CITY OF STORM LAKE
REGULAR COUNCIL SESSION MEETING
CITY HALL - COUNCIL CHAMBERS
MARCH 16, 2026
5:00 PM

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

AGENDA

Access to the official meeting can also be done through the following ways:

BY TELEPHONE
Dial: 1-312-626-6799 or toll-free 1-888 475-4499
Zoom Meeting ID: 933 2006 3301

BY COMPUTER:
https://zoom.us/j/93320063301

Open the Meeting

- **Call to Order**
- **Pledge of Allegiance**
- **Proclamation**

A. Consideration of Changes in Agenda and Setting the Agenda

B. Disclosure by City Council Members

C. Hear the Public

D. Consent Agenda

1. Consent Agenda
    a. Buy Local Information
    b. City Code Enforcement Summary
    c. Motion To Approve Appointment Of Members To The Mayor's Civic Leadership Advisory Ad Hoc Committee

E. Unfinished Business

F. New Business

1. Motion To Approve Storm Lake Preservation Association Project Partnership Request
2. Resolution No. 57-R-2026-2027 Setting the Public Hearing Application A Request For A Zoning Map Amendment Change For 211 E 13th St.
3. Ordinance No. 08-O-2025-2026 On A Proposed Rezoning of Six Parcels Located on Highview Drive - 3rd Reading
4. Ordinance No. 09-O-2025-2026 Amending the Zoning Classification of Certain Real Estate On Oneida Street - 2nd Reading
5. Resolution No. 58-R-2025-2026 Approving And Authorizing Conveyance Of A Fee Title Interest In Real Property To The Buena Vista Regional Medical Center
6. Resolution No. 59-R-2025-2026 Approving Change Order No. 5 for the New Production Well No.22 Project
7. Motion to Approve Contract with ISG to Complete Community Public Water System Risk &

Resilience Assessment (RRA) Plan Update

8. Motion to Approve Contract with Rebnord Technologies to Complete Community Public Water System Risk & Resilience Assessment (RRA) Plan Update
9. Motion To Approve Selection And Hiring Of Simmering-Cory for Grant Writing And Administration Services For CDBG Funding For Housing Rehabilitation - Roofing Project.
10. Motion To Approve Selection And Hiring Of Simmering-Cory for Technical Services For CDBG Funding For Housing Rehabilitation - Roofing Project.
11. Motion Setting A Public Hearing For The Plans, Specifications, Form of Contract, And Engineer's Estimate For The Terminal Area Apron Expansion Project
12. Fiscal Year 2026-2027 Budget Work Session
13. Code Enforcement Work Session
14. City Council Requested Items / City Council Updates

G. Adjourn

Meeting Protocol

If you wish to speak today, please:

1. To speak on an agenda item, please approach the podium when that agenda item is called, and upon recognition by the Mayor, identify yourself by stating your name and address.
2. If your issue is not a topic on the agenda, please approach the podium under the "Hear the Public" agenda item, and upon recognition by the Mayor, identify yourself by stating your name and address.
3. Please keep your remarks to three (3) minutes or less.
4. If you require accommodation for this meeting, including but not limited to translation services, hearing assistance, or accessibility, please contact the City Clerk at least four (4) hours prior to the start of the meeting.

*If you have concerns about any of the items on the consent agenda, they may be separated from the consent agenda and voted on individually.
**Ordinances may be read at three consecutive meetings or readings may be waived and ordinances may be passed at only one or two meetings.

Find us on Facebook https://www.facebook.com/cityofstormlake Follow us on Twitter @Storm_Lake Find us on the Web at http://www.stormlake.org.

Staff Summary

3/16/2026
Agenda Item # D.1.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Mayra Martinez, City Clerk

SUBJECT: **Consent Agenda**

BACKGROUND: The Consent Agenda Includes:

- List of Bills
- Approve King's Pointe And Sunrise Pointe Golf Course Disbursements
- Approve March 2, 2026, City Council Minutes and March 03, 2026, Special City Council Minutes
- Approve Renewal Liquor Licenses For Lakeshore Cafe and Zimmy's Bar & Grill, Wal-Mart Store #1526 and Puffs
- Approve Appointment of Members to the Mayor's Civic Leadership Advisory Ad Hoc Committee
- Approve Buy Local Information
- Approve City Code Enforcement Update

FISCAL IMPACT: City Will Pay The Following Expenditures:

- List of Bills: $ 906,069,74
- King's Pointe & Sunrise Pointe Golf Course Bills: $209,000.19

RECOMMENDATION:

ATTACHMENTS:

1. 3/16/2026 City Claims Expense Report
2. 3/16/2026 King's Pointe Claims 2.27.2026 to 3.12.2026
3. 03/02/2026 City Council Minutes
4. 03/03/2026 City Council Minutes - Special

5. Zimmys Bar & Grill and Lakeshore Cafe Liquor Application 2026
6. Wal-Mart Store #1526 Liquor Application 2026
7. Puffs Liquor Application 2026

My Buy Local_v1

Storm Lake, IA

Payment Date Range: 03/05/2026 - 03/18/2026

Vendor Name	Vendor Number	Payable Description		Total Payments
BVC				
Alta Implement Company, Inc	001288	Filter / Oil		108.67
Buena Vista County Solid Waste	001035	City Clean Up		290.76
Mike's Electronics Inc	001196	Memorial Boiler		8,304.35
		BVC Total:	8,703.78	
Contract/Agreement				
Bolton & Menk, Inc	001024	Engineering Services		60,531.00
Charles Sargent Irrigation Company, Inc	001209	Well #7 Rehabilitation		65,595.00
I & S Group, Inc	001103	Professional Services		7,361.58
King Contracting, LLC	001066	Pay #12 of HMA LS Project		275,994.00
Reding's Gravel & Excavating Co., Inc	001132	Black Dirt		341.62
		Contract/Agreement Total:	409,823.20	
Local				
A & A Automotive	001022	P13 - Brakes / Service		4,357.01
Arnold Motor Supply, LLP	001007	Supplies		850.49
Buena Vista Regional Medical Center	001124	February 2026 Memberships - 3		60.00
Central Bank	001025	Services		4,243.11
Culligan Water Storm Lake	001071	Water Supplies		27.75
Deere Credit, Inc	001188	O-Ring		17.73
Edwards Storm Lake	001114	2015 Impala - Service		74.66
Growmark Inc New Century FS	001016	Fuel		4,193.42
Jim Bartholomew	001069	March 2026 Airport Contract		6,289.61
Kwik Trip Inc	002717	Fuel		4,473.89
Larson Oil & Distributing Co, Inc	001178	Fuel / Oil		2,508.36
Long Lines	001077	Fax Line & Emergency Line Service		1,396.49
Marcus Lumber Company Corp	002011	Trim		106.99
North Lake Truck Repair	001177	Truck Repair - Sensor		1,366.70
O'Reilly Automotive Inc	001108	Supplies		104.77
Plumbing & Heating Wholesale, Inc	001126	Recarb Filter Housing		375.11
Rebnord Technologies, Inc	001091	Technology Split		15,713.60
Rent-All, Inc	001210	Boom Telescope		1,049.50
Siouxland Certified Testing Services, Inc	001190	Testing Services - SL3859A - WW Lift Station		384.00
Stanton Electric, Inc	001264	Digital TV Electric Outlet		336.16
Storm City Auto Parts, Inc	001501	Hydraulic Fittings		467.10
Storm Lake Ace Hardware	001216	Supplies		495.76
The Storm Lake Times	001214	February 2026 Publications		849.45
Verizon Wireless Services LLC	001075	Cell Phone Service		3,535.52
Wiese Plumbing & Heating, Inc	001302	Vacuum Breakers - SLPD		591.08
		Local Total:	53,868.26	
Non-Local				
Ad Astra Education LLC	002738	Myers Animal Books		41.94
Ahlers & Cooney, P.C.	001023	General Attorney Services		5,274.40
Barnes & Noble Booksellers, USA Inc	001274	Books		649.96
Bend Mailing Services, LLC	002013	Bill Printing Services		3,674.57
Brodart Co.	001009	Books		467.16
Carey's Furniture	002434	1/23/2026 Water Loss - Mattress Replaceme		1,223.96
Central Iowa Distributing, Inc	001026	Cleaning Supplies		1,870.00
Chicago, Central & Pacific Railroad Co	001314	Property - License		5,698.50
Core & Main LP	002000	Watermain Break Clamps		1,278.03
Dale Vitito	001061	Awards / Medals		118.89
Datatel Communications Inc	002595	Monthly IVR Services		679.90

My Buy Local_v1

Vendor Name	Vendor Number	Payable Description	Total Payments
Dorsey & Whitney LLP	001954	TIF Legal Services	89,469.48
Efficient Construction LLC	001055	Roof Repair - 1306 Erie	5,126.00
Foundation Analytical Laboratory, Inc	001100	Testing Services	1,156.75
HD Supply, Inc	001336	Check Valve Wafer	1,376.85
Hotsy Equipment Company	001577	Nozzle Repair	327.27
Huber Technology LLC	001761	Huber Rebuild Screen & Auger	5,104.95
Ingram Library Services, Inc	001268	Standing Order Books	176.49
Iowa Association of Municipal Utilities	001551	FY2026 - 2027 Membership Dues	1,259.00
Iowa Municipal Finance Officers Associat	001333	2026 Membership - Gibbins	50.00
Iowa Prison Industries	001129	Nature Area Supplies	35.80
Kasperbauer Cleaners, Inc	002435	Entrance Mat Services	44.78
Laurens House of Print Ltd	002161	Interrogation Cards	93.75
Linde Inc	001111	Carbon Dioxide	3,049.87
Martin Marietta Materials, Inc	001429	Rock	639.16
Menards, Inc	001480	Meeting Room Wall Repair	860.19
Midwest Breathing Air, LLC	001365	Quarterly Air Test	235.40
Midwest Tape, LLC	001275	DVDs	94.46
Mississippi Lime Company	001095	Quicklime	44,636.14
MRA Custom Applications, LLC	001553	Lime Hauling Services	9,446.63
Multi Service Technology Solutions Unc	002705	Office Supplies	210.04
Murguia Online Investigations LLC	002748	Catching Online Predators Course	700.00
NW Iowa Planning & Development Comn	001102	SHIELD FY2026 - 4th Draw	3,500.00
P.Q.L., Inc.	001828	Bulbs	149.53
Pitney Bowes	001182	Postage Machine Agreement	244.50
Power Plan	001491	Boot	59.97
PS Operating Company LLC	002745	Thermalarm	77.03
Rice Signs LLC	001446	Signs - Memorial	317.42
Sandy Boeckman	002024	2026 Reciprocal Agreement	75.00
Schumacher Elevator Company	001200	Elevator Maintenance	253.02
Secretary of State	001207	2026 Notary Renewal - John Bauer	30.00
Sioux City Newspapers, Inc	001345	FY2026 Subscription - Library	603.99
Staples, Inc	002735	Office Supplies	119.85
State Industrial Products Corporation	002309	Wastewater Program	3,552.94
Tyler Technologies, Inc	001084	ERP Pro Annual Services Fee - PACE (3/1/26-	4,000.00
VEIT, LLC	002734	Copier Maintenance Agreement	660.17
Woodbury County Government	002747	Sheriff - Citation - Civil #26-000662	45.00
Ziegler, Inc	001097	Inlet Generator	1,288.85
		Non-Local Total: 200,047.59	
Payroll/Refunds			
Andrew Kutz	002668	1/3 - 1/4/2026 Training	602.10
Christopher Chambers	002016	ICC Region III Upper Grear Plains Conference	48.00
Elizabeth Huff	001737	ALA Book Award Stickers Refund - Chicago D	50.90
Gustavo Muniz	002030	7.30.2025 - DW Grade 1 - Cert Fee	95.33
		Payroll/Refunds Total: 796.33	
		Grand Total: 673,239.16	

King's Pointe Resort

Claims Publication

From 2/27/2026 to 3/12/2026

Vendor	Description		Amount
ACCO Unlimited	Supplies	$	592.24
Alliant Energy	Utilities	$	2,936.82
Amazon Capital Services	Supplies	$	485.64
ASSA ABLOY Global	Supplies	$	1,695.00
Authnet Gateway	Services	$	30.00
Carey's Furniture	Supplies	$	5,293.11
City of Storm Lake	Utilities	$	6,148.74
Commlog LLC	Supplies	$	67.29
Daniels Filter Service	Supplies	$	680.94
Denison Drywall Contracting	Services	$	11,980.00
Doll Distribution	Beverages	$	848.40
ECO LAB	Supplies	$	243.60
Fintech	Services	$	69.39
Fullsteam	Services	$	5,951.41
Grainger	Supplies	$	121.92
Guest Supply	Supplies	$	6,014.04
Hard Tops of Iowa	Supplies	$	1,489.00
Horwath Laundry Machinery Co	Services	$	83.08
HyVee	Supplies	$	942.44
Iowa Information Inc	Services	$	35.00
Johnson Brothers	Beverages	$	1,152.10
Kelli's Gift Shop Suppliers	Supplies	$	778.70
King's Pointe Resort Payroll- 3/6	Payroll	$	89,780.74
KTIV Television	Advertising	$	1,395.33
Kwik Trip Inc	Supplies	$	14.98
Long Lines	Utilities	$	765.94
Marcus Lumber Co	Supplies	$	168.34
Martin Brothers	Food	$	15,434.86
Mediacom	Utilities	$	482.90
Midwestern Mechanical	Services	$	747.50
Pepsi Beverage Co	Beverages	$	620.60
Plumbing & Heating Wholesale	Supplies	$	121.18
Power Solutions	Services	$	104.00
Rebnord Technologies	Services	$	3,218.33
Rolloff Dumpster Rental of Iowa	Services	$	316.00
S&L Hospitality	Agreement	$	8,506.53
Sceptre Hospitality Resources	Supplies	$	1,314.59
SGS LLC dba Garbage Hauling	Utilities	$	126.00
Shift 4	Services	$	1,759.00
State of Iowa	License	$	1,170.00
Storm Lake Ace Hardware	Supplies	$	415.78
Symmetry Energy Solutions	Utilities	$	12,687.93

Sysco Iowa Inc	Food	$	7,408.28
Verizon Wireless	Utilities	$	290.24
Vestis	Services	$	2,120.60
		$	**196,608.51**

King's Pointe OWP

Claims Publication

From 2/27/2026 to 3/12/2026

Vendor	Description		Amount
ACCO Unlimited	Supplies	$	7,765.00
Shift 4	Services	$	486.00
		$	**8,251.00**

Sunrise Pointe Golf Course

Claims Publication

From 2/27/2026 to 3/12/2026

Vendor	Description		Amount
Alliant Energy	Utilities	$	1,211.84
Fintech	Services	$	69.39
Heartland Payment System	Services	$	253.50
HyVee	Supplies	$	108.48
Pest Elimination Division	Services	$	133.87
Plumbing & Heating Wholesale	Supplies	$	116.60
S&L Hospitality	Agreement	$	750.00
Shift 4	Services	$	152.00
State of Iowa	License	$	1,170.00
USGA	Membership	$	175.00
		$	**4,140.68**

REGULAR COUNCIL MEETING, CITY OF STORM LAKE, CITY HALL COUNCIL CHAMBERS, MARCH 2, 2026, 5:00 PM

CITY OF STORM LAKE, REGULAR COUNCIL MEETING, CITY HALL COUNCIL CHAMBERS, MARCH 2, 2026, 5:00 PM

Present: Mayor Margaret McKeon, Council Members Richard Riner, Matt Ricklefs, Don Piercy Jr., and Maggie Martinez. Absent: Council Member Maria Ramos.

Staff Present: City Manager Keri Navratil, Assistant City Manager David Derragon, Police Chief Chris Cole, King's Pointe Manager Amy VonBank, Library Director Elizabeth Huff, Building and Code Compliance Director Scott Olesen, Building Inspector Chris Chambers, Public Works Director Ron Covert, Communications Coordinator Dana Larsen, Public Services Director Brandon Ripke, Development Services Specialist Lee Dutfield, Finance Director Tyler Gibbins, and City Clerk Mayra Martinez.

Media Present: Lindsay Kruse (via Zoom) with KAYL Radio.

Mayor McKeon called the meeting to order at 5:00 pm.

Pledge of Allegiance

Agenda - Moved by Council Member Martinez to approve setting the agenda as presented. Seconded by Council Member Riner. Vote: All ayes. Motion carried.

Disclosure by City Council Members - Council Member Riner disclosed to refrain from any agenda item pretraining to BVU as he is an employee of the university. Council Member Maggie Martinez disclosed to refrain from any agenda item pertaining to Highview Drive as she is an employee of BVRMC.

Hear the Public – No public comments at this time. Mayor McKeon read a proclamation proclaiming the month of March 2026 as National Social Work Month.

Consent Agenda - Moved by Council Member Piercy Jr. to approve the Consent Agenda which includes List of bills Chk #'s 83805 through 83854, EFT #s 1840, 7328 through 7364, DFT #'s 3063 through 3075, Approve King's Pointe and Sunrise Pointe disbursements, Approve February 16, 2026 City Council minutes, adopt resolution No. 51-R-2025-2026 to approve Sunrise Pointe Golf Course reciprocal policy, Approve Buy Local information, and approve City Code Enforcement update. Seconded by Council Member Martinez. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

Mayor McKeon announced the award the City received by Iowa State Auditor Rob Sand for the Public Innovations & Efficiencies (PIE) Award. The award recognizes creative efforts to promote efficiency, save money, and create transparency in local government

Unfinished Business – No items at this time.

New Business

Witter Gallery Art Festival - Moved by Council Member Riner to approve the Witter Gallery Art Festival request. Seconded by Council Member Martinez. Vote: All ayes with Council Member Ramos absent. Motion carried.

RIDES Funding Request FY 2027 - Hugh Lively and Cindy Voss with RIDES provided updates and discussions for the annual request of funds for Fiscal Year 2027.

Kids' Fest - Moved by Council Member Piercy Jr. to adopt Resolution No. 52-R-2025-2026 to approve the Kids' Fest Street Closure. Seconded by Council Member Riner. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

RESOLUTION NO. 52-R-2025-2026

RESOLUTION TEMPORARILY CLOSING PUBLIC WAYS OR GROUNDS IN CONNECTION WITH A SPECIAL EVENT KNOWN AS "KIDS' FEST"

WHEREAS, Iowa Code Section 364.12(2) states "a city shall keep all public grounds, streets, sidewalks, alleys, bridges, culverts, overpasses, underpasses, grade crossing separations and approaches, public ways, squares, and commons open, in repair and free from nuisance;" and

WHEREAS, Iowa Code Section 364.12(2)(a) states "public ways and grounds may be temporarily closed by resolution;" and

WHEREAS, a request has been submitted for a temporary street closure in connection with a special event known as “Kids’ Fest,” and the City finds it is necessary and in the best interests of the attendees and public to temporarily close the following streets and any associated parking spaces from 11:00 a.m. to approximately 4 p.m. on the dates listed below, in conjunction with the special event known as “Kids’ Fest:”

Chautauqua Park Road from the Lakeshore Drive intersection to the Hudson Street Intersection, on June 14th, 2026.

NOW, THEREFORE, BE IT RESOLVED, pursuant to Iowa Code Section 364.12(2)(a), the City Council of the City of Storm Lake, Iowa does hereby temporarily close the street as stated above.

Dated this date: March 2nd, 2026

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Kids Fest Outdoor Waterpark Rate - Moved by Council Member Martinez to approve the Kids Fest Outdoor Waterpark special one-day rate request. Seconded by Council Member Piercy Jr.. Vote: All ayes with Council Member Ramos absent. Motion carried.

Storm Lake Water Tower No. 5 - Moved by Council Member Riner to adopt Resolution No. 53-R-2025-2026 Storm Lake Water Tower No. 5 Change Order No. 2. Seconded by Council Member Piercy Jr.. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

RESOLUTION NO. 53-R-2025-2026

RESOLUTION ADOPTING CHANGE ORDER NO. 2 FOR THE CITY OF STORM LAKE, IOWA ELEVATED WATER TOWER NO. 5 PROJECT

WHEREAS, on the 16th day of February 2026, plans, specifications, form of contract and estimate of cost were filed with the Clerk for the construction of certain public improvements described in general as the Storm Lake Elevated Water Tower No. 5; and

WHEREAS, notice of hearing on plans, specifications, form of contract and estimate of cost for the public improvements was published as required by law.

WHEREAS, a contract in the amount of $6,624,000.00 was awarded to Landmark Structures for the project; and

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, STATE OF IOWA:

Section 1. That Change Order No. 2 as recommended by ISG is hereby approved in the amount of $3,341.00 decreasing the contract amount from $6,674,873,000 to $6,671,532.00.

Section 2. Final Payment is changed from December 31, 2025 to April 30, 2026.

PASSED AND APPROVED this 2nd day of March 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Highview Drive - Mayor McKeon opened the Public Hearing on the proposal to convey a portion of Highview Drive stating this was the time and place for any comments. Building Official Olesen mentioned that the purchase agreement is available on this agenda item and will be considered at the March 16, 2026, council meeting. Hearing no additional comments and no other objections received prior to this public hearing from the Public or City Council, Mayor McKeon closed the public hearing.

Moved by Council Member Piercy Jr. to pass on third reading Ordinance No. 07-O-2025-2026 an ordinance vacating the public Right-Of-Way in a portion of Highview Drive in the City of Storm Lake. Seconded by Council Member Ricklefs. Roll call vote: All ayes with Council Member Ramos absent and Council Member Martinez abstaining. Motion carried.

ORDINANCE NO. 07-O-2025-2026
AN ORDINANCE VACATING THE PUBLIC RIGHT-OF-WAY IN A PORTION OF HIGHVIEW DRIVE IN THE CITY OF STORM LAKE

WHEREAS, the City of Storm Lake, Iowa (the "City") proposes to vacate a portion of the Highview Drive, as further described herein; and

WHEREAS, Iowa Code Sections 306.11, 306.12, and 364.12(2)(a) require that public ways be vacated by ordinance, after published and mailed notice and a public hearing before the City Council; and

WHEREAS, the City Council set a public hearing on the proposed vacation for its meeting held on February 2, 2026 and, following notice given as directed by law, held said public hearing; and

WHEREAS, the City Council now wishes to proceed with the vacation of the public right-of-way.

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, STATE OF IOWA:

Section 1: That no claim for damages was filed at or before the hearing and no person is entitled to damages from the vacation of this public right-of-way.

Section 2: That the public right-of-way in the portion of Highview Drive legally described as follows is hereby vacated:

A PART OF HIGHVIEW DRIVE LOCATED IN PLEASANT VIEW FIRST ADDITION TO THE CITY OF STORM LAKE, BUENA VISTA COUNTY, IOWA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning at the Northeast Corner of Lot One of Block Three of said Pleasant View First Addition; thence South 88° 43' 15" East (assumed bearing), on the south line of Lochedem Drive, 59.85 feet to the northwest corner of Lot One of Block Two of said Pleasant View First Addition; thence South 01° 05' 54" West, on the west line of said Block Two of Pleasant View First Addition, 214.06 feet to the Southwest Corner of Lot Three of said Block Two of Pleasant View First Addition; thence North 88° 26' 16" West, 59.90 feet to the Southeast Corner of Lot Three of said

Block Three of Pleasant View First Addition; thence North 01° 06' 40" East, on the east line of said Block Three of Pleasant View First Addition, 213.77 feet to the Point of Beginning.

Tract contains 0.29 acres and is subject to all easements of record.

Section 3: That no public or private utility easements are located within the portion of Highview Drive containing this now-vacated public right-of-way.

Section 4: All ordinances or portions of ordinances in conflict with the provisions of this Ordinance are hereby repealed.

Section 5: If any section, provision, or part of this Ordinance shall be adjudged invalid or unconstitutional, such adjudication shall not affect the validity of the Ordinance as a whole or any section, provision or part thereof not adjudged invalid or unconstitutional.

Section 6: This Ordinance shall be in effect after its final passage, approval and publication as provided by law.

PASSED AND APPROVED this 2nd day of March, 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Read First Time: -_02/02/2026__
Read Second Time: _02/16/2026
Read Third Time: _03/02/2026_

PASSED AND APPROVED MARCH 2ND, 2026

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

I, Mayra A. Martinez, City Clerk of the City of Storm Lake, State of Iowa, hereby certify that the above and foregoing is a true copy of Ordinance No. 07-O-2025-2026 passed and approved by the City Council of the City at a meeting held March 2nd, 2026, signed by the Mayor on March 2nd, 2026, and published in the Storm Lake Times Pilot on March 13, 2026.

_____
City Clerk, City of Storm Lake, State of Iowa

02241588-1\11149-133

Moved by Council Member Riner to approve on second reading Ordinance No. 08-O-2025-2026 on a proposed rezoning of six parcels located on Highview Drive. Seconded by Council Member Piercy Jr.. Roll call vote: All ayes with Council Member Ramos absent and Council Member Martinez abstaining. Motion carried.

942 Oneida Street - Moved by Council Member Martinez to approve on second reading Ordinance No. 09-O-2025-2026 amending the Zoning Classification of Certain Real Estate on Oneida Street. Seconded by Council Member Piercy Jr.. Roll call vote: All ayes with Council Member Ramos absent and Council Member Riner abstaining. Motion carried.

Well No. 23 Project - Moved by Council Member Martinez to adopt Resolution No. 54-R-2025-2026 approving a Grant Agreement with IEDA for the Well No. 23 Development Project. Seconded by Council Member Piercy Jr.. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

RESOLUTION NO. 54-R-2025-2026

A RESOLUTION APPROVING A GRANT AGREEMENT WITH IEDA FOR THE WELL NO. 23 DEVELOPMENT PROJECT

WHEREAS, the City of Storm Lake has been awarded a grant from the Iowa Economic Development Authority under the Iowa Community Development Block Grant program for the Storm Lake Well No. 23 Development Project, and;

WHEREAS, the City has an immediate need to conduct a project to construct a new well to ensure a high quality and sufficient supply of water for its residents, and;

WHEREAS, the City Council is in agreement with the terms provided by the Iowa Economic Development Authority for the Community Development Block Grant for the Storm Lake Well No. 23 Development Project;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, IOWA:

SECTION 1. The City Council approves the contract with the Iowa Economic Development Authority for project number 26-OT-001 which includes a grant award in the amount of $500,000.00 for the Storm Lake Well No. 23 Development Project.

SECTION 2. The approval of the IEDA Grant Agreement is contingent upon final review and approval of the agreement by IEDA.

SECTION 3. The Mayor is authorized to sign the contract with the Iowa Economic Development Authority and all other required documents upon final review by IEDA.

PASSED AND APPROVED THIS 2ND DAY OF MARCH 2026.

BY THE CITY COUNCIL OF THE
CITY OF STORM LAKE, IOWA

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Moved by Council Member Piercy Jr. to adopt Resolution No. 55-R-2025-2026 approving a Grant Administration Agreement with Simmering-Cory for the Storm Lake Well No. 23 Development Project. Seconded by Council Member Martinez. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

RESOLUTION NO. 55-R-2025-2026

RESOLUTION APPROVING A GRANT ADMINISTRATION AGREEMENT WITH SIMMERING-CORY FOR THE STORM LAKE WELL NO. 23 DEVELOPMENT PROJECT

WHEREAS, the City of Storm Lake has been awarded a grant from the Iowa Economic Development Authority under the Iowa Community Development Block Grant program for the Storm Lake Well No. 23 Development Project, and;

WHEREAS, the City has an immediate need to conduct a project to construct a new well to ensure a high quality and sufficient supply of water for its residents, and;

WHEREAS, the City Council has a need to have a professional grant administrator administer the grant per the Iowa Economic Development Authority guidelines;

WHEREAS, the City has previously procured for grant administration services following 2 CFR 200.319 and has selected the firm of Simmering-Cory to assist the City with this grant;

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, IOWA:

SECTION 1. The City Council approves the contract with Simmering-Cory for grant administration services on IEDA project number 26-OT-001 in the amount of $22,000.00 for the Storm Lake Well No. 23 Development Project.

SECTION 2. Approval of the grant administration agreement is contingent upon IEDA approval of the grant agreement.

SECTION 3. The Mayor is authorized to sign the contract with the Simmering-Cory following approval of IEDA's grant agreement approval.

PASSED AND APPROVED THIS 2ND DAY OF MARCH 2026.

BY THE CITY COUNCIL OF THE
CITY OF STORM LAKE, IOWA

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Water Plant Project - Moved by Council Member Piercy Jr. to approve a service agreement with Piper Sandler & Co. for the Water Treatment Plant Project. Seconded by Council Member Riner. Vote: All ayes with Council Member Ramos absent. Motion carried.

Fiscal Year 2027-2031 CIP - Mayor McKeon opened the Public Hearing for the Fiscal Year 2027-2031 Capital Improvement Plan stating this was the time and place for any comments. Hearing no comments and no other objections received prior to this public hearing from the Public or City Council, Mayor McKeon closed the public hearing.

Moved by Council Member Riner to adopt Resolution No. 56-R-2025-2026 approving FY2027-2031 Capital Improvement Plan. Seconded by Council Member Ricklefs. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

RESOLUTION NO. 56-R-2025-2026

RESOLUTION APPROVING THE CITY OF STORM LAKE 5-YEAR CAPITAL IMPROVEMENTS PLAN

WHEREAS, the City of Storm Lake has a need to develop a 5-Year Capital Improvements Plan that will assist city staff and the City Council in the development of long-term capital funding priorities; and

WHEREAS, each department of the City of Storm Lake has submitted and prioritized potential projects for the next five fiscal years; and

WHEREAS, the City Manager and City Council have reviewed and prioritized those projects based on potential funding sources in each fund; and

WHEREAS, the proposed 5-Year Capital Improvements Plan has been reviewed and commented on by the City Council during their Budget Workshops in January 2026.

NOW, THEREFORE BE IT HEREBY RESOLVED that the Storm Lake City Council formally approves the City's FY 2027-2031 5-Year Capital Improvement Plan as a planning document for the entire city organization.

PASSED AND APPROVED this 2nd day of March 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Tax Levy Rate - Moved by Council Member Piercy Jr. to approve setting a Public Hearing at 4:30 pm on April 6, 2026, at City Hall Council Chambers on Setting Tax Levy Rate and Maximum Property Tax Dollars. Seconded by Council Member Martinez. Roll call vote: All ayes with Council Member Ramos absent. Motion carried.

City Council Requested Items / City Council Updates – No requests at this time

Fiscal Year 2026-2027 Budget Work Session - City Council members and staff discussed the FY 2026-2027 Operations and maintenance budget for the Fire Department, King Pointe, and Outside Agency Funding

Adjourn – Moved by Council Member Martinez to adjourn at 6:46 pm. Seconded by Council Member Riner. Vote: All ayes with Council Member Ramos absent. Motion carried.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

REGULAR COUNCIL MEETING, CITY OF STORM LAKE, CITY HALL COUNCIL CHAMBERS, MARCH 3, 2026, 5:00 PM

CITY OF STORM LAKE, REGULAR COUNCIL MEETING, CITY HALL COUNCIL CHAMBERS, MARCH 3, 2026, 5:00 PM

Present: Mayor Margaret J. McKeon, Council Members Matt Ricklefs, Richard Riner, Maggie Martinez and Maria Ramos(arrived at 5:13 pm). Absent: Council Member Don Piercy Jr.

Staff Present: City Manager Keri Navratil, Assistant City Manager David Derragon, Police Chief Chris Cole, Library Director Elizabeth Huff,, Building and Code Compliance Director Scott Olesen, Building Inspector Chris Chambers, Public Works Director Ron Covert, Communications Coordinator Dana Larsen, Public Services Director Brandon Ripke, Program Manager/Sunrise Campground Manager Kim Woltman, Development Services Specialist Lee Dutfield, Finance Director Tyler Gibbins, and City Clerk Mayra Martinez.

Media Present: Lindsay Kruse (via zoom) with KAYL Radio.

Mayor McKeon called the meeting to order at 5:00 pm.

New Business
Budget Work session – City Council and staff reviewed Fiscal Year 2026-2027 Operations and maintenance budget for LPA Request, Public Services, Police Department, Library, Building and Code enforcement, Economic Development, and Administration.

Adjourn - Moved by Council Member Riner to adjourn at 7:05 pm. Seconded by Council Member Ramos. Vote: All ayes with Council Member Piercy Jr. absent. Motion carried.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

CLASS "C" RETAIL ALCOHOL LICENSE RENEWAL

Business Information

Name of Legal Entity: LAKESHORE CAFE INC

FEIN: XX-XXX4393

Business Type: Corporation

This business is registered with the Secretary of State.

Business Number of Secretary of State: 24009

Premises Information

Premises DBA: LAKESHORE CAFE & ZIMMY'S BAR & GRILL

Premises Address: 1520 N. LAKE AVE. STORM LAKE IA 50588

Premises Type: Restaurant

Number of Floors: 1

Control of Premises: Own

Is your premises equipped with at least one adequate, conveniently located indoor or outdoor toilet facility for use by patrons?
Yes

Does your premises conform to all local and state health, fire and building laws and regulations?
Yes

Is your establishment equipped with tables and seats to accommodate a minimum of 25?
Yes

Has the number of floors of the premises changed?
No

Have there been any changes to the premises in the last 12 months? This includes any changes that affect where alcohol is manufactured, stored, sold or consumed, such as adding, deleting, or changing permanent outdoor service areas.
No

Has there been a change in the control of property over the last 12 months? This includes a renewed/updated lease agreement, or changing from a deed to a lease, or a lease to a deed.
No

License Information

Effective Date: 18-Mar-2026

Length of License Requested: 12MONTH

Privilege(s) Requested

Catering - Allows catering of alcoholic liquor, wine, beer, and wine coolers. Alcohol must be catered with food. Food and alcohol must be served without cost to the guests. No sales on- or off-premises sales. Only available for 12 month terms.

Endorsements

Local Authority: City of Storm Lake

Dramshop Company: COLUMBIA NATIONAL INSURANCE COMPANY

Ownership Information

Type	Name	ID Type	ID	DOB	Phone	Address	Percentage
Individual	EDDIE, KYLE	SSN	***-**			STORM LAKE IA 50588	7.00
Individual	ZIMMERMAN, TERRY	SSN	***-**			STORM LAKE IA 50588	49.00
Individual	LANGE, DAVID	SSN	***-**-			STORM LAKE IA 50588	15.00
Individual	EDDIE, LESA	SSN	***-**			STORM LAKE IA 50588	29.00

Criminal History Details

Has anyone listed on the Ownership page been charged or convicted of a felony offense in Iowa or any other state of the United States?
No

Has anyone listed on the Ownership page been convicted of any violation of any state, county, city, federal or foreign law? For traffic violations, only include those that are drug or alcohol related.
No

Criminal Violations

Contact Information

Contact Name: TERRY ZIMMERMAN

Phone Number: (712) 299-9800

Email Address: lkshore1@gmail.com

Address: 1520 LAKE AVE STORM LAKE IA 50588-1912

Attestation Information

Attestation Name: TERRY ZIMMERMAN

Attestation Date: 07-Feb-2026

CLASS "E" RETAIL ALCOHOL LICENSE RENEWAL

Business Information

Name of Legal Entity: WALMART INC

FEIN: XX-XXX5188

Business Type: Corporation

This business is registered with the Secretary of State.

Business Number of Secretary of State: 51094

Premises Information

Premises DBA: WAL-MART SUPERCENTER #1526

Premises Address: 1831 LAKE AVE STORM LAKE IA 50588-7606

Premises Type: Grocery Store

Number of Floors: 1

Control of Premises: Lease

The total square footage of the entire retail sales area plus any alcoholic beverage storage areas of the business. This includes areas of walk-in alcoholic beverage coolers that are accessible to the public.
157131

Does your premises conform to all local and state health, fire and building laws and regulations?
Yes

Does or will your licensed location wholesale alcoholic beverages to on-premises retail alcohol licensees?
No

Has the number of floors of the premises changed?
No

Have there been any changes to the premises in the last 12 months? This includes any changes that affect where alcohol is manufactured, stored, sold or consumed, such as adding, deleting, or changing permanent outdoor service areas.
No

Has there been a change in the control of property over the last 12 months? This includes a renewed/updated lease agreement, or changing from a deed to a lease, or a lease to a deed.
No

Has the square footage of the premises changed?
No

License Information

Effective Date: 01-May-2026

Length of License Requested: 12MONTH

Endorsements

Local Authority: City of Storm Lake

Ownership Information

Type	Name	ID Type	ID	DOB	Phone	Address	Percentage
Individual	ALLEN, MATTHEW	SSN	***-**-	76		ROGERS AR 72758-9624	0.00
Individual	LITTLE, SARAH	SSN	***-**-			SPRINGDALE AR 72764-5342	0.00
Individual	VICK, BRANDON	SSN	***-**			16330 ROGERS AR 72756-7742	0.00
Individual	FENTON, CAREY	SSN	***-**-			BENTONVILLE AR 72712-4966	0.00
Individual	FURNER, JOHN	SSN	***-**-			ROGERS AR 72758-9537	0.00

Criminal History Details

Has anyone listed on the Ownership page been charged or convicted of a felony offense in Iowa or any other state of the United States?
No

Has anyone listed on the Ownership page been convicted of any violation of any state, county, city, federal or foreign law? For traffic violations, only include those that are drug or alcohol related.
No

Criminal Violations

Contact Information

Contact Name: MARIA GARCIA

Phone Number: (479) 371-8476

Email Address: complic@wal-mart.com

Address: 702 SW 8TH ST DEPT 8916 BENTONVILLE AR 72716-0500

Bond

Do you want to add a bond for this permit?
No

Bond Policy Number: 103912736

Issued Date: 01-May-2021

Premises Hours

Is the premises open 24/7?
No

Store Hours Description:

Deliveries Hours

Are deliveries able to be received 24/7?
No

Delivery Hours Description:

Automatic Renewal Enrollment

Do you wish to enroll in the Automatic Renewal Program at this time?
No

Attestation Information

Attestation Name: SARAH LITTLE

Attestation Date: 25-Feb-2026

CLASS "C" RETAIL ALCOHOL LICENSE RENEWAL

Business Information

Name of Legal Entity: THREE S LLC

FEIN: XX-XXX0617

Business Type: Limited Liability Company

This business is registered with the Secretary of State.

Business Number of Secretary of State: 415193

Premises Information

Premises DBA: PUFFS

Premises Address: 1205 EAST LAKESHORE DR STORM LAKE IA 50588

Premises Type: Bar/Tavern

Number of Floors: 1

Control of Premises: Own

Is your premises equipped with at least one adequate, conveniently located indoor or outdoor toilet facility for use by patrons?
Yes

Does your premises conform to all local and state health, fire and building laws and regulations?
Yes

Is your establishment equipped with tables and seats to accommodate a minimum of 25?
Yes

Has the number of floors of the premises changed?
No

Have there been any changes to the premises in the last 12 months? This includes any changes that affect where alcohol is manufactured, stored, sold or consumed, such as adding, deleting, or changing permanent outdoor service areas.
No

Has there been a change in the control of property over the last 12 months? This includes a renewed/updated lease agreement, or changing from a deed to a lease, or a lease to a deed.
No

License Information

Effective Date: 20-Apr-2026

Length of License Requested: 12MONTH

Privilege(s) Requested

Outdoor Service - Allows the selling/serving of alcoholic beverages by the license/permit in a designated, adjacent outdoor area.

Provided description of the Outdoor Service Area:

attached, fenced in patio. 5 tables for food and beverage service.

Endorsements

Local Authority: City of Storm Lake

Dramshop Company: ILLINOIS CASUALTY CO

Ownership Information

Type	Name	ID Type	ID	DOB	Phone	Address	Percentage
Individual	BELLINGHAUSEN, LANCE	SSN	***-**-			STORM LAKE IA 50588	100.00

Criminal History Details

Has anyone listed on the Ownership page been charged or convicted of a felony offense in Iowa or any other state of the United States?
No

Has anyone listed on the Ownership page been convicted of any violation of any state, county, city, federal or foreign law? For traffic violations, only include those that are drug or alcohol related.
No

Criminal Violations

Contact Information

Contact Name: LANCE BELLINGHAUSEN

Phone Number: (712) 301-3174

Email Address: puffs.lance@gmail.com

Address: 1205 E LAKESHORE DR STORM LAKE IA 50588-2646

Attestation Information

Attestation Name: LANCE BELLINGHAUSEN

Attestation Date: 03-Mar-2026

Staff Summary

3/16/2026
Agenda Item # D.1.A.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Mayra Martinez, City Clerk

SUBJECT: **Buy Local Information**

BACKGROUND: In 2011 during a Study Session discussion Council asked staff to look at putting together some analysis information regarding the amount of purchases made locally. We have pulled that information together and a provided a summary of purchases identified in the current list of bills to be approved that are purchased locally (within the City of Storm Lake), within Buena Vista County, and outside of Buena Vista County are presented here for Council's review. This information is presented for both the City & King's Pointes' bills. As the reader reviews the information they should note the following key notes: Costs associated with any major capital project (those bid under the State of Iowa Bid Law) are excluded from the calculation Costs associated with travel is excluded from the calculation and % Costs associated with payroll is excluded from the calculation and % In some cases there is only one vendor or an item is only available from vendors outside of the City limits and/or Buena Vista County – we have not identified these some departments have fairly minor budgets and a major purchase can skew the % and or amount for a given review period (For Example: the Airport may have normally $4,000 - $6,000 in expenses until they purchase Jet Fuel or Av Gas which can be $10,000 + and as a vendor who is not local this can skew the information for that review period) Local has been determined to be has an office front in the area and based on where the office front is located for local vs. BV County (For Example: Wal-Mart is considered local since they have a store in Storm Lake even though their headquarters is not located here) As with all analytical data it is possible to interpret the numbers in a variety of ways and as we move forward we would be happy to provide further detail and or revise the way in which we show the data. Likewise, if you have any questions

or concerns please don't hesitate to contact city staff.

FISCAL IMPACT:

Breakout	**Calculated Expenses**
Buena Vista County	$8,703.78
Contract/Agreement	$409,823.20
Local	$53,868.26
Non-Local	$200,047.59
Payroll / UBRefunds, Pyrl Tax & Ins	$233,626.91
Total Expenses:	**$906,069.74**

Supporting Documents Attached

RECOMMENDATION:

ATTACHMENTS:

1. 3/16/2026 Project Report

Summary

Project Summary

Project Number	Project Name	Total Budget	Date Range Budget	Beginning Balance	Total Activity	Ending Balance	Budget Remaining
0P1.131538	Memorial Road Street & Utility Impro...	4,126,579.75	0.00	4,201,654.40	0.00	4,201,654.40	-75,074.65
22-26698	Storm Lake WTP- Well No. 21	1,709,968.50	1,709,968.50	1,687,701.74	0.00	1,687,701.74	22,266.76
22-27926	Storm Lake WTP- Well #22	2,592,061.53	2,592,061.53	2,367,990.80	0.00	2,367,990.80	224,070.73
23-092	King's Pointe Remodel/Refresh	446,537.52	0.00	421,607.89	0.00	421,607.89	24,929.63
23-29446	WWTP UV Disinfection Building	275,138.00	0.00	191,768.00	0.00	191,768.00	83,370.00
23-29447	College & 3rd St Lift Station Replacem...	1,631,615.00	1,631,615.00	1,435,498.12	133.57	1,435,631.69	195,983.31
24-31153	WWTP Blower Project (EECBG)	129,600.00	129,600.00	95,401.50	0.00	95,401.50	34,198.50
24-31751	Storm Lake WTP- Well #23	175,500.00	175,500.00	86,239.04	0.00	86,239.04	89,260.96
24-31828	WTP Prelim Engineering Report	83,000.00	83,000.00	71,819.50	4,341.25	76,160.75	6,839.25
24X.136745	Apron Expansion Improvements	285,900.00	285,900.00	65,900.00	30,000.00	95,900.00	190,000.00
FEMA HMGP (HMA) 4483	FEMA HMGP (HMA) 4483	4,632,415.50	4,632,415.50	2,580,695.68	279,300.50	2,859,996.18	1,772,419.32
IA0091	SL Elevated Water Storage- Tower #5	7,434,973.15	7,434,973.15	7,069,956.68	1,180.51	7,071,137.19	363,835.96
P11.120411	Highway 7/110 Traffic Lane/Signalizat...	4,776,040.38	0.00	5,111,149.39	0.00	5,111,149.39	-335,109.01
WRAC 25-675	Sunrise Park Boat Ramp & Area Impro...	227,700.00	227,700.00	66,875.00	0.00	66,875.00	160,825.00
	Report Total:	**28,527,029.33**	**18,902,733.68**	**25,454,257.74**	**314,955.83**	**25,769,213.57**	**2,757,815.76**

Group Summary

Group	Total Budget	Date Range Budget	Beginning Balance	Total Activity	Ending Balance	Budget Remaining
Airport Projects	285,900.00	285,900.00	65,900.00	30,000.00	95,900.00	190,000.00
ARPA Project	1,709,968.50	1,709,968.50	1,687,701.74	0.00	1,687,701.74	22,266.76
King's Pointe Resort Projects	446,537.52	0.00	421,607.89	0.00	421,607.89	24,929.63
Sanitary Sewer Projects	6,668,768.50	6,393,630.50	4,303,363.30	279,434.07	4,582,797.37	2,085,971.13
Street Construction	8,902,620.13	0.00	9,312,803.79	0.00	9,312,803.79	-410,183.66
Water Project	10,285,534.68	10,285,534.68	9,596,006.02	5,521.76	9,601,527.78	684,006.90
Water Recreation Access Cost-Share P...	227,700.00	227,700.00	66,875.00	0.00	66,875.00	160,825.00
Report Total:	**28,527,029.33**	**18,902,733.68**	**25,454,257.74**	**314,955.83**	**25,769,213.57**	**2,757,815.76**

Type Summary

Group	Total Budget	Date Range Budget	Beginning Balance	Total Activity	Ending Balance	Budget Remaining
Construction	13,556,879.15	3,932,583.50	13,296,920.08	30,133.57	13,327,053.65	229,825.50
Federal/State Grant	14,659,450.18	14,659,450.18	12,018,643.16	280,481.01	12,299,124.17	2,360,326.01
Grant	227,700.00	227,700.00	66,875.00	0.00	66,875.00	160,825.00
Professional Service Study	83,000.00	83,000.00	71,819.50	4,341.25	76,160.75	6,839.25
Report Total:	**28,527,029.33**	**18,902,733.68**	**25,454,257.74**	**314,955.83**	**25,769,213.57**	**2,757,815.76**

Staff Summary

3/16/2026
Agenda Item # D.1.B.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Scott Olesen, Building and Code Compliance Director

SUBJECT: **City Code Enforcement Summary**

BACKGROUND: 2/5/2026-3/4/2026

Abandoned Signs 11
Damaged Signs 5
Building Maintenance 4
Failure to Have Covered Trash 3
Fence/Retaining Walls 2
Nuisance/Junk 13
Parking Restricted to Hard Surface 10
Peeling Missing Paint 1
Citation 3
Resolved 9

FISCAL IMPACT: .

RECOMMENDATION: .

ATTACHMENTS:
None

Staff Summary

3/16/2026
Agenda Item # D.1.C.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Keri Navratil, City Manager

SUBJECT: **Motion To Approve Appointment Of Members To The Mayor's Civic Leadership Advisory Ad Hoc Committee**

BACKGROUND: The Mayor's Civic Leadership Advisory Committee will offer guidance and suggestions to the Mayor to help ensure both the Mayor and the City stay attentive to the needs of all residents, encourage growth, and actively support the development of future leaders.

Members will serve three (3) staggered terms.

Three (3) members serving one (1) year

- Erika Dierking
- Stephanie Alanis
- Benjamen Foglesong

Three (3) members serving two (2) years

- Taylor James
- Berselynna Butler
- Dalton Walker

Three (3) members serving three (3) years.

- Aaron Ramos
- Benjamin Davis
- Izabelle Ramos

FISCAL IMPACT: N/A

RECOMMENDATION: Motion To Approve Resolution

ATTACHMENTS:

1. Resolution No. 37-R-2025-2026 - Resolution Establishing Mayor's Civc Leadership Ad Hoc Committee

RESOLUTION NO. 37-R-2025-2026

RESOLUTION ESTABLISHING MAYOR'S CIVIC LEADERSHIP ADVISORY AD HOC COMMITTEE

WHEAREAS, a committee is to be established to offer guidance and suggestions to the Mayor to help ensure both the Mayor and the City stay attentive to the needs of all residents, encourage growth, and actively support the development of future leaders.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF STORM LAKE, that the City Council does hereby establish the Mayor's Civic Leadership Advisory Ad Hoc Committee as set forth in below:

1. The Advisory Committee will be entitled the Mayor's Civic Leadership Advisory Ad Hoc Committee and will be appointed by the Mayor and confirmed by City Council.

2. The Advisory Committee at full strength will consist of no more than nine (9) members and one member appointed by the City Manager who will serve as an ex-officio member.

3. Members will serve three (3) staggered terms with three (3) members serving one (1) year, three (3) members serving two (2) years, and three (3) members serving three (3) years.

4. The Mayor shall serve as the Chairperson of the Committee.

5. Meetings shall meet quarterly or at the direction of the Mayor. Any member who misses three (3) consecutive meetings during their term without express approval of the Mayor will be deemed to have resigned from the Advisory Committee.

PASSED AND APPROVED this 19th day of January 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Staff Summary

3/16/2026
Agenda Item # F.1.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Keri Navratil, City Manager

SUBJECT: **Motion To Approve Storm Lake Preservation Association Project Partnership Request**

BACKGROUND: A member from the Storm Lake Preservation Association will provide the Mayor and Council project information and formally request in-kind support.

FISCAL IMPACT:

RECOMMENDATION:

ATTACHMENTS:
1. LPA Request

THE LAW OFFICES OF REDENBAUGH & MOHR, P.C.

PHIL REDENBAUGH
phil@redenlaw.com

RYAN A. MOHR
ryan@redenlaw.com

BRETT C. REDENBAUGH
brett@redenlaw.com

February 20, 2026

Storm Lake City Council
Attn: Keri Navratil

e-mailed to: Navratil@stormlake.org

RE: E LAKESHORE DR. PROJECT – PARTNERSHIP

Dear Mayor and Councilmembers,

The Storm Lake Preservation Association ("LPA") has been actively raising funds to re-armor the north shoreline of Storm Lake, between Awaysis Beach and Mae Street (as shown in the attached Exhibit A). This shoreline segment, adjacent to U.S. Highway 71, continues to experience erosion and requires stabilization to protect public infrastructure and improve long-term shoreline resiliency.

Although prior grant applications have not been successful, LPA is preparing to reapply for several grant opportunities in the coming months. As part of those applications, we once again request the City's approval and partnership in moving this project forward.

Because the subject shoreline is owned by the City, we respectfully request the City's permission and guidance to complete the project. In addition, while we recognize the City's budgetary constraints, we request consideration of in-kind support to assist with project implementation.

Requested in-kind support may include:

- Staff time for agenda preparation and project coordination;
- Engineering review and oversight (no engineer drawings are required);
- Grant administration assistance;
- Temporary construction easements or right-of-way coordination, if necessary;
- Reseeding and restoration of disturbed areas; and
- Ongoing vegetation maintenance consistent with current City practices.

For grant purposes, we respectfully request Council recognition of an in-kind contribution in the range of $15,000–$50,000. We believe this level of in-kind support is achievable through documented staff time, equipment usage, and maintenance commitments, without disrupting the City's current budget framework.

In summary, LPA is requesting:

1. The City's permission to complete the shoreline re-armoring project, subject to engineering approval;
2. Authorization to submit grant applications identifying the City and LPA as project partners; and
3. Council recognition and pledge of $15,000–$50,000 in documented in-kind support during construction and for ongoing vegetation maintenance.

As you know, the City and LPA successfully partnered on the Frank Starr shoreline re-armoring project, which proved to be a strong and effective collaboration (see Exhibit B). The proposed north shoreline project is more limited in scope and should be comparatively straightforward to complete.

We appreciate your consideration and look forward to the opportunity to continue our partnership in protecting and preserving Storm Lake's shoreline.

Please let me know if the Council requires any additional information prior to consideration of this request.

Respectfully submitted,

Ryan A. Mohr

Ryan A. Mohr

Attached: Exhibits A and B

♦ 111 West Sixth Street, P.O. Box 1284, Storm Lake, Iowa 50588 ♦
♦ Telephone: 712-732-1873 Fax: 712-732-4274 ♦
♦ www.redenlaw.com ♦

EXHIBIT A (1 of 2)

E Lakeshore Dr. Project - Aerial Photo of Project Site

Re-Armoring Project is between the Red Dashes N
Current Roadside Parking Shown by Yellow
Access beaches flank the project site on the LEFT AND RIGHT!



Exhibit A (2 of 2)

The project location is tucked between Awaysis Park Beach -- which is a popular attraction for families with young children – and another natural beach east of Chautauqua Park Dr. The project will remove the existing repurposed concrete rubble—currently strewn with jagged edges and rebar (see below the actual images of the current shoreline) —and replace it with natural fieldstone to stabilize the shoreline and halt ongoing erosion. This will eliminate a major safety hazard for the thousands of swimmers, fishermen, walkers, bikers, and families who frequent the adjacent trail and nearby beaches, while restoring a natural lakeshore aesthetic.





Exhibit B (1 of 2) – Frank Starr Park before restoration

Frank Starr Shoreline Erosion



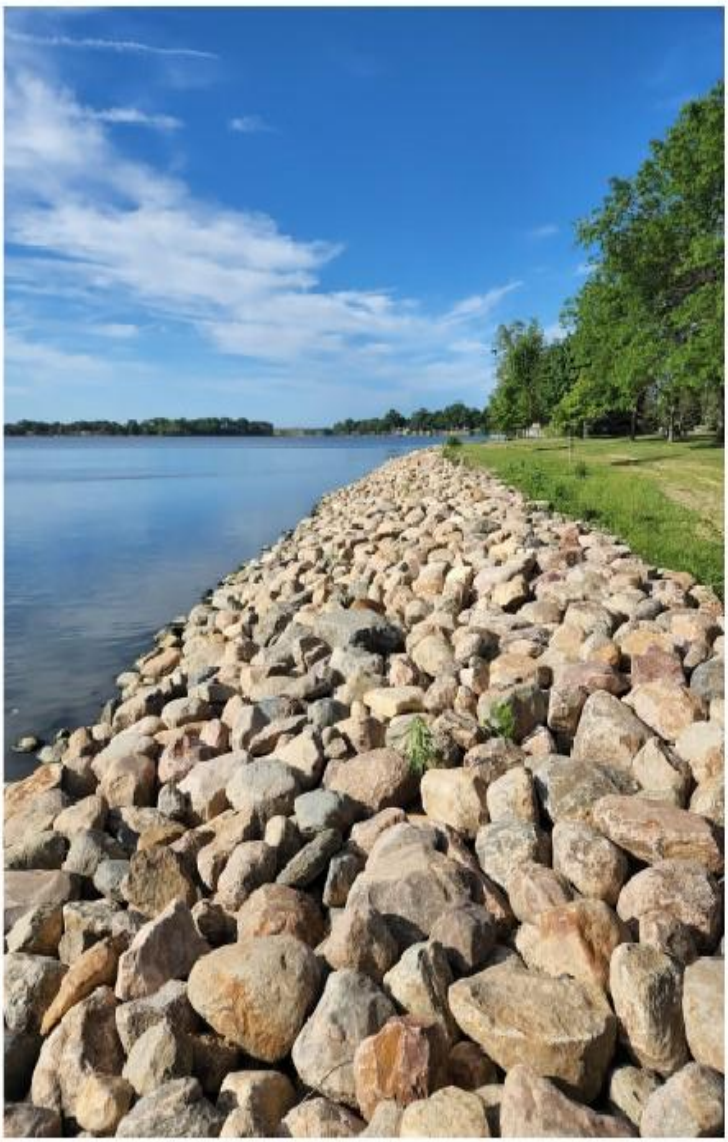






Exhibit B (2 of 2) – Frank Starr Park after restoration





Staff Summary

3/16/2026
Agenda Item # F.2.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Scott Olesen, Building and Code Compliance Director

SUBJECT: **Resolution No. 57-R-2026-2027 Setting A Public Hearing On A Request For A Zoning Map Amendment Change For 211 E 13th St.**

BACKGROUND: Cost of mailings of approximately $300.

COMPREHENSIVE PLAN RELATIONSHIP: Motion To Adopt Resolution setting A Public Hearing For The April 6, 2026 City Council Meeting at 5:00 pm on the Proposed Zoning Change for the property Located At 211 E 13th Street

POTENTIAL FINDINGS: **The Planning and Zoning Commission shall determine the following:**

1) Whether the current classification of the property to be re-zoned is valid.
The area under consideration is currently Zoned IN-2, Institutional Facilities Zoning District. The future land use map shows this as Neighborhood Mixed Use. The Comprehensive Plan on Page 26, "Provide an array of housing options to attract and retain households." There has not been an apartment-style multifamily project since 2013. This will provide a different option. It is adjacent to other R-4 properties, so it would not create an island.

2) Whether there is a need for additional land zoned for the purpose requested.
According to Table 2.1 of the Comprehensive Plan, multifamily residential land use is 2.3% of the total land use in the City and future land use is intended to increase to 6.7% as shown in Table 2.2.

3) Whether the proposed change is consistent with the current land use plan, considering such factors:

i. Whether the re-zoning would result in a population density or development which would in turn cause a demand for services and utilities in excess of the capacity planned for the area.
The current sewer and water mains in the area should be adequate to serve future development. The area is served by a 12-inch sanitary sewer main and has access to a 6-inch water mains. There is a 24-inch stormwater main across the street.

ii. Whether the re-zoning would result in the generating of traffic in excess of the capacity of existing and planned streets in the vicinity.
The streets adjacent to the project are sized for a local street and the proposed development will not exceed its capacity.

iii. Whether there is intent on the part of the applicant to develop the property diligently and within a reasonable time.
The Developer is interested in moving forward in an expeditious manner.

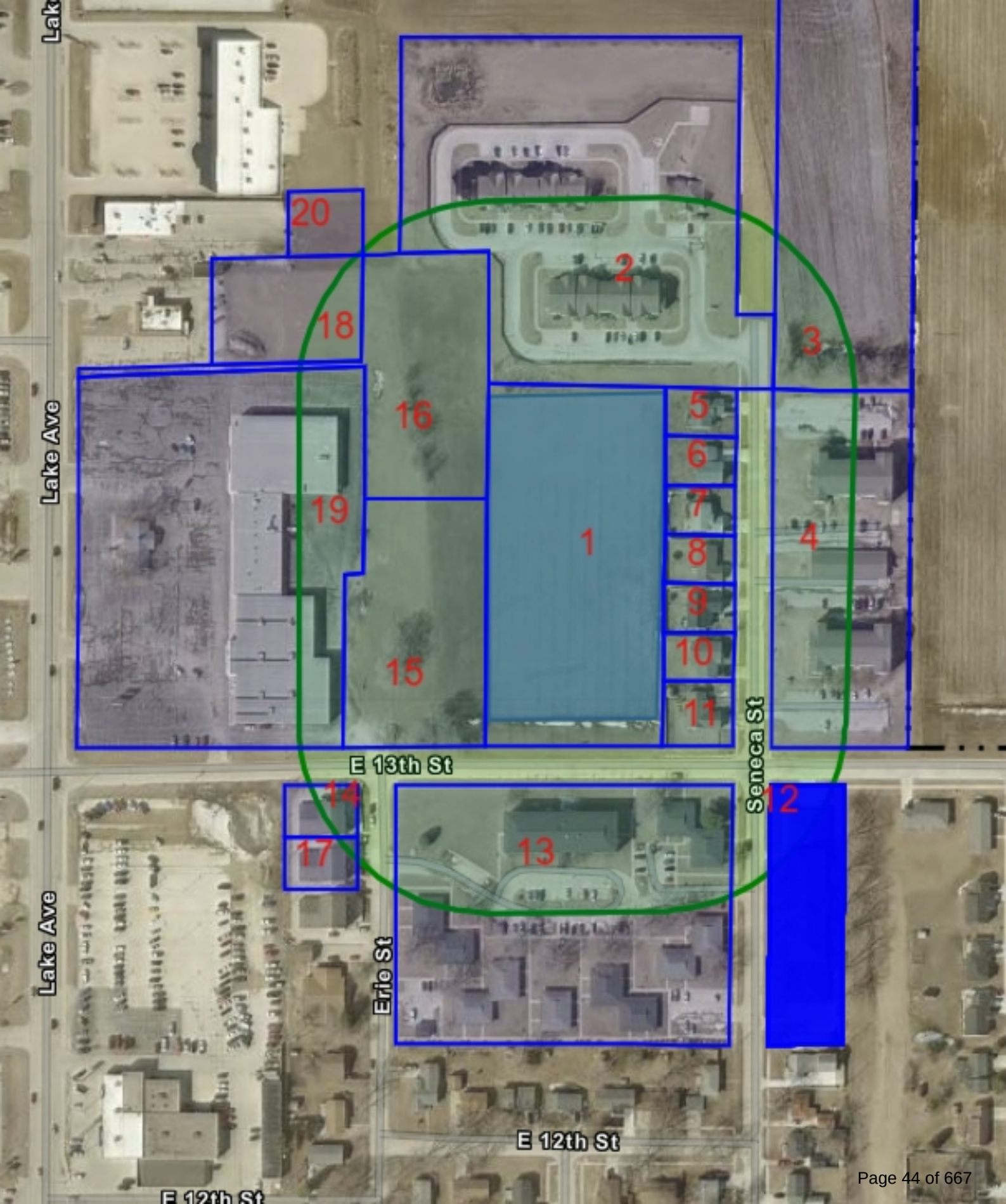
RECOMMENDATION: Tyler Spaans of Axis Property has purchased the property located at 211 E 13th Street. The lot is currently zoned IN-2 Institutional Facilities and is 3.54 acres in size. The request is to change the Zoning to R-4, High Density Residential Zoning District. The lot is currently bounded on three sides by the R-4 Zoning District. Therefore, the re-zoning would not create an island. The lot is also adjacent to the CC, Community Commercial Zoning District and these uses would not be incompatible. The areas adjacent to the subject property that are currently Zoned R-4, have mainly been developed as multifamily units.

Axis Properties intends to use the lot to build apartments if the re-zoning is approved.

This agenda item will set the public hearing for the April 6th, 2026 City Council meeting. The Planning and Zoning Commission will review this application at their March 18th, 2026 meeting and make a recommendation to the City Council.

ATTACHMENTS:
1. 211 E 13th Map

2. Application 2026-3 211 E 13th
3. Notice of Public Hearing
4. Resolution No. 57-R-2025-2026 - Resolution Scheduling Public Hearing For Ordinance Re-Zoning for 211 E 13th Street


Lake Ave
Lake Ave
Lake Ave
E 13th St
Seneca St
Erie St
E 12th St
E 12th St
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20

Zoning Ordinance Amendment Request

02/12/2026 4:00 PM (CST)

Zoning Ordinance Request

Planning & Zoning and City Council

The City of Storm Lake Zoning Ordinance Article 12 Section 1209 establishes the powers and duties of the Board of Adjustment including reviewing variance request. The applicant should submit the following information, which must accompany this application before it can be considered by the Board of Adjustment.

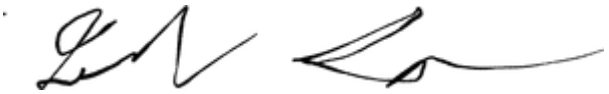
- The full legal description and local address of the property/properties.
- The present zoning classification and the requested zoning classification.
- The existing use of the property and the proposed use of the property.
- A statement of the reasons why the applicant feels the present zoning classification is no longer valid.
- The request will be heard by the Planning & Zoning Commission and the City Council at separate meetings.
- The City of Storm Lake will notify all adjoining property owners to the applicant's property of the upcoming hearing.
- The City of storm Lake will notify the applicant of the hearing date.
- The City of Storm Lake will publish a public hearing notice in a locally circulated newspaper not less than 7 and no more than 20 days prior to the meeting.
- A non refundable application fee of $300.00 is required at the time of application. The fee will not be refunded if the request is denied by the Planning and Zoning Commission or the City Council..

First Name	Tyler
Last Name	Spaans
Address	117 Central Ave SE
City	Orange City
State	IA
ZIP Code	51041
Phone Number	6052613566
Email Address	tyler.spaans@axisre.net
Type of Request	Zoning Map Amendment to the Zoning Ordinance
Property Address	211 E 13th
Full Legal Description	04-01 STORM LAKE CORP WASH GEISINGERS COMMERCIAL 2ND ADD S 550' OF LOTS 4A & 4B REPLAT OF LOTS 4 & 7 (EX COLBY DEV 1ST ADD)
Present Zoning District	IN-2-Institutional Facilities
Requested Zoning District	R-4-Residential
Why Present Zoning is no Longer Valid:	Looking to develop property
Existing Use of Property:	Bare Land

Proposed Use of Property	Multi-Family Development

Signature Agreement

By affixing your signature in the box below, you agree that such signature will be the electronic representation of your signature to be valid and binding upon you for all purposes when you (or your agent) affix below, including on legally binding contracts, just the same as a hand-written signature.

Signature	
Date	02/12/2026

Thank you for providing this information. After clicking ‘Submit’ you will receive a Submission ID number that can be retained for future reference.

You will be updated by our staff, if necessary, as your submission is processed.

Have a great day!

City of Storm Lake Use

Request Number:_____ Meeting Date:_____ Application Fee Paid:_____

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

NOTICE OF PUBLIC HEARING FOR PUBLICATION
PLANNING AND ZONING COMMISSION
CITY OF STORM LAKE

File number: **2026-3**
Date: March 18, 2026

A petition for a Zoning Map Amendment Change Request in the IN-2: Institutional Facilities Zoning District as applied to the property located at 211 E 13th Street and legally described as:

> The South Five Hundred Fifty feet (S.550'), of Lots 4A and 4B in the replat of Lot Four (4) and Seven (7), Block One (1), Geisinger's Commercial, Second Addition to the City of Storm Lake, Buena Vista County, Iowa EXCEPTING therefrom Lots One through Seven (1-7) of Colby Development's First Addition to the City of Storm Lake, Iowa

to allow for a change to R-4: High Density Residential Zoning District.

A public hearing will be held by the Planning and Zoning Commission on March 18, 2026 at 5:15 pm at which time you may appear if you so desire, either in person or by agent or attorney, in opposition to or support of the proposed changes. **You may attend in person at City Hall, by Telephone: Dial: 1-312-626-6799 or tollfree: 1-888-475-4499 Zoom Meeting ID 826 8482 2818, or by Computer: https://us06web.zoom.us/j/82684822818**.

Respectfully submitted,

Scott Olesen
Zoning Administrator

RESOLUTION NO. 57-R-2025-2026

RESOLUTION SCHEDULING A PUBLIC HEARING ON A PROPOSED ORDINANCE AMENDING THE ZONING CLASSIFICATION OF CERTAIN REAL ESTATE AT 211 E 13TH STREET IN THE CITY OF STORM LAKE

WHEREAS, the City Council of the City of Storm Lake, Iowa, is considering an ordinance to amend the zoning map classification of certain real estate of the City of Storm Lake, Iowa

WHEREAS, the City Council wishes to give members of the public the opportunity to be heard regarding the Ordinance under consideration.

NOW, THEREFORE, be it hereby resolved that the Ordinance is scheduled for public hearing at the Council Chambers at City Hall at the regular council meeting scheduled April 6, 2026 at 5:00 p.m. The City Clerk is further directed to have a copy of this Resolution, a copy of the proposed ordinance, and general notice of such public hearing published in the Storm Lake Times Pilot on a date not less than four (4) days prior to said meeting.

Passed and approved this 16th day of March, 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Staff Summary

3/16/2026
Agenda Item # F.3.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Scott Olesen, Building and Code Compliance Director

SUBJECT: **Ordinance No. 08-O-2025-2026 On A Proposed Rezoning of Six Parcels Located on Highview Drive - 3rd Reading**

BACKGROUND: A petition for a Zoning Map Amendment Change Request in the R-1 :Low Density Residential Zoning District as applied to the properties located at 706 Highview Drive, 707 Highview Drive, 710 Highview Drive, 711 Highview Drive, 714 Highview Drive and 1520 Lochedem Drive and legally described as:
Blocks Two (2), And Three (3) Of Lots One (1), Two (2), And Three (3) First Pleasant View Addition To The City Of Storm Lake, Iowa to allow for a change to IN-3 Medical Hospital Facility has been submitted by Buena Vista Regional Medical Center.

Buena Vista Regional Medical Center is planning on constructing a Clinic addition to the northeast side of the Hospital. The six lots listed above are currently zoned as R-1, Low Density Residential and Hospitals and Clinics are not a permitted use in this Zoning District. Therefore, BVRMC has made a request to re-zone the above lots to the IN-3 District which permits the requested use. These lots are adjacent to the IN-3 Zone to the south of these parcels.

The Future Land Use Map located in the Comprehensive Plan does not show these lots to be Zoned IN-3. However, Goal 1 on page 59 of the Comprehensive Plan states: "Support and expand the City's existing economic base. Work with existing businesses to maintain or expand their current sites or relocate to more appropriate sites." Goal 2: Provide adequate land and infrastructure to make locations within Storm Lake attractive to future businesses. "Ensure an adequate supply of land for business locations and target new areas for businesses in the Land Use Plan." This re-zoning will expand the

essential services that the Hospital provides on one "campus". The ability for BVRMC to expand is a benefit to the entire community and increases the economic benefits by bringing patients from other surrounding communities as well.

The Storm Lake Planning and Zoning Commission reviewed the request for rezoning from BVRMC at their February 9th, 2026 meeting and recommended the approval of the request by BVRMC to the City Council.

The Storm Lake Planning and Zoning Commission reviewed application 2026-1, the request for rezoning from BVRMC at their February 9th, 2026 meeting and recommended the approval of the request by BVRMC to the City Council.

FISCAL IMPACT: $300.00 for postal expenses.

RECOMMENDATION: Review and approve the request by BVRMC for a change in the zoning from R-1 to IN-3 on the:
~~First Reading, February 16th, 2026~~.
~~Second Reading, March 2nd, 2026~~.
Third Reading, March 16th, 2026.

ATTACHMENTS:

1. Ordinance No. 08-O-2025-2026 - Zoning Ordinance - Highview
2. 2026-1 Application
3. Highview Map

ORDINANCE NO. 08-O-2025-2026

ORDINANCE AMENDING THE ZONING ORDINANCE OF THE CITY OF STORM LAKE, IOWA BY CHANGING THE ZONING CLASSIFICATION OF CERTAIN REAL ESTATE

WHEREAS, after due notice of intended action as provided by law, the City Council of the City of Storm Lake, Iowa, has determined that the zoning ordinance of this City should be amended as set forth below; and

WHEREAS, said action has been recommended by the Planning and Zoning Commission of the City of Storm Lake, Iowa;

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Storm Lake, Iowa, that, pursuant to Article IV, Section 406 of the Zoning Ordianance of the City of Storm Lake, Iowa, the official zoning map, as referred to therein, is hereby amended as follows:

BLOCKS TWO (2), AND THREE (3) OF LOTS ONE (1), TWO (2), AND THREE (3) FIRST PLEASANT VIEW ADDITION TO THE CITY OF STORM LAKE, IOWA WITHIN THE CORPORATE LIMITS OF THE CITY OF STORM LAKE, BUENA VISTA COUNTY, IOWA,

are hereby rezoned from a district classification of R-1 (Low Density Residential) to a district classification of IN-3 (Hospital Medical Facilities)

This ordinance shall be in full force and effect from and after its passage and publication as provided by law.

PASSED AND APPROVED this 16th day of March, 2026

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Zoning Ordinance Amendment Request

01/13/2026 3:11 PM (CST)

Zoning Ordinance Request

Planning & Zoning and City Council

The City of Storm Lake Zoning Ordinance Article 12 Section 1209 establishes the powers and duties of the Board of Adjustment including reviewing variance request. The applicant should submit the following information, which must accompany this application before it can be considered by the Board of Adjustment.

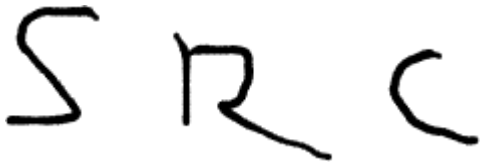
- The full legal description and local address of the property/properties.
- The present zoning classification and the requested zoning classification.
- The existing use of the property and the proposed use of the property.
- A statement of the reasons why the applicant feels the present zoning classification is no longer valid.
- The request will be heard by the Planning & Zoning Commission and the City Council at separate meetings.
- The City of Storm Lake will notify all adjoining property owners to the applicant's property of the upcoming hearing.
- The City of storm Lake will notify the applicant of the hearing date.
- The City of Storm Lake will publish a public hearing notice in a locally circulated newspaper not less than 7 and no more than 20 days prior to the meeting.
- A non refundable application fee of $300.00 is required at the time of application. The fee will not be refunded if the request is denied by the Planning and Zoning Commission or the City Council..

First Name	Buena Vista Regional Medical Center
Last Name	BVRMC
Address	1525 W 5th St
City	Storm Lake
State	IA
ZIP Code	50588
Phone Number	7122138600
Email Address	colerick.rob@bvrmc.org
Type of Request	Zoning Map Amendment to the Zoning Ordinance
Property Address	714, 711, 710, 707 & 706 Highview Drive and 1520 Lochedem Drive
Full Legal Description	TBD
Present Zoning District	R-1- Residential
Requested Zoning District	IN-3-Hospital Medical Facilities
Why Present Zoning is no Longer Valid:	Change of property use
Existing Use of Property:	Residential lot
Proposed Use of Property	Hospital usage

Signature Agreement

By affixing your signature in the box below, you agree that such signature will be the electronic representation of your signature to be valid and binding upon you for all purposes when you (or your agent) affix below, including on legally binding contracts, just the same as a hand-written signature.

Signature



Date 01/13/2026

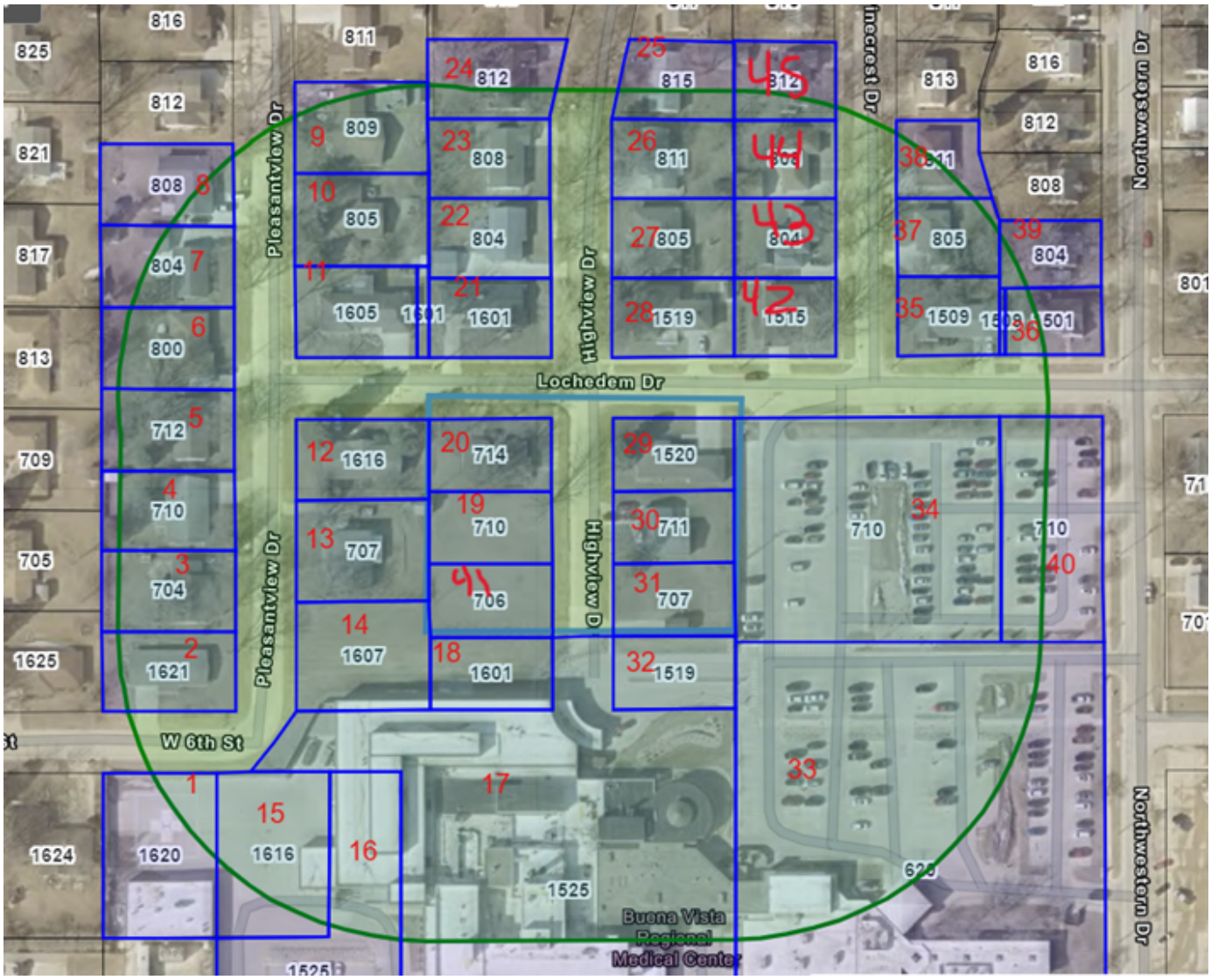
Thank you for providing this information. After clicking ‘Submit’ you will receive a Submission ID number that can be retained for future reference.

You will be updated by our staff, if necessary, as your submission is processed.

Have a great day!

City of Storm Lake Use

Request Number:_____ Meeting Date:_____ Application Fee Paid:_____


Pleasantview Dr
Highview Dr
Lochedem Dr
W 6th St
Northwestern Dr
Buena Vista Regional Medical Center
1 1620
2 1621
3 704
4 710
5 712
6 800
7 804
8 808
9 809
10 805
11 1605
12 1616
13 707
14 1607
15 1616
16
17
18 1601
19 710
20 714
21 1601
22 804
23 808
24 812
25 815
26 811
27 805
28 1519
29 1520
30 711
31 707
32 1519
33
34 710
35 1509
36 501
37 805
38
39 804
40
41 706
42 1515
43 804
45 812
1525
1624
1625
705
709
813
817
821
825
816
811
812
808
804
800
712
710
704
1621
1607
1601
1605
1616
714
710
707
706
1601
1519
1520
711
707
1519
710
710
1509
501
805
804
804
812
815
811
804
805
804
1515
812
813
816
812
808
801
71
701
620

Staff Summary

3/16/2026
Agenda Item # F.4.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Scott Olesen, Building and Code Compliance Director

SUBJECT: **Ordinance No. 09-O-2025-2026 Amending the Zoning Classification of Certain Real Estate On Oneida Street - 2nd Reading**

BACKGROUND: Buena Vista University has agreed to sell the property located at 942 Oneida Street to the Storm Lake Public School District, contingent on the property being re-zoned. The lot is currently Zoned IN-1, Public Services Zoning District. The request is to change the Zoning to the R-4, High Density Residential Zoning District.

The Storm Lake Community School District intends to use the lot for its Building Trades Program and, if approved for re-zoning, will construct a new single-family dwelling this fall.

The Storm Lake Comprehensive Plan, on page 13, lists: "2022 Strategic Plan, High/Medium Priority, Keep building houses (especially single family dwellings). Page 24 Goal 1: "Provide an array of housing options to attract and retain households, residents, and families of varying sizes, ages, diversities, cultures, incomes and needs. On page 26, Goal 1 states: "Provide an array of housing options to attract households, residents, and families of varying sizes, ages, diversities, cultures, incomes, and needs."

The Planning and Zoning Commission reviewed this request at their February 9th, 2026 meeting and recommended approval of the request for rezoning from Buena University to the Storm Lake City Council.

FISCAL IMPACT: $300.00 for postal fees.

RECOMMENDATION: Review and approve the request for rezoning from IN-1 to R-4 by

Buena University on the ~~First Reading: February 16th, 2026~~.

Second Reading, March 2nd. 2026.

Third Reading, March 16th, 2026.

ATTACHMENTS:

1. Ordinance No. 09-O-2025-2026 - Zoning Ordinance - Oneida
2. Application 2026-2
3. 2026-2 Map

ORDINANCE NO. 09-O-2025-2026

ORDINANCE AMENDING THE ZONING ORDINANCE OF THE CITY OF STORM LAKE, IOWA BY CHANGING THE ZONING CLASSIFICATION OF CERTAIN REAL ESTATE

WHEREAS, after due notice of intended action as provided by law, the City Council of the City of Storm Lake, Iowa, has determined that the zoning ordinance of this City should be amended as set forth below; and

WHEREAS, said action has been recommended by the Planning and Zoning Commission of the City of Storm Lake, Iowa;

NOW, THEREFORE, BE IT ORDAINED by the City Council of the City of Storm Lake, Iowa, that, pursuant to Article IV, Section 406 of the Zoning Ordinance of the City of Storm Lake, Iowa, the official zoning map, as referred to therein, is hereby amended as follows:

06-00 STORM LAKE CORP WASH ONEIDA ADD & LOT 7 TO THE CITY OF STORM LAKE, IOWA WITHIN THE CORPORATE LIMITS OF THE CITY OF STORM LAKE, BUENA VISTA COUNTY, IOWA,

are hereby rezoned from a district classification of IN-1 (Public Services) to a district classification of R-4 (High Density Residential)

This ordinance shall be in full force and effect from and after its passage and publication as provided by law.

PASSED AND APPROVED this 16th day of March, 2026

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Zoning Ordinance Amendment Request

01/27/2026 3:57 PM (CST)

Zoning Ordinance Request

Planning & Zoning and City Council

The City of Storm Lake Zoning Ordinance Article 12 Section 1209 establishes the powers and duties of the Board of Adjustment including reviewing variance request. The applicant should submit the following information, which must accompany this application before it can be considered by the Board of Adjustment.

- The full legal description and local address of the property/properties.
- The present zoning classification and the requested zoning classification.
- The existing use of the property and the proposed use of the property.
- A statement of the reasons why the applicant feels the present zoning classification is no longer valid.
- The request will be heard by the Planning & Zoning Commission and the City Council at separate meetings.
- The City of Storm Lake will notify all adjoining property owners to the applicant's property of the upcoming hearing.
- The City of storm Lake will notify the applicant of the hearing date.
- The City of Storm Lake will publish a public hearing notice in a locally circulated newspaper not less than 7 and no more than 20 days prior to the meeting.
- A non refundable application fee of $300.00 is required at the time of application. The fee will not be refunded if the request is denied by the Planning and Zoning Commission or the City Council..

First Name	Buena Vista University
Last Name	by Suzette Radke
Address	610 West 4th St
City	Storm Lake
State	Iowa
ZIP Code	50588
Phone Number	712-749-2044
Email Address	radkes@bvu.edu
Type of Request	Zoning Map Amendment to the Zoning Ordinance
Property Address	942 Oneida
Full Legal Description	Lot 6 Oneida Addition
Present Zoning District	IN-1-Public Services
Requested Zoning District	R-4-Residential
Why Present Zoning is no Longer Valid:	For construction of Storm Lake Community School Building Trades House
Existing Use of Property:	Bare lot
Proposed Use of Property	Single Family Residential home

Signature Agreement

By affixing your signature in the box below, you agree that such signature will be the electronic representation of your signature to be valid and binding upon you for all purposes when you (or your agent) affix below, including on legally binding contracts, just the same as a hand-written signature.

Signature 

Date 01/27/2026

Thank you for providing this information. After clicking ‘Submit’ you will receive a Submission ID number that can be retained for future reference.

You will be updated by our staff, if necessary, as your submission is processed.

Have a great day!

City of Storm Lake Use

Request Number:_____ Meeting Date:_____ Application Fee Paid:_____


N Windsor Cir
E 9th St
Seneca St
Oneida St
Oneida St
1025
1026
1021
1020
1017
1014
1015
1009
1008
1005
1002
1001
921
942
915
401
25
29
33
26
30
34
311
315
319
308
312
316
17
23
25
30
34
40
44
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25

Staff Summary

3/16/2026
Agenda Item # F.5.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Scott Olesen, Building and Code Compliance Director

SUBJECT: **Resolution No. 58-R-2025-2026 Approving And Authorizing Conveyance Of A Fee Title Interest In Real Property To The Buena Vista Regional Medical Center**

BACKGROUND: Buena Vista Regional Medical Center has requested that the City sell a portion of the Highview Drive Right of Way to allow them to construct a clinic addition to the northeast corner of the main Hospital building. The portion of the ROW to be conveyed lies south of Lochedem Drive and is adjacent to the current BVRMC property at the south end. Easements will be provided for the relocated sanitary and storm sewer pipes that will be relocated generally to the east of their current location.

The proposed parcel to be conveyed contains .29 acres and is subject to all easements of record. Public notice of the proposed sale was made and BVRMC owns all the adjoining parcels.

The public hearing for this proposed conveyance was held at the March 2nd City Council meeting.

FISCAL IMPACT: Publication and legal fees.

RECOMMENDATION: Review and adopt Resolution for the proposed conveyance of Highview Drive to BVRMC And Resolution For The Sale Of The Proposed Portion Of Highview Drive As Described In The Attached Legal Description.

ATTACHMENTS:

1. Resolution No. 58-R-2025-2026 Resolution Authorizing Conveyance of Real Property To BVRMC
2. Notice of Public Hearing for Conveyance
3. Real Estate Purchase Agreement - BVRMC - Highview Drive
4. Storm Sewer Utility Easement - BVRMC - Highview Drive
5. Sanitary Sewer Utility Easement - BVRMC - Highview Drive

RESOLUTION NO. 58-R-2025-2026

RESOLUTION APPROVING AND AUTHORIZING CONVEYANCE OF A FEE TITLE INTEREST IN REAL PROPERTY TO THE BUENA VISTA REGIONAL MEDICAL CENTER

WHEREAS, pursuant to the terms of a proposed purchase agreement (the "Purchase Agreement") between the City of Storm Lake (the "City") and the Buena Vista Regional Medical Center, the City desires to convey a fee title interest in certain City-owned property, subject to the City approving an ordinance vacating the property; and

WHEREAS, the proposed purchase includes the following real property:

Beginning at the Northeast Corner of Lot One of Block Three of said Pleasant View First Addition; thence South 88° 43' 15" East (assumed bearing), on the south line of Lochedem Drive, 59.85 feet to the northwest corner of Lot One of Block Two of said Pleasant View First Addition; thence South 01° 05' 54" West, on the west line of said Block Two of Pleasant View First Addition, 214.06 feet to the Southwest Corner of Lot Three of said Block Two of Pleasant View First Addition; thence North 88° 26' 16" West, 59.90 feet to the Southeast Corner of Lot Three of said Block Three of Pleasant View First Addition; thence North 01° 06' 40" East, on the east line of said Block Three of Pleasant View First Addition, 213.77 feet to the Point of Beginning.

Tract contains 0.29 acres and is subject to all easements of record.

WHEREAS, pursuant to notice published as required by law, this Council held a public meeting and hearing on March 2, 2026, upon the proposal to convey the real property to Buena Vista Regional Medical Center and has considered the extent of objections received from residents or property owners as to said proposal; and, accordingly the following action is now considered to be in the best interests of the City and residents thereof.

NOW THEREFORE, BE IT RESOLVED, BY THE CITY COUNCIL OF THE CITY OF STORM LAKE IN THE STATE OF IOWA:

Section 1. The proposal to convey fee title interest in real property to the Buena Vista Regional Medical Center pursuant to the terms of the Purchase Agreement is hereby approved.

Section 2. That the form and content of the Purchase Agreement, the provisions of which are incorporated herein by reference, be and the same hereby are in all respects authorized, approved and confirmed, and the Mayor and the City Clerk be and they hereby are authorized, empowered and directed to execute, attest, seal and deliver the Purchase Agreement for and on behalf of the City in substantially the form and content now before this meeting, but with such changes, modifications, additions or deletions therein as shall be approved by such officers, and that from and after the execution and delivery of the Purchase Agreement, the Mayor and the City

Clerk, or their delegates, are hereby authorized, empowered and directed to do all such acts and things and to execute all such documents as may be necessary to carry out and comply with the provisions of the Purchase Agreement as executed.

PASSED AND APPROVED this 16th day of March, 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

CERTIFICATE

STATE OF IOWA)
) SS
COUNTY OF BUENA VISTA)

I, the undersigned City Clerk of the City of Storm Lake, State of Iowa, do hereby certify that attached is a true and complete copy of the portion of the corporate records of the City showing proceedings of the Council, and the same is a true and complete copy of the action taken by the Council with respect to the matter at the meeting held on the date indicated in the attachment, which proceedings remain in full force and effect, and have not been amended or rescinded in any way; that meeting and all action thereat was duly and publicly held in accordance with a notice of public hearing and tentative agenda, a copy of which was timely served on each member of the Council and posted on a bulletin board or other prominent place easily accessible to the public and clearly designated for that purpose at the principal office of the Council (a copy of the face sheet of the agenda being attached hereto) pursuant to the local rules of the Council and the provisions of Chapter 21, Code of Iowa, upon reasonable advance notice to the public and media at least twenty-four hours prior to the commencement of the meeting as required by law and with members of the public present in attendance; I further certify that the individuals named therein were on the date thereof duly and lawfully possessed of their respective city offices as indicated therein, that no vacancy existed except as may be stated in the proceedings, and that no controversy or litigation is pending, prayed or threatened involving the incorporation, organization, existence or boundaries of the City or the right of the individuals named therein as officers to their respective positions.

WITNESS my hand and the seal of the Council hereto affixed this _____ day of _____, 2026.

_____
Mayra A. Martinez, City Clerk
City of Storm Lake, State of Iowa

(SEAL)

4919-1477-1094-1\11149-1005

(One publication required)

NOTICE OF PUBLIC HEARING OF THE CITY COUNCIL OF THE CITY OF STORM LAKE IN THE STATE OF IOWA, ON THE MATTER OF THE PROPOSAL TO CONVEY A PART OF HIGHVIEW DRIVE , AND THE HEARING THERON

PUBLIC NOTICE is hereby given that the Council of the City of Storm Lake in the State of Iowa, will hold a public hearing at its meeting on March 2, 2026, at 5:00 P.M., at Storm Lake City Council Chambers, City Hall, 620 Erie St., Storm Lake, Iowa at which meeting the Council proposes to take action on the proposal to convey a part of Highview Drive to Buena Vista Regional Medical Center property owned by the City, which is legally described as follows:

Beginning at the Northeast Corner of Lot One of Block Three of said Pleasant View First Addition; thence South 88° 43' 15" East (assumed bearing), on the south line of Lochedem Drive, 59.85 feet to the northwest corner of Lot One of Block Two of said Pleasant View First Addition; thence South 01 ° 05' 54" West, on the west line of said Block Two of Pleasant View First Addition, 214.06 feet to the Southwest Corner of Lot Three of said Block Two of Pleasant View First Addition; thence North 88° 26' 16" West, 59.90 feet to the Southeast Corner of Lot Three of said Block Three of Pleasant View First Addition; thence North 0 1 ° 06' 40" East, on the east line of said Block Three of Pleasant View First Addition, 213. 77 feet to the Point of Beginning.

Tract contains 0.29 acres and is subject to all easements of record.

The conveyance may be subject to conditions as may be stated either in the resolution of the City council, or documents entered into between parties.

At the time set for the public hearing , interested individuals will be given the opportunity to express their views, both orally and in writing, on the proposed conveyance. After the public hearing , the Council may make a final determination to accept or reject the [proposal as submitted, or upon condition that certain terms be changed, or the Council may defer actions on the proposal until a subsequent meeting.

This notice is given by order of the City Council of the City of Storm Lake in the State of Iowa, as provided by Section 364.7 of the City Code of Iowa.

Dated this 2 day of February, 2026.

_____
Mayra Martinez, City Clerk
City of Storm Lake in the State of Iowa

(End of Notice)

Real Estate Purchase Agreement

This Real Estate Purchase Agreement ("Agreement") is dated _____, 2026 and is between the City of Storm Lake, Iowa (the "Seller") and Buena Vista Regional Medical Center (the "Buyer").

WHEREAS, Seller owns a portion of property, which was vacated by Ordinance No. _____ of the City Council on _____, 2026, which is situated within the City of Storm Lake, legally described as follows:

> Beginning at the Northeast Corner of Lot One of Block Three of said Pleasant View First Addition; thence South 88° 43' 15" East (assumed bearing), on the south line of Lochedem Drive, 59.85 feet to the northwest corner of Lot One of Block Two of said Pleasant View First Addition; thence South 01° 05' 54" West, on the west line of said Block Two of Pleasant View First Addition, 214.06 feet to the Southwest Corner of Lot Three of said Block Two of Pleasant View First Addition; thence North 88° 26' 16" West, 59.90 feet to the Southeast Corner of Lot Three of said Block Three of Pleasant View First Addition; thence North 01° 06' 40" East, on the east line of said Block Three of Pleasant View First Addition, 213.77 feet to the Point of Beginning.
> Tract contains 0.29 acres and is subject to all easements of record.
>
> ; and

WHEREAS, Buyer owns all lots adjacent to the above-described property and uses said lots for hospital purposes, and desires to purchase and maintain the City-owned property described above as part of an expansion project, and Seller is willing to sell it to Buyer subject to certain terms and conditions; and

WHEREAS, the parties have hereinafter outlined the responsibilities of each party as it relates to this transaction.

The parties agree as follows:

1. **Purchase and Sale of Property.** The Seller shall convey to the Buyer a 0.29 acre site as legally described and depicted in the plat of survey attached as **Exhibit A** (the "Property"). The Seller shall convey the Property together with any easements and servient estates appurtenant thereto and subject to any (i) zoning restrictions, (ii) easements of record acceptable to each other, and (iii) restrictive covenants of record.

2. **Purchase Price**. The Purchase Price shall be $21,645.52 (the "Purchase Price"). The Buyer shall pay the Purchase Price in cash on the Closing Date with proper adjustments as provided in this agreement.

3. **Real Estate Taxes**. The Buyer acknowledges that the Seller is a tax-exempt government entity, and the Buyer agrees that the Seller shall not be required to pay any real estate

taxes or to give the Buyer a credit for prorated real estate taxes at Closing. The Buyer shall pay all real estate taxes assessed against the Property prior to Closing.

4. **Special Assessments**. The Seller shall pay all special assessments which are a lien on the Property as of the Closing Date. Any preliminary or deficiency assessment which cannot be discharged by payment shall be paid by Seller through an escrow account with sufficient funds to pay such liens when payable, with any unused funds returned to Seller. The Buyer shall pay all other special assessments.

5. **Insurance**. Seller shall bear the risk of loss to the Property until Closing. In the event of material damage prior to Closing, Buyer may elect to terminate this Agreement without penalty.

6. **Closing and Possession**. Closing shall occur on a date mutually agreed to between the parties on or before April 24, 2026 (the "Closing Date"). The Seller shall deliver possession of the Property to the Buyer on the Closing Date. This transaction shall be considered closed upon: (i) the filing of all title transfer documents, (ii) the Seller's receipt of all funds due from the Buyer under this Agreement, and (iii) Seller's receipt of a sanitary sewer utility and storm sewer utility easement executed by Buyer, as depicted in the attached **Exhibit B** ("Closing").

7. **Seller's Closing Costs**. Seller shall pay the following costs associated with this transaction: (i) Seller's attorney's fees or other professional fees incurred by Seller in connection with this transaction; (ii) transfer taxes, if any; (iii) recording fees necessary to cure title defects identified under section 12 of this Agreement; (iv) all other costs customarily paid by sellers of real estate in Iowa.

8. **Buyer's Closing Costs**. Buyer shall pay the following costs associated with this transaction: (i) the Purchase Price under section 2 of this Agreement; (ii) Buyer's attorney's fees or other professional fees incurred by Buyer in connection with this transaction; (iii) the cost to update the abstract under section 12 of this Agreement; (iv) the closing or settlement fee charged by a closing or title agent; (v) the recording fee to record the deed transferring title to Buyer; (vi) all other costs customarily paid by buyers of real estate in Iowa.

9. **Fixtures**. Included with the Property shall be all fixtures that integrally belong to, are specifically adapted to, or are a part of the real estate, whether attached or detached.

10. **Inspection and Disclaimer of Warranties.** The Buyer acknowledges and agrees that the Seller is not making and has not at any time made any warranties or representations of any kind or character, express or implied, with respect to the Property, including, but not limited to, any warranties or representations as to habitability, merchantability, fitness for a particular purpose, title, leasing, zoning, tax consequences, latent or patent physical condition, utilities, operating history or projections, valuation, governmental approvals, or the compliance of the Property with laws. The Buyer represents to the Seller that the Buyer has conducted, or will conduct prior to Closing, any investigations of the Property, including its physical and environmental condition, as the Buyer deems necessary to satisfy itself as to the condition of the Property. The Buyer acknowledges and agrees that at the Closing, the Buyer shall accept the

Property "as is, where is, with all faults." At the Closing, the Buyer shall be deemed to have released the Seller from any claims, known or unknown, which the Buyer might have asserted or alleged against the Seller arising out of any latent or patent physical condition of the Property, violations of any applicable laws, and any other matters regarding the Property. The Buyer acknowledges that the compensation to be paid to the Seller for the Property considers that the Property is being sold subject to the provisions of this section 10.

11. **Abstract and Title**. Buyer, at Buyer's expense, shall promptly obtain an abstract of title to the Property and deliver it to Buyer's attorney to examine and render a title opinion. If the title opinion does not show marketable title in Seller in conformity with this agreement, Iowa law, and the title standards of the Iowa State Bar Association, the Seller shall reasonably cooperate with the Buyer to remedy any defects to title. If the Seller is unable to cure the defects to title by the Closing Date, then either party may terminate this Agreement by giving 10 calendar days written notice to the other party.

12. **Deed**. Upon payment of the Purchase Price, Seller shall convey the Property to Buyer by Special Warranty Deed , free and clear of all liens, restrictions, and encumbrances except as permitted by this Agreement.

13. **Remedies of the Parties.**

a. If the Seller breaches, repudiates, or otherwise fails to timely perform this Agreement, the Buyer may elect, as its remedy, to (i) terminate this Agreement and recover from Seller all of Buyer's actual, reasonable out of pocket costs and expenses incurred in connection with this transaction, not to exceed $5,000 or (ii) pursue specific performance of this Agreement or any other remedy available at law or in equity.

b. If the Buyer breaches, repudiates, or otherwise fails to timely perform this Agreement, the Seller may elect to (i) terminate this Agreement by written notice to the Buyer, or (ii) to enforce this Agreement by any available remedy, including specific performance.

c. The prevailing party in any dispute arising out of this Agreement shall be entitled to obtain judgment for its reasonable costs and attorney fees.

14. **Notice.** For a notice under this Agreement to be valid, it must be in writing and must be delivered either (i) in person, (ii) via certified mail to the address noted below, or (iii) via email if the receiving party consents to receiving notice via email. All notices shall be effective upon receipt.

If to the Seller:
City of Storm Lake, Iowa
Attn: City Manager
620 Erie St.
Storm Lake, IA 50322

If to the Buyer:
Buena Vista Regional Medical Center
Attn: CEO
1525 W 5th Street
Storm Lake, IA 50588

15. **Time of the Essence.** In the performance of each part of this Agreement, time shall be of the essence.

16. **Choice of Law.** All claims relating to this Agreement shall be governed by the laws of the State of Iowa without regard to principles of conflicts of law.

17. **Forum.** The sole and exclusive jurisdiction for any action arising from or relating to this Agreement shall be in the state or federal courts located in the county in which the Property is located.

18. **Assignment.** Neither party may transfer to any other person (i) any discretion granted under this Agreement, (ii) any right under this Agreement, (iii) any remedy under this Agreement, or (iv) any obligation imposed under this Agreement.

19. **Survival.** This agreement shall survive the Closing.

20. **Entire Agreement.** This Agreement constitutes the entire understanding between the parties with respect to the subject matter of this agreement and supersedes all other agreements, whether written or oral, between the parties.

21. **Modification.** No amendment of this Agreement will be effective unless it is in writing and signed by both parties.

22. **Waiver.** No waiver under this Agreement will be effective unless it is in writing and signed by the party granting the waiver.

23. **Severability.** The parties agree that if a dispute between the parties arises out of this Agreement, they would want the court to interpret this Agreement as follows:

a. With respect to any provision that it holds to be unenforceable, by modifying that provision to the minimum extent necessary to make it enforceable or, if that modification is not permitted by law, by disregarding that provision;

b. If an unenforceable provision is modified or disregarded in accordance with this section, by holding that the rest of this Agreement will remain in effect;

c. By holding that any unenforceable provision will remain as written in any circumstances other than those in which the provision is held to be unenforceable; and

d. If modifying or disregarding the unenforceable provision would result in failure of an essential purpose of this agreement, by holding the entire Agreement unenforceable.

24. **Certification**. Buyer and Seller each certify that they are not acting, directly or

indirectly, for or on behalf of any person, group, entity or nation named by any Executive Order or the United States Treasury Department as a terrorist, "Specially Designated National and Blocked Person" or any other banned or blocked person, entity, nation or transaction pursuant to any law, order, rule or regulation that is enforced or administered by the Office of Foreign Assets Control; and are not engaged in this transaction, directly or indirectly on behalf of, any such person, group, entity or nation. Each party hereby agrees to defend, indemnify and hold harmless the other party from and against any and all claims, damages, losses, risks, liabilities and expenses (including attorney's fees and costs) arising from or related to a breach of the foregoing certification.

25. **Counterpart and Electronic Signatures.** This Agreement may be executed in two or more counterparts, each of which shall be deemed an original but all of which together shall constitute one and the same instrument. Facsimile and PDF signatures shall be given the same effect as original signatures.

26. **Seller Representations.** Seller represents and warrants to Buyer as of the date of this Agreement and as of the Closing Date that:

a. Seller is a municipal corporation and authority to enter into this Agreement is subject to the approval of the Storm Lake City Council;

b. Closing is expressly conditioned upon the vacation of the Property in accordance with all legal requirements by the City of Storm Lake City Council;

c. To Seller's knowledge, no hazardous substances have been released on the Property during Seller's ownership in violation of applicable law.

[The parties have signed this agreement on the following page]

The parties are signing this Agreement as of the date stated in the introductory clause.

SELLER:
CITY OF STORM LAKE, IOWA

By: _____
Mayor

By: _____
City Clerk

BUYER:
BUENA VISTA REGIONAL MEDICAL CENTER

By: _____

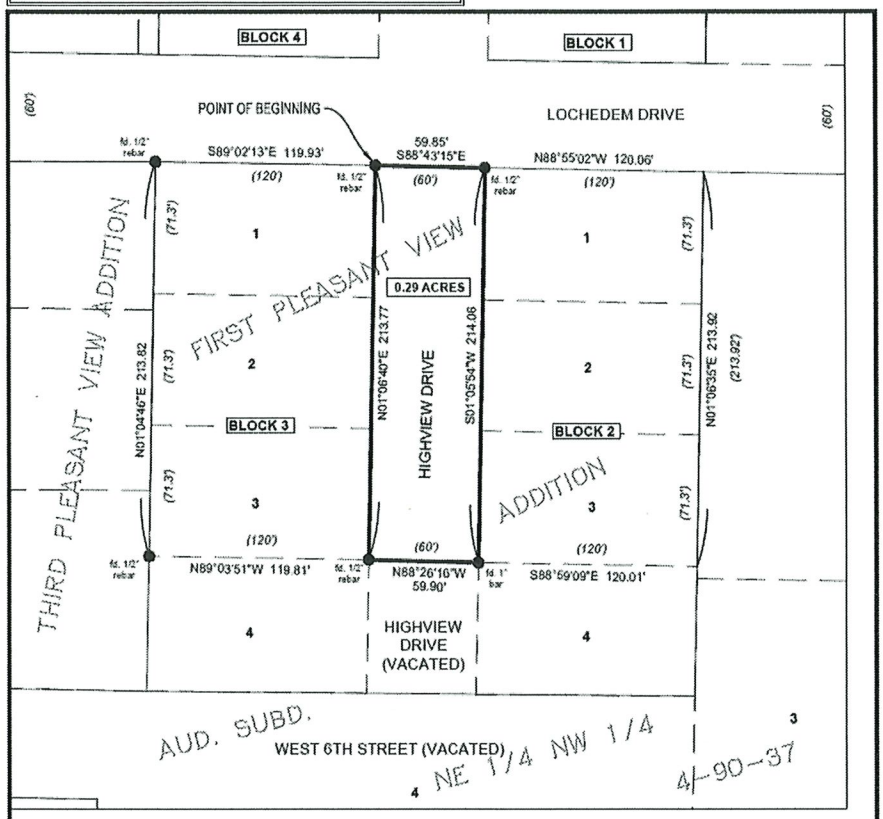
Its: CEO

Exhibits

Exhibit A – Depiction of the Property
Exhibit B – Easement Plat

Exhibit A – Plat of Survey

INDEX LEGEND
PLAT OF SURVEY
CITY: STORM LAKE
COUNTY: BUENA VISTA
SUBDIVISION/ADDITION NAME: PLEASANT VIEW FIRST ADDITION
LOT: PT. HIGHVIEW DRIVE
BLOCK: 2 & 3
PROPRIETOR: CITY OF STORM LAKE
SURVEY PREPARED FOR: EARL STANLEY - BVRMC
SURVEY PREPARED BY: JOSHUA A. WERNER, IOWA PLS NO. 29451
COMPANY NAME: ISG
OFFICE ADDRESS: 1725 N. LAKE AVE, STORM LAKE, IA 50588
PHONE: 712-732-7745



DESCRIPTION

A PART OF HIGHVIEW DRIVE LOCATED IN PLEASANT VIEW FIRST ADDITION TO THE CITY OF STORM LAKE, BUENA VISTA COUNTY, IOWA, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

Beginning at the Northeast Corner of Lot One of Block Three of said Pleasant View First Addition; thence South 88° 43' 15" East (assumed bearing), on the south line of Lochedem Drive, 59.85 feet to the northwest corner of Lot One of Block Two of said Pleasant View First Addition; thence South 01° 05' 54" West, on the west line of said Block Two of Pleasant View First Addition, 214.06 feet to the Southwest Corner of Lot Three of said Block Two of Pleasant View First Addition; thence North 88° 26' 16" West, 59.90 feet to the Southeast Corner of Lot Three of said Block Three of Pleasant View First Addition; thence North 01° 06' 40" East, on the east line of said Block Three of Pleasant View First Addition, 213.77 feet to the Point of Beginning.

Tract contains 0.29 acres and is subject to all easements of record.

N

Scale: 1"= 60'

LEGEND OF SYMBOLS/ABBREVIATIONS

- ● CORNERS FOUND (monuments as described)
- ○ CORNERS SET (1/2" rebar w/ppc no. 29451)
- ◆ CORNERS SET (magnetic nail)

100.00' MEASURED
(100.00') RECORDED AS
ppc PURPLE PLASTIC CAP

I hereby certify that this land surveying document was prepared by me and the related survey work was performed by me or under my direct personal supervision and that I am a duly licensed Land Surveyor under the laws of the State of Iowa.

JOSHUA A. WERNER 29451 IOWA

JOSHUA A. WERNER Date: 11/4/2025
License Number 29451
My License renewal date is 12/31/2026
Pages covered by this seal 1

ISG

PN: 25-32576
Sheet 1 OF 1
Surveyed by: BAM
Survey Date: 04/23/25
Rev. Date: / /

EXHIBIT B

[INSERT EASEMENTS]

4908-0462-3763-1\11149-1005

STORM SEWER UTILITY EASEMENT

Recorder's Cover Sheet

Preparer Information:
Kristine Stone
Ahlers & Cooney, PC
100 Court Ave Ste 600
Des Moines IA 50309

Return Document To:
City of Storm Lake, Iowa
P.O. Box 1086
620 Erie Street
Storm Lake, IA 50588

Grantor: Buena Vista Regional Medical Center

Grantee: City of Storm Lake, Iowa

Legal Description: See Page 2

Document or instrument number of previously recorded documents:

STORM SEWER UTILITY EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS:

That BUENA VISTA REGIONAL MEDICAL CENTER (hereinafter called "Grantor") in consideration of the sum of One Dollar ($1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged by the Grantor, does hereby sell, grant, and convey unto the CITY OF STORM LAKE, IOWA, a municipal corporation, (hereinafter called "City"), a permanent easement and right-of-way for storm sewer and overland stormwater flowage purposes over, under, through, on, within, and across the following described real estate (the "Easement Area"):

See attached Easement Plat

for the purpose of the City constructing, reconstructing, repairing, replacing, grading, improving, inspecting, and maintaining storm sewer infrastructure and overland stormwater flowage, together with necessary appurtenances thereto.

This Easement is subject to the following terms and conditions:

1. **ERECTION OF STRUCTURES PROHIBITED**. Grantor and its successors and assigns shall not erect any structure, building, or fence over or within the Easement Area without obtaining the prior written approval of the City, which approval shall not be unreasonably withheld, conditioned, or delayed. Notwithstanding the foregoing, Grantor may use the surface of the Easement Area for paving, parking, drive lanes, sidewalks, landscaping (excluding trees), and similar improvements that do not materially interfere with the City's use of the Easement Area for sanitary sewer purposes.

2. **OBSTRUCTIONS PROHIBITED**. Without obtaining the prior written approval of the City, which approval shall not be unreasonably withheld, conditioned, or delayed. Grantor and its successors and assigns shall not erect or cause to be placed on the Easement Area any structure, material, device, thing, matter, or other obstruction, nor plant or permit to grow any vegetation or plant which could obstruct, impede, or otherwise interfere with the operations or maintenance of the storm sewer infrastructure in the Easement Area.

3. **MAINTENANCE OF EASEMENT AREA**. Grantor and its successors and assigns shall keep and preserve the Easement Area in good repair and condition at all times, and shall not plant nor permit to grow any trees or other vegetative growth within the Easement Area which might reasonably be expected to obstruct or impair the City's use and enjoyment of the Easement Area for the purposes described herein.

4. **CHANGE IN GRADE PROHIBITED**. Grantor and its successors and assigns shall not change the grade, elevation, or contour of any part of the Easement Area without

obtaining the prior written consent of the City, which consent shall not be unreasonably withheld, conditioned, or delayed.

5. **RIGHT OF ACCESS**. City shall have the right of access to the Easement Area from Grantor's property adjacent to the Easement Area and have all rights of ingress and egress reasonably necessary for the use and enjoyment of the Easement Area as herein described, including, but not limited to, the right to remove any unauthorized obstructions, structures, planting, or material placed or erected on the Easement Area and the right to improve, repair, and maintain the Easement Area in whatever manner necessary consistent with its purpose. Except in the case of an emergency posing an immediate threat to public health or safety, the City shall provide reasonable advance notice to Grantor prior to entering the Easement Area and shall coordinate access with Grantor so as to minimize disruption to hospital operations. The City shall use reasonable efforts to utilize existing driveways and access routes designated by Grantor.

6. **RELOCATION.** Grantor shall have the right, upon reasonable prior written notice to the City, to relocate the storm sewer facilities within or outside the Easement Area at Grantor's sole cost and expense, provided that (a) the relocation is approved by the City, which approval shall not be unreasonably withheld, conditioned, or delayed, (b) the relocated facilities provide equivalent utility and service, and (c) all applicable codes and standards are satisfied. Upon completion of the relocation and acceptance by the City, the City shall vacate the original Easement Area no longer in use.

7. **ABANDONMENT.** In the event the sanitary sewer facilities within the Easement Area are permanently abandoned or removed and no longer used for public utility purposes, the City shall vacate this Easement within a reasonable time following written request by Grantor.

8. **EASEMENT RUNS WITH LAND**. This Easement shall be perpetual, permanent and runs with the land and shall be binding on Grantor and on Grantor's successors and assigns.

9. **PROPERTY TO BE RESTORED**. Upon completion of any work within the Easement Area, the City shall restore the Easement Area and any adjacent areas disturbed by the City to substantially the same condition that existed immediately prior to such work. However, the City shall have no obligation to restore any Grantor-installed improvements within the Easement Area which were installed after the effective date of this Easement.

10. **LIABILITY**. Except as may be caused by the negligent acts or omissions of the City, its employees, agents, or its representatives, the City shall not be liable for injury or property damage occurring in or to the Easement Area, the property abutting said Easement Area, nor for property damage to any improvements or obstructions thereon resulting from the City's exercise of this Easement. Grantor and its successors and assigns agree to indemnify and hold the City, its employees, agents and representatives

harmless against any loss, damage, injury, or any claim or lawsuit for loss, damage, or injury arising out of or resulting from the negligent acts or omissions of Grantor or its employees, agents, or representatives.

11. **EASEMENT BENEFIT**. This Easement shall be for the benefit of the City, its successors and assigns, and its permittees and licensees.

12. **APPROVAL**. This Easement shall not be binding until it has received the final approval and acceptance by the governing body of the City.

Grantor does **HEREBY COVENANT** with the City that Grantor holds said real estate described in this Easement by title in fee simple; that Grantor has good and lawful authority to convey the same; and said Grantor covenants to **WARRANT AND DEFEND** the said premises against the lawful claims of all persons whomsoever.

Each of the undersigned hereby relinquishes all rights of dower, homestead and distributive share, if any, in and to the interests conveyed by this Easement.

Words and phrases herein including acknowledgment hereof shall be construed as in the singular or plural number, and as masculine or feminine gender, according to the context.

GRANTOR: BUENA VISTA REGIONAL MEDICAL CENTER

By: _____ (Signature)

Name: Steven R. Cokrue (Print Name)

Its: CEO (Title)

STATE OF IOWA)
) ss
COUNTY OF _____)

This record was acknowledged before me on this _____ day of _____, 2026, by _____, as _____ of Buena Vista Regional Medical Center.

_____
Notary Public in and for said State

ACCEPTANCE BY CITY

STATE OF IOWA, COUNTY OF BUENA VISTA, ss:

I, _____, City Clerk of the City of Storm Lake, Iowa, do hereby certify that the within and foregoing Storm Sewer Utility Easement was duly approved and accepted by the City Council of said City of Storm Lake by Resolution No. _____ passed on the _____ day of _____, 2026, and this certificate is made pursuant to authority contained in said Resolution.

Signed this _____ day of _____, 2026.

_____
City Clerk

(Seal)

EASEMENT PLAT

4901-2010-0243-1\11149-1005

SANITARY SEWER UTILITY EASEMENT

Recorder's Cover Sheet

Preparer Information:
Kristine Stone
Ahlers & Cooney, PC
100 Court Ave Ste 600
Des Moines IA 50309

Return Document To:
City of Storm Lake, Iowa
P.O. Box 1086
620 Erie Street
Storm Lake, IA 50588

Grantor: Buena Vista Regional Medical Center

Grantee: City of Storm Lake, Iowa

Legal Description: See Page 2

Document or instrument number of previously recorded documents:

SANITARY SEWER UTILITY EASEMENT

KNOW ALL PERSONS BY THESE PRESENTS:

That BUENA VISTA REGIONAL MEDICAL CENTER (hereinafter called "Grantor") in consideration of the sum of One Dollar ($1.00) and other good and valuable consideration, the receipt of which is hereby acknowledged by the Grantor, does hereby sell, grant, and convey unto the CITY OF STORM LAKE, IOWA, a municipal corporation, (hereinafter called "City"), a permanent easement and right-of-way for sanitary sewer purposes over, under, through, on, within, and across the following described real estate (the "Easement Area"):

See attached Easement Plat

for the purpose of the City constructing, reconstructing, repairing, replacing, grading, improving, inspecting, and maintaining sanitary sewer infrastructure, together with necessary appurtenances thereto.

This Easement is subject to the following terms and conditions:

1. **ERECTION OF STRUCTURES PROHIBITED**. Grantor and its successors and assigns shall not erect any structure, building, or fence over or within the Easement Area without obtaining the prior written approval of the City, which approval shall not be unreasonably withheld, conditioned, or delayed. Notwithstanding the foregoing, Grantor may use the surface of the Easement Area for paving, parking, drive lanes, sidewalks, landscaping (excluding trees), and similar improvements that do not materially interfere with the City's use of the Easement Area for sanitary sewer purposes.

2. **OBSTRUCTIONS PROHIBITED**. Without obtaining the prior written approval of the City, which approval shall not be unreasonably withheld, conditioned, or delayed, Grantor and its successors and assigns shall not erect or cause to be placed on the Easement Area any structure, material, device, thing, matter, or other obstruction, nor plant or permit to grow any vegetation or plant which could obstruct, impede, or otherwise interfere with the operations or maintenance of the sanitary sewer infrastructure in the Easement Area.

3. **MAINTENANCE OF EASEMENT AREA**. Grantor and its successors and assigns shall keep and preserve the Easement Area in good repair and condition at all times, and shall not plant nor permit to grow any trees or other vegetative growth within the Easement Area which might reasonably be expected to obstruct or impair the City's use and enjoyment of the Easement Area for the purposes described herein.

4. **CHANGE IN GRADE PROHIBITED**. Grantor and its successors and assigns shall not change the grade, elevation, or contour of any part of the Easement Area without

obtaining the prior written consent of the City, which consent shall not be unreasonably withheld, conditioned, or delayed.

5. **RIGHT OF ACCESS**. City shall have the right of access to the Easement Area from Grantor's property adjacent to the Easement Area and have all rights of ingress and egress reasonably necessary for the use and enjoyment of the Easement Area as herein described, including, but not limited to, the right to remove any unauthorized obstructions, structures, planting, or material placed or erected on the Easement Area and the right to improve, repair, and maintain the Easement Area in whatever manner necessary consistent with its purpose. Except in the case of an emergency posing an immediate threat to public health or safety, the City shall provide reasonable advance notice to Grantor prior to entering the Easement Area and shall coordinate access with Grantor so as to minimize disruption to hospital operations. The City shall use reasonable efforts to utilize existing driveways and access routes designated by Grantor.

6. **RELOCATION.** Grantor shall have the right, upon reasonable prior written notice to the City, to relocate the sanitary sewer facilities within or outside the Easement Area at Grantor's sole cost and expense, provided that (a) the relocation is approved by the City, which approval shall not be unreasonably withheld, conditioned, or delayed, (b) the relocated facilities provide equivalent utility and service, and (c) all applicable codes and standards are satisfied. Upon completion of the relocation and acceptance by the City, the City shall vacate the original Easement Area no longer in use.

7. **ABANDONMENT.** In the event the sanitary sewer facilities within the Easement Area are permanently abandoned or removed and no longer used for public utility purposes, the City shall vacate this Easement within a reasonable time following written request by Grantor.

8. **EASEMENT RUNS WITH LAND**. This Easement shall be perpetual, permanent and runs with the land and shall be binding on Grantor and on Grantor's successors and assigns.

9. **PROPERTY TO BE RESTORED**. Upon completion of any work within the Easement Area, the City shall restore the Easement Area and any adjacent areas disturbed by the City to substantially the same condition that existed immediately prior to such work. However, the City shall have no obligation to restore any Grantor-installed improvements within the Easement Area which were installed after the effective date of this Easement.

10. **LIABILITY**. Except as may be caused by the negligent acts or omissions of the City, its employees, agents, or its representatives, the City shall not be liable for injury or property damage occurring in or to the Easement Area, the property abutting said Easement Area, nor for property damage to any improvements or obstructions thereon resulting from the City's exercise of this Easement. Grantor and its successors and assigns agree to indemnify and hold the City, its employees, agents and representatives

harmless against any loss, damage, injury, or any claim or lawsuit for loss, damage, or injury arising out of or resulting from the negligent acts or omissions of Grantor or its employees, agents, or representatives.

11. **EASEMENT BENEFIT**. This Easement shall be for the benefit of the City, its successors and assigns, and its permittees and licensees.

12. **APPROVAL**. This Easement shall not be binding until it has received the final approval and acceptance by the governing body of the City.

Grantor does **HEREBY COVENANT** with the City that Grantor holds said real estate described in this Easement by title in fee simple; that Grantor has good and lawful authority to convey the same; and said Grantor covenants to **WARRANT AND DEFEND** the said premises against the lawful claims of all persons whomsoever.

Each of the undersigned hereby relinquishes all rights of dower, homestead and distributive share, if any, in and to the interests conveyed by this Easement.

Words and phrases herein including acknowledgment hereof shall be construed as in the singular or plural number, and as masculine or feminine gender, according to the context.

GRANTOR: BUENA VISTA REGIONAL MEDICAL CENTER

By: _____ (Signature)

Name: Steven R. Calvick (Print Name)

Its: CEO (Title)

STATE OF IOWA)
) ss
COUNTY OF _____)

This record was acknowledged before me on this _____ day of _____, 2026, by _____, as _____ of Buena Vista Regional Medical Center.

_____
Notary Public in and for said State

ACCEPTANCE BY CITY

STATE OF IOWA, COUNTY OF BUENA VISTA, ss:

I, _____, City Clerk of the City of Storm Lake, Iowa, do hereby certify that the within and foregoing Sanitary Sewer Utility Easement was duly approved and accepted by the City Council of said City of Storm Lake by Resolution No. _____ passed on the _____ day of _____, 2026, and this certificate is made pursuant to authority contained in said Resolution.

Signed this _____ day of _____, 2026.

_____
City Clerk

(Seal)

EASEMENT PLAT

4924-7094-2099-1\11149-1005

Staff Summary

3/16/2026
Agenda Item # F.6.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Ron Covert, Public Works Director

SUBJECT: **Resolution No. 59-R-2025-2026 Approving Change Order No. 5 for the New Production Well No.22 Project**

BACKGROUND: New Production Well No.22 is under construction by King Construction and nearing final completion. The original contract for this project included seeding and restoration of the existing vegetation on the site. The City now has a construction schedule for Production Well No. 23 starting in the summer of 2026 on the same site. Change Order No. 5 removes seeding from the Production Well 22 Project. The silt fence currently on the site will remain in place for runoff protection.

FISCAL IMPACT: Deduction of $2,500.00 from project cost.

RECOMMENDATION: Adopt Resolution Approving Change Order No. 5 for the New Production Well No. 22 Project

ATTACHMENTS:

1. Change Order No 5
2. Resolution No. 59-R-2025-2026 Approving Change Order No. 5 Production Well No. 22

EJCDC
ENGINEERS JOINT CONTRACT DOCUMENTS COMMITTEE

CHANGE ORDER NUMBER: 5

Date of Issuance: February 20, 2026 Effective Date: Upon Signature

PROJECT:	ENGINEER'S PROJECT NUMBER:
City of Storm Lake Production Well No. 22	27926
OWNER:	DATE OF CONTRACT:
City of Storm Lake	September 3, 2024
CONTRACTOR:	OWNER'S CONTRACT NUMBER:
King Construction	

The Contract Documents are modified as follows upon execution of this Change Order:

Description:

Remove seeding from the contract.

Attachments:

Certification Page: N/A
Plan Sheets: N/A
Specifications: N/A

CHANGE IN CONTRACT PRICE:

Original Contract Price:

$2,380,915.00

Increase from previously approved Change Orders Number 0 to 4

$48,946.53

Contract Price prior to this Change Order:

$2,429,861.53

Decrease of this Change Order:

-$2,500.00

Contract Price Incorporating this Change Order:

$2,427,361.53

CHANGE IN CONTRACT TIMES:

Original Contract Times: ☐ Working Days ☐ Calendar Days

Substantial Completion (day or dates): N/A
Ready for Final Payment (day or dates): N/A

(Increase) (Decrease) from previously approved Change Orders Number _____ to _____

Substantial completion (day or dates): N/A
Ready for Final Payment (day or dates): N/A

Contract Times prior to this Change Order:

Substantial Completion (day or dates): N/A
Ready for Final Payment (day or dates): N/A

(Increase) (Decrease) of this Change Order:

Substantial Completion (day or dates): N/A
Ready for Final Payment (day or dates): N/A

Contract Times with all approved Change Orders:

Substantial Completion (day or dates): N/A
Ready for Final Payment (day or dates): N/A

RECOMMENDED:	ACCEPTED:	ACCEPTED:
I +S GROUP	City of Storm Lake	King Construction
By: Amanda Hoodu	By: _____	By:
Engineer (Authorized Signature)	Owner (Authorized Signature)	Contractor (Authorized Signature)
Date: 02.20.2026	Date: _____	Date: 3-2-26

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	Amount	
					Increase	Decrease
1	Remove seeding from contract	LS	1.0	($2,500.00)		$2,500.00

TOTALS	$0.00	$2,500.00
NET CHANGE IN CONTRACT PRICE	($2,500.00)	
INCREASE (DECREASE) IN CONTRACT TIME, days		

Decrease of this Change Order:

Remove seeding from contract

RESOLUTION NO. 59-R-2025-2026

RESOLUTION APPROVING CHANGE ORDER NUMBER 5
FOR THE STORM LAKE WELL NO. 22 PROJECT

WHEREAS, the City of Storm Lake, Iowa, (hereinafter CITY), has entered into an agreement for construction of the Well No. 22 Project, (hereinafter PROJECT) with:

Contractor Name:	**King Contracting (hereinafter CONTRACTOR)**
Contractor Location:	**Wall Lake, Iowa**
Date of Agreement:	**September 3, 2024**

WHEREAS, the CITY and the CONTRACTOR have previously agreed to amend the original agreement related to the PROJECT with the following change orders:

Change Order No. 1	**November 4, 2024**	**Adding Future Space for Well 23**
Change Order No. 2	**February 3, 2025**	**Changed Transfer Switch**
Change Order No. 3	**July 7, 2025**	**Downsize Components Due to Flow**
Change Order No. 4	**September 15, 2025**	**Plug Well 15**

WHEREAS, during the course of construction on the PROJECT, the CONTRACTOR, project engineer, and CITY have determined that an additional change is needed as outlined in detail in Change Order No. 5 and summarized here:

Removing Seeding Work Scope From Project

WHEREAS, the proposed Change Order No. 5 includes changes in the value of the contract and the dates of completion required in the original agreement as outlined below:

Change in Agreement Value:	**$(2,500.00)**
Change in Substantial Completion Date:	**None**
Change in Final Completion Date:	**None**

WHEREAS, the project engineer has recommended approval of Change Order No. 5; and,

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, IOWA:

SECTION 1. That the agreement between the CITY and the CONTRACTOR be amended to change the value of the contract as follows:

Change In Value:	$(2,500.00)
Total Agreement Value After Change Order:	$2,427,361.53

SECTION 2. That the agreement between the CITY and the CONTRACTOR be amended to change the dates of completion as follows:

Date of Substantial Completion:	November 1, 2025
Date of Final Completion:	December 2, 2025

SECTION 3. That the Mayor is hereby authorized to sign Change Order No. 5 on behalf of the CITY following approval by the City Council.

SECTION 4. That Change Order No. 5 is hereby accepted and approved by the CITY.

PASSED AND APPROVED THIS 16TH DAY OF MARCH, 2026.

APPROVED BY THE
CITY OF STORM LAKE

Margaret J. McKeon, Mayor

ATTEST

_____
Mayra A. Martinez, City Clerk

Staff Summary

3/16/2026
Agenda Item # F.7.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Ron Covert, Public Works Director

SUBJECT: **Motion to Approve Contract with ISG to Complete Community Public Water System Risk & Resilience Assessment (RRA) Plan Update**

BACKGROUND: As part of America's Water Infrastructure Act (AWIA) of 2018, community public water systems that serve more than 3,300 people must complete a Risk & Resilience Assessment (RRA) and develop an Emergency Response Plan (ERP). The Risk & Resilience Assessment for the Storm Lake Water Supply was performed in November 2020 and certified in June 2021. Water Systems are required to review and update their RRA and ERP every five years and certify to the EPA that these actions were completed.

FISCAL IMPACT: ISG has proposed a contract with a Not to Exceed (NTE) cost of $5,200.00

RECOMMENDATION: Approve the contract with ISG to complete the Community Public Water System Risk & Resilience Assessment (RRA)

ATTACHMENTS:

1. 2026-03-05_Risk+ResilienceAssessment_StormLakeIA ProposedContract

MARCH 5, 2026

Ron Covert
Public Works Director
City of Storm Lake
620 Erie Street
Storm Lake, IA 50588
covert@stormlake.org

RE: RISK AND RESILIENCE ASSESSMENT (RRA) PLAN UPDATE

Ron,

Thank you for the opportunity to submit this proposal to assist the City of Storm Lake in updating the Risk and Resilience Assessment Plan (RRA) that was originally drafted in 2021. ISG will work with City staff to update the RRA as required to re-certify the RRA on the 5-year schedule required by EPA. The following scope of services will be provided to meet these goals.

SCOPE OF SERVICES

Risk and Resilience Assessment Plan Update

ISG Staff will provide the following:

- On site visit to meet with City staff, review existing facilities and facilitate discussion of risks
  - Tour system facilities and discuss current operations with City operators and staff
  - Discuss past and current risks from malevolent acts and natural hazards
  - Discuss actions (countermeasures) in place to reduce risks
  - Review and rank the risks for each of the EPA identified asset categories with City operators and staff
  - Assessment report to meet the requirements of AWIA
  - Provide spreadsheet of assets and risks to the City for documenting future work
- Submit the assessment to the City for review
- Meet with City to review the assessment
- Assist the City in submitting the required certification to EPA no later than June 30, 2026

Client Responsibilities

To facilitate the RRA plan update, ISG assumes that the following will be provided by the City of Storm Lake:

- Any incidents of past malevolent acts or natural hazards relating to the water system
- Any notices of violation from the Iowa DNR in the past five (5) years
- All other pertinent documents regarding existing facilities, including a copy of the previous RRA plan with updates/changes

COMPENSATION

ISG proposes to provide the scope of work described within this proposal for compensation in accordance with the following time-and-materials, not to exceed amount. Anticipated reimbursable expenses such as travel time, mileage expenses, and printing costs are included.

Tasks	Compensation
Risk + Resilience Assessment Plan Update	Not to Exceed $5,200
Total	**NTE $5,200**

Thank you again for allowing ISG to provide you with a proposal for the City of Storm Lake's Risk and Resilience Assessment plan update. If you have any questions, please feel free to reach out to me. To provide ISG with authorization to proceed, please acknowledge receipt and acceptance of this proposal by signing and dating the acceptance box below. We look forward to the opportunity to assist you with this project.

Sincerely,

Tom Grafft
Water/Wastewater Group Leader

TomGrafft@ISGInc.com

Applicable Contract

The General Terms and Conditions applicable to this Proposal are available at the link below and are hereby accepted and incorporated herein by reference. Upon acceptance of this Proposal, the parties can proceed with the project based on this signed Proposal, per its General Terms and Conditions, or for more complex projects, ISG, at its discretion, will prepare and require the use of an AIA or EJCDC Contract that will govern the project. ISG's compensation does not include sales or use taxes. Additional information can be found in our General Terms and Conditions.

bit.ly/termsconditions_isg

Acknowledgement of Acceptance

This proposal is valid for 30 days.

Accepted this _____ day of _____, 2026.

Company (Print): _____

Name (Print): _____

Title (Print): _____

Signature: _____

Staff Summary

3/16/2026
Agenda Item # F.8.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Ron Covert, Public Works Director

SUBJECT: **Motion to Approve Contract with Rebnord Technologies to Complete Community Public Water System Risk & Resilience Assessment (RRA) Plan Update**

BACKGROUND: As part of America's Water Infrastructure Act (AWIA) of 2018, community public water systems that serve more than 3,300 people must complete a Risk & Resilience Assessment (RRA) and develop an Emergency Response Plan (ERP). The Risk & Resilience Assessment for the Storm Lake Water Supply was performed in November 2020 and certified in June 2021. Water systems are required to review and update their RRA and ERP every five years and certify to the EPA that these actions were completed. Rebnord Technologies will provide the cybersecurity expertise for the RRA.

FISCAL IMPACT: Rebnord Technologies has proposed a contract with a Not to Exceed (NTE) cost of $1,000.00

RECOMMENDATION: Approve the contract with Rebnord Technologies to complete Community Public Water System Risk & Resilience Assessment (RRA) Plan Update

ATTACHMENTS:

1. Risk Assessment AssistanceRebnord

CITY OF STORM LAKE, IOWA
PROFESSIONAL SERVICES AGREEMENT (SMALL PURCHASE)
Risk and Resiliency Assessment Assistance

Date: March 3, 2026
Consultant: Rebnord Technologies, Inc.

This memorandum confirms an agreement between the **City of Storm Lake, Iowa ("City")** and **Rebnord Technologies, Inc. ("Consultant")** for limited professional services related to the City's Risk and Resiliency Assessment.

1. Scope of Services

Consultant will provide limited professional assistance to the City including consultation, document review, identification of potential risks, and recommendations related to community resilience planning and assessment support.

2. Compensation

Total compensation under this Agreement shall **not exceed One Thousand Dollars ($1,000.00)**. Consultant shall submit an invoice describing services performed. Payment will be made in accordance with normal City payment procedures.

3. Term

This Agreement begins on the date above and continues until the services are completed unless terminated earlier as provided herein.

4. Independent Contractor

Consultant is an independent contractor and is not an employee or agent of the City. Consultant is responsible for all taxes, insurance, and obligations associated with performing the services.

5. Compliance with Laws

Consultant shall comply with all applicable federal, state, and local laws, regulations, and ordinances in performing services under this Agreement.

6. Insurance

Consultant shall maintain any insurance reasonably necessary for the performance of the services and shall be responsible for the acts or omissions of the Consultant and any employees or subcontractors.

7. Indemnification

Consultant agrees to indemnify and hold harmless the City, its officers, employees, and agents from and against claims, damages, losses, and expenses arising out of Consultant's performance of the services, to the extent caused by the negligent acts or omissions of the Consultant.

8. Termination

Either party may terminate this Agreement upon written notice. The Consultant shall be compensated for services satisfactorily performed up to the date of termination, subject to the not-to-exceed amount.

9. Public Records

Consultant acknowledges that records related to this Agreement may be subject to disclosure under the **Iowa Open Records Law (Chapter 22, Iowa Code).**

10. Entire Agreement

This memorandum constitutes the entire agreement between the parties and may only be modified in writing signed by both parties.

CITY OF STORM LAKE, IOWA

By: _____

Name/Title: _____

Date: _____

CONSULTANT

By: _____

Name/Title: Tim Rebnord, CEO/President

Organization (if applicable): Rebnord Technologies, Inc.

Date: March 3, 2026

Staff Summary

3/16/2026
Agenda Item # F.9.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Lee Dutfield, Development Services Specialist

SUBJECT: **Motion To Approve Selection And Hiring Of Simmering-Cory for Grant Writing And Administration Services For CDBG Funding For Housing Rehabilitation - Roofing Project.**

BACKGROUND: The City advertised on March 6, 2026, for proposals from qualified firms for grant writing and administration services for a CDBG Housing Rehabilitation program that provides funds to assist low-and-moderate-income households by addressing critical roofing deficiencies that threaten the health, safety, and long-term habitability of their homes.

Advertising occurred in the newspaper, on the City's website, and on the Iowa League of Cities website.

One proposal was received from Simmering-Cory for Grant Writing and Administrative Services.

For Phase 1 Grant Preparation services, the proposal requires a fee of $2,000.
For Phase 2 Grant Administration services, the fee will not exceed $18,000.

The grant administration costs, as proposed, would be funded 100% by the grant award to the City. The city is eligible for a maximum award of $180,000 (maximum of six housing unit roofs with a maximum cost of $30,000 per unit - $24,500 actual construction costs) in the Housing Rehabilitation – Roofing Project. The grant program will fund $18,000 grant administration costs for the project. The total maximum grant award is $198,000.

The program does not require any local match.

FISCAL IMPACT: Amount not to exceed $20,000

RECOMMENDATION: Move to Approve Selection and Hiring of Simmering-Cory for Grant Writing and Administration Services for CDBG funding for Housing Rehabilitation - Roofing Project.

ATTACHMENTS:

1. PROPOSAL Storm Lake Roofing Grant Administration Services Proposal - March 2026 - FINAL

SIMMERING-CORY & IOWA CODIFICATION
www.sc-ic.com

March 4, 2026

City of Storm Lake
Attn: Mayra Martinez, City Clerk
PO Box 1086
Storm Lake, Iowa 50588

Ms. Martinez,

Thank you for the opportunity to submit a proposal for grant writing and administration services related to the City's Housing Rehabilitation - Roofing Project.

Simmering-Cory (SC) is pleased to provide you with the following proposal in response to your RFP for Grant Administration services related to your proposed project as outlined in your request for proposals. SC has been working with the Community Development Block Grant (CDBG) program for over 30 years and has the experience and qualifications to assist the City in the preparation of their application and administration of their grant. If you have any questions, after reviewing our proposal, please don't hesitate to contact us.

Experience with IEDA's CDBG Program

Over the past 30 years, SC has written and administered over 500 CDBG projects in the water/sewer infrastructure, community facilities, housing, Covid, CDBG-DR, and downtown façade revitalization programs. We have successfully written and administered grants for the construction of new water mains, sewer collection service improvements, lift stations, wells, water storage facilities, water treatment plants, wastewater facilities, upper story housing, day care facilities, community health centers, parks, commercial facades, housing rehabilitation, and several other important essential services and quality of life improvements for our clients.

The Housing Rehabilitation-Roofing program is a new program in 2026 designed to be a more feasible housing rehabilitation program based on federal regulations for project costs while still achieving meaningful benefits for Iowa communities. In general, the administration of the program will be very similar to the older housing rehabilitation projects of which we have done several in the State of Iowa including the following.

Alta Housing Rehabilitation – 2020
Bedford Housing Rehabilitation – 2021
Clarion Housing Rehabilitation – 2019
Colfax Housing Rehabilitation – 2019
Cresco Housing Rehabilitation – 2018*
Eagle Grove Housing Rehabilitation – 2019
Fayette Housing Rehabilitation – 2018*
Laurens Housing Rehabilitation – 2015
Mitchellville Housing Rehabilitation – 2018
Pierson Housing Rehabilitation – 2019
Storm Lake Housing Rehabilitation - 2020
Tipton Housing Rehabilitation – 2021
Waukon Housing Rehabilitation – 2021
Waukon Housing Rehabilitation – 2021*

PO Box 244 | 114 E. 5th Street, Suite B | Storm Lake, Iowa 50588 | Tel 641-357-7595 | Fax 515-724-7868

Gilmore City Housing Rehabilitation – 2016
Gilmore City Housing Rehabilitation - 2020
Gowrie Housing Rehabilitation – 2016
Hartley Housing Rehabilitation – 2016
West Bend Housing Rehabilitation – 2016
West Bend Housing Rehabilitation – 2020
THIS COULD BE YOUR PROJECT!!

*For these projects we were hired to take over mid-project to correct deficiencies resulting from other grant administrators.

In addition, a majority of our CDBG projects are in the water sewer program of which we have completed a number of projects including the following.

Ainsworth – Water Main Improvements
Alta – Sanitary Sewer Collection System Improvements
Anthon – Water Treatment Plant Improvements
Armstrong – Wastewater Treatment Plant
Bedford – Water Main Improvements
Boone – Ground Water Reservoir
Boone – Wastewater Disinfection System
Cherokee – Beech Street Lift Station Relocation
Cherokee – Sanitary Sewer Collection System
Cherokee – Wastewater Treatment Plant
Clarion – Well Development
Clarion – Water Main Improvements
Clarion – Water Treatment Plant
Colfax – Water Main Improvements
Correctionville – Sanitary Sewer Force Main
Cushing – Lift Station
Cushing – Water Main Improvements
Cushing – Water Storage
Danbury – Wastewater Treatment Facility
De Soto – Water Treatment Plant, Well, Raw Water Main
Eagle Grove – Neighborhood Water & Sewer Collection
Eagle Grove – North Lift Station Replacement
Farmersburg – Wastewater Treatment Plant
Gowrie – Well Development
Guthrie Center – Clear Well
Guthrie Center – Water Main Improvements
Hartford – Wastewater Treatment Plant
Hartley – Lift Station & Sewer Collection System
Holstein – Wastewater Treatment Plant
Lanesboro – Water Main Improvements
Madrid – Wastewater Treatment Plant
Madrid – Water Main Improvements
Maxwell – Water Main Improvements
Maxwell – Wastewater Treatment Plant
Milford – Water and Sewer Mains
Mingo – Wastewater Treatment Plant
Mitchellville – Water Main Improvements – Phase 2
Mitchellville – Water Main Improvement – Phase 3
Parkersburg – Sanitary Sewer Collection System
Parkersburg – Water Main Improvements
Pierson – Sanitary Sewer Collection System
Pleasantville – Water Main Improvements
Pocahontas – Water Treatment Plant
Quimby – Sanitary Sewer Collection / Lift Station
Randolph – Water Main Improvements
Renwick – Water Main Improvements
Rockwell City – Wastewater Treatment Plant
Spillville – Water System Improvements
Storm Lake – Lift Station
Storm Lake – Well Development (No. 22)
Storm Lake – Well Development (No. 23)
Terrill – Water Treatment Plant
Titonka – Well & Water Treatment System Improvements
Washington – Water Main Improvements
West Bend – Well Development (No. 8)
THIS COULD BE YOUR PROJECT!!

This experience has led to extensive knowledge of the CDBG program as well as a proven track record. A complete set of references is provided in the reference section of this proposal. Please feel free to contact any of the listed cities or CDBG program staff at the Iowa Economic Development Authority (IEDA) for information about SC's abilities with the CDBG Program.

Description of Past Grant Related Services Provided

SC has a strong history of success in the CDBG Program. While a majority of the applications we write are in the Water and Sewer Infrastructure Program we have done projects in all the other individual programs under the CDBG umbrella including these types of housing rehabilitation projects.

Our proposal includes two phases. Phase one is for grant writing services related to your Housing Rehabilitation - Roofing Project.

Our grant application preparation services include developing and compiling documentation necessary for you to compete for grant funds. This will include us making recommendations regarding the scope and components of your project in order to strengthen the application and give you the best possible chance of receiving grant funds.

The following services are included in this phase of the work proposal:

- Work with City staff to develop and circulate an application that can be used by owner occupied residents to apply for the program and rehabilitation of the roof on their home.

- Conduct review of the applications received and the income verification to ensure eligibility of the applicant.

- Write and submit the grant application to the Iowa Economic Development Authority (IEDA) through Iowa Grants online.

- Development and preparation for the required environmental assessment for the application, excluding any Phase 1 Archaeological services that may be required as we are not qualified to conduct those services. The required environmental assessment will be completed and ready for publication at the time of grant application submission. The required public comment periods and publications will occur after funding is awarded per IEDA requirements.

CDBG is accepting applications once during the 2026 calendar year on May 22 for this program. We are prepared to work with the City for a May 22 submission.

Phase two of the proposal is for grant administration services related to Housing Rehabilitation - Roofing Project. SC proposes to perform the scope of work as itemized in the Storm Lake's Request for Proposals for CDBG administration and writing including handling correspondence between the City and IEDA, handling draws for the City, from the CDBG portion of the project, monitoring, and other key administrative components.

Phase two of the proposal also includes Project Delivery Services including the completion of the environmental assessment, verification of invoices, and assistance in the procurement process for the project.

Our Administration and Project Delivery services include comprehensive assistance and program management required from grant award through project completion and close-out.

Description of Organizational Capacity to Complete All Necessary Grant Administration Activities.

SC is well prepared to assist the City of Storm Lake with its Housing Rehabilitation - Roofing Project. For 30 years, Simmering-Cory has provided a variety of community development, planning, technical assistance, and grant writing and administration services to cities and counties in Iowa. SC, and its sister company Iowa Codification, are committed to the success of their clients.

The following Simmering-Cory staff will be involved in the Storm Lake project:

Melanie Mitchell
Melanie has over 30 years of experience in the CDBG program including work in all of the individual categories including the Housing Rehabilitation Program. Melanie's principal responsibilities include grant writing and administration services. Melanie has completed various training programs provided by IEDA and is a grant administrator in good standing. Melanie is a certified grant administrator with the Iowa Economic Development Authority.

Jennifer Movall
Jennifer has over eight years of government finance experience where, in addition to daily administration of the city's finances, she was also responsible for administration of grants including CDBG, FEMA, and Federal Aviation Administration programs. With SC, Jennifer has been involved in the writing and administration of grants in the CDBG program. Jennifer has completed training provided by IEDA and HUD and is a grant administrator in good standing. Jennifer is a certified grant administrator with the Iowa Economic Development Authority.

Justin Yarosevich
Justin has over 17 years of experience in local government administration where he did grant writing and administration as well as project management on various infrastructure and community projects. With SC, Justin has been involved in the writing and administration of grants including CDBG and RISE (Revitalize Iowa's Sound Economy). Justin has completed training provided by IEDA and HUD and is a grant administrator in good standing. Justin is a certified grant administrator with the Iowa Economic Development Authority.

All of our grant administrators are certified grant administrators through the Iowa Economic Development Authority.

References

The following references provided are current and past clients for whom we have done similar work. Please feel free to contact them directly for a better understanding of our capacity to assist your community.

City of Cherokee Theresa Pudenz, City Administrator 712-225-5749 Theresa.pudenz@cherokeeiowa.net	City of Parkersburg Chris Luhring, City Administrator 319-346-2262 celuhring@aol.com
City of Eagle Grove Bryce Davis, City Administrator 515-448-4343 b.davis@eaglegrove.gov	City of Clarion Clint Middleton, City Manager 515-532-2847 cmiddleton@clarioniowa.gov

Cost of Services

As noted above, our proposal is broken into two phases. The fees for each phase are provided below.

Phase 1 – SC's grant preparation services, as outlined above in the Description of Services section, are charged as a lump sum fee at the time of grant submittal. The fee to write a CDBG application for Housing Rehabilitation - Roofing Project would be $2,000.00.

Our costs for grant writing services include all our work related to the submission of a CDBG Application for the proposed project(s). These services include the income verification and application development components of the grant writing steps. This also includes the development of the environmental assessment for the project up to the point of the public comment period which must be completed post award.

The costs for Phase 1 services identified in this response to the City's Request for Proposals are NOT eligible for reimbursement from any CDBG award that may be granted by the State of Iowa.

Phase 2 – SC's grant administration services, as outlined above in the Description of Services section, are charged based on completion of milestones during the project. Our fee for administration of the Storm Lake Housing Rehabilitation - Roofing Project would be $18,000 ($3,000.00 per unit awarded), broken down as follows:

Element No. 1 – Grant Administration Services		$14,000.00
Element No. 2 – Project Delivery Services		$ 4,000.00
	Total	$18,000.00

The cost for the project will be invoiced as follows:

Release of Funds Invoice	$2,000.00 of the Project Delivery Services upon Release of Funds.
Bidding Services Invoice	$2,000.00 of the Project Delivery Services upon Receipt of Bids.
Grant Administration Invoices	Billed over the term of the grant, typically as follows:
Invoice 1	$2,000.00 at the release of funds.
Invoice 2	$1,000.00 at the receipt of bids
Invoice 3	$1,000.00 with the 1st Pay Application for Construction
Invoice 4	$2,000.00 at 30% completion of Construction
Invoice 5	$1,000.00 at 50% completion of Construction
Invoice 6	$1,000.00 at 70% completion of Construction
Invoice 7	$1,000.00 at 90% completion of Construction
Invoice 8	$2,000.00 at 100% completion of Construction
Invoice 9	$2,000.00 at the Payment of Retainage
Invoice 10	$1,000.00 for Project Closeout

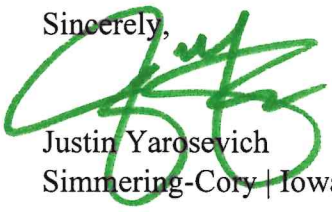
SC will contract with the City separately for grant administration services following award of a grant from the CDBG Program.

