AGENDA
City Council Meeting
City Hall - Webster City, Iowa
May 16, 2022 - 6:00 p.m.

Council Members and minimal staff will be meeting in the Council Chambers at City Hall.
Due to the COVID-19 concerns and social distancing recommendations, this meeting will be Open to the Public, with limited seating available in the Council Chambers, and also by ELECTRONIC MEANS.
Iowa Code Section 21.8 outlines the guidelines to hold an electronic meeting when there are valid concerns that an in-person meeting is "impossible or impractical".

Join Zoom Meeting
https://us02web.zoom.us/j/83707672224

Meeting ID: 837 0767 2224
One tap mobile
+13017158592,,83707672224# US (Washington DC)
+13126266799,,83707672224# US (Chicago)

Dial by your location
+1 301 715 8592 US (Washington DC)
+1 312 626 6799 US (Chicago)
+1 646 558 8656 US (New York)
+1 253 215 8782 US (Tacoma)
+1 346 248 7799 US (Houston)
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Meeting ID: 837 0767 2224
Find your local number: https://us02web.zoom.us/u/kbQfVSUO0L

Join by Skype for Business
https://us02web.zoom.us/skype/83707672224

ROLL CALL

Motion on Approval of Agenda

Pledge of Allegiance

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

2. MINUTES AND CLAIMS

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 2, 2022
b. RESOLUTION on PAYROLL for the period ending May 7, 2022 and paid on May 13, 2022
c. RESOLUTION on BILLS Approve FUND LIST

3. GENERAL AGENDA

6:05 P.M. PUBLIC HEARINGS

a. Public Hearing on Plans and Specifications and proposed Form of Contract and Estimate of Cost for the Water Treatment Facility Improvement Project.

COUNCIL MEMORANDUM

RESOLUTION finally approving and confirming Plans, Specifications and Form of Contract and Estimate of Cost for the Water Treatment Facility Improvement Project.

ADDENDUM 1 ADDENDUM 2 BID ENGR LTR MANUAL

RESOLUTION awarding Contract for the Water Treatment Facility Improvement Project

b. Public Hearing on the proposed sale of City Owned Property located in Elbert's Addition, Webster City, Iowa.

COUNCIL MEMORANDUM RESOLUTION approving executed

REAL ESTATE CONTRACT conveying City Owned Property at 909 Harding Court in Elbert's Addition of Webster City, Iowa to Mitchell Hansen. BID REVIEW BID

c. Public Hearing to Amend the FY 2021/22 Budget

COUNCIL MEMORANDUM NOTICE

RESOLUTION adopting the Budget Amendment for Fiscal Year ending June 30, 2022.

d. COUNCIL MEMORANDUM: RESOLUTION charging off from Active Accounts Receivable Delinquent Final Utility Bills and Department Charges.
AR WRITE-OFFS UTILITY WRITE-OFFS

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

1. Class C Liquor License – 5-Day License, St. Thomas Aquinas Church
1010 Des Moines Street for annual event to be held on June 3, 2022.

COUNCIL MEMORANDUM

f. Third reading of an ORDINANCE repealing the Code of Ordinances of the City of Webster City, Iowa, 2019, by Amending Chapter 34, Article IV, Pertaining to Offenses Relating to Minors within the Corporate Limits of the City of Webster City, Iowa.
PASS & ADOPT ORDINANCE

g. Third reading of an ORDINANCE repealing the Code of Ordinances of the City of Webster City, Iowa, 2019, by Amending Chapter 12, Article II, Pertaining to Businesses within the Corporate Limits of the City of Webster City, Iowa.
PASS & ADOPT ORDINANCE

h. COUNCIL MEMORANDUM RESOLUTION adopting Group Benefit Plan for City Employees beginning July 1, 2022 with Governmental Health Care Plan, Third Party Administrator Employee Benefit Systems.

i. COUNCIL MEMORANDUM REQUEST from Hamilton County Fairgrounds-Hamilton County Exposition to hold the Fair Parade on July 19, 2022, and assistance from various City departments. (Parade at 6:00 p.m., staging begins at 4:00 p.m.)

4. REPORTS AND RECOMMENDATIONS OF OFFICERS, BOARDS AND COMMISSIONS

a. City Manager REPORT - April
b. Police Department REPORT - April
c. Fire Department - REPORT - April
d. Hamilton County Solid Waste Commission AGENDA PACKET 5-11-22
e. Nuisance Log - REPORT
f. Council Committee Reports
g. Other reports and recommendations

5. CLOSED SESSION

Meet in Closed Session to discuss strategy with counsel in matters that are presently in litigation or where litigation is imminent where its disclosure would be likely to prejudice or disadvantage the position of the governmental body in that litigation, as provided by Chapter 21.5 c. of the Code of Iowa .

RETURN TO OPEN SESSION

6. ADJOURN

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

CITY COUNCIL MEETING MINUTES
Webster City, Iowa May 2, 2022 – 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 2, 2022, 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, John Hawkins, Megan McFarland, Matt McKinney and Logan Welch.

Iowa Code Section 21.8 outlines the guidelines to hold an electronic meeting when there are valid concerns that an in-person meeting is ***"impossible or impractical"****. Due to the COVID-19 concerns and social distancing recommendations, this meeting was Open to the Public with limited capacity and by electronic means utilizing the Zoom Platform. Details were provided in using the Zoom platform either by joining through the web portal or by calling in to view or participate.*

It was moved by Welch and seconded by McFarland to approve the agenda.
ROLL CALL: Hansen, Hawkins, McFarland, McKinney and Welch voting aye.

Mayor John Hawkins led the Pledge of Allegiance.

PETITIONS – COMMUNICATIONS – REQUESTS
None brought forth.
PUBLIC INFORMATION
Cindy Bettis addressed Council with concerns on costs of public utilities and inquired about alternative energy options such as wind power and solar energy to stay competitive.
MINUTES AND CLAIMS
It was moved by Welch and seconded by Hansen that the following motion and Resolutions be approved and adopted collectively:
a. That the meeting minutes of April 18, 2022 be approved.
b. That Resolution No. 2022-070 approving Payroll for the period ending April 23, 2022 and paid on April 29, 2022, in the amount of $172,477.89 be passed and adopted.
c. That Resolution No. 2022-071 approving bills paid in the amount of $458,565.07 be passed and adopted.
ROLL CALL: Hawkins, McFarland, McKinney, Welch and Hansen voting aye.

GENERAL AGENDA
a. It was moved by Welch and seconded by McKinney that the issuance of Beer and Liquor Licenses by the Iowa Department of Commerce be approved for the following:
1. Renewal of Class E Liquor License, Class C Beer Permit, Class B Wine Permit, and Sunday Service – Casey's General Store #1828, 1300 2nd Street
2. Renewal of Class E Liquor License, Class C Beer Permit, Class B Wine Permit and Sunday Service - Hy-Vee (Store), 823 2nd Street

ROLL CALL: McFarland, McKinney, Welch, Hansen and Hawkins voting aye.
b. It was moved by Welch and seconded by Hansen that the Second Reading of an Ordinance repealing the Code of Ordinances of the City of Webster City, Iowa, 2019, by Amending Chapter 34, Article IV, Pertaining to Offenses Relating to Minors within the Corporate Limits of the City of Webster City, Iowa be approved.
ROLL CALL: McKinney, Welch, Hansen, Hawkins and McFarland voting aye.

c. It was moved by McFarland and seconded by Welch that the Second Reading of an Ordinance repealing the Code of Ordinances of the City of Webster City, Iowa, 2019, by Amending Chapter 12, Article II, Pertaining to Businesses within the Corporate Limits of the City of Webster City, Iowa be approved.

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

d. It was moved by Welch and seconded by Hansen that Resolution No. 2022-072 Amending Terms of Employment for City Clerk be passed and adopted.

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

e. It as moved by McFarland and seconded by Welch that Resolution No. 2022-073 directing publication of gross wage salaries for full time and part time City Employees for the Calendar Year 2021 be passed and adopted.

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

f. It was moved by Welch and seconded by Hansen that Resolution No. 2022-074 authorizing the City Manager to accept the bid from Iowa Plains Signing to complete Center Line Painting for Fiscal Year 2021-2022 be passed and adopted.

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

Brandon Bahrenfuss, Street Department Superintendent, provided the specifics of the cancellation of current contract and acceptance of the two-month contract for painting to be completed this year.

g. It was moved by McFarland and seconded by Hansen that Resolution No. 2022-075 awarding Agreement for the 2022 Concrete Crack Seal Project to Denco Highway Construction Corp., Mingo, Iowa in the amount not to exceed $50,000.00 be passed and adopted.

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

Biridiana Bishop, Assistant City Manager/Public Works Director, informed Council of the process taken for this project and that work is not to exceed $50,000.00 budgeted amount.

h. It was moved by Welch and seconded by McKinney that Resolution No. 2022-076 authorizing and approving Purchase from Struchen Rentals, LLC, of Lot 5 Home Fourth Addition in Webster City, Iowa be passed and adopted.

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

Assistant City Manager/Public Works Director Bishop explained to Council that the acquisition of this land is necessary for the Force Main Route for the new Wastewater Treatment Plant.

i. It was moved by Hansen and seconded by McKinney that Resolution No. 2022-077 authorizing the City Manager to award contracts for the Tuckpoint Repair and Exterior Painting of the Senior Citizen Center Building be passed and adopted.

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

Breanne Lesher, Recreation and Public Grounds Assistant Director, was present and explained the details of the repair and painting costs associated with the building. Funds previously budgeted for the cemetery GIS project will be used to complete the necessary repairs and painting of the Senior Citizen Center Building while other options will be explored for the GIS project at the Cemetery.

j. It was moved by Welch and seconded by McFarland that setting May 16, 2022 at 6:05 p.m. in Council Chambers at City Hall in Webster City, Iowa as the time and place for a Public Hearing to Amend the FY 2021/22 Budget be approved.

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

k. It was moved by Welch and seconded by Hansen that Resolution No. 2022-078, setting May 16, 2022 at 6:05 p.m. in Council Chambers at City Hall in Webster City, Iowa as the time and place for a Public Hearing on the proposed sale of City Owned Property located in Elbert's Addition, Webster City, Iowa, addressed as 909 Harding Court, be passed and adopted.

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

l. It was moved by Welch and seconded by McFarland that Resolution No. 2022-079 accepting the Goal Setting Session Summary Report prepared by Callahan Municipal Consultants, LLC for the City of Webster City for 2022 be passed and adopted.

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

Daniel Ortiz-Hernandez, City Manager, provided a review and additional information on items included in the report.

REPORTS AND RECOMMENDATIONS OF OFFICERS, BOARDS AND COMMISSIONS

a. Council Committee Reports – None brought forth.

b. Other reports and recommendations – None brought forth.

OTHER ITEMS

a. The Report/Update from the City Attorney dated April 26, 2022 was previously given to Council for review.

It was moved by McKinney and seconded by Hansen that Council adjourn.

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

The May 2, 2022 Regular City Council Meeting stood adjourned at 6:32 p.m.

_____ _____

John Hawkins, Mayor Karyl K. Bonjour, City Clerk

RESOLUTION NO. 2022 -

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WEBSTER CITY, IOWA:

That the payroll for the 80-hour period ending May 7, 2022 and paid on May 13, 2022 aggregating the sum of $186,323.30 herewith presented, be and the same is hereby approved.

Passed and adopted this 16th day of May, 2022.

_____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

Employee Number	Name	Total Gross Amount	Total Gross Hours	3-01 OT no pen Emp Amt	4-00 OT pension Emp Amt	5-01 DBL OT np Emp Amt	6-00 DBL OT pen Emp Amt	23-01 OTHER pen Emp Amt	24-00 OTHER np Emp Amt	85-00 NET PAY Emp Amt	86-00 DIRECT DEP Emp Amt
20035	BISHOP, BIRIDIANA	3,778.85	80.00	.00	.00	.00	.00	.00	125.00	.00	2,512.37
60722	CHELESVIG, BETH A.	3,032.00	80.00	.00	.00	.00	.00	.00	.00	.00	1,983.00
20020	ORTIZ-HERNANDEZ, DANIEL	5,271.15	80.00	.00	.00	.00	.00	.00	175.00	.00	2,938.15
60003	SMITH, ELIZABETH A.	2,135.20	80.00	.00	.00	.00	.00	.00	.00	.00	1,438.25
Total CITY MANAGER:											
	4	14,217.20	320.00	.00	.00	.00	.00	.00	300.00	.00	8,871.77
30980	STRONER, BRIAN M.	2,741.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,923.93
Total ENVIRONMENTAL/SAFETY:											
	1	2,741.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,923.93
61164	BONJOUR, KARYL K.	2,849.60	80.00	.00	.00	.00	.00	583.20	.00	.00	1,897.72
61238	HAGLUND, DENISE D.	1,440.00	80.00	.00	.00	.00	.00	.00	.00	.00	975.97
61190	NERLAND, DEDRA R.	1,684.80	80.00	.00	.00	.00	.00	.00	.00	.00	1,163.46
61163	PEVESTORF, ELIZABETH J.	1,902.40	80.00	.00	.00	.00	.00	.00	.00	.00	1,310.68
30329	WOLFGRAM, DOREEN A.	3,028.00	80.00	.00	.00	.00	.00	.00	.00	.00	2,105.03
Total FINANCE OFFICE:											
	5	10,904.80	400.00	.00	.00	.00	.00	583.20	.00	.00	7,452.86
41502	CAMPBELL, AARON M.	40.00	.00	.00	.00	.00	.00	40.00	.00	.00	36.94
41215	CASEY, DANA R	20.00	.00	.00	.00	.00	.00	20.00	.00	.00	17.23
40857	DOOLITTLE, KENDALL J.	60.00	.00	.00	.00	.00	.00	60.00	.00	51.68	.00
41263	ESTLUND, JEROMY J.	2,419.20	112.00	.00	.00	.00	.00	.00	.00	.00	1,736.20
41395	FEICKERT, DAKOTA L.	126.00	9.00	.00	.00	.00	.00	.00	.00	.00	107.54
41038	FERGUSON, WILLIAM M.	20.00	.00	.00	.00	.00	.00	20.00	.00	18.47	.00
41300	FOX, JEFFREY A.	56.00	4.00	.00	.00	.00	.00	.00	.00	.00	48.24
41438	FRAKES, JUSTIN M.	20.00	.00	.00	.00	.00	.00	20.00	.00	.00	18.47
41260	FRAZIER, LOGAN W.	40.00	.00	.00	.00	.00	.00	40.00	.00	.00	36.94
40971	HAYES, BRANDON W.	2,686.32	117.50	.00	.00	240.24	.00	.00	.00	.00	1,949.36
41445	HAYES, HARRISON W.	994.00	63.00	.00	.00	.00	.00	112.00	.00	856.23	.00
41441	HAYES, HUNTER W.	20.00	.00	.00	.00	.00	.00	20.00	.00	18.47	.00
40031	HOLST, RONALD W	80.00	.00	.00	.00	.00	.00	80.00	.00	68.91	.00
41192	JESSEN, PHILLIP N.	630.00	37.00	.00	.00	.00	.00	112.00	.00	464.75	.00
41460	LEHMAN, MICHEAL L.	20.00	.00	.00	.00	.00	.00	20.00	.00	.00	13.47
41200	MADSEN, TODD M	60.00	.00	.00	.00	.00	.00	60.00	.00	.00	51.68
41219	SOWLE JR., ANDREW W.	2,424.80	112.00	.00	.00	.00	.00	.00	.00	.00	1,446.68
41400	STANSFIELD, CHARLES T.	2,993.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,979.23
41029	STEWART, EARL L	40.00	.00	.00	.00	.00	.00	40.00	.00	.00	36.94
41485	THUMMA, AMANDA L.	40.00	.00	.00	.00	.00	.00	40.00	.00	.00	36.94
41088	TOLLE, PAUL A.	60.00	.00	.00	.00	.00	.00	60.00	.00	51.68	.00
41216	WEINSCHENK, KENRIC J	60.00	.00	.00	.00	.00	.00	60.00	.00	.00	55.41
41213	WILLIAMS, ZACHARY W.	60.00	.00	.00	.00	.00	.00	60.00	.00	.00	51.68
40815	WILLS, DON H.	80.00	.00	.00	.00	.00	.00	80.00	.00	73.88	.00
41340	YOUNGDALE, COLE C.	60.00	.00	.00	.00	.00	.00	60.00	.00	55.41	.00
41270	ZEHNER, DONALD F.	40.00	.00	.00	.00	.00	.00	40.00	.00	.00	36.94
41505	ZIMMER, COLLEN C.	40.00	.00	.00	.00	.00	.00	40.00	.00	.00	36.94
Total FIRE DEPARTMENT:											
	27	13,189.92	534.50	.00	.00	240.24	.00	1,084.00	.00	1,659.48	7,696.83
61240	WINTER, KIRBY L.	4,085.38	80.00	.00	.00	.00	.00	.00	20.00	.00	2,810.25

Employee Number	Name	Total Gross Amount	Total Gross Hours	3-01 OT no pen Emp Amt	4-00 OT pension Emp Amt	5-01 DBL OT np Emp Amt	6-00 DBL OT pen Emp Amt	23-01 OTHER pen Emp Amt	24-00 OTHER np Emp Amt	85-00 NET PAY Emp Amt	86-00 DIRECT DEP Emp Amt
Total INFORMATION SYSTEMS:											
	1	4,085.38	80.00	.00	.00	.00	.00	.00	20.00	.00	2,810.25
61235	SIMPSON, CORY L.	1,935.20	80.00	.00	.00	.00	.00	.00	.00	.00	1,355.95
Total INSPECTION:											
	1	1,935.20	80.00	.00	.00	.00	.00	.00	.00	.00	1,355.95
31210	BARNES, DERRICK S.	3,106.29	82.75	.00	111.27	.00	.00	.00	.00	.00	2,109.21
31185	CASEY, DANA R.	3,263.56	82.00	.00	117.96	.00	.00	.00	.00	.00	2,205.72
30678	DICKINSON, ADAM L.	4,239.69	90.00	.00	139.77	.00	.00	.00	.00	.00	2,861.12
31230	MC COLLOUGH, DOUGLAS J.	3,071.00	83.00	.00	.00	.00	.00	.00	.00	.00	2,147.43
31184	MOURTON, RUSSELL E.	3,148.01	80.00	.00	.00	.00	.00	.00	.00	.00	1,804.64
31240	NEWMAN, BRADY N.	980.00	49.00	.00	.00	.00	.00	.00	.00	.00	819.10
31186	ORTON, RYAN D.	3,660.68	85.50	.00	126.96	.00	.00	.00	.00	.00	2,469.31
30918	PARKHILL, MARTY E.	3,550.42	83.50	.00	.00	.00	.00	.00	.00	.00	2,430.39
Total LINE DEPARTMENT:											
	8	25,019.65	635.75	.00	495.96	.00	.00	.00	.00	.00	16,846.92
30976	MADSEN, TODD M.	1,725.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,251.48
31188	PASCHKE, RODNEY A.	1,662.40	80.00	.00	.00	.00	.00	.00	.00	.00	1,093.93
Total METER DEPARTMENT:											
	2	3,388.00	160.00	.00	.00	.00	.00	.00	.00	.00	2,345.41
40540	ARENDS, PEGGY J.	16,054.20	40.00	.00	.00	.00	.00	12,992.01	1,872.99	.00	9,763.30
41480	DILLEY, JEAN M.	1,430.40	80.00	.00	.00	.00	.00	.00	.00	.00	994.10
41500	HOLCOMBE, IAN J.	1,441.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,027.88
41390	NOWELL, TANNER J.	2,009.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,439.04
41475	RUSH, DEBORAH G.	1,661.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,133.92
41510	WHITEHILL, AUDRIANA G.	1,424.00	80.00	.00	.00	.00	.00	.00	.00	.00	1,019.50
41207	WINDSCHITL, JOAN E.	1,788.80	80.00	.00	.00	.00	.00	.00	.00	.00	1,101.90
Total POLICE DEPARTMENT-D:											
	7	25,810.20	520.00	.00	.00	.00	.00	12,992.01	1,872.99	.00	16,479.64
41430	BASINGER, RYAN A.	2,381.68	84.00	.00	.00	.00	.00	.00	.00	.00	1,686.88
41191	HOUGE, CLINTON J.	2,547.72	84.00	.00	.00	.00	.00	.00	.00	.00	1,785.89
41453	LEHMAN, MICHEAL L.	2,382.48	84.00	.00	.00	.00	.00	.00	.00	.00	1,753.99
41465	LOWE, ANDREW T.	2,404.95	86.00	82.35	.00	.00	.00	.00	.00	.00	1,694.38
41479	LUFT, ANTHONY J.	2,383.36	98.00	.00	.00	.00	.00	.00	.00	.00	1,752.99
41230	MCKINLEY, ERIC K.	2,684.64	84.00	.00	.00	.00	.00	.00	.00	.00	1,947.20
41110	MORK, SHILOH B.	3,173.60	80.00	.00	.00	.00	.00	.00	.00	.00	2,121.62
41471	MOURLAM, DALTON G.	2,245.76	84.00	.00	.00	.00	.00	.00	.00	.00	1,588.80
41225	PRITCHARD, BRANDON D.	2,522.52	84.00	.00	.00	.00	.00	.00	.00	.00	1,781.79
41482	RICHARDSON, COLT A.	2,254.56	84.00	.00	.00	.00	.00	.00	.00	.00	1,661.50
41426	ROSE, DYLAN M.	2,318.68	84.00	.00	.00	.00	.00	.00	.00	.00	1,318.68
41450	THUMMA, STEVEN L.	2,318.68	84.00	.00	.00	.00	.00	.00	.00	.00	1,475.04
41495	WATKINS, MARK D.	2,538.27	86.00	87.03	.00	.00	.00	.00	.00	.00	1,866.66
Total POLICE DEPARTMENT-O:											
	13	32,156.90	1,106.00	169.38	.00	.00	.00	.00	.00	.00	22,435.42
81672	CRYSTAL, EVERETT T.	484.50	38.00	.00	.00	.00	.00	.00	.00	.00	416.95

