



WEBSTER
CITY

AGENDA
City Council Meeting
City Hall Council Chambers - Webster City, Iowa
May 20, 2024 6:00 p.m.

This meeting will be open to the public and can be viewed live on the City facebook page <https://www.facebook.com/cityofwebstercity/> or viewed on the City of Webster City website <https://webstercity.com/government/city-council/city-council-meetings/> the morning following the meeting.

CALL TO ORDER

ROLL CALL

PLEDGE OF ALLEGIANCE

Motion on Approval of Agenda

1. PETITIONS – COMMUNICATIONS – REQUESTS

This is the time of the meeting that a citizen may address the Council on a matter not on the Agenda. **(No more than five minutes per person)** Except in cases of emergency, the City Council will not take any action at this meeting, but may ask the City Staff to research the matter or have the matter placed on the Agenda for a future meeting.

- a. Public Information
- b. Oath of Office to Police Officer Anthony J. Luft by Mayor Hawkins
- c. [PROCLAMATION](#) on Poppy Day May 24 by Mayor Hawkins
- d. [PROCLAMATION](#) on Memorial Day May 27 by Mayor Hawkins

2. MINUTES, CLAIMS, REPORTS, LICENSES

The following items have been deemed to be non-controversial, routine actions to be approved by the Council in a single motion. If a Council member, or a member of the audience wishes to have an item removed from this list, it will be considered in its normal sequence on the Agenda.

- a. [MINUTES](#) of May 6, 2024 Meeting
- b. [CLAIMS](#), including Payroll ending May 4, 2024 and [FUND LIST](#)
- c. [REPORTS](#) Wastewater, Electric, Water for April 2024
- d. Police Department [ACTIVITY REPORT](#) for April 2024 [CITATIONS BY APPROACH](#) for April 2024
- e. Fire Department [REPORT](#) for April 2024.
- f. Hamilton County Solid Waste Commission [AGENDA](#) May 8, 2024

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g. Recommend approval for issuance of Beer & Liquor Licenses by the Iowa Department of Commerce for the following:

Auto Renewals: Class E Retail Alcohol License

BW Gas & Convenience Retail, LLC – Yesway #1018, 1803 Superior Street

BW Gas & Convenience Retail, LLC – Yesway #1021, 1102 2nd Street

Renewal – Special Class C Retail Alcohol license, Leon’s Pizza, 643 2nd Street

Special Class C Retail Alcohol License – TTMM Promotions, LLC d/b/a Hamilton County Speedway for participation at Chamber of Commerce Market Nights in June, July & August, 2024

Amendment to License #LC0046627 for Additional Outdoor Service, Second Street Saloon for Street Dance scheduled for June 14th, 2024

h. Council Committee Reports

i. Other reports and recommendations

3. GENERAL AGENDA

a. [MEMO-APPLICATION CHAMBER](#) [RESOLUTION](#) supporting the submission of an Iowa Economic Development Authority (IEDA) Application to the Workforce Housing Tax Credit Program by Webster City Area Community Foundation.

b. [RESOLUTION](#) authorizing and approving a Loan Agreement and providing for the issuance and securing the payment of Water Revenue Bonds, Series 2024.

[LOAN AGREEMENT](#)

[AGENT AGREEMENT](#)

[CONT DISCLOSURE CERT](#)

c. [RESOLUTION](#) authorizing and approving a Loan Agreement and providing for the issuance of Electric Revenue Bonds, Series 2024.

[LOAN AGREEMENT](#)

[AGENT AGREEMENT](#)

[CONT DISCLOSURE CERT](#)

d. [COUNCIL MEMORANDUM](#) Request from Finance Director on proposals for Banking Services. [RFP](#)

e. [COUNCIL MEMORANDUM](#) Motion to set Public Hearing to Amend the FY25 Budget . *(June 3 - 6:05 p.m.)*
[NOTICE](#)

f. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) to transfer Cash from Various Funds to Other Various Funds.

g. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) Charging off from Active Accounts Receivable Delinquent Final Utility Bills and Department Charges. [ACCOUNTS RECEIVABLE](#) [UTILITY ACCOUNTS](#)

h. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) providing for Notice of Hearing on proposed plans and specifications, proposed form of Contract and Estimate of Cost for Municipal Building HVAC System Replacement. *(July 15 - 6:10 p.m.)*

[NOTICE](#) [COST OPINION](#) [REPLACEMENT](#) [PROJECT MANUAL](#)

i. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) adopting Group Benefit Plan for City Employees beginning July 1, 2024 with Iowa Governmental Health Care Plan, Third Party Administrator Employee Benefit Systems.

j. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) Adopting Employee Pay Plan for 2024-25.

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k. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) providing for Notice of Hearing on Proposed Plans and Specifications and Proposed Form of Contract and Estimate of Cost to Purchase the 15 kV Indoor Metalclad Switchgear needed for the Reisner Substation. *(July 1 - 6:05 p.m.)*

[NOTICE OF HEARING](#) [NOTICE TO BIDDERS](#) [BID DOCUMENTS](#)

l. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) accepting Permanent Electrical Easement, located in the Lawn Hill Addition, from Kwik Trip, Incorporated. [EASEMENT](#)

m. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) Authorizing the City Manager to sign and execute Amendment No. 32 with Snyder and Associates to provide Professional Services needed for the 2025 Fair Meadow Drive Reconstruction Project. [AMENDMENT](#) [CAPITAL IMPR FD](#) [CAPITAL IMPR FD W/BONDS](#)

n. [COUNCIL MEMORANDUM](#) [RESOLUTION](#) providing for Notice of Hearing on Proposed Plans and Specifications and Proposed Form of Contract and Estimate of Cost for Construction of the FY 2025 HMA Improvements Project. *(June 17 - 6:05 p.m.)*

[NOTICE OF HEARING](#) [NOTICE TO BIDDERS](#) [COST OPINION](#) [CONTRACT](#) [FINAL PLAN](#)

o. [COUNCIL MEMORANDUM](#) Second Reading of an Ordinance Amending the Code of Ordinances of the City of Webster City, Iowa, 2019, by amending Chapter 46, Article II, Division 2, Section 46-50 pertaining to Stop Requirement at Certain Streets. [ORDINANCE](#)

p. Discuss Catalyst Grant for 608 Second Street.

4. ADJOURN

NOTE: The Council may act by motion, resolution or ordinance on items listed on the Agenda.



WEBSTER CITY AMERICAN LEGION AUXILIARY UNIT 191

PROCLAMATION

I, _____, Mayor of the City of Webster City do hereby proclaim the date of May 24, 2024 as Poppy Day in Webster City, Iowa and ask that all citizens pay tribute to those who have made the ultimate sacrifice in the name of freedom, by wearing the memorial Poppy on this day.

Mayor

PROCLAMATION

MEMORIAL DAY – MAY 27, 2024

WHEREAS, as Americans we enjoy the freedom of peace, prosperity and independence; these are virtues upon which the United States was built and ideals that bind us together as a nation; and

WHEREAS, on Memorial Day we pause to remember that freedom comes at a great cost, throughout history, in field, skies and seas around the world, American military personnel have given their lives to defend our liberty and uphold the promise of our democracy; and

WHEREAS the first Memorial Day was observed in 1868 originally as Decoration Day, in remembrance of soldiers who died in the Civil War. For 149 years our nation has set aside this day to pay homage to all American patriots who have fallen in service to our country; and

WHEREAS, the American Legion has planned special services for Memorial Day this year, including services at the North Des Moines Street Bridge, Cass Center Cemetery, Parade, service at the Boulevard of Valor and a service at Graceland Cemetery

NOW, THEREFORE I, John Hawkins, Mayor of the City of Webster City, do hereby proclaim May 27, 2024 as Memorial Day in Webster City, Iowa and hereby commend its observance to the citizens of our community urging everyone to participate in the activities and events recognizing and honoring veterans in our community.

Signed this 20th day of May, 2024.

John Hawkins Mayor
City of Webster City, Iowa

CITY COUNCIL MEETING MINUTES
Webster City, Iowa May 6, 2024 – 6:00 p.m.

The City Council met in regular session at the City Hall, Webster City, Iowa at 6:00 p.m. on May 6, 2024 upon call of the Mayor and the advance agenda. The meeting was called to order by Mayor John Hawkins and roll being called there were present in Council Chambers the following Council Members: Abbie Hansen, Megan McFarland and Matt McKinney. Council Member Logan Welch was absent.

This meeting was open to the public and could be viewed live on the City facebook page <https://www.facebook.com/cityofwebstercity/> or can be viewed on the City of Webster City website <https://webstercity.com/government/city-council/city-council-meetings/> the following morning.

Mayor John Hawkins led the Pledge of Allegiance.

It was moved by Hansen and seconded by McKinney to approve the agenda.

ROLL CALL: Hansen, Hawkins, McFarland and McKinney voting aye.

Agenda item (j.) was moved to the first item on the General Agenda.

PETITIONS- COMMUNICATIONS- REQUESTS

None brought forth.

PUBLIC INFORMATION

a. Mayor Hawkins gave a Proclamation designating May as Mental Health Month in Webster City, Iowa. Mickie Shubin, Power Up Youth, was in attendance and also spoke on the Make It OK Walk/Event scheduled for May 9th, 2024 in Webster City.

MINUTES, CLAIMS, REPORTS, LICENSES

It was moved by McFarland and seconded by Hansen that the following motions, licenses and lease (a-d) be approved collectively:

- a. The meeting minutes of April 15, 2024
- b. The Claims, including Payroll ending April 20, 2024 and Fund List
- c. That the issuance of Beer & Liquor Licenses by the Iowa Department of Commerce be recommended for the following:
 - Auto-Renewals – Class E Retail Alcohol License
 - Fareway Stores, Inc. – 942 2nd Street
 - Hy-Vee, Inc. – 823 2nd Street
 - Casey’s General Store #1828 – 1300 2nd Street
 - Class C Retail Alcohol License, Gridiron Family Grill and Sports Lounge, Inc., 1121 East Second Street
 - Amendment to add Outdoor Service Area – Wildcat Distilling Co., 626 2nd Street – for Parklet Area during dates of May 1st through October 31st annually
 - 5-Day (May 21st-25th) Class C Retail Alcohol License for Iowa Beer Bus to participate at Junquefest event being held at Hamilton County Fairgrounds
- d. A one-year Farm Lease with Travis Wearda, Webster City, Iowa on City owned property
- e. Council Committee Reports – None brought forth
- f. Other reports and recommendations – None brought forth.

ROLL CALL: Hawkins, McFarland, McKinney and Hansen voting aye.

GENERAL AGENDA

j. It was moved by McFarland and seconded by Hansen that Resolution No. 2024-064 approving Contract for Economic Development Services, be passed and adopted.

ROLL CALL: McFarland, McKinney, Hansen and Hawkins voting aye.

PUBLIC HEARINGS 6:05 P.M.

a. May 6, 2024 at 6:05 p.m. in Council Chambers at City Hall, 400 Second Street, Webster City, Iowa being the time and place for a Public Hearing on the Construction of Reisner Substation Grading, the same was held. No written objections were received and no oral objections were presented.

It was moved by McKinney and seconded by Hansen that Resolution No. 2024-065 approving plans and specifications, form of contract and estimate of cost for the Construction of Reisner Substation Grading and Awarding Contract to McDowell & Sons Contractors, Inc. of Iowa Falls, Iowa in the amount of \$366,460.00 as identified by DGR Engineering in preparation for construction of the Reisner Substation be passed and adopted.

ROLL CALL: McKinney, Hansen, Hawkins and McFarland voting aye.

b. May 6, 2024 at 6:05 p.m. in Council Chambers at City Hall, 400 Second Street, Webster City, Iowa being the time and place for a Public Hearing on Substation Materials needed for the Construction of Reisner Substation, the same was held. No written objections were received and no oral objections were presented.

It was moved by Hansen and seconded by McFarland that Resolution No. 2024-066 approving and confirming plans, specifications, and estimate of cost for Six Major Substation Materials, as defined, needed for Construction of the Reisner Substation and award of contracts to multiple suppliers for Materials as outlined in this Resolution be passed and adopted.

ROLL CALL: Hansen, Hawkins, McFarland and McKinney voting aye.

c. It was moved by McKinney and seconded by Hansen that Resolution No 2024-067 setting June 17, 2024 at 6:05 p.m. in Council Chambers at City Hall, 400 Second Street, Webster City, Iowa as the time and place for a Public Hearing on the 2022 Electrical Underground Conversion Project (Project 9-22-006) (East Side Conversion Project) be passed and adopted.

ROLL CALL: Hawkins, McFarland, McKinney and Hansen voting aye.

d. It was moved by Hansen and seconded by McFarland that Resolution No. 2024-068 setting date for the sale of Water Revenue Bonds, Series 2024 and authorizing the use of a preliminary official statement in connection therewith. be passed and adopted.

ROLL CALL: McFarland, McKinney, Hansen and Hawkins voting aye.

e. It was moved by McFarland and seconded by Hansen that Resolution No. 2024-069 setting date for the sale of Electric Revenue Bonds, Series 2024 and authorizing the use of a preliminary official statement in connection therewith be passed and adopted.

ROLL CALL: McKinney, Hansen, Hawkins and McFarland voting aye.

f. It was moved by McKinney and seconded by McFarland that Resolution 2024-070 authorizing the City Manager to sign and execute Change Order No. 5 and Council to authorize Final Payment and retainage in 30 days to Doyle Construction, Fort Dodge, Iowa, for the completion of the Lincoln Drive Reconstruction Project be passed and adopted.

ROLL CALL: Hansen, Hawkins, McFarland and McKinney voting aye.

g. It was moved by Hansen and seconded by McKinney that Resolution No. 2024-071 authorizing the City Manager to sign and execute Change Order No. 1 for the Fair Meadow Drive Reconstruction Project be passed and adopted.

ROLL CALL: Hawkins, McFarland, McKinney and Hansen voting aye.

City Council Meeting Minutes, May 6, 2024

h. It was moved by McFarland and seconded by Hansen that the First Reading of an Ordinance Amending the Code of Ordinances of the City of Webster City, Iowa, 2019, by amending Chapter 46, Article II, Division 2, Section 46-50 pertaining to Stop Requirement at Certain Streets be approved. (Cedar and Grove)
ROLL CALL: McFarland, McKinney, Hansen and Hawkins voting aye.

i. It was moved by Hansen and seconded by McKinney that Resolution No. 2024-072 amending Terms of Employment for City Clerk be passed and adopted.
ROLL CALL: McKinney, Hansen, Hawkins and McFarland voting aye.

k. Consider Resolution authorizing and approving execution of Wilson Brewer Park Agreement between the City of Webster City and Hamilton County. Roll Call vote was taken on the following Resolution:
Resolution No. 2024-073 authorizing and approving execution of Wilson Brewer Park Agreement between the City of Webster City and Hamilton County, contingent upon reviewing any changes potentially made by the Hamilton County Board of Supervisors, be passed and adopted.
ROLL CALL: Hansen, Hawkins, McFarland and McKinney voting aye.

OTHER ITEMS SENT TO COUNCIL

a. The City Attorney report/update of May 1, 2024 was previously given to Council for review.

CLOSED SESSION

It was moved by McFarland and seconded by Hansen that the Council meet in closed session to evaluate the professional competency of an individual whose appointment, hiring performance or discharge is being considered when necessary to prevent needless and irreparable injury to that individual’s reputation and that individual requests a closed session as provided by Chapter 21.5 i of the Code of Iowa.
ROLL CALL: Hawkins, McFarland, McKinney and Hansen voting aye.

Council went out of Open Session at 6:46 p.m.
Council took a short recess.
Council went in to Closed Session at 6:52 p.m.
Council returned to Open Session at 8:19 p.m.

It was moved by McKinney and seconded by Hansen that council adjourn.
ROLL CALL: McFarland, McKinney, Hansen and Hawkins voting aye.
The May 6, 2024 City Council Meeting stood adjourned at 8:20 p.m.

John Hawkins, Mayor

Karyl K. Bonjour, City Clerk.

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
DOYLE CONSTRUCTION (7733)							
4-25-24 #5	1	Invoice	CONST - LINCOLN DRIVE PROJECT # 9-23-0	04/25/2024	74,372.43	11/24	525-23-30-5310-299
Total 4-25-24 #5:					74,372.43		
Total DOYLE CONSTRUCTION (7733):					74,372.43		
Total 05/13/2024:					74,372.43		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
PEOPLES CREDIT UNION (4140)							
051424	1	Invoice	6 MONTH CD	05/14/2024	400,000.00	11/24	100-11003
051424	2	Invoice	6 MONTH CD	05/14/2024	600,000.00	11/24	100-11107
Total 051424:					1,000,000.00		
Total PEOPLES CREDIT UNION (4140):					1,000,000.00		
WCF FINANCIAL BANK (5526)							
051424	1	Invoice	3 MONTH CD @ 5.30%	05/14/2024	50,000.00	11/24	100-11107
051424	2	Invoice	3 MONTH CD @ 5.30%	05/14/2024	120,000.00	11/24	202-11003
051424	3	Invoice	3 MONTH CD @ 5.30%	05/14/2024	496,600.00	11/24	601-11003
051424	4	Invoice	3 MONTH CD @ 5.30%	05/14/2024	1,150,000.00	11/24	603-11003
051424	5	Invoice	3 MONTH CD @ 5.30%	05/14/2024	51,000.00	11/24	603-11112
051424	6	Invoice	3 MONTH CD @ 5.30%	05/14/2024	129,000.00	11/24	603-11107
051424	7	Invoice	3 MONTH CD @ 5.30%	05/14/2024	3,400.00	11/24	232-11003
Total 051424:					2,000,000.00		
Total WCF FINANCIAL BANK (5526):					2,000,000.00		
Total 05/14/2024:					3,000,000.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
AFLAC, INC. (20)							
028044	1	Invoice	AFLAC PREMIUMS	05/13/2024	2,119.64	11/24	902-11215
Total 028044:					2,119.64		
Total AFLAC, INC. (20):					2,119.64		
AGSOURCE (4458)							
PS-INV3369	1	Invoice	INDOOR POOL WATER TESTING	04/29/2024	27.50	11/24	100-22-42-5233-299
PS-INV3369	2	Invoice	BOIL ORDER TESTING	04/29/2024	276.00	11/24	602-23-62-5662-318
Total PS-INV336930:					303.50		
Total AGSOURCE (4458):					303.50		
AGUIRRE, EDUARDO UTRERA (7940)							
315900134	1	Invoice	CUSTOMER DEPOSIT REFUND	05/06/2024	15.34	11/24	601-21011
Total 315900134:					15.34		
Total AGUIRRE, EDUARDO UTRERA (7940):					15.34		
ARNOLD MOTOR SUPPLY (68)							
26NV102426	1	Invoice	WINDSHIELD WASHER RESERV/TRK 1	04/26/2024	6.78	11/24	601-23-52-5935-314
Total 26NV102426:					6.78		
26NV102429	1	Invoice	OIL-AIR FILTERS/TRK 7	04/26/2024	29.92	11/24	601-23-52-5935-314
Total 26NV102429:					29.92		
26NV102931	1	Invoice	LIGHT BULBS/TRK 7	05/20/2024	6.08	11/24	601-23-52-5935-314
Total 26NV102931:					6.08		
26NV102946	1	Invoice	SWITCH	05/08/2024	10.99	11/24	100-23-42-5371-314
Total 26NV102946:					10.99		
26NV103162	1	Invoice	SFE GLASS FUSE-20A-5 PER CARD	05/13/2024	5.44	11/24	100-23-42-5371-314
Total 26NV103162:					5.44		
Total ARNOLD MOTOR SUPPLY (68):					59.21		
BLACK HILLS ENERGY (3466)							
0976116930	1	Invoice	GAS UTILITY/LINE DEPT	05/09/2024	68.06	11/24	601-23-51-5566-234
Total 0976116930 05/09/24:					68.06		
5978424719	1	Invoice	GAS UTILITY/WATER PLANT	05/09/2024	80.74	11/24	602-23-61-5642-234
Total 5978424719 05/09/24:					80.74		
6506969580	1	Invoice	GAS UTILITY/WATER PLANT	05/09/2024	170.22	11/24	602-23-61-5642-234
Total 6506969580 05/09/24:					170.22		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total BLACK HILLS ENERGY (3466):					319.02		
BOMGAARS (5165)							
62096519	1	Invoice	WIPER BLADES/GLASS CLEANER	02/13/2024	32.99	11/24	601-23-80-5935-227
62096519	2	Invoice	WIPER BLADES/GLASS CLEANER	02/13/2024	32.98	11/24	602-23-80-5935-227
Total 62096519:					65.97		
62098201	1	Invoice	SUPPLIES	02/19/2024	129.00	11/24	603-23-70-5642-318
Total 62098201:					129.00		
62116881	1	Invoice	TAPE MEASURE	04/16/2024	16.99	11/24	601-23-52-5588-311
Total 62116881:					16.99		
62116999	1	Invoice	HEADLAMP & OVERSHOES	04/16/2024	30.49	11/24	602-23-80-5903-318
62116999	2	Invoice	HEADLAMP & OVERSHOES	04/16/2024	30.49	11/24	601-23-80-5905-318
Total 62116999:					60.98		
62117307	1	Invoice	STRAP/TRK 4	04/17/2024	3.98	11/24	601-23-52-5588-318
Total 62117307:					3.98		
62117361	1	Invoice	GLOVES	04/17/2024	32.98	11/24	602-23-61-5642-318
Total 62117361:					32.98		
62117568	1	Invoice	FASTENERS/TRK 5	04/18/2024	11.52	11/24	601-23-52-5588-318
Total 62117568:					11.52		
62118147	1	Invoice	4PK RATCHET/TRK 4	04/19/2024	28.99	11/24	601-23-52-5588-318
Total 62118147:					28.99		
62119673	1	Invoice	FASTENERS	04/22/2024	25.92	11/24	602-23-61-5642-318
Total 62119673:					25.92		
62120321	1	Invoice	BALL VALVE	04/24/2024	12.99	11/24	602-23-61-5642-318
Total 62120321:					12.99		
62120655	1	Invoice	FASTENERS	04/25/2024	15.56	11/24	603-23-70-5642-318
Total 62120655:					15.56		
62120740	1	Invoice	FLEXIBLE COUPLING	04/25/2024	6.99	11/24	601-23-52-5588-318
Total 62120740:					6.99		
62120746	1	Invoice	FASTENERS	04/25/2024	4.39	11/24	603-23-70-5642-318
Total 62120746:					4.39		
62121057	1	Invoice	SHOP SUPPLIES	04/26/2024	30.71	11/24	601-23-52-5588-318

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 62121057:					30.71		
62121239	1	Invoice	QUICK LINK	04/26/2024	2.98	11/24	601-23-52-5588-318
Total 62121239:					2.98		
62122602	1	Invoice	GAUGES/FASTENERS	04/29/2024	102.67	11/24	603-23-70-5642-318
Total 62122602:					102.67		
62122842	1	Invoice	STEP LADDER/TRK 11	04/30/2024	119.99	11/24	601-23-52-5588-318
Total 62122842:					119.99		
62122974	1	Invoice	GRINDING WHEEL/BLADE/SAWZALL BLADE	04/30/2024	20.17	11/24	603-23-70-5642-311
Total 62122974:					20.17		
62122999	1	Invoice	BOLTS	04/30/2024	37.27	11/24	603-23-70-5642-318
Total 62122999:					37.27		
62123022	1	Invoice	FASTENERS	04/30/2024	3.56	11/24	603-23-70-5642-318
Total 62123022:					3.56		
62123761	1	Invoice	LEVELS/CORNER BRACE/CLOSED BAR HOL	05/02/2024	91.95	11/24	100-22-42-5210-318
Total 62123761:					91.95		
62125901	1	Invoice	PAINT SUPPLIES/OD POOL	05/07/2024	89.20	11/24	100-22-42-5242-311
Total 62125901:					89.20		
62125994	1	Invoice	BATTERIES/GRESE GUN-CEMETERY	05/07/2024	231.97	11/24	100-23-42-5371-311
Total 62125994:					231.97		
62126395	1	Invoice	ROUNDUP SPRAYER	05/08/2024	26.99	11/24	204-23-30-5310-318
Total 62126395:					26.99		
62127305	1	Invoice	FASTENERS-SIGN WORK	05/10/2024	102.62	11/24	100-21-30-5120-318
Total 62127305:					102.62		
62127538	1	Invoice	DUMP TRK GATE	05/10/2024	44.99	11/24	601-23-52-5935-314
Total 62127538:					44.99		
62129397	1	Invoice	BATTERIES	05/13/2024	5.49	11/24	601-23-80-5905-318
62129397	2	Invoice	BATTERIES	05/13/2024	5.50	11/24	602-23-80-5903-318
Total 62129397:					10.99		
62129569	1	Invoice	ROUND UP FOR CITY HALL	05/14/2024	9.45	11/24	100-24-36-5480-318
62129569	2	Invoice	ROUND UP FOR CITY HALL	05/14/2024	6.75	11/24	601-23-36-5480-318

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
62129569	3	Invoice	ROUND UP FOR CITY HALL	05/14/2024	5.40	11/24	602-23-36-5480-318
62129569	4	Invoice	ROUND UP FOR CITY HALL	05/14/2024	5.39	11/24	603-23-36-5480-318
Total 62129569:					26.99		
62130198	1	Invoice	MISC SMALL TOOLS/ROUNDUP	05/15/2024	115.45	11/24	204-23-30-5310-311
Total 62130198:					115.45		
Total BOMGAARS (5165):					1,474.76		
BORDER STATES INDUSTRIES INC (109)							
928312188	1	Invoice	HARD HATS	05/06/2024	726.38	11/24	601-23-52-5588-312
Total 928312188:					726.38		
Total BORDER STATES INDUSTRIES INC (109):					726.38		
BREWER ENGINEERING CONSULTANTS, PLC (7649)							
6498	1	Invoice	HVAC SYSTEM PROJECT/DESIGN PHASE S	05/02/2024	9,871.75	11/24	100-24-36-5480-880
6498	2	Invoice	HVAC SYSTEM PROJECT/DESIGN PHASE S	05/02/2024	7,051.25	11/24	601-23-36-5480-880
6498	3	Invoice	HVAC SYSTEM PROJECT/DESIGN PHASE S	05/02/2024	5,641.00	11/24	602-23-36-5480-880
6498	4	Invoice	HVAC SYSTEM PROJECT/DESIGN PHASE S	05/02/2024	5,641.00	11/24	603-23-36-5480-880
Total 6498:					28,205.00		
Total BREWER ENGINEERING CONSULTANTS, PLC (7649):					28,205.00		
CAPITAL SANITARY SUPPLY (6096)							
C386173	1	Invoice	SHOP SUPPLIES	04/24/2024	134.09	11/24	601-23-52-5588-318
Total C386173:					134.09		
C386397	1	Invoice	TRASH BAGS/PT/GLOVES	04/24/2024	144.08	11/24	100-22-42-5233-318
Total C386397:					144.08		
C387083	1	Invoice	FULLER HALL SUPPLIES	05/08/2024	296.82	11/24	100-22-42-5233-318
Total C387083:					296.82		
Total CAPITAL SANITARY SUPPLY (6096):					574.99		
CARDENAS CONCRETE, LLC (7929)							
INV-308	1	Invoice	FY24 CONCRETE PANEL REPLACEMENT - 5	05/08/2024	8,915.00	11/24	204-23-30-5310-299
Total INV-308:					8,915.00		
Total CARDENAS CONCRETE, LLC (7929):					8,915.00		
CARRICO AQUATIC RESOURCES (6820)							
20242614	1	Invoice	INDOOR POOL CHEMICALS	05/03/2024	164.50	11/24	100-22-42-5233-318
Total 20242614:					164.50		
Total CARRICO AQUATIC RESOURCES (6820):					164.50		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
CENTRAL IOWA BLDG SUPPLY (1298)							
1021234	1	Invoice	D PLATE/PLATE	04/18/2024	215.82	11/24	601-23-52-5588-318
Total 1021234:					215.82		
1021382	1	Invoice	BANK STREET BRIDGE REPAIRS	04/29/2024	337.00	11/24	204-23-30-5310-299
Total 1021382:					337.00		
Total CENTRAL IOWA BLDG SUPPLY (1298):					552.82		
CENTURY LINK (4614)							
E65-4065 05/	1	Invoice	ALARM CIRCUIT LINE	05/01/2024	148.00	11/24	100-21-22-5140-230
Total E65-4065 05/01/24:					148.00		
Total CENTURY LINK (4614):					148.00		
CITY OF WEBSTER CITY (176)							
042524+	1	Invoice	CITY UTILITIES-WATER PLANT	04/25/2024	19,779.34	11/24	602-23-60-5601-233
Total 042524+:					19,779.34		
Total CITY OF WEBSTER CITY (176):					19,779.34		
CLEAN ALL (7699)							
28726	1	Invoice	CLEANING SERVICES-FULLER HALL LOCKE	04/30/2024	853.15	11/24	100-22-42-5233-299
Total 28726:					853.15		
Total CLEAN ALL (7699):					853.15		
CORIO, PETRONA (7941)							
210360016	1	Invoice	CUSTOMER DEPOSIT REFUND	05/08/2024	21.79	11/24	601-21011
Total 210360016:					21.79		
Total CORIO, PETRONA (7941):					21.79		
CORN BELT POWER COOP, INC. (197)							
16899	1	Invoice	TAPE READINGS & REPORTS	05/10/2024	40.00	11/24	601-23-51-5566-299
Total 16899:					40.00		
Total CORN BELT POWER COOP, INC. (197):					40.00		
CRUZ, YADIRA (7942)							
1417602317	1	Invoice	CUSTOMER DEPOSIT REFUND	05/01/2024	189.83	11/24	601-21011
Total 1417602317:					189.83		
Total CRUZ, YADIRA (7942):					189.83		
CTI READY MIX, INC. (7518)							
116369	1	Invoice	SPARBOE CT & WEBSTER ST-STORM INTAK	04/22/2024	454.00	11/24	204-23-30-5330-318
Total 116369:					454.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
116837	1	Invoice	SPARBOE CT & WEBSTER ST-INTAKE BOX	05/03/2024	796.50	11/24	204-23-30-5330-318
Total 116837:					796.50		
Total CTI READY MIX, INC. (7518):					1,250.50		
CTS LANGUAGE LINK (6323)							
268722	1	Invoice	TELEPHONE LANGUAGE TRANSLATION	05/01/2024	430.49	11/24	100-21-21-5110-299
Total 268722:					430.49		
Total CTS LANGUAGE LINK (6323):					430.49		
CULLIGAN FORT DODGE (207)							
043024	1	Invoice	AIRPORT-SOFT WATER SERVICE	04/30/2024	121.71	11/24	205-23-45-5372-299
Total 043024:					121.71		
Total CULLIGAN FORT DODGE (207):					121.71		
DAKOTA SUPPLY GROUP (3498)							
S103662182.	1	Invoice	SOLAR LED FLASHING BARRICADE LIGHTS	04/19/2024	304.63	11/24	100-21-30-5120-318
Total S103662182.001:					304.63		
S103706156.	1	Invoice	MANHOLE FRAME/LID	05/07/2024	1,073.07	11/24	603-23-71-5673-860
Total S103706156.001:					1,073.07		
Total DAKOTA SUPPLY GROUP (3498):					1,377.70		
DALCO (7876)							
20240331+	1	Invoice	ADD'L AMT FOR INV #20240331	03/31/2024	1.15	11/24	100-21-22-5140-318
Total 20240331+:					1.15		
Total DALCO (7876):					1.15		
DON'S PEST CONTROL (3349)							
7691	1	Invoice	PEST CONTROL/WATER PLANT	05/13/2024	51.00	11/24	602-23-61-5651-299
Total 7691:					51.00		
Total DON'S PEST CONTROL (3349):					51.00		
DOOLITTLE OIL COMPANY, INC. (243)							
81159	1	Invoice	UNLEADED GASOLINE-FIRE DEPT	03/27/2024	31.09	11/24	100-21-22-5140-315
Total 81159:					31.09		
81845	1	Invoice	DEF 55/1-DRUM WAS EXCHANGED	04/26/2024	110.00	11/24	204-23-30-5310-315
Total 81845:					110.00		
Total DOOLITTLE OIL COMPANY, INC. (243):					141.09		
DOYLE CONSTRUCTION (7733)							
042524 RET	1	Invoice	CONST - LINCOLN DRIVE PROJECT # 9-23-0	04/25/2024	14,074.86	11/24	525-23-30-5310-299

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 042524 RETAINAGE:					14,074.86		
Total DOYLE CONSTRUCTION (7733):					14,074.86		
ECHO GROUP, INC. (6306)							
S010559206.	1	Invoice	GFI BOXES 15A/4X4 BOXES/MINI TWISTER	04/08/2024	390.84	11/24	601-23-52-5588-318
Total S010559206.001:					390.84		
S010559206.	1	Invoice	RETURN - 15A GFI BOXES	05/01/2024	277.78-	11/24	601-23-52-5588-318
Total S010559206.002:					277.78-		
S010559206.	1	Invoice	20A OUTLETS W/ GFI	05/03/2024	484.50	11/24	601-23-52-5588-318
Total S010559206.003:					484.50		
S010575024.	1	Invoice	ST LIGHT COVER-VIRGINIA PKWY	04/26/2024	163.41	11/24	100-21-30-5160-233
Total S010575024.001:					163.41		
Total ECHO GROUP, INC. (6306):					760.97		
ELSDEN, WILLIAM (3201)							
033124	1	Invoice	ENERGY EFFICIENCY REBATE	03/31/2024	250.00	11/24	601-23-36-5930-979
Total 033124:					250.00		
Total ELSDEN, WILLIAM (3201):					250.00		
EMPLOYEE BENEFIT SYSTEMS (4707)							
000042624	1	Invoice	HEALTH/DENTAL/VISION PREMIUM	05/06/2024	5,250.35	11/24	902-11100
000042624	2	Invoice	HEALTH/DENTAL/VISION PREMIUM	05/06/2024	106,204.91	11/24	902-11215
Total 000042624:					111,455.26		
Total EMPLOYEE BENEFIT SYSTEMS (4707):					111,455.26		
FIFTH ASSET, INC (7551)							
DB2001917	1	Invoice	ANNUAL DEBTBOOK SUBSCRIPTION	05/01/2024	751.50	11/24	100-24-14-5435-212
DB2001917	2	Invoice	ANNUAL DEBTBOOK SUBSCRIPTION	05/01/2024	5,427.50	11/24	601-23-80-5923-212
DB2001917	3	Invoice	ANNUAL DEBTBOOK SUBSCRIPTION	05/01/2024	1,670.00	11/24	602-23-80-5923-212
DB2001917	4	Invoice	ANNUAL DEBTBOOK SUBSCRIPTION	05/01/2024	501.00	11/24	603-23-80-5923-212
Total DB2001917:					8,350.00		
Total FIFTH ASSET, INC (7551):					8,350.00		
FIRE SERVICE TRAINING BUREAU (294)							
241766	1	Invoice	FFII TEST-WAGNER	04/03/2024	50.00	11/24	100-21-22-5140-231
Total 241766:					50.00		
Total FIRE SERVICE TRAINING BUREAU (294):					50.00		
FLETCHER-REINHARDT SERVICE COMPANY (305)							
S1319260.00	1	Invoice	FEED THROUGH PARKING STANDS	04/30/2024	3,068.76	11/24	601-23-52-5588-318

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total S1319260.006:					3,068.76		
Total FLETCHER-REINHARDT SERVICE COMPANY (305):					3,068.76		
GERBER AUTO ELECTRIC (342)							
145486	1	Invoice	CAR #4-REPLACE TRANSMISSION	05/03/2024	5,515.61	11/24	100-21-21-5110-227
Total 145486:					5,515.61		
145900	1	Invoice	CAR #3-REPLACE THERMOSTAT	05/10/2024	338.36	11/24	100-21-21-5110-227
Total 145900:					338.36		
Total GERBER AUTO ELECTRIC (342):					5,853.97		
GORDON FLESCH COMPANY (6978)							
IN14676952	1	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	13.13	11/24	100-24-12-5430-225
IN14676952	2	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	36.12	11/24	601-23-81-5931-225
IN14676952	3	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	8.21	11/24	602-23-81-5931-225
IN14676952	4	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	8.21	11/24	603-23-81-5931-225
IN14676952	5	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	5.91	11/24	100-24-14-5435-225
IN14676952	6	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	42.69	11/24	601-23-80-5931-225
IN14676952	7	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	13.13	11/24	602-23-80-5931-225
IN14676952	8	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	3.94	11/24	603-23-80-5931-225
IN14676952	9	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	5.58	11/24	100-24-30-5380-225
IN14676952	10	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	5.58	11/24	601-24-30-5380-225
IN14676952	11	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	5.58	11/24	602-24-30-5380-225
IN14676952	12	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	5.58	11/24	603-24-30-5380-225
IN14676952	13	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	21.67	11/24	100-21-18-5190-225
IN14676952	14	Invoice	C5550i-PRINTER/COPIER-MGR'S OFFICE	05/06/2024	21.67	11/24	100-24-18-5470-225
Total IN14676952:					197.00		
Total GORDON FLESCH COMPANY (6978):					197.00		
GRAINGER (3288)							
9105024682	1	Invoice	FLANGE	05/01/2024	133.11	11/24	603-23-70-5642-318
Total 9105024682:					133.11		
Total GRAINGER (3288):					133.11		
GRIMES ASPHALT & PAVING CORP. (1837)							
25522	1	Invoice	Cold mix 7.74 TON	05/08/2024	1,199.70	11/24	204-23-30-5310-318
Total 25522:					1,199.70		
Total GRIMES ASPHALT & PAVING CORP. (1837):					1,199.70		
HAMILTON COUNTY PUBLIC HEALTH (1866)							
050624	1	Invoice	INDOOR POOL INSPECTION	05/06/2024	270.00	11/24	100-22-42-5233-212
Total 050624:					270.00		
Total HAMILTON COUNTY PUBLIC HEALTH (1866):					270.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
HAWKEYE WEST PEST CONTROL (7345)							
65298	1	Invoice	PEST CONTROL STREET DEPT	05/14/2024	90.00	11/24	204-23-30-5310-299
Total 65298:					90.00		
Total HAWKEYE WEST PEST CONTROL (7345):					90.00		
HAWKINS, INC. (3668)							
6735801	1	Invoice	CHLORINE/LPC-DP/LPC-AM/SODIUM ALUMI	04/16/2024	11,599.77	11/24	602-23-61-5641-318
Total 6735801:					11,599.77		
Total HAWKINS, INC. (3668):					11,599.77		
HINDERKS, LEAH (5180)							
012324	1	Invoice	ENERGY EFFICIENCY REBATE	01/23/2024	250.00	11/24	601-23-36-5930-979
Total 012324:					250.00		
Total HINDERKS, LEAH (5180):					250.00		
HYDRO KLEAN, INC. (422)							
088435	1	Invoice	CLEANING SANITARY/STORM SEWER-LYNX	04/30/2024	1,160.56	11/24	603-23-71-5673-229
088435	2	Invoice	CLEANING SANITARY/STORM SEWER-LYNX	04/30/2024	1,160.56	11/24	204-23-30-5330-299
088435	3	Invoice	TELEVISIONING SANITARY SEWER-LYNX DEV	04/30/2024	3,493.50	11/24	603-23-71-5673-229
088435	4	Invoice	TELEVISIONING STORM SEWER-LYNX DEV	04/30/2024	738.65	11/24	204-23-30-5330-299
Total 088435:					6,553.27		
Total HYDRO KLEAN, INC. (422):					6,553.27		
ICIT TREASURER (7525)							
051624	1	Invoice	ICIT ANNUAL MEMBERSHIP	05/16/2024	7.50	11/24	100-24-16-5420-215
051624	2	Invoice	ICIT ANNUAL MEMBERSHIP	05/16/2024	27.50	11/24	601-24-16-5930-215
051624	3	Invoice	ICIT ANNUAL MEMBERSHIP	05/16/2024	7.50	11/24	602-24-16-5930-215
051624	4	Invoice	ICIT ANNUAL MEMBERSHIP	05/16/2024	7.50	11/24	603-24-16-5930-215
Total 051624:					50.00		
Total ICIT TREASURER (7525):					50.00		
IEUSTA (1199)							
043024	1	Invoice	2024 IEUSTA ANNUAL DUES	04/30/2024	150.00	11/24	601-23-52-5930-215
Total 043024:					150.00		
Total IEUSTA (1199):					150.00		
inTANDEM (6526)							
2492	1	Invoice	ANNUAL WEBSITE HOSTING/VIRUS PROT/S	05/15/2024	100.35	11/24	100-24-16-5420-215
2492	2	Invoice	ANNUAL WEBSITE HOSTING/VIRUS PROT/S	05/15/2024	367.94	11/24	601-24-16-5930-215
2492	3	Invoice	ANNUAL WEBSITE HOSTING/VIRUS PROT/S	05/15/2024	100.35	11/24	602-24-16-5930-215
2492	4	Invoice	ANNUAL WEBSITE HOSTING/VIRUS PROT/S	05/15/2024	100.35	11/24	603-24-16-5930-215
Total 2492:					668.99		
Total inTANDEM (6526):					668.99		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
IOWA ATHLETIC CONSTRUCTION CO. (6813)							
1881	1	Invoice	NOKOMIS BALL FIELD RENO	04/29/2024	41,000.00	11/24	100-22-42-5210-880
Total 1881:					41,000.00		
Total IOWAATHLETIC CONSTRUCTION CO. (6813):					41,000.00		
IOWA COMMUNICATIONS NETWORK (7419)							
694267	1	Invoice	ICN CONNECTION FEES FOR ALL CITY RADI	05/06/2024	45.20	11/24	100-24-16-5420-299
694267	2	Invoice	ICN CONNECTION FEES FOR ALL CITY RADI	05/06/2024	45.20	11/24	204-24-16-5930-299
694267	3	Invoice	ICN CONNECTION FEES FOR ALL CITY RADI	05/06/2024	45.20	11/24	601-24-16-5935-299
694267	4	Invoice	ICN CONNECTION FEES FOR ALL CITY RADI	05/06/2024	45.20	11/24	602-24-16-5935-299
694267	5	Invoice	ICN CONNECTION FEES FOR ALL CITY RADI	05/06/2024	45.20	11/24	603-24-16-5935-299
Total 694267:					226.00		
Total IOWA COMMUNICATIONS NETWORK (7419):					226.00		
IOWA DEPT OF AGRICULTURE (1306)							
FY 2024	1	Invoice	FY24 COMMERCIAL METER LICENSE - AIRP	04/30/2024	9.00	11/24	205-23-45-5372-215
Total FY 2024:					9.00		
Total IOWA DEPT OF AGRICULTURE (1306):					9.00		
K.C. NIELSEN LTD - WEBSTER CITY (7904)							
10683474	1	Invoice	MOWER BLADES/RETURN BLADES	04/12/2024	45.48-	11/24	100-22-42-5210-314
Total 10683474:					45.48-		
10687802	1	Invoice	FLAT BELT/LAWN MOWER	04/22/2024	38.51	11/24	602-23-61-5935-314
Total 10687802:					38.51		
10692794	1	Invoice	JD MOWER REPAIR	05/01/2024	1,733.43	11/24	100-22-42-5210-227
Total 10692794:					1,733.43		
Total K.C. NIELSEN LTD - WEBSTER CITY (7904):					1,726.46		
K.STEIN DESIGNS (7839)							
24-075	1	Invoice	SSMID PORTION-WINDOW DECALS	05/01/2024	728.19	11/24	260-23-36-5393-299
Total 24-075:					728.19		
24-085	1	Invoice	CORRUGATED ROAD SIGNS	05/10/2024	40.00	11/24	100-21-30-5120-318
Total 24-085:					40.00		
Total K.STEIN DESIGNS (7839):					768.19		
KARIAN PETERSON POWER LINE CONTRACTING (7943)							
051024 PAY	1	Invoice	PAY APP#1 - 69kV TRANSMISSION LINE REL	05/10/2024	235,446.75	11/24	601-23-51-5562-871
Total 051024 PAY APP #1:					235,446.75		
Total KARIAN PETERSON POWER LINE CONTRACTING (7943):					235,446.75		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
KINNETZ SIGNS (547)							
04/05/24	1	Invoice	LOGO DECALS/UNIT NUMBERS - PUBLIC W	04/05/2024	198.00	11/24	100-21-30-5120-318
04/05/24	2	Invoice	VEHICLE LOGO DECALS-METER DEPT	04/05/2024	31.25	11/24	601-23-80-5905-318
04/05/24	3	Invoice	VEHICLE LOGO DECALS-METER DEPT	04/05/2024	31.25	11/24	602-23-80-5903-318
04/05/24	4	Invoice	VEHICLE LOGOS/UNIT NUMBERS - PG	04/05/2024	157.00	11/24	100-22-42-5210-318
Total 04/05/24:					417.50		
050324	1	Invoice	EQUIPMENT ID DECALS (25@\$3.00 EA)	05/03/2024	75.00	11/24	100-21-30-5120-318
Total 050324:					75.00		
Total KINNETZ SIGNS (547):					492.50		
LAMPERT LUMBER (564)							
2455531	1	Invoice	INSECT TRAPS FOR OFFICES	05/02/2024	57.95	11/24	204-23-30-5310-316
2455531	2	Invoice	STORM SEWER INTAKE RPR/WILLIAM ST	05/02/2024	36.99	11/24	204-23-30-5330-318
Total 2455531:					94.94		
2455539	1	Invoice	COLD MIX	05/02/2024	62.94	11/24	204-23-30-5310-318
Total 2455539:					62.94		
Total LAMPERT LUMBER (564):					157.88		
LEE, DANIEL (5222)							
042424	1	Invoice	ENERGY EFFICIENCY REBATE	04/24/2024	175.00	11/24	601-23-36-5930-979
Total 042424:					175.00		
Total LEE, DANIEL (5222):					175.00		
MARSHALL-BOND PUMPS, INC (7394)							
40670.0	1	Invoice	GASKET/UPPER & LOWER CLAMPS	04/24/2024	3,444.61	11/24	603-23-70-5642-318
Total 40670.0:					3,444.61		
Total MARSHALL-BOND PUMPS, INC (7394):					3,444.61		
MEYER, DOUG (6140)							
032124	1	Invoice	BLACK DIRT	03/21/2024	46.67	11/24	204-23-30-5330-318
032124	2	Invoice	BLACK DIRT - E TWIN	03/21/2024	46.67	11/24	602-23-62-5662-318
032124	3	Invoice	BLACK DIRT - E TWIN	03/21/2024	46.66	11/24	603-23-71-5662-318
Total 032124:					140.00		
Total MEYER, DOUG (6140):					140.00		
MOORE CLEANING SERVICE, LLC (2902)							
051524	1	Invoice	CLEANING SERVICES FOR CITY HALL	05/15/2024	455.00	11/24	100-24-36-5480-299
051524	2	Invoice	CLEANING SERVICES FOR CITY HALL	05/15/2024	325.00	11/24	601-23-36-5480-299
051524	3	Invoice	CLEANING SERVICES FOR CITY HALL	05/15/2024	260.00	11/24	602-23-36-5480-299
051524	4	Invoice	CLEANING SERVICES FOR CITY HALL	05/15/2024	260.00	11/24	603-23-36-5480-299
Total 051524:					1,300.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total MOORE CLEANING SERVICE, LLC (2902):					1,300.00		
MOTOROLA SOLUTIONS, INC. (5413)							
8281890999	1	Invoice	ANT 1/4 WAVE 7/800 STUBBY	05/13/2024	45.72	11/24	100-21-21-5110-318
Total 8281890999:					45.72		
Total MOTOROLA SOLUTIONS, INC. (5413):					45.72		
MOURLAM, DALTON (7055)							
051024	1	Invoice	REIMBURSE - BOOTS	05/10/2024	110.24	11/24	100-21-21-5110-312
Total 051024:					110.24		
Total MOURLAM, DALTON (7055):					110.24		
MUNICIPAL SUPPLY, INC. (672)							
0906361-IN	1	Invoice	CLAMPS/WATER MAIN BREAK/NORTH TERR	05/07/2024	1,184.22	11/24	602-23-62-5662-318
Total 0906361-IN:					1,184.22		
0906611-IN	1	Invoice	AMI - WATER MATERIALS	05/08/2024	23,181.82	11/24	602-23-62-5935-870
Total 0906611-IN:					23,181.82		
0906711-CM	1	Invoice	CREDIT AMI WATER	05/09/2024	3,541.00-	11/24	602-23-62-5935-870
Total 0906711-CM:					3,541.00-		
Total MUNICIPAL SUPPLY, INC. (672):					20,825.04		
NAPA AUTO PARTS (677)							
984590	1	Invoice	HYD HOSE FITTINGS/RPR TRK #27	05/08/2024	225.09	11/24	204-23-30-5310-314
Total 984590:					225.09		
984998	1	Invoice	ARMORALL PROTECTANT AND TIRE FOAM	05/15/2024	40.65	11/24	204-23-30-5310-314
Total 984998:					40.65		
Total NAPA AUTO PARTS (677):					265.74		
NCL OF WISCONSIN, INC. (687)							
503288	1	Invoice	LAB SUPPLIES	05/01/2024	334.38	11/24	603-23-70-5642-319
Total 503288:					334.38		
Total NCL OF WISCONSIN, INC. (687):					334.38		
NELS PEDERSON COMPANY, INC. (1082)							
05/02/24 PY	1	Invoice	2023 SAN SEWER REHAB PROJECT # 9-23-0	05/02/2024	37,083.87	11/24	603-23-71-5673-860
Total 05/02/24 PYMT #2:					37,083.87		
Total NELS PEDERSON COMPANY, INC. (1082):					37,083.87		
NEW HORIZONS (7945)							
347413	1	Invoice	MICROSOFT TRAINING	05/15/2024	880.00	11/24	601-24-16-5926-231

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
347413	2	Invoice	MICROSOFT TRAINING	05/15/2024	240.00	11/24	602-24-16-5926-231
347413	3	Invoice	MICROSOFT TRAINING	05/15/2024	240.00	11/24	603-24-16-5926-231
347413	4	Invoice	MICROSOFT TRAINING	05/15/2024	379.32	11/24	100-24-12-5430-231
347413	5	Invoice	MICROSOFT TRAINING	05/15/2024	948.30	11/24	601-23-81-5926-231
347413	6	Invoice	MICROSOFT TRAINING	05/15/2024	284.49	11/24	602-23-81-5926-231
347413	7	Invoice	MICROSOFT TRAINING	05/15/2024	284.49	11/24	603-23-81-5926-231
347413	8	Invoice	MICROSOFT TRAINING	05/15/2024	265.50	11/24	100-24-30-5380-231
347413	9	Invoice	MICROSOFT TRAINING	05/15/2024	265.50	11/24	601-24-30-5380-231
347413	10	Invoice	MICROSOFT TRAINING	05/15/2024	265.50	11/24	602-24-30-5380-231
347413	11	Invoice	MICROSOFT TRAINING	05/15/2024	265.50	11/24	603-24-30-5380-231
Total 347413:					4,318.60		
Total NEW HORIZONS (7945):					4,318.60		
NEWMAN SIGNS, INC. (7530)							
TRFINV0535	1	Invoice	MULTIPLE TRAFFIC SIGNS	04/30/2024	4,617.53	11/24	100-21-30-5120-318
Total TRFINV053589:					4,617.53		
Total NEWMAN SIGNS, INC. (7530):					4,617.53		
NORTH IOWA MUNICIPAL ELECTRIC (705)							
6659	1	Invoice	URD TICKET # 3040 - 600 VLM PARKWAY TH	05/10/2024	656.00	11/24	601-23-51-5566-299
Total 6659:					656.00		
Total NORTH IOWA MUNICIPAL ELECTRIC (705):					656.00		
ODLAND, BRENT (1107)							
22679 PARK	1	Invoice	LAND RENTAL (sludge disposal) 2023	04/22/2024	2,102.00	11/24	602-23-61-5931-224
Total 22679 PARK:					2,102.00		
Total ODLAND, BRENT (1107):					2,102.00		
PLATINUM CONNECT, LLC. (7663)							
1020758	1	Invoice	TELEPHONE SERVICE	05/01/2024	9.20	11/24	100-24-12-5430-230
1020758	2	Invoice	TELEPHONE SERVICE	05/01/2024	25.30	11/24	601-23-81-5921-230
1020758	3	Invoice	TELEPHONE SERVICE	05/01/2024	5.75	11/24	602-23-81-5921-230
1020758	4	Invoice	TELEPHONE SERVICE	05/01/2024	5.75	11/24	603-23-81-5921-230
1020758	5	Invoice	TELEPHONE SERVICE	05/01/2024	4.14	11/24	100-24-14-5435-230
1020758	6	Invoice	TELEPHONE SERVICE	05/01/2024	29.90	11/24	601-23-80-5903-230
1020758	7	Invoice	TELEPHONE SERVICE	05/01/2024	9.20	11/24	602-23-80-5921-230
1020758	8	Invoice	TELEPHONE SERVICE	05/01/2024	2.76	11/24	603-23-80-5921-230
1020758	9	Invoice	TELEPHONE SERVICE	05/01/2024	11.50	11/24	100-24-30-5380-230
1020758	10	Invoice	TELEPHONE SERVICE	05/01/2024	11.50	11/24	601-24-30-5380-230
1020758	11	Invoice	TELEPHONE SERVICE	05/01/2024	11.50	11/24	602-24-30-5380-230
1020758	12	Invoice	TELEPHONE SERVICE	05/01/2024	11.50	11/24	603-24-30-5380-230
1020758	13	Invoice	TELEPHONE SERVICE	05/01/2024	46.00	11/24	100-23-42-5371-230
1020758	14	Invoice	TELEPHONE SERVICE	05/01/2024	46.01	11/24	601-23-52-5588-230
1020758	15	Invoice	TELEPHONE SERVICE	05/01/2024	46.00	11/24	100-22-42-5233-230
1020758	16	Invoice	TELEPHONE SERVICE	05/01/2024	46.01	11/24	204-23-30-5310-230
1020758	17	Invoice	TELEPHONE SERVICE	05/01/2024	46.00	11/24	603-23-70-5642-230
1020758	18	Invoice	TELEPHONE SERVICE	05/01/2024	46.00	11/24	602-23-61-5642-230
1020758	19	Invoice	TELEPHONE SERVICE	05/01/2024	18.85	11/24	100-21-22-5140-230
1020758	20	Invoice	TELEPHONE SERVICE	05/01/2024	143.99	11/24	100-21-21-5110-230

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 1020758:					576.86		
Total PLATINUM CONNECT, LLC. (7663):					576.86		
PRAIRIE ENERGY COOPERATIVE (768)							
050824	1	Invoice	AIRPORT ELECTRICITY/FIVE METERS	05/08/2024	644.73	11/24	205-23-45-5372-237
Total 050824:					644.73		
Total PRAIRIE ENERGY COOPERATIVE (768):					644.73		
RELIABLE1 HEATING / AC / PLUMBING (6716)							
38580720	1	Invoice	DISPATCH/DIAGNOSE FEE	04/16/2024	145.00	11/24	603-23-70-5652-226
Total 38580720:					145.00		
Total RELIABLE1 HEATING / AC / PLUMBING (6716):					145.00		
S&P GLOBAL RATINGS (4287)							
11474446	1	Invoice	ANNUAL ANALYTICAL SVCS-ELEC REV BON	05/13/2024	20,700.00	11/24	601-23-98-5923-212
11474446	2	Invoice	ANNUAL ANALYTICAL SVCS-WTR REV BOND	05/13/2024	20,025.00	11/24	602-23-98-5923-212
Total 11474446:					40,725.00		
Total S&P GLOBAL RATINGS (4287):					40,725.00		
SAFE BUILDING LLC (7669)							
04092025	1	Invoice	CITY CODE INSPECTIONS/STEINER BLVD	04/30/2024	503.50	11/24	100-21-18-5190-212
Total 04092025:					503.50		
Total SAFE BUILDING LLC (7669):					503.50		
SENCOR HOLDINGS, LLC (7258)							
051324	1	Invoice	EE REBATE/1519 BANK STREET	05/13/2024	75.00	11/24	601-23-36-5930-979
Total 051324:					75.00		
Total SENCOR HOLDINGS, LLC (7258):					75.00		
SHUTTLEWORTH & INGERSOLL, P.L.C. (6731)							
4578890	1	Invoice	PROFESSIONAL SVCS/PINHOLE LEAKS	05/07/2024	77.00	11/24	602-23-61-5930-212
Total 4578890:					77.00		
Total SHUTTLEWORTH & INGERSOLL, P.L.C. (6731):					77.00		
SIOUX SALES COMPANY (5795)							
194873	1	Invoice	S & W PISTOLS/HOLSTER/MISC	05/07/2024	1,889.45	11/24	100-21-21-5110-312
Total 194873:					1,889.45		
Total SIOUX SALES COMPANY (5795):					1,889.45		
SKARSHAUG TESTING LAB, INC. (878)							
277015	1	Invoice	TEST, INSPECT & CLEAN RUBBER & FIBERG	04/26/2024	3,997.04	11/24	601-23-52-5935-227

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 277015:					3,997.04		
Total SKARSHAUG TESTING LAB, INC. (878):					3,997.04		
SNYDER & ASSOCIATES (2951)							
122.0346.01-	1	Invoice	ENG - FAIR MEADOW DR RECON	04/30/2024	19,764.03	11/24	525-23-30-5310-212
Total 122.0346.01-19:					19,764.03		
122.1080.01	1	Invoice	ENG - 2023 SANITARY SEWER REHAB PROJ	04/30/2024	1,607.98	11/24	603-23-71-5673-860
Total 122.1080.01A-4:					1,607.98		
124.0071.01-	1	Invoice	ON CALL ENG SVC 2024	04/30/2024	15,886.75	11/24	204-23-30-5310-212
Total 124.0071.01-3:					15,886.75		
Total SNYDER & ASSOCIATES (2951):					37,258.76		
STATE HYGIENIC LABORATORY (423)							
278423	1	Invoice	WASTEWATER TESTING	04/30/2024	1,279.50	11/24	603-23-70-5923-212
Total 278423:					1,279.50		
278424	1	Invoice	WATER TESTING FEES	04/30/2024	193.50	11/24	602-23-61-5651-299
Total 278424:					193.50		
Total STATE HYGIENIC LABORATORY (423):					1,473.00		
STEIN HEATING & COOLING, INC. (5576)							
16676	1	Invoice	OUTDOOR POOL STARTUP MAINTENANCE	05/02/2024	1,121.96	11/24	100-22-42-5242-226
Total 16676:					1,121.96		
Total STEIN HEATING & COOLING, INC. (5576):					1,121.96		
STIVERS FORD LINCOLN (2920)							
714155	1	Invoice	UPFIT CAR #2306	05/07/2024	13,937.89	11/24	100-41-21-5110-515
Total 714155:					13,937.89		
714729	1	Invoice	UPDIT TRUCK #2301	05/07/2024	10,404.42	11/24	100-41-21-5110-515
Total 714729:					10,404.42		
Total STIVERS FORD LINCOLN (2920):					24,342.31		
STOREY KENWORTHY (5937)							
PINV117306	1	Invoice	#10 WINDOW ENVELOPES	05/01/2024	386.04	11/24	100-24-14-5435-316
PINV117306	2	Invoice	#10 WINDOW ENVELOPES	05/01/2024	2,788.08	11/24	601-23-80-5921-316
PINV117306	3	Invoice	#10 WINDOW ENVELOPES	05/01/2024	857.87	11/24	602-23-80-5921-316
PINV117306	4	Invoice	#10 WINDOW ENVELOPES	05/01/2024	257.37	11/24	603-23-80-5921-316
Total PINV1173065:					4,289.36		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total STOREY KENWORTHY (5937):					4,289.36		
SURVEYING & MAPPING, LLC (7245)							
201216033	1	Invoice	GIS TECH SUPPORT - 2ND ST RECON PROJ	04/17/2024	300.00	11/24	536-23-30-5310-212
Total 201216033:					300.00		
201219801	1	Invoice	SWITCH GEAR LAYER INTEGRITY/UPDATE	05/14/2024	300.00	11/24	601-23-31-5420-318
Total 201219801:					300.00		
Total SURVEYING & MAPPING, LLC (7245):					600.00		
THE TILE PROS, INC. (2701)							
WO-1154	1	Invoice	PLUMBING LABOR/RPR PRIVAT WATER LINE	03/28/2024	285.00	11/24	602-23-62-5662-318
Total WO-1154:					285.00		
WO-1368	1	Invoice	REPLACE CURB BOX RISER-AMI	05/06/2024	779.94	11/24	602-23-62-5935-870
Total WO-1368:					779.94		
Total THE TILE PROS, INC. (2701):					1,064.94		
THE TRASHMAN, LLC (943)							
763-1682	1	Invoice	TRASH SERVICE	04/30/2024	17.50	11/24	100-24-36-5480-236
763-1682	2	Invoice	TRASH SERVICE	04/30/2024	12.50	11/24	601-23-36-5480-236
763-1682	3	Invoice	TRASH SERVICE	04/30/2024	10.00	11/24	602-23-36-5480-236
763-1682	4	Invoice	TRASH SERVICE	04/30/2024	10.00	11/24	603-23-36-5480-236
763-1682	5	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	100-22-42-5280-236
763-1682	6	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	204-23-30-5310-236
763-1682	7	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	100-21-22-5140-236
763-1682	8	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	100-22-42-5233-236
763-1682	9	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	601-23-52-5588-236
763-1682	10	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	603-23-70-5642-236
763-1682	11	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	100-22-42-5210-236
763-1682	12	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	602-23-61-5642-236
763-1682	13	Invoice	TRASH SERVICE	04/30/2024	50.00	11/24	205-23-45-5372-236
Total 763-1682:					500.00		
763-1684	1	Invoice	ROLLOFF/LANDFILL FEES-CEMETERY	04/30/2024	202.18	11/24	100-23-42-5371-236
Total 763-1684:					202.18		
763-1685	1	Invoice	CURB RECYCLING - APRIL 2024	04/30/2024	12,652.50	11/24	100-23-30-5340-235
Total 763-1685:					12,652.50		
763-1686	1	Invoice	ROLLOFF/LANDFILL FEES-CEMETERY	04/30/2024	313.70	11/24	100-23-42-5371-236
Total 763-1686:					313.70		
Total THE TRASHMAN, LLC (943):					13,668.38		
TOLLE AUTOMOTIVE, INC. (3188)							
1435	1	Invoice	TUBE/MOUNT	05/09/2024	32.95	11/24	602-23-61-5935-227

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 1435:					32.95		
Total TOLLE AUTOMOTIVE, INC. (3188):					32.95		
TONY'S TIRE SERVICE (958)							
183697	1	Invoice	REPAIR BRAKES/#27	05/02/2024	288.41	11/24	204-23-30-5310-227
Total 183697:					288.41		
Total TONY'S TIRE SERVICE (958):					288.41		
UNITED COOPERATIVE (979)							
11487	1	Invoice	PROPANE FOR AIRPORT/T533A & T533B	04/25/2024	1,160.00	11/24	205-23-45-5372-234
Total 11487:					1,160.00		
11635	1	Invoice	GAS REPORT	04/03/2024	1,348.44	11/24	100-21-21-5110-315
11635	2	Invoice	GAS REPORT	04/03/2024	112.15	11/24	100-21-22-5140-315
11635	3	Invoice	GAS REPORT	04/03/2024	483.98	11/24	204-23-30-5310-315
11635	4	Invoice	GAS REPORT	04/03/2024	128.36	11/24	603-23-70-5935-315
11635	5	Invoice	GAS REPORT	04/03/2024	138.09	11/24	602-23-61-5935-315
11635	6	Invoice	GAS REPORT	04/03/2024	552.89	11/24	601-23-52-5935-315
11635	7	Invoice	GAS REPORT	04/03/2024	74.58	11/24	601-23-80-5935-315
11635	8	Invoice	GAS REPORT	04/03/2024	74.58	11/24	602-23-80-5935-315
11635	9	Invoice	GAS REPORT	04/03/2024	34.86	11/24	100-22-42-5210-315
11635	10	Invoice	GAS REPORT	04/03/2024	34.86	11/24	100-23-42-5371-315
11635	11	Invoice	GAS REPORT	04/03/2024	246.53	11/24	100-24-14-5435-315
Total 11635:					3,229.32		
11722	1	Invoice	GAS REPORT	04/15/2024	1,108.94	11/24	100-21-21-5110-315
11722	2	Invoice	GAS REPORT	04/15/2024	52.43	11/24	100-21-22-5140-315
11722	3	Invoice	GAS REPORT	04/15/2024	178.04	11/24	204-23-30-5310-315
11722	4	Invoice	GAS REPORT	04/15/2024	65.12	11/24	603-23-70-5935-315
11722	5	Invoice	GAS REPORT	04/15/2024	88.04	11/24	602-23-61-5935-315
11722	6	Invoice	GAS REPORT	04/15/2024	50.97	11/24	100-21-18-5190-315
11722	7	Invoice	GAS REPORT	04/15/2024	495.33	11/24	601-23-52-5935-315
11722	8	Invoice	GAS REPORT	04/15/2024	45.61	11/24	601-23-80-5935-315
11722	9	Invoice	GAS REPORT	04/15/2024	45.61	11/24	602-23-80-5935-315
11722	10	Invoice	GAS REPORT	04/15/2024	34.63	11/24	100-22-42-5233-315
11722	11	Invoice	GAS REPORT	04/15/2024	252.42	11/24	100-22-42-5210-315
11722	12	Invoice	GAS REPORT	04/15/2024	252.41	11/24	100-23-42-5371-315
11722	13	Invoice	GAS REPORT	04/15/2024	235.94	11/24	100-24-14-5435-315
Total 11722:					2,905.49		
11742	1	Invoice	DIESEL REPORT	04/19/2024	166.12	11/24	100-21-22-5140-315
11742	2	Invoice	DIESEL REPORT	04/19/2024	1,771.61	11/24	204-23-30-5310-315
11742	3	Invoice	DIESEL REPORT	04/19/2024	211.94	11/24	602-23-61-5935-315
11742	4	Invoice	DIESEL REPORT	04/19/2024	898.14	11/24	601-23-52-5935-315
11742	5	Invoice	DIESEL REPORT	04/19/2024	46.09	11/24	100-22-42-5210-315
11742	6	Invoice	DIESEL REPORT	04/19/2024	46.09	11/24	100-23-42-5371-315
11742	7	Invoice	DIESEL REPORT	04/19/2024	782.32	11/24	100-24-14-5435-315
Total 11742:					3,922.31		
11775	1	Invoice	GAS REPORT	04/29/2024	1,384.87	11/24	100-21-21-5110-315

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
11775	2	Invoice	GAS REPORT	04/29/2024	70.08	11/24	100-21-22-5140-315
11775	3	Invoice	GAS REPORT	04/29/2024	361.19	11/24	204-23-30-5310-315
11775	4	Invoice	GAS REPORT	04/29/2024	160.22	11/24	603-23-70-5935-315
11775	5	Invoice	GAS REPORT	04/29/2024	179.05	11/24	602-23-61-5935-315
11775	6	Invoice	GAS REPORT	04/29/2024	579.14	11/24	601-23-52-5935-315
11775	7	Invoice	GAS REPORT	04/29/2024	83.50	11/24	601-23-80-5935-315
11775	8	Invoice	GAS REPORT	04/29/2024	83.50	11/24	602-23-80-5935-315
11775	9	Invoice	GAS REPORT	04/29/2024	37.66	11/24	100-22-42-5233-315
11775	10	Invoice	GAS REPORT	04/29/2024	343.14	11/24	100-22-42-5210-315
11775	11	Invoice	GAS REPORT	04/29/2024	343.13	11/24	100-23-42-5371-315
11775	12	Invoice	GAS REPORT	04/29/2024	185.60	11/24	100-24-14-5435-315
Total 11775:					3,811.08		
Total UNITED COOPERATIVE (979):					15,028.20		
UNITED STATES TREASURY (5852)							
720-V	1	Invoice	PCORI FEES	05/15/2024	207.00	11/24	902-11215
Total 720-V:					207.00		
Total UNITED STATES TREASURY (5852):					207.00		
US CELLULAR (986)							
0649262892	1	Invoice	CELLULAR SERVICE	04/20/2024	45.96	11/24	204-23-30-5310-230
0649262892	2	Invoice	CELLULAR SERVICE	04/20/2024	22.98	11/24	601-23-52-5588-230
0649262892	3	Invoice	CELLULAR SERVICE	04/20/2024	22.98	11/24	601-23-51-5566-230
0649262892	4	Invoice	CELLULAR SERVICE	04/20/2024	11.49	11/24	100-24-30-5380-230
0649262892	5	Invoice	CELLULAR SERVICE	04/20/2024	11.49	11/24	601-24-30-5380-230
0649262892	6	Invoice	CELLULAR SERVICE	04/20/2024	11.49	11/24	602-24-30-5380-230
0649262892	7	Invoice	CELLULAR SERVICE	04/20/2024	11.49	11/24	603-24-30-5380-230
0649262892	8	Invoice	INSP I-PAD SVC	04/20/2024	45.29	11/24	100-21-18-5190-230
0649262892	9	Invoice	METER I-PAD SVC	04/20/2024	22.64	11/24	602-23-80-5902-299
0649262892	10	Invoice	METER I-PAD SVC	04/20/2024	22.64	11/24	601-23-80-5905-299
0649262892	11	Invoice	FIRE I-PAD SVC	04/20/2024	45.29	11/24	100-21-22-5140-230
0649262892	12	Invoice	LINE I-PADS SVC	04/20/2024	181.16	11/24	601-23-52-5588-230
Total 0649262892:					454.90		
Total US CELLULAR (986):					454.90		
US PUBLIC SAFETY GROUP, INC. (6141)							
11064	1	Invoice	RESERVE BADGE/HOLDER	04/29/2024	119.01	11/24	100-21-21-5110-312
Total 11064:					119.01		
Total US PUBLIC SAFETY GROUP, INC. (6141):					119.01		
VALUTECH PEST CONTROL (6822)							
4625	1	Invoice	PEST CONTROL/CITY HALL	05/16/2024	11.20	11/24	100-24-36-5480-299
4625	2	Invoice	PEST CONTROL/CITY HALL	05/16/2024	8.00	11/24	601-23-36-5480-299
4625	3	Invoice	PEST CONTROL/CITY HALL	05/16/2024	6.40	11/24	602-23-36-5480-299
4625	4	Invoice	PEST CONTROL/CITY HALL	05/16/2024	6.40	11/24	603-23-36-5480-299
Total 4625:					32.00		
Total VALUTECH PEST CONTROL (6822):					32.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
VERMEER IOWA & N. MISSOURI (6073)							
P0538705	1	Invoice	LID-VAC UNIT	04/11/2024	55.50	11/24	601-23-52-5588-318
Total P0538705:					55.50		
P0538705+	1	Invoice	LID-VAC UNIT - ADDL AMT	04/11/2024	.30	11/24	601-23-52-5588-318
Total P0538705+:					.30		
Total VERMEER IOWA & N. MISSOURI (6073):					55.80		
VESSCO, INC. (997)							
093961	1	Invoice	FORCE FLOW SCALE ELECTRONIC/EXPANS	04/24/2024	5,234.39	11/24	602-23-61-5935-870
Total 093961:					5,234.39		
Total VESSCO, INC. (997):					5,234.39		
VISUAL EDGE IT, INC. (3995)							
24AQR17706	1	Invoice	IT PRINTER PER CLICK MAINT. FEE	05/14/2024	4.15	11/24	100-24-16-5420-299
24AQR17706	2	Invoice	IT PRINTER PER CLICK MAINT. FEE	05/14/2024	15.24	11/24	601-24-16-5935-299
24AQR17706	3	Invoice	IT PRINTER PER CLICK MAINT. FEE	05/14/2024	4.15	11/24	602-24-16-5935-299
24AQR17706	4	Invoice	IT PRINTER PER CLICK MAINT. FEE	05/14/2024	4.15	11/24	603-24-16-5935-299
Total 24AQR1770680:					27.69		
24AR171378	1	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	04/23/2024	15.26	11/24	100-24-14-5435-225
24AR171378	2	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	04/23/2024	110.21	11/24	601-23-80-5931-225
24AR171378	3	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	04/23/2024	33.91	11/24	602-23-80-5931-225
24AR171378	4	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	04/23/2024	10.18	11/24	603-23-80-5931-225
Total 24AR1713784:					169.56		
24AR172506	1	Invoice	PRINTER CONTRACT - POLICE DEPT	04/26/2024	36.21	11/24	100-21-21-5110-225
Total 24AR1725068:					36.21		
24AR174222	1	Invoice	PRINTER CONTRACT - CEMETERY	05/01/2024	27.36	11/24	100-23-42-5371-299
Total 24AR1742229:					27.36		
24AR174223	1	Invoice	PRINTER CONTRACT - FULLER HALL	05/01/2024	77.77	11/24	100-22-42-5233-299
Total 24AR1742230:					77.77		
24AR175293	1	Invoice	PRINTER CONTRACT - INSPECTION	05/06/2024	32.24	11/24	100-21-18-5190-225
Total 24AR1752939:					32.24		
24AR175294	1	Invoice	PRINTER CONTRACT - LINE DEPT	05/06/2024	32.96	11/24	601-23-52-5931-225
Total 24AR1752940:					32.96		
24AR175616	1	Invoice	PRINTER CONTRACT - STREET DEPT	05/07/2024	44.00	11/24	204-23-30-5310-299
Total 24AR1756160:					44.00		
24AR177067	1	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	05/14/2024	5.40	11/24	100-24-14-5435-225

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
24AR177067	2	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	05/14/2024	38.97	11/24	601-23-80-5931-225
24AR177067	3	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	05/14/2024	11.99	11/24	602-23-80-5931-225
24AR177067	4	Invoice	PRINTER CONTRACT - FINANCE/UTILITY OF	05/14/2024	3.59	11/24	603-23-80-5931-225
Total 24AR1770679:					59.95		
Total VISUAL EDGE IT, INC. (3995):					507.74		
WALKER, BILL (2703)							
#22674	1	Invoice	LAND RENTAL (sludge disposal) 2023	01/22/2024	4,100.00	11/24	602-23-61-5931-224
Total #22674:					4,100.00		
Total WALKER, BILL (2703):					4,100.00		
WEBSTER CITY TRUE VALUE (2155)							
2404-036271	1	Invoice	SCREW CONNECTOR/GARAGE DOOR	04/15/2024	5.97	11/24	601-23-52-5588-318
Total 2404-036271:					5.97		
2404-037501	1	Invoice	CLR SEAL	04/23/2024	38.97	11/24	602-23-62-5662-318
Total 2404-037501:					38.97		
2404-037552	1	Invoice	SUPREM CAULK	04/23/2024	27.98	11/24	602-23-62-5662-318
Total 2404-037552:					27.98		
2404-037885	1	Invoice	COUP CONNECT/SUPERIOR ST REPAIRS	04/25/2024	16.98	11/24	601-23-52-5588-318
Total 2404-037885:					16.98		
2404-037891	1	Invoice	COUP CONNECT	04/25/2024	8.49	11/24	601-23-52-5588-318
Total 2404-037891:					8.49		
2405-040505	1	Invoice	UPS SHIPPING/SEND POST TESTS BACK	05/08/2024	16.00	11/24	100-21-21-5110-221
Total 2405-040505:					16.00		
2405-040664	1	Invoice	ROLL OF CLOTH LIKE RAGS-SIGN WORK	05/09/2024	4.99	11/24	100-21-30-5120-318
Total 2405-040664:					4.99		
2405-040971	1	Invoice	LOOSE BITS/SIGN WORK	05/10/2024	2.98	11/24	100-21-30-5120-318
Total 2405-040971:					2.98		
Total WEBSTER CITY TRUE VALUE (2155):					122.36		
WESCO RECEIVABLES CORP (1038)							
022602	1	Invoice	GUY-GRIP DEAD END	04/17/2024	465.45	11/24	601-23-52-5588-318
Total 022602:					465.45		
Total WESCO RECEIVABLES CORP (1038):					465.45		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
WHITE, THELMA (7944)							
042624	1	Invoice	ENERGY EFFICIENCY REBATE	04/26/2024	75.00	11/24	601-23-36-5930-979
042624	2	Invoice	ENERGY EFFICIENCY REBATE	04/26/2024	50.00	11/24	601-23-36-5930-979
Total 042624:					125.00		
Total WHITE, THELMA (7944):					125.00		
ZERO9 SOLUTIONS LTD (7691)							
4659-B2B	1	Invoice	TASER CASE/BODYWORN CAMERA SYSTE	05/16/2024	289.60	11/24	100-21-21-5110-312
Total 4659-B2B:					289.60		
INV#4515-B2	1	Invoice	CAMERA SYSTEMS CASES/#685 & #691	05/08/2024	196.80	11/24	100-21-21-5110-312
Total INV#4515-B2B:					196.80		
Total ZERO9 SOLUTIONS LTD (7691):					486.40		
ZIEGLER, INC. (1071)							
SI000476850	1	Invoice	REPLACE SEAT BELT& SENSOR/LOADER #1	04/20/2024	1,047.43	11/24	204-23-30-5310-227
Total SI000476850:					1,047.43		
SI000480441	1	Invoice	REPAIR 2018 CAT WHEEL LOADER	04/29/2024	.00	11/24	204-23-30-5310-227
Total SI000480441:					.00		
SI000480441	1	Invoice	REPAIR 2018 CAT WHEEL LOADER	04/29/2024	48,071.10	11/24	204-23-30-5310-227
Total SI000480441+:					48,071.10		
Total ZIEGLER, INC. (1071):					49,118.53		
Total 05/20/2024:					796,937.51		
Grand Totals:					3,871,309.94		

Report GL Period Summary

GL Period	Amount
11/24	3,871,309.94
Grand Totals:	3,871,309.94

Vendor number hash: 743692
 Vendor number hash - split: 1425596
 Total number of invoices: 186
 Total number of transactions: 350

Terms Description	Invoice Amount	Net Invoice Amount
Open Terms	3,871,309.94	3,871,239.94
ClaimsTotal:	<u>3,871,309.94</u>	<u>3,871,239.94</u>
Payroll Ending May 4, 2024	206,619.46	
Grand Total:	\$ 4,077,929.40	

WASTEWATER TREATMENT PLANT REPORT FOR THE MONTH OF April 2024

	MONTH April	Year to Date 2024	MONTH April	Year to Date 2023	
Total gallons flow	41,569,000	141,508,000	41,193,000	159,563,000	gal
Average daily flow	1,385,000		1,373,100		gal/da
Percentage treated	100		100		%
Total gallons raw sludge	119,586	373,759	80,126	291,911	gal
Total gallons digested sludge out	0		0		gal
Total gallons sludge transferred to storage tank	106,220		99,640		gal
Total gallons supernatant returned	0		77,496		gal
Methane gas produced	0		0		cu.ft.
Average effluent CBOD (25 mg/l aver. 40 mg/l max.)	8.9		25.76		mg/l
Number of days max. limit was exceeded	0		2		da
Average % removal	96.9		93.3		%
Average effluent suspended solids (30 mg/l aver. 45 mg/l max.)	7.3		19.13		mg/l
Number of days max. limit was exceeded	0		0		da
Average percent removal	97.4		94.2		%
Average effluent ammonia nitrogen April 1.7 (mg/l average, 15.7 mg/l max. limitation)	1.65		<1		mg/l
Number of days max. limit was exceeded	0		0		da

ELECTRIC REPORT FOR THE MONTH OF April 2024

(Production Month-March 2024; Billing Month (Due) - April 2024)

	<u>MONTH April</u>	<u>Year to Date 2024</u>	<u>MONTH April</u>	<u>Year to 2023</u>
TOTAL PURCHASED POWER K.W.	7,824,731	33,147,024	8,716,292	35,613,953
Gross K.W. Generated For Maint.	0	6,150	0	372,790
For Corn Belt	0	113,550	0	0
Station Power K.W.	20,195	99,166	28,076	129,769
NET K.W.TO BOARD	7,804,536	33,047,858	8,688,216	35,484,184
Billed by Clerk's Office to Customers K.W.:				
Commercial Sales	2,074,436	8,600,089	2,349,483	9,547,301
Industrial Sales	2,332,678	9,298,767	2,594,113	9,426,617
City Departments & Street Lights	398,183	1,643,067	429,584	1,715,081
Residential Sales	2,148,299	9,738,258	2,172,999	10,517,089
Sales for Resale-Wholesale	540,200	2,523,200	656,300	2,948,300
KILOWATTS UNACCOUNTED	<u>310,740</u>	<u>1,244,477</u>	<u>485,737</u>	<u>1,329,796</u>
Percentage of Unaccounted for	3.98%	3.77%	5.59%	3.75%

LOAD COMPARISON	<u>2024</u>	<u>2023</u>
Peak K.W. Demand	14,812	15,558
Purchased Power	7,824,731	8,716,292
Net to Board	7,804,536	8,688,216

REMARKS:

**CITY OF WEBSTER CITY, IOWA - UTILITY REPORT
ELECTRIC UTILITY PURCHASES & SALES - 2024**

Purch. Power Period	Billing Month (Due)	Month Purch.Power kWh	Pur Pwr lessStaPwr = Net to Board kWh	Month Billed KWh less StaPwr	Col D Net to Board less Col E Mo billed Mo Unaccounted For	Month Unaccounted For %	Yr To Date Purch.Power less sta pwrkWh	Yr To Date Billed &SPwr kWh	Yr To Date Unaccounted kWh	Yr To Date Unaccounted For %
Dec	Jan 2024	8,260,174	8,234,298	8,411,893	(177,595)	-2.16%	8,234,298	8,411,893	(177,595)	-2.16%
Jan	Feb 2024	9,305,951	9,276,242	8,356,871	919,371	9.91%	17,510,540	16,768,764	741,776	4.24%
Feb	Mar 2024	7,756,168	7,732,782	7,540,821	191,961	2.48%	25,243,322	24,309,585	933,737	3.70%
Mar	Apr 2024	7,824,731	7,804,536	7,493,796	310,740	3.98%	33,047,858	31,803,381	1,244,477	3.77%
Apr	May 2024									
May	Jun 2024									
Jun	July 2024									
July	Aug 2024									
Aug	Sept 2024									
Sep	Oct 2024									
Oct	Nov 2024									
Nov	Dec 2024									
TOTALS		33,147,024	33,047,858	31,803,381	1,244,477					

Billings
By Type of

Serv-kWh	Commercial	Industrial	City Depts & Street Lights	Residential	Wholesale	Station Power-N/C	Billed & Sta. Pwr Total	Previous Year Bill&Sta.Pwr Tot
Jan 2024	2,247,629	2,216,617	454,244	2,786,103	707,300	25,876	8,437,769	9,149,683
Feb 2024	2,212,465	2,422,324	415,946	2,592,136	714,000	29,709	8,386,580	8,903,311
Mar 2024	2,065,559	2,327,148	374,694	2,211,720	561,700	23,386	7,564,207	8,000,608
Apr 2024	2,074,436	2,332,678	398,183	2,148,299	540,200	20,195	7,513,991	8,230,555
May 2024								
Jun 2024								
July 2024								
Aug 2024								
Sep 2024								
Oct 2024								
Nov 2024								
Dec 2024								
TOTALS	8,600,089	9,298,767	1,643,067	9,738,258	2,523,200	99,166	31,902,547	34,284,157

BILLING AMOUNT	Commercial Sales	Industrial Sales	City Depts. & St. Light Sales	Residential Sales	Wholesale Sales	Station Power	TOTAL SALES	PREVIOUS YEAR
Jan 2024	\$272,870.82	\$234,055.84	\$49,468.04	\$370,926.29	\$68,689.01	N/C	\$996,010.00	\$973,456.49
Feb 2024	\$269,096.16	\$201,006.47	\$45,795.93	\$351,549.58	\$70,310.33	N/C	\$937,758.47	\$997,484.42
Mar 2024	\$254,927.96	\$212,660.18	\$42,301.36	\$313,240.78	\$58,951.91	N/C	\$882,082.19	\$915,334.40
Apr 2024	\$255,582.97	\$235,311.00	\$44,603.07	\$310,071.41	\$56,709.32	N/C	\$902,277.77	\$910,025.77
May 2024								
Jun 2024								
July 2024								
Aug 2024								
Sep 2024								
Oct 2024								
Nov 2024								
Dec 2024								
TOTALS	\$1,052,477.91	\$883,033.49	\$182,168.40	\$1,345,788.06	\$254,660.57		\$3,718,128.43	\$3,796,301.08

Number of Customers	Commercial	Industrial	City Depts & St. Lights	Residential	Wholesale	Total	Previous Year
Jan 2023	534	7	49	3,865	3	4,458	4,482
Feb 2023	533	7	49	3,877	3	4,469	4,482
Mar 2023	530	7	49	3,881	3	4,470	4,474
Apr 2023	534	7	51	3,905	3	4,500	4,481
May 2023							
Jun 2023							
July 2023							
Aug 2023							
Sep 2023							
Oct 2023							
Nov 2023							
Dec 2023							

WATER PLANT REPORT FOR THE MONTH OF April 2024

(Production Month-March 2024 Billing Month (Due) - April 2024)

	MONTH April	Year to Date 2024	MONTH April	Year to Date 2023
Total Gallons Pumped from Wells(Inf)	23,169,000	86,393,000	25,026,000	88,913,000
Average Gallons Pumped	(772,300)		(83,420)	
Gallons for Sludge	61,100	244,400	61,100	230,300
Total Gallons to Water Plant	23,107,900	86,148,600	24,964,900	88,682,700
Gallons to Distribution System From From Water Plant (Effluent reading)	22,426,000	91,893,000	25,514,000	97,232,000
	0			
TOTAL TO SYSTEM - CUBIC FEET	2,997,920	12,284,306	3,410,725	12,998,027
Billed by Clerk's Office to Customers Cubic Feet	2,347,600	9,291,800	2,368,000	9,232,000
Billed by City Departments Cubic Feet	297,600	796,400	351,100	1,016,900
Used by City Departments, but not billed-estimated Cubic Feet				
Fire	0		0	0
Meter	0		0	0
Sew. Disp.	0		0	0
Street,Water,SewerDistribution,Line est <i>(main breaks,hydrant flush,sewer, valve rpr,w.tower, line dept</i>	13,368	53,472	13,368	53,472
Water Plant filter backwash	29,885	125,553	109,929	300,720
Ground storage tank loss Recreation-Drink.Fount.	0		0	0
Cemetery	0		0	0
Change in Distribution System	0		0	0
Used by Contractor	0		0	0
CUBIC FEET UNACCOUNTED FOR	309,467	2,017,081	568,328	2,394,935
Percentage of Unaccounted for	10.32%	16.42%	16.66%	18.43%

NOTE: 26 loads of lime sludge
hauled to farm ground

NOTE: 26 loads of lime sludge
hauled to farm ground

REMARKS:

WATER UTILITY PRODUCTION SALES & USAGE 2024

Prod Mo.	Billing Month (Due)	Month to Distribution System C/F	Month Billed & Unbilled Usage C/F	Month Unaccounted For C/F	Month Unaccounted For %	Yr to Date To Distribution System C/F	Yr to Date Billed & Unbilled C/F	Yr To Date Unaccounted For C/F	Yr To Date Unaccounted For %
Dec	Jan 2024	3,160,342	2,634,612	525,730	16.64%	3,160,342	2,634,612	525,730	16.64%
Jan	Feb 2024	3,118,901	2,586,126	532,775	17.08%	6,279,243	5,220,738	1,058,505	16.86%
Feb	Mar 2024	3,007,144	2,358,034	649,110	21.59%	9,286,387	7,578,772	1,707,615	18.39%
Mar	Apr 2024	2,997,920	2,688,453	309,467	10.32%	12,284,307	10,267,225	2,017,081	16.42%
Apr	May 2024								
May	Jun 2024								
June	July 2024								
July	Aug 2024								
Aug	Sep 2024								
Sep	Oct 2024								
Oct	Nov 2024								
Nov	Dec 2024								

TOTALS 12,284,307 10,267,225 2,017,082

Billings & Usage

By Type of Service-C/F	Used by City Dep i.e. water breaks flush.etc.					Total	Previous Year	Previous Year Produced
	Commercial	Industrial	City Depts.	Residential	Not metered			
Jan 2024	634,200	437,100	243,500	1,279,700	40,112	2,634,612	2,692,282	3,407,918
Feb 2024	669,300	385,800	183,100	1,311,600	36,326	2,586,126	2,588,413	3,279,852
Mar 2024	632,700	446,200	72,200	1,147,600	59,334	2,358,034	2,480,000	2,899,531
Apr 2024	670,400	405,900	297,600	1,271,300	43,253	2,688,453	2,842,397	3,410,725
May 2024								
Jun 2024								
July 2024								
Aug 2024								
Sep 2024								
Oct 2024								
Nov 2024								
Dec 2024								

TOTALS 2,606,600 1,675,000 796,400 5,010,200 179,025 10,267,225 10,603,092 12,998,026

BILLING AMOUNT

	Commercial Sales	Industrial Sales	City Depts. Sales	Residential Sales	City Depts Not Sold	TOTAL SALES	PREVIOUS YEAR
Jan 2024	\$55,029.99	\$26,113.01	\$14,402.76	\$176,535.56	N/C	\$272,081.32	\$ 209,127.27
Feb 2024	\$57,247.43	\$24,384.12	\$11,188.04	\$176,580.23	N/C	\$269,399.82	\$ 202,913.33
Mar 2024	\$54,544.93	\$26,114.06	\$5,176.82	\$164,130.96	N/C	\$249,966.77	\$ 194,397.02
Apr 2024	\$57,311.60	\$24,463.99	\$17,402.07	\$174,716.42	N/C	\$273,894.08	\$ 209,826.64
May 2024							
Jun 2024							
July 2024							
Aug 2024							
Sep 2024							
Oct 2024							
Nov 2024							
Dec 2024							

TOTALS \$224,133.95 \$101,075.18 \$48,169.69 \$691,963.17 \$1,065,341.99 \$ 816,264.26

Number of Customers

	Commercial	Industrial	City Depts.	Residential		Previous Year
Jan 2023	350	7	15	3,168	3,540	3,554
Feb 2023	349	7	15	3,166	3,537	3,544
Mar 2023	350	7	15	3,169	3,541	3,542
Apr 2023	354	7	19	3,141	3,521	3,559
May 2023						
Jun 2023						
July 2023						
Aug 2023						
Sept 2023						
Oct 2023						
Nov 2023						
Dec 2023						

CALLS FOR SERVICE

wcpd

4/1/2024 to 4/30/2024

Printed 5/7/2024

Alarm Actual/False	15
All Other Offenses	3
Animal Complaint	41
Assault	3
Assist Sheriffs Office	6
Assist VDMC	30
Assistance Public	91
Assist Other Agency	14
Bicycle Violations	1
Burg/Breaking & Entering	8
Burning Complaint	1
Civil Disputes	3
Commercial/Resd Patrol	154
Criminal Trespass	5
Debris/Street Problems	17
Directed Assignment	66
Disorderly Conduct	3
Domestic Disturbances	7
Downtown Foot Patrol	17
Driving Complaints	17
Drug/Narcotics/Equipment	2
Escort/Funeral	1
Fire	10
Follow Up	26
Foot Patrol	3
Fraud	2
Harassment	8
Juveniles	9

K9 Activity	1
Lost/Found Property	17
Motorist Assist	12
Noise Complaints	11
Notification	7
Nuisance Calls	14
Open Window/Door	8
Parking Violations	31
Peddler/Solicitor	1
Project Awareness	5
Public Window Assist	42
Reports/Other Paperwork	1
Robbery	1
Runaway	1
School Foot Patrol	21
Sex Abuse	1
Signs/Signals	5
Stationary Patrol	2
STEP Wave	24
Suspicious Activity	56
Theft	20
Tip	1
Traffic Control/School	29
Traffic Stop	56
Transient	1
Trash Violation	1
Utility Problems	22
Vandalism	8
Vehicle Unlock	12
Violation Restraining Ord	1
Warrant Served	3
Welfare Check	19

Issued Citations by Approach



Selection Criteria:

Citation Issue Date From: 04/01/2024
 Citation Issue Date To: 04/30/2024
 Approach (Sensor): ALL
 Include Warning Notices: NO

Site: EB US 20 @ MM 141 (US20EB)

Citation Type	Count
Speed	1878
Total for Approach	1878

Site: NB Briggs Woods Rd @ Millards Ln (BWMLNB)

Citation Type	Count
Speed	112
Total for Approach	112

Site: SB Briggs Woods Rd @ Millards Ln (BWMLSB)

Citation Type	Count
Speed	794
Total for Approach	794

Site: WB US 20 @ MM 141 (US20WB)

Citation Type	Count
Speed	2394
Total for Approach	2394
Total	5178

FIRE DEPARTMENT REPORT

April 2024

ALARMS

<u>DATE</u>	<u>TIME</u>	<u>ADDRESS</u>	<u>TYPE OF SITUATION FOUND</u>	<u>CITY, MUTUAL AID, DISTRICT</u>
04-05	1407	1800 Industrial Road	Sprinkler activation	City
04-05	1600	2000 Superior Street.	Police assist	City
04-07	0133	2156 Stonega Road.	Commercial Building Fire	Mutual
04-10	1228	511 Elm Street	Hazmat release	City
04-12	2235	403 Prospect Street	Unauthorized burning	City
04-13	0252	403 Prospect Street	Unauthorized burning	City
04-14	0237	390 th Street	Grass fire	Mutual
04-15	1639	1000 Water Street.	Structure Fire	City
04-21	0656	601 Fairmeadow Drive.	False Alarm	City
04-21	1830	400 Des Moines Street	Hazardous condition	City
04-21	1830	455 White Fox Road	Chemical spill	City
04-22	0716	858 Division	Scorch burns	City
04-23	2106	600 Block of Second Street Alley	Vehicle Fire	City
04-24	1028	1113 Division Street	Gas Leak	City
04-25	0038	2950 Fenton Avenue	Residential Building Fire	Fire District
04-27	2351	1601 Lynx Avenue.	Smoke in building	City
04-30	0945	303 Broadway Street.	Trash fire	City

Year to Date Total = 59

April Total =17
City- =14
Mutual- =2
District- =1

TRAINING

<u>TIME</u>	<u>TYPE OF TRAINING</u>	<u>HOURS</u>	<u>PERSONNEL</u>
04-08	Driver Operator Training	2	27
04-22	Driver Operator Training Part II	2	27
	Stonega After Action Report	1	2

Year to Date Total = 295

April Total = 110

INSPECTIONS

<u>DATE</u>	<u>BUSINESS</u>	<u>REASON FOR INSPECTION</u>
<u>04-06</u>	<u>Shanti Wellness day spa</u>	<u>Annual</u>
<u>04-16</u>	<u>Donna Ryder Bakery</u>	<u>Plan Review</u>
<u>04-17</u>	<u>Inspection on The Dance Connection</u>	<u>Plan Review</u>
<u>04-18</u>	<u>Final walk through The Dance Connection</u>	<u>Final</u>
<u>04-26</u>	<u>The Dance Connection</u>	<u>Fire Code Review</u>
<u>04-30</u>	<u>New Building Zoning questions</u>	<u>Fire Code Review</u>

Year to Date Total = 17

April Total =06

MISCELLANEOUS

<u>DATE</u>	<u>TIME</u>	<u>EVENT</u>
04-05		Sewer flush for Street department
04-09		Lubricate garage bay doors
		Repaired air leak on L-31
04-12		Repair valve on E32
04-13		Test on Outdoor warning system
04-16		Assist Street Dept. on flushing hydrants
		Newspaper interview
		Replaced valve on E32
04-20		Tested outdoor warning system
04-22		Installed 6 smoke detectors in home
04-23		Hamilton County Emergency Coalition meeting
04-25		Meeting with Rich Fagan CPSE Fire Department Inspection
		Sanded and oiled and painted all hand tools
04-26		Tour of Fire Station
04-28		Take apart and lubricate LDH valves on trucks

MEETING ROOM

<u>DATE</u>	<u>TIME</u>	<u>USED BY</u>
<u>04-24</u>		USDA used training room for meeting

**HAMILTON
COUNTY**

**SOLID WASTE
COMMISSION**

Serving:
BLAIRSBURG
ELLSWORTH
JEWELL
KAMRAR
RANDALL

STANHOPE
WEBSTER CITY
WILLIAMS
RURAL HAM. CO.

WEBSTER CITY, IOWA 50595
TELEPHONE: 515-539-4420
800-535-1145

AGENDA

Regular Meeting

2605 McMurray Avenue

1 ½ Miles Northwest of Kamrar, Iowa

7:00 P.M.

May 8, 2024

1. Roll Call
2. Minutes of April 10, 2024
3. Approve Payment of Bills and Payrolls
4. Secretary-Treasurer's Financial Reports for April
5. Manager's Reports for April
6. Resolution 24-01, Setting Date of Public Hearing for Sale of Property
7. Appoint Alternate Representative to the North Central Iowa Regional Solid Waste Agency Executive Board
8. Approve Tire Purchase
9. Review 2024-2025 Proposed Budget
10. Open Discussion
11. Adjourn

REGULAR MEETING OF THE
HAMILTON COUNTY SOLID WASTE COMMISSION
MINUTES

A regular meeting of the Hamilton County Solid Waste Commission was held at the Transfer Station Office building on April 10, 2024 at 7:00 P.M. The meeting was called to order by Chairperson Dan Campidilli and roll being called, members were present as follows:

Kamrar-Lendall Mechaelsen
Hamilton County-Dan Campidilli
Webster City-Brandon Bahrenfuss
Randall-Mark Judge

Jewell-Mickey Walker
Stanhope-Kelly Wirtz
Williams-Dennis Frayne

The representatives from the Cities of Blairsburg and Ellsworth were absent.

It was moved by Wirtz and seconded by Mechaelsen that:

1. The Minutes of March 13, 2024 be approved.
2. The issuance of Payroll for the period ending March 8, 2024 and paid on March 15, 2024 in the amount of \$9,230.15 be approved.
3. The issuance of Payroll for the period ending March 22, 2024 and paid on March 29, 2024 in the amount of \$9,836.19 be approved.
4. Payment of Bills for March 2024 in the amount of \$79,607.61 be approved.
5. The Secretary-Treasurer's Report for March 2024 be approved.

Motion carried with seven ayes, Blairsburg and Ellsworth absent.

It was moved by Wirtz and seconded by Bahrenfuss that the Manager's reports for March 2024 be approved. Motion carried with seven ayes, Blairsburg and Ellsworth absent.

It was moved by Wirtz and seconded by Bahrenfuss to grant Manager Terry Klaver additional days off in exchange for working his usual days off. Motion carried with seven ayes, Ellsworth and Blairsburg absent.

It was moved by Frayne and seconded by Judge to proceed with the land sale and to place the resolution setting the public hearing on next month's agenda. Motion carried with seven ayes, Ellsworth and Blairsburg absent.

It was moved by Wirtz and seconded by Frayne that the Hamilton County Solid Waste Commission adjourn. Motion carried with seven ayes, Blairsburg and Ellsworth absent.

The Commission stood adjourned at 8:11 P.M.

Dan Campidilli, Chairperson

Cherie Ferguson, Secretary-Treasurer

Bills Approved 4/10/2024

AUDITOR OF STATE	\$175.00
BAUER TIRE & TAXIDERM	\$920.00
BIRI BISHOP	\$29.83
BOMGAARS	\$206.85
BRANDON BAHRENFUSS	\$60.10
CARD SERVICES	\$848.93
CARLENE AUESTAD	\$108.60
CHERIE FERGUSON	\$19.47
CINTAS	\$251.13
COLUMN SOFTWARE	\$242.53
COOPERATIVE TELEPHONE EXCHAN	\$137.18
DENNIS FRAYNE	\$195.59
EFTPS	\$2,288.80
HOUSBY MACK	\$451.82
IOWA FIRE CONTROL	\$533.00
IPERS	\$2,903.49
JEANETTE TEMPEL	\$22.62
KALIB KING	\$10.00
KEENAN ELLIOTT	\$17.97
KELLY WIRTZ	\$26.08
LEO REITER	\$54.06
LIBERTY TIRE	\$691.46
METRO WASTE AUTHORITY	\$150.00
MICKEY WALKER	\$54.84
NAPA	\$99.98
NCIARSWA	\$46,630.11
OVERHEAD DOOR OF WEBSTER CO	\$600.25
POSTMASTER	\$18.99
PRINTING SERVICES	\$103.50
TERRY KLAVER	\$30.00
TERRY PAINTON	\$97.16
TOLLE AUTOMOTIVE	\$266.22
TREASURER OF STATE	\$520.33
UNITED COOPERATIVE	\$2,079.00
U.S. CELLULAR	\$196.80
WEBSTER CITY MUNICIPAL UTILITIE	\$359.27
WELLMARK	\$3,567.28
WOLFE CLINIC	\$483.00
PAYROLL	\$14,156.37
Total	<u>\$79,607.61</u>

HCSW COMMISSION

Check Detail

April 11 - May 8, 2024

DATE	TRANSACTION TYPE	NUM NAME	MEMO/DESCRIPTION	CLR	AMOUNT
FIRST STATE BANK CHECKING					
04/11/2024	Check	12599 UNITED COOPERATIVE	DEISEL FEUL		-2,060.10 2,060.10
04/13/2024	Check	EFT IPERS	MARCH IPERS		-4,543.59 4,543.59
04/13/2024	Check	EFT MY IOWA UI	1ST QTR 2024 UI		-329.48 329.48
04/13/2024	Check	EFT TREASURER OF STATE	1ST QTR 2024 STATE WH		-2,257.36 -2,257.36
04/15/2024	Check	EFT United States Treasury	MARCH FED WH/FICA		-6,197.21 6,197.21
04/21/2024	Check	EFT FIRST STATE BANK	SAFE DEPOSIT BOX FEE		-30.00 30.00
04/25/2024	Check	12638 UNITED COOPERATIVE	DIESEL FUEL		-1,374.30 1,374.30
04/30/2024	Check	EFT TREASURER OF STATE	MARCH SALES TAX		-540.78 -540.78
05/01/2024	Check	EFT WELLMARK	MAY HEALTH INSURANCE		-3,567.28 3,567.28
OPERATING FUND					
04/12/2024	Payroll Check	12598 NICK T. SCHUTT	Pay Period: 03/23/2024-04/05/2024 Gross Pay - This is not a legal pay stub Employer Taxes Employer Retirement Contribution Employer Health Ins. Contribution Health Insurance (taxable) IPERS Health Insurance (taxable) - Company Contribution IPERS - Company Contribution IA Unemployment Taxes IA Income Tax Federal Taxes (941/943/944)		-1,240.82 1,835.10 156.90 173.23 334.44 111.48 115.43 334.44 173.23 16.52 76.94 430.81
04/12/2024	Payroll Check	12596 TERRY A KLAVER	Pay Period: 03/23/2024-04/05/2024 Gross Pay - This is not a legal pay stub Employer Taxes Employer Retirement Contribution Employer Health Ins. Contribution Health Insurance (taxable) IPERS Payroll Correction Health Insurance (taxable) - Company Contribution IPERS - Company Contribution IA Unemployment Taxes IA Income Tax Federal Taxes (941/943/944)		-2,206.46 3,112.56 266.13 293.83 334.44 111.48 195.78 0.00 334.44 293.83 28.01 123.63 713.33

DATE	TRANSACTION TYPE	NUM	NAME	MEMO/DESCRIPTION	CLR	AMOUNT
04/12/2024	Payroll Check	12594	KEENAN L. ELLIOTT	Pay Period: 03/23/2024-04/05/2024		-1,414.07
				Gross Pay - This is not a legal pay stub		2,053.25
				Employer Taxes		175.55
				Employer Retirement Contribution		193.83
				Employer Health Ins. Contribution		334.44
				Health Insurance (taxable)		111.48
				IPERS		129.15
				Health Insurance (taxable) - Company Contribution		334.44
				IPERS - Company Contribution		193.83
				IA Unemployment Taxes		18.48
				IA Income Tax		67.05
				Federal Taxes (941/943/944)		488.57
04/12/2024	Payroll Check	12595	CHERIE L FERGUSON	Pay Period: 03/23/2024-04/05/2024		-577.27
				Gross Pay - This is not a legal pay stub		706.88
				Employer Taxes		60.44
				Employer Retirement Contribution		66.73
				IPERS		44.46
				IPERS - Company Contribution		66.73
				IA Unemployment Taxes		6.36
				IA Income Tax		4.44
				Federal Taxes (941/943/944)		134.79
04/12/2024	Payroll Check	12597	AARON A. PARK	Pay Period: 03/23/2024-04/05/2024		-1,280.37
				Gross Pay - This is not a legal pay stub		1,673.43
				Employer Taxes		143.08
				Employer Retirement Contribution		157.97
				Employer Health Ins. Contribution		334.44
				Health Insurance (taxable)		111.48
				IPERS		105.26
				Health Insurance (taxable) - Company Contribution		334.44
				IPERS - Company Contribution		157.97
				IA Unemployment Taxes		15.06
				IA Income Tax		48.30
				Federal Taxes (941/943/944)		256.04
04/26/2024	Payroll Check	12636	AARON A. PARK	Pay Period: 04/06/2024-04/19/2024		-1,229.78
				Gross Pay - This is not a legal pay stub		1,610.75
				Employer Taxes		137.72
				Employer Retirement Contribution		152.05
				Employer Health Ins. Contribution		334.44
				Health Insurance (taxable)		111.48
				IPERS		101.32
				Health Insurance (taxable) - Company Contribution		334.44
				IPERS - Company Contribution		152.05
				IA Unemployment Taxes		14.50
				IA Income Tax		44.95
				Federal Taxes (941/943/944)		246.44
04/26/2024	Payroll Check	12633	KEENAN L. ELLIOTT	Pay Period: 04/06/2024-04/19/2024		-1,382.97
				Gross Pay - This is not a legal pay stub		2,008.51
				Employer Taxes		171.74
				Employer Retirement Contribution		189.60
				Employer Health Ins. Contribution		334.44
				Health Insurance (taxable)		111.48
				IPERS		126.34
				Health Insurance (taxable) - Company Contribution		334.44
				IPERS - Company Contribution		189.60
				IA Unemployment Taxes		18.08
				IA Income Tax		64.66
				Federal Taxes (941/943/944)		476.72

DATE	TRANSACTION TYPE	NUM NAME	MEMO/DESCRIPTION	CLR	AMOUNT	
04/26/2024	Payroll Check	12634	CHERIE L FERGUSON	Pay Period: 04/06/2024-04/19/2024		-577.28
				Gross Pay - This is not a legal pay stub		706.88
				Employer Taxes		60.43
				Employer Retirement Contribution		66.73
				IPERS		44.46
				IPERS - Company Contribution		66.73
				IA Unemployment Taxes		6.36
				IA Income Tax		4.44
				Federal Taxes (941/943/944)		134.77
				04/26/2024	Payroll Check	12637
Gross Pay - This is not a legal pay stub		1,788.80				
Employer Taxes		152.95				
Employer Retirement Contribution		168.86				
Employer Health Ins. Contribution		334.44				
Health Insurance (taxable)		111.48				
IPERS		112.52				
Health Insurance (taxable) - Company Contribution		334.44				
IPERS - Company Contribution		168.86				
IA Unemployment Taxes		16.10				
IA Income Tax		74.46				
Federal Taxes (941/943/944)		418.55				
04/26/2024	Payroll Check	12635	TERRY A KLAVER			
				Gross Pay - This is not a legal pay stub		3,112.56
				Employer Taxes		266.13
				Employer Retirement Contribution		293.83
				Employer Health Ins. Contribution		334.44
				Health Insurance (taxable)		111.48
				IPERS		195.78
				Payroll Correction		0.00
				Health Insurance (taxable) - Company Contribution		334.44
				IPERS - Company Contribution		293.83
				IA Unemployment Taxes		28.02
				IA Income Tax		123.63
				Federal Taxes (941/943/944)		713.31

HCSW COMMISSION

Unpaid Bills

All Dates

DATE	NUM	AMOUNT
BAUER TIRE & TAXIDERMY LLC		
515-838-2477		
01/17/2023		920.00
04/30/2024		589.00
Total for BAUER TIRE & TAXIDERMY LLC		\$1,509.00
BLUE RIBBON PELHAM WATERS		
04/30/2024	4748	34.00
Total for BLUE RIBBON PELHAM WATERS		\$34.00
BOMGAARS		
03/18/2024	62106942	134.66
03/28/2024	62109862	176.25
04/10/2024	62114132	103.92
Total for BOMGAARS		\$414.83
COLUMN SOFTWARE PBC		
04/18/2024	05BF44BE-0014	73.31
Total for COLUMN SOFTWARE PBC		\$73.31
COOPERATIVE TELEPHONE EXCHANGE		
515-826-3206		
05/01/2024	232	139.12
Total for COOPERATIVE TELEPHONE EXCHANGE		\$139.12
FREEMAN JOURNAL		
04/28/2024		182.50
Total for FREEMAN JOURNAL		\$182.50
LIBERTY TIRE RECYCLING, LLC		
04/20/2024	2719427	1,738.25
Total for LIBERTY TIRE RECYCLING, LLC		\$1,738.25
NCIARSWA		
515-955-2781		
04/21/2024	042124-1	30,434.95
Total for NCIARSWA		\$30,434.95
NEXT LEVEL FABRICATION		
03/28/2024		900.00
04/28/2024	71	915.00
Total for NEXT LEVEL FABRICATION		\$1,815.00
REES TRUCK & TRAILER, INC		
04/09/2024	155357	205.35
04/09/2024	155359	40.60
Total for REES TRUCK & TRAILER, INC		\$245.95
SCS ENGINEERS		
03/31/2024	0499638	515.00
03/31/2024	0499639	269.06
Total for SCS ENGINEERS		\$784.06
TITAN MACHINERY		

DATE	NUM	AMOUNT
04/02/2024	PS0256227-1	307.68
04/24/2024	PS0282842-1	328.93
Total for TITAN MACHINERY		\$636.61
WEBSTER CITY MUNICIPAL UTILITIES		
04/25/2024	19.741400.01	111.57
04/25/2024	19.741300.01	242.52
Total for WEBSTER CITY MUNICIPAL UTILITIES		\$354.09
TOTAL		\$38,361.67

HCSW COMMISSION

A/R Aging Summary

As of May 1, 2024

	CURRENT	1 - 30	31 - 60	61 - 90	91 AND OVER	TOTAL
AG FORCE	72.61					\$72.61
AG SOURCE	130.20	71.43				\$201.63
ALL SEASON GUTTERS	41.73					\$41.73
AMERICAN SANITATION	19,732.90	60.00				\$19,792.90
APPLIANCE PLUS	16.70					\$16.70
CHAD ARNOLD	49.24	16.54	16.80	1.71		\$84.29
CHRIS MC NEIL PLUMBING						
CITY OF BLAIRSBURG					-34.20	\$ -34.20
CITY OF ELLSWORTH					-0.01	\$ -0.01
CITY OF WEBSTER CITY	258.56					\$258.56
DAILY FREEMAN JOURNAL	110.76					\$110.76
FOAM CATZ	32.10		0.32			\$32.42
GILBERT FLOORING & PAINT	249.54					\$249.54
GOOD LIFE RV	16.05					\$16.05
HAMILTON COUNTY CONSERVATION	213.66					\$213.66
HAMILTON COUNTY ENGINEER	15.00					\$15.00
HAMILTON COUNTY FAIRGROUNDS	163.36					\$163.36
HUBBARD CONCRETE					-0.01	\$ -0.01
INTERIOR SPACES	16.05					\$16.05
J&C BUILDERS, LCC	38.39					\$38.39
JLE CONSTRUCTION	660.96	162.68		0.00		\$823.64
MARY ANN'S SPECIALTY FOODS	100.58					\$100.58
MERTZ ENGINEERING CO.					-0.01	\$ -0.01
MIDWEST ECOSTRUCTION	37.56					\$37.56
MORTENSON PROPERTIES	128.70	176.86				\$305.56
NICK MURPHY CONSTRUCTION	45.90					\$45.90
PAGEL REPAIR AND LOCK					-48.62	\$ -48.62
REMINGTON SEEDS	16.05					\$16.05
RUBA LAWN CARE	337.37					\$337.37
SEAMLESS PROS LLC	121.85	93.18				\$215.03
SHAWN MORAN CONSTRUCTION	1,566.53		3.25			\$1,569.78
SIGN UP	47.57					\$47.57
SPEEDY DUMP		57.67				\$57.67
THE TRASH MAN	678.51					\$678.51
TILE PROS, INC.	59,287.30					\$59,287.30
T&T RENTALS	18.72					\$18.72
VAN DIEST SUPPLY					4.65	\$4.65
WASTE MANAGEMENT	49.24					\$49.24
WEBSTER CITY SCHOOLS	133.38	140.63	288.67	178.35		\$741.03
ZATLOUKAL CONSTRUCTION	50.70					\$50.70
TOTAL	32.10					\$32.10
	\$84,469.87	\$778.99	\$309.04	\$180.05	\$-78.19	\$85,659.76

HCSW COMMISSION

Sales by Customer Summary

April 2024

	TOTAL
AG FORCE	67.86
AG SOURCE	121.68
ALL SEASON GUTTERS	39.00
AMERICAN SANITATION	19,792.90
APPLIANCE PLUS	15.60
CASH	17,372.76
CHAD ARNOLD	46.02
CITY OF ELLSWORTH	258.56
CITY OF WEBSTER CITY	110.76
DAILY FREEMAN JOURNAL	75.00
FOAM CATZ	233.22
GILBERT FLOORING & PAINT	15.00
GOOD LIFE RV	199.68
HAMILTON COUNTY CONSERVATION	30.00
HAMILTON COUNTY ENGINEER	221.86
HUBBARD CONCRETE	15.00
INTERIOR SPACES	35.88
J&C BUILDERS, LCC	645.24
JLE CONSTRUCTION	94.00
MERTZ ENGINEERING CO.	71.76
MIDWEST ECOSTRUCTION	128.70
MORTENSON PROPERTIES	42.90
NICK MURPHY CONSTRUCTION	67.08
PAGEL REPAIR AND LOCK	15.00
REMINGTON SEEDS	315.30
RUBA LAWN CARE	113.88
SEAMLESS PROS LLC	1,464.06
SHAWN MORAN CONSTRUCTION	44.46
SPEEDY DUMP	652.08
THE TRASH MAN	59,287.30
TILE PROS, INC.	18.72
VAN DIEST SUPPLY	165.36
WASTE MANAGEMENT	133.38
WEBSTER CITY SCHOOLS	50.70
ZATLOUKAL CONSTRUCTION	30.00
TOTAL	\$101,990.70

HCSW COMMISSION

Profit and Loss

April 2024

	TOTAL
Income	
OPERATING FUND	
GATE CHARGES	-4.29
APPLIANCES	170.00
C&D	33,572.02
CONCRETE	784.96
ELECTRONICS	119.00
MSW	58,445.16
TIRES	17,913.76
TVS	360.00
Total GATE CHARGES	111,360.61
SCRAP METAL SOLD	635.00
Total OPERATING FUND	111,995.61
TRANSFER STATION CD INTEREST	649.01
Unapplied Cash Payment Income	-71.77
Total Income	\$112,572.85
GROSS PROFIT	\$112,572.85
Expenses	
Operating Fund Expenses	
Audits	175.00
Bank Service Charges	30.00
Building and Fixture Repairs	600.25
COMMISSION FEES	688.88
Computer Service	308.77
Diesel Fuel/Fuel Oil	3,434.40
Drinking Water Service	25.50
Electricity	359.27
Equipment and Vehicle Repairs	533.00
Gasoline	266.18
Meeting/Training Expenses	52.08
NCIARSWA Gate Fees	30,434.95
NCIARSWA Per Capita Assessments	16,195.16
Office Supplies	103.50
Payroll Expenses	
Health Insurance	3,567.28
IPERS	4,543.59
Medicare & Social Security	6,197.21
Unemployment Insurance	329.48
Total Payroll Expenses	14,637.56
Phone & Internet Service	137.18
Public Notices	242.53
TIRE REMOVAL	691.46

	TOTAL
Tires	266.22
Uniform Service	251.13
Vehicle&Equip. Parts&Supplies	1,017.97
Total Operating Fund Expenses	70,450.99
Payroll Expenses	
Company Contributions	
Health Insurance	2,675.52
Retirement	1,756.66
Total Company Contributions	4,432.18
Taxes	1,591.07
Wages	18,608.72
Total Payroll Expenses	24,631.97
Total Expenses	\$95,082.96
NET OPERATING INCOME	\$17,489.89
Other Income	
Late Fee Income	3.64
Total Other Income	\$3.64
NET OTHER INCOME	\$3.64
NET INCOME	\$17,493.53

HCSW COMMISSION

Budget vs. Actuals: FY_2023_2024 - FY24 P&L

July 2023 - April 2024

	TOTAL			
	ACTUAL	BUDGET	OVER BUDGET	% OF BUDGET
Income				
CRUSHED ROCK	240.70		240.70	
OPERATING FUND	1.79		1.79	
ASSESSMENTS	48,585.48	64,781.00	-16,195.52	75.00 %
BAD CHECK FEES	-15.60		-15.60	
FARM INCOME	2,692.57	3,500.00	-807.43	76.93 %
GAS TAX REFUND		50.00	-50.00	
GATE CHARGES	-799.72	1,100,000.00	-1,100,799.72	-0.07 %
APPLIANCES	5,020.00		5,020.00	
C&D	319,814.36		319,814.36	
CONCRETE	914.28		914.28	
ELECTRONICS	1,197.00		1,197.00	
LATEX PAINT	336.00		336.00	
MSW	586,419.13		586,419.13	
PACKER	4,504.00		4,504.00	
RCC FEES	152.99		152.99	
TIRES	22,709.86		22,709.86	
TVS	5,310.00		5,310.00	
Total GATE CHARGES	945,577.90	1,100,000.00	-154,422.10	85.96 %
INTEREST	780.31	13,000.00	-12,219.69	6.00 %
REFUNDS AND REIMBURSEMENTS	3,424.00	5,000.00	-1,576.00	68.48 %
SCRAP METAL SOLD	6,154.67	6,000.00	154.67	102.58 %
Total OPERATING FUND	1,007,201.12	1,192,331.00	-185,129.88	84.47 %
POST CLOSURE RESERVE FUND				
INTEREST ON INVESTMENTS	20,960.90	30,000.00	-9,039.10	69.87 %
Total POST CLOSURE RESERVE FUND	20,960.90	30,000.00	-9,039.10	69.87 %
Services				
TRANSFER STATION CD INTEREST	1,036.20		1,036.20	
Unapplied Cash Payment Income	649.01	1,500.00	-850.99	43.27 %
	-497.31		-497.31	
Total Income	\$1,029,590.62	\$1,223,831.00	\$-194,240.38	84.13 %
GROSS PROFIT	\$1,029,590.62	\$1,223,831.00	\$-194,240.38	84.13 %
Expenses				
LANDFILL POST CLOSURE FUND				
CONSULTING ENGINEERING FEES	1,036.56	1,990.00	-953.44	52.09 %
OTHER DISBURSEMENTS	3,684.38	5,000.00	-1,315.62	73.69 %
Total LANDFILL POST CLOSURE FUND	4,720.94	6,990.00	-2,269.06	67.54 %
Operating Fund Expenses				
Attorney Fees		1,000.00	-1,000.00	
Audits	5,475.00	6,000.00	-525.00	91.25 %
Bank Service Charges	30.00	100.00	-70.00	30.00 %
Building and Fixture Repairs	3,809.20	75,000.00	-71,190.80	5.08 %
Building Supplies	843.36	2,000.00	-1,156.64	42.17 %
Cell Phone Service	938.27	1,400.00	-461.73	67.02 %

	TOTAL			
	ACTUAL	BUDGET	OVER BUDGET	% OF BUDGET
Change Fund		50.00	-50.00	
COMMISSION FEES	1,372.67	2,000.00	-627.33	68.63 %
Computer Service	1,751.96	1,500.00	251.96	116.80 %
Diesel Fuel/Fuel Oil	34,176.21	45,000.00	-10,823.79	75.95 %
Drinking Water Service	340.00	500.00	-160.00	68.00 %
Electricity	4,335.57	5,750.00	-1,414.43	75.40 %
ELECTRONICS RECYCLING	8,829.95	10,000.00	-1,170.05	88.30 %
Engineering Fees	737.82	7,000.00	-6,262.18	10.54 %
Equipment and Vehicle Repairs	8,498.89	8,000.00	498.89	106.24 %
EQUIPMENT PURCHASES		57,000.00	-57,000.00	
Gasoline	1,190.83	1,200.00	-9.17	99.24 %
Insurance Expense	16,526.00	15,700.00	826.00	105.26 %
LEACHATE DISPOSAL	2,250.64	3,500.00	-1,249.36	64.30 %
Licenses and Permits	100.00	100.00	0.00	100.00 %
MEDICAL SERVICES	141.00	250.00	-109.00	56.40 %
Medical Supplies	17.12	200.00	-182.88	8.56 %
Meeting/Training Expenses	1,276.75	2,000.00	-723.25	63.84 %
Membership Dues		450.00	-450.00	
MISC EXPENSES	1,007.48		1,007.48	
Miscellaneous Expenses	333.00		333.00	
NCIARSWA Gate Fees	327,907.23	375,000.00	-47,092.77	87.44 %
NCIARSWA Per Capita Assessments	64,780.64	64,781.00	-0.36	100.00 %
Office Supplies	1,527.69	3,500.00	-1,972.31	43.65 %
Other Capital Outlay	643.42	5,000.00	-4,356.58	12.87 %
Payroll Expenses				
Health Insurance	19,127.44	45,911.00	-26,783.56	41.66 %
IPERS	16,370.81	23,483.00	-7,112.19	69.71 %
Medicare & Social Security	16,910.44	19,030.00	-2,119.56	88.86 %
Unemployment Insurance	329.48	1,465.00	-1,135.52	22.49 %
Wages		248,762.00	-248,762.00	
Total Payroll Expenses	52,738.17	338,651.00	-285,912.83	15.57 %
Phone & Internet Service	1,367.66	1,800.00	-432.34	75.98 %
Postage	420.35	600.00	-179.65	70.06 %
Propane	3,313.10	3,500.00	-186.90	94.66 %
Public Notices	878.79	1,500.00	-621.21	58.59 %
RCC DISPOSAL/SUPPLIES	8,831.74	20,000.00	-11,168.26	44.16 %
Rock	22,525.00	26,500.00	-3,975.00	85.00 %
Safety Clothing and Equipment	2,202.04	2,000.00	202.04	110.10 %
Security Monitoring	1,057.92	1,400.00	-342.08	75.57 %
Signs		500.00	-500.00	
TIRE REMOVAL	12,335.64	10,000.00	2,335.64	123.36 %
Tires	9,551.32	10,000.00	-448.68	95.51 %
Uniform Service	2,189.61	2,000.00	189.61	109.48 %
Vehicle&Equip. Parts&Supplies	14,374.64	10,000.00	4,374.64	143.75 %
Weed Chemicals	102.88		102.88	
WORKERS' COMP INSURANCE	4,936.00	6,100.00	-1,164.00	80.92 %
Total Operating Fund Expenses	625,665.56	1,128,532.00	-502,866.44	55.44 %
Payroll Expenses				
Company Contributions				

		TOTAL		
	ACTUAL	BUDGET	OVER BUDGET	% OF BUDGET
Health Insurance	33,475.58		33,475.58	
Retirement	19,414.07		19,414.07	
Total Company Contributions	52,889.65		52,889.65	
Taxes	17,038.69		17,038.69	
Wages	205,656.60		205,656.60	
Total Payroll Expenses	275,584.94		275,584.94	
Unapplied Cash Bill Payment Expense	53.81		53.81	
Total Expenses	\$906,025.25	\$1,135,522.00	\$-229,496.75	79.79 %
NET OPERATING INCOME	\$123,565.37	\$88,309.00	\$35,256.37	139.92 %
Other Income				
Late Fee Income	172.81		172.81	
Total Other Income	\$172.81	\$0.00	\$172.81	0.00%
Other Expenses				
Reconciliation Discrepancies-1	0.49		0.49	
Total Other Expenses	\$0.49	\$0.00	\$0.49	0.00%
NET OTHER INCOME	\$172.32	\$0.00	\$172.32	0.00%
NET INCOME	\$123,737.69	\$88,309.00	\$35,428.69	140.12 %

HAMILTON COUNTY SOLID WASTE COMMISSION

April - 2024 MONTHLY REPORT

	DAY	TOTAL TONS	CHARGE RECEIPTS	CASH RECEIPTS	CASH RECEIPTS	TOTAL RECEIPTS	PACKER WEIGHT	DAY PACKER DUMPED & DISPOSAL CHG	LATEX PAINT FEES
		TO BLDG.	TO BLDG.	TO PACKER	TO BLDG.		(TONS)		
1	Mon	49.10	3465.90	24.00	425.68	4251.58			
2	Tues	41.00	2889.57	40.00	361.43	3395.00			
3	Wed	60.66	4442.53	8.00	317.69	4768.22			
4	Thurs	82.98	5679.04	16.00	417.29	6122.33			
5	Fri	56.11	3780.87	16.00	662.89	4639.76			
6	Sat	14.59	690.30	56.00	565.39	1331.69			
7	Sun	0.00	0.00	0.00	0.00	0.00			
8	Mon	77.96	5293.32	40.00	919.46	6368.78			
9	Tues	54.27	3546.68	16.00	813.03	4389.71			
10	Wed	74.12	5071.37	8.00	797.64	6022.01			
11	Thurs	27.12	1512.02	32.00	699.55	2456.57			
12	Fri	63.07	4660.96	8.00	332.95	5091.91			
13	Sat	11.25	121.68	64.00	891.89	1222.57			
14	Sun	0.00	0.00	0.00	0.00	0.00			
15	Mon	64.22	3864.13	24.00	1249.61	5416.74			
16	Tues	43.14	3536.97	16.00	105.48	3698.45		192.56obp-66Latex	
17	Wed	58.26	4185.85	8.00	431.22	4691.07			
18	Thurs	49.99	3316.23	8.00	132.36	3551.12			
19	Fri	46.10	2908.75	24.00	760.96	3743.71			
20	Sat	10.84	117.78	64.00	878.24	1199.12			
21	Sun	0.00	0.00	0.00	0.00	0.00			
22	Mon	59.64	3889.13	24.00	857.65	4850.78			
23	Tues	32.06	2321.26	40.00	258.81	2650.07			
24	Wed	88.77	5327.96	40.00	1780.80	7127.76			
25	Thurs	42.85	2914.60	16.00	467.75	3440.35			
26	Fri	47.27	3491.46	8.00	228.53	4029.99			
27	Sat	13.95	625.78	48.00	561.44	1305.22			
28	Sun	0.00	0.00	0.00	0.00	0.00			
29	Mon	41.99	3037.32	24.00	296.93	3508.25			
30	Tues	47.27	3446.92	32.00	302.69	3855.61			
31									
Total		1258.58	84138.38	704.00	15517.36	103128.37	0.00	0.00	0.00
TOTAL AVG		48.41	3236.09	27.08	596.82	3966.48	0.00	0.00	0.00

HAMILTON COUNTY SOLID WASTE COMMISSION

April - 2024 MONTHLY REPORT

DATE	DAY	Tires, Tubes & Rims		Appliances-White Goods		Tv & Electronics		DAILY FORT DODGE TONS	TONS OF CONSTR. TO BLDG.	TONS OF MSW WASTE
		UNITS	RECEIPTS	UNITS	RECEIPTS	UNITS	RECEIPTS			
1	Mon	17.00	112.00	11.00	110.00	14.00	114.00	55.16	2.80	46.30
2	Tues	8.00	46.00	3.00	30.00	4.00	28.00	54.97	2.20	38.8
3	Wed	0.00	0.00	0.00	0.00	0.00	0.00	29.79	2.49	58.17
4	Thurs	0.00	0.00	1.00	10.00	0.00	0.00	63.86	6.29	76.69
5	Fri	30.00	150.00	3.00	30.00	0.00	0.00	67.85	8.28	47.83
6	Sat	2.00	10.00	1.00	10.00	0.00	0.00	40.98	0.65	13.94
7	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
8	Mon	1.00	2.00	10.00	100.00	1.00	15.00	51.22	3.00	74.96
9	Tues	2.00	4.00	1.00	10.00	0.00	0.00	52.03	4.47	49.80
10	Wed	0.00	0.00	13.00	130.00	1.00	15.00	62.87	8.32	65.80
11	Thurs	19.00	77.00	10.00	100.00	4.00	36.00	45.01	2.88	24.24
12	Fri	7.00	35.00	1.00	10.00	3.00	45.00	49.96	7.08	55.99
13	Sat	8.00	40.00	3.00	30.00	5.00	75.00	37.24	2.53	8.72
14	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
15	Mon	20.00	120.00	1.00	10.00	11.00	149.00	35.09	9.22	55.00
16	Tues	4.00	20.00	2.00	20.00	0.00	0.00	42.08	3.19	39.95
17	Wed	0.00	0.00	0.00	0.00	6.00	66.00	62.82	5.66	52.60
18	Thurs	3.00	84.53	1.00	10.00	0.00	0.00	61.95	2.68	47.29
19	Fri	0.00	0.00	5.00	50.00	0.00	0.00	19.17	1.17	44.93
20	Sat	22.00	154.10	0.00	0.00	3.00	45.00	40.46	0.00	10.84
21	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
22	Mon	4.00	20.00	6.00	60.00	0.00	0.00	16.36	11.97	47.67
23	Tues	3.00	15.00	0.00	0.00	1.00	15.00	70.57	4.49	27.57
24	Wed	1.00	24.00	0.00	0.00	0.00	0.00	69.92	4.61	84.16
25	Thurs	1.00	5.00	0.00	0.00	3.00	37.00	54.48	4.61	38.24
26	Fri	1.00	5.00	8.00	80.00	15.00	217.00	38.70	8.53	38.74
27	Sat	4.00	20.00	2.00	20.00	2.00	30.00	18.06	8.50	5.45
28	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
29	Mon	0.00	0.00	9.00	90.00	4.00	60.00	37.00	1.66	40.33
30	Tues	0.00	0.00	3.00	30.00	4.00	44.00	46.86	5.16	42.11
31										
TOTAL		157.00	943.63	94.00	940.00	81.00	991.00	1224.46	122.44	1136.12
TOTAL AVG		6.04	36.29	3.62	36.15	3.12	38.12	47.09	4.71	43.70

HAMILTON COUNTY TRANSFER STATION

(Manager's Report for April 2024)

Project East Door Damage Update.

To help expedite the completion of the taller door installation I reached out to the Executive Commission for approvals. The door was 4-5 weeks out and Sadler confirmed they could be onsite 2-3 weeks out. I kept them in the loop with the door timeline and provided them with a name to get recommended rough opening size for taller door from Overhead Door. Update to be given at our next meeting.

End Loader Tire Replacement Project.

Tire pricing has been received from Matts Tire in Ft. Dodge. They just recently put new foam filled tires on our skid loader. See the quoted prices on End Loader tires below.

1. Matts Tire – Foam filled Maxam Tire with current rims - \$19,358.00
2. Solid Tire – Brawler w/interchangeable hubs - \$27,229.64
The solid tire option will fit any brand of loader. Solid tires come complete with rims.

* Interchangeable center plates are \$600.00 each plus \$100.00 for hardware.

Cost to change brands of Loader if needed would be \$2800.00 with the Solid Trellborg Brawler.

Landfill Leachate System Project.

Leachate levels in our system appear to be on the increase/very full. The DNR has requested a Report be completed by SCS Engineering. SCS has applied for a extension through the end of May. See attached information that I have received up to this point. I plan to have an update at our next meeting.

TERRY KLAUER

Re: 621 bid



From Matt's Tire <office.mattstire@gmail.com>

To <hamcosolidwaste@netins.net>

Date 2024-04-24 08:33

interchangeable plates are 600 ea plus 100 for the hardware

On Mon, Mar 25, 2024 at 9:04 AM Matt's Tire <office.mattstire@gmail.com> wrote:

- foam fills
- maxam 20.5r25 L-5 2563 ea x 4 10,252.00
- 2 service calls 125 ea x2 250
- 4 foam fills 2302 ea x 4 7208
- 4 cut off and mount 200 ea x 4 800
- 4 stems 12.00 ea x 4 48
- 4 mounted switches 100 ea x 4 400
- 4 disposals 100 ea x 4 400

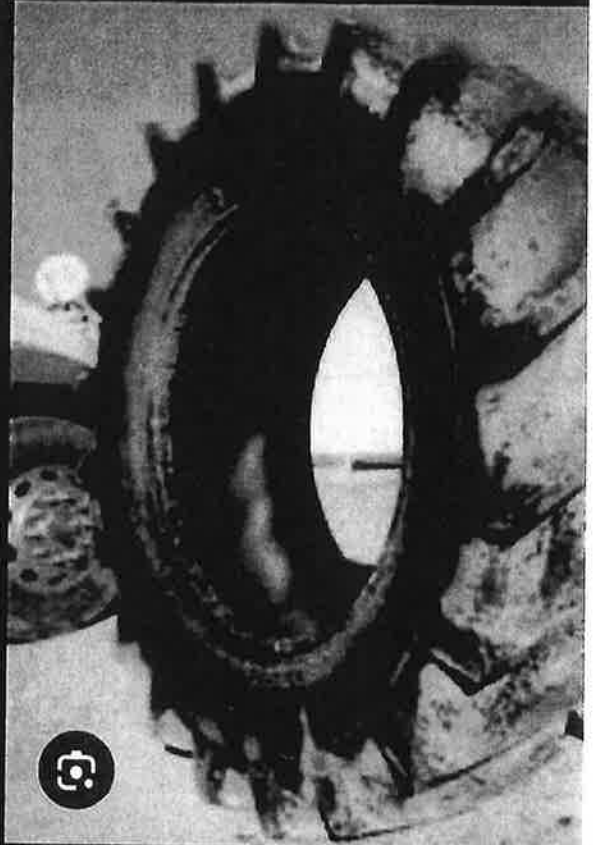
- total if foam filled 19,358.00

- solids w interchangeable plate
- trellborg brawler traction net state price 6676.16 eax4 26,704.64
- 1 service call 125
- 4 mounted switches 100 ea x 4 400

- total for solids 27229.64




Machinery Trader



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Hamilton County Sanitary Landfill - 40-SDP-02-75C - Leachate Collection System Evaluation



From Ohrt, Nathan <NOhrt@scsengineers.com>
To Spain, Geoffrey <Geoffrey.Spain@dnr.iowa.gov>
Cc Mailer Team <hamcosolidwaste@netins.net>, Mike Smith <mike.smith@dnr.iowa.gov>, Buelow, Tim <TBuelow@scsengineers.com>, Madson, Ben <BMadson@scsengineers.com>
Date 2024-04-22 11:46

Good morning Geoff-

In correspondence dated January 23, 2024 (Doc #109094), the Iowa Department of Natural Resources requested a schedule by April 25, 2024 to evaluate the impact of the shutdown of the leachate collection system for the Hamilton County Sanitary Landfill. Due to emergency personal matters for SCS staff, an extension to the submittal date to May 31, 2024 is requested. If you have any questions or comments, please contact me at the number below. Thank you.

Nathan Ohrt
Senior Project Professional
SCS Engineers
West Des Moines, Iowa
319-331-9613 (M)
nohrt@scsengineers.com

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BE GREEN Please don't print this e-mail unless necessary!

Re: Hamilton County Sanitary Landfill - 40-SDP-02-75C - Leachate Collection System Evaluation

From Spain, Geoffrey <geoffrey.spain@dnr.iowa.gov>
To Ohrt, Nathan <NOhrt@scsengineers.com>
Cc Mailer Team <hamcosolidwaste@netins.net>, Mike Smith <mike.smith@dnr.iowa.gov>, Buelow, Tim <TBuelow@scsengineers.com>, Madson, Ben <BMadson@scsengineers.com>, Becky Jolly <becky.jolly@dnr.iowa.gov>
Date 2024-04-24 09:15

Hello,

The extension request for May 31, 2024 is approved.

On Mon, Apr 22, 2024 at 11:46 AM Ohrt, Nathan <NOhrt@scsengineers.com> wrote:
Good morning Geoff-

In correspondence dated January 23, 2024 (Doc #109094), the Iowa Department of Natural Resources requested a schedule by April 25, 2024 to evaluate the impact of the shutdown of the leachate collection system for the Hamilton County Sanitary Landfill. Due to emergency personal matters for SCS staff, an extension to the submittal date to May 31, 2024 is requested. If you have any questions or comments, please contact me at the number below. Thank you.

Nathan Ohrt

Senior Project Professional

SCS Engineers

West Des Moines, Iowa

319-331-9613 (M)

nohrt@scsengineers.com

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www.scsengineers.com

 **BE GREEN** Please don't print this e-mail unless necessary!

--
Geoffrey Spain
Environmental Engineer
Land Quality Bureau
Iowa Department of Natural Resources
509 E 9th St., Des Moines, IA 50319-0034
515-587-7638 mobile
geoffrey.spain@dnr.iowa.gov
www.iowadnr.gov

RESOLUTION 24-01

RESOLUTION SETTING DATE OF PUBLIC HEARING FOR SALE OF PROPERTY

WHEREAS, the State of Iowa under Iowa Code Section 364.7 requires a government entity to hold a public hearing prior to an agreement for sale of property;

WHEREAS, the Hamilton County Solid Waste Commission wishes to sell Parcel Letter "E" located in the NE ¼ of the NE ¼ of Section 27, Township 88 North, Range 25 West of the 5th P.M., Hamilton County, Iowa described as follows:

Commencing at the E ¼ Corner of said Section 27; thence North 00°14'40" East 1941.89 feet on the East line of the NE ¼ of said Section 27 to a corner that is common with Parcel Letter "D" recorded in Survey Cabinet Slide 365A Page 5, also being the point of beginning; Thence continuing North 00°14'40" East 243.50 feet on said East line; Thence North 89°46'05" West 920.91 feet to a point on a line that is common with said Parcel Letter "D"; Thence South 00°13'13" West 237.00 feet to a corner that is common with said Parcel Letter "D"; Thence South 89°21'52" East 920.83 feet to the point of beginning, containing 5.08 Acres, inclusive of a Public Roadway Easement of 0.18 Acres and is subject to any and all other Easements, be they of record or not.

For this Survey the East line of the NE ¼ of said Section 27 was assumed to bear North 00°14'40" East.

NOW THEREFORE, BE IT RESOLVED BY THE HAMILTON COUNTY SOLID WASTE COMMISSION:

1)That a public hearing shall be held on the proposed sale of the property at 7:00 p.m. at the Transfer Station office building located at 2605 McMurray Ave., Webster City, IA, 50595.

2)That the Secretary-Treasurer is authorized and directed to publish notice of this public hearing in the Daily Freeman Journal, at least once, not less than four (4) nor more than twenty (20) days, before the date of the public hearing.

PASSED and APPROVED this 8th day of May, 2024.

AYES: _____

NAYS: _____

ATTEST:

Dan Campidilli, Chairperson
Hamilton County Solid Waste Commission

Cherie Ferguson, Secretary-Treasurer
Hamilton County Solid Waste Commission

	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	BUDGET	PROPOSED BUDGET
Beginning Balance	975,161.86	1,055,502.85	1,117,531.85	1,078,216.84	1,024,865.53	1,144,164.41
RECEIPTS						
Gate Charges	992,784	1,002,409	1,040,693	1,109,097	1,100,000	1,100,000
Less Sales Tax Paid						
	992,784	1,002,409	1,040,693	1,109,097	1,100,000	1,100,000
Assessments	67,186	67,186	65,383	65,381	64,781	64,781
Interest on Investments	2,030	1,051	900	2,964	13,000	14,000
Farm Income	2,078	1,893	3,479	1,871	3,500	1,300
Refunds & Reimbursements	12,875	1,377	45,202	6,053	0	0
Gas Tax Refund	0	0	0	0	50	50
RETURNED CHECK FEE	118	0	0	0	0	0
DNR RCC REIMBURSEMENT	3,371	4,626	12,454	4,522	5,000	5,000
Other Receipts	8,559	373	1,000	2,470	0	0
Scrap Metal Sold	3,969	7,804	14,428	6,872	6,000	6,000
Total Receipts	1,092,971	1,086,719	1,183,540	1,199,230	1,192,331	1,191,131
DISBURSEMENTS						
Personal Services						
Regular & OT Wages	161,607	185,907	195,280	213,113	248,762	261,203
FICA/Medicare	12,842	14,222	14,939	20,002	19,030	19,982
IPERS	15,022	17,550	18,434	21,300	23,483	24,658
Medical Insurance	24,197	33,092	34,607	31,608	45,911	33,000
Workers Comp. Insurance	5,238	5,064	2,272	6,947	6,100	6,100
Unemployment Compensation	111	134	146	451	1,465	860
Commission Fees	1,950	1,475	1,233	1,501	2,000	5,000
Uniform Service	1,989	2,566	1,940	1,869	2,000	2,500
Outside Labor			0	0	0	0
	222,956	260,010	268,851	296,791	348,751	353,303
Contractual Supplies & Services						
Security Monitoring	1,212	1,274	1,277	1,340	1,400	1,500
Audits	5,300	5,175	5,100	5,550	6,000	6,000
Bank Service Charges	98	77	51	723	100	100
Bldgs & Fixtures Repairs	20,687	1,189	17,161	54,599	75,000	49,000
Change Fund	0	0	0	0	50	50
Computer Service	1,158	1,793	1,310	1,306	1,500	2,500
Consulting Attorney Fees	30	50	0	0	1,000	1,000
Consulting Engineering Fees	4,900	0	4,399	25,440	7,000	7,000
Dust Control			1,389		2,000	2,000
Dues - Memberships	398	398	223	245	450	450
Electricity	6,780	5,925	5,194	5,179	5,750	5,750
Electronics Recycling	9,263	13,896	7,470	8,357	10,000	12,000
Equip. & Vehicle Repairs	36,569	15,758	7,033	2,870	8,000	10,000
Cell Phone Service	1,482	1,619	1,524	1,295	1,400	1,400
General & Liability Insurance	9,801	9,767	11,840	14,277	15,700	18,000
Leachate Disposal				3,938	3,500	3,500
Licenses & Permits	84	84	156	84	100	100
Medical Services	0	0	162	0	250	500
Miscellaneous	831	2,204	324	9,011	0	1,500
North Central - Gate	494,116	534,607	533,512	563,967	375,000	375,000
North Central - Per Capita	67,185	67,185	65,983	64,781	64,781	64,781
Postage	462	614	524	492	600	680
Propane Gas Service	3,228	1,206	2,128	3,458	3,500	3,500
Public Notices	1,540	1,533	724	1,069	1,500	1,500
RCC Disposal/Supplies	8,890	16,794	12,741	24,002	20,000	20,000
Telephone	1,606	1,646	1,613	1,622	1,800	1,800
Tire Removal	8,739	9,565	8,012	7,993	10,000	15,000
Tires, Tire Repairs, and Services	6,960	7,631	9,205	7,514	10,000	37,229
Travel-Meeting-School Expenses	482	1,374	1,577	364	2,000	2,000
Bottled Water Service	518	451	426	418	500	500
	692,319	701,815	701,057	809,892	628,381	643,840
Commodities						

	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	BUDGET	PROPOSED BUDGET
Building Supplies	762	684	1,011	1,671	2,000	2,000
Diesel Fuel/Fuel Oil	27,857	20,842	28,078	43,980	45,000	45,000
Gasoline	486	625	1,031	1,041	1,200	1,400
Medical Supplies	29	56	0	0	200	200
Office Supplies	2,398	2,508	2,176	3,129	3,500	3,500
Rock & Rock Crushing	1,057	688	0	1,719	26,500	1,200
Safety Clothing/Equipmen	2,036	692	936	706	2,000	7,400
Signs	0	633	0	388	500	500
Vehicle & Equip. Parts & S	10,974	12,439	9,841	8,010	10,000	17,000
Weed Chemicals	0	86	0	0	0	100
	45,599	39,253	43,073	60,644	90,900	78,300
Total Operating Costs	960,874	1,001,078	1,012,981	1,167,327	1,068,032	1,075,443
Capital Outlay						
Loader			108000	0	0	0
Semi			99919.31	0	0	85000
Computer/ Printer		347	1955.02	0	0	1500
Trailer				55756.85	0	0
Other	0	0	0	29,497	5,000	5,000
TOTALS	0	347	209,874	85,254	5,000	91,500
Total Disbursements	960,874	1,001,425	1,222,855	1,252,581	1,073,032	1,166,943
TRANSFERS IN						
Fr Rev Fund to O&M Fund	0	0	0	0	0	0
	0	0	0	0	0	0
TRANSFERS OUT						
To Equipment Reserve	51,756	23,265	0	0	0	0
To Post Closure Reserve						
To Closure Reserve						
To Oper. & Maint. Fund	0	0	0	0	0	0
To Transfer Station Closure Fund						
TOTALS	51,756	23,265	0	0	0	0
Net + or (-)	80,341	62,029	(39,315)	(53,351)	119,299	24,188
Ending Fund Balance	1,055,503	1,117,532	1,078,217	1,024,866	1,144,164	1,168,352

LANDFILL POST CLOSURE RESERVE FUND	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	BUDGET	PROPOSED BUDGET
Beginning Balance	923,017	872,023	873,555	864,737	843,878	828,602	851,612
Beginning Balance							
RECEIPTS							
Interest on Investments	11919	14043	7696	2711	3600	30000	40000
	11,919	14,043	7,696	2,711	3,600	30,000	40,000
DISBURSEMENTS							
Water Quality Reports	12,875	0	7,375	5,600	7,525	0	0
Lab Testing	7,636	0	2,019	0	2,085	0	0
Consulting Engineering	4,165	5,368	2,575	11,842	4,908	1,990	1,990
Leachate System Repairs	5,215	3,450	2,475	3,045	3,080	0	0
Leachate Seep Repair	4,837	1,179	0	0	0	0	0
Discontinuation Project	16,000	0	0	0	413	0	0
LEACHATE DISPOSAL	12,035	2,466	1,926	3,083	0	0	0
TUBE CLEAN OUT							
Other Disbursements	150	48	144	0	866	5,000	5,000
Total	62,913	12,511	16,514	23,570	18,877	6,990	6,990
ENDING BALANCE	872,023	873,555	864,737	843,878	828,602	851,612	884,622

TRANSFER STATION CLOSURE RESERVE FUND	2018-2019	2019-2020	2020-2021	2021-2022	2022-2023	2023-2024	2024-2025
	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	BUDGET	PROPOSED BUDGET
Beginning Balance	27912	27942	35462	35,781	35,890	36,482	37,982
RECEIPTS							
Interest on Investments	30	490	319	108	591.61	1500	2000
TRANSFERS IN							
DISBURSEMENTS	0	0	0	0	0	0	0
TRANSFERS OUT	0	0	0	0	0	0	0
ENDING BALANCE	27,942	35,462	35,781	35,890	36,482	37,982	39,982

DATE:

May 16th, 2024

MEMORANDUM

To: City of Webster City City Council

From: Webster City Area Chamber of Commerce

Subject: Upper Story Housing Tax Credits

Background:

In an effort to fully utilize the Webster City Area Chamber of Commerce building, the board of directors would like to move forward with an upper story renovation. The board has recently become aware of a workforce housing tax credit program through the Iowa Economic Development Authority. This program will offer refundable tax credits on 20% of the qualified expenses, up to \$150,000 of the new investment. With the rollout of this state incentive program, the project costs are feasible to proceed with construction.

According to our chamber member feedback, housing placement has become a significant barrier to workforce recruitment and placement. The developed units will provide more variety to the current city housing stock and produce (2) additional units able to house area workforce.

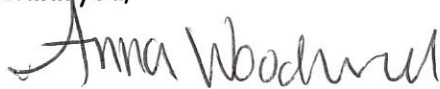
Summary:

The deadline for the workforce housing tax credit application period is June 10th, 2024. In order to apply for the program there must be a city contribution of at least \$1,000 per unit. Waived permit fees can count towards this contribution.

The Webster City Area Chamber of Commerce Board of Directors is requesting a cash contribution of \$1,800 along with \$200 in waived construction permit fees as the City of Webster City's contribution to the project.

We are requesting a resolution allocating this amount by the City of Webster City to this workforce housing project to include as part of our application. Please find the current application attached. Cost estimates related to exterior repair are still being negotiated and subject to change, but the requested city contribution and tax credit amount are expected to remain the same.


Thank you,



Anna Woodward
Chamber Director
Webster City Area Chamber of Commerce

 info@visitwebstercityiowa.com

 515-832-2564

 628 Second Street
Webster City, Iowa 50595



Submitted Applications

List of all current submitted applications

562826 - Webster City Area Community Foundation Upper Story Housing

Status: Editing

Stage: Final Application

Application Due Date: Jun 10, 2024 4:30 PM

Program Area: Workforce Housing Tax Credits

Funding Opportunity: 95226-Workforce Housing Tax Incentive Program

Organization: Webster City Chamber of Commerce

Requested Total: \$0.00

App List Genera Contac Projec Propos Unit I Readin Impact Budget Requir Other

This section includes the high level information about the Application.

To edit this form, click the green Edit button in the upper right hand corner of the section. Need more help? Click Online Help in the toolbar at the top of the screen.

General Information

[Edit Form](#)

Id*: 562826

Status: Editing

Title*: Webster City Area Community Foundation Upper Story Housing

Organization*: Webster City Chamber of Commerce

Primary Contact*: Anna Woodward

Additional Contacts: Anna Woodward

Funding Opportunity: 95226-Workforce Housing Tax Incentive Program

Program Area: Workforce Housing Tax Credits



[Next →](#)





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- App List
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- Other

Contact Information - Current Version

Applicant Information

✓ Mark as Complete

✎ Edit Form

Applicant Name*: Webster City Area Chamber of Commerce

Legal entity applying for award

Non-Profit Organization

Entity Type

Iowa Secretary of Federal Taxpayer ID number

State business number

Salutation Anna Woodward

Contract Signer First Name Contract Signer Last Name

Chamber Director

Contact Title

628 Second Street

Address

Webster City Iowa 50595



City State Zip Code

515-832-2564 anna@visitwebstercityiowa.com
Phone E-mail

Parent Company Contact Information

Provide Parent company contact information.

Webster City Association of Business and Industry
Company/Organization Name

Salutation First Name Last Name

628 Second Street
Address

Webster City Iowa 50595
City State Zip +4

Test anna@visitwebstercityiowa.com
Federal Taxpayer ID number E-mail

Developer Contact Information

Webster City Area Chamber of Commerce
Company/Organization Name

Salutation Mark Ferguson
First Name Last Name

628 Second Street
Address

Webster City Iowa 50595
City State Zip +4

515-832-2564 info@visitwebstercityiowa.com
Phone E-mail

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Project Site - Current Version

Project Site

✓ Mark as Complete

✎ Edit Form

Project Name*: Upper Story Housing Development

Project Address*: 628 Second Street

Project City/State/County/Zip Code*: Webster City Iowa Hamilton County 50595
 City State County Zip Code

Is the project located in a 100-year flood plain: No



Upload screenshot of project location from FEMA flood plain map:

628SecondStreetWebsterCity_FloodPlainScreenShot_WCAreaCommunityFoundation.jpg

Visit the FEMA website at <https://msc.fema.gov/portal/search> to screenshot project site is not in the 100-year flood plain. If FEMA website is not up to date, visit Iowa Department of Natural Resources website at <https://ifis.iowafloodcenter.org/ifis/newmaps/hazard/>.

Is this project an adaptive reuse of an existing building not currently being used for housing: Yes

Is this project considered dilapidated: Yes

Provide summary of any project that is considered dilapidated:

The building was originally a bank owned by Farmers? National Bank. The main level was utilized as a bank lobby and the upper story housed bank offices, a breakroom, and meeting space in the front. Records indicate use of the upper story was discontinued in the 1980s. Following this time, the upper story was used as storage, which was water damaged due to building neglect. Right now, the upper story does not have working electrical or HVAC systems or running water.

Does the project involve rehabilitation, repair, redevelopment or preservation of a historic building as defined in Iowa Code Section 404A.1(2): Yes

Explain the financial and development factors that were considered when this project's site was selected:

The building, formerly Farmers National Bank, was purchased for \$1 in 2017. The lower level was renovated to house office space, while the upper story has remained vacant. We see a great need for additional housing units to support our local workforce attraction efforts. An upper story renovation creates (2) two 1-bedroom housing units intended to fulfill transitional and immediate housing needs. We are currently prospecting industry partners that may desire to be the leaseholder to offer housing timed with successful recruitment and offer acceptance. We intend to use 100% local contractors to complete all stages of construction.

The building acquisition was partly due to the fact, it was not a good candidate for demolition, when many neighboring buildings were demolished. The existence of 3 steel safes on all floors, and the disposal costs associated, makes

rehabilitation the most workable solution for the building. It is vital to restore the property to be income producing. Consider purchase cost, ease of development, access to infrastructure, or other factors that led to site selection.

Describe how the location of this project will be appealing to prospective residents:

The upper story housing units will positively contribute to the Webster City quality of life amenities. The building is located near restaurants, retail stores, seasonal outdoor dining and coffee shops. In the green space adjacent to the building, a weekly night market plays live music throughout the summer. Walking trail trailheads, along the Boone River, are less than a mile North and East of the housing units. The housing units are within 2-miles of 25 major employers.

Consider access to grocery, shopping, services, employment, schools, parks or other attributes that will make this location desirable and marketable.

Is your community a designated Thriving Community: No

Last Edited By: Anna Woodward - Apr 30, 2024 1:52 PM

 **Edit Form**

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Submitted Applications

List of all current submitted applications

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Program Area: Workforce Housing Tax Credits

Funding Opportunity: 95226-Workforce Housing Tax Incentive Program

Organization: Webster City Chamber of Commerce

Requested Total: \$0.00

- App List
- Genera
- Contac
- Projec
- Propos**
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- Requir
- Other

Proposed Project - Current Version

Proposed Project

✓ Mark as Complete

✎ Edit Form

Please provide a brief description of the proposed housing development project:

The upper story renovation creates (2) two 1-bedroom housing units intended to fulfill transitional and immediate housing needs experienced by industry partners. Each unit offers 1-bedroom, 1-bathroom and open concept kitchen and living space.

This information will be used for media, legislative reporting, and press releases.

Describe the proposed design/amenities of the project including notable features that will be attractive to prospective residents:



The housing units are located in a historic commercial district with an open-concept living arrangement, providing a feeling of spacious living in small quarters. One-unit is able to provide a walk-in closet and both offer one-household closet. Each unit have a full tub and shower. Plans include to use 60,000 BTU, 96.1% efficiency 2-state furnaces. Consider features like a garage, parking, laundry in units, common space, appliances, energy efficiency, storage on stie, walk-in closets, yards, etc.

How many years of related experience does the developer have: 0

How many housing projects has the developer completed within the last 5 years: 0

Has the developer been awarded Workforce Housing Tax Incentives before: No

Describe other similar housing projects completed within the last 5 years by the developer:

The is the first housing project completed by the Webster City Area Chamber of Commerce. It has been a long-term goal by the chamber board to make better use of available resources. There may be additional opportunities for the chamber board to develop additional downtown properties or establish a model for local developers to follow. Include type of project, location, number of units completed, date of completion, and total project cost upon completion.

Explain how the developer possesses the necessary experience to successfully complete the proposed project:

The Webster City Area Chamber of Commerce board is comprised of business professionals representing a variety of industries with experience being involved in development project. Chamber board members work professionally in banking, city administration, real estate, government, and economic development activities.

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Unit Information - Current Version

Project Unit Information - Multi-List

✓ Mark as Complete

+ Add Row

Each unit type must be added separately. This includes differences in square footage, number of bathrooms or bedrooms, rent or sale amounts, etc.

Building Address	Housing Activity	Project Building Type	Unit Ownership	# Units in Project	# of Bedrooms	# Bathrooms	Total Square Footage	Rent or sales asking price
628 Second Street	Upper Story Housing Development	Upper Story Housing	Rental	2	1	1	1400	\$700.00

Last Edited By: Anna Woodward - Apr 30, 2024 11:03 AM

+ Add Row



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Readiness - Current Version

Project Readiness & Financing

✓ Mark as Complete

✎ Edit Form

Is the property zoned properly for this project type: Yes

Upload zoning letter signed by city official confirming proper zoning type: WebsterCityAreaFoundation_ZoningLetter.pdf

Are there architectural drawings for this project: Yes

Upload drawings and/or plans: Chamber Commerce Floor Plans 1.pdf




**Explain other factors
that allow the project
to quickly proceed
after potential award:**

The project utilizes 100% local contractors that are members of the Webster City Area Chamber of Commerce. The project developer and property owner have an existing relationship and current contact information on file. The reciprocal nature of chamber membership, helps ensure positive relationships and open communication.

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Submitted Applications

List of all current submitted applications

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Impact - Current Version

Project Impact

✓ Mark as Complete

✎ Edit Form

Describe recent or planned business expansions that created a need for additional housing in the community and the number and types of jobs to be created as a result of these expansions:

Housing has been identified as the number one challenge to recruiting workforce by a number of large area industry partners in the area. Housing available in the county has decreased by 2.5% between 2010-2020, contributing to the housing shortage we are currently experiencing.



If there has been no recent expansions and no planned expansions, describe how housing is a barrier to job growth in the neighborhood or community, and how this project will make an impact:

Housing has been identified as the number one barrier for workforce recruitment by many of our industry partners. The lack of versatile housing has resulted in declined offers and frustrating recruitment efforts. The value of fulfilling immediate needs and transitional housing enables our business partners to take the needed time to fully place recruits. From 2010-2020, Hamilton County housing stock declined 2.5%. An upper story renovation can serve as a fast-acting solution to the larger effort

Describe the impact of this project on the neighborhood and how it meets the needs of the community:

This project will be able to increase the amount of downtown residents, which will also positively increase the amount of downtown usage and business patronage. As we work to grow our housing stock and variety, we are able to offer affordable solutions for those new to the area or the state. In order to aid our community-wide downtown revitalization effort, this renovation will also be a catalyst to enable the foundation to move on to other projects in the downtown area.

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Organization: Webster City Chamber of Commerce

Requested Total: \$0.00

Budget - Current Version

WHTC - Request

Save Form

Workforce Housing Tax Credit Amount: \$0.00

Iowa Sales Tax Refund Amount: \$0.00

Briefly explain the financing for your project:

The Webster City Area Community Foundation will primarily be financing this project t
49 character(s) left

Save Form

Project expenditures shown in the below section **MUST EQUAL** Project Financing Sources shown in this section.

A Workforce Housing Tax Incentive amount must be included as a source of funds, and the total amount must match the total requested amount in the first section.

Source	Amount	Status	Supporting Documentation	Comments
All Other Public Sources - Loan	\$1,800.00	Not Committed		
Developer - Cash or Equity	\$143,308.43	Committed		
Private Lender - Loan	\$137,304.43	Committed		
Requested Workforce Housing Tax Incentive	\$60,000.00	Not Committed		
	\$342,412.86			

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Project Expenditures (RESIDENTIAL ONLY)

Save Form

PROJECT EXPENDITURES AND PROJECT FINANCING **MUST BALANCE**.

Building Acquisition:	<input type="text" value="\$0.00"/>
Land Acquisition:	<input type="text" value="\$0.00"/>
Site Development (including demolition):	<input type="text" value="\$13,375.00"/>
Construction (materials only)	<input type="text" value="\$108,358.71"/>
Iowa Sales Tax Refund is 6% on this amount:	
Construction (labor and operations):	<input type="text" value="\$98,288.25"/>
Architect/Engineer Fees:	<input type="text" value="\$2,000.00"/>
Building Permits and Fees:	<input type="text" value="\$200.00"/>
Construction Loan Interest:	<input type="text" value="\$0.00"/>
All Other Soft Costs:	<input type="text" value="\$0.00"/>

\$0.00

Reserves and Lease-up: \$0.00

Total: \$222,221.96

Save Form

Requested Award

Save Form

Maximum award amounts are calculated, but lesser amounts maybe requested. Please confirm the amount of Sales Tax Refund and Workforce Housing Tax Incentive Program requested in this application.

Cost per Unit

NOTE: project costs may not exceed the following per unit cost caps:

- Single family unit in an urban and small city area - \$298,021 per unit
- Multi family unit in an urban and small city area - \$241,643 per unit

Historic preservation projects involving historic property as defined in Iowa Code Section 404A.1(2), may not exceed 125% of the maximum per unit cost established based on project type and location.

Sub-Total Residential \$222,021.96

Costs from above: Excludes land acquisition, building permits and fees, loan fees and interest, project accounting and legal, developer fee, appliances and furnishings, and reserves and lease-up

Number of Units: 2

Cost per Unit: \$111,010.98

Estimated Amount of Assistance

Estimated amount \$60,000.00

Workforce Housing

Tax Credit:

Estimated Iowa Sales \$6,501.52

Tax Refund

(on materials only):



Acknowledgement

I understand amounts calculated are estimates based on initial application information provided to IEDA. Amounts of assistance estimated are maximum amounts and could be less depending on final project costs. Award amounts under the Workforce Housing Tax Incentive Program will not be increased should project costs increase. The requested amount listed above will be used for award amounts if less than estimated amounts.

I understand*:

I understand compliance fees imposed in Iowa code Section 15.330(12) shall apply to all Workforce Housing Tax Incentive Program agreements.

I Understand*:

 **Save Form**



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- Other

Required Attachments - Current Version

Application includes each of the following attachments. DO NOT submit application without uploading all required documents listed below.

Named Attachments

Mark as Complete

Named Attachment	Required	Description	File Name	Type	Size	Upload Date	Delete?
Release of Information Download form here		Webster City Area Community Foundation Certification & Release of Information	WebsterCity_Certification_ReleaseofInformation.pdf	pdf	68 KB	05/02/2024 03:36 PM	Delete



Named Attachment	Required	Description	File Name 	Type	Size	Upload Date	Delete?
------------------	----------	-------------	---	------	------	-------------	---------

Resolution in support of the housing project by the community where the housing project will be located:

[Download](#)

Resolution example here
 If \$1,000 per unit match is not included in resolution, please upload additional documentation in Other Attachments tab.