The grant administration costs, as proposed in this response to the City's Request for Proposals would be funded 100% by the grant award to the City. As a reminder the City is eligible for a maximum award of $180,000.00 (maximum of six housing unit roofs with a maximum cost of $30,000 per unit - $24,500 actual construction costs) in the Housing Rehabilitation - Roofing Project. In addition, the grant program will fund the $18,000.00 grant administration costs for the project. The total maximum grant award is $198,000.00. The program does not require any local match.

SC offers a comprehensive package of services related to grant writing and administration to ensure that your project has the best opportunity for funding in a very competitive CDBG program and to ensure that administration of your grant runs smoothly from grant award through project close-out.

SC appreciates your consideration of our proposal for grant writing and administrative services. Should you have any questions please don't hesitate to contact me.

Sincerely,



Justin Yarosevich
Simmering-Cory | Iowa Codification

GRANT ADMINISTRATOR ACCEPTANCE OF DUTIES AND RESPONSIBILITIES

ADDENDUM TO GRANT ADMINSTRATOR – SUBRECIPEINT AGREEMENT

As a certified grant administrator operating on the behalf of the Subrecipient under the Iowa Economic Development Authority (IEDA) for the Community Development Block Grant (CDBG) program, including CDBG–Disaster Recovery (CDBG–DR) and CDBG–Mitigation (CDBG–MIT) funds as applicable, I hereby acknowledge that I have read, understand, and agree to comply with the current IEDA Grant Administration Policy and all related federal and state requirements.

I recognize that certification by IEDA indicates my competency and accountability to administer CDBG-funded projects in full accordance with applicable statutes, regulations, and policies. I agree to uphold the professional and ethical standards required of all certified grant administrators.

I understand that it is my responsibility to ensure project compliance with all applicable federal cross-cutting requirements, including, but not limited to:

- **24 CFR Part 570** – Community Development Block Grants (State Program)
- **2 CFR Part 200** – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- **24 CFR Part 58** – Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities
- **24 CFR Part 135** (and successor regulation 24 CFR Part 75) – Section 3 Requirements for Economic Opportunities
- **29 CFR Parts 1, 3, and 5** – Davis-Bacon and Related Acts (DBRA) Labor Standards
- **40 U.S.C. 3141 et seq.** – Contract Work Hours and Safety Standards Act (CWHSSA)
- **42 U.S.C. 4601 et seq.** – Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA)
- **2 CFR Part 180 and Part 2424** – Debarment and Suspension Requirements

- **24 CFR Part 8 and 24 CFR Part 107** – Equal Opportunity, Fair Housing, and Nondiscrimination Requirements
- **24 CFR Part 42** – Displacement, Relocation, and Real Property Acquisition Policies
- **Build America, Buy America Act (BABA)** – Domestic content and materials sourcing requirements (Public Law 117–58, §§70901–70953)
- **Section 504 of the Rehabilitation Act of 1973** – Accessibility Requirement
- **Title VI of the Civil Rights Act of 1964** – Nondiscrimination in Federally Assisted Programs
- **Section 109 of the Housing and Community Development Act of 1974** – Nondiscrimination Requirements
- **National Flood Insurance Reform Act / EO 11988 and EO 11990** – Floodplain Management and Wetlands Protection
- **Executive Order 13166** – Limited English Proficiency (LEP) Requirements
- **2 CFR Part 25 and Part 170** – Federal Award Identification and Transparency Requirements
- **HUD Section 104(d)** – Displacement and Relocation under the Housing and Community Development Act
- **Davis-Bacon Related Acts (DBRA)** – As applicable to CDBG–DR funded construction contracts
- **Section 110 of the National Historic Preservation Act (NHPA)** – SHPO/THPO Consultation and Historic Preservation Compliance

I also understand that it is my duty to:

- Maintain active certification status through IEDA's Grant Administrator Certification Program;
- Administer projects in accordance with the approved IEDA Management Guide and all current program guidance;
- Ensure that all contractors, subrecipients, and beneficiaries adhere to the above cross-cutting requirements;
- Promptly notify IEDA of any changes in employment, project assignments, or potential conflicts of interest that may affect my role; and
- Participate in refresher training or policy updates as required by IEDA to maintain compliance.

I acknowledge that failure to comply with IEDA's Grant Administration Policy or any applicable federal cross-cutting requirement may result in retraining, probation or revocation of certification status, and may affect eligibility to administer future IEDA-funded projects on behalf of Subrecipients.

Signature: Melanie Mitchell

Printed Name: Melanie Mitchell

Organization: Simmering Cory

Title: Grant Administrator

Date: 2/12/26

GRANT ADMINISTRATOR ACCEPTANCE OF DUTIES AND RESPONSIBILITIES

ADDENDUM TO GRANT ADMINSTRATOR – SUBRECIPEINT AGREEMENT

As a certified grant administrator operating on the behalf of the Subrecipient under the Iowa Economic Development Authority (IEDA) for the Community Development Block Grant (CDBG) program, including CDBG–Disaster Recovery (CDBG–DR) and CDBG–Mitigation (CDBG–MIT) funds as applicable, I hereby acknowledge that I have read, understand, and agree to comply with the current IEDA Grant Administration Policy and all related federal and state requirements.

I recognize that certification by IEDA indicates my competency and accountability to administer CDBG-funded projects in full accordance with applicable statutes, regulations, and policies. I agree to uphold the professional and ethical standards required of all certified grant administrators.

I understand that it is my responsibility to ensure project compliance with all applicable federal cross-cutting requirements, including, but not limited to:

- **24 CFR Part 570** – Community Development Block Grants (State Program)
- **2 CFR Part 200** – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- **24 CFR Part 58** – Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities
- **24 CFR Part 135** (and successor regulation 24 CFR Part 75) – Section 3 Requirements for Economic Opportunities
- **29 CFR Parts 1, 3, and 5** – Davis-Bacon and Related Acts (DBRA) Labor Standards
- **40 U.S.C. 3141 et seq.** – Contract Work Hours and Safety Standards Act (CWHSSA)
- **42 U.S.C. 4601 et seq.** – Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA)
- **2 CFR Part 180 and Part 2424** – Debarment and Suspension Requirements

- **24 CFR Part 8 and 24 CFR Part 107** – Equal Opportunity, Fair Housing, and Nondiscrimination Requirements
- **24 CFR Part 42** – Displacement, Relocation, and Real Property Acquisition Policies
- **Build America, Buy America Act (BABA)** – Domestic content and materials sourcing requirements (Public Law 117–58, §§70901–70953)
- **Section 504 of the Rehabilitation Act of 1973** – Accessibility Requirement
- **Title VI of the Civil Rights Act of 1964** – Nondiscrimination in Federally Assisted Programs
- **Section 109 of the Housing and Community Development Act of 1974** – Nondiscrimination Requirements
- **National Flood Insurance Reform Act / EO 11988 and EO 11990** – Floodplain Management and Wetlands Protection
- **Executive Order 13166** – Limited English Proficiency (LEP) Requirements
- **2 CFR Part 25 and Part 170** – Federal Award Identification and Transparency Requirements
- **HUD Section 104(d)** – Displacement and Relocation under the Housing and Community Development Act
- **Davis-Bacon Related Acts (DBRA)** – As applicable to CDBG–DR funded construction contracts
- **Section 110 of the National Historic Preservation Act (NHPA)** – SHPO/THPO Consultation and Historic Preservation Compliance

I also understand that it is my duty to:

- Maintain active certification status through IEDA's Grant Administrator Certification Program;
- Administer projects in accordance with the approved IEDA Management Guide and all current program guidance;
- Ensure that all contractors, subrecipients, and beneficiaries adhere to the above cross-cutting requirements;
- Promptly notify IEDA of any changes in employment, project assignments, or potential conflicts of interest that may affect my role; and
- Participate in refresher training or policy updates as required by IEDA to maintain compliance.

I acknowledge that failure to comply with IEDA's Grant Administration Policy or any applicable federal cross-cutting requirement may result in retraining, probation or revocation of certification status, and may affect eligibility to administer future IEDA-funded projects on behalf of Subrecipients.

Signature: Jennifer Movall

Printed Name: Jennifer Movall

Organization: Simmering Cory

Title: Grant Administrator

Date: February 12, 2026

GRANT ADMINISTRATOR ACCEPTANCE OF DUTIES AND RESPONSIBILITIES

ADDENDUM TO GRANT ADMINSTRATOR – SUBRECIPEINT AGREEMENT

As a certified grant administrator operating on the behalf of the Subrecipient under the Iowa Economic Development Authority (IEDA) for the Community Development Block Grant (CDBG) program, including CDBG–Disaster Recovery (CDBG–DR) and CDBG–Mitigation (CDBG–MIT) funds as applicable, I hereby acknowledge that I have read, understand, and agree to comply with the current IEDA Grant Administration Policy and all related federal and state requirements.

I recognize that certification by IEDA indicates my competency and accountability to administer CDBG-funded projects in full accordance with applicable statutes, regulations, and policies. I agree to uphold the professional and ethical standards required of all certified grant administrators.

I understand that it is my responsibility to ensure project compliance with all applicable federal cross-cutting requirements, including, but not limited to:

- **24 CFR Part 570** – Community Development Block Grants (State Program)
- **2 CFR Part 200** – Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards
- **24 CFR Part 58** – Environmental Review Procedures for Entities Assuming HUD Environmental Responsibilities
- **24 CFR Part 135** (and successor regulation 24 CFR Part 75) – Section 3 Requirements for Economic Opportunities
- **29 CFR Parts 1, 3, and 5** – Davis-Bacon and Related Acts (DBRA) Labor Standards
- **40 U.S.C. 3141 et seq.** – Contract Work Hours and Safety Standards Act (CWHSSA)
- **42 U.S.C. 4601 et seq.** – Uniform Relocation Assistance and Real Property Acquisition Policies Act (URA)
- **2 CFR Part 180 and Part 2424** – Debarment and Suspension Requirements

- **24 CFR Part 8 and 24 CFR Part 107** – Equal Opportunity, Fair Housing, and Nondiscrimination Requirements
- **24 CFR Part 42** – Displacement, Relocation, and Real Property Acquisition Policies
- **Build America, Buy America Act (BABA)** – Domestic content and materials sourcing requirements (Public Law 117–58, §§70901–70953)
- **Section 504 of the Rehabilitation Act of 1973** – Accessibility Requirement
- **Title VI of the Civil Rights Act of 1964** – Nondiscrimination in Federally Assisted Programs
- **Section 109 of the Housing and Community Development Act of 1974** – Nondiscrimination Requirements
- **National Flood Insurance Reform Act / EO 11988 and EO 11990** – Floodplain Management and Wetlands Protection
- **Executive Order 13166** – Limited English Proficiency (LEP) Requirements
- **2 CFR Part 25 and Part 170** – Federal Award Identification and Transparency Requirements
- **HUD Section 104(d)** – Displacement and Relocation under the Housing and Community Development Act
- **Davis-Bacon Related Acts (DBRA)** – As applicable to CDBG–DR funded construction contracts
- **Section 110 of the National Historic Preservation Act (NHPA)** – SHPO/THPO Consultation and Historic Preservation Compliance

I also understand that it is my duty to:

- Maintain active certification status through IEDA's Grant Administrator Certification Program;
- Administer projects in accordance with the approved IEDA Management Guide and all current program guidance;
- Ensure that all contractors, subrecipients, and beneficiaries adhere to the above cross-cutting requirements;
- Promptly notify IEDA of any changes in employment, project assignments, or potential conflicts of interest that may affect my role; and
- Participate in refresher training or policy updates as required by IEDA to maintain compliance.

I acknowledge that failure to comply with IEDA's Grant Administration Policy or any applicable federal cross-cutting requirement may result in retraining, probation or revocation of certification status, and may affect eligibility to administer future IEDA-funded projects on behalf of Subrecipients.

Signature: 

Printed Name: Justin Yarosevich

Organization: Simmering-Cory

Title: Grant Administrator

Date: February 11, 2026

Staff Summary

3/16/2026
Agenda Item # F.10.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Lee Dutfield, Development Services Specialist

SUBJECT: **Motion To Approve Selection And Hiring Of Simmering-Cory for Technical Services For CDBG Funding For Housing Rehabilitation - Roofing Project.**

BACKGROUND: The City advertised on March 6, 2026, for proposals from qualified firms for Technical Services for a CDBG Housing Rehabilitation program that provides funds to assist low-and-moderate-income households by addressing critical roofing deficiencies that threaten the health, safety, and long-term habitability of their homes.

Advertising occurred in the newspaper, on the City's website, and on the Iowa League of Cities website.

One proposal was received from Simmering-Cory for Technical Services.

Cost of Technical Services:
Technical Services $3,500 per unit ($21,000 for six units)
Lead Testing Services $500 per unit ($3,000 for six units)

The Technical Services cost, as proposed above, would be funded 100% by the grant award to the City. The program does not require any local match.

FISCAL IMPACT: Amount not to exceed $24,000

RECOMMENDATION: Move to Approve Selection and Hiring of Simmering-Cory for Technical Services for CDBG funding for Housing Rehabilitation - Roofing Project.

ATTACHMENTS:

1. PROPOSAL Storm Lake Roofing Technical Services Proposal - March 2026 - FINAL

SIMMERING-CORY & IOWA CODIFICATION
www.sc-ic.com

March 4, 2026

City of Storm Lake
Attn: Mayra Martinez, City Clerk
PO Box 1086
Storm Lake, Iowa 50588

Ms. Martinez,

Thank you for the opportunity to submit a proposal for technical services related to the City's Housing Rehabilitation - Roofing Project.

Simmering-Cory (SC) is pleased to provide you with the following proposal in response to your RFP for technical services related to your proposed project as outlined in your request for proposals. SC has been working with the Community Development Block Grant (CDBG) program for over 30 years and has the experience and qualifications to assist the City in the preparation of their application and administration of their grant. If you have any questions, after reviewing our proposal, please don't hesitate to contact us.

Experience with IEDA's CDBG Program

Over the past 30 years, SC has written and administered over 500 CDBG projects in the water/sewer infrastructure, community facilities, housing, Covid, CDBG-DR, and downtown façade revitalization programs. We have successfully written and administered grants for the construction of new water mains, sewer collection service improvements, lift stations, wells, water storage facilities, water treatment plants, wastewater facilities, upper story housing, day care facilities, community health centers, parks, commercial facades, housing rehabilitation, and several other important essential services and quality of life improvements for our clients.

The Housing Rehabilitation-Roofing program is a new program in 2026 designed to be a more feasible housing rehabilitation program based on federal regulations for project costs while still achieving meaningful benefits for Iowa communities. In general, the administration of the program will be very similar to the older housing rehabilitation projects of which we have done several in the State of Iowa including the following.

Alta Housing Rehabilitation – 2020
Bedford Housing Rehabilitation – 2021
Clarion Housing Rehabilitation – 2019
Colfax Housing Rehabilitation – 2019
Cresco Housing Rehabilitation – 2018*
Eagle Grove Housing Rehabilitation – 2019
Fayette Housing Rehabilitation – 2018*
Laurens Housing Rehabilitation – 2015
Mitchellville Housing Rehabilitation – 2018
Pierson Housing Rehabilitation – 2019
Storm Lake Housing Rehabilitation - 2020
Tipton Housing Rehabilitation – 2021
Waukon Housing Rehabilitation – 2021
Waukon Housing Rehabilitation – 2021*

Gilmore City Housing Rehabilitation – 2016
Gilmore City Housing Rehabilitation - 2020
Gowrie Housing Rehabilitation – 2016
Hartley Housing Rehabilitation – 2016
West Bend Housing Rehabilitation – 2016
West Bend Housing Rehabilitation – 2020
THIS COULD BE YOUR PROJECT!!

*For these projects we were hired to take over mid-project to correct deficiencies resulting from other grant administrators.

This experience has led to extensive knowledge of the CDBG program as well as a proven track record. A complete set of references is provided in the reference section of this proposal. Please feel free to contact any of the listed cities or CDBG program staff at the Iowa Economic Development Authority (IEDA) for information about SC's abilities with the CDBG Program.

Description of Past Grant Related Services Provided

SC has a strong history of success in the CDBG Program. On all of the above referenced housing rehabilitation projects we have provided technical services including those needed for the proposed Storm Lake Housing Rehabilitation – Roofing Project.

Our technical services proposal includes the following specific services related to your Housing Rehabilitation – Roofing Project.

- Perform site and housing unit inspections, including at a minimum the following inspections:
    - Initial Site Inspection. An initial site inspection to identify project scope, take pictures, get measurements, and meet with the homeowner. The inspector will also place and provide instructions for sending in a radon test for the property.
    - Under Construction Inspection. A site inspection during construction that would ensure that work is being done in accordance with the plans and specifications. This inspection would also include a LEAD Hazard Inspection and any potential testing needed.
    - Final Site Inspection. A final site inspection to verify that the work was conducted in the manner outlined in the plans and to review the project with homeowner to get approval of pay application.
- Develop plans and specifications for each project. Development of plans and specifications may include the development of plans and specifications for radon mitigation if the results of testing indicate the need for mitigation within the home.
- Bidding Services. Simmering-Cory will assist the City with individual bidding services including the appropriate notices, soliciting contractors and assisting with the letting process.
- Pay Applications. Review the contractor's pay applications and format for approval by the City as needed.

Description of Organizational Capacity to Complete All Necessary Grant Administration Activities.

SC is well prepared to assist the City of Storm Lake with its Housing Rehabilitation - Roofing Project. For 30 years, Simmering-Cory has provided a variety of community development, planning, technical assistance, and grant writing and administration services to cities and counties in Iowa. SC, and its sister company Iowa Codification, are committed to the success of their clients.

The following Simmering-Cory staff will be involved in the Storm Lake project:

Melanie Mitchell
Melanie has over 30 years of experience in the CDBG program including work in all of the individual categories including the Housing Rehabilitation Program. Melanie's principal responsibilities include grant writing and administration services. Melanie has completed various training programs provided by IEDA and is a grant administrator in good standing. Melanie is a certified grant administrator with the Iowa Economic Development Authority.

Jennifer Movall
Jennifer has over eight years of government finance experience where, in addition to daily administration of the city's finances, she was also responsible for administration of grants including CDBG, FEMA, and Federal Aviation Administration programs. With SC, Jennifer has been involved in the writing and administration of grants in the CDBG program. Jennifer has completed training provided by IEDA and HUD and is a grant administrator in good standing. Jennifer is a certified grant administrator with the Iowa Economic Development Authority.

Justin Yarosevich
Justin has over 17 years of experience in local government administration where he did grant writing and administration as well as project management on various infrastructure and community projects. With SC, Justin has been involved in the writing and administration of grants including CDBG and RISE (Revitalize Iowa's Sound Economy). Justin has completed training provided by IEDA and HUD and is a grant administrator in good standing. Justin is a certified grant administrator with the Iowa Economic Development Authority.

All of our grant administrators are certified grant administrators through the Iowa Economic Development Authority.

Alan Hinrickson
Alan Hinrickson, is our project inspector. He has done inspections on housing rehabilitation projects including all those listed in our referenced projects. He is certified by the State of Iowa as a certified Lead Sampling Technician, a copy of his certification is attached to this proposal for your review.

References

The following references provided are current and past clients for whom we have done similar work. Please feel free to contact them directly for a better understanding of our capacity to assist your community.

City of Hartley Roxann Swanson, City Administrator 712-928-2240 cityclerkadmin@hartleyiowa.gov	City of Bedford Tammy Thompson, City Clerk 712-523-2210 city@mchsi.com
City of Eagle Grove Bryce Davis, City Administrator 515-448-4343 b.davis@eaglegrove.gov	City of Clarion Clint Middleton, City Manager 515-532-2847 cmiddleton@clarioniowa.gov

Cost of Services

SC's technical services, as outlined above in the Description of Services section, are charged based on a per unit cost and billed in installments as follows:

Fees Structure for Technical Services:

Technical Services	$3,500.00 per unit ($21,000.00 for six units)
Lead Testing Services	$500.00 per unit ($3,000.00 for six units)

Services will be billed in two installments as follows:

Installment No. 1	$1,750.00	Following the Initial Site Visit
	$250.00 Lead Testing Services	
Installment No. 2	$1,750.00	Following the completion of the individual housing unit project
	$250.00 Lead Testing Services	

SC will contract with the City separately for technical services following award of a grant from the CDBG Program.

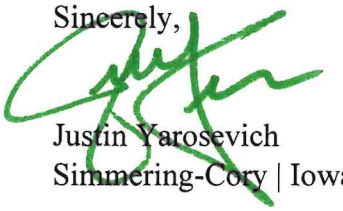
The technical services costs, as proposed in this response to the City's Request for Proposals, would be funded 100% by the grant award to the City. The total hard costs for construction and awarded CDBG funds will be as follows:

Cost Element	Per Unit Cost	No. of Units	Total Cost Max Award Amount
Construction Costs (roof and radon mitigation if required)	$24,000.00	6	$144,000.00
Lead Hazard Reduction (contractor expense)	$2,000.00	6	$12,000.00
Lead Testing Services	$500.00	6	$3,000.00
Technical Services Costs	$3,500.00	6	$21,000.00
Total Hard Construction Costs			$180,000.00

SC offers a comprehensive package of services related to grant writing, administration, and technical services to ensure that your project has the best opportunity for funding in a very competitive CDBG program and to ensure that administration of your grant runs smoothly from grant award through project close-out.

SC appreciates your consideration of our proposal for technical services. Should you have any questions please don't hesitate to contact me.

Sincerely,



Justin Yarosevich
Simmering-Cory | Iowa Codification

IDPH
IOWA
PUBLIC HEALTH

Protecting and Improving
the Health of Iowans

April 19, 2024

ALAN D HINRICKSON
316 NW 9th Street
POCAHONTAS, IA 50574

Dear ALAN D HINRICKSON

The department has reviewed the information you submitted and determined that you have met the requirements for certification in the state of Iowa as a Sampling Technician. Your certification number is: LEAD-SAMP10032.

Your certification will expire on April 18, 2027. By that date, you must renew your certification in order to perform any lead professional certification activities. To renew your certification, you will need to have completed the appropriate refresher course. Refresher courses are valid if taken within 3-years from the date that you renew.

Please keep a copy of your certification on your person or in an easily retrievable area at the work site. If you submitted your application online or with a valid email address, the certification is being provided to you electronically. You may choose to either print these documents or have them available on your phone or other electronic device for display if requested.

You can find the certification requirements and work practice standards for all lead professionals in Iowa Administrative Code 641 - Chapter 70, which is at: http://www.idph.iowa.gov/LPP under "Resources". You **must** be currently certified to perform work that requires certification.

Bureau of Environmental Health Services
Lead Professional Certification
Phone: 800-972-2026
E-mail: Lead.Bureau@idph.iowa.gov



IOWA DEPARTMENT OF PUBLIC HEALTH

ALAN D HINRICKSON

Sampling Technician

Certification Number: LEAD-SAMP10032

Expiration Date: April 18, 2027

Staff Summary

3/16/2026
Agenda Item # F.11.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Tyler Gibbins, Finance Director

SUBJECT: **Motion Setting A Public Hearing For The Plans, Specifications, Form of Contract, And Engineer's Estimate For The Terminal Area Apron Expansion Project**

BACKGROUND: The Airport Apron Expansion project will involve extending the hard surface to the south of the existing apron. The construction of an apron expansion will allow for additional aircraft parking and for a secondary apron route to relieve congestion on the existing apron at the Storm Lake Municipal Airport.

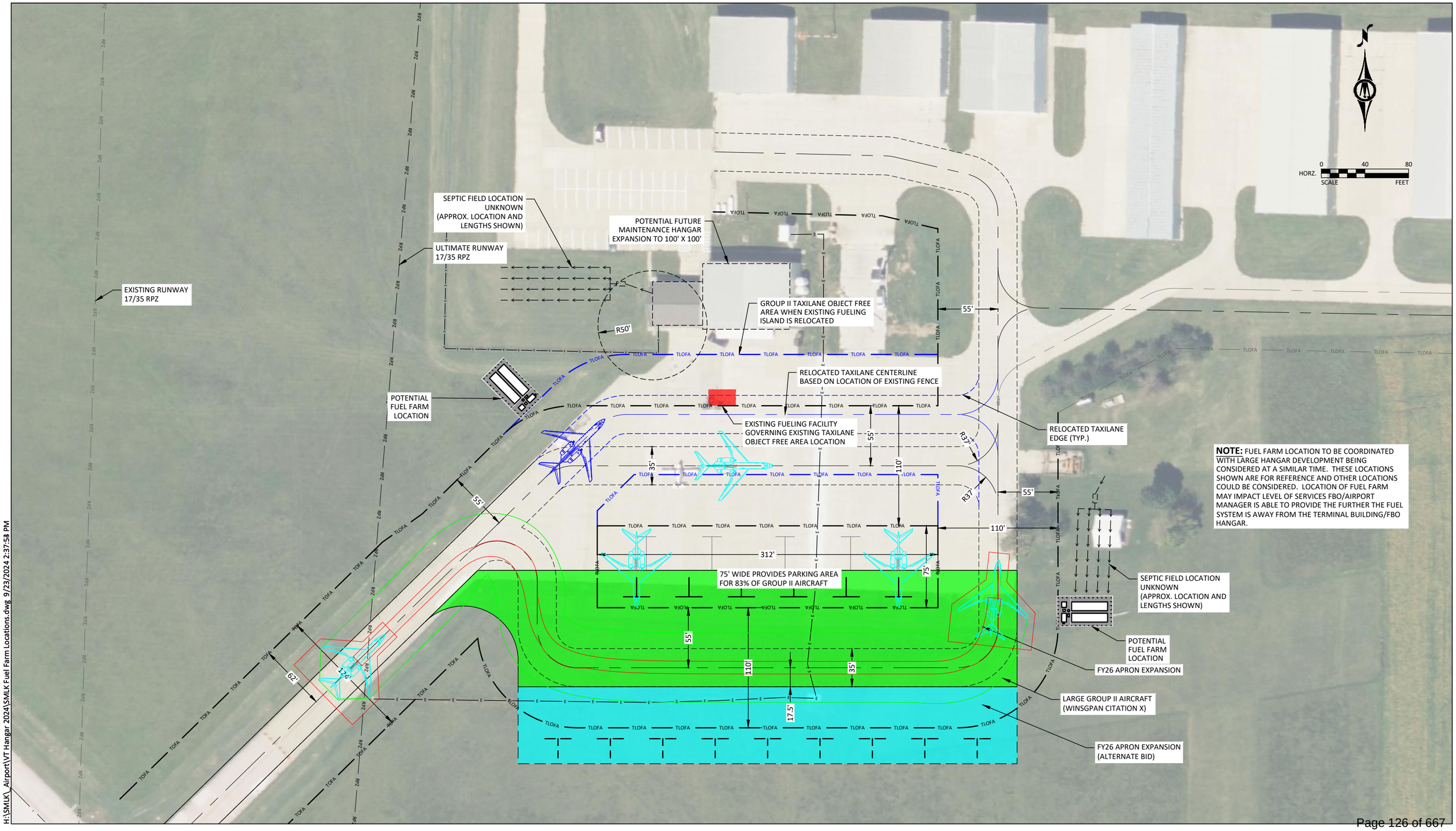
This project is proposed to be funded 95% by the FAA through entitlement funds and BIL funds with a local match of 5%.

FISCAL IMPACT: Publication of the Public Hearing

RECOMMENDATION: Approve Setting a Public Hearing for April 20th, 2026 at 5:00 pm in the City Council Chambers.

ATTACHMENTS:

1. Map
2. Notice of Public Hearing-Storm Lake-Apron Expansion
3. Engineer's Estimate
4. Project Plans
5. Project Specifications



NOTE: FUEL FARM LOCATION TO BE COORDINATED WITH LARGE HANGAR DEVELOPMENT BEING CONSIDERED AT A SIMILAR TIME. THESE LOCATIONS SHOWN ARE FOR REFERENCE AND OTHER LOCATIONS COULD BE CONSIDERED. LOCATION OF FUEL FARM MAY IMPACT LEVEL OF SERVICES FBO/AIRPORT MANAGER IS ABLE TO PROVIDE THE FURTHER THE FUEL SYSTEM IS AWAY FROM THE TERMINAL BUILDING/FBO HANGAR.

H:\SMLK_Airport\VT Hangar 2024\SMLK Fuel Farm Locations.dwg 9/23/2024 2:37:58 PM

SECTION 00105 - NOTICE OF PUBLIC HEARING

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

Public Hearing on Proposed Contract Documents and Estimated Costs for Repair or Improvement. A public hearing will be held by the City of Storm Lake on the proposed contract documents (plans, specifications and form of contract) and estimated cost for the improvement at its council meeting at 5:00 P.M. on April 20, 2026, at City Hall, 620 Erie Street, Storm Lake, Iowa 50588.

PROJECT DESCRIPTION: Expand Aircraft Parking Apron including PCC Pavement, Grading and Drainage

At said hearing, the City Council will consider the plans, specifications, proposed form of contract, and estimated total cost for the project, the same now being on file in the office of the City Clerk, 620 Erie Street, Storm Lake, Iowa 50588, reference to which is made for a more detailed and complete description of the proposed improvements, and at said time and place the said City Council will also receive and consider any objections to said plans, specifications, estimate of cost, and form of contract made by any interested party.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ENGINEER'S ESTIMATE

Apron Expansion

City of Storm Lake, Iowa

BMI PROJECT NO. 24X.136745.000

BOLTON & MENK

Real People. Real Solutions.

March 12, 2026

Item No.	Item Code	Item	Unit	Quantity	Unit Price	Total Amount
1	C-102	INSTALLATION OF WATTLES	LF	1500	$3.00	$4,500.00
2	C-102	REMOVAL OF WATTLES	LF	1500	$1.00	$1,500.00
3	C-102	WATTLE CLEANOUT	LF	1500	$2.00	$3,000.00
4	C-102	INLET PROTECTION DEVICE	EA	1	$500.00	$500.00
5	C-102	SWPPP ESTABLISHMENT AND MANAGEMENT	LS	1	$7,500.00	$7,500.00
6	C-105	MOBILIZATION	LS	1	$136,175.00	$136,175.00
7	C-105	TRAFFIC CONTROL	LS	1	$10,000.00	$10,000.00
8	C-105	CONSTRUCTION SURVEY	LS	1	$10,000.00	$10,000.00
9	P-101	PAVEMENT REMOVAL, PCC PAVEMENT	SY	700	$15.00	$10,500.00
10	P-101	REMOVAL OF STORM SEWER INTAKES	EA	1	$5,000.00	$5,000.00
11	P-151	CLEARING AND GRUBBING	LS	1	$20,000.00	$20,000.00
12	P-152	UNCLASSIFIED EXCAVATION	CY	85	$15.00	$1,275.00
13	P-152	BORROW, OFF SITE	CY	1870	$25.00	$46,750.00
14	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	2720	$12.50	$34,000.00
15	P-156	CEMENT TREATED SUBGRADE, 12"	SY	5600	$10.00	$56,000.00
16	P-156	CEMENT, 5%	TON	160	$275.00	$44,000.00
17	P-208 OR P-219	AGGREGATE BASE COURSE, 6"	SY	5600	$20.00	$112,000.00
18	P-501	PAVEMENT, PCC, 6.5"	SY	5400	$80.00	$432,000.00
19	P-501	TIE DOWN ANCHORS	EA	18	$100.00	$1,800.00
20	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	2000	$10.00	$20,000.00
21	P-620	PAVEMENT MARKING REMOVALS	LS	1	$4,000.00	$4,000.00
22	D-751	SW-512, CIRCULAR AREA INTAKE, 24" WITH MANHOLE CASTING AND SOLID LID	EA	1	$6,000.00	$6,000.00
23	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	2	$6,000.00	$12,000.00
24	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR BASE BID CONDITIONS	LF	10	$100.00	$1,000.00
25	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT	LF	10	$50.00	$500.00
26	L-115	CAN PLAZA MODIFICATIONS	LS	1	$20,000.00	$20,000.00

OPINION OF PROBABLE CONSTRUCTION COST: $1,000,000.00

ALTERNATE A

Item No.	Item Code	Item	Unit	Quantity	Unit Price	Total Amount
A1	P-152	UNCLASSIFIED EXCAVATION	CY	10	$15.00	$150.00
A2	P-152	BORROW, OFF SITE	CY	1165	$25.00	$29,125.00
A3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	1265	$12.50	$15,812.50
A4	P-156	CEMENT TREATED SUBGRADE, 12"	SY	2200	$10.00	$22,000.00
A5	P-156	CEMENT, 5%	TON	70	$275.00	$19,250.00
A6	P-208 OR P-219	AGGREGATE BASE COURSE, 6"	SY	2200	$20.00	$44,000.00
A7	P-501	PAVEMENT, PCC, 6.5"	SY	2100	$80.00	$168,000.00
A8	P-501	TIE DOWN ANCHORS	EA	15	$100.00	$1,500.00
A9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	250	$10.00	$2,500.00
A10	D-705	FIELD INVESTIGATION OF EXISTING FIELD TILE	LS	1	$5,000.00	$5,000.00
A11	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	1	$6,000.00	$6,000.00
A12	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR ALT BID A CONDITIONS	LF	8	$25.00	$200.00
A13	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT	LF	280	$50.00	$14,000.00

ALTERNATE A - PROBABLE CONSTRUCTION COST: $327,537.50

ALTERNATE B

Item No.	Item Code	Item	Unit	Quantity	Unit Price	Total Amount
B1	P-152	UNCLASSIFIED EXCAVATION	CY	85	$15.00	$1,275.00
B2	P-152	BORROW, OFF SITE	CY	1165	$25.00	$29,125.00
B3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	1120	$12.50	$14,000.00
B4	P-156	CEMENT TREATED SUBGRADE, 12"	SY	1900	$10.00	$19,000.00
B5	P-156	CEMENT, 5%	TON	60	$275.00	$16,500.00
B6	P-208 OR P-219	AGGREGATE BASE COURSE, 6"	SY	1900	$20.00	$38,000.00
B7	P-501	PAVEMENT, PCC, 6.5"	SY	1800	$80.00	$144,000.00
B8	P-501	TIE DOWN ANCHORS	EA	12	$100.00	$1,200.00
B9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	200	$10.00	$2,000.00
B10	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	1	$6,000.00	$6,000.00

ALTERNATE B - PROBABLE CONSTRUCTION COST: $271,100.00

BASE BID PLUS ALL ALTERNATE BIDS - PROBABLE CONSTRUCTION COST: $1,598,637.50

FEDERAL AVIATION ADMINISTRATION'S AC 150/5370-10H, DATED DECEMBER 21, 2018 "STANDARD SPECIFICATIONS FOR CONSTRUCTION OF AIRPORTS" AND ALL SUPPLEMENTS.

ALL APPLICABLE FEDERAL, STATE, AND LOCAL LAWS AND ORDINANCES WILL BE COMPLIED WITHIN THE CONSTRUCTION OF THIS PROJECT.

IOWA ONE CALL
1-800-292-8989 | 811
www.iowaonecall.com

NOTE: EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY IOWA ONE CALL 1-800-292-8989 OR 811

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

STORM LAKE MUNICIPAL AIRPORT

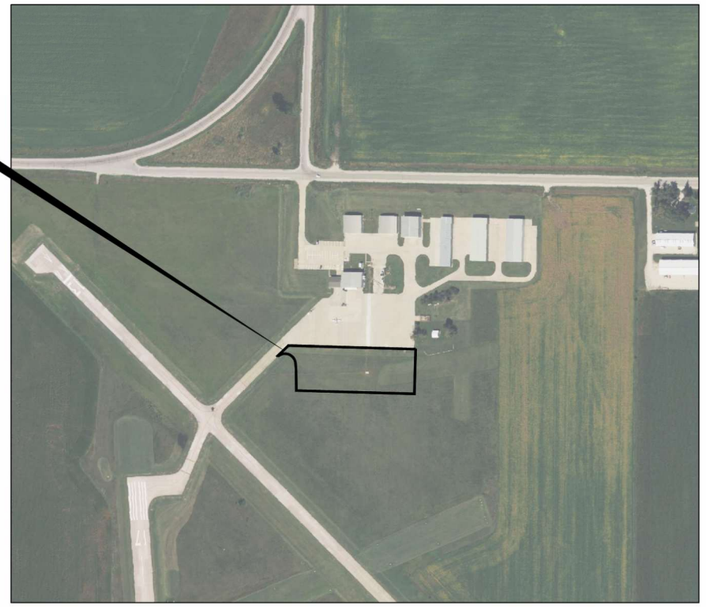
CONSTRUCTION PLANS FOR

EXPAND TERMINAL AREA APRON

FAA AIP# 3-19-0088-019-2025 - IIJA (DESIGN)
FAA AIP# 3-19-0088-020-2025 - AIP (DESIGN)
FAA AIP# 3-19-0088-021-2026 - AIP (CONSTRUCTION)
FAA AIP# 3-19-0088-022-2026 - IIJA (CONSTRUCTION)

MARCH 2025

PROJECT LOCATION



MAP OF THE
STORM LAKE MUNICIPAL AIRPORT
BUENA VISTA COUNTY, IA

0 200 400
SCALE FEET



BUENA VISTA COUNTY, IA

SHEET NUMBER	SHEET TITLE
G0.01	TITLE SHEET, LEGEND
G0.02	SYMBOLS & GENERAL INFORMATION
G1.01 - G1.03	QUANTITIES AND ESTIMATE REFERENCE INFORMATION
G2.01 - G2.03	CONTROL POINTS & SITE LAYOUT INFORMATION
G3.01 - G3.03	CONSTRUCTION SAFETY & PHASING PLAN
C0.01	EXISTING CONDITIONS & DEMOLITION PLAN
C1.01 - C1.04	TYPICAL SECTIONS & DETAILS
C2.01	BASE BID EROSION CONTROL & OVERALL SITE GRADING PLAN
C2.02	BID ALT A EROSION CONTROL & OVERALL SITE GRADING PLAN
C2.03	BID ALT B EROSION CONTROL & OVERALL SITE GRADING PLAN
C3.01	BASE BID DETAILED GRADING PLAN
C3.02	BID ALT A DETAILED GRADING PLAN
C3.03	BID ALT B DETAILED GRADING PLAN
C5.01	BASE BID STORM SEWER PLAN
C6.01	JOINTING PLAN
C7.01	PAVEMENT MARKING PLAN & DETAIL
E1.01	BASE BID ELECTRICAL PLAN
E1.02	BID ALT A ELECTRICAL PLAN
E1.03	BID ALT B ELECTRICAL PLAN
E2.01	ELECTRICAL DETAILS

LICENSED PROFESSIONAL ENGINEER
GARRETT T. JACOBS 28152
IOWA

I HEREBY CERTIFY THAT THIS ENGINEERING DOCUMENT WAS PREPARED BY ME OR UNDER MY DIRECT PERSONAL SUPERVISION AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF IOWA.

GARRETT T. JACOBS, P.E.

LICENSE NUMBER: 28152 DATE: 3/12/2026

MY LICENSE RENEWAL DATE IS DECEMBER 31, 2026

PAGES OR SHEETS COVERED BY THIS SEAL:

ALL SHEETS

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X\136745000\CAD\3D\136745_G0.01.dwg 3/12/2026 9:22:20 AM

HORZ. 300 300 600
SCALE FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
TITLE SHEET

SHEET G0.01

EXISTING TOPOGRAPHIC SYMBOLS

- ACCESS GRATE
- AIR CONDITION UNIT
- ANTENNA
- AUTO SPRINKLER CONNECTION
- BARRICADE PERMANENT
- BASKETBALL POST
- BENCH
- BIRD FEEDER
- BOLLARD
- BUSH
- CATCH BASIN RECTANGULAR CASTING
- CATCH BASIN CIRCULAR CASTING
- CURB STOP
- CLEAN OUT
- CULVERT END
- DRINKING FOUNTAIN
- DOWN SPOUT
- ELECTRIC CAR CHARGE STATION
- FILL PIPE
- FIRE HYDRANT
- FLAG POLE
- FLARED END / APRON
- FUEL PUMP
- GRILL
- GUY WIRE ANCHOR
- HANDHOLE
- HANDICAP SPACE
- IRRIGATION SPRINKLER HEAD
- IRRIGATION VALVE BOX
- LIFT STATION CONTROL PANEL
- LIFT STATION
- LIGHT POLE
- MAILBOX
- MANHOLE-COMMUNICATION
- MANHOLE-ELECTRIC
- MANHOLE-GAS
- MANHOLE-HEAT
- MANHOLE-RECLAIMED WATER
- MANHOLE-SANITARY SEWER
- MANHOLE-STORM SEWER
- MANHOLE-UTILITY
- MANHOLE-WATER
- METER
- DRIVE-THRU MICROPHONE
- PARKING METER
- PAVEMENT MARKING
- PEDESTAL-COMMUNICATION
- PEDESTAL-ELECTRIC
- PEDESTRIAN PUSH BUTTON
- PICNIC TABLE
- POLE-UTILITY
- POST
- RAILROAD SIGNAL POLE
- REGULATION STATION GAS
- SATELLITE DISH
- SIGN TRAFFIC
- SIGNAL CONTROL CABINET
- SOIL BORING
- SIREN
- TELEPHONE BOOTH
- TILE INLET
- TILE OUTLET
- TILE RISER
- TRANSFORMER-ELECTRIC
- TREE-CONIFEROUS
- TREE-DEAD
- TREE-DECIDUOUS
- TREE STUMP
- TRAFFIC ARM BARRIER
- TRAFFIC SIGNAL
- TRASH CAN
- UTILITY MARKER
- VALVE
- VALVE POST INDICATOR
- VALVE VAULT
- VAULT
- VENT PIPE
- WATER SPIGOT
- WELL
- WETLAND DELINEATED MARKER
- WETLAND
- WET WELL
- YARD HYDRANT

PROPOSED TOPOGRAPHIC SYMBOLS

- CLEANOUT
- MANHOLE
- LIFT STATION
- STORM SEWER CIRCULAR CASTING
- STORM SEWER RECTANGULAR CASTING
- STORM SEWER FLARED END / APRON
- STORM SEWER OUTLET STRUCTURE
- STORM SEWER OVERFLOW STRUCTURE
- CURB BOX
- FIRE HYDRANT
- WATER VALVE
- WATER REDUCER
- WATER BEND
- WATER TEE
- WATER CROSS
- WATER SLEEVE
- WATER CAP / PLUG
- RIP RAP
- DRAINAGE FLOW
- TRAFFIC SIGNS

SURVEY SYMBOLS

- BENCHMARK LOCATION
- CONTROL POINT
- MONUMENT FOUND
- CAST IRON MONUMENT
- STONE MONUMENT

EXISTING TOPOGRAPHIC LINES

- RETAINING WALL
- FENCE
- FENCE-DECORATIVE
- GUARD RAIL
- TREE LINE
- BUSH LINE

SURVEY LINES

- CONTROLLED ACCESS
- BOUNDARY
- CENTERLINE
- EXISTING EASEMENT LINE
- PROPOSED EASEMENT LINE
- EXISTING LOT LINE
- PROPOSED LOT LINE
- EXISTING RIGHT-OF-WAY
- PROPOSED RIGHT-OF-WAY
- SETBACK LINE
- SECTION LINE
- QUARTER LINE
- SIXTEENTH LINE
- TEMPORARY EASEMENT

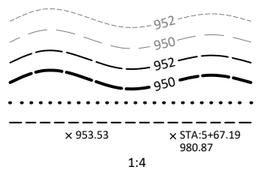
EXISTING UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- RECLAIMED WATER

PROPOSED UTILITY LINES

- FORCEMAIN
- SANITARY SEWER
- SANITARY SERVICE
- STORM SEWER
- STORM SEWER DRAIN TILE
- WATERMAIN
- WATER SERVICE
- PIPE CASING
- TRENCHLESS PIPE (PLAN VIEW)
- TRENCHLESS PIPE (PROFILE VIEW)

GRADING INFORMATION



- EXISTING CONTOUR MINOR
- EXISTING CONTOUR MAJOR
- PROPOSED CONTOUR MINOR
- PROPOSED CONTOUR MAJOR
- PROPOSED GRADING LIMITS / SLOPE LIMITS
- PROJECT LIMITS
- PROPOSED SPOT ELEVATION
- RISE:RUN (SLOPE)

EXISTING PRIVATE UTILITY LINES

NOTE:
EXISTING UTILITY INFORMATION SHOWN ON THIS PLAN HAS BEEN PROVIDED BY THE UTILITY OWNER. THE CONTRACTOR SHALL FIELD VERIFY EXACT LOCATIONS PRIOR TO COMMENCING CONSTRUCTION AS REQUIRED BY STATE LAW. NOTIFY GOPHER STATE ONE CALL, 1-800-252-1166 OR 651-454-0002.

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D UNLESS OTHERWISE NOTED. THIS UTILITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-22, ENTITLED "STANDARD GUIDELINE FOR INVESTIGATING AND DOCUMENTING EXISTING UTILITIES".

- UNDERGROUND FIBER OPTIC
- UNDERGROUND ELECTRIC
- UNDERGROUND GAS
- UNDERGROUND COMMUNICATION
- OVERHEAD ELECTRIC
- OVERHEAD COMMUNICATION
- OVERHEAD UTILITY

UTILITIES IDENTIFIED WITH A QUALITY LEVEL :

LINE TYPES FOLLOW THE FORMAT: UTILITY TYPE - QUALITY LEVEL
EXAMPLE: G-A G-A UNDERGROUND GAS, QUALITY LEVEL A
UTILITY QUALITY LEVEL (A,B,C,D) DEFINITIONS CAN BE FOUND IN CI/ASCE 38-22.

UTILITY QUALITY LEVELS:

QUALITY LEVEL D: PROVIDES THE MOST BASIC LEVEL OF INFORMATION. IT INVOLVES COLLECTING DATA FROM EXISTING UTILITY RECORDS. RECORDS MAY INCLUDE AS-BUILT DRAWINGS, DISTRIBUTION AND SERVICES MAPS, EXISTING GEOGRAPHIC INFORMATION SYSTEM DATABASES, CONSTRUCTION PLANS, ETC.

QUALITY LEVEL C: INVOLVES SURVEYING VISIBLE SUBSURFACE UTILITY STRUCTURES SUCH AS MANHOLES, HAND-HOLES, UTILITY VALVES AND METERS, FIRE HYDRANTS, PEDESTALS AND UTILITY MARKERS, AND THEN CORRELATING THE INFORMATION WITH EXISTING UTILITY RECORDS TO CREATE COMPOSITE DRAWINGS. INCLUDES QUALITY LEVEL D ACTIVITIES.

QUALITY LEVEL B: INVOLVES DESIGNATING THE HORIZONTAL POSITION OF SUBSURFACE UTILITIES THROUGH SURFACE DETECTION METHODS AND COLLECTING THE INFORMATION THROUGH A SURVEY METHOD. INCLUDES QUALITY LEVEL C AND D TASKS.

QUALITY LEVEL A: PROVIDES THE HIGHEST LEVEL OF ACCURACY. IT INVOLVES LOCATING OR POTHOLING UTILITIES AS WELL AS ACTIVITIES IN QUALITY LEVELS B, C, AND D. THE LOCATED FACILITY INFORMATION IS SURVEYED AND MAPPED AND THE DATA PROVIDES PRECISE PLAN AND PROFILE INFORMATION.

ABBREVIATIONS

A	ALGEBRAIC DIFFERENCE	GRAV	GRAVEL	RSC	RIGID STEEL CONDUIT
ADJ	ADJUST	GU	GUTTER	RT	RIGHT
ALT	ALTERNATE	GV	GATE VALVE	SAN	SANITARY SEWER
B-B	BACK TO BACK	HDPE	HIGH DENSITY POLYETHYLENE	SCH	SCHEDULE
BIT	BITUMINOUS	HH	HANDHOLE	SERV	SERVICE
BLDG	BUILDING	HP	HIGH POINT	SHLD	SHOULDER
BMP	BEST MANAGEMENT PRACTICE	HWL	HIGH WATER LEVEL	STA	STATION
BR	BEGIN RADIUS	HYD	HYDRANT	STD	STANDARD
BV	BUTTERFLY VALVE	I	INVERT	STM	STORM SEWER
CB	CATCH BASIN	K	CURVE COEFFICIENT	TC	TOP OF CURB
C&G	CURB AND GUTTER	L	LENGTH	TE	TEMPORARY EASEMENT
CIP	CAST IRON PIPE	LO	LOWEST OPENING	TEMP	TEMPORARY
CIPP	CURED-IN-PLACE PIPE	LP	LOW POINT	TNH	TOP NUT HYDRANT
CL	CENTER LINE	LT	LEFT	TP	TOP OF PIPE
CL.	CLASS	MAX	MAXIMUM	TYP	TYPICAL
CLVT	CULVERT	MH	MANHOLE	VCP	VITRIFIED CLAY PIPE
CMP	CORRUGATED METAL PIPE	MIN	MINIMUM	VERT	VERTICAL
C.O.	CHANGE ORDER	MR	MID RADIUS	VPC	VERTICAL POINT OF CURVE
COMM	COMMUNICATION	NIC	NOT IN CONTRACT	VPI	VERTICAL POINT OF INTERSECTION
CON	CONCRETE	NMC	NON-METALLIC CONDUIT	VPT	VERTICAL POINT OF TANGENT
CSP	CORRUGATED STEEL PIPE	NTS	NOT TO SCALE	WM	WATERMAIN
DIA	DIAMETER	NWL	NORMAL WATER LEVEL		
DIP	DUCTILE IRON PIPE	OHW	ORDINARY HIGH WATER LEVEL		
DWY	DRIVEWAY	PC	POINT OF CURVE	AC	ACRES
E	EXTERNAL CURVE DISTANCE	PCC	POINT OF COMPOUND CURVE	CF	CUBIC FEET
ELEC	ELECTRIC	PE	PERMANENT EASEMENT	CV	COMPACTED VOLUME
ELEV	ELEVATION	PED	PEDESTRIAN, PEDESTAL	CY	CUBIC YARD
EOF	EMERGENCY OVERFLOW	PERF	PERFORATED PIPE	EA	EACH
ER	END RADIUS	PERM	PERMANENT	EV	EXCAVATED VOLUME
ESMT	EASEMENT	PI	POINT OF INTERSECTION	LB	POUND
EX	EXISTING	PL	PROPERTY LINE	LF	LINEAR FEET
FES	FLARED END SECTION	PRC	POINT OF REVERSE CURVE	LS	LUMP SUM
F-F	FACE TO FACE	PT	POINT OF TANGENT	LV	LOOSE VOLUME
FF	FINISHED FLOOR	PVC	POLYVINYL CHLORIDE PIPE	SF	SQUARE FEET
F&I	FURNISH AND INSTALL	PVMT	PAVEMENT	SV	STOCKPILE VOLUME
FM	FORCEMAIN	R	RADIUS	SY	SQUARE YARD
FO	FIBER OPTIC	R/W	RIGHT-OF-WAY		
F.O.	FIELD ORDER	RCP	REINFORCED CONCRETE PIPE		
GRAN	GRANULAR	RET	RETAINING		

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X\136745000\CAD\C3D\136745_G0.01.dwg 3/12/2026 11:34:24 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
SYMBOLS & GENERAL INFORMATION

SHEET G0.02

ESTIMATED PROJECT QUANTITIES - BASE BID

ITEM NO.	ITEM CODE	ITEM	UNIT	QUANTITY	AS-BUILT QTY.
1	C-102	INSTALLATION OF WATTLES	LF	1500	
2	C-102	REMOVAL OF WATTLES	LF	1500	
3	C-102	WATTLE CLEANOUT	LF	1500	
4	C-102	INLET PROTECTION DEVICE	EA	1	
5	C-102	SWPPP ESTABLISHMENT AND MANAGEMENT	LS	1	
6	C-105	MOBILIZATION	LS	1	
7	C-105	TRAFFIC CONTROL	LS	1	
8	C-105	CONSTRUCTION SURVEY	LS	1	
9	P-101	PAVEMENT REMOVAL, PCC PAVEMENT	SY	700	
10	P-101	REMOVAL OF STORM SEWER INTAKES	EA	1	
11	P-151	CLEARING AND GRUBBING	LS	1	
12	P-152	UNCLASSIFIED EXCAVATION	CY	85	
13	P-152	BORROW, OFF SITE	CY	1870	
14	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	2720	
15	P-156	CEMENT TREATED SUBGRADE, 12"	SY	5600	
16	P-156	CEMENT, 5%	TON	160	
17	P-208 or P-219	AGGREGATE BASE COURSE, 6"	SY	5600	
18	P-501	PAVEMENT, PCC, 6.5"	SY	5400	
19	P-501	TIE DOWN ANCHORS	EA	18	
20	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	2000	
21	P-620	PAVEMENT MARKING REMOVALS	LS	1	
22	D-751	SW-512, CIRCULAR AREA INTAKE, 24" WITH MANHOLE CASTING AND SOLID LID	EA	1	
23	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	2	
24	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR BASE BID CONDITIONS	LF	10	
25	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT	LF	10	
26	L-115	CAN PLAZA MODIFICATIONS	LS	1	

ESTIMATED PROJECT QUANTITIES (ALTERNATE A)

ITEM NO.	ITEM CODE	ITEM	UNIT	QUANTITY	AS-BUILT QTY.
A1	P-152	UNCLASSIFIED EXCAVATION	CY	10	
A2	P-152	BORROW, OFF SITE	CY	1165	
A3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	1265	
A4	P-156	CEMENT TREATED SUBGRADE, 12"	SY	2200	
A5	P-156	CEMENT, 5%	TON	70	
A6	P-208 or P-219	AGGREGATE BASE COURSE, 6"	SY	2200	
A7	P-501	PAVEMENT, PCC, 6.5"	SY	2100	
A8	P-501	TIE DOWN ANCHORS	EA	15	
A9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	250	
A10	D-705	FIELD INVESTIGATION OF EXISTING FIELD TILE	LS	1	
A11	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	1	
A12	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR ALT BID A CONDITIONS	LF	8	
A13	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT	LF	280	

ESTIMATED PROJECT QUANTITIES (ALTERNATE B)

ITEM NO.	ITEM CODE	ITEM	UNIT	QUANTITY	AS-BUILT QTY.
B1	P-152	UNCLASSIFIED EXCAVATION	CY	85	
B2	P-152	BORROW, OFF SITE	CY	1165	
B3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	1120	
B4	P-156	CEMENT TREATED SUBGRADE, 12"	SY	1900	
B5	P-156	CEMENT, 5%	TON	60	
B6	P-208 or P-219	AGGREGATE BASE COURSE, 6"	SY	1900	
B7	P-501	PAVEMENT, PCC, 6.5"	SY	1800	
B8	P-501	TIE DOWN ANCHORS	EA	12	
B9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	200	
B10	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	1	

Note: Quantities shown in these tables are an approximation used for comparison of bid prices only. The Contractor remains fully responsible for performing their own quantity takeoff and determining what they believe the true dollar amount associated with an item is, and adjust unit prices accordingly.

ESTIMATE REFERENCE INFORMATION

ITEM NO.	ITEM CODE	DESCRIPTION
1	C-102	INSTALLATION OF WATTLES WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-102 AND THE POLLUTION PREVENTION PLAN REQUIREMENTS. THIS ITEM WILL NOT BE CONSIDERED COMPLETE UNTIL VEGETATION IS ESTABLISHED ALLOWING REMOVAL, AND THE WATTLES ARE REMOVED AND DISPOSED OF BY THE CONTRACTOR, PAID FOR UNDER ITS RESPECTIVE BID ITEM. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT OF WATTLES INSTALLED.
2	C-102	REMOVAL OF WATTLES WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-102 AND THE POLLUTION PREVENTION PLAN REQUIREMENTS. WATTLES SHALL BE REMOVED AND DISPOSED OF ACCORDING TO LOCAL, STATE AND FEDERAL GUIDELINES. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT OF WATTLES REMOVED.
3	C-102	WATTLE CLEANOUT WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-102 AND THE POLLUTION PREVENTION PLAN REQUIREMENTS. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT OF WATTLE CLEANOUT.
4	C-102	INLET PROTECTION DEVICE WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-102 AND THE POLLUTION PREVENTION PLAN REQUIREMENTS. THIS ITEM WILL NOT BE CONSIDERED COMPLETE UNTIL VEGETATION IS ESTABLISHED ALLOWING REMOVAL, AND THE FILTER IS REMOVED AND DISPOSED OF BY THE CONTRACTOR. BASIS OF PAYMENT SHALL BE PER EACH INLET PROTECTION DEVICE INSTALLED.
5	C-102	SWPPP ESTABLISHMENT AND MANAGEMENT THE CONTRACTOR SHALL ESTABLISH A STORM WATER POLLUTION PREVENTION PLAN MEETING THE REQUIREMENTS OF DEPARTMENT OF NATURAL RESOURCES GENERAL PERMIT NO. 2. IN ADDITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INSPECTIONS AND KEEPING APPROPRIATE DOCUMENTATION PER THE REQUIREMENTS OF THE IOWA DNR AND NPDES GP #2. THE CONTRACTOR SHALL PROVIDE COPIES OF ALL INSPECTION REPORTS TO THE AIRPORT, KEEP COPIES ON-SITE AT ALL TIMES AND SHALL BE RESPONSIBLE FOR ALL INSPECTIONS UNTIL THE NOTICE OF DISCONTINUATION. BASIS OF PAYMENT WILL BE LUMP SUM.
6	C-105	MOBILIZATION WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-105 AND THE PLANS. A SAFETY COMPLIANCE DOCUMENT (SPCD) SHALL BE WRITTEN IN ACCORDANCE WITH AC 150/5370-2G SECTION 4.2.2. BASIS OF PAYMENT SHALL BE LUMP SUM AND SHALL INCLUDE ALL PREPARATORY WORK COSTS INCURRED INCLUDING BUT NOT LIMITED TO COSTS OF BONDS, INSURANCE, AND OTHER MISCELLANEOUS ITEMS THAT DO NOT HAVE THEIR OWN SEPARATE BID ITEMS BUT ARE REQUIRED TO COMPLETE THE PROJECT, SHALL BE INCLUDED IN THIS BID ITEM. CONSTRUCTION ENTRANCES SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. METHOD OF PAYMENT SHALL BE A LUMP SUM.
7	C-105	TRAFFIC CONTROL WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-105 AND THE PLANS. BASIS OF PAYMENT SHALL BE LUMP SUM AND SHALL INCLUDE ALL TRAFFIC CONTROL NECESSARY PER THE PLANS AND CSPP. METHOD OF PAYMENT SHALL BE A LUMP SUM.
8	C-105	CONSTRUCTION SURVEY WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION C-105 AND THE PLANS. THIS ITEM SHALL INCLUDE ALL SURVEY NECESSARY FOR THE LAYOUT AND STAKING OF CONSTRUCTION OF THE PROJECT. THE CONTRACTOR SHALL PROVIDE FIELD NOTES AND VERIFICATION CHECKS AS PROVIDED IN THE FAA GENERAL PROVISION SECTIONS AND SHALL PROVIDE ADDITIONAL SURVEYING REQUIREMENTS THAT ARE ALSO LISTED IN THE REFERENCE SPECIFICATIONS FOR THE PROJECT. BASIS OF PAYMENT SHALL BE LUMP SUM.
9	P-101	PAVEMENT REMOVAL, PCC PAVEMENT WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-101 AND THE PLANS. PAVEMENT THAT IS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF AIRPORT PROPERTY. FULL DEPTH SAWCUTS SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. BASIS OF PAYMENT WILL BE PER SQUARE YARD OF REMOVED PAVEMENT.
10	P-101	REMOVAL OF STORM SEWER INTAKES WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-101 AND THE PLANS. STORM SEWER INTAKES THAT ARE REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE LEGALLY DISPOSED OF OFF AIRPORT PROPERTY. BASIS OF PAYMENT WILL BE PER EACH STORM SEWER INTAKE REMOVED.
11	P-151	CLEARING AND GRUBBING WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-151 AND THE PLANS. BASIS OF PAYMENT SHALL BE LUMP SUM.

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\24X\136745000\CAD\C3D\136745_G1.01.dwg 3/12/2026 11:34:32 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
QUANTITIES & ESTIMATE REFERENCE INFORMATION

SHEET
G1.01

12	P-152	UNCLASSIFIED EXCAVATION WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES AS FOLLOWS: EARTHWORK CUT = 85 CY FILL + 30% = 1,955 CY BORROW = 1,870 CY ALL AREAS TO BE COMPACTED IN ACCORDANCE WITH THE MOISTURE AND DENSITY REQUIREMENTS AS STATED IN REFERENCE SPECIFICATION P-152 AND THE PLANS. SHOULD SETTLEMENT OCCUR AFTER INITIAL CONSTRUCTION OF EMBANKMENTS THE CONTRACTOR SHALL BE REQUIRED TO CORRECT THE SETTLED AREAS AND PROVIDE MATERIAL TO REACH THE FINISHED GRADES DESIRED. ADDITIONAL COSTS MAY INCLUDE, BUT ARE NOT LIMITED TO, MOBILIZATION, TESTING, MATERIAL REQUIRED, HAULING, PLACEMENT AND COMPACTION OF MATERIAL.
13	P-152	BORROW, OFF SITE WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES. TOPSOIL STRIP, SALVAGE AND RESPREAD OF THE BORROW SITE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.
14	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES AS FOLLOWS: TOPSOIL TOPSOIL STRIP = 2,720 CY TOPSOIL RESPREAD +30% = 1,230 CY WASTE = 1,490 CY 12'' OF TOPSOIL SHALL BE STRIPPED AND STOCKPILED AND THE TOP 12" OF ALL AREAS TO BE SEEDED SHALL CONSIST OF TOPSOIL.
15	P-156	CEMENT TREATED SUBGRADE, 12" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-156 AND THE PLANS. THE SUBGRADE SHALL BE TREATED WITH CEMENT AND SHALL BE COMPACTED TO IN ACCORDANCE WITH THE REQUIREMENTS LISTED IN REFERENCE SPECIFICATION P-156. PAYMENT WILL NOT BE MADE FOR SUBGRADE TREATMENT EXTENDED BEYOND THE SPECIFIED SUBGRADE TREATMENT DIMENSION. BASIS OF PAYMENT WILL BE PER SQUARE YARD OF SUBGRADE TREATED.
16	P-156	CEMENT, 5% WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-156 AND THE PLANS. CEMENT SHALL BE INCORPORATED INTO THE SOIL AT A RATE OF 5% CEMENT PER DRY UNIT WEIGHT OF SOIL. BASIS OF PAYMENT WILL BE PER TON OF CEMENT MATERIAL INCORPORATED INTO THE SOIL.
17	P-208 or P-219	AGGREGATE BASE COURSE, 6" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-208 OR P-219 AND THE PLANS. BASE COURSE MATERIAL MAY BE EITHER P-208 AGGREGATE BASE COURSE OR P-219 RECYCLED CONCRETE AGGREGATE BASE COURSE. BASE COURSE SHALL BE COMPACTED IN ACCORDANCE WITH MOISTURE AND DENSITY REQUIREMENTS PRIOR TO PLACEMENT OF PCC SURFACE. ADDITIONAL PAYMENT WILL NOT BE MADE FOR BASE COURSE EXTENDED BEYOND THE SPECIFIED BASE COURSE EXTENSION DIMENSION OR FOR EXTENSION BEYOND THE SPECIFIED DIMENSION FOR USE OF A SLIP FORM PAVING MACHINE OR FOR EASE OF CONSTRUCTION. ANY ADDITIONAL EXTENSION BEYOND THE SPECIFIED DIMENSION SHALL BE AT THE EXPENSE OF THE CONTRACTOR. PAYMENT SHALL BE BY THE SQUARE YARD BASE COURSE INSTALLED.
18	P-501	PAVEMENT, PCC, 6.5" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-501 AND THE PLANS. COURSE AGGREGATE SHALL BE 3I MINIMUM. EPOXY COATED DEFORMED BARS, EPOXY COATED DOWEL BARS, EPOXY COATED WIRE MESH, EPOXYING OF DOWEL BARS, REINFORCING CHAIRS OR BOLSTERS, SAW CUTTING, CHAMFERING AND JOINT SEALING SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. BASIS OF PAYMENT SHALL BE PER SQUARE YARD OF PAVING INSTALLED.
19	P-501	TIE DOWN ANCHORS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-501 AND THE PLANS. TIE DOWN ANCHORS SHALL BE NEEHNAH 3490 SERIES OR APPROVED EQUAL. BASIS OF PAYMENT SHALL BE PER EACH INSTALLED.
20	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. BLACK OUTLINE AND REMOVAL OF PAVEMENT CURE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. PAYMENT SHALL BE PER SQUARE FOOT OF GROSS AREA OF THE PAVEMENT MARKINGS.
21	P-620	PAVEMENT MARKING REMOVALS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. PAYMENT SHALL BE PER SQUARE FOOT OF GROSS AREA OF THE PAVEMENT MARKINGS REMOVAL.
22	D-751	SW-512, CIRCULAR AREA INTAKE, 24" WITH MANHOLE CASTING AND SOLID LID WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION D-751 AND THE PLANS. HANDLING, MANIPULATION OF EXISTING PIPING, PROVIDING LENGTHS OF PIPE TO EXTEND PIPING INTO THE PROPOSED STORM SEWER STRUCTURE, ELBOWS, COUPLINGS, FERNCO'S AND CONCRETE COLLARS SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. BASIS OF PAYMENT SHALL BE PER STORM SEWER STRUCTURE INSTALLED.
23	T-901	SEEDING FERTILIZING AND MULCHING WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION T-901 AND THE PLANS. THIS ITEM SHALL PROVIDE FOR SEEDBED PREPARATION, SEEDING, FERTILIZING AND MULCHING OF ALL AREAS DISTURBED BY CONSTRUCTION. THIS BID ITEM WILL BE ACCEPTED WHEN A STAND OF GRASS HAS BEEN ESTABLISHED IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION T-901. BASIS OF PAYMENT SHALL BE A LUMP SUM. ANY SEEDING CORRECTION, RESEEDING, WEEDY AREAS, ERODED AREAS, BARE SPOTS AND AFFECTED AREAS BE THE REMEDIED AT THE EXPENSE OF THE CONTRACTOR. ANY AREAS OUTSIDE OF THE GRADING EXTENTS SHOWN IN THE PLANS THAT ARE DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, STAGING AREA, STORAGE AREAS, STOCK PILE AREAS AND HAUL ROUTES.
24	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR BASE BID CONDITIONS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION L-110 AND THE PLANS. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT. TRENCHING SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.
25	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION L-110 AND THE PLANS. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT. TRENCHING AND CONCRETE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.
26	L-115	CAN PLAZA MODIFICATIONS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION L-115 AND THE PLANS. HANDHOLE MODIFICATION SHALL INCLUDE 3/4" NEW MINIMUM THICK LID WITH RECESSED BOLTS, ADJUSTING RING FIELD MEASURED TO RIGHT HEIGHT, CONCRETE, REBAR, FORMING TO BE RECESSED. CONTRACTOR SHALL CONFIRM WITH CAN MANUFACTURER ENGINEERING DEPARTMENT REQUIRED THICKNESS OF SOLID LID FOR INTEND USE AND FIELD ADJUST AS NECESSARY. ASR TESTING PER REFERENCE SPECIFICATION P-610-2.1 IS NOT REQUIRED GROUNDING OF HANDHOLES, GROUNDING OF CAN PLAZA CONCRETE FORMING AND CONCRETE FOR

ESTIMATE REFERENCE INFORMATION (ALTERNATE A)

ITEM NO.	ITEM CODE	DESCRIPTION
A1	P-152	UNCLASSIFIED EXCAVATION WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES AS FOLLOWS: EARTHWORK CUT = 10 CY FILL + 30% = 1,175 CY BORROW, OFF SITE = 1,165 CY ALL AREAS TO BE COMPACTED IN ACCORDANCE WITH THE MOISTURE AND DENSITY REQUIREMENTS AS STATED IN REFERENCE SPECIFICATION P-152 AND THE PLANS. SHOULD SETTLEMENT OCCUR AFTER INITIAL CONSTRUCTION OF EMBANKMENTS THE CONTRACTOR SHALL BE REQUIRED TO CORRECT THE SETTLED AREAS AND PROVIDE MATERIAL TO REACH THE FINISHED GRADES DESIRED. ADDITIONAL COSTS MAY INCLUDE, BUT ARE NOT LIMITED TO, MOBILIZATION, TESTING, MATERIAL REQUIRED, HAULING, PLACEMENT AND COMPACTION OF MATERIAL.
A2	P-152	BORROW, OFF SITE WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES. TOPSOIL STRIP, SALVAGE AND RESPREAD OF THE BORROW SITE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.
A3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES AS FOLLOWS: TOPSOIL TOPSOIL STRIP = 1,265 CY TOPSOIL RESPREAD +30% = 900 CY WASTE = 365 CY 12'' OF TOPSOIL SHALL BE STRIPPED AND STOCKPILED AND THE TOP 12" OF ALL AREAS TO BE SEEDED SHALL CONSIST OF TOPSOIL.
A4	P-156	CEMENT TREATED SUBGRADE, 12" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-156 AND THE PLANS. THE SUBGRADE SHALL BE TREATED WITH CEMENT AND SHALL BE COMPACTED TO IN ACCORDANCE WITH THE REQUIREMENTS LISTED IN REFERENCE SPECIFICATION P-156. PAYMENT WILL NOT BE MADE FOR SUBGRADE TREATMENT EXTENDED BEYOND THE SPECIFIED SUBGRADE TREATMENT DIMENSION. BASIS OF PAYMENT WILL BE PER SQUARE YARD OF SUBGRADE TREATED.
A5	P-156	CEMENT, 5% WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-156 AND THE PLANS. CEMENT SHALL BE INCORPORATED INTO THE SOIL AT A RATE OF 5% CEMENT PER DRY UNIT WEIGHT OF SOIL. BASIS OF PAYMENT WILL BE PER TON OF CEMENT MATERIAL INCORPORATED INTO THE SOIL.
A6	P-208 or P-219	AGGREGATE BASE COURSE, 6" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-208 OR P-219 AND THE PLANS. BASE COURSE MATERIAL MAY BE EITHER P-208 AGGREGATE BASE COURSE OR P-219 RECYCLED CONCRETE AGGREGATE BASE COURSE. BASE COURSE SHALL BE COMPACTED IN ACCORDANCE WITH MOISTURE AND DENSITY REQUIREMENTS PRIOR TO PLACEMENT OF PCC SURFACE. ADDITIONAL PAYMENT WILL NOT BE MADE FOR BASE COURSE EXTENDED BEYOND THE SPECIFIED BASE COURSE EXTENSION DIMENSION OR FOR EXTENSION BEYOND THE SPECIFIED DIMENSION FOR USE OF A SLIP FORM PAVING MACHINE OR FOR EASE OF CONSTRUCTION. ANY ADDITIONAL EXTENSION BEYOND THE SPECIFIED DIMENSION SHALL BE AT THE EXPENSE OF THE CONTRACTOR. PAYMENT SHALL BE BY THE SQUARE YARD BASE COURSE INSTALLED.
A7	P-501	PAVEMENT, PCC, 6.5" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-501 AND THE PLANS. COURSE AGGREGATE SHALL BE 3I MINIMUM. EPOXY COATED DEFORMED BARS, EPOXY COATED DOWEL BARS, EPOXY COATED WIRE MESH, EPOXYING OF DOWEL BARS, REINFORCING CHAIRS OR BOLSTERS, SAW CUTTING, CHAMFERING AND JOINT SEALING SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. BASIS OF PAYMENT SHALL BE PER SQUARE YARD OF PAVING INSTALLED.
A8	P-501	TIE DOWN ANCHORS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-501 AND THE PLANS. TIE DOWN ANCHORS SHALL BE NEEHNAH 3490 SERIES OR APPROVED EQUAL. BASIS OF PAYMENT SHALL BE PER EACH INSTALLED.
A9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. BLACK OUTLINE AND REMOVAL OF PAVEMENT CURE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. PAYMENT SHALL BE PER SQUARE FOOT OF GROSS AREA OF THE PAVEMENT MARKINGS.
A10	D-705	FIELD INVESTIGATION OF EXISTING FIELD TILE WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION D-705 AND THE PLANS. THIS ITEM IS INTENDED FOR EXPLORING EXISTING FIELD TILES. ANY DAMAGED CAUSED BY INVESTIGATIONS SHALL BE REPAIRED AND THE REPAIR SHALL BE CONSIDEDED INCIDENTAL TO THIS BID ITEM. RESULTS OF FIELD TILE INVESTIGATION SHALL BE SHARED WITH THE ENGINEER. BASIS OF PAYMENT SHALL BE LUMP SUM.
A11	T-901	SEEDING FERTILIZING AND MULCHING WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION T-901 AND THE PLANS. THIS ITEM SHALL PROVIDE FOR SEEDBED PREPARATION, SEEDING, FERTILIZING AND MULCHING OF ALL AREAS DISTURBED BY CONSTRUCTION. THIS BID ITEM WILL BE ACCEPTED WHEN A STAND OF GRASS HAS BEEN ESTABLISHED IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION T-901. BASIS OF PAYMENT SHALL BE A LUMP SUM. ANY SEEDING CORRECTION, RESEEDING, WEEDY AREAS, ERODED AREAS, BARE SPOTS AND AFFECTED AREAS BE THE REMEDIED AT THE EXPENSE OF THE CONTRACTOR. ANY AREAS OUTSIDE OF THE GRADING EXTENTS SHOWN IN THE PLANS THAT ARE DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, STAGING AREA, STORAGE AREAS, STOCK PILE AREAS AND HAUL ROUTES.
A12	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR ALT BID A CONDITIONS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION L-110 AND THE PLANS. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT. TRENCHING SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.
A13	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION L-110 AND THE PLANS. BASIS OF PAYMENT SHALL BE PER LINEAR FOOT. TRENCHING AND CONCRETE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.

© Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X\136745000\CAD\C3D\136745_G1.01.dwg 3/12/2026 11:34:32 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
QUANTITIES & ESTIMATE REFERENCE INFORMATION

SHEET
G1.02

ESTIMATE REFERENCE INFORMATION (ALTERNATE B)

ITEM NO.	ITEM CODE	DESCRIPTION
B1	P-152	UNCLASSIFIED EXCAVATION WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES AS FOLLOWS: EARTHWORK CUT = 85 CY FILL + 30% = 1250 CY BORROW, OFF SITE = 1,165 CY ALL AREAS TO BE COMPACTED IN ACCORDANCE WITH THE MOISTURE AND DENSITY REQUIREMENTS AS STATED IN REFERENCE SPECIFICATION P-152 AND THE PLANS. SHOULD SETTLEMENT OCCUR AFTER INITIAL CONSTRUCTION OF EMBANKMENTS THE CONTRACTOR SHALL BE REQUIRED TO CORRECT THE SETTLED AREAS AND PROVIDE MATERIAL TO REACH THE FINISHED GRADES DESIRED. ADDITIONAL COSTS MAY INCLUDE, BUT ARE NOT LIMITED TO, MOBILIZATION, TESTING, MATERIAL REQUIRED, HAULING, PLACEMENT AND COMPACTION OF MATERIAL.
B2	P-152	BORROW, OFF SITE WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES. TOPSOIL STRIP, SALVAGE AND RESPREAD OF THE BORROW SITE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM.
B3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-152 AND THE PLANS. BASIS OF PAYMENT BE BASED ON TEMPLATE QUANTITIES AS FOLLOWS: TOPSOIL TOPSOIL STRIP = 1,120 CY TOPSOIL RESPREAD +30% = 695 CY WASTE = 425 CY 12'' OF TOPSOIL SHALL BE STRIPPED AND STOCKPILED AND THE TOP 12" OF ALL AREAS TO BE SEEDED SHALL CONSIST OF TOPSOIL.
B4	P-156	CEMENT TREATED SUBGRADE, 12" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-156 AND THE PLANS. THE SUBGRADE SHALL BE TREATED WITH CEMENT AND SHALL BE COMPACTED TO IN ACCORDANCE WITH THE REQUIREMENTS LISTED IN REFERENCE SPECIFICATION P-156. PAYMENT WILL NOT BE MADE FOR SUBGRADE TREATMENT EXTENDED BEYOND THE SPECIFIED SUBGRADE TREATMENT DIMENSION. BASIS OF PAYMENT WILL BE PER SQUARE YARD OF SUBGRADE TREATED.
B5	P-156	CEMENT, 5% WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION P-156 AND THE PLANS. CEMENT SHALL BE INCORPORATED INTO THE SOIL AT A RATE OF 5% CEMENT PER DRY UNIT WEIGHT OF SOIL. BASIS OF PAYMENT WILL BE PER TON OF CEMENT MATERIAL INCORPORATED INTO THE SOIL.
B6	P-208 or P-219	AGGREGATE BASE COURSE, 6" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-208 OR P-219 AND THE PLANS. BASE COURSE MATERIAL MAY BE EITHER P-208 AGGREGATE BASE COURSE OR P-219 RECYCLED CONCRETE AGGREGATE BASE COURSE. BASE COURSE SHALL BE COMPACTED IN ACCORDANCE WITH MOISTURE AND DENSITY REQUIREMENTS PRIOR TO PLACEMENT OF PCC SURFACE. ADDITIONAL PAYMENT WILL NOT BE MADE FOR BASE COURSE EXTENDED BEYOND THE SPECIFIED BASE COURSE EXTENSION DIMENSION OR FOR EXTENSION BEYOND THE SPECIFIED DIMENSION FOR USE OF A SLIP FORM PAVING MACHINE OR FOR EASE OF CONSTRUCTION. ANY ADDITIONAL EXTENSION BEYOND THE SPECIFIED DIMENSION SHALL BE AT THE EXPENSE OF THE CONTRACTOR. PAYMENT SHALL BE BY THE SQUARE YARD BASE COURSE INSTALLED.
B7	P-501	PAVEMENT, PCC, 6.5" WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-501 AND THE PLANS. COURSE AGGREGATE SHALL BE 3I MINIMUM. EPOXY COATED DEFORMED BARS, EPOXY COATED DOWEL BARS, EPOXY COATED WIRE MESH, EPOXYING OF DOWEL BARS, REINFORCING CHAIRS OR BOLSTERS, SAW CUTTING, CHAMFERING AND JOINT SEALING SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. BASIS OF PAYMENT SHALL BE PER SQUARE YARD OF PAVING INSTALLED.
B8	P-501	TIE DOWN ANCHORS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-501 AND THE PLANS. TIE DOWN ANCHORS SHALL BE NEEHNAH 3490 SERIES OR APPROVED EQUAL. BASIS OF PAYMENT SHALL BE PER EACH INSTALLED.
B9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION P-620 AND THE PLANS. BLACK OUTLINE AND REMOVAL OF PAVEMENT CURE SHALL BE CONSIDERED INCIDENTAL TO THIS BID ITEM. PAYMENT SHALL BE PER SQUARE FOOT OF GROSS AREA OF THE PAVEMENT MARKINGS.
B10	T-901	SEEDING FERTILIZING AND MULCHING WORK UNDER THIS BID ITEM SHALL BE IN ACCORDANCE WITH REFERENCE SPECIFICATION T-901 AND THE PLANS. THIS ITEM SHALL PROVIDE FOR SEEDBED PREPARATION, SEEDING, FERTILIZING AND MULCHING OF ALL AREAS DISTURBED BY CONSTRUCTION. THIS BID ITEM WILL BE ACCEPTED WHEN A STAND OF GRASS HAS BEEN ESTABLISHED IN ACCORDANCE WITH REFERENCE SPECIFICATION SECTION T-901. BASIS OF PAYMENT SHALL BE A LUMP SUM. ANY SEEDING CORRECTION, RESEEDING, WEEDY AREAS, ERODED AREAS, BARE SPOTS AND AFFECTED AREAS BE THE REMEDIED AT THE EXPENSE OF THE CONTRACTOR. ANY AREAS OUTSIDE OF THE GRADING EXTENTS SHOWN IN THE PLANS THAT ARE DISTURBED SHALL BE RESTORED TO ORIGINAL CONDITION AT THE EXPENSE OF THE CONTRACTOR. THIS INCLUDES, BUT IS NOT LIMITED TO, STAGING AREA, STORAGE AREAS, STOCK PILE AREAS AND HAUL ROUTES.

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\2AX136745000\CAD\C3D\136745_G1.01.dwg 3/12/2026 11:34:33 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

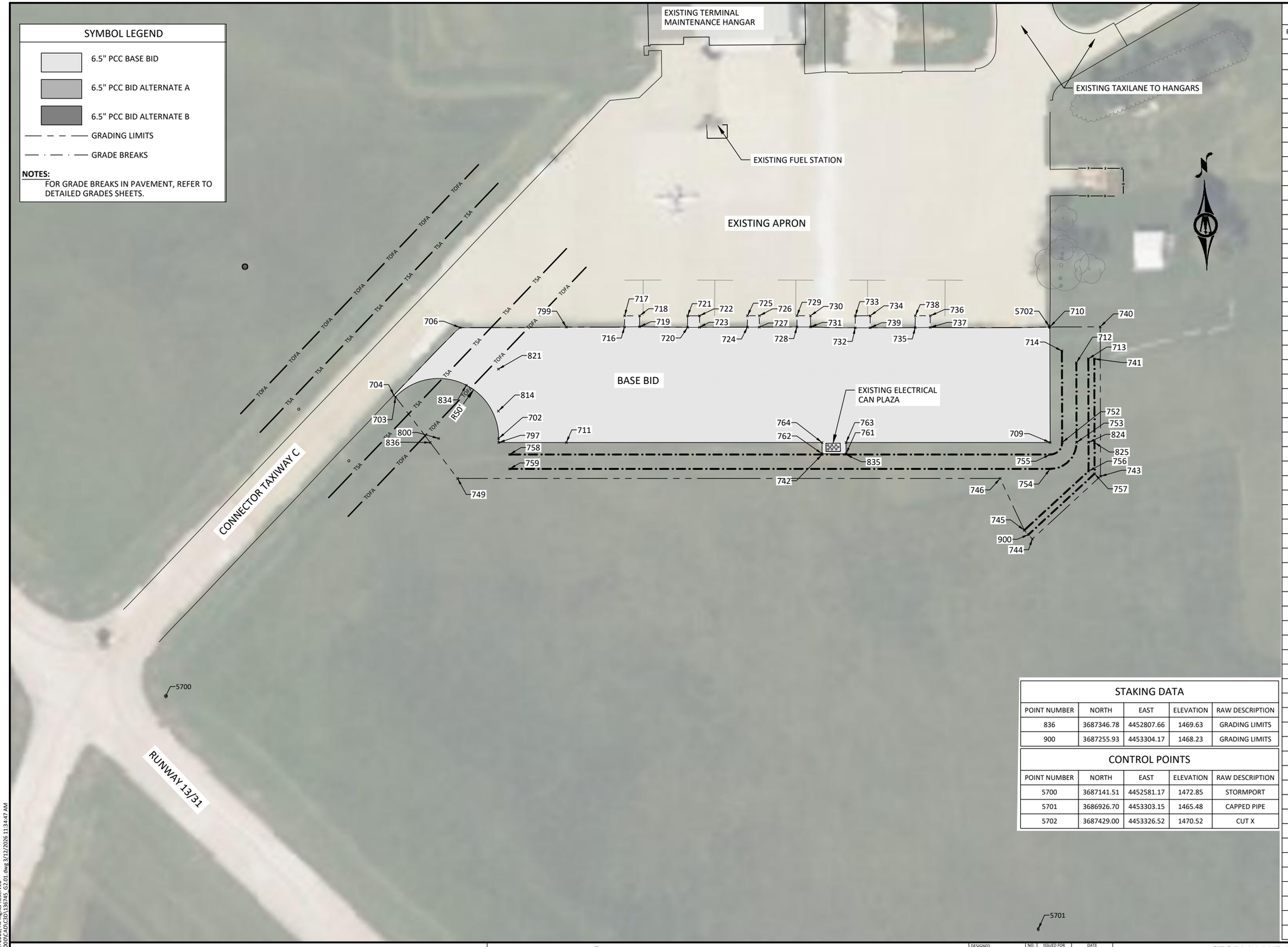
STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
QUANTITIES & ESTIMATE REFERENCE INFORMATION

SHEET
G1.03

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B
- GRADING LIMITS
- GRADE BREAKS

NOTES:
FOR GRADE BREAKS IN PAVEMENT, REFER TO DETAILED GRADES SHEETS.



STAKING DATA

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
702	3687348.57	4452864.78	1469.78	CURVE PT
703	3687385.69	4452779.81	1471.56	CORNER/CURVE PC
704	3687387.11	4452778.41	1471.58	MATCH
706	3687441.92	4452835.22	1471.13	MATCH
710	3687428.63	4453326.98	1470.54	MATCH
711	3687343.59	4452921.09	1469.00	GRADE BREAK
712	3687398.07	4453348.20	1469.65	GRADE BREAK
713	3687401.12	4453358.28	1469.40	GRADE BREAK
714	3687408.38	4453336.46	1469.90	GRADE BREAK
716	3687438.59	4452972.35	1469.59	MATCH
717	3687447.93	4452972.69	1469.72	MATCH
718	3687447.58	4452985.21	1469.78	MATCH
719	3687438.40	4452984.89	1469.65	MATCH
720	3687436.86	4453024.92	1469.74	MATCH
721	3687446.46	4453025.20	1469.89	MATCH
722	3687446.18	4453035.18	1469.92	MATCH
723	3687436.61	4453034.89	1469.77	MATCH
724	3687435.57	4453074.81	1469.88	MATCH
725	3687445.06	4453075.09	1470.05	MATCH
726	3687444.78	4453085.04	1470.09	MATCH
727	3687435.32	4453084.75	1469.93	MATCH
728	3687434.57	4453116.10	1469.99	MATCH
729	3687443.90	4453116.38	1470.15	MATCH
730	3687443.59	4453127.68	1470.19	MATCH
731	3687434.25	4453127.43	1470.05	MATCH
732	3687432.54	4453164.67	1470.17	MATCH
733	3687442.51	4453165.01	1470.28	MATCH
734	3687442.17	4453177.50	1470.36	MATCH
735	3687431.24	4453214.70	1470.28	MATCH
736	3687440.79	4453227.56	1470.44	MATCH
737	3687431.06	4453227.20	1470.27	MATCH
738	3687441.14	4453215.05	1470.41	MATCH
739	3687432.19	4453177.10	1470.25	MATCH
740	3687427.55	4453368.97	1470.64	GRADING LIMITS
741	3687400.99	4453363.28	1469.40	GRADE BREAK
742	3687327.59	4453134.06	1468.95	GRADE BREAK
743	3687302.88	4453365.70	1469.36	GRADING LIMITS
744	3687252.20	4453307.42	1468.24	GRADING LIMITS
745	3687259.71	4453300.88	1468.21	GRADING LIMITS
746	3687303.42	4453281.95	1468.39	GRADING LIMITS
749	3687316.15	4452829.59	1469.28	GRADING LIMITS
752	3687331.97	4453334.50	1469.37	GRADE BREAK
753	3687331.67	4453346.50	1469.19	GRADE BREAK
754	3687310.24	4453323.89	1469.19	GRADE BREAK
755	3687322.23	4453324.22	1469.37	GRADE BREAK
756	3687307.52	4453355.86	1468.74	GRADE BREAK
757	3687305.19	4453360.80	1468.74	GRADE BREAK
758	3687334.93	4452873.53	1469.12	GRADE BREAK
759	3687322.93	4452873.20	1468.94	GRADE BREAK
761	3687327.65	4453154.07	1469.44	CORNER
762	3687328.21	4453134.08	1469.40	CORNER
763	3687337.02	4453154.33	1469.50	CORNER
764	3687337.58	4453134.34	1469.46	CORNER
797	3687345.18	4452864.76	1469.74	CORNER
799	3687439.87	4452923.80	1469.46	MATCH
800	3687349.98	4452814.80	0.00	RADIUS CENTER
814	3687371.42	4452865.19	1470.02	GRADE BREAK
821	3687406.41	4452866.17	1470.39	GRADE BREAK
824	3687331.33	4453356.48	1468.90	GRADE BREAK
825	3687331.19	4453361.47	1468.92	GRADE BREAK
834	3687393.70	4452839.06	1470.41	GRADING LIMITS
835	3687327.03	4453154.05	1469.00	GRADING LIMITS

STAKING DATA

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
836	3687346.78	4452807.66	1469.63	GRADING LIMITS
900	3687255.93	4453304.17	1468.23	GRADING LIMITS

CONTROL POINTS

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
5700	3687141.51	4452581.17	1472.85	STORMPORT
5701	3686926.70	4453303.15	1465.48	CAPPED PIPE
5702	3687429.00	4453326.52	1470.52	CUT X

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X\136745000\CAD\C3D\136745_G2.01.dwg 3/12/2026 11:34:47 AM

HORZ. SCALE 0 40 80 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

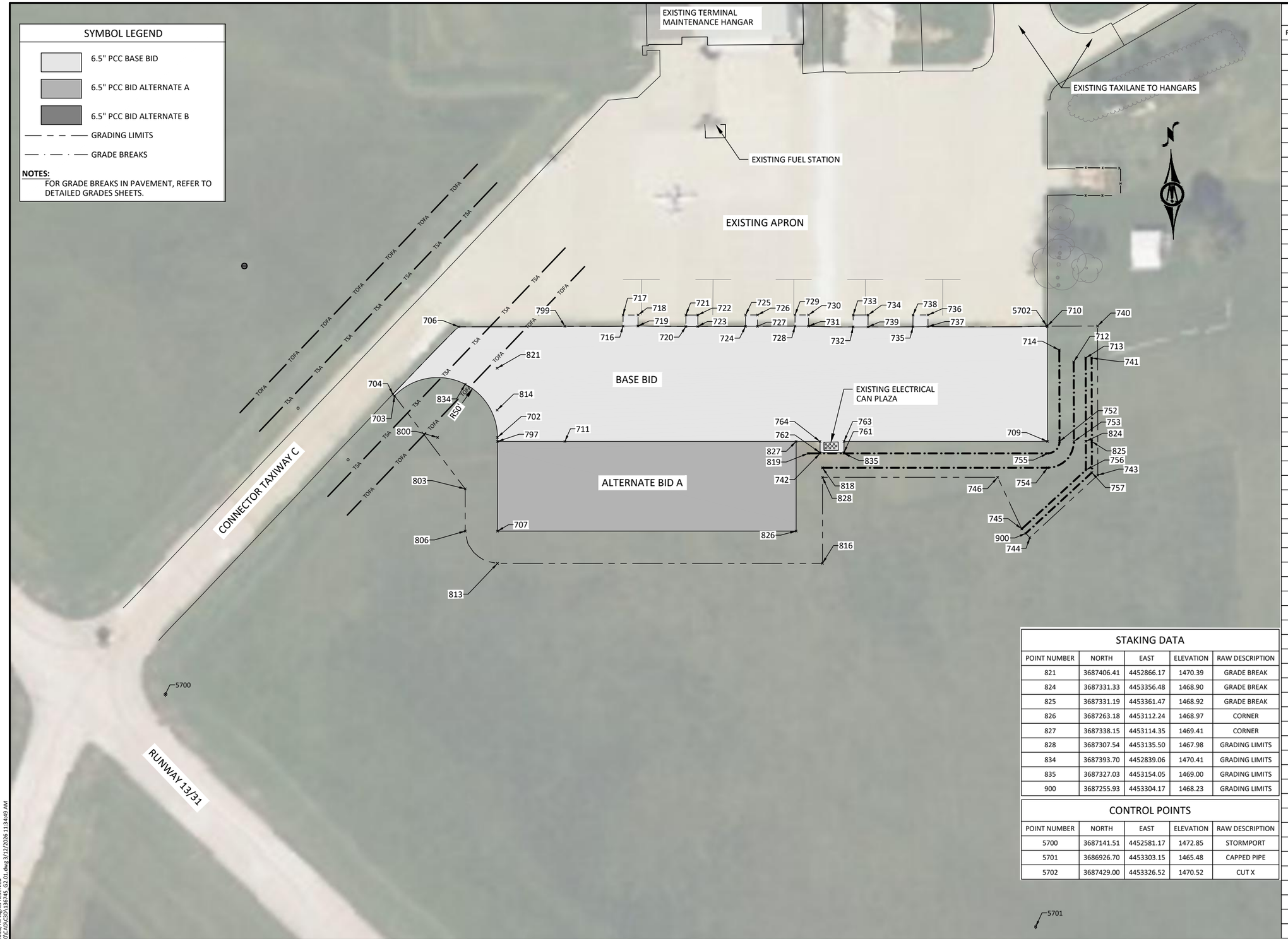
STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
CONTROL POINTS & SITE LAYOUT INFORMATION

SHEET G2.01

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B
- GRADING LIMITS
- GRADE BREAKS

NOTES:
FOR GRADE BREAKS IN PAVEMENT, REFER TO DETAILED GRADES SHEETS.



STAKING DATA

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
702	3687348.57	4452864.78	1469.78	CURVE PT
703	3687385.69	4452779.81	1471.56	CORNER/CURVE PC
704	3687387.11	4452778.41	1471.58	MATCH
706	3687441.92	4452835.22	1471.13	MATCH
707	3687270.21	4452862.65	1469.36	CORNER
709	3687332.23	4453324.51	1469.87	CORNER
710	3687428.63	4453326.98	1470.54	MATCH
711	3687343.59	4452921.09	1469.00	GRADE BREAK
712	3687398.07	4453348.20	1469.65	GRADE BREAK
713	3687401.12	4453358.28	1469.40	GRADE BREAK
714	3687408.38	4453336.46	1469.90	GRADE BREAK
716	3687438.59	4452972.35	1469.59	MATCH
717	3687447.93	4452972.69	1469.72	MATCH
718	3687447.58	4452985.21	1469.78	MATCH
719	3687438.40	4452984.89	1469.65	MATCH
720	3687436.86	4453024.92	1469.74	MATCH
721	3687446.46	4453025.20	1469.89	MATCH
722	3687446.18	4453035.18	1469.92	MATCH
723	3687436.61	4453034.89	1469.77	MATCH
724	3687435.57	4453074.81	1469.88	MATCH
725	3687445.06	4453075.09	1470.05	MATCH
726	3687444.78	4453085.04	1470.09	MATCH
727	3687435.32	4453084.75	1469.93	MATCH
728	3687434.57	4453116.10	1469.99	MATCH
729	3687443.90	4453116.38	1470.15	MATCH
730	3687443.59	4453127.68	1470.19	MATCH
731	3687434.25	4453127.43	1470.05	MATCH
732	3687432.54	4453164.67	1470.17	MATCH
733	3687442.51	4453165.01	1470.28	MATCH
734	3687442.17	4453177.50	1470.36	MATCH
735	3687431.24	4453214.70	1470.28	MATCH
736	3687440.79	4453227.56	1470.44	MATCH
737	3687431.06	4453227.20	1470.27	MATCH
738	3687441.14	4453215.05	1470.41	MATCH
739	3687432.19	4453177.10	1470.25	MATCH
740	3687427.55	4453368.97	1470.64	GRADING LIMITS
741	3687400.99	4453363.28	1469.40	GRADE BREAK
742	3687327.59	4453134.06	1468.95	GRADE BREAK
743	3687302.88	4453365.70	1469.36	GRADING LIMITS
744	3687252.20	4453307.42	1468.24	GRADING LIMITS
745	3687259.71	4453300.88	1468.21	GRADING LIMITS
746	3687303.42	4453281.95	1468.39	GRADING LIMITS
752	3687331.97	4453334.50	1469.37	GRADE BREAK
753	3687331.67	4453346.50	1469.19	GRADE BREAK
754	3687310.24	4453323.89	1469.19	GRADE BREAK
755	3687322.23	4453324.22	1469.37	GRADE BREAK
756	3687307.52	4453355.86	1468.74	GRADE BREAK
757	3687305.19	4453360.80	1468.74	GRADE BREAK
761	3687327.65	4453154.07	1469.44	CORNER
762	3687328.21	4453134.08	1469.40	CORNER
763	3687337.02	4453154.33	1469.50	CORNER
764	3687337.58	4453134.34	1469.46	CORNER
797	3687345.18	4452864.76	1469.74	CORNER
799	3687439.87	4452923.80	1469.46	MATCH
800	3687349.98	4452814.80	0.00	RADIUS CENTER
803	3687306.28	4452836.65	1469.23	GRADING LIMITS
806	3687270.97	4452835.66	1469.34	GRADING LIMITS
813	3687243.22	4452861.89	1469.43	GRADING LIMITS
814	3687371.42	4452865.19	1470.02	GRADE BREAK
816	3687235.57	4453133.47	1467.98	GRADING LIMITS
818	3687315.53	4453135.72	1468.37	GRADE BREAK
819	3687327.87	4453124.06	1468.94	GRADE BREAK

STAKING DATA

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
821	3687406.41	4452866.17	1470.39	GRADE BREAK
824	3687331.33	4453356.48	1468.90	GRADE BREAK
825	3687331.19	4453361.47	1468.92	GRADE BREAK
826	3687263.18	4453112.24	1468.97	CORNER
827	3687338.15	4453114.35	1469.41	CORNER
828	3687307.54	4453135.50	1467.98	GRADING LIMITS
834	3687393.70	4452839.06	1470.41	GRADING LIMITS
835	3687327.03	4453154.05	1469.00	GRADING LIMITS
900	3687255.93	4453304.17	1468.23	GRADING LIMITS

CONTROL POINTS

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
5700	3687141.51	4452581.17	1472.85	STORMPORT
5701	3686926.70	4453303.15	1465.48	CAPPED PIPE
5702	3687429.00	4453326.52	1470.52	CUT X

©Bolton & Menk, Inc. 2026, All Rights Reserved
H:\SMLR\24X136745000\CAD\C3D\136745_G2.01.dwg 3/12/2026 11:34:49 AM

HORZ. SCALE 0 40 80 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

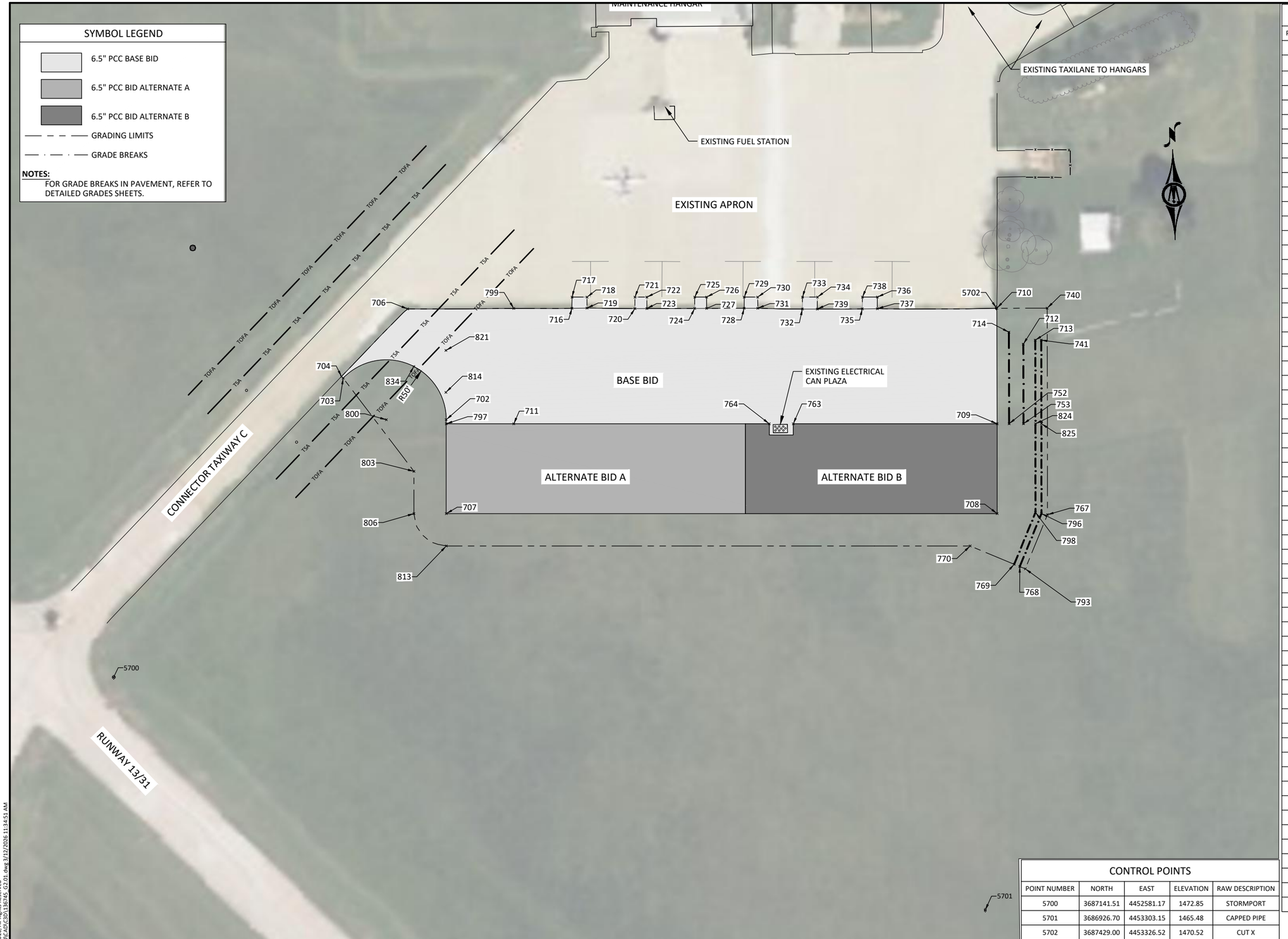
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
CONTROL POINTS & SITE LAYOUT INFORMATION

SHEET G2.02



STAKING DATA				
POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
702	3687348.57	4452864.78	1469.78	CURVE PT
703	3687385.69	4452779.81	1471.56	CORNER/CURVE PC
704	3687387.11	4452778.41	1471.58	MATCH
706	3687441.92	4452835.22	1471.13	MATCH
707	3687270.21	4452862.65	1469.36	CORNER
708	3687257.26	4453322.39	1469.34	CORNER
709	3687332.23	4453324.51	1469.87	CORNER
710	3687428.63	4453326.98	1470.54	MATCH
711	3687343.59	4452921.09	1469.00	GRADE BREAK
712	3687398.07	4453348.20	1469.65	GRADE BREAK
713	3687401.12	4453358.28	1469.40	GRADE BREAK
714	3687408.38	4453336.46	1469.90	GRADE BREAK
716	3687438.59	4452972.35	1469.59	MATCH
717	3687447.93	4452972.69	1469.72	MATCH
718	3687447.58	4452985.21	1469.78	MATCH
719	3687438.40	4452984.89	1469.65	MATCH
720	3687436.86	4453024.92	1469.74	MATCH
721	3687446.46	4453025.20	1469.89	MATCH
722	3687446.18	4453035.18	1469.92	MATCH
723	3687436.61	4453034.89	1469.77	MATCH
724	3687435.57	4453074.81	1469.88	MATCH
725	3687445.06	4453075.09	1470.05	MATCH
726	3687444.78	4453085.04	1470.09	MATCH
727	3687435.32	4453084.75	1469.93	MATCH
728	3687434.57	4453116.10	1469.99	MATCH
729	3687443.90	4453116.38	1470.15	MATCH
730	3687443.59	4453127.68	1470.19	MATCH
731	3687434.25	4453127.43	1470.05	MATCH
732	3687432.54	4453164.67	1470.17	MATCH
733	3687442.51	4453165.01	1470.28	MATCH
734	3687442.17	4453177.50	1470.36	MATCH
735	3687431.24	4453214.70	1470.28	MATCH
736	3687440.79	4453227.56	1470.44	MATCH
737	3687431.06	4453227.20	1470.27	MATCH
738	3687441.14	4453215.05	1470.41	MATCH
739	3687432.19	4453177.10	1470.25	MATCH
740	3687427.55	4453368.97	1470.64	GRADING LIMITS
741	3687400.99	4453363.28	1469.40	GRADE BREAK
752	3687331.97	4453334.50	1469.37	GRADE BREAK
753	3687331.67	4453346.50	1469.19	GRADE BREAK
763	3687337.02	4453154.33	1469.50	CORNER
764	3687337.58	4453134.34	1469.46	CORNER
767	3687255.20	4453364.37	1468.92	GRADING LIMITS
768	3687212.57	4453340.01	1468.60	GRADING LIMITS
769	3687214.60	4453335.44	1468.51	GRADING LIMITS
770	3687230.90	4453299.14	1467.99	GRADING LIMITS
793	3687210.55	4453344.58	1468.65	GRADING LIMITS
796	3687256.29	4453359.38	1468.72	GRADE BREAK
797	3687345.18	4452864.76	1469.74	CORNER
798	3687257.41	4453354.41	1468.66	GRADE BREAK
799	3687439.87	4452923.80	1469.46	MATCH
800	3687349.98	4452814.80	0.00	RADIUS CENTER
803	3687306.28	4452836.65	1469.23	GRADING LIMITS
806	3687270.97	4452835.66	1469.34	GRADING LIMITS
813	3687243.22	4452861.89	1469.43	GRADING LIMITS
814	3687371.42	4452865.19	1470.02	GRADE BREAK
821	3687406.41	4452866.17	1470.39	GRADE BREAK
824	3687331.33	4453356.48	1468.90	GRADE BREAK
825	3687331.19	4453361.47	1468.92	GRADE BREAK
834	3687393.70	4452839.06	1470.41	GRADING LIMITS

CONTROL POINTS				
POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
5700	3687141.51	4452581.17	1472.85	STORMPORT
5701	3686926.70	4453303.15	1465.48	CAPPED PIPE
5702	3687429.00	4453326.52	1470.52	CUT X

©Bolton & Menk, Inc. 2026, All Rights Reserved
H:\SWEK\24X\136745000\CAD\C3D\136745_G2.01.dwg 3/12/2026 11:34:51 AM

HORZ. SCALE 0 40 80 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
CONTROL POINTS & SITE LAYOUT

SHEET G2.03

SAFETY AND CONSTRUCTION NOTES

(SEE CONSTRUCTION SAFETY AND PHASING PLAN IN SPECIFICATIONS FOR ADDITIONAL DETAIL)

GENERAL CONSTRUCTION SAFETY

1. THE CONTRACTOR SHALL COMPLY WITH ALL REQUIREMENTS SET FORTH IN FAA AC 150/5370-2G "OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION", WHICH IS INCLUDED IN THE PROJECT MANUAL APPENDIX. CONSTRUCTION SAFETY SHALL BE DISCUSSED DURING THE PRE-CONSTRUCTION MEETING AND AT WEEKLY PROJECT MEETINGS.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL PUBLIC AND PRIVATE UTILITY LOCATIONS DURING CONSTRUCTION.
3. THE RESPONSIBILITY FOR ALL SAFETY SHALL FALL UPON THE CONTRACTOR(S) DURING CONSTRUCTION. THIS SAFETY PLAN SHALL BE REVIEWED BY THE FAA PRIOR TO CONSTRUCTION NOTICES. ANY ATTACHMENT, DEVIATIONS, OMISSIONS, OR CONTRADICTIONS TO THE FAA REGULATIONS DISCOVERED DURING REVIEW SHALL BE MADE PART OF THE SAFETY PLAN PRIOR TO CONSTRUCTION, AND HENCE BECOME PART OF THE CONTRACT CONDITIONS. THE CONTRACTOR SHALL CONFIRM PRIOR TO ENTERING INTO A CONSTRUCTION CONTRACT THAT NO MODIFICATIONS TO THIS SAFETY PLAN HAVE BEEN MADE. AT THE CONTRACTOR'S REQUEST THE ENGINEER SHALL PROVIDE DOCUMENTATION THAT INDICATES NO MODIFICATIONS, REVISIONS OR ADDITIONAL ITEMS BE INCLUDED IN THIS SAFETY PLAN.

CONSTRUCTION EQUIPMENT:

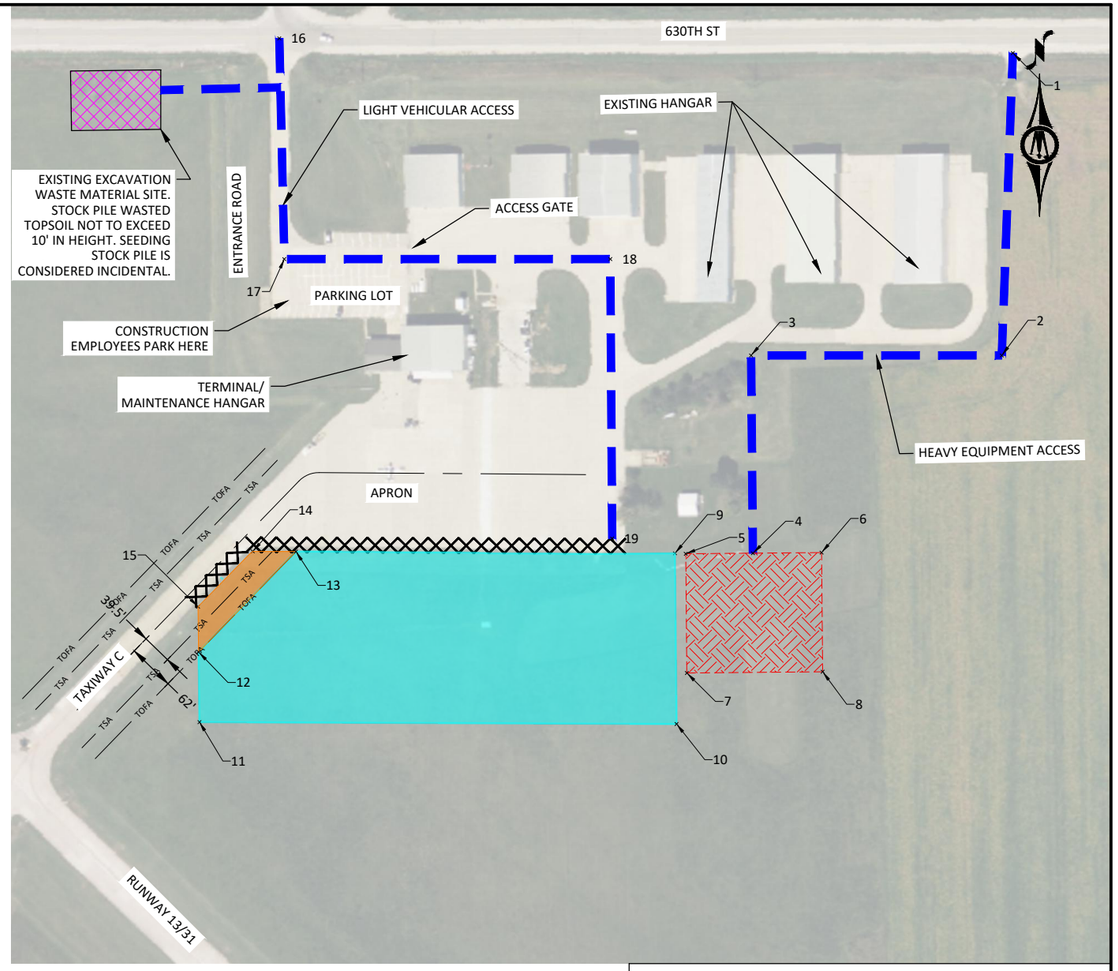
4. ALL CONSTRUCTION EQUIPMENT SHALL BE PARKED IN DESIGNATED STAGING/STORAGE AREAS WHEN NOT IN USE OR OVERNIGHT. ALL BOOMS SHALL BE LOWERED WHEN NOT IN USE.
5. THE EXPECTED MAXIMUM HEIGHT OF CONSTRUCTION EQUIPMENT IS 15 FEET AT ANY LOCATION. THE CONTRACTOR SHALL VERIFY ANY EQUIPMENT HEIGHT MORE THAN 15 FEET AND NOTIFY THE ENGINEER AND OWNER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY CONSTRUCTION THAT REQUIRES EQUIPMENT OF MORE THAN 15 FEET SO THAT THE APPROPRIATE NOTICE TO AIR MISSIONS (NOTAM) MAY BE ISSUED.
6. ALL EQUIPMENT WORKING ON THE AIRPORT CONSTRUCTION SITE MUST HAVE AN AMBER FLASHING BEACON AND/OR WARNING FLAG. THE VEHICLE WARNING FLAGS SHALL BE AS PER DETAIL ON THE CSPP PLAN SHEETS. THE FLAG SHALL BE SECURELY ATTACHED TO THE HIGHEST POINT ON THE CONSTRUCTION EQUIPMENT OR VEHICLE AND BE VISIBLE AT ALL TIMES. VEHICLE WARNING FLAGS ARE THE MINIMUM REQUIREMENT. AMBER FLASHING BEACONS ARE NOT REQUIRED BUT IF USED SHALL BE MOUNTED ON THE HIGHEST POINT OF THE CONSTRUCTION EQUIPMENT OR VEHICLE AND OPERATING WHENEVER EQUIPMENT IS IN USE.
7. VEHICULAR TRAFFIC LOCATED IN OR CROSSING ACTIVE AIRCRAFT MOVEMENT AREAS MUST HAVE A WORKING TWO-WAY RADIO CONTACT WITH AIRPORT OPERATIONS OR BE ESCORTED BY A PERSON IN RADIO CONTACT. THE DRIVER, THROUGH PERSONAL OBSERVATION, SHOULD CONFIRM THAT NO AIRCRAFT ARE APPROACHING THE VEHICLES POSITION. VEHICULAR TRAFFIC SHALL NOT ENTER ACTIVE AIRCRAFT MOVEMENT AREAS DURING THE PROJECT. SHOULD VEHICULAR TRAFFIC NEED TO ENTER ACTIVE AIRCRAFT MOVEMENT AREAS THE CONTRACTOR SHALL COORDINATE WITH THE ENGINEER AND AIRPORT MANAGER TO ISSUE THE PROPER NOTAM TO PREVENT INCURSIONS.

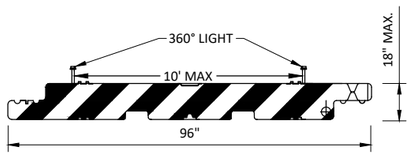
HAUL ROUTES, TRAFFIC CONTROL & ACCESS CONTROL

8. ALL TEMPORARY ACCESS, STORAGE/STAGING AREAS AND ROADS SHALL BE RESTORED TO ORIGINAL CONDITION, INCLUDING TOPSOILING, RE-SEEDING, IF NECESSARY, AFTER USE BY THE CONTRACTOR. RESTORATION OF THESE AREAS SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
9. THE CONTRACTOR SHALL PROVIDE, INSTALL, AND MAINTAIN ALL TRAFFIC CONTROL DEVICES AS NECESSARY.
10. THIS LAYOUT IS A MINIMUM REQUIREMENT NECESSARY TO ASSIST THE CONTRACTOR IN DETERMINING THE COST FOR PROVIDING NECESSARY TRAFFIC CONTROL. THE CONTRACTOR MAY ADD ADDITIONAL WARNING DEVICES UPON APPROVAL OF THE ENGINEER.
11. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND THE AIRPORT MANAGER A MINIMUM OF 72 HOURS IN ADVANCE OF ANY PROPOSED CONSTRUCTION WITHIN THE APRON OR TAXIWAY SAFETY AREAS, RUNWAY PROTECTION ZONES, APPROACH AREAS OR REQUIRED CLOSURE AREAS SO THAT THE APPROPRIATE NOTAM MAY BE ISSUED. THE AIRPORT MANAGER WILL ALSO ISSUE TIMELY NOTAMS WHICH SPECIFICALLY DETAIL THE CURRENT STATUS OF THE AIRPORT DURING CONSTRUCTION, INCLUDING CLOSURE STATUS. THE NOTAM SHALL INCLUDE THE PROPOSED LOCATION, TIME AND DATE OR COMMENCEMENT OF CONSTRUCTION.
12. INSPECT FOR AND REMOVE FOREIGN OBJECT DEBRIS (FOD) ON OR NEAR ALL AIRCRAFT MOVEMENT AREAS BY SWEEPING DAILY AT TIMES OF CONCURRENT CONSTRUCTION AND AIRCRAFT OPERATIONS. WASTE AND LOOSE MATERIAL MUST NOT BE PLACED IN ACTIVE AIRCRAFT MOVEMENT AREAS. MATERIALS TRACKED ON TO THESE AREAS MUST BE REMOVED CONTINUOUSLY DURING THE PROJECT. THE CONSTRUCTION SITE, INCLUDING THE STAGING AREA, SHALL BE KEPT CLEAN OF ALL PERSONNEL DEBRIS.
13. THERE SHALL BE NO UNAUTHORIZED PERSONNEL ON THE AIRFIELD. CONTRACTOR SHALL USE THE DESIGNATED AIRPORT ACCESS ROUTE IDENTIFIED IN THE CSPP PLAN SHEETS WHEN ENTERING AIRPORT PROPERTY. NO GATES ARE TO BE LEFT OPEN AND UNATTENDED.
14. AT ALL TIMES, WHILE CONSTRUCTION IS IN PROGRESS, THE CONTRACTOR SHALL HAVE A DESIGNATED PERSON MONITORING THE UNICOM FREQUENCY OR CTAF (122.700).
15. PERSONAL VEHICLES SHALL NOT BE ALLOWED ON THE AIRFIELD. ALL PERSONAL VEHICLES SHOULD BE PARKED IN DESIGNATED STAGING/STORAGE AREAS OR ANOTHER AREA AS DESIGNATED BY THE AIRPORT MANAGER.
16. WHEN ACCESS POINTS ARE CREATED IN THE SECURITY FENCING TO PERMIT THE PASSAGE OF CONSTRUCTION VEHICLES OR PERSONNEL, TEMPORARY GATES SHOULD BE EQUIPPED SO THEY CAN BE SECURELY CLOSED AND LOCKED TO PREVENT ACCESS BY ANIMALS AND PEOPLE.
17. LOW PROFILE BARRICADE FLASHERS, AND FLASHERS OR ANY KIND UTILIZED ON THE PROJECT SHALL BE INSPECTED AT DUSK EACH DAY TO ENSURE ALL FLASHERS ARE WORKING PROPERLY.
18. PROMINENTLY MARK OPEN TRENCHES, EXCAVATIONS AND STOCKPILED MATERIALS AND LIGHT THESE OBSTACLES DURING HOURS OF RESTRICTED VISIBILITY AND DARKNESS. CONSTRAIN STOCKPILED MATERIALS TO PREVENT ITS MOVEMENT AS A RESULT OF THE MAXIMUM ANTICIPATED AIRCRAFT BLAST AND FORECASTED WIND CONDITIONS.
19. PRIOR TO RE-OPENING ANY CLOSED PAVEMENT AREA, THE CONTRACTOR, TOGETHER WITH THE AIRPORT MANAGER AND ENGINEER SHALL INSPECT THE PAVEMENT, SAFETY AREAS AND PRIMARY SURFACE FOR ANY OBSTRUCTION OR FOD.
20. WHEN THE AIRFIELD IS CLOSED FOR CONSTRUCTION (RUNWAY CLOSURES IN PLACE), THE BEACON SHALL REMAIN IN OPERATION BUT ALL OTHER AIRFIELD LIGHTING & NAVAID SHALL BE TURNED OFF.
21. ALL AIRFIELD GUIDANCE SIGNS (INCLUDING HOLD SIGNS) SHALL BE COVERED OR OTHERWISE REMOVED FROM SERVICE IF THE SAID GUIDANCE SIGNS ARE IDENTIFYING AREAS THAT ARE CLOSED FOR CONSTRUCTION.
22. THE CONTRACTOR SHALL NOTIFY AIRCRAFT RESCUE AND FIRE FIGHTING (ARFF) PERSONNEL, MUTUAL AID PROVIDERS AND OTHER EMERGENCY SERVICES IF CONSTRUCTION REQUIRES SHUTTING OFF OR OTHERWISE DISRUPTING ANY WATER LINE OR FIRE HYDRANT ON THE AIRPORT OR ADJOINING AREAS AND IF CONTRACTORS WORK WITH HAZARDOUS MATERIAL ON THE AIRFIELD. NOTIFICATION MUST ALSO BE MADE WHEN THE WORK PERFORMED WILL CLOSE OR AFFECT ANY EMERGENCY ROUTES. ALSO MAKE NOTIFICATION WHEN SERVICES ARE RESTORED.

PROJECT NOTES:

23. CONTRACTOR SHALL PROVIDE A SAFETY COMPLIANCE DOCUMENT PRIOR TO ISSUANCE OF NOTICE TO PROCEED.
24. A REPRESENTATIVE SHALL BE PROVIDED BY THE CONTRACTOR ON-CALL 24 HOURS A DAY FOR EMERGENCY MAINTENANCE OF THE AIRPORT TRAFFIC CONTROL DEVICES AND LIGHTING.
25. CONTRACTOR, ENGINEER AND AIRPORT MANAGER SHALL CONDUCT DAILY INSPECTIONS TO ENSURE CONFORMANCE TO CSPP PLAN.
26. CONTRACTOR SHALL HAVE A SWEEPER ON-SITE AT ALL TIMES TO PICK UP DEBRIS FROM ACTIVE AIRCRAFT MOVEMENT AREAS AS IT OCCURS.
27. FOR MORE INFORMATION REGARDING CONTRACT TIME ALLOWED FOR CONSTRUCTION, REFER TO THE NOTICE TO BIDDERS FOR THE PROJECT.



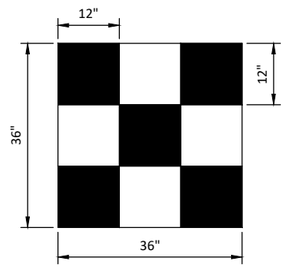


LOW PROFILE BARRICADE NOTES:

1) BARRICADES SHALL BE LOW PROFILE AND LOW MASS AS APPROVED BY ENGINEER.
2) TWO FLASHING RED LIGHTS ARE REQUIRED. LIGHTS SHALL BE OMNIDIRECTIONAL OR ROTATE ONE LIGHT 90°. SECURELY FASTEN LIGHTS TO BARRICADE.
3) REFLECTIVE MEDIA SHALL BE ALTERNATING 6" WIDE BANDS OF INTERNATIONAL ORANGE AND WHITE ANGLED AT 45°.
4) BARRICADES SHALL BE SECURELY WEIGHTED TO PREVENT MOVEMENT BY WIND, PROPELLER WASH, OR JET BLAST UP TO 75 MPH.
5) SPACE BARRICADES 4' APART OR LESS AND EXTEND ACROSS PAVEMENT, EDGE TO EDGE.
6) CONTRACTOR SHALL INSPECT BARRICADES TWICE DAILY - BEFORE CONSTRUCTION STARTS AND PRIOR TO LEAVING THE SITE AT THE END OF DAY.
7) DISTANCE BETWEEN LIGHTS SHALL NOT EXCEED 10.'

1 LOW PROFILE BARRICADE DETAIL

NOT TO SCALE



NOTES:

1. FLAG SHALL HAVE A CHECKERED PATTERN OF INTERNATIONAL ORANGE AND WHITE SQUARES

2 VEHICLE WARNING FLAG

NOT TO SCALE

HAUL ROUTE POINT LAT/LONG DATA			
POINT NUMBER	ELEVATION	LATITUDE	LONGITUDE
1	1481.000	N42°36'15.613"	W95°14'10.521"
2	1474.000	N42°36'11.670"	W95°14'10.716"
3	1470.000	N42°36'11.670"	W95°14'15.140"
4	1470.000	N42°36'09.093"	W95°14'15.109"
16	1470.540	N42°36'15.803"	W95°14'23.466"
17	1470.540	N42°36'12.926"	W95°14'23.378"
18	1470.540	N42°36'12.927"	W95°14'17.624"
19	1470.540	N42°36'09.284"	W95°14'17.592"

STAGING AREA POINT LAT/LONG DATA			
POINT NUMBER	ELEVATION	LATITUDE	LONGITUDE
5	1470.000	N42°36'09.085"	W95°14'16.294"
6	1470.000	N42°36'09.101"	W95°14'13.897"
7	1470.000	N42°36'07.531"	W95°14'16.275"
8	1470.000	N42°36'07.547"	W95°14'13.878"

WORK AREA POINT LAT/LONG DATA				
POINT NUMBER	ELEVATION	LATITUDE	LONGITUDE	RAW DESCRIPTION
9	1472.207	N42°36'09.091"	W95°14'16.484"	WORK AREA
10	1472.210	N42°36'06.866"	W95°14'16.456"	WORK AREA
11	1472.210	N42°36'06.891"	W95°14'24.875"	WORK AREA
12	1470.010	N42°36'07.805"	W95°14'24.890"	CRITICAL AREA
13	1470.010	N42°36'09.114"	W95°14'23.171"	CRITICAL AREA
14	1470.010	N42°36'09.117"	W95°14'23.935"	CRITICAL AREA
15	1470.010	N42°36'08.395"	W95°14'24.900"	CRITICAL AREA

LEGEND

- CONTRACTORS ACCESS ROUTE
- LOW-PROFILE BARRICADES
- CONSTRUCTION STAGING/STORAGE/STOCKPILE LOCATION
- WORK AREA
- CRITICAL TAXIWAY OBJECT FREE AREA - NO WORK OR EQUIPMENT TO BE IN THIS ZONE WHEN AIRCRAFT ARE TAXING TO/FROM APRON. CONTRACTOR TO PROVIDE FLAGGER TO DIRECT TRAFFIC WHEN WORKING IN THIS AREA. YIELD TO AIRCRAFT, MOVE OUT OF WAY AND BE CLEAR OF TOFA. PROVIDE GRADED SHOULDER FROM TAXIWAY LIGHTS TO PAVEMENT, AFTER COMPLETING VARIOUS OPERATIONS NEEDED.
- STOCK PILE AREA FOR WASTE TOPSOIL

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMAK\24X\136745000\CAD\C3D\136745_G3.01.dwg 3/12/2026 11:34:58 AM

HORZ. SCALE 0 200 400 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
CONSTRUCTION SAFETY & PHASING PLAN

SHEET G3.01



Construction traffic shall yield the right-of-way to mainline traffic.

(1) Refer to SI-881 for details.

LEGEND

Traffic Sign

Direction of Traffic

Possible Contract Item:
Traffic Control

IOWA DOT

STANDARD ROAD PLAN

REVISION 2 10-15-19

TC-273

SHEET 1 of 1

REVISIONS: New logo.

APPROVED BY DESIGN METHODS ENGINEER

CONSTRUCTION SITE ENTRANCE

NOTES:
CONTRACTOR SHALL INSTALL TRAFFIC SIGNS ON ALL THREE ROADS SHOWN AS DETAILED IN TC-273 SHOWN ABOVE.

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X\136745000\CAD\C3D\136745_G3.01.dwg 3/12/2026 11:34:59 AM

HORZ. SCALE 0 100 200 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT

EXPAND TERMINAL AREA APRON

CONSTRUCTION SAFETY & PHASING PLAN

SHEET G3.02

DEMOLITION SYMBOL LEGEND

- TREE REMOVAL, INCLUDING GRUBBING
- PCC PAVEMENT REMOVAL
- ELECTRICAL REMOVALS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING TAXILANE

CONCRETE ENCASED DUCT BANKS (PROTECT IN PLACE)

EXISTING FUELING STATION (PROTECT IN PLACE)

EXISTING APRON

REMOVE TREES/BRUSH COMPLETELY, INCLUDING GRUBBING

13.81'

EXISTING ELECTRICAL PANEL. FIELD LOCATE ELECTRICAL LINE TO PANEL

REMOVE FIRST 14.0' +/- OF FENCING, SALVAGE & RE-INSTALL CATTLE GATE. CONTRACTOR IS RESPONSIBLE FOR ANY CONNECTIONS OR ITEMS REQUIRED FOR THE GATE REINSTALLATION INCLUDING ANY BRACING/REINFORCEMENT TO ACCOMMODATE THE REMOVAL OF SECTIONS OF FENCE.

REMOVE TREES/BRUSH COMPLETELY, INCLUDING GRUBBING

EXISTING 5KV RUNWAY 13/31 AND CONNECTING TAXIWAY EDGE LIGHTING CIRCUIT, REMOVE CABLES AS SHOWN AND SPLICE CIRCUIT TOGETHER IN PRECEDING TAXIWAY EDGE LIGHT BASE CAN.

EXISTING TAXIWAY EDGE LIGHT -REMOVE & SALVAGE. EDGE LIGHT AND ALL ASSOCIATED PARTS SHALL BE KEPT IN GOOD, WORKING CONDITION AND OFFERED TO THE OWNER.

EXISTING DRAIN TILE. EXACT LOCATION UNKNOWN. FIELD INVESTIGATE PRIOR TO CONSTRUCTION. PROTECT IN PLACE

REMOVE TIE DOWN PAVEMENT MARKING (THIS TIE-DOWN)

REMOVE AND REPLACE EXISTING PANEL TO ALLOW FOR CONSTRUCTION OF PROPOSED TIE DOWN TYPICAL.

EXISTING HANDHOLE PROTECT DURING CONSTRUCTION

TAXIWAY C

EXISTING 16" INTAKE W/ BEEHIVE CASTING TO BE REMOVED AND REPLACED WITH SW-512 MANHOLE LID STRUCTURE
RIM: 1468.28
IN: 4" HDPE E (INV=1465.61)
IN: 6" PCC N (INV=1465.61)
IN: 6" PCC NW (INV=1465.61)
OUT: 8" PCC SW (INV= 1465.61)
BOTTOM OF STRUCTURE: 1464.88

CONCRETE ENCASED DUCT BANKS. FIELD VERIFY DEPTH. EXISTING COUNTERPOISE. (PROTECT IN PLACE)

FIELD VERIFY ALL CONDUITS CONNECT TO PLAZA

EXISTING CONCRETE ENCASED DUCT BANKS. FIELD VERIFY DEPTH (PROTECT DURING CONSTRUCTION)

EXISTING CAN PLAZA ADJUST ACCORDING TO OTHER PLAN SHEETS AND PROJECT DETAILS

EXISTING DRAIN TILE. EXACT LOCATION UNKNOWN. FIELD INVESTIGATE PRIOR TO CONSTRUCTION. PROTECT IN PLACE (TRACE TO TAXIWAY EDGE & PAST PROJECT LIMITS)

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

3-2" CONDUITS EXTEND WEST
6-2" CONDUITS STUBBED OUT JUST OUTSIDE OF PLAZA (FIELD VERIFY)

FIELD VERIFY DEPTH OF ELECTRICAL AT VARIOUS POINTS PRIOR TO CONSTRUCTION

EXISTING TAXIWAY EDGE LIGHT - UAC PROTECT DURING CONSTRUCTION

EXISTING DRAINAGE DISTRICT TILE. EXACT LOCATION UNKNOWN. FIELD INVESTIGATE PRIOR TO CONSTRUCTION. DO NOT DISTURB. (TRACE TO TAXIWAY EDGE & PAST PROJECT LIMITS)

HORZ. SCALE 0 30 60 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X136745000\CAD\C3D\136745_C0.01.dwg 3/12/2026 11:35:21 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

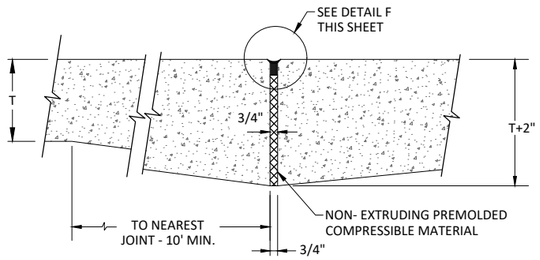
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

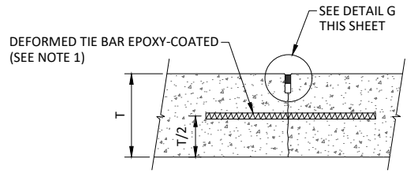
STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
EXISTING CONDITIONS & DEMOLITION PLAN

SHEET C0.01



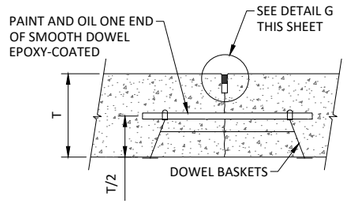
A TYPE A THICKENED EDGE

NOT TO SCALE



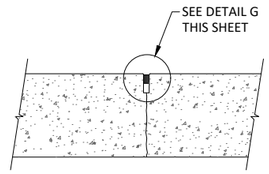
B TYPE B HINGED CONTRACTION

NOT TO SCALE



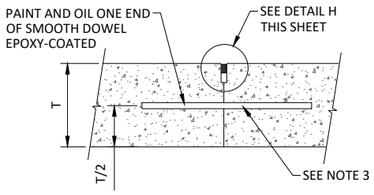
C TYPE C DOWELED CONTRACTION JOINT

NOT TO SCALE



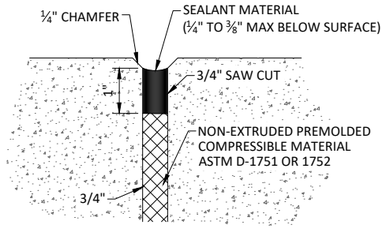
D TYPE D DUMMY

NOT TO SCALE



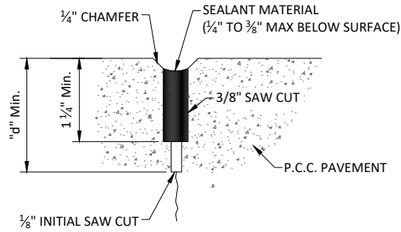
E TYPE E DOWELED CONSTRUCTION JOINT

NOT TO SCALE



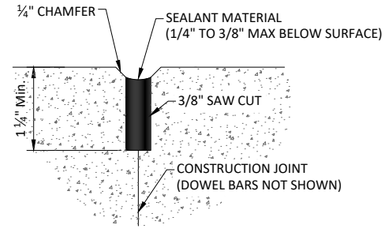
F ISOLATION JOINT DETAIL

NOT TO SCALE



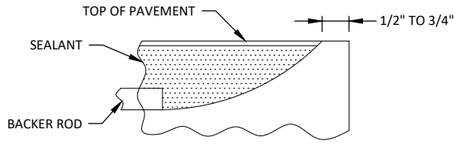
G CONTRACTION JOINT

NOT TO SCALE



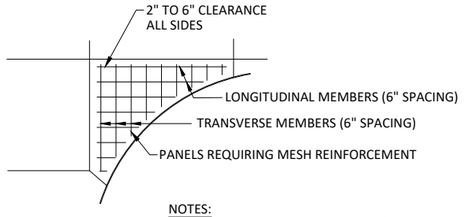
H CONSTRUCTION JOINT

NOT TO SCALE



I DETAIL AT EDGE OF PAVEMENT

NOT TO SCALE

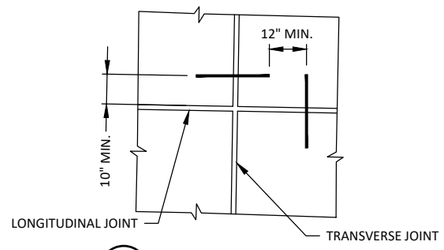


NOTES:

- END LAPS SHALL BE AT LEAST 12"
- SIDE LAPS SHALL BE AT LEAST 6"
- PLACE MESH IN VERTICAL CENTER OF PAVEMENT (T/2)
- ALL REINFORCEMENT TO BE EPOXY-COATED

J MESH REINFORCEMENT DETAIL

NOT TO SCALE



K POSITION OF DOWELS AT EDGE OF JOINT

NOT TO SCALE

TIE BAR DIMENSION AND SPACING TABLE			
THICKNESS OF SLAB	NO.	LENGTH	SPACING
6"	4	20"	36"
6.5" - 9"	5	30"	30"

DOWEL BAR DIMENSION AND SPACING TABLE			
THICKNESS OF SLAB	DIAMETER	LENGTH	SPACING
6" - 7"	3/4"	18"	12"
7.5"-12"	1"	18"	12"

NOTES:

1. WIRE MESH SHALL BE FURNISHED IN FLAT SHEETS AND EPOXY COATED. IN LIEU OF WIRE MESH AS SPECIFIED, CONTRACTOR MAY USE EPOXY COATED DEFORMED BARS MEETING 0.050% OF THE PANEL CROSS-SECTIONAL AREA IN REINFORCEMENT IN BOTH DIRECTIONS. STEEL MESH SHALL BE W6xW6 AS DETAILED ON THIS SHEET AND PLACED ON WIRE MESH SUPPORTS.
2. CONTRACTOR SHALL DRILL AND EPOXY ALL DOWEL BARS INTO EXISTING PAVEMENT OR INSTALL IN BASKETS. REFER TO DOWEL BAR DIMENSIONS AND SPACING TABLE THIS SHEET FOR DOWEL BAR SIZE AND SPACING.
3. "d" = MINIMUM T/4 (±1/4") FOR ALL JOINTS.
4. W/D FACTOR SHALL BE 1:1 UNLESS OTHERWISE SPECIFIED BY JOINT MATERIAL MANUFACTURER.
5. OUTSIDE LONGITUDINAL JOINTS TO BE TYPE 'B' HINGED
6. INNER LONGITUDINAL JOINTS BETWEEN PACING PASSES (CONSTRUCTION JOINT) SHALL BE TYPE 'E'. IF WITHIN SLAB (NOT AT EDGE OF PAVING PASS), INNER LONGITUDINAL JOINTS MAY BE TYPE 'B'
7. IF PCC IS NOT PAVED CONTINUOUSLY, DOWELED CONSTRUCTION JOINT WILL BE REQUIRED.
8. TRAVERSE JOINTS SHALL BE TYPE 'B' OR 'C' FOR PAVEMENTS <8" OR 'C' FOR PAVEMENTS >=9" FOR FIRST 3 JOINTS EITHER SIDE OF AN EXPANSION JOINT OR FREE END, OR WHEN SHOWN ON PLANS.
9. ANY CONSTRUCTION JOINT (TRANSVERSE OR LONGITUDINAL) AT THE EDGE OR END OF A PAVING PASS SHALL BE TYPE 'E' UNLESS SHOWN OTHERWISE.
10. ALL IRREGULAR SHAPED SLABS OR PANELS WITH LENGTH TO WIDTH RATIOS OF 1.25 OR GREATER SHALL BE REINFORCED.
11. ALL JOINT STEEL AND REINFORCING STEEL SHALL BE EPOXY COATED.

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMK\24X\136745000\CAD\C3D\136745_C1.01.dwg 3/12/2026 11:35:30 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

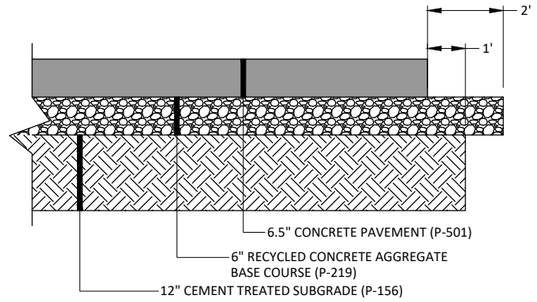
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

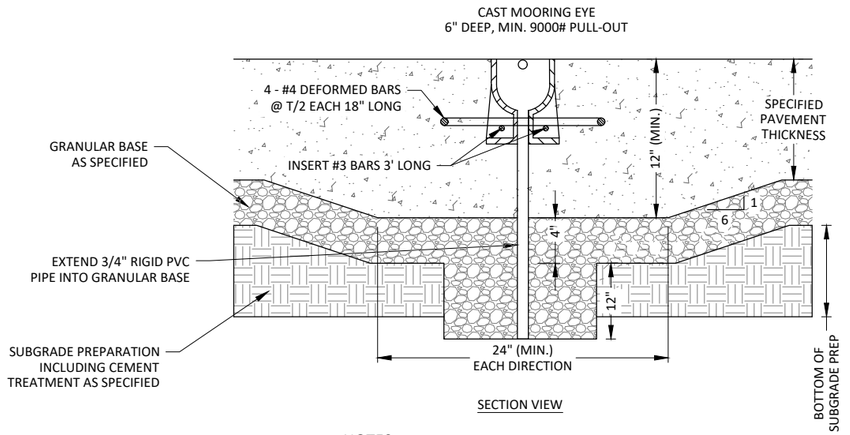
STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
TYPICAL SECTIONS & DETAILS

SHEET C1.01



1 PROPOSED PAVEMENT CROSS SECTION

NOT TO SCALE



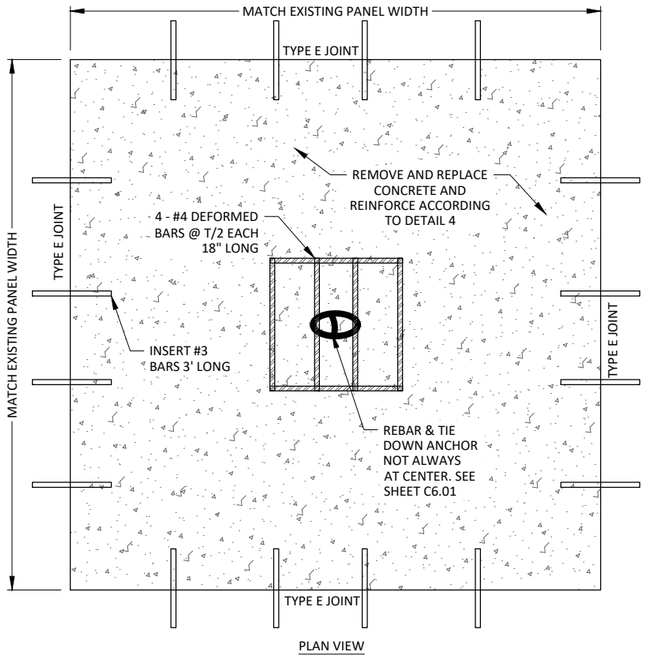
SECTION VIEW

NOTES:

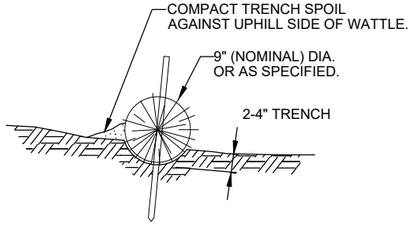
1. TIE DOWN SHALL BE PLACED AT LEAST 3' FROM AN EXISTING JOINT.
2. COORDINATE WITH ENGINEER TO CONFIRM LOCATION OF TIE DOWNS IN THE FIELD.
3. TIE DOWN ANCHORS SHALL BE CAST-IN-PLACE AND STAKED TO ELEVATION PRIOR TO PAVING, WITHIN MINIMAL ADJUSTMENT AFTER.
4. THE ORIENTATION OF THE MOORING EYE SHALL BE SET SUCH THAT WHEN AN AIRCRAFT IS PARKED, NEITHER THE ROPES FOR THE WINGS NOR THE TAIL WOULD BECOME FRAYED BY RUBBING AGAINST THE SIDE OF THE MOORING EYE CASTING.
5. IF SUBGRADE IS CHEMICALLY TREATED, TIE DOWN MOORING EYE DRAINAGE PIPE MUST BE DRAINED TO (AT A MINIMUM) THE NATURAL SUBGRADE, HOWEVER, MAY BE CONNECTED TO THE SUBDRAIN SYSTEM (IF AVAILABLE).

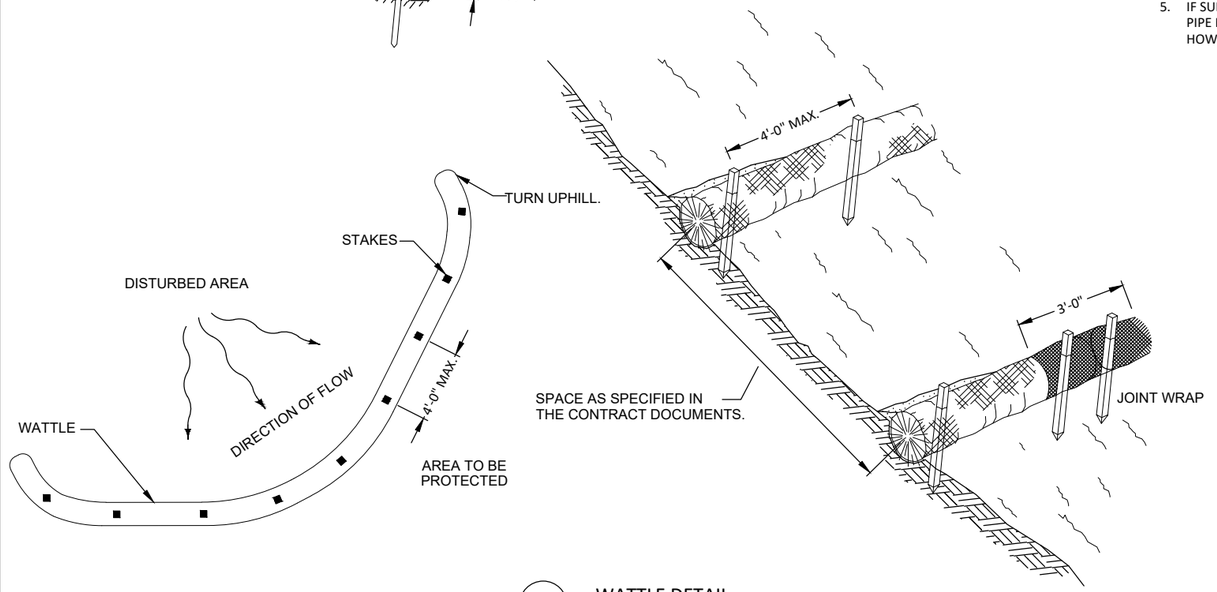
2 AIRCRAFT TIE DOWN DETAIL

NOT TO SCALE



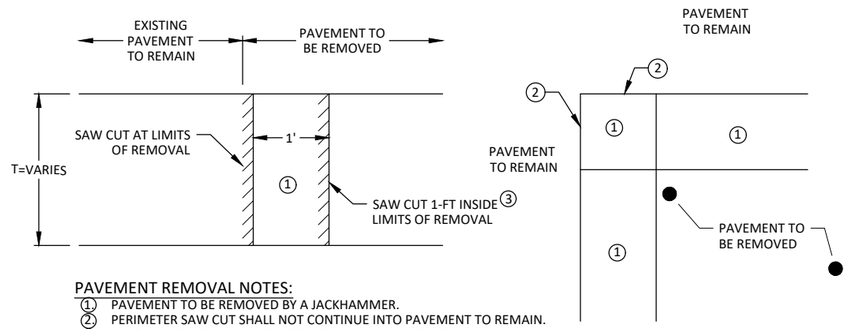
PLAN VIEW





3 WATTLE DETAIL

NOT TO SCALE



PAVEMENT REMOVAL NOTES:

1. PAVEMENT TO BE REMOVED BY A JACKHAMMER.
2. PERIMETER SAW CUT SHALL NOT CONTINUE INTO PAVEMENT TO REMAIN.
3. SECOND INTERIOR SAWCUT NOT REQUIRED AT PHASE BOUNDARY.

4 PCC PAVEMENT REMOVAL DETAIL

NOT TO SCALE

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X1367450\0\CAD\C3D\136745_C1.01.dwg 3/12/2026 11:35:30 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

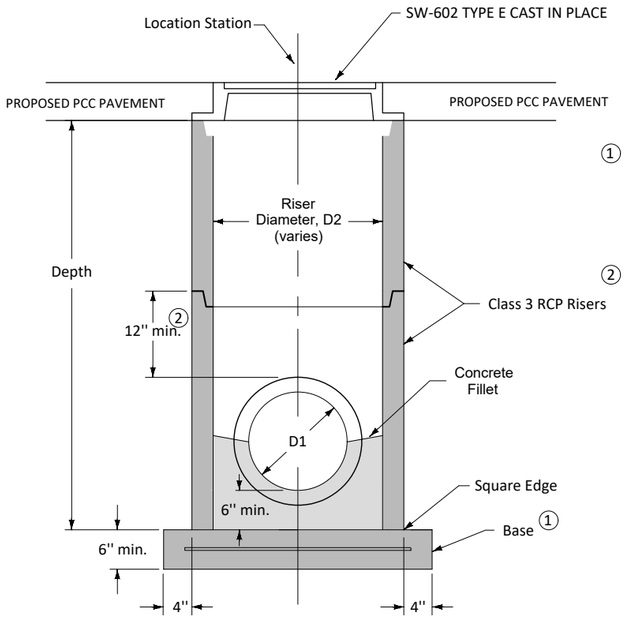
DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
TYPICAL SECTIONS & DETAILS

SHEET C1.02

TYPICAL SECTION



① Precast (shown) or cast-in-place base:

Precast: 6 inch thick concrete with #6 welded wire mesh on 4 inch centers (WWF 4" x 4"). Center mesh vertically within base.