Employee Number	Name	Total Gross Amount	Total Gross Hours	3-01 OT no pen Emp Amt	4-00 OT pension Emp Amt	5-01 DBL OT np Emp Amt	6-00 DBL OT pen Emp Amt	23-01 OTHER pen Emp Amt	24-00 OTHER np Emp Amt	85-00 NET PAY Emp Amt	86-00 DIRECT DEP Emp Amt
81697	FARO, FRANK L.	250.00	20.00	.00	.00	.00	.00	.00	.00	.00	212.14
81713	FOLEY, PATRICK R.	183.75	15.00	.00	.00	.00	.00	.00	.00	.00	157.14
81712	GARVEY, ROGER A.	281.75	23.00	.00	.00	.00	.00	.00	.00	.00	238.47
70980	HARMS, BRIAN K.	1,685.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,247.01
81714	MCBURNEY, BRAYZIN	747.25	61.00	.00	.00	.00	.00	.00	.00	.00	572.89
81739	MOURLAM, KEITH D.	903.50	69.50	.00	.00	.00	.00	.00	.00	.00	793.63
81617	OLSON, NICHOLAS L.	371.00	28.00	.00	.00	.00	.00	.00	.00	312.28	.00
51195	RODEN, JACOB J.	1,823.20	80.00	.00	.00	.00	.00	.00	.00	.00	1,256.18
Total PUBLIC GROUNDS:											
	9	6,730.55	414.50	.00	.00	.00	.00	.00	.00	312.28	4,894.41
61200	ALCAZAR, MATTHEW D.	2,061.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,195.10
Total PUBLIC WORKS:											
	1	2,061.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,195.10
81653	BINDER, MEREDITH K.	312.00	24.00	.00	.00	.00	.00	.00	.00	268.52	.00
81726	BINDER, RILEY K.	120.00	10.00	.00	.00	.00	.00	.00	.00	.00	110.82
81669	DRAEGER, MAKAYLEE M.	48.00	4.00	.00	.00	.00	.00	.00	.00	.00	44.32
70100	FLAWS, LARRY J.	2,629.00	80.00	.00	.00	.00	.00	.00	85.00	.00	1,766.47
81708	GALLENTINE, ABIGAIL M.	108.00	9.00	.00	.00	.00	.00	.00	.00	99.73	.00
81740	GARVEY, ANNE N.	176.75	13.75	.00	.00	.00	.00	.00	.00	.00	161.23
70107	GLASCOCK, MARK A.	1,835.13	82.00	.00	66.33	.00	.00	.00	.00	.00	1,208.18
81711	HANSEN, ELLA M.	118.00	10.00	.00	.00	.00	.00	.00	.00	.00	107.97
81690	HURT, TIM E.	182.00	14.00	.00	.00	.00	.00	.00	.00	.00	156.63
81738	JOHNSON, NOLAN J.	325.00	27.25	.00	.00	.00	.00	.00	.00	.00	249.15
81721	KENVILLE, REBECCA M.	48.00	4.00	.00	.00	.00	.00	.00	.00	.00	44.32
70975	LESHER, BREANNE M.	2,146.40	80.00	.00	.00	.00	.00	.00	.00	.00	1,450.30
81651	LINDSTROM, SARAH J.	144.00	12.00	.00	.00	.00	.00	.00	.00	132.98	.00
81594	MCBURNEY, SONYA L.	723.06	54.00	.00	.00	.00	.00	.00	.00	.00	549.94
81673	MCKEE, BRONWYN E.	22.00	2.00	.00	.00	.00	.00	.00	.00	.00	20.32
81689	NELSEN, DENISE L.	803.38	52.75	.00	.00	.00	.00	.00	.00	.00	642.10
81742	OUVERSON, ERIN A.	16.50	1.50	.00	.00	.00	.00	.00	.00	.00	15.24
81744	PECK, EMMA G.	108.00	9.00	.00	.00	.00	.00	.00	.00	.00	99.73
31195	PETERSON, RICK E.	1,834.40	80.00	.00	.00	.00	.00	.00	.00	.00	1,273.16
81665	PRUISMANN, LINDA A.	981.92	60.50	.00	.00	.00	.00	.00	.00	.00	731.60
81719	SCHULTZ, CAMDEN J.	81.00	6.75	.00	.00	.00	.00	.00	.00	.00	74.81
81703	SEISER, DAWSON K.	142.00	12.00	.00	.00	.00	.00	.00	.00	.00	130.14
81470	SPELLMEYER, WILLIAM C.	177.00	12.50	.00	.00	.00	.00	.00	.00	126.33	.00
Total RECREATION:											
	23	13,081.54	661.00	.00	66.33	.00	.00	.00	85.00	627.56	8,836.43
51187	BAHRENFUSS, BRANDON D.	2,723.20	80.00	.00	.00	.00	.00	.00	.00	.00	1,884.16
51210	DANIELS, JACOB S.	1,817.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,282.11
51178	DOOLITTLE, DAN L	770.00	35.00	.00	.00	.00	.00	.00	.00	.00	617.50
51189	MACRUNNEL, MATTHEW A.	1,827.20	80.00	.00	.00	.00	.00	.00	.00	.00	1,309.04
51190	RATCLIFF, BRETT D.	2,000.00	80.00	.00	.00	.00	.00	.00	.00	.00	1,328.95
51215	SLAGLE, MATHEW L.	1,763.66	81.00	.00	32.46	.00	.00	.00	.00	.00	1,233.45
51184	WILLIAMS, ZACHARY W.	2,188.80	80.00	.00	.00	.00	.00	.00	.00	.00	1,502.88
51205	YOUNGDALE, COLE C.	2,121.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,491.75
Total STREET DEPARTMENT:											
	8	15,212.06	596.00	.00	32.46	.00	.00	.00	.00	.00	10,649.84

Employee Number	Name	Total Gross Amount	Total Gross Hours	3-01 OT no pen Emp Amt	4-00 OT pension Emp Amt	5-01 DBL OT np Emp Amt	6-00 DBL OT pen Emp Amt	23-01 OTHER pen Emp Amt	24-00 OTHER np Emp Amt	85-00 NET PAY Emp Amt	86-00 DIRECT DEP Emp Amt
30772	DINGMAN, CHAD M.	2,444.00	80.00	.00	.00	.00	.00	.00	.00	.00	1,802.28
30977	JACKSON, JEFFREY S.	1,973.60	80.00	.00	.00	.00	.00	.00	.00	.00	1,375.96
31179	WEST, JOHN A.	2,190.29	89.00	.00	.00	.00	.00	.00	.00	.00	1,635.13
Total WASTEWATER:											
	3	6,607.89	249.00	.00	.00	.00	.00	.00	.00	.00	4,813.37
31189	CHAMBERS, TODD A.	2,328.00	80.00	.00	.00	.00	.00	.00	.00	.00	1,549.52
31220	FARWELL, GREGORY A.	2,146.50	81.00	.00	.00	.00	.00	.00	.00	.00	1,510.36
31215	KNOWLES, NICHOLAS A.	3,535.97	89.00	.00	.00	.00	.00	.00	.00	.00	2,286.96
31225	PARKER, LOGAN M.	1,170.34	64.00	.00	.00	.00	.00	.00	.00	.00	1,010.87
Total WATER PLANT:											
	4	9,180.81	314.00	.00	.00	.00	.00	.00	.00	.00	6,357.71
Grand Totals:											
	117	186,323.30	6,230.75	169.38	594.75	240.24	.00	14,659.21	2,277.99	2,599.32	124,965.84

RESOLUTION NO. 2022 -

BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WEBSTER CITY, IOWA:

That we, the City Council of the City of Webster City, Iowa, having examined bills aggregating the sum of $1,010,398.39 presented herewith, hereby approve said bills, and the City Clerk is hereby authorized to issue warrants in payment of the same.

Passed and adopted this 16th day of May, 2022.

_____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
MIDLAND GIS SOLUTIONS, LLC (6658)							
13903	6	Adjustmen	1.5 HRS (BRANDON) NEW LAYERS & VIEW A	04/14/2022	225.00-	11/22	204-23-30-5310-212
13903	7	Adjustmen	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75-	11/22	100-23-31-5420-299
13903	8	Adjustmen	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75-	11/22	601-23-31-5420-299
13903	9	Adjustmen	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75-	11/22	602-23-31-5420-299
13903	10	Adjustmen	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75-	11/22	603-23-31-5420-299
Total 13903:					300.00-		
Total MIDLAND GIS SOLUTIONS, LLC (6658):					300.00-		
Total 05/02/2022:					300.00-		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
ABENS REALTY TRUST ACCOUNT (6912)							
050222	1	Invoice	LOT 5-HOME FOURTH ADDN/WWTP FORCE	05/04/2022	27,800.25	11/22	603-23-70-5652-860
Total 050222:					27,800.25		
Total ABENS REALTY TRUST ACCOUNT (6912):					27,800.25		
Total 05/04/2022:					27,800.25		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
NORTH IOWA MUNICIPAL ELECTRIC (705)							
050622	1	Invoice	PURCHASED POWER - APRIL 2022	05/06/2022	562,895.16	11/22	601-23-50-5555-233
Total 050622:					562,895.16		
Total NORTH IOWA MUNICIPAL ELECTRIC (705):					562,895.16		
Total 05/10/2022:					562,895.16		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
WEBSTER CITY DAYCARE (5160)							
051122	1	Invoice	PAGEL REPAIR (DRAWDOWN #4)	05/11/2022	16,112.86	11/22	100-11230
Total 051122:					16,112.86		
Total WEBSTER CITY DAYCARE (5160):					16,112.86		
Total 05/11/2022:					16,112.86		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
AGSOURCE (4458)							
PS-INV1949	1	Invoice	DRINKING WATER TESTING	04/19/2022	135.00	11/22	602-23-62-5662-212
Total PS-INV194969:					135.00		
Total AGSOURCE (4458):					135.00		
AHLERS & COONEY, P.C. (22)							
821948	1	Invoice	INDUSTRIAL TREATMENT AGREEMENTS - W	04/27/2022	19,369.00	11/22	603-23-70-5653-212
Total 821948:					19,369.00		
Total AHLERS & COONEY, P.C. (22):					19,369.00		
ALTEC INDUSTRIES, INC. (35)							
11902400	1	Invoice	3= 9' NYLON AUGER SLINGS (PT# 234-80005	04/22/2022	171.47	11/22	601-23-52-5935-314
Total 11902400:					171.47		
50965231	1	Invoice	ANNUAL DOT & ELECTRICAL INSPECTION -	04/08/2022	1,499.50	11/22	601-23-52-5935-227
Total 50965231:					1,499.50		
50965253	1	Invoice	ANNUAL DOT & ELECTRICAL INSPECTION -	04/08/2022	1,176.20	11/22	601-23-52-5935-227
Total 50965253:					1,176.20		
50965287	1	Invoice	ANNUAL DOT & ELECTRICAL INSPECTION -	04/08/2022	1,376.80	11/22	601-23-52-5935-227
Total 50965287:					1,376.80		
50965290	1	Invoice	ANNUAL DOT & ELECTRICAL INSPECTION	04/08/2022	1,243.40	11/22	601-23-52-5935-227
Total 50965290:					1,243.40		
50967506	1	Invoice	ANNUAL DOT & ELECTRICAL INSPECTION -	04/12/2022	1,190.57	11/22	601-23-52-5935-227
Total 50967506:					1,190.57		
Total ALTEC INDUSTRIES, INC. (35):					6,657.94		
ARNOLD MOTOR SUPPLY (68)							
26NV066719	1	Invoice	WIPER BLADE/POLICE	04/08/2022	25.58	11/22	100-21-21-5110-314
Total 26NV066719:					25.58		
26NV067304	1	Invoice	FUEL LINE FOR LITTLE TRENCHER	04/20/2022	6.35	11/22	601-23-52-5935-314
Total 26NV067304:					6.35		
26NV068051	1	Invoice	BELT FOR SLAKER MOTOR	05/05/2022	22.99	11/22	602-23-61-5935-314
Total 26NV068051:					22.99		
Total ARNOLD MOTOR SUPPLY (68):					54.92		
ASTRA SECURITY (6495)							
39293	1	Invoice	SECURITY CAMERAS/BASEMENT	04/27/2022	434.55	11/22	100-41-16-5420-513