Letter of Support (max. of 5)

Map of the proposed project within the community

Map of proposed project

WebsterCity_628SecondStreet_MapofProposedProject.pdf

pdf

680 KB

04/30/2024 01:47 PM

[Delete](#)

Documentation of site control of the property (deed, purchase agreement or option to purchase)

The building was purchased by the Webster City Area Association of Business and Industry from Availa Bank in December 2017.

WebsterCity_628SecondStreet_WarrantyDeed.pdf


pdf

42 KB

04/30/2024 01:37 PM

[Delete](#)



Named Attachment	Required	Description	File Name 	Type	Size	Upload Date	Delete?
Market study, housing needs assessment or market information fillable form (if a Market Study or Community Housing Assessment is not available, please download and complete the Developer Market Review Spreadsheet)		Webster City Housing Study dated 2021	Webster City-Housing 2021 Study.pdf	pdf	12 MB	04/30/2024 02:48 PM	Delete
Pictures of current project (outside, inside, etc.)		North View facing Second Street. This is the North View facing Second Street. This space will be an open-concept living/dining space on the left, and bedroom to the right, for one-unit. The boarded up windows will be replaced.	WebsterCity_628SecondStreet_NorthInteriorView.jpg	jpg	51 KB	04/30/2024 11:42 AM	Delete

Last Edited By: Anna Woodward - May 2, 2024 3:36 PM

RESOLUTION NO. 2024 - xxx

RESOLUTION SUPPORTING THE SUBMISSION OF AN
IOWA ECONOMIC DEVELOPMENT AUTHORITY (IEDA) APPLICATION
TO THE WORKFORCE HOUSING TAX CREDIT PROGRAM BY
Webster City Area Community Foundation

WHEREAS, Webster City Area Community Foundation proposes to rehab (2) upper-story housing units and invest \$220,000.

WHEREAS, the proposed project will support the City's efforts to create new housing opportunities for a growing workforce within the community; and

WHEREAS, Webster City Area Community Foundation has committed a significant amount of private financing to the project; and

WHEREAS, the City of Webster City, will provide assistance to the project in the form of \$1,800 cash match and \$200 in waived building fees and permits; and

WHEREAS, Webster City Area Community Foundation application to the Workforce Housing Tax Credit Program, a copy of which is attached hereto and by this reference made a part hereof, will provide necessary tax credits and other benefits which will directly contribute to the success of the development; and

WHEREAS, the City supports said application to the Workforce Housing Tax Credit Program by Webster City Area Community Foundation.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF Webster City IOWA, that the City Council of the City of Webster City hereby supports the submission of an Iowa Economic Development Authority Application to the Workforce Housing Tax Credit Program by Webster City Area Community Foundation, as referred to in the preamble hereof, for necessary tax credits and other benefits directly contributing to the success of the development at 628 Second Street, Webster City, Iowa 50595.

John Hawkins, Mayor

ATTEST: _____
Karyl K. Bonjour, City Clerk

RESOLUTION NO. _____

Resolution authorizing and approving a Loan Agreement and providing for the issuance and securing the payment of \$5,135,000 Water Revenue Bonds, Series 2024

WHEREAS, the City of Webster City (the “City”), in Hamilton County, State of Iowa, did heretofore establish a Municipal Waterworks Utility System (the “Utility”) in and for the City which has continuously supplied water service in and to the City and its inhabitants since its establishment; and

WHEREAS, the management and control of the Utility are vested in the City Council and no Board of Trustees exists for this purpose; and

WHEREAS, pursuant to a prior resolution of the Council (the “Outstanding Bond Resolution”), the City previously issued its \$5,055,000 Water Revenue Improvement and Refunding Bonds, Series 2021B, dated March 31, 2021 (the “Outstanding Bonds”), a portion of which remains outstanding; and

WHEREAS, pursuant to the Outstanding Bond Resolution, the City reserved the right to issue additional obligations payable from the Net Revenues (as defined herein) of the Utility and ranking on a parity with the Outstanding Bonds under the terms and conditions set forth in the Outstanding Bond Resolution; and

WHEREAS, the City heretofore proposed to enter into a Water Revenue Loan Agreement (the “Loan Agreement”) in a principal amount not to exceed \$5,395,000, pursuant to the provisions of Section 384.24A of the Code of Iowa, for the purpose of paying the costs, to that extent, of planning, designing, and constructing improvements and extensions to the Utility (the “Project”), and pursuant to law and duly published notice of the proposed action has held a hearing thereon on April 15, 2024; and

WHEREAS, a Preliminary Official Statement (the “P.O.S.”) has been prepared by Dorsey & Whitney LLP (the “Disclosure Counsel”) as bond and disclosure counsel to the City to facilitate the sale of Water Revenue Bonds, Series 2024 (the “Bonds”) to be issued in evidence of the obligation of the City under the Loan Agreement, and the City Council has approved the P.O.S. and has authorized its use by PFM Financial Advisors LLC, as municipal advisor to the City, and has otherwise made provision for the sale of the Bonds; and

WHEREAS, pursuant to advertisement of sale, bids for the purchase of the Bonds were received and canvassed on behalf of the City at the appointed time and the substance of such bids noted in the minutes; and

WHEREAS, upon final consideration of all bids, the bid of _____ (the “Purchaser”), was the best, such bid proposing the lowest interest cost to the City for the Bonds; and

WHEREAS, it is now necessary to make final provision for approval of the Loan Agreement and to authorize the issuance of the Bonds;

NOW, THEREFORE, Be It Resolved by the City Council of the City of Webster City, Iowa, as follows:

Section 1. The City shall enter into the Loan Agreement with the Purchaser in substantially the form attached hereto, providing for a loan to the City in the amount of \$5,135,000 for the purposes as set forth in the preamble hereof.

The Mayor and City Clerk are hereby authorized and directed to sign the Loan Agreement on behalf of the City, and the Loan Agreement is hereby approved.

Section 2. The Bonds, in the aggregate principal amount of \$5,135,000, are hereby authorized to be issued in evidence of the obligation of the City under the Loan Agreement. The Bonds shall be dated June 5, 2024, shall be issued in the denominations of \$5,000 each, or any integral multiple thereof, and shall mature on June 1 in each of the years, in the respective principal amounts, and bear interest at the respective rates, as follows:

<u>Date</u>	<u>Principal</u>	<u>Interest Rate</u>	<u>Date</u>	<u>Principal</u>	<u>Interest Rate</u>
2025	\$160,000	____%	2035	\$255,000	____%
2026	\$165,000	____%	2036	\$265,000	____%
2027	\$175,000	____%	2037	\$280,000	____%
2028	\$185,000	____%	2038	\$290,000	____%
2029	\$190,000	____%	2039	\$305,000	____%
2030	\$200,000	____%	2040	\$320,000	____%
2031	\$210,000	____%	2041	\$335,000	____%
2032	\$225,000	____%	2042	\$350,000	____%
2033	\$235,000	____%	2043	\$365,000	____%
2034	\$245,000	____%	2044	\$380,000	____%

Section 3. UMB Bank, n.a., West Des Moines, Iowa, is hereby designated as the Registrar and Paying Agent for the Bonds and may be hereinafter referred to as the “Registrar” or the “Paying Agent” in such capacities. The City shall enter into an agreement (the “Registrar/Paying Agent Agreement”) with the Registrar, in substantially the form as has been placed on file with the City Council; the Mayor and City Clerk are hereby authorized and directed to sign the Registrar/Paying Agent Agreement on behalf of the City; and the Registrar/Paying Agent Agreement is hereby approved.

The City reserves the right to optionally prepay part or all of the principal of the Bonds maturing in each of the years 2033 to 2044, inclusive, prior to and in any order of maturity on June 1, 2032, or on any date thereafter upon terms of par and accrued interest. If less than all of the Bonds of any like maturity are to be redeemed, the particular part of those Bonds to be redeemed shall be selected by the Registrar by lot. The Bonds may be called in part in one or more units of \$5,000.

If less than the entire principal amount of any Bond in a denomination of more than \$5,000 is to be redeemed, the Registrar will issue and deliver to the registered owner thereof,

upon surrender of such original Bond, a new Bond or Bonds, in any authorized denomination, in a total aggregate principal amount equal to the unredeemed balance of the original Bond. Notice of such redemption as aforesaid identifying the Bond or Bonds (or portion thereof) to be redeemed shall be sent by electronic means or mailed by certified mail to the registered owners thereof at the addresses shown on the City's registration books not less than 30 days prior to such redemption date. Any notice of redemption may contain a statement that the redemption is conditioned upon the receipt by the Paying Agent of funds on or before the date fixed for redemption sufficient to pay the redemption price of the Bonds so called for redemption, and that if funds are not available, such redemption shall be cancelled by written notice to the owners of the Bonds called for redemption in the same manner as the original redemption notice was sent. All of such Bonds as to which the City reserves and exercises the right of redemption and as to which notice as aforesaid shall have been given and for the redemption of which funds are duly provided, shall cease to bear interest on the redemption date.

Accrued interest on the Bonds shall be payable semiannually on the first day of June and December in each year, commencing December 1, 2024. Interest shall be calculated on the basis of a 360-day year comprised of twelve 30-day months. Payment of interest on the Bonds shall be made to the registered owners appearing on the registration books of the City at the close of business on the fifteenth day of the month next preceding the interest payment date and shall be paid to the registered owners at the addresses shown on such registration books. Principal of the Bonds shall be payable in lawful money of the United States of America to the registered owners or their legal representatives upon presentation and surrender of the Bond or Bonds at the office of the Paying Agent.

The Bonds shall be executed on behalf of the City with the official manual or facsimile signature of the Mayor and attested with the official manual or facsimile signature of the City Clerk, and shall be fully registered Bonds without interest coupons. The issuance of the Bonds shall be recorded in the office of the City Treasurer, and the certificate on the back of each Bond shall be executed with the official manual or facsimile signature of the City Treasurer. In case any officer whose signature or the facsimile of whose signature appears on the Bonds shall cease to be such officer before the delivery of the Bonds, such signature or such facsimile signature shall nevertheless be valid and sufficient for all purposes, the same as if such officer had remained in office until delivery.

The Bonds shall not be valid or become obligatory for any purpose until the Certificate of Authentication thereon shall have been signed by the Registrar.

All of the Bonds and the interest thereon, together with the Outstanding Bonds and any additional obligations as may be hereafter issued and outstanding from time to time ranking on a parity therewith under the conditions set forth herein (which additional obligations are hereinafter sometimes referred to as "Parity Obligations"), shall be payable solely from the Net Revenues of the Utility, the Sinking Fund and, with respect to the Bonds, the Outstanding Bonds and any Parity Obligations secured by a subaccount of the Reserve Fund, the Reserve Fund hereinafter referred to, all of which are hereby pledged to the payment of the Bonds. The Bonds shall be a valid claim of the owners thereof only against said Net Revenues, the Sinking Fund and the Reserve Fund. None of the Bonds shall be a general obligation of the City, nor payable in any manner by taxation, and under no circumstances shall the City or the Utility be in any

manner liable by reason of the failure of the Net Revenues of the Utility to be sufficient for the payment in whole or in part of the Bonds and the interest thereon.

The Bonds shall be fully registered as to principal and interest in the names of the owners on the registration books of the City kept by the Registrar, and after such registration, payment of the principal thereof and interest thereon shall be made only to the registered owners, or their legal representatives or assigns. Each Bond shall be transferable only upon the registration books of the City upon presentation to the Registrar, together with either a written instrument of transfer satisfactory to the Registrar or the assignment form thereon completed and duly executed by the registered owner or the duly authorized attorney for such registered owner.

The record and identity of the owners of the Bonds shall be kept confidential as provided by Section 22.7 of the Code of Iowa.

Section 4. Notwithstanding anything above to the contrary, the Bonds shall be issued initially as Depository Bonds, with one fully registered Bond for each maturity date, in principal amounts equal to the amount of principal maturing on each such date, and registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York (“DTC”). On original issue, the Bonds shall be deposited with DTC for the purpose of maintaining a book-entry system for recording the ownership interests of its participants and the transfer of those interests among its participants (the “Participants”). In the event that DTC determines not to continue to act as securities depository for the Bonds or the City determines not to continue the book-entry system for recording ownership interests in the Bonds with DTC, the City will discontinue the book-entry system with DTC. If the City does not select another qualified securities depository to replace DTC (or a successor depository) in order to continue a book-entry system, the City will register and deliver replacement bonds in the form of fully registered certificates, in authorized denominations of \$5,000 or integral multiples of \$5,000, in accordance with instructions from Cede & Co., as nominee for DTC. In the event that the City identifies a qualified securities depository to replace DTC, the City will register and deliver replacement bonds, fully registered in the name of such depository, or its nominee, in the denominations as set forth above, as reduced from time to time prior to maturity in connection with redemptions or retirements by call or payment, and in such event, such depository will then maintain the book-entry system for recording ownership interests in the Bonds.

Ownership interest in the Bonds may be purchased by or through Participants. Such Participants and the persons for whom they acquire interests in the Bonds as nominees will not receive certificated Bonds, but each such Participant will receive a credit balance in the records of DTC in the amount of such Participant’s interest in the Bonds, which will be confirmed in accordance with DTC’s standard procedures. Each such person for which a Participant has an interest in the Bonds, as nominee, may desire to make arrangements with such Participant to have all notices of redemption or other communications of the City to DTC, which may affect such person, forwarded in writing by such Participant and to have notification made of all interest payments.

The City will have no responsibility or obligation to such Participants or the persons for whom they act as nominees with respect to payment to or providing of notice for such Participants or the persons for whom they act as nominees.

As used herein, the term “Beneficial Owner” shall hereinafter be deemed to include the person for whom the Participant acquires an interest in the Bonds.

DTC will receive payments from the City, to be remitted by DTC to the Participants for subsequent disbursement to the Beneficial Owners. The ownership interest of each Beneficial Owner in the Bonds will be recorded on the records of the Participants whose ownership interest will be recorded on a computerized book-entry system kept by DTC.

When reference is made to any action which is required or permitted to be taken by the Beneficial Owners, such reference shall only relate to those permitted to act (by statute, regulation or otherwise) on behalf of such Beneficial Owners for such purposes. When notices are given, they shall be sent by the City to DTC, and DTC shall forward (or cause to be forwarded) the notices to the Participants so that the Participants can forward the same to the Beneficial Owners.

Beneficial Owners will receive written confirmations of their purchases from the Participants acting on behalf of the Beneficial Owners detailing the terms of the Bonds acquired. Transfers of ownership interest in the Bonds will be accomplished by book entries made by DTC and the Participants who act on behalf of the Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Bonds, except as specifically provided herein. Interest and principal will be paid when due by the City to DTC, then paid by DTC to the Participants and thereafter paid by the Participants to the Beneficial Owners.

Section 5. The Bonds shall be in substantially the following form:

(Form of Bond)

UNITED STATES OF AMERICA
STATE OF IOWA
COUNTY OF HAMILTON
CITY OF WEBSTER CITY

WATER REVENUE BOND, SERIES 2024

No. _____ \$ _____

RATE	MATURITY DATE	BOND DATE	CUSIP
_____ %	June 1, _____	June 5, 2024	536036 _____

The City of Webster City (the “City”), in Hamilton County, State of Iowa, for value received, promises to pay on the maturity date of this Bond to

Cede & Co.
New York, New York

or registered assigns, the principal sum of

THOUSAND DOLLARS

in lawful money of the United States of America upon presentation and surrender of this Bond at the office of UMB Bank, n.a., West Des Moines, Iowa (hereinafter referred to as the “Registrar” or the “Paying Agent”) with interest on said sum, until paid, at the rate per annum specified above from the date of this Bond, or from the most recent interest payment date on which interest has been paid, on June 1 and December 1 of each year, commencing December 1, 2024, except as the provisions hereinafter set forth with respect to redemption prior to maturity may be or become applicable hereto. Interest on this Bond is payable to the registered owner appearing on the registration books of the City at the close of business on the fifteenth day of the month next preceding the interest payment date, and shall be paid to the registered owner at the address shown on such registration books. Interest shall be calculated on the basis of a 360-day year comprised of twelve 30-day months.

This Bond shall not be valid or become obligatory for any purpose until the Certificate of Authentication hereon shall have been signed by the Registrar.

This Bond is one of a series of Water Revenue Bonds, Series 2024 (the “Bonds”) issued by the City to evidence its obligation under a certain Loan Agreement, dated as of June 5, 2024 (the “Loan Agreement”) entered into by the City for the purpose of paying the cost, to that extent, of planning, designing, and constructing improvements and extensions to the Municipal Waterworks Utility System (the “Utility”) of the City.

The Bonds are issued pursuant to and in strict compliance with the provisions of Chapter 384 of the Code of Iowa, 2023, and all other laws amendatory thereof and supplemental thereto, and in conformity with a resolution of the City Council authorizing and approving the Loan Agreement and

providing for the issuance and securing the payment of the Bonds (the “Resolution”), and reference is hereby made to the Resolution and the Loan Agreement for a more complete statement as to the source of payment of the Bonds and the rights of the owners of the Bonds.

The City reserves the right to optionally prepay part or all of the Bonds maturing on June 1 in each of the years 2033 to 2044, inclusive, prior to and in any order of maturity on June 1, 2032, or on any date thereafter upon terms of par and accrued interest. If less than all of the Bonds of any like maturity are to be redeemed, the particular part of those Bonds to be redeemed shall be selected by the Registrar by lot. The Bonds may be called in part in one or more units of \$5,000.

If less than the entire principal amount of any Bond in a denomination of more than \$5,000 is to be redeemed, the Registrar will issue and deliver to the registered owner thereof, upon surrender of such original Bond, a new Bond or Bonds, in any authorized denomination, in a total aggregate principal amount equal to the unredeemed balance of the original Bond. Notice of such redemption as aforesaid identifying the Bond or Bonds (or portion thereof) to be redeemed shall be sent by electronic means or by certified mail to the registered owners thereof at the addresses shown on the City’s registration books not less than 30 days prior to such redemption date. All of such Bonds as to which the City reserves and exercises the right of redemption and as to which notice as aforesaid shall have been given and for the redemption of which funds are duly provided, shall cease to bear interest on the redemption date.

The Bonds are not general obligations of the City but, together with the City’s outstanding Water Revenue Improvement and Refunding Bonds, Series 2021B, dated March 31, 2021, and any additional obligations as may be hereafter issued and outstanding from time to time ranking on a parity therewith under the conditions set forth in the Resolution, are payable solely and only out of the future Net Revenues (as defined in the Resolution) of the Utility, a sufficient portion of which has been ordered set aside and pledged for that purpose. This Bond is not payable in any manner by taxation, and under no circumstances shall the City be in any manner liable by reason of the failure of the said Net Revenues to be sufficient for the payment of this Bond and the interest hereon.

This Bond is fully negotiable but shall be fully registered as to both principal and interest in the name of the owner on the books of the City in the office of the Registrar, after which no transfer shall be valid unless made on said books and then only upon presentation of this Bond to the Registrar, together with either a written instrument of transfer satisfactory to the Registrar or the assignment form hereon completed and duly executed by the registered owner or the duly authorized attorney for such registered owner.

The City, the Registrar and the Paying Agent may deem and treat the registered owner hereof as the absolute owner for the purpose of receiving payment of or on account of principal hereof, premium, if any, and interest due hereon and for all other purposes, and the City, the Registrar and the Paying Agent shall not be affected by any notice to the contrary.

And It Is Hereby Certified, Recited and Declared that all acts, conditions and things required to exist, happen and be performed precedent to and in the issuance of the Bonds have existed, have happened and have been performed in due time, form and manner, as required by law, and that the issuance of the Bonds does not exceed or violate any constitutional or statutory limitation or provision.

IN TESTIMONY WHEREOF, the City of Webster City, Iowa, by its City Council, has caused this Bond to be executed with the duly authorized facsimile signature of its Mayor and attested with the duly authorized facsimile signature of the City Clerk, all as of June 5, 2024.

CITY OF WEBSTER CITY, IOWA

By _____
Mayor

Attest:

City Clerk

Registration Date: June 5, 2024

REGISTRAR’S CERTIFICATE OF AUTHENTICATION

This Bond is one of the Bonds described in the within-mentioned Resolution.

UMB BANK, N.A.
West Des Moines, Iowa
Registrar

Authorized Officer

STATE OF IOWA
COUNTY OF HAMILTON
CITY OF WEBSTER CITY

SS: CITY TREASURER’S CERTIFICATE

The original issuance of the Bonds, of which this Bond is a part, was duly and properly recorded in my office as of June 5, 2024.

(Facsimile Signature)

City Treasurer, Webster City, Iowa

ABBREVIATIONS

The following abbreviations, when used in this Bond, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	-	as tenants in common	UTMA	_____
				(Custodian)
TEN ENT	-	as tenants by the entireties	As Custodian for	_____
TEN	-	as joint tenants with right of survivorship and not as tenants in common		(Minor)
			under Uniform Transfers to Minors Act	_____
				(State)

Additional abbreviations may also be used though not in the list above.

ASSIGNMENT

For valuable consideration, receipt of which is hereby acknowledged, the undersigned assigns this Bond to

(Please print or type name and address of Assignee)

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

and does hereby irrevocably appoint _____, Attorney, to transfer this Bond on the books kept for registration thereof with full power of substitution.

Dated: _____

Signature guaranteed:

Signature(s) must be guaranteed by an eligible guarantor institution which is a member of a recognized signature guarantee program.

NOTICE: The signature to this Assignment must correspond with the name of the registered owner as it appears on this Bond in every particular, without alteration or enlargement or any change whatever.

Section 6. The Bonds shall be executed as herein provided as soon after the adoption of this Resolution as may be possible and thereupon they shall be delivered to the Registrar for registration, authentication and delivery to or on behalf of the Purchaser, upon receipt of the loan proceeds (\$ _____), including original issue premium (\$ _____) (the “Loan Proceeds”), and all action heretofore taken in connection with the Loan Agreement is hereby ratified and confirmed in all respects.

A portion of the Loan Proceeds received from the sale of the Bonds (\$ _____) shall be deposited in a dedicated fund (the “Project Fund”), which is hereby created, to be used for the payment of costs of the Project and to the extent that any such proceeds (the “Project Proceeds”) remain after the full payment of the costs of the Project, such Project Proceeds, shall be transferred to the Sinking Fund for the payment of interest on the Bonds.

A portion of the Loan Proceeds received from the sale of the Bonds (\$ _____) will be retained by the Purchaser as the Underwriter’s Discount.

A portion of the Loan Proceeds (\$ _____) will be deposited in the Reserve Fund as referenced in Section 9.C herein.

A portion of the Loan Proceeds (\$ _____) (the “Cost of Issuance Proceeds”) shall be used for the payment of costs of issuance of the Bonds, and to the extent that Cost of Issuance Proceeds remain after the full payment of the costs of issuance of the Bonds, such Cost of Issuance Proceeds shall be transferred to the Sinking Fund for the payment of interest on the Bonds.

The remainder of the Loan Proceeds (\$ _____) (the “Additional Proceeds”) will be used for any lawful purpose of the City related to the Utility or its surplus.

The City shall keep a detailed and segregated accounting of the expenditure of, and investment earnings on, the Loan Proceeds to ensure compliance with the requirements of the Internal Revenue Code, as hereinafter defined. The allocation and final use of the Loan Proceeds may be adjusted as provided in the final closing certificate of the City.

Section 7. So long as any of the Bonds, the Outstanding Bonds, or any Parity Obligations are outstanding, the City shall continue to maintain the Utility in good condition, and the Utility shall continue to be operated in an efficient manner and at a reasonable cost as a revenue producing undertaking. The City shall establish, impose, adjust and provide for the collection of rates to be charged to customers of the Utility, including the City, to produce gross revenues (hereinafter sometimes referred to as the “Gross Revenues”) at least sufficient to pay the expenses of operation and maintenance of the Utility, which shall include salaries, wages, cost of maintenance and operation, materials, supplies, insurance, and all other items normally included under recognized accounting practices (but does not include allowances for depreciation in the valuation of physical property) (which such expenses are hereinafter sometimes referred to as the “Operating Expenses”) and to leave a balance of net revenues (herein referred to as the “Net Revenues”) equal to at least 110 percent (110%) of the amount of annual payments of principal of and interest on all of the Bonds, the Outstanding Bonds and any Parity Obligations outstanding from time to time, as the same become due, and to maintain a

reasonable reserve for the payment of such principal and interest, as hereinafter provided, or as provided in the Outstanding Bond Resolution or a future issuance resolution for a series of Parity Obligations (a “Parity Obligation Issuance Resolution”).

Section 8. The provisions, covenants, undertakings and stipulations for the operation of the Utility and for the collection, application and use of the Gross Revenues and income from such operation, as set forth in the Outstanding Bond Resolution shall inure and appertain to the Bonds to the same extent and with like force and effect as if herein set out in full, except only insofar as the same may be inconsistent with this Resolution.

Nothing in this Resolution shall be construed to impair the rights vested in the Outstanding Bonds. The amounts herein required to be paid into the various funds hereafter named shall be inclusive of said payments required with respect to the Outstanding Bonds. The provisions of the Outstanding Bond Resolution and the provisions of this Resolution are to be construed whenever possible so that the same will not be in conflict. In the event such construction is not possible, the provisions of the resolution first adopted shall prevail until such time as the obligations authorized by such resolution have been paid or otherwise satisfied as therein provided, at which time the provisions of this Resolution shall again prevail.

The provisions of the Outstanding Bond Resolution with respect to the issuance of Parity Obligations are hereby recognized, and it is hereby found, determined and declared that there has been procured and filed with the City Clerk a statement of an Independent Auditor or a Consulting Engineer, not a regular employee of the City, reciting the opinion that the Net Revenues of the Utility (with adjustments as provided in the Outstanding Bond Resolution) for the Fiscal Year which ended June 30, 202__, were equal to at least 1.10 times the average annual amount of principal and interest that will be required in any Fiscal Year prior to the longest maturity of any of the Bonds or Parity Obligations for both the Bonds and the Outstanding Bonds.

Section 9. From and after the issuance of the Bonds, and as long as the Bonds, the Outstanding Bonds or any Parity Obligations are outstanding, the Gross Revenues of the Utility shall continue to be set aside into City’s Water Revenue Fund (“Water Revenue Fund”) created under the Outstanding Bond Resolution. The Water Revenue Fund shall be used in maintaining and operating the Utility, and after payment of the Operating Expenses shall, to the extent provided in this Resolution and the Outstanding Bond Resolution, be used to pay the principal of and interest on the Bonds, the Outstanding Bonds and any Parity Obligations, and to create and maintain the several separate funds hereinafter described and in the following priority:

A. Operation and Maintenance Fund. The provisions in and by the Outstanding Bond Resolution, whereby there has been created and is to be maintained an account known as the Operation and Maintenance Fund (herein referred to as the “Operation and Maintenance Fund”), and for which payment into said fund from the Net Revenues of the Utility such portion thereof as will be sufficient to meet the current Operating Expenses of the month plus an amount equal to 1/12th of Operating Expenses payable on an annual basis such as insurance are all hereby ratified and confirmed. After the monthly deposit, further deposits may be made to the Operation and Maintenance Fund from the Water Revenue Fund to the extent necessary to pay

current Operating Expenses accrued and payable to the extent that funds are not available in the Surplus Fund.

B. Sinking Fund. The provisions in and by the Outstanding Bond Resolution whereby there has been created and there is to be maintained a separate and special fund known as the Water Revenue Sinking Fund (herein referred to as the “Sinking Fund”) are hereby ratified and confirmed. From and after the issuance of the Bonds and throughout the time any of the Bonds, the Outstanding Bonds or Parity Obligations are outstanding, the Sinking Fund shall be maintained, into which there shall be set aside from the future Net Revenues of the Utility such portion thereof as will be sufficient to pay the interest upon and principal of the Outstanding Bonds as set forth in the Outstanding Bond Resolution, plus such additional amount as shall be necessary to pay principal of and interest on the Bonds as the same become due, and it is hereby determined that the minimum amount to be set aside from the Net Revenues and paid into the Sinking Fund relative to the Bonds on the first day of each month shall be not less than as follows:

Commencing on July 1, 2024 and continuing to and including November 1, 2024, an amount equal to 1/5th of the installment of interest coming due on December 1, 2024, and thereafter, commencing on December 1, 2024 and continuing to final maturity, an amount equal to 1/6th of the installment of interest coming due on the next succeeding interest payment date on the then outstanding Bonds. In addition, commencing on July 1, 2024 and continuing to and including May 1, 2024, an amount equal to 1/11th of the installment of principal coming due on June 1, 2025, and thereafter, commencing on June 1, 2025, and continuing to final maturity, an amount equal to 1/12th of the installment of principal coming due on such Bonds on the next succeeding principal payment date until the full amount of such installment is on deposit in the Sinking Fund;

Money in the Sinking Fund shall be used solely for the purpose of paying principal of and interest on the Bonds, the Outstanding Bonds and any Parity Obligations as the same shall become due and payable. Whenever Parity Obligations are issued under the conditions and restrictions hereinafter set forth, provision shall be made for additional payments to be made into the Sinking Fund for the purpose of paying the interest on and principal of such Parity Obligations.

If at any time there be a failure to pay into the Sinking Fund the full amount above stipulated, then an amount equivalent to the deficiency shall be paid into the Sinking Fund from the Net Revenues of the Utility as soon as available, and the same shall be in addition to the amount otherwise required to be so set apart and paid into the Sinking Fund.

No further payments need be made into the Sinking Fund when and so long as the amount therein is sufficient to retire all of the Bonds, the Outstanding Bonds and any Parity Obligations then outstanding which are payable from the Sinking Fund and to pay all interest to become due thereon prior to such retirement, or if provision for such payment has been made.

All of such payments required to be made into the Sinking Fund shall be made in equal monthly installments on the first day of each month, except that when the first day of any month

shall be a Sunday or legal holiday, then such payments shall be made on the next succeeding secular day.

C. Reserve Fund. The provisions of the Outstanding Bond Resolution whereby there has been created and is to be maintained a special fund to be known and designated as the Reserve Fund (the “Reserve Fund”) for the purpose of paying the principal of and interest on the Outstanding Bonds whenever for any reason the funds on deposit in the Sinking Fund are insufficient, are all hereby ratified and confirmed. There shall be created in the Reserve Fund a subaccount (the “Series 2024 Reserve Account”) relating to the Bonds, and the minimum amount required to remain on deposit therein shall be and remain at \$_____ (the “Series 2024 Required Reserve Account Balance”). The Series 2024 Required Reserve Account Balance is equal, as of the date of calculation, to the least of (i) ten percent of the principal amount of the Bonds, (ii) the maximum amount of principal and interest payable on the Bonds in the current or any future Fiscal Year, or (iii) 125% of the average debt service on the Bonds. Unless otherwise satisfied in adherence to the terms of the next succeeding paragraph, whenever the sum on deposit in the Series 2024 Reserve Account has been reduced to less than the Series 2024 Required Reserve Account Balance by the expenditure of all or a portion of such funds in order to prevent or remedy a deficiency in the Sinking Fund, there shall be deposited into the Series 2024 Reserve Account in each month an amount equal to twenty-five percent (25%) of the amount required by this Resolution to be deposited into the Sinking Fund in such month. Such payments shall continue until such time as the sum on deposit in the Series 2024 Reserve Account shall be at least equal to the Series 2024 Required Reserve Account Balance.

In lieu of maintaining and depositing moneys in the Series 2024 Reserve Account, the City may hold in deposit in the Reserve Fund a letter of credit, surety bond or similar instrument (the “Reserve Policy”) issued by a bank, insurance company or other financial institution in an amount equal to the Series 2024 Required Reserve Account Balance, such bank, insurance company or other financial institution, as the case may be, having a credit rating at the time of such delivery in one of the two highest rating categories of any nationally recognized rating service (without regard to any refinements of gradation of any rating category by numerical modifier or otherwise). ****if insurance**** On the date of issuance of the Bonds, the City will hold the Reserve Policy issued by the Insurer in deposit in the Series 2024 Reserve Account in lieu of maintaining and depositing moneys therein. The provisions of Section ___ of this resolution shall govern with respect to the Reserve Policy.

All money credited to the Series 2024 Required Reserve Account shall be used and is hereby pledged for the payment of the principal of and interest on the Bonds whenever for any reason the funds on deposit in the Sinking Fund are insufficient to pay such principal and interest when due. The amounts on deposit in the Series 2024 Reserve Account secure only the payment of principal of and interest on the Bonds and shall not secure the Outstanding Bonds or any Parity Obligations.

If and to whatever extent Parity Obligations shall be issued under the conditions set forth in this Resolution, provision shall be made to create and maintain a reasonable reserve therefor, if so required by the purchaser of such Parity Obligations at the time of their issuance. The City may establish other subaccounts within the Reserve Fund upon the issuance of future Parity Obligations which are required to be secured by the Reserve Fund. The money deposited into

the Water Revenue Fund shall be disbursed on a parity basis to make deposits into the various subaccounts of the Reserve Fund for all Parity Obligations secured thereby. The subaccounts in the Reserve Fund shall be segregated from all other funds, accounts and subaccounts established by Parity Obligation Issuance Resolution secured by the Reserve Fund, and each subaccount shall be segregated and shall not be commingled or pledged to any other Parity Obligations, if issued.

D. Subordinate Obligations. Money in the Water Revenue Fund may next be used to pay principal of and interest on (including reasonable reserves therefor) any other obligations (the “Subordinate Obligations”) which by their terms shall be payable from revenues of the Utility, but subordinate to the Bonds, the Outstanding Bonds and Parity Obligations, and which have been issued for the purposes of extensions and improvements to the Utility. From time to time there may be established and maintained additional, subordinate sinking funds (the “Subordinate Debt Funds”), into which shall be deposited, after first making all required deposits into the Operation and Maintenance Fund, the Sinking Fund and the Reserve Fund, sufficient sums to pay principal and interest requirements on the Subordinate Obligations.

E. Surplus Fund. The provisions in and by the Outstanding Bond Resolution whereby there has been created and there is to be maintained a separate and special fund known as the Surplus Fund, into which there shall be set apart and paid all of the Net Revenues remaining after first making the required payments into the Operation and Maintenance Fund, the Sinking Fund, the Reserve Fund and the Subordinate Debt Funds, if any, and after the Reserve Fund contains the amounts required under the Outstanding Bond Resolution, this Resolution and any Parity Obligation Issuance Resolution, are hereby ratified and confirmed. All money credited to the Surplus Fund shall be transferred and credited to the Sinking Fund whenever necessary to prevent or remedy a default in the payment of the principal of or interest on the Bonds, the Outstanding Bonds and any Parity Obligations or shall be transferred and credited to the Reserve Fund or any subaccount thereof whenever any deficiency may exist in the Reserve Fund or any subaccount thereof.

As long as the Sinking Fund and the Reserve Fund or any subaccount thereof have the full amounts required to be deposited therein by this Resolution, the Outstanding Bond Resolution, or any Parity Obligation Issuance Resolution and the Subordinate Debt Funds have the full amount required under the terms of the Subordinate Obligations, any balance in the Surplus Fund may be made available to the City as the City Council, or such other duly constituted body as may then be charged with the operation of the Utility, may from time to time direct.

Section 10. All of such payments required to be made into any fund created or to be maintained under the terms of this Resolution shall be made in equal monthly installments as hereinbefore provided on the first day of each month, except that when the first day of any month shall be a Sunday or legal holiday, then such payments shall be made on the next succeeding secular day, and all money held in any fund created or to be maintained under the terms of this Resolution shall be deposited in lawful depositories of the City or invested in accordance with Chapters 12B and 12C of the Code of Iowa and continuously held and secured as provided by the laws of the State of Iowa relating to the depositing, securing, holding and investing of public funds. All interest received by the City as a result of investments under this Section shall be

deposited in or transferred to the Sinking Fund and used solely and only for the purposes specified herein for such fund.

Section 11. The City hereby covenants and agrees with the owner or owners of the Bonds, the Outstanding Bonds and any Parity Obligations, or any of them, that may be outstanding from time to time, that it will faithfully and punctually perform all duties with reference to the Utility required and provided by the Constitution and laws of the State of Iowa, that it will segregate the Gross Revenues of the Utility and make application thereof in accordance with the provisions of this Resolution and that it will not sell, lease or in any manner dispose of the Utility or any part thereof, including any and all extensions and additions that may be made thereto, until all of the Bonds, the Outstanding Bonds and any Parity Obligations have been paid in full, both principal and interest, or unless and until provision shall have been made for the payment thereof in full, both principal and interest; provided, however, that the City may dispose of any property which in the judgment of the City Council, or the duly constituted body as may then be charged with the operation of the Utility, is no longer useful or profitable in the operation of the Utility nor essential to the continued operation thereof and when the sale thereof will not operate to reduce the revenues to be derived from the operation of the Utility.

Section 12. Upon a breach or default of a term of the Bonds, the Outstanding Bonds or any Parity Obligations, the Outstanding Bond Resolution and this Resolution, a proceeding may be brought in law or in equity by suit, action or mandamus to enforce and compel performance of the duties required under the terms of this Resolution and Division V of Chapter 384 of the Code of Iowa or an action may be brought to obtain the appointment of a receiver to take possession of and operate the Utility and to perform the duties required by this Resolution and Division V of Chapter 384 of the Code of Iowa.

Section 13. The Bonds, the Outstanding Bonds or any Parity Obligations shall not be entitled to priority or preference one over the other in the application of the Net Revenues of the Utility, regardless of the time or times of the issuance thereof, it being the intention that there shall be no priority among the Bonds, the Outstanding Bonds or any Parity Obligations, regardless of the fact that they may have been actually issued and delivered at different times. The City will issue no other notes, bonds or obligations of any kind or nature payable from or enjoying a lien or claim on the Net Revenues having priority over the Bonds, the Outstanding Bonds or any Parity Obligations as may from time to time be issued and outstanding; provided, however, that the City reserves the right and privilege of issuing additional obligations from time to time payable from the Net Revenues of the Utility and ranking on a parity with the Bonds, the Outstanding Bonds and any Parity Obligations in order to pay the cost of improvements and extensions to the Utility or for refunding any notes, bonds or other obligations payable from the Net Revenues of the Utility or general obligation notes, bonds or other obligations, but only if (i) before any such Parity Obligations are issued, there will have been procured and filed with the City, a statement of an independent auditor or an independent consulting engineer (or, after the payment in full of the Outstanding Bonds, an independent financial consultant), not a regular employee of the City, reciting the opinion based upon necessary investigations that the Net Revenues of the Utility for the preceding Fiscal Year (with adjustments as provided herein) were equal to at least 1.10 times the average annual amount that will be required in any Fiscal Year prior to the longest maturity of any of the Bonds, the Outstanding Bonds or Parity Obligations for both principal of and interest on all Bonds, the Outstanding Bonds and any Parity Obligations

then outstanding which are payable from the Net Revenues and the Parity Obligations then proposed to be issued and (ii) the Parity Obligations must be payable as to principal and as to interest on the same month and day as the Bonds. For purposes of this Section, “preceding Fiscal Year” shall be the most recently completed Fiscal Year for which audited or unaudited financial statements are available, but in no event a Fiscal Year which ended more than eighteen months prior to the date of issuance of Parity Obligations.

The amount of Gross Revenues of the Utility may be adjusted for the purpose of the foregoing computations by an independent auditor or an independent consulting engineer (or, after the payment in full of the Outstanding Bonds, an independent financial consultant), not a regular employee of the City, so as to reflect any revision in the schedule of rates and charges being imposed at the time of the issuance of any such Parity Obligations.

Obligations issued to refund the Bonds, the Outstanding Bonds or any Parity Obligations shall not be subject to the foregoing restrictions, provided the Bonds, the Outstanding Bonds or Parity Obligations being refunded mature, or shall be redeemed, within three (3) months of the date of such refunding and no other funds are available to pay such maturing Bonds, the Outstanding Bonds or Parity Obligations, or the issuance of the refunding obligations will not cause an increase in the annual debt service requirements during the life of any of the Bonds, the Outstanding Bonds or any Parity Obligations then outstanding which are not being refunded, but otherwise any Parity Obligations shall only be issued subject to the restrictions of this Resolution.

The City reserves the right to issue additional obligations secured by and payable from the Net Revenues of the Utility, provided that such additional obligations shall be in all ways subject and subordinate to the rights vested in the Bonds, the Outstanding Bonds and any Parity Obligations as may from time to time be and remain outstanding.

Section 14. The City agrees that so long as the Bonds, the Outstanding Bonds or any Parity Obligations remain outstanding, it will maintain insurance for the benefit of the owners of the Bonds, the Outstanding Bonds and any Parity Obligations on the insurable portions of the Utility of a kind and in an amount which usually would be carried by private companies or municipalities engaged in a similar type of business. The City will keep proper books of record and account, separate from all other records and accounts, showing the complete and correct entries of all transactions relating to the Utility, and the owners of the Bonds, the Outstanding Bonds or any Parity Obligations shall have the right at all reasonable times to inspect the Utility and all records, accounts and data relating thereto.

Section 15. The provisions of this Resolution shall constitute a contract between the City and the owners of the Bonds, and after the issuance of the Bonds, no change, variation or alteration of any kind of the provisions of this Resolution shall be made which will adversely affect the owners of the Bonds until all of the Bonds and the interest thereon shall have been paid in full, except as hereinafter provided.

The owners of a majority in principal amount of the Outstanding Bonds, the Bonds and Parity Obligations at any time outstanding (not including in any case any obligations which may be then held or owned by or for the account of the City, but including such obligations as may be

issued for the purpose of refunding any of the Outstanding Bonds, the Bonds or any Parity Obligations if such obligations shall not then be owned by the City) shall have the right from time to time to consent to and approve the adoption by the City Council, or such other duly constituted body as may be then charged with the operation of the Utility, of a resolution or resolutions modifying or amending any of the terms or provisions contained in this Resolution; provided, however, that this Resolution may not be so modified or amended in such manner as to:

- a. make any change in the maturity or redemption terms of the Outstanding Bonds, the Bonds or any Parity Obligations;
- b. make any change in the rate of interest borne by the Outstanding Bonds, the Bonds or any Parity Obligations;
- c. reduce the amount of the principal payable on any Outstanding Bonds, Bonds or Parity Obligations;
- d. modify the terms of payment of principal of or interest on the Outstanding Bonds, the Bonds or any Parity Obligations, or any of them, or impose any conditions with respect to such payment;
- e. affect the rights of the owners of less than all of the Outstanding Bonds, Bonds and any Parity Obligations then outstanding; or
- f. reduce the percentage of the principal amount of the Outstanding Bonds, Bonds and any Parity Obligations, the consent of the owners of which shall be required to effect a further modification.

Whenever the City shall propose to amend or modify this Resolution under the provisions of this section, it shall cause notice of the proposed amendment to be mailed to each of the owners of the Outstanding Bonds, Bonds and any Parity Obligations at the addresses appearing on the registration books of the City. Such notice shall briefly set forth the nature of the proposed amendment and shall state that a copy of the proposed amendatory resolution is on file in the office of the City Clerk.

If the owners of at least a majority in aggregate principal amount of the Outstanding Bonds, Bonds and any Parity Obligations outstanding at the time of the adoption of such amendatory resolution shall have consented to and approved the adoption thereof as herein provided, no owner of the Outstanding Bonds or any Bond or Parity Obligation shall have any right or interest to object to the adoption of such amendatory resolution or to object to any of the terms or provisions therein contained or to the operation thereof or to enjoin or restrain the City from taking any action pursuant to the provisions thereof.

Any consent given by the owners of a Bond, the Outstanding Bonds or a Parity Obligation pursuant to the provisions of this section shall be irrevocable for a period of six (6) months from the date of such consent and shall be conclusive and binding upon all future owners of the same Bond, the Outstanding Bonds or Parity Obligation during such period. Such consent may be revoked at any time after six (6) months from the date of such consent by the owner who

gave such consent or by a successor in title, but such revocation shall not be effective if the owners of a majority in aggregate principal amount of the Outstanding Bonds, Bonds and Parity Obligations outstanding as in this section defined shall have, prior to the attempted revocation, consented to and approved the amendatory resolution referred to in such revocation.

The fact and date of the execution of any instrument under the provisions of this section may be proved by the certificate of any officer in any jurisdiction who by the laws thereof is authorized to take acknowledgments of deeds within such jurisdiction, that the persons signing such instrument acknowledged before him the execution thereof, or may be proved by an affidavit of a witness to such execution sworn to before such officer.

Section 16. It is the intention of the City that interest on the Bonds be and remain excluded from gross income for federal income tax purposes pursuant to the appropriate provisions of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations in effect with respect thereto (all of the foregoing herein referred to as the “Internal Revenue Code”). In furtherance thereof the City covenants to comply with the provisions of the Internal Revenue Code as they may from time to time be in effect or amended and further covenants to comply with applicable future laws, regulations, published rulings and court decisions as may be necessary to insure that the interest on the Bonds will remain excluded from gross income for federal income tax purposes. Any and all of the officers of the City are hereby authorized and directed to take any and all actions as may be necessary to comply with the covenants herein contained.

Section 17. The Securities and Exchange Commission (the “SEC”) has promulgated certain amendments to Rule 15c2-12 under the Securities Exchange Act of 1934 (17 C.F.R. § 240.15c2-12) (the “Rule”) that make it unlawful for an underwriter to participate in the primary offering of municipal securities in a principal amount of \$1,000,000 or more unless, before submitting a bid or entering into a purchase contract for the bonds, an underwriter has reasonably determined that the issuer or an obligated person has undertaken in writing for the benefit of the bondholders to provide certain disclosure information to prescribed information repositories on a continuing basis or unless and to the extent the offering is exempt from the requirements of the Rule.

On the date of issuance and delivery of the Bonds, the City will execute and deliver a Continuing Disclosure Certificate pursuant to which the City will undertake to comply with the Rule. The City covenants and agrees that it will comply with and carry out the provisions of the Continuing Disclosure Certificate. Any and all of the officers of the City are hereby authorized and directed to take any and all actions as may be necessary to comply with the Rule and the Continuing Disclosure Certificate.

Section 18. If any section, paragraph, clause or provision of this Resolution shall be held invalid, the invalidity of such section, paragraph, clause or provision shall not affect any of the remaining provisions of this Resolution.

Section 19. All resolutions and orders or parts thereof in conflict with the provisions of this Resolution are, to the extent of such conflict, hereby repealed.

Section 20. This Resolution shall be in full force and effect immediately upon its adoption and approval, as provided by law.

Passed and approved June 5, 2024.

Mayor

Attest:

City Clerk

••••

On motion and vote, the meeting adjourned.

Mayor

Attest:

City Clerk

LOAN AGREEMENT

This Loan Agreement is entered into as of June 5, 2024, by and between the City of Webster City, Iowa (the "City") and _____, _____, _____ (the "Purchaser"). The parties agree as follows:

1. The Purchaser shall loan to the City the sum of \$5,135,000, and the City's obligation to repay hereunder shall be evidenced by the issuance of Water Revenue Bonds, Series 2024 in the aggregate principal amount of \$5,135,000 (the "Bonds").

2. The City has adopted a resolution on May 20, 2024 (the "Resolution") authorizing and approving this Loan Agreement and providing for the issuance and securing the payment of the Bonds. The Resolution is incorporated herein by reference, and the parties agree to abide by the terms and provisions of the Resolution. The Bonds and the interest thereon, together with the City's outstanding Water Revenue Improvement and Refunding Bonds, Series 2021B, dated March 31, 2021 and any additional obligations as may be hereafter issued and outstanding from time to time under the conditions set forth in the Resolution, shall be payable solely and only from the Net Revenues (as defined in the Resolution) of the Municipal Waterworks Utility System, a sufficient portion of which has been ordered set aside and pledged for such purpose under the provisions of the Resolution.

3. The loan proceeds (the "Loan Proceeds") shall be used for the purposes set forth in the Resolution. Any remaining Loan Proceeds shall be deposited in the Sinking Fund (defined in the Resolution) and shall be held therein and used, along with other amounts on deposit in such fund, to pay interest due on the Bonds on the first interest payment date.

4. The Bonds, in substantially the form set forth in the Resolution, shall be executed and delivered to or on behalf of the Purchaser to evidence the City's obligation to repay the amounts payable hereunder. The Bonds shall be dated June 5, 2024, shall bear interest, shall be payable as to principal on the dates and in the amounts, shall be subject to prepayment prior to maturity and shall contain such other terms and provisions as provided in the Bonds and the Resolution.

5. Neither this Loan Agreement nor any of the Bonds shall constitute a general obligation of the City, nor be payable by taxation, and under no circumstances shall the City be in any manner liable by reason of the failure of the aforesaid Net Revenues to be sufficient to pay the Bonds and the interest thereon or to otherwise discharge the City's obligation hereunder.

6. This Loan Agreement is executed pursuant to the provisions of Section 384.24A of the Code of Iowa and shall be read and construed as conforming to all provisions and requirements of the statute.

IN WITNESS WHEREOF, we have hereunto affixed our signatures all as of the date first above written

CITY OF WEBSTER CITY, IOWA

By _____
Mayor

Attest:

City Clerk

_____, _____
By _____
(Signature)

(Print Name and Title)

REGISTRAR / PAYING AGENT AGREEMENT

THIS AGREEMENT is made and entered into this June 5, 2024 (the “Dated Date”) by and between the City of Webster City, Iowa, hereinafter called “ISSUER”, and UMB Bank, n.a., a national banking association with its principal payment office in Kansas City, Missouri, in its capacity as paying agent and registrar, hereinafter called the “AGENT”.

WHEREAS, the ISSUER has issued, or is currently in the process of issuing, pursuant to an ordinance, resolution, order, final terms certificate, notice of sale or other authorizing instrument of the governing body of the ISSUER, hereinafter collectively called the “Bond Document” certain bonds, certificates, notes and/or other debt instruments, more particularly described as \$5,135,000 Water Revenue Bonds, Series 2024 hereinafter called the “Bonds”; and

WHEREAS, pursuant to the Bond Document, the ISSUER has designated and appointed the AGENT as agent to perform registrar and paying agent services, to wit: establishing and maintaining a record of the owners of the Bonds, effecting the transfer of ownership of the Bonds in an orderly and efficient manner, making payments of principal and interest when due pursuant to the terms and conditions of the Bonds, and for other related purposes; and

WHEREAS, the AGENT has represented that it possesses the necessary qualifications and maintains the necessary facilities to properly perform the required services as such registrar and paying agent and is willing to serve in such capacities for the ISSUER;

NOW THEREFORE, in consideration of mutual promises and covenants herein contained the parties agree as follows:

1. The ISSUER has designated and appointed the AGENT as registrar and paying agent of the Bonds pursuant to the Bond Document, and the AGENT has accepted such appointment and agrees to provide the services set forth therein and herein.
2. The ISSUER agrees to deliver or cause to be delivered to the AGENT a transcript of the proceedings related to the Bonds to contain the following documents:
 - a) A copy of the Bond Document, and the consent or approval of any other governmental or regulatory authority, required by law to approve or authorize the issuance of the Bonds;
 - b) A written opinion by an attorney or by a firm of attorneys with a nationally recognized standing in the field of municipal bond financing, and any supporting or supplemental opinions, to the effect that the Bonds and the Bond Document have been duly authorized and issued by, are legally binding upon and are enforceable against the ISSUER;
 - c) A closing certificate of the ISSUER, a closing certificate and/or receipt of the purchaser(s) of the Bonds, and such other documents related to the issuance of the Bonds as the Agent reasonably deems necessary or appropriate; and
 - d) Unless Paragraph 20 hereof is applicable, in addition to the transcript of proceedings a reasonable supply of blank Bond certificates bearing the manual or facsimile signatures of

officials of the ISSUER authorized to sign certificates and, if required by the Bond Document, impressed with the ISSUER's seal or facsimile thereof, to enable the AGENT to provide Bond Certificates to the holders of the Bonds upon original issuance or the transfer thereof.

The foregoing documents may be subject to the review and approval of legal counsel for the AGENT. Furthermore, the ISSUER shall provide to the AGENT prompt written notification of any future amendment or change in respect of any of the foregoing, together with such documentation as the AGENT reasonably deems necessary or appropriate.

3. Unless Paragraph 20 hereof is applicable, Bond certificates provided by the ISSUER shall be printed in a manner to minimize the possibility of counterfeiting. This requirement shall be deemed satisfied by use of a certificate format meeting the standard developed by the American National Standards Committee or in such other format as the AGENT may accept by its authentication thereof. The AGENT shall have no responsibility for the form or contents of any such certificates. The ISSUER shall, while any of the Bonds are outstanding, provide a reasonable supply of additional blank certificates at any time upon request of the AGENT. All such certificates shall satisfy the requirements set forth in Paragraphs 2(d) and 3.

4. The AGENT shall initially register and authenticate, pursuant to instructions from the ISSUER and/or the initial purchaser(s) of the Bonds, one or more Bonds and shall enter into a Bond registry record the certificate number of the Bond and the name and address of the owner. The AGENT shall maintain such registry of owners of the Bonds until all the Bonds have been fully paid and surrendered. The initial owner of each Bond as reflected in the registry of owners shall not be changed except upon transfers of ownership and in accordance with procedures set forth in the Bond Document or this Agreement.

5. Transfers of ownership of the Bonds shall be made by the AGENT as set forth in the Bond Document. Absent specific guidelines in the Bond Document, transfers of ownership of the Bonds shall be made by the AGENT only upon delivery to the AGENT of a properly endorsed Bond or of a Bond accompanied by a properly endorsed transfer instrument, accompanied by such documents as the AGENT may deem necessary to evidence the authority of the person making the transfer, and satisfactory evidence of compliance with all applicable laws relating to the collection of taxes. The AGENT reserves the right to refuse to transfer any Bond until it is satisfied that each necessary endorsement is genuine and effective, and for that purpose it may require guarantees of signatures in accordance with applicable rules of the Securities and Exchange Commission and the standards and procedures of the AGENT, together with such other assurances as the AGENT shall deem necessary or appropriate. The AGENT shall incur no liability for delays in registering transfers as a result of inquiries into adverse claims or for the refusal in good faith to make transfers which it, in its judgment, deems improper or unauthorized. Upon presentation and surrender of any duly registered Bond and satisfaction of the transferability requirements, the AGENT shall (a) cancel the surrendered Bond; (b) register a new Bond(s) as directed in the same aggregate principal amount and maturity; (c) authenticate the new Bond(s); and (d) enter the transferee's name and address, together with the certificate number of the new Bond(s), in its registry of owners.

6. The AGENT may deliver Bonds by first class, certified, or registered mail, or by courier.

7. Ownership of, payment of the principal amount of, redemption premium, if any, and interest due on the Bonds and delivery of notices shall be subject to the provisions of the Bond Document, and for all other purposes. The AGENT shall have no responsibility to determine the beneficial owners of any Bonds and shall owe no duties to any such beneficial owners. Upon written request and reasonable notice from the ISSUER, the AGENT will mail, at the ISSUER's expense, notices or other communications from the ISSUER to the holders of the Bonds as recorded in the registry maintained by the AGENT.

8. Unless the Bond Document provides otherwise, the ISSUER shall, without notice from or demand of the AGENT, provide to the AGENT funds that are immediately available at least one business day prior to the relevant interest and/or principal payment date, sufficient to pay on each interest payment date and each principal payment date, all interest and principal then payable under the terms and provisions of the Bond Document and the Bonds. The AGENT shall have no responsibility to make any such payments to the extent ISSUER has not provided sufficient immediately available funds to AGENT on the relevant payment date. Unless the Bond Document provides otherwise, in the event that an interest and/or principal payment date shall be a date that is not a business day, payment may be made on the next succeeding business day and no interest shall accrue. The term "business day" shall include all days except Saturdays, Sundays and legal holidays recognized by the Federal Reserve Bank of Kansas City, Missouri.

9. Unless otherwise provided in the Bond Document and subject to the provisions of Paragraph 12 hereof, to the extent that the ISSUER has made sufficient funds available to it, the AGENT will pay to the record owners of the Bonds as of any record date (as specified in the Bond certificate or Bond Document) the interest due thereon as of the related interest payment date or any redemption date and, will pay upon presentation and surrender of such Bond at maturity or earlier date of redemption to the owner of any Bond, the principal or redemption amount of such Bond.

10. The AGENT may make a charge against any Bond owner sufficient for the reimbursement of any governmental tax or other charge required to be paid for any reason, including, but not limited to, failure of such owner to provide a correct taxpayer identification number to the AGENT. Such charge may be deducted from an interest or principal payment due to such owner.

11. Unless payment of interest, principal, and redemption premium, if any, is made by electronic transfer all payments will be made by check or draft and mailed to the last address of the owner as reflected on the registry of owners, or to such other address as directed in writing by the owner. In the event of payment of interest, the principal amount of and redemption premium, if any, by electronic transfer, the AGENT shall make payment by such means, at the expense of the ISSUER, pursuant to written instructions from the owner.

12. Subject to the provisions of the Bond Document, the AGENT may pay at maturity or redemption or issue new certificates to replace certificates represented to the AGENT to have been lost, destroyed, stolen or otherwise wrongfully taken, but first may require the Bond owner to pay a replacement fee, to furnish an affidavit of loss, and/or furnish either an indemnity bond or other indemnification satisfactory to the AGENT indemnifying the ISSUER and the AGENT.

13. The AGENT shall comply with the provisions, if any, of the Bond Document and the rules of the Securities and Exchange Commission pertaining to the cancellation and retention of Bond certificates and the periodic certification to the Issuer of the cancellation of such Bond certificates. In the event that the ISSUER requests in writing that the AGENT forward to the ISSUER the cancelled Bond certificates, the ISSUER agrees to comply with the foregoing described rules. The AGENT shall have no duty to retain any documents or records pertaining to this Agreement, the Bond Document or the Bonds any longer than eleven years after final payment on the Bonds, unless otherwise required by the rules of the Securities and Exchange Commission or other applicable law.

14. In case of any request or demand for inspection of the registry of owners or other related records maintained by the AGENT, the AGENT may be entitled to receive appropriate instructions from the ISSUER before permitting or refusing such inspection. The AGENT reserves the right, however, to only permit such inspection at a location and at such reasonable time or times designated by the Agent.

15. The AGENT is authorized to act on the order, directions or instructions of such officials as the governing body of ISSUER as the ISSUER by resolution or other proper action shall designate. The AGENT shall be protected in acting upon any paper or document believed by it to be genuine and to have been signed by the proper official(s), and the ISSUER shall promptly notify AGENT in writing of any change in the identity or authority of officials authorized to sign Bond certificates, written instructions or requests. If not so provided in the Bond Document, if any official whose manual or facsimile signature appears on blank Bond certificates shall die, resign or be removed from office or authority before the authentication of such certificates by the Agent, the AGENT may nevertheless issue such certificates until specifically directed to the contrary in writing by the ISSUER.

16. The AGENT shall provide notice(s) to the owners of the Bonds and such depositories, banks, brokers, rating agencies, information services, repositories, or publications as required by the terms of the Bond Document and to any other entities that request such notice(s) and, if so directed in such other manner and to such other parties as the Issuer shall so direct in writing and at the expense of the ISSUER.

17. The ISSUER shall compensate the AGENT for the AGENT's ordinary services as paying agent and registrar and shall reimburse the AGENT for all ordinary out-of-pocket expenses, charges, advances, counsel fees and other costs incurred in connection with the Bonds, the Bond Document and this Agreement as set forth in the Exhibit A or as otherwise agreed to by the Issuer and Agent in writing. In addition, should it become necessary for the AGENT to perform extraordinary services, the AGENT shall be entitled to extra compensation therefor and reimbursement for any out-of-pocket extraordinary costs and expenses, including, but not limited to, attorneys' fees.

18. The AGENT may resign, or be removed by the ISSUER, as provided in the Bond Document, or, if not so provided in the Bond Document, upon thirty days written notice to the other. Upon the effective date of resignation or removal, all obligations of the AGENT hereunder shall cease and terminate. In the event of resignation or removal, the AGENT shall deliver the registry of owners and all related books and records in accordance with the written instructions of the ISSUER or any successor agent designated in writing by the Issuer within a reasonable period following the effective date of its removal or resignation.

19. Whenever in the performance of its duties as Agent hereunder, the Bond Document or under the Bonds the AGENT shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, under the Bond Document or under the Bonds, the AGENT may consult with legal counsel, including, but not limited to, legal counsel for the ISSUER, with respect to any matter in connection with this Agreement and it shall not be liable for any action taken or omitted by it in good faith in reliance upon the advice or opinion of such counsel.

20. In the event that the Bond Document provides that the initial registered owner of all of the Bond certificates is or may be the Depository Trust Company, or any other securities depository or registered clearing agency qualified under the Securities and Exchange Act of 1934, as amended (a "Securities Depository"), none of the beneficial owners will receive certificates representing their respective interest in the Bonds. Except to the extent provided otherwise in the Bond Document, the following provisions shall apply:

- a) The registry of owners maintained by the AGENT will reflect as owner of the Bonds only the Securities Depository or its nominee, until and unless the ISSUER authorizes the delivery of Bond certificates to the beneficial owners as described in subsection (d) below.
- b) It is anticipated that during the term of the Bonds, the Securities Depository will make book-entry transfers among its participants and receive and transmit payments of principal and interest on the Bonds to the participants, unless and until the ISSUER authorizes the delivery of Bonds to the beneficial owners as described in subsection (d) below.
- c) The ISSUER may at any time, in accordance with the Bond Document, select and appoint a successor Securities Depository and shall notify the Agent of such selection and appointment in writing.
- d) If the ISSUER determines that the holding of the Bonds by the Securities Depository is no longer in the best interests of the beneficial owners of the Bonds, then the AGENT, at the written instruction and expense of the ISSUER, shall notify the beneficial owners of the Bonds by first class mail of such determination and of the availability of certificates to owners requesting the same. The AGENT shall register in the names of and authenticate and deliver certificates representing their respective interests in the Bonds to the beneficial owners or their nominees, in principal amounts and maturities representing the interest of each, making such adjustments as it may find necessary or appropriate as to accrued interest and previous calls for redemption. In such event, all references to the Securities Depository herein shall relate to the period of time when at least one Bond is registered in the name of the Securities Depository or its nominee. For the purposes of this paragraph, the AGENT may conclusively rely on information provided by the Securities Depository and its participants as to principal amounts held by and the names and mailing addresses of the beneficial owners of the Bonds, and shall not be responsible for any investigation to determine the beneficial owners. The cost of printing certificates for the Bonds and expenses of the AGENT shall be paid by the ISSUER.

21. The AGENT shall incur no liability whatsoever in taking or failing to take any action in accordance with the Bond Document, and shall not be liable for any error in judgment made in good faith by an officer or employee of the AGENT unless it shall be proved the AGENT was negligent in ascertaining the pertinent facts or acted intentionally in bad faith. The AGENT shall not be under any

obligation to prosecute or defend any action or suit in connection with its duties under the Bond Document or this Agreement or in respect of the Bonds, which, in its opinion, may involve it in expense or liability, unless satisfactory security and indemnity is furnished to the Agent (except as may result from the AGENT's own negligence or willful misconduct). To the extent permitted by law, the ISSUER agrees to indemnify the AGENT for, and hold it harmless against, any loss, liability, or expense incurred without negligence or bad faith on its part, arising out of or in connection with its acceptance or administration of its duties hereunder, including the cost and expense against any claim or liability in connection with the exercise or performance of any of its powers or duties under this Agreement. To the extent that the ISSUER may now or hereafter be entitled to claim, for itself or its assets, immunity from suit, execution, attachment (before or after judgment) or other legal process, the ISSUER irrevocably agrees not to claim, and it hereby waives, such immunity in connection with any suit or other action brought by the AGENT to enforce the terms of the Bond Document or this Agreement. The AGENT shall only be responsible for performing such duties as are set forth herein, required by the Bond Document, or otherwise agreed to in writing by the AGENT.

22. It is mutually understood and agreed that, unless otherwise provided in the Bonds or Bond Document, this Agreement shall be governed by the laws of the State of Iowa, both as to interpretation and performance.

23. It is understood and agreed by the parties that if any part, term, or provision of this Agreement is held by the courts to be illegal or in conflict with any applicable law, regulation or rule, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

24. The name "UMB Bank, n.a." shall include its successor or successors, any surviving corporation into which it may be merged, any new corporation resulting from its consolidation with any other corporation or corporations, the successor or successors of any such surviving or new corporation, and any corporation to which the corporate trust business of said Bank may at any time be transferred.

25. All notices, demands, and request required or permitted to be given to the ISSUER or AGENT under the provisions hereof must be in writing and shall be deemed to have been sufficiently given, upon receipt if (i) personally delivered, (ii) sent by email or electronic means and confirmed by phone or (iii) mailed by registered or certified mail, with return receipt requested, delivered as follows:

If to AGENT: UMB Bank, n.a.
Attn: Corporate Trust & Escrow Services
7155 Lake Drive, Suite 120
West Des Moines, Iowa 50266

If to ISSUER: City of Webster City, Iowa
Attn: City Clerk
City Hall
400 Second Street
PO Box 217
Webster City, Iowa 50595-2017

26. The parties hereto agree that the transactions described herein may be conducted and related documents may be sent, received or stored by electronic means. Copies, telecopies, facsimiles, electronic files and other reproductions of original executed documents shall be deemed to be authentic and valid counterparts of such original documents for all purposes, including the filing of any claim, action or suit in the appropriate court of law.

27. In order to comply with provisions of the USA PATRIOT Act of 2001, as amended from time to time, and the Bank Secrecy Act, as amended from time to time, the AGENT may request certain information and/or documentation to verify confirm and record identification of persons or entities who are parties to this Agreement.

28. If the Bonds are eligible for receipt of any U.S. Treasury Interest Subsidy and if so directed by the Bond Document or, as agreed to in writing between the Issuer and the Paying Agent, the Paying Agent shall comply with the provisions, if any, relating to it as described in the Bond Document or as otherwise agreed upon in writing between the Issuer and the Paying Agent. The Paying Agent shall not be responsible for completion of or the actual filing of Form 8038-CP (or any successor form) with the IRS or any payment from the United States Treasury in accordance with §§ 54AA and 6431 of the Code.

IN WITNESS WHEREOF, the parties hereto have, by their duly authorized signatories, set their respective hands on the Dated Date.

CITY OF WEBSTER CITY, IOWA

Mayor

Attest:

City Clerk

UMB BANK, N.A., as PAYING AGENT/REGISTRAR

By: _____
Authorized Signatory



PAYING AGENT, BOND REGISTRAR AND TRANSFER AGENT FEE SCHEDULE

ADMINISTRATION

- | | |
|--------------------------------------|----------------------------|
| • Book Entry Bonds | \$300 initial/\$600 annual |
| • Registered/Private Placement Bonds | \$750 initial/\$600 annual |

* Initial Fees charged at Closing

* Annual Fees charged in arrears month of closing

ADDITIONAL SERVICES

- | | |
|-------------------------------------|------------------------------|
| • Placement of CDs or Sinking Funds | \$500 per set up/outside UMB |
| • Late Payments | \$100 |
| • Optional or Partial Redemption | \$300 |
| • Mandatory Redemption | \$100 |
| • Early Termination/Full Call | \$500 |
| • Paying Costs of Issuance | \$500 one-time fee |

SERVICES AVAILABLE UPON REQUEST

- | | |
|-----------------------|----------------|
| • Dissemination Agent | \$1,000 annual |
|-----------------------|----------------|

CHANGES IN FEE SCHEDULE

UMB Bank, N.A. reserves the right to renegotiate this fee schedule

Reasonable charges will be made for additional services or reports not contemplated at the time of execution of the Agreement or not covered specifically elsewhere in this schedule. Extraordinary out-of-pocket expenses will be charged at cost. However, this does not include ordinary out-of-pocket expenses such as normal postage and supplies, which are included in the annual fees quoted above.

CONTINUING DISCLOSURE CERTIFICATE

This Continuing Disclosure Certificate (the “Disclosure Certificate”) is executed and delivered by the City of Webster City (the “Issuer”), in connection with the issuance of \$5,135,000 Water Revenue Bonds, Series 2024 (the “Bonds”), dated June 5, 2024. The Bonds are being issued pursuant to a resolution of the Issuer approved on May 20, 2024 (the “Resolution”). The Issuer covenants and agrees as follows:

Section 1. Purpose of the Disclosure Certificate. This Disclosure Certificate is being executed and delivered by the Issuer for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c-12.

Section 2. Definitions. In addition to the definitions set forth in the Resolution, which apply to any capitalized term used in this Disclosure Certificate unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

“Beneficial Owner” shall mean any person which (a) has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries), or (b) is treated as the owner of any Bonds for federal income tax purposes.

“Dissemination Agent” shall mean the Dissemination Agent, if any, designated in writing by the Issuer and which has filed with the Issuer a written acceptance of such designation.

“EMMA” shall mean the MSRB’s Electronic Municipal Market Access system available at <http://emma.msrb.org>.

“Financial Obligation” shall mean a (i) debt obligation, (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation, or, (iii) guarantee of either (i) or (ii). The term “Financial Obligation” shall not include municipal securities as to which a final official statement has been provided to the MSRB pursuant to the Rule.

“Holders” shall mean the registered holders of the Bonds, as recorded in the registration books of the Registrar.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Disclosure Certificate.

“Municipal Securities Rulemaking Board” or “MSRB” shall mean the Municipal Securities Rulemaking Board, 1300 I Street NW, Suite 1000, Washington, DC 20005.

“Participating Underwriter” shall mean any of the original underwriters of the Bonds required to comply with the Rule in connection with offering of the Bonds.

“Rule” shall mean Rule 15c2-12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“State” shall mean the State of Iowa.

Section 3. Provision of Annual Reports.

(a) Not later than June 30 (the “Submission Deadline”) of each year following the end of the 2023-2024 fiscal year, the Issuer shall, or shall cause the Dissemination Agent (if any) to, file on EMMA an electronic copy of its Annual Report which is consistent with the requirements of Section 4 of this Disclosure Certificate in a format and accompanied by such identifying information as prescribed by the MSRB. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4 of this Disclosure Certificate; provided that the audited financial statements of the Issuer may be submitted separately from the balance of the Annual Report and later than the Submission Deadline if they are not available by that date. If the Issuer’s fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(c), and the Submission Deadline beginning with the subsequent fiscal year will become one year following the end of the changed fiscal year.

(b) If the Issuer has designated a Dissemination Agent, then not later than fifteen (15) business days prior to the Submission Deadline, the Issuer shall provide the Annual Report to the Dissemination Agent.

(c) If the Issuer is unable to provide an Annual Report by the Submission Deadline, in a timely manner thereafter, the Issuer shall, or shall cause the Dissemination Agent (if any) to, file a notice on EMMA stating that there has been a failure to provide an Annual Report on or before the Submission Deadline.

Section 4. Content of Annual Reports. The Issuer’s Annual Report shall contain or include by reference the following:

(a) The **audited financial statements** of the Issuer for the prior fiscal year, prepared in accordance with generally accepted accounting principles promulgated by the Financial Accounting Standards Board as modified in accordance with the governmental accounting standards promulgated by the Governmental Accounting Standards Board or as otherwise provided under State law, as in effect from time to time, or, if and to the extent such audited financial statements have not been prepared in accordance with generally accepted accounting principles, noting the discrepancies therefrom and the effect thereof. If the Issuer’s audited financial statements are not available by the Submission Deadline, the Annual Report shall contain unaudited financial information (which may include any annual filing information required by State law) accompanied by a notice that the audited financial statements are not yet

available, and the audited financial statements shall be filed on EMMA when they become available.

(b) Tables, schedules or other information contained in the official statement for the Bonds, under the following captions:

RATES AND CHARGES
HISTORY OF WATER SOLD
NUMBER OF WATER UTILITY CUSTOMER ACCOUNTS
LARGER WATER UTILITY CUSTOMERS
WATER UTILITY FUNDS ON HAND (as of each June 30)
MUNICIPAL WATERWORKS SYSTEM OPERATING
STATEMENT AND DEBT SERVICE COVERAGE
WATER REVENUE DEBT (including Outstanding Water Revenue
Debt Service Requirements)
THE ISSUER - POPULATION (City only)

Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Issuer or related public entities, which are available on EMMA or are filed with the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available on EMMA. The Issuer shall clearly identify each such other document so included by reference.

Section 5. Reporting of Significant Events

(a) Pursuant to the provisions of this Section 5, the Issuer shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Bonds:

- (1) Principal and interest payment delinquencies.
- (2) Non-payment related defaults, if material.
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties.
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties.
- (5) Substitution of credit or liquidity providers, or their failure to perform.
- (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the security, or other material events affecting the tax status of the security.
- (7) Modifications to rights of security holders, if material.
- (8) Bond calls, if material, and tender offers.

- (9) Defeasances.
- (10) Release, substitution, or sale of property securing repayment of the securities, if material.
- (11) Rating changes.
- (12) Bankruptcy, insolvency, receivership or similar event of the obligated person.

Note to paragraph (12): For the purposes of the event identified in subparagraph (12), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

- (13) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material.
 - (14) Appointment of a successor or additional trustee or the change of name of a trustee, if material.
 - (15) Incurrence of a Financial Obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the obligated person, any of which affect security holders, if material.
 - (16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the obligated person, any of which reflect financial difficulties.
- (b) If a Listed Event described in Section 5(a) paragraph (2), (7), (8) (but only with respect to bond calls under (8)), (10), (13), (14), or (15) has occurred and the Issuer has determined that such Listed Event is material under applicable federal securities laws, the Issuer shall, in a timely manner but not later than ten business days after the occurrence of such Listed Event, promptly file, or cause to be filed, a notice of such occurrence on EMMA, with such

notice in a format and accompanied by such identifying information as prescribed by the MSRB.

(c) If a Listed Event described in Section 5(a) paragraph (1), (3), (4), (5), (6), (8) (but only with respect to tender offers under (8)), (9), (11), (12), or (16) above has occurred the Issuer shall, in a timely manner but not later than ten business days after the occurrence of such Listed Event, promptly file, or cause to be filed, a notice of such occurrence on EMMA, with such notice in a format and accompanied by such identifying information as prescribed by the MSRB. Notwithstanding the foregoing, notice of Listed Events described in Section (5)(a) paragraphs (8) and (9) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected Bonds pursuant to the Resolution.

Section 6. Termination of Reporting Obligation. The Issuer's obligations under this Disclosure Certificate shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Bonds or upon the Issuer's receipt of an opinion of nationally recognized bond counsel to the effect that, because of legislative action or final judicial action or administrative actions or proceedings, the failure of the Issuer to comply with the terms hereof will not cause Participating Underwriters to be in violation of the Rule or other applicable requirements of the Securities Exchange Act of 1934, as amended.

Section 7. Dissemination Agent. The Issuer may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or Annual Report prepared by the Issuer pursuant to this Disclosure Certificate. The initial Dissemination Agent shall be the Issuer.

Section 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Certificate, the Issuer may amend this Disclosure Certificate, and any provision of this Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(a) (i) the amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the Bonds, or the type of business conducted; (ii) the undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and (iii) the amendment or waiver either (1) is approved by a majority of the Holders, or (2) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners; or

(b) the amendment or waiver is necessary to comply with modifications to or interpretations of the provisions of the Rule as announced by the Securities and Exchange Commission.

In the event of any amendment or waiver of a provision of this Disclosure Certificate, the Issuer shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the Issuer. In addition, if the amendment relates to the accounting principles to be followed in preparing audited financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event under Section 5(c), and (ii) the Annual Report for the year in which the change is made will present a comparison or other discussion in narrative form (and also, if feasible, in quantitative form) describing or illustrating the material differences between the audited financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Section 9. Additional Information. Nothing in this Disclosure Certificate shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Certificate. If the Issuer chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Certificate, the Issuer shall have no obligation under this Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

Section 10. Default. In the event of a failure of the Issuer to comply with any provision of this Disclosure Certificate, any Holder or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Issuer to comply with its obligations under this Disclosure Certificate. Direct, indirect, consequential and punitive damages shall not be recoverable by any person for any default hereunder and are hereby waived to the extent permitted by law. A default under this Disclosure Certificate shall not be deemed an event of default under the Resolution, and the sole remedy under this Disclosure Certificate in the event of any failure of the Issuer to comply with this Disclosure Certificate shall be an action to compel performance.

Section 11. Duties, Immunities and Liabilities of Dissemination Agent. The Dissemination Agent, if any, shall have only such duties as are specifically set forth in this Disclosure Certificate, and the Issuer agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The obligations of the Issuer under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

Section 12. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriters and Holders

and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity.

Dated: June 5, 2024

CITY OF WEBSTER CITY, IOWA

By _____
Mayor

Attest:

By _____
City Clerk

RESOLUTION NO. ____

Resolution authorizing and approving a Loan Agreement and providing for the issuance of \$ _____ Electric Revenue Bonds, Series 2024 and other documents related to the Bonds.

WHEREAS, the City of Webster City (the “City” or the “Issuer”), in Hamilton County, State of Iowa, did heretofore establish a Municipal Electric Utility System (referred to hereinafter as the “Utility”) in and for the City which has continuously supplied electric service in and to the City and its inhabitants since its establishment; and

WHEREAS, the management and control of the Utility are vested in the City Council (the “Council”) and no board of trustees exists for this purpose; and

WHEREAS, the City is authorized and empowered by Chapter 384 of the Code of Iowa (the “Act”) to borrow money for the Utility and the City has adopted a master bond resolution (the “Master Resolution”) authorizing the issuance from time to time of Obligations (as defined in the Master Resolution) to borrow money secured by a lien on the Utility’s Net Revenues (as defined in the Master Resolution) as Parity Obligations or Subordinated Obligations (as each is defined in the Master Resolution); and

WHEREAS, the City has developed a financing plan which includes financing the costs of improvements to the Utility (the “Project”) and, pursuant to the provisions of Section 384.24A of the Code of Iowa, a public hearing notice duly published and a hearing held thereon on April 15, 2024, the City has heretofore determined to enter into an electric revenue loan agreement in the aggregate principal amount not to exceed \$8,835,000, and to issue one or more series of electric revenue bonds secured by the Utility’s Net Revenues; and

WHEREAS, a Preliminary Official Statement (the “P.O.S.”) has been prepared by Dorsey & Whitney LLP (the “Disclosure Counsel”), as bond and disclosure counsel to the City, to facilitate the sale of Electric Revenue Bonds, Series 2024 (the “Series 2024 Bonds” or “Bonds”) in evidence of the obligation of the City under the Loan Agreement (as defined herein), and the City Council has made provision for the approval of the P.O.S. and has authorized its use by PFM Financial Advisors LLC, as municipal advisor, to market the Series 2024 Bonds pursuant to a competitive sale process; and

WHEREAS, pursuant to advertisement of sale, bids for the purchase of the Series 2024 Bonds to be issued in evidence of the City’s obligation under the Loan Agreement were received and canvassed on behalf of the City at the appointed time for the payment of costs of the Project; and

WHEREAS, upon final consideration of all bids, the bid of the Underwriter (as defined herein) was the best, such bid proposing the lowest interest cost to the City; and

WHEREAS, Section 2 of the Master Resolution authorizes the Council to adopt a Series Resolution (as defined in the Master Resolution) to provide for the issuance of Parity

Obligations, and this Series Resolution constitutes a Series Resolution under the Master Resolution; and

WHEREAS, the obligations of the City under the Series 2024 Bonds and the Loan Agreement shall be payable solely and only from the Net Revenues of the Utility and certain funds and accounts created and pledged under the this Series Resolution and the Master Resolution; and

WHEREAS, it is now necessary to make final provision for approval of the Loan Agreement and to authorize the issuance of the Series 2024 Bonds [IF INSURANCE] and to approve commitments for municipal bond insurance policies issued by _____ (the “Bond Insurer”) and related agreements with respect to insuring the payment of the debt service on the Series 2024 Bonds];

NOW, THEREFORE, Be It Resolved by the City Council of the City of Webster City, Iowa, as follows:

Section 1. Definitions. Terms used herein and not defined herein shall have the meaning given to them in this Series Resolution and the Master Resolution unless the text expressly or by necessary implication requires otherwise:

“Bonds” or “Series 2024 Bonds” means the \$ _____ Electric Revenue Bonds, Series 2024, in one or more series.

“Business Day” means any day other than a Saturday, Sunday, legal holiday or a day on which financial institutions are closed in Iowa.

“Closing Date” shall mean the date of delivery of the Series 2024 Bonds, anticipated to be [June 5, 2024], with any final changes to such date set forth in the Loan Agreement.

“Loan” shall mean the loan made pursuant to the Loan Agreement and evidenced by the Series 2024 Bonds.

“Loan Agreement” means the loan agreement between the Issuer and the Underwriter related to the Series 2024 Bonds.

“Paying Agent” shall mean UMB Bank, n.a., West Des Moines, Iowa or such successor and assigns.

“Series 2019 Bonds” means the City’s outstanding Taxable Electric Revenue Refunding Bonds, Series 2019 dated April 17, 2019.

“Series 2024 Bond Sinking Fund” means the fund by that name created pursuant to Section 14 hereof.

“Series 2024 Bond Debt Service Reserve Fund” means the fund by that name created pursuant to Section 14 hereof.

“Series 2024 Reserve Fund Requirement” means \$ _____, or such other amount set forth in the Loan Agreement.

“Series Resolution” or “Resolution” means this resolution.

“Underwriter” shall mean _____, its successor and assigns.

Section 2. Loan Authorization; Authorization for Execution and Delivery of Documents. Following the adoption of this Series Resolution and pursuant to Chapter 384 of the Code of Iowa, the City Council is hereby authorized to execute and deliver the Loan Agreement with the Underwriter in the form which has been placed on file with the Council providing for a Loan in the aggregate amount of \$ _____ for the purpose or purposes set forth in the preamble hereof. The Mayor and City Clerk are hereby authorized to execute and deliver the Loan Agreement on behalf of the Issuer in the form presented to the Council, with final terms as determined by the Council and the Underwriter. **[INSERT INSURANCE POLICY APPROVAL]**

The Mayor, City Clerk and City Treasurer are each authorized to execute and deliver the Series 2024 Bonds, any and all agreements, documents and instruments required related to the issuance of the Series 2024 Bonds and to carry out the purposes set forth in this Series Resolution, including but not limited to any tax certificates, closing certificates and purchase agreements.

Section 3. Registrar/Paying Agent. UMB Bank, n.a., West Des Moines, Iowa is hereby designated as the Registrar and Paying Agent for the Series 2024 Bonds and may be hereinafter referred to as the “Registrar” or the “Paying Agent” in such capacities. The Issuer shall enter into an agreement (the “Registrar/Paying Agent Agreement”) with the Registrar, in substantially the form as has been placed on file with the Council, and the Mayor and City Clerk are hereby authorized and directed to sign the Registrar/Paying Agent Agreement.

Section 4. Source of Payment of the Series 2024 Bonds. The Series 2024 Bonds, when issued, will be Parity Obligations under the Master Resolution and shall be payable solely from the Net Revenues of the Utility, and certain funds and accounts created and pledged under this Series Resolution and the Master Resolution.

Section 5. Series 2024 Bonds Details; Form of Series 2024 Bonds. The Series 2024 Bonds, in the aggregate principal amount of \$ _____, are hereby authorized to be issued in evidence of the obligation of the City under the Loan Agreement. The Series 2024 Bonds shall be dated the date of delivery, shall be issued in the denominations of \$5,000 each, or any integral multiple thereof, and shall mature on May 1 in each of the years, in the respective principal amounts, and bear interest at the respective rates, as follows:

<u>Date</u>	<u>Principal</u>	<u>Interest Rate</u>	<u>Date</u>	<u>Principal</u>	<u>Interest Rate</u>
2025			2035		
2026			2036		
2027			2037		
2028			2038		

2029	2039
2030	2040
2031	2041
2032	2042
2033	2043
2034	2044

[IF TERM BONDS] Principal of the Series 2024 Bond maturing on May 1, 20__ is subject to mandatory redemption (by lot, as selected by the Registrar) on May 1, ___, at a redemption price of 100% of the principal amount thereof to be redeemed, plus accrued interest thereon to the redemption date, in the following principal amounts:

<u>Year</u>	<u>Principal Amount</u>
	\$ (Maturity)

The Issuer reserves the right to optionally prepay part or all of the principal of the Series 2024 Bonds maturing in the [years 2033 to 2044], inclusive, prior to and in any order of maturity on May 1, [2032], or on any date thereafter upon terms of par and accrued interest. If less than all of the Series 2024 Bonds of any like maturity are to be redeemed, the particular part of those Bonds to be redeemed shall be selected by the Registrar by lot. The Series 2024 Bonds may be called in part in one or more units of \$5,000.

If less than the entire principal amount of any Series 2024 Bond in a denomination of more than \$5,000 is to be redeemed, the Registrar will issue and deliver to the registered owner thereof, upon surrender of such original Series 2024 Bond, a new Bond or Bonds, in any authorized denomination, in a total aggregate principal amount equal to the unredeemed balance of the original Bond. Notice of such redemption as aforesaid identifying the Series 2024 Bond or Bonds (or portion thereof) to be redeemed shall be sent by electronic means or mailed by certified mail to the registered owners thereof at the addresses shown on the Issuer’s registration books not less than 30 days prior to such redemption date. Any notice of redemption may contain a statement that the redemption is conditioned upon the receipt by the Paying Agent of funds on or before the date fixed for redemption sufficient to pay the redemption price of the Series 2024 Bonds so called for redemption, and that if funds are not available, such redemption shall be cancelled by written notice to the owners of the Series 2024 Bonds called for redemption in the same manner as the original redemption notice was sent, such notice of cancellation to be made at least three Business Days prior to the date fixed for redemption. All of such Series 2024 Bonds as to which the Issuer reserves and exercises the right of redemption and as to which notice as aforesaid shall have been given and for the redemption of which funds are duly provided, shall cease to bear interest on the redemption date.

Accrued interest on the Series 2024 Bonds shall be payable semiannually on the first day of May and November in each year, commencing November 1, 2024. Interest shall be calculated on the basis of a 360-day year comprised of twelve 30-day months. Payment of interest on the Series 2024 Bonds shall be made to the registered owners appearing on the registration books of

the Issuer at the close of business on the fifteenth day of the month next preceding the interest payment date and shall be paid to the registered owners at the addresses shown on such registration books. Principal of the Series 2024 Bonds shall be payable in lawful money of the United States of America to the registered owners or their legal representatives upon presentation and surrender of the Series 2024 Bond or Bonds at the office of the Paying Agent.

The Series 2024 Bonds shall be executed on behalf of the Issuer with the official manual or facsimile signature of the Mayor and attested by the official manual or facsimile signature of the City Clerk, and shall be fully registered bonds without interest coupons. The issuance of the Series 2024 Bonds shall be recorded in the office of the City Treasurer, and the certificate on the back of each Series 2024 Bond shall be executed with the official manual or facsimile signature of the City Treasurer. In case any officer whose signature or the facsimile of whose signature appears on the Series 2024 Bonds shall cease to be such officer before the delivery of such Bonds, such signature or such facsimile signature shall nevertheless be valid and sufficient for all purposes, the same as if such officer had remained in office until delivery.

The Series 2024 Bonds shall not be valid or become obligatory for any purpose until the Certificate of Authentication thereon shall have been signed by the Registrar.

The Series 2024 Bonds shall be in substantially the form attached as Exhibit A hereto.

Section 6. Registration of Series 2024 Bonds; Designation of Registrar; Transfer; Ownership; Delivery; and Cancellation.

(a) Registration. The Series 2024 Bonds shall be fully registered as to principal and interest in the names of the owners on the registration books of the Issuer kept by the Registrar, and after such registration, payment of the principal thereof and interest thereon shall be made only to the registered owners, their legal representatives or assigns. The Registrar shall maintain the books of the Issuer for the registration of ownership of the Series 2024 Bonds for the payment of principal of and interest on the Series 2024 Bonds. The Series 2024 Bonds shall be negotiable, subject to the provisions for registration and transfer contained in the Series 2024 Bonds and in this Series Resolution. The record and identity of the owners of the Series 2024 Bonds may be kept confidential as provided by Section 22.7 of the Code of Iowa. The Issuer reserves the right to name a substitute, successor Registrar or Paying Agent upon giving prompt written notice to the registered owners of the Series 2024 Bonds.

(b) Transfer. The Series 2024 Bonds shall be transferable only upon the registration books of the Issuer upon presentation to the Registrar, together with either a written instrument of transfer satisfactory to the Registrar or the assignment form thereon completed and duly executed by the registered owner or the duly authorized attorney for such registered owner. In all cases of transfer of the Series 2024 Bonds, the Registrar shall register, at the earliest practicable time, on the registration books, the Series 2024 Bonds, in accordance with the provisions of this Series Resolution.

(c) Ownership. The person in whose name the ownership of the same shall be registered on the registration books of the Registrar shall be deemed and regarded as the absolute owner thereof for all purposes, and payment of or on account of the principal of the Series 2024 Bonds and the premium, if any, and interest thereon shall be made only to or upon the order of the registered owner thereof or his or her legal representative. All such payments shall be valid and effectual to satisfy and discharge the liability upon the Series 2024 Bonds, including the interest thereon, to the extent of the sum or sums so paid.

(d) Cancellation. Upon final payment of the Series 2024 Bonds, the Series 2024 Bonds shall be cancelled by the Registrar and destroyed and a notation thereof made in the registration books of the Issuer.

(e) Non-Presentation of Bonds. In the event any check in payment of interest on or principal of the Series 2024 Bonds is returned to the Paying Agent or is not presented for payment, or if the Series 2024 Bond is not presented for payment of principal at the maturity date thereof, if funds sufficient to pay such interest and principal shall have been made available to the Paying Agent for the benefit of the owner thereof, all liability of the Issuer to the owner thereof for such interest or payment of the Series 2024 Bonds shall forthwith cease, terminate and be completely discharged, and thereupon it shall be the duty of the Paying Agent to hold such funds, without liability for interest thereon, for the benefit of the owner of the Series 2024 Bonds who shall thereafter be restricted exclusively to such funds for any claim of whatever nature on the owner's part under this Series Resolution or on, or with respect to, such interest or the Series 2024 Bonds. The Paying Agent's obligation to hold such funds shall continue for a period equal to one year following the date on which such interest or principal became due, whether at maturity, or at the date fixed for prepayment thereof, or otherwise, at which time the Paying Agent, shall surrender any remaining funds so held to the Issuer, whereupon any claim under this Series Resolution by the owners of the Series 2024 Bonds of whatever nature shall be made upon the Issuer.

Section 7. Reissuance of Mutilated, Destroyed, Stolen or Lost Bond. In case the Series 2024 Bonds shall become mutilated or be destroyed, stolen or lost, the Issuer shall at the request of the Registrar authenticate and deliver a new Series 2024 Bond of like tenor and amount in exchange and substitution for the mutilated Series 2024 Bond, upon surrender of the mutilated Series 2024 Bond to the Registrar, or in lieu of and substitution for the Series 2024 Bond destroyed, stolen or lost, upon filing with the Registrar evidence satisfactory to the Registrar and Issuer that the Series 2024 Bond has been destroyed, stolen or lost and proof of ownership thereof, and upon furnishing the Registrar and Issuer with satisfactory indemnity and complying with such other reasonable regulations as the Issuer or its agent may prescribe and paying such expenses as the Issuer may incur in connection therewith.

Section 8. Depository Trust Company. Notwithstanding anything above to the contrary, the Series 2024 Bonds shall be issued initially as Depository Bonds, with one fully registered Series 2024 Bond for each maturity date, in principal amounts equal to the amount of principal maturing on each such date, and registered in the name of Cede & Co., as nominee for The Depository Trust Company, New York, New York ("DTC"). On original issue, the Series

2024 Bonds shall be deposited with DTC for the purpose of maintaining a book-entry system for recording the ownership interests of its participants and the transfer of those interests among its participants (the “Participants”). In the event that DTC determines not to continue to act as securities depository for the Series 2024 Bonds or the Issuer determines not to continue the book-entry system for recording ownership interests in the Series 2024 Bonds with DTC, the Issuer will discontinue the book-entry system with DTC. If the Issuer does not select another qualified securities depository to replace DTC (or a successor depository) in order to continue a book-entry system, the Issuer will register and deliver replacement bonds in the form of fully registered certificates, in authorized denominations of \$5,000 or integral multiples of \$5,000, in accordance with instructions from Cede & Co., as nominee for DTC. In the event that the Issuer identifies a qualified securities depository to replace DTC, the Issuer will register and deliver replacement bonds, fully registered in the name of such depository, or its nominee, in the denominations as set forth above, as reduced from time to time prior to maturity in connection with redemptions or retirements by call or payment, and in such event, such depository will then maintain the book-entry system for recording ownership interests in the Series 2024 Bonds.

Ownership interest in the Series 2024 Bonds may be purchased by or through Participants. Such Participants and the persons for whom they acquire interests in the Series 2024 Bonds as nominees will not receive certificated Series 2024 Bonds, but each such Participant will receive a credit balance in the records of DTC in the amount of such Participant’s interest in the Series 2024 Bonds, which will be confirmed in accordance with DTC’s standard procedures. Each such person for which a Participant has an interest in the Series 2024 Bonds, as nominee, may desire to make arrangements with such Participant to have all notices of redemption or other communications of the Issuer to DTC, which may affect such person, forwarded in writing by such Participant and to have notification made of all interest payments.

The Issuer will have no responsibility or obligation to such Participants or the persons for whom they act as nominees with respect to payment to or providing of notice for such Participants or the persons for whom they act as nominees.

As used herein, the term “Beneficial Owner” shall hereinafter be deemed to include the person for whom the Participant acquires an interest in the Series 2024 Bonds.

DTC will receive payments from the Issuer, to be remitted by DTC to the Participants for subsequent disbursement to the Beneficial Owners. The ownership interest of each Beneficial Owner in the Series 2024 Bonds will be recorded on the records of the Participants whose ownership interest will be recorded on a computerized book-entry system kept by DTC.

When reference is made to any action which is required or permitted to be taken by the Beneficial Owners, such reference shall only relate to those permitted to act (by statute, regulation or otherwise) on behalf of such Beneficial Owners for such purposes. When notices are given, they shall be sent by the Issuer to DTC, and DTC shall forward (or cause to be forwarded) the notices to the Participants so that the Participants can forward the same to the Beneficial Owners.

Beneficial Owners will receive written confirmations of their purchases from the Participants acting on behalf of the Beneficial Owners detailing the terms of the Series 2024

Bonds acquired. Transfers of ownership interest in the Series 2024 Bonds will be accomplished by book entries made by DTC and the Participants who act on behalf of the Beneficial Owners. Beneficial Owners will not receive certificates representing their ownership interests in the Series 2024 Bonds, except as specifically provided herein. Interest and principal will be paid when due by the Issuer to DTC, then paid by DTC to the Participants and thereafter paid by the Participants to the Beneficial Owners

Section 9. Application of Loan Proceeds. The proceeds of the Loan (the “Loan Proceeds”) shall be applied or deposited as set forth in this Series Resolution, the Loan Agreement and the closing certificate of the Council dated the date of delivery of the Series 2024 Bonds. Any amounts set forth herein may be changed to conform to the final delivery requirements as set forth in the closing certificate of the Council.

A portion of the Loan Proceeds received from the sale of the Series 2024 Bonds (\$ _____ [include the rounding amount]) (the “Project Proceeds”) shall be deposited in a dedicated fund (the “Project Fund”), which is hereby created, to be used for the payment of costs of the Project, and to the extent that any such Project Proceeds remain after the full payment of the costs of the Project, such Project Proceeds shall be transferred to the Series 2024 Bond Sinking Fund for the payment of interest on the Series 2024 Bonds.

A portion of the Loan Proceeds (\$ _____) will be deposited in the Series 2024 Bond Debt Service Reserve Fund established in Section 14 herein.

A portion of the Loan Proceeds (\$ _____) (the “Cost of Issuance Proceeds”) shall be used for the payment of costs of issuance of the Series 2024 Bonds, and to the extent that Cost of Issuance Proceeds remain after the full payment of the costs of issuance of the Series 2024 Bonds, such Cost of Issuance Proceeds shall be transferred to the Series 2024 Bond Sinking Fund for the payment of interest on the Series 2024 Bonds.

A portion of the Loan Proceeds received from the sale of the Series 2024 Bonds (\$ _____) will be retained by the Underwriter as the Underwriter’s Discount.

[IF INSURANCE] A portion of the Loan Proceeds (\$ _____) received from the sale of the Series 2024 Bonds shall be used to pay the bond insurance premium to the Bond Insurer.

The City shall keep a detailed and segregated accounting of the expenditure of, and investment earnings on, the Loan Proceeds to ensure compliance with the requirements of the Internal Revenue Code, as hereinafter defined.

Section 10. Continuing Disclosure. The Securities and Exchange Commission (the “SEC”) has promulgated certain amendments to Rule 15c2-12 under the Securities Exchange Act of 1934 (17 C.F.R. § 240.15c2-12) (the “Rule”) that make it unlawful for an underwriter to participate in the primary offering of municipal securities in a principal amount of \$1,000,000 or more unless, before submitting a bid or entering into a purchase contract for the bonds, an underwriter has reasonably determined that the issuer or an obligated person has undertaken in writing for the benefit of the bondholders to provide certain disclosure information to prescribed information repositories on a continuing basis or unless and to the extent the offering is exempt from the requirements of the Rule.

On the date of issuance and delivery of the Series 2024 Bonds, the Issuer will execute and deliver a continuing disclosure certificate or agreement (the “Continuing Disclosure Certificate”) pursuant to which the Issuer will undertake to comply with the Rule. The Issuer covenants and agrees that it will comply with and carry out the provisions of the Continuing Disclosure Certificate. Any and all of the officers of the Issuer and the Utility are hereby authorized and directed to take any and all actions as may be necessary to comply with the Rule and the Continuing Disclosure Certificate.

Section 11. Ratification of Master Resolution. All provisions of the Master Resolution are hereby ratified and confirmed and are incorporated herein, and certain provisions thereof are modified as applicable to the Series 2024 Bonds as provided herein.

Section 12. Rates and Charges; Independent Consultant. There have heretofore been established as required by law, just and equitable fees, rates and charges for the use of the services rendered by the Utility. As provided in Section 6 of the Master Resolution, so long as the Series 2024 Bonds are outstanding and unpaid, the fees, rates and charges to consumers of services of the Utility shall be sufficient in each Fiscal Year for the payment of the Operating Expenses of the Utility and Debt Service Payments, and the maintenance of a Debt Service Coverage Ratio for each Fiscal Year equal to at least 1.25.

Section 13. Equality of Lien on Net Revenues. As provided in the Master Resolution, the timely payment of principal of and interest on the outstanding Series 2024 Bonds shall be secured equally and ratably with other Parity Obligations by the Net Revenues of the Utility without priority by reason of number or time of sale or delivery.

Section 14. Establishment of Funds; Series 2024 Bond Sinking Fund; Series 2024 Bond Debt Service Reserve Fund. The provisions of Section 5 of the Master Resolution provide for the establishment of the Revenue Fund, any Parity Obligation Sinking Funds, any Parity Obligation Debt Service Reserve Funds and any other required funds and accounts established in any Parity Obligation Issuance Documents, any required funds and accounts established in any Subordinated Obligation Issuance Documents, and for the application of the entire income and revenues of the Utility.

Series 2024 Bond Sinking Fund. From and after the issuance of the Series 2024 Bonds and as long as the Series 2024 Bonds are outstanding, the Issuer shall establish and maintain a separate fund to be known as the Series 2024 Bond Sinking Fund. The Issuer shall transfer amounts on deposit in the Revenue Fund into the Series 2024 Bond Sinking Fund for the payment of interest on and principal of the Series 2024 Bonds, on the 1st day of each month commencing on the 1st day of the month immediately succeeding the date of issuance and delivery of any of the Series 2024 Bonds in equal monthly amounts which, together with other monthly amounts made pursuant hereto, will be sufficient to pay principal of and interest on the Series 2024 Bonds due on the next succeeding date which principal of and/or interest on such Series 2024 Bonds are due and payable. If for any reason the amount on deposit in the Series 2024 Bond Sinking Fund exceeds the required amount, the excess shall be forthwith withdrawn therefrom by the Issuer and deposited into the Revenue Fund. If for any reason the amount on deposit in the Series 2024 Bond Sinking Fund is less than the required amount, the deficit shall forthwith be made up by the Issuer from available funds on deposit in the Revenue Fund as provided in Section 5 of the Master Resolution.

Money in the Series 2024 Bond Sinking Fund shall be used solely for the purpose of paying principal of and interest on the Series 2024 Bonds as the same may become due and payable.

Series 2024 Bond Debt Service Reserve Fund. As long as the Series 2024 Bonds are outstanding, the Issuer shall establish and maintain a separate fund to be known as the Series 2024 Bond Debt Service Reserve Fund which shall be maintained in the amount equal to the Series 2024 Reserve Fund Requirement. On the Closing Date, the Issuer shall deposit an amount equal to the Series 2024 Reserve Fund Requirement into the Series 2024 Bond Debt Service Reserve Fund; provided, however, that in lieu of maintaining and depositing moneys into the Series 2024 Bond Debt Service Reserve Fund, the City may hold in deposit in the Series 2024 Bond Debt Service Reserve Fund a letter of credit issued by a domestic or foreign bank or a debt service reserve fund insurance policy issued by a bond insurance company, in an amount equal to the Series 2024 Reserve Fund Requirement, such bank or bond insurance company, as the case may be, having a credit rating at the time of such delivery in one of the two highest rating categories by Moody's Investors Services, Inc., or S&P Global Ratings, a division of Standard and Poor's Financial Services LLC.

The Series 2024 Bonds shall be secured by all amounts on deposit in the Series 2024 Bond Debt Service Reserve Fund, and the Issuer may utilize the funds on deposit therein to pay debt service on the Series 2024 Bonds in the event of insufficient funds in the Series 2024 Bond Sinking Fund and the Revenue Fund.

If at any time the amount on deposit in the Series 2024 Bond Debt Service Reserve Fund is less than the Series 2024 Reserve Fund Requirement either because of a transfer therefrom or a valuation thereof as hereinafter provided, the Issuer shall restore the Series 2024 Bond Debt Service Reserve Fund to an amount equal to the Series 2024 Reserve Fund Requirement from the Net Revenues in not more than 12 substantially equal monthly payments commencing with the first day of the first month following the month in which the deficiency occurs (after first making the required payments under subparagraph (a) of Section 5 of the Master Resolution and on a parity with any required payments made to any other Parity Obligation Debt Service Reserve Funds under subparagraph (b) of Section 5 of the Master Resolution). The value of the Series 2024 Bond Debt Service Reserve Fund shall be determined by the Issuer at least annually. If for any reason the amount on deposit in the Series 2024 Bond Debt Service Reserve Fund exceeds the Series 2024 Reserve Fund Requirement on the date of valuation, the excess shall be transferred and paid into the Series 2024 Bond Sinking Fund.

The Series 2024 Bond Debt Service Reserve Fund only secures the payment of the Series 2024 Bonds.

The Series 2024 Bonds are not secured by the debt service reserve fund securing the Series 2019 Bonds.

Section 15. Investment of Funds. Moneys in any fund or account may be invested only in Qualified Investments (as defined in the Master Resolution) which at the time are authorized by the laws of the State of Iowa for the investment of public funds. All such investments shall mature before the date on which the moneys are required for the purposes for

which said fund was created or otherwise as herein provided. All funds of the Utility shall be invested in accordance with applicable provisions of Iowa law.

All income derived from such investments shall be credited to the fund from which such investments were made. Such investments shall at any time necessary be liquidated and the proceeds thereof applied to the purpose for which the respective fund was created.

Section 16. Covenants Regarding Operation of the Utility. Section 7 of the Master Resolution contains covenants relating to operation of the Utility, including without limitation maintenance, rates, insurance, accounting, fidelity bond, budget, and sale of the Utility. As provided in the Master Resolution, the Issuer shall comply with Section 7 of the Master Resolution.

Section 17. Restrictions on the Incurrence of Indebtedness as Parity Obligations and Subordinated Obligations. No bonds, notes or obligations of any kind or nature payable from or enjoying a lien or claim on the property or revenues of the Utility shall be issued having priority over any Parity Obligations. Section 9 of the Master Resolution contains the conditions by which the City may incur Indebtedness. The Issuer shall comply with Section 9 of the Master Resolution regarding the incurrence of Parity Obligations and Subordinate Obligations.

Section 18. Events of Default; Remedies. Except as herein expressly limited, the holder or holders of the Series 2024 Bonds shall have and possess all the rights of action and remedies afforded by the Master Resolution, this Series Resolution, the common law, the Constitution and statutes of the State of Iowa, and of the United States of America, for the enforcement of payment of their obligation, and of the pledge of the Net Revenues made hereunder and under the Master Resolution, and of all covenants of the Issuer hereunder, including but not limited to the right to a proceeding in law or in equity by suit, action or mandamus to enforce and compel performance of the duties required by Iowa law and this Series Resolution or to obtain the appointment of a receiver to take possession of or operate the Utility and to perform the duties required by Iowa law and this Series Resolution, the Master Resolution or employ the services of an Independent Consultant to assist in the management of the Utility. The holders of a majority in aggregate principal amount of the Parity Obligations then outstanding under the Master Resolution shall have the right to direct the method and place of conducting all proceedings to be taken in connection with the enforcement of the terms and conditions of this Section.

Section 19. Additional Covenants, Representations and Warranties of the Issuer; Disposition of Proceeds; Bank Qualification. The Issuer certifies and covenants that the Issuer through its officers, will (a) make such further specific covenants, representations and assurances as may be necessary or advisable; (b) file such forms, statements and supporting documents as may be required and in a timely manner; (c) if deemed necessary or advisable by its officers, employ and pay fiscal agents, financial advisors, attorneys and other persons to assist the Issuer in such compliance; and (d) it is the intention of the City that interest on the Series 2024 Bonds be and remain excluded from gross income for federal income tax purposes pursuant to the appropriate provisions of the Internal Revenue Code of 1986, as amended, and the Treasury Regulations in effect with respect thereto (all of the foregoing herein referred to as the "Internal Revenue Code"). In furtherance thereof the City covenants to comply with the provisions of the Internal Revenue Code as they may from time to time be in effect or amended and further

covenants to comply with applicable future laws, regulations, published rulings and court decisions as may be necessary to insure that the interest on the Series 2024 Bonds will remain excluded from gross income for federal income tax purposes. Any and all of the officers of the City and the Utility are hereby authorized and directed to take any and all actions as may be necessary to comply with the covenants herein contained.

The Issuer does not designate the Series 2024 Bonds as “Qualified Tax Exempt Obligations” as that term is used in Section 265(b)(3)(B) of the Internal Revenue Code.

Section 20. Discharge and Satisfaction of Series 2024 Bonds. The covenants, liens and pledges entered into, created or imposed pursuant to this Series Resolution may be fully discharged and satisfied with respect to the Series 2024 Bonds in any one or more of the following ways:

(a) By paying the Series 2024 Bonds when the same shall become due and payable; or

(b) By depositing in trust with an escrow agent designated by the Council (the “Escrowed Amounts”), for the payment of the Series 2024 Bonds and irrevocably appropriated exclusively to that purpose an amount in cash or United States Government Obligations (as defined in the Master Resolution) the maturities and income of which shall be sufficient to retire at maturity, or by prepayment prior to maturity on a designated date upon which the Series 2024 Bonds may be prepaid, the Series 2024 Bonds, together with the interest thereon to maturity or to the designated prepayment date, premiums thereon, if any, that may be payable on the prepayment date of the Series 2024 Bonds to be prepaid shall have been previously published or provisions shall have been made for such publications.

Upon such payment or deposit of money or United States Government Obligations, or both, in the amount and manner provided by this section, all liability of the Issuer with respect to the Series 2024 Bonds for which such deposits have been made shall cease, determine and be completely discharged, and the holders thereof shall be entitled only to payment out of the money or United States Government Obligations so deposited.

Section 21. Resolution a Contract. The provisions of this Series Resolution shall constitute a contract among the Issuer and the owners of the Series 2024 Bonds, and after the issuance of the Series 2024 Bonds, no change, variation or alteration of any kind in the provisions of this Series Resolution shall be made in any manner, except as provided in Section 22 or Section 23 hereof, until such time as the Series 2024 Bonds, and interest due thereon, shall have been satisfied and discharged as provided in this Series Resolution.

Section 22. Modification of Resolution Not Requiring the Consent of Owners of Series 2024 Bonds. For any one or more of the following purposes, without the consent of or notice to the owners of the Series 2024 Bonds, and at any time or from time to time this Series Resolution may be amended, modified or supplemented by the Issuer:

(a) to cure any ambiguity or formal defect or omission in this Series Resolution;

(b) to grant to or confer for the benefit of the owners of the Series 2024 Bonds any additional rights, remedies, powers or authority that may lawfully be granted to or conferred upon the owners of the Series 2024 Bonds; provided such additional rights, remedies, powers or authority do not adversely affect the rights of any Parity Obligation Holder;

(c) to assign and pledge under this Series Resolution additional revenues, properties or collateral;

(d) to provide for the refunding of the Series 2024 Bonds if and to the extent permitted under the Master Resolution and any applicable Obligation Issuance Documents; or

(e) to make any other change that does not materially adversely affect the rights of any of the owners of the Series 2024 Bonds.

Section 23. Modification of Series Resolution Requiring Consent of Owners of Series 2024 Bonds. In addition to amendments to this Series Resolution authorized by Section 22 hereof, this Series Resolution may be amended from time to time if such amendment shall have been consented to by a majority of the owners of the Series 2024 Bonds; provided, however, that this Series Resolution may not be so modified or amended in any of the following without 100% consent of the owners of the Series 2024 Bonds:

a. make any change in the maturity or redemption terms of the Series 2024 Bonds;

b. make any change in the rate of interest borne by the Series 2024 Bonds;

c. reduce the amount of the principal payable on any Series 2024 Bonds;

d. modify the terms of payment of principal of or interest on the Series 2024 Bonds, or impose any conditions with respect to such payment;

e. affect the rights of the owners of less than all of the Series 2024 Bonds then outstanding; or

f. reduce the percentage of the principal amount of the Outstanding Series 2024 Bonds, the consent of the owners of which shall be required to effect a further modification.

Whenever the Issuer shall propose to amend or modify this Series Resolution under the provisions of this Section, it shall cause notice of the proposed amendment to be mailed to each of the owners of the Series 2024 Bonds at the addresses appearing on the registration books. Such notice shall briefly set forth the nature of the proposed amendment and shall state that a copy of the proposed amendatory resolution is on file in the office of the City Clerk.

Except for amendments requiring 100% consent of the owners as provided herein, if the owners of at least a majority in aggregate principal amount of the Series 2024 Bonds outstanding at the time of the adoption of such amendatory resolution shall have consented to and approved

the adoption thereof as herein provided, no owner of the Series 2024 Bonds shall have any right or interest to object to the adoption of such amendatory resolution or to object to any of the terms or provisions therein contained or to the operation thereof or to enjoin or restrain the Issuer from taking any action pursuant to the provisions thereof.

Any consent given by the owners of a Series 2024 Bonds pursuant to the provisions of this section shall be irrevocable.

The fact and date of the execution of any instrument under the provisions of this section may be proved by the certificate of any officer in any jurisdiction who by the laws thereof is authorized to take acknowledgments of deeds within such jurisdiction, that the persons signing such instrument acknowledged before him the execution thereof, or may be proved by an affidavit of a witness to such execution sworn to before such officer.

Section 24. Conflicting Provisions. All resolutions and orders or parts thereof in conflict with the provisions of this resolution are, to the extent of such conflict, hereby repealed.

Section 25. Effective Date. This Series Resolution shall be in full force and effect immediately upon its adoption and approval, as provided by law.

Section 26. Severability. If any section, paragraph, or provision of this Series Resolution shall be held to be invalid or unenforceable for any reason, the invalidity or unenforceability of such section, paragraph or provision shall not affect any of the remaining provisions.

Adopted and approved this _____, 2024.

Mayor

Attest:

City Clerk

STATE OF IOWA
COUNTY OF HAMILTON
CITY OF WEBSTER CITY

SS:

I, the undersigned, do hereby certify that I have in my possession or have access to the complete corporate records of the City and of its City Council and officers and that I have carefully compared the transcript hereto attached with the aforesaid corporate records and that the transcript hereto attached is a true, correct and complete copy of all the corporate records in relation to the authorization and approval of a certain Loan Agreement and the issuance of \$ _____ Electric Revenue Bonds, Series 2024 of the City evidencing the City's obligation under the Loan Agreement and that the transcript hereto attached contains a true, correct and complete statement of all the measures adopted and proceedings, acts and things had, done and performed up to the present time with respect thereto.

I further certify that no appeal has been taken to the District Court from the decision of the City Council to enter into the Loan Agreement or to issue the Series 2024 Bonds.

WITNESS MY HAND this ____ day of _____, 2024.

City Clerk

STATE OF IOWA
COUNTY OF HAMILTON
CITY OF WEBSTER CITY

SS:

I, the undersigned, City Clerk of the City of Webster City, Iowa, do hereby certify that the City did heretofore establish a Municipal Electric Utility System (hereinafter referred to as the “Utility”), that the management and control of the Utility are vested in the City Council of the City, and that no board of trustees exists which has any part of the control and management of such Utility.

I further certify that there is not pending or threatened any question or litigation whatsoever touching the establishment, improvement or operation of such Utility and that there are no bonds or other obligations of any kind now outstanding which are payable from or constitute a lien upon the revenues derived from the operation of such Utility, except for the Series 2024 Bonds currently being issued by the City.

WITNESS MY HAND this _____ day of _____, 2024.

City Clerk

EXHIBIT A

Form of Series 2024 Bond

UNITED STATES OF AMERICA
STATE OF IOWA
COUNTY OF HAMILTON
CITY OF WEBSTER CITY

ELECTRIC REVENUE BOND, SERIES 2024

No. _____				\$ _____
	RATE	MATURITY DATE	BOND DATE	CUSIP
	_____ %	May 1, _____	[June 5, 2024]	56036 _____

The City of Webster City (the “City”), in Hamilton County, State of Iowa, for value received, promises to pay on the maturity date of this Bond to

Cede & Co.
New York, New York

or registered assigns, the principal sum of

THOUSAND DOLLARS

in lawful money of the United States of America upon presentation and surrender of this Bond at the office of UMB Bank, n.a., West Des Moines, Iowa (hereinafter referred to as the “Registrar” or the “Paying Agent”) with interest on said sum, until paid, at the rate per annum specified above from the date of this Bond, or from the most recent interest payment date on which interest has been paid, on May 1 and November 1 of each year, commencing November 1, 2024, except as the provisions hereinafter set forth with respect to redemption prior to maturity may be or become applicable hereto. Interest on this Bond is payable to the registered owner appearing on the registration books of the City at the close of business on the fifteenth day of the month next preceding the interest payment date, and shall be paid to the registered owner at the address shown on such registration books. Interest shall be calculated on the basis of a 360-day year comprised of twelve 30-day months.

This Bond shall not be valid or become obligatory for any purpose until the Certificate of Authentication hereon shall have been signed by the Registrar.

This Bond and the series of which it is a part (the “Series 2024 Bonds”) are issued by the City pursuant to and in strict compliance with the provisions of Chapter 384 of the Code of Iowa, and all other laws amendatory thereof and supplemental thereto, and in conformity with a master bond resolution of the City Council (the “Master Resolution”), adopted on April 16, 2012, as amended from time to time, a series bond resolution (the “Series Resolution”), adopted on _____, 2024, and a loan agreement (the “Loan Agreement”) between the Issuer and the Underwriter (as defined in the Series Resolution) for the purpose of paying the cost, to that extent, of constructing improvements to the Municipal Electric Utility System (the “Utility”) of the City.

The Series 2024 Bonds, together with the Series 2019 Bonds (as defined in the Series Resolution) and any other Parity Obligations (as defined in the Master Resolution) issued and outstanding from time

to time ranking on a parity with the Series 2024 Bonds, are limited obligations of the City payable solely from the future Net Revenues (as defined in the Master Resolution) of the Utility and, with respect to the Series 2024 Bonds, the amounts on deposit in the funds and accounts held by the City under the Series Resolution. The Series 2024 Bonds and the interest thereon are not payable in any manner by taxation and do not constitute a general obligation of the City. The City shall not be liable by reason of the failure of the Net Revenues to be sufficient for the payment of the Series 204 Bonds.

Reference is hereby made to the Master Resolution, the Series Resolution and the Loan Agreement for a more complete statement as to the source of payment of the Series 2024 Bonds, a description of the rights, duties and obligations of the City, the Registrar, the Paying Agent and the Owners of the Series 2024 Bonds, the terms upon which the Series 2024 Bonds are issued and the terms and conditions upon which the Series 2024 Bonds will be paid at or prior to maturity, or will be deemed to be paid upon the making of provision for payment. Any capitalized term used in this Bond but not defined in this Bond is used with the meaning set forth in the Master Resolution, the Series Resolution and the Loan Agreement.

The City reserves the right to optionally prepay part or all of the Series 2024 Bonds maturing on May 1 in each of the years [2033 to 2043], inclusive, prior to and in any order of maturity on May 1, [2032], or on any date thereafter upon terms of par and accrued interest. If less than all of the Series 2024 Bonds of any like maturity are to be redeemed, the particular part of those Series 2024 Bonds to be redeemed shall be selected by the Registrar by lot. The Series 2024 Bonds may be called in part in one or more units of \$5,000.

[IF TERM BONDS] Principal of the Series 2024 Bonds maturing on May in the years [] is subject to mandatory redemption (by lot, as selected by the Registrar) on May 1 in each of the years [], respectively, in accordance with the mandatory redemption schedules set forth in the Resolution at a redemption price of 100% of the principal amount thereof to be redeemed, plus accrued interest thereon to the redemption date

If less than the entire principal amount of any Series 2024 Bond in a denomination of more than \$5,000 is to be redeemed, the Registrar will issue and deliver to the registered owner thereof, upon surrender of such original Series 2024 Bond, a new Series 2024 Bond or Bonds, in any authorized denomination, in a total aggregate principal amount equal to the unredeemed balance of the original Series 2024 Bond. Notice of such redemption as aforesaid identifying the Series 2024 Bond or Bonds (or portion thereof) to be redeemed shall be sent by electronic means or by certified mail to the registered owners thereof at the addresses shown on the City's registration books not less than 30 days prior to such redemption date. All of such Series 2024 Bonds as to which the City reserves and exercises the right of redemption and as to which notice as aforesaid shall have been given and for the redemption of which funds are duly provided, shall cease to bear interest on the redemption date.

This Bond is fully negotiable but shall be fully registered as to both principal and interest in the name of the owner on the books of the City in the office of the Registrar, after which no transfer shall be valid unless made on said books and then only upon presentation of this Bond to the Registrar, together with either a written instrument of transfer satisfactory to the Registrar or the assignment form hereon completed and duly executed by the registered owner or the duly authorized attorney for such registered owner.

The City, the Registrar and the Paying Agent may deem and treat the registered owner hereof as the absolute owner for the purpose of receiving payment of or on account of principal hereof, premium, if any, and interest due hereon and for all other purposes, and the City, the Registrar and the Paying Agent shall not be affected by any notice to the contrary.

And It Is Hereby Certified, Recited and Declared that all acts, conditions and things required to exist, happen and be performed precedent to and in the issuance of the Series 2024 Bonds have existed, have happened and have been performed in due time, form and manner, as required by law, and that the issuance of the Series 2024 Bonds does not exceed or violate any constitutional or statutory limitation or provision.

IN TESTIMONY WHEREOF, the City of Webster City, Iowa, by its City Council, has caused this Bond to be executed with the duly authorized facsimile signature of its Mayor and attested with the duly authorized facsimile signature of the City Clerk, all as of Bond Date.

CITY OF WEBSTER CITY, IOWA

By _____
Mayor

Attest:

City Clerk

Registration Date: Bond Date

REGISTRAR'S CERTIFICATE OF AUTHENTICATION

This Bond is one of the Bonds described in the within-mentioned Resolution.

UMB Bank, n.a.
West Des Moines, Iowa
Registrar

Authorized Officer

[STATEMENT OF INSURANCE]

[INSERT INSURANCE]

STATE OF IOWA
COUNTY OF HAMILTON SS: CITY TREASURER'S CERTIFICATE
CITY OF WEBSTER CITY

The original issuance of the Series 2024 Bonds, of which this Bond is a part, was duly and properly recorded in my office as of the Bond Date.

(Facsimile Signature)

City Treasurer, Webster City, Iowa

ABBREVIATIONS

The following abbreviations, when used in this Bond, shall be construed as though they were written out in full according to applicable laws or regulations:

TEN COM	-	as tenants in common	UTMA	_____
				(Custodian)
TEN ENT	-	as tenants by the entireties	As Custodian for	_____
TEN	-	as joint tenants with		(Minor)
		right of survivorship and	under Uniform Transfers to Minors Act	
		not as tenants in common		_____
				(State)

Additional abbreviations may also be used though not in the list above.

ASSIGNMENT

For valuable consideration, receipt of which is hereby acknowledged, the undersigned assigns this Bond to

(Please print or type name and address of Assignee)

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE

and does hereby irrevocably appoint _____, Attorney, to transfer this Bond on the books kept for registration thereof with full power of substitution.

Dated: _____

Signature guaranteed:

Signature(s) must be guaranteed by an eligible guarantor institution which is a member of a recognized signature guarantee program.

NOTICE: The signature to this Assignment must correspond with the name of the registered owner as it appears on this Bond in every particular, without alteration or enlargement or any change whatever.

LOAN AGREEMENT

This Loan Agreement is entered into as of June __, 2024, by and between the City of Webster City, Iowa (the "City"), and [] (the "Purchaser"). The parties agree as follows:

1. The Purchaser shall loan to the City the sum of \$ _____, and the City's obligation to repay hereunder shall be evidenced by the issuance of Electric Revenue Bonds, Series 2024, in the aggregate principal amount of \$ _____ (the "Bonds").

2. City Council has adopted a certain master bond resolution on April 16, 2012 (as amended from time to time, the "Master Resolution") and a certain series resolution on [May 20, 2024] related to the Bonds (the "Series Resolution" and, together with the Master Resolution, the "Resolutions") authorizing and approving this Loan Agreement and providing for the issuance and securing the payment of the Bonds. The Resolutions are incorporated herein by reference, and the parties agree to abide by the terms and provisions of the Resolutions. The Bonds and the interest thereon, together with the outstanding Series 2019 Bonds (as defined in the Series Resolution) and any other future Parity Obligations (as defined in the Master Resolution), shall be payable solely and only out of the future Net Revenues (as defined in the Master Resolution) of the Municipal Electric Utility System of the City, a sufficient portion of which has been ordered set aside and pledged for such purpose under the provisions of the Resolutions, and from certain funds established in the Resolutions and pledged to the payment thereof.

3. The loan proceeds (the "Loan Proceeds") shall be used for the purposes set forth in the Series Resolution. Any remaining Loan Proceeds, including accrued interest, if any, shall be deposited in the Series 2024 Bond Sinking Fund (as defined in the Series Resolution) and shall be held therein and used, along with other amounts on deposit in such fund, to pay interest due on the Bonds on the first interest payment date.

4. The Bonds, in substantially the form set forth in the Series Resolution, shall be executed and delivered to or on behalf of the Purchaser to evidence the City's obligation to repay the amounts payable hereunder. The Bonds shall be dated the date of delivery, shall be in denominations of \$5,000 or integral multiples thereof, shall bear interest, shall be payable as to principal on the dates and in the amounts, shall be subject to prepayment prior to maturity and shall contain such other terms and provisions as provided in the Bonds and the Series Resolution.

5. Neither this Loan Agreement nor any of the Bonds shall constitute a general obligation of the City, nor be payable by taxation, and under no circumstances shall the City be in any manner liable by reason of the failure of the aforesaid Net Revenues to be sufficient to pay the Bonds and the interest thereon or to otherwise discharge the City's obligation hereunder.

6. This Loan Agreement is executed pursuant to the provisions of Section 384.24A of the Code of Iowa and shall be read and construed as conforming to all provisions and requirements of the statute.

IN WITNESS WHEREOF, we have hereunto affixed our signatures all as of the date first above written.

CITY OF WEBSTER CITY, IOWA

By _____
Mayor

Attest:

City Clerk

[PURCHASER]

By _____
(Signature)

(Print Name and Title)

REGISTRAR / PAYING AGENT AGREEMENT

THIS AGREEMENT is made and entered into this June 5, 2024 (the “Dated Date”) by and between the City of Webster City, Iowa, hereinafter called “ISSUER”, and UMB Bank, n.a., a national banking association with its principal payment office in Kansas City, Missouri, in its capacity as paying agent and registrar, hereinafter called the “AGENT”.

WHEREAS, the ISSUER has issued, or is currently in the process of issuing, pursuant to an ordinance, resolution, order, final terms certificate, notice of sale or other authorizing instrument of the governing body of the ISSUER, hereinafter collectively called the “Bond Document” certain bonds, certificates, notes and/or other debt instruments, more particularly described as \$8,410,000 Electric Revenue Bonds, Series 2024 hereinafter called the “Bonds”; and

WHEREAS, pursuant to the Bond Document, the ISSUER has designated and appointed the AGENT as agent to perform registrar and paying agent services, to wit: establishing and maintaining a record of the owners of the Bonds, effecting the transfer of ownership of the Bonds in an orderly and efficient manner, making payments of principal and interest when due pursuant to the terms and conditions of the Bonds, and for other related purposes; and

WHEREAS, the AGENT has represented that it possesses the necessary qualifications and maintains the necessary facilities to properly perform the required services as such registrar and paying agent and is willing to serve in such capacities for the ISSUER;

NOW THEREFORE, in consideration of mutual promises and covenants herein contained the parties agree as follows:

1. The ISSUER has designated and appointed the AGENT as registrar and paying agent of the Bonds pursuant to the Bond Document, and the AGENT has accepted such appointment and agrees to provide the services set forth therein and herein.
2. The ISSUER agrees to deliver or cause to be delivered to the AGENT a transcript of the proceedings related to the Bonds to contain the following documents:
 - a) A copy of the Bond Document, and the consent or approval of any other governmental or regulatory authority, required by law to approve or authorize the issuance of the Bonds;
 - b) A written opinion by an attorney or by a firm of attorneys with a nationally recognized standing in the field of municipal bond financing, and any supporting or supplemental opinions, to the effect that the Bonds and the Bond Document have been duly authorized and issued by, are legally binding upon and are enforceable against the ISSUER;
 - c) A closing certificate of the ISSUER, a closing certificate and/or receipt of the purchaser(s) of the Bonds, and such other documents related to the issuance of the Bonds as the Agent reasonably deems necessary or appropriate; and
 - d) Unless Paragraph 20 hereof is applicable, in addition to the transcript of proceedings a reasonable supply of blank Bond certificates bearing the manual or facsimile signatures of

officials of the ISSUER authorized to sign certificates and, if required by the Bond Document, impressed with the ISSUER's seal or facsimile thereof, to enable the AGENT to provide Bond Certificates to the holders of the Bonds upon original issuance or the transfer thereof.

The foregoing documents may be subject to the review and approval of legal counsel for the AGENT. Furthermore, the ISSUER shall provide to the AGENT prompt written notification of any future amendment or change in respect of any of the foregoing, together with such documentation as the AGENT reasonably deems necessary or appropriate.

3. Unless Paragraph 20 hereof is applicable, Bond certificates provided by the ISSUER shall be printed in a manner to minimize the possibility of counterfeiting. This requirement shall be deemed satisfied by use of a certificate format meeting the standard developed by the American National Standards Committee or in such other format as the AGENT may accept by its authentication thereof. The AGENT shall have no responsibility for the form or contents of any such certificates. The ISSUER shall, while any of the Bonds are outstanding, provide a reasonable supply of additional blank certificates at any time upon request of the AGENT. All such certificates shall satisfy the requirements set forth in Paragraphs 2(d) and 3.

4. The AGENT shall initially register and authenticate, pursuant to instructions from the ISSUER and/or the initial purchaser(s) of the Bonds, one or more Bonds and shall enter into a Bond registry record the certificate number of the Bond and the name and address of the owner. The AGENT shall maintain such registry of owners of the Bonds until all the Bonds have been fully paid and surrendered. The initial owner of each Bond as reflected in the registry of owners shall not be changed except upon transfers of ownership and in accordance with procedures set forth in the Bond Document or this Agreement.

5. Transfers of ownership of the Bonds shall be made by the AGENT as set forth in the Bond Document. Absent specific guidelines in the Bond Document, transfers of ownership of the Bonds shall be made by the AGENT only upon delivery to the AGENT of a properly endorsed Bond or of a Bond accompanied by a properly endorsed transfer instrument, accompanied by such documents as the AGENT may deem necessary to evidence the authority of the person making the transfer, and satisfactory evidence of compliance with all applicable laws relating to the collection of taxes. The AGENT reserves the right to refuse to transfer any Bond until it is satisfied that each necessary endorsement is genuine and effective, and for that purpose it may require guarantees of signatures in accordance with applicable rules of the Securities and Exchange Commission and the standards and procedures of the AGENT, together with such other assurances as the AGENT shall deem necessary or appropriate. The AGENT shall incur no liability for delays in registering transfers as a result of inquiries into adverse claims or for the refusal in good faith to make transfers which it, in its judgment, deems improper or unauthorized. Upon presentation and surrender of any duly registered Bond and satisfaction of the transferability requirements, the AGENT shall (a) cancel the surrendered Bond; (b) register a new Bond(s) as directed in the same aggregate principal amount and maturity; (c) authenticate the new Bond(s); and (d) enter the transferee's name and address, together with the certificate number of the new Bond(s), in its registry of owners.

6. The AGENT may deliver Bonds by first class, certified, or registered mail, or by courier.

7. Ownership of, payment of the principal amount of, redemption premium, if any, and interest due on the Bonds and delivery of notices shall be subject to the provisions of the Bond Document, and for all other purposes. The AGENT shall have no responsibility to determine the beneficial owners of any Bonds and shall owe no duties to any such beneficial owners. Upon written request and reasonable notice from the ISSUER, the AGENT will mail, at the ISSUER's expense, notices or other communications from the ISSUER to the holders of the Bonds as recorded in the registry maintained by the AGENT.

8. Unless the Bond Document provides otherwise, the ISSUER shall, without notice from or demand of the AGENT, provide to the AGENT funds that are immediately available at least one business day prior to the relevant interest and/or principal payment date, sufficient to pay on each interest payment date and each principal payment date, all interest and principal then payable under the terms and provisions of the Bond Document and the Bonds. The AGENT shall have no responsibility to make any such payments to the extent ISSUER has not provided sufficient immediately available funds to AGENT on the relevant payment date. Unless the Bond Document provides otherwise, in the event that an interest and/or principal payment date shall be a date that is not a business day, payment may be made on the next succeeding business day and no interest shall accrue. The term "business day" shall include all days except Saturdays, Sundays and legal holidays recognized by the Federal Reserve Bank of Kansas City, Missouri.

9. Unless otherwise provided in the Bond Document and subject to the provisions of Paragraph 12 hereof, to the extent that the ISSUER has made sufficient funds available to it, the AGENT will pay to the record owners of the Bonds as of any record date (as specified in the Bond certificate or Bond Document) the interest due thereon as of the related interest payment date or any redemption date and, will pay upon presentation and surrender of such Bond at maturity or earlier date of redemption to the owner of any Bond, the principal or redemption amount of such Bond.

10. The AGENT may make a charge against any Bond owner sufficient for the reimbursement of any governmental tax or other charge required to be paid for any reason, including, but not limited to, failure of such owner to provide a correct taxpayer identification number to the AGENT. Such charge may be deducted from an interest or principal payment due to such owner.

11. Unless payment of interest, principal, and redemption premium, if any, is made by electronic transfer all payments will be made by check or draft and mailed to the last address of the owner as reflected on the registry of owners, or to such other address as directed in writing by the owner. In the event of payment of interest, the principal amount of and redemption premium, if any, by electronic transfer, the AGENT shall make payment by such means, at the expense of the ISSUER, pursuant to written instructions from the owner.

12. Subject to the provisions of the Bond Document, the AGENT may pay at maturity or redemption or issue new certificates to replace certificates represented to the AGENT to have been lost, destroyed, stolen or otherwise wrongfully taken, but first may require the Bond owner to pay a replacement fee, to furnish an affidavit of loss, and/or furnish either an indemnity bond or other indemnification satisfactory to the AGENT indemnifying the ISSUER and the AGENT.

13. The AGENT shall comply with the provisions, if any, of the Bond Document and the rules of the Securities and Exchange Commission pertaining to the cancellation and retention of Bond certificates and the periodic certification to the Issuer of the cancellation of such Bond certificates. In the event that the ISSUER requests in writing that the AGENT forward to the ISSUER the cancelled Bond certificates, the ISSUER agrees to comply with the foregoing described rules. The AGENT shall have no duty to retain any documents or records pertaining to this Agreement, the Bond Document or the Bonds any longer than eleven years after final payment on the Bonds, unless otherwise required by the rules of the Securities and Exchange Commission or other applicable law.

14. In case of any request or demand for inspection of the registry of owners or other related records maintained by the AGENT, the AGENT may be entitled to receive appropriate instructions from the ISSUER before permitting or refusing such inspection. The AGENT reserves the right, however, to only permit such inspection at a location and at such reasonable time or times designated by the Agent.

15. The AGENT is authorized to act on the order, directions or instructions of such officials as the governing body of ISSUER as the ISSUER by resolution or other proper action shall designate. The AGENT shall be protected in acting upon any paper or document believed by it to be genuine and to have been signed by the proper official(s), and the ISSUER shall promptly notify AGENT in writing of any change in the identity or authority of officials authorized to sign Bond certificates, written instructions or requests. If not so provided in the Bond Document, if any official whose manual or facsimile signature appears on blank Bond certificates shall die, resign or be removed from office or authority before the authentication of such certificates by the Agent, the AGENT may nevertheless issue such certificates until specifically directed to the contrary in writing by the ISSUER.

16. The AGENT shall provide notice(s) to the owners of the Bonds and such depositories, banks, brokers, rating agencies, information services, repositories, or publications as required by the terms of the Bond Document and to any other entities that request such notice(s) and, if so directed in such other manner and to such other parties as the Issuer shall so direct in writing and at the expense of the ISSUER.

17. The ISSUER shall compensate the AGENT for the AGENT's ordinary services as paying agent and registrar and shall reimburse the AGENT for all ordinary out-of-pocket expenses, charges, advances, counsel fees and other costs incurred in connection with the Bonds, the Bond Document and this Agreement as set forth in the Exhibit A or as otherwise agreed to by the Issuer and Agent in writing. In addition, should it become necessary for the AGENT to perform extraordinary services, the AGENT shall be entitled to extra compensation therefor and reimbursement for any out-of-pocket extraordinary costs and expenses, including, but not limited to, attorneys' fees.

18. The AGENT may resign, or be removed by the ISSUER, as provided in the Bond Document, or, if not so provided in the Bond Document, upon thirty days written notice to the other. Upon the effective date of resignation or removal, all obligations of the AGENT hereunder shall cease and terminate. In the event of resignation or removal, the AGENT shall deliver the registry of owners and all related books and records in accordance with the written instructions of the ISSUER or any successor agent designated in writing by the Issuer within a reasonable period following the effective date of its removal or resignation.

19. Whenever in the performance of its duties as Agent hereunder, the Bond Document or under the Bonds the AGENT shall deem it desirable that a matter be proved or established prior to taking, suffering or omitting any action hereunder, under the Bond Document or under the Bonds, the AGENT may consult with legal counsel, including, but not limited to, legal counsel for the ISSUER, with respect to any matter in connection with this Agreement and it shall not be liable for any action taken or omitted by it in good faith in reliance upon the advice or opinion of such counsel.

20. In the event that the Bond Document provides that the initial registered owner of all of the Bond certificates is or may be the Depository Trust Company, or any other securities depository or registered clearing agency qualified under the Securities and Exchange Act of 1934, as amended (a "Securities Depository"), none of the beneficial owners will receive certificates representing their respective interest in the Bonds. Except to the extent provided otherwise in the Bond Document, the following provisions shall apply:

- a) The registry of owners maintained by the AGENT will reflect as owner of the Bonds only the Securities Depository or its nominee, until and unless the ISSUER authorizes the delivery of Bond certificates to the beneficial owners as described in subsection (d) below.
- b) It is anticipated that during the term of the Bonds, the Securities Depository will make book-entry transfers among its participants and receive and transmit payments of principal and interest on the Bonds to the participants, unless and until the ISSUER authorizes the delivery of Bonds to the beneficial owners as described in subsection (d) below.
- c) The ISSUER may at any time, in accordance with the Bond Document, select and appoint a successor Securities Depository and shall notify the Agent of such selection and appointment in writing.
- d) If the ISSUER determines that the holding of the Bonds by the Securities Depository is no longer in the best interests of the beneficial owners of the Bonds, then the AGENT, at the written instruction and expense of the ISSUER, shall notify the beneficial owners of the Bonds by first class mail of such determination and of the availability of certificates to owners requesting the same. The AGENT shall register in the names of and authenticate and deliver certificates representing their respective interests in the Bonds to the beneficial owners or their nominees, in principal amounts and maturities representing the interest of each, making such adjustments as it may find necessary or appropriate as to accrued interest and previous calls for redemption. In such event, all references to the Securities Depository herein shall relate to the period of time when at least one Bond is registered in the name of the Securities Depository or its nominee. For the purposes of this paragraph, the AGENT may conclusively rely on information provided by the Securities Depository and its participants as to principal amounts held by and the names and mailing addresses of the beneficial owners of the Bonds, and shall not be responsible for any investigation to determine the beneficial owners. The cost of printing certificates for the Bonds and expenses of the AGENT shall be paid by the ISSUER.

21. The AGENT shall incur no liability whatsoever in taking or failing to take any action in accordance with the Bond Document, and shall not be liable for any error in judgment made in good faith by an officer or employee of the AGENT unless it shall be proved the AGENT was negligent in ascertaining the pertinent facts or acted intentionally in bad faith. The AGENT shall not be under any

obligation to prosecute or defend any action or suit in connection with its duties under the Bond Document or this Agreement or in respect of the Bonds, which, in its opinion, may involve it in expense or liability, unless satisfactory security and indemnity is furnished to the Agent (except as may result from the AGENT's own negligence or willful misconduct). To the extent permitted by law, the ISSUER agrees to indemnify the AGENT for, and hold it harmless against, any loss, liability, or expense incurred without negligence or bad faith on its part, arising out of or in connection with its acceptance or administration of its duties hereunder, including the cost and expense against any claim or liability in connection with the exercise or performance of any of its powers or duties under this Agreement. To the extent that the ISSUER may now or hereafter be entitled to claim, for itself or its assets, immunity from suit, execution, attachment (before or after judgment) or other legal process, the ISSUER irrevocably agrees not to claim, and it hereby waives, such immunity in connection with any suit or other action brought by the AGENT to enforce the terms of the Bond Document or this Agreement. The AGENT shall only be responsible for performing such duties as are set forth herein, required by the Bond Document, or otherwise agreed to in writing by the AGENT.

22. It is mutually understood and agreed that, unless otherwise provided in the Bonds or Bond Document, this Agreement shall be governed by the laws of the State of Iowa, both as to interpretation and performance.

23. It is understood and agreed by the parties that if any part, term, or provision of this Agreement is held by the courts to be illegal or in conflict with any applicable law, regulation or rule, the validity of the remaining portions or provisions shall not be affected, and the rights and obligations of the parties shall be construed and enforced as if the Agreement did not contain the particular part, term, or provision held to be invalid.

24. The name "UMB Bank, n.a." shall include its successor or successors, any surviving corporation into which it may be merged, any new corporation resulting from its consolidation with any other corporation or corporations, the successor or successors of any such surviving or new corporation, and any corporation to which the corporate trust business of said Bank may at any time be transferred.

25. All notices, demands, and request required or permitted to be given to the ISSUER or AGENT under the provisions hereof must be in writing and shall be deemed to have been sufficiently given, upon receipt if (i) personally delivered, (ii) sent by email or electronic means and confirmed by phone or (iii) mailed by registered or certified mail, with return receipt requested, delivered as follows:

If to AGENT: UMB Bank, n.a.
Attn: Corporate Trust & Escrow Services
7155 Lake Drive, Suite 120
West Des Moines, Iowa 50266

If to ISSUER: City of Webster City, Iowa
Attn: City Clerk
City Hall
400 Second Street
PO Box 217
Webster City, Iowa 50595-2017

26. The parties hereto agree that the transactions described herein may be conducted and related documents may be sent, received or stored by electronic means. Copies, telecopies, facsimiles, electronic files and other reproductions of original executed documents shall be deemed to be authentic and valid counterparts of such original documents for all purposes, including the filing of any claim, action or suit in the appropriate court of law.

27. In order to comply with provisions of the USA PATRIOT Act of 2001, as amended from time to time, and the Bank Secrecy Act, as amended from time to time, the AGENT may request certain information and/or documentation to verify confirm and record identification of persons or entities who are parties to this Agreement.

28. If the Bonds are eligible for receipt of any U.S. Treasury Interest Subsidy and if so directed by the Bond Document or, as agreed to in writing between the Issuer and the Paying Agent, the Paying Agent shall comply with the provisions, if any, relating to it as described in the Bond Document or as otherwise agreed upon in writing between the Issuer and the Paying Agent. The Paying Agent shall not be responsible for completion of or the actual filing of Form 8038-CP (or any successor form) with the IRS or any payment from the United States Treasury in accordance with §§ 54AA and 6431 of the Code.

IN WITNESS WHEREOF, the parties hereto have, by their duly authorized signatories, set their respective hands on the Dated Date.

CITY OF WEBSTER CITY, IOWA

Mayor

Attest:

City Clerk

UMB BANK, N.A., as PAYING AGENT/REGISTRAR

By: _____
Authorized Signatory



PAYING AGENT, BOND REGISTRAR AND TRANSFER AGENT FEE SCHEDULE

ADMINISTRATION

- | | |
|--------------------------------------|----------------------------|
| • Book Entry Bonds | \$300 initial/\$600 annual |
| • Registered/Private Placement Bonds | \$750 initial/\$600 annual |

* Initial Fees charged at Closing

* Annual Fees charged in arrears month of closing

ADDITIONAL SERVICES

- | | |
|-------------------------------------|------------------------------|
| • Placement of CDs or Sinking Funds | \$500 per set up/outside UMB |
| • Late Payments | \$100 |
| • Optional or Partial Redemption | \$300 |
| • Mandatory Redemption | \$100 |
| • Early Termination/Full Call | \$500 |
| • Paying Costs of Issuance | \$500 one-time fee |

SERVICES AVAILABLE UPON REQUEST

- | | |
|-----------------------|----------------|
| • Dissemination Agent | \$1,000 annual |
|-----------------------|----------------|

CHANGES IN FEE SCHEDULE

UMB Bank, N.A. reserves the right to renegotiate this fee schedule

Reasonable charges will be made for additional services or reports not contemplated at the time of execution of the Agreement or not covered specifically elsewhere in this schedule. Extraordinary out-of-pocket expenses will be charged at cost. However, this does not include ordinary out-of-pocket expenses such as normal postage and supplies, which are included in the annual fees quoted above.

CONTINUING DISCLOSURE CERTIFICATE

This Continuing Disclosure Certificate (the “Disclosure Certificate”) is executed and delivered by the City of Webster City (the “Issuer”), in connection with the issuance of \$8,410,000 Electric Revenue Bonds, Series 2024 (the “Bonds”), dated June 5, 2024. The Bonds are being issued pursuant to a resolution of the Issuer approved on May 20, 2024 (the “Resolution”). The Issuer covenants and agrees as follows:

Section 1. Purpose of the Disclosure Certificate. This Disclosure Certificate is being executed and delivered by the Issuer for the benefit of the Holders and Beneficial Owners of the Bonds and in order to assist the Participating Underwriters in complying with S.E.C. Rule 15c2-12.

Section 2. Definitions. In addition to the definitions set forth in the Resolution, which apply to any capitalized term used in this Disclosure Certificate unless otherwise defined in this Section, the following capitalized terms shall have the following meanings:

“Annual Report” shall mean any Annual Report provided by the Issuer pursuant to, and as described in, Sections 3 and 4 of this Disclosure Certificate.

“Beneficial Owner” shall mean any person which (a) has the power, directly or indirectly, to vote or consent with respect to, or to dispose of ownership of, any Bonds (including persons holding Bonds through nominees, depositories or other intermediaries), or (b) is treated as the owner of any Bonds for federal income tax purposes.

“Dissemination Agent” shall mean the Dissemination Agent, if any, designated in writing by the Issuer and which has filed with the Issuer a written acceptance of such designation.

“EMMA” shall mean the MSRB’s Electronic Municipal Market Access system available at <http://emma.msrb.org>.

“Financial Obligation” shall mean a (i) debt obligation, (ii) derivative instrument entered into in connection with, or pledged as security or a source of payment for, an existing or planned debt obligation, or, (iii) guarantee of either (i) or (ii). The term “Financial Obligation” shall not include municipal securities as to which a final official statement has been provided to the MSRB pursuant to the Rule.

“Holders” shall mean the registered holders of the Bonds, as recorded in the registration books of the Registrar.

“Listed Events” shall mean any of the events listed in Section 5(a) of this Disclosure Certificate.

“Municipal Securities Rulemaking Board” or “MSRB” shall mean the Municipal Securities Rulemaking Board, 1300 I Street NW, Suite 1000, Washington, DC 20005.

“Participating Underwriter” shall mean any of the original underwriters of the Bonds required to comply with the Rule in connection with offering of the Bonds.

“Rule” shall mean Rule 15c2-12 adopted by the Securities and Exchange Commission under the Securities Exchange Act of 1934, as the same may be amended from time to time.

“State” shall mean the State of Iowa.

Section 3. Provision of Annual Reports.

(a) Not later than June 30 (the “Submission Deadline”) of each year following the end of the 2023-2024 fiscal year, the Issuer shall, or shall cause the Dissemination Agent (if any) to, file on EMMA an electronic copy of its Annual Report which is consistent with the requirements of Section 4 of this Disclosure Certificate in a format and accompanied by such identifying information as prescribed by the MSRB. The Annual Report may be submitted as a single document or as separate documents comprising a package, and may cross-reference other information as provided in Section 4 of this Disclosure Certificate; provided that the audited financial statements of the Issuer may be submitted separately from the balance of the Annual Report and later than the Submission Deadline if they are not available by that date. If the Issuer’s fiscal year changes, it shall give notice of such change in the same manner as for a Listed Event under Section 5(c), and the Submission Deadline beginning with the subsequent fiscal year will become one year following the end of the changed fiscal year.

(b) If the Issuer has designated a Dissemination Agent, then not later than fifteen (15) business days prior to the Submission Deadline, the Issuer shall provide the Annual Report to the Dissemination Agent.

(c) If the Issuer is unable to provide an Annual Report by the Submission Deadline, in a timely manner thereafter, the Issuer shall, or shall cause the Dissemination Agent (if any) to, file a notice on EMMA stating that there has been a failure to provide an Annual Report on or before the Submission Deadline.

Section 4. Content of Annual Reports. The Issuer’s Annual Report shall contain or include by reference the following:

(a) The **audited financial statements** of the Issuer for the prior fiscal year, prepared in accordance with generally accepted accounting principles promulgated by the Financial Accounting Standards Board as modified in accordance with the governmental accounting standards promulgated by the Governmental Accounting Standards Board or as otherwise provided under State law, as in effect from time to time, or, if and to the extent such audited financial statements have not been prepared in accordance with generally accepted accounting principles, noting the discrepancies therefrom and the effect thereof. If the Issuer’s audited financial statements are not available by the Submission Deadline, the Annual Report shall contain unaudited financial information (which may include any annual filing information required by State law) accompanied by a notice that the audited financial statements are not yet

available, and the audited financial statements shall be filed on EMMA when they become available.

(b) Tables, schedules or other information contained in the official statement for the Bonds, under the following captions:

1. THE SYSTEM - Summary of Financial Information (as of June 30)
2. THE SYSTEM - Electrical Service Rates
3. THE SYSTEM - Larger Electric Users (as of June 30)
4. THE SYSTEM - Historical System Sales by Customer Type (calendar year)
5. THE SYSTEM - Annual Historical Customers by Type
6. THE SYSTEM - Historical Peak Demand
7. THE SYSTEM - Electric Power Purchased and Cost
8. THE SYSTEM - Historical System Revenues and Expenses
9. Pro Forma Debt Service Coverage
10. Electric Utility Revenues Available for Debt Service
11. Notes Payable
12. General information about Webster City - Population

Any or all of the items listed above may be included by specific reference to other documents, including official statements of debt issues of the Issuer or related public entities, which are available on EMMA or are filed with the Securities and Exchange Commission. If the document included by reference is a final official statement, it must be available on EMMA. The Issuer shall clearly identify each such other document so included by reference.

Section 5. Reporting of Significant Events

(a) Pursuant to the provisions of this Section 5, the Issuer shall give, or cause to be given, notice of the occurrence of any of the following events with respect to the Bonds:

- (1) Principal and interest payment delinquencies.
- (2) Non-payment related defaults, if material.
- (3) Unscheduled draws on debt service reserves reflecting financial difficulties.
- (4) Unscheduled draws on credit enhancements reflecting financial difficulties.
- (5) Substitution of credit or liquidity providers, or their failure to perform.
- (6) Adverse tax opinions, the issuance by the Internal Revenue Service of proposed or final determinations of taxability, Notices of Proposed Issue (IRS Form 5701-TEB) or other material notices or determinations with respect to the tax status of the security, or other material events affecting the tax status of the security.
- (7) Modifications to rights of security holders, if material.

- (8) Bond calls, if material, and tender offers.
- (9) Defeasances.
- (10) Release, substitution, or sale of property securing repayment of the securities, if material.
- (11) Rating changes.
- (12) Bankruptcy, insolvency, receivership or similar event of the obligated person.

Note to paragraph (12): For the purposes of the event identified in subparagraph (12), the event is considered to occur when any of the following occur: the appointment of a receiver, fiscal agent or similar officer for an obligated person in a proceeding under the U.S. Bankruptcy Code or in any other proceeding under state or federal law in which a court or governmental authority has assumed jurisdiction over substantially all of the assets or business of the obligated person, or if such jurisdiction has been assumed by leaving the existing governing body and officials or officers in possession but subject to the supervision and orders of a court or governmental authority, or the entry of an order confirming a plan of reorganization, arrangement or liquidation by a court or governmental authority having supervision or jurisdiction over substantially all of the assets or business of the obligated person.

- (13) The consummation of a merger, consolidation, or acquisition involving an obligated person or the sale of all or substantially all of the assets of the obligated person, other than in the ordinary course of business, the entry into a definitive agreement to undertake such an action or the termination of a definitive agreement relating to any such actions, other than pursuant to its terms, if material.
 - (14) Appointment of a successor or additional trustee or the change of name of a trustee, if material.
 - (15) Incurrence of a Financial Obligation of the obligated person, if material, or agreement to covenants, events of default, remedies, priority rights, or other similar terms of a Financial Obligation of the obligated person, any of which affect security holders, if material.
 - (16) Default, event of acceleration, termination event, modification of terms, or other similar events under the terms of a Financial Obligation of the obligated person, any of which reflect financial difficulties.
- (b) If a Listed Event described in Section 5(a) paragraph (2), (7), (8) (but only with respect to bond calls under (8)), (10), (13), (14), or (15) has occurred and the Issuer has determined that such Listed Event is material under applicable federal securities laws, the Issuer shall, in a timely manner but not later than ten business days after the occurrence of such Listed

Event, promptly file, or cause to be filed, a notice of such occurrence on EMMA, with such notice in a format and accompanied by such identifying information as prescribed by the MSRB.

(c) If a Listed Event described in Section 5(a) paragraph (1), (3), (4), (5), (6), (8) (but only with respect to tender offers under (8)), (9), (11), (12), or (16) above has occurred the Issuer shall, in a timely manner but not later than ten business days after the occurrence of such Listed Event, promptly file, or cause to be filed, a notice of such occurrence on EMMA, with such notice in a format and accompanied by such identifying information as prescribed by the MSRB. Notwithstanding the foregoing, notice of Listed Events described in Section (5)(a) paragraphs (8) and (9) need not be given under this subsection any earlier than the notice (if any) of the underlying event is given to Holders of affected Bonds pursuant to the Resolution.

Section 6. Termination of Reporting Obligation. The Issuer's obligations under this Disclosure Certificate shall terminate upon the legal defeasance, prior redemption or payment in full of all of the Bonds or upon the Issuer's receipt of an opinion of nationally recognized bond counsel to the effect that, because of legislative action or final judicial action or administrative actions or proceedings, the failure of the Issuer to comply with the terms hereof will not cause Participating Underwriters to be in violation of the Rule or other applicable requirements of the Securities Exchange Act of 1934, as amended.

Section 7. Dissemination Agent. The Issuer may, from time to time, appoint or engage a Dissemination Agent to assist it in carrying out its obligations under this Disclosure Certificate, and may discharge any such Agent, with or without appointing a successor Dissemination Agent. The Dissemination Agent shall not be responsible in any manner for the content of any notice or Annual Report prepared by the Issuer pursuant to this Disclosure Certificate. The initial Dissemination Agent shall be the Issuer.

Section 8. Amendment; Waiver. Notwithstanding any other provision of this Disclosure Certificate, the Issuer may amend this Disclosure Certificate, and any provision of this Disclosure Certificate may be waived, provided that the following conditions are satisfied:

(a) (i) the amendment or waiver is made in connection with a change in circumstances that arises from a change in legal requirements, change in law, or change in the identity, nature or status of an obligated person with respect to the Bonds, or the type of business conducted; (ii) the undertaking, as amended or taking into account such waiver, would, in the opinion of nationally recognized bond counsel, have complied with the requirements of the Rule at the time of the original issuance of the Bonds, after taking into account any amendments or interpretations of the Rule, as well as any change in circumstances; and (iii) the amendment or waiver either (1) is approved by a majority of the Holders, or (2) does not, in the opinion of nationally recognized bond counsel, materially impair the interests of the Holders or Beneficial Owners; or

(b) the amendment or waiver is necessary to comply with modifications to or interpretations of the provisions of the Rule as announced by the Securities and Exchange Commission.

In the event of any amendment or waiver of a provision of this Disclosure Certificate, the Issuer shall describe such amendment in the next Annual Report, and shall include, as applicable, a narrative explanation of the reason for the amendment or waiver and its impact on the type (or in the case of a change of accounting principles, on the presentation) of financial information or operating data being presented by the Issuer. In addition, if the amendment relates to the accounting principles to be followed in preparing audited financial statements, (i) notice of such change shall be given in the same manner as for a Listed Event under Section 5(c), and (ii) the Annual Report for the year in which the change is made will present a comparison or other discussion in narrative form (and also, if feasible, in quantitative form) describing or illustrating the material differences between the audited financial statements as prepared on the basis of the new accounting principles and those prepared on the basis of the former accounting principles.

Section 9. Additional Information. Nothing in this Disclosure Certificate shall be deemed to prevent the Issuer from disseminating any other information, using the means of dissemination set forth in this Disclosure Certificate or any other means of communication, or including any other information in any Annual Report or notice of occurrence of a Listed Event, in addition to that which is required by this Disclosure Certificate. If the Issuer chooses to include any information in any Annual Report or notice of occurrence of a Listed Event in addition to that which is specifically required by this Disclosure Certificate, the Issuer shall have no obligation under this Certificate to update such information or include it in any future Annual Report or notice of occurrence of a Listed Event.

Section 10. Default. In the event of a failure of the Issuer to comply with any provision of this Disclosure Certificate, any Holder or Beneficial Owner may take such actions as may be necessary and appropriate, including seeking mandate or specific performance by court order, to cause the Issuer to comply with its obligations under this Disclosure Certificate. Direct, indirect, consequential and punitive damages shall not be recoverable by any person for any default hereunder and are hereby waived to the extent permitted by law. A default under this Disclosure Certificate shall not be deemed an event of default under the Resolution, and the sole remedy under this Disclosure Certificate in the event of any failure of the Issuer to comply with this Disclosure Certificate shall be an action to compel performance.

Section 11. Duties, Immunities and Liabilities of Dissemination Agent. The Dissemination Agent, if any, shall have only such duties as are specifically set forth in this Disclosure Certificate, and the Issuer agrees to indemnify and save the Dissemination Agent, its officers, directors, employees and agents, harmless against any loss, expense and liabilities which it may incur arising out of or in the exercise or performance of its powers and duties hereunder, including the costs and expenses (including attorneys' fees) of defending against any claim of liability, but excluding liabilities due to the Dissemination Agent's negligence or willful misconduct. The obligations of the Issuer under this Section shall survive resignation or removal of the Dissemination Agent and payment of the Bonds.

Section 12. Beneficiaries. This Disclosure Certificate shall inure solely to the benefit of the Issuer, the Dissemination Agent, the Participating Underwriters and Holders

and Beneficial Owners from time to time of the Bonds, and shall create no rights in any other person or entity.

Dated: June 5, 2024

CITY OF WEBSTER CITY, IOWA

By _____
Mayor

Attest:

By _____
City Clerk

MEMORANDUM

TO: Mayor and City Council

FROM: Dodie Wolfgram, Finance Director

DATE: May 20, 2024

RE: Request for Proposals for Banking Services

SUMMARY: Staff is seeking authorization to send banking services RFPs to the 4 local financial institutions to provide a checking account for operations, a separate checking account for the USDA Revolving Loan Fund as well as an interest earning sweep account.

PRIOR COUNCIL ACTION/BACKGROUND/DISCUSSION: The Investment Policy for the City of Webster City was updated and adopted by City Council in 2014. One of the updates included a requirement to seek proposals for banking services every 5 years. During this period, local banks did not need our cash so as CD's matured we were unable to purchase new so the money was deposited into our checking account. The large cash balance was a hardship to the bank as they were forced to pledge securities to ensure the safety of public funds exceeding the FDIC limit.

RFP's were sent to Availa, First State, People's Credit Union & WCF in 2014 with First State Bank being chosen as the institution to have the best rate of return. FSB's proposal included setting up an Insured Cash Sweep Money Market Account to earn .30% interest. The funds in the ICS were deposited into banks across the United States in increments at or under the FDIC limit. Typically, municipalities cannot invest in banks that are not adjacent to the county they are located in, but in this case First State Bank was considered our bank. This was and is still a legal tool used by cities. By the end of the agreement in 2019, the interest rate had risen to 1.41%.

In 2019 RFP's were again sent to the 4 local financial institutions with staff recommending Availa to provide the City's banking needs for the upcoming 5 years. During our 5 years with Availa we have seen the interest rates rise, fall and now up again. We are currently earning .5% interest on our checking accounts and 1.87% on our sweep account. We are also utilizing IPAIT (Iowa Public Agency Investment Trust) to earn over 5% in our diversified account which is considered cash as we can move this without penalty at any time. We are also taking advantage of the increased rates on CD's and T-bills which we have purchased from all of the local banks as well as IPAIT.

It is time to solicit proposals for banking services. We plan to send the attached RFP to Availa, First State Bank, People's Credit Union and WCF on May 21st with a recommendation to council at the June 17th meeting.

FINANCIAL IMPLICATIONS: We will evaluate the proposals and recommend the bank that has the best overall return.

RECOMMENDATION: I recommend sending the attached RFP to the four financial institutions in Webster City.

CITY OF WEBSTER CITY, IOWA

**FINANCIAL SERVICES SPECIFICATIONS AND
REQUEST FOR PROPOSAL**

RFP OFFER DATE:	MAY 21, 2024
RFP DUE DATE:	JUNE 5, 2024
OPENING OF BIDS:	JUNE 6, 2024
CITY COUNCIL TO RECEIVE RECOMMENDATION:	JUNE 17, 2024
TARGET DATE FOR NEW AGREEMENT:	JULY 15, 2024
TERM OF AGREEMENT:	5 YEARS

PROPOSALS MUST BE ENCLOSED IN A SEALED ENVELOPE, MARKED "FINANCIAL SERVICES PROPOSAL" AND HAND DELIVERED TO THE UTILITY/FINANCE OFFICE AT 400 2ND STREET, WEBSTER CITY, IOWA 50595 NO LATER THAN 5:00 P.M. ON WEDNESDAY, JUNE 5, 2024

THE CITY OF WEBSTER CITY RESERVES THE RIGHT TO REJECT ANY AND ALL PROPOSALS AND TO WAIVE ANY OR ALL FORMALITIES AND TECHNICALITIES WITH RESPECT TO THIS RFP.

The City of Webster City is soliciting proposals to local firms that are wishing to act as the City of Webster City's financial institution for a period of 5 years beginning July 15, 2024. The contract will be awarded to the financial institution who is determined to best meet the needs of the City of Webster City and that will provide the best rate of return to the taxpayer and utility customers of Webster City.

Please email questions to dodie@webstercity.com – the question & answer will be forwarded to all bidders to ensure everyone has the same information.

CURRENT ACCOUNTS/BALANCES

As of May 14, 2025, the City has \$32,354,941.63 between investments and cash.

Checking Account #1 (Operating) - \$500,000 – our operating checking account is set to close each day with a \$500,000 balance – earns .5% interest

Sweep Account - \$1,853,466.32 – after we spend the obligated \$3,000,000 on CD's from the bids that were due 5-8-24. This account is used to reconcile daily to the operating checking account – sweeps in and out are automatic at the end of each day – earns 1.87%.

Checking Account #2 - \$290,376.40 – specific to USDA funds which is a mandatory separate interest-bearing checking account. \$3,000 is automatically transferred in from our main account monthly. The last transfer will be July 15, 2026. We would possibly use a cashier's check when granting the money to a local business.

IPAIT Diversified - \$1,712,699.91 – we can transfer from this account to our checking account without penalty at any time. The interest rate today is 5.073%.

Investments – the city has \$27,998,399 in investments as of May 10, 2024. A chart on the following page is sorted by the mature date showing the financial institution holding the investment, type of investment (CD or T-bill), interest rate, mature date and principal value of the investment. The chart is sorted by mature date to give a better idea of how much cash might be coming in the next few months.