Cast-in-place: 8 inch thick non-reinforced concrete.

② 12 inch minimum riser height above all pipes.

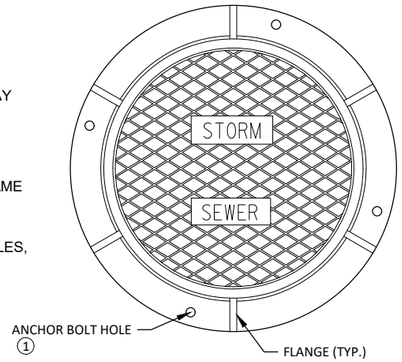
INTAKE SIZE - CASE 1	
Outlet Pipe Diameter, D1	Minimum Riser Diameter, D2
12''	18''
15''	24''
18''	24''
21''	30''
24''	30''
27''	36''

6 CIRCULAR AREA INTAKE SW-512 WITH MANHOLE CASTING LID

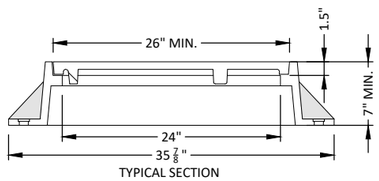
NOT TO SCALE

FRAME NOTES:
SIZE, SPACING AND NUMBER OF LUGS AND FLANGES MAY VARY.
COVER NOTES:
ROUGHNESS PATTERN AND TEXT STYLE MAY VARY. MINIMUM ONE PICKHOLE.

① ANCHOR THE LOWER FRAME OF ALL THREE-PIECE CASTING TO THE MANHOLE STRUCTURE. WHEN SPECIFIED IN THE CONTRACT DOCUMENTS, ANCHOR THE FRAME OF THE TWO- PIECE CASTING TO THE MANHOLE STRUCTURE. IF CASTING FRAME DOES NOT INCLUDE ANCHOR HOLES OR SLOTS, DRILL FOUR 7/8 INCH DIAMETER HOLES, EQUALLY SPACED AROUND THE FRAME.



PLAN



TYPICAL SECTION

7 SW-602 MANHOLE TYPE E TWO-PIECE FIXED CASTING

NOT TO SCALE

©Bolton & Menk, Inc. 2026, All Rights Reserved
H:\SW\K\24X\136745000\CAD\C3D\136745_C1.01.dwg 3/12/2026 11:35:32 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

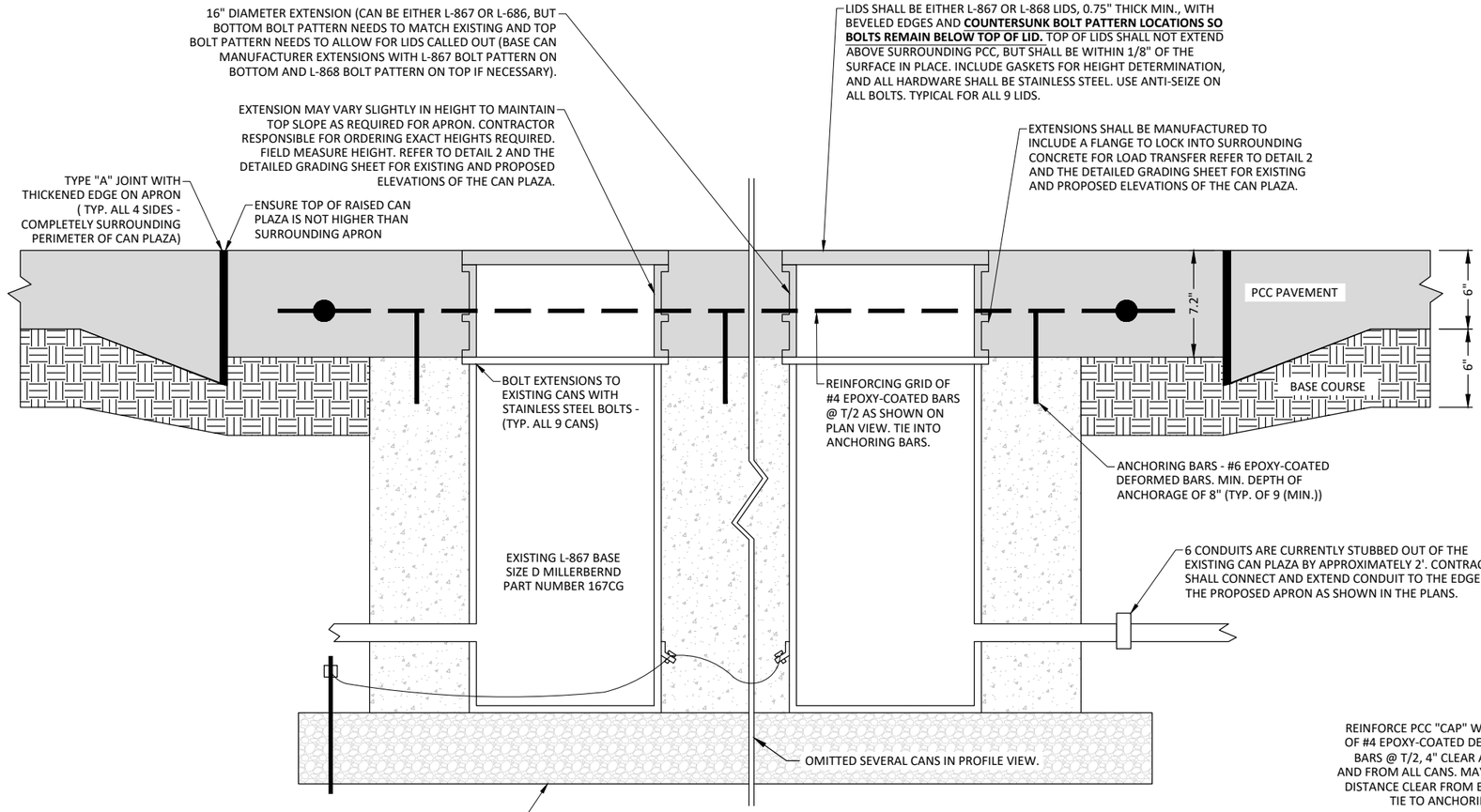
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
TYPICAL SECTIONS & DETAILS

SHEET C1.03



1 EXISTING CAN PLAZA PROFILE VIEW

NOT TO SCALE

CAN PLAZA TABLE					
CAN #	CAN SIZE	VOLTAGE	CONDUIT SIZE	PROPOSED PURPOSE	FUTURE PURPOSE
16	16"	5 KV	2"	SPARE	TAXIWAYS
17	16"	600 V	2"	RWY 17 REIL	PAPI/REIL/WC 13
18	16"	600 V	2"	RWY 35 REIL	PAPI/REIL/WC 31
13	16"	5 KV	2"	RUNWAY 17/35	RUNWAY 17/35
14	16"	600 V	2"	WINDCONE (WC)	WINDCONE (WC)
15	16"	600 V	2"	SPARE	SPARE
10	16"	5 KV	2"	RUNWAY 13/31 & TXY	RUNWAY 13/31
11	16"	600 V	2"	RWY 17 PAPI	PAPI/REIL/WC 17
12	16"	600 V	2"	RWY 35 PAPI	PAPI/REIL/WC 35

GENERAL ELECTRICAL NOTES:

1. GENERAL ELECTRICAL REQUIREMENTS - ALL ELECTRICAL WORK SHALL MEET ALL LOCAL AND NATIONAL CODES. WORK SHALL BE COMPLETED BY CONTRACTORS MEETING RECENTLY UPDATED IOWA STATE REQUIREMENTS FOR USING QUALIFIED PERSONNEL FOR ELECTRICAL WORK. CONTRACTOR SHALL HAVE A CLASS A MASTER'S LICENSE AND A STATE OF IOWA CONTRACTOR'S LICENSE. ALL ELECTRICAL WORK SHALL BE INSPECTED AS NECESSARY BY APPROPRIATE INSPECTOR(S), AND ANY COSTS ASSOCIATED WITH INSPECTIONS SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CURRENTLY, ELECTRICAL INSPECTIONS ARE CONDUCTED BY THE STATE OF IOWA, WITH A MINIMUM OF 72-HOUR NOTICE TO COMPLETE THE INSPECTION.

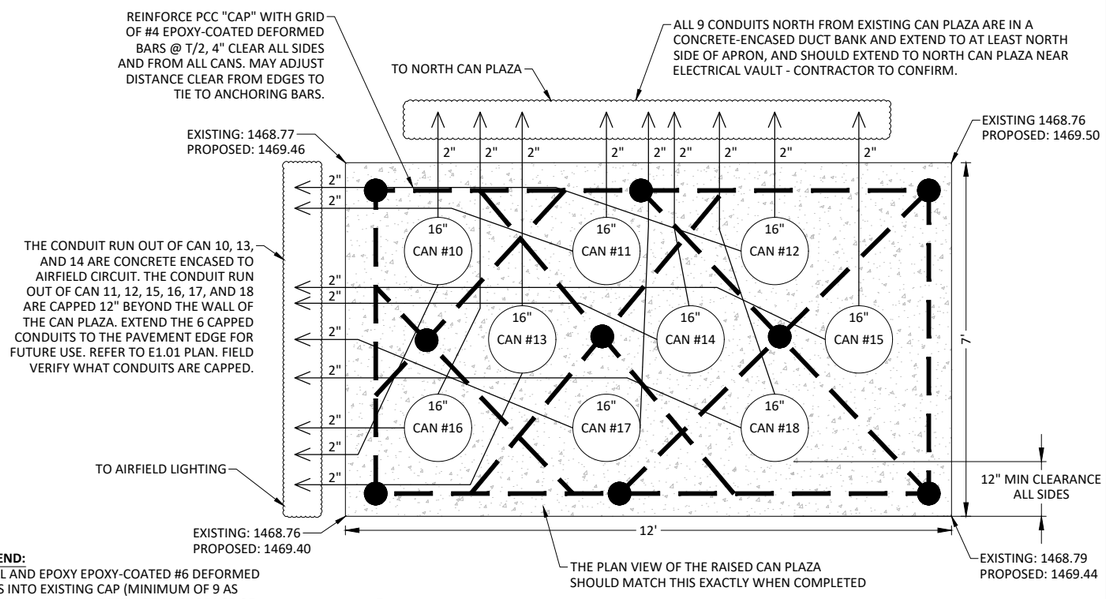
   MEASUREMENT OF ANY CONDUIT SHALL END AT THE HANDHOLES AND/OR LIGHT BASES. CABLES SHALL BE MEASURED TO THE CENTER OF EACH HANDHOLE, BUT SLACK NECESSARY FOR SPLICES SHALL NOT BE MEASURED.

   ALL WIRING SHALL BE COPPER. ALL UNDERGROUND CONDUIT WILL BE PVC (INCLUDING CONDUIT ENCASED IN CONCRETE), WITH THE EXCEPTION OF CONDUIT BORED UNDER PAVEMENT, WHICH SHALL BE SCHEDULE 80 HDPE. EXPOSED (ABOVE-GROUND) CONDUIT SHALL BE RGS, AND THE RGS SHALL EXTEND TO THE BOTTOM OF EACH SWEEP PRIOR TO TRANSITIONING TO PVC UNDERGROUND.

   ALL ELECTRICAL EQUIPMENT INSTALLED IN THIS PROJECT SHALL MEET THE REQUIREMENTS OF THE MOST RECENT VERSION OF THE APPLICABLE FAA ADVISORY CIRCULAR (A.C.) RELATING TO THAT PIECE OF EQUIPMENT. SHOULD THE CONTRACTOR REQUIRE ADDITIONAL INFORMATION ON THE MOST RECENT APPLICABLE STANDARDS, THEY SHALL CONTACT THE ENGINEER FOR ASSISTANCE PRIOR TO ORDERING EQUIPMENT.

2. DUCT MARKERS - DUCT MARKERS, AS SHOWN ON THE PLANS, ARE REQUIRED AT EACH END OF BURIED CONDUITS (IF CONDUITS DON'T END AT HANDHOLES). MARKERS ARE CONSIDERED INCIDENTAL TO THE PRICE OF THE BURIED DUCT, AND NO SEPARATE BID ITEM IS INCLUDED FOR THEM.

3. RESTORATION - THE CONTRACTOR SHALL TOPSOIL, FERTILIZE, SEED, AND MULCH DISTURBED AREAS. COST OF THIS RESTORATION WORK IS CONSIDERED INCIDENTAL AND WILL NOT BE MEASURED FOR PAYMENT.



LEGEND:

● DRILL AND EPOXY EPOXY-COATED #6 DEFORMED BARS INTO EXISTING CAP (MINIMUM OF 9 AS SHOWN). MINIMUM DEPTH OF ANCHORAGE OF 8". MAINTAIN 6" (MIN.) CLEAR OF ALL PCC EDGES AND ALL CANS/EXTENSIONS, AND 4" CLEAR OF TOP SURFACE OF "CAP". TIE REINFORCING GRID TO THESE ANCHORING BARS.

2 EXISTING AND RAISED CAN PLAZA - PLAN VIEW

NOT TO SCALE

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\2AX136745000\CAD\C3D\136745_C1.01.dwg 3/12/2026 11:35:32 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
TYPICAL SECTIONS & DETAILS

SHEET C1.04

EROSION SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B
- SEEDING/MULCHING
- STRAW WATTLES
- INLET PROTECTION
- GRADING LIMITS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING FUEL STATION

EXISTING APRON

BASE BID

TAXIWAY C

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

EXISTING ELECTRICAL CAN PLAZA

159'

159'

HORZ. SCALE 0 30 60 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X\136745000\CAD\C3D\136745_C2.01.dwg 3/12/2026 11:35:47 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BASE BID EROSION CONTROL & OVERALL SITE GRADING PLAN

SHEET C2.01

EROSION SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B
- SEEDING/MULCHING
- STRAW WATTLES
- INLET PROTECTION
- GRADING LIMITS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING FUEL STATION

EXISTING APRON

BASE BID

BID ALT A

TAXIWAY C

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

EXISTING ELECTRICAL CAN PLAZA

159'

159'

HORZ. SCALE 0 30 60 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X1367450\0\CAD\C3D\136745_C2.01.dwg 3/12/2026 11:35:49 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BID ALT A EROSION CONTROL & OVERALL SITE GRADING PLAN

SHEET C2.02

EROSION SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B
- SEEDING/MULCHING
- STRAW WATTLES
- INLET PROTECTION
- GRADING LIMITS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING TAXILANE

EXISTING FUEL STATION

EXISTING APRON

TAXIWAY C

BASE BID

BID ALT A

BID ALT B

EXISTING ELECTRICAL CAN PLAZA

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

TOFA

TSA

ROFA

B

1472 1473 1471 1470 1469 1468 1467

159'

HORZ. SCALE 0 30 60 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLA\24X1367450\0\CAD\C3D\136745_C2.01.dwg 3/12/2026 11:35:51 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BID ALT B EROSION CONTROL & OVERALL SITE GRADING PLAN

SHEET C2.03

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B

GRADING LEGEND

	EXISTING SLOPE
2.00%	PROPOSED SLOPE
× 1000.00	EXISTING SPOT ELEVATION
× 1000.00	PROPOSED SPOT ELEVATION
1000.00	EXISTING CONTOUR
1000.00	PROPOSED CONTOUR
— — — —	PAVEMENT JOINT
	GRADING LIMITS
	GRADE BREAKS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXIWAY

EXISTING TAXIWAY

EXISTING TAXIWAY

EXISTING APRON

TAXIWAY C

BASE BID

TOFA

TSA

ROFA

ROFZ

EXISTING ELECTRICAL CAN PLAZA.
INSTALL EXTENDERS AND NEW THICKER LID AND CAST PLAZA IN PLACE. BOND CONCRETE TO SURFACE OF EXISTING PLAZA BY INSTALLING GROOVES IN EXISTING PAVEMENT TO PROVIDE INTERLOCK.

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\2Ax1367450\0\CAD\C3D\136745_C3.01.dwg 3/12/2026 11:36:05 AM

HORZ. SCALE 0 30 60 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BASE BID DETAILED GRADING PLAN

SHEET C3.01

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B

GRADING LEGEND

	EXISTING SLOPE
2.00%	PROPOSED SLOPE
× 1000.00	EXISTING SPOT ELEVATION
× 1000.00	PROPOSED SPOT ELEVATION
1000.00	EXISTING CONTOUR
1000.00	PROPOSED CONTOUR
— — — —	PAVEMENT JOINT
	GRADING LIMITS
	GRADE BREAKS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXIWAY

EXISTING TAXIWAY

EXISTING TAXIWAY

EXISTING APRON

TAXIWAY C

BASE BID

BID ALT A

TOFA

TSA

ROFA

ROFZ

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

EXISTING ELECTRICAL CAN PLAZA. INSTALL EXTENDERS AND NEW THICKER LID AND CAST PLAZA IN PLACE. BOND CONCRETE TO SURFACE OF EXISTING PLAZA BY INSTALLING GROOVES IN EXISTING PAVEMENT TO PROVIDE INTERLOCK.

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\2Ax1367450\0\CAD\C3D\136745_C3.01.dwg 3/12/2026 11:36:07 AM

HORZ. SCALE 0 30 60 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BID ALT A DETAILED GRADING PLAN

SHEET C3.02

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B

GRADING LEGEND

	EXISTING SLOPE
2.00%	PROPOSED SLOPE
× 1000.00	EXISTING SPOT ELEVATION
× 1000.00	PROPOSED SPOT ELEVATION
1000.00	EXISTING CONTOUR
1000.00	PROPOSED CONTOUR
— — — —	PAVEMENT JOINT
	GRADING LIMITS
	GRADE BREAKS

EXISTING PARKING LOT

EXISTING TERMINAL & MAINTENANCE HANGAR

EXISTING TAXIWAY

EXISTING TAXIWAY

EXISTING TAXIWAY

EXISTING APRON

TAXIWAY C

BASE BID

BID ALT B

EXISTING ELECTRICAL CAN PLAZA.
INSTALL EXTENDERS AND NEW THICKER LID AND CAST PLAZA IN PLACE. BOND CONCRETE TO SURFACE OF EXISTING PLAZA BY INSTALLING GROOVES IN EXISTING PAVEMENT TO PROVIDE INTERLOCK.

WHEN WORKING IN TOFA, YEILD TO AIRCRAFT, MOVE OUT OF WAY AND CLEAR TOFA.

TOFA TSA ROFA

1471.58 1471.56 1471.13 1471 1470.39 1470 1469.72 1469.78 1469.89 1469.92 1470.05 1470.09 1470.15 1470.19 1470.28 1470.36 1470.41 1470.44 1470.54 1470.64 1469.59 1469.65 1469.74 1469.77 1469.88 1469.93 1469.99 1470.05 1470.17 1470.25 1470.28 1470.27 1469.87 1469.46 1469.49 1469.50 1469.44 1469.40 1469.42 1469.01 1469.41 1469.74 1469.23 1469.36 1469.34 1468.68 1468.97 1469.02 1467.37 1468 1469 1469.43 1467.16 1467.14 1467.99 1468.51 1468.60 1468.66 1468.72 1468.92

1.31% 0.22% 0.21% 0.50% 0.59% 0.62% 0.69% 0.70% 0.61% 0.31% 0.23% 0.72% 0.10% 7.44% 0.18% 1.07% 1.05% 5.00% 1.50% 0.70%

27' 17' 12' 10' 5'

HORZ. SCALE 0 30 60 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\2Ax\136745000\CAD\C3D\136745_C3.01.dwg 3/12/2026 11:36:09 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

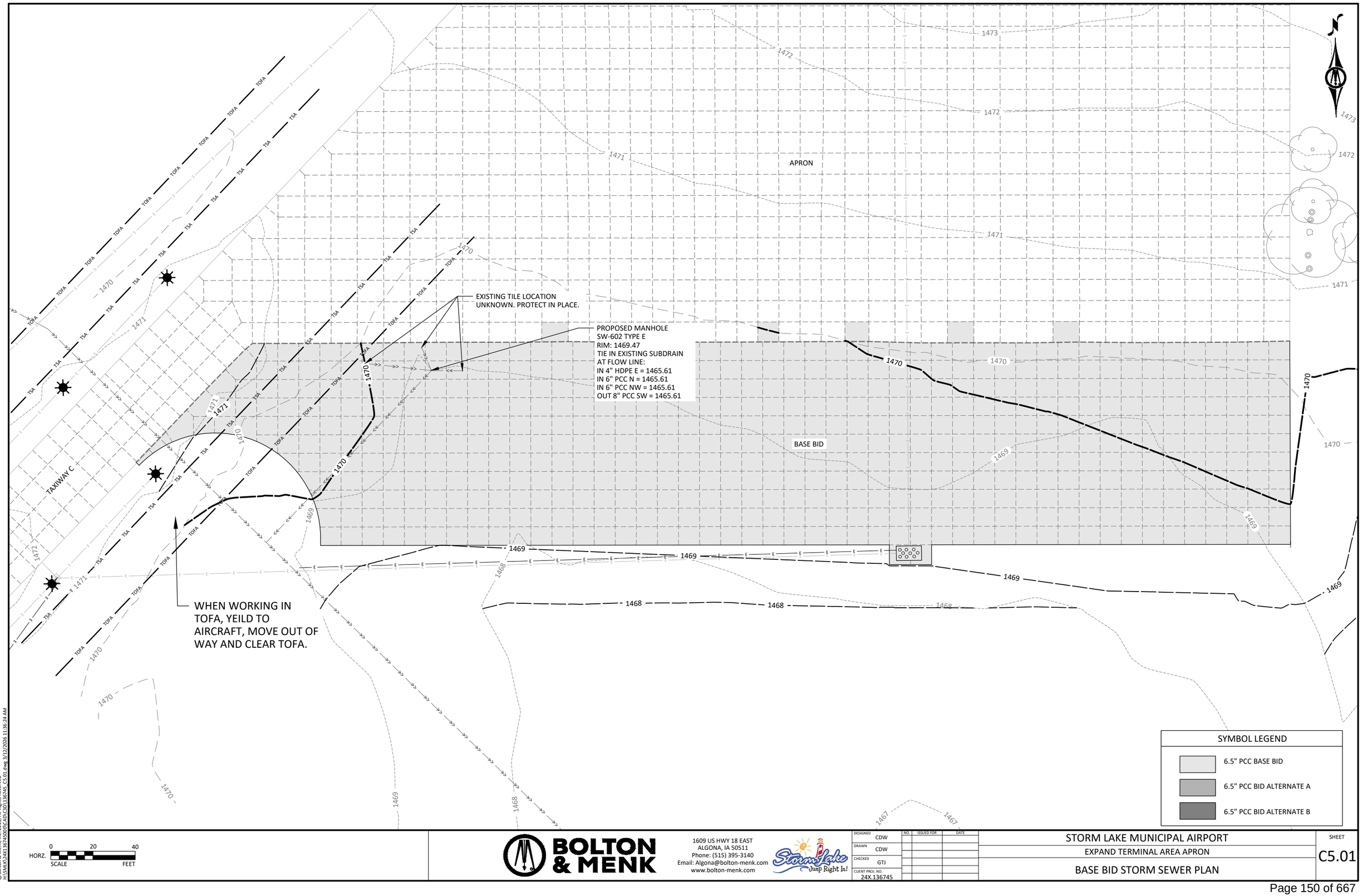
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BID ALT B DETAILED GRADING PLAN

SHEET C3.03



©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLR\24X136745000\CADD\C3D\136745_C5.01.dwg 3/12/2026 11:36:24 AM

HORZ. SCALE 0 20 40 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BASE BID STORM SEWER PLAN

SHEET C5.01

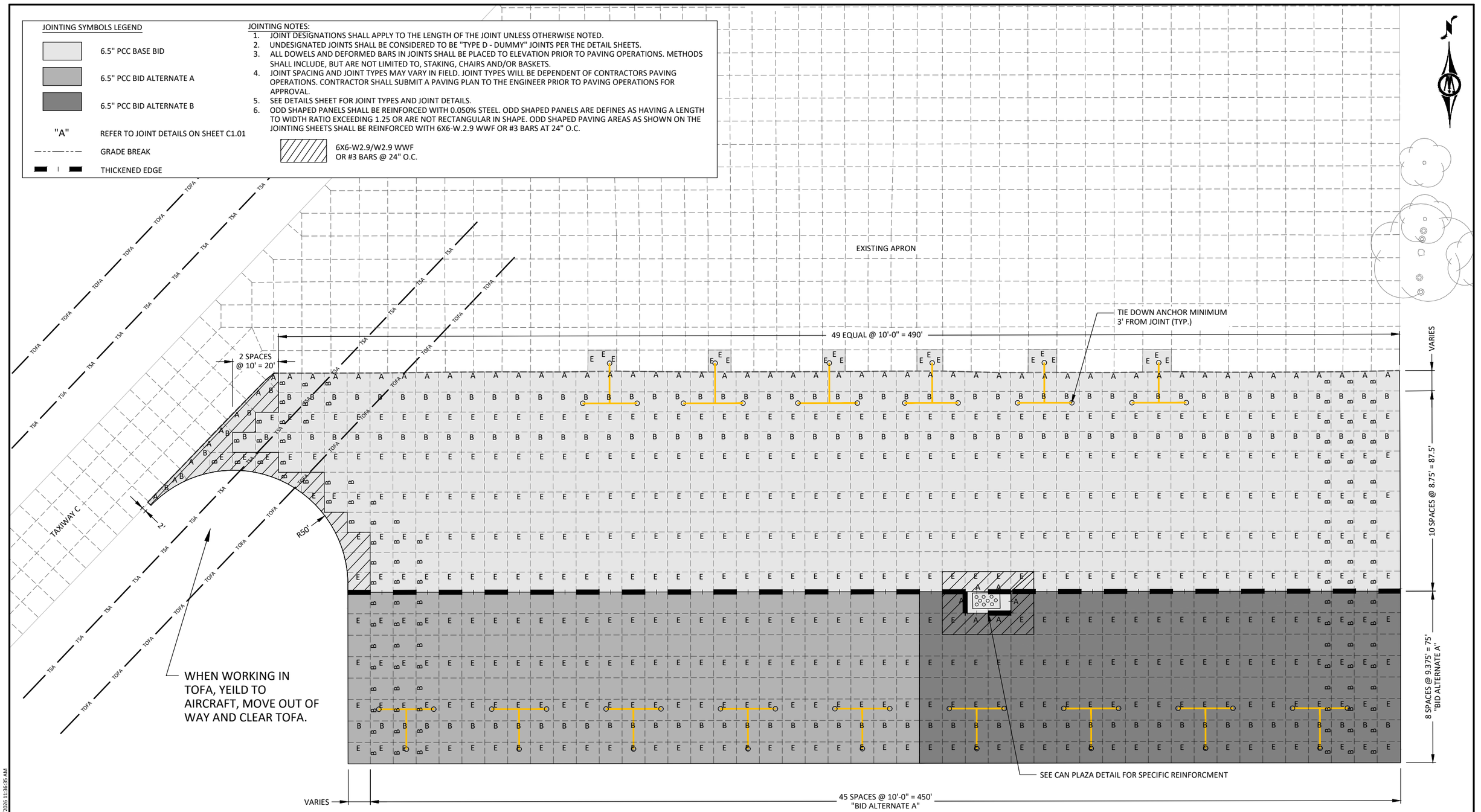
JOINTING SYMBOLS LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B
- "A" — REFER TO JOINT DETAILS ON SHEET C1.01
- GRADE BREAK
- THICKENED EDGE

JOINTING NOTES:

1. JOINT DESIGNATIONS SHALL APPLY TO THE LENGTH OF THE JOINT UNLESS OTHERWISE NOTED.
2. UNDESIGNATED JOINTS SHALL BE CONSIDERED TO BE "TYPE D - DUMMY" JOINTS PER THE DETAIL SHEETS.
3. ALL DOWELS AND DEFORMED BARS IN JOINTS SHALL BE PLACED TO ELEVATION PRIOR TO PAVING OPERATIONS. METHODS SHALL INCLUDE, BUT ARE NOT LIMITED TO, STAKING, CHAIRS AND/OR BASKETS.
4. JOINT SPACING AND JOINT TYPES MAY VARY IN FIELD. JOINT TYPES WILL BE DEPENDENT OF CONTRACTORS PAVING OPERATIONS. CONTRACTOR SHALL SUBMIT A PAVING PLAN TO THE ENGINEER PRIOR TO PAVING OPERATIONS FOR APPROVAL.
5. SEE DETAILS SHEET FOR JOINT TYPES AND JOINT DETAILS.
6. ODD SHAPED PANELS SHALL BE REINFORCED WITH 0.050% STEEL. ODD SHAPED PANELS ARE DEFINES AS HAVING A LENGTH TO WIDTH RATIO EXCEEDING 1.25 OR ARE NOT RECTANGULAR IN SHAPE. ODD SHAPED PAVING AREAS AS SHOWN ON THE JOINTING SHEETS SHALL BE REINFORCED WITH 6X6-W.2.9 WWF OR #3 BARS AT 24" O.C.

6X6-W2.9/W2.9 WWF
OR #3 BARS @ 24" O.C.



©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMA\2AX136745000\CAD\C3D\136745_C6.01.dwg 3/12/2026 11:36:35 AM

HORZ. SCALE 0 20 40 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

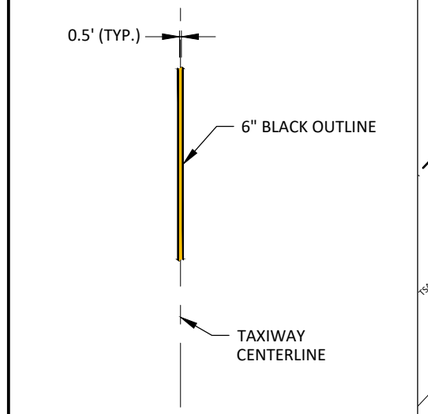
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

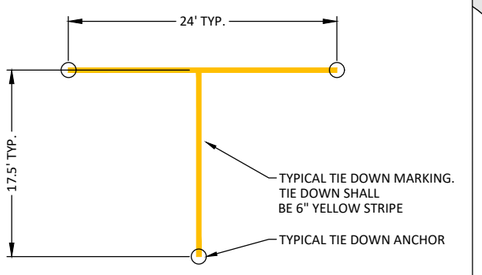
STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
JOINTING PLAN

SHEET C6.01



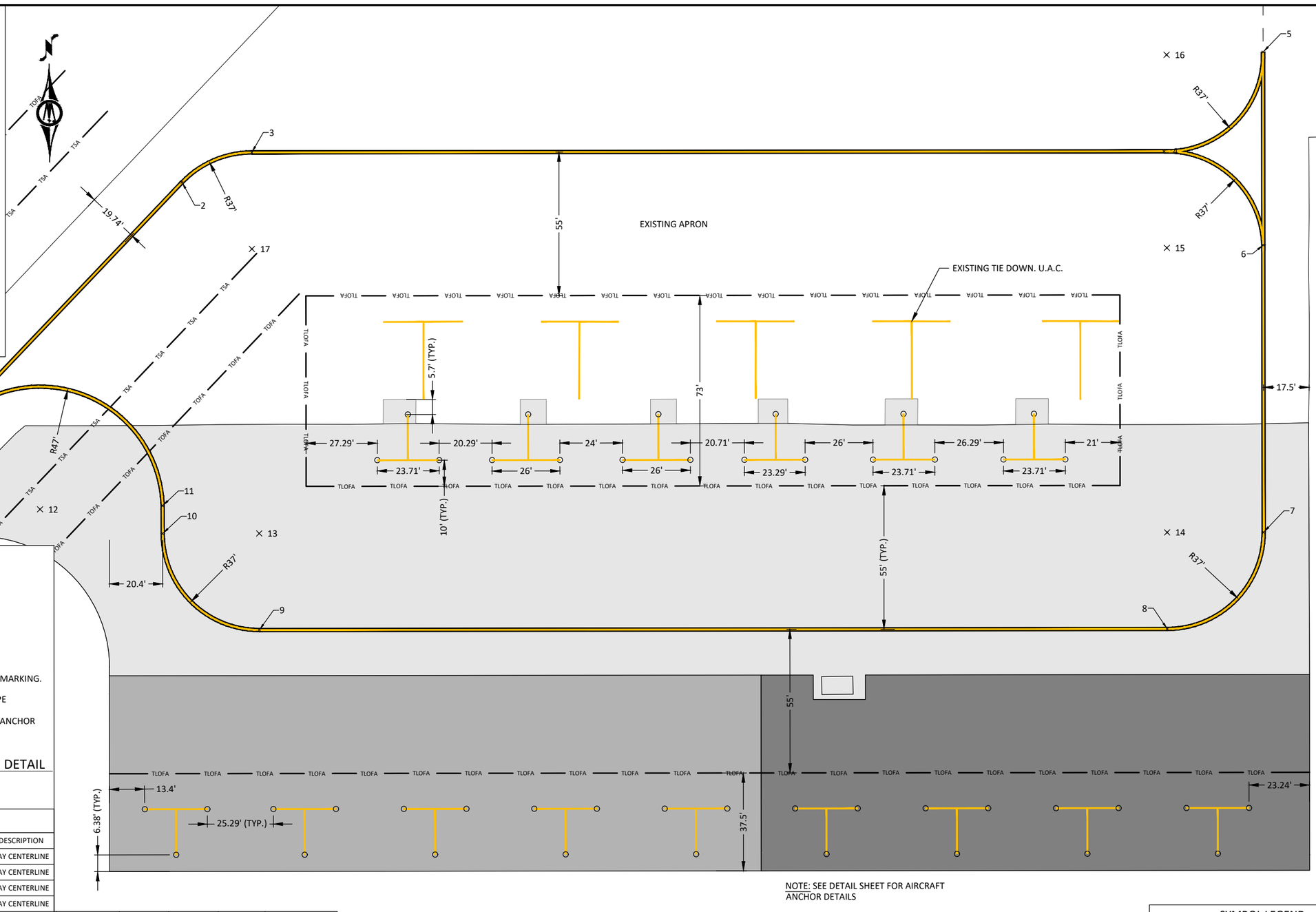
1 CENTERLINE PAINT DETAIL
PLAN VIEW

NOT TO SCALE



2 TIE DOWN PAVEMENT MARKING DETAIL
PLAN VIEW

NOT TO SCALE



NOTE: SEE DETAIL SHEET FOR AIRCRAFT ANCHOR DETAILS

POINT NORTHING-EASTING DATA				
POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
1	3687443.15	4452806.90	1470.000	TAXIWAY CENTERLINE
2	3687533.37	4452898.04	1470.000	TAXIWAY CENTERLINE
3	3687544.06	4452925.11	1470.010	TAXIWAY CENTERLINE
4	3687534.21	4453274.62	1470.010	TAXIWAY CENTERLINE
5	3687571.16	4453313.70	1470.010	TAXIWAY CENTERLINE
6	3687497.21	4453311.62	1470.010	TAXIWAY CENTERLINE
7	3687387.20	4453308.52	1470.010	TAXIWAY CENTERLINE
8	3687351.26	4453270.49	1470.010	TAXIWAY CENTERLINE
9	3687361.05	4452922.63	1470.010	TAXIWAY CENTERLINE
10	3687399.08	4452886.69	1470.010	TAXIWAY CENTERLINE
11	3687409.74	4452886.97	1470.010	TAXIWAY CENTERLINE

POINT NUMBER	NORTH	EAST	ELEVATION	RAW DESCRIPTION
12	3687409.74	4452839.97	1470.010	RADIUS
13	3687398.04	4452923.67	1470.010	RADIUS
14	3687388.24	4453271.53	1470.010	RADIUS
15	3687497.21	4453274.62	1470.010	RADIUS
16	3687571.16	4453276.70	1470.010	RADIUS
17	3687507.07	4452924.07	1470.010	RADIUS

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B

HORZ. SCALE 0 20 40 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X136745000\CAD\C3D\136745_C7.01.dwg 3/12/2026 11:36:45 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

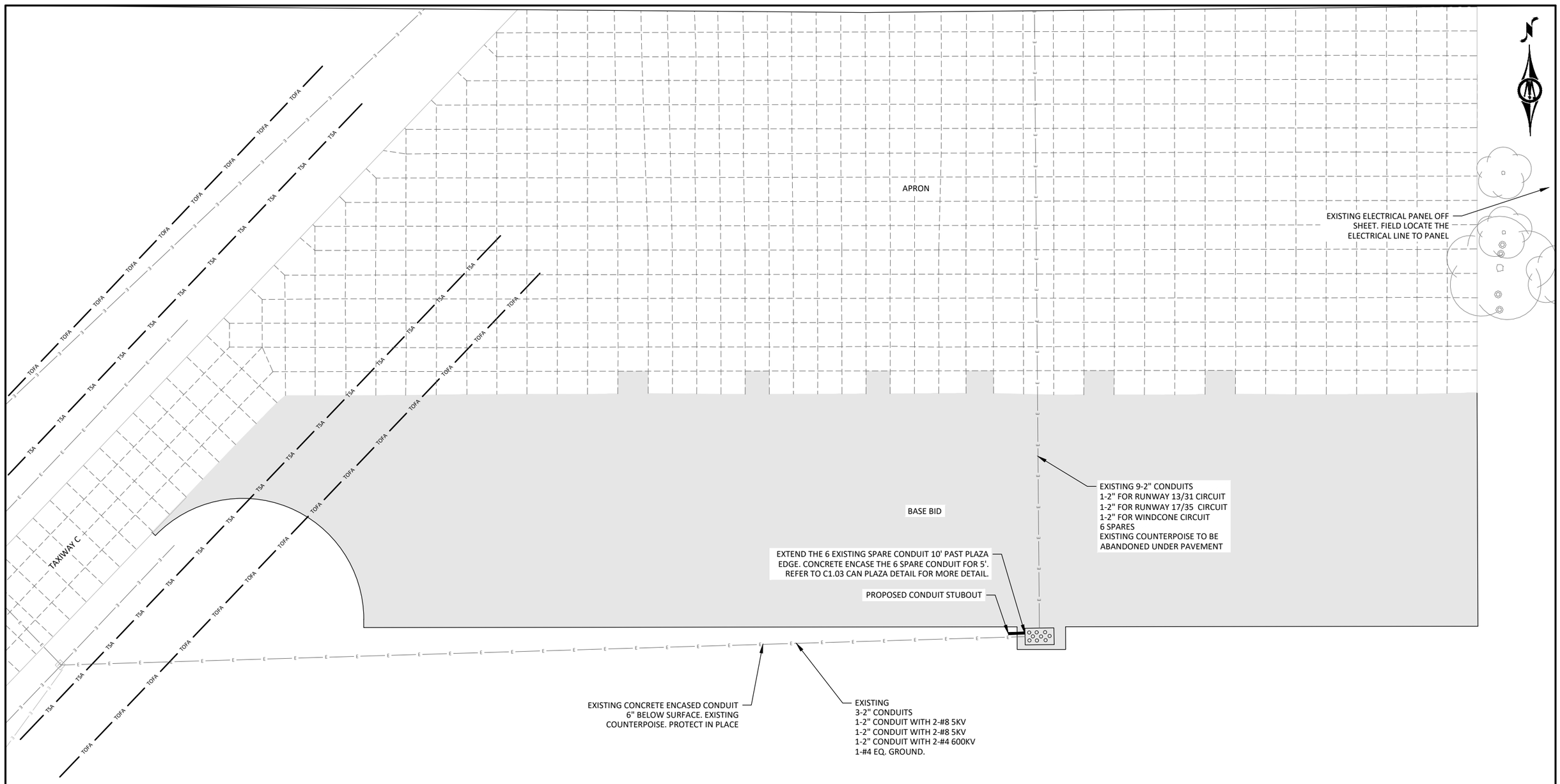
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
PAVEMENT MARKING PLAN & DETAILS

SHEET C7.01



©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X136745000\CAD\C3D\136745_E1.01.dwg 3/12/2026 11:36:56 AM

HORZ. SCALE 0 20 40 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
BASE BID ELECTRICAL PLAN

SHEET E1.01

APRON

EXISTING ELECTRICAL PANEL OFF SHEET. FIELD LOCATE THE ELECTRICAL LINE TO PANEL

EXISTING 9-2" CONDUITS
1-2" FOR RUNWAY 13/31 CIRCUIT
1-2" FOR RUNWAY 17/35 CIRCUIT
1-2" FOR WINDCONE CIRCUIT
6 SPARES
EXISTING COUNTERPOISE TO BE ABANDONED UNDER PAVEMENT

BASE BID

TIE INTO EXISTING CONDUIT STUBS. REFER TO C1.03 CAN PLAZA DETAIL FOR MORE DETAIL.

PROPOSED DUCT BANK (284 LF)
6 - 2" CONDUITS, CONCRETE ENCASED

END CONCRETE ENCASE 2' OFF PAVEMENT EDGE

10'

EXISTING COUNTERPOISE TO BE ABANDONDED

CAP END OF CONDUIT

EXISTING CONCRETE ENCASED CONDUIT
6" BELOW SURFACE. EXISTING COUNTERPOISE. PROTECT IN PLACE

3-2" CONDUITS
1-2" CONDUIT WITH 2-#8 5KV
1-2" CONDUIT WITH 2-#8 5KV
1-2" CONDUIT WITH 2-#4 600KV
1-#4 EQ. GROUND.

BID ALT A

TAXIWAY C

TOFA

TSA

SYMBOL LEGEND

- 6.5" PCC BASE BID
- 6.5" PCC BID ALTERNATE A
- 6.5" PCC BID ALTERNATE B

HORZ. SCALE 0 20 40 FEET

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X136745000\CAD\C3D\136745_E1.01.dwg 3/12/2026 11:36:57 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

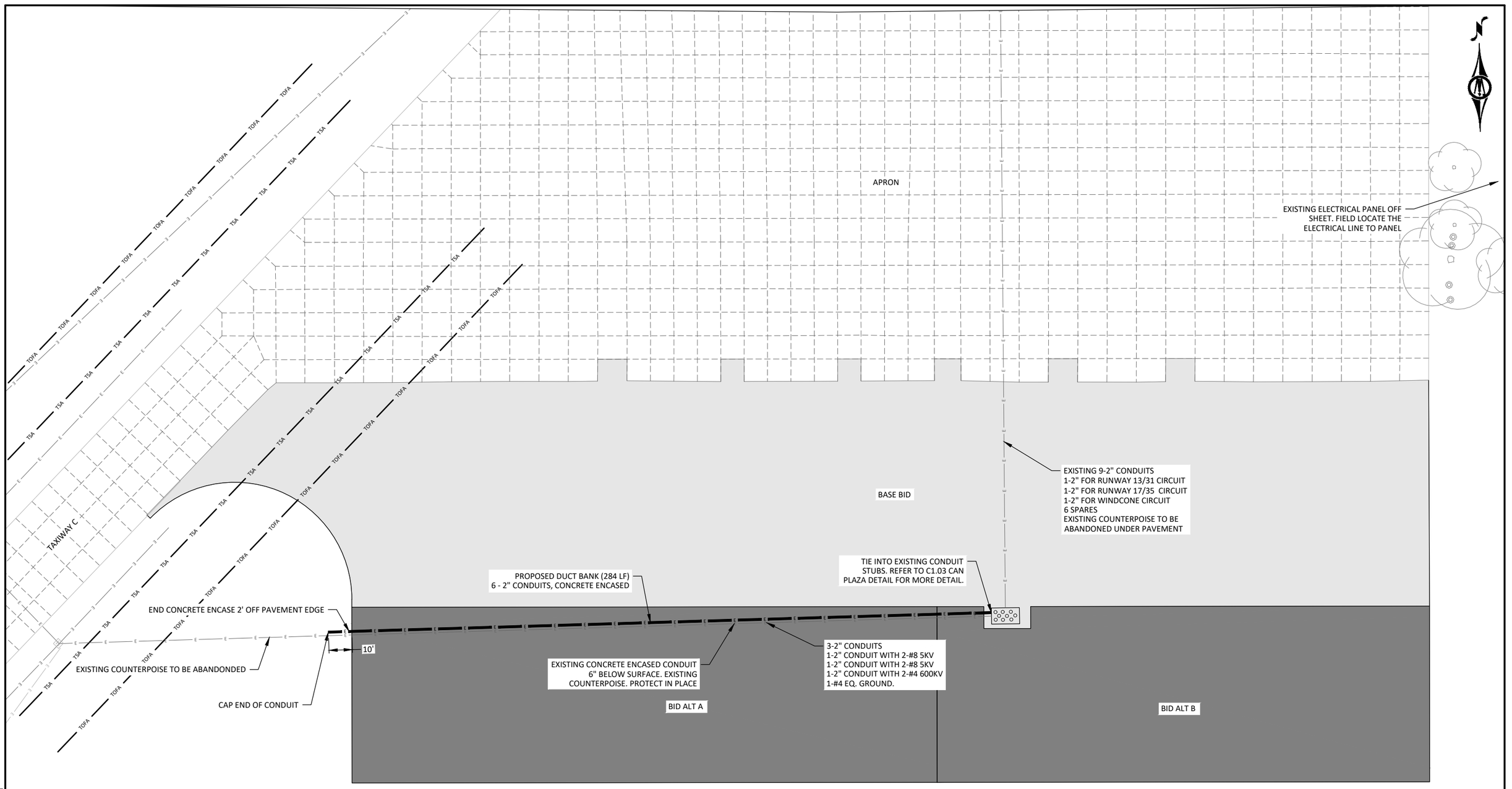
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
ALT BID A ELECTRICAL PLAN

SHEET E1.02



SYMBOL LEGEND
6.5" PCC BASE BID
6.5" PCC BID ALTERNATE A
6.5" PCC BID ALTERNATE B

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLK\24X136745000\CAD\C3D\136745_E1.01.dwg 3/12/2026 11:36:59 AM

HORZ. SCALE 0 20 40 FEET

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

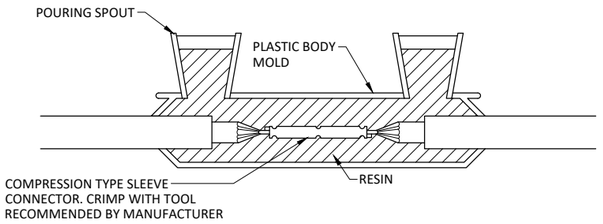
Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
ALT BID B ELECTRICAL PLAN

SHEET E1.03

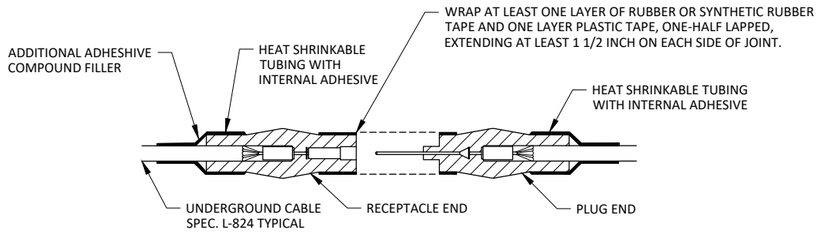


NOTE:
CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.

FOR SPLICES IN HOMERUNS AND EXTENSIONS TO EXISTING CABLE ONLY

1 TYPE A CONNECTION

NOT TO SCALE

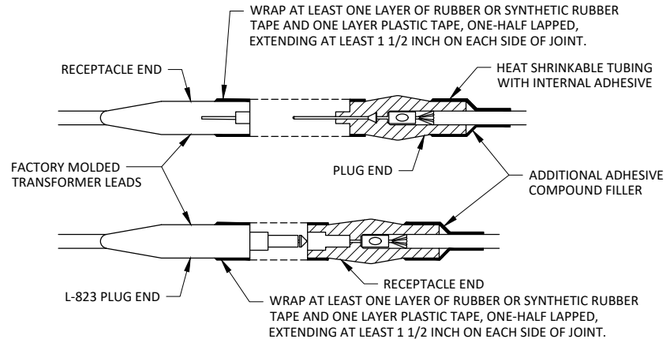


NOTE:
CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.

FOR SPLICED FOR USE AT JUNCTION OF HOMERUN WITH LOOP CIRCUIT

2 TYPE B CONNECTION

NOT TO SCALE

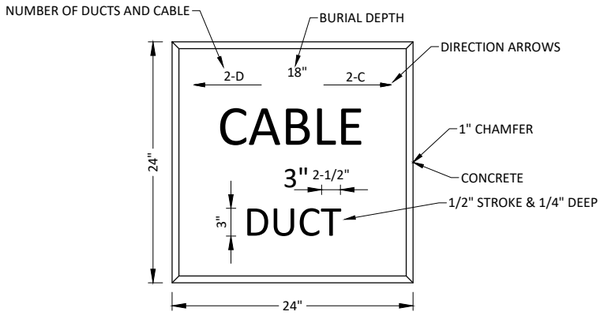


NOTE:
CONNECTION OF CONDUCTORS MUST BE MADE BY USING CRIMP CONNECTORS AND A CRIMPING TOOL APPROVED BY THE CONNECTOR/LUG MANUFACTURER. THE TOOL MUST PRODUCE A COMPLETE CRIMP BEFORE IT CAN BE REMOVED. THE CRIMPING TOOL USED MUST BE LISTED BY THE L-823 KIT MANUFACTURER. MAKE THE NUMBER AND TYPE OF CRIMPS PER THE KIT MANUFACTURER'S INSTRUCTIONS.

FOR SPLICES AT TAXIWAY/RUNWAY LIGHTS

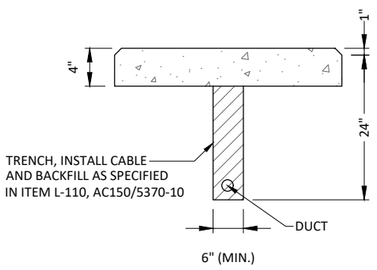
3 TYPE C CONNECTION

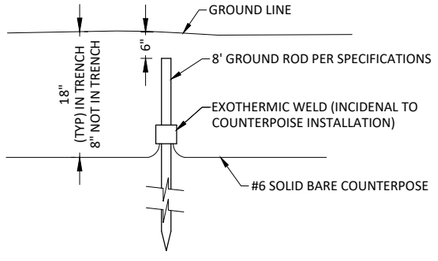
NOT TO SCALE



4 CONCRETE MARKER DETAIL

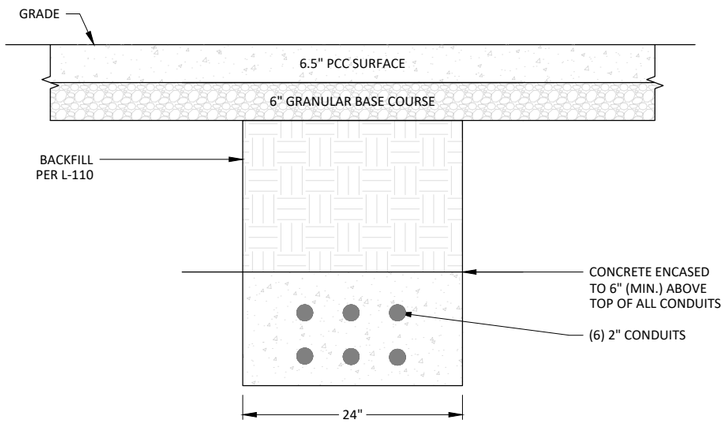
NOT TO SCALE





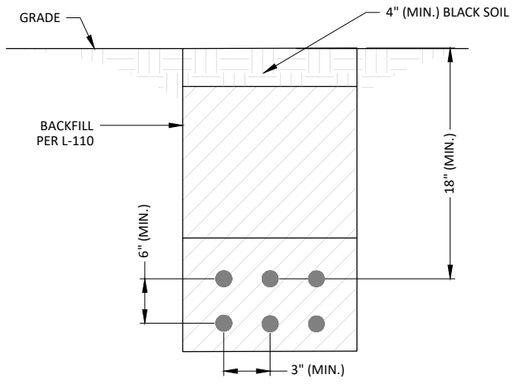
5 GROUND ROD DETAIL

NOT TO SCALE



6 DUCT BANK CONCRETE ENCASED DETAIL

NOT TO SCALE



7 TYPICAL DUCT TRENCH DETAIL

NOT TO SCALE

©Bolton & Menk, Inc. 2026. All Rights Reserved
H:\SMLA\24X136745\00\CAD\C3D\136745_E1.01.dwg 3/12/2026 11:37:00 AM

BOLTON & MENK
1609 US HWY 18 EAST
ALGONA, IA 50511
Phone: (515) 395-3140
Email: Algona@bolton-menk.com
www.bolton-menk.com

Storm Lake Jump Right In!

DESIGNED	CDW
DRAWN	CDW
CHECKED	GTJ
CLIENT PROJ. NO.	24X.136745

NO.	ISSUED FOR	DATE

STORM LAKE MUNICIPAL AIRPORT
EXPAND TERMINAL AREA APRON
ELECTRICAL DETAILS

SHEET
E2.01

PROJECT MANUAL

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),
3-19-0088-021-2026 (Construction) &
3-19-0088-022-2026 (Construction)

24X.136745.000

BOLTON & MENK

Real People. Real Solutions.

Bolton-Menk.com

SECTION 00005 – CERTIFICATION

PROJECT MANUAL

for

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),

3-19-0088-021-2026 (Construction) & 3-19-0088-022-2026 (Construction)

24X.136745.000



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

Garrett T. Jacobs
License No. 28152
My renewal date is December 31, 2026
Pages or sheets covered by this seal:

Date: 3/12/2026

ALL PAGES

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00010 - TABLE OF CONTENTS

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

CONTRACT DOCUMENTS:

PROJECT MANUAL:

INTRODUCTORY INFORMATION, BIDDING REQUIREMENTS, CONTRACT FORMS AND CONDITIONS OF CONTRACT

00005 – CERTIFICATION PAGE
00010 – TABLE OF CONTENTS
00100 – NOTICE TO BIDDERS
00105 – NOTICE OF PUBLIC HEARING
00200 – INSTRUCTIONS TO BIDDERS

ITEMS TO BE SUBMITTED WITH THE BID:

00410 – PROPOSAL
00410 – C – PROPOSAL ATTACHMENT: PART C – BID ITEMS AND QUANTITIES
00411 – BIDDER STATUS FORM
00411 – WORKSHEET: AUTHORIZATION TO TRANSACT BUSINESS
00412 – BUY AMERICAN CERTIFICATION OF COMPLIANCE WITH FAA BUY AMERICAN PREFERENCE CONSTRUCTION PROJECTS
00412 – BUY AMERICAN WAIVER REQUEST ALL
00412 – BUY AMERICAN PROJECT/PRODUCT CONTENT PERCENTAGE CALCULATION – WORKSHEET
00412 – BUY AMERICAN PREFERENCES – FINAL ASSEMBLY QUESTIONNAIRE
00412 – BUY AMERICAN CONFORMANCE LISTING
00413 – DBE UTILIZATION STATEMENT
00413 – DBE LETTER OF INTENT
00414 – FOSTERING SMALL BUSINESS PARTICIPATION
00420 – BID BOND

ITEMS TO BE EXECUTED AFTER AWARD OF CONTRACT:

00500 – CONTRACT
00610 – PERFORMANCE BOND
00620 – PAYMENT BOND
00650 – INSURANCE REQUIREMENTS

FAA SUPPLEMENTARY PROVISIONS

FAA SP – FAA SUPPLEMENTARY PROVISIONS
WR - WAGE RATES

FAA GENERAL CONTRACT PROVISIONS ALL

PART 1
10 – DEFINITION OF TERMS
20 – PROPOSAL REQUIREMENTS AND CONDITIONS
30 – AWARD AND EXECUTION OF CONTRACT
40 – SCOPE OF WORK
50 – CONTROL OF WORK
60 – CONTROL OF MATERIALS

@ Bolton & Menk, Inc. 2026, All Rights Reserved

70 – LEGAL REGULATIONS AND RESPONSIBILITY TO PUBLIC
80 – EXECUTION AND PROGRESS
90 – MEASUREMENT AND PAYMENT

FAA TECHNICAL SPECIFICATIONS

PART 2 - GENERAL CONSTRUCTION ITEMS
C-100 - CONTRACTOR QUALITY CONTROL PROGRAM (CQCP)
C-102 - TEMPORARY AIR AND WATER POLLUTION, SOIL EROSION, AND SILTATION CONTROL
C-105 - MOBILIZATION
C-110 - METHOD OF ESTIMATING PERCENTAGE OF MATERIAL WITHIN SPECIFICATION LIMITS (PWL)

PART 3 - SITEWORK
P-101 - PREPARATION/REMOVAL OF EXISTING PAVEMENTS
P-151 - CLEARING AND GRUBBING
P-152 - EXCAVATION, SUBGRADE, AND EMBANKMENT
P-156 - CEMENT-TREATED SUBGRADE

PART 4 - BASE COURSES
P-208 - AGGREGATE BASE COURSE
P-219 - RECYCLED CONCRETE AGGREGATE BASE COURSE

PART 5 - STABILIZED BASE COURSES
NOT USED FOR THIS PROJECT

PART 6 - FLEXIBLE PAVEMENTS
NOT USED FOR THIS PROJECT

PART 7 -RIGID PAVEMENTS
P-501 – CEMENT CONCRETE PAVEMENT

PART 8 - SURFACE TREATMENTS
NOT USED FOR THIS PROJECT

PART 9 - MISCELLANEOUS
P-605 - JOINT SEALANTS FOR PAVEMENTS
P-610 - CONCRETE FOR MISCELLANEOUS STRUCTURES
P-620 - RUNWAY AND TAXIWAY MARKING

PART 10 - FENCING
NOT USED FOR THIS PROJECT

PART 11 - DRAINAGE
D-705 - PIPE UNDERDRAINS FOR AIRPORTS
D-751 - MANHOLE, CATCH BASINS, INLETS, AND INSPECTION HOLES

PART 12 - TURFING
T-901 - SEEDING
T-905 - TOPSOIL
T-908 – MULCH

@ Bolton & Menk, Inc. 2026, All Rights Reserved

PART 13 - LIGHTING INSTALLATION
L-110 - AIRPORT UNDERGROUND ELECTRICAL DUCT BANKS AND CONDUITS
L-115 - ELECTRICAL MANHOLES AND JUNCTION STRUCTURES

DRAWINGS (UNDER SEPARATE COVER):

Sheets numbered G0.01 through E2.01, inclusive, dated March 2026, and with each sheet bearing the following general title:

Expand Terminal Area Apron
Storm Lake Municipal Airport

APPENDICES

- CONSTRUCT SAFETY AND PHASING PLAN (CSPP)
- GEOTECHNICAL INVESTIGATIONS REPORT
- FAA AC 150/5370-2G – OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION

******END OF SECTION******

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00100 - NOTICE TO BIDDERS

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

Receipt and Opening of Sealed Proposals. Sealed proposals for the work comprising the repair and improvement as stated below must be filed before 11:00 A.M. on April 13, 2026, in the office of the City Clerk, City Hall, 620 Erie Street, Storm Lake, Iowa, 50588. Sealed proposals will be opened and publicly read with bids being tabulated at that time or thereafter. The results will be reported to the City of Storm Lake at its council meeting at 5:00 P.M. on April 20, 2026, at which time the City Council may take action on the proposals submitted or at such time as may then be fixed.

Time and Place Sealed Proposals Will be Opened and Considered. Sealed proposals will be opened and proposals tabulated at 11:00 A.M. on April 13, 2026, in the office of the City Clerk by the City Clerk, City Hall, 620 Erie Street, Storm Lake, Iowa, 50588 for consideration by the City of Storm Lake at its council meeting at 5:00 P.M. on April 20, 2026, at City Hall, 620 Erie Street, Storm Lake, Iowa 50588. The City of Storm Lake reserves the right to reject any and all bids, to waive informalities or technicalities in any bid, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City of Storm Lake.

Time for Commencement and Completion of Work. Work on the improvement shall commence upon approval of the contract by the City Council and as stated in the Notice to Proceed. All work under the base bid shall be completed in thirty-five (35) working days. All work under the alternate bid A shall be completed in seven (8) working days. All work under the alternate bid b shall be completed in seven (8) working days. If the owner selects the base bid plus the alternate bid working days shall be combined for a total of fifty-one (51) working days for the project. Once work is started on the project is must actively be completed regardless of start date or due date. Due to the receipt of FAA funding and working times being historically wetter in the spring, a notice to proceed is not expected to be issued until on or after June 7, 2027, for the project. All work related to the project must be completed and ready for use by no later than the set in of winter weather, ceasing construction operations at the end of calendar year 2027 regardless of the start date.

Liquidated damages as set forth in Section 00500 – Contract.

Bid Security. Each bidder shall accompany its bid with bid security, as defined in Iowa Code Section 26.8, as security that the successful bidder will enter into a contract for the work bid upon. The bidder's security shall be in an amount equal to 5% percent of the total amount of the bid. The bid shall contain no condition except as provided in the specifications.

If the bidder fails to execute the contract and to furnish an acceptable performance and payment bond or provide a Certificate of Insurance within ten (10) days after acceptance of the bid by the City of Storm Lake, the bid security may be forfeited or cashed by the City of Storm Lake as liquidated damages.

Contract Documents. Copies of the project documents are available for a price of $25.00 per set. This fee is refundable, provided the plans and specifications are returned complete and in good usable condition, and they are returned within fourteen (14) calendar days after the award of the project. Please contact Bolton & Menk, Inc at cedarrapids@bolton-menk.com to obtain a hard set of project documents. Complete digital project bidding documents are available at www.bolton-menk.com or www.questcdn.com. You may view the digital plan documents for free by entering **Quest project # 10099477** on the website's Project Search page. Documents may be downloaded for $0.00. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, viewing, downloading, and working with this digital project information.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Preference of Products and Labor. By virtue of statutory authority, further preference will be given to products and provisions grown and coal produced within the State of Iowa, and to Iowa domestic labor, to the extent lawfully required under Iowa statutes. **Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.**

Sales Tax Exemption Certificates. The bidder shall not include sales tax in the bid. The City of Storm Lake will distribute tax exemption certificates and authorization letters to the Contractor and all subcontractors who are identified. The Contractor and subcontractor may make copies of the tax exemption certificates and provide a copy to each supplier providing construction materials. These tax exemption certificates and authorization letters are applicable only for this specific project under the Contract.

Award of Contract. All proposals submitted in accordance with the instructions presented herein will be subject to evaluation. Bids may be held by the City of Storm Lake for a period not to exceed **Ninety (90) days or September 1, 2026, whichever is later,** from the date of the bid opening for the purpose of conducting the bid evaluation.

The Owner will base the award of contract upon the lowest aggregate sum proposal submitted from those bidders the Owner confirms as being responsive and responsible. The right is reserved, as the City of Storm Lake may require, to reject any and all bids and to waive any informality in the bids received.

Prospective Bidders are hereby advised that award of contract is contingent upon the owner receiving Federal funding assistance under the Airport Improvement Program.

Federal Provisions

This project is subject to the following Federal provisions, statutes, and regulations:

Equal Employment Opportunity - Executive Order 11246 and 41 CFR Part 60: The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth within the supplementary provisions. The successful Bidder shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin.

Goals for Minority and Female Participation – Executive Order 11246 and 41 CFR Part 60:

1. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth within the supplementary provisions.
2. The goals and timetables for minority and female participation, expressed in percentage terms for the contractor's aggregate workforce in each trade on all construction work in the covered area, are as follows:

   Timetables:

   Goals for minority participation for each trade: **0.4 %**

   Goals for female participation in each trade: **6.9 %**

These goals are applicable to all of the contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the contractor performs construction work in a geographical area located outside of the geographical area where the work is actually performed. With regard to this second area, the contractor also is subject to the goals for both its Federally involved and non-federally involved construction.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Certification of Non-Segregated Facilities – 41 CFR Part 60: A certification of Non-segregated Facilities must be submitted prior to the award of a federally-assisted construction contract exceeding $10,000 which is not exempt from the provisions of the Equal Opportunity Clause.

Contractors receiving federally assisted construction contract awards exceeding $10,000, which are not exempt from the provisions of the Equal Opportunity Clause will be required to provide for the forwarding of the notice to prospective subcontractors for supplies and construction contracts where the subcontracts exceed $10,000 and are not exempt from the provisions of the Equal Opportunity Clause. The penalty for making false statements in offers in prescribed in 18 U.S.C. 1001.

Disadvantaged Business Enterprise – 49 CFR Part 26: The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contracts. In accordance with 49 CFR Part 26.45, the sponsor has established a **contract goal of 0%** participation for small business concerns owned and controlled by certified socially and economically **Disadvantaged Business Enterprise (DBE)**. The bidder shall make and document good faith efforts, as defined in Appendix A of 49 CFR Part 26, to meet this established goal.

Davis-Bacon Act, as amended – 29 CFR Part 5: The Contractor is required to comply with wage and labor provisions and to pay minimum wages in accordance with the current schedule of wage rates established by the United States Department of Labor.

Debarment, Suspension, Ineligibility and Voluntary Exclusion – 49 CFR Part 29: The bidder certifies, by submission of a proposal or acceptance of a contract, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction by any Federal department or agency. Individuals or companies listed in the General Services Administration's "Excluded Parties Listing System" will not be considered for award of contract.

Foreign Trade Restriction – 49 CFR Part 30

The Bidder and Bidder's subcontractors, by submission of an offer and/or execution of a contract, is required to certify that it:

a. Is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms published by the Office of the United States Trade Representative (USTR).

b. Has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country on said list or is owned or controlled directly or indirectly by one or more citizens or nationals of a foreign country on said list.

c. Has not procured any product nor subcontracted for the supply of any product for use on the project that is produced in a foreign country on said list.

Buy American Certificate – Aviation Safety and Capacity Act of 1990:

This contract is subject to the "Buy American Preferences" of the Aviation Safety and Capacity Act of 1990. Per Title 49 U.S.C. Section 50101, all steel and manufactured products installed under an AIP assisted project must be produce in the United States unless the Federal Aviation Administration has granted a formal waiver.

As a condition of bid responsiveness, Bidders must complete and submit as part of their proposal the enclosed Buy American certification. The bidder must indicate whether it intends to meet Buy American preferences by only installing steel and manufactured products produced with the United State of America; or if it intends to seek a permissible waiver to the Buy American requirements.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

PROJECT DESCRIPTION: Expand Aircraft Parking Apron including PCC Pavement, Grading and Drainage

This Notice is given by the authority of the City of Storm Lake

Mayra Martinez, City Clerk

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00105 - NOTICE OF PUBLIC HEARING

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

Public Hearing on Proposed Contract Documents and Estimated Costs for Repair or Improvement. A public hearing will be held by the City of Storm Lake on the proposed contract documents (plans, specifications and form of contract) and estimated cost for the improvement at its council meeting at 5:00 P.M. on April 20, 2026, at City Hall, 620 Erie Street, Storm Lake, Iowa 50588.

PROJECT DESCRIPTION: Expand Aircraft Parking Apron including PCC Pavement, Grading and Drainage

At said hearing, the City Council will consider the plans, specifications, proposed form of contract, and estimated total cost for the project, the same now being on file in the office of the City Clerk, 620 Erie Street, Storm Lake, Iowa 50588, reference to which is made for a more detailed and complete description of the proposed improvements, and at said time and place the said City Council will also receive and consider any objections to said plans, specifications, estimate of cost, and form of contract made by any interested party.

This Notice is given by the authority of the City of Storm Lake

Mayra Martinez
City Clerk

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00200 - INSTRUCTIONS TO BIDDERS

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

The work comprising the above-mentioned project shall be constructed in accordance with the FAA Standard Specifications, and as further modified by the supplemental specifications and special provisions included in the contract documents. The terms used in the contract version of the documents are defined in said Standard Specifications. Before submitting a bid, please review the requirements in these specifications. Please be certain that all documents have been completed properly as failure to complete and sign all documents and to comply with the requirements listed below can cause a submitted bid not to be read.

ARTICLE 1 - BID SECURITY

1.01 The bid security must be in the minimum amount of 5% of the total bid amount including all add alternates (do not deduct the amount of deduct alternates). Bid security shall be in the form of a cashier's check, or a certified check drawn on a FDIC insured bank in Iowa; or a certified check drawn on a FDIC insured bank chartered under the laws of the United States; or a certified share draft drawn **ON A CREDIT UNION IN IOWA OR CHARTERED UNDER THE LAWS OF THE UNITED STATES; OR A BID BOND EXECUTED BY** a corporation authorized to contract as a surety in Iowa or satisfactory to the City Of Storm Lake, hereinafter called the "Jurisdiction".

1.02 The bid bond must be submitted on the **enclosed Bid Bond form as no other bid bond forms are acceptable. All signatures on the bid bond must be original signatures in ink**; electronic, copies, or facsimile (fax) of any signature on the bid bond is not acceptable.

1.03 Bid security other than said bid bond shall be in accordance with Chapter 26 of the Iowa Code.

ARTICLE 2 - SUBMISSION OF THE PROPOSAL AND IDENTITY OF BIDDER

2.01 The proposal shall be sealed in an envelope, properly identified as the Proposal with the project title and the name and address of the bidder. The bid security shall be sealed in a separate envelope identified as the "Bid Security" and attached to the outside of the bid proposal envelope. The Proposal and Bid security shall be deposited with the Jurisdiction at or before the time and at the place provided in the Notice to Bidders. It is the sole responsibility of the bidder to see that its proposal is delivered to the Jurisdiction prior to the time for opening bids along with the appropriate bid security. Any proposal received after the scheduled time for the receiving of proposals will be returned to the bidder unopened and will not be considered.

2.02 The following documents shall be completed, signed, and returned in the Proposal envelope. The bid cannot be read if any of these documents are omitted from the Proposal envelope.

A. PROPOSAL – Complete each of the following parts:

- PART B – ACKNOWLEDGMENT OF ADDENDA, IF ANY HAVE BEEN ISSUED
- PART C – BID ITEMS, QUANTITIES AND PRICES
- PART F – ADDITIONAL REQUIREMENTS
- PART G – IDENTITY OF BIDDER

@ Bolton & Menk, Inc. 2026, All Rights Reserved

B. The following documents which are part of the proposal documents must be completed and attached:

1. Bidder Status Form
2. Worksheet: Authorization To Transact Business
3. Buy American Certification of Compliance with FAA Buy American Preference Construction Projects, dated December 29, 2025
4. Buy American Waiver Request
5. Buy American Project/Product Content Percentage Calculation – Worksheet
6. Buy American Preferences – Final Assembly Questionnaire
7. Buy American Conformance Listing
8. DBE Utilization Statement
9. DBE Letter of Intent
10. Fostering Small Business Participation
11. Sign the proposal. The signature on the proposal and all proposal attachments must be an original signature in ink signed by the same individual who is the Company Owner or an authorized Officer of the Company; copies or facsimile of any signature will not be accepted.
12. Documents must be submitted as printed. No alterations, additions, or deletions are permitted. If the Bidder notes a requirement in the contract documents which the Bidder believes will require a conditioned or unsolicited alternate bid, the Bidder must immediately notify the Engineer in writing. The Engineer will issue any necessary interpretation by an addendum.

ARTICLE 3 - PROSECUTION AND PROGRESS OF THE WORK

3.01 The work is located at the Storm Lake Municipal Airport.

Work on the improvement shall commence upon approval of the contract by the City of Storm Lake and as stated in the Notice to Proceed. All work under the Contract must be substantially complete as stated in Section 00500-Contract. Liquidated Damages will be assessed as detailed in the stated in Section 00500 - Contract.

3.02 Community Events.

Successful bidder will be required to coordinate with the owner and accommodate the owner's requirements for the following list of events:

None

3.03 Each successful bidder will be required to furnish a corporate surety bond in an amount equal to 100% of its contract price. Said bond shall be issued by a responsible surety approved by City of Storm Lake and shall guarantee the faithful performance of the contract, the terms and conditions therein contained, the prompt payment of all material and labor, protect and save harmless City of Storm Lake from claims and damages of any kind caused by the operations of the contract, and shall also guarantee the maintenance of the improvement caused by failures in materials and construction for a period of one (1) year from and after acceptance of the work.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

3.04 The City of Storm Lake, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42U.S.C. 2000d to 2000d-4 and title 49 Code of Federal Regulations, Department of Transportation, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the Department of Transportation issued pursuant to such Act, hereby notifies all bidders that it will affirmatively ensure that with any contract entered into pursuant to this advertisement, minority business enterprises will be afforded full opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

ARTICLE 4 - PREFERENCE OF PRODUCTS AND LABOR

4.01 In accordance with Iowa statutes, a resident bidder shall be allowed preference against a nonresident bidder from a state or foreign country provided that state or foreign county gives or requires any preference to bidders from that state or foreign country. This includes, but is not limited to, any preference to bidders, the imposition of any type of labor force preference, or any other form of preferential treatment to bidders or laborers from that state or foreign country. The preference allowed shall be equal to the preference given or required by the state of foreign county in which the nonresident bidder is a resident. In the instance of a resident labor force preference, a nonresident bidder shall apply the same resident labor force preference to a public improvement in this state as would be required in the construction of a public improvement by the state or foreign country in which the nonresident bidder is a resident.

4.02 Buy American Preference

A. As a matter of bid responsiveness, Bidder must indicate within their proposal how they intend to comply with the Buy American preferences established by Title 49 USC 50101. The bidder may choose to certify it will comply with Buy American preferences by only installing steel and manufactured products that are 100% made in the United States; or the bidder may choose to certify that they cannot fully comply with Buy American preferences and thus requests a waiver to Buy American preferences.

B. A bidder that certifies they will meet Buy American preferences by requesting a waiver also agrees to prepare and submit a formal waiver request and the associated component cost calculation if selected by the owner as the bidder with the apparent low bid. The successful bidder must submit their formal waiver request and component cost calculation to the owner within the timeframe prescribed on the Buy American certification.

4.03 Disadvantage Business Enterprise (DBE)

A. The requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of the City of Storm Lake, Iowa to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals. The award of this contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders, including those who qualify as a Disadvantaged Business Enterprise.

B. The Owner has established a DBE contract goal for this contract. The Goal is listed in the Notice to Bidders and Notice of Public Hearing. The Bidder/Offeror shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26, to subcontract the prime contract to certified DBE firms as defined in 49 CFR Part 26.

C. All bidders shall submit the following information with their proposal on the forms provided:

1. The name and addresses of DBE firms that will participate in the contract.

2. A description of the work that each DBE firm will perform.

3. The dollar amount of the participation of each DBE firm participating.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

4. Written documentation of the Bidder/Offeror's commitment to use a DBE subcontractor whose participation it submits to meet the contract goal.

5. Evidence of good faith efforts undertaken by the bidder, as described in appendix A to 49 CFR Part 26.

The successful Bidder will be required to provide written confirmation from the participating DBE firms verifying their intent to participate as in the project. This written confirmation shall be submitted prior to the execution of the contract.

4.04 Good Faith Efforts (DBE)

Bidder must demonstrate that they made good faith efforts to achieve participation with DBE firms. This requires that the bidder shows that it took all necessary and reasonable steps to secure participation by certified DBE firms. The owner will not consider mere pro forma efforts as a good faith effort.

Actions constituting evidence of good faith efforts are described in appendix A to 49 CFR Part 26. Such actions include but are not limited to:

A. Soliciting DBE participation through all reasonable and available means. This may include public advertisements and phone calls/faxes to known certified DBE firms.

B. Consult the State Department of Transportation office to obtain a list of certified DBE firms.

C. Selecting portions of work that increases the likelihood that DBE firms will be available to participate.

D. Providing DBE firms with sufficient information and time to review the project plans and specifications.

E. Documenting all contacts with DBE firms. This includes name, address, phone number, date of contact and record of conversation/negotiation.

ARTICLE 5 - TAXES

5.01 The City of Storm Lake will issue a sales tax exemption certificate and authorization letters to the contractor and all subcontractors for all materials purchased on the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued.

5.02 The Contractor shall provide a listing to the City of Storm Lake identifying all appropriate subcontractors qualified for use of the tax exemption certificate. The Contractor and subcontractors may make copies of the certificate and provide to each supplier providing construction materials.

5.03 Income Tax:

A. The Successful Bidder is subject to payment of Iowa income tax on income from this work in amounts prescribed by law.

B. If a successful bidder is a non-Iowa partnership, individual or association, Bidder shall furnish evidence prior to execution of contract that bond or securities have been posted with the Iowa Department of Revenue in the amount required by law.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ARTICLE 6 – ADDITIONAL ITEMS

6.01 Qualification of Bidders

A. To demonstrate the Bidder's qualifications to perform the work, after submitting its bid and within 5 days of owners request, Bidder must submit the following information:

1. Written evidence establishing the Bidder's qualifications such as financial data, previous experience industry certifications, industry specific licensure, specific experience requirement information listed in the technical specifications and/or supplement specifications sections of the project manual, and present commitments.
2. A written statement that the Bidder is authorized to do business in the State of Iowa, or a written certification that Bidder will obtain such authority prior to the effective date of the contract.
3. The Bidder's state or other contractor license number, if applicable.
4. Subcontractors and suppliers qualification information.
5. Other required information regarding qualifications

6.02 Pre-Bid Conference

A. A non-mandatory pre-bid conference will be held at the time and location indicated in the advertisement or invitation to bid. Representatives of the Owner and Engineer will be present to discuss the project. Bidders are encouraged to attend and participate in the pre-bid conference; however, attendance at this pre-bid conference is not required to submit a bid.

B. Information presented at the pre-bid conference does not alter the contract documents. Owner will issue an addenda to make any changes to the contract documents that result from discussions at the pre-bid conference. Information presented and statements made at the pre-bid conference will not be binding or legally effective unless incorporated in an addendum.

6.03 Other Site-Related Documents

A. Site Visit

1. Bidder shall conduct the required site visit during normal working hours

******END OF SECTION******

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ITEMS TO BE SUBMITTED WITH THE BID

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),

3-19-0088-021-2026 (Construction) &

3-19-0088-022-2026 (Construction)

24X.136745.000

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00410 - PROPOSAL

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

PROPOSAL: PART A – SCOPE

The City of Storm Lake, hereinafter called the "Jurisdiction," has need of a qualified contractor to complete the work comprising the below referenced repair or improvement. The undersigned Bidder hereby proposes to complete the work comprising the below referenced repair or improvement as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the City Clerk, 620 Erie Street, Storm Lake, Iowa 50588, at the prices hereinafter provided in Part C of the Proposal, for the following described improvements:

PROJECT DESCRIPTION: Expand Aircraft Parking Apron including PCC Pavement, Grading and Drainage

PROPOSAL: PART B – ACKNOWLEDGMENT OF ADDENDA

The Bidder hereby acknowledges that all addenda become a part of the contract documents when issued and that each such addendum has been received and utilized in the preparation of this bid. The Bidder hereby acknowledges receipt of the following addenda by inserting the number of each addendum in the blanks below:

ADDENDUM NUMBER	_____	ADDENDUM NUMBER	_____
ADDENDUM NUMBER	_____	ADDENDUM NUMBER	_____

and certifies that said addenda were utilized in the preparation of this bid.

PROPOSAL: PART C – BID ITEMS AND QUANTITIES

UNIT BID PRICE CONTRACTS: The Bidder must provide the Unit Bid Price, the Total Bid Price, any Alternate Prices, and the Total Construction Costs on the Proposal Attachment: Part C – Bid Items and Quantities. In case of discrepancy, the **Unit Bid Price governs**. The quantities shown on the Proposal Attachment: Part C – Bid Items and Quantities are approximate only but are considered sufficiently adequate for the purpose of comparing bids. T**he Total Base Bid plus all bid alternates shall be used for comparison of bids.** The jurisdiction shall only use the Total Construction Cost for determining the sufficiency of the bid security.

SEE INCLUDED PROPOSAL ATTACHMENT

PROPOSAL: PART D – GENERAL

The Bidder hereby acknowledges that the Jurisdiction, in advertising for public bids for this project reserves the right to:

1. Reject any or all bids. Award of the contract, if any, to be to the lowest responsible, responsive bidder; and
2. Reject any or all alternates in determining the items to be included in the contract. Designation of the lowest responsible, responsive bidder to be based on comparison of the total bid only, not including any alternates; and

@ Bolton & Menk, Inc. 2026, All Rights Reserved

3. Make such alterations to the contract documents or in the proposal quantities as it determines necessary in accordance with the contract documents after execution of the contract. Such alterations shall not be considered a waiver of any conditions of the contract documents, and shall not invalidate any of the provisions thereof; and

4. Make The BIDDER, by submission of a proposal, acknowledge that award of this contract is subject to the provisions of the Davis-Bacon Act. The BIDDER accepts the requirement to pay prevailing wages for each classification and type of worker as established in the attached wage rate determination as issued by the United States Department of Labor. The BIDDER further acknowledges and accepts their requirement to incorporate the provision to pay the established prevailing wages in every subcontract agreement entered into by the Bidder under this project.

5 The BIDDER acknowledges that the OWNER has established a contract Disadvantaged Business Enterprise goal for this project. The contract goal established is provided in the Notice to Bidders and Notice of Public Hearing. The BIDDER acknowledges and accepts the requirement to apply and document good faith efforts, as defined in Appendix A, 49 CFR Part 26, for subcontracting a portion of the prime contract to certified Disadvantaged Business Enterprises (DBE), as defined in 49 CFR Part 26 for purposes of meeting the OWNER'S established goal. The BIDDER, in complying with this requirement, proposes participation by Disadvantaged Business Enterprises as stated on the attached forms, "Utilization Statement" and "Letter of Intent;" and

The Bidder hereby agrees to:

1. Enter into a contract, if this proposal is selected, in the form approved by the Jurisdiction, provide proof of registration with the Iowa Division of Labor in accordance with Chapter 91C of the Iowa Code, and furnish a performance and payment bond; and

2. Forfeit bid security, not as a penalty but as liquidated damages, upon failure to enter into such contract and/or to furnish said bond; and

3. Commence the work upon written Notice to Proceed; and

4. Substantially complete the work on or before as detailed in Section 00500 – Contract; and

5. Pay liquidated damages for noncompliance with said completion provisions at the rate detailed in Section 00500 – Contract.

PROPOSAL: PART E – NON-COLLUSION AFFIDAVIT

The Bidder hereby certifies:

1. That this proposal is not affected by, contingent on, or dependent on any other proposal submitted for any improvement with the Jurisdiction; and

2. That no individual employed by the Bidder has employed any person to solicit or procure the work on this project, nor will any employee of the Bidder make any payment or agreement for payment of any compensation in connection with the procurement of this project; and

3. That no part of the bid price received by the Bidder was or will be paid to any person, corporation, firm, association, or other organization for soliciting the bid, other than the payment of their normal compensation to persons regularly employed by the Bidder whose services in connection with the construction of the project were in the regular course of their duties for the Bidder; and

4. That this proposal is genuine and not collusive or sham; that the Bidder has not colluded, conspired, connived, or agreed, directly or indirectly, with any bidder or person, to submit a sham bid or to refrain from bidding; and

@ Bolton & Menk, Inc. 2026, All Rights Reserved

5. That the bid has not in any manner, directly or indirectly, sought, by agreement or collusion, or communication or conference, with any person, to fix the bid price of the Bidder or of any other bidder; and

6. That all statements in this proposal are true; and

7. That the individual(s) executing this proposal have the authority to execute this proposal on behalf of the Bidder.

PROPOSAL: PART F – ADDITIONAL REQUIREMENTS

The Bidder hereby agrees to comply with the additional requirements listed below which are included in this proposal and identified as proposal attachments:

The following documents are attached to and made a part of this Bid:

1. Bid Guaranty in the form of a completed Bid Bond in the amount of 5% (five percent) of the amount bid.

2. Completed "Bidder Status Form," signed and dated. The Worksheet: Authorization to Transact Business is not required to be submitted with the Bid. It is intended to be used to assist the bidder in completing the Bidder Status Form.

3. Completed "Buy American Certification of Compliance with FAA Buy American Preference Construction Projects," signed and dated**. If you check the first box certifying compliance with Buy American requirements, then additional forms listed below as item 4, item 5, and item 6 are not required.**

4. Completed "Buy American Waiver Request," signed and dated, if the second box is checked on the "Buy American Certification." Otherwise, attach form and indicate "N.A." on the form. Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award.

5. Completed "Buy American Project/Product Content Percentage Calculation – Worksheet ," signed and dated if "Buy American Waiver Request" is completed. Otherwise, attach form and indicate "N.A." on the form. Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award. This section is used if something is not listed already on a FAA national approved waiver.

6. Completed "Buy American Preferences – Final Assembly Questionnaire," signed and dated if "Buy American Waiver Request" is completed. Otherwise, attach form and indicate "N.A." on the form. Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award. This section is used if something is not listed already on a FAA national approved waiver.

7. Completed "Buy American Conformance Listing," signed and dated if signed and dated if "Buy American Waiver Request" is completed. Otherwise, attach form and indicate "N.A." on the form. Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award. This section is used if something is already listed on a FAA national approved waiver. You would fill in the information on this form from the information available on the nation waiver.

8. Completed DBE forms "Utilization Statement."

9. Completed DBE "Letter of Intent." One copy shall be submitted for each DBE subcontractor. The "Letters of Intent" do not need to be signed by the DBE firms at the time of the bid opening. However, all other information in the letter must be provided with the bid. Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

10. Evidence of good faith efforts required by 49 CFR Part 26, Appendix A. If the proposed DBE goal is met, submittal of evidence of good faith efforts is not required.

11. Completed “Fostering Small Business Participation.” Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award.

12. Evidence of BIDDER’S qualifications per the requirements of the Instructions-to-Bidders.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

PROPOSAL: PART G - IDENTITY OF BIDDER

The Bidder shall indicate whether the bid is submitted by a/an:

☐ Individual,
Sole Proprietorship

☐ Partnership

☐ Corporation

☐ Limited Liability Company

☐ Joint venture; all parties must join in and execute all documents

☐ Other

The bidder shall enter its Public Registration Number __ __ __ __ __ - __ __ issued by the Iowa Commissioner of Labor Pursuant Section 91C.5 of the Iowa Code.

Failure to provide said Registration Number shall result in the bid being read under advisement. A contract will not be executed until the Contractor is registered.

_____
Bidder

_____
Signature

_____
Name (Print/Type)

_____
Title

_____
Street Address

_____
City, State, Zip Code

_____
Telephone Number

_____
E-Mail

Type or print the name and title of the company's owner, president, CEO, etc. if a different person than entered above

_____
Name

_____
Title

NOTE: The signature on this proposal must be an original signature in ink; copies, facsimiles, or electronic signatures will not be accepted.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00410 – C - PROPOSAL

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

PROPOSAL ATTACHMENT: PART C – BID ITEMS AND QUANTITIES

This is a UNIT BID PRICE CONTRACT. The bidder must provide the Unit Bid Price, the Total Bid Price, any Alternate Prices and the Total Bid Amount; in case of discrepancy, the Unit Bid Price governs. The Quantities shown on the Proposal Attachment: Part C – Bid Items and Quantities are approximate only but are considered sufficiently adequate for the purpose of comparing bids. **The Jurisdiction shall use the Total Base Bid plus all bid alternate amounts shall be used for comparison of bids.**

SEE SCHEDULE OF PRICES ON NEXT PAGE

@ Bolton & Menk, Inc. 2026, All Rights Reserved

BASE BID

ITEM NO.	ITEM CODE	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
1	C-102	INSTALLATION OF WATTLES	LF	1500	$	$
2	C-102	REMOVAL OF WATTLES	LF	1500	$	$
3	C-102	WATTLE CLEANOUT	LF	1500	$	$
4	C-102	INLET PROTECTION DEVICE	EA	1	$	$
5	C-102	SWPPP ESTABLISHMENT AND MANAGEMENT	LS	1	$	$
6	C-105	MOBILIZATION	LS	1	$	$
7	C-105	TRAFFIC CONTROL	LS	1	$	$
8	C-105	CONSTRUCTION SURVEY	LS	1	$	$
9	P-101	PAVEMENT REMOVAL, PCC PAVEMENT	SY	700	$	$
10	P-101	REMOVAL OF STORM SEWER INTAKES	EA	1	$	$
11	P-151	CLEARING AND GRUBBING	LS	1	$	$
12	P-152	UNCLASSIFIED EXCAVATION	CY	85	$	$
13	P-152	BORROW, OFF SITE	CY	1870	$	$
14	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	2720	$	$
15	P-156	CEMENT TREATED SUBGRADE, 12"	SY	5600	$	$
16	P-156	CEMENT, 5%	TON	160	$	$
17	P-208 OR P-219	AGGREGATE BASE COURSE, 6"	SY	5600	$	$
18	P-501	PAVEMENT, PCC, 6.5"	SY	5400	$	$
19	P-501	TIE DOWN ANCHORS	EA	18	$	$
20	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	2000	$	$
21	P-620	PAVEMENT MARKING REMOVALS	LS	1	$	$
22	D-751	SW-512, CIRCULAR AREA INTAKE, 24" WITH MANHOLE CASTING AND SOLID LID	EA	1	$	$
23	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	2	$	$
24	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR BASE BID CONDITIONS	LF	10	$	$
25	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT	LF	10	$	$
26	L-115	CAN PLAZA MODIFICATIONS	LS	1	$	$
					TOTAL AMOUNT BASE BID:	$

TOTAL - BASE BID (Written Format): _____

BID ALTERNATE A

ITEM NO.	ITEM CODE	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
A1	P-152	UNCLASSIFIED EXCAVATION	CY	10	$	$
A2	P-152	BORROW, OFF SITE	CY	1165	$	$
A3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	1265	$	$
A4	P-156	CEMENT TREATED SUBGRADE, 12"	SY	2200	$	$
A5	P-156	CEMENT, 5%	TON	70	$	$
A6	P-208 OR P-219	AGGREGATE BASE COURSE, 6"	SY	2200	$	$
A7	P-501	PAVEMENT, PCC, 6.5"	SY	2100	$	$
A8	P-501	TIE DOWN ANCHORS	EA	15	$	$
A9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	250	$	$
A10	D-705	FIELD INVESTIGATION OF EXISTING FIELD TILE	LS	1	$	$
A11	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	1	$	$
A12	L-110	NON-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT FOR ALT BID A CONDITIONS	LF	8	$	$
A13	L-110	CONCRETE-ENCASED DUCT BANK WITH (6) 2" PVC/HDPE CONDUIT	LF	280	$	$
					TOTAL AMOUNT BID ALTERNATE A:	$

TOTAL - BID ALTERNATE A (Written Format): _____

BID ALTERNATE B

ITEM NO.	ITEM CODE	DESCRIPTION	UNIT	APPROX. QUANTITY	UNIT PRICE	AMOUNT
B1	P-152	UNCLASSIFIED EXCAVATION	CY	85	$	$
B2	P-152	BORROW, OFF SITE	CY	1165	$	$
B3	P-152	TOPSOIL STRIP, SALVAGE AND RESPREAD	CY	1120	$	$
B4	P-156	CEMENT TREATED SUBGRADE, 12"	SY	1900	$	$
B5	P-156	CEMENT, 5%	TON	60	$	$
B6	P-208 OR P-219	AGGREGATE BASE COURSE, 6"	SY	1900	$	$
B7	P-501	PAVEMENT, PCC, 6.5"	SY	1800	$	$
B8	P-501	TIE DOWN ANCHORS	EA	12	$	$
B9	P-620	PAVEMENT MARKINGS, SOLID YELLOW, WITH BEADS	SF	200	$	$
B10	T-901	SEEDING FERTILIZING AND MULCHING	ACRE	1	$	$
					TOTAL AMOUNT BID ALTERNATE B:	$

TOTAL - BID ALTERNATE B (Written Format): _____

TOTAL - BASE BID PLUS ALL ALTERNATIVES (Written Format): _____

Note: It is understood that the above quantities are estimated for the purpose of this bid. All quantities are subject to revision by the owner as noted in section 00500-CONTRACT

_____
Bidder Name

All bidders must submit the following competed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156

Section 00411 - Bidder Status Form

To be completed by all bidders — Part A

Please answer "Yes" or "No" for each of the following:

☐ Yes ☐ No My company is authorized to transact business in Iowa.
(To help you determine if your company is authorized, please review the worksheet on the next page).

☐ Yes ☐ No My company has an office to transact business in Iowa.

☐ Yes ☐ No My company's office in Iowa is suitable for more than receiving mail, telephone calls, and e-mail.

☐ Yes ☐ No My company has been conducting business in Iowa for at least 3 years prior to the first request for bids on this project.

☐ Yes ☐ No My company is not a subsidiary of another business entity, or my company is a subsidiary of another business entity that would qualify as a resident bidder in Iowa.

If you answered "Yes" to each question above, your company qualifies as a resident bidder. Please complete Parts B and D of this form.

If you answered "No" to one or more questions above, your company is a non-resident bidder. Please complete Parts C and D of this form.

To be completed by resident bidders — Part B

My company has maintained offices in Iowa during the past 3 years at the following addresses:

Dates: _____ to _____ Address: _____

(mm/dd/yyy) City, State, Zip: _____

Dates: _____ to _____ Address: _____

(mm/dd/yyy) City, State, Zip: _____

Dates: _____ to _____ Address: _____

(mm/dd/yyy) City, State, Zip: _____

You may attach additional sheet(s) if needed.

To be completed by non-resident bidders — Part C

1. Name of home state or foreign country reported to the Iowa Secretary of State: _____
2. Does your company's home state or foreign country offer preferences to bidders who are residents? ☐ Yes ☐ No
3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.

You may attach additional sheet(s) if needed.

To be completed by all bidders — Part D

I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be reason to reject my bid.

Signed Name: _____ Signature: _____

Firm Name: _____ Date: _____

Email Address: _____ Phone Number _____

@ Bolton & Menk, Inc. 2026, All Rights Reserved

All bidders must submit the following competed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156

SECTION 00411 - WORKSHEET: AUTHORIZATION TO TRANSACT BUSINESS

This worksheet may be used to help complete Part A of the Resident Bidder Status form. If at least one of the following describes your business, you are authorized to transact business in Iowa.

☐ Yes ☐ No My business is currently registered as a contractor with the Iowa Division of Labor.

☐ Yes ☐ No My business is a sole proprietorship, and I am an Iowa resident for Iowa income tax purposes.

☐ Yes ☐ No My business is a general partnership or joint venture. More than 50 percent of the general partners or joint venture parties are residents of Iowa for Iowa income tax purposes

☐ Yes ☐ No My business is an active corporation with the Iowa Secretary of State and has paid all fees required by the Secretary of State, has filed its most recent biennial report, and has not filed articles of dissolution.

☐ Yes ☐ No My business is a corporation whose articles of incorporation are filed in a state other than Iowa, the corporation has received a certificate of authority from the Iowa Secretary of State, has filed its most recent biennial report with the Secretary of State, and has neither received a certificate of withdrawal from the Secretary of state nor had its authority revoked.

☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in this state and the statement has not been canceled.

☐ Yes ☐ No My business is a limited liability partnership which has filed a statement of qualification in a state other than Iowa, has filed a statement of foreign qualification in Iowa and a statement of cancellation has not been filed.

☐ Yes ☐ No My business is a limited partnership or limited liability limited partnership which has filed a certificate of limited partnership in this state and has not filed a statement of termination.

☐ Yes ☐ No My business is a limited partnership or a limited liability limited partnership whose certificate of limited partnership is filed in a state other than Iowa, the limited partnership or limited liability limited partnership has received notification from the Iowa Secretary of state that the application for certificate of authority has been approved and no notice of cancellation has been filed by the limited partnership or the limited liability limited partnership.

☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in Iowa and has not filed a statement of termination.

☐ Yes ☐ No My business is a limited liability company whose certificate of organization is filed in a state other than Iowa, has received a certificate of authority to transact business in Iowa and the certificate has not been revoked or canceled.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00412 - BUY AMERICAN - CERTIFICATION OF COMPLIANCE WITH FAA BUY AMERICAN PREFERENCE CONSTRUCTION PROJECTS

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with its proposal. The bidder or offeror must indicate how it intends to comply with 49 USC § 50101, BABA and other Made in America Laws, U.S. statutes, guidance, and FAA policies, by selecting one of the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (√) or the letter "X."

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101, BABA and other related U.S. statutes, guidance, and policies of the FAA by:

a) Only installing iron, steel and manufactured products produced in the United States.

b) Only installing construction materials defined as: an article, material, or supply – other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber or drywall that have been manufactured in the United States.

c) Installing manufactured products for which the Federal Aviation Administration (FAA) has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing; or

d) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

a) To provide to the Airport Sponsor or FAA evidence that documents the source and origin of the iron, steel and manufactured product.

b) To faithfully comply with providing U.S. domestic product.

c) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

d) Certify all construction materials used in the project are manufactured in the U.S.

☐ The bidder or offeror hereby certifies it cannot comply with the 100 percent Buy American Preferences of 49 USC § 50101(a) but may qualify for a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

a) To submit to the Airport Sponsor or FAA within 5 calendar days of being selected as the responsive bidder, a formal waiver request and required documentation that supports the type of waiver being requested.

b) That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination that may result in rejection of the proposal.

c) To faithfully comply with providing U.S. domestic products at or above the approved U.S. domestic content percentage as approved by the FAA.

d) To furnish U.S. domestic product for any waiver request that the FAA rejects.

e) To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Required Documentation

Type 2 Waiver (**Nonavailability)** - The iron, steel, manufactured goods, or construction materials or manufactured goods are not available in sufficient quantity or quality in the United States. The required documentation for the Nonavailability waiver is:

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire
b) Record of thorough market research, consideration where appropriate of qualifying alternate items, products, or materials including;
c) A description of the market research activities and methods used to identify domestically manufactured items capable of satisfying the requirement, including the timing of the research and conclusions reached on the availability of sources.

Type 3 Waiver – The cost of the item components and subcomponents produced in the United States is more than 60 percent of the cost of all components and subcomponents of the "facility/project". The required documentation for a Type 3 waiver is:

a) Completed Content Percentage Worksheet and Final Assembly Questionnaire including;
b) Listing of all manufactured products that are not comprised of 100 percent U.S. domestic content (excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non- domestic products in their entirety).
c) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly and installation at project location.
d) Percentage of non-domestic component and subcomponent cost as compared to total "facility" component and subcomponent costs, excluding labor costs associated with final assembly installation at project location.

Type 4 Waiver (Unreasonable Costs) - Applying this provision for iron, steel, manufactured goods, or construction materials would increase the cost of the overall project by more than 25 percent. The required documentation for this waiver is:

a) A Completed Content Percentage Worksheet and Final Assembly Questionnaire from
b) At minimum two comparable equal bid and/or offer;
c) Receipt or record that demonstrates that supplier scouting called for in Executive Order 14005, indicates that no domestic source exists for the project and/or component;
d) Completed waiver applications for each comparable bid and/or offer.

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date	Signature
Company Name	Title

December 29, 2025

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00412 - BUY AMERICAN WAIVER REQUEST

Title 49 U.S.C Section 50101 (b)

FOR AIRFIELD DEVELOPMENT PROJECTS FUNDED UNDER THE AIRPORT IMPROVEMENT PROGRAM

Type of Waiver Request:

The bidder may request a waiver subject to the provisions of Section 50101(b)(3) or Section 50101(b)(4). The bidder may not request a waiver under Section 50101(b)(1) or Section 50101(b)(2). Bidder is hereby advised that the Owner's approval with the bidder's waiver request is contingent upon FAA approval. The bidder must select one of the following applicable waiver provisions:

❒ Section 50101(b)(3): Bidder hereby requests a waiver to Buy American preferences based upon Section 50101(b)(3) for the equipment identified below. The bidder certifies that _____ % of the cost of components and subcomponents comprising the equipment are produced in the United States and that final assembly occurs within the United States. *(Bidder must attach a copy of the component cost calculation table)*

Equipment: _____

❒ Section 50101(b)(4). Bidder hereby requests a waiver to Buy American preferences based upon Section 50101(b)(4). The bidder asserts provision of domestic material increases the cost of the overall project by more than 25%. *(Note: This type of waiver is very rare)*

Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award.

Certification Signature:

In accordance with Section 50101(b), we request a waiver to the Buy American provisions based on the above certification and attached documentation.

_____ _____

Bidder's Firm Name Date

_____

Signature

@ Bolton & Menk, Inc. 2026, All Rights Reserved

1.1 Instructions for Section 50101(b)(3) Waiver:

1. "Equipment" in Section 50101 shall mean the following:
   a) Individual type "L" items (Airfield Lighting Equipment) as listed in FAA Advisory Circular 150/5345-53.
   b) Individual bid items as established within FAA Advisory Circular 150/5370-10. The bid item application may not be applied for the type "L" items listed in AC 150/5345-53.
   c) A waiver request may only address one specific equipment item. Submit separate requests for each equipment item for which a waiver.
   d) Items listed under the Nationwide Waiver do not require further review. Please refer to the following webpage: http://www.faa.gov/airports/aip/procurement/federal_contract_provisions/media/buy_american_waiver.xls
2. The bidder must base the U.S. percentage upon the value that results from completing a component cost calculation table similar to the attached format. The bidder shall avoid mere pro forma efforts to establish the waiver request percentage. The Bidder must submit the component cost calculation table as an attachment to the waiver request.
3. Components/subcomponents are the material and products composing the "equipment."
4. The final assembly of the AIP-funded "equipment" must be within the USA *(Section 50101(b)(3)(B)).* Final assembly is the substantial transformation of the components and subcomponents into the end product.
5. All steel used in the "Equipment" must be produced in the United States.
6. The Buy American requirements apply to all tier contractors and subcontractors. All contractors/subcontractors are required to provide appropriate documentation that indicates origin of manufacturer and percentage of domestic made product.
7. The bidder is hereby advised there is no implied or expressed guarantee that a requested waiver will be issued by the Federal Aviation Administration (FAA). Less than 60% of the USA component/subcomponent proposed for this facility CANNOT be waived. Products made with foreign steel are not eligible for a waiver.

1.2 Instructions for Section 50101(b)(4) Waiver:

1. The 25% cost increase waiver is rarely applicable. Consult Owner before making this request.

1.3 North America Free Trade Act (NAFTA)

NAFTA **does not** apply to the AIP. Products and material made in Canada or Mexico must be considered as foreign made products.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Buy American Project/Product Content Percentage Calculation – Worksheet

Applicant Information

Date of Application:

Applicant Name:

Applicant Type (choose one):

☐ Prime Contractor ☐ Manufacturer ☐ Supplier

Point of Contact (First and Last Name):

Applicant Business Address:

Email address:

Telephone: Extension:

Project/Product Information

FAA Eligible Project:

Airport Sponsor:

Airport LOCID:

FAA Award Number:

FAA Certified Equipment Number: FAA Advisory Circular:

Total Material Cost:

Total **U.S.** Material Content Cost: Percentage: %

Total **Non-U.S.** Material Content Cost: Percentage: %

@ Bolton & Menk, Inc. 2026, All Rights Reserved

FAA Buy American Requirements and Build America Buy America Compliance

Does this project include any iron, steel, or any of the following construction materials, not 100% produced in the United States?

☐ Yes ☐ No.

If "Yes," indicate the cost and percentage of the project below.

Steel (e.g., structural steel, rebar)	Cost:	Percentage:	%
Iron	Cost:	Percentage:	%
Non-ferrous metals	Cost:	Percentage:	%
Plastic and polymer-based products	Cost:	Percentage:	%
Glass (including optic glass)	Cost:	Percentage:	%
Lumber	Cost:	Percentage:	%
Drywall	Cost:	Percentage:	%

Use of Non-Domestic Construction Materials Justification

Provide a description of your efforts to locate and secure a domestic source for those "construction materials" or final manufactured goods that are not 100% produced in the U.S., including use of the Manufacturing Extension Partnership (MEP) and market research.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Project Material Structure Worksheet

Level (0, 1, 2)	Material Reference Number	Project Components and (or) Subcomponents	Qty	Unit of Measure	Non-U.S. Material Cost per Unit of Measure	Total Non-U.S. Material Cost	Country of Non-U.S. Material	U.S. Material Cost per Unit of Measure	Total U.S. Material Cost	Total Material Cost
0			1	Total Project						

FAA 5100-136 (8/2025) SUPERSEDES PREVIOUS EDITION

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Level (0, 1, 2)	Material Reference Number	Project Components and (or) Subcomponents	Qty	Unit of Measure	Non-U.S. Material Cost per Unit of Measure	Total Non-U.S. Material Cost	Country of Non-U.S. Material	U.S. Material Cost per Unit of Measure	Total U.S. Material Cost	Total Material Cost

FAA 5100-136 (8/2025) SUPERSEDES PREVIOUS EDITION

@ Bolton & Menk, Inc. 2026, All Rights Reserved

– CONFIDENTIAL –

NOT SUBJECT TO DISCLOSURE UNDER EXEMPTION # 4 OF THE FREEDOM OF INFORMATION ACT

Certification

The undersigned certifies that this information is true and accurate to the best of their knowledge. A false certification represents a violation of 18 U.S.C § 1001 and 49 U.S.C § 47126. Signatory has the burden of proof to establish compliance.

Signature: Date:_____

_____

Name (Print): _____

Title: _____

FOR FAA USE ONLY

(Check the appropriate Waiver Type and Scope check boxes below)

Applicable FAA Waiver Type

- ☐ Type I Public Interest (HQ Only)
- ☐ Type II Nonavailability (HQ Only)
- ☐ Type III More than 60% and Final Assembly within the U.S.
- ☐ Type IV Unreasonable Cost (Requires MEP/requires HQ coordination)
- ☐ BABA Iron, Steel, or Construction Material (requires justification) (Apply BABA Flag)

Applicable FAA Waiver Scope

- ☐ Project Specific
- ☐ Nationwide – (General Applicability) (For HQ Only)

Justifications

- ☐ Manufacturing Extension Partnership (MEP) Coordinated

FAA Official's Signature:

End of FAA Use Only Section

FAA 5100-136 (8/2025) SUPERSEDES PREVIOUS EDITION

@ Bolton & Menk, Inc. 2026, All Rights Reserved

-- CONFIDENTIAL –
NOT SUBJECT TO DISCLOSURE UNDER EXEMPTION # 4 OF THE FREEDOM OF INFORMATION ACT

BUY AMERICAN PREFERENCES – FINAL ASSEMBLY QUESTIONNAIRE

To assist the Federal Aviation Administration (FAA) in making the determination of whether final assembly of the product occurs in the United States, please complete and submit this questionnaire when requesting a Buy American Waiver under 49 USC § 50101(b)(3)(A).

Company Name: Date:

FAA Eligible Item: FAA Item Number (if applicable):

Address of Final Assembly Location:

1. Provide a description of the assembly process occurring at the specified final location in the United States.
   a. Describe the final assembly process and its various operations.
   b. How long does the final assembly process take to complete?
2. Provide a description of the resources used to conduct the assembly of the product at the specified location in the United States.
   a. How many employees are involved in the final assembly process and what is the general skill level of those employees?
   b. What type of equipment is used during the final assembly process?
   c. What is a rough estimate of the associated cost to conduct final assembly of the product at the specified location in the United States?

The undersigned certifies that this information is true and accurate to the best of their knowledge. A false certification represents a violation of 18 U.S.C § 1001 and 49 U.S.C § 47126. Signatory has the burden of proof to establish compliance.

Signature: _____

Name: _____

FAA Form 5100-137 (8/20) SUPERSEDES PREVIOUS EDITION

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00412 - BUY AMERICAN CONFORMANCE LISTING

Title 49 U.S.C Section 50101 (b)

FOR AIRFIELD DEVELOPMENT PROJECTS FUNDED UNDER THE AIRPORT IMPROVEMENT PROGRAM

- *Preparation of a Component Cost Calculation Table is not necessary for equipment listed on the FAA national listing:*

  https://www.faa.gov/airports/aip/buy_american/nationwide_waivers_issued

- *Bidder shall submit a listing of equipment it proposes to install on the project that is included on the current National Buy American conformance list.*

Equipment Type	Name of Manufacturer	Product Number

Signed copies must be provided within five (5) calendar days of the bid opening to be considered for award.

Certification Signature:

The bidder hereby certifies that the above listed equipment, which we propose for installation on the subject project, is on the current National Buy American Conformance list on the website listed above.

I hereby certify the above information is accurate and complete.

_____ _____

Bidder's Firm Name Date

_____

Signature

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00413 – DBE UTILIZATION STATEMENT

Disadvantage Business Enterprise

The undersigned bidder/offeror has satisfied the requirements of the bid specification in the following manner. (*Please mark the appropriate box*)

- ❑ **The bidder/offeror is committed to a minimum of _____% DBE utilization on this contract.**
- ❑ **The bidder/offeror, while unable to meet the DBE goal of _____%, hereby commits to a minimum of _____% DBE utilization on this contract and also submits documentation, as an attachment demonstrating good faith efforts (GFE).**

The undersigned hereby further assures that the information included herein is true and correct, and that the DBE firm(s) listed herein have agreed to perform a commercially useful function in the work items noted for each firm. The undersigned further understands that no changes to this statement may be made without prior approval from the Civil Right Staff of the Federal Aviation Administration.

_____

Bidder's/Offeror's Firm Name

_____ _____

Signature Date

DBE UTILIZATION SUMMARY

	Contract Amount		**DBE Amount**	**Contract Percentage**
DBE Prime Contractor	$_____	x 1.00 =	$_____	_____%
DBE Subcontractor	$_____	x 1.00 =	$_____	_____%
DBE Supplier	$_____	x 0.60 =	$_____	_____%
DBE Manufacturer	$_____	x 1.00 =	$_____	_____%
Total Amount DBE			$_____	_____%
DBE Goal			$_____	_____%

Note: If the total proposed DBE participation is less than the established DBE goal, Bidder must provide written documentation of the good faith efforts as required by 49 CFR Part 26.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00413 – DBE LETTER OF INTENT

Disadvantage Business Enterprise

(This page shall be submitted for each DBE firm)

Bidder/Offer Name:_____

Address:_____

City_____ State:_____ Zip:_____

DBE Firm: DBE Firm:_____

Address:_____

City:_____ State:_____ Zip:_____

DBE Contact Person: Name:_____ Phone: _____

DBE Certifying Agency: _____ Expiration Date:_____

Each DBE Firm shall submit evidence (such as a photocopy) of their certification status.

Classification: ☐Prime Contractor ☐Subcontractor ☐Joint Venture ☐Manufacturer ☐Supplier

Work item(s) to be performed by DBE	Description of Work Item	Quantity	Total

The bidder/offeror is committed to utilizing the above-named DBE firm for the work described above. The estimated participation is as follows:

DBE contract amount: $_____ Percent of total contract:_____%

AFFIRMATION:

The above-named DBE firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____

(Signature) *(Title)*

Notes: In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00414 – FOSTERING SMALL BUSINESS PARTICIPATION

TITLE 49 CFR 26.39 (*This page shall be submitted for each Small Business firm)*

In accordance with Section 26.39, detailed information shall be completed by the Prime Contractor for work items. The firms listed may or may not be certified DBE's.

Bidder/Offer:

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Small Business Firm:

Name of Firm: _____

Address: _____

City: _____ State: _____ Zip: _____

Contact Person:

Name: _____ Phone: _____

CERTIFICATION: Is the firm a Small Business as defined by Section 26.65

☐ Yes ☐ No

*Proof of eligibility may be requested

CERTIFIED DBE: Is the firm a Certified DBE?

☐ Yes ☐ No

Work item(s) to be performed by Small Business Firm	Description of Work Item	Cost	Percentage of Total Contract

The bidder/offeror is committed to utilizing the above-named Small Business firm for the work described above in an effort to foster Small Business participation. The estimated participation is as follows:

Small Business contract amount: $_____ Percent of total contract: _____ %

AFFIRMATION:

The above-named Small Business firm affirms that it will perform the portion of the contract for the estimated dollar value as stated above.

By: _____

(Signature) (Title)

In the event the bidder/offeror does not receive award of the prime contract, any and all representations in this Letter of Intent and Affirmation shall be null and void.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00420 - BID BOND

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

KNOW ALL BY THESE PRESENTS:

That we, _____, as Principal, and

_____, as Surety,

are held and firmly bound unto, City of Storm Lake as Obligee, (hereinafter referred to as "the Jurisdiction"), in the penal sum of _____

_____dollars ($_____),

lawful money of the United States, for which payment said Principal and Surety bind themselves, their heirs, executors, administrators, successors, and assigns jointly and severally, firmly by these presents.

The condition of the above obligation is such that whereas the Principal has submitted to the Jurisdiction a certain proposal, in a separate envelope, and hereby made a part hereof, to enter into a contract in writing, for the following project:

Project Name: Expand Terminal Area Apron

Project Location: Storm Lake Municipal Airport, Storm Lake, Iowa

The Surety hereby stipulates and agrees that the obligations of said Surety and its bond shall be in no way impaired or affected by any extension of the time within which the Jurisdiction may accept such bid or execute such Contract; and said Surety does hereby waive notice of any such extension.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that the venue thereof shall be Buena Vista County, State of Iowa. If legal action is required by the Jurisdiction against the Surety or Principal to enforce the provisions of the bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Surety or Principal agrees to pay the Jurisdiction all damages, costs, and attorney fees incurred by enforcing any of the provisions of this Bond. All rights, powers, and remedies of the Jurisdiction hereunder shall be cumulative and not alternative and shall be in addition to all rights, powers, and remedies given to the Jurisdiction, by law. The Jurisdiction may proceed against Surety for any amount guaranteed hereunder whether action is brought against Principal or whether Principal is joined in any such action or actions or not.

NOW, THEREFORE, if said proposal by the Principal be accepted, and the Principal shall enter into a contract with Jurisdiction in accordance with the terms of such proposal, including the provision of insurance and of a bond as may be specified in the contract documents, with good and sufficient surety for the faithful performance of such contract, for the prompt payment of labor and material furnished in the prosecution thereof, and for the maintenance of said improvements as may be required therein, then this obligation shall become null and void; otherwise, the Principal shall pay to the Jurisdiction the full amount of the bid bond, together with court costs, attorney's fees, and any other expense of recovery.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Signed and sealed this _____ day of _____, 2026.

SURETY:	PRINCIPAL:
Surety Company	Bidder
By	By
Signature Attorney-in-Fact/Officer	Signature
Name of Attorney-in-Fact/Officer	Name (Print/Type)
Company Name	Title
Company Address	Address
City, State, Zip Code	City, State, Zip Code
Company Telephone Number	Telephone Number
Company E-Mail	E-Mail

NOTE: All signatures on this bid bond must be original signatures in ink; electronic, copies, or facsimile of any signature will not be accepted. This bond must be sealed with the Surety's raised, embossing seal or official adhesive seal. The Certificate or Power of Attorney accompanying this bond must be valid on its face and sealed with the Surety's raised, embossing seal or official adhesive seal.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ITEMS TO BE EXECUTED AFTER

AWARD OF CONTRACT

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),

3-19-0088-021-2026 (Construction) &

3-19-0088-022-2026 (Construction)

24X.136745.000

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00500 - CONTRACT

Expand Terminal Area Apron
Storm Lake Municipal Airport
Storm Lake, Iowa

This CONTRACT made and entered into at _____ this _____ of
City, State Date

_____, 2026 by and between the City of Storm Lake hereinafter called the
Month

"Jurisdiction", and_____, hereinafter called the "Contractor".

WITNESSETH:

The Contractor hereby agrees to complete the work comprising the Expand Terminal Area Apron as specified in the contract documents, which are officially on file with the Jurisdiction, in the office of the City Clerk, 620 Erie Street, Storm Lake, Iowa 50588. This contract includes all such contract documents. All work under this contract shall be constructed in accordance with the FAA Standard Specifications, and as further modified by the Special Provisions, Technical Specifications and Supplemental Specifications included in said contract documents and the Contract Attachment which is attached hereto. The Contractor further agrees to complete the work in strict accordance with said contract documents, and to guarantee the work as required by law for the time required in said contract documents after its acceptance by the Jurisdiction.

This contract is awarded and executed for completion of the work specified in the contract documents for the bid prices shown on the Contract Attachment: Bid Items and Quantities which were proposed by the Contractor in its proposal submitted in accordance with the Notice to Bidders and Notice of Public Hearing for the following described project:

Project Name: Expand Terminal Area Apron

Project Location: Storm Lake Municipal Airport, Storm Lake, Iowa

The Contractor agrees to perform said work for and in consideration of the Jurisdiction's payment of the bid amount of _____ dollars ($_____), which amount shall constitute the required amount of the performance bond and payment bond. The Contractor hereby agrees to commence work as stated in the written Notice to Proceed; and substantially complete the work the work in accordance with the following contract provisions:

CONTRACT PROVISIONS

A. Completion of Work

1. Completion of work is further defined in FAA General Contract Provisions, paragraph 80-08.

B. Liquidated Damage

1. Liquidated damages shall be in accordance with FAA General Contract Provisions, paragraph 80-08, and as further stated below:

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Schedule	Liquidated Damages Cost	Allowed Construction Time
All Phases, Based Bid or All Alternate Bids	$500/ Calendar Day	As prescribed in the Notice to Bidders
Completion and Ready for Use by the Set in of winter weather ceasing construction operations at the end of Calendar Year 2027	$750/ Calendar Day	As prescribed in the Notice to Bidders
Project Closeout (Punchlist Items and Documentation)	$250 / Calendar Day	Start Date is Final Inspection – 21 Calendar Days

2. In addition to the above-mentioned liquated damages, the contractor also agrees to reimburse the owner, with a reduction in the final payment due to the contractor, an amount equal to the additional charges for engineering services incurred due to the continuance of work beyond the specified allotted contract completion date, working days or calendar days.

C. Maintenance Bond & Warranty

1. To remedy any and all defects that may develop in or result from work to be performed under the Contract with the City of Storm Lake, from the date of acceptance of the work under the Contract, by reason of defects in workmanship or materials used in construction of said work.
2. Shall also guarantee the maintenance of the improvement caused by failures in materials and construction for a period of one (1) year from and after acceptance of the work.

D. Bid Quantity Revisions

1. All quantities are estimates and subject to revision by the Jurisdiction.
2. Quantity changes are subject to the requirements of FAA General Provisions Section 20, paragraph 20-05 and Section 40, paragraph 40-02.

CONTRACTOR'S CERTIFICATIONS

A. The Contractor understands and agrees that all certifications made by the Contractor within the Proposal shall apply under this Agreement as if fully rewritten herein. The Contractor further certifies the following.

1. <u>Certification of Eligibility</u> (29 CFR Part 5.5)

a. By Entering into this contract, the CONTRACTOR certifies that neither he or she nor any person or firm who has an interest in the CONTRACTOR'S firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

b. No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code 18 U.S.C.

2. <u>Certification of Non-Segregated Facilities</u> (41 CFR Part 60-1.8)

a. The federally assisted construction CONTRACTOR certifies that it <u>does not</u> maintain or provide, for its employees, any segregated facilities at any of its establishments and that it does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The BIDDER certifies that it <u>will not</u> maintain or provide, for its employees, segregated facilities at any of its establishments and that it will not permit its employees to perform their services at any location under its control where segregated facilities are maintained.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The Bidder agrees that a breach of this certification is a violation of the Equal Opportunity Clause, which is to be incorporated in the contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The Bidder agrees that (except where it has obtained identical certifications from proposed subcontractors for specific time periods) it will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that it will retain such certifications in its files.

IN WITNESS WHEREOF, the Parties hereto have executed this instrument, in triplicate on the date first shown written.

JURISDICTION: City of Storm Lake

By

Michael Porsch, Mayor

ATTEST:

Mayra Martinez, City Clerk

CONTRACTOR:

Company Name:

By

Signature

Name (Print/Type)

Title:

Street Address

City, State, Zip Code

Telephone

E-Mail

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONTRACTOR PUBLIC REGISTRATION INFORMATION TO BE PROVIDED BY:

1. All Contractors: The Contractor shall enter its Public Registration No. _____ issued by the Iowa Commissioner of Labor pursuant to Section 91C.5 of the Iowa Code.

2. Out-of-State Contractors:

   A. Pursuant to Section 91C.7 of the Iowa Code, an out-of-state contractor, before commencing a contract in excess of five thousand dollars in value in Iowa, shall file a bond with the division of labor services of the department of workforce development. The contractor should contact (866) 239-0843 for further information. Prior to contract execution, the Jurisdictional Engineer may forward a copy of this contract to the Iowa Department of Workforce Development as notification of pending construction work. It is the contractor's responsibility to comply with said Section 91C.7 before commencing this work.

   B. Prior to entering into contract, the designated low bidder, if it is a corporation organized under the laws of a state other than Iowa, shall file with the Jurisdictional Engineer a certificate from the Secretary of the State of Iowa showing that it has complied with all the provisions of Chapter 490 of the Code of Iowa, as amended, governing foreign corporations. For further information contact the Iowa Secretary of State Office at 515-281-5204.

Bond No. _____

Name of Surety _____

NOTE: All signatures on this contract must be original signatures in ink; electronic, copies or facsimile of any signature will not be accepted.

CORPORATE ACKNOWLEDGMENT

State of _____)

_____) SS

_____ County)

On this _____ day of _____, 2026, before me, the undersigned, a Notary Public in and for the State of _____, personally appeared _____ and _____ , to me known, who, being by me duly sworn, did say that they are the _____, and _____, respectively, of the corporation executing the foregoing instrument; that (no seal has been procured by) (the seal affixed thereto is the seal of) the corporation; that said instrument was signed (and sealed) on behalf of the corporation by authority of this Board of Directors; that _____ and _____ acknowledged the execution of the instrument to be the voluntary act and deed of the corporation, by it and by them voluntarily executed.

Signature _____

Notary Public in and for the State of _____

My commission expires _____ 20, _____

@ Bolton & Menk, Inc. 2026, All Rights Reserved

PARTNERSHIP ACKNOWLEDGMENT

State of _____)
_____) SS
_____ County)

On this ____ day of _____, 2026, before me, the undersigned, a Notary Public in and for the State of _____, personally appeared _____ to me personally known, who being by me duly sworn, did say that the person is one of the partners of _____, a partnership, and that the instrument was signed on behalf of the partnership by authority of the partners and the partner acknowledged the execution of the instrument to be the voluntary act and deed of the partnership by it and by the partner voluntarily executed

Signature _____

Notary Public in and for the State of _____

My commission expires _____ 20, _____

INDIVIDUAL ACKNOWLEDGMENT

State of _____)
_____) SS
_____ County)

On this _____ day of _____, 2026, before me, the undersigned, a Notary Public in and for the State of _____, personally appeared _____ and _____, to me known to be the identical person(s) named in and who executed the foregoing instrument, and acknowledged that (he) (she) (they) executed the instrument as (his) (her) (their) voluntary act and deed.

Signature _____

Notary Public in and for the State of _____

My commission expires _____ 20, _____

@ Bolton & Menk, Inc. 2026, All Rights Reserved

LIMITED LIABILITY COMPANY ACKNOWLEDGMENT

State of _____)
) SS
_____ County)

On this _____ day of _____, 2026, before me a Notary Public in and for said state, personally appeared _____, to me personally known, who being by me duly sworn did say that person is _____ of said _____, that (the seal affixed to said instrument is the seal of said OR no seal has been procured by the said) _____, and that said instrument was signed and sealed on behalf of the said _____, by authority of its managers and the said _____ acknowledged the execution of said instrument to be the voluntary act and deed of said _____, by it voluntarily executed.

Signature _____

Notary Public in and for the State of _____

My commission expires _____ 20, _____

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONTRACT ATTACHMENT: ITEM 1: GENERAL - NONE

CONTRACT ATTACHMENT: ITEM 2: BID ITEMS AND QUANTITIES

THIS CONTRACT IS AWARDED AND EXECUTED FOR COMPLETION OF THE WORK SPECIFIED IN THE CONTRACT DOCUMENTS FOR THE BID PRICES TABULATED BELOW AS PROPOSED BY THE CONTRACTOR IN ITS PROPOSAL SUBMITTED IN ACCORDANCE WITH THE NOTICE TO BIDDERS AND THE NOTICE OF PUBLIC HEARING. ALL QUANTITIES ARE SUBJECT TO REVISION BY THE JURISDICTION. THE JURISDICTION RESERVES THE RIGHT TO ADJUST QUANTITIES AS NECESSARY TO MAXIMIZE FUNDS BUDGETED FOR THIS PROJECT AS NOTED IN SECTION 00500 – CONTRACT.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00610 - PERFORMANCE BOND

Bond Number

PRINCIPAL *(Legal Name and Business Address)* STATE OF INCORPORATION

SURETY *(Legal Name and Business Address)*	CONTRACT NO.	CONTRACT DATE

PENAL SUM OF BOND *(Expressed in words and numerals)*

OBLIGATION

KNOW ALL PERSONS BY THESE PRESENTS, that the above-named PRINCIPAL, hereinafter referred to and called CONTRACTOR, and the above-named SURETY hereby bind themselves unto The City of Storm Lake, 620 Erie Street, Storm Lake, Iowa, as OBLIGEE, hereinafter referred to and called OWNER, in the penal sum stated above, in lawful money of the United States of America to be paid to OWNER. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has entered into the written contract agreement identified hereinabove with the OWNER for the following project:

Project Name: Expand Terminal Area Apron

Project Location: Storm Lake Municipal Airport, Storm Lake, Iowa

which said contract and associated contract documents, including any present or future amendment thereto, is incorporated herein by reference and is hereinafter referred to as the Contract.

CONDITION

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly and faithfully perform all undertakings, covenants, terms, conditions and agreements of the Contract during the original term of the Contract and any extensions thereof that are granted by the OWNER, with or without notice to the SURETY, and during the period of any guarantee or warranties required under the Contract, and if CONTRACTOR shall perform and fulfill all undertakings, covenants, terms, conditions and agreements of any and all duly authorized modifications of the Contract that hereafter are made, then this obligation shall be void; otherwise it shall remain in full force and effect subject to the following additional conditions:

1. SURETY, for value received, hereby stipulates and agrees that no change, extension of time, modification, omission, addition or change in or to the Contract, or the work performed thereunder or the specifications accompanying the same, shall in any way affect the SURETY'S obligation on this bond; and SURETY hereby agrees to waive notice of any and all such extensions, modifications, omissions, alterations, and additions to the terms of the Contract, work or specifications.
2. Whenever CONTRACTOR shall be and declared by the OWNER to be in default under the Contract, the Surety shall promptly and at the SURETY'S expense remedy the default by implementing one or more of the following actions:

@ Bolton & Menk, Inc. 2026, All Rights Reserved

a. Arrange for the CONTRACTOR, with consent of the OWNER, to perform and complete the Contract; or

b. Undertake to perform and complete the Contract itself, through its agents or through independent contractors; or

c. Obtain bids or negotiated proposals from qualified contractors acceptable to the OWNER for a contract for performance and completion of the Contract; arrange for a contract to be prepared for execution by the OWNER and the contractor selected with the OWNER'S concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the Bonds issued on the Contract; and make available as work progresses (even though there should be a default or a succession of defaults under the contract or contracts of completion arranged under this paragraph) sufficient funds to pay the cost of completion less the balance of the contract price; but not exceeding, including other costs and damages for which the Surety may be liable hereunder, the penal sum of the bond. The term "balance of the contract price", as used in this paragraph, shall mean the total amount payable by OWNER to CONTRACTOR under the Contract and any amendments thereto, disbursed at the rate provided in the original contract, less the amount properly paid by OWNER to CONTRACTOR.

d. With written consent of the OWNER, SURETY may waive its right to perform and complete, arrange for completion, or obtain a new contractor and with reasonable promptness, investigate and determine the amount the SURETY is liable to the OWNER and tender payment therefor to the OWNER.

3. CONTRACTOR and SURETY agree that if in connection with the enforcement of this Bond, the OWNER is required to engage the services of an attorney, that reasonable attorney fees incurred by the OWNER, with or without suit, are in addition to the balance of the contract price.

4. No right of action shall accrue on this bond to or for the use of any person or corporation other than the OWNER named herein or the successors or assigns of the OWNER.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

WITNESS

In witness whereof, this instrument is executed this the _____ day of _____, 2026.

INDIVIDUAL PRINCIPAL:

Company Name: _____

Signature: _____

Name: _____

Title: _____

CORPORATE PRINCIPAL:

ATTEST**:**

Signature: _____

Name: _____

Title: _____

(Affix Corporate Seal)

Corporate Name: _____

Signature: _____

Name: _____

Title: _____

SURETY:

ATTEST**:**

Signature: _____

Name: _____

Title: _____

(Affix Seal)

Surety Name:

Signature: _____

Name: _____

Title: _____

(Attach Power of Attorney)

OWNER ACCEPTANCE

The OWNER approves the form of this Performance Bond.

Date: _____

Signature: _____

Name: _____

Title: _____

ATTEST:

Signature: _____

Name: _____

Title: _____

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00620 - PAYMENT BOND

Bond Number

PRINCIPAL *(Legal Name and Business Address)* STATE OF INCORPORATION

SURETY *(Legal Name and Business Address)*	CONTRACT NO.	CONTRACT DATE

PENAL SUM OF BOND *(Expressed in words and numerals)*

OBLIGATION

KNOW ALL PERSONS BY THESE PRESENTS, that the above-named PRINCIPAL, hereinafter referred to and called CONTRACTOR, and the above-named SURETY hereby bind themselves unto The City of Storm Lake, 620 Erie Street, Storm Lake, Iowa, as OBLIGEE, hereinafter referred to and called OWNER, in the penal sum stated above, in lawful money of the United States of America to be paid to OWNER. For payment of the penal sum, we bind ourselves, our heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents.

WHEREAS,

CONTRACTOR has entered into the written contract agreement identified hereinabove with the OWNER for the following project:

Project Name: Expand Terminal Area Apron

Project Location: Storm Lake Municipal Airport, Storm Lake, Iowa

which said contract and associated contract documents, including any present or future amendment thereto, is incorporated herein by reference and is hereinafter referred to as the Contract.

CONDITION

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if CONTRACTOR shall promptly make payment to all employees, persons, firms or corporations for all incurred indebtedness and just claims for labor, supplies, materials and services furnished for or used in connection with the performance of the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect subject to the following additional conditions:

1. CONTRACTOR and SURETY indemnify and hold harmless the OWNER for all claims, demands, liens or suits that arise from performance of the Contract.
2. SURETY, for value received, hereby stipulates and agrees that no change, extension of time, modification, omission, addition or change in or to the Contract, or the work performed thereunder or the specifications accompanying the same, shall in any way affect the SURETY'S obligation on this bond; and SURETY hereby agrees to waive notice of any and all such extensions, modifications, omissions, alterations, and additions to the terms of the Contract, work or specifications.
3. No final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.
4. The amount of this bond shall be reduced by and to the extent of any payments made in good faith hereunder.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

5. Amounts owed by the OWNER to the CONTRACTOR under the Contract shall be used for the performance of the Contract and to satisfy claims, if any, under any Performance Bond. By the CONTRACTOR furnishing and the OWNER accepting this Bond, they agree that all funds earned by the CONTRACTOR in the performance of the Contract are dedicated to satisfy obligations of the CONTRACTOR and the SURETY under this Bond, subject to the OWNER'S priority to use the funds for the completion of the project.

WITNESS

In witness whereof, this instrument is executed this the _____ day of _____, 2026.

INDIVIDUAL PRINCIPAL:

Company Name: _____

Signature: _____

Name: _____

Title: _____

CORPORATE PRINCIPAL:

ATTEST**:**

Signature: _____

Name: _____

Title: _____

(Affix Corporate Seal)

Corporate Name: _____

Signature: _____

Name: _____

Title: _____

SURETY:

ATTEST**:**

Signature: _____

Name: _____

Title: _____

(Affix Seal)

Surety Name:

Signature: _____

Name: _____

Title: _____

(Attach Power of Attorney)

OWNER ACCEPTANCE

The OWNER approves the form of this Performance Bond.

Date: _____

Signature: _____

Name: _____

Title: _____

ATTEST:

Signature: _____

Name: _____

Title: _____

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SECTION 00650 - INSURANCE REQUIREMENTS

The Contractor shall provide a Certificate of Liability Insurance (Acord Form 25 or equal). The City of Storm Lake and Bolton & Menk, Inc. shall be named as additional insured on the Certificate of Liability Insurance for all required insurances. The City of Storm Lake should be named as additional insured on a primary basis for ongoing and completed operations.

The Vendor/Contractor shall obtain and maintain through the term of this Subcontract and two years beyond, insurance with terms and limits of coverage equal to or in excess of those set forth in the specifications governing the Project, but in no event are such terms and limits to be less than those set forth below:

1. *Workers Compensation and Employers Liability:* Including coverage for Occupational Diseases

Part 1 – Workers Compensation Benefits	Statutory

2. *Employers Liability:*

Bodily Injury by Accident, Each Accident	$500,000
Bodily Injury by Disease, Each Accident	$500,000
Bodily Injury by Disease, Policy Limit	$500,000

3. *Commercial General Liability*: Including coverage for premises and operations, independent contractors, products & completed operations and contractual liability and general aggregate per project endorsement; The City of Storm Lake and Bolton & Menk, Inc., should be named as additional insured on a primary basis for ongoing and completed operations:

General Aggregate Limit	$2,000,000
Products' Completed Operations Aggregate Limit	$2,000,000
Personal & Advertising Injury – Per Person	$1,000,000
Bodily Injury & Property Damage – Each Occurrence	$1,000,000
Fire Damage Limit (any one fire)	$50,000
Medical Damage (any one person)	$5,000

4. *Business Automobile:* Including coverage for all owned, non-owned, hired and leased vehicles:

Bodily Injury, Personal Injury & Property Damage – Each Accident	$1,000,000

5. At the Contractor's option, the above limits may be satisfied with a combination of primary and Umbrella/Excess Insurance.

6. All responsibility for maintenance of property and insurance on the work (including but not limited to *Builders Risk* and *Installation Floater*) remains solely with the Contractor who may at his option insure against any or all perils, and such responsibility shall remain with the Contractor until such time as the work is complete and accepted in writing by the Owner. It is a condition of the Contract that the Owner and Engineer and all Contractors, subcontractors and sub-subcontractors waive all rights of recovery against each other for damages caused by fire or other perils to the extent covered by any valid and collectible insurance, and further, that any policy not including the standard waiver of subrogation clause be so endorsed as to comply with this paragraph.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

FAA SUPPLEMENTARY PROVISIONS

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),

3-19-0088-021-2026 (Construction) &

3-19-0088-022-2026 (Construction)

24X.136745.000

@ Bolton & Menk, Inc. 2026, All Rights Reserved

SUPPLEMENTARY PROVISIONS

PART A - FEDERAL CONTRACT PROVISIONS FOR CONSTRUCTION AND EQUIPMENT CONTRACTS

APPLICATION OF REFERENCES

ALL REFERENCES MADE HEREIN TO "CONTRACTOR", "BIDDER", AND "OFFEROR" SHALL PERTAIN TO THE PRIME CONTRACTOR. ALL REFERENCES MADE HEREIN TO "SUBCONTRACTOR" SHALL PERTAIN TO ANY AND ALL SUBCONTRACTORS UNDER CONTRACT WITH THE PRIME CONTRACTOR OR A SUBCONTRACTOR.

ALL REFERENCES MADE HEREIN TO "CONSULTANT" SHALL PERTAIN TO ARCHITECT/ENGINEER (A/E) UNDER CONTRACT WITH THE SPONSOR. ALL REFERENCES MADE HEREIN TO "SUBCONSULTANT" SHALL PERTAIN TO ANY AND ALL SUBCONSULTANTS UNDER CONTRACT WITH THE A/E.

ALL REFERENCES MADE HEREIN TO "SPONSOR" AND "OWNER" SHALL PERTAIN TO THE STATE, CITY, AIRPORT AUTHORITY OR OTHER PUBLIC ENTITY EXECUTING CONTRACTS WITH THE PRIME CONTRACTOR AND/OR THE A/E.

PROVISIONS APPLICABLE TO ALL CONTRACTS

ACCESS TO RECORDS AND REPORTS 3

BUY AMERICAN PREFERENCE 3

CIVIL RIGHTS – GENERAL 4

CIVIL RIGHTS – TITLE VI ASSURANCE 4

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT 6

FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE) 7

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 7

RIGHT TO INVENTIONS 7

SEISMIC SAFETY 7

TAX DELINQUENCY AND FELONY CONVICTIONS 8

TRADE RESTRICTION CERTIFICATION 8

VETERAN'S PREFERENCE 9

DOMESTIC PREFERENCES FOR PROCUREMENTS 9

PROHIBITION OF COVERED UNMANNED AIRCRAFT SYSTEMS (UAS) 10

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $2,000

COPELAND "ANTI-KICKBACK' ACT 11
DAVIS-BACON REQUIREMENTS 11

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $10,000

PROCUREMENT OF RECOVERED MATERIALS 18
TERMINATION OF CONTRACT 18

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $15,000

DISTRACTED DRIVING 21

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $25,000

DEBARMENT AND SUSPENSION 22

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $100,000

CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS 23
LOBBYING AND INFLUENCING FEDERAL EMPLOYEES 24

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $150,000

CLEAN AIR AND WATER POLLUTION CONTROL 25

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $350,000

BREACH OF CONTRACT TERMS 26

PROVISIONS APPLICABLE TO CONTRACTS CUMULATIVELY EXCEEDING $250,000 IN ONE YEAR

DISADVANTAGED BUSINESS ENTERPRISE 27

PROVISIONS APPLICABLE TO ALL CONTRACTS

ACCESS TO RECORDS AND REPORTS

Reference: 2 CFR § 200.334
2 CFR § 200.337
FAA Order 5100.38

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

BUY AMERICAN PREFERENCE

Reference: 49 U.S.C. § 50101
Executive Order 14005, *Ensuring the Future is Made in All of America by All of America's Workers*
Infrastructure Investment and Jobs Act (IIJA) (P.L. No. 117-58), Build America, Buy America (BABA)

The Contractor certifies that its bid/offer is in compliance with 49 U.S.C. § 50101, BABA and other related Made in America Laws,[1] U.S. statutes, guidance, and FAA policies, which provide that Federal funds may not be obligated unless all iron, steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

The bidder or offeror must complete and submit the certification of compliance with FAA's Buy American Preference, BABA and Made in America laws included herein with their bid or offer. The Airport Sponsor/Owner will reject as nonresponsive any bid or offer that does not include a completed certification of compliance with FAA's Buy American Preference and BABA.

The bidder or offeror certifies that all constructions materials, defined to mean an article, material, or supply other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives that are or consist primarily of: non-ferrous metals; plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables); glass (including optic glass); lumber; or drywall used in the project are manufactured in the U.S.

[1] Per Executive Order 14005 "Made in America Laws" means all statutes, regulations, rules, and Executive Orders relating to federal financial assistance awards or federal procurement, including those that refer to "Buy America" or "Buy American," that require, or provide a preference for, the purchase or acquisition of goods, products, or materials produced in the United States, including iron, steel, and manufactured products offered in the United States.

The bidder or offeror certifies procurement of certain rolling stock using FAA grant funds will prohibit airports from using Federal financial assistance to procure buses or rail car vehicle rolling stock from covered entities.

CIVIL RIGHTS – GENERAL

Reference: 49 U.S.C. § 47123

In all its activities within the scope of its airport program, the Contractor agrees to comply with pertinent statutes, Executive Orders, and such rules as identified in Title VI List of Pertinent Nondiscrimination Acts and Authorities to ensure that no person shall, on the grounds of race, color, national origin, creed, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

The above provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract.

CIVIL RIGHTS – TITLE VI ASSURANCES

Reference: 49 U.S.C. § 47123
FAA Order 1400.11

Title VI Solicitation Notice

As a condition of a grant award, the Sponsor shall demonstrate that it complies with the provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. §§ 2000d et seq) and implementing regulations (49 CFR part 21) including amendments thereto, the Airport and Airway Improvement Act of 1982 (49 U.S.C. § 47123), the Age Discrimination Act of 1975 (42 U.S.C. 6101 et seq.), Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794 et seq.), the Americans with Disabilities Act of 1990 (42 U.S.C. § 12101, et seq.), U.S. Department of Transportation and Federal Aviation Administration (FAA) Assurances, and other relevant civil rights statutes, regulations, or authorities, including any amendments or updates thereto. This may include, as applicable, providing a current Title VI Program Plan to the FAA for approval, in the format and according to the timeline required by the FAA, and other information about the communities that will be benefited and impacted by the project. A completed FAA Title VI Pre-Grant Award Checklist is required for every grant application, unless excused by the FAA. The Sponsor shall affirmatively ensure that when carrying out any project supported by this grant that it complies with all federal nondiscrimination and civil rights laws based on race, color, national origin, sex, creed, age, disability, genetic information, in consideration for federal financial assistance. The Department's and FAA's Office of Civil Rights may provide resources and technical assistance to recipients to ensure full and sustainable compliance with Federal civil rights requirements. Failure to comply with civil rights requirements will be considered a violation of the agreement or contract and be subject to any enforcement action as authorized by law.

Title VI List of Pertinent Nondiscrimination Acts and Authorities

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees to comply with the following non-discrimination statutes and authorities; including but not limited to:

- Title VI of the Civil Rights Act of 1964 (42 U.S.C. § 2000d *et seq*., 78 stat. 252) (prohibits discrimination on the basis of race, color, national origin);
- 49 CFR Part 21 (Non-discrimination in Federally-Assisted programs of the Department of Transportation—Effectuation of Title VI of the Civil Rights Act of 1964) including amendments thereto;
- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, (42 U.S.C. § 4601) (prohibits unfair treatment of persons displaced or whose property has been acquired because of Federal or Federal-aid programs and projects);
- Section 504 of the Rehabilitation Act of 1973 (29 U.S.C. § 794 *et seq*.), as amended (prohibits discrimination on the basis of disability); and 49 CFR part 27 (Nondiscrimination on the Basis of Disability in Programs or Activities Receiving Federal Financial Assistance);
- The Age Discrimination Act of 1975, as amended (42 U.S.C. § 6101 *et seq*.) (prohibits discrimination on the basis of age);
- Airport and Airway Improvement Act of 1982 (49 U.S.C. § 47123), as amended (prohibits discrimination based on race, creed, color, national origin, or sex);
- The Civil Rights Restoration Act of 1987 (P.L. 100-259) (broadened the scope, coverage and applicability of Title VI of the Civil Rights Act of 1964, the Age Discrimination Act of 1975 and Section 504 of the Rehabilitation Act of 1973, by expanding the definition of the terms "programs or activities" to include all of the programs or activities of the Federal-aid recipients, sub-recipients and contractors, whether such programs or activities are Federally funded or not);
- Titles II and III of the Americans with Disabilities Act of 1990 (42 U.S.C. § 12101, et seq) (prohibit discrimination on the basis of disability in the operation of public entities, public and private transportation systems, places of public accommodation, and certain testing entities) as implemented by U.S. Department of Transportation regulations at 49 CFR Parts 37 and 38;
- Title IX of the Education Amendments of 1972, as amended, which prohibits you from discriminating because of sex in education programs or activities (20 U.S.C. § 1681, et seq).

Nondiscrimination Requirements / Title VI Clauses for Compliance

Compliance with Nondiscrimination Requirements:

During the performance of this contract, the Contractor, for itself, its assignees, and successors in interest (hereinafter referred to as the "Contractor") agrees as follows:

1. **Compliance with Regulations:** The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.
2. **Nondiscrimination:** The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, national origin, creed, sex, age, or disability in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including

employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21 including amendments thereto.

3. **Solicitations for Subcontracts, including Procurements of Materials and Equipment:** In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.
4. **Information and Reports:** The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the Sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.
5. **Sanctions for Noncompliance:** In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the Sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:
    a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or
    b. Cancelling, terminating, or suspending a contract, in whole or in part.
6. **Incorporation of Provisions:** The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the Sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the Sponsor to enter into any litigation to protect the interests of the Sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

PROHIBITION ON CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

Reference: 2 CFR § 200, Appendix II(K)
2 CFR § 200.216

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [P.L. 115-232 § 889(f)(1)].

FEDERAL FAIR LABOR STANDARDS ACT (FEDERAL MINIMUM WAGE)

Reference: 29 U.S.C. § 201, et seq
2 CFR § 200.430

All contracts and subcontracts that result from this solicitation incorporate by reference the provisions of 29 CFR Part 201, et seq, the Federal Fair Labor Standards Act (FLSA), with the same force and effect as if given in full text. The FLSA sets minimum wage, overtime pay, recordkeeping, and child labor standards for full and part-time workers.

The Contractor has full responsibility to monitor compliance to the referenced statute or regulation. The Contractor must address any claims or disputes that arise from this requirement directly with the U.S. Department of Labor – Wage and Hour Division.

OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970

Reference: 20 CFR Part 1910

All contracts and subcontracts that result from this solicitation incorporate by reference the requirements of 29 CFR Part 1910 with the same force and effect as if given in full text. The employer must provide a work environment that is free from recognized hazards that may cause death or serious physical harm to the employee. The employer retains full responsibility to monitor its compliance and their subcontractor's compliance with the applicable requirements of the Occupational Safety and Health Act of 1970 (29 CFR Part 1910). The employer must address any claims or disputes that pertain to a referenced requirement directly with the U.S. Department of Labor – Occupational Safety and Health Administration.

RIGHT TO INVENTIONS

Reference: 2 CFR Part 200, Appendix II(F)
37 CFR Part 401

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 CFR § 401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.

SEISMIC SAFETY

Reference: 49 CFR Part 41

The Contractor agrees to ensure that all work performed under this contract, including work performed by subcontractors, conforms to a building code standard that provides a level of seismic safety substantially equivalent to standards established by the National Earthquake Hazards Reduction Program (NEHRP). Local building codes that model their code after the current version of the International Building Code (IBC) meet the NEHRP equivalency level for seismic safety.

TAX DELINQUENCY AND FELONY CONVICTIONS

Reference: Section 8113 of the Consolidated Appropriations Act, 2022 (P.L. 117-103) and similar provisions in subsequent appropriations acts
DOT Order 4200.6 – Appropriations Act Requirements for Procurement and Non-Procurement Regarding Tax Delinquency and Felony Convictions

The Contractor certifies:

1) It is not a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability. A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

2) It is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months. A felony conviction is a conviction within the preceding twenty four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

The Contractor agrees to incorporate the above certification in all lower tier subcontracts.

TRADE RESTRICTION CERTIFICATION

Reference: 49 U.S.C. § 50104
49 CFR Part 30

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror:

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 U.S.C. § 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when

submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR § 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR; or
2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list; or
3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

VETERAN'S PREFERENCE

Reference: 49 U.S.C. § 47112(c)

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within 49 U.S.C. § 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 U.S.C. § 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

DOMESTIC PREFERENCES FOR PROCUREMENTS

Reference: 2 CFR § 200.322
2 CFR Part 200, Appendix II(L)

The Bidder or Offeror certifies by signing and submitting this bid or proposal that, to the greatest extent practicable, the Bidder or Offeror has provided a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products) in compliance with 2 CFR § 200.322.

PROHIBITION OF COVERED UNMANNED AIRCRAFT SYSTEMS (UAS)

Reference: FAA Reauthorization Act of 2024 (P.L. 118-63), Section 936
49 U.S.C. § 44801 note

The Bidder or Offeror certifies that they are aware of and comply with relevant Federal statutes and regulations, including those from the Federal Aviation Administration (FAA), for operating unmanned aircraft systems (UAS) in accordance, and in compliance with all related requirements in the FAA Reauthorization Act of 2024 (Public Law 118-63), section 936 (49 U.S.C. § 44801 note).

Contractor warrants that all UAS operations will be conducted in full compliance with all applicable Federal Aviation Administration (FAA) regulations, including but not limited to 14 CFR Part 107, and any other applicable local, state, or Federal laws and regulations.