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
39293	2	Invoice	SECURITY CAMERAS/BASEMENT	04/27/2022	1,593.35	11/22	601-41-16-5420-513
39293	3	Invoice	SECURITY CAMERAS/BASEMENT	04/27/2022	434.55	11/22	602-41-16-5420-513
39293	4	Invoice	SECURITY CAMERAS/BASEMENT	04/27/2022	434.55	11/22	603-41-16-5420-513
Total 39293:					2,897.00		
Total ASTRA SECURITY (6495):					2,897.00		
BISHOP, BIRIDIANA (7355)							
032522	1	Invoice	REIMB ICMA DUES	03/25/2022	144.00	11/22	100-24-12-5430-215
032522	2	Invoice	REIMB ICMA DUES	03/25/2022	396.00	11/22	601-23-81-5930-215
032522	3	Invoice	REIMB ICMA DUES	03/25/2022	90.00	11/22	602-23-81-5930-215
032522	4	Invoice	REIMB ICMA DUES	03/25/2022	90.00	11/22	603-23-81-5930-215
Total 032522:					720.00		
Total BISHOP, BIRIDIANA (7355):					720.00		
BOB ERICKSON (7503)							
4-28-22	1	Invoice	REIMBURSE FOR STOVE PURCHASE FOR S	03/27/2022	935.18	11/22	100-22-42-5280-226
Total 4-28-22:					935.18		
Total BOB ERICKSON (7503):					935.18		
BOMGAARS (5165)							
62842002	1	Invoice	WRENCH, COMBO RATCHET (x3)	04/12/2022	27.99	11/22	601-23-52-5588-311
62842002	2	Invoice	WRENCH, COMBO RATCHET (x3)	04/12/2022	27.98	11/22	601-23-51-5566-311
Total 62842002:					55.97		
62844585	1	Invoice	RECEPTACLE - SQ OUTLET BOX + COVER (	04/20/2022	35.50	11/22	100-22-42-5280-310
Total 62844585:					35.50		
62844684	1	Invoice	SPRAY NOZZLES	04/20/2022	26.98	11/22	601-23-52-5588-318
Total 62844684:					26.98		
62844863	1	Invoice	PUSHLOC72 IN HANDLES	04/21/2022	32.98	11/22	204-23-30-5310-318
62844863	2	Invoice	STORM SEWER MATERIALS	04/21/2022	174.27	11/22	204-23-30-5330-318
Total 62844863:					207.25		
62845255	1	Invoice	CONCRETE BROOM	04/22/2022	32.99	11/22	204-23-30-5310-318
62845255	2	Invoice	LUBRICANT FOR SHOP	04/22/2022	25.98	11/22	204-23-30-5310-314
62845255	3	Invoice	TURNBUCKLE & J-BOLT FOR HYD UNIT	04/22/2022	13.56	11/22	204-23-30-5310-314
Total 62845255:					72.53		
62845433	1	Invoice	PIPE THREAD COMPOUND (FH POOL HEATE	04/22/2022	2.99	11/22	100-22-42-5233-314
Total 62845433:					2.99		
62845479	1	Invoice	CORNER BRACE	04/22/2022	6.99	11/22	100-22-42-5210-318
Total 62845479:					6.99		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
62846459	1	Invoice	FASTENERS	04/25/2022	1.71	11/22	601-23-52-5588-318
62846459	2	Invoice	DEF FOR DIESEL TRUCKS	04/25/2022	15.50	11/22	601-23-52-5935-315
Total 62846459:					17.21		
62846976	1	Invoice	TAPE MEASURE-RECEP.BLADE SET-NUT SE	04/26/2022	37.97	11/22	100-22-42-5233-311
62846976	2	Invoice	3' DOOR SWEEP FOR DEPOT	04/26/2022	14.99	11/22	100-22-42-5221-310
62846976	3	Invoice	SS SNAP LINK FOR WT ROOM	04/26/2022	37.25	11/22	100-22-42-5233-318
Total 62846976:					90.21		
62847514	1	Invoice	RECEPTACLE TESTER	04/28/2022	11.99	11/22	100-21-18-5190-318
Total 62847514:					11.99		
62849415	1	Invoice	LEVER BINDER-CHAIN-QUICK LINKS	05/03/2022	49.52	11/22	100-23-42-5371-318
62849415	2	Invoice	DIAGONAL PLIERS (x2)	05/03/2022	35.98	11/22	100-23-42-5371-311
62849415	3	Invoice	AIR & FILTRETE FILTERS	05/03/2022	47.98	11/22	100-23-42-5371-314
Total 62849415:					133.48		
62849417	1	Invoice	HEAVY DUTY DUST MASK	05/03/2022	9.99	11/22	100-22-42-5210-312
Total 62849417:					9.99		
62850410	1	Invoice	SCHOOL HOUSE DOOR SEAL	05/05/2022	26.98	11/22	100-22-42-5221-310
Total 62850410:					26.98		
Total BOMGAARS (5165):					698.07		
BROWN SUPPLY COMPANY, INC. (122)							
119009	1	Invoice	4" & 6" HYMAX COUPLERS	04/28/2022	690.00	11/22	602-23-62-5662-318
Total 119009:					690.00		
Total BROWN SUPPLY COMPANY, INC. (122):					690.00		
CAPITAL SANITARY SUPPLY (6096)							
C346739	1	Invoice	FH SUPPLIES	04/20/2022	300.15	11/22	100-22-42-5233-318
Total C346739:					300.15		
C346739A	1	Invoice	BATH BODY & HAIR SHAMPOO	04/27/2022	386.50	11/22	100-22-42-5233-318
Total C346739A:					386.50		
C347052	1	Invoice	BROWN PAPER TOWEL ROLLS	04/27/2022	44.87	11/22	100-22-42-5210-318
Total C347052:					44.87		
C347223	1	Invoice	B/O URINAL SCREENS & URIGARD DISPOSA	04/27/2022	229.59	11/22	100-22-42-5233-318
Total C347223:					229.59		
Total CAPITAL SANITARY SUPPLY (6096):					961.11		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
CARD SERVICES (140)							
0000 05/02/2	1	Invoice	GAS FOR CHAINSAWS	05/02/2022	23.46	11/22	601-23-52-5935-315
0000 05/02/2	2	Invoice	OVERHEAD ELEC WORKSHOP/LINE DEPT E	05/02/2022	1,680.00	11/22	601-23-52-5926-231
0000 05/02/2	3	Invoice	UPDATE INT'L CODE BOOK	05/02/2022	145.00	11/22	601-23-51-5566-318
0000 05/02/2	4	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	.06	11/22	100-24-30-5380-315
0000 05/02/2	5	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	.06	11/22	601-24-30-5380-315
0000 05/02/2	6	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	.06	11/22	602-24-30-5380-315
0000 05/02/2	7	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	.06	11/22	603-24-30-5380-315
0000 05/02/2	8	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	3.15	11/22	100-21-22-5140-315
0000 05/02/2	9	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	14.38	11/22	100-24-14-5435-315
0000 05/02/2	10	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	20.95	11/22	601-23-52-5935-315
0000 05/02/2	11	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	1.64	11/22	601-23-80-5935-315
0000 05/02/2	12	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	1.64	11/22	602-23-80-5935-315
0000 05/02/2	13	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	26.25	11/22	100-21-21-5110-315
0000 05/02/2	14	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	2.01	11/22	100-22-42-5210-315
0000 05/02/2	15	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	2.01	11/22	100-23-42-5371-315
0000 05/02/2	16	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	19.15	11/22	204-23-30-5310-315
0000 05/02/2	17	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	2.24	11/22	603-23-70-5935-315
0000 05/02/2	18	Invoice	FUELCLOUD SUBSCRIPTION	05/02/2022	1.34	11/22	602-23-61-5935-315
Total 0000 05/02/22:					1,943.46		
0001 05/02/2	1	Invoice	OFFICE SUPPLIES/PD DISPATCH	05/02/2022	151.94	11/22	100-21-21-5180-316
0001 05/02/2	2	Invoice	K-9 TRAINING EXP/LODGING-MEALS	05/02/2022	739.13	11/22	214-21-21-5110-231
0001 05/02/2	3	Invoice	TRAINING/OFFICER THUMMA	05/02/2022	969.15	11/22	100-21-21-5110-231
0001 05/02/2	4	Invoice	9X12 MANILLA ENVELOPES	05/02/2022	21.44	11/22	211-21-21-5110-318
Total 0001 05/02/22:					1,881.66		
0002 05/02/2	1	Invoice	LIFEGUARD CERTIFICATIONS	05/02/2022	246.00	11/22	100-22-42-5242-231
0002 05/02/2	2	Invoice	SAFE SERV CONCESSION CERTIFICATION	05/02/2022	160.00	11/22	100-22-42-5242-231
Total 0002 05/02/22:					406.00		
0003 05/02/2	1	Invoice	REAL VNC ANNUAL SUBSCRIPTION	05/02/2022	76.27	11/22	100-24-16-5420-215
0003 05/02/2	2	Invoice	REAL VNC ANNUAL SUBSCRIPTION	05/02/2022	279.69	11/22	601-24-16-5930-215
0003 05/02/2	3	Invoice	REAL VNC ANNUAL SUBSCRIPTION	05/02/2022	76.27	11/22	602-24-16-5930-215
0003 05/02/2	4	Invoice	REAL VNC ANNUAL SUBSCRIPTION	05/02/2022	76.27	11/22	603-24-16-5930-215
Total 0003 05/02/22:					508.50		
0004 05/02/2	1	Invoice	ADVERTISING/CDD	05/02/2022	99.97	11/22	100-21-18-5190-210
0004 05/02/2	2	Invoice	NUISANCE CONF REG/ORTIZ & BISHOP	05/02/2022	30.00	11/22	100-24-12-5430-232
0004 05/02/2	3	Invoice	NUISANCE CONF REG/ORTIZ & BISHOP	05/02/2022	82.50	11/22	601-23-81-5926-232
0004 05/02/2	4	Invoice	NUISANCE CONF REG/ORTIZ & BISHOP	05/02/2022	18.75	11/22	602-23-81-5926-232
0004 05/02/2	5	Invoice	NUISANCE CONF REG/ORTIZ & BISHOP	05/02/2022	18.75	11/22	603-23-81-5926-232
0004 05/02/2	6	Invoice	NUISANCE CONF REG/POLICE CHIEF	05/02/2022	75.00	11/22	100-21-21-5110-232
0004 05/02/2	7	Invoice	P&Z WORKSHOP/SIMPSON	05/02/2022	65.00	11/22	100-21-18-5190-232
0004 05/02/2	8	Invoice	P&Z WORKSHOP/GOODPASTER	05/02/2022	65.00	11/22	100-21-18-5190-232
0004 05/02/2	9	Invoice	NUISANCE CONF REG/MAYOR	05/02/2022	15.00	11/22	100-24-11-5410-232
0004 05/02/2	10	Invoice	NUISANCE CONF REG/MAYOR	05/02/2022	41.26	11/22	601-24-11-5410-232
0004 05/02/2	11	Invoice	NUISANCE CONF REG/MAYOR	05/02/2022	9.37	11/22	602-24-11-5410-232
0004 05/02/2	12	Invoice	NUISANCE CONF REG/MAYOR	05/02/2022	9.37	11/22	603-24-11-5410-232
0004 05/02/2	13	Invoice	NUISANCE CONF REG/SIMPSON	05/02/2022	75.00	11/22	100-21-18-5190-232
0004 05/02/2	14	Invoice	COUNCIL GOAL SESSION EXPENSE	05/02/2022	13.35	11/22	100-24-11-5410-232
0004 05/02/2	15	Invoice	COUNCIL GOAL SESSION EXPENSE	05/02/2022	36.72	11/22	601-24-11-5410-232
0004 05/02/2	16	Invoice	COUNCIL GOAL SESSION EXPENSE	05/02/2022	8.34	11/22	602-24-11-5410-232
0004 05/02/2	17	Invoice	COUNCIL GOAL SESSION EXPENSE	05/02/2022	8.34	11/22	603-24-11-5410-232

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
0004 05/02/2	18	Invoice	TRAINING/LEASE CONTRACT REPORTING-	05/02/2022	20.25	11/22	100-24-14-5435-231
0004 05/02/2	19	Invoice	TRAINING/LEASE CONTRACT REPORTING-	05/02/2022	146.25	11/22	601-23-80-5926-231
0004 05/02/2	20	Invoice	TRAINING/LEASE CONTRACT REPORTING-	05/02/2022	45.00	11/22	602-23-80-5926-231
0004 05/02/2	21	Invoice	TRAINING/LEASE CONTRACT REPORTING-	05/02/2022	13.50	11/22	603-23-80-5926-231
0004 05/02/2	22	Invoice	IMFOA CONF LODGING/BONJOUR	05/02/2022	21.26	11/22	100-24-14-5436-232
0004 05/02/2	23	Invoice	IMFOA CONF LODGING/BONJOUR	05/02/2022	153.57	11/22	601-23-80-5926-232
0004 05/02/2	24	Invoice	IMFOA CONF LODGING/BONJOUR	05/02/2022	47.25	11/22	602-23-80-5926-232
0004 05/02/2	25	Invoice	IMFOA CONF LODGING/BONJOUR	05/02/2022	14.18	11/22	603-23-80-5926-232
Total 0004 05/02/22:					1,132.98		
0221 050222	1	Invoice	PAINT/FIRE DEPT	05/02/2022	37.21	11/22	100-21-22-5140-310
0221 050222	2	Invoice	GLOVES-HAYES/FEICKERT	05/02/2022	158.00	11/22	100-21-22-5140-312
0221 050222	3	Invoice	FDIC CONF/LODGING EXP	05/02/2022	838.76	11/22	100-21-22-5140-232
0221 050222	4	Invoice	FDIC CONF EXP-MEALS/PARKING	05/02/2022	358.60	11/22	100-21-22-5140-231
Total 0221 050222:					1,392.57		
0254 05/02/2	1	Invoice	UNIFORM AWARDS/PD	05/02/2022	38.09	11/22	100-21-21-5110-312
0254 05/02/2	2	Invoice	JACKET REPAIR/PD	05/02/2022	65.00	11/22	100-21-21-5110-312
0254 05/02/2	3	Invoice	HALL DISPLAY PROJECT/PD	05/02/2022	111.97	11/22	100-21-21-5110-318
0254 05/02/2	4	Invoice	USB SCANNER/PD#8	05/02/2022	115.55	11/22	100-21-21-5110-314
0254 05/02/2	5	Invoice	CARD READER BRACKET/PD#8	05/02/2022	36.12	11/22	100-21-21-5110-314
0254 05/02/2	6	Invoice	AMMO FOR RANGE/PD	05/02/2022	363.90	11/22	100-21-21-5110-318
0254 05/02/2	7	Invoice	MAGAZINE FLOOR PLATES FOR RANGE/PD	05/02/2022	27.86	11/22	100-21-21-5110-312
0254 05/02/2	8	Invoice	MAGAZINES FOR RANGE/PD	05/02/2022	267.45	11/22	100-21-21-5110-312
0254 05/02/2	9	Invoice	MAGAZINES FOR RANGE/PD	05/02/2022	267.45	11/22	100-21-21-5110-312
0254 05/02/2	10	Invoice	UNIFORM SUPPLIES/#625	05/02/2022	44.22	11/22	100-21-21-5110-312
0254 05/02/2	11	Invoice	UNIFORM BUTTONS/COLLAR RANKS-#625	05/02/2022	72.09	11/22	100-21-21-5110-312
0254 05/02/2	12	Invoice	GRIP MODULE/RANGE-PD	05/02/2022	78.43	11/22	100-21-21-5110-318
0254 05/02/2	13	Invoice	MAGAZINES/FLOOR PLATES FOR RANGE-P	05/02/2022	195.75	11/22	100-21-21-5110-312
Total 0254 05/02/22:					1,683.88		
0296 05/02/2	1	Invoice	WELDING GLOVES	05/02/2022	28.88	11/22	204-23-30-5310-312
0296 05/02/2	2	Invoice	BALL VALVE ASSEMBLY	05/02/2022	444.61	11/22	204-23-30-5320-314
0296 05/02/2	3	Invoice	BINDER FOR SDS SHEETS	05/02/2022	6.69	11/22	204-23-30-5310-318
Total 0296 05/02/22:					480.18		
Total CARD SERVICES (140):					9,429.23		
CENTRAL IOWA BLDG SUPPLY (1298)							
1010851	1	Invoice	PIPE TO PROTECT TRANSFORMER @ GOO	04/28/2022	302.32	11/22	601-23-52-5588-318
Total 1010851:					302.32		
Total CENTRAL IOWA BLDG SUPPLY (1298):					302.32		
CENTRAL IOWA DISTRIBUTING, INC (153)							
225078	1	Invoice	PARK BATHROOM SUPPLIES	04/26/2022	480.00	11/22	100-22-42-5210-318
Total 225078:					480.00		
225338	1	Invoice	SUPPLIES @ WWTP	05/03/2022	277.50	11/22	603-23-70-5642-318
Total 225338:					277.50		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total CENTRAL IOWA DISTRIBUTING, INC (153):					757.50		
CENTRAL IOWA TRUCK REPAIR (7502)							
4640	1	Invoice	LINE TK#5 REPAIRS	05/03/2022	883.83	11/22	601-23-52-5935-227
Total 4640:					883.83		
Total CENTRAL IOWA TRUCK REPAIR (7502):					883.83		
CENTURY LINK (4614)							
832-2525 04/	1	Invoice	PHONE SERVICE-SENIOR CENTER	04/22/2022	144.72	11/22	100-22-42-5280-230
Total 832-2525 04/22/22:					144.72		
832-9166 04/	1	Invoice	PHONE SERVICE - POLICE DEPT	04/22/2022	321.52	11/22	100-21-21-5110-230
Total 832-9166 04/22/22:					321.52		
832-9190 04/	1	Invoice	PHONE SERVICE-OD POOL	04/22/2022	59.33	11/22	100-22-42-5242-230
Total 832-9190 04/22/22:					59.33		
E65-4065 05/	1	Invoice	ALARM CIRCUIT LINE	05/01/2022	148.00	11/22	100-21-22-5140-230
Total E65-4065 05/01/22:					148.00		
Total CENTURY LINK (4614):					673.57		
CITY OF WEBSTER CITY (176)							
051022	1	Invoice	OUTDOOR POOL START-UP MONEY	05/10/2022	182.50	11/22	100-22-42-5242-299
Total 051022:					182.50		
Total CITY OF WEBSTER CITY (176):					182.50		
CONKLING, RICHARD (5203)							
022822	1	Invoice	ENERGY EFFICIENCY REBATE/414 WILLOW	02/28/2022	118.23	11/22	601-23-36-5930-979
Total 022822:					118.23		
Total CONKLING, RICHARD (5203):					118.23		
COUNSEL (3995)							
23AR921299	1	Invoice	PRINTER CONTRACT - WASTEWATER	04/20/2022	21.00	11/22	603-23-70-5931-225
Total 23AR921299:					21.00		
23AR922259	1	Invoice	PRINTER CONTRACT - FULLER HALL	04/20/2022	81.38	11/22	100-22-42-5233-225
Total 23AR922259:					81.38		
23AR934043	1	Invoice	XEROX COPIER/PD ADMIN ASST	04/29/2022	26.18	11/22	100-21-21-5110-225
Total 23AR934043:					26.18		
23AR934055	1	Invoice	XEROX COPIER/PD ADMIN ASST	04/29/2022	20.00	11/22	100-21-21-5110-225

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 23AR934055:					20.00		
Total COUNSEL (3995):					148.56		
CTS LANGUAGE LINK (6323)							
212695	1	Invoice	TELE LANGUAGE TRANSLATION/PD	05/01/2022	114.42	11/22	100-21-21-5110-225
212695	2	Invoice	TELE LANGUAGE TRANSLATION/UTILITIES	05/01/2022	2.91	11/22	601-23-80-5930-299
Total 212695:					117.33		
Total CTS LANGUAGE LINK (6323):					117.33		
CULLIGAN FORT DODGE (207)							
043022	1	Invoice	AIRPORT-SOFT WATER SERVICE	04/30/2022	120.68	11/22	205-23-45-5372-299
Total 043022:					120.68		
Total CULLIGAN FORT DODGE (207):					120.68		
DAILY FREEMAN JOURNAL, INC. (211)							
000091 04/3	1	Invoice	RECYCLING ADV	04/30/2022	151.04	11/22	100-23-30-5340-235
000091 04/3	2	Invoice	MY HOMETOWN - APRIL 2022	04/30/2022	99.00	11/22	100-24-12-5430-223
000091 04/3	3	Invoice	MY HOMETOWN - APRIL 2022	04/30/2022	272.25	11/22	601-23-81-5921-223
000091 04/3	4	Invoice	MY HOMETOWN - APRIL 2022	04/30/2022	61.87	11/22	602-23-81-5921-223
000091 04/3	5	Invoice	MY HOMETOWN - APRIL 2022	04/30/2022	61.88	11/22	603-23-81-5921-223
Total 000091 04/30/22:					646.04		
8079	1	Invoice	LEGAL PUBL 4/29/22 - WATER TREATMENT F	04/29/2022	71.40	11/22	602-23-61-5935-870
Total 8079:					71.40		
8083	1	Invoice	CM-GOAL SETTING 04/01/2022	04/29/2022	46.73	11/22	100-24-14-5435-210
Total 8083:					46.73		
8085	1	Invoice	CM 04/18//2022	04/29/2022	280.35	11/22	100-24-14-5435-210
Total 8085:					280.35		
8092	1	Invoice	AIRPORT/CONTRACT GOALS	05/03/2022	28.88	11/22	205-23-45-5372-210
Total 8092:					28.88		
8093	1	Invoice	NOTICE/BUDGET AMENDMENTS	05/03/2022	130.83	11/22	100-24-14-5435-210
Total 8093:					130.83		
8104	1	Invoice	PH-909 HARDING COURT	05/06/2022	18.38	11/22	100-21-18-5190-210
Total 8104:					18.38		
8106	1	Invoice	ORD 2022-1857/BLDG CODES	05/06/2022	44.10	11/22	100-21-18-5190-210
Total 8106:					44.10		
8107	1	Invoice	ORD 2022-1856/2-MILE JURISDICTION	05/06/2022	260.40	11/22	100-24-14-5435-210

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 8107:					260.40		
8108	1	Invoice	ORD 2022-1855/CORPORATE LIMITS	05/06/2022	139.65	11/22	100-24-14-5435-210
Total 8108:					139.65		
Total DAILY FREEMAN JOURNAL, INC. (211):					1,666.76		
DES MOINES STAMP MANUFACTURING (228)							
1200245	1	Invoice	NAMEPLATE/MAYOR PRO TEM	05/04/2022	5.90	11/22	100-24-11-5410-316
1200245	2	Invoice	NAMEPLATE/MAYOR PRO TEM	05/04/2022	16.23	11/22	601-24-11-5410-316
1200245	3	Invoice	NAMEPLATE/MAYOR PRO TEM	05/04/2022	3.69	11/22	602-24-11-5410-316
1200245	4	Invoice	NAMEPLATE/MAYOR PRO TEM	05/04/2022	3.68	11/22	603-24-11-5410-316
Total 1200245:					29.50		
Total DES MOINES STAMP MANUFACTURING (228):					29.50		
DESIGNER GRAPHIX PLUS, INC (1214)							
2022-0093	1	Invoice	GREY SHIRTS W/ CHEST LOGOS	05/02/2022	250.00	11/22	100-23-42-5371-312
2022-0093	2	Invoice	GREY SHIRTS W/ CHEST LOGOS	05/02/2022	138.00	11/22	100-22-42-5210-312
Total 2022-0093:					388.00		
Total DESIGNER GRAPHIX PLUS, INC (1214):					388.00		
ECHO GROUP, INC. (6306)							
S009460237.	1	Invoice	1/2" CHASE NIPPLES (STOCK)	04/25/2022	47.40	11/22	601-23-52-5588-318
S009460237.	2	Invoice	MOTION SENSORS (CITY HALL)	04/25/2022	30.87	11/22	100-24-36-5480-310
S009460237.	3	Invoice	MOTION SENSORS (CITY HALL)	04/25/2022	22.05	11/22	601-23-36-5480-310
S009460237.	4	Invoice	MOTION SENSORS (CITY HALL)	04/25/2022	17.64	11/22	602-23-36-5480-310
S009460237.	5	Invoice	MOTION SENSORS (CITY HALL)	04/25/2022	17.64	11/22	603-23-36-5480-310
Total S009460237.002:					135.60		
S009467008.	1	Invoice	MOTION SENSORS (CITY HALL)	04/27/2022	44.18	11/22	100-24-36-5480-310
S009467008.	2	Invoice	MOTION SENSORS (CITY HALL)	04/27/2022	31.56	11/22	601-23-36-5480-310
S009467008.	3	Invoice	MOTION SENSORS (CITY HALL)	04/27/2022	25.25	11/22	602-23-36-5480-310
S009467008.	4	Invoice	MOTION SENSORS (CITY HALL)	04/27/2022	25.25	11/22	603-23-36-5480-310
Total S009467008.001:					126.24		
S009470505.	1	Invoice	DEFECTIVE REPLACEMENT	04/27/2022	22.09-	11/22	601-23-51-5566-311
Total S009470505.001:					22.09-		
S009470520.	1	Invoice	EXCHANGE SENSORS FOR CITY HALL	04/27/2022	30.87-	11/22	100-24-36-5480-310
S009470520.	2	Invoice	EXCHANGE SENSORS FOR CITY HALL	04/27/2022	22.05-	11/22	601-23-36-5480-310
S009470520.	3	Invoice	EXCHANGE SENSORS FOR CITY HALL	04/27/2022	17.64-	11/22	602-23-36-5480-310
S009470520.	4	Invoice	EXCHANGE SENSORS FOR CITY HALL	04/27/2022	17.64-	11/22	603-23-36-5480-310
Total S009470520.001:					88.20-		
Total ECHO GROUP, INC. (6306):					151.55		
EMPLOYEE BENEFIT SYSTEMS (4707)							
000033613	1	Invoice	HEALTH INSURANCE - JUNE 2022	05/05/2022	92,498.76	11/22	902-11215