			Interest		
			Rate	Matures	Value
	IPAIT	CD	5.25%	7/3/24	3,000,000
	IPAIT	T-BILL	5.34%	5/23/24	1,999,451
	IPAIT	T-BILL	5.27%	8/22/24	1,999,601
	IPAIT	T-NOTE	5.17%	2/15/25	1,999,346
	IPAIT	CD	5.15%	5/13/25	4,000,000
	PEOPLES	CD	5.32%	11/10/24	2,000,000
	PEOPLES	CD	5.41%	8/16/24	2,000,000
	PEOPLES	CD	5.32%	11/10/24	1,000,000
	WCF	CD	5.35%	1/5/25	2,000,000
	WCF	CD	5.25%	8/22/24	2,000,000
	WCF	CD	5.40%	7/2/24	1,000,000
	WCF	CD	5.35%	10/1/2024	1,000,000
	WCF	CD	5.25%	1/1/2025	2,000,000
	WCF	CD	5.30%	8/10/2024	2,000,000

The City plans to receive bond proceeds between now and June 30th in the amount of \$13,655,000. The project construction for the multiple projects we are bonding for range from now through 2025. We can attempt to give a better timeline of the expenditures if needed.

In 2023, the City’s average of debit and credit transactions were:

- 285 debits – including an average of 24 ACH debits (FICA, IPERS, State of Iowa withholding & sales tax, Police & Fire Retirement, loan payments, etc.) This does not include any transfers to the sweep account or returned deposits.
- Daily deposit of cash & checks averaged \$57,000 per day
- Average of 95 ACH credits per month, including daily deposits from Paymentech which range from 1-3 per day from credit & debit card transactions. We have approximately 12-15 commercial customers currently using ACH for their utility payments.
- ACH payroll file is bi-weekly with an average file amount of \$145,000 with 142 transactions
- ACH Utility Direct pay file – 2 files per month

RFP REQUIREMENTS

Please make sure your proposal includes the following, as we will be using the criteria to score proposals to make our decision.

1. SWEEP/MONEY MARKET/SAVINGS

- 1.1. Does your proposal include an interest-bearing separate account such as a sweep, savings or money market?
- 1.2. If yes, what is the minimum interest rate on this account over the term of this agreement, including economy/market changes
- 1.3. If yes, what is the minimum or maximum account balance – please state amounts and penalties including how it will be monitored or determined and any grace period to allow a next day transfer?
- 1.4. Will the funds be fully insured?
- 1.5. Would this account be set up to automatically sweep to/from our checking without city obligation to monitor daily?
- 1.6. If yes to automatic sweeps, will there be any fees?
- 1.7. Please include any other fees, penalties or criteria that may not be listed above.

2. CHECKING – 2 ACCOUNTS – USDA & OPERATING

- 2.1. Please state the minimum interest rate on this account over the term of this agreement on the checking accounts (both the USDA and regular) including economy/market changes.
- 2.2. Is there a minimum and/or maximum required balance in either account?
- 2.3. Will the funds be fully insured?
- 2.4. Will there be any monthly service charges? If yes, please describe
- 2.5. Is there a minimum or maximum number of transactions such as checks written, ACH transactions, etc?
- 2.6. Stop payment on check – fee and procedure
- 2.7. Fee for returned deposit items – both checks and ACH
- 2.8. Fee to process bi-weekly payroll via ACH and 2 direct pay files per month
- 2.9. Fee to process 2 files per month for direct pay from customers

Please also include whether or not you provide the following and any applicable fees:

- Duplicate deposit slips
- Wire transfers out
- Night Depository
- On-line internet access to all accounts
- Statements to include electronic copies of cancelled checks sorted in check number sequence and duplicate deposit tickets (online, paper or both)
- Ability to view and print front and back of cancelled checks

The City of Webster City is looking for the best return for our citizens. In order to accomplish this, funds may need to be deposited into more than one institution.

Please feel free to add any information that you feel was missed.

MEMORANDUM

TO: Mayor and City Council

FROM: Finance Director

DATE: May 20, 2024

RE: Set Public Hearing to Amend the FY24 Budget

SUMMARY: A public hearing is needed to amend the FY 2023/24 budget.

BACKGROUND/DISCUSSION: If a city's expenditures will be more or revenues less than budgeted it is required to hold a public hearing to amend the budget. The final amendment is due to the state by the end of June.

The process of amending the budget begins with reviewing all of the programs and functions to determine whether an amendment is needed, keeping in mind that we are not penalized or have an audit finding for amending when not needed.

The revenues we feel may need an amendment by year end are:

Taxes Levied on Property – using the past 3 years of tax dollars received in the final 3 months it appears we could be short \$23,881.

Licenses & Permits – building permits are being reduced by \$50,000 after re-estimating this category

Intergovernmental – reducing this category by \$820,000 – Airport FAA projects have not had as much completed this fiscal year as expected and we might not receive the FEMA grant funding for the lift station generators until FY25.

Other Financing Sources – we had a change in loan proceeds as we added an electric bond, modified the amount of the water bond and deleted the wastewater bond for FY24 which resulted in a reduction of \$24,440,000.

The expenses that we would like to amend are:

Public Safety – if we purchase a new fire truck prior to June 30 we will need to amend the budget by \$402,624. Proceeds will possibly be increased as well, however since this is a revenue an amendment it is not required and not shown

RECOMMENDATION: We recommend that a Public Hearing to amend the FY24 budget be set for 6:05 p.m. on Monday, June 3, 2024.

NOTICE OF PUBLIC HEARING - AMENDMENT OF CURRENT BUDGET

City of WEBSTER CITY
Fiscal Year July 1, 2023 - June 30, 2024

The City of WEBSTER CITY will conduct a public hearing for the purpose of amending the current budget for fiscal year ending June 30, 2024

Meeting Date/Time: 6/3/2024 06:05 AM

Contact: Dodie Wolfram

Phone: (515) 832-9141

Meeting Location: Webster City Council Chambers
Municipal Building
400 2nd Street
Webster City, IA 50595

There will be no increase in taxes. Any residents or taxpayers will be heard for or against the proposed amendment at the time and place specified above. A detailed statement of: additional receipts, cash balances on hand at the close of the preceding fiscal year, and proposed disbursements, both past and anticipated, will be available at the hearing. Budget amendments are subject to protest. If protest petition requirements are met, the State Appeal Board will hold a local hearing. For more information, consult <https://dom.iowa.gov/local-gov-appeals>.

REVENUES & OTHER FINANCING SOURCES		Total Budget as Certified or Last Amended	Current Amendment	Total Budget After Current Amendment
Taxes Levied on Property	1	4,993,016	-23,881	4,969,135
Less: Uncollected Delinquent Taxes - Levy Year	2	0	0	0
Net Current Property Tax	3	4,993,016	-23,881	4,969,135
Delinquent Property Tax Revenue	4	0	0	0
TIF Revenues	5	300,822	0	300,822
Other City Taxes	6	1,143,388	0	1,143,388
Licenses & Permits	7	172,580	-50,000	122,580
Use of Money & Property	8	1,106,339	0	1,106,339
Intergovernmental	9	2,014,945	-820,000	1,194,945
Charges for Service	10	18,222,593	0	18,222,593
Special Assessments	11	0	0	0
Miscellaneous	12	1,688,438	0	1,688,438
Other Financing Sources	13	38,785,800	-24,000,000	14,785,800
Transfers In	14	29,847,462	0	29,847,462
Total Revenues & Other Sources	15	98,275,383	-24,893,881	73,381,502
EXPENDITURES & OTHER FINANCING USES				
Public Safety	16	3,753,830	402,624	4,156,454
Public Works	17	3,773,093	0	3,773,093
Health and Social Services	18	25,819	0	25,819
Culture and Recreation	19	2,001,293	0	2,001,293
Community and Economic Development	20	763,241	0	763,241
General Government	21	1,073,883	0	1,073,883
Debt Service	22	1,521,784	0	1,521,784
Capital Projects	23	3,519,500	0	3,519,500
Total Government Activities Expenditures	24	16,432,443	402,624	16,835,067
Business Type/Enterprise	25	42,790,744	0	42,790,744
Total Gov Activities & Business Expenditures	26	59,223,187	402,624	59,625,811
Transfers Out	27	29,847,462	0	29,847,462
Total Expenditures/Transfers Out	28	89,070,649	402,624	89,473,273
Excess Revenues & Other Sources Over (Under) Expenditures/Transfers Out	29	9,204,734	-25,296,505	-16,091,771
Beginning Fund Balance July 1, 2023	30	46,445,097	0	46,445,097
Ending Fund Balance June 30, 2024	31	55,649,831	-25,296,505	30,353,326

Explanation of Changes: Revenue decreases due to less property taxes received, lower building permits than anticipated, work for projects involving federal grants not performed this fiscal year and bonding for projects changed, mainly due to new Wastewater Plant still in the design phase. The added expense is a new fire truck.

MEMORANDUM

TO: Mayor and City Council

FROM: Finance Director

DATE: May 20, 2024

RE: Transfer of Various Funds

SUMMARY: The 8 transfers being requested for approval total \$3,685,741.21.

PREVIOUS COUNCIL ACTION: This is the first of the two-yearly transfer requests. Typically, this request would have been made in December, however with the increased improvement costs I wanted the utility cash flow projections to be updated prior to making the franchise transfers.

BACKGROUND/DISCUSSION: The transfers presented are both budgeted and reconciling.

Transfers 1-3 – these 3 transfers were budgeted for each utility to transfer 6% of their actual FY22 utility sales to the general fund for a franchise fee

Transfer 4 – is to set aside to the water bond payment to be made this fiscal year

Transfers 5 & 6 – is to establish a new Economic Development fund by transferring both the current balances in the General and Electric Economic Development Sub funds

Transfers 7 & 8 – will reconcile funds that will be closed out

FINANCIAL IMPLICATIONS: Transfers 1-4 were budgeted, 5&6 are moving funds to a newly established fund for ease of tracking expenses and to make sure these funds are spent on economic development type activities and transfers 7 & 8 will reduce the reserves in the General Fund but both need to net to 0 and close.

RECOMMENDATION: Staff recommends approving the 8 transfers totaling \$3,685,741.21.

RESOLUTION NO. 2024 – xxx

TRANSFER CASH FROM VARIOUS FUNDS TO OTHER VARIOUS FUNDS

WHEREAS, the 2023-2024 City of Webster City budget provides that certain transfers be made from various funds as follows:

	CASH TRANSFERS	FUND	TRANSFER IN	TRANSFER OUT	FUND
(1)	Electric Share of General Fund Operations	100	709,952.00	709,952.00	601
(2)	Water Share of General Fund operations	100	114,254.00	114,254.00	602
(3)	Sewer Share of General Fund Operations	100	114,721.00	114,721.00	603
(4)	Water Operations Fund to Water Bond Sinking Fund	602B	318,163.00	318,163.00	602
(5)	General Fund Econ Develop Economic Development	242	1,113,300.49	1,113,300.49	100B
(6)	Electric Economic Develop Economic Development	242	1,295,039.33	1,295,039.33	601P
(7)	General Fund Econ Develop Revolving	220	34.00	34.00	100
(8)	General Fund TIF-SE Development Park	268	20,998.39	20,998.39	100
	TOTAL TRANSFERS		3,686,462.21	3,686,462.21	

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa that the Finance Director is hereby authorized and directed to make the cash transfers in the amounts described above.

Passed and adopted this 20th day of May, 2024.

ATTEST:

John Hawkins, Mayor

Karyl K. Bonjour, City Clerk

MEMORANDUM

TO: Mayor and City Council

FROM: Finance Director

DATE: May 20, 2024

RE: Accounts Receivable and Utility Write Off's

SUMMARY: Staff is asking council to approve the writing off of \$29,642.14 of utility and \$7,476.24 of billings for other services such as frozen water meters, barricading of a collapsed building, damages to electric infrastructure due to accidents and hangar rental.

PRIOR COUNCIL ACTION: This is an annual procedure that is given to City Council for approval.

BACKGROUND/DISCUSSION: The probability of accounts receivable to be collected after 6 months of billing is rare. To keep these accounts in our active receivable's would not show a true picture of the balance sheet at the end of the year.

We can still collect on any of these accounts through the Iowa Setoff Program or when a former customer needs to put utilities in their name. We require that they pay up to 50% of the amount written off along with a new deposit and payment agreement on the remaining amount due.

The majority of the utility accounts have been placed on the Iowa Setoff Program. If any of the people billed would receive a state payment such as income tax return or state-owned casino jackpot win the payment is frozen until cleared by us.

The general Accounts Receivable can be harder to collect as we need a social security number to place on the Iowa Setoff and some of the accidents are from out of town/state drivers. We forward the billings to auto insurance if applicable but unfortunately some of the drivers did not have an active insurance policy.

FINANCIAL IMPLICATIONS: We budget an expense for uncollectible accounts each fiscal year to off-set the annual write offs. The write off moves the receivables from current to uncollectible to show a better true financial picture on the balance sheet. The city has collected \$175,344.79 from 788 customers from the Iowa Setoff Program since 2014.

RECOMMENDATION: Staff recommends that Council authorize the write-off of these inactive accounts from our current accounts receivable. Our auditor will verify we have a process in place as this is part of generally accepted accounting principles.

RESOLUTION NO. 2024 - xxx

**CHARGING OFF FROM ACTIVE ACCOUNTS RECEIVABLE DELINQUENT FINAL UTILITY BILLS
AND DEPARTMENT CHARGES**

WHEREAS, efforts have been made to contact and collect delinquent final utility bills in the amount of \$29,642.14 and delinquent department charges in the amount of \$7,476.24; and

WHEREAS, said accounts outstanding and unpaid are listed and attached to this resolution for final utility bills and department charges.

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa as follows:

That the Finance Director is authorized and directed to remove the attached list of delinquent utility accounts accumulating to \$29,642.14 and department charges accumulating to \$7,476.24 from the active accounts receivable, but it is stated that said accounts are still collectible that have not been negotiated through legal procedures or the courts.

Passed and adopted this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk

AR WRITE-OFFS 2024

CUST #	INVOICE #	DATE BILLED	AMOUNT	FUND		Sent to Offset Program
1779	147891	9/15/2022	\$122.00	602	Frozen Water Meter	
1803	147983	10/25/2022	\$122.00	602	Damaged Water Meter	Unknown EIN
1358	147996	11/1/2022	\$1,483.78	100	Barricades/Labor hrs-street	
1358	147996	11/1/2022	\$578.31	601	Labor hrs/Truck hours/Tax	
1812	148131	1/4/2023	\$196.00	602	Frozen Water Meter	
1782	148159	1/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1814	148168	1/17/2023	\$2,240.63	601	Vehicle Struck Light Pole	
1822	148219	2/13/2023	\$196.00	602	Frozen Water Meter	
1823	148220	2/13/2023	\$135.00	602	Frozen Water Meter	
1782	148224	2/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1827	148287	3/14/2023	\$135.00	602	Frozen Water Meter	
1782	148275	3/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1829	148294	3/31/2023	\$135.00	602	Frozen Water Meter	Unknown SS
1782	148332	4/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1835	148390	5/9/2023	\$546.16	601	Vehicle Struck Utility Box	
1782	148403	5/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1782	148455	6/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1757	148472	6/30/2023	\$836.36	601	Plowed through Primary	Unknown EIN
1782	148511	7/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1782	148581	8/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1782	148650	9/15/2023	\$75.00	205	Hangar Rental	Unknown SS
1782	148689	10/15/2023	\$75.00	205	Hangar Rental	Unknown SS

TOTAL WRITE-OFFS \$7,476.24

\$1,483.78 General
 \$750.00 Airport
 \$4,201.46 Electric
 \$1,041.00 Water

FY23 UTILITY DELINQUENT ACCOUNT WRITE-OFFS

ACCOUNT #	TERMINATION DATE	ELECTRIC	WATER	SEWER	RECYCLE	LANDFILL	TOTAL
15.129200.02	6/2/2023	6.41			0.30	0.14	6.85
2.131601.06	1/6/2023	9.82	4.30	4.48	0.22	0.10	18.92
2.101200.07	3/20/2023	11.18	5.77	5.42	0.22	0.10	22.69
14.374605.25	6/15/2023	50.78			2.63	1.22	54.63
12.130003.09	1/26/2023	38.43	40.48		6.05	2.83	87.79
15.176001.07	1/5/2023	95.99			2.05	0.95	98.99
2.145600.04	11/1/2022	63.70	11.36	22.68	2.68	1.26	101.68
9.152803.08	10/2/2023	44.70	33.31	28.32	0.88	0.41	107.62
11.132505.09	10/9/2023		51.12	53.89	2.69	1.26	108.96
5.112802.16	1/6/2023	107.61			4.21	1.97	113.79
7.147250.24	10/10/2023	55.89	21.76	33.41	2.52	1.18	114.76
8.100800.06	3/31/2023	64.33	20.46	27.49	1.83	0.86	114.97
3.133111.08	10/6/2023	120.45			3.78	1.76	125.99
3.148227.22	2/3/2023	79.29	21.85	46.96	4.25	1.98	154.33
14.340709.14	4/10/2023	158.10			5.35	2.50	165.95
14.386206.12	7/7/2023	153.41			8.88	4.14	166.43
10.141204.21	11/10/2022	84.70	24.65	49.26	5.82	2.72	167.15
7.1441085.13	8/29/2023	86.62	25.42	49.27	4.25	1.98	167.54
2.154408.15	11/3/2022	95.15	26.39	52.66	6.21	2.90	183.31
2.107605.19	8/30/2023	73.48	36.77	65.53	5.42	2.53	183.73
14.373300.26	1/12/2023	180.82			6.25	2.92	189.99
10.108610.05	8/4/2023	112.68	38.40	43.96	2.48	1.15	198.67
10.126302.18	5/4/2023	84.23	47.80	62.53	4.04	1.89	200.49
12.108201.05	7/14/2023	117.31	40.59	59.69	4.30	2.01	223.90
3.732603.03	3/31/2023	221.71				3.41	225.12
19.414750.03	12/1/2022	233.60					233.60
2.108603.04	6/30/2023	123.35	40.42	63.18	4.77	2.22	233.94
12.156607.11	6/26/2023	111.99	43.35	73.42	5.86	2.73	237.35
7.147264.28	12/9/2022	122.24	44.48	68.36	7.14	3.33	245.55
8.114400.02	9/26/2023	124.31	60.29	67.99	3.75	1.75	258.09
4.111405.22	12/30/2022	106.65	54.60	87.88	9.44	4.40	262.97
12.139206.24	9/25/2023	140.87	57.02	61.15	3.15	1.47	263.66
14.332521.31	5/10/2023	257.00			4.58	2.13	263.71
3.131615.11	8/30/2023	261.74			7.32	3.42	272.48
10.116410.29	7/17/2023	133.79	58.31	75.77	4.87	2.28	275.02
3.759801.16	7/10/2023	204.53	13.16	55.65		2.44	275.78
5.117584.24	4/17/2023	133.93	59.32	91.42	6.83	3.19	294.69
15.129000.14	10/6/2023	287.26			7.86	3.67	298.79
3.131708.11	4/20/2023	296.22			6.57	3.08	305.87
8.113405.04	4/11/2023	112.64	97.54	97.46	4.31	2.01	313.96
6.114500.13	1/18/2023	157.67	74.96	80.19	4.00	1.87	318.69
19.371700.21	9/11/2023	156.90	70.57	120.63	9.69	4.52	362.31
8.107404.05	5/10/2023	122.98	72.66	179.35	17.14	7.99	400.12
6.104607.21	1/31/2023	183.22	80.30	121.59	10.56	4.93	400.60
7.143413.28	8/9/2023	271.42	60.84	82.16	5.54	2.58	422.54
12.160800.01	1/5/2023	209.42	95.44	111.61	9.05	4.23	429.75
11.100304.12	8/11/2023	277.10	57.50	97.11	7.74	3.58	443.03
4.110600.01	2/27/2023	143.87	152.76	141.17	5.25	2.45	445.50
14.387204.09	4/12/2023	433.03			10.45	4.88	448.36
6.129001.11	8/1/2023	297.97	73.20	96.02	6.23	2.91	476.33
12.101804.27	8/31/2023	232.44	120.38	118.93	5.30	2.48	479.53
5.132403.04	5/17/2023	202.82	144.73	155.90	7.87	3.68	515.00
7.144146.28	5/19/2023	199.64	144.43	164.54	9.02	4.21	521.84



MEMORANDUM

TO: Mayor and City Council

FROM: Beth Chelesvig, Administrative Services Director
John Harrenstein, Interim City Manager

DATE: May 20, 2024

RE: Bidding Package: Municipal Building HVAC System Replacement Project

SUMMARY: Requesting permission to seek bids and schedule a Public Hearing for materials as defined in the attached bidding documents to furnish said materials for the Municipal Building HVAC System Replacement Project.

PREVIOUS COUNCIL ACTION: The City Council has previously approved the Municipal Building HVAC System Replacement Project as part of the Capital Improvement Program (CIP) budget for next fiscal year.

BACKGROUND/DISCUSSION: The current HVAC system is in need of replacement. The current boiler was built in 1985, there are 38 units throughout the building that have been replaced or repaired as needed. We are experiencing many repairs on the current system and DNR regulation requirement regarding discharge into the storm sewer will have to be addressed.

We entered into an agreement with Brewer Engineering Consultants, PLC to study and review current system and recommend options.

The attached bidding documents reference in more detailed and complete description of the project specifications. At the proposed Public Hearing on July 15th, 2024 at 6:10 P.M., the City Council will also receive and consider any objection to said plans, specifications and form of contract or cost of the project made by any interested party.

FINANCIAL IMPLICATIONS: The estimated cost of this project is \$600,460 plus engineering services of \$49,500.

RECOMMENDATION: Approve the request to set public hearing for July 15th, 2024 at 6:10 P.M. at which time the City Council will consider the plans and specifications, proposed form of contract and the estimate of cost for Municipal Building HVAC System Replacement Project.

RESOLUTION NO. 2024 - xxx

**RESOLUTION PROVIDING FOR NOTICE OF HEARING
ON PROPOSED PLANS AND SPECIFICATIONS, PROPOSED FORM OF CONTRACT AND
ESTIMATE OF COST FOR MUNICIPAL BUILDING HVAC SYSTEM REPLACEMENT**

WHEREAS, the City Council of the City of Webster City, Iowa, has determined that it is necessary and desirable that a public improvement be done as described in the proposed plans and specifications and form of contract, which may be hereafter referred to as Municipal Building HVAC System Replacement Project, (and is hereinafter referred to as the "Project"), which proposed plans, specifications and form of contract and estimate of cost are on file with the City Clerk; and

WHEREAS, it is necessary to fix a time and place of public hearing on the proposed plans, specifications and form of contract and estimate of cost for the Project and to advertise for sealed bids for the Project;

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa, as follows:

Section 1. The detailed plans and specifications, notice of hearing and estimate of cost referred to in the preamble hereof be and the same are hereby approved.

Section 2. The Project is necessary and desirable for the City, and it is in the best interests of the City to proceed toward the construction of the Project.

Section 3. The amount of the bid security to accompany each bid is hereby fixed at 5% of the amount of the proposal.

Section 4. Sealed proposals will be received by the City Clerk of Webster City, at the Council Chambers of the City Council, in the City Hall of said City, until 2:00 p.m. on the 21st day of June, 2024, for the Municipal Building HVAC Replacement Project, as described in the plans and specifications therefor now on file in the office of the City Clerk. Proposals will be opened by Brewer Engineering and City Staff appointed by the City Council as provided by Section 384.101, Code of Iowa.

Section 5. The 15th day of July, 2024, at 6:10 o'clock p.m. at the Council Chambers at City Hall, Webster City, Iowa, is hereby fixed as the time and place of hearing on the proposed plans, specifications, form of contract and estimate of cost for the Project, and also as the time and place of considering bids previously received by the City Clerk in connection therewith.

Section 6. The City Clerk is hereby authorized and directed to give notice of the aforementioned hearing and letting by publication of such notices in a newspaper of general circulation in the City, which publication shall be made not less than four nor more than twenty days prior to the time of the said hearing, all in conformity with Chapters 362, 384, and 26 of the Code of Iowa. The said notice shall be in the form substantially as attached to this resolution.

Section 7. All provisions set out in the following form of notice are hereby recognized and prescribed by this Council and all resolutions or orders or parts thereof, to the extent the same may be in conflict herewith, are hereby repealed.

Passed and approved this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST: _____
Karyl K. Bonjour, City Clerk

NOTICE OF PUBLIC HEARING

**NOTICE OF PUBLIC HEARING ON PLANS AND SPECIFICATIONS, PROPOSED FORM OF CONTRACT,
AND ESTIMATE OF COST FOR MUNICIPAL BUILDING HVAC SYSTEM REPLACEMENT
FOR THE CITY OF WEBSTER CITY, IOWA.**

Notice is hereby given that the City Council of Webster City, Iowa will meet in the Council Chambers at City Hall, 400 Second Street, Webster City, Iowa 50595 on July 15th at 6:10 PM, at which time and place the City Council will consider the adoption of plans and specifications and proposed form of contract for the above referenced project, which are now on file in the City Offices. At said meeting the City Council will receive and consider any objections to said plans, specifications, form of contract and estimate of cost made by any interested party.

Publication upon order of the City Council of Webster City, Iowa.

CITY OF WEBSTER CITY, IOWA

By /s/ John Hawkins
Mayor

ATTEST:

By /s/ Karyl K. Bonjour
City Clerk

**BREWER
ENGINEERING
CONSULTANTS, PLC**

905 Washington Ave, SE
Bondurant, Iowa | 515-957-8806

Webster City Avg Hr. Rate \$75.00
Municipal Bldg HVAC Replacement
Engineer's Opinion of Prob. Cost
 29-Apr-24 Estimator BKB

#	Description	Qty	Matls	Hours	Tot Matl	Tot Hrs	Labor \$	Tot Cost
	Mobilization, etc.	1	\$10,000.00	0	\$10,000	0	\$0	\$10,000
	Demolition	1	\$0.00	120	\$0	120	\$9,000	\$9,000
	Replacement Heat Pumps	1	\$137,000.00	432	\$137,000	432	\$32,400	\$169,400
	Reroute discharge to sanitary	1	\$57,000.00	80	\$57,000	80	\$6,000	\$63,000
	Dedicated Outdoor Air System	1	\$55,000.00	40	\$55,000	40	\$3,000	\$58,000
	Ductwork	27	\$500.00	8	\$13,500	216	\$16,200	\$29,700
	Ceilings	1	\$7,500.00	0	\$7,500	0	\$0	\$7,500
	Circ Pumps	2	\$3,500.00	24	\$7,000	48	\$3,600	\$10,600
	Roof Patching	1	\$10,000.00	0	\$10,000	0	\$0	\$10,000
	Test and Balance	28	\$0.00	4	\$0	112	\$8,400	\$8,400
	Electrical	28	\$1,000.00	4	\$28,000	112	\$8,400	\$36,400
	Controls (thermostats)	28	\$200.00	3	\$5,600	84	\$6,300	\$11,900
	Steel	1	\$5,000.00	0	\$5,000	0	\$0	\$5,000
					\$0	0	\$0	\$0
					\$0	0	\$0	\$0
			\$286,700.00	715.0	\$335,600.00	1,244.0	\$93,300.00	\$428,900.00
			Markup, Overhead, etc:	40%	\$134,240.00	497.6		\$171,560.00
			Subtotal		\$469,840.00	1,742		\$600,460.00

GENERAL NOTES

1. NOTIFY OWNER AND ENGINEER AT LEAST 72 HOURS PRIOR TO STARTING CONSTRUCTION.
2. COMPLETE ALL CONSTRUCTION IN ACCORDANCE WITH 2022 IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS 2022 EDITION AND PLANS AND SPECIFICATIONS FOR THIS PROJECT.
3. LOCATION OF EXISTING UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES SHOWN ARE FROM AVAILABLE SURVEYS AND RECORDS. THESE LOCATIONS SHOULD BE CONSIDERED AS APPROXIMATE ONLY, WITH POSSIBILITY THAT OTHER UTILITIES OR UNDERGROUND FEATURES MAY EXIST. DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES WITHIN CONSTRUCTION LIMITS PRIOR TO THE START OF CONSTRUCTION.
4. NOTIFY UTILITY COMPANIES PRIOR TO COMMENCING WORK. AVOID DAMAGE TO UTILITIES AND UNDERGROUND FEATURES DURING CONSTRUCTION. REPAIR ANY DAMAGE CAUSED BY CONSTRUCTION OPERATIONS AT CONTRACTOR'S EXPENSE.
5. COORDINATE CONSTRUCTION OPERATIONS AND COOPERATE WITH UTILITY COMPANIES WITH RESPECT TO RELOCATING ANY CONFLICTING FACILITIES. COSTS FOR LOCATING EXISTING UTILITIES, COORDINATING RELOCATION WORK, PROVIDING TEMPORARY SUPPORTS, AND STAGING CONSTRUCTION TO ACCOMMODATE THE RELOCATION OF UTILITIES IS INCIDENTAL TO CONSTRUCTION.
6. PROVIDE EROSION CONTROL MEASURES NECESSARY TO PROTECT AGAINST SILTATION, EROSION AND DUST POLLUTION WITHIN CONSTRUCTION LIMITS AND ANY OFF-SITE AREAS USED FOR THIS PROJECT. COMPLY WITH SOIL EROSION CONTROL REQUIREMENTS OF IOWA CODE AND LOCAL ORDINANCES.
7. PROVIDE TEMPORARY SUPPORT FOR EXISTING UTILITY LINES THAT ARE ENCOUNTERED DURING CONSTRUCTION UNTIL BACKFILLING IS COMPLETED.
8. CONSTRUCTION LIMITS ARE THE PERMANENT AND TEMPORARY EASEMENT AREAS SHOWN ON THESE PLANS. CONFINE ALL CONSTRUCTION ACTIVITY TO WITHIN THE CONSTRUCTION LIMITS UNLESS OTHERWISE AUTHORIZED BY THE OWNER. ALL EASEMENT LIMITS SHALL BE CLEARLY MARKED IN THE FIELD AND PROTECTED BY THE CONTRACTOR. THE CONTRACTOR SHALL OBTAIN NECESSARY ACCESS PERMISSION TO THE PROJECT CONSTRUCTION LIMITS.
9. CONSTRUCTION PLANS SHOW THE WORK LIMITS AND CONSTRUCTION SHALL BE WITHIN CITY RIGHT-OF-WAY AS SHOWN ON PLANS.
10. CONTRACTOR RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING ALL ACCESSES TO THE CONSTRUCTION LIMITS. THE ACCESSES MUST BE ADEQUATELY SIZED AND PROPERLY SURFACED FOR UTILIZATION BY CONSTRUCTION VEHICLES AND INCLUDE PROVISIONS TO MAINTAIN POSITIVE DRAINAGE. WORK WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
11. LIMIT GRADING AND CONSTRUCTION OPERATIONS TO THE MINIMUM REQUIRED TO COMPLETE THE PROJECT. CONTRACTOR REQUIRED TO PAY DAMAGES TO RESPECTIVE PARTIES FOR DAMAGE TO PROPERTY CAUSED BY CONSTRUCTION ACTIVITIES OUTSIDE OF THE CONSTRUCTION LIMITS IN ADDITION TO THE RESTORATION, AT NO COST TO OWNER.
12. COORDINATE THE CONSTRUCTION TO MINIMIZE THE DISRUPTIONS TO THE ADJACENT PROPERTIES. ANY AREAS DISTURBED BY CONSTRUCTION OUTSIDE OF THE CONSTRUCTION LIMITS SHALL BE REPAIRED AND RESTORED AT THE CONTRACTOR'S EXPENSE.
13. DO NOT RESTRICT DRAINAGE CHANNELS AND PROTECT ALL EXISTING DRAINAGE STRUCTURES. CONTRACTOR FULLY LIABLE FOR ALL DAMAGES TO PUBLIC OR PRIVATE PROPERTY CAUSED BY THEIR ACTION OR INACTION IN THE HANDLING OF STORM WATER FLOWS DURING CONSTRUCTION. ANY EXTRA GRADING WORK NEEDED TO MAINTAIN POSITIVE DRAINAGE WITHIN THE CONSTRUCTION LIMITS IS INCIDENTAL TO CONSTRUCTION.
14. REPAIR ALL FIELD/DRAIN TILES THAT ARE ENCOUNTERED DURING CONSTRUCTION AS SPECIFIED. RECORD THE EXISTING TYPE, SIZE, LOCATION AND DEPTH OF ALL FIELD/DRAIN TILES ENCOUNTERED AND REPAIRED DURING CONSTRUCTION. PROVIDE DATA TO THE ENGINEER FOR INCORPORATION INTO THE RECORD DRAWINGS.
15. PROTECT AND KEEP DEBRIS DEPOSITED BY THE CONSTRUCTION OFF OF ADJACENT PROPERTIES OUTSIDE THE EASEMENT AREA AND STREETS. REMOVE AND REPAIR ANY DAMAGE WITHOUT ADDITIONAL COMPENSATION.
16. PROTECT EXISTING TREES, SHRUBS, FENCES, AND LANDSCAPING UNLESS SPECIFICALLY NOTED OR DESIGNATED OTHERWISE ON THE PLANS. REPLACE ANY ITEMS DAMAGED DURING CONSTRUCTION AT CONTRACTOR'S EXPENSE.
17. COMPLETELY REMOVE AND DISPOSE OF TREES, SHRUBS AND VEGETATION DESIGNATED FOR REMOVAL ON THE PLANS. DISPOSE OF IN ACCORDANCE WITH SPECIFICATIONS.
18. CONTRACTORS SHALL SATISFY THEMSELVES PRIOR TO SUBMISSION OF BIDS AS TO THE SOIL CONDITIONS.
19. AS NECESSARY FOR CONSTRUCTION, THE CONTRACTOR SHALL REMOVE EXISTING IMPROVEMENTS WITHIN THE WORK AREA SHOWN ON THE PLAN AS "REMOVE & REPLACE" AND SHALL REPLACE THEM TO THE CONDITION EXISTING PRIOR TO CONSTRUCTION, OR BETTER, AS DETERMINED BY THE ENGINEER. THE REMOVAL AND REPLACEMENT WORK IS INCIDENTAL AND ALL ASSOCIATED COSTS SHALL BE INCLUDED IN THE BID.
20. ADJUST ALL MANHOLES, VALVE PITS, VALVE BOXES AND OTHER BURIED FACILITIES WITH SURFACE ACCESS TO MATCH FINAL GRADES, UNLESS OTHERWISE INDICATED.
21. PROTECT AND SAVE ALL PROPERTY CORNER MONUMENTS. REPLACE IF REMOVED OR DAMAGED. REPLACEMENT IS CONSIDERED INCIDENTAL TO CONSTRUCTION.
22. CONSTRUCTION STAKING WILL NOT BE PROVIDED.
23. PROVIDE TRAFFIC CONTROL IN ACCORDANCE WITH CURRENT STATE OF IOWA APPROVED MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
24. CONTRACTOR SHALL REMOVE AND REPLACE ALL EXISTING PERMANENT TRAFFIC SIGNS THAT ARE IN CONFLICT WITH THE CONSTRUCTION. NOTIFY THE OWNER 72 HOURS BEFORE CONSTRUCTION BEGINS.
25. DO NOT STORE EQUIPMENT AND/OR MATERIALS WITHIN PUBLIC RIGHT OF WAY ON STREETS OPEN TO TRAFFIC. PROVIDE AREAS AS NEEDED FOR STORAGE OF EQUIPMENT AND/OR MATERIALS.
26. BLADING, SHAPING OR MAINTENANCE OF TEMPORARY CONNECTIONS, CROSSINGS DETOURS OR TEMPORARY ACCESSES SHALL BE INCIDENTAL TO THE PROJECT.
27. REMOVE THE EXISTING PAVEMENT AREAS TO THE NEAREST EXISTING JOINT OR AS DIRECTED BY THE ENGINEER.
28. REMOVE AND REPLACE, OR REPAIR ALL ROAD SURFACES AND OTHER ITEMS DAMAGED BY CONSTRUCTION ACTIVITIES TO THEIR ORIGINAL CONDITION AND/OR TO THE SATISFACTION OF THE OWNER AND ENGINEER.
29. EXERCISE EXTREME CARE WHEN PERFORMING ANY NECESSARY SAW CUTTING OPERATIONS FOR THE REMOVAL OF EXISTING PAVEMENT. PROTECT ADJACENT STREET SURFACING. REMOVE AND REPLACE DAMAGED SURFACING WITHOUT ADDITIONAL COMPENSATION.
30. COMPACT ALL TRENCH BACKFILL, UNDER PAVED SURFACES, AND WITHIN RIGHT-OF-WAY TO 95% STANDARD PROCTOR DENSITY.
31. SLOPE ALL DRIVEWAYS, SIDEWALKS AND ROAD SURFACES 1/4 INCH PER FOOT MINIMUM, UNLESS OTHERWISE NOTED.
32. SURFACE RESTORATION INCLUDES THE REMOVAL OF ALL GRANULAR MATERIAL FROM THE TOP 6 INCHES OF TOPSOIL. THIS WORK IS INCIDENTAL TO CONSTRUCTION.
33. OWNER HAS FIRST RIGHT OF REFUSAL TO RETAIN ANY MATERIAL REMOVED FROM THE PROJECT AREA. IF DIRECTED, DELIVER ITEMS OR MATERIALS TO OWNER AT LOCATION DESIGNATED BY THE PUBLIC WORKS DEPARTMENT. DISPOSE OF NON-SALVAGEABLE MATERIALS IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS.
34. PROVIDE WASTE AREAS OR DISPOSAL SITES FOR WASTE MATERIAL (ASPHALTIC CONCRETE, STEEL OR BROKEN CONCRETE). NO EXTRA PAYMENTS WILL BE MADE FOR MATERIAL HAULED TO THESE SITES. DISPOSE OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REQUIREMENTS. DO NOT PLACE WASTE MATERIAL WITHIN THE RIGHT-OF-WAY. KEEP CONSTRUCTION DEBRIS AND DIRT OFF OF THE ADJACENT PROPERTIES AND STREETS.
35. RECONSTRUCT ANY ROAD DITCHES DISTURBED, INCLUDING DITCH GRADES AND CROSS SECTIONS. REPLACE CULVERTS TO ORIGINAL GRADES UNLESS OTHERWISE NOTED. GRADE ALL DITCHES FOR PROPER DRAINAGE. PONDING OF WATER IS NOT ACCEPTABLE. RE-GRADE ANY DITCH WHICH DOES NOT PROPERLY DRAIN. ALL DITCH GRADING IS INCIDENTAL TO CONSTRUCTION.
36. STRIP, SALVAGE AND RESPREAD TOP 6 INCHES OF TOPSOIL IN ALL AREAS WITHIN THE CONSTRUCTION LIMITS AS PER SPECIFICATIONS, EXCEPT AREAS NOT DISTURBED BY CONSTRUCTION AND USED TO STOCKPILE THE TOPSOIL. MECHANICALLY LOOSEN THE 18 INCHES OF SOIL ON ALL HAUL ROADS AND OVERLY COMPACTED AREAS PRIOR TO RESPREADING OF THE TOPSOIL.
37. ASSIST ENGINEER'S FIELD REPRESENTATIVE WITH DAILY RECORD KEEPING INCLUDING ALL NECESSARY FIELD LOCATIONS AND MEASUREMENTS. CONTRACTOR REQUIRED TO ATTEND FINAL AND INTERMEDIATE INSPECTIONS OF PROJECT, OPEN ALL MANHOLES FOR INSPECTION.
38. DIMENSIONS, STREET LOCATIONS, UTILITIES, AND GRADING ARE BASED ON AVAILABLE INFORMATION AT THE TIME OF DESIGN. DEVIATIONS MAY BE NECESSARY IN THE FIELD. REPORT ANY SUCH CHANGES OR CONFLICTS BETWEEN THE PLAN AND FIELD CONDITIONS TO PROJECT ENGINEER IMMEDIATELY.
39. IN THE EVENT OF A DISCREPANCY BETWEEN THE QUANTITY ESTIMATES AND THE DETAILED PLANS, THE DETAILED PLANS SHALL GOVERN.
40. MAINTAIN EMERGENCY ACCESS ON ALL STREETS AND ALL AFFECTED PROPERTIES AT ALL TIMES.
41. MAINTAIN GARBAGE SERVICE TO ALL RESIDENCES ALONG THE PROJECT. COORDINATE THE GARBAGE REMOVAL WITH THE LOCAL REFUSE HAULERS AND TRANSPORT GARBAGE AND/OR RECYCLING CONTAINERS ACROSS THE CONSTRUCTION AREAS AS NEEDED.
42. MAINTAIN MAIL SERVICE TO ALL RESIDENCES ALONG THE PROJECT. THIS INCLUDES INSTALLING A TEMPORARY MAILBOX, IF NECESSARY. COORDINATE TEMPORARY MAIL SERVICE WITH POST OFFICE.
43. COORDINATE THE CONSTRUCTION WITH PROPERTY OWNERS HAVING LIVESTOCK WITH ACCESS TO THE CONSTRUCTION LIMITS. TEMPORARY FIELD FENCE TO ISOLATE THE CONSTRUCTION LIMITS FROM THE LIVESTOCK. THE TEMPORARY FILED FENCE MUST BE APPROPRIATE FOR THE TYPE OF LIVESTOCK PRESENT. THIS WORK WILL BE INCIDENTAL.

WEBSTER CITY MUNICIPAL BUILDING HVAC REPLACEMENT

GENERAL NOTES

WEBSTER CITY, IOWA

SNYDER & ASSOCIATES, INC.

2727 S.W. SNYDER BLVD
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com



Project No: 124.0406.01
Sheet C.1

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.

Toni R. Tabbert 4/26/24
Date

Toni R. Tabbert, P.E.

License Number P23665

My License Renewal Date is December 31, 2025

Pages or sheets covered by this seal:
C.1, D.1, J.1

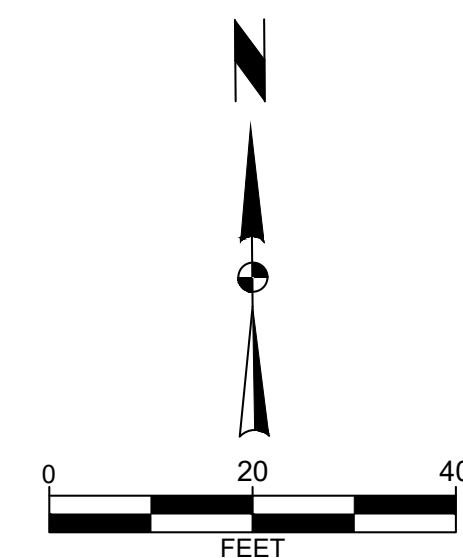
MARK	REVISION	Checked By: CHKD	Scale: 1" =	DATE	BY				
Engineer: TRT	Technician: LGM	Date: MM-DD-YYYY	T-R-S: TTN-RRW-SS						
Project No.: 124.0406.01									Sheet C.1

V:\Projects\2024\124.0406.01\CAD\CD - SHEETS.dwg LORNA MILLER, SITE PLAN, 2024/03/26, 2:00 PM, ANSI FULL BLEED B (17.00 X 11.00 INCHES)



CONSTRUCTION NOTES:

1. REMOVE AND REPLACE:
 - A. PCC PAVEMENT WITH INTEGRAL CURB AND GUTTER. INSTALL FULL DEPTH PATCH IN ACCORDANCE WITH SUDAS SECTION 7040. SAW CUT FULL DEPTH TO NEAREST JOINT AS NECESSARY FOR CONSTRUCTION. MATCH EXISTING JOINT PATTERN IN ADJACENT PAVEMENT.
 - B. SIDEWALK. REMOVE AND SALVAGE BRICK PAVER IN SIDEWALK. REMOVE AND REPLACE SIDEWALK (4\"/>
2. SANITARY SEWER SERVICE:
 - A. INSTALL NEW 6\"/>
3. PROTECT EXISTING:
 - A. WATER MAIN. COORDINATE WITH WATER UTILITY OWNER FOR PROTECTION OF WATER MAIN DURING CONSTRUCTION. PROVIDE TEMPORARY SHEETING AND SHORING OR PIPE SUPPORT AS NECESSARY (INCIDENTAL TO CONSTRUCTION).

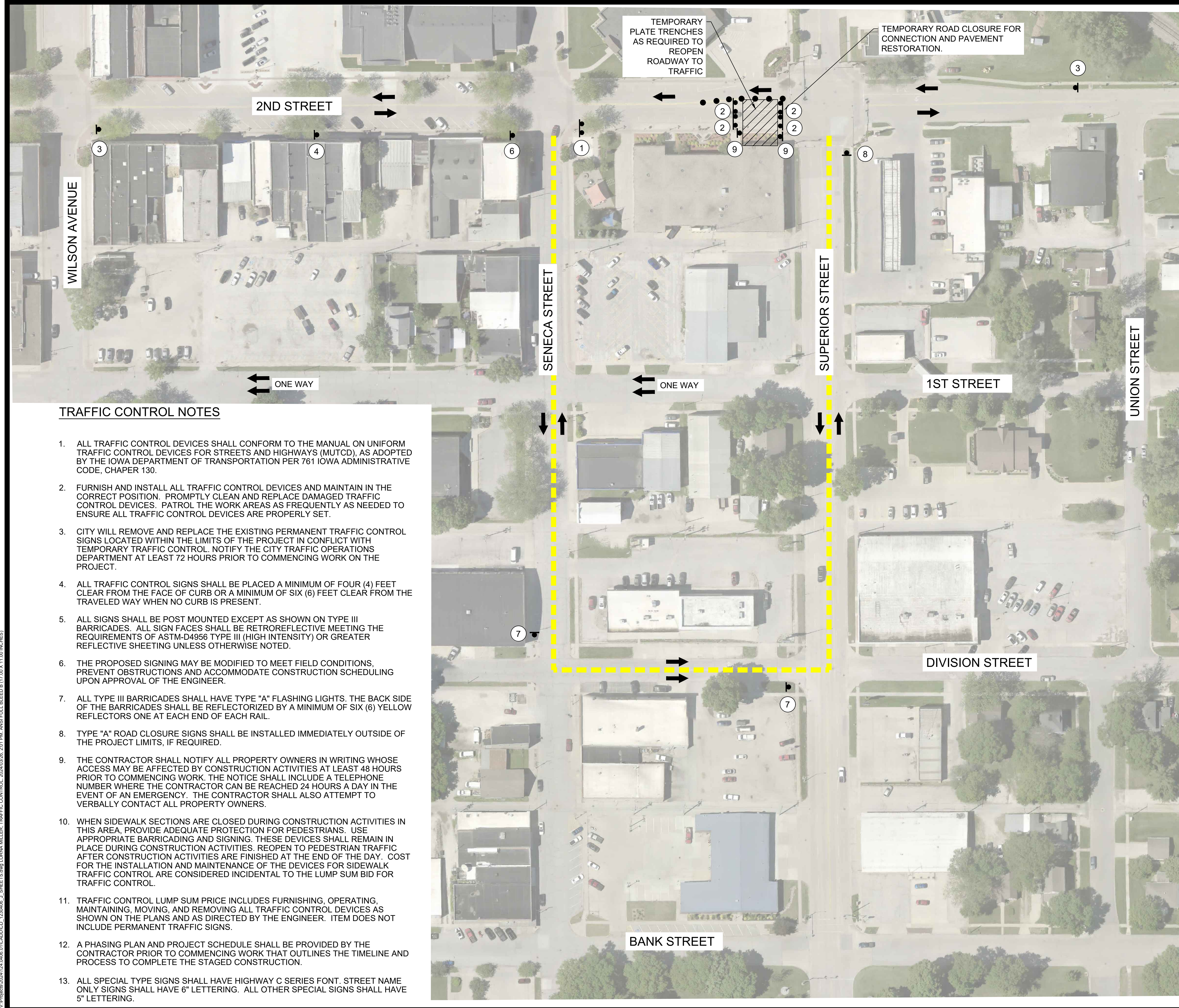


MARK	REVISION	DATE	BY

Engineer: TRT
 Technician: LGM
 Checked By: CHKD
 Date: MM-DD-YYYY
 T-R-S: TTN-RRW-SS
 Project No.: 124-0406.01

WEBSTER CITY MUNICIPAL BUILDING HVAC REPLACEMENT
SITE PLAN
WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 S.W. SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | www.snyder-associates.com

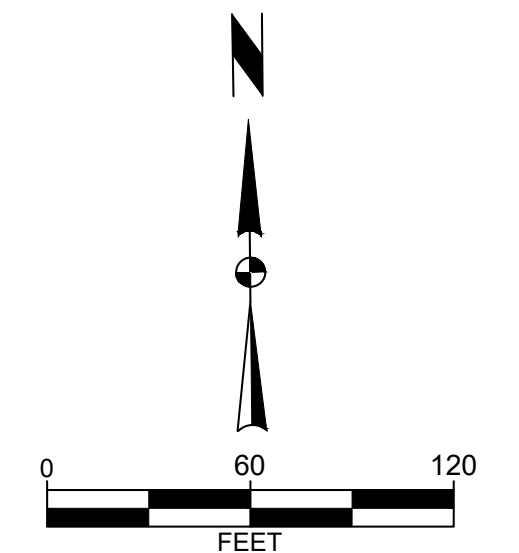
Project No: 124.0406.01
 Sheet D.1



STAGE 1

- LEGEND**
- (A) CONSTRUCTION SIGN IDENTIFICATION
 - SIGN
 - ▭ AREA OF WORK
 - ⊗ DRUM
 - 42" CHANNELIZER
 - ◀◀◀ ARROW BOARD
 - ← DIRECTION OF TRAFFIC
 - TEMPORARY LANE SEPARATOR SYSTEM
 - BARRICADE
 - SAFETY FENCE
 - ▬▬▬ DETOUR ROUTE
 - ⚠ FLAGGER
 - ⬇️ TEMPORARY TRAFFIC SIGNAL

- | | |
|----------------------|-----------------------|
| | |
| 1 R11-4
60" X 30" | 2 R11-2
48" X 30" |
| | |
| 3 W20-1
36" X 36" | 4 W20-2a
36" X 36" |
| | |
| 5 W8-24
48" X 48" | 6 M4-9R
30" X 24" |
| | |
| 7 M4-9L
30" X 24" | 8 M4-8a
24" X 18" |
| | |
| 9 R9-9
24"x12" | |

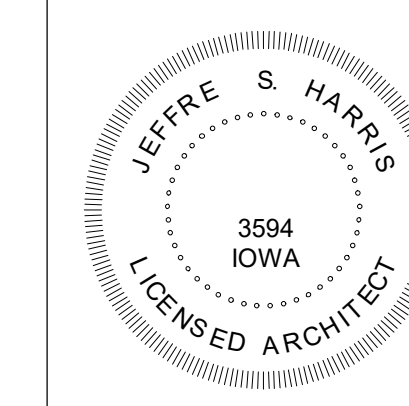


TRAFFIC CONTROL NOTES

1. ALL TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS (MUTCD), AS ADOPTED BY THE IOWA DEPARTMENT OF TRANSPORTATION PER 761 IOWA ADMINISTRATIVE CODE, CHAPTER 130.
2. FURNISH AND INSTALL ALL TRAFFIC CONTROL DEVICES AND MAINTAIN IN THE CORRECT POSITION. PROMPTLY CLEAN AND REPLACE DAMAGED TRAFFIC CONTROL DEVICES. PATROL THE WORK AREAS AS FREQUENTLY AS NEEDED TO ENSURE ALL TRAFFIC CONTROL DEVICES ARE PROPERLY SET.
3. CITY WILL REMOVE AND REPLACE THE EXISTING PERMANENT TRAFFIC CONTROL SIGNS LOCATED WITHIN THE LIMITS OF THE PROJECT IN CONFLICT WITH TEMPORARY TRAFFIC CONTROL. NOTIFY THE CITY TRAFFIC OPERATIONS DEPARTMENT AT LEAST 72 HOURS PRIOR TO COMMENCING WORK ON THE PROJECT.
4. ALL TRAFFIC CONTROL SIGNS SHALL BE PLACED A MINIMUM OF FOUR (4) FEET CLEAR FROM THE FACE OF CURB OR A MINIMUM OF SIX (6) FEET CLEAR FROM THE TRAVELED WAY WHEN NO CURB IS PRESENT.
5. ALL SIGNS SHALL BE POST MOUNTED EXCEPT AS SHOWN ON TYPE III BARRICADES. ALL SIGN FACES SHALL BE RETROREFLECTIVE MEETING THE REQUIREMENTS OF ASTM-D4956 TYPE III (HIGH INTENSITY) OR GREATER REFLECTIVE SHEETING UNLESS OTHERWISE NOTED.
6. THE PROPOSED SIGNING MAY BE MODIFIED TO MEET FIELD CONDITIONS, PREVENT OBSTRUCTIONS AND ACCOMMODATE CONSTRUCTION SCHEDULING UPON APPROVAL OF THE ENGINEER.
7. ALL TYPE III BARRICADES SHALL HAVE TYPE "A" FLASHING LIGHTS. THE BACK SIDE OF THE BARRICADES SHALL BE REFLECTORIZED BY A MINIMUM OF SIX (6) YELLOW REFLECTORS ONE AT EACH END OF EACH RAIL.
8. TYPE "A" ROAD CLOSURE SIGNS SHALL BE INSTALLED IMMEDIATELY OUTSIDE OF THE PROJECT LIMITS, IF REQUIRED.
9. THE CONTRACTOR SHALL NOTIFY ALL PROPERTY OWNERS IN WRITING WHOSE ACCESS MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES AT LEAST 48 HOURS PRIOR TO COMMENCING WORK. THE NOTICE SHALL INCLUDE A TELEPHONE NUMBER WHERE THE CONTRACTOR CAN BE REACHED 24 HOURS A DAY IN THE EVENT OF AN EMERGENCY. THE CONTRACTOR SHALL ALSO ATTEMPT TO VERBALLY CONTACT ALL PROPERTY OWNERS.
10. WHEN SIDEWALK SECTIONS ARE CLOSED DURING CONSTRUCTION ACTIVITIES IN THIS AREA, PROVIDE ADEQUATE PROTECTION FOR PEDESTRIANS. USE APPROPRIATE BARRICADING AND SIGNING. THESE DEVICES SHALL REMAIN IN PLACE DURING CONSTRUCTION ACTIVITIES. REOPEN TO PEDESTRIAN TRAFFIC AFTER CONSTRUCTION ACTIVITIES ARE FINISHED AT THE END OF THE DAY. COST FOR THE INSTALLATION AND MAINTENANCE OF THE DEVICES FOR SIDEWALK TRAFFIC CONTROL ARE CONSIDERED INCIDENTAL TO THE LUMP SUM BID FOR TRAFFIC CONTROL.
11. TRAFFIC CONTROL LUMP SUM PRICE INCLUDES FURNISHING, OPERATING, MAINTAINING, MOVING, AND REMOVING ALL TRAFFIC CONTROL DEVICES AS SHOWN ON THE PLANS AND AS DIRECTED BY THE ENGINEER. ITEM DOES NOT INCLUDE PERMANENT TRAFFIC SIGNS.
12. A PHASING PLAN AND PROJECT SCHEDULE SHALL BE PROVIDED BY THE CONTRACTOR PRIOR TO COMMENCING WORK THAT OUTLINES THE TIMELINE AND PROCESS TO COMPLETE THE STAGED CONSTRUCTION.
13. ALL SPECIAL TYPE SIGNS SHALL HAVE HIGHWAY C SERIES FONT. STREET NAME ONLY SIGNS SHALL HAVE 6" LETTERING. ALL OTHER SPECIAL SIGNS SHALL HAVE 5" LETTERING.

<p>WEBSTER CITY MUNICIPAL BUILDING HVAC REPLACEMENT</p> <p>WEBSTER CITY, IOWA</p>	<p>Sheet J.1</p> <p>Project No.: 124.0406.01</p>
<p>TRAFFIC CONTROL</p>	<p>2727 S.W. SNYDER BLVD ANKENY, IOWA 50023 515-964-2020 www.snyder-associates.com</p>
<p>SNYDER & ASSOCIATES</p>	
<p>Project No.: 124.0406.01</p> <p>Sheet J.1</p>	

AL, ALUM	ALUMINUM	O.C.	ON CENTER
AT	ACOUSTICAL CEILING TILE	P LAM	PLASTIC LAMINATE
BLDG	BUILDING	PART BD	PARTICLE BOARD
BLK	BLOCK (CONCRETE)	PC	PRECAST CONCRETE
BRK	BRICK	PLYWD	PLYWOOD
CJ	CONTROL JOINT	R	RISER, RADIUS
CL	CENTER LINE	RH	RIGHT HAND
CMU	CONCRETE MASONRY UNIT	RSR	RUBBER STAIR RISER
CONC	CONCRETE	RST	RUBBER STAIR TREAD
CONC/S	SEALED CONCRETE	SC	SOLID CORE
CONV	CONVENIENCE	SCH	SCHEDULE
CPT	CARPET	SFP	SPRAYED FIRE PROTECTION
CT	CERAMIC TILE	SG	SAFETY GLASS
DN	DOWN	SG	SPANDREL GLASS
DTL	DETAIL	SH	STEEL
EJ, EXP JT	EXPANSION JOINT	SIM	SIMILAR
EXT	EXTERIOR	SK	SINK
FC	FOAM CORE	SND	SANITARY NAPKIN DISPOSAL
FGT	FIBERGLASS CEILING TILE	SOG	SLAB ON GRADE
FGW	FIBERGLASS WALL TILE	SPEC	SPECIFICATIONS, SPECIFIED
FT	FOOT, FEET	SS, ST STL	STAINLESS STEEL
GALV	GALVANIZED	SVF	SHEET VINYL FLOORING
GB, GYP BD, GWB	GYP SUM WALLBOARD	THRED	THRESHOLD
GR	GRANITE	TR	TREAD
GYP	GYP SUM	TYP	TYPICAL
HDW	HARDWARE	UR	URINAL
HM	HOLLOW METAL	VB	VINYL BASE
IG	INSULATED GLASS	VF	VINYL WALL FABRIC
INSUL	INSULATION, INSULATED	VP	VENEER PLASTIC
ISG	INSULATING SAFETY GLASS	VT	VINYL TILE
LH	LEFT HAND	W	WITH
MIN	MINIMUM	W/O	WITHOUT
MTL, MET	METAL	WC	WATER CLOSET
NIC	NOT IN CONTRACT	WD	WOOD
NOM	NOMINAL	WG	WIRE GLASS
NTS	NOT TO SCALE		



I hereby certify that the portion of this technical submission described below was prepared by me or under my direct supervision and responsible charge. I am a duly licensed architect under the laws of the state of Iowa.

Jeffrey S. Harris Date
 License number: 3594
 My license renewal date is: June 30, 2020
 Pages or sheets covered by this seal:
 A0.0 A2.4
 A2.2
 A2.3



1615 Golden Aspen Drive
 Suite 110
 Ames, Iowa 50010

515 292 6075 Phone
 515 292 6370 Fax

mail@rmharchitects.com

www.rmharchitects.com

Project Number
 23038

Print Record
 REVIEW 4/26/2024

Revision Record

Consultant

Material Symbols

	Earth		Stone		Blocking		Plastic Laminate
	Granular Fill		Aluminum		Particle Board		Gypsum Board
	Sand, Mortar		Plywood		Plaster		
	Concrete		Steel		Glass		Acoustic Tile
	Concrete Block		Bronze		Batt Insulation		Terrazzo
	Brick		Wood		Rigid Insulation		
			Structural		Tile		

Walls

	Metal Stud
	Wood Stud

General Notes

1. Prior to excavation and site planting on the job site, the contractor shall contact utility companies to locate underground utilities effecting the excavations and planting on the job site. Excavation shall not proceed until all utilities are located and indicated. The contractor shall maintain the identifying devices throughout the duration of the project.
2. The contractor shall comply with all applicable OSHA rules and regulations throughout the construction activities on the project. None of the work contemplated in the construction documents shall be construed as being in conflict with applicable OSHA rules and regulations.
3. Contractors shall verify all dimensions and conditions effecting the work shown on the contract documents. Any conflicts found shall be reported to the Architect before proceeding with the work.

Index to Drawings

ARCHITECTURAL

A0.0	Title Sheet
A2.2	FIRST FLOOR RCP - DEMO
A2.3	FIRST FLOOR RCP - NEW WORK
A2.4	Roof Plan

Graphic Symbols

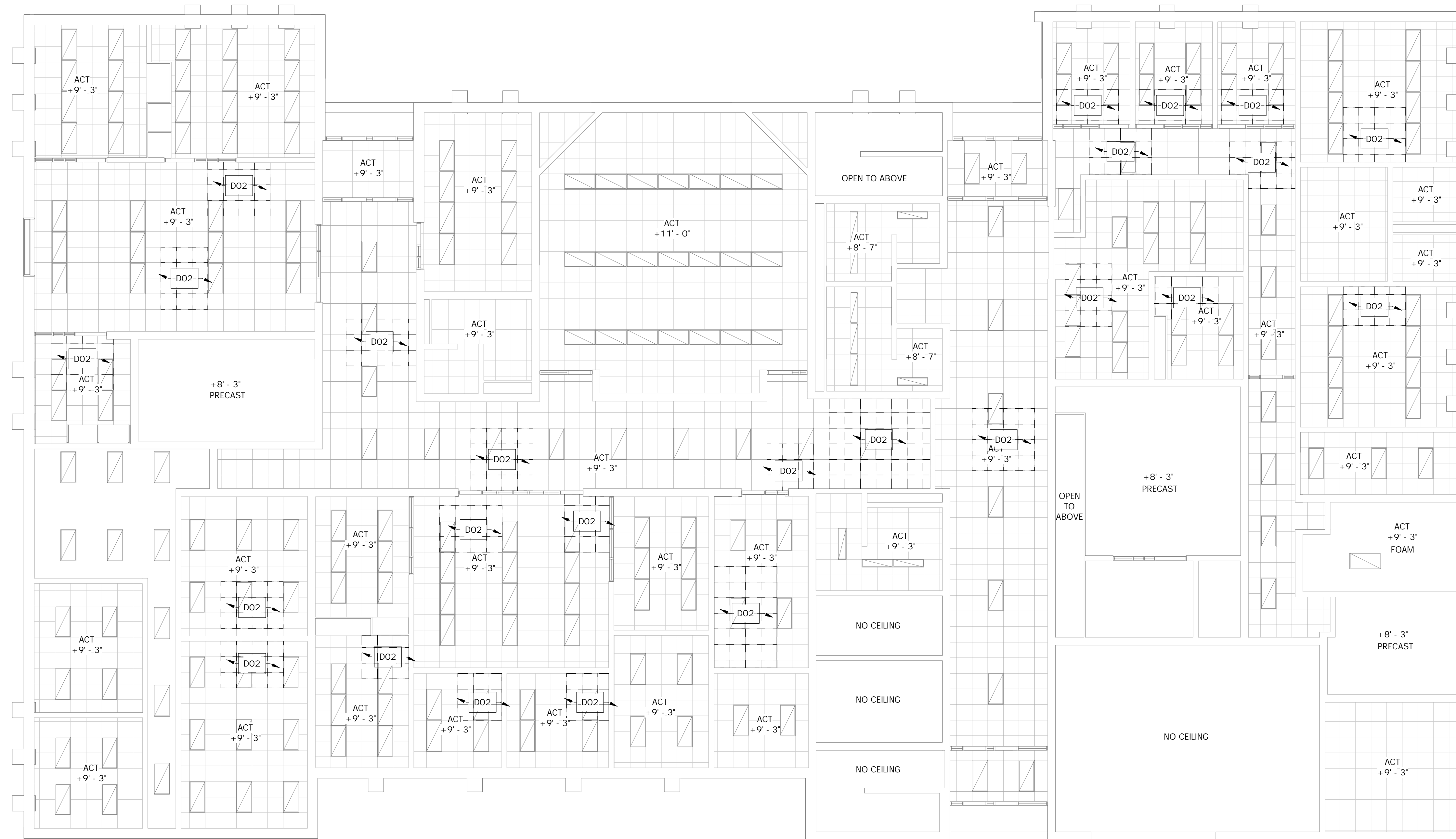
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	Sheet		Wall Type		Room Name/No.
	Building Section		Revision No.		Column Grid
	Wall Section		Floor Line		Test Bore
	Plan Detail				
	Detail				

WEBSTER CITY MUNICIPAL BUILDING

PRELIMINAR ONL
 NOT FOR CONSTRUCTION

WEBSTER CITY MUNICIPAL
 BUILDING
 400 2ND ST. A
 WEBSTER CITY, IA 50595

Title Sheet



1 RCP - DEMO
 1/8" = 1'-0" N↑

GENERAL NOTES

- EXISTING CONDITION DRAWINGS WERE COMPILED FROM CONSTRUCTION DRAWINGS PROVIDED BY THE OWNER AND ARE NOT INTENDED TO SHOW EVERY EXISTING CONDITION. CONTRACTOR SHOULD VERIFY ALL SITE CONDITIONS AND DIMENSIONS PRIOR TO PROCEEDING. EXISTING BUILDING DRAWINGS ARE AVAILABLE AT THE ARCHITECTS OFFICE FOR REVIEW.
- REMOVE ALL EXISTING WALLS, DOOR FRAMES, DOORS, AND MILLWORK WHERE REQUIRED. VERIFY SALVAGE RIGHTS WITH OWNER.
- REMOVE ALL EXISTING CEILINGS WHERE NEW CEILINGS ARE INDICATED ON CEILING PLANS.
- REMOVE ALL EXISTING LIGHT FIXTURES, SURFACE AND RECESSED CONDUIT AND WIRING, WALL SWITCHES AND OUTLETS, VOICE/DATA OUTLETS AND WIRING, CIRCUIT BOXES, & FLOOR BOXES THAT WOULD EXIST IN A DORMANT STATE UPON COMPLETION OF THE PROJECT. REMOVE ALL WIRING AND CONDUIT BACK TO CIRCUIT PANEL OR PHONE PANEL LEAVING NO DORMANT WIRE. (SEE FLOOR PLAN FOR DETAILS) VERIFY SALVAGE RIGHTS WITH OWNER.
- REMOVE ALL EXISTING PLUMBING FIXTURES, PLUMBING SOIL AND VENT STACKS, FLOOR DRAINS, AREA DRAINS, AND ANY EXTRANEIOUS PLUMBING THAT WOULD EXIST IN A DORMANT STATE AT THE COMPLETION OF THE PROJECT. (SEE PLANS FOR DETAILS) VERIFY SALVAGE RIGHTS WITH OWNER.
- REMOVE EXISTING MECHANICAL EQUIPMENT, EXHAUST AND SUPPLY DUCTING AND PIPING NOT REQUIRED BY THE NEW CONSTRUCTION, AND ANY EXTRANEIOUS MECHANICAL ITEMS THAT WOULD EXIST IN A DORMANT STATE AT THE COMPLETION OF THE PROJECT.
- PREPARE WALLS TO REMAIN FOR REQUIRED FINISH.
- REMOVE AND REINSTALL AT COMPLETION OF PROJECT ALL CEILING AND WALL MOUNTED ACCESSORIES INCLUDING SIGNAGE, ELECTRICAL DEVICES, ART WORK, AND MISCELLANEOUS ITEMS.

DEMOLITION ITEMS

DO1	EXISTG TO REMAIN
DO2	REMOVE EXISTING ACT SYSTEM FOR EQUIPMENT REPLACEMENT. SALVAGE FOR REINSTALLATION



1615 Golden Aspen Drive
 Suite 110
 Ames, Iowa 50010

515 292 6075 Phone
 515 292 6370 Fax

mail@rmharchitects.com

www.rmharchitects.com

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FIRST FLOOR RCP - DEMO

© 4/26/2024

A2.2



1 RCP - NEW WORK
1/8" = 1'-0"

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PROJECT MATERIAL LIST

- 1 EXISTING TO REMAIN
- 2 INSTALL SALVAGED ACT SYSTEM WHERE INDICATED; PROVIDE NEW WHERE DAMAGED



1615 Golden Aspen Drive
Suite 110
Ames, Iowa 50010

515 292 6075 Phone
515 292 6370 Fax

mail@rmharchitects.com

www.rmharchitects.com

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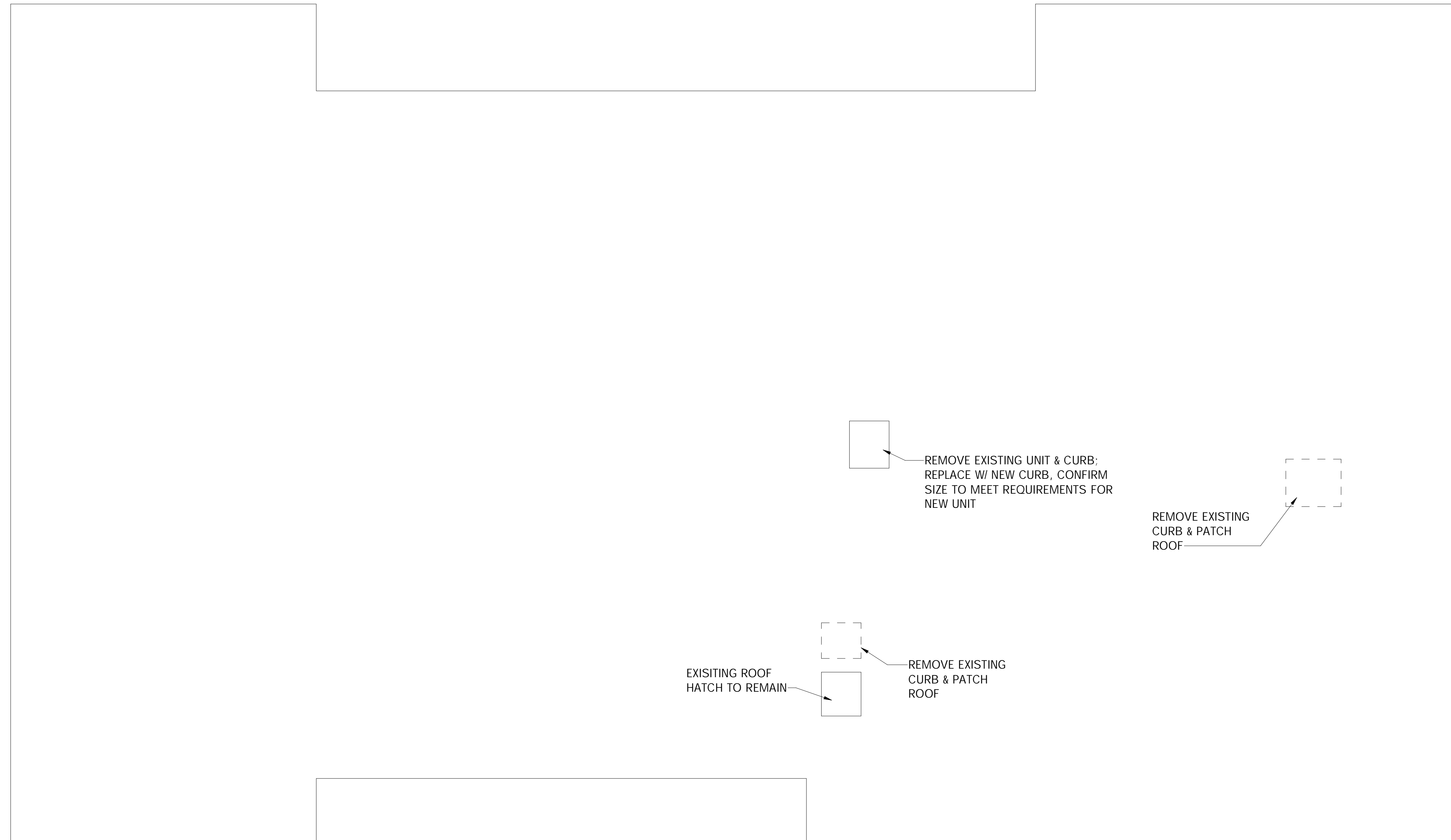
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PROJECT MATERIAL LIST

1	EXISTING TO REMAIN
2	INSTALL SALVAGED ACT SYSTEM WHERE INDICATED; PROVIDE NEW WHERE DAMAGED

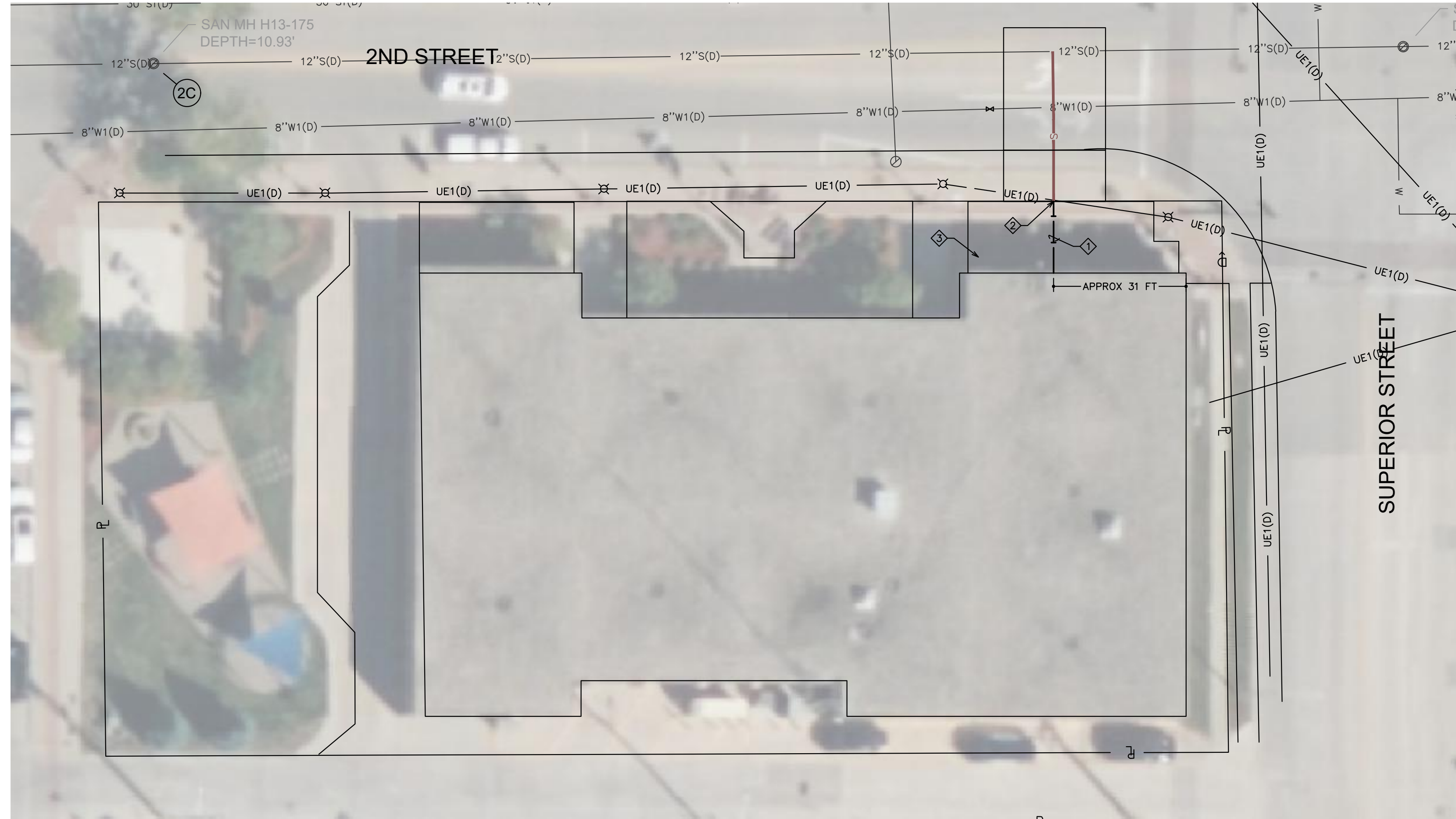


1 Roof
1/8" = 1'-0"

PRELIMINAR ONL
NOT FOR CONSTRUCTION

WEBSTER CITY MUNICIPAL
BUILDING
400 2ND ST. A
WEBSTER CITY, IA 50595

Roof Plan



MECHANICAL SITE PLAN
 1 1"=20'-0"
 NORTH
 SCALE REDUCTION BAR

GENERAL NOTES

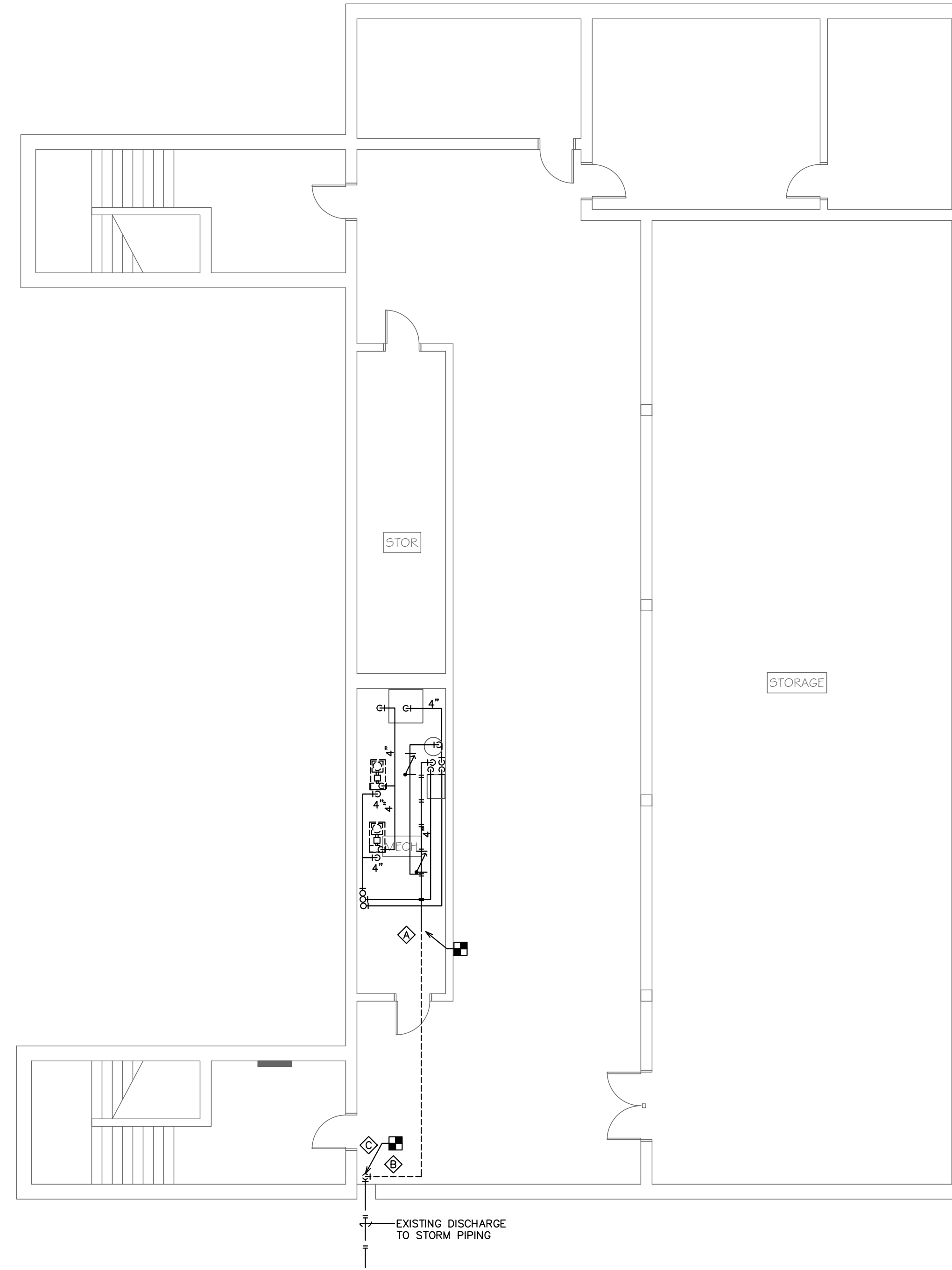
- ALL WORK ON THIS SHEET SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL, AND NATIONAL CODES. IF THERE ARE CONFLICTS BETWEEN THIS DRAWING AND THESE CODES, THE CONTRACTOR IS RESPONSIBLE TO HAVE ALL WORK CONFORM TO CODE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS, APPLICATIONS, AND INSPECTIONS, INCLUDING BUT NOT LIMITED TO PLUMBING, MECHANICAL, AND BACKFLOW PREVENTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN INSTALLATION WHICH MEETS THE REQUIREMENTS OF ALL PERMITS AND INSPECTIONS.
- NEW WORK IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL NOT PROCURE OR FABRICATE ANY PIPING, DUCTWORK, EQUIPMENT, OR OTHER ITEMS PRIOR TO FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS.
- DUE TO THE SCALE OF THESE DRAWINGS, PLACEMENT AND ROUTING OF ALL DUCTWORK, PIPING, ETC. ON THESE DRAWINGS IS SCHEMATIC IN NATURE AND MAY NOT INCLUDE ALL DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING WORK AND RECONNECTIONS, AS NECESSARY TO PROVIDE COMPLETE AND FULLY FUNCTIONAL SYSTEMS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER-TIGHT INTEGRITY OF ROOF AND WALLS DURING CONSTRUCTION. PATCH AND REFINISH ALL REMAINING OPENINGS TO MATCH ADJACENT STRUCTURE AND FINISH.
- COORDINATE WORK SCOPE WITH ALL OTHER TRADES. FURNISH APPROPRIATE RESOURCES AS REQUIRED TO MEET PROJECT COMPLETION DEADLINES AND MILESTONES.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND CUTTING THEIR OWN ROOF, FLOOR, AND WALL OPENINGS. COORDINATE WITH THE GENERAL CONTRACTOR.
- MAINTAIN ALL MANUFACTURER RECOMMENDED EQUIPMENT SERVICE AND SAFETY CLEARANCES.
- IN A NEAT AND WORKMANLIKE MANNER, FLASH AND SEAL ALL MECHANICAL PENETRATIONS THRU WALLS, CEILINGS, AND FLOORS WITH METAL FRAMEWORK OR ESCUTCHEONS. CAULK AND SEAL AIR-TIGHT.
- DO NOT PASS PIPING, DUCTWORK, OR EQUIPMENT ABOVE OR IN FRONT OF ELECTRICAL PANELS OR SWITCHGEAR. MAINTAIN ALL NEC REQUIRED CLEARANCES.
- PATCH WALLS CEILING OR FLOOR TO MATCH SURROUNDING AREA.
- FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS.

TAGGED NOTES

- NEW 4" SANITARY PIPING (GEOLoop DISCHARGE ONLY). VERIFY LOCATION PRIOR TO START OF WORK. REMOVE AND SALVAGE LANDSCAPING FOR RE-INSTALLATION.
- SEE CIVIL SITE DRAWING FOR CONTINUATION AND INSTALLATION REQUIREMENTS.
- REMOVE AND DEMOLISH ABANDONED BURIED LIQUID PROPANE STORAGE TANK, PIPING, AND REGULATOR. REMOVAL SHALL CONFORM TO NFPA GUIDELINES. SEAL BUILDING OPENING WITH BENTONITE PLUG AND EXTERIOR SEALANT.

MECHANICAL SITE PLAN	DRAWING NO. ME1.0	PROJECT WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595	CLIENT CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595	DESIGNED	DATE	DATE	DATE
				DRAWN	BKB	4/23/24	4/23/24
				REVIEWED	MJC	BEC #	BEC #
				FILE	BKB	SCALE	SCALE
					SEE DWG	2208	2208
					SEE DWG		

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1
NORTH
1/8" = 1'-0"
SCALE REDUCTION BAR

GENERAL DEMO NOTES

1. ALL WORK ON THIS SHEET SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL, AND NATIONAL CODES. IF THERE ARE CONFLICTS BETWEEN THIS DRAWING AND THESE CODES, THE CONTRACTOR IS RESPONSIBLE TO HAVE ALL WORK CONFORM TO STRICTER OF SAID REQUIREMENTS.
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3. DEMO WORK IS SHOWN DIAGRAMMATICALLY AND IS BASED ON LIMITED SITE OBSERVATIONS AND PREVIOUS CONSTRUCTION DOCUMENTS. CONTRACTOR SHALL NOT DEMOLISH ANY PIPING, DUCTWORK, EQUIPMENT, OR OTHER ITEMS PRIOR TO FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS.
4. DUE TO THE SCALE OF THESE DRAWINGS, PLACEMENT AND ROUTING OF ALL DUCTWORK, PIPING, ETC. ON THESE DRAWINGS IS SCHEMATIC IN NATURE AND MAY NOT INCLUDE ALL DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING REWORK AND RECONNECTIONS, AS NECESSARY TO PROVIDE COMPLETE AND FULLY FUNCTIONAL SYSTEMS.
5. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATER-TIGHT INTEGRITY OF ROOF AND WALLS DURING CONSTRUCTION. PATCH AND REFRESH ALL REMAINING OPENINGS TO MATCH ADJACENT STRUCTURE AND FINISH.
6. COORDINATE WORK SCOPE WITH ALL OTHER TRADES. PROJECT COMPLETION DEADLINES AND MILESTONES. PRE-SCHEDULE ALL REQUIRED UTILITY OR PROCESS INTERRUPTIONS WITH THE OWNER.
7. OWNER SHALL RETAIN SALVAGE RIGHTS TO ALL REMOVED EQUIPMENT/MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DISPOSAL OF ALL DEMOLITION DEBRIS INCLUDING BUT NOT LIMITED TO (UN-CLAIMED) EQUIPMENT/MATERIALS UNLESS NOTED OTHERWISE.
8. PROVIDE TEMPORARY POWER, VENTILATION AND HEATING AS REQUIRED.
9. PROPER RECYCLING AND RECLAIM POLICIES SHALL BE FOLLOWED AT ALL TIMES. SPECIFICALLY, FLUORESCENT LAMPS AND BALLASTS SHALL BE DISPOSED OF PROPERLY. ALL REFRIGERANTS MUST BE RECLAIMED, LOGGED, AND PROCESSED. TECHNICIANS WORKING WITH REFRIGERANT MUST BE CERTIFIED AS REQUIRED BY LOCAL, REGIONAL OR NATIONAL AGENCIES.
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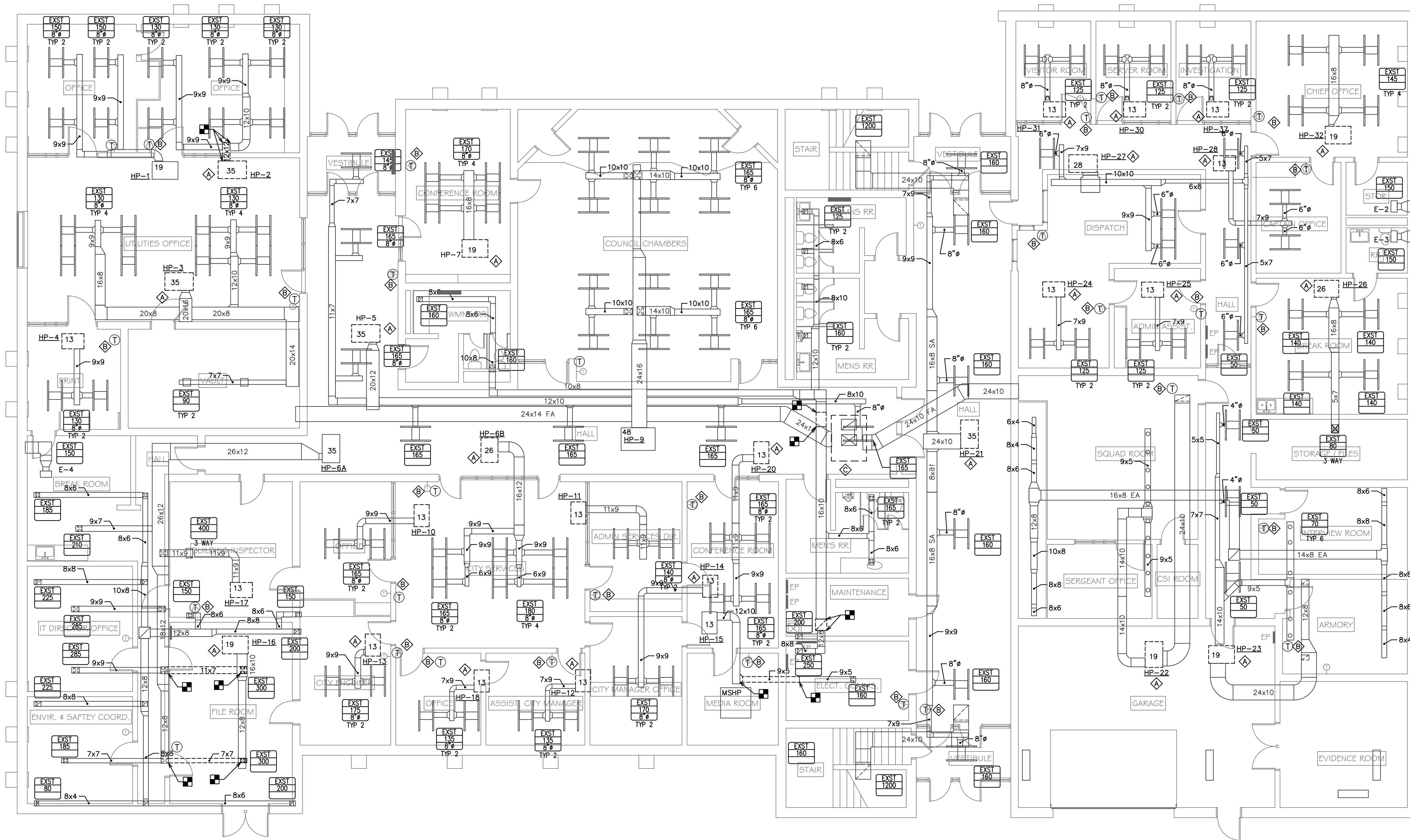
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7. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND CUTTING THEIR OWN ROOF, FLOOR, AND WALL OPENINGS. COORDINATE WITH THE GENERAL CONTRACTOR.
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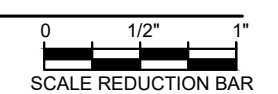
TAGGED DEMO NOTES

- ◇ REMOVE DISCHARGE PIPING IN PREPARATION FOR NEW WORK. FIELD VERIFY TIE-IN LOCATION.
- ◇ REMOVE AND SALVAGE FLOW METER FOR REINSTALLATION IN NEW PIPING.
- ◇ PLUG/CAP EXISTING STORM PIPING AT WALL.

PROJECT WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595	DATE 4/23/24	BEC # 2208	SCALE SEE DWG
	DESIGNED DRAWN REVIEWED FILE	BKB MJC BKB	MJC BKB
CLIENT CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595	REVISION 1	DATE 4/23/24	BEC # 2208
DRAWING NO. MD1.0			



1 MAIN LEVEL DEMOLITION PLAN
 1/8" = 1'-0"
 NORTH



GENERAL DEMO NOTES

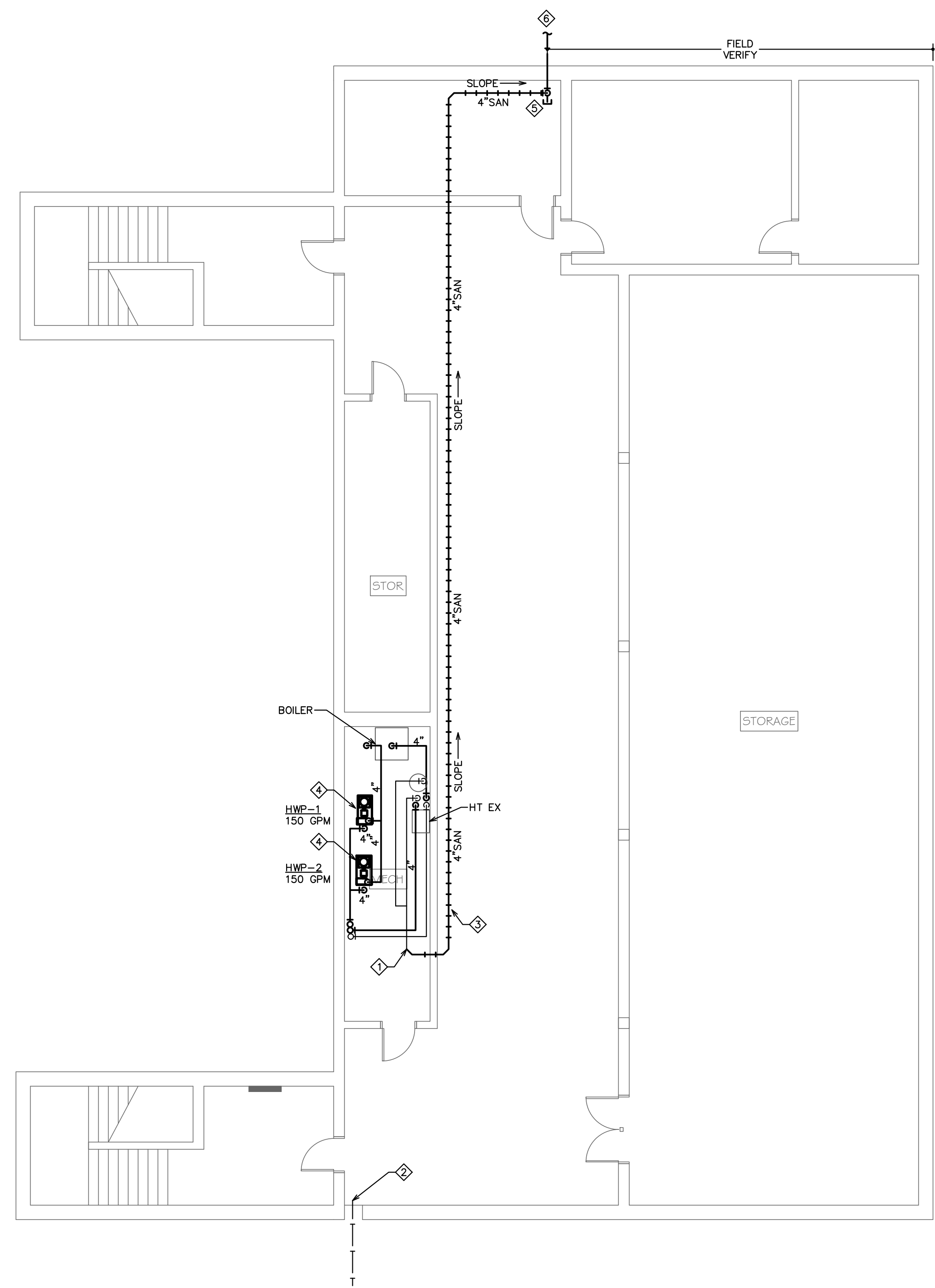
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TAGGED DEMO NOTES

- ⬠ DEMO EXISTING WSPH, DUCT CONNECTIONS, PIPING CONNECTIONS, VALVE PACKAGE, POWER CONNECTIONS AND BMS CONNECTION PREPARE FOR NEW WORK.
- ⬠ REMOVE EXISTING THERMOSTAT AND PREPARE FOR NEW. REMOVE AND REPLACE WIRING IF NOT COMPATIBLE WITH NEW EQUIPMENT.
- ⬠ DEMO ROOFTOP VENTILATOR, POWER, DUCTING, CURB AND CONTROLS. PREPARE FOR NEW WORK.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595			
	CLIENT	CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595		
DESIGNED	DATE	4/23/24	SCALE	SEE DWG
	BK#	MJC	BK#	SEE DWG
DRAWN	DATE	2208	SCALE	SEE DWG
	BK#	MJC	BK#	SEE DWG
REVIEWED	DATE	2208	SCALE	SEE DWG
FILE	MD1.1			

BRIEFWATER
 ENGINEERING CONSULTANTS
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1 NORTH
 1/8" = 1'-0"
 SCALE REDUCTION BAR

GENERAL NOTES

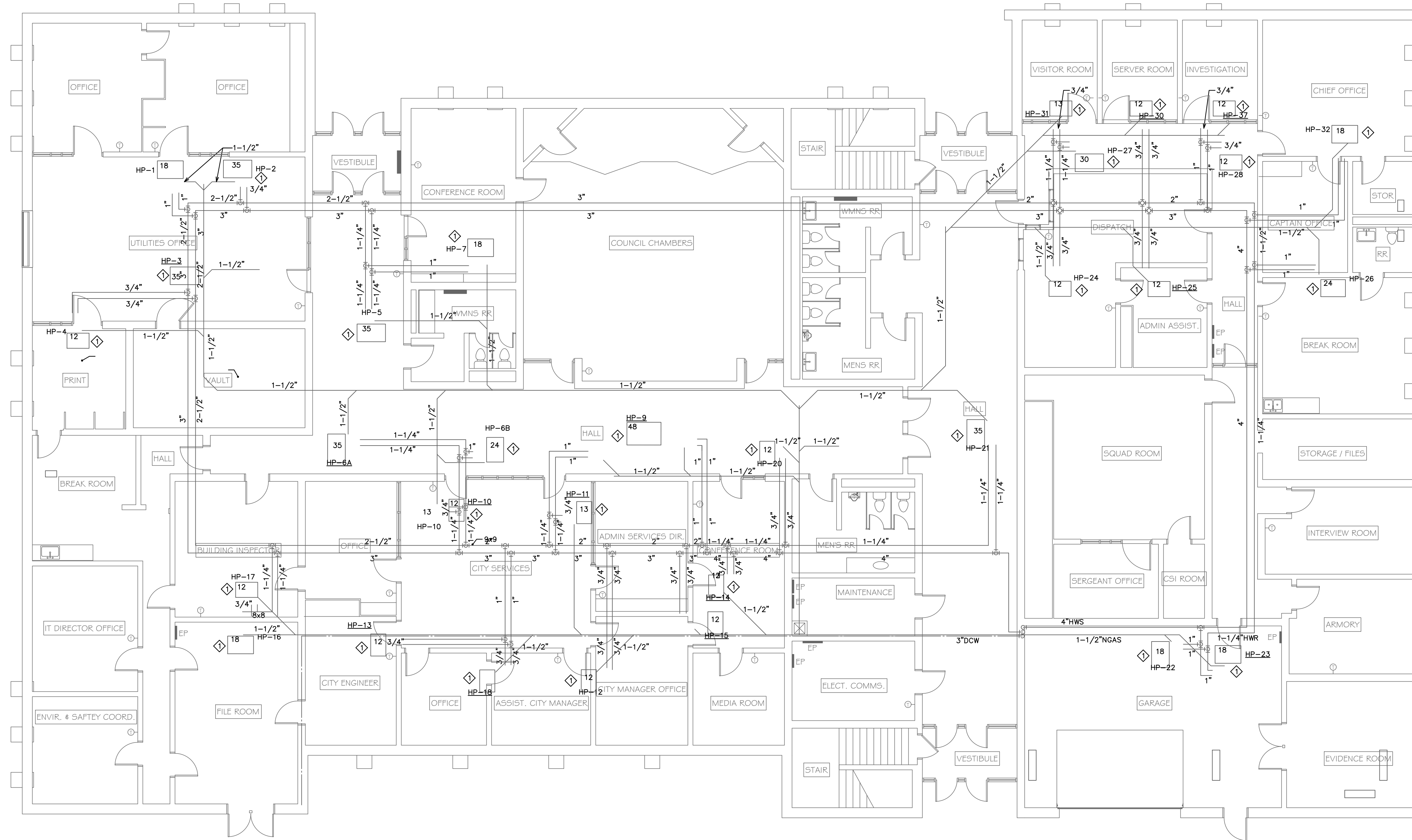
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12. FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS.

TAGGED NOTES

- ◆ CONNECT TO EXISTING DISCHARGE PIPING AND REMOVE DRAIN PIPING TO SOUTH WALL.
- ◆ CAP EXISTING STORM WATER DISCHARGE PIPING.
- ◆ RELOCATE FLOW METER FROM SOUTH WALL.
- ◆ REPLACE HEATING WATER PUMPS. SEE SCHEDULE. REPAIR/REPLACE ANY PIPING INSULATION DAMAGED OR REMOVED.
- ◆ DROP AT EXTERIOR WALL TO CLEANOUT BEFORE PENETRATING FOUNDATION WALL AT 60 INCHES BELOW GRADE. SEAL PENETRATION WITH "LINK SEAL" FITTING AND BENTONITE AND SEALANT.
- ◆ SEE SITE PLAN FOR CONTINUATION.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595			
	CLIENT	CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595		
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	MJC	BEC #	2208	SEE DWG
DRAWN	BKB	SCALE		SEE DWG
	MJC	SCALE		SEE DWG
REVIEWED	BKB	SCALE		SEE DWG
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DATE				
REVISION				
DRAWING NO.	M2.0			
	M2.0			

le BIRJEWER
 ENGINEERING CONSULTANTS
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 Ph: 515-957-8806 | 877-772-2040 | www.birjewer-eng.com



1
NORTH

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SCALE REDUCTION BAR

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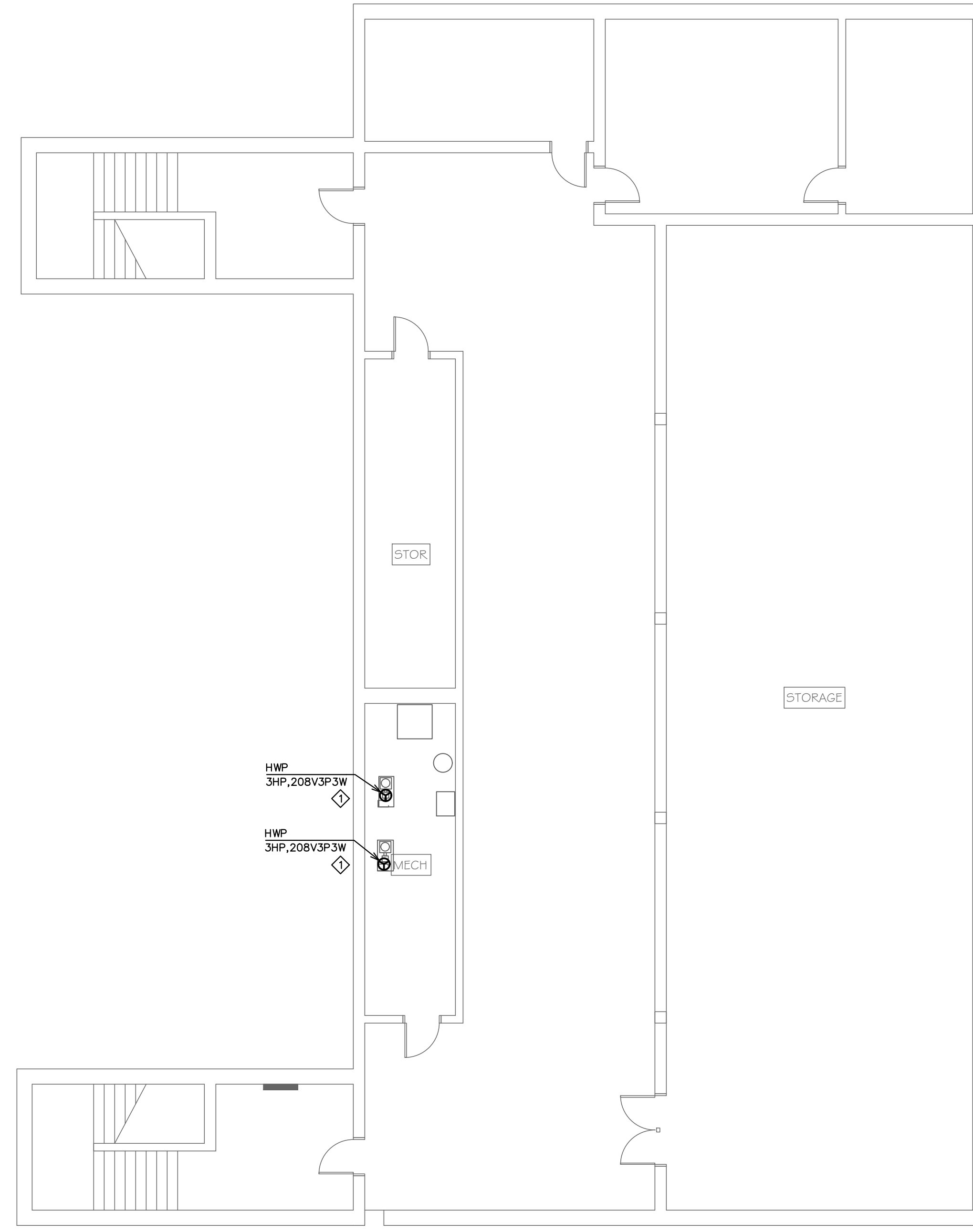
TAGGED NOTES

- ◇ REMOVE EXISTING HEAT PUMP CONNECTIONS AND PREPARE FOR NEW HOSE KITS. INSTALL ISOLATION VALVES AND HOSE KITS AND REPAIR/REPLACE LOOP PIPING INSULATION.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595			
	DATE	4/23/24	DATE	4/23/24
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BREWER
ENGINEERING CONSULTANTS
905 Washington Ave SE - Burlington, Iowa 50835 BEC# 2208
PH: 515-957-8806 | 877-772-2040 | www.brewer-engr.com

MAIN LEVEL
PIPING PLAN
DRAWING NO. M2.1



1 NORTH 1/8" = 1'-0" SCALE REDUCTION BAR

GENERAL NOTES

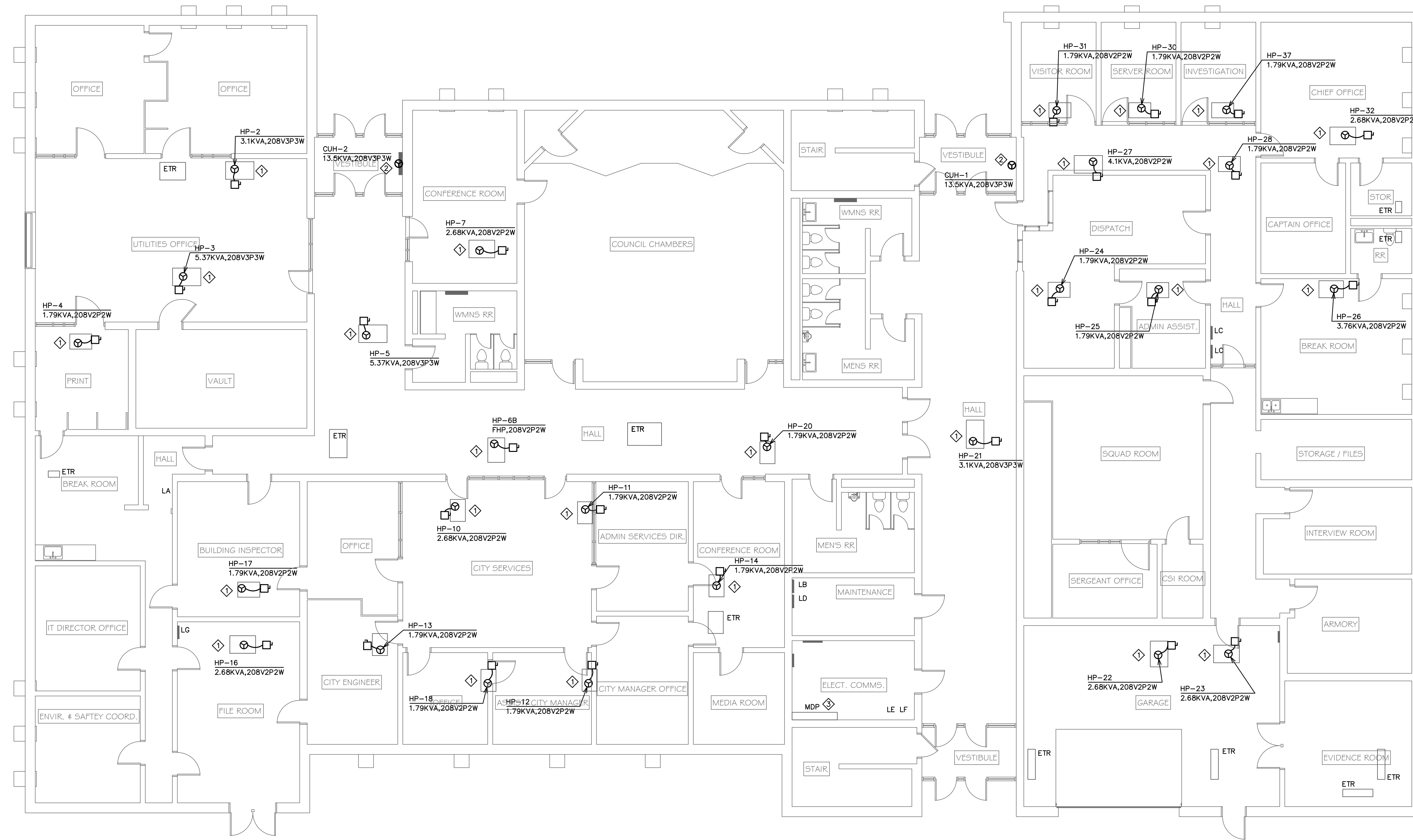
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TAGGED NOTES

- ◆ REMOVE ELECTRICAL CONNECTION TO HEATING WATER PUMP FOR DEMOLITION AND REPLACEMENT BY OTHERS. RECONNECT NEW PUMPS TO SAME CIRCUITS/STARTERS.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595		
	CLIENT	CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595	
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	DRAWN	BEC #	2208
REVIEWED	MJC	SCALE	SEE DWG
	BKB	SCALE	SEE DWG
FILE	SEE DWG	DATE	4/23/24
DRAWING NO.	E1.0	REVISION	

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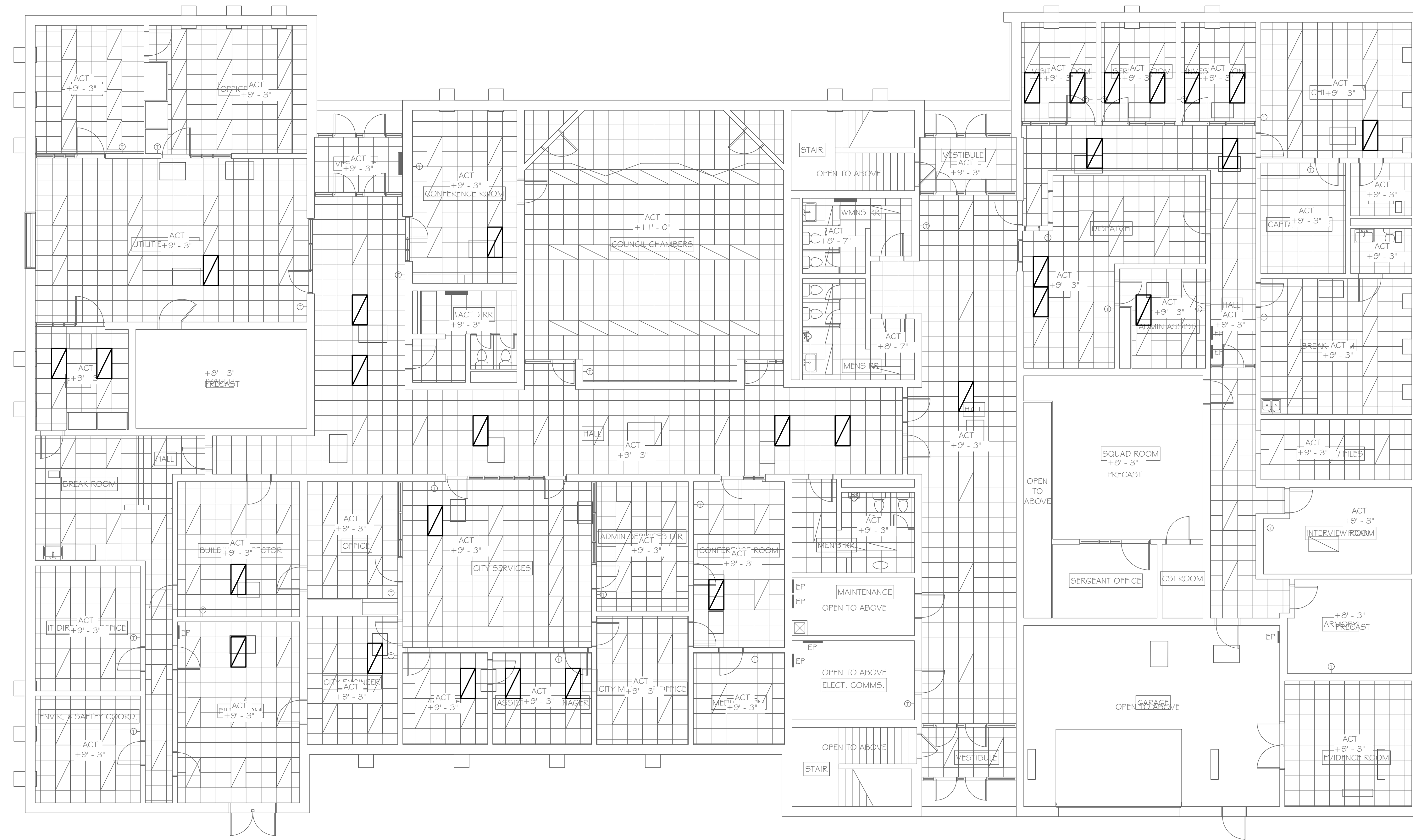
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- COORDINATE/ADJUST LIGHT FIXTURES IN MECHANICAL AND ELECTRICAL ROOMS WITH DUCTWORK, PIPING, CONDUIT, AND EQUIPMENT.
- ALL ELECTRICAL DEVICE LOCATIONS SHALL BE COORDINATED DURING CONSTRUCTION WITH THE OWNER AND ARCHITECT.
- REFER TO CASEWORK DRAWINGS FOR RECEPTACLE HEIGHTS.
- MAINTAIN MINIMUM 24" OFFSET FOR RECEPTACLES/WALL BOXES "BACK TO BACK" IN FIRE PARTITIONS.

TAGGED NOTES

- ◇ REMOVE ELECTRICAL CONNECTION TO EXISTING UNITS FOR DEMOLITION BY OTHERS. RECONNECT NEW EQUIPMENT TO SAME CIRCUITS. VERIFY CIRCUIT BREAKER AND CONDUCTOR REQUIREMENTS WITH PURCHASED HEAT PUMPS.
- ◇ REMOVE ELECTRICAL CONNECTION TO HEATING UNIT FOR DEMOLITION AND REPLACEMENT BY OTHERS. RECONNECT NEW HEATERS TO SAME CIRCUITS.
- ◇ NEW 70A/3P BREAKER IN EXISTING SQUARE D 1200A SWITCHBOARD, 42K AIC RATING. ROUTE CIRCUIT THROUGH CEILING CAVITY IN CONDUIT AND UP THROUGH INSIDE OF NEW UNIT CURB TO UNIT DISCONNECT.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595			
	DESIGNED	BKB	MJC	BKB
CLIENT	CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595			
	DRAWN	BKB	MJC	BKB
DATE	4/23/24	2208	SCALE	SEE DWG
	DATE	4/23/24	SCALE	SEE DWG
REVISION	DATE			
	REVISION			
DRAWING NO. E1.1				



1 MAIN LEVEL LIGHTING PLAN
 1/8" = 1'-0"
 NORTH

GENERAL NOTES

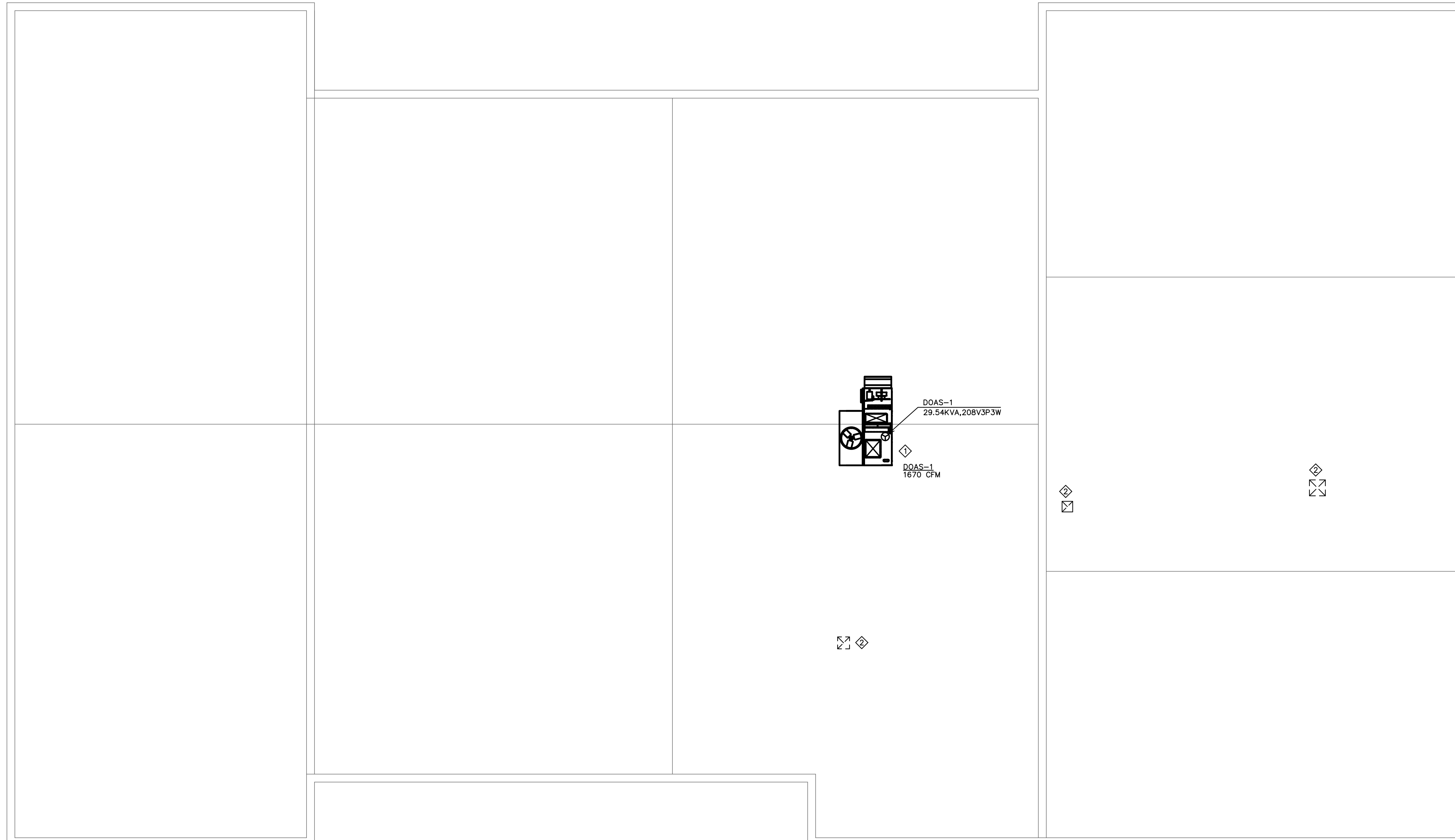
- ALL WORK ON THIS SHEET SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL AND NATIONAL CODES. IF THERE ARE CONFLICTS BETWEEN THIS DRAWING AND THESE CODES, THE CONTRACTOR IS RESPONSIBLE TO HAVE ALL WORK CONFORM TO CODE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS, APPLICATIONS AND INSPECTIONS, INCLUDING BUT NOT LIMITED TO ELECTRICAL. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN INSTALLATION WHICH MEETS THE REQUIREMENTS OF ALL PERMITS AND INSPECTIONS.
- NEW WORK IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL NOT PROCURE OR FABRICATE ANY CONDUIT, EQUIPMENT, OR OTHER ITEMS PRIOR TO FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS.
- DUE TO THE SCALE OF THESE DRAWINGS, PLACEMENT AND ROUTING OF ALL CONDUIT, JUNCTION BOXES, ETC. ON THESE DRAWINGS IS SCHEMATIC IN NATURE AND MAY NOT INCLUDE ALL DETAILS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WORK, INCLUDING REWORK AND RECONNECTIONS, AS NECESSARY TO PROVIDE COMPLETE AND FULLY FUNCTIONAL SYSTEMS.
- CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING WATERTIGHT INTEGRITY OF ROOF AND WALLS DURING CONSTRUCTION. PATCH AND FINISH ALL REMAINING OPENINGS TO MATCH ADJACENT STRUCTURE AND FINISH.
- COORDINATE WORK SCOPE WITH ALL OTHER TRADES. CONTRACTOR RESPONSIBLE FOR VERIFYING CORRECT EQUIPMENT VOLTAGE AND AMPERAGE PRIOR TO INSTALLATION. FURNISH APPROPRIATE RESOURCES AS REQUIRED TO MEET PROJECT COMPLETION DEADLINES AND MILESTONES.
- EACH CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND CUTTING THEIR OWN ROOF, FLOOR, AND WALL OPENINGS. COORDINATE WITH THE GENERAL CONTRACTOR.
- MAINTAIN ALL MANUFACTURER RECOMMENDED EQUIPMENT SERVICE AND SAFETY CLEARANCES.
- IN A NEAT AND WORKMANLIKE MANNER, FLASH AND SEAL ALL ELECTRICAL PENETRATIONS THRU WALLS, CEILING, AND FLOORS WITH METAL FRAMEWORK OR ESCUTCHEONS. CAULK AND SEAL AIRTIGHT.
- COORDINATE/ADJUST LIGHT FIXTURES IN MECHANICAL AND ELECTRICAL ROOMS WITH DUCTWORK, PIPING, CONDUIT, AND EQUIPMENT.
- ALL ELECTRICAL DEVICE LOCATIONS SHALL BE COORDINATED DURING CONSTRUCTION WITH THE OWNER AND ARCHITECT.
- REFER TO CASEWORK DRAWINGS FOR RECEPTACLE HEIGHTS.
- MAINTAIN MINIMUM 24" OFFSET FOR RECEPTACLES/WALL BOXES "BACK TO BACK" IN FIRE PARTITIONS.

TAGGED NOTES

- ◇ CEILING MOUNTED LIGHT FIXTURES WILL LIKELY NEED TO BE REMOVED, STORED, AND RE-INSTALLED AFTER HEAT PUMPS ARE REPLACED. CONTRACTOR SHOULD PLAN ON REMOVAL AND REINSTALLATION OF THE FIXTURES HIGH-LIGHTED HERE, BUT MORE FIXTURE REMOVALS MAY BE NECESSARY.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595			
	CLIENT	CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595		
DESIGNED	BKB	DATE	4/23/24	SCALE
	DRAWN	MJC	BEC #	2208
REVIEWED	BKB	DATE	4/23/24	SCALE
	FILE	MJC	BEC #	2208
DRAWING NO.	E.2.1			

BREWER
 ENGINEERING CONSULTANTS
 905 Washington Ave SE - Bondurant, Iowa 50035 BEC # 2208
 Ph: 515-957-8806 | 877-772-2040 | www.brewer-eng.com



1 ROOF LEVEL MECH/ELEC PLAN
 1/8" = 1'-0"
 NORTH

0 1/2" 1"
 SCALE REDUCTION BAR

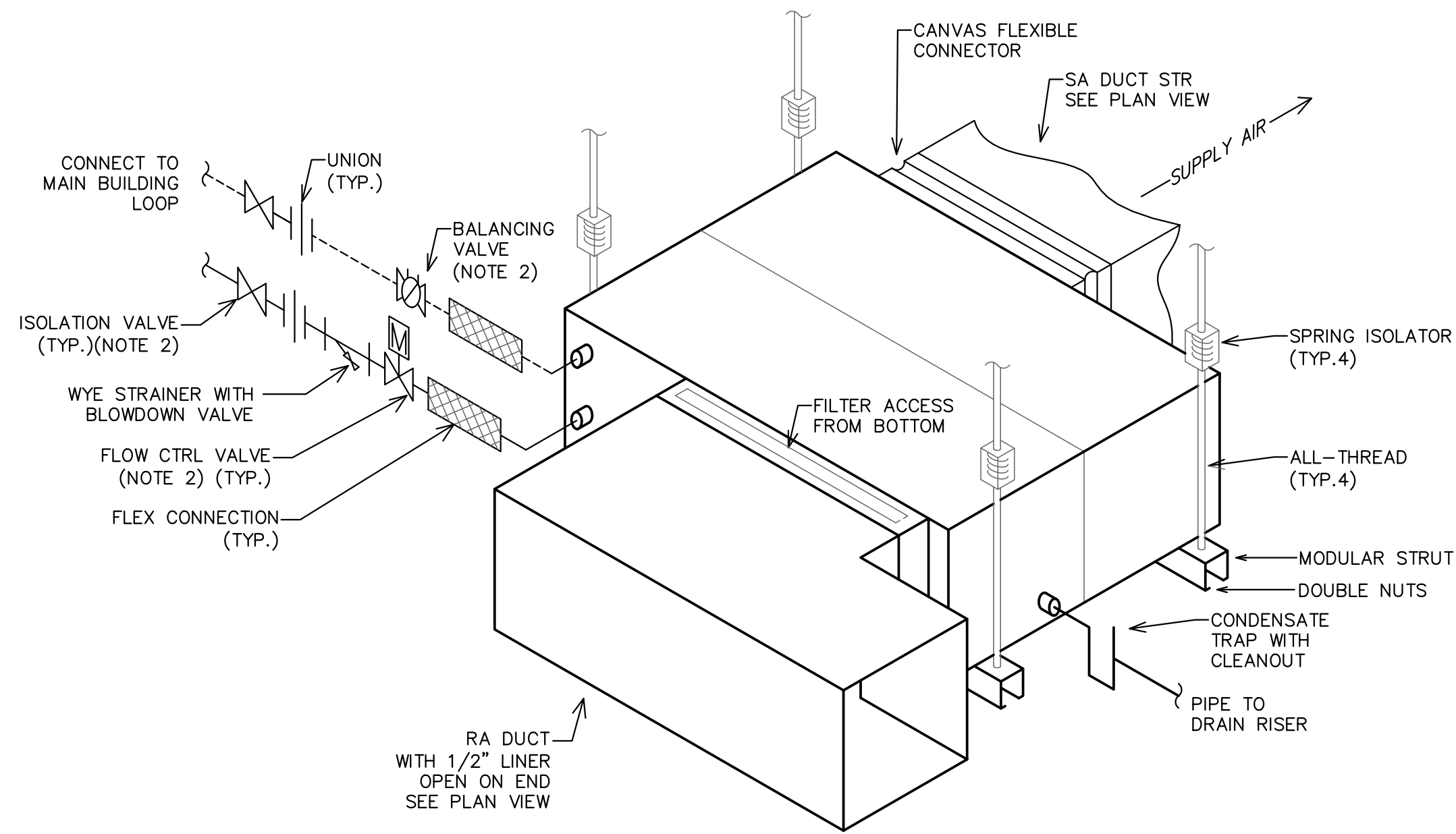
GENERAL NOTES

- ALL WORK ON THIS SHEET SHALL BE COMPLETED IN ACCORDANCE WITH ALL APPLICABLE STATE, LOCAL, AND NATIONAL CODES. IF THERE ARE CONFLICTS BETWEEN THIS DRAWING AND THESE CODES, THE CONTRACTOR IS RESPONSIBLE TO HAVE ALL WORK CONFORM TO CODE.
- THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED PERMITS, APPLICATIONS, AND INSPECTIONS, INCLUDING BUT NOT LIMITED TO PLUMBING, MECHANICAL, AND BACKFLOW PREVENTION. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE AN INSTALLATION WHICH MEETS THE REQUIREMENTS OF ALL PERMITS AND INSPECTIONS.
- NEW WORK IS SHOWN DIAGRAMMATICALLY. CONTRACTOR SHALL NOT PROCURE OR FABRICATE ANY PIPING, DUCTWORK, EQUIPMENT, OR OTHER ITEMS PRIOR TO FIELD VERIFYING ALL DIMENSIONS AND CONDITIONS.
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- IN A NEAT AND WORKMANLIKE MANNER, FLASH AND SEAL ALL MECHANICAL PENETRATIONS THRU WALLS, CEILINGS, AND FLOORS WITH METAL FRAMEWORK OR ESCUTCHEONS. CAULK AND SEAL AIRTIGHT.
- DO NOT PASS PIPING, DUCTWORK, OR EQUIPMENT ABOVE OR IN FRONT OF ELECTRICAL PANELS OR SWITCHGEAR. MAINTAIN ALL NEC REQUIRED CLEARANCES.
- PATCH WALLS CEILING OR FLOOR TO MATCH SURROUNDING AREA.
- FOLLOW MANUFACTURERS INSTALLATION INSTRUCTIONS.

TAGGED NOTES

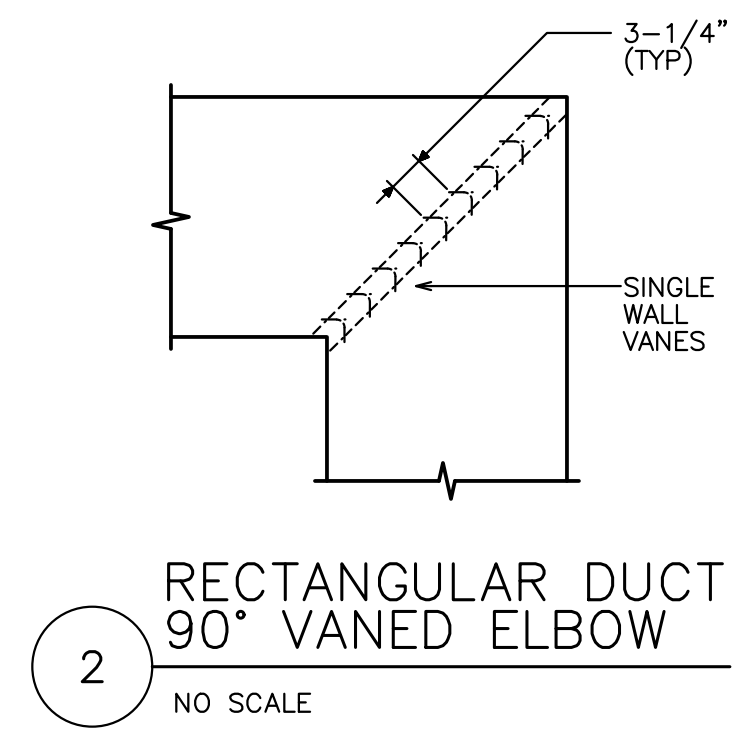
- INSTALL NEW DOAS UNIT ON NEW CURB. CLOSE EXISTING OPENINGS NOT RE-USED AND CUT NEW OPENINGS AS REQUIRED AND SUPPORT WITH 3X3X1/4 ANGLES UNDER CURB AND PERIMETER OF OPENINGS. CONNECT UNIT SUPPLY AND RETURN OPENINGS TO EXISTING DUCT RISERS WITH NEW TRANSITIONS AS APPROPRIATE. COORDINATE OPENINGS AND REPAIRS WITH ROOFING CONTRACTOR.
- REMOVE AND DEMOLISH EXISTING EQUIPMENT, CURB, DUCTING, POWER, ACCESSORIES AND CONTROLS. CLOSE OPENING AND REPAIR/REPLACE ROOFING - COORDINATE WITH ROOFING CONTRACTOR.

PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT 400 2nd St Webster City, Iowa 50595			CLIENT	CITY OF WEBSTER CITY, IA 400 2nd St Webster City, Iowa 50595		
	DESIGNED	BKB	DATE		4/23/24	REVISION	DATE
DRAWN	MJC	BEC #	2208				
REVIEWED	BKB	SCALE	SEE DWG				
FILE	SEE DWG						
DRAWING NO.	ME2.0						

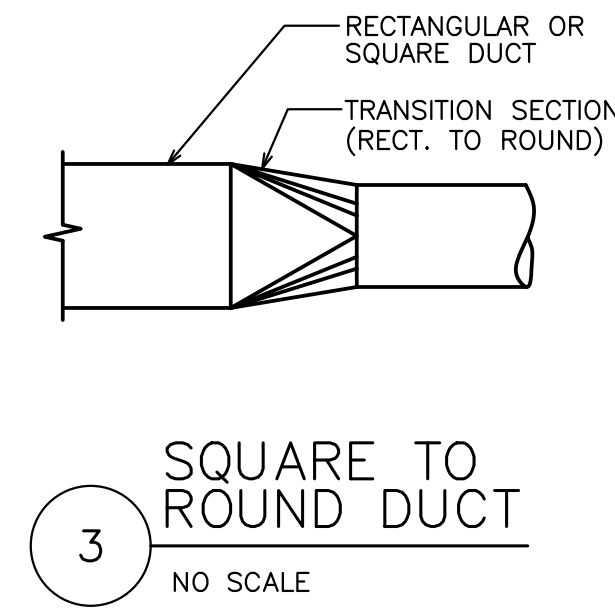


1 WSHP CONNECTION DETAIL
NO SCALE

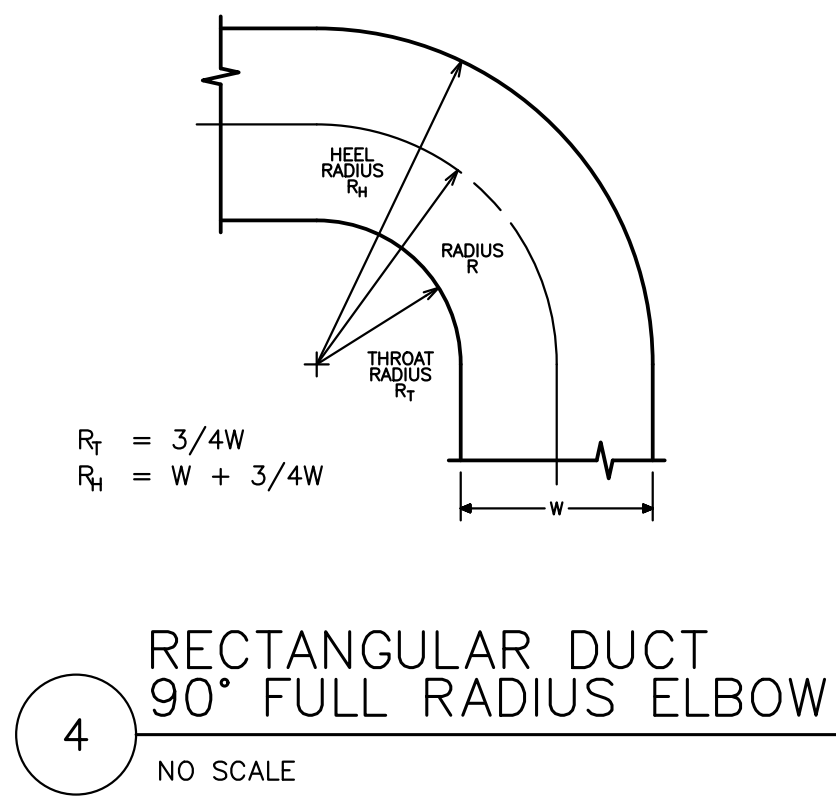
- NOTES:
 1. STRAINERS SHALL BE 40 MESH.
 2. REPLACE EXISTING VALVES WITH NEW.
 3. REPLACE PIPING PACKAGES WITH NEW INCLUDING FLEX CONNECTIONS.



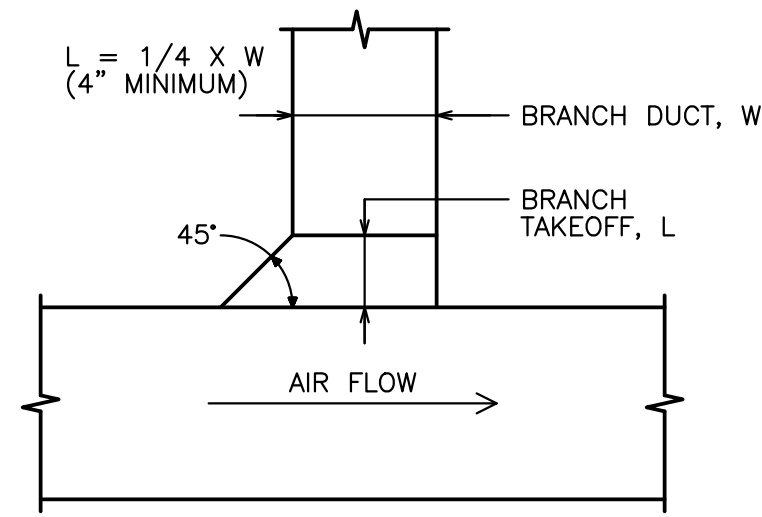
2 RECTANGULAR DUCT 90° VANED ELBOW
NO SCALE



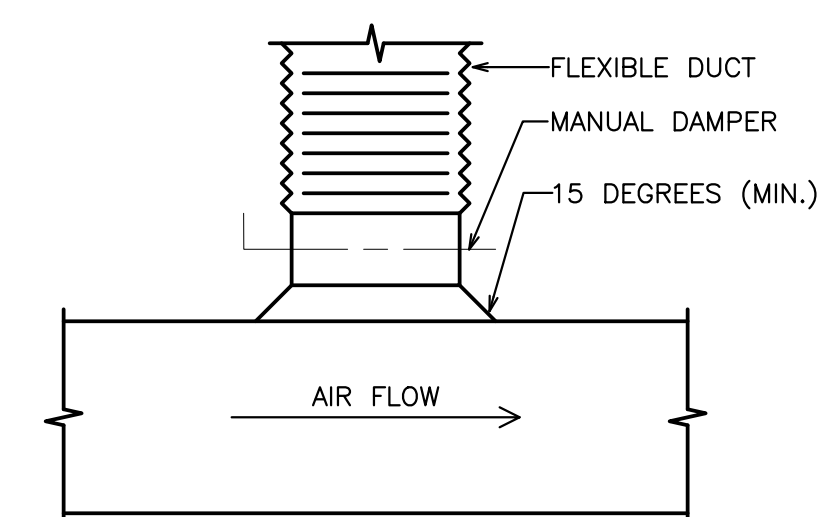
3 SQUARE TO ROUND DUCT
NO SCALE



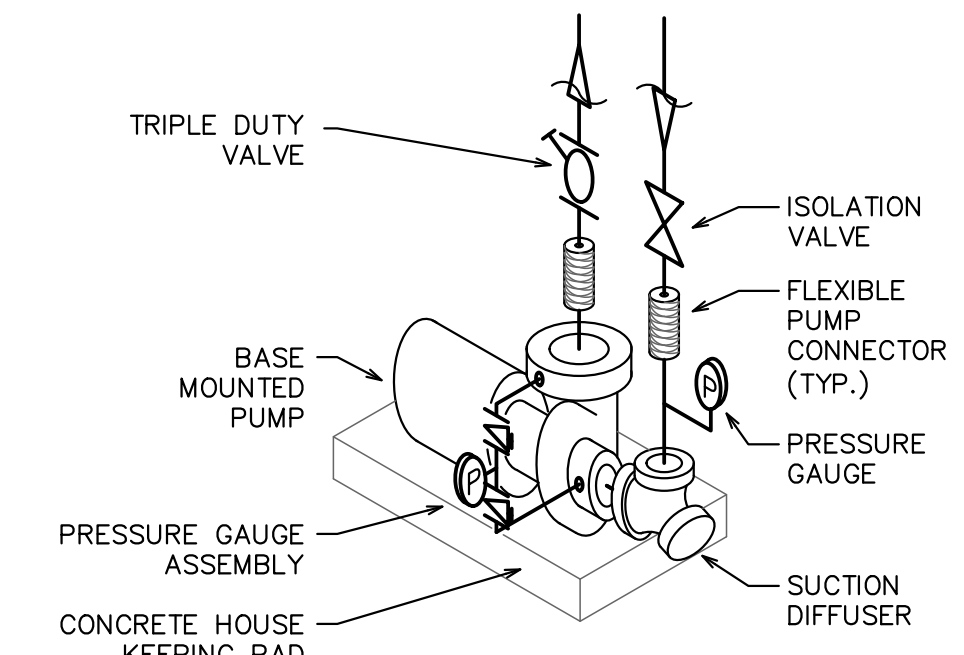
4 RECTANGULAR DUCT 90° FULL RADIUS ELBOW
NO SCALE



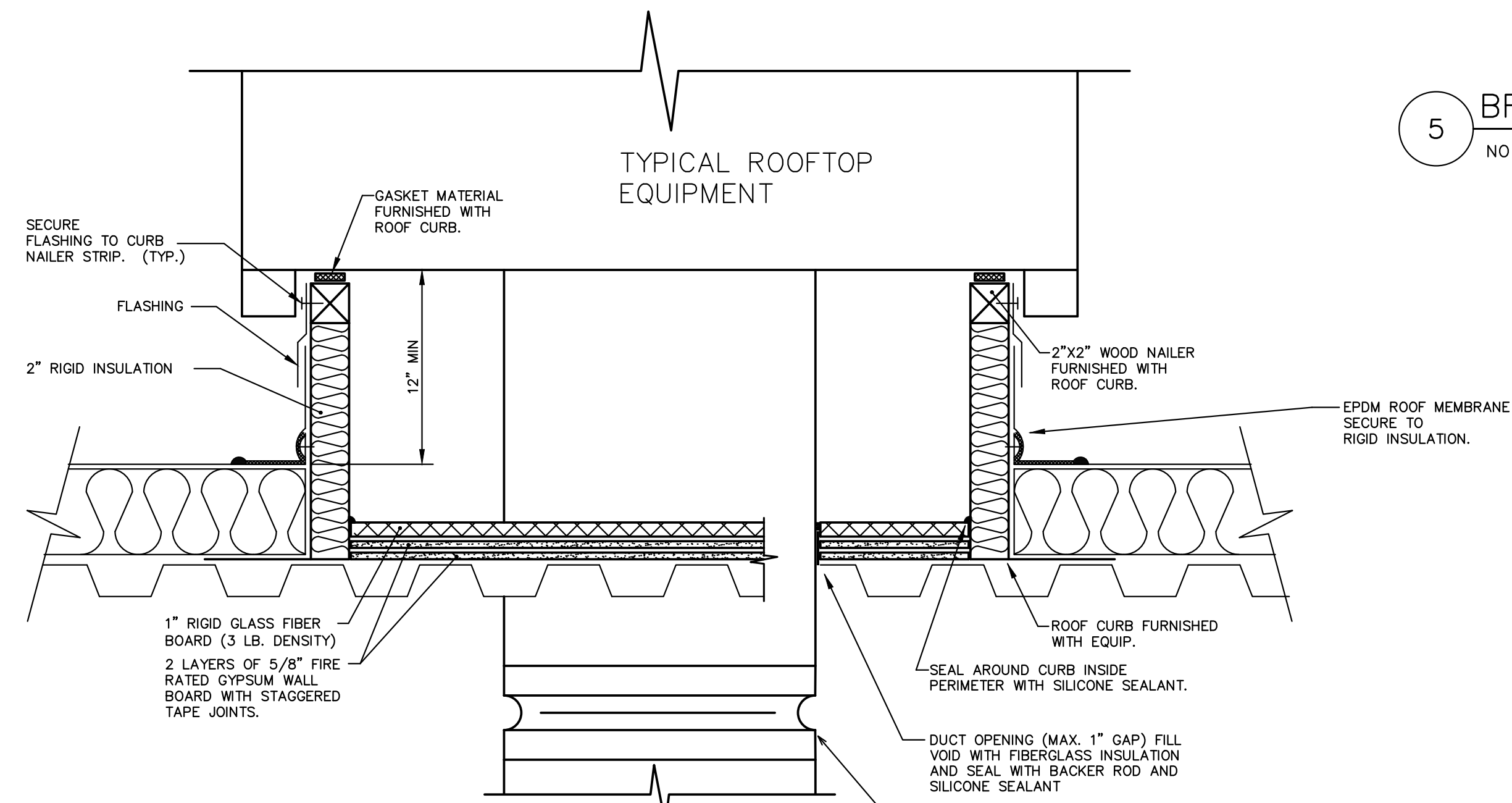
5 BRANCH DUCT TAKEOFF
NO SCALE



6 FLEXIBLE DUCT TAKEOFF
NO SCALE



7 BASE MOUNTED PUMP DETAIL
NO SCALE



8 ROOFTOP EQUIPMENT CURB
NO SCALE

- NOTES:
 1. ALL ROOF FLASHING SHALL BE PER ROOF MANUFACTURER'S RECOMMENDATIONS.
 2. ROOF CURB SHALL BE INSTALLED PER ROOF CURB MANUFACTURER'S RECOMMENDATIONS.
 3. PROVIDE EXTENDED CURB AS REQUIRED TO MAINTAIN 12\"/>

DATE		REVISION	
PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT		
CLIENT	CITY OF WEBSTER CITY, IA		
DESIGNED	BKB	DATE	4/23/24
DRAWN	MJC	BEC #	2208
REVIEWED	BKB	SCALE	SEE DWG
FILE		SEE DWG	
PROJECT	WEBSTER CITY MUNICIPAL BLDG HVAC REPLACEMENT		
CLIENT	CITY OF WEBSTER CITY, IA		
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REVIEWED	BKB	SCALE	SEE DWG
FILE		SEE DWG	
DRAWING NO.	ME3.0		

BREWER
 ENGINEERING CONSULTANTS
 905 Washington Ave SE - Bondurant, Iowa 50035 BEC# 2208
 Ph: 515-957-8806 | 877-772-2040 | www.brewer-engr.com

CITY OF WEBSTER CITY, IA
 400 2nd St
 Webster City, Iowa 50595

WEBSTER CITY MUNICIPAL BLDG
 HVAC REPLACEMENT
 400 2nd St
 Webster City, Iowa 50595

WEBSTER CITY MUNICIPAL BLDG

2024 HVAC System Replacement

Owner:

CITY OF WEBSTER CITY
400 2nd St.
Webster City, IA 50595

May 2024

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- D. 00 4100 - Bid Form
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- F. 00 5200 - Agreement Form
- G. 00 7200 - General Conditions
- H. 00 7300 - Supplementary Conditions

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- B. 01 2000 - Price and Payment Procedures
- C. 01 2500 - Substitution Procedures
- D. 01 3000 - Administrative Requirements
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SECTION 00 1113
ADVERTISEMENT FOR BIDS

1.01 NOTICE

- A. Sealed proposals for alterations at the Webster City Municipal Building, 400 S. 2nd St, Webster City, IA 50595, will be received by the City of Webster City, at the office of the Webster City City Clerk, until 2:00 P.M., on the 21st day of June 2024. Said proposals will be publicly opened and tabulated on said date. At such later time as the City Council may determine, said proposals will be considered and acted upon by the City Council.
- B. Bids received after the time and date stated above will not be considered and will be returned to bidder.
- C. Work under this contract includes replacement of rooftop and interior HVAC equipment, associated mechanical and electrical work, repairs to existing membrane roof assemblies, selective interior demolition, replacement of interior finishes and other related work.
- D. Each proposal shall be made on the official bid proposal form prepared for this purpose, which may be obtained from the Engineer. Any alteration in the official bid proposal form will entitle the City Council at its option to reject the proposal involved from consideration. Each proposal shall be accompanied by a bid bond or a certified check or cashier's check, drawn on a solvent state or national bank, or a certified share draft drawn on a credit union in Iowa, and filed in a sealed envelope separate from the one containing the proposal. The bidder's certified check or bid bond shall be in an amount equal to five percent (5 %) of the amount of the proposal, made payable to the City of Webster City, Iowa. The check may be cashed by the City Council or the bid bond forfeited to the City Council as liquidated damages in the event the successful bidder fails to enter into a contract and file acceptable bonds satisfactory to the City Council assuring the faithful fulfillment of the contract and maintenance of said improvements as required by law within 10 days after the acceptance of the successful bidder's proposal.
- E. The City Council reserves the right to reject any or all proposals, or to defer action on the proposals for a period of not to exceed 30 days from and after the date and time specified in this notice for receiving proposals.
- F. The successful bidder will be required to furnish a Performance Bond and a Payment Bond, each in an amount equal to 100 percent of the contract price. Said bonds are to be issued by a responsible Surety approved by the City Council and shall guarantee that the Principal will promptly make payment to all persons, firms, subcontractors and corporations furnishing materials for or performing labor in the prosecution of the work stated and the faithful performance of the contract and the terms and conditions therein contained and the guarantee that all work performed and materials furnished shall be free from defects for a period of one (1) year from the time of acceptance of said improvements by the City Council.

- G. Payment to the Contractor for said improvements will be made in monthly increments based on the estimated progress of the Contractor in performing the contract. Payment will be made from cash on hand and from such other funds as are available to the City Council that may be legally used for such purpose.
- H. At least 10 days before each progress payment falls due (but not more often than once a month), the Contractor will submit to the Engineer a partial payment estimate filled out and signed by the Contractor covering the work performed during the period covered by the partial payment estimate and supported by such data as the Engineer may reasonably require. If payment is required on the basis of materials and equipment not incorporated in the work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data, satisfactory to the City Council, as will establish the City Council' title to the material and equipment and protect the City Council' interest therein, including applicable insurance. The Engineer will, within 10 days after receipt of each partial payment estimate, either indicate in writing approval of payment and present the partial payment estimate to the City Council, or return the partial payment estimate to the Contractor indicating in writing the reasons for refusing to approve payment. In the latter case, the Contractor may make the necessary corrections and resubmit the partial payment estimate. The City Council will, within 10 days of presentation to the City Council of an approved partial payment estimate, pay the Contractor a progress payment on the basis of the approved partial payment estimate.
- I. The City Council shall retain from each monthly payment five percent (5.0 %) of that amount which is determined to be due according to the estimate of the Engineer. The retainage shall constitute a fund for the payment of claims for materials furnished and labor performed on said improvement and will be held and disposed of by the City Council as hereinafter provided. Such monthly payment shall in no way be construed as an act of acceptance for any part of the work partially or totally completed. Final payment of the retainage due the Contractor will be made not earlier than 31 days after the final acceptance of said work by the City Council subject to the conditions and in accordance with the provisions of Chapter 573 of the Code of Iowa.
- J. Work covered by partial payment shall not be construed as relieving the Contractor of the sole responsibility for the care and protection of the work upon which payments have been made or the restoration of any damaged work, or as a waiver of the rights of the City Council to require the fulfillment of all terms of the contract documents. No such partial or final payment will be due until the Contractor has certified to the City Council that the materials, labor and services involved in each estimate have been paid for in accordance with the requirements stated in the specifications.
- K. The Contractor shall indemnify and save the City Council or the City Council' agents harmless from all claims growing out of the lawful demands of subcontractors, laborers, workers, material suppliers and furnishers of machinery, equipment, tools and all supplies incurred in the

furtherance of the performance of the work on said improvements. The Contractor shall, at the City Council' request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived.

- L. If the Contractor fails to do so, the City Council may, after having notified the Contractor, either pay unpaid bills or withhold from the Contractor's unpaid compensation, a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharged whereupon payment to the Contractor shall be resumed in accordance with the terms of the contract documents, but in no event shall the provisions of this sentence be construed to impose any obligations upon the City Council to either the Contractor, his Surety or any third party. In paying any unpaid bills of the Contractor, any payment so made by the City Council shall be considered as a payment made under the contract documents by the City Council to the Contractor and the City Council shall not be liable to the Contractor for any such payments made in good faith.
- M. By virtue of statutory authority, 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 provided that the award of contract will be made to the lowest responsible bidder submitting the lowest responsive bid, which shall be determined without regard to state or local laws giving preference to factors other than the amount of the bid.
- N. Work under the proposed contract shall be commenced immediately after the award of the contract and shall be completed and ready for operation not later than 365 calendar days after the notice to proceed, subject to any extension of time which may be granted by the City Council.
- O. Before final payment will be made, the Contractor shall file in duplicate with the City Council an itemized statement showing the amount of Iowa sales tax and to whom paid on all materials which have become part of the finished work.
- P. Plans and specifications governing the construction of the proposed improvements have been prepared by Roseland Mackey Harris Architects, P.C., which plans and specifications and the official proceedings of the City Council referring to and defining said proposed improvements are hereby made a part of this Notice and the proposed contract by this reference, and shall be executed in compliance therewith.
- Q. Prebid conference and site walkthrough has been scheduled for 2:00 p.m. on May 28th, 2024 at the Project Site. General contract and subcontract bidders and suppliers are required to contact the Engineer at the following address and phone number no less than one (1) business day before prebid conference date to indicate their intention to attend. Representatives of the Engineer will be in attendance. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.
- R. Plans, specifications and proposed contract documents are on file with the Engineer, for examination by bidders. Copies of said plans, specifications, Form of Proposal blanks and

Form of Contract may be obtained from Brewer Engineering Consultants, PLC, 905 Washington Ave SE, Bondurant, Iowa 50035, 515-957-8806, upon written request and deposit of 100.00 per set after May 20, 2024. A refund of 100.00 per document set returned in good and usable condition within 10 days after the date of receiving bids will be returned to the requesting firm.

- S. Bidding Documents may be obtained from Beeline Blue, 2507 Ingersoll Avenue, Des Moines, IA 50312, (515) 244-1611, www.beelineandblue.com.

END OF SECTION

SECTION 00 2113
INSTRUCTIONS TO BIDDERS

SUMMARY

1.01 DOCUMENT INCLUDES

INVITATION

2.01 INTENT

- A. The intent of this Bid request is to obtain an offer to perform work to complete a replacement of HVAC equipment and associated work located at 400 2nd St, Webster City, Iowa for a Stipulated Sum contract, in accordance with Contract Documents.

2.02 CONTRACT TIME

- A. Identify Contract Time in the Bid Form. The completion date in the Agreement shall be the Contract Time added to the commencement date.

BID DOCUMENTS AND CONTRACT DOCUMENTS

3.01 DEFINITIONS

- A. Bid Documents: Contract Documents supplemented with Invitation To Bid, Instructions to Bidders, Information Available to Bidders, Bid Form Supplements To Bid Forms and Appendices identified.
- B. Contract Documents: Defined in AIA A201 Article 1 including issued Addenda.
- C. Bid, Offer, or Bidding: Act of submitting an offer under seal.
- D. Bid Amount: Monetary sum identified by the Bidder in the Bid Form.

3.02 CONTRACT DOCUMENTS IDENTIFICATION

- A. Contract Documents are identified as Owner's Project Number BEC 2208, as prepared by Architect/Engineer, and with contents as identified in the Table of Contents.

3.03 AVAILABILITY

- A. Interested parties may obtain one set of Bid Documents upon receipt of a refundable deposit, by check, in the amount of 100, or completed current MBI/ABC card, from the office of Architect/Engineer.
- B. Bid Documents will be delivered directly from the printer after receipt of bid deposit.
- C. Deposit will be refunded if Bid Documents are returned complete, undamaged, unmarked and reusable, within 7 days of bid submission. Failure to comply will result in forfeiture of deposit.
- D. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.
- E. All Bid Documents are copyright protected and their use for any purpose other than obtaining offers for this project as designed is prohibited.

3.04 EXAMINATION

- A. Bid Documents may be viewed at the office of Architect/Engineer.
- B. Upon receipt of Bid Documents verify that documents are complete. Notify Architect/Engineer should the documents be incomplete.

- C. Immediately notify Architect/Engineer upon finding discrepancies or omissions in the Bid Documents.

3.05 INQUIRIES/ADDENDA

- A. Direct questions to Brian Brewer, email; bbrewer@brewer-engr.com.
- B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.
- D. Clarifications requested by bidders must be in writing not less than 7 days before date set for receipt of bids. The reply will be in the form of an Addendum, a copy of which will be forwarded to known recipients.

3.06 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS

- A. General Requirements for Substitution Requests:
 - 1. Project Manual establishes standards for products, assemblies, and systems.
 - 2. Submit requests only for elements for which substitution is specifically allowed in the Project Manual.
 - 3. Provide sufficient information to determine acceptability of proposed substitutions.
 - 4. Provide complete information on required revisions to other work to accommodate each proposed substitution.
- B. Substitution Request Time Restrictions:
 - 1. Where the Bid Documents stipulate a particular product, substitutions will be considered up to 10 days before receipt of bids.
- C. Substitution Request Form:
 - 1. Submit substitution requests by completing CSI/CSC Form 1.5C - Substitution Request (During the Bidding/Negotiating Stage). See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- D. Review and Acceptance of Request:
 - 1. Architect/Engineer may approve the proposed substitution and will issue an Addendum to known bidders.
- E. See Section 01 2500 - Substitution Procedures for additional requirements.

SITE ASSESSMENT

4.01 SITE EXAMINATION

- A. Examine the project site before submitting a bid.

4.02 PREBID CONFERENCE

- A. A bidders conference has been scheduled for _____ a.m. on the _____ day of _____ at the location of the Project Site.
- B. All general contract and subcontract bidders and suppliers are requested to contact the Architect/Engineer no less than one (1) business day before prebid conference date to indicate their intention to attend.

- C. Representatives of Architect/Engineer will be in attendance.
- D. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.

QUALIFICATIONS

5.01 EVIDENCE OF QUALIFICATIONS

- A. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position, previous experience, and current commitments, license to perform work in the State.

5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS

- A. Owner reserves the right to reject a proposed subcontractor for reasonable cause.
- B. Refer to General Conditions.

BID SUBMISSION

6.01 SUBMISSION PROCEDURE

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.
- B. Submit one copy of the executed offer on the Bid Forms provided, signed and sealed with the required security in a closed opaque envelope, clearly identified with bidder's name, project name and Owner's name on the outside.
- C. Double Envelope: Insert the closed and sealed Bid Form envelope plus requested security deposit, in a large opaque envelope and label this envelope as noted above.
- D. Improperly completed information, irregularities in security deposit, may be cause not to open the Bid Form envelope and declare the bid invalid or informal.
- E. An abstract summary of submitted bids will be made available to all bidders following bid opening.

6.02 BID INELIGIBILITY

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.
- B. Bid Forms, Appendices, and enclosures that are improperly prepared may, at the discretion of Owner, be declared unacceptable.

BID ENCLOSURES/REQUIREMENTS

7.01 SECURITY DEPOSIT

- A. Bids shall be accompanied by a security deposit as follows:
 - 1. Bid Bond of a sum no less than 5 percent of the Bid Amount on AIA A310 Bid Bond Form.
- B. Endorse the Bid Bond in the name of the Owner as obligee, signed and sealed by the principal (Contractor) and surety.
- C. The security deposit will be returned after delivery to the Owner of the required Performance and Payment Bond(s) by the accepted bidder.

- D. Include the cost of bid security in the Bid Amount.
- E. After a bid has been accepted, all securities will be returned to the respective bidders and other requested enclosures.
- F. If no contract is awarded, all security deposits will be returned.

7.02 PERFORMANCE ASSURANCE

- A. Accepted Bidder: Provide a Performance bond as described in 00 7300 - Supplementary Conditions.
- B. Include the cost of performance assurance bonds in the Bid Amount.

7.03 BID FORM REQUIREMENTS

- A. Complete all requested information in the Bid Form and Appendices.

7.04 SALES AND USE TAXES

- A. Iowa Construction Sales Tax Exemption Certificates and authorization letters will be provided by the Owner to the Contractor and Subcontractors for use on this project in accordance with the regulations of the Iowa Department of Revenue and Finance. This exemption certificate will authorize suppliers to sell construction materials that will be incorporated into and made part of the Work exempt from Iowa sales tax and any applicable local option sales tax and school infrastructure local option sales tax. Complete information on qualifying materials can be found on the Iowa Department of Revenue and Finance web site at www.state.ia.us/tax. It is the responsibility of the Contractor and Subcontractors to maintain records identifying the materials purchased and verifying they were used on this project. Any materials purchased tax-free and not used on the project are subject to sales and local option taxes and these taxes must be paid directly to the Iowa Department of Revenue and Finance.

7.05 BID FORM SIGNATURE

- A. The Bid Form shall be signed by the bidder, as follows:
 - 1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words Sole Proprietor under the signature. Affix seal.
 - 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word Partner under each signature. Affix seal to each signature.
 - 3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, must also be submitted with the Bid Form in the bid envelope.
 - 4. Joint Venture: Each party of the joint venture shall execute the Bid Form under their respective seals in a manner appropriate to such party as described above, similar to the requirements of a Partnership.

OFFER ACCEPTANCE/REJECTION

8.01 DURATION OF OFFER

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of sixty (60) days after the bid closing date.

8.02 ACCEPTANCE OF OFFER

- A. Owner reserves the right to accept or reject any or all offers.
- B. After acceptance by Owner, Architect/Engineer on behalf of Owner, will issue to the successful bidder, a written Notice To Proceed.

END OF SECTION

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SECTION 00 4100

BID FORM

THE PROJECT AND THE PARTIES

1.01 TO:

- A. Webster City City Council (Owner)
400 2nd St
Webster City, Iowa 50595

1.02 FOR:

- A. Project: Webster City Municipal Bldg HVAC Replacement

1.03 DATE: _____ (BIDDER TO ENTER DATE)

1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)

- A. Bidder's Full Name
 - 1. Address
 - 2. City, State, Zip

1.05 OFFER

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by Brewer Engineering Consultants, PLC for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Sum of:

B.

dollars

(), in lawful money of the United States of America.

- C. We have included the required security deposit as required by the Instruction to Bidders.
- D. We have included the required performance assurance bonds in the Bid Amount as required by the Instructions to Bidders.
- E. All applicable federal taxes are included and State of _____ taxes are included in the Bid Sum.

1.06 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
 - 1. Execute the Agreement within seven days of receipt of Notice of Award.
 - 2. Furnish the required bonds within seven days of receipt of Notice of Award.
 - 3. Commence work within seven days after written Notice to Proceed of this bid.
- C. If this bid is accepted within the time stated, and we fail to commence the Work or we fail to provide the required Bond(s), the security deposit shall be forfeited as damages to Owner by reason of our failure, limited in amount to the lesser of the face value of the security deposit or the difference between this bid and the bid upon which a Contract is signed.

- D. In the event our bid is not accepted within the time stated above, the required security deposit shall be returned to the undersigned, in accordance with the provisions of the Instructions to Bidders; unless a mutually satisfactory arrangement is made for its retention and validity for an extended period of time.

1.07 CONTRACT TIME

- A. If this Bid is accepted, we will:
- B. Complete the Work in _____ calendar weeks from Notice to Proceed.
(Bidder to enter number of weeks.)

1.08 ADDENDA

- A. The following Addenda have been received. The modifications to the Bid Documents noted below have been considered and all costs are included in the Bid Sum.
 - 1. Addendum # _____ Dated _____ .
 - 2. Addendum # _____ Dated _____ .