Sponsors and subgrant recipients cannot use AIP grant funds to enter into, extend, or renew a contract related to covered unmanned aircraft systems (UAS). This includes both procurement and operational contracts, as well as contracts with entities that operate such systems.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $2,000

COPELAND "ANTI-KICKBACK' ACT

Reference: 2 CFR Part 200, Appendix II(D)
29 CFR Parts 3 and 5

Contractor must comply with the requirements of the Copeland "Anti-Kickback" Act (18 U.S.C. 874 and 40 U.S.C. 3145), as supplemented by Department of Labor regulation 29 CFR part 3. Contractor and subcontractors are prohibited from inducing, by any means, any person employed on the project to give up any part of the compensation to which the employee is entitled. The Contractor and each Subcontractor must submit to the Owner, a weekly statement on the wages paid to each employee performing on covered work during the prior week. Owner must report any violations of the Act to the Federal Aviation Administration.

DAVIS-BACON REQUIREMENTS

Reference: 2 CFR Part 200, Appendix II(D)
29 CFR Part 5
49 U.S.C. § 47112(b)
40 U.S.C. §§ 3141-3144, 3146, and 3147

1. Minimum Wages.

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under regulations implementing the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR § 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided,* that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be

posted at all times by the Contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii) (A) thru (D)

(A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the Contractor, the laborers, or mechanics to be employed in the classification, or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(D) The wage rate (including fringe benefits where appropriate) determined pursuant to subparagraphs (1)(ii) (B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, *Provided,* that the Secretary of Labor has found, upon the written request of the Contractor,

that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

2. Withholding.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the Contractor, Sponsor, Applicant, or Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker; his or her correct classification; hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act); daily and weekly number of hours worked; deductions made; and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records that show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii) (A) thru (D)

(A) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit the payrolls to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR § 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on

weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (*e.g.,* the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at *https://www.dol.gov/agencies/whd/government-contracts/construction/payroll-certification* or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker and shall provide them upon request to the Federal Aviation Administration if the agency is a party to the contract, but if the agency is not such a party, the Contractor will submit them to the applicant, Sponsor, or Owner, as the case may be, for transmission to the Federal Aviation Administration, the Contractor, or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, Sponsor, or Owner).

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the Contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR § 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR § 5.5 (a)(3)(i), and that such information is correct and complete;

(2) That each laborer and mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (3)(ii)(B) of this section.

(D) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The Contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the Contractor, Sponsor, applicant, or

Owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR § 5.12.

4. Apprentices and Trainees.

(i) Apprentices

Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the Contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the Contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees

Except as provided in 29 CFR § 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under

the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination that provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate that is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

5. Compliance with Copeland Act Requirements.

The Contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The Contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR §§ 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR § 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR § 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the Contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

10. Certification of Eligibility.

(i) By entering into this contract, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR § 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR § 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. § 1001.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $10,000

PROCUREMENT OF RECOVERED MATERIALS

Reference: 2 CFR § 200.323
2 CFR Part 200, Appendix II(J)
40 CFR Part 247
42 U.S.C. § 6901, et seq (Resource Conservation and Recovery Act (RCRA))

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

a) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or

b) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;

b) Fails to meet reasonable contract performance requirements; or

c) Is only available at an unreasonable price.

TERMINATION OF CONTRACT

Reference: 2 CFR Part 200, Appendix II(B)
FAA Advisory Circular 150/5370-10, Section 80-09

Termination for Convenience (Construction & Equipment Contracts)

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1. Contractor must immediately discontinue work as specified in the written notice.
2. Terminate all subcontracts to the extent they relate to the work terminated under the notice.
3. Discontinue orders for materials and services except as directed by the written notice.

4. Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.
5. Complete performance of the work not terminated by the notice.
6. Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

1. Completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;
2. Documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;
3. Reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and
4. Reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.

The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

Termination for Cause (Construction)

Section 80-09 of FAA Advisory Circular 150/5370-10 establishes standard language for conditions, rights, and remedies associated with Owner termination of this contract for cause due to default of the Contractor.

Termination for Cause (Equipment)

The Owner may, by written notice of default to the Contractor, terminate all or part of this Contract for cause if the Contractor:

1. Fails to begin the Work under the Contract within the time specified in the Notice- to-Proceed;
2. Fails to make adequate progress as to endanger performance of this Contract in accordance with its terms;
3. Fails to make delivery of the equipment within the time specified in the Contract, including any Owner approved extensions;
4. Fails to comply with material provisions of the Contract;
5. Submits certifications made under the Contract and as part of their proposal that include false or fraudulent statements; or
6. Becomes insolvent or declares bankruptcy.

If one or more of the stated events occur, the Owner will give notice in writing to the Contractor and Surety of its intent to terminate the contract for cause. At the Owner's discretion, the notice may allow the Contractor and Surety an opportunity to cure the breach or default.

If within ten (10) days of the receipt of notice, the Contractor or Surety fails to remedy the breach or default to the satisfaction of the Owner, the Owner has authority to acquire equipment by other procurement action. The Contractor will be liable to the Owner for any excess costs the Owner incurs for acquiring such similar equipment.

Payment for completed equipment delivered to and accepted by the Owner shall be at the Contract price. The Owner may withhold from amounts otherwise due the Contractor for such completed equipment, such sum as the Owner determines to be necessary to protect the Owner against loss because of Contractor default.

Owner will not terminate the Contractor's right to proceed with the work under this clause if the delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such acceptable causes include: acts of God, acts of the Owner, acts of another Contractor in the performance of a contract with the Owner, and severe weather events that substantially exceed normal conditions for the location.

If, after termination of the Contractor's right to proceed, the Owner determines that the Contractor was not in default, or that the delay was excusable, the rights and obligations of the parties will be the same as if the Owner issued the termination for the convenience the Owner.

The rights and remedies of the Owner in this clause are in addition to any other rights and remedies provided by law or under this contract.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $15,000

DISTRACTED DRIVING

Reference: Executive Order 13513
DOT Order 3902.10

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $15,000 that involve driving a motor vehicle in performance of work activities associated with the project.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $25,000

DEBARMENT AND SUSPENSION

Reference: 2 CFR Part 180 (Subpart B)
2 CFR Part 200, Appendix II(H)
2 CFR Part 1200
DOT Order 4200.5
Executive Orders 12549 and 12689

Certification of Offeror/Bidder Regarding Debarment

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

Certification of Lower Tier Contractors Regarding Debarment

The successful bidder, by administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", must confirm each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally-assisted project. The successful bidder will accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov.
2. Collecting a certification statement similar to the Certification of Offeror /Bidder Regarding Debarment, above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

If the Federal Aviation Administration later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $100,000

CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS

Reference: 2 CFR Part 200, Appendix II(E)
29 CFR § 5.5(b)
40 U.S.C. § 3702
40 U.S.C. § 3704

1. Overtime Requirements.

No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic, including watchmen and guards, in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

2. Violation; Liability for Unpaid Wages; Liquidated Damages.

In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $29 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

3. Withholding for Unpaid Wages and Liquidated Damages.

The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

4. Subcontractors.

The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

Reference: 31 U.S.C. § 1352 – Byrd Anti-Lobbying Amendment
2 CFR Part 200, Appendix II(I)
49 CFR Part 20, Appendix A

Certification Regarding Lobbying

The Bidder or Offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 U.S.C. § 1352. Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $150,000

CLEAN AIR AND WATER POLLUTION CONTROL

References: 2 CFR Part 200, Appendix II(G)
42 U.S.C. § 7401, et seq
33 U.S.C. § 1251, et seq

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 U.S.C. §§ 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. §§ 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

The Contractor must include this requirement in all subcontracts that exceed $150,000.

PROVISIONS APPLICABLE TO CONTRACTS EXCEEDING $350,000

BREACH OF CONTRACT TERMS

Reference: 2 CFR § 200 Appendix II(A)

Any violation or breach of terms of this contract on the part of the Contractor or its subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide Contractor written notice that describes the nature of the breach and corrective actions the Contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the Contractor must correct the breach. Owner may proceed with termination of the contract if the Contractor fails to correct the breach by the deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder are in addition to, and not a limitation of, any duties, obligations, rights and remedies otherwise imposed or available by law.

PROVISIONS APPLICABLE TO CONTRACTS CUMULATIVELY EXCEEDING $250,000 IN ONE YEAR

DISADVANTAGED BUSINESS ENTERPRISE

Reference: 49 CFR Part 26

Solicitation Language (Solicitations with a DBE Contract Goal)

*Bid Information Submitted as a matter of **responsiveness**:*

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.

As a condition of responsiveness, the Bidder or Offeror must submit the following information with its proposal on the forms provided herein:

1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
2) A description of the work that each DBE firm will perform;
3) The dollar amount of the participation of each DBE firm listed under (1);
4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal;
5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26 including any amendments thereto. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

*Bid Information submitted as a matter of bidder **responsibility**:*

The Owner's award of this contract is conditioned upon Bidder or Offeror satisfying the good faith effort requirements of 49 CFR § 26.53.

As a condition of responsibility, every Bidder or Offeror must submit the following information on the forms provided herein within five days after bid opening.

1) The names and addresses of Disadvantaged Business Enterprise (DBE) firms that will participate in the contract;
2) A description of the work that each DBE firm will perform;
3) The dollar amount of the participation of each DBE firm listed under (1);
4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal;
5) Written confirmation from each listed DBE firm that it is participating in the contract in the kind and amount of work provided in the prime contractor's commitment; and
6) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26

including any amendments thereto. The documentation of good faith efforts must include copies of each DBE and non-DBE subcontractor quote submitted to the bidder when a non-DBE subcontractor was selected over a DBE for work on the contract.

*Bid Information requirements for **negotiated procurements***

In a negotiated procurement, such as a procurement for professional services, the Sponsor may allow the bidder/offeror to make a contractually binding commitment to meet the goal at the time of bid submission or the presentation of initial proposals but provide the information required under the above *responsiveness* or *responsibility* procedures before the final selection for the contract is made by the recipient.

*Bid Information submitted for **Design-Build projects***

In a design-build contracting situation, in which the Sponsor solicits proposals to design and build a project with minimal-project details at time of letting, the Sponsor may set a DBE goal that proposers must meet by submitting a DBE Open-Ended DBE Performance Plan (OEPP) with the proposal. The OEPP replaces the requirement to provide the information required in paragraph (b) of 49 CFR § 26.53 that applies to design-bid-build contracts. To be considered responsive, the OEPP must include a commitment to meet the goal and provide details of the types of subcontracting work or services (with projected dollar amount) that the proposer will solicit DBEs to perform. The OEPP must include an estimated time frame in which actual DBE subcontracts would be executed. Once the design-build contract is awarded, the recipient must provide ongoing monitoring and oversight to evaluate whether the design-builder is using good faith efforts to comply with the OEPP and schedule. The recipient and the design-builder may agree to make written revisions of the OEPP throughout the life of the project, *e.g.,* replacing the type of work items the design-builder will solicit DBEs to perform and/or adjusting the proposed schedule, as long as the design-builder continues to use good faith efforts to meet the goal.

Solicitation Language (Solicitations with No DBE Contract Goal)

The requirements of 49 CFR Part 26 including any amendments thereto apply to this contract. It is the policy of the Owner to practice nondiscrimination based on race, color, sex, or national origin in the award or performance of this contract. The Owner encourages participation by all firms qualifying under this solicitation regardless of business size or ownership.

Prime Contracts (Contracts Covered by a DBE Program)

Contract Assurance (49 CFR § 26.13)

The Contractor, subrecipient or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26, including any amendments thereto, in the award and administration of DOT-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the recipient deems appropriate, which may include, but is not limited to:

1) Withholding monthly progress payments;
2) Assessing sanctions;

3) Liquidated damages; and/or
4) Disqualifying the Contractor from future bidding as non-responsible.

Prompt Payment (49 CFR § 26.29)

The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than thirty (30) calendar days from the receipt of each payment the prime contractor receives from Owner. The prime contractor agrees further to return retainage payments to each subcontractor within thirty (30) calendar days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the Owner. This clause applies to both DBE and non-DBE subcontractors.

Termination of DBE Subcontracts (49 CFR § 26.53(f))

The prime contractor must not terminate a DBE subcontractor listed in response to the above *Solicitation Language (Solicitations that include a Contract Goal)* section (or an approved substitute DBE firm) without prior written consent of Owner. This includes, but is not limited to, instances in which the prime contractor seeks to perform work originally designated for a DBE subcontractor with its own forces or those of an affiliate, a non-DBE firm, or with another DBE firm.

The prime contractor shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the contractor obtains written consent from the Owner. Unless the Owner's consent is provided, the prime contractor shall not be entitled to any payment for work or material unless it is performed or supplied by the listed DBE.

The Owner may provide such written consent only if the Owner agrees, for reasons stated in the concurrence document, that the prime contractor has good cause to terminate the DBE firm. For purposes of this paragraph, good cause includes the circumstances listed in 49 CFR §26.53.

Before transmitting to the Owner its request to terminate and/or substitute a DBE subcontractor, the prime contractor must give notice in writing to the DBE subcontractor, with a copy to the Owner, of its intent to request to terminate and/or substitute, and the reason for the request.

The prime contractor must give the DBE five days to respond to the prime contractor's notice and advise the Owner and the contractor of the reasons, if any, why it objects to the proposed termination of its subcontract and why the Owner should not approve the prime contractor's action. If required in a particular case as a matter of public necessity (e.g., safety), the Owner may provide a response period shorter than five days.

In addition to post-award terminations, the provisions of this section apply to pre-award deletions of or substitutions for DBE firms put forward by offerors in negotiated procurements.

This Page Intentionally Left Blank

SECTION WR - PREDETERMINED WAGE RATE

General Decision Number: IA20260028 01/16/2026

State: Iowa

Construction Types: Heavy and Highway

Counties: Adair, Adams, Allamakee, Appanoose, Audubon, Benton, Black Hawk, Boone, Bremer, Buchanan, Buena Vista, Butler, Calhoun, Carroll, Cass, Cedar, Cerro Gordo, Cherokee, Chickasaw, Clarke, Clay, Clayton, Clinton, Crawford, Dallas, Davis, Decatur, Delaware, Des Moines, Dickinson, Dubuque, Emmet, Fayette, Floyd, Franklin, Fremont, Greene, Grundy, Guthrie, Hamilton, Hancock, Hardin, Harrison, Henry, Howard, Humboldt, Ida, Iowa, Jackson, Jasper, Jefferson, Johnson, Jones, Keokuk, Kossuth, Lee, Linn, Louisa, Lucas, Lyon, Madison, Mahaska, Marion, Marshall, Mills, Mitchell, Monona, Monroe, Montgomery, Muscatine, O'Brien, Osceola, Page, Palo Alto, Plymouth, Pocahontas, Polk, Pottawattamie, Poweshiek, Ringgold, Sac, Shelby, Sioux, Story, Tama, Taylor, Union, Van Buren, Wapello, Warren, Washington, Wayne, Webster, Winnebago, Winneshiek, Woodbury, Worth and Wright Counties in Iowa.

HIGHWAY CONSTRUCTION PROJECTS

Modification Number Publication Date

0 01/16/2026

SAIA2025-001 12/26/2024

BRICKLAYER (BRICKLAYER/STONE MASON)	Rates	Fringes
ZONE 1	$ 37.00	$ 18.62
ZONE 2	$ 37.00	$ 18.62
ZONE 3	$ 37.00	$ 18.62
ZONE 4	$ 35.75	$ 17.09
ZONE 5	$ 32.65	$ 17.09
CARPENTER & PILEDRIVERMEN		
ZONE 1	$ 34.27	$ 17.08
ZONE 2	$ 32.80	$ 17.23
ZONE 3	$ 32.68	$ 17.48
ZONE 4	$ 32.45	$ 14.80
ZONE 5**	$ 31.40	$ 13.45
CONCRETE FINISHER		
ZONE 1	$ 31.85	$ 15.08
ZONE 2	$ 31.85	$ 15.08
ZONE 3	$ 31.85	$ 15.08
ZONE 4	$ 30.00	$ 10.70
ZONE 5	$ 28.95	$ 10.70

© Bolton & Menk, Inc. 2026, All Rights Reserved

ELECTRICIAN (STREET AND HIGHWAY LIGHTING AND TRAFFIC SIGNALS)		
ZONE 1, 2, AND 3	$ 41.40	$ 18.80
ZONE 4	$ 40.10	$ 17.80
ZONE 5	$ 38.45	$ 16.05
IRONWORKER (SETTING OF STRUCTURAL STEEL)	Rates	Fringes
ZONE 1	$ 32.28	$ 19.07
ZONE 2	$ 30.57	$ 19.46
ZONE 3	$ 30.56	$ 19.60
ZONE 4	$ 28.74	$ 18.51
ZONE 5**	$ 27.26	$ 17.59
LABORER		
ZONE 4		
GROUP A	$ 25.42	$ 13.42
GROUP AA	$ 28.96	$ 13.42
GROUP B	$ 23.57	$ 13.42
GROUP C	$ 21.60	$ 13.42
ZONE 5		
GROUP A	$ 25.42	$ 12.17
GROUP AA	$ 28.96	$ 12.17
GROUP B	$ 23.57	$ 12.17
GROUP C	$ 21.60	$ 12.17
ZONES 1, 2, & 3		
GROUP A	$ 26.29	$ 13.64
GROUP AA	$ 28.96	$ 13.64
GROUP B	$ 24.44	$ 13.64
GROUP C	$ 21.36	$ 13.64
POWER EQUIPMENT OPERATOR		
ZONE 1		
GROUP A	$ 38.92	$ 18.28
GROUP B	$ 37.37	$ 18.28
GROUP C	$ 34.87	$ 18.28
GROUP D	$ 34.87	$ 18.28
ZONE 2		
GROUP A	$ 38.82	$ 18.28
GROUP B	$ 37.22	$ 18.28
GROUP C	$ 34.67	$ 18.28
GROUP D	$ 34.67	$ 18.28
ZONE 3		
GROUP A	$ 35.10	$ 31.30
GROUP B	$ 33.80	$ 31.30
GROUP C	$ 32.30	$ 31.30
GROUP D	$ 32.30	$ 31.30

© Bolton & Menk, Inc. 2026, All Rights Reserved

ZONE 4		
GROUP A	$ 35.10	$ 20.70
GROUP B	$ 33.96	$ 20.70
GROUP C	$ 31.88	$ 20.70
GROUP D	$ 31.88	$ 20.70
ZONE 5		
GROUP A	$ 34.17	$ 15.55
GROUP B	$ 33.13	$ 15.55
GROUP C	$ 31.40	$ 15.55
GROUP D	$ 30.40	$ 15.55
TRUCK DRIVER		
ZONE 1	$ 29.00	$ 13.40
ZONE 2	$ 29.00	$ 13.40
ZONE 3	$ 29.00	$ 13.40
ZONE 4	$ 29.00	$ 11.00
ZONE 5	$ 27.24	$ 11.00

ZONE DEFINITIONS

ZONE 1 - The Counties of Polk, Warren, and Dallas for all Crafts, and Linn County Carpenters only.

ZONE 2 - The Counties of Dubuque for all Crafts and Linn County for all Crafts except Carpenters.

ZONE 3 - The Cities of Burlington (including West Burlington), Clinton, Fort Madison, Keokuk, and Middleton (including the Iowa Army Ammunition Plant) and Muscatine (and abutting municipalities of any such cities).

ZONE 4 - Story, Black Hawk, Cedar, Jasper, Jones, Jackson, Louisa, Madison, and Marion Counties; Clinton County (except the City of Clinton), Johnson County, Muscatine County (except the City of Muscatine), the City of Council Bluffs, Lee County and Des Moines County.

ZONE 5 - All areas of the state not listed above.

LABORER CLASSIFICATIONS - ALL ZONES

GROUP AA - Skilled pipelayer (sewer, water, and conduits) and tunnel laborers; asbestos abatement worker

GROUP A - Carpenter tender on bridges and box culverts; CCTV* sewer inspection operator; curb machine (without a seat); deck hand; diamond & core drills; drill operator on air tracs, wagon drills, and similar drills; form setter/stringman on paving work; gunnite nozzleman; joint sealer kettleman; laser operator; mason tender (brick/stone), powderman tender; powderman/blaster; sign erector; saw operator; {(Zones 4 and 5) Skilled pipelayer (sewer, water, and conduits); surveyors assistant; tunnel laborer; asbestos abatement worker}. *new labor classification (CCTV: closed circuit television)

GROUP B - Air, gas, electric tool operator; barco hammer; carpenter tender; caulker; chain sawman; compressor (under 400 cfm); concrete finisher tender; concrete processing materials and monitors; cutting torch on demolition; drill tender; dumpmen; electric drills; fence erectors; form line expansion joint assembler; form tamper; general laborer; grade checker; handling and placing metal mesh, dowel bars, reinforcing bars and chairs; hot asphalt laborer; installing temporary traffic control devices; jack hammerman; mechanical grouter; painter (all except stripers); paving breaker; planting trees, shrubs and

© Bolton & Menk, Inc. 2026, All Rights Reserved

flowers; power broom (not self-propelled); power buggyman; rakers; rodman (tying reinforcing steel); sandblaster; seeding and mulching; sewer utility topman/bottom man; spaders; stressor or stretcherman on pre or post tensioned concrete; stringman on re/surfacing/no grade control; swinging stage, tagline, or block and tackle; tampers; timberman; tool room men and checkers; tree climber; tree groundman; underpinning and shoring caissons over twelve feet deep; vibrators; walk behind trencher; walk behind paint stripers; walk behind vibrating compactor; water pumps (under three inch); work from bosun chair.

GROUP C - Scale weigh person; traffic control/flagger, surveillance or monitor; water carrier.

POWER EQUIPMENT OPERATOR CLASSIFICATIONS - ALL ZONES

GROUP A - All terrain (off road) forklift; asphalt breakdown roller (vibratory); asphalt laydown machine; asphalt plant; asphalt screed; bulldozer (finish); central mix plant; concrete pump; crane; crawler tractor pulling scraper; directional drill (60,000 (lbs) pullback and above); dragline and power shovel; dredge engineer; excavator (over cu. yd.); front end loader (4 cy and over); horizontal boring machine; master mechanic; milling machine (over 350 hp); motor grader (finish); push cat; rubber tired backhoe (over cu. yd.); scraper (12 cu. yd. and over or finish); Self-propelled rotary mixer/road reclaimer; sidebroom tractor; slipform portland concrete paver; tow or push boat; trenching machine (Cleveland 80 or similar)

GROUP B - Articulated off road hauler, asphalt heater/planer; asphalt material transfer vehicle; asphalt roller; belt loader or similar loader; bulldozer (rough); churn or rotary drill; concrete curb machine; crawler tractor pulling ripper, disk or roller; deck hand/oiler; directional drill (less than 60,000 (lbs) pullback); distributor; excavator (1/2 cu. yd. and under); form riding concrete paver; front end loader (2 to less than 4 cu. yd.); group equipment greaser; mechanic; milling machine (350 hp. and less); paving breaker; portland concrete dry batch plant; rubber tired backhoe (1/2 cu. yd. and under); scraper (under 12 cu. yd.); screening, washing and crushing plant (mobile, portable or stationary); shoulder machine; skid loader (l cu. yd. and over); subgrader or trimmer; trenching machine; water wagon on compaction.

GROUP C - Boom & winch truck; concrete spreader/belt placer; deep wells for dewatering; farm type tractor (over 75 hp.) pulling disc or roller; forklift; front end loader (under 2 cu. yd.); motor grader (rough); pile hammer power unit; pump (greater than three inch diameter); pumps on well points; safety boat; self-propelled roller (other than asphalt); self-propelled sand blaster or shot blaster, water blaster or striping grinder/remover; skid loader (under 1 cu. yd.); truck mounted post driver.

GROUP D - Boiler; compressor; cure and texture machine; dow box; farm type or utility tractor (under 75 hp.) pulling disk, roller or other attachments; group greaser tender; light plants; mechanic tender; mechanical broom; mechanical heaters; oiler; pumps (under three inch diameter); tree chipping machine; truck crane driver/oiler.

CARPENTERS AND PILEDRIVERMEN, or IRONWORKERS (ZONE 5)

Setting of structural steel; any welding incidental to bridge or culvert construction; setting concrete beams.

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

==========

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year.

© Bolton & Menk, Inc. 2026, All Rights Reserved

Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at

https://www.dol.gov/agencies/whd/government-contracts.

Note: Executive Order 13658 generally applies to contracts subject to the Davis-Bacon Act that were awarded on or between January 1, 2015 and January 29, 2022, and that have not been renewed or extended on or after January 30, 2022. Executive Order 13658 does not apply to contracts subject only to the Davis-Bacon Related Acts regardless of when they were awarded. If a contract is subject to Executive Order 13658, the contractor must pay all covered workers at least $13.30 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2025. The applicable Executive Order minimum wage rate will be adjusted annually. Additional information on contractor requirements and worker protections under Executive Order 13658 is available at www.dol.gov/whd/govcontracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (iii)).

The body of each wage determination lists the classifications and wage rates that have been found to be prevailing for the type(s) of construction and geographic area covered by the wage determination. The classifications are listed in alphabetical order under rate identifiers indicating whether the particular rate is a union rate (current union negotiated rate), a survey rate, a weighted union average rate, a state adopted rate, or a supplemental classification rate.

Union Rate Identifiers

A four-letter identifier beginning with characters other than ""SU"", ""UAVG"", ?SA?, or ?SC? denotes that a union rate was prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2024. PLUM is an identifier of the union whose collectively bargained rate prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. The date, 07/01/2024 in the example, is the effective date of the most current negotiated rate.

Union prevailing wage rates are updated to reflect all changes over time that are reported to WHD in the rates in the collective bargaining agreement (CBA) governing the classification.

Union Average Rate Identifiers

The UAVG identifier indicates that no single rate prevailed for those classifications, but that 100% of the data reported for the classifications reflected union rates. EXAMPLE: UAVG-OH-0010 01/01/2024. UAVG indicates that the rate is a weighted union average rate. OH indicates the State of Ohio. The next number, 0010 in the example, is an internal number used in producing the wage determination. The date, 01/01/2024 in the example, indicates the date the wage determination was updated to reflect the most current union average rate.

© Bolton & Menk, Inc. 2026, All Rights Reserved

A UAVG rate will be updated once a year, usually in January, to reflect a weighted average of the current rates in the collective bargaining agreements on which the rate is based.

Survey Rate Identifiers

The ""SU"" identifier indicates that either a single non-union rate prevailed (as defined in 29 CFR 1.2) for this classification in the survey or that the rate was derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As a weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SUFL2022-007 6/27/2024. SU indicates the rate is a single non-union prevailing rate or a weighted average of survey data for that classification. FL indicates the State of Florida. 2022 is the year of the survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 6/27/2024 in the example, indicates the survey completion date for the classifications and rates under that identifier.

?SU? wage rates typically remain in effect until a new survey is conducted. However, the Wage and Hour Division (WHD) has the discretion to update such rates under 29 CFR 1.6(c)(1).

State Adopted Rate Identifiers

The ""SA"" identifier indicates that the classifications and prevailing wage rates set by a state (or local) government were adopted under 29 C.F.R 1.3(g)-(h). Example: SAME2023-007 01/03/2024. SA reflects that the rates are state adopted. ME refers to the State of Maine. 2023 is the year during which the state completed the survey on which the listed classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. The date, 01/03/2024 in the example, reflects the date on which the classifications and rates under the ?SA? identifier took effect under state law in the state from which the rates were adopted.

WAGE DETERMINATION APPEALS PROCESS

1) Has there been an initial decision in the matter? This can be:
    a) a survey underlying a wage determination
    b) an existing published wage determination
    c) an initial WHD letter setting forth a position on a wage determination matter
    d) an initial conformance (additional classification and rate) determination

On survey related matters, initial contact, including requests for summaries of surveys, should be directed to the WHD Branch of Wage Surveys. Requests can be submitted via email to davisbaconinfo@dol.gov or by mail to:

Branch of Wage Surveys
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

Regarding any other wage determination matter such as conformance decisions, requests for initial decisions should be directed to the WHD Branch of Construction Wage Determinations. Requests can be submitted via email to BCWD-Office@dol.gov or by mail to:

© Bolton & Menk, Inc. 2026, All Rights Reserved

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2) If an initial decision has been issued, then any interested party (those affected by the action) that disagrees with the decision can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Requests for review and reconsideration can be submitted via email to dba.reconsideration@dol.gov or by mail to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210.

==========

END OF GENERAL DECISION"

© Bolton & Menk, Inc. 2026, All Rights Reserved

GENERAL CONTRACT PROVISIONS

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),

3-19-0088-021-2026 (Construction) &

3-19-0088-022-2026 (Construction)

24X.136745.000

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 10 Definition of Terms

When the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be defined as follows:

Paragraph Number	Term	Definition
10-01	**AASHTO**	The American Association of State Highway and Transportation Officials.
10-02	**Access Road**	The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public roadway.
10-03	**Advertisement**	A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.
10-04	**Airport**	Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; airport buildings and facilities located in any of these areas, and a heliport.
10-05	**Airport Improvement Program (AIP)**	A grant-in-aid program, administered by the Federal Aviation Administration (FAA).
10-06	**Air Operations Area (AOA)**	The term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.
10-07	**Apron**	Area where aircraft are parked, unloaded or loaded, fueled and/or serviced.
10-08	**ASTM International (ASTM)**	Formerly known as the American Society for Testing and Materials (ASTM).
10-09	**Award**	The Owner's notice to the successful bidder of the acceptance of the submitted bid.
10-10	**Bidder**	Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.
10-11	**Building Area**	An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.
10-12	**Calendar Day**	Every day shown on the calendar.
10-13	**Certificate of Analysis (COA)**	The COA is the manufacturer's Certificate of Compliance (COC) including all applicable test results required by the specifications.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Paragraph Number	Term	Definition
10-14	**Certificate of Compliance (COC)**	The manufacturer's certification stating that materials or assemblies furnished fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer's authorized representative.
10-15	**Change Order**	A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for work within the scope of the contract and necessary to complete the project.
10-16	**Contract**	A written agreement between the Owner and the Contractor that establishes the obligations of the parties including but not limited to performance of work, furnishing of labor, equipment and materials and the basis of payment. The awarded contract includes but may not be limited to: Advertisement, Contract form, Proposal, Performance bond, payment bond, General provisions, certifications and representations, Technical Specifications, Plans, Supplemental Provisions, standards incorporated by reference and issued addenda.
10-17	**Contract Item (Pay Item)**	A specific unit of work for which a price is provided in the contract.
10-18	**Contract Time**	The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.
10-19	**Contractor**	The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.
10-20	**Contractors Quality Control (QC) Facilities**	The Contractor's QC facilities in accordance with the Contractor Quality Control Program (CQCP).
10-21	**Contractor Quality Control Program (CQCP)**	Details the methods and procedures that will be taken to assure that all materials and completed construction required by the contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors.
10-22	**Control Strip**	A demonstration by the Contractor that the materials, equipment, and construction processes results in a product meeting the requirements of the specification.
10-23	**Construction Safety and Phasing Plan (CSPP)**	The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
10-24	**Drainage System**	The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Paragraph Number	Term	Definition
10-25	**Engineer**	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering, inspection, and/or observation of the contract work and acting directly or through an authorized representative.
10-26	**Equipment**	All machinery, together with the necessary supplies for upkeep and maintenance; and all tools and apparatus necessary for the proper construction and acceptable completion of the work.
10-27	**Extra Work**	An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Owner's Engineer or Resident Project Representative (RPR) to be necessary to complete the work within the intended scope of the contract as previously modified.
10-28	**FAA**	The Federal Aviation Administration. When used to designate a person, FAA shall mean the Administrator or their duly authorized representative.
10-29	**Federal Specifications**	The federal specifications and standards, commercial item descriptions, and supplements, amendments, and indices prepared and issued by the General Services Administration.
10-30	**Force Account**	a. Contract Force Account - A method of payment that addresses extra work performed by the Contractor on a time and material basis. b. Owner Force Account - Work performed for the project by the Owner's employees.
10-31	**Intention of Terms**	Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer and/or Resident Project Representative (RPR) is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer and/or RPR, subject in each case to the final determination of the Owner. Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.
10-32	**Lighting**	A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.
10-33	**Major and Minor Contract Items**	A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Paragraph Number	Term	Definition
10-34	**Materials**	Any substance specified for use in the construction of the contract work.
10-35	**Modification of Standards (MOS)**	Any deviation from standard specifications applicable to material and construction methods in accordance with FAA Order 5300.1.
10-36	**Notice to Proceed (NTP)**	A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.
10-37	**Owner**	The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only. The Owner for this project is the City of Storm Lake
10-38	**Passenger Facility Charge (PFC)**	Per 14 Code of Federal Regulations (CFR) Part 158 and 49 United States Code (USC) § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls.
10-39	**Pavement Structure**	The combined surface course, base course(s), and subbase course(s), if any, considered as a single unit.
10-40	**Payment bond**	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.
10-41	**Performance bond**	The approved form of security furnished by the Contractor and their own surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.
10-42	**Plans**	The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications. Plans may also be referred to as 'contract drawings.'
10-43	**Project**	The agreed scope of work for accomplishing specific airport development with respect to a particular airport.
10-44	**Proposal**	The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.
10-45	**Proposal guaranty**	The security furnished with a proposal to guarantee that the bidder will enter into a contract if their own proposal is accepted by the Owner.
10-46	**Quality Assurance (QA)**	Owner's responsibility to assure that construction work completed complies with specifications for payment.
10-47	**Quality Control (QC)**	Contractor's responsibility to control material(s) and construction processes to complete construction in accordance with project specifications.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Paragraph Number	Term	Definition
10-48	**Quality Assurance (QA) Inspector**	An authorized representative of the Engineer and/or Resident Project Representative (RPR) assigned to make all necessary inspections, observations, tests, and/or observation of tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.
10-49	**Quality Assurance (QA) Laboratory**	The official quality assurance testing laboratories of the Owner or such other laboratories as may be designated by the Engineer or RPR. May also be referred to as Engineer's, Owner's, or QA Laboratory.
10-50	**Resident Project Representative (RPR)**	The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for all necessary inspections, observations, tests, and/or observations of tests of the contract work performed or being performed, or of the materials furnished or being furnished by the Contractor, and acting directly or through an authorized representative.
10-51	**Runway**	The area on the airport prepared for the landing and takeoff of aircraft.
10-52	**Runway Safety Area (RSA)**	A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to aircraft. See the construction safety and phasing plan (CSPP) for limits of the RSA.
10-53	**Safety Plan Compliance Document (SPCD)**	Details how the Contractor will comply with the CSPP.
10-54	**Specifications**	A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.
10-55	**Sponsor**	A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.
10-56	**Structures**	Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.
10-57	**Subgrade**	The soil that forms the pavement foundation.
10-58	**Superintendent**	The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the RPR, and who shall supervise and direct the construction.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Paragraph Number	Term	Definition
10-59	**Supplemental Agreement**	A written agreement between the Contractor and the Owner that establishes the basis of payment and contract time adjustment, if any, for the work affected by the supplemental agreement. A supplemental agreement is required if: (1) in scope work would increase or decrease the total amount of the awarded contract by more than 25%: (2) in scope work would increase or decrease the total of any major contract item by more than 25%; (3) work that is not within the scope of the originally awarded contract; or (4) adding or deleting of a major contract item.
10-60	**Surety**	The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.
10-61	**Taxilane**	A taxiway designed for low speed movement of aircraft between aircraft parking areas and terminal areas.
10-62	**Taxiway**	The portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.
10-63	**Taxiway/Taxilane Safety Area (TSA)**	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an aircraft. See the construction safety and phasing plan (CSPP) for limits of the TSA.
10-64	**Work**	The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.
10-65	**Working day**	A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.
10-66	**Owner Defined terms**	None for this Project.

END OF SECTION 10

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders). The Owner, or their authorized agent, shall publish the advertisement at such places and at such times as are required by local law or ordinances. The published advertisement shall state the time and place for submitting sealed proposals; a description of the proposed work; instructions to bidders as to obtaining proposal forms, plans, and specifications; proposal guaranty required; and the Owner's right to reject any and all bids. If the Owner prequalifies bidders, they shall publish the advertisement at such places and at such times as are required by local law or ordinances.

20-02 Qualification of bidders. Each bidder shall submit evidence of competency and evidence of financial responsibility to perform the work to the Owner at the time of bid opening.

Evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, and a list of equipment and a list of key personnel that would be available for the work.

Each bidder shall furnish the Owner satisfactory evidence of their financial responsibility. Evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether their financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Unless otherwise specified, a bidder may submit evidence that they are prequalified with the State Highway Division and are on the current "bidder's list" of the state in which the proposed work is located. Evidence of State Highway Division prequalification may be submitted as evidence of financial responsibility in lieu of the certified statements or reports specified above.

20-03 Contents of proposal forms. The Owner's proposal forms state the location and description of the proposed construction; the place, date, and time of opening of the proposals; and the estimated quantities of the various items of work to be performed and materials to be furnished for which unit bid prices are asked. The proposal form states the time in which the work must be completed, and the amount of the proposal guaranty that must accompany the proposal. The Owner will accept only those Proposals properly executed on physical forms or electronic forms provided by the Owner. Bidder actions that may cause the Owner to deem a proposal irregular are given in paragraph 20-09 *Irregular proposals*.

Mobilization is limited to 10 percent of the total project cost.

A pre-bid conference will discuss as a minimum, the following items: material requirements; submittals; Quality Control/Quality Assurance requirements; the construction safety and phasing plan including airport access and staging areas; and unique airfield paving construction requirements. If a pre-bid conference is to be held for the project, the time, date and place is stated in the Notice to Bidders section of this project manual.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder if the bidder is in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as provided in the Section 40, paragraph 40-02, Alteration of Work and Quantities, without in any way invalidating the unit bid prices.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves to the character, quality, and quantities of work to be performed, materials to be furnished, and to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied to the conditions to be encountered in performing the work and the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from their own examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit their proposal on the forms furnished by the Owner. All blank spaces in the proposal forms, unless explicitly stated otherwise, must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals which they propose for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall correctly sign the proposal in ink. If the proposal is made by an individual, their name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state where the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of their authority to do so and that the signature is binding upon the firm or corporation.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Owner's invitation for bid. It is the Owner's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 2 CFR § 200.318(h). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

f. If the applicable Disadvantaged Business Enterprise information is incomplete.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a bid bond, certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such bond, check, or collateral, shall be made payable to the Owner.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in paragraph 20-04, *Issuance of Proposal Forms,* of this section.

20-15 Discrepancies and Omissions. A Bidder who discovers discrepancies or omissions with the project bid documents shall immediately notify the Owner's Engineer of the matter. A bidder that has doubt as to the true meaning of a project requirement may submit to the Owner's Engineer a written request for interpretation no later than seven (7) calendar days prior to bid opening.

Any interpretation of the project bid documents by the Owner's Engineer will be by written addendum issued by the Owner. The Owner will not consider any instructions, clarifications or interpretations of the bidding documents in any manner other than written addendum.

END OF SECTION 20

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices written in words and unit bid prices written in numbers, the unit bid price written in words shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in Section 20, paragraph 20-09, *Irregular Proposals*.

b. If the bidder is disqualified for any of the reasons specified Section 20, paragraph 20-14, *Disqualification of Bidders*.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within the time specified in the Notice to Bidders and Notice of Public Hearing Section of this project manual.

If the Owner elects to proceed with an award of contract, the Owner will make award to the responsible bidder whose bid, conforming with all the material terms and conditions of the bid documents, is the lowest in price.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with paragraph 30-07 *Approval of Contract*.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the paragraph 30-01, *Consideration of Proposals.* Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in paragraph 30-05, *Requirements of Contract Bonds.*

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in paragraph 30-05, *Requirements of Contract Bonds,* of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the period specified in paragraph 30-06, *Execution of Contract,* of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidated damages to the Owner.

END OF SECTION 30

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

40-02 Alteration of work and quantities. The Owner reserves the right to make such changes in quantities and work as may be necessary or desirable to complete, in a satisfactory manner, the original intended work. Unless otherwise specified in the Contract, the Owner's Engineer or RPR shall be and is hereby authorized to make, in writing, such in-scope alterations in the work and variation of quantities as may be necessary to complete the work, provided such action does not represent a significant change in the character of the work.

For purpose of this section, a significant change in character of work means: any change that is outside the current contract scope of work; any change (increase or decrease) in the total contract cost by more than 25%; or any change in the total cost of a major contract item by more than 25%.

Work alterations and quantity variances that do not meet the definition of significant change in character of work shall not invalidate the contract nor release the surety. Contractor agrees to accept payment for such work alterations and quantity variances in accordance with Section 90, paragraph 90-03, *Compensation for Altered Quantities*.

Should the value of altered work or quantity variance meet the criteria for significant change in character of work, such altered work and quantity variance shall be covered by a supplemental agreement. Supplemental agreements shall also require consent of the Contractor's surety and separate performance and payment bonds. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

40-03 Omitted items. The Owner, the Owner's Engineer or the RPR may provide written notice to the Contractor to omit from the work any contract item that does not meet the definition of major contract item. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with Section 90, paragraph 90-04, *Payment for Omitted Items*.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, Owner may issue a Change Order to cover the necessary extra work. Change orders for extra work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the RPR's opinion, is necessary for completion of the extra work.

When determined by the RPR to be in the Owner's best interest, the RPR may order the Contractor to proceed with extra work as provided in Section 90, paragraph 90-05, *Payment for Extra Work*. Extra work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a supplemental agreement as defined in Section 10, paragraph 10-59, *Supplemental Agreement*.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

If extra work is essential to maintaining the project critical path, RPR may order the Contractor to commence the extra work under a Time and Material contract method. Once sufficient detail is available to establish the level of effort necessary for the extra work, the Owner shall initiate a change order or supplemental agreement to cover the extra work.

Any claim for payment of extra work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration. The Contractor shall maintain traffic in the manner detailed in the Construction Safety and Phasing Plan (CSPP).

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to their own operations and the operations of all subcontractors as specified in Section 80, paragraph 80-04, *Limitation of Operations*. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in Section 70, paragraph 70-15, *Contractor's Responsibility for Utility Service and Facilities of Others*.

b. With respect to their own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport in accordance with the construction safety and phasing plan (CSPP) and the safety plan compliance document (SPCD).

c. When the contract requires the maintenance of an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep the road, street, or highway open to all traffic and shall provide maintenance as may be required to accommodate traffic. The Contractor, at their expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways. Unless otherwise specified herein, the Contractor will not be required to furnish snow removal for such existing road, street, or highway.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Resident Project Representative (RPR) shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the RPR in accordance with the provisions of the contract.

Except as provided in Section 40, paragraph 40-07, *Rights in and Use of Materials Found in the Work*, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be embankment, the Contractor may at their own option either:

a. Use such material in another contract item, providing such use is approved by the RPR and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the RPR; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the RPR's approval in advance of such use.

Should the RPR approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at their expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the RPR approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of their own exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of the property Owner.

END OF SECTION 40

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 50 Control of Work

50-01 Authority of the Resident Project Representative (RPR). The RPR has final authority regarding the interpretation of project specification requirements. The RPR shall determine acceptability of the quality of materials furnished, method of performance of work performed, and the manner and rate of performance of the work. The RPR does not have the authority to accept work that does not conform to specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans, or specifications.

If the RPR finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications, but that the portion of the work affected will, in their opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the RPR will advise the Owner of their determination that the affected work be accepted and remain in place. The RPR will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. Changes in the contract price must be covered by contract change order or supplemental agreement as applicable.

If the RPR finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the RPR's written orders.

The term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the RPR's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the RPR's opinion, such compliance is essential to provide an acceptable finished portion of the work.

The term "reasonably close conformity" is also intended to provide the RPR with the authority, after consultation with the Sponsor and FAA, to use sound engineering judgment in their determinations to accept work that is not in strict conformity, but will provide a finished product equal to or better than that required by the requirements of the contract, plans and specifications.

The RPR will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. If electronic files are provided and used on the project and there is a conflict between the electronic files and hard copy plans, the hard copy plans shall govern. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the RPR for an interpretation and decision, and such decision shall be final.

The Contractor shall not take advantage of any apparent error or omission on the plans or specifications. In the event the Contractor discovers any apparent error or discrepancy, Contractor shall immediately notify the Owner or the designated representative in writing requesting their written interpretation and decision.

50-04 List of Special Provisions.

1. Federal Contract Provisions for Construction and Equipment Contracts
2. Davis-Bacon Wage Rate Determination
3. In case of a discrepancy within the various items included in the contract documents, the items shall prevail, or govern in the following descending order:
    a) Special Provisions listed in Section 50-04
    b) Plans, including plan notes
    c) FAA Technical Specifications
    d) Supplemental Specifications
    e) FAA General Contract Provisions
    f) Construction Safety and Phasing Plan (CSPP)
    g) FAA Supplemental Provisions
    h) FAA Advisory Circulars
4. Contractor shall be responsible for all quality control testing. The sponsor/RPR shall be responsible for Quality Assurance testing in accordance with the project FAA Technical Specifications and Supplemental Specifications.
5. Any non-passing quality assurance testing and retesting shall be borne by the contractor.

50-05 Cooperation of Contractor. The Contractor shall be supplied with five hard copies or an electronic PDF of the plans and specifications. The Contractor shall have available on the construction site at all times one hardcopy each of the plans and specifications. Additional hard copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the RPR and their inspectors and with other Contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as their agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the RPR or their authorized representative.

50-06 Cooperation between Contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with their own contract and shall protect and hold harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange their work and shall place and dispose of the materials being used to not interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join their work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

50-07 Construction layout and stakes. The Engineer/RPR shall establish necessary horizontal and vertical control. The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor. Contractor is responsible for preserving integrity of horizontal and vertical controls established by Engineer/RPR. In case of negligence on the part of the Contractor or their employees, resulting in the destruction of any horizontal and vertical control, the resulting costs will be deducted as a liquidated damage against the Contractor.

Prior to the start of construction, the Contractor will check all control points for horizontal and vertical accuracy and certify in writing to the RPR that the Contractor concurs with survey control established for the project. All lines, grades and measurements from control points necessary for the proper execution and control of the work on this project will be provided to the RPR. The Contractor is responsible to establish all layout required for the construction of the project.

Copies of survey notes will be provided to the RPR for each area of construction and for each placement of material as specified to allow the RPR to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. Surveys will be provided to the RPR prior to commencing work items that cover or disturb the survey staking. Survey(s) and notes shall be provided in the following format(s): Electronic. This shall be applicable to all survey(s) throughout these specifications.

Laser, GPS, String line, or other automatic control shall be checked with temporary control as necessary. In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

No direct payment will be made, unless otherwise specified in contract documents, for this labor, materials, or other expenses. The cost shall be included in the price of the bid for the various items of the Contract.

50-08 Authority and duties of Quality Assurance (QA) inspectors. QA inspectors shall be authorized to inspect all work done and all material furnished. Such QA inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. QA inspectors are not authorized to revoke, alter, or waive any provision of the contract. QA inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

QA Inspectors are authorized to notify the Contractor or their representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the RPR for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The RPR shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the RPR requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Provide advance written notice to the RPR of work the Contractor plans to perform each week and each day. Any work done or materials used without written notice and allowing opportunity for inspection by the RPR may be ordered removed and replaced at the Contractor's expense.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the RPR as provided in paragraph 50-02, *Conformity with Plans and Specifications*.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of Section 70, paragraph 70-14, *Contractor's Responsibility for Work*.

No removal work made under provision of this paragraph shall be done without lines and grades having been established by the RPR. Work done contrary to the instructions of the RPR, work done beyond the lines shown on the plans or as established by the RPR, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the RPR made under the provisions of this subsection, the RPR will have authority to cause unacceptable work to be remedied or removed and replaced; and unauthorized work to be removed and recover the resulting costs as a liquidated damage against the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor, at their own expense, shall be responsible for the repair to equal or better than preconstruction conditions of any damage caused by the Contractor's equipment and personnel.

Various measures such as videotape or photographs may be required to document existing conditions prior to start of construction. Construction traffic should be kept off airport pavements to the extent possible.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in paragraph 50-12, *Maintenance during Construction*, the RPR shall immediately notify the Contractor of such noncompliance. Such notification shall specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the RPR's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be recovered as a liquidated damage against the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the RPR to make final inspection of that unit. If the RPR finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the RPR may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the RPR and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The RPR shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the RPR will notify the Contractor and the Contractor shall correct the unsatisfactory work. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the RPR will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the RPR in writing of their intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the RPR is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the RPR has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the RPR who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

END OF SECTION 50

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish documentation to the RPR as to the origin, composition, and manufacture of all materials to be used in the work. Documentation shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the RPR's option, materials may be approved at the source of supply before delivery. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that meets the requirements of the specifications; and is listed in AC 150/5345-53, *Airport Lighting Equipment Certification Program* and *Addendum*, that is in effect on the date of advertisement.

60-02 Samples, tests, and cited specifications. All materials used in the work shall be inspected, tested, and approved by the RPR before incorporation in the work unless otherwise designated. Any work in which untested materials are used without approval or written permission of the RPR shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the RPR, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests will be made by and at the expense of the Owner in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), federal specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the RPR. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the RPR.

A copy of all Contractor QC test data shall be provided to the RPR daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the RPR showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests.

The Contractor shall employ a Quality Control (QC) testing organization to perform all Contractor required QC tests in accordance with Item C-100 Contractor Quality Control Program (CQCP).

60-03 Certification of compliance/analysis (COC/COA). The RPR may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's COC stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified. The COA is the manufacturer's COC and includes all applicable test results.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the RPR.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "or equal," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

The RPR shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The RPR reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The RPR or their authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the RPR conduct plant inspections, the following conditions shall exist:

a. The RPR shall have the cooperation and assistance of the Contractor and the producer with whom the Contractor has contracted for materials.

b. The RPR shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the RPR, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Place office or working space in a convenient location with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The RPR shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer/ Resident Project Representative (RPR) field office. An Engineer/RPR field office is not required.

60-06 Storage of materials. Materials shall be stored to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the RPR. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans and/or CSPP, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the RPR. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the RPR a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at their expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the RPR.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the RPR has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all their officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) must be shown on the plans and is indicated as follows:

None At This Time

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the RPR.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the RPR, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal Participation. The United States Government has agreed to reimburse the Owner for some portion of the contract costs. The contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator. No requirement of this contract shall be construed as making the United States a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor's worksite and facilities shall comply with applicable federal, state, and local requirements for health, safety and sanitary provisions.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

70-07 Public convenience and safety. The Contractor shall control their operations and those of their subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to their own operations and those of their own subcontractors and all suppliers in accordance with Section 40, paragraph 40-05, *Maintenance of Traffic,* and shall limit such operations for the convenience and safety of the traveling public as specified in Section 80, paragraph 80-04, *Limitation of Operations*.

The Contractor shall remove or control debris and rubbish resulting from its work operations at frequent intervals, and upon the order of the RPR. If the RPR determines the existence of Contractor debris in the work site represents a hazard to airport operations and the Contractor is unable to respond in a prompt and reasonable manner, the RPR reserves the right to assign the task of debris removal to a third party and recover the resulting costs as a liquidated damage against the Contractor.

70-08 Construction Safety and Phasing Plan (CSPP). The Contractor shall complete the work in accordance with the approved Construction Safety and Phasing Plan (CSPP) developed in accordance with AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP is located in the Construction Safety and Phasing Plan located in the project manual and a Construction Safety Plan is located in project plans.

70-09 Use of explosives. The use of explosives is not permitted on this project.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer/RPR has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at their expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and hold harmless the Engineer/RPR and the Owner and their officers, agents, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the "Workmen's Compensation Act," or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of their own contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, their own surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third-party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

70-13 Opening sections of the work to traffic. If it is necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work must be specified below and indicated on the approved Construction Safety and Phasing Plan (CSPP) and the project plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified.

Phasing is addressed in detail in the Construction Safety And Phasing Plan (CSPP), located as an appendix item in this specification.

The most current version of A.C. 150/5370-2, *Operational Safety On Airports During Construction,* is an appendix item in this specification.

Upon completion of any portion of work listed above, such portion shall be accepted by the Owner in accordance with Section 50, paragraph 50-14, *Partial Acceptance*.

No portion of the work may be opened by the Contractor until directed by the Owner in writing. Should it become necessary to open a portion of the work to traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the RPR, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at their expense.

The Contractor shall make their own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

The Contractor must conform to safety standards contained AC 150/5370-2 and the approved CSPP.

Contractor shall refer to the plans, specifications, and the approved CSPP to identify barricade requirements, temporary and/or permanent markings, airfield lighting, guidance signs and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the RPR's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with Section 50, paragraph 50-14, *Partial Acceptance*, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at their own expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

70-15 Contractor's responsibility for utility service and facilities of others. As provided in paragraph 70-04, *Restoration of Surfaces Disturbed by Others*, the Contractor shall cooperate with the owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and/or in the contract documents.

None known; however, the contractor shall notify Iowa One Call, the airport manager, and the engineer at least 48 hours prior to any excavation work.

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of their plan of operations. Such notification shall be in writing addressed to "The Person to Contact" as provided in this paragraph and paragraph 70-04, *Restoration of Surfaces Disturbed By Others*. A copy of each notification shall be given to the RPR.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's "Person to Contact" no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the RPR.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the RPR and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the RPR continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or their own surety.

70-15.1 FAA facilities and cable runs. Not Used.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, RPR, their authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or their surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill their obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, asphalts, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during their operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the RPR. The RPR will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in Section 40, paragraph 40-04, *Extra Work,* and Section 90, paragraph 90-05, *Payment for Extra Work*. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with Section 80, paragraph 80-07, *Determination and Extension of Contract Time*.

70-21 Insurance Requirements. Refer to the Insurance Requirements section of this project manual. The contractor shall provide at the time of the signing of the contract an insurance certificate as proof of insurance coverage that the equipment is fully insured, and insurance coverage shall remain in effect until final acceptance by the owner.

END OF SECTION 70

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Resident Project Representative (RPR).

The Contractor shall perform, with his organization, an amount of work equal to at least **Twenty-Five (25%)** percent of the total contract cost.

Should the Contractor elect to assign their contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

The Contractor shall provide copies of all subcontracts to the RPR fourteen (14) days prior to being utilized on the project. As a minimum, the information shall include the following:

- Subcontractor's legal company name.
- Subcontractor's legal company address, including County name.
- Principal contact person's name, telephone and fax number.
- Complete narrative description, and dollar value of the work to be performed by the subcontractor.
- Copies of required insurance certificates in accordance with the specifications.
- Minority/ non-minority status.

80-02 Notice to proceed (NTP). The Owners notice to proceed will state the date on which contract time commences. The Contractor is expected to commence project operations within ten (10) days of the NTP date. The Contractor shall notify the RPR at least 24 hours in advance of the time contract operations begins. The Contractor shall not commence any actual operations prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their coordinated construction schedule showing all work activities for the RPR's review and acceptance at least 10 days prior to the start of work. The Contractor's progress schedule, once accepted by the RPR, will represent the Contractor's baseline plan to accomplish the project in accordance with the terms and conditions of the Contract. The RPR will compare actual Contractor progress against the baseline schedule to determine that status of the Contractor's performance. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the RPR's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the RPR at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the NTP is issued by the Owner.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The project schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified. It shall include information on the sequence of work activities, milestone dates, and activity duration. The schedule shall show all work items identified in the project proposal for each work area and shall include the project start date and end date.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

80-04 Limitation of operations. The Contractor shall control their operations and the operations of their subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct their operations within an AOA of the airport, the work shall be coordinated with airport operations (through the RPR) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the RPR and until the necessary temporary marking, signage and associated lighting is in place as provided in Section 70, paragraph 70-08, *Construction Safety and Phasing Plan (CSPP)*.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; and immediately obey all instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until satisfactory conditions are provided. The areas of the AOA identified in the Construction Safety Phasing Plan (CSPP) and as listed below, cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

> Closed areas and limitations in any given area are addressed in detail in the Construction Safety And Phasing Plan (CSPP), located as an appendix in this specification.

The Contractor shall be required to conform to safety standards contained in AC 150/5370-2, Operational Safety on Airports During Construction and the approved CSPP.

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the approved project Construction Safety and Phasing Plan (CSPP) and the Safety Plan Compliance Document (SPCD) and the provisions set forth within the current version of AC 150/5370-2, Operational Safety on Airports During Construction. The CSPP included within the contract documents conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a SPCD that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and SPCD and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP and SPCD unless approved in writing by the Owner and coordinated with the FAA. The necessary coordination actions to review Contractor proposed modifications to an approved CSPP or approved SPCD can require a significant amount of time.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the RPR, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the RPR, be removed immediately by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the RPR.

Should the Contractor fail to remove such person or persons, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the RPR may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall not cause injury to previously completed work, adjacent property, or existing airport facilities due to its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless otherwise authorized by the RPR. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the RPR to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the RPR determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the RPR may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this paragraph.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods the Owner may deem necessary, due to unsuitable weather, or other conditions considered unfavorable for the execution of the work, or for such time necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the written order to suspend work to the effective date of the written order to resume the work. Claims for such compensation shall be filed with the RPR within the time period stated in the RPR's order to resume work. The Contractor shall submit with their own claim information substantiating the amount shown on the claim. The RPR will forward the Contractor's claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather or for any other delay provided for in the contract, plans, or specifications.

If it becomes necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

80-07 Determination and extension of contract time. The time for completion (number of working days) shall be stated in the proposal and contract and shall be known as the Contract Time.

If the contract time requires extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

80-07.1 Contract time based on working days. Contract time based on working days shall be calculated weekly by the Resident Project Representative (RPR). The RPR will furnish the Contractor a copy of their weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved Change Orders or Supplemental Agreements covering Extra Work).

The weekly statement of contract time charged is based on the following considerations:

(1) Time will be charged for days on which the Contractor could proceed with scheduled work under construction at the time for at least six (6) hours with the normal work force employed on such items. When normal work force is a double-shift, use 12 hours; and when the normal work force is on a triple-shift, use 18 hours. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the scheduled work items under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The RPR will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The RPR will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The RPR will not make charges against the contract time after the date of final acceptance as defined in Section 50, paragraph 50-14, *Final Acceptance*.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth their own objections to the RPR's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the Section 20, paragraph 20-05, *Interpretation of Estimated Proposal Quantities*. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in paragraph 80-07, *Determination and Extension of Contract Time*) the sum specified in the contract and proposal as liquidated damages (LD) will be deducted from any money due or to become due the Contractor or their own surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Liquidated damages shall be as described in the Contract Section of this project manual.

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

80-09 Default and termination of contract. The Contractor shall be considered in default of their contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons, if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Owner consider the Contractor in default of the contract for any reason above, the Owner shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the RPR of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to the terms and provisions thereof, or use such other methods as in the opinion of the RPR will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the RPR.

Termination of the contract or a portion thereof shall neither relieve the Contractor of their responsibilities for the completed work nor shall it relieve their surety of its obligation for and concerning any just claim arising out of the work performed.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the RPR prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate work in accordance with the approved CSPP and SPCD.

END OF SECTION 80

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the RPR, or their authorized representatives, using United States Customary Units of Measurement.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the RPR.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract. When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

When requested by the Contractor and approved by the RPR in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the RPR and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Measurement and Payment Terms

Term	Description
Excavation and Embankment Volume	In computing volumes of excavation, the average end area method will be used unless otherwise specified.
Measurement and Proportion by Weight	The term “ton” will mean the short ton consisting of 2,000 pounds (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, independently certified scales by competent, qualified personnel at locations designated by the RPR. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the RPR directs, and each truck shall bear a plainly legible identification mark.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Term	**Description**
Measurement by Volume	Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.
Asphalt Material	Asphalt materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts. Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when asphalt material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work. When asphalt materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, will be used for computing quantities.
Cement	Cement will be measured by the ton (kg) or hundredweight (km).
Structure	Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.
Timber	Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.
Plates and Sheets	The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.
Miscellaneous Items	When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.
Scales	Scales must be tested for accuracy and serviced before use. Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end. Scales shall be accurate within 0.5% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the RPR before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed 0.1% of the nominal rated capacity of the scale, but not less than one pound (454 grams). The use of spring balances will not be permitted. In the event inspection reveals the scales have been “overweighing” (indicating more than correct weight) they will be immediately adjusted. All materials received

@ Bolton & Menk, Inc. 2026, All Rights Reserved

	subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of 0.5%. In the event inspection reveals the scales have been under-weighing (indicating less than correct weight), they shall be immediately adjusted. No additional payment to the Contractor will be allowed for materials previously weighed and recorded. Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the RPR can safely and conveniently view them. Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment. All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.
Rental Equipment	Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered in connection with extra work will be measured as agreed in the change order or supplemental agreement authorizing such work as provided in paragraph 90-05 *Payment for Extra Work*.
Pay Quantities	When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the RPR. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of Section 70, paragraph 70-18, *No Waiver of Legal Rights*.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in Section 40, paragraph 40-02, *Alteration of Work and Quantities,* will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from their own unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in Section 40, paragraph 40-03, *Omitted Items,* the RPR shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the RPR omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the RPR's order to omit or non-perform such contract item.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the RPR's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the RPR's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with Section 40, paragraph 40-04, *Extra Work*, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the RPR, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with paragraph 90-07, *Payment for Materials on Hand*. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

a. From the total of the amount determined to be payable on a partial payment, 5% (five percent) of such total amount will be deducted and retained by the Owner for protection of the Owner's interests. Unless otherwise instructed by the Owner, the amount retained by the Owner will be in effect until the final payment is made except as follows:

   (1) Contractor may request release of retainage on work that has been partially accepted by the Owner in accordance with Section 50-03. Contractor must provide a certified invoice to the RPR that supports the value of retainage held by the Owner for partially accepted work.

   (2) In lieu of retainage, the Contractor may exercise at its option the establishment of an escrow account per paragraph 90-08.

b. The Contractor is required to pay all subcontractors for satisfactory performance of their contracts no later than 30 days after the Contractor has received a partial payment. Contractor must provide the Owner evidence of prompt and full payment of retainage held by the prime Contractor to the subcontractor within 30 days after the subcontractor's work is satisfactorily completed. A subcontractor's work is satisfactorily completed when all the tasks called for in the subcontract have been accomplished and documented as required by the Owner. When the Owner has made an incremental acceptance of a portion of a prime contract, the work of a subcontractor covered by that acceptance is deemed to be satisfactorily completed.

c. When at least 95% of the work has been completed to the satisfaction of the RPR, the RPR shall, at the Owner's discretion and with the consent of the surety, prepare estimates of both the contract value and the cost of the remaining work to be done. The Owner may retain an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the RPR to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in paragraph 90-09, *Acceptance and Final Payment*.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any

@ Bolton & Menk, Inc. 2026, All Rights Reserved

potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the RPR at or on an approved site.

b. The Contractor has furnished the RPR with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the RPR with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of their responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this paragraph.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in paragraph 90-06 *Partial Payments*, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of Section 50, paragraph 50-15, *Final Acceptance*, the RPR will prepare the final estimate of the items of work actually performed. The Contractor shall approve the RPR's final estimate or advise the RPR of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the RPR shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the RPR's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the RPR's estimate under protest of the quantities in dispute, and

@ Bolton & Menk, Inc. 2026, All Rights Reserved

such disputed quantities shall be considered by the Owner as a claim in accordance with Section 50, paragraph 50-16, *Claims for Adjustment and Disputes*.

After the Contractor has approved, or approved under protest, the RPR's final estimate, and after the RPR's receipt of the project closeout documentation required in paragraph 90-11, *Contractor Final Project Documentation*, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of Section 50, paragraph 50-16, *Claims for Adjustments and Disputes,* or under the provisions of this paragraph, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work, except as noted. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of the Contractor's failure to conform to contract requirements; or any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within seven (7) days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within 14 days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Contractor Final Project Documentation. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the RPR approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturer's warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with Section 40, paragraph 40-08, *Final Cleanup*.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual(s).

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

@ Bolton & Menk, Inc. 2026, All Rights Reserved

FAA TECHNICAL SPECIFICATIONS

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),

3-19-0088-021-2026 (Construction) &

3-19-0088-022-2026 (Construction)

24X.136745.000

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item C-100 Contractor Quality Control Program (CQCP)

100-1 General. Quality is more than test results. Quality is the combination of proper materials, testing, workmanship, equipment, inspection, and documentation of the project. Establishing and maintaining a culture of quality is key to achieving a quality project. The Contractor shall establish, provide, and maintain an effective Contractor Quality Control Program (CQCP) that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications, and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The Contractor shall establish a CQCP that will:

a. Provide qualified personnel to develop and implement the CQCP.

b. Provide for the production of acceptable quality materials.

c. Provide sufficient information to assure that the specification requirements can be met.

d. Document the CQCP process.

The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the CQCP has been reviewed and approved by the Resident Project Representative (RPR). No partial payment will be made for materials subject to specific quality control (QC) requirements until the CQCP has been reviewed and approved.

The QC requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the quality assurance (QA) testing requirements. QA testing requirements are the responsibility of the RPR, or Contractor as specified in the specifications.

A Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Resident Project Representative (RPR), Contractor, subcontractors, testing laboratories, and Owner's representative must be held prior to start of construction. The QC/QA workshop will be facilitated by the Contractor. The Contractor shall coordinate with the Airport and the RPR on time and location of the QC/QA workshop. Items to be addressed, at a minimum, will include:

a. Review of the CQCP including submittals, QC Testing, Action & Suspension Limits for Production, Corrective Action Plans, Distribution of QC reports, and Control Charts.

b. Discussion of the QA program.

c. Discussion of the QC and QA Organization and authority including coordination and information exchange between QC and QA.

d. Establish regular meetings to discuss control of materials, methods and testing.

e. Establishment of the overall QC culture.

100-2 Description of program.

a. General description. The Contractor shall establish a CQCP to perform QC inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. The CQCP shall ensure conformance to applicable specifications and plans with respect to materials, off-site fabrication, workmanship, construction, finish, and functional performance. The CQCP shall be effective for control of all construction work

@ Bolton & Menk, Inc. 2026, All Rights Reserved

performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of QC.

b. Contractor Quality Control Program (CQCP). The Contractor shall describe the CQCP in a written document that shall be reviewed and approved by the RPR prior to the start of any production, construction, or off-site fabrication. The written CQCP shall be submitted to the RPR for review and approval at least 14 (fourteen) calendar days before the CQCP Workshop. The Contractor's CQCP and QC testing laboratory must be approved in writing by the RPR prior to the Notice to Proceed (NTP).

The CQCP shall be organized to address, as a minimum, the following:

1. QC organization and resumes of key staff
2. Project progress schedule
3. Submittals schedule
4. Inspection requirements
5. QC testing plan
6. Documentation of QC activities and distribution of QC reports
7. Requirements for corrective action when QC and/or QA acceptance criteria are not met
8. Material quality and construction means and methods. Address all elements applicable to the project that affect the quality of the pavement structure including subgrade, subbase, base, and surface course. Some elements that must be addressed include, but is not limited to mix design, aggregate grading, stockpile management, mixing and transporting, placing and finishing, quality control testing and inspection, smoothness, laydown plan, equipment, and temperature management plan.

The Contractor must add any additional elements to the CQCP that is necessary to adequately control all production and/or construction processes required by this contract.

100-3 CQCP organization. The CQCP shall be implemented by the establishment of a QC organization. An organizational chart shall be developed to show all QC personnel, their authority, and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all QC staff by name and function and shall indicate the total staff required to implement all elements of the CQCP, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the CQCP, the personnel assigned shall be subject to the qualification requirements of paragraphs 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The QC organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Contractor Quality Control Program Administrator (CQCPA) must be a full-time on-site employee of the Contractor, or a consultant engaged by the Contractor. The CQCPA must have a minimum of five (5) years of experience in QC pavement construction with prior QC experience on a project of comparable size and scope as the contract.

Included in the five (5) years of paving/QC experience, the CQCPA must meet at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.

(2) Engineer-in-training with two (2) years of airport paving experience.

(3) National Institute for Certification in Engineering Technologies (NICET) Civil Engineering Technology Level IV with three (3) years of airport paving experience.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

(4) An individual with four (4) years of airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

The CQCPA must have full authority to institute any and all actions necessary for the successful implementation of the CQCP to ensure compliance with the contract plans and technical specifications. The CQCPA authority must include the ability to immediately stop production until materials and/or processes are in compliance with contract specifications. The CQCPA must report directly to a principal officer of the construction firm. The CQCPA may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. QC technicians. A sufficient number of QC technicians necessary to adequately implement the CQCP must be provided. These personnel must be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II in Civil Engineering Technology or higher, and shall have a minimum of two (2) years of experience in their area of expertise.

The QC technicians must report directly to the CQCPA and shall perform the following functions:

(1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by paragraph 100-6.

(2) Performance of all QC tests as required by the technical specifications and paragraph 100-8.

(3) Performance of tests for the RPR when required by the technical specifications.

Certification at an equivalent level of qualification and experience by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified QC personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The CQCP shall state where different technicians will be required for different work elements.

100-4 Project progress schedule. Critical QC activities must be shown on the project schedule as required by Section 80, paragraph 80-03, *Execution and Progress*.

100-5 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include as a minimum:

a. Specification item number

b. Item description

c. Description of submittal

d. Specification paragraph requiring submittal

e. Scheduled date of submittal

100-6 Inspection requirements. QC inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by paragraph 100-9.

Inspections shall be performed as needed to ensure continuing compliance with contract requirements until completion of the particular feature of work. Inspections shall include the following minimum requirements:

a. During plant operation for material production, QC test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The CQCP shall detail how these, and other QC functions will be accomplished and used.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

b. During field operations, QC test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The CQCP shall document how these and other QC functions will be accomplished and used.

100-7 Contractor QC testing facility.

a. For projects that include Item P-401, Item P-403, and Item P-404, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM D3666, *Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials*:

8.1.3 Equipment Calibration and Checks;

8.1.9 Equipment Calibration, Standardization, and Check Records;

8.1.12 Test Methods and Procedures

b. For projects that include P-501, the Contractor shall ensure facilities, including all necessary equipment, materials, and current reference standards, are provided that meet requirements in the following paragraphs of ASTM C1077, Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation:

7 Test Methods and Procedures

8 Facilities, Equipment, and Supplemental Procedures

100-8 QC testing plan. As a part of the overall CQCP, the Contractor shall implement a QC testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional QC tests that the Contractor deems necessary to adequately control production and/or construction processes.

The QC testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

a. Specification item number (e.g., P-401)

b. Item description (e.g., Hot Mix Asphalt Pavements)

c. Test type (e.g., gradation, grade, asphalt content)

d. Test standard (e.g., ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)

e. Test frequency (e.g., as required by technical specifications or minimum frequency when requirements are not stated)

f. Responsibility (e.g., plant technician)

g. Control requirements (e.g., target, permissible deviations)

The QC testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The RPR shall be provided the opportunity to witness QC sampling and testing.

All QC test results shall be documented by the Contractor as required by paragraph 100-9.

100-9 Documentation. The Contractor shall maintain current QC records of all inspections and tests performed. These records shall include factual evidence that the required QC inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the RPR daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the CQCPA.

Contractor QC records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor QC technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous QC inspections have been performed and shall, as a minimum, include the following:

(1) Technical specification item number and description

(2) Compliance with approved submittals

(3) Proper storage of materials and equipment

(4) Proper operation of all equipment

(5) Adherence to plans and technical specifications

(6) Summary of any necessary corrective actions

(7) Safety inspection.

(8) Photographs and/or video

The daily inspection reports shall identify all QC inspections and QC tests conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible QC technician and the CQCPA. The RPR shall be provided at least one copy of each daily inspection report on the workday following the day of record. When QC inspection and test results are recorded and transmitted electronically, the results must be archived.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all QC test results. Daily test reports shall document the following information:

(1) Technical specification item number and description

(2) Test designation

(3) Location

(4) Date of test

(5) Control requirements

(6) Test results

(7) Causes for rejection

(8) Recommended remedial actions

(9) Retests

Test results from each day's work period shall be submitted to the RPR prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical QC charts. When QC daily test results are recorded and transmitted electronically, the results must be archived.

100-10 Corrective action requirements. The CQCP shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the CQCP as a whole, and for individual items of work contained in the technical specifications.

The CQCP shall detail how the results of QC inspections and tests will be used for determining the need for corrective action and shall contain clear rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

When applicable or required by the technical specifications, the Contractor shall establish and use statistical QC charts for individual QC tests. The requirements for corrective action shall be linked to the control charts.

100-11 Inspection and/or observations by the RPR. All items of material and equipment are subject to inspection and/or observation by the RPR at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate QC system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to inspection and/or observation by the RPR at the site for the same purpose.

Inspection and/or observations by the RPR does not relieve the Contractor of performing QC inspections of either on-site or off-site Contractor's or subcontractor's work.

100-12 Noncompliance.

a. The Resident Project Representative (RPR) will provide written notice to the Contractor of any noncompliance with their CQCP. After receipt of such notice, the Contractor must take corrective action.

b. When QC activities do not comply with either the CQCP or the contract provisions or when the Contractor fails to properly operate and maintain an effective CQCP, and no effective corrective actions have been taken after notification of non-compliance, the RPR will recommend the Owner take the following actions:

(1) Order the Contractor to replace ineffective or unqualified QC personnel or subcontractors and/or

(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

METHOD OF MEASUREMENT

100-13 Basis of measurement. Contractor Quality Control Program (CQCP) will not be measured for payment.

BASIS OF PAYMENT

100-14 Payment will be made under:

Item C-100 No separate payment will be made for the Contractor Quality Control Program (CQCP). It shall be considered incidental to other project bid items.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

National Institute for Certification in Engineering Technologies (NICET)

ASTM International (ASTM)

ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials

END OF ITEM C-100

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item C-102 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

DESCRIPTION

102-1. This item shall consist of temporary control measures as shown on the plans or as ordered by the Resident Project Representative (RPR) during the life of a contract to control pollution of air and water, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

Temporary erosion control shall be in accordance with the approved erosion control plan; the approved Construction Safety and Phasing Plan (CSPP) and AC 150/5370-2, *Operational Safety on Airports During Construction*. The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be designed, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

MATERIALS

102-2.1 Grass. Grass that will not compete with the grasses sown later for permanent cover per Item T-901 shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

102-2.2 Mulches. Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per Item T-908. Mulches shall not create a wildlife attractant.

102-2.3 Fertilizer. Fertilizer shall be a standard commercial grade and shall conform to all federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

102-2.4 Slope drains. Slope drains may be constructed of pipe, fiber mats, rubble, concrete, asphalt, or other materials that will adequately control erosion.

102-2.5 Silt fence. Silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

102-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the RPR before being incorporated into the project.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONSTRUCTION REQUIREMENTS

102-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The RPR shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

102-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules in accordance with the approved Construction Safety and Phasing Plan (CSPP) and the plans for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the RPR.

102-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the plans and approved CSPP. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, schedule and perform clearing and grubbing operations so that grading operations and permanent erosion control features can follow immediately if project conditions permit. Temporary erosion control measures are required if permanent measures cannot immediately follow grading operations. The RPR shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the RPR.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the RPR. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the RPR, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The RPR may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be maintained by the Contractor during the construction period.

Provide temporary structures whenever construction equipment must cross watercourses at frequent intervals. Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

102-3.4 Installation, maintenance and removal of silt fence. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence. The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the RPR.

METHOD OF MEASUREMENT

102-4.1 Temporary erosion and pollution control work required will be performed as scheduled or directed by the RPR. Completed and accepted work will be measured as follows:

a. Installation of Wattle will be measured by the linear foot (meter).

b. Removal of Wattle will be measured by the linear foot (meter).

c. Wattle cleanout will be measured by the linear foot (meter).

d. SWPPP Establishment and Management will not be measured for payment.

g. Inlet Protection Device will be measured per each

102-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

BASIS OF PAYMENT

102-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the RPR and measured as provided in paragraph 102-4.1 will be paid for under:

Item C-102-5.1a	Installation of Wattle - per Linear Feet (meter)
Item C-102-5.1.b	Removal of Wattle - per Linear Feet (meter)
Item C-102-5.1.c	Wattle Cleanout - per Linear Feet (meter)
Item C-102-5.1.d	SWPPP Establishment and Management – per Lump Sum
Item C-102-5.1.e	Inlet Protection Device, Installation, Cleanout and Removal – per each

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the RPR will be paid for in accordance with Section 90, paragraph 90-05 *Payment for Extra Work*.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Advisory Circulars (AC)

AC 150/5200-33 *Hazardous Wildlife Attractants on or Near Airports*

AC 150/5370-2 *Operational Safety on Airports During Construction*

ASTM International (ASTM)

ASTM D6461 *Standard Specification for Silt Fence Materials*

United States Department of Agriculture (USDA)

FAA/USDA Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM C-102

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item C-105 Mobilization

105-1 Description. This item of work shall consist of, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

105-2 Mobilization limit. Mobilization shall be limited to 10 percent of the total project cost.

105-3 Posted notices. Prior to commencement of construction activities, the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-4 Engineer/RPR field office. An Engineer/RPR field office is not required.

105-5 Traffic Control. Traffic Control will involve implementation of the various materials, traffic control, equipment, and procedures necessary to comply with the CSPP and SPCD.

105-6 Construction Survey. Construction staking shall be provided by the contactor and shall meet the requirements listed in general provision 50-07 for construction layout and stakes.

METHOD OF MEASUREMENT

105-7.1 Basis of measurement. Based upon the contract lump sum price for "Mobilization," "Traffic Control," and "Construction Survey", partial payments will be allowed as follows:

a. With first pay request, 25%.

b. When 25% or more of the original contract is earned, an additional 25%.

c. When 50% or more of the original contract is earned, an additional 40%.

d. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by Section 90, paragraph 90-11, *Contractor Final Project Documentation,* the final 10%.

e. For Construction Survey only, it may be paid at 100% once survey is complete.

BASIS OF PAYMENT

105-8.1 Payment.

Payment will be made under:

Item C-105.9.1.a Mobilization – per Lump Sum

Item C-105.9.1.b Traffic Control – per Lump Sum

Item C-105.9.1.c Construction Survey – per Lump Sum

@ Bolton & Menk, Inc. 2026, All Rights Reserved

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Office of Federal Contract Compliance Programs (OFCCP)

Executive Order 11246, as amended

EEOC-P/E-1 – Equal Employment Opportunity is the Law Poster

United States Department of Labor, Wage and Hour Division (WHD)

WH 1321 – Employee Rights under the Davis-Bacon Act Poster

END OF ITEM C-105

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item C-110 Method of Estimating Percentage of Material Within Specification Limits (PWL)

110-1 General. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (X) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-2 Method for computing PWL. The computational sequence for computing PWL is as follows:

a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.

b. Locate the random sampling position within the sublot in accordance with the requirements of the specification.

c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.

d. Find the sample average (X) for all sublot test values within the lot by using the following formula:

$$\mathbf{X = (x_1 + x_2 + x_3 + \ldots x_n) / n}$$

Where: X = Sample average of all sublot test values within a lot

$x_1, x_2, \ldots x_n$ = Individual sublot test values

n = Number of sublot test values

e. Find the sample standard deviation (S_n) by use of the following formula:

$$\mathbf{S_n = [(d_1^2 + d_2^2 + d_3^2 + \ldots d_n^2)/(n-1)]^{1/2}}$$

Where: S_n = Sample standard deviation of the number of sublot test values in the set

$d_1, d_2, \ldots d_n$ = Deviations of the individual sublot test values $x_1, x_2, \ldots$ from the average value X

that is: $d_1 = (x_1 - X)$, $d_2 = (x_2 - X) \ldots d_n = (x_n - X)$

n = Number of sublot test values

@ Bolton & Menk, Inc. 2026, All Rights Reserved

f. For single sided specification limits (i.e., L only), compute the Lower Quality Index Q_L by use of the following formula:

$$\mathbf{Q_L = (X - L) / S_n}$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L, using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

g. For double-sided specification limits (i.e., L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$\mathbf{Q_L = (X - L) / S_n}$$
and
$$\mathbf{Q_U = (U - X) / S_n}$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U, using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U. Determine the PWL by use of the following formula:

$$\mathbf{PWL = (P_U + P_L) - 100}$$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

A-1 = 96.60

A-2 = 97.55

A-3 = 99.30

A-4 = 98.35

n = 4

2. Calculate average density for the lot.

$X = (x_1 + x_2 + x_3 + \ldots x_n) / n$

$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$

X = 97.95% density

3. Calculate the standard deviation for the lot.

$S_n = \mathbf{[}((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2)) / (4 - 1)\mathbf{]}^{1/2}$

$S_n = \mathbf{[}(1.82 + 0.16 + 1.82 + 0.16) / 3\mathbf{]}^{1/2}$

$S_n = 1.15$

@ Bolton & Menk, Inc. 2026, All Rights Reserved

4. Calculate the Lower Quality Index Q_L for the lot. (L=96.3)

$Q_L = (X - L) / S_n$

$Q_L = (97.95 - 96.30) / 1.15$

$Q_L = 1.4348$

5. Determine PWL by entering Table 1 with Q_L= 1.44 and n= 4.

PWL = 98

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

A-1 = 5.00

A-2 = 3.74

A-3 = 2.30

A-4 = 3.25

2. Calculate the average air voids for the lot.

$X = (x_1 + x_2 + x_3 \ldots n) / n$

$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$

X = 3.57%

3. Calculate the standard deviation S_n for the lot.

$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$

$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$

$S_n = 1.12$

4. Calculate the Lower Quality Index Q_L for the lot. (L= 2.0)

$Q_L = (X - L) / S_n$

$Q_L = (3.57 - 2.00) / 1.12$

$Q_L = 1.3992$

5. Determine P_L by entering Table 1 with Q_L = 1.41 and n = 4.

$P_L = 97$

6. Calculate the Upper Quality Index Q_U for the lot. (U= 5.0)

$Q_U = (U - X) / S_n$

$Q_U = (5.00 - 3.57) / 1.12$

$Q_U = 1.2702$

7. Determine P_U by entering Table 1 with Q_U = 1.29 and n = 4.

$P_U = 93$

8. Calculate Air Voids PWL

$PWL = (P_L + P_U) - 100$

PWL = (97 + 93) - 100 = 90

@ Bolton & Menk, Inc. 2026, All Rights Reserved

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.

A-3 = 99.30

A-4 = 98.35

A-2 = 97.55

A-1 = 96.60

2. From ASTM E178, Table 1, for n=4 an upper 5% significance level, the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

a. For measurements greater than the average:

If (measurement - average)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-3, check if (99.30 - 97.95) / 1.15 is greater than 1.463.

Since 1.174 is less than 1.463, the value is not an outlier.

b. For measurements less than the average:

If (average - measurement)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-1, check if (97.95 - 96.60) / 1.15 is greater than 1.463.

Since 1.435 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

Greater than (97.95 + 1.463 × 1.15) = 99.63%

OR

less than (97.95 - 1.463 × 1.15) = 96.27%.

Table 1. Table for Estimating Percent of Lot Within Limits (PWL)

Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520	1.9994	2.0362
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053	1.8379	1.8630
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993	1.7235	1.7420
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127	1.6313	1.6454
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381	1.5525	1.5635
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4717	1.4829	1.4914
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112	1.4199	1.4265
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554	1.3620	1.3670
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032	1.3081	1.3118
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541	1.2576	1.2602
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075	1.2098	1.2115
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630	1.1643	1.1653

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
87	1.0597	1.1100	1.1173	1.1192	1.1199	1.1204	1.1208	1.1212
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794	1.0791	1.0789
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399	1.0389	1.0382
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015	1.0000	0.9990
83	0.9939	0.9900	0.9785	0.9715	0.9671	0.9643	0.9624	0.9610
82	0.9749	0.9600	0.9452	0.9367	0.9315	0.9281	0.9258	0.9241
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928	0.8901	0.8882
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583	0.8554	0.8533
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245	0.8214	0.8192
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915	0.7882	0.7858
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590	0.7556	0.7531
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271	0.7236	0.7211
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958	0.6922	0.6896
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649	0.6613	0.6587
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344	0.6308	0.6282
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044	0.6008	0.5982
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747	0.5712	0.5686
70	0.6787	0.6000	0.5719	0.5582	0.5504	0.5454	0.5419	0.5394
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164	0.5130	0.5105
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877	0.4844	0.4820
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592	0.4560	0.4537
66	0.5563	0.4800	0.4545	0.4424	0.4355	0.4310	0.4280	0.4257
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4030	0.4001	0.3980
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753	0.3725	0.3705
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477	0.3451	0.3432
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203	0.3179	0.3161
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931	0.2908	0.2892
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660	0.2639	0.2624
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391	0.2372	0.2358
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122	0.2105	0.2093
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855	0.1840	0.1829
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1588	0.1575	0.1566
55	0.1806	0.1500	0.1406	0.1363	0.1338	0.1322	0.1312	0.1304
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057	0.1049	0.1042
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0793	0.0786	0.0781
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528	0.0524	0.0521
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264	0.0262	0.0260
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264	-0.0262	-0.0260
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528	-0.0524	-0.0521

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0793	-0.0786	-0.0781
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057	-0.1049	-0.1042
45	-0.1806	-0.1500	-0.1406	-0.1363	-0.1338	-0.1322	-0.1312	-0.1304
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1588	-0.1575	-0.1566
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855	-0.1840	-0.1829
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122	-0.2105	-0.2093
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391	-0.2372	-0.2358
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660	-0.2639	-0.2624
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931	-0.2908	-0.2892
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203	-0.3179	-0.3161
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477	-0.3451	-0.3432
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753	-0.3725	-0.3705
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4030	-0.4001	-0.3980
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4355	-0.4310	-0.4280	-0.4257
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592	-0.4560	-0.4537
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877	-0.4844	-0.4820
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164	-0.5130	-0.5105
30	-0.6787	-0.6000	-0.5719	-0.5582	-0.5504	-0.5454	-0.5419	-0.5394
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747	-0.5712	-0.5686
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044	-0.6008	-0.5982
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344	-0.6308	-0.6282
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649	-0.6613	-0.6587
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958	-0.6922	-0.6896
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271	-0.7236	-0.7211
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590	-0.7556	-0.7531
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915	-0.7882	-0.7858
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245	-0.8214	-0.8192
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583	-0.8554	-0.8533
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928	-0.8901	-0.8882
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9315	-0.9281	-0.9258	-0.9241
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9671	-0.9643	-0.9624	-0.9610
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015	-1.0000	-0.9990
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399	-1.0389	-1.0382
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794	-1.0791	-1.0789
13	-1.0597	-1.1100	-1.1173	-1.1192	-1.1199	-1.1204	-1.1208	-1.1212
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630	-1.1643	-1.1653
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075	-1.2098	-1.2115
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541	-1.2576	-1.2602
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032	-1.3081	-1.3118
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554	-1.3620	-1.3670
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112	-1.4199	-1.4265
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4717	-1.4829	-1.4914
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381	-1.5525	-1.5635
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127	-1.6313	-1.6454
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993	-1.7235	-1.7420

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053	-1.8379	-1.8630
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520	-1.9994	-2.0362

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM E178 Standard Practice for Dealing with Outlying Observations

END OF ITEM C-110

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-101 Preparation/Removal of Existing Pavements

DESCRIPTION

101-1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable plans.

EQUIPMENT AND MATERIALS

101-2 All equipment and materials shall be specified here and in the following paragraphs or approved by the Resident Project Representative (RPR). The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

The Contractor's removal operation shall be controlled to not damage adjacent pavement structure, and base material, cables, utility ducts, pipelines, or drainage structures which are to remain under the pavement.

a. Concrete pavement removal. Full depth saw cuts shall be made perpendicular to the slab surface. The Contractor shall saw through the full depth of the slab including any dowels at the joint, removing the pavement and installing new dowels as shown on the plans and per the specifications. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods which will not cause distress in the pavement which is to remain in place. Concrete slabs that are damaged by under breaking shall be repaired or removed and replaced as directed by the RPR.

The edge of existing concrete pavement against which new pavement abuts shall be protected from damage at all times. Spall and underbreak repair shall be in accordance with the plans. Any underlaying material that is to remain in place, shall be recompacted and/or replaced as shown on the plans. Adjacent areas damaged during repair shall be repaired or replaced at the Contractor's expense.

b. Asphalt pavement removal. Asphalt pavement to be removed shall be cut to the full depth of the asphalt pavement around the perimeter of the area to be removed.

c. Repair or removal of Base, Subbase, and/or Subgrade. All failed material including surface, base course, subbase course, and subgrade shall be removed and repaired as shown on the plans or as directed by the RPR. Materials and methods of construction shall comply with the applicable sections of these specifications. Any damage caused by Contractor's removal process shall be repaired at the Contractor's expense.

101-3.2 Preparation of joints and cracks prior to overlay/surface treatment. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists, treat the specific area with a concentrated solution of a water-based herbicide approved by the RPR. Fill all cracks greater than 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. The crack sealant, preparation, and application shall be compatible with the surface treatment/overlay to be used. To minimize contamination of the asphalt with the crack sealant, underfill the crack sealant a minimum of 1/8 inch (3 mm), not to exceed ¼ inch (6 mm). Any excess joint or crack sealer shall be removed from the pavement surface.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or replaced as stated below.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

1. Gradation

Sieve Size	Percent Passing
No. 4 (4.75 mm)	100
No. 8 (2.36 mm)	90-100
No. 16 (1.18 mm)	65-90
No. 30 (600 µm)	40-60
No. 50 (300 µm)	25-42
No. 100 (150 µm)	15-30
No. 200 (75 µm)	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the RPR.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled to within +0 to -1/8 inches (+0 to -3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of Foreign Substances/contaminates prior to overlay, seal-coat, **remarking.** Removal of foreign substances/contaminates from existing pavement that will affect the bond of the new treatment shall consist of removal of rubber, fuel spills, oil, crack sealer, at least 90% of paint, and other foreign substances from the surface of the pavement. Areas that require removal are designated on the plans and as directed by the RPR in the field during construction.

Chemicals, high-pressure water, heater scarifier (asphaltic concrete only), cold milling, rotary grinding and sandblasting may be used. If chemicals are used, they shall comply with the state's environmental protection regulations. Removal methods used shall not cause major damage to the pavement, or to any structure or utility within or adjacent to the work area. Major damage is defined as changing the properties of the pavement, removal of asphalt causing the aggregate to ravel, or removing pavement over 1/8 inch (3 mm) deep. If it is deemed by the RPR that damage to the existing pavement is caused by operational error, such as permitting the application method to dwell in one location for too long, the Contractor shall repair the damaged area without compensation and as directed by the RPR.

Removal of foreign substances shall not proceed until approved by the RPR. Water used for high-pressure water equipment shall be provided by the Contractor at the Contractor's expense. No material shall be deposited on the pavement shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphalt mixture with aggregate sized appropriately for the depth of the patch. The material shall be compacted with equipment approved by the RPR until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphalt pavement repair. The Contractor shall repair all spalled concrete as shown on the plans or as directed by the RPR. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be removed. Materials and methods of construction shall comply with the applicable sections of these specifications.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a uniform finished surface. The milling machine or grinder shall operate without tearing or gouging the underlaying surface. The milling machine or grinder shall be equipped with grade and slope controls, and a positive means of dust control. All millings shall be removed and disposed off Airport property or in areas designated on the plans. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material removed with new material at the Contractor's Expense.

a. Patching. The milling machine shall be capable of cutting a vertical edge without chipping or spalling the edges of the remaining pavement and it shall have a positive method of controlling the depth of cut. The RPR shall layout the area to be milled with a straightedge in increments of 1-foot (30 cm) widths. The area to be milled shall cover only the failed area. Any excessive area that is milled because the Contractor doesn't have the appropriate milling machine, or areas that are damaged because of his negligence, shall be repaired by the Contractor at the Contractor's Expense.

b. Profiling, grade correction, or surface correction. The milling machine shall have a minimum width of 7 feet (2 m) and it shall be equipped with electronic grade control devices that will cut the surface to the grade specified. The tolerances shall be maintained within +0 inch and -1/4 inch (+0 mm and -6mm) of the specified grade. The machine must cut vertical edges and have a positive method of dust control. The machine must have the ability to remove the millings or cuttings from the pavement and load them into a truck. All millings shall be removed and disposed of off the airport or in areas designated on the plans.

c. Clean-up. The Contractor shall sweep the milled surface daily and immediately after the milling until all residual materials are removed from the pavement surface. Prior to paving, the Contractor shall wet down the milled pavement and thoroughly sweep and/or blow the surface to remove loose residual material. Waste materials shall be collected and removed from the pavement surface and adjacent areas by sweeping or vacuuming. Waste materials shall be removed and disposed off Airport property or in areas designated on the plans.

101-3.6. Preparation of asphalt pavement surfaces prior to surface treatment. Existing asphalt pavements to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt pavement similar to that of the existing pavement in accordance with paragraph 101-3.4b.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scrubbing with a detergent and washing thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the RPR. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement prior to resealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the joint and does not damage the joint.

101-3.8.1 Removal of Existing Joint Sealant. All existing joint sealants will be removed by plowing or use of hand tools. Any remaining sealant and or debris will be removed by use of wire brushes or other tools as necessary. Resaw joints removing no more than 1/16 inch (2 mm) from each joint face. Immediately after sawing, flush out joint with water and other tools as necessary to completely remove the slurry.

101-3.8.2 Cleaning prior to sealing. Immediately before sealing, joints shall be cleaned by removing any remaining laitance and other foreign material. Allow sufficient time to dry out joints prior to sealing. Joint surfaces will be surface-dry prior to installation of sealant.

101-3.8.3 Joint sealant. Joint material and installation will be in accordance with Item P-605.

101-3.9 Preparation of Cracks in Flexible Pavement prior to sealing. Prior to application of sealant material, clean and dry the joints of all scale, dirt, dust, old sealant, curing compound, moisture and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method used cleans the cracks and does not damage the pavement.

101-3.9.1 Preparation of Crack. Widen crack with router or random crack saw by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, cracks will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Crack Sealant. Existing sealants will be removed by routing or random crack saw. Following routing or sawing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

101-3.9.3 Crack Sealant. Crack sealant material and installation will be in accordance with Item P-605.

101-3.9.4 Removal of Pipe and other Buried Structures.

a. Removal of Existing Pipe Material. Remove the types of pipe as indicated on the plans. The pipe material shall be legally disposed of off-site in a timely manner following removal. Trenches shall be backfilled with material equal to or better in quality than adjacent embankment. Trenches under paved areas must be compacted to 95% of ASTM D1557 or D698. Trenches outside of paved areas must be compacted to 95% of ASTM D1557 or D698. (Use same compaction requirements as specified in Item P-152).

b. Removal of Inlets/Manholes. Where indicated on the plans or as directed by the RPR, inlets and/or manholes shall be removed and legally disposed of off-site in a timely fashion after removal. Excavations after removal shall be backfilled with material equal or better in quality than adjacent embankment. When under paved areas must be compacted to 95% of ASTM D1557 or D698, when outside of paved areas must be compacted to 95% of ASTM D698 or ASTM D1557. (Use same compaction requirements as specified in Item P-152).

METHOD OF MEASUREMENT

101-4.1 Pavement removal. The unit of measurement for pavement removal shall be the number of square yards (square meters) removed by the Contractor. Any pavement removed outside the limits of removal because the pavement was damaged by negligence on the part of the Contractor shall not be included in the measurement for payment. No direct measurement or payment shall be made for saw cutting. Saw cutting shall be incidental to pavement removal. Dowel bar installation shall be incidental to pavement removal.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

101-4.2 Removal of Pipe and other Buried Structures. The unit of measurement for removal of pipe and other buried structures will be made at the contract unit price for each completed and accepted item. This price shall be full compensation for all labor, equipment, tools, and incidentals necessary to complete this item in accordance with paragraph 101-3.9.4.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1	Pavement Removal, PCC Pavement - per Square Yard (square meter)
Item P-101-5.2	Removal of Storm Sewer Intake – per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circulars (AC)

AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements.

ASTM International (ASTM)

ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END OF ITEM P-101

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-151 Clearing and Grubbing

DESCRIPTION

151-1.1 This item shall consist of clearing or clearing and grubbing, including the disposal of materials, for all areas within the limits designated on the plans or as required by the Resident Project Representative (RPR).

a. Clearing shall consist of the cutting and removal of all trees, stumps, brush, logs, hedges, the removal of fences and other loose or projecting material from the designated areas. The grubbing of stumps and roots will not be required.

b. Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the RPR is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing.

c. Tree Removal. Tree Removal shall consist of the cutting and removal of isolated single trees or isolated groups of trees, and the grubbing of stumps and roots. The removal of all the trees of this classification shall be in accordance with the requirements for the particular area being cleared.

CONSTRUCTION METHODS

151-2.1 General. The areas denoted on the plans to be cleared or cleared and grubbed shall be staked on the ground by the Contractor as indicated on the plans.

The removal of existing structures and utilities required to permit orderly progress of work shall be accomplished by local agencies, unless otherwise shown on the plans. Whenever a telephone pole, pipeline, conduit, sewer, roadway, or other utility is encountered and must be removed or relocated, the Contractor shall advise the RPR who will notify the proper local authority or owner to secure prompt action.

151-2.1.1 Disposal. All materials removed by clearing or by clearing and grubbing shall be disposed of outside the Airport's limits at the Contractor's responsibility or by burning if indicated in the project plans, except when otherwise directed by the RPR. When burning of material is permitted, it shall be burned under the constant overseeing of a watchman to assure the surrounding vegetation and other adjacent property is not jeopardized. Burning shall be done in accordance with all applicable federal, state and local laws, ordinances, and regulations. The Contractor shall notify the agency having jurisdiction and obtain all approvals in writing before starting any burning operations. As far as practicable, waste concrete and masonry shall be placed on slopes of embankments or channels. When embankments are constructed of such material, this material shall be placed in accordance with requirements for formation of embankments. Any broken concrete or masonry that cannot be used in construction and all other materials not considered suitable for use elsewhere, shall be disposed of by the Contractor. In no case, shall any discarded materials be left in windrows or piles adjacent to or within the airport limits. The manner and location of disposal of materials shall be subject to the approval of the RPR and shall not create an unsightly or objectionable view. When the Contractor is required to locate a disposal area outside the airport property limits, the Contractor shall obtain and file with the RPR permission in writing from the property owner for the use of private property for this purpose.

151-2.1.2 Blasting. Blasting shall not be allowed.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

151-2.2 Clearing. The Contractor shall clear the staked or indicated area of all materials as indicated on the plans. Trees unavoidably falling outside the specified clearing limits must be cut up, removed, and disposed of in a satisfactory manner. To minimize damage to trees that are to be left standing, trees shall be felled toward the center of the area being cleared. The Contractor shall preserve and protect from injury all trees not to be removed. The trees, stumps, and brush shall be cut flush with the original ground surface. The grubbing of stumps and roots will not be required.

Fences shall be removed and disposed of as directed by the RPR. Fence wire shall be neatly rolled and the wire and posts stored on the airport if they are to be used again, or stored at a location designated by the RPR if the fence is to remain the property of a local owner or authority.

151-2.3 Clearing and grubbing. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials as indicated on the plans, shall be removed, except where embankments exceeding 3-1/2 feet (105 cm) in depth will be constructed outside of paved areas. For embankments constructed outside of paved areas, all unsatisfactory materials shall be removed, but sound trees, stumps, and brush can be cut off flush with the original ground and allowed to remain. Tap roots and other projections over 1-1/2 inches (38 mm) in diameter shall be grubbed out to a depth of at least 18 inches (0.5 m) below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials shall be disposed of by removal from the site. The cost of removal is incidental to this item. The remaining or existing foundations, wells, cesspools, and like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet (60 cm) below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor's expense. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes in embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required in Item P-152. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

METHOD OF MEASUREMENT

151-3.1 The quantities of clearing and grubbing as shown by the limits on the plans shall be per lump sum of land specifically cleared and grubbed.

151-3.2 No separate measurement will be made for isolated tree removal; it shall be incidental to Item 151-4.1.a.

BASIS OF PAYMENT

151-4.1 Payment shall be made at the contract unit price per lump sum for clearing and grubbing. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

151-4.2 No separate will be made for isolated tree or groupings of trees to be removed. It shall be considered incidental Item 151-4.1.a. Payment shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Payment will be made under:

Item P-151-4.1.a Clearing And Grubbing - per Lump Sum

END OF ITEM P-151

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-152 Excavation, Subgrade, and Embankment

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature.

152-1.3 Unsuitable excavation. Unsuitable material shall be disposed in designated waste areas as shown on the plans. Materials containing vegetable or organic matter, such as muck, peat, organic silt, or sod shall be considered unsuitable for use in embankment construction. Material suitable for topsoil may be used on the embankment slope when approved by the RPR.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be cleared or cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the RPR. All unsuitable material shall be disposed of in waste areas as shown on the plans. All waste areas shall be graded to allow positive drainage of the area and adjacent areas. The surface elevation of waste areas shall be specified on the plans or approved by the RPR.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the RPR notified per Section 70, paragraph 70-20. At the direction of the RPR, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Areas outside the limits of the pavement areas where the top layer of soil has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the RPR, who shall arrange for their removal if necessary. The Contractor, at their own expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

a. Blasting. Blasting shall not be allowed.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the RPR has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. The Contractor and RPR shall agree that the original ground lines shown on the original topographic mapping are accurate, or agree to any adjustments made to the original ground lines.

Digital terrain model (DTM) files of the existing surfaces, finished surfaces and other various surfaces were used to develop the design plans.

Existing grades on the design cross sections or DTM's, where they do not match the locations of actual spot elevations shown on the topographic map, were developed by computer interpolation from those spot elevations. Prior to disturbing original grade, Contractor shall verify the accuracy of the existing ground surface by verifying spot elevations at the same locations where original field survey data was obtained as indicated on the topographic map. Contractor shall recognize that, due to the interpolation process, the actual ground surface at any particular location may differ somewhat from the interpolated surface shown on the design cross sections or obtained from the DTM's. Contractor's verification of original ground surface, however, shall be limited to verification of spot elevations as indicated herein, and no adjustments will be made to the original ground surface unless the Contractor demonstrates that spot elevations shown are incorrect. For this purpose, spot elevations which are within 0.1 foot (30 mm) of the stated elevations for ground surfaces, or within 0.04 foot (12 mm) for hard surfaces (pavements, buildings, foundations, structures, etc.) shall be considered "no change". Only deviations in excess of these will be considered for adjustment of the original ground surface. If Contractor's verification identifies discrepancies in the topographic map, Contractor shall notify the RPR in writing at least two weeks before disturbance of existing grade to allow sufficient time to verify the submitted information and make adjustments to the design cross sections or DTM's. Disturbance of existing grade in any area shall constitute acceptance by the Contractor of the accuracy of the original elevations shown on the topographic map for that area.

All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the RPR. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes as shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

The grade shall be maintained so that the surface is well drained at all times.

When the volume of the excavation exceeds that required to construct the embankments to the grades as indicated on the plans, the excess shall be used to grade the areas of ultimate development or disposed as directed by the RPR. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the RPR shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas until it can be placed. The more suitable material shall then be placed and compacted as specified. Selective grading shall be considered incidental to the work involved. The cost of stockpiling and placing the material shall be included in the various pay items of work involved.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the RPR. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans. Undercutting will be paid as unclassified excavation.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

c. Over-break. Over-break, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the RPR. All over-break shall be graded or removed by the Contractor and disposed of as directed by the RPR. The RPR shall determine if the displacement of such material was unavoidable and their own decision shall be final. Payment will not be made for the removal and disposal of over-break that the RPR determines as avoidable. Unavoidable over-break will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by the Contractor as indicated on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the RPR. All foundations thus excavated shall be backfilled with suitable material and compacted as specified for embankment or as shown on the plans.

152-2.3 Borrow excavation. Borrow areas within the airport property are indicated on the plans. Borrow excavation shall be made only at these designated locations and within the horizontal and vertical limits as staked or as directed by the RPR. All unsuitable material shall be disposed of by the Contractor as shown on the plans. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

If borrow areas are not indicated in the plans, there are no borrow sources within the boundaries of the airport property. The Contractor shall locate and obtain borrow sources, subject to the approval of the RPR. The Contractor shall notify the RPR at least 15 days prior to beginning the excavation so necessary measurements and tests can be made by the RPR. All borrow pits shall be opened to expose the various strata of acceptable material to allow obtaining a uniform product. Borrow areas shall be drained and left in a neat, presentable condition with all slopes dressed uniformly. Borrow areas shall not create a hazardous wildlife attractant.

152-2.4 Drainage excavation. Drainage excavation shall consist of excavating drainage ditches including intercepting, inlet, or outlet ditches; or other types as shown on the plans. The work shall be performed in sequence with the other construction. Ditches shall be constructed prior to starting adjacent excavation operations. All satisfactory material shall be placed in embankment fills; unsuitable material shall be placed in designated waste areas or as directed by the RPR. All necessary work shall be performed true to final line, elevation, and cross-section. The Contractor shall maintain ditches constructed on the project to the required cross-section and shall keep them free of debris or obstructions until the project is accepted.

152-2.5 Preparation of cut areas or areas where existing pavement has been removed. In those areas on which a subbase or base course is to be placed, the top 12 inches (300 mm) of subgrade shall be compacted to not less than 95% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

152-2.6 Preparation of embankment area. All sod and vegetative matter shall be removed from the surface upon which the embankment is to be placed. The cleared surface shall be broken up by plowing or scarifying to a minimum depth of 6 inches (150 mm) and shall then be compacted per paragraph 152-2.10.

Sloped surfaces steeper than one (1) vertical to four (4) horizontal shall be plowed, stepped, benched, or broken up so that the fill material will bond with the existing material. When the subgrade is part fill and part excavation or natural ground, the excavated or natural ground portion shall be scarified to a depth of 12 inches (300 mm) and compacted as specified for the adjacent fill.

No direct payment shall be made for the work performed under this section. The necessary clearing and grubbing and the quantity of excavation removed will be paid for under the respective items of work.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

152-2.7 Control Strip. The first half-day of construction of subgrade and/or embankment shall be considered as a control strip for the Contractor to demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of this specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not begin until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

152-2.8 Formation of embankments. The material shall be constructed in lifts as established in the control strip, but not less than 6 inches (150 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

The lifts shall be placed, to produce a soil structure as shown on the typical cross-section or as directed by the RPR. Materials such as brush, hedge, roots, stumps, grass and other organic matter, shall not be incorporated or buried in the embankment.

Earthwork operations shall be suspended at any time when satisfactory results cannot be obtained due to rain, freezing, or other unsatisfactory weather conditions in the field. Frozen material shall not be placed in the embankment nor shall embankment be placed upon frozen material. Material shall not be placed on surfaces that are muddy, frozen, or contain frost. The Contractor shall drag, blade, or slope the embankment to provide surface drainage at all times.

The material in each lift shall be within ±2% of optimum moisture content before rolling to obtain the prescribed compaction. The material shall be moistened or aerated as necessary to achieve a uniform moisture content throughout the lift. Natural drying may be accelerated by blending in dry material or manipulation alone to increase the rate of evaporation.

The Contractor shall make the necessary corrections and adjustments in methods, materials or moisture content to achieve the specified embankment density.

The RPR will take samples of excavated materials which will be used in embankment for testing and develop a Moisture-Density Relations of Soils Report (Proctor) in accordance with ASTM D698. A new Proctor shall be developed for each soil type based on visual classification.

Density tests will be taken by the RPR for every 1,000 square yards of compacted embankment for each lift which is required to be compacted, or other appropriate frequencies as determined by the RPR.

If the material has greater than 30% retained on the 3/4-inch (19.0 mm) sieve, follow AASHTO T-180 Annex Correction of maximum dry density and optimum moisture for oversized particles.

Rolling operations shall be continued until the embankment is compacted to not less than 95% of maximum density for non-cohesive soils, and 95% of maximum density for cohesive soils as determined by ASTM D698. Under all areas to be paved, the embankments shall be compacted to a depth of 12 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D698. As used in this specification, "non-cohesive" shall mean those soils having a plasticity index (PI) of less than 3 as determined by ASTM D4318.

On all areas outside of the pavement areas, no compaction will be required on the top 4 inches (100 mm) minimum which shall be prepared for a seedbed in accordance with Item T-901.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM 6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. The RPR shall perform all density tests.. If the specified density is not attained, the area represented by the test or as designated by the RPR shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

Compaction areas shall be kept separate, and no lift shall be covered by another lift until the proper density is obtained.

During construction of the embankment, the Contractor shall route all construction equipment evenly over the entire width of the embankment as each lift is placed. Lift placement shall begin in the deepest portion of the embankment fill. As placement progresses, the lifts shall be constructed approximately parallel to the finished pavement grade line.

When rock, concrete pavement, asphalt pavement, and other embankment material are excavated at approximately the same time as the subgrade, the material shall be incorporated into the outer portion of the embankment and the subgrade material shall be incorporated under the future paved areas. Stones, fragmentary rock, and recycled pavement larger than 4 inches (100 mm) in their greatest dimensions will not be allowed in the top 12 inches (300 mm) of the subgrade. Rockfill shall be brought up in lifts as specified or as directed by the RPR and the finer material shall be used to fill the voids forming a dense, compact mass. Rock, cement concrete pavement, asphalt pavement, and other embankment material shall not be disposed of except at places and in the manner designated on the plans or by the RPR.

When the excavated material consists predominantly of rock fragments of such size that the material cannot be placed in lifts of the prescribed thickness without crushing, pulverizing or further breaking down the pieces, such material may be placed in the embankment as directed in lifts not exceeding 2 feet (60 cm) in thickness. Each lift shall be leveled and smoothed with suitable equipment by distribution of spalls and finer fragments of rock. The lift shall not be constructed above an elevation 4 feet (1.2 m) below the finished subgrade.

There will be no separate measurement of payment for compacted embankment. All costs incidental to placing in lifts, compacting, discing, watering, mixing, sloping, and other operations necessary for construction of embankments will be included in the contract price for excavation, borrow, or other items.

152-2.9 Proof rolling. The purpose of proof rolling the subgrade is to identify any weak areas in the subgrade and not for compaction of the subgrade. Before start of embankment and After compaction is completed, the subgrade area shall be proof rolled with a 20 ton (18.1 metric ton) Tandem axle Dual Wheel Dump Truck loaded to the legal limit with tires inflated to 80 psi min. (0.551 MPa) in the presence of the RPR. Apply a minimum coverage as specified by the RPR, under pavement areas. A coverage is defined as the application of one tire print over the designated area. Soft areas of subgrade that deflect more than 1 inch (25 mm) or show permanent deformation greater than 1 inch (25 mm) shall be removed and replaced with suitable material or reworked to conform to the moisture content and compaction requirements in accordance with these specifications. Removal and replacement of soft areas is incidental to this item.

152-2.10 Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum dry density as determined by ASTM D698. The subgrade in areas outside the limits of the pavement areas shall be compacted to a depth of 12 inches (300 mm) and to a density of not less than 95 percent of the maximum density as determined by ASTM D698.

The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils). When the material has greater than 30 percent retained on the ¾ inch (19.0 mm) sieve, follow the methods in ASTM D698 and the procedures in AASHTO T180 Annex for correction of maximum dry density and optimum moisture for oversized particles. Tests for moisture content and compaction will be taken at a minimum of 1,000 S.Y. of subgrade. All quality assurance testing shall be done by the RPR.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938 within 12 months prior to its use on this contract. The gage shall be field standardized daily.

Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

If the specified density is not attained, the entire lot shall be reworked and/or re-compacted and additional random tests made. This procedure shall be followed until the specified density is reached.

All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the RPR and the finished subgrade shall be maintained.

152-2.11 Finishing and protection of subgrade. Finishing and protection of the subgrade is incidental to this item. Grading and compacting of the subgrade shall be performed so that it will drain readily. All low areas, holes or depressions in the subgrade shall be brought to grade. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans. All ruts or rough places that develop in the completed subgrade shall be graded, re-compacted, and retested. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes.

The Contractor shall maintain the completed course in satisfactory condition throughout placement of subsequent layers. No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been accepted by the RPR.

152-2.12 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

The Contractor's equipment shall not cause damage to any excavated surface, compacted lift or to the subgrade as a result of hauling operations. Any damage caused as a result of the Contractor's hauling operations shall be repaired at the Contractor's expense.

The Contractor shall be responsible for providing, maintaining and removing any haul roads or routes within or outside of the work area, and shall return the affected areas to their former condition, unless otherwise authorized in writing by the Owner. No separate payment will be made for any work or materials associated with providing, maintaining and removing haul roads or routes.

152-2.13 Surface Tolerances. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor’s expense.

- **a. Smoothness.** The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.
- **b. Grade.** The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

On safety areas, turfed areas and other designated areas within the grading limits where no subbase or base is to placed, grade shall not vary more than 0.10 feet (30 mm) from specified grade. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

152-2.14 Topsoil. When topsoil is specified or required as shown on the plans or under Item T-905, it shall be salvaged from stripping or other grading operations. The topsoil shall meet the requirements of Item T-905. If, at the time of excavation or stripping, the topsoil cannot be placed in its final section of finished construction, the material shall be stockpiled at approved locations. Stockpiles shall be located as shown on the plans and the approved CSPP, and shall not be placed on areas that subsequently will require any excavation or embankment fill. If, in the judgment of the RPR, it is practical to place the salvaged topsoil at the time of excavation or stripping, the material shall be placed in its final position without stockpiling or further re-handling.

Upon completion of grading operations, stockpiled topsoil shall be handled and placed as shown on the plans and as required in Item T-905. Topsoil shall be paid for as provided in Item T-905. No direct payment will be made for topsoil under Item P-152.

METHOD OF MEASUREMENT

152-3.1 Measurement for payment specified by the cubic yard (cubic meter) of "Unclassified Excavation," "Borrow Offsite," or "Topsoil, Strip, Salvage and Respread" shall be computed by the comparison of digital terrain model (DTM) surfaces for computation of neat line design quantities. The end area is that bound by the original ground line established by field cross-sections and the final theoretical pay line established by cross-sections shown on the plans, subject to verification by the RPR.

BASIS OF PAYMENT

152-4.1 "Unclassified excavation", "Topsoil, Strip, Salvage and Respread", and "Borrow Offsite" payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-152-4.1.a	Unclassified Excavation - per cubic yard (cubic meter)
Item P-152-4.1.b	Topsoil Strip, Salvage and Respread - per cubic yard (cubic meter)
Item P-152-4.1.c	Borrow Offsite - per cubic yard (cubic meter)

@ Bolton & Menk, Inc. 2026, All Rights Reserved

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO T-180	Standard Method of Test for Moisture-Density Relations of Soils Using a 4.54-kg (10-lb) Rammer and a 457-mm (18-in.) Drop

ASTM International (ASTM)

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

Advisory Circulars (AC)

AC 150/5370-2	Operational Safety on Airports During Construction Software

Software

FAARFIELD – FAA Rigid and Flexible Iterative Elastic Layered Design

U.S. Department of Transportation

FAA RD-76-66	Design and Construction of Airport Pavements on Expansive Soils

END OF ITEM P-152

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-156 Cement Treated Subgrade

DESCRIPTION

156-1.1 This item shall consist of constructing one or more courses of a mixture of soil, stabilizer, and water in accordance with this specification, and in conformity with the lines, grades, thickness, and typical cross-sections shown on the plans.

MATERIALS

156-2.1 Cement. Cement shall conform to the requirements of ASTM C150, Type I, IA, II, or IIA or ASTM C595, Type IS, IL, IP, or IS(A).

156-2.2 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

156-2.3 Soil. The soil for this work shall consist of on-site materials free of roots, sod, weeds, and stones larger than 2-1/2 inches (60 mm) and have a sulfate content of less than 0.3%.

COMPOSITION

156-3.1 Soil-cement mixture. Cement shall be added at an application rate of 5 percent of dry unit weight of soil.

156-3.2 Tolerances. At final compaction, the cement and water content for each course of subgrade treatment shall conform to the following tolerances:

Tolerances

Material/Properties	Target	Tolerance	Specifications
Cement	5%	0 to +1%	% Total Dry Materials
Moisture Content	Optimum +2%	0 to +1%	ASTM D698

WEATHER LIMITATIONS

156-4.1 Weather limitation. Do not construct subgrade when weather conditions detrimentally affect the quality of the materials. Do not apply cement unless the air temperature is at least 40°F (4°C) and rising. Do not apply cement to soils that are frozen or contain frost. Do not apply cement when conditions are too windy to allow even distribution of the cement to the subgrade. If the air temperature falls below 35°F (2°C), protect completed treated areas against freezing. Remove and replace any damaged portion of the completed treated area with new material in accordance with this specification.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

EQUIPMENT

156-5.1 Equipment. All equipment necessary to grade, scarify, spread, mix and compact the material shall be provided. The Resident Project Representative (RPR) must approve the Contractor's proposed equipment prior to the start of the treatment.

CONSTRUCTION METHODS

156-6.1 General. This specification is to construct a subgrade consisting of a uniform cement mixture which shall be free from loose or segregated areas. The subgrade shall be of uniform density and moisture content, well mixed for its full depth and have a smooth surface suitable for placing subsequent courses. The Contractor shall be responsible for meeting the above requirements.

Prior to any treatment, the subgrade shall be constructed as specified in Item P-152, Excavation, Subgrade and Embankment, and shaped to conform to the typical sections, lines, and grades as shown on the plans.

The mixing machine must give visible indication at all times that it is cutting, pulverizing and mixing the material uniformly to the proper depth over the full width of the cut.

156-6.2 Application. Cement shall be uniformly spread only over an area where the initial mixing operations and compaction can be completed during the same workday. The cement shall not be applied when wind conditions are detrimental to proper application. A motor grader shall not be used to spread the lime. Adequate moisture shall be added to the cement/soil mixture to maintain the proper moisture content. Materials shall be handled, stored, and applied in accordance with all federal, state, and local requirements.

156-6.3 Mixing Procedure. The full depth of the treated subgrade shall be mixed with equipment as approved by the RPR. Cement shall not be left exposed for more than one (1) hour after distribution. Mixing and pulverization shall continue until the soil cement mixture contains no clods greater than 1-1/2 inches (38 mm) in size. Final moisture content of the mix shall be determined by the Contractor immediately prior to compaction in accordance with ASTM D2216 or ASTM D4959.

156-6.4 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. Control strips that do not meet specification requirements shall be reworked, re-compacted, or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. Upon acceptance of the control strip by the RPR, the Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved in advance by the RPR.

156-6.5 Treatment Application and Depth Checks. The amount of cement applied shall be monitored by the Contractor to assure that no less than the amount of cement required by the mix design is applied. The depth of stabilization shall be measured by the Contractor no less than 2 tests per day of material placed; test shall be witnessed by the RPR. Measurements shall be made in test holes excavated to show the full depth of mixing.

156-6.6 Compaction. The moisture content shall be within the tolerance as specified in paragraph 156-3.2. The field density of the compacted mixture shall be at least 95% of the maximum density as specified in paragraph 156-6.10. Compaction of the soil/cement mixture shall begin within 30 minutes after mixing the cement into the subgrade. All compaction operations shall be completed within 2 hours from the start of mixing.

Perform in-place density test immediately after completion of compaction to determine degree of compaction. If the material fails to meet the density requirements, compaction shall continue or the material shall be removed and replaced. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

156-6.7 Finishing and curing. After the final lift or course of treated subgrade has been compacted, it shall be brought to the required lines and grades in accordance with the typical sections. Finished portions of treated subgrade shall be protected to prevent equipment from marring, permanently deforming, or damaging completed work.

Not later than 24 hours after completion of final finishing, the surface shall be cured by application of an emulsified asphalt, being kept continuously moist for a period of 7 days with a fog-type water spray , application of a curing compound or other moisture retention methods as approved by the RPR.

Sufficient protection from freezing shall be provided for at least 7 days after its construction or as approved by the RPR.

156-6.8 Maintenance. The Contractor shall maintain the entire treated subgrade in good condition from the start of work until all the work has been completed, cured, and accepted by the RPR. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meets all specification requirements. The cost shall be incidental to this item.

156-6.9 Surface tolerance. In those areas on which a subbase or base course is to be placed, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and re-compacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. The Contractor shall perform all final smoothness and grade checks in the presence of the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense.

a. Smoothness. The finished surface shall not vary more than +/- ½ inch (12 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +/-0.05 feet (15 mm) of the specified grade.

156-6.10 Acceptance sampling and testing. Aggregate base course shall be accepted for density and thickness on an area basis. Testing frequency shall be a minimum of one (1) compaction and thickness test per 1000 square yards (840 m^2) of stabilized subgrade, but not less than four (4) tests per day of production. Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. All testing shall be done by the RPR.

The field density of the compacted mixture shall be at least 95% of the maximum density as determined by ASTM D698. The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D6938, Procedure A, direct transmission method. The in-place moisture content shall be determined in accordance with ASTM D2216. If the material fails to meet the density requirements, compaction shall continue or the material shall be removed and replaced. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each sublot. Where the thickness is deficient by more than 1/2-inch (12 mm), the material shall be removed to full depth and replaced, at Contractor's expense.

METHOD OF MEASUREMENT

156-7.1 The amount of cement treated subgrade shall be based on the number of square yards (square meters) complete and accepted.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

156-7.2 The amount of cement used is based upon an application rate as specified in paragraph 156-3.1. The amount of cement shall be paid by the number of tons (kg) of cement used in the completed and accepted work.

BASIS OF PAYMENT

156-8.1 Payment for placement shall be made at the contract unit price per square yard (m) for the cement treated subgrade for the thickness specified. The price shall be full compensation for all preparation, delivering, placing and mixing these materials, and all labor, equipment, tools and incidentals necessary to complete this item.

156-8.2 Payment for cement shall be made at the contract unit price per ton **(**kg) for the cement. The price shall be full compensation for all preparation, delivering, placing and mixing these materials, and all labor, equipment, tools and incidentals necessary to complete this item.

Payment will be made under:

Item P 156-8.1	Cement Treated Subgrade, 12" - per Square Yard (Meter)
Item P 156-8.2	Cement, 5% - per Ton (kg)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C150	Standard Specification for Portland Cement
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D558	Standard Test Methods for Moisture-Density (Unit Weight) Relations of Soil-Cement Mixtures
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft3 (600 kN-m/m3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2,700 kN-m/m^3))
ASTM D1663	Standard Test Methods for Compressive Strength of Molded Soil-Cement Cylinders
ASTM D2216	Test Methods for Laboratory Determination of Water (Moisture) Soil and Rock by Mass
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM D4959	Standard Test Method for Determination of Water Content of Soil by Direct Heating
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

END OF ITEM P-156

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-208 Aggregate Base Course

DESCRIPTION

208-1.1 This item shall consist of a base course composed of course aggregate bonded with fine aggregate base. It shall be constructed on a prepared subgrade or subbase course per these specifications and shall conform to the dimensions and typical cross-section shown on the plans.

MATERIALS

208-2.1 Aggregate base. The aggregate base material shall consist of both fine and coarse aggregate. Material shall be clean, sound, durable particles and fragments of stone or gravel, crushed stone, crushed slag, or crushed gravel mixed or blended with sand, screenings, or other materials. Materials shall be handled and stored in accordance with all federal, state, and local requirements. The aggregate shall be free from clay lumps, organic matter, or other deleterious materials or coatings. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as nearly constant and uniform as practicable. The fine aggregate portion, defined as the portion passing the No. 4 (4.75 mm) sieve produced in crushing operations, shall be incorporated in the base material to the extent permitted by the gradation requirements. Aggregate base material requirements are listed in the following table.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Aggregate Base Material Requirements

Material Test	Requirement	Standard
Coarse Aggregate		
Resistance to Degradation	Loss: 50% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Percentage of Fractured Particles	Minimum 60% by weight of particles with at least two fractured faces and 75% with at least one fractured face[1]	ASTM D5821
Flat Particles, Elongated Particles, or Flat and Elongated Particles	10% maximum, by weight, of flat, elongated, or flat and elongated particles [2]	ASTM D4791
Bulk density of slag	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C2
Clay lumps and friable particles	Less than or equal to 3 percent	ASTM C142
Fine Aggregate		
Liquid limit	Less than or equal to 25	ASTM D4318
Plasticity Index	Not more than five (5)	ASTM D4318

[1] The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces.

[2] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

208-2.2 Gradation requirements. The gradation of the aggregate base material shall meet the requirements of the gradation given in the following table when tested per ASTM C117 and ASTM C136. The gradation shall be well graded from coarse to fine and shall not vary from the lower limit on one sieve to the high limit on an adjacent sieve or vice versa.

Gradation of Aggregate Base

Sieve Size	Design Range Percentage by Weight passing	Contractor's Final Gradation	Job Control Grading Band Tolerances for Contractor's Final Gradation[1] Percent
2 inch (50 mm)			±0
1-1/2 inch (37.5 mm)	100		±5
1 inch (25.0 mm)	70-100		±8
3/4 inch (19.0 mm)	55-85		±8
No. 4 (4.75 mm)	30-60		±8
No. 40 (425 µm)	10-30		±5
No. 200 (75 µm)	0-5%		±3

[1] The "Job Control Grading Band Tolerances for Contractor's Final Gradation" in the table shall be applied to "Contractor's Final Gradation" to establish a job control grading band. The full tolerance still applies if application of the tolerances results in a job control grading band outside the design range.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

208-2.3 Sampling and testing.

a. Aggregate base materials. The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraphs 208-2.1 and 208-2.2. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. Gradation requirements. The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 208-2.2. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

208-2.4 Separation Geotextile. If shown in plans**,** separation geotextile shall be Class 2, 0.02 sec^{-1} permittivity per ASTM D4491, Apparent opening size per ASTM D4751 with 0.60 mm maximum average roll value.

CONSTRUCTION METHODS

208-3.1 Control strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved by the RPR.

208-3.2 Preparing underlying subgrade and/or subbase. The underlying subgrade and/or subbase shall be checked and accepted by the RPR before base course placing and spreading operations begin. Re-proof rolling of the subgrade or proof rolling of the subbase in accordance with Item P-152, at the Contractor's expense, may be required by the RPR if the Contractor fails to ensure proper drainage or protect the subgrade and/or subbase. Any ruts or soft, yielding areas due to improper drainage conditions, hauling, or any other cause, shall be corrected before the base course is placed. To ensure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.

208-3.3 Production. The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 208-3.5, the approved material may be transported directly to the placement.

208-3.4 Placement. The aggregate shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The aggregate shall meet gradation and moisture requirements prior to compaction. The base course layer shall be constructed in lifts as established in the control strip, but not less than 4 inches (100 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications at the Contractor's expense.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

208-3.5 Compaction. Immediately upon completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade.

The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the base material delivered to the jobsite. The laboratory specimens shall be compacted and tested in accordance with ASTM D698. The moisture content of the material during placing operations shall be within ±2 percentage points of the optimum moisture content as determined by ASTM D698. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

208-3.6 Weather limitations. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

208-3.7 Maintenance. The base course shall be maintained in a condition that will meet all specification requirements. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at their expense.

208-3.8 Surface tolerances. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. Smoothness. The finished surface shall not vary more than 3/8-inch (9 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +0 and -1/2 inch (12 mm) of the specified grade.

208-3.9 Acceptance sampling and testing. Aggregate base course shall be accepted for density and thickness on an area basis. Two tests will be made for density and thickness for each 1000 square yards (840 square meters). Sampling locations will be determined on a random basis per ASTM D3665.

a. **Density.** The RPR shall perform all density tests.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D698. The in-place field density shall be determined per ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

b. Thickness. Depth tests shall be made by test holes at least 3 inches (75 mm) in diameter that extend through the base. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

208-4.1 The quantity of aggregate base course shall be measured by the number of square yards (square meters) of material actually constructed and accepted by the RPR as complying with the plans and specifications. Base materials shall not be included in any other excavation quantities.

BASIS OF PAYMENT

208-5.1 Payment shall be made at the contract unit price per square yards (square meters) for aggregate base course. This price shall be full compensation for furnishing all materials and for all operations, hauling, placing, and compacting of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-208-5.1	Aggregate Base Course, 6” - per Square Yard (square meter)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C29	Standard Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D2487	Standard Practice for Classification of Soils for Engineering Purposes (Unified Soil Classification System)
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4491	Standard Test Methods for Water Permeability of Geotextiles by Permittivity
ASTM D4643	Standard Test Method for Determination of Water Content of Soil and Rock by Microwave Oven Heating
ASTM D4751	Standard Test Methods for Determining Apparent Opening Size of a Geotextile
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D5821	Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)
ASTM D7928	Standard Test Method for Particle-Size Distribution (Gradation) of Fine-Grained Soils Using the Sedimentation (Hydrometer) Analysis

American Association of State Highway and Transportation Officials (AASHTO)

M288	Standard Specification for Geosynthetic Specification for Highway Applications

END OF ITEM P-208

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-219 Recycled Concrete Aggregate Base Course

DESCRIPTION

219-1.1 This item consists of a base course composed of recycled concrete aggregate, crushed to meet a particular gradation, constructed on a prepared course per these specifications and in conformity to the dimensions and typical cross-sections shown on the plans.

MATERIALS

219-2.1 Aggregate. Recycled concrete aggregate shall consist of cement concrete. The recycled concrete material shall be free of reinforcing steel and expansion material. Asphalt overlays and any full slab asphalt panels shall be removed from the concrete surface prior to removal and crushing.

Recycled concrete aggregate shall consist of at least 90%, by weight, cement concrete; virgin aggregates may be added to meet the 90% minimum concrete requirement. The remaining 10% may consist of the following materials:

Deleterious Materials

Material	Quantity
Wood	0.1% maximum
Brick, mica, schist, or other friable materials	4% maximum
Asphalt concrete	10% maximum
Total	10 % maximum

Recycled Concrete Aggregate Base Material Requirements

Material Test	Requirement	Standard
Coarse Aggregate		
Resistance to Degradation	Loss: 45% maximum	ASTM C131
Flat Particles, Elongated Particles, or Flat and Elongated Particles[1]	10% maximum, by weight, for fraction retained on the ½ inch (12.5mm) sieve and 10% maximum, by weight, for the fraction passing the 1/2-inch (12.5 mm) sieve	ASTM D4791
Clay lumps and friable particles	Less than or equal to 3 percent	ASTM C142
Fine Aggregate Portion		
Liquid limit	Less than or equal to 25	ASTM D4318
Plasticity Index	Not more than four (4)	ASTM D4318

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The fine aggregate shall be produced by crushing stone, gravel, slag, or recycled concrete that meet the requirements for wear and soundness specified for coarse aggregate. Fine aggregate may be added to produce the correct gradation.

Each source of recycled concrete aggregate shall meet the above requirements.

Recycled concrete aggregate shape depends on the characteristics of the recycled concrete, plant type, and plant operation speed. This may require a number of trial batches before crushed recycled concrete aggregate meeting the shape and gradation requirements can be produced.

219-2.2 Gradation requirements. The gradation (job mix) of the final mixture shall fall within the design range indicated in the following table, when tested per ASTM C117 and ASTM C136. The final gradation shall be continuously graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on an adjacent sieve or vice versa.

Gradation of Recycled Concrete Aggregate Base

Sieve Size	Percentage by Weight Passing Sieves	Contractor's Final Gradation	Job Mix Tolerances Percent
2 inch (50 mm)	100		--
1-1/2 inch (37.5 mm)	95 - 100		±5
1 inch (25.0 mm)	70 - 95		±8
3/4 inch (19.0 mm)	55 - 85		±8
No. 4 (4.75 mm)	30 - 60		±8
No. 30 (600 µm)	12 - 30		±5
No. 200 (75 µm)	0 - 5		±3

The job mix tolerances in the table shall be applied to the job mix gradation to establish a job control gradation band. The full tolerance still will apply if application of the tolerances results in a job control gradation band outside the design range.

219-2.3 Sampling and testing.

a. Aggregate base materials. The Contractor shall take samples of the aggregate base in accordance with ASTM D75 to verify initial aggregate base requirements and gradation. Material shall meet the requirements in paragraphs 219-2.1 and 219-2.2. This sampling and testing will be the basis for approval of the aggregate base quality requirements.

b. Gradation requirements. The Contractor shall take at least two aggregate base samples per day in the presence of the Resident Project Representative (RPR) to check the final gradation. Sampling shall be per ASTM D75. Material shall meet the requirements in paragraph 219-2.2. The lot will be consistent with the lot size used for density. The samples shall be taken from the in-place, un-compacted material at sampling points and intervals designated by the RPR.

219-2.4 Separation Geotextile. Separation Geotextile shall be class 2, 0.02 sec^{-1} permittivity per ASTM D4491, Apparent opening size per ASTM D4751 with 0.60 mm maximum average roll value.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONSTRUCTION METHODS

219-3.1 Control Strip. The first half-day of construction shall be considered the control strip. The Contractor shall demonstrate, in the presence of the RPR, that the materials, equipment, and construction processes meet the requirements of the specification. The sequence and manner of rolling necessary to obtain specified density requirements shall be determined. The maximum compacted thickness may be increased to a maximum of 12 inches (300 mm) upon the Contractor's demonstration that approved equipment and operations will uniformly compact the lift to the specified density. The RPR must witness this demonstration and approve the lift thickness prior to full production.

Control strips that do not meet specification requirements shall be reworked, re-compacted or removed and replaced at the Contractor's expense. Full operations shall not continue until the control strip has been accepted by the RPR. The Contractor shall use the same equipment, materials, and construction methods for the remainder of construction, unless adjustments made by the Contractor are approved by the RPR.

219-3.2 Preparing underlying course. The underlying course shall be checked by the RPR before placing and spreading operations are started. Any ruts or soft yielding places caused by improper drainage conditions, hauling, or any other cause shall be corrected at the Contractor's expense before the base course is placed there. Material shall not be placed on frozen material.

To protect the existing layers and to ensure proper drainage, the spreading of the recycled concrete aggregate base course shall begin along the centerline of the pavement on a crowned section or on the greatest contour elevation of a pavement with a variable uniform cross slope.

219-3.3 Placement. The aggregate shall be placed and spread on the prepared underlying layer by spreader boxes or other devices as approved by the RPR, to a uniform thickness and width. The equipment shall have positive thickness controls to minimize the need for additional manipulation of the material. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

The aggregate shall meet gradation and moisture requirements prior to compaction. The subbase course shall be constructed in lifts as established in the control strip, but not less than 4 inches (100 mm) nor more than 12 inches (300 mm) of compacted thickness.

When more than one lift is required to establish the layer thickness shown on the plans, the construction procedure described here shall apply to each lift. No lift shall be covered by subsequent lifts until tests verify that compaction requirements have been met. The Contractor shall rework, re-compact and retest any material placed which does not meet the specifications.

219-3.4 Compaction. Immediately upon completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density within the same day that the aggregate is placed on the subgrade.

The field density of each compacted lift of material shall be at least 100% of the maximum density of laboratory specimens prepared from samples of the subbase material delivered to the jobsite. The laboratory specimens shall be compacted and tested in accordance with ASTM D698. The moisture content of the material during placing operations shall be within ±2 percentage points of the optimum moisture content as determined by ASTM D698. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

219-3.5 Weather limitations. Material shall not be placed unless the ambient air temperature is at least 40°F (4°C) and rising. Work on base course shall not be conducted when the subgrade or subbase is wet or frozen or the base material contains frozen material.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

219-3.6 Maintenance. The base course shall be maintained in a condition that will meet all specification requirements. When material has been exposed to excessive rain, snow, or freeze-thaw conditions, prior to placement of additional material, the Contractor shall verify that materials still meet all specification requirements. Equipment may be routed over completed sections of base course, provided that no damage results and the equipment is routed over the full width of the completed base course. Any damage resulting to the base course from routing equipment over the base course shall be repaired by the Contractor at their expense.

219-3.7 Surface tolerances. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the RPR. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. Smoothness. The finished surface shall not vary more than 3/8-inch (9 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Grade. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +0 and 1/2 inch (12 mm) of the specified grade.

219-3.8 Acceptance sampling and testing for density. Recycled Concrete Aggregate base course shall be accepted for density and thickness on an area basis. Two tests shall be made for density and thickness for each 1000 square yds (840 m^2). Sampling locations will be determined on a random basis per ASTM D3665.

a. Density. The RPR shall perform all density tests.

Each area shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM D698. The in-place field density shall be determined per ASTM D1556 or ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the area represented by the failed test must be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached. Maximum density refers to maximum dry density at optimum moisture content unless otherwise specified.

b. Thickness. Depth tests shall be made by test holes at least 3 inches (75 mm) in diameter that extend through the base. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by depth tests taken by the Contractor in the presence of the RPR for each area. Where the thickness is deficient by more than 1/2-inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

METHOD OF MEASUREMENT

219-4.1 The quantity of recycled concrete aggregate base course will be determined by measurement of the number of square yards (square meters) of material actually constructed and accepted as complying with the plans and specifications.

BASIS OF PAYMENT

219-5.1 Payment shall be made at the contract unit price per square yard (square meter) for recycled concrete aggregate base course. This price shall be full compensation for furnishing all materials, for preparing and placing these materials, and for all labor, equipment tools, and incidentals necessary to complete the item.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

219-5.2 Payment shall be made at the contract unit price per square yard (square meter) for separation geotextile. The price shall be full compensation for furnishing all labor, equipment, material, anchors, and incidentals necessary.

Payment will be made under:

Item P-219-5.1 Aggregate Base Course, 6" - per Square Yard (square meter)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C29	Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C117	Standard Test Method for Materials Finer than 75 µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregate
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand Cone Method
ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4643	Standard Test Method for Determination of Water (Moisture) Content of Soil by Microwave Oven Heating
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D6938	Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

END OF ITEM P-219

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-501 Cement Concrete Pavement

DESCRIPTION

501-1.1 This work shall consist of pavement composed of cement concrete with reinforcement constructed on a prepared underlying surface in accordance with these specifications and shall conform to the lines, grades, thickness, and typical cross-sections shown on the plans. The terms cement concrete, hydraulic cement concrete, and concrete are interchangeable in this specification.

MATERIALS

501-2.1 Aggregates.

a. Reactivity. Fine and Coarse aggregates to be used in PCC on this project shall be tested and evaluated by the Contractor for alkali-aggregate reactivity in accordance with both ASTM C1260 and ASTM C1567. Tests must be representative of aggregate sources which will be providing material for production. ASTM C1260 and ASTM C1567 tests may be run concurrently.

(1) Test coarse aggregate and fine aggregate separately, in accordance with ASTM C1260; however, extend the length of the test to 28 days (30 days from casting). Complete the tests within six months of the date of the concrete submittal. If expansion of either the coarse or fine aggregate exceeds 0.10% at 28 days, limit the alkali loading of the concrete to be less than or equal to 3.0 lb per cubic yard (1.8 kg per cubic meter),calculated in accordance with EB 106.

(2) The combined coarse and fine aggregate shall be tested in accordance with ASTM C1567, modified for combined aggregates, using the proposed mixture design proportions of aggregates, cementitious materials, and/or specific reactivity reducing chemicals. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

(3) If lithium nitrate is proposed for use with or without supplementary cementitious materials, the aggregates shall be tested in accordance with Corps of Engineers (COE) Concrete Research Division (CRD) C662 in lieu of ASTM C1567. If lithium nitrate admixture is used, it shall be nominal 30% ±0.5% weight lithium nitrate in water. If the expansion does not exceed 0.10% at 28 days, the proposed combined materials will be accepted. If the expansion is greater than 0.10% at 28 days, the aggregates will not be accepted unless adjustments to the combined materials mixture can reduce the expansion to less than 0.10% at 28 days, or new aggregates shall be evaluated and tested.

b. Fine aggregate. Grading of the fine aggregate, as delivered to the mixer, shall conform to the requirements of ASTM C33 and the parameters identified in the fine aggregate material requirements below. Fine aggregate material requirements and deleterious limits are shown in the table below.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Fine Aggregate Material Requirements		
Soundness of Aggregates by Use of Sodium Sulfate **or** Magnesium Sulfate	Loss after 5 cycles: 10% maximum using Sodium sulfate - or - 15% maximum using magnesium sulfate	ASTM C88
Sand Equivalent	45 minimum	ASTM D2419
Fineness Modulus (FM)	2.50 ≤ FM ≤ 3.40	ASTM C136
Limits for Deleterious Substances in Fine Aggregate for Concrete		
Clay lumps and friable particles	1.0% maximum	ASTM C142
Coal and lignite	0.5% using a medium with a density of Sp. Gr. of 2.0	ASTM C123

c. Coarse aggregate. The maximum size coarse aggregate shall be 1".

Aggregates delivered to the mixer shall be clean, hard, uncoated aggregates consisting of crushed stone, crushed or uncrushed gravel, air-cooled iron blast furnace slag, crushed recycled concrete pavement, or a combination. The aggregates shall have no known history of detrimental pavement staining. Steel blast furnace slag shall not be permitted. Coarse aggregate material requirements and deleterious limits are shown in the table below; washing may be required to meet aggregate requirements.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Coarse Aggregate Material Requirements

Material Test	Requirement	Standard
Resistance to Degradation	Loss: 40% maximum	ASTM C131
Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate	Loss after 5 cycles: 12% maximum using Sodium sulfate - or - 18% maximum using magnesium sulfate	ASTM C88
Flat, Elongated, or Flat and Elongated Particles	8% maximum, by weight, of flat, elongated, or flat and elongated particles at 5:1 for any size group coarser than 3/8 (9.5 mm) sieve [1]	ASTM D4791
Bulk density of slag [2]	Weigh not less than 70 pounds per cubic foot (1.12 Mg/cubic meter)	ASTM C29
D-cracking (Freeze-Thaw)[3]	Durability factor ≥ 95	ASTM C666

[1] A flat particle is one having a ratio of width to thickness greater than five (5); an elongated particle is one having a ratio of length to width greater than five (5).

[2] Only required if slag is specified.

[3] Coarse aggregate may only be accepted from sources that have a 20-year service history for the same gradation to be supplied with no history of D-Cracking. The aggregate supplier must certify the **20-year service history and include surveillance documentation from a State DOT for at least 20 years. Documentation from the DOT should include an aggregate gradation that matches the gradation used in the project mix design.** Aggregates that do not have a 20-year record of service free from major repairs (less than 5% of slabs replaced) in similar conditions without D-cracking shall not be used unless the material currently being produced has a durability factor greater than or equal to 95 per ASTM C666. The Contractor shall submit a current certification and test results to verify the aggregate acceptability. Test results will only be accepted from a State Department of Transportation (DOT) materials laboratory or an accredited laboratory. Certification and test results which are not dated or which are over one (1) year old or which are for different gradations will not be accepted. **State DOT tests are not considered to be a sufficient substitution for ASTM 666.**

The amount of deleterious material in the coarse aggregate shall not exceed the following limits:

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Limits for Deleterious Substances in Coarse Aggregate

Deleterious material	ASTM	Percentage by Mass
Clay Lumps and friable particles	ASTM C142	1.0
Material finer than No. 200 sieve (75 µm)	ASTM C117	1.0[1]
Lightweight particles	ASTM C123 using a medium with a density of Sp. Gr. of 2.0	0.5
Chert[2] (less than 2.40 Sp Gr.)	ASTM C123 using a medium with a density of Sp. Gr. of 2.40)	0.1[3]
Total of all deleterious Material		3.0[1]

[1] The limit for material finer than 75-µm is allowed to be increased to 1.5% for crushed aggregates consisting of dust of fracture that is essentially free from clay or shale. Test results supporting acceptance of increasing limit to 1.5% with statement indicating material is dust of fracture must be submitted with Concrete mix. Acceptable techniques to characterizing these fines include methylene blue adsorption or X-ray diffraction analysis.

[2] Chert and aggregates with less than 2.4 specific gravity.

[3] The limit for chert may be increased to 1.0 percent by mass in areas not subject to severe freeze and thaw.

d. Combined aggregate gradation. This specification is targeted for a combined aggregate gradation developed following the guidance presented in United States Air Force Engineering Technical Letter (ETL) 97-5: Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements. Base the aggregate grading upon a combination of all the aggregates (coarse and fine) to be used for the mixture proportioning. Three aggregate sizes may be required to achieve an optimized combined gradation that will produce a workable concrete mixture for its intended use. Use aggregate gradations that produce concrete mixtures with well-graded or optimized aggregate combinations. The Contractor shall submit complete mixture information necessary to calculate the volumetric components of the mixture. The combined aggregate grading shall meet the following requirements:

(1) The materials selected and the proportions used shall be such that when the Coarseness Factor (CF) and the Workability Factor (WF) are plotted on a diagram as described in paragraph 501-2.1d(4) below, the point thus determined shall fall within the parallelogram described therein.

(2) The CF shall be determined from the following equation:

CF = (cumulative percent retained on the 3/8 in. (9.5 mm) sieve)(100) / (cumulative percent retained on the No. 8 (2.36 mm) sieve)

(3) The WF is defined as the percent passing the No. 8 (2.36 mm) sieve based on the combined gradation. However, WF shall be adjusted, upwards only, by 2.5 percentage points for each 94 pounds (42 kg) of cementitious material per cubic meter yard greater than 564 pounds per cubic yard (335 kg per cubic meter).

(4) A diagram shall be plotted using a rectangular scale with WF on the Y-axis with units from 20 (bottom) to 45 (top), and with CF on the X-axis with units from 80 (left side) to 30 (right side). On this diagram a parallelogram shall be plotted with corners at the following coordinates (CF-75, WF-28), (CF-75, WF-40), (CF-45, WF-32.5), and (CF-45, WF-44.5). If the point determined by the intersection of the computed CF and WF does not fall within the above parallelogram, the grading of each size of aggregate used and the proportions selected shall be changed as necessary. The point determined by the plotting of the CF and WF may be adjusted during production ±3 WF and ±5 CF. Adjustments to gradation may not take the point outside of the parallelogram.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

e. Contractors combined aggregate gradation. The Contractor shall submit their combined aggregate gradation using the following format:

Contractor's Combined Aggregate Gradation[1]

Sieve Size	Contractor's Concrete mix Gradation (Percent passing by weight)[1]
2 inch (50 mm)	*
1-1/2 inch (37.5 mm)	*
1 inch (25.0 mm)	*
3/4 inch (19.0 mm)	*
1/2 inch (12.5 mm)	*
3/8 inch (9.5 mm)	*
No. 4 (4.75 mm)	*
No. 8 (2.36 mm)	*
No. 16 (1.18 mm)	*
No. 30 (600 µm)	*
No. 50 (300 µm)	*
No. 100 (150 µm)	*
No. 200 (75 µm)	*

* Values to be provided by the contractor

[1] Contractor shall use readily available standard gradations listed in aggregate gradation table for Coarse Aggregates and Fine Aggregates in the Iowa Department of Transportation Standard Reference Specifications to complete the above gradation table.

501-2.2 Cement. Cement shall conform to the requirements of ASTM C150 Type I, II, or V; ASTM C595 -Type IS, IP, IL or IT.

501-2.3 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total alkali content less than 3% per ASTM C311. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the Resident Project Representative (RPR).

@ Bolton & Menk, Inc. 2026, All Rights Reserved

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

c. Raw or calcined natural pozzolan. Natural pozzolan shall be raw or calcined and conform to ASTM C618, Class N, including the optional requirements for uniformity and effectiveness in controlling Alkali-Silica reaction and shall have a loss on ignition not exceeding 6%. Class N pozzolan for use in mitigating Alkali-Silica Reactivity shall have a total available alkali content less than 3%.

d. Ultrafine fly ash and ultrafine pozzolan. UltraFine Fly Ash (UFFA) and UltraFine Pozzolan (UFP) shall conform to ASTM C618, Class F or N, and the following additional requirements:

(1) The strength activity index at 28 days of age shall be at least 95% of the control specimens.

(2) The average particle size shall not exceed 6 microns.

501-2.4 Joint seal. The joint seal for the joints in the concrete pavement shall meet the requirements of Item P-605 and shall be of the type specified in the plans.