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
000033613	2	Invoice	HEALTH INSURANCE - MAY 2022	05/05/2022	8,550.60	11/22	902-11100
Total 000033613:					101,049.36		
Total EMPLOYEE BENEFIT SYSTEMS (4707):					101,049.36		
ENVIRONMENTAL RESOURCE ASSOC. (273)							
006336	1	Invoice	WWTP TESTING SUPPLIES	04/25/2022	1,083.37	11/22	603-23-70-5642-319
Total 006336:					1,083.37		
Total ENVIRONMENTAL RESOURCE ASSOC. (273):					1,083.37		
FIRE SERVICE TRAINING BUREAU (294)							
221485	1	Invoice	FIREFIGHTER I TESTING	04/21/2022	250.00	11/22	100-21-22-5140-231
Total 221485:					250.00		
221530	1	Invoice	INVESTIGATOR CLASS/STANSFIELD	04/26/2022	600.00	11/22	100-21-22-5140-231
Total 221530:					600.00		
221556	1	Invoice	INVESTIGATOR CERTIFICATION TEST	04/29/2022	50.00	11/22	100-21-22-5140-231
Total 221556:					50.00		
Total FIRE SERVICE TRAINING BUREAU (294):					900.00		
FLETCHER-REINHARDT COMPANY (305)							
S1270444.00	1	Invoice	JOHNNY INSULATORS	04/26/2022	254.13	11/22	601-23-52-5588-318
Total S1270444.001:					254.13		
S1271322.00	1	Invoice	BOOM CLEANER WIPES	04/12/2022	342.05	11/22	601-23-52-5588-318
Total S1271322.001:					342.05		
Total FLETCHER-REINHARDT COMPANY (305):					596.18		
GALLEGO, JUAN ELAIS (7504)							
050222	1	Invoice	METER DEPOSIT REFUND	05/02/2022	105.00	11/22	601-21011
Total 050222:					105.00		
Total GALLEGO, JUAN ELAIS (7504):					105.00		
GALLS, LLC - DBA CARPENTER UNIFORM (331)							
021011954	1	Invoice	BOOT LACES/TACTICAL LACES	04/26/2022	15.30	11/22	100-21-21-5110-312
Total 021011954:					15.30		
Total GALLS, LLC - DBA CARPENTER UNIFORM (331):					15.30		
GERBER AUTO ELECTRIC (342)							
135205	1	Invoice	REAR CRANKSHAFT WORK - CEM '95 FORD	04/29/2022	909.13	11/22	100-22-42-5210-227
135205	2	Invoice	REAR CRANKSHAFT WORK - CEM '95 FORD	04/29/2022	750.00	11/22	100-23-42-5371-227

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 135205:					1,659.13		
Total GERBER AUTO ELECTRIC (342):					1,659.13		
GORDON FLESCH COMPANY (6978)							
IN13718551	1	Invoice	CANON/IR C350IF	04/19/2022	20.09	11/22	100-24-14-5435-225
IN13718551	2	Invoice	CANON/IR C350IF	04/19/2022	145.13	11/22	601-23-80-5931-225
IN13718551	3	Invoice	CANON/IR C350IF	04/19/2022	44.65	11/22	602-23-80-5931-225
IN13718551	4	Invoice	CANON/IR C350IF	04/19/2022	13.40	11/22	603-23-80-5931-225
Total IN13718551:					223.27		
Total GORDON FLESCH COMPANY (6978):					223.27		
HACH COMPANY (362)							
13002606	1	Invoice	WTP TESTING SUPPLIES	04/25/2022	650.04	11/22	602-23-61-5642-319
Total 13002606:					650.04		
Total HACH COMPANY (362):					650.04		
HAMILTON COUNTY SOLID WASTE (375)							
315687	1	Invoice	REMOVAL KYP GARAGE	04/25/2022	102.60	11/22	100-22-42-5210-236
Total 315687:					102.60		
315694	1	Invoice	REMOVAL KYP GARAGE	04/26/2022	147.44	11/22	100-22-42-5210-236
Total 315694:					147.44		
315708	1	Invoice	REMOVAL KYP GARAGE	04/26/2022	110.20	11/22	100-22-42-5210-236
Total 315708:					110.20		
315725	1	Invoice	REMOVAL KYP GARAGE	04/26/2022	113.24	11/22	100-22-42-5210-236
Total 315725:					113.24		
315737	1	Invoice	REMOVAL KYP GARAGE	04/27/2022	202.92	11/22	100-22-42-5210-236
Total 315737:					202.92		
Total HAMILTON COUNTY SOLID WASTE (375):					676.40		
HAWKINS, INC. (3668)							
6161528	1	Invoice	CHLORINE	04/13/2022	2,209.10	11/22	602-23-61-5641-318
Total 6161528:					2,209.10		
6165630	1	Invoice	LPC-DP	04/18/2022	3,397.19	11/22	602-23-61-5641-318
Total 6165630:					3,397.19		
6170392	1	Invoice	Chlorine & SODIUM BISULFITE	04/26/2022	1,561.83	11/22	603-23-70-5641-318
Total 6170392:					1,561.83		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total HAWKINS, INC. (3668):					7,168.12		
HEIMAN FIRE EQUIPMENT, INC. (392)							
0908245-IN	1	Invoice	BOOTS/ZIMMER	04/18/2022	423.40	11/22	100-21-22-5140-312
Total 0908245-IN:					423.40		
Total HEIMAN FIRE EQUIPMENT, INC. (392):					423.40		
HY-VEE ACOUNTS RECEIVABLE (424)							
4842814494	1	Invoice	COFFEE & FILTERS COMMITEE ROUND TAB	04/25/2022	12.38	11/22	100-22-42-5233-318
Total 4842814494:					12.38		
Total HY-VEE ACOUNTS RECEIVABLE (424):					12.38		
INTERSTATE ALL BATTERY CENTER (448)							
1900301042	1	Invoice	BATTERIES/FIRE DEPT	04/14/2022	21.96	11/22	100-21-22-5140-318
Total 1900301042516:					21.96		
Total INTERSTATE ALL BATTERY CENTER (448):					21.96		
IOWA COMMUNICATIONS NETWORK (7419)							
645545	1	Invoice	ICN CONNECTIVITY FOR RADIOS	05/03/2022	45.20	11/22	100-24-16-5420-299
645545	2	Invoice	ICN CONNECTIVITY FOR RADIOS	05/03/2022	45.20	11/22	204-24-16-5930-299
645545	3	Invoice	ICN CONNECTIVITY FOR RADIOS	05/03/2022	45.20	11/22	601-24-16-5935-299
645545	4	Invoice	ICN CONNECTIVITY FOR RADIOS	05/03/2022	45.20	11/22	602-24-16-5935-299
645545	5	Invoice	ICN CONNECTIVITY FOR RADIOS	05/03/2022	45.20	11/22	603-24-16-5935-299
Total 645545:					226.00		
Total IOWA COMMUNICATIONS NETWORK (7419):					226.00		
IOWA ONE CALL (485)							
240222	1	Invoice	ONE CALL SERVICES	04/27/2022	122.90	11/22	601-23-52-5930-299
240222	2	Invoice	ONE CALL SERVICES	04/27/2022	98.60	11/22	602-23-62-5662-299
240222	3	Invoice	ONE CALL SERVICES	04/27/2022	98.60	11/22	603-23-71-5662-299
Total 240222:					320.10		
Total IOWA ONE CALL (485):					320.10		
IOWA PARKS & RECREATION ASSN (486)							
3817	1	Invoice	CPO TRAINING & TESTING - LESHER	05/03/2022	310.00	11/22	100-22-42-5210-231
Total 3817:					310.00		
Total IOWA PARKS & RECREATION ASSN (486):					310.00		
IOWA UTILITIES BOARD (461)							
54570	1	Invoice	2021 ASSESSMENT	05/02/2022	11,969.00	11/22	601-23-52-5930-299
Total 54570:					11,969.00		
Total IOWA UTILITIES BOARD (461):					11,969.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
KQWC RADIO STATION (553)							
22040068	1	Invoice	RECYCLING ADS	04/30/2022	158.10	11/22	100-23-30-5340-235
Total 22040068:					158.10		
Total KQWC RADIO STATION (553):					158.10		
LEGISLATIVE SERVICES AGENCY (3650)							
051022	1	Invoice	IOWA ACTS/OFFICIAL REGISTER	05/10/2022	7.20	11/22	100-24-14-5435-316
051022	2	Invoice	IOWA ACTS/OFFICIAL REGISTER	05/10/2022	52.00	11/22	601-23-80-5921-316
051022	3	Invoice	IOWA ACTS/OFFICIAL REGISTER	05/10/2022	16.00	11/22	602-23-80-5921-316
051022	4	Invoice	IOWA ACTS/OFFICIAL REGISTER	05/10/2022	4.80	11/22	603-23-80-5921-316
Total 051022:					80.00		
Total LEGISLATIVE SERVICES AGENCY (3650):					80.00		
MARSHALL-BOND PUMPS, INC (7394)							
40165.0	1	Invoice	URETHANE CHECK BALL	04/27/2022	310.43	11/22	603-23-70-5642-318
Total 40165.0:					310.43		
Total MARSHALL-BOND PUMPS, INC (7394):					310.43		
MARTIN MARIETTA MATERIALS (601)							
35099206	1	Invoice	PAVEMENT DR - 3/8 WASHED CHIPS	04/11/2022	284.12	11/22	204-23-30-5310-318
Total 35099206:					284.12		
35112523	1	Invoice	PAVEMENT DR - 3/8 WASHED CHIPS	04/12/2022	718.77	11/22	204-23-30-5310-318
Total 35112523:					718.77		
Total MARTIN MARIETTA MATERIALS (601):					1,002.89		
MECHANICAL COMFORT, INC. (618)							
44545	1	Invoice	UTILITY WATER/PUMP TANK REPLACEMENT	04/29/2022	8,790.00	11/22	603-23-70-5652-229
Total 44545:					8,790.00		
Total MECHANICAL COMFORT, INC. (618):					8,790.00		
MIDAMERICAN ENERGY (629)							
525343184	1	Invoice	BOOSTER STATION ELECTRICITY	04/29/2022	211.98	11/22	602-23-62-5662-237
Total 525343184:					211.98		
Total MIDAMERICAN ENERGY (629):					211.98		
MOORE CLEANING SERVICE, LLC (2902)							
051022	1	Invoice	CLEANING SERVICES FOR CITY HALL	05/10/2022	455.00	11/22	100-24-36-5480-299
051022	2	Invoice	CLEANING SERVICES FOR CITY HALL	05/10/2022	325.00	11/22	601-23-36-5480-299
051022	3	Invoice	CLEANING SERVICES FOR CITY HALL	05/10/2022	260.00	11/22	602-23-36-5480-299
051022	4	Invoice	CLEANING SERVICES FOR CITY HALL	05/10/2022	260.00	11/22	603-23-36-5480-299
Total 051022:					1,300.00		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total MOORE CLEANING SERVICE, LLC (2902):					1,300.00		
MOTION INDUSTRIES, INC. (666)							
IA35-005172	1	Invoice	WASTEWATER SUPPLIES	04/13/2022	245.28	11/22	603-23-70-5642-318
Total IA35-00517262:					245.28		
Total MOTION INDUSTRIES, INC. (666):					245.28		
MUNICIPAL EMERGENCY SERVICES (669)							
IN1702953	1	Invoice	2-1/2" BALL VALVE GASKET	04/21/2022	18.68	11/22	602-23-62-5662-318
Total IN1702953:					18.68		
Total MUNICIPAL EMERGENCY SERVICES (669):					18.68		
MUNICIPAL SUPPLY, INC. (672)							
0831251-IN	1	Invoice	6" MJ GASKET	04/20/2022	97.24	11/22	602-23-62-5662-318
Total 0831251-IN:					97.24		
0832092-IN	1	Invoice	5-1/4"x12" MED HYDRANT EXT	04/28/2022	831.00	11/22	602-23-62-5662-318
Total 0832092-IN:					831.00		
Total MUNICIPAL SUPPLY, INC. (672):					928.24		
NAPA AUTO PARTS (677)							
941456	1	Invoice	HYD HOSE FITTINGS & 8MXTXREEL	04/20/2022	95.72	11/22	601-23-52-5935-314
Total 941456:					95.72		
941504	1	Invoice	BRAKES & ROTOR PD#6 & 5W20 OIL	04/21/2022	325.27	11/22	204-23-30-5310-314
Total 941504:					325.27		
941750	1	Invoice	CLAMP, AIR & OIL FILTERS	04/25/2022	56.98	11/22	204-23-30-5310-314
Total 941750:					56.98		
941825	1	Invoice	3 JAW 6 10 TON PULLER (BEARING PULLER)	04/26/2022	202.99	11/22	204-23-30-5310-311
Total 941825:					202.99		
941862	1	Invoice	STOCK MATERIAL	04/26/2022	146.64	11/22	204-23-30-5310-314
Total 941862:					146.64		
942034	1	Invoice	LED SEALED BEAMS - ENG.33	04/28/2022	476.00	11/22	204-23-30-5310-314
Total 942034:					476.00		
942310	1	Invoice	SIGNAL LAMP - ST#23	05/03/2022	61.49	11/22	204-23-30-5310-314
Total 942310:					61.49		
Total NAPA AUTO PARTS (677):					1,365.09		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
NCL OF WISCONSIN, INC. (687)							
469281	1	Invoice	LAB SUPPLIES	04/14/2022	154.86	11/22	603-23-70-5642-319
Total 469281:					154.86		
Total NCL OF WISCONSIN, INC. (687):					154.86		
O'REILLY AUTOMOTIVE, INC. (727)							
0357-122903	1	Invoice	EXT SKT ST	04/22/2022	18.18	11/22	100-22-42-5210-318
Total 0357-122903:					18.18		
0357-123423	1	Invoice	AIR FILTER - GOLF CART	04/29/2022	13.76	11/22	100-23-42-5371-314
Total 0357-123423:					13.76		
Total O'REILLY AUTOMOTIVE, INC. (727):					31.94		
P & M APPAREL (734)							
37539	1	Invoice	FULLER HALL STAFF SHIRT (backordered)	03/11/2022	101.70	11/22	100-22-42-5233-312
Total 37539:					101.70		
37961	1	Invoice	FULLER HALL STAFF SHIRT (backordered)	04/29/2022	55.60	11/22	100-22-42-5233-312
Total 37961:					55.60		
Total P & M APPAREL (734):					157.30		
P & P ELECTRIC (2978)							
15080	1	Invoice	2- 20 AMP SINGLE POLE CH BREAKER - RSV	04/21/2022	30.40	11/22	100-22-42-5280-310
Total 15080:					30.40		
Total P & P ELECTRIC (2978):					30.40		
PAGEL REPAIR (3497)							
4252-23	1	Invoice	10 KEYS FOR NEW SHELTER (LARRY)	04/15/2022	30.00	11/22	100-22-42-5233-318
Total 4252-23:					30.00		
426-22	1	Invoice	KEYS FOR W.TWIN PARK SHELTER	04/26/2022	30.00	11/22	100-22-42-5210-318
426-22	2	Invoice	36x36 1/8 LEXAN LYONS PARK	04/26/2022	100.00	11/22	100-22-42-5210-318
Total 426-22:					130.00		
Total PAGEL REPAIR (3497):					160.00		
PEPSI-COLA (7435)							
33019608	1	Invoice	POP FOR RESALE	04/26/2022	270.99	11/22	100-22-42-5233-323
Total 33019608:					270.99		
Total PEPSI-COLA (7435):					270.99		
PLASTIC RECYCLING/IOWA FALLS, INC (7291)							
0132635-IN	1	Invoice	BENCH - CLASS OF 1960	04/28/2022	975.60	11/22	100-22-42-5233-318