1.09 BID FORM SUPPLEMENTS

- A. The following Supplements are attached to this Bid Form and are considered an integral part of this Bid Form:
 - 1. Document 00 4336 - Proposed Subcontractors Form: Include the names of all Subcontractors and the portions of the Work they will perform.

1.10 BID FORM SIGNATURE(S)

- A.
- B. (Bidder - print the full name of your firm)
- C.
- D. (Authorized signing officer, Title)

END OF SECTION

SECTION 00 4336

PROPOSED SUBCONTRACTORS FORM

PARTICULARS

1.01 HEREWITH IS THE LIST OF SUBCONTRACTORS REFERENCED IN THE BID SUBMITTED BY:

1.02 (BIDDER) _____

1.03 TO (OWNER): WEBSTER CITY CITY COUNCIL

1.04 DATED _____ AND WHICH IS AN INTEGRAL PART OF THE BID FORM.

**1.05 THE FOLLOWING WORK WILL BE PERFORMED (OR PROVIDED) BY SUBCONTRACTORS
AND COORDINATED BY US:**

LIST OF SUBCONTRACTORS

WORK SUBJECTSUBCONTRACTOR NAME

- A. Mechanical.....
- B. Plumbing.....
- C. Electrical.....

END OF SECTION

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**SECTION 00 5200
AGREEMENT FORM**

PART 1 GENERAL

1.01 FORM OF AGREEMENT

**1.02 AIA DOCUMENT A101, OWNER-CONTRACTOR AGREEMENT FORM - STIPULATED SUM
2017 EDITION, FORMS THE BASIS OF CONTRACT BETWEEN THE OWNER AND
CONTRACTOR.**

1.03 RELATED REQUIREMENTS

- A. Section 00 7200 - General Conditions.
- B. Section 00 7300 - Supplementary Conditions.

PART 2 PRODUCTS (NOT USED)

PART 3 EXECUTION (NOT USED)

END OF SECTION

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**SECTION 00 7200
GENERAL CONDITIONS**

FORM OF GENERAL CONDITIONS

**1.01 AIA DOCUMENT A101, OWNER-CONTRACTOR AGREEMENT FORM - STIPULATED SUM
2017 EDITION, FORMS THE BASIS OF CONTRACT BETWEEN THE OWNER AND
CONTRACTOR.**

SUPPLEMENTARY CONDITIONS

**2.01 REFER TO DOCUMENT 00 7300 - SUPPLEMENTARY CONDITIONS FOR AMENDMENTS TO
THESE GENERAL CONDITIONS.**

END OF SECTION

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SECTION 00 7300
SUPPLEMENTARY CONDITIONS

PART 1 GENERAL

1.01 SUMMARY

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 7200 - General Conditions and other provisions of Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

1.02 MODIFICATIONS TO AIA A201

A. ARTICLE 11.5 - PERFORMANCE BOND AND PAYMENT BOND

- 1. Add the following subparagraph:
 - a. 11.5.3: The bond value requirements are as follows:
 - 1) Provide bonds on AIA A312.
 - 2) Provide a 100 percent Performance Bond.
 - 3) Provide a 100 percent Payment Bond.
 - 4) Deliver bonds within 7 days after execution of the Contract.

B. ARTICLE 17: INSURANCE

- 1. Insurance coverage shall not be less than the following:
 - a. Worker's Compensation:
 - 1) Statutory limits
 - b. Contractor's General Liability on an occurrence basis, limit applies per this project:
 - 1) Each occurrence: 1,000,000
 - 2) Fire damage: 100,000
 - 3) Medical expense per person: 5,000
 - 4) Personal Adv. Injury: 1,000,000
 - 5) General aggregate: 2,000,000
 - 6) Products-Comp/Op Aggregate: 2,000,000
 - c. All Automobile Public Liability:
 - 1) Personal injury: 1,000,000/ 1,000,000
 - 2) Property damage: 100,000 each occurrence
 - d. Contractor's Excess Liability:
 - 1) Combined bodily injury and property damage: 5,000,000 over primary
 - e. Builder's Risk insurance: All risk contract value to be provided by the Owner.
- 2. All Contractor's insurance policies shall name the Architect and the Owner as additional insured's for b., c., and d. above.

1.03 ADDITIONAL ARTICLE - DEFINITIONS

- A. PRODUCTS: Means new material, machinery, components, equipment, fixtures, and systems forming the work, but does not include machinery and equipment used for preparation, fabrication, conveying and erection of the work. Products may also include existing materials or components required for re-use.
- B. FURNISH OR SUPPL : To supply and deliver, unload, inspect for damage.
- C. INSTALL: To unpack, assemble, erect, apply, place, finish, cure, protect, clean, and ready for use.
- D. PROVIDE: To furnish or supply, plus install.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 1000

SUMMARY

PART 1 GENERAL

1.01 PROJECT

- A. Project Name: Webster City Municipal Bldg HVAC Replacement
- B. Owner's Name: Webster City City Council.
- C. Architect/Engineer's Name: Architect/Engineer.
- D. The Project consists of the replacement of HVAC systems.

1.02 CONTRACT DESCRIPTION

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 5200 - Agreement Form.

1.03 DESCRIPTION OF ALTERATIONS WORK

- A. Scope of demolition and removal work is indicated on drawings and specified in Section 02 4100.
- B. Scope of alterations work is indicated on drawings.
- C. Plumbing: Alter existing system and add new construction, keeping existing in operation.
- D. HVAC: Replace existing system with new construction, keeping existing in operation until ready for changeover.
- E. Electrical Power and Lighting: Alter existing system and add new construction, keeping existing in operation.

1.04 OWNER OCCUPANCY

- A. Owner intends to continue to occupy all portions of the existing building during the entire construction period.
- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

1.05 CONTRACTOR USE OF SITE AND PREMISES

- A. Construction Operations: Limited to areas noted on Drawings.
 - 1. Locate and conduct construction activities in ways that will limit disturbance to site.
- B. Arrange use of site and premises to allow:
 - 1. Work by Others.
 - 2. Work by Owner.
 - 3. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
 - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Time Restrictions:

1. Limit conduct of especially noisy exterior work to the hours of .
- E. Utility Outages and Shutdown:
1. Limit disruption of utility services to hours the building is unoccupied.
 2. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
 3. Prevent accidental disruption of utility services to other facilities.

1.06 WORK SEQUENCE

- A. Coordinate construction schedule and operations with Owner.

1.07 CONSTRUCTION PERSONNEL SCREENING

- A. Comply with Owner's requirements for background screening of construction personnel working at the Project site. Contractor will be responsible for submitting information to Owner for required background checks of all on-site construction personnel. Owner reserves the right to deny facility access to individuals based on criminal history and/or pending criminal judgements.

1.08 CONSTRUCTION PERSONNEL IDENTIFICATION

- A. Contractor shall be responsible for providing each employee with visible identification on site to facilitate Owner to identify who the employee is, who that employee works for.
1. Identification may consist of a name badge system with Contractor's name and employee's name, a hard hat system with Contractor's name, logo and employee's name, or other system acceptable to the Owner.
 2. Present identification system to the Project Architect and Owner's Representative for approval during the Preconstruction Meeting.
- B. Each member of each construction team must provide their own personal identification plus employer and project identification each time they enter the facility.

END OF SECTION

SECTION 01 2000
PRICE AND PAYMENT PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Change procedures.

1.02 RELATED REQUIREMENTS

- A. Section 00 5200 - Agreement Form: Contract Sum, retainages, payment period, monetary values of unit prices.
- B. Section 00 7200 - General Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Section 01 7800 - Closeout Submittals: Project record documents.

1.03 SCHEDULE OF VALUES

- A. Use Schedule of Values Form: AIA G703, edition stipulated in the Agreement.
- B. Submit a printed schedule on AIA Form G703 - Application and Certificate for Payment Continuation Sheet.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Architect/Engineer for approval.
- D. Forms filled out by hand will not be accepted.
- E. Submit Schedule of Values in duplicate within 15 days after date of Owner-Contractor Agreement.
- F. Revise schedule to list approved Change Orders, with each Application For Payment.

1.04 APPLICATIONS FOR PROGRESS PAYMENTS

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Use Form AIA G702 and Form AIA G703, edition stipulated in the Agreement.
- C. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Architect/Engineer for approval.
- D. Forms filled out by hand will not be accepted.
- E. For each item, provide a column for listing each of the following:
 - 1. Item Number.
 - 2. Description of work.
 - 3. Scheduled Values.
 - 4. Previous Applications.
 - 5. Work in Place and Stored Materials under this Application.
 - 6. Authorized Change Orders.
 - 7. Total Completed and Stored to Date of Application.
 - 8. Balance to Finish.
 - 9. Retainage.

- F. Execute certification by signature of authorized officer.
- G. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed and for stored products.
- H. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- I. Submit one electronic and three hard-copies of each Application for Payment.
- J. When Architect/Engineer requires substantiating information, submit data justifying dollar amounts in question.

1.05 MODIFICATION PROCEDURES

- A. Submit name of the individual authorized to receive change documents and who will be responsible for informing others in Contractor's employ or subcontractors of changes to Contract Documents.
- B. For minor changes not involving an adjustment to the Contract Sum or Contract Time, Architect/Engineer will issue instructions directly to Contractor.
- C. For other required changes, Architect/Engineer will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
 - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
 - 2. Promptly execute the change.
- D. For changes for which advance pricing is desired, Architect/Engineer will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within days.
- E. Contractor may propose a change by submitting a request for change to Architect/Engineer, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 6000.
- F. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
 - 1. For change requested by Architect/Engineer for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
 - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Architect/Engineer.
 - 3. For change ordered by Architect/Engineer without a quotation from Contractor, the amount will be determined by Architect/Engineer based on the Contractor's substantiation of costs as specified for Time and Material work.
- G. Substantiation of Costs: Provide full information required for evaluation.

1. On request, provide the following data:
 - a. Quantities of products, labor, and equipment.
 - b. Taxes, insurance, and bonds.
 - c. Overhead and profit.
 - d. Justification for any change in Contract Time.
 - e. Credit for deletions from Contract, similarly documented.
 2. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- H. Execution of Change Orders: Architect/Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- I. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- J. Promptly enter changes in Project Record Documents.

1.06 APPLICATION FOR FINAL PAYMENT

- A. Prepare Application for Final Payment as specified for progress payments, identifying total adjusted Contract Sum, previous payments, and sum remaining due.
- B. Application for Final Payment will not be considered until the following have been accomplished:
 1. All closeout procedures specified in Section 01 7000.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

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SECTION 01 2500
SUBSTITUTION PROCEDURES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Procedural requirements for proposed substitutions.

1.02 RELATED REQUIREMENTS

- A. Section 00 2113 - Instructions to Bidders: Restrictions on timing of substitution requests.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. A Substitution Request for products, assemblies, materials, and equipment constitutes a representation that the submitter:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
 - 2. Agrees to provide the same warranty for the substitution as for the specified product.
 - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
- C. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
 - 1. No specific form is required. Contractor's Substitution Request documentation must include the following:
 - a. Project Information:
 - 1) Official project name and number, and any additional required identifiers established in Contract Documents.
 - b. Substitution Request Information:
 - 1) Discrete and consecutive Substitution Request number, and descriptive subject/title.
 - 2) Indication of whether the substitution is for cause or convenience.
 - 3) Issue date.
 - 4) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
 - 5) Description of Substitution.
 - 6) Reason why the specified item cannot be provided.

- c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
 - 1) Physical characteristics.
 - 2) In-service performance.
 - 3) Expected durability.
 - 4) Visual effect.
 - 5) Warranties.
 - 6) Other salient features and requirements.
 - 7) Include, as appropriate or requested, the following types of documentation:
 - (a) Product Data:
 - (b) Samples.
 - (c) Certificates, test, reports or similar qualification data.
 - (d) Drawings, when required to show impact on adjacent construction elements.
- d. Impact of Substitution:
 - 1) Savings to Owner for accepting substitution.
 - 2) Change to Contract Time due to accepting substitution.

D. Limit each request to a single proposed substitution item.

3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT

A. Submittal Time Restrictions:

- 1. Section 00 2113 - Instructions to Bidders specifies time restrictions and the documents required for submitting substitution requests during the bidding period.

3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION

- A. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Architect/Engineer, in order to stay on approved project schedule.
- B. Submit request for Substitution for Convenience within 14 days of discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Architect/Engineer, in order to stay on approved project schedule.
 - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
 - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
 - 3. Bear the costs engendered by proposed substitution of:
 - a. Owner's compensation to the Architect/Engineer for any required redesign, time spent processing and evaluating the request.
- C. Substitutions will not be considered under one or more of the following circumstances:

1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
2. Without a separate written request.

3.04 RESOLUTION

- A. Architect/Engineer may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Architect/Engineer will notify Contractor in writing of decision to accept or reject request.

END OF SECTION

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SECTION 01 3000
ADMINISTRATIVE REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Requests for Interpretation (RFI) procedures.
- H. Submittal procedures.

1.02 RELATED REQUIREMENTS

- A. Section 01 3216 - Construction Progress Schedule: Form, content, and administration of schedules.
- B. Section 01 6000 - Product Requirements: General product requirements.
- C. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
- D. Section 01 7800 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

1.03 GENERAL ADMINISTRATIVE REQUIREMENTS

- A. Comply with requirements of Section 01 7000 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRECONSTRUCTION MEETING

- A. Attendance Required:
 - 1. Owner.
 - 2. Architect/Engineer.
 - 3. Contractor.
- B. Agenda:
 - 1. Execution of Owner-Contractor Agreement.
 - 2. Submission of executed bonds and insurance certificates.
 - 3. Distribution of Contract Documents.
 - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.
 - 5. Designation of personnel representing the parties to Contract and Architect/Engineer.

6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
 7. Scheduling.
- C. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect/Engineer, Owner, participants, and those affected by decisions made.

3.02 PROGRESS MEETINGS

- A. Make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- B. Attendance Required:
1. Contractor.
 2. Owner.
 3. Architect/Engineer.
 4. Contractor's superintendent.
 5. Major subcontractors.
- C. Agenda:
1. Review minutes of previous meetings.
 2. Review of work progress.
 3. Field observations, problems, and decisions.
 4. Identification of problems that impede, or will impede, planned progress.
 5. Review of submittals schedule and status of submittals.
 6. Maintenance of progress schedule.
 7. Corrective measures to regain projected schedules.
 8. Planned progress during succeeding work period.
 9. Maintenance of quality and work standards.
 10. Effect of proposed changes on progress schedule and coordination.
 11. Other business relating to work.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect/Engineer, Owner, participants, and those affected by decisions made.

3.03 CONSTRUCTION PROGRESS SCHEDULE

- A. Within 10 days after date of the Agreement, submit preliminary schedule defining planned operations for the first 60 days of work, with a general outline for remainder of work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 10 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

3.04 REQUESTS FOR INTERPRETATION (RFI)

- A. Definition: A request seeking one of the following:
 - 1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
 - 2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for claiming additional costs or delays in execution of the work.
 - 1. Prepare a separate RFI for each specific item.
 - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
 - b. Do not forward requests which solely require internal coordination between subcontractors.
 - 2. Prepare in a format and with content acceptable to Owner.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
 - 1. Include in each request Contractor's signature attesting to good faith effort to determine from Contract Documents information requiring interpretation.
 - 2. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
 - a. Approval of submittals (use procedures specified elsewhere in this section).
 - b. Approval of substitutions (see Section - 01 6000 - Product Requirements)
 - c. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
 - 3. Improper RFIs: Requests not prepared in compliance with requirements of this section, and/or missing key information required to render an actionable response. They will be returned without a response, with an explanatory notation.
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
 - 1. Official Project name and number, and any additional required identifiers established in Contract Documents.
 - 2. Owner's, Architect/Engineer's, and Contractor's names.
 - 3. Discrete and consecutive RFI number, and descriptive subject/title.
 - 4. Issue date, and requested reply date.

5. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
 6. Annotations: Field dimensions and/or description of conditions which have engendered the request.
 7. Contractor's suggested resolution: A written and/or a graphic solution, to scale, is required in cases where clarification of coordination issues is involved, for example; routing, clearances, and/or specific locations of work shown diagrammatically in Contract Documents. If applicable, state the likely impact of the suggested resolution on Contract Time or the Contract Sum.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. RFI Log: Prepare and maintain a tabular log of RFIs for the duration of the project.
1. Indicate current status of every RFI. Update log promptly and on a regular basis.
 2. Note dates of when each request is made, and when a response is received.
 3. Highlight items requiring priority or expedited response.
 4. Highlight items for which a timely response has not been received to date.
- H. Review Time: Architect/Engineer will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- I. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
 2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
 3. Upon receipt of a response, promptly review and distribute it to all affected parties, and update the RFI Log.
 4. Notify Architect/Engineer within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

3.05 SUBMITTAL SCHEDULE

- A. Submit to Architect/Engineer for review a schedule for submittals in tabular format.
 - 1. Submit at the same time as the preliminary schedule specified in Section - 01 3216 - Construction Progress Schedule.
 - 2. Coordinate with Contractor's construction schedule and schedule of values.
 - 3. Format schedule to allow tracking of status of submittals throughout duration of construction.
 - 4. Arrange information to include scheduled date for initial submittal, specification number and title, submittal category (for review or for information), description of item of work covered, and role and name of subcontractor.
 - 5. Account for time required for preparation, review, manufacturing, fabrication and delivery when establishing submittal delivery and review deadline dates.
 - a. For assemblies, equipment, systems comprised of multiple components and/or requiring detailed coordination with other work, allow for additional time to make corrections or revisions to initial submittals, and time for their review.

3.06 SUBMITTALS FOR REVIEW

- A. When the following are specified in individual sections, submit them for review:
 - 1. Product data.
 - 2. Design data.
 - 3. Shop drawings.
 - 4. Samples for selection.
 - 5. Samples for verification.
- B. Submit to Architect/Engineer for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.
- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

3.07 SUBMITTALS FOR INFORMATION

- A. When the following are specified in individual sections, submit them for information:
 - 1. Design data.
 - 2. Certificates.
 - 3. Test reports.
 - 4. Inspection reports.
 - 5. Manufacturer's instructions.
 - 6. Manufacturer's field reports.
 - 7. Other types indicated.
- B. Submit for Architect/Engineer's knowledge as contract administrator or for Owner.

3.08 SUBMITTALS FOR PROJECT CLOSEOUT

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 7800 - Closeout Submittals:
 - 1. Project record documents.
 - 2. Operation and maintenance data.
 - 3. Warranties.
 - 4. Bonds.
 - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

3.09 NUMBER OF COPIES OF SUBMITTALS

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect/Engineer.
 - 1. After review, produce duplicates.
 - 2. Retained samples will not be returned to Contractor unless specifically so stated.

3.10 SUBMITTAL PROCEDURES

- A. General Requirements:
 - 1. Use a separate transmittal for each item.
 - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
 - 3. Transmit using approved form.
 - 4. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
 - 5. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
 - 6. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
 - a. Submittals from sources other than the Contractor, or without Contractor's stamp will not be acknowledged, reviewed, or returned.
 - 7. Deliver each submittal on date noted in submittal schedule, unless an earlier date has been agreed to by all affected parties, and is of the benefit to the project.
 - a. Deliver submittals to Architect/Engineer at business address.
 - 8. Schedule submittals to expedite the Project, and coordinate submission of related items.

- a. For each submittal for review, allow 15 days excluding delivery time to and from the Contractor.
 - b. For sequential reviews involving approval from authorities having jurisdiction (AHJ), in addition to Architect/Engineer's approval, allow an additional 30 days.
 - 9. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
 - 10. Provide space for Contractor and Architect/Engineer review stamps.
 - 11. When revised for resubmission, identify all changes made since previous submission.
 - 12. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
 - 13. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
 - 14. Submittals not requested will be recognized, and will be returned Not Reviewed ,
- B. Product Data Procedures:
- 1. Submit only information required by individual specification sections.
 - 2. Collect required information into a single submittal.
 - 3. Do not submit (Material) Safety Data Sheets for materials or products.
- C. Shop Drawing Procedures:
- 1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting Contract Documents and coordinating related work.
 - 2. Do not reproduce Contract Documents to create shop drawings.
 - 3. Generic, non-project-specific information submitted as shop drawings do not meet the requirements for shop drawings.
- D. Samples Procedures:
- 1. Transmit related items together as single package.
 - 2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.
 - 3. Transmit each submittal with approved form.

3.11 SUBMITTAL REVIEW

- A. Submittals for Review: Architect/Engineer will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Architect/Engineer will acknowledge receipt and review. See below for actions to be taken.
- C. Architect/Engineer's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Architect/Engineer's and consultants' actions on items submitted for review:
 - 1. Authorizing purchasing, fabrication, delivery, and installation:
 - a. Approved , or language with same legal meaning.

- b. Approved as Noted, Resubmission not required , or language with same legal meaning.
 - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
- c. Approved as Noted, Resubmit for Record , or language with same legal meaning.
- 2. Not Authorizing fabrication, delivery, and installation:
- E. Architect/Engineer's and consultants' actions on items submitted for information:
 - 1. Items for which no action was taken:
 - a. Received - to notify the Contractor that the submittal has been received for record only.
 - 2. Items for which action was taken:
 - a. Reviewed - no further action is required from Contractor.

END OF SECTION

SECTION 01 3216
CONSTRUCTION PROGRESS SCHEDULE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Preliminary schedule.
- B. Construction progress schedule, bar chart type.

1.02 RELATED SECTIONS

1.03 SUBMITTALS

- A. Within 10 days after date of Agreement, submit preliminary schedule.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 10 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.
- F. Submit in PDF format.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PRELIMINARY SCHEDULE

- A. Prepare preliminary schedule in the form of a horizontal bar chart.

3.02 CONTENT

- A. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- B. Identify each item by specification section number.
- C. Identify work of separate stages and other logically grouped activities.
- D. Provide sub-schedules for each stage of Work identified in Section 01 1000 - Summary.
- E. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- F. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, products identified under Allowances, and dates reviewed submittals will be required from Architect/Engineer. Indicate decision dates for selection of finishes.
- G. Indicate delivery dates for owner-furnished products.
- H. Provide legend for symbols and abbreviations used.

3.03 BAR CHARTS

- A. Include a separate bar for each major portion of Work or operation.
- B. Identify the first work day of each week.

3.04 UPDATING SCHEDULE

- A. Maintain schedules to record actual start and finish dates of completed activities.

- B. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- C. Annotate diagrams to graphically depict current status of Work.
- D. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- E. Indicate changes required to maintain Date of Substantial Completion.
- F. Submit reports required to support recommended changes.

3.05 DISTRIBUTION OF SCHEDULE

- A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect/Engineer, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections indicated in schedules.

END OF SECTION

SECTION 01 4000
QUALITY REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Submittals.
- B. Quality assurance.
- C. References and standards.
- D. Testing and inspection agencies and services.
- E. Control of installation.
- F. Defect Assessment.

1.02 RELATED REQUIREMENTS

- A. Document 00 7200 - General Conditions: Inspections and approvals required by public authorities.
- B. Section 01 3000 - Administrative Requirements: Submittal procedures.

1.03 REFERENCE STANDARDS

- A. ASTM C1021 - Standard Practice for Laboratories Engaged in Testing of Building Sealants; 2008 (Reapproved 2023).
- B. ASTM C1077 - Standard Practice for Agencies Testing Concrete and Concrete Aggregates for Use in Construction and Criteria for Testing Agency Evaluation; 2024.
- C. ASTM C1093 - Standard Practice for Accreditation of Testing Agencies for Masonry; 2023.
- D. ASTM D3740 - Standard Practice for Minimum Requirements for Agencies Engaged in Testing and/or Inspection of Soil and Rock as Used in Engineering Design and Construction; 2023.
- E. ASTM E329 - Standard Specification for Agencies Engaged in Construction Inspection, Testing, or Special Inspection; 2023.
- F. ASTM E543 - Standard Specification for Agencies Performing Nondestructive Testing; 2021.
- G. ASTM E699 - Standard Specification for Agencies Involved in Testing, Quality Assurance, and Evaluating of Manufactured Building Components; 2016.
- H. IAS AC89 - Accreditation Criteria for Testing Laboratories; 2021.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Test Reports: After each test/inspection, promptly submit two copies of report to Architect/Engineer and to Contractor.
 - 1. Include:
 - a. Date issued.
 - b. Project title and number.
 - c. Name of inspector.
 - d. Date and time of sampling or inspection.
 - e. Identification of product and specifications section.

- f. Location in the Project.
 - g. Type of test/inspection.
 - h. Date of test/inspection.
 - i. Results of test/inspection.
 - j. Compliance with Contract Documents.
 - k. When requested by Architect/Engineer, provide interpretation of results.
2. Test report submittals are for Architect/Engineer's knowledge as contract administrator for the limited purpose of assessing compliance with information given and the design concept expressed in the Contract Documents, or for Owner's information.
- C. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect/Engineer, in quantities specified for Product Data.
- 1. Indicate material or product complies with or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- D. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

1.05 QUALITY ASSURANCE

- A. Testing Agency Qualifications:
- 1. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.

1.06 REFERENCES AND STANDARDS

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Contract Documents, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Architect/Engineer shall be altered from Contract Documents by mention or inference otherwise in any reference document.

1.07 TESTING AND INSPECTION AGENCIES AND SERVICES

- A. Contractor shall employ and pay for services of an independent testing agency to perform other specified testing.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.
- C. Contractor Employed Agency:
 - 1. Testing agency: Comply with requirements of ASTM E329, ASTM E543, ASTM E699, ASTM C1021, ASTM C1077, ASTM C1093, ASTM D3740, and .
 - 2. Inspection agency: Comply with requirements of ASTM D3740, ASTM E329, and

PART 3 EXECUTION

2.01 CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

2.02 TESTING AND INSPECTION

- A. See individual specification sections for testing required.
- B. Testing Agency Duties:
 - 1. Provide qualified personnel at site. Cooperate with Architect/Engineer and Contractor in performance of services.
 - 2. Perform specified sampling and testing of products in accordance with specified standards.
 - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
 - 4. Promptly notify Architect/Engineer and Contractor of observed irregularities or non-compliance of Work or products.
 - 5. Perform additional tests and inspections required by Architect/Engineer.
 - 6. Submit reports of all tests/inspections specified.
- C. Limits on Testing/Inspection Agency Authority:

1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
 2. Agency may not approve or accept any portion of the Work.
 3. Agency may not assume any duties of Contractor.
 4. Agency has no authority to stop the Work.
- D. Contractor Responsibilities:
1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
 3. Provide incidental labor and facilities:
 - a. To provide access to Work to be tested/inspected.
 - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
 - c. To facilitate tests/inspections.
 - d. To provide storage and curing of test samples.
 4. Notify Architect/Engineer and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
 5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
 6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- E. Re-testing required because of non-compliance with specified requirements shall be performed by the same agency on instructions by Architect/Engineer.
- F. Re-testing required because of non-compliance with specified requirements shall be paid for by Contractor.

2.03 DEFECT ASSESSMENT

- A. Replace Work or portions of the Work not complying with specified requirements.

END OF SECTION

SECTION 01 5000
TEMPORARY FACILITIES AND CONTROLS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Temporary sanitary facilities.
- B. Temporary Controls: Barriers, enclosures, and fencing.
- C. Security requirements.
- D. Waste removal facilities and services.

1.02 TEMPORARY UTILITIES

- A. Owner will provide the following:
 - 1. Electrical power and metering, consisting of connection to existing facilities.
- B. Existing facilities may be used.
- C. New permanent facilities may be used.
- D. Use trigger-operated nozzles for water hoses, to avoid waste of water.

1.03 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Maintain daily in clean and sanitary condition.

1.04 BARRIERS

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

1.05 FENCING

- A. Provide 6 foot high fence around construction site; equip with vehicular and pedestrian gates with locks.

1.06 EXTERIOR ENCLOSURES

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

1.07 INTERIOR ENCLOSURES

- A. Provide temporary partitions and ceilings as indicated to separate work areas from Owner-occupied areas, to prevent penetration of dust and moisture into Owner-occupied areas, and to prevent damage to existing materials and equipment.

- B. Construction: Framing and reinforced polyethylene sheet materials with closed joints and sealed edges at intersections with existing surfaces:

1.08 SECURITY

- A. Provide security and facilities to protect Work, existing facilities, and Owner's operations from unauthorized entry, vandalism, or theft.
- B. Coordinate with Owner's security program.

1.09 VEHICULAR ACCESS AND PARKING

- A. Coordinate access and haul routes with governing authorities and Owner.
- B. Provide and maintain access to fire hydrants, free of obstructions.
- C. Provide means of removing mud from vehicle wheels before entering streets.
- D. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.
- E. Existing parking areas may be used for construction parking.

1.10 WASTE REMOVAL

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

1.11 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Remove underground installations to a minimum depth of 2 feet. Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore existing facilities used during construction to original condition.
- E. Restore new permanent facilities used during construction to specified condition.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION - NOT USED

END OF SECTION

SECTION 01 6000
PRODUCT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Transportation, handling, storage and protection.
- B. Product option requirements.
- C. Substitution limitations.
- D. Maintenance materials, including extra materials, spare parts, tools, and software.

1.02 RELATED REQUIREMENTS

- A. Section 01 2500 - Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 6116 - Volatile Organic Compound (VOC) Content Restrictions: Requirements for VOC-restricted product categories.
- C. Section 01 7419 - Construction Waste Management and Disposal: Waste disposal requirements potentially affecting product selection, packaging and substitutions.

1.03 SUBMITTALS

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
 - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

PART 2 PRODUCTS

2.01 NEW PRODUCTS

- A. Provide new products unless specifically required or permitted by Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
- C. Where other criteria are met, Contractor shall give preference to products that:
 - 1. If used on interior, have lower emissions, as defined in Section 01 6116.
 - 2. Are extracted, harvested, and/or manufactured closer to the location of the project.
 - 3. Have longer documented life span under normal use.
 - 4. Result in less construction waste. See Section 01 7419
 - 5. Have a published GreenScreen Chemical Hazard Analysis.

2.02 PRODUCT OPTIONS

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

2.03 MAINTENANCE MATERIALS

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

PART 3 EXECUTION

3.01 SUBSTITUTION LIMITATIONS

- A. See Section 01 2500 - Substitution Procedures.

3.02 TRANSPORTATION AND HANDLING

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

3.03 STORAGE AND PROTECTION

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication. See Section 01 7419.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- E. For exterior storage of fabricated products, place on sloped supports above ground.

- F. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- G. Comply with manufacturer's warranty conditions, if any.
- H. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- I. Prevent contact with material that may cause corrosion, discoloration, or staining.
- J. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- K. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.

END OF SECTION

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SECTION 01 7000
EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition,
- C. Cutting and patching.
- D. Surveying for laying out the work.
- E. Cleaning and protection.
- F. Starting of systems and equipment.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 5000 - Temporary Facilities and Controls: Temporary exterior enclosures.
- C. Section 01 5000 - Temporary Facilities and Controls: Temporary interior partitions.
- D. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- E. Section 07 8400 - Firestopping.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
 - 1. On request, submit documentation verifying accuracy of survey work.
 - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in compliance with Contract Documents.
 - 3. Submit surveys and survey logs for the project record.
- C. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
 - 1. Structural integrity of any element of Project.
 - 2. Integrity of weather exposed or moisture resistant element.
 - 3. Efficiency, maintenance, or safety of any operational element.
 - 4. Visual qualities of sight exposed elements.
 - 5. Work of Owner or separate Contractor.

1.04 QUALIFICATIONS

- A. For surveying work, employ a land surveyor registered in State of Iowa and acceptable to Architect/Engineer. Submit evidence of surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities,

1.05 PROJECT CONDITIONS

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
 - 1. At All Times: Excessively noisy tools and operations will not be tolerated inside the building at any time of day; excessively noisy includes jackhammers.
 - 2. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
 - 3. Indoors: Limit conduct of especially noisy interior work to the hours of 6 pm to 7 am.
- D. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- E. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
- F. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

1.06 COORDINATION

- A. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- B. Notify affected utility companies and comply with their requirements.
- C. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- D. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- E. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.

- F. Coordinate completion and clean-up of work of separate sections.
- G. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

PART 2 PRODUCTS

2.01 PATCHING MATERIALS

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

3.02 PREPARATION

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

3.03 LAYING OUT THE WORK

- A. Promptly notify Architect/Engineer of any discrepancies discovered.
- B. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
 - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.

2. Grid or axis for structures.
 3. Building foundation, column locations, ground floor elevations.
 4. Controlling lines and levels required for mechanical and electrical trades.
- C. Periodically verify layouts by same means.
- D. Maintain a complete and accurate log of control and survey work as it progresses.

3.04 GENERAL INSTALLATION REQUIREMENTS

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

3.05 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
1. Verify that construction and utility arrangements are as indicated.
 2. Report discrepancies to Architect/Engineer before disturbing existing installation.
 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.
- C. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
1. Where openings in exterior enclosure exist, provide construction to make exterior enclosure weatherproof.
 2. Insulate existing ducts or pipes that are exposed to outdoor ambient temperatures by alterations work.
- D. Remove existing work as indicated and as required to accomplish new work.
1. Remove items indicated on drawings.
 2. Relocate items indicated on drawings.
 3. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
 4. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.

- E. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
 - b. Provide temporary connections as required to maintain existing systems in service.
 4. Verify that abandoned services serve only abandoned facilities.
 5. Remove abandoned pipe, ducts, conduits, and equipment , including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- F. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
 3. Repair adjacent construction and finishes damaged during removal work.
- G. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Architect/Engineer.
 2. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect/Engineer review and request instructions.
- H. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- I. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.

- 2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- J. Clean existing systems and equipment.
- K. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- L. Do not begin new construction in alterations areas before demolition is complete.
- M. Comply with all other applicable requirements of this section.

3.06 CUTTING AND PATCHING

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
 - 1. Complete the work.
 - 2. Fit products together to integrate with other work.
 - 3. Provide openings for penetration of mechanical, electrical, and other services.
 - 4. Match work that has been cut to adjacent work.
 - 5. Repair areas adjacent to cuts to required condition.
 - 6. Repair new work damaged by subsequent work.
 - 7. Remove samples of installed work for testing when requested.
 - 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ original installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material in accordance with Section 07 8400, to full thickness of the penetrated element.
- J. Patching:
 - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
 - 2. Match color, texture, and appearance.
 - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair

substrate prior to repairing finish.

3.07 PROGRESS CLEANING

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

3.08 PROTECTION OF INSTALLED WORK

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.
- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

3.09 SYSTEM STARTUP

- A. Coordinate schedule for start-up of various equipment and systems.
- B. Verify that each piece of equipment or system has been checked for proper lubrication, drive rotation, belt tension, control sequence, and for conditions that may cause damage.
- C. Verify tests, meter readings, and specified electrical characteristics agree with those required by the equipment or system manufacturer.
- D. Verify that wiring and support components for equipment are complete and tested.
- E. Execute start-up under supervision of applicable Contractor personnel and manufacturer's representative in accordance with manufacturers' instructions.
- F. Submit a written report that equipment or system has been properly installed and is functioning correctly.

3.10 DEMONSTRATION AND INSTRUCTION

- A. Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, maintenance, and shutdown of each item of equipment at scheduled time, at equipment location.
- B. For equipment or systems requiring seasonal operation, perform demonstration for other season within six months.

- C. Provide a qualified person who is knowledgeable about the Project to perform demonstration and instruction of Owner's personnel.
- D. Utilize operation and maintenance manuals as basis for instruction. Review contents of manual with Owner's personnel in detail to explain all aspects of operation and maintenance.

3.11 ADJUSTING

- A. Adjust operating products and equipment to ensure smooth and unhindered operation.

3.12 FINAL CLEANING

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- C. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces, vacuum carpeted and soft surfaces.
- D. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- E. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- F. Clean filters of operating equipment.
- G. Clean debris from roofs, gutters, downspouts, scuppers, overflow drains, area drains, drainage systems, and .
- H. Clean site; sweep paved areas, rake clean landscaped surfaces.
- I. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

3.13 CLOSEOUT PROCEDURES

- A. Make submittals that are required by governing or other authorities.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Architect/Engineer when work is considered ready for Architect/Engineer's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Architect/Engineer's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect/Engineer's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect/Engineer.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.

- G. Notify Architect/Engineer when work is considered finally complete and ready for Architect/Engineer's Substantial Completion final inspection.
- H. Complete items of work determined by Architect/Engineer listed in executed Certificate of Substantial Completion.

3.14 MAINTENANCE

- A. Provide service and maintenance of components indicated in specification sections.
- B. Maintenance Period: As indicated in specification sections or, if not indicated, not less than one year from the Date of Substantial Completion or the length of the specified warranty, whichever is longer.
- C. Examine system components at a frequency consistent with reliable operation. Clean, adjust, and lubricate as required.
- D. Include systematic examination, adjustment, and lubrication of components. Repair or replace parts whenever required. Use parts produced by the manufacturer of the original component.
- E. Maintenance service shall not be assigned or transferred to any agent or subcontractor without prior written consent of the Owner.

END OF SECTION

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SECTION 01 7800
CLOSEOUT SUBMITTALS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Project record documents.
- B. Operation and maintenance data.
- C. Warranties and bonds.

1.02 RELATED REQUIREMENTS

- A. Section 00 7200 - General Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Specific requirements for operation and maintenance data.
- E. Individual Product Sections: Warranties required for specific products or Work.

1.03 SUBMITTALS

- A. Project Record Documents: Submit documents to Architect/Engineer with claim for final Application for Payment.
- B. Operation and Maintenance Data:
 - 1. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
 - 2. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect/Engineer comments. Revise content of all document sets as required prior to final submission.
 - 3. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. Warranties and Bonds:
 - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
 - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
 - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:

1. Drawings.
 2. Addenda.
 3. Change Orders and other modifications to the Contract.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
 - C. Store record documents separate from documents used for construction.
 - D. Record information concurrent with construction progress.
 - E. Record Drawings: Legibly mark each item to record actual construction including:
 1. Field changes of dimension and detail.
 2. Details not on original Contract drawings.

3.02 OPERATION AND MAINTENANCE DATA

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

3.03 WARRANTIES AND BONDS

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.
- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

END OF SECTION

**SECTION 02 4100
DEMOLITION**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Selective demolition of building elements for alteration purposes.

1.02 RELATED REQUIREMENTS

- A. Section 01 1000 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 1000 - Summary: Description of items to be salvaged or removed for re-use by Contractor.
- C. Section 01 5000 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- D. Section 01 6000 - Product Requirements: Handling and storage of items removed for salvage and relocation.
- E. Section 01 7000 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.
- F. Section 02 6500 - Underground Storage Tank Removal.

1.03 REFERENCE STANDARDS

- A. 29 CFR 1926 - Safety and Health Regulations for Construction; Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations; 2022, with Errata (2021).

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Site Plan: Indicate:
 - 1. Areas for temporary construction and field offices.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

PART 2 PRODUCTS -- NOT USED

PART 3 EXECUTION

3.01 SCOPE

- A. Remove mechanical equipment and associated services as indicated on drawings.
- B. Remove other items indicated, for salvage and relocation.

3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
 - 1. Obtain required permits.
 - 2. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of

unstable structures.

3. Provide, erect, and maintain temporary barriers and security devices.
 4. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
 5. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
 6. Do not close or obstruct roadways or sidewalks without permits from authority having jurisdiction.
 7. Conduct operations to minimize obstruction of public and private entrances and exits. Do not obstruct required exits at any time. Protect persons using entrances and exits from removal operations.
 8. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon, or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
- C. Do not begin removal until vegetation to be relocated has been removed and vegetation to remain has been protected from damage.
- D. Protect existing structures and other elements to remain in place and not removed.
1. Provide bracing and shoring.
 2. Prevent movement or settlement of adjacent structures.
 3. Stop work immediately if adjacent structures appear to be in danger.
- E. Minimize production of dust due to demolition operations. Do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
- F. Hazardous Materials:
1. Hazardous Materials: Comply with 29 CFR 1926 and state and local regulations.
- G. Partial Removal of Paving and Curbs: Neatly saw cut at right angle to surface.
- H. Underground Storage Tanks: Remove and dispose of as specified in Section 02 6500.

3.03 EXISTING UTILITIES

- A. Coordinate work with utility companies. Notify utilities before starting work, comply with their requirements, and obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.

- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

3.04 SELECTIVE DEMOLITION FOR ALTERATIONS

- A. Existing construction and utilities indicated on drawings are based on casual field observation and existing record documents only.
 - 1. Verify construction and utility arrangements are as indicated.
 - 2. Report discrepancies to Architect/Engineer before disturbing existing installation.
 - 3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Separate areas in which demolition is being conducted from areas that remain occupied.
 - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000 in locations indicated on drawings.
- C. Remove existing work as indicated and required to accomplish new work.
 - 1. Remove items indicated on drawings.
- D. Services including, but not limited to, HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications: Remove existing systems and equipment as indicated.
 - 1. Maintain existing active systems to remain in operation, and maintain access to equipment and operational components.
 - 2. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
 - 3. Verify that abandoned services serve only abandoned facilities before removal.
 - 4. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings. Remove back to source of supply where possible, otherwise cap stub and tag with identification.
- E. Protect existing work to remain.
 - 1. Prevent movement of structure. Provide shoring and bracing as required.
 - 2. Perform cutting to accomplish removal work neatly and as specified for cutting new work.
 - 3. Repair adjacent construction and finishes damaged during removal work.
 - 4. Patch to match new work.

3.05 DEBRIS AND WASTE REMOVAL

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

END OF SECTION

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SECTION 03 3000
CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Concrete formwork.
- B. Concrete reinforcement.
- C. Concrete curing.

1.02 REFERENCE STANDARDS

- A. ACI CODE-318 - Building Code Requirements for Structural Concrete and Commentary; 2019 (Reapproved 2022).
- B. ACI PRC-304 - Guide for Measuring, Mixing, Transporting, and Placing Concrete; 2000 (Reapproved 2009).
- C. ACI PRC-308 - Guide to External Curing of Concrete; 2016.
- D. ACI SPEC-301 - Specifications for Concrete Construction; 2020.
- E. ASTM A615/A615M - Standard Specification for Deformed and Plain Carbon-Steel Bars for Concrete Reinforcement; 2022.
- F. ASTM C33/C33M - Standard Specification for Concrete Aggregates; 2023.
- G. ASTM C39/C39M - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens; 2023.
- H. ASTM C94/C94M - Standard Specification for Ready-Mixed Concrete; 2024.
- I. ASTM C150/C150M - Standard Specification for Portland Cement; 2022.
- J. ASTM C173/C173M - Standard Test Method for Air Content of Freshly Mixed Concrete by the Volumetric Method; 2023.
- K. ASTM C260/C260M - Standard Specification for Air-Entraining Admixtures for Concrete; 2010a (Reapproved 2016).

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified requirements and installation instructions.
- C. Mix Design: Submit proposed concrete mix design.
- D. Manufacturer's Installation Instructions: For concrete accessories, indicate installation procedures and interface required with adjacent construction.

1.04 QUALITY ASSURANCE

- A. Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.

1.05 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 FORMWORK

- A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic head without distortion in excess of permitted tolerances.
 - 1. Form Facing for Exposed Finish Concrete: Contractor's choice of materials that will provide smooth, stain-free final appearance.

2.02 REINFORCEMENT MATERIALS

- A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi).
 - 1. Type: Deformed billet-steel bars.
 - 2. Finish: Unfinished, unless otherwise indicated.
- B. Reinforcement Accessories:
 - 1. Tie Wire: Annealed, minimum 16 gauge, 0.0508 inch.

2.03 CONCRETE MIX DESIGN

- A. Concrete Strength: Establish required average strength for each type of concrete on the basis of field experience or trial mixtures, as specified in ACI SPEC-301.
 - 1. For trial mixtures method, employ independent testing agency acceptable to Architect/Engineer for preparing and reporting proposed mix designs.
- B. Normal Weight Concrete:
 - 1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: 5,000 pounds per square inch.
 - 2. Water-Cement Ratio: Maximum 40 percent by weight.
 - 3. Maximum Aggregate Size: 3/4 inch.

2.04 MIXING

- A. Transit Mixers: Comply with ASTM C94/C94M.
- B. Adding Water: If concrete arrives on-site with slump less than suitable for placement, do not add water that exceeds the maximum water-cement ratio or exceeds the maximum permissible slump.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify lines, levels, and dimensions before proceeding with work of this section.

3.02 PREPARATION

- A. Formwork: Comply with requirements of ACI SPEC-301. Design and fabricate forms to support all applied loads until concrete is cured and for easy removal without damage to concrete.

3.03 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

- A. Comply with requirements of ACI SPEC-301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

3.04 PLACING CONCRETE

- A. Place concrete in accordance with ACI PRC-304.

3.05 CONCRETE FINISHING

- A. Repair surface defects, including tie holes, immediately after removing formwork.

3.06 CURING AND PROTECTION

- A. Comply with requirements of ACI PRC-308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.
- B. Maintain concrete with minimal moisture loss at relatively constant temperature for period necessary for hydration of cement and hardening of concrete.

3.07 DEFECTIVE CONCRETE

- A. Defective Concrete: Concrete not complying with required lines, details, dimensions, tolerances or specified requirements.
- B. Repair or replacement of defective concrete will be determined by the Architect/Engineer. The cost of additional testing shall be borne by Contractor when defective concrete is identified.
- C. Do not patch, fill, touch-up, repair, or replace exposed concrete except upon express direction of Architect/Engineer for each individual area.

END OF SECTION

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**SECTION 053100
STEEL DECKING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roof deck.
- B. Supplementary framing for openings up to and including 18 inches (450 mm).
- C. Bearing plates and angles.

1.02 RELATED REQUIREMENTS

- A. Section 055000 - Metal Fabrications: Steel angle support frames for equipment curbs and openings larger than 18 inches (450 mm).

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2014 (Amended 2015).
- C. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2020.
- D. AWS D1.3/D1.3M - Structural Welding Code - Sheet Steel; 2018.
- E. ICC-ES AC43 - Acceptance Criteria for Steel Deck Roof and Floor Systems; 2022.
- F. ICC-ES AC70 - Acceptance Criteria for Fasteners Power Driven into Concrete, Steel and Masonry Elements; 2016.
- G. SDI (DM) - Publication No.30, Design Manual for Composite Decks, Form Decks, and Roof Decks; 2007.
- H. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittals procedures.
- B. Product Data: Provide deck profile characteristics, dimensions, structural properties, and finishes.
- C. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.

1.05 QUALITY ASSURANCE

- A. Design deck layout, spans, fastening, and joints under direct supervision of a Professional Structural Engineer experienced in design of this work and licensed in the State in which the Project is located.
- B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.3/D1.3M and dated no more than 12 months before start of scheduled welding work.

PART 2 PRODUCTS

2.01 STEEL DECK

- A. All Deck Types: Select and design metal deck in accordance with SDI Design Manual.
 - 1. Calculate to structural working stress design and structural properties specified.
 - 2. Maximum Vertical Deflection of Roof Deck: 1/240 of span.
- B. Roof Deck: Non-composite type, fluted steel sheet:
 - 1. Primer: Shop coat of manufacturer's standard primer paint over cleaned and phosphatized substrate.
 - 2. Minimum Base Metal Thickness: 22 gauge, 0.0299 inch (0.76 mm).
 - 3. Profile and Sheet Width: match existing.

4. Side Joints: Lapped, mechanically fastened.
5. End Joints: Lapped, mechanically fastened.

2.02 ACCESSORY MATERIALS

- A. Bearing Plates and Angles: ASTM A36/A36M steel, unfinished.
- B. Fasteners: Galvanized hardened steel, self tapping.
- C. Powder Actuated Mechanical Fasteners: Steel; with knurled shank and forged ballistic point. Comply with applicable requirements of ICC-ES AC70.
 1. Design Requirements: Provide number and type of fasteners that comply with the applicable requirements of SDI (DM) design method for roof deck and floor deck applications and ICC-ES AC43.
- D. Mechanical Fasteners: Steel; hex washer head, self-drilling, self-tapping.
 1. Design Requirements for Sidelap Connections: Provide number and type of fasteners that comply with the applicable requirements of SDI (DM) design method for roof deck and floor deck applications and ICC-ES AC43.
- E. Weld Washers: Mild steel, uncoated, 3/4 inch (19 mm) outside diameter, 1/8 inch (3 mm) thick.
- F. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- G. Flute Closures: Closed cell foam rubber, 1 inch (25 mm) thick; profiled to fit tight to the deck.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions prior to beginning work.

3.02 INSTALLATION

- A. Install metal deck in accordance with SDI Design Manual and manufacturer's instructions. Align and level.
- B. On steel supports provide minimum 1-1/2 inch (38 mm) bearing.
- C. Fasten deck to steel support members at ends and intermediate supports at 12 inches (300 mm) on center maximum, parallel with the deck flute and at each transverse flute using methods specified.
- D. At mechanically fastened male/female side laps fasten at 24 inches (600 mm) on center maximum.
- E. Drive mechanical sidelap connectors completely through adjacent lapped sheets; positively engage adjacent sheets with minimum three-thread penetration.
- F. At welded male/female side laps weld at 18 inches (450 mm) on center maximum.
- G. Weld deck in accordance with AWS D1.3/D1.3M.
- H. At deck openings from 6 inches (150 mm) to 18 inches (450 mm) in size, provide 2 by 2 by 1/4 inch (50 by 50 by 6 mm) steel angle reinforcement. Place angles perpendicular to flutes; extend minimum two flutes beyond each side of opening and fasten to deck at each flute.
- I. At deck openings greater than 18 inches (450 mm) in size, provide steel angle reinforcement as specified in Section 055000 - Metal Fabrications.
- J. Where deck (other than cellular deck electrical raceway) changes direction, install 6 inch (150 mm) minimum wide sheet steel cover plates, of same thickness as deck. Fusion weld 12 inches (300 mm) on center maximum.
- K. Close openings above walls and partitions perpendicular to deck flutes with single row of foam cell closures.
- L. Immediately after welding deck and other metal components in position, coat welds, burned areas, and damaged surface coating, with touch-up primer.

END OF SECTION

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**SECTION 05500
METAL FABRICATIONS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Shop fabricated steel items.

1.02 RELATED REQUIREMENTS

- A. Section 053100 - Steel Decking: Bearing angles for metal deck bearing, including anchorage.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2014.
- B. ASTM A307 - Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength; 2021.
- C. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2018a.
- D. AWS A2.4 - Standard Symbols for Welding, Brazing, and Nondestructive Examination; 2012.
- E. AWS B2.1/B2.1M - Specification for Welding Procedure and Performance Qualification; 2014 (Amended 2015).
- F. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2020.
- G. AWS D1.2/D1.2M - Structural Welding Code - Aluminum; 2014, with Errata.
- H. IAS AC172 - Accreditation Criteria for Fabricator Inspection Programs for Structural Steel; 2018.
- I. SSPC-Paint 15 - Steel Joist Shop Primer/Metal Building Primer; 2004.
- J. SSPC-Paint 20 - Zinc-Rich Coating (Type I - Inorganic, and Type II - Organic); 2019.
- K. SSPC-SP 2 - Hand Tool Cleaning; 2018.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable.
 - 1. Indicate welded connections using standard AWS A2.4 welding symbols. Indicate net weld lengths.
- C. Welders' Qualification Statement: Welders' certificates in accordance with AWS B2.1/B2.1M and dated no more than 12 months before start of scheduled welding work.

1.05 QUALITY ASSURANCE

- A. Design mechanical equipment supports and connections under direct supervision of a Professional Engineer experienced in design of this work and licensed in the State in which the Project is located.
- B. Welder Qualifications: Welding processes and welding operators qualified in accordance with AWS D1.1/D1.1M and AWS D1.2/D1.2M and dated no more than 12 months before start of scheduled welding work.
- C. Fabricator Qualifications: A qualified steel fabricator that is accredited by IAS AC172.

PART 2 PRODUCTS

2.01 MATERIALS - STEEL

- A. Steel Sections: ASTM A36/A36M.

- B. Slotted Channel Fittings: ASTM A1011/A1011M.
- C. Mechanical Fasteners: Same material as or compatible with materials being fastened; type consistent with design and specified quality level.
- D. Bolts, Nuts, and Washers: ASTM A307, Grade A, plain.
- E. Welding Materials: AWS D1.1/D1.1M; type required for materials being welded.
- F. Shop and Touch-Up Primer: SSPC-Paint 15, complying with VOC limitations of authorities having jurisdiction.
- G. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

- A. Fit and shop assemble items in largest practical sections, for delivery to site.
- B. Fabricate items with joints tightly fitted and secured.
- C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.
- D. Supply components required for anchorage of fabrications. Fabricate anchors and related components of same material and finish as fabrication, except where specifically noted otherwise.

2.03 FABRICATED ITEMS

- A. Ledge Angles, Shelf Angles, Channels, and Plates: For support of metal decking and mechanical equipment curbs; prime paint finish.

2.04 FINISHES - STEEL

- A. Prime paint steel items.
 - 1. Exceptions: Galvanize items to be embedded in concrete and items to be embedded in masonry.
- B. Prepare surfaces to be primed in accordance with SSPC-SP2.
- C. Clean surfaces of rust, scale, grease, and foreign matter prior to finishing.
- D. Prime Painting: One coat.

2.05 FABRICATION TOLERANCES

- A. Squareness: 1/8 inch (3 mm) maximum difference in diagonal measurements.
- B. Maximum Offset Between Faces: 1/16 inch (1.5 mm).
- C. Maximum Misalignment of Adjacent Members: 1/16 inch (1.5 mm).
- D. Maximum Bow: 1/8 inch (3 mm) in 48 inches (1.2 m).
- E. Maximum Deviation From Plane: 1/16 inch (1.5 mm) in 48 inches (1.2 m).

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field conditions are acceptable and are ready to receive work.

3.02 PREPARATION

- A. Clean and strip primed steel items to bare metal where site welding is required.

3.03 INSTALLATION

- A. Install items plumb and level, accurately fitted, free from distortion or defects.
- B. Provide for erection loads, and for sufficient temporary bracing to maintain true alignment until completion of erection and installation of permanent attachments.
- C. Field weld components as indicated on drawings.

- D. Perform field welding in accordance with AWS D1.1/D1.1M.
- E. Obtain approval prior to site cutting or making adjustments not scheduled.
- F. After erection, prime welds, abrasions, and surfaces not shop primed or galvanized , except surfaces to be in contact with concrete.

3.04 TOLERANCES

- A. Maximum Variation From Plumb: 1/4 inch (6 mm) per story, non-cumulative.
- B. Maximum Offset From True Alignment: 1/4 inch (6 mm).
- C. Maximum Out-of-Position: 1/4 inch (6 mm).

END OF SECTION

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**SECTION 061000
ROUGH CARPENTRY**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Roof-mounted curbs.
- B. Roofing nailers.
- C. Preservative treated wood materials.
- D. Fire retardant treated wood materials.
- E. Concealed wood blocking, nailers, and supports.

1.02 RELATED REQUIREMENTS

- A. Section 055000 - Metal Fabrications: Miscellaneous steel connectors and support angles for wood framing.

1.03 REFERENCE STANDARDS

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2023.
- B. AWPA U1 - Use Category System: User Specification for Treated Wood; 2018.
- C. PS 20 - American Softwood Lumber Standard; 2020.
- D. WWPA G-5 - Western Lumber Grading Rules; 2017.

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide technical data on wood preservative materials and application instructions.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. General: Cover wood products to protect against moisture. Support stacked products to prevent deformation and to allow air circulation.

1.06 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies.
 - 1. Species: Douglas Fir-Larch, unless otherwise indicated.
 - 2. If no species is specified, provide species graded by the agency specified; if no grading agency is specified, provide lumber graded by grading agency meeting the specified requirements.
 - 3. Grading Agency: Grading agency whose rules are approved by the Board of Review, American Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated.
 - 4. Lumber of other species or grades is acceptable provided structural and appearance characteristics are equivalent to or better than products specified.

2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

- A. Grading Agency: Western Wood Products Association; WWPA G-5.
- B. Sizes: Nominal sizes as indicated on drawings, S4S.
- C. Moisture Content: S-dry or MC19.

- D. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:
 - 1. Lumber: S4S, No. 2 or Standard Grade.
 - 2. Boards: Standard or No. 3.

2.03 ACCESSORIES

- A. Fasteners and Anchors:
 - 1. Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity and preservative-treated wood locations, unfinished steel elsewhere.

2.04 FACTORY WOOD TREATMENT

- A. Treated Lumber and Plywood: Comply with requirements of AWWA U1 - Use Category System for wood treatments determined by use categories, expected service conditions, and specific applications.
 - 1. Preservative-Treated Wood: Provide lumber and plywood marked or stamped by an ALSC-accredited testing agency, certifying level and type of treatment in accordance with AWWA standards.
- B. Preservative Treatment:
 - 1. Preservative Pressure Treatment of Lumber Above Grade: AWWA U1, Use Category UC3B, Commodity Specification A using waterborne preservative.
 - a. Kiln dry lumber after treatment to maximum moisture content of 19 percent.
 - b. Treat lumber exposed to weather.
 - c. Treat lumber in contact with roofing, flashing, or waterproofing.
 - d. Treat lumber in contact with masonry or concrete.

PART 3 EXECUTION

3.01 INSTALLATION - GENERAL

- A. Select material sizes to minimize waste.
- B. Reuse scrap to the greatest extent possible; clearly separate scrap for use on site as accessory components, including: shims, bracing, and blocking.
- C. Where treated wood is used on interior, provide temporary ventilation during and immediately after installation sufficient to remove indoor air contaminants.

3.02 BLOCKING, NAILERS, AND SUPPORTS

- A. Provide framing and blocking members as indicated or as required to support finishes, fixtures, specialty items, and trim.
- B. Where ceiling-mounting is indicated, provide blocking and supplementary supports above ceiling, unless other method of support is explicitly indicated.

3.03 ROOF-RELATED CARPENTRY

- A. Coordinate installation of roofing carpentry with deck construction, framing of roof openings, and roofing assembly installation.

3.04 TOLERANCES

- A. Framing Members: 1/4 inch (6 mm) from true position, maximum.
- B. Variation from Plane, Other than Floors: 1/4 inch in 10 feet (2 mm/m) maximum, and 1/4 inch in 30 feet (7 mm in 10 m) maximum.

3.05 CLEANING

- A. Waste Disposal:
 - 1. Comply with applicable regulations.
 - 2. Do not burn scrap on project site.
 - 3. Do not burn scraps that have been pressure treated.
 - 4. Do not send materials treated with pentachlorophenol, CCA, or ACA to co-generation facilities or "waste-to-energy" facilities.

- B. Do not leave wood, shavings, sawdust, etc. on the ground or buried in fill.
- C. Prevent sawdust and wood shavings from entering the storm drainage system.

END OF SECTION

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**SECTION 075300
ELASTOMERIC MEMBRANE ROOFING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Elastomeric roofing membrane application at new and reconfigured roof areas after equipment removal/replacement.
- B. Insulation, flat and tapered.
- C. Vapor retarder.

1.02 RELATED REQUIREMENTS

- A. Section 053100 - Steel Decking: Placement of acoustical insulation for deck flutes.

1.03 REFERENCE STANDARDS

- A. ASTM C578 - Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation; 2019.
- B. ASTM D412 - Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers--Tension; 2016 (Reapproved 2021).
- C. ASTM D448 - Standard Classification for Sizes of Aggregate for Road and Bridge Construction; 2012 (Reapproved 2017).
- D. ASTM D4637/D4637M - Standard Specification for EPDM Sheet Used in Single-Ply Roof Membrane; 2015, with Editorial Revision (2022).

1.04 SUBMITTALS

- A. See Section 013000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data indicating membrane materials, flashing materials, insulation, vapor retarder, surfacing, and fasteners.
- C. Shop Drawings: Indicate joint or termination detail conditions, conditions of interface with other materials, and paver layout.
- D. Manufacturer's Installation Instructions: Indicate membrane seaming precautions and perimeter conditions requiring special attention.
- E. Installer's qualification statement.
- F. Warranty: Submit warranty and ensure forms have been completed in Owner's name and registered with manufacturer for new work.

1.05 QUALITY ASSURANCE

- A. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.

1.06 FIELD CONDITIONS

- A. Do not apply roofing membrane during unsuitable weather.
- B. Do not apply roofing membrane to damp or frozen deck surface or when precipitation is expected or occurring.
- C. Do not expose materials vulnerable to water or sun damage in quantities greater than can be weatherproofed the same day.
- D. Schedule applications so that no partially completed sections of roof are left exposed at end of workday.

1.07 WARRANTY

- A. See Section 017800 - Closeout Submittals for additional warranty requirements.
- B. Correct defective work within a one year period after Date of Substantial Completion.

- C. Provide five year manufacturer's material and labor warranty to cover failure to prevent penetration of water.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. EPDM Membrane Materials:
 - 1. Carlisle SynTec Systems; Sure-Tough EPDM: www.carlisle-syntec.com/#sle.
 - 2. Versico Roofing Systems; VersiGard EPDM: www.versico.com/#sle.
 - 3. Substitutions: See Section 016000 - Product Requirements.
- B. Insulation:
 - 1. Dow: www.dow.com/#sle.
 - 2. GAF: www.gaf.com/#sle.
 - 3. Owens Corning Corporation: www.owenscorning.com/#sle.
 - 4. Versico Roofing Systems: www.versico.com/#sle.
 - 5. Substitutions: See Section 016000 - Product Requirements.

2.02 ROOFING - BALLASTED APPLICATIONS

- A. Elastomeric Membrane Roofing: One-ply membrane loose-laid over insulation and vapor retarder with ballast.
- B. Ballast: Re-distribute existing ballast over new membrane.

2.03 ROOFING MEMBRANE AND ASSOCIATED MATERIALS

- A. Membrane: Ethylene-propylene-diene-monomer (EPDM); externally reinforced with fabric; complying with minimum properties of ASTM D4637/D4637M.
 - 1. Thickness: 45 mil, 0.045 inch (1.1 mm), minimum.
 - 2. Sheet Width: 76 inches (1,930 mm), maximum; factory fabricate into widest possible sheets.
 - 3. Color: Black.
- B. Seaming Materials: As recommended by membrane manufacturer.
- C. Vapor Retarder: Reinforced Kraft paper laminate, complying with requirements of fire rating classification; compatible with roofing and insulation materials.
 - 1. Fire-retardant adhesive.
- D. Flexible Flashing Material: Same material as membrane.

2.04 INSULATION

- A. Expanded Polystyrene (EPS) Board Insulation: Complying with ASTM C578,.
 - 1. Board Size: 48 by 96 inches (1220 by 2440 mm).
 - 2. Board Thickness: 1-1/2 inches (38 mm).
 - 3. Tapered Board: Slope to match existing; minimum thickness 1/2 inch (12.7 mm); fabricate of fewest layers possible.

2.05 ACCESSORIES

- A. Insulation Joint Tape: Glass fiber reinforced type as recommended by insulation manufacturer, compatible with roofing materials; 6 inches (152 mm) wide; self adhering.
- B. Membrane Adhesive: As recommended by membrane manufacturer.
- C. Insulation Adhesive: As recommended by insulation manufacturer.
- D. Sealants: As recommended by membrane manufacturer.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work.
- B. Verify deck is supported and secure.

- C. Verify deck is clean and smooth, flat, free of depressions, waves, or projections, properly sloped and suitable for installation of roof system.
- D. Verify deck surfaces are dry and free of snow or ice.
- E. Verify that roof openings, curbs, and penetrations through roof are solidly set, and cant strips are in place.

3.02 INSTALLATION - VAPOR RETARDER AND INSULATION, UNDER MEMBRANE

- A. Install vapor retarder to deck surface with adhesive in accordance with manufacturer's instructions.
 - 1. Extend vapor retarder under cant strips and blocking to deck edge.
 - 2. Install flexible flashing from vapor retarder to air seal material of wall construction, lap and seal to provide continuity of the air barrier plane.
- B. Ensure vapor retarder is clean and dry, continuous, and ready for application of insulation.
- C. Attachment of Insulation: Embed insulation in adhesive in full contact, in accordance with roofing and insulation manufacturers' instructions.
- D. Lay subsequent layers of insulation with joints staggered minimum 6 inches (152 mm) from joints of preceding layer.
- E. On metal deck, place boards parallel to flutes with insulation board edges bearing on deck flutes.
- F. Lay boards with edges in moderate contact without forcing. Cut insulation to fit neatly to perimeter blocking and around penetrations through roof.
- G. Tape joints of insulation in accordance with roofing and insulation manufacturers' instructions.
- H. Do not apply more insulation than can be covered with membrane in same day.

3.03 INSTALLATION - MEMBRANE

- A. Roll out membrane, free from wrinkles or tears. Place sheet into place without stretching.
- B. Shingle joints on sloped substrate in direction of drainage.
- C. Overlap edges and ends and seal seams by contact adhesive, minimum 3 inches (76 mm). Seal permanently waterproof. Apply uniform bead of sealant to joint edge.
- D. At intersections with vertical surfaces:
 - 1. Extend membrane over cant strips and up a minimum of 4 inches (102 mm) onto vertical surfaces.
 - 2. Fully adhere flexible flashing over membrane and up to nailing strips.
- E. Around roof penetrations, seal flanges and flashings with flexible flashing.
- F. Coordinate installation of roof drains and sumps and related flashings.

3.04 INSTALLATION - BALLAST

- A. Ballast: Evenly distribute aggregate ballast.

END OF SECTION

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**SECTION 095100
ACOUSTICAL CEILINGS**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Suspended metal grid ceiling system.
- B. Acoustical units.

1.02 REFERENCE STANDARDS

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2020.
- B. ASTM C635/C635M - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings; 2017.
- C. ASTM C636/C636M - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels; 2019.
- D. ASTM E580/E580M - Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions; 2022.
- E. ASTM E1264 - Standard Classification for Acoustical Ceiling Products; 2019.

1.03 SUBMITTALS

- A. See Section 013000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on suspension system components and acoustical units.
- C. Samples: Submit two samples 6 by 6 inch (152 by 152 mm) in size illustrating material and finish of acoustical units to match existing.
- D. Manufacturer's Installation Instructions: Indicate special procedures.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
 - 1. See Section 016000 - Product Requirements, for additional provisions.
 - 2. Extra Acoustical Units: 24 sq ft (1.86 sq m) of each type and size.

PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

- A. Acoustical Units - General: ASTM E1264, Class A.
- B. Acoustical Panels: Painted mineral fiber, with the following characteristics:
 - 1. Classification: ASTM E1264 Type III.
 - a. Form: 2, water felted.
 - b. Pattern: Match Existing.
 - 2. Size: 24 by 24 inches and 24 by 48 inches.
 - 3. Thickness: 5/8 inches (16 mm).
 - 4. Panel Edge: Square and Reveal.
 - 5. Color: White.
 - 6. Suspension System: Exposed grid.
 - 7. Products:
 - a. Match Existing
 - b. Substitutions: Not permitted.

2.02 SUSPENSION SYSTEM(S)

- A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, clips, and splices as required.
 - 1. Materials:
 - a. Steel Grid: ASTM A653/A653M, G30 coating, unless otherwise indicated.
- B. Exposed Suspension System: Hot-dipped galvanized steel grid with cap.

1. Structural Classification: Intermediate-duty, when tested in accordance with ASTM C635/C635M.
2. Profile: Tee; 15/16 inch (24 mm) face width.
3. Finish: Baked enamel.
4. Color: Black.
5. Products:
 - a. Provide products compatible with existing grid system.

2.03 ACCESSORIES

- A. Hanger Wire: 12 gauge, 0.08 inch (2 mm) galvanized steel wire.
- B. Perimeter Moldings: Same metal and finish as grid.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify existing conditions before starting work.
- B. Verify that layout of hangers will not interfere with other work.

3.02 PREPARATION

- A. Install after major above-ceiling work is complete.
- B. Coordinate the location of hangers with other work.

3.03 INSTALLATION - SUSPENSION SYSTEM

- A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, and manufacturer's instructions and as supplemented in this section.
- B. Rigidly secure system, including integral mechanical and electrical components, for maximum deflection of 1:360.
- C. Perimeter Molding: If required, install at intersection of ceiling and vertical surfaces and at junctions with other interruptions.
 1. Use longest practical lengths.
 2. Overlap and rivet corners.
- D. Suspension System, Non-Seismic: Hang suspension system independent of walls, columns, ducts, pipes and conduit. Where carrying members are spliced, avoid visible displacement of face plane of adjacent members.
- E. Where ducts or other equipment prevent the regular spacing of hangers, reinforce the nearest affected hangers and related carrying channels to span the extra distance.
- F. Do not support components on main runners or cross runners if weight causes total dead load to exceed deflection capability.
- G. Support fixture loads using supplementary hangers located within 6 inches (152 mm) of each corner, or support components independently.
- H. Do not eccentrically load system or induce rotation of runners.

3.04 INSTALLATION - ACOUSTICAL UNITS

- A. Install acoustical units in accordance with manufacturer's instructions.
- B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.
- C. Fit border trim neatly against abutting surfaces.
- D. Install acoustical units level, in uniform plane, and free from twist, warp, and dents.
- E. Cutting Acoustical Units:
 1. Make field cut edges of same profile as factory edges.

3.05 TOLERANCES

- A. Maximum Variation from Flat and Level Surface: 1/8 inch in 10 feet (3 mm in 3 m).
- B. Maximum Variation from Plumb of Grid Members Caused by Eccentric Loads: 2 degrees.

END OF SECTION

**SECTION 22 0500
COMMON PLUMBING REQUIREMENTS**

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Specification and the accompanying drawings govern the work involved in furnishing, installing, testing and placing into satisfactory operation the Mechanical Systems as shown on the drawings and specified herein.
- B. Each Contractor shall provide all new materials as indicated in the schedules on the drawings, and/or in these specifications, and all items required to make his portion of the Mechanical System a complete, finished and working system.

1.02 WORK SEQUENCE

- A. All construction work that will produce excessive noise levels and interference with normal building operations or access, as determined by the Owner, shall be scheduled with the Owner. It may be necessary to schedule such work during regular hours. The Owner shall reserve the right to set policy as to when restricted construction hours will be required.
- B. The successful Bidders shall be responsible for scheduling overtime hours for the following work:
 - 1. This Contractor shall reference the work sequence as outlined in the Architectural specifications. Work in existing areas shall be coordinated with the General Contractor to minimize construction schedule in existing areas.

1.03 DIVISION OF WORK BETWEEN MECHANICAL, ELECTRICAL & CONTROL CONTRACTORS

- A. Definitions:
 - 1. Mechanical Contractors as referred to herein refers to the following Contractors:
 - a. HVAC Contractor
 - b. Plumbing Contractor
 - c. Temperature Control Contractor
 - 2. Motor Power Wiring. The single phase or 3 phase wiring extending from the power source (transformer, panelboard, feeder circuits, etc.) through disconnect switches and motor controllers to, and including the connections to the terminals of the motor.
 - 3. Motor Control Circuit Wiring. The wiring associated with the remote operation of the magnetic coil of a magnetic motor starter or relay, or the wiring which permits the direct cycling of the motor by means of a device in series with the motor power wiring. In the latter case the devices are usually single phase and are usually (but not always) connected into the motor power wiring through a manual motor starter having Manual-Off-Auto provisions.
 - 4. Control devices such as start-stop push buttons, thermostats, pressure switches, flow switches, other relays, etc., generally represent the type of equipment associated with motor control circuit wiring.

5. Motor control circuit wiring is single phase and usually will be 120 volts. In some instances, the voltage will be the same as the motor power wiring. Generally, where the motor power wiring exceeds 120 volts, a control transformer is provided to give a control voltage of 120 volts.
6. Temperature Control Wiring. The wiring associated with the operation of a motorized damper, solenoid valve or motorized valve, etc., either modulating or two (2) position, as opposed to wiring which directly powers or controls a motor used to drive equipment such as fans, pumps, etc. This wiring will be from a 120 volt source and may continue as 120 volt if applicable or be reduced in voltage (24 volt) in which case a control transformer shall be furnished as part of the temperature and comfort control wiring.
7. Control Motor. Where the term Control Motor is used without other clarification, it means an electrical device used to operate dampers, valves, etc. It may be of such a design to produce two position or modulating operation of the operated device. Conventional characteristics of such a motor are 24 volts, 60 cycles, 1 phase, although other voltages at times may be encountered.

B. General:

1. The purpose of these Specifications is to outline the Electrical and Mechanical Contractor's work responsibilities as related to control wiring, starters, disconnects and other electrical work required for items such as temperature controls, mechanical equipment, fans, chillers, compressors and the like. The exact wiring requirements for much of the equipment cannot be determined until the systems have been purchased and submittals reviewed. Therefore, only known wiring, as related to such items, is shown on the electrical drawings as being by the Electrical Contractor. Other wiring not shown on the electrical drawings but required for the mechanical equipment and systems shall be the responsibility of the Mechanical Contractor.
2. Where the drawings require the Electrical Contractor to wire between various pieces of equipment furnished by the Mechanical Contractor, such wiring shall be terminated at terminals provided in the equipment. It is the Mechanical Contractor's responsibility to provide complete wiring diagrams and supervision to the Electrical Contractor and to designate the terminal numbers for the correct wiring of the equipment.
3. The electrical work for all equipment and systems shall conform to the National Electrical Code requirements. All provisions of the Electrical Specifications concerning wiring, protection, etc., shall apply to wiring provided by the Mechanical Contractor.
4. All Contractors assigned to the project shall establish utility elevations prior to fabrication. All Contractors shall coordinate their material and equipment with other trades. When a conflict arises, priority is as follows:
 - a. Light Fixtures
 - b. Sheet Metal

- c. Electrical Cable Trays
 - d. Hydronic Piping
 - e. Conduit
- C. Mechanical Contractor's Responsibility:
- 1. Assumes all responsibility for the internal wiring of all equipment provided by the Mechanical Contractor, for example:
 - a. Burners
 - b. Gas Trains
 - c. Air Handlers
 - d. Fans
 - e. Condensing Units
 - 2. Assumes all responsibility for miscellaneous items that require wiring, but are not shown on the electrical drawings or specified in the Electrical Specification. If items such as relays, flow switches, or interlocks are required to make the system function correctly or are required by the manufacturer, they are the responsibility of the Mechanical Contractor.
- D. Temperature Control Contractor's Responsibility:
- 1. Assumes all responsibility for the complete wiring of any devices necessary to make the Temperature Control System functional.
 - 2. Assumes the responsibility for verifying any control wiring shown on the electrical drawings as being by the Electrical Contractor. If any wiring is required for the Control System, but not shown or scheduled on the electrical drawings, it shall be the responsibility of the Temperature Control Sub-contractor.
 - 3. Assumes the responsibility of coordinating equipment locations (such as PE's EP's, relays, transformer and etc.) with the Electrical Contractor where the wiring of the equipment is shown to be by the Electrical Contractor.
- E. Electrical Contractor's Responsibility:
- 1. Furnishes and installs all combination starters as shown on the Materials Schedule of the Electrical Drawings and as indicated to be by the Electrical Contractor on the Mechanical Equipment Schedule of the Mechanical Drawings.
 - 2. Furnishes and installs all manual starters and disconnect devices as shown on the Materials Schedule of the Electrical Drawings and as indicated to be by the Electrical Contractor on the Mechanical Equipment Schedule of the Mechanical Drawings.
 - 3. Installs and wires to all remote control devices furnished by the Mechanical Contractor or Temperature Control Subcontractor when such items are noted on the Electrical Drawings.
 - 4. Provides motor control wiring where so noted on the drawings.
 - 5. Provides temperature control wiring where so noted on the drawings.

6. Electrical Contractor shall furnish, install and connect all relays, etc., for automatic shutdown of certain supply units and exhaust fans upon actuation of the Fire Alarm System as indicated and specified in Article Fire Alarm System .

1.04 QUALITY ASSURANCE

A. Qualifications:

1. Only products of reputable manufacturers will be acceptable.
2. Each Contractor and his subcontractors shall employ only workmen who are skilled in their respective trades.

B. Compliance with Codes, Laws, Ordinances:

1. This Contractor shall conform to all requirements of Local and State of Iowa Codes, Laws, Ordinances and other regulations having jurisdiction over this installation.
2. In the event there are no local codes having jurisdiction over this job, the state codes in existence shall be followed.
3. If there is a discrepancy between the codes and regulations having jurisdiction over this installation, and these specifications, the Engineer shall determine the method or equipment used.
4. If the Contractor notes, at the time of bidding, any parts of the drawings and specifications which are not in accord with the applicable codes or regulations, he shall inform the Architect/Engineer in writing, requesting a clarification. If there is insufficient time to follow this procedure, he shall submit with his proposal a separate price required to make the system shown on the drawings comply with the codes and regulations.
5. All changes to the system made after the letting of the contract, in order to comply with the applicable codes or the requirements of the Inspector, shall be made by the Contractor without cost to the Owner.
6. If there is a discrepancy between the manufacturer's recommendations and these specifications, the manufacturer's recommendations shall determine the method or equipment used.

C. Permits, Fees, Taxes, Inspections:

1. Procure all applicable permits and licenses.
2. Abide by all applicable laws, regulations, ordinances, and other rules of the State or Political Subdivision wherein the work is done, or as required by any duly constituted public authority.
3. Pay all applicable charges for such permits or licenses that may be required.
4. Pay all applicable fees and taxes imposed by the State, Municipal and/or other regulatory bodies.
5. Pay all charges arising out of required inspections by the codes, permits, licenses or as otherwise may be required by an authorized body.

6. Where applicable, all fixtures, equipment and materials shall be as approved or listed by the following:
 - a. Underwriters' Laboratories, Inc.
- D. Utility Company Requirements:
 1. Secure from the appropriate utility company (privately or publicly owned) all applicable requirements that must be followed to make the job comply with their requirements.
 2. Make the installation comply with the utility company requirements.
- E. Examination of Drawings:
 1. The drawings for the mechanical work are completely diagrammatic, intended to convey the scope of the work and to indicate the general arrangements and locations of equipment, outlets, etc., and the approximate sizes of equipment.
 2. Contractor shall determine the exact locations of equipment and rough-ins, and the exact routing of pipes and ducts so as to best fit the layout of the job.
 3. Scaling of the drawings will not be sufficient or accurate for determining these locations.
 4. Where job conditions require reasonable changes in indicated arrangements and locations, such changes shall be made by the Contractor at no additional cost to the Owner.
 5. Because of the scale of the drawings, certain basic items, such as fittings, boxes, valves, unions, etc., may not be shown, but where such items are required by other sections of the specifications or where they are required for proper installation of the work, such items shall be furnished and installed.
 6. If an item is either shown on the drawings or called for in the specifications, it shall be considered sufficient for including same in this contract.
 7. The determination of quantities of material and equipment required shall be made by the Contractor from the drawings. Schedules on the drawings and in the specifications are completed as an aid to the Contractor but where discrepancies arise, the greater number shall govern.
 8. Where words provide , install , or furnished are used on the drawings or in the specifications, it shall be taken to mean, to furnish, install and connect up complete and ready for operation, the items mentioned.
- F. Field Measurements:
 1. Before ordering any materials or fabricating any supports, pipes or ducts, This Contractor shall verify all pertinent dimensions at the job site and be responsible for their accuracy.

1.05 SUBMITTALS

- A. In addition to the provisions of Division 1, the following is required:
 1. Submittals shall include all fabrication, erection, layout, and setting drawings; manufacturers' standard drawings; schedules; descriptive literature, catalogs and brochures; performance and test data; wiring and control diagrams; and all other drawings

and descriptive data of materials of construction as may be required to show that the materials, equipment or systems and the location thereof conform to the requirements of the contract documents.

2. The Contractor shall submit seven (7) copies of each shop drawing for review by the Architect /Engineer BEFORE releasing any equipment for manufacture or shipment.
3. The Contractor shall thoroughly review and approve all shop drawings before submitting them to the Architect/Engineer. APPROVAL WILL INDICATE THE CONTRACTOR'S REVIEW of all material and a COMPLETE UNDERSTANDING OF EACH WHAT IS TO BE FURNISHED. Contractor shall clearly mark all deviations from the contract documents on all submittals. IF DEVIATIONS ARE NOT MARKED BY THE CONTRACTOR, THEN THE ITEM SHALL BE REQUIRED TO MEET ALL DRAWING AND SPECIFICATION REQUIREMENTS.
4. The Contractor shall clearly mark each item with the same nomenclature applied on the drawings or in the specifications.
5. The Contractor shall clearly indicate the size, finish, material, etc.
6. All submittals shall be assembled in sets such as all air handling units, plumbing fixtures, or all fans, etc. All sets shall be identical.
7. Each set shall be bound in a manufacturer's folder.
8. Each set shall contain an index of the items enclosed with a general topic description on the cover.
9. Where more than one model is shown on a manufacturer's sheet, the Contractor shall clearly indicate exactly which item and which data is relevant to the work.
10. Failure to comply with the above shall be reason to resubmit all shop drawing submittals.
11. Reviewing one set of shop drawing submittals for each product shall be the Engineer's responsibility. if the first submittal is incomplete or does not comply with the drawings and/or specifications, the Contractor shall be responsible to bear the cost for the Engineer to recheck and handle the additional shop drawing submittals.
12. Submittals shall be required for the items identified in each section.

1.06 PRODUCT DELIVERY, STORAGE, HANDLING & MAINTENANCE

- A. Exercise care in transporting and handling to avoid damage to fixtures, equipment and materials. Store materials on the site so as to prevent damage. Keep fixtures, equipment and materials clean, dry and free from deleterious conditions.
- B. Keep all bearings properly lubricated. Keep all belts properly tensioned and aligned.

1.07 WARRANTY

- A. Provide one-year warranty, to the Owner, for all fixtures, equipment, materials, and workmanship.
- B. The warranty period for the entire installation described in this Division of the specifications shall commence on the date of final acceptance unless a whole or partial system or any

separate piece of equipment or component is put into use for the benefit of any party other than the installing contractor with the prior written authorization. In this instance, the warranty period shall commence on the date when such whole system, partial system or separate piece of equipment or component is placed in operation and accepted in writing by the Owner or his representative.

- C. Warranty requirements shall extend to correction, without cost to the final user, of all Work found to be defective or nonconforming to the contract documents. The Contractor shall bear the cost of correcting all damage resulting from such defects or nonconformance with contract documents exclusive of repairs required as a result of improper maintenance or operation, or of normal wear.

1.08 INSURANCE

- A. This Contractor shall maintain insurance coverage as set forth in Division 1 of these specifications.

1.09 MATERIAL SUBSTITUTION

- A. Where several manufacturer's names are given, the manufacturer for which a catalog number is given constitutes the basis for job design and establishes the equipment quality required to be used in this contract. Alternate manufacturers may be listed for the convenience of the contractor, but must conform to the requirements established by the basis for design given.
- B. This Contractor, at his option, may use equivalent equipment as manufactured by the other named manufacturers. This Contractor is responsible to ensure that all items submitted by these other manufacturers meets all requirements of the drawings and specifications and fits in the allocated space.
- C. Any material, article or equipment of other unnamed manufacturers which will adequately perform the services and duties imposed by the design and is of a quality equal to or better than the material, article or equipment identified by the drawings and specifications may be used if approval is secured in writing from the Architect/Engineer not later than ten (10) days prior to the bid opening date.
- D. Any material, article or equipment of other unnamed manufacturers which will adequately perform the services and duties imposed by the design and is of a quality equal to or better than the material, article or equipment identified by the drawings and specifications may be used but is contingent upon Architect/Engineer's approval during the submittal process.
- E. This Contractor assumes all costs that may be incurred as a result of using the offered material, article or equipment necessitating extra expense on his part or on the part of other Contractors whose work is affected.
- F. This Contractor may list voluntary add or deduct prices for alternate materials on the bid form. These items will not be used in determining the low bidder.
- G. All material substitutions requested later than ten (10) days prior to bid opening must be listed as voluntary changes on the bid form.

1.10 MANUFACTURERS AND MODEL NUMBERS

- A. Where drawing schedules call out specific manufacturer's model numbers, the numbers are listed solely for the convenience of the contractor.
- B. Where specific manufacturer's model numbers are called out, the Contractor and Material Supplier are responsible for verifying the correct model number. Where scheduled capacities, options, or accessories conflict with model numbers specified, the greater capacity, options, or accessories shall be bid upon and supplied unless addressed by the Engineer prior to Bid date.
- C. Incorrect model numbers shall be brought to the attention of the Engineer when discovered.

1.11 RESOLUTION OF DISCREPANCIES

- A. If discrepancies are found to exist between the project drawings and project specifications, the more restrictive and obligatory document shall prevail as the project requirement.
- B. If discrepancies are found to exist between the requirements of the; Electrical Specifications, the Mechanical Specifications, the Architectural Specifications, and/or the Specification Front End Documents (Bidding Requirements-Agreement, Bonds, and Closeout Documents-Project Forms-Conditions of the Contract), the more restrictive and obligatory document/section(s) shall prevail as the project requirement.

PART 2 PRODUCTS

2.01 NOT APPLICABLE

PART 3 EXECUTION

3.01 EXCAVATION, FILL, BACKFILL, COMPACTION

- A. General:
 - 1. The Contractor shall do all necessary excavating, filling, backfilling and compacting in connection with his work.
- B. Excavation:
 - 1. Excavations for structures, manholes, pits and trenches shall be excavated to accurate, solid, undisturbed foundation beds required for foundations, slabs on ground, etc., and to proper dimensions to permit installation and inspection of forms and other work.
 - 2. Where excavations are carried in error below indicated levels, concrete of same strength as specified for the foundations or thoroughly compacted sand-gravel fill, as determined by the Architect/Engineer shall be placed in such excess excavations under foundation. Thoroughly compacted, clean, stable soil fill shall be placed in excess excavations under slabs on ground, all at the Contractor's expense.
 - 3. Bottom and sides of excavations shall be trimmed to required grade and lines to receive foundations.
 - 4. Excavations shall be protected against frost action and freezing.
 - 5. Care shall be exercised in excavating so as to not damage surrounding structures, equipment or buried pipe. In no case shall any major structural footing or foundation be undermined.

6. All trenching shall be performed in a manner to prevent cave-ins and risk to workmen.
 7. Mechanical excavation of the trench to line and grade of the pipe shall be permitted.
 8. Where original surface is pavement or concrete, the surface shall be saw cut to provide clean edges and assist in the surface restoration.
 9. Where satisfactory bearing soil for foundations is not found at the indicated levels, the Architect /Engineer or their representative shall be notified immediately, and no further work shall be done until further instructions are given by the Architect /Engineer or their representative.
- C. Dewatering:
1. The Contractor shall be responsible for the furnishing, installation, operation and removal of all dewatering pumps and lines necessary to keep trenches and pits free of water at all times.
- D. Underground Obstructions:
1. Known underground piping, foundations, or other underground obstructions in the vicinity of construction are shown on the drawings. The Contractor shall use great care in making his installation in the vicinity of underground obstructions.
 2. If objects not shown on the drawings are encountered in area of new construction, remove, relocate, or perform extra work as directed by the Architect/Engineer.
- E. Fill and Backfilling:
1. No rubbish or waste material shall be permitted in excavations for trench fill and backfill.
 2. The Contractor shall provide the necessary sand for backfilling.
 3. Dispose of the excess excavated earth as directed.
 4. Soils for backfill shall be suitable for required stability and compaction, clean and free from perishable materials and free from stones greater than 4 inches in diameter. Under no circumstances shall water be permitted to rise in unbackfilled trenches after installation has been placed. No material shall be used for backfilling which contains stones having any dimension greater than 4 inches, frozen earth, debris or earth with an exceptionally high void content.
 5. All trenches and excavations shall be backfilled immediately after installation of pipe, or removal of forms, is made unless other protection is directed.
 6. Around piers and isolated foundations and structures, backfill and fill shall be placed and consolidated simultaneously on all sides to prevent wedge action and displacement. Fill and backfill materials shall be spread in 6 inch thick uniform horizontal layers with each layer being compacted separately to required density.
 7. All piping shall be laid on a compacted bed of sand at least 3 inches deep. Backfill around the pipe with sand, spread in 6 inch layers, and compact each layer.
 8. Use sand for backfill up to grade for all piping located under building slabs or paved areas. All other piping shall have sand backfill to 6 inches above the top of the pipe.

9. The backfilling above the sand shall be placed in uniform layers not exceeding 6 inches in depth. Each layer shall be placed, then carefully and uniformly tamped, so as to eliminate the possibility of lateral or vertical displacement.
 10. Where the fill and backfilling will ultimately be under a building, floor or paving, each layer of fill shall be compacted to 95 of the maximum density as determined by AASHTO Designation T-99 or ASTM Designation D-698. Moisture content of soil at time of compaction shall not exceed plus or minus 2 of optimum moisture content as determined by AASHTO T-99 or ASTM D-698 test.
- F. Surface Restoration:
1. Where trenches are cut through graded, planted or landscaped areas, the areas shall be restored to the original condition at completion of the work. All planting removed or damaged during the course of the work shall be replaced to its original condition. A minimum of 6 inches of topsoil shall be applied where disturbed areas are to be seeded or sodded.
 2. Concrete or asphalt type pavement, seal coat, rock, gravel or earth surfaces removed or damaged during the course of the work shall be replaced with comparable materials and restored to original condition.

3.02 PROJECT CLOSEOUT

- A. Refer to the Division 1 Section: PROJECT CLOSEOUT for requirements. The following paragraphs supplement the requirements of Division 1.
1. Before final payment will be authorized, This Contractor must have completed the following:
 - a. Submitted operation and maintenance manuals to the Architect/Engineer for review.
 - b. Submitted bound copies of approved shop drawings.
 - c. Submitted record documents for Architect/Engineer review including marked-up drawings and specifications.
 - d. Submitted a report stating the instructions given to the Owner's representative complete with the number of hours spent in the instruction. The report shall bear the signature of an authorized agent of This Contractor and shall be signed by the Owner's representative as having received the instructions.
 - e. Submitted inspection report by the State Fire Marshal of the fire protection system.
 - f. Submitted start-up reports on all equipment requiring a factory installation inspection and/or start.

3.03 OPERATION AND MAINTENANCE MANUAL

- A. As part of instructing the Owner, This Contractor shall assemble, organize, and bind operation and maintenance manuals on the mechanical systems installed.
- B. Submit three (3) properly indexed and bound copies of the manual to the Architect/Engineer for approval. Make all corrections or additions required.

- C. Operation and Maintenance Manuals shall consist of the following:
 - 1. Title page with project title, Architect, Engineer, and Contractor, with addresses, telephone numbers, and contacts.
 - 2. Table of Contents describing index.
 - 3. Listing of all Subcontractors and major equipment suppliers with addresses, telephone numbers, and contacts.
 - 4. Index tabs dividing information by specification section, major equipment, or systems.
 - 5. Copy of final approved test and balance report.
- D. Operation and maintenance data shall consist of written instructions for the care, maintenance, and operation of the equipment and systems. Instruction books, cards, manuals furnished with the equipment shall be included.
- E. Provide three (3) separate manuals with original or reproductions of approved shop drawings with title page and index system similar to operation and maintenance manual.

3.04 INSTRUCTING THE OWNER'S REPRESENTATIVE

- A. Adequately instruct the Owner's designated representative or representatives in the maintenance, care, and operation of the complete systems installed under this contract.
- B. Provide verbal and written instructions to the Owner's representative or representatives by FACTOR PERSONNEL in the care, maintenance, and operation of the equipment and systems.
- C. The Owner has the option to video tape the instructions to the Owner. Coordinate schedule of, instructions to facilitate this recording.
- D. The instructions shall include:
 - 1. Explanation of all system flow diagrams.
 - 2. Explanation of all air handling systems.
 - 3. Temperature control system operation including calibration, adjustment and proper operating conditions of all sensors.
 - 4. Maintenance of equipment.
 - 5. Start-up procedures for each major piece of equipment.
 - 6. Explanation of seasonal system changes.
 - 7. Description of emergency system operation.
- E. The Architect/Engineer shall be notified of the time and place for the verbal instructions to be given to the Owner's representative so that either he or his representative can be present if desirable.
- F. Minimum manhours of instruction time for each item and/or system, as outlined above, shall be as follows:
 - 1. 2 Hours.
- G. Operating Instructions:

1. The Contractor is responsible for all instructions to the Owner and/or his operating staff on the mechanical and control systems.
2. If the Contractor does not have Engineers and/or Technicians on staff that can adequately provide the required instructions on system operation, performance, troubleshooting, care and maintenance, he shall include in his bid an adequate amount to hire the Engineer to perform these instructions.

3.05 SYSTEM COMMISSIONING

- A. The mechanical systems included in the construction documents are to be complete and operating systems. The Architect /Engineer will make periodic job site observations during the construction period. The system start-up, testing, balancing, and satisfactory system performance is the responsibility of the Contractor. This shall include all calibration and adjustments of controls, noise level adjustments and final comfort factor adjustments that may be required.
- B. This Contractor shall adjust the mechanical systems and controls at season changes during the one year warranty period, as required, to provide satisfactory operation and to prove performance of system used in all seasons.
- C. All operating conditions and control sequences shall be simulated and tested during the start-up period. Testing shall also include all interlocks, safety shut-downs, damper position controls, and alarms.
- D. The Contractor, subcontractors, and equipment suppliers are expected to have skilled technicians to insure that the system performs as designed. If the Architect/Engineer is requested to visit the job site for the purpose of trouble shooting, assisting in the satisfactory start-up, obtaining satisfactory equipment operation, resolving installation and/or workmanship problems, equipment substitution issues or unsatisfactory system performance, including call backs during the warranty period through no fault of the design; the Contractor shall reimburse the Architect /Engineer on a time and material basis for services rendered at the Architect /Engineer's standard hourly rates in effect at the time the services are requested. The Contractor shall be responsible for making payment to the Architect /Engineer for services required that are product, installation or workmanship related. Payment is due within 30 days after services are rendered.

3.06 RECORD DOCUMENTS

- A. Refer to the Division 1 Section: PROJECT CLOSEOUT for requirements. The following paragraphs supplement the requirements of Division 1.
- B. Mechanical Contractor shall maintain at the job site a separate and complete set of mechanical drawings and specifications upon which he shall clearly and permanently mark and note in complete detail any changes made to the location and arrangement of the mechanical apparatus or changes made in the mechanical system and piping as a result of building construction conditions or as a result of instructions from the Architect or Engineer.

- C. Mark drawings to indicate revisions to piping and ductwork, size and location both exterior and interior; including locations of coils, dampers, other control devices, filters, boxes, and similar units requiring periodic maintenance or repair; actual equipment locations, dimensioned for column lines; actual inverts and locations of underground piping; concealed equipment, dimensioned to column lines; mains and branches of piping systems, with valves and control devices located and numbered, concealed unions located, and with items requiring maintenance located (i.e. traps, strainers, expansion compensators, tanks, etc.) Change Orders; concealed control system devices.
- D. Before the completion of the project, a set of reproducible mechanical drawings will be given to the Contractor for transfer of all as-built conditions from the paper set maintained at the job site. All marks on reproducibles shall be clearly made in a permanent fashion.
- E. Mark specifications to indicate approved substitutions; Change Orders, actual equipment and materials used.
- F. Such record of changes shall be made daily by This Contractor and the marked drawings shall be available for the Architect and Engineer's examination at any normal work time.
- G. Upon completion of the job, and before final payment is made, This Contractor shall give the marked-up drawings to the Architect/Engineer.

3.07 PAINTING

- A. This Contractor shall paint any equipment which is marred or damaged prior to the Owner's acceptance and occupancy. Paint and color shall match original equipment paint and shall be obtained from the equipment supplier when available.
- B. Equipment located in finished areas and which will be painted to match the room decor will be painted by others. Should This Contractor install equipment in a finished area after the area has been painted by others, he shall be responsible for having the equipment and all of its supports, hangers, etc., painted to match the room decor.
- C. Equipment cabinets, casings, covers, metal jackets, etc., located in equipment rooms or concealed spaces, shall be furnished in standard or prime finish free from scratches, abrasions, chippings, etc.
- D. Equipment located in occupied spaces, or if standard to the unit, shall have a baked primer with baked enamel finish coat free from scratches, abrasions, chipping, etc. if color option is specified or color option given as standard to the unit, This Contractor shall, before ordering, verify with the Architect /Engineer his color preference and shall furnish this color.
- E. This Contractor shall paint equipment located in unfinished areas such as boiler room, mechanical spaces, storage room, etc., furnished by him. If certain equipment is furnished with a factory coat of paint and enamel, it need not be painted, providing the factory applied finish is in no way marred or spattered. If so, the item or piece of equipment shall be refinished with the same paint or enamel that was factory applied.

- F. After surfaces have been thoroughly cleaned and are free of oil, dirt or other foreign matter, the pipes or equipment shall be painted with the following paint materials:
1. Bare Metal Surfaces - Apply one coat of metal primer suitable for use on metal being painted. Finish with two coats of Alkyd base enamel paint.
 2. Insulated Surfaces - Paint insulation jacket with two coats of semi-gloss acrylic latex paint.
 3. Color of paint shall be verified with the Architect.

3.08 ADJUST AND CLEAN

- A. Contractor shall thoroughly clean all equipment and systems prior to the Owner's final acceptance of the project.
- B. Contractor shall clean all foreign paint, grease, oil, dirt, labels, stickers, and other foreign material from equipment and fixtures.
- C. Contractor shall remove all rubbish, debris, etc., accumulated during the Contractor's operations from the premises.

END OF SECTION

SECTION 22 0719
PLUMBING PIPING INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Glass fiber insulation.
- B. Jacketing and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.

1.03 REFERENCE STANDARDS

- A. ASTM C177 - Standard Test Method for Steady-State Heat Flux Measurements and Thermal Transmission Properties by Means of the Guarded-Hot-Plate Apparatus; 2019, with Editorial Revision (2023).
- B. ASTM C195 - Standard Specification for Mineral Fiber Thermal Insulating Cement; 2007 (Reapproved 2019).
- C. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation; 2022a.
- D. ASTM C552 - Standard Specification for Cellular Glass Thermal Insulation; 2022.
- E. ASTM C795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2008 (Reapproved 2023).
- F. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- G. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- H. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.
- C. Manufacturer's Instructions: Indicate installation procedures that ensure acceptable workmanship and installation standards will be achieved.

1.05 QUALITY ASSURANCE

- A. Applicator Qualifications: Company specializing in performing the type of work specified in this section

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

1.07 FIELD CONDITIONS

- A. Maintain ambient conditions required by manufacturers of each product.

- B. Maintain temperature before, during, and after installation for minimum of 24 hours.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84, UL 723, ASTM E84, or UL 723.

2.02 GLASS FIBER INSULATION

- A. Manufacturers:
 - 1. CertainTeed Corporation: www.certainteed.com/#sle.
 - 2. Johns Manville Corporation: www.jm.com/#sle.
 - 3. Knauf Insulation: www.knaufinsulation.com/#sle.
 - 4. Owens Corning Corporation: www.ocbuildingspec.com/#sle.
 - 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulation: ASTM C547 and ASTM C795; semi-rigid, noncombustible, end grain adhered to jacket.
 - 1. K Value: ASTM C177, 0.24 at 75 degrees F.
 - 2. Maximum Service Temperature: 650 degrees F.
 - 3. Maximum Moisture Absorption: 0.2 percent by volume.
- C. Vapor Barrier Jacket: White Kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm.

2.03 JACKETING AND ACCESSORIES

- A. PVC Plastic Jacket:
 - 1. Jacket: One piece molded type fitting covers and sheet material, off-white color.
 - a. Minimum Service Temperature: 0 degrees F.
 - b. Maximum Service Temperature: 150 degrees F.
 - c. Moisture Vapor Permeability: 0.002 perm inch, maximum, when tested in accordance with ASTM E96/E96M.
 - d. Thickness: 10 mil, 0.010 inch.
 - e. Connections: Brush on welding adhesive.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that piping has been tested before applying insulation materials.
- B. Verify that surfaces are clean and dry, with foreign material removed.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with North American Insulation Manufacturers Association (NAIMA) National Insulation Standards.
- C. Exposed Piping: Locate insulation and cover seams in least visible locations.

- D. Insulated pipes conveying fluids below ambient temperature: Insulate entire system including fittings, valves, unions, flanges, strainers, flexible connections, pump bodies, and expansion joints.
- E. Glass fiber insulated pipes conveying fluids below ambient temperature:
 - 1. Provide vapor barrier jackets, factory-applied or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure-sensitive adhesive. Secure with outward clinch expanding staples and vapor barrier mastic.
 - 2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor barrier adhesive or PVC fitting covers.
- F. For hot piping conveying fluids 140 degrees F or less, do not insulate flanges and unions at equipment, but bevel and seal ends of insulation.
- G. For hot piping conveying fluids over 140 degrees F, insulate flanges and unions at equipment.
- H. Insulation shall continue through all hangers and supports, broken only as required for inserts. Fit inserts tightly to insulation with no gaps. Maintain vapor barrier through support and inserts with NO penetrations.
- I. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions. At fire separations, see Section 07 8400.
- J. Pipe Exposed in Mechanical Equipment Rooms or Finished Spaces (less than 10 feet above finished floor): Finish with PVC jacket and fitting covers.

3.03 SCHEDULES

- A. Refer to the drawings for the piping and insulation schedule.

END OF SECTION

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**SECTION 22 1005
PLUMBING PIPING**

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Domestic water piping, above grade.
 - 1. Ball valves.

1.02 RELATED REQUIREMENTS

- A. Section 22 0553 - MECHANICAL IDENTIFICATION.

1.03 REFERENCE STANDARDS

- A. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2021.
- B. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2021.
- C. ASME B31.9 - Building Services Piping; 2020.
- D. ASTM A47/A47M - Standard Specification for Ferritic Malleable Iron Castings; 1999, with Editorial Revision (2022).
- E. ASTM B32 - Standard Specification for Solder Metal; 2020.
- F. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2022.
- G. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2020.
- H. ASTM B813 - Standard Specification for Liquid and Paste Fluxes for Soldering of Copper and Copper Alloy Tube; 2016.
- I. ASTM B828 - Standard Practice for Making Capillary Joints by Soldering of Copper and Copper Alloy Tube and Fittings; 2023.
- J. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- K. AWWA C606 - Grooved and Shouldered Joints; 2022.
- L. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2018, with Amendment (2019).
- M. MSS SP-110 - Ball Valves Threaded, Socket-Welding, Solder Joint, Grooved and Flared Ends; 2010, with Errata .
- N. NSF 61 - Drinking Water System Components - Health Effects; 2023, with Errata.
- O. NSF 372 - Drinking Water System Components - Lead Content; 2022.
- P. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalog information. Indicate valve data and ratings.

1.05 QUALITY ASSURANCE

- A. Perform work in accordance with applicable codes.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.07 FIELD CONDITIONS

- A. Do not install underground piping when bedding is wet or frozen.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Potable Water Supply Systems: Provide piping, pipe fittings, and solder and flux (if used), that comply with NSF 61 and NSF 372 for maximum lead content; label pipe and fittings.
- B. Plenum-Installed Acid Waste Piping: Flame-spread index equal or below 25 and smoke-spread index equal or below 50 according to ASTM E84 or UL 723 tests.

2.02 DOMESTIC WATER PIPING, ABOVE GRADE

- A. Copper Pipe: ASTM B88 (ASTM B88M), Type K (A), Drawn (H).
 - 1. Fittings: ASME B16.18, cast copper alloy or ASME B16.22, wrought copper and bronze.
 - 2. Joints: ASTM B32, alloy Sn95 solder.
 - 3. Joints: Grooved mechanical couplings.

2.03 PIPE FLANGES, UNIONS, AND COUPLINGS

- A. Unions for Pipe Sizes 3 inch and Under:
 - 1. Ferrous Pipe: Class 150 malleable iron threaded unions.
 - 2. Copper Tube and Pipe: Class 150 bronze unions with soldered joints.
- B. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
 - 1. Dimensions and Testing: In accordance with AWWA C606.
 - 2. Housing Material: Provide ASTM A47/A47M malleable iron or ductile iron, galvanized.
 - 3. Gasket Material: Nitrile rubber suitable for operating temperature range from minus 20 degrees F to 180 degrees F.
 - 4. Bolts and Nuts: Hot dipped galvanized or zinc-electroplated steel.
 - 5. When pipe is field grooved, provide coupling manufacturer's grooving tools.
- C. Dielectric Connections: Union with galvanized or plated steel threaded end, copper solder end, water impervious isolation barrier.

2.04 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.
 - 1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
 - 2. Overhead Supports: Individual steel rod hangers attached to structure or to trapeze hangers.

3. Trapeze Hangers: Welded steel channel frames attached to structure.
- B. Plumbing Piping - Water:
1. Conform to ASME B31.9.
 2. Hangers for Pipe Sizes 1/2 to 1-1/2 inch: Malleable iron, adjustable swivel, split ring.
 3. Hangers for Cold Pipe Sizes 2 inch and Over: Carbon steel, adjustable, clevis.
 4. Hangers for Hot Pipe Sizes 2 to 4 inch: Carbon steel, adjustable, clevis.
 5. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

2.05 BALL VALVES

- A. Manufacturers:
1. Apollo Valves: www.apollovalves.com/#sle.
 2. Grinnell Products: www.grinnell.com/#sle.
 3. Nibco, Inc: www.nibco.com/#sle.
 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Construction, 4 inch and Smaller: MSS SP-110, Class 150, 400 psi CWP, bronze body, chrome plated brass ball, regular port, teflon seats and stuffing box ring, blow-out proof stem, lever handle, solder or grooved ends.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs.
- B. Remove scale and dirt, on inside and outside, before assembly.
- C. Prepare piping connections to equipment with flanges or unions.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide non-conducting dielectric connections wherever jointing dissimilar metals.
- C. Route piping in orderly manner and maintain gradient. Route parallel and perpendicular to walls.
- D. Install piping to maintain headroom, conserve space, and not interfere with use of space.
- E. Group piping whenever practical at common elevations.
- F. Provide clearance in hangers and from structure and other equipment for installation of insulation and access to valves and fittings.
- G. Provide access where valves and fittings are not exposed.
- H. Where pipe support members are welded to structural building framing, scrape, brush clean, and apply one coat of zinc-rich primer to welding.
- I. Install bell and spigot pipe with bell end upstream.
- J. Install valves with stems upright or horizontal, not inverted. See Section 22 0523.
- K. Install water piping to ASME B31.9.
- L. Copper Pipe and Tube: Make soldered joints in accordance with ASTM B828, using specified solder, and flux meeting ASTM B813; in potable water systems use flux also complying with

NSF 61 and NSF 372.

M. Pipe Hangers and Supports:

1. Install in accordance with ASME B31.9.
2. Support horizontal piping as indicated.
3. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.
4. Place hangers within 12 inches of each horizontal elbow.
5. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
6. Support vertical piping at every other floor. Support riser piping independently of connected horizontal piping.
7. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
8. Provide copper plated hangers and supports for copper piping.

3.03 APPLICATION

- A. Use grooved mechanical couplings and fasteners only in accessible locations.
- B. Install unions downstream of valves and at equipment or apparatus connections.
- C. Install ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

3.04 SCHEDULES

A. Pipe Hanger Spacing:

1. Metal Piping:
 - a. Pipe Size: 1/2 inch to 1-1/4 inch:
 - 1) Maximum Hanger Spacing: 6.5 ft.
 - 2) Hanger Rod Diameter: 3/8 inches.

END OF SECTION

**SECTION 23 0500
COMMON HVAC REQUIREMENTS**

PART 1 GENERAL

1.01 SCOPE OF WORK

- A. This Specification and the accompanying drawings govern the work involved in furnishing, installing, testing and placing into satisfactory operation the Mechanical Systems as shown on the drawings and specified herein.
- B. Each Contractor shall provide all new materials as indicated in the schedules on the drawings, and/or in these specifications, and all items required to make his portion of the Mechanical System a complete, finished and working system.
- C. Reference Division 1 Sections for all Bid Package definitions and scopes. The scope of work listed below is for the convenience of the contractor and lists normal breakdown of the subcontracts.

1.02 WORK SEQUENCE

- A. All construction work that will produce excessive noise levels and interference with normal building operations or access, as determined by the Owner, shall be scheduled with the Owner. It may be necessary to schedule such work during regular hours. The Owner shall reserve the right to set policy as to when restricted construction hours will be required.
- B. The successful Bidders shall be responsible for scheduling overtime hours for the following work:
 - 1. This Contractor shall reference the work sequence as outlined in the Architectural specifications. Work in existing areas shall be coordinated with the General Contractor to minimize construction schedule in existing areas.

1.03 DIVISION OF WORK BETWEEN MECHANICAL, ELECTRICAL & CONTROL CONTRACTORS

- A. Definitions:
 - 1. Mechanical Contractors as referred to herein refers to the following Contractors:
 - a. HVAC Contractor
 - b. Plumbing Contractor
 - c. Temperature Control Contractor (Not Owner's BMS Integrator)
 - 2. Motor Power Wiring. The single phase or 3 phase wiring extending from the power source (transformer, panelboard, feeder circuits, etc.) through disconnect switches and motor controllers to, and including the connections to the terminals of the motor.
 - 3. Motor Control Circuit Wiring. The wiring associated with the remote operation of the magnetic coil of a magnetic motor starter or relay, or the wiring which permits the direct cycling of the motor by means of a device in series with the motor power wiring. In the latter case the devices are usually single phase and are usually (but not always) connected into the motor power wiring through a manual motor starter having Manual-Off-Auto provisions.

4. Control devices such as start-stop push buttons, thermostats, pressure switches, flow switches, other relays, etc., generally represent the type of equipment associated with motor control circuit wiring.
5. Motor control circuit wiring is single phase and usually will be 120 volts. In some instances, the voltage will be the same as the motor power wiring. Generally, where the motor power wiring exceeds 120 volts, a control transformer is provided to give a control voltage of 120 volts.
6. Temperature Control Wiring. The wiring associated with the operation of a motorized damper, solenoid valve or motorized valve, etc., either modulating or two (2) position, as opposed to wiring which directly powers or controls a motor used to drive equipment such as fans, pumps, etc. This wiring will be from a 120 volt source and may continue as 120 volt if applicable or be reduced in voltage (24 volt) in which case a control transformer shall be furnished as part of the temperature and comfort control wiring.
7. Control Motor. Where the term Control Motor is used without other clarification, it means an electrical device used to operate dampers, valves, etc. It may be of such a design to produce two position or modulating operation of the operated device. Conventional characteristics of such a motor are 24 volts, 60 cycles, 1 phase, although other voltages at times may be encountered.

B. General:

1. The purpose of these Specifications is to outline the Electrical and Mechanical Contractor's work responsibilities as related to control wiring, starters, disconnects and other electrical work required for items such as temperature controls, mechanical equipment, fans, chillers, compressors and the like. The exact wiring requirements for much of the equipment cannot be determined until the systems have been purchased and submittals reviewed. Therefore, only known wiring, as related to such items, is shown on the electrical drawings as being by the Electrical Contractor. Other wiring not shown on the electrical drawings but required for the mechanical equipment and systems shall be the responsibility of the Mechanical Contractor.
2. Where the drawings require the Electrical Contractor to wire between various pieces of equipment furnished by the Mechanical Contractor, such wiring shall be terminated at terminals provided in the equipment. It is the Mechanical Contractor's responsibility to provide complete wiring diagrams and supervision to the Electrical Contractor and to designate the terminal numbers for the correct wiring of the equipment.
3. The electrical work for all equipment and systems shall conform to the National Electrical Code requirements. All provisions of the Electrical Specifications concerning wiring, protection, etc., shall apply to wiring provided by the Mechanical Contractor.
4. All Contractors assigned to the project shall establish utility elevations prior to fabrication. All Contractors shall coordinate their material and equipment with other trades. When a

conflict arises, priority is as follows:

- a. Light Fixtures
- b. Equipment
- c. Sheet Metal
- d. Electrical Cable Trays
- e. Hydronic Piping
- f. Conduit

C. Mechanical Contractor's Responsibility:

1. Assumes all responsibility for the internal wiring of all equipment provided by the Mechanical Contractor, for example:
 - a. Burners
 - b. Gas Trains
 - c. Air Handlers
 - d. Fans
 - e. Condensing Units
2. Assumes all responsibility for miscellaneous items that require wiring, but are not shown on the electrical drawings or specified in the Electrical Specification. If items such as relays, flow switches, or interlocks are required to make the system function correctly or are required by the manufacturer, they are the responsibility of the Mechanical Contractor.
3. Assumes all responsibility for the Temperature Control wiring, since the Temperature Control Contractor is a Subcontractor to the Mechanical Contractor.

D. Temperature Control Contractor's Responsibility:

1. Assumes all responsibility for the complete wiring of any devices necessary to make the Temperature Control System functional.
2. Assumes the responsibility for verifying any control wiring shown on the electrical drawings as being by the Electrical Contractor. If any wiring is required for the Control System, but not shown or scheduled on the electrical drawings, it shall be the responsibility of the Temperature Control Sub-contractor.
3. Assumes the responsibility of coordinating equipment locations (such as PE's EP's, relays, transformer and etc.) with the Electrical Contractor where the wiring of the equipment is shown to be by the Electrical Contractor.

E. Electrical Contractor's Responsibility:

1. Furnishes and installs all combination starters as shown on the Materials Schedule of the Electrical Drawings and as indicated to be by the Electrical Contractor on the Mechanical Equipment Schedule of the Mechanical Drawings.
2. Furnishes and installs all manual starters and disconnect devices as shown on the Materials Schedule of the Electrical Drawings and as indicated to be by the Electrical Contractor on the Mechanical Equipment Schedule of the Mechanical Drawings.

3. Installs and wires to all remote control devices furnished by the Mechanical Contractor or Temperature Control Subcontractor when such items are noted on the Electrical Drawings.
4. Provides motor control wiring where so noted on the drawings.
5. Provides temperature control wiring where so noted on the drawings.
6. Electrical Contractor shall furnish, install and connect all relays, etc., for automatic shutdown of certain supply units and exhaust fans upon actuation of the Fire Alarm System as indicated and specified in Article Fire Alarm System .

1.04 QUALITY ASSURANCE

A. Qualifications:

1. Only products of reputable manufacturers will be acceptable.
2. Each Contractor and his subcontractors shall employ only workmen who are skilled in their respective trades.

B. Compliance with Codes, Laws, Ordinances:

1. This Contractor shall conform to all requirements of Local and State of Iowa Codes, Laws, Ordinances and other regulations having jurisdiction over this installation.
2. In the event there are no local codes having jurisdiction over this job, the state codes in existence shall be followed.
3. If there is a discrepancy between the codes and regulations having jurisdiction over this installation, and these specifications, the Engineer shall determine the method or equipment used.
4. If the Contractor notes, at the time of bidding, any parts of the drawings and specifications which are not in accord with the applicable codes or regulations, he shall inform the Architect/Engineer in writing, requesting a clarification. If there is insufficient time to follow this procedure, he shall submit with his proposal a separate price required to make the system shown on the drawings comply with the codes and regulations.
5. All changes to the system made after the letting of the contract, in order to comply with the applicable codes or the requirements of the Inspector, shall be made by the Contractor without cost to the Owner.
6. If there is a discrepancy between the manufacturer's recommendations and these specifications, the manufacturer's recommendations shall determine the method or equipment used.

C. Permits, Fees, Taxes, Inspections:

1. Procure all applicable permits and licenses.
2. Abide by all applicable laws, regulations, ordinances, and other rules of the State or Political Subdivision wherein the work is done, or as required by any duly constituted public authority.
3. Pay all applicable charges for such permits or licenses that may be required.

4. Pay all applicable fees and taxes imposed by the State, Municipal and/or other regulatory bodies.
 5. Pay all charges arising out of required inspections by the codes, permits, licenses or as otherwise may be required by an authorized body.
 6. Where applicable, all fixtures, equipment and materials shall be as approved or listed by the following:
 - a. Underwriters' Laboratories, Inc.
- D. Utility Company Requirements:
1. Secure from the appropriate utility company (privately or publicly owned) all applicable requirements that must be followed to make the job comply with their requirements.
 2. Make the installation comply with the utility company requirements.
- E. Examination of Drawings:
1. The drawings for the mechanical work are completely diagrammatic, intended to convey the scope of the work and to indicate the general arrangements and locations of equipment, outlets, etc., and the approximate sizes of equipment.
 2. Contractor shall determine the exact locations of equipment and rough-ins, and the exact routing of pipes and ducts so as to best fit the layout of the job.
 3. Scaling of the drawings will not be sufficient or accurate for determining these locations.
 4. Where job conditions require reasonable changes in indicated arrangements and locations, such changes shall be made by the Contractor at no additional cost to the Owner.
 5. Because of the scale of the drawings, certain basic items, such as fittings, boxes, valves, unions, etc., may not be shown, but where such items are required by other sections of the specifications or where they are required for proper installation of the work, such items shall be furnished and installed.
 6. If an item is either shown on the drawings or called for in the specifications, it shall be considered sufficient for including same in this contract.
 7. The determination of quantities of material and equipment required shall be made by the Contractor from the drawings. Schedules on the drawings and in the specifications are completed as an aid to the Contractor but where discrepancies arise, the greater number shall govern.
 8. Where words provide , install , or furnished are used on the drawings or in the specifications, it shall be taken to mean, to furnish, install and connect up complete and ready for operation, the items mentioned.
- F. Field Measurements:
1. Before ordering any materials or fabricating any supports, pipes or ducts, This Contractor shall verify all pertinent dimensions at the job site and be responsible for their accuracy.

1.05 SUBMITTALS

- A. In addition to the provisions of Division 1, the following is required:
1. Submittals shall include all fabrication, erection, layout, and setting drawings; manufacturers' standard drawings; schedules; descriptive literature, catalogs and brochures; performance and test data; wiring and control diagrams; and all other drawings and descriptive data of materials of construction as may be required to show that the materials, equipment or systems and the location thereof conform to the requirements of the contract documents.
 2. The Contractor shall submit seven (7) copies of each shop drawing for review by the Architect /Engineer BEFORE releasing any equipment for manufacture or shipment.
 3. The Contractor shall thoroughly review and approve all shop drawings before submitting them to the Architect/Engineer. APPROVAL WILL INDICATE THE CONTRACTOR'S REVIEW of all material and a COMPLETE UNDERSTANDING OF EACH WHAT IS TO BE FURNISHED. Contractor shall clearly mark all deviations from the contract documents on all submittals. IF DEVIATIONS ARE NOT MARKED BY THE CONTRACTOR, THEN THE ITEM SHALL BE REQUIRED TO MEET ALL DRAWING AND SPECIFICATION REQUIREMENTS.
 4. The Contractor shall clearly mark each item with the same nomenclature applied on the drawings or in the specifications.
 5. The Contractor shall clearly indicate the size, finish, material, etc.
 6. All submittals shall be assembled in sets such as all air handling units, plumbing fixtures, or all fans, etc. All sets shall be identical.
 7. Each set shall be bound in a manufacturer's folder.
 8. Each set shall contain an index of the items enclosed with a general topic description on the cover.
 9. Where more than one model is shown on a manufacturer's sheet, the Contractor shall clearly indicate exactly which item and which data is relevant to the work.
 10. Failure to comply with the above shall be reason to resubmit all shop drawing submittals.
 11. Reviewing one set of shop drawing submittals for each product shall be the Engineer's responsibility. if the first submittal is incomplete or does not comply with the drawings and/or specifications, the Contractor shall be responsible to bear the cost for the Engineer to recheck and handle the additional shop drawing submittals.
 12. Submittals shall be required for the items identified in each section.

1.06 PRODUCT DELIVERY, STORAGE, HANDLING & MAINTENANCE

- A. Exercise care in transporting and handling to avoid damage to fixtures, equipment and materials. Store materials on the site so as to prevent damage. Keep fixtures, equipment and materials clean, dry and free from deleterious conditions.
- B. Keep all bearings properly lubricated. Keep all belts properly tensioned and aligned.

1.07 WARRANTY

- A. Provide one-year warranty, to the Owner, for all fixtures, equipment, materials, and workmanship.
- B. The warranty period for the entire installation described in this Division of the specifications shall commence on the date of final acceptance unless a whole or partial system or any separate piece of equipment or component is put into use for the benefit of any party other than the installing contractor with the prior written authorization. In this instance, the warranty period shall commence on the date when such whole system, partial system or separate piece of equipment or component is placed in operation and accepted in writing by the Owner or his representative.
- C. Warranty requirements shall extend to correction, without cost to the final user, of all Work found to be defective or nonconforming to the contract documents. The Contractor shall bear the cost of correcting all damage resulting from such defects or nonconformance with contract documents exclusive of repairs required as a result of improper maintenance or operation, or of normal wear.

1.08 INSURANCE

- A. This Contractor shall maintain insurance coverage as set forth in Division 1 of these specifications.

1.09 MATERIAL SUBSTITUTION

- A. Where several manufacturer's names are given, the manufacturer for which a catalog number is given constitutes the basis for job design and establishes the equipment quality required to be used in this contract. Alternate manufacturers may be listed for the convenience of the contractor, but must conform to the requirements established by the basis for design given.
- B. This Contractor, at his option, may use equivalent equipment as manufactured by the other named manufacturers. This Contractor is responsible to ensure that all items submitted by these other manufacturers meets all requirements of the drawings and specifications and fits in the allocated space.
- C. Any material, article or equipment of other unnamed manufacturers which will adequately perform the services and duties imposed by the design and is of a quality equal to or better than the material, article or equipment identified by the drawings and specifications may be used if approval is secured in writing from the Architect/Engineer not later than ten (10) days prior to the bid opening date.
- D. Any material, article or equipment of other unnamed manufacturers which will adequately perform the services and duties imposed by the design and is of a quality equal to or better than the material, article or equipment identified by the drawings and specifications may be used but is contingent upon Architect/Engineer's approval during the submittal process.
- E. This Contractor assumes all costs that may be incurred as a result of using the offered material, article or equipment necessitating extra expense on his part or on the part of other Contractors

whose work is affected.

- F. This Contractor may list voluntary add or deduct prices for alternate materials on the bid form. These items will not be used in determining the low bidder.
- G. All material substitutions requested later than ten (10) days prior to bid opening must be listed as voluntary changes on the bid form.

1.10 MANUFACTURERS AND MODEL NUMBERS

- A. Where drawing schedules call out specific manufacturer's model numbers, the numbers are listed solely for the convenience of the contractor.
- B. Where specific manufacturer's model numbers are called out, the Contractor and Material Supplier are responsible for verifying the correct model number. Where scheduled capacities, options, or accessories conflict with model numbers specified, the greater capacity, options, or accessories shall be bid upon and supplied unless addressed by the Engineer prior to Bid date.
- C. Incorrect model numbers shall be brought to the attention of the Engineer when discovered.

1.11 RESOLUTION OF DISCREPANCIES

- A. If discrepancies are found to exist between the project drawings and project specifications, the more restrictive and obligatory document shall prevail as the project requirement.
- B. If discrepancies are found to exist between the requirements of the; Electrical Specifications, the Mechanical Specifications, the Architectural Specifications, and/or the Specification Front End Documents (Bidding Requirements-Agreement, Bonds, and Closeout Documents-Project Forms-Conditions of the Contract), the more restrictive and obligatory document/section(s) shall prevail as the project requirement.

PART 2 PRODUCTS

2.01 NOT APPLICABLE

PART 3 EXECUTION

3.01 PROJECT CLOSEOUT

- A. Refer to the Division 1 Section: PROJECT CLOSEOUT for requirements. The following paragraphs supplement the requirements of Division 1.
 - 1. Before final payment will be authorized, This Contractor must have completed the following:
 - a. Submitted operation and maintenance manuals to the Architect/Engineer for review.
 - b. Submitted bound copies of approved shop drawings.
 - c. Submitted record documents for Architect/Engineer review including marked-up drawings and specifications.
 - d. Submitted a report stating the instructions given to the Owner's representative complete with the number of hours spent in the instruction. The report shall bear the signature of an authorized agent of This Contractor and shall be signed by the Owner's representative as having received the instructions.
 - e. Submitted inspection report by the State Fire Marshal of the fire protection system.

- f. Submitted start-up reports on all equipment requiring a factory installation inspection and/or start.

3.02 OPERATION AND MAINTENANCE MANUAL

- A. As part of instructing the Owner, This Contractor shall assemble, organize, and bind operation and maintenance manuals on the mechanical systems installed.
- B. Submit three (3) properly indexed and bound copies of the manual to the Architect/Engineer for approval. Make all corrections or additions required.
- C. Operation and Maintenance Manuals shall consist of the following:
 - 1. Title page with project title, Architect, Engineer, and Contractor, with addresses, telephone numbers, and contacts.
 - 2. Table of Contents describing index.
 - 3. Listing of all Subcontractors and major equipment suppliers with addresses, telephone numbers, and contacts.
 - 4. Index tabs dividing information by specification section, major equipment, or systems.
 - 5. Copy of final approved test and balance report.
- D. Operation and maintenance data shall consist of written instructions for the care, maintenance, and operation of the equipment and systems. Instruction books, cards, manuals furnished with the equipment shall be included.
- E. Provide three (3) separate manuals with original or reproductions of approved shop drawings with title page and index system similar to operation and maintenance manual.

3.03 INSTRUCTING THE OWNER'S REPRESENTATIVE

- A. Adequately instruct the Owner's designated representative or representatives in the maintenance, care, and operation of the complete systems installed under this contract.
- B. Provide verbal and written instructions to the Owner's representative or representatives by FACTOR PERSONNEL in the care, maintenance, and operation of the equipment and systems.
- C. The Owner has the option to video tape the instructions to the Owner. Coordinate schedule of, instructions to facilitate this recording.
- D. The instructions shall include:
 - 1. Explanation of all system flow diagrams.
 - 2. Explanation of all air handling systems.
 - 3. Temperature control system operation including calibration, adjustment and proper operating conditions of all sensors.
 - 4. Maintenance of equipment.
 - 5. Start-up procedures for each major piece of equipment.
 - 6. Explanation of seasonal system changes.
 - 7. Description of emergency system operation.

- E. The Architect/Engineer shall be notified of the time and place for the verbal instructions to be given to the Owner's representative so that either he or his representative can be present if desirable.
- F. Minimum manhours of instruction time for each item and/or system, as outlined above, shall be as follows:
 - 1. 2 Hours.
- G. Operating Instructions:
 - 1. The Contractor is responsible for all instructions to the Owner and/or his operating staff on the mechanical and control systems.
 - 2. If the Contractor does not have Engineers and/or Technicians on staff that can adequately provide the required instructions on system operation, performance, troubleshooting, care and maintenance, he shall include in his bid an adequate amount to hire the Engineer to perform these instructions.

3.04 SYSTEM COMMISSIONING

- A. The mechanical systems included in the construction documents are to be complete and operating systems. The Architect /Engineer will make periodic job site observations during the construction period. The system start-up, testing, balancing, and satisfactory system performance is the responsibility of the Contractor. This shall include all calibration and adjustments of controls, noise level adjustments and final comfort factor adjustments that may be required.
- B. This Contractor shall adjust the mechanical systems and controls at season changes during the one year warranty period, as required, to provide satisfactory operation and to prove performance of system used in all seasons.
- C. All operating conditions and control sequences shall be simulated and tested during the start-up period. Testing shall also include all interlocks, safety shut-downs, damper position controls, and alarms.
- D. The Contractor, subcontractors, and equipment suppliers are expected to have skilled technicians to insure that the system performs as designed. If the Architect/Engineer is requested to visit the job site for the purpose of trouble shooting, assisting in the satisfactory start-up, obtaining satisfactory equipment operation, resolving installation and/or workmanship problems, equipment substitution issues or unsatisfactory system performance, including call backs during the warranty period through no fault of the design; the Contractor shall reimburse the Architect /Engineer on a time and material basis for services rendered at the Architect /Engineer's standard hourly rates in effect at the time the services are requested. The Contractor shall be responsible for making payment to the Architect /Engineer for services required that are product, installation or workmanship related. Payment is due within 30 days after services are rendered.

3.05 RECORD DOCUMENTS

- A. Refer to the Division 1 Section: PROJECT CLOSEOUT for requirements. The following paragraphs supplement the requirements of Division 1.
- B. Mechanical Contractor shall maintain at the job site a separate and complete set of mechanical drawings and specifications upon which he shall clearly and permanently mark and note in complete detail any changes made to the location and arrangement of the mechanical apparatus or changes made in the mechanical system and piping as a result of building construction conditions or as a result of instructions from the Architect or Engineer.
- C. Mark drawings to indicate revisions to piping and ductwork, size and location both exterior and interior; including locations of coils, dampers, other control devices, filters, boxes, and similar units requiring periodic maintenance or repair; actual equipment locations, dimensioned for column lines; actual inverts and locations of underground piping; concealed equipment, dimensioned to column lines; mains and branches of piping systems, with valves and control devices located and numbered, concealed unions located, and with items requiring maintenance located (i.e. traps, strainers, expansion compensators, tanks, etc.) Change Orders; concealed control system devices.
- D. Before the completion of the project, a set of reproducible mechanical drawings will be given to the Contractor for transfer of all as-built conditions from the paper set maintained at the job site. All marks on reproducibles shall be clearly made in a permanent fashion.
- E. Mark specifications to indicate approved substitutions; Change Orders, actual equipment and materials used.
- F. Such record of changes shall be made daily by This Contractor and the marked drawings shall be available for the Architect and Engineer's examination at any normal work time.
- G. Upon completion of the job, and before final payment is made, This Contractor shall give the marked-up drawings to the Architect/Engineer.

3.06 PAINTING

- A. This Contractor shall paint any equipment which is marred or damaged prior to the Owner's acceptance and occupancy. Paint and color shall match original equipment paint and shall be obtained from the equipment supplier when available.
- B. Equipment located in finished areas and which will be painted to match the room decor will be painted by others. Should This Contractor install equipment in a finished area after the area has been painted by others, he shall be responsible for having the equipment and all of its supports, hangers, etc., painted to match the room decor.
- C. Equipment cabinets, casings, covers, metal jackets, etc., located in equipment rooms or concealed spaces, shall be furnished in standard or prime finish free from scratches, abrasions, chippings, etc.
- D. Equipment located in occupied spaces, or if standard to the unit, shall have a baked primer with baked enamel finish coat free from scratches, abrasions, chipping, etc. if color option is

specified or color option given as standard to the unit, This Contractor shall, before ordering, verify with the Architect /Engineer his color preference and shall furnish this color.

- E. This Contractor shall paint equipment located in unfinished areas such as boiler room, mechanical spaces, storage room, etc., furnished by him. If certain equipment is furnished with a factory coat of paint and enamel, it need not be painted, providing the factory applied finish is in no way marred or spattered. If so, the item or piece of equipment shall be refinished with the same paint or enamel that was factory applied.
- F. After surfaces have been thoroughly cleaned and are free of oil, dirt or other foreign matter, the pipes or equipment shall be painted with the following paint materials:
 - 1. Bare Metal Surfaces - Apply one coat of metal primer suitable for use on metal being painted. Finish with two coats of Alkyd base enamel paint.
 - 2. Insulated Surfaces - Paint insulation jacket with two coats of semi-gloss acrylic latex paint.
 - 3. Color of paint shall be verified with the Architect.

3.07 ADJUST AND CLEAN

- A. Contractor shall thoroughly clean all equipment and systems prior to the Owner's final acceptance of the project.
- B. Contractor shall clean all foreign paint, grease, oil, dirt, labels, stickers, and other foreign material from equipment and fixtures.
- C. Contractor shall remove all rubbish, debris, etc., accumulated during the Contractor's operations from the premises.

END OF SECTION

SECTION 23 0553

IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Nameplates.
- B. Tags.
- C. Pipe markers.

1.02 RELATED REQUIREMENTS

1.03 REFERENCE STANDARDS

- A. ASTM D709 - Standard Specification for Laminated Thermosetting Materials; 2017.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. List: Submit list of wording, symbols, letter size, and color coding for mechanical identification.
- C. Product Data: Provide manufacturers catalog literature for each product required.

PART 2 PRODUCTS

2.01 IDENTIFICATION APPLICATIONS

- A. Air Handling Units: Nameplates.
- B. Air Terminal Units: Tags.
- C. Control Panels: Nameplates.
- D. Heat Transfer Equipment: Nameplates.
- E. Major Control Components: Nameplates.
- F. Pumps: Nameplates.
- G. Tanks: Nameplates.

2.02 NAMEPLATES

- A. Manufacturers:
 - 1. Substitutions: See Section 01 6000 - Product Requirements.
- B. Letter Color: White.
- C. Letter Height: 1/4 inch.
- D. Background Color: Black.
- E. Plastic: Comply with ASTM D709.

2.03 TAGS

- A. Plastic Tags: Laminated three-layer plastic with engraved black letters on light contrasting background color. Tag size minimum 1-1/2 inch diameter.

2.04 PIPE MARKERS

- A. Manufacturers:
 - 1. Brady Corporation: www.bradycorp.com/#sle.
 - 2. Brimar Industries, Inc: www.pipemarker.com/#sle.
 - 3. Craftmark Pipe Markers: www.craftmarkid.com/#sle.

4. Kolbi Pipe Marker Co: www.kolbipipemarkers.com/#sle.
 5. Seton Identification Products, a Tricor Company: www.seton.com/#sle.
 6. Substitutions: See Section 01 6000 - Product Requirements.
- B. Color: Comply with ASME A13.1.
 - C. Plastic Pipe Markers: Factory fabricated, flexible, semi- rigid plastic, preformed to fit around pipe or pipe covering; minimum information indicating flow direction arrow and identification of fluid being conveyed.
 - D. Plastic Tape Pipe Markers: Flexible, vinyl film tape with pressure-sensitive adhesive backing and printed markings.
 - E. Underground Plastic Pipe Markers: Bright-colored continuously printed plastic ribbon tape, minimum 6 inches wide by 4 mil, 0.004 inch thick, manufactured for direct burial service.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install nameplates with corrosive-resistant mechanical fasteners, or adhesive. Apply with sufficient adhesive to ensure permanent adhesion and seal with clear lacquer.
- B. Install tags with corrosion resistant chain.
- C. Install plastic pipe markers in accordance with manufacturer's instructions.
- D. Install plastic tape pipe markers complete around pipe in accordance with manufacturer's instructions.
- E. Install underground plastic pipe markers 6 to 8 inches below finished grade, directly above buried pipe.
- F. Use tags on piping 3/4 inch diameter and smaller.
- G. Install in clear view and align with axis of piping.
- H. Locate identification not to exceed 20 feet on straight runs including risers and drops, adjacent to each valve and Tee, at each side of penetration of structure or enclosure, and at each obstruction.

END OF SECTION

SECTION 23 0593

TESTING, ADJUSTING, AND BALANCING FOR HVAC

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Testing, adjustment, and balancing of air systems.
- B. Measurement of final operating condition of HVAC systems.

1.02 REFERENCE STANDARDS

- A. AABC (NSTSB) - AABC National Standards for Total System Balance, 7th Edition; 2016.
- B. ASHRAE Std 111 - Measurement, Testing, Adjusting, and Balancing of Building HVAC Systems; 2008, with Errata (2019).
- C. NEBB (TAB) - Procedural Standards for Testing Adjusting and Balancing of Environmental Systems; 2015, with Errata (2017).
- D. SMACNA (TAB) - HVAC Systems Testing, Adjusting and Balancing; 2002.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Installer Qualifications: Submit name of adjusting and balancing agency and TAB supervisor for approval within 30 days after award of Contract.
- C. Final Report: Indicate deficiencies in systems that would prevent proper testing, adjusting, and balancing of systems and equipment to achieve specified performance.
 - 1. Submit under provisions of Section 01 4000.
 - 2. Revise TAB plan to reflect actual procedures and submit as part of final report.
 - 3. Submit draft copies of report for review prior to final acceptance of Project. Provide final copies for Architect/Engineer and for inclusion in operating and maintenance manuals.
 - 4. Provide reports in soft cover, letter size, 3-ring binder manuals, complete with index page and indexing tabs, with cover identification at front and side. Include set of reduced drawings with air outlets and equipment identified to correspond with data sheets, and indicating thermostat locations.
 - 5. Include actual instrument list, with manufacturer name, serial number, and date of calibration.
 - 6. Form of Test Reports: Where the TAB standard being followed recommends a report format use that; otherwise, follow ASHRAE Std 111.
 - 7. Units of Measure: Report data in both I-P (inch-pound) and SI (metric) units.
 - 8. Test Reports: Indicate data on AABC MN-1 forms, forms prepared following ASHRAE Std 111, or NEBB forms. Submit data in SI (metric) units.
 - 9. Include the following on the title page of each report:
 - a. Name of Testing, Adjusting, and Balancing Agency.
 - b. Address of Testing, Adjusting, and Balancing Agency.
 - c. Telephone number of Testing, Adjusting, and Balancing Agency.

- d. Project name.
 - e. Project location.
 - f. Project Architect/Engineer.
 - g. Project Contractor.
 - h. Report date.
- D. Project Record Documents: Record actual locations of flow measuring stations and balancing valves and rough setting.

1.04 QUALITY ASSURANCE

- A. Perform total system balance in accordance with AABC MN-1, ASHRAE Std 111, or NEBB Procedural Standards for Testing, Balancing and Adjusting of Environmental Systems.
- B. TAB Agency Qualifications: Independent Company specializing in the testing, adjusting, and balancing of systems specified in this Section with minimum three years documented experience certified by AABC.

1.05 SEQUENCING AND SCHEDULING

- A. Sequence work to commence after completion of systems and schedule completion of work before Substantial Completion of Project.

PART 2 PRODUCTS - NOT USED

PART 3 EXECUTION

3.01 GENERAL REQUIREMENTS

- A. Perform total system balance in accordance with one of the following:
 - 1. AABC (NSTSB), AABC National Standards for Total System Balance.
 - 2. SMACNA (TAB).
- B. Begin work after completion of systems to be tested, adjusted, or balanced and complete work prior to Substantial Completion of the project.
- C. TAB Agency Qualifications:
 - 1. Company specializing in the testing, adjusting, and balancing of systems specified in this section.
 - 2. Certified by one of the following:
 - a. AABC, Associated Air Balance Council: www.aabc.com/#sle; upon completion submit AABC National Performance Guaranty.
 - b. TABB, The Testing, Adjusting, and Balancing Bureau of National Energy Management Institute: www.tabbcertified.org/#sle.
- D. TAB Supervisor and Technician Qualifications: Certified by same organization as TAB agency.

3.02 EXAMINATION

- A. Verify that systems are complete and operable before commencing work. Ensure the following conditions:
 - 1. Systems are started and operating in a safe and normal condition.
 - 2. Temperature control systems are installed complete and operable.

3. Proper thermal overload protection is in place for electrical equipment.
 4. Final filters are clean and in place. If required, install temporary media in addition to final filters.
 5. Duct systems are clean of debris.
 6. Fans are rotating correctly.
 7. Fire and volume dampers are in place and open.
 8. Air coil fins are cleaned and combed.
 9. Access doors are closed and duct end caps are in place.
 10. Air outlets are installed and connected.
 11. Duct system leakage is minimized.
 12. Hydronic systems are flushed, filled, and vented.
 13. Pumps are rotating correctly.
 14. Proper strainer baskets are clean and in place.
 15. Service and balance valves are open.
- B. Submit field reports. Report defects and deficiencies that will or could prevent proper system balance.

3.03 PREPARATION

- A. Provide instruments required for testing, adjusting, and balancing operations. Make instruments available to Architect/Engineer to facilitate spot checks during testing.
- B. Provide additional balancing devices as required.

3.04 ADJUSTMENT TOLERANCES

- A. Air Handling Systems: Adjust to within plus or minus 10 percent of design for supply systems and plus or minus 0 percent of design for return and exhaust systems.
- B. Air Outlets and Inlets: Adjust total to within plus 10 percent and minus 5 percent of design to space. Adjust outlets and inlets in space to within plus or minus 10 percent of design.
- C. Hydronic Systems: Adjust to within plus or minus 10 percent of design.

3.05 RECORDING AND ADJUSTING

- A. Ensure recorded data represents actual measured or observed conditions.
- B. Permanently mark settings of valves, dampers, and other adjustment devices allowing settings to be restored. Set and lock memory stops.
- C. After adjustment, take measurements to verify balance has not been disrupted or that such disruption has been rectified.
- D. Leave systems in proper working order, replacing belt guards, closing access doors, closing doors to electrical switch boxes, and restoring thermostats to specified settings.

3.06 AIR SYSTEM PROCEDURE

- A. Adjust air handling and distribution systems to provide required or design supply, return, and exhaust air quantities at site altitude.

- B. Make air quantity measurements in ducts by Pitot tube traverse of entire cross sectional area of duct.
- C. Measure air quantities at air inlets and outlets.
- D. Adjust distribution system to obtain uniform space temperatures free from objectionable drafts and noise.
- E. Use volume control devices to regulate air quantities only to extend that adjustments do not create objectionable air motion or sound levels. Effect volume control by duct internal devices such as dampers and splitters.
- F. Vary total system air quantities by adjustment of fan speeds. Provide drive changes required. Vary branch air quantities by damper regulation.
- G. Provide system schematic with required and actual air quantities recorded at each outlet or inlet.
- H. Measure static air pressure conditions on air supply units, including filter and coil pressure drops, and total pressure across the fan. Make allowances for 50 percent loading of filters.
- I. Adjust outside air automatic dampers, outside air, return air, and exhaust dampers for design conditions.
- J. Measure temperature conditions across outside air, return air, and exhaust dampers to check leakage.
- K. Where modulating dampers are provided, take measurements and balance at extreme conditions. Balance variable volume systems at maximum air flow rate, full cooling, and at minimum air flow rate, full heating.
- L. Measure building static pressure and adjust supply, return, and exhaust air systems to provide required relationship between each to maintain approximately 0.05 inches positive static pressure near the building entries.
- M. For variable air volume system powered units set volume controller to air flow setting indicated. Confirm connections properly made and confirm proper operation for automatic variable air volume temperature control.
- N. On fan powered VAV boxes, adjust air flow switches for proper operation.

3.07 WATER SYSTEM PROCEDURE

- A. Adjust water systems to provide required or design quantities.
- B. Use calibrated Venturi tubes, orifices, or other metered fittings and pressure gauges to determine flow rates for system balance. Where flow metering devices are not installed, base flow balance on temperature difference across various heat transfer elements in the system.
- C. Adjust systems to provide specified pressure drops and flows through heat transfer elements prior to thermal testing. Perform balancing by measurement of temperature differential in conjunction with air balancing.
- D. Effect system balance with automatic control valves fully open to heat transfer elements.

- E. Effect adjustment of water distribution systems by means of balancing cocks, valves, and fittings. Do not use service or shut-off valves for balancing unless indexed for balance point.
- F. Where available pump capacity is less than total flow requirements or individual system parts, full flow in one part may be simulated by temporary restriction of flow to other parts.

3.08 SCOPE

- A. Test, adjust, and balance the following:
 - 1. Packaged Roof Top Heating/Cooling Units.
 - 2. Unit Air Conditioners.
 - 3. Air Coils.
 - 4. Air Handling Units.
 - 5. Fans.
 - 6. Air Inlets and Outlets.

END OF SECTION

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SECTION 23 0713
DUCT INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Duct insulation.
- B. Duct liner.

1.02 REFERENCE STANDARDS

- A. ASTM C518 - Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus; 2021.
- B. ASTM C553 - Standard Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications; 2013 (Reapproved 2019).
- C. ASTM C916 - Standard Specification for Adhesives for Duct Thermal Insulation; 2020.
- D. ASTM C1071 - Standard Specification for Fibrous Glass Duct Lining Insulation (Thermal and Sound Absorbing Material); 2019.
- E. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- F. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2020.
- G. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.03 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section with not less than three years of documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified in this section and approved by manufacturer.

1.04 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site in original factory packaging, labelled with manufacturer's identification, including product density and thickness.
- B. Protect insulation from weather and construction traffic, dirt, water, chemical, and mechanical damage, by storing in original wrapping.

1.05 FIELD CONDITIONS

- A. Maintain ambient temperatures and conditions required by manufacturers of adhesives, mastics, and insulation cements.
- B. Maintain temperature during and after installation for minimum period of 24 hours.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84, UL 723, ASTM E84, or UL 723.

2.02 GLASS FIBER, FLEXIBLE

- A. Manufacturer:
 - 1. Johns Manville: www.jm.com/#sle.
 - 2. Owens Corning Corporation: www.ocbuildingspec.com/#sle.
 - 3. CertainTeed Corporation: www.certainteed.com/#sle.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulation: ASTM C553; flexible, noncombustible blanket.
 - 1. K value: 0.36 at 75 degrees F, when tested in accordance with ASTM C518.
- C. Vapor Barrier Jacket:
 - 1. Kraft paper with glass fiber yarn and bonded to aluminized film.
- D. Vapor Barrier Tape:
 - 1. Kraft paper reinforced with glass fiber yarn and bonded to aluminized film, with pressure-sensitive rubber-based adhesive.

2.03 DUCT LINER

- A. Manufacturers:
 - 1. Johns Manville: www.jm.com/#sle.
 - 2. Owens Corning Corp: www.owenscorning.com.
- B. Insulation: Incombustible glass fiber complying with ASTM C 1071; flexible blanket and rigid board; impregnated surface and edges coated with poly vinyl acetate polymer or acrylic polymer shown to be fungus and bacteria resistant by testing to ASTM G 21.
 - 1. Apparent Thermal Conductivity: Maximum of 0.31 at 75 degrees F.
 - 2. Service Temperature: Up to 250 degrees F.
 - 3. Rated Velocity on Coated Air Side for Air Erosion: 5,000 fpm, minimum.
- C. Adhesive: Waterproof, fire-retardant type, ASTM C916.
- D. Liner Fasteners: Galvanized steel, self-adhesive pad, impact applied, or welded with integral head.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Test ductwork for design pressure prior to applying insulation materials.
- B. Verify that surfaces are clean, foreign material removed, and dry.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Insulated Ducts Conveying Air Below Ambient Temperature:
 - 1. Provide insulation with vapor barrier jackets.
 - 2. Finish with tape and vapor barrier jacket.
 - 3. Continue insulation through walls, sleeves, hangers, and other duct penetrations.

4. Insulate entire system, including fittings, joints, flanges, fire dampers, flexible connections, and expansion joints.
- D. Duct and Plenum Liner Application:
1. Adhere insulation with adhesive for 90 percent coverage.
 2. Secure insulation with mechanical liner fasteners. Refer to SMACNA (DCS) for spacing.
 3. Seal and smooth joints. Seal and coat transverse joints.
 4. Seal liner surface penetrations with adhesive.
 5. Duct dimensions indicated are net inside dimensions required for airflow. Increase duct size to allow for insulation thickness.

3.03 SCHEDULES

- A. Refer to the drawings for the duct and insulation schedule.

END OF SECTION

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SECTION 23 0719
HVAC PIPING INSULATION

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Piping insulation.
- B. Flexible removable and reusable blanket insulation.
- C. Jacketing and accessories.

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.

1.03 REFERENCE STANDARDS

- A. ASTM C195 - Standard Specification for Mineral Fiber Thermal Insulating Cement; 2007 (Reapproved 2019).
- B. ASTM C547 - Standard Specification for Mineral Fiber Pipe Insulation; 2022a.
- C. ASTM C795 - Standard Specification for Thermal Insulation for Use in Contact with Austenitic Stainless Steel; 2008 (Reapproved 2023).
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- E. ASTM E96/E96M - Standard Test Methods for Gravimetric Determination of Water Vapor Transmission Rate of Materials; 2023.
- F. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide product description, thermal characteristics, list of materials and thickness for each service, and locations.

1.05 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the Products specified in this section with not less than three years of documented experience.
- B. Applicator Qualifications: Company specializing in performing the type of work specified in this section and approved by manufacturer.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Accept materials on site, labeled with manufacturer's identification, product density, and thickness.

PART 2 PRODUCTS

2.01 REGULATORY REQUIREMENTS

- A. Surface Burning Characteristics: Flame spread index/Smoke developed index of 25/50, maximum, when tested in accordance with ASTM E84, UL 723, ASTM E84, or UL 723.

2.02 GLASS FIBER, RIGID

- A. Manufacturers:
 - 1. einsulation.com, Inc.: www.einsulation.com
 - 2. Owens Corning Corp: www.owenscorning.com.
 - 3. Substitutions: See Section 01 6000 - Product Requirements.
- B. Insulation: ASTM C547 and ASTM C795; semi-rigid, noncombustible, end grain adhered to jacket.
 - 1. Maximum Service Temperature: 650 degrees F.
 - 2. Maximum Moisture Absorption: 0.2 percent by volume.
- C. Vapor Barrier Jacket: White kraft paper with glass fiber yarn, bonded to aluminized film; moisture vapor transmission when tested in accordance with ASTM E96/E96M of 0.02 perm-inches.
- D. Vapor Barrier Lap Adhesive: Compatible with insulation.
- E. Insulating Cement/Mastic: ASTM C195; hydraulic setting on mineral wool.
- F. Indoor Vapor Barrier Finish:
 - 1. Cloth: Untreated; 9 oz/sq yd weight.
 - 2. Vinyl emulsion type acrylic, compatible with insulation, white color.

2.03 JACKETING AND ACCESSORIES

- A. PVC Plastic.
 - 1. Jacket: One piece molded type fitting covers and sheet material, off-white color.
 - a. Minimum Service Temperature: 0 degrees F.
 - b. Maximum Service Temperature: 150 degrees F.
 - c. Moisture Vapor Permeability: 0.002 perm inch, maximum, when tested in accordance with ASTM E96/E96M.
 - d. Thickness: 10 mil, 0.010 inch.
 - e. Connections: Brush on welding adhesive.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NAIMA National Insulation Standards.
- C. Exposed Piping: Locate insulation and cover seams in least visible locations.
- D. Insulated Pipes Conveying Fluids Below Ambient Temperature:
 - 1. Insulate entire system, including fittings, valves, unions, flanges, strainers, flexible connections, pump bodies, and expansion joints.
- E. Glass Fiber Insulated Pipes Conveying Fluids Below Ambient Temperature:
 - 1. Provide vapor barrier jackets, factory-applied or field-applied; secure with self-sealing longitudinal laps and butt strips with pressure-sensitive adhesive. Secure with outward clinch expanding staples and vapor barrier mastic.

2. Insulate fittings, joints, and valves with molded insulation of like material and thickness as adjacent pipe. Finish with glass cloth and vapor barrier adhesive or PVC fitting covers.
- F. For hot piping conveying fluids 140 degrees F or less, do not insulate flanges and unions at equipment, but bevel and seal ends of insulation.
- G. Glass Fiber Insulated Pipes Conveying Fluids Above Ambient Temperature:
1. Provide standard jackets, with or without vapor barrier, factory-applied, or field-applied. Secure with self-sealing longitudinal laps and butt strips with pressure-sensitive adhesive. Secure with outward clinch expanding staples.
 2. Insulate fittings, joints, and valves with insulation of like material and thickness as adjoining pipe. Finish with glass cloth and adhesive or PVC fitting covers.
- H. Inserts and Shields:
1. Application: Piping 1-1/2 inches diameter or larger.
 2. Shields: Galvanized steel between pipe hangers or pipe hanger rolls and inserts.
 3. Insert location: Between support shield and piping and under the finish jacket.
 4. Insert Configuration: Minimum 6 inches long, of same thickness and contour as adjoining insulation; may be factory fabricated.
 5. Insert Material: Hydrous calcium silicate insulation or other heavy density insulating material suitable for the planned temperature range.
- I. Continue insulation through walls, sleeves, pipe hangers, and other pipe penetrations. Finish at supports, protrusions, and interruptions. At fire separations, see Section 07 8400.
- J. Pipe Exposed in Mechanical Equipment Rooms or Finished Spaces (less than 10 feet above finished floor): Finish with PVC jacket and fitting covers.

END OF SECTION

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SECTION 23 0923
DIGITAL CONTROL EQUIPMENT - HVAC

PART 1 GENERAL

1.01 SCOPE

- A. This Contractor shall install equipment with local digital controllers and fully operating as stand-alone units, suitable for BMS integration by others.
- B. Owner will install Contractor provided temperature sensors.
- C. Owner will provide and install communication cabling between wall sensor(s) and equipment controller and between equipment controller and Owner's BMS equipment.
- D. Owner's Building Management System (BMS) Integrator (separate contract) shall integrate Temperature Control Contractor installed equipment into existing Owner's BMS via TCC provided equipment BACNet IP communication ports.

1.02 REFERENCES

- A. NFPA 70 - National Electrical Code; National Fire Protection Association; 2002.

1.03 SUBMITTALS

- A. See Section 01 3000-Administrative Requirements, for submittal procedures.
- B. Product Data: Manufacturer's data on all products proposed to be used.
- C. Provide the Engineer and Owner, any additional information or data which is deemed necessary to determine compliance with these specifications or which is deemed valuable in documenting the system to be installed.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Use new products the manufacturer is currently manufacturing and selling for use in new installations. Do not use this installation as a product test site unless explicitly approved in writing by Owner. Spare parts shall be available for at least five years after completion of this contract.

2.02 COMMUNICATION

- A. Control products, communication media, connectors, repeaters, hubs, and routers shall comprise a BACnet internetwork. Controller and operator interface communication shall conform to ANSI/ASHRAE Standard 135, BACnet.
- B. Install new wiring and network devices as required to provide a complete and workable control network. Use existing Ethernet backbone for network segments marked existing on project drawings.
- C. Each controller shall have a communication port for temporary connection to a laptop computer or other operator interface. Connection shall support memory downloads and other commissioning and troubleshooting operations.
- D. Internetwork operator interface and value passing shall be transparent to internetwork architecture.

2.03 WIRING AND RACEWAYS

- A. General. Provide copper wiring, plenum cable, and raceways as specified in applicable sections of Division 26.
- B. Insulated wire shall use copper conductors and shall be UL listed for 90°C (200°F) minimum service.
- C. Communication cabling shall be ethernet Cat 5e cabling with white jacket.

PART 3 EXECUTION

3.01 COORDINATION

- A. Site.
 - 1. Assist in coordinating space conditions to accommodate the work of each trade where work will be installed near or will interfere with work of other trades. If installation without coordination causes interference with work of other trades, Contractor shall correct conditions without extra charge.
 - 2. Coordinate and schedule work with other work in the same area and with work dependent upon other work to facilitate mutual progress.
- B. Test and Balance.
 - 1. Provide Test and Balance Contractor a single set of necessary tools to interface to control system for testing and balancing.
 - 2. Train Test and Balance Contractor to use control system interface tools.
 - 3. Provide a qualified technician to assist with testing and balancing the first 20 terminal units.
 - 4. Test and Balance Contractor shall return tools undamaged and in working condition at completion of testing and balancing.
- C. Life Safety.
 - 1. Owner's BMS shall monitor fire alarm system and shut down air handling systems upon fire alarm system activation.

3.02 GENERAL WORKMANSHIP

- A. Install equipment, piping, and wiring or raceway horizontally, vertically, and parallel to walls wherever possible.
- B. Provide sufficient slack and flexible connections to allow for piping and equipment vibration isolation.
- C. Install equipment in readily accessible locations as defined by National Electrical Code (NEC) Chapter 1 Article 100 Part A.
- D. Verify wiring integrity to ensure continuity and freedom from shorts and ground faults.
- E. Equipment, installation, and wiring shall comply with industry specifications and standards and local codes for performance, reliability, and compatibility.

3.03 FIELD QUALITY CONTROL

- A. Work, materials, and equipment shall comply with rules and regulations of applicable local, state, and federal codes and ordinances.
- B. Continually monitor field installation for code compliance and workmanship quality.
- C. Contractor shall arrange for work inspection by local or state authorities having jurisdiction over the work.

3.04 WIRING

- A. Control and interlock wiring and installation shall comply with national and local electrical codes, Division 26, and manufacturer's recommendations.
- B. NEC Class 1 (line voltage) wiring shall be UL listed in approved raceway as specified by NEC and Division 16.
- C. Low-voltage wiring shall meet NEC Class 2 requirements. Subfuse low-voltage power circuits as required to meet Class 2 current limit.
- D. NEC Class 2 (current-limited) wires not in raceway but in concealed and accessible locations such as return air plenums shall be UL listed for the intended application.
- E. Install wiring in raceway where subject to mechanical damage and at levels below 3 m (10ft) in mechanical, electrical, or service rooms.
- F. Install Class 1 and Class 2 wiring in separate raceways. Boxes and panels containing high-voltage wiring and equipment shall not be used for low-voltage wiring except for the purpose of interfacing the two through relays and transformers.
- G. Do not install wiring in raceway containing tubing.
- H. Run exposed Class 2 wiring parallel to a surface or perpendicular to it and tie neatly at 3 m (10 ft) intervals.
- I. Use structural members to support or anchor plenum cables without raceway. Do not use ductwork, electrical raceways, piping, or ceiling suspension systems to support or anchor cables.
- J. Secure raceways with raceway clamps fastened to structure and spaced according to code requirements. Raceways and pull boxes shall not be hung on or attached to ductwork, electrical raceways, piping, or ceiling suspension systems.
- K. Use color-coded conductors throughout.
- L. Adhere to requirements in Division 26 where raceway crosses building expansion joints.
- M. Install insulated bushings on raceway ends and enclosure openings. Seal top ends of vertical raceways.
- N. Install raceway rigidly, support adequately, ream at both ends, and leave clean and free of obstructions. Join raceway sections with couplings and according to code. Make terminations in boxes with fittings. Make terminations not in boxes with bushings.

3.05 COMMUNICATION WIRING

- A. Communication wiring shall be low-voltage Class 2 wiring and shall comply with Article 3.7 (Wiring).
- B. Install communication wiring in separate raceways and enclosures from other Class 2 wiring.
- C. During installation do not exceed maximum cable pulling, tension, or bend radius specified by the cable manufacturer.
- D. Verify entire network's integrity following cable installation using appropriate tests for each cable.
- E. Each run of communication wiring shall be a continuous length without splices when that length is commercially available. Runs longer than commercially available lengths shall have as few splices as possible using commercially available lengths.
- F. Label communication wiring to indicate origination and destination.
- G. Ground coaxial cable according to NEC regulations article on Communications Circuits, Cable, and Protector Grounding.

3.06 INSTALLATION OF SENSORS

- A. Install sensors according to manufacturer's recommendations.
- B. Mount sensors rigidly and adequately for operating environment.
- C. Install room temperature sensors on concealed junction boxes properly supported by wall framing.
- D. Air seal wires attached to sensors in their raceways or in the wall to prevent sensor readings from being affected by air transmitted from other areas.

3.07 IDENTIFICATION OF HARDWARE AND WIRING

- A. Label wiring and cabling, including that within factory-fabricated panels, with control system address or termination number at each end within 5 cm (2 in.) of termination.
- B. Permanently label or code each point of field terminal strips to show instrument or item served.
- C. Label control panels with minimum 1 cm (□ in.) letters on laminated plastic nameplates.
- D. Label each control component with a permanent label. Label plug-in components such that label remains stationary during component replacement.
- E. Label room sensors related to terminal boxes or valves with nameplates.
- F. Manufacturers' nameplates and UL or CSA labels shall be visible and legible after equipment is installed.
- G. Label identifiers shall match record documents.

3.08 CLEANING

- A. Each day clean up debris resulting from work. Remove packaging material as soon as its contents have been removed. Collect waste and place in designated location.
- B. On completion of work in each area, clean work debris and equipment. Keep areas free from dust, dirt, and debris.

- C. On completion of work, check equipment furnished under this section for paint damage. Repair damaged factory-finished paint to match adjacent areas. Replace deformed cabinets and enclosures with new material and repaint to match adjacent areas.

END OF SECTION

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SECTION 23 2113
HYDRONIC PIPING

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Hydronic system requirements.
- B. Heating water and glycol piping, above grade.
- C. Chilled water piping, above grade.
- D. Radiant heating piping system.
- E. Pipe and pipe fittings for:
 - 1. Heating water piping system.
 - 2. Chilled water piping system.
 - 3. Equipment drains and overflows.
- F. Pipe hangers and supports.
- G. Unions, flanges, mechanical couplings, and dielectric connections.
- H. Valves:
 - 1. Ball valves.
 - 2. Butterfly valves.
 - 3. Check valves.
- I. Flow controls.

1.02 RELATED REQUIREMENTS

- A. Section 08 3100 - Access Doors and Panels.
- B. Section 23 2500 - HVAC Water Treatment: Pipe cleaning.

1.03 REFERENCE STANDARDS

- A. ASME B16.3 - Malleable Iron Threaded Fittings: Classes 150 and 300; 2021.
- B. ASME B16.3 - Malleable Iron Threaded Fittings; The American Society of Mechanical Engineers; 1998 (R2006).
- C. ASME B16.18 - Cast Copper Alloy Solder Joint Pressure Fittings; 2021.
- D. ASME B16.22 - Wrought Copper and Copper Alloy Solder-Joint Pressure Fittings; 2021.
- E. ASME B31.9 - Building Services Piping; 2020.
- F. ASME B16.22 - Wrought Copper and Copper Alloy Solder Joint Pressure Fittings; The American Society of Mechanical Engineers; 2001 (R2005).
- G. ASME B31.9 - Building Services Piping; The American Society of Mechanical Engineers; 2008 (ANSI/ASME B31.9).
- H. ASTM A53/A53M - Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless; 2022.
- I. ASTM A234/A234M - Standard Specification for Piping Fittings of Wrought Carbon Steel and Alloy Steel for Moderate and High Temperature Service; 2023a.
- J. ASTM B88 - Standard Specification for Seamless Copper Water Tube; 2022.

- K. ASTM B88M - Standard Specification for Seamless Copper Water Tube (Metric); 2020.
- L. ASTM F708 - Standard Practice for Design and Installation of Rigid Pipe Hangers; 2024.
- M. ASTM F876 - Standard Specification for Crosslinked Polyethylene (PE) Tubing; 2024.
- N. ASTM F877 - Standard Specification for Crosslinked Polyethylene (PE) Hot- and Cold-Water Distribution Systems; 2024.
- O. ASTM F1476 - Standard Specification for Performance of Gasketed Mechanical Couplings for Use in Piping Applications; 2007 (Reapproved 2019).
- P. ASTM F877 - Standard Specification for Crosslinked Polyethylene (PE) Plastic Hot- and Cold-Water Distribution Systems; 2007.
- Q. AWS D1.1/D1.1M - Structural Welding Code - Steel; 2020, with Errata (2023).
- R. AWWA C606 - Grooved and Shouldered Joints; 2022.
- S. AWWA C606 - Standard Specification for Grooved and Shouldered Joints; American Water Works Association; 2006.
- T. MSS SP-58 - Pipe Hangers and Supports - Materials, Design, Manufacture, Selection, Application, and Installation; 2018, with Amendment (2019).