501-2.5 Isolation joint filler. Premolded joint filler for isolation joints shall conform to the requirements of ASTM D1751 or ASTM D1752 and shall be where shown on the plans. The filler for each joint shall be furnished in a single piece for the full depth and width required for the joint, unless otherwise specified by the RPR. When the use of more than one piece is required for a joint, the abutting ends shall be fastened securely and held accurately to shape by stapling or other positive fastening means satisfactory to the RPR.

501-2.6 Steel reinforcement. Reinforcing shall consist of epoxy coated welded wire fabric and epoxy coated reinforcement conforming to the requirements of ASTM A884 and ASTM A775. Welded wire fabric shall be furnished in flat sheets only.

501-2.7 Dowel and tie bars. Dowel bars shall be plain steel bars conforming to ASTM A615 and shall be free from burring or other deformation restricting slippage in the concrete. All dowel bars and tie bars shall be epoxy coated.

a. Dowel Bars. Before delivery to the construction site each dowel bar shall be epoxy coated per ASTM A1078, Type 1, with a coating thickness after curing greater than 10 mils. Patched ends are not required for Type 1 coated dowels. The dowels shall be coated with a bond-breaker recommended by the manufacturer. Dowel sleeves or inserts are not permitted. Grout retention rings shall be fully circular metal or plastic devices capable of supporting the dowel until the grout hardens.

b. Tie Bars. Tie bars shall be deformed steel bars and conform to the requirements of ASTM A615. Tie bars designated as Grade 60 in ASTM A615 or ASTM A706 shall be used for construction requiring bent bars.

501-2.8 Water. Water used in mixing or curing shall be potable. If water is taken from other sources considered non-potable, it shall meet the requirements of ASTM C1602.

501-2.9 Material for curing concrete. Curing materials shall conform to one of the following specifications:

a. Liquid membrane-forming compounds for curing concrete shall conform to the requirements of ASTM C309, Type 2, Class A, or Class B.

b. White polyethylene film for curing concrete shall conform to the requirements of ASTM C171.

c. White burlap-polyethylene sheeting for curing concrete shall conform to the requirements of ASTM C171.

d. Waterproof paper for curing concrete shall conform to the requirements of ASTM C171.

501-2.10 Admixtures. Admixtures shall conform to the following specifications:

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entraining agent and any water reducer admixture shall be compatible.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D.

c. Other admixtures. The use of set retarding and set-accelerating admixtures shall be approved by the RPR prior to developing the concrete mix. Retarding admixtures shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating admixtures shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

d. Lithium Nitrate. The lithium admixture shall be a nominal 30% aqueous solution of Lithium Nitrate, with a density of 10 pounds/gallon (1.2 kg/L), and shall have the approximate chemical form as shown below:

Lithium Admixture

Constituent	Limit (Percent by Mass)
LiNO3 (Lithium Nitrate)	30 ±0.5
SO4 (Sulfate Ion)	0.1 (max)
Cl (Chloride Ion)	0.2 (max)
Na (Sodium Ion)	0.1 (max)
K (Potassium Ion)	0.1 (max)

The lithium nitrate admixture dispensing and mixing operations shall be verified and certified by the lithium manufacturer's representative.

501-2.11 Epoxy-resin. All epoxy-resin materials shall be two-component materials conforming to the requirements of ASTM C881, Class as appropriate for each application temperature to be encountered, except that in addition, the materials shall meet the following requirements:

a. Material for use for embedding dowels and anchor bolts shall be Type IV, Grade 3.

b. Material for use as patching materials for complete filling of spalls and other voids and for use in preparing epoxy resin mortar shall be Type III, Grade as approved.

c. Material for use for injecting cracks shall be Type IV, Grade 1.

d. Material for bonding freshly mixed Portland cement concrete or mortar or freshly mixed epoxy resin concrete or mortar to hardened concrete shall be Type V, Grade as approved.

501-2.12 Bond Breaker. Not required.

CONCRETE MIX

501-3.1. General. No concrete shall be placed until an acceptable concrete mix has been submitted to the RPR for review and the RPR has taken appropriate action. The RPR's review shall not relieve the Contractor of the responsibility to select and proportion the materials to comply with this section.

501-3.2 Concrete Mix Laboratory. The laboratory used to develop the concrete mix shall be accredited in accordance with ASTM C1077. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the concrete mix must be included in the lab accreditation. A copy of the

@ Bolton & Menk, Inc. 2026, All Rights Reserved

laboratory's current accreditation and accredited test methods shall be submitted to the RPR prior to start of construction.

501-3.3 Concrete Mix Proportions. Develop the mix using the procedures contained in Portland Cement Association (PCA) publication, "Design and Control of Concrete Mixtures." Concrete shall be proportioned to achieve a 28-day compressive strength that meets or exceeds the acceptance criteria contained in paragraph 501-6.6 for a compressive strength of 4400 psi per ASTM C39.

The minimum cementitious material shall be adequate to ensure a workable, durable mix. The minimum cementitious material (cement plus fly ash, or slag cement) shall be 517 pounds per cubic yard (310 kg per cubic meter). The ratio of water to cementitious material, including free surface moisture on the aggregates but not including moisture absorbed by the aggregates shall be between 0.38 – 0.45 by weight.

Compressive strength test specimens shall be prepared in accordance with ASTM C192 and tested in accordance with ASTM C39. At the start of the project, the Contractor shall determine an allowable slump as determined by ASTM C143 not to exceed 2 inches (50 mm) for slip-form placement. For fixed-form placement, the slump shall not exceed 3 inches (75 mm). For hand placement, the slump shall not exceed 4 inches (100 mm).

The results of the concrete mix shall include a statement giving the maximum nominal coarse aggregate size and the weights and volumes of each ingredient proportioned on a one cubic yard (meter) basis. Aggregate quantities shall be based on the mass in a saturated surface dry condition.

If a change in source(s) is made, or admixtures added or deleted from the mix, a new concrete mix must be submitted to the RPR for approval.

The RPR may request samples at any time for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

501-3.4 Concrete Mix submittal. The concrete mix shall be submitted to the RPR at least 30 days prior to the start of operations. The submitted concrete mix shall not be more than 180 days old and must use the materials to be used for production for the project. Production shall not begin until the concrete mix is approved in writing by the RPR.

Each of the submitted concrete mixes (i.e, slip form, side form machine finish and side form hand finish) shall be stamped or sealed by the responsible professional Engineer of the laboratory and shall include the following items and quantities as a minimum:

- Certified material test reports for aggregate in accordance with paragraph 501-2.1. Certified reports must include all tests required; reporting each test, test method, test result, and requirement specified (criteria).
- Combined aggregate gradations and analysis; and including plots of the fine aggregate fineness modulus.
- Reactivity Test Results.
- Coarse aggregate quality test results, including deleterious materials.
- Fine aggregate quality test results, including deleterious materials.
- Mill certificates for cement and supplemental cementitious materials.
- Certified test results for all admixtures, including Lithium Nitrate if applicable.
- Specified flexural and compressive strength, slump, and air content.
- Recommended proportions/volumes for proposed mixture and trial water-cementitious materials ratio, including actual slump and air content.
- Flexural and Compressive strength summaries and plots, including all individual beam and cylinder breaks.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

- Correlation ratios for acceptance testing and Contractor QC testing, when applicable.
- Historical record of test results documenting production standard deviation, when applicable.
- Alkali loading contributed by the cement per cubic yard, calculated in accordance with EB 106.

501-3.5 Cementitious materials.

a. Fly ash. When fly ash is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If fly ash is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

b. Slag cement (ground granulated blast furnace (GGBF)). Slag cement may be used. The slag cement, or slag cement plus fly ash if both are used, may constitute between 25 to 55% of the total cementitious material by weight.

c. Raw or calcined natural pozzolan. Natural pozzolan may be used in the concrete mix. When pozzolan is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 20 and 30% by weight of the total cementitious material. If pozzolan is used in conjunction with slag cement the maximum replacement rate shall not exceed 10% by weight of total cementitious material.

d. Ultrafine fly ash (UFFA) and ultrafine pozzolan (UFP). UFFA and UFP may be used in the concrete mix with the RPR's approval. When UFFA and UFP is used as a partial replacement for cement, the replacement rate shall be determined from laboratory trial mixes, and shall be between 7% and 16% by weight of the total cementitious material.**501-3.6 Admixtures.**

a. Air-entraining admixtures. Air-entraining admixture are to be added in such a manner that will ensure uniform distribution of the agent throughout the batch. The air content of freshly mixed air-entrained concrete shall be based upon trial mixes with the materials to be used in the work adjusted to produce concrete of the required plasticity and workability. The percentage of air in the mix shall be 6.0%. Air content shall be determined by testing in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag and other highly porous coarse aggregate.

b. Water-reducing admixtures. Water-reducing admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

c. Other admixtures. Set controlling, and other approved admixtures shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements. Tests shall be conducted with the materials to be used in the work, in accordance with ASTM C494.

d. Lithium nitrate. Lithium nitrate shall be added to the mix in the manner recommended by the manufacturer and in the amount necessary to comply with the specification requirements in accordance with paragraph 501-2.10d.

CONSTRUCTION METHODS

501-4.1 Control Strip. The control strip(s) shall be to the next planned joint after the initial 250 feet (75 m) of each type of pavement construction (slip-form pilot lane, slip-form fill-in lane, or fixed form). The Contractor shall demonstrate, in the presence of the RPR, that the materials, concrete mix, equipment, construction processes, and quality control processes meet the requirements of the specifications. The concrete mixture shall be extruded from the paver meeting the edge slump tolerance and with little or no finishing. Pilot, fill-in, and fixed-form control strips will be accepted separately. Minor adjustments to the mix design may be required to place an acceptable control strip. The production mix will be the adjusted mix design used to place the acceptable control strip. Upon acceptance of the control strip by the RPR, the Contractor must use the same equipment, materials, and construction methods for the remainder of concrete paving. Any adjustments to processes or materials must be approved in advance by the RPR. Acceptable control strips will meet edge slump tolerance and surface acceptable with little or no finishing,

@ Bolton & Menk, Inc. 2026, All Rights Reserved

air content within action limits, strength equal or greater than requirements of P501-3.3. The control strip will be considered one lot for payment (no sublots required for control strip). Payment will only be made for an acceptable control strip in accordance with paragraph 501-8.1 using a lot pay factor equal to 100.

501-4.2 Equipment. The Contractor is responsible for the proper operation and maintenance of all equipment necessary for handling materials and performing all parts of the work to meet this specification.

a. Plant and equipment. The plant and mixing equipment shall conform to the requirements of ASTM C94 and/or ASTM C685. Each truck mixer shall have attached in a prominent place a manufacturer's nameplate showing the capacity of the drum in terms of volume of mixed concrete and the speed of rotation of the mixing drum or blades. The truck mixers shall be examined daily for changes in condition due to accumulation of hard concrete or mortar or wear of blades. The pickup and throwover blades shall be replaced when they have worn down 3/4 inch (19 mm) or more. The Contractor shall have a copy of the manufacturer's design on hand showing dimensions and arrangement of blades in reference to original height and depth.

Equipment for transferring and spreading concrete from the transporting equipment to the paving lane in front of the finishing equipment shall be provided. The equipment shall be specially manufactured, self-propelled transfer equipment which will accept the concrete outside the paving lane and will spread it evenly across the paving lane in front of the paver and strike off the surface evenly to a depth which permits the paver to operate efficiently.

b. Finishing equipment.

(1) Slip-form. The standard method of constructing concrete pavements shall be with an approved slip-form paving equipment designed and operated to spread, consolidate, screed, and finish the freshly placed concrete in one complete pass of the machine so that the end result is a dense and homogeneous pavement which is achieved with a minimum of hand finishing. The paver-finisher shall be a heavy duty, self-propelled machine designed specifically for paving and finishing high quality concrete pavements.

(2) Fixed-form. On projects requiring less than 500 cubic yards (380 cubic meters) of concrete pavement or irregular areas at locations inaccessible to slip-form paving equipment, concrete pavement may be placed with equipment specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR. Hand screeding and float finishing may only be used on small irregular areas as allowed by the RPR.

c. Vibrators. Vibrator shall be the internal type. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation or voids. The number, spacing, and frequency shall be as necessary to provide a dense and homogeneous pavement and meet the recommendations of American Concrete Institute (ACI) 309R, Guide for Consolidation of Concrete. Adequate power to operate all vibrators shall be available on the paver. The vibrators shall be automatically controlled so that they shall be stopped as forward motion ceases. The Contractor shall provide an electronic or mechanical means to monitor vibrator status. The checks on vibrator status shall occur a minimum of two times per day or when requested by the RPR.

Hand held vibrators may only be used in irregular areas and shall meet the recommendations of ACI 309R, Guide for Consolidation of Concrete.

d. Concrete saws. The Contractor shall provide sawing equipment adequate in number of units and power to complete the sawing to the required dimensions. The Contractor shall provide at least one standby saw in good working order and a supply of saw blades at the site of the work at all times during sawing operations.

e. Fixed forms. Straight side fixed forms shall be made of steel and shall be furnished in sections not less than 10 feet (3 m) in length. Forms shall be provided with adequate devices for secure settings so that when in place they will withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms with battered top surfaces and bent, twisted or broken forms shall not be used. Built-up forms shall not be used, except as approved by the RPR. The top face of the form shall not vary from a true plane more than 1/8 inch (3 mm) in 10 feet (3 m), and the upstanding leg shall not vary more than 1/4 inch (6 mm). The forms shall contain provisions for locking the ends of abutting sections together tightly for secure setting. Wood forms may

@ Bolton & Menk, Inc. 2026, All Rights Reserved

be used under special conditions, when approved by the RPR. The forms shall extend the full depth of the pavement section.

501-4.3 Form setting. Forms shall be set to line and grade as shown on the plans, sufficiently in advance of the concrete placement, to ensure continuous paving operation. Forms shall be set to withstand, without visible spring or settlement, the impact and vibration of the consolidating and finishing equipment. Forms shall be cleaned and oiled prior to the concrete placement.

501-4.4 Base surface preparation prior to placement. Any damage to the prepared base, subbase, and subgrade shall be corrected full depth by the Contractor prior to concrete placement. The underlying surface shall be entirely free of frost when concrete is placed. The prepared grade shall be moistened with water, without saturating, immediately ahead of concrete placement to prevent rapid loss of moisture from concrete.

501-4.5 Handling, measuring, and batching material. Aggregate stockpiles shall be constructed and managed in such a manner that prevents segregation and intermixing of deleterious materials. Aggregates from different sources shall be stockpiled, weighed and batched separately at the concrete batch plant. Aggregates that have become segregated or mixed with earth or foreign material shall not be used. All aggregates produced or handled by hydraulic methods, and washed aggregates, shall be stockpiled or binned for draining at least 12 hours before being batched. Store and maintain all aggregates at a uniform moisture content prior to use. A continuous supply of materials shall be provided to the work to ensure continuous placement.

501-4.6 Mixing concrete. The concrete may be mixed at the work site, in a central mix plant or in truck mixers. The mixer shall be of an approved type and capacity. Mixing time shall be measured from the time all materials are placed into the drum until the drum is emptied into the truck. All concrete shall be mixed and delivered to the site in accordance with the requirements of ASTM C94 or ASTM C685.

Mixed concrete from the central mixing plant shall be transported in truck mixers, truck agitators, or non-agitating trucks. The elapsed time from the addition of cementitious material to the mix until the concrete is discharged from the truck should not exceed 30 minutes when the concrete is hauled in non-agitating trucks, nor 90 minutes when the concrete is hauled in truck mixers or truck agitators. In no case shall the temperature of the concrete when placed exceed 90°F (32°C). Retempering concrete by adding water or by other means will not be permitted. With transit mixers additional water may be added to the batch materials and additional mixing performed to increase the slump to meet the specified requirements provided the addition of water is performed within 45 minutes after the initial mixing operations and provided the water/cementitious ratio specified is not exceeded.

501-4.7 Weather Limitations on mixing and placing. No concrete shall be mixed, placed, or finished when the natural light is insufficient, unless an adequate and approved artificial lighting system is operated.

a. Cold weather. Unless authorized in writing by the RPR, mixing and concreting operations shall be discontinued when a descending air temperature in the shade and away from artificial heat reaches 40°F (4°C) and shall not be resumed until an ascending air temperature in the shade and away from artificial heat reaches 35°F (2°C).

The aggregate shall be free of ice, snow, and frozen lumps before entering the mixer. The temperature of the mixed concrete shall not be less than 50°F (10°C) at the time of placement. Concrete shall not be placed on frozen material nor shall frozen aggregates be used in the concrete.

When concreting is authorized during cold weather, water and/or the aggregates may be heated to not more than 150°F (66°C). The apparatus used shall heat the mass uniformly and shall be arranged to preclude the possible occurrence of overheated areas which might be detrimental to the materials.

Curing during cold weather shall be in accordance with paragraph 501-4.13d.

b. Hot weather. During periods of hot weather when the maximum daily air temperature exceeds 85°F (30°C), the following precautions shall be taken.

The forms and/or the underlying surface shall be sprinkled with water immediately before placing the concrete. The concrete shall be placed at the coolest temperature practicable, and in no case shall the temperature of the

@ Bolton & Menk, Inc. 2026, All Rights Reserved

concrete when placed exceed 90°F (32°C). The aggregates and/or mixing water shall be cooled as necessary to maintain the concrete temperature at or not more than the specified maximum.

The concrete placement shall be protected from exceeding an evaporation rate of 0.2 psf (0.98 kg/m^2 per hour) per hour. When conditions are such that problems with plastic cracking can be expected, and particularly if any plastic cracking begins to occur, the Contractor shall immediately take such additional measures as necessary to protect the concrete surface. If the Contractor's measures are not effective in preventing plastic cracking, paving operations shall be immediately stopped.

Curing during hot weather shall be in accordance with paragraph 501-4.13e.

c. Temperature management program. Prior to the start of paving operation for each day of paving, the Contractor shall provide the RPR with a Temperature Management Program for the concrete to be placed to assure that uncontrolled cracking is avoided. (Federal Highway Administration HIPERPAV 3 is one example of a temperature management program.) As a minimum, the program shall address the following items:

(1) Anticipated tensile strains in the fresh concrete as related to heating and cooling of the concrete material.

(2) Anticipated weather conditions such as ambient temperatures, wind velocity, and relative humidity; and anticipated evaporation rate using Figure 19-9, PCA, Design and Control of Concrete Mixtures.

(3) Anticipated timing of initial sawing of joint.

(4) Anticipated number and type of saws to be used.

d. Rain. The Contractor shall have available materials for the protection of the concrete during inclement weather. Such protective materials shall consist of rolled polyethylene sheeting at least 4 mils (0.1 mm) thick of sufficient length and width to cover the plastic concrete slab and any edges. The sheeting may be mounted on either the paver or a separate movable bridge from which it can be unrolled without dragging over the plastic concrete surface. When rain appears imminent, all paving operations shall stop and all available personnel shall begin covering the surface of the unhardened concrete with the protective covering.

501-4.8 Concrete Placement. At any point in concrete conveyance, the free vertical drop of the concrete from one point to another or to the underlying surface shall not exceed 3 feet (1 m). The finished concrete product must be dense and homogeneous, without segregation and conforming to the standards in this specification. Backhoes and grading equipment shall not be used to distribute the concrete in front of the paver. Front end loaders will not be used. All concrete shall be consolidated without voids or segregation, including under and around all load-transfer devices, joint assembly units, and other features embedded in the pavement. "For public and construction traffic after placement and before acceptance see 501-4.17 Protection of pavement and 501-4.18 Opening to construction traffic."

The Contractor shall have available materials for the protection of the concrete during cold, hot and/or inclement weather in accordance with paragraph 501-4.7.

a. Slip-form construction. The concrete shall be distributed uniformly into final position by a self-propelled slip-form paver without delay. The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose. The paver shall vibrate the concrete for the full width and depth of the strip of pavement being placed and the vibration shall be adequate to provide a consistency of concrete that will stand normal to the surface with sharp well-defined edges. The sliding forms shall be rigidly held together laterally to prevent spreading of the forms. The plastic concrete shall be effectively consolidated by internal vibration with transverse vibrating units for the full width of the pavement and/or a series of equally placed longitudinal vibrating units. The space from the outer edge of the pavement to longitudinal unit shall not exceed 9 inches (23 cm) for slipform and at the end of the dowels for the fill-in lanes. The spacing of internal units shall be uniform and shall not exceed 18 inches (0.5 m).

The term internal vibration means vibrating units located within the specified thickness of pavement section.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without, segregation, voids, or vibrator trails and the amplitude of vibration shall be sufficient to be perceptible on the surface of the concrete along the entire length of the vibrating unit and for a distance of at least one foot (30 cm). The frequency of vibration or amplitude should be adjusted proportionately with the rate of travel to result in a uniform density and air content. The paving machine shall be equipped with a tachometer or other suitable device for measuring and indicating the actual frequency of vibrations.

The concrete shall be held at a uniform consistency. The slip-form paver shall be operated with as nearly a continuous forward movement as possible and all operations of mixing, delivering, and spreading concrete shall be coordinated to provide uniform progress with stopping and starting of the paver held to a minimum. If for any reason, it is necessary to stop the forward movement of the paver, the vibratory and tamping elements shall also be stopped immediately. No tractive force shall be applied to the machine, except that which is controlled from the machine.

When concrete is being placed adjacent to an existing pavement, that part of the equipment which is supported on the existing pavement shall be equipped with protective pads on crawler tracks or rubber-tired wheels on which the bearing surface is offset to run a sufficient distance from the edge of the pavement to avoid breaking the pavement edge.

Not more than 15% of the total free edge of each 500-foot (150 m) segment of pavement, or fraction thereof, shall have an edge slump exceeding 1/4 inch (6 mm), and none of the free edge of the pavement shall have an edge slump exceeding 3/8 inch (9 mm). (The total free edge of 500 feet (150 m) of pavement will be considered the cumulative total linear measurement of pavement edge originally constructed as nonadjacent to any existing pavement; that is, 500 feet (150 m) of paving lane originally constructed as a separate lane will have 1,000 feet (300 m) of free edge, 500 feet (150 m) of fill-in lane will have no free edge, etc.). The area affected by the downward movement of the concrete along the pavement edge shall be limited to not more than 18 inches (0.5 m) from the edge.

When excessive edge slump cannot be corrected before the concrete has hardened, the area with excessive edge slump will be removed the full width of the slip form lane and replaced at the expense of the Contractor as directed by the RPR.

b. Fixed-form construction. Forms shall be drilled in advance of being placed to line and grade to accommodate tie bars / dowel bars where these are specified.

Immediately in advance of placing concrete and after all subbase operations are completed, side forms shall be trued and maintained to the required line and grade for a distance sufficient to prevent delay in placing.

Side forms shall remain in place at least 12 hours after the concrete has been placed, and in all cases until the edge of the pavement no longer requires the protection of the forms. Curing compound shall be applied to the concrete immediately after the forms have been removed.

Side forms shall be thoroughly cleaned and coated with a release agent each time they are used and before concrete is placed against them.

Concrete shall be spread, screed, shaped and consolidated by one or more self-propelled machines. These machines shall uniformly distribute and consolidate concrete without segregation so that the completed pavement will conform to the required cross-section with a minimum of handwork.

The number and capacity of machines furnished shall be adequate to perform the work required at a rate equal to that of concrete delivery. The equipment must be specifically designed for placement and finishing using stationary side forms. Methods and equipment shall be reviewed and accepted by the RPR.

Concrete for the full paving width shall be effectively consolidated by internal vibrators. The rate of vibration of each vibrating unit shall be sufficient to consolidate the pavement without segregation, voids, or leaving vibrator trails.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Power to vibrators shall be connected so that vibration ceases when forward or backward motion of the machine is stopped.

c. Consolidation. Concrete shall be consolidated with the specified type of lane-spanning, gang-mounted, mechanical, immersion type vibrating equipment mounted in front of the paver, supplemented, in rare instances as specified, by hand-operated vibrators. The vibrators shall be inserted into the concrete to a depth that will provide the best full-depth consolidation but not closer to the underlying material than 2 inches (50 mm). Vibrators shall not be used to transport or spread the concrete. For each paving train, at least one additional vibrator spud, or sufficient parts for rapid replacement and repair of vibrators shall be maintained at the paving site at all times. Any evidence of inadequate consolidation (honeycomb along the edges, large air pockets, or any other evidence) or over-consolidation (vibrator trails, segregation, or any other evidence) shall require the immediate stopping of the paving operation and adjustment of the equipment or procedures as approved by the RPR.

If a lack of consolidation of the hardened concrete is suspected by the RPR, referee testing may be required. Referee testing of hardened concrete will be performed by the RPR by cutting cores from the finished pavement after a minimum of 24 hours curing. The RPR shall visually examine the cores for evidence of lack of consolidation. Density determinations will be made by the RPR based on the water content of the core as taken. ASTM C642 shall be used for the determination of core density in the saturated-surface dry condition. When required, referee cores will be taken at the minimum rate of one for each 500 cubic yards (382 m^2) of pavement, or fraction. The Contractor shall be responsible for all referee testing cost if they fail to meet the required density.

The average density of the cores shall be at least 97% of the original concrete mix density, with no cores having a density of less than 96% of the original concrete mix density. Failure to meet the referee tests will be considered evidence that the minimum requirements for vibration are inadequate for the job conditions. Additional vibrating units or other means of increasing the effect of vibration shall be employed so that the density of the hardened concrete conforms to the above requirements.

501-4.9 Strike-off of concrete and placement of reinforcement. Following the placing of the concrete, it shall be struck off to conform to the cross-section shown on the plans and to an elevation that when the concrete is properly consolidated and finished, the surface of the pavement shall be at the elevation shown on the plans. When reinforced concrete pavement is placed in two layers, the bottom layer shall be struck off to such length and depth that the sheet of reinforcing steel fabric or bar mat may be laid full length on the concrete in its final position without further manipulation. The reinforcement shall then be placed directly upon the concrete, after which the top layer of the concrete shall be placed, struck off, and screed. If any portion of the bottom layer of concrete has been placed more than 30 minutes without being covered with the top layer or if initial set has taken place, it shall be removed and replaced with freshly mixed concrete at the Contractor's expense. When reinforced concrete is placed in one layer, the reinforcement may be positioned in advance of concrete placement or it may be placed in plastic concrete by mechanical or vibratory means after spreading.

Reinforcing steel, at the time concrete is placed, shall be free of mud, oil, or other organic matter that may adversely affect or reduce bond. Reinforcing steel with rust, mill scale or a combination of both will be considered satisfactory, provided the minimum dimensions, weight, and tensile properties of a hand wire-brushed test specimen are not less than the applicable ASTM specification requirements.

501-4.10 Joints. Joints shall be constructed as shown on the plans and in accordance with these requirements. All joints shall be constructed with their faces perpendicular to the surface of the pavement and finished or edged as shown on the plans. Joints shall not vary more than 1/2-inch (12 mm) from their designated position and shall be true to line with not more than 1/4-inch (6 mm) variation in 10 feet (3 m). The surface across the joints shall be tested with a 12-foot (3 m) straightedge as the joints are finished and any irregularities in excess of 1/4 inch (6 mm) shall be corrected before the concrete has hardened. All joints shall be so prepared, finished, or cut to provide a groove of uniform width and depth as shown on the plans.

a. Construction. Longitudinal construction joints shall be slip-formed or formed against side forms as shown in the plans.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Transverse construction joints shall be installed at the end of each day's placing operations and at any other points within a paving lane when concrete placement is interrupted for more than 30 minutes or it appears that the concrete will obtain its initial set before fresh concrete arrives. The installation of the joint shall be located at a planned contraction or expansion joint. If placing of the concrete is stopped, the Contractor shall remove the excess concrete back to the previous planned joint.

b. Contraction. Contraction joints shall be installed at the locations and spacing as shown on the plans. Contraction joints shall be installed to the dimensions required by forming a groove or cleft in the top of the slab while the concrete is still plastic or by sawing a groove into the concrete surface after the concrete has hardened. When the groove is formed in plastic concrete the sides of the grooves shall be finished even and smooth with an edging tool. If an insert material is used, the installation and edge finish shall be according to the manufacturer's instructions. The groove shall be finished or cut clean so that spalling will be avoided at intersections with other joints. Grooving or sawing shall produce a slot at least 1/8 inch (3 mm) wide and to the depth shown on the plans.

c. Isolation (expansion). Isolation joints shall be installed as shown on the plans. The premolded filler of the thickness as shown on the plans, shall extend for the full depth and width of the slab at the joint. The filler shall be fastened uniformly along the hardened joint face with no buckling or debris between the filler and the concrete interface, including a temporary filler for the sealant reservoir at the top of the slab. The edges of the joint shall be finished and tooled while the concrete is still plastic.

d. Dowels and Tie Bars for Joints

(1) Tie bars. Tie bars shall consist of deformed bars installed in joints as shown on the plans. Tie bars shall be placed at right angles to the centerline of the concrete slab and shall be spaced at intervals shown on the plans. They shall be held in position parallel to the pavement surface and in the middle of the slab depth and within the tolerances in paragraph 501-4.10(f.). When tie bars extend into an unpaved lane, they may be bent against the form at longitudinal construction joints, unless threaded bolt or other assembled tie bars are specified. Tie bars shall not be painted, greased, or enclosed in sleeves. When slip-form operations call for tie bars, two-piece hook bolts can be installed.

(2) Dowel bars. Dowel bars shall be placed across joints in the proper horizontal and vertical alignment as shown on the plans. The dowels shall be coated with a bond-breaker or other lubricant recommended by the manufacturer and approved by the RPR. Dowels bars at longitudinal construction joints shall be bonded in drilled holes.

(3) Placing dowels and tie bars. Horizontal spacing of dowels shall be within a tolerance of ±3/4 inch (19 mm). The vertical location on the face of the slab shall be within a tolerance of ±1/2 inch (12 mm). The method used to install dowels shall ensure that the horizontal and vertical alignment will not be greater than 1/4 inch per feet (6 mm per 0.3 m), except for those across the crown or other grade change joints. Dowels across crowns and other joints at grade changes shall be measured to a level surface. Horizontal alignment shall be checked perpendicular to the joint edge. The portion of each dowel intended to move within the concrete or expansion cap shall be wiped clean and coated with a thin, even film of lubricating oil or light grease before the concrete is placed. Dowels shall be installed as specified in the following subparagraphs.

Dowels and tie bars shall not be placed closer than 0.6 times the dowel bar or tie bar length to the planned joint line. If the last regularly spaced longitudinal dowel and/or tie bar is closer than that dimension, it shall be moved away from the joint to a location 0.6 times the dowel bar and/or tie bar length, but not closer than 6 inches (150 mm) to its nearest neighbor.

(a) Contraction joints. Dowels and tie bars in longitudinal and transverse contraction joints within the paving lane shall be held securely in place by means of rigid metal frames or basket assemblies of an approved type. The basket assemblies shall be held securely in the proper location by means of suitable pins or anchors. Do not cut or crimp the dowel basket tie wires.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

At the Contractor's option, dowels and tie bars in contraction joints may be installed by insertion into the plastic concrete using approved equipment and procedures per the paver manufacturer's design. Approval of installation methods will be based on the results of the control strip showing that the dowels and tie bars are installed within specified tolerances as verified by cores or non-destructive rebar location devices approved by the RPR.

(b) Construction joints. Install dowels and tie bars by the cast-in- place or the drill-and-dowel method. Installation by removing and replacing in preformed holes will not be permitted. Dowels and tie bars shall be prepared and placed across joints where indicated, correctly aligned, and securely held in the proper horizontal and vertical position during placing and finishing operations, by means of devices fastened to the forms.

(c) Joints in hardened concrete. Install dowels in hardened concrete by bonding the dowels into holes drilled into the concrete. The concrete shall have cured for seven (7) days or reached a minimum compressive strength of 3100 psi ((21.4 MPa)) before drilling begins. Holes 1/8 inch (3 mm) greater in diameter than the dowels shall be drilled into the hardened concrete using rotary-core drills. Rotary-percussion drills may be used, provided that excessive spalling does not occur. Spalling beyond the limits of the grout retention ring will require modification of the equipment and operation. Depth of dowel hole shall be within a tolerance of ±1/2 inch (12 mm) of the dimension shown on the drawings. On completion of the drilling operation, the dowel hole shall be blown out with oil-free, compressed air. Dowels shall be bonded in the drilled holes using epoxy resin. Epoxy resin shall be injected at the back of the hole before installing the dowel and extruded to the collar during insertion of the dowel so as to completely fill the void around the dowel. Application by buttering the dowel will not be permitted. The dowels shall be held in alignment at the collar of the hole by means of a suitable metal or plastic grout retention ring fitted around the dowel.

e. Sawing of joints. Sawing shall commence, without regard to day or night, as soon as the concrete has hardened sufficiently to permit cutting without chipping, spalling, or tearing and before uncontrolled shrinkage cracking of the pavement occurs and shall continue without interruption until all joints have been sawn. All slurry and debris produced in the sawing of joints shall be removed by vacuuming and washing. Curing compound or system shall be reapplied in the initial saw-cut and maintained for the remaining cure period.

Joints shall be cut in locations as shown on the plans. The initial joint cut shall be a minimum 1/8 inch (3 mm) wide and to the depth shown on the plans. Prior to placement of joint sealant or seals, the top of the joint shall be widened by sawing as shown on the plans.

501-4.11 Finishing. Finishing operations shall be a continuing part of placing operations starting immediately behind the strike-off of the paver. Initial finishing shall be provided by the transverse screed or extrusion plate. The sequence of operations shall be transverse finishing, longitudinal machine floating if used, straightedge finishing, edging of joints, and then texturing. Finishing shall be by the machine method. The hand method shall be used only on isolated areas of odd slab widths or shapes and in the event of a breakdown of the mechanical finishing equipment. Supplemental hand finishing for machine finished pavement shall be kept to an absolute minimum. Any machine finishing operation which requires appreciable hand finishing, other than a moderate amount of straightedge finishing, shall be immediately stopped and proper adjustments made or the equipment replaced. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Compensation shall be made for surging behind the screeds or extrusion plate and settlement during hardening and care shall be taken to ensure that paving and finishing machines are properly adjusted so that the finished surface of the concrete (not just the cutting edges of the screeds) will be at the required line and grade. Finishing equipment and tools shall be maintained clean and in an approved condition. At no time shall water be added to the surface of the slab with the finishing equipment or tools, or in any other way. Fog (mist) sprays or other surface applied finishing aids specified to prevent plastic shrinkage cracking, approved by the RPR, may be used in accordance with the manufacturers requirements.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

a. Machine finishing with slipform pavers. The slipform paver shall be operated so that only a very minimum of additional finishing work is required to produce pavement surfaces and edges meeting the specified tolerances. Any equipment or procedure that fails to meet these specified requirements shall immediately be replaced or modified as necessary. A self-propelled non-rotating pipe float may be used while the concrete is still plastic, to remove minor irregularities and score marks. Only one pass of the pipe float shall be allowed. Equipment, mixture, and/or procedures which produce more than 1/4 inch (6 mm) of mortar-rich surface shall be immediately modified as necessary to eliminate this condition or operations shall cease. Remove excessive slurry from the surface with a cutting straightedge and wipe off the edge. Any slurry which does run down the vertical edges shall be immediately removed by hand, using stiff brushes or scrapers. No slurry, concrete or concrete mortar shall be used to build up along the edges of the pavement to compensate for excessive edge slump, either while the concrete is plastic or after it hardens.

b. Machine finishing with fixed forms. The machine shall be designed to straddle the forms and shall be operated to screed and consolidate the concrete. Machines that cause displacement of the forms shall be replaced. The machine shall make only one pass over each area of pavement. If the equipment and procedures do not produce a surface of uniform texture, true to grade, in one pass, the operation shall be immediately stopped and the equipment, mixture, and procedures adjusted as necessary.

c. Other types of finishing equipment. Clary screeds, other rotating tube floats, or bridge deck finishers are not allowed on mainline paving, but may be allowed on irregular or odd-shaped slabs, and near buildings or trench drains, subject to the RPR's approval.

Bridge deck finishers shall have a minimum operating weight of 7500 pounds (3400 kg) and shall have a transversely operating carriage containing a knock-down auger and a minimum of two immersion vibrators. Vibrating screeds or pans shall be used only for isolated slabs where hand finishing is permitted as specified, and only where specifically approved.

d. Hand finishing. Hand finishing methods will not be permitted, except under the following conditions: (1) in the event of breakdown of the mechanical equipment, hand methods may be used to finish the concrete already deposited on the grade and (2) in areas of narrow widths or of irregular dimensions where operation of the mechanical equipment is impractical.

e. Straightedge testing and surface correction. After the pavement has been struck off and while the concrete is still plastic, it shall be tested for trueness with a 12-foot (3.7-m) finishing straightedge swung from handles capable of spanning at least one-half the width of the slab. The straightedge shall be held in contact with the surface in successive positions parallel to the centerline and the whole area gone over from one side of the slab to the other, as necessary. Advancing shall be in successive stages of not more than one-half the length of the straightedge. Any excess water and laitance in excess of 1/8 inch (3 mm) thick shall be removed from the surface of the pavement and wasted. Any depressions shall be immediately filled with freshly mixed concrete, struck off, consolidated, and refinished. High areas shall be cut down and refinished. Special attention shall be given to assure that the surface across joints meets the smoothness requirements. Straightedge testing and surface corrections shall continue until the entire surface is found to be free from observable departures from the straightedge and until the slab conforms to the required grade and cross-section. The use of long-handled wood floats shall be confined to a minimum; they may be used only in emergencies and in areas not accessible to finishing equipment.

501-4.12 Surface texture. The surface of the pavement shall be finished as designated below for all newly constructed concrete pavements. It is important that the texturing equipment not tear or unduly roughen the pavement surface during the operation. The texture shall be uniform in appearance and approximately 1/16 inch (2 mm) in depth. Any imperfections resulting from the texturing operation shall be corrected to the satisfaction of the RPR.

a. Brush or broom finish. When hand finishing is required the concrete shall be fished by a light brush or broom finish. Brush or broom finish shall be applied when the water sheen has practically disappeared. The equipment shall operate transversely across the pavement surface.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

b. Burlap drag finish. Burlap, at least 15 ounces per square yard (555 grams per square meter), will typically produce acceptable texture. To obtain a textured surface, the transverse threads of the burlap shall be removed approximately one foot (30 cm) from the trailing edge. A heavy buildup of grout on the burlap threads produces the desired wide sweeping longitudinal striations on the pavement surface.

c. Artificial turf finish. Not used.

501-4.13 Curing. Immediately after finishing operations are completed and bleed water is gone from the surface, all exposed surfaces of the newly placed concrete shall be cured for a 7-day cure period in accordance with one of the methods below. Failure to provide sufficient cover material of whatever kind the Contractor may elect to use, or lack of water to adequately take care of both curing and other requirements, shall be cause for immediate suspension of concreting operations. The concrete shall not be left exposed for more than 1/2 hour during the curing period.

When a two-saw-cut method is used to construct the contraction joint, the curing compound shall be applied to the saw-cut immediately after the initial cut has been made. The sealant reservoir shall not be sawed until after the curing period has been completed. When the one cut method is used to construct the contraction joint, the joint shall be cured with wet rope, wet rags, or wet blankets. The rags, ropes, or blankets shall be kept moist for the duration of the curing period.

a. Impervious membrane method. Curing with liquid membrane compounds should not occur until bleed and surface moisture has evaporated. All exposed surfaces of the pavement shall be sprayed uniformly with white pigmented curing compound immediately after the finishing of the surface and before the set of the concrete has taken place. The curing compound shall not be applied during rainfall. Curing compound shall be applied by mechanical sprayers under pressure at the rate of one gallon (4 liters) to not more than 150 square feet (14 sq m). The spraying equipment shall be of the fully atomizing type equipped with a tank agitator. At the time of use, the compound shall be in a thoroughly mixed condition with the pigment uniformly dispersed throughout the vehicle. During application, the compound shall be stirred continuously by mechanical means. Hand spraying of odd widths or shapes and concrete surfaces exposed by the removal of forms will be permitted. When hand spraying is approved by the RPR, a double application rate shall be used to ensure coverage. Should the film become damaged from any cause, including sawing operations, within the required curing period, the damaged portions shall be repaired immediately with additional compound or other approved means. Upon removal of side forms, the sides of the exposed slabs shall be protected immediately to provide a curing treatment equal to that provided for the surface.

b. White burlap-polyethylene sheets. The surface of the pavement shall be entirely covered with the sheeting. The sheeting used shall be such length (or width) that it will extend at least twice the thickness of the pavement beyond the edges of the slab. The sheeting shall be placed so that the entire surface and both edges of the slab are completely covered. The sheeting shall be placed and weighted to remain in contact with the surface covered, and the covering shall be maintained fully saturated and in position for seven (7) days after the concrete has been placed.

c. Water method. The entire area shall be covered with burlap or other water absorbing material. The material shall be of sufficient thickness to retain water for adequate curing without excessive runoff. The material shall be kept wet at all times and maintained for seven (7) days. When the forms are stripped, the vertical walls shall also be kept moist. It shall be the responsibility of the Contractor to prevent ponding of the curing water on the subbase.

d. Concrete protection for cold weather. Maintain the concrete at a temperature of at least 50°F (10°C) for a period of 72 hours after placing and at a temperature above freezing for the remainder of the 7-day curing period. The Contractor shall be responsible for the quality and strength of the concrete placed during cold weather; and any concrete damaged shall be removed and replaced at the Contractor's expense.

e. Concrete protection for hot weather. Concrete should be continuous moisture cured for the entire curing period and shall commence as soon as the surfaces are finished and continue for at least 24 hours. However, if moisture curing is not practical beyond 24 hours, the concrete surface shall be protected from drying with application of a liquid membrane-forming curing compound while the surfaces are still damp. Other curing methods may be approved by the RPR.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

501-4.14 Removing forms. Unless otherwise specified, forms shall not be removed from freshly placed concrete until it has hardened sufficiently to permit removal without chipping, spalling, or tearing. After the forms have been removed, the sides of the slab shall be cured in accordance with paragraph 501-4.13.

If honeycombed areas are evident when the forms are removed, materials, placement, and consolidation methods must be reviewed and appropriate adjustments made to assure adequate consolidation at the edges of future concrete placements. Honeycombed areas that extend into the slab less than approximately 1 inch (25 mm), shall be repaired with an approved grout, as directed by the RPR. Honeycombed areas that extend into the slab greater than a depth of 1 inch (25 mm) shall be considered as defective work and shall be removed and replaced in accordance with paragraph 501-4.19.

501-4.15 Saw-cut grooving. If shown on the plans, grooved surfaces shall be provided in accordance with the requirements of Item P-621.

501-4.16 Sealing joints. The joints in the pavement shall be sealed in accordance with Item P-605.

501-4.17 Protection of pavement. The Contractor shall protect the pavement and its appurtenances against both public traffic and traffic caused by the Contractor's employees and agents until accepted in writing by the RPR. This shall include watchmen to direct traffic and the erection and maintenance of warning signs, lights, pavement bridges, crossovers, and protection of unsealed joints from intrusion of foreign material, etc. Any damage to the pavement occurring prior to final acceptance shall be replaced at the Contractor's expense. Slabs shall be removed to the full depth, width, and length of the slab. The replacement slabs shall be doweled and tied at the direction of the RPR.

Aggregates, rubble, or other similar construction materials shall not be placed on airfield pavements.

Hauling equipment or other mechanical equipment can be permitted on adjoining previously constructed pavement when the concrete strength reaches a compressive strength of 3,100 psi (21.4 MPa), based on the average of four field cured specimens per 2,000 cubic yards (1,530 cubic meters) of concrete placed. The Contractor is responsible for the verification testing and costs associated with that testing. The Contractor must determine, with the use of FAARFIELD, that the above minimum strengths are adequate for the protection of the pavement from overloads due to the construction equipment proposed for the project. The testing results and the overload protection calculations shall be approved in writing by the RPR prior to any traffic being allowed on new pavement.

In paving intermediate lanes between newly paved pilot lanes, operation of the hauling and paving equipment will be permitted on the new pavement only after the pavement has met the above criteria, and the slab edge is protected."

501-4.18 Opening to construction traffic. The pavement shall not be opened to any traffic until the pavement has met the requirements of 4.17. If such tests are not conducted, the pavement shall not be opened to traffic until accepted by the RPR. Prior to opening the pavement to any traffic, all joints shall either be sealed or protected from damage to the joint edge and intrusion of foreign materials into the joint. As a minimum, backer rod or tape may be used to protect the joints from foreign matter intrusion. All new and existing pavement carrying any traffic or equipment shall be kept clean and spillage of concrete and other materials shall be cleaned up immediately.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

501-4.19 Repair, removal, or replacement of slabs. New pavement slabs that are broken or contain cracks or are otherwise defective or unacceptable as defined by acceptance criteria in paragraph 501-6.6 shall be removed and replaced or repaired, as directed by the RPR, at the Contractor's expense. Spalls along joints shall be repaired as specified. Removal of partial slabs is not permitted. Removal and replacement shall be full depth, shall be full width of the slab, and the limit of removal shall be normal to the paving lane and to each original transverse joint. The RPR will determine whether cracks extend full depth of the pavement and may require cores to be drilled on the crack to determine depth of cracking. Such cores shall be have a diameter of 2 inches (50 mm) to 4 inches (100 mm), shall be drilled by the Contractor and shall be filled by the Contractor with a well consolidated concrete mixture bonded to the walls of the hole with a bonding agent, using approved procedures. Drilling of cores and refilling holes shall be at no expense to the Owner. Repair of cracks as described in this section shall not be allowed if in the opinion of the RPR the overall condition of the pavement indicates that such repair is unlikely to achieve an acceptable and durable finished pavement. No repair of cracks shall be allowed in any panel that demonstrates segregated aggregate with an absence of coarse aggregate in the upper 1/8 inch (3 mm) of the pavement surface.

a. Shrinkage cracks. Shrinkage cracks which do not exceed one-third of the pavement depth shall be cleaned and either high molecular weight methacrylate (HMWM) applied; or epoxy resin (Type IV, Grade 1) pressure injected using procedures recommended by the manufacturer and approved by the RPR. Sandblasting of the surface may be required following the application of HMWM to restore skid resistance. Care shall be taken to ensure that the crack is not widened during epoxy resin injection. All epoxy resin injection shall take place in the presence of the RPR. Shrinkage cracks which exceed one-third the pavement depth shall be treated as full depth cracks in accordance with paragraphs 501-4.19b and 501-19c.

b. Slabs with cracks through interior areas. Interior area is defined as that area more than 6 inches (150 mm) from either adjacent original transverse joint. The full slab shall be removed and replaced at no cost to the Owner, when there are any full depth cracks, or cracks greater than one-third the pavement depth, that extend into the interior area.

c. Cracks close to and parallel to joints. All full-depth cracks within 6 inches (150 mm) either side of the joint and essentially parallel to the original joints, shall be treated as follows.

(1) Full depth cracks and original joint not cracked. The full-depth crack shall be treated as the new joint and the original joint filled with an epoxy resin.

i. Full-depth crack. The joint sealant reservoir for the crack shall be formed by sawing to a depth of 3/4 inches (19 mm), ±1/16 inch (2 mm), and to a width of 5/8 inch (16 mm), ±1/8 inch (3 mm). The crack shall be sawed with equipment specially designed to follow random cracks. Any equipment or procedure which causes raveling or spalling along the crack shall be modified or replaced to prevent raveling or spalling. The joint shall be sealed with sealant in accordance with P-605 or as directed by the RPR.

ii. Original joint. If the original joint sealant reservoir has been sawed out, the reservoir and as much of the lower saw cut as possible shall be filled with epoxy resin, Type IV, Grade 2, thoroughly tooled into the void using approved procedures.

If only the original narrow saw cut has been made, it shall be cleaned and pressure injected with epoxy resin, Type IV, Grade 1, using approved procedures.

Where a parallel crack goes part way across paving lane and then intersects and follows the original joint which is cracked only for the remained of the width, it shall be treated as specified above for a parallel crack, and the cracked original joint shall be prepared and sealed as originally designed.

(2) Full depth cracks and original joint cracked. If there is any place in the lane width where a parallel crack and a cracked portion of the original joint overlap, the entire slab containing the crack shall be removed and replaced.

d. Removal and replacement of full slabs. Make a full depth cut perpendicular to the slab surface along all edges of the slab with a concrete saw cutting any dowels or tie-bars. Remove damaged slab protecting adjacent pavement from damage. Damage to adjacent slabs may result in removal of additional slabs as directed by the RPR at the Contractor's expense.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The underlying material shall be repaired, re-compacted and shaped to grade.

Dowels of the size and spacing specified for other joints in similar pavement on the project shall be installed along all four (4) edges of the new slab in accordance with paragraph 501-4.10d.

Placement of concrete shall be as specified for original construction. The joints around the new slab shall be prepared and sealed as specified for original construction.

e. Spalls along joints.

(1) Spalls less than one inch wide and less than the depth of the joint sealant reservoir, shall be filled with joint sealant material.

(2) Spalls larger than one inch and/or deeper than the joint reservoir, but less than ½ the slab depth, and less than 25% of the length of the adjacent joint shall be repaired as follows:

i. Make a vertical saw cut at least one inch (25 mm) outside the spalled area and to a depth of at least 2 inches (50 mm). Saw cuts shall be straight lines forming rectangular areas surrounding the spalled area.

ii. Remove unsound concrete and at least 1/2 inch (12 mm) of visually sound concrete between the saw cut and the joint or crack with a light chipping hammer.

iii. Clean cavity with high-pressure water jets supplemented with compressed air as needed to remove all loose material.

iv. Apply a prime coat of epoxy resin, Type III, Grade I, to the dry, cleaned surface of all sides and bottom of the cavity, except any joint face.

v. Fill the cavity with low slump concrete or mortar or with epoxy resin concrete or mortar.

vi. An insert or other bond-breaking medium shall be used to prevent bond at all joint faces.

vii. A reservoir for the joint sealant shall be sawed to the dimensions required for other joints, or as required to be routed for cracks. The reservoir shall be thoroughly cleaned and sealed with the sealer specified for the joints.

(3) Spalls deeper than 1/2 of the slab depth or spalls longer than 25% of the adjacent joint require replacement of the entire slab.

f. Diamond grinding of Concrete surfaces. Diamond grinding shall be completed prior to pavement grooving. Diamond grinding of the hardened concrete should not be performed until the concrete is at least 14 days old and has achieved full minimum strength. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the joints will not be permitted. The depth of diamond grinding shall not exceed 1/2 inch (13 mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified.

Diamond grinding shall be performed with a machine specifically designed for diamond grinding capable of cutting a path at least 3 feet (0.9 m) wide. The saw blades shall be 1/8-inch (3-mm) wide with sufficient number of flush cut blades that create grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide; and peaks and ridges approximately 1/32 inch (1 mm) higher than the bottom of the grinding cut. The Contractor shall determine the number and type of blades based on the hardness of the aggregate. Contractor shall demonstrate to the RPR that the grinding equipment will produce satisfactory results prior to making corrections to surfaces.

Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The slurry resulting from the grinding operation shall be continuously removed and the pavement left in a clean condition. All grinding shall be at the expense of the Contractor.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONTRACTOR QUALITY CONTROL (CQC)

501-5.1 Quality control program. The Contractor shall develop a Quality Control Program in accordance with Item C-100. No partial payment will be made for materials that are subject to specific quality control requirements without an approved quality control program.

501-5.2 Contractor Quality Control (CQC). The Contractor shall provide or contract for testing facilities in accordance with Item C-100. The RPR shall be permitted unrestricted access to inspect the Contractor's QC facilities and witness QC activities. The RPR will advise the Contractor in writing of any noted deficiencies concerning the QC facility, equipment, supplies, or testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected.

501-5.3 Contractor QC testing. The Contractor shall perform all QC tests necessary to control the production and construction processes applicable to this specification and as set forth in the CQCP.. The testing program shall include, but not necessarily be limited to, tests for aggregate gradation, aggregate moisture content, slump, and air content. A QC Testing Plan shall be developed and approved by the RPR as part of the CQCP.

The RPR may at any time, notwithstanding previous plant acceptance, reject and require the Contractor to dispose of any batch of concrete mixture which is rendered unfit for use due to contamination, segregation, or improper slump. Such rejection may be based on only visual inspection. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the RPR, and if it can be demonstrated in the laboratory, in the presence of the RPR, that such material was erroneously rejected, payment will be made for the material at the contract unit price**.**

a. Fine aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C70 or ASTM C566.

(3) Deleterious substances. Fine aggregate as delivered to the mixer shall be tested for deleterious substances in fine aggregate for concrete as specified in paragraph 501-2.1b, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

b. Coarse Aggregate.

(1) Gradation. A sieve analysis shall be made at least twice daily for each size of aggregate. Tests shall be made in accordance with ASTM C136 from randomly sampled material taken from the discharge gate of storage bins or from the conveyor belt.

(2) Moisture content. If an electric moisture meter is used, at least two direct measurements of moisture content shall be made per week to check the calibration. If direct measurements are made in lieu of using an electric meter, two tests shall be made per day. Tests shall be made in accordance with ASTM C566.

(3) Deleterious substances. Coarse aggregate as delivered to the mixer shall be tested for deleterious substances in coarse aggregate for concrete as specified in paragraph 501-2.1c, prior to production of the control strip, and a minimum of every 30-days during production or more frequently as necessary to control deleterious substances.

c. Slump. One test shall be made for each sublot. Slump tests shall be performed in accordance with ASTM C143 from material randomly sampled from material discharged from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

d. Air content. One test shall be made for each sublot. Air content tests shall be performed in accordance with ASTM C231 for gravel and stone coarse aggregate and ASTM C173 for slag or other porous coarse aggregate, from material randomly sampled from trucks at the paving site. Material samples shall be taken in accordance with ASTM C172.

e. Unit weight and Yield. One test shall be made for each sublot. Unit weight and yield tests shall be in accordance with ASTM C138. The samples shall be taken in accordance with ASTM C172 and at the same time as the air content tests.

f. Temperatures. Temperatures shall be checked at least four times per lot at the job site in accordance with ASTM C1064.

g. Smoothness for Contractor Quality Control. The Contractor shall perform smoothness testing in transverse and longitudinal directions daily to verify that the construction processes are producing pavement with variances less than ¼ inch in 12 feet, identifying areas that may pond water which could lead to hydroplaning of aircraft. If the smoothness criteria is not met, appropriate changes and corrections to the construction process shall be made by the Contractor before construction continues.

The Contractor may use a 12-foot (3.7 m) straightedge, a rolling inclinometer meeting the requirements of ASTM E2133 or rolling external reference device that can simulate a 12-foot (3.7m) straightedge approved by the RPR. Straight-edge testing shall start with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Testing shall be continuous across all joints. The surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between the two high points. If the rolling inclinometer or external reference device is used, the data may be evaluated using the FAA profile program, ProFAA, or FHWA profile program ProVal, using the 12-foot straightedge simulation function.

Smoothness readings shall not be made across grade changes or cross slope transitions. The transition between new and existing pavement shall be evaluated separately for conformance with the plans.

(1) Transverse measurements. Transverse measurements shall be taken for each day's production placed. Transverse measurements shall be taken perpendicular to the pavement centerline each 50 feet (15 m) or more often as determined by the RPR. The joint between lanes shall be tested separately to facilitate smoothness between lanes.

(2) Longitudinal measurements. Longitudinal measurements shall be taken for each day's production placed. Longitudinal tests shall be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6 m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6 m) or greater. When placement abuts previously placed material the first measurement shall start with one half the length of the straight edge on the previously placed material.

Deviations on the final surface course in either the transverse or longitudinal direction that will trap water greater than 1/4 inch (6 mm) shall be corrected with diamond grinding per paragraph 501-4.19f or by removing and replacing the surface course to full depth. Grinding shall be tapered in all directions to provide smooth transitions to areas not requiring grinding. All areas in which diamond grinding has been performed shall be subject to the final pavement thickness tolerances specified in paragraph 501-6.6.

Control charts shall be kept to show area of each day's placement and the percentage of corrective grinding required. Corrections to production and placement shall be initiated when corrective grinding is required. If the Contractor's machines and/or methods produce significant areas that need corrective actions in excess of 10 percent of a day's production, production shall be stopped until corrective measures are implemented by the Contractor.

h. Grade. Grade will be evaluated prior to and after placement of the concrete surface.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Measurements will be taken at appropriate gradelines (as a minimum at center and edges of paving lane) and longitudinal spacing as shown on cross-sections and plans. The final surface of the pavement will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically and 0.1 feet (30 mm) laterally. The documentation will be provided by the Contractor to the RPR by the end of the following working day.

Areas with humps or depression that that exceed grade or smoothness and that retain water on the surface must be ground off provided the course thickness after grinding is not more than 1/2 inch (12 mm) less than the thickness specified on the plans. If these areas cannot be corrected with grinding then the slabs that are retaining water must be removed and replaced in accordance with paragraph 501-4.19d. Grinding shall be in accordance with paragraph 501-4.19f. All corrections will be at the Contractors expense.

501-5.4 Control charts. The Contractor shall maintain linear control charts for fine and coarse aggregate gradation, slump, and air content. The Contractor shall also maintain a control chart plotting the coarseness factor/workability factor from the combined gradations in accordance with paragraph 501-2.1d.

Control charts shall be posted in a location satisfactory to the RPR and shall be kept up to date at all times. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and suspension Limits, or Specification limits, applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a potential problem and the Contractor is not taking satisfactory corrective action, the RPR may halt production or acceptance of the material.

a. Fine and coarse aggregate gradation. The Contractor shall record the running average of the last five gradation tests for each control sieve on linear control charts. Superimposed on the control charts shall be the action and suspension limits. Gradation tests shall be performed by the Contractor per ASTM C136. The Contractor shall take at least two samples per lot to check the final gradation. Sampling shall be per ASTM D75 from the flowing aggregate stream or conveyor belt.

b. Slump and air content. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for slump and air content in accordance with the following Action and Suspension Limits.

c. Combined gradation. The Contractor shall maintain a control chart plotting the coarseness factor and workability factor on a chart in accordance with paragraph 501-2.1d.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Control Chart Limits[1]

Control Parameter	Individual Measurements	
	Action Limit	**Suspension Limit**
Gradation[2]	*[3]	*[3]
Coarseness Factor (CF)	±3.5	±5
Workability Factor (WF)	±2	±3
Slump	+0.5 to -1 inch (+13 to -25 mm)	+1 to -1.5 inch (+25 to -38 mm)
Air Content	±1.5%	±2.0%

[1] Control charts shall be developed and maintained for each control parameter indicated.

[2] Control charts shall be developed and maintained for each sieve size.

[3] Action and suspension limits shall be determined by the Contractor.

501-5.5 Corrective action at Suspension Limit. The CQCP shall indicate that appropriate action shall be taken when the process is believed to be out of control. The CQCP shall detail the following details what action will be taken to bring the process into control and shall contain sets of rules to gauge when a process is out of control. As a minimum, a process shall be deemed out of control and corrective action taken if any one of the following conditions exists.

a. Fine and coarse aggregate gradation. When two consecutive averages of five tests are outside of the suspension limits, immediate steps, including a halt to production, shall be taken to correct the grading.

b. Coarseness and Workability factor. When the CF or WF reaches the applicable suspension limits, the Contractor, immediate steps, including a halt to production, shall be taken to correct the CF and WF.

c. Fine and coarse aggregate moisture content. Whenever the moisture content of the fine or coarse aggregate changes by more than 0.5%, the scale settings for the aggregate batcher and water batcher shall be adjusted.

d. Slump. The Contractor shall halt production and make appropriate adjustments whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

d. Air content. The Contractor shall halt production and adjust the amount of air-entraining admixture whenever:

(1) one point falls outside the Suspension Limit line for individual measurements

OR

(2) two points in a row fall outside the Action Limit line for individual measurements.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

MATERIAL ACCEPTANCE

501-6.1 Quality Assurance (QA) Acceptance sampling and testing. All acceptance sampling and testing necessary to determine conformance with the requirements specified in this section, with the exception of coring for thickness determination, will be performed by the RPR. The Contractor shall provide adequate facilities for the initial curing of cylinders. The Contractor shall bear the cost of providing initial curing facilities and coring and filling operations, per paragraph 501-6.5b(1).

The samples will be transported while in the molds. The curing, except for the initial cure period, will be accomplished using the immersion in saturated lime water method. During the 24 hours after molding, the temperature immediately adjacent to the specimens must be maintained in the range of 60° to 80°F (16° to 27°C), and loss of moisture from the specimens must be prevented. The specimens may be stored in tightly constructed wooden boxes, damp sand pits, temporary buildings at construction sites, under wet burlap in favorable weather, or in heavyweight closed plastic bags, or using other suitable methods, provided the temperature and moisture loss requirements are met.

501-6.2 Quality Assurance (QA) testing laboratory. Quality assurance testing organizations performing these acceptance tests will be accredited in accordance with ASTM C1077. The quality assurance laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods will be submitted to the RPR prior to start of construction.

501-6.3 Lot size. Concrete will be accepted for strength and thickness on a lot basis. A lot will consist of a day's production not to exceed 2500 square yards (2,090 square meters). Each lot will be divided into approximately equal sublots with individual sublots between 400 to 600 cubic yards. Where three sublots are produced, they will constitute a lot. Where one or two sublots are produced, they will be incorporated into the previous or next lot.

Daily pours of small areas (short runs and/or radius areas) shall be considered as one sublot if less than 500 square yards. Daily pour sizes shall be broken into sublots as defined below:

Daily Pour (SY)	Sublots
0 – 500	1
501 – 1500	2
1501 – 2500	3
2501 – 3500	4

Where one or two sublots are produced, they will be incorporated into the previous or next lot.

Where more than one plant is simultaneously producing concrete for the job, the lot sizes will apply separately for each plant.

501-6.4 Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot or for overages or minor placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

Where three sublots have been produced, they will constitute a lot. Where one or two sublots have been produced, they will be incorporated into the next lot or the previous lot and the total number of sublots will be used in the acceptance criteria calculation, that is, n=5 or n=6.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

501-6.5 Acceptance Sampling and Testing.

a. Strength.

(1) Sampling. One sample will be taken for each sublot from the concrete delivered to the job site. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. The concrete will be sampled in accordance with ASTM C172.

(2) Test Specimens. The RPR will be responsible for the casting, initial curing, transportation, and curing of specimens in accordance with ASTM C31. Two (2) specimens will be made from each sample and slump, air content, unit weight, and temperature tests will be conducted for each set of strength specimens. Within 24 to 48 hours, the samples will be transported from the field to the laboratory while in the molds. Samples will be cured in saturated lime water.

The strength of each specimen will be determined in accordance with ASTM C39. The strength for each sublot will be computed by averaging the results of the two test specimens representing that sublot.

(3) Acceptance. Acceptance of pavement for strength will be determined by the RPR in accordance with paragraph 501-6.6b(1). All individual strength tests within a lot will be checked for outliers in accordance with ASTM E178, at a significance level of 5%. Outliers will be discarded and the remaining test values will be used to determine acceptance in accordance with paragraph 501-6.5b.

b. Pavement thickness.

(1) Sampling. One core will be taken by the Contractor for each sublot in the presence of the RPR. Sampling locations will be determined by the RPR in accordance with random sampling procedures contained in ASTM D3665. Areas, such as thickened edges, with planned variable thickness, will be excluded from sample locations.

Cores shall be a minimum 4 inch (100 mm) in diameter neatly cut with a core drill. The Contractor will furnish all tools, labor, and materials for cutting samples and filling the cored hole. Core holes will be filled by the Contractor with a non-shrink grout approved by the RPR within one day after sampling.

(2) Testing. The thickness of the cores will be determined by the RPR by the average caliper measurement in accordance with ASTM C174. Each core shall be photographed and the photograph included with the test report.

(3) Acceptance. Acceptance of pavement for thickness will be determined by the RPR in accordance with paragraph 501-6.6.

501-6.6 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the completed pavement discussed in paragraph 501-6.5b:

(1) Strength

(2) Thickness

(3) Grade

(4) Profilograph smoothness – Not used

(5) Adjustments for repairs

Acceptance for strength, thickness, and grade, will be based on the criteria contained in accordance with paragraph 501-6.6b(1), 501-6.6b(2), and 501-6.6b(3), respectively. Acceptance for profilograph smoothness will be based on the criteria contained in paragraph 501-6.6b(4).

Production quality must achieve 90 PWL or higher to receive full payment.

Strength and thickness will be evaluated for acceptance on a lot basis using the method of estimating PWL. Production quality must achieve 90 PWL or higher to receive full pavement. The PWL will be determined in accordance with procedures specified in Item C-110.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The lower specification tolerance limit (L) for strength and thickness will be:

Lower Specification Tolerance Limit (L) for Determination of PWL

Strength	0.93 × strength specified in paragraph 501-3.3
Thickness	Lot Plan Thickness in inches, - 0.50 in

b. Acceptance criteria.

(1) Strength. If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment for the lot will be determined in accordance with paragraph 501-8.1.

(**2) Thickness.** If the PWL of the lot equals or exceeds 90%, the lot will be acceptable. Acceptance and payment for the lot will be determined in accordance with paragraph 501-8.1.

(3) Grade. The final finished surface of the pavement of the completed project will not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm) vertically or 0.1 feet (30 mm) laterally. The documentation, stamped and signed by a licensed surveyor shall be in accordance with paragraph 501-5.3h. Payment for sublots that do not meet grade for over 25% of the sublot shall reduced by 5% and not be more than 95%.

(4) Profilograph roughness for QA Acceptance. Not used

(5) Adjustments for repair. Sublots with spall repairs, crack repairs, or partial panel replacement, will be limited to no more than 95% payment.

(6) Adjustment for grinding. For sublots with grinding over 25% of a sublot, payment will be reduced 5%.

METHOD OF MEASUREMENT

501-7.1 Concrete pavement shall be measured by the number of square yards (square meters) of plainor reinforced pavement as specified in-place, completed and accepted.

BASIS OF PAYMENT

501-8.1 Payment. Payment for concrete pavement meeting all acceptance criteria as specified in paragraph 501-6.6. Acceptance Criteria shall be based on results of strength, and thickness tests. Payment for acceptable lots of concrete pavement shall be adjusted in accordance with paragraph 501-8.1a for strength and thickness; 501-8.1b for repairs; and 501-8.1c for grinding, subject to the limitation that:

The total project payment for concrete pavement shall not exceed 100% percent of the product of the contract unit price and the total number of square yards (square meters) of concrete pavement used in the accepted work (See Note 1 under the Price Adjustment Schedule table below).

Payment shall be full compensation for all labor, materials, tools, equipment, and incidentals required to complete the work as specified herein and on the drawings.

a. Basis of adjusted payment. The pay factor for each individual lot shall be calculated in accordance with the Price Adjustment Schedule table below. A pay factor shall be calculated for both strength and thickness. The lot pay factor shall be the higher of the two values when calculations for both strength and thickness are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either strength or thickness is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both strength and thickness are less than 100%.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Price Adjustment Schedule[1]

Percentage of Materials Within Specification Limits (PWL)	Lot Pay Factor (Percent of Contract Unit Price)
96 – 100	106
90 – 95	PWL + 10
75 – 90	0.5 PWL + 55
55 – 74	1.4 PWL – 12
Below 55	Reject[2]

[1] Although it is theoretically possible to achieve a pay factor of 106% for each lot, actual payment in excess of 100% shall be subject to the total project payment limitation specified in paragraph 501-8.1.

[2] The lot shall be removed and replaced unless, after receipt of FAA concurrence, the Owner and Contractor agree in writing that the lot will remain; the lot paid at 50% of the contract unit price; and the total project payment limitation reduced by the amount withheld for that lot.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 501-8.1. Payment in excess of 100% for accepted lots of concrete pavement shall be used to offset payment for accepted lots of concrete pavement that achieve a lot pay factor less than 100%; except for rejected lots which remain in place and/or sublots with adjustments for repairs.

b. Adjusted payment for repairs. The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots which contain repairs in accordance with paragraph 501-4.19 on more than 20% of the slabs within the sublot. Payment factors greater than 100 percent for the strength and thickness cannot be used to offset adjustments for repairs.

c. Adjusted payment for grinding. The PWL lot pay factor shall be reduced by 5% and be no higher than 95% for sublots with grinding over 25% of a sublot.

d. Profilograph Roughness. The Contractor will receive full payment when the profilograph average profile index is in accordance with paragraph 501-6.6b(4). When the final average profile index for the entire length of pavement does not exceed 15 inches per mile per 1/10 mile, payment will be made at the contract unit price for the completed pavement.

e. Payment.

Payment shall be made under:

Item P-501-8.1 Concrete Pavement, 6.5” - per Square Yard (Square Meter)

Item P-501-8.2 Tie-down Anchors - per Each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A996	Standard Specification for Rail-Steel and Axle-Steel Deformed Bars for Concrete Reinforcement
ASTM A1035	Standard Specification for Deformed and Plain, Low-Carbon, Chromium, Steel Bars for Concrete Reinforcement
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete
ASTM A1078	Standard Specification for Epoxy-Coated Steel Dowels for Concrete Pavement
ASTM C29	Standard Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate
ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C70	Standard Test Method for Surface Moisture in Fine Aggregate
ASTM C78	Standard Test Method for Flexural Strength of Concrete (Using Simple Beam - with Third-Point Loading)
ASTM C88	Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C123	Standard Test Method for Lightweight Particles in Aggregate
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C138	Standard Test Method for Density (Unit Weight), Yield, and Air Content (Gravimetric) of Concrete
ASTM C142	Standard Test Method for Clay Lumps and Friable Particles in Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C173	Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method
ASTM C174	Standard Test Method for Measuring Thickness of Concrete Elements Using Drilled Concrete Cores
ASTM C227	Standard Test Method for Potential Alkali Reactivity of Cement-Aggregate Combinations (Mortar-Bar Method)
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C295	Standard Guide for Petrographic Examination of Aggregates for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregates by Drying
ASTM C595	Standard Specification for Blended Hydraulic Cements
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C642	Standard Test Method for Density, Absorption, and Voids in Hardened Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C881	Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1064	Test Method for Temperature of Freshly Mixed Hydraulic-Cement Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1567	Standard Test Method for Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials and Aggregate (Accelerated Mortar-Bar Method)
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Bituminous Types)
ASTM D1752	Standard Specification for Preformed Sponge Rubber and Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
ASTM E2133	Standard Test Method for Using a Rolling Inclinometer to Measure Longitudinal and Transverse Profiles of a Traveled Surface

American Concrete Institute (ACI)

ACI 305R	Guide to Hot Weather Concreting
ACI 306R	Guide to Cold Weather Concreting
ACI 309R	Guide for Consolidation of Concrete

Advisory Circulars (AC)

AC 150/5320-6	Airport Pavement Design and Evaluation

Federal Highway Administration (FHWA)

HIPERPAV 3, version 3.2

Portland Concrete Association (PCA)

PCA	Design and Control of Concrete Mixtures, 16th Edition

@ Bolton & Menk, Inc. 2026, All Rights Reserved

U.S. Army Corps of Engineers (USACE) Concrete Research Division (CRD)

CRD C662	Determining the Potential Alkali-Silica Reactivity of Combinations of Cementitious Materials, Lithium Nitrate Admixture and Aggregate (Accelerated Mortar-Bar Method)

United States Air Force Engineering Technical Letter (ETL)

ETL 97-5	Proportioning Concrete Mixtures with Graded Aggregates for Rigid Airfield Pavements

END ITEM P-501

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-610 Concrete for Miscellaneous Structures

DESCRIPTION

610-1.1 This item shall consist of concrete and reinforcement, as shown on the plans, prepared and constructed in accordance with these specifications. This specification shall be used for all concrete other than airfield pavement which are cast-in-place.

MATERIALS

610-2.1 General. Only approved materials, conforming to the requirements of these specifications, shall be used in the work. Materials may be subject to inspection and tests at any time during their preparation or use. The source of all materials shall be approved by the Resident Project Representative (RPR) before delivery or use in the work. Representative preliminary samples of the materials shall be submitted by the Contractor, when required, for examination and test. Materials shall be stored and handled to ensure preservation of their quality and fitness for use and shall be located to facilitate prompt inspection. All equipment for handling and transporting materials and concrete must be clean before any material or concrete is placed in them.

The use of pit-run aggregates shall not be permitted unless the pit-run aggregate has been screened and washed, and all fine and coarse aggregates stored separately and kept clean. The mixing of different aggregates from different sources in one storage stockpile or alternating batches of different aggregates shall not be permitted.

a. Reactivity. Fine aggregate and coarse aggregates to be used in all concrete shall have been tested separately within twelve months of the project in accordance with ASTM C1260. Test results shall be submitted to the RPR. The aggregate shall be considered innocuous if the expansion of test specimens, tested in accordance with ASTM C1260, does not exceed 0.08% at 14 days (16 days from casting). If the expansion either or both test specimen is greater than 0.08% at 14 days, but less than 0.20%, a minimum of 25% of Type F fly ash, or between 40% and 55% of slag cement shall be used in the concrete mix.

If the expansion is greater than 0.20%, the aggregates shall not be used, and test results for other aggregates must be submitted for evaluation; or aggregates that meet P-501 reactivity test requirements may be utilized.

If expansion of either the coarse or fine aggregate exceeds 0.08% at 14 days, limit the alkali of the concrete to be less than or equal to 3.0 lb per cubic yard (1.8 kg per cubic meter), calculated in accordance with EB 106

610-2.2 Coarse aggregate. The coarse aggregate for concrete shall meet the requirements of ASTM C33 and the requirements of Table 4, Class Designation 5S; and the grading requirements shown below, as required for the project.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Coarse Aggregate Grading Requirements

Maximum Aggregate Size		ASTM C33, Table 3 Grading Requirements (Size No.)
Figure 1	1 1/2 inch (37.5 mm)	467 or 4 and 67
Figure 2	1 inch (25 mm)	57
Figure 3	¾ inch (19 mm)	67
Figure 4	½ inch (12.5 mm)	7

610-2.2.1 Coarse Aggregate susceptibility to durability (D) cracking.

Coarse aggregate may only be accepted from sources that have a 20-year service history for the same gradation to be supplied with no history of D-Cracking. Aggregates that do not have a 20-year record of service free from major repairs (less than 5% of slabs replaced) in similar conditions without D-cracking shall not be used unless the material currently being produced has a durability factor greater than or equal to 95 per ASTM C666. The Contractor shall submit a current certification and test results to verify the aggregate acceptability. Test results will only be accepted from a State Department of Transportation (DOT) materials laboratory or an accredited laboratory. Certification and test results which are not dated or which are over one (1) year old or which are for different gradations will not be accepted.

Crushed granite, calcite cemented sandstone, quartzite, basalt, diabase, rhyolite or trap rock are considered to meet the D-cracking test requirements but must meet all other quality tests specified in Item P-501.

610-2.3 Fine aggregate. The fine aggregate for concrete shall meet all fine aggregate requirements of ASTM C33.

610-2.4 Cement. Cement shall conform to the requirements of ASTM C150 Type I, II or V; ASTM C595 Type Types IS, IP, IL, or IT.

610-2.5 Cementitious materials.

a. Fly ash. Fly ash shall meet the requirements of ASTM C618, with the exception of loss of ignition, where the maximum shall be less than 6%. Fly ash shall have a Calcium Oxide (CaO) content of less than 15% and a total available alkali content less than 3% per ASTM C311. Fly ash produced in furnace operations using liming materials or soda ash (sodium carbonate) as an additive shall not be acceptable. The Contractor shall furnish the previous three most recent, consecutive ASTM C618 reports for each source of fly ash proposed in the concrete mix, and shall furnish each additional report as they become available during the project. The reports can be used for acceptance or the material may be tested independently by the RPR.

b. Slag cement (ground granulated blast furnace (GGBF). Slag cement shall conform to ASTM C989, Grade 100 or Grade 120. Slag cement shall be used only at a rate between 25% and 55% of the total cementitious material by mass.

610-2.6 Water. Water used in mixing or curing shall be from potable water sources. Other sources shall be tested in accordance with ASTM C1602 prior to use.

610-2.7 Admixtures. The Contractor shall submit certificates indicating that the material to be furnished meets all of the requirements indicated below. In addition, the RPR may require the Contractor to submit complete test data from an approved laboratory showing that the material to be furnished meets all of the requirements of the cited specifications. Subsequent tests may be made of samples taken by the RPR from the supply of the material being furnished or proposed for use on the work to determine whether the admixture is uniform in quality with that approved.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

a. Air-entraining admixtures. Air-entraining admixtures shall meet the requirements of ASTM C260 and shall consistently entrain the air content in the specified ranges under field conditions. The air-entrainment agent and any water reducer admixture shall be compatible.

b. Water-reducing admixtures. Water-reducing admixture shall meet the requirements of ASTM C494, Type A, B, or D. ASTM C494, Type F and G high range water reducing admixtures and ASTM C1017 flowable admixtures shall not be used.

c. Other chemical admixtures. The use of set retarding, and set-accelerating admixtures shall be approved by the RPR. Retarding shall meet the requirements of ASTM C494, Type A, B, or D and set-accelerating shall meet the requirements of ASTM C494, Type C. Calcium chloride and admixtures containing calcium chloride shall not be used.

610-2.8 Premolded joint material. Premolded joint material for expansion joints shall meet the requirements of ASTM D1751**.**

610-2.9 Joint filler. The filler for joints shall meet the requirements of Item P-605, unless otherwise specified.

610-2.10 Steel reinforcement. Reinforcing shall consist of the types conforming to the requirements listed below **.**

All reinforcing and joint steel shall be epoxy coated.

Steel Reinforcement

Reinforcing Steel	**ASTM A615, ASTM A706, ASTM A775, ASTM A934**
Welded Steel Wire Fabric	**ASTM A1064, ASTM A884**

610-2.11 Materials for curing concrete. Curing materials shall conform to the requirements below:

Materials for Curing

White-pigmented Liquid Membrane-Forming Compound, Type 2, Class B	**ASTM C309**

CONSTRUCTION METHODS

610-3.1 General. The Contractor shall furnish all labor, materials, and services necessary for, and incidental to, the completion of all work as shown on the drawings and specified here. All machinery and equipment used by the Contractor on the work, shall be of sufficient size to meet the requirements of the work. All work shall be subject to the inspection and approval of the RPR.

610-3.2 Concrete Mixture. The concrete shall develop a compressive strength of 4000 psi (28 MPa) in 28 days as determined by test cylinders made in accordance with ASTM C31 and tested in accordance with ASTM C39. The concrete shall contain not less than 470 pounds of cementitious material per cubic yard (280 kg per cubic meter). The water cementitious ratio shall not exceed 0.45 by weight. The air content of the concrete shall be 5% +/- 1.2% as determined by ASTM C231 and shall have a slump of not more than 4 inches (100 mm) as determined by ASTM C143.

610-3.3 Mixing. Concrete may be mixed at the construction site, at a central point, or wholly or in part in truck mixers. The concrete shall be mixed and delivered in accordance with the requirements of ASTM C94 or ASTM C685.

The concrete shall be mixed only in quantities required for immediate use. Concrete shall not be mixed while the air temperature is below 40°F (4°C) without the RPRs approval. If approval is granted for mixing under such conditions, aggregates or water, or both, shall be heated and the concrete shall be placed at a temperature not less than 50°F (10°C) nor more than 100°F (38°C). The Contractor shall be held responsible for any defective work, resulting from freezing or injury in any manner during placing and curing, and shall replace such work at his expense.

Retempering of concrete by adding water or any other material is not permitted.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The rate of delivery of concrete to the job shall be sufficient to allow uninterrupted placement of the concrete.

610-3.4 Forms. Concrete shall not be placed until all the forms and reinforcements have been inspected and approved by the RPR. Forms shall be of suitable material and shall be of the type, size, shape, quality, and strength to build the structure as shown on the plans. The forms shall be true to line and grade and shall be mortar-tight and sufficiently rigid to prevent displacement and sagging between supports. The surfaces of forms shall be smooth and free from irregularities, dents, sags, and holes. The Contractor shall be responsible for their adequacy.

The internal form ties shall be arranged so no metal will show in the concrete surface or discolor the surface when exposed to weathering when the forms are removed. All forms shall be wetted with water or with a non-staining mineral oil, which shall be applied immediately before the concrete is placed. Forms shall be constructed so they can be removed without injuring the concrete or concrete surface.

610-3.5 Placing reinforcement. All reinforcement shall be accurately placed, as shown on the plans, and shall be firmly held in position during concrete placement. Bars shall be fastened together at intersections. The reinforcement shall be supported by approved metal chairs. Shop drawings, lists, and bending details shall be supplied by the Contractor when required.

610-3.6 Embedded items. Before placing concrete, all embedded items shall be firmly and securely fastened in place as indicated. All embedded items shall be clean and free from coating, rust, scale, oil, or any foreign matter. The concrete shall be spaded and consolidated around and against embedded items. The embedding of wood shall not be allowed.

610-3.7 Concrete Consistency. The Contractor shall monitor the consistency of the concrete delivered to the project site; collect each batch ticket; check temperature; and perform slump tests on each truck at the project site in accordance with ASTM C143.

610-3.8 Placing concrete. All concrete shall be placed during daylight hours, unless otherwise approved. The concrete shall not be placed until the depth and condition of foundations, the adequacy of forms and falsework, and the placing of the steel reinforcing have been approved by the RPR. Concrete shall be placed as soon as practical after mixing, but in no case later than one (1) hour after water has been added to the mix. The method and manner of placing shall avoid segregation and displacement of the reinforcement. Troughs, pipes, and chutes shall be used as an aid in placing concrete when necessary. The concrete shall not be dropped from a height of more than 5 feet (1.5 m). Concrete shall be deposited as nearly as practical in its final position to avoid segregation due to rehandling or flowing. Do not subject concrete to procedures which cause segregation. Concrete shall be placed on clean, damp surfaces, free from running water, or on a properly consolidated soil foundation.

610-3.9 Vibration. Vibration shall follow the guidelines in American Concrete Institute (ACI) Committee 309R, Guide for Consolidation of Concrete.

610-3.10 Joints. Joints shall be constructed as indicated on the plans.

610-3.11 Finishing. All exposed concrete surfaces shall be true, smooth, and free from open or rough areas, depressions, or projections. All concrete horizontal plane surfaces shall be brought flush to the proper elevation with the finished top surface struck-off with a straightedge and floated.

610-3.12 Curing and protection. All concrete shall be properly cured in accordance with the recommendations in American Concrete Institute (ACI) 308R, Guide to External Curing of Concrete. The concrete shall be protected from damage until project acceptance.

610-3.13 Cold weather placing. When concrete is placed at temperatures below 40°F (4°C), follow the cold weather concreting recommendations found in ACI 306R, Cold Weather Concreting.

610-3.14 Hot weather placing. When concrete is placed in hot weather greater than 85ºF (30 ºC), follow the hot weather concreting recommendations found in ACI 305R, Hot Weather Concreting.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

QUALITY ASSURANCE (QA)

610-4.1 Quality Assurance sampling and testing. Concrete for each day's placement will be accepted on the basis of the compressive strength specified in paragraph 610-3.2. The RPR will sample the concrete in accordance with ASTM C172; test the slump in accordance with ASTM C143; test air content in accordance with ASTM C231; make and cure compressive strength specimens in accordance with ASTM C31; and test in accordance with ASTM C39. The QA testing agency will meet the requirements of ASTM C1077.

The Contractor shall provide adequate facilities for the initial curing of cylinders.

610-4.2 Defective work. Any defective work that cannot be satisfactorily repaired as determined by the RPR, shall be removed and replaced at the Contractor's expense. Defective work includes, but is not limited to, uneven dimensions, honeycombing and other voids on the surface or edges of the concrete.

METHOD OF MEASUREMENT

610-5.1 Concrete shall be considered incidental to which the concrete is being used and no separate measurement shall be made for concrete complete in place and accepted. Reinforcing steel used in the concrete will also be considered incidental and no measurement shall be made.

BASIS OF PAYMENT

610-6.1 No separate payment shall be made for concrete or reinforcing steel as they shall be considered incidental for other bid items which the concrete is used. This price shall be full compensation for furnishing all materials including reinforcement and embedded items and for all preparation, delivery, installation, and curing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A184	Standard Specification for Welded Deformed Steel Bar Mats for Concrete Reinforcement
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A704	Standard Specification for Welded Steel Plain Bar or Rod Mats for Concrete Reinforcement
ASTM A706	Standard Specification for Low-Alloy Steel Deformed and Plain Bars for Concrete Reinforcement
ASTM A775	Standard Specification for Epoxy-Coated Steel Reinforcing Bars
ASTM A884	Standard Specification for Epoxy-Coated Steel Wire and Welded Wire Reinforcement
ASTM A934	Standard Specification for Epoxy-Coated Prefabricated Steel Reinforcing Bars
ASTM A1064	Standard Specification for Carbon-Steel Wire and Welded Wire Reinforcement, Plain and Deformed, for Concrete

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM C31	Standard Practice for Making and Curing Concrete Test Specimens in the Field
ASTM C33	Standard Specification for Concrete Aggregates
ASTM C39	Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens
ASTM C94	Standard Specification for Ready-Mixed Concrete
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C114	Standard Test Methods for Chemical Analysis of Hydraulic Cement
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM C143	Standard Test Method for Slump of Hydraulic-Cement Concrete
ASTM C150	Standard Specification for Portland Cement
ASTM C171	Standard Specification for Sheet Materials for Curing Concrete
ASTM C172	Standard Practice for Sampling Freshly Mixed Concrete
ASTM C231	Standard Test Method for Air Content of Freshly Mixed Concrete by the Pressure Method
ASTM C260	Standard Specification for Air-Entraining Admixtures for Concrete
ASTM C309	Standard Specification for Liquid Membrane-Forming Compounds for Curing Concrete
ASTM C311	Standard Test Methods for Sampling and Testing Fly Ash or Natural Pozzolans for Use in Portland-Cement Concrete
ASTM C494	Standard Specification for Chemical Admixtures for Concrete
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C666	Standard Test Method for Resistance of Concrete to Rapid Freezing and Thawing
ASTM C685	Standard Specification for Concrete Made by Volumetric Batching and Continuous Mixing
ASTM C989	Standard Specification for Slag Cement for Use in Concrete and Mortars
ASTM C1017	Standard Specification for Chemical Admixtures for Use in Producing Flowing Concrete
ASTM C1077	Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation
ASTM C1157	Standard Performance Specification for Hydraulic Cement
ASTM C1260	Standard Test Method for Potential Alkali Reactivity of Aggregates (Mortar-Bar Method)
ASTM C1365	Standard Test Method for Determination of the Proportion of Phases in Portland Cement and Portland-Cement Clinker Using X-Ray Powder Diffraction Analysis
ASTM C1602	Standard Specification for Mixing Water Used in the Production of Hydraulic Cement Concrete
ASTM D1751	Standard Specification for Preformed Expansion Joint Filler for Concrete Paving and Structural Construction (Nonextruding and Resilient Asphalt Types)

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM D1752	Standard Specification for Preformed Sponge Rubber Cork and Recycled PVC Expansion Joint Fillers for Concrete Paving and Structural Construction

American Concrete Institute (ACI)

ACI 305R	Hot Weather Concreting
ACI 306R	Cold Weather Concreting
ACI 308R	Guide to External Curing of Concrete
ACI 309R	Guide for Consolidation of Concrete

END OF ITEM P-610

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-620 Runway and Taxiway Marking

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Resident Project Representative (RPR). The terms “paint” and “marking material” as well as “painting” and “application of markings” are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer’s certified test reports, for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. This certification along with a copy of the paint manufacturer’s surface preparation; marking materials, including adhesion, flow promoting and/or floatation additive; and application requirements must be submitted and approved by the Resident Project Representative (RPR) prior to the initial application of markings. The reports can be used for material acceptance or the RPR may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the RPR upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers that are easily quantifiable for inspection by the RPR.

620-2.2 Marking materials.

Table 1. Marking Materials

Paint[1]				Glass Beads[2]	
Type	Color	Fed Std. 595 Number	Application Rate Maximum	Type	Application Rate Minimum
Waterborne Type I or II	White	37925	115 Ft^2/gal (2.8 m^2/l)	1, grad A	7lb/gal (0.85 kg/l)
Waterborne Type I or II	Yellow	33538 or 33655	115 Ft^2/gal (2.8 m^2/l)	1, grad A	7lb/gal (0.85 kg/l)
Waterborne Type I or II	Black	37038	115 Ft^2/gal (2.8 m^2/l)	N/A	N/A

[1] See paragraph 620-2.2a

[2] See paragraph 620-2.2b

a. Paint. Paint shall be waterborne in accordance with the requirements of this paragraph. Paint colors shall comply with Federal Standard No. 595.

Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952F, Type I or Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.

b. Reflective media. Glass beads for white and yellow paint shall meet the requirements for Federal Specification TT-B-1325D Type I, Gradation A.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Glass beads shall not be used in black and green paint.

Type III glass beads shall not be used in red and pink paint.

CONSTRUCTION METHODS

620-3.1 Weather limitations. Painting shall only be performed when the surface is dry, and the ambient temperature and the pavement surface temperature meet the manufacturer's recommendations in accordance with paragraph 620-2.1. Painting operations shall be discontinued when the ambient or surface temperatures does not meet the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns. Markings shall not be applied when weather conditions are forecasts to not be within the manufacturers' recommendations for application and dry time.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless type marking machine with automatic glass bead dispensers suitable for application of traffic paint. It shall produce an even and uniform film thickness and appearance of both paint and glass beads at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray. The marking equipment for both paint and beads shall be calibrated daily.

620-3.3 Preparation of surfaces. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other contaminates that would reduce the bond between the paint and the pavement. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the RPR. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

a. Preparation of new pavement surfaces. The area to be painted shall be cleaned by broom, blower, water blasting, or by other methods approved by the RPR to remove all contaminants, including PCC curing compounds, minimizing damage to the pavement surface.

b. Preparation of pavement to remove existing markings. Existing pavement markings shall be removed by rotary grinding, water blasting, or by other methods approved by the RPR minimizing damage to the pavement surface. The removal area may need to be larger than the area of the markings to eliminate ghost markings. After removal of markings on asphalt pavements, apply a fog seal or seal coat to 'block out' the removal area to eliminate 'ghost' markings.

c. Preparation of pavement markings prior to remarking. Prior to remarking existing markings, loose existing markings must be removed minimizing damage to the pavement surface, with a method approved by the RPR. After removal, the surface shall be cleaned of all residue or debris.

Prior to the application of markings (applies to paragraph 620-3.3a thru 620-3.3c above), the Contractor shall certify in writing that the surface is dry and free from dirt, grease, oil, laitance, or other foreign material that would prevent the bond of the paint to the pavement or existing markings. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the RPR prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application. The locations of markings to receive glass beads shall be shown on the plans.

620-3.5 Application. A period of 30 days shall elapse between placement of surface course or seal coat and application of the permanent paint markings. Paint shall be applied at the locations and to the dimensions and

@ Bolton & Menk, Inc. 2026, All Rights Reserved

spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the RPR.

The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacing shall be within the following tolerances:

Marking Dimensions and Spacing Tolerance

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inch to 6 feet (910 mm to 1.85 m)	±1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	±2 inch (50 mm)
greater than 60 feet (18.3 m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment and distribution should be performed.

620-3.6 Application--preformed thermoplastic airport pavement markings.

Preformed thermoplastic pavement markings not used.

620-3.7 Control strip. Prior to the full application of airfield markings, the Contractor shall prepare a control strip in the presence of the RPR. The Contractor shall demonstrate the surface preparation method and all striping equipment to be used on the project. The marking equipment must achieve the prescribed application rate of paint and population of glass beads (per Table 1) that are properly embedded and evenly distributed across the full width of the marking. Prior to acceptance of the control strip, markings must be evaluated during darkness to ensure a uniform appearance.

620-3.8 Retro-reflectance. Not Used

620-3.9 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the RPR. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1a Surface preparation will not be measured.

620-4.1b Reflective media will not be measured.

620-4.1c Black Pavement markings will not be measured and shall be incidental to other pavement marking bid items.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

620-4.1d The quantity of preformed markings to be paid for shall be the number of square feet (square meters) of preformed markings.

620-4.1e The quantity of pavement markings removed will not be measured for payment.

BASIS OF PAYMENT

620-5.1 This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item complete in place and accepted by the RPR in accordance with these specifications.

620-5.1.a Payment for surface preparation will not be paid for separately. It shall be considered incidental to other bid items.

620-5.1.b Payment for reflective media will not be paid separately. It shall be considered incidental to other bid items.

620-5.1.c. Black pavement markings will not be paid for separately and shall be considered incidental to other pavement marking bid items.

620-5.1.d Payment for preformed markings shall be made at the contract price for the number of square feet (square meters) of preformed markings**.**

620-5.1.e Payment for pavement marking removal shall be made at the contract price per lump sum for pavement marking removal. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item 620-5.1.d.2	Pavement Marking, Solid Yellow, with Beads - per Square Foot (square meter) of Preformed Markings
Item P-620-5.1.e	Pavement Marking Removals **-** per lump sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness

@ Bolton & Menk, Inc. 2026, All Rights Reserved

ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E303	Standard Test Method for Measuring Surface Frictional Properties Using the British Pendulum Tester
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

Code of Federal Regulations (CFR)

40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 FR Part 1910.1200	Hazard Communication

Federal Specifications (FED SPEC)

FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective
FED SPEC TT-P-1952F	Paint, Traffic and Airfield Marking, Waterborne
FED STD 595	Colors used in Government Procurement

Commercial Item Description

A-A-2886B	Paint, Traffic, Solvent Based

Advisory Circulars (AC)

AC 150/5340-1	Standards for Airport Markings
AC 150/5320-12	Measurement, Construction, and Maintenance of Skid Resistant Airport Pavement Surfaces

END OF ITEM P-620

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item P-605 Joint Sealants for Pavements

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints in pavement; joints between different types of pavements; and cracks in existing pavement.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

605-2.2 Backer rod. The material furnished shall be a compressible, non-shrinking, non-staining, non-absorbing material that is non-reactive with the joint sealant in accordance with ASTM D5249. The backer-rod material shall be 25% ± 5 % larger in diameter than the nominal width of the joint.

605-2.3 Bond breaking tapes. Provide a bond breaking tape or separating material that is a flexible, non-shrinkable, non-absorbing, non-staining, and non-reacting adhesive-backed tape. The material shall have a melting point at least 5°F (3°C) greater than the pouring temperature of the sealant being used when tested in accordance with ASTM D789. The bond breaker tape shall be approximately 1/8 inch (3 mm) wider than the nominal width of the joint and shall not bond to the joint sealant.

CONSTRUCTION METHODS

605-3.1 Time of application. Joints shall be sealed as soon after completion of the curing period as feasible and before the pavement is opened to traffic, including construction equipment. The pavement temperature shall be 50°F (10°C) and rising at the time of application of the poured joint sealing material. Do not apply sealant if moisture is observed in the joint.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, 14 days prior to use on the project.

a. Tractor-mounted routing tool. Provide a routing tool, used for removing old sealant from the joints, of such shape and dimensions and so mounted on the tractor that it will not damage the sides of the joints. The tool shall be designed so that it can be adjusted to remove the old material to varying depths as required. The use of V-shaped tools or rotary impact routing devices will not be permitted. Hand-operated spindle routing devices may be used to clean and enlarge random cracks.

b. Concrete saw. Provide a self-propelled power saw, with water-cooled diamond or abrasive saw blades, for cutting joints to the depths and widths specified.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

c. Sandblasting equipment. Sandblasting is not allowed.

d. Waterblasting equipment. The Contractor must demonstrate waterblasting equipment including the pumps, hose, guide and nozzle size, under job conditions, before approval in accordance with paragraph 605-3.3. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

e. Hand tools. Hand tools may be used, when approved, for removing defective sealant from a crack and repairing or cleaning the crack faces. Hand tools should be carefully evaluated for potential spalling effects prior to approval for use.

f. Hot-poured sealing equipment. The unit applicators used for heating and installing ASTM D6690 joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

g. Cold-applied, single-component sealing equipment. The equipment for installing ASTM D5893 single component joint sealants shall consist of an extrusion pump, air compressor, following plate, hoses, and nozzle for transferring the sealant from the storage container into the joint opening. The dimension of the nozzle shall be such that the tip of the nozzle will extend into the joint to allow sealing from the bottom of the joint to the top. Maintain the initially approved equipment in good working condition, serviced in accordance with the supplier's instructions, and unaltered in any way without obtaining prior approval. Small hand-held air-powered equipment (i.e., caulking guns) may be used for small applications.

605-3.3 Preparation of joints. Pavement joints for application of material in this specification must be dry, clean of all scale, dirt, dust, curing compound, and other foreign matter. The Contractor shall demonstrate, in the presence of the RPR, that the method cleans the joint and does not damage the joint.

a. Sawing. All joints shall be sawed in accordance with specifications and plan details. Immediately after sawing the joint, the resulting slurry shall be completely removed from joint and adjacent area by flushing with a jet of water, and by use of other tools as necessary.

b. Sealing. Immediately before sealing, the joints shall be thoroughly cleaned of all remaining laitance, curing compound, filler, protrusions of hardened concrete, old sealant and other foreign material from the sides and upper edges of the joint space to be sealed. Cleaning shall be accomplished bytractor-mounted routing equipment, concrete saw or waterblaster as specified in paragraph 605-3.2. After final cleaning and immediately prior to sealing, blow out the joints with compressed air and leave them completely free of debris and water. The joint faces shall be surface dry when the seal is applied.

c. Backer Rod. When the joint opening is of a greater depth than indicated for the sealant depth, plug or seal off the lower portion of the joint opening using a backer rod in accordance with paragraph 605-2.2 to prevent the entrance of the sealant below the specified depth. Take care to ensure that the backer rod is placed at the specified depth and is not stretched or twisted during installation.

d. Bond-breaking tape. Where inserts or filler materials contain bitumen, or the depth of the joint opening does not allow for the use of a backup material, insert a bond-separating tape breaker in accordance with paragraph 605-2.3 to prevent incompatibility with the filler materials and three-sided adhesion of the sealant. Securely bond the tape to the bottom of the joint opening so it will not float up into the new sealant.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

605-3.4 Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the RPR before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

Immediately preceding, but not more than 50 feet (15 m) ahead of the joint sealing operations, perform a final cleaning with compressed air. Fill the joints from the bottom up to 1/8 inch (3 mm) ±1/16 inch (2 mm) below the top of pavement surface; or bottom of groove for grooved pavement. Remove and discard excess or spilled sealant from the pavement by approved methods. Install the sealant in such a manner as to prevent the formation of voids and entrapped air. In no case shall gravity methods or pouring pots be used to install the sealant material. Traffic shall not be permitted over newly sealed pavement until authorized by the RPR. When a primer is recommended by the manufacturer, apply it evenly to the joint faces in accordance with the manufacturer's instructions. Check the joints frequently to ensure that the newly installed sealant is cured to a tack-free condition within the time specified.

605-3.5 Inspection. The Contractor shall inspect the joint sealant for proper rate of cure and set, bonding to the joint walls, cohesive separation within the sealant, reversion to liquid, entrapped air and voids. Sealants exhibiting any of these deficiencies at any time prior to the final acceptance of the project shall be removed from the joint, wasted, and replaced as specified at no additional cost to the airport.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Joint sealing will not be measured.

BASIS OF PAYMENT

605-5.1 No separate payment will be made for joint sealing. It shall be incidental to Item P-501 PCC Paving. The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D789	Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)
ASTM D5249	Standard Specification for Backer Material for Use with Cold- and Hot-Applied Joint Sealants in Portland-Cement Concrete and Asphalt Joints
ASTM D5893	Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements
ASTM D6690	Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt
ASTM D7116	Standard Specification for Joint Sealants, Hot Applied, Jet Fuel Resistant Types for Portland Cement Concrete Pavements

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Advisory Circulars (AC)

AC 150/5340-30 Design and Installation Details for Airport Visual Aids

END ITEM P-605

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item D-705 Pipe Underdrains for Airports

DESCRIPTION

705-1.1 This item shall consist of the construction of pipe drains in accordance with these specifications and in reasonably close conformity with the lines and grades shown on the plans.

MATERIALS

705-2.1 General. Materials shall meet the requirements shown on the plans and specified below.

None

705-2.2 Pipe. The pipe shall be of the type called for on the plans or in the proposal and shall be in accordance with the following appropriate requirements.

AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500-mm (12- to 60-in.) Diameter
AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) Diameter
ASTM F758	Standard Specification for Smooth-Wall Poly (Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings

705-2.3 Joint mortar. Pipe joint mortar shall consist of one part by volume of Portland cement and two parts sand. The Portland cement shall conform to the requirements of ASTM C150, Type I. The sand shall conform to the requirements of ASTM C144.

705-2.4 Elastomeric seals. Elastomeric seals shall conform to the requirements of ASTM F477.

705-2.5 Porous backfill. Porous backfill shall be free of clay, humus, or other objectionable matter, and shall conform to the gradation in Table 1 when tested in accordance with ASTM C136, which conforms to Section 4131 Porous Backfill Material (Gradation 29) of the Iowa DOT Standard Specifications for Highway and Bridge Construction (current version).

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Table 1. Gradation of Porous Backfill

Sieve Designation (square openings)	Percentage by Weight Passing Sieves
	Porous Material No.
1-1/2 inch (37.5 mm)	
1 inch (25.0 mm)	
3/8 inch (9.5 mm)	50-100
No. 4 (4.75 mm)	0-50
No. 8 (2.36 mm)	0-8
No. 16 (1.18 mm)	0
No. 50 (300 µm)	0
No. 100 (150 µm)	0

705-2.6 Granular material. Granular material used for backfilling shall conform to the requirements of ASTM D2321 for Class IA, IB, or II materials.

705-2.7 Filter fabric. The filter fabric shall conform to the requirements of Section 4196 Engineering Fabrics (Item B.2. Subsurface Drainage) of the Iowa DOT Standard Specifications for Highway and Bridge Construction (current version).

Table 2. Fabric Properties

Fabric Property	Test Method	Test Requirement
Grab Tensile Strength, lbs	ASTM D4632	125 min
Grab Tensile Elongation %	ASTM D4632	50 min
Burst Strength, psi	ASTM D3785	125 min
Trapezoid Tear Strength, lbs	ASTM D4533	55 min
Puncture Strength, lbs	ASTM D4833	40 min
Abrasion, lbs	ASTM D4886	15 max loss
Equivalent Opening Size	ASTM D4751	70-100
Permittivity sec^{-1}	ASTM D4491	0.80
Accelerated Weathering (UV Stability) (Strength Retained - %)	ASTM D4355 *(500 hrs exposure)	70

705-2.8 Controlled low-strength material (CLSM). CLSM is not used.

CONSTRUCTION METHODS

705-3.1 Equipment. All equipment required for the construction of pipe underdrains shall be on the project, in good working condition, and approved by the RPR before construction is permitted to start.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

705-3.2 Excavation. The width of the pipe trench shall be sufficient to permit satisfactory jointing of the pipe and thorough tamping of the bedding material under and around the pipe, but shall not be less than the external diameter of the pipe plus 6 inches (150 mm) on each side of the pipe. The trench walls shall be approximately vertical.

Where rock, hardpan, or other unyielding material is encountered, it shall be removed below the foundation grade for a depth of at least 4 inches (100 mm). The excavation below grade shall be backfilled with selected fine compressible material, such as silty clay or loam, and lightly compacted in layers not over 6 inches (150 mm) in uncompacted depth to form a uniform but yielding foundation.

Where a firm foundation is not encountered at the grade established, due to soft, spongy, or other unstable soil, the unstable soil shall be removed and replaced with approved granular material for the full trench width. The RPR shall determine the depth of removal necessary. The granular material shall be compacted to provide adequate support for the pipe.

Excavated material not required or acceptable for backfill shall be disposed of by the Contractor as directed by the RPR. The excavation shall not be carried below the required depth; if this occurs, the trench shall be backfilled at the Contractor's expense with material approved by the RPR and compacted to the density of the surrounding material.

The pipe bedding shall be constructed uniformly over the full length of the pipe barrel, as required on the plans. The maximum aggregate size shall be 1 inch when the bedding thickness is less than 6 inches, and 1-1/2 inch when the bedding thickness is greater than 6 inches. Bedding shall be loosely placed, uncompacted material under the middle third of the pipe prior to placement of the pipe.

The Contractor shall do trench bracing, sheathing, or shoring necessary to perform and protect the excavation as required for safety and conformance to federal, state and local laws. Unless otherwise provided, the bracing, sheathing, or shoring shall be removed by the Contractor after the backfill has reached at least 12 inches (300 mm) over the top of the pipe. The sheathing or shoring shall be pulled as the granular backfill is placed and compacted to avoid any unfilled spaces between the trench wall and the backfill material. The cost of bracing, sheathing, or shoring, and the removal of same, shall be included in the unit price bid per foot (meter) for the pipe.

705-3.3 Laying and installing pipe.

a. Concrete pipe. The laying of the pipe in the finished trench shall be started at the lowest point and proceed upgrade. When bell and spigot pipe is used, the bells shall be laid upgrade. If tongue and groove pipe is used, the groove end shall be laid upgrade. Holes in perforated pipe shall be placed down, unless otherwise shown on the plans. The pipe shall be firmly and accurately set to line and grade so that the invert will be smooth and uniform. Pipe shall not be laid on frozen ground.

Pipe which is not true in alignment, or which shows any settlement after laying, shall be taken up and re-laid by the Contractor at no additional expense. Making adjustments in grade by exerting force on the barrel of the pipe with excavating equipment, by lifting and dropping the pipe, or by lifting the pipe and packing bedding material under it shall be prohibited. If the installed pipe section is not to grade, the pipe section shall be completely removed, the grade corrected, and the pipe rejoined."

b. Metal pipe. The metal pipe shall be laid with the separate sections joined firmly together with bands, with outside laps of circumferential joints pointing upgrade, and with longitudinal laps on the sides. Any metal in the pipe or bands that is not protected thoroughly by galvanizing shall be coated with a suitable asphaltum paint.

During installation, the asphalt-protected pipe shall be handled without damaging the asphalt coating. Any breaks in the bitumen or treatment of the pipe shall be refilled with the type and kind of bitumen used in coating the pipe originally.

c. PVC, fiberglass, or polyethylene pipe. PVC or polyethylene pipe shall be installed in accordance with the requirements of ASTM D2321. Perforations shall meet the requirements of AASHTO M252 or AASHTO M294 Class 2, unless otherwise indicated on the plans. The pipe shall be laid accurately to line and grade. Fiberglass per ASTM D3839 Standard Guide for Underground Installation of "Fiberglass" (Glass-Fiber Reinforced Thermosetting-Resin) Pipe.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

d. All types of pipe. The upgrade end of pipelines, not terminating in a structure, shall be plugged or capped as approved by the RPR.

Unless otherwise shown on the plans, a 4-inch (100 mm) bed of granular backfill material shall be spread in the bottom of the trench throughout the entire length under all perforated pipe underdrains.

Pipe outlets for the underdrains shall be constructed when required or shown on the plans. The pipe shall be laid with tight-fitting joints. Porous backfill is not required around or over pipe outlets for underdrains. All connections to other drainage pipes or structures shall be made as required and in a satisfactory manner. If connections are not made to other pipes or structures, the outlets shall be protected and constructed as shown on the plans.

e. Filter fabric. The filter fabric shall be installed in accordance with the manufacturer's recommendations, or in accordance with the AASHTO M288 Appendix, unless otherwise shown on the plans.

705-3.4 Mortar. The mortar shall be of the desired consistency for caulking and filling the joints of the pipe and for making connections to other pipes or to structures. Mortar that is not used within 45 minutes after water has been added shall be discarded. Retempering of mortar shall not be permitted.

705-3.5 Joints in concrete pipe. When open or partly open joints are required or specified, they shall be constructed as indicated on the plans. The pipe shall be laid with the ends fitted together as designed. If bell and spigot pipe is used, mortar shall be placed along the inside bottom quarter of the bell to center the following section of pipe.

The open or partly open joints shall be surrounded with granular material meeting requirements of porous backfill No. 2 in Table 1 or as indicated on the plans. This backfill shall be placed so its thickness will be not less than 3 inches (75 mm) nor more than 6 inches (150 mm), unless otherwise shown on the plans.

When the original material excavated from the trench is impervious, commercial concrete sand or granular material meeting requirements of porous backfill No. 1 shall surround porous backfill No. 2 (Table 1), as shown on the plans or as directed by the RPR.

When the original material excavated from the trench is pervious and suitable, it may be used as backfill in lieu of porous backfill No. 1, when indicated on the plans or as directed by the RPR.

705-3.6 Embedment and Backfill

a. Earth. All trenches and excavations shall be backfilled soon after the pipes are installed, unless additional protection of the pipe is directed. The embedment material shall be select material from excavation or borrow and shall be approved by the RPR. The select material shall be placed on each side of the pipe out to a distance of the nominal pipe diameter and one foot (30 cm) over the top of the pipe and shall be readily compacted. It shall not contain stones 3 inches (75 mm) or larger in size, frozen lumps, chunks of highly plastic clay, or any other material that is objectionable to the RPR. The material shall be moistened or dried, as required to aid compaction. Placement of the embedment material shall not cause displacement of the pipe. Thorough compaction under the haunches and along the sides to the top of the pipe shall be obtained.

The embedment material shall be placed in loose layers not exceeding 6 inches (150 mm) in depth under and around the pipe. Backfill material over the pipe shall be placed in lifts not exceeding 8 inches (200 mm). Successive layers shall be added and thoroughly compacted by hand and pneumatic tampers, approved by the RPR, until the trench is completely filled and brought to the planned elevation. Embedment and backfilling shall be done to avoid damaging top or side of the pipe.

In embankments and other unpaved areas, the backfill shall be compacted per Item P-152 to the density required for embankments in unpaved areas. Under paved areas, the subgrade and any backfill shall be compacted per Item P-152 to the density required for embankments for paved areas.

b. Granular backfill. When granular backfill is required, placement in the trench and about the pipe shall be as shown on the plans. The granular backfill shall not contain an excessive amount of foreign matter, nor shall soil from the sides of the trench or from the soil excavated from the trench be allowed to filter into the granular backfill. When required by the RPR, a template shall be used to properly place and separate the two sizes of backfill. The backfill

@ Bolton & Menk, Inc. 2026, All Rights Reserved

shall be placed in loose layers not exceeding 6 inches (150 mm) in depth. The granular backfill shall be compacted by hand and pneumatic tampers to the requirements as given for embankment. Backfilling shall be done to avoid damaging top or side pressure on the pipe. The granular backfill shall extend to the elevation of the trench or as shown on the plans.

When perforated pipe is specified, granular backfill material shall be placed along the full length of the pipe. The position of the granular material shall be as shown on the plans. If the original material excavated from the trench is pervious and suitable, it shall be used in lieu of porous backfill No. 1.

If porous backfill is placed in paved or adjacent to paved areas before grading or subgrade operations is completed, the backfill material shall be placed immediately after laying the pipe. The depth of the granular backfill shall be not less than 12 inches (300 mm), measured from the top of the underdrain. During subsequent construction operations, a minimum depth of 12 inches (300 mm) of backfill shall be maintained over the underdrains. When the underdrains are to be completed, any unsuitable material shall be removed exposing the porous backfill. Porous backfill containing objectionable material shall be removed and replaced with suitable material. The cost of removing and replacing any unsuitable material shall be at the Contractor's expense.

If a granular subbase blanket course is used which extends several feet beyond the edge of paving to the outside edge of the underdrain trench, the granular backfill material over the underdrains shall be placed in the trench up to an elevation of 2 inches (50 mm) above the bottom surface of the granular subbase blanket course. Immediately prior to the placing of the granular subbase blanket course, the Contractor shall blade this excess trench backfill from the top of the trench onto the adjacent subgrade where it can be incorporated into the granular subbase blanket course. Any unsuitable material that remains over the underdrain trench shall be removed and replaced. The subbase material shall be placed to provide clean contact between the subbase material and the underdrain granular backfill material for the full width of the underdrain trench.

c. Controlled low-strength material (CLSM). CLSM is not used.

705-3.7 Flexible Pipe Ring Deflection. The flexible pipe shall be inspected by the Contractor during and after installation to ensure that the internal diameter of the pipe barrel has not been reduced by more than 5 percent. For guidance on properly sizing mandrels, refer to ASTM D3034 and ASTM F679 appendices.

705-3.8 Connections. When the plans call for connections to existing or proposed pipe or structures, these connections shall be watertight and made to obtain a smooth uniform flow line throughout the drainage system.

705-3.9 Cleaning and restoration of site. After the backfill is completed, the Contractor shall dispose of all surplus material, soil, and rubbish from the site. Surplus soil may be deposited in embankments, shoulders, or as directed by the RPR. Except for paved areas of the airport, the Contractor shall restore all disturbed areas to their original condition.

METHOD OF MEASUREMENT

705-4.1. Field investigations of existing tiles will not be measured for payment.

BASIS OF PAYMENT

705-5.1. Field Investigations of Existing Tiles. Contractor shall provide the means and methods of locating existing tile(s) for the project. Any repairs to the file caused by the contractor shall be incidental.

Payment will be made under:

Item D-705-5.1 Field Investigation of Existing Tile – per lump sum

@ Bolton & Menk, Inc. 2026, All Rights Reserved

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A760	Standard Specification for Corrugated Steel Pipe, Metallic Coated for Sewers and Drains
ASTM A762	Standard Specification for Corrugated Steel Pipe, Polymer Precoated for Sewers and Drains
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C444	Standard Specification for Perforated Concrete Pipe
ASTM C654	Standard Specification for Porous Concrete Pipe
ASTM D2321	Standard Practice for Underground Installation of Thermoplastic Pipe for Sewers and Other Gravity-Flow Applications
ASTM D3262	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Sewer Pipe
ASTM D4161	Standard Specification for "Fiberglass" (Glass-Fiber Reinforced Thermosetting Resin) Pipe Joints Using Flexible Elastomeric Seals
ASTM F477	Standard Specification for Elastomeric Seals (Gaskets) for Joining Plastic Pipe
ASTM F758	Standard Specification for Smooth Wall Poly (Vinyl Chloride) (PVC) Plastic Underdrain Systems for Highway, Airport, and Similar Drainage
ASTM F794	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Gravity Sewer Pipe & Fittings Based on Controlled Inside Diameter
ASTM F949	Standard Specification for Poly (Vinyl Chloride) (PVC) Corrugated Sewer Pipe with a Smooth Interior and Fittings
ASTM F2562	Specification for Steel Reinforced Thermoplastic Ribbed Pipe and Fittings for Non-Pressure Drainage and Sewerage

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M190	Standard Specification for Bituminous - Coated Corrugated Metal Culvert Pipe and Pipe Arches
AASHTO M196	Standard Specification for Corrugated Aluminum Pipe for Sewers and Drains
AASHTO M252	Standard Specification for Corrugated Polyethylene Drainage Pipe
AASHTO M288	Standard Specification for Geotextile Specification for Highway Applications
AASHTO M294	Standard Specification for Corrugated Polyethylene Pipe, 300- to 1500- mm (12- to 60-in.) Diameter

@ Bolton & Menk, Inc. 2026, All Rights Reserved

AASHTO M304	Standard Specification for Poly (Vinyl Chloride) (PVC) Profile Wall Drain Pipe and Fittings Based on Controlled Inside Diameter
AASHTO MP20	Standard Specification for Steel-Reinforced Polyethylene (PE) Ribbed Pipe, 300- to 900-mm (12- to 36-in.) diameter
AASHTO	Standard Specifications for Highway Bridges

END OF ITEM D-705

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item D-751 Manholes, Catch Basins, Inlets and Inspection Holes

DESCRIPTION

751-1.1 This item shall consist of construction of manholes, catch basins, inlets, and inspection holes, in accordance with these specifications, at the specified locations and conforming to the lines, grades, and dimensions shown on the plans or required by the RPR.

MATERIALS

751-2.1 Brick. Not Used.

751-2.2 Mortar. Not Used.

751-2.3 Concrete. Plain and reinforced concrete used in structures, connections of pipes with structures, and the support of structures or frames shall conform to the requirements of Item P-610.

751-2.4 Precast concrete pipe manhole rings. Precast concrete pipe manhole rings shall conform to the requirements of ASTM C478. Unless otherwise specified, the risers and offset cone sections shall have an inside diameter of not less than 36 inches (90 cm) nor more than 48 inches (120 cm). There shall be a gasket between individual sections and sections cemented together with mortar on the inside of the manhole. Gaskets shall conform to the requirements of ASTM C443.

751-2.5 Corrugated metal. Not Used.

751-2.6 Frames, covers, and grates. The castings shall conform to one of the following requirements:

a. ASTM A48, Class 35B: Gray iron castings

b. ASTM A47: Malleable iron castings

c. ASTM A27: Steel castings

d. ASTM A283, Grade D: Structural steel for grates and frames

e. ASTM A536, Grade 65-45-12: Ductile iron castings

f. ASTM A897: Austempered ductile iron castings

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings, aircraft gear configuration and/or direct loading, specified.

Each frame and cover or grate unit shall be provided with fastening members to prevent it from being dislodged by traffic but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

751-2.7 Steps. The steps or ladder bars shall be gray or malleable cast iron or galvanized steel. The steps shall be the size, length, and shape shown on the plans and those steps that are not galvanized shall be given a coat of asphalt paint, when directed.

751-2.8 Precast inlet structures. Manufactured in accordance with and conforming to ASTM C913.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONSTRUCTION METHODS

751-3.1 Unclassified excavation.

a. The Contractor shall excavate for structures and footings to the lines and grades or elevations, shown on the plans, or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown. The elevations of the bottoms of footings, as shown on the plans, shall be considered as approximately only; and the RPR may direct, in writing, changes in dimensions or elevations of footings necessary for a satisfactory foundation.

b. Boulders, logs, or any other objectionable material encountered in excavation shall be removed. All rock or other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped, or serrated, as directed by the RPR. All seams or crevices shall be cleaned out and grouted. All loose and disintegrated rock and thin strata shall be removed. Where concrete will rest on a surface other than rock, the bottom of the excavation shall not be disturbed and excavation to final grade shall not be made until immediately before the concrete or reinforcing is placed.

c. The Contractor shall do all bracing, sheathing, or shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheathing, or shoring shall be included in the unit price bid for the structure.

d. All bracing, sheathing, or shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall not disturb or damage finished masonry. The cost of removal shall be included in the unit price bid for the structure.

e. After excavation is completed for each structure, the Contractor shall notify the RPR. No concrete or reinforcing steel shall be placed until the RPR has approved the depth of the excavation and the character of the foundation material.

751-3.2 Brick structures. Not Used.

751-3.3 Concrete structures. Concrete structures which are to be cast-in-place within the project boundaries shall be built on prepared foundations, conforming to the dimensions and shape indicated on the plans. The construction shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

All invert channels shall be constructed and shaped accurately to be smooth, uniform, and cause minimum resistance to flowing water. The interior bottom shall be sloped to the outlet.

751-3.4 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program.

Precast concrete structures shall conform to ASTM C478. Precast concrete structures shall be constructed on prepared or previously placed slab foundations conforming to the dimensions and locations shown on the plans. All precast concrete sections necessary to build a completed structure shall be furnished. The different sections shall fit together readily. Joints between precast concrete risers and tops shall be full-bedded in cement mortar and shall: (1) be smoothed to a uniform surface on both interior and exterior of the structure or (2) utilize a rubber gasket per ASTM C443. The top of the upper precast concrete section shall be suitably formed and dimensioned to receive the metal frame and cover or grate, or other cap, as required. Provision shall be made for any connections for lateral pipe, including drops and leads that may be installed in the structure. The flow lines shall be smooth, uniform, and cause minimum resistance to flow. The metal or metal encapsulated steps that are embedded or built into the side walls shall be aligned and placed in accordance to ASTM C478. When a metal ladder replaces the steps, it shall be securely fastened into position.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

751-3.5 Corrugated metal structures. Not Used ~~Corrugated metal structures shall be prefabricated. All standard or special fittings shall be furnished to provide pipe connections or branches with the correct dimensions and of sufficient length to accommodate connecting bands. The fittings shall be welded in place to the metal structures. The top of the metal structure shall be designed so that either a concrete slab or metal collar may be attached to allow the fastening of a standard metal frame and grate or cover. Steps or ladders shall be furnished as shown on the plans. Corrugated metal structures shall be constructed on prepared foundations, conforming to the dimensions and locations as shown on the plans. When indicated, the structures shall be placed on a reinforced concrete base.~~

751-3.6 Inlet and outlet pipes. Inlet and outlet pipes shall extend through the walls of the structures a sufficient distance beyond the outside surface to allow for connections. They shall be cut off flush with the wall on the inside surface of the structure, unless otherwise directed. For concrete or brick structures, mortar shall be placed around these pipes to form a tight, neat connection.

751-3.7 Placement and treatment of castings, frames, and fittings. All castings, frames, and fittings shall be placed in the positions indicated on the plans or as directed by the RPR, and shall be set true to line and elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

When frames or fittings are placed on previously constructed masonry, the bearing surface of the masonry shall be brought true to line and grade and shall present an even bearing surface so the entire face or back of the unit will come in contact with the masonry. The unit shall be set in mortar beds and anchored to the masonry as indicated on the plans or as directed by the RPR. All units shall set firm and secure.

After the frames or fittings have been set in final position, the concrete or mortar shall be allowed to harden for seven (7) days before the grates or covers are placed and fastened down.

751-3.8 Installation of steps. The steps shall be installed as indicated on the plans or as directed by the RPR. When the steps are to be set in concrete, they shall be placed and secured in position before the concrete is placed. When the steps are installed in brick masonry, they shall be placed as the masonry is being built. The steps shall not be disturbed or used until the concrete or mortar has hardened for at least seven (7) days. After seven (7) days, the steps shall be cleaned and painted, unless they have been galvanized.

When steps are required with precast concrete structures they shall meet the requirements of ASTM C478. The steps shall be cast into the side of the sections at the time the sections are manufactured or set in place after the structure is erected by drilling holes in the concrete and cementing the steps in place.

When steps are required with corrugated metal structures, they shall be welded into aligned position at a vertical spacing of 12 inches (300 mm).

Instead of steps, prefabricated ladders may be installed. For brick or concrete structures, the ladder shall be held in place by grouting the supports in drilled holes. For metal structures, the ladder shall be secured by welding the top support to the structure and grouting the bottom support into drilled holes in the foundation or as directed by the RPR.

751-3.9 Backfilling.

a. After a structure has been completed, the area around it shall be backfilled with approved material, in horizontal layers not to exceed 8 inches (200 mm) in loose depth, and compacted to the density required in Item P-152. Each layer shall be deposited evenly around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

b. Backfill shall not be placed against any structure until approved by the RPR. For concrete structures, approval shall not be given until the concrete has been in place seven (7) days, or until tests establish that the concrete has attained sufficient strength to withstand any pressure created by the backfill and placing methods.

c. Backfill shall not be measured for direct payment. Performance of this work shall be considered an obligation of the Contractor covered under the contract unit price for the structure involved.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

751-3.10 Cleaning and restoration of site. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt, and rubbish from the site. Surplus dirt may be deposited in embankments, shoulders, or as approved by the RPR. The Contractor shall restore all disturbed areas to their original condition. The Contractor shall remove all tools and equipment, leaving the entire site free, clear, and in good condition.

METHOD OF MEASUREMENT

751-4.1 Manholes, catch basins, inlets, and inspection holes shall be measured by the unit.

BASIS OF PAYMENT

751-5.1 The accepted quantities of manholes, catch basins, inlets, and inspection holes will be paid for at the contract unit price per each in place when completed. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials; furnishing and installation of such specials and connections to pipes and other structures as may be required to complete the item as shown on the plans; and for all labor equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Item D-751-5.1	SW-512, Circular Area Intake, 24” with Manhole Casting and Solid Lid - per each

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A897	Standard Specification for Austempered Ductile Iron Castings
ASTM C32	Standard Specification for Sewer and Manhole Brick (Made from Clay or Shale)
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C443	Standard Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets.
ASTM C478	Standard Specification for Precast Reinforced Concrete Manhole Sections
ASTM C913	Standard Specification for Precast Concrete Water and Wastewater Structures.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

American Association of State Highway and Transportation Officials (AASHTO)

AASHTO M36	Standard Specification for Corrugated Steel Pipe, Metallic-Coated, for Sewers and Drains

END OF ITEM D-751

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item T-901 Seeding

DESCRIPTION

901-1.1 This item shall consist of soil preparation, seeding, fertilizing and mulching the areas shown on the plans or as directed by the RPR in accordance with these specifications.

MATERIALS

901-2.1 Seed. The species and application rates of grass, legume, and cover-crop seed furnished shall be those stipulated herein. Seed shall conform to the requirements of Federal Specification JJJ-S-181, Federal Specification, Seeds, Agricultural.

Seed shall be furnished separately or in mixtures in standard containers labeled in conformance with the Agricultural Marketing Service (AMS) Seed Act and applicable state seed laws with the seed name, lot number, net weight, percentages of purity and of germination and hard seed, and percentage of maximum weed seed content clearly marked for each kind of seed. The Contractor shall furnish the RPR duplicate signed copies of a statement by the vendor certifying that each lot of seed has been tested by a recognized laboratory for seed testing within six (6) months of date of delivery. This statement shall include: name and address of laboratory, date of test, lot number for each kind of seed, and the results of tests as to name, percentages of purity and of germination, and percentage of weed content for each kind of seed furnished, and, in case of a mixture, the proportions of each kind of seed. Wet, moldy, or otherwise damaged seed will be rejected.

Seeds shall be applied as follows:

Iowa SUDAS Type 1 (Permanent Lawn Mixture)[1]

Seed	Minimum Seed Purity (Percent)	Minimum Germination (Percent)	Rate of Application lb/acre (or lb/1,000 S.F.)
Creeping red fescue	98	85	25
Turf-type perennial ryegrass[2]	95	90	20
Turf-type perennial ryegrass[2]	95	90	20
Kentucky bluegrass cultivar[3]	85	80	65
Kentucky bluegrass cultivar[3]	85	80	65
Kentucky bluegrass cultivar[3]	85	80	65

[1] A commercial mixture may be used if it contains a high percentage of similar bluegrasses; it may or may not contain creeping red fescue.

[2] Choose two different cultivars of turf-type perennial ryegrass, at 20 lbs/acre each.

[3] Choose three different cultivars of Kentucky bluegrass, at 65 lbs/acre each.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

A commercial mixture may be used if it contains a high percentage of similar bluegrasses; it may or may not contain creeping red fescue.

Seeding shall be performed during the period between March 1 and May 31 or between August 10 and September 30 inclusive, unless otherwise approved by the RPR. For this project, the Contactor may complete seeding at any time as long as the grass becomes established. A proper stand of grass is the project requirement, without regard to when seeding is actually completed. The date ranges noted above are typical for timeframes when seeding is more likely to become established in the state, but is not a requirement.

901-2.2 Lime. Not required.

901-2.3 Fertilizer. Fertilizer shall be standard commercial fertilizers supplied separately or in mixtures containing the percentages of total nitrogen, available phosphoric acid, and water-soluble potash. They shall be applied at the rate and to the depth specified, and shall meet the requirements of applicable state laws. They shall be furnished in standard containers with name, weight, and guaranteed analysis of contents clearly marked thereon. No cyanamide compounds or hydrated lime shall be permitted in mixed fertilizers.

The fertilizers may be supplied in one of the following forms:

a. A dry, free-flowing fertilizer suitable for application by a common fertilizer spreader;

b. A finely-ground fertilizer soluble in water, suitable for application by power sprayers; or

c. A granular or pellet form suitable for application by blower equipment.

Fertilizers shall be 13-13-13 commercial fertilizer and shall be spread at the rate of 750 pounds per acre (minimum).

901-2.4 Soil for repairs. The soil for fill and topsoiling of areas to be repaired shall be at least of equal quality to that which exists in areas adjacent to the area to be repaired. The soil shall be relatively free from large stones, roots, stumps, or other materials that will interfere with subsequent sowing of seed, compacting, and establishing turf, and shall be approved by the RPR before being placed.

CONSTRUCTION METHODS

901-3.1 Advance preparation and cleanup. After grading of areas has been completed and before applying fertilizer and ground limestone, areas to be seeded shall be raked or otherwise cleared of stones larger than 2 inches (50 mm) in any diameter, sticks, stumps, and other debris that might interfere with sowing of seed, growth of grasses, or subsequent maintenance of grass-covered areas. If any damage by erosion or other causes has occurred after the completion of grading and before beginning the application of fertilizer and ground limestone, the Contractor shall repair such damage include filling gullies, smoothing irregularities, and repairing other incidental damage.

An area to be seeded shall be considered a satisfactory seedbed without additional treatment if it has recently been thoroughly loosened and worked to a depth of not less than 5 inches (125 mm) as a result of grading operations and, if immediately prior to seeding, the top 3 inches (75 mm) of soil is loose, friable, reasonably free from large clods, rocks, large roots, or other undesirable matter, and if shaped to the required grade.

When the area to be seeded is sparsely sodded, weedy, barren and unworked, or packed and hard, any grass and weeds shall first be cut or otherwise satisfactorily disposed of, and the soil then scarified or otherwise loosened to a depth not less than 5 inches (125 mm). Clods shall be broken and the top 3 inches (75 mm) of soil shall be worked into a satisfactory seedbed by discing, or by use of cultipackers, rollers, drags, harrows, or other appropriate means.

901-3.2 Dry application method.

a. Liming. Not required.

b. Fertilizing. Following advance preparations and cleanup fertilizer shall be uniformly spread at the rate that will provide not less than the minimum quantity stated in paragraph 901-2.3.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

c. Seeding. Grass seed shall be sown at the rate specified in paragraph 901-2.1 immediately after fertilizing. The fertilizer and seed shall be raked within the depth range stated in the special provisions. Seeds of legumes, either alone or in mixtures, shall be inoculated before mixing or sowing, in accordance with the instructions of the manufacturer of the inoculant. When seeding is required at other than the seasons shown on the plans or in the special provisions, a cover crop shall be sown by the same methods required for grass and legume seeding.

d. Rolling. After the seed has been properly covered, the seedbed shall be immediately compacted by means of an approved lawn roller, weighing 40 to 65 pounds per foot (60 to 97 kg per meter) of width for clay soil (or any soil having a tendency to pack), and weighing 150 to 200 pounds per foot (223 to 298 kg per meter) of width for sandy or light soils.

901-3.3 Wet application method.

a. General. The Contractor may elect to apply seed and fertilizer (and lime, if required) by spraying them on the previously prepared seedbed in the form of an aqueous mixture and by using the methods and equipment described herein. The rates of application shall be as specified in the special provisions.

b. Spraying equipment. The spraying equipment shall have a container or water tank equipped with a liquid level gauge calibrated to read in increments not larger than 50 gallons (190 liters) over the entire range of the tank capacity, mounted so as to be visible to the nozzle operator. The container or tank shall also be equipped with a mechanical power-driven agitator capable of keeping all the solids in the mixture in complete suspension at all times until used.

The unit shall also be equipped with a pressure pump capable of delivering 100 gallons (380 liters) per minute at a pressure of 100 lb / sq inches (690 kPa). The pump shall be mounted in a line that will recirculate the mixture through the tank whenever it is not being sprayed from the nozzle. All pump passages and pipe lines shall be capable of providing clearance for 5/8 inch (16 mm) solids. The power unit for the pump and agitator shall have controls mounted so as to be accessible to the nozzle operator. There shall be an indicating pressure gauge connected and mounted immediately at the back of the nozzle.

The nozzle pipe shall be mounted on an elevated supporting stand in such a manner that it can be rotated through 360 degrees horizontally and inclined vertically from at least 20 degrees below to at least 60 degrees above the horizontal. There shall be a quick-acting, three-way control valve connecting the recirculating line to the nozzle pipe and mounted so that the nozzle operator can control and regulate the amount of flow of mixture delivered to the nozzle. At least three different types of nozzles shall be supplied so that mixtures may be properly sprayed over distance varying from 20 to 100 feet (6 to 30 m). One shall be a close-range ribbon nozzle, one a medium-range ribbon nozzle, and one a long-range jet nozzle. For case of removal and cleaning, all nozzles shall be connected to the nozzle pipe by means of quick-release couplings.

In order to reach areas inaccessible to the regular equipment, an extension hose at least 50 feet (15 m) in length shall be provided to which the nozzles may be connected.

c. Mixtures. Lime, if required, shall be applied separately, in the quantity specified, prior to the fertilizing and seeding operations. Not more than 220 pounds (100 kg) of lime shall be added to and mixed with each 100 gallons (380 liters) of water. Seed and fertilizer shall be mixed together in the relative proportions specified, but not more than a total of 220 pounds (100 kg) of these combined solids shall be added to and mixed with each 100 gallons (380 liters) of water.

All water used shall be obtained from fresh water sources and shall be free from injurious chemicals and other toxic substances harmful to plant life. The Contractor shall identify to the RPR all sources of water at least two (2) weeks prior to use. The RPR may take samples of the water at the source or from the tank at any time and have a laboratory test the samples for chemical and saline content. The Contractor shall not use any water from any source that is disapproved by the RPR following such tests.

All mixtures shall be constantly agitated from the time they are mixed until they are finally applied to the seedbed. All such mixtures shall be used within two (2) hours from the time they were mixed or they shall be wasted and disposed of at approved locations.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

d. Spraying. Lime, if required, shall be sprayed only upon previously prepared seedbeds. After the applied lime mixture has dried, the lime shall be worked into the top 3 inches (75 mm), after which the seedbed shall again be properly graded and dressed to a smooth finish.

Mixtures of seed and fertilizer shall only be sprayed upon previously prepared seedbeds on which the lime, if required, shall already have been worked in. The mixtures shall be applied by means of a high-pressure spray that shall always be directed upward into the air so that the mixtures will fall to the ground like rain in a uniform spray. Nozzles or sprays shall never be directed toward the ground in such a manner as might produce erosion or runoff.

Particular care shall be exercised to ensure that the application is made uniformly and at the prescribed rate and to guard against misses and overlapped areas. Proper predetermined quantities of the mixture in accordance with specifications shall be used to cover specified sections of known area.

Checks on the rate and uniformity of application may be made by observing the degree of wetting of the ground or by distributing test sheets of paper or pans over the area at intervals and observing the quantity of material deposited thereon.

On surfaces that are to be mulched as indicated by the plans or designated by the RPR, seed and fertilizer applied by the spray method need not be raked into the soil or rolled. However, on surfaces on which mulch is not to be used, the raking and rolling operations will be required after the soil has dried.

901-3.4 Maintenance of seeded areas. The Contractor shall protect seeded areas against traffic or other use by warning signs or barricades, as approved by the RPR. Surfaces gullied or otherwise damaged following seeding shall be repaired by regrading and reseeding as directed. The Contractor shall mow, water as directed, and otherwise maintain seeded areas in a satisfactory condition until final inspection and acceptance of the work. The cost of regrading, reseeding, mowing, watering and/or other maintenance practices needed to establish an acceptable stand of grass shall be borne by the contractor.

When either the dry or wet application method outlined above is used for work done out of season, it will be required that the Contractor establish a good stand of grass of uniform color and density to the satisfaction of the RPR.

A grass stand shall be considered adequate when bare spots are one square foot (0.01 sq m) or less, randomly dispersed, and do not exceed 3% of the area seeded.

Following rain events, the Contractor shall immediately (maximum 48 hour response time) address erosion, washout, and surface irregularities within the runway/taxiway safety area once the runway/taxiway is opened for aircraft operations. The runway/taxiway safety area grading must be met at all times when the runway/taxiway is open for aircraft operations.

METHOD OF MEASUREMENT

901-4.1 The quantity of seeding to be paid for shall be the number of acres (sq m) measured on the ground surface, completed and accepted.

BASIS OF PAYMENT

901-5.1 Payment shall be made at the contract unit price per acre (sq m) or fraction thereof, which price and payment shall be full compensation for furnishing and placing all material and for all labor, equipment, tools, and incidentals necessary to complete the work prescribed in this item.

Payment will be made under:

Item 901-5.1a Seeding, Fertilizing and Mulching - per Acre (sq m)

@ Bolton & Menk, Inc. 2026, All Rights Reserved

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C602	Standard Specification for Agricultural Liming Materials

Federal Specifications (FED SPEC)

FED SPEC	JJJ-S-181, Federal Specification, Seeds, Agricultural

Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-901

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item T-905 Topsoil

DESCRIPTION

905-1.1 This item shall consist of preparing the ground surface for topsoil application, removing topsoil from designated stockpiles or areas to be stripped on the site or from approved sources off the site, and placing and spreading the topsoil on prepared areas in accordance with this specification at the locations shown on the plans or as directed by the RPR.

MATERIALS

905-2.1 Topsoil. Topsoil shall be the surface layer of soil with no admixture of refuse or any material toxic to plant growth, and it shall be reasonably free from subsoil and stumps, roots, brush, stones (2 inches (50 mm) or more in diameter), and clay lumps or similar objects. Brush and other vegetation that will not be incorporated with the soil during handling operations shall be cut and removed. Ordinary sod and herbaceous growth such as grass and weeds are not to be removed, but shall be thoroughly broken up and intermixed with the soil during handling operations. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means, shall be removed. The topsoil or soil mixture, unless otherwise specified or approved, shall have a pH range of approximately 5.5 pH to 7.6 pH, when tested in accordance with the methods of testing of the Association of Official Agricultural Chemists in effect on the date of invitation of bids. The organic content shall be not less than 3% nor more than 20% as determined by the wet-combustion method (chromic acid reduction). There shall be not less than 20% nor more than 80% of the material passing the 200 mesh (75 µm) sieve as determined by the wash test in accordance with ASTM C117.

Natural topsoil may be amended by the Contractor with approved materials and methods to meet the above specifications.

905-2.2 Inspection and tests. Within 10 days following acceptance of the bid, the RPR shall be notified of the source of topsoil to be furnished by the Contractor. The topsoil shall be inspected to determine if the selected soil meets the requirements specified and to determine the depth to which stripping will be permitted. At this time, the Contractor may be required to take representative soil samples from several locations within the area under consideration and to the proposed stripping depths, for testing purposes as specified in paragraph 905-2.1.

CONSTRUCTION METHODS

905-3.1 General. Areas to be topsoiled shall be shown on the plans. If topsoil is available on the site, the location of the stockpiles or areas to be stripped of topsoil and the stripping depths shall be shown on the plans.

Suitable equipment necessary for proper preparation and treatment of the ground surface, stripping of topsoil, and for the handling and placing of all required materials shall be on hand, in good condition, and approved by the RPR before the various operations are started.

905-3.2 Preparing the ground surface. Immediately prior to dumping and spreading the topsoil on any area, the surface shall be loosened by discs or spike-tooth harrows, or by other means approved by the RPR, to a minimum depth of 2 inches (50 mm) to facilitate bonding of the topsoil to the covered subgrade soil. The surface of the area to be topsoiled shall be cleared of all stones larger than 2 inches (50 mm) in any diameter and all litter or other material which may be detrimental to proper bonding, the rise of capillary moisture, or the proper growth of the

@ Bolton & Menk, Inc. 2026, All Rights Reserved

desired planting. Limited areas, as shown on the plans, which are too compact to respond to these operations shall receive special scarification.

Grades on the area to be topsoiled, which have been established by others as shown on the plans, shall be maintained in a true and even condition. Where grades have not been established, the areas shall be smooth-graded and the surface left at the prescribed grades in an even and compacted condition to prevent the formation of low places or pockets where water will stand.

905-3.3 Obtaining topsoil. Prior to the stripping of topsoil from designated areas, any vegetation, briars, stumps and large roots, rubbish or stones found on such areas, which may interfere with subsequent operations, shall be removed using methods approved by the RPR. Heavy sod or other cover, which cannot be incorporated into the topsoil by discing or other means shall be removed.

When suitable topsoil is available on the site, the Contractor shall remove this material from the designated areas and to the depth as directed by the RPR. The topsoil shall be spread on areas already tilled and smooth-graded, or stockpiled in areas approved by the RPR. Any topsoil stockpiled by the Contractor shall be rehandled and placed without additional compensation. Any topsoil that has been stockpiled on the site by others, and is required for topsoil purposes, shall be removed and placed by the Contractor. The sites of all stockpiles and areas adjacent thereto which have been disturbed by the Contractor shall be graded if required and put into a condition acceptable for seeding.

When suitable topsoil is secured off the airport site, the Contractor shall locate and obtain the supply, subject to the approval of the RPR. The Contractor shall notify the RPR sufficiently in advance of operations in order that necessary measurements and tests can be made. The Contractor shall remove the topsoil from approved areas and to the depth as directed. The topsoil shall be hauled to the site of the work and placed for spreading, or spread as required. Any topsoil hauled to the site of the work and stockpiled shall be rehandled and placed without additional compensation.

905-3.4 Placing topsoil. The topsoil shall be evenly spread on the prepared areas to a uniform depth of 2 inches (50 mm) after compaction, unless otherwise shown on the plans or stated in the special provisions. Spreading shall not be done when the ground or topsoil is frozen, excessively wet, or otherwise in a condition detrimental to the work. Spreading shall be carried on so that turfing operations can proceed with a minimum of soil preparation or tilling.

After spreading, any large, stiff clods and hard lumps shall be broken with a pulverizer or by other effective means, and all stones or rocks (2 inches (50 mm) or more in diameter), roots, litter, or any foreign matter shall be raked up and disposed of by the Contractor. after spreading is completed, the topsoil shall be satisfactorily compacted by rolling with a cultipacker or by other means approved by the RPR. The compacted topsoil surface shall conform to the required lines, grades, and cross-sections. Any topsoil or other dirt falling upon pavements as a result of hauling or handling of topsoil shall be promptly removed.

METHOD OF MEASUREMENT

905-4.1 Topsoil shall not be measured for payment and shall be based on plan quantity.

BASIS OF PAYMENT

905-5.1 No separate payment will be made for topsoil. It shall be considered incidental to Item P-152 Excavation, Subgrade and Embankment.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM C117	Materials Finer than 75 μm (No. 200) Sieve in Mineral Aggregates by Washing

Advisory Circulars (AC)

AC 150/5200-33	Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-905

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item T-908 Mulching

DESCRIPTION

908-1.1 This item shall consist of furnishing, hauling, placing, and securing mulch on surfaces indicated on the plans or designated by the RPR.

MATERIALS

908-2.1 Mulch material. Acceptable mulch shall be the materials listed below or any approved locally available material that is similar to those specified. Mulch shall be free from noxious weeds, mold, and other deleterious materials. Mulch materials, which contain matured seed of species that would volunteer and be detrimental to the proposed overseeding, or to surrounding farm land, will not be acceptable. Straw or other mulch material which is fresh and/or excessively brittle, or which is in such an advanced stage of decomposition as to smother or retard the planted grass, will not be acceptable.

a. Hay. Hay shall be native hay in an air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Hay shall be sterile, containing no fertile seed.

b. Straw. Straw shall be the stalks from threshed plant residue of oats, wheat, barley, rye, or rice from which grain has been removed. Furnish in air-dry condition and of proper consistency for placing with commercial mulch blowing equipment. Straw shall contain no fertile seed.

c. Hay mulch containing seed. Hay mulch shall be mature hay containing viable seed of native grasses or other desirable species stated in the special provisions or as approved by the RPR. The hay shall be cut and handled so as to preserve the maximum quantity of viable seed. Hay mulch that cannot be hauled and spread immediately after cutting shall be placed in weather-resistant stacks or baled and stored in a dry location until used.

d. Manufactured mulch. Cellulose-fiber or wood-pulp mulch shall be products commercially available for use in spray applications.

e. Asphalt binder. Asphalt binder material shall conform to the requirements of ASTM D977, Type SS-1 or RS-1.

908-2.2 Inspection. The RPR shall be notified of sources and quantities of mulch materials available and the Contractor shall furnish him with representative samples of the materials to be used 30 days before delivery to the project. These samples may be used as standards with the approval of the RPR and any materials brought on the site that do not meet these standards shall be rejected.

CONSTRUCTION METHODS

908-3.1 Mulching. Before spreading mulch, all large clods, stumps, stones, brush, roots, and other foreign material shall be removed from the area to be mulched. Mulch shall be applied immediately after seeding. The spreading of the mulch may be by hand methods, blower, or other mechanical methods, provided a uniform covering is obtained.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Mulch material shall be furnished, hauled, and evenly applied on the area shown on the plans or designated by the RPR. Straw or hay shall be spread over the surface to a uniform thickness at the rate of 2 to 3 tons per acre (1800 - 2700 kg per acre) to provide a loose depth of not less than 1-1/2 inches (38 cm) nor more than 3 inches (75 mm). Other organic material shall be spread at the rate directed by the RPR. Mulch may be blown on the slopes and the use of cutters in the equipment for this purpose will be permitted to the extent that at least 95% of the mulch in place on the slope shall be 6 inches (150 mm) or more in length. When mulches applied by the blowing method are cut, the loose depth in place shall be not less than one inch (25 mm) nor more than 2 inches (50 mm).

908-3.2 Securing mulch. The mulch shall be held in place by light discing, a very thin covering of topsoil, pins, stakes, wire mesh, asphalt binder, or other adhesive material approved by the RPR. Where mulches have been secured by either of the asphalt binder methods, it will not be permissible to walk on the slopes after the binder has been applied. When an application of asphalt binder material is used to secure the mulch, the Contractor must take every precaution to guard against damaging or disfiguring structures or property on or adjacent to the areas worked and will be held responsible for any such damage resulting from the operation.

If the "peg and string" method is used, the mulch shall be secured by the use of stakes or wire pins driven into the ground on 5-foot (1.5-m) centers or less. Binder twine shall be strung between adjacent stakes in straight lines and crisscrossed diagonally over the mulch, after which the stakes shall be firmly driven nearly flush to the ground to draw the twine down tight onto the mulch.

908-3.3 Care and repair.

a. The Contractor shall care for the mulched areas until final acceptance of the project. Care shall consist of providing protection against traffic or other use by placing warning signs, as approved by the RPR, and erecting any barricades that may be shown on the plans before or immediately after mulching has been completed on the designated areas.

b. The Contractor shall be required to repair or replace any mulch that is defective or becomes damaged until the project is finally accepted. When, in the judgment of the RPR, such defects or damages are the result of poor workmanship or failure to meet the requirements of the specifications, the cost of the necessary repairs or replacement shall be borne by the Contractor.

c. If the "asphalt spray" method is used, all mulched surfaces shall be sprayed with asphalt binder material so that the surface has a uniform appearance. The binder shall be uniformly applied to the mulch at the rate of approximately 8 gallons (32 liters) per 1,000 square feet (100 sq m), or as directed by the RPR, with a minimum of 6 gallons (24 liters) and a maximum of 10 gallons (40 liters) per 1,000 square feet (100 sq m) depending on the type of mulch and the effectiveness of the binder securing it. Asphalt binder material may be sprayed on the mulched slope areas from either the top or the bottom of the slope. An approved spray nozzle shall be used. The nozzle shall be operated at a distance of not less than 4 feet (1.2 m) from the surface of the mulch and uniform distribution of the asphalt material shall be required. A pump or an air compressor of adequate capacity shall be used to ensure uniform distribution of the asphalt material.

d. If the "asphalt mix" method is used, the mulch shall be applied by blowing, and the asphalt binder material shall be sprayed into the mulch as it leaves the blower. The binder shall be uniformly applied to the mulch at the rate of approximately 8 gallons (32 liters) per 1,000 square feet (100 sq m) or as directed by the RPR, with a minimum of 6 gallons (24 liters) and a maximum of 10 gallons (40 liters) per 1,000 square feet (100 sq m) depending on the type of mulch and the effectiveness of the binder securing it.

METHOD OF MEASUREMENT

908-4.1 Mulching will not be measured.