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 0132635-IN:					975.60		
0132636-IN	1	Invoice	BENCH - MEMORY JOYCE HAGLER	04/28/2022	935.60	11/22	100-22-42-5233-318
Total 0132636-IN:					935.60		
Total PLASTIC RECYCLING/IOWA FALLS, INC (7291):					1,911.20		
PRINTING SERVICES, INC. (1130)							
697981-0	1	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	26.02	11/22	100-21-22-5140-316
697981-0	2	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	26.02	11/22	204-23-30-5310-316
697981-0	3	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	13.01	11/22	603-23-70-5921-316
697981-0	4	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	13.01	11/22	100-23-42-5371-316
697981-0	5	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	13.01	11/22	602-23-61-5921-316
697981-0	6	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	7.80	11/22	100-21-18-5190-316
697981-0	7	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	7.80	11/22	100-23-43-5361-316
697981-0	8	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	7.80	11/22	601-24-16-5921-316
697981-0	9	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	13.01	11/22	100-22-42-5233-316
697981-0	10	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	26.02	11/22	601-23-52-5921-316
697981-0	11	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	26.02	11/22	100-21-21-5110-316
697981-0	12	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	7.80	11/22	100-24-18-5470-316
697981-0	13	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	6.24	11/22	100-24-12-5430-316
697981-0	14	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	3.90	11/22	602-23-81-5921-316
697981-0	15	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	3.90	11/22	603-23-81-5921-316
697981-0	16	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	17.17	11/22	601-23-81-5921-316
697981-0	17	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	2.34	11/22	100-24-14-5435-316
697981-0	18	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	5.20	11/22	602-23-80-5921-316
697981-0	19	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	1.57	11/22	603-23-80-5921-316
697981-0	20	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	16.91	11/22	601-23-80-5921-316
697981-0	21	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	1.95	11/22	100-24-30-5380-316
697981-0	22	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	1.95	11/22	601-24-30-5380-316
697981-0	23	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	1.95	11/22	602-24-30-5380-316
697981-0	24	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	1.95	11/22	603-24-30-5380-316
697981-0	25	Invoice	PUIRCHASE ORDER BOOKS	04/26/2022	7.80	11/22	100-24-36-5480-318
Total 697981-0:					260.15		
Total PRINTING SERVICES, INC. (1130):					260.15		
REES HYDRAULIC SALES & SVC. (5581)							
1465B	1	Invoice	CYL REPAIR ST#9	04/20/2022	231.42	11/22	204-23-30-5310-227
Total 1465B:					231.42		
Total REES HYDRAULIC SALES & SVC. (5581):					231.42		
RUBA LAWN CARE (2708)							
28353	1	Invoice	SUMMER GROUNDS MAINTENANCE @ CITY	05/04/2022	18.03	11/22	100-24-36-5480-226
28353	2	Invoice	SUMMER GROUNDS MAINTENANCE @ CITY	05/04/2022	12.87	11/22	601-23-36-5480-226
28353	3	Invoice	SUMMER GROUNDS MAINTENANCE @ CITY	05/04/2022	10.30	11/22	602-23-36-5480-226
28353	4	Invoice	SUMMER GROUNDS MAINTENANCE @ CITY	05/04/2022	10.30	11/22	603-23-36-5480-226
Total 28353:					51.50		
Total RUBA LAWN CARE (2708):					51.50		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
SEALMASTER-ST.LOUIS (7497)							
22623	1	Invoice	E TWIN PICKLEBALL COURT - ADDITIONAL S	04/15/2022	791.92	11/22	537-23-42-5221-318
Total 22623:					791.92		
Total SEALMASTER-ST.LOUIS (7497):					791.92		
SEILER INSTRUMENT & MFG. CO. INC. (6811)							
INV-438838	1	Invoice	CEP - GPS DEVICE	04/22/2022	1,583.91	11/22	100-41-31-5420-515
INV-438838	2	Invoice	CEP - GPS DEVICE	04/22/2022	1,583.92	11/22	601-41-31-5420-515
INV-438838	3	Invoice	CEP - GPS DEVICE	04/22/2022	1,583.92	11/22	602-41-31-5420-515
INV-438838	4	Invoice	CEP - GPS DEVICE	04/22/2022	1,583.92	11/22	603-41-31-5420-515
Total INV-438838:					6,335.67		
Total SEILER INSTRUMENT & MFG. CO. INC. (6811):					6,335.67		
SHUTTLEWORTH & INGERSOLL, P.L.C. (6731)							
4493858	1	Invoice	PROFESSIONAL SVCS/PINHOLE LEAKS	05/09/2022	5,160.37	11/22	602-23-61-5930-212
Total 4493858:					5,160.37		
Total SHUTTLEWORTH & INGERSOLL, P.L.C. (6731):					5,160.37		
SNYDER & ASSOCIATES (2951)							
122.0346.01-	1	Invoice	ENG - LINCOLN DR PROJ# 122.0346.01 #2	04/30/2022	44,525.76	11/22	525-23-30-5310-212
122.0346.01-	2	Invoice	ENG - FAIR MEADOW PROJ# 122.0346.01A #	04/30/2022	7,734.28	11/22	525-23-30-5310-212
Total 122.0346.01-2:					52,260.04		
Total SNYDER & ASSOCIATES (2951):					52,260.04		
STAR EQUIPMENT, LTD (2002)							
04098443	1	Invoice	BANJO FITTING	04/19/2022	57.85	11/22	204-23-30-5310-314
Total 04098443:					57.85		
04098702	1	Invoice	2 SUBMERSIBLE PUMPS & HYD POWER UNI	05/02/2022	7,347.15	11/22	100-41-30-5310-515
04098702	2	Invoice	2 SUBMERSIBLE PUMPS & HYD POWER UNI	05/02/2022	2,236.09	11/22	602-41-62-5935-515
04098702	3	Invoice	2 SUBMERSIBLE PUMPS & HYD POWER UNI	05/02/2022	1,064.81	11/22	603-41-71-5935-515
Total 04098702:					10,648.05		
Total STAR EQUIPMENT, LTD (2002):					10,705.90		
STEIN HEATING & COOLING, INC. (5576)							
13264	1	Invoice	FURNACE FILTERS/STREET SHOP	04/19/2022	205.17	11/22	204-23-30-5310-318
Total 13264:					205.17		
Total STEIN HEATING & COOLING, INC. (5576):					205.17		
STOREY KENWORTHY (5937)							
PINV992398	1	Invoice	PROJECT AWARENESS BOOKS	05/04/2022	285.40	11/22	100-21-21-5110-318
Total PINV992398:					285.40		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total STOREY KENWORTHY (5937):					285.40		
SURVEYING & MAPPING, LLC (7245)							
13903	1	Invoice	1.5 HRS (BRANDON)NEW LAYERS & VIEW A	04/14/2022	225.00	11/22	204-23-30-5310-212
13903	2	Invoice	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75	11/22	100-23-31-5420-299
13903	3	Invoice	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75	11/22	601-23-31-5420-299
13903	4	Invoice	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75	11/22	602-23-31-5420-299
13903	5	Invoice	.5 HR DIGITIZED NEW EASEMENTS-GIS	04/14/2022	18.75	11/22	603-23-31-5420-299
Total 13903:					300.00		
Total SURVEYING & MAPPING, LLC (7245):					300.00		
THE IOWA OUTDOORS STORE, LLC (7104)							
3660/1	1	Invoice	PARTS FOR GRAVELY MOWER	04/20/2022	132.20	11/22	100-22-42-5210-314
Total 3660/1:					132.20		
Total THE IOWA OUTDOORS STORE, LLC (7104):					132.20		
THE TRASHMAN, LLC (943)							
715-1824	1	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	26.95	11/22	100-24-36-5480-236
715-1824	2	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	19.25	11/22	601-23-36-5480-236
715-1824	3	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	15.40	11/22	602-23-36-5480-236
715-1824	4	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	15.40	11/22	603-23-36-5480-236
715-1824	5	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	77.00	11/22	100-22-42-5280-236
715-1824	6	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	44.00	11/22	204-23-30-5310-236
715-1824	7	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	16.50	11/22	100-21-22-5140-236
715-1824	8	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	77.00	11/22	100-22-42-5233-236
715-1824	9	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	44.00	11/22	601-23-52-5588-236
715-1824	10	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	44.00	11/22	603-23-70-5642-236
715-1824	11	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	44.00	11/22	100-22-42-5210-236
715-1824	12	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	44.00	11/22	602-23-61-5642-236
715-1824	13	Invoice	TRASH SERVICE/FUEL SURCHARGE	05/01/2022	44.00	11/22	205-23-45-5372-236
Total 715-1824:					511.50		
715-1824 RE	1	Invoice	CURB RECYCLING - APRIL 2022	05/01/2022	13,009.84	11/22	100-23-30-5340-235
Total 715-1824 RECYCLING:					13,009.84		
715-1825	1	Invoice	DROP BOX CHARGES/EXTRA SVC	05/01/2022	319.00	11/22	100-23-30-5340-235
Total 715-1825:					319.00		
715-1826	1	Invoice	CEMETERY ROLLOFF	05/01/2022	472.68	11/22	100-23-42-5371-236
Total 715-1826:					472.68		
Total THE TRASHMAN, LLC (943):					14,313.02		
T-MOBILE (7288)							
973411563 0	1	Invoice	POLICE TOUGHBOOKS SVC	04/21/2022	149.59	11/22	100-21-21-5110-230
Total 973411563 04/21/22:					149.59		
974104414 0	1	Invoice	PD CAR PHONES/INVESTIGATOR	04/20/2022	172.19	11/22	100-21-21-5110-230
974104414 0	2	Invoice	LINE DEPT SVC	04/20/2022	16.69	11/22	601-23-52-5588-230

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
974104414 0	3	Invoice	LINE DEPT SVC	04/20/2022	16.69	11/22	601-23-51-5566-230
Total 974104414 04/20/22:					205.57		
974816802 0	1	Invoice	PHONE SVC/MGR & ASST MGR	04/21/2022	27.45	11/22	100-24-12-5430-230
974816802 0	2	Invoice	PHONE SVC/MGR & ASST MGR	04/21/2022	75.49	11/22	601-23-81-5921-230
974816802 0	3	Invoice	PHONE SVC/MGR & ASST MGR	04/21/2022	17.16	11/22	602-23-81-5921-230
974816802 0	4	Invoice	PHONE SVC/MGR & ASST MGR	04/21/2022	17.16	11/22	603-23-81-5921-230
974816802 0	5	Invoice	ON-CALL PHONE SVC/WWTP	04/21/2022	44.42	11/22	603-23-70-5642-230
974816802 0	6	Invoice	ON-CALL PHONE SVC/WATER	04/21/2022	44.42	11/22	602-23-61-5642-230
974816802 0	7	Invoice	PHONE SVC/WATER-WWTP	04/21/2022	22.21	11/22	602-23-61-5642-230
974816802 0	8	Invoice	PHONE SVC/WATER-WWTP	04/21/2022	22.21	11/22	603-23-70-5642-230
974816802 0	9	Invoice	GIS IPAD SVC	04/21/2022	4.99	11/22	100-23-31-5420-230
974816802 0	10	Invoice	GIS IPAD SVC	04/21/2022	5.00	11/22	601-23-31-5420-230
974816802 0	11	Invoice	GIS IPAD SVC	04/21/2022	4.99	11/22	602-23-31-5420-230
974816802 0	12	Invoice	GIS IPAD SVC	04/21/2022	4.99	11/22	603-23-31-5420-230
974816802 0	13	Invoice	METER IPAD SVC	04/21/2022	9.99	11/22	602-23-80-5902-299
974816802 0	14	Invoice	METER IPAD SVC	04/21/2022	9.98	11/22	601-23-80-5905-299
Total 974816802 04/21/22:					310.46		
Total T-MOBILE (7288):					665.62		
TOLLE AUTOMOTIVE, INC. (3188)							
20175	1	Invoice	TIRE MOUNT/BALANCE/DISP-PD#6	04/27/2022	27.14	11/22	100-21-21-5110-227
Total 20175:					27.14		
Total TOLLE AUTOMOTIVE, INC. (3188):					27.14		
TONY'S TIRE SERVICE (958)							
174184	1	Invoice	35 TON WRECKER SERVICE (MADSEN AVE-	04/21/2022	285.00	11/22	204-23-30-5310-227
Total 174184:					285.00		
Total TONY'S TIRE SERVICE (958):					285.00		
TOWN & COUNTRY INSURANCE (959)							
5850	1	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-21-18-5190-217
5850	2	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	230.68	11/22	100-21-21-5110-217
5850	3	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-21-22-5140-217
5850	4	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	240.54	11/22	100-22-42-5233-217
5850	5	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-23-42-5371-217
5850	6	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-24-11-5410-217
5850	7	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-24-12-5430-217
5850	8	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	363.54	11/22	100-24-14-5435-217
5850	9	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-24-18-5470-217
5850	10	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	100-24-30-5380-217
5850	11	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	204-23-30-5310-217
5850	12	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	601-23-51-5925-217
5850	13	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	601-23-52-5925-217
5850	14	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	2,590.77	11/22	601-23-80-5925-217
5850	15	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.13	11/22	602-23-61-5925-217
5850	16	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	727.08	11/22	602-23-80-5925-217
5850	17	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	228.06	11/22	603-23-70-5925-217
5850	18	Invoice	CYBER SOLUTIONS RENEWAL	04/20/2022	409.90	11/22	603-23-80-5925-217

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 5850:					7,300.00		
5870	1	Invoice	INLAND COVERAGE/BORING MACHINE	05/02/2022	356.00	11/22	601-23-51-5924-216
5870	2	Invoice	INLAND COVERAGE/BORING MACHINE	05/02/2022	356.00	11/22	601-23-51-5924-216
Total 5870:					712.00		
Total TOWN & COUNTRY INSURANCE (959):					8,012.00		
UNITED COOPERATIVE (979)							
08509	1	Invoice	GAS REPORT	04/12/2022	1,731.65	11/22	100-21-21-5110-315
08509	2	Invoice	GAS REPORT	04/12/2022	53.06	11/22	100-21-22-5140-315
08509	3	Invoice	GAS REPORT	04/12/2022	797.01	11/22	204-23-30-5310-315
08509	4	Invoice	GAS REPORT	04/12/2022	63.57	11/22	603-23-70-5935-315
08509	5	Invoice	GAS REPORT	04/12/2022	31.78	11/22	602-23-61-5935-315
08509	6	Invoice	GAS REPORT	04/12/2022	41.21	11/22	100-21-18-5190-315
08509	7	Invoice	GAS REPORT	04/12/2022	724.01	11/22	601-23-52-5935-315
08509	8	Invoice	GAS REPORT	04/12/2022	76.63	11/22	601-23-80-5935-315
08509	9	Invoice	GAS REPORT	04/12/2022	76.63	11/22	602-23-80-5935-315
08509	10	Invoice	GAS REPORT	04/12/2022	61.95	11/22	100-22-42-5210-315
08509	11	Invoice	GAS REPORT	04/12/2022	61.68	11/22	100-23-42-5371-315
08509	12	Invoice	GAS REPORT	04/12/2022	397.44	11/22	100-24-14-5435-315
Total 08509:					4,116.62		
08530	1	Invoice	PROPANE FOR AIRPORT	04/01/2022	1,827.72	11/22	205-23-45-5372-234
Total 08530:					1,827.72		
08552	1	Invoice	GAS REPORT	04/25/2022	1,666.85	11/22	100-21-21-5110-315
08552	2	Invoice	GAS REPORT	04/25/2022	318.63	11/22	204-23-30-5310-315
08552	3	Invoice	GAS REPORT	04/25/2022	141.25	11/22	603-23-70-5935-315
08552	4	Invoice	GAS REPORT	04/25/2022	79.84	11/22	602-23-61-5935-315
08552	5	Invoice	GAS REPORT	04/25/2022	156.79	11/22	100-21-18-5190-315
08552	6	Invoice	GAS REPORT	04/25/2022	586.69	11/22	601-23-52-5935-315
08552	7	Invoice	GAS REPORT	04/25/2022	116.51	11/22	601-23-80-5935-315
08552	8	Invoice	GAS REPORT	04/25/2022	116.51	11/22	602-23-80-5935-315
08552	9	Invoice	GAS REPORT	04/25/2022	175.21	11/22	100-22-42-5210-315
08552	10	Invoice	GAS REPORT	04/25/2022	175.57	11/22	100-23-42-5371-315
08552	11	Invoice	GAS REPORT	04/25/2022	246.40	11/22	100-24-14-5435-315
Total 08552:					3,780.25		
08553	1	Invoice	DIESEL REPORT	04/25/2022	279.26	11/22	100-21-22-5140-315
08553	2	Invoice	DIESEL REPORT	04/25/2022	2,004.60	11/22	204-23-30-5310-315
08553	3	Invoice	DIESEL REPORT	04/25/2022	168.65	11/22	602-23-61-5935-315
08553	4	Invoice	DIESEL REPORT	04/25/2022	1,321.76	11/22	601-23-52-5935-315
08553	5	Invoice	DIESEL REPORT	04/25/2022	1,610.55	11/22	100-24-14-5435-315
Total 08553:					5,384.82		
Total UNITED COOPERATIVE (979):					15,109.41		
UNITY POINT CLINIC-OCC MEDICINE (5263)							
127176	1	Invoice	PRE-EMPLOYMENT DRUG TEST	05/02/2022	42.00	11/22	602-23-61-5923-212

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 127176:					42.00		
Total UNITY POINT CLINIC-OCC MEDICINE (5263):					42.00		
US BANK OPERATIONS CENTER (4821)							
051122	1	Invoice	PRIN PYMT-2019 EL REFUND BOND	05/11/2022	52,908.66	11/22	601-21009
051122	2	Invoice	INT PYMT-2019 EL REFUND BOND	05/11/2022	37,269.11	11/22	601-21005
Total 051122:					90,177.77		
Total US BANK OPERATIONS CENTER (4821):					90,177.77		
US CELLULAR (986)							
0504415525	1	Invoice	CELLULAR SERVICE	04/20/2022	177.73	11/22	100-21-21-5110-230
0504415525	2	Invoice	CELLULAR SERVICE	04/20/2022	49.75	11/22	204-23-30-5310-230
0504415525	3	Invoice	CELLULAR SERVICE	04/20/2022	33.90	11/22	601-23-52-5588-230
0504415525	4	Invoice	CELLULAR SERVICE	04/20/2022	33.89	11/22	601-23-51-5566-230
0504415525	5	Invoice	CELLULAR SERVICE	04/20/2022	45.80	11/22	100-21-18-5190-230
0504415525	6	Invoice	CELLULAR SERVICE	04/20/2022	22.89	11/22	100-24-30-5380-230
0504415525	7	Invoice	CELLULAR SERVICE	04/20/2022	22.90	11/22	601-24-30-5380-230
0504415525	8	Invoice	CELLULAR SERVICE	04/20/2022	22.90	11/22	602-24-30-5380-230
0504415525	9	Invoice	CELLULAR SERVICE	04/20/2022	22.89	11/22	603-24-30-5380-230
0504415525	10	Invoice	CELLULAR SERVICE	04/20/2022	9.17	11/22	100-24-12-5430-230
0504415525	11	Invoice	CELLULAR SERVICE	04/20/2022	25.19	11/22	601-23-81-5921-230
0504415525	12	Invoice	CELLULAR SERVICE	04/20/2022	5.73	11/22	602-23-81-5921-230
0504415525	13	Invoice	CELLULAR SERVICE	04/20/2022	5.73	11/22	603-23-81-5921-230
0504415525	14	Invoice	INSP I-PAD	04/20/2022	45.79	11/22	100-21-18-5190-230
0504415525	15	Invoice	METER I-PAD SVC	04/20/2022	22.89	11/22	602-23-80-5902-299
0504415525	16	Invoice	METER I-PAD SVC	04/20/2022	22.90	11/22	601-23-80-5905-299
0504415525	17	Invoice	FIRE I-PAD SVC	04/20/2022	45.79	11/22	100-21-22-5140-230
0504415525	18	Invoice	LINE I-PADS SVC (GIS)	04/20/2022	183.16	11/22	601-23-52-5930-215
Total 0504415525:					799.00		
Total US CELLULAR (986):					799.00		
VALUTECH PEST CONTROL (6822)							
2218	1	Invoice	DOWNTOWN AREA-CO-OP/SSMID	04/15/2022	65.00	11/22	260-23-36-5393-299
Total 2218:					65.00		
Total VALUTECH PEST CONTROL (6822):					65.00		
VAN WALL EQUIPMENT (2622)							
5521557	1	Invoice	MOWER PARTS-GRAVELY	04/28/2022	209.50	11/22	100-22-42-5210-314
Total 5521557:					209.50		
Total VAN WALL EQUIPMENT (2622):					209.50		
WEBSTER CITY TRUE VALUE (2155)							
160806	1	Invoice	SUPPLIES/HOSE REPAIR-FIRE DEPT	04/20/2022	12.99	11/22	100-21-22-5140-310
Total 160806:					12.99		
160809	1	Invoice	BREAKERS FOR RSVP FREEZERS	04/20/2022	31.98	11/22	100-22-42-5280-226

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
Total 160809:					31.98		
160848	1	Invoice	PVC PIPE - STORM SEWER REPAIR	04/21/2022	57.99	11/22	204-23-30-5330-318
Total 160848:					57.99		
161155	1	Invoice	WASP KILLER	05/06/2022	6.00	11/22	601-23-80-5905-318
161155	2	Invoice	WASP KILLER	05/06/2022	5.99	11/22	602-23-80-5903-318
Total 161155:					11.99		
Total WEBSTER CITY TRUE VALUE (2155):					114.95		
WEBSTER CITY VETERINARY CLINIC (1030)							
470009	1	Invoice	1ST QTR 2022 DOG POUND FEES	04/26/2022	1,250.00	11/22	100-22-21-5240-299
Total 470009:					1,250.00		
Total WEBSTER CITY VETERINARY CLINIC (1030):					1,250.00		
WESCO DISTRIBUTION (1038)							
146118	1	Invoice	STOCK SUPPLIES	04/20/2022	3,067.90	11/22	601-23-52-5588-318
Total 146118:					3,067.90		
Total WESCO DISTRIBUTION (1038):					3,067.90		
WOOLSTOCK MUTUAL TELEPHONE ASN (1054)							
839-1086 05/	1	Invoice	INTERNET SERVCE	05/01/2022	3.03	11/22	100-24-14-5435-230
839-1086 05/	2	Invoice	INTERNET SERVCE	05/01/2022	21.90	11/22	601-23-80-5903-230
839-1086 05/	3	Invoice	INTERNET SERVCE	05/01/2022	6.74	11/22	602-23-80-5921-230
839-1086 05/	4	Invoice	INTERNET SERVCE	05/01/2022	2.02	11/22	603-23-80-5921-230
839-1086 05/	5	Invoice	INTERNET SERVCE	05/01/2022	3.61	11/22	100-24-12-5430-230
839-1086 05/	6	Invoice	INTERNET SERVCE	05/01/2022	12.03	11/22	601-23-81-5921-230
839-1086 05/	7	Invoice	INTERNET SERVCE	05/01/2022	7.22	11/22	602-23-81-5921-230
839-1086 05/	8	Invoice	INTERNET SERVCE	05/01/2022	1.20	11/22	603-23-81-5921-230
839-1086 05/	9	Invoice	INTERNET SERVCE	05/01/2022	6.02	11/22	100-24-30-5380-230
839-1086 05/	10	Invoice	INTERNET SERVCE	05/01/2022	6.02	11/22	601-24-30-5380-230
839-1086 05/	11	Invoice	INTERNET SERVCE	05/01/2022	6.02	11/22	602-24-30-5380-230
839-1086 05/	12	Invoice	INTERNET SERVCE	05/01/2022	6.01	11/22	603-24-30-5380-230
839-1086 05/	13	Invoice	INTERNET SERVCE	05/01/2022	14.44	11/22	100-21-22-5140-230
839-1086 05/	14	Invoice	INTERNET SERVCE	05/01/2022	38.50	11/22	100-21-21-5110-230
839-1086 05/	15	Invoice	INTERNET SERVCE	05/01/2022	7.22	11/22	601-23-52-5588-230
839-1086 05/	16	Invoice	INTERNET SERVCE	05/01/2022	7.22	11/22	601-23-51-5566-230
839-1086 05/	17	Invoice	INTERNET SERVCE	05/01/2022	14.44	11/22	602-23-61-5642-230
839-1086 05/	18	Invoice	INTERNET SERVCE	05/01/2022	4.81	11/22	100-23-43-5361-230
839-1086 05/	19	Invoice	INTERNET SERVCE	05/01/2022	19.25	11/22	100-22-42-5233-230
839-1086 05/	20	Invoice	INTERNET SERVCE	05/01/2022	118.62	11/22	601-24-16-5921-230
839-1086 05/	21	Invoice	INTERNET SERVCE	05/01/2022	20.84	11/22	602-24-16-5921-230
839-1086 05/	22	Invoice	INTERNET SERVCE	05/01/2022	20.84	11/22	603-24-16-5921-230
Total 839-1086 05/01/22:					348.00		
839-3034 05/	1	Invoice	INTERNET SERVICE/RSVP	05/01/2022	29.95	11/22	100-22-42-5280-230
Total 839-3034 05/01/22:					29.95		