1.04 SYSTEM DESCRIPTION

- A. Where more than one piping system material is specified, ensure system components are compatible and joined to ensure the integrity of the system is not jeopardized. Provide necessary joining fittings. Ensure flanges, union, and couplings for servicing are consistently provided.
- B. Use unions, flanges, and couplings downstream of valves and at equipment or apparatus connections. Do not use direct welded or threaded connections to valves, equipment or other apparatus.
- C. Use non-conducting dielectric connections whenever jointing dissimilar metals in open systems.
- D. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.
- E. Use ball or butterfly valves for shut-off and to isolate equipment, part of systems, or vertical risers.
- F. Use globe valves for throttling, bypass, or manual flow control services.
- G. Use butterfly valves in heating water systems interchangeably with gate and globe valves.
- H. Use lug end butterfly valves to isolate equipment.
- I. Use 3/4 inch ball valves with cap for drains at main shut-off valves, low points of piping, bases of vertical risers, and at equipment. Pipe to nearest floor drain.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Include data on pipe materials, pipe fittings, valves, and accessories. Provide manufacturers catalogue information. Indicate valve data and ratings.
- C. Project Record Documents: Record actual locations of valves.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with minimum three years of documented experience.

1.07 REGULATORY REQUIREMENTS

- A. Conform to ASME B31.9 code for installation of piping system.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

PART 2 PRODUCTS

2.01 HYDRONIC SYSTEM REQUIREMENTS

- A. Comply with ASME B31.9 and applicable federal, state, and local regulations.
- B. Piping: Provide piping, fittings, hangers, and supports as required, as indicated, and as follows:
 - 1. Where more than one piping system material is specified, provide joining fittings that are compatible with piping materials and ensure that the integrity of the system is not jeopardized.
 - 2. Use non-conducting dielectric connections whenever jointing dissimilar metals.
 - 3. Grooved mechanical joints may be used in accessible locations only.
 - a. Accessible locations include those exposed on interior of building, in pipe chases, and in mechanical rooms, aboveground outdoors, and as approved by Architect/Engineer.
 - b. Use rigid joints unless otherwise indicated.
 - 4. Provide pipe hangers and supports in accordance with ASME B31.9 or MSS SP-58 unless indicated otherwise.
 - 5. Provide pipe hangers and supports in accordance with ASME B31.9 unless indicated otherwise.
- C. Pipe-to-Valve and Pipe-to-Equipment Connections: Use flanges, unions, or grooved couplings to allow disconnection of components for servicing; do not use direct welded, soldered, or threaded connections.
- D. Valves: Provide valves where indicated:

2.02 HEATING WATER AND GLYCOL PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black, using one of the following joint types:
 - 1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1/D1.1M welded.
 - 2. Fittings: ASTM B 16.3, malleable iron or ASTM A 234/A 234M, wrought steel welding type fittings.

3. Joints: Threaded, AWS D1.1 welded, or grooved and shouldered pipe end couplings.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), drawn, using one of the following joint types:
1. Grooved Joints: AWWA C606 grooved tube, fittings of same material, and copper-tube-dimension mechanical couplings.
 2. Joints: Solder, lead free, 95-5 tin-antimony, or tin and silver.

2.03 CHILLED WATER PIPING, ABOVE GRADE

- A. Steel Pipe: ASTM A53/A53M, Schedule 40, black; using one of the following joint types:
1. Welded Joints: ASTM A234/A234M, wrought steel welding type fittings; AWS D1.1/D1.1M welded.
 2. Threaded Joints: ASME B16.3, malleable iron fittings.
 3. Grooved Joints: AWWA C606 grooved pipe, fittings of same material, and mechanical couplings.
 4. Fittings: ASME B16.3, malleable iron or ASTM A 234/A 234M, wrought steel welding type.
 5. Joints: Threaded, AWS D1.1 welded, or grooved and shouldered pipe end couplings.
- B. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), hard drawn; using one of the following joint types:
1. Joints: Solder, lead free, ASTM B 32, HB alloy (95-5 tin-antimony), or tin and silver.

2.04 RADIANT HEATING PIPING

- A. Manufacturers:
1. Rehau
 2. Wirsbo.
 3. Uponor.
 4. Substitutions: See Section 01600 - Product Requirements.
- B. Cross-Linked Polyethylene (PE) Pipe: ASTM F876 or ASTM F877.
- C. Composite Polyethylene Pipe: Aluminum tube laminated between two layers of high density polyethylene.
1. Fittings: Brass flared compression.
 2. Joints: Fittings adapt to copper tubing or copper tube fittings, threaded pipe and fittings, and copper compression fittings.

2.05 EQUIPMENT DRAINS AND OVERFLOWS

- A. Copper Tube: ASTM B88 (ASTM B88M), Type K (A), drawn; using one of the following joint types:
1. Joints: Solder, lead free, ASTM B 32, HB alloy (95-5 tin-antimony), or tin and silver.

2.06 PIPE HANGERS AND SUPPORTS

- A. Provide hangers and supports that comply with MSS SP-58.

1. If type of hanger or support for a particular situation is not indicated, select appropriate type using MSS SP-58 recommendations.
- B. Conform to ASME B31.9.
 - C. Hangers for Pipe Sizes 1/2 to 1-1/2 Inches: Malleable iron, adjustable swivel, split ring.
 - D. Hangers for Cold Pipe Sizes 2 Inches and Greater: Carbon steel, adjustable, clevis.
 - E. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods.
 - F. Wall Support for Pipe Sizes 4 Inches and Greater: Welded steel bracket and wrought steel clamp.
 - G. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.
 - H. Hanger Rods: Mild steel threaded both ends, threaded one end, or continuous threaded.
 - I. In grooved installations, use rigid couplings with offsetting angle-pattern bolt pads or with wedge-shaped grooves in header piping to permit support and hanging in accordance with ASME B31.9.

2.07 UNIONS, FLANGES, MECHANICAL COUPLINGS, AND DIELECTRIC CONNECTIONS

- A. Unions for Pipe of 2 Inches and Less:
 1. Ferrous Piping: 150 psi brass or malleable iron, threaded.
 2. Copper Pipe: Bronze, soldered joints.
- B. Flanges for Pipe 2 Inches and Greater:
 1. Ferrous Piping: 150 psig forged steel, slip-on.
 2. Copper Piping: Bronze.
 3. Gaskets: 1/16 inch thick, preformed neoprene.
- C. Mechanical Couplings for Grooved and Shouldered Joints: Two or more curved housing segments with continuous key to engage pipe groove, circular C-profile gasket, and bolts to secure and compress gasket.
 1. Dimensions and Testing: In accordance with AWWA C606.
 2. Mechanical Couplings: Comply with ASTM F1476.
 3. Housing Material: Malleable iron or ductile iron, galvanized.
 4. Housing Clamps: Malleable iron galvanized to engage and lock, designed to permit some angular deflection, contraction, and expansion.
 5. Gasket Material: EPDM suitable for operating temperature range from minus 30 degrees F to 230 degrees F.
 6. Bolts and Nuts: Hot dipped galvanized or zinc-electroplated steel.
 7. When pipe is field grooved, provide coupling manufacturer's grooving tools.
- D. Dielectric Connections: Union or waterway fitting with water impervious isolation barrier and one galvanized or plated steel end and one copper tube end, end types to match pipe joint types used.

2.08 BALL VALVES

- A. Manufacturers:

1. Milwaukee Valve Company: www.milwaukeevalve.com.
- B. Up To and Including 2 Inches:
 1. Bronze one piece body, chrome plated brass ball, teflon seats and stuffing box ring, lever handle with balancing stops, solder ends with union.

2.09 BUTTERFLY VALVES

- A. Manufacturers:
 1. Hammond Valve: www.hammondvalve.com.
- B. Body: Cast or ductile iron with resilient replaceable EPDM seat, lug or grooved ends, extended neck.
- C. Disc: Construct of aluminum bronze, chrome plated ductile iron, stainless steel, or ductile iron with EPDM encapsulation.
- D. Body: Cast or ductile iron with resilient replaceable EPDM seat, wafer or lug ends, extended neck.
- E. Disc: Aluminum bronze.
- F. Operator: 10 position lever handle.

2.10 SWING CHECK VALVES

- A. Manufacturers:
 1. Crane Valve
 2. Milwaukee Valve Company: www.milwaukeevalve.com.
- B. Up To and Including 2 Inches:
 1. Bronze body, bronze trim, bronze rotating swing disc, with composition disc, solder ends.
- C. Over 2 Inches:
 1. Iron body, bronze trim, stainless steel, bronze, or bronze faced rotating swing disc, renewable disc and seat, flanged or grooved ends.
 2. Iron body, bronze trim, bronze or bronze faced rotating swing disc, renewable disc and seat, flanged ends.

2.11 SPRING LOADED CHECK VALVES

- A. Manufacturers:
 1. Crane Co.: www.cranevalve.com.
- B. Iron body, bronze trim, split plate, hinged with stainless steel spring, resilient seal bonded to body, wafer, or threaded lug ends.

2.12 FLOW CONTROLS

- A. Manufacturers:
 1. ITT Bell Gossett: www.bellgossett.com/#sle.
 2. Griswold Controls: www.griswoldcontrols.com.
 3. Taco, Inc: www.taco-hvac.com/#sle.
- B. Construction: Class 125, Brass or bronze body with union on inlet and outlet, temperature and pressure test plug on inlet and outlet, blowdown/backflush drain.

- C. Calibration: Control flow within 10 percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, minimum pressure 2 psi.
- D. Calibration: Control flow within 5 percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, maximum minimum pressure 3.5 psi psi.

PART 3 EXECUTION

3.01 PREPARATION

- A. Ream pipe and tube ends. Remove burrs. Bevel plain end ferrous pipe.
- B. Prepare pipe for grooved mechanical joints as required by coupling manufacturer.
- C. Remove scale and dirt on inside and outside before assembly.
- D. Prepare piping connections to equipment using jointing system specified.
- E. Keep open ends of pipe free from scale and dirt. Protect open ends with temporary plugs or caps.
- F. After completion, fill, clean, and treat systems. See Section 23 2500 for additional requirements.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install heating water to ASME B31.9 requirements. Install chilled water piping to ASME B31.5 requirements.
- C. Route piping in orderly manner, parallel to building structure, and maintain gradient.
- D. Install piping to conserve building space and to avoid interference with use of space.
- E. Group piping whenever practical at common elevations.
- F. Slope piping and arrange to drain at low points.
- G. Radiant Slab Tubing:
 - 1. Run tubing in continuous sections within the floor. No splicing or connections shall be made other than at tubing manifolds.
 - 2. Concrete Slab: Secure tubing to reinforcement by mechanical attachments every eighteen (18) inches and at the midpoint of each turn or bend, with a minimum of two (2) inches of concrete coverage above the top of the tubing. More coverage may be required depending on structural and loading requirements; refer to Structural Drawings. Total encasement of tubing is required.
 - 3. Install tubing as indicated by engineer on drawings, schedules, and specifications, in accordance with manufacturer's installation instructions.
 - 4. Locate tubing in floors as indicated on the Contract Drawings; cover areas continuously wall to wall at specified spacings unless otherwise indicated.
 - 5. Provide pressure testing of between 50 and 100 psig for a minimum of twenty-four (24) hours prior to, and during the pour for concrete applications.
 - 6. Install access panels centered in front of each manifold.

7. Minimum bend radius shall be: four (4) inches for 1/2 inch ID tubing; five (5) inches for 5/8 inch ID tubing; six (6) inches for 3/4 inch ID tubing.
 8. System Start-Up and Balancing: Provide system start-up, air purging and balancing to ensure proper operation. Check pumps for flows, valves for proper setting and operation, and water temperature and pressure levels in accordance with design specification and manufacturer's recommendations. System will operate properly for two (2) days before the Owner and/or the engineer shall be required to certify system compliance.
- H. Pipe Hangers and Supports:
1. Install in accordance with ASME B31.9, ASTM F708, or MSS SP-58.
 2. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.
 3. Provide copper plated hangers and supports for copper piping.
- I. Provide access where valves and fittings are not exposed. Coordinate size and location of access doors with Section 08 3100 .
- J. Install valves with stems upright or horizontal, not inverted.

3.03 SCHEDULES

- A. Hanger Spacing for Copper Tubing.
1. 1/2 Inch and 3/4 inch: Maximum span, 5 feet; minimum rod size, 1/4 inch.
 2. 1 Inch: Maximum span, 6 feet; minimum rod size, 1/4 inch.
 3. 1-1/2 Inches and 2 Inches: Maximum span, 8 feet; minimum rod size, 3/8 inch.
 4. 2-1/2 Inches: Maximum span, 9 feet; minimum rod size, 3/8 inch.
 5. 3 Inches: Maximum span, 10 feet; minimum rod size, 3/8 inch.
- B. Hanger Spacing for Steel Piping.
1. 1/2 Inch, 3/4 Inch, and 1 Inch: Maximum span, 7 feet; minimum rod size, 1/4 inch.
 2. 1-1/4 Inches: Maximum span, 8 feet; minimum rod size, 3/8 inch.
 3. 1-1/2 Inches: Maximum span, 9 feet; minimum rod size, 3/8 inch.
 4. 2 Inches: Maximum span, 10 feet; minimum rod size, 3/8 inch.
 5. 2-1/2 Inches: Maximum span, 11 feet; minimum rod size, 3/8 inch.
 6. 3 Inches: Maximum span, 12 feet; minimum rod size, 3/8 inch.

END OF SECTION

SECTION 23 2114
HYDRONIC SPECIALTIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Expansion tanks.
- B. Expansion tanks.
- C. Air vents.
- D. Air separators.
- E. Strainers.
- F. Suction diffusers.
- G. Combination pump discharge valves.
- H. Automatic flow control valves.
- I. Pump suction fittings.
- J. Combination fittings.
- K. Flow indicators, controls, meters.
- L. Relief valves.
- M. Glycol system.
- N. Glycol specialties.
- O. Glycol system maintenance.

1.02 RELATED REQUIREMENTS

- A. Section 23 2113 - Hydronic Piping.
- B. Section 23 2500 - HVAC Water Treatment: Pipe cleaning.

1.03 REFERENCE STANDARDS

- A. ASME BPVC-VIII-1 - Boiler and Pressure Vessel Code, Section VIII, Division 1: Rules for Construction of Pressure Vessels; 2021.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide product data for manufactured products and assemblies required for this project. Include component sizes, rough-in requirements, service sizes, and finishes. Include product description and model.
- C. Maintenance Data: Include installation instructions, assembly views, lubrication instructions, and replacement parts list.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Accept valves on site in shipping containers with labeling in place. Inspect for damage.
- B. Provide temporary end caps and closures on piping and fittings. Maintain in place until installation.
- C. Protect piping systems from entry of foreign materials by temporary covers, completing sections of the work, and isolating parts of completed system.

1.06 EXTRA MATERIALS

- A. See Section 01 6000 - Project Requirements, for additional provisions.
- B. Provide one extra 55 gallon drum of propylene glycol.

PART 2 PRODUCTS

2.01 EXPANSION TANKS

- A. Manufacturers:
 - 1. Amtrol Inc; : www.amtrol.com/#sle.
 - 2. Bell Gossett, a brand of ylem, Inc; : www.bellgossett.com/#sle.
 - 3. Taco, Inc; : www.taco-hvac.com/#sle.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Construction: Welded steel, tested and stamped in accordance with ASME BPVC-VIII-1; supplied with National Board Form U-1, adjustable flexible EPDM diaphragm or bladder seal factory precharged to 12 psi, and steel support stand.
- C. Automatic Cold Water Fill Assembly: Pressure reducing valve, reduced pressure double check backflow preventer, test cocks, strainer, vacuum breaker, and valved by-pass.

2.02 AIR VENTS

- A. Manufacturers:
 - 1. Armstrong International, Inc; : www.armstronginternational.com/#sle.
 - 2. Bell Gossett, a brand of ylem, Inc; : www.bellgossett.com/#sle.
 - 3. Taco, Inc; : www.taco-hvac.com/#sle.
- B. Manual Air Vent: Short vertical sections of 2-inch diameter pipe to form air chamber, with 1/8 inch brass needle valve at top of chamber.
- C. Maximum Fluid Pressure: 150 psi.
- D. Maximum Fluid Temperature: 250 degrees F.

2.03 STRAINERS

- A. Size 2 inch and Under:
 - 1. Provide threaded, grooved, or sweat brass or iron body for up to 175 psi working pressure, -pattern strainer with 1/32 inch stainless steel perforated screen.
- B. Size 2-1/2 inch to 4 inch:
 - 1. Provide flanged or grooved iron body for up to 175 psi working pressure, up to 250 degrees F working temperature, -pattern strainer with 1/16 inch or 3/64 inch stainless steel perforated screen.
 - 2. Flanged iron body for 175 psi working pressure, pattern with 3/64 inch stainless steel perforated screen.

2.04 SUCTION DIFFUSERS

- A. Fitting: Angle pattern, cast-iron body, threaded for 2 inch and smaller, flanged for 2-1/2 inch and larger, rated for 175 psi working pressure, with inlet vanes, cylinder strainer with 3/16 inch diameter openings, disposable fine mesh strainer to fit over cylinder strainer, and permanent

magnet located in flow stream and removable for cleaning.

- B. Accessories: Adjustable foot support, blowdown tapping in bottom, gauge tapping in side.

2.05 COMBINATION PUMP DISCHARGE VALVES

- A. Manufacturers:

- 1. ITT Bell Gossett: <http://fhs.ittind.com>.

- B. Quarter-Turn Plug Type: Flanged cast-iron body with bolt-on bonnet, position indicator, stainless steel stem, backflow preventer, memory stop, metering connectors, bubble-tight shutoff, and wrench-adjustable plug flow regulator.

2.06 AUTOMATIC FLOW CONTROL VALVES

- A. Construction:

- 1. Brass, bronze, or iron body with union on inlet and outlet, temperature and pressure test plug on inlet and outlet with blowdown/backflush drain.

- 2. Built-in lug-type outlet butterfly valve with 2-position handle.

- B. Calibration: Control flow within 10 percent of selected rating, over operating pressure range of 10 times minimum pressure required for control, minimum pressure 2 psi.

- C. Control Mechanism: Provide stainless steel or nickel-plated, brass piston or regulator cup, operating against stainless steel helical or wave formed spring or elastomeric diaphragm and polyphenylsulfone orifice plate.

2.07 GLYCOL SYSTEM

- A. Pump System:

- 1. Storage: 15 gal polypropylene tank with bolt-removable hinged solid cover and enamel coated carbon steel tank-stand.

- 2. Pump:

- a. Thermally protected 1/4 hp motor at 115 to 120 VAC, single phase rated for indoor service.

- b. Maximum Service Operation: 100 psi at 85 degrees F.

- 3. Mechanical Accessories: System isolation valves, strainer, and pressure gauges.

- 4. Control Panel:

- a. Fused single-point system connection rated at 115 to 120 VAC, single phase.

- b. Interface: Hand switches with indicating lights for ON, FAULT, and LOW LEVEL.

- c. Pressure Switch: Panel-mounted and prewired for 10 psi cut-in and 40 psi cut-out, adjustable.

- d. Low Level Cut-Off Switch: Prewired to shut-down unit upon activation. Tank-side mounted.

- 5. Pressure Relief Valve: System-mounted brass valve tubed from pump discharge side into tank with adjustable setpoint between 20 psi and 150 psi.

- B. Glycol Solution:

1. Water-based solution mix containing 30 percent ethylene glycol by volume required for cooling or heating system operating temperature range.
2. Cooling or heating System Operating Temperature Range: Between freezing and boiling points of 3 and 220 degees F at 14.7 psia.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install specialties in accordance with manufacturer's instructions.
- B. Provide manual air vents at system high points and as indicated.
- C. For automatic air vents in ceiling spaces or other concealed locations, provide vent tubing to nearest drain.
- D. Provide air separator on suction side of system circulation pump and connect to expansion tank.
- E. Provide valved drain and hose connection on strainer blowdown connection.
- F. Provide pump suction fitting on suction side of base-mounted centrifugal pumps where indicated. Remove temporary strainers after cleaning systems.
- G. Provide combination pump discharge valve on discharge side of base mounted centrifugal pumps where indicated.
- H. Support pump fittings with floor-mounted pipe and flange supports.
- I. Provide relief valves on pressure tanks, low-pressure side of reducing valves, heat exchangers, and expansion tanks.
- J. Select system relief valve capacity so that it is greater than make-up pressure reducing valve capacity. Select equipment relief valve capacity to exceed rating of connected equipment.
- K. Pipe relief valve outlet to nearest floor drain.
- L. Clean and flush glycol system before adding glycol solution. Refer to Section 23 2500.
- M. Feed glycol solution to system through make-up line with pressure regulator, venting system high points.
- N. Feed glycol solution to system through make-up line with pressure regulator, venting system high points. Set to fill at 12 psi.
- O. Perform tests determining strength of glycol and water solutions and submit written test results for both heating water and chilled water systems.

3.02 MAINTENANCE

- A. See Section 01 7000 - Execution Requirements for additional requirements relating to maintenance service.
- B. Provide service and maintenance of glycol system for one year from date of Substantial Completion at no extra charge to Owner.
- C. Perform monthly visit to make glycol fluid concentration analysis on site with refractive index measurement instrument. Report findings in detail in writing, including analysis and amounts of glycol or water added.

D. Explain corrective actions to Owner's maintenance personnel in person.

END OF SECTION

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SECTION 23 2123
HYDRONIC PUMPS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Vertical in-line pumps.
- B. Base-mounted pumps.

1.02 RELATED REQUIREMENTS

- A. Section 22 0513 - Common Motor Requirements for Plumbing Equipment.
- B. Section 22 0719 - Plumbing Piping Insulation.
- C. Section 15075 - Mechanical Identification
- D. Section 23 2113 - Hydronic Piping.
- E. Section 23 2114 - Hydronic Specialties.

1.03 REFERENCE STANDARDS

- A. NEMA MG 1 - Motors and Generators; 2021.
- B. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- C. UL 778 - Standard for Motor-Operated Water Pumps; Current Edition, Including All Revisions.

1.04 PERFORMANCE REQUIREMENTS

- A. Ensure pumps operate at specified system fluid temperatures without vapor binding and cavitation, are non-overloading in parallel or individual operation, and operate within 25 percent of midpoint of published maximum efficiency curve.

1.05 SUBMITTALS

- A. Product Data: Provide certified pump curves showing performance characteristics with pump and system operating point plotted. Include NPSH curve when applicable. Include electrical characteristics and connection requirements.
- B. Manufacturer's Installation Instructions: Indicate hanging and support requirements and recommendations.
- C. Millwright's Certificate: Certify that base mounted pumps have been aligned.
- D. Operation and Maintenance Data: Include installation instructions, assembly views, lubrication instructions, and replacement parts list.

1.06 QUALITY ASSURANCE

- A. Alignment: Base mounted pumps shall be aligned by qualified millwright.

1.07 REGULATORY REQUIREMENTS

- A. Products Requiring Electrical Connection: Listed and classified by UL 778 as suitable for the purpose specified and indicated.

1.08 EXTRA MATERIALS

- A. See Section 01 6000 - Product Requirements, for additional provisions.
- B. Provide one set of mechanical seals for each pump.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Armstrong Fluid Technology, Inc; : www.armstrongfluidtechnology.com/#sle.
- B. Grundfos Pumps Corporation: www.usa.grundfos.com
- C. Bell Gossett, a ylem Inc. brand; : www.bellgossett.com/#sle.
- D. Taco, Inc.: www.taco-hvac.com
- E. Substitutions: See Section 01 6000 - Product Requirements.

2.02 IN-LINE CIRCULATORS

- A. Type: Horizontal shaft, single stage, direct connected, with resiliently mounted motor for in-line mounting, permanently lubricated, for 150 psi maximum working pressure.
- B. Casing: Bronze, with flanged pump connections.
- C. Impeller: Non-ferrous keyed to shaft.
- D. Bearings: Permanently-lubricated ball bearings.
- E. Shaft: Alloy steel with bronze sleeve, integral thrust collar.
- F. Seal: Carbon rotating against a stationary ceramic seat, 225 degrees F maximum continuous operating temperature.

2.03 VERTICAL IN-LINE PUMPS

- A. Type: Vertical, single stage, close coupled, radially or horizontally split casing, for in-line mounting, for 175 psi working pressure.
- B. Casing: Cast iron, with suction and discharge gauge port, casing wear ring, seal flush connection, drain plug, flanged suction and discharge.
- C. Impeller: Bronze, fully enclosed, keyed directly to motor shaft or extension.
- D. Shaft: Carbon steel with stainless steel impeller cap screw or nut and bronze sleeve.
- E. Seal: Mechanical seal, 225 degrees F maximum continuous operating temperature.

2.04 BASE-MOUNTED PUMPS

- A. Type: Horizontal shaft, single stage, direct connected, radially or horizontally split casing, for 125 psi maximum working pressure.
- B. Casing: Cast iron, or ductile iron with suction and discharge gauge ports, renewable bronze casing wearing rings, seal flush connection, drain plug, flanged suction and discharge.
- C. Impeller: Bronze, fully enclosed, keyed to shaft.
- D. Bearings: Oil lubricated roller or ball bearings.
- E. Shaft: Alloy steel with copper, bronze, or stainless steel shaft sleeve.
- F. Seal: Mechanical seal, 225 degrees F maximum continuous operating temperature.
- G. Seal: Packing gland with minimum four rings graphite impregnated packing and bronze lantern rings, 250 degrees F maximum continuous operating temperature.
- H. Drive: Flexible coupling with coupling guard.
- I. Baseplate: Cast iron or fabricated steel with integral drain rim.

PART 3 EXECUTION

3.01 PREPARATION

- A. Verify that electric power is available and of the correct characteristics.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Provide access space around pumps for service. Provide no less than minimum space recommended by manufacturer.
- C. Provide line sized shut-off valve and strainer on pump suction, and line sized soft seat check valve and balancing valve on pump discharge.
- D. Provide air cock and drain connection on horizontal pump casings.
- E. Provide drains for bases and seals, piped to and discharging into floor drains.
- F. Check, align, and certify alignment of base-mounted pumps prior to start-up.
- G. Install base mounted pumps on concrete housekeeping base/pads using anchor bolts; set and level; grout in place. Refer to Section 03300.
- H. Install other non-base mounted pumps on housekeeping pads with anchor bolts as noted in the Project Drawings.
- I. Lubricate pumps before start-up.
- J. Provide side-stream filtration system for closed loop systems. Install across pump with flow from pump discharge to pump suction from pump tapings.

3.03 SCHEDULES

- A. See Contract Drawings.

END OF SECTION

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SECTION 23 2500
HVAC WATER TREATMENT

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Materials.
 - 1. System cleaner.
 - 2. Closed system treatment (water).
- B. By-pass (pot) feeder.

1.02 RELATED REQUIREMENTS

- A. Section 23 2113 - Hydronic Piping.
- B. Section 23 2114 - Hydronic Specialties.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide chemical treatment materials, chemicals, and equipment including electrical characteristics and connection requirements.
- C. Manufacturer's Field Reports: Indicate start-up of treatment systems when completed and operating properly. Indicate analysis of system water after cleaning and after treatment.
- D. Operation and Maintenance Data: Include data on chemical feed pumps, agitators, and other equipment including spare parts lists, procedures, and treatment programs. Include step by step instructions on test procedures including target concentrations.

1.04 MAINTENANCE MATERIALS

- A. Supply sufficient chemicals for treatment and testing during warranty period.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. AmSolv-Amrep, Inc: www.amsolv.com/#sle.
- B. GE Water Process Technologies: www.gewater.com/#sle.
- C. Nalco, an Ecolab Company: www.nalco.com/#sle.
- D. The Fust Company: 515-266-5594 Pleasant Hill Iowa.
- E. Substitutions: See Section 01 6000 - Product Requirements.

2.02 REGULATORY REQUIREMENTS

- A. Comply with applicable codes for addition of non-potable chemicals to building mechanical systems and to public sewage systems.

2.03 MATERIALS

- A. System Cleaner:
 - 1. Liquid alkaline compound with emulsifying agents and detergents to remove grease and petroleum products; sodiumtripoly phosphate and sodium molybdate.
 - 2. Biocide chlorine release agents such as sodium hypochlorite or calcium hypochlorite or microbiocides such as quarternary ammonia compounds, tributyltin oxide, methylene bis

(thiocyanate).

- B. Closed System Treatment (Water):
 - 1. Sequestering agent to reduce deposits and adjust pH; polyphosphate.
 - 2. Corrosion inhibitors; boron-nitrite, sodium nitrite and borax, sodium totyltriazole, low molecular weight polymers, phosphonates, sodium molybdate, or sulphites.
 - 3. Conductivity enhancers; phosphates or phosphonates.

2.04 BY-PASS (POT) FEEDER

- A. Manufacturers:
 - 1. Griswold Controls: www.griswoldcontrols.com/#sle.
 - 2. J. L. Wingert Company: www.jlwingert.com/#sle.
 - 3. Industrial Chemical Corporation: www.industrialchemicalcorp.com.
 - 4. Neptune, a brand of the Dover Company: www.neptune1.com/#sle.
 - 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. 2 quart quick opening cap for working pressure of 175 psi.

PART 3 EXECUTION

3.01 PREPARATION

- A. Systems shall be operational, filled, started, and vented prior to cleaning. Use water meter to record capacity in each system.
- B. Place terminal control valves in open position during cleaning.
- C. Verify that electric power is available and of the correct characteristics.

3.02 CLEANING SEQUENCE

- A. Hot Water Heating Systems:
 - 1. Apply heat while circulating, slowly raising temperature to 160 degrees F and maintain for 12 hours minimum.
 - 2. Remove heat and circulate to 100 degrees F or less; drain systems as quickly as possible and refill with clean water.
 - 3. Circulate for 6 hours at design temperatures, then drain.
 - 4. Refill with clean water and repeat until system cleaner is removed.
- B. Chilled Water Systems:
 - 1. Circulate for 48 hours, then drain systems as quickly as possible.
 - 2. Refill with clean water, circulate for 24 hours, then drain.
 - 3. Refill with clean water and repeat until system cleaner is removed.
- C. Flush open systems with clean water for one hour minimum. Drain completely and refill.
- D. Remove, clean, and replace strainer screens.
- E. Inspect, remove sludge, and flush low points with clean water after cleaning process is completed. Include disassembly of components as required.

3.03 INSTALLATION

- A. Install in accordance with manufacturer's instructions.

3.04 CLOSED SYSTEM TREATMENT

- A. Provide one bypass feeder on each system. Install isolating and drain valves and necessary piping. Install around balancing valve downstream of circulating pumps unless indicated otherwise.
- B. Introduce closed system treatment through bypass feeder when required or indicated by test.
- C. Provide 3/4 inch water coupon rack around circulating pumps with space for 4 test specimens.

END OF SECTION

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SECTION 23 3100
HVAC DUCTS AND CASINGS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Metal ducts.

1.02 RELATED REQUIREMENTS

- A. Section 23 0713 - Duct Insulation: External insulation and duct liner.
- B. Section 23 3300 - Air Duct Accessories.
- C. Section 23 3319 - Duct Silencers.
- D. Section 23 3600 - Air Terminal Units.
- E. Section 23 3700 - Air Outlets and Inlets: Fabric air distribution devices.

1.03 REFERENCE STANDARDS

- A. ASTM A36/A36M - Standard Specification for Carbon Structural Steel; 2019.
- B. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2020.
- C. ASTM A1011/A1011M - Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High Strength; 2018a.
- D. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- E. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.
- F. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2020.

1.04 PERFORMANCE REQUIREMENTS

- A. No variation of duct configuration or sizes permitted except by written permission. Size round ducts installed in place of rectangular ducts in accordance with ASHRAE table of equivalent rectangular and round ducts.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for duct materials.
- C. Project Record Documents: Record actual locations of ducts and duct fittings. Record changes in fitting location and type. Show additional fittings used.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum three years of documented experience, and approved by manufacturer.
- B. Installer Qualifications: Company specializing in performing the type of work specified in this section, with minimum three years of documented experience.

1.07 REGULATORY REQUIREMENTS

- A. Construct ductwork to NFPA 90A standards.

PART 2 PRODUCTS

2.01 GENERAL REQUIREMENTS

- A. Provide UL Class 1 ductwork, fittings, hangers, supports, and appurtenances in accordance with NFPA 90A and SMACNA (DCS) guidelines unless stated otherwise.
- B. Provide metal duct unless otherwise indicated. Fibrous glass duct can be substituted at the Contractor's option.
- C. Acoustical Treatment: Provide sound-absorbing liners and sectional silencers for metal-based ducts in compliance with Section 23 3319.
- D. Duct Shape and Material in accordance with Allowed Static Pressure Range:
- E. Duct Sealing and Leakage in accordance with Static Pressure Class:

--- Medium Pressure service ranges from 3 to 6 in-wc. ---
--- High Pressure service ranges from 6 to 10 in-wc. ---

- F. Duct Fabrication Requirements:
 - 1. Duct and Fitting Fabrication and Support: SMACNA (DCS) including specifics for continuously welded round and oval duct fittings.
 - 2. Use reinforced and sealed sheet-metal materials at recommended gauges for indicated operating pressures or pressure class.
 - 3. Construct tees, bends, and elbows with radius of not less than 1-1/2 times width of duct on centerline. Where not possible and where rectangular elbows must be used, provide airfoil turning vanes of perforated metal with glass fiber insulation.
 - 4. Provide turning vanes of perforated metal with glass fiber insulation when acoustical lining is indicated.
 - 5. Increase duct sizes gradually, not exceeding 15 degrees divergence wherever possible; maximum 30 degrees divergence upstream of equipment and 45 degrees convergence downstream.
 - 6. Provide turning vanes of perforated metal with glass fiber insulation when an acoustical lining is required.
 - 7. Where ducts are connected to exterior wall louvers and duct outlet is smaller than louver frame, provide blank-out panels sealing louver area around duct. Use same material as duct, painted black on exterior side; seal to louver frame and duct.

2.02 DUCT MANUFACTURERS

- A. Metal-Fab, Inc: www.mtlfab.com.
- B. SEMCO Incorporated: www.semcoinc.com.
- C. United McGill Corporation: www.unitedmcgill.com.

2.03 METAL DUCTS

- A. Material Requirements:
 - 1. Galvanized Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M FS Type B, with G60/Z180 coating.
- B. Manufacture in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible, and as indicated. Provide duct material, gages, reinforcing, and sealing for operating pressures indicated.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install, support, and seal ducts in accordance with SMACNA (DCS).
- B. Install products following the manufacturer's instructions.
- C. Duct sizes indicated are precise inside dimensions. For lined ducts, maintain sizes inside lining.
- D. Install and seal metal and flexible ducts in accordance with SMACNA HVAC Duct Construction Standards - Metal and Flexible.
- E. Provide openings in ductwork as indicated to accommodate thermometers and controllers. Provide pilot tube openings as indicated for testing of systems, complete with metal can with spring device or screw to insure against air leakage. For openings, insulate ductwork and install insulation material inside a metal ring.
- F. Locate ducts with sufficient space around equipment to allow normal operating and maintenance activities.
- G. Use crimp joints with or without bead for joining round duct sizes 8 inch and smaller with a crimp in the direction of airflow.
- H. Use double nuts and lock washers on threaded rod supports.
- I. Connect diffusers or light troffer boots to low-pressure ducts directly or with 5 feet maximum length of flexible duct held in place with strap or clamp.
- J. Connect flexible ducts to metal ducts with draw bands.
- K. During construction provide temporary closures of metal or taped polyethylene on open ductwork to prevent construction dust from entering ductwork system.
- L. At exterior wall louvers, seal duct to louver frame and install blank-out panels.

END OF SECTION

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SECTION 23 3300
AIR DUCT ACCESSORIES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Combination fire and smoke dampers.
- B. Duct access doors.
- C. Duct test holes.
- D. Flexible duct connectors.
- E. Volume control dampers.

1.02 RELATED REQUIREMENTS

- A. Section 23 3100 - HVAC Ducts and Casings.
- B. Section 23 3600 - Air Terminal Units: Pressure regulating damper assemblies.

1.03 REFERENCE STANDARDS

- A. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.
- B. NFPA 92 - Standard for Smoke Control Systems; 2021.
- C. SMACNA (DCS) - HVAC Duct Construction Standards Metal and Flexible; 2020.
- D. UL 555 - Standard for Fire Dampers; Current Edition, Including All Revisions.
- E. UL 555S - Standard for Smoke Dampers; Current Edition, Including All Revisions.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide for shop-fabricated assemblies including volume control dampers, duct access doors, duct test holes, and hardware used. Include electrical characteristics and connection requirements.
- C. Manufacturer's Installation Instructions: Provide instructions for fire dampers and combination fire and smoke dampers.

1.05 PROJECT RECORD DOCUMENTS

- A. Record actual locations of access doors and test holes.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Protect dampers from damage to operating linkages and blades.

1.07 EXTRA MATERIALS

- A. See Section 01 6000 - Product Requirements, for additional provisions.

PART 2 PRODUCTS

2.01 COMBINATION FIRE AND SMOKE DAMPERS

- A. Manufacturers:
 - 1. Louvers Dampers, Inc, a brand of Mestek, Inc: www.louvers-dampers.com/#sle.
 - 2. Nailor Industries, Inc: www.nailor.com/#sle.
 - 3. Pottorff: www.pottorff-hvac.com
 - 4. Ruskin Manufacturing: www.ruskin.com

- 5. Substitutions: See Section 01 6000 - Product Requirements.
- B. Fabricate in accordance with NFPA 90A, UL 555, UL 555S, and as indicated.
- C. Provide factory sleeve and collar for each damper.
- D. Multiple Blade Dampers: Fabricate with 16 gage galvanized steel frame and 14 gage galvanized steel blades, oil-impregnated bronze or stainless steel sleeve bearings and plated steel axles, stainless steel jamb seals, 1/8 x 1/2 inch plated steel concealed linkage, stainless steel closure spring, blade stops, and lock, and 1/2 inch actuator shaft.
- E. Operators: UL listed and labeled; spring-return, electric-type suitable for 120 volts, single phase, 60 Hz. Provide end switches to indicate damper position. Locate damper operator on interior of duct and link to damper operating shaft.
- F. Electro Thermal Link: Fusible link melting at 165 degrees F; 120 volts, single phase, 60 Hz; UL listed and labeled.

2.02 DUCT ACCESS DOORS

- A. Manufacturers:
 - 1. Nailor Industries, Inc: www.nailor.com/#sle.
 - 2. Ruskin Company: www.ruskin.com/#sle.
 - 3. SEMCO LLC: www.semcohvac.com/#sle.
 - 4. Substitutions: See Section 01 6000 - Product Requirements.
- B. Fabricate in accordance with SMACNA (DCS) and as indicated.
- C. Access doors with sheet metal screw fasteners are not acceptable.

2.03 DUCT TEST HOLES

- A. Temporary Test Holes: Cut or drill in ducts as required. Cap with neat patches, neoprene plugs, threaded plugs, or threaded or twist-on metal caps.

2.04 FLEXIBLE DUCT CONNECTORS

- A. Fabricate in accordance with SMACNA (DCS) and as indicated.
- B. Flexible Duct Connections: Fabric crimped into metal edging strip.
 - 1. Fabric: UL listed fire-retardant neoprene coated woven glass fiber fabric to NFPA 90A, minimum density 30 oz/sq yd.

2.05 VOLUME CONTROL DAMPERS

- A. Manufacturers:
 - 1. Louvers Dampers, Inc, a brand of Mestek, Inc: www.louvers-dampers.com/#sle.
 - 2. Nailor Industries, Inc: www.nailor.com/#sle.
 - 3. Pottorff: www.pottorff-hvac.com
 - 4. Ruskin Company: www.ruskin.com/#sle.
- B. Fabricate in accordance with SMACNA (DCS) and as indicated.
- C. Single Blade Dampers: Fabricate for duct sizes up to 6 x 30 inch.
- D. Multi-Blade Damper: Fabricate of opposed blade pattern with maximum blade sizes 8 x 72 inch. Assemble center and edge crimped blades in prime coated or galvanized channel frame

with suitable hardware.

- E. End Bearings: Except in round ducts 12 inches and smaller, provide end bearings. On multiple blade dampers, provide oil-impregnated nylon, thermoplastic elastomer, or sintered bronze bearings.
- F. Quadrants:
 - 1. Provide locking, indicating quadrant regulators on single and multi-blade dampers.
 - 2. On insulated ducts mount quadrant regulators on stand-off mounting brackets, bases, or adapters.

PART 3 EXECUTION

3.01 PREPARATION

- A. Verify that electric power is available and of the correct characteristics.

3.02 INSTALLATION

- A. Install accessories in accordance with manufacturer's instructions, NFPA 90A, and follow SMACNA (DCS). See Section 23 3100 for duct construction and pressure class.
- B. Provide duct access doors for inspection and cleaning before and after filters, coils, fans, automatic dampers, at fire dampers, combination fire and smoke dampers, and elsewhere as indicated. Provide minimum 8 x 8 inch size for hand access, 18 x 18 inch size for shoulder access, and as indicated. Provide 4 x 4 inch for balancing dampers only. Review locations prior to fabrication.
- C. Provide duct test holes where indicated and required for testing and balancing purposes.
- D. Provide fire dampers, combination fire and smoke dampers, and smoke dampers at locations indicated, where ducts and outlets pass through fire-rated components, and where required by authorities having jurisdiction. Install with required perimeter mounting angles, sleeves, breakaway duct connections, corrosion resistant springs, bearings, bushings and hinges.
- E. Install smoke dampers and combination smoke and fire dampers in accordance with NFPA 92.
- F. At fans and motorized equipment associated with ducts, provide flexible duct connections immediately adjacent to the equipment.
- G. At equipment supported by vibration isolators, provide flexible duct connections immediately adjacent to the equipment.
- H. Provide balancing dampers at points on supply, return, and exhaust systems where branches are taken from larger ducts as required for air balancing. Install minimum two duct widths from duct take-off.
- I. Provide balancing dampers on high velocity systems where indicated. See Section 23 3600.
- J. Provide balancing dampers on duct take-off to diffusers, grilles, and registers, regardless of whether dampers are specified as part of the diffuser, grille, or register assembly.

END OF SECTION

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SECTION 23 3700
AIR OUTLETS AND INLETS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Diffusers:
- B. Registers/grilles:
 - 1. Ceiling-mounted, egg crate exhaust and return register/grilles.
- C. Fabric air distribution devices.

1.02 REFERENCE STANDARDS

- A. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- B. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.
- C. NFPA 90B - Standard for the Installation of Warm Air Heating and Air-Conditioning Systems; 2021.
- D. UL 723 - Standard for Test for Surface Burning Characteristics of Building Materials; Current Edition, Including All Revisions.
- E. UL 2518 - Standard for Safety Air Dispersion Systems; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data for equipment required for this project. Review outlets and inlets as to size, finish, and type of mounting prior to submission. Submit schedule of outlets and inlets showing type, size, location, application, and noise level.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Anemostat: www.anemostat-hvac.com.
- B. Carnes, a division of Carnes Company Inc: www.carnes.com/#sle.
- C. Nailor Industries: www.nailor.com.
- D. Price Industries: www.price-hvac.com/#sle.
- E. Donco Air Products: www.doncoair.com
- F. Titus, a brand of Air Distribution Technologies: www.titus-hvac.com/#sle.
- G. Substitutions: See Section 01 6000 - Product Requirements.

2.02 ARCHITECTURAL SQUARE PLAQUE CEILING DIFFUSERS

- A. Type: Square, stamped, single plaque diffuser to discharge air in 360 degree pattern.
- B. Frame: Inverted T-bar type. In plaster ceilings, provide plaster frame and ceiling frame.
- C. Fabrication: 22 gauge steel housing, double thickness faceplate with 20 gauge subplate. Faceplate shall be removeable without tools and have a safety cable. Exposed surface of faceplate shall be smooth, flat, and free of visible fasteners.
- D. Duct Connection: Extra deep 2-1/2 beaded duct connection collar.

- E. Finish: Powder coat white finish, minimum pencil hardness of HB to H. Finish must pass 250 hr ASTM D-870 Water Immersion Test and ASTM D-2794 Reverse Impact Cracking Test with a 50 inch-pound force applied.
- F. The diffuser shall be tested in accordance with ANSI/ASHRAE Standard 70-1991.

2.03 CEILING EGG CRATE EXHAUST AND RETURN GRILLES

- A. Type: Egg crate style face consisting of 1/2 by 1/2 by 1 inch grid core.
- B. Fabrication: Grid core consists of aluminum with mill aluminum finish.
- C. Color: To be selected by Architect/Engineer from manufacturer's standard range.
- D. Frame: Channel lay-in frame for suspended grid ceilings.
- E. Accessories: Provide 1 filter frame and thumbscrew for hinged face access.

2.04 FABRIC AIR DISTRIBUTION DEVICES

- A. General Requirements:
 - 1. Diffuser material to comply with ASTM E84, UL 723, UL 2518, NFPA 90A, and NFPA 90B.
 - 2. Air Dispersion Method:
 - 3. Hanger Supports:

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Check location of outlets and inlets and make necessary adjustments in position to comply with architectural features, symmetry, and lighting arrangement.
- C. Install diffusers to ductwork with air tight connection.
- D. Provide balancing dampers on duct take-off to diffusers, and grilles and registers, despite whether dampers are specified as part of the diffuser, or grille and register assembly.

3.02 AIR OUTLET AND INLET SCHEDULE

- A. See Contract Drawings.

END OF SECTION

SECTION 23 4000
HVAC AIR CLEANING DEVICES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Disposable panel filters.

1.02 REFERENCE STANDARDS

- A. UL 900 - Standard for Air Filter Units; Current Edition, Including All Revisions.

1.03 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide data on filter media, emitter size configuration, filter performance data, filter assembly and filter frames, dimensions, motor locations and electrical characteristics and connection requirements.

PART 2 PRODUCTS

2.01 FILTER MANUFACTURERS

- A. American Filtration Inc: www.americanfiltration.com/#sle.
- B. AAF International/American Air Filter: www.aafintl.com/#sle.
- C. The Camfil Group: www.camfilfarr.com/#sle.
- D. Substitutions: See Section 01 6000 - Product Requirements.

2.02 DISPOSABLE PANEL FILTERS

- A. Media: UL 900 Class 2, fiber blanket, factory sprayed with flameproof, non-drip, non-volatile adhesive.
 - 1. Thickness: 2 inch.
- B. Performance Rating:
 - 1. Face Velocity: 500 fpm.
 - 2. Initial Resistance: 0.15 in-wc.
 - 3. Recommended Final Resistance: 0.50 in-wc.
- C. Casing: Cardboard frame.
- D. Holding Frames: 20 gauge, 0.0359 inch minimum galvanized steel frame with expanded metal grid on outlet side and steel rod grid on inlet side, hinged with pull and retaining handles.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install air cleaning devices in accordance with manufacturer's instructions.
- B. Prevent passage of unfiltered air around filters with felt, rubber, or neoprene gaskets.
- C. Install filter gauge static pressure taps upstream and downstream of filters. Mount filter gauges on outside of filter housing or filter plenum, in accessible position. Adjust and level.
- D. Do not operate fan system until filters (temporary or permanent) are in place. Replace temporary filters used during construction and testing, with clean set.

- E. Provide filter gauges on filter banks, installed with separate static pressure taps upstream and downstream of filters.

END OF SECTION

SECTION 23 7413
PACKAGED ROOFTOP AIR-HANDLING UNITS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Packaged roof top unit.
- B. Unit controls.
- C. Roof mounting curb and base.

1.02 RELATED REQUIREMENTS

- A. Section 23 0548 - Vibration and Seismic Controls for HVAC.
- B. Section 26 0583 - Wiring Connections: Electrical characteristics and wiring connections.

1.03 REFERENCE STANDARDS

- A. AHRI 210/240 - Performance Rating of Unitary Air-Conditioning and Air-Source Heat Pump Equipment; 2023.
- B. ASHRAE Std 135 - A Data Communication Protocol for Building Automation and Control Networks; 2020, with Errata and Amendments (2022).
- C. NFPA 90A - Standard for the Installation of Air-Conditioning and Ventilating Systems; 2024.

1.04 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Provide capacity and dimensions of manufactured products and assemblies required for this project. Indicate electrical service with electrical characteristics and connection requirements, and duct connections.
- C. Shop Drawings: Indicate capacity and dimensions of manufactured products and assemblies required for this project. Indicate electrical service with electrical characteristics and connection requirements, and duct connections.
- D. Manufacturer's Instructions: Indicate assembly, support details, connection requirements, and include start-up instructions.
- E. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions, installation instructions, maintenance and repair data, and parts listing.
- F. Warranty: Submit manufacturer's warranty and ensure forms have been filled out in Owner's name and registered with manufacturer.

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Protect units from physical damage by storing off site until roof mounting curbs are in place, ready for immediate installation of units.

1.06 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Provide a five year warranty to include coverage for refrigeration compressors.

PART 2 PRODUCTS

2.01 MANUFACTURERS - ENERGY RECOVERY UNITS

- A. AAON: www.aaon.com.
- B. Daikin Applied: www.daikinapplied.com.
- C. Trane, a brand of Ingersoll Rand: www.trane.com.
- D. York International Corporation/Johnson Controls Inc: www.johnsoncontrols.com/#sle.
- E. Addison: www.addison-hvac.com
- F. Valent: www.valentair.com
- G. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MANUFACTURED UNITS

- A. Description: Self-contained, packaged, factory assembled and prewired, consisting of cabinet and frame, supply fan, return fan, electric heating elements, energy recovery, controls, air filters, refrigerant cooling coil and compressor, condenser coil and condenser fan.
- B. Electrical Characteristics:
 - 1. 208 VAC, three phase, 60 Hz.
- C. Disconnect Switch: Factory mount disconnect switch on equipment under provisions of Section 26 2717.

2.03 FABRICATION

- A. Cabinet: Steel with baked enamel finish, including access panels with screwdriver operated flush cam type fasteners. Structural members shall be minimum 18 gage, 0.0478 inch, with access doors or panels of minimum 20 gage, 0.0359 inch. DOAS units shall have double wall construction.
- B. Insulation: one inch thick neoprene coated glass fiber with edges protected from erosion. DOAS units shall have 1" injected foam wall insulation.
- C. Supply and Exhaust Fan: Forward curved centrifugal type, resiliently mounted direct drive or with V-belt drive, adjustable variable pitch pulley, and rubber isolated hinge mounted high efficiency motor or direct drive; see Section 23 0548. Isolate complete fan assembly.
- D. Air Filters:
 - 1. 2 inch thick glass fiber disposable media in metal frames.
- E. Insulated Roof Mounting Curb: 16 inches high galvanized steel, channel frame with gaskets, nailer strips, fiberglass insulation, and sheetmetal liner. All unit curbs shall be suitable for sloped roofs, verify actual field conditions.

2.04 ELECTRIC HEATING COIL

- A. Finned tube heating elements easily accessible with automatic reset thermal cut-out, built-in magnetic contactors, galvanized steel frame, control circuit transformer and fuse, manual reset thermal cut-out, airflow proving device, toggle switch (pilot duty), load fuses.
- B. Controls: Modulating/SCR. Start supply fan before electric elements are energized and continue operating until air temperature reaches minimum setting, with switch for continuous

fan operation.

2.05 EVAPORATOR COIL

- A. Provide copper tube aluminum fin coil assembly with galvanized drain pan and connection.
- B. Provide capillary tubes or thermostatic expansion valves for units of 6 Tons of refrigeration capacity and less, and thermostatic expansion valves and alternate row circuiting for units 7.5 Tons of refrigeration cooling capacity and larger.
- C. Provide stainless steel drain pans for DOAS units.

2.06 COMPRESSOR

- A. Provide hermetic compressors, 3600 rpm maximum, resiliently mounted with positive lubrication, crankcase heater, high and low pressure safety controls, motor overload protection, suction and discharge service valves and gauge ports, and filter drier.
- B. Variable capacity first compressor. Staged additional compressors.
- C. Five minute timed off circuit to delay compressor start.
- D. Sound blanket for reduction of compressor noise.

2.07 CONDENSER COIL

- A. Provide copper tube aluminum fin coil assembly with subcooling rows and coil guard.
- B. Provide direct drive propeller fans, resiliently mounted with fan guard, motor overload protection, wired to operate with compressor. Provide high efficiency fan motors. All DOAS units shall have inverter driven compressors.
- C. Provide refrigerant pressure switches to cycle condenser fans.

2.08 MIXED AIR CASING

- A. Dampers: Provide outside and relief dampers with damper operator and control package to automatically vary outside air quantity. Outside air damper to fail to closed position.
- B. Exhaust Fan: Provide powered exhaust fan, controlled by outdoor air damper position.
- C. Gaskets: Provide tight fitting dampers with edge gaskets.
- D. Damper Operator: 24 volt with gear train sealed in oil.

2.09 OPERATING CONTROLS

- A. Provide a BACnet IP certified control interface for future connection by others.
- B. Factory-supplied, field-installed duct mounted supply and return temperature and humidity sensors.
- C. Provide low limit thermostat in supply air to close outside air damper and stop supply fan.

2.10 ENERGY RECOVERY WHEEL (ON DOAS UNITS)

- A. Energy Recovery Cassette to consist of frame wheel, wheel drive system, and energy transfer segments. Segments are removable for cleaning or replacement.
- B. Segments rotate through counter flowing exhaust and outdoor air supply streams where they transfer heat and/or water vapor from the warm, moist air stream to the cooler and/or drier air stream.
- C. Provide staged energy recovery defrost control for DOAS units.

- D. BAS, SCADA, or other Integrated Automation Link: ASHRAE Std 135 BACnet IP.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that roof is ready to receive work and opening dimensions are as indicated on shop drawings.
- B. Verify that proper power supply is available.

3.02 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install in accordance with NFPA 90A.
- C. Mount units on factory built roof mounting curb providing watertight enclosure to protect ductwork and utility services. Install roof mounting curb level.

3.03 SYSTEM STARTUP

- A. Prepare and start equipment. Adjust for proper operation.

3.04 SCHEDULES

- A. See Contract Drawings.

END OF SECTION

SECTION 23 8149
GROUND-SOURCE UNITARY HEAT PUMPS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. High-efficiency, dual-stage, horizontal/vertical GCHP.

1.02 RELATED REQUIREMENTS

- A. Section 23 0529 - Hangers and Supports for HVAC Piping and Equipment.
- B. Section 23 0593 - Testing, Adjusting, and Balancing for HVAC.
- C. Section 23 2113 - Hydronic Piping: Load-side piping.
- D. Section 23 2113.33 - Ground-Loop Heat-Pump Piping.
- E. Section 23 2114 - Hydronic Specialties: Valves, strainers, PT test plugs, and other fittings.
- F. Section 25 1500 - Integrated Automation Software.
- G. Section 26 0583 - Wiring Connections.

1.03 ABBREVIATIONS AND ACRONYMS

- A. BACnet IP: BACnet communications over internet protocol.
- B. BAS: Building Automation System; controls.
- C. BMS: Building Management System; controls.
- D. COP: Coefficient of Performance; applicable when heating.
- E. EAT: Entering Air Temperature.
- F. EER: Energy Efficiency Ratio; applicable when cooling.
- G. EWT: Entering Water Temperature; coil or heat exchanger.
- H. GSHP: Ground-Source Heat Pump; uses refrigerant-filled, buried pipe-loop as heat sink.

1.04 REFERENCE STANDARDS

- A. ASHRAE Std 135 - A Data Communication Protocol for Building Automation and Control Networks; 2020, with Errata and Amendments (2022).
- B. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials; 2023d.
- C. UL 94 - Tests for Flammability of Plastic Materials for Parts in Devices and Appliances; Current Edition, Including All Revisions.

1.05 SUBMITTALS

- A. See Section 01 3000 - Administrative Requirements for submittal procedures.
- B. Product Data: Manufacturer's data sheets for each product furnished, including:
 - 1. Electrical and performance data showing compliance with specifications.
 - 2. Required water flow rates and temperatures for inflow and outflow.
 - 3. Detailed electrical wiring diagrams.
 - 4. Storage and handling requirements and recommendations.
 - 5. Installation instructions.
 - 6. Start-up, troubleshooting, and TAB instructions.

7. Specimen warranty.
- C. Shop Drawings: Indicate piping connections and interface to supply and return ductwork, source-side water piping to buried loop, circulator pumps, and condensate drains. Include control wiring diagrams prepared specifically for this project including unit controls interface.
- D. Operation and Maintenance Data: Include replaceable parts lists, parts sources, and troubleshooting guide.
- E. Warranty: Submit manufacturer warranty and ensure that forms have been completed in Owner's name and registered with manufacturer.

1.06 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products of the type specified in this section, with not less than three years of documented experience.
- B. Installer Qualifications: Company specializing in performing the work of the type this section and approved by manufacturer.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Verify upon delivery that equipment nameplate data, including electrical data, matches specified and ordered equipment. Verify that refrigerant charge has been retained during shipping.
- B. Store products in manufacturer's unopened packaging until ready for installation.
- C. Store products under cover and elevated above grade.

1.08 WARRANTY

- A. See Section 01 7800 - Closeout Submittals for additional warranty requirements.
- B. Provide five year manufacturer warranty for compressors and motors, expansion devices, heat exchangers, and reversing valves.

PART 2 PRODUCTS

2.01 UNITARY HEAT PUMP PERFORMANCE REQUIREMENTS

- A. High-efficiency, Dual-stage, Horizontal/Vertical Heat Pump:
 1. Ground or Surface-Water Conditions:
 - a. Heating Mode: 23 degrees F.
 - b. Cooling Mode: 104 degrees F.
 2. Single-Point Power Feed: 208-230VAC single or three phase as scheduled at 60 Hz.

2.02 GENERAL UNITARY HEAT PUMP FABRICATION REQUIREMENTS

- A. Energy Efficiency: ASHRAE Std 90.1 I-P EER and COP ratings, minimum.
- B. Factory assemble internal components, safety controls, accessories, filters, piping, cable, and wires, then charge with R-410A refrigerant prior to testing.
- C. Include factory mounted and programmed digital controller and zone sensor with over-ride and local temperature adjustment. Controller shall have BACNet IP interface.
- D. Comply with UL 1995, place service and caution labels on unit.

- E. Equipment of sizes larger than indicated, requiring additional electrical service, larger sized piping or pumps, or other modifications, may be accepted provided necessary modifications are accomplished as part of work of this section at no additional cost.
- F. Cabinet Assembly:
1. Construct of zinc-coated, heavy-gauge, galvanized steel with exposed edges rounded.
 2. Finish: Factory apply electrostatic powder paint or baked enamel finish. Coordinate with Architect/Engineer for specific color finish requirements of console units or other units installed within occupied spaces.
 3. Provide access panels for inspection, cleaning, and servicing of refrigerant, controls, condensate drain pan, coil, and blower.
 4. Furnish 1-inch or 3-inch duct flange on open-discharge selections.
 5. Interior Insulation: Minimum 1/2 inch thick, dual-density, bonded glass fiber.
 6. Provide flame spread of less than 25, and smoke developed classification of less than 50 in accordance with ASTM E84 and UL 723.
 7. Sound and Noise Suppression:
 - a. Mechanical Rooms: 18 gauge, 0.05 inch, minimum.
 - b. Occupied Spaces: 16 gauge, 0.06 inch, minimum.
 - c. Compressor enclosure lined with 1/2 inch thick insulation.
 - d. Include vibration isolation between compressor and heat exchanger.
 - e. Include length-wise unit base stiffeners.
 - f. Foam gasket sealant around compressor and end panel perimeter.
- G. Blower Section:
1. Draw-through, forward-curved fan, constructed of corrosion-resistant, galvanized material and designed for efficient, quiet operation.
 2. Factory program for both soft start and constant flow output over static pressure range.
 3. Provide preinstalled neutral-wire protection when required to support specified fan type.
 4. Motor to include thermal overload protection, quick-disconnect plug, and permanently lubricated bearings.
 5. Belt-Driven Motor Requirements: Provide adjustable blower-motor/sheave combination device based on indicated flow performance requirements.
 6. Variable Speed Control: Configure controller to maintain adjustable flow setpoint for modulating or speed-switched units.
 7. Fan Turndown: Design control features to allow fan-speed reduction to adjustable 50 percent of its capacity when zone set point temperature is satisfied or when unit runs in fan-only mode.
- H. Evaporator Section:
1. Internally finned, aluminum or copper tubes mechanically bonded to configured aluminum plate fin, corrosion-inhibitor coated as indicated.

2. Refrigerant Coil Distributor Assembly: Orifice style with round copper distributor tubes.
 3. Thermostatic Expansion Valve: Factory select and install for wide control range.
 4. Factory leak test to minimum 450 psi and pressure test to minimum 600 psi.
 5. Tubes: Size tubes consistent with coil capacity. Fabricate suction header from rounded copper pipe.
 6. Completely evacuate air and charge with proper column of refrigerant prior to shipment.
- I. Compressor Section:
1. Provide rubber mounting devices located underneath compressor mounting base.
 2. Safety Interlocked Devices:
 - a. Thermal overload protection.
 - b. High-pressure switch for protection against excessive discharge pressure.
 - c. Low-pressure safety for protection against loss of refrigerant charge.
- J. Refrigerant Tubing Lines:
1. Tubing made of copper with service pressure ports on high- and low-pressure sides.
 2. Free from contaminants and conditions such as drilling fragments, dirt, and oil.
 3. Include drier, thermal expansion valve, and other related components.
 4. Freeze Protection: 30 degrees F, thermistor based.
 5. Insulation: Air and heat exchanger sides; minimum 3/8 inch thick elastomeric insulation.
- K. Refrigerant Load Control:
1. Hot-Gas Bypass: Provide to increase heat transfer efficiency at low temperatures.
 2. Hot-Gas Reheat Coil:
 - a. Humidity Control: Upgrade thermostat to include humidity sensor tied to unit controller for integral dehumidification control.
 - b. Coil Assembly: Aluminum or copper tubes mechanically expanded into evenly spaced aluminum fins.
 - c. Coil Testing: Proof test at minimum of 1.5 times maximum operating pressure, then leak test at maximum operating pressure.
- L. Water-to-Refrigerant Heat Exchanger:
1. Coaxial Type: Provide aluminum or copper tube and fins.
 2. Brazed-Plate Type: Stainless steel, with bidirectional liquid line filter drier.
 3. Insulate heat exchanger, water lines, and refrigerant suction lines for prevention of condensation at temperatures below 60 degrees F.
 4. Provide rubber isolation to heat exchanging device for enhanced sound attenuation.
 5. Freeze Protection: 35 degrees F by thermistor sensing.
 6. Minimum Working Pressure: 400 psi waterside, 600 psi D side.
 7. End Connections: Copper NPT. Provide flow shut-off ball valves.
 8. Accessories:
 - a. Strainer, PT test plug, and flow regulator.

- b. Unit-controlled, return-waterside solenoid valve.
- M. Filter Section:
 - 1. ASHRAE Std 52.2, minimum efficiency reported value or MERV listing.
 - 2. Filter Box: Provide field-installed, return-duct-mounted filter housing with side access.
- N. Electrical:
 - 1. Provide factory-installed phase loss safety device for 3-phase units.
 - 2. Configure unit for single-point connection, include terminal for field-installed components.
 - 3. Include separate holes and knockouts with plastic ferrules for respective electrical and controls wiring.
- O. Unit Controls:
 - 1. DDC:
 - a. Tested to monitor and handle sequencing functions and other operational modes using field-mounted thermostat and other sensors.
 - b. Coordination and Sequencing:
 - 1) Internal Devices: Include compressors, blower, sensors, switches, valves, safeties, other components.
 - 2) Field-Installed Devices: Solenoid valves, thermostat, EWT sensors, LWT sensors, load-pump contact, source-pump contact, and other devices required for operation.
 - 3) Safeties: At minimum include anti-short-cycle compressor protection, condensate overflow, refrigerant high pressure, refrigerant low pressure, loss-of-charge, refrigerant freeze protection, and freezestat.
 - 2. Thermostat:
 - a. Field mounted and wired, tied into prewired control-interface terminals.
 - b. Averaging capability among multiple sensors where noted on the drawings.
 - c. Thermostat: Single-gang-box-mounted platinum or thermistor.
 - 1) Local Interface to Include:
 - (a) Setpoint adjustment control.
 - (b) Status indicating manual override.
 - (c) Dial, knob, lever, or slider interface.

2.03 HIGH-EFFICIENCY, DUAL-STAGE, HORIZONTAL/VERTICAL, GROUND-COUPLED HEAT PUMP

- A. Manufacturers:
 - 1. AAON Inc: www.aaon.com.
 - 2. Carrier Corporation: www.carrier.com/#sle.
 - 3. ClimateMaster, Inc: www.climatemaster.com.
 - 4. Daikin Industries, Ltd: www.daikin.com.
 - 5. Substitutions: See Section 01 6000 - Product Requirements.

- B. Cabinet Air Discharge Configuration: As indicated on drawings.
- C. Compressors: High-efficiency, hermetically sealed, dual-stage scroll type.
- D. Water-to-Refrigerant Heat Exchanger: Coaxial type with factory-supplied water economizer.
- E. Refrigerant Load Control: Provide hot-gas bypass and hot-gas reheat coil.
- F. Blower Section: Provide static or flow-controlled, variable-speed, belt-driven fan motor.
- G. Filter Section: Include MERV 13 rated air filter.
- H. Electrical: 208-230 Volt, single or three phase, 60 Hz with field-installed disconnect switch.
- I. Accessories: Provide flexible-pipe connectors and return-air hinged acoustical door.
- J. Unit Controls: Factory-supplied DDC with blind-face thermostat.
 - 1. BAS, SCADA, or other Integrated Automation Link: BACnet IP in accordance with ASHRAE Std 135.
 - 2. Control Valve: Return-installed, modulating, pressure-independent ball type; manufacturer provided.

2.04 WATERSIDE ACCESSORIES

- A. Ground-Source-Loop Circulating Pumps:
 - 1. Hose Kits: Automatic flow control valve with pressure/temperature ports, lever handle, stainless steel braided hoses and isolation ball valve. Hose lengths as required.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that available power supply complies with equipment specifications.

3.02 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.03 INSTALLATION

- A. Operate units in stand alone mode temporarily without BAS connection.
- B. Install equipment in accordance with manufacturer's written installation instructions.
- C. Unit Mounting:
 - 1. Above Finished Floor: Include hangers and supports; see Section 23 0529.
 - 2. Do not obstruct maintenance access to equipment by any type of piping, electrical conduit, or other utility.
- D. Ground-Water Source:
 - 1. Connections to Existing Systems: Obtain approval before interrupting service; notify Architect/Engineer in writing at least 10 business days prior to start pending connections.
 - 2. Connect waterside piping to buried piping source loop; see Section 23 2113 and 23 2114 for related piping and hydronic specialties.
 - 3. Fit-in and install externally interconnected equipment, devices, and components such as pumps and heat exchanger as applicable to specific selections.

4. Flush and clean piping before placing in operation; take precautions to prevent introduction of debris into piping systems.
- E. Electrical: Provide equipment raceway, wiring, and cables; see Section 26 0583.
- F. Controls: Provide and install Cat 5e control wiring from unit sensor/room controllers to each unit and from each unit controller to Owner's control cabinets in IT Closet 012, coiling 10 ft of cable for final connection by others.
- G. Start system and adjust controls and equipment so as to give satisfactory operation.
- H. Adjust water temperature control system and place in operation so that water quantities circulated are as required.

3.04 FIELD QUALITY CONTROL

- A. Upon completion and before final acceptance of work, test each system to demonstrate compliance with the contract requirements.
 1. Adjust controls and balance systems prior to final acceptance of completed systems.
 2. Test controls through every cycle of operation.
 3. Test safety controls to demonstrate performance of required function.
 4. Furnish water, electricity, instruments, connecting devices, and personnel for tests.
 5. Clean equipment, piping, strainers, ducts, and filters.
 6. Coordinate testing with testing of related piping, specified elsewhere.
 7. Correct defects in work and repeat tests.
- B. Coordinate BAS, BMS, or Integrated Automation linking between unit controllers and remote front-end interface; see Section 25 1500.
- C. Additional requirements for testing, adjusting, and balancing (TAB) of piping, equipment, and controls are specified in Section 23 0593.
- D. Within 30 calendar days after acceptable completion of testing, submit each test report for review and approval; include:
 1. Unit nameplate data, and actual voltage and ampere consumption.
 2. Load-side supply and return water flow and temperatures, and measurement equipment.
 3. Source-side supply and return water flow and temperatures, and measurement equipment.
 4. Ambient air temperature at heat pump unit.
 5. Date and name and signature of person testing and reporting.

3.05 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Date of Substantial Completion.

END OF SECTION

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SECTION 26 0500
BASIC ELECTRICAL REQUIREMENTS

GENERAL

1.01 SECTION INCLUDES

- A. Basic Electrical Requirements specifically applicable to Division 26 Sections, in addition to Division I - General Requirements.

1.02 SCOPE OF WORK

- A. This Specification and the accompanying drawings govern the work involved in furnishing, installing, testing and placing into satisfactory operation the Electrical Systems as shown on the drawings and specified herein.
- B. Each Contractor shall provide all new materials as indicated in the schedules on the drawings, and/or in these specifications, and all items required to make his portion of the Electrical System a finished and working system.

1.03 WORK SEQUENCE

- A. All construction work that will produce excessive noise levels and interference with normal building operations, as determined by the Owner, shall be scheduled with the Owner. It may be necessary to schedule such work during non-occupied hours. The Owner shall reserve the right to set policy as to when restricted construction hours will be required.

1.04 DIVISION OF WORK BETWEEN MECHANICAL, ELECTRICAL & CONTROL CONTRACTORS

- A. Definitions:
 - 1. Mechanical Contractors as referred to herein refers to the Contractors listed in the 210000,220000,230000 and 250000 series of this Specification.
 - a. Plumbing Contractor.
 - b. HVAC Contractor.
 - c. Temperature Control Contractor.
 - 2. Motor Power Wiring. The single phase or 3 phase wiring extending from the power source (transformer, panelboard, feeder circuits, etc.) through disconnect switches and motor controllers to, and including the connections to the terminals of the motor.
 - 3. Motor Control Circuit Wiring. The wiring associated with the remote operation of the magnetic coil of a magnetic motor starter or relay, or the wiring which permits the direct cycling of the motor by means of a device in series with the motor power wiring. In the latter case the devices are usually single phase, have Manual -Off -Auto provisions, and are usually (but not always) connected into the motor power wiring through a manual motor starter.
 - 4. Control devices such as start-stop push buttons, thermostats, pressure switches, flow switches, other relays, etc., generally represent the type of equipment associated with motor control circuit wiring.

5. Motor control circuit wiring is single phase and usually will be 120 volts. In some instances, the voltage will be the same as the motor power wiring. Generally, where the motor power wiring exceeds 120 volts, a control transformer is provided to give a control voltage of 120 volts.
6. Temperature Control Wiring: The wiring associated with the operation of a motorized damper, solenoid valve or motorized valve, etc., either modulating or two (2) position, as opposed to wiring which directly powers or controls a motor used to drive equipment such as fans, pumps, etc.
7. This wiring will be from a 120 volt source and may continue as 120 volt if applicable or be reduced in voltage (24 volt) in which case a control transformer shall be furnished as part of the temperature and comfort control wiring.
8. Control Motor: Where the term Control Motor is used without other clarification, it means an electrical device used to operate dampers, valves, etc. It may be of such a design to produce two position or modulating operation of the operated device. Conventional characteristics of such a motor are 24 volts, 60 cycles, 1 phase, although other voltages at times may be encountered.

B. General:

1. The purpose of these Specifications is to outline the Electrical and Mechanical Contractor's work responsibilities as related to control wiring, starters, disconnects and other electrical work required for items such as temperature controls, mechanical equipment, fans, chillers, compressors, etc. The exact wiring requirements for much of the equipment cannot be determined until the systems have been purchased and submittals approved. Therefore, only known wiring, as related to such items, is shown on the electrical drawings as being by the Electrical Contractor. Other wiring not shown on the electrical drawings but required for the mechanical equipment and systems shall be the responsibility of the Mechanical Contractor.
2. Where the drawings require the Electrical Contractor to wire between various pieces of equipment furnished by the Mechanical Contractor, such wiring shall be terminated at terminals provided in the equipment. It is the Mechanical Contractor's responsibility to provide complete wiring diagrams and supervision to the Electrical Contractor and to designate the terminal numbers for the correct wiring of the equipment.

C. Mechanical Contractor's Responsibility:

1. Assumes all responsibility for the internal wiring of all equipment provided by the Mechanical Contractor, for example:
 - a. Burners
 - b. Gas Trains
 - c. Package Air Handling Units
 - d. Condensing Units

- e. Water Chillers
 - 2. Assumes all responsibility for miscellaneous items provided by the Mechanical Contractor that require wiring but are not shown on the electrical drawings or specified in the Electrical Specification. If items such as relays, flow switches, or interlocks are required to make the mechanical system function correctly or are required by the manufacturer, they are the responsibility of the Mechanical Contractor. Assumes all responsibility for the Temperature Control wiring, if the Temperature Control Contractor is a Subcontractor to the Mechanical Contractor.
- D. Temperature Control Contractor's or Subcontractor's Responsibility:
- 1. Assumes all responsibility for the complete wiring of any devices necessary to make the Temperature Control System functional.
 - 2. Assumes the responsibility for verifying any control wiring shown on the electrical drawings as being by the Electrical Contractor. If any wiring is required for the Control System, but not shown or scheduled on the electrical drawings, it shall be the responsibility of the Temperature Control Subcontractor.
 - 3. Assumes the responsibility of coordinating equipment locations (such as PE's, EP's, relays, transformer and etc.) with the Electrical Contractor where the wiring of the equipment is shown to be by the Electrical Contractor.
- E. Electrical Contractor's Responsibility:
- 1. Furnishes and installs all combination starters as shown on the Materials List of the Electrical Drawings or as indicated to be by the Electrical Contractor on the Mechanical Equipment Schedule of the Mechanical Drawings.
 - 2. Furnishes and installs all manual starters and disconnect devices as shown on the Materials List of the Electrical Drawings or as indicated to be by the Electrical Contractor on the Mechanical Equipment Schedule of the Mechanical Drawings.
 - 3. Installs and wires to all remote control devices furnished by the Mechanical Contractor or Temperature Control Subcontractor when such items are noted on the Electrical Drawings.
 - 4. Provides motor control wiring where so noted on the drawings.
 - 5. Provides temperature control wiring where so noted on the drawings.
 - 6. Electrical Contractor shall furnish, install and connect all relays, etc., for automatic shutdown of certain mechanical equipment (i.e. supply fans, exhaust fans, etc.) upon actuation of the Fire Alarm System.

1.05 QUALITY ASSURANCE

- A. Qualifications:
- 1. Only products of reputable manufacturers as determined by the Engineer will be acceptable.

2. Each Contractor and his subcontractors shall employ only workmen who are skilled in their respective trades. At all times, the number of apprentices at the job site shall be less than or equal to the number of journeymen at the job site.
- B. Compliance with Codes, Laws, Ordinances:
1. This Contractor shall conform to all requirements of local and State of Iowa, Laws, Ordinances and other regulations having jurisdiction over this installation.
 2. In the event there are no local codes having jurisdiction over this job, the current issue of the National Electrical Code shall be followed.
 3. If there is a discrepancy between the codes and regulations having Jurisdiction over this installation, and these specifications, the codes and regulations shall determine the method or equipment used.
 4. If the Contractor notes, at the time of bidding, any parts of the drawings and specifications which are not in accord with the applicable codes or regulations, he shall inform the Architect/Engineer in writing, requesting a clarification. If there is insufficient time to follow this procedure, he shall submit with his proposal a separate price required to make the system shown on the drawings comply with the codes and regulations.
 5. All changes to the system made after the letting of the contract, in order to comply with the applicable codes or the requirements of the Inspector, shall be made by the Contractor without cost to the Owner.
- C. Permits, Fees, Taxes, Inspections:
1. Procure all applicable permits and licenses.
 2. Abide by all applicable laws, regulations, ordinances, and other rules of the State or Political Subdivision wherein the work is done, or as required by any duly constituted public authority.
 3. Pay all applicable charges for such permits or licenses that may be required.
 4. Pay all applicable fees and taxes imposed by the State, Municipal and/or other regulatory bodies.
 5. Pay all charges arising out of required inspections due to codes, permits, licenses or as otherwise may be required by an authorized body.
 6. Pay any charges by the telephone company related to the service or change in service to the project.
 7. All fixtures, equipment and materials shall be as approved or listed by the following:
(Unless approval or listing is not applicable to an item by all acceptable manufacturers.)
 8. Underwriters' Laboratories, Inc.
- D. Utility Company Requirements:
1. Secure from Utility Company all applicable guidelines that must be followed to make the job comply with their requirements.
 2. Make the installation comply with the Utility Company requirements.

3. Make application for and pay for new electrical service equipment and installation.
 4. Make application for and pay for meters and metering equipment as required by the Utility Company.
 5. Make application and pay for any changes and/or removal of existing electrical service by the Utility Company.
 6. It shall be the Contractor's responsibility to verify compliance of meter used with the Utility Company's standards.
- E. Examination of Drawings:
1. The drawings for the electrical work are completely diagrammatic, intended to convey the scope of the work and to indicate the general arrangements and locations of equipment, outlets, etc. , and the approximate sizes of equipment.
 2. Contractor shall determine the exact locations of equipment and rough-ins, and the exact routing of electrical raceways so as to best fit the layout of the job.
 3. Scaling of the drawings will not be sufficient or accurate for determining these locations.
 4. Where job conditions require reasonable changes in indicated arrangements and locations, such changes shall be made by the Contractor at no additional cost to the Owner.
 5. Because of the scale of the drawings, certain basic items, such as junction boxes, pull boxes, conduit fittings, etc., may not be shown, but where such items are required by other sections of the specifications or where they are required for proper installation of the work, such items shall be furnished and installed.
 6. If an item is either shown on the drawings or called for in the specifications, it shall be considered sufficient for including same in this contract.
 7. The determination of quantities of material and equipment required shall be made by the Contractor from the drawings. Schedules on the drawings and in the specifications are completed as an aid to the Contractor but where discrepancies arise, the greater number shall govern.
 8. Where words provide , install , or furnish are used on the drawings or in the specifications, it shall be taken to mean, to furnish, install and connect up complete and ready for operation, the items mentioned.
- F. Field Measurements:
1. Before ordering any conduit, conductors, wireways, bus duct, fittings, etc., This Contractor shall verify all pertinent dimensions at the job site and be responsible for their accuracy.

1.06 SUBMITTALS

- A. In addition to the provisions of Division 1, the following is required:
1. Submittals shall include all fabrication, erection layout, and setting drawings; manufacturers' standard drawings; schedules; descriptive literature, catalogs and brochures; performance and test data; wiring and control diagrams; and all other drawings

and descriptive data of materials of construction as may be required to show that the materials, equipment or systems and the location thereof conform to the requirements of the contract documents.

2. The Contractor shall submit seven (7) copies of each shop drawing for review by the Architect/Engineer BEFORE releasing any equipment for manufacture or shipment.
3. The Contractor shall thoroughly review and approve all shop drawings before submitting them to the Architect/Engineer. APPROVAL WILL INDICATE THE CONTRACTOR'S REVIEW of all material and a COMPLETE UNDERSTANDING OF EACH WHAT IS TO BE FURNISHED. Contractor shall clearly mark all deviations from the contract documents on all submittals. IF DEVIATIONS ARE NOT MARKED BY THE CONTRACTOR, THEN THE ITEM SHALL BE REQUIRED TO MEET ALL DRAWING AND SPECIFICATION REQUIREMENTS.
4. The Contractor shall clearly mark each item with the same nomenclature applied on the drawings or in the specifications.
5. The Contractor shall clearly indicate the size, finish, material, etc.
6. All submittals shall be assembled in sets such as light fixtures, power distribution, fire alarm, generators, wiring devices, etc. All sets shall be identical.
7. Each set shall be bound in a manufacturer's folder or inside of a manila file folder.
8. Each set shall contain an index of the items enclosed with a general topic description on the cover.
9. Where more than one model is shown on a manufacturer's sheet, the Contractor shall clearly indicate exactly which item and which data is relevant to the work.
10. Failure to comply with the above shall be reason to resubmit all shop drawing submittals.
11. The Engineer's responsibility shall be to review one set of shop drawing submittals for each product. If the first submittal is incomplete or does not comply with the drawings and/or specifications, the Contractor shall be responsible to bear the cost for the Engineer to recheck and handle the additional shop drawing submittals.
12. Submittals shall be required for the following items, unless additional items are required elsewhere in this specification or on the drawings:
 - a. All light fixtures including emergency and exit.
 - b. All panelboards, switchboards, switchgear, fuses, breakers, disconnect switches, motor control centers, manual motor starters, motor starters, ground bars, termination bushings, transformers, pushbuttons and other switches (when part of motor control), pilot lights, and miscellaneous motor control and distribution equipment.
 - c. All cables, wires, conduit, junction boxes, miscellaneous clamps, miscellaneous supports, connectors, raceway, cable tray, splicing kits, lugs, and other miscellaneous items if specified or shown in the contract documents.

- d. All receptacles, toggle switches, coverplates, dimmers, relays, photocells and other lighting control (when not part of a light fixture) , timers, telephone jacks, computer jacks, television jacks and miscellaneous switches and outlets.
 - e. All lightning protection components.
 - f. All intercommunication and miscellaneous systems components: Nurse Call.
 - g. Other items as dictated elsewhere in the contract documents.
- B. PRODUCT DELIVERY, STORAGE, HANDLING MAINTENANCE
- 1. Exercise care in transporting and handling to prevent damage to fixtures, equipment and materials.
 - 2. Store materials on the site so as to prevent damage.
 - 3. Keep fixtures, equipment and materials clean, dry and free from deleterious conditions.

1.07 WARRANTY

- A. Provide one (1) year warranty for all fixtures, equipment, materials and workmanship.
- B. The warranty period for the entire installation described in this Division of the specifications shall commence on the date of final written acceptance unless a whole or partial system or any separate piece of equipment or component is put into use for the benefit of any party other than the installing contractor with prior written authorization. In this instance, the warranty period shall commence on the date when such whole system, partial system or separate piece of equipment or component is placed in operation and accepted in writing by the Owner or his representative.
- C. Warranty requirements shall extend to correction, without cost to the final user, of all Work and/or equipment found to be defective or nonconforming to the contract documents.
- D. THE CONTRACTOR SHALL BEAR THE COST OF CORRECTING ALL DAMAGE RESULTING FROM SUCH DEFECTS OR NONCONFORMANCE WITH CONTRACT DOCUMENTS EXCLUSIVE OF REPAIRS REQUIRED AS A RESULT OF IMPROPER MAINTENANCE OR OPERATION, OR OF NORMAL WEAR AS DETERMINED BY THE ARCHITECT/ENGINEER.
- E. INCANDESCENT LAMPS USED DURING CONSTRUCTION SHALL BE REPLACED WITH NEW LAMPS AT THE TIME THE WARRANTY PERIOD STARTS. REPLACEMENT OF INCANDESCENT AND OTHER LAMP BURNOUTS AFTER THE WARRANTY PERIOD STARTS SHALL BE THE RESPONSIBILITY OF THE FINAL USER.

1.08 INSURANCE

- A. This Contractor shall maintain insurance coverage as set forth in Division 1 of these specifications.

1.09 MATERIAL SUBSTITUTIONS

- A. Where several manufacturer's names are given, the first named manufacturer constitutes the basis for job design and establishes the equipment quality required to be used in this contract.

- B. Any material, article or equipment of other unnamed manufacturers which will adequately perform the services and duties imposed by the design and is of a quality equal to or better than the material, article or equipment identified by the drawings and specifications may be used if approval is secured in writing from the Architect/Engineer not later than ten (10) days prior to the bid opening date. The Contractor bears full responsibility for the unnamed manufacturers equipment adequately meeting the intent of design. The Architect/ Engineer may reject manufacturer at time of shop drawing submittal.
- C. This Contractor may list voluntary add or deduct prices for alternate materials on the bid form. These items will not be used in determining the low bidder. Should a voluntary alternate material be accepted, This Contractor shall assume all costs that may be incurred as a result of using the offered material, article or equipment necessitating extra expense on his part or on the part of other Contractors whose work is affected.
- D. All material substitutions requested later than ten (10) days prior to bid opening will not be considered.

1.10 MANUFACTURERS AND MODEL NUMBERS

- A. Where drawing schedules call out specific manufacturer's model numbers, the numbers are listed solely for the convenience of the contractor.
- B. Where specific manufacturer's model numbers are called out, the Contractor and Material Supplier are responsible for verifying the correct model number. Where scheduled capacities, options, or accessories conflict with model numbers specified, the greater capacity, options, or accessories shall be bid upon and supplied unless addressed by the Engineer prior to Bid date.
- C. Incorrect model numbers shall be brought to the attention of the Engineer when discovered.

1.11 RESOLUTION OF DISCREPANCIES

- A. If discrepancies are found to exist between the project drawings and project specifications, the more restrictive and obligatory document shall prevail as the project requirement.
- B. If discrepancies are found to exist between the requirements of the; Electrical Specifications, the Mechanical Specifications, the Architectural Specifications, and/or the Specification Front End Documents (Bidding Requirements-Agreement, Bonds, and Closeout Documents-Project Forms-Conditions of the Contract), the more restrictive and obligatory document/section(s) shall prevail as the project requirement.

PRODUCTS

2.01 GENERAL

- A. All items of material having a similar function (i.e. safety switches, panelboards, switchboards, contactors, motor starters, dry type transformers), shall be of the same manufacturer. This shall be adhered to unless specifically stated otherwise on drawings or elsewhere in specifications.

EXECUTION

3.01 EXCAVATION, FILL, BACKFILL, COMPACTION

- A. General:

1. The Contractor shall do all necessary excavating, securing, filling, backfilling, compacting, and restoration in connection with his work.

B. Excavation:

1. Excavations for structures, manholes, pits and trenches shall be excavated to accurate, solid, undisturbed foundation beds required for foundations, slabs on grade, etc., and to proper dimensions to permit installation and inspection of forms and other work.
2. Where excavations are carried in error below indicated levels, concrete of same strength as specified for the foundations or thoroughly compacted sand-gravel fill, as determined by the Architect/Engineer shall be placed in such excess excavations under the foundation. Thoroughly compacted, clean, stable soil fill shall be placed in excess excavations under slabs on grade, all at the Contractor's expense.
3. Bottom and sides of excavations shall be trimmed to required grade and lines to receive foundations.
4. Excavations shall be protected against frost action and freezing.
5. Care shall be exercised in excavating so as to not damage surrounding structures, equipment, and buried utilities. In no case shall any major structural footing or foundation be undermined.
6. All trenching shall be performed in a manner to prevent cave-ins and risk to workmen.
7. Where original surface is pavement or concrete, the surface shall be saw cut to provide clean edges and assist in the surface restoration.
8. Excavation shall be performed in all ground characteristics, including rock, if encountered. Each bidder shall visit the premises and determine for himself, by actual observations, borings, or other means, the nature of the soil conditions. The cost of all such inspections, borings, etc. , shall be borne by the bidder.
9. In the case where the trench is excavated in rock, a compacted bed with a depth of 3 inches (minimum) of sand and gravel shall be used to support the conduit unless masonry cradles or encasements are used.
10. Where satisfactory bearing soil is not found at the indicated levels, the Architect/Engineer or their representative shall be notified immediately and no further work shall be done until further instructions are given.
11. Mechanical excavation of the trench to line and grade of the conduit or to the bottom level of masonry cradles or encasements shall be permitted, unless otherwise indicated on the electrical drawings.
12. Mechanical excavation of the trench to line and grade where direct burial cables are to be installed shall be permitted provided the excavation is made to a depth to permit installation of the cable on a fine sand bed having a minimum depth of 3 inches.

C. Dewatering:

1. The Contractor shall be responsible for the furnishing, installation, operation and removal of all dewatering pumps and lines necessary to keep the excavation free of water at all times.
- D. Underground Obstructions:
1. Known underground piping, conduit, feeders, foundations, or other underground obstructions in the vicinity of construction are noted on the drawings. The Contractor is responsible for reviewing all Bid Documents for all trades on the project to determine obstructions indicated. The Contractor shall use great care in making his installation in the vicinity of underground obstruction.
 2. If objects not shown on the drawings are encountered in area of new construction, remove, relocate, or perform extra work as directed by the Architect/Engineer.
- E. Fill and Backfilling:
1. No rubbish or waste material shall be permitted in excavations for trench fill and backfill.
 2. The Contractor shall provide the necessary sand for backfilling.
 3. Dispose of the excess excavated earth as directed.
 4. Soils for backfill shall be suitable for required stability and compaction, clean and free from perishable materials and free from stones greater than 4 inches in diameter. Under no circumstances shall water be permitted to rise in unbackfilled trenches after installation has been placed. No material shall be used for backfilling which contains stones having any dimension greater than 4 inches, frozen earth, debris or earth with an exceptionally high void content.
 5. All trenches and excavations shall be backfilled immediately after installation of conduit, or removal of forms, unless other protection is directed.
 6. Around piers and isolated foundations and structures, backfill and fill shall be placed and consolidated simultaneously on all sides to prevent wedge action and displacement. Fill and backfill materials shall be spread in 6 inch thick uniform horizontal layers with each layer being compacted separately to required density.
 7. All conduit shall be laid on a compacted bed of sand at least 3 inches deep. Backfilling around the conduit with sand, spread in 6 inch layers and compact each layer.
 8. Use sand for backfill up to grade for all conduit located under building slabs or paved areas. All other conduit shall have sand backfill to 6 inches above the top of the conduit.
 9. The backfilling above the sand shall be placed in uniform layers not exceeding 6 inches in depth. Each layer shall be placed, then carefully and uniformly tamped, so as to eliminate the possibility of lateral or vertical displacement.
 10. Where the fill and backfilling will ultimately be under a building, floor or paving, each layer of fill shall be compacted to 95 of the maximum density as determined by AASHTO Designation T-99 or ASTM Designation D-698. Moisture content of soil at time of compaction shall not exceed plus or minus 2 of optimum moisture content as

determined by AASHTO T-99 or ASTM D-698 test.

11. After backfilling of trenches, no superficial loads shall be placed on the exposed surface of the backfill until a period of 48 hours has elapsed.

F. Surface Restoration:

1. Where trenches are cut through graded, planted or landscaped areas, the areas shall be restored to the original condition at completion of the work. All planting and landscaping features removed or damaged during the course of the work shall be replaced to its original condition. A minimum of 6 inches of topsoil shall be applied where disturbed areas are to be seeded or sodded. All lawn areas shall be sodded unless seeding is called out on the drawings or I in the specifications.
2. Concrete or asphalt type pavement, seal coat, rock, gravel or earth surfaces removed or damaged during the course of the work shall be replaced with comparable materials and restored to original condition. Broken edges shall be saw cut and repaired as directed by Architect/Engineer.

3.02 FIELD QUALITY CONTROL

A. General:

1. The Contractor shall conduct all tests required and applicable to the work both during and after construction of the work.
2. The necessary instruments, meters, etc., required to conduct or make the tests shall be supplied by the Contractor who shall also supply a competent technician for making the tests who has been schooled in the proper testing techniques.
3. All cables and wires shall be tested for shorts and grounds following installation and connection to devices. Shorted or grounded wires and cables shall be removed and replaced.
4. Each circuit installed by Contractor over 100 feet in length shall have the most distant outlet or load tested for voltage drop under full load conditions. Full load for outlet(s) shall be determined by multiplying the upstream overcurrent device by 80 percent and applying the calculated load to the most distant location of the circuit. Full load for equipment shall be equipment operating at full output. The Contractor shall increase wire size of circuit until voltage drop is below 3% of rated voltage. The Contractor shall provide a load bank to perform tests.
5. Any wiring device, electrical apparatus or lighting fixture furnished under this contract, if grounded or shorted on any integral live part, shall be removed and the trouble rectified by replacing all defective parts or materials as directed.
6. Cable insulation shall be tested for proper insulation values. Such tests shall include the cable, all splices, and all terminations. Each conductor shall be tested and shall test free from short circuits and grounds and have an insulation value not less than the National Electrical Code Standards. Readings shall be taken between conductors and between

conductors and ground.

7. A record of readings taken shall be supplied to the Architect/Engineer in a neat and understandable form and in triplicate. The record shall include: circuit designation, ampere loading, voltage at circuit overcurrent device, and voltage at circuits extremity under full load as calculated in previous paragraph.
 8. In the event the results obtained in the tests are not satisfactory, This Contractor shall make such adjustments, replacements and changes as are necessary and shall then repeat the test or tests which disclose faulty or defective work or equipment, and shall make such additional tests as the Architect/ Engineer or code enforcing agency deems necessary.
- B. Low Voltage Cable (600 volts and below):
1. Test shall be made by means of an insulation testing device such as a Megger using not less than 500 volts D.C. test potential.
- C. Ground Resistance:
1. Service ground resistance tests shall be conducted using an approved manufactured ground resistance measuring meter. The Contractor shall submit to the Architect /Engineer for approval a test procedure he proposes to use including type of equipment to be used. (Note that the conventional ohmmeter is not an acceptable device.)
 2. Ground resistance measurements shall be made during normal dry weather and not less than 48 hours after a rain. Ground resistance values shall be verified by the Architect /Engineer at the time the readings are taken.
- D. Other Equipment:
1. other equipment furnished and installed by the Contractor shall be given all standard tests normally made to assure that the equipment is electrically sound, all connections properly made, phase rotation correct, fuses and thermal elements suitable for protection against overloads, etc., voltage complies with equipment nameplate rating and full load amperes are within equipment rating.
 2. In the event the results obtained in the tests are not satisfactory, the Contractor shall make such adjustments, replacements and changes as are necessary and shall then repeat the test or tests which disclose faulty or defective work or equipment, and shall make such additional tests as the Architect/Engineer or code enforcing agency deems necessary.

3.03 PROJECT CLOSEOUT

- A. Refer to the Division 1 Section: PROJECT CLOSEOUT for requirements. The following paragraphs supplement the requirements of Division 1.
- B. Before final payment will be authorized, This Contractor must have completed the following:
 1. Submitted operation and maintenance manuals to the Architect/Engineer for review.
 2. Submitted bound copies of approved shop drawings.

3. Submitted a report stating the instructions given to the Owner's representative complete with the number of hours spent in the instruction. The report shall bear the signature of an authorized agent of This Contractor and shall be signed by the Owner's representative as having received the instructions.
4. Submitted inspection and testing report by the fire alarm system manufacturer.
5. Submitted start-up reports on all equipment requiring a factory installation inspection and/or start.

3.04 OPERATION AND MAINTENANCE MANUAL

- A. As part of instructing the Owner, This Contractor shall assemble, organize, and bind operation and maintenance manuals on the electrical systems installed.
- B. Submit three (3) properly indexed and bound copies of the manual to the Architect/Engineer for approval. Make all corrections or additions required.
- C. Operation and Maintenance Manuals shall consist of the following:
 1. Title page with project title, Architect, Engineer, and Contractor, with addresses, telephone numbers, and contacts.
 2. Table of Contents describing index.
 3. Listing of all Subcontractors and major equipment suppliers with addresses, telephone numbers, and contacts.
 4. Index tabs dividing information by specification section, major equipment, or systems.
- D. Operation and Maintenance Data on Equipment or Systems shall include:
 1. Schematic wiring diagrams of the equipment which have been updated for field conditions. Field wiring shall have label numbers to match drawings.
 2. Dimensional drawings of equipment.
 3. Detailed parts list with list of suppliers.
 4. Operating procedures for each system.
 5. Maintenance schedule and procedures. Include maintenance chart that lists routine maintenance requirements and frequency over one year time period.
 6. Repair procedures for major components.
 7. Replacement parts and service material requirements for each system and the frequency of service required.
 8. Instruction books, cards, and manuals furnished with the equipment.

3.05 INSTRUCTING THE OWNER'S REPRESENTATIVE

- A. Adequately instruct the Owner's designated representative or representatives in the maintenance, care, and operation of the complete systems installed under this contract.
- B. Provide verbal and written instructions to the Owner's representative or representatives by FACTOR PERSONNEL in the care, maintenance, and operation of the equipment and systems.

- C. The Owner has the option to video tape the instructions to the Owner. Coordinate schedule of instructions to facilitate this recording.
- D. The Architect/Engineer shall be notified of the time and place for the verbal instructions to be given to the Owner's representative so that either he or his representative can be present if desirable.
- E. Minimum manhours of instruction time for each item and/or system shall be as follows:
 - 1. Distribution System - 1/2 Hour.
 - 2. Lighting Systems - 1 Hour.
 - 3. Balance of Project - 1/2 Hour.
- F. The Contractor is responsible for all instructions to the owner and/or his operating staff on the electrical and specialized systems. If the Contractor does not have Engineers and/or Technicians on staff that can adequately provide the required instructions on system operation, performance, troubleshooting, care and maintenance, he shall include in his bid an adequate amount to hire the Engineer to perform these instructions.

3.06 SYSTEM COMMISSIONING

- A. The electrical systems included in the construction documents are to be complete and operating systems. The Architect /Engineer will make periodic job site observations during the construction period. The system start-up, testing, balancing, and satisfactory system performance is the responsibility of the Contractor. This shall include all calibration and adjustments of electrical equipment controls, balancing of loads, trouble shooting and verification of software, and final adjustments that may be required.
- B. All operating conditions and control sequences shall be simulated and tested during the start-up period. Testing shall also include all interlocks, safety shut-downs, system operations, and alarms.
- C. The Contractor, subcontractors, and equipment suppliers are expected to have skilled technicians to insure that the system performs as designed. If the Architect /Engineer is requested to visit the job site for the purpose of trouble shooting, assisting in the satisfactory start-up, obtaining satisfactory equipment operation, resolving installation and/or workmanship problems, equipment substitution issues or unsatisfactory system performance, including call backs during the warranty period through no fault of the design; the Contractor shall reimburse the Architect/Engineer on a time and material basis for services rendered at the Architect /Engineer's standard hourly rates in effect at the time the services are requested. The Contractor shall be responsible for making payment to the Architect /Engineer for services required that are product, installation or workmanship related. Payment is due within 30 days after services are rendered.

3.07 RECORD DOCUMENTS

- A. Refer to the Division 1 Section: PROJECT CLOSEOUT for requirements. The following paragraphs supplement the requirements of Division 1.

- B. Mark specifications to indicate approved substitutions; Change Orders, actual equipment and materials used.
- C. This Electrical Contractor shall maintain at the job site a separate and complete set of electrical drawings upon which he shall clearly and permanently mark and note in complete detail any changes made to the location and arrangement of the electrical apparatus or made in the electrical system and wiring as a result of building construction conditions or as a result of instructions from the Architect or Engineer.
- D. Such record of changes shall be made daily by This Contractor and the marked drawings shall be available for the Architect and Engineer's examination at any normal work time.
- E. Upon completion of the job, and before final payment is made, This Contractor shall provide as built drawings prepared in AutoCAD release 2002 or higher to the Architect/Engineer.

3.08 PAINTING

- A. This Contractor shall paint any equipment which is marred or damaged prior to the Owner's acceptance and occupancy. Paint and color shall match original equipment paint and shall be obtained from the equipment supplier when available. All equipment shall have a finished coat of paint applied unless specifically allowed to be provided with a prime coat only.
- B. Equipment located in finished areas and which will be painted to match the room decor will be painted by others. Should This Contractor install equipment in a finished area after the area has been painted by others, he shall be responsible for having the equipment and all of its supports, hangers, etc., painted to match the room decor at the Contractor's expense. Painting shall be performed as described in project specifications.
- C. Equipment cabinets, casings, covers, metal jackets, etc., located in equipment rooms or concealed spaces, shall be furnished in standard finish free from scratches, abrasions, chippings, etc.
- D. Equipment located in occupied spaces, or if standard to the unit, shall have a baked primer with baked enamel finish coat free from scratches, abrasions, chipping, etc. if color option is specified or color option given as standard to the unit, This Contractor shall, before ordering, verify with the Architect /Engineer his color preference and shall furnish this color.
- E. This Contractor shall paint equipment located in unfinished areas such as boiler room, mechanical spaces, storage room, etc., furnished by him. If certain equipment is furnished with a factory coat of paint and enamel, it need not be painted, providing the factory applied finish is in no way marred or spattered and meets color requirements specified. If damaged, the item or piece of equipment shall be refinished with the same paint or enamel that was factory applied.
- F. All electrical conduit and equipment, fittings, hangers, structural supports, etc., in unfinished areas, such as equipment and storage room area, shall be painted two (2) coats of oil paint of colors selected by the Architect/Engineer.
- G. Electric conduits shall NOT be painted in crawl spaces, tunnels, or spaces above suspended ceilings except that where conduit is in a damp location exposed threads at joints shall be given

two coats of sealer after joint is made up.

- H. After surfaces have been thoroughly cleaned and are free of oil, dirt or other foreign matter, the raceway or equipment shall be painted with the following paint materials:
 - I. Bare Metal Surfaces -- Apply one coat of metal primer suitable for use on metal being painted. Finish with two coats of Alkyd base enamel paint.
 - J. Plastic Surfaces -- Paint plastic surfaces with two coats of semi-gloss acrylic latex paint.
 - K. Color of paint shall be as specified by Room Finish Schedule found on the architectural drawings, or as directed by the Architect.

3.09 ADJUST AND CLEAN

- A. Contractor shall thoroughly clean all equipment and systems prior to the Owner's final acceptance of the project.
- B. Contractor shall clean all foreign paint, grease, oil, dirt, labels, stickers, and other foreign material from equipment and fixtures.
- C. Contractor shall remove all rubbish, debris, etc., accumulated during the Contractor's operations from the premises.

END OF SECTION

SECTION 26 0519

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Single conductor building wire.
- B. Wire and cable for 600 volts and less.
- C. Wiring connectors.
- D. Electrical tape.
- E. Wire pulling lubricant.
- F. Cable ties.

1.02 RELATED REQUIREMENTS

- A. Section 07 8400 - Firestopping.
- B. Section 26 0526 - Grounding and Bonding for Electrical Systems: Additional requirements for grounding conductors and grounding connectors.
- C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- D. Section 28 4600 - Fire Detection and Alarm: Fire alarm system conductors and cables.

1.03 REFERENCE STANDARDS

- A. ASTM B3 - Standard Specification for Soft or Annealed Copper Wire; 2013 (Reapproved 2018).
- B. ASTM B8 - Standard Specification for Concentric-Lay-Stranded Copper Conductors, Hard, Medium-Hard, or Soft; 2011 (Reapproved 2017).
- C. ASTM B787/B787M - Standard Specification for 19 Wire Combination Unilay-Stranded Copper Conductors for Subsequent Insulation; 2004 (Reapproved 2020).
- D. ASTM D3005 - Standard Specification for Low-Temperature Resistant Vinyl Chloride Plastic Pressure-Sensitive Electrical Insulating Tape; 2017.
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- F. NEMA WC 70 - Power Cables Rated 2000 Volts or Less for the Distribution of Electrical Energy; 2021.
- G. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems; 2021.
- H. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- I. UL 44 - Thermoset-Insulated Wires and Cables; Current Edition, Including All Revisions.
- J. UL 83 - Thermoplastic-Insulated Wires and Cables; Current Edition, Including All Revisions.
- K. UL 267 - Outline of Investigation for Wire-Pulling Compounds; Most Recent Edition, Including All Revisions.
- L. UL 486A-486B - Wire Connectors; Current Edition, Including All Revisions.
- M. UL 486C - Splicing Wire Connectors; Current Edition, Including All Revisions.

- N. UL 486D - Sealed Wire Connector Systems; Current Edition, Including All Revisions.
- O. UL 510 - Polyvinyl Chloride, Polyethylene, and Rubber Insulating Tape; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate sizes of raceways, boxes, and equipment enclosures installed under other sections with the actual conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate with electrical equipment installed under other sections to provide terminations suitable for use with the conductors to be installed.
 - 3. Notify Architect/Engineer of any conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements, for submittal procedures.
- B. Product Data: Provide for each cable assembly type.
- C. Design Data: Indicate voltage drop and ampacity calculations for aluminum conductors substituted for copper conductors. Include proposed modifications to raceways, boxes, wiring gutters, enclosures, etc. to accommodate substituted conductors.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conductors and cables in accordance with manufacturer's instructions.

1.08 FIELD CONDITIONS

- A. Do not install or otherwise handle thermoplastic-insulated conductors at temperatures lower than 14 degrees F, unless otherwise permitted by manufacturer's instructions. When installation below this temperature is unavoidable, notify Architect/Engineer and obtain direction before proceeding with work.

PART 2 PRODUCTS

2.01 CONDUCTOR AND CABLE APPLICATIONS

- A. Do not use conductors and cables for applications other than as permitted by NFPA 70 and product listing.
- B. Provide single conductor building wire installed in suitable raceway unless otherwise indicated, permitted, or required.
- C. Concealed Dry Interior Locations: Use only building wire in raceway.
- D. Exposed Dry Interior Locations: Use only building wire in raceway.
- E. Above Accessible Ceilings: Use only building wire in raceway.
- F. Wet or Damp Interior Locations: Use only building wire in raceway.

- G. Exterior Locations: Use only building wire in raceway.
- H. Underground Installations: Use only building wire with Type THWN-2 insulation in raceway.
- I. Use solid conductor for feeders and branch circuits 10 AWG and smaller.
- J. Use stranded conductors for control circuits.
- K. Use conductor not smaller than 12 AWG for power and lighting circuits.
- L. Use conductor not smaller than 16 AWG for control circuits.
- M. Use 10 AWG conductors for 20 ampere, 120 volt branch circuits longer than 75 feet.
- N. Use 10 AWG conductors for 20 ampere, 277 volt branch circuits longer than 200 feet.

2.02 CONDUCTOR AND CABLE MANUFACTURERS

- A. Cerro Wire LLC: www.cerrowire.com.
- B. Industrial Wire Cable, Inc: www.iewc.com.
- C. Southwire Company: www.southwire.com.
- D. Substitutions: See Section 01 6000 - Product Requirements.

2.03 CONDUCTOR AND CABLE GENERAL REQUIREMENTS

- A. Provide products that comply with requirements of NFPA 70.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Unless specifically indicated to be excluded, provide all required conduit, boxes, wiring, connectors, etc. as required for a complete operating system.
- D. Comply with NEMA WC 70.
- E. Thermoplastic-Insulated Conductors and Cables: Listed and labeled as complying with UL 83.
- F. Thermoset-Insulated Conductors and Cables: Listed and labeled as complying with UL 44.
- G. Conductors for Grounding and Bonding: Also comply with Section 26 0526.
- H. Conductor Material:
 - 1. Provide copper conductors only. Aluminum conductors are not acceptable for this project. Conductor sizes indicated are based on copper.
 - 2. Copper Conductors: Soft drawn annealed, 98 percent conductivity, uncoated copper conductors complying with ASTM B3, ASTM B8, or ASTM B787/B787M unless otherwise indicated.
- I. Conductor Color Coding:
 - 1. Color code conductors as indicated unless otherwise required by the authority having jurisdiction. Maintain consistent color coding throughout project.
 - 2. Color Coding Method: Integrally colored insulation.
 - 3. Color Code:
 - a. 208 /120 V, 3 Phase, 4 Wire System:
 - 1) Phase A: Black.
 - 2) Phase B: Red.
 - 3) Phase C: Blue.
 - 4) Neutral/Grounded: White.

- b. Equipment Ground, All Systems: Green.
 - c. Isolated Ground, All Systems: Green with yellow stripe.
 - d. Travelers for 3-Way and 4-Way Switching: Pink.
 - e. For control circuits, comply with manufacturer's recommended color code.
- J. Substitutions: See Section 260500 - Basic Electrical Requirements for substitutions.

2.04 SINGLE CONDUCTOR BUILDING WIRE

- A. Description: Single conductor insulated wire.
- B. Conductor Stranding:
 - 1. Feeders and Branch Circuits:
 - a. Size 12 AWG and Smaller: Solid.
 - b. Size 10 AWG and Larger: Stranded.
- C. Insulation Voltage Rating: 600 V.
- D. Insulation:
 - 1. Copper Building Wire: Type THHN/THWN, except as indicated below.
- E. Conductor: Copper.
- F. Insulation Voltage Rating: 600 volts.
- G. Insulation: NFPA 70 , Type THHN/THWN.

2.05 WIRING CONNECTORS

- A. Description: Wiring connectors appropriate for the application, suitable for use with the conductors to be connected, and listed as complying with UL 486A-486B or UL 486C as applicable.
- B. Connectors for Grounding and Bonding: Comply with Section 26 0526.
- C. Wiring Connectors for Splices and Taps:
 - 1. Copper Conductors Size 8 AWG and Smaller: Use twist-on insulated spring connectors.
 - 2. Copper Conductors Size 6 AWG and Larger: Use compression connectors.
- D. Wiring Connectors for Terminations:
 - 1. Provide terminal lugs for connecting conductors to equipment furnished with terminations designed for terminal lugs.
 - 2. Where over-sized conductors are larger than the equipment terminations can accommodate, provide connectors suitable for reducing to appropriate size, but not less than required for the rating of the overcurrent protective device.
- E. Do not use insulation-piercing or insulation-displacement connectors designed for use with conductors without stripping insulation.
- F. Do not use push-in wire connectors as a substitute for twist-on insulated spring connectors.
- G. Twist-on Insulated Spring Connectors: Rated 600 V, 221 degrees F for standard applications and 302 degrees F for high temperature applications; pre-filled with sealant and listed as complying with UL 486D for damp and wet locations.
 - 1. Manufacturers:

- a. 3M: www.3m.com/#sle.
 - b. Ideal Industries, Inc: www.idealindustries.com/#sle.
 - c. NSI Industries LLC: www.nsiindustries.com/#sle.
 - d. Substitutions: See Section 01 6000 - Product Requirements.
- H. Compression Connectors: Provide circumferential type or hex type crimp configuration.
- 1. Manufacturers:
 - a. IlSCO: www.ilSCO.com/#sle.
 - b. Thomas Betts Corporation: www.tnb.com/#sle.
 - c. Substitutions: See Section 01 6000 - Product Requirements.

2.06 ACCESSORIES

- A. Electrical Tape:
 - 1. Manufacturers:
 - a. 3M: www.3m.com/#sle.
 - b. Substitutions: See Section 01 6000 - Product Requirements.
 - 2. Vinyl Insulating Electrical Tape: Complying with ASTM D3005 and listed as complying with UL 510; minimum thickness of 7 mil; resistant to abrasion, corrosion, and sunlight; conformable for application down to 0 degrees F and suitable for continuous temperature environment up to 221 degrees F.
- B. Wire Pulling Lubricant:
 - 1. Listed and labeled as complying with UL 267.
 - 2. Suitable for use with conductors/cables and associated insulation/jackets to be installed.
 - 3. Suitable for use at installation temperature.
- C. Cable Ties: Material and tensile strength rating suitable for application.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that interior of building has been protected from weather.
- B. Verify that work likely to damage wire and cable has been completed.
- C. Verify that raceways, boxes, and equipment enclosures are installed and are properly sized to accommodate conductors and cables in accordance with NFPA 70.
- D. Verify that raceway installation is complete and supported.
- E. Verify that field measurements are as indicated.
- F. Verify that conditions are satisfactory for installation prior to starting work.

3.02 PREPARATION

- A. Clean raceways thoroughly to remove foreign materials before installing conductors and cables.

3.03 INSTALLATION

- A. Circuiting Requirements:
 - 1. Unless dimensioned, circuit routing indicated is diagrammatic.

2. When circuit destination is indicated without specific routing, determine exact routing required.
 3. Arrange circuiting to minimize splices.
 4. Include circuit lengths required to install connected devices within 10 ft of location indicated.
 5. Maintain separation of wiring for emergency systems in accordance with NFPA 70.
 6. Common Neutrals: Unless otherwise indicated, sharing of neutral/grounded conductors among up to three single phase branch circuits of different phases installed in the same raceway is not permitted. Provide dedicated neutral/grounded conductor for each individual branch circuit.
- B. Install products in accordance with manufacturer's instructions.
- C. Perform work in accordance with NECA 1 (general workmanship).
- D. Installation in Raceway:
1. Tape ends of conductors and cables to prevent infiltration of moisture and other contaminants.
 2. Pull all conductors and cables together into raceway at same time.
 3. Do not damage conductors and cables or exceed manufacturer's recommended maximum pulling tension and sidewall pressure.
 4. Use suitable wire pulling lubricant where necessary, except when lubricant is not recommended by the manufacturer.
- E. Paralleled Conductors: Install conductors of the same length and terminate in the same manner.
- F. Secure and support conductors and cables in accordance with NFPA 70 using suitable supports and methods approved by the authority having jurisdiction. Provide independent support from building structure. Do not provide support from raceways, piping, ductwork, or other systems.
- G. Install conductors with a minimum of 12 inches of slack at each outlet.
- H. Neatly train and bundle conductors inside boxes, wireways, panelboards and other equipment enclosures.
- I. Group or otherwise identify neutral/grounded conductors with associated ungrounded conductors inside enclosures in accordance with NFPA 70.
- J. Make wiring connections using specified wiring connectors.
1. Make splices and taps only in accessible boxes. Do not pull splices into raceways or make splices in conduit bodies or wiring gutters.
 2. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors.
 3. Do not remove conductor strands to facilitate insertion into connector.

4. Clean contact surfaces on conductors and connectors to suitable remove corrosion, oxides, and other contaminates. Do not use wire brush on plated connector surfaces.
 5. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 6. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- K. Insulate splices and taps that are made with uninsulated connectors using methods suitable for the application, with insulation and mechanical strength at least equivalent to unspliced conductors.
 - L. Insulate ends of spare conductors using vinyl insulating electrical tape.
 - M. Identify conductors and cables in accordance with Section 26 0553.
 - N. Color Code Legend: Provide identification label identifying color code for ungrounded conductors at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
 - O. Install firestopping to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
 - P. Unless specifically indicated to be excluded, provide final connections to all equipment and devices, including those furnished by others, as required for a complete operating system.
 - Q. Install wire and cable securely, in a neat and workmanlike manner, as specified in NECA 1.
 - R. Route wire and cable as required to meet project conditions.
 1. Wire and cable routing indicated is approximate unless dimensioned.
 2. Where wire and cable destination is indicated and routing is not shown, determine exact routing and lengths required.
 3. Include wire and cable of lengths required to install connected devices within 10 ft of location shown.
 - S. Use wiring methods indicated.
 - T. Pull all conductors into raceway at same time.
 - U. Use suitable wire pulling lubricant for building wire 4 AWG and larger.
 - V. Neatly train and lace wiring inside boxes, equipment, and panelboards.
 - W. Clean conductor surfaces before installing lugs and connectors.
 - . Make splices, taps, and terminations to carry full ampacity of conductors with no perceptible temperature rise.
 - . Use split bolt connectors for copper conductor splices and taps, 6 AWG and larger. Tape uninsulated conductors and connector with electrical tape to 150 percent of insulation rating of conductor.
 - Z. Use solderless pressure connectors with insulating covers for copper conductor splices and taps, 8 AWG and smaller.

AA. Use insulated spring wire connectors with plastic caps for copper conductor splices and taps, 10 AWG and smaller.

BB. Identify and color code wire and cable under provisions of Section 26 0553. Identify each conductor with its circuit number or other designation indicated.

3.04 FIELD QUALITY CONTROL

A. See Section 01 4000 - Quality Requirements, for additional requirements.

B. Perform field inspection and testing in accordance with Section 01 4000.

C. Inspect and test in accordance with NETA ATS, except Section 4.

D. Perform inspections and tests listed in NETA ATS, Section 7.3.2. The insulation resistance test is required for all conductors. The resistance test for parallel conductors listed as optional is not required.

E. Correct deficiencies and replace damaged or defective conductors and cables.

F. Perform inspections and tests listed in NETA STD ATS, Section 7.3.2.

END OF SECTION

SECTION 26 0526

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Grounding and bonding requirements.
- B. Conductors for grounding and bonding.
- C. Connectors for grounding and bonding.
- D. Ground bars.
- E. Ground rod electrodes.
- F. Grounding and bonding components.
- G. Provide all components necessary to complete the grounding system(s) consisting of:
 - 1. Metal underground water pipe.
 - 2. Metal frame of the building.
 - 3. Concrete-encased electrode.
 - 4. Rod electrodes.

1.02 RELATED REQUIREMENTS

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Additional requirements for conductors for grounding and bonding, including conductor color coding.
- B. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.

1.03 REFERENCE STANDARDS

- A. IEEE 81 - IEEE Guide for Measuring Earth Resistivity, Ground Impedance, and Earth Surface Potentials of a Grounding System; 2012.
- B. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- C. NEMA GR 1 - Grounding Rod Electrodes and Grounding Rod Electrode Couplings; 2017.
- D. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems; 2021.
- E. NETA STD ATS - Acceptance Testing Specifications for Electrical Power Distribution Equipment and Systems; International Electrical Testing Association; 2007.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 467 - Grounding and Bonding Equipment; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify exact locations of underground metal water service pipe entrances to building.
 - 2. Coordinate the work with other trades to provide steel reinforcement complying with specified requirements for concrete-encased electrode.

3. Notify Architect/Engineer of any conflicts with or deviations from Contract Documents.
Obtain direction before proceeding with work.

B. Sequencing:

1. Do not install ground rod electrodes until final backfill and compaction is complete.

1.05 PERFORMANCE REQUIREMENTS

- A. Grounding System Resistance: 5 ohms.

1.06 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements for submittals procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for grounding and bonding system components.
- C. Project Record Documents: Record actual locations of components and grounding electrodes.

1.07 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.

1.08 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store products in accordance with manufacturer's instructions.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience .
- C. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 GROUNDING AND BONDING REQUIREMENTS

- A. Do not use products for applications other than as permitted by NFPA 70 and product listing.
- B. Unless specifically indicated to be excluded, provide all required components, conductors, connectors, conduit, boxes, fittings, supports, accessories, etc. as necessary for a complete grounding and bonding system.
- C. Where conductor size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.
- D. Grounding System Resistance:
1. Achieve specified grounding system resistance under normally dry conditions unless otherwise approved by Architect/Engineer. Precipitation within the previous 48 hours does not constitute normally dry conditions.
 2. Grounding Electrode System: Not greater than 5 ohms to ground, when tested according to IEEE 81 using fall-of-potential method.
 3. Between Grounding Electrode System and Major Electrical Equipment Frames, System Neutral, and Derived Neutral Points: Not greater than 0.5 ohms, when tested using point-to-point methods.
- E. Grounding Electrode System:

1. Provide connection to required and supplemental grounding electrodes indicated to form grounding electrode system.
 - a. Provide continuous grounding electrode conductors without splice or joint.
 - b. Install grounding electrode conductors in raceway where exposed to physical damage. Bond grounding electrode conductor to metallic raceways at each end with bonding jumper.
 2. Metal Underground Water Pipe(s):
 - a. Provide connection to underground metal domestic and fire protection (where present) water service pipe(s) that are in direct contact with earth for at least 10 feet at an accessible location not more than 5 feet from the point of entrance to the building.
 - b. Provide bonding jumper(s) around insulating joints/pipes as required to make pipe electrically continuous.
 - c. Provide bonding jumper around water meter of sufficient length to permit removal of meter without disconnecting jumper.
 3. Metal In-Ground Support Structure:
 - a. Provide connection to metal in-ground support structure that is in direct contact with earth in accordance with NFPA 70.
 4. Concrete-Encased Electrode:
 - a. Provide connection to concrete-encased electrode consisting of not less than 20 feet of either steel reinforcing bars or bare copper conductor not smaller than 4 AWG embedded within concrete foundation or footing that is in direct contact with earth in accordance with NFPA 70.
 5. Ground Rod Electrode(s):
 - a. Provide two electrodes unless otherwise indicated or required.
 - b. Space electrodes not less than 10 feet from each other and any other ground electrode.
 - c. Where location is not indicated, locate electrode(s) at least 5 feet outside building perimeter foundation as near as possible to electrical service entrance; where possible, locate in softscape (uncovered) area.
 6. Provide additional ground electrode(s) as required to achieve specified grounding electrode system resistance.
- F. Bonding and Equipment Grounding:
1. Provide bonding for equipment grounding conductors, equipment ground busses, metallic equipment enclosures, metallic raceways and boxes, device grounding terminals, and other normally non-current-carrying conductive materials enclosing electrical conductors/equipment or likely to become energized as indicated and in accordance with NFPA 70.

2. Provide insulated equipment grounding conductor in each feeder and branch circuit raceway. Do not use raceways as sole equipment grounding conductor.
 3. Where circuit conductor sizes are increased for voltage drop, increase size of equipment grounding conductor proportionally in accordance with NFPA 70.
 4. Unless otherwise indicated, connect wiring device grounding terminal to branch circuit equipment grounding conductor and to outlet box with bonding jumper.
 5. Terminate branch circuit equipment grounding conductors on solidly bonded equipment ground bus only. Do not terminate on neutral (grounded) or isolated/insulated ground bus.
 6. Provide bonding jumper across expansion or expansion/deflection fittings provided to accommodate conduit movement.
- G. Isolated Ground System:
1. Where isolated ground receptacles or other isolated ground connections are indicated, provide separate isolated/insulated equipment grounding conductors.
 2. Connect isolated/insulated equipment grounding conductors only to separate isolated/insulated equipment ground busses.
 3. Connect the isolated/insulated equipment grounding conductors to the solidly bonded equipment ground bus only at the service disconnect or separately derived system disconnect. Do not make any other connections between isolated ground system and normal equipment ground system on the load side of this connection.
- H. Communications Systems Grounding and Bonding:
1. Provide intersystem bonding termination at service equipment or metering equipment enclosure and at disconnecting means for any additional buildings or structures in accordance with NFPA 70.
 2. Provide bonding jumper in raceway from intersystem bonding termination to each communications room or backboard and provide ground bar for termination.
 - a. Bonding Jumper Size: 6 AWG, unless otherwise indicated or required.
 - b. Raceway Size: 3/4 inch trade size unless otherwise indicated or required.
 - c. Ground Bar Size: 1/4 by 2 by 12 inches unless otherwise indicated or required.

2.02 GROUNDING AND BONDING COMPONENTS

- A. General Requirements:
1. Provide products listed, classified, and labeled as suitable for the purpose intended.
 2. Provide products listed and labeled as complying with UL 467 where applicable.
- B. Conductors for Grounding and Bonding, in Addition to Requirements of Section 26 0526:
1. Use insulated copper conductors unless otherwise indicated.
 - a. Exceptions:
 - 1) Use bare copper conductors where installed underground in direct contact with earth.

- 2) Use bare copper conductors where directly encased in concrete (not in raceway).
- C. Connectors for Grounding and Bonding:
1. Description: Connectors appropriate for the application and suitable for the conductors and items to be connected; listed and labeled as complying with UL 467.
 2. Unless otherwise indicated, use exothermic welded connections for underground, concealed and other inaccessible connections.
 3. Unless otherwise indicated, use mechanical connectors, compression connectors, or exothermic welded connections for accessible connections.
- D. Ground Bars:
1. Description: Copper rectangular ground bars with mounting brackets and insulators.
 2. Size: As indicated.
 3. Holes for Connections: As indicated or as required for connections to be made.
- E. Ground Rod Electrodes:
1. Comply with NEMA GR 1.
 2. Material: Copper-bonded (copper-clad) steel.
 3. Size: 3/4 inch diameter by 10 feet length, unless otherwise indicated.

2.03 MANUFACTURERS

- A. Cooper Power Systems: www.cooperpower.com.
- B. Framatome Connectors International: www.fciconnect.com.
- C. Lightning Master Corporation: www.lightningmaster.com.
- D. Substitutions: See Section 260500 - Basic Electrical Requirements, for submittals.

2.04 ELECTRODES

- A. Rod Electrodes: Copper.
 1. Diameter: 3/4 inch.
 2. Length: 10 feet.

2.05 CONNECTORS AND ACCESSORIES

- A. Mechanical Connectors: Bronze.
- B. Exothermic Connections:
- C. Wire: Stranded copper.
- D. Grounding Electrode Conductor: Size to meet NFPA 70 requirements.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that work likely to damage grounding and bonding system components has been completed.
- B. Verify that field measurements are as indicated.
- C. Verify that conditions are satisfactory for installation prior to starting work.
- D. Verify existing conditions prior to beginning work.

- E. Verify that final backfill and compaction has been completed before driving rod electrodes.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Ground Rod Electrodes: Unless otherwise indicated, install ground rod electrodes vertically. Where encountered rock prohibits vertical installation, install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70 or install at 45 degree angle or bury horizontally in trench at least 30 inches (750 mm) deep in accordance with NFPA 70.
- D. Make grounding and bonding connections using specified connectors.
 - 1. Remove appropriate amount of conductor insulation for making connections without cutting, nicking or damaging conductors. Do not remove conductor strands to facilitate insertion into connector.
 - 2. Remove nonconductive paint, enamel, or similar coating at threads, contact points, and contact surfaces.
 - 3. Exothermic Welds: Make connections using molds and weld material suitable for the items to be connected in accordance with manufacturer's recommendations.
 - 4. Mechanical Connectors: Secure connections according to manufacturer's recommended torque settings.
 - 5. Compression Connectors: Secure connections using manufacturer's recommended tools and dies.
- E. Identify grounding and bonding system components in accordance with Section 26 0553.
- F. Install ground electrodes at locations indicated. Install additional rod electrodes as required to achieve specified resistance to ground.
- G. Provide grounding electrode conductor and connect to reinforcing steel in foundation footing . Bond steel together.
- H. Provide bonding to meet requirements per Quality Assurance.
- I. Equipment Grounding Conductor: Provide separate, insulated conductor within each feeder and branch circuit raceway. Terminate each end on suitable lug, bus, or bushing.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Perform inspection in accordance with Section 01 4000.
- C. Inspect and test in accordance with NETA ATS except Section 4.
- D. Perform inspections and tests listed in NETA ATS, Section 7.13.
- E. Perform ground electrode resistance tests under normally dry conditions. Precipitation within the previous 48 hours does not constitute normally dry conditions.

- F. Investigate and correct deficiencies where measured ground resistances do not comply with specified requirements.

END OF SECTION

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SECTION 26 0529

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Support and attachment requirements and components for equipment, conduit, cable, boxes, and other electrical work.

1.02 REFERENCE STANDARDS

- A. ASTM A123/A123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products; 2017.
- B. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware; 2016a.
- C. ASTM B633 - Standard Specification for Electrodeposited Coatings of Zinc on Iron and Steel; 2019.
- D. MFMA-4 - Metal Framing Standards Publication; 2004.
- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.03 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's catalog data for fastening systems.

1.04 QUALITY ASSURANCE

PART 2 PRODUCTS

2.01 SUPPORT AND ATTACHMENT COMPONENTS

- A. General Requirements:
 - 1. Comply with the following. Where requirements differ, comply with most stringent.
 - a. NFPA 70.
 - b. Requirements of authorities having jurisdiction.
 - 2. Provide required hangers, supports, anchors, fasteners, fittings, accessories, and hardware as necessary for complete installation of electrical work.
 - 3. Provide products listed, classified, and labeled as suitable for purpose intended, where applicable.
 - 4. Do not use products for applications other than as permitted by NFPA 70 and product listing.
 - 5. Steel Components: Use corrosion-resistant materials suitable for environment where installed.
 - a. Zinc-Plated Steel: Electroplated in accordance with ASTM B633.
 - b. Galvanized Steel: Hot-dip galvanized after fabrication in accordance with ASTM A123/A123M or ASTM A153/A153M.

- B. Conduit and Cable Supports: Straps and clamps suitable for conduit or cable to be supported.
 - 1. Conduit Straps: One-hole or two-hole type; steel or malleable iron.
 - 2. Conduit Clamps: Bolted type unless otherwise indicated.
- C. Outlet Box Supports: Hangers and brackets suitable for boxes to be supported.
- D. Metal Channel/Strut Framing Systems:
 - 1. Description: Factory-fabricated, continuous-slot, metal channel/strut and associated fittings, accessories, and hardware required for field assembly of supports.
 - 2. Comply with MFMA-4.
- E. Hanger Rods: Threaded, zinc-plated steel unless otherwise indicated.
- F. Anchors and Fasteners:
 - 1. Unless otherwise indicated and where not otherwise restricted, use anchor and fastener types indicated for specified applications.

2.02 MANUFACTURERS

- A. Thomas Betts Corporation: www.tnb.com.
- B. Threaded Rod Company: www.threadedrod.com.
- C. Substitutions: See Section 260500 - Basic Electrical Requirements, for substitutions.

2.03 MATERIALS

- A. Hangers, Supports, Anchors, and Fasteners - General: Corrosion-resistant materials of size and type adequate to carry the loads of equipment and conduit, including weight of wire in conduit.
- B. Supports: Fabricated of structural steel or formed steel members; galvanized.
- C. Anchors and Fasteners:
 - 1. Do not use powder-actuated anchors.
 - 2. Concrete Structural Elements: Use precast inserts, expansion anchors, or preset inserts.
 - 3. Steel Structural Elements: Use beam clamps.
 - 4. Concrete Surfaces: Use expansion anchors.
 - 5. Hollow Masonry, Plaster, and Gypsum Board Partitions: Use toggle bolts or hollow wall fasteners.
 - 6. Solid Masonry Walls: Use expansion anchors or preset inserts.
 - 7. Sheet Metal: Use sheet metal screws.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install hangers and supports in accordance with NECA 1.
- C. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
- D. Unless specifically indicated or approved by Architect/Engineer, do not provide support from suspended ceiling support system or ceiling grid.

- E. Unless specifically indicated or approved by Architect/Engineer, do not provide support from roof deck.
- F. Do not penetrate or otherwise notch or cut structural members without approval of Structural Engineer.
- G. Equipment Support and Attachment:
 - 1. Use metal, fabricated supports or supports assembled from metal channel/strut to support equipment as required.
 - 2. Use metal channel/strut secured to studs to support equipment surface mounted on hollow stud walls when wall strength is not sufficient to resist pull-out.
 - 3. Use metal channel/strut to support surface-mounted equipment in wet or damp locations to provide space between equipment and mounting surface.
 - 4. Securely fasten floor-mounted equipment. Do not install equipment such that it relies on its own weight for support.
- H. Secure fasteners in accordance with manufacturer's recommended torque settings.
- I. Remove temporary supports.

END OF SECTION

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SECTION 26 0533.13
CONDUIT FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Galvanized steel rigid metal conduit (RMC).
- B. Stainless steel rigid metal conduit (RMC).
- C. Galvanized steel intermediate metal conduit (IMC).
- D. Stainless steel intermediate metal conduit (IMC).
- E. Flexible metal conduit (FMC).
- F. Liquidtight flexible metal conduit (LFMC).
- G. Galvanized steel electrical metallic tubing (EMT).
- H. Stainless steel electrical metallic tubing (EMT).
- I. Rigid polyvinyl chloride (PVC) conduit.
- J. Reinforced thermosetting resin conduit (RTRC).
- K. Conduit, fittings and conduit bodies.

1.02 RELATED REQUIREMENTS

- A. Section 03 3000 - Cast-in-Place Concrete: Concrete encasement of conduits.
- B. Section 07 8400 - Firestopping.
- C. Section 26 0526 - Grounding and Bonding for Electrical Systems.
 - 1. Includes additional requirements for fittings for grounding and bonding.
- D. Section 26 0529 - Hangers and Supports for Electrical Systems.
- E. Section 26 0533.23 - Surface Raceways for Electrical Systems.
- F. Section 26 0553 - Identification for Electrical Systems.
- G. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- H. Section 26 2100 - Low-Voltage Electrical Service Entrance: Additional requirements for electrical service conduits.
- I. Section 26 2701 - Electrical Service Entrance: Additional requirements for electrical service conduits.
- J. Section 27 0533.13 - Conduit for Communications Systems.
- K. Section 31 2316 - Excavation.
- L. Section 31 2323 - Fill: Bedding and backfilling.

1.03 REFERENCE STANDARDS

- A. ANSI C80.1 - American National Standard for Electrical Rigid Steel Conduit (ERSC); 2020.
- B. ANSI C80.3 - American National Standard for Electrical Metallic Tubing -- Steel (EMT-S); 2020.
- C. ANSI C80.5 - American National Standard for Electrical Rigid Metal Conduit -- Aluminum (ERMC-A); 2020.
- D. ANSI C80.6 - American National Standard for Electrical Intermediate Metal Conduit; 2018.

- E. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- F. NECA 101 - Standard for Installing Steel Conduits (Rigid, IMC, EMT); 2020.
- G. NECA 111 - Standard for Installing Nonmetallic Raceways (RNC, ENT, LFNC); 2017.
- H. NEMA FB 1 - Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit, Electrical Metallic Tubing, and Cable; 2014.
- I. NEMA TC 2 - Electrical Polyvinyl Chloride (PVC) Conduit; 2020.
- J. NEMA TC 3 - Polyvinyl Chloride (PVC) Fittings for Use with Rigid PVC Conduit and Tubing; 2021.
- K. NEMA TC 14 (SERIES) - Reinforced Thermosetting Resin Conduit and Fittings Series; 2015.
- L. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- M. UL 1 - Flexible Metal Conduit; Current Edition, Including All Revisions.
- N. UL 6 - Electrical Rigid Metal Conduit-Steel; Current Edition, Including All Revisions.
- O. UL 6A - Electrical Rigid Metal Conduit-Aluminum, Red Brass, and Stainless Steel; Current Edition, Including All Revisions.
- P. UL 360 - Liquid-Tight Flexible Metal Conduit; Current Edition, Including All Revisions.
- Q. UL 514B - Conduit, Tubing, and Cable Fittings; Current Edition, Including All Revisions.
- R. UL 651 - Schedule 40, 80, Type EB and A Rigid PVC Conduit and Fittings; Current Edition, Including All Revisions.
- S. UL 797 - Electrical Metallic Tubing-Steel; Current Edition, Including All Revisions.
- T. UL 797A - Electrical Metallic Tubing - Aluminum and Stainless Steel; Current Edition, Including All Revisions.
- U. UL 1242 - Electrical Intermediate Metal Conduit-Steel; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate minimum sizes of conduits with actual type and quantity of conductors to be installed, including adjustments for conductor sizes increased for voltage drop.
 - 2. Coordinate arrangement of conduits with structural members, ductwork, piping, equipment, and other potential conflicts.
 - 3. Verify exact conduit termination locations required for boxes, enclosures, and equipment.
 - 4. Coordinate work to provide roof penetrations that preserve integrity of roofing system and do not void roof warranty.
 - 5. Notify Architect/Engineer of conflicts with or deviations from Contract Documents. Obtain direction before proceeding with work.
- B. Sequencing:
 - 1. Do not begin installation of conductors and cables until installation of conduit between termination points is complete.

1.05 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements for submittals procedures.
- B. Product Data: Provide for metallic conduit, flexible metal conduit, liquidtight flexible metal conduit, metallic tubing, nonmetallic conduit, fittings, and conduit bodies.

1.06 QUALITY ASSURANCE

- A. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for purpose specified and shown.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Receive, inspect, handle, and store conduit and fittings in accordance with manufacturer's instructions.
- B. Accept conduit on site. Inspect for damage.
- C. Protect conduit from corrosion and entrance of debris by storing above grade. Provide appropriate covering.
- D. Protect PVC conduit from sunlight.

PART 2 PRODUCTS

2.01 CONDUIT APPLICATIONS

- A. Do not use conduit and associated fittings for applications other than as permitted by NFPA 70, manufacturer's instructions, and product listing.
- B. Unless otherwise indicated and where not otherwise restricted, use conduit types indicated for specified applications. Where more than one listed application applies, comply with most restrictive requirements. Where conduit type for particular application is not specified, use galvanized steel rigid metal conduit.
- C. Underground:
 - 1. Under Slab on Grade: Use galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit (RMC), galvanized steel electrical metallic tubing (EMT), stainless steel electrical metallic tubing (EMT), rigid PVC conduit, or reinforced thermosetting resin conduit (RTRC).
 - 2. Exterior, Direct-Buried: Use galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit, galvanized steel electrical metallic tubing (EMT), stainless steel electrical metallic tubing (EMT), rigid PVC conduit, or reinforced thermosetting resin conduit (RTRC).
 - 3. Exterior, Embedded Within Concrete: Use galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), PVC-coated galvanized steel rigid metal conduit (RMC), galvanized steel electrical metallic tubing (EMT), stainless steel electrical metallic tubing (EMT), rigid PVC conduit, or reinforced thermosetting resin

conduit (RTRC).

4. Where rigid polyvinyl chloride (PVC) conduit is provided, transition to galvanized steel rigid metal conduit (RMC), stainless steel rigid metal conduit (RMC), galvanized steel intermediate metal conduit (IMC), stainless steel intermediate metal conduit (IMC), or schedule 80 rigid PVC conduit where emerging from underground.

2.02 CONDUIT - GENERAL REQUIREMENTS

- A. Comply with NFPA 70.
- B. Electrical Service Conduits: See Section 26 2100 for additional requirements.
- C. Fittings for Grounding and Bonding: See Section 26 0526 for additional requirements.
- D. Provide conduit, fittings, supports, and accessories required for complete raceway system.
- E. Provide products listed, classified, and labeled as suitable for purpose intended.
- F. Where conduit size is not indicated, size to comply with NFPA 70 but not less than applicable minimum size requirements specified.

2.03 GALVANIZED STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC galvanized steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6.
- B. Fittings:
 1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6.
 2. Material: Use steel or malleable iron.
 3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.04 STAINLESS STEEL RIGID METAL CONDUIT (RMC)

- A. Description: NFPA 70, Type RMC stainless steel rigid metal conduit complying with ANSI C80.1 and listed and labeled as complying with UL 6A.
- B. Fittings:
 1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 6A.
 2. Material: Use stainless steel with corrosion resistance equivalent to conduit.
 3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.

2.05 GALVANIZED STEEL INTERMEDIATE METAL CONDUIT (IMC)

- A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
- B. Fittings:
 1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 1242.
 2. Material: Use steel or malleable iron.

3. Connectors and Couplings: Use threaded type fittings only. Threadless fittings, including set screw and compression/gland types, are not permitted.
- C. Conduit Size: Comply with NFPA 70.
 1. Minimum Size: 1/2 inch unless otherwise specified.
 2. Minimum Size: 1 inch for telecommunications conduits.
- D. Underground Installations:
 1. More than 5 Feet from Foundation Wall: Use rigid steel conduit or thickwall non-metallic conduit.
 2. Within 5 Feet from Foundation Wall: Use rigid steel conduit or thickwall nonmetallic conduit.
 3. In or Under Slab on Grade: Use rigid steel conduit or thickwall non-metallic conduit.
 4. Minimum Size: 3/4 inch.
- E. Outdoor Locations Above Grade: Use rigid steel conduit.
- F. Wet and Damp Locations: Use rigid steel conduit.
- G. Dry Locations:
 1. Concealed: Use electrical metallic tubing.
 2. Exposed: Use electrical metallic tubing.

2.06 STAINLESS STEEL INTERMEDIATE METAL CONDUIT (IMC)

- A. Description: NFPA 70, Type IMC galvanized steel intermediate metal conduit complying with ANSI C80.6 and listed and labeled as complying with UL 1242.
- B. Fittings:
 1. Nonhazardous Locations: Use fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B or UL 1242.

2.07 MANUFACTURERS

- A. Essex Group, Inc: www.essexgroup.com.
- B. Hubbell Power Systems: www.hubbellpowersystems.com.
- C. HellermannTyton: www.hellermanntyton.com.
- D. Substitutions: See Section 260500 - Basic Electrical Requirements, for submittals.

2.08 METAL CONDUIT

- A. Rigid Steel Conduit: ANSI C80.1.
- B. Intermediate Metal Conduit (IMC): Rigid steel.
- C. Fittings and Conduit Bodies: NEMA FB 1; material to match conduit.

2.09 FLEXIBLE METAL CONDUIT (FMC)

- A. Description: NFPA 70, Type FMC standard-wall steel flexible metal conduit listed and labeled as complying with UL 1, and listed for use in classified firestop systems.
- B. Fittings:
 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.

- 2. Material: Use steel or malleable iron.
- C. Description: Interlocked steel construction.
- D. Fittings: NEMA FB 1.
- E. Maximum Length: 72 inches.

2.10 LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC)

- A. Description: NFPA 70, Type LFMC polyvinyl chloride (PVC) jacketed steel flexible metal conduit listed and labeled as complying with UL 360.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
- C. Description: Interlocked steel construction with PVC jacket.
- D. Fittings: NEMA FB 1.
- E. Maximum Length: 72 inches.

2.11 GALVANIZED STEEL ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT galvanized steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Material: Use steel or malleable iron.
 - 3. Connectors and Couplings: Use compression/gland or set-screw type.
 - a. Do not use indenter type connectors and couplings.
- C. Description: ANSI C80.3; galvanized tubing.
- D. Fittings and Conduit Bodies: NEMA FB 1; steel compression type.

2.12 STAINLESS STEEL ELECTRICAL METALLIC TUBING (EMT)

- A. Description: NFPA 70, Type EMT stainless steel electrical metallic tubing complying with ANSI C80.3 and listed and labeled as complying with UL 797A.
- B. Fittings:
 - 1. Description: Fittings complying with NEMA FB 1 and listed and labeled as complying with UL 514B.
 - 2. Connectors and Couplings: Use compression/gland or set-screw type.

2.13 RIGID POLYVINYL CHLORIDE (PVC) CONDUIT

- A. Description: NFPA 70, Type PVC rigid polyvinyl chloride conduit complying with NEMA TC 2 and listed and labeled as complying with UL 651; Schedule 40 unless otherwise indicated, Schedule 80 where subject to physical damage; rated for use with conductors rated 90 degrees C.
- B. Fittings:

1. Manufacturer: Same as manufacturer of conduit to be connected.
 2. Description: Fittings complying with NEMA TC 3 and listed and labeled as complying with UL 651; material to match conduit.
- C. Description: NEMA TC 2; Schedule 40 PVC.
- D. Fittings and Conduit Bodies: NEMA TC 3.

2.14 REINFORCED THERMOSETTING RESIN CONDUIT (RTRC)

- A. Description: NFPA 70, Type RTRC reinforced thermosetting resin conduit complying with NEMA TC 14 (SERIES).
- B. Supports: As recommended by manufacturer.
- C. Fittings: Same type and manufacturer as conduit to be connected.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that mounting surfaces are ready to receive conduits.
- C. Verify that conditions are satisfactory for installation prior to starting work.
- D. Verify routing and termination locations of conduit prior to rough-in.
- E. Conduit routing is shown on drawings in approximate locations unless dimensioned. Route as required to complete wiring system.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install conduit in accordance with NECA 1.
- C. Install galvanized steel rigid metal conduit (RMC) in accordance with NECA 101.
- D. Install intermediate metal conduit (IMC) in accordance with NECA 101.
- E. Install rigid polyvinyl chloride (PVC) conduit in accordance with NECA 111.
- F. Conduit Routing:
1. Unless dimensioned, conduit routing indicated is diagrammatic.
 2. When conduit destination is indicated without specific routing, determine exact routing required.
 3. Conceal conduits unless specifically indicated to be exposed.
 4. Unless otherwise approved, do not route exposed conduits:
 - a. Across floors.
 - b. Across roofs.
 - c. Across top of parapet walls.
 - d. Across building exterior surfaces.
 5. Conduits installed underground or embedded in concrete may be routed in shortest possible manner unless otherwise indicated. Route other conduits parallel or perpendicular to building structure and surfaces, following surface contours where practical.

6. Arrange conduit to maintain adequate headroom, clearances, and access.
 7. Arrange conduit to provide no more than equivalent of four 90-degree bends between pull points.
 8. Route conduits above water and drain piping where possible.
 9. Arrange conduit to prevent moisture traps. Provide drain fittings at low points and at sealing fittings where moisture may collect.
- G. Conduit Support:
1. Secure and support conduits in accordance with NFPA 70 using suitable supports and methods approved by authorities having jurisdiction; see Section 26 0529.
 2. Provide independent support from building structure. Do not provide support from piping, ductwork, or other systems.
 3. Installation Above Suspended Ceilings: Do not provide support from ceiling support system. Do not provide support from ceiling grid or allow conduits to lay on ceiling tiles.
- H. Connections and Terminations:
1. Use approved zinc-rich paint or conduit joint compound on field-cut threads of galvanized steel conduits prior to making connections.
 2. Where two threaded conduits must be joined and neither can be rotated, use three-piece couplings or split couplings. Do not use running threads.
 3. Use suitable adapters where required to transition from one type of conduit to another.
 4. Provide drip loops for liquidtight flexible conduit connections to prevent drainage of liquid into connectors.
 5. Terminate threaded conduits in boxes and enclosures using threaded hubs or double lock nuts for dry locations and raintight hubs for wet locations.
 6. Provide insulating bushings, insulated throats, or listed metal fittings with smooth, rounded edges at conduit terminations to protect conductors.
 7. Secure joints and connections to provide mechanical strength and electrical continuity.
- I. Penetrations:
1. Do not penetrate or otherwise notch or cut structural members, including footings and grade beams, without approval of Structural Engineer.
 2. Make penetrations perpendicular to surfaces unless otherwise indicated.
 3. Provide sleeves for penetrations as indicated or as required to facilitate installation. Set sleeves flush with exposed surfaces unless otherwise indicated or required.
 4. Conceal bends for conduit risers emerging above ground.
 5. Where conduits penetrate waterproof membrane, seal as required to maintain integrity of membrane.
 6. Make penetrations for roof-mounted equipment within associated equipment openings and curbs where possible to minimize roofing system penetrations. Where penetrations are necessary, seal as indicated or as required to preserve integrity of roofing system and

maintain roof warranty.

7. Install firestopping to preserve fire resistance rating of partitions and other elements; see Section 07 8400.
- J. Underground Installation:
 1. Provide trenching and backfilling in accordance with Sections 31 2316 and 31 2323.
 2. Minimum Cover, Unless Otherwise Indicated or Required:
 - a. Underground, Exterior: 18 inches.
 3. Provide underground warning tape along entire conduit length for service entrance where not concrete-encased; see Section 26 0553.
- K. Conduit Movement Provisions: Where conduits are subject to movement, provide expansion and expansion/deflection fittings to prevent damage to enclosed conductors or connected equipment. This includes, but is not limited to:
 1. Where conduits cross structural joints intended for expansion, contraction, or deflection.
 2. Where calculated in accordance with NFPA 70 for rigid polyvinyl chloride (PVC) conduit installed above ground to compensate for thermal expansion and contraction.
 3. Where calculated in accordance with NFPA 70 for reinforced thermosetting resin conduit (RTRC) conduit installed above ground to compensate for thermal expansion and contraction.
 4. Where conduits are subject to earth movement by settlement or frost.
- L. Conduit Sealing:
 1. Use foam conduit sealant to prevent entry of moisture and gases. This includes, but is not limited to:
 - a. Where conduits enter building from outside.
 - b. Where service conduits enter building from underground distribution system.
 - c. Where conduits enter building from underground.
 - d. Where conduits may transport moisture to contact live parts.
 2. Where conduits cross barriers between areas of potential substantial temperature differential, use foam conduit sealant at accessible point near penetration to prevent condensation. This includes, but is not limited to:
 - a. Where conduits pass from outdoors into conditioned interior spaces.
 - b. Where conduits pass from unconditioned interior spaces into conditioned interior spaces.
- M. Provide pull string in each empty conduit and in conduits where conductors and cables are to be installed by others. Leave minimum slack of 12 inches at each end.
- N. Provide grounding and bonding; see Section 26 0526.
- O. Identify conduits; see Section 26 0553.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements for additional requirements.

- B. Repair cuts and abrasions in galvanized finishes using zinc-rich paint recommended by manufacturer. Replace components that exhibit signs of corrosion.
- C. Correct deficiencies and replace damaged or defective conduits.

3.04 CLEANING

- A. Clean interior of conduits to remove moisture and foreign matter.

3.05 PROTECTION

- A. Immediately after installation of conduit, use suitable manufactured plugs to provide protection from entry of moisture and foreign material and do not remove until ready for installation of conductors.
- B. Install conduit securely, in a neat and workmanlike manner, as specified in NECA 1.
- C. Install steel conduit as specified in NECA 101.
- D. Install nonmetallic conduit in accordance with manufacturer's instructions.
- E. Arrange supports to prevent misalignment during wiring installation.
- F. Support conduit using coated steel or malleable iron straps, lay-in adjustable hangers, clevis hangers, and split hangers.
- G. Group related conduits; support using conduit rack. Construct rack using steel channel ; provide space on each for 25 percent additional conduits.
- H. Fasten conduit supports to building structure and surfaces under provisions of Section 26 0529.
- I. Do not support conduit with wire or perforated pipe straps. Remove wire used for temporary supports.
- J. Do not attach conduit to ceiling support wires.
- K. Arrange conduit to maintain headroom and present neat appearance.
- L. Route exposed conduit parallel and perpendicular to walls.
- M. Route conduit installed above accessible ceilings parallel and perpendicular to walls.
- N. Route conduit in and under slab from point-to-point.
- O. Provide rigid steel elbows where conduit enters and exits the concrete slab.
- P. Maintain adequate clearance between conduit and piping.
- Q. Cut conduit square using saw or pipecutter; de-burr cut ends.
- R. Bring conduit to shoulder of fittings; fasten securely.
- S. Join nonmetallic conduit using cement as recommended by manufacturer. Wipe nonmetallic conduit dry and clean before joining. Apply full even coat of cement to entire area inserted in fitting. Allow joint to cure for 20 minutes, minimum.
- T. Use conduit hubs to fasten conduit to sheet metal boxes in damp and wet locations.
- U. Install no more than equivalent of four 90 degree bends between boxes. Use conduit bodies to make sharp changes in direction, as around beams. Use hydraulic one shot bender to fabricate bends in metal conduit larger than 2 inch size.
- V. Avoid moisture traps; provide junction box with drain fitting at low points in conduit system.

- W. Provide suitable fittings to accommodate expansion and deflection where conduit crosses control and expansion joints.
 - . Provide suitable pull string in each empty conduit except sleeves and nipples.
 - . Use suitable caps to protect installed conduit against entrance of dirt and moisture.
- Z. Ground and bond conduit under provisions of Section 26 0526.
- AA. Identify conduit under provisions of Section 26 0553.
- BB. Architect shall have final approval on all conduit routing.

3.06 INTERFACE WITH OTHER PRODUCTS

- A. Install conduit to preserve fire resistance rating of partitions and other elements, using materials and methods specified in Section 07 8400.
- B. Route conduit through roof openings for piping and ductwork wherever possible. Where separate roofing penetration is required, coordinate location and installation method with roofing installation specified in Section 07 1300.

END OF SECTION

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SECTION 26 0553
IDENTIFICATION FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical identification requirements.
- B. Identification nameplates and labels.
- C. Wire and cable markers.
- D. Underground warning tape.
- E. Warning signs and labels.
- F. Field-painted identification of conduit.

1.02 RELATED REQUIREMENTS

- A. Section 09 9113 - Exterior Painting.
- B. Section 09 9123 - Interior Painting.
- C. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables: Color coding for power conductors and cables 600 V and less; vinyl color coding electrical tape.
- D. Section 26 2726 - Wiring Devices - Lutron: Device and wallplate finishes; factory pre-marked wallplates.
- E. Section 27 1000 - Structured Cabling: Identification for communications cabling and devices.

1.03 REFERENCE STANDARDS

- A. ANSI Z535.2 - American National Standard for Environmental and Facility Safety Signs; 2011 (Reaffirmed 2017).
- B. ANSI Z535.4 - American National Standard for Product Safety Signs and Labels; 2011 (Reaffirmed 2017).
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- D. UL 969 - Marking and Labeling Systems; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Verify final designations for equipment, systems, and components to be identified prior to fabrication of identification products.
- B. Sequencing:
 - 1. Do not conceal items to be identified, in locations such as above suspended ceilings, until identification products have been installed.
 - 2. Do not install identification products until final surface finishes and painting are complete.

1.05 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements for submittals procedures.
- B. Product Data: Provide catalog data for nameplates, labels, and markers.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.

1.07 FIELD CONDITIONS

- A. Do not install adhesive products when ambient temperature is lower than recommended by manufacturer.
- B. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for purpose specified and shown.

PART 2 PRODUCTS

2.01 IDENTIFICATION REQUIREMENTS

- A. Identification for Equipment:
 - 1. Use identification nameplate to identify each piece of electrical distribution and control equipment and associated sections, compartments, and components.
 - a. Switchboards:
 - 1) Identify ampere rating.
 - 2) Identify voltage and phase.
 - 3) Identify power source and circuit number. Include location when not within sight of equipment.
 - 4) Use identification nameplate to identify main overcurrent protective device.
 - 5) Use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - b. Panelboards:
 - 1) Identify ampere rating.
 - 2) Identify voltage and phase.
 - 3) Identify power source and circuit number. Include location when not within sight of equipment.
 - 4) Identify main overcurrent protective device. Use identification label for panelboards with a door. For power distribution panelboards without a door, use identification nameplate.
 - 5) Use typewritten circuit directory to identify load(s) served for panelboards with a door. Identify spares and spaces using pencil.
 - 6) For power panelboards without a door, use identification nameplate to identify load(s) served for each branch device. Do not identify spares and spaces.
 - c. Enclosed switches, circuit breakers, and motor controllers:
 - 1) Identify voltage and phase.
 - 2) Identify power source and circuit number. Include location when not within sight of equipment.
 - 3) Identify load(s) served. Include location when not within sight of equipment.
 - 2. Service Equipment:

- a. Use identification nameplate to identify each service disconnecting means.
- 3. Use voltage marker to identify highest voltage present for each piece of electrical equipment.
- 4. Use identification nameplate to identify disconnect location for equipment with remote disconnecting means.
- 5. Available Fault Current Documentation: Use identification label to identify the available fault current and date calculations were performed at locations requiring documentation by NFPA 70 including but not limited to the following.
 - a. Service equipment.
 - b. Industrial control panels.
 - c. Motor control centers.
 - d. Elevator control panels.
 - e. Industrial machinery.
- B. Identification for Conductors and Cables:
 - 1. Color Coding for Power Conductors 600 V and Less: Comply with Section 26 0519.
 - 2. Identification for Communications Conductors and Cables: Comply with Section 27 1000.
 - 3. Use identification nameplate or identification label to identify color code for ungrounded and grounded power conductors inside door or enclosure at each piece of feeder or branch-circuit distribution equipment when premises has feeders or branch circuits served by more than one nominal voltage system.
- C. Identification for Raceways:
- D. Identification for Boxes:
 - 1. Use voltage markers to identify highest voltage present.
 - 2. Use voltage markers or color coded boxes to identify systems other than normal power system.
 - a. Color-Coded Boxes: Field-painted in accordance with Section 09 9123 and 09 9113 per the same color code used for raceways.
 - 1) Fire Alarm System: Red.
- E. Identification for Devices:
 - 1. Identification for Communications Devices: Comply with Section 27 1000.
 - 2. Wiring Device and Wallplate Finishes: Comply with Section 26 2726.

2.02 MANUFACTURERS

- A. Brady Corporation: www.bradycorp.com.
- B. Seton Identification Products: www.seton.com/aec.
- C. HellermannTyton: www.hellermanntyton.com.
- D. Substitutions: See Section 260500 - Basic Electrical Requirements for substitution requirements.

2.03 IDENTIFICATION NAMEPLATES AND LABELS

- A. Identification Nameplates:
 - 1. Materials:
 - 2. Mounting Holes for Mechanical Fasteners: Two, centered on sides for sizes up to 1 inch high; Four, located at corners for larger sizes.
- B. Identification Labels:
 - 1. Materials: Use self-adhesive laminated plastic labels; UV, chemical, water, heat, and abrasion resistant.
 - 2. Text: Use factory pre-printed or machine-printed text. Do not use handwritten text unless otherwise indicated.
- C. Nameplates: Engraved three-layer laminated plastic, black letters on white background.
- D. Labels: Embossed adhesive tape, with 3/16 inch white letters on black background. Use only for identification of individual wall switches and receptacles, and control device stations.

2.04 WIRE AND CABLE MARKERS

- A. Markers for Conductors and Cables: Use wrap-around self-adhesive vinyl cloth, wrap-around self-adhesive vinyl self-laminating, heat-shrink sleeve, plastic sleeve, plastic clip-on, or vinyl split sleeve type markers suitable for the conductor or cable to be identified.
- B. Markers for Conductor and Cable Bundles: Use plastic marker tags secured by nylon cable ties.
- C. Legend: Power source and circuit number or other designation indicated.
- D. Text: Use factory pre-printed or machine-printed text, all capitalized unless otherwise indicated.
- E. Minimum Text Height: 1/8 inch.
- F. Color: Black text on white background unless otherwise indicated.
- G. Description: Vinyl cloth type self-adhesive wire markers.
- H. Description: Cloth type wire markers.
- I. Locations: Each conductor at panelboard gutters, pull boxes, outlet boxes, and junction boxes each load connection.

2.05 VOLTAGE MARKERS

- A. Markers for Boxes and Equipment Enclosures: Use factory pre-printed self-adhesive vinyl or self-adhesive vinyl cloth type markers.
- B. Minimum Size:
 - 1. Markers for Equipment: 1 1/8 by 4 1/2 inches.
 - 2. Markers for Pull Boxes: 1 1/8 by 4 1/2 inches.
 - 3. Markers for Junction Boxes: 1/2 by 2 1/4 inches.
- C. Legend:
 - 1. Markers for Voltage Identification: Highest voltage present.
 - 2. Markers for System Identification:
- D. Color: Black text on orange background unless otherwise indicated.

2.06 UNDERGROUND WARNING TAPE

- A. Materials: Use foil-backed detectable type polyethylene tape suitable for direct burial, unless otherwise indicated.
- B. Foil-backed Detectable Type Tape: 3 inches wide, with minimum thickness of 5 mil, unless otherwise required for proper detection.
- C. Legend: Type of service, continuously repeated over full length of tape.
- D. Color:

2.07 WARNING SIGNS AND LABELS

- A. Comply with ANSI Z535.2 or ANSI Z535.4 as applicable.
- B. Warning Signs:
 - 1. Materials:
 - 2. Minimum Size: 7 by 10 inches unless otherwise indicated.
- C. Warning Labels:
 - 1. Materials: Use factory pre-printed or machine-printed self-adhesive polyester or self-adhesive vinyl labels; UV, chemical, water, heat, and abrasion resistant; produced using materials recognized to UL 969.
 - 2. Machine-Printed Labels: Use thermal transfer process printing machines and accessories recommended by label manufacturer.
 - 3. Minimum Size: 2 by 4 inches unless otherwise indicated.
- D. Description: 4 inch wide polyethylene tape, detectable type colored red with suitable warning legend describing buried electrical lines.

PART 3 EXECUTION

3.01 PREPARATION

- A. Clean surfaces to receive adhesive products according to manufacturer's instructions.
- B. Degrease and clean surfaces to receive nameplates and labels.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Install identification products to be plainly visible for examination, adjustment, servicing, and maintenance. Unless otherwise indicated, locate products as follows:
 - 1. Surface-Mounted Equipment: Enclosure front.
 - 2. Flush-Mounted Equipment: Inside of equipment door.
 - 3. Free-Standing Equipment: Enclosure front; also enclosure rear for equipment with rear access.
 - 4. Elevated Equipment: Legible from the floor or working platform.
 - 5. Branch Devices: Adjacent to device.
 - 6. Interior Components: Legible from the point of access.
 - 7. Conduits: Legible from the floor.
 - 8. Boxes: Outside face of cover.

- 9. Conductors and Cables: Legible from the point of access.
- 10. Devices: Outside face of cover.
- C. Install identification products centered, level, and parallel with lines of item being identified.
- D. Secure nameplates to exterior surfaces of enclosures using stainless steel screws and to interior surfaces using self-adhesive backing or epoxy cement.
- E. Install self-adhesive labels and markers to achieve maximum adhesion, with no bubbles or wrinkles and edges properly sealed.
- F. Install underground warning tape above buried lines with one tape per trench at 3 inches below finished grade.
- G. Mark all handwritten text, where permitted, to be neat and legible.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Replace self-adhesive labels and markers that exhibit bubbles, wrinkles, curling or other signs of improper adhesion.
- C. Install nameplates and labels parallel to equipment lines.
- D. Secure nameplates to equipment front using screws or adhesive.
- E. Secure nameplates to inside surface of door on panelboard that is recessed in finished locations.
- F. Identify conduit using field painting under provisions of Section 09 9000.
- G. Identify panel and circuit number serving each device with an adhesive label located on wall plate.
- H. Identify circuits contained in junction box on the cover.
- I. Paint junction box covers containing fire alarm system.
 - 1. Colors:
 - a. Fire Alarm System: Red.
- J. Identify underground conduits using underground warning tape. Install one tape per trench at 3 inches below finished grade.

END OF SECTION

SECTION 26 0583
WIRING CONNECTIONS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Electrical connections to equipment.

1.02 RELATED REQUIREMENTS

- A. Section 26 0519 - Low-Voltage Electrical Power Conductors and Cables.
- B. Section 26 0533.13 - Conduit for Electrical Systems.
- C. Section 26 0533.16 - Boxes for Electrical Systems.
- D. Section 26 2726 - Wiring Devices.
- E. Section 26 2816.16 - Enclosed Switches.

1.03 REFERENCE STANDARDS

- A. NEMA WD 1 - General Color Requirements for Wiring Devices; 1999 (Reaffirmed 2020).
- B. NEMA WD 6 - Wiring Devices - Dimensional Specifications; 2021.
- C. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
 - 2. Determine connection locations and requirements.
- B. Sequencing:
 - 1. Install rough-in of electrical connections before installation of equipment is required.
 - 2. Make electrical connections before required start-up of equipment.