BASIS OF PAYMENT

908-5.1 No separate payment will be made for mulching. It shall be incidental to item T-901 Seeding.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM International (ASTM)

ASTM D977 Standard Specification for Emulsified Asphalt

Advisory Circulars (AC)

AC 150/5200-33 Hazardous Wildlife Attractants on or Near Airports

FAA/United States Department of Agriculture

Wildlife Hazard Management at Airports, A Manual for Airport Personnel

END OF ITEM T-908

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item L-110 Airport Underground Electrical Duct Banks and Conduits

DESCRIPTION

110-1.1 This item shall consist of underground electrical conduits and duct banks (single or multiple conduits encased in concrete or buried in sand) installed per this specification at the locations and per the dimensions, designs, and details shown on the plans. This item shall include furnishing and installing of all underground electrical duct banks and individual and multiple underground conduits and removal of existing duct banks. It shall also include all turfing trenching, backfilling, removal, and restoration of any paved or turfed areas; concrete encasement, mandrelling, pulling lines, duct markers, plugging of conduits, and the testing of the installation as a completed system ready for installation of cables per the plans and specifications. This item shall also include furnishing and installing conduits and all incidentals for providing positive drainage of the system. Verification of existing ducts is incidental to the pay items provided in this specification.

EQUIPMENT AND MATERIALS

110-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications and acceptable to the RPR. Materials supplied and/or installed that do not comply with these specifications shall be removed, when directed by the RPR and replaced with materials, that comply with these specifications, at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment for which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in project that accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications. The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

110-2.2 Steel conduit. Rigid galvanized steel (RGS) conduit and fittings shall be hot dipped galvanized inside and out and conform to the requirements of Underwriters Laboratories Standards 6, 514B, and 1242. All RGS conduits or RGS elbows installed below grade, in concrete, permanently wet locations or other similar environments shall be

@ Bolton & Menk, Inc. 2026, All Rights Reserved

painted with a 10-mil thick coat of asphaltum sealer or shall have a factory-bonded polyvinyl chloride (PVC) cover. Any exposed galvanizing or steel shall be coated with 10 mils of asphaltum sealer. When using PVC coated RGS conduit, care shall be exercised not to damage the factory PVC coating. Damaged PVC coating shall be repaired per the manufacturer's written instructions. In lieu of PVC coated RGS, corrosion wrap tape shall be permitted to be used where RGS is in contact with direct earth."

110-2.3 Plastic conduit. Plastic conduit and fittings-shall conform to the following requirements:

- UL 514B covers W-C-1094-Conduit fittings all types, classes 1 thru 3 and 6 thru 10.
- UL 514C covers W-C-1094- all types, Class 5 junction box and cover in plastic (PVC).
- UL 651 covers W-C-1094-Rigid PVC Conduit, types I and II, Class 4.
- UL 651A covers W-C-1094-Rigid PVC Conduit and high-density polyethylene (HDPE) Conduit type III and Class 4.

Underwriters Laboratories Standards UL-651 and Article 352 of the current National Electrical Code shall be one of the following, as shown on the plans:

a. Type I–Schedule 40 and Schedule 80 PVC suitable for underground use either direct-buried or encased in concrete.

b. Type II–Schedule 40 PVC suitable for either above ground or underground use.

c. Type III – Schedule 80 PVC suitable for either above ground or underground use either direct-buried or encased in concrete.

d. Type III –HDPE pipe, minimum standard dimensional ratio (SDR) 11, suitable for placement with directional boring under pavement.

The type of solvent cement shall be as recommended by the conduit/fitting manufacturer.

110-2.4 Split conduit. Split conduit shall be pre-manufactured for the intended purpose and shall be made of steel or plastic.

110-2.5 Conduit spacers. Conduit spacers shall be prefabricated interlocking units manufactured for the intended purpose. They shall be of double wall construction made of high grade, high density polyethylene complete with interlocking cap and base pads. They shall be designed to accept No. 4 reinforcing bars installed vertically.

110-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. If item P-610 is not provided in the project manual, then all Concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 20% Type C or F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).If item P-610 is not included in the project manual, concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 20% Type C or F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).

110-2.7 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another RPR approved third party certification program. Precast concrete structures shall conform to ASTM C478.

110-2.8 Flowable backfill. Not Required.

110-2.9 Detectable warning tape. Plastic, detectable, American Public Works Association (APWA) red (electrical power lines, cables, conduit and lighting cable), orange (telephone/fiber optic cabling) with continuous legend magnetic tape shall be polyethylene film with a metallized foil core and shall be 3-6 inches (75-150 mm) wide. Detectable tape is incidental to the respective bid item.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

CONSTRUCTION METHODS

110-3.1 General. The Contractor shall install underground duct banks and conduits at the approximate locations indicated on the plans. The RPR shall indicate specific locations as the work progresses, if required to differ from the plans. Duct banks and conduits shall be of the size, material, and type indicated on the plans or specifications. Where no size is indicated on the plans or in the specifications, conduits shall be not less than 2 inches (50 mm) inside diameter or comply with the National Electrical Code based on cable to be installed, whichever is larger. All duct bank and conduit lines shall be laid so as to grade toward access points and duct or conduit ends for drainage. Unless shown otherwise on the plans, grades shall be at least 3 inches (75 mm) per 100 feet (30 m). On runs where it is not practicable to maintain the grade all one way, the duct bank and conduit lines shall be graded from the center in both directions toward access points or conduit ends, with a drain into the storm drainage system. Pockets or traps where moisture may accumulate shall be avoided. Under pavement, the top of the duct bank shall not be less than 18 inches (0.5 m) below the subgrade; in other locations, the top of the duct bank or underground conduit shall be not less than 18 inches (0.5 m) below finished grade.

The Contractor shall mandrel each individual conduit whether the conduit is direct-buried or part of a duct bank. An iron-shod mandrel, not more than 1/4 inch (6 mm) smaller than the bore of the conduit shall be pulled or pushed through each conduit. The mandrel shall have a leather or rubber gasket slightly larger than the conduit hole.

The Contractor shall swab out all conduits/ducts and clean base can, manhole, pull boxes, etc., interiors immediately prior to pulling cable. Once cleaned and swabbed the light bases, manholes, pull boxes, etc., and all accessible points of entry to the duct/conduit system shall be kept closed except when installing cables. Cleaning of ducts, base cans, manholes, etc., is incidental to the pay item of the item being cleaned. All raceway systems left open, after initial cleaning, for any reason shall be recleaned at the Contractor's expense. All accessible points shall be kept closed when not installing cable. The Contractor shall verify existing ducts proposed for use in this project as clear and open. The Contractor shall notify the RPR of any blockage in the existing ducts.

For pulling the permanent wiring, each individual conduit, whether the conduit is direct-buried or part of a duct bank, shall be provided with a 200-pound (90 kg) test polypropylene pull rope. The ends shall be secured and sufficient length shall be left in access points to prevent it from slipping back into the conduit. Where spare conduits are installed, as indicated on the plans, the open ends shall be plugged with removable tapered plugs, designed for this purpose.

All conduits shall be securely fastened in place during construction and shall be plugged to prevent contaminants from entering the conduits. Any conduit section having a defective joint shall not be installed. Ducts shall be supported and spaced apart using approved spacers at intervals not to exceed 5 feet (1.5 m).

Unless otherwise shown on the plans, concrete encased duct banks shall be used when crossing under pavements expected to carry aircraft loads, such as runways, taxiways, taxilanes, ramps and aprons. When under paved shoulders and other paved areas, conduit and duct banks shall be encased using flowable fill for protection.

All conduits within concrete encasement of the duct banks shall terminate with female ends for ease in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Where turf is well established and the sod can be removed, it shall be carefully stripped and properly stored.

Trenches for conduits and duct banks may be excavated manually or with mechanical trenching equipment unless in pavement, in which case they shall be excavated with mechanical trenching equipment. Walls of trenches shall be essentially vertical so that a minimum of shoulder surface is disturbed. Blades of graders shall not be used to excavate the trench.

When rock is encountered, the rock shall be removed to a depth of at least 3 inches (75 mm) below the required conduit or duct bank depth and it shall be replaced with bedding material of earth or sand containing no mineral aggregate particles that would be retained on a 1/4-inch (6.3 mm) sieve. Flowable backfill may alternatively be used.

Underground electrical warning (Caution) tape shall be installed in the trench above all underground duct banks and conduits in unpaved areas. Contractor shall submit a sample of the proposed warning tape for approval by the RPR.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

If not shown on the plans, the warning tape shall be located 6 inches above the duct/conduit or the counterpoise wire if present.

Joints in plastic conduit shall be prepared per the manufacturer's recommendations for the particular type of conduit. Plastic conduit shall be prepared by application of a plastic cleaner and brushing a plastic solvent on the outside of the conduit ends and on the inside of the couplings. The conduit fitting shall then be slipped together with a quick one-quarter turn twist to set the joint tightly. Where more than one conduit is placed in a single trench, or in duct banks, joints in the conduit shall be staggered a minimum of 2 feet (60 cm).

Changes in direction of runs exceeding 10 degrees, either vertical or horizontal, shall be accomplished using manufactured sweep bends.

Whether or not specifically indicated on the drawings, where the soil encountered at established duct bank grade is an unsuitable material, as determined by the RPR, the unsuitable material shall be removed per Item P-152 and replaced with suitable material. Additional duct bank supports shall be installed, as approved by the RPR.

All excavation shall be unclassified and shall be considered incidental to Item L-110. Dewatering necessary for duct installation, and erosion per federal, state, and local requirements is incidental to Item L-110.

Unless otherwise specified, excavated materials that are deemed by the RPR to be unsuitable for use in backfill or embankments shall be removed and disposed of offsite.

Any excess excavation shall be filled with suitable material approved by the RPR and compacted per Item P-152.

It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Where existing active cables) cross proposed installations, the Contractor shall ensure that these cables are adequately protected. Where crossings are unavoidable, no splices will be allowed in the existing cables, except as specified on the plans. Installation of new cable where such crossings must occur shall proceed as follows:

a. Existing cables shall be located manually. Unearthed cables shall be inspected to assure absolutely no damage has occurred.

b. Trenching, etc., in cable areas shall then proceed with approval of the RPR, with care taken to minimize possible damage or disruption of existing cable, including careful backfilling in area of cable.

In the event that any previously identified cable is damaged during the course of construction, the Contractor shall be responsible for the complete repair.

110-3.2 Duct banks. Unless otherwise shown in the plans, duct banks shall be installed so that the top of the concrete envelope is not less than 18 inches (0.5 m) below the bottom of the base or stabilized base course layers where installed under runways, taxiways, aprons, or other paved areas, and not less than 18 inches (0.5 m) below finished grade where installed in unpaved areas.

Unless otherwise shown on the plans, duct banks under paved areas shall extend at least 3 feet (1 m) beyond the edges of the pavement or 3 feet (1 m) beyond any under drains that may be installed alongside the paved area. Trenches for duct banks shall be opened the complete length before concrete is placed so that if any obstructions are encountered, provisions can be made to avoid them. Unless otherwise shown on the plans, all duct banks shall be placed on a layer of concrete not less than 3 inches (75 mm) thick prior to its initial set. The Contractor shall space the conduits not less than 3 inches (75 mm) apart (measured from outside wall to outside wall). All such multiple conduits shall be placed using conduit spacers applicable to the type of conduit. As the conduit laying progresses, concrete shall be placed around and on top of the conduits not less than 3 inches (75 mm) thick unless otherwise shown on the plans. All conduits shall terminate with female ends for ease of access in current and future use. Install factory plugs in all unused ends. Do not cover the ends or plugs with concrete.

Conduits forming the duct bank shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth prior to placing the concrete encasement. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

When specified, the Contractor shall reinforce the bottom side and top of encasements with steel reinforcing mesh or fabric or other approved metal reinforcement. When directed, the Contractor shall supply additional supports where the ground is soft and boggy, where ducts cross under roadways, or where shown on the plans. Under such conditions, the complete duct structure shall be supported on reinforced concrete footings, piers, or piles located at approximately 5-foot (1.5-m) intervals.

All pavement surfaces that are to have ducts installed therein shall be neatly saw cut to form a vertical face. All excavation shall be included in the contract with price for the duct.

Install a plastic, detectable, color as noted, 3 to 6 inches (75 to 150 mm) wide tape, 8 inches (200 mm) minimum below grade above all underground conduit or duct lines not installed under pavement. Utilize the 3-inch (75-mm) wide tape only for single conduit runs. Utilize the 6-inch (150-mm) wide tape for multiple conduits and duct banks. For duct banks equal to or greater than 24 inches (600 mm) in width, utilize more than one tape for sufficient coverage and identification of the duct bank as required.

When existing cables are to be placed in split duct, encased in concrete, the cable shall be carefully located and exposed by hand tools. Prior to being placed in duct, the RPR shall be notified so that he may inspect the cable and determine that it is in good condition. Where required, split duct shall be installed as shown on the drawings or as required by the RPR.

110-3.3 Conduits without concrete encasement. Trenches for single-conduit lines shall be not less than 6 inches (150 mm) nor more than 12 inches (300 mm) wide. The trench for 2 or more conduits installed at the same level shall be proportionately wider. Trench bottoms for conduits without concrete encasement shall be made to conform accurately to grade so as to provide uniform support for the conduit along its entire length.

Unless otherwise shown on the plans, a layer of fine earth material, at least 4 inches (100 mm) thick (loose measurement) shall be placed in the bottom of the trench as bedding for the conduit. The bedding material shall consist of soft dirt, sand or other fine fill, and it shall contain no particles that would be retained on a 1/4-inch (6.3 mm) sieve. The bedding material shall be tamped until firm. Flowable backfill may alternatively be used.

Unless otherwise shown on plans, conduits shall be installed so that the tops of all conduits within the Airport's secured area where trespassing is prohibited are at least 18 inches (0.5 m) below the finished grade. Conduits outside the Airport's secured area shall be installed so that the tops of the conduits are at least 24 inches (60 cm) below the finished grade per National Electric Code (NEC), Table 300.5.

When two or more individual conduits intended to carry conductors of equivalent voltage insulation rating are installed in the same trench without concrete encasement, they shall be spaced not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and not less than 6 inches (150 mm) apart in a vertical direction. Where two or more individual conduits intended to carry conductors of differing voltage insulation rating are installed in the same trench without concrete encasement, they shall be placed not less than 3 inches (75 mm) apart (measured from outside wall to outside wall) in a horizontal direction and lot less than 6 inches (150 mm) apart in a vertical direction.

Trenches shall be opened the complete length between normal termination points before conduit is installed so that if any unforeseen obstructions are encountered, proper provisions can be made to avoid them.

Conduits shall be installed using conduit spacers. No. 4 reinforcing bars shall be driven vertically into the soil a minimum of 6 inches (150 mm) to anchor the assembly into the earth while backfilling. For this purpose, the spacers shall be fastened down with locking collars attached to the vertical bars. Spacers shall be installed at 5-foot (1.5-m) intervals. Spacers shall be in the proper sizes and configurations to fit the conduits. Locking collars and spacers shall be submitted to the RPR for review prior to use.

110-3.4 Markers. The location of each end and of each change of direction of conduits and duct banks shall be marked by a concrete slab marker 2 feet (60 cm) square and 4 - 6 inches (100 - 150 mm) thick extending approximately one inch (25 mm) above the surface. The markers shall also be located directly above the ends of all conduits or duct banks, except where they terminate in a junction/access structure or building. Each cable or duct

@ Bolton & Menk, Inc. 2026, All Rights Reserved

run from a line of lights and signs to the equipment vault must be marked at approximately every 200 feet (61 m) along the cable or duct run, with an additional marker at each change of direction of cable or duct run.

The Contractor shall impress the word “DUCT” or “CONDUIT” on each marker slab. Impression of letters shall be done in a manner, approved by the RPR, for a neat, professional appearance. All letters and words must be neatly stenciled. After placement, all markers shall be given one coat of high-visibility orange paint, as approved by the RPR. The Contractor shall also impress on the slab the number and size of conduits beneath the marker along with all other necessary information as determined by the RPR. The letters shall be 4 inches (100 mm) high and 3 inches (75 mm) wide with width of stroke 1/2 inch (12 mm) and 1/4 inch (6 mm) deep or as large as the available space permits. Furnishing and installation of duct markers is incidental to the respective duct pay item.

110-3.5 Backfilling for conduits. For conduits, 8 inches (200 mm) of sand, soft earth, or other fine fill (loose measurement) shall be placed around the conduits ducts and carefully tamped around and over them with hand tampers. The remaining trench shall then be backfilled and compacted per Item P-152 except that material used for back fill shall be select material not larger than 4 inches (100 mm) in diameter.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during back filling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.6 Backfilling for duct banks. After the concrete has cured, the remaining trench shall be backfilled and compacted per Item P-152 “Excavation and Embankment” except that the material used for backfill shall be select material not larger than 4 inches (100 mm) in diameter. In addition to the requirements of Item P-152, where duct banks are installed under pavement, one moisture/density test per lift shall be made for each 250 linear feet (76 m) of duct bank or one work period’s construction, whichever is less.

Flowable backfill may alternatively be used.

Trenches shall not contain pools of water during backfilling operations.

The trench shall be completely backfilled and tamped level with the adjacent surface; except that, where sod is to be placed over the trench, the backfilling shall be stopped at a depth equal to the thickness of the sod to be used, with proper allowance for settlement.

Any excess excavated material shall be removed and disposed of per instructions issued by the RPR.

110-3.7 Restoration. Where sod has been removed, it shall be replaced as soon as possible after the backfilling is completed. All areas disturbed by the work shall be restored to its original condition. The restoration shall include topsoiling, fertilizing, seeding, and mulching shown on the plans. The Contractor shall be held responsible for maintaining all disturbed surfaces and replacements until final acceptance. All restoration shall be considered incidental to the respective L-110 pay item. Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

110-3.8 Ownership of removed cable. Removed cable and conduits shall become the property of the contractor and shall be disposed of properly offsite.

METHOD OF MEASUREMENT

110-4.1 Underground conduits and duct banks shall be measured by the linear foot (meter) of conduits and duct banks installed, including encasement, locator tape, trenching and backfill with designated material, and restoration,

@ Bolton & Menk, Inc. 2026, All Rights Reserved

and for drain lines, the termination at the drainage structure, all measured in place, completed, and accepted. Separate measurement shall be made for the various types and sizes.

BASIS OF PAYMENT

110-5.1 Payment will be made at the contract unit price per linear foot for each type and size of conduit and duct bank completed and accepted, including trench and backfill with the designated material, and, for drain lines, the termination at the drainage structure. This price shall be full compensation for removal and disposal of existing duct banks and conduits as shown on the plans, furnishing all materials and for all preparation, assembly, and installation of these materials, and for all labor, equipment, tools, and incidentals necessary to complete this item per the provisions and intent of the plans and specifications.

Payment will be made under:

Item L-110-5.1.a	Non-Encased Duct Bank With (6) 2” PVC/HDPE Conduits - per Linear Foot (Meter)
Item L-110-5.1.b	Concrete Encased Duct Bank With (6) 2” PVC/HDPE Conduits - per Linear Foot (Meter)

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

Advisory Circular (AC)

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-53	Airport Lighting Equipment Certification Program

ASTM International (ASTM)

ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement

National Fire Protection Association (NFPA)

NFPA-70	National Electrical Code (NEC)

Underwriters Laboratories (UL)

UL Standard 6	Electrical Rigid Metal Conduit - Steel
UL Standard 514B	Conduit, Tubing, and Cable Fittings
UL Standard 514C	Nonmetallic Outlet Boxes, Flush-Device Boxes, and Covers
UL Standard 1242	Electrical Intermediate Metal Conduit Steel
UL Standard 651	Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings

@ Bolton & Menk, Inc. 2026, All Rights Reserved

UL Standard 651A	Type EB and A Rigid PVC Conduit and HDPE Conduit

END OF ITEM L-110

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Item L-115 Electrical Manholes and Junction Structures

DESCRIPTION

115-1.1 This item shall consist of electrical manholes and junction structures (hand holes, pull boxes, junction cans, etc.) installed per this specification, at the indicated locations and conforming to the lines, grades and dimensions shown on the plans or as required by the RPR. This item shall include the installation of each electrical manhole and/or junction structures with all associated excavation, backfilling, sheeting and bracing, concrete, reinforcing steel, ladders, appurtenances, testing, dewatering and restoration of surfaces to the satisfaction of the RPR including removal of existing manholes and junction structures as shown on the plans.

EQUIPMENT AND MATERIALS

115-2.1 General.

a. All equipment and materials covered by referenced specifications shall be subject to acceptance through manufacturer's certification of compliance with the applicable specification when so requested by the RPR.

b. Manufacturer's certifications shall not relieve the Contractor of the responsibility to provide materials per these specifications. Materials supplied and/or installed that do not comply with these specifications shall be removed (when directed by the RPR) and replaced with materials that comply with these specifications at the Contractor's cost.

c. All materials and equipment used to construct this item shall be submitted to the RPR for approval prior to ordering the equipment. Submittals consisting of marked catalog sheets or shop drawings shall be provided. Submittal data shall be presented in a clear, precise and thorough manner. Original catalog sheets are preferred. Photocopies are acceptable provided they are as good a quality as the original. Clearly and boldly mark each copy to identify products or models applicable to this project. Indicate all optional equipment and delete any non-pertinent data. Submittals for components of electrical equipment and systems shall identify the equipment to which they apply on each submittal sheet. Markings shall be made bold and clear with arrows or circles (highlighting is not acceptable). The Contractor is solely responsible for delays in the project that may accrue directly or indirectly from late submissions or resubmissions of submittals.

d. The data submitted shall be sufficient, in the opinion of the RPR, to determine compliance with the plans and specifications**.** The Contractor's submittals shall be electronically submitted in pdf format, tabbed by specification section. The RPR reserves the right to reject any and all equipment, materials or procedures that do not meet the system design and the standards and codes, specified in this document.

e. All equipment and materials furnished and installed under this section shall be guaranteed against defects in materials and workmanship for a period of at least twelve (12) months from the date of final acceptance by the Owner. The defective materials and/or equipment shall be repaired or replaced, at the Owner's discretion, with no additional cost to the Owner.

115-2.2 Concrete structures. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. Cast-in-place concrete structures shall be as shown on the plans.

115-2.3 Precast concrete structures. Precast concrete structures shall be furnished by a plant meeting National Precast Concrete Association Plant Certification Program or another engineer approved third party certification program. Provide precast concrete structures where shown on the plans.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Precast concrete structures shall be an approved standard design of the manufacturer. Precast units shall have mortar or bitumastic sealer placed between all joints to make them watertight. The structure shall be designed to withstand 60,000 min. lb aircraft loads, unless otherwise shown on the plans. Openings or knockouts shall be provided in the structure as detailed on the plans.

Threaded inserts and pulling eyes shall be cast in as shown on the plans.

If the Contractor chooses to propose a different structural design, signed and sealed shop drawings, design calculations, and other information requested by the RPR shall be submitted by the Contractor to allow for a full evaluation by the RPR. The RPR shall review per the process defined in the General Provisions.

115-2.4 Junction boxes. Junction boxes shall be L-867 Class 1 (non-load bearing) or L-868 Class 1 (load bearing) airport light bases that are encased in concrete. The light bases shall have a L-894 blank cover, gasket, and stainless steel hardware. All bolts, studs, nuts, lock washers, and other similar fasteners used for the light fixture assemblies must be fabricated from 316L (equivalent to EN 1.4404), 18-8, 410, or 416 stainless steel. If 18-8, 410, or 416 stainless steel is utilized it shall be passivated and be free from any discoloration. Covers shall be 3/8-inch (9-mm) thickness for L-867 and 3/4-inch (19-mm) thickness for L-868. All junction boxes shall be provided with both internal and external ground lugs.

115-2.5 Mortar. The mortar shall be composed of one part of cement and two parts of mortar sand, by volume. The cement shall be per the requirements in ASTM C150, Type I. The sand shall be per the requirements in ASTM C144. Hydrated lime may be added to the mixture of sand and cement in an amount not to exceed 15% of the weight of cement used. The hydrated lime shall meet the requirements of ASTM C206. Water shall be potable, reasonably clean and free of oil, salt, acid, alkali, sugar, vegetable, or other substances injurious to the finished product.

115-2.6 Concrete. Concrete shall be proportioned, placed, and cured per Item P-610, Concrete for Miscellaneous Structures. If item P-610 is not included in the project manual, concrete shall be proportioned, placed, and cured per state department of transportation structural concrete with minimum 20% Type C or F fly ash, and a minimum allowable compressive strength of 4,000 psi (28 MPa).

115-2.7 Frames and covers. The frames shall conform to one of the following requirements:

a. ASTM A48 Gray iron castings

b. ASTM A47 Malleable iron castings

c. ASTM A27 Steel castings

d. ASTM A283 Grade D Structural steel for grates and frames

e. ASTM A536 Ductile iron castings

f. ASTM A897 Austempered ductile iron castings

All castings specified shall withstand a maximum tire pressure of 200 psi and maximum load of **3**0,000 min. lbs.

All castings or structural steel units shall conform to the dimensions shown on the plans and shall be designed to support the loadings specified.

Each frame and cover unit shall be provided with fastening members to prevent it from being dislodged by traffic, but which will allow easy removal for access to the structure.

All castings shall be thoroughly cleaned. After fabrication, structural steel units shall be galvanized to meet the requirements of ASTM A123.

Each cover shall have the word “ELECTRIC” or other approved designation cast on it. Each frame and cover shall be as shown on the plans or approved equivalent. No cable notches are required.

Each manhole shall be provided with a “DANGER -- PERMIT-REQUIRED CONFINED SPACE, DO NOT ENTER” safety warning sign as detailed in the Contract Documents and in accordance with OSHA 1910.146 (c)(2).

@ Bolton & Menk, Inc. 2026, All Rights Reserved

115-2.8 Ladders. Ladders, if specified, shall be galvanized steel or as shown on the plans.

115-2.9 Reinforcing steel. All reinforcing steel shall be deformed bars of new billet steel meeting the requirements of ASTM A615, Grade 60.

115-2.10 Bedding/special backfill. Bedding or special backfill shall be as shown on the plans.

115-2.11 Flowable backfill. Flowable material used to backfill shall conform to the requirements of Item P-153, Controlled Low Strength Material.

115-2.12 Cable trays. Cable trays shall be of galvanized steel or aluminum. Cable trays shall be located as shown on the plans.

115-2.13 Plastic conduit. Plastic conduit shall comply with Item L-110, Airport Underground Electrical Duct Banks and Conduits.

115-2.14 Conduit terminators. Conduit terminators shall be pre-manufactured for the specific purpose and sized as required or as shown on the plans.

115-2.15 Pulling-in irons. Pulling-in irons shall be manufactured with 7/8-inch (22 mm) diameter hot-dipped galvanized steel or stress-relieved carbon steel roping designed for concrete applications (7 strand, 1/2-inch (12 mm) diameter with an ultimate strength of 270,000 psi (1862 MPa)). Where stress-relieved carbon steel roping is used, a rustproof sleeve shall be installed at the hooking point and all exposed surfaces shall be encapsulated with a polyester coating to prevent corrosion.

115-2.16 Ground rods. Ground rods shall be one piece, copper or copper clad steel**.** The ground rods shall be of the length and diameter specified on the plans, but in no case shall they be less than 8 feet (2.4 m) long nor less than 5/8 inch (16 mm) in diameter.

CONSTRUCTION METHODS

115-3.1 Unclassified excavation. It is the Contractor's responsibility to locate existing utilities within the work area prior to excavation. Damage to utility lines, through lack of care in excavating, shall be repaired or replaced to the satisfaction of the RPR without additional expense to the Owner.

The Contractor shall perform excavation for structures and structure footings to the lines and grades or elevations shown on the plans or as staked by the RPR. The excavation shall be of sufficient size to permit the placing of the full width and length of the structure or structure footings shown.

All excavation shall be unclassified and shall be considered incidental to Item L-115. Dewatering necessary for structure installation and erosion per federal, state, and local requirements is incidental to Item L-115.

Boulders, logs and all other objectionable material encountered in excavation shall be removed. All rock and other hard foundation material shall be cleaned of all loose material and cut to a firm surface either level, stepped or serrated, as directed by the RPR. All seams, crevices, disintegrated rock and thin strata shall be removed. When concrete is to rest on a surface other than rock, special care shall be taken not to disturb the bottom of the excavation. Excavation to final grade shall not be made until just before the concrete or reinforcing is to be placed.

The Contractor shall provide all bracing, sheeting and shoring necessary to implement and protect the excavation and the structure as required for safety or conformance to governing laws. The cost of bracing, sheeting and shoring shall be included in the unit price bid for the structure.

Unless otherwise provided, bracing, sheeting and shoring involved in the construction of this item shall be removed by the Contractor after the completion of the structure. Removal shall be effected in a manner that will not disturb or mar finished masonry. The cost of removal shall be included in the unit price bid for the structure.

After each excavation is completed, the Contractor shall notify the RPR. Structures shall be placed after the RPR has approved the depth of the excavation and the suitability of the foundation material.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Prior to installation the Contractor shall provide a minimum of 6 inches (150 mm) of sand or a material approved by the RPR as a suitable base to receive the structure. The base material shall be compacted and graded level and at proper elevation to receive the structure in proper relation to the conduit grade or ground cover requirements, as indicated on the plans.

115-3.2 Concrete structures. Concrete structures shall be built on prepared foundations conforming to the dimensions and form indicated on the plans. The concrete and construction methods shall conform to the requirements specified in Item P-610. Any reinforcement required shall be placed as indicated on the plans and shall be approved by the RPR before the concrete is placed.

115-3.3 Precast unit installations. Precast units shall be installed plumb and true. Joints shall be made watertight by use of sealant at each tongue-and-groove joint and at roof of manhole. Excess sealant shall be removed and severe surface projections on exterior of neck shall be removed.

115-3.4 Placement and treatment of castings, frames and fittings. All castings, frames and fittings shall be placed in the positions indicated on the Plans or as directed by the RPR and shall be set true to line and to correct elevation. If frames or fittings are to be set in concrete or cement mortar, all anchors or bolts shall be in place and position before the concrete or mortar is placed. The unit shall not be disturbed until the mortar or concrete has set.

Field connections shall be made with bolts, unless indicated otherwise. Welding will not be permitted unless shown otherwise on the approved shop drawings and written approval is granted by the casting manufacturer. Erection equipment shall be suitable and safe for the workman. Errors in shop fabrication or deformation resulting from handling and transportation that prevent the proper assembly and fitting of parts shall be reported immediately to the RPR and approval of the method of correction shall be obtained. Approved corrections shall be made at Contractor's expense.

Anchor bolts and anchors shall be properly located and built into connection work. Bolts and anchors shall be preset by the use of templates or such other methods as may be required to locate the anchors and anchor bolts accurately.

Pulling-in irons shall be located opposite all conduit entrances into structures to provide a strong, convenient attachment for pulling-in blocks when installing cables. Pulling-in irons shall be set directly into the concrete walls of the structure.

115-3.5 Installation of ladders. Ladders shall be installed such that they may be removed if necessary. Mounting brackets shall be supplied top and bottom and shall be cast in place during fabrication of the structure or drilled and grouted in place after erection of the structure.

115-3.6 Removal of sheeting and bracing. In general, all sheeting and bracing used to support the sides of trenches or other open excavations shall be withdrawn as the trenches or other open excavations are being refilled. That portion of the sheeting extending below the top of a structure shall be withdrawn, unless otherwise directed, before more than 6 inches (150 mm) of material is placed above the top of the structure and before any bracing is removed. Voids left by the sheeting shall be carefully refilled with selected material and rammed tight with tools especially adapted for the purpose or otherwise as may be approved.

The RPR may direct the Contractor to delay the removal of sheeting and bracing if, in his judgment, the installed work has not attained the necessary strength to permit placing of backfill.

115-3.7 Backfilling. After a structure has been completed, the area around it shall be backfilled in horizontal layers not to exceed 6 inches (150 mm) in thickness measured after compaction to the density requirements in Item P-152. Each layer shall be deposited all around the structure to approximately the same elevation. The top of the fill shall meet the elevation shown on the plans or as directed by the RPR.

Backfill shall not be placed against any structure until approval is given by the RPR. In the case of concrete, such approval shall not be given until tests made by the laboratory under supervision of the RPR establish that the concrete has attained sufficient strength to provide a factor of safety against damage or strain in withstanding any pressure created by the backfill or the methods used in placing it.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

Where required, the RPR may direct the Contractor to add, at his own expense, sufficient water during compaction to assure a complete consolidation of the backfill. The Contractor shall be responsible for all damage or injury done to conduits, duct banks, structures, property or persons due to improper placing or compacting of backfill.

115-3.8 Connection of duct banks. To relieve stress of joint between concrete-encased duct banks and structure walls, reinforcement rods shall be placed in the structure wall and shall be formed and tied into duct bank reinforcement at the time the duct bank is installed.

115-3.9 Grounding. A ground rod shall be installed in the floor of all concrete structures so that the top of rod extends 6 inches (150 mm) above the floor. The ground rod shall be installed within one foot (30 cm) of a corner of the concrete structure. Ground rods shall be installed prior to casting the bottom slab. Where the soil condition does not permit driving the ground rod into the earth without damage to the ground rod, the Contractor shall drill a 4-inch (100 mm) diameter hole into the earth to receive the ground rod. The hole around the ground rod shall be filled throughout its length, below slab, with Portland cement grout. Ground rods shall be installed in precast bottom slab of structures by drilling a hole through bottom slab and installing the ground rod. Bottom slab penetration shall be sealed watertight with Portland cement grout around the ground rod.

A grounding bus of 4/0 bare stranded copper shall be exothermically bonded to the ground rod and loop the concrete structure walls. The ground bus shall be a minimum of one foot (30 cm) above the floor of the structure and separate from other cables. No. 2 American wire gauge (AWG) bare copper pigtails shall bond the grounding bus to all cable trays and other metal hardware within the concrete structure. Connections to the grounding bus shall be exothermic. If an exothermic weld is not possible, connections to the grounding bus shall be made by using connectors approved for direct burial in soil or concrete per UL 467. Hardware connections may be mechanical, using a lug designed for that purpose.

115-3.10 Cleanup and repair. After erection of all galvanized items, damaged areas shall be repaired by applying a liquid cold-galvanizing compound per MIL-P-21035. Surfaces shall be prepared and compound applied per the manufacturer's recommendations.

Prior to acceptance, the entire structure shall be cleaned of all dirt and debris.

115-3.11 Restoration. After the backfill is completed, the Contractor shall dispose of all surplus material, dirt and rubbish from the site. The Contractor shall restore all disturbed areas equivalent to or better than their original condition. All sodding, grading and restoration shall be considered incidental to the respective Item L-115 pay item.

The Contractor shall grade around structures as required to provide positive drainage away from the structure.

Areas with special surface treatment, such as roads, sidewalks, or other paved areas shall have backfill compacted to match surrounding areas, and surfaces shall be repaired using materials comparable to original materials.

Following restoration of all trenching near airport movement surfaces, the Contractor shall thoroughly visually inspect the area for foreign object debris (FOD), and remove any such FOD that is found. This FOD inspection and removal shall be considered incidental to the pay item of which it is a component part.

After all work is completed, the Contractor shall remove all tools and other equipment, leaving the entire site free, clear and in good condition.

115-3.12 Inspection. Prior to final approval, the electrical structures shall be thoroughly inspected for conformance with the plans and this specification. Any indication of defects in materials or workmanship shall be further investigated and corrected. The earth resistance to ground of each ground rod shall not exceed 25 ohms. Each ground rod shall be tested using the fall-of-potential ground impedance test per American National Standards Institute / Institute of Electrical and Electronic Engineers (ANSI/IEEE) Standard 81. This test shall be performed prior to establishing connections to other ground electrodes.

115-3.13 Manhole elevation adjustments. The Contractor shall adjust the tops of existing manholes in areas designated in the Contract Documents to the new elevations shown. The Contractor shall be responsible for determining the exact height adjustment required to raise or lower the top of each manhole to the new elevations.

@ Bolton & Menk, Inc. 2026, All Rights Reserved

The existing top elevation of each manhole to be adjusted shall be determined in the field and subtracted/added from the proposed top elevation.

The Contractor shall remove/extend the existing top section or ring and cover on the manhole structure or manhole access. The Contractor shall install precast concrete sections or grade rings of the required dimensions to adjust the manhole top to the new proposed elevation or shall cut the existing manhole walls to shorten the existing structure, as required by final grades. The Contractor shall reinstall the manhole top section or ring and cover on top and check the new top elevation.

The Contractor shall construct a concrete slab around the top of adjusted structures located in graded areas that are not to be paved. The concrete slab shall conform to the dimensions shown on the plans.

115-3.14 Duct extension to existing ducts. Where existing concrete encased ducts are to be extended, the duct extension shall be concrete encased plastic conduit. The fittings to connect the ducts together shall be standard manufactured connectors designed and approved for the purpose. The duct extensions shall be installed according to the concrete encased duct detail and as shown on the plans.

METHOD OF MEASUREMENT

115-4.1 Electrical manholes and junction structures will not be measured for payment.

BASIS OF PAYMENT

115-5.1 The electrical manholes and junction structures will be paid for at the Contract unit price per lump sum for each modified, complete and in place. This price shall be full compensation for furnishing all materials and for all preparation, excavation, backfilling and placing of the materials, furnishing and installation of appurtenances, modifications to existing can plaza, reinforcement, concrete, removal of old lids, installation of new lids, extensions, and connections to duct banks and other structures as may be required to complete the item as shown on the plans and for all labor, equipment, tools and incidentals necessary to complete the structure.

Payment will be made under:

Item L-115-5.1.a	Can Plaza Modifications – per Lump Sum

REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

American National Standards Institute / Insulated Cable Engineers Association (ANSI/ICEA)

ANSI/IEEE STD 81	IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Ground System

Advisory Circular (AC)

AC 150/5345-7	Specification for L-824 Underground Electrical Cable for Airport Lighting Circuits
AC 150/5345-26	Specification for L-823 Plug and Receptacle, Cable Connectors
AC 150/5345-42	Specification for Airport Light Bases, Transformer Housings, Junction Boxes, and Accessories

@ Bolton & Menk, Inc. 2026, All Rights Reserved

AC 150/5340-30	Design and Installation Details for Airport Visual Aids
AC 150/5345-53	Airport Lighting Equipment Certification Program

Commercial Item Description (CID)

A-A 59544	Cable and Wire, Electrical (Power, Fixed Installation)

ASTM International (ASTM)

ASTM A27	Standard Specification for Steel Castings, Carbon, for General Application
ASTM A47	Standard Specification for Ferritic Malleable Iron Castings
ASTM A48	Standard Specification for Gray Iron Castings
ASTM A123	Standard Specification for Zinc (Hot Dip Galvanized) Coatings on Iron and Steel Products
ASTM A283	Standard Specification for Low and Intermediate Tensile Strength Carbon Steel Plates
ASTM A536	Standard Specification for Ductile Iron Castings
ASTM A615	Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement
ASTM A897	Standard Specification for Austempered Ductile Iron Castings
ASTM C144	Standard Specification for Aggregate for Masonry Mortar
ASTM C150	Standard Specification for Portland Cement
ASTM C206	Standard Specification for Finishing Hydrated Lime

FAA Engineering Brief (EB)

EB #83	In Pavement Light Fixture Bolts

Mil Spec

MIL-P-21035	Paint High Zinc Dust Content, Galvanizing Repair

National Fire Protection Association (NFPA)

NFPA-70	National Electrical Code (NEC)

END OF ITEM L-115

@ Bolton & Menk, Inc. 2026, All Rights Reserved

APPENDICES

Expand Terminal Area Apron

Storm Lake Municipal Airport

City of Storm Lake

Storm Lake, Iowa

3-19-0088-019-2025 (Design), 3-19-0088-020-2025 (Design),
3-19-0088-021-2026 (Construction) &
3-19-0088-022-2026 (Construction)

24X.136745.000

@ Bolton & Menk, Inc. 2026, All Rights Reserved

BOLTON & MENK

Real People. Real Solutions.

STORM LAKE MUNICIPAL AIRPORT (SLB)

CONSTRUCTION SAFETY & PHASING PLAN (CSPP)

EXPAND TERMINAL AREA APRON

FAA AIP No. 3-19-0088-019-2025 (DESIGN), FAA AIP NO. 3-19-0088-020-2025 (DESIGN)

FAA AIP No. 3-19-0088-021-2026 (CONSTRUCTION) & FAA AIP NO. 3-19-0088-022-2026 (CONSTRUCTION)

February 2025

Submitted by:
Bolton & Menk, Inc.
218 11th St SW
Spencer, IA 51301
P: (712) 580-5075

Table of Contents

I. Overview 1
II. PURPOSE 1
III. CONSTRUCTION SAFETY & PHASING RESPONSIBILITIES 1
A. Airport Operator 1
B. Construction Contractor 1
C. Airport Tenants 3
D. Project Engineer 4
IV. CONSTRUCTION SAFETY & PHASING 4
A. Coordination 4
B. Construction Phasing 4
C. Areas & Operations Affected by Construction Activities 6
D. Protection of Navigational Aids (NAVAIDs) 7
E. Contractor Access 7
F. Wildlife Management 9
G. Foreign Object Debris (FOD) Management 9
H. Hazardous Materials (HAZMAT) Management 9
I. Notification of Construction Activities 10
J. Inspection Requirements 11
K. Underground Utilities 11
L. Penalties 11
M. Special Conditions 11
N. Runway & Taxiway Visual Aids 12
O. Markings & Signs for Access Routes 12
P. Hazard Marking & Lighting 13
Q. Protection of Safety Areas 13
R. Other Limitations on Construction 14

Appendix

Appendix A: Construction Safety & Phasing Plan (CSPP) Sheets

Appendix B: Safety Inspection Checklist

Appendix C: Airfield Areas and Operations Affected by Construction Activity Table

I. Overview

This document presents a general outline of the construction safety and phasing provisions for working in or near the Air Operations Area (AOA) contained in the bid documents (Project Plans and Specifications), and to explain how those provisions will be implemented during construction.

II. PURPOSE

This CSPP provides single source procedural information for all key project personnel to use during construction. The CSPP defines the specific responsibilities of the Airport Operator, the Contractor, Airport tenants, and the Project Engineer.

Requirements for maintaining operational safety during construction are in conformance with FAA Advisory Circular 150/5370-2G, "Operational Safety on Airports During Construction". The project specific Construction Safety and Phasing Plan for the project is shown on the CSPP plan sheet(s) and is attached to this report as Appendix A.

III. CONSTRUCTION SAFETY & PHASING RESPONSIBILITIES

A. Airport Operator

The Airport Operator is responsible for operational safety on the Airport at all times. The City of Storm Lake is the Airport Operator. The City of Storm Lake will provide oversight of all construction activities and coordinate those activities with the Airport users (pilots) and Airport tenants. The City of Storm Lake will hold monthly construction progress and safety meetings. During those meetings operational safety will be reviewed and an action plan will be developed as needed to address any discrepancies in safety that need to be corrected. The City of Storm Lake will require and approve a Safety Plan Compliance Document (SPCD) from the Contractor prior to the Notice to Proceed.

B. Construction Contractor

The Contractor will be required to attend scheduled progress and safety meetings and to correct any discrepancies found in safety.

The Contractor shall submit a draft Safety Plan Compliance Document (SPCD) prepared in accordance with FAA Advisory Circular 150/5370-2G to detail how it intends to comply with the CSPP. The draft SPCD shall be submitted no less than seven (7) calendar days prior to the Preconstruction Conference for Owner for review. The Contractor shall address Owner review comments and submit a revised SPCD for Owner acceptance.

Safety Plan Compliance Document requirements are noted below:

The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, Name of Contractor, have read the Title of Project CSPP, approved on Date, and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

(1) **Coordination**. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.

(2) **Phasing**. Discuss proposed construction schedule elements, including:
   (a) Duration of each phase.
   (b) Daily start and finish of construction, including "night only" construction.
   (c) Duration of construction activities during:
      (i) Normal runway operations.
      (ii) Closed runway operations.
      (iii) Modified runway "Aircraft Reference Code" usage.

(3) **Areas and operations affected by the construction activity**. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.

(4) **Protection of NAVAIDs**. Discuss specific methods proposed to protect operating NAVAIDs. Coordinate with FAA Air Traffic Organization (ATO) (local tech ops) for turning off FAA-owned NAVAIDs. That office has noted that they will also mark their own power and control cables prior to construction.

(5) **Contractor access**. Provide the following:
   (a) Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
   (b) Listing of individuals requiring driver training (for certificated airports and as requested).
   (c) Radio communications.
      (i) Types of radios and backup capabilities.
      (ii) Who will be monitoring radios.
      (iii) Whom to contact if the ATCT cannot reach the contractor's designated person by radio.
   (d) Details on how the contractor will escort material delivery vehicles.

(6) **Wildlife management**. Discuss the following:
   (a) Methods and procedures to prevent wildlife attraction.
   (b) Wildlife reporting procedures.

(7) **Foreign Object Debris (FOD) management**. Discuss equipment and methods for control of FOD, including construction debris and dust.

(8) Hazardous material (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.

(9) **Notification of construction activities**. Provide the following:
   (a) Contractor points of contact.
   (b) Contractor emergency contact.
   (c) Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
   (d) Batch plant details, including 7460-1 submittal.

(10) **Inspection requirements**. Discuss daily (or more frequent) inspections and special inspection procedures.

(11) **Underground utilities**. Discuss proposed methods of identifying and protecting underground utilities.

(12) **Penalties**. Penalties should be identified in the CSPP and should not require an entry in the SPCD.

(13) **Special conditions**. Discuss proposed actions for each special condition identified in the CSPP.

(14) **Runway and taxiway visual aids**. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
   (a) Equipment and methods for covering signage and airfield lights.
   (b) Equipment and methods for temporary closure markings (paint, fabric, other).
   (c) Types of temporary Visual Guidance Slope Indicators (VGSI).

(15) **Marking and signs for access routes**. Discuss proposed methods of demarcating access routes for vehicle drivers.

(16) **Hazard marking and lighting**. Discuss proposed equipment and methods for identifying excavation areas.

(17) **Protection of runway and taxiway safety areas**. Including object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
   (a) Equipment and methods for maintaining Taxiway Safety Area standards.
   (b) Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.

(18) **Other limitations on construction** should be identified in the CSPP and should not require an entry in the SPCD.

C. Airport Tenants

The Airport will notify Airport tenants of all pending construction activities that impact them and advise the tenants of planned pavement closures and other activities in the AOA that will affect aircraft operations.

D. Project Engineer

As part of the Project Construction Management, Inspection, and Quality Assurance process, the Project Engineer will monitor construction safety on a periodic basis, utilizing the "Construction Project Daily Safety Inspection Checklist" (see Appendix B) to ensure an appropriate level of priority is given to safety. Any discrepancies in safety will be immediately brought to the Contractor's and City of Storm Lake's attention for corrective action implementation.

IV. CONSTRUCTION SAFETY & PHASING

A. Coordination

A preconstruction conference will be held as soon as practicable after the contract has been awarded and before issuance of the notice to proceed. The preconstruction conference participants should include, but not be limited to, the sponsor's engineer, resident engineer, airport management, testing laboratory representative, contactor and subcontractor(s), contractor's project superintendent, contractor's project clerk, airport users, utility companies, federal, state, or local agencies affected by the proposed construction, and FAA representative.

Contractor progress meetings will be held weekly for the duration of construction. During paving operations, meetings shall be weekly. Operational safety will be a standing agenda item for discussion during progress meetings throughout the project. Date, time, and location of the progress meetings will be determined at the pre-construction meeting.

No changes to the CSPP shall be made without prior FAA consent. The Contractor will submit proposed CSPP changes to the Owner who will then forward them to the FAA for review. The Contractor will be required to update their SPCD to address the proposed CSPP changes and re-submit their SPCD for Owner review and acceptance.

B. Construction Phasing

The project will be constructed in a single-phase. Details of the phase is listed below:

1. Phase 1

(Runway 17/35 and Connecting Taxiway to Runway 13/31 – Open)

(Runway 13/35 and Connecting Taxiway to Apron - Open)

(Runway 06/24 - Open)

- *Scope of Work* – Remove taxiway edge light and construct proposed apron pavement improvements.
- *Duration* – As specified in the Notice to Bidders Section of the Project Manual.
- *Runway 17/35*- Runway 17/35 to remain open.
- *Runway 13/31 –* Runway 13/31 to remain open
- *Runway 06/24 –* Runway 06/24 to remain open
- *Connector Taxiway C to Runway 17/35* - Will remain open during Phase 1.

- *Connector Taxiway C to Runway 13/31* - Will remain open during Phase 1. When construction work occurring within Taxiway C TOFA, per AC 150/5370-2G 2.22.4.3 - 1) taxiing speed of aircraft shall be limited to 10 mph by NOTAM, 2) NOTAM shall be issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway C, 3) marking and lighting signage provided per CSPP plan sheets, 4) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft. 6) Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft. Provide graded shoulder back from taxiway lights back to pavement edge, after completion of various operations so there is no dropoff.
- *Hangar Taxilane* - Will remain open during construction
- *Terminal Apron* – Will remain open during Phase 1. When construction work occurring within Taxiway C TOFA, per AC 150/5370-2G 2.22.4.3 - 1) taxiing speed of aircraft shall be limited to 10 mph by NOTAM, 2) NOTAM shall be issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway C, 3) marking and lighting signage provided per CSPP plan sheets, 4) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft. 6) Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft.
- *Fuel Farm* – Fueling stations will also be operational. A portion of the apron will be closed.
- *Emergency Vehicle Access Routes* – No impact
- *Construction Staging Area* – See CSPP plan sheet(s)
- *Construction Access and Haul Route* – See CSPP plan sheet(s).

  Impacts to Visual NAVAIDs –No Impact
- *Impacts to Electronic Navaids* – No Impact
- *Pavement Marking Changes* – No Impact
- *Edge Lighting Changes* – With the proposed pavement, the taxiway edge light at the corner of taxiway C and the apron will be removed.

  The circuit powering Taxiway C edge lights will need to be turned off to allow for the changes or the power cables disconnected in side the appropriate light base.
- *Required hazard marking and lighting* – Low profile barricades shall be installed on the Apron and Taxiway C.
- *NOTAM and Changes in Aircraft Operations*

- Lead times for required notification 72 hours.
- During this phase a NOTAM shall be issued indicating that construction work is occurring on the apron and shall advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway C

2. Construction Safety Drawings

Drawings specifically indicating construction operations and safety have been developed for each schedule and phase. These drawings have been included in Attachment A and can also be found in the contract drawing bid package.

C. Areas & Operations Affected by Construction Activities

Refer to the table in Appendix C for a summary of the affected airport elements during the different phases of the project.

1. Identification of Affected Areas

Refer to the table in Appendix C for a summary of the affected airport elements during the different phases of the project.

2. Mitigation of Effects

To mitigate construction effects on airport operations, a detailed phasing requirement has been specified in the plans and specifications. The following procedures are established to maintain the safety and efficiency of airport operations.

a) Temporary Changes to Runway and/or Taxi Operations

When the Contractor's operations impact any Taxiway Object Free Area (TOFA), the respective taxiway will be closed, limited or offset as required in FAA AC 150/5370-2G. See section 2.22.4.3 for project specific requirements.

Refer to Section B – *Construction Phasing* for further information on the required, temporary operations for each construction phase.

b) Detours for ARFF and other airport vehicles

All determined airport support vehicles access routes or alternate routes, including emergency response routes, will be coordinated and maintained throughout the project by the Contractor and Airport personnel. Contractor vehicle movements to and from the site must conform to the approved Access and Haul Routes or as directed by the airport at the weekly/bi-weekly construction meetings. The airport will coordinate with all stakeholders any detours from existing Airfield Service Roads as needed, throughout the duration of the project.

c) Maintenance of Essential Utilities

Special attention shall be given to preventing unscheduled interruption of utility services and facilities, including airfield lighting and navigation equipment. The Contractor shall locate and/or arrange for the location of all underground utilities. When an underground cable or utility is damaged due to the Contractor's negligence, the Contractor shall immediately repair the affected cable or utility. Full coordination between the Airport and construction personnel will be exercised to ensure that all utilities are fully protected prior to any excavation. Locations of cabling and other underground utilities will be marked prior to beginning of construction/excavation. The Contractor will be required to contact all known utility agencies if there appears to be a potential impact, and pothole accordingly. If utilities are impacted, the Contractor will be required to provide maintenance until the impacted utilities are restored.

d) Temporary Changes to Air Traffic Control Procedures

There is no Air Traffic Control Tower at KSLB.

D. Protection of Navigational Aids (NAVAIDs)

NAVAIDS shall be protected at all times. The contractor shall not impact the PAPI or REIL on Runway 17/35. The existing power cables for all Navaids shall be marked by the contractor during construction and shall be protected by the contractor. Existing circuits located in project area.

E. Contractor Access

1. Location of Stockpiled Construction Materials

Stockpiles of construction materials and equipment shall be located only in the Staging Areas and are restricted to a maximum height of 15 feet.

2. Vehicle & Pedestrian Operations

a) Construction Site Parking

Employees' vehicles must be parked in the staging area shown on the plans or in the airport parking lot spaces approved by the airport manager. No employee vehicles will be allowed into the worksite beyond the staging area limits.

b) Construction Equipment Parking

When not in use, construction vehicles and equipment shall be parked outside of the Runway Safety Area (RSA), Runway Obstacle Free Zone (ROFZ) and Taxiway Object Free Areas (TOFA's). Construction vehicles shall be serviced only in the Staging Area. Construction vehicles and equipment shall never be left unattended/parked on the runway or taxiway.

c) Access & Haul Roads

The contractor will be restricted to only utilizing the haul route(s) shown in the drawings. Right-of-way must be given to all emergency vehicles and aircraft. See paragraphs (e) and (g) in this section for requirements operating within the airfield environment.

d) Marking & Lighting of Vehicles

Only marked Contractor-owned or operated vehicles required for the proper execution of the work will be allowed in the work area. All vehicles and equipment must have an omni-directional amber flashing light and/or 3-foot by 3-foot flag having a checkered pattern of international orange and white squares at least one foot on each side. All vehicles and equipment must be equipped with an omni-directional amber flashing light for all airfield activities between sunset and sunrise or when visibility is low. Vehicles within the airfield environment must display company identification markings on both sides of the vehicle. Non-motorized equipment must have a reflective device displayed on the front, back and sides. All supervisory and survey personnel vehicles which operate within the airfield environment but outside the work area must have a company vehicle with an amber flashing light mounted on the roof of the cab and identifying markings, visible from 300 feet, mounted on both sides of the vehicle. FAA Advisory Circular (A.C.) 150/5210-5D, "Painting, Marking, and Lighting of Vehicles Used on an Airport" shall be referenced for requirements.

e) Required Escorts

When crossing pavement open to aircraft operations, escorts will be required. The contractor is to provide the escorts and shall take the most direct route available and follow the access routes line shown in the CSPP plan sheets.

f) Situational Awareness

While driving or working on the airfield environment, there must be no devices in or on ears other than those used to protect hearing or communicate company business. Yield right-of-way to emergency vehicles displaying rotating beacons and/or using sirens and other audible emergency signals. Right of way must also be given to aircraft. In the event of an emergency, be prepared to move workers, vehicles, and equipment immediately at the direction of the City of Storm Lake .

g) Two-Way Radio Communication Procedures

All activities within aircraft movement areas will require two-way radio communication. In the event the contractor needs to access a movement area, all radio communications will be performed by the City of Storm Lake using the Common Traffic Advisory Frequency (CTAF). Frequency that will be used by City of Storm Lake personnel is:

CTAF – 122.700 MHz

h) Maintenance of the Secured Area of the Airport

Access locations to the airport are secured by existing gates, therefore the Contractor shall be responsible for ensuring that all gates and access points are closed when working within the airport property.

F. Wildlife Management

1. Trash

   Receptacles must be provided by the contractor and equipped with metal, canvas, or plastic covers. Food scraps or other trash shall not be disposed of on the ground and must be collected and placed in covered receptacles to not attract wildlife. Contractor shall provide trash receptacle(s) located in the staging area. Trash receptacle shall contain closeable lids and must be emptied weekly.

2. Standing Water

   Staging areas, stockpile areas, and the work area must be graded to drain to avoid attracting wildlife. If any water is standing for more than a 24-hour period it shall be removed.

3. Tall Grass & Seeds

   The use of low-quality seed mixtures that contain seeds of plants (such as clover) will attract wildlife and must not be used. Grass and weeds must be managed, or cut if necessary, within work areas to avoid attracting wildlife.

4. Disruption of Existing Wildlife Habitat

   Contractor personnel should immediately notify the airport operator of wildlife sighting.

G. Foreign Object Debris (FOD) Management

The contractor will be required to ensure the airfield environment is kept continuously free of construction debris, equipment and/or materials that might endanger or be ingested by an aircraft. Take extreme care to ensure no work-related debris or other loose items can be blown away by wind or aircraft engine blast. The Contractor must be responsible for any resulting damage to aircraft engines and/or other property arising from failure to secure and/or protect debris, tools, supplies, or other loose items. In areas that may result in the tracking of soil, sediments, or hazardous materials on the wheels of hauling equipment outside the area that are enclosed by erosion and silt/sediment control devices, the Contractor must provide the means and methods to remove these materials prior to the vehicle exiting the controlled area. Equipment operated on haul routes over existing pavements must always be kept free of material spillage and foreign matter. Standby equipment is always required to be onsite and operational throughout the project and must include, at a minimum, a self-propelled regenerative air sweeper and a water truck always kept loaded.

H. Hazardous Materials (HAZMAT) Management

The Contractor's SPCD shall include a section discussing its HAZMAT management procedures for hazardous materials (such as fuel and hydraulic fluid) transport, storage, and transfer procedures for re-fueling and servicing equipment as well as spill containment and cleanup methods. The hazards of chemical products brought onto airport property shall be conveyed through Safety Data Sheets (SDS) formatted in accordance with OSHA standards in an appendix of the SPCD. In preparing this section of their SPCD, the Contractor should consult Advisory Circular 150/5320-15, Management of Airport Industrial Waste, which contains the FAA's recommended guidelines for HAZMAT management on airports.

I. Notification of Construction Activities

1. Responsible representatives/points of contact

Points of Contact			
NAME	**REPRESENTING**	**PHONE**	**EMAIL**
Jim Bartholomew	Storm Lake Municipal Airport (Primary CSPP Contact)	(712) 732-6494	bartbfs@live.com
Tyler Gibbins	City of Storm Lake	(712) 732-8000	gibbins@stormlake.org
Joe Roenfeldt	Bolton & Menk, Inc.	(515) 240-4329	joe.roenfeldt@bolton-menk.com
Garrett Jacobs	Bolton & Menk, Inc.	(563) 349-7180	garrett.jacobs@bolton-menk.com
TBD	Contractor 24hr Contact	TBD	TBD

2. Notices to Air Missions (NOTAMs)

   The City of Storm Lake will issue Notice to Air Missions (NOTAMS) whenever construction activities occur in the AOA.

   Only the City of Storm Lake or their designated representative may initiate or cancel a NOTAM on airport conditions and is the only entity that can close or open a runway. Points of contact for issuing NOTAMS are as follows: Main Contact – Jim Bartholomew, Airport Manager @ (712) 732-6494

3. Emergency Notification Procedures

   - Emergency – DIAL 911
   - Airport Manager – Jim Bartholomew, Airport Manager – (712) 732-6494
   - City of Storm Lake – Tyler Gibbins – (712) 732-8000
   - CTAF radio emergency – 122.700 MHz
   - Storm Lake Police Department – (712) 732-8010
   - Storm Lake Fire Department – (712) 732-8010
   - Hospital – Buena Vista Regional Medical Center – (712) 732-4030
   - Buena Vista County Sheriff's Department - (712) 749-2530
   - Iowa Poison Control – (800) 222-1222

4. Notification to the FAA

   a) Part 77

      Any equipment, (cranes, graders, other equipment) used or planned to be used by the contractor, which exceed the 15' height limitation, must also have a 7460-1 airspace evaluation done by the contractor and a favorable determination from the FAA must be received prior to use.

J. Inspection Requirements

1. Daily inspections

   The contractor shall conduct inspections at least daily, but more frequently, if necessary, to ensure conformance with the CSPP. The City of Storm Lake will have the final authority in determining if the area is suitable for aircraft use. Appendix B contains a safety inspection checklist that may be used by the Contractor or City of Storm Lake. Any deficiencies, whether caused by negligence, oversight, or project scope change, are to be addressed immediately.

2. Final inspection

   An inspection must be conducted by the City of Storm Lake prior to the commissioning of any newly constructed areas open to air traffic. The City of Storm Lake will have the final authority in determining if the area is suitable for aircraft use. Appendix B contains a safety inspection checklist that may be used by the Contractor or City of Storm Lake.

K. Underground Utilities

Notify Iowa One Call and owners of underground utilities within the construction area or within affected public rights-of-way or easements, via the "one-call" notification system (1-800-292-8989) in advance of the commencement of excavation activities. Notify the City of Storm Lake when the "one-call" request is being initiated. Contractor must not cross electrical or communication cables unless protected by approved means. In the event of interruption to field-located utility services as a result of the work, promptly notify the City of Storm Lake first, and then the proper authority. Cooperate with said authority in restoring service as promptly as possible. If required, the Contractor must install suitable temporary service until permanent repair is completed. Refer to General Provisions, Section 70.

Private utilities do exist at the airport. Their location along with other known utilities have been shown were known on the project plans. Their location shall be considered approximate and additional utilities either public or private may not be yet known.

The contractor is responsible for ensuring all private and public utilities at the airport are marked and protected.

L. Penalties

The Contractor is responsible for compliance with the CSPP as detailed herein. Violations will be cause for the project to be stopped and project safety procedures evaluated. Contractor working days will continue to be charged, even if the City of Storm Lake ceases construction operations. The City of Storm Lake will decide if and when work will continue. Enforcement of these regulations will be by the City of Storm Lake. Refer to General Provision Section 80-06, Temporary Suspension of the Work, for further details. Failure to comply with the CSPP is a failure on the part of the contractor to conduct out orders given or fulfil any provisions of the contract.

M. Special Conditions

An aircraft in distress may require the Contractor to immediately move equipment. The City of Storm Lake will notify the Contractor in the unlikely event of an aircraft in distress. The Contractor will be required to comply with all City of Storm Lake and/or Air Traffic instructions, and all equipment directed to be moved shall be relocated to the Staging Area.

Various circumstances, such as an aircraft accident, security breach, or other unforeseen event may require suspension of the construction. The City of Storm Lake will notify the Contractor when suspension of the work is required. See Section H – Emergency Notification Procedures for emergency contact information.

A VPD (vehicle/pedestrian deviation) is any entry or movement on the movement area by a vehicle or pedestrian that has not been authorized by the City of Storm Lake. In the event of a VPD, the City of Storm Lake reserves the right to suspend the work or any portion thereof and continue suspension until the completion of any investigation or evaluation by the City of Storm Lake and full compliance with any corrective measures which the City of Storm Lake may reasonably require. In addition, the City of Storm Lake may require the Contractor to provide to the City of Storm Lake a written plan, satisfactory to the City of Storm Lake, to demonstrate the Contractor's ability to prevent future violations. See Section E – Contractor Access for vehicle and pedestrian operations and two-way radio communication requirements.

N. Runway & Taxiway Visual Aids

1. General

   Temporary traffic control devices must be clearly visible to pilots, not misleading, confusing, or deceptive. All temporary traffic control devices must be secured in place to prevent movement by prop wash, jet blast, wing vortices, or other wind currents and constructed of materials that would minimize damage to an aircraft in the event of inadvertent contact.

2. Markings

   a) Temporarily Closed Runway

      Not Applicable

   b) Temporary Closed Taxiway

      Not Applicable

3. Lighting and visual NAVAIDs

   Refer to section B Construction phasing for more information regarding Lighting and Navaids during project phases.

   Edge lighting on Taxiway C from the Apron to Runway 13/31 shall either be covered or disconnected from the transformer so that they don't illuminate.

4. Signs

   Airfield guidance signs are not anticipated to be impacted due to the construction of this project.

O. Markings & Signs for Access Routes

Access for this project will be from the routes indicated in the construction safety plan sheets. This type of project will have limited personnel airside, and the Contractor is responsible for his workforce familiarity with access, so no signs for access routes will be required. If access signage is required due to workforce familiarity, the contractor shall provide signage for the project.

P. Hazard Marking & Lighting

Before starting work, the contractor must provide and have available all signs, barricades, and lights necessary for protection of the work. Install and maintain adequate warning signs and lighted barricades to protect property and personnel in the work area. Barricades must be weighted or anchored to prevent overturning from wind or aircraft engine blast.

Barricades are not permitted in any active safety area. Barricades located within a runway or taxiway object free area and/or on aprons must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights. Barricades must be spaced according to the function. For aircraft movement areas barricades must be placed at 10' on center. For vehicle movement areas barricades must be placed at 4' on center. For personnel movement area barricades must be placed with 0' spacing.

The Contractor must have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information as information included in their SPCD. Lighting must be checked for proper operation at least once per day, preferably at dusk.

Open trenches, excavations, or obstructions not being actively worked must be marked with lighted and weighted barricades which can be seen from a reasonable distance. Contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the City of Storm Lake, and light them with red lights during hours of restricted visibility or darkness.

Q. Protection of Safety Areas

1. Runway Safety Area (RSA)

   No construction is anticipated to occur in this area.

2. Runway Obstacle Free Zone (ROFZ)

   No construction is anticipated to occur in this area

3. Runway Object Free Area (ROFA)

   No construction is anticipated to occur in this area

4. Taxiway Safety Area (TSA)

   No construction may occur in the TSA while the taxiway is open to aircraft operations. Open trenches or excavations are not permitted within the TSA while the taxiway is open. Backfill trenches before the taxiway is opened.

   Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting the occasional passage of aircraft without causing structural damage to the aircraft.

   Grading tolerances inside the safety area must be 5% maximum grade with no humps/depressions/drop-offs greater than 3-inches. The TSA depicted on the Construction Safety & Phasing Plan and dimensions are contained in Appendix C.

5. Taxiway Object Free Area (TOFA)

   For this project, the TOFA is depicted on the Construction Safety & Phasing Plan and dimensions are contained in Appendix C.

Per FAA AC 150/5370-2G 2.22.4.3 when working in TOFA 1) taxiing speed of aircraft shall be limited to 10 mph by NOTAM, 2) NOTAM shall be issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway C, 3) marking and lighting signage provided per CSPP plan sheets, 4) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft. 6) Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft.

6. Taxilane Safety Area (TLSA)

   No construction is anticipated to occur in this area

7. Taxilane Object Free Area (TLOFA)

   No construction is anticipated to occur in this area

8. Runway approach/departure surfaces

   No construction is anticipated to occur in this area

R. Other Limitations on Construction

1. Prohibitions

   a) Open flame welding or torches are prohibited unless fire safety precautions are provided, and the airport has approved their use.

   b) The use of flare pots is prohibited within the Airport Operations Area (AOA).

   c) No smoking will be allowed within the airfield environment.

Appendix A: Construction Safety & Phasing Plan (CSPP) Sheets

Refer to the CSPP Plan Sheet(s) in the Project Plans for more information.

Appendix B: Safety Inspection Checklist

Construction Project Daily Safety Inspection Checklist

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project

Potentially Hazardous Conditions

ITEM	ACTION REQUIRED	NONE
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		☐
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		☐
Runway resurfacing projects resulting in lips exceeding 3 in (7.6 cm) from pavement edges and ends.		☐
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		☐
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		☐
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and approach zones.		☐
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		☐
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		☐
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		☐
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		☐

Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		☐
Obliterated or faded temporary markings on active operational areas.		☐
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		☐
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		☐
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		☐
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		☐
Lack of radio communications with construction vehicles in airport movement areas.		☐
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		☐
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		☐
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		☐
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		☐
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		☐
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		☐
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		☐
Site burning, which can cause possible obscuration.		☐
Construction work taking place outside of designated work areas and out of phase.		☐

Appendix C: Airfield Areas and Operations Affected by Construction Activity Table

Airfield Areas and Operations Affected by Construction Activity Table

	Normal Airport Operations (Prior to Project)	Phase 1	Normal Airport Operations (After Project)
Runway 17/35	Open	Open	Open
Runway 17 Threshold Location	As Is	As Is	As Is
Runway 35 Threshold Location	As Is	As Is	As Is
Runway Length	5,002 ft	Unchanged	5,002 ft
RSA Width	150'	Unchanged	150'
ROFA Width	500'	Unchanged	500'
ROFZ Width	400'	Unchanged	400'
Aircraft MTOW lbs., SWG	30,000 lbs	Unchanged	30,000 lbs
Runway/Approach Type	Non-Precision	Unchanged	Non-Precision
RNAV (GPS) RWY 17	Available	Available	Available
RNAV (GPS) RWY 35	Available	Available	Available
VOR/DME-A	Available	Available	Available
Runway 17 PAPI	On	On	On
Runway 17 REIL	On	On	On
Runway 35 PAPI	On	On	On
Runway 35 REIL	On	On	On
Runway 17 Turnaround	Open	Open	Open
Runway 35 Turnaround	Open	Open	Open
Connecting Taxiway to Runway 17/35 (Taxiway C)	Open	Open	Open
Runway 06/24	Open	Open	Open
Runway 06 Threshold Location	As Is	As Is	As Is
Runway 24Threshold Location	As Is	As Is	As Is
Runway Length	1,962 ft	Unchanged	1,962 ft
RSA Width	120'	Unchanged	120'
ROFA Width	250'	Unchanged	250'
ROFZ Width	250'	Unchanged	250'
Runway/Approach Type	Visual	Unchanged	Visual
Runway 13/31	Open	Open	Open
Runway 13 Threshold Location	As Is	As Is	As Is
Runway 31 Threshold Location	As Is	As Is	As Is
Runway Length	3,034 Ft	Unchanged	3,034 Ft
RSA Width	150'	Unchanged	150'
ROFA Width	500'	Unchanged	500'
ROFZ Width	400'	Unchanged	400'
Aircraft MTOW lbs., SWG	4,000 lbs	Unchanged	4,000 lbs
Runway/Approach Type	Visual	Unchanged	Visual
Runway 13 Turnaround	Open	Open	Open
Runway 31 Turnaround	Open	Open	Open
Connecting Taxiway to 13/31 (Taxiway C)	Open	Open*[1]	Open
Terminal Apron	Open	Open*[1]	Open
T-Hangar Taxilanes	Open	Open	Open
Aircraft Self-Service Fuel	Available	Available	Available
Airport Rotating Beacon	Normal	Normal	Normal
AWOS	Normal	Normal	Normal
Emergency Vehicle Access	Normal	Normal	Normal

Notes

*1 - When construction work occurring within Taxiway C TOFA, per AC 150/5370-2G 2.22.4.3 - 1) taxiing speed of aircraft shall be limited to 10 mph by NOTAM, 2) NOTAM shall be issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway C, 3) marking and lighting signage provided per CSPP plan sheets, 4) Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft. 6) Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft.

January 30, 2026

Project No: 252112STO

Bolton and Menk
Attn: Mr. Garrett Jacobs, P.E.
430 East Grand Ave
Des Moines, Iowa 50313

RE: **Geotechnical Investigation Executive Summary**
Storm Lake Municipal Airport
Apron Expansion
Storm Lake, Iowa

Dear Mr. Jacobs,

Thank you for the opportunity to provide our services for the above referenced project. Upon completion of the geotechnical drilling and analysis, the following summary of the findings can be concluded from the data.

- The site consists of mainly topsoil, B-horizon loess, loess and glacial till soil deposits, classified as CL and CH soils. The B-horizon loess soils are classified as CH soils. These soils are characterized as moderately to highly expansive. The soils were treated with 5% cement. **It was determined a 5% cement dosage rate, based on dry soil weight, would be required to raise the CBR value to an acceptable limit and remediate the expansive soil tendencies**. It will likely be necessary to re-work (farm) or chemically stabilize the soils to adjust the moisture contents to an acceptable range for compaction. The chemical stabilization should be conducted to a minimum depth of 24 inches below bottom of pavement elevations.
- No groundwater was noted during drilling operations. Dewatering techniques could become necessary during construction, as these levels tend will fluctuate with seasonal changes.
- Soil samples were subject to Moisture Content (ASTM D2216), Atterberg Limits (ASTM D4318), Grain Size Analysis (ASTM D422), Standard Proctor (ASTM D698), and California Bearing Ratio (ASTM D1883) classification testing.
- Water Soluble Sulfates in Soil (ASTM C1580) was also evaluated and will be reported separately when the results are available
- California Bearing Ratio (CBR) testing was conducted on virgin soil samples from the borings. The CBR for this site yielded an average value of 2.5 (untreated). The soils were stabilized with 5% Type IL cement for a stabilization study. It was determined a 5% cement dosage rate, based on dry soil weight, would enhance the CBR value to a design value of 5.75.
- The frost group classification for this site is an FG-4.

Please feel free to call should you have questions or if I may be of further assistance.

Sincerely,

Sybil K. Ferrier, P.E.
Principal Engineer

1610 East Madison Ave • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851
www.cmt-iowa.com

GEOTECHNICAL INVESTIGATION

FOR

STORM LAKE MUNICIPAL AIRPORT

APRON EXPANSION

STORM LAKE, IOWA

PROJECT NO. 252112STO

BMI: 24X.136754.000

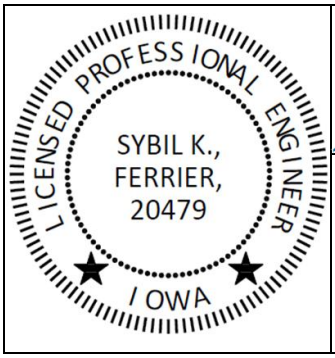
Prepared For:

Bolton and Menk
Attn: Mr. Garrett Jacobs, P.E.
430 East Grand Ave
Des Moines, Iowa 50309

Prepared By:

Construction Materials Testing, Inc.
1610 E. Madison Avenue
Des Moines, IA 50313

January 30, 2026



I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.

1/30/26

Sybil K. Ferrier, P.E. Date
License No. 20479

My License renewal date is **December 31,** 2026.
Pages or sheets covered by this seal: All Pages.

1610 East Madison Ave • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851
www.cmt-iowa.com

Table of Contents

PROJECT BACKGROUND 3
FIELD EXPLORATION 3
SITE AND SUBSURFACE CONDITIONS 4
Site Geology 4
Soil Conditions 4
Groundwater Observations 5
PROCEDURES 5
Laboratory Testing 5
ENGINEERING ANALYSIS AND RECOMMENDATIONS 5
Expansive Soil Considerations 5
Site Preparation 6
Earthwork Considerations 6
Exterior Pavement Support and Design Considerations 8
Pavement Drainage Considerations 9
Pavement Frost Heave Considerations 9
GENERAL COMMENTS 10

GEOTECHNICAL ENGINEERING REPORT

Storm Lake Municipal Airport

Apron Expansion

Storm Lake, Iowa

January 30, 2026

Project No. 252112STO

PROJECT BACKGROUND

The Storm Lake Airport Commission is planning to expand the existing apron, which provides access to the current taxiway. The new apron will be approximately 30,000 sq. ft, of pavement, broken into two sections. It is anticipated the site will require minor grading operations on the order of 2 feet or less to achieve the final grades. Six soil borings were conducted to a depth of 10 feet below existing grades site to evaluate current soil conditions. The purposes of this report are to describe the subsurface conditions encountered in the borings, analyze and evaluate the test data, and provide geotechnical recommendations regarding the design and construction of the new pavement section.

FIELD EXPLORATION

Field exploration was conducted on January 12, 2026. The boring locations were selected by Bolton and Menk (BMI) and staked in the field by CMT. No topographic site information was available at the time this report was issued. Individual Boring Logs and a Site Plan are included in the attachments of this report showing the findings and locations of the borings.

The bores were drilled with a Geoprobe 7822DT to advance the boreholes. Representative samples were obtained at various intervals using augers and split spoon samplers in general accordance with ASTM procedures. Field logs of each boring were recorded by the drill crew during drilling operations. These logs contain visual classifications of the materials encountered as well as the drillers interpretation of the subsurface conditions between samples during drilling. Soil samples were sealed and returned to the laboratory for further testing and classification. The final Boring Logs (see attached) represent an interpretation of the field logs and include modifications based on laboratory observations and test results for the samples.

SITE AND SUBSURFACE CONDITIONS

Site Geology

The site is located at the Storm Lake Municipal Airport, on the southwest side of Storm Lake, Iowa. This geologic region of Iowa is known as the Des Moines Glacial Lobe. After the last glacier advanced through Iowa, it left behind a poorly drained landscape consisting of pebbly deposits striated with sand and gravel seams from glacial meltwater streams. Many of the natural soils present consist of Wisconsinan glacial till, loess and Pre-Illinoian glacial till underlain by the Pennsylvanian bedrock system. Wisconsinan glacial till typically consists of a lower sand content glacial till, generally mixed with sand seams and layers. The upper more weathered portion of the Pre-Illinoian glacial till, referred to as paleosol, is typically a higher clay content soil.

Soil Conditions

Specific subsurface soil conditions at each boring location are presented on the individual Boring Logs, enclosed in the appendix. The stratification boundaries shown on the Boring Logs represented the approximate boundary lines where changes in soil formations may occur. In-situ the transition between materials is more gradual than what is presented on the Boring Logs. Based on the borings, the subsurface conditions can be generalized as follows:

Topsoil – Topsoil was present to an average depth of approximately 1- 1.5 feet below existing grade in the borings, across the site. The topsoil consisted of very dark brown and very dark gray sandy lean clay (CL) with traces of organics. The organic zone of the topsoil was observed to be 8inches in thickness. The topsoil was in a moist condition at the time of drilling.

B-Horizon Loess – B-Horizon loess soils were encountered beneath the topsoil in Boring Nos. 1, 4 and 5. This stratum was identified as dark gray rusty, light gray rusty fat clay (CH). The B-Horizon loess exhibited soft to medium consistencies in a moist condition. This stratum was encountered to a depth of 5 feet below existing grades.

Loess – Loess soils were the prevalent soil stratum found at this site. It was encountered beneath the topsoil in Boring Nos. 2, 3, and 6, and beneath the B-Horizon in Boring Nos. 1, 4, and 5. It was identified as various shades of dark gray rusty, gray rusty, and light gray rusty silty lean clay (CL). The stratum generally graded to a gray-rusty coloring after a depth of 2 feet below existing grades in Boring Nos. 2, 3, and 6. The loess exhibited soft to medium consistencies in a moist condition. Increasing sand contents were noted in several bores, after depths of 5 to 7 feet below existing grades. All borings, except Boring No. 4, terminated in this soil stratum at a depth of 10 feet below existing grades.

Wisconsinan Supraglacial Till –Wisconsinan supraglacial till soil was encountered at the bottom of Boring No. 4. This soil stratum consisted of gray-brown sandy silty lean clay (CL) with traces of gravel. The glacial till exhibited soft consistencies in a moist condition. Boring No. 4 terminated in this soil stratum at a depth of 10 feet below existing grades.

Groundwater Observations

No groundwater accumulation was noted during drilling operations. No moisture seepage was noted. It should be anticipated the groundwater levels will fluctuate from the observed values at drilling to the time of construction. Dewatering techniques may become necessary during construction if groundwater levels rise. These short-term observations are not necessarily an accurate indication of normal groundwater levels. Long-term observations would be required to better define the natural groundwater level in this area. The groundwater levels observed during site exploration can be seen on the attached Boring Logs in the appendix.

Fluctuations in groundwater can occur from varying amounts of precipitation, changes in surface coverage (i.e. adding pavements or vegetation), irrigation practices, etc. Brown-gray coloring of the soil is another indication of potential groundwater levels. The color change of the soil will indicate a level at which the groundwater is fluctuating.

PROCEDURES

Laboratory Testing

The soil samples were classified in the laboratory based on visual observations, moisture content and strength tests. The soil descriptions and group symbols presented on the Boring Logs for native soils are in general accordance with the Unified Soil Classification System (USCS). The results of the laboratory tests are shown on the boring logs attached to this report.

ENGINEERING ANALYSIS AND RECOMMENDATIONS

Expansive Soil Considerations

The shallow B-Horizon Loess encountered at this site is considered a highly expansive soil (CH). Expansive soils are subject to volumetric changes (either shrink or swell) when fluctuations in soil moisture content occur. These movements can be detrimental to lightly loaded floor slabs, pavements, and foundations if not properly addressed. The following paragraphs outline proper remedial techniques for expansive soils.

- It is recommended for a minimum of two feet of non-expansive engineered fill (either cohesive or granular) be placed beneath pavements. This will create a buffer zone between the pavements and the expansive soils.
- It is recommended for frost depth foundations to not be placed within three feet of the expansive soil layer. This may require an over-excavation and backfill process to achieve the minimum depth of three feet of non-expansive fill. The over-excavation should be backfilled with pre-approved suitable fill material, either a non-expansive cohesive soil (CL) or granular material, such as 1 inch clean limestone, limestone screenings or river gravel.
- Chemically stabilize the foundation soils with either fly ash or cement. If elected, dosage rates should be determined at the time of construction to adjust for current soil moisture contents and the chemical

chosen for stabilization. At the current moisture contents, it is anticipated a 10% fly ash and 8% cement dosage rate will be needed.

Moisture contents of these soils were slightly above (+2-3%) the typical (optimum) values at the time of drilling operations. In order to lower the risk of further expansions/settlements occurring, CMT recommends the over-excavation option be coupled with a drainline system to maintain soil moisture contents. Soil moisture content fluctuations are the main culprit which causes shrinkage/swelling in soil stratums. By maintaining the moisture content at a constant level, the shrink/swell potential is drastically reduced. This will further be discussed in the ***Foundations*** section of this report.

Typically, over-excavation of soils to remediate expansive soil conditions will reduce soil movements to acceptable levels, but will not completely eliminate them. Large vegetation planted close to the structures may remove moisture from the nearby soils. Foundations and pavements can potentially settle due to shrinkage of soils from loss of moisture. Trees and shrubs should be planted a minimum horizontal distance away from the structure equal to the final height of the vegetation. Similarly, excessive irrigation near structures can cause soil swelling and should be limited.

Site Preparation

Site preparation will begin with the stripping of any existing organic or loose material present near the surface, within the construction footprint of the project. Based on boring data, this could be on the order of 18 inches or less to adequately remove the topsoil and organic zone. While not encountered during drilling, if found during construction, any mature vegetation, roots, large areas of organic materials, or debris fields should be removed from the construction area and properly backfilled prior to further grading or construction operations.

During the initial site exploration, the moisture contents of the natural soils were slightly above (+2-3%) the recommended moisture content for compaction. Adjustment of the moisture content may be necessary during grading operations to achieve the desired amount of compaction at the preferred moisture content. If the soils are wetter during grading and weather permitting, farming the soils is a very economical way to lower the moisture content of the soils. If farming is not a feasible option, chemical stabilization can be conducted with cement or fly ash. If chemical stabilization is warranted, options and chemical availability should be discussed at the time of construction.

Earthwork Considerations

The on-site natural soils would be suitable for general grading applications, if selectively placed to combat expansive tendencies. It is anticipated that grading operations on the order of 2 feet or less will be required to achieve the desired final grades. The on-site soils can be excavated utilizing conventional equipment. Cohesive soils are best compacted utilizing a sheepsfoot or pneumatic type compactor (tampers). Pneumatic tired roller or track equipment will not be allowed, as this does not allow for sufficient compaction of soils. Granular soils are best compacted using a vibratory compactor. It is recommended for any fill or borrow material needed for site grading consist of a non-expansive (CL) cohesive material, free of organics and rubble, or a granular material. The material should be compacted to a minimum of 95 percent of the maximum dry density as determined by ASTM D-698 (Standard Proctor Test) at a moisture content of -1 to +4 percent of optimum. No

fill should be placed in lifts greater than one foot in thickness. The non-expansive cohesive fill material should exhibit a Liquid Limit less than 45 and a Plasticity Index less than 23 when tested in compliance with ASTM D-4318. All fill materials, cohesive or granular, should be pre-approved prior to placement.

The natural on-site soils have a characteristically high silt content, which causes lack of cohesion when the silt content is high enough. These soil types will not support trenching operations if encountered. If areas of increased silt are encountered during construction, they could cave or collapse rapidly, especially if water is flowing freely throughout the excavation. All excavations should be adequately sloped or braced for safety if it is necessary for personnel to enter excavations. Excavation side slopes should be constructed and maintained in accordance with all local, state and federal requirements, including OSHA 29 CFR, part 1926.

CMT has not been provided with information regarding specific design or construction plans; therefore, we cannot address more specific earthwork issues at this time. If desired, CMT can review a final grading plan when it becomes available to insure compatibility with geotechnical recommendations. It is recommended for CMT personnel be on-site during construction to verify compaction, bearing capacity or material suitability during the construction process.

The soils were evaluated for classification and design characteristics in accordance with the RFP dated December 15, 2025. Samples were obtained from 3.5 - 5 ft interval. These test methods included Atterberg Limits (ASTM D4318), Grain Size Analysis (ASTM D422), Soil pH (ASTM D4972), Standard Proctor (ASTM D698), California Bearing Ratio (ASTM D1883) and moisture content (ASTM D2216). Water Soluble Sulfates in Soil (ASTM C1580) was also evaluated and will be reported separately when the results are available. During testing and evaluation of the soil samples in the laboratory, some isolated areas of the upper soil stratum was classified as expansive. Based on the laboratory testing and CBR results, chemical stabilization of the soil subgrade is necessary to combat the expansive soils present onsite. CMT is recommending chemical stabilization of the soils. The soils were treated in a laboratory condition utilizing a 5% cement (Type IL) dosage, based on dry soil weight. Based on the test results, it is recommended during reconstruction to utilize a 5**% cement dosage rate based on dry soil weight**, in order to remediate the expansive soil tendencies. Listed in the following tables are the laboratory test results. Enclosed are the appendix are the graphical representations of the results.

Table 1. Classifications

Sample ID	AASHTO Classification Untreated	Atterberg Limits Untreated
Bore 1-1 (3.5 - 5 ft)	A-7-6(32)	LL=53 PL=24 PI=29
Bore 2-1 (3.5 - 5 ft)	A-7-6(22)	LL=44 PL=19 PI=25

Bore 3-1 (3.5 - 5 ft)	A-6(5)	LL=27 PL=14 PI=13
Bore 4-1 (3.5 - 5 ft)	A-7-6(31)	LL=50 PL=22 PI=28
Bore 5-1 (3.5 - 5 ft)	A-7-6(28)	LL=50 PL=25 PI=25
Bore 6-1 (3.5 - 5 ft)	A-6(8)	LL=30 PL=15 PI=15

Table 2. Standard Proctor Results

Sample ID	Proctor Untreated	Proctor 8% Cement	CBR Untreated	CBR 8% Cement	Soil pH
Bore 1-1 (3.5 - 5 ft)	99.4 pcf 21.3%	101.7 pcf 22.3%	2	5	4.68
Bore 2-1 (3.5 - 5 ft)	111.2 pcf 16.0%	109.1 pcf 19.0%	2.5	6	6.62
Bore 3-1 (3.5 - 5 ft)	111.1 pcf 15.6%	109.2 pcf 16.5%	2.5	6	4.49
Bore 4-1 (3.5 - 5 ft)	104.2 pcf 19.2%	103.0 pcf 20.6%	2	5.5	5.58
Bore 5-1 (3.5 - 5 ft)	113.4 pcf 15.3%	112.5 pcf 16.1%	3	6	5.90
Bore 6-1 (3.5 - 5 ft)	114.2 pcf 14.4%	112.6 pcf 15.5%	2	6	6.39

Exterior Pavement Support and Design Considerations

Pavement thickness should be designed using the new pavement design guide published by the FAA Design Guide, and verified by FAARFIELD calculations. Based on information provided by lab tests and on-site borings, it is recommended for a PCC pavement to be constructed according to the following guidelines.

In order to enhance the bearing capacity and provide drainage for the pavement, it is recommended to utilize a 6 inch thick granular subbase beneath the pavement. All granular subbase materials should be compacted to a minimum of 100 percent of the maximum dry unit weight as established by the Standard Proctor test (ASTM D698), in accordance with FAA regulations, at a moisture content of -3 to +3 percent of optimum. The subbase should consist of a granular material similar to an IDOT Roadstone gradation and be in compliance with the FAA P-209 or FAA P-219 of *AC 150/5370-10G.* All cohesive pavement sub-grade materials should be

compacted to a minimum of 95 percent of the maximum dry unit weight as established by the Standard Proctor test (ASTM D698), in accordance with FAA regulations, at a moisture content of -1 to +4 percent of optimum.

The frost group classification for this project is an FG-4. For all exterior concrete, a rigid pavement consisting of a PCC mix design should be in compliance with P-501 FAA regulations, however it could be similar to an IDOT C-4 WRC15 or WRC20 mix, with a target air content of 5 - 6 percent. The strength requirement of either 4,400 psi compressive or 650 psi flexural strength (third point loading) at 28 days should be achieved.

Pavement Drainage Considerations

No groundwater was observed during drilling operations below existing grades. It is not anticipated that groundwater will impact pavements, however, the soil subgrade moistures fluctuated across the site (+2-3 %). This is an indication of poor soil drainage, due to expansive soil tendencies and high silt content. The fluctuations in soil moistures can increase the risk for unwanted pavement faulting. In addition, excess water from irrigation methods, rainfall events or general surface water runoff can infiltrate the pavement structure through cracks and joints. This type of water infiltration typically leads to premature pavement failures, seen as joint spalling, heaving of panels or pavement staining if not maintained appropriately.

Seasonal fluctuations have shown that perimeter drains, edge drains or a granular subbase can enhance the lifetime of the pavement structure. Proper drainage will also aid in reducing the amount of differential settlement a pavement experiences. One option would be to place a granular subbase under the pavements to aid in drainage. The granular subbase could consist of a one inch clean granular material, such as crushed limestone, IDOT Modified Subbase or similar material which meets the gradation criteria of the FAA design specifications. It should be placed a minimum of 6 inches in thickness.

Edge drains or drain tiles consisting of 4 inch perforated PVC pipe would be adequate to maintain soil moisture contents. These could also be considered to aid in removing excess water from under the pavements and should be surrounded by a free draining granular material. This will help in maintaining the groundwater table beneath the pavements and alleviate frost heave potentials. All drainlines should be constructed to drain to a suitable outlet, or daylighted out away from structures so as not to re-introduce water to those structures.

Pavement Frost Heave Considerations

Transition points in soil subgrades or soils that exhibit predominate textural changes (silts to clays, sands to clays, etc.) can react differently to frost heave movements, even when groundwater levels are uniform beneath the pavements. These transition areas may not be apparent from the ground surface, but could exist within the zone of influence beneath the pavements (within several feet bottom of the pavement structure). These transitions points can create faulting in the pavement sections, or non-uniform frost heave movements. It may not be possible to delineate these zones from boring information alone, however remedial measures can be taken to reduce the potential for these movements to occur. The soils at this site are comprised of predominately heavy clays, with a varying moisture and silt content. To alleviate the potential for frost heave, groundwater levels should be maintained as low as possible beneath pavements. Dewatering techniques, such as drainlines or subdrains, or utility trench bedding material, can be designed to divert water from beneath pavements. Proper utility line installation and curb backfill process can also improve frost heave potential.

GENERAL COMMENTS

CMT should be retained for testing and observation during construction to help determine that the design recommendations are fulfilled.

The analysis and recommendations presented in this report are based upon the data obtained from the soil borings performed at the indicated locations and from any other information discussed in this report. This report does not reflect any variations, which may occur between borings. If, during construction, the nature and extent of such variations appear evident; it will be necessary to reevaluate the recommendations of this report.

The scope of service for this project does not include either specifically or by implication any environmental assessment of the site or identification of contaminated or hazardous materials or conditions. If the owner is concerned about the potential for such contamination, other studies should be undertaken.

This report has been prepared for the exclusive use of our client for specific application to the project discussed and has been prepared in accordance with generally accepted geotechnical engineering practices. No warranties, either express or implied are intended or made. In the event that any changes in the nature, design or location of the project as outlined in this report are planned, the conclusions and recommendations contained in this report shall not be considered valid, unless the changes are reviewed and the conclusions of this report are modified or verified in writing by the geotechnical engineer.

Sincerely,

Sybil K. Ferrier, P.E.
Principal Engineer

1610 East Madison Ave • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851
www.cmt-iowa.com

APPENDIX

1610 East Madison Ave • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851
www.cmt-iowa.com

GENERAL NOTES - BORING LOG DESCRIPTIONS

Soil descriptions stated on the Boring Logs are based on the Unified Soil Classification System as stated in ASTM Designations D-2487 and D-2488. The Unified Soil Classification group symbol listed in the table below correlate to the group symbols listed on the Boring Logs. The classification is mainly based on visual observations to define the soil characteristics. If a more detailed soil description is required, additional soil testing will be conducted to better define the soil characteristics.

Group Symbol	Group Name	Group Symbol	Group Name	Group Symbol	Group Name	Group Symbol	Group Name
SW	Well-graded Sand	GW	Well-graded Gravel	CL	Lean Clay	CH	Fat Clay
SP	Poorly-graded Sand	GP	Poorly-graded Gravel	ML	Silt	MH	Elastic Silt
SM	Silty Sand	GM	Silty Gravel	OL or OH	Organic Silt Organic Clay	Pt	Peat
SC	Clayey Sand	GC	Clayey Gravel				

RELATIVE DENSITY OF COARSE-GRANED SOILS		**CONSISTENCY OF FINE-GRAINED SOILS**		
SPT, bpf	*Relative Density*	*Unconfined Compressive Strength, Q_u, psf*	*Consistency*	*SPT, bpf*
0-3	Very Loose	< 500	Very Soft	0 – 2
4-9	Loose	500 - 1,000	Soft	2 – 4
10-29	Medium Dense	1,001 - 2,000	Medium Stiff	4 – 8
30-49	Dense	2,001 – 4,000	Stiff	8 – 15
50-80	Very Dense	4,001 – 8,000	Very Stiff	15 – 30
80+	Extremely Dense	8,001 – 16,000	Hard	30 – 100
		>16,000	Very Hard	>100

GRAIN SIZE TERMINOLOGY		**RELATIVE PROPORTIONS**		
Major Component of Sample	*Size Range*	*Descriptive Terms(s) (of components also present in sample)*	*Fines Percent of Dry Weight*	*Sand and Gravel Percent of Dry Weight*
Cobbles	12 in. to 3 in. (300 mm to 75 mm)	Trace	< 5	< 15
Gravel	3 in. to #4 sieve (75 mm to 4.75 mm)	With	5 – 12	15 – 29
Sand	#4 to #200 sieve (4.75 mm to 0.074 mm)	Modifier	> 12	> 30
Silt or Clay	Passing #200 sieve (> 0.074 mm)			

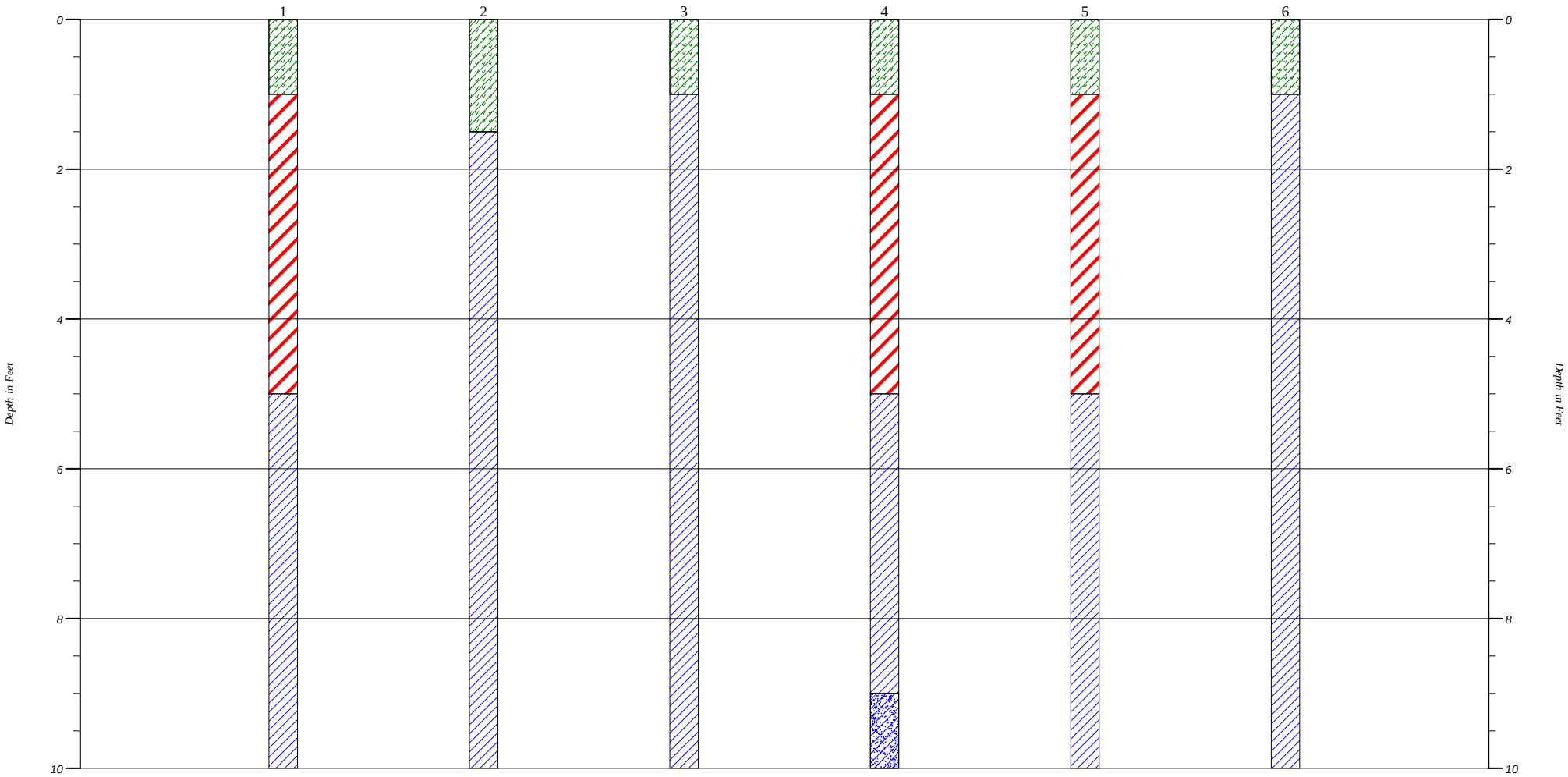
DRILLING AND SAMPLING ABBREVIATIONS

Drilling Methods

CS – Continuous Flight Auger Sample; typically, 4, 6, or 8 inches in diameter (ASTM D 1452)
HSA – Hollow Stem Auger; 6 or 8 inches in diameter, continuous flight auger remains in bore hole with undisturbed soil samples obtained from center of auger.
HA – Hand Auger; typically with a 4 inch or less diameter auger

Sample Types

SS - Split Spoon; samples obtained with a 140 lb manual hammer in accordance with ASTM D1586.
SSA – Split Spoon; samples obtained with a 140 lb automatic hammer in accordance with ASTM D 1586.
ST – Shelby Tube; thin walled tube samples, typically for cohesive soils, in accordance with ASTM D1587.
SPT- Standard Penetration Test: The number of blows required to drive a sampler, either split spoon or drive cone, into the soil with a 140 lb mass dropped a distance of 30 inches, in accordance with ASTM D 1586, and the number of blows are recorded in each 6 inch interval over a distance of 18 inches. Blow counts are reported for each 6 inch interval or the sum of the last two intervals is reported. The sum of the last two intervals is referred to as N, in blows per foot.
BS – Bulk Disturbed Sample
CPT – Cone Penetration Test; A device in which a 60° cone is pushed continuously into the soil and the cone end resistance is measured for skin friction and end bearing (ASTM D3441).



Strata symbols

- Topsoil
- Fat Clay
- Lean Clay
- Sandy Lean Clay

CONSTRUCTION MATERIALS TESTING

GENERALIZED SOIL PROFILE

HORIZONTAL SCALE:	DRAWN BY/APPROVED BY	DATE DRAWN
VERTICAL SCALE: 1"=2'		1/30/2026

Storm Lake Municipal Airport
Apron Expansion

PROJECT NO. 252112STO

FIGURE NUMBER

Boring No. 1

Project Storm Lake Municipal Airport Apron Expansion

Client Bolton and Menk

Surface Elev. Existing Ground Surface

Project No. 252112STO

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								Very dark brown sandy clay with organics, moist TOPSOIL	CL	
								Dark gray rusty silty fat clay, moist	CH	
2								B-HORIZON LOESS		
4	1	CS		28.5		3,000**				
								Gray-rusty silty lean clay, moist LOESS	CL	
6										
8										
	2	CS		33.3		2,000**				
10								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer.		
12										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

Groundwater Level Observations

WD Dry ▽

IAD ▼

1610 E. Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851

Boring No. 2

Project Storm Lake Municipal Airport Apron Expansion

Client Bolton and Menk

Surface Elev. Existing Ground Surface

Project No. 252112STO

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								Very dark brown sandy clay with organics, moist TOPSOIL	CL	
2								Dark gray rusty silty lean clay, moist	CL	
4	1	CS		29.0		4,000**		Gray-rusty after 3.5 ft.		
6								Increasing sand content after 5 ft. LOESS		
8										
10	2	CS		29.2		3,500**				
								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer.		
12										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

Groundwater Level Observations

WD Dry ▽

IAD ▼

1610 E. Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851

Boring No. 3

Project Storm Lake Municipal Airport Apron Expansion

Client Bolton and Menk

Surface Elev. Existing Ground Surface

Project No. 252112STO

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								Very dark gray sandy clay with organics, moist TOPSOIL	CL	
								Gray rusty silty lean clay, moist	CL	
2										
4	1	CS		29.8		1,500**				
								Increasing sand content after 5 ft. LOESS		
6										
								Sand seam noted near 7 ft.		
8										
	2	CS		19.5		2,500**				
10								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer.		
12										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

Groundwater Level Observations

WD Dry ▽

IAD ▼

1610 E. Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851

Boring No. 4

Project Storm Lake Municipal Airport Apron Expansion

Client Bolton and Menk

Surface Elev. Existing Ground Surface

Project No. 252112STO

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								Very dark gray sandy clay with organics, moist TOPSOIL	CL	
2								Light gray rusty fat clay, moist B-HORIZON LOESS	CH	
4	1	CS		28.4		3,000**				
6								Light gray silty lean clay, moist LOESS	CL	
8										
10	2	CS		19.2		1,500**		Gray brown sandy silty lean clay, trace gravel, moist WISCONSINAN SUPRAGLACIAL TILL	CL	
12								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer.		

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

Groundwater Level Observations

WD Dry ▽

IAD ▼

1610 E. Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851

Boring No. 5

Project Storm Lake Municipal Airport Apron Expansion

Client Bolton and Menk

Surface Elev. Existing Ground Surface

Project No. 252112STO

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								Very dark gray sandy clay with organics, moist TOPSOIL	CL	
								Dark gray rusty fat clay, moist	CH	
2								B-HORIZON LOESS		
4	1	CS		28.9		1,500**				
								Fray rusty silty lean clay, moist	CL	
6								Increasing sand content after 7 ft. LOESS		
8										
	2	CS		24.0		3,500**				
10								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer.		
12										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

Groundwater Level Observations

WD Dry ▽

IAD ▼

1610 E. Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851

Boring No. 6

Project Storm Lake Municipal Airport Apron Expansion

Client Bolton and Menk

Surface Elev. Existing Ground Surface

Project No. 252112STO

Depth Ft.	Sample #	Method	SPT bpf	Moisture %	Dry Density pcf	Unconfined Compressive Strength	Cross Section	Material Description *	USCS	Water Level
0								Very dark gray sandy clay with organics, moist TOPSOIL	CL	
								Gray rusty silty lean clay, moist	CL	
2										
4	1	CS		35.0		1,000**				
								Increasing sand content after 5 ft.		
6								LOESS		
8										
	2	CS		20.4		3,500**				
10								End of Boring No groundwater noted during drilling operations. **Estimated using calibrated penetrometer.		
12										

* The stratification lines represent approximate boundary lines between material types -- the transition may be gradual.

Groundwater Level Observations

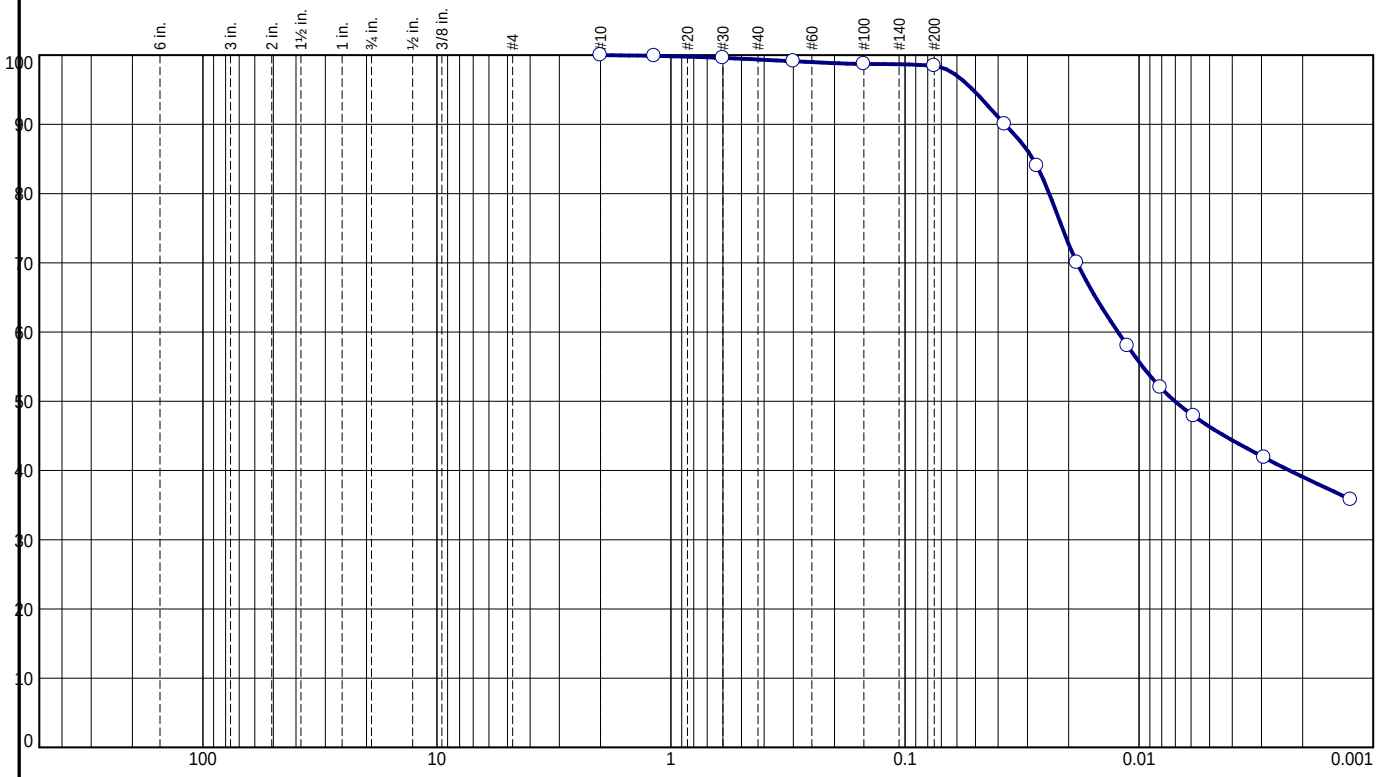
WD Dry ▽

IAD ▼

1610 E. Madison Ave. • Des Moines, Iowa 50313
(515) 263-0794 • Fax (515) 263-0851

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.6	0.9	59.4	39.1

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
#10	100.0			
#16	99.9			
#30	99.6			
#50	99.1			
#100	98.7			
#200	98.5			
0.0375 mm.	90.0			
0.0273 mm.	84.0			
0.0185 mm.	70.0			
0.0112 mm.	58.0			
0.0081 mm.	52.0			
0.0058 mm.	47.9			
0.0029 mm.	41.9			
0.0012 mm.	35.8			

* (no specification provided)

Material Description

Dark gray rusty silty lean clay

Atterberg Limits

PL= 24 LL= 53 PI= 29

Classification

USCS= CH AASHTO= A-7-6(32)

Test Remarks

Sampled form boring spoils.

Source of Sample: 1 Depth: 3.5
Sample Number: 1

Sample Date: 1/16/26

Construction Materials Testing

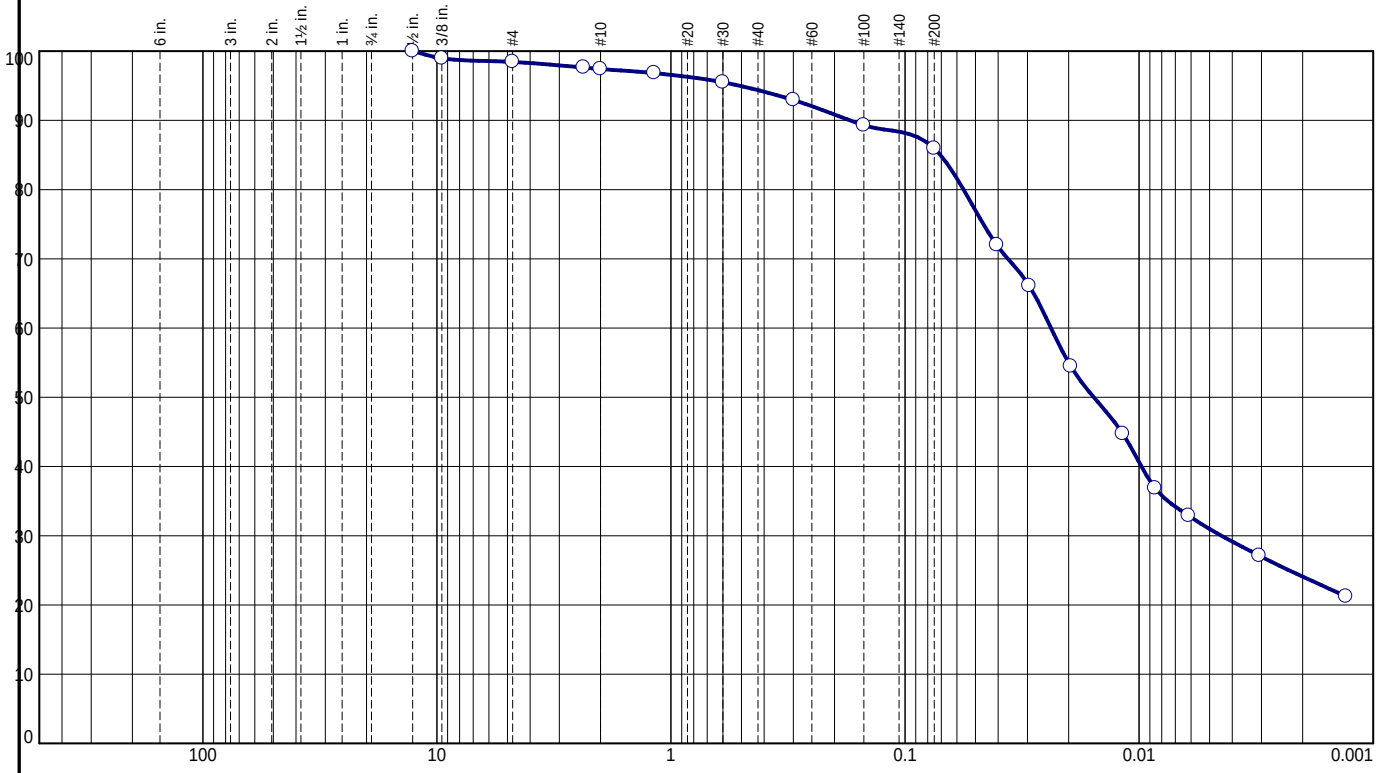
Client: Bolton and Menk
Project: Storm Lake Municipal Airport
Apron Expansion
Project No: 252112STO

Figure

Tested By: David Tarnow Checked By: S.Ferrier

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.5	1.1	3.0	8.5	61.8	24.1

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1/2	100.0			
3/8	99.0			
#4	98.5			
#8	97.6			
#10	97.4			
#16	96.8			
#30	95.5			
#50	92.9			
#100	89.3			
#200	85.9			
0.0405 mm.	72.0			
0.0295 mm.	66.1			
0.0196 mm.	54.4			
0.0117 mm.	44.7			
0.0086 mm.	36.9			
0.0061 mm.	32.9			
0.0031 mm.	27.1			
0.0013 mm.	21.2			

* (no specification provided)

Material Description

Gray rusty silty lean clay

Atterberg Limits

PL= 19 LL= 44 PI= 25

Classification

USCS= CL AASHTO= A-7-6(22)

Test Remarks

Sampled form boring spoils.

Source of Sample: 2 Depth: 3.5
Sample Number: 1

Sample Date: 1/16/26

Construction Materials Testing

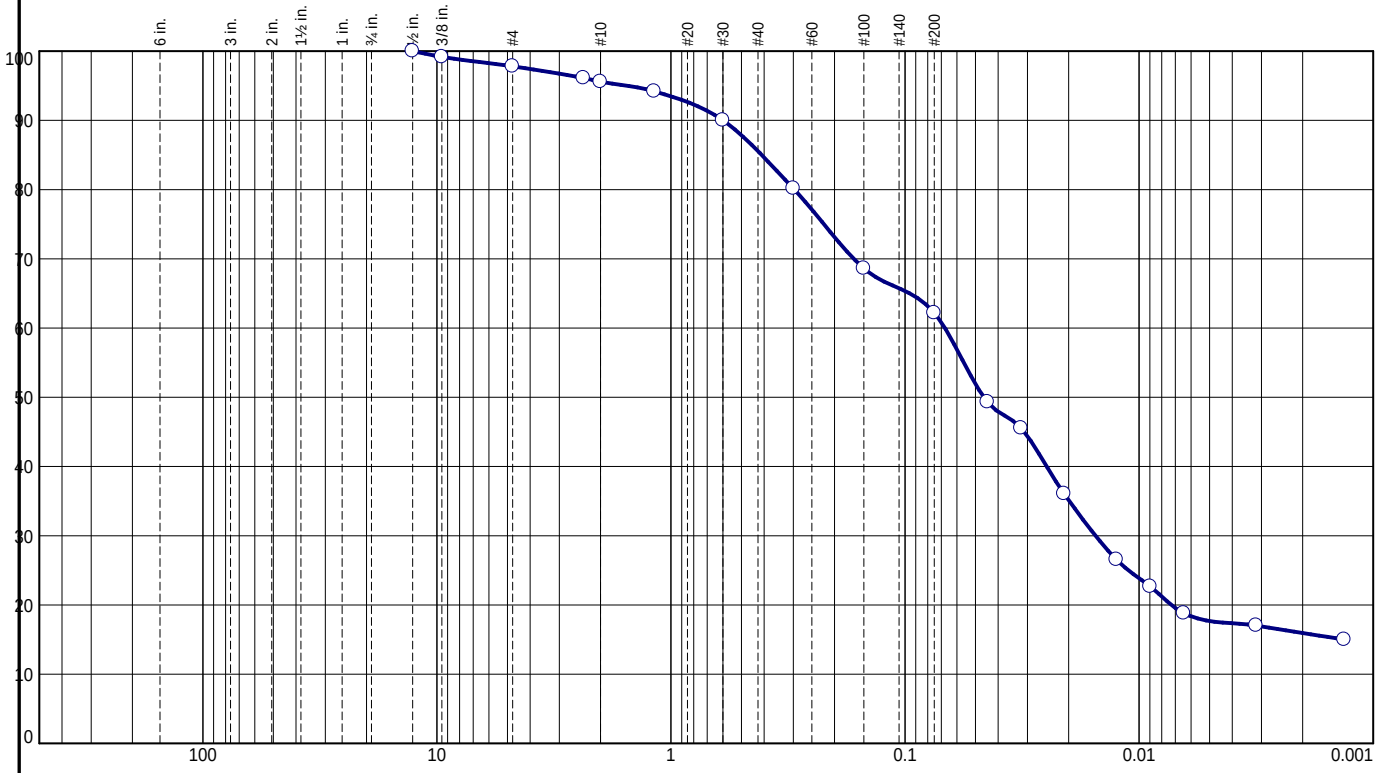
Client: Bolton and Menk
Project: Storm Lake Municipal Airport
Apron Expansion
Project No: 252112STO

Figure

Tested By: John Hopkins Checked By: S.Ferrier

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	2.2	2.2	10.0	23.4	46.3	15.9

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1/2	100.0			
3/8	99.2			
#4	97.8			
#8	96.1			
#10	95.6			
#16	94.2			
#30	90.0			
#50	80.2			
#100	68.6			
#200	62.2			
0.0444 mm.	49.3			
0.0319 mm.	45.5			
0.0209 mm.	36.1			
0.0125 mm.	26.5			
0.0090 mm.	22.7			
0.0064 mm.	18.8			
0.0032 mm.	17.0			
0.0013 mm.	15.0			

* (no specification provided)

Material Description

Gray rusty silty lean clay

Atterberg Limits

PL= 14 LL= 27 PI= 13

Classification

USCS= CL AASHTO= A-6(5)

Test Remarks

Sampled form boring spoils.

Source of Sample: 3 Depth: 3.5
Sample Number: 1

Sample Date: 1/16/26

Construction Materials Testing

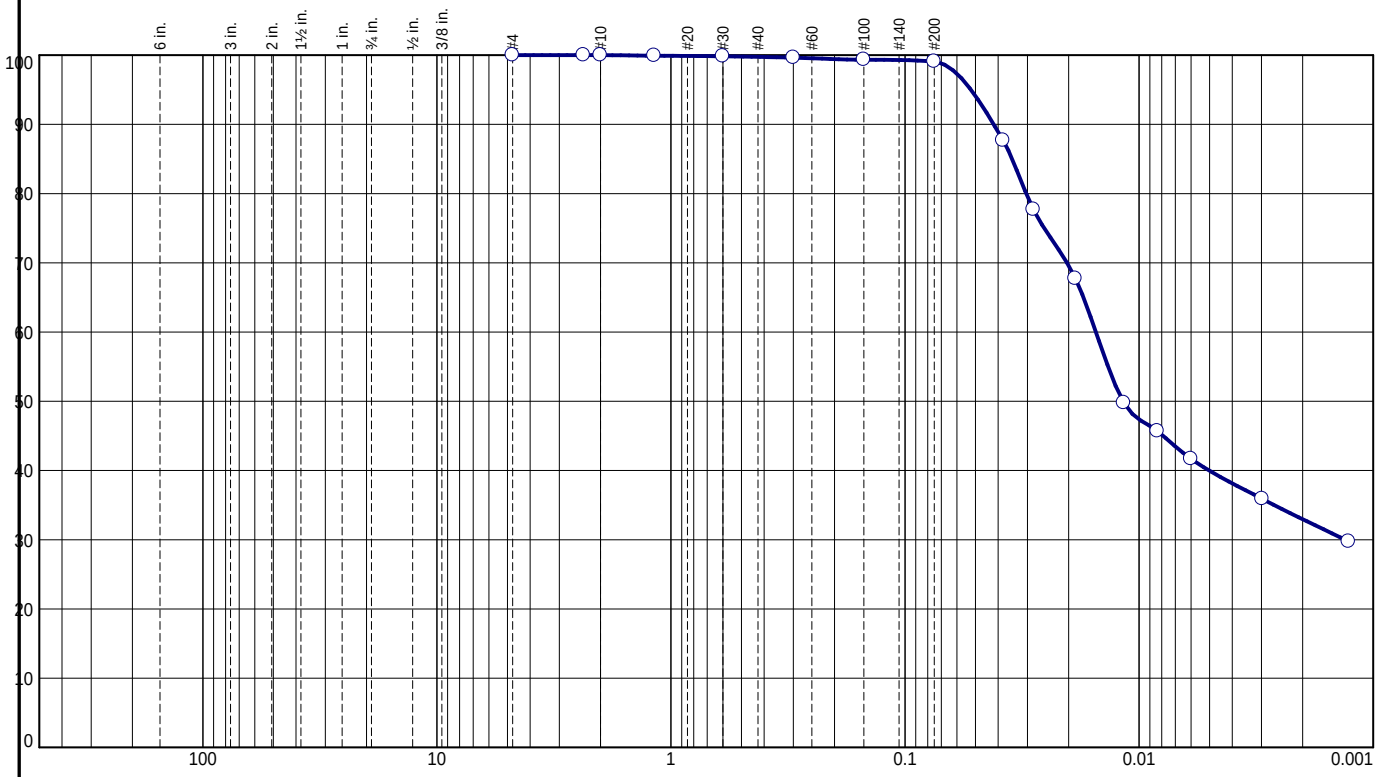
Client: Bolton and Menk
Project: Storm Lake Municipal Airport
Apron Expansion
Project No: 252112STO

Figure

Tested By: John Hopkins Checked By: S.Ferrier

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.2	0.7	66.1	33.0

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
#4	100.0			
#8	100.0			
#10	100.0			
#16	99.9			
#30	99.8			
#50	99.6			
#100	99.3			
#200	99.1			
0.0381 mm.	87.7			
0.0283 mm.	77.7			
0.0187 mm.	67.7			
0.0116 mm.	49.8			
0.0083 mm.	45.7			
0.0060 mm.	41.7			
0.0030 mm.	35.9			
0.0013 mm.	29.8			

* (no specification provided)

Material Description

Light gray rusty silty lean clay

Atterberg Limits

PL= 22 LL= 50 PI= 28

Classification

USCS= CH AASHTO= A-7-6(31)

Test Remarks

Sampled form boring spoils.

Source of Sample: 4 Depth: 3.5
Sample Number: 1

Sample Date: 1/17/26

Construction Materials Testing

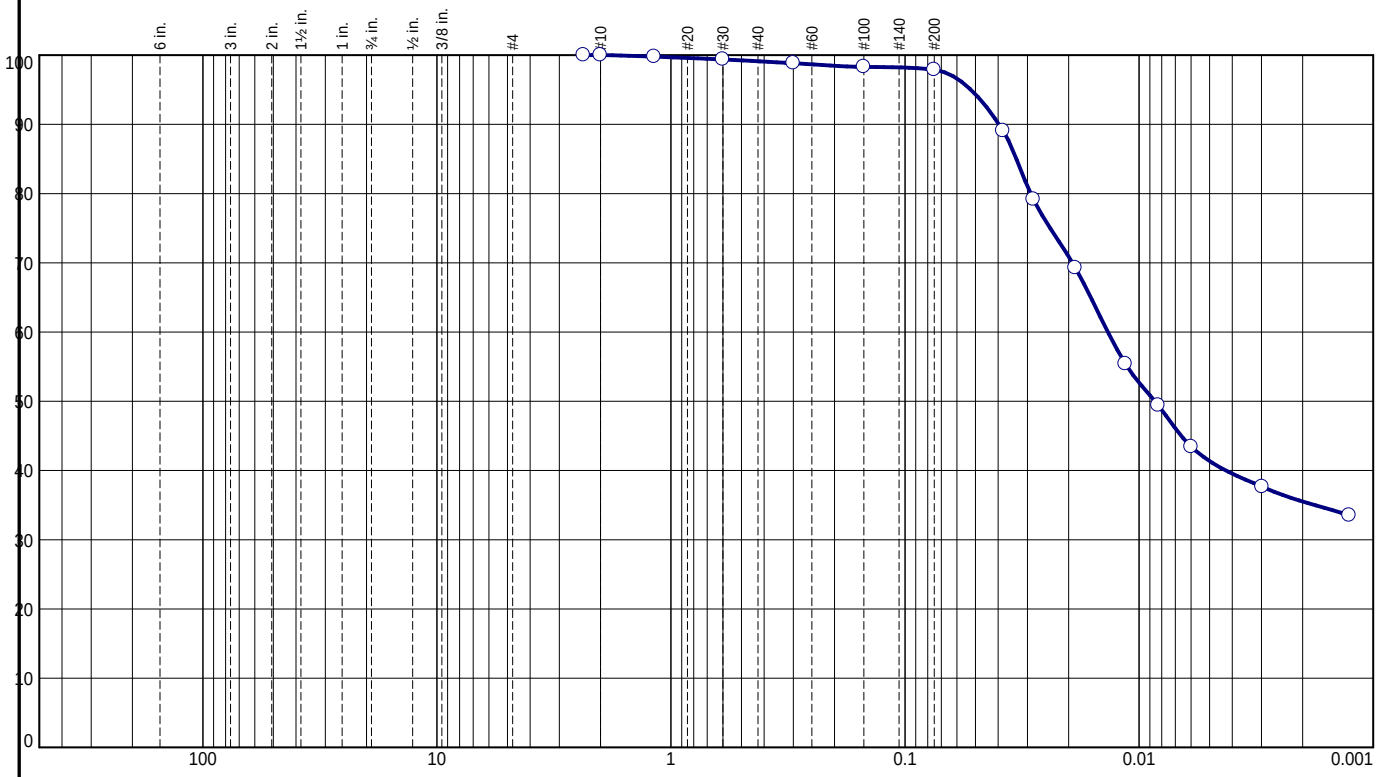
Client: Bolton and Menk
Project: Storm Lake Municipal Airport
Apron Expansion
Project No: 252112STO

Figure

Tested By: John Hopkins / David Tarnow Checked By: S.Ferrier

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	0.0	0.0	0.9	1.2	62.4	35.5

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
#8	100.0			
#10	100.0			
#16	99.8			
#30	99.4			
#50	98.8			
#100	98.3			
#200	97.9			
0.0381 mm.	89.1			
0.0283 mm.	79.2			
0.0187 mm.	69.3			
0.0114 mm.	55.4			
0.0083 mm.	49.4			
0.0060 mm.	43.4			
0.0030 mm.	37.6			
0.0013 mm.	33.5			

* (no specification provided)

Material Description

Gray rusty rusty silty lean clay

Atterberg Limits

PL= 25 LL= 50 PI= 25

Classification

USCS= CH AASHTO= A-7-6(28)

Test Remarks

Sampled form boring spoils.

Source of Sample: 5 Depth: 3.5
Sample Number: 1

Sample Date: 1/16/26

Construction Materials Testing

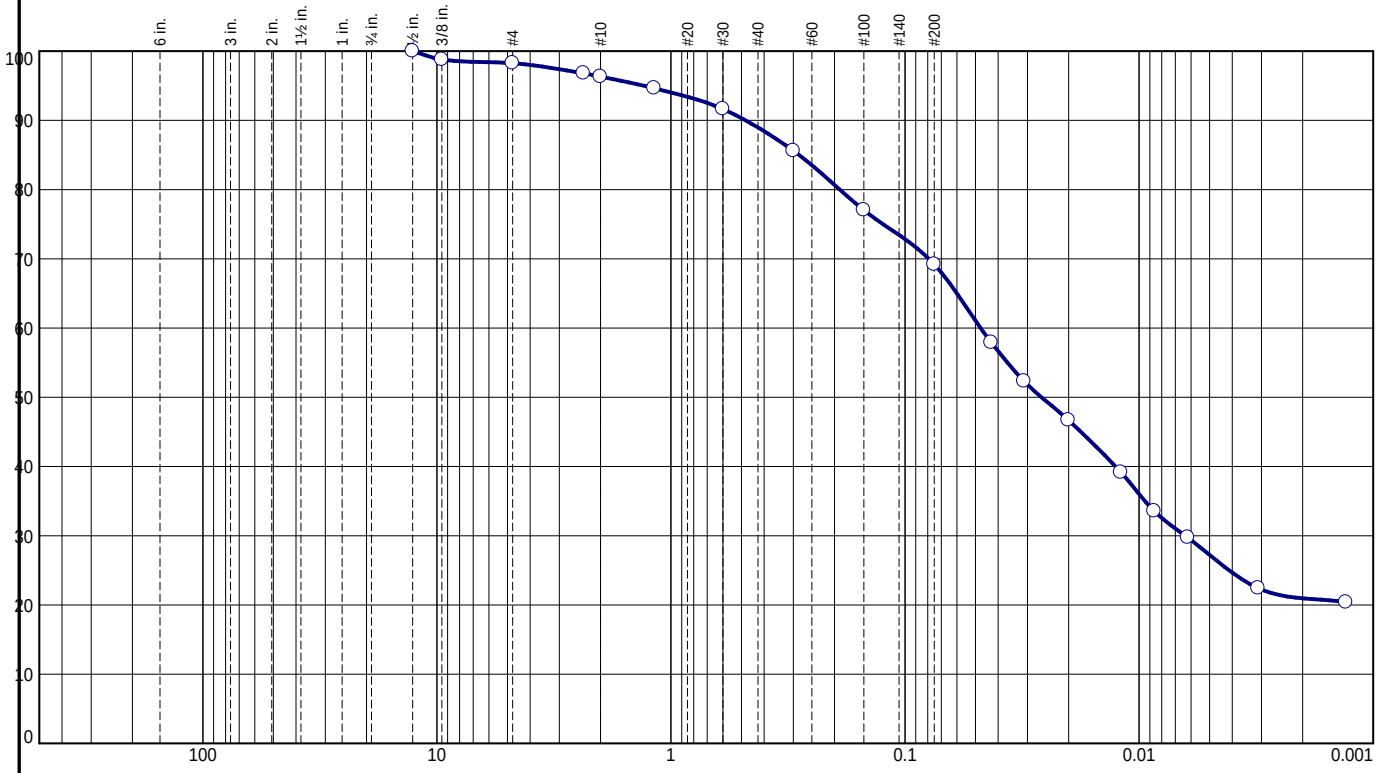
Client: Bolton and Menk
Project: Storm Lake Municipal Airport
Apron Expansion
Project No: 252112STO

Figure

Tested By: John Hopkins Checked By: S.Ferrier

Particle Size Distribution Report

ASTM D422



% +3"	% Gravel		% Sand			% Fines	
	Coarse	Fine	Coarse	Medium	Fine	Silt	Clay
0.0	0.0	1.7	2.0	7.3	19.8	48.2	21.0

Test Results (ASTM D422)

Sieve Size or Diam. (mm.)	Finer (%)	Spec.* (%)	Out of Spec. (%)	Pct. of Fines
1/2	100.0			
3/8	98.8			
#4	98.3			
#8	96.8			
#10	96.3			
#16	94.6			
#30	91.6			
#50	85.6			
#100	77.0			
#200	69.2			
0.0428 mm.	57.9			
0.0310 mm.	52.3			
0.0201 mm.	46.7			
0.0119 mm.	39.1			
0.0086 mm.	33.5			
0.0062 mm.	29.7			
0.0031 mm.	22.4			
0.0013 mm.	20.4			

* (no specification provided)

Material Description

Gray rusty silty lean clay

Atterberg Limits

PL= 15 LL= 30 PI= 15

Classification

USCS= CL AASHTO= A-6(8)

Test Remarks

Sampled form boring spoils.
Sampled form boring spoils. Cement added in laboratory.

Source of Sample: 6 Depth: 3.5
Sample Number: 1

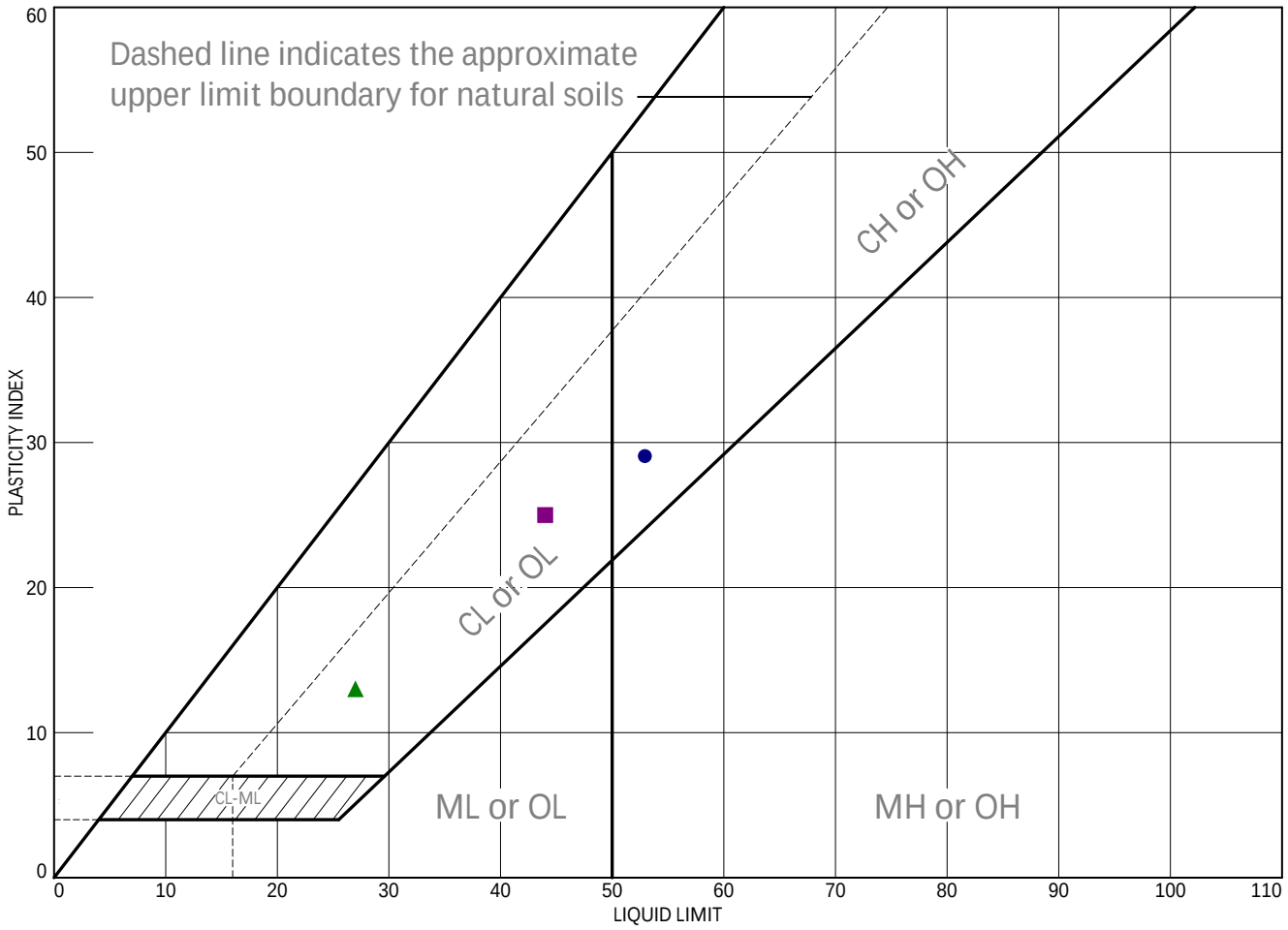
Sample Date: 1/17/26

Construction Materials Testing

Client: Bolton and Menk
Project: Storm Lake Municipal Airport Apron Expansion
Project No: 252112STO Figure

Tested By: John Hopkins Checked By: S.Ferrier

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Dark gray rusty silty lean clay	53	24	29	99.4	98.5	CH
■	Gray rusty silty lean clay	44	19	25	94.4	85.9	CL
▲	Gray rusty silty lean clay	27	14	13	85.6	62.2	CL

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion

●Source of Sample: 1 Depth: 3.5 Sample Number: 1

■Source of Sample: 2 Depth: 3.5 Sample Number: 1

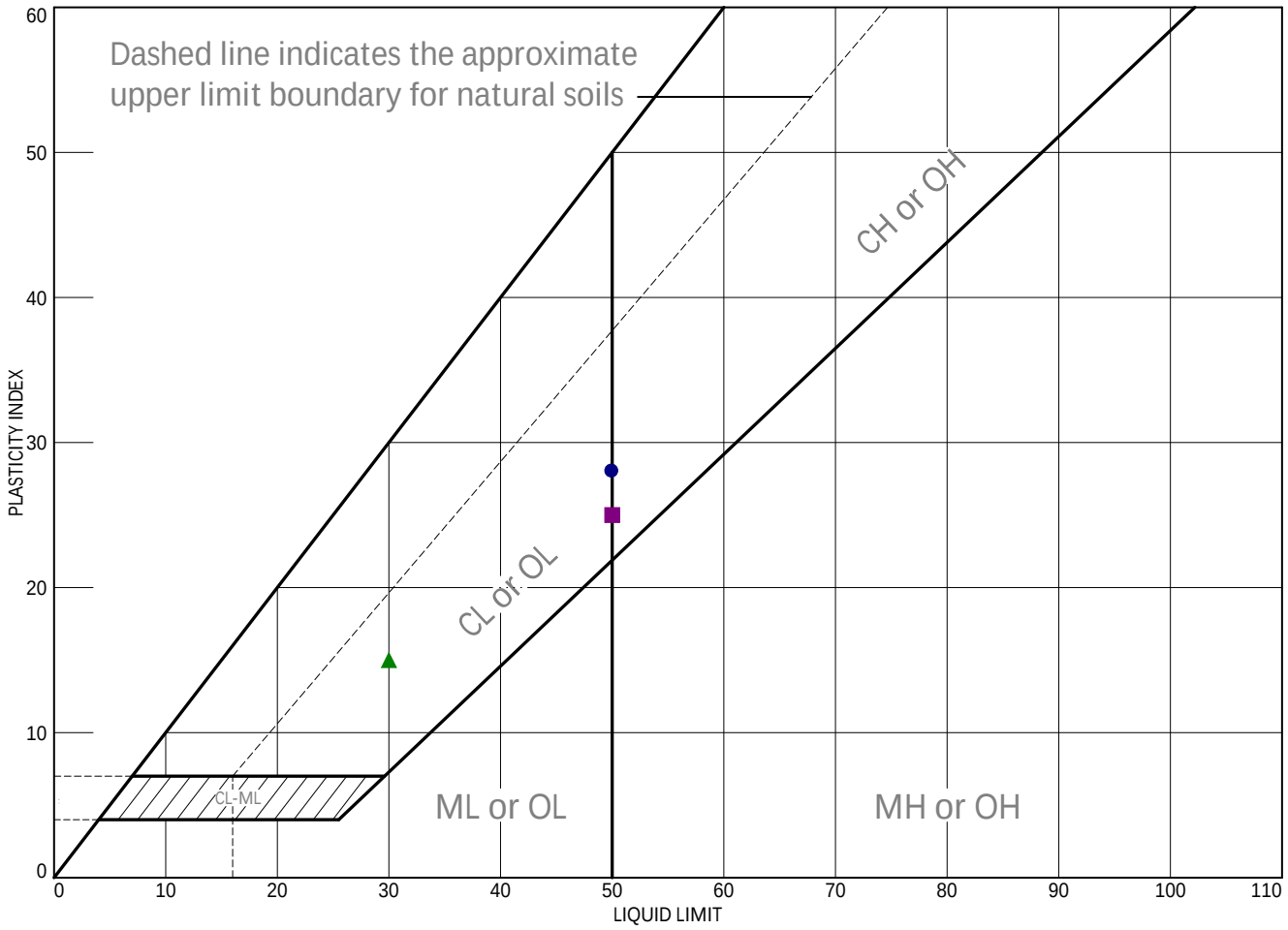
▲Source of Sample: 3 Depth: 3.5 Sample Number: 1

Remarks:
●Sampled form boring spoils.
■Sampled form boring spoils.
▲Sampled form boring spoils.

Figure

Tested By: ○ D.Tarnow □J.Hopkins △D.Tarnow Checked By: S.Ferrier

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Light gray rusty silty lean clay	50	22	28	99.8	99.1	CH
■	Gray rusty rusty silty lean clay	50	25	25	99.1	97.9	CH
▲	Gray rusty silty lean clay	30	15	15	89.0	69.2	CL

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion

●Source of Sample: 4 Depth: 3.5 Sample Number: 1

■Source of Sample: 5 Depth: 3.5 Sample Number: 1

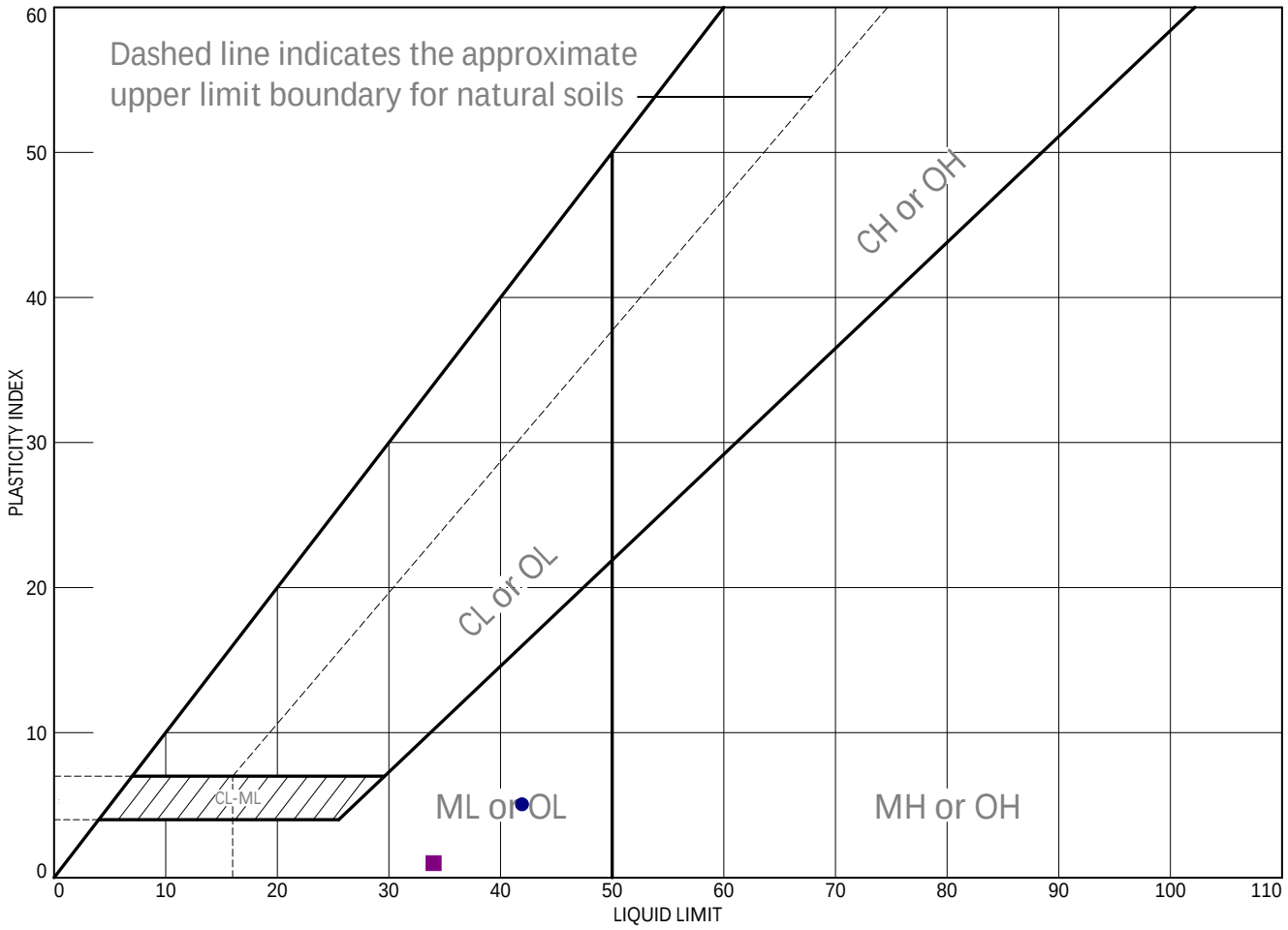
▲Source of Sample: 6 Depth: 3.5 Sample Number: 1

Remarks:
●Sampled form boring spoils.
■Sampled form boring spoils.
▲Sampled form boring spoils.

Figure

Tested By: B.Clement Checked By: S.Ferrier

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Dark gray rusty silty lean clay, with 5% cement	42	37	5			
■	Gray rusty silty lean clay, with 5% cement	34	33	1			
▲	Gray rusty silty lean clay, with 5% cement	32	NP	NP			

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion

● Location: Boring No. 1 Depth: 3.5 - 5 ft Sample Number: 1

■ Location: Boring No. 2 Depth: 3.5 - 5 ft Sample Number: 1

▲ Location: Boring No. 3 Depth: 3.5 - 5 ft Sample Number: 1

Remarks:

● Sampled form boring spoils. Cement added in laboratory.

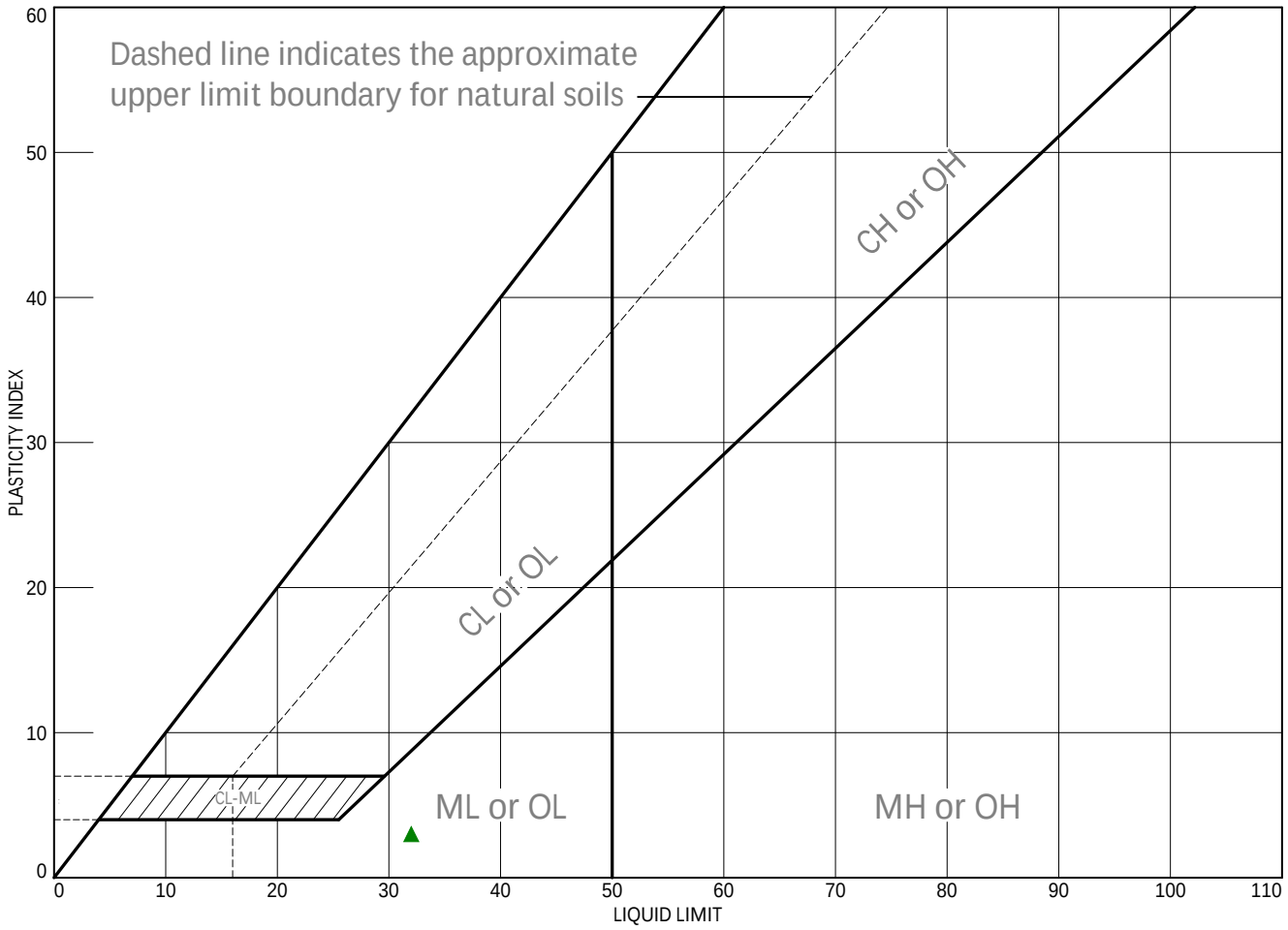
■ Sampled form boring spoils. Cement added in laboratory.