Invoice	Seq	Type	Description	Invoice Date	Total Cost	Period	GL Account
839-7981 05/	1	Invoice	INTERNET SERVCE/FULLER HALL	05/01/2022	29.95	11/22	100-22-42-5280-230
Total 839-7981 05/01/22:					29.95		
Total WOOLSTOCK MUTUAL TELEPHONE ASN (1054):					407.90		
Total 05/16/2022:					403,890.12		
Grand Totals:					1,010,398.39		

Report GL Period Summary

GL Period	Amount
11/22	1,010,398.39
Grand Totals:	1,010,398.39

Vendor number hash:	460882
Vendor number hash - split:	1036413
Total number of invoices:	175
Total number of transactions:	443

Terms Description	Invoice Amount	Net Invoice Amount
Open Terms	1,010,398.39	1,010,398.39
Grand Totals:	1,010,398.39	1,010,398.39

FUND LIST TOTALS FOR BILLS MAY 16, 2022

Account	Fund	Total Amount
100	General	69,592.81
204	Road Use Tax Funds	7,402.14
205	Airport Fund	2,021.28
211	DARE Trust	21.44
214	K9 Trust Fund	739.13
260	SSMID	65.00
525	Street Improvement	52,260.04
537	East Twin Improvements	791.92
601	Electric Utility	691,553.82
602	Water Utility	20,378.75
603	Sewer Fund	64,522.70
902	Medical/Flex	101,049.36
	Grand Total	$1,010,398.39

WEBSTER CITY

MEMORANDUM

TO: Mayor and City Council

FROM : Daniel Ortiz-Hernandez, City Manager
Biridiana Bishop, Assistant City Manager

DATE: May 16, 2022

RE: Adopt Resolution Accepting Plans and Specifications and Awarding Contract to Peterson Construction in the Amount of $693,000 for the Water Treatment Facility Improvements Project

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SUMMARY: The City Council authorized an agreement with Bolton and Menk on November 15, 2021 to provide professional services for water related matters and authorized the purchase of various chemical feed equipment recommended for upgrades by Bolton and Menk at the Water Treatment Plant. The notice to bidders for the replacement of the Carbon Dioxide system and the chlorine feed system was posted on April 13th and closed on May 5, 2022 at 2:00 p.m.

PREVIOUS COUNCIL ACTION: The City Council adopted Resolution 2021-218 on November 15, 2021 and Resolution 2022-068 to Set Public Hearing for May 16, 2022 at 6:05 p.m. on April 18, 2022.

BACKGROUND/DISCUSSION:
Bolton and Menk performed an assessment of the Water Treatment Plant and determined updates were needed to our chemical and chlorine feed systems. City staff will install the polymer, sodium aluminate coagulant, polyphosphate, orthophosphate and lime feed equipment. The installation of city procured carbon dioxide and booster pump system, the furnishing and installation of chlorination system improvements and the SCADA integration will be completed by a contractor. The notice to bidders was sent out on April 13th. Sealed proposals were due May 5, 2022 at 2:00 p.m. The city received one qualified bid from the following contractor:

Name of Contractor	Bid Amount
1. Peterson Construction Company	$693,000

The bid fell within the engineer's cost opinion of $700,000. Bolton and Menk reviewed the bid and recommends awarding the Water Treatment Facility Improvement project contract to Peterson Construction Company. Their letter of recommendation is attached. The bid specifications originally noted that the awarded contractor will have 120 days to substantially

complete the work requested; however, an addendum was issued modifying the 120 days to 200 days in order for the contractor to have sufficient time to complete the project. During the pre-bid meeting, contractors in attendance noted long lead times to obtain materials such as the programmable logic controller (PLC) for the Supervisory Control and Data Acquisition (SCADA) system.

FINANCIAL IMPLICATIONS:
This will be paid for by the Water Fund. The engineer's estimate for the portion of this project is $700,000. The estimate includes installation of the City's procured CO2 system and booster pumps and the electrical controls needed for the chemical feed equipment the City will install as well.

RECOMMENDATION:
Recommend City Council adopt resolution approving plans and specifications and awarding contract to Peterson Construction.

RESOLUTION NO. 2022-

FINALLY APPROVING AND CONFIRMING PLANS, SPECIFICATIONS AND FORM OF CONTRACT FOR THE WATER TREATMENT FACILITY IMPROVEMENTS PROJECT

WHEREAS, this Council has heretofore approved plans, specifications and form of contract for the proposed construction of the Water Treatment Facility Improvements Project, as described in the resolution providing for a notice of hearing on proposed plans and specifications and proposed form of contract for such Water Treatment Facility Improvements Project and the taking of bids therefor; and

WHEREAS, hearing has been held on objections to the proposed plans, specifications, and form of contract and to the cost of the Water Treatment Facility Improvements Project, and no objections were provided.

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

That the plans, specifications and form of contract, and estimate of cost referred to in the preamble hereof be and the same are hereby finally approved and the prior action of the Council approving them is hereby finally confirmed, and the aforementioned public improvement to be constructed in accordance with the plans, specifications and form of contract is necessary and desirable.

Passed and adopted this 16th day of May, 2022.

_____
John Hawkins, Mayor

ATTEST:_____
Karyl K. Bonjour, City Clerk

Bolton & Menk, Inc.
1519 Baltimore Drive
Ames, IA 50010
4/26/2022

ADDENDUM NO. 1
City of Webster City, Iowa
Water Treatment Facility Improvements
Bid Date: May 5, 2022
Bid Time: 2:00 p.m.
BMI Project No. 0M2.126087

This addendum forms a part of the Contract Documents and modifies the original Specifications and Drawings. Acknowledge receipt of this Addendum in the space provided on the Proposal Form. Failure to do so may subject Bidder to disqualification.

For purpose of clarity, some Addendum items call for the complete replacement of a Specification section.

The following items shall become part of the original Bidding Documents:

I SPECIFICATIONS

Item I.1.1 Section 00100 – Notice of Hearing and Letting

a. Delete Section 00100 Notice of Hearing and Letting and replace it with Section 00101 – Notice of Letting, dated 4/26/2022, attached.

Item I.1.2 Section 01400 – Tests and Inspections

a. Paragraph 1.8.A: Add to the end "The approved independent testing laboratory shall be certified by the Iowa Department of Natural Resources (IDNR) and testing results shall be satisfactory to the IDNR."

b. Paragraph 1.10.A.3: In the last sentence, delete "Department of Health" and replace with "Iowa Department of Natural Resources"

c. Paragraph 1.10.C.1:

1. Where located in the paragraph, delete "AWWA C600-87" and replace with "AWWA C600-2017"

2. Delete "133,200" and replace with "148,000"

d. Paragraph 1.10.D.5: In the first sentence, delete "Department of Health" and replace with "Iowa Department of Natural Resources"

Item I.1.3 Section 15060 – Process Piping and Pipe Fittings

a. Paragraph 3.14.A:

1. Where located in the paragraph, delete "AWWA C600-87" and replace with "AWWA C600-2017"

2. Delete "133,200" and replace with "148,000"

II PLANS

None

ATTACHMENTS:
Section 00101 – Notice of Letting, dated 4/26/2022

*** END OF ADDENDUM NO. 1 ***

SECTION 00100 – NOTICE OF LETTING

NOTICE OF LETTING
WATER TREATMENT FACILITY IMPROVEMENTS

Sealed Proposals will be received by the Public Works Department of Webster City, Hamilton County, Iowa, at the Municipal Building in said City, until 2 o'clock P.M. on the 5th day of May 2022 for the Water Treatment Facility Improvements Facility Improvements project, as described in the Plans and Specifications therefore now on file in the office of the City Clerk at 400 2nd Street, Webster City, IA 50595.

The extent of the work involved for the Water Treatment Facility Improvements Facility Improvements project consists of:

A. Remove and replace of existing CO2 gas diffuser re-carbonation system with Owner purchased TomCo 75 lbs/hr rated pressure solution carbonic acid feed system. This equipment including the booster pumping system will be assigned to the contractor for installation. Existing Carbon-dioxide storage tank shall be reused. Remove replace carbon dioxide gas feed piping with 304 SS pipe. Install booster pump system for TomCo re-carbonation carrier water system to maintain constant 60 psi water supply. Modify baffle wall system in the existing re-carbonation basin and furnish and install sample withdrawal piping system for pH sensor for automatic control of re-carbonation system.

B. Remove and replace existing pre-chlorine and intermediate chlorine feed system. The new equipment shall include new 500 lbs/d rated ejectors, manual gas chlorinators chlorine feed rate rotameters, new vacuum tubing and carrier and chlorine solution piping and related appurtenances.

C. Furnish and install new chlorine booster pump. Provide a shelf spare chlorine booster pump.

D. Furnish and install a new gas leak monitoring system in the chlorin storage room with strobe light indicator and an alarm horn to indicate chlorine gas leak. Furnish and install new automatic shut off valve on the one-ton chlorine cylinder with a battery back-up system.

E. SCADA integration with necessary electrical wiring and motor starters, disconnect and sub-feed panels for work described above and additional work done by the owner for the following chemical feed system

1. Lime feed system
2. Sodium Aluminate coagulant feed system
3. Polymer feed system
4. Polyphosphate feed system
5. Orthophosphate feed system

F. There is no painting work included in the project.

All work and equipment is to be in accordance with the approved Plans, Specifications and form of Contract prepared by the City of Webster City, Iowa, which have been heretofore approved by

the City Council and are now on file in the City Clerk's office in said City of Webster City, Iowa, for public examination and by this reference made a part hereof as though fully set out and incorporated herein.

Each Proposal shall be made on the Proposal form furnished by the City of Webster City, Iowa, and must be enclosed in a **SEPARATE** sealed envelope and plainly identified. Each Proposal shall be accompanied by a bid bond, certified check, cashier's check or credit union certified share draft in a separate sealed envelope in an amount equal to five (5) percent of the total amount of the bid.

If a bid bond is submitted, IT SHALL BE ON THE BID BOND FORM FURNISHED BY THE CITY. The certified check or cashier's check shall be drawn on a bank in Iowa or a bank chartered under the laws of the United States of America; the certified share draft shall be drawn on a credit union in Iowa or a credit union chartered under the laws of the United States of America; and such check or draft shall be made payable to the Treasurer of the City as security that if awarded a Contract, the Bidder shall enter into a Contract at the prices bid and furnish the required Performance Bond and Payment Bonds and Certificate of Insurance.

The certified check or cashier's check or certified share draft may be cashed or the bid bond forfeited and the proceeds retained as liquidated damages if the bidder fails to execute a Contract or file acceptable Performance Bond and Payment Bonds or provide an acceptable Certificate of Insurance within ten (10) days after the acceptance of his Proposal by resolution of the Council. No bidder shall be allowed to withdraw a Proposal within thirty (30) days after the date set for opening bids.

The City of Webster City, Iowa is registered with the Iowa Department of Revenue and Finance as a sales and use tax-exempt entity. The City of Webster City has elected to issue an authorization letter and exemption certificate to Contractors which allows purchase of qualifying items to be made exempt from Iowa sales Tax, Local Option Sales Tax, and School Infrastructure Local Option Sales Tax. Qualifying exempt items can be found on the Iowa Department of Revenue and Finance web site at www.state.ia.us/tax.

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 responsible bid, which shall be determined without regard to state or local law whereby preference is given on factors other than the amount of bid.

The City reserves the right to reject any or all Proposals and all alternate bid items, re-advertise for new bids and to waive informalities that may be in the best interest of the City.

The successful bidder shall be required to furnish a "Performance Bond" in an amount equal to one hundred (100) percent of its Contract price, said bond to be issued by a responsible surety approved by the City Council and shall guarantee the faithful performance of the Contract and the terms and conditions therein contained and the maintenance of said improvements for the City as required by the Specifications.

The successful bidder shall be required to furnish a "Payment Bond" in an amount equal to one hundred (100) percent of the Contract price, said bond to be issued by a responsible surety approved by the City Council and shall guarantee the prompt payment, as required by the law, of all persons supplying labor and materials in the execution of the work provided for in the Contract.

Payment to the Contractor shall be made by the City in cash from such funds as are legally available for such purpose and/or from the proceeds of the issuance of such bonds as may be legally issued.

Monthly payments shall be paid the Contractor in an amount equal to ninety-five (95) percent of the Contract value of the work completed and approved by the City.

Provisions may be made by the City Council to withhold larger amounts than the five (5) percent stated above where there is specific necessity and right to do so.

Final payment to the Contractor will be made no earlier than thirty-one (31) days from and after the final acceptance of work by the Council, subject to the conditions and in accordance with the provisions of Chapter 573 of the Code of Iowa.

All work on the project shall be substantially completed one hundred twenty (120) calendar days after issuance of Notice to Proceed.

OBTAINING CONTRACT DOCUMENTS AND BIDDING REQUIREMENTS: Plans and specifications and all contract documents may be obtained at the office of Bolton & Menk, Inc., 1519 Baltimore Drive, Ames, Iowa 50010, upon payment of $75.00 (refundable deposit), (includes sales tax) for each full set of specifications and accompanying drawings. Additional shipping charges will apply for delivery to any address not within the lower 48 states. Deposits will be refunded for contract documents returned within 30 days of bid, if in usable condition. Complete digital project bidding documents are available at www.questcdn.com. You may view the digital plan documents for free or download them by entering Quest project #8182498 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.

A copy of the plans and specifications may be inspected at the following locations:

- Office of Bolton & Menk Inc., 1519 Baltimore Drive, Ames, IA 50010.
- City of Webster City, 400 2nd St., Webster City, IA 50595.

Pre-Bid Meeting: A non-mandatory prebid meeting will be held at the Water Treatment Facility at 502 White Fox Road, Webster City, IA 50595 on April 27, 2022 at 1:00 PM. All bidders are encouraged to attend this meeting to familiarize with the site conditions.

PLANHOLDERS LIST, ADDENDA AND BID TABULATION: The planholders list, addenda and bid tabulation will be available on-line at www.bolton-menk.com.

Published upon order of the City Council of Webster City, Iowa.

CITY OF WEBSTER CITY, IOWA

Karyl K. Bonjour
City Clerk
Webster City, Iowa

Bolton & Menk, Inc.
1519 Baltimore Drive
Ames, IA 50010
4/29/2022

ADDENDUM NO. 2
City of Webster City, Iowa
Water Treatment Facility Improvements
Bid Date: May 5, 2022
Bid Time: 2:00 p.m.
BMI Project No. 0M2.126087

This addendum forms a part of the Contract Documents and modifies the original Specifications and Drawings. Acknowledge receipt of this Addendum in the space provided on the Proposal Form. Failure to do so may subject Bidder to disqualification.

For purpose of clarity, some Addendum items call for the complete replacement of a Specification section.

The following items shall become part of the original Bidding Documents:

I SPECIFICATIONS

Item I.2.1 Section 00101 – Notice of Letting, dated 4/26/2022

a. Add Paragraph G under "The extent of the work involved for the Water Treatment Facility Improvements project consists of":

G. Furnish and install two carbon dioxide gas monitors. One shall be installed in the pump room and the second monitor shall be installed in the basement pipe gallery. The monitors shall be wired to the SCADA system and on high level alarm shall shut off the electric motor actuated valve on the carbon dioxide gas line.

Item I.2.2 Section 00411 – Bid Schedule

a. Delete sales tax from the Note: Bids shall include sales tax and all applicable taxes and fees "on page 00411-1.

b. Delete sales tax from the Note: Bids shall include sales tax and all applicable taxes and fees "on page 00411-3.

c. Under 1.1 BASE BID PRICES FOR THE FOLLOWING ITEMS, add paragraph F as follows:

F. Furnish and install two carbon dioxide gas monitors. One shall be installed in the pump room and the second monitor shall be installed in the basement pipe gallery. The monitors shall be wired to the SCADA system and on high level alarm shall shut off the electric motor actuated valve on the carbon dioxide gas line.

Item I.2.3 Section 00500 – Contract

a. Revise Paragraph 5 (page 00500-2) as follows:

All work under this contract shall be fully completed within t hundred twenty (200) calendar days Anticipated Notice of Award date is May 17, 2022. Anticipated delivery date for Owner furnished carbon dioxide equipment. is September 15, 2022. Anticipated delivery date of Contractor furnished PLC is October 1, 2022. The Bidder shall also agree to pay as liquidated damages, the sum of Five Hundred Dollars ($500.00) for each "per calendar day" thereafter as provided in the Specifications.

Item I.2.4 Section 01010 – Summary of Work

a. Add paragraph 1.3.H as follows:

H. Furnish and install two carbon dioxide gas monitors. One shall be installed in the pump room and the second monitor shall be installed in the basement pipe gallery. The monitors shall be wired to the SCADA system and on high level alarm shall shut off the electric motor actuated valve on the carbon dioxide gas line.

II PLANS

Item II.2.1 Sheet 5.02 – LOWER LEVEL PLAN AND CHLORINE FEED PIPING ODIFICATIONS

a. Replace with Sheet 5.02, dated 5/2/2022

Item II.2.2 Sheet 5.03 – MAIN LEVEL PLAN

a. Replace with Sheet 5.03, dated 5/2/2022

b. Exposed outdoor carbon dioxide piping shall be insulated with pipe insulation and supported on firm ground or pipe supports.