1.05 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements, for submittal procedures.
- B. Product Data: Provide wiring device manufacturer's catalog information showing dimensions, configurations, and construction.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Products: Listed, classified, and labeled as suitable for the purpose intended.

1.07 COORDINATION

- A. Obtain and review shop drawings, product data, manufacturer's wiring diagrams, and manufacturer's instructions for equipment furnished under other sections.
- B. Determine connection locations and requirements.
- C. Sequence rough-in of electrical connections to coordinate with installation of equipment.
- D. Sequence electrical connections to coordinate with start-up of equipment.

PART 2 PRODUCTS

2.01 MATERIALS

- A. Cords and Caps: NEMA WD 6; match receptacle configuration at outlet provided for equipment.
 - 1. Colors: Comply with NEMA WD 1.
 - 2. Cord Construction: NFPA 70, Type SO, multiconductor flexible cord with identified equipment grounding conductor, suitable for use in damp locations.
 - 3. Size: Suitable for connected load of equipment, length of cord, and rating of branch circuit overcurrent protection.
- B. Wiring Devices: As specified in Section 26 2726.
- C. Flexible Conduit: As specified in Section 26 0533.13.
- D. Wire and Cable: As specified in Section 26 0519.
- E. Boxes: As specified in Section 26 0533.16.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.02 ELECTRICAL CONNECTIONS

- A. Make electrical connections in accordance with equipment manufacturer's instructions.
- B. Make conduit connections to equipment using flexible conduit. Use liquidtight flexible conduit with watertight connectors in damp or wet locations.
- C. Connect heat producing equipment using wire and cable with insulation suitable for temperatures encountered.
- D. Provide receptacle outlet to accommodate connection with attachment plug.
- E. Provide cord and cap where field-supplied attachment plug is required.
- F. Install suitable strain-relief clamps and fittings for cord connections at outlet boxes and equipment connection boxes.
- G. Install disconnect switches, controllers, control stations, and control devices to complete equipment wiring requirements.
- H. Install terminal block jumpers to complete equipment wiring requirements.
- I. Install interconnecting conduit and wiring between devices and equipment to complete equipment wiring requirements.

END OF SECTION

SECTION 26 2816.16
ENCLOSED SWITCHES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Enclosed safety switches.
- B. Fusible switches.
- C. Nonfusible switches.

1.02 RELATED REQUIREMENTS

- A. Section 26 0526 - Grounding and Bonding for Electrical Systems.
- B. Section 26 0529 - Hangers and Supports for Electrical Systems.
- C. Section 26 0553 - Identification for Electrical Systems: Identification products and requirements.
- D. Section 26 2813 - Fuses.

1.03 REFERENCE STANDARDS

- A. NECA 1 - Standard for Good Workmanship in Electrical Construction; 2015.
- B. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum); 2020.
- C. NEMA FU 1 - Low Voltage Cartridge Fuses; National Electrical Manufacturers Association; 2002 (R2007).
- D. NEMA KS 1 - Heavy Duty Enclosed and Dead-Front Switches (600 Volts Maximum); 2013.
- E. NETA ATS - Standard For Acceptance Testing Specifications For Electrical Power Equipment And Systems; 2021.
- F. NFPA 70 - National Electrical Code; Most Recent Edition Adopted by Authority Having Jurisdiction, Including All Applicable Amendments and Supplements.
- G. UL 50 - Enclosures for Electrical Equipment, Non-Environmental Considerations; Current Edition, Including All Revisions.
- H. UL 50E - Enclosures for Electrical Equipment, Environmental Considerations; Current Edition, Including All Revisions.
- I. UL 98 - Enclosed and Dead-Front Switches; Current Edition, Including All Revisions.

1.04 ADMINISTRATIVE REQUIREMENTS

- A. Coordination:
 - 1. Coordinate the work with other trades. Avoid placement of ductwork, piping, equipment, or other potential obstructions within the dedicated equipment spaces and within working clearances for electrical equipment required by NFPA 70.
 - 2. Coordinate arrangement of electrical equipment with the dimensions and clearance requirements of the actual equipment to be installed.
 - 3. Verify with manufacturer that conductor terminations are suitable for use with the conductors to be installed.

4. Notify Architect/Engineer of any conflicts with or deviations from Contract Documents.
Obtain direction before proceeding with work.

1.05 SUBMITTALS

- A. See Section 260500 - Basic Electrical Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's standard catalog pages and data sheets for enclosed switches and other installed components and accessories.

1.06 QUALITY ASSURANCE

- A. Comply with requirements of NFPA 70.
- B. Maintain at the project site a copy of each referenced document that prescribes execution requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Store in a clean, dry space. Maintain factory wrapping or provide an additional heavy canvas or heavy plastic cover to protect units from dirt, water, construction debris, and traffic.
- B. Handle carefully in accordance with manufacturer's written instructions to avoid damage to enclosed switch internal components, enclosure, and finish.

1.08 FIELD CONDITIONS

- A. Maintain ambient temperature between -22 degrees F and 104 degrees F during and after installation of enclosed switches.
- B. Products: Listed and classified by Underwriters Laboratories Inc. as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. Eaton Corporation: www.eaton.com/#sle.
- B. Schneider Electric; Square D Products: www.schneider-electric.us/#sle.
- C. Siemens: www.siemens.com
- D. Substitutions: See Section 01 6000 - Product Requirements.
- E. Source Limitations: Furnish enclosed switches and associated components produced by the same manufacturer as the other electrical distribution equipment used for this project and obtained from a single supplier.

2.02 ENCLOSED SAFETY SWITCHES

- A. Description: Quick-make, quick-break enclosed safety switches listed and labeled as complying with UL 98; heavy duty; ratings, configurations, and features as indicated on the drawings.
- B. Provide products listed, classified, and labeled as suitable for the purpose intended.
- C. Unless otherwise indicated, provide products suitable for continuous operation under the following service conditions:
 1. Altitude: Less than 6,600 feet.
 2. Ambient Temperature: Between -22 degrees F and 104 degrees F.

- D. Horsepower Rating: Suitable for connected load.
- E. Voltage Rating: Suitable for circuit voltage.
- F. Short Circuit Current Rating:
- G. Provide with switch blade contact position that is visible when the cover is open.
- H. Conductor Terminations: Suitable for use with the conductors to be installed.
- I. Provide solidly bonded equipment ground bus in each enclosed safety switch, with a suitable lug for terminating each equipment grounding conductor.
- J. Enclosures: Comply with NEMA 250, and list and label as complying with UL 50 and UL 50E.
 - 1. Environment Type per NEMA 250: Unless otherwise indicated, as specified for the following installation locations:
- K. Provide safety interlock to prevent opening the cover with the switch in the ON position with capability of overriding interlock for testing purposes.
- L. Heavy Duty Switches:
 - 1. Comply with NEMA KS 1.
 - 2. Conductor Terminations:
 - a. Lug Material: Copper suitable for terminating copper conductors only.
 - 3. Provide externally operable handle with means for locking in the OFF position, capable of accepting three padlocks.
- M. Substitutions: See Section 16010 - Basic Electrical Requirements for submittals.

2.03 COMPONENTS

- A. Fusible Switch Assemblies: NEMA KS 1, Type HD enclosed load interrupter knife switch.
 - 1. Externally operable handle interlocked to prevent opening front cover with switch in ON position.
 - 2. Handle lockable in OFF position.
 - 3. Fuse clips: Designed to accommodate NEMA FU1, Class R fuses.
- B. Nonfusible Switch Assemblies: NEMA KS 1, Type HD enclosed load interrupter knife switch.
 - 1. Externally operable handle interlocked to prevent opening front cover with switch in ON position.
 - 2. Handle lockable in OFF position.
- C. Enclosures: NEMA KS 1.
 - 1. Interior Dry Locations: Type 1.
 - 2. Exterior Locations: Type 3R.

PART 3 EXECUTION

3.01 EXAMINATION

- A. Verify that field measurements are as indicated.
- B. Verify that the ratings of the enclosed switches are consistent with the indicated requirements.
- C. Verify that mounting surfaces are ready to receive enclosed safety switches.
- D. Verify that conditions are satisfactory for installation prior to starting work.

3.02 INSTALLATION

- A. Install products in accordance with manufacturer's instructions.
- B. Perform work in accordance with NECA 1 (general workmanship).
- C. Arrange equipment to provide minimum clearances in accordance with manufacturer's instructions and NFPA 70.
- D. Provide required support and attachment in accordance with Section 26 0529.
- E. Install enclosed switches plumb.
- F. Except where indicated to be mounted adjacent to the equipment they supply, mount enclosed switches such that the highest position of the operating handle does not exceed 79 inches above the floor or working platform.
- G. Provide grounding and bonding in accordance with Section 26 0526.
- H. Provide fuses complying with Section 26 2813 for fusible switches as indicated or as required by equipment manufacturer's recommendations.
- I. Identify enclosed switches in accordance with Section 26 0553.
- J. Provide identification nameplate for each enclosed switch in accordance with Section 26 0553.
- K. Provide identification label on inside door of each fused switch indicating NEMA fuse class and size installed in accordance with Section 26 0553.
- L. Provide arc flash warning labels in accordance with NFPA 70.
- M. Install fuses in fusible disconnect switches.
- N. Apply adhesive tag on inside door of each fused switch indicating NEMA fuse class and size installed.

3.03 FIELD QUALITY CONTROL

- A. See Section 01 4000 - Quality Requirements, for additional requirements.
- B. Inspect and test in accordance with NETA ATS, except Section 4.
- C. Perform inspections and tests listed in NETA ATS, Section 7.5.1.1.
- D. Correct deficiencies and replace damaged or defective enclosed safety switches or associated components.

3.04 ADJUSTING

- A. Adjust tightness of mechanical and electrical connections to manufacturer's recommended torque settings.

3.05 CLEANING

- A. Clean dirt and debris from switch enclosures and components according to manufacturer's instructions.
- B. Repair scratched or marred exterior surfaces to match original factory finish.

END OF SECTION

MEMORANDUM

TO: Mayor and City Council

FROM: Beth Chelesvig, Administrative Services Director
John Harrenstein, Interim City Manager

DATE: May 20, 2024

RE: Health/Dental/Vision/Life Insurance Renewal

SUMMARY:

Over the last few months, I have been meeting with the Health Insurance Committee to review our renewal information, discuss and research any possible changes and make a recommendation for the 24-25 plan year.

As a committee we had anticipated that this year could be a larger increase than in past years. In 2021/22 and 2022/23 no increase was applied as there was balance in the self-funding account that was being used up. Claims have increased significantly as well, so the end result is a 12.41% adjustment needed to the health insurance plan.

The recommendation from the Committee is the following –

Health Insurance – 12.41% Increase

Vision Insurance – No Increase

Dental Insurance – No Increase

Life Insurance – No Increase

I would like to thank all of the members of the committee for the time and attention they continue to dedicate to this process. The current members are Brian Stroner, Marty Parkhill, Zach Williams, Breanne Leshner and Ashley Dinsdale.

PREVIOUS COUNCIL ACTION:

We are bound by contract for the fire bargaining unit for the contribution rates for health insurance, which is currently 100% single, 87% Family. The police bargaining unit, by current contract, is bound to the contribution rates that are established for non-bargaining employees which is currently 100% single, 90% family. The members of the IUOE unit that was decertified in November of 2017 are now part of the non-bargaining employee group.

BACKGROUND/DISCUSSION:

In January of 2012 we changed from Coventry to Iowa Governmental Health Care Plan (IGHCP) with third party administrator Two Rivers/Employee Benefit Systems (EBS). At the time we entered into an 18-month agreement which changed our renewal for health insurance from calendar year to fiscal year. IGHCP is a pool of cities, counties and a few school systems. A high deductible plan is purchased from Wellmark, current levels are \$5000/\$10000 deductible, \$7350/\$14700 out of pocket maximum (we started the program at \$2000/\$4000 deductible, \$4000/\$8000 out of pocket maximum and changed to the current levels for FY 19-20), then the plan is partially self-funded to the current level of benefits that employees are receiving (deductible of \$750/\$1500, out of pocket maximum of \$1500/\$3000). The employees have been pleased with the program and it has been working well for us financially.

The premium from Wellmark then has claims funding amount and administration fees added in to arrive at the monthly premium. The claim's funding amount is an actuarial estimate based on claims history and plan design.

Being a part of this group has been beneficial for the City of Webster City in controlling health care costs and providing quality insurance benefits for our employees.

History of increases:

- 2010 – Principal – 9.6% increase
- 2011 – Coventry – 27.5% increase
- 2012 – IGHCP – No increase, transition process
- 2013/14 – IGHCP – 4.29% increase
- 2014/15 – IGHCP – 2.5% increase
- 2015/16 – IGHCP – 4.23% increase
- 2016/17 – IGHCP – 4.12% increase
- 2017/18 – IGHCP – 0% increase
- 2018/19 – IGHCP – 3.39% increase
- 2019/20 – IGHCP – 5% increase
- 2020/21 – IGHCP – 4% increase
- 2021/22 – IGHCP – 0% increase
- 2022/23 – IGHCP – 0% increase
- 2023/24 – IGHCP – 4% increase
- 2024/25 – IGHCP – 12.41% increase

FINANCIAL IMPLICATIONS: The 24/25 budget will support this plan.

RECOMMENDATION: Adopt and approve the Group Health Plan and Flexible Benefits Program.

RESOLUTION NO. 2024-

**ADOPTING GROUP BENEFIT PLAN FOR CITY EMPLOYEES BEGINNING JULY 1, 2024,
WITH IOWA GOVERNMENTAL HEALTH CARE PLAN,
THIRD PARTY ADMINISTRATOR EMPLOYEE BENEFIT SYSTEMS**

WHEREAS, the City of Webster City desires to continue with agreement for the Group Health Insurance Plan with Iowa Governmental Health Care Plan administered by Two Rivers/Employee Benefit Systems, Third Party Administrative Services for Dental, Vision and Section 125 Flexible Benefit Plan with Two Rivers/Employee Benefit Systems; and,

WHEREAS, the City of Webster City desires to continue the following agreements for group insurance plan and group Section 125 Flexible Benefits for City employees;

Iowa Governmental Health Care Plan 28E agreement administered by Two Rivers/Employee Benefit Systems

Two Rivers/Employee Benefits Systems Third Party Administration Service Agreement for Dental, Vision and Section 125 Flexible Benefit Plan

WHEREAS, the said Group Health Plan and Flexible Benefits Program should be approved for the period of July 1, 2024– June 30, 2025.

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa that the above mentioned Group Benefit Plan are hereby adopted and approved, to be effective July 1, 2024 and the Administrative Services Director is hereby authorized and directed to execute the necessary documents for implementation.

Passed and adopted this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST: _____
Karyl K. Bonjour, City Clerk

MEMORANDUM

TO: Mayor and City Council

FROM: Beth Chelesvig, Administrative Services Director
John Harrenstein, Interim City Manager

DATE: May 20, 2024

RE: 24-25 Pay Plan

SUMMARY:

The 24-25 pay plan has been prepared reflecting the following:

Iowa State Policeman's Association Local, American Federation of State, County and Municipal Employees Council 61, AFL-CIO (AFSCME) – 4.00% July 1, 2024 and 4.00% January 1, 2025. There will be an additional basic wage rate increase of \$1.75/hour effective July 1, 2024 for Police Sergeant Classification.

Iowa Professional Fire Fighter's Local, #1940 – 4% increase in base wage

Police unit has a three-year contract July 1, 2024 – June 30, 2027

Fire unit has a three-year contract July 1, 2023 – June 30, 2026

Recommendation for Non-Bargaining Employees

The recommendation for this year will be a 4% increase in base wage for non-bargaining employees, there may be additional adjustments as needed. Any additional increases were budgeted for in the budget approved by council for FY24-25. If a non-bargaining employee has a needs improvement rating on their evaluation, they would receive no increase at 7-1-24, a performance improvement plan would be implemented and they would be reviewed again at 6 months with opportunity for an increase at that point if rating has improved.

PREVIOUS COUNCIL ACTION:

Discussed below in background/discussion.

BACKGROUND/DISCUSSION:

Last year a 4% increase was given to non-bargaining employees.

Police bargaining unit received 5% and Fire bargaining unit received 4.00%.

In surveying other cities, the average range for wage adjustments for non-bargaining for 7-1-24 is running from 4-8%.

FINANCIAL IMPLICATIONS: Increases are budgeted in 24-25 budget.

RECOMMENDATION: Approving Employee Pay Plan for 2024-2025.

BASIC WAGE INCREASE INFORMATION

DEPARTMENT DIRECTORS & STAFF

As per Budget adopted by City Council
April 15, 2024

POLICE (Agreement)
Resolution 24-027

4.00% increase July 1, 2023
4.00% increase January 1, 2025
Additional \$1.75/hour Sergeant
Classification effective July 1, 2024

FIRE (Agreement)
Resolution 23-050

4.00% increase July 1, 2024

ALL EMPLOYEES

The City Manager shall set the position of the employee in the pay plan.

APPOINTED EMPLOYEES

The City Council shall appoint and determine the wages of the City Manager and City Clerk.

The City Manager and City Clerk shall be covered by the same fringe benefits that cover Non-bargaining employees.

Police Department

July 1, 2024 – December 31, 2024 – 4.00% increase + sergeant base wage rate increased an additional \$1.75/hour effective July 1, 2024

July 1, 2024

Police Officer	\$25.82	\$26.59	\$27.48		
Sr. Police Officer	\$28.90	\$29.84	\$30.73	\$31.58	\$32.53
Sergeant			\$35.06	\$36.03	\$37.08
Dispatcher	\$19.86	\$21.02	\$22.15	\$23.24	\$24.47

January 1, 2025

Police Officer	\$25.82	\$26.59	\$27.48		
Sr. Police Officer	\$28.90	\$29.84	\$30.73	\$31.58	\$32.53
Sergeant			\$35.06	\$36.03	\$37.08
Dispatcher	\$19.86	\$21.02	\$22.15	\$23.24	\$24.47

1. Steps:

- A) After an officer becomes certified by the Iowa Law Enforcement Academy, he/she will be placed at Step 1 Senior Patrolman. Dispatchers hired as NCIC Certified, EMD Certified will be allowed to bring with them their years of service as a certified dispatcher in another department for the purposes of advancing through the step criteria. Police Officers who are hired with previous ILEA certification and training are qualified to be immediately

adjusted to the step pay commensurate with their years of previous service and training.

2.

B) All Senior patrolman, sergeant and dispatcher steps shall be awarded at the discretion of the Chief of Police with the approval of the City Manager pursuant to criteria developed by the department (including the chief and members) and the City Manager. Criteria may be reviewed at the request of the union or the Chief of Police. Specific change to be made in criteria language prior to July 1, 2000 shall be made in the language regarding overall rating of the employee's performance. Language shall be agreed upon to reflect that the overall employee's performance must "MEET EXPECTATIONS" for a minimum of two consecutive years.

Field Training Officer Pay

Field Training Officers shall be compensated an extra two (2) hours per shift for any shifts where they act as a Field Training Officer.

Field Training Officers (FTOs) must be certified FTOs through a course approved by the Chief of Police in order to be eligible for any supplemental pay.

Fire Department

July 1, 2024 - June 30, 2025 4.00% across - the - board

<u>Classification</u>	<u>Step 1</u>	<u>Step 2</u>	<u>Step 3</u>	<u>Step 4</u>	<u>Step 5</u>
11 Firefighter	\$17.79 \$ 51,804.48	\$18.30 \$ 53,289.60	\$18.83 \$ 54,832.96	\$19.58 \$ 57,016.96	\$20.12 \$ 58,589.44
13 Captain	\$20.70 \$ 60,278.40	\$21.55 \$ 62,753.60	\$22.39 \$ 65,199.68	\$23.09 \$ 67,238.08	\$23.88 \$ 69,538.56

RESOLUTION NO. 2024 - xxx

ADOPTING EMPLOYEE PAY PLAN FOR 2024-25

WHEREAS, the employee pay plan for classified employees has been updated and revised as deemed appropriate by the Administrative Services Director.

WHEREAS, the employees of the Police bargaining unit will receive basic wage increase of 4.00% July 1, 2024 and 4.00% January 1, 2025. There will be an additional basic wage rate increase of \$1.75/hour effective July 1, 2024 for Police Sergeant Classification as per Resolution No. 2024-027; and,

WHEREAS, the employees of the Fire bargaining unit will receive basic wage increases of 4.00% July 1, 2024 as per Resolution No. 2023-050; and,

WHEREAS, funds have been budgeted for non-bargaining employees as approved in budget adopted April 15, 2024.

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa that the proposed 2024-25 employee pay plan for the fiscal year ending June 30, 2025 is hereby adopted.

Passed and adopted this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk



MEMORANDUM

TO: Mayor and City Council

FROM: Adam Dickinson, Line Department Superintendent
John Harrenstein, Interim City Manager

DATE: May 20, 2024

RE: Bidding Package: Furnishing 15 kV Indoor Metalclad Switchgear – Reisner Substation

SUMMARY: Requesting permission to seek bids and schedule a Public Hearing for materials as defined in the attached bidding documents to furnish said materials for the Reisner Substation.

PREVIOUS COUNCIL ACTION: The City Council has previously authorized DGR Engineering to perform full design services (final design, bidding, construction administration, etc.), and has approved multiple contracts for materials for the new Reisner Substation.

BACKGROUND/DISCUSSION: The equipment to be supplied is described in general as follows:

Furnishing and installing a new lineup of 15 kV indoor metalclad switchgear including eight (8) vacuum circuit breakers with related controls and accessories.

The attached bidding documents reference in more detailed and complete description of the material specifications. At the proposed Public Hearing on July 1st, 2024 at 6:05 P.M., the City Council will also receive and consider any objection to said plans, specifications and form of contract or cost of the project made by any interested party.

FINANCIAL IMPLICATIONS: The Engineer's estimate for this bidding package is \$580,000.00 (excluding taxes).

PROJECT TIMELINE: The current timeline for these materials is as follows:

- Bid Opening: Tuesday, June 18, 2024 @ 2:00 PM at City Hall
- Estimated Delivery: June 30, 2025

RECOMMENDATION: Approve the request to set public hearing for July 1st, 2024 at 6:05 P.M. at which time the City Council will consider the plans and specifications, proposed form of contract and the estimate of cost to furnish materials for the Reisner Substation as defined.

RESOLUTION NO. 2024 - xxx

RESOLUTION PROVIDING FOR NOTICE OF HEARING ON PROPOSED PLANS AND SPECIFICATIONS AND PROPOSED FORM OF CONTRACT AND ESTIMATE OF COST TO PURCHASE THE 15 KV INDOOR METALCLAD SWITCHGEAR NEEDED FOR THE REISNER SUBSTATION

WHEREAS, the City Council of the City of Webster City, Iowa, has determined that it is necessary and desirable that a public improvement be done as described in the proposed plans and specifications and form of contract, which may be hereafter referred to as the 15 kV Indoor Metalclad Switchgear for the Reisner Substation, (and is hereinafter referred to as the “Project”), which proposed plans, specifications and form of contract and estimate of cost are on file with the City Clerk; and

WHEREAS, The City Council has previously sanctioned DGR Engineering to oversee comprehensive design services for the Reisner Substation project, and has approved multiple contracts for materials procurement; and

WHEREAS, The materials required for the Reisner Substation include the furnishing and installation of a new lineup of 15 kV Indoor Metalclad Switchgear, comprising of eight (8) vacuum circuit breakers with related controls and accessories, as outlined in the attached bidding documents; and

WHEREAS, A Public Hearing is deemed necessary to receive objections and feedback regarding the plans, specifications, proposed contract form, and estimated project costs from interested parties; and

WHEREAS, The Engineer’s estimate for the bidding package amounts to \$580,000.00, excluding taxes; and

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa, as follows:

Section 1. The detailed plans and specifications, notice of hearing and estimate of cost referred to in the preamble hereof be and the same are hereby approved.

Section 2. The Project is necessary and desirable for the City, and it is in the best interests of the City to proceed toward the construction of the Project.

Section 3. Sealed proposals will be received by the City Clerk of Webster City, at the Council Chambers of the City Council, in the City Hall of said City, until 2:00 p.m. on the 18th day of June, 2024, for the 15 kV Indoor Metalclad Switchgear for the Reisner Substation, as described in the plans and specifications therefor now on file in the office of the City Clerk. Proposals will be opened by City Staff appointed by the City Council as provided by Section 384.101, Code of Iowa.

Section 4. The 1st day of July, 2024, at 6:05 o'clock p.m. at the Council Chambers at City Hall, Webster City, Iowa, is hereby fixed as the time and place of hearing on the proposed plans, specifications, form of contract and estimate of cost for the Project, and also as the time and place of considering bids previously received by the City Clerk in connection therewith.

Section 5. The City Clerk is hereby authorized and directed to give notice of the aforementioned hearing and letting by publication of such notices in a newspaper of general circulation in the City, which publication shall be made not less than four nor more than twenty days prior to the time of the said hearing, all in conformity with Chapters 362, 384, and 26 of the Code of Iowa. The said notice shall be in the form substantially as attached to this resolution.

Section 6. All provisions set out in the following form of notice are hereby recognized and prescribed by this Council and all resolutions or orders or parts thereof, to the extent the same may be in conflict herewith, are hereby repealed.

Passed and approved this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST: _____
Karyl K. Bonjour, City Clerk

NOTICE OF PUBLIC HEARING

NOTICE OF PUBLIC HEARING ON PLANS AND SPECIFICATIONS, PROPOSED FORM OF CONTRACT, AND ESTIMATE OF COST FOR FURNISHING 15 KV INDOOR METALCLAD SWITCHGEAR - REISNER SUBSTATION FOR THE CITY OF WEBSTER CITY, IOWA.

Notice is hereby given that the City Council of Webster City, Iowa will meet in the Council Chambers at City Hall, 400 Second Street, Webster City, Iowa 50595 on July 1, 2024 at 6:05 PM, at which time and place the City Council will consider the adoption of plans and specifications and proposed form of contract for the above referenced materials, which are now on file in the City Offices. At said meeting the City Council will receive and consider any objections to said plans, specifications, form of contract and estimate of cost made by any interested party.

The equipment to be supplied is described in general as follows:

Furnishing and installing a new lineup of 15 kV indoor metalclad switchgear including eight (8) vacuum circuit breakers with related controls and accessories.

Publication upon order of the City Council of Webster City, Iowa.

Dated this 14th day of June 2024.

CITY OF WEBSTER CITY, IOWA

By /s/ John Hawkins
Mayor

ATTEST:
/s/ Karyl K. Bonjour
City Clerk

NOTICE TO BIDDERS

Notice is hereby given that sealed bids will be received by the City Clerk of the City of Webster City, Iowa, at City Hall, 400 Second Street, Webster City, Iowa 50595, before **2:00 P.M. on June 18, 2024**, for Furnishing 15 kV Indoor Metalclad Switchgear for Reisner Substation for the City of Webster City, Iowa. At said time, the bids will be publicly opened and read aloud in the Council Chambers, 400 Second Street, Webster City, Iowa 50595. Bids will be considered by the City Council at its meeting at 6:05 PM on July 1, 2024 in the Council Chambers at City Hall, 400 Second Street, Webster City, Iowa 50595. The City Council may award the contract at said meeting or at such other time and place as shall then be announced.

The equipment to be supplied is described in general as follows:

Furnishing and installing a new lineup of 15 kV indoor metalclad switchgear including eight (8) vacuum circuit breakers with related controls and accessories.

The above equipment shall be in accordance with the specifications and proposed form of contract now on file in the office of the Municipal Electric Utility in said City of Webster City, Iowa, by this reference made a part hereof, as though fully set out and incorporated herein.

Complete digital project bidding documents are available at www.questcdn.com. You may download the digital plan documents at no charge by inputting **Quest project #9124141** on the website's Project Search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital project information. An optional paper set of the proposal forms and specifications at no charge for individual use may be obtained from the office of the Engineer, DGR Engineering, 1302 South Union, P.O. Box 511, Rock Rapids, Iowa 51246, telephone 712-472-2531, Fax 712-472-2710, e-mail: dgr@dgr.com.

Each bid shall be made out on a blank form furnished by the Utility and must contain bid security as required by Iowa Code Section 26.8. The bidder's security shall be in the form of either (1) a cashier's check or certified check drawn on a state-chartered or federally chartered bank, in an amount equal to ten (10) percent of the amount of the Bid; or (2) a certified share draft drawn on a state-chartered or federally chartered credit union, in an amount equal to ten (10) percent of the amount of the Bid; or (3) a bid bond executed by a corporation authorized to contract as a surety in the State of Iowa, in an amount equal to ten (10) percent of the amount of the Bid. The bid security shall be made payable to the City of Webster City, Iowa. The bid security must not contain any conditions either in the body or as an endorsement thereon. Such bid security shall be forfeited to the City as liquidated damages in the event the successful bidder fails or refuses to enter into a contract within fifteen (15) days after the award of contract and post a satisfactory Performance Bond.

The sealed envelope containing the bid shall be clearly marked "BID ENCLOSED – FURNISHING 15 kV INDOOR METALCLAD SWITCHGEAR – REISNER SUBSTATION" on the outside of the envelope.

Payment to the Supplier will be made as described in the Material Agreement.

Delivery of the Switchgear shall be by the date set in the General Requirements.

By virtue of statutory authority, a preference will be given to products and provisions grown, and coal produced within the State of Iowa, and preference shall be given to Iowa domestic labor in the construction of said improvements. The Owner will, in evaluating Bids, consider the requirements of the resident bidder preference law, and allow such preferences to resident bidders as are required to be allowed under State Law. Bidder shall, when submitting a Bid, furnish an executed Bidder Status Form for the Owner to use when applying the preference law. Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

The City Council reserves the right to defer acceptance of any proposal for a period not to exceed thirty (30) days after the date proposals are received and no proposal may be withdrawn during this period. The City Council also reserves the right to reject any or all bids, to waive informalities and irregularities in the form of the bid, and enter into such contract as it shall deem to be in the best interest of the Utility.

Publication upon order of the City Council of Webster City, Iowa.

Dated this 21st day of May 2024.

CITY OF WEBSTER CITY, IOWA

By /s/ John Hawkins
Mayor

ATTEST:
/s/ Karyl K. Bonjour
City Clerk

Bidding Documents

Furnishing 15 kV Indoor Metalclad Switchgear - Reisner Substation



**City of Webster City/Municipal Utilities
Webster City, Iowa**

May 2024

**DGR Project No. 428403
City Project No. 9-23-011**



Bidding Documents

Furnishing 15 kV Indoor Metalclad Switchgear Reisner Substation

City of Webster City/Municipal Utilities Webster City, Iowa

May 2024

This engineering document is a reproduction of a certified engineering document,
the official copy of which was certified by

_____ Ryan D. Kleinjan, P.E. _____ on _____ 5-14-2024 _____

The official copy of this engineering document is on file at the office of the Owner.

Pages or sheets covered by this seal: All bound pages. _____

DGR Project No. 428403

DGR Engineering

1302 South Union Street

Rock Rapids, IA

(712) 472-2531

dgr@dgr.com

Bidding Documents

Furnishing 15 kV Indoor Metalclad Switchgear Reisner Substation

City of Webster City/Municipal Utilities Webster City, Iowa

Contact persons for this project are as follows:

Owner's

Representative: City of Webster City/Municipal Utilities
400 Second Street
Webster City, IA 50595
Telephone: (515) 832-9151

Adam Dickinson, Electric Utility Supervisor
Telephone: (515) 832-9159
Cell: (515) 297-1307
E-mail: adam@webstercity.com

Ryan Orton, Utility Technician
Telephone: (515) 832-9159
Cell: (515) 297-0820
E-mail: rorton@webstercity.com

Engineer:

DGR Engineering
1302 South Union Street
Rock Rapids, Iowa 51246
Telephone 712-472-2531

Andy Koob, P.E., Project Principal
E-mail: andy.koob@dgr.com

Ryan Kleinjan, P.E., Project Manager
E-mail: ryan.kleinjan@dgr.com

Kade Griesse, E.I., Project Engineer
E-mail: kade.griesse@dgr.com

Bidding Documents

Furnishing 15 kV Indoor Metalclad Switchgear Reisner Substation

City of Webster City/Municipal Utilities Webster City, Iowa

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NOTICE TO BIDDERS

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The equipment to be supplied is described in general as follows:

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The above equipment shall be in accordance with the specifications and proposed form of contract now on file in the office of the Municipal Electric Utility in said City of Webster City, Iowa, by this reference made a part hereof, as though fully set out and incorporated herein.

Complete digital project bidding documents are available at www.questcdn.com. You may download the digital plan documents at no charge by inputting **Quest project #9124141** on the website's Project Search page. Please contact QuestCDN.com at 952-233-1632 or info@questcdn.com for assistance in free membership registration, downloading, and working with this digital project information. An optional paper set of the proposal forms and specifications at no charge for individual use may be obtained from the office of the Engineer, DGR Engineering, 1302 South Union, P.O. Box 511, Rock Rapids, Iowa 51246, telephone 712-472-2531, Fax 712-472-2710, e-mail: dgr@dgr.com.

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The sealed envelope containing the bid shall be clearly marked "BID ENCLOSED – FURNISHING 15 kV INDOOR METALCLAD SWITCHGEAR – REISNER SUBSTATION" on the outside of the envelope.

Payment to the Supplier will be made as described in the Material Agreement.

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By virtue of statutory authority, a preference will be given to products and provisions grown, and coal produced within the State of Iowa, and preference shall be given to Iowa domestic labor in the construction of said improvements. The Owner will, in evaluating Bids, consider the requirements of the resident bidder preference law, and allow such preferences to resident bidders as are required to be allowed under State Law. Bidder shall, when submitting a Bid, furnish an executed Bidder Status Form for the Owner to use when applying the preference law. Failure to submit a fully completed Bidder Status Form with the bid may result in the bid being deemed nonresponsive and rejected.

The City Council reserves the right to defer acceptance of any proposal for a period not to exceed thirty (30) days after the date proposals are received and no proposal may be withdrawn during this period. The City Council also reserves the right to reject any or all bids, to waive informalities and irregularities in the form of the bid, and enter into such contract as it shall deem to be in the best interest of the Utility.

Publication upon order of the City Council of Webster City, Iowa.

Dated this 21st day of May 2024.

CITY OF WEBSTER CITY, IOWA

By /s/ John Hawkins
Mayor

ATTEST:
/s/ Karyl K. Bonjour
City Clerk

NOTICE OF PUBLIC HEARING

NOTICE OF PUBLIC HEARING ON PLANS AND SPECIFICATIONS, PROPOSED FORM OF CONTRACT, AND ESTIMATE OF COST FOR FURNISHING 15 kV INDOOR METALCLAD SWITCHGEAR - REISNER SUBSTATION FOR THE CITY OF WEBSTER CITY, IOWA.

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The equipment to be supplied is described in general as follows:

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Publication upon order of the City Council of Webster City, Iowa.

Dated this 14th day of June 2024.

CITY OF WEBSTER CITY, IOWA

By /s/ John Hawkins
Mayor

ATTEST:
/s/ Karyl K. Bonjour
City Clerk

INSTRUCTIONS TO BIDDERS

1.01 FAMILIARITY OF CONDITIONS:

- A. Bidders are required to examine to their satisfaction, the plans and specifications and to make sure that the requirements are fully understood. The failure or omission of any Bidder to examine any form, instrument, or document shall in no way relieve any bidder from any obligation regarding their bid.

1.02 BIDDERS QUALIFICATIONS:

- A. Bidder must be capable of performing the work bid upon. The lowest responsive Bidders will be required to satisfy the Owner as to their integrity, experience, number of employees, equipment, personal, and financial ability to perform and ability to finance the cost of the work.
- B. If the information and data requested by the Owner is not furnished, the Owner may consider the Bidder non-responsive or non-responsible. The Owner reserves the right, in its sole and absolute discretion, to accept the bid of a Bidder despite the fact that said Bidder has not submitted any information, list, data or statement requested.
- C. The Owner reserves the right to reject any bid if the Owner determines, in its sole and absolute discretion, that the Bidder is not properly qualified to carry out the obligations of the Contract and/or to complete the work contemplated by the Contract. Conditional bids will not be accepted.

1.03 METHOD OF BIDDING:

- A. Bids shall be submitted on a unit price or lump sum basis as stated on the Bid Form. In preparing a bid, the Bidder shall specify the price, written legibly in ink or typewritten, at which the Bidder proposes to do each item of work. The price shall be stated with respect to each and every alternate item, whether an add alternate, or a deduct alternate. Failure to state a price for any alternate bid item shall constitute a non-responsive bid that will not be considered. The prices shall be stated in figures. In items where unit price is required, the total amount for each item shall be computed at the unit prices bid for the quantities given in the estimate. In the event of discrepancies in the unit price extensions listed in the bid, unit prices shall govern.
- B. For all work let on a unit price basis, the Engineer's estimate of quantities shown on the bid is understood to be approximate only and will be used only for the purpose of comparing bids. For work let on a lump sum basis, any estimate of quantities provided is furnished for the convenience of Bidders and is not guaranteed.

1.04 **BID SECURITY:**

- A. Each bid shall be accompanied by bid security as specified in the Notice to Bidders and made payable to the Owner. Should the bidder receiving the award fail to execute a satisfactory contract and file acceptable bonds within fifteen (15) days after the award of contract, the Owner may consider Bidder to be in default, annul the Notice of Award, and the bid security of that Bidder will be forfeited. Such forfeiture shall be the Owner's exclusive remedy if Bidder defaults.
- B. The bid security of unsuccessful Bidders will be returned promptly after the award has been made. In no case will the bid security be held longer than thirty (30) days without written permission of the Bidder, except that the bid security of the Bidder to whom the contract is awarded will be retained until he or she has entered into contract and filed an acceptable bond.

1.05 **TAXES:**

- A. The prices for material items in all bids shall not include provisions for the payment of any taxes to the State of Iowa.

1.06 **ALTERNATE MATERIALS:**

- A. Requests for approval of 'or-equal' materials and equipment shall be submitted to the Engineer in writing at least fifteen (15) days prior to receipt of bids. Each request shall conform to the terms and conditions of the bidding documents and to the type, function, and quality standards of approved materials and equipment. The burden of proof of the merit of proposed 'or-equal' materials and equipment is upon the Bidder. The engineer's decision of approval or disapproval of a proposed 'or-equal' item will be final. No substitution shall be approved except by a written addendum issued to all prospective Bidders.
- B. Bidders may submit bids for alternate materials which do not meet all of the detailed requirements of the specifications. Such submissions shall be in addition to the basic bid which shall comply with all requirements of the specifications. Bid evaluation and contract award will be made on the basis of the base bid. Alternate materials will then be considered, and the final contract amount adjusted accordingly if the Owner decides to accept bids for alternate materials. In submitting bids for alternate materials, Bidders shall submit manufacturer's data and note the exceptions to the requirements of the plans and specifications.
- C. Additionally, as part of evaluating 'or-equal' requests, engineer will consider the following:
 - 1. Manufacturer's ability to conform with the project specifications.
 - 2. Manufacturer's relevant experience.

3. Manufacturer's support capabilities.
4. The Owner's and Engineer's experience with the proposed equipment.

1.07 TERMS AND CONDITIONS:

- A. The Bidder is invited to attach their standard patent protection and liability limitation conditions, but shall not include any other terms and conditions to this bid. Attachment of additional terms and conditions shall be grounds for disqualification of the submitted bid.

1.08 CHANGES IN QUANTITIES:

- A. Not Applicable.

1.09 SUBMISSION OF BIDS:

- A. Bidders will be furnished with Bid Form(s) giving the estimate of quantities needed to complete the work. Two (2) copies of the completed Bid Form(s) and all supporting documentation shall be included with the bid.
- B. If the bid is made by an individual, his or her name and post office address must be shown. If made by a firm or partnership, the name and post office address of the firm or partnership must be shown. If made by a corporation, the person signing the bid must name the state under the laws of which the corporation is chartered, and the name, title, and business address of the executive head of the corporation. Anyone signing a bid as agent may be required to submit satisfactory evidence of his or her authority to do so.
- C. Any changes or alterations made in the official Bid Form, or any additions thereto, may result in the rejection of the bid. No bid will be considered which contains a clause in which the Bidder reserves the right to accept or reject a contract awarded by the Owner. Bids in which the unit prices are obviously unbalanced may be rejected.
- D. Should the Bidder find discrepancies, ambiguities or omissions from these documents, they should immediately notify the Engineer and an addendum will be sent to all known entities holding copies of the Bidding Documents.
- E. Two (2) copies of each Bid Form and all supporting documentation shall be provided. Bids shall be placed in an opaque envelope and the envelope sealed and marked "Bid Enclosed – Furnishing 15 kV Indoor Metalclad Switchgear – Reisner Substation" to indicate its contents. If forwarded by mail, the envelope shall be mailed to the following address:

City of Webster City
Attn: Dedra Nerland, Public Works Management Assistant
400 Second Street
Webster City, IA 50595

- F. Receipt of any Addenda must be acknowledged on the Bid Form or a copy of any addenda relating to the bid shall be signed and attached to the bid.
- G. No oral, facsimile, e-mail, telegraphic or telephonic bids or modifications will be considered.

1.10 MODIFICATION OR WITHDRAWAL OF BIDS:

- A. A bid may be withdrawn by an appropriate document duly executed in the same manner that a bid must be executed and delivered to the place where bids are to be submitted prior to the date and time for the opening of bids. Upon receipt of such notice, the unopened bid will be returned to the Bidder.
- B. If a Bidder wishes to modify its bid prior to bid opening, Bidder must withdraw its initial bid and submit a new bid prior to the date and time for the opening of bids.
- C. No bid may be withdrawn for a period of thirty (30) days after the scheduled date and time for the receipt of bids.

1.11 CONTRACT AWARD:

- A. Award of the Contract, if an award is made, will be on the basis of the base bid and/or any alternate bid(s) chosen by the Owner, as is in the best interest of the Owner. It is the intent of the Owner to award one (1) Contract for the Switchgear as is deemed to be in the best interest of the Owner. The effect of the guaranteed delivery date, dimensions and the experience record of the Bidder on units of similar size and rating will also be considered in evaluating the bids. This may also include location of manufacturing and assembly, and preference may be given to units manufactured and assembled in the USA. The Owner reserves the right to reject any or all bids, waive technicalities, and make award(s) as deemed to be in the best interest of the Owner. In addition to cost, other items that will impact the award decision include the following:
 - 1. Relevant experience with installations of similar size and type.
 - 2. Support capabilities.
 - 3. Ability to meet specified delivery schedule.
 - 4. Conformance to project specifications.
 - 5. Life cycle and maintenance costs.

6. The Owner's and Engineer's experience with the units manufactured by the Bidder.

1.12 PERFORMANCE BOND:

- A. Should the total value of the awarded work to any Bidder be equal to or greater than \$25,000, the Bidder to whom the contract is awarded shall furnish a Performance Bond in an amount equal to the total amount of the bid guaranteeing the faithful performance of the work in accordance with the terms of the contract. Such bond shall be with a surety company authorized to do business in the State of Iowa and in form acceptable to the Owner. Any costs associated with procuring the necessary bond shall be included in the bid prices. Bidder may furnish a Supply Bond in lieu of a Performance Bond.

1.13 EXECUTION OF CONTRACT:

- A. The Bidder to whom the contract has been awarded shall enter into contract with the Owner within fifteen (15) days after the award has been made.
- B. No bid shall be considered binding upon the Owner until the contract is properly executed by both parties and all required bonds are filed.
- C. The contract, when executed, shall be combined with all the Contract Documents identified in the Material Agreement representing the entire agreement between parties. The Bidder shall not claim any modification resulting from representation or promise made by representative of the Owner or other persons.

1.14 DELIVERY/INSTALLATION DATE:

- A. The desired delivery date for the 15 kV indoor metalclad switchgear is desired to be **no later than June 30, 2025. Based on current material availability, both later and earlier delivery dates will be considered by the Owner and should be listed on the Bid Form.**
- B. The Owner agrees to indemnify the Supplier for circumstances beyond his control, including acts of God, acts of government, and related circumstances. Actions that cause delivery delays that are under the control of the Supplier are failure to allow sufficient time for manufacturing, failure to inform the Engineer of changes in the manufacturing schedule, or lack of cooperation in establishing effective measures by which delays could be minimized.
- C. The Supplier shall provide monthly progress reports to the Engineer during the manufacturing of the equipment.

* * * END OF SECTION * * *

BID BOND

Any singular reference to Bidder, Surety, Owner or other party shall be considered plural where applicable.

BIDDER (*Name and Address*):

SURETY (*Name, and Address of Principal Place of Business*):

OWNER (*Name and Address*):

BID

Bid Due Date:

Description (*Project Name— Include Location*):

BOND

Bond Number:

Date:

Penal sum

\$

(Words)

(Figures)

Surety and Bidder, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Bid Bond to be duly executed by an authorized officer, agent, or representative.

BIDDER

SURETY

(Seal)

(Seal)

Bidder's Name and Corporate Seal

Surety's Name and Corporate Seal

By:

Signature

By:

Signature (Attach Power of Attorney)

Print Name

Print Name

Title

Title

Attest:

Signature

Attest:

Signature

Title

Title

Note: Addresses are to be used for giving any required notice.

Provide execution by any additional parties, such as joint venturers, if necessary.

1. Bidder and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to pay to Owner upon default of Bidder the penal sum set forth on the face of this Bond. Payment of the penal sum is the extent of Bidder's and Surety's liability. Recovery of such penal sum under the terms of this Bond shall be Owner's sole and exclusive remedy upon default of Bidder.
2. Default of Bidder shall occur upon the failure of Bidder to deliver within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents.
3. This obligation shall be null and void if:
 - 3.1 Owner accepts Bidder's Bid and Bidder delivers within the time required by the Bidding Documents (or any extension thereof agreed to in writing by Owner) the executed Agreement required by the Bidding Documents and any performance and payment bonds required by the Bidding Documents, or
 - 3.2 All Bids are rejected by Owner, or
 - 3.3 Owner fails to issue a Notice of Award to Bidder within the time specified in the Bidding Documents (or any extension thereof agreed to in writing by Bidder and, if applicable, consented to by Surety when required by Paragraph 5 hereof).
4. Payment under this Bond will be due and payable upon default of Bidder and within 30 calendar days after receipt by Bidder and Surety of written notice of default from Owner, which notice will be given with reasonable promptness, identifying this Bond and the Project and including a statement of the amount due.
5. Surety waives notice of any and all defenses based on or arising out of any time extension to issue Notice of Award agreed to in writing by Owner and Bidder, provided that the total time for issuing Notice of Award including extensions shall not in the aggregate exceed 120 days from the Bid due date without Surety's written consent.
6. No suit or action shall be commenced under this Bond prior to 30 calendar days after the notice of default required in Paragraph 4 above is received by Bidder and Surety and in no case later than one year after the Bid due date.
7. Any suit or action under this Bond shall be commenced only in a court of competent jurisdiction located in the state in which the Project is located.
8. Notices required hereunder shall be in writing and sent to Bidder and Surety at their respective addresses shown on the face of this Bond. Such notices may be sent by personal delivery, commercial courier, or by United States Registered or Certified Mail, return receipt requested, postage pre-paid, and shall be deemed to be effective upon receipt by the party concerned.
9. Surety shall cause to be attached to this Bond a current and effective Power of Attorney evidencing the authority of the officer, agent, or representative who executed this Bond on behalf of Surety to execute, seal, and deliver such Bond and bind the Surety thereby.
10. This Bond is intended to conform to all applicable statutory requirements. Any applicable requirement of any applicable statute that has been omitted from this Bond shall be deemed to be included herein as if set forth at length. If any provision of this Bond conflicts with any applicable statute, then the provision of said statute shall govern and the remainder of this Bond that is not in conflict therewith shall continue in full force and effect.
11. The term "Bid" as used herein includes a Bid, offer, or proposal as applicable.

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" for 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 nonresident 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: _____

City, State, Zip: _____

Dates: _____ / _____ / _____ to _____ / _____ / _____ Address: _____

City, State, Zip: _____

Dates: _____ / _____ / _____ to _____ / _____ / _____ Address: _____

You may attach additional sheet(s) if needed. City, State, Zip: _____

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 resident bidders, resident labor force preferences or any other type of preference to bidders or laborers? 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 a reason to reject my bid.

Firm Name: _____

Signature: _____ Date: _____

You must submit the completed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156. This form has been approved by the Iowa Labor Commissioner.

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.

BID FORM
15 kV Switchgear

TO: City Council
Webster City, Iowa

FROM: Bidders Name _____

Address _____

Pursuant to and in compliance with the Notice to Bidders, the Notice of Public Hearing, and the Instructions to Bidders relating thereto, the terms of which are incorporated herein by reference thereto, the undersigned as bidder offers and agrees, if this offer is accepted, to furnish and deliver the equipment and materials in strict conformance with the Specifications forming a part of these contract documents and in accordance with following addenda for the sum indicated on the following bid schedule.

Addendum Number

Addendum Date

1. The prices set forth herein do not include any sums which are or may be payable by the seller on account of taxes imposed by the State of Iowa upon the sale, purchase or use of the equipment. If any such tax is applicable to the sale, purchase or use of the equipment, the amount thereof shall be paid by the Owner.
2. The prices included herein are firm without regard for time of delivery, increase in cost from manufacturer, or any other factor.
3. The price of the equipment set forth herein shall include the cost of delivery to the job site in Webster City, Iowa as detailed in the specifications. The guaranteed delivery date of the 15 kV switchgear shall be included in this Bid.
4. Title to the equipment shall pass to the Owner upon completion of the contract and acceptance by the Owner.
5. This bid is void unless a materials contract based on this bid is entered into by the Owner and the Supplier within thirty (30) days after the date hereof.
6. The undersigned being familiar with all the details, conditions, and requirements hereby proposes to furnish the following material to City of Webster City, in strict conformance with the specifications and Bidding Documents, to-wit:

<u>Item No.</u>	<u>Qty</u>	<u>Description</u>	<u>Extended Price</u>
1	1	15 kV indoor metalclad switchgear lineup, with eight (8) vacuum circuit breakers, PT's, CT's, controls, relaying, factory testing, and drawings (as req'd)	\$ _____
2	1	Delivery to and installation at the site of Item 1 (as req'd)	\$ _____
TOTAL BID:			\$ _____

Manufacturer and Location: _____

Bidder confirms its ability to meet the proposed design submittal schedule (yes/no): _____

Approximate Weight: _____

Delivery Date: _____

Approximate Dimensions: H: _____

W: _____

D: _____

Bidder Status Form Enclosed _____

Bid Security Enclosed _____

* All materials shall be F.O.B. Webster City, Iowa.

The undersigned bidder certifies that this bid is made in good faith without collusion or connection with any other person or persons bidding on the work.

The undersigned bidder states that this bid is made in conformity with the Contract Documents and agrees that, in the event of any discrepancies or differences between any conditions of this bid and the Specifications, the provisions of the latter shall prevail.

Dated this ____ day of _____, 2024

Bidder _____

Address _____

Authorized Officer _____

Signature _____

Title _____

Telephone Number _____

E-Mail _____

PERFORMANCE BOND

CONTRACTOR *(name and address):*

SURETY *(name and address of principal place of business):*

OWNER *(name and address):*

CONSTRUCTION CONTRACT

Effective Date of the Agreement:

Amount:

Description *(name and location):*

BOND

Bond Number:

Date *(not earlier than the Effective Date of the Agreement of the Construction Contract):*

Amount:

Modifications to this Bond Form: None See Paragraph 16

Surety and Contractor, intending to be legally bound hereby, subject to the terms set forth below, do each cause this Performance Bond to be duly executed by an authorized officer, agent, or representative.

CONTRACTOR AS PRINCIPAL

SURETY

Contractor's Name and Corporate Seal *(seal)*

Surety's Name and Corporate Seal *(seal)*

By: _____
Signature

By: _____
Signature *(attach power of attorney)*

Print Name

Print Name

Title

Title

Attest: _____
Signature

Attest: _____
Signature

Title

Title

Notes: (1) Provide supplemental execution by any additional parties, such as joint venturers. (2) Any singular reference to Contractor, Surety, Owner, or other party shall be considered plural where applicable.

1. The Contractor and Surety, jointly and severally, bind themselves, their heirs, executors, administrators, successors, and assigns to the Owner for the performance of the Construction Contract, which is incorporated herein by reference.
2. If the Contractor performs the Construction Contract, the Surety and the Contractor shall have no obligation under this Bond, except when applicable to participate in a conference as provided in Paragraph 3.
3. If there is no Owner Default under the Construction Contract, the Surety's obligation under this Bond shall arise after:
 - 3.1. The Owner first provides notice to the Contractor and the Surety that the Owner is considering declaring a Contractor Default. Such notice shall indicate whether the Owner is requesting a conference among the Owner, Contractor, and Surety to discuss the Contractor's performance. If the Owner does not request a conference, the Surety may, within five (5) business days after receipt of the Owner's notice, request such a conference. If the Surety timely requests a conference, the Owner shall attend. Unless the Owner agrees otherwise, any conference requested under this Paragraph 3.1 shall be held within ten (10) business days of the Surety's receipt of the Owner's notice. If the Owner, the Contractor, and the Surety agree, the Contractor shall be allowed a reasonable time to perform the Construction Contract, but such an agreement shall not waive the Owner's right, if any, subsequently to declare a Contractor Default;
 - 3.2. The Owner declares a Contractor Default, terminates the Construction Contract and notifies the Surety; and
 - 3.3. The Owner has agreed to pay the Balance of the Contract Price in accordance with the terms of the Construction Contract to the Surety or to a contractor selected to perform the Construction Contract.
4. Failure on the part of the Owner to comply with the notice requirement in Paragraph 3.1 shall not constitute a failure to comply with a condition precedent to the Surety's obligations, or release the Surety from its obligations, except to the extent the Surety demonstrates actual prejudice.
5. When the Owner has satisfied the conditions of Paragraph 3, the Surety shall promptly and at the Surety's expense take one of the following actions:
 - 5.1. Arrange for the Contractor, with the consent of the Owner, to perform and complete the Construction Contract;
 - 5.2. Undertake to perform and complete the Construction Contract itself, through its agents or independent contractors;
 - 5.3. Obtain bids or negotiated proposals from qualified contractors acceptable to the Owner for a contract for performance and completion of the Construction Contract, arrange for a contract to be prepared for execution by the Owner and a contractor selected with the Owners concurrence, to be secured with performance and payment bonds executed by a qualified surety equivalent to the bonds issued on the Construction Contract, and pay to the Owner the amount of damages as described in Paragraph 7 in excess of the Balance of the Contract Price incurred by the Owner as a result of the Contractor Default; or
 - 5.4. Waive its right to perform and complete, arrange for completion, or obtain a new contractor, and with reasonable promptness under the circumstances:
 - 5.4.1. After investigation, determine the amount for which it may be liable to the Owner and, as soon as practicable after the amount is determined, make payment to the Owner; or
 - 5.4.2. Deny liability in whole or in part and notify the Owner, citing the reasons for denial.
6. If the Surety does not proceed as provided in Paragraph 5 with reasonable promptness, the Surety shall be deemed to be in default on this Bond seven days after receipt of an additional written notice from the Owner to the Surety demanding that the Surety perform its obligations under this Bond, and the Owner shall be entitled to enforce any remedy available to the Owner. If the Surety proceeds as provided in Paragraph 5.4, and the Owner refuses the payment or the Surety has denied liability, in whole or in part, without further notice the Owner shall be entitled to enforce any remedy available to the Owner.
7. If the Surety elects to act under Paragraph 5.1, 5.2, or 5.3, then the responsibilities of the Surety to the Owner shall not be greater than those of the Contractor under the Construction Contract, and the responsibilities of the Owner to the Surety shall not be greater than those of the Owner under the Construction Contract. Subject to the commitment by the Owner to pay the Balance of the Contract Price, the Surety is obligated, without duplication for:
 - 7.1. the responsibilities of the Contractor for correction of defective work and completion of the Construction Contract;
 - 7.2. additional legal, design professional, and delay costs resulting from the Contractor's Default, and resulting from the actions or failure to act of the Surety under Paragraph 5; and
 - 7.3. liquidated damages, or if no liquidated damages are specified in the Construction Contract, actual damages caused by delayed performance or non-performance of the Contractor.
8. If the Surety elects to act under Paragraph 5.1, 5.3, or 5.4, the Surety's liability is limited to the amount of this Bond.
9. The Surety shall not be liable to the Owner or others for obligations of the Contractor that are unrelated to the Construction Contract, and the Balance of the Contract Price shall not be reduced or set off on account of any such unrelated obligations. No right of action shall accrue on this Bond to any person or entity other than the Owner or its heirs, executors, administrators, successors, and assigns.
10. The Surety hereby waives notice of any change, including changes of time, to the Construction Contract or to related subcontracts, purchase orders, and other obligations.
11. Any proceeding, legal or equitable, under this Bond may be instituted in any court of competent jurisdiction in the location in which the work or part of the work is located and shall be instituted within two years after a declaration of Contractor Default or within two years after the Contractor ceased working or within two years after the Surety refuses or fails to perform its obligations under this Bond, whichever occurs first. If the provisions of this paragraph are void or prohibited by law, the minimum periods of limitations available to sureties as a defense in the jurisdiction of the suit shall be applicable.
12. Notice to the Surety, the Owner, or the Contractor shall be mailed or delivered to the address shown on the page on which their signature appears.
13. When this Bond has been furnished to comply with a statutory or other legal requirement in the location where the construction was to be performed, any provision in this Bond conflicting with said statutory or legal requirement shall be deemed deleted herefrom and provisions conforming to such statutory or other legal requirement shall be deemed incorporated herein. When so furnished, the intent is that this Bond shall be construed as a statutory bond and not as a common law bond.
14. Definitions
 - 14.1. Balance of the Contract Price: The total amount payable by the Owner to the Contractor under the Construction Contract after all proper adjustments have been made including allowance for the Contractor for any amounts received or to be received by the Owner in settlement of insurance or other claims for damages to which the Contractor is entitled, reduced by all valid and proper payments made to or on behalf of the Contractor under the Construction Contract.
 - 14.2. Construction Contract: The agreement between the Owner and Contractor identified on the cover page, including all Contract Documents and changes made to the agreement and the Contract Documents.
 - 14.3. Contractor Default: Failure of the Contractor, which has not been remedied or waived, to perform or otherwise to comply with a material term of the Construction Contract.
 - 14.4. Owner Default: Failure of the Owner, which has not been remedied or waived, to pay the Contractor as required under the Construction Contract or to perform and complete or comply with the other material terms of the Construction Contract.
 - 14.5. Contract Documents: All the documents that comprise the agreement between the Owner and Contractor.
15. If this Bond is issued for an agreement between a contractor and subcontractor, the term Contractor in this Bond shall be deemed to be Subcontractor and the term Owner shall be deemed to be Contractor.
16. Modifications to this Bond are as follows:

GENERAL REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY:

- A. Materials shall be supplied as specified herein, and shall be in accordance with the applicable NEMA, ANSI, IEEE, IPCEA, ASTM Standards, NEC, and the Standards of the Underwriter's Laboratory.
- B. The Supplier shall manufacture, furnish, offload and install the switchgear.
- C. The Supplier shall be responsible for developing all drawings of the switchgear and shall perform all wiring contained within the furnished equipment drawings. The Supplier shall obtain all external equipment drawings from the Engineer. The Supplier is responsible for developing interconnection diagrams which detail connections to the external equipment as well as updating external equipment drawings showing those connections. The Supplier shall also furnish terminal strips for wiring to external equipment from the switchgear. The control wiring to external equipment will be furnished and installed by Others. External equipment includes a 69-13.2 kV power transformer, 69 kV control panels, AC and DC panels, communication rack, etc.
- D. The equipment required includes a lineup of new 15 kV metal-clad switchgear, with eight (8) 1200 amp breakers, 1200 Amp rated 15 kV bus, PT's, CT's, controls, and relaying equipment. The Supplier shall coordinate the location of the equipment with Others. The equipment shall be transported to the site, offloaded, and secured to the foundation by the Supplier. The Supplier shall make all necessary arrangements to accomplish this, verify all openings, dimensions, site conditions, and transport and set all equipment in permanent place on the Owner's foundation pad.

1.02 CONTRACT AWARD:

- A. The Owner will award one (1) contract for the Bid as deemed in the best interest of the Owner. The following dates represent the proposed schedule for this Contract:

June 18, 2024	Bid Opening
July 1, 2024	City Council Awards Contract
July 2, 2024	Notice of Award Issued
July 15, 2024	Supplier furnishes bonds and signs contract(s)
August 2, 2024*	Contract executed by Owner

June 30, 2025
(no later than)

Delivery and installation of equipment

* Date subject to change.

Delivery of the Switchgear is desired to be no later than June 30, 2025. Based on current material availability, both later and earlier delivery dates will be considered by the Owner.

1.03 SUBMITTALS:

- A. The Supplier shall prepare all **layout, material list, construction detail drawings, schematics, three-lines, wiring diagrams, and control cable schedule** in AutoCAD 11" x 17" format. See Drawing Index on drawing RS-000 for details on required drawings. These shall be prepared based on the project drawings and sample drawings furnished with the specifications. The Supplier shall include at least the level of detail shown on the corresponding layout, construction detail, schematic, three-line, or wiring diagram.
- B. Relay inputs, relay outputs, relay communication ports and test switch pole assignments shall be per the IED I/O and port assignment list and panel nameplate details shown on the lists and drawings.
- C. The Supplier shall incorporate the internal schematics of all internal and external equipment contained in Supplier created drawings. This includes equipment furnished by both the Supplier and by Others. Supplier shall obtain all external equipment vendor drawings from the Engineer for implementation into the Supplier drawings.
- D. The Supplier shall be responsible for all drawings required to fully document the function of all equipment internal to the switchgear and control building. The Supplier shall also show external equipment connections on the wiring diagrams. This includes the external control cables and includes individual wire colors, cable sizes, remote terminal wire labels, and terminal block strip label.
- E. See the Drawing List and Contract Drawings for further details on the Supplier drawing requirements. Individual drawing numbers and titles shall be directed by the Engineer to fit into an existing set of drawings. Refer to the Drawing List for proposed drawing numbers and titles. Any deviation to the drawing list shall be approved by Engineer.
- F. Drawings shall be submitted electronically to the Engineer in 11 x 17 PDF format.
- G. Drawings shall be transmitted with a cover letter and such letter shall note the submittal number, drawings included in transmittal, and date sent.

- H. The Supplier shall furnish to the Engineer the following submittal packages:
- a. Submittal #1: After award of the contract and before proceeding with the manufacture and purchase of the material, submit electronic files of fabrication details, layouts, plan view showing switchgear footprint, and material lists for approval. Fabrication details shall include overall dimensions, metal frame sizing, equipment cutout details and locations, ground bar mounting, and other details as required to allow Engineer to sufficiently review the design.
 - b. Submittal #2: Resubmittal package including all fabrication details, panel layouts, and material lists prior to the Supplier ordering materials.
 - c. Submittal #3: Schematic, three-line for the switchgear **submitted**. Main breaker, 2 feeders, Bus Diff.
 - d. Submittal #4: Schematic, three-line for the switchgear **resubmitted**. Main breaker, 2 feeders, Bus Diff.
 - e. Submittal #5: Schematic, three-line and wiring diagrams for the switchgear **submitted**. Main breaker, 2 feeders, Bus Diff.
 - f. Submittal #6: Schematic, three-line and wiring diagrams for the switchgear **resubmitted**. Main breaker, 2 feeders, Bus Diff.
 - g. Submittal #7: Schematic, three-line and wiring diagrams for the switchgear **submitted**. All sections.
 - h. Submittal #8: Schematic, three-line and wiring diagrams for the switchgear **resubmitted**. All sections.
 - i. Submittal #9: Final review package including all fabrication details, panel layouts, and material lists, schematics, three-lines, and wiring diagrams **prior to** the Supplier starting wiring.
 - j. Submittal #10: Final review package including all fabrication details, layouts, and material lists, schematics, three-lines, and wiring diagrams **prior to** shipment.
 - k. Submittal #11: **After** the Engineer submits ‘as-built redlines’ to the Supplier; final review package including all fabrication details, layouts, and material lists, schematics, three-lines, and wiring diagrams **after** shipment **and after commissioning by Others.**

- I. Submittal Schedule: the following schedule is proposed to ensure a quality design. Changes to the proposed submittal schedule must be approved by Engineer:

August 19, 2024 September 9, 2024	Supplier submits Submittal #1 for approval Submittal #1 returned with comments
November 11, 2024 November 15, 2024	Supplier submits Submittal #2 for approval Submittal #2 returned with comments
November 25, 2024 November 29, 2024	Supplier submits Submittal #3 for approval Submittal #3 returned with comments
December 9, 2024 December 13, 2024	Supplier submits Submittal #4 for approval Submittal #4 returned with comments
December 30, 2024 January 3, 2025	Supplier submits Submittal #5 for approval Submittal #5 returned with comments
January 13, 2025 January 17, 2025	Supplier submits Submittal #6 for approval Submittal #6 returned with comments
January 27, 2025 January 31, 2025	Supplier submits Submittal #7 for approval Submittal #7 returned with comments
February 10, 2025 February 14, 2025	Supplier submits Submittal #8 for approval Submittal #8 returned with comments
February 24, 2025 February 28, 2025	Supplier submits Submittal #9 for approval Submittal #9 returned with comments
May 27, 2025 June 2, 2025	Supplier submits Submittal #10 for approval Submittal #10 approved as noted
September 27, 2025 October 25, 2025	Supplier submits Submittal #11 for approval Submittal #11 returned with final comments

NOTE: The Bidder shall clearly indicate in his bid any exceptions to the above dates.

- J. Supplier Milestones: the following schedule is the proposed Supplier milestone schedule recommended to keep the project on schedule. The following schedule is developed based on the Supplier Submittal Schedule:

November 24, 2024	Supplier orders material and begins fabrication
-------------------	---

January 17, 2025	Engineering furnishes schematics and wiring diagrams for the external equipment to the Supplier for review.
March 3, 2025	Supplier receives material for fabrication assembly
April 21, 2025	Fabrication complete, ready for wiring
June 10, 2025	Wiring complete
June 17, 2025	Ready to ship (testing and crating done)
June 30, 2025	Delivery and Installation complete
October 25, 2025	Final completion, record drawings and O&M manuals submitted.

NOTE: The Bidder shall clearly indicate in his bid any exceptions to the above dates.

- K. During the project, the supplier shall attend periodic Teams meetings with Engineer.
- L. Within one week after shipment of the switchgear, the Supplier shall forward to the Engineer an electronic copy in both AutoCAD DWG compatible format and Adobe PDF compatible format for every drawing created or modified by the Supplier. The Supplier shall also furnish the plot style table (.ctb or .stb) used to plot the drawings. These files shall be submitted to the Engineer prior to final payment.
- M. Supplier shall provide a mark-up of Engineer-furnished drawings and Cable Schedule, or take possession of the Engineer-furnished drawings and updated them accordingly if preferred, to document any changes required for the design.
- N. Approval of final Supplier's drawings or data by the Engineer shall not relieve the Supplier of any part of his responsibility to meet all the requirements of this specification or as to the correctness of his drawings and data. Further, approval of the Engineer does not relieve the Supplier of responsibility for the adequacy of the design.
- O. Three (3) copies of all instruction books shall be provided with the equipment. Three (3) copies of all approved shop drawings and/or material lists shall be furnished after the project is completed. **One (1) zipped file containing all files required to create the instruction book shall be supplied via email, FTP, or similar electronic medium.**
- P. Supplier shall submit to the Engineer a maintenance schedule summary for all equipment furnished by the supplier needing routine maintenance as recommended by the equipment manufacturer.

Q. Allow 2-3 weeks for the Engineer's review of the shop drawings.

1.04 SHIPPING AND ASSEMBLY PROCEDURES:

A. The Bid(s) shall include F.O.B to the project location in Webster City, IA. The project site address is as follows:

Reisner Substation
City of Webster City
OFFICIAL ADDRESS TO BE DETERMINED
Webster City, IA 50595

B. Supplier shall notify the Owner and Engineer when equipment is ready for shipment **at least 7 days prior to delivery**. In addition, seller shall advise the Engineer of method of shipment, projected routing and estimated time in shipment.

C. Supplier shall notify the Electric Utility Supervisor or Utility Technician by telephone when equipment is ready for shipment, **AT LEAST 48 HOURS PRIOR TO DELIVERY**. Contact information is provided at the beginning of this document.

D. Title to the equipment shall pass to the Owner upon acceptance testing and checkout of the equipment and receipt of all required documentation.

E. Deliveries Accepted: Monday-Friday, 8:00 AM – 4:00 PM, working days only.

F. The supplier shall investigate all limitations in regard to shipping the equipment. The equipment shall be shipped as completely assembled as transportation limits allow.

G. Supplier shall also coordinate delivery in advance with the substation construction Contractor to ensure the Contractor can schedule to be on-site during delivery of the equipment.

H. The Supplier shall coordinate delivery locations with the Owner and Engineer.

I. Unloading, placing and assembly of the equipment will be completed by the Supplier. Provide rigging and other necessary equipment to perform the installation.

1.05 INSURANCE REQUIREMENTS:

A. General: The Supplier shall secure and maintain such insurance policies as will protect that Supplier and unless otherwise specified, the Owner and its agents, from claims for bodily injuries, death or property damage, which may arise from operations under this contract whether such operations be by the Supplier or anyone

employed directly or indirectly by them. The Supplier shall not commence work under this contract until the Supplier has obtained all insurance required herein and such insurance has been approved by the Owner. The Supplier shall deliver to the Owner executed copies of all policies or a certificate of insurance. No policy shall be canceled until thirty (30) days after notice of cancellation is given to the Owner in writing. The Supplier agrees to hold harmless, indemnify and defend the Owner and its agents from all loss and damage, including damage to person or property, arising from any act by, or negligence of, Supplier or its subcontractors or the officers, agents, or employees of either while engaged in the performance of this contract, or while in or about the building or premises, or arising from accident or any injury not caused by act of Owner or Owner's agents, its agents or servants, or anyone employed by Owner, other than this Supplier, to any Supplier or officer, agent, or employee of a subcontractor while engaged in or about the performance of this contract, or while in or about Owner's premises, or arising from liens or claims for services rendered or labor or materials furnished in or for the performance of this contract.

- B. Coverages and Limits: The Supplier shall provide insurance to include a minimum of the following coverages and associated limits:

<u>Coverage</u>	<u>Limits</u>
Worker's Compensation	Statutory
Employer's Liability	\$1,000,000 each employee \$1,000,000 each disease \$1,000,000 each accident
Comprehensive General Liability- Combined Single Limit	\$2,000,000 each occurrence \$2,000,000 aggregate
Automobile Liability- Combined Single Limit	\$1,000,000 each occurrence
Umbrella (Excess) Liability	\$2,000,000 each occurrence \$2,000,000 aggregate

- C. Casualty Insurance: Except when the risk of loss of the Equipment is with Owner, Supplier shall maintain on the Equipment insurance against loss or damage by fire, lightning and all other risks covered by the so-called extended coverage insurance endorsement in an amount equal to the full insurable value of the Equipment. Upon the request of Owner, Supplier shall deliver to Owner a certificate of insurance evidencing the insurance required by this section.
- D. Risk of Loss: Risk of loss of the Equipment shall remain with Supplier until the Equipment has been unloaded, inspected, and accepted by the Owner or Owner's Representative, at which time risk of loss shall pass to Owner. Notwithstanding the foregoing, if Owner rejects the Equipment as non-conforming, risk of loss of

the Equipment shall be and remain with Supplier until Supplier corrects the non-conformity or Owner accepts the Equipment.

- E. Additional Insured: The Owner, Engineer, and each of their employees, officers or agents shall be named as an additional insured as their interest may appear under this agreement under the prime Supplier's insurance policies.

Owner: City of Webster City/Municipal Utilities
400 Second Street
Webster City, IA 50595
Telephone: (515) 832-9151

Engineer: DeWild Grant Reckert and Associates Company
dba DGR Engineering
1302 South Union Street
Rock Rapids, IA 51246

1.05 WARRANTY:

- A. A warranty package shall be furnished with the material. The warranty shall be in effect for 18 months after date of delivery of the material as part of this proposal.
- B. The warranty shall be comprehensive, without deductibles, and shall cover all equipment supplied by the Bidder, whether or not it was manufactured by the Bidder.
- C. All repair parts, labor, and travel expenses necessary for repairs at the job site shall be included.
- D. The Supplier shall repair or replace any materials found to be defective at no cost to the Owner.
- E. Any costs incurred by the Owner due to defective materials supplied by the Supplier shall be reimbursed to the Owner by the Supplier.

1.06 TERMS AND CONDITIONS:

- A. The Bidder is invited to attach their standard patent protection and liability limitation conditions, but shall not include any other terms and conditions to this bid. **Any terms or conditions submitted with the Bid other than the terms or conditions herein listed shall be grounds for disqualification of bid. All additional costs required to meet this specification shall be deemed to be included in the base bid.**

* * * END OF SECTION * * *

TECHNICAL SPECIFICATIONS

15 kV INDOOR METALCLAD SWITCHGEAR

PART 1 - GENERAL

1.01 SCOPE:

- A. All other conditions of the Contract and the General Requirements are hereby made part of this Section.
- B. Work under this Section includes manufacturing, furnishing, delivering, and installing the 15 kV indoor metalclad switchgear as herein specified and shown on the Drawings. Work includes, but is not limited to, the following:
 - 1. Furnish and install a complete lineup of new 15 kV metal-clad switchgear with eight (8) 1200 Amp breakers, 1200 Amp rated 15 kV bus, PT's, CT's, relays, and other control equipment, include all miscellaneous loose equipment and communication cables as indicated on the material lists shown on the Drawings.
 - 2. Furnish layout, material list, and construction detail drawings detailing the scope of the project.
 - 3. Complete schematics, three-lines, wiring diagrams, and control schematics for the switchgear.
- B. Material furnished by Others:
 - 1. Multi-conductor control cables and communication cables for connections external to the switchgear as indicated in the final Cable Schedule.
 - 2. 15 kV power cable for connections external to the switchgear.
 - 3. SEL-735 meter.
- C. Work performed by Others:
 - 1. Installation of multi-conductor control cables and communication cables for connections external to the switchgear.
 - 2. 15 kV power cable terminations.
 - 3. Field testing and commissioning of the switchgear.

1.02 SUBMITTALS:

- A. See General Requirements for submittal procedures.

1.03 SHIPPING PROCEDURES:

- A. See General Requirements for shipping procedures.
- B. Supplier shall notify the Owner and Owner's Contractor by telephone AT LEAST 7 DAYS PRIOR TO SWITCHGEAR DELIVERY.

1.04 WARRANTY:

- A. See General Requirements for warranty requirements.

1.05 APPROVED SUPPLIERS:

- A. Suppliers shall have experience designing and furnishing switchgear for electrical utility projects.
- B. All design and fabrication must be completed in the United States. Design and fabrication completed outside of the United States will not be accepted.
- C. Switchgear shall be furnished only from the following Suppliers, unless written permission is obtained from the Engineer.
 - 1. Eaton
 - 2. Harold K. Scholz Co.
 - 3. PowerCon Corp.
 - 4. States Manufacturing Corporation

PART 2 – PRODUCTS

2.01 SWITCHGEAR FABRICATION:

- A. Electrical requirements:
 - 1. The system voltage will be 7.62/13.2 kV, 3-phase, 4-wire, grounded neutral, 60 hertz.
 - 2. Switchgear shall be designed, manufactured, and tested in accordance with the latest standards of ANSI and NEMA.

3. Size bus bar and equipment ampacity as stated on the Drawings.

B. Switchgear assembly:

1. Breaker housing and auxiliary units shall be arranged to meet the electrical requirements as shown on the one-line diagram.
2. The breaker housings shall be the height and width shown on the Drawings. Bolt breaker housings together to form a rigid, metalclad, switchgear assembly.
3. Each housing unit shall consist of breaker, bus, line, ground bus, instrument transformers, control, and auxiliary modules as required.
4. Metal side panels shall isolate adjacent housings, and removable metal barriers shall isolate the 15 kV power cable terminations of each circuit.
5. Arrange switchgear to facilitate entrance of the 15 kV power cables from ducts in the floor.
6. Rear cover panels shall be hinged and bolted with handles.
7. Front panel doors shall be hinged with handles.
8. Switchgear shall be constructed of a minimum of #11 gauge hot rolled steel.
9. All bus insulation, supports (including runback supports), and inter-compartmental barriers shall be porcelain or epoxy.
10. Feeder cubicles shall be supplied with lightning arresters on each phase, ABB type XPI-III, Ohio Brass type PVD, General Electric type Tranquel, or equal.
11. A terminal board sheet shall be provided for the mounting of terminal blocks, shorting type terminal blocks, secondary fuses, and any necessary panduit. Secure the terminal board by drilling and tapping the breaker housing wall and bolting to wall.
12. Provide a through wireway near the top of the front part of the switchgear for control wire runs between panels where required.
13. Allow for control cable entry from cable tray mounted above the switchgear or from cable trough below the switchgear as indicated on the Drawings. Entrances shall be located in the front compartment, near the front of the switchgear.

C. Switchgear Panel Doors:

1. Front panels shall be half height, formed, with concealed hinge, providing ample swing for removal of the circuit breaker. Provide catch mechanism to hold door in open position.
2. Provide one chrome finished handle, without lock, per panel door.
3. Meters, control, and relays shall be mounted on the panel doors as indicated on the Drawings.
4. External equipment shall be semi-flush, panel mount type. Provide project-panel mounted relays or other equipment if needed to meet breaker racking requirements.
5. Panel doors shall have provisions (openings with covers) for racking breakers in and out of the energized position while the door is closed. The front door shall be able to close without any relay obstruction, when the breaker is in the racked out position.
6. Panel door racking provisions shall also include mounting brackets for a provided racking motor. With the door closed, the racking motor can be attached to the brackets with associated hardware and engage the breaker racking mechanism through provided openings.

2.02 INSTRUMENTATION, CONTROL AND RELAYING:

A. General:

1. Refer to the Drawings for material lists indicating the devices and relays that shall be provided on the switchgear. The Supplier shall include any proposed substitutions or modifications to the equipment list with their proposal.
2. Items listed without an actual catalog number on the Drawings shall meet the ratings and specifications indicated on the Drawings and shall be reviewed and approved as noted by Engineer during review of the material list.
3. SEL configurable labels wording shall be determined by the Engineer and reviewed by the Supplier. Supplier shall furnish and install all SEL configurable labels prior to shipment of the switchgear.
4. Communication cables for interconnecting relays to communication processors and Ethernet switches shall be furnished and installed as indicated on the Drawings.

2.03 CONTROL WIRING:

- A. Switchboard type, rated for 90° C operation.
- B. CT secondary circuits and associated test switches shall have #10 AWG wiring. All other wiring shall be #14 AWG minimum, unless noted otherwise.
- C. Installed, bundled, and tied in a workmanlike manner.
- D. Panduit and plastic wire ties shall be used to direct and secure wire in a neat manner.
- E. Wires shall be connected to terminal blocks and device terminals (where appropriate) with nylon insulated, ring-tongue multi-finger insulation grip terminals, Burndy type YAE-N or approved equal.
- F. Plastic markers shall be placed on each conductor to provide identification of the associated remote terminal point and equipment designation of the conductor.
- G. Control wiring between switchgear panels shall be run in the control cable wireway in the switchgear.
- H. Including fuse blocks for control and PT circuits as shown in the Drawings. All three-phase PT fuse blocks shall consist of 4 poles. The neutral PT circuits shall include a slug, Bussman NTN-R-30, or equal. All Trip fuse blocks shall be sized to accommodate Bussman NTN-R-60, no equal.
- I. External Wiring:
 - 1. Circuits between the external equipment and switchgear shall be via the terminal blocks mounted in the switchgear.
 - 2. All wiring between the switchgear and the control panels will be completed using multi-conductor control cable furnished and installed by the switchgear supplier as indicated in the final Cable Schedule.
 - 3. All other external switchgear wiring will be completed using multi-conductor control cable furnished and installed by Others as indicated in the final Cable Schedule.
 - a. Wires from each control cable shall terminate on the same terminal block in each switchgear unit and adjacent blocks if more than one block is required. Multiple control cables can connect to the same terminal block if space exists on the block for terminating all wires of the control cables.

- b. The external switchgear wiring includes, but is not limited to, wiring between the communication rack, yard equipment, AC panels, and DC panels.
- c. All wires of the control cable shall be shown terminated on terminal blocks in the switchgear even if the wire is unused.

J. Terminal Blocks:

- 1. Terminal blocks shall be mounted near the front panel door for easy field access.
- 2. All terminal blocks not used for CT secondary circuits shall be GE type EB25 or Marathon 17XXSTD, 12-circuit terminal blocks or approved equal unless indicated otherwise.
- 4. Terminal blocks that are used for CT secondary circuits shall be GE type EB27B06S, six-circuit terminal blocks, **no equal**.
- 5. Wire all CT leads out to an associated terminal block. This includes all taps for multi-ratio CTs and both connections to single-ratio CTs.
- 6. The neutral circuit of each CT secondary circuit shall be directly connected to ground at the terminal block only.
- 7. All terminal block terminations shall be furnished with washer-head screws whether they are used or not.
- 8. Terminal blocks shall include a label on each circuit that is referenced on the schematics. Circuit nodes that are not connected to a terminal block point do not require a label on the schematics or on the wire labels.

K. Convenience outlets shall be provided and installed as indicated on the Drawings.

L. LED lights with switches shall be included in each cubicle.

M. Each cubicle shall have strip heaters, as sized by manufacturer, at each runback

2.04 GROUNDING:

- A. All switchgear breaker housing and auxiliary compartment units shall be grounded.
- B. Control ground bus: provide and install a copper ground bus bar, 1/8 inch x 1 inch, near the front of the switchgear, accessible from all control compartments, across the full length of the switchgear, for control and relay grounding. Secure the control ground bus bar to the power ground bus.

- C. Power ground bus: provide and install a 1/4-inch x 3-inch copper ground bus bar across the full length of the switchgear near the rear for power circuit grounding. This ground bus shall be suitable for use as a solid grounded neutral bus. NEMA 4-bolt pad terminals shall be furnished for terminating power cable and neutral conductors entering from the bottom.
- D. All bus joints on both ground bus bars shall be silver-plated and bolted. Secure the ground bus bars to each housing. The power ground bus shall be bolted to each breaker ground contact.
- E. Provide a means of securing meters, relays, and control devices to the mounting panels such that any metal case of these devices is grounded to the panel, not insulated from the same by paint or panel finish.

2.05 BREAKER AND BUS MODULE:

- A. Bus bar shall be sized per ampacity specified in the Drawings.
- B. The main bus shall be of copper and shall have flame-retardant insulation. Epoxy main bus supports shall cover the bus opening between housings to provide a non-combustible firewall.
- C. All bus joints shall be silver-plated, bolted and insulated.
- D. Breaker/bus modules of the same rating shall be interchangeable and shall house any circuit breaker of the same rating.
- E. The stationary primary contact shall be silver-plated and recessed within glass polyester NEMA GP03 supports. An automatic shutter shall cover the stationary primary disconnecting contacts when the breaker is in the disconnected position or out of the housing.
- F. The stationary secondary contacts shall be silver-plated multiple sockets. Safety interlocks shall be provided to function with the circuit breaker.
- G. Each breaker/bus module shall be furnished with a mechanism which will move the breaker between the Connected, Test, and Disconnected positions. The mechanism shall be designed so that the breaker will be self-aligning and will be held rigidly in the operating position without the necessity of locking bars or bolts.
- H. In the disconnect position, the breaker shall remain housed in the bay with the front panel door closed, and shall be easily removable from the compartment with the door open. Extra front volume behind door shall be provided, as required, to accomplish this with all installed panel devices.
- I. A ground contact shall ground the breaker in the operating position, testing position, and between these positions.

2.06 CIRCUIT BREAKER:

- A. Circuit breakers shall be:
 - 1. Vacuum, Draw-out type.
 - 2. Rated 15,000 volts, 60 hertz.
 - 3. Continuous current rating as shown on the Drawings.
 - 4. Nominal interrupting rating of 25 kA.
 - 5. 125 VDC nominal operating voltage.
- B. Acceptable circuit breaker manufacturers:
 - 1. Eaton type VCP-W. No equal.
- C. All circuit breakers of equal rating shall be interchangeable and shall fit any housing of the same rating.
- D. The mechanisms shall be of the stored energy type, normally charged by a universal electric motor, and be mechanically and electrically trip free.
- E. Provisions shall be included for manual charging of the mechanism.
- F. The primary disconnecting fingers shall be silver-plated and retained to the primary contacts with individual leaf springs.
- G. Each main contact shall be sealed in a separate vacuum unit. A means shall be provided to determine the degree of contact erosion.
- H. The secondary disconnecting contacts shall be silver-plated, multiple plug type, with automatic self-aligning sliding-type contacts.
- I. The circuit breaker shall be able to operate in either the operating or test positions.
- J. Interlocks shall be provided to prevent movement of a closed breaker, to prevent closing of a breaker between operating and test positions, to trip breakers upon insertion or removal from housing, and to discharge stored energy mechanisms upon insertion or removal from housing. The breakers shall be secured positively in the housing between and including the operating and test positions.
- K. Circuit Breaker control circuits:
 - 1. Breaker control circuits shall be suitable for 125 volt DC operation and shall include all necessary limit and latch checking switches, interlocking

switches, anti-pump mechanisms and control circuits, miscellaneous relays, test switches, etc., for proper operation.

2. The breaker control circuits shall include a normally open contact of the limit switch for the spring charging motor and a normally closed contact of the trip latch checking switch, in addition to the normally supplied devices, in the closing circuit of the breaker.
- L. MOC contacts shall be provided which duplicate the “a” and “b” contacts in each breaker. Provide a minimum of five additional “a” MOC contacts and five additional “b” MOC contacts for each breaker.

2.07 INSTRUMENT TRANSFORMERS:

- A. Instrument transformers shall be provided and installed in breaker compartments as shown in the Drawings.
- B. Current transformers (CTs) for relaying shall be ring type and of the ratio as shown in the Drawings. CTs shall be rated relaying accuracy class of C200 or greater. The transformers shall be mounted in the breaker module and shall be accessible after installation.
- C. Current transformers for revenue metering (metering accuracy) shall meet ANSI Standard C57.13 of 0.3 percent at all burdens and shall have continuous thermal rating factor of at least 2.0 at 30°C and 1.5 at 55°C. These current transformers shall be designed for indoor use and utilize one of the following construction styles as noted in the Drawings:
 1. Ring type CT, similar to ABB type SCV.
- D. The potential transformers (PTs) shall be indoor and rated for use at nominal system voltages in a wye configuration. These potential transformers shall meet ANSI Standard C57.13 of 0.3 percent accuracy class for all burdens. Furnish GE JVM-5, PTG5, ABB type VIZ-11 or similar. Provide ratio as shown on the Drawings.
- E. The potential transformers shall be mounted on draw-out or tip-out assemblies which disconnect both the primary and secondary PT connections and ground the same when in the draw-out position. Provide two (2) spare fuses.

2.08 ACCESSORIES:

- A. The switchgear shall be furnished with the following set of accessories:
 1. (1) Maintenance handle for manually charging closing spring when not in housing.
 2. (1) Levering crank for moving circuit breaker between test and connected positions.

3. (1) set of extension rails for moving the breaker in and out of the housing.
4. (1) Set of test plugs for use with relays and meters.
5. (1) Spring charge handle for manually charging closing spring.
6. (1) Docking transport dolly for handling circuit breaker outside housing.
7. (1) Portable breaker lifter with lifting yoke for use with stacked circuit breakers type switchgear, for removal of the breaker from upper compartment and transporting to another location.
8. (5) Spare LED indicating lamps for each type/color furnished.
9. Two (2) spare 120/240 V fuses for each installed secondary fuse after energized and tested as indicated on the drawings.
10. Insulating boots shall be supplied for installation over the terminated connections in each bay where high voltage power cables are to be installed.
11. (1) Ten foot test jumper cable for electrically operating circuit breaker outside housing. Include panel with pushbuttons for installation on the control enclosure wall by others.
12. Remote Racking System. System to include 120 V electric motor and minimum 20 ft. cord with controls.

2.09 FINISH:

- A. Steel surfaces shall be chemically cleaned and treated to provide a bond between the primer paint and metal surfaces.
- B. Steel shall be finished with minimum of one (1) primer coat and two (2) coats of unfinished paint.
- C. Exterior Finish Paint: Indoor light gray ANSI #61.
- D. Interior Finish Paint: Indoor light gray ANSI #61.
- E. Furnish touch-up paint for application by Others after installation.

2.10 NAMEPLATES:

- A. Nameplate sizes and text sizes as indicated on the Drawings.
- B. Laminated plastic, adhesive-type securely fastened to panel.

- C. White lettering on black background; wording shall be as shown on the Drawings.

PART 3 - EXECUTION

3.01 TESTING AND CHECKOUT PROCEDURES

- A. The Supplier shall perform all production tests required by the applicable standards and these specifications. Tests on the switchgear assembly shall include, but not be limited to, the following:
 - 1. Mechanical operation tests
 - 2. Instrument transformer case grounding tests
 - 3. Instrument transformer polarity verification
 - 4. Dielectric tests (AC Hi-Pot)
 - 5. Functional tests
 - 6. Control wiring continuity tests
 - 7. Acceptance and commissioning testing of all relays and devices.
 - 8. Breaker Testing.
- B. Additionally, each medium voltage draw-out circuit breaker shall be uncrated and inserted into the switchgear cubicles to verify alignment and proper operation.
- C. Manufacturer shall perform all tests required by its Quality Assurance Program to ensure that this product will maintain its high quality standard of materials and reliability in operation.
- D. The Supplier shall include one (1) copy of associated test reports in each set of instruction manuals.
- E. After the installation of equipment and prior to energizing of the same, several types of tests will be performed by an independent testing company hired by the Owner. Tests included will be:
 - 1. Functional testing of all equipment.
 - 2. Functional testing of all control schemes.
 - 3. Acceptance and commissioning testing of all relays and devices.
 - 4. Phase angle and magnitude testing of all equipment.

- F. The Supplier shall be available for telephonic consultation as needed during the field testing and commissioning phase as questions or issues arise. If issues/deficiencies are discovered with the switchgear during the testing/commissioning phase, the Owner reserves the right to require the Supplier to provide field personnel immediately to resolve the issues/deficiencies.

3.02 DELIVERY AND INSTALLATION

- A. The Supplier shall protect the painted surfaces during shipping to preserve the factory-applied finish and provide touch-up paint for any areas that may have become scratched during the shipping, unloading and installation process.
- B. In addition to painted surfaces, the Supplier shall protect any equipment displays, control switch handles, clear glass doors, and/or other instruments from being scratched or damaged.
- C. The equipment will be brought into the substation control enclosure via an removable wall panel opening approximately 9 feet wide by 9.5 feet high. The removable wall panel will be removed and re-installed by the on-site Substation Contractor. The Supplier shall coordinate this work with the Substation Contractor and make all necessary arrangements to accommodate this so the switchgear can be moved into the building without any disassembly of the switchgear.
- D. All interconnection wiring that is disconnected for shipment shall be reconnected by the Supplier's field staff. This work may not be subcontracted to a 3rd party.
- E. Coordinate delivery address with Engineer.

* * * END OF SECTION * * *

MATERIAL AGREEMENT

THIS AGREEMENT made as of _____, 2024 between **City of Webster City, Iowa** (hereinafter called the "Owner"), and _____ (hereinafter called the "Supplier"),

WITNESSETH, that the Supplier and the Owner for the considerations hereinafter named agree as follows:

1. SCOPE OF WORK.

- A. The Supplier agrees to sell and deliver to the Owner and the Owner agrees to purchase and receive from the Supplier the equipment in the Bid, in strict accordance with the documents entitled **“Furnishing 15 kV Indoor Metalclad Switchgear - Reisner Substation”** for Webster City Municipal Utilities, Webster City, Iowa.

2. THE CONTRACT DOCUMENTS.

- A. The Contract Documents shall consist of this written Agreement, Bid Form, Advertisement for Bids, Instructions to Bidders, Addendums issued numbers __ , Insurance Policies and Certificates, General Requirements, Performance Bond, drawings and specifications, tests and engineering data, approved change orders, Supplier’s Requests for Payment, and all addenda issued by the Owner prior to the awarding of the Contract (collectively, the “Contract Documents”). All of the Contract Documents listed in this Material Agreement are hereby incorporated by this reference as fully as if they were set out in this Agreement in full, all of which documents and instruments are incorporated by the signature of the parties hereto. The Unit(s) will be designed, manufactured, tested, shipped, sold and invoiced in accordance with _____ (Supplier) bidding document, revision - _____, dated _____.

3. TIME OF COMPLETION.

- A. The work to be performed under this contract shall be commenced upon execution of this Agreement. Material shall be fully delivered by _____.

4. THE CONTRACT SUM.

- A. The Owner shall pay the Supplier for the equipment, in current funds: The Owner shall pay to the Supplier for performance of the work encompassed by this Agreement, and the Supplier will accept as full compensation therefore the lump sum of \$ _____, subject to adjustment as provided by the Contract Documents, to be paid by progress payments in cash or its equivalent in the manner provided for in the Contract Documents.

5. PAYMENT.

- A. Upon shipment of the complete equipment, the Supplier shall submit to the Owner a detailed statement of the equipment shipped and installed. The Owner shall, within thirty (30) days after delivery receipt of the material and associated invoice, pay the Supplier ninety-five percent (95%) of the contract price of the material.
- B. The Owner shall within thirty (30) days after final completion, field testing, required test reports, record drawings, final documentation, and certification by Engineer, pay the Supplier the remaining five percent (5%) of the contract price.

6. LIQUIDATED DAMAGES.

- A. Not applicable.

7. TERMINATION.

- A. This Agreement may be terminated by either party upon seven (7) days written notice should the other party breach the terms of this Agreement and, that party fails to initiate and diligently pursue a cure to such breach within the seven (7) day period after receiving such written notice. Further, any delay, suspension or termination of an order for convenience will be subject to Supplier's Cancellation and Delay Policy, as attached to Supplier's bid.

8. ASSIGNMENT.

- A. The Supplier shall not assign all of his rights or obligations under this Agreement without the express written consent of the Owner. Upon any assignment even though consented to by the Owner, the Supplier shall remain liable for the performance of the work under this Agreement.

9. PARTIAL INVALIDITY.

- A. If any provisions of this Agreement are in violation of any statute or rule of law of the State of Iowa, then such provisions shall be deemed null and void to the extent that they may be violative of law, but without invalidating the remaining provisions hereof.

10. WAIVER.

- A. No waiver of any breach of any one of the agreements, terms, conditions or covenants of this Agreement by the Owner shall be deemed or imply or constitute a waiver of any other agreement, term, condition or covenant of this Agreement. The failure of the Owner to insist on strict performance of any agreement, term, condition or covenant, herein set forth, shall not constitute or be construed as a waiver of the Owner's rights thereafter to enforce any other default; neither shall such failure to insist upon strict performance be deemed sufficient grounds to enable the Supplier to

forego or subvert or otherwise disregard any other agreement, term, condition or covenant of this Agreement.

11. ENTIRE AGREEMENT.

- A. The within Agreement, together with the Contract Documents, constitute the entire agreement of the parties hereto. No modification, change, or alteration of the within Agreement shall be of any legal force or effect unless in writing, signed by all the parties.

12. COUNTERPARTS, COPIES SAME AS ORIGINALS, ELECTRONIC AND SCANNED SIGNATURES PERMITTED:

- A. This Agreement may be executed in several counterparts and each such counterpart shall be deemed an original. Any photocopies, electronic copies, or scanned copies of this Agreement shall be given full force and effect as the original(s). Given the distance between the parties and the time-sensitive nature of this Agreement, the parties stipulate that each party and/or their individual representatives may execute this Agreement using an electronic or scanned signature. Such electronic or scanned signatures shall be given full effect by the parties.

13. GOVERNING LAW.

- A. Venue for any and all legal actions regarding or arising out of the transaction covered herein shall be solely in the District Court in and for Hamilton County, State of Iowa or the United States District Court for the State of Iowa. This transaction shall be governed by the laws of the State of Iowa.

14. BOND:

- A. If the total value of this contract exceeds \$25,000, Supplier shall provide a performance bond or supply bond as required by Iowa law valued at 100% of the contract amount.

15. INDEMNIFICATION:

- A. To the fullest extent permitted by law, the Supplier shall defend, indemnify, and hold harmless Owner, its agents, representatives, and employees (Indemnitees) from and against all claims, damages, losses and expenses, including, but not limited to, attorney's fees, arising out of or resulting from or in connection with performance of the work, but only to the extent caused by the negligent acts or omissions of the Supplier, a Sub-supplier, anyone directly or indirectly employed by them, or anyone for whose acts they may be liable, regardless of whether or not such claim, damage, loss, or expense is caused in part by a party indemnified hereunder. Such obligation shall not be construed to negate, abridge, or otherwise reduce any other right or obligation of indemnity or contribution which would otherwise exist, as to any party or person described in Contract Documents.

16. INSURANCE REQUIREMENTS

- A. The Supplier shall secure and maintain such insurance policies as specified in the General Requirements of this Contract.

17. NOTICES.

- A. All notices, requests, demands and other communications given or to be given under this Agreement shall be in writing and shall be deemed to have been duly given when served if served personally, or on the second day after mailing if mailed by first class mail, registered or certified, postage prepaid, and properly addressed to the party to whom notice is to be given as set forth below.

If to Owner:

City of Webster City
400 Second Street
Webster City, IA 50595

If to Supplier:

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives all as of the day and year first above written.

City of Webster City, Iowa

Owner

Supplier

Sign: _____

Sign: _____

Print: _____

Print: _____

Title: _____

Title: _____

ATTEST:

ATTEST:

Sign: _____

Sign: _____

Print: _____

Print: _____

Title: _____

Title: _____

Appendix

- Preliminary Cable Schedule
- Switchgear Drawings (separate)

C	S	F	D	T	D	D	F
69 KV POTENTIALS							
PT74A	12C/12	PANEL P2	RS-802C	PT74	RS-821	69 KV POTENTIALS	310
	BK	P2/LA-1		PT74/67 -A		67V - 74 A	
	R	P2/LA-2		PT74/67 -B		67V - 74 B	
	BL	P2/LA-3		PT74/67 -C		67V - 74 C	
	O	P2/LA-4		PT74/67 -N		74 N	
		P2/LA-5		PT74/67 -A		67V - 74 A	
	BR	P2/LA-6		PT74/67 -B		67V - 74 B	
	R/BK	P2/LA-7		PT74/67 -C		67V - 74 C	
	BL/BK	P2/LA-8		PT74/67 -N		74 N	
	O/BK	P2/LA-9		PT74/-		SPARE	
	/BK	P2/LA-10		PT74/-		SPARE	
	BR/BK	P2/LA-11		PT74/-		SPARE	
	BK/R	P2/LA-12		PT74/-		SPARE	
PT71A	12C/12	PANEL P3	RS-803C	PT71	RS-821	69 KV POTENTIALS	270
	BK	P3/LA-1		PT71/67 -A		67V - 71 A	
	R	P3/LA-2		PT71/67 -B		67V - 71 B	
	BL	P3/LA-3		PT71/67 -C		67V - 71 C	
	O	P3/LA-4		PT71/67 -N		71 N	
		P3/LA-5		PT71/67 -A		67V - 71 A	
	BR	P3/LA-6		PT71/67 -B		67V - 71 B	
	R/BK	P3/LA-7		PT71/67 -C		67V - 71 C	
	BL/BK	P3/LA-8		PT71/67 -N		71 N	
	O/BK	P3/LA-9		PT71/-		SPARE	
	/BK	P3/LA-10		PT71/-		SPARE	
	BR/BK	P3/LA-11		PT74/-		SPARE	
	BK/R	P3/LA-12		PT74/-		SPARE	
PT72A	12C/12	PANEL P4	RS-804C	PT72	RS-821	69 KV POTENTIALS	200
	BK	P4/LA-1		PT72/67 -A		67V - 74 A	
	R	P4/LA-2		PT72/67 -N		74 N	
	BL	P4/LA-3		PT72/67 -A		67V - 74 A	
	O	P4/LA-4		PT72/67 -N		74 N	
		P4/LA-5		PT72/-		SPARE	
	BR	P4/LA-6		PT72/-		SPARE	
	R/BK	P4/LA-7		PT72/-		SPARE	
	BL/BK	P4/LA-8		PT72/-		SPARE	
	O/BK	P4/LA-9		PT72/-		SPARE	
	/BK	P4/LA-10		PT72/-		SPARE	
	BR/BK	P4/LA-11		PT74/-		SPARE	
	BK/R	P4/LA-12		PT74/-		SPARE	

C	S	F	D	T	D	D	F
69 V BREAKER 1210							
CT-1210A	4C/10	PANEL P2	RS-802C	1210	RS-812A	51-74 &11P-74 - SEL-311C & SEL-351S RELAY - 1200/5	290
	BK	P2/SA-1		1210/1 1		1 1	
	R	P2/SA-2		1210/3 1		3 1	
	BL	P2/SA-3		1210/5 1		5 1	
	O	P2/SA-4		1210/5 3		5 3	
CT-1210B	4C/10	PANEL P2	RS-802C	1210	RS-812A	11S-74 - SEL-311C RELAY - 1200/5	290
	BK	P2/SB-1		1210/1 1		1 1	
	R	P2/SB-2		1210/3 1		3 1	
	BL	P2/SB-3		1210/5 1		5 1	
	O	P2/SB-4		1210/5 3		5 3	
CT-1210C	4C/10	PANEL P3	RS-802C	1210	RS-812A	11S-71 - SEL-311C RELAY - 1200/5	290
	BK	P3/SC-1		1210/2 1		2 1	
	R	P3/SC-2		1210/4 1		4 1	
	BL	P3/SC-3		1210/6 1		6 1	
	O	P3/SC-4		1210/6 3		6 3	
CT-1210D	4C/10	PANEL P3	RS-802C	1210	RS-812A	11P-71 - SEL-311C RELAY - 1200/5	290
	BK	P3/SD-1		1210/2 1		2 1	
	R	P3/SD-2		1210/4 1		4 1	
	BL	P3/SD-3		1210/6 1		6 1	
	O	P3/SD-4		1210/6 3		6 3	
C-1210A	12C/12	PANEL P2	RS-802C	1210	RS-812A	1210 CONTROL	290
	BK	P2/RB-1		1210/5		1210 CL()	
	R	P2/RB-2		1210/7		1210 CL	
	BL	P2/RB-3		1210/9		1210 CL(-)	
	O	P2/RB-4		1210/11		1210 TC1()	
		P2/RB-5		1210/13		1210 GRN LT	
	BR	P2/RB-6		1210/6		1210 TC1	
	R/BK	P2/RB-7		1210/10		1210 TC1(-)	
	BL/BK	P2/RB-8		1210/11A		1210 TC2()	
	O/BK	P2/RB-9		1210/9A		1210 TC2	
	/BK	P2/RB-10		1210/10A		1210 TC2(-)	
	BR/BK	P2/RB-11		1210/79		1210 52B	
	BK/R	P2/RB-12		1210/80		1210 52B	
C-1210B	12C/12	PANEL P2	RS-802C	1210	RS-812A	1210 ALARMS/STATUS	290
	BK	P2/RC-1		1210/98		ALM()	
	R	P2/RC-2		1210/99		1210 LOSS OF DC	
	BL	P2/RC-3		1210/40		1210 LOW GAS	
	O	P2/RC-4		1210/34		1210 LO GAS L/O	
		P2/RC-5		1210/91		1210 SPR DISCH	
	BR	P2/RC-6		1210/108		1210 LOSS AC	
	R/BK	P2/RC-7		1210/44		1210 LOCAL AT BREAKER	
	BL/BK	P2/RC-8		1210/-		SPARE	
	O/BK	P2/RC-9		1210/89		1210 52A	

C	S	F	D	T	D	D	F
	/BK	P2/RC-10		1210/82		1210 52A	
	BR/BK	P2/RC-11		1210/83		1210 52B	
	BK/R	P2/RC-12		1210/84		1210 52B	
C-1210C	12C/12	PANEL P2	RS-802C	1210	RS-812A	1210 STATUS	290
	BK	P2/RD-1		1210/51		1210 52A	
	R	P2/RD-2		1210/52		1210 52A	
	BL	P2/RD-3		1210/55		1210 52A	
	O	P2/RD-4		1210/56		1210 52A	
		P2/RD-5		1210/59		1210 52A	
	BR	P2/RD-6		1210/60		1210 52A	
	R/BK	P2/RD-7		1210/65		1210 52A	
	BL/BK	P2/RD-8		1210/66		1210 52A	
	O/BK	P2/RD-9		1210/69		1210 52A	
	/BK	P2/RD-10		1210/70		1210 52A	
	BR/BK	P2/RD-11		1210/75		1210 52A	
	BK/R	P2/RD-12		1210/76		1210 52A	
69 V BREAKER 1211							
CT-1211A	4C/10	PANEL P3	RS-803C	1211	RS-813A	11P-71 - SEL-311C RELAY - 1200/5	235
	BK	P3/SA-1		1211/1 1		1 1	
	R	P3/SA-2		1211/3 1		3 1	
	BL	P3/SA-3		1211/5 1		5 1	
	O	P3/SA-4		1211/5 3		6 3	
CT-1211B	4C/10	PANEL P3	RS-803C	1211	RS-813A	11S-71 - SEL-311C RELAY - 1200/5	235
	BK	P3/SB-1		1211/1 1		1 1	
	R	P3/SB-2		1211/3 1		3 1	
	BL	P3/SB-3		1211/5 1		5 1	
	O	P3/SB-4		1211/5 2		5 3	
CT-1211C	4C/10	PANEL P4	RS-803C	1211	RS-813A	51-71 - SEL-351S - 1200/5	230
	BK	P4/SC-1		1211/2 1		2 1	
	R	P4/SC-2		1211/4 1		4 1	
	BL	P4/SC-3		1211/6 1		6 1	
	O	P4/SC-4		1211/6 3		6 3	
CT-1211D	4C/10	PANEL P4	RS-803C	1211	RS-813A	87B1 - SEL-787 RELAY - 1200/5	230
	BK	P4/SB-1		1211/2 1		2 1	
	R	P4/SB-2		1211/4 1		4 1	
	BL	P4/SB-3		1211/6 1		6 1	
	O	P4/SB-4		1211/6 3		6 3	
C-1211A	12C/12	PANEL P3	RS-803C	1211	RS-813A	1211 CONTROL	235
	BK	P3/RB-1		1211/5		1211 CL()	
	R	P3/RB-2		1211/7		1211 CL	
	BL	P3/RB-3		1211/9		1211 CL(-)	
	O	P3/RB-4		1211/11		1211 TC1()	
		P3/RB-5		1211/13		1211 GRN LT	
	BR	P3/RB-6		1211/6		1211 TC1	
	R/BK	P3/RB-7		1211/10		1211 TC1(-)	

C	S	F	D	T	D	D	F
	BL/BK	P3/RB-8		1211/11A		1211 TC2()	
	O/BK	P3/RB-9		1211/9A		1211 TC2	
	/BK	P3/RB-10		1211/10A		1211 TC2(-)	
	BR/BK	P3/RB-11		1211/79		1211 52B	
	BK/R	P3/RB-12		1211/80		1211 52B	
C-1211B	12C/12	PANEL P3	RS-803C	1211	RS-813A	1211 ALARMS/STATUS	235
	BK	P3/RC-1		1211/98		ALM()	
	R	P3/RC-2		1211/99		1211 LOSS OF DC	
	BL	P3/RC-3		1211/40		1211 LOW GAS	
	O	P3/RC-4		1211/34		1211 LO GAS L/O	
		P3/RC-5		1211/91		1211 SPR DISCH	
	BR	P3/RC-6		1211/108		1211 LOSS AC	
	R/BK	P3/RC-7		1211/44		1211 LOCAL AT BREAKER	
	BL/BK	P3/RC-8		1211/-		SPARE	
	O/BK	P3/RC-9		1211/89		1211 52A	
	/BK	P3/RC-10		1211/82		1211 52A	
	BR/BK	P3/RC-11		1211/83		1211 52B	
	BK/R	P3/RC-12		1211/84		1211 52B	
C-1211C	12C/12	PANEL P3	RS-803C	1211	RS-813A	1211 STATUS	235
	BK	P3/RD-1		1211/51		1211 52A	
	R	P3/RD-2		1211/52		1211 52A	
	BL	P3/RD-3		1211/55		1211 52A	
	O	P3/RD-4		1211/56		1211 52A	
		P3/RD-5		1211/59		1211 52A	
	BR	P3/RD-6		1211/60		1211 52A	
	R/BK	P3/RD-7		1211/65		1211 52A	
	BL/BK	P3/RD-8		1211/66		1211 52A	
	O/BK	P3/RD-9		1211/69		1211 52A	
	/BK	P3/RD-10		1211/70		1211 52A	
	BR/BK	P3/RD-11		1211/75		1211 52A	
	BK/R	P3/RD-12		1211/76		1211 52A	
69 V BREAKER 1212							
CT-1212A	4C/10	PANEL P4	RS-803C	1212	RS-814A	87B1 - SEL-787 RELAY - 1200/5	225
	BK	P4/SA-1		1212/5 1		5 1	
	R	P4/SA-2		1212/3 1		3 1	
	BL	P4/SA-3		1212/1 1		1 1	
	O	P4/SA-4		1212/5 3		5 3	
CT-1212B	4C/10	PANEL P4	RS-803C	1212	RS-814A	51-72 - SEL-351S - 1200/5	225
	BK	P4/SF-1		1212/5 1		5 1	
	R	P4/SF-2		1212/3 1		3 1	
	BL	P4/SF-3		1212/1 1		1 1	
	O	P4/SF-4		1212/5 3		5 3	
CT-1212C	4C/10	PANEL P3	RS-803C	1212	RS-814A	11S-71 - SEL-311C RELAY - 1200/5	235
	BK	P3/SB-1		1212/6 1		6 1	
	R	P3/SB-2		1212/4 1		4 1	

C	S	F	D	T	D	D	F
	BL	P3/SB-3		1212/2 1		2 1	
	O	P3/SB-4		1212/6 3		6 3	
CT-1212D	4C/10	PANEL P3	RS-803C	1212	RS-814A	11P-71 - SEL-311C RELAY - 1200/5	235
	BK	P3/SA-1		1212/6 1		6 1	
	R	P3/SA-2		1212/4 1		4 1	
	BL	P3/SA-3		1212/2 1		2 1	
	O	P3/SA-4		1212/6 3		6 3	
C-1212A	12C/12	PANEL P3	RS-803C	1212	RS-814A	1212 CONTROL	225
	BK	P3/RB-1		1212/5		1212 CL()	
	R	P3/RB-2		1212/7		1212 CL	
	BL	P3/RB-3		1212/9		1212 CL(-)	
	O	P3/RB-4		1212/11		1212 TC1()	
		P3/RB-5		1212/13		1212 GRN LT	
	BR	P3/RB-6		1212/6		1212 TC1	
	R/BK	P3/RB-7		1212/10		1212 TC1(-)	
	BL/BK	P3/RB-8		1212/11A		1212 TC2()	
	O/BK	P3/RB-9		1212/9A		1212 TC2	
	/BK	P3/RB-10		1212/10A		1212 TC2(-)	
	BR/BK	P3/RB-11		1212/79		1212 52B	
	BK/R	P3/RB-12		1212/80		1212 52B	
C-1212B	12C/12	PANEL P3	RS-803C	1212	RS-814A	1212 ALARMS/STATUS	225
	BK	P3/RC-1		1212/98		ALM()	
	R	P3/RC-2		1212/99		1212 LOSS OF DC	
	BL	P3/RC-3		1212/40		1212 LOW GAS	
	O	P3/RC-4		1212/34		1212 LO GAS L/O	
		P3/RC-5		1212/91		1212 SPR DISCH	
	BR	P3/RC-6		1212/108		1212 LOSS AC	
	R/BK	P3/RC-7		1212/44		1212 LOCAL AT BREAKER	
	BL/BK	P3/RC-8		1212/-		SPARE	
	O/BK	P3/RC-9		1212/89		1212 52A	
	/BK	P3/RC-10		1212/82		1212 52A	
	BR/BK	P3/RC-11		1212/83		1212 52B	
	BK/R	P3/RC-12		1212/84		1212 52B	
C-1212C	12C/12	PANEL P3	RS-803C	1212	RS-814A	1212 STATUS	225
	BK	P3/RD-1		1212/51		1212 52A	
	R	P3/RD-2		1212/52		1212 52A	
	BL	P3/RD-3		1212/55		1212 52A	
	O	P3/RD-4		1212/56		1212 52A	
		P3/RD-5		1212/59		1212 52A	
	BR	P3/RD-6		1212/60		1212 52A	
	R/BK	P3/RD-7		1212/65		1212 52A	
	BL/BK	P3/RD-8		1212/66		1212 52A	
	O/BK	P3/RD-9		1212/69		1212 52A	
	/BK	P3/RD-10		1212/70		1212 52A	
	BR/BK	P3/RD-11		1212/75		1212 52A	
	BK/R	P3/RD-12		1212/76		1212 52A	

C	S	F	D	T	D	D	F
69/13.2 V XFMR T1							
CT-T1A	4C/10	SWGR BP	RS-831B	XFMR T1	RS-825K	XFMR T1 - H BUSHING CT'S - 300/5 - 87T1	140
	BK	BP/T -1		T1/SB1 1		A	
	R	BP/T -2		T1/SB2 1		B	
	BL	BP/T -3		T1/SB3 1		C	
	O	BP/T -4		T1/SB3 3		N	
CT-T1B	4C/10	PANEL P4	RS-801C	XFMR T1	RS-825K	XFMR T1 - H BUSHING CT - 1200/5 - 87B1	140
	BK	P4/SC-1		T1/SB4 5		A	
	R	P4/SC-2		T1/SB5 5		B	
	BL	P4/SC-3		T1/SB6 5		C	
	O	P4/SC-4		T1/SB6 1		N	
CT-T1C	4C/10	PANEL P4	RS-831B	XFMR T1	RS-825K	XFMR T1 - X BUSHING CT - 1200/5 - 87B1 (SUMMED)	140
	BK	P4/SD-1		T1/SB7 1		A	
	R	P4/SD-2		T1/SB8 1		B	
	BL	P4/SD-3		T1/SB9 1		C	
	O	P4/SD-4		T1/SB9 5		N	
C-T1A	12C/12	PANEL P4	RS-801C	XFMR T1	RS-825K	XFMR T1 ALARMS	140
	BK	P4/LB-1		T1/T163		3350-A()	
	R	P4/LB-2		T1/T165		2414 ALARM	
	BL	P4/LB-3		T1/-		SPARE TO TB	
	O	P4/LB-4		T1/-		SPARE TO TB	
		P4/LB-5		T1/-		SPARE TO TB	
	BR	P4/LB-6		T1/-		SPARE TO TB	
	R/BK	P4/LB-7		T1/-		SPARE TO TB	
	BL/BK	P4/LB-8		T1/-		SPARE TO TB	
	O/BK	P4/LB-9		T1/-		SPARE TO TB	
	/BK	P4/LB-10		T1/-		SPARE TO TB	
	BR/BK	P4/LB-11		T1/-		SPARE TO TB	
	BK/R	P4/LB-12		T1/-		SPARE TO TB	
C-T1B	12C/12	PANEL P4	RS-801C	XFMR T1	RS-825K	XFMR T1 TRIPS	140
	BK	P4/LC-1		T1/T32		87B1()	
	R	P4/LC-2		T1/T31		26Q1 OIL TEMP TRIP MAIN	
	BL	P4/LC-3		T1/T37		26Q2 OIL TEMP TRIP LTC	
	O	P4/LC-4		T1/T49		49T WINIDNG TEMP TRIP	
		P4/LC-5		T1/T58		71Q1 T1 LOW OIL TRIP MAIN	
	BR	P4/LC-6		T1/T64		71Q2 T1 LOW OIL TRIP LTC	
	R/BK	P4/LC-7		T1/-		SPARE TO TB	
	BL/BK	P4/LC-8		T1/-		SPARE TO TB	
	O/BK	P4/LC-9		T1/T13		86T1()	
	/BK	P4/LC-10		T1/T14		63 1 TRIP	
	BR/BK	P4/LC-11		T1/-		SPARE TO TB	
	BK/R	P4/LC-12		T1/-		SPARE TO TB	
C-T1C	12C/12	SWGR BP	RS-831B	XFMR T1	RS-825K	XFMR T1 LTC CONTROL/INDICATION	140
	BK	BP/T -1		T1/T119		BMP-P1	
	R	BP/T -2		T1/T120		BMP-P0	
	BL	BP/T -3		T1/-		SPARE	

C	S	F	D	T	D	D	F
	O	BP/T -4		T1/T128			REMOTE
		BP/T -5		T1/T127			AUTO
	BR	BP/T -6		T1/T125			LOWER
	R/BK	BP/T -7		T1/T126			RAISE
	BL/BK	BP/T -8		T1/T177			INCON-A
	O/BK	BP/T -9		T1/T178			INCON-B
	/BK	BP/T -10		T1/T179			INCON-C
	BR/BK	BP/T -11		T1/T175			INCON-E
	BK/R	BP/T -12		T1/T176			INCON-F
69 KV PANEL P4 TO SWGR INTERCONNECTS							
C-BMA	12C/12	PANEL P4	RS-804C	SWGR BP	RS-831D	BM/1211/1212 CONTROLS	65
	BK	P4/LD-1		BP/T -1			
	R	P4/LD-2		BP/T -2			
	BL	P4/LD-3		BP/T -3			
	O	P4/LD-4		BP/T -4			
		P4/LD-5		BP/T -5			
	BR	P4/LD-6		BP/T -6			
	R/BK	P4/LD-7		BP/T -7			
	BL/BK	P4/LD-8		BP/T -8			
	O/BK	P4/LD-9		BP/T -9			
	/BK	P4/LD-10		BP/T -10			
	BR/BK	P4/LD-11		BP/T -11			
	BK/R	P4/LD-12		BP/T -12			
C-BMB	12C/12	PANEL P4	RS-804C	SWGR BP	RS-831D	BM/1211/1212 STATUSES	65
	BK	P4/LE-1		BP/T -1			
	R	P4/LE-2		BP/T -2			
	BL	P4/LE-3		BP/T -3			
	O	P4/LE-4		BP/T -4			
		P4/LE-5		BP/T -5			
	BR	P4/LE-6		BP/T -6			
	R/BK	P4/LE-7		BP/T -7			
	BL/BK	P4/LE-8		BP/T -8			
	O/BK	P4/LE-9		BP/T -9			
	/BK	P4/LE-10		BP/T -10			
	BR/BK	P4/LE-11		BP/T -11			
	BK/R	P4/LE-12		BP/T -12			
C-BMC	12C/12	PANEL P4	RS-804C	SWGR BP	RS-831D	BM/1211/1212 STATUSES	65
	BK	P4/LF-1		BP/T -1			
	R	P4/LF-2		BP/T -2			
	BL	P4/LF-3		BP/T -3			
	O	P4/LF-4		BP/T -4			
		P4/LF-5		BP/T -5			
	BR	P4/LF-6		BP/T -6			
	R/BK	P4/LF-7		BP/T -7			
	BL/BK	P4/LF-8		BP/T -8			

C □□□□	S □□□	F □□□	D □□	T □	D □□	D □□□□□□□□	F □
	O/BK	P4/LF-9		BP/T	-9		
	/BK	P4/LF-10		BP/T	-10		
	BR/BK	P4/LF-11		BP/T	-11		
	BK/R	P4/LF-12		BP/T	-12		

BUILDING AUXILIARY ALARMS

C-ALM1	12C/12	PANEL P1	RS-801C	ALM JBOX	RS-882	ALARM JUNCTION BOX	45
	BK	P1/LC-1		JB/T1-1		DOOR 1 COMMON	
	R	P1/LC-2		JB/T1-2		DOOR 1 OPEN	
	BL	P1/LC-3		JB/T1-3		DOOR 2 COMMON	
	O	P1/LC-4		JB/T1-4		DOOR 2 OPEN	
		P1/LC-5		JB/T1-5		SMOKE	
	BR	P1/LC-6		JB/T1-6		SMOKE	
	R/BK	P1/LC-7		JB/T1-7		HI TEMP	
	BL/BK	P1/LC-8		JB/T1-8		HI TEMP	
	O/BK	P1/LC-9		JB/T1-9		LO TEMP	
	/BK	P1/LC-10		JB/T1-10		LO TEMP	
	BR/BK	P1/LC-11		JB/T1-11		HI WATER ALM	
	BK/R	P1/LC-12		JB/T1-12		HI WATER ALM	
C-ALM2	12C/12	PANEL P1	RS-801C	ALM JBOX	RS-882	ALARM JUNCTION BOX	45
	BK	P1/LD-1		JB/T2-1		AC LIGHTS ON	
	R	P1/LD-2		JB/T2-2		AC LIGHTS ON	
	BL	P1/LD-3		JB/T2-3		ARD LIGHTS ON	
	O	P1/LD-4		JB/T2-4		ARD LIGHTS ON	
		P1/LD-5		JB/T2-5		DC UPSTAIRS 125()	
	BR	P1/LD-6		JB/T2-6		DC EMERGENC ON	
	R/BK	P1/LD-7		JB/T2-7		DC UPSTAIRS 125(-)	
	BL/BK	P1/LD-8		JB/T2-8		SPARE	
	O/BK	P1/LD-9		JB/T2-9		SPARE	
	/BK	P1/LD-10		JB/T2-10		SPARE	
	BR/BK	P1/LD-11		JB/T2-11		SPARE	
	BK/R	P1/LD-12		JB/T2-12		SPARE	
C-CHGR	2C/12	PANEL P1	RS-801C	CHGR	RS-883	BATTERY CHARGER ALARM	50
	BK	P1/RB-11		CHRG/TB2-2		CHGR ALARM()	
	R	P1/RB-12		CHRG/TB2-1		SUMMAR	

AC CONNECTIONS

ACP1	2C/10	PANEL P1	RS-801C	AC PANEL AC2	RS-410	PANEL P1-P4 LIGHTS/RECEPTACLES	50
	BK	P1/LB-11		AC2/6		120-	
	WT	P1/TLB-12		AC2/N		120-N	
ACCBPC	2C/10	CBPC COMM RACK	RS-809	AC PANEL AC2	RS-410	CBPC AC SUPPLY	50
	BK	RACK/		AC2/8		120-	
	WT	RACK/		AC2/N		120-N	
ACPT71	2C/12	PT71	RS-821	AC PANEL AC2	RS-410	PT71 HTR	270
	BK	PT71/HTR1		AC2/14		120-	

C	S	F	D	T	D	D	F
	WT	PT71/HTR2		AC2/N		120-N	
ACPT72	2C/12	PT72	RS-821	AC PANEL AC2	RS-410	PT72 HTR	200
	BK	PT72/HTR1		AC2/16		120-	
	WT	PT72/HTR2		AC2/N		120-N	
ACPT74	2C/12	PT74	RS-821	AC PANEL AC2	RS-410	PT74 HTR	310
	BK	PT74/HTR1		AC2/18		120-	
	WT	PT74/HTR2		AC2/N		120-N	
ACHTRSB	2C/10	SWGR BM	RS-831D	AC PANEL AC2	RS-410	SWGR LIGHTS/RECEPTACLES	55
	BK	BM/T32-9		AC2/4		120-	
	WT	BM/T32-10		AC2/N		120-N	
ACSWGRB	2C/10	SWGR BM	RS-831D	AC PANEL AC2	RS-410	SWGR HEATERS	55
	BK	BP/T32-11		AC2/2		120-	
	WT	BP/T32-12		AC2/N		120-N	
AC1210	3C/10	1210	RS-812A	AC PANEL AC2	RS-410	1210 AC POWER	275
	BK	1210/35		AC2/1		120-	
	RD	1210/36		AC2/3		120-	
	WT	1210/38		AC2/N		N	
AC1211	3C/10	1211	RS-813A	AC PANEL AC2	RS-410	1211 AC POWER	220
	BK	1211/35		AC2/5		120-	
	RD	1211/36		AC2/7		120-	
	WT	1211/38		AC2/N		N	
AC1212	3C/10	1212	RS-814A	AC PANEL AC2	RS-410	1212 AC POWER	210
	BK	1212/35		AC2/9		120-	
	RD	1212/36		AC2/11		120-	
	WT	1212/38		AC2/N		N	
ACT1A	3C/6	XFMR T1	RS-825I	AC PANEL AC2	RS-410	XFMR T1 AC POWER - FANS, LTC	130
	BK	T1/L1D		AC2/25		120-	
	RD	T1/L2D		AC2/27		120-	
	WT	T1/N4		AC2/N		N	
AC2-32	3C/8	ALM JBOX	RS-412	AC PANEL AC2	RS-410	YARD LIGHT MAIN RUN	40
	BK	JBO /T3-1		AC2/30		120-	
	RD	JBO /T3-2		AC2/32		120-	
	WT	JBO /T3-3		AC2/N		N	
AC1-12	2C/10	ALM JBOX	RS-412	AC PANEL AC1	RS-410	YARD LIGHT CONTROL	40
	BK	JBO /T2-1		AC1/12		120-	
	WT	JBO /T2-3		AC1/N		N	
ACYL1	3C/12	ALM JBOX	RS-412	YARD LIGHT 1	RS-412	YARD LIGHT 1	140
	BK	JBO /T3-1		L1/L1		120-	
	RD	JBO /T3-2		L1/L2		120-	
	WT	JBO /T3-3		L1/N		N	
ACYL2	3C/12	YARD LIGHT 1	RS-412	YARD LIGHT 2	RS-412	YARD LIGHT 2	150
	BK	L1/L1		L2/L1		120-	
	RD	L1/L2		L2/L2		120-	
	WT	L1/N		L2/N		N	
ACYL3	3C/12	YARD LIGHT 2	RS-412	YARD LIGHT 3	RS-412	YARD LIGHT 3	215

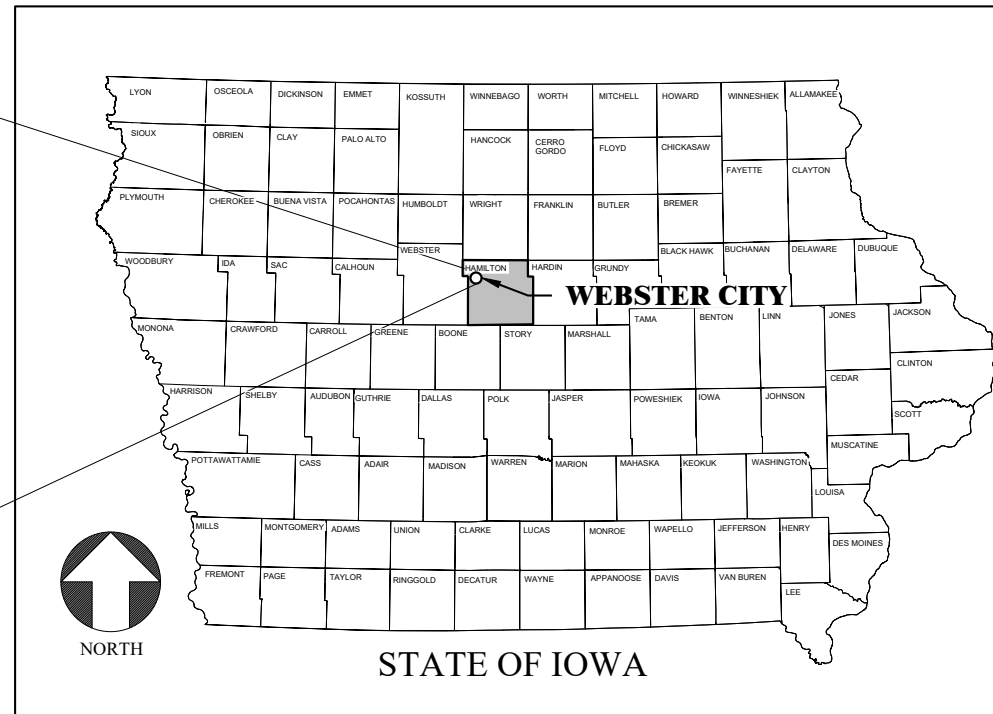
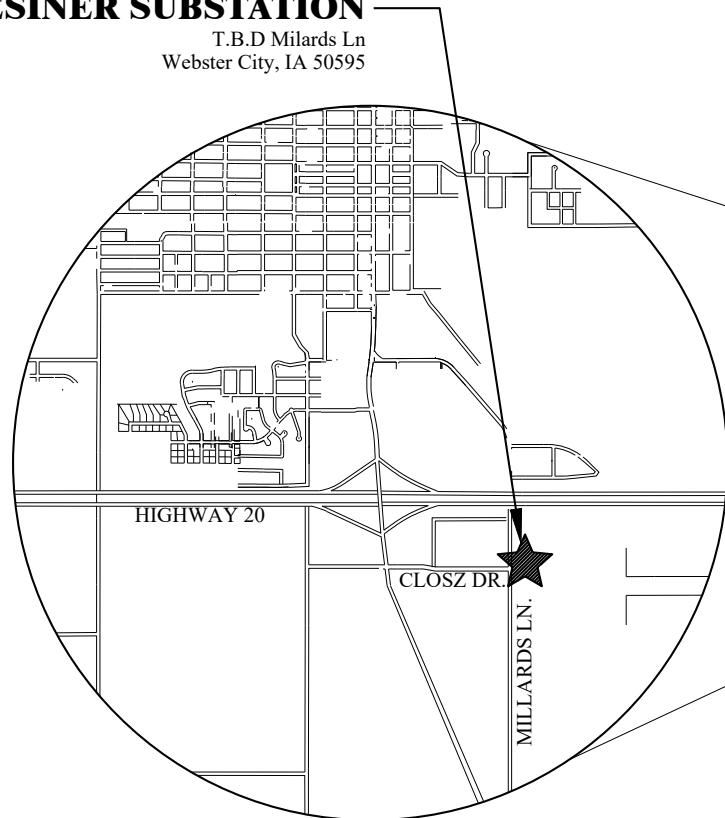
C	S	F	D	T	D	D	F
	BK	L2/L1		L3/L1		120-	
	RD	L2/L2		L3/L2		120-	
	WT	L2/N		L3/N		N	
ACYL4	3C/12	YARD LIGHT 3	RS-412	YARD LIGHT 4	RS-412	YARD LIGHT 4	140
	BK	L3/L1		L4/L1		120-	
	RD	L3/L2		L4/L2		120-	
	WT	L3/N		L4/N		N	
ACYL5	3C/12	YARD LIGHT 2	RS-412	YARD LIGHT 5	RS-412	YARD LIGHT 5	170
	BK	L2/L1		L5/L1		120-	
	RD	L2/L2		L5/L2		120-	
	WT	L2/N		L5/N		N	
ACYL6	3C/12	YARD LIGHT 5	RS-412	YARD LIGHT 6	RS-412	YARD LIGHT 6	145
	BK	L5/L1		L6/L1		120-	
	RD	L5/L2		L6/L2		120-	
	WT	L5/N		L6/N		N	
ACYL7	3C/12	YARD LIGHT 4	RS-412	YARD LIGHT 7	RS-412	YARD LIGHT 7	170
	BK	L4/L1		L7/L1		120-	
	RD	L4/L2		L7/L2		120-	
	WT	L4/N		L7/N		N	
DC CONNECTIONS							
DCBM	2C/10	SWGR BM	RS-831D	DC PANEL DC1	RS-411	SWGR BM	55
	RD	BM/T -		DC1/1		125VDC	
	BK	BM/T -		DC1/3		125VDC-	
DCB1	2C/10	SWGR B1	RS-832B	DC PANEL DC1	RS-411	SWGR B1	50
	RD	B1/T -		DC1/5		125VDC	
	BK	B1/T -		DC1/7		125VDC-	
DCB2	2C/10	SWGR B2	RS-832D	DC PANEL DC1	RS-411	SWGR B2	50
	RD	B2/T -		DC1/9		125VDC	
	BK	B2/T -		DC1/11		125VDC-	
DCB3	2C/10	SWGR B3	RS-833B	DC PANEL DC1	RS-411	SWGR B3	45
	RD	B3/T -		DC1/13		125VDC	
	BK	B3/T -		DC1/15		125VDC-	
DCB4	2C/10	SWGR B4	RS-833D	DC PANEL DC1	RS-411	SWGR B4	45
	RD	B4/T -		DC1/17		125VDC	
	BK	B4/T -		DC1/19		125VDC-	
DCB5	2C/10	SWGR B5	RS-834B	DC PANEL DC1	RS-411	SWGR B5	40
	RD	B5/T -		DC1/21		125VDC	
	BK	B5/T -		DC1/23		125VDC-	
DCB6	2C/10	SWGR B6	RS-834D	DC PANEL DC1	RS-411	SWGR B6	40
	RD	B6/T -		DC1/25		125VDC	
	BK	B6/T -		DC1/27		125VDC-	
DCBC	2C/10	SWGR BC	RS-835D	DC PANEL DC1	RS-411	SWGR BC	35
	RD	BC/T -		DC1/31		125VDC	
	BK	BC/T -		DC1/35		125VDC-	
DCBX	2C/10	SWGR BX	RS-835B	DC PANEL DC1	RS-411	SWGR BX - 87B5 - SEL-787Z	35

C	S	F	D	T	D	D	F
DCREV1	RD	B /T -		DC1/35		125VDC	55
	BK	B /T -		DC1/37		125VDC-	
	2C/10	SWGR BP	RS-831B	DC PANEL DC1	RS-411	SWGR BP - 735-T1	
DC87T1	RD	BP/T -		DC1/6		125VDC	55
	BK	BP/T -		DC1/8		125VDC-	
	2C/10	SWGR BP	RS-831B	DC PANEL DC2	RS-411	SWGR BP - 87.1	
DCP1A	RD	BP/T -		DC2/17		125VDC	50
	BK	BP/T -		DC2/19		125VDC-	
	2C/10	PANEL P1	RS-801C	DC PANEL DC2	RS-411	PANEL P1 - 2523-A ANNUNCIATOR	
DCP1B	RD	P1/RA-1		DC2/5		125VDC	50
	BK	P1/RA-2		DC2/7		125VDC-	
	2C/10	PANEL P1	RS-801C	DC PANEL DC2	RS-411	PANEL P1 - 3350-A RTAC	
DCP2A	RD	P1/RA-3		DC2/9		125VDC	50
	BK	P1/RA-4		DC2/11		125VDC-	
	2C/10	PANEL P2	RS-802C	DC PANEL DC1	RS-411	PANEL P2 - 11P-74	
DCP2B	RD	P2/RA-1		DC1/10		125VDC	50
	BK	P2/RA-2		DC1/12		125VDC-	
	2C/10	PANEL P2	RS-802C	DC PANEL DC2	RS-411	PANEL P2 - 11S-74	
DCP2C	RD	P2/RA-3		DC2/2		125VDC	50
	BK	P2/RA-4		DC2/4		125VDC-	
	2C/10	PANEL P2	RS-802C	DC PANEL DC2	RS-411	PANEL P2 - 51-74	
DCP3A	RD	P2/RA-5		DC2/14		125VDC	45
	BK	P2/RA-6		DC2/16		125VDC-	
	2C/10	PANEL P3	RS-803C	DC PANEL DC1	RS-411	PANEL P3 - 11P-71	
DCP3B	RD	P3/RA-3		DC1/14		125VDC	45
	BK	P3/RA-4		DC1/16		125VDC-	
	2C/10	PANEL P3	RS-803C	DC PANEL DC2	RS-411	PANEL P3 - 11S-71	
DCP3C	RD	P3/RA-3		DC2/6		125VDC	45
	BK	P3/RA-4		DC2/8		125VDC-	
	2C/10	PANEL P3	RS-803C	DC PANEL DC2	RS-411	PANEL P3 - 51-71	
DCP4A	RD	P3/RA-5		DC2/18		125VDC	40
	BK	P3/RA-6		DC2/20		125VDC-	
	2C/10	PANEL P4	RS-804C	DC PANEL DC1	RS-411	PANEL P4 - 87B1	
DCP4B	RD	P4/RA-1		DC1/18		125VDC	40
	BK	P4/RA-2		DC1/20		125VDC-	
	2C/10	PANEL P4	RS-804C	DC PANEL DC2	RS-411	PANEL P4 - 86T1	
DCP4C	RD	P4/RA-3		DC2/10		125VDC	40
	BK	P4/RA-4		DC2/12		125VDC-	
	2C/10	PANEL P4	RS-804C	DC PANEL DC2	RS-411	PANEL P4 - 51-72	
DC1210A	RD	P4/RA-5		DC2/22		125VDC	290
	BK	P4/RA-6		DC2/24		125VDC-	
	2C/10	1210	RS-812A	DC PANEL DC2	RS-411	1210 CLOSE/TC1/MOTOR	
DC1210B	RD	1210/1		DC2/21		125VDC	290
	BK	1210/2		DC2/23		125VDC-	
	2C/10	1210	RS-812A	DC PANEL DC1	RS-411	1210 TC2	
	RD	1210/1B		DC1/22		125VDC	
	BK	1210/2B		DC1/24		125VDC-	

C	S	F	D	T	D	D	F
DC1211A	2C/10	1211	RS-813A	DC PANEL DC2	RS-411	1211 CLOSE/TC1/MOTOR	235
	RD	1211/1		DC2/25		125VDC	
	BK	1211/2		DC2/27		125VDC-	
DC1211B	2C/10	1211	RS-813A	DC PANEL DC1	RS-411	1211 TC2	235
	RD	1211/1B		DC1/26		125VDC	
	BK	1211/2B		DC1/28		125VDC-	
DC1210A	2C/10	1212	RS-814A	DC PANEL DC2	RS-411	1212 CLOSE/TC1/MOTOR	225
	RD	1212/1		DC2/31		125VDC	
	BK	1212/2		DC2/33		125VDC-	
DC1210B	2C/10	1212	RS-814A	DC PANEL DC1	RS-411	1212 TC2	225
	RD	1212/1B		DC1/32		125VDC	
	BK	1212/2B		DC1/34		125VDC-	
DCT1	2C/10	XFMR T1	RS-815X	DC PANEL DC2	RS-411	XFMR T1 - SEL-2414 FANS AND SUDD. PRESSURE	130
	RD	T1/PC		DC2/1		125VDC	
	BK	T1/NC		DC2/3		125VDC-	
DCLITES1	2C/10	DC LITES UPSTAIRS	RS-411	DC PANEL DC1	RS-411	DC EMERGENCY LIGHTING - MAIN FLOOR	130
	RD	DCLITES1/		DC1/36		125VDC	
	BK	DCLITES1/-		DC1/38		125VDC-	

FURNISHING 15kV INDOOR METALCLAD SWITCHGEAR FOR REISNER SUBSTATION WEBSTER CITY MUNICIPAL UTILITIES WEBSTER CITY, IOWA

RESINER SUBSTATION
T.B.D Milards Ln
Webster City, IA 50595



DGR PROJECT NUMBERS: 428403

**ISSUED FOR
SWITCHGEAR BIDS
05-14-2024**

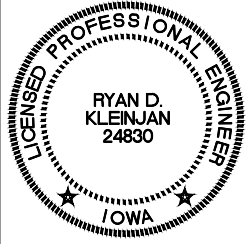
LIST OF DRAWINGS

RS-000	DRAWING INDEX
RS-100	SWITCHING ONE-LINE
RS-110	PROTECTION AND CONTROL ONE-LINE
RS-120	PROTECTION AND CONTROL ONE-LINE
RS-150	COMMUNICATION DIAGRAM
RS-400	CONTROL ENCLOSURE FLOOR PLAN (FOR REFERENCE)
* RS-511	LAYOUT - BUS B SWITCHGEAR
* RS-515	MATERIAL LIST BUS B SWITCHGEAR
* RS-542	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
* RS-543	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
* RS-544	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
* RS-545	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
* RS-562	CONSTRUCTION DETAILS - UNIT 2 - B1/B2
* RS-631A	87T1 - XFMR T1 DIFF - CONTROL SCHEMATIC
* RS-631B	BKR BM - XFMR T1 - CONTROL SCHEMATIC
* RS-632A	BKR B1 - FEEDER - CONTROL SCHEMATIC
* RS-832C	UNIT 2 - B2 - WIRING DIAGRAM
* RS-832D	UNIT 2 - B2 - WIRING DIAGRAM
* RS-900A	CONTROL CABLE SCHEDULE

* ASTERISK DENOTES A SAMPLE OR EXAMPLE DRAWING

PROJECT REVISION HISTORY

REV	DATE	DESCRIPTION
A	03-08-2024	ISSUED FOR MATERIAL BIDS
B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



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Ryan D. Kleinjan, P.E. on 05-14-2024

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ROCK RAPIDS, IOWA
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REISNER SUBSTATION

Plot Date: 5/14/2024 12:23:12 PM

DWG REV DRAWING TITLE

OVERALL DRAWINGS

RS-100	A	SWITCHING ONE-LINE DIAGRAM
RS-110	A	PROTECTION AND CONTROL ONE-LINE DIAGRAM
RS-120	A	PROTECTION AND CONTROL ONE-LINE DIAGRAM
RS-150	A	COMMUNICATION DIAGRAM

PHYSICAL DRAWINGS (CIVIL)

RS-200	A	SITE LAYOUT
RS-201	0	SITE GRADING TITLE SHEET
RS-202	0	SITE DETAILS
RS-203	0	EXISTING SITE PLAN
RS-204	0	PROPOSED SITE PLAN
RS-210	A	FOUNDATION PLAN
RS-211	A	GENERAL STRUCTURAL NOTES
RS-212	A	SUBSTATION DRILLED PIERS
RS-213	A	SUBSTATION DRILLED PIERS
RS-214	A	CIRCUIT BREAKER FOUNDATION PLANS & DETAILS
RS-215	A	TRANSFORMER FOUNDATION PLANS & DETAILS
RS-216	A	CONTROL ENCLOSURE FOUNDATION PLANS & DETAILS
RS-220	A	RACEWAY PLAN
RS-221	A	CONDUIT SCHEDULE
RS-222	A	CONDUIT AND TRENCH DETAILS
RS-223	A	CONDUIT AND J-BOX DETAILS
RS-240	A	GROUNDING PLAN
RS-245	A	GROUNDING DETAILS
RS-300	A	ULTIMATE ARRANGEMENT
RS-301	A	GENERAL ARRANGEMENT
RS-309	A	69 kV BUS SECTION VIEW NOTES
RS-310	A	69 kV BUS SECTION VIEWS
RS-311	A	69 kV BUS SECTION VIEWS
RS-312	A	69 kV BUS SECTION VIEWS
RS-313	A	69 kV BUS SECTION VIEWS
RS-314	A	69 kV BUS SECTION VIEWS
RS-330	A	CONNECTOR DETAILS
RS-331	A	CONNECTOR DETAILS
RS-340	A	LIGHTING PLAN
RS-350	A	STEEL PLAN
RS-351	A	69 kV DEADEND H-FRAME DETAIL
RS-352	A	69 kV FUTURE DEADEND H-FRAME DETAIL
RS-353	A	DEADEND STRUCTURE DETAILS
RS-354	A	SHIELD TOWER DETAILS
RS-356	A	69 kV LOW SWITCH SUPPORT DETAILS
RS-357	A	69 kV HIGH SWITCH SUPPORT DETAILS
RS-358	A	INSULATOR BRACKET DETAILS
RS-360	A	69 kV BUS SUPPORT DETAILS
RS-365	A	69 kV 3Ø PT SUPPORT DETAILS
RS-366	A	69 kV 1Ø PT SUPPORT DETAILS
RS-370	A	GROUNDING PLATFORM DETAILS

DWG REV DRAWING TITLE

CONTROL ENCLOSURE DETAILS

RS-400	A	CONTROL ENCLOSURE FLOOR PLAN
RS-401	A	CONTROL ENCLOSURE SECTION VIEWS
RS-402	A	CONTROL ENCLOSURE SECTION VIEWS
RS-403	A	CONTROL ENCLOSURE DETAILS
RS-405	A	CONTROL ENCLOSURE CABLE TRAY & HVAC PLAN
RS-406	A	CONTROL ENCLOSURE ELECTRICAL & LIGHTING PLAN
RS-410	A	AC PANEL DETAILS
RS-411	A	DC PANEL DETAILS
RS-412	A	YARD LIGHT AC SCHEMATIC
RS-413	A	CONTROL ENCLOSURE ELECTRICAL DETAILS

CONTROL PANEL EQUIPMENT DETAILS

RS-500	A	CONTROL PANEL LAYOUT
RS-501	A	PANEL P1 - COMMUNICATIONS - EQUIPMENT SCHEDULE
RS-502	A	PANEL P2 - 69 kV LINE TO SWEAZEY (BKR 1210) - EQUIPMENT SCHEDULE
RS-503	A	PANEL P3 - 69 kV LINE TO WILLIAMS (BKR 1211) - EQUIPMENT SCHEDULE
RS-504	A	PANEL P4 - 69/13.2 kV TRANSFORMER T1 (BKR 1212) - EQUIPMENT SCHEDULE
RS-509	A	CONTROL PANEL CONSTRUCTION DETAILS
RS-511	A	LAYOUT - BUS B SWITCHGEAR
RS-515	A	MATERIAL LIST BUS B SWITCHGEAR
RS-531	A	CONTROL PANEL P1 LABELS AND DETAILS
RS-532	A	CONTROL PANEL P2 LABELS AND DETAILS
RS-533	A	CONTROL PANEL P3 LABELS AND DETAILS
RS-534	A	CONTROL PANEL P4 LABELS AND DETAILS
RS-540	A	OUTDOOR NAMEPLATE SCHEDULE
RS-541	A	SWITCHGEAR MANUFACTURER NAMEPLATES
RS-542	A	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
RS-543	A	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
RS-544	A	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
RS-545	A	SWITCHGEAR NAMEPLATES, LABELS, DETAILS
RS-551	A	BUS B SWITCHGEAR PLAN VIEW
RS-561	A	CONSTRUCTION DETAILS - UNIT 1 - BP/BM
RS-562	A	CONSTRUCTION DETAILS - UNIT 2 - B1/B2
RS-563	A	CONSTRUCTION DETAILS - UNIT 3 - B3/B4
RS-564	A	CONSTRUCTION DETAILS - UNIT 4 - B5/B6
RS-565	A	CONSTRUCTION DETAILS - UNIT 5 - BX/BC

CONTROL PANEL SCHEMATICS

RS-601A	A	69 kV ANNUNCIATOR 2523-A - (PANEL P1) - CONTROL SCHEMATIC
RS-601B	A	RTAC 3350-A - (PANEL P1) - CONTROL SCHEMATIC
RS-601C	A	LIGHTING AND RECEPTACLES - (PANEL P1 THRU P4) - CONTROL SCHEMATIC
RS-602A	A	69 kV BREAKER 1210 - CLOSE CIRCUIT (PANEL P2) - CONTROL SCHEMATIC
RS-602B	A	69 kV BREAKER 1210 - TRIP1/TRIP2 CIRCUIT (PANEL P2) - CONTROL SCHEMATIC
RS-602C	A	69 kV BREAKER 1210 - AUXILIARY CIRCUIT (PANEL P2) - CONTROL SCHEMATIC
RS-602D	A	11P-74 - PRIMARY RELAY (PANEL P2) - CONTROL SCHEMATIC
RS-602E	A	11S-74 - SECONDARY RELAY (PANEL P2) - CONTROL SCHEMATIC
RS-602F	A	86BF1210 BKR FAIL RLY (PANEL P2) - CONTROL SCHEMATIC
RS-603A	A	69 kV BREAKER 1211 - CLOSE CIRCUIT (PANEL P3) - CONTROL SCHEMATIC
RS-603B	A	69 kV BREAKER 1211 - TRIP1/TRIP2 CIRCUIT (PANEL P3) - CONTROL SCHEMATIC
RS-603C	A	69 kV BREAKER 1211 - AUXILIARY CIRCUIT (PANEL P3) - CONTROL SCHEMATIC
RS-603D	A	11P-71 - PRIMARY RELAY (PANEL P3) - CONTROL SCHEMATIC
RS-603E	A	11S-71 - SECONDARY RELAY (PANEL P3) - CONTROL SCHEMATIC
RS-603F	A	86BF1211 BKR FAIL RLY (PANEL P3) - CONTROL SCHEMATIC
RS-604A	A	69 kV BREAKER 1212 - CLOSE CIRCUIT (PANEL P4) - CONTROL SCHEMATIC
RS-604B	A	69 kV BREAKER 1212 - TRIP1/TRIP2 CIRCUIT (PANEL P4) - CONTROL SCHEMATIC
RS-604C	A	69 kV BREAKER 1212 - AUXILIARY CIRCUIT (PANEL P4) - CONTROL SCHEMATIC
RS-604D	A	87B1 - PRIMARY XFMR T1 RELAY/ 69kV DIFF RELAY (PANEL P4) - CONTROL SCHEMATIC
RS-604E	A	86BF1212 BKR FAIL RLY/ 86TI LOCKOUT RLY (PANEL P4) - CONTROL SCHEMATIC
RS-631A	A	87T1 - XFMR T1 DIFF - CONTROL SCHEMATIC
RS-631B	A	BKR BM - XFMR T1 - CONTROL SCHEMATIC
RS-632A	A	BKR B1 - FEEDER - CONTROL SCHEMATIC
RS-632B	A	BKR B2 - FEEDER - CONTROL SCHEMATIC
RS-633A	A	BKR B3 - FEEDER - CONTROL SCHEMATIC
RS-633B	A	BKR B4 - FEEDER - CONTROL SCHEMATIC
RS-634A	A	BKR B5 - FEEDER - CONTROL SCHEMATIC
RS-634B	A	BKR B6 - FEEDER - CONTROL SCHEMATIC
RS-635A	A	87BB/86BB - BUS DIFF - CONTROL SCHEMATIC
RS-635B	A	BKR BC - BUS TIE - CONTROL SCHEMATIC

DWG REV DRAWING TITLE

THREE-LINE DIAGRAMS

RS-702A	A	69 kV BREAKER 1210 - PT74 - SWEAZEY LINE - THREE-LINE DIAGRAM
RS-702B	A	PANEL P2 - 69 kV BKRS 1210/1211 - SWEAZEY LINE - THREE-LINE DIAGRAM
RS-703A	A	69 kV BREAKER 1211 - PT71 - WILLIAMS LINE - THREE-LINE DIAGRAM
RS-703B	A	PANEL P3 - BKRS 1211/1212 - WILLIAMS LINE - THREE-LINE DIAGRAM
RS-704A	A	69 kV BREAKER 1212 - PT72 - BUS TO T1 - THREE-LINE DIAGRAM
RS-704B	A	PANEL P4 - BKRS 1211/1212 - T1 DIFF - THREE-LINE DIAGRAM
RS-704C	A	PANEL P4 - XFMR - T1 OVERCURRENT - THREE-LINE DIAGRAM
RS-731	A	MAIN BREAKER BM - THREE-LINE DIAGRAM
RS-732	A	FEEDER BREAKER - B1/B2 - THREE-LINE DIAGRAM
RS-733	A	FEEDER BREAKER - B3/B4 - THREE-LINE DIAGRAM
RS-734	A	FEEDER BREAKER - B5/B6 - THREE-LINE DIAGRAM
RS-735	A	BUS B DIFF. 87BB & TIE BKR BC - THREE-LINE DIAGRAM
RS-736	A	SWITCHGEAR HEATERS, LIGHTS, RECEPTACLES - AC POWER

WIRING DIAGRAMS

RS-801A - B	A	PANEL P1 - WIRING DIAGRAM (2 SHTS)
RS-802A - D	A	PANEL P2 - WIRING DIAGRAM (4 SHTS)
RS-803A - D	A	PANEL P3 - WIRING DIAGRAM (4 SHTS)
RS-804A - D	A	PANEL P4 - WIRING DIAGRAM (4 SHTS)
RS-809	A	CBPC COMM RACK - WIRING DIAGRAM

69 kV YARD EQUIPMENT DIAGRAMS

RS-810	A	GAS SCHEMATIC/NAMEPLATE - 69 kV BKRS 1210, 1211, 1212
RS-810A	A	NAMEPLATE - 69 kV BKRS 1210, 1211, 1212
RS-810B	A	BUSHING - 69 kV BKRS 1210, 1211, 1212
RS-810C	A	BCT CONNECTION DIAGRAM - 69 kV BKRS 1210, 1211, 1212
RS-810D	A	OUTLINE - 69 kV BKRS 1210, 1211, 1212
RS-810E	A	CONNECTION DIAGRAM - 69 kV BKRS 1210, 1211, 1212
RS-812A	A	YARD WIRING DIAGRAM - BKR 1210
RS-812B	A	BCT - WIRING DIAGRAM - BKR 1210
RS-813A	A	YARD WIRING DIAGRAM - BKR 1211
RS-813B	A	BCT - WIRING DIAGRAM - BKR 1211
RS-814A	A	YARD WIRING DIAGRAM - BKR 1212
RS-814B	A	BCT - WIRING DIAGRAM - BKR 1212
RS-820A	A	69 kV PTS - PT71, PT72, PT74
RS-820B	A	69 kV PTS - PT71, PT72, PT74
RS-821	A	69 kV PTS - PT71 WIRING DIAGRAM
RS-822	A	69 kV PTS - PT72 WIRING DIAGRAM
RS-824	A	69 kV PTS - PT74 WIRING DIAGRAM
RS-825A	A	XFMR T1 - OUTLINE
RS-825B	A	XFMR T1 - BILL OF MATERIALS
RS-825D	A	XFMR T1 - SHIPPING CONFIGURATION
RS-825E	A	XFMR T1 - NAMEPLATE
RS-825F	A	XFMR T1 - NAMEPLATE
RS-825G	A	XFMR T1 - WIRING SCHEMATIC
RS-825H	A	XFMR T1 - WIRING SCHEMATIC
RS-825I	A	XFMR T1 - WIRING SCHEMATIC
RS-825J	A	XFMR T1 - WIRING SCHEMATIC
RS-825K	A	XFMR T1 - WIRING DIAGRAM
RS-825L	A	XFMR T1 - WIRING DIAGRAM
RS-831A	A	UNIT 1 - BP - WIRING DIAGRAM
RS-831B	A	UNIT 1 - BP - WIRING DIAGRAM
RS-831C	A	UNIT 1 - BM - WIRING DIAGRAM
RS-831D	A	UNIT 1 - BM - WIRING DIAGRAM
RS-832A	A	UNIT 2 - B1 - WIRING DIAGRAM
RS-832B	A	UNIT 2 - B1 - WIRING DIAGRAM
RS-832C	A	UNIT 2 - B2 - WIRING DIAGRAM
RS-832D	A	UNIT 2 - B2 - WIRING DIAGRAM
RS-833A	A	UNIT 3 - B3 - WIRING DIAGRAM
RS-833B	A	UNIT 3 - B3 - WIRING DIAGRAM
RS-833C	A	UNIT 3 - B4 - WIRING DIAGRAM
RS-833D	A	UNIT 3 - B4 - WIRING DIAGRAM
RS-834A	A	UNIT 4 - B5 - WIRING DIAGRAM
RS-834B	A	UNIT 4 - B5 - WIRING DIAGRAM
RS-834C	A	UNIT 4 - B6 - WIRING DIAGRAM
RS-834D	A	UNIT 4 - B6 - WIRING DIAGRAM
RS-835A	A	UNIT 5 - BX - WIRING DIAGRAM
RS-835B	A	UNIT 5 - BX - WIRING DIAGRAM
RS-835C	A	UNIT 5 - BC - WIRING DIAGRAM
RS-835D	A	UNIT 5 - BC - WIRING DIAGRAM
RS-881	A	BUILDING ALARM JBOX - WIRING DIAGRAM
RS-882	A	BATTERY CHARGER WIRING DIAGRAM

DWG REV DRAWING TITLE

CONTROL CABLE SCHEDULE

RS-900A	A	CONTROL CABLE SCHEDULE
RS-900B	A	CONTROL CABLE SCHEDULE
RS-900C	A	CONTROL CABLE SCHEDULE
RS-900D	A	CONTROL CABLE SCHEDULE
RS-900E	A	CONTROL CABLE SCHEDULE
RS-900F	A	CONTROL CABLE SCHEDULE
RS-901A	A	CONTROL CABLE SCHEDULE
RS-901B	A	CONTROL CABLE SCHEDULE
RS-901C	A	CONTROL CABLE SCHEDULE

NOTES

- △ A cloud "☁" identifies drawings to be developed by the supplier as directed by the Engineer. The switchgear supplier shall resubmit the drawings until the Engineer approves all of them.
- △ An asterisk "*" indicates drawings that have been included by the Engineer to serve as a guide, sample, or example drawing. The supplier shall work closely with the Engineer to update the drawings for accuracy as needed throughout the project.