▲ Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

LIQUID AND PLASTIC LIMITS TEST REPORT



	MATERIAL DESCRIPTION	LL	PL	PI	%<#40	%<#200	USCS
●	Light gray rusty silty lean clay, with 5% cement	40	NP	NP			
■	Dark gray rusty silty lean clay, with 5% cement	35	NP	NP			
▲	Gray rusty silty lean clay, with 5% cement	32	29	3			

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion

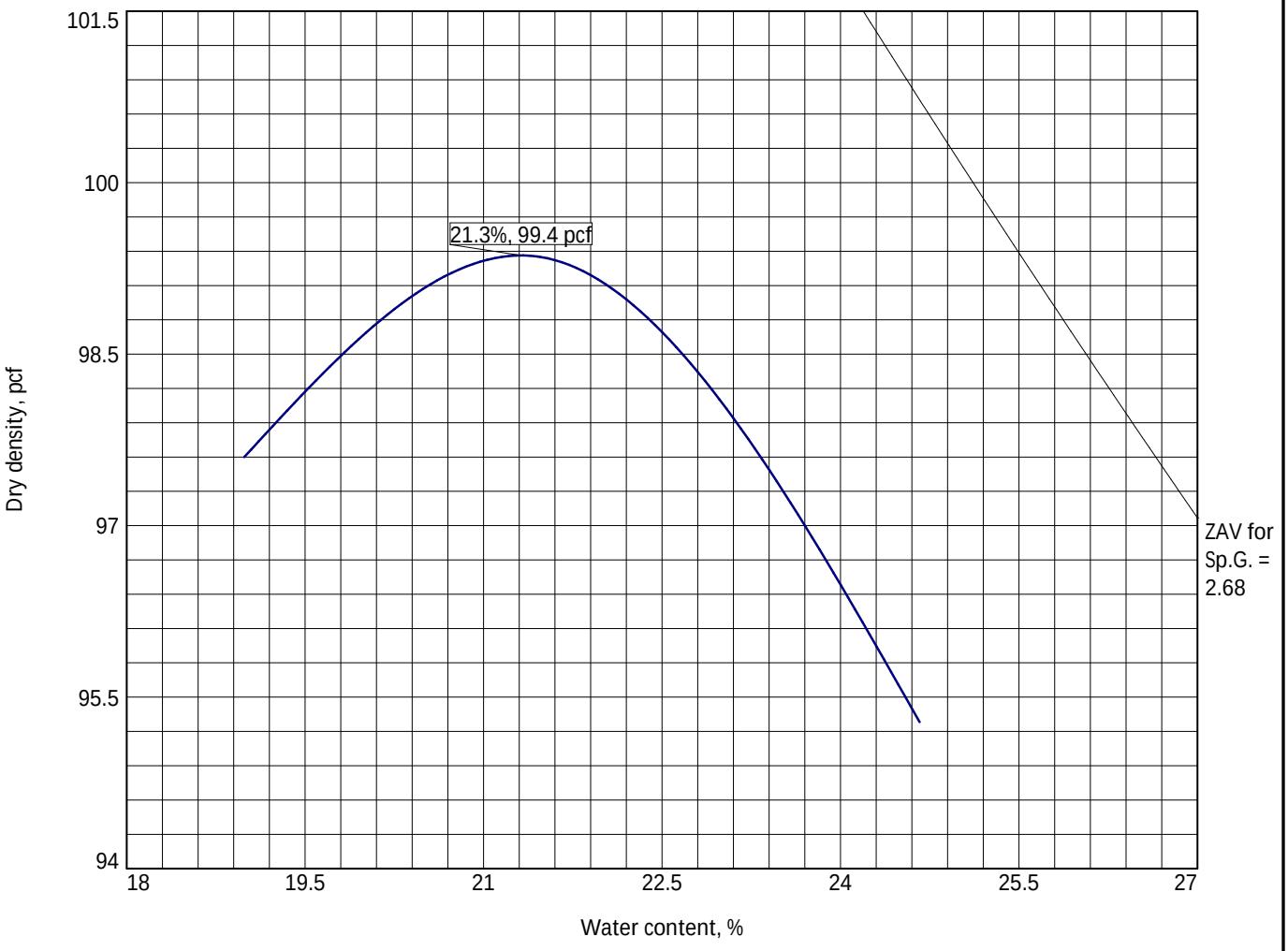
●Location: Boring No. 4 Depth: 3.5 - 5 ft Sample Number: 1
■Location: Boring No. 5 Depth: 3.5 - 5 ft Sample Number: 1
▲Location: Boring No. 6 Depth: 3.5 - 5 ft Sample Number: 1

Remarks:
●Sampled form boring spoils. Cement added in laboratory.
■Sampled form boring spoils. Cement added in laboratory.
▲Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: ○D.Tarnow □J.Hopkins △R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5	CH	A-7-6(32)	28.5	2.68	53	29	0.0	98.5

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 99.4 pcf Optimum moisture = 21.3 %	Dark gray rusty silty lean clay

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport

Apron Expansion Date: 1/16/26

○ Source of Sample: 1 Sample Number: 1

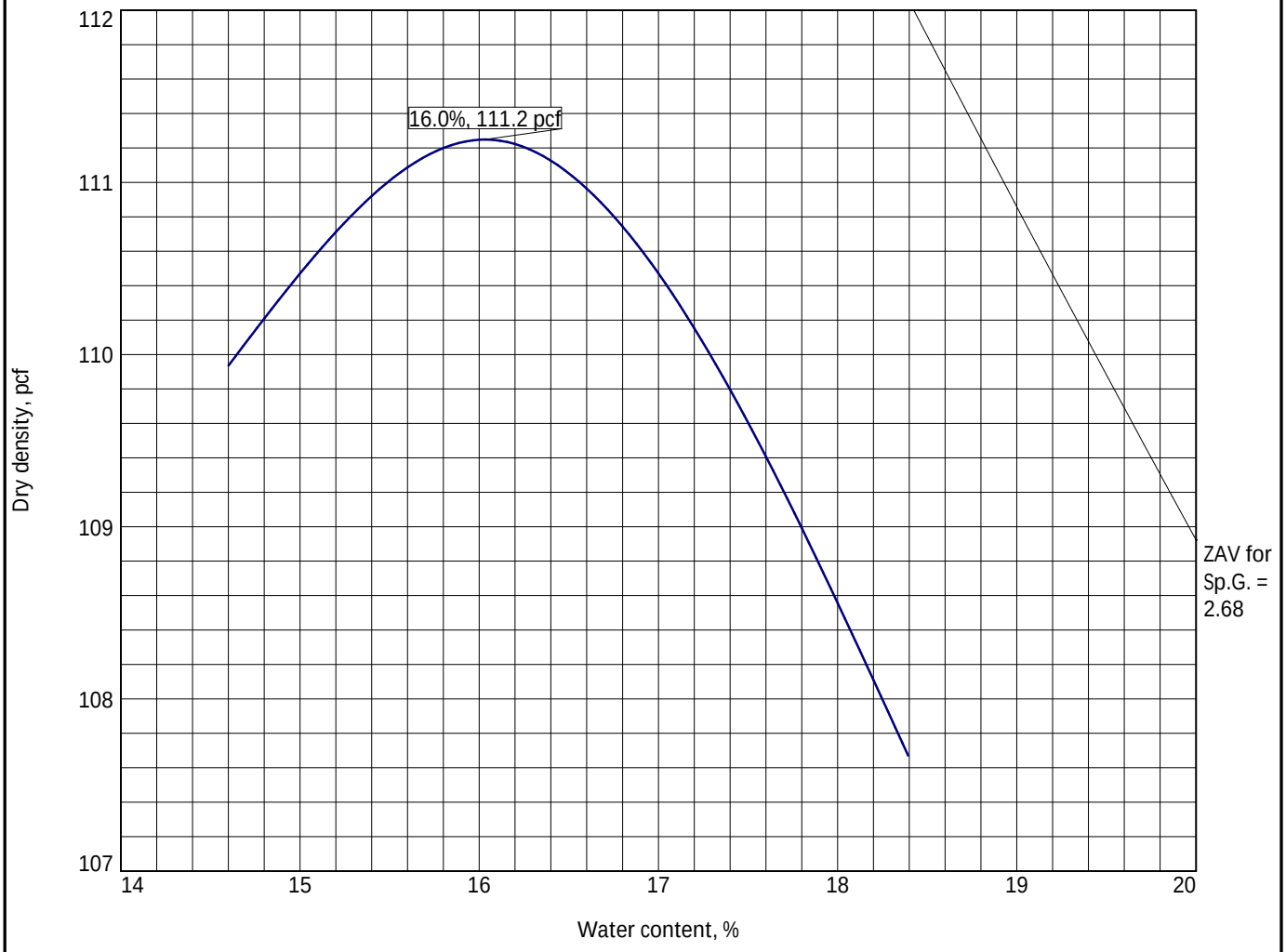
Remarks:

Sampled form boring spoils.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5	CL	A-7-6(22)	29.0	2.68	44	25	1.5	85.9

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 111.2 pcf Optimum moisture = 16.0 %	Gray rusty silty lean clay

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion Date: 1/16/26

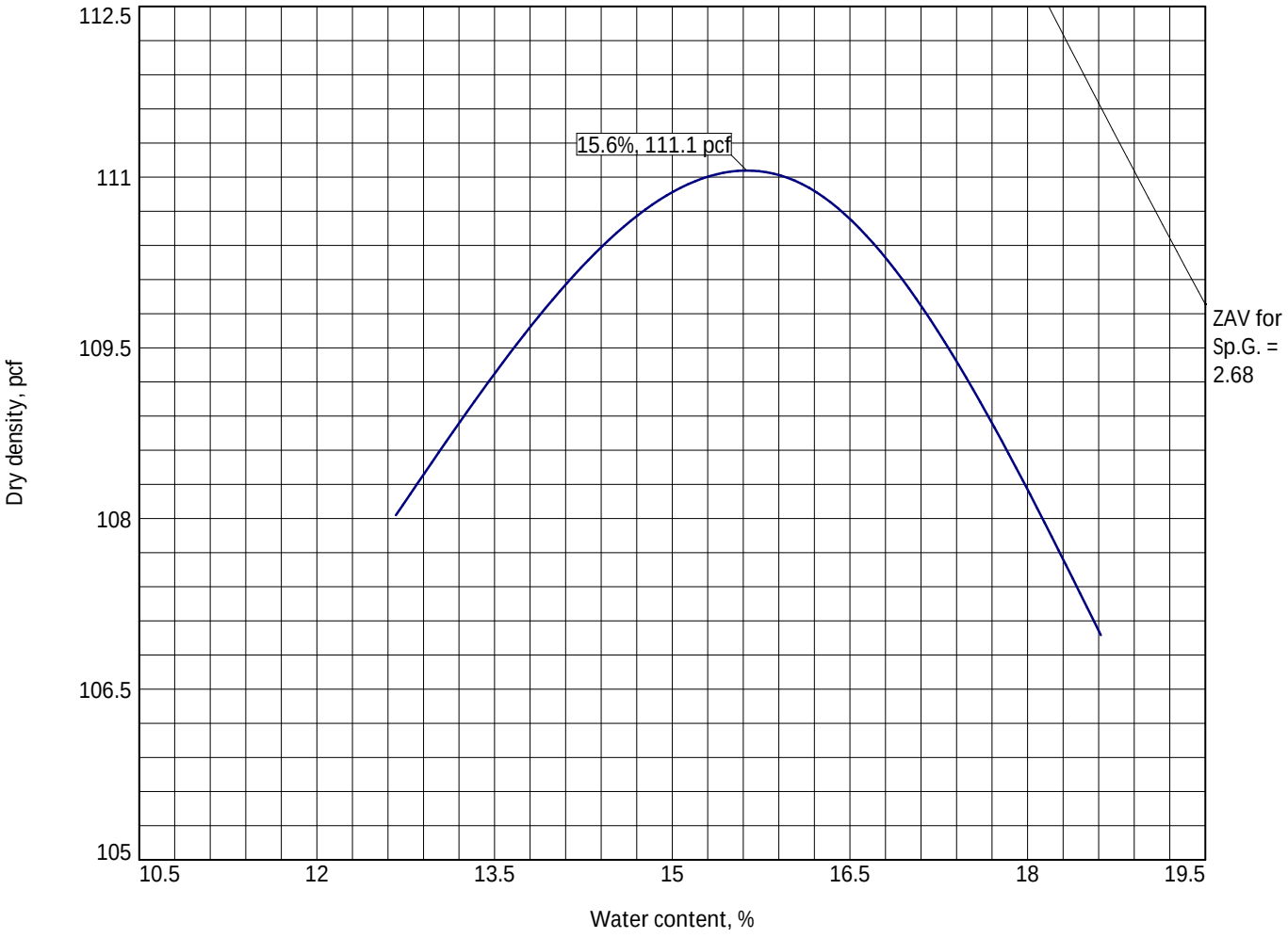
○ Source of Sample: 2 Sample Number: 1

Remarks:
Sampled form boring spoils.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5	CL	A-6(5)	29.8	2.68	27	13	2.2	62.2

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 111.1 pcf Optimum moisture = 15.6 %	Gray rusty silty lean clay

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion Date: 1/17/26

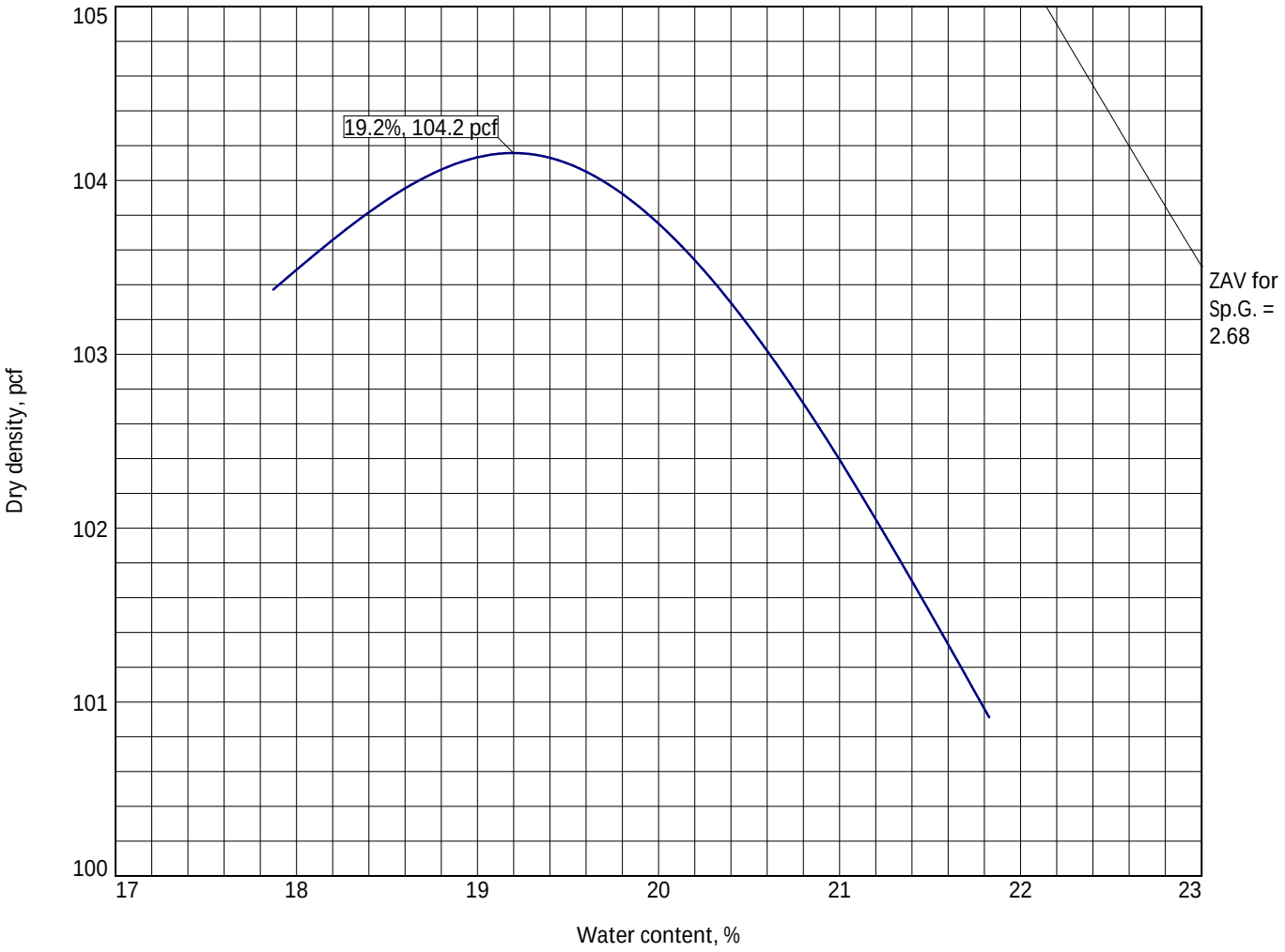
○ Source of Sample: 3 Sample Number: 1

Remarks:
Sampled form boring spoils.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5	CH	A-7-6(31)	28.4	2.68	50	28	0.0	99.1

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 104.2 pcf Optimum moisture = 19.2 %	Light gray rusty silty lean clay

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport

Apron Expansion Date: 1/17/26

○ Source of Sample: 4 Sample Number: 1

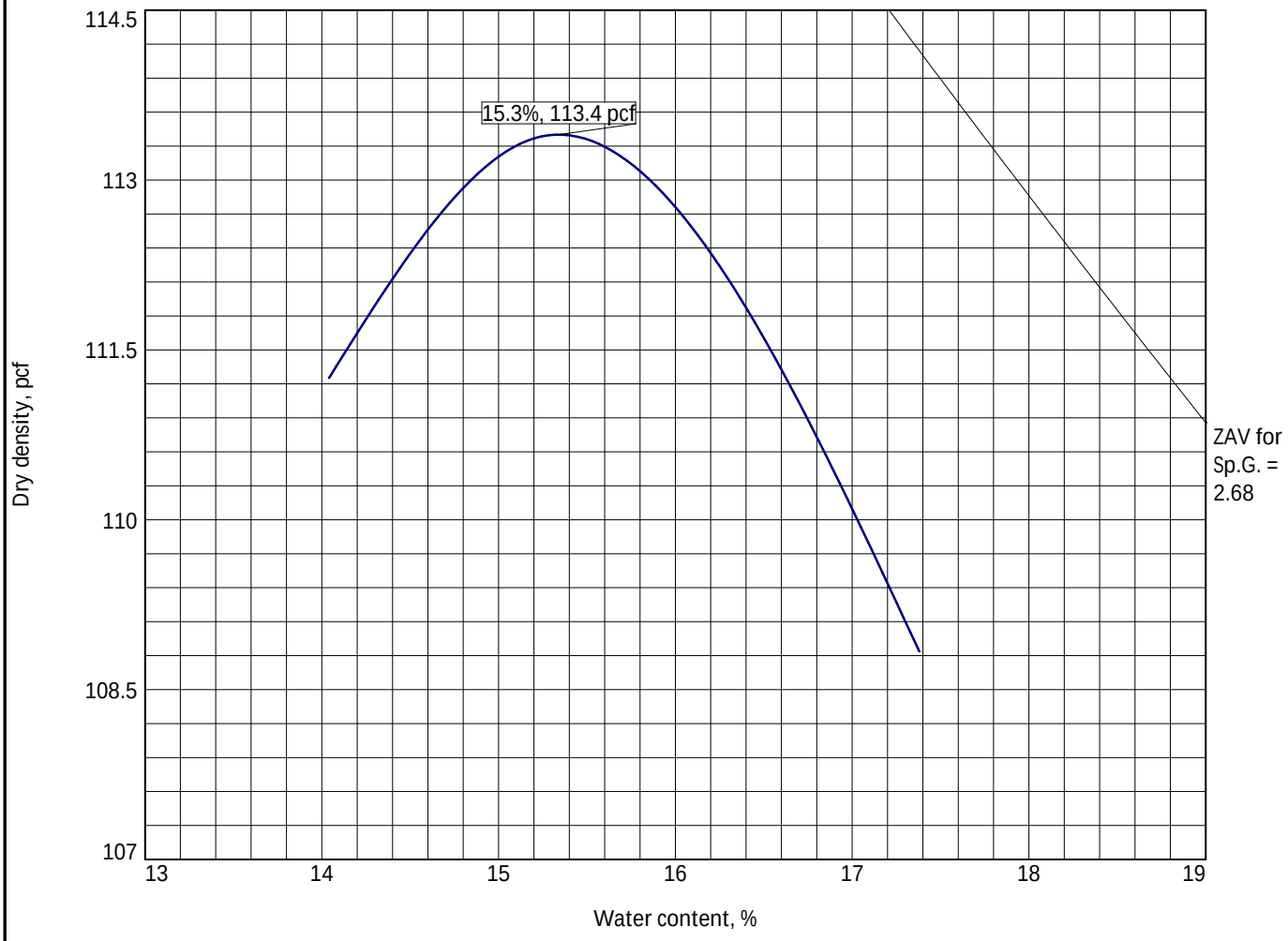
Remarks:

Sampled form boring spoils.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5	CH	A-7-6(28)	28.9	2.68	50	25	0.0	97.9

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 113.4 pcf Optimum moisture = 15.3 %	Gray rusty rusty silty lean clay

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport

Apron Expansion Date: 1/17/26

○ Source of Sample: 5 Sample Number: 1

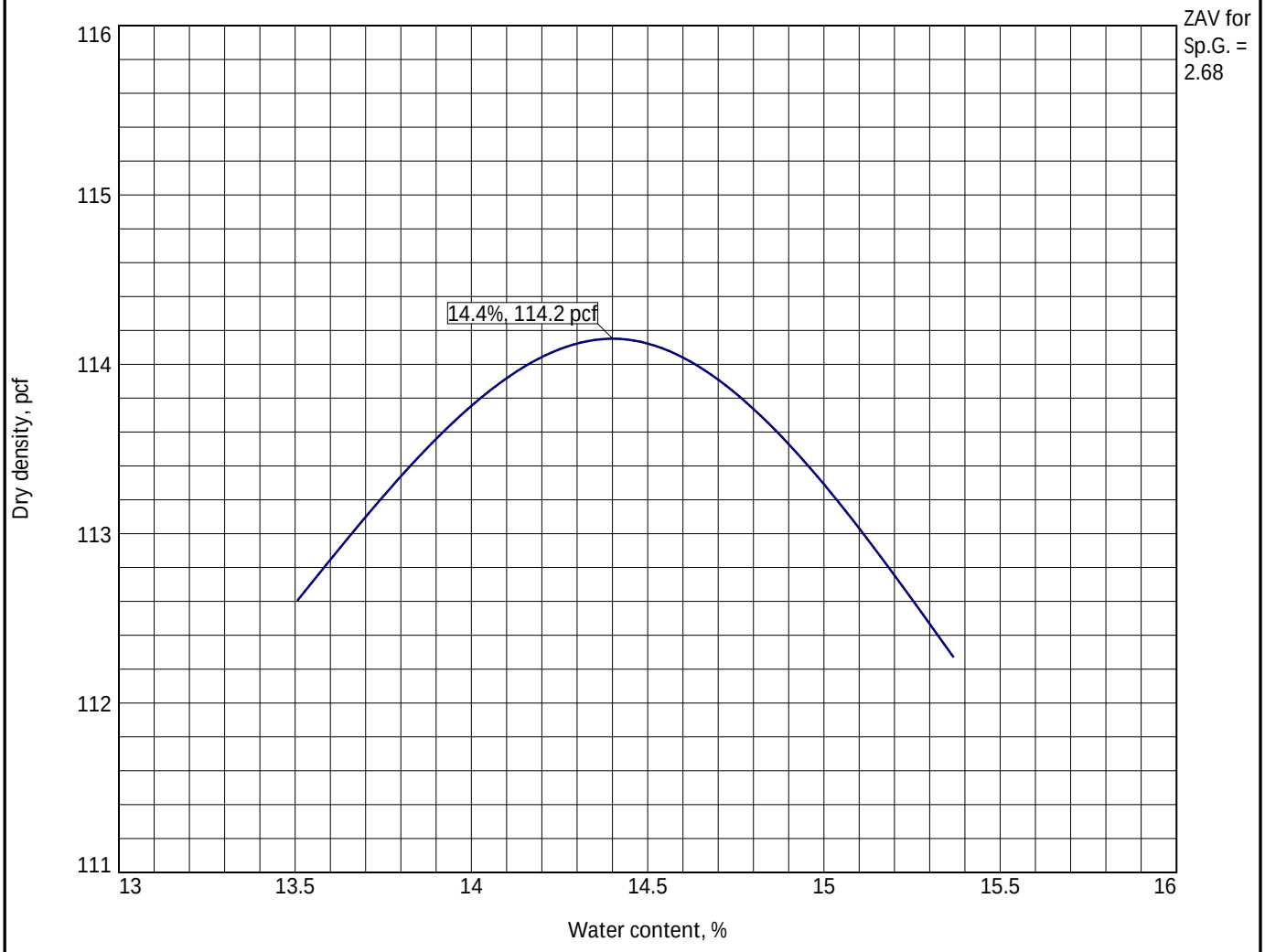
Remarks:

Sampled form boring spoils.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5	CL	A-6(8)	35.0	2.68	30	15	1.7	69.2

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 114.2 pcf Optimum moisture = 14.4 %	Gray rusty silty lean clay

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport

Apron Expansion Date:

○ Source of Sample: 6 Sample Number: 1

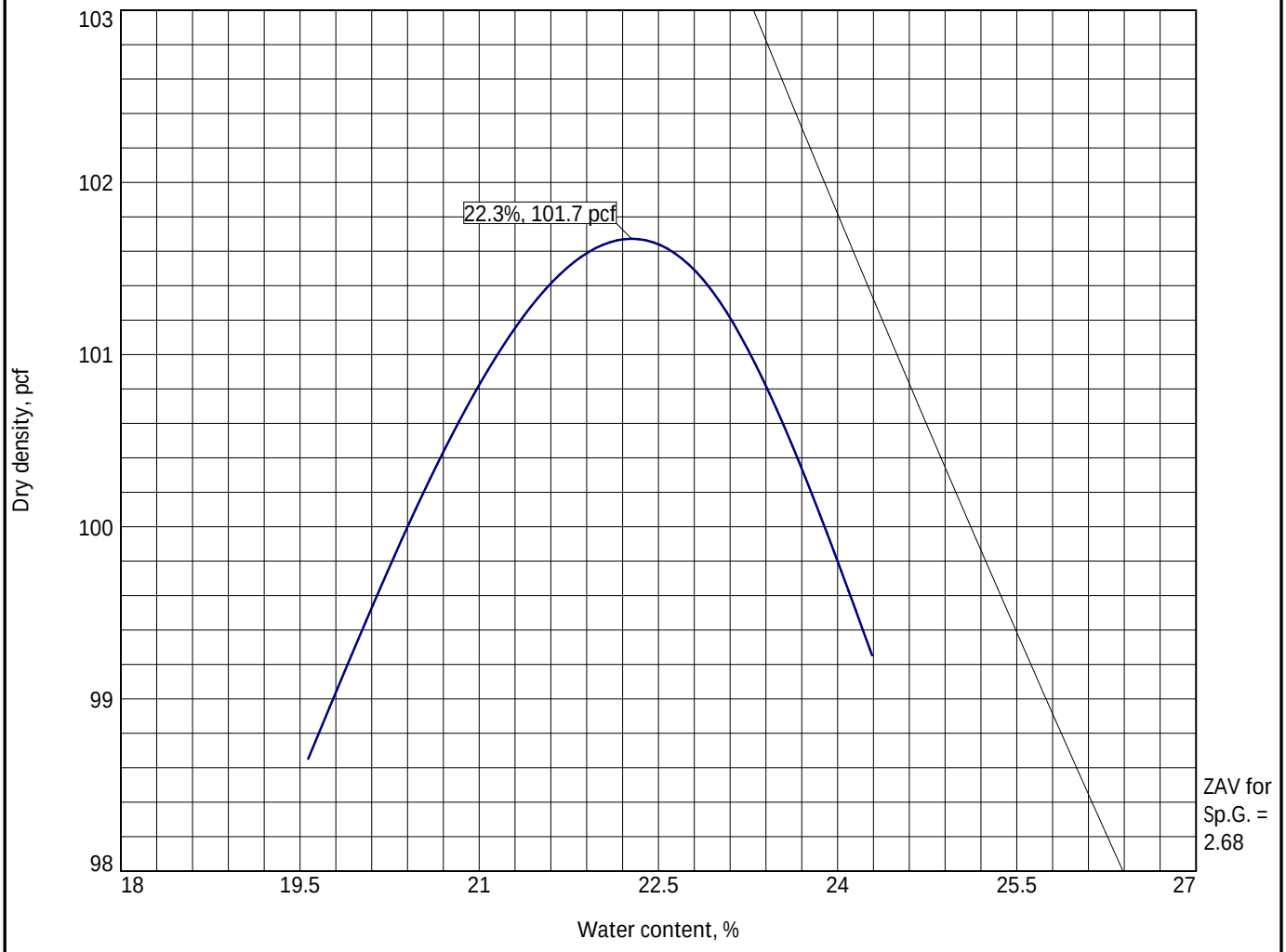
Remarks:

Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: R.Dittmer Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5 - 5 ft				2.68	42	5		

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 101.7 pcf Optimum moisture = 22.3 %	Dark gray rusty silty lean clay, with 5% cement

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport

Apron Expansion Date: 1/17/26

○ Location: Boring No. 1 Sample Number: 1

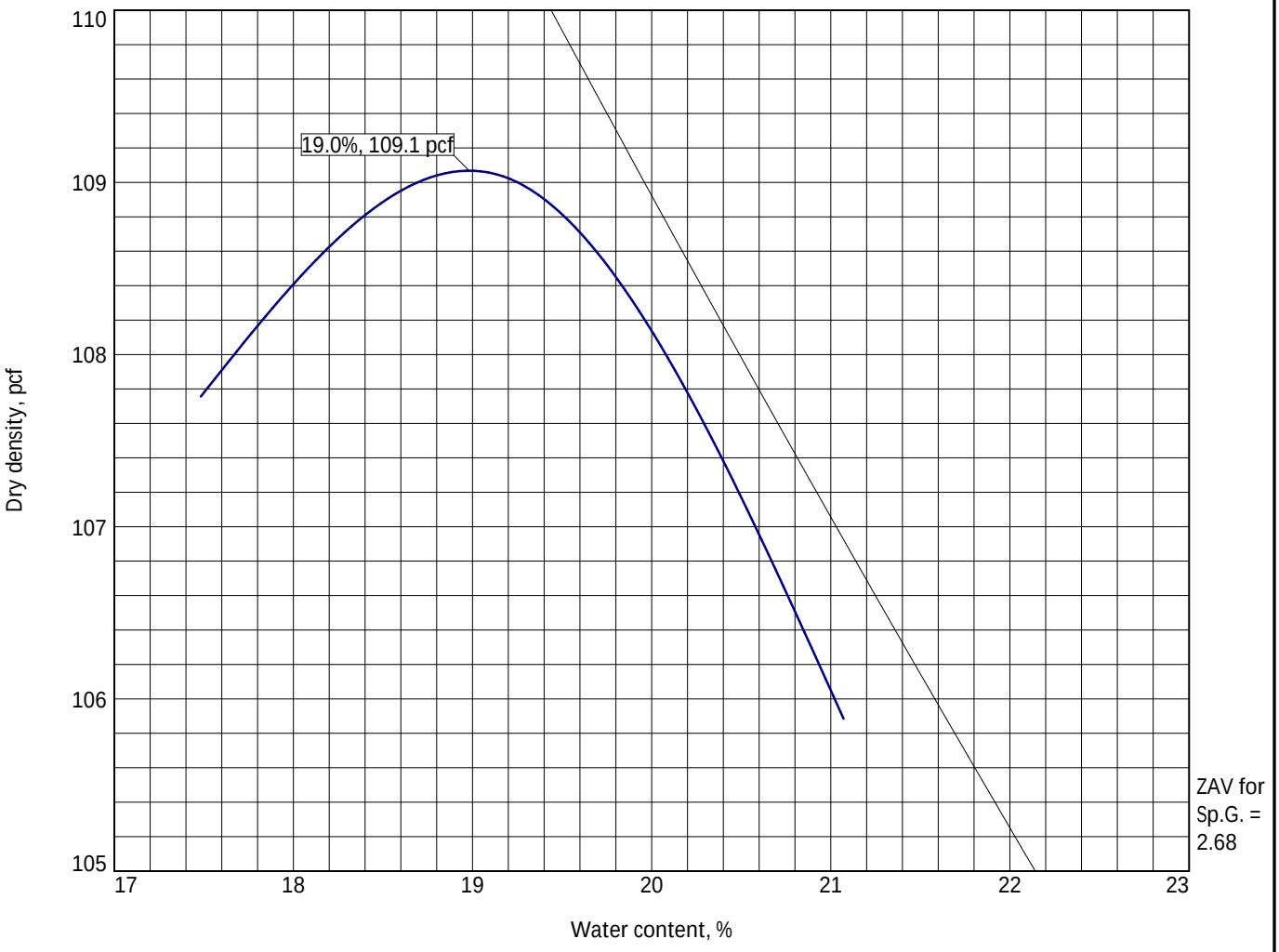
Remarks:

Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: J.Hopkins Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5 - 5 ft				2.68	34	1		

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 109.1 pcf Optimum moisture = 19.0 %	Gray rusty silty lean clay, with 5% cement

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion Date: 1/17/26

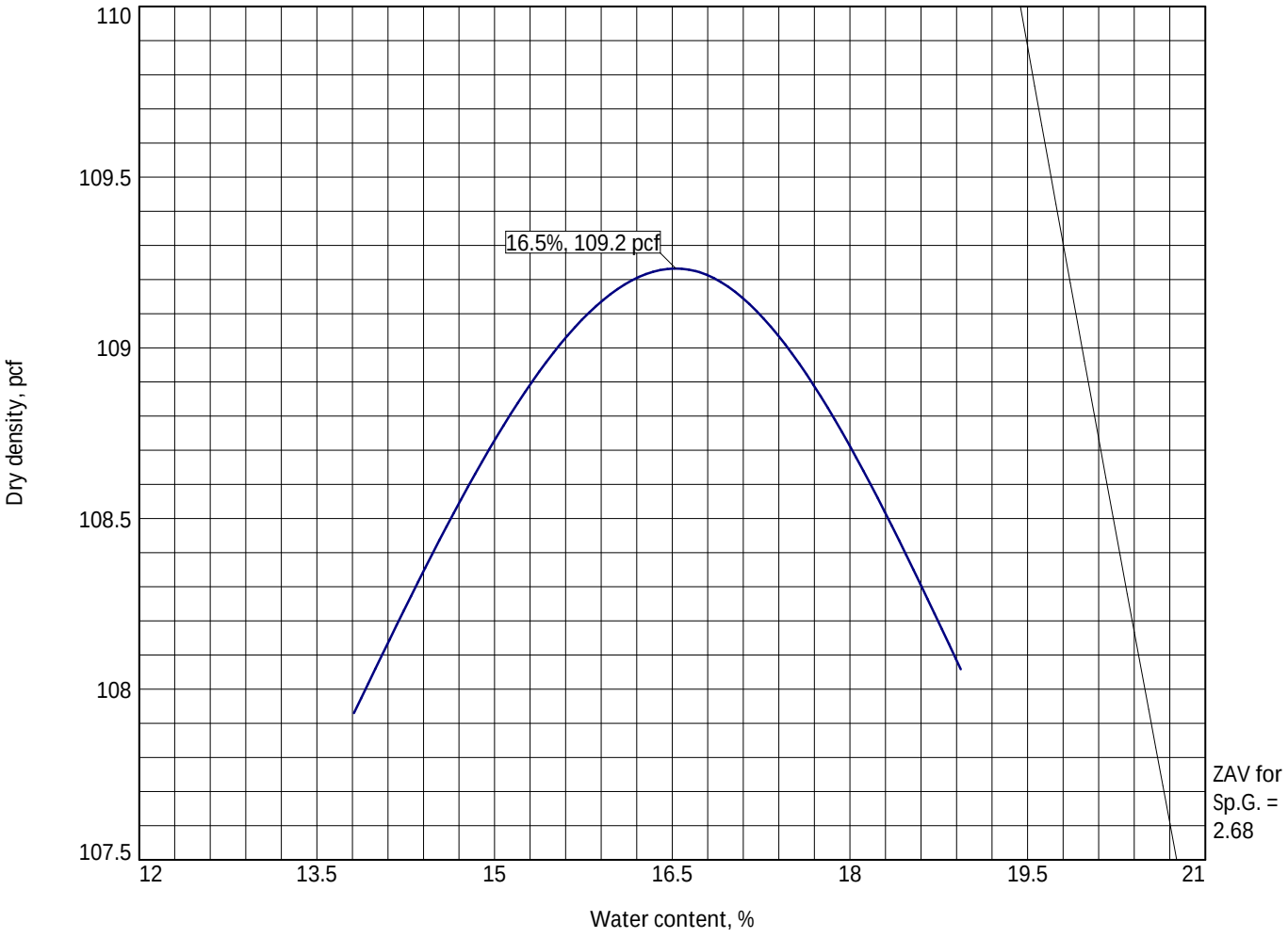
○ Location: Boring No. 2 Sample Number: 1

Remarks:
Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: J.Hokins Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5 - 5 ft				2.68	32	NP		

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 109.2 pcf Optimum moisture = 16.5 %	Gray rusty silty lean clay, with 5% cement

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion Date: 1/17/26

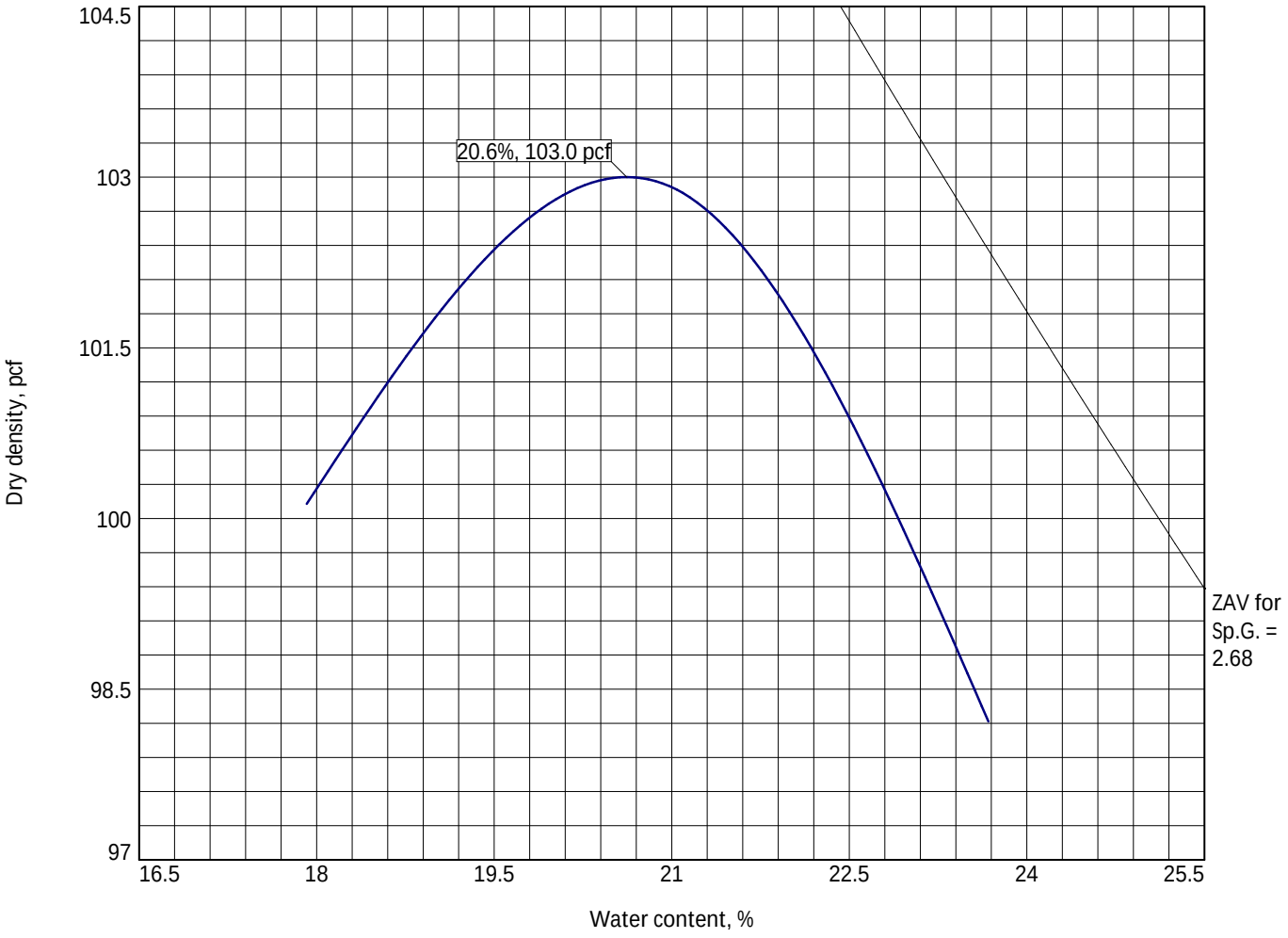
○ Location: Boring No. 3 Sample Number: 1

Remarks:
Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: J.Hopkins Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5 - 5 ft				2.68	40	NP		

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 103.0 pcf Optimum moisture = 20.6 %	Light gray rusty silty lean clay, with 5% cement

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion Date: 1/17/26

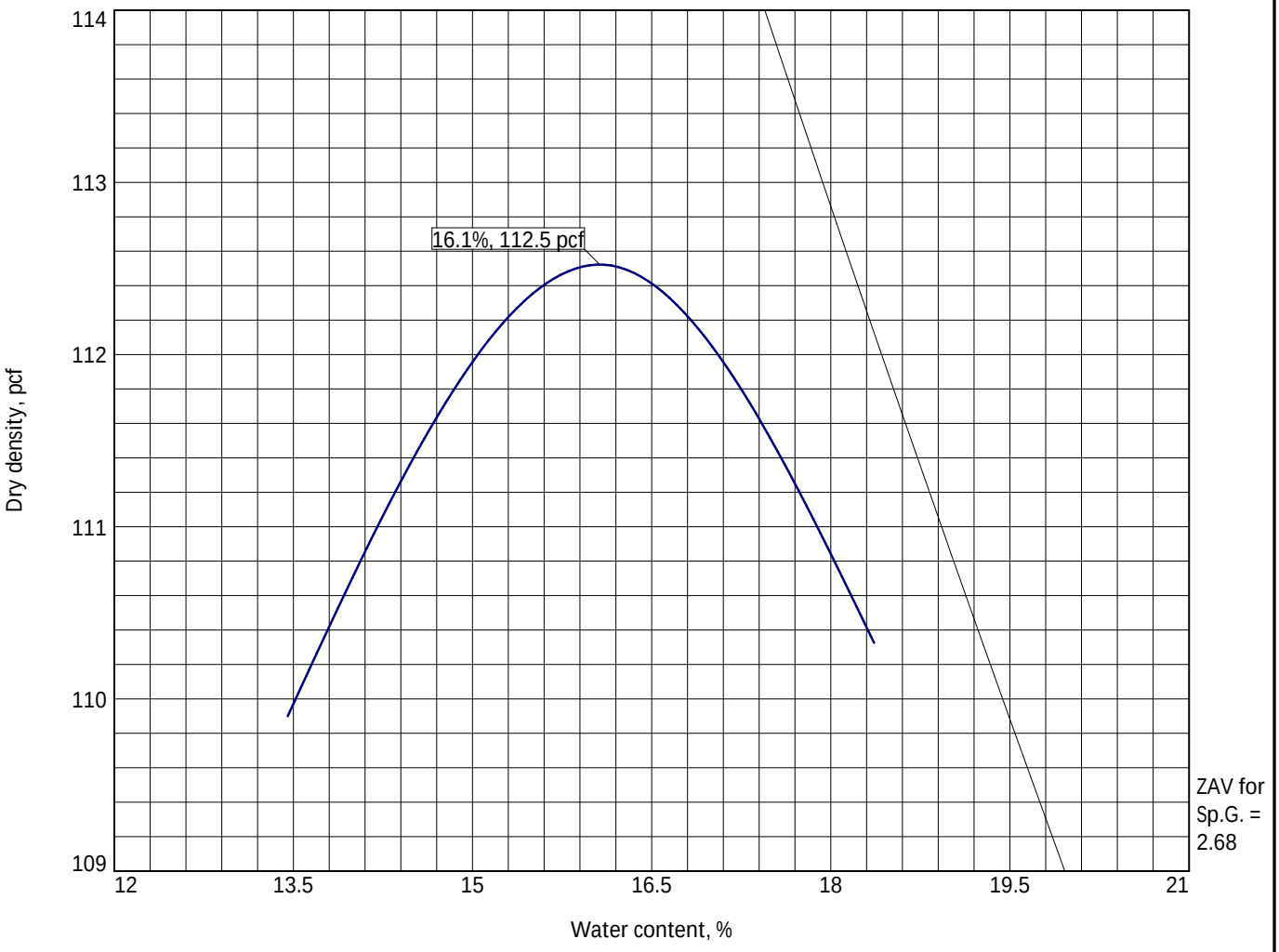
○ Location: Boring No. 4 Sample Number: 1

Remarks:
Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: J.Hopkins Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5 - 5 ft				2.68	35	NP		

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 112.5 pcf Optimum moisture = 16.1 %	Dark gray rusty silty lean clay, with 5% cement

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport
Apron Expansion Date: 1/17/26

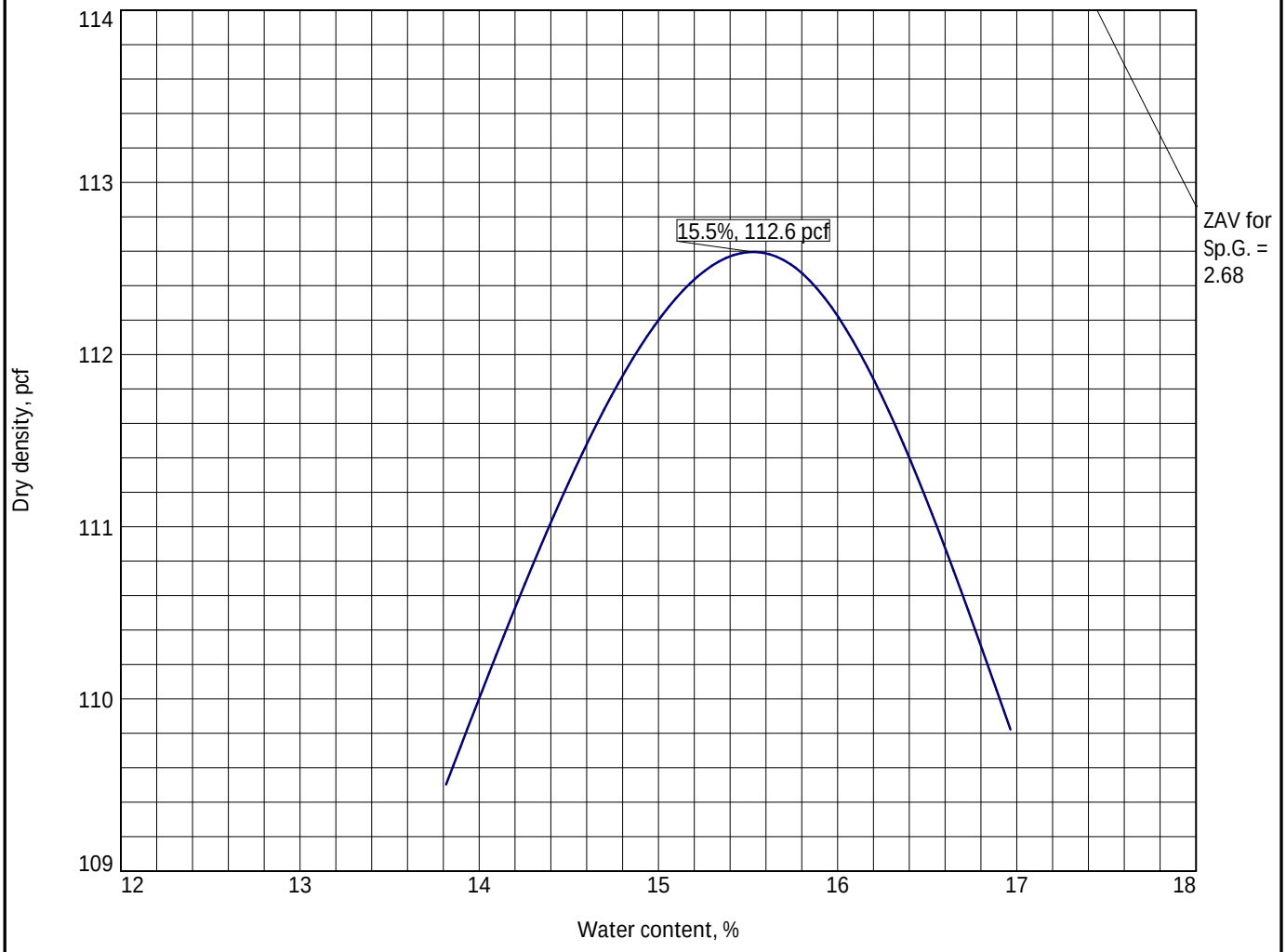
○ Location: Boring No. 5 Sample Number: 1

Remarks:
Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: J.Hopkins Checked By: S.Ferrier

COMPACTION TEST REPORT



Test specification: ASTM D 698-12 Method A Standard

Elev/ Depth	Classification		Nat. Moist.	Sp.G.	LL	PI	% > #4	% < No.200
	USCS	AASHTO						
3.5 - 5 ft				2.68	32	3		

TEST RESULTS	MATERIAL DESCRIPTION
Maximum dry density = 112.6 pcf Optimum moisture = 15.5 %	Gray rusty silty lean clay, with 5% cement

Project No. 252112STO Client: Bolton and Menk

Project: Storm Lake Municipal Airport

Apron Expansion Date: 1/17/26

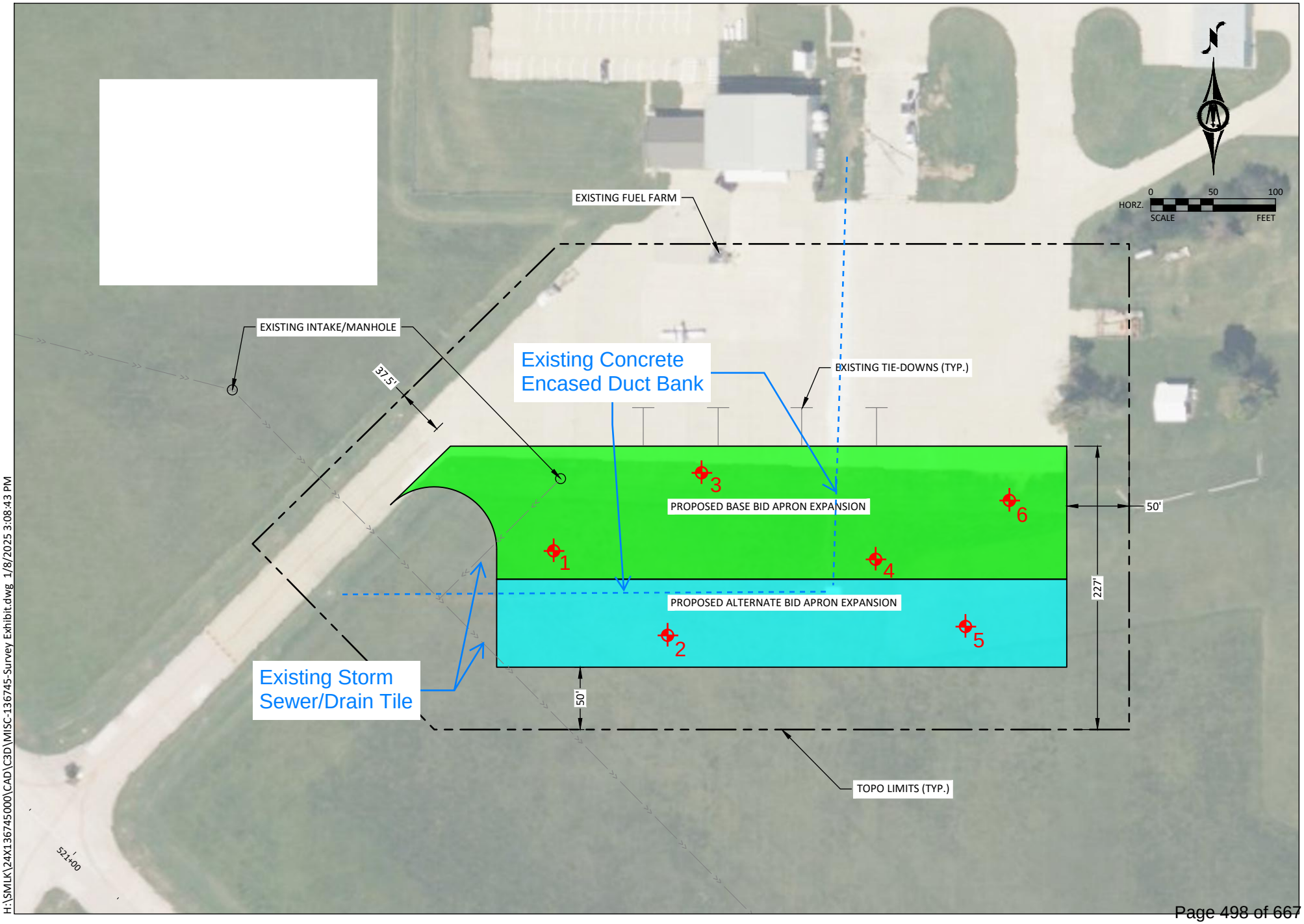
○ Location: Boring No. 6 Sample Number: 1

Remarks:

Sampled form boring spoils. Cement added in laboratory.

Figure

Tested By: J.Hopkins Checked By: S.Ferrier



H:\SMLK\24X136745000\CAD\C3D\MISC-136745-Survey Exhibit.dwg 1/8/2025 3:08:43 PM

U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Operational Safety on Airports During Construction	**Date:** 12/13/2017 **Initiated By:** AAS-100	**AC No:** 150/5370-2G **Change:**

1 **Purpose.**

This AC sets forth guidelines for operational safety on airports during construction.

2 **Cancellation.**

This AC cancels AC 150/5370-2F, *Operational Safety on Airports during Construction*, dated September 29, 2011.

3 **Application.**

This AC assists airport operators in complying with Title 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*. For those certificated airports, this AC provides one way, but not the only way, of meeting those requirements. The use of this AC is mandatory for those airport construction projects receiving funds under the Airport Improvement Program (AIP). See Grant Assurance No. 34, *Policies, Standards, and Specifications*. While we do not require non-certificated airports without grant agreements or airports using Passenger Facility Charge (PFC) Program funds for construction projects to adhere to these guidelines, we recommend that they do so to help these airports maintain operational safety during construction.

4 **Related Documents.**

ACs and Orders referenced in the text of this AC do not include a revision letter, as they refer to the latest version. Appendix A contains a list of reading material on airport construction, design, and potential safety hazards during construction, as well as instructions for obtaining these documents.

5 **Principal Changes.**

The AC incorporates the following principal changes:

1. Notification about impacts to both airport owned and FAA-owned NAVAIDs was added. See paragraph 2.13.5.3, NAVAIDs.

2. Guidance for the use of orange construction signs was added. See paragraph 2.18.4.2, Temporary Signs.
3. Open trenches or excavations may be permitted in the taxiway safety area while the taxiway is open to aircraft operations, subject to restrictions. See paragraph 2.22.3.4, Excavations.
4. Guidance for temporary shortened runways and displaced thresholds has been enhanced. See Figure 2-1 and Figure 2-2.
5. Figures have been improved and a new Appendix F on the placement of orange construction signs has been added.

Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within this document) are provided throughout this document and are identified with underlined text. When navigating within this document, return to the previously viewed page by pressing the "ALT" and " ←" keys simultaneously.

Figures in this document are schematic representations and are not to scale.

6 **Use of Metrics.**

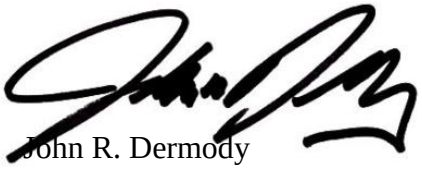
Throughout this AC, U.S. customary units are used followed with "soft" (rounded) conversion to metric units. The U.S. customary units govern.

7 **Where to Find this AC.**

You can view a list of all ACs at http://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at http://www.faa.gov/regulations_policies/faa_regulations/.

8 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.



John R. Dermody
Director of Airport Safety and Standards

CONTENTS

Paragraph **Page**

Chapter 1. Planning an Airfield Construction Project 1-1
1.1 Overview. 1-1
1.2 Plan for Safety. 1-1
1.3 Develop a Construction Safety and Phasing Plan (CSPP). 1-3
1.4 Who Is Responsible for Safety During Construction? 1-4

Chapter 2. Construction Safety and Phasing Plans 2-1
2.1 Overview. 2-1
2.2 Assume Responsibility. 2-1
2.3 Submit the CSPP. 2-1
2.4 Meet CSPP Requirements. 2-2
2.5 Coordination. 2-6
2.6 Phasing. 2-7
2.7 Areas and Operations Affected by Construction Activity. 2-7
2.8 Navigation Aid (NAVAID) Protection. 2-11
2.9 Contractor Access. 2-11
2.10 Wildlife Management. 2-15
2.11 Foreign Object Debris (FOD) Management. 2-16
2.12 Hazardous Materials (HAZMAT) Management. 2-16
2.13 Notification of Construction Activities. 2-16
2.14 Inspection Requirements. 2-18
2.15 Underground Utilities. 2-19
2.16 Penalties. 2-19
2.17 Special Conditions. 2-19
2.18 Runway and Taxiway Visual Aids. 2-19
2.19 Marking and Signs for Access Routes. 2-29
2.20 Hazard Marking, Lighting and Signing. 2-30
2.21 Work Zone Lighting for Nighttime Construction. 2-32
2.22 Protection of Runway and Taxiway Safety Areas. 2-33
2.23 Other Limitations on Construction. 2-37

Chapter 3. Guidelines for Writing a CSPP 3-1
3.1 General Requirements. 3-1
3.2 Applicability of Subjects. 3-1
3.3 Graphical Representations. 3-1
3.4 Reference Documents. 3-2
3.5 Restrictions. 3-2
3.6 Coordination. 3-2
3.7 Phasing. 3-2
3.8 Areas and Operations Affected by Construction. 3-2
3.9 NAVAID Protection. 3-2
3.10 Contractor Access. 3-3
3.11 Wildlife Management. 3-4
3.12 FOD Management. 3-4
3.13 HAZMAT Management. 3-4
3.14 Notification of Construction Activities. 3-4
3.15 Inspection Requirements. 3-5
3.16 Underground Utilities. 3-5
3.17 Penalties. 3-5
3.18 Special Conditions. 3-5
3.19 Runway and Taxiway Visual Aids. 3-6
3.20 Marking and Signs for Access Routes. 3-6
3.21 Hazard Marking and Lighting. 3-6
3.22 Work Zone Lighting for Nighttime Construction. 3-6
3.23 Protection of Runway and Taxiway Safety Areas. 3-7
3.24 Other Limitations on Construction. 3-7

Appendix A. Related Reading Material A-1

Appendix B. Terms and Acronyms B-1

Appendix C. Safety and Phasing Plan Checklist C-1

Appendix D. Construction Project Daily Safety Inspection Checklist D-1

Appendix E. Sample Operational Effects Table E-1

Appendix F. Orange Construction Signs F-1

FIGURES

Number **Page**

Figure 2-1. Temporary Partially Closed Runway 2-9
Figure 2-2. Temporary Displaced Threshold 2-10
Figure 2-3. Markings for a Temporarily Closed Runway 2-21
Figure 2-4. Temporary Taxiway Closure 2-22
Figure 2-5. Temporary Outboard White Threshold Bars and Yellow Arrowheads 2-24
Figure 2-6. Lighted X in Daytime 2-26
Figure 2-7. Lighted X at Night 2-26
Figure 2-8. Interlocking Barricades 2-31
Figure 2-9. Low Profile Barricades 2-32
Figure E-1. Phase I Example E-1
Figure E-2. Phase II Example E-2
Figure E-3. Phase III Example E-3
Figure F-1. Approved Sign Legends F-1
Figure F-2. Orange Construction Sign Example 1 ..... F-2
Figure F-3. Orange Construction Sign Example 2 ..... F-3

TABLES

Number **Page**

Table A-1. FAA Publications A-1
Table A-2. Code of Federal Regulation A-3
Table B-1. Terms and Acronyms B-1
Table C-1. CSPP Checklist C-1
Table D-1. Potentially Hazardous Conditions D-1
Table E-1. Operational Effects Table E-4
Table E-2. Runway and Taxiway Edge Protection E-6
Table E-3. Protection Prior to Runway Threshold E-7

Page Intentionally Blank

CHAPTER 1. PLANNING AN AIRFIELD CONSTRUCTION PROJECT

1.1 Overview.

Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety. The airport operator must understand how construction activities and aircraft operations affect one another to be able to develop an effective plan to complete the project. While the guidance in this AC is primarily used for construction operations, the concepts, methods and procedures described may also enhance the day-to-day airport maintenance operations, such as lighting maintenance and snow removal operations.

1.2 Plan for Safety.

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the airport operator must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities, and associated costs will be identified and their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project, and/or to airport operations to maintain operational safety. This planning effort will ultimately result in a project Construction Safety and Phasing Plan (CSPP). The development of the CSPP takes place through the following five steps:

1.2.1 Identify Affected Areas.

The airport operator must determine the geographic areas on the airport affected by the construction project. Some, such as a runway extension, will be defined by the project. Others may be variable, such as the location of haul routes and material stockpiles.

1.2.2 Describe Current Operations.

Identify the normal airport operations in each affected area for each phase of the project. This becomes the baseline from which the impact on operations by construction activities can be measured. This should include a narrative of the typical users and aircraft operating within the affected areas. It should also include information related to airport operations: the Aircraft Approach Category (AAC) and Airplane Design Group (ADG) of the airplanes that operate on each runway; the ADG and Taxiway Design Group (TDG)[1] for each affected taxiway; designated approach visibility minimums;

[1] Find Taxiway Design Group information in AC 150/5300-13, *Airport Design.*

available approach and departure procedures; most demanding aircraft; declared distances; available air traffic control services; airport Surface Movement Guidance and Control System (SMGCS) plan; and others. The applicable seasons, days and times for certain operations should also be identified as applicable.

1.2.3 Allow for Temporary Changes to Operations.

To the extent practical, current airport operations should be maintained during the construction. In consultation with airport users, Aircraft Rescue and Fire Fighting (ARFF) personnel, and FAA Air Traffic Organization (ATO) personnel, the airport operator should identify and prioritize the airport's most important operations. The construction activities should be planned, through project phasing if necessary, to safely accommodate these operations. When the construction activities cannot be adjusted to safely maintain current operations, regardless of their importance, then the operations must be revised accordingly. Allowable changes include temporary revisions to approach procedures, restricting certain aircraft to specific runways and taxiways, suspension of certain operations, decreased weights for some aircraft due to shortened runways, and other changes. An example of a table showing temporary operations versus current operations is shown in Appendix E.

1.2.4 Take Required Measures to Revise Operations.

Once the level and type of aircraft operations to be maintained are identified, the airport operator must determine the measures required to safely conduct the planned operations during the construction. These measures will result in associated costs, which can be broadly interpreted to include not only direct construction costs, but also loss of revenue from impacted operations. Analysis of costs may indicate a need to reevaluate allowable changes to operations. As aircraft operations and allowable changes will vary widely among airports, this AC presents general guidance on those subjects.

1.2.5 Manage Safety Risk.

The FAA is committed to incorporating proactive safety risk management (SRM) tools into its decision-making processes. FAA Order 5200.11, *FAA Airports (ARP) Safety Management System (SMS)*, requires the FAA to conduct a Safety Assessment for certain triggering actions. Certain airport projects may require the airport operator to provide a Project Proposal Summary to help the FAA determine whether a Safety Assessment is required prior to FAA approval of the CSPP. The airport operator must coordinate with the appropriate FAA Airports Regional or District Office early in the development of the CSPP to determine the need for a Safety Risk Assessment. If the FAA requires an assessment, the airport operator must at a minimum:

1. Notify the appropriate FAA Airports Regional or District Office during the project "scope development" phase of any project requiring a CSPP.
2. Provide documents identified by the FAA as necessary to conduct SRM.
3. Participate in the SRM process for airport projects.
4. Provide a representative to participate on the SRM panel.

5. Ensure that all applicable SRM identified risks elements are recorded and mitigated within the CSPP.

1.3 **Develop a Construction Safety and Phasing Plan (CSPP).**

Development of an effective CSPP will require familiarity with many other documents referenced throughout this AC. See Appendix A for a list of related reading material.

1.3.1 List Requirements.

A CSPP must be developed for each on-airfield construction project funded by the Airport Improvement Program (AIP) or located on an airport certificated under Part 139. For on-airfield construction projects at Part 139 airports funded without AIP funds, the preparation of a CSPP represents an acceptable method the certificate holder may use to meet Part 139 requirements during airfield construction activity. As per FAA Order 5200.11, projects that require Safety Assessments do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a Safety Assessment and a CSPP. The CSPP is subject to subsequent review and approval under the FAA's Safety Risk Management procedures (see paragraph 1.2.5).

1.3.2 Prepare a Safety Plan Compliance Document (SPCD).

The Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the airport operator reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications.

1.3.3 Assume Responsibility for the CSPP.

The airport operator is responsible for establishing and enforcing the CSPP. The airport operator may use the services of an engineering consultant to help develop the CSPP. However, writing the CSPP cannot be delegated to the construction contractor. Only those details the airport operator determines cannot be addressed before contract award are developed by the contractor and submitted for approval as the SPCD. The SPCD does not restate nor propose differences to provisions already addressed in the CSPP.

1.4 Who Is Responsible for Safety During Construction?

1.4.1 Establish a Safety Culture.

Everyone has a role in operational safety on airports during construction: the airport operator, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, ARFF personnel, Air Traffic personnel, including Technical Operations personnel, FAA Airports Division personnel, and others, such as military personnel at any airport supporting military operations (e.g. national guard or a joint use facility). Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project. The airport operator and contractor should conduct onsite safety inspections throughout the project and immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

1.4.2 Assess Airport Operator's Responsibilities.

An airport operator has overall responsibility for all activities on an airport, including construction. This includes the predesign, design, preconstruction, construction, and inspection phases. Additional information on the responsibilities listed below can be found throughout this AC. The airport operator must:

1.4.2.1 Develop a CSPP that complies with the safety guidelines of Chapter 2, Construction Safety and Phasing Plans, and Chapter 3, Guidelines for Writing a CSPP. The airport operator may develop the CSPP internally or have a consultant develop the CSPP for approval by the airport operator. For tenant sponsored projects, approve a CSPP developed by the tenant or its consultant.

1.4.2.2 Require, review and approve the SPCD by the contractor that indicates how it will comply with the CSPP and provides details that cannot be determined before contract award.

1.4.2.3 Convene a preconstruction meeting with the construction contractor, consultant, airport employees and, if appropriate, tenant sponsor and other tenants to review and discuss project safety before beginning construction activity. The appropriate FAA representatives should be invited to attend the meeting. See AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects.* (Note "FAA" refers to the Airports Regional or District Office, the Air Traffic Organization, Flight Standards Service, and other offices that support airport operations, flight regulations, and construction/environmental policies.)

1.4.2.4 Ensure contact information is accurate for each representative/point of contact identified in the CSPP and SPCD.

1.4.2.5 Hold weekly or, if necessary, daily safety meetings with all affected parties to coordinate activities.

1.4.2.6 Notify users, ARFF personnel, and FAA ATO personnel of construction and conditions that may adversely affect the operational safety of the airport via Notices to Airmen (NOTAM) and other methods, as appropriate. Convene a meeting for review and discussion if necessary.

1.4.2.7 Ensure construction personnel know applicable airport procedures and changes to those procedures that may affect their work.

1.4.2.8 Ensure that all temporary construction signs are located per the scheduled list for each phase of the project.

1.4.2.9 Ensure construction contractors and subcontractors undergo training required by the CSPP and SPCD.

1.4.2.10 Ensure vehicle and pedestrian operations addressed in the CSPP and SPCD are coordinated with airport tenants, the airport traffic control tower (ATCT), and construction contractors.

1.4.2.11 At certificated airports, ensure each CSPP and SPCD is consistent with Part 139.

1.4.2.12 Conduct inspections sufficiently frequently to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.2.13 Take immediate action to resolve safety deficiencies.

1.4.2.14 At airports subject to 49 CFR Part 1542, *Airport Security*, ensure construction access complies with the security requirements of that regulation.

1.4.2.15 Notify appropriate parties when conditions exist that invoke provisions of the CSPP and SPCD (for example, implementation of low-visibility operations).

1.4.2.16 Ensure prompt submittal of a Notice of Proposed Construction or Alteration (Form 7460-1) for conducting an aeronautical study of potential obstructions such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. A separate form may be filed for each potential obstruction, or one form may be filed describing the entire construction area and maximum equipment height. In the latter case, a separate form must be filed for any object beyond or higher than the originally evaluated area/height. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp. The appropriate FAA Airports Regional or District Office can provide assistance in determining which objects require an aeronautical study.

1.4.2.17 Ensure prompt transmission of the Airport Sponsor Strategic Event Submission, FAA Form 6000-26, located at https://oeaaa.faa.gov/oeaaa/external/content/AIRPORT_SPONSOR_STRATEGIC_EVENT_SUBMISSION_FORM.pdf, to assure proper coordination for NAS Strategic Interruption per Service Level Agreement with ATO.

1.4.2.18 Promptly notify the FAA Airports Regional or District Office of any proposed changes to the CSPP prior to implementation of the change. Changes to the CSPP require review and approval by the airport operator and the FAA. The FAA Airports Regional or District office will determine if further coordination within the FAA is needed. Coordinate with appropriate local and other federal government agencies, such as Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), Transportation Security Administration (TSA), and the state environmental agency.

1.4.3 Define Construction Contractor's Responsibilities.

The contractor is responsible for complying with the CSPP and SPCD. The contractor must:

1.4.3.1 Submit a Safety Plan Compliance Document (SPCD) to the airport operator describing how it will comply with the requirements of the CSPP and supply any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor, indicating an understanding of the operational safety requirements of the CSPP and the assertion of compliance with the approved CSPP and SPCD unless written approval is granted by the airport operator. Any construction practice proposed by the contractor that does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

1.4.3.2 Have available at all times copies of the CSPP and SPCD for reference by the airport operator and its representatives, and by subcontractors and contractor employees.

1.4.3.3 Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Many projects will require 24-hour coverage.

1.4.3.4 Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.

1.4.3.5 Conduct sufficient inspections to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.3.6 Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.

1.4.3.7 Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.

1.4.3.8 Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, and other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

1.4.3.9 Ensure that all necessary safety mitigations are understood by all parties involved, and any special requirements of each construction phase will be fulfilled per the approved timeframe.

1.4.3.10 Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

1.4.4 Define Tenant's Responsibilities.

If planning construction activities on leased property, Airport tenants, such as airline operators, fixed base operators, and FAA ATO/Technical Operations sponsoring construction are strongly encouraged to:

1. Develop, or have a consultant develop, a project specific CSPP and submit it to the airport operator. The airport operator may forgo a complete CSPP submittal and instead incorporate appropriate operational safety principles and measures addressed in the advisory circular within their tenant lease agreements.
2. In coordination with its contractor, develop an SPCD and submit it to the airport operator for approval issued prior to issuance of a Notice to Proceed.
3. Ensure that construction personnel are familiar with safety procedures and regulations on the airport during all phases of the construction.
4. Provide a point of contact of who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport.
5. Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.
6. Ensure that no tenant or contractor employees, employees of subcontractors or suppliers, or any other persons enter any part of the AOA from the construction site unless authorized.
7. Restrict movement of construction vehicles to construction areas by flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate, as specified in the CSPP and SPCD.
8. Ensure prompt submittal through the airport operator of Form 7460-1 for conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.
9. Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

CHAPTER 2. CONSTRUCTION SAFETY AND PHASING PLANS

2.1 Overview.

Aviation safety is the primary consideration at airports, especially during construction. The airport operator's CSPP and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

2.2 Assume Responsibility.

Operational safety on the airport remains the airport operator's responsibility at all times. The airport operator must develop, certify, and submit for FAA approval each CSPP. It is the airport operator's responsibility to apply the requirements of the FAA approved CSPP. The airport operator must revise the CSPP when conditions warrant changes and must submit the revised CSPP to the FAA for approval. The airport operator must also require and approve a SPCD from the project contractor.

2.3 Submit the CSPP.

Construction Safety and Phasing Plans should be developed concurrently with the project design. Milestone versions of the CSPP should be submitted for review and approval as follows. While these milestones are not mandatory, early submission will help to avoid delays. Submittals are preferred in 8.5 × 11 inch or 11 × 17 inch format for compatibility with the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE / AAA) process.

2.3.1 Submit an Outline/Draft.

By the time approximately 25% to 30% of the project design is completed, the principal elements of the CSPP should be established. Airport operators are encouraged to submit an outline or draft, detailing all CSPP provisions developed to date, to the FAA for review at this stage of the project design.

2.3.2 Submit a CSPP.

The CSPP should be formally submitted for FAA approval when the project design is 80 percent to 90 percent complete. Since provisions in the CSPP will influence contract costs, it is important to obtain FAA approval in time to include all such provisions in the procurement contract.

2.3.3 Submit an SPCD.

The contractor should submit the SPCD to the airport operator for approval to be issued prior to the Notice to Proceed.

2.3.4 Submit CSPP Revisions.

All revisions to a previously approved CSPP must be re-submitted to the FAA for review and approval/disapproval action.

2.4 Meet CSPP Requirements.

2.4.1 To the extent possible, the CSPP should address the following as outlined in Chapter 3, Guidelines for Writing a CSPP. Details that cannot be determined at this stage are to be included in the SPCD.

1. Coordination.
    a. Contractor progress meetings.
    b. Scope or schedule changes.
    c. FAA ATO coordination.
2. Phasing.
    a. Phase elements.
    b. Construction safety drawings.
3. Areas and operations affected by the construction activity.
    a. Identification of affected areas.
    b. Mitigation of effects.
4. Protection of navigation aids (NAVAIDs).
5. Contractor access.
    a. Location of stockpiled construction materials.
    b. Vehicle and pedestrian operations.
6. Wildlife management.
    a. Trash.
    b. Standing water.
    c. Tall grass and seeds.
    d. Poorly maintained fencing and gates.
    e. Disruption of existing wildlife habitat.
7. Foreign Object Debris (FOD) management.
8. Hazardous materials (HAZMAT) management.
9. Notification of construction activities.

a. Maintenance of a list of responsible representatives/ points of contact.

b. NOTAM.

c. Emergency notification procedures.

d. Coordination with ARFF Personnel.

e. Notification to the FAA.

10. Inspection requirements.

a. Daily (or more frequent) inspections.

b. Final inspections.

11. Underground utilities.

12. Penalties.

13. Special conditions.

14. Runway and taxiway visual aids. Marking, lighting, signs, and visual NAVAIDs.

a. General.

b. Markings.

c. Lighting and visual NAVAIDs.

d. Signs, temporary, including orange construction signs, and permanent signs.

15. Marking and signs for access routes.

16. Hazard marking and lighting.

a. Purpose.

b. Equipment.

17. Work zone lighting for nighttime construction (if applicable).

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces.

a. Runway Safety Area (RSA).

b. Runway Object Free Area (ROFA).

c. Taxiway Safety Area (TSA). Provide details for any adjustments to Taxiway Safety Area width to allow continued operation of smaller aircraft. See paragraph 2.22.3.

d. Taxiway Object Free Area (TOFA). Provide details for any continued aircraft operations while construction occurs within the TOFA. See paragraph 2.22.4.

e. Obstacle Free Zone (OFZ).

f. Runway approach/departure surfaces.

19. Other limitations on construction.

a. Prohibitions.

b. Restrictions.

2.4.2 The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, (Name of Contractor), have read the (Title of Project) CSPP, approved on (Date), and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

1. Coordination. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.
2. Phasing. Discuss proposed construction schedule elements, including:
   a. Duration of each phase.
   b. Daily start and finish of construction, including "night only" construction.
   c. Duration of construction activities during:
      i. Normal runway operations.
      ii. Closed runway operations.
      iii. Modified runway "Aircraft Reference Code" usage.
3. Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
4. Protection of NAVAIDs. Discuss specific methods proposed to protect operating NAVAIDs.
5. Contractor access. Provide the following:
   a. Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
   b. Listing of individuals requiring driver training (for certificated airports and as requested).
   c. Radio communications.
      i. Types of radios and backup capabilities.
      ii. Who will be monitoring radios.
      iii. Who to contact if the ATCT cannot reach the contractor's designated person by radio.

d. Details on how the contractor will escort material delivery vehicles.

6. Wildlife management. Discuss the following:
   a. Methods and procedures to prevent wildlife attraction.
   b. Wildlife reporting procedures.
7. Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.
8. Hazardous Materials (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.
9. Notification of construction activities. Provide the following:
   a. Contractor points of contact.
   b. Contractor emergency contact.
   c. Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
   d. Batch plant details, including 7460-1 submittal.
10. Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.
11. Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.
12. Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.
13. Special conditions. Discuss proposed actions for each special condition identified in the CSPP.
14. Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
   a. Equipment and methods for covering signage and airfield lights.
   b. Equipment and methods for temporary closure markings (paint, fabric, other).
   c. Temporary orange construction signs.
   d. Types of temporary Visual Guidance Slope Indicators (VGSI).
15. Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.
16. Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.
17. Work zone lighting for nighttime construction (if applicable). Discuss proposed equipment, locations, aiming, and shielding to prevent interference with air traffic control and aircraft operations.

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
    a. Equipment and methods for maintaining Taxiway Safety Area standards.
    b. Equipment and methods to ensure the safe passage of aircraft where Taxiway Safety Area or Taxiway Object Free Area standards cannot be maintained.
    c. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
19. Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

2.5 **Coordination.**

Airport operators, or tenants responsible for design, bidding and conducting construction on their leased properties, should ensure at all project developmental stages, such as predesign, prebid, and preconstruction conferences, they capture the subject of airport operational safety during construction (see AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects*). In addition, the following should be coordinated as required:

2.5.1 Progress Meetings.

Operational safety should be a standing agenda item for discussion during progress meetings throughout the project developmental stages.

2.5.2 Scope or Schedule Changes.

Changes in the scope or duration at any of the project stages may require revisions to the CSPP and review and approval by the airport operator and the FAA (see paragraph 1.4.2.17).

2.5.3 FAA ATO Coordination.

Early coordination with FAA ATO is highly recommended during the design phase and is required for scheduling Technical Operations shutdowns prior to construction. Coordination is critical to restarts of NAVAID services and to the establishment of any special procedures for the movement of aircraft. Formal agreements between the airport operator and appropriate FAA offices are recommended. All relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, should be coordinated with FAA ATO and may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart. Flight inspections may require a reimbursable agreement between the airport operator and FAA ATO. Reimbursable agreements should be coordinated a minimum of 12 months prior to the start of construction. (See paragraph 2.13.5.3.2 for required FAA notification regarding FAA-owned NAVAIDs.)

2.6 **Phasing.**

Once it has been determined what types and levels of airport operations will be maintained, the most efficient sequence of construction may not be feasible. In this case, the sequence of construction may be phased to gain maximum efficiency while allowing for the required operations. The development of the resulting construction phases should be coordinated with local Air Traffic personnel and airport users. The sequenced construction phases established in the CSPP must be incorporated into the project design and must be reflected in the contract drawings and specifications.

2.6.1 Phase Elements.

For each phase the CSPP should detail:

- Areas closed to aircraft operations.
- Duration of closures.
- Taxi routes and/or areas of reduced TSA and TOFA to reflect reduced ADG use.
- ARFF access routes.
- Construction staging, disposal, and cleanout areas.
- Construction access and haul routes.
- Impacts to NAVAIDs.
- Lighting, marking, and signing changes.
- Available runway length and/or reduced RSA and ROFA to reflect reduced ADG use.
- Declared distances (if applicable).
- Required hazard marking, lighting, and signing.
- Work zone lighting for nighttime construction (if applicable).
- Lead times for required notifications.

2.6.2 Construction Safety Drawings.

Drawings specifically indicating operational safety procedures and methods in affected areas (i.e., construction safety drawings) should be developed for each construction phase. Such drawings should be included in the CSPP as referenced attachments and should also be included in the contract drawing package.

2.7 **Areas and Operations Affected by Construction Activity.**

Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. Pre-meetings with the FAA ATO will support operational simulations. See Appendix E for an example of a table showing temporary operations versus current operations. The tables in Appendix E can be useful for coordination among all interested parties, including FAA Lines of Business.

2.7.1 Identification of Affected Areas.

Identifying areas and operations affected by the construction helps to determine possible safety problems. The affected areas should be identified in the construction safety drawings for each construction phase. (See paragraph 2.6.2.) Of particular concern are:

2.7.1.1 **Closing, or Partial Closing, of Runways, Taxiways and Aprons, and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing, landing, or takeoff in either direction on that pavement is prohibited. A displaced threshold, by contrast, is established to ensure obstacle clearance and adequate safety area for landing aircraft. The pavement prior to the displaced threshold is normally available for take-off in the direction of the displacement and for landing and takeoff in the opposite direction. Misunderstanding this difference, may result in issuance of an inaccurate NOTAM, and can lead to a hazardous condition.

2.7.1.1.1 Partially Closed Runways.

The temporarily closed portion of a partially closed runway will generally extend from the threshold to a taxiway that may be used for entering and exiting the runway. If the closed portion extends to a point between taxiways, pilots will have to back-taxi on the runway, which is an undesirable operation. See Figure 2-1 for a desirable configuration.

2.7.1.1.2 Displaced Thresholds.

Since the portion of the runway pavement between the permanent threshold and a standard displaced threshold is available for takeoff and for landing in the opposite direction, the temporary displaced threshold need not be located at an entrance/exit taxiway. See Figure 2-2.

2.7.1.2 Closing of aircraft rescue and fire fighting access routes.

2.7.1.3 Closing of access routes used by airport and airline support vehicles.

2.7.1.4 Interruption of utilities, including water supplies for fire fighting.

2.7.1.5 Approach/departure surfaces affected by heights of objects.

2.7.1.6 Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads.

Figure 2-1. Temporary Partially Closed Runway

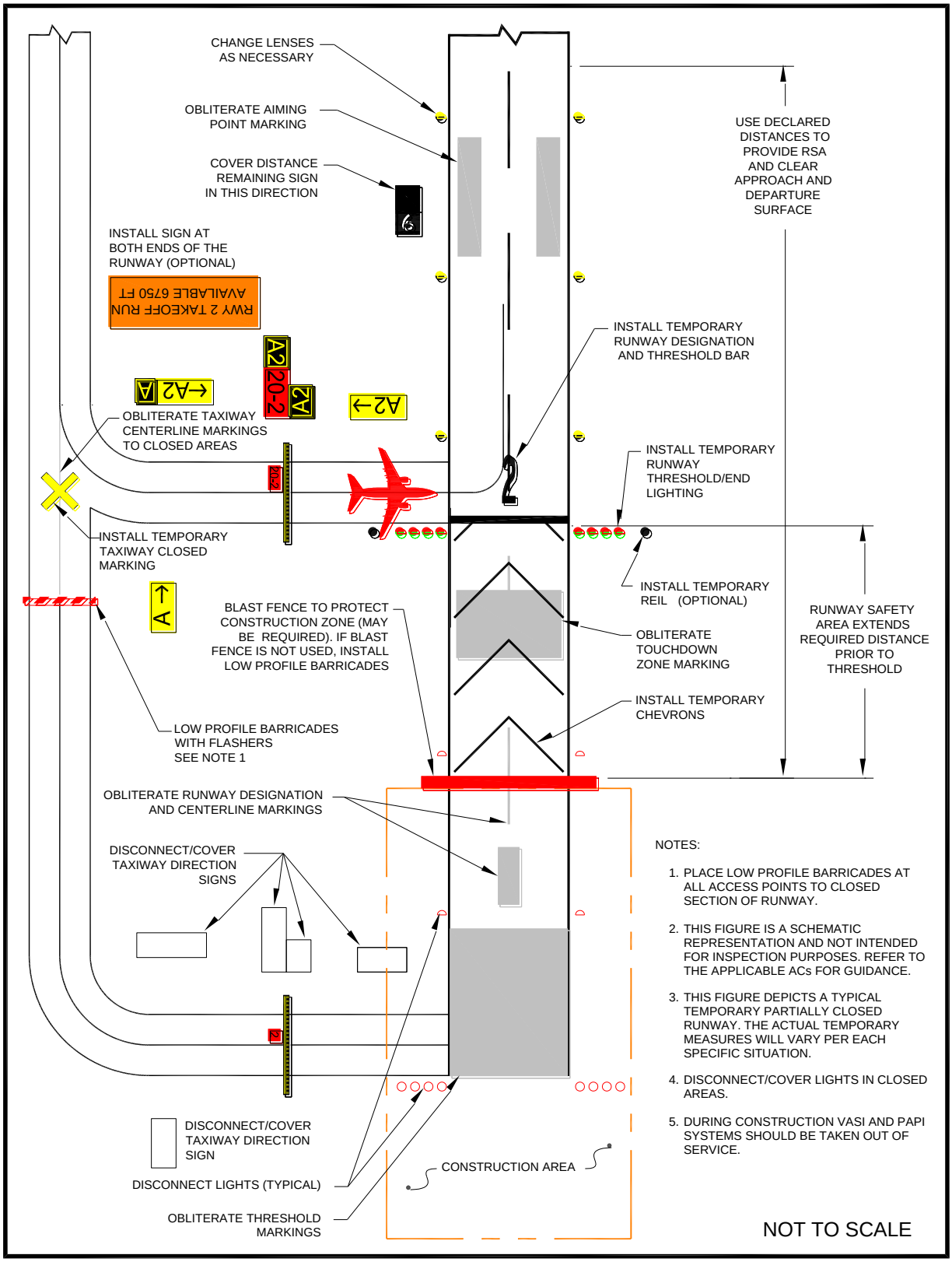
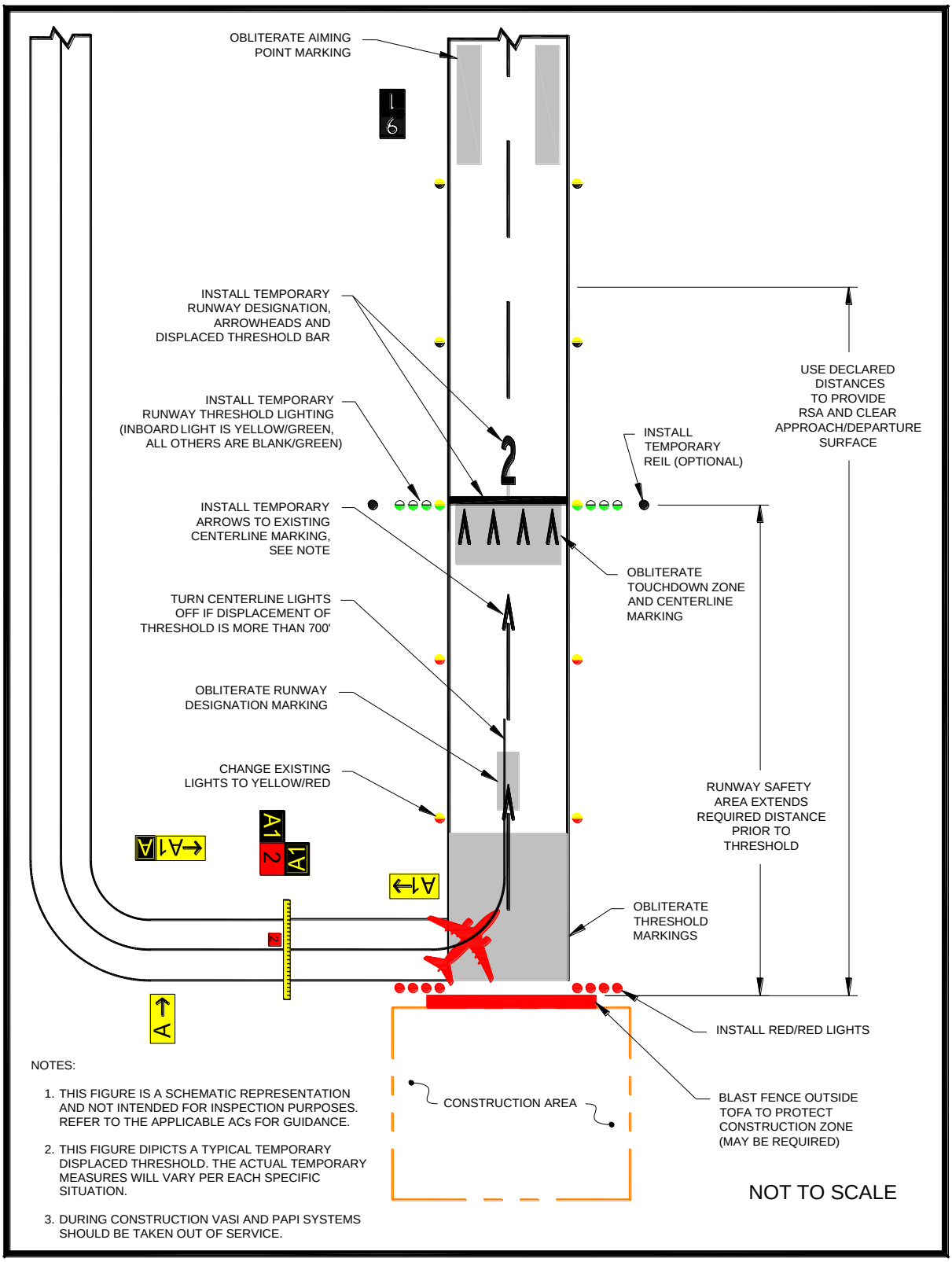


Figure 2-2. Temporary Displaced Threshold



Note: See paragraph 2.18.2.5.

2.7.2 Mitigation of Effects.

Establishment of specific procedures is necessary to maintain the safety and efficiency of airport operations. The CSPP must address:

2.7.2.1 Temporary changes to runway and/or taxi operations.

2.7.2.2 Detours for ARFF and other airport vehicles.

2.7.2.3 Maintenance of essential utilities.

2.7.2.4 Temporary changes to air traffic control procedures. Such changes must be coordinated with the ATO.

2.8 Navigation Aid (NAVAID) Protection.

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. (See paragraph 2.13.5.3.) Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. If any NAVAID may be affected, the CSPP and SPCD must show an understanding of the "critical area" associated with each NAVAID and describe how it will be protected. Where applicable, the operational critical areas of NAVAIDs should be graphically delineated on the project drawings. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the ATCT or with electronic emissions. Interference from construction equipment and activities may require NAVAID shutdown or adjustment of instrument approach minimums for low visibility operations. This condition requires that a NOTAM be filed (see paragraph 2.13.2). Construction activities and materials/equipment storage near a NAVAID must not obstruct access to the equipment and instruments for maintenance. Submittal of a 7460-1 form is required for construction vehicles operating near FAA NAVAIDs. (See paragraph 2.13.5.3.)

2.9 Contractor Access.

The CSPP must detail the areas to which the contractor must have access, and explain how contractor personnel will access those areas. Specifically address:

2.9.1 Location of Stockpiled Construction Materials.

Stockpiled materials and equipment storage are not permitted within the RSA and OFZ, and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. (See paragraph 2.18.2.) This includes determining and

verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage from blowing or tracked material. See paragraphs 2.10 and 2.11.

2.9.2 Vehicle and Pedestrian Operations.

The CSPP should include specific vehicle and pedestrian requirements. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The airport operator should coordinate requirements for vehicle operations with airport tenants, contractors, and the FAA air traffic manager. In regard to vehicle and pedestrian operations, the CSPP should include the following, with associated training requirements:

2.9.2.1 **Construction Site Parking.**

Designate in advance vehicle parking areas for contractor employees to prevent any unauthorized entry of persons or vehicles onto the AOA. These areas should provide reasonable contractor employee access to the job site.

2.9.2.2 **Construction Equipment Parking.**

Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Unless a complex setup procedure makes movement of specialized equipment infeasible, inactive equipment must not be parked on a closed taxiway or runway. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria, surfaces established by 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP). See paragraph 2.13.1 for further information.

2.9.2.3 **Access and Haul Roads.**

Determine the construction contractor’s access to the construction sites and haul roads. Do not permit the construction contractor to use any access or haul roads other than those approved. Access routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Pay special attention to ensure that if construction traffic is to share or cross any ARFF routes that ARFF right of way is not impeded at any time, and that construction traffic on haul

roads does not interfere with NAVAIDs or approach surfaces of operational runways. Address whether access gates will be blocked or inoperative or if a rally point will be blocked or inaccessible.

2.9.2.4 Marking and lighting of vehicles in accordance with AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport.*

2.9.2.5 Description of proper vehicle operations on various areas under normal, lost communications, and emergency conditions.

2.9.2.6 Required escorts.

2.9.2.7 **Training Requirements for Vehicle Drivers to Ensure Compliance with the Airport Operator's Vehicle Rules and Regulations.**

Specific training should be provided to vehicle operators, including those providing escorts. See AC 150/5210-20, *Ground Vehicle Operations on Airports*, for information on training and records maintenance requirements.

2.9.2.8 **Situational Awareness.**

Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time. At non-towered airports, all aircraft movements and flight operations rely on aircraft operators to self-report their positions and intentions. However, there is no requirement for an aircraft to have radio communications. Because aircraft do not always broadcast their positions or intentions, visual checking, radio monitoring, and situational awareness of the surroundings is critical to safety.

2.9.2.9 **Two-Way Radio Communication Procedures.**

2.9.2.9.1 General.

The airport operator must ensure that tenant and construction contractor personnel engaged in activities involving unescorted operation on aircraft movement areas observe the proper procedures for communications, including using appropriate radio frequencies at airports with and without ATCT. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

1. Airport operations
2. ATCT

3. Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.
4. Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

2.9.2.9.2 Areas Requiring Two-Way Radio Communication with the ATCT.

Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

2.9.2.9.3 Frequencies to be Used.

The airport operator will specify the frequencies to be used by the contractor, which may include the CTAF for monitoring of aircraft operations. Frequencies may also be assigned by the airport operator for other communications, including any radio frequency in compliance with Federal Communications Commission requirements. At airports with an ATCT, the airport operator will specify the frequency assigned by the ATCT to be used between contractor vehicles and the ATCT.

2.9.2.9.4 Proper radio usage, including read back requirements.

2.9.2.9.5 Proper phraseology, including the International Phonetic Alphabet.

2.9.2.9.6 Light Gun Signals.

Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/runway_safety/publications/ (see "Signs & Markings Vehicle Dashboard Sticker") or obtained from the FAA Airports Regional Office.

2.9.2.10 **Maintenance of the secured area of the airport, including:**

2.9.2.10.1 Fencing and Gates.

Airport operators and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. The Department of Transportation (DOT) document DOT/FAA/AR-

00/52, *Recommended Security Guidelines for Airport Planning and Construction*, provides more specific information on fencing. A copy of this document can be obtained from the Airport Consultants Council, Airports Council International, or American Association of Airport Executives.

2.9.2.10.2 Badging Requirements.

Airports subject to 49 CFR Part 1542, *Airport Security*, must meet standards for access control, movement of ground vehicles, and identification of construction contractor and tenant personnel.

2.10 Wildlife Management.

The CSPP and SPCD must be in accordance with the airport operator's wildlife hazard management plan, if applicable. See AC 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports,* and CertAlert 98-05, *Grasses Attractive to Hazardous Wildlife.* Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

2.10.1 Trash.

Food scraps must be collected from construction personnel activity.

2.10.2 Standing Water.

2.10.3 Tall Grass and Seeds.

Requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, *Standards for Specifying Construction of Airports,* Item T-901, Seeding. Contact the local office of the United Sates Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations.

2.10.4 Poorly Maintained Fencing and Gates.

See paragraph 2.9.2.10.1.

2.10.5 Disruption of Existing Wildlife Habitat.

While this will frequently be unavoidable due to the nature of the project, the CSPP should specify under what circumstances (location, wildlife type) contractor personnel should immediately notify the airport operator of wildlife sightings.

2.11 **Foreign Object Debris (FOD) Management.**

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. Construction contractors must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) or covers may be necessary to contain material that can be carried by wind into areas where aircraft operate. See AC 150/5210-24, *Foreign Object Debris (FOD) Management.*

2.12 **Hazardous Materials (HAZMAT) Management.**

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15, *Management of Airport Industrial Waste.*

2.13 **Notification of Construction Activities.**

The CSPP and SPCD must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable.

2.13.1 List of Responsible Representatives/points of contact for all involved parties, and procedures for contacting each of them, including after hours.

2.13.2 NOTAMs.

Only the airport operator may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The airport operator must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must either enter the NOTAM into NOTAM Manager, or provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The airport operator must file and maintain a list of authorized representatives with the FSS. Refer to AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators,* for a sample NOTAM form. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the airport operator. See paragraph 2.7.1.1 about issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

2.13.3 Emergency notification procedures for medical, fire fighting, and police response.

2.13.4 Coordination with ARFF.

The CSPP must detail procedures for coordinating through the airport sponsor with ARFF personnel, mutual aid providers, and other emergency services if construction requires:

1. The deactivation and subsequent reactivation of water lines or fire hydrants, or
2. The rerouting, blocking and restoration of emergency access routes, or
3. The use of hazardous materials on the airfield.

2.13.5 Notification to the FAA.

2.13.5.1 **Part 77.**

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e., cranes, graders, other equipment) on airports. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, can be used for this purpose and submitted to the appropriate FAA Airports Regional or District Office. See Appendix A to download the form. Further guidance is available on the FAA web site at oeaaa.faa.gov.

2.13.5.2 **Part 157.**

With some exceptions, Title 14 CFR Part 157, *Notice of Construction, Alteration, Activation, and Deactivation of Airports*, requires that the airport operator notify the FAA in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport. Notification involves submitting FAA Form 7480-1, *Notice of Landing Area Proposal*, to the nearest FAA Airports Regional or District Office. See Appendix A to download the form.

2.13.5.3 **NAVAIDs.**

For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

2.13.5.3.1 Airport Owned/FAA Maintained.

If construction operations require a shutdown of 24 hours or greater in duration, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown, using Strategic Event Coordination (SEC) Form 6000.26 contained within FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

2.13.5.3.2 FAA Owned.

1. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs, using SEC Form 6000.26.
2. Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. Refer to active Service Level Agreement with ATO for specifics.

2.14 **Inspection Requirements.**

2.14.1 Daily Inspections.

Inspections should be conducted at least daily, but more frequently if necessary to ensure conformance with the CSPP. A sample checklist is provided in Appendix D, Construction Project Daily Safety Inspection Checklist. See also AC 150/5200-18, *Airport Safety Self-Inspection.* Airport operators holding a Part 139 certificate are required to conduct self-inspections during unusual conditions, such as construction activities, that may affect safe air carrier operations.

2.14.2 Interim Inspections.

Inspections should be conducted of all areas to be (re)opened to aircraft traffic to ensure the proper operation of lights and signs, for correct markings, and absence of FOD. The contractor should conduct an inspection of the work area with airport operations personnel. The contractor should ensure that all construction materials have been secured, all pavement surfaces have been swept clean, all transition ramps have been properly constructed, and that surfaces have been appropriately marked for aircraft to operate safely. Only if all items on the list meet with the airport operator's approval should the air traffic control tower be notified to open the area to aircraft operations. The contractor should be required to retain a suitable workforce and the necessary equipment at the work area for any last minute cleanup that may be requested by the airport operator prior to opening the area.

2.14.3 Final Inspections.

New runways and extended runway closures may require safety inspections at certificated airports prior to allowing air carrier service. Coordinate with the FAA Airport Certification Safety Inspector (ACSI) to determine if a final inspection will be necessary.

2.15 **Underground Utilities.**

The CSPP and/or SPCD must include procedures for locating and protecting existing underground utilities, cables, wires, pipelines, and other underground facilities in excavation areas. This may involve coordinating with public utilities and FAA ATO/Technical Operations. Note that "One Call" or "Miss Utility" services do not include FAA ATO/Technical Operations.

2.16 **Penalties.**

The CSPP should detail penalty provisions for noncompliance with airport rules and regulations and the safety plans (for example, if a vehicle is involved in a runway incursion). Such penalties typically include rescission of driving privileges or access to the AOA.

2.17 **Special Conditions.**

The CSPP must detail any special conditions that affect the operation of the airport and will require the activation of any special procedures (for example, low-visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle / Pedestrian Deviation (VPD) and other activities requiring construction suspension/resumption).

2.18 **Runway and Taxiway Visual Aids.**

This includes marking, lighting, signs, and visual NAVAIDs. The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs that are to continue to perform their functions during construction remain in place and operational. Visual NAVAIDs that are not serving their intended function during construction must be temporarily disabled, covered, or modified as necessary. The CSPP must address the following, as appropriate:

2.18.1 General.

Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, and other wind currents and constructed of materials that will minimize damage to an aircraft in the event of inadvertent contact. Items used to secure such markings must be of a color similar to the marking.

2.18.2 Markings.

During the course of construction projects, temporary pavement markings are often required to allow for aircraft operations during or between work periods. During the design phase of the project, the designer should coordinate with the project manager,

airport operations, airport users, the FAA Airports project manager, and Airport Certification Safety Inspector for Part 139 airports to determine minimum temporary markings. The FAA Airports project manager will, wherever a runway is closed, coordinate with the appropriate FAA Flight Standards Office and disseminate findings to all parties. Where possible, the temporary markings on finish grade pavements should be placed to mirror the dimensions of the final markings. Markings must be in compliance with the standards of AC 150/5340-1, *Standards for Airport Markings*, except as noted herein. Runways and runway exit taxiways closed to aircraft operations are marked with a yellow X. The preferred visual aid to depict temporary runway closure is the lighted X signal placed on or near the runway designation numbers. (See paragraph 2.18.2.1.2.)

2.18.2.1 **Closed Runways and Taxiways.**

2.18.2.1.1 Permanently Closed Runways.

For runways, obliterate the threshold marking, runway designation marking, and touchdown zone markings, and place an X at each end and at 1,000-foot (300 m) intervals. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X.

2.18.2.1.2 Temporarily Closed Runways.

For runways that have been temporarily closed, place an X at each end of the runway directly on or as near as practicable to the runway designation numbers. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X. See Figure 2-3. See also paragraph 2.18.3.3.

2.18.2.1.3 Partially Closed Runways and Displaced Thresholds.

When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings must comply with AC 150/5340-1. An X is not used on a partially closed runway or a runway with a displaced threshold. See paragraph 2.7.1.1 for the difference between partially closed runways and runways with displaced thresholds. Because of the temporary nature of threshold displacement due to construction, it is not necessary to re-adjust the existing runway centerline markings to meet standard spacing for a runway with a visual approach. Some of the requirements below may be waived in the cases of low-activity airports and/or short duration changes that are measured in days rather than weeks. Consider whether the presence of an airport traffic

control tower allows for the development of special procedures. Contact the appropriate FAA Airports Regional or District Office for assistance.

Figure 2-3. Markings for a Temporarily Closed Runway

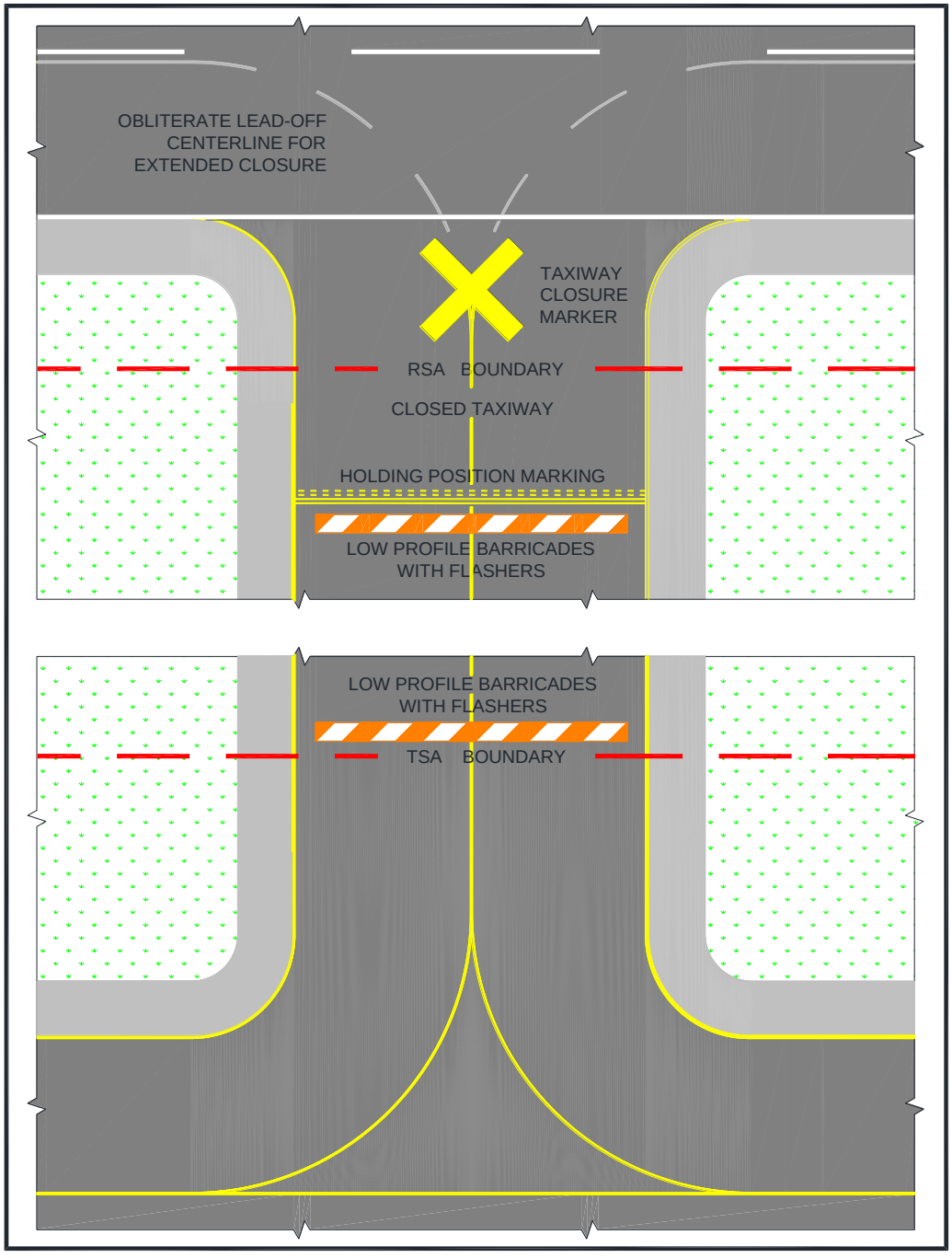


1. **Partially Closed Runways.** Pavement markings for temporary closed portions of the runway consist of a runway threshold bar, runway designation, and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing (see AC 150/5340-1). Obliterate or cover markings prior to the moved threshold. Existing touchdown zone markings beyond the moved threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-4.
2. **Displaced Thresholds.** Pavement markings for a displaced threshold consist of a runway threshold bar, runway designation, and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. See AC 150/5340-1. Obliterate markings prior to the displaced threshold. Existing touchdown zone markings beyond the displaced threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-2.

2.18.2.1.4 Taxiways.

1. **Permanently Closed Taxiways.** AC 150/5300-13 *Airport Design*, notes that it is preferable to remove the pavement, but for pavement that is to remain, place an X at the entrance to both ends of the closed section. Obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway. See Figure 2-4.

Figure 2-4. Temporary Taxiway Closure



2. **Temporarily Closed Taxiways.** Place barricades outside the safety area of intersecting taxiways. For runway/taxiway intersections, place an X at the entrance to the closed taxiway from the runway. If the taxiway will be closed for an extended period, obliterate taxiway centerline markings, including runway leadoff lines and taxiway to taxiway turns, leading to the closed section. Always obliterate runway lead-off lines for high speed exits, regardless of the duration of the closure. If the centerline markings will be reused upon reopening the taxiway, it is preferable to paint over the marking. This will result in less damage to the pavement when the upper layer of paint is ultimately removed. See Figure 2-4.

2.18.2.1.5 Temporarily Closed Airport.

When the airport is closed temporarily, mark all the runways as closed.

2.18.2.2 If unable to paint temporary markings on the pavement, construct them from any of the following materials: fabric, colored plastic, painted sheets of plywood, or similar materials. They must be properly configured and appropriately secured to prevent movement by prop wash, jet blast, or other wind currents. Items used to secure such markings must be of a color similar to the marking.

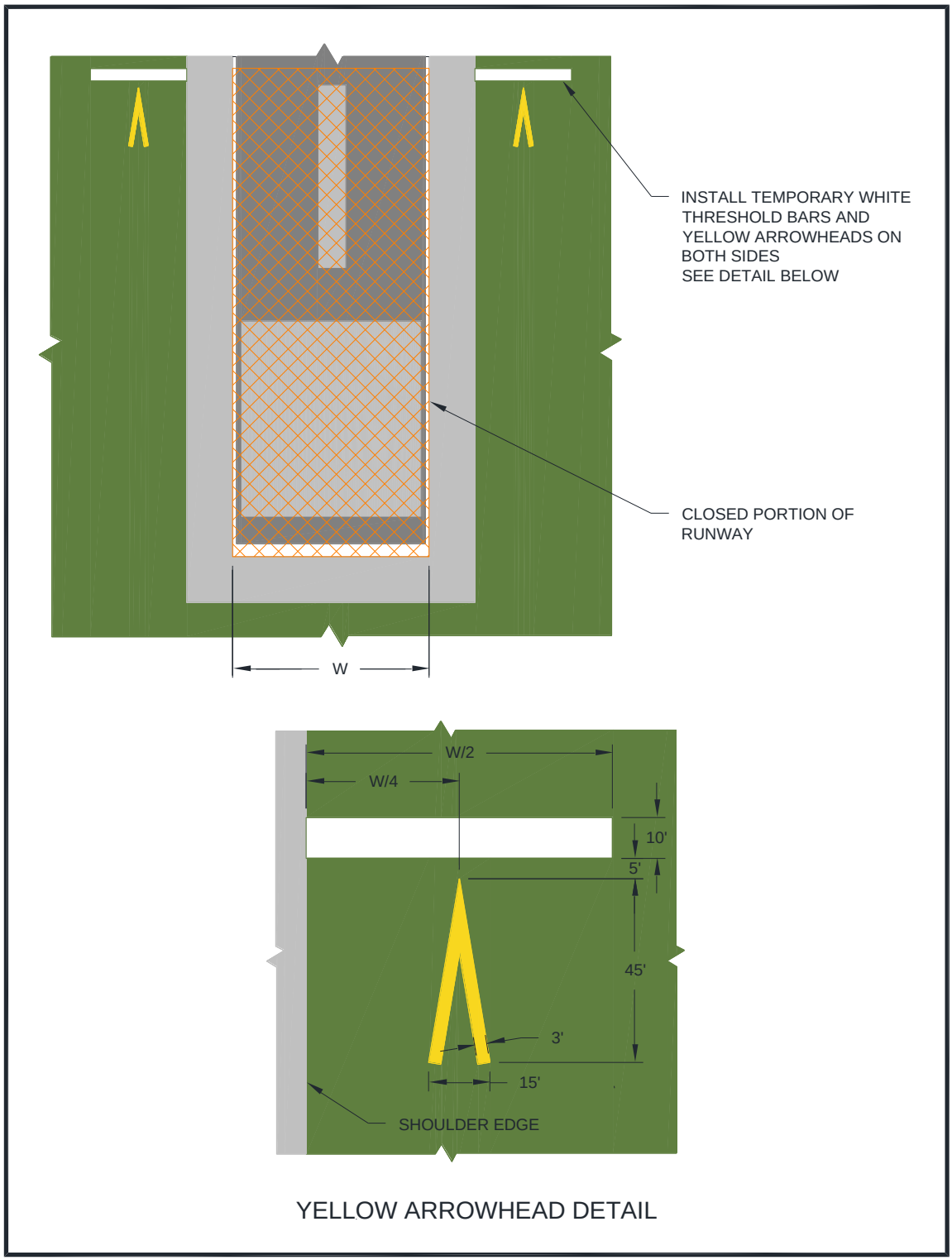
2.18.2.3 It may be necessary to remove or cover runway markings, including but not limited to, runway designation markings, threshold markings, centerline markings, edge stripes, touchdown zone markings and aiming point markings, depending on the length of construction and type of activity at the airport. When removing runway markings, apply the same treatment to areas between stripes or numbers, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

2.18.2.4 If it is not possible to install threshold bars, chevrons, and arrows on the pavement, "temporary outboard white threshold bars and yellow arrowheads", see Figure 2-5, may be used. Locate them outside of the runway pavement surface on both sides of the runway. The dimensions must be as shown in Figure 2-5. If the markings are not discernible on grass or snow, apply a black background with appropriate material over the ground to ensure they are clearly visible.

2.18.2.5 The application rate of paint to mark a short-term temporary runway and taxiway markings may deviate from the standard (see Item P-620, "Runway and Taxiway Painting," in AC 150/5370-10), but the dimensions must meet the existing standards. When applying temporary markings at night, it is recommended that the fast curing, Type II paint be used to help offset the higher humidity and cooler temperatures often experienced at night. Diluting the paint will substantially increase cure time and is not recommended. Glass beads are not recommended for temporary markings. Striated markings may also be used for certain temporary markings. AC

150/5340-1, *Standards for Airport Markings*, has additional guidance on temporary markings.

Figure 2-5. Temporary Outboard White Threshold Bars and Yellow Arrowheads



2.18.3 Lighting and Visual NAVAIDs.

This paragraph refers to standard runway and taxiway lighting systems. See below for hazard lighting. Lighting installation must be in conformance with AC 150/5340-30, *Design and Installation Details for Airport Visual Aids,* and fixture design in conformance with AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights.* When disconnecting runway and taxiway lighting fixtures, disconnect the associated isolation transformers. See AC 150/5340-26, *Maintenance of Airport Visual Aid Facilities*, for disconnect procedures and safety precautions. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources. Maintain mandatory hold signs to operate normally in any situation where pilots or vehicle drivers could mistakenly be in that location. At towered airports certificated under Part 139, holding position signs are required to be illuminated on open taxiways crossing to closed or inactive runways. If the holding position sign is installed on the runway circuit for the closed runway, install a jumper to the taxiway circuit to provide power to the holding position sign for nighttime operations. Where it is not possible to maintain power to signs that would normally be operational, install barricades to exclude aircraft. Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4 illustrate temporary changes to lighting and visual NAVAIDs.

2.18.3.1 **Permanently Closed Runways and Taxiways.**

For runways and taxiways that have been permanently closed, disconnect the lighting circuits.

2.18.3.2 **Temporarily Closed Runways and New Runways Not Yet Open to Air Traffic.**

If available, use a lighted X, both at night and during the day, placed at each end of the runway on or near the runway designation numbers facing the approach. (Note that the lighted X must be illuminated at all times that it is on a runway.) The use of a lighted X is required if night work requires runway lighting to be on. See AC 150/5345-55, *Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure.* For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, disconnect the lighting circuits or secure switches to prevent inadvertent activation. For runways that will be opened periodically, coordinate procedures with the FAA air traffic manager or, at airports without an ATCT, the airport operator. Activate stop bars if available. Figure 2-6 shows a lighted X by day. Figure 2-7 shows a lighted X at night.

Figure 2-6. Lighted X in Daytime



Figure 2-7. Lighted X at Night



2.18.3.3 **Partially Closed Runways and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially

closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service.

2.18.3.3.1 Partially Closed Runways.

Disconnect edge and threshold lights on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed). Alternately, cover the light fixtures in such a way as to prevent light leakage. See Figure 2-1.

2.18.3.3.2 Temporary Displaced Thresholds.

Edge lighting in the area of the displacement emits red light in the direction of approach and yellow light (white for visual runways) in the opposite direction. If the displacement is 700 feet or less, blank out centerline lights in the direction of approach or place the centerline lights out of service. If the displacement is over 700 feet, place the centerline lights out of service. See AC 150/5340-30 for details on lighting displaced thresholds. See Figure 2-2.

2.18.3.3.3 Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.

2.18.3.3.4 A temporary threshold on an unlighted runway may be marked by retroreflective, elevated markers in addition to markings noted in paragraph 2.18.2.1.3. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible. See AC 150/5345-39, *Specification for L-853, Runway and Taxiway Retroreflective Markers.*

2.18.3.3.5 Temporary threshold lights and runway end lights and related visual NAVAIDs are installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 inch (7.6 cm) above ground. (The standard above ground height for airport lighting fixtures is 14 inches (35 cm)). When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage. See AC 150/5370-10.

2.18.3.3.6 Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are intended primarily for visual flight rules (VFR) aircraft operations but may

be used for instrument flight rules (IFR) aircraft operations, upon individual approval from the Flight Standards Division of the applicable FAA Regional Office.

2.18.3.3.7 When runway thresholds are temporarily displaced, reconfigure yellow lenses (caution zone), as necessary, and place the centerline lights out of service.

2.18.3.3.8 Relocate the Visual Glide Slope Indicator (VGSI), such as Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI); other airport lights, such as Runway End Identifier Lights (REIL); and approach lights to identify the temporary threshold. Another option is to disable the VGSI or any equipment that would give misleading indications to pilots as to the new threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway. If the FAA owns and operates the VGSI, coordinate its installation or disabling with the local ATO/Technical Operations Office. Relocation of such visual aids will depend on the duration of the project and the benefits gained from the relocation, as this can result in great expense. See FAA JO 6850.2, *Visual Guidance Lighting Systems,* for installation criteria for FAA owned and operated NAVAIDs.

2.18.3.3.9 Issue a NOTAM to inform pilots of temporary lighting conditions.

2.18.3.4 **Temporarily Closed Taxiways.**

If possible, deactivate the taxiway lighting circuits. When deactivation is not possible (for example other taxiways on the same circuit are to remain open), cover the light fixture in a way as to prevent light leakage.

2.18.4 Signs.

To the extent possible, signs must be in conformance with AC 150/5345-44, *Specification for Runway and Taxiway Signs*, and AC 150/5340-18, *Standard for Airport Sign Systems.*

2.18.4.1 **Existing Signs.**

Runway exit signs are to be covered for closed runway exits. Outbound destination signs are to be covered for closed runways. Any time a sign does not serve its normal function or would provide conflicting information, it must be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed. For long term construction projects, consider relocating signs, especially runway distance remaining signs.

2.18.4.2 **Temporary Signs.**

Orange construction signs comprise a message in black on an orange background. Orange construction signs may help pilots be aware of changed conditions. The airport operator may choose to introduce these signs as part of a movement area construction project to increase situational awareness when needed. Locate signs outside the taxiway safety limits and ahead of construction areas so pilots can take timely action. Use temporary signs judiciously, striking a balance between the need for information and the increase in pilot workload. When there is a concern of pilot "information overload," the applicability of mandatory hold signs must take precedence over orange construction signs recommended during construction. Temporary signs must meet the standards for such signs in Engineering Brief 93, *Guidance for the Assembly and Installation of Temporary Orange Construction Signs.* Many criteria in AC 150/5345-44, *Specification for Runway and Taxiway Signs,* are referenced in the Engineering Brief. Permissible sign legends are:

1. CONSTRUCTION AHEAD,
2. CONSTRUCTION ON RAMP, and
3. RWY XX TAKEOFF RUN AVAILABLE XXX FT.

Phasing, supported by drawings and sign schedule, for the installation of orange construction signs must be included in the CSPP or SPCD.

2.18.4.2.1 Takeoff Run Available (TORA) signs.

Recommended: Where a runway has been shortened for takeoff, install orange TORA signs well before the hold lines, such as on a parallel taxiway prior to a turn to a runway hold position. See EB 93 for sign size and location.

2.18.4.2.2 Sign legends are shown in Figure F-1.

Note: See Figure E-1, Figure E-2, Figure E-3, Figure F-2, and Figure F-3 for examples of orange construction sign locations.

2.19 **Marking and Signs for Access Routes.**

The CSPP should indicate that pavement markings and signs for construction personnel will conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23, *Frangible Connections,* which may require modification to size and height guidance in the MUTCD.

2.20 **Hazard Marking, Lighting and Signing.**

2.20.1 Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. The CSPP must specify prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also consider less obvious construction-related hazards and include markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

2.20.2 Equipment.

2.20.2.1 **Barricades.**

Low profile barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude aircraft, gaps between barricades must be smaller than the wingspan of the smallest aircraft to be excluded; if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 feet (1.2 meters). Provision must be made for ARFF access if necessary. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

2.20.2.2 **Lights.**

Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 feet (3 meters). Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.

2.20.2.3 **Supplement Barricades with Signs (for example) As Necessary.**

Examples are “No Entry” and “No Vehicles.” Be aware of the increased effects of wind and jet blast on barricades with attached signs.

2.20.2.4 **Air Operations Area – General.**

Barricades are not permitted in any active safety area or on the runway side of a runway hold line. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, highly reflective collapsible barricades marked with diagonal, alternating orange and white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 inch (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway / taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, and other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inch (7.6 cm) above the ground. Figure 2-8 and Figure 2-9 show sample barricades with proper coloring and flags.

Figure 2-8. Interlocking Barricades



Figure 2-9. Low Profile Barricades



2.20.2.5 **Air Operations Area – Runway/Taxiway Intersections.**

Use highly reflective barricades with lights to close taxiways leading to closed runways. Evaluate all operating factors when determining how to mark temporary closures that can last from 10 to 15 minutes to a much longer period of time. However, even for closures of relatively short duration, close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

2.20.2.6 **Air Operations Area – Other.**

Beyond runway and taxiway object free areas and aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

2.20.2.7 **Maintenance.**

The construction specifications must include a provision requiring the contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

2.21 Work Zone Lighting for Nighttime Construction.

Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. Refer to AC 150/5370-10 for minimum illumination levels for nighttime paving projects. Additionally, it is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely

illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations. Construction lighting units should be identified and generally located on the construction phasing plans in relationship to the ATCT and active runways and taxiways.

2.22 **Protection of Runway and Taxiway Safety Areas.**

Runway and taxiway safety areas, OFZs, OFAs, and approach surfaces are described in AC 150/5300-13. Protection of these areas includes limitations on the location and height of equipment and stockpiled material. An FAA airspace study may be required. Coordinate with the appropriate FAA Airports Regional or District Office if there is any doubt as to requirements or dimensions (see paragraph 2.13.5) as soon as the location and height of materials or equipment are known. The CSPP should include drawings showing all safety areas, object free areas, obstacle free zones and approach departure surfaces affected by construction.

2.22.1 Runway Safety Area (RSA).

A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway (see AC 150/5300-13). Construction activities within the existing RSA are subject to the following conditions:

2.22.1.1 No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. (See AC 150/5300-13). The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Coordinate with the appropriate FAA Airports Regional or District Office to have declared distances information published, and appropriate NOTAMs issued. See AC 150/5300-13 for guidance on the use of declared distances.

2.22.1.2 The airport operator must coordinate the adjustment of RSA dimensions as permitted above with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

2.22.1.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations.

2.22.1.4 **Excavations.**

2.22.1.4.1 Open trenches or excavations are not permitted within the RSA while the runway is open. Backfill trenches before the runway is opened. If backfilling excavations before the runway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

2.22.1.4.2 Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.1.5 **Erosion Control.**

Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.2 Runway Object Free Area (ROFA).

Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

2.22.3 Taxiway Safety Area (TSA).

2.22.3.1 A taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. (See AC 150/5300-13.) Since the width of the TSA is equal to the wingspan of the design aircraft, no construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction. Give special consideration to TSA dimensions at taxiway turns and intersections. (see AC 150/5300-13).

2.22.3.2 The airport operator must coordinate the adjustment of the TSA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager and issue a NOTAM.

2.22.3.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations.

2.22.3.4 **Excavations.**

1. Curves. Open trenches or excavations are not permitted within the TSA while the taxiway is open. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.
2. Straight Sections. Open trenches or excavations are not permitted within the TSA while the taxiway is open for unrestricted aircraft operations. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations to allow the safe passage of ARFF equipment and of the heaviest aircraft operating on the taxiway across the trench without causing damage to the equipment or aircraft. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the following restrictions:
   a. Taxiing speed is limited to 10 mph.
   b. Appropriate NOTAMs are issued.
   c. Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.
   d. Low mass, low-profile lighted barricades are installed.
   e. Appropriate temporary orange construction signs are installed.
3. Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.3.5 **Erosion control.**

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.4 Taxiway Object Free Area (TOFA).

Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway object free area during normal operations. Thus, the restrictions are more stringent. Except as provided below, no construction may occur within the taxiway object free area while the taxiway is open for aircraft operations.

2.22.4.1 The taxiway object free area dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a taxiway object free area that is equal to the taxiway object free area width available. Give special consideration to TOFA dimensions at taxiway turns and intersections.

2.22.4.2 Offset taxiway centerline and edge pavement markings (do not use glass beads) may be used as a temporary measure to provide the required taxiway object free area. Where offset taxiway pavement markings are provided, centerline lighting, centerline reflectors, or taxiway edge reflectors are required. Existing lighting that does not coincide with the temporary markings must be taken out of service.

2.22.4.3 Construction activity, including open excavations, may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

2.22.4.3.1 Taxiing speed is limited to 10 mph.

2.22.4.3.2 NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.

2.22.4.3.3 Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.

2.22.4.3.4 If desired, appropriate orange construction signs are installed. See paragraph 2.18.4.2 and Appendix F.

2.22.4.3.5 Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

2.22.4.3.6 Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft. Due to liability issues, the airport operator should require airlines to provide flaggers for directing taxiing aircraft.

2.22.5 Obstacle Free Zone (OFZ).

In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6 Runway Approach/Departure Areas and Clearways.

All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces, as defined in AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6.1 Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the airport operator with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

2.22.6.2 **Caution About Partial Runway Closures.**

When filing a NOTAM for a partial runway closure, clearly state that the portion of pavement located prior to the threshold is not available for landing and departing traffic. In this case, the threshold has been moved for both landing and takeoff purposes (this is different than a displaced threshold). There may be situations where the portion of closed runway is available for taxiing only. If so, the NOTAM must reflect this condition).

2.22.6.3 **Caution About Displaced Thresholds.**

Implementation of a displaced threshold affects runway length available for aircraft landing over the displacement. Depending on the reason for the displacement (to provide obstruction clearance or RSA), such a displacement may also require an adjustment in the landing distance available and accelerate-stop distance available in the opposite direction. If project scope includes personnel, equipment, excavation, or other work within the existing RSA of any usable runway end, do not implement a displaced threshold unless arrivals and departures toward the construction activity are prohibited. Instead, implement a partial closure.

2.23 **Other Limitations on Construction.**

The CSPP must specify any other limitations on construction, including but not limited to:

2.23.1 Prohibitions.

2.23.1.1 No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

2.23.1.2 No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.

2.23.1.3 No use of electrical blasting caps on or within 1,000 feet (300 meters) of the airport property. See AC 150/5370-10.

2.23.2 Restrictions.

2.23.2.1 Construction suspension required during specific airport operations.

2.23.2.2 Areas that cannot be worked on simultaneously.

2.23.2.3 Day or night construction restrictions.

2.23.2.4 Seasonal construction restrictions.

2.23.2.5 Temporary signs not approved by the airport operator.

2.23.2.6 Grades changes that could result in unplanned effects on NAVAIDs.

CHAPTER 3. GUIDELINES FOR WRITING A CSPP

3.1 General Requirements.

The CSPP is a standalone document written to correspond with the subjects outlined in paragraph 2.4. The CSPP is organized by numbered sections corresponding to each subject listed in paragraph 2.4, and described in detail in paragraphs 2.5 - 2.23. Each section number and title in the CSPP matches the corresponding subject outlined in paragraph 2.4 (for example, 1. Coordination, 2. Phasing, 3. Areas and Operations Affected by the Construction Activity, and so on). With the exception of the project scope of work outlined in Section 2. Phasing, only subjects specific to operational safety during construction should be addressed.

3.2 Applicability of Subjects.

Each section should, to the extent practical, focus on the specific subject. Where an overlapping requirement spans several sections, the requirement should be explained in detail in the most applicable section. A reference to that section should be included in all other sections where the requirement may apply. For example, the requirement to protect existing underground FAA ILS cables during trenching operations could be considered FAA ATO coordination (Coordination, paragraph 2.5.3), an area and operation affected by the construction activity (Areas and Operations Affected by the Construction Activity, paragraph 2.7.1.4), a protection of a NAVAID (Protection of Navigational Aids (NAVAIDs), paragraph 2.8), or a notification to the FAA of construction activities (Notification of Construction Activities, paragraph 2.13.5.3.2). However, it is more specifically an underground utility requirement (Underground Utilities, paragraph 2.15). The procedure for protecting underground ILS cables during trenching operations should therefore be described in 2.4.2.11: "The contractor must coordinate with the local FAA System Support Center (SSC) to mark existing ILS cable routes along Runway 17-35. The ILS cables will be located by hand digging whenever the trenching operation moves within 10 feet of the cable markings." All other applicable sections should include a reference to 2.4.2.11: "ILS cables shall be identified and protected as described in 2.4.2.11" or "See 2.4.2.11 for ILS cable identification and protection requirements." Thus, the CSPP should be considered as a whole, with no need to duplicate responses to related issues.

3.3 Graphical Representations.

Construction safety drawings should be included in the CSPP as attachments. When other graphical representations will aid in supporting written statements, the drawings, diagrams, and/or photographs should also be attached to the CSPP. References should be made in the CSPP to each graphical attachment and may be made in multiple sections.

3.4 **Reference Documents.**

The CSPP must not incorporate a document by reference unless reproduction of the material in that document is prohibited. In that case, either copies of or a source for the referenced document must be provided to the contractor. Where this AC recommends references (e.g. as in paragraph 3.9) the intent is to include a reference to the corresponding section in the CSPP, not to this Advisory Circular.

3.5 **Restrictions.**

The CSPP should not be considered as a project design review document. The CSPP should also avoid mention of permanent ("as-built") features such as pavements, markings, signs, and lighting, except when such features are intended to aid in maintaining operational safety during the construction.

3.6 **Coordination.**

Include in this section a detailed description of conferences and meetings to be held both before and during the project. Include appropriate information from AC 150/5370-12. Discuss coordination procedures and schedules for each required FAA ATO Technical Operations shutdown and restart and all required flight inspections.

3.7 **Phasing.**

Include in this section a detailed scope of work description for the project as a whole and each phase of work covered by the CSPP. This includes all locations and durations of the work proposed. Attach drawings to graphically support the written scope of work. Detail in this section the sequenced phases of the proposed construction. Include a reference to paragraph 3.8, as appropriate.

3.8 **Areas and Operations Affected by Construction.**

Focus in this section on identifying the areas and operations affected by the construction. Describe corresponding mitigation that is not covered in detail elsewhere in the CSPP. Include references to paragraphs below as appropriate. Attach drawings as necessary to graphically describe affected areas and mechanisms proposed. See Appendix F for sample operational effects tables and figures.

3.9 **NAVAID Protection.**

List in this section all NAVAID facilities that will be affected by the construction. Identify NAVAID facilities that will be placed out of service at any time prior to or during construction activities. Identify individuals responsible for coordinating each shutdown and when each facility will be out of service. Include a reference to paragraph 3.6 for FAA ATO NAVAID shutdown, restart, and flight inspection coordination. Outline in detail procedures to protect each NAVAID facility remaining in service from interference by construction activities. Include a reference to paragraph 3.14 for the

issuance of NOTAMs as required. Include a reference to paragraph 3.16 for the protection of underground cables and piping serving NAVAIDs. If temporary visual aids are proposed to replace or supplement existing facilities, include a reference to paragraph 3.19. Attach drawings to graphically indicate the affected NAVAIDS and the corresponding critical areas.

3.10 **Contractor Access.**

This will necessarily be the most extensive section of the CSPP. Provide sufficient detail so that a contractor not experienced in working on airports will understand the unique restrictions such work will require. Due to this extent, it should be broken down into subsections as described below:

3.10.1 Location of Stockpiled Construction Materials.

Describe in this section specific locations for stockpiling material. Note any height restrictions on stockpiles. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify stockpiles. Include a reference to paragraph 3.11 for provisions to prevent stockpile material from becoming wildlife attractants. Include a reference to paragraph 3.12 for provisions to prevent stockpile material from becoming FOD. Attach drawings to graphically indicate the stockpile locations.

3.10.2 Vehicle and Pedestrian Operations.

While there are many items to be addressed in this major subsection of the CSPP, all are concerned with one main issue: keeping people and vehicles from areas of the airport where they don't belong. This includes preventing unauthorized entry to the AOA and preventing the improper movement of pedestrians or vehicles on the airport. In this section, focus on mechanisms to prevent construction vehicles and workers traveling to and from the worksite from unauthorized entry into movement areas. Specify locations of parking for both employee vehicles and construction equipment, and routes for access and haul roads. In most cases, this will best be accomplished by attaching a drawing. Quote from AC 150/5210-5 specific requirements for contractor vehicles rather than referring to the AC as a whole, and include special requirements for identifying HAZMAT vehicles. Quote from, rather than incorporate by reference, AC 150/5210-20 as appropriate to address the airport's rules for ground vehicle operations, including its training program. Discuss the airport's recordkeeping system listing authorized vehicle operators.

3.10.3 Two-Way Radio Communications.

Include a special section to identify all individuals who are required to maintain communications with Air Traffic (AT) at airports with active towers, or monitor CTAF at airports without or with closed ATCT. Include training requirements for all individuals required to communicate with AT. Individuals required to monitor AT frequencies should also be identified. If construction employees are also required to communicate by radio with Airport Operations, this procedure should be described in detail. Usage of vehicle mounted radios and/or portable radios should be addressed. Communication procedures for the event of disabled radio communication (that is, light

signals, telephone numbers, others) must be included. All radio frequencies should by identified (Tower, Ground Control, CTAF, UNICOM, ATIS, and so on).

3.10.4 Airport Security.

Address security as it applies to vehicle and pedestrian operations. Discuss TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs. Attach drawings to graphically indicate secured and/or Security Identification Display Areas (SIDA), perimeter fencing, and available access points.

3.11 **Wildlife Management.**

Discuss in this section wildlife management procedures. Describe the maintenance of existing wildlife mitigation devices, such as perimeter fences, and procedures to limit wildlife attractants. Include procedures to notify Airport Operations of wildlife encounters. Include a reference to paragraph 3.10 for security (wildlife) fence integrity maintenance as required.

3.12 **FOD Management.**

In this section, discuss methods to control and monitor FOD: worksite housekeeping, ground vehicle tire inspections, runway sweeps, and so on. Include a reference to paragraph 3.15 for inspection requirements as required.

3.13 **HAZMAT Management.**

Describe in this section HAZMAT management procedures: fuel deliveries, spill recovery procedures, Safety Data Sheet (SDS), Material Safety Data Sheet (MSDS) or Product Safety Data Sheet (PSDS) availability, and other considerations. Any specific airport HAZMAT restrictions should also be identified. Include a reference to paragraph 3.10 for HAZMAT vehicle identification requirements. Quote from, rather than incorporate by reference, AC 150/5320-15.

3.14 **Notification of Construction Activities.**

List in this section the names and telephone numbers of points of contact for all parties affected by the construction project. We recommend a single list that includes all telephone numbers required under this section. Include emergency notification procedures for all representatives of all parties potentially impacted by the construction. Identify individual representatives – and at least one alternate – for each party. List both on-duty and off-duty contact information for each individual, including individuals responsible for emergency maintenance of airport construction hazard lighting and barricades. Describe procedures to coordinate immediate response to events that might adversely affect the operational safety of the airport (such as interrupted NAVAID service). Explain requirements for and the procedures for the issuance of Notices to Airmen (NOTAMs), notification to FAA required by 14 CFR Part 77 and Part 157 and in the event of affected NAVAIDs. For NOTAMs, identify an individual, and at least one alternate, responsible for issuing and cancelling each specific type of Notice to

Airmen (NOTAM) required. Detail notification methods for police, fire fighting, and medical emergencies. This may include 911, but should also include direct phone numbers of local police departments and nearby hospitals. Identify the E911 address of the airport and the emergency access route via haul roads to the construction site. Require the contractor to have this information available to all workers. The local Poison Control number should be listed. Procedures regarding notification of Airport Operations and/or the ARFF Department of such emergencies should be identified, as applicable. If airport radio communications are identified as a means of emergency notification, include a reference to paragraph 3.10. Differentiate between emergency and nonemergency notification of ARFF personnel, the latter including activities that affect ARFF water supplies and access roads. Identify the primary ARFF contact person and at least one alternate. If notification is to be made through Airport Operations, then detail this procedure. Include a method of confirmation from the ARFF department.

3.15 **Inspection Requirements.**

Describe in this section inspection requirements to ensure airfield safety compliance. Include a requirement for routine inspections by the resident engineer (RE) or other airport operator's representative and the construction contractors. If the engineering consultants and/or contractors have a Safety Officer who will conduct such inspections, identify this individual. Describe procedures for special inspections, such as those required to reopen areas for aircraft operations. Part 139 requires daily airfield inspections at certificated airports, but these may need to be more frequent when construction is in progress. Discuss the role of such inspections on areas under construction. Include a requirement to immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

3.16 **Underground Utilities.**

Explain how existing underground utilities will be located and protected. Identify each utility owner and include contact information for each company/agency in the master list. Address emergency response procedures for damaged or disrupted utilities. Include a reference to paragraph 3.14 for notification of utility owners of accidental utility disruption as required.

3.17 **Penalties.**

Describe in this section specific penalties imposed for noncompliance with airport rules and regulations, including the CSPP: SIDA violations, VPD, and others.

3.18 **Special Conditions.**

Identify any special conditions that may trigger specific safety mitigation actions outlined in this CSPP: low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, VPD, and other activities requiring construction suspension/resumption. Include a reference to paragraph 3.10 for compliance with airport safety and security measures and for radio communications as required. Include

a reference to paragraph 3.14 for emergency notification of all involved parties, including police/security, ARFF, and medical services.

3.19 **Runway and Taxiway Visual Aids.**

Include marking, lighting, signs, and visual NAVAIDS. Detail temporary runway and taxiway marking, lighting, signs, and visual NAVAIDs required for the construction. Discuss existing marking, lighting, signs, and visual NAVAIDs that are temporarily, altered, obliterated, or shut down. Consider non-federal facilities and address requirements for reimbursable agreements necessary for alteration of FAA facilities and for necessary flight checks. Identify temporary TORA signs or runway distance remaining signs if appropriate. Identify required temporary visual NAVAIDs such as REIL or PAPI. Quote from, rather than incorporate by reference, AC 150/5340-1, *Standards for Airport Markings;* AC 150/5340-18, *Standards for Airport Sign Systems;* and AC 150/5340-30, as required. Attach drawings to graphically indicate proposed marking, lighting, signs, and visual NAVAIDs.

3.20 **Marking and Signs for Access Routes.**

Detail plans for marking and signs for vehicle access routes. To the extent possible, signs should be in conformance with the Federal Highway Administration MUTCD and/or State highway specifications, not hand lettered. Detail any modifications to the guidance in the MUTCD necessary to meet frangibility/height requirements.

3.21 **Hazard Marking and Lighting.**

Specify all marking and lighting equipment, including when and where each type of device is to be used. Specify maximum gaps between barricades and the maximum spacing of hazard lighting. Identify one individual and at least one alternate responsible for maintenance of hazard marking and lighting equipment in the master telephone list. Include a reference to paragraph 3.14. Attach drawings to graphically indicate the placement of hazard marking and lighting equipment.

3.22 **Work Zone Lighting for Nighttime Construction.**

If work is to be conducted at night, specify all lighting equipment, including when and where each type of device is to be used. Indicate the direction lights are to be aimed and any directions that aiming of lights is prohibited. Specify any shielding necessary in instances where aiming is not sufficient to prevent interference with air traffic control and aircraft operations. Attach drawings to graphically indicate the placement and aiming of lighting equipment. Where the plan only indicates directions that aiming of lights is prohibited, the placement and positioning of portable lights must be proposed by the Contractor and approved by the airport operator’s representative each time lights are relocated or repositioned.

3.23 **Protection of Runway and Taxiway Safety Areas.**

This section should focus exclusively on procedures for protecting all safety areas, including those altered by the construction: methods of demarcation, limit of access, movement within safety areas, stockpiling and trenching restrictions, and so on. Reference AC 150/5300-13, as required. Include a reference to paragraph 3.10 for procedures regarding vehicle and personnel movement within safety areas. Include a reference to paragraph 3.10 for material stockpile restrictions as required. Detail requirements for trenching, excavations, and backfill. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify open excavations as required. If runway and taxiway closures are proposed to protect safety areas, or if temporary displaced thresholds and/or revised declared distances are used to provide the required Runway Safety Area, include a reference to paragraphs 3.14 and 3.19. Detail procedures for protecting the runway OFZ, runway OFA, taxiway OFA and runway approach surfaces including those altered by the construction: methods of demarcation, limit of cranes, storage of equipment, and so on. Quote from, rather than incorporate by reference, AC 150/5300-13, as required. Include a reference to paragraph 3.24 for height (i.e., crane) restrictions as required. One way to address the height of equipment that will move during the project is to establish a three-dimensional "box" within which equipment will be confined that can be studied as a single object. Attach drawings to graphically indicate the safety area, OFZ, and OFA boundaries.

3.24 **Other Limitations on Construction.**

This section should describe what limitations must be applied to each area of work and when each limitation will be applied: limitations due to airport operations, height (i.e., crane) restrictions, areas which cannot be worked at simultaneously, day/night work restrictions, winter construction, and other limitations. Include a reference to paragraph 3.7 for project phasing requirements based on construction limitations as required.

Page Intentionally Blank

APPENDIX A. RELATED READING MATERIAL

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

Table A-1. FAA Publications

Number	Title and Description
AC 150/5200-28	*Notices to Airmen (NOTAMs) for Airport Operators* Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	*Airport Field Condition Assessments and Winter Operations Safety* Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	*Hazardous Wildlife Attractants On or Near Airports* Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	*Painting, Marking, and Lighting of Vehicles Used on an Airport* Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	*Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports* Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	*Airport Design* FAA standards and recommendations for airport design. Establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the obstacle free-zone criteria.
AC 150/5210-24	*Airport Foreign Object Debris (FOD) Management* Guidance for developing and managing an airport foreign object debris (FOD) program

Number	Title and Description
AC 150/5320-15	*Management of Airport Industrial Waste* Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial activities.
AC 150/5340-1	*Standards for Airport Markings* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5340-18	*Standards for Airport Sign Systems* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	*Precision Approach Path Indicator (PAPI) Systems* FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.
AC 150/5340-30	*Design and Installation Details for Airport Visual Aids* Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	*Specification for L-853, Runway and Taxiway Retroreflective Markers*
AC 150/5345-44	*Specification for Runway and Taxiway Signs* FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	*Airport Lighting Equipment Certification Program* Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	*Specification for Portable Runway and Taxiway Lights* FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative.
AC 150/5345-55	*Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure*

Number	Title and Description
AC 150/5370-10	*Standards for Specifying Construction of Airports* Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
AC 150/5370-12	*Quality Management for Federally Funded Airport Construction Projects*
EB 93	*Guidance for the Assembly and Installation of Temporary Orange Construction Signs*
FAA Order 5200.11	FAA Airports (ARP) Safety Management System (SMS) Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	*Grasses Attractive to Hazardous Wildlife* Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal
FAA Form 6000.26	National NAS Strategic Interruption Service Level Agreement, Strategic Events Coordination, Airport Sponsor Form

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://www.ecfr.gov/.

Table A-2. Code of Federal Regulation

Number	Title
Title 14 CFR Part 77	Safe, Efficient Use and Preservation of the Navigable Airspace
Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part 1542	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

Page Intentionally Blank

APPENDIX B. TERMS AND ACRONYMS

Table B-1. Terms and Acronyms

Term	Definition
Form 7460-1	Notice of Proposed Construction or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. (See guidance available on the FAA web site at https://oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
Form 7480-1	Notice of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
Form 6000-26	Airport Sponsor Strategic Event Submission Form
AC	Advisory Circular
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area, as defined in 14 CFR Part 107. Means a portion of an airport, specified in the airport security program, in which security measures are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the secured area of the airport terminal building.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
AT	Air Traffic
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under

Term	Definition
	the authority of 14 CFR Part 139, *Certification of Airports*.
CFR	Code of Federal Regulations
Construction	The presence of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety and Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FOD	Foreign Object Debris/Damage
FSS	Flight Service Station
GA	General Aviation
HAZMAT	Hazardous Materials
HMA	Hot Mix Asphalt
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.