Item II.2.3 Sheet 5.04 – UPPER LEVEL PLAN

a. Replace with Sheet 5.04, dated 5/2/2022

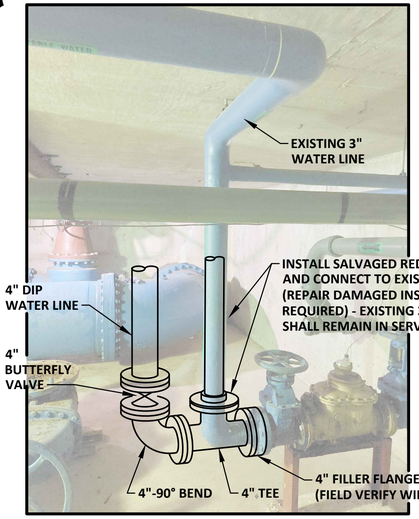
III APPENDIX

Item III.2.1 Appendix A- Revised Cable and Conduit Schedule

a. Replace Appendix A with Revised Appendix A dated 5/02/2022

ATTACHMENTS:
Sheet 5.02, dated 5/2/2022
Sheet 5.03, dated 5/2/2022
Sheet 5.04, dated 5/2/2022
Appendix A dated 5/2/2022

*** END OF ADDENDUM NO. 2 ***



1 / 5.02 PHOTO
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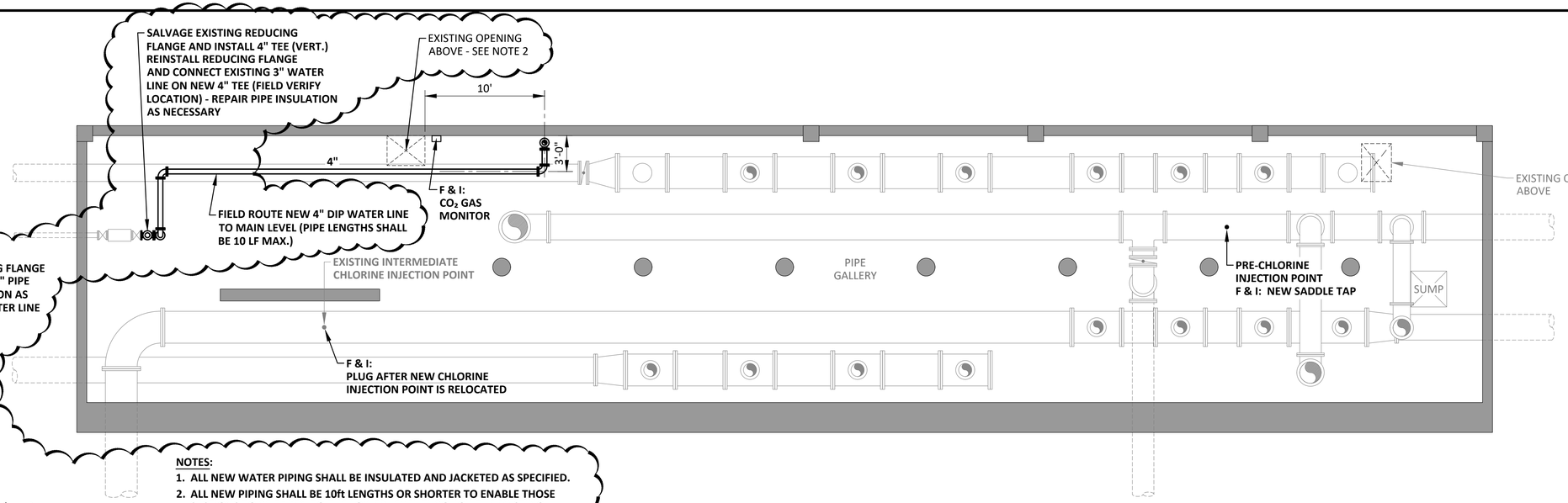
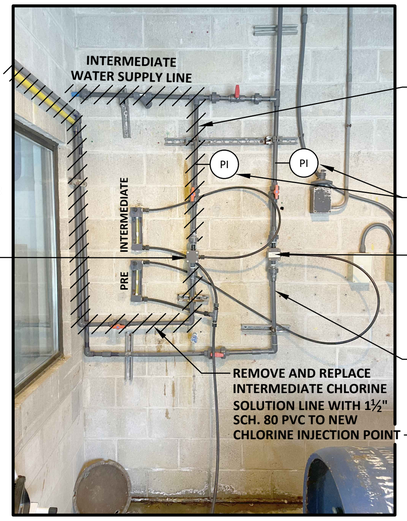


NOTES:

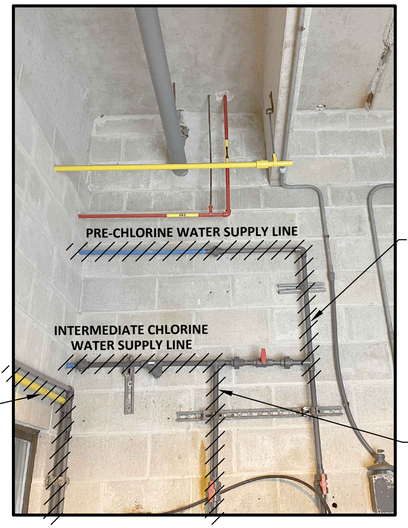
1. ALL NEW WATER PIPING SHALL BE INSULATED AND JACKETED AS SPECIFIED.
2. ALL NEW PIPING SHALL BE 10ft LENGTHS OR SHORTER TO ENABLE THOSE SECTIONS TO BE TAKEN TO THE LOWER LEVEL THROUGH THE EXISTING OPENING IN THE FLOOR.

LOWER LEVEL PLAN

SCALE: 3/16"=1'-0"



1A / 5.03 PHOTO
NOT TO SCALE



1B / 5.03 PHOTO
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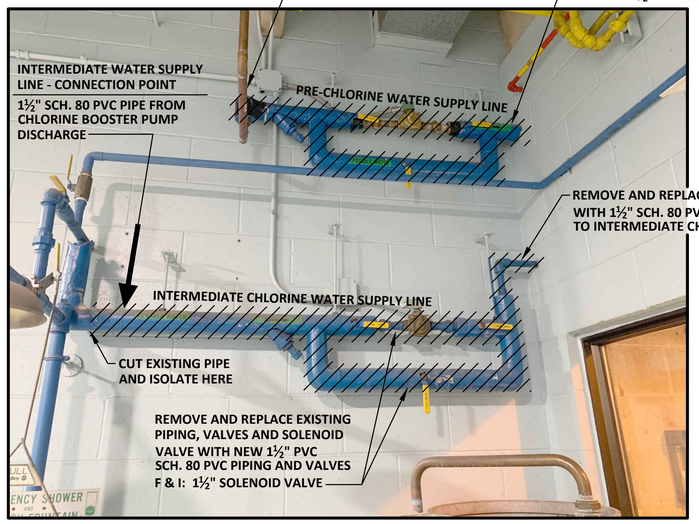

2 / 5.03 PHOTO
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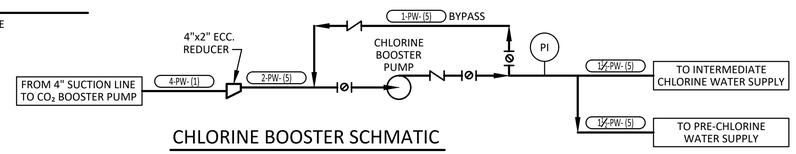
CHLORINE FEED PIPING MODIFICATIONS



CHLORINE BOOSTER SCHMATIC

NOT TO SCALE

ADDENDUM NO. 2

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Graphic Scale for 3/16"=1'-0"
0 2 4 6 8 12 16

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1519 BALTIMORE DRIVE
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Phone: (515) 233-6100
Email: Ames@bolton-menk.com
www.bolton-menk.com

DESIGNED	HAD
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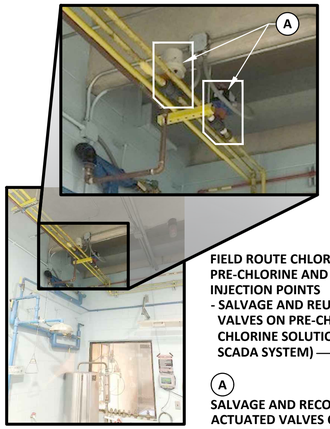
CLIENT PROJ. NO.	0M2.126087

NO.	ISSUED FOR	DATE
A		1/28/2022
0		4/12/2022
1	ADD 2	5/2/2022

WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
LOWER LEVEL PLAN AND CHLORINE FEED PIPING MODIFICATIONS

SHEET 5.02



FIELD ROUTE CHLORINE SOLUTION LINES TO PRE-CHLORINE AND INTERMEDIATE CHLORINE INJECTION POINTS
- SALVAGE AND REUSE ELECTRIC ACTUATED VALVES ON PRE-CHLORINE AND INTERMEDIATE CHLORINE SOLUTION LINES (RECONNECT TO SCADA SYSTEM)

(A) SALVAGE AND RECONNECT ELECTRIC ACTUATED VALVES ON PRE-CHLORINE AND INTERMEDIATE CHLORINE SOLUTION LINES - RECONNECT TO SCADA SYSTEM

1 / 5.03 PHOTO
NOT TO SCALE

CHLORINE DIFFUSER
NOT TO SCALE

NEW INTERMEDIATE CHLORINE SOLUTION LINE FROM UPPER LEVEL TO INSIDE OF FILTER EFFLUENT WET WELL AND CONNECT TO CHLORINE DIFFUSER - PLACE DIFFUSER ACROSS 30" PIPE

OWNER SUPPLIED POLYPHOSPHATE FEED SYSTEM ON UPPER LEVEL - CONNECT FEED PUMP TO SCADA SYSTEM

OWNER SUPPLIED 100% ORTHOPHOSPHATE FEED SYSTEM ON UPPER LEVEL - CONNECT FEED PUMP TO SCADA SYSTEM

CHLORINE ROOM

HOIST BEAM

1A / 5.02 PHOTO

1B / 5.02 PHOTO

2 / 5.02 PHOTO

1 / 5.03 PHOTO

1½"

INTERMEDIATE WATER SUPPLY LINE - CONNECTION POINT

FIELD ROUTE NEW INTERMEDIATE CHLORINE SOLUTION ALONG CEILING

EXISTING CLHORINE FEED LINES

3" DIP WATER FEED PIPE TO CO_2 PANEL

EXISTING POTABLE WATER THROUGH WALL

PROPOSED 20"Ø BLADDER TANK

CORE DRILL EXIST. CONC. FLOOR (4" DIP)

CO_2 / H_2O FEED PANEL (2" FNPT S.S. INFLUENT AND 2" FNPT S.S. EFFLUENT)

CHLORINE BOOSTER PUMP

ROUTE pH SIGNAL CABLE TO TOMCO CONTROL PANEL

9"

F & I: CO_2 GAS MONITOR

FIELD ROUTE CHLORINE PUMP DISCHARGE PIPING TO PRE-CHLORINE WATER AND INTERMEDIATE CHLORINE SUPPLY CONNECTION POINTS

CONCRETE HOUSE-KEEPING PAD

4'-6"

2 / 5.03 PHOTO

16'-0"

CONCRETE HOUSEKEEPING PAD

4"x2" REDUCER

HOIST BEAM

CO_2 BOOSTER PUMP SYSTEM

BLOWER

¾" S.S. NEEDLE VALVE FOR FLOW CONTROL TO pH SENSOR

AIR COMPRESSOR

NEW INTERMEDIATE CHLORINE SOLUTION LINE FROM MAIN LEVEL THROUGH CEILING TO CEILING OF UPPER LEVEL

ELEVATOR

LIME STORAGE SILO

SODA ASH STORAGE SILO

pH SENSOR
- MOUNT SENSOR 5ft ABOVE FINISHED FLOOR (FFE)
- INLET PIPING TO HAVE A ¾"S.S. NEEDLE VALVE FOR FLOW CONTROL
- OUTLET DRAIN TO BE PIPED TO CHLORINE ANALYZER DRAIN
- SIGNAL CABLE TO TOMCO CONTROL PANEL

PUMP ROOM

HIGH SERVICE PUMPS

LOW SERVICE PUMPS

3 / 5.03 PHOTO

SAMPLE SINK

4 / 5.03 PHOTO

1" SCH. 40 PVC

REMOVE AND REROUTE EXISTING CHLORINE SOLUTION LINES TO NEW FEED LOCATIONS
- REMOVE AND CAP POTABLE WATER LINE AS NECESSARY IN THE METERING ROOM

2 / 5.03 PHOTO
NOT TO SCALE

ROUTE NEW ¾" CO_2 SUPPLY LINE OVER THE EXISTING OVERHEAD/ROLLUP DOOR AND ALONG EXISTING CONCRETE BEAM
- NEW CO_2 GAS SUPPLY PIPING SHALL BE ¾" SCH. 40 304 S.S. PIPE - WELDED CONNECTIONS

SALVAGE AND REUSE EXISTING ELECTRIC ACTUATED VALVE ON EXISTING CO_2 GAS PIPING AND INSTALL AT THIS LOCATION
- CO_2 GAS MONITOR ALARMS WILL SHUT OFF THE VALVE ON HIGH LEVEL ALARM
- CONNECT TO SCADA/CO_2 GAS MONITOR FOR ALARM SHUT-OFF

EXISTING CO_2 STORAGE TANK

1" DIA. CORE DRILL IN CONC. SLAB ABOVE

¾" SCH. 80 PVC SAMPLE DRAW OFF PIPE INSTALLED 6ft FROM THE BAFFLE WALL AT THE CENTER OF THE BAFFLE WALL OPENING PIPE END OPENING 15in ABOVE THE TANK FLOOR - PROVIDE PIPE SUPPORT AS NECESSARY

6'-0"

RECARBONATION BASIN

10'-6"

SAMPLE DRAW-OFF FOR TOMCO CONTROL PANEL pH MONITORING AND CONTROL

EXISTING REDWOOD BAFFLE WALL

NEW INTERMEDIATE CHLORINE INJECTION DIFFUSER PIPE

2 / 5.03

F & I:
1" PVC BALL VALVE ON THE DRAIN LINE - PROVIDE PIPE LOOP IN THE DRAIN LINE TO ENSURE FULL PIPE FLOW AT pH SENSOR IS LOCATED

EXTEND DIFFUSER PIPE BEYOND 30" PIPE OPENING AND PROVIDE SUPPORT FROM CONCRETE WALL - SEE 1/5.04 FOR EXISTING 30" PIPE ELEVATION REFERENCE

1" DIA. CORE DRILL IN CONC. SLAB ABOVE

FILTER BED

FILTER BED

FILTER BED

FILTER BED

36"Ø FILTER WET WELL ACCESS ABOVE

100% ORTHOPHOSPHATE FEED
- CONNECT TO EXISTING FEED POINT

3" SCH. 40 304 S.S. CO_2 SOLUTION LINE WITH WELDED CONNECTIONS
- FIELD ROUTE TO EXISTING RECARBONATION TANK
- REUSE THE EXISTING RECABONATION TANK OUTSIDE WALL PENETRATION TO ENTER RECABONATION TANK (ENLARGE EXISTING WALL PENETRATION TO ACCOMODATE NEW 3" PIPE)

FIELD VERIFY WALL PENETRATION LOCATION WITH ENGINEER - PROVIDE S.S. PIPE SUPPORT AS NECESSARY

TOMCO CO_2 SOLUTION DIFFUSER AT BAFFLE OPENING

REVISE BOTTOM OF BAFFLE OPENING BY BLOCKING WITH CONCRETE ON TWO SIDES TO PROVIDE 2ft WIDE OPENING TO DIRECT FLOW TO pH SAMPLE DRAW-OFF PIPE - SEE SHEET 5.04 FOR BAFFLE WALL MODIFICATION DETAIL

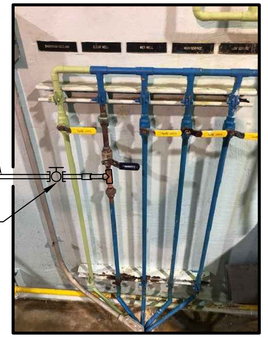
REMOVE AND REPLACE EXISTING CHLORINE ANALYZER
- MODIFY THE S/EP SAMPLE LINE TO PROVIDE THE SAMPLE FOR THE CHLORINE ANALYZER

REMOVE AND REPLACE EXISTING ¾" CO_2 GAS SUPPLY PIPING AND REROUTE AS SHOWN

SOLIDS CONTACT

TO CHLORINE ANALYZER SAMPLE INLET

1" BALL VALVE



3 / 5.03 PHOTO
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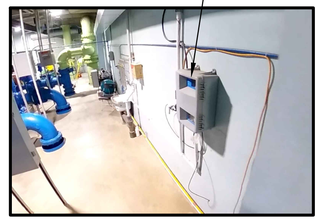
REMOVE AND REPLACE EXISTING CHLORINE ANLAYZER



4 / 5.03 PHOTO
NOT TO SCALE

MAIN LEVEL PLAN
SCALE: 3/16"=1'-0"

0 2 4 6 8 12 16
Graphic Scale for 3/16"=1'-0"

ADDENDUM NO. 2

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1519 BALTIMORE DRIVE
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Email: Ames@bolton-menk.com
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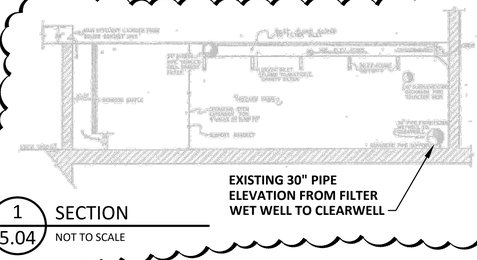
CLIENT PROJ. NO.	0M2.126087

NO.	ISSUED FOR	DATE
A		1/28/2022
0		4/12/2022
1	ADD 2	5/2/2022

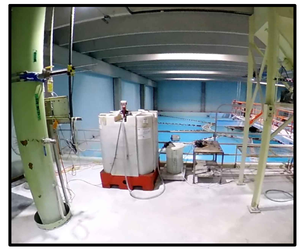
WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
MAIN LEVEL PLAN

SHEET 5.03

4/5.04 PHOTO
NOT TO SCALE



1/5.04 SECTION
NOT TO SCALE



2/5.04 PHOTO
NOT TO SCALE

ELEVATOR

CHEMICAL FEED PANEL

CONNECT OWNER INSTALLED LIME WEIGH BELT FEED SYSTEM TO SCADA SYSTEM

2/5.04 PHOTO

16" AERATOR INFLUENT

BLOWER INTAKE FILTER

APPROX. EXISTING pH PROBE LOCATION

CORE DRILL 1" DIA. HOLE IN CONC. SLAB FOR 100% ORTHOPHOSPHATE FEED TUBING - FIELD VERIFY LOCATION WITH ENGINEER

INTERMEDIATE CHLORINE SOLUTION LINE FROM MAIN LEVEL UP THROUGH FLOOR TO CEILING OF UPPER LEVEL

SODA ASH DAY BIN

LIME DAY BIN

CHEMICAL FEED TOTE

1½"

1½"

FIELD ROUTE NEW INTERMEDIATE CHLORINE SOLUTION LINE ALONG UPPER FLOOR CEILING

1/5.04

CONNECT OWNER INSTALLED SODIUM ALUMINATE FEED SYSTEM TO SCADA SYSTEM

CONNECT OWNER INSTALLED POLYMER FEED SYSTEM TO SCADA SYSTEM

4/5.04 PHOTO

3/5.04

DROP NEW INTERMEDIATE CHLORINE SOLUTION LINE THROUGH UPPER LEVEL FLOOR TO INSIDE OF FILTER EFFLUENT WET WELL AND RUN ALONG BOTTOM SIDE OF CONC. SLAB AND DOWN TO CONNECT TO CHLORINE DIFFUSER
- PROVIDE 2" HIGH CONC. CURB AROUND CORE DRILLED HOLE (FIELD VERIFY LOCATION WITH ENGINEER)

OWNER SUPPLIED POLYPHOSPHATE FEED SYSTEM - CONNECT FEED PUMP TO SCADA SYSTEM

36"Ø FILTER WET WELL ACCESS - SEE 4/5.04 (PHOTO)

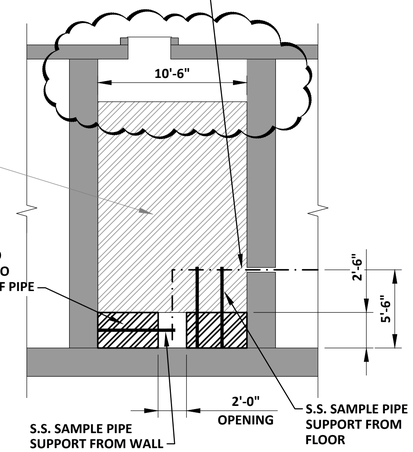
OWNER SUPPLIED 100% ORTHOPHOSPHATE FEED SYSTEM - CONNECT FEED PUMP TO SCADA SYSTEM

SOLIDS CONTACT

¾" SCH. 80 PVC SAMPLE DRAW OFF PIPE TO pH SENSOR - PROVIDE LINK-SEAL AT PIPE PENETRATION ON BOTH SIDES

EXISTING REDWOOD BAFFLE WALL

REVISE BOTTOM OF BAFFLE OPENING BY BLOCKING WITH CONCRETE ON TWO SIDES TO PROVIDE 2ft WIDE OPENING TO DIRECT FLOW TO pH SAMPLE DRAW-OFF PIPE



EXISTING RECARBONATION BASIN BAFFLE WALL MODIFICATIONS

3/5.04 SECTION
NOT TO SCALE

UPPER LEVEL PLAN

SCALE: 3/16"=1'-0"

0 2 4 6 8 12 16
Graphic Scale for 3/16"=1'-0"

ADDENDUM NO. 2

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Phone: (515) 233-6100
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CLIENT PROJ. NO.	0M2.126087

NO.	ISSUED FOR	DATE
A		1/28/2022
0		4/12/2022
1	ADD 2	5/2/2022

WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
UPPER LEVEL PLAN

SHEET 5.04

Addendum No.2- Appendix A -Revised Cable and Conduit Schedule 5/2/2022

Equipment	From	To	Power and Control Requirements	Conductors	Notes
Chlorine Booster Pump					
	Control Room MCC Feeder Breaker	Chlorine Booster Pump Starter	480/3/60	(3) #12 AWG + gnd	
	Chlorine Booster Pump Starter	Chlorine Booster Pump	480/3/60	(3) #12 AWG + gnd	
	Pump Room RTU	Chlorine Booster Pump Starter	120 Vac I/O	(8) #14 AWG + gnd	
Booster Pump Skid					
	Control Room MCC Feeder Breaker	Booster Pump Skid	480/3/60	(3) #8 AWG + gnd	
	Booster Pump Skid	Pump Room RTU	120 Vac I/O	(16) #14 AWG + gnd	
Tomco Control Panel					
	Existing Elec Room Lighting Panel	Tomco Control Panel	120 Vac Power	(3) #12 AWG + gnd	Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Tomco Control Panel	Pump Room RTU	120 Vac I/O	(8) #14 AWG + gnd	
	Tomco Control Panel	Pump Room RTU	Ethernet Communications	(1) Cat-6 cable	
pH Sensor	pH Sensor	Tomco Control Panel	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
	Existing Elec Room Lighting Panel	pH Sensor	120 Vac Power		Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
Pump Room RTU					
	Existing Elec Room Lighting Panel	Pump Room RTU	120 Vac Power	(3) #12 AWG + gnd	Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Existing WTP Main Control Panel (Located in upper level control room)	Pump Room RTU	Ethernet Communications	(1) Cat-6 cable	
Flood Switch					
	Flood Switch	Pump Room RTU	120V DI	(3) #12 AWG + gnd	
Pipe Gallery CO2 Gas Monitor					
	Transmitter mounted in Pump Room	Pump Room RTU	120V DI	(2) #14 AWG	
	Pump Room RTU	Transmitter mounted in Pump Room	120 Vac Power	(3) #12 AWG + gnd	
	Remote mounted gas sensor	Transmitter mounted in Pump Room	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
Pump Room CO2 Gas Monitor					
	Transmitter mounted in Pump Room	Pump Room RTU	120V DI	(2) #14 AWG	
	Pump Room RTU	Transmitter mounted in Pump Room	120 Vac Power	(3) #12 AWG + gnd	
	Remote mounted gas sensor	Transmitter mounted in Pump Room	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
CO2 Alarm Strobes					
	Pump Room RTU	Each Pump Room Entrance Door Strobe Light	120V DO	(3) #12 AWG + gnd per Strobe Light	Alarm lights can be wired in parallel from RTU.
	Pump Room RTU	Pipe Gallery Strobe Light	120V DO	(3) #12 AWG + gnd per Strobe Light	
CO2 Feed Valve					
	Pump Room RTU	CO2 Feed Valve	120V DI and DO	(4) #14 AWG + gnd	
Chlorine Gas Monitor					
	Existing Lighting Panel	Chlorine Gas Transmitter	120 Vac Power	(3) #12 AWG + gnd	Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Chlorine Gas Transmitter	Pump Room RTU	120V DO	(3) #12 AWG + gnd	
Chlorine Alarm Exterior Alarm Horn and Light					
	Pump Room RTU	Alarm Horn and Light at Exterior Door	120V DO	(3) #12 AWG + gnd	
Chlorine Room Alarm Horn and Light					
	Pump Room RTU	Alarm Horn and Light in Chlorine Room	120V DO	(3) #12 AWG + gnd	
Chlorine Robovalve System					
	Pump Room RTU	Robovalve	120V DI and DO	(4) #14 AWG + gnd	
CL17 Chlorine Analyzer					
	Pump Room RTU	Chlorine Analyzer	120 Vac Power	(3) #12 AWG + gnd	
	Chlorine Analyzer	Pump Room RTU	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
Existing WTP Master Control Panel					
Sodium Aluminate Chemical Feed Pump					
	Existing Lighting Panel	Sodium Aluminate Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Sodium Aluminate Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	

	Sodium Aluminate Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Polymer Chemical Feed Pump					
	Existing Lighting Panel	Polymer Chemical Feed Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Polymer Chemical Feed Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Polymer Chemical Feed Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Polyphosphate Chemical Feed Pump					
	Existing Lighting Panel	Polyphosphate Chemical Feed Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Polyphosphate Chemical Feed Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Polyphosphate Chemical Feed Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Orthophosphate Chemical Feed Pump					
	Existing Lighting Panel	Orthophosphate Chemical Feed Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Orthophosphate Chemical Feed Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Orthophosphate Chemical Feed Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Existing Soda Ash Feed System					
	Existing Soda Ash Feed System	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Lime Feed System					
	Existing Lime Feed System Control Panel	Lime Feed System	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
	Existing Lime Feed System Control Panel	Lime Feed System	120V DI and DO	(6) #14 AWG + gnd	

Notes:
1. Wire sizing, conduits, and grounding to be done in accordance with Division 16 specifications and NEC Code Requirements.
2. Separate conduits required between analog and 120 Vac digital signals.

BOLTON & MENK

Real People. Real Solutions.

BID TABULATION

Project Location: City of Webster City, Iowa
Project Title: Water Treatment Facility Improvements

Project No.: 0M2.126087

Addendum(s): No. 1 – 4/26/2022
No. 2 – 4/29/2022

Bid Day/Date: May 5, 2022
Bid Time: 2:00 p.m.

Bid Submittal: Public Works Department
Municipal Building

BIDDERS	TOTAL PROJECT BASE BID PRICE	BID BOND	ADDENDA
Peterson Construction	693,000.00	yes	yes

Bolton & Menk is an equal opportunity employer.

SECTION 00410 - BID FORM

ARTICLE 1 - FOR CONSTRUCTION CONTRACTS

Water Treatment Facility Improvements

Webster City, IA

Bolton & Menk Project No: 0M2.126087

ARTICLE 2 - BID RECIPIENT

2.01 This Bid is submitted to:

City of Webster City, Iowa
400 2nd Street
Webster City, IA 50595-

2.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 3 - BIDDER'S ACKNOWLEDGEMENTS

Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 4 - BIDDER'S REPRESENTATIONS

4.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
1	4/26/2022
2	5/02/2022

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in supplementary conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in supplementary conditions as containing reliable "technical data."

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 5 - BIDDER'S CERTIFICATION

5.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;
2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;
3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and
4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 6 - BASIS OF BID

6.01 Bidder will complete the work in accordance with the Contract Documents at the lump sum prices shown in the attached Bid Schedule (Section 00411).

ARTICLE 7 - TIME OF COMPLETION

7.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with the General Conditions within the number of calendar days indicated in the Agreement.

7.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 8 - ATTACHMENTS TO THIS BID

8.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of a certified check, bank money order, or a bid bond (on the form attached).

B. Section 00411- Bid Schedule

C. Section 00412- Project References

ARTICLE 9 - DEFINED TERMS

9.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SEE ATTACHED SECTION 00411 – BID SCHEDULE

BID SUBMITTAL

9.02 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name:

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: Peterson Construction (SEAL)

State of Incorporation: Iowa

Type (General Business, Professional, Service, Limited Liability): General Business

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed): Gerald Peterson

Title: President

(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in [*State where project is located*] is
12 / 23 / 1988

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first venture partner – attach evidence of authority to sign)

Name (typed of printed): _____

Title: _____

Second Joint Venture Name: _____ (SEAL)

By: _____
(Signature of second venture partner – attach evidence of authority to sign)

Name (typed or printed) _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address 1929 W Second Street
Webster City IA 50595

Phone No. (515) 832-1216 Fax No. (515) 832-3782

E-mail g.peterson@petersonconst.com

SUBMITTED on May 5, 20 22

State Contractor License No. C099488 *[If applicable]*

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first venture partner – attach evidence of authority to sign)

Name (typed of printed): _____

Title: _____

Second Joint Venture Name: _____ (SEAL)

By: _____
(Signature of second venture partner – attach evidence of authority to sign)

Name (typed or printed) _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address 1929 W Second Street
Webster City IA 50595

Phone No. (515) 832-1216 Fax No. (515) 832-3782

E-mail g.peterson@petersonconst.com

SUBMITTED on May 5, 20 22

State Contractor License No. C099488 *[If applicable]*

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: 1957 to present Address: 1929 W Second Street
(mm/dd/yyyy) City, State, Zip: Webster City IA 50595

Dates: _____ to _____ Address: _____
(mm/dd/yyyy) City, State, Zip: _____

Dates: _____ to _____ Address: _____
(mm/dd/yyyy) City, State, Zip: _____

You may attach additional sheet(s) if needed.

To be completed by non-resident bidders — Part C

1. Name of home state or foreign country reported to the Iowa Secretary of State:

2. Does your company's home state or foreign country offer preferences to bidders who are residents? ☐ Yes ☐ No

3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.

You may attach additional sheet(s) if needed.

To be completed by all bidders — Part D

I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be a reason to reject my bid.

Firm Name: Peterson Construction

Signature: _____ Date: 5/5/2022

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.

SECTION 00411 – BID SCHEDULE

Bid Form for construction of:

Water Treatment Facility Improvements

Webster City, Iowa

The undersigned declares that the only persons or parties interested in this Bid as principals are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that he has carefully examined all the Contract Documents as prepared by Bolton & Menk, Inc.; that he has informed himself fully in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. The Bid price covers all expenses incurred in performing the Work required under the Contract Documents, of which this Bid Form is a part.

Note: Bids shall include sales tax and all applicable taxes and fees.

The Bidder has based the following Total Project Base Bid Price upon providing the equipment and materials of the encircled manufacturers as listed in the Equipment/Materials Schedule attached to this Bid Form. Should Bidder fail to indicate which named manufacturer his Total Project Base Bid Price is based upon, the Bidder will supply the first-named manufacturer's equipment/material. Bidder has also indicated substitute equipment/materials that he proposes to be utilized in place of the encircled manufacturers' equipment/materials, subject to the following:

1. Allowance of "alternate" equipment does not constitute a waiver of the Specifications. If the Bidder desires to offer equipment by an "alternate" manufacturer instead of the "Basis of Bid" manufacturer, he shall indicate in the appropriate schedule the installed price of the "alternate" equipment along with the installed price of the "Basis of Bid" manufacturer. Additional "alternate" manufacturers, along with installed prices, can be listed on the sheet provided.

   If a named "alternate" is shown on the bid form, the CONTRACTOR shall indicate a price for installed deduct price. If the CONTRACTOR does not wish to supply a named "alternate" he shall indicate an installed deduct price of zero.

   No supporting documents are required for a named alternate. The OWNER reserves the right to accept or reject any or all named "alternates". The named alternates will be taken into consideration in the award of the CONTRACT.

2. In order that the Owner may determine if the proposed "alternate" manufacturer is a satisfactory substitute to that specified, the bidder shall submit one set of drawings, Specifications, full descriptive material, performance data and a detailed list of exceptions taken to the Specifications with the bid or to the ENGINEER in advance of the bid. Any revisions to structures, piping, mechanical, electrical, instrumentation and control or any other work necessary by such "alternate" equipment must be submitted for approval and the entire cost for such revisions shall be included in the installed price of "alternate."

3. The Engineer will review all proposed "Alternate" Manufacturer's equipment qualification submittals in a timely manner to determine conformance with the performance and technical requirements of this project. The Engineer will be the sole judge as to the comparative quality and suitability of such alternative equipment, products or other materials, and his/her decision shall be final.

4. If awarded a Contract on this project, all equipment items be guaranteed by the undersigned and his Surety to meet the performance requirements of the Contract Documents.

5. That all installed prices stated on the Equipment/Materials Schedule include the preparation and submittal of detailed drawings showing all modifications, if any, to the Contract Drawing necessary to accommodate such equipment and furthermore that all installed costs stated on the Schedule include complete operating installation, and the furnishing and installing of any and all

change or additions in structures, piping, buildings, mechanical and electrical work, accessories and controls, necessary to accommodate the equipment.

6. The naming of a manufacturer in this specification is not an indication that the manufacturer's standard equipment is acceptable in lieu of the specified component features. Naming is only an indication that the manufacturer may have the capability of engineering and supplying a system as specified. All exceptions to the specifications shall be indicated in the shop drawing.

This Proposal is submitted after careful study of the plans and specifications and from personal knowledge of the conditions to be encountered at the project site, which knowledge was obtained from the undersigned's own sources of information and not from any official or employee of the OWNER.

If a discrepancy appears between the written and the numerical, the written words will be used as the quoted price. If an error appears in an extension or the addition of items, the corrected extension or total of the parts shall govern.

In accordance with the above understanding, the undersigned proposes to perform the Work, furnish all materials, and complete the Work in its entirety in the manner and under the conditions required for the Lump Sum Contract Price(s) listed on the following pages.

BID of Peterson Construction
(Name of Bidder)

Schedule of Prices for Construction of:

Water Treatment Facility Improvements

Webster City, Iowa

Bidder agrees to perform all of the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sums:

NOTE: BIDS shall include sales tax and all applicable taxes and fees.

BIDDER must fill in the TOTAL PROJECT BASE BID PRICE and the EQUIPMENT/MATERIALS SCHEDULE, "Basis of Bid" Manufacturer and named "Alternate" Manufacturer Installed Deduct Price as furnished and ADD ITEMS. The Lump Sum bid shall include a construction allowance of five thousand ($5,000.00) dollars. If the allowance is not required or fully used, the unused portion of the allowance shall be refunded to the OWNER.

1.1 BASE BID PRICES FOR THE FOLLOWING ITEMS:

A. Remove and replace of existing CO2 gas diffuser re-carbonation system with Owner purchased TomCo 75 lbs/hr rated pressure solution carbonic acid feed system. This equipment including the booster pumping system will be assigned to the contractor for installation. Existing Carbon-dioxide storage tank shall be reused. Remove replace carbon dioxide gas feed piping with 304 SS pipe. Install booster pump system for TomCo re-carbonation carrier water system to maintain constant 60 psi water supply. Modify baffle wall system in the existing re-carbonation basin and furnish and install sample withdrawal piping system for pH sensor for automatic control of re-carbonation system.

B. Remove and replace existing pre-chlorine and intermediate chlorine feed system. The new equipment shall include new 500 lbs/d rated ejectors, manual gas chlorinators chlorine feed rate rotameters, new vacuum tubing and carrier and chlorine solution piping and related appurtenances.

C. Furnish and install new chlorine booster pump. Provide a shelf spare chlorine booster pump.

D. Furnish and install a new gas leak monitoring system in the chlorin storage room with strobe light indicator and an alarm horn to indicate chlorine gas leak. Furnish and install new automatic shut off valve on the one-ton chlorine cylinder with a battery back-up system.

E. SCADA integration with necessary electrical wiring and motor starters, disconnect and sub-feed panels for work described above and additional work done by the owner for the following chemical feed system

1. Lime feed system
2. Sodium Aluminate coagulant feed system
3. Polymer feed system
4. Polyphosphate feed system
5. Orthophosphate feed system

$ 693,000.00

(SIX HUNDRED NINETY THREE THOUSAND

DOLLARS)

EQUIPMENT/MATERIALS SCHEDULE

INSTRUCTIONS

A. Items in the following schedule have been designated as the major equipment and/or material items to be furnished. For each item, the Bidder must indicate which of the named manufacturer's equipment/material he intends to supply and upon which he developed his Total Project Base Bid Price. Such indication should be shown by circling the manufacturer's name.

B. The Bidder shall encircle one, and only one, manufacturer's name for each item in the schedule. Should Bidder fail to indicate which named manufacturer his Total Project Base Bid Price is based upon, the Bidder will supply the first-named manufacturer's equipment/material. The prices for the circled equipment/materials schedule do not have to be furnished with the Bid. The lowest three bidders shall supply the equipment/material prices as requested by the ENGINEER.

C. If the Bidder wishes to supply items by an un-named alternate manufacturer, he may propose a substitute manufacturer and indicate the amount by which his Total Project Base Bid Price may be reduced, if the substitution is acceptable to the Owner and Engineer. Substitute equipment/materials manufacturers will generally be considered provided that:

1. The substitute equipment is of equal quality, function and performance to the listed equipment item, and it will perform satisfactorily and continuously. In this case, it will be assumed that the cost to the Contractor, if the equipment proposed to be substituted is accepted, is less than the equipment named in the schedule, and, if the substitution is approved, the contract price shall be reduced a corresponding amount by a Change Order which will be executed simultaneously with the signing of the Agreement. The cost to be deducted from the Total Project Base Bid Price price for acceptable substitute equipment shall be listed in the appropriate space on this equipment schedule.

2. The equipment or material proposed for substitution is superior in construction and efficiency to that named in the Contract. In this case, there may be no Total Project Base Bid Price reduction shown (indicated by a price of zero).

3. No substitute equipment will be considered unless, in the opinion of the Owner, it conforms to the Contract Drawings and Specifications in all respects, except for make and manufacturer and minor details.

EQUIPMENT/MATERIALS SCHEDULE		
Specification Section and Equipment Item	**Equipment or Material Item (circle one – if not circled, first item will be used)**	**Name of "Alternate" Manufacturer and Amount of Deduct for "Alternate" Manufacturer**
Section 11260 Chlorination Equipment	Wallace & Tiernan/Evoqua	1. $ Installed Price Add/Deduct 2. $ Installed Price Add/Deduct
Section 16950 System Integrator	Automatic Systems Co	1. $ Installed Price Add/Deduct 2. $ Installed Price Add/Deduct

**** END OF SECTION ****

SECTION 00412 – PROJECT REFERENCES

Below is a listing of the most recent projects that meet the following minimum contractor qualifications:

MINIMUM CONTRACTOR QUALIFICATIONS: The Bidder shall have experience as a General Contractor in the successful completion of at least three municipal water or wastewater treatment plants within the last five (5) years.

1. Contracting Agency MER Engineering - Lehigh WTP
   Description of Work (indicate rehab or new construction) Rehab - new filter
   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) WTP
   Agency Representative _____
   Title _____ Phone _____ Contract Completion Date 2021

2. Contracting Agency Stanley - Jewell WTP
   Description of Work (indicate rehab or new construction) Rehab - new process equipment
   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) WTP
   Agency Representative _____
   Title _____ Phone _____ Contract Completion Date 2020

3. Contracting Agency ISG - Clarion WTP
   Description of Work (indicate rehab or new construction) Rehab - new process piping
   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) WTP
   Agency Representative _____
   Title _____ Phone _____ Contract Completion Date 2021

4. Contracting Agency ISG - Pocahontas WTP
   Description of Work (indicate rehab or new construction) Rehab - process piping
   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) WTP
   Agency Representative _____
   Title _____ Phone _____ Contract