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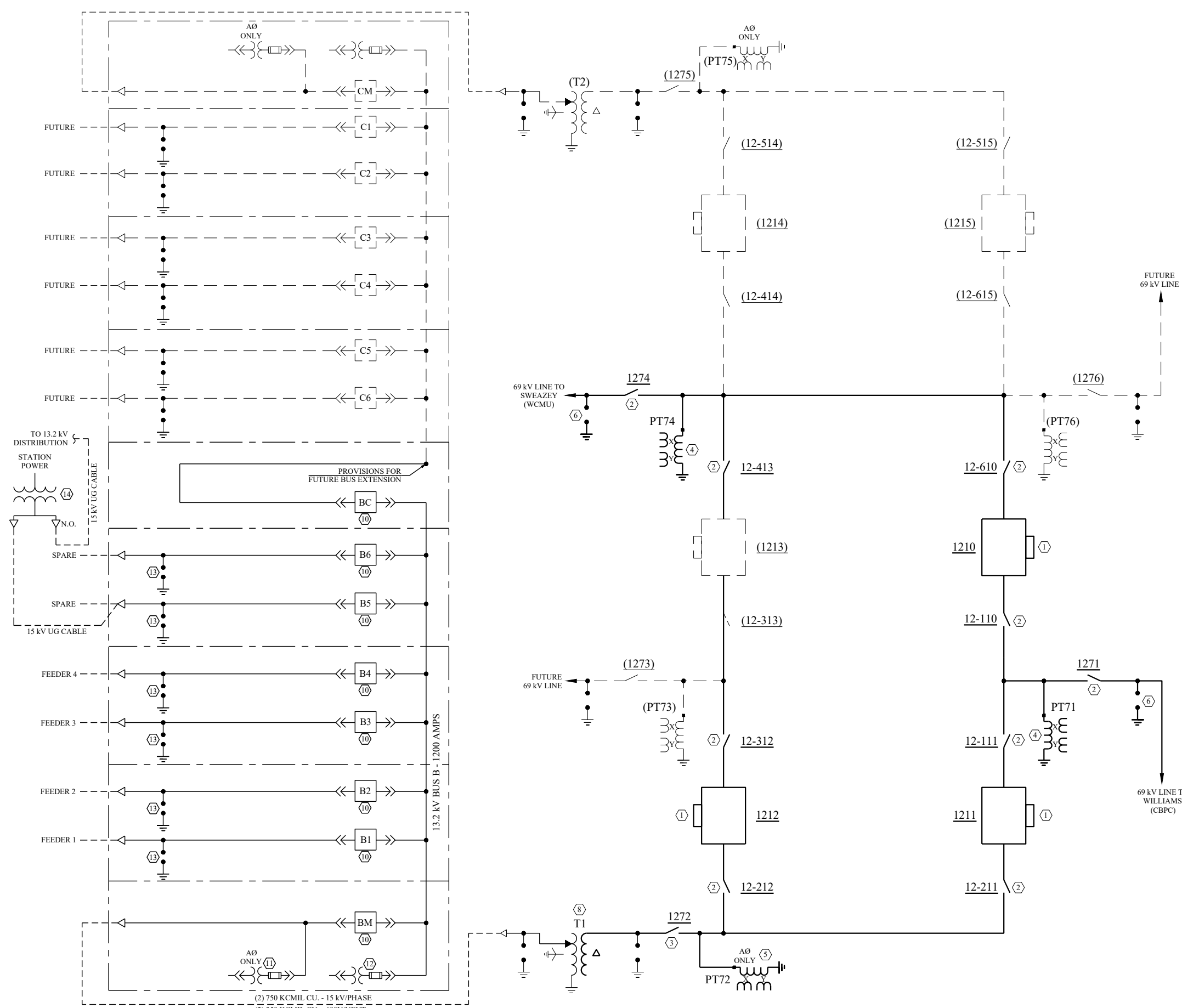


Project Manager: ADK
Designer: KAG
Project Number: 428403
Phone: (712) 472-2531

WEBSTER CITY MUNICIPAL UTILITIES
WEBSTER CITY, IOWA
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DRAWING INDEX
REISNER SUBSTATION

S
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MAJOR EQUIPMENT

- ① Circuit Breaker, 3Ø, 72.5 kV, 2000 A continuous, 40 kA interrupting, 350 kV BIL, SF6 gas, Manufacturer Siemens Type XXXX
- ② Group-Operated Air-Break (GOAB) Switch, 2000 A continuous, 61 kA withstand, 350 kV BIL, XX
- ③ Group-Operated Air-Break (GOAB) Switch, 1200 A continuous, 61 kA withstand, 350 kV BIL, XX
- ④ Potential Transformer, 1Ø (Qty. 3), 40.25 kV primary, 350 kV BIL, dual winding 600/350:1 ratio, 0.3WXYZZ accuracy
- ⑤ Potential Transformer, 1Ø, 40.25 kV primary, 350 kV BIL, dual winding 600/350:1 ratio, 0.3WXYZZ accuracy, XX
- ⑥ Lightning Arrester, 1Ø (Qty. 3), 60 kV duty cycle, 48 kV MCOV, station class, (Installed on deadend)
- ⑦ Not used
- ⑧ Power Transformer with LTC, 67 kV delta to 13.2 grdY/7.62 kV, 12/16/20/22.4 MVA ONAN/ONAF/ONAF 55/65°C, Z=X.XX%
- ⑨ Not used
- ⑩ Circuit Breaker, 3Ø, draw-out vacuum type, 15 kV, 1200 A continuous, 25 kA interrupting, XX
- ⑪ Potential Transformer, 1Ø, draw-out type, 8400:120 V, 0.3WXYZZ 1.2 ZZ accuracy, with primary 1 A fuse, XX
- ⑫ Potential Transformer, 1Ø (Qty. 3), draw-out type, 8400:120 V, 0.3WXYZZ 1.2 ZZ accuracy, with primary 1 A fuse, XX
- ⑬ Lightning Arrester, 1Ø (Qty. 3), 12 kV duty cycle, 10.2 kV MCOV, station class
- ⑭ Station Power Transformer, 1Ø padmount, 13.2 grdY/7.62 kV to 240/120 V, 50 kVA

LEGEND

- 69 kV circuit
- 13.2 kV circuit
- - - 13.2 kV underground circuit
- ⊥ Wye, grounded
- Δ Delta
- ⊔ Underground transition
- - - FUTURE

NOTES:
 A-B-C = East to West
 A-B-C = North to South

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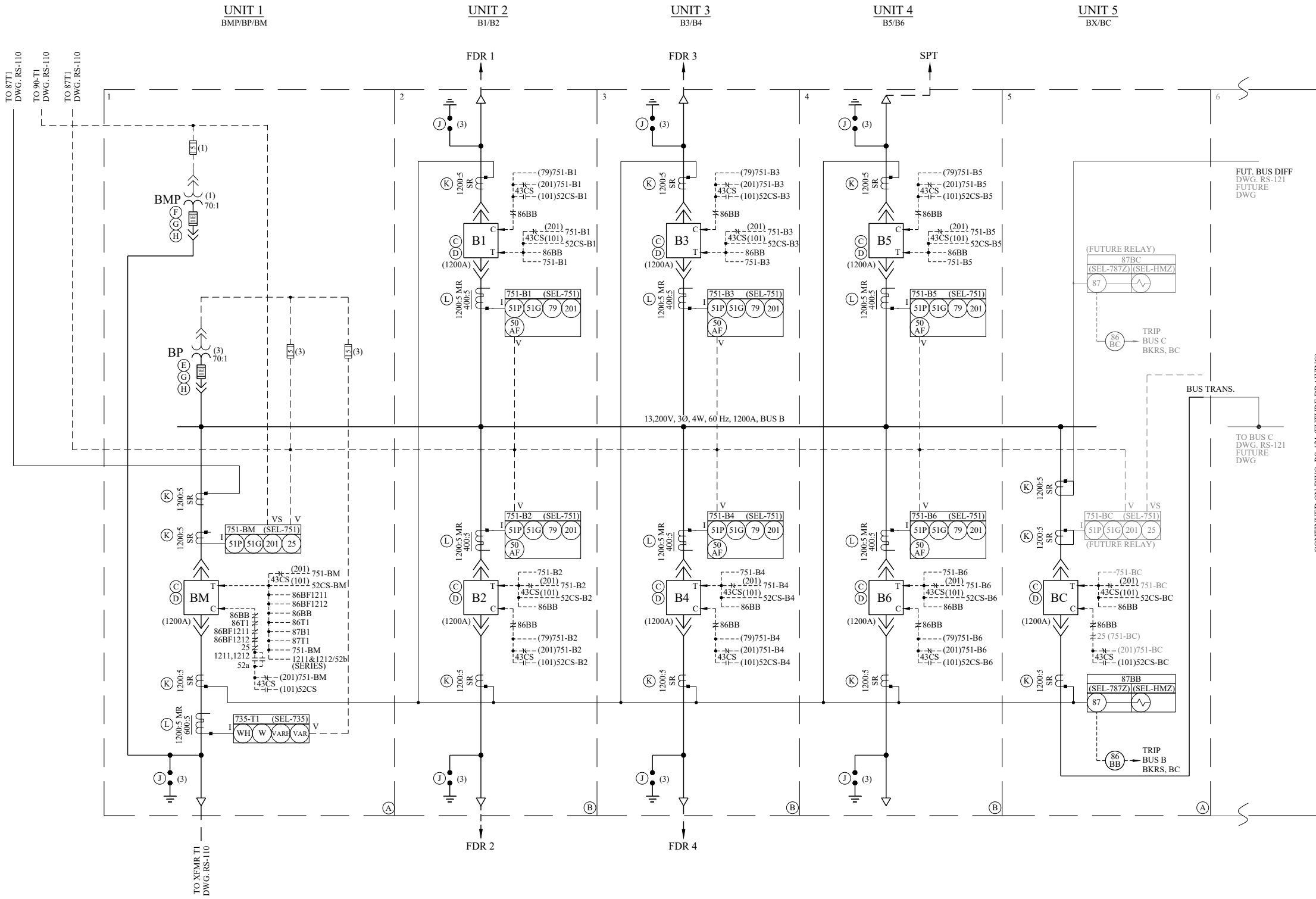


Project Manager: ADK
 Designer: RDK
 Project Number: 428403
 Phone: (712) 472-2531

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SWITCHING ONE-LINE DIAGRAM
 REISNER SUBSTATION

SHEET
 RS-100



CONTINUED ON DWG. RS-121 (FUTURE DRAWING)

GENERAL LEGEND

- 13.2 kV circuit
- - - - 13.2 kV underground circuit
- > 13.2 kV underground transition

CONTROL/RELAY LEGEND

NAME	(TYPE)	MULTIFUNCTION DIGITAL RELAY
XX XX XX XX	XX	XX = DEVICE FUNCTION LISTED BELOW
51		Time overcurrent
51P		Phase time overcurrent
51G		Ground time overcurrent
79		Reclosing
87		Differential
201		Supv control
25		Sync check
<ul style="list-style-type: none"> —— Current transformer secondary circuit - - - - Potential transformer secondary circuit - - - - Control circuit ⌚ Multi-ratio CT ⌚ Single-ratio CT 101 Local control BC Block close C Close or close circuit T Trip or trip circuit 52CS-XX Local breaker control switch (XX = BKR ID) 43CS-X Local/Supv control switch 86 BX Lock-out relay (B=bus) (X = equipment ID) A Internal Equipment list identifier (See BOM) 		

NOTES

- 1 Test switches not shown for clarity. See nameplate details and three-lines for insight.
- 2 External equipment list items can be identified on drawing RS-515.
- 3 See drawing RS-150 for communication details.
- 4 Feeder power cable terminals shall be suitable for three (3) 500 KCMIL power cables per phase.

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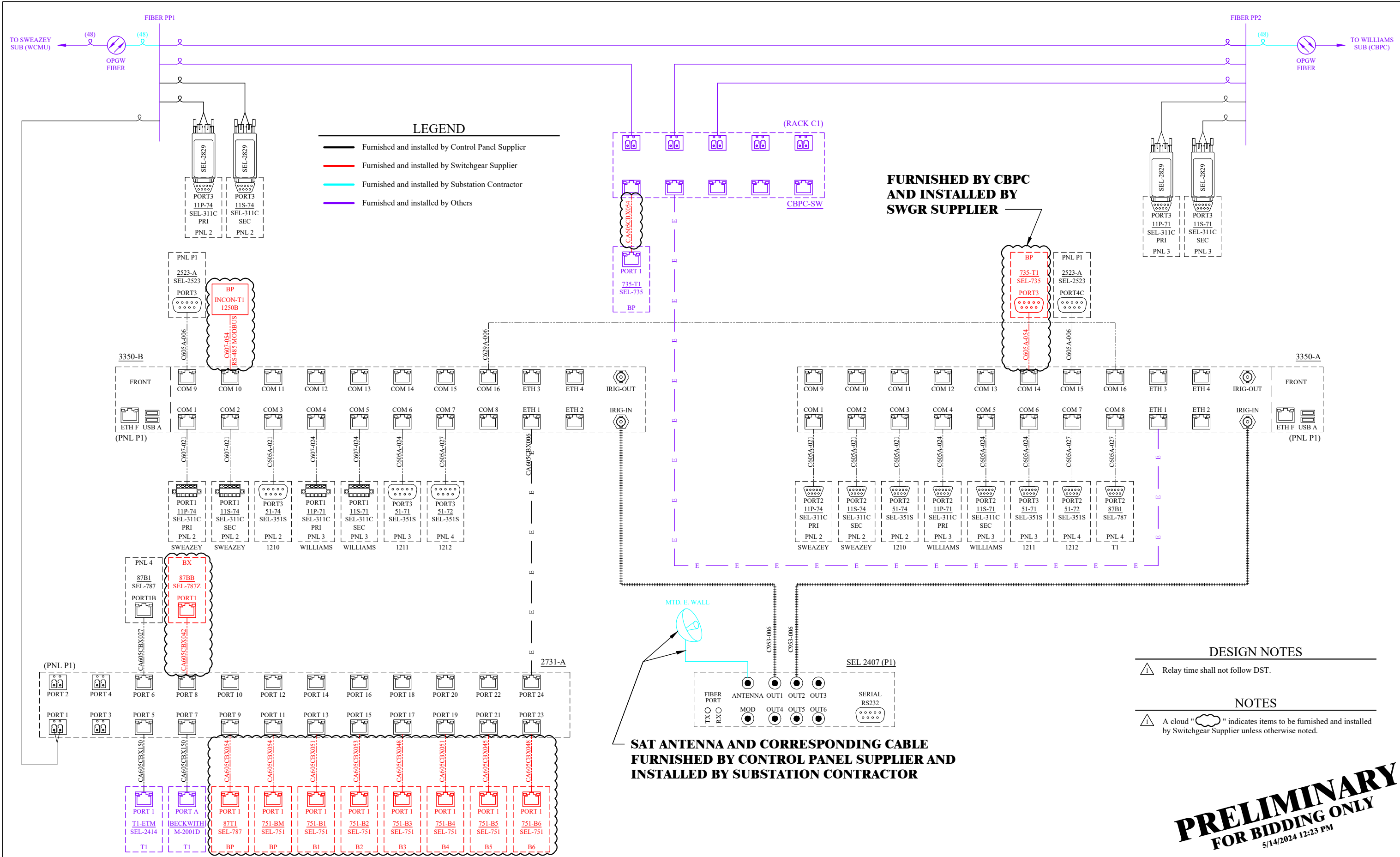
Project Manager: ADK
 Designer: KAG
 Project Number: 428403
 Phone: (712) 472-2531

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PROTECTION AND CONTROL ONE-LINE DIAGRAM
 REISNER SUBSTATION

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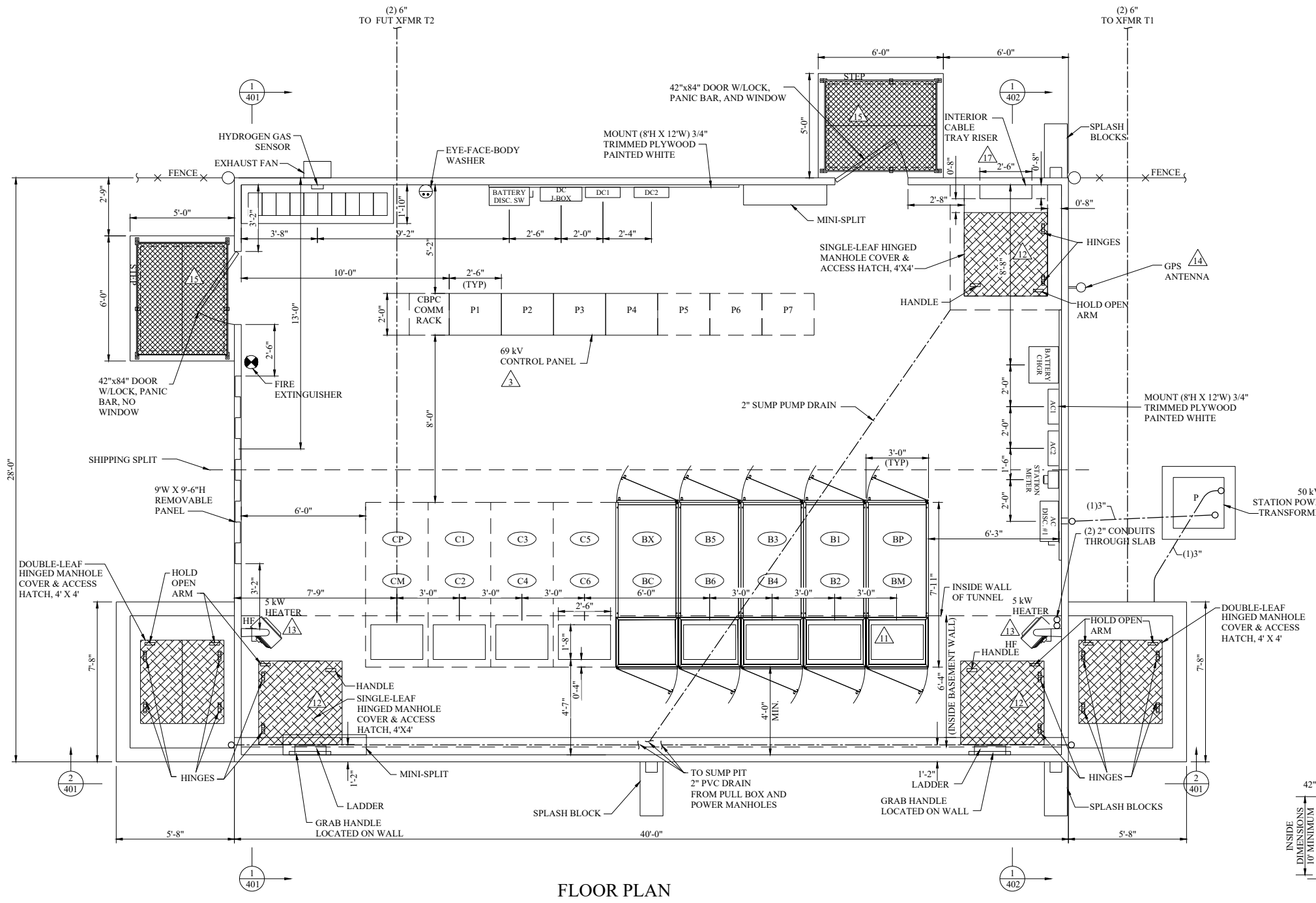
COMMUNICATION DIAGRAM
 REISNER SUBSTATION

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RS-150

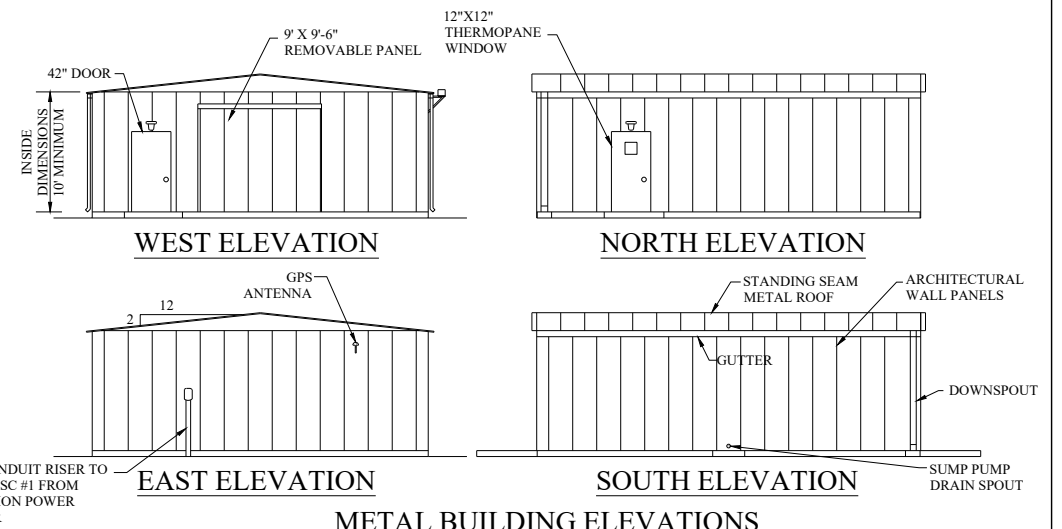
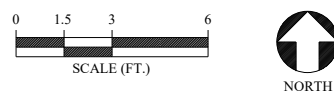
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NOTES

- 1 All low-voltage power and control cables will be run in the cable tray.
- 2 Contractor shall coordinate all floor opening locations and sizes with the equipment. Coordinate exact placement of conduit and openings so that cable entrances line up correctly with floor openings such that cables may be easily trained into switchgear. Building will have a partial basement where switchgear cables will enter and exit the building.
- 3 The control panels and switchgear will be supplied and installed by Others. The Contractor shall be responsible for removing and reinstalling the control enclosure's removable panel to aid in the switchgear and control panel installation. The Contractor shall coordinate the timing of switchgear and control panel installation with the supplier.
- 4 The Contractor shall verify dimensions shown on this drawing.
- 5 Connect building, equipment and station power transformer to ground grid.
- 6 Cap all unused conduits. Seal all conduits with and without cables installed.
- 7 Battery rack shall be bolted to the floor and connected to the ground grid.
- 8 Top of manhole covers shall be flush with the surrounding supplied floor.
- 9 Provide recessive and or removable handles on manhole covers.
- 10 Layout is diagrammatic in nature and does not show all items required. See specifications for details.
- 11 Contractor shall coordinate all floor openings with supplied equipment.
- 12 The hatch doors shall be aluminum 4' X 4'. Provide Nystrom, see structural drawings for details.
- 13 Mount heaters minimum of 7' from floor on east and west walls. provide one thermostat for both heaters. This thermostat shall be separate from HVAC thermostat.
- 14 Route GPS antenna wiring through respective conduit sleeves into building. GPS antenna will be furnished by Others and installed by this Contractor.
- 15 Bolt stoop grate such that anchor bolts are a minimum of 2" from stoop edge.
- 16 Coordinate conduit route and final stub up locations for the station power transformer and load management equipment with the Engineer and the Owner.
- 17 See detail 5/401 for conduit layout on north wall.



FLOOR PLAN



METAL BUILDING ELEVATIONS

NOT TO SCALE

FOR REFERENCE

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B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



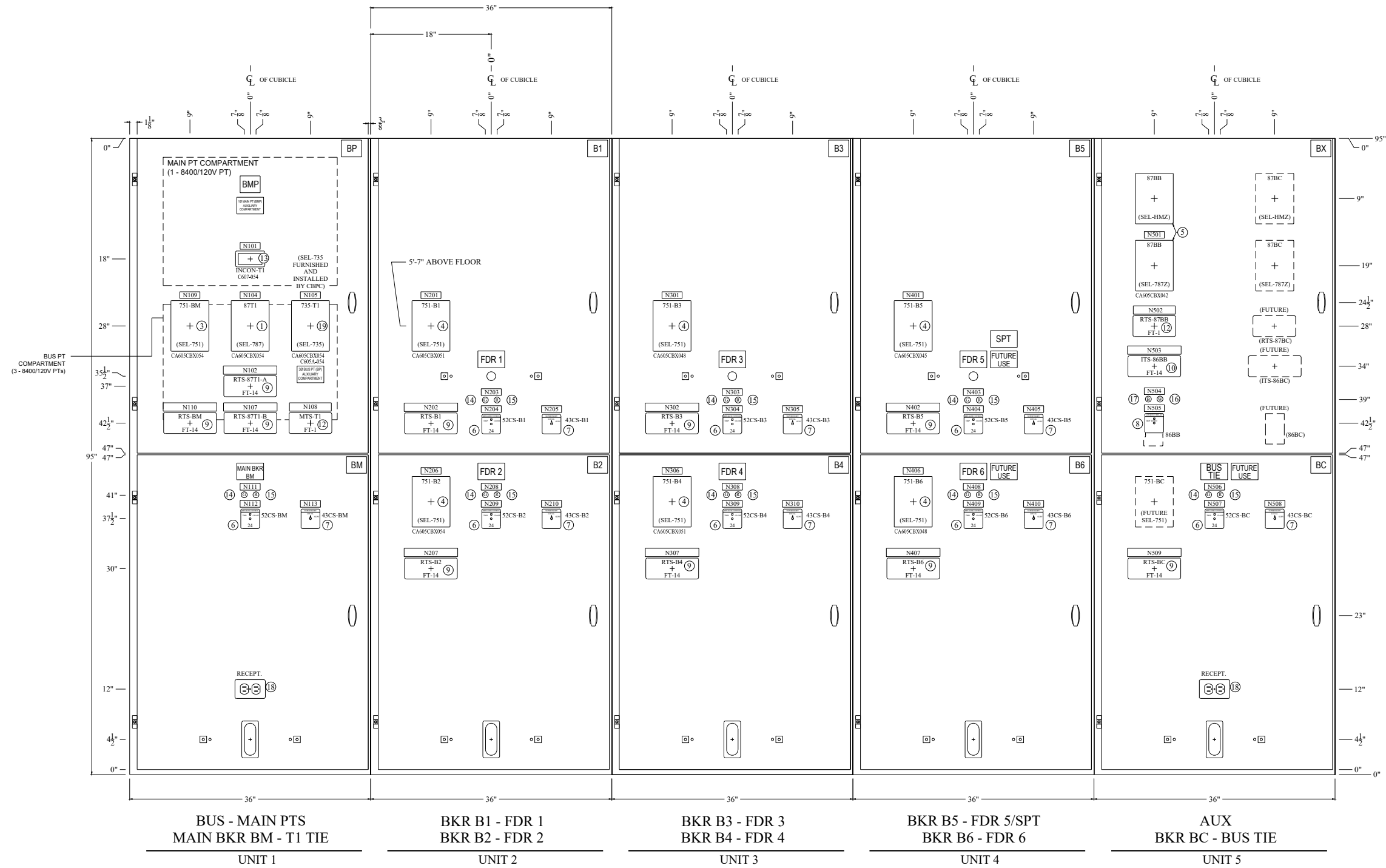
Project Manager: ADK
 Designer: KEB
 Project Number: 428403
 Phone: (712) 472-2531

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CONTROL ENCLOSURE
 FLOOR PLAN
 REISNER SUBSTATION

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 RS-400

SEE RS-400 FOR SWITCHGEAR FOOTPRINT



NOTES (SWGR SUPPLIER)

⚠ This drawing to be recreated by the supplier. Supplier may recommend changes to the layout. Significant changes to the layout must be approved by the Engineer.

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Project Manager: ADK
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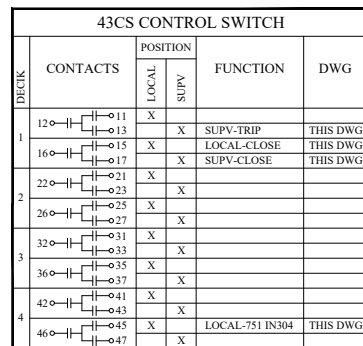
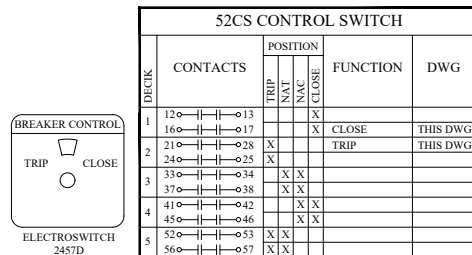
LAYOUT - BUS B SWITCHGEAR
REISNER SUBSTATION

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RS-511

SWITCHGEAR EXTERNAL EQUIPMENT LIST						
NO	QTY	DESCRIPTION	MFG	HASHTAG	CATALOG NO.	REMARKS
1	1	TOUCH, 8 PUSH, 4DO-4DI HIGH CURRENT, 4DO-4DI, 1ACI/3AVI, 6ACI, 5A	SEL	787#06Q2	07872EE1ACA1A7985A200	87T1
2						
3	1	TOUCH, 4 PUSH, 4DO-4DI HIGH CURRENT, N/A, VSNBAT/7DI, 4ACI/3AVI, 5A	SEL	751#Q41Q	751201ACA0X7A85BC00	751-BM
4	6	TOUCH, 4 PUSH, 4DO-4DI HIGH CURRENT, N/A, N/A, 4ACI/3AVI, 5A	SEL	751#67KN	751401ACA0X0X85BC00	751-B1, B2, B3, B4, B5, B6
5	1	HIGH IMPEDANCE BUS DIFFERENTIAL RELAY, TOUCH, 8 PUSH, 4DO-4DI HIGH CURRENT, N/A, N/A, HIGH-IMPEDANCE MODULE	SEL	787Z#AEWR	0787Z001ACA0X0X85A2010010	87BB
6	8	BREAKER CONTROL SWITCH	ELECTROSWITCH		2457D	52CS
7	8	BREAKER CONTROL SWITCH	ELECTROSWITCH		24204B	43CS
8	1	LOCKOUT RELAY	ELECTROSWITCH		7807D	86BB
9	10	FT14, P P P C-C C-C-C P T T T T, SCREW, CLEAR COVER	ABB		FT4A14T08CN4211	RTS-87T1-A, 87T1-B, BM, B1, B2, B3, B4, B5, B6, BC
10	1	FT14, P P P P T T T T T T T T T T, SCREW, CLEAR COVER	ABB		FT4A14T14CN4018	ITS-86BB
11						
12	2	FT1, P P P C-C C-C-C P, SCREW, CLEAR COVER	ABB		C129A514G01	MTS-T1, RTS-87BB
13	1	INCON - MUST BE SPECIFIED WITH "-M", RS-485 MODBUS	INCON		1250B-0-R-M-120	INCON-T1
14	8	ET-16, LED TYPE, 125 VDC, GREEN LAMP, GREEN COLOR CAP	GE		116B6708G43G73G4	G
			VCC		1835LS3-G-CG	
15	8	ET-16, LED TYPE, 125 VDC, RED LAMP, RED COLOR CAP	GE		116B6708G43R73R4	R
			VCC		1835LS3-R-CR	
16	1	ET-16, LED TYPE, 125 VDC, WHITE LAMP, CLEAR COLOR CAP	GE		116B6708G3-C	W
			VCC		1835LS3-W-CW	
17	1	ET-16, LED TYPE, 125 VDC, BLUE LAMP, BLUE COLOR CAP	GE		116B6708G43B73B4	B
			VCC		1835LS3-B-CB	
18	2	DUPLEX RECEPTACLE, 120VAC	AS REQUIRED		AS REQUIRED	-
19	1	CBPC 735, FURNISHED AND INSTALLED BY CBPC	SEL	735#W9KV	0735VX00944CFXXXX16101XX	735-T1

NOTES (SWITCHGEAR SUPPLIER)

- Front panels shall have door handles and hinges. Rear panels to have bolts and hinges. All relay doors to have slide-latching door stops.
- Depth of 15 kV switchgear shall be 94 inches. All relays and equipment on switchgear shall be flush mounted. Provide necessary space in switchgear to accomplish this with equipment supplied.
- Provide (2) rollout trays for (3) bus PTs and one(1) main PT.
- Supplier shall be responsible for verifying part numbers and quantities. Supplier shall notify Engineer of all substitutions.
- Shorting blocks shall be GE EB27, no equal.
- Coordinate depth of switchgear and bottom power cable entry and top control cable entry details with Engineer and substation contractor.
- SEL-735 furnished and installed by CBPC. Switchgear supplier to leave pigtails.
- Major internal equipment catalog/part numbers determined by Supplier. See Spec.
- This drawing to be recreated by the supplier.



SWITCHGEAR AND PANEL INTERNAL EQUIPMENT LIST						
NO	QTY	DESCRIPTION	MFG	TYPE	CATALOG NO.	REMARKS
A	2	POWER MODULE, 36 IN WIDE, 41KA	EATON	VCP-W	-	BLANK/AUX TOP - 1200A BKR BOTTOM
B	3	POWER MODULE, 36 IN WIDE, 41KA	EATON	VCP-W	-	1200A BKR TOP - 1200A BKR BOTTOM
C	8	1200A VACUUM CIRCUIT BREAKER	EATON	150VCP-W25-1200	-	15KV, 29KA, 1200A, 125VDC T&C
D	8	MECHANISM OPERATED CELL SWITCH	EATON	MOC	-	5a/5b CONTACTS, TEST & CONNECT
E	1	PT DRAWER DRAWOUT COMPARTMENT KIT	-	EDO	-	BUS PTS
F	1	PT DRAWER DRAWOUT COMPARTMENT KIT	-	EDO	-	MAIN PT
G	4	POTENTIAL TRANSFORMER	GE OR AMRAN	PTG5	-	RATIO 8400/120V SINGLE FUSE
H	4	PT FUSES	GE OR AMRAN	EJ-1	-	14.4KV, 1E AMP
J	21	INTERMEDIATE LIGHTNING ARRESTERS	ABB	XPI-III	-	12KV MOV, 10.2KV MCOV
K	36	CURRENT TRANSFORMER-SR-1200/5	ABB	SCV	-	1200/5A SINGLE-RATIO-C200
L	21	CURRENT TRANSFORMER-MR-1200/5	ABB	SCV	-	1200/5A MULTI-RATIO-C200
M						
N						
P	10	HEAVY DUTY STRIP HEATERS	HEATREX	276-4	HX-565005	250V, 250W
Q	10	UNDER CABINET LIGHT FIXTURE	METALUX	UC SERIES	UC18T8115	18IN, 1 LAMP, 58, 15W, 120V
R	10	UNDER CABINET LED LAMPS	KEYSTONE	LED	KT-LED7T8-18GC-850-D-CP	T8, LED LAMP, 72, 120/277V, G13 BASE
S	10	DOOR SWITCH	MICRO-SWITCH	BZ	BZ-2RWR82-A2	CLOSES AS DOOR OPENS
T						
U	1	120VAC AUX RELAY, 2 FORM C CONTACTS	FINDER OR EQUAL	-	60.12.8.120.0030	LTC AUTOMAN AUXILIARY RELAY
V						
W						
X						
Y						
Z						
20						
21						
22						
23						
24	XX	4 POLE TERMINAL BLOCK	MARATHON	4-POLE	1704STD	MARKING SHALL MATCH WIRING
25	XX	8 POLE TERMINAL BLOCK	MARATHON	8-POLE	1708STD	MARKING SHALL MATCH WIRING
26	XX	12 POLE TERMINAL BLOCK	MARATHON	12-POLE	1712STD	MARKING SHALL MATCH WIRING
27	57	6 POLE SHORTING BLOCK	GE	6-POLE	EB27B06S NO EQUAL	NO EQUAL
28						
29	8	60A FUSE BLOCKS	MARATHON	2-POLE	F60A2SQ	60A, 250V, TRIP SLUG HOLDER
30	XX	30A FUSE BLOCKS	MARATHON	2-POLE	F30A2S	30A, 250V
31	XX	20A FUSES	BUSSMAN	NON-20	051712101578	ONE TIME BUSS
32	XX	10A FUSES	BUSSMAN	NON-10	051712101554	ONE TIME BUSS
33	XX	5A FUSES	BUSSMAN	NON-5	051712300056	ONE TIME BUSS
34	5	30A SLUG	BUSSMAN	NTN	NTN-R-30	30A SLUG
35	16	60A SLUG	BUSSMAN	NTN	NTN-R-60	60A SLUG
36						
37						

EQUIPMENT SHIPPED LOOSE						
NO	QTY	DESCRIPTION	MFG	TYPE	CATALOG NO.	REMARKS
L1	1	PORTABLE LIFTER	EATON		-	
L2	1	LIFTING YOKE FOR VCP-W BREAKERS	EATON		-	
L3	1	BREAKER TEST CABINET	EATON		-	FOR DC TRIP & CLOSE
L4	1	STANDARD SET OF BREAKER ACCESSORIES	EATON		-	CRANK, EXT. RAILS, CLAMPS, MAN. CHR. HANDLE
L5	1	DOCKING TRANSPORT DOLLY	-		-	STEEL CART WITH CASTERS
L6	2	PT FUSES	BUSSMANN	-	-	14.4KV, 1E AMP (SPARE)
L7	XX	20A FUSES	BUSSMANN	NON-20	051712101578	ONE TIME BUSS (SPARE)
L8	XX	10A FUSES	BUSSMANN	NON-10	051712101554	ONE TIME BUSS (SPARE)
L9	XX	5A FUSES	BUSSMANN	NON-5	051712300056	ONE TIME BUSS (SPARE)
L10	10	LED - GREEN	VCC	37-140VDC	1835LS3-G-CG	FOR GREEN LIGHT (SPARE)
L11	10	LED - RED	VCC	37-140VDC	1835LS3-R-CR	FOR RED LIGHT (SPARE)
L12	2	LED - BLUE	VCC	37-140VDC	1835LS3-B-CB	FOR BLUE LIGHT (SPARE)
L13	2	LED - WHITE	VCC	37-140VDC	1835LS3-W-CW	FOR WHITE LIGHT (SPARE)
L14	1	ETHERNET CABLE	SEL	SEL-CA605C	CA605CBX042	CAT 5e, 42 FEET
L15	2	ETHERNET CABLE	SEL	SEL-CA605C	CA605CBX045	CAT 5e, 45 FEET
L16	2	ETHERNET CABLE	SEL	SEL-CA605C	CA605CBX048	CAT 5e, 48 FEET
L17	2	ETHERNET CABLE	SEL	SEL-CA605C	CA605CBX051	CAT 5e, 51 FEET
L18	4	ETHERNET CABLE	SEL	SEL-CA605C	CA605CBX054	CAT 5e, 54 FEET
L19	1	RS-232 CABLE WITH IRIG-B	SEL	SEL-C605A	C605A-054	RS-232 WITH IRIG-B, 54 FEET
L20	1	COMMUNICATION CABLE - 54 FT LONG	SEL	SEL-C607	C607-054	MODBUS BETWEEN INCON AND RTAC

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REV	DATE	DESCRIPTION
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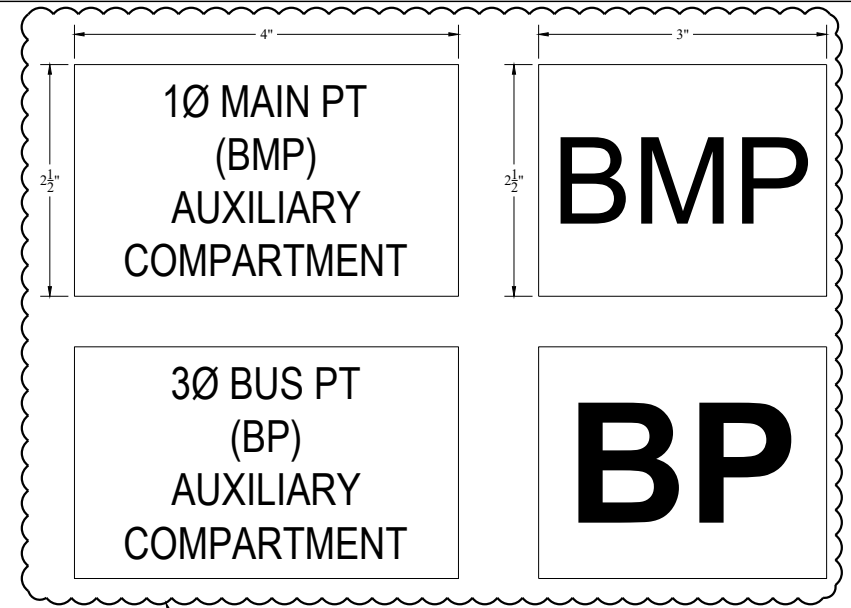
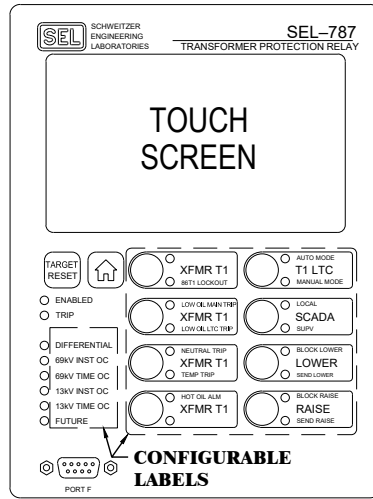
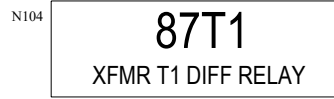
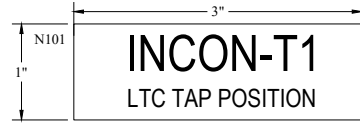
Project Manager: ADK
Designer: KAG
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Phone: (712) 472-2531

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MATERIAL LIST BUS B SWITCHGEAR
REISNER SUBSTATION

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CUBICLE BP - T1 XFMR TIE



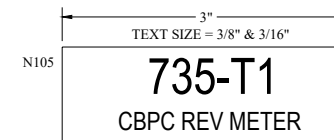
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87T1 (SEL-787) - RELAY LEGEND			
ID	CONNECTIONS	FUNCTION	DWG
OUT101	A03 - A04		
OUT102	A05 - A06		
OUT103	A07 - A08		
	A09	RELAY ALARM	THIS DWG
IN101	A11 - A10		
IN102	A12		
OUT301	C01 - C02	TRIP 1212 TC1	RS-604B
OUT302	C03 - C04	TRIP 1211 TC1	RS-603B
OUT303	C05 - C06	TRIP BM	RS-631B
OUT304	C07 - C08	DIFF TRIP 86T1	RS-604F
IN301	C09 - C10	1212 52A	THIS DWG
IN302	C11 - C12	1211 52A	THIS DWG
IN303	C13 - C14	BM 52A	THIS DWG
IN304	C15 - C16	86T1 L/O	THIS DWG
OUT401	D01 - D02	T1 LTC - AUTO/MAN	THIS DWG
OUT402	D03 - D04	T1 LTC - LOWER	THIS DWG
OUT403	D05 - D06	T1 LTC - RAISE	THIS DWG
OUT404	D07 - D08		
IN401	D09 - D10	T1 LTC - LOSS AC	THIS DWG (AC DEBOUNCE)
IN402	D11 - D12	T1 LTC - REMOTE AT XFMR	THIS DWG (AC DEBOUNCE)
IN403	D13 - D14	T1 LTC - REMOTE BLOCK AUTO	THIS DWG (AC DEBOUNCE)
IN404	D15 - D16		

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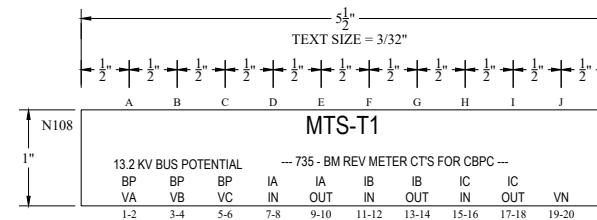
NOTES

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RTS-87T1-A													
87T1 - SEL-787 SECONDARY XFMR DIFF RELAY													
----- 87T1 -----													
OUT301 OUT302 OUT303 OUT401													
H1 H1 H2 H3 H3 TRIP TRIP TRIP DIFF													
IAW1 IAW1 IBW1 IBW1 ICW1 ICW1 1212 1211 BM TRIP													
SPARE SPARE SPARE IN OUT IN OUT IN OUT SPARE TC2 TC2 TRIP 86T1													
1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16 17-18 19-20 21-22 23-24 25-26 27-28													

RTS-87T1-B													
87T1 - SEL-787 SECONDARY XFMR DIFF RELAY													
13.2 KV BUS POTENTIAL													
BP BP BP BM BM BM BM BM													
VA VB VC IN OUT IN OUT IN OUT IN OUT N SPARE SPARE SPARE SPARE													
1-2 3-4 5-6 7-8 9-10 11-12 13-14 15-16 17-18 19-20 21-22 23-24 25-26 27-28													



REV	DATE	DESCRIPTION
B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



Project Manager: ADK
 Designer: KAG
 Project Number: 428403
 Phone: (712) 472-2531

WEBSTER CITY MUNICIPAL UTILITIES
 WEBSTER CITY, IOWA
548 of 664

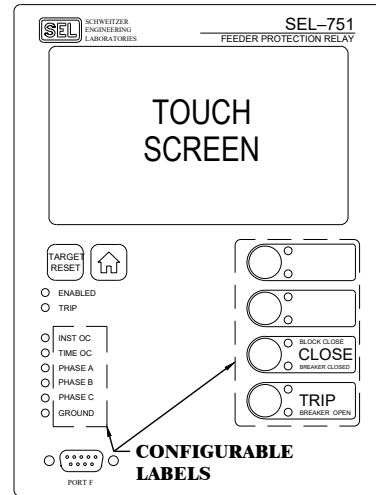
SWITCHGEAR NAMEPLATES, LABELS, DETAILS
 REISNER SUBSTATION

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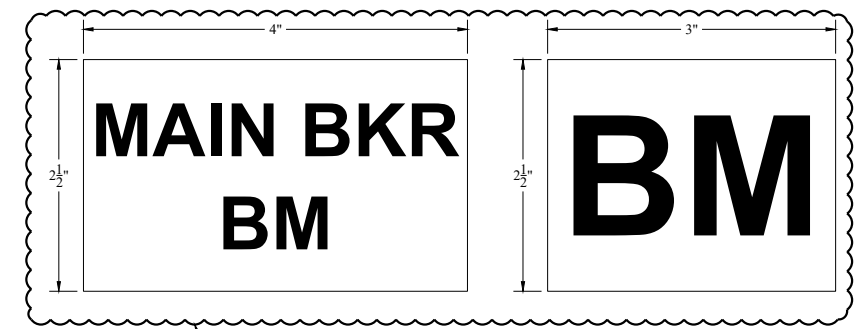
CUBICLE BP - BUS B MAIN BREAKER

N109 **751-BM**
BUS B MAIN RELAY



ID	CONNECTIONS	FUNCTION	DWG
OUT101	A03 - A04	SYNC CHECK BM	THIS DWG
OUT102	A05 - A06		
OUT103	A07 - A08		
	A09	RELAY FAIL ALM TO 3350-A	THIS DWG
IN101	A11 - A10	52A - 1211	THIS DWG
IN102	A12	52A - 1212	THIS DWG
OUT301	C01 - C02	RELAY TRIP BM	THIS DWG
OUT302	C03 - C04	SUPV TRIP BM	THIS DWG
OUT303	C05 - C06	SUPV CLOSE BM	THIS DWG
OUT304	C07 - C08		
IN301	C09 - C10	52A - BM	THIS DWG
IN302	C11 - C12	LOSS OF CLOSE DC (27C)	THIS DWG
IN303	C13 - C14	TRIP COIL MONITOR	THIS DWG
IN304	C15 - C16	LOCAL - 43CS	THIS DWG
IN501	E05		
IN502	E06		
IN503	E07		
IN504	E08		
IN505	E09		
IN506	E10		
IN507	E11 - E12		

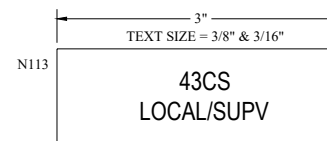
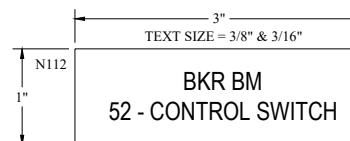
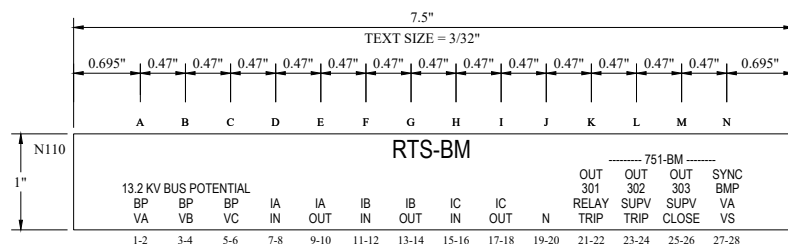
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QTY=2 EA.

NOTES

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B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



Project Manager: ADK
Designer: KAG
Project Number: 428403
Phone: (712) 472-2531

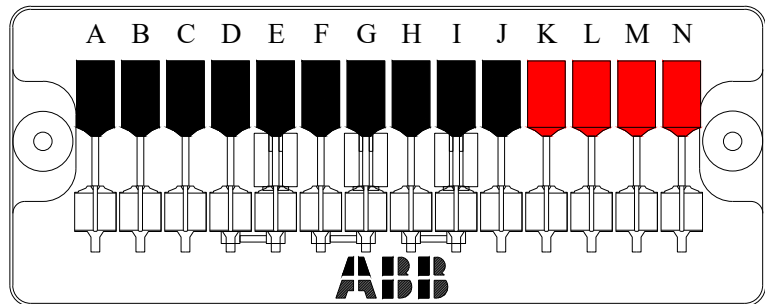
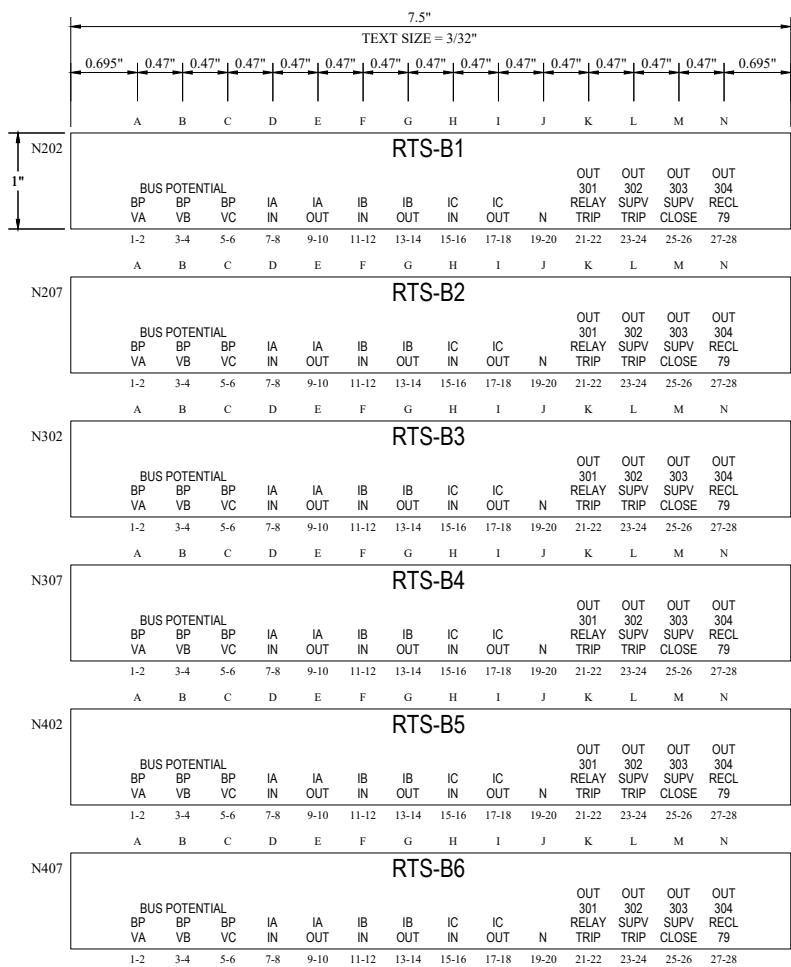
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SWITCHGEAR NAMEPLATES, LABELS, DETAILS
REISNER SUBSTATION

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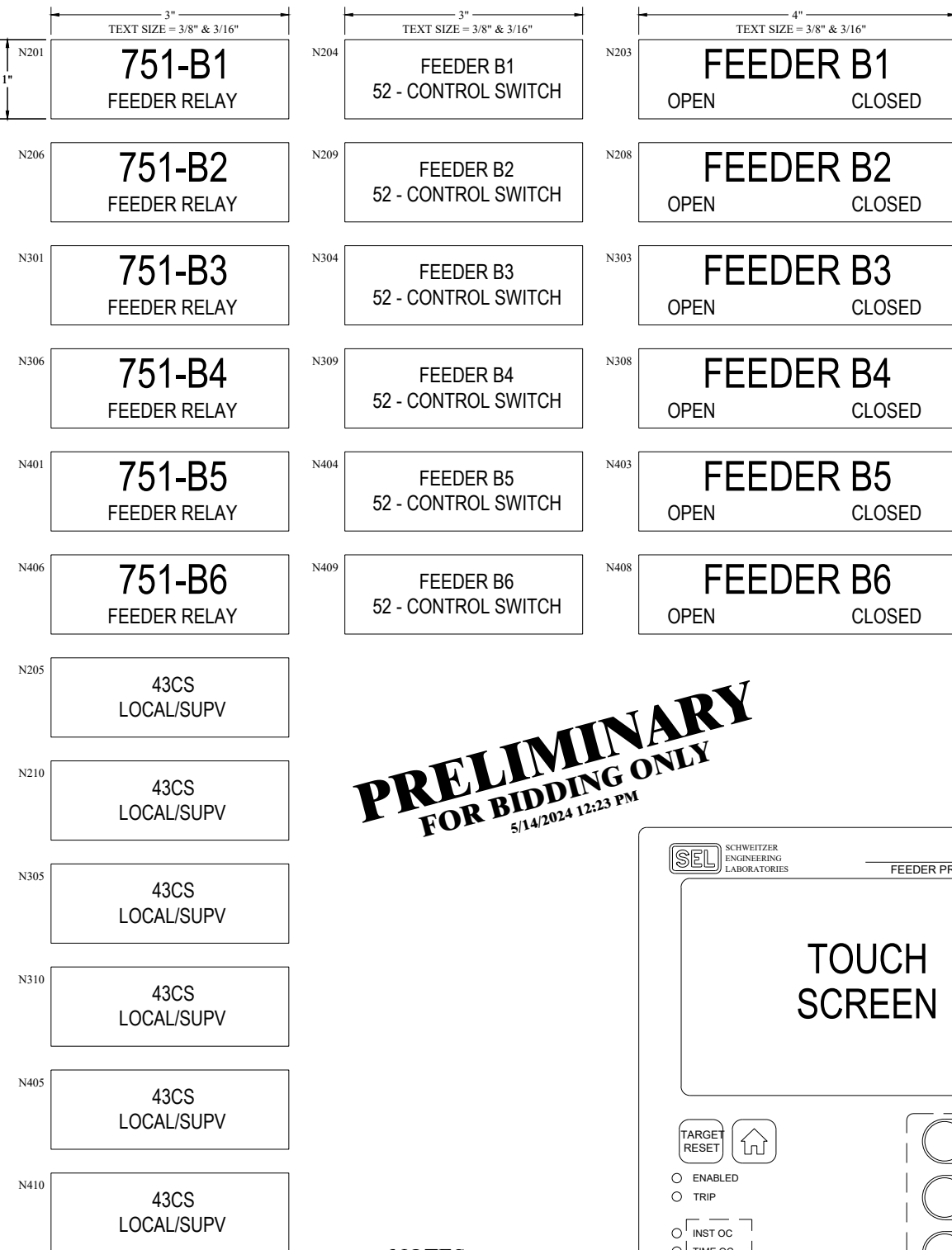
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B1, B2, B3, B4, B5, B6 BREAKERS



751-B1, B2, B3, B4, B5, B6 RELAY LEGEND			
ID	CONNECTIONS	FUNCTION	DWG
OUT101	A03 -> A04		
OUT102	A05 -> A06		
OUT103	A07 -> A08		
IN101	A11 -> A10	RELAY FAIL ALM TO 3350-A	THIS DWG
IN102	A11 -> A12		
OUT301	C01 -> C02	RELAY TRIP	THIS DWG
OUT302	C03 -> C04	SUPV TRIP	THIS DWG
OUT303	C05 -> C06	SUPV CLOSE	THIS DWG
OUT304	C07 -> C08	RECLOSE	THIS DWG
IN301	C09 -> C10	52a	THIS DWG
IN302	C11 -> C12	LOSS OF CLOSE DC (27C)	THIS DWG
IN303	C13 -> C14	TRIP COIL MONITOR (TCM)	THIS DWG
IN304	C15 -> C16	LOCAL - 43CS	THIS DWG

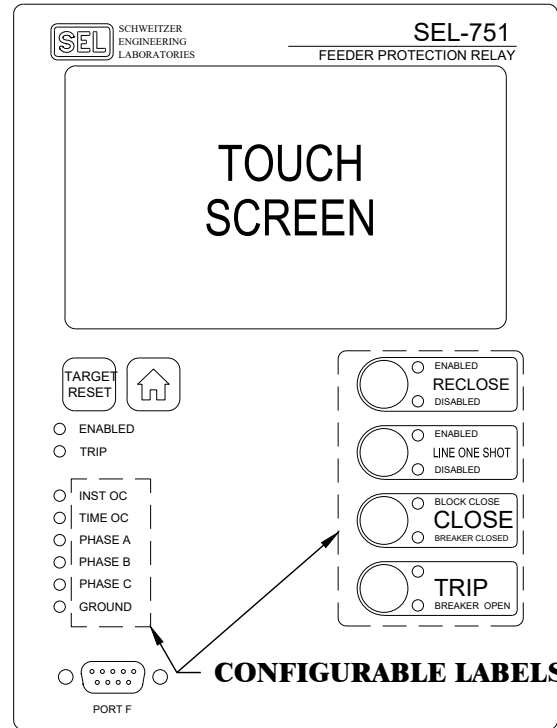
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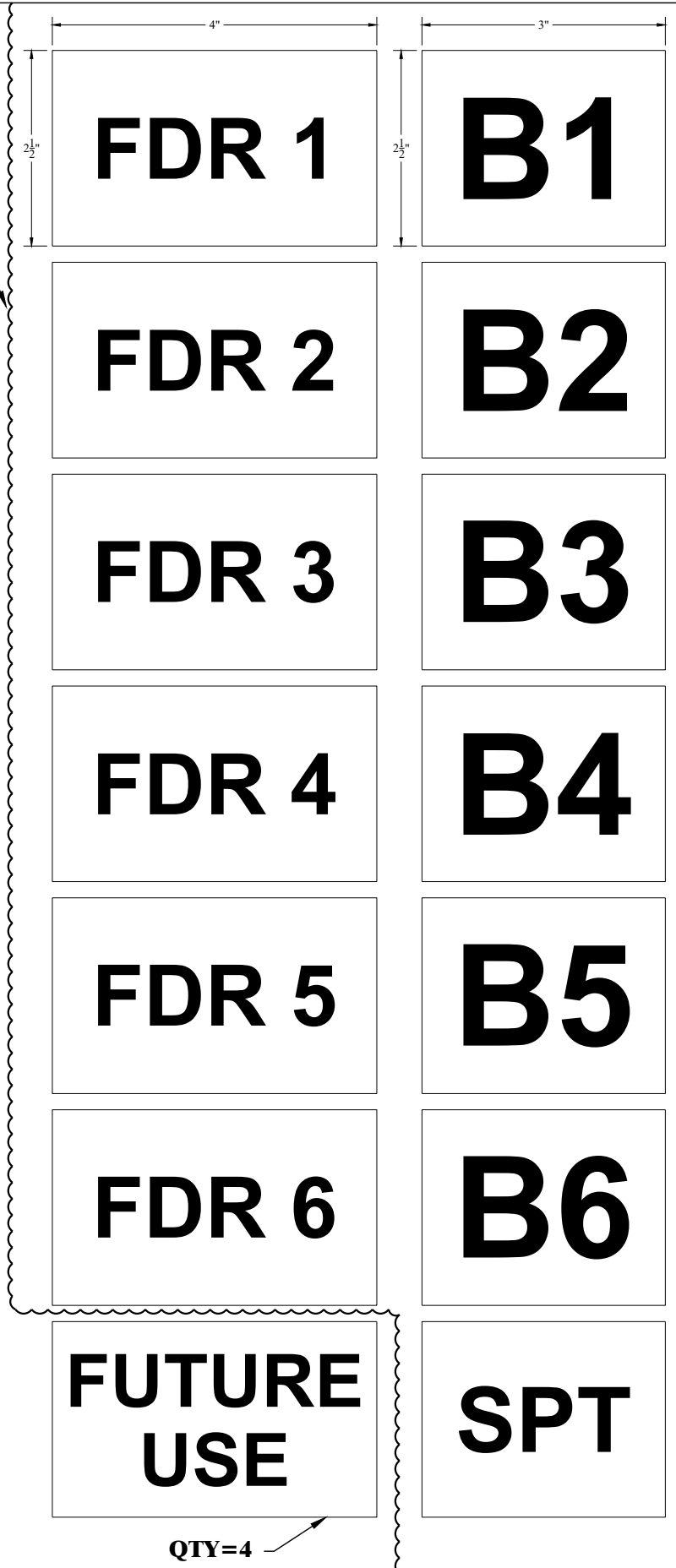
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5/14/2024 12:23 PM

NOTES

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REV	DATE	DESCRIPTION
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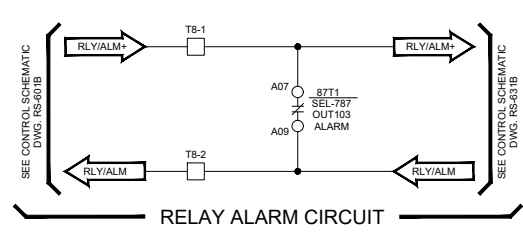
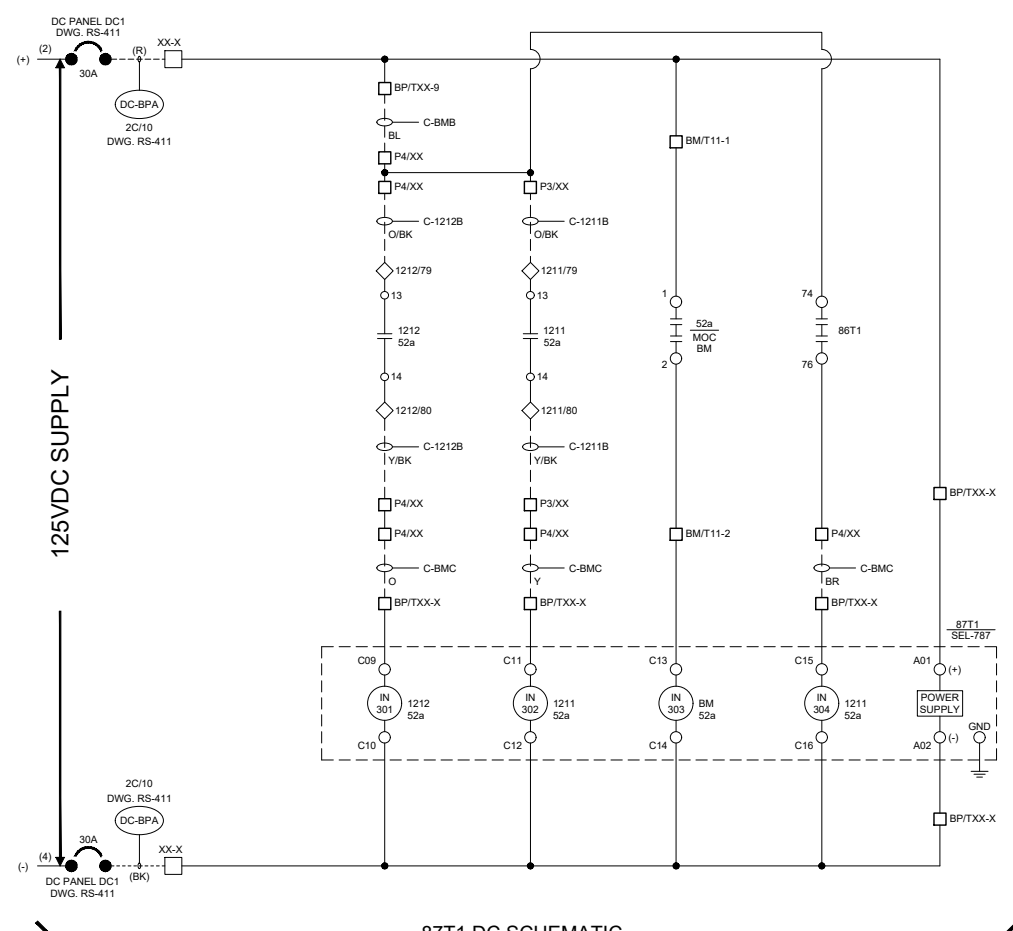


Project Manager: ADK
Designer: KAG
Project Number: 428403
Phone: (712) 472-2531

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SWITCHGEAR NAMEPLATES, LABELS, DETAILS
REISNER SUBSTATION

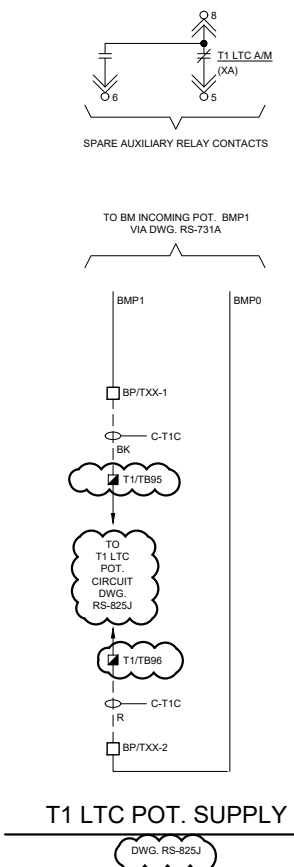
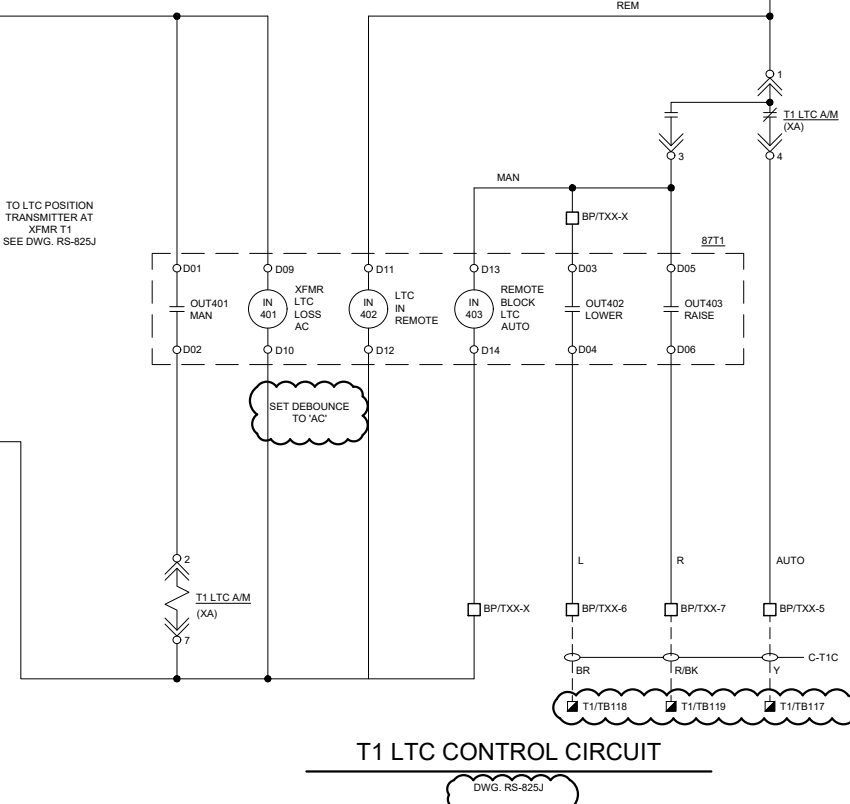
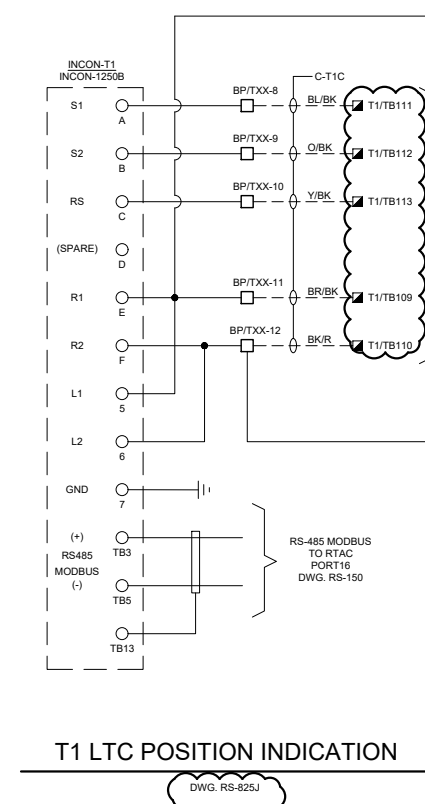
SHEET
RS-544



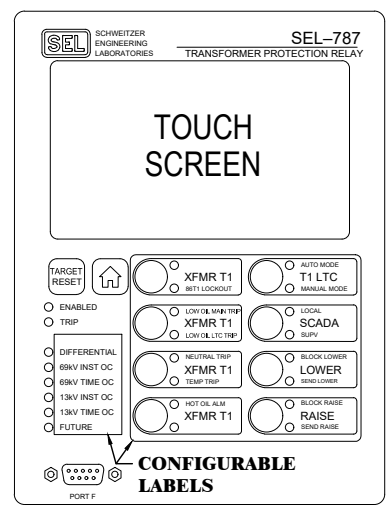
CONTROL LEGEND	
87T1	SCHWEITZER PROTECTION RELAY (SEL-787)
—	CONTROL WIRING
---	EXTERNAL WIRING
CXX-BK	CONTROL CABLE/CONDUCTOR COLOR LABEL
- - -	EQUIPMENT DESIGNATION
○	DEVICE TERMINAL
□	TERMINAL BLOCK
■	SHORTING BLOCK
◇	YARD EQUIPMENT TERMINAL BLOCK
◇	YARD EQUIPMENT SHORTING BLOCK
◇	REMOTE EQUIPMENT TERMINAL BLOCK
BX/TX-X	TERMINAL BLOCK LABEL - PANEL/TERMINAL NUMBER

NOTES

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87T1 (SEL-787) - RELAY LEGEND			
ID	CONNECTIONS	FUNCTION	DWG
OUT101	A03		
OUT102	A05		
OUT103	A07		
IN101	A11		
IN102			
OUT301	C01	TRIP 1212 TC1	RS-604B
OUT302	C03	TRIP 1211 TC1	RS-603B
OUT303	C05	TRIP BM	RS-631B
OUT304	C07	DIFF TRIP 86T1	RS-604F
IN301	C09	1212 52A	THIS DWG
IN302	C11	1211 52A	THIS DWG
IN303	C13	BM 52A	THIS DWG
IN304	C15	86T1 L/O	THIS DWG
OUT401	D01	T1 LTC - AUTO/MAN	THIS DWG
OUT402	D03	T1 LTC - LOWER	THIS DWG
OUT403	D05	T1 LTC - RAISE	THIS DWG
OUT404	D07		
IN401	D09	T1 LTC - LOSS AC	THIS DWG
IN402	D11	T1 LTC - REMOTE AT XFMR	THIS DWG
IN403	D13	T1 LTC - REMOTE BLOCK AUTO	THIS DWG
IN404	D15		



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REV	DATE	DESCRIPTION
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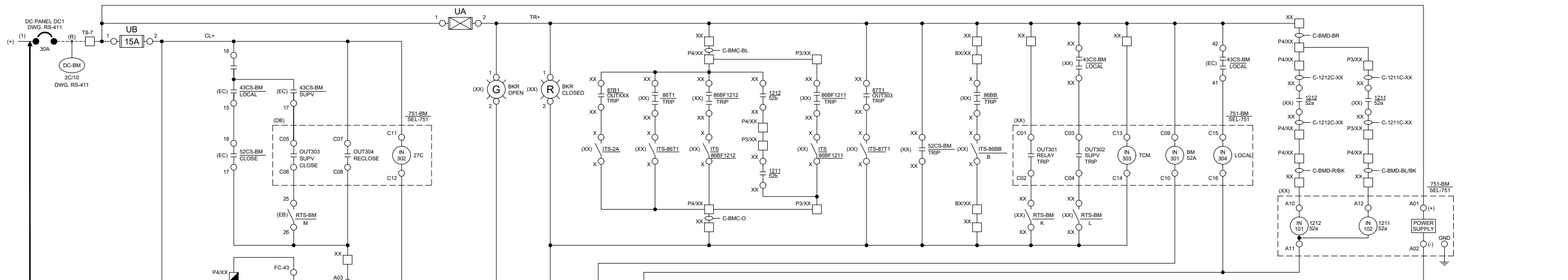


Project Manager: ADK
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87T1 - XFMR T1 DIFF CONTROL SCHEMATIC REISNER SUBSTATION

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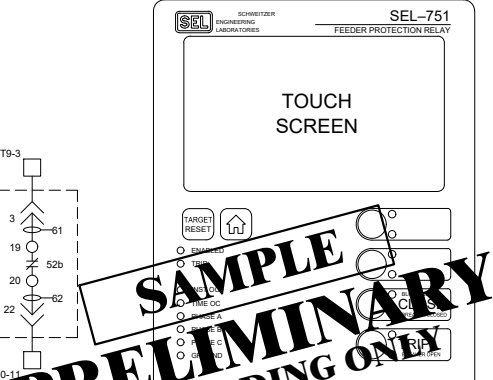
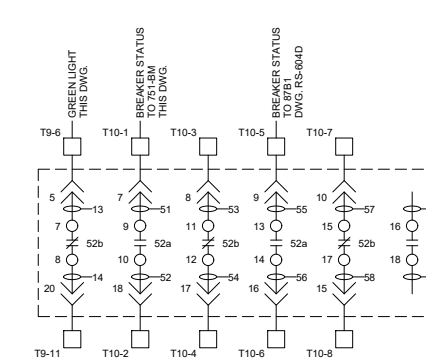
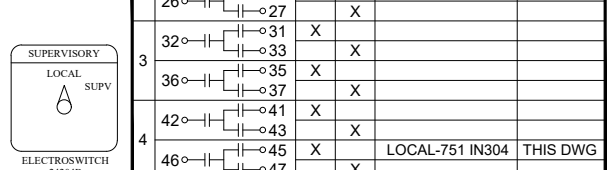
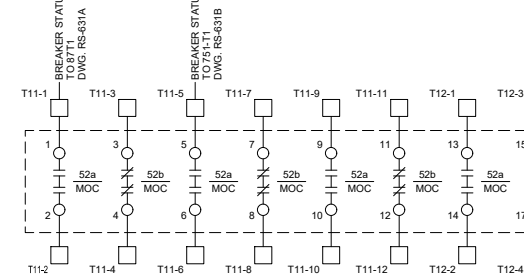
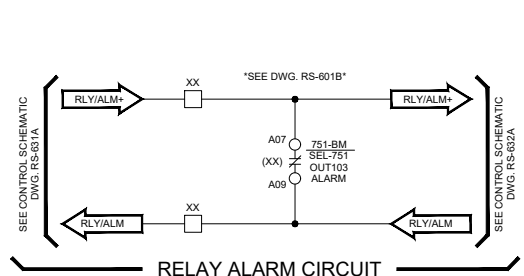
751-BM RELAY LEGEND			
ID	CONNECTIONS	FUNCTION	DWG
OUT101	A03	SYNC CHECK BM	THIS DWG
OUT102	A05		
OUT103	A07	RELAY FAIL ALM TO 3350-A	THIS DWG
IN101	A11	52A - 1211	THIS DWG
IN102	A12	52A - 1212	THIS DWG
OUT301	C01	RELAY TRIP BM	THIS DWG
OUT302	C03	SUPV TRIP BM	THIS DWG
OUT303	C05	SUPV CLOSE BM	THIS DWG
OUT304	C07		
IN301	C09	52A - BM	THIS DWG
IN302	C11	LOSS OF CLOSE DC (27C)	THIS DWG
IN303	C13	TRIP COIL MONITOR	THIS DWG
IN304	C15	LOCAL - 43CS	THIS DWG
IN501	E05		
IN502	E06		
IN503	E07		
IN504	E08		
IN505	E09		
IN506	E10		
IN507	E11		

52CS-BM CONTROL SWITCH					
DECIK	CONTACTS	POSITION		FUNCTION	DWG
		TRIP	CLOSE		
1	12-13		X		
	16-17		X	CLOSE	THIS DWG
	21-28	X		TRIP	THIS DWG
2	24-25				
	33-34	X	X		
3	37-38	X	X		
	41-42	X	X		
4	45-46	X	X		
	52-53	X	X		
5	56-57	X	X		

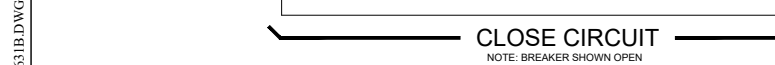
43CS-BM CONTROL SWITCH					
DECIK	CONTACTS	POSITION		FUNCTION	DWG
		LOCAL	SUPV		
1	12-13	X			
	16-17	X	X	SUPV-TRIP	THIS DWG
2	22-23	X	X	LOCAL-CLOSE	THIS DWG
	26-27	X	X	SUPV-CLOSE	THIS DWG
3	32-33	X	X		
	36-37	X	X		
4	42-43	X	X		
	46-47	X	X	LOCAL-751 IN304	THIS DWG

CONTROL LEGEND	
751-BM	SCHWEITZER PROTECTION RELAY (SEL-751)
52	EATON VCP-W VACUUM CIRCUIT BREAKER
52a	BREAKER AUX. CONTACT-OPEN WHEN BREAKER IS OPEN
52b	BREAKER AUX. CONTACT-CLOSE WHEN BREAKER IS CLOSED
52CS-BM	BREAKER CONTROL SWITCH
52-LC	TRIP LATCH CHECK SW. (OPEN UNTIL MECHANISM IS RESET)
52-L51bb	LIMIT SWITCH (CLOSED UNTIL SPRINGS ARE FULLY CHARGED)
52-L52aa	LIMIT SWITCH (OPEN UNTIL SPRINGS ARE FULLY CHARGED)
52-L52bb	LIMIT SWITCH (CLOSED UNTIL SPRINGS ARE FULLY CHARGED)
52M	BREAKER SPRING CHARGING MOTOR
52-PS1	POSITION SWITCH (OPEN IN ALL EXCEPT BETWEEN 'TEST' & 'CONNECTED' POSITIONS)
52-PS2	POSITION SWITCH (CLOSED IN ALL EXCEPT BETWEEN 'TEST' & 'CONNECTED' POSITIONS)
52SR	CLOSING SPRING RELEASE COIL
52ST	BREAKER SHUNT TRIP COIL
52Y	ANTI PUMP RELAY
86BB	BUS DIFFERENTIAL LOCKOUT
27C	LOSS OF CLOSE DC
G	GREEN INDICATING LIGHT
R	RED INDICATING LIGHT
TCM	TRIP COIL MONITOR
XX	BREAKER SECONDARY DISCONNECT
---	CONTROL WIRING
---	EXTERNAL WIRING
---	CONTROL CABLE/CONDUCTOR COLOR LABEL
---	EQUIPMENT DESIGNATION
○	DEVICE TERMINAL
□	TERMINAL BLOCK
■	SHORTING BLOCK
◇	YARD EQUIPMENT TERMINAL BLOCK
◇	YARD EQUIPMENT SHORTING BLOCK
◇	REMOTE EQUIPMENT TERMINAL BLOCK
XX/XX-X	TERMINAL BLOCK LABEL - PANEL/TERMINAL NUMBER

NOTES
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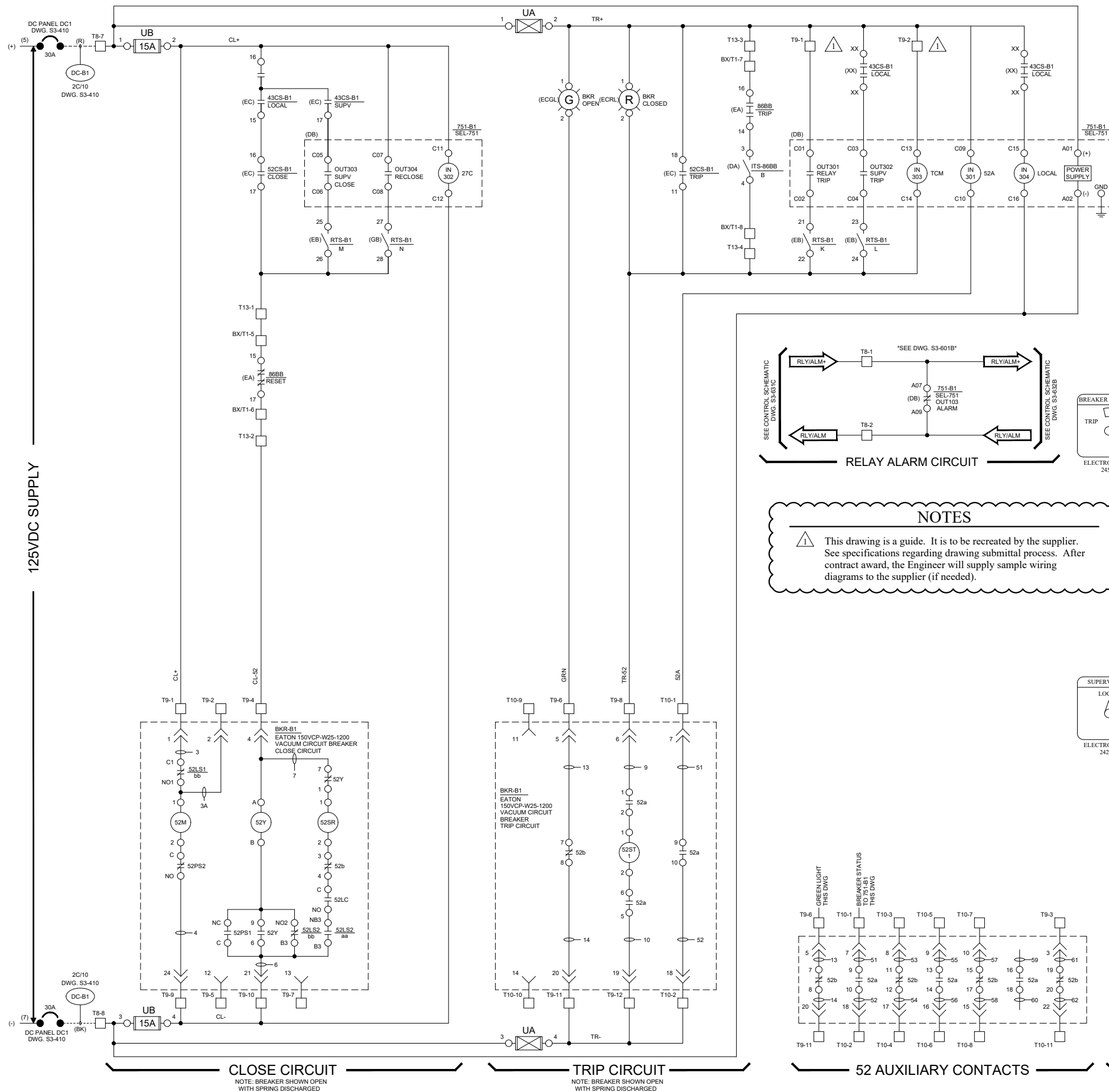


REV	DATE	DESCRIPTION
B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS

DGR ENGINEERING
 Project Manager: ADK
 Designer: KAG
 Project Number: 428403
 Phone: (712) 472-2531

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BKR BM - XFMR T1
 CONTROL SCHEMATIC
 REISNER SUBSTATION
 SHEET
 RS-631B



751-B1 LEGEND - SEL-751 FEEDER RELAY

ID	CONNECTIONS	FUNCTION	DRAWING
OUT101	A03		
OUT102	A05		
OUT103	A07		
IN101	A11		
IN102	A10		
OUT301	C01	RELAY TRIP	THIS DWG
OUT302	C03	SUPV TRIP	THIS DWG
OUT303	C05	SUPV CLOSE	THIS DWG
OUT304	C07		
IN301	C09		
IN302	C11	LOSS OF CLOSE DC (27C)	THIS DWG
IN303	C13	TRIP COIL MONITOR (TCM)	THIS DWG
IN304	C15	LOCAL - 43CS-B1	THIS DWG

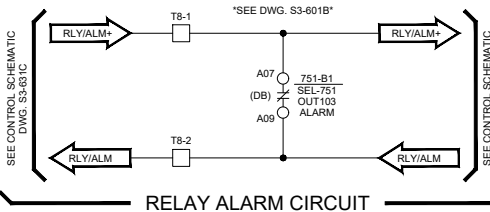
SEL-751, FEEDER RELAY, 751401CA0XD0X858C00

52CS-B1 CONTROL SWITCH

DEC/K	CONTACTS	POSITION			FUNCTION	DWG
		TRIP	NAT	MAC CLOSE		
1	12-13			X		
1	16-17			X	CLOSE	THIS DWG
2	21-22	X			TRIP	THIS DWG
2	24-25	X				
3	33-34		X	X		
3	37-38		X	X		
4	41-42		X	X		
4	45-46		X	X		
5	52-53	X	X			
5	56-57	X	X			

43CS-B1 CONTROL SWITCH

DEC/K	CONTACTS	POSITION		FUNCTION	DWG
		LOCAL	SUPV		
1	12-13	X			
1	16-17	X	X	SUPV-TRIP	THIS DWG
1	16-17	X		LOCAL-CLOSE	THIS DWG
1	16-17		X	SUPV-CLOSE	THIS DWG
2	22-23	X			
2	26-27	X	X		
3	32-33	X	X		
3	36-37	X			
4	42-43	X	X		
4	46-47	X		LOCAL-751 IN304	THIS DWG

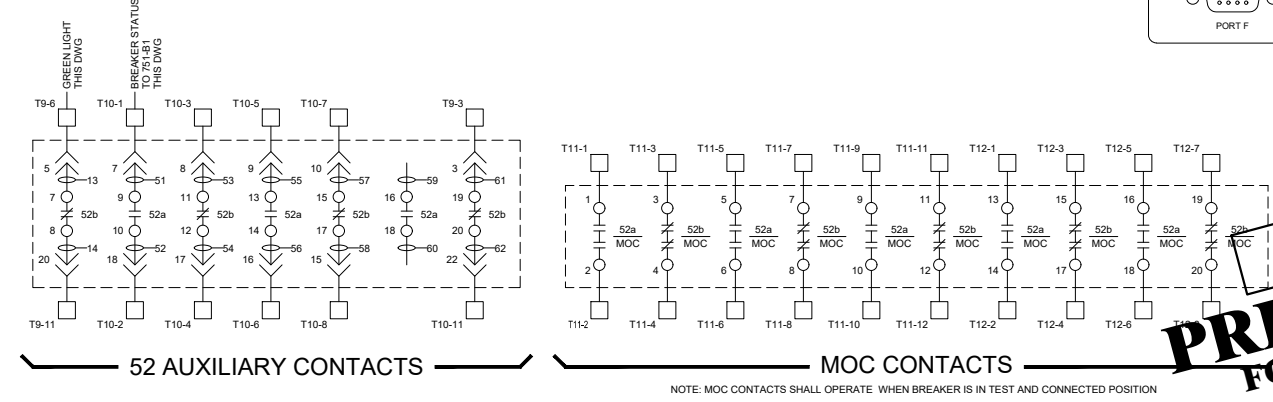
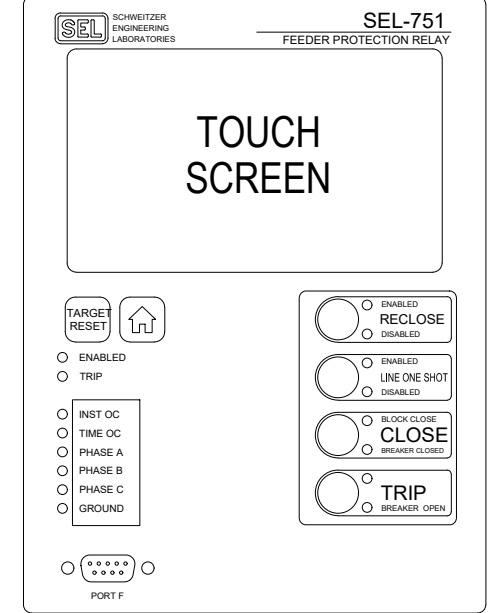


NOTES

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CONTROL LEGEND

- 751-B1 SCHWEITZER FEEDER PROTECTION RELAY (SEL-751)
- 52 EATON VCP-W VACUUM CIRCUIT BREAKER
- 52a BREAKER AUX. CONTACT-OPEN WHEN BREAKER IS OPEN
- 52b BREAKER AUX. CONTACT-CLOSE WHEN BREAKER IS CLOSED
- 52CS-B1 BREAKER CONTROL SWITCH
- 52-LC TRIP LATCH CHECK SW. (OPEN UNTIL MECHANISM IS RESET)
- 52-L51/52bb LIMIT SWITCH (CLOSED UNTIL SPRINGS ARE FULLY CHARGED)
- 52-L52/52aa LIMIT SWITCH (OPEN UNTIL SPRINGS ARE FULLY CHARGED)
- 52M BREAKER SPRING CHARGING MOTOR
- 52-PS1 POSITION SWITCH (OPEN IN ALL EXCEPT BETWEEN 'TEST' & 'CONNECTED' POSITIONS)
- 52-PS2 POSITION SWITCH (CLOSED IN ALL EXCEPT BETWEEN 'TEST' & 'CONNECTED' POSITIONS)
- 52SR CLOSING SPRING RELEASE COIL
- 52ST BREAKER SHUNT TRIP COIL
- 52Y ANTI PUMP RELAY
- 8BBB BUS DIFFERENTIAL LOCKOUT
- 27C LOSS OF CLOSE DC
- G GREEN INDICATING LIGHT
- R RED INDICATING LIGHT
- TCM TRIP COIL MONITOR
- TRIP BREAKER SECONDARY DISCONNECT
- CONTROL WIRING
- EXTERNAL WIRING
- CONTROL CABLE/CONDUCTOR COLOR LABEL
- EQUIPMENT DESIGNATION
- DEVICE TERMINAL
- TERMINAL BLOCK
- SHORTING BLOCK
- YARD EQUIPMENT TERMINAL BLOCK
- YARD EQUIPMENT SHORTING BLOCK
- REMOTE EQUIPMENT TERMINAL BLOCK
- TERMINAL BLOCK LABEL - PANEL/TERMINAL NUMBER



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Designer: KAG
Project Number: 428403
Phone: (712) 472-2531

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BKR B1 - FEEDER
CONTROL SCHEMATIC
REISNER SUBSTATION

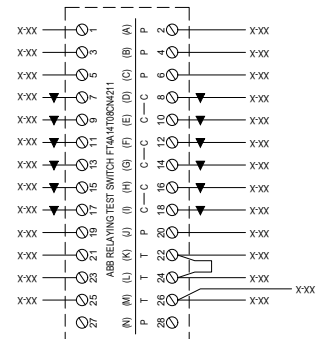
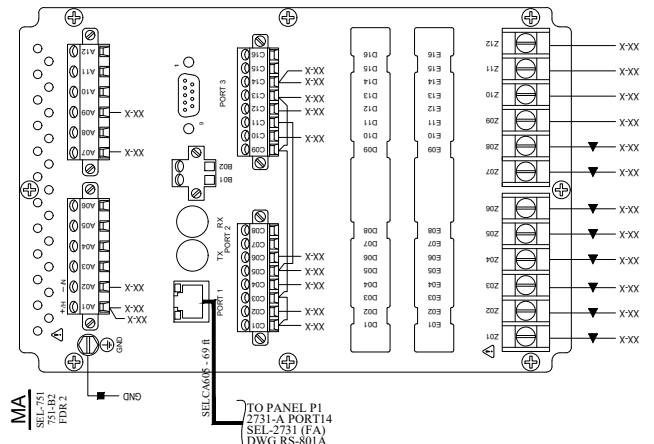
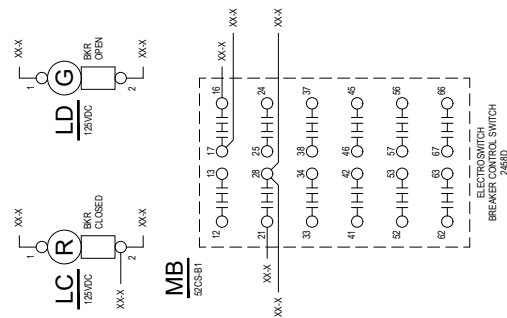
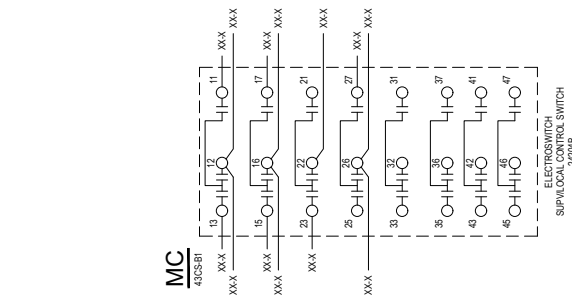
S
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RS-632A

LOWER UNIT B2

HINGE SIDE

HINGE SIDE

HINGE SIDE

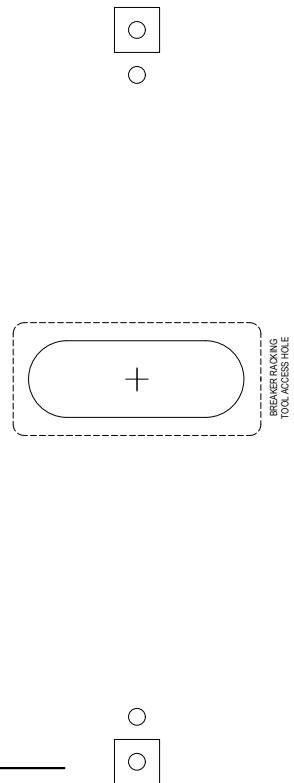


DESIGN NOTES

- 1 Device labels shall be identical to the names listed on the schematics and panel front views. Device Description shall include model type, function, and application as appropriate.
- 2 All major components shall have the part number listed.
- 3 Terminal blocks shall each have a unique identifying mnemonic. The terminal block termination points shall be labeled with the corresponding schematic label assigned by Supplier.
- 4 Control cable (furnished and installed by Owner) wire colors shall be listed on the wiring diagram in parenthesis. All control cable wire colors shall be installed with the following wire colors from top to bottom on the terminal block: BK, R, BU, O, Y, BR, R/B, BU/B, O/B, Y/B, BR/B, BK/R. Exceptions to this rule may be allowed if discussed with engineer prior to drawing approval. Twisted pair cables shall be listed in the following order: BK1, W1, BK2, W2, BK3, W3...BK8, W8 as needed. All wires of the control cables shall be terminated to a terminal block even if they are not in use.
- 5 The opposite end terminal connection shall be listed after the wire color for each conductor of the control cable.
- 6 "Upper" designation refers to the top cubicle in a switchgear unit. The Supplier shall use a separate drawing for the "Lower" or bottom cubicle. Supplier may use more than one drawing to complete the wiring diagram for each switchgear cubicle; however, 2 drawings for each switchgear cubicle is desired. One for the door and one for the cell.
- 7 Typical wiring connections internal to the panel shall list a two letter designation assigned to each device followed by the device terminal point. Device designation and terminal point can be separated by a dash, but if device terminal point has a letter designation, a dash must be inserted. Multiple connections to a terminal shall be shown with as a separate wire (line/lead). Individual terminal points shall have a maximum of two connections.
- 8 Internal switchgear wiring between cubicles shall note the remote cubicle followed by a slash and the device/termination notation. All inter-cubicle wiring shall be terminal block to terminal block connections.
- 9 Control cable names shall match the names assigned in the Cable Schedule. The Supplier may be required to make minor adjustments to the Cable Schedule as needed. All changes made by the Supplier shall be documented with the Engineer. Control cable labels shall also include the far end equipment designation along with the corresponding wiring diagram drawing number as listed on the Drawing List.
- 10 Supplier title block shall be used as desired in place of the Engineer's title block shown on this drawing. Drawing titles and drawing numbers shall match the Drawing List.
- 11 Use manufacturer's drawings for panel device rear views where possible. This specifically includes all relays, meters, and other IED's. Wiring diagram shall represent physical layout of equipment to the extent possible.
- 12 Include 15 kV equipment details for each cubical. Show layout, external drawing references, connection types, rating, and phasing details. Layout diagram shall match the physical layout as much as possible. Equipment labeling shall include corresponding schematic label identifiers, manufacturer, part number, ratings, and available/connected ratios as applies.
- 13 Update 15 kV breaker internal wiring diagram and secondary disconnect per supplied breaker.

AUTODESK NOTES

- 14 The drawings shall be produced in Autodesk version 2018 (or later) .dwg format.
- 15 The drawings created by the supplier will become part of an overall drawing package managed and maintained by the Engineer using AutoCAD's Sheet Set Manager. As such, the drawings shall conform to the following requirements.
- 16 The drawing shall make use of paper space. When printing, the paper space layouts shall use the default AutoCAD Dwg to pdf.pc3 file. Supplier specific .pc3 files shall NOT be used. The .ctb or .stb file used for the drawing set shall be approved by the Engineer. If the said file is not default to AutoCAD (i.e. "custom"), the Supplier shall furnish the .ctb or .stb file to the Engineer.
- 17 The drawing text styles shall be of True Type fonts so the text can be searched in Adobe Acrobat or similar pdf reader. SHX text files shall not be allowed.
- 18 The drawings shall be printed to pdf so that when the drawings are printed from Adobe Acrobat at actual size (NOT to fit), they are printed on 11x17 paper with clean margins (no cutoffs).
- 19 Before creating all of the drawings, the Supplier shall submit a sample drawing to the Engineer for approval.
- 20 The title block shall be sized such that there is a minimum of 1" of white space on the left-hand side of the printed drawing. This will facilitate the use of 2-hole paper fastener and/or 3-ring binders.
- 21 Whenever possible, avoid text width factors of less than 1.



SAMPLE PRELIMINARY FOR BIDDING ONLY

5/14/2024 12:24 PM

REV	DATE	DESCRIPTION
B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



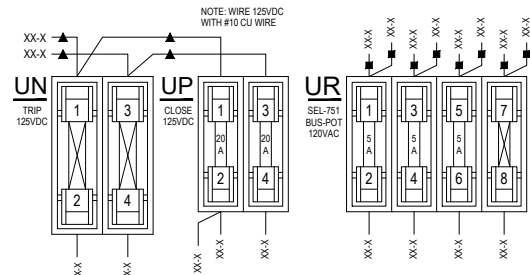
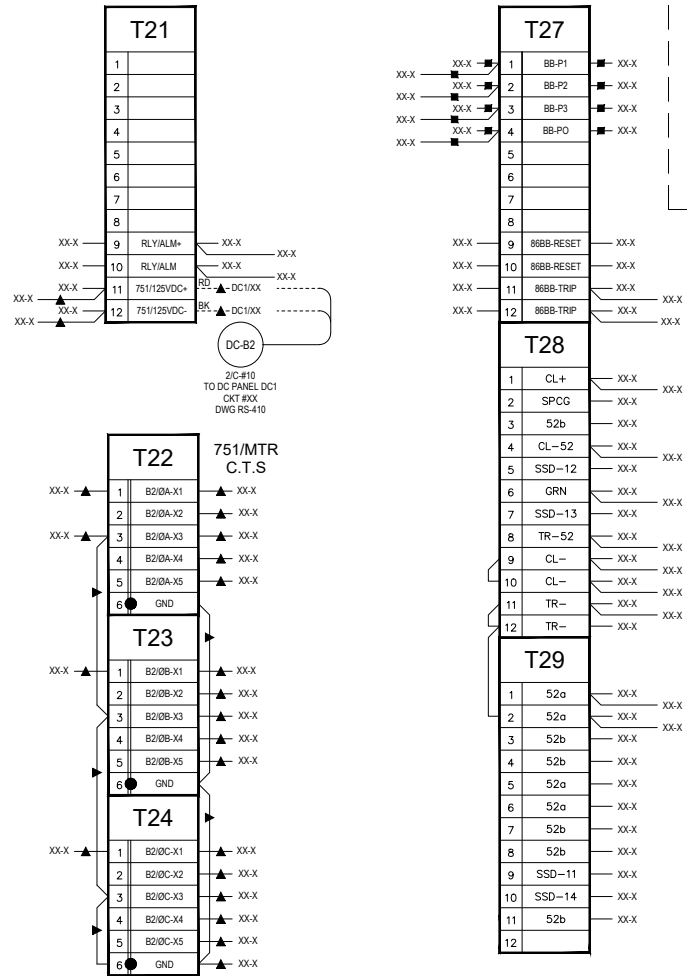
Project Manager: ADK
 Designer: KAG
 Project Number: 428403
 Phone: (712) 472-2531

WEBSTER CITY PUBLIC UTILITIES
 WEBSTER CITY, IA
556 of 664

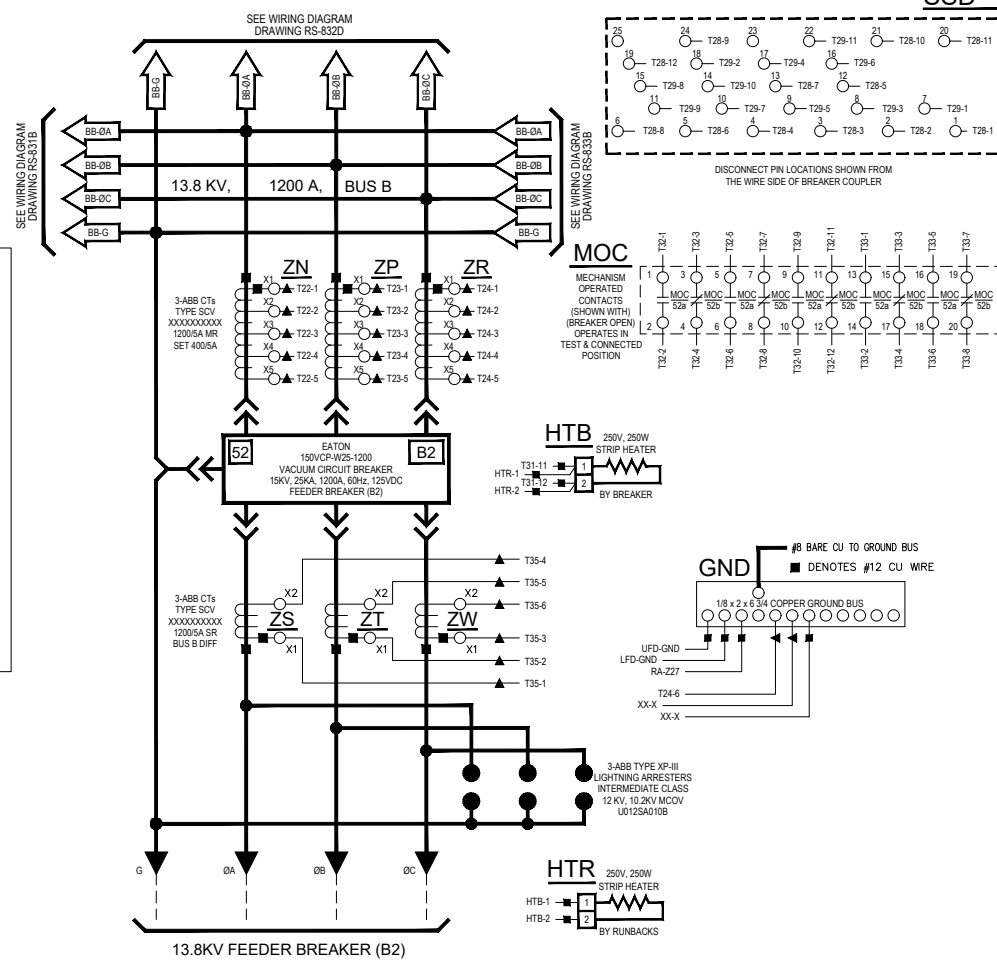
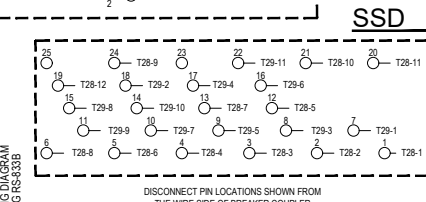
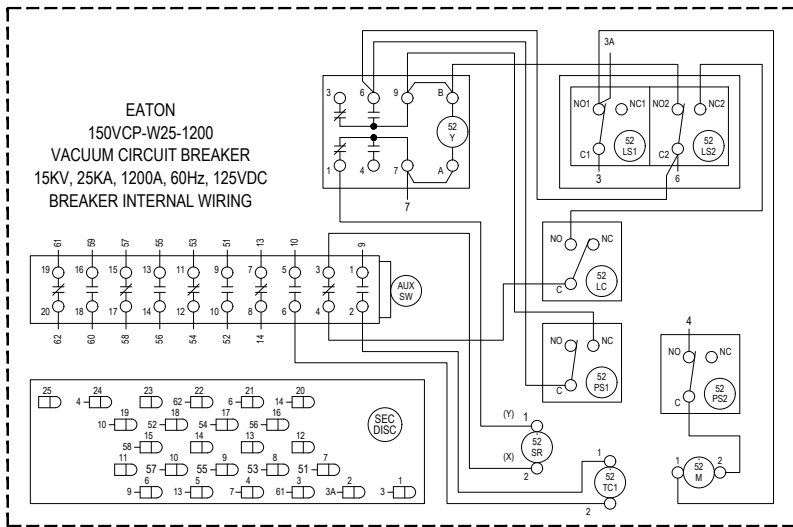
UNIT 2 - B2
 WIRING DIAGRAM
 REISNER SUBSTATION

S
H
E
E
T
RS-832C

LOWER FRONT DOOR (REAR VIEW)



LOWER CENTER BARRIER



AUTODESK NOTES

- The drawings shall be produced in Autodesk version 2013 (or later) .dwg format.
- The drawings created by the supplier will become part of an overall drawing package managed and maintained by the Engineer using AutoCAD's Sheet Set Manager. As such, the drawings shall conform to the following requirements.
- The drawing shall make use of paper space. When printing, the paper space layouts shall use the default AutoCAD Dwg to pdf.pc3 file. Supplier specific .pc3 files shall NOT be used. The .ctb or .stb file used for the drawing set shall be approved by the Engineer. If the said file is not default to AutoCAD (i.e. "custom"), the Supplier shall furnish the .ctb or .stb file to the Engineer.
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- Before creating all of the drawings, the Supplier shall submit a sample drawing to the Engineer for approval.
- The title block shall be sized such that there is a minimum of 1" of white space on the left-hand side of the printed drawing. This will facilitate the use of 2-hole paper fastener and/or 3-ring binders.
- Whenever possible, avoid text width factors of less than 1. OLE objects shall not be allowed in the wiring diagrams!

LEGEND

—	NO. 14 SIS CU WIRE
—	NO. 12 SIS CU WIRE
—	NO. 10 SIS CU WIRE
—	NO. 8 SIS CU WIRE
NOTE: 1	INSULATED LUGS ARE REQUIRED
NOTE: 2	WIRE MARKERS ARE REQUIRED

LOWER LEFT SIDE SHEET

DESIGN NOTES

- Device labels shall be identical to the names listed on the schematics and panel front views. Device Description shall include model type, function, and application as appropriate.
- All major components shall have the part number listed.
- Terminal blocks shall each have a unique identifying mnemonic. The terminal block termination points shall be labeled with the corresponding schematic label assigned by Supplier.
- Control cable (furnished and installed by Owner) wire colors shall be listed on the wiring diagram in parenthesis. All control cable wire colors shall be listed with the following wire colors from top to bottom on the terminal block: BK, R, BL, O, Y, BR, R/B, BL/B, O/B, Y/B, BR/B, BK/R. Exceptions to this rule may be allowed if discussed with engineer prior to drawing approval. Twisted pair cables shall be listed in the following order: BK1, W1, BK2, W2, BK3, W3...BK8, W8 as needed. All wires of the control cables shall be terminated to a terminal block even if they are not in use.
- The opposite end terminal connection shall be listed after the wire color for each conductor of the control cable.
- "Upper" designation refers to the top cubicle in a switchgear unit. The Supplier shall use a separate drawing for the "Lower" or bottom cubicle. Supplier may use more than one drawing to complete the wiring diagram for each switchgear cubicle; however, 2 drawings for each switchgear cubicle is desired. One for the door and one for the cell.
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- Include 15 kV equipment details for each cubical. Show layout, external drawing references, connection types, rating, and phasing details. Layout diagram shall match the physical layout as much as possible. Equipment labeling shall include corresponding schematic label identifiers, manufacturer, part number, ratings, and available/connected ratios as applies.
- Update 15 kV breaker internal wiring diagram and secondary disconnect per supplied breaker.

—FEEDER BREAKER B2—

1200/5A MULT-RATIO CTs

RATIO	TAP	RATIO	TAP
100:5	X2 - X3	600:5	X2 - X4
200:5	X1 - X2	800:5	X1 - X4
300:5	X1 - X3	900:5	X3 - X5
400:5	X4 - X5	1000:5	X2 - X5
500:5	X3 - X4	1200:5	X1 - X5

LOWER RIGHT SIDE SHEET

SAMPLE PRELIMINARY FOR BIDDING ONLY
5/14/2024 12:24 PM

REV	DATE	DESCRIPTION
B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



Project Manager: ADK
Designer: KAG
Project Number: 428403
Phone: (712) 472-2531

WEBSTER CITY PUBLIC UTILITIES
WEBSTER CITY, IA
557 of 664

UNIT 2 - B2
WIRING DIAGRAM
REISNER SUBSTATION
S
H
E
E
T
RS-832D

Cable	Size	From	Dwg	To	Dwg	Description	Ft.
69 kV POTENTIALS							
PT74A	12C/12	PANEL P2	RS-802C	PT74	RS-821	69 KV POTENTIALS	310
	BK	P2/LA-1		PT74/67X-AØ		67V - 74X AØ	
	R	P2/LA-2		PT74/67X-BØ		67V - 74X BØ	
	BL	P2/LA-3		PT74/67X-CØ		67V - 74X CØ	
	O	P2/LA-4		PT74/67X-N		74X N	
	Y	P2/LA-5		PT74/67Y-AØ		67V - 74Y AØ	
	BR	P2/LA-6		PT74/67Y-BØ		67V - 74Y BØ	
	R/BK	P2/LA-7		PT74/67Y-CØ		67V - 74Y CØ	
	BL/BK	P2/LA-8		PT74/67X-N		74Y N	
	O/BK	P2/LA-9		PT74/-		SPARE	
	Y/BK	P2/LA-10		PT74/-		SPARE	
	BR/BK	P2/LA-11		PT74/-		SPARE	
	BK/R	P2/LA-12		PT74/-		SPARE	
PT71A	12C/12	PANEL P3	RS-803C	PT71	RS-821	69 KV POTENTIALS	270
	BK	P3/LA-1		PT71/67X-AØ		67V - 71X AØ	
	R	P3/LA-2		PT71/67X-BØ		67V - 71X BØ	
	BL	P3/LA-3		PT71/67X-CØ		67V - 71X CØ	
	O	P3/LA-4		PT71/67X-N		71X N	
	Y	P3/LA-5		PT71/67Y-AØ		67V - 71Y AØ	
	BR	P3/LA-6		PT71/67Y-BØ		67V - 71Y BØ	
	R/BK	P3/LA-7		PT71/67Y-CØ		67V - 71Y CØ	
	BL/BK	P3/LA-8		PT71/67X-N		71Y N	
	O/BK	P3/LA-9		PT71/-		SPARE	
	Y/BK	P3/LA-10		PT71/-		SPARE	
	BR/BK	P3/LA-11		PT71/-		SPARE	
	BK/R	P3/LA-12		PT71/-		SPARE	
PT72A	12C/12	PANEL P4	RS-804C	PT72	RS-821	69 KV POTENTIALS	200
	BK	P4/LA-1		PT72/67X-AØ		67V - 74X AØ	
	R	P4/LA-2		PT72/67X-N		74X N	
	BL	P4/LA-3		PT72/67Y-AØ		67V - 74Y AØ	
	O	P4/LA-4		PT72/67X-N		74Y N	
	Y	P4/LA-5		PT72/-		SPARE	
	BR	P4/LA-6		PT72/-		SPARE	
	R/BK	P4/LA-7		PT72/-		SPARE	
	BL/BK	P4/LA-8		PT72/-		SPARE	
	O/BK	P4/LA-9		PT72/-		SPARE	
	Y/BK	P4/LA-10		PT72/-		SPARE	
	BR/BK	P4/LA-11		PT72/-		SPARE	
	BK/R	P4/LA-12		PT72/-		SPARE	
69 kV BREAKER 1210							
CT-1210A	4C/10	PANEL P2	RS-802C	1210	RS-812A	51-74 & 11P-74 - SEL-311C & SEL-351S RELAY - 1200/5	290
	BK	P2/SA-1		1210/1X1		1X1	
	R	P2/SA-2		1210/3X1		3X1	
	BL	P2/SA-3		1210/5X1		5X1	
	O	P2/SA-4		1210/5X3		5X3	
CT-1210B	4C/10	PANEL P2	RS-802C	1210	RS-812A	11S-74 - SEL-311C RELAY - 1200/5	290
	BK	P2/SB-1		1210/1Y1		1Y1	
	R	P2/SB-2		1210/3Y1		3Y1	
	BL	P2/SB-3		1210/5Y1		5Y1	
	O	P2/SB-4		1210/5Y3		5Y3	
CT-1210C	4C/10	PANEL P3	RS-802C	1210	RS-812A	11S-71 - SEL-311C RELAY - 1200/5	290
	BK	P3/SC-1		1210/2Y1		2Y1	
	R	P3/SC-2		1210/4Y1		4Y1	
	BL	P3/SC-3		1210/6Y1		6Y1	
	O	P3/SC-4		1210/6Y3		6Y3	
CT-1210D	4C/10	PANEL P3	RS-802C	1210	RS-812A	11P-71 - SEL-311C RELAY - 1200/5	290
	BK	P3/SD-1		1210/2X1		2X1	
	R	P3/SD-2		1210/4X1		4X1	
	BL	P3/SD-3		1210/6X1		6X1	
	O	P3/SD-4		1210/6X3		6X3	

Cable	Size	From	Dwg	To	Dwg	Description	Ft.
69 kV BREAKER 1210							
C-1210A	12C/12	PANEL P2	RS-802C	1210	RS-812A	1210 CONTROL	290
	BK	P2/RB-1		1210/5		1210 CL(+)	
	R	P2/RB-2		1210/7		1210 CL	
	BL	P2/RB-3		1210/9		1210 CL(-)	
	O	P2/RB-4		1210/11		1210 TC1(+)	
	Y	P2/RB-5		1210/13		1210 TC1	
	BR	P2/RB-6		1210/6		1210 GRN LT	
	R/BK	P2/RB-7		1210/10		1210 TC1(-)	
	BL/BK	P2/RB-8		1210/11A		1210 TC2(+)	
	O/BK	P2/RB-9		1210/9A		1210 TC2	
	Y/BK	P2/RB-10		1210/10A		1210 TC2(-)	
	BR/BK	P2/RB-11		1210/79		1210 52B	
	BK/R	P2/RB-12		1210/80		1210 52B	
C-1210B	12C/12	PANEL P2	RS-802C	1210	RS-812A	1210 ALARMS/STATUS	290
	BK	P2/RC-1		1210/XX		1210 ALM(+)	
	R	P2/RC-2		1210/XX		1210 LOSS OF DC/TCM	
	BL	P2/RC-3		1210/XX		1210 LOW GAS	
	O	P2/RC-4		1210/XX		1210 LO GAS L/O	
	Y	P2/RC-5		1210/XX		1210 SPR DISCH	
	BR	P2/RC-6		1210/XX		1210 LOSS AC	
	R/BK	P2/RC-7		1210/XX		1210 TANK HTR LOSS AC	
	BL/BK	P2/RC-8		1210/XX		1210 TANK HTR FAIL	
	O/BK	P2/RC-9		1210/89		1210 52A	
	Y/BK	P2/RC-10		1210/82		1210 52A	
	BR/BK	P2/RC-11		1210/83		1210 52B	
	BK/R	P2/RC-12		1210/84		1210 52B	
C-1210C	12C/12	PANEL P2	RS-802C	1210	RS-812A	1210 STATUS	290
	BK	P2/RD-1		1210/51		1210 52A	
	R	P2/RD-2		1210/52		1210 52A	
	BL	P2/RD-3		1210/55		1210 52A	
	O	P2/RD-4		1210/56		1210 52A	
	Y	P2/RD-5		1210/59		1210 52A	
	BR	P2/RD-6		1210/60		1210 52A	
	R/BK	P2/RD-7		1210/65		1210 52A	
	BL/BK	P2/RD-8		1210/66		1210 52A	
	O/BK	P2/RD-9		1210/69		1210 52A	
	Y/BK	P2/RD-10		1210/70		1210 52A	
	BR/BK	P2/RD-11		1210/75		1210 52A	
	BK/R	P2/RD-12		1210/76		1210 52A	

NOTES

⚠ This drawing shall be used as a guide by the supplier to create the cable schedule. Supplier shall reference the preliminary cable schedule in the Appendix of the specifications to develop when developing the cable schedule.

Legend	
CT-XXX	Current
PT-XXX	Potential
C-XXX	Control
ACXXX	AC Power
DCXXX	DC Power

**SAMPLE
PRELIMINARY
FOR BIDDING ONLY**
5/14/2024 12:24 PM

REV	DATE	DESCRIPTION
B	05-14-2024	ISSUED FOR SWITCHGEAR BIDS



Project Manager: ADK
 Designer: KAG
 Project Number: 428403
 Phone: (712) 472-2531

WEBSTER CITY MUNICIPAL UTILITIES
 WEBSTER CITY, IOWA
558 of 664

CONTROL CABLE SCHEDULE
 REISNER SUBSTATION

S
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T
RS-900A



MEMORANDUM

TO: Mayor and City Council

FROM: Adam Dickinson, Line Department Supervisor
John Harrenstein, Interim City Manager

DATE: May 20, 2024

RE: Establishing Permanent Easement

SUMMARY: Staff is requesting permission to obtain a permanent electrical easement from Kwik Trip, Incorporated to allow the city to provide electrical underground service to the site of the new store locate in Outlot D, Outlot E, and Former Railroad Right-of-Way all in Lawn Hill Addition, City of Webster City, Hamilton County, Iowa.

PREVIOUS COUNCIL ACTION: N/A

BACKGROUND/DISCUSSION: The current location has no electrical existing on the property. By establishing an easement from Kwik Trip, Incorporated, the City would bring underground electric from Fair Avenue. The Line Department will either bore or trench new electric in the easement granted.

FINANCIAL IMPLICATIONS: No funding needed as Kwik Trip Incorporated has provided the legal work for the easement.

RECOMMENDATION: Approve electrical easement as provided by Herold-Reicks Surveying on behalf of Kwik Trip, Incorporated.

RESOLUTION NO. 2024-xxx

**RESOLUTION ACCEPTING PERMANENT ELECTRICAL EASEMENT,
LOCATED IN THE LAWN HILL ADDITION, FROM KWIK TRIP, INCORPORATED**

WHEREAS, the City of Webster City, Hamilton County, Iowa, has identified the need to provide electrical service to the site of the new Kwik Trip store located in Outlot D, Outlot E, and Former Railroad Right-of-Way in Lawn Hill Addition; and

WHEREAS, the current location lacks existing electrical infrastructure on the property, necessitating the establishment of an easement to bring underground electric from Fair Avenue; and

WHEREAS, Kwik Trip, Incorporated has agreed to provide a permanent electrical easement for this purpose; and

WHEREAS, no additional funding is required as Kwik Trip, Incorporated has undertaken the necessary legal work for the easement; and

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Webster City, Hamilton County, Iowa, as follows:

SECTION 1: The City Council hereby authorizes the establishment of a permanent electrical easement from Kwik Trip, Incorporated, to allow the City to provide underground electrical service to the site of the new store located in Outlot D, Outlot E, and Former Railroad Right-of-Way in Lawn Hill Addition.

SECTION 2: The Line Department is hereby authorized to proceed with the necessary actions to implement the establishment of the electrical easement, including but not limited to boring or trenching new electric in the easement granted.

SECTION 3: The Mayor and City Clerk are authorized to execute any and all documents necessary to effectuate the establishment of the permanent electrical easement.

Passed and adopted this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST:

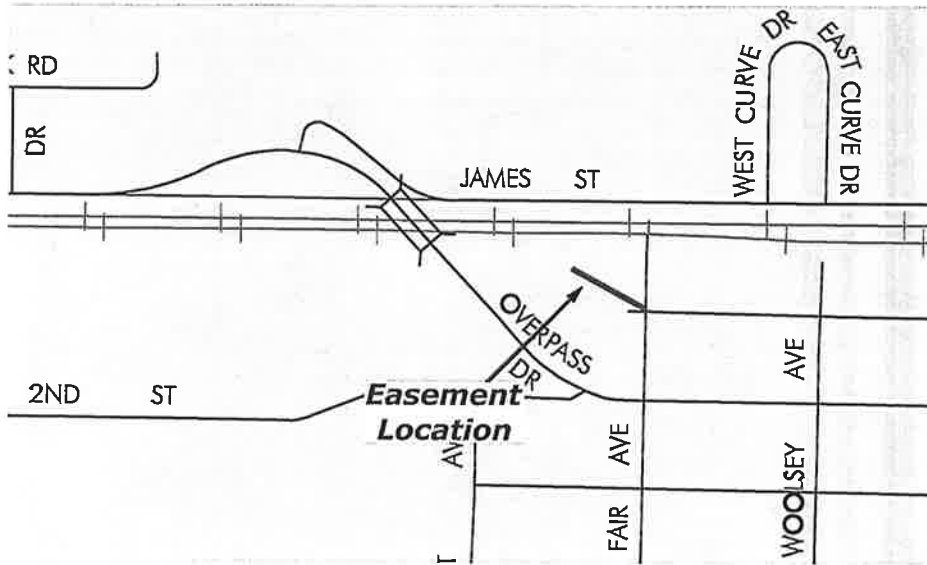
Karyl K. Bonjour, City Clerk

Exhibit "A"

Index Legend	
Prepared by & Returned to: Joseph A. Snethen, PLS 23133 805 Buddy Holly Place Clear Lake, Iowa 50428 Phone: 641-231-8092	
Proprietor(s): Kwik Trip, Inc.	
Requested By: Jeff Osgood w/Kwik Trip, Inc.	
County: Hamilton	City: Webster City
Subdivision(s): Lawn Hill Addition	
Block(s): Outlot D & Outlot E	

Easement Plat

Utility Easement in Outlot D, Outlot E, and the Former Railroad Right-of-Way all in Lawn Hill Addition, City of Webster City, Hamilton County, Iowa.



Webster City

Basis of Bearing:

The Coordinate Basis for this survey and the subsequent Basis of Bearing is the Iowa State Plane Coordinate System North Zone (1401) Horizontal Control NAD 83 (1996), (U.S. Survey Foot), Vertical Control NAVD88 (Geoid 99C). Control was acquired by localizing into the Hamilton County GPS Control System utilizing Points 15, 16, 17, 21, 22, 23 and projecting from the cross of 15-23 and 17-21.

Scale factor 1.000095316 applied.

Projection Point:
Northing = 3,627,004.25'
Easting = 4,836,269.51'

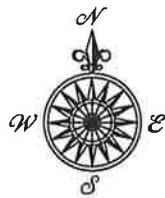
Notes:

References are hereby made to any Recorded Documents, if indicated on this Easement Plat.

See Sheet 1 for Location Map.
See Sheet 2 for Easement Details
and for Easement Legal Description(s).

Map Not to Scale

Map Courtesy of the Iowa Department of Transportation <http://www.iowadot.gov/maps/>



LEGEND

♥	= Fd. 5/8"Ø Rebar w/BPC PLS 23133
◇	= Calculated Position
---	= Easement Boundary Line
RPC, YPC, OPC, BPC	= Red, Yellow, Orange, Blue Plastic Cap
(0.00')	= Recorded Dimension

Fieldwork was completed on March 16, 2023.

FB: Hamilton 6, Page(s) 1-3

JAS | Project Number: 2023-303

Sheet: 1 of 2



Herold-Reicks Surveying

New Hampton Waverly Clear Lake
641-394-2725 319-483-5187 641-231-8092
www.hrsurveying.com



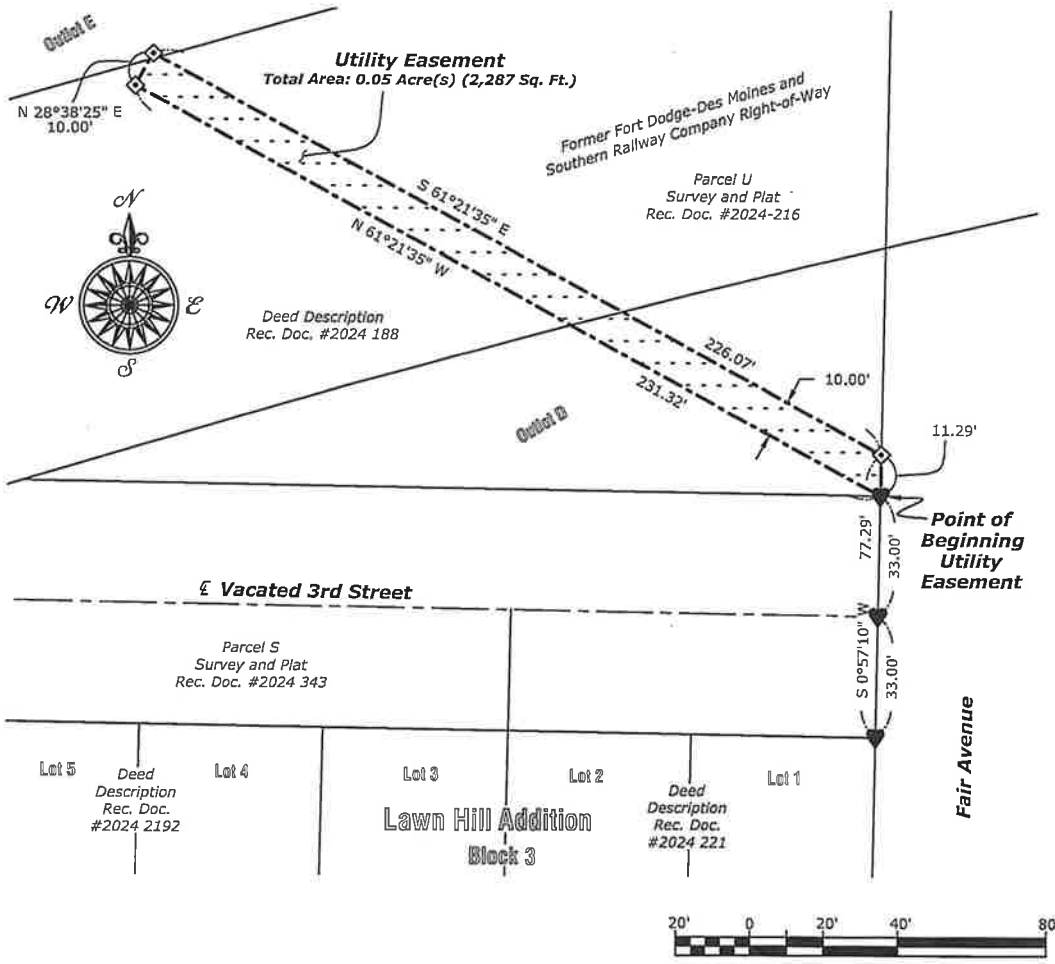
562 of 664

I hereby certify that this land surveying document was prepared 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.
Joseph A Snethen Digitally signed by Joseph A Snethen
Date: 2024.04.10 15:50:39 -05'00'

Joseph A. Snethen Date:
License number 23133
My license renewal date is December 31, 2024.
Sheets covered by this seal: 1-2

Easement Plat

Utility Easement in Outlot D, Outlot E, and the Former Railroad Right-of-Way all in Lawn Hill Addition, City of Webster City, Hamilton County, Iowa.



Easement Description(s):

Utility Easement being 10 Feet in width in Outlot D, Outlot E, and being part the Former Railroad Right-of-Way all in Lawn Hill Addition, City of Webster City, Hamilton County, Iowa and being more particularly described as follows;

Beginning at the Southeast Corner of Outlot D, Lawn Hill Addition to the City of Webster City;

Thence **North 61°21'35" West, 231.32 feet;**

Thence **North 28°38'25" East, 10.00 feet;**

Thence **South 61°21'35" East, 226.07 feet** to the West Right-of-Way Line of Fair Avenue;

Thence **South 00°57'10" West, 11.29 feet** along said West Right-of-Way Line to the Point of Beginning.

Containing **0.05 Acre(s) (2,287 Square Feet)**, subject to any other easements recorded or unrecorded.

Note: The Bearings and Distances indicated in this Legal Description are to the Monuments "Found or Set" as indicated on the attached "Easement Plat" and the calls along the courses in this Description are to those Monuments as indicated.

References are hereby made to any Recorded Documents, if indicated on this Easement Plat.



MEMORANDUM

TO: Mayor and City Council

FROM: Brandon Bahrenfuss, Street Department Supervisor
John Harrenstein, City Manager

DATE: May 20, 2024

RE: Adopt a Resolution Authorizing the City Manager to Sign and Execute Amendment No. 32 with Snyder and Associates to Provide Professional Services Needed for the 2025 Fair Meadow Drive Reconstruction Project

SUMMARY: The Scope of this service is to provide preliminary and final design, topographic and boundary survey, utility coordination, public engagement, plan preparation, contract documents, bid assistance services, and construction services for the 2025 Fair Meadow Drive Reconstruction Project.

PREVIOUS COUNCIL ACTION: The Council approved agreement with Snyder and Associates to provide On-Call Paving Specialist Services on February 6, 2017. This was part of the 2024-2025 Capital Improvement Plan brought to Council on April 15, 2024.

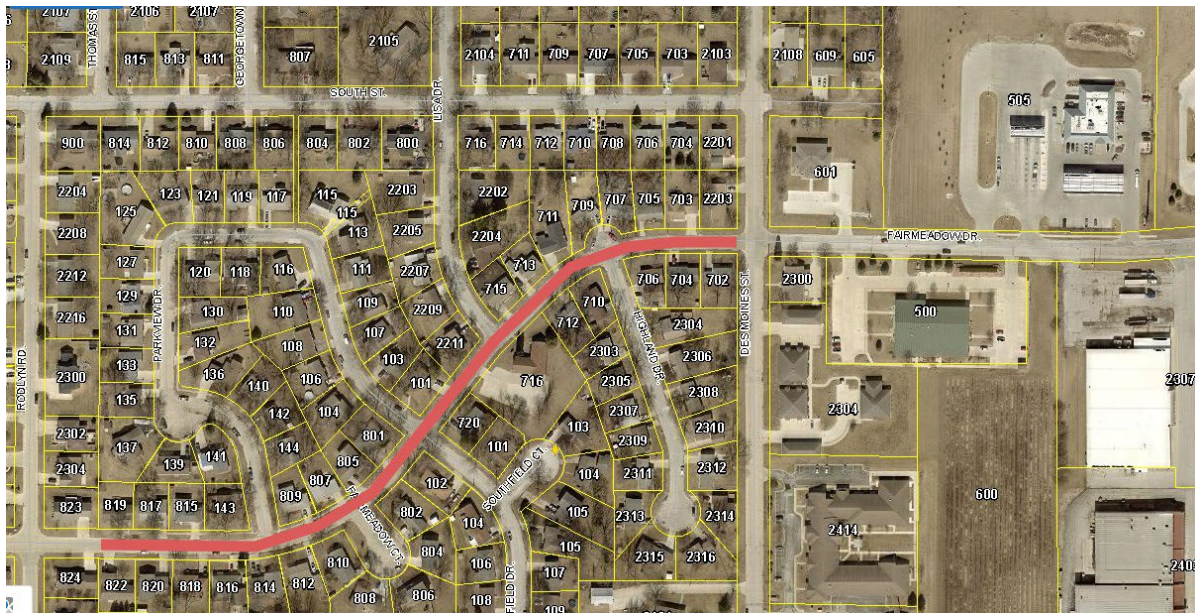
BACKGROUND/DISCUSSION: The rehabilitation and maintenance of various local roads is critical to ensuring a healthy circulation of vehicles throughout the City. Local roads serve as transportation modes for multiple types of vehicles to move throughout the City. The Pavement Condition Index (PCI) report collected in 2021 classifies this road as fair and poor condition. These poor conditions require constant pothole patching and yearly dura-patching and this is temporary. With lots available in Brewer Creek 5 & 6 addition, this roadway will only get busier as more homes start to be built. Throughout this stretch of road, infrastructure will also be addressed including water, sanitary, and storm sewer. All Sanitary Sewer mainline/manholes will be slip lined (CIPP), all Storm Sewer intakes will be replaced with the addition of new inlets and sub-drain, and Water Main will be replaced and upsized. Sump pump water will be discharged in the new sub-drain to prevent water sitting on the roadway.

This project will consist of new PCC curb and gutter and HMA (asphalt) pavement. Sidewalks will be constructed along the southerly right of way where not present today in order to make continuous throughout the length of the project. Pedestrian ramps will be installed or replaced as required. This stretch of water main has had eight water main breaks over the years requiring a replacement of 6" cast iron pipe with 8" PVC. Any lead service lines will be addressed at this time. The sanitary sewer will be slip lined from Rodlyn Rd. to Des Moines St. and one brick manhole is scheduled to be replaced. Orangeburg sanitary sewer services will be replaced from the mainline to the right-of-way during construction. Finally, the storm sewer system will be evaluated and analyzed via sewer video footage to determine what needs to be replaced, upsized and/or added to the collection system. All brick storm sewer manholes will be replaced with new structures or rehabbed to last another 50-75 years.

This project is slated for an early December 2024 letting with Spring/Summer 2025 construction.

FINANCIAL IMPLICATIONS: The estimated cost for Amendment No. 32 is \$340,600. Funding for the cost is allocated to the CIP Fund (Sales Tax). As identified in the adopted 24/25 budget, this project is anticipated to be funded with at General Obligation Bond sold in the next fiscal year. While engineering fees will be incurred prior to the bonds being sold, the city will recoup these funds through a reimbursement resolution to be adopted by the Council in the near future.

RECOMMENDATION: Staff recommends the City Council adopt a resolution approving Amendment No. 32 with Snyder and Associates.



RESOLUTION NO. 2024 - xxx

RESOLUTION AUTHORIZING THE CITY MANAGER TO SIGN AND EXECUTE AMENDMENT NO. 32 WITH SNYDER AND ASSOCIATES TO PROVIDE PROFESSIONAL SERVICES NEEDED FOR THE 2025 FAIR MEADOW DRIVE RECONSTRUCTION PROJECT

WHEREAS, on February 6, 2017 the City of Webster City did enter an On-Call Street Paving Specialist Agreement with Snyder and Associates, Inc. Ankeny Iowa; and

WHEREAS, the City of Webster City will utilize the services of its consulting engineer, Snyder and Associates, to perform services noted in the attached as Exhibit "A";

WHEREAS, said professional services shall be governed by and construed in accordance with the laws of the State of Iowa and local municipal code; and

NOW THEREFORE BE IT RESOLVED, by the City Council of the City of Webster City, Iowa as follows:

SECTION 1: Authorizes the City Manager to sign and execute amendment number 32 with Snyder and Associates to provide professional services needed for the 2025 Fair Meadow Drive Reconstruction Project.

Passed and adopted this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk

WEBSTER CITY, IOWA

AMENDMENT No. 32 TO THE AGREEMENT FOR PROFESSIONAL SERVICES FOR THE ON-CALL STREET PAVING SPECIALIST

This Amendment to the Agreement for Engineering Services is made and entered into on the date hereinafter stated under City's signature, between the City of Webster City ("City"), Iowa, and Snyder & Associates, Inc. ("Professional").

For work on the On-Call Street Paving Specialist, the parties agree as follows:

1. **Engagement.** The City hereby engages the Professional to perform work necessary to provide all services as described in the Scope of Work in connection with this Amendment to the Contract.
2. **Scope of Work.** The Professional shall perform in a competent and professional manner, the scope of work as set forth in **Exhibit "A"** attached hereto and by reference incorporated herein.
3. **Completion.** The Professional shall commence work immediately upon receipt of a written notice from the City and complete the Scope of Work in an expeditious and professional manner as set forth in **Exhibit "B"** attached hereto and by reference incorporated herein.
4. **Payment.** The prices for work performed by the Professional on this Amendment shall not exceed those prices as set forth in **Exhibit "C"** attached hereto and by reference incorporated herein.
5. **Fee Schedule.** Billing rates for work performed under this Agreement shall be in accordance with **Exhibit "D"**.
6. **Project Location Maps.** Project location maps depicting the limits and Scope of Work are included in this Agreement as **Exhibit "E"**.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Amendment to the Agreement. All provisions of the Agreement shall remain in full force and effect.

CITY OF WEBSTER CITY, IOWA

John Hawkins, Mayor

Dated: May 20, 2024

SNYDER & ASSOCIATES, INC.

EXHIBIT “A” SCOPE OF WORK

To accomplish the City’s mission of providing quality street, alley, electric, water, wastewater, and storm water services for its customers, it owns and maintains streets and alleys with appurtenant structures, electric facilities with appurtenant structures, water treatment and distribution systems, wastewater collection and treatment systems and storm water collection systems within public rights-of-way.

I. GENERAL

2025 FAIR MEADOW DRIVE RECONSTRUCTION PROJECT

This Scope of Services is for the topographic and boundary survey, preliminary and final design, utility coordination, public engagement, plan preparation, contract documents, bid assistance services, and construction services for the 2025 Fair Meadow Drive Reconstruction Project, to be known as the Project. The Project consists of water main replacement, pavement reconstruction with PCC curb and gutter and HMA pavement, additional sidewalks and pedestrian ramps, sanitary sewer lining, storm sewer, and associated structure adjustments and replacements from Rodlyn Road to Des Moines Street.

Fair Meadow Drive reconstruction begins approximately 150’ east of the Rodlyn Road intersection and ends about 40’ west of the Des Moines Street intersection. Adjacent intersections in the project corridor will also be reconstructed. Current driveways will be replaced within the right-of-way. The half moon at the end of Highland Drive will be removed to maintain a consistent street width and current drives will be extended to the new curb location.

Sidewalks will be constructed along the southerly right of way where not present today in order to make continuous throughout the length of the Project. Pedestrian ramps will be installed or replaced as required. In order to meet ADA sidewalk requirements, some driveways where sidewalks are not currently present will also be replaced and extended beyond the right-of-way limits to accommodate current ADA requirements.

The Project also includes replacing the 6” cast iron water main from Rodlyn Road to Des Moines Street with an 8” PVC water main. Associated intersection mains, valves and all services beneath the new roadway pavement will be replaced. Two fire hydrants will be replaced and three additional installations are anticipated to meet hydrant separation distances.

Cured in Place (CIPP) sanitary sewer main lining will be included from near Rodlyn Road continuing to the first manhole beyond Des Moines Street. One brick manhole replacement is planned. Orangeburg sanitary sewer services encountered will be replaced within the right-of-way.

The current storm sewer system sufficiency will be analyzed and evaluated. If the current system is adequate a new main will be extended from Fair Meadow Court to new intakes located west of Parkview Drive. If the existing storm sewer system is determined to be undersized then new intakes placed west of Parkview Drive will be connected to a new storm sewer main extending to an existing intake on the southwest corner of Rodlyn Road. Replaced and added storm intakes will be included for the balance of the Project. All brick manholes will be removed and replaced. The existing storm sewer pipes will be videoed and reviewed to determine if they are in good condition to remain in place.

Coordination with utility companies and property owners to facilitate relocations, permitting, and construction of the improvements will be required.

The staging plan will maintain access to residences during construction except for limited periods. It is anticipated detour routing via Rodlyn Road and South Street will be required. Access for Fair Meadow Court, Parkview Drive and Highland Drive will be maintained and coordinated with construction activities.

One plan set will be prepared for the Project. An early December 2024 letting is with a Spring/Summer 2025 construction.

II. BASIC SERVICES

A. PROJECT DEVELOPMENT

An initial project meeting will be held with the City to establish lines of communication regarding elements of the scope and schedule, set design parameters for the Project, and review replacement locations. Additional meetings will be held for the purpose of reviewing design, coordinating with design professionals for other projects in the area, coordinating with utility companies and reviewing budget considerations as the Project progresses.

B. PROJECT ADMINISTRATION

For the duration of the project, the Professional will confer with the City for the purpose of accomplishing the following:

1. Necessary project coordination efforts by the Professional to assure proper integration of participation levels from the Professional's staff, the City, Stakeholders in the project area, developers, and necessary agencies. A Project Management Team (PMT) will be developed, and periodic meetings will be held to ensure the Project is kept on schedule
2. The Professional shall work with the City to develop a schedule for the project. Anticipated preliminary schedule is outlined in Exhibit "B".
3. The Professional will contact the appropriate utility companies to determine the existing utility locations within the project's construction area and coordinate potholing. This information will be used in the design of the project to determine the impact of the project on each utility. The Professional will work with the City to determine the desirable locations for each new and relocated utility. The Professional will work with each utility to organize and schedule necessary relocations.
4. To obtain from the City, as necessary, approvals and policy decisions regarding the project.
5. The Professional will provide to the City a monthly project status report. This written report will be submitted in such a way that is suitable for the use as a City Council information item. Accompanying this report at monthly intervals, the Professional will submit a certified invoice for allowable cost incurred for the performance of the project agreement. Invoice statements will be based on actual cost incurred by the Professional per invoice period. All invoices will be documented, detailing the work performed by the Professional during the invoice period.

C. PRELIMINARY SURVEY

The Professional will complete a detailed topographic survey to gather necessary information for design and plan preparation. The survey will be reduced to prepare a base map and digital terrain model. Typical information gathered will include existing roadway centerlines and profiles, location of existing features, spot elevations, and utility locations. Boundary retracement surveys will be performed to establish property corner locations for use in calculating existing right of way.

The utility portion of the survey shall be created using the field survey and information provided to the Professional from the utility owners by either existing record and or physical field locates. The Professional shall make a diligent attempt to make an accurate representation of underground utilities, vaults, and related items but no guarantee can be made as to the condition or location horizontally or vertically between each structure. This portion of the topographic survey would constitute a level "C" utility survey as outlined by the Subsurface Utility Engineering profession.

D. DESIGN, PLANS, AND CONTRACT DOCUMENTS

The Professional will prepare design and plan documents for the Project for review, comment, and coordination. The Project plans will address significant project features such as alignment and grade, driveway and side road connections, drainage, water main, sanitary sewer, staging, accommodation of utilities, traffic control, maintenance of access, and other design issues that would affect the limits of construction and the right of way and easement needs for the Project. Meetings will be held with the City to review the design.

Geotechnical Services have not been included with the design but may be warranted for consultation during construction activities to evaluate subsurface conditions. Pavement coring services have not been included but existing pavement depths will be established by hand drilling methods.

Water main design will be based on SUDAS 2024 Design Standards. Pavement design will be based on client direction, with pavement life estimated by ESALs.

The Professional will prepare plans for bidding in accordance with the City's process. Plan sets will include construction details, layout information, tabulations, and quantities. Production will include submittal of final plans, and contract documents for review and approval. All plans will be created on bond paper, with an 11" x 17" size. Final Plans will be certified by a Licensed Professional Engineer, licensed in the State of Iowa.

This Project will be let by the City, and the Professional shall supply the necessary documents for this process. The Professional shall prepare the final special provisions to be included in the contract documents. Also included in the special provisions will be working day and liquidated damage requirements and project related information for the NPDES permit requirements, when applicable.

The Professional will obtain all required permits from the Iowa Department of Natural Resources. Permit fees will be reimbursed by the City to the Professional.

The Professional will prepare final cost opinions based on the final plans. Opinions of probable construction cost prepared by the Professional represent the best judgment of a design professional familiar with the construction industry. It is recognized, however that the Professional has no control over the cost of labor, materials or equipment over the contractor's methods of determining bid prices, or over the competitive bidding or market conditions. Accordingly, the Professional does not guarantee that any actual cost will not vary from any cost opinion prepared by the Professional.

E. PUBLIC INFORMATION MEETING

The Professional will coordinate, facilitate, and present one (1) public informational meeting to encourage public input and provide a forum for area residents and business owners to voice questions or concerns. Additionally, the Professional shall meet with, from time to time, individual City Council members to explain the project, provide updates on the schedule and budget, and gather input into the project development phase. Informational meetings will focus on presenting the preliminary design status, funding sources, and will be held during the development of the design, based on direction from the City. Input will be gathered from adjacent property owners regarding the phasing of the improvements and maintenance of access to their properties during construction.

F. TEMPORARY CONSTRUCTION EASEMENT EXHIBITS

Exhibits will be prepared for the City to acquire temporary construction easements for twenty (20) parcels. Most locations are related to the construction of sidewalks and ramp with some tied to the water main replacement. Exhibits will be prepared for the City to acquire the temporary construction easements. Right of way services for permanent acquisitions are not included within the Scope of Services, and, if necessary, may be added by amendment.

G. BID PHASE SERVICES

The Professional shall supply the necessary documents for the Project that will be let by the City. The administrative documents conforming to the City's standards will be supplied by the City and will be formally prepared for the project by the Professional. The Professional shall prepare the final special provisions to be included in the contract documents. Also included in the special provisions will be working day and liquidated damage requirements and project related information for the NPDES permit requirements provided by the City to be included in the special provisions.

The Professional shall answer questions from potential contractors, subcontractor and suppliers, and coordinate with City staff during this phase of services. Written documentation of discussions with plan holders shall be provided to the City. The Professional shall prepare and distribute all necessary addenda prior to receiving bids, with assistance from the City.

The Professional shall attend the meeting at which bids are received, tabulate the bids, and make recommendations to the City Council regarding the awarding of the construction contract to the lowest qualified bidder.

III. CONSTRUCTION SERVICES

A. CONSTRUCTION ADMINISTRATION

Upon award of the initial construction contracts, the Professional shall perform the following administrative services during construction of the Project:

1. During the construction phases, the Professional shall specify the testing of materials and administrative procedures as per the City's requirements and as directed by the Professional.
2. Public Communication, the Professional will review and approve the Contractor's handbills and door hanger notices prior to distributing to residents and businesses affected by the construction.
3. Preconstruction Conferences - The Professional shall arrange and conduct preconstruction conferences with the Contractors and City, to review the contract requirements, details of construction, utility conflicts and work schedule prior to construction.
4. Site Observation – The Professional shall visit the construction site, at such times and with such frequency deemed necessary to (a) observe the progress and (b) determine if the results of the construction work substantially conforms to the drawings and specifications in the Construction Documents.
5. Contractor Payment Requests - The Professional shall review the requests of the contractor for progress payments and shall approve a request, based on site observations, which authorizes payments and is a declaration that the contractor's work has progressed to the point indicated.
6. Notification of Nonconformance - The Professional shall notify the City of any known work which does not conform to the construction contract, make recommendations to the City for the correction of nonconforming work and, at the request of the City, see that these recommendations are implemented by the contractor.
7. Shop Drawings - The Professional shall review shop drawings and other submissions of the Contractor for general compliance with the construction contract.
8. Change Orders - The Professional shall prepare change orders for approval of the City.
9. Substantially Complete and Final Site Observation - The Professional shall perform a site observation to determine if the Project is substantially complete according to the plans and specifications and make recommendation on final payment for each construction phase.
10. During the Construction Services Phase, the Project Manager shall confer with the City to report Project status. A written progress report shall be submitted and written in such a way that it is suitable for use as a City Council information item.
11. If the Contractor exceeds the estimated working days in completing construction of the Project for any of the Project lettings, or if change orders or project additions require additional working days, the Professional will be compensated for administration and observation services based on established hourly rates and fixed expenses, as agreed, and amended by the parties to this Agreement.

12. Final Acceptance - It is understood that the City will accept any portion of the Project only after recommendation by the Professional. Final acceptance of the Project by the City shall not be deemed to release the contractor from responsibility for insuring that the work is done in a good and workmanlike manner, free of defects in materials and workmanship nor the Professional for liability of design.

B. CONSTRUCTION OBSERVATION

The Professional will provide one or more Construction Observer for the project during the construction phase. This may be periodic or full time as determined by the Professional based on the type of construction activity and contractor's schedule. At a minimum observation will include the beginning portions of all phases and full-time services during paving, curb and gutter replacement, sidewalk and pedestrian ramp construction, water main and storm sewer construction. Examples of periodic observation services for this project include traffic control setups, grading, fixture adjustments, erosion control placement, and surface restoration.

If the contractor requests a waiver of any provisions of the plans and specifications, the Professional will make a recommendation on the request to the City for their determination. No waiver shall be granted if such waiver would serve to reduce the quality of the final product. The City shall never be deemed to have authorized the Professional to consent to the use of defective workmanship or materials.

The Construction Observer will give guidance to the project during the construction periods, including the following:

1. Setting and/or checking of lines and grades required during construction.
2. Observation of the work for general compliance with plans and specifications.
3. Keep a record or log of Contractor's activities throughout construction, including notation on the nature and cost of any extra work or changes ordered during construction.
4. Resident Construction Services provide the City with representation at the job site during the Construction Phases of the Project which results in increasing the probability that the Project will be constructed in substantial compliance with the plans and specifications, and Contract Documents. However, such Resident Construction Services do not guarantee the contractor's performance. Resident services do not include responsibility for construction means, controls, techniques, sequences, procedures, or safety.
5. The Resident Engineer or Construction Observer shall coordinate the acceptance testing and monitoring according to City requirements. Concrete field air and slump tests required will be completed by the Construction Observer. Moisture and density control tests will be required by the contractor. Assurance sampling, testing and source inspection required is not expected to be provided by the Professional. All material testing and inspection shall be provided either by the Professional or by the construction contractor with review for acceptance or denial by the Professional.

C. CONSTRUCTION SURVEY

The Professional shall perform Construction Survey for the Project as specified in 2024 Iowa SUDAS Standard Specifications Division 11 Section 11,010.

D. RECORD DRAWINGS

Record Documents – The Professional shall furnish reproducible record documents for the Project according to City requirements. Such as-builts may contain a waiver of liability phrase in regard to unknown changes made by the contractor without City/Professional approval. All material testing and inspection shall be provided either by the Professional or the construction contractor with review for acceptance or denial by Professional.

E. MONUMENT PRESERVATION SURVEY

The Professional shall prepare a Monument Preservation Certificate in accordance with Iowa Code 355.6A. This document may include, but not be limited to, identifying the existing monuments within the project corridor, and replacing any monument disturbed or removed at its preserved position. Replacement of property pins with sidewalk and water distribution system improvements is anticipated. The results of this survey will be provided to the City for their record and recorded with the Hamilton County Recorder’s Office.

IV. ADDITIONAL SERVICES:

The following items shall be considered additional services and are not included within the Scope of Services. These items are listed to further assist with clarity of project scope as well as provide a listing of services, which the Professional could perform upon request.

- A. Assessment Plats and Schedules
- B. Permanent Easement Plats and/or Acquisition Plats
- C. Right-of-way Services
- D. Submittal fees and/or permit fees to any and all regulatory agencies
- E. Environmental Services
- F. Geotechnical Services
- G. Utility Potholes
- H. Title Reports
- I. Client requested major revisions

All work is on an “as needed” basis and work on each Project shall be as directed by the City. Costs for each project assigned shall be negotiated as ‘lump sum,’ ‘not to exceed,’ or performed on a ‘time and materials’ basis, as mutually agreed and detailed in Exhibit “C.”

J. BOONE STREET HMA RESURFACING (DES MOINES ST TO WILLSON AVE)

This Amendment also includes the addition of a third bid add alternative to the Fiscal Year (FY) 2025 HMA Improvements Project. This bid alternative will include the design, plans, and contract document modifications to include this block of HMA resurfacing along Boone Street between Des Moines Street and Willson Avenue. This information will be included and bid with the FY 2025 HMA Improvements Project.

Responsible persons assigned to this project shall be:

City – Brandon Bahrenfuss, Street Department Superintendent
Dedra Nerland, Public Works Management Assistant

Professional – John Haldeman, P.E., Project Manager

EXHIBIT “B” COMPLETION

Professional shall commence work immediately upon receipt of a written Notice to Proceed from the City and shall complete all phases of the Scope of Work as expeditiously as is consistent with professional skill and care and the orderly progress of the Work in a timely manner. Project schedule assumes no significant franchise utility relocation delays are experienced.

The anticipated preliminary schedule for the Project is as follows:

Task	Completion Date
City Council Approve Contract	May 20, 2024
Complete Topographic and Boundary Survey	June 21, 2024
PMT Mtg #1 to review survey & design progress	July 9, 2024
Submit Preliminary Plans (60%)	August 2, 2024
PMT Mtg #2 to review preliminary plans	August 6, 2024
Public Information Meeting	August 13, 2024
Submit Check Plans (100%)	September 17, 2024
PMT Mtg to review check plans	October 8, 2024
IDNR Permit*	October 8, 2024
Temporary Easements Obtained by City	November 1, 2024
Complete Final Plans and Contract Documents	November 1, 2024
City Council set Letting and Hearing Dates	November 4, 2024
Bid Letting	December 2, 2024
Memo – Engineer Letter of Recommendation	December 4, 2024
City Council Hearing / Review Bids / Contract Award	December 16, 2024
Preconstruction Meeting	April 2025
Start Construction	April 21, 2025
End Construction	November 7, 2025

* It is anticipated the IDNR Water Permit can take 4-6 weeks to acquire.

**Project schedule assumes minimal franchise utility relocations are required and can be completed prior to April 2025.

N/A = Not Applicable

Upon request of the City, Professional shall submit, for the City's approval, a schedule for the performance of Professional's services which shall be adjusted as required as the project proceeds, and which shall include allowances for periods of time required by the City for review and approval of submissions and for approvals of authorities having jurisdiction over the project. This schedule, when approved by the City, shall not, except for reasonable cause, be exceeded by the Professional.

All other incidental completion dates required to complete work under this Agreement shall be adhered to as stipulated.

**EXHIBIT “C”
PAYMENT**

COMPENSATION

Below is a table summarizing the Professional’s fees for the scope of services outlined in this Exhibit “A”. Fees will be invoiced and paid on an hourly rate plus expenses basis not to exceed amount and rates will be accrued in accordance with the Professional’s 2024 Standard Fee Schedule contained in Exhibit “D” of this Amendment No. 32 to the Agreement for Professional Services.

Basic Services

Project Administration	\$	24,500
Preliminary Survey	\$	14,500
Preliminary Design and Plans	\$	78,600
Final Design and Plans	\$	53,700
Public Information Meeting	\$	3,500
Temporary Easement Exhibits (x20)	\$	5,000
Bid Letting Services	\$	4,200
Subtotal	\$	184,000

Construction Services

Construction Administration	\$	23,300
Construction Observation	\$	101,600
Construction Staking	\$	15,000
Record Drawings	\$	5,500
Monument Preservation Survey	\$	2,500
Subtotal	\$	147,900

Additional Services

Right-of-Way and Permanent Easement Plats	\$	By Amend
Title Reports	\$	By Amend
Permit Fees and Direct Expenses	\$	At Cost
Design and Plans for Bid Alternate 3 on FY 2025 HMA Improvements Project	\$	8,700
Subtotal	\$	8,700

Amendment No. 32 Total **\$ 340,600**

STANDARD FEE SCHEDULE

PROFESSIONAL

Engineer, Landscape Architect, Land Surveyor, GIS, Environmental Scientist
 Project Manager, Planner, Right-of-Way Agent, Graphic Designer

Principal II	\$252.00/hour
Principal I	\$237.00/hour
Senior	\$216.00/hour
VIII	\$198.00/hour
VII	\$187.00/hour
VI	\$178.00/hour
V	\$166.00/hour
IV	\$153.00/hour
III	\$141.00/hour
II	\$128.00/hour
I	\$115.00/hour

TECHNICAL

CAD, Survey, Construction Observation

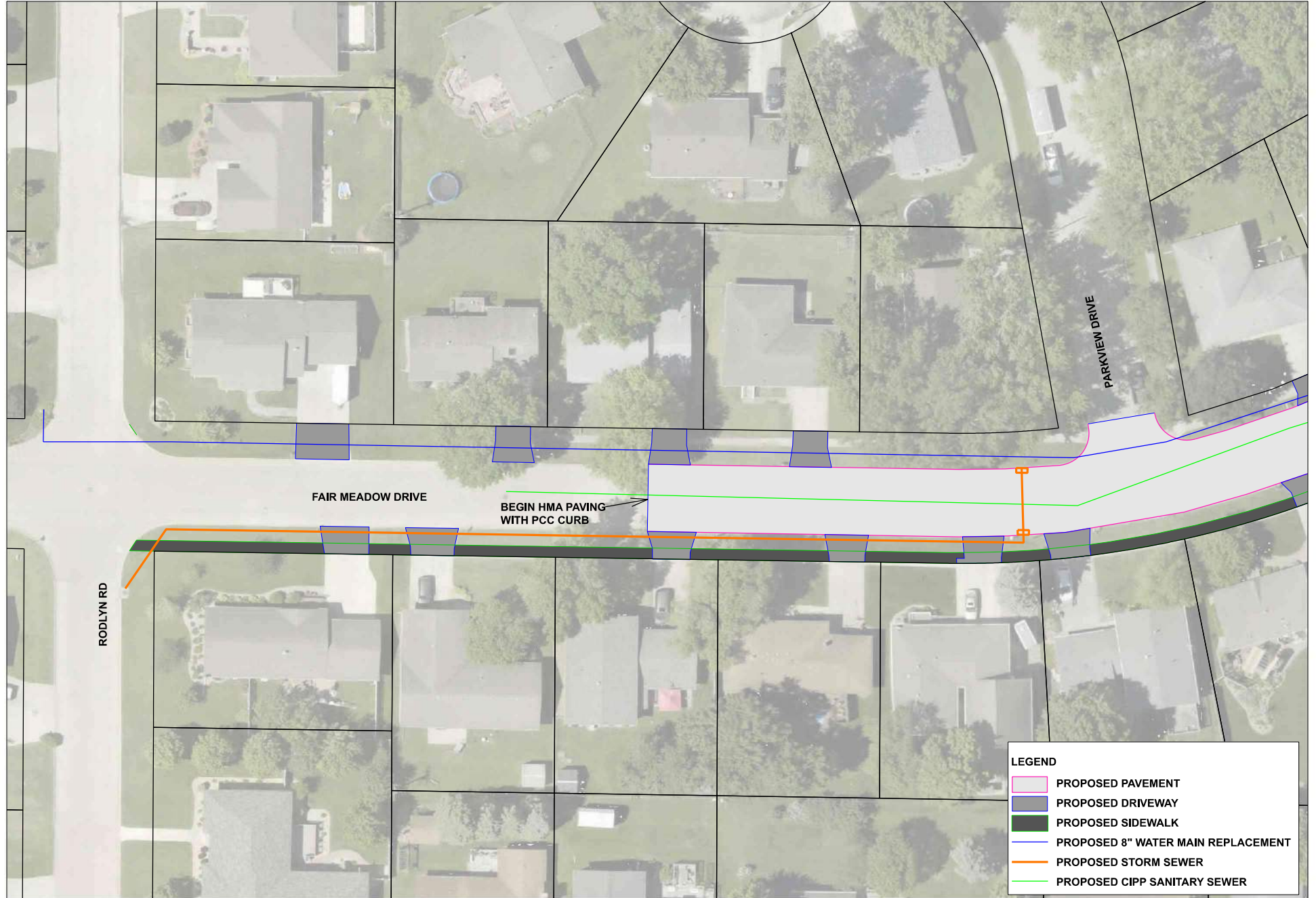
Lead	\$150.00/hour
Senior	\$144.00/hour
VIII	\$134.00/hour
VII	\$124.00/hour
VI	\$111.00/hour
V	\$101.00/hour
IV	\$91.00/hour
III	\$82.00/hour
II	\$75.00/hour
I	\$66.00/hour

ADMINISTRATIVE

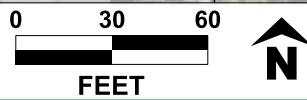
II	\$77.00/hour
I	\$63.00/hour

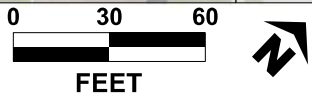
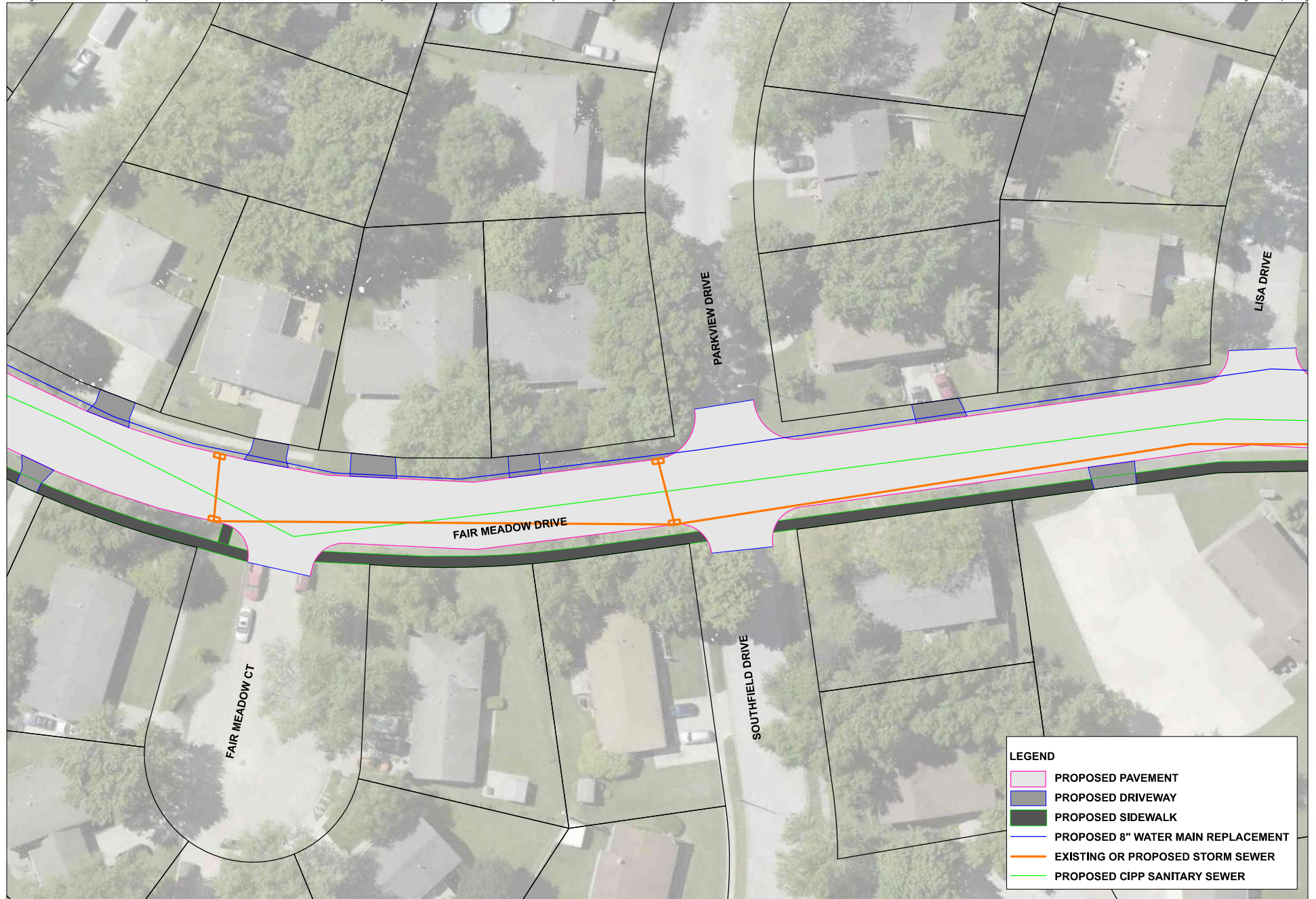
REIMBURSABLES

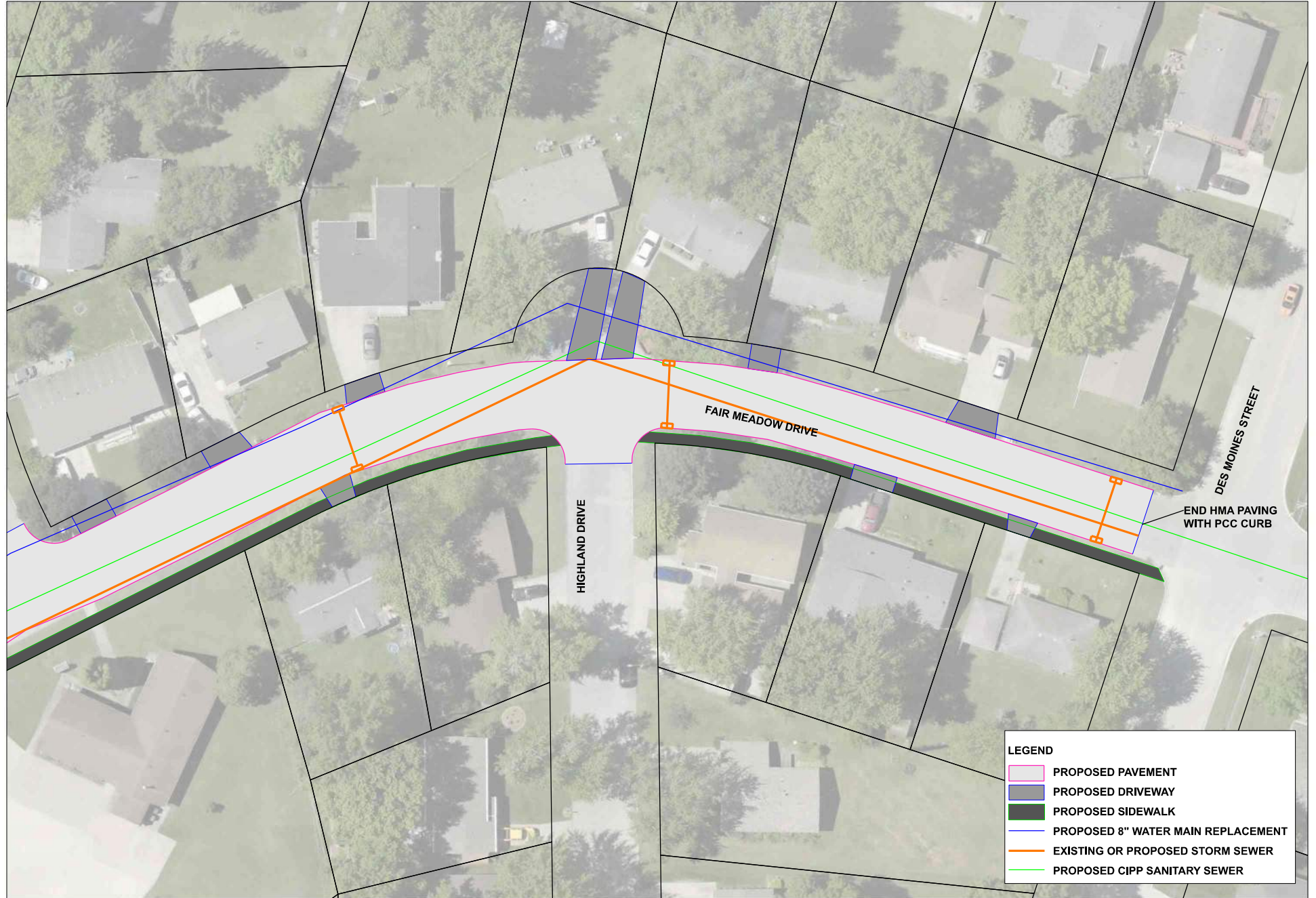
Mileage	Current IRS standard rate
Outside Services	As Invoiced



LEGEND	
	PROPOSED PAVEMENT
	PROPOSED DRIVEWAY
	PROPOSED SIDEWALK
	PROPOSED 8" WATER MAIN REPLACEMENT
	PROPOSED STORM SEWER
	PROPOSED CIPP SANITARY SEWER







**CITY OF WEBSTER CITY, IOWA
500 CAPITAL IMPROVEMENT RESERVE FUND / SALES TAX FUND
2024-2025 PROPOSED BUDGET**

100% of revenues will be applied directly to public safety expenditures, public infrastructure, public parks, sports & recreational facilities and trails, and public library use within the City of Webster City*

	2021-2022	2022-2023	2023-2024	2023-2024	2024-2025	+/-	2025-2026	2026-2027	2027-2028	2028-2029	COMMENTS
REVENUES	ACTUAL	ACTUAL	BUDGET	AMENDED	PROPOSED	PRIOR YEAR	FORECAST	FORECAST	FORECAST	FORECAST	
Interest	22,942	46,480	40,000	52,000	40,000	(12,000)	40,000	40,000	40,000	40,000	
Local Option Sales Tax	1,069,561	1,264,744	1,000,000	1,250,000	1,200,000	(50,000)	1,200,000	1,200,000	1,200,000	1,200,000	
Miscellaneous		8,270									
Grants (Beach Street)											
Proceeds 2021A GO Bonds	152,029				160,000	160,000	850,000				
TOTAL REVENUES	1,244,532	1,317,494	1,040,000	1,302,000	1,400,000	90,000	2,090,000	1,240,000	1,240,000	1,240,000	
EXPENDITURES											
Annual Rehab Concrete Panels					250,000	250,000	1,100,000	250,000	250,000	250,000	Replace Concrete Panels
Payment Preservation (Surface Rehab/preservation)			150,000	150,000	150,000		150,000	150,000	150,000	150,000	
Concrete Replacement HMA projects			100,000	100,000	250,000	150,000	43,000	28,000	26,500	30,000	Curb, etc.
Elm/Cedar HMA				202,000		(202,000)					Des Moines to Wilson, Seneca to Wilson
Water Street HMA					376,100	376,100					Funk to Prospect
Boone Street HMA					391,000	391,000					Grove to Des Moines
Brewer/Wilson HMA & Water, Storm					950,000	950,000					Ohio to Des Moines
East Street HMA					150,000	150,000					Des Moines to Top of Hill
Bell & High Street HMA					270,000	270,000					2nd Street to Buxton
3rd street HMA					110,000	110,000					Grove to Broadway
HMA Future Years							427,000	272,000	273,500	330,000	Example: 3rd street, Locust, Kantor, Union, etc.
Pavement Preservation Subtotal	-	-	250,000	452,000	2,897,100	2,445,100	1,720,000	700,000	700,000	760,000	
2020 Str Improvement Project	(13,570)										
2021 2nd street project	594,276	10,645			160,000	160,000					
Lincoln Drive Reconstruction		152,029		600,000							
Fairmeadow-Superior to Des Moines (Concrete/Storm)											Begin 4/1/24
Street Improvement Projects	580,706	162,674	-	600,000	160,000	160,000	-	-	-	-	
Fairmeadow 1 Debt Service				130,000			130,000	130,000	130,000	130,000	Superior to Des Moines
Fairmeadow 2 Debt Service							240,000	240,000	240,000	240,000	Des Moines to Redlyn
Hillcrest Debt Service								170,000	170,000	170,000	Nadin's Addition
HMA White Fox, Reconstruct 1300-1500 Bank Debt Service									115,000	115,000	HMA
1300-1500 Bank Street Debt Services										115,000	Reconstruction
Debt Service Subtotal	-	-	-	130,000	-	-	370,000	540,000	855,000	770,500	
TOTAL EXPENDITURES	580,706	162,674	250,000	1,182,000	3,057,100	2,605,100	2,090,000	1,240,000	1,355,000	1,530,000	
AUDIT ADJUSTMENT	(246,803)	753,699									
REVENUES OVER (UNDER) EXP.				120,000	(1,657,100)				(115,000)	(290,000)	Must adjust spending
BEGINNING BALANCE				4,002,855	4,122,855		2,465,755	2,465,755	2,465,755	2,360,755	Ties with Audit
ENDING BALANCE				4,122,855	2,465,755	(1,657,100)	2,465,755	2,465,755	2,350,755	2,060,755	
EXPENDITURES AS A % OF FUND BALANCE				34%	81%		11%	19%	17%	13%	

CITY OF WEBSTER CITY, IOWA
500 CAPITAL IMPROVEMENT RESERVE FUND / SALES TAX FUND
2024-2025 PROPOSED BUDGET

100% of revenues will be applied directly to public safety expenditures, public infrastructure, public parks, sports & recreational facilities and trails, and public library use within the City of Webster City"

	2021-2022	2022-2023	2023-2024	2023-2024	2024-2025	+/-	2025-2026	2026-2027	2027-2028	2028-2029	COMMENTS
	ACTUAL	ACTUAL	BUDGET	AMENDED	PROPOSED	PRIOR YEAR	FORECAST	FORECAST	FORECAST	FORECAST	
REVENUES											
Interest	22,942	46,480	40,000	52,000	40,000	(12,000)	40,000	40,000	40,000	40,000	
Local Option Sales Tax	1,069,561	1,264,744	1,000,000	1,250,000	1,200,000	(50,000)	1,200,000	1,200,000	1,200,000	1,200,000	
Miscellaneous		6,270									
Grants (Beach Street)							850,000				
Proceeds 2021A GO Bonds	152,029	-	-	-	160,000	160,000	-	-	-	-	
Bond Proceeds 2025A					1,300,000						Fairmeadow 1
Bond Proceeds 2026A							2,400,000				Fairmeadow 2
TOTAL REVENUES	1,244,532	1,317,494	1,040,000	1,302,000	2,700,000	1,398,000	4,490,000	1,240,000	1,240,000	1,240,000	
EXPENDITURES											
Annual Rehab Concrete Panels					250,000	250,000	1,100,000	250,000	250,000	250,000	Replace Concrete Panels
Payment Preservation (Surface Rehab/preservation)			150,000	150,000	150,000	-	150,000	150,000	150,000	150,000	
Concrete Replacement HMA projects			100,000	100,000	250,000	150,000	43,000	28,000	26,500	30,000	Curb, etc.
Elm/Cedar HMA				202,000		(202,000)					Des Moines to Wilson, Seneca to Wilson
Water Street HMA					376,100	376,100					Funk to Prospect
Booone Street HMA					391,000	391,000					Grove to Des Moines
Brewer/Wilson HMA & Water, Storm					237,500	237,500	712,500				Ohio to Des Moines
East Street HMA					150,000	150,000					Des Moines to Top of Hill
Bell & High Street HMA					270,000	270,000					2nd Street to Buxton
3rd street HMA					110,000	110,000					Grove to Broadway
HMA Future Years							427,000	272,000	273,500	330,000	Example: 3rd street, Locust, Kantor, Union, etc.
Pavement Preservation Subtotal	-	-	250,000	452,000	2,184,600	1,732,600	2,432,500	700,000	700,000	760,000	
2020 Str Improvement Project	(13,570)										
2021 2nd street project	594,278	10,645			160,000	160,000					
Lincoln Drive Reconstruction		152,029	-	600,000							
Fairmeadow-Superior to Des Moines (Concrete/Storm)					1,300,000						Begin 4/1/24
Fairmeadow - Des Moines to Rodalyn					340,000		2,400,000				
Street Improvement Projects	580,708	162,674	-	600,000	1,800,000	160,000	2,400,000	-	-	-	-
Fairmeadow 1 Debt Service					60,000		130,000	130,000	130,000	130,000	Superior to Des Moines
Fairmeadow 2 Debt Service							240,000	240,000	240,000	240,000	Des Moines to Rodlyn
Hillcrest Debt Service								170,000	170,000	170,000	Nadin's Addition
HMA White Fox, Reconstruct 1300-1500 Bank Debt Service									115,000	115,000	HMA
1300-1500 Bank Street Debt Services										115,000	Reconstruction
Debt Service Subtotal	-	-	-	-	60,000	-	370,000	540,000	655,000	770,000	-
TOTAL EXPENDITURES	580,708	162,674	250,000	1,052,000	4,044,600	1,892,600	5,202,500	1,240,000	1,355,000	1,530,000	
AUDIT ADJUSTMENT	(246,803)	753,699									
REVENUES OVER (UNDER) EXP.				250,000	(1,344,600)		(712,500)	-	(115,000)	(290,000)	Must adjust spending
BEGINNING BALANCE				4,002,855	4,252,855		2,908,255	2,195,755	2,195,755	2,080,755	Ties with Audit
ENDING BALANCE				4,252,855	2,908,255	(1,344,600)	2,195,755	2,195,755	2,080,755	1,790,755	
EXPENDITURES AS A % OF FUND BALANCE				404%	72%		42%	177%	154%	117%	



MEMORANDUM

TO: Mayor and City Council

FROM: Brandon Bahrenfuss, Street Department Supervisor
John Harrenstein, City Manager

DATE: May 20, 2024

RE: Adopt a Resolution Providing for Notice of Hearing on Proposed Plans and Specifications and Proposed Form of Contract and Estimate of Cost for the Construction of the FY 2025 HMA Improvements Project.

SUMMARY: The FY 2025 HMA Improvements Project plans and specifications are ready to be sent out for bids. The improvement area includes Bell Avenue & High Street from Buxton Dr. to East Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Street and Third Street from Grove Street to Broadway Street. There are four bid alternatives for this project, they include Water Street from Willson Ave to Seneca Street; Boone Street from Des Moines Street to Willson Avenue; Buxton Drive from Bell Avenue to gravel, and Nokomis Park parking lot. The City Council must set a public hearing in order to proceed with the next step of the project.

PREVIOUS COUNCIL ACTION:

- The Council approved an agreement with Snyder & Associates to provide On-Call Paving Specialist Services on February 6, 2017.
- City Council Approved CIP-CEP Plan for FY 2024-2025 through 2028-2029 on April 15, 2024.
- City Council Approved Amendment 27 to the On-Call Street Paving Specialist Agreement with Snyder & Associates on September 5, 2023.

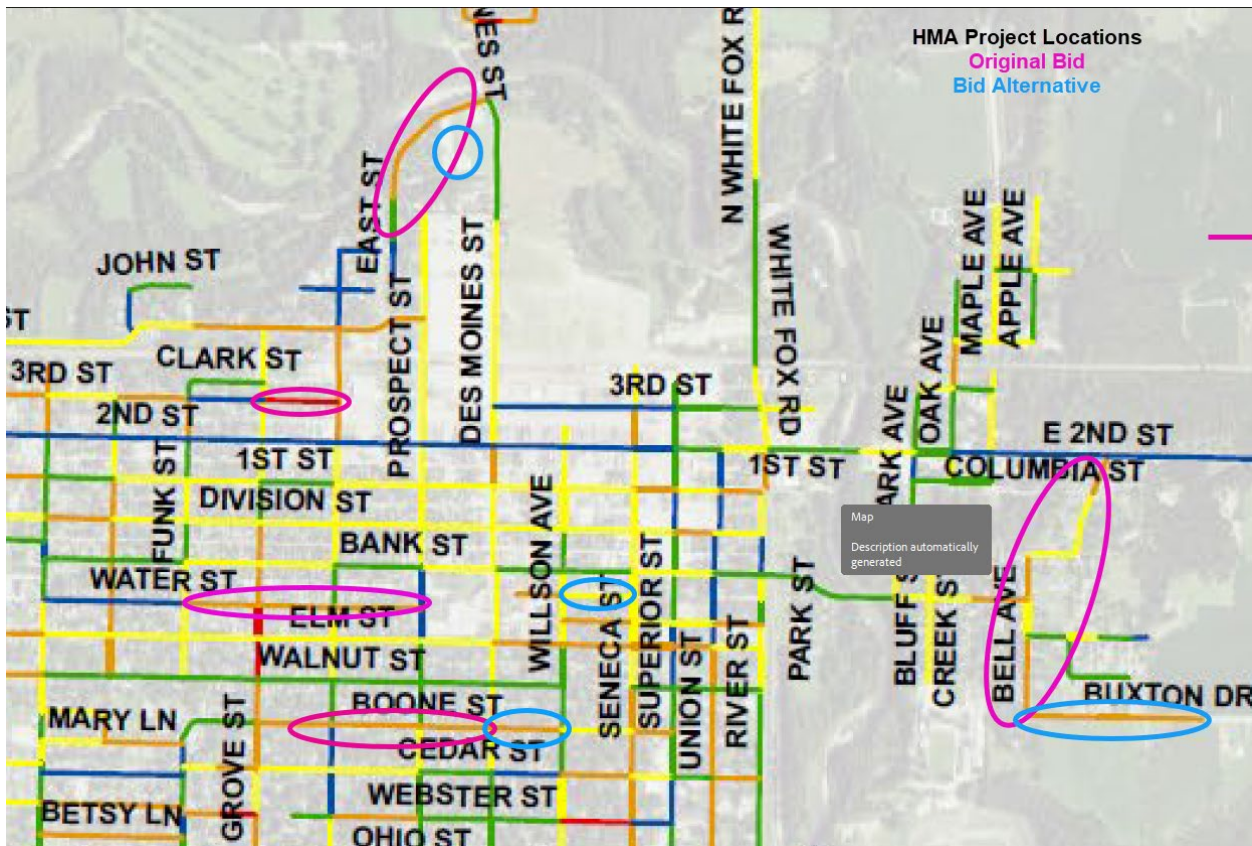
BACKGROUND/DISCUSSION: The project includes limited segments of curb and gutter replacement, pavement milling, HMA resurfacing, traffic control and staging plans, and utility fixture adjustments such as sewer manhole boxouts and water valve extensions. Utility pipe or structure replacements are not anticipated for this Project. City staff will core out all sub-base material that appears to be failing or causing settling. New sub-base material will be supplied by the City from recycled concrete and asphalt millings.

Detailed plans and specifications are available at City Hall for review. In order to move the project forward, the City Council must set a date for the public hearing on the proposed plans and specifications and proposed form of contract and estimate of cost for the construction of the FY 2025 HMA Improvements Project. The public hearing date proposed by staff and Snyder and Associates is June 17, 2024 at 6:05 p.m.

Snyder & Associates provided the City with a Pavement Management Report on January 29, 2021 with the report being updated on October 15, 2021. The report rated City streets into 5 categories using a PCI Range (Pavement Condition Index & Classification). The Pavement Condition Index (PCI) rating schedule from 0 to 100 with 100 being representative of a brand-new pavement with no distress. A pavement with an excellent condition has a PCI in the range of 81 to 100 and is displayed in blue. A very poor pavement has a PCI of 0 to 20 and is shown in red. The 600 block of Elm Street has a PCI rating between of "Poor" being in the 21-40 range, while the 500 block of Webster Street has a PCI rating of "Very Poor" being in the 0-20 range.

Table 1- Pavement Condition Index (PCI) & Classification

PCI Range	Condition Classification
81-100	Excellent
61-80	Good
41-60	Fair
21-40	Poor
0-20	Very Poor



The anticipated schedule for the project is as follows:

Task Completion	Completion Date
PMT Meeting	April 26, 2024
95% Check Plan, Contract Documents	May 3, 2024
City Final Comments	May 10, 2024
Complete Final Plans and Contract Documents	May 20, 2024

City Council sets Hearing Dates	May 20, 2024
Bid Letting	June 11, 2024
City Council Review Bids Received / Contract Award	June 17, 2024
City begins core out	June 18, 2024
Early Start Construction	July 1, 2024
Late Start Construction	September 3, 2024
Completion of Construction	Mid-October

FINANCIAL IMPLICATIONS: Engineer cost opinion for the base bid is \$841,500, including Engineering Services. Construction only is \$726,400. The project includes four additive bid alternates that total \$256,300. Bid alternatives may be selected or rejected in any combination by the Council. The current fiscal budget has \$1,297,000 budgeted and currently slated to come out of the FY 24-25 LOSST funds.

RECOMMENDATION: Staff recommends the City Council adopt a resolution providing for Notice of Hearing on Proposed Plans and Specifications and Proposed Form of Contract and Estimate of Cost for the Construction of the FY 2025 HMA Improvements Project.

RESOLUTION NO. - xxx

RESOLUTION PROVIDING FOR NOTICE OF HEARING ON PROPOSED PLANS AND SPECIFICATIONS AND PROPOSED FORM OF CONTRACT AND ESTIMATE OF COST FOR CONSTRUCTION OF THE FY 2025 HMA IMPROVEMENTS PROJECT

WHEREAS, the City Council of the City of Webster City, Iowa, has determined that it is necessary and desirable that a public improvement be done as described in the proposed plans and specifications and form of contract, which may be hereafter referred to as the FY 2025 HMA Improvements Project, (and is hereinafter referred to as the “Project”), which proposed plans, specifications and form of contract and estimate of cost are on file with the City Clerk; and

WHEREAS, it is necessary to fix a time and place of public hearing on the proposed plans, specifications and form of contract and estimate of cost for the Project and to advertise for sealed bids for the Project;

NOW THEREFORE BE IT RESOLVED by the City Council of the City of Webster City, Iowa, as follows:

Section 1. The detailed plans and specifications, notice of hearing and estimate of cost referred to in the preamble hereof be and the same are hereby approved.

Section 2. The Project is necessary and desirable for the City, and it is in the best interests of the City to proceed toward the construction of the Project.

Section 3. The amount of the bid security to accompany each bid is hereby fixed at 100% of the amount of the proposal.

Section 4. Sealed proposals will be received by the City Clerk of Webster City, at the Council Chambers of the City Council, in the City Hall of said City, until 2:00 p.m. on the 11th day of June, 2024, for the 2024 HMA Improvements Project, as described in the plans and specifications therefor now on file in the office of the City Clerk. Proposals will be opened by City Staff appointed by the City Council as provided by Section 384.101, Code of Iowa.

Section 5. The 17th day of June, 2024, at 6:05 o'clock p.m. at the Council Chambers at City Hall, Webster City, Iowa, is hereby fixed as the time and place of hearing on the proposed plans, specifications, form of contract and estimate of cost for the Project, and also as the time and place of considering bids previously received by the City Clerk in connection therewith.

Section 6. The City Clerk is hereby authorized and directed to give notice of the aforementioned hearing and letting by publication of such notices in a newspaper of general circulation in the City, which publication shall be made not less than four nor more than twenty days prior to the time of the said hearing, all in conformity with Chapters 362, 384, and 26 of the Code of Iowa. The said notice shall be in the form substantially as attached to this resolution.

Section 7. All provisions set out in the following form of notice are hereby recognized and prescribed by this Council and all resolutions or orders or parts thereof, to the extent the same may be in conflict herewith, are hereby repealed.

Passed and approved this 20th day of May, 2024.

John Hawkins, Mayor

ATTEST: _____
Karyl K. Bonjour, City Clerk

NOTICE OF HEARING

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, FORM OF CONTRACT
AND ESTIMATE OF COST FOR:
FY 2025 HMA IMPROVEMENTS PROJECT
JURISDICTION OF CITY OF WEBSTER CITY, IOWA PUBLIC IMPROVEMENT PROJECT

Public Notice is hereby given that a public hearing will be held by the City of Webster City, Iowa on the proposed Contract Documents (plans, specifications, and form of contract) and estimated total cost for the **FY 2025 HMA Improvements Project** at its meeting at **6:05 P.M. on June 17th, 2024**, in said City Council Chambers, Webster City City Hall, 400 Second Street, Webster City, Iowa 50595.

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3" HMA Milling.

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

The City of Webster City does hereby reserve the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

This Notice is given by authority of the City Council of the City of Webster City, Iowa.

Dated at Webster City, Iowa, this ____th day of May, 2024.

John Hawkins, Mayor

ATTEST: _____
Karyl K. Bonjour, City Clerk

Published in the DAILY FREEMAN JOURNAL on the ____ day of May, 2024.

NOTICE TO BIDDERS

FY 2025 HMA IMPROVEMENTS PROJECT

JURISDICTION OF CITY OF WEBSTER CITY, IOWA PUBLIC IMPROVEMENT PROJECT

Public Hearing on Proposed Contract Documents and Estimated Costs for Improvement

Notice is hereby given that a public hearing will be held by the City of Webster City, Iowa on the proposed Contract Documents (plans, specifications, and form of contract) and estimated total cost for the **FY 2025 HMA Improvements Project** at its meeting at **6:05 P.M. on the 17th day of June, 2024**, in said City Council Chambers, Webster City City Hall, 400 Second Street, Webster City, Iowa 50595.

Time and Place for Filing Sealed Proposals

Sealed bids for the work comprising the improvements as stated below must be filed before **2:00 P.M.** according to the clock in said City Council Chambers on the **11th day of June, 2024**, at the reception desk in the City Hall, 400 Second Street, Webster City, Iowa 50595.

Time and Place Sealed Proposals Will be Opened and Considered

Sealed proposals will be opened by the City Staff and bids tabulated at **2:00 P.M.** on the **11th day of June, 2024**, in said City Council Chambers. Bids will be considered by the City Council at its meeting on the **17th of June, 2024 at 6:05 P.M.** The City Council may award a Contract at said meeting, or at such other time and place as shall then be announced.

Contract Documents

A copy of said plans, specifications, and form of contract, and estimated total cost is now on file in the office of the City Clerk and may be examined at Webster City City Hall, 400 Second Street, Webster City, Iowa 50595.

An electronic copy of the Contract Documents is available at www.snyder-associates.com/bids for no cost and choosing the **FY 2025 HMA Improvements Project** on the left. Project information, estimated total cost, and planholder information is available for no cost at the same link. Downloads of the Contract Documents require the user to register for a free membership at www.QuestCDN.com.

Paper copies of the Contract Documents are available from Snyder & Associates, Inc., 911 Central Avenue, Fort Dodge, Iowa 50501, for a fee of Twenty-five Dollars (\$25.00) per set. This fee is refundable, provided the following conditions are met: (1) The Contract Documents are returned complete and in a reusable condition, and (2) they are returned within fourteen (14) calendar days after the award of the project. You must call 515-573-2030 in advance to reserve a paper copy.

General Nature of the Public Improvement

FY 2025 HMA IMPROVEMENTS PROJECT

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

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 and will furnish after the award of Contract a corporate Surety Bond, in a form acceptable to the City of Webster City, for the faithful performance of the Contract, in an amount equal to one hundred percent (100%) of the amount of the Contract. The Bidder’s security shall be in the amount fixed in the Instructions to Bidders and shall be in the form of a cashier’s check or a certified check drawn on an FDIC insured bank in Iowa or on an 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 on the form provided in the Contract Documents with corporate Surety satisfactory to the City of Webster City. The bid shall contain no condition except as provided in the specifications.

Performance, Payment, and Maintenance Bond

Each successful Bidder will be required to furnish a corporate Surety Bond in an amount equal to one hundred percent (100%) of its Contract price. Said Bond shall be issued by a responsible Surety approved by the City of Webster City and shall guarantee the faithful performance of the Contract and the terms and conditions therein contained and shall guarantee the prompt payment of all material and labor, and protect and save harmless the City of Webster City 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 two (2) years from and after acceptance of the Contract.

Title VI Compliance

The City of Webster City, Iowa, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.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 insure that in 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, national origin, sex, age, or disability in consideration for an award.

Completion of Work

The Notice to Proceed is anticipated to be issued after satisfactory review of executed bonds, insurance, and contract, with an early start date of July 1, 2024 and a late start date of August 5, 2024.

The Contractor shall fully complete the project within 30 Working Days. Fully complete includes having all pavement, driveways, utility adjustments, and site restoration and ALL work areas open to use by the public. Work once commenced shall be diligently worked to completion. Should the Contractor fail to fully complete the work within the time allotted, liquidated damages of One Thousand Dollars (\$1,000) per working day shall be applied for each calendar day until the work is fully completed.

The selection of Bid Alternate A will add four (4) working days to the contract. The selection of Bid Alternate B will add two (2) working days to the contract. The selection of Alternate C will add four (4) working days to the contract. The selection of Bid Alternate D will add three (3) working days to the contract.

The City of Webster City does hereby reserve the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

This Notice is given by authority of the City Council of the City of Webster City, Iowa.

Dated at Webster City, Iowa, this ___th day of May, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk

Posted on City of Webster City website on the ___ day of **May, 2024**.

Posted at Master Builders of Iowa Plan Room on the ___ day of **May, 2024**.

ENGINEER'S CHECK PLAN OPINION OF PROBABLE PROJECT COSTS



2025 HMA IMPROVEMENTS
 Various Locations
 Pavement Rehabilitation Options
 WEBSTER CITY, IA
 Prepared: May 16, 2024

ITEM #	DESCRIPTION	UNIT	UNIT PRICE	Water Street (Funk to Prospect)		Boone Street (Grove to Des Moines)		East Street (300' N/O Lucas to Des Moines Street)		Bell and High Streets (Buxton Drive to S/O East Second Street)		Third Street (Grove to Broadway)		BASE BID TOTAL	
				QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE
EARTHWORK															
2.1	Granular Shoulder Finishing, City-Furnished Material	STA	\$ 1,500.00	0	\$ -	0	\$ -	25	\$ 37,500	43.2	\$ 64,800	0	\$ -	68.2	\$ 102,300
STRUCTURES FOR SANITARY AND STORM															
6.1	Manhole Adjustment, Minor	EA	\$ 1,500.00	3	\$ 4,500	3	\$ 4,500	1	\$ 1,500	11	\$ 16,500	1	\$ 1,500	19	\$ 28,500
STREETS AND RELATED WORK															
7.1	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	\$ 45.00	233	\$ 10,485	157	\$ 7,065	0	\$ -	0	\$ -	104	\$ 4,680	494	\$ 22,230
7.2	HMA & PCC Pavement Samples and Testing	LS	\$ 10,000.00	0.25	\$ 2,500	0.25	\$ 2,500	0.1	\$ 1,000	0.3	\$ 3,000	0.1	\$ 1,000	1	\$ 10,000
7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	\$ 105.00	921	\$ 96,705	855	\$ 89,775	539	\$ 56,595	1350	\$ 141,750	306	\$ 32,130	3971	\$ 416,955
7.4	HMA Fillet, Place Only	SY	\$ 12.00	0	\$ -	0	\$ -	33	\$ 396	945	\$ 11,340		\$ -	978	\$ 11,736
7.5	Milling, 3" Nominal Depth	SY	\$ 7.00	5305	\$ 37,135	4928	\$ 34,496	0	\$ -	562	\$ 3,934	1760	\$ 12,320	12555	\$ 87,885
7.6	Milling, Variable Depth	SY	\$ 10.00	93	\$ 930		\$ -	211	\$ 2,110	475	\$ 4,750		\$ -	779	\$ 7,790
7.7	Remove Curb and Gutter	LF	\$ 12.00	233	\$ 2,796	157	\$ 1,884	0	\$ -	0	\$ -	104	\$ 1,248	494	\$ 5,928
7.8	HMA Surface Patch	TON	\$ 250.00	50	\$ 12,500	45	\$ 11,250	25	\$ 6,250	65	\$ 16,250	5	\$ 1,250	190	\$ 47,500
TRAFFIC CONTROL															
8.1	Temporary Traffic Control	LS	\$ 5,000.00	0.25	\$ 1,250	0.25	\$ 1,250	0.1	\$ 500	0.3	\$ 1,500	0.1	\$ 500	1	\$ 5,000
SITE WORK AND LANDSCAPING															
9.1	Filter Sock, 12" Dia	LF	\$ 3.00	0	\$ -	0	\$ 1,500	200	\$ 600	200	\$ 600	0	\$ -	400	\$ 1,200
9.2	Remove Filter Sock	LF	\$ 1.00					200	\$ 200	200	\$ 200			400	\$ 400
MISCELLANEOUS															
11.1	Mobilization	LS	\$ 45,000.00	0.25	\$ 11,250	0.25	\$ 11,250	0.15	\$ 6,750	0.25	\$ 11,250	0.1	\$ 4,500	1	\$ 45,000
11.2	Maintenance of Solid Waste Collection	LS	\$ 2,000	0.3	\$ 600	0.3	\$ 600	0	\$ -	0.3	\$ 600	0.1	\$ 200	1	\$ 2,000
Subtotal:					\$ 180,651		\$ 166,070		\$ 113,401		\$ 276,474		\$ 59,328		\$ 794,424
Contingency (5%):					\$ 9,000		\$ 8,300		\$ 5,700		\$ 13,800		\$ 3,000		\$ 39,700
CONSTRUCTION TOTAL (ROUNDED):					\$ 189,651		\$ 174,370		\$ 119,101		\$ 290,274		\$ 62,328		\$ 834,124
COST PER SY:					\$ 35.75		\$ 35.38		\$ 44.11		\$ 43.46		\$ 35.41		\$ 38.31
Street Area					5305		4928		3102		6679		1760		21774
March 2024 Cost Opinion					\$ 320,000		\$ 391,000		\$ 124,700		\$ 233,600		\$ 95,000		\$ 1,164,300

Notes and Assumptions

- (1) Coreout and subbase overexcavation by City forces.
- (2) Does not include any utility work except fixture adjustment.
- (3) Pavement markings and signage by City.
- (4) Does not include handicap ramps, sidewalks or any ADA improvements.
- (5) SWPPP controls include intake protection, and protection of drainage ways as required by State law.
- (6) March 2024 Cost opinions still included some driveway replacement and more extensive curb and gutter replacements.

ENGINEER'S CHECK PLAN OPINION OF PROBABLE PROJECT COSTS



2025 HMA IMPROVEMENTS
Various Locations

WEBSTER CITY, IA
Prepared: May 16, 2024

				Bid Alt A: Water Street (Willson to Seneca)		Bid Alt B: Nokomis Park Parking Lot		Bid Alt C: Boone Street (Des Moines to Willson)		Bid Alt D: Buxton Drive Bell Avenue to City Limits					
ITEM #	DESCRIPTION	UNIT	UNIT PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE	QUANTITY	EXTENDED PRICE		
EARTHWORK															
2.1	Granular Shoulder Finishing, City Furnished Material	STA	\$ 1,000.00	0	\$ -	6.4	\$ 6,400	0	\$ -	25.8	\$ 25,800		\$ -	32.2	\$ 32,200
STRUCTURES FOR SANITARY AND STORM															
6.1	Manhole Adjustment, Minor	EA	\$ 1,500	2	\$ 3,000	0	\$ -	1	\$ 1,500	0	\$ -		\$ -	3	\$ 4,500
STREETS AND RELATED WORK															
7.1	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	\$ 45	194	\$ 8,730	0	\$ -	120	\$ 5,400	0	\$ -		\$ -	314	\$ 14,130
7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	\$ 105	257	\$ 26,985	537	\$ 56,385	280	\$ 29,400	695	\$ 72,975		\$ -	1769	\$ 185,745
7.4	HMA Fillet, Place Only	SY	\$ 12.00							139	\$ 1,668			139	\$ 1,668
7.5	Milling, 3" Nominal Depth	SY	\$ 7	1485	\$ 10,395	0	\$ -	1613	\$ 11,291	0	\$ -		\$ -	3098	\$ 21,686
7.6	Milling, Variable Depth	SY	\$ 10.00							537	\$ 5,370			537	\$ 5,370
7.7	Remove Curb and Gutter	LF	\$ 10	194	\$ 1,940	0	\$ -	120	\$ 1,200	0	\$ -			314	\$ 3,140
TRAFFIC CONTROL															
8.1	Temporary Traffic Control	LS	\$ 2,500.00	0.3	\$ 750	0	\$ -	0.3	\$ 750	0.4	\$ 1,000		\$ -	1	\$ 2,500
Subtotal :					\$ 51,800		\$ 62,785		\$ 49,541		\$ 106,813				\$ 270,939
Contingency (5%):					\$ 2,600		\$ 3,100		\$ 2,500		\$ 5,300				\$ 13,500
CONSTRUCTION TOTAL (ROUNDED):					\$ 54,400		\$ 65,885		\$ 52,041		\$ 112,113				\$ 284,439
COST PER SY:					\$ 36.63		\$ 21.30		\$ 30.74		\$ 22.08				
Total Base Bid					\$ 834,124		\$ 54,400		\$ 65,885		\$ 52,041		\$ 112,113		\$ 1,118,563
Total Bid Alt A					\$ 54,400		\$ 65,885		\$ 52,041		\$ 112,113				\$ 1,118,563
Total Bid Alt B					\$ 65,885		\$ 52,041		\$ 112,113						\$ 1,118,563
Total Bid Alt C					\$ 52,041		\$ 112,113								\$ 1,118,563
Total Bid Alt D					\$ 112,113										\$ 1,118,563
Total Base + Bid Alt s A-D					\$ 1,118,563										\$ 1,118,563
Engineering and Construction Services				(7)	\$ 115,100										\$ 1,233,663
Total Estimated Project					\$ 1,233,663										\$ 1,233,663
2024 HMA Improvements (Elm/Webster)					\$ 209,348										\$ 1,443,011
Engineering and Construction Services					\$ 68,100										\$ 1,511,111
FY 2024-25 Budget					\$ 1,297,000										\$ 1,511,111

Notes and Assumptions

- (1) Coreout and subbase overexcavation by City forces.
- (2) Does not include any utility work except fixture adjustment.
- (3) Pavement markings and signage by City.
- (4) Does not include handicap ramps, sidewalks or any ADA improvements.
- (5) SWPPP controls include intake protection, and protection of drainage ways as required by State law.
- (6) March 2024 Cost opinions still included some driveway replacement and more extensive curb and gutter replacements.
- (7) Does not include Brewer Willson Project.

Contract Documents

for

FY 2025 HMA Improvements Project

Prepared for:

*City of Webster City
Public Works Department
400 Second Street
Webster City, Iowa 50595*



Prepared by:

*Snyder & Associates
2727 SW Snyder Boulevard
Ankeny, IA 50023*



Contract Documents


for

FY 2025 HMA Improvements Project

Prepared for:

*City of Webster City
Public Works Department
400 Second Street
Webster City, Iowa 50595*

Prepared by:

	<p>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.</p>
	<p>_____ 05/18/2024 Laura C. Lamberty, P.E. Date License Number P21814 My License Renewal Date is December 31, 2024 Pages or sheets covered by this seal: _____ _____</p>

Prepared by:

*Snyder & Associates, Inc.
2727 SW Snyder Blvd.
Ankeny, IA 50023*

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STANDARD SPECIFICATIONS

The 2022 Edition of the Statewide Urban Design and Specifications (SUDAS) Standard Specifications shall apply to all work performed on this project unless otherwise noted herein, or within the Special Provisions included in the Contract Documents.

- In addition to the Contract Documents, the Contractor is required to have a copy of the 2022 edition of the SUDAS Standard Specifications Manual on the job site at all times.
- A paper copy of the SUDAS Standard Specifications Manual may be purchased at the following link: <https://iowasudas.org/order-the-manuals/>
- An electronic copy of the SUDAS Standard Specifications Manual may be found at the SUDAS website: www.iowasudas.org. The electronic copy can be printed free of charge.

Bidding Information

NOTICE TO BIDDERS

FY 2025 HMA IMPROVEMENTS PROJECT

JURISDICTION OF CITY OF WEBSTER CITY, IOWA PUBLIC IMPROVEMENT PROJECT

Public Hearing on Proposed Contract Documents and Estimated Costs for Improvement

Notice is hereby given that a public hearing will be held by the City of Webster City, Iowa on the proposed Contract Documents (plans, specifications, and form of contract) and estimated total cost for the **FY 2025 HMA Improvements Project** at its meeting at **6:05 P.M. on the 17th day of June, 2024**, in said City Council Chambers, Webster City City Hall, 400 Second Street, Webster City, Iowa 50595.

Time and Place for Filing Sealed Proposals

Sealed bids for the work comprising the improvements as stated below must be filed before **2:00 P.M.** according to the clock in said City Council Chambers on the **11th day of June, 2024**, at the reception desk in the City Hall, 400 Second Street, Webster City, Iowa 50595.

Time and Place Sealed Proposals Will be Opened and Considered

Sealed proposals will be opened by the City Staff and bids tabulated at **2:00 P.M.** on the **11th day of June, 2024**, in said City Council Chambers. Bids will be considered by the City Council at its meeting on the **17th of June, 2024 at 6:05 P.M.** The City Council may award a Contract at said meeting, or at such other time and place as shall then be announced.

Contract Documents

A copy of said plans, specifications, and form of contract, and estimated total cost is now on file in the office of the City Clerk and may be examined at Webster City City Hall, 400 Second Street, Webster City, Iowa 50595.

An electronic copy of the Contract Documents is available at www.snyder-associates.com/bids for no cost and choosing the **FY 2025 HMA Improvements Project** on the left. Project information, estimated total cost, and planholder information is available for no cost at the same link. Downloads of the Contract Documents require the user to register for a free membership at www.QuestCDN.com.

Paper copies of the Contract Documents are available from Snyder & Associates, Inc., 911 Central Avenue, Fort Dodge, Iowa 50501, for a fee of Twenty-five Dollars (\$25.00) per set. This fee is refundable, provided the following conditions are met: (1) The Contract Documents are returned complete and in a reusable condition, and (2) they are returned within fourteen (14) calendar days after the award of the project. You must call 515-573-2030 in advance to reserve a paper copy.

General Nature of the Public Improvement

FY 2025 HMA IMPROVEMENTS PROJECT

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

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 and will furnish after the award of Contract a corporate Surety Bond, in a form acceptable to the City of Webster City, for the faithful performance of the Contract, in an amount equal to one hundred percent (100%) of the amount of the Contract. The Bidder’s security shall be in the amount fixed in the Instructions to Bidders and shall be in the form of a cashier’s check or a certified check drawn on an FDIC insured bank in Iowa or on an 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 on the form provided in the Contract Documents with corporate Surety satisfactory to the City of Webster City. The bid shall contain no condition except as provided in the specifications.

Performance, Payment, and Maintenance Bond

Each successful Bidder will be required to furnish a corporate Surety Bond in an amount equal to one hundred percent (100%) of its Contract price. Said Bond shall be issued by a responsible Surety approved by the City of Webster City and shall guarantee the faithful performance of the Contract and the terms and conditions therein contained and shall guarantee the prompt payment of all material and labor, and protect and save harmless the City of Webster City 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 two (2) years from and after acceptance of the Contract.

Title VI Compliance

The City of Webster City, Iowa, in accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 U.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 insure that in 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, national origin, sex, age, or disability in consideration for an award.

Completion of Work

The Notice to Proceed is anticipated to be issued after satisfactory review of executed bonds, insurance, and contract, with an early start date of July 1, 2024 and a late start date of August 5, 2024.

The Contractor shall fully complete the project within 30 Working Days. Fully complete includes having all pavement, driveways, utility adjustments, and site restoration and ALL work areas open to use by the public. Work once commenced shall be diligently worked to completion. Should the Contractor fail to fully complete the work within the time allotted, liquidated damages of One Thousand Dollars (\$1,000) per working day shall be applied for each calendar day until the work is fully completed.

The selection of Bid Alternate A will add four (4) working days to the contract. The selection of Bid Alternate B will add two (2) working days to the contract. The selection of Alternate C will add four (4) working days to the contract. The selection of Bid Alternate D will add three (3) working days to the contract.

The City of Webster City does hereby reserve the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

This Notice is given by authority of the City Council of the City of Webster City, Iowa.

Dated at Webster City, Iowa, this ___th day of May, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk

Posted on City of Webster City website on the ___ day of **May, 2024**.

Posted at Master Builders of Iowa Plan Room on the ___ day of **May, 2024**.

NOTICE OF HEARING

NOTICE OF PUBLIC HEARING ON PROPOSED PLANS, SPECIFICATIONS, FORM OF CONTRACT AND ESTIMATE OF COST FOR:

FY 2025 HMA IMPROVEMENTS PROJECT
JURISDICTION OF CITY OF WEBSTER CITY, IOWA PUBLIC IMPROVEMENT PROJECT

Public Notice is hereby given that a public hearing will be held by the City of Webster City, Iowa on the proposed Contract Documents (plans, specifications, and form of contract) and estimated total cost for the **FY 2025 HMA Improvements Project** at its meeting at **6:05 P.M.** on **June 17th, 2024**, in said City Council Chambers, Webster City City Hall, 400 Second Street, Webster City, Iowa 50595.

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

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

The City of Webster City does hereby reserve the right to reject any or all bids, to waive informalities, and to enter into such contract, or contracts, as it shall deem to be in the best interest of the City.

This Notice is given by authority of the City Council of the City of Webster City, Iowa.

Dated at Webster City, Iowa, this ____th day of May, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk

Published in the FREEMAN JOURNAL on the ____ day of May, 2024.

The following proposal attachments must be completed and attached:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
1.	<u>Bidder Status Form</u>
2.	<u>Statement of Bidder's Qualifications Form</u>
3.	_____
4.	_____
5.	_____
6.	_____

- Part G – Identity of Bidder

Sign the Proposal. The signature of 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 or electronic signatures will not be accepted.

The Bidder Status Form is required by the Iowa Labor Commissioner, pursuant to the Iowa Administrative Code rule 875-156.2(1). The Bidder must complete and submit the Bidder Status Form, signed by an authorized representative of the Bidder, with their bid proposal. Under Iowa Administrative Code rule 875-156.2(1), failure to provide the Bidder Status Form with the Proposal may result in the Proposal being deemed non-responsive and may result in the Proposal being rejected.

III. UNBALANCED BIDS

Unbalanced bids may not be accepted.

IV. COMMENCEMENT OF WORK

The Notice to Proceed is anticipated to be issued after satisfactory review of executed bonds, insurance, and contract, with an early start date of July 1, 2024 and a late start date of August 5, 2024.

The Contractor shall fully complete the project within 30 Working Days. Fully complete includes having all pavement, driveways, utility adjustments, and site restoration and ALL work areas open to use by the public. Work once commenced shall be diligently worked to completion. Should the Contractor fail to fully complete the work within the time allotted, liquidated damages of One Thousand Dollars (\$1,000) per working day shall be applied for each calendar day until the work is fully completed.

The selection of Bid Alternate A will add four (4) working days to the contract. The selection of Bid Alternate B will add two (2) working days to the contract. The selection of Alternate C will add four (4) working days to the contract. The selection of Bid Alternate D will add three (3) working days to the contract.

V. PREFERENCE OF PRODUCTS AND LABOR

By virtue of statutory authority, a preference will be given to products and provisions grown and coal produced within the State of Iowa.

In accordance with Iowa statutes, a resident bidder shall be allowed a preference as against a nonresident bidder from a state or foreign country if that state or foreign country gives or requires any preference to bidders from that state or foreign country, including but 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 or foreign country 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.

Failure to submit a fully completed and accurate Bidder Status Form with the Proposal may result in the Proposal being deemed non-responsive and may result in the Proposal being rejected.

VI. STATEMENT OF BIDDER'S QUALIFICATIONS

Failure to submit a fully completed and accurate Statement of Bidder's Qualifications Form with the Proposal may result in the Proposal being deemed non-responsive and may result in the Proposal being rejected.

VII. PAYMENT

Payment to the Contractor will be made in cash from such fund or funds as are legally available including, but not limited to, proceeds from the sale of General Obligation Bonds and/or Revenue Bonds.

VIII. SALES TAX EXEMPTION

The City of Webster City will issue a sales tax exemption certificate to the Contractor for all material purchased for incorporation into the project. Tax exemption certificates are applicable only for the specific project for which the tax exemption certificate is issued. The Contractor shall provide to the City: company name, Federal ID number, contact person, phone number and the service being provided. The Contractor also must file appropriate lien waivers before final payment will be released.

IX. NON-DEBARRED CONTRACTORS AND SUBCONTRACTORS

The contractor and all of its subcontractors shall, at the time of bid opening and for the performance of this public works contract, be non-debarred contractors and not be ineligible contractors.

The bidder, by submission of a bid and under penalty of perjury, certifies that they or any other person associated therewith in the capacity of owner, partner, director, officer, manager, or persons acting in these capacities for any subcontractor:

- a. is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any federal or state agency;
- b. has not been suspended, debarred, voluntarily excluded, or determined ineligible by any federal or state agency within the past three (3) years;
- c. does not have a proposed debarment pending; and
- d. has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past three (3) years.

The following documents must be submitted as printed. No alterations, additions, or deletions are allowed. If the Bidder notes a requirement in the Contract Documents that 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.

PROPOSAL

PROPOSAL: PART A – SCOPE

The **City of Webster City**, hereinafter called the “Jurisdiction,” has need of a qualified contractor to complete the work comprising the below referenced improvement. The undersigned Bidder hereby proposes to complete the work comprising the below referenced improvement as specified in the Contract Documents, which are officially on file with the Jurisdiction, in the office of the **City Clerk**, at the prices hereinafter provided in Part C of the Proposal, for the following described improvements:

FY 2025 HMA IMPROVEMENTS PROJECT

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

PROPOSAL: PART B – ACKNOWLEDGEMENT 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, QUANTITIES, AND PRICES

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, Quantities, and Prices. In case of discrepancy, the Unit Bid Price governs. The quantities shown on the Proposal Attachment: Part C – Bid Items, Quantities, and Prices are approximate only, but are considered sufficiently adequate for the purpose of comparing bids. The Total Construction Cost plus any alternates selected by the Jurisdiction shall be used only for comparison of bids. The Total Construction Cost, including any Add-Alternates, shall be used for determining the sufficiency of the bid security.

BASE BID CONTRACTS: The Bidder must provide any Bid Prices, any Alternate Prices, and the Total of the Base Bid plus any Add-Alternates on the Proposal Attachment: Part C – Bid Items, Quantities, and Prices. The Total of the Base Bid plus any Alternates selected by the Jurisdiction shall be used only for comparison of bids. The Total of the Base Bid plus any Add-Alternates shall be used for determining the sufficiency of the bid security.

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 plus any selected alternates; and
3. Make such alterations in 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

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, Payment, and Maintenance 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. Notice to Proceed shall be issued after satisfactory review of executed bonds, insurance, and contract.
4. The Contractor shall complete the work as follows:

The Notice to Proceed is anticipated to be issued after satisfactory review of executed bonds, insurance, and contract, with an early start date of July 1, 2024 and a late start date of August 5, 2024.

The Contractor shall fully complete the project within 30 Working Days. Fully complete includes having all pavement, driveways, utility adjustments, and site restoration and ALL work areas open to use by the public. Work once commenced shall be diligently worked to completion. Should the Contractor fail to fully complete the work within the time allotted, liquidated damages of One Thousand Dollars (\$1,000) per working day shall be applied for each calendar day until the work is fully completed.

The selection of Bid Alternate A will add four (4) working days to the contract. The selection of Bid Alternate B will add two (2) working days to the contract. The selection of Alternate C will add four (4) working days to the contract. The selection of Bid Alternate D will add three (3) working days to the 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 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 that all statements in this proposal are true; and
5. 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 that are included in this Proposal and identified as proposal attachments:

<u>ITEM NO.</u>	<u>DESCRIPTION OF ATTACHMENT</u>
1.	<u>Bidder Status Form</u>
2.	<u>Statement of Bidder’s Qualifications Form</u>
3.	_____
4.	_____
5.	_____
6.	_____

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

Bidder

Signature

By: _____
Name (Print/Type)

Title

Street Address

City, State, Zip Code

Telephone Number

Type or print the name and title of the company's owner, president, CEO, etc. if a different person than entered above.

Name

Title

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.

NOTE:

- 1. The signature on this Proposal must be an original signature in ink; copies, facsimiles, or electronic signatures will not be accepted.**

Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
Bid Additive Alternate A: Water Street - Willson to Seneca					
A6.1	Manhole Adjustment, Minor	EA	2	\$	\$
A7.1	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	194	\$	\$
A7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	257	\$	\$
A7.6	Milling 3" Nominal Depth	SY	1,485	\$	\$
A7.7	Remove Curb and Gutter	LF	194	\$	\$
A8.1	Temporary Traffic Control	LS	1	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE A: \$

Bid Additive Alternate B: Nokomis Park Parking Lot					
B2.1	Granular Shoulder Finishing, City Furnished Material	STA	6.4	\$	\$
B7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness	TON	537	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE B: \$

Bid Additive Alternate C - Boone Street Des Moines to Willson					
C6.1	Manhole Adjustment, Minor	EA	1	\$	\$
C7.1	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	120	\$	\$
C7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	280	\$	\$
C7.5	Milling 3" Nominal Depth	SY	1,613	\$	\$
C7.7	Remove Curb and Gutter	LF	120	\$	\$
C8.1	Temporary Traffic Control	LS	1	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE C: \$

Bid Additive Alternate D: Buxton Drive Bell to City Limit					
D2.1	Granular Shoulder Finishing, City Furnished Material	STA	25.8	\$	\$
D7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness	TON	695	\$	\$
D7.4	HMA Fillet, Place Only	SY	139	\$	\$
D7.6	Milling, Variable Depth	SY	537	\$	\$
D8.1	Temporary Traffic Control	LS	1	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE D: \$

All bidders must submit the following completed form to the governmental body requesting bids per 875 Iowa Administrative Code Chapter 156.

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" for 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: _____

City, State, Zip: _____

Dates: ___ / ___ / ___ to ___ / ___ / ___ Address: _____

City, State, Zip: _____

Dates: ___ / ___ / ___ to ___ / ___ / ___ Address: _____

You may attach additional sheet(s) if needed. City, State, Zip: _____

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 a reason to reject my bid.

Firm Name: _____

Signature: _____ Date: _____

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.

2. Responsibility

A. Has the Contractor's Registration ever been suspended or revoked in any jurisdiction?

_____Yes _____No

If yes, provide all relevant information and documentation regarding the suspension or revocation.

B. Has the Contractor ever been unable to obtain a bond or been denied a bond?

_____Yes _____No

If yes, provide all relevant information and documentation regarding the refusal or denial.

C. Has the Contractor had any judgments entered against it or been a party to arbitration proceedings or litigation within the past five (5) years, or are there any currently pending arbitration proceedings or litigation involving the Contractor or any of its officers?

_____Yes _____No

If yes, provide listings, status, and outcomes regarding the judgments, arbitration proceedings, or litigation. The Owner reserves the right to request additional information, if deemed necessary.

D. Within the past five (5) years, has the Contractor, or the Contractor's proposed subcontractor(s) for the Project, ever been prohibited, debarred, disqualified, or removed by any federal, state, or local governmental entity from bidding on any project?

_____Yes _____No

If yes, provide all relevant information and documentation regarding the prohibition, debarment, disqualification, or removal.

E. Within the past five (5) years, has the Contractor, or the Contractor's proposed subcontractor(s) for the Project, received notification of breach or default on any contract; had any contract terminated; had any owner request to take over work; failed to substantially complete any project in a timely manner; or failed to fully complete any project in a timely manner?

_____Yes _____No

If yes, provide all relevant information and documentation regarding said breach, default, termination, owner request to take over work, or failure to complete.

F. The Contractor affirms its responsibility to retain only subcontractors who can fully comply with the Contract Documents for the Project, including those that can address requirements concerning labor.

_____Yes _____No

G. The Contractor affirms its responsibility to ensure that each subcontractor meets quality assurance specifications as presented in the Contract Documents for the Project.

_____Yes _____No

BID BOND

KNOW ALL BY THESE PRESENTS:

That we, _____, as Principal, and _____, as Surety, are held and firmly bound unto the **City of Webster City, Iowa**, as Obligee, (hereinafter referred to as the "Jurisdiction"), in the penal sum of _____ **DOLLARS (\$ _____)**, or **ten percent (10%)** of the amount bid in 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 described improvements:

FY 2025 HMA IMPROVEMENTS PROJECT

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3" HMA Milling.

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 **Hamilton** 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.

Signed and sealed this _____ day of _____, 20____.

SURETY:

PRINCIPAL:

<p>_____</p> <p style="text-align: center;">Surety Company</p> <p>By: _____</p> <p style="text-align: center;">Signature Attorney-in-Fact/Officer</p> <p>_____</p> <p style="text-align: center;">Printed Name of Attorney-in-Fact/Officer</p> <p>_____</p> <p style="text-align: center;">Company Name</p> <p>_____</p> <p style="text-align: center;">Company Address</p> <p>_____</p> <p style="text-align: center;">City, State, Zip Code</p> <p>_____</p> <p style="text-align: center;">Company Telephone Number</p>	<p>_____</p> <p style="text-align: center;">Bidder</p> <p>By: _____</p> <p style="text-align: center;">Signature</p> <p>_____</p> <p style="text-align: center;">Printed Name</p> <p>_____</p> <p style="text-align: center;">Title</p> <p>_____</p> <p style="text-align: center;">Address</p> <p>_____</p> <p style="text-align: center;">City, State, Zip Code</p> <p>_____</p> <p style="text-align: center;">Telephone Number</p>
--	--

NOTE:

1. All signatures on this Bid Bond must be original signatures in ink; copies, facsimiles, or electronic signatures will not be accepted.
2. This Bond must be sealed with the Surety's raised, embossing seal.
3. The Certificate or Power of Attorney accompanying this Bond must be valid on its face and sealed with the Surety's raised, embossing seal.

NON-COLLUSION AFFIDAVIT STATEMENT

STATE OF IOWA)
) ss
HAMILTON COUNTY)

I _____ being first duly sworn, depose and

say that I am the _____
(Sole Owner, Partner, President, Secretary, etc.)

of _____,
(Contractor)

the party making the foregoing bid; that such bid is not made in the interest of or on behalf of any undisclosed person, partnership, company, association, organization, or corporation; that such bid is genuine and not collusive or sham; that said bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded conspired, connived, or agreed with any bidder or anyone else to put in a false or sham bid, or that anyone shall refrain from bidding; that said bidder has not solicited or induced any individual or entity to refrain from bidding; that said bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to get the bid price of said bidder or of any other bidder, not to fix any overhead, profit, or cost advantage against the public body awarding the contract or anyone interested in the proposed contract; that bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the contract; that all statements contained in such bid are true; and further, that said bidder has not directly or indirectly submitted his/her bid price or any breakdown thereof, nor the contents thereof, nor divulged information or data relative thereto, nor paid and will not pay fee in connection therewith to any corporation, partnership, company, association, organization, bid depository, nor to any member or agent thereof, nor to any other individual except to such person or persons as have a partnership or other financial interest with said bidder in his/her general business.

By: _____

Subscribed and sworn to before this _____ day of _____, 2023.

(Notarial Acknowledgment)

Signature of Officer Administering Oath

SUBCONTRACTORS LIST

Bidder supplies the following information for any subcontractor, supplier, fabricator, equipment rental with operator, etc. to be used on the **FY 2025 HMA Improvements Project**.

Name and Telephone No.	Address	License No.	Bid Item No. or Work to be Performed
()			
()			
()			
()			
()			
()			
()			
()			

(Use additional sheets as necessary)

BID CERTIFICATION

The undersigned certifies they are familiar with the various state and local laws affecting labor, length of working days, employer's liabilities, Sunday and holiday work, alien labor, domestic materials, subcontractors, etc. It is understood and agreed that the work under the contract will be commenced by the undersigned bidder, if awarded the contract, within fourteen (14) calendar days after receipt of the Notice to Proceed and will be completed by the Contractor in the time set forth in the AGREEMENT. Contract time shall begin on the date of the Notice to Proceed and "winter work" shall be as specified in the Special Provisions.

Enclosed find bidders bond, certified check no. or cashier's check no. _____ on the _____ Bank,

in the amount of _____ which is as stipulated in the bid bond, submitted by the undersigned made payable to the City of Webster City, Iowa and which is given as a guarantee that the bidder agrees that in case of their default in executing said contract with necessary bonds, the bond or check accompanying this bid and the money made payable shall become and remain the property of the City.

It is understood and agreed that the City has the right to waive defects and to accept or reject any or all bids. The following required information is true and correct. Failure to complete this information renders the bid non-responsive and the bid must be rejected.

_____ Company Name	_____ Authorized Signature
_____ Mailing Address	_____ Signatory's Title
_____ City, State, Zip	_____ State License Number
_____ Street Address (if different from Mailing Address)	_____ Email Address
_____ Telephone Number	_____ Fax Number

Dated this _____ day of _____, 2024.

RECEIPT OF ADDENDA:

Addendum #1 _____ Addendum #2 _____ Addendum #3 _____

CONTRACT

THIS CONTRACT, made and entered into at **Webster City City Hall** this _____ day of _____, 20____, by and between the **City of Webster City, Iowa** by its **Mayor**, upon order of its **City Council** hereinafter called the “Jurisdiction,” and _____, hereinafter called the “Contractor.”

WITNESSETH:

The Contractor hereby agrees to complete the work comprising the below referenced improvements as specified in the Contract Documents, which are officially on file with the Jurisdiction, in the office of the **City Clerk**. This Contract includes all Contract Documents. The work under this Contract shall be constructed in accordance with the SUDAS Standard Specifications, 2022 Edition, and as further modified by the Supplemental Specifications and Special Provisions included in said Contract Documents. 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, Quantities, and Prices, 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 improvements:

FY 2025 HMA IMPROVEMENTS PROJECT

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

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, Payment, and Maintenance Bond.

The Contractor shall complete the work as follows:

The Notice to Proceed is anticipated to be issued after satisfactory review of executed bonds, insurance, and contract, with an early start date of July 1, 2024 and a late start date of August 5, 2024.

The Contractor shall fully complete the project within 30 Working Days. Fully complete includes having all pavement, driveways, utility adjustments, and site restoration and ALL work areas open to use by the public. Work once commenced shall be diligently worked to completion. Should the Contractor fail to fully complete the work within the time allotted, liquidated damages of One Thousand Dollars (\$1,000) per working day shall be applied for each calendar day until the work is fully completed.

The selection of Bid Alternate A will add four (4) working days to the contract. The selection of Bid Alternate B will add two (2) working days to the contract. The selection of Alternate C will add four (4) working days to the contract. The selection of Bid Alternate D will add three (3) working days to the contract.

IN WITNESS WHEREOF, the Parties hereto have executed this instrument, in triplicate on the date first shown written.

JURISDICTION:

CONTRACTOR:

By: _____

Contractor

(Seal)
ATTEST:

By: _____
Signature

Title

Street Address

City, State, Zip Code

Telephone

CONTRACTOR PUBLIC REGISTRATION INFORMATION To Be Provided By:

1. All Contractors: The Contractor shall enter its Public Registration Number _____ - ____ 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 Iowa Department of Workforce Development. 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 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 Iowa Code, or as amended, governing foreign corporations.

NOTE:

1. **All signatures on this Contract must be original signatures in ink; copies, facsimiles, or electronic signatures will not be accepted.**

CORPORATE ACKNOWLEDGEMENT

State of _____)
) SS
_____ County)

On this _____ day of _____, 20____, 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.

Notary Public in and for the State of _____
My commission expires _____, 20____

PARTNERSHIP ACKNOWLEDGEMENT

State of _____)
) SS
_____ County)

On this _____ day of _____, 20____, 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.

Notary Public in and for the State of _____
My commission expires _____, 20____

INDIVIDUAL ACKNOWLEDGEMENT

State of _____)
) SS
_____ County)

On this _____ day of _____, 20____, 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.

Notary Public in and for the State of _____
My commission expires _____, 20____

LIMITED LIABILITY COMPANY ACKNOWLEDGEMENT

State of _____)
) SS
_____ County)

On this _____ day of _____, 20____, before me a Notary Public in and for said county, 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.

Notary Public in and for the State of _____
My commission expires _____, 20____

CONTRACT ATTACHMENT: BID ITEMS, QUANTITIES, AND PRICES

This Contract is award 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 Notice of Public Hearing. All quantities are subject to revision by the Jurisdiction. Quantity changes that amount to twenty percent (20%) or less of the amount bid shall not affect the unit bid price.

BASE BID					
Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
	Earthwork				
2.1	Granular Shoulder Finishing, City Furnished Material	STA	68.2	\$	\$
	Structures for Sanitary and Storm Sewers				
6.1	Manhole Adjustment, Minor	EA	19	\$	\$
	Streets and Related Work				
7.1	Curb and Gutter, 2.5' Width, 6 In. Thickness	LF	494	\$	\$
7.2	HMA and PCC Pavement Samples and Testing	LS	1	\$	\$
7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	3,971	\$	\$
7.4	HMA Fillet, Place Only	SY	978	\$	\$
7.5	Milling 3" Nominal Depth	SY	12,555	\$	\$
7.6	Milling, Variable Depth	SY	779	\$	\$
7.7	Remove Curb and Gutter	LF	494	\$	\$
7.8	HMA Surface Patch	TON	190	\$	\$
	Traffic Control				
8.1	Temporary Traffic Control	LS	1	\$	\$
	Site Work and Landscaping				
9.1	Filter Sock, 12" Dia	LF	400	\$	\$
9.2	Remove Filter Sock	LF	400	\$	\$
	Miscellaneous				
11.1	Mobilization	LS	1	\$	\$
11.2	Maintenance of Solid Waste Collection	LS	1	\$	\$

TOTAL CONSTRUCTION COST BASE BID: \$ _____

Item No.	Item Description	Unit	Quantity	Unit Price	Total Price
Bid Additive Alternate A: Water Street - Willson to Seneca					
A6.1	Manhole Adjustment, Minor	EA	2	\$	\$
A7.1	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	194	\$	\$
A7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	257	\$	\$
A7.6	Milling 3" Nominal Depth	SY	1,485	\$	\$
A7.7	Remove Curb and Gutter	LF	194	\$	\$
A8.1	Temporary Traffic Control	LS	1	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE A: \$

Bid Additive Alternate B: Nokomis Park Parking Lot					
B2.1	Granular Shoulder Finishing, City Furnished Material	STA	6.4	\$	\$
B7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness	TON	537	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE B: \$

Bid Additive Alternate C - Boone Street Des Moines to Willson					
C6.1	Manhole Adjustment, Minor	EA	1	\$	\$
C7.1	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	120	\$	\$
C7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	280	\$	\$
C7.5	Milling 3" Nominal Depth	SY	1,613	\$	\$
C7.7	Remove Curb and Gutter	LF	120	\$	\$
C8.1	Temporary Traffic Control	LS	1	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE C: \$

Bid Additive Alternate D: Buxton Drive Bell to City Limit					
D2.1	Granular Shoulder Finishing, City Furnished Material	STA	25.8	\$	\$
D7.3	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness	TON	695	\$	\$
D7.4	HMA Fillet, Place Only	SY	139	\$	\$
D7.6	Milling, Variable Depth	SY	537	\$	\$
D8.1	Temporary Traffic Control	LS	1	\$	\$

TOTAL CONSTRUCTION COST BID ADDITIVE ALTERNATE D: \$

PERFORMANCE, PAYMENT, AND MAINTENANCE BOND

KNOW ALL BY THESE PRESENTS:

That we, _____, as Principal (hereinafter the “Contractor” or “Principal”) and _____, as Surety, are held and firmly bound unto the **City of Webster City, Iowa**, as Obligee, (hereinafter referred to as the “Jurisdiction”), and to all persons who may be injured by any breach of any of the conditions of this Bond in the penal sum of _____ DOLLARS (\$ _____), lawful money of the United States, for the payment of which sum, well and truly to be made, we bind ourselves, our heirs, legal representatives, and assigns, jointly or severally, firmly by these presents.

The conditions of the above obligations are such that whereas said Contractor entered into a contract with the Jurisdiction, bearing date the _____ day of _____, 20____, (hereinafter the “Contract”) wherein said Contractor undertakes and agrees to construct the following described improvements:

FY 2025 HMA IMPROVEMENTS PROJECT

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

and to faithfully perform all the terms and requirements of said Contract within the time therein specified, in a good and workmanlike manner, and in accordance with the Contract Documents.

It is expressly understood and agreed by the Contractor and Surety in this Bond that the following provisions are a part of this Bond and are binding upon said Contractor and Surety, to-wit:

1. **PERFORMANCE:** The Contractor shall well and faithfully observe, perform, fulfill, and abide by each and every covenant, condition, and part of said Contract and Contract Documents, by reference made a part hereof, for the above referenced improvements, and shall indemnify and save harmless the Jurisdiction from all outlay and expense incurred by the Jurisdiction by reason of the Contractor’s default or failure to perform as required. The Contractor shall also be responsible for the default or failure to perform as required under the Contract and Contract Documents by all its subcontractors, suppliers, agents, or employees furnishing materials or providing labor in the performance of the Contract.

2. **PAYMENT:** The Contractor and the Surety on this Bond are hereby agreed to pay all just claims submitted by persons, firms, subcontractors, and corporations furnishing materials for or performing labor in the performance of the Contract on account of which this Bond is given, including but not limited to claims for all amounts due for labor, materials, lubricants, oil, gasoline, repairs on machinery, equipment, and tools, consumed or used by the Contractor or any subcontractor, wherein the same are not satisfied out of the portion of the contract price which the Jurisdiction is required to retain until completion of the improvement, but the Contractor and Surety shall not be liable to said persons, firms, or corporations unless the claims of said claimants against said portion of the contract price shall have been established as provided by law. The Contractor and Surety hereby bind themselves to the obligations and conditions set forth in Chapter 573 of the Iowa Code, which by this reference is made a part hereof as though fully set out herein.
3. **MAINTENANCE:** The Contractor and the Surety on this Bond hereby agree, at their own expense:
 - A. To remedy any and all defects that may develop in or result from work to be performed under the Contract within the period of **two (2) years** 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;
 - B. To keep all work in continuous good repair; and
 - C. To pay the Jurisdiction's reasonable costs of monitoring and inspecting to assure that any defects are remedied, and to repair the Jurisdiction all outlay and expense incurred as a result of Contractor's and Surety's failure to remedy any defect as required by this section.
4. **GENERAL:** Every Surety on this Bond shall be deemed and held bound, any contract to the contrary notwithstanding, to the following provisions:
 - A. To consent without notice to any extension of time to the Contractor in which to perform the Contract;
 - B. To consent without notice to any change in the Contract or Contract Documents, which thereby increases the total contract price and the penal sum of this bond, provided that all such changes do not, in the aggregate, involve an increase of more than twenty percent (20%) of the total contract price, and that this Bond shall then be released as to such excess increase; and
 - C. To consent without notice that this Bond shall remain in full force and effect until the Contract is completed, whether completed within the specified contract period, within an extension thereof, or within a period of time after the contract period has elapsed and the liquidated damage penalty is being charged against the Contractor.
 - D. That no provision of this Bond or of any other contract shall be valid which limits to less than five years after the acceptance of the work under the Contract the right to sue on this Bond.

- E. That as used herein, the phrase “all outlay and expense” is not to be limited in any way but shall include the actual and reasonable costs and expenses incurred by the Jurisdiction including interest, benefits, and overhead where applicable. Accordingly, “all outlay and expense” would include but not be limited to all contract or employee expense, all equipment usage or rental, materials, testing, outside experts, attorney’s fees (including overhead expenses of the Jurisdiction’s staff attorneys), and all costs and expenses of litigation as they are incurred by the Jurisdiction. It is intended the Contractor and Surety will defend and indemnify the Jurisdiction on all claims made against the Jurisdiction on account of Contractor’s failure to perform as required in the Contract and Contract Documents, that all agreements and promises set forth in the Contract and Contract Documents, in approved change orders, and in this Bond will be fulfilled, and that the Jurisdiction will be fully indemnified so that it will be put into the position it would have been in had the Contract been performed in the first instance as required.

In the event the Jurisdiction incurs any “outlay and expense” in defending itself with respect to any claim as to which the Contractor or Surety should have provided the defense, or in the enforcement of the promises given by the Contractor in the Contract, Contract Documents, or approved change orders, or in the enforcement of the promises given by the Contractor and Surety in this Bond, the Contractor and Surety agree that they will make the Jurisdiction whole for all such outlay and expense, provided that the Surety’s obligation under this Bond shall not exceed 125% of the penal sum of this Bond.

In the event that any actions or proceedings are initiated with respect to this Bond, the parties agree that the venue thereof shall be **Hamilton** County, State of Iowa. If legal action is required by the Jurisdiction to enforce the provisions of this Bond or to collect the monetary obligation incurring to the benefit of the Jurisdiction, the Contractor and the Surety agree, jointly and severally, to pay the Jurisdiction all outlay and expense incurred therefore by the Jurisdiction. 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 the Contractor or whether Contractor is joined in any such action(s) or not.

NOW THEREFORE, the condition of this obligation is such that if said Principal shall faithfully perform all of the promises of the Principal, as set forth and provided in the Contract, in the Contract Documents, and in this Bond, then this obligation shall be null and void, otherwise it shall remain in full force and effect.

When a word, term, or phase is used in this Bond, it shall be interpreted or construed first as defined in this Bond, the Contract, or the Contract Documents; second, if not defined in the Bond, Contract, or Contract Documents, it shall be interpreted or construed as defined in applicable provisions of the Iowa Code; third, if not defined in the Iowa Code, it shall be interpreted or construed according to its generally accepted meaning in the construction industry; and fourth, if it has no generally accepted meaning in the construction industry, it shall be interpreted or construed according to its common or customary usage.

Failure to specify or particularize shall not exclude terms or provisions not mentioned and shall not limit liability hereunder. The Contract and Contract Documents are hereby made a part of this Bond.

Witness our hands, in triplicate, this _____ day of _____, 20____.

Surety Countersigned By:

PRINCIPAL:

Signature of Agent

Contractor

By: _____
Signature

Printed Name of Agent

Title

Company Name

SURETY:

Company Address

Surety Company

City, State, Zip Code

By: _____
Signature Attorney-in-Fact Officer

Company Telephone Number

Printed Name of Attorney-in-Fact Officer

Company Name

Company Address

City, State, Zip Code

Company Telephone Number

NOTE:

- 1. All signatures on this Performance, Payment, and Maintenance Bond must be original signatures in ink; copies, facsimiles, or electronic signatures will not be accepted.**
- 2. This Bond must be sealed with the Surety's raised, embossing seal.**
- 3. The Certificate or Power of Attorney accompanying this Bond must be valid on its face and sealed with the Surety's raised, embossing seal.**
- 4. The name and signature of the Surety's Attorney-in-Fact/Officer entered on this Bond must be exactly as listed on the Certificate of Power or Attorney accompanying this Bond.**

NOTICE TO PROCEED

PROJECT: FY 2025 HMA Improvements Project

OWNER: City of Webster City, Iowa

DATE: _____

TO: Contractor Name: _____

Contractor Address: _____

You are hereby notified to commence work in accordance with the Contract dated _____, on or by the Late Start Date of August 5, 2023. Work is intended to be fully complete within 25 Working days may be suspended by the Engineer when locations are substantially complete.

Should the Contractor fail to fully complete the project within 25 Working Days, liquidated damages of One Thousand Dollars (\$1,000.00) per calendar day will be assessed for work not completed.

By: _____

Title: Project Engineer

ACCEPTANCE OF NOTICE

Receipt of the above Notice to Proceed is hereby acknowledged by _____ of

_____ on this the _____ day of _____, 20____.

By: _____

Title: _____

Special Provisions

PART 1 – SPECIAL CONSTRUCTION

1. SCOPE OF WORK

The **FY 2025 HMA Improvements Project** is located on numerous City Streets within the City of Webster City including Bell Avenue & High Street from Buxton Drive to Second Street; East Street from Des Moines Street to north of Lucas Street; Boone Street from Grove Street to Des Moines Street; Water Street from Funk Street to Prospect Avenue and Third Street from Grove Street to Broadway. The project consists of approximately 68.2 Stations of granular shoulder finishing, 19 manhole adjustments (minor), 494 LF of curb and gutter, 494 LF of curb and gutter removal; 3971 Tons of HMA overlay, 12,555 SY of HMA milling, HMA and PCC Samples and Testing, Traffic control, mobilization and SWPPP control measures, and other related items.

There are four additive bid alternates. Bid alternates include four additional locations related to other project locations and include up to 32.2 Stations of granular shoulder finishing, 3 minor manhole adjustments, 314 LF of curb and gutter removal and replacement, 1769 tons HMA Overlay, 537 SY of variable depth milling and 3098 SY of 3” HMA Milling.

2. TRAFFIC CONTROL

Traffic. The traffic control plan shall be as specified in the J-sheets. Access to residences shall be maintained at all practical times, at the end of working hours and on weekends.

Detours. All detour signage shall be installed prior to the closure of specified portion of roadway(s) and shall be maintained during closure.

The Contractor shall open roadways, driveways, and sidewalks to traffic promptly, to minimize inconvenience to the public.

3. EXISTING ELECTRICAL SYSTEMS

Conduits from existing streetlight may be encountered during construction of this project. Webster City Municipal Electric is responsible for relocating all electrical lines and overhead poles.

4. EXISTING LANDSCAPE AND IRRIGATION SYSTEMS

Existing landscaping and irrigation systems may be encountered during construction of this project. The Contractor shall verify with the property owner and the project inspector, whether all affected irrigation items work correctly or not, and the condition of all affected landscape items. The Contractor will notify the property owner and the project inspector if irrigation improvements are located within the project construction limits for the property owner to remove, salvage, or relocate.

Existing irrigation systems shall include, but not be limited to those items within City right-of-way that service adjacent private property and are maintained by the property owner; those items on private property adjacent to City right-of-way that are maintained by the private property owner; those items within the City right-of-way that service agricultural properties and are maintained by a water company; and those items owned and operated by the City on public property.

5. TREE PRUNING/REMOVAL

The Contractor shall trim trees in the public right-of-way to prevent damage from construction

PART 1 – SPECIAL CONSTRUCTION

equipment and operations.

6. STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

This project requires coverage under the NPDES General Permit No. 2 for storm water discharges associated with construction activities from the IDNR, as required by the Environmental Protection Agency (EPA). The Contractor shall comply with laws, codes, ordinances, and requirements of governing agencies regarding the discharge of pollutants, air and water pollution control and any other requirements for this project.

Sawcutting Residue. The Contractor shall pick up and remove all residue from any sawcutting operation at the time sawcutting work is performed. Sawcutting residue shall not be washed into gutters, allowed to dry and/or be tracked by vehicular or pedestrian traffic.

7. EXISTING UTILITIES

Locations of utility lines, mains, cables, and appurtenances shown on the plans are from information provided by utility company and records of Jurisdiction. Prior to construction, contact all utility companies and have all utility lines and services located. The Contractor is responsible for excavating and exposing underground utilities in the line of work. Confirm location of underground utilities by excavating ahead of work. The Contractor is solely responsible for any damage to utilities or private or public property due to utility disruption. The Contractor shall notify utility company immediately if a utility line is damaged during construction.

Utility lines, poles, and appurtenances, except water and sewer lines, in direct conflict with the line and grade of work will be relocated by utility company before or during construction. Support and protect all utilities that are not moved. Utility services are generally shown on the plans; protect and maintain services during construction. No claims for additional compensation will be allowed to the Contractor for interference or delay caused by the utility company. The Contractor shall coordinate their operations with private construction companies on adjacent properties.

8. UTILITY COORDINATION AND RELOCATION SCHEDULE

The following information has been obtained from representatives with franchise utility companies located within the project corridor and is for informational purposes only. The Contractor is required to coordinate with the utility companies throughout construction. No claims for additional compensation will be allowed to Contractor for interference or delay caused by utility company.

8.1 Webster City Municipal Electric

8.1.1 Contact: Adam Dickinson
Phone: (515) 297-1307
Email: adam@webstercity.com

8.2 Webster City (Water Main, Storm Sewer, and Sanitary Sewer)

8.2.1 Contact: Brandon Bahrenfuss
Phone: (515) 832-9123

PART 1 – SPECIAL CONSTRUCTION

Email: bbahrenfuss@webstercity.com

8.3 Black Hills Energy (Gas)

8.3.1 Contact: Mike Broshous
Phone: (515) 987-8971
Email: mike.broshous@blackhillscorp.com

8.4 Mediacom

8.4.1 Contact: Mike W. Hollinger
Phone: (641) 210-2883
Email: mhollinger@mediacomcc.com

8.5 Lumen

8.5.1 Contact: Sadie Hull
Phone: (918)547-0147
Email: sadie.hull@lumen.com

8.6 Platinum Connect, LLC

8.5.1 Contact: Mike Lawson (Vantage Point)
Phone: (615) 975-0143
Email: mike.lawson@vantagepnt.com

9. COOPERATION AND COORDINATION WITH OTHERS

During work on this project, various utility companies may be working on their facilities within the project limits. The Contractor shall cooperate and coordinate with various contractors working for and/or with the utility companies. No additional contract time or compensation for delays and/or coordination shall be allowed unless delays are beyond utility company's ability to control in completing their work. Utility contact information can be found on Sheet A.1 of the Project plan set. Refer to Section 8 for utility contact information.

10. CONSTRUCTION SCHEDULE

The Engineer must be provided with a proposed schedule of construction showing dates of starting and completing various portions of work. This schedule is required at the Preconstruction Meeting and shall be updated for each weekly or bi-weekly meeting. The Contractor shall demonstrate that sufficient manpower and equipment is scheduled for construction work to maintain a timely and orderly construction.

The Notice to Proceed is anticipated to be issued after satisfactory review of executed bonds, insurance, and contract, with an early start date of July 1, 2024 and a late start date of August 5, 2024.

The Contractor shall fully complete the project within 30 Working Days. Fully complete includes having all pavement, driveways, utility adjustments, and site restoration and ALL work areas open to use by the public. Work once commenced shall be diligently worked to completion. Should the Contractor fail to

PART 1 – SPECIAL CONSTRUCTION

fully complete the work within the time allotted, liquidated damages of One Thousand Dollars (\$1,000) per working day shall be applied for each calendar day until the work is fully completed.

The selection of Bid Alternate A will add four (4) working days to the contract. The selection of Bid Alternate B will add two (2) working days to the contract. The selection of Alternate C will add four (4) working days to the contract. The selection of Bid Alternate D will add three (3) working days to the contract.

11. CONSTRUCTION YARD

The Contractor shall provide and maintain as necessary, any additional property required for storage of equipment, materials, etc., to perform work on this project. When private property is used for a yard area, the Contractor shall secure written authorization from the private property owner and supply a copy of such to the City before any monthly progress payment is submitted. At the end of the project, the Contractor shall clean up and remove all trash and debris, including all organic trash and debris and provide the City a written release from the private property owner that they are satisfied with all cleanup removal work.

The City will permit storage of materials and equipment at the following locations:

- Nokomis Park Parking Lots
- City Street Maintenance Facility, 100 E. Ohio Street, Webster City.

All storage of equipment and materials, is subject to the Contractor making the area sufficiently secure, and the storage is at the Contractor's risk. At the end of the project, and as directed by the City, the Contractor shall clean up and remove all trash and debris. Site restoration is required.

12. PRESERVATION OF PAVED SURFACES, ENVIRONMENTAL FACTORS, RESTORATION OF WORK SITES, AND DISPOSAL OF SPOIL AND WASTE MATERIALS

Access to the work site is by paved public roads. The Contractor shall utilize said roads in such a manner as to not damage the existing roads or the adjacent property. Any damage to said roads shall be repaired by the Contractor to the satisfaction of the agency having jurisdiction over the roadway.

The Contractor shall not perform work outside the work site limits as shown by existing road right-of-way on the construction drawings and shall not leave said work site except when entering or leaving the area via the paved public roads. All areas adjacent to or in the vicinity of the work site shall be restored to pre-job conditions and shall meet all requirements of the property owner. The Contractor is obligated to keep visual impacts for the work site to a minimum; therefore, the Contractor is required to restore all areas altered by construction to near pre-construction conditions. Such areas shall include, but not be limited to, areas used for travel, parking and storage of vehicles, equipment, and materials.

The Contractor shall be responsible for the proper disposal of all waste materials resulting from his operations, including rubbish, and packing material, in a manner and location suitable to the City. The Contractor shall clean the work site and remove all trash and rubbish from premises a minimum of one time per week. Material and equipment, including mounds of earth and other debris, shall be stored on the job site only as needed and removed from the site daily, or as soon

PART 1 – SPECIAL CONSTRUCTION

as they are no longer necessary, as determined by the Engineer. All cleanup costs shall be included in the Contractor's bid.

The Contractor shall take all necessary precautions to control dust created by construction operations. The Contractor shall be especially diligent in implementing dust control program and shall be prepared to respond immediately and positively to any instructions for corrective action given by the City. The Contractor shall use dust palliatives if necessary to satisfactorily control dust; however, the Contractor shall secure the City and property owner approval for use of dust palliatives other than water.

13. PAYMENT OF STORED MATERIALS

Not Used.

14. INCIDENTAL CONTRACT ITEMS

The following list includes major items that are incidental to the project and will not be paid for as separate bid items. Other items may be designated as incidental under certain bid items.

- Dewatering and handling storm water flow during construction
- Excavation, verification and protection of existing utilities, potholing if necessary
- Material & Field testing, not specified elsewhere
- Pipe bedding material
- Temporary sheets and shoring
- Construction fencing
- Coordination and cooperation with utility companies
- Coordination and cooperation with affected property owners
- Coordination and cooperation with the City of Webster City
- Protection of existing utilities and light poles
- Protection of existing mailboxes
- Adjustment to grade of water valves and curb stops
- Handbill notification of street closures & utility disruption to affected residents
- Monitoring weather conditions
- Finish grading
- Watering of seeded and sodded areas
- Dust control measures
- Construction staging & phasing
- Working backfill to reduce moisture content
- Control of stormwater
- Curb and pavement backfill
- Repair of invisible fences if damaged during construction.
- Repair of private irrigation systems, if damaged during construction.

15. CONSTRUCTION SURVEY

Construction staking will be provided by the Engineer for construction of the Project as per SUDAS 11,010. The original stakes set by the surveyor shall be preserved. If in the opinion of the Engineer the original survey stakes or marks have been carelessly or willfully destroyed or disturbed by the Contractor, replacement of said stakes will be deemed as restaking and will be

PART 1 – SPECIAL CONSTRUCTION

charged back to the Contractor. Restaking charges will be invoiced from the Engineer to the Contractor with detailed descriptions weekly to the Contractor for payment.

16. SEEDING

Refer to pages SP-7 to SP-8 for the City Ordinance regarding seeding.

ORDINANCE NO. 2022 – 1854

AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF WEBSTER CITY, IOWA, 2019 BY AMENDING CHAPTER 10 ARTICLE IV, PERTAINING TO THE IOWA STATEWIDE URBAN DESIGN STANDARDS FOR PUBLIC IMPROVEMENTS AND THE IOWA STATEWIDE URBAN STANDARD SPECIFICATIONS FOR PUBLIC IMPROVEMENTS MANUALS.

BE IT ENACTED by the City Council of the City of Webster City, Iowa, as follows, to-wit:

SECTION 1. SECTION MODIFIED. The Code of Ordinances of the City of Webster City, Iowa, 2019, is amended by repealing and replacing Chapter 10, Article IV. Public Improvement Standards, as follows:

SEC. 10-202 PURPOSE. The purpose of this article is to protect public health, property, welfare, and safety by establishing reasonable minimum requirements for the construction and design of public improvements within Webster City. These design standards and construction specifications, along with the supplemental specifications, will be used to design and construct public improvements within Webster City.

SEC. 10-203 ADOPTION OF PUBLIC IMPROVEMENTS STANDARDS. Except as hereinafter added to, deleted, modified or amended, the following manuals are hereby adopted as, and constitute, Statewide Urban Design and Specifications (SUDAS) manuals for public improvements of the City of Webster City, Iowa.

1. **SUDAS Design Manual.** The Iowa Statewide Urban Design Standards for Public Improvements manual, 2022 edition, as published by the Iowa SUDAS corporation, is hereby adopted by reference in full except for the following portions that are deleted, modified, or amended:
 - a. Chapter 7 Erosion and Sediment Control, Table 7E-23.01: Classification of Vegetation, delete from list: Kudzu; Lespedeza; Crabgrass; Red Top; Centipedegrass; Common Lespedeza.
 - b. Chapter 8 Parking Lots, – Delete
2. **SUDAS Specifications Manual.** The Iowa Statewide Urban Standard Specifications for Public Improvements manual, 2022 edition, as published by the Iowa SUDAS corporation, is hereby adopted by reference in full except for the following portions that are deleted, modified, or amended:
 - a. Division 9 Site Work and Landscaping, Table 9010.01 Domestic Grasses, delete from the list: Brome, smooth-LINCOLN; Fescue, creeping, red; Wildrye, Russian.
 - b. Division 9 Site Work and Landscaping, Table 9010.02 Legumes, shall not be used near native plantings.

- c. Division 9 Site Work and Landscaping, Table 9010.02 Legumes, delete from the list: Lespedeza.

SECTION 2. REPEALER. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION 3. SEVERABILITY CLAUSE. 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 4. WHEN EFFECTIVE. This ordinance shall be in effect from and after its final passage, approval and publication as provided by law.

Passed and adopted this 7th day of March, 2022.

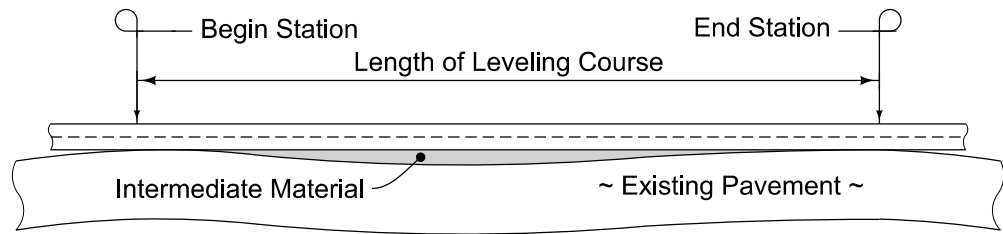
CITY OF WEBSTER CITY, IOWA

John Hawkins, Mayor

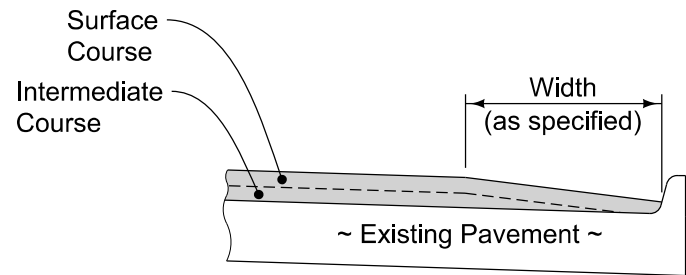
ATTEST:

Karyl K. Bonjour, City Clerk

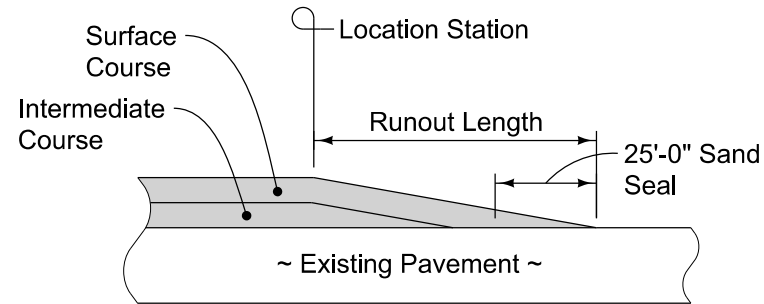
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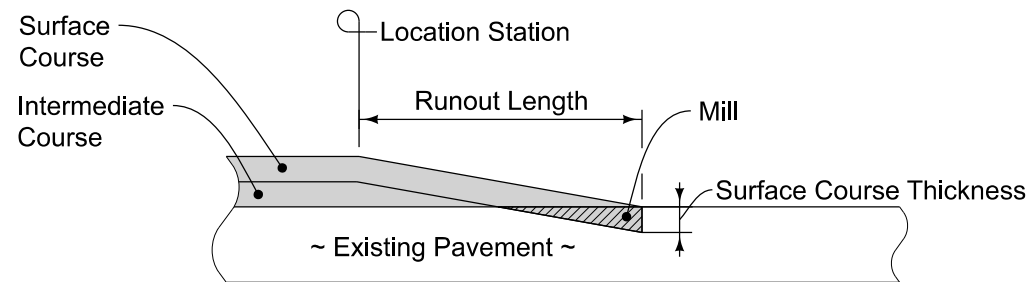
TYPICAL LEVELING COURSE



GUTTERLINE EDGE - MATCH



**WEDGE SHAPED RUNOUT
 (When Milling is not Specified)**



MILLED SURFACE NOTCH RUNOUT

DOUBLE COURSE RESURFACING

RUNOUT LENGTH	
POSTED SPEED LIMIT (mph)	RUNOUT RATIO (ft. per inch)
45 or More	50
20 to 45	25

FIGURE 7021.101 SHEET 2 OF 2

	REVISION	
	New	2022 Edition
	7021.101	
SHEET 2 of 2		
DETAILS FOR ASPHALT RESURFACING		

FY 2025 HMA IMPROVEMENTS TYPICAL CROSS SECTIONS AND DETAILS	WEBSTER CITY, IOWA SNYDER & ASSOCIATES, INC.
 SNYDER & ASSOCIATES	2727 SW SNYDER BLVD ANKENY, IOWA 50023 515-964-2020 WWW.SNYDER-ASSOCIATES.COM
Project No: 124053401A	
Sheet B.3	

**ESTIMATED PROJECT QUANTITIES
(1 DIVISION PROJECT)**

101-02

Item No.	Item Code	Item	Unit	Total	As BUILT Qty.
2.1	2999-A	Granular Shoulder Finishing, City Furnished Material	STA	68.2	
6.1	6010-E-1	Manhole Adjustment, Minor	EA	19	
7.1	7010-E	Curb and Gutter, 2.5' Width, 6 In. Thickness	LF	494	
7.2	7020-I/7010-A	HMA and PCC Pavement Samples and Testing	LS	1	
7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	3,971	
7.4	7021-999-A	HMA Fillet, Place Only	SY	978	
7.5	7040-G	Milling 3" Nominal Depth	SY	12,555	
7.6	7040-G	Milling, Variable Depth	SY	779	
7.7	7040-I	Remove Curb and Gutter	LF	494	
7.8	7040-999-A	HMA Surface Patch	TON	190	
8.1	8030-A	Temporary Traffic Control	LS	1	
9.1	9040-D-1	Filter Sock, 12" Dia	LF	400	
9.2	9040-D-2	Remove Filter Sock	LF	400	
11.1	11,020A	Mobilization	LS	1	
11.2	11,030B	Maintenance of Solid Waste Collection	LS	1	
Bid Additive Alternate A: Water Street - Willson to Seneca					
A6.1	6010-E-1	Manhole Adjustment, Minor	EA	2	
A7.1	7010-E	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	194	
A7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	257	
A7.5	7040-G	Milling 3" Nominal Depth	SY	1,485	
A7.7	7040-I	Remove Curb and Gutter	LF	194	
A8.1	8030-A	Temporary Traffic Control	LS	1	
Bid Additive Alternate B: Nokomis Park Parking Lot					
B2.1	2999-A	Granular Shoulder Finishing, City Furnished Material	STA	6.4	
B7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness	TON	537	
Bid Additive Alternate C - Boone Street Des Moines to Willson					
C6.1	6010-E-1	Manhole Adjustment, Minor	EA	1	
C7.1	7010-E	Curb and Gutter, 2.5' Width, 6 Inch Thickness	LF	120	
C7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 In. Thickness	TON	280	
C7.5	7040-G	Milling 3" Nominal Depth	SY	1,613	
C7.7	7040-I	Remove Curb and Gutter	LF	120	
C8.1	8030-A	Temporary Traffic Control	LS	1	
Bid Additive Alternate D: Buxton Drive Bell to City Limit					
D2.1	2999-A	Granular Shoulder Finishing, City Furnished Material	STA	25.8	
D7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness	TON	695	
D7.4	7021-999-A	HMA Fillet, Place Only	SY	139	
D7.6	7040-G	Milling, Variable Depth	SY	537	
D8.1	8030-A	Temporary Traffic Control	LS	1	

ESTIMATE REFERENCE INFORMATION

101-06

Item No.	Item Code	Description
2.1	2999-A	Granular Shoulder Finishing, City Furnished Material Item is for shoulder finishing of rural roadways except at paved entrances. Item includes placement, loading, hauling, spreading, and compaction of City-furnished granular material. Granular material is stockpiled at City Yard at 100 E. Ohio St. Webster City. Item shall be constructed with moisture conditioning and compaction and in accordance with IOWA DOT 2121.06 for Type B Granular Shoulders. Item is estimated to have up to 2.5 CY of granular material per station. Method of Measurement: Granular Shoulder Finishing shall be measured by the Station of shoulder finished as measured along the adjacent edge of roadway pavement. Basis of Payment: Payment will be made at the contract unit price for the quantity of Granular Shoulder Finishing measured for payment. Payment shall be considered full compensation for placement, loading, hauling, spreading and compacting granular shoulder finishing.
6.1	6010-E-1	Manhole Adjustment, Minor Refer to D-Sheets for locations. Sanitary and storm manhole locations are shown on the plans. Assume 10 manholes are of brick or block construction. Refer to PV-103 for information and details. Item includes removal of all brick manhole adjustment materials, and up to 12" of new grade adjustment rings. Item includes minor adjustment of storm and sanitary manholes to grade, with 5'x5' diamond or 5' circular PCC boxout. Item includes chimney seal for sanitary manholes. External chimney seals, extruded molded shield, and heat shrink sleeves are permitted. New castings and lids are required. New sanitary castings shall be SW-601 Type B, with solid cover lid. Storm castings shall be SW-602 Type F. Contractor is advised that some manholes currently have 22" castings.
7.1	7010-E	Curb and Gutter, 2.5' Width, 6 Inch Thickness Refer to D-Sheets for locations, layouts and quantities. Item includes construction of new curb and gutter, placement and compaction of 6" thick City-furnished special backfill materials underneath curb sections. Intent is for straight grade installation to match existing curbs. Overlay of gutter pan is intended to maintain flowline and to match existing curb structure. Hauling, spreading, grading and compacting special backfill is incidental to this item. Quantity includes approximately 20% additional to be used in locations as directed by the Engineer.
7.2	7020-I 7010-A	HMA and PCC Pavement Samples and Testing Item is for the collection, transport, sampling and testing of uncompacted samples of HMA; cutting, transport and analysis of cores for thickness and density. Item includes testing by a qualified and certified independent laboratory. Engineer may accept testing by Contractor's certified laboratory, but additional split samples shall be collected, and independent testing of split samples, at the Contractor's expense will be required, if requested by the Engineer. The IOWA DOT Daily Asphalt Materials Test Report shall be furnished. Testing for Bid Alternates, if selected, is incidental to this item. Item also includes PCC plastic and hardened testing by a third party to include casting, transport and analysis of cylinders, and testing of plastic concrete for air content and slump.

ESTIMATE REFERENCE INFORMATION

101-06

Item No.	Item Code	Description
7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness Item is for the HMA overlay of streets. Refer to D- Sheets for locations and layouts. Refer to B-Sheets for typicals. Item includes intermediate and surface courses for overlay of 1.5" thickness each at all work locations overlay of 1.5" thickness each at all work locations. Intent is for pavement to be placed to generally the same lines and grades as exist today with no cross slope correction or significant areas of levelling course. Item includes tonnage for driveway filets for rural roadway sections and 5% overrun in quantities.
7.4	7021-999-A	HMA Fillet, Place Only Refer to D-Sheets for locations and quantities. Item is for the placement of HMA filets at paved and non-paved entrances. Asphalt pavement mixture will be paid separately by tonnage under the HMA Overlay item. Actual locations and limits of HMA Fillets will be marked in the field. Fillets at residential driveways are to be 2' in width. Method of Measurement: Fillets separate from mainline pavement will be measured by the square yard of pavement placed. Fillets at commercial drives and alleys are 10' in width. Fillets at sideroads are as shown in the plans. Basis of Payment: HMA Fillet, Place Only will be paid at the area of the pavement placed for driveway, entrance or sideroad connections. This shall be considered full compensation for placing, spreading, compacting, backfilling, grading for placements at paved and non-paved connections per details in the B-Sheets.
7.5	7040-G	Milling 3" Nominal Depth
7.6	7040-G	Milling, Variable Depth Refer to D- Sheets for locations and layouts. Protect curbs, intakes and existing payment as directed by the Engineer. In areas where there are PCC patches in the roadway, milling of the PCC to grade is incidental to the item. Millings shall be hauled and delivered to the City Shop at 100 E. Ohio Street, Webster City.
7.7	7040-I	Remove Curb and Gutter Refer to D-Sheets for locations. Full depth sawcut as required for a neat edge is incidental to this item. Item includes sub-excavation and offhaul of material to accommodate granular subbase placement.
7.8	7040-999-A	HMA Surface Patch Item is for locations identified by the Engineer to require crack filling or HMA surface patch. Refer to IOWA DOT. Item is to be used at the direction of the Engineer only. HMA Mix shall be 3/8" Mix PG 58-28S ST. Sand Mix may be used for crack filling. Actual locations and limits of HMA Surface Patch will be marked in the field by the Engineer. Method of Measurement: Method of measurement shall be per ton of HMA for surface patch. Basis of Payment: The Unit Price per Ton for HMA Surface Patch shall be considered full compensation for cleaning, preparing tack coat, furnishing materials, placement and compaction.
8.1	8030-A	Temporary Traffic Control Item includes all devices, barricades, lights, signs, channelizers, delineators, and flags necessary for completion of the work. Refer to J-Sheets for requirements.
9.1	9040-D-1	Filter Sock, 12" Dia
9.2	9040-D-2	Remove Filter Sock Item is an allowance for storm water pollution prevention measures. Item includes placement at intakes, ditches and other critical storm water discharge points. Item is to be used at the direction of the Engineer. Locations will be identified at the beginning of the contract. One additional mobilization is considered incidental to this item.
11.1	11,020A	Mobilization Item includes all handbills and schedule updates. Mobilization for Bid Additive Alternates, if awarded, is incidental to this item.
11.2	11,030B	Maintenance of Solid Waste Collection Item includes all residential street locations. Bid Alternates locations, if selected, are incidental to this item.
A6.1	6010-E-1	Bid Additive Alternate A - Water Street (Willson Avenue to Seneca Street) Manhole Adjustment, Minor Refer to D-Sheets for locations. Sanitary and storm manhole locations are shown on the plans. Assume 10 manholes are of brick or block construction. Refer to PV-103 for information and details. Item includes removal of all brick manhole adjustment materials, and up to 12" of new grade adjustment rings. Item includes minor adjustment of storm and sanitary manholes to grade, with 5'x5' diamond or 5' circular PCC boxout. Item includes chimney seal for sanitary manholes. External chimney seals, extruded molded shield, and heat shrink sleeves are permitted. New castings and lids are required. New sanitary castings shall be SW-601 Type B, with solid cover lid. Storm castings shall be SW-602 Type F. Contractor is advised that some manholes currently have 22" castings.
A7.1	7010-E	Curb and Gutter, 2.5' Width, 6 Inch Thickness Refer to D-Sheets for locations, layouts and quantities. Item includes construction of new curb and gutter, placement and compaction of 6" thick City-furnished special backfill materials underneath curb sections. Intent is for straight grade installation to match existing curbs. Overlay of gutter pan is intended to maintain flowline and to match existing curb structure. Hauling, spreading, grading and compacting special backfill is incidental to this item. Quantity includes approximately 20% additional to be used in locations as directed by the Engineer.
A7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness Item is for the HMA overlay of streets. Refer to D- Sheets for locations and layouts. Refer to B-Sheets for typicals. Item includes intermediate and surface courses for overlay of 1.5" thickness each at all work locations overlay of 1.5" thickness each at all work locations. Intent is for pavement to be placed to generally the same lines and grades as exist today with no cross slope correction or significant areas of levelling course. Item includes tonnage for driveway filets for rural roadway sections and 5% overrun in quantities.
A7.5	7040-G	Milling 3" Nominal Depth Refer to D- Sheets for locations and layouts. Protect curbs, intakes and existing payment as directed by the Engineer. In areas where there are PCC patches in the roadway, milling of the PCC to grade is incidental to the item. Millings shall be hauled and delivered to the City Shop at 100 E. Ohio Street, Webster City.

FY 2025 HMA IMPROVEMENTS

PROJECT QUANTITIES AND ESTIMATE REFERENCE

SNYDER & ASSOCIATES, INC.



Project No: 124053401A

Sheet C.1

WEBSTER CITY, IA

2727 SW SNYDER BLVD.
ANKENY, IOWA 50023
515-964-2020 | www.snyder-associates.com

Project No: 124053401A Sheet C.1

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101-06

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
A7.7	7040-I	Remove Curb and Gutter Refer to D-Sheets for locations. Full depth sawcut as required for a neat edge is incidental to this item. Item includes sub-excavation and offhaul of material to accommodate granular subbase placement.
A8.1	8030-A	Temporary Traffic Control Item includes all devices, barricades, lights, signs, channelizers, delineators, and flaggers necessary for completion of the work. Refer to J-Sheets for requirements.
B2.1	2999-A	Bid Additive Alternate B (Nokomis Park Parking Lot) Granular Shoulder Finishing, City Furnished Material Item is for shoulder finishing of rural roadways except at paved entrances. Item includes placement, loading, hauling, spreading, and compaction of City-furnished granular material. Granular material is stockpiled at City Yard at 100 E. Ohio St, Webster City. Item shall be constructed with moisture conditioning and compaction and in accordance with IOWA DOT 2121.06 for Type B Granular Shoulders. Item is estimated to have up to 2.5 CY of granular material per station. Method of Measurement: Granular Shoulder Finishing shall be measured by the Station of shoulder finished as measured along the adjacent edge of roadway pavement. Basis of Payment: Payment will be made at the contract unit price for the quantity of Granular Shoulder Finishing measured for payment. Payment shall be considered full compensation for placement, loading, hauling, spreading and compacting granular shoulder finishing.
B7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness Item is for the HMA overlay of streets. Refer to D-Sheets for locations and layouts. Refer to B-Sheets for typical. Item includes intermediate and surface courses for overlay of 1.5" thickness each at all work locations overlay of 1.5" thickness each at all work locations. Intent is for pavement to be placed to generally the same lines and grades as exist today with no cross slope correction or significant areas of leveling course. Item includes tonnage for driveway fillets for rural roadway sections and 5% overrun in quantities.
C6.1	6010-E-1	Bid Additive Alternate C - Boone Street Des Moines to Willson Manhole Adjustment, Minor Refer to D-Sheets for locations. Sanitary and storm manhole locations are shown on the plans. Assume 10 manholes are of brick or block construction. Refer to PV-103 for information and details. Item includes removal of all brick manhole adjustment materials, and up to 12" of new grade adjustment rings. Item includes minor adjustment of storm and sanitary manholes to grade, with 5'x5' diamond or 5' circular PCC boxout. Item includes chimney seal for sanitary manholes. External chimney seals, extruded molded shield, and heat shrink sleeves are permitted. New castings and lids are required. New sanitary castings shall be SW-601 Type B, with solid cover lid. Storm castings shall be SW-602 Type F. Contractor is advised that some manholes currently have 22" castings.
C7.1	7010-E	Curb and Gutter, 2.5' Width, 6 Inch Thickness Refer to D-Sheets for locations, layouts and quantities. Item includes construction of new curb and gutter, placement and compaction of 6" thick City-furnished special backfill materials underneath curb sections. Intent is for straight grade installation to match existing curbs. Overlay of gutter pan is intended to maintain flowline and to match existing curb structure. Hauling, spreading, grading and compacting special backfill is incidental to this item. Quantity includes approximately 20% additional to be used in locations as directed by the Engineer.
C7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5 in. Thickness Item is for the HMA overlay of streets. Refer to D-Sheets for locations and layouts. Refer to B-Sheets for typical. Item includes intermediate and surface courses for overlay of 1.5" thickness each at all work locations overlay of 1.5" thickness each at all work locations. Intent is for pavement to be placed to generally the same lines and grades as exist today with no cross slope correction or significant areas of leveling course. Item includes tonnage for driveway fillets for rural roadway sections and 5% overrun in quantities.
C7.5	7040-G	Milling 3" Nominal Depth Refer to D-Sheets for locations and layouts. Protect curbs, intakes and existing payment as directed by the Engineer. In areas where there are PCC patches in the roadway, milling of the PCC to grade is incidental to the item. Millings shall be hauled and delivered to the City Shop at 100 E. Ohio Street, Webster City.
C7.7	7040-I	Remove Curb and Gutter Refer to D-Sheets for locations. Full depth sawcut as required for a neat edge is incidental to this item. Item includes sub-excavation and offhaul of material to accommodate granular subbase placement.
C8.1	8030-A	Temporary Traffic Control Item includes all devices, barricades, lights, signs, channelizers, delineators, and flaggers necessary for completion of the work. Refer to J-Sheets for requirements.
D2.1	2999-A	Bid Additive Alternate D: Granular Shoulder Finishing, City Furnished Material Item is for shoulder finishing of rural roadways except at paved entrances. Item includes placement, loading, hauling, spreading, and compaction of City-furnished granular material. Granular material is stockpiled at City Yard at 100 E. Ohio St, Webster City. Item shall be constructed with moisture conditioning and compaction and in accordance with IOWA DOT 2121.06 for Type B Granular Shoulders. Item is estimated to have up to 2.5 CY of granular material per station. Method of Measurement: Granular Shoulder Finishing shall be measured by the Station of shoulder finished as measured along the adjacent edge of roadway pavement. Basis of Payment: Payment will be made at the contract unit price for the quantity of Granular Shoulder Finishing measured for payment. Payment shall be considered full compensation for placement, loading, hauling, spreading and compacting granular shoulder finishing.
D7.3	7021-A	HMA Overlay, 1/2" Agg, ST, PG 58-28S, 1.5" Thickness Item is for the HMA overlay of streets. Refer to D-Sheets for locations and layouts. Refer to B-Sheets for typical. Item includes intermediate and surface courses for overlay of 1.5" thickness each at all work locations overlay of 1.5" thickness each at all work locations. Intent is for pavement to be placed to generally the same lines and grades as exist today with no cross slope correction or significant areas of leveling course. Item includes tonnage for driveway fillets for rural roadway sections and 5% overrun in quantities.

101-06

ESTIMATE REFERENCE INFORMATION

Item No.	Item Code	Description
D7.4	7021-999-A	HMA Fillet, Place Only Refer to D-Sheets for locations and quantities. Item is for the placement of HMA fillets at paved and non-paved entrances. Asphalt pavement mixture will be paid separately by tonnage under the HMA Overlay item. Actual locations and limits of HMA Fillets will be marked in the field. Fillets at residential driveways are to be 2' in width. Method of Measurement: Fillets separate from mainline pavement will be measured by the square yard of pavement placed. Fillets at commercial drives and alleys are 10' in width. Fillets at sideroads are as shown in the plans. Basis of Payment: HMA Fillet, Place Only will be paid at the area of the pavement placed for driveway, entrance or sideroad connections. This shall be considered full compensation for placing, spreading, compacting, backfilling, grading for placements at paved and non-paved connections per details in the B-Sheets.
D7.6	7040-G	Milling, Variable Depth Refer to D-Sheets for locations and layouts. Protect curbs, intakes and existing payment as directed by the Engineer. In areas where there are PCC patches in the roadway, milling of the PCC to grade is incidental to the item. Millings shall be hauled and delivered to the City Shop at 100 E. Ohio Street, Webster City.
D8.1	8030-A	Temporary Traffic Control Item includes all devices, barricades, lights, signs, channelizers, delineators, and flaggers necessary for completion of the work. Refer to J-Sheets for requirements.

FY 2025 HMA IMPROVEMENTS

PROJECT QUANTITIES AND ESTIMATE REFERENCE

SNYDER & ASSOCIATES, INC.

WEBSTER CITY, IA

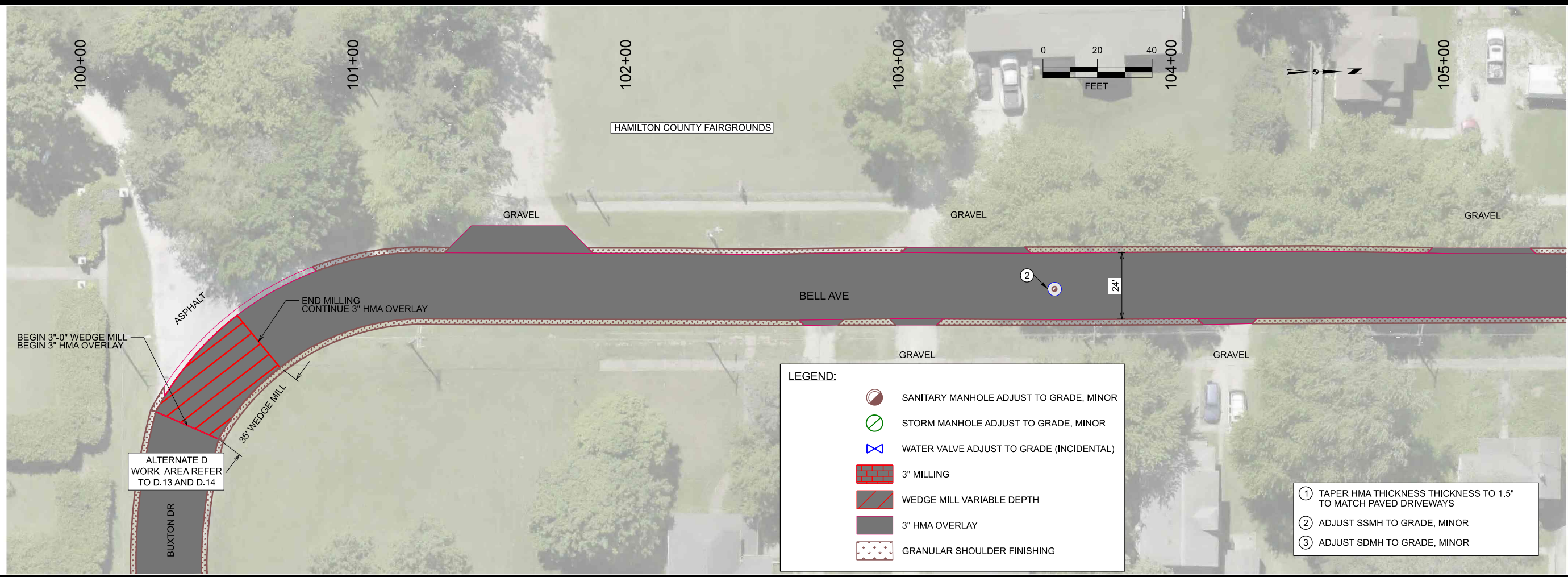
2727 SW SNYDER BLVD.
ANKENY, IOWA 50023
www.snyder-associates.com



Project No: 124053401A

Sheet C.2

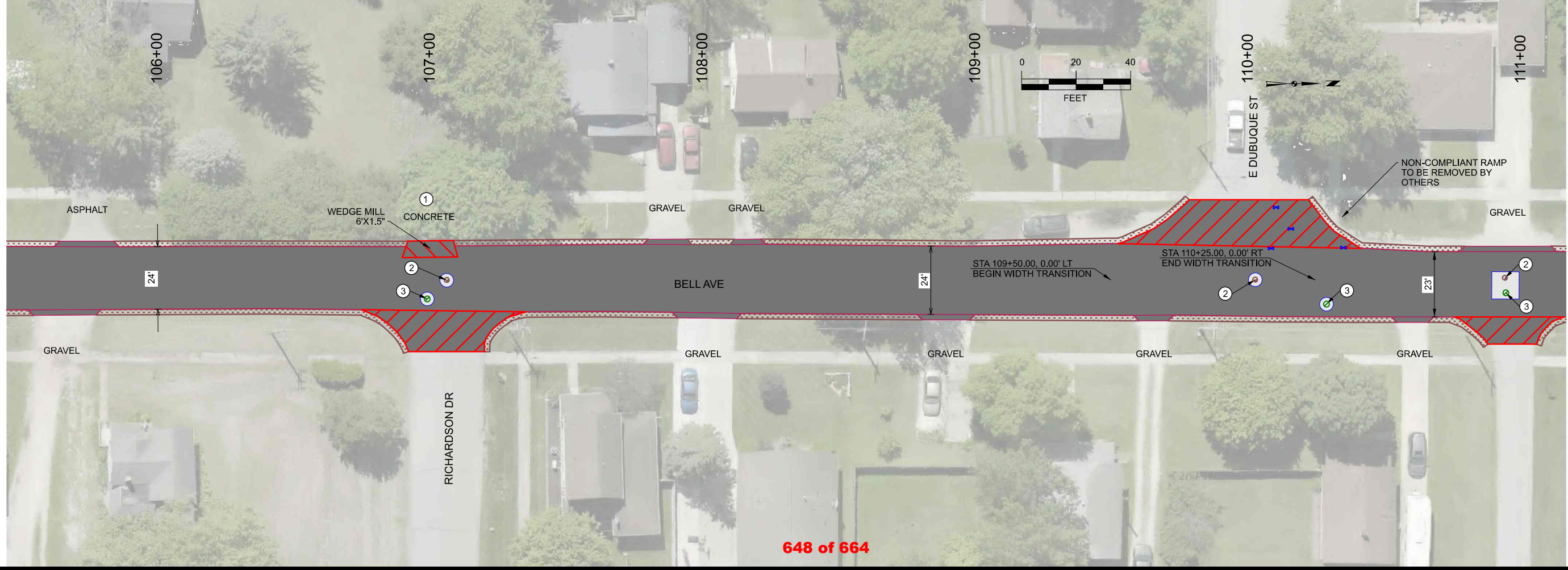
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LEGEND:

- SANITARY MANHOLE ADJUST TO GRADE, MINOR
- STORM MANHOLE ADJUST TO GRADE, MINOR
- WATER VALVE ADJUST TO GRADE (INCIDENTAL)
- 3" MILLING
- WEDGE MILL VARIABLE DEPTH
- 3" HMA OVERLAY
- GRANULAR SHOULDER FINISHING

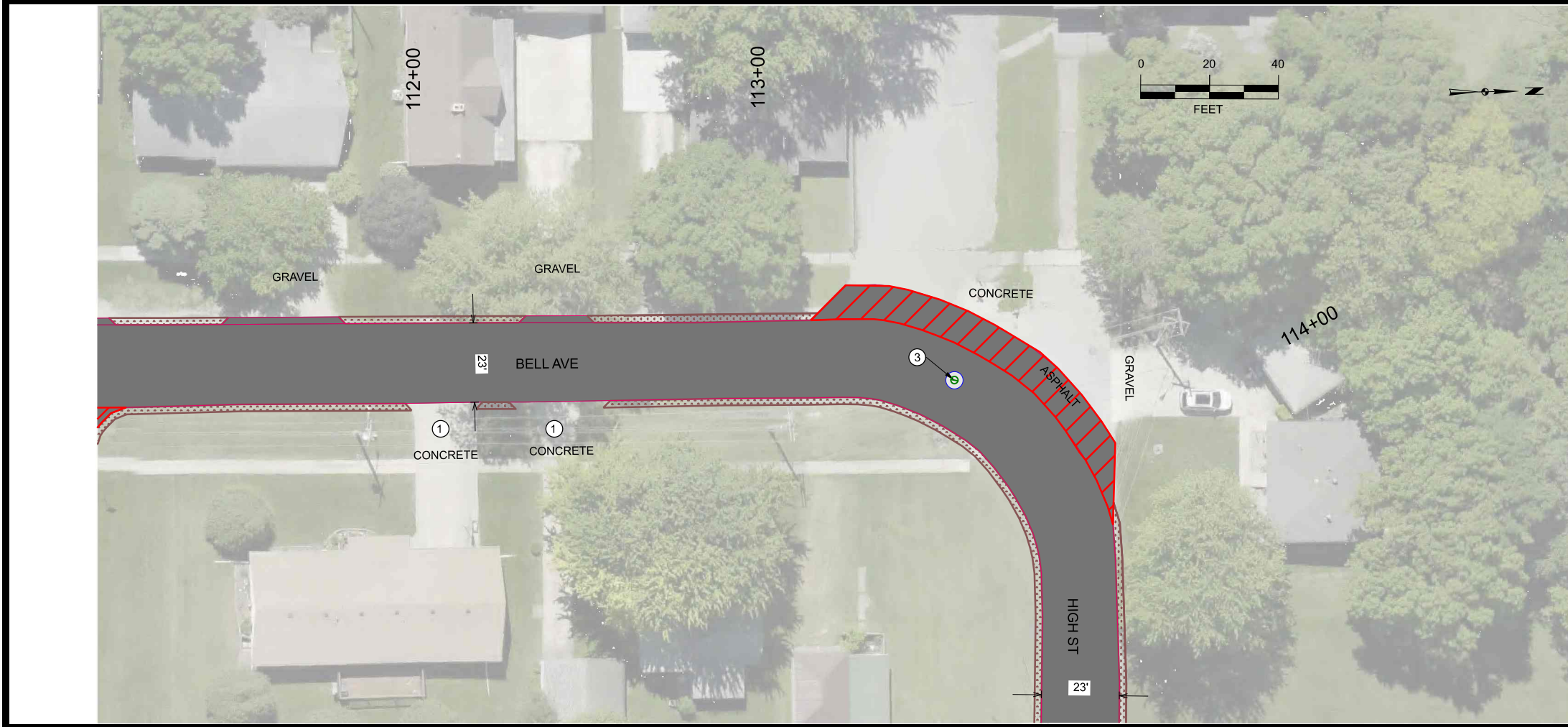
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- ② ADJUST SSMH TO GRADE, MINOR
- ③ ADJUST SDMH TO GRADE, MINOR



MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
LOCATION 1 BELL AVE AND HIGH STREET
WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM





- ① TAPER HMA THICKNESS TO 1.5" TO MATCH PAVED DRIVEWAYS
- ② ADJUST SSMH TO GRADE, MINOR
- ③ ADJUST SDMH TO GRADE, MINOR

LEGEND:

- SANITARY MANHOLE ADJUST TO GRADE, MINOR
- STORM CIRCULAR INTAKE
- STORM MANHOLE ADJUST TO GRADE, MINOR
- WATER VALVE ADJUST TO GRADE (INCIDENTAL)
- 3" MILLING
- WEDGE MILL VARIABLE DEPTH
- 3" HMA OVERLAY
- GRANULAR SHOULDER FINISHING

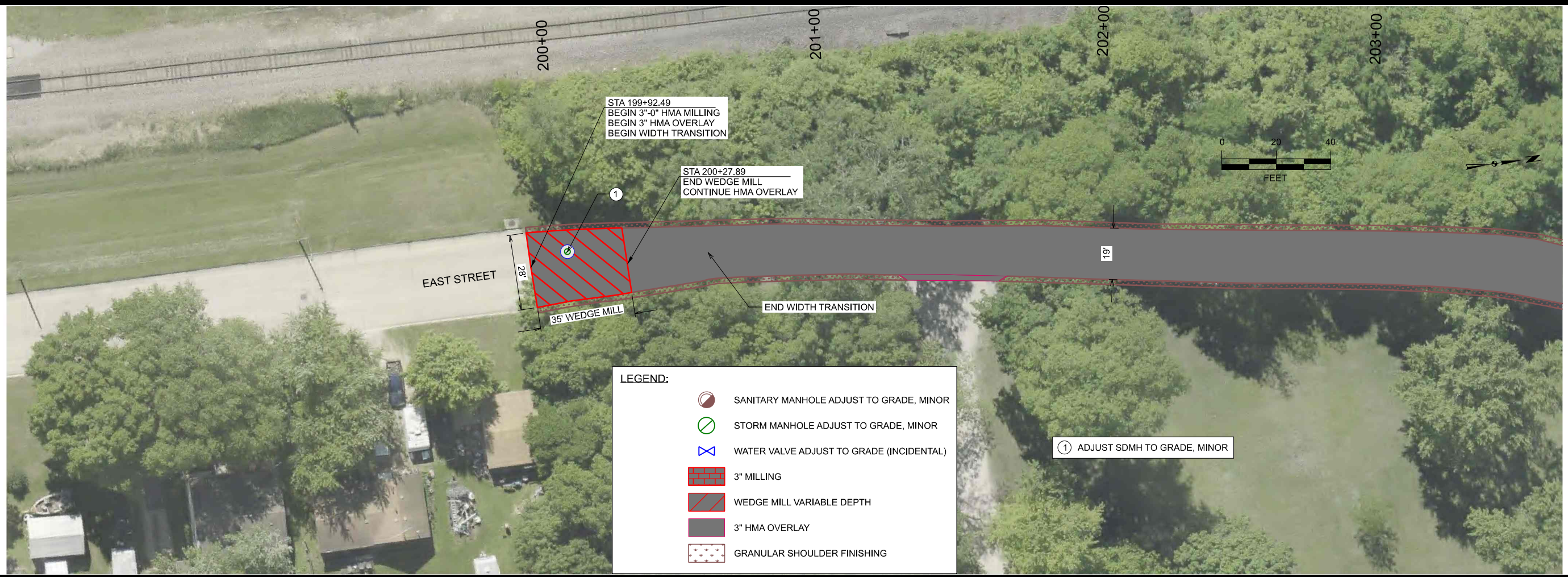


MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
 LOCATION 1 BELL AVE AND HIGH STREET
 WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM

Project No: 124053401A
 Sheet D.2

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LEGEND:

- SANITARY MANHOLE ADJUST TO GRADE, MINOR
- STORM MANHOLE ADJUST TO GRADE, MINOR
- WATER VALVE ADJUST TO GRADE (INCIDENTAL)
- 3" MILLING
- WEDGE MILL VARIABLE DEPTH
- 3" HMA OVERLAY
- GRANULAR SHOULDER FINISHING



MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
 LOCATION 2 EAST STREET
 WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM

Project No: 124053401A
 Sheet D.4

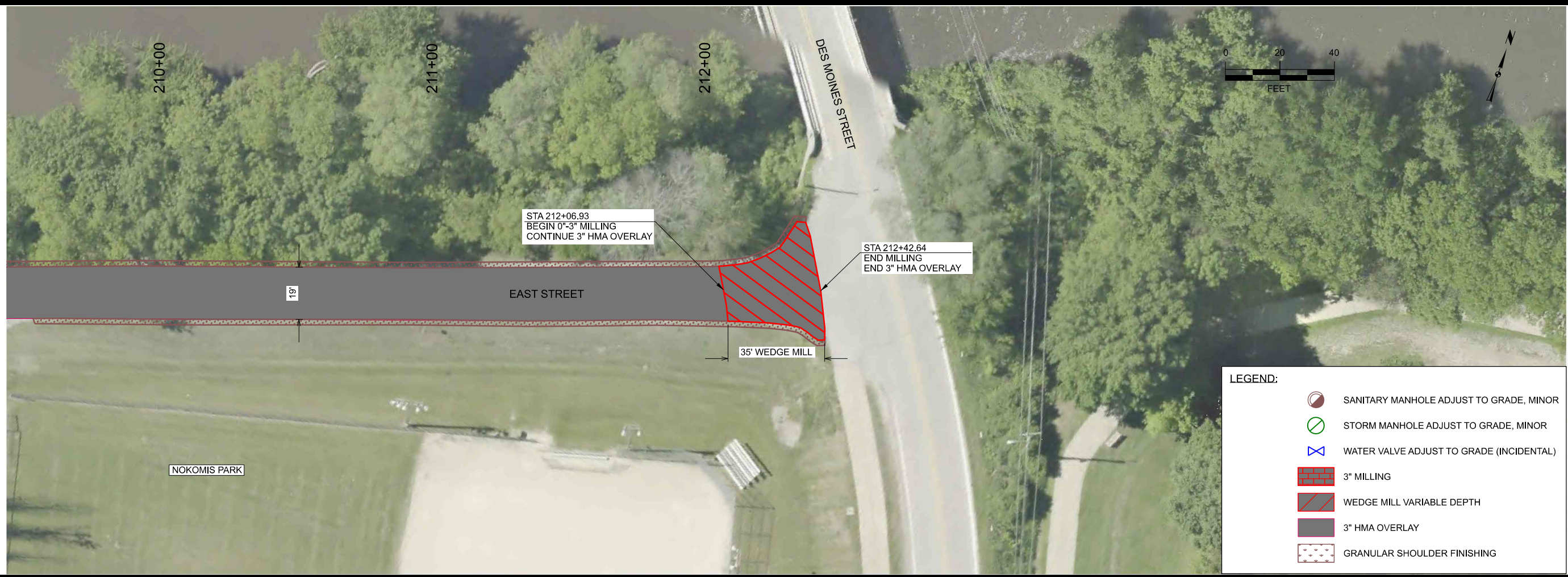
PARKING LOT PAVING IS PART OF BID ALTERNATE B

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BID ALTERNATE B: NOKOMIS PARK PARKING LOT PAVING

PARKING LOT OVERLAY ONLY.
 OVERLAY TO SAME LINES AND GRADES AS EXIST TODAY.
 NO PAVEMENT MARKING IS INCLUDED.



STA 212+06.93
 BEGIN 0"-3" MILLING
 CONTINUE 3" HMA OVERLAY

STA 212+42.64
 END MILLING
 END 3" HMA OVERLAY

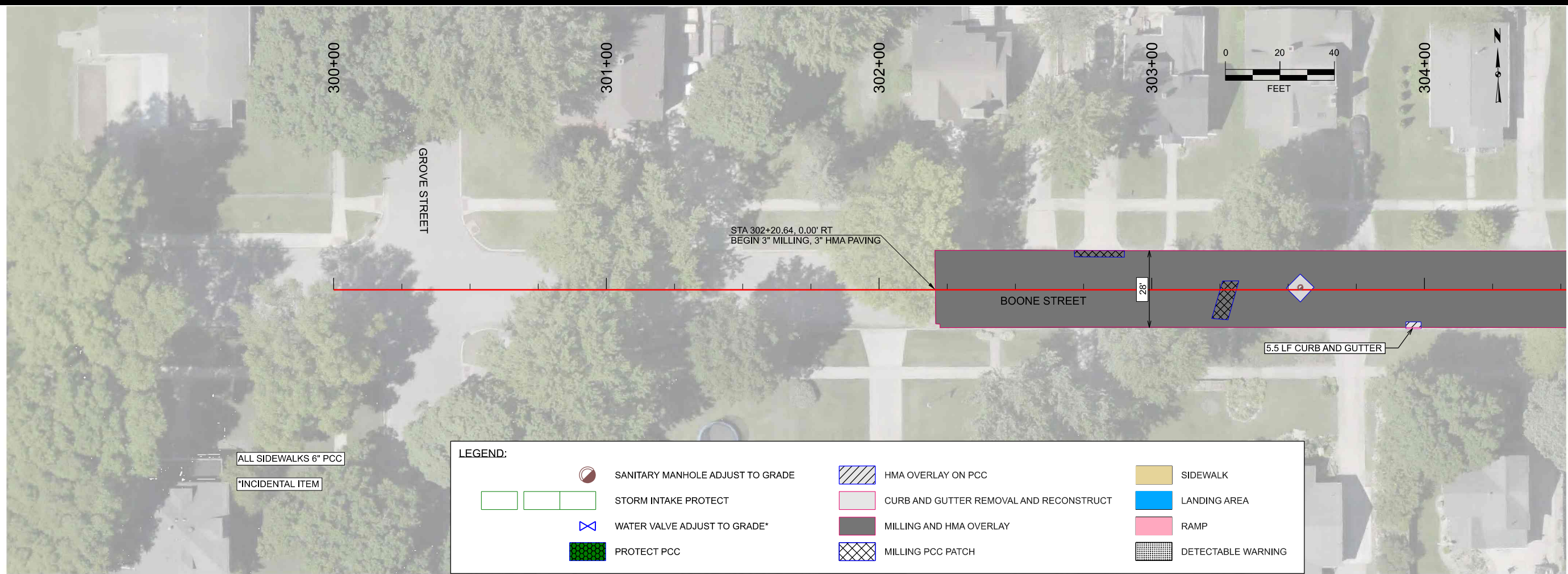
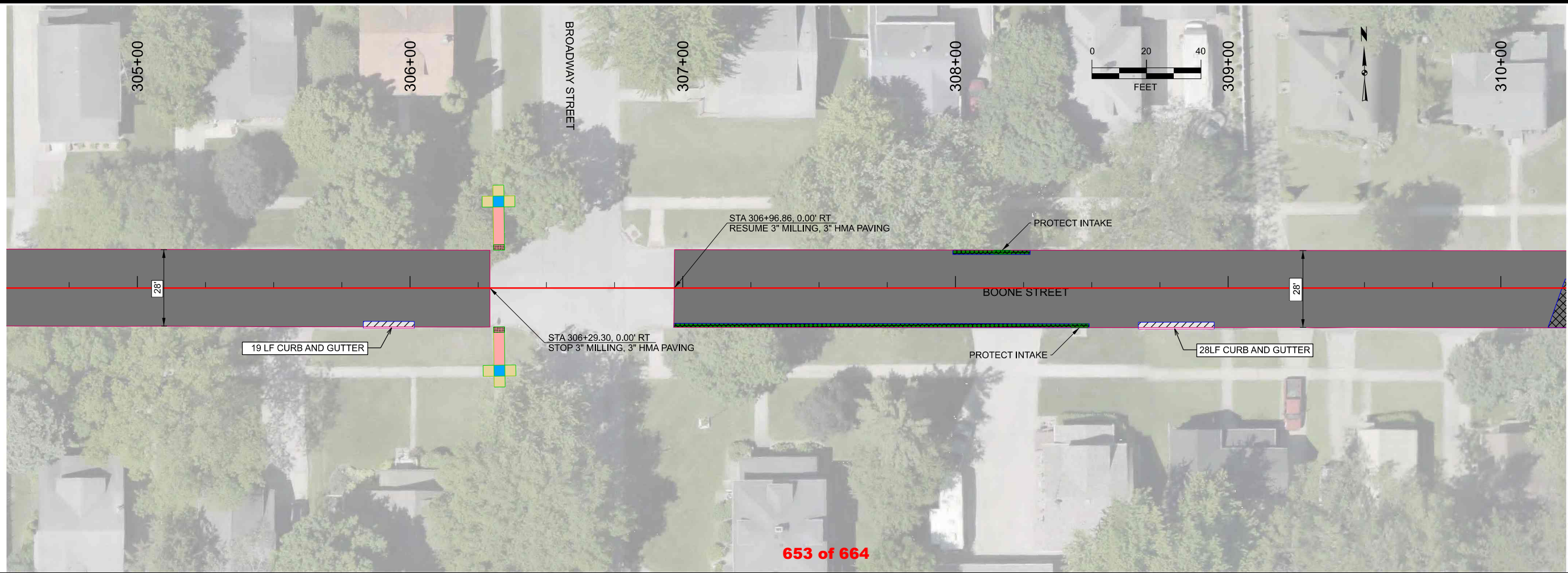
LEGEND:

- SANITARY MANHOLE ADJUST TO GRADE, MINOR
- STORM MANHOLE ADJUST TO GRADE, MINOR
- WATER VALVE ADJUST TO GRADE (INCIDENTAL)
- 3" MILLING
- WEDGE MILL VARIABLE DEPTH
- 3" HMA OVERLAY
- GRANULAR SHOULDER FINISHING

MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
 LOCATION 2 EAST STREET/BID ALT B: NOKOMIS PARK WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM

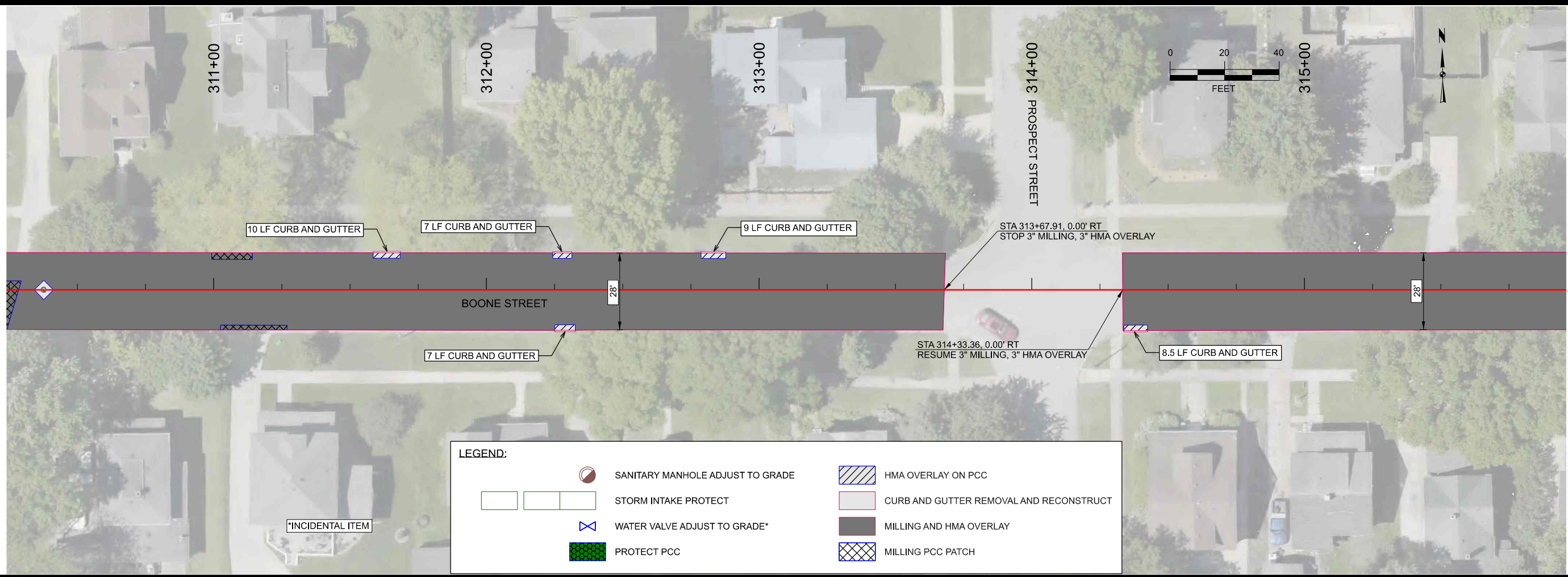
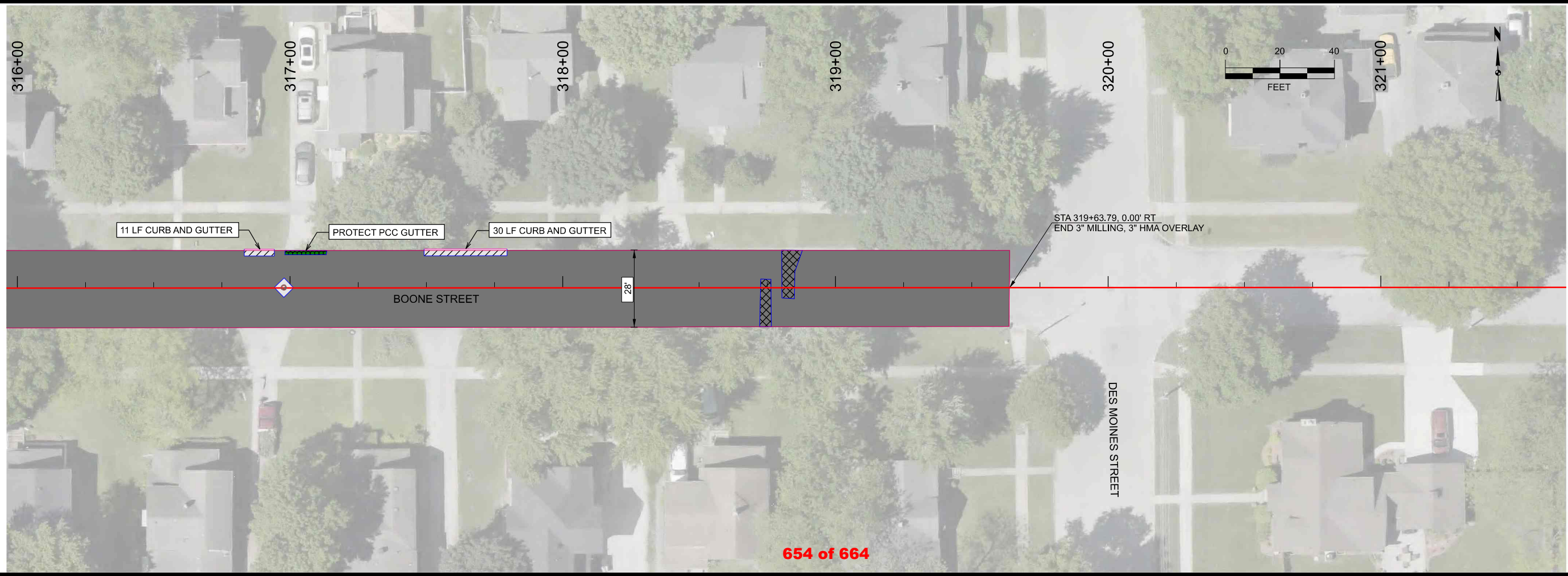
Project No: 124053401A
 Sheet D.5



LEGEND:

	STORM INTAKE PROTECT		SANITARY MANHOLE ADJUST TO GRADE		HMA OVERLAY ON PCC		SIDEWALK
	WATER VALVE ADJUST TO GRADE*		CURB AND GUTTER REMOVAL AND RECONSTRUCT		MILLING AND HMA OVERLAY		LANDING AREA
	PROTECT PCC		MILLING PCC PATCH		RAMP		DETECTABLE WARNING

FY 2025 HMA IMPROVEMENTS		WEBSTER CITY, IOWA	
LOCATION 3 BOONE STREET		Project No: 124053401A	
SNYDER & ASSOCIATES, INC.		Sheet D.6	
2727 SW SNYDER BLVD ANKENY, IOWA 50023 515-964-2020 WWW.SNYDER-ASSOCIATES.COM		DATE: 11/20/20 Scale: 1"=20' Field Bk: Pgs: Checked By: JWH Date: 5/16/2024 Technician: MAC	
 SNYDER & ASSOCIATES		REVISION Engineer: LCL Technician: MAC	
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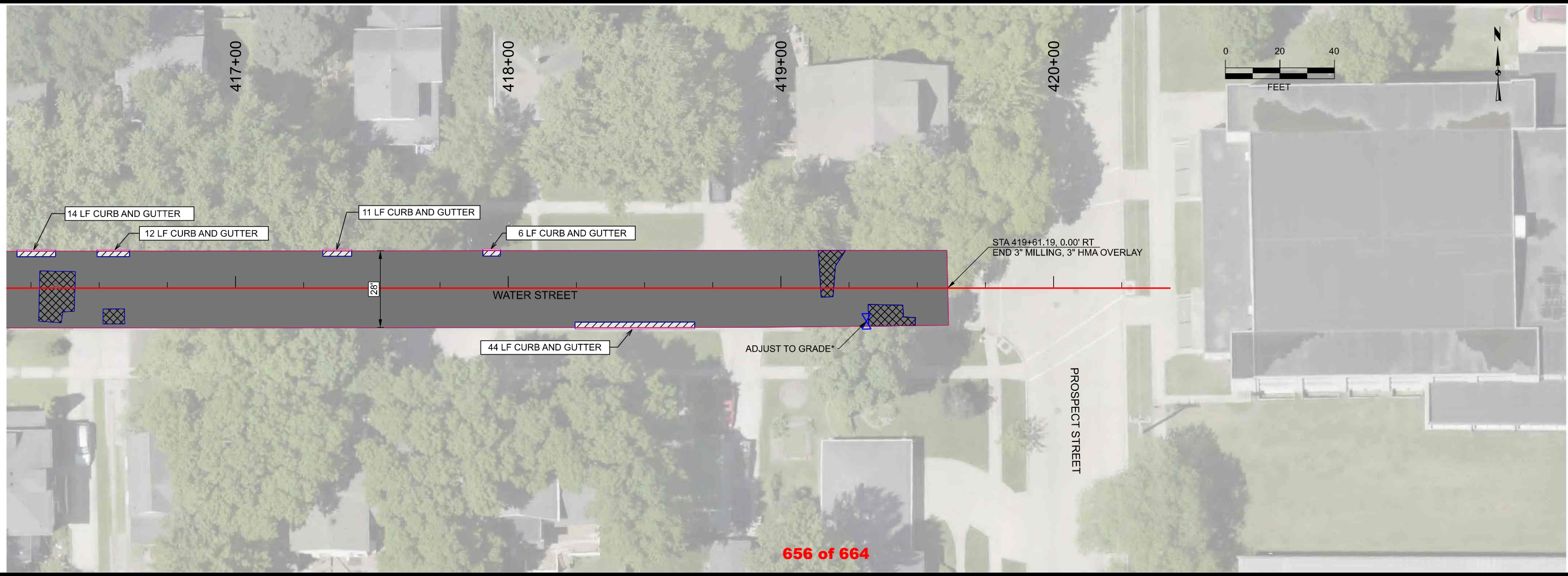
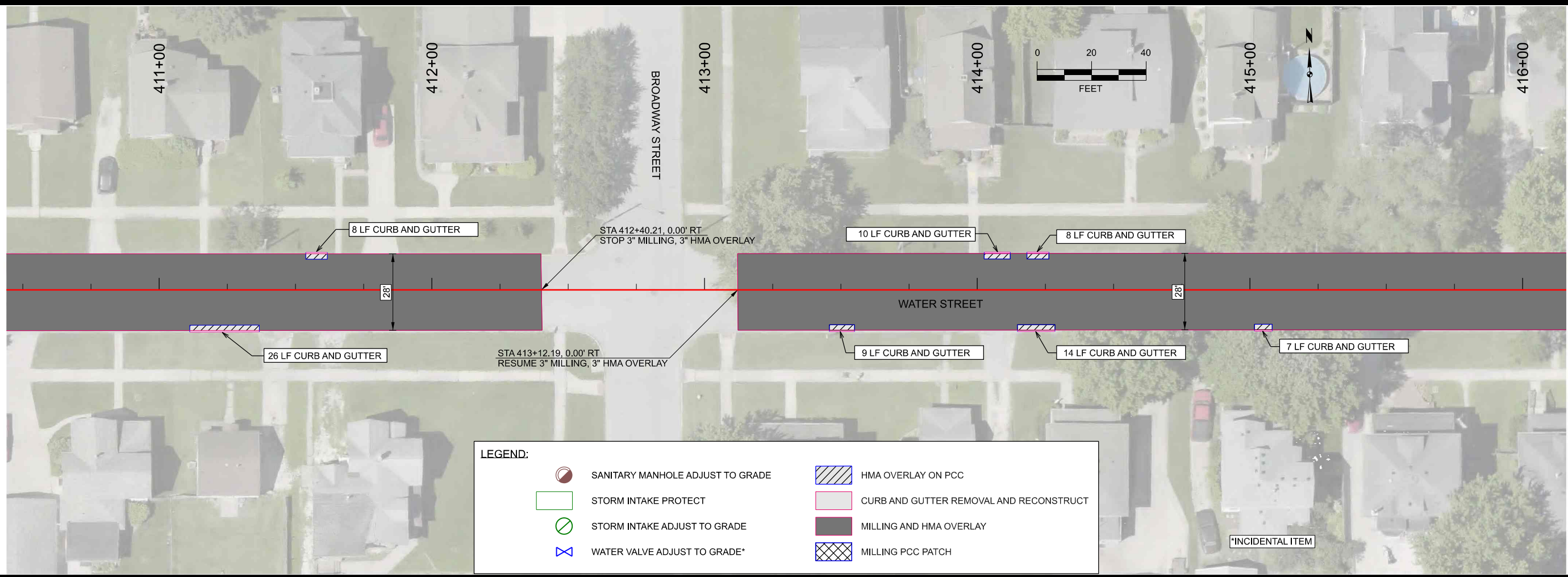
LEGEND:

	STORM INTAKE PROTECT		SANITARY MANHOLE ADJUST TO GRADE		HMA OVERLAY ON PCC
	WATER VALVE ADJUST TO GRADE*		CURB AND GUTTER REMOVAL AND RECONSTRUCT		MILLING AND HMA OVERLAY
	PROTECT PCC		MILLING PCC PATCH		

MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"= 20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
 LOCATION 3 BOONE STREET
 WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
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 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM

Project No: 124053401A
 Sheet D.7



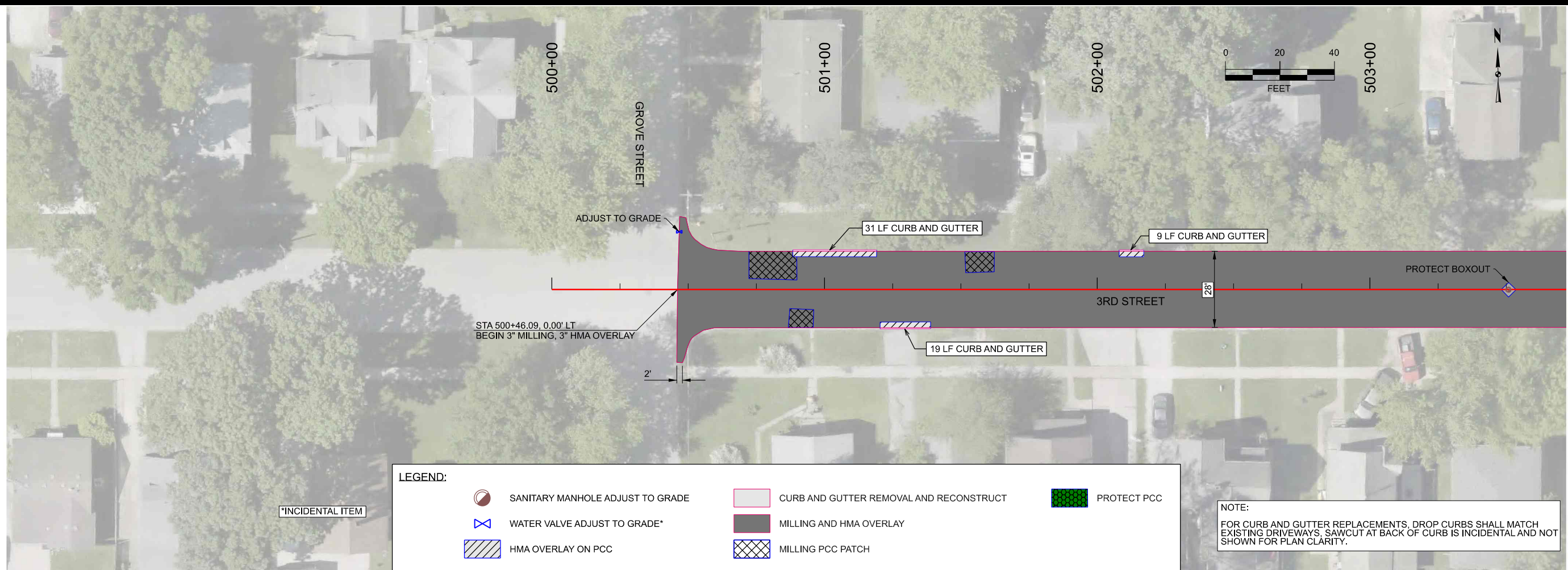
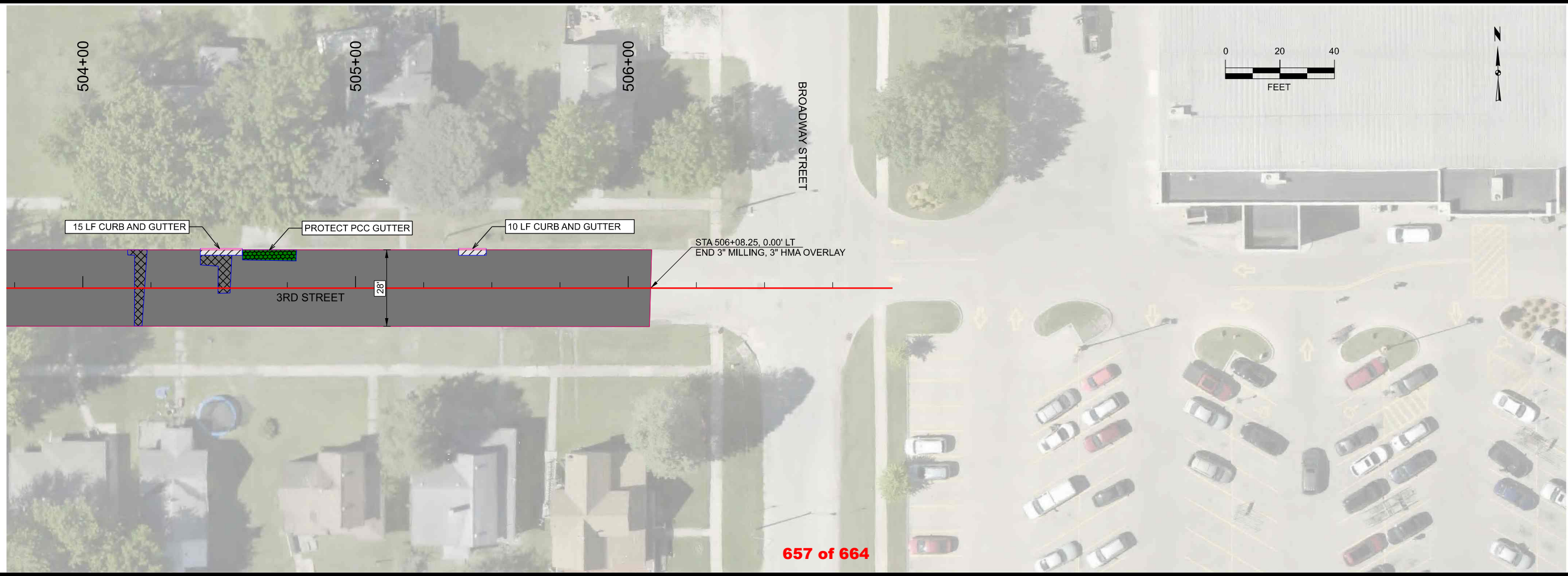
MARK	REVISION	DATE	BY

Project No: 124053401A
 Sheet D.9

FY 2025 HMA IMPROVEMENTS
 LOCATION 4 WATER STREET
 WEBSTER CITY, IOWA

SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM

OpenRoads Designer_SAA
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LEGEND:

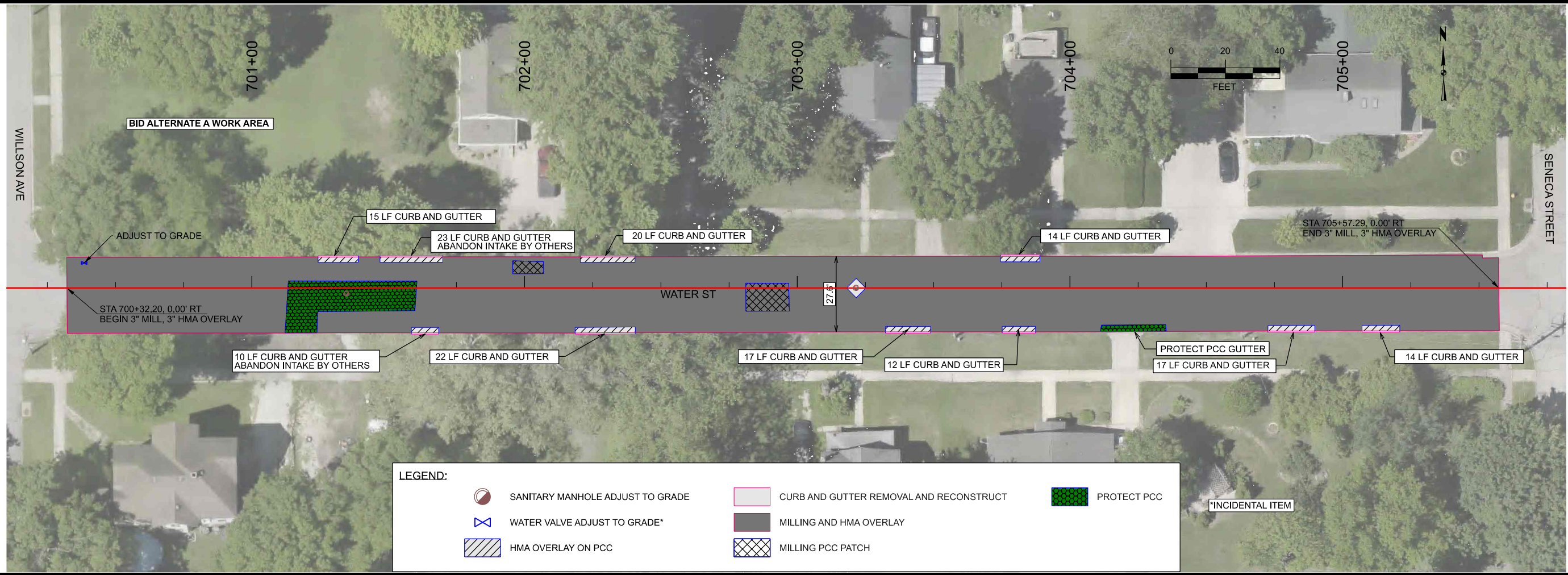
	SANITARY MANHOLE ADJUST TO GRADE		CURB AND GUTTER REMOVAL AND RECONSTRUCT		PROTECT PCC
	WATER VALVE ADJUST TO GRADE*		MILLING AND HMA OVERLAY		MILLING PCC PATCH
	HMA OVERLAY ON PCC				

NOTE:
 FOR CURB AND GUTTER REPLACEMENTS, DROP CURBS SHALL MATCH EXISTING DRIVEWAYS, SAWCUT AT BACK OF CURB IS INCIDENTAL AND NOT SHOWN FOR PLAN CLARITY.

MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
 LOCATION 5 3RD STREET
 WEBSTER CITY, IOWA
 SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM
 Project No: 124053401A
 Sheet D.10

SNYDER & ASSOCIATES
 Project No: 124053401A
 Sheet D.10



LEGEND:

	SANITARY MANHOLE ADJUST TO GRADE		CURB AND GUTTER REMOVAL AND RECONSTRUCT		PROTECT PCC
	WATER VALVE ADJUST TO GRADE*		MILLING AND HMA OVERLAY		MILLING PCC PATCH
	HMA OVERLAY ON PCC				

MARK	REVISION	DATE	BY

Engineer: LCL	Checked By: JWH	Scale: 1"=20'
Technician: MAC	Date: 5/16/2024	Field Bk: Pgr

FY 2025 HMA IMPROVEMENTS

BID ALTERNATE A WATER ST WILLSON TO SENECA WEBSTER CITY, IOWA

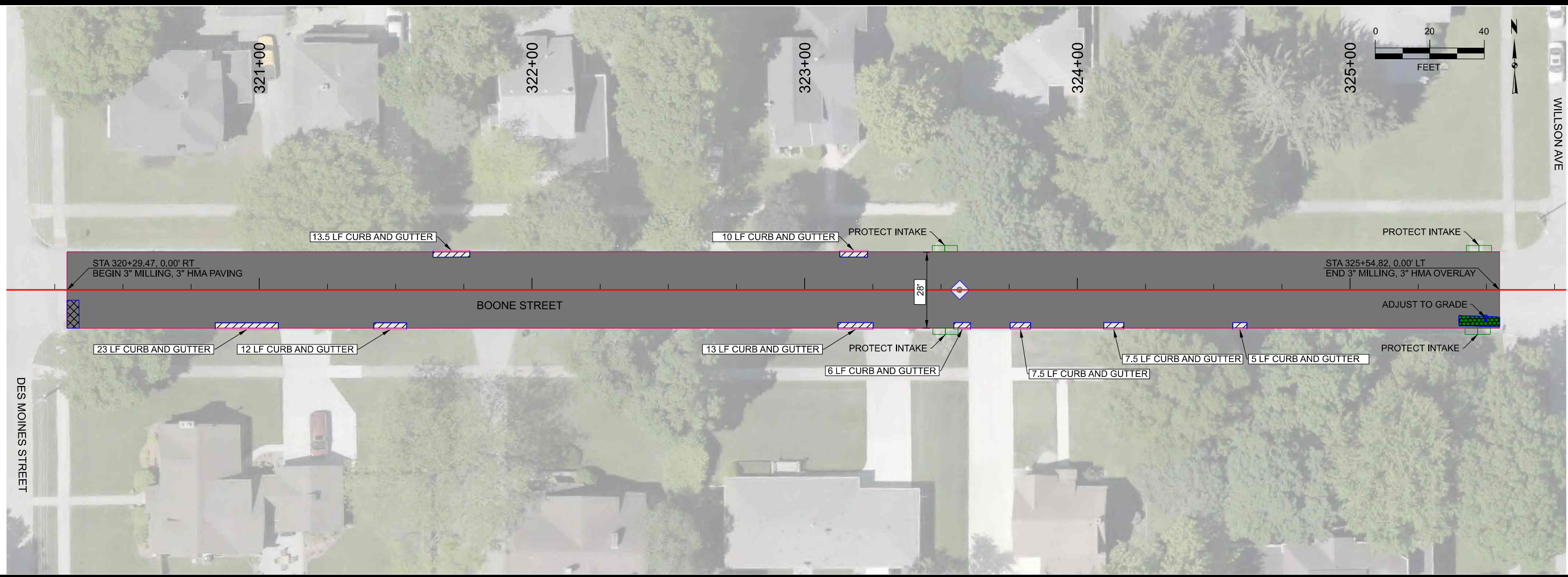
SNYDER & ASSOCIATES, INC.

2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM

Project No: 124053401A
 Sheet D.11









Project No: 124053401A
 Sheet D.11

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*INCIDENTAL ITEM

LEGEND:

	SANITARY MANHOLE ADJUST TO GRADE		HMA OVERLAY ON PCC
	STORM INTAKE PROTECT		CURB AND GUTTER REMOVAL AND RECONSTRUCT
	WATER VALVE ADJUST TO GRADE*		MILLING AND HMA OVERLAY
	PROTECT PCC		MILLING PCC PATCH

MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:

FY 2025 HMA IMPROVEMENTS
 LOCATION 3 BOONE STREET - BID ALTERNATE C
 WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM
 Project No: 124053401A
 Sheet D.12



Project No: 124053401A
 Sheet D.12



LEGEND:

	SANITARY MANHOLE ADJUST TO GRADE, MINOR
	STORM MANHOLE ADJUST TO GRADE, MINOR
	WATER VALVE ADJUST TO GRADE (INCIDENTAL)
	3" MILLING
	WEDGE MILL VARIABLE DEPTH
	3" HMA OVERLAY
	GRANULAR SHOULDER FINISHING

MARK	REVISION	DATE	BY
Engineer: LCL	Checked By: JWH	Scale: 1"=20'	
Technician: MAC	Date: 5/16/2024	Field Bk:	Pg:
Project No: 124053401A			Sheet D.14

FY 2025 HMA IMPROVEMENTS
 BID ALTERNATE D BUXTON DRIVE
 WEBSTER CITY, IOWA
SNYDER & ASSOCIATES, INC.
 2727 SW SNYDER BLVD
 ANKENY, IOWA 50023
 515-964-2020 | WWW.SNYDER-ASSOCIATES.COM



Project No: 124053401A
 Sheet D.14



MEMORANDUM

TO: Mayor and City Council

FROM: Traffic Committee
Derrick Drube, Traffic Committee Secretary

DATE: May 20, 2024

RE: Second Reading of an Ordinance Amending the Code of Ordinances of the City of Webster City, Chapter 46, Article II, Division 2, Sec. 46-50 in regard to stop requirements at certain streets.

SUMMARY: City staff received a request in regards to numerous close calls at the intersection of Cedar Street and Grove Street during the pickup and drop-off times of children at Sunset Elementary. The Traffic Committee discussed this request on March 25, 2024. The Traffic Committee is recommending stop signs to be installed for traffic traveling on Grove Street to stop at Cedar Street.

PREVIOUS COUNCIL ACTION: Council approved the first reading on May 6, 2024.

BACKGROUND/DISCUSSION: Sunset Drive south to Ohio Street and Cedar Street are utilized the most during these times. The intersection of Cedar Street and Grove Street has limited visibility when traveling east on Cedar Street. With majority of traffic utilizing Cedar Street the Traffic Committee recommends stop signs be installed for the north and south bound traffic at this intersection.

FINANCIAL IMPLICATIONS: The cost of two stop signs would come out of the 2024-2025 fiscal year general fund.

RECOMMENDATION: Traffic committee recommends City Council approve the second reading of the Ordinance amending the Webster City Municipal Code of Ordinances, Chapter 46, Article II, Division 2, Sec. 46-50 in regard to stop requirements at certain streets.

ORDINANCE NO. 2024 –

**AN ORDINANCE AMENDING THE CODE OF ORDINANCES OF THE CITY OF WEBSTER CITY, IOWA, 2019,
BY AMENDING CHAPTER 46, ARTICLE II, DIVISION 2, SECTION 46-50
PERTAINING TO STOP REQUIREMENT AT CERTAIN STREETS.**

BE IT ENACTED by the City Council of the City of Webster City, Iowa, as follows, to-wit:

SECTION 1. SECTION MODIFIED. Chapter 46, Article II, Division 2, Section 46-50 of the Code of Ordinances of the City of Webster City, Iowa, 2019, is amended by adding the following

Sec. 46-50

Stop requirement at certain streets.

Every driver of a vehicle shall stop in accordance with the following:

(183) Grove Street. Vehicles traveling on Grove Street shall stop at Cedar Street

SECTION 2. REPEALER. All ordinances or parts of ordinances in conflict with the provisions of this ordinance are hereby repealed.

SECTION 3. SEVERABILITY CLAUSE. 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 4. WHEN EFFECTIVE. This ordinance shall be in effect from and after its final passage, approval and publication as provided by law.

Passed and adopted this ____ day of _____, 2024.

John Hawkins, Mayor

ATTEST:

Karyl K. Bonjour, City Clerk