Term	Definition
NOTAM	Notices to Airmen
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.
OCC	Operations Control Center
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13 for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
OTS	Out of Service
P&R	Planning and Requirements Group
NPI	NAS Planning & Integration
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicator
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RA	Reimbursable Agreement
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway, in accordance with AC 150/5300-13.
SDS	Safety Data Sheet
SIDA	Security Identification Display Area
SMS	Safety Management System

Term	Definition
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
SSC	System Support Center
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13.
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area, or Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicator
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicator (PAPI), visual approach slope indicator (VASI), and pulse light approach slope indicator (PLASI).
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

Table C-1. CSPP Checklist

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	2.5				
Operational safety is a standing agenda item for construction progress meetings.	2.5				
Scheduling of the construction phases is properly addressed.	2.6				
Any formal agreements are established.	2.5.3				
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	2.7.1				
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	2.7.1.1				
Access routes used by ARFF vehicles affected by the project are addressed.	2.7.1.2				
Access routes used by airport and airline support vehicles affected by the project are addressed.	2.7.1.3				
Underground utilities, including water supplies for firefighting and drainage.	2.7.1.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	2.7.1.5				
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	2.7.1				
Temporary changes to taxi operations are addressed.	2.7.2.1				
Detours for ARFF and other airport vehicles are identified.	2.7.2.2				
Maintenance of essential utilities and underground infrastructure is addressed.	2.7.2.3				
Temporary changes to air traffic control procedures are addressed.	2.7.2.4				
NAVAIDs					
Critical areas for NAVAIDs are depicted on drawings.	2.8				
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	2.8				
Protection of NAVAID facilities is addressed.	2.8				
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	2.8				
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	2.8, 2.13.1, 2.13.5.3.1, 2.18.1				
Contractor Access					
The CSPP addresses areas to which contractor will have access and how	2.9				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
the areas will be accessed.					
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	2.9				
The location of stockpiled construction materials is depicted on drawings.	2.9.1				
The requirement for stockpiles in the ROFA to be approved by FAA is included.	2.9.1				
Requirements for proper stockpiling of materials are included.	2.9.1				
Construction site parking is addressed.	2.9.2.1				
Construction equipment parking is addressed.	2.9.2.2				
Access and haul roads are addressed.	2.9.2.3				
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, *Painting, Marking and Lighting of Vehicles Used on an Airport,* is included.	2.9.2.4				
Proper vehicle operations, including requirements for escorts, are described.	2.9.2.5, 2.9.2.6				
Training requirements for vehicle drivers are addressed.	2.9.2.7				
Two-way radio communications procedures are described.	2.9.2.9				
Maintenance of the secured area of the airport is addressed.	2.9.2.10				
Wildlife Management					
The airport operator's wildlife management procedures are addressed.	2.10				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	2.11				
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	2.12				
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	2.13				
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	2.13.1				
A list of local ATO/Technical Operations personnel is included.	2.13.1				
A list of ATCT managers on duty is included.	2.13.1				
A list of authorized representatives to the OCC is included.	2.13.2				
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	2.8, 2.13.2, 2.18.3.3.9				
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	2.13.2				
Emergency notification procedures for medical, fire fighting, and police	2.13.3				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
response are addressed.					
Coordination with ARFF personnel for non-emergency issues is addressed.	2.13.4				
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	2.13.5				
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	2.13.5.3.2				
Inspection Requirements					
Daily and interim inspections by both the airport operator and contractor are specified.	2.14.1, 2.14.2				
Final inspections at certificated airports are specified when required.	2.14.3				
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	2.15				
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	2.16				
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	2.17				
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	2.18.1				
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	2.18.1, 2.18.3, 2.18.4.2, 2.20.2.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The requirement for markings to be in compliance with AC 150/5340-1, *Standards for Airport Markings*, is specified.	2.18.2				
Detailed specifications for materials and methods for temporary markings are provided.	2.18.2				
The requirement for lighting to conform to AC 150/5340-30, *Design and Installation Details for Airport Visual Aids;* AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.3				
The use of a lighted X is specified where appropriate.	2.18.2.1.2, 2.18.3.2				
The requirement for signs to conform to AC 150/5345-44, *Specification for Runway and Taxiway Signs;* AC 50/5340-18, *Standards for Airport Sign Systems;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.4				
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	2.18.4.2				
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	2.20.1				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	2.20.1				
The CSPP considers less obvious construction-related hazards.	2.20.1				
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	2.20.2.1				
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	2.20.2.1				
Red lights meeting the luminance requirements of the State Highway Department are specified.	2.20.2.2				
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high.	2.20.2.3				
Barricades are specified to indicate construction locations in which no part of an aircraft may enter.	2.20.2.3				
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	2.20.2.5				
Markings for temporary closures are specified.	2.20.2.5				
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	2.20.2.7				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Work Zone Lighting for Nighttime Construction					
If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.	2.21				
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	2.22.1.1, 2.22.3.1				
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	2.22.1.2, 2.22.3.2				
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	2.22.3.3				
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.	2.22.1.4				
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	2.22.1.4				
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	2.22.1.4				
Grading and soil erosion control to maintain RSA/TSA standards are	2.22.3.5				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
addressed.					
The CSPP specifies that equipment is to be removed from the ROFA when not in use.	2.22.2				
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	2.22.3				
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	2.22.4				
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	2.22.4.3.6				
Provisions for protection of runway approach/departure areas and clearways are included.	2.22.6				
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	2.23.1.2				
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	2.23.1.3				

APPENDIX D. CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

Item	Action Required (Describe)	No Action Required (Check)
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		
Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends.		
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and		

Item	Action Required (Describe)	No Action Required (Check)
approach zones.		
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
Obliterated or faded temporary markings on active operational areas.		
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		

Item	Action Required (Describe)	No Action Required (Check)
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
Lack of radio communications with construction vehicles in airport movement areas.		
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		

Item	Action Required (Describe)	No Action Required (Check)
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
Site burning, which can cause possible obscuration.		
Construction work taking place outside of designated work areas and out of phase.		

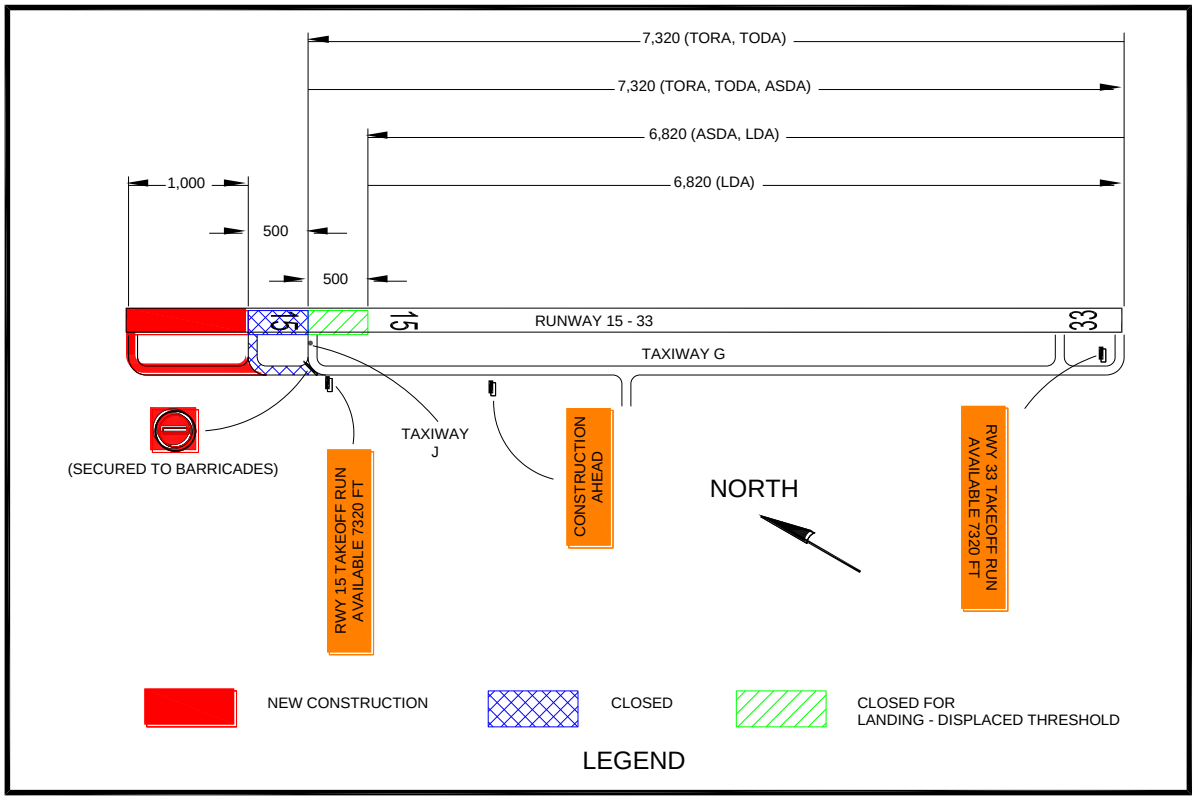
APPENDIX E. SAMPLE OPERATIONAL EFFECTS TABLE

E.1 **Project Description.**

Runway 15-33 is currently 7820 feet long, with a 500 foot stopway on the north end. This project will remove the stopway and extend the runway 1000 feet to the north and 500 feet to the south. Finally, the existing portion of the runway will be repaved. The runway 33 glide slope will be relocated. The new runway 33 localizer has already been installed by FAA Technical Operations and only needs to be switched on. Runway 15 is currently served only by a localizer, which will remain in operation as it will be beyond the future RSA. Appropriate NOTAMS will be issued throughout the project.

E.1.1 During Phase I, the runway 15 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 15 takeoff and the departure end of runway 33 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 33 will be adjusted to provide the required RSA and applicable departure surface. Excavation near Taxiway G will require its ADG to be reduced from IV to III. See Figure E-1.

Figure E-1. Phase I Example

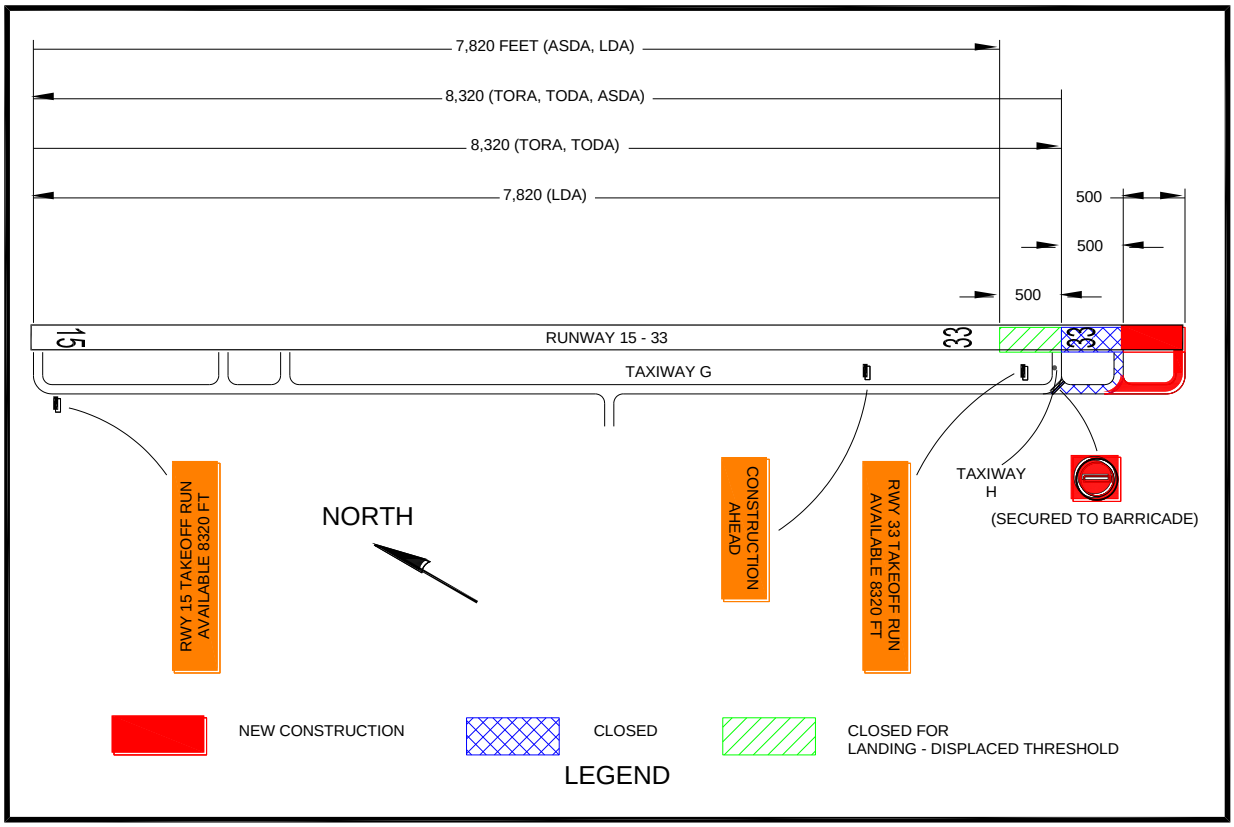


Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 33 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.2 During Phase II, the runway 33 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 33 takeoff and the departure end of runway 15 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 15 will be adjusted to provide the required RSA and applicable departure surface. See Figure E-2.

Figure E-2. Phase II Example



Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 15 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.3 During Phase III, the existing portion of the runway will be repaved with Hot Mix Asphalt (HMA) and the runway 33 glide slope will be relocated. Construction will be accomplished between the hours of 8:00 pm and 5:00 am, during which the runway will be closed to operations.

Figure E-3. Phase III Example

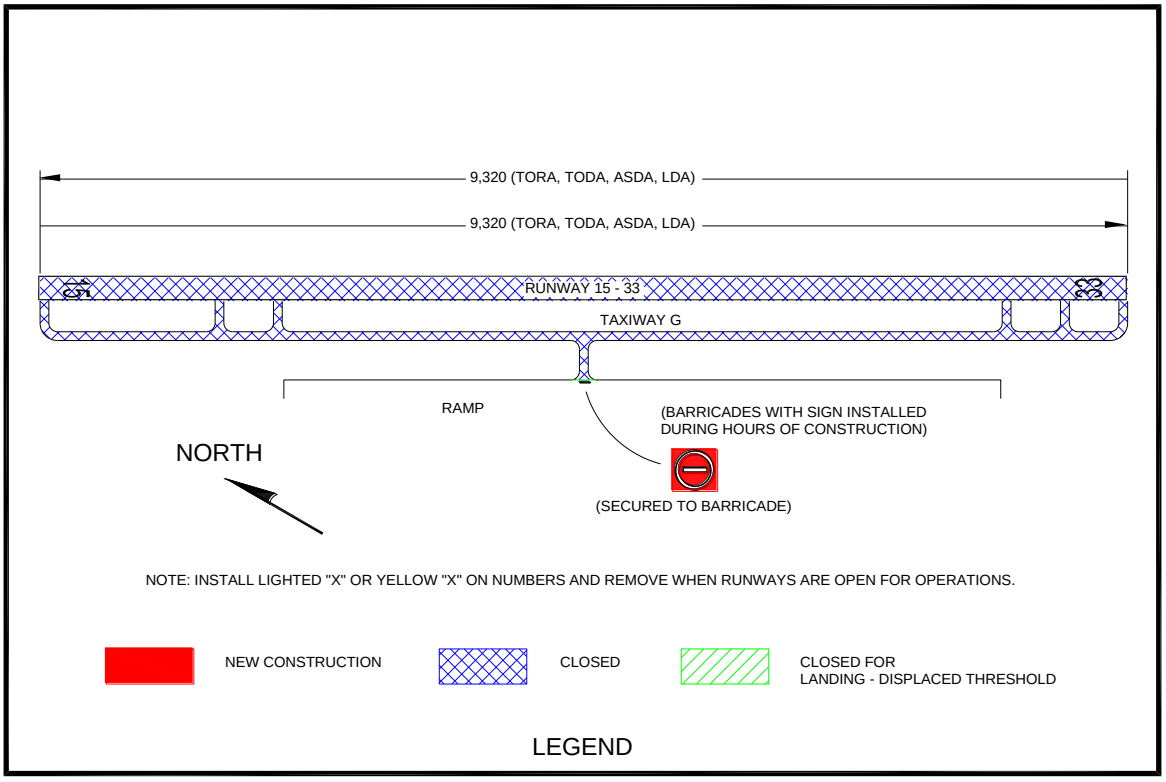


Table E-1. Operational Effects Table

Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Scope of Work	N/A	Extend Runway 15-33 1,000 ft on north end with Hot Mix Asphaltic Concrete (HMA).	Extend Runway 15-33 500 ft on south end with Hot Mix Asphaltic Concrete (HMA).	Repave existing runway with HMA Relocate Runway 33 Glide Slope
Effects of Construction Operations	N/A	Existing North 500 ft closed	Existing South 500 ft closed	Runway closed between 8:00 pm and 5:00 am Edge lighting out of service
Construction Phase	N/A	Phase I (Anticipated)	Phase II (Anticipated)	Phase III (Anticipated)
Runway 15 Average Aircraft Operations	Carrier: 52 /day GA: 26 /day Military: 11 /day	Carrier: 40 /day GA: 26 /day Military: 0 /day	Carrier: 45 /day GA: 26 /day Military: 5 /day	Carrier: 45 / day GA: 20 / day Military: 0 /day
Runway 33 Average Aircraft Operations	Carrier: 40 /day GA: 18 /day Military: 10 /day	Carrier: 30 /day GA: 18 /day Military: 0 /day	Carrier: 25 /day GA: 18 /day Military: 5 /day	Carrier: 20 /day GA: 5 /day Military: 0 /day
Runway 15-33 Aircraft Category	C-IV	C-IV	C-IV	C-IV
Runway 15 Approach Visibility Minimums	1 mile	1 mile	1 mile	1 mile
Runway 33 Approach Visibility Minimums	¾ mile	¾ mile	¾ mile	1 mile

Note: Proper coordination with Flight Procedures group is necessary to maintain instrument approach procedures during construction.

Project		Runway 15-33 Extension and Repaving			
Phase		Normal (Existing)	Phase I: Extend Runway 15 End	Phase II: Extend Runway 33 End	Phase III: Repave Runway
Runway 15 Declared Distances	TORA	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	7,820	7,320	7,820	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 33 Declared Distances	TORA	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	8,320	6,820	8,320	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 15 Approach Procedures		LOC only	LOC only	LOC only	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 33 Approach Procedures		ILS	ILS	ILS	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 15 NAVAIDs		LOC	LOC	LOC	LOC
Runway 33 NAVAIDs		ILS, MALSR	ILS, MALSR	ILS, MALSR	LOC, MALSR
Taxiway G ADG		IV	III	IV	IV
Taxiway G TDG		4	4	4	4
ATCT (hours open)		24 hours	24 hours	24 hours	0500 - 2000
ARFF Index		D	D	D	D

Project	Runway 15-33 Extension and Repaving			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Special Conditions	Air National Guard (ANG) military operations	All military aircraft relocated to alternate ANG Base	Some large military aircraft relocated to alternate ANG Base	All military aircraft relocated to alternate ANG Base
Information for NOTAMs		Refer above for applicable declared distances. Taxiway G limited to 118 ft wingspan	Refer above for applicable declared distances.	Refer above for applicable declared distances. Airport closed 2000 – 0500. Runway 15 glide slope OTS.

Note: This table is one example. It may be advantageous to develop a separate table for each project phase and/or to address the operational status of the associated NAVAIDs per construction phase.

Complete the following chart for each phase to determine the area that must be protected along the runway and taxiway edges:

Table E-2. Runway and Taxiway Edge Protection

Runway/Taxiway	Aircraft Approach Category* A, B, C, or D	Airplane Design Group* I, II, III, or IV	Safety Area Width in Feet Divided by 2*

*See AC 150/5300-13 to complete the chart for a specific runway/taxiway.

Complete the following chart for each phase to determine the area that must be protected before the runway threshold:

Table E-3. Protection Prior to Runway Threshold

Runway End Number	Airplane Design Group* I, II, III, or IV	Aircraft Approach Category* A, B, C, or D	Minimum Safety Area Prior to the Threshold*	Minimum Distance to Threshold Based on Required Approach Slope*	
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1

*See AC 150/5300-13 to complete the chart for a specific runway.

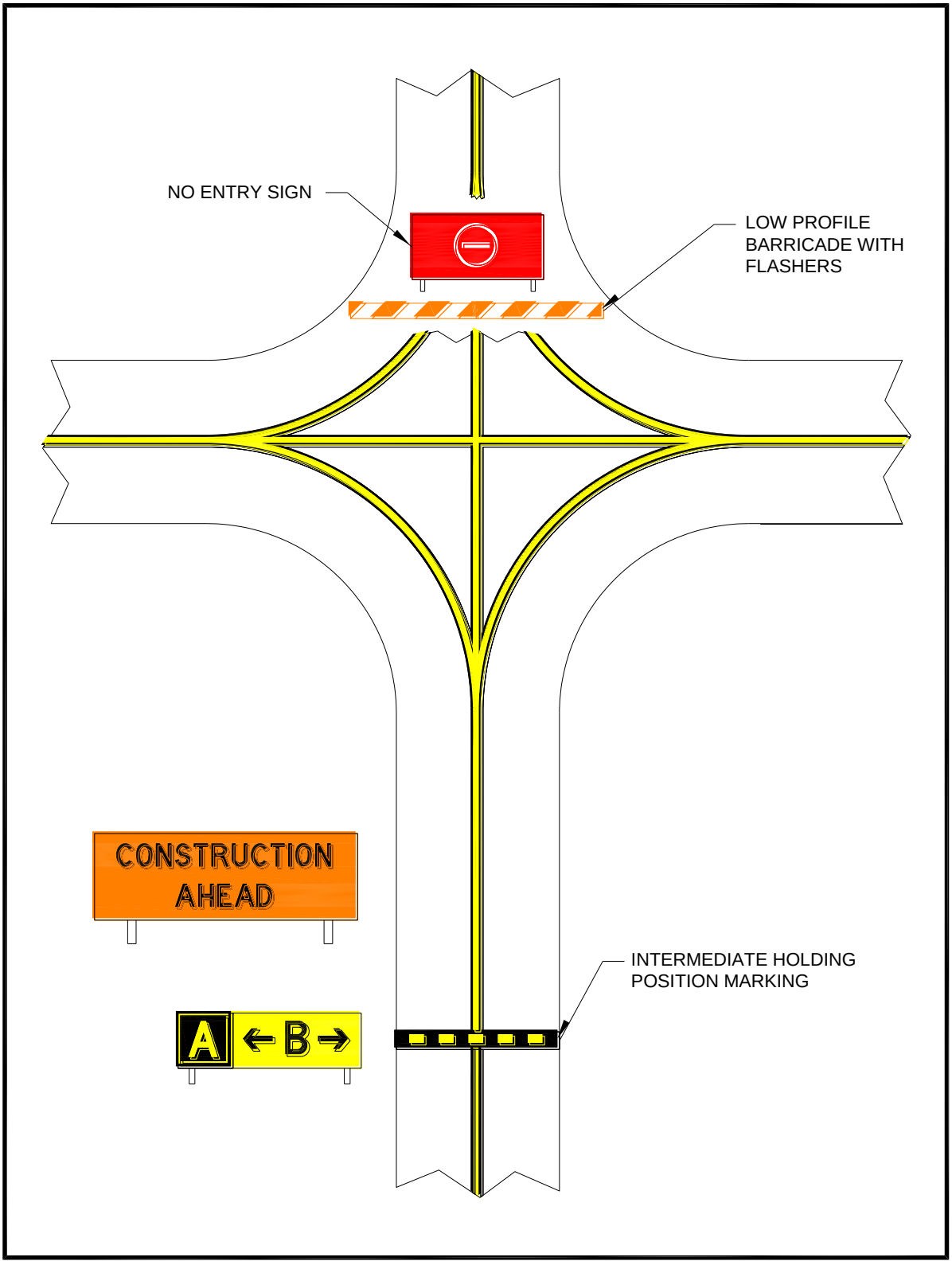
Page Intentionally Blank

APPENDIX F. ORANGE CONSTRUCTION SIGNS

Figure F-1. Approved Sign Legends

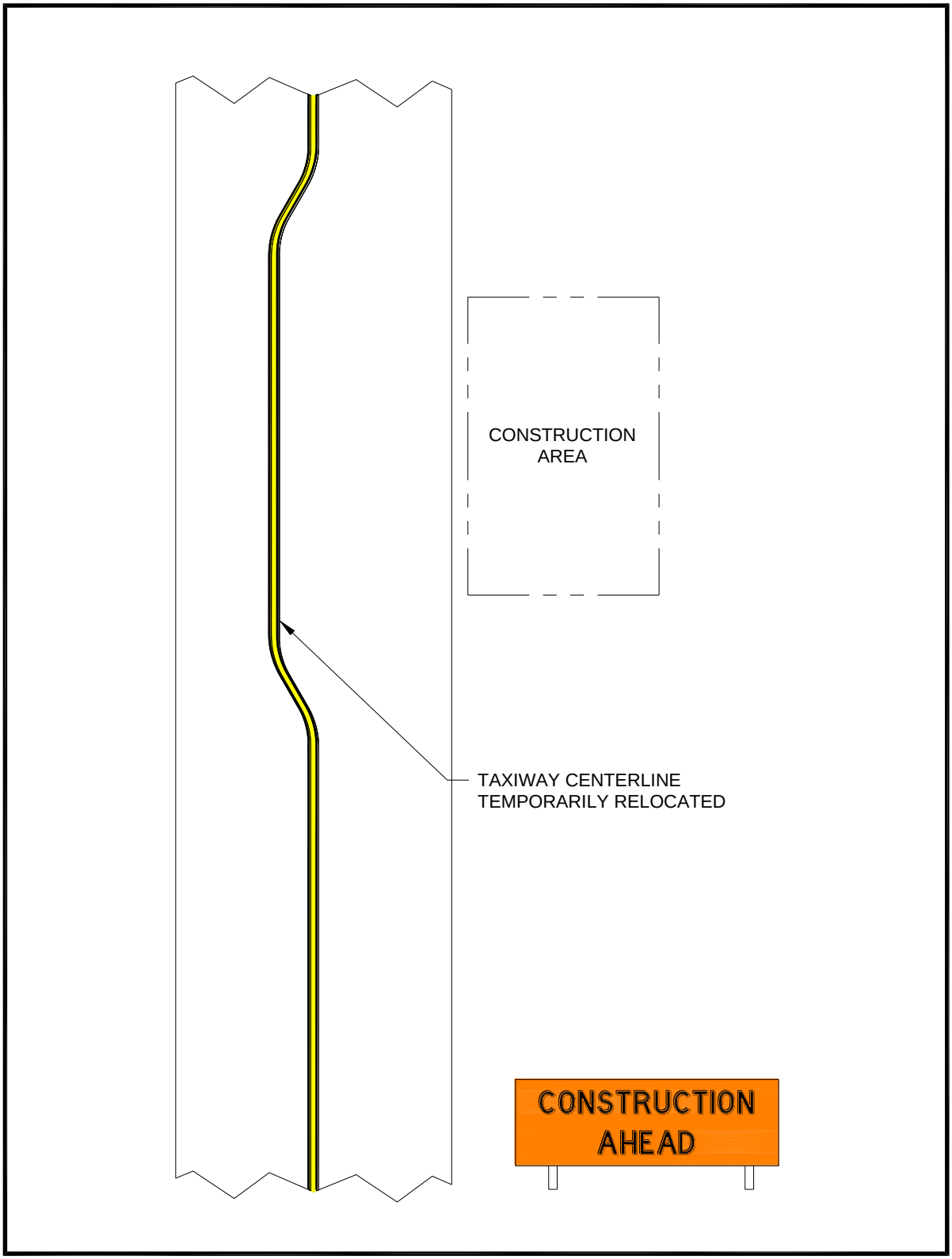


Figure F-2. Orange Construction Sign Example 1



Note: For proper placement of signs, refer to EB 93.

Figure F-3. Orange Construction Sign Example 2



Note: For proper placement of signs, refer to EB 93.

Page Intentionally Blank

Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/5370-2G Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____
_____
_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____
_____
_____

☐ Other comments:

_____
_____
_____

☐ I would like to discuss the above. Please contact me at (phone number, email address).

_____

Submitted by: _____ Date: _____

Page Intentionally Blank

Staff Summary

3/16/2026
Agenda Item # F.12.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Tyler Gibbins, Finance Director

SUBJECT: **Fiscal Year 2026-2027 Budget Work Session**

BACKGROUND: Fiscal Year 2026-2027 Department Budgets presented to City Council.

FISCAL IMPACT: Will be determined during the budget adoption process.

RECOMMENDATION: Review budgets and make final recommendations.

ATTACHMENTS:

1. FISCAL YEAR 2026-2027 BUDGET MEMO
2. FY2027 PROPOSED TAX LEVY
3. ADMINISTRATION
4. OUTSIDE AGENCY FUNDING
5. POLICE DEPARTMENT
6. FIRE DEPARTMENT
7. BUILDING & CODE ENFORCEMENT
8. LIBRARY
9. LIBRARY FINES & FEES POLICY
10. ECONOMIC DEVELOPMENT
11. PUBLIC SERVICES
12. WATER FUND
13. SEWER FUND
14. LANDFILL FUND
15. STORM WATER FUND
16. KINGS POINTE 2026-2027
17. FEE RESOLUTION

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

Honorable Mayor, City Council and Storm Lake Community:

The City Manager's Recommended Fiscal Year 2026–2027 Budget is submitted for your review and consideration. This budget is designed to support long-term financial stability while ensuring that we continue delivering high-quality services that reflect the needs and expectations of our community. It also aligns with the priorities of our state's elected officials, recognizing that we all serve the same public and share a responsibility to steward resources wisely.

The recommended budget follows the City Council's identified priorities for Fiscal Year 2026-2027:

- Streets
- Neighborhood Committees
- Fire Department
- Police Department
- Water Plant

The tax levy will remain stable at $15.17441 despite an 11.73% increase for general property insurance and liability insurance. Employee health benefits decreased 0.28% for the first time since 2006. However, life, disability, dental, and vision insurance increased 4.4%. employee retirement contributions are unchanged.

The Recommended Budget includes a 3% cost-of-living adjustment for all employees, excluding those covered by collective bargaining agreements. The pay plan is reviewed annually to ensure that we maintain a competitive compensation structure while also keeping the plan financially sustainable.

Significant progress has been made toward replacing the undersized 1978 water treatment plant, guided by the insight and recommendations of the Water Treatment Plant Water Rates and Design Advisory Ad Hoc Committee. Although the existing plant cannot expand onto the adjacent property, the committee identified a suitable alternative site along with an appropriate rate structure to support the project.

The past year has brought significant challenges, particularly the extensive damage caused by major windstorm events. These storms required substantial unplanned expenditures and forced our Public Services Department to divert resources toward community-wide cleanup efforts, resulting in an approximate eight-week delay in scheduled operations.

To maintain our long-term financial stability, the Fiscal Year 2025–2026 Adopted Budget includes a series of strategic reductions, operational adjustments, and revenue measures. Together, these actions resulted in a general fund reduction of $380,294 for the upcoming fiscal year. These decisions were made with great care, balancing community priorities, essential operational needs, and our responsibility to safeguard the City's fiscal health.

By taking these steps now, we position Storm Lake to remain stable, responsive, and resilient in the years ahead. While no essential services have been eliminated, service levels will be affected. All services will continue, though some may operate at reduced capacity or experience slower response times.

I am proud of the dedicated professionals who make up our organization. Your hard work, commitment, and service to the Mayor, City Council, and the community of Storm Lake do not go unnoticed. It is truly my privilege and honor to serve alongside you.

Respectfully,

Keri Navratil
City Manager

FY2027 PROPOSED TAX LEVIES

Tax Levy
Revenues for the General Fund are based on taxable valuations determined by the County Assessor. Below is the past and proposed levy rate for City of Storm Lake:

FY2024	$13.40670
FY2025	$13.60000
FY2026	$15.17441
FY2027 Proposed	$15.17441

Consolidated General Fund Levy
During the 2023 legislative session, State Legislators passed house file 718 which combined multiple levies, including the General Fund and Emergency Levy fund, which the City previously used.

FY2024	$8.37000
FY2025	$8.12621 – Year 1 of HF718
FY2026	$8.04575
FY2027 Proposed	$8.10000

The goal of HF718 was to bring all levies back under or to the $8.10 max rate over time. The new consolidated general fund levy reduces the newly combined levy rate of non TIF taxable growth triggers are met or exceeded, or fiscal years 2025-2028. For FY2026-2027 those limitations are:

- 0-2.74% growth –no change in rate from current year
- 2.75-3.99% growth –1% limitation factor applied
- 4.00 –5.99% growth –2% limitation factor applied
- 6.00% or more growth –3% limitation factor applied

For fiscal year 2026-2027, Storm Lake grew at 1.41% which did not trigger the limitation factor on the City CGFL for FY2027.

Insurance Levy
The Insurance Levy is a levy on property valuation to cover the cost of insurance.
Proposed Levy Rate:

FY2024	$0.38237
FY2025	$0.31647
FY2026	$0.68110
FY2027 Proposed	$0.78115

Insurance rates are expected to increase by 11.73% for general property insurance and liability insurance.

Employee Benefits Levy
The Employee Benefit Levy is a levy on property valuation to cover the cost of benefits offered to City Employees. This benefit levy includes the employers portion of FICA, IPERS, MFPRSI, life, disability, health, dental, and vision insurance.
Proposed Levy Rate:

FY2024	$2.93173
FY2025	$4.43099
FY2026	$5.13906
FY2027 Proposed	$4.98477

Employee health benefits decreased 0.28% for the first time since 2006. However, life, disability, dental, and vision insurance increased 4.4%. IPERS and MFPRSI maintained a 9.44% and 21.859% respectively.

Debt Service/Bond Payments
The Debt Levy is a levy imposed on local property owners for public improvements which are covered by bonds.

Previous/Proposed Levy Rates:

FY2024	$1.72260
FY2025	$0.72633
FY2026	$1.30850
FY2027 Proposed	$1.30849

Total Debt (Principal General Obligation, rounded to the nearest thousand) as reported:

FY2022	$17,389,000
FY2023	$15,520,000
FY2024	$13,559,000
FY2025	$14,466,000
FY2026 (est.)	$12,488,000

Administration

General Fund

The General Fund is the primary ledger accounts that record all assets and liabilities of the City which are not assigned to a special purpose. The primary divisions of the General Fund include: Public Safety, Code Enforcement, Airport, Library, Parks, Campground, Golf Course, Economic Development, Finance, Administration, Cottages, and Outdoor Water Park.

Airport:

Revenues- $267,600
Expenses- $256,384

Transit System:

Operating Expense- $8,500

Municipal Band:

Operating Expenses- $8,080

Community Education:

Operating Expenses- $115,250

Mayor, City Council &, Manager:

Payroll- $91,287

Franchise Fees:

Revenues- $1,267,350
Expenses (CIP & Programs)- $1,195,400

Policy & Administration:

Revenues- $189,575
Payroll- $175,651
Operating Expenses- $462,507
- Kids Fest- $15,000
- Breakfast with Santa- $3,000
- Code Updates- $19,950

Legal Services- $125,000
Insurance- $307,797
Outside Agency- $52,500

Cottages:

Revenues- $131,800
Operating Expenses- $115,330

Outdoor Water Park:

Revenues- $437,800
Operating Expenses- $460,238

Local Option Sales Tax
Local Option Sales Tax is the 1% voter approved specific purpose tax that is returned to the City for streets, buildings, debt retirement and capital improvements.

Estimated Revenues: $1,778,826
Debt Expenses: $ 212,564
Capital Expenses: $1,565,721

Hotel Motel Tax
Hotel Motel Tax is the tax generated and returned to the community from recreation. Per Section 422A.2(4)(a) of the Code of Iowa, 50% of this revenue must go back into the community for recreation, culture and tourism ,and related debt.

Estimated Revenues: $432,600
Debt Expenses: $143,148
Capital Expenses: $288,000
Marketing & Tourism: $ 50,000

Sales Tax Increment Financing Fund
As part of our flood mitigation projects, the State enacted a STIFF program to assist with offsetting costs for flood mitigation projects. These funds are used to repay bonds incurred by flood mitigation projects.

Estimated Revenues: $249,000
Debt Expenses: $249,000

Tax Increment Financing
Tax Increment Financing is a public financing method used as an incentive for redevelopment, infrastructure, and other community improvement projects. TIF is a way for the City to divert future property tax revenue increases from a defined area (Urban Renewal Area) toward an economic development or public improvement project in the community. The City currently has 5 Urban Renewal Areas:

Industrial Park URA
Projected Revenues: $2,639,227
Debt Repayment Expenses: $2,639,227

Bargloff URA
Projected Revenues: $435,867
Debt Repayment Expenses: $435,867

LMI #3 URA

Projected Revenues:	$34,207
Debt Repayment Expenses:	$34,207

LMI #4 URA

Projected Revenues:	$32,725
Debt Repayment Expenses:	$32,725

Donations

The City of Storm Lake maintains several donation funds which are earmarked for specific purposes. These funds are collected and disbursed accordingly per the use of the funds. The City will have a full donation plan implemented by July 1st, 2023.

Crime Prevention

Estimated Revenues: $3,500
Projected Expenses: $3,500

Parks

Estimated Revenues: $1,000
Projected Expenses: $1,000

Law Enforcement Funds

The City maintains evidence funds for the Public Safety Department which are held for a judge's ruling.

Law Enforcement

Estimated Revenues: $5,500
Projected Expenses: $5,500

Evidence

Estimated Revenues: $0
Projected Expenses: $0

***Note: Transfers between funding sources are not included to get a clear picture of revenue vs expenses per division. Transfers were approved during the CIP process.

OUTSIDE AGENCY FUNDING

Each year the City of Storm Lake takes requests from tax-exempt organizations throughout the community to award grant money the City has available on an annual appropriation basis. This year, the City received 5 requests totaling $56,340, of which $3,840 is in-kind services.

REVENUES:
Revenues to support the outside agency funding will come from the general fund.

FISCAL YEAR 2026-2027 BUDGET:

Outside Agency Award
Applications were received by:

Agency	Project	Total Award
Imagine the Possibilities	Shelter House- Waived Fees	$ 3,840
The Bridge of Storm Lake	Summer Neighborhood Outreach	$ 1,900
Witter Gallery	Window Treatment	$ 6,000
SLU Development	Wood, Wine, & Blues Event Support	$ 8,800
Upper Des Moines	Emergency Assistance	$15,000

Notes:

***Awardees must be willing to enter, or have already entered, into a 28E agreement with the City of Storm Lake pursuant the State Auditor's Office.

***Awardees must provide a mid-year update to the City Council on project status.

***Awardees are required to account to the City the use of the public funds to determine that the public purpose is met.

***Awardees are not permitted to use public funds for salaries.

Council to come to a consensus on amounts (if any) of Outside Agency funding.

POLICE DEPARTMENT

The Storm Lake Police Department provides 24-hour law enforcement services to the City of Storm Lake. The department currently consists of 20 sworn Police Officers, 1 Civilian Office staff members and 3 Civilian Volunteers (two chaplains and one tactical team medic).

The Storm Lake Police Department Patrol Division is made up of 4 Lieutenants and 14 patrol officers. Each Lieutenant oversees a patrol shift consisting of two to three patrol officers.

The patrol division is primarily responsible for answering calls for service which include:

- Responding to emergency calls
- Taking criminal complaints
- Enforcing traffic laws
- Addressing quality of life issues
- Investigating vehicular accidents
- Preliminary Investigation of crimes
- Community Policing
- Networking with other community service providers
- Enforcing city and state criminal laws
- Animal Control

The Criminal Investigation Division (CID) is made up of 2 detectives supervised by the Assistant Chief.

The investigation division is responsible for major case crimes and follow up investigations. SLPD Detectives provide the highest quality criminal investigations by conducting timely and thorough investigations using advanced investigative techniques and forensic equipment.

The Community Service Officer (CSOs) position was removed and the responsibilities transferred to the Code Enforcement Office because of restructuring and budget constraints.

The Police Department Special Services Division has specially trained officers in the following areas:

Tactical Entry Team (E-Team)
Hostage Negotiators
Clandestine Drug Lab Response Team
Underwater Search and Recovery Dive Team
Sexual Assault Response Team (SART)
Drone Pilots
K-9 Unit
Narcotics Unit
Community Engagement / Community Outreach

REVENUES:
The operations for the Storm Lake police department budget are covered by the City's general fund with other revenue coming from fines and fees outlined in the City's fee resolution.

CURRENT FEE RESOLUTION

Fee	Rate	Code Reference
Administrative Fee	$ 50.00	
Alarm Business Permit Application	$ 75.00	4-7-6
Alarm Business Permit Renewal	$ 75.00	4-7-9
False Alarm Equip Malfunction (after 3)	$ 75.00	4-7-16
False Alarm	$ 75.00	4-7-16
Building Escorts (per car)	$100.00	5-1-3
Cat License – Not Neutered/Spayed (per year)	$ 30.00	8-4-2
Neutered/Spayed (per year)	$ 20.00	
Dog License – Not Neutered/Spayed (per year)	$ 30.00	8-3-2
Neutered/Spayed (per year)	$ 20.00	
Animal License Handling Fee	Current USPS Rate	
Fingerprinting	$ 20.00	
Impound/Storage Fee (per day)	$ 50.00	8-6-5
Impound Storage Fee – felony related (per day)	$ 50.00	
Parking Fine	$ 25.00	9-11-4
Report Copies	$ 5.00	
Police Escort Fee – per hour, per unit	$100.00	5-1-3
Emergency Response and/or Cleanup of Material (per hour)		
Police Vehicle (per vehicle)	$100.00	

FISCAL YEAR 2026-2027 BUDGET ADJUSTEMENTS:

Axon Body/Car Cam Agreement- $100,750

BUDGET OVERVIEW

Total Revenues- $48,400
Expenses- $3,870,922

Personnel- $3,262,592	84% of the total expenses
Operations/Maintenance- $510,330	13%
Animal Control- $26,000	1%
Capital Projects- $72,000	2%

FIRE DEPARTMENT

The Storm Lake Fire Department is a mix of 3 full-time employees and 24 paid on call fire fighters. SLFD houses 7 emergency vehicles comprised of three engines, one aerial, one heavy rescue, one wildland / brush truck, and a command vehicle. The SLFD covers approximately 93 square miles within Grant, Hayes, and Washington Townships which encompass the City of Storm Lake, City of Lakeside, and Truesdale. These surrounding areas have entered into a fire service agreement with the City of Storm Lake for emergency services.

Fire Inspections - Annual fire inspections are a simple and effective way to enforce adopted fire codes, ensure compliance, and reduce risk and potential loss. The goal of the Fire Prevention Bureau is to build a relationship of understanding, knowledge sharing, and increased safety with business owners. In 2025 410 fire inspections were completed with a 100 percent corrective action rate.

FACTORS AFFECTING THIS BUDGET YEAR:

In 2025 SLFD responded to 440 calls with 28 reported fires involving property or dollar loss. All fires are investigated for origin and cause with fires involving possible criminal action turned over to local law enforcement.

Training – In 2025 SLFD trained for a combined 1,792 hours across multiple disciplines. Key topics were fire suppression, CPR, Driver Operator, Fire Investigator, and Fire Officer development. SLFD has also hosted and participated in numerous state funded training opportunities through Iowa's FSTB and in conjunction with our mutual aid partners.

Community Service – SLFD firefighters and staff participated in numerous community events and outreach opportunities including National Night Out, Kids Fest, Star Spangled Spectacular, Octobers Fire Prevention Month, Chills and Thrills, and Miracle on Lake Ave. These events highlight our continued involvement and proactive participation within the community we serve. By the community seeing us not just during an emergency but as partners and fellow neighbors, this helps to build positive relationships, humanize our members, and lead to possible recruitment of new firefighters.

Last year SLFD added 4 new firefighters through recruitment and lost 3 from retirement. Each new firefighter we onboard costs on average 8 to 9 thousand dollars with some reimbursement coming from the state of Iowa via SAFER Grant money for personal protective gear and initial skills training.

REVENUES:

The operations for the Storm Lake fire department budget are covered by the City's general fund with other revenue coming from the surrounding service area governing bodies.

CURRENT FEE RESOLUTION:

Fee	Rate
Liquor License Inspection Fee	$ 50.00
Fireworks Display (Mortar sizes from 1-3 inches)	$150.00
Fireworks Display (Mortar size larger than 3 inches)	$300.00
Emergency Response and/or Cleanup of Material Rate set by the Iowa Fire Service Annual Hazardous material response fee structure for the current calendar year.	See State Chart
Safety Trailer Use Fee	
Buena Vista County	$150.00
Non Buena Vista County	$150.00 plus $6 A Mile One Way

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS:

Transition from First Due Subscription to ImageTrend offered by the State as a shared service.	($10,697)
Fire Hose & Fitting Replacements:	$7,500
Portable Vent Fan:	$6,000

BUDGET OVERVIEW

Total Revenues- $157,823
Expenses- $1,136,674

Personnel- $589,022	52% of the total expenses
Operations/Maintenance- $129,351	11%
Emergency Management- $ 13,881	1%
Fire Truck Debt- $404,420	36%

BUILDING & CODE ENFORCEMENT

Building and code compliance enforcement is vital to community safety and economic development. The Department acts as “first preventers” and operates in coordination with Public Safety. The intent of the Departments code regulations is to establish minimum requirements to provide a reasonable level of safety, public health, and general welfare. It protects Storm Lake residents from hazards that may arise, such as fire, electrical shock, nuisances, and structural failures. Economic benefits include abatement of nuisances, higher property values, and attraction of future developers.

The Storm Lake Building Department consists of three full-time employees who inspect and enforce national and local building codes for new construction and remodels. Additionally, the Building Inspector and Building and Code Compliance Director are responsible for storm water inspections, rental housing inspections, enforcement of the Zoning Ordinance, working with the Planning and Zoning Commission and Board of Adjustment, dangerous building inspections, flood plain management and coordinating with the other City Departments on areas of overlap. The City’s Code Enforcement Officer inspects and enforces the City Property Maintenance Code, schedules rental inspections, inspects sidewalks, performs storm water inspections, inspects rental housing, and schedules building inspections, as well as setting up Planning and Zoning Commission and Board of Adjustment meetings.

The Building and Code Compliance Department inspectors completed numerous tasks in 2025 to achieve goals of the City Council and the Department, which included the following number of inspections per type of inspection and the approximate time associated with the different types of inspections:

- **Building Inspections-** 386 hours. Inspections vary in time from 30 minutes to 1.5 hours.
- **Site Inspections-** 115 hours. 30 minutes per site inspection
- **Rental Inspections-** 176 hours. Inspections vary in time from 30 minutes to 40 minutes.
- **Sidewalk Inspections-** 275 hours. Completion requires approximately 1 hour per inspection.
- **Plan Review-** 45 hours. Plan review varies in time depending on the project from 30 minutes to several days for larger commercial projects.
- **Property Maintenance**- 1,201 hours. Property Maintenance cases vary over time depending on the specific case. 30 minutes to several hours per case.
- **Storm Water Inspections**- 7 hours. 30 Minutes per inspection
- **Meetings** - 810 hours. 30 to 60 minutes per meeting

FACTORS AFFECTING THIS BUDGET YEAR:

- Revenue that is generated by permit fees varies depending on construction demand.
- The increased amount of code cases for nuisance abatement will result in increased costs related to processing them.
- The age of Department vehicles will cause increased costs of maintenance as they get older.
- The number of requests to be processed for Planning and Zoning and Board of Adjustment meetings.
- Measures are taken to operate as efficiently as possible, while still providing the services to the community, which benefit Storm Lake.

REVENUES:

The operations for the Storm Lake Building Department budget are covered by the City's general fund with permitting and registration revenues.

The budget is based on historical operational costs and revenue. Revenue that is generated by permit fees is volatile and varies depending on construction demand. Permit fees are determined based on construction valuation; the permit fees are reviewed on a regular basis and were updated in 2025.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS:

Luminance Meter- $1,000

BUDGET OVERVIEW

Total Revenues- $46,000
Expenses- $202,546
Personnel- $162,406 80% of the total expenses
Operations/Maintenance- $40,140 20%

LIBRARY DEPARTMENT

The Storm Lake Public Library has 2 full-time employees and 6 part-time employees. Operations are governed by City administration and actions of Council-appointed members of the Storm Lake Public Library Board of Trustees. The longest serving Trustee is the Board President with over 20 years of continuous service. The library has been associated with the Friends of the Storm Lake Public Library since 1998, a fundraising non-profit corporation run by volunteer members. The Friends have purchased furniture for the children, teen, and main reading room, while providing all programming expenses.

The library serves 7,862 current card account patrons.

The library participates in a statewide interlibrary loan program with requests from public and academic libraries. Besides maintaining Storm Lake's library collection for a very diverse community; there are education and outreach programs, in-house public computers, and digital books through a Statewide program. The library is proud to offer a telemedicine video conference room to the public and is the only public library in Iowa to offer this service. The County Supervisors acknowledge the library's partnership with Linn Grove and Rembrandt Public Libraries. The library is in partnership with the Carvour Lab, University of Iowa Health for the Micronesian Service Navigator program on Tuesday afternoons and winter safety program. Another partner is the Buena Vista University Social Work Department for a Community Resource Intern.

Essential Services to the community include photocopying, faxing, and scanning services. The library is one of two places in the community offering these services.

REVENUES:

The operations for the Storm Lake library budget are covered by the City's general fund with other revenue coming from late fees and services outlined in the City's fee resolution. The library also requests funding from Buena Vista County on an annual basis for support.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS:

Additional Concrete Paving-	$ 3,500
Additional Materials-	$10,000
Additional Supplies-	$ 7,500

Memorial Funds
The City keeps a number of memorial funds. During their monthly meetings, the Storm Lake Library Board of Trustees receives the Memorial Funds for acknowledgement. Among them are limitations on the usage of funds.

Current fund balances for the Memorial Funds are $156,923 in Library Memorials and $243,750 from the John G. Black Family.

Library Memorial Funds
Estimated Revenues: $ 9,535
Projected Expenses: $ 8,330
Capital Projects: $22,000

BUDGET OVERVIEW
Total Revenues- $27,477
Expenses- $475,610

Personnel- $341,196	72% of the total expenses
Operations/Maintenance- $119,414	25%
Capital Projects- $15,000	3%

FEES

Each patron is responsible for all materials checked out on his/her Library card. The Library will be reimbursed for all lost or damaged items.

Patrons with valid Library cards are restricted from borrowing any materials if their fines accumulate to $1.00 or more, or if items are overdue. When fines are cleared and/or materials returned, borrowing privileges are restored.

All library fees are periodically reviewed and are adopted by the Library Board.

Library fees in dollars

Late borrowing fees

Each print materials and audiobooks per day	0.10	
DVDs per day	1.00	

Sale of Designated Library Materials

Used Magazine	0.25	
Used Book	0.50	
Designated Used Book or Set	As priced	
Used Audio, VHS, DVD	1.00	

Printing, Scan, Fax per page and transaction

B&W photocopy or computer print	0.25	
B&W legal or longer photocopy paper	0.50	
Color photocopy or computer print	1.00	
Scan to email or print first page only	1.00	
Scan to email or print additional pages	0.25	
Domestic fax	1.00	
International fax	3.00	

Replacements per item

Damaged or missing material	Full replacement cost	
Administrative Fee*	30.00	
Library card	1.00	
Barcode or label	1.00	
Pocket	1.00	
Security Card	2.00	
Single DVD case	2.00	
Double DVD case	4.00	
Multiple DVD case	5.00	
Single CD Case	2.00	
Double CD Case	4.00	
Large CD Case	5.00	
CD sleeves	1.00	
Dust jacket	1.25	
DVD paper cover	2.00	

Missing book cover or page	10.00	
3” Book Tape	2.00	
4” Book Tape	3.00	

Meeting Room

Fee, non-profit organization	25.00	
Smart TV, non-profit organization	10.00	
Fee, profit organization	40.00	
Smart TV, profit organization	10.00	
Damage Deposit	Room rental	
Room Rental Damage	Full replacement cost & labor	

Other Fees

Interlibrary Loan	2.00	
Interlibrary Loan – Academic	4.00	
Administrative Fee*	30.00	

*Administrative Fee charged for services rendered outside of normal day-to-day operations.

Library Fees in Dollars was adopted by the Board of Trustees of the Storm Lake Public Library on June 8, 2015. The Library Fees in Dollars was revised by the Board of Trustees of the Storm Lake Public Library on January 11, 2016, December 11, 2017, January 14, 2019, February 10, 2020, March 9, 2020. Affirmed on July 13, 2020. Revised September 13, 2024.

The *Fees Policy* was revised by the Board of Trustees of the Storm Lake Public Library on January 9, 2012 and January 11, 2016.

ECONOMIC DEVELOPMENT

Our economic development strategies are based on the needs, assets, and goals of the Storm Lake community. The Economic Development Department seeks to improve economic well-being and quality of life by encouraging business investment opportunities and supporting business retention, expansion, attraction, and job creation to maintain a healthy economy and increase our tax base.

The City of Storm Lake through the Development Services Specialist is committed to promoting and sustaining a strong, successful business climate by providing assistance and support with grants, loans, business and financial planning, apprenticeship programs, retail recruitment, expansion, retention, succession planning and development opportunities.

Comprehensive Economic Development requires the support of elected officials and partner organizations. The Development Services Specialist works closely with City Council, Iowa Economic Development Authority, Small Business Development Center, Iowa Lakes Corridor Development, Iowa Workforce Development, NW Iowa Planning and Development, Buena Vista University (The Foundry) and Iowa Central Community College.

Economic Development Highlights:

- Conducted 35 Business Retention and Expansion visits (BRE).
- Assisted several business owners with succession and leadership transition planning.
- Worked with developers to identify suitable land for future housing projects.
- Maintained and updated LOIS, a national online location analysis tool that promotes available sites and building inventory for Storm Lake.
- Met with 18 local entrepreneurs and provide strategic business planning and site location assistance.
- Facilitated disaster recovery efforts by coordinating temporary site placements for storm-impacted businesses.
- Attended DEV 25 Economic Development Conference.
- Worked to fill vacant properties by connecting the building owners with entrepreneurs interested in starting a new business.
- Assisted in the collection of data for Maxfield Research & Consulting to complete a Comprehensive Housing Needs Assessment.
- Built a Webinars, Workshop & Podcast page on the city website to provide online access to topics and help owners grow their business and expand their career skills.
- Spearheaded the Ad Hoc Downtown Signage Committee and delivered recommendations to City Council, for comprehensive overhaul of Article 10 Sign Regulations. Integrated modern technology standards and historic preservation while streamlining code clarity and public safety.
- Assisted the Iowa Lakes Corridor in the collection of data for UNI wage and benefit survey.
- Guest speaker on Housing at ISU Extension and Outreach “Siouxland’s Legacy of Workforce Opportunity” Conference.

- Collaborated with state and local agencies—including the IEDA, SBDC, Iowa Workforce Development, ILCDC, SLU, The Foundry and ICCC pertaining to grants, loans, business and financial planning, apprenticeship programs, and development opportunities.

FACTORS AFFECTING THIS BUDGET YEAR

There were no unforeseen expenses in the current year.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS

Iowa Lakes Corridor Membership-	$37,600
Storm Lake United Membership-	$30,000
NW IA Planning & Dev Member-	$ 7,325
Hometown Pride Support-	$12,000

BUDGET OVERVIEW

Expenses- $281,765

PUBLIC SERVICES

The public services department is made up of the City's Street, Parks, Golf, Campground, and Street Sweeping divisions.

STREETS:

The Road Use Tax Fund is funds eligible for street reconstructions, street maintenance, street lighting, and snow removal for Storm Lake's 109 lane miles of streets and 10 lane miles of gravel streets & alleyways.

The Road Use Tax Fund is a special revenue fund with support from the State of Iowa through Fuel Taxes. The State disburses funds on a per capita basis (FY2027 estimate is $138.50) via the last census. A Street Finance Report is completed and submitted to the State each year.

FACTORS AFFECTING THIS BUDGET YEAR:
Completed Infrastructure:

- Angier – W5th to Shoreway
- Shoreway – Angier to Northwestern
- Northwestern – Shoreway to W5th
- Seneca – Bair to Lakeshore

A second load of Mastic was purchased while pricing was low in the amount of $29,590 for street repairs.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS:

East Building Heat Upgrade-	$ 5,000
Shop Upgrades-	$ 5,000
Shop Tools-	$ 5,000
Driver Feed Back Signs-	$ 4,000
Infrastructure Mgmt Plan-	$350,000

BUDGET OVERVIEW:
Total Revenues- $1,574,257
Expenses- $2,942,847

Personnel- $1,045,512	36% of the total expenses
Operations/Maintenance- $691,335	23%
Infrastructure Mgmt Plan- $350,000	12%
Capital Projects- $856,000	29%

PARKS:

The Parks department is a mix of 1 full time employee and 4 part time employees. These individuals along with support from street department employees maintain 85 acres of parks including King's Pointe green areas. They also maintain 11 playgrounds, 8 bathrooms, 3 ballfields, 1 tennis complex, 1 pickleball complex, 1 mini-pitch, 3 beaches, Chautauqua Shelter, and other open shelters. They maintain 16 docks in total, of those 16 docks they install and remove 14 each year. They are heavily involved in the Star Spangled Spectacular, Wood Wine and Blues, and other community events:

- Star Spangled Spectacular- 130 In-Kind Hours
- Wood, Wine, & Blues- 55.75 In-Kind Hours
- We-Go-Swing Installation- 411.25 In Kind Hours
- Kiwanis Park Gazebo & Concrete- 372.5 In-Kind Hours
- Kiwanis Events (Triathlon, Car Show, Food Pantry)- 43.5 In-Kinds Hours

Recreation in Storm Lake is one of the major quality of life amenities offered. Storm Lake is unique with the number of parks adjacent to a natural lake feature. Though parks are generally first-come, first-serve, the community may reserve a specific shelter as outlined in the City's fee resolution:

Shelter House

Rental Fee - per side	$110.00
Damage Deposit – per side	$200.00
AWAYSIS Pavilions – per time slot (3 times available)	$ 25.00
Frank Starr Park Open Shelter – per time slot (2 times available)	$ 50.00
Campground Open Shelter – per time slot (2 time slots available)	$ 50.00
AWAYSIS Great Lawn – per day	$200.00
Band Shell – per day	$ 50.00

FACTORS AFFECTING THIS BUDGET YEAR:

The installation of the We-Go-Swing was completed through the partnership with the Paxton's Trust. Also, the Kiwanis Park shelter and concrete were completed in partnership with Kiwanis.

FISCAL YEAR 2026-2027 BUDGET SUPPLEMENTAL REQUESTS:

Parks Building Door Replacement-	$ 5,000
Snack Shack RR Lock Replacement-	$ 5,000
ADA Curb Ramp Program-	$25,000
Vegetation Management Plan-	$ 3,500
Shop Tools-	$ 5,000
Toolcat Sprayer-	$ 7,000
Shelter House Door Replacement-	$ 5,000
Aluminum Picnic Tables (Chautauqua)-	$10,000

BUDGET OVERVIEW:
Total Revenues- $27,195
Expenses- $729,456
Personnel- $254,656 35% of the total expense
Operations/Maintenance- $192,800 26%
Capital Projects- $282,000 39%

GOLF:

This 100+ year old (1917) 9-hole golf course is located adjacent to King's Pointe Resort and Pirate's Pointe Miniature Golf. The senior citizens call the club house their senior center and offers the community another event location.

The golf course maintenance crew consists of 1 full time employee and two part time employees, down one from previous years, who work with 4 mowers, 2 utility vehicles, 2 sprayers, 1 aerator, 1 fertilizer spreader and 1 golf cart.

FISCAL YEAR 2026-2027 BUDGET SUPPLEMENTAL REQUESTS:
Aerator Trailer- $5,500
Garbage Can/Ball Washer Replacements- $1,500

BUDGET OVERVIEW:
Total Revenue- $267,430
Total Expense- $393,942
Clubhouse Exp- $222,770
Grounds Exp- $171,172
Personnel- $47,322
Operations/Maintenance- $73,850
Capital Projects- $50,000

CAMPGROUND:

The campground offers 101 camping sites, onsite campground hosts receive hourly wage for hours worked and a free full hook up site. There are 4 hosts usually consisting of 2 couples. The campground does have firewood, ice and other items for sale.

An increase in long term guest requests and the need for larger sites has been noted. The campground has a large area mower, a weed eater and a utility vehicle for the hosts to use.

FISCAL YEAR 2026-2027 BUDGET SUPPLEMENTAL REQUESTS:

Picnic Table Concrete Pads- $7,500

BUDGET OVERVIEW:

Total Revenues-	$195,000	
Expenses-	$202,476	
Personnel-	$101,026	50% of the total expense
Operations/Maintenance-	$ 88,950	44%
Capital Projects-	$ 12.500	6%

Note: Transfers between funding sources are not included to get a clear picture of revenue vs expenses per department

WATER FUND

The Water Fund is one of the City's enterprise funds. Enterprise funds are self-supporting used to account for goods and services for which user fees and charges are paid in exchange for services provided. The Water Fund includes the following divisions: Administration, Water Plant, Distribution, and Water Meters.

Personnel:

- Supervisor grade 4 water, grade 2 distribution, grade 4 waste water. Years of service 1 month
- Supervisor grade 1 water, grade 4 distribution. Years of service 6.
- Supervisor grade 4 water, grade 2 distribution. Years of service 13.
- Operator grade 4 water, grade 4 distribution, and grade 2 waster water. Years of service 6.5
- Operator grade 4 water, grade 4 distribution. Years of service 9.5
- Operator grade 3 water, grade 3 distribution. Years of service 1
- Operator grade 2 water, grade 1 distribution, grade 1 waste water. Years of service 7 months
- Meter/operator working on licenses. Years of service 4

Number of Water Accounts- 4,103
Average Water Daily Flow- 4.0 MGD
Highest Peak Flow- 5.5 MGD
Number of Wells- 11 (Only 9 are in service)
Number of Water Towers- 4
Number of Clear Wells- 2
Miles of Water Pipe- 90.7
Water Mains: 82.4 mi
Irrigation: 4.19 mi
Raw Water Line: 4.11 mi
Number of Hydrants- 540
Average Water Loss- 12%

Tours were provided to 5th grade and middle schoolers from Storm Lake Schools as well as BVU's environmental science major students.

FACTORS AFFECTING THIS BUDGET YEAR

The timely rains of spring and early summer helped replenish the shallow aquifer levels as well ease the daily demand through the summer. We improved our storage capacity of our towers by 1.75 million gallons by adding Tower 5. In the air we now, have 3.5 million gallons of elevated storage.

We finished up Well 21 as a 600 gpm well. We are working on finishing Well 22 which will be 700 gpm.

Repairs related to the April 2025 Storm continued into FY2027 increasing expenses that were unbudgeted.

There were a few one-time expenditures which occurred during the year including, Well 4 pump replacements, carbon dioxide tank safety valves, and clarifier #1 repairs totaling $282,840.

The water fund is also expecting additional costs related to Well 7 and Well 20 repairs in FY2026.

REVENUES

The Water Fund is operating in good financial health maintaining the Council desired 40% fund balance. Anticipated ending fund balance for fiscal year 2025-2026 will be $5,037,105.

Estimated operating revenues are projected to be $7,537,581, which includes a $12.68 increase to water rates per month for an average residential user as recommended. The proposed rate structure will include a water capital improvement fund for the construction of the new water plant.

According to the City of Ames, Iowa 2023 annual Water & Sewer Rate Study, the City of Storm Lake is at $33.10 for bill amounts at 600 cubic feet of use. This ranks the City of Storm Lake in the bottom 3rd of cities with 10,000+ population. The report's median bill is $37.63 and high is $59.19, $4.53 and $26.09 more than the City's current rate respectively.

PROPOSED FEE CHANGES:

No additional price increases are suggested by the staff for the FY2027 fee resolution.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS

Consistent throughout the Water Fund budget, Insurance rates are expected to increase by 11.73% for general property insurance, worker's comp insurance, and liability insurance. The proposed budget includes a 3% increase for full-time employees. Adjustments have been appropriately made for chemicals, telecommunication, electric service, gas services, and software subscription costs.

Supplemental Requests:

- Clear Well Maintenance- $50,000

BUDGET OVERVIEW

Total Revenues- $7,537,581
SRF/WIFIA Revenues- $7,850,000
Expenses- $17,400,881

Personnel- $1,365,433	8% of the total expenses
Operations/Maintenance- $2,948,010	17%
Debt Service- $1,016,188	6%
Capital Expenditures- $2,580,250	15%
New Water Plant Design- $7,850,000	45%
Land Acquisition- $1,641,000	9%

SEWER FUND

The Sewer Fund is one of the City's enterprise funds. Enterprise funds are self-supporting used to account for goods and services for which user fees and charges are paid in exchange for services provided. The Sewer Fund includes the following divisions: Administration, Wastewater Plant, and Collection.

We currently have 5 full time operators at the Wastewater Treatment Plant. The operator crew is a fairly newer employees. With time of service with the city, ranging from 9 years, 6 years, 1 year, 11 months, and 4 months of service at the Wastewater Plant. We are currently working on getting them trained in the process of the plant, lift station, and collection system. We are working hard to get them trained properly by signing them up for the online classes, webinars, hands-on training at DMACC, and getting them CEU (Continuing Education Unit) to be eligible to obtain the wastewater certification through the DNR, a requirement needed for operating the plant. The plant needs to have a grade 4 certification to run the plant.

Personnel:

- 2 grade 4 operators
- 1 grade 1 operator
- 2 operators with no certification

Average Influent Daily Flow- 2.347 MGD
    24.20% of the flow comes from residential users
    75.80% of the flow comes from commercial and industrial users
Average Effluent Daily Flow- 2.211 MGD
Rain Events Daily Flow- We have seen up to 5 MGD
Sludge Hauled- 233.7 Dry Metric Tons in 2024
Miles of Sewer Pipe- 62.85
    Force Main: 12.73 mi
    Gravity Main: 50.12 mi
Lift Stations- 16

FACTORS AFFECTING THIS BUDGET YEAR

In comparison to the engineer's estimations, bid prices for recent sewer-related projects have significantly increased. This was observed by the Sewer Division on the Waste Water Treatment Plant Blower Project and the Ice House Lift Station and Scout Park Projects. Projects, most notably the Blower Project, have been delayed due to these bid results not matching the budgeted engineer's projections.

REVENUES

The Sewer Fund has a projected ending fund balance of $2,924,458 and is operating at the Council desired 40%. The fund balance includes balances earmarked for Scout Park and Ice House Lift Station Project.

Revenues are projected to be $5,344,531, which includes a 7% increase to our sewer rates. A 7% increase would result in an average residential bill increasing by $3.92 per month.

According to the City of Ames, Iowa 2024 annual Water & Sewer Rate Study, the City of Storm Lake is at $50.89 for bill amounts at 600 cubic feet of use. The median rate according to the study is $44.82.

PROPOSED FEE CHANGES:

The staff does not suggest making any modifications to the fee resolution this year.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS

Consistent throughout the Sewer Fund budget, Insurance rates are expected to increase by 11.73% for general property insurance, worker's comp insurance, and liability insurance. The proposed budget includes a 3% increase for full-time employees. Adjustments have been appropriately made for chemicals, telecommunication, electric service, gas services, and software subscription costs.

Supplemental Requests:

- Sample Station Roof- $5,000
- DuraLabel Starter Kit- $7,000
- Skidloader Broom Attachments- $9,000

BUDGET OVERVIEW

Total Revenues- $5,344,531
Expenses- $5,469,787

Personnel- $1,168,406	21% of the total expenses
Operations/Maintenance- $2,143,115	39%
Debt Service- $576,016	11%
Capital Expenditures- $1,582,250	29%

LANDFILL FUND

The Landfill Fund is one of the City's enterprise funds. Enterprise funds are self-supporting used to account for goods and services for which user fees and charges are paid in exchange for services provided.

Last year, the City Wide Clean Up effort collected $2,960 in total revenue and spent $12,022 on staff time and disposal fees.

In October 2025, the Council made changes to the program to allow additional access to the recycling center as opposed to a single week of the year. Since then, we have sold 118 tickets totaling $1,725 in revenues and expensed $1,325. 39 tickets have been redeemed totaling 8.35 tons including 17 TVs 35" and up, 4 TVs 24" or less, and 5 appliances.

REVENUES

The Landfill Fund is operating in good financial health and maintains the Council desired 40% fund balance of $262,164.

Estimated revenues are projected to be $503,500, slightly higher than in the last few years due to an increased number of housing developments.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS

Landfill assessment will increase to $35 per capita. This assessment rate is determined by the Solid Waste Commission.

BUDGET OVERVIEW

Total Revenues- $503,500
Expenses- $599,109

Personnel- $132,934	22% of the total expenses
Operations/Maintenance- $71,760	12%
Landfill Assessment- $394,415	66%

STORM WATER FUND

The Storm Water Fund is one of the City's enterprise funds. Enterprise funds are self-supporting used to account for goods and services for which user fees and charges are paid in exchange for services provided. The Storm Water Fund includes the following divisions: Administration and Collection.

Lane miles of Streets to be Swept- 96

-All streets were swept around 7 times. 3 times in spring and 3 times in fall with an additional sweeping in January/February as weather allowed.

- We swept every month except for July, August and December.
- Additional sweeping was done during both Storm Clean Ups.

-Central Business District was swept as needed- 5 total times in 2025

Number of Storm Intakes-745

Storm Water Quality Controls-64

Projects Completed in 2025:

- 5th/Northwestern repair (done by contractor)
- Intake Repairs – Done by staff
- 916 E Milwaukee
- 2x North Emerald Dr
- 9th/Erie St
- 3rd/Lake Ave

REVENUES

The Storm Water Fund is operating over the Council's 40% fund balance at $405,514. Reserves are earmarked for SW projects, including rain garden reconstructions. Revenues for FY2027 are estimated at $535,687.

FISCAL YEAR 2026-2027 BUDGET ADJUSTMENTS

Consistent throughout the Storm Water Fund budget, Insurance rates are expected to increase by 11.73% for general property insurance, worker's comp insurance, and liability insurance. The proposed budget includes a 3% increase for full-time employees. Adjustments have been appropriately made for chemicals, telecommunication, electric service, gas services, and software subscription costs.

The Storm Water $729,000 revenue bond will mature on 6/1/2027. The Storm Water demand for the Oneida Street Phase II project will require a revenue bond issuance. City Staff will coordinate the issuance of this bond during FY2027.

BUDGET OVERVIEW

Total Revenues- $535,687
Expenses- $692,344

Personnel- $410,634	59% of the total expenses
Operations/Maintenance- $123,750	18%
Debt Service- $48,960	7%
Capital Projects- $109,000	16%

KING'S POINTE

The Awaysis project was funded by an $8M Vision Iowa Grant and voter approved bonds. The projects included a hotel and indoor waterpark, outdoor water park, lighthouse, great lawn, family playground, redesigned golf course and cottages. The purpose of the project was to diversify economic development and increase Local Option Sales Tax Revenue and Hotel/Motel revenue.

KINGS POINTE RESORT 2026-27 FISCAL YEAR BUSINESS PLAN

As we move into our 19th and 20th years of operation, our hearts are filled with gratitude. What began as a vision has grown into something truly special because of the people who gather here — families, friends, neighbors, and visitors who choose Storm Lake as the backdrop for their most meaningful moments.

During the 25-26 fiscal year we contracted for 216 events bringing guests to our resort and our community. Over the years, we have been honored to host weddings, family reunions, birthdays, engagements, university visits, "just because" getaways, work retreats, and so many other celebrations. We enjoy watching generations return year after year is one of our greatest privileges. We are equally excited to welcome first-time guests who discover Storm Lake and quickly understand what makes this community so unique — many of whom soon become part of our extended resort family.

This past year, we were proud to once again partner with the City of Storm Lake to bring back cherished traditions like Kidsfest and Breakfast with Santa, bringing smiles to hundreds of children and families. We also enjoyed participating in community celebrations such as the 4th of July parade and hosting holiday gatherings including New Year's Eve, Easter, Mother's Day, and Thanksgiving events. Being a place where people come together to celebrate life's moments — big and small — is something we never take for granted.

We are grateful to work alongside organizations such as Storm Lake United and Star Spangled Spectacular, supporting events that showcase the pride and spirit of our lake community. Giving back — through donations, local partnerships, and community involvement — is not just something we do; it is part of who we are.

We encourage every guest to explore the community, support fellow local businesses, and enjoy our beautiful parks and lakefront. We are proud to contribute to Storm Lake not only as a destination, but as a neighbor and large employer, employing over 200 employees during the peak season and 147 during the off season. We take pride in giving back through local purchasing and contracting, payroll, hotel-motel tax contributions, and the positive economic impact that extends throughout our incredible lake community.

As we look ahead, we remain committed to providing a welcoming place where memories are made and traditions continue. Thank you for allowing us to be part of what makes Storm Lake such a wonderful place to eat, play, stay — and call home.

FISCAL YEAR 2026-2027 FORECAST

Rooms Sold **19,400 of the 36,500 available room nights**
Occupancy **53.15%**
Average Daily Rate **$147.84**

Total Projected Revenue $4,863,447
Total Projected Expense $4,500,180

KPR Outdoor Waterpark:
Total Revenue: $437,800
Total Expense: $460,238

Sunrise Golf Course:
Total Revenue: $267,430
Total Expense: $222,770

RESOLUTION NO.43 -R-2025-2026

RESOLUTION SETTING FINES AND FEES

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF STORM LAKE, IOWA that the following schedule of fees are approved and effective as of July 1, 2025 with the exception of Outdoor Water Park and Golf Course fees that are effective April 1, 2025.

Administration	**Fee**	**Code Section**
Administrative Fee	$30.00	
Dock Fee	$25.00	
Dock Per Hoist	$10.00	
Garbage Truck Permits (per business)	$100.00	3-1-5
Insufficient Check Fee	$30.00	
Mobile Food & Beverage, Peddlers, Solicitor Or Transient Merchant Permit (1 Day)	$25.00	4-3-4, 4-3-6, 4-10-4
Mobile Food & Beverage, Peddlers, Solicitor or Transient Merchant Permit (7 Day)	$75.00	
Mobile Food & Beverage, Peddlers, Solicitor or Transient Merchant Permit (28 Day)	$150.00	
Investigation Fee (main contact)	$25.00	
Investigation Fee (each additional Person)	$5.00	
Taxi Permit (Business)	$100.00	4-5-3
Taxi Permit (per vehicle)	$10.00	4-5-3
Cancel Permit Fee	$25.00	
Freedom of Information Requests (FOIA Request)		
Single Sided Copy 8.5x11	$.30/page	
Duplex copy 8.5x11	$.40/page	
Single Sided Legal	$.35/page	
Duplex Legal copy	$.45/page	
Single Sided Ledger (11x17)	$.70/page	
Single Sided Ledger with Color Print	$.90/page	
Duplex Ledger (11x17)	$.80/page	
Duplex Ledger with Color Print	$1.00/page	
Large Format Prints (one side only and in color)	$8.00/page	
USB Storage Device	$15/64gb storage	
Research Hourly Rate – per hour/per person	$25.00	
Mailing Costs – 3 pages	$2.00 Plus Current Postage Cost	
Mailing Costs – 50 pages	$6.00 Plus Current Postage Cost	
Mailing Costs – 100 pages	$11.00 Plus Current Postage Cost	
Special City Council Meeting	$250.00	

Airport Hangar Rent (monthly fees)	
Hangar A	$125.00
12 Month Lease Discount Rate	$115.00
Hangar B	$125.00
12 Month Lease Discount Rate	$115.00
Hangar C (VT)	$450.00

Hangar D	$142.00	
12 Month Lease Discount Rate	$130.00	
Hangar E	$160.00	
12 Month Lease Discount Rate	$145.00	
Hangar F	$206.00	
12 Month Lease Discount Rate	$185.00	
FBO Stall	$223.00	
12 Month Lease Discount Rate	$200.00	
Daily Inside Storage/per night	$30.00	

Building Official

Public sidewalk right away cafés, retail sales, or benches	$0	
Driveway (Curb) Cut, Inspection & Marking Residential	$150.00	
Driveway (Curb) Cut, Inspection & Marking Commercial	$200.00	
ROW Temp Closure Permit	$25.00	
Building Moving Permit (Per Bldg)	$150.00 5-1-1	
Demolition Permit	$100.00	
Pool Inspection	$20.00 8-8-11	
Re-inspection Fee (after 1 per inspection)	$75.00	
No Show Fee (per event)	$75.00	
Rental Registration Fee – Yearly (July 1st – June 30th)		
Base Registration Fee (per parcel and 1 unit)	$20.00 5-8-9	
Additional unit in excess of 1 (per unit)	$10.00 5-8-9	
Late Registration Fee - Per Landlord License	$75.00 5-8-9	
Additional unit in excess of 1 (up to 6 units)	$75.00	
Property Maintenance Ordinance Appeal	$150.00	Zoning Ord.
Variance Request	$150.00	Zoning Ord.
Zoning Request	$300.00	Zoning Ord.
Conditional Use	$300.00	Zoning Ord.
Sub-Division Application Fee	$300.00	
Sidewalk Repair Permit Fee	$0	
Pigeons Permit Fee (Per Unit)	$100.00	8-1-1(A)(18)

Building & Sign Permit Fees

Building & Sign Permit <$1,200	$30.00 5-2-2	
Building & Sign Permit $1,200-2,000		5-2-2
$30.00 + $2.88 for each additional $100.00 over $1,200		
Building & Sign Permit $2,001-25,000		5-2-2
$53.04+ $9.16 for each additional $1,000.00 over $2,000		
Building & Sign Permit $25,001-50,000		5-2-2
$263.72 + $6.22 for each additional $1,000.00 over $25,000		
Building & Sign Permit $50,001-100,000		5-2-2
$419.22+ $4.15 for each additional $1,000.00 over $50,000		
Building & Sign Permit $100,001 or more		5-2-2
$626.72+ $3.61 for each additional $1,000.00 over $100,000		
Portable Sign Permit (14 days)	$30.00	Zoning Ord.

Electrical Fees

For New Residences 5-4-9

Single Dwelling	$38.00
Duplex Dwelling	$56.75
Triplex Dwelling	$75.50
4-Plex Dwelling	$113.00
Multi Units Between 5 and 12	$156.75
Over 12 Units	$156.75 plus $38.00 each over 12

For New Commercial or Industrial Buildings

First $5,000.00 at $8.00 per/$1,000.00 of cost
Second $5,000.00 at $6.75 per /$1,000.00 of cost
Third $5,000.00 at $5.50 per/$1,000.00 of cost
Fourth $5,000.00 at $4.25 per/$1,000.00 of cost
Fifth $5,000.00 at $3.00 per/$1,000.00 of cost
All over $25,000.00 at $1.50 per/$1,000.00 of cost

For Rewiring, Repairs or Alterations on Residence, Commercial and Industrial Buildings

$100.00 to $150.00 electric contract $6.75
$151.00 to $200.00 electric contract $8.00
$201.00 to $250.00 electric contract $9.25
$251.00 to $300.00 electric contract $10.50
$301.00 to $350.00 electric contract $11.75
$351.00 to $400.00 electric contract $13.00
$401.00 to $450.00 electric contract $14.25
$451.00 to $500.00 electric contract $15.50
$501.00 to $1,000.00 electric contract $23.00
$1,001.00 to $2,000.00 electric contract $28.00
All over $2,001.00 $28.00 plus $1.50 per $100.00

Plumbing Fees

For New Residences 5-3-10

Single Dwelling	$38.00
Duplex Dwelling	$56.75
Triplex Dwelling	$75.50
4-Plex Dwelling	$113.00
Multi Units Between 5 and 12	$156.75
Over 12 Units	$156.75 plus $38.00 each over 12

For New Commercial or Industrial Buildings

First $5,000.00 at $8.00 per/$1,000.00 of cost
Second $5,000.00 at $6.75 per /$1,000.00 of cost
Third $5,000.00 at $5.50 per/$1,000.00 of cost
Fourth $5,000.00 at $4.25 per/$1,000.00 of cost
Fifth $5,000.00 at $3.00 per/$1,000.00 of cost
All over $25,000.00 at $1.75 per/$1,000.00 of cost

For Repairs or Alterations on Residence, Commercial and Industrial Buildings

$100.00 to $150.00 plumbing contract $6.75

$151.00 to $200.00 plumbing contract $8.00
$201.00 to $250.00 plumbing contract $9.25
$251.00 to $300.00 plumbing contract $10.50
$301.00 to $350.00 plumbing contract $11.75
$351.00 to $400.00 plumbing contract $13.00
$401.00 to $450.00 plumbing contract $14.25
$451.00 to $500.00 plumbing contract $15.50
$501.00 to $1,000.00 plumbing contract $23.00
$1,001.00 to $2,000.00 plumbing contract $28.00
All over $2,001.00 $28.00 plus $1.50 per $100.00

Campground

Class A Site (Lake View, Patio, Water, Sewer, Electric, Cable TV, Fire Pit)	$30.00
Class C Site (Lake View, Patio, Water, Sewer, Electric, Fire Pit)	$28.00
Class E Site (Water, Sewer, Electric)	$25.00
Class F Site (Electric)	$20.00
Glass G Site (Tent)	$12.00
Extra Vehicle Parking (if space available)	$5.00
Non-Campers Dump Station (per event)	$5.00
Non-Camper Shower (per shower)	$5.00
Early check in prior to noon	$20.00
Early check in after 12pm prior to 3pm	$10.00
Late check out after 1pm per hour charge	$10.00

Fire Department

Liquor License Inspection Fee	$50.00
Fireworks Display (Mortar sizes from 1-3 inches)	$150.00
Fireworks Display (Mortar size larger than 3 inches)	$300.00
Emergency Response and/or Cleanup of Material Rate set by the Iowa Fire Service Annual Hazardous material response fee structure for the current calendar year.	See Chart
Safety Trailer Use Fee	
Buena Vista County	$150.00
Non Buena Vista County	$150.00 plus $6 A Mile One Way

Golf Course

Single Season Pass (Ages 18+)	$350.00	
Junior Season Pass (17 and Under)	$75.00	
Electric Cart Storage	$350.00	
Gas Cart Storage	$325.00	
Off Season Cart Storage	$100.00	
Locker Rent/yr	$20.00	
Golf Club Rental	$15.00	
Trail Fee (per day)	$15.00	
Pull Cart Rental	$5.00	
Pull Cart (year)	$75.00	
Trail Fee (year)	$185.00	
10 Round Punch Card (Green Fees Only)	$140.00	
10 Round Cart Rental Punch Card	$150.00	
10 Combo, Green Fee & Cart Rental, Punch Card	$250.00	
Discount Tickets – per 9 holes (Green Fees Only) (sold in advance with minimum quantity of 50)	$10.00	
Weekday 9 Holes	$17.50	
Weekday 18 Holes	$22.50	
Weekend 9 Holes	$22.50	
Weekend 18 Holes	$27.50	
Cart Rental 9 Holes	$17.00	
Cart Rental 18 Holes	$27.00	
Yearly Cart Rental	$350.00	
Hall Rental	$350.00	
Hall Rental - Friday Setup Fee (Valid only after ~~5:00~~ 4:00pm Friday with following Sat. rental)	$200.00	
Hall Rental (weekday 4hrs or less)	$200.00	
Bar Setup Fee (Event Center Only)	$100.00	
9-Hole Course Rental Fee (Minimum 25 participants)	$350.00	
18-Hole Course Rental Fee (Minimum 25 participants)	$500.00	
*Course Rental Fees are due at the time of booking. *Cancelations require a 72 hour advanced notice. *If cancelled inside the 72 hour period, only 50% of the rental Fee will be refunded.		
Group Cart Rental Fee (25 Carts)	$400.00	

Police

Administrative Fee	$50.00	
Alarm Business Permit Application	$75.00	4-7-6
Alarm Business Permit Renewal	$75.00	4-7-9
False Alarm Equip Malfunction (after 3)	$75.00	4-7-16
False Alarm	$75.00	4-7-16
Building Escorts (per car)	$100.00	
Cat License – Not Neutered/Spayed (per year)	$30.00	8-4-2
Neutered/Spayed (per year)	$20.00	
Dog License – Not Neutered/Spayed (per year)	$30.00	8-3-2
Neutered/Spayed (per year)	$20.00	

Animal License Handling Fee	Current USPS Cost	
Fingerprinting	$ 20.00	
Impound/Storage Fee (per day)	$50.00	8-6-5
Impound Storage Fee – felony related (per day)	$50.00	
Parking Fine	$25.00	9-11-4
Report Copies	$5.00	
Police Escort Fee – per hour, per unit	$100.00	5-1-3
Emergency Response and/or Cleanup of Material (per hour)		
Police Vehicle (per vehicle)	$100.00	

King's Pointe Outdoor Aquatic Center

Individual Season Pass (Ages 12+)	$100.00
Child Pass (Ages 11 and Under)	$ 75.00
Adult BV Resident Daily Pass (Age 12+)	$9.00
Child BV Resident Daily Pass (Age 5-11)	$8.00
Child BV Resident Daily Pass (Age 0-4)	$2.00
Adults (Age 12+) Standard Pricing	$17.00
Children (Age 5-11) Standard Pricing	$13.00
Children (Age 0-4) Standard Pricing	$ 3.00
Land Lovers	$ 8.00
Daily Pass Punch Cards:	
10 Punches	$110.00
20 Punches	$190.00
30 Punches	$260.00
50 Punches	$450.00
Swim Lessons	$40.00
Lap Swimming (per time)	$4.00
Lap Swimming Punch Card:	
10 Punches	$35.00
20 Punches	$65.00
30 Punches	$80.00

Roadway Maintenance

Street Cuts & Replacement - Half Street	$800.00
Street Cuts & Replacement Full Street	$1600.00

Sewer

Sewer Svc Permit & Connection Fee	$150.00	3-2-4
Private Wastewater System Permit	$50.00	3-2-3
Sanitary Sewer Dump Fee (Per Load)	$75.00	
Industrial FOG (Fat, Oil, Grease) Per Load	$300.00	

Shelter House

Rental Fee - per side	$110.00
Damage Deposit – per side	$200.00
AWAYSIS Pavilions – per time slot (3 times available)	$25.00
Frank Starr Park Open Shelter – per time slot (2 times available)	$50.00
Campground Open Shelter – per time slot (2 time slots available)	$50.00

AWAYSIS Great Lawn – per day	$200.00	
Band Shell – per day	$50.00	

Water

Door Tag Fee	$20.00	3-5-3
Meter Testing Fee (within 2%)	$50.00	3-4-20
Shut Off Fee	$30.00	3-5-3
Turn On Fee	$30.00	3-5-3
Water Svc Permit & Connect Fee	$150.00	3-4-5
Water Tapping Fee (per inch)	$65.00	3-4-5
Outside City Limits Hook-up Fee	$1,500.00	3-4-6
Combined Utility Deposit	$160.00	
Bulk Water Sales (Minimum)	$15.00	
Bulk Water Sales per 1,000 Gallons	Commercial Rate	3-5-1
Urgent/Elective Shut Off Fee	$500.00	

PASSED AND APPROVED this 19th Day of January, 2026.

_____
Margaret J. McKeon, Mayor

ATTEST:

_____
Mayra A. Martinez, City Clerk

Staff Summary

3/16/2026
Agenda Item # F.13.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Scott Olesen, Building and Code Compliance Director

SUBJECT: **Code Enforcement Work Session**

BACKGROUND: The Storm Lake Building Department Code Enforcement division is tasked with enforcing City Code Chapters 5-10 and 8-1, which provide the requirements for property maintenance and nuisance enforcement. Utilizing these City Code Chapters, the Code Enforcement Officer responds to complaints and also looks for violations of the above City Code sections as well.

The goal is to abate violations of the City Code through contact with individuals who are in non-compliance. Educating people on what rules apply and giving the property owner a reasonable amount of time to abate the nuisance is important and is the directive the City Code provides to City Staff along with the required legal due process in the enforcement of the Code. All situations are a bit different, so the Code Enforcement Officer has to take into consideration each circumstance individually, in order to abate the Code violation in the most effective manner. Consideration is given to whether or not this violation has previously occurred on the property in question, the severity of the violation, (in other words, is this an immediate danger to the property owner or the surrounding properties), and if the property owner is making an effort to correct the violation(s).

We will go over the processes we utilize from initial contact to what happens if we issue a municipal infraction or have to go to court with the property owner who wants to contest a municipal infraction. We will also go over some additional solutions and potential ideas that could be implemented to aid in the process of achieving compliance.

FISCAL IMPACT: No fiscal impact, information only.

RECOMMENDATION: Provide feedback on presentation.

ATTACHMENTS:

1. spenceria-ia-1
2. carroll-ia-1
3. 364.22 Municipal infractions
4. Storm Lake

NUISANCES

§ 93.060 DEFINITIONS.

For the purpose of this subchapter, the following definitions shall apply unless the context clearly indicates or requires a different meaning.

NUISANCE. Whatever is injurious to health, indecent or offensive to the senses or an obstacle to the free use of property so as essentially to interfere with the comfortable enjoyment of life or property. The following are declared to be nuisances:

(1) Buildings. The erecting, continuing or using any building or other place for any trade, employment or manufacture, which, because of offensive odors or pollutants, becomes injurious or dangerous to the health, comfort or property of individuals or the public;

(2) Various materials and deposits. Putrid, filthy and offensive substances, materials, deposits or things left deposited or existing in or upon any street, alley, sidewalk, park, public place, vacant or occupied lot or building, or upon any pond or pool of water which are or may be injurious, offensive, dangerous, deleterious to the health of the city or its inhabitants;

(3) Waters. The obstructing or impeding, without legal authority, the passage of any navigable river, harbor or collection of water;

(4) Pollution. The pollution of the water of any river, stream or pond, or unlawfully diverting the same from its natural course or state, to the damage of others;

(5) Obstructions. The obstructing or encumbering by fences, buildings or otherwise public roads, private ways, streets, alleys, commons or landing places;

(6) Cotton bearing trees. Cotton bearing cottonwood trees and all other cotton bearing poplar trees;

(7) Inflammables. The depositing or storing of inflammable junk, such as rags, rope, cordage, rubber, bones and paper, unless it be in a structure of fireproof construction;

(8) Emissions. The emission of dense smoke, noxious fumes or fly ash;

(9) Yard waste. Piles or accumulations of yard waste exceeding, in total, 16 cubic feet. Such piles or accumulations shall not be placed in a front yard. Firewood, landscaping features and material which constitutes inventory used in the manufacture of a product on the premises are exempt;

(10) Standing water. Allowing or permitting land to remain in such a condition as to allow stagnant, standing water;

(11) Houses. A house, other than building, or land visible from any public place or private premises remaining in an unclean or disorderly condition and to a standard not conforming with other orderly premises in that vicinity;

(12) Property maintenance. Premises maintained in a manner causing substantial diminution in the value of other property in the neighborhood in which such premises are located;

(13) Construction site maintenance. The maintenance of a construction site in such a manner that litter will not be prevented from being carried by the elements to adjoining premises;

(14) Objects. Abandoned, discarded or unused objects or equipment such as automobiles, furniture, appliances, cans or containers;

(15) Compost. Any compost pile which is of such a nature as to spread or harbor disease, emit unpleasant odors or harmful gas, or attract rodents, vermin or other disease carrying pests, animals or insects;

(16) Farm animals. Except in areas zoned F Agricultural, the keeping within the city limits of farm animals and fowl, including, but not limited to, ducks, geese, chickens, turkeys, cattle, goats, swine, sheep, buffalo, horses and ponies;

(17) Materials.

(a) Storing or permitting the storage of material, such as, but not limited to, sand, gravel, rock, earth, coal and grain in piles with side slopes in excess of the angle of repose of said material, the angle of repose being the angle that the surface of freestanding material makes with the horizontal plane without slipping, sliding or collapse of the material.

(b) Subsection (17)(a) shall not apply to accumulations or piles of snow, nor to materials stored in a building, enclosure or completely fenced area to which members of the public are not permitted access.

(18) Privy. Any privy, unless it has connection with the public sewer. Privies that emit or cause an offensive or noxious or disagreeable smell or odor. Modern chemical toilets are permitted at construction sites and for event specific temporary use or emergency use;

(19) Animal and vegetable matter. Carcasses of animals remaining exposed and unburied six hours after death, except game animals being processed in accordance with State Department of Natural Resources regulations. Green or slated hides left or deposited in any open or public places;

(20) Obstructing streets, sidewalks, parking and drains. The unlawful obstructing or impeding of any street, alley, sidewalk, parking, gutter, drainage ditch, sewer or catch basin;

(21) Deposits on parking. The deposit or storage of any garbage or refuse containers, brush, rubbish, grass, rocks, building materials, incinerators or any other debris or

materials on the parking or area between the sidewalk and the curb on any street, except for a period not to exceed 24 hours while awaiting removal by garbage or refuse haulers;

(22) Air quality. Any business, trade, manufacture or other operation or condition of property, which gives rise to noxious or offensive odors, gases, vapors, smoke, pollen or fumes which injure or threaten the health or safety of individuals or the public which result in three independent complaints within any six-hour period;

(23) Storage, collection, discharge or depositing. The storage, collection, discharge or depositing of any liquid waste, offal, filth, garbage, refuse, dead animals or contaminated material in any private or public place so as to threaten the health, safety or is offensive to the senses of any individual or the public, or to be conducive to the breeding and harborage of flies, rats or other vermin. Game animals being processed according to State Department of Natural Resources regulations are exempted;

(24) Rats. An infestation of rats or other vermin in or upon any premises;

(25) Bodies of water. The discharge or depositing of any liquid waste, offal, filth, refuse, garbage, dead animals, contaminated material or other polluting material into any stream, river, lake or other body of water so as to injure or threaten the health and safety of individuals or the public;

(26) Communicable disease. The exposure of any person to any communicable disease by unlawful act or practice;

(27) Drugs, medication, devices, materials and chemicals. The unlawful manufacture, formulation, sale, distribution and/or use of drugs, medication, devices, materials and/or chemicals;

(28) Dead animals. The disposal of dead animals by means other than by rendering, by burying at least three feet under the surface of the ground, or by transportation to and disposal at the Northern Plains Regional Landfill;

(29) Secure areas. Failure to secure areas, buildings or places against unauthorized access where such access threatens the health or safety of individuals, or is an attractive nuisance to children;

(30) Debris, refuse, rubbish and trash. Accumulations of unused boards, bricks, concrete or rocks, animal or vegetable products or matter, appliances, ashes, barrels (excluding solid waste collection barrels awaiting pickup), bones, bottles, boxes, broken glass, brush, cans, cartons, cinders, coal, crates, pallets, decayed fruits or vegetables, dirt, dust, excrement, fence wire, filth, firewood not piled or stacked neatly or systematically, flammable materials, garbage, gasoline, grass, household furniture, discarded or broken or abandoned toys, iron and other metals, junk, kegs, leaves, logs, lumber not piled or stacked neatly and systematically (must have nails removed and be in rear yard, untreated lumber must be stacked), lumber scraps, manure, nails, offal, oil, old wearing apparel, paper, plaster, plastic (discarded containers or wrappers), plumbing fixtures, putrid fish or meat entrails, rags, roof shingles, rubber, sawdust, slag slop, soot, straw, sweepings, tacks, tarpaulin not in good repair, tire(s) (mounted or unmounted), toilets, tubs, vehicle parts,

weeds, wire, wood or metal shavings, any type of solid or yard waste (bagged or unbagged), or any condition or item that would prohibit the routine maintenance of the property or adversely affect the use and habitability of nearby property and of property within the city as a whole. Foliage and shrub clippings or cuttings, leaves, brush and fallen tree limbs or debris, firewood and other yard waste may be stored in piles in a rear yard not less than two feet from a lot line and should be stored temporarily pending disposal or when used for mulch or composting or firewood;

(31) Furniture, fixtures and appliances outdoors. Any furniture, fixture and appliance, including sofas, divans, recliners, toilets, bathtubs, sinks and similar objects which are not designed for outdoor use but which are maintained or located on any porch, lawn, parking lot, driveway or public right-of-way;

(32) Miscellaneous. Any act done or committed or suffered to be done or committed by any person or any substance or thing kept, maintained, placed or found in or on any public or private place which is annoying or damaging or injurious or dangerous to the public health or welfare or safety and every act or thing done, permitted, maintained, allowed or continued on any property, public or private, by any person, which is liable to or does endanger, annoy, damage or injure any person or inhabitant of the city or property of said person or inhabitant;

(33) Storage. Storage other than in an enclosed building on private property which is residentially zoned of any two or more vehicle parts, including, but not limited to, bumpers, engines, exhaust pipes, doors, fenders, hoods, mufflers, seats, windshields or windows, wheels, or any other structural, mechanical or decorative vehicle parts;

(34) Unenclosed storage. The storage of anything on an unenclosed (a tarp shall not be considered enclosed) trailer, pickup or truck box or like vehicles shall be treated in the same manner as storage outside of an enclosed structure; and

(35) Other nuisances. Any matter, thing, substance or condition within the city deemed to be a nuisance in Iowa Code Chapter 657, or defined as a public nuisance in Iowa Code Chapter 657A, or the successor provisions of either of the chapters, or existing by reason of any violation of other provisions of this chapter.

PROPERTY OWNER. The contract purchaser if there is one of record; otherwise, the record holder of legal title.

(Prior Code, § 4-1-1) (Ord. 13, passed - -; Ord. 67, passed 12-7-1953; Ord. 324, passed 9-16-1985; Ord. 452, passed 3-7-1994; Ord. 686, passed 4-20-2009; Ord. 824, passed 11-6-2017)

§ 93.061 OTHER CONDITIONS PROHIBITED.

The following conditions may also be abated in the manner provided in this subchapter, and the following actions may be required:

(A) The removal of diseased trees or dead wood;

(B) The removal, repair or dismantling of a dangerous building or structure;

(C) The connection to public drainage systems from abutting property when necessary for public health or safety;

(D) The connection to public sewer systems from abutting property, and the installation of sanitary toilet facilities and removal of other toilet facilities on such property; and

(E) The cutting or destruction of weeds or other growth which constitutes a health, safety or fire hazard.

(Prior Code, § 4-1-2) (Ord. 324, passed 9-16-1985)

§ 93.062 NUISANCES PROHIBITED.

The creation or maintenance of a nuisance is hereby prohibited, and a nuisance, public or private, may be abated or penalized in the manner provided in this subchapter.

(Prior Code, § 4-1-3) (Ord. 67, passed 12-7-1953; Ord. 324, passed 9-16-1985)

§ 93.063 NOTICE TO ABATE NUISANCE OR CONDITION.

Whenever the Mayor or other authorized municipal officer finds that a nuisance or other condition listed in § 93.060 exists, he or she shall cause to be served upon the property owner as shown by the records of the County Auditor a written notice to abate the nuisance within a reasonable time after notice.

(Prior Code, § 4-1-4) (Ord. 324, passed 9-16-1985)

§ 93.064 CONTENTS OF NOTICE TO ABATE.

The notice to abate shall contain:

(A) A description of what constitutes the nuisance or other condition;

(B) The location of the nuisance or condition;

(C) A statement of the act or acts necessary to abate the nuisance or condition;

(D) A reasonable time within which to complete the abatement; and

(E) A statement that if the nuisance or condition is not abated as directed and no request for hearing has been made within the time prescribed, the city may prosecute the owner or abate the nuisance and assess the costs against the owner.

(Prior Code, § 4-1-5) (Ord. 324, passed 9-16-1985)

§ 93.065 METHOD OF SERVICE.

The notice may be in the form of an ordinance or sent by certified mail to the property owner as shown by the records of the County Auditor, or may be served by the Police Department or County Sheriff.

(Prior Code, § 4-1-6) (Ord. 324, passed 9-16-1985)

§ 93.066 REQUEST FOR HEARING AND APPEAL.

(A) Any person ordered to abate a nuisance or condition may have a hearing before the City Council as to whether a nuisance or prohibited condition exists. A request for hearing must be made in writing and delivered to the City Clerk within the time for abatement stated in the notice, or it will be conclusively presumed that a nuisance or prohibited condition exists, and it must be abated as ordered.

(B) At the conclusion of the hearing, the Council shall render a written decision as to whether a nuisance or prohibited condition exists. If it finds that a nuisance or prohibited condition exists, it shall order it abated and prescribe additional time which must be reasonable under the circumstances.

(Prior Code, § 4-1-7) (Ord. 324, passed 9-16-1985)

§ 93.067 ABATEMENT IN EMERGENCY.

If it is determined that an emergency exists by reason of the continuing maintenance of the nuisance or condition, the city may perform any action which may be required without prior notice. The city shall assess the costs as provided in § 93.068, after notice to the property owner.

(Prior Code, § 4-1-8) (Ord. 324, passed 9-16-1985)

§ 93.068 ABATEMENT BY MUNICIPALITY.

If the person notified to abate a nuisance or condition neglects or fails to abate as directed, the city may perform the required action to abate, keeping an accurate account of the expense incurred. The itemized expense account shall be filed with the City Clerk who shall pay such expenses on behalf of the municipality.

(Prior Code, § 4-1-9) (Ord. 324, passed 9-16-1985)

§ 93.069 COLLECTION OF COST OF ABATEMENT.

The City Clerk shall mail a statement of the total expense incurred to the property owner who has failed to abide by the notice to abate, and if the amount shown by the statement has not been paid within one month, the City Clerk shall certify the costs to the County Auditor, which shall then be collected with and in the same manner as general property taxes.

(Prior Code, § 4-1-10) (Ord. 324, passed 9-16-1985)

§ 93.070 INSTALLMENT PAYMENT OF COST OF ABATEMENT.

If the amount expended to abate the nuisance or condition is $500 or less, the city may levy an assessment against the property to be paid in one installment. If the amount expended to abate the nuisance or condition exceeds $500, but does not exceed $1,000, the city may permit the assessment to be paid in up to five annual installments; if the cost exceeds $1,000 but does not exceed $2,000, the city may permit the assessment to be paid in up to seven annual installments; and if the cost exceeds $2,000, the city may permit the assessment to be paid in up to ten annual installments in the same manner and with the same interest as special assessments on benefitted property.

(Prior Code, § 4-1-11) (Ord. 773, passed 11-3-2014)

§ 93.071 PROSECUTION.

In lieu of the foregoing abatement procedures, the city may elect to treat an unabated nuisance as a violation of this subchapter.

(Prior Code, § 4-1-12) (Ord. 324, passed 9-16-1985) Penalty, see § 93.999

Downloaded from Carroll Iowa Website 12.30.25

CHAPTER 50
NUISANCE ABATEMENT PROCEDURE

50.01 Definitions
50.02 Nuisances Enumerated
50.03 Other Conditions
50.04 Building Maintenance
50.05 Household Goods and Machinery
50.06 Construction Equipment and Materials
50.07 Junk and Junk Vehicles
50.08 Mowing of Properties
50.09 Nuisances Prohibited
50.10 Nuisance Abatement
50.11 Abatement of Nuisance by Written Notice
50.12 Municipal Infraction Abatement Procedure

50.01 DEFINITIONS.

For use in this chapter, the following terms are defined:

1. "Junk" is defined in Section 51.01(1) of this Code of Ordinances.

2. "Junk vehicle" is defined in Section 51.01(2) of this Code of Ordinances.

3. "Motor vehicle" is defined in Chapter 321 of the Code of Iowa, including motorized bicycles, motorcycles, and all terrain vehicles.

4. "Nuisance" means whatever is injurious to health, indecent, or unreasonably offensive to the senses, or an obstruction to the free use of property so as essentially to interfere unreasonably with the comfortable enjoyment of life or property is a nuisance.

(Code of Iowa, Sec. 657.1)

5. "Vehicle" is defined in Section 51.01(3).

50.02 NUISANCES ENUMERATED.

The following subsections include, but do not limit, the conditions that are deemed to be nuisances in the City:

(Code of Iowa, Sec. 657.2)

1. Offensive Smells. Erecting, continuing, or using any building or other place for the exercise of any trade, employment, or manufacture that, by occasioning noxious exhalations, unreasonably offensive smells, or other annoyances, becomes injurious and dangerous to the health, comfort, or property of individuals or the public.

2. Filth or Noisome Substance. Causing or suffering any offal, filth, or noisome substance to be collected or to remain in any place to the prejudice of others.

3. Impeding Passage of Navigable River. Obstructing or impeding without legal authority the passage of any navigable river, harbor, or collection of water.

4. Water Pollution. Corrupting or rendering unwholesome or impure the water of any river, stream, or pond, or unlawfully diverting the same from its natural course or state, to the injury or prejudice of others.

5. Blocking Public and Private Ways. Obstructing or encumbering, by fences, buildings or otherwise, the public roads, private ways, streets, alleys, commons, landing places, or burying grounds.

6. Houses of Ill Fame. Houses of ill fame, kept for the purpose of prostitution and lewdness; gambling houses; places resorted to by persons participating in criminal gang activity prohibited by Chapter 723A of the Code of Iowa or places resorted to by persons using controlled substances, as defined in Section 124.101 of the Code of Iowa, in violation of law, or houses where drunkenness, quarreling, fighting or breaches of the peace are carried on or permitted to the disturbance of others.

7. Billboards. Billboards, signboards, and advertising signs, whether erected and constructed on public or private property, that so obstruct and impair the view of any portion or part of a public street, avenue, highway, boulevard or alley or of a railroad or street railway track as to render dangerous the use thereof. (See also Section 62.04.)

8. Storing of Flammable Junk. Depositing or storing of flammable junk, such as old rags, rope, cordage, rubber, bones and paper, by dealers in such articles within the fire limits of the City, unless in a building of fireproof construction. (See also Chapter 51.)

9. Grasses, Weeds, and Brush. Dense growth of all weeds, vines, brush, or other vegetation in the City so as to constitute a health, safety, or fire hazard. Grasses and weeds that are allowed to grow on any developed lot to a height greater than eight (8) inches, grasses and weeds that are allowed to grow on any undeveloped lot to a height greater than twelve (12) inches, and any growth of noxious weeds as defined in the Code of Iowa. This subsection does not apply to grasses grown as agricultural crops on undeveloped property or to grasses growing in an area declared by the Council to be a natural woodlands area.

10. Dutch Elm Disease. Trees infected with Dutch elm disease. (See also Chapter 151.)

11. Vermin Harborage. Conditions that are conducive to the harborage or breeding of vermin.

12. Dilapidated Buildings. Any building or structure that is in such a dilapidated condition that it is unfit for human habitation, or kept in such an unsafe or unsanitary condition that it is a menace to the health of people residing in the vicinity thereof, or any building or structure defined as a dangerous or unsafe building in Chapter 145 of this Code of Ordinances.

50.03 OTHER CONDITIONS.

The following chapters of this Code of Ordinances contain regulations prohibiting or restricting other conditions that are deemed to be nuisances:

1. Junk and Junk Vehicles (See Chapter 51)
2. Dangerous Buildings (See Chapter 145)
3. Storage and Disposal of Solid Waste (See Chapter 105)
4. Trees (See Chapter 151)

50.04 BUILDING MAINTENANCE.

Every building shall be maintained to be free from excessively peeling paint or other conditions suggestive of deterioration or inadequate maintenance. Exterior surfaces shall not have any holes or broken glass; loose, cracked or damaged shingles or siding; or other defects in the exterior finish which admit rain, cold air, dampness, rodents, insects, or vermin. Basements, cellars, and crawl spaces shall be free of standing water and hazards. All wood, including floorboards, subfloors, joists, bridging, roof rafters and sheathing, and all other wood in any interior or exterior floor, wall, roof, or other part of the structure shall be maintained to be free of cracks affecting structural integrity, termite damage, infestation, or rot. Any and all damaged or deteriorating materials shall be replaced. If infestation exists in any basement, cellar, or crawl space, such infestation shall be remedied in accordance with industry standards. Violation of this section is declared to be a nuisance.

50.05 HOUSEHOLD GOODS AND MACHINERY.

No furniture, household furnishings, appliances, or other such items not designed for outside use and no machinery, implements, or other such equipment that is in inoperable condition, including component parts thereof, shall be stored or kept outside for a period of more than twenty-four (24) hours on any premises in a residential area. Violation of this section is declared to be a nuisance.

50.06 CONSTRUCTION EQUIPMENT AND MATERIALS.

Operable machinery, equipment, and materials being used for construction purposes, including pipes, lumber, forms, dirt, sand, and sod, shall not be stored or kept in the open, except:

1. For use in the ordinary course of business as the inventory or asset of a contractor, supplier, or government subdivision; or

2. On the job site of a project in progress, for a period not to exceed thirty (30) days after construction has been completed or a separate certificate of occupancy has been issued, whichever occurs first.

Violation of this section is declared to be a nuisance.

50.07 JUNK AND JUNK VEHICLES.

It is hereby declared that storage within the corporate limits of any junk or a junk vehicle upon private property owned or controlled by the owner of the junk or junk vehicle, unless excepted by Section 51.04 of this Code of Ordinances, constitutes a threat to the health and safety of the citizens and is a nuisance within the meaning of Section 657.1 of the Code of Iowa. If any junk or junk vehicle is stored upon private property in violation hereof, the owner or person in control of the property upon which it is stored shall be prima facie liable for said violation.

(Code of Iowa, Sec. 364.12[3a])

50.08 MOWING OF PROPERTIES.

1. Definitions. Unless otherwise expressly stated, the following terms shall have the meaning given in this subsection:

A. CURB, CURB LINE, or CURBING means the outer boundaries of a street at the edge of that portion of the street usually traveled by vehicular traffic.

B. CUT or MOW means to mechanically maintain the growth of grass, weeds, or brush at a uniform height.

C. PROPERTY OWNER: The record titleholder or the contract purchaser of record, if any.

D. PARKING means that part of a street in the City not covered by a sidewalk and lying between the lot line or property line and the curb line; or on unpaved streets, that part of the street lying between the lot line or property line and that portion of the street usually traveled by vehicular traffic.

2. Uniform Height Specifications.

A. Any property within the City of Carroll, whether vacated or non-vacated, is required to be mowed any time the grass, weeds and brush reaches a height where it can become a

habitat for vermin, or a health, safety or fire hazard. Ornamental grasses are excluded. Specifically, grass, weeds or brush, except trees, shall be cut, mowed and maintained to conform to the following height specification:

(1) Developed Residential Areas: not to exceed eight inches (8")

(2) Undeveloped Residential Areas: not to exceed twelve inches (12")

(3) Business and Industrial Areas: not to exceed eight inches (8")

(4) Agricultural Areas: not to exceed sixteen inches (16")

3. Obligation of Property Owner.

A. The property owner shall cut, mow and maintain all grass, weeds, and brush upon the property owner's property and adjacent to the curb line or outer boundary of any street, which includes the parking area abutting the owner's property, to a uniform height as defined in section 2.

B. City building officials or chief of police or their designated representative may give the property owner in violation of this ordinance a notice entitled "Official Notice - Failure to Maintain Grass, Weeds, and Brush" setting forth the location/address of the violation and to whom the notice is directed with the explanation of the violations. This notice shall be personally served upon the owner of the residence by the city building officials or the police department. If personal service is not possible, written notice of such violation shall be affixed to the front door of the premises. If the owner is leasing or renting the premise, the tenant shall be personally served or notice affixed to the front door and the property owner shall also be personally served with the notice. The owner of the property shall have seventy-two (72) hours from time of service or posting of this notice in which to take action and bring the property into compliance with this code. The existence of extraordinary weather conditions as determined by the building officials or police chief shall extend the seventy-two (72) hours until such extraordinary weather conditions have dissipated. If after notice, the property owner has not brought the property into compliance according to section 2 of this ordinance, the police chief or their designated representative is authorized to issue a civil citation pursuant to section 364.22 of the Code of Iowa.

C. A second subsequent violation of this section shall not be considered a repeat offense pursuant to section 364.22, Code of Iowa, for the purposes of increasing the civil penalty, unless the prior or preceding offenses have occurred within the current mowing season.

4. Mowing By the City of Carroll. Whenever a violation has remained unabated pursuant to section 3, and the time for the property owner to take action after service of the notice has expired, the city may take action to remedy the violation either by use of city personnel and equipment or by contracting the work to be undertaken.

5. Right to Assess. When the City completes or causes to complete the compliance action of the property, the city may assess the property owner the actual cost plus any administrative costs of the compliance action of the violation, in addition to taking any other action provided for in this section.

6. Assessment of Costs. The actual cost including an administrative cost of seventy-five dollars ($75) per occurrence, shall be paid by the property owner. The property owner shall be sent an itemized bill by the city for said costs to permit the voluntary payment thereof by the property owner. The bill shall be sent within thirty (30) days of the city's actions as set forth in subsection 5 of this section. Failure to pay said bill within thirty (30) days after mailing of bill will cause the action to appear on a schedule of assessment to be forwarded to the City Clerk.

7. Schedule of Assessments. Whenever action by the city to remedy the violation as provided in this section, and the right to assess provided for in subsection 6 is invoked, the city shall cause to be prepared a schedule giving the name of the owner, so far as known, a description of the property, the date when the work was done, and the amount charged to each lot, and for what work and materials the charge was made. As soon thereafter as practicable the schedule shall be filed with the City Clerk.

8. Certification For Collection. Upon receipt of the schedule of assessments and certification by the City Clerk, the City Clerk shall file said assessments with the County Treasurer for collection in the manner provided by law.

(Ord. 2407 - Aug. 24 Supp.)

50.09 NUISANCES PROHIBITED.

The creation or maintenance of a nuisance is prohibited, and a nuisance, public or private, may be abated in the manner provided for in this chapter or Chapter 657 of the Code of Iowa.

(Code of Iowa, Sec. 657.3)

50.10 NUISANCE ABATEMENT.

Whenever any authorized municipal officer finds that a nuisance exists, such officer has the authority to determine on a case-by-case basis whether to utilize the nuisance abatement procedure described in Section 50.10 of this chapter or the municipal infraction procedure referred to in Section 50.11.

(Code of Iowa, Sec. 364.12[3h])

50.11 ABATEMENT OF NUISANCE BY WRITTEN NOTICE.

Any nuisance, public or private, may be abated in the manner provided for in this section:

(Code of Iowa, Sec. 364.12[3h])

1. Contents of Notice to Property Owner. The notice to abate shall contain: † 2

A. Description of Nuisance. A description of what constitutes the nuisance.

B. Location of Nuisance. The location of the nuisance.

C. Acts Necessary to Abate. A statement of the act or acts necessary to abate the nuisance.

D. Reasonable Time. A reasonable time within which to complete the abatement.

E. Assessment of City Costs. A statement that if the nuisance or condition is not abated as directed and no request for hearing is made within the time prescribed, the City will abate it and assess the costs against the property owner.

2. Method of Service. The notice may be in the form of an ordinance or sent by certified mail to the property owner.

(Code of Iowa, Sec. 364.12[3h])

3. Request for Hearing. Any person ordered to abate a nuisance may have a hearing with the Council as to whether a nuisance exists. A request for a hearing must be made in writing and delivered to the Clerk within the time stated in the notice, or it will be conclusively presumed that a nuisance exists and it must be abated as ordered. The hearing will be before the Council at a time and place fixed by the Council. The findings of the Council shall be conclusive and, if a nuisance is found to exist, it shall be ordered abated within a reasonable time under the circumstances.

4. Abatement in Emergency. If it is determined that an emergency exists by reason of the continuing maintenance of the nuisance or condition, the City may perform any action that may be required under this chapter without prior notice. The City shall assess the costs as provided in subsection 6 of this section after notice to the property owner under the applicable provisions of subsection 1 and 2, and the hearing as provided in subsection 3.

(Code of Iowa, Sec. 364.12[3h])

5. Abatement by City. If the person notified to abate a nuisance or condition neglects or fails to abate as directed, the City may perform the required action to abate, keeping an accurate account of the expense incurred. The itemized expense account shall be filed with the Clerk, who shall pay such expenses on behalf of the City.

(Code of Iowa, Sec. 364.12[3h])

6. Collection of Costs. The Clerk shall send a statement of the total expense incurred by certified mail to the property owner who has failed to abide by the notice to abate, and if the amount shown by the statement has not been paid within one month, the Clerk shall certify the costs to the County Treasurer and such costs shall then be collected with, and in the same manner as, general property taxes.

(Code of Iowa, Sec. 364.12[3h])

7. Installment Payment of Cost of Abatement. If the amount expended to abate the nuisance or condition exceeds one hundred dollars ($100.00), the City may permit the

assessment to be paid in up to ten (10) annual installments, to be paid in the same manner and with the same interest rates provided for assessments against benefited property under State law.

(Code of Iowa, Sec. 364.13)

8. Failure to Abate. Any person causing or maintaining a nuisance who shall fail or refuse to abate or remove the same within the reasonable time required and specified in the notice to abate is in violation of this Code of Ordinances.

Notes

2 † EDITOR'S NOTE: A suggested form of notice for the abatement of nuisances is included in the Appendix of this Code of Ordinances. Caution is urged in the use of this administrative abatement procedure, particularly where cost of abatement is more than minimal or where there is doubt as to whether or not a nuisance does in fact exist. If compliance is not secured following notice and hearings, we recommend you review the situation with your attorney before proceeding with abatement and assessment of costs. Your attorney may recommend proceedings in court under Chapter 657 of the Code of Iowa rather than this procedure.

50.12 MUNICIPAL INFRACTION ABATEMENT PROCEDURE.

In lieu of the abatement procedures set forth in Section 50.10, the requirements of this chapter may be enforced under the procedures applicable to municipal infractions as set forth in Chapter 4 of this Code of Ordinances.

364.22 Municipal infractions.

1. *a.* A municipal infraction is a civil offense punishable by a civil penalty of not more than seven hundred fifty dollars for each violation or if the infraction is a repeat offense, a civil penalty not to exceed one thousand dollars for each repeat offense. However, notwithstanding section 364.3, a municipal infraction arising from noncompliance with a pretreatment standard or requirement, referred to in 40 C.F.R. §403.8, by an industrial user may be punishable by a civil penalty of not more than one thousand dollars for each day a violation exists or continues.

b. (1) A city may classify a municipal infraction, other than a violation arising from noncompliance with a pretreatment standard or requirement, as an environmental violation if the infraction is a violation of chapter 455B or 459, subchapters II and III, or a violation of a standard established by the city in consultation with the department of natural resources, or both. The discharge of airborne residue from grain, created by the handling, drying, or storing of grain by a person, shall not be subject to an ordinance, the violation of which is classified as an environmental violation, unless the person is engaged in industrial production or manufacturing of grain products. The discharge of airborne residue from grain, created by the handling, drying, or storing of grain by a person engaged in industrial production or manufacturing of grain products, shall not be subject to an ordinance, the violation of which is classified as an environmental violation, if the discharge occurs from September 15 to January 15. A municipal infraction which is classified an environmental violation is punishable by a civil penalty of not more than one thousand dollars for each occurrence. A person committing an environmental violation is not subject to a civil penalty, if all of the following conditions are satisfied:

(a) The violation results solely from the person conducting an initial start-up, cleaning, repairing, performing scheduled maintenance, testing, or conducting a shutdown, of either equipment causing the violation or the equipment designed to reduce or eliminate the violation.

(b) The person notifies the city of the violation within twenty-four hours from the time that the violation begins.

(c) The violation does not continue in existence for more than eight hours.

(2) A city shall not enforce this section against a person committing an environmental violation, until the city offers to participate in informal negotiations with the person. If the person accepts the offer, the city and the person shall participate in good faith negotiations to resolve issues alleged to be the basis for the violation.

2. A city by ordinance may provide that a violation of an ordinance is a municipal infraction.

3. A city shall not provide that a violation of an ordinance is a municipal infraction if the violation is a felony, an aggravated misdemeanor, or a serious misdemeanor under state law or if the violation is a simple misdemeanor under chapters 687 through 747.

4. An officer authorized by a city to enforce a city code or regulation may issue a civil citation to a person who commits a municipal infraction. A copy of the citation may be served by personal service as provided in **rule of civil procedure 1.305**, by certified mail addressed to the defendant at the defendant's last known mailing address, return receipt requested, or by publication in the manner as provided in **rule of civil procedure 1.310** and subject to the conditions of **rule of civil procedure 1.311**. A copy of the citation shall be retained by the issuing officer, and the original citation shall be sent to the clerk of the district court. The citation shall serve as notification that a civil offense has been committed and shall contain the following information:

a. The name and address of the defendant.
b. The name or description of the infraction attested to by the officer issuing the citation.
c. The location and time of the infraction.
d. The amount of civil penalty to be assessed or the alternate relief sought, or both.
e. The manner, location, and time in which the penalty may be paid.
f. The time and place of court appearance.
g. The penalty for failure to appear in court.

h. The legal description of the affected real property, if applicable.

5. *a.* Upon receiving a citation under subsection 4 that affects real property and that charges a violation relating to the condition of the property, including a building code violation, a local housing regulation violation, a housing code violation, or a public health or safety violation, the clerk of the district court shall index the citation pursuant to section 617.10, if the legal description of the affected property is included in or attached to the citation.

b. After filing the citation with the clerk of the district court, the city shall also file the citation in the office of the county treasurer. The county treasurer shall include a notation of the pendency of the action in the county system, as defined in section 445.1, until the judgment of the court is satisfied or until the action is dismissed. Pursuant to section 446.7, an affected property that is subject to a pending action shall not be offered for sale by the county treasurer at tax sale.

6. In municipal infraction proceedings:

a. The matter shall be tried before a magistrate, a district associate judge, or a district judge in the same manner as a small claim. The matter shall only be tried before a judge in district court if the total amount of civil penalties assessed exceeds the jurisdictional amount for small claims set forth in section 631.1.

b. The city has the burden of proof that the municipal infraction occurred and that the defendant committed the infraction. The proof shall be by clear, satisfactory, and convincing evidence.

c. The court shall ensure that the defendant has received a copy of the charges and that the defendant understands the charges. The defendant may question all witnesses who appear for the city and produce evidence or witnesses on the defendant's behalf.

d. The defendant may be represented by counsel of the defendant's own selection and at the defendant's own expense.

e. The defendant may answer by admitting or denying the infraction.

f. If a municipal infraction is proven the court shall enter a judgment against the defendant. If the infraction is not proven, the court shall dismiss it.

7. All penalties or forfeitures collected by the court for municipal infractions shall be remitted to the city in the same manner as fines and forfeitures are remitted for criminal violations under section 602.8106. If the person named in the citation is served as provided in this section and fails without good cause to appear in response to the civil citation, judgment shall be entered against the person cited.

8. A person against whom judgment is entered, shall pay court costs and fees as in small claims under chapter 631. If the action is dismissed, the city is liable for the court costs and court fees. Where the action is disposed of without payment, or provision for assessment, of court costs, the clerk shall at once enter judgment for costs against the city.

9. Seeking a civil penalty as authorized in this section does not preclude a city from seeking alternative relief from the court in the same action.

10. *a.* When judgment has been entered against a defendant, the court may do any of the following:

(1) Impose a civil penalty by entry of a personal judgment against the defendant.

(2) Direct that payment of the civil penalty be suspended or deferred under conditions imposed by the court.

(3) Grant appropriate alternative relief ordering the defendant to abate or cease the violation.

(4) Authorize the city to abate or correct the violation.

(5) Order that the city's costs for abatement or correction of the violation be entered as a personal judgment against the defendant or assessed against the property where the violation occurred, or both.

b. If a defendant willfully violates the terms of an order imposed by the court, the failure is contempt.

c. A magistrate or district associate judge shall have jurisdiction to assess or enter judgment for costs of abatement or correction in an amount not to exceed the jurisdictional amount for a money judgment in a civil action pursuant to section 631.1, subsection 1, for

magistrates and section 602.6306, subsection 2, for district associate judges. If the city seeks abatement or correction costs in excess of those amounts, and the matter is not before a judge in district court, the case shall be referred to the district court for hearing and entry of an appropriate order. The procedure for hearing in the district court shall be the same procedure as that for a small claims appeal pursuant to section 631.13.

11. The defendant or the city may file a motion for a new trial or may appeal the decision of a magistrate, district associate judge, or a district judge to the district court. The procedure on appeal shall be the same as for a small claim pursuant to section 631.13. A factual determination made by the trial court, supported by substantial evidence as shown in the record, is binding for purposes of appeal relating to the violation at issue, but shall not be admissible or binding as to any future violation for the same or similar ordinance provision by the same defendant.

12. This section does not preclude a peace officer of a city from issuing a criminal citation for a violation of a city code or regulation if criminal penalties are also provided for the violation. Each day that a violation occurs or is permitted to exist by the defendant, constitutes a separate offense.

13. The issuance of a civil citation for a municipal infraction or the ensuing court proceedings do not provide an action for false arrest, false imprisonment, or malicious prosecution.

14. An action brought pursuant to this section for a municipal infraction which is an environmental violation does not preclude, and is in addition to, any other enforcement action which may be brought pursuant to chapter 455B, 455D, 455E, or 459, subchapters II, III, and VI.

15. A police department may dispose of personal property under section 80.39.

86 Acts, ch 1202, §2; 87 Acts, ch 99, §4 – 6; 89 Acts, ch 150, §5 – 8; 90 Acts, ch 1210, §1 – 5; 96 Acts, ch 1067, §1; 98 Acts, ch 1144, §4; 2000 Acts, ch 1203, §21; 2003 Acts, ch 178, §24; 2009 Acts, ch 21, §6; 2010 Acts, ch 1050, §1, 2

Referred to in §364.22B, 380.10, 446.7, 455B.192

Chapter 5-10

PROPERTY MAINTENANCE CODE

Sections:

5-10-1 Title
5-10-2 Purpose
5-10-3 Interpretation
5-10-4 Abrogation and Greater Restrictions
5-10-5 Severability
5-10-6 Definitions
5-10-7 Maintenance Standards
5-10-8 Violations

Section 5-10-1 Title

This ordinance may be referred to as the "Property Maintenance Code", and is herein referred to as "this Code".
(Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-2 Purpose

The purpose of this Code is to protect the public health, safety, and welfare, esthetics and property values, by establishing minimum standards for maintenance, appearance, condition, and occupancy, and for essential utilities, facilities, and other physical components and conditions to make residential premises fit for human habitation, and to make nonresidential premises fit for use according to the purpose for which they were developed; by fixing certain responsibilities and duties upon the owners and managers, and distinct and separate responsibilities and duties upon the occupants; by authorizing and establishing procedures for inspection of premises, and enforcement of this Code; establishing penalties for violations; and providing for proper repair, demolition, or vacation of premises which do not comply with this Code.
(Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-3 Interpretation

The provision of this Code shall be interpreted and applied as minimum requirements, and shall not be deemed a limitation or repeal for any other power granted by the Code of Iowa.

Nothing in this Code shall be construed to abrogate the Federal or State Constitutions, nor to grant powers to the City that are otherwise reserved by and for Federal and State government.
(Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-4 Abrogation and Greater Restrictions

It is not the intent of this Code to repeal, abrogate, annul, impair, or interfere with any existing easements, covenants, deed restrictions, agreements, ordinances, rules, regulations, or permits previously adopted or issued pursuant to law. Where two or more provisions apply the higher standard shall prevail.
(Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-5 Severability

If a section, provision, or part of this Code is adjudged to be invalid or unconstitutional, such adjudication shall not affect the validity of this Code as a whole or any section, provision, or part hereof not adjudged invalid or unconstitutional.
(Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-6 Definitions

Words used in this Code shall have the same meaning as that defined by the Zoning Ordinance, unless otherwise defined by this Code.

(A) Abandoned Building. Any building or portion of a building under construction which has stood with an incomplete exterior shell for more than one year, or any completed building or portion thereof which has stood unoccupied for longer than six (6) months, and which is unsecured or has Housing Code or Building Code violations.

(B) Deterioration. A state of conditions caused by a lack of maintenance or excessive use, characterized by holes, breaks, rot, crumbling, peeling paint, rusting, or other evidence of physical decay or neglect.

(C) Enforcement Officer. The Police, City Administration or Code Enforcement Officer, or other staff as may be assigned.

(D) Eviseration/Slaughtering B Slaughter is the killing of live animals for the purpose of converting them into meat or for having the animal mounted by a taxidermist and does not include the killing of a live animal by police or other persons for public safety purposes. Eviseration is the bleeding out and/or disembowelment of a dead animal.
(E) Exposed to Public View. Any premises or any part thereof which may be lawfully viewed by the public or from adjoining premises.

(F) Exterior. Yards and other open outdoor spaces on premises, and the external surfaces of any structure.

(G) Extermination. The control and elimination of insects, rodents and vermin.

(H) Farm. Agricultural use types include the on-site production and sale of plant and animal products by agricultural methods.

1. Horticulture
   The growing of horticultural and floricultural specialties, such as flowers, shrubs, or trees intended for ornamental or landscaping purposes. This definition may include accessory retail sales under certain conditions. Typical uses include wholesale plant nurseries and greenhouses.

2. Crop Production
   The raising and harvesting of tree crops, row crops for field crops on an agricultural or commercial basis. This definition may include accessory retail sales under certain conditions.

3. Animal Production
   The raising of animals or production of animal products, such as eggs or dairy products on an agricultural or commercial basis on a site which is also used for crop production or where grazing of natural vegetation is the major feed source; or the raising of animals for recreational use. Typical uses include grazing, ranching, dairy farming, and poultry farming.

4. Commercial Feedlots
   The exclusive use of a site for the confined feeding or holding of livestock or poultry within buildings, lots, pens, or other close quarter, which are not used, for crop production or where grazing of natural vegetation is not the major feed source.

5. Livestock Sales
   Use of a site for the temporary confinement and exchange or sale of livestock. Typical uses include sale barns.

(I) Infestation. The presence of insects, rodents, vermin, or other pests on the premise to the extent that they constitute a health hazard, are deemed by an Enforcement Officer to be in threat of spreading to adjoining premises, or are exposed to public view.

(J) Junk. Any discarded or salvaged material or fixture; obsolete or inoperable machinery or vehicle, or parts thereof; or scrap metal.

(K) Nuisance. Physical conditions that are dangerous or detrimental to the health or safety of persons on or near the premises where the conditions exist, or anything that is injurious to the senses or interferes with the comfortable enjoyment of life or property.

(L) Owner. Any person who alone, jointly, or severally with others, holds legal or equitable title to any premises, with or without accompanying actual possession thereof.

(M) Premises. A lot, parcel, tract or plot of land, contiguous and under common ownership or control, together with the buildings and structure thereon.

(N) Public Authority. Any officer or any department or branch of the City, County, or State charged with regulating health, fire, zoning, building regulations, public safety or other activities concerning property in the City.

(O) Refuse. Any material that has lost its value for the original purpose for which it was created or manufactured, or for its redesigned use, whether putrescible or non-putrescible, combustible or non-combustible, which is not securely stored in a building or legal outdoor storage yard for prompt disposal or resale, including, but not limited to junk; paper or cardboard; plastic, metals; glass; yard clippings, leaves, woody vegetative trimmings, and other plant wastes which have not been properly composted; vegetable or animal waste resulting from the handling, processing, storage, preparation, serving or consumption of food, crockery; bedding, furniture, or appliances; offal; rubbish; ashes or incinerator residue; construction debris; accumulation of animal feces; dead animals; or wastes from commercial or industrial processes.

(P) Responsible party. Any person having possession, charge, care, or control of real or personal property, whether with or without the knowledge and consent of the owner, including without

limitation any one or more of the following: owner, agent, property manager, contract purchaser, mortgagee or vendee in possession, receiver, executor, trustee, lessee or tenant, or any other person, firm or corporation exercising apparent control over a property.

(Q) Vehicle. Any device designed to transport a person or property by land, air, or water, such as automobiles, trucks, trailers, motorcycles, tractors, buggies, wagons, boats, airplanes, or any combination thereof, except bicycles.
(Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-7 Maintenance Standards

A) GENERAL. The exterior of every premises and structure shall be maintained in good repair, to the end that the premises and each structure thereon will be preserved; adjoining properties protected from blighting influences; and safety and fire hazards eliminated.

(B) MAINTENANCE OF PREMISES. Each and every premise shall be kept free of all nuisances, health, safety, and fire hazards, unsanitary conditions, and infestation. It shall be the duty of the responsible party to keep the premises free of all said conditions and to promptly remove and abate same, which include but are not limited to the following declared nuisances:

1. Weeds or grasses allowed to grow to a height greater than eight (8) inches on the average, or any accumulation of dead weeds or grass that are exposed to public view, on any non-farm property. This provision shall not apply to prairies, wetlands, or similar area of naturalized perennial vegetation which are certified by an Enforcement Officer to not constitute a nuisance.

2. No person shall permit garbage or recyclable materials to accumulate longer than a garbage collection cycle upon premises owned or occupied by him or her if such accumulation would violate the purpose of this Chapter as set out in City Code 3-1-1 nor shall any person deposit any garbage or recyclable materials upon any other premises except the County Landfill unless such person has been authorized by the owner of the premises to deposit such materials there.

3. Any structure, which is in such a dilapidated condition that it is unfit for human habitation or the use for which it was constructed; kept in such an unsanitary condition that it is a menace to the health of people residing therein or in the vicinity thereof; any structure defined as a dangerous building by the most-current edition of the Uniform Code for the Abatement of Dangerous Buildings, as published by the International Conference of Building Officials; or any building that is defined as abandoned or a public nuisance by Chapter 657A, Code of Iowa.

4. Any inoperable vehicle which is exposed to public view for more than ten (10) days, unless located on the premises of a lawfully operated junk yard or undergoing repairs in an expeditious manner at a vehicle repair business.

5. The presence of mud, dirt, gravel or other debris or matter, whether organic or inorganic, deposited upon and adjacent to or on public property in a quantity judged by an enforcement officer to be a threat to public safety or to cause pollution, obstruction, or siltation of drainage systems, or to violate solid waste disposal

regulations, or illicit discharge regulations contained in Chapter 3-11, of the Storm Lake City Code. This subsection is subject to the possible exception set forth in 5-10-7(B)(5a).

5(a). No person shall store or permit to be stored dirt, sand, gravel, debris or similar materials on a vacant lot unless said dirt or other materials shall be leveled and the lot brought to uniform grade consistent with surrounding lots. As an exception to the foregoing, the following uses are permitted:

1. Materials stored in bulk which are to be used as a part of the normal operations of a legally permitted landscaping business for use on other lots or to be sold on premises.

2. Dirt, sand, gravel and other materials may be stored in mounds for a period not to exceed four (4) months on a vacant lot in anticipation of construction on that lot, or in connection with construction on a neighboring lot, but for no other purpose.

6. Failure to establish a permanent cover of perennial grasses on any non-farm property or adjacent unpaved public right-of-way as soon as practical after any construction on the lot and adjacent right of way, and to thereafter maintain same in such condition as to substantially bind the surface of the soil and prevent erosion, whether by sheet or gullying, or by wind or water.

Exceptions shall be permitted for densely shaded areas, landscape beds, and gardens, provided that vegetable gardens and agricultural crops shall not be placed in the front yard of a non-farm property, unless it can be demonstrated that no other viable location exists on the premises because of topography, natural vegetation, or similar circumstances out of the resident's control. Additionally, if permanent grass cover fails to establish itself on the right of way, due to road salt, sand and other winter maintenance procedures, then ornamental rock cover may be established, subject to the approval of the City Administrator and/or designee.

7. Any nuisance as defined herein or described as such by Chapter 657 of the Code of Iowa.

8. Any alteration, modification, or obstruction which prevents, obstructs or impedes the normal flow of runoff from adjacent lands, or any alteration or modification which substantially concentrates or increases the flow of water onto an adjoining premises to the extent of damaging or saturating such premises.

9. Conditions which are conducive to the accumulation of weeds, vegetation, junk, dead organic matter, debris, garbage, offal, rodent harborages, stagnant water, combustible materials and similar materials or conditions on a premise which constitutes a fire, health or safety hazard.

10. Facilities for the storage or processing of sewage, such as privies, vaults, sewers, private drains, septic tanks, cesspools, and drain fields, which have failed or do not function properly, as may be evidenced by overflow, leakage, seepage, or emanation of odors, or which do not comply with the Buena Vista County Department of Health regulations, as applicable. Septic tanks, cisterns, and cesspools which are no longer in use shall be removed, or emptied and filled with clean dirt or sand.

11. Fences or retaining walls that are not structurally sound or which are deteriorating, as may be evidenced by leaning or loose elements.

12. Dead or diseased trees or other woody vegetation which may lead to the spread of the disease to other specimens or pose a threat to safety of buildings; major parts thereof, such as a limb, which may be dead or broken or otherwise pose a threat to safety of persons or buildings on adjoining premises; any vegetation located on private property which overhangs and is less than 8 feet above the traveled portion of any sidewalk or not less than 14 feet above the traveled portion of any street.

13. Loose, overhanging objects or accumulations of ice or snow, which by reason of location above ground level constitute a danger of falling on persons in the thereof. ((Dangerous Building Code 302-5, 6)

14. The slaughtering of live domestic animals or evisceration of dead domestic animals in any residential zoned district other than the Sunrise Campgrounds until such time as the campgrounds are renovated. Deer shall be included in the category of domestic animal. Any further processing of a dead animal shall be out of public view.

(C) BUILDING MAINTENANCE. All buildings shall be maintained to be weather and water tight. Broken windows, holes in roofs, and missing siding shall be replaced with similar materials to maintain the weather and water tight properties of the structure. All wood including floor boards, decking, subfloors, joists, rafters, roof sheathing, and siding shall be replaced when missing, rotted or damaged. Materials and practices used in reconstruction and residing shall be of standard quality and appearance commensurate with the character of house or building. Their appearance, as judged under prevailing appraisal practices and standards. Owners or responsible parties shall not use materials which would depreciate the value of adjoining premises or the neighborhood. Painted surfaces shall be maintained or repainted so that an individual wall surface does not have peeling or missing paint in areas in excess of fifty percent (50%) of that individual surface area.

(D) The purpose of this Section is to establish minimum standards relating to the parking of vehicles on private property and adjacent right-of-way in all zoned districts.

1. Definitions

Hard-Surfaced driveway shall mean any driveway, adjacent wing, or approach area that is paved with a hard surface including concrete, asphalt, or paving stones installed and maintained according to city specifications.

Non Hard-Surfaced driveway shall be defined as a driveway constructed of gravel, millings, dirt, grass, and/or any other non-smooth/hard surface.

Approach shall be defined as that area of the driveway which begins at the street and extends through the public right-of-way.

Wing Area is defined as a permitted increase in the width of the driveway, all of which

must be located on private property and no part of which may be on the Approach.

Auxiliary Parking Area shall mean a parking lot and shall only be allowable when required for multi-family residential complexes.

Multi-family Unit shall be defined as a residential structure containing two(2) or more separate residential units.

Curb Cut shall mean an opening formed in the standard profile of curb and gutter either by sawing and breaking or grinding and done to maintain drainage.

2. Parking within the City of Storm Lake shall be limited in residentially zoned districts (R-1, R-2, R-3, and R-4 as well as permitted non-conforming residential uses and approved residential conditional uses in other zoning districts) of the City to hard-surfaced driveways. In R-3 and R-4 as well as permitted non-conforming residential uses and approved residential conditional uses in other zoning districts, any auxiliary parking areas must be hard surfaced as well. Each lot will be limited to one hard-surfaced driveway with a maximum width of twenty-four feet (24') in the case of a two-car garage, single-car garage, or no garage and a maximum width of thirty-two feet (32') in the case of a three car or larger garage. In addition, each lot will be allowed one hard-surfaced wing area directly adjacent to the hard-surfaced driveway with a maximum width of twelve feet (12') to be used for parking. A hard-surfaced winged parking area is allowed on only one side of the hard-surfaced driveway and not both sides. Hard-surfaced wing parking areas shall not encroach upon the public right-of-way area. No person shall park a vehicle in the front or side yards of a residence except upon permitted driveways, wing areas and approach, and for multi-family uses, upon a permitted auxiliary parking area.

3. For all residential lots the maximum allowable width of the approach per lot shall be limited to a maximum width of twenty-four feet (24') in the case of a two-car garage, single-car garage, or no garage and a maximum width of thirty-two feet (32') in the case of a three car or larger garage. In the case of a lot having two approaches to accommodate a circular drive, the combined width of the approaches shall not exceed the maximum allowable width based on the number of garage spaces.

3(A). For Commercial and Industrial uses outside the Central Business District (CBD), the maximum allowable width of the approach shall not exceed thirty four (34') feet. As an exception, when unusual conditions exist at a location which would create a hardship or significant traffic conditions are present which would adversely affect traffic safety, approaches may be allowed to exceed the above stated width, subject to review by the City Administrator or other staff as may be assigned.

4. Parking areas and driveways accessed from an alley must be, at a minimum, surfaced with gravel in accordance with City specifications. The allowable width for alley approaches and parking areas shall be in accordance with an in addition to the allowable limits set forth earlier in this ordinance for street accessed parking.

5. All existing hard surfaced driveways, approaches, wing areas and/or hard-surfaced auxiliary parking areas on private property shall be permitted to continue as a non-conforming use if they exceed the maximum width permitted herein provided, however,

that if the City must cut an approach in connection with a street or utility improvement project, the City will only replace the approach to the maximum width permitted by this Ordinance. Existing non hard-surfaced driveways on private property and within the allowable maximum driveway width may continue but, at a minimum, be surfaced and/or maintained with gravel in accordance with City specifications. All of that portion of existing non hard-surfaced driveways in excess of the allowable maximum width may not continue and must be removed and returned to grass not later than September 1, 2008.

6. If an approach area is not hard surfaced, any gravel on any portion of the approach area which is in excess of the permitted width shall be removed not later than September 1, 2008 and the excess width returned to grass. The approach area, up to the maximum permitted width, must be hard surfaced not later than December 31, 2012. As an exception to the above subsection, existing approaches accessed from gravel streets would not have to be paved until such time as the City paves the street.

7. Any existing lots where surfaced approaches are in excess of the allowable width, as set forth in this Ordinance at the date of passage, shall be permitted to continue so long as they meet the definition of a surfaced driveway as set forth in this Ordinance and as long as the property owner agrees to accept responsibility to replace the surfaced area over the maximum allowed by this Ordinance at their expense if the approach should need to be replaced for any reason including utility work done in the public right-of-way by the City of Storm Lake or by public utilities.

8. All vehicle parking constructed after the adoption of this Ordinance shall be hard surfaced as defined herein.

9. Existing parking areas for multi-family units located in the City right-of-way accessed by curb cuts in existence prior to November 1, 2007 shall be allowed to remain as long as the area is hard surfaced by December 31, 2012 and may exceed the allowable driveway width as defined by this ordinance.

(E) REFUSE. The purpose of this Subsection is to eliminate unhealthy, unsanitary and unsightly conditions in the City caused by deposits and accumulation of garbage and to regulate the collection of same.

1. DEFINITIONS. For use within this Subsection the following terms are hereby defined:

   (a) "CAN": A container for the storage of garbage or recyclable materials which is provided with a handle and tight-fitting cover; is watertight; is substantially made of galvanized iron, plastic or rubber or other non-rusting material; and of a size that may be conveniently handled by the collector.

   (b) "COLLECTOR": Any person, business, private contractor, specifically including the City of Storm Lake, which picks up and removes garbage, recyclable materials, or yard waste for a fee and is licensed, in accordance with Storm Lake City Code.

(c) "GARBAGE": All animal, fruit, vegetable and other waste material resulting from the preparation of food and drink together with other discarded items that do not fall into the category of recyclable material or yard waste.

(d) "RECYCLABLE MATERIAL": Materials which may be designated as recyclable by the Buena Vista County Recycling center such as cardboard, clean newspapers, magazines, number one and two plastic, tin cans, clear and amber glass; subject to such additional items or deletions of items that the Recycling Center may make from time to time.

(e) "YARD WASTE": Yard waste shall have such definition as is given to it by the Iowa Department of Natural Resources, but in any case shall include glass clippings, leaves, garden waste and branches from trees and shrubs.

2. DUTY TO PROVIDE CANS. Each person who shall store garbage or recyclable materials out of doors on premises owned or occupied by that person shall provide and use cans suitable in capacity for the storage of garbage and recyclable materials accumulating in a normal collection period. The foregoing shall not be construed as requiring a can of sufficient capacity for the occasional discarded item which is too large for a can if discards of this type are not regularly reoccurring.

All cans provided shall be kept covered and reasonably clean at all times. They shall be placed in a position readily accessible to the collector outside of buildings but not in alleys or streets; provided, however, that persons storing garbage in commercially zoned districts or residential complexes of 4 or more units may store garbage and recyclable materials discretely on their own property or in the alley in cans or other commercial containers if such cans or containers are stored immediately adjacent to the adjoining building.

3. ACCUMULATION AND DEPOSIT OF GARBAGE OR RECYCLABLE MATERIALS PROHIBITED. No person shall permit garbage or recyclable materials to accumulate upon premises owned or occupied by him or her if such accumulation would violate the purpose of this Chapter as set out in City Code 3-1-1 nor shall any person deposit any garbage or recyclable materials upon any other premises except the County Landfill unless such person has been authorized by the owner of the premises to deposit such materials there.
(Ord. 11-O-2007-2008, Amended, 02/18/2008; Ord. 10-O-2007-2008, Amended, 12/17/2007; Ord. 09-O-2007-2008, Amended, 12/17/2007; Ord. 08-O-2007-2008, Add, 12/17/2007)

Section 5-10-8 Violations

(A) ENFORCEMENT. The creation or maintenance of a violation of this ordinance is prohibited and shall constitute a municipal infraction subject to the penalties and alternative relief authorized by Title I, Chapter 20 of the City Code and by Section 364.22 of the Code of Iowa. Each day that a violation is permitted to continue beyond any period of time granted by the enforcement officer to correct the violation constitutes a separate offense.

(B) INSPECTIONS. All inspections, enforcement actions, and hearings on violations, unless expressly stated to the contrary, shall be under the direction and supervision of an Enforcement Officer, who may appoint or designate other public officers or employees to perform duties as may be necessary to enforce this Code, including inspections and holding of hearings. The

Enforcement Officers are hereby authorized to abate such violations in accordance with the procedures of this Code and to serve notice to abate same, whether upon the owner or other responsible party for a premise upon which a violation is being maintained, or upon the person or persons causing or maintaining the violation.

(C) VOLUNTARY ABATEMENT. The objective of this Code being the abatement of violations, persons violating this Code shall, except in emergency situations, be given notice of the violation and allowed a reasonable amount of time to voluntarily remedy the violation before action to assess costs or penalties for committing a municipal infraction are undertaken. Consideration will be given to evidence of a good faith effort to correct the violation; whether an imminent health or safety hazard exists; whether the person has previously been notified of or charged with violations of a similar nature; and other factors.

(D) EMERGENCY CONDITION. If the Enforcement Officer judges that an emergency exists which creates a dangerous and imminent health or safety hazard to persons, property or the general public which requires immediate action, the City may order such action as may be necessary to meet the emergency. Any orders issued pursuant to this paragraph shall be effective immediately or in the time and manner prescribed in the order itself.

(E) REPEAT OFFENSE. The enforcement officer may, but shall not be required to, give notice to abate prior to issuance of a municipal infraction citation for a repeat offense involving the same property and occurring within one year of a prior violation and notice to abate.

(F) NOTICE. When service of a notice to abate is required, the following methods of service shall be deemed adequate:

1. By personal service upon the person or persons causing or maintaining the violation or the owner of the property upon which the nuisance exists.

2. If, after reasonable effort, personal service cannot be made, service shall be made by sending the notice by certified mail, return receipt requested to the last known address of the responsible party or owner as appropriate.

(G) ABATEMENT REMEDIES AND PENALTIES. In the event that the violation is not abated as ordered and within the time specified, the City may abate such violation by undertaking such abatement and assessing the costs thereof against the property.

1. Abatement may include but is not limited to repair, removal, cleaning, extermination, cutting, mowing, grading, sewer repairs, draining, securing, barricading or fencing, demolition of dangerous or abandoned structures or portions thereof, and elimination of nuisances. Abatement costs may include the cost of removing or eliminating the violation; the cost of investigation, such as title searches, inspection, and testing; the cost of notification; filing costs; and other related administrative costs. Inoperable or obsolete vehicles which have been impounded may be sold in accordance with state law. If an inoperable or obsolete vehicle removed from private premises is not sold or if the proceeds of such sale or redemption are not sufficient to pay the costs of abatement, storage and sale of said inoperable or obsolete vehicle, such cost or the balance of such cost may be assessed against the premises in the same manner as a property tax.

2. Before the assessment of any charges for work done or caused to be done by the City the owner of the property proposed to be assessed shall be provided notice and opportunity for hearing before the Property Maintenance Appeal Board. The notice shall set forth the amount proposed to be assessed, and include a statement of the time, place, and date of hearing.

(H) EMERGENCY ABATEMENT PROCEDURE. If an Enforcement Officer determines that a violation exists and constitutes an imminent, clear, and compelling danger to health, safety or welfare of persons or property, the enforcement officer is authorized to abate the violation or have it abated without prior notice and opportunity for hearing. The costs of such action may be assessed against the premises. However, prior to such assessment, the City shall give a property owner notice and the opportunity for a hearing before the Property Maintenance Appeal Board.

(I) APPEAL. There is hereby created a Property Maintenance Appeal Board. It shall have five members and those five members shall be the same as the five persons currently serving on the Storm Lake Board of Adjustment. When sitting as the Property Management Appeal Board, the powers of the Board of Adjustment shall not apply and the Property Maintenance Appeal Board shall have the following powers:

1. To determine whether the finding of a violation by the enforcement officer is correct.

2. To grant, upon a showing of extreme financial hardship, a reasonable extension of time to correct a violation.

3. To authorize, upon a showing of unique circumstances not attributable to the owner or responsible party, vehicle parking arrangements not otherwise permitted by this Code but which may not include any new gravel parking.

4. The cost of an appeal to the Property Maintenance Appeal Board shall be the same as the cost of an appeal to the Board of Adjustment, and shall be set by Resolution duly adopted by the City Council.

(Ord. 08-O-2007-2008, Add, 12/17/2007)

Staff Summary

3/16/2026
Agenda Item # F.14.

City of Storm Lake
PO Box 1086
Storm Lake, IA 50588
p (712) 732-8000
f (712) 732-4114

REPORT TO: Honorable Mayor & Council

FROM: Mayra Martinez, City Clerk

SUBJECT: **City Council Requested Items / City Council Updates**

BACKGROUND:
1. Nuisance Code - March 15
2. Truck Routes- April 6

FISCAL IMPACT: None

RECOMMENDATION:

ATTACHMENTS:
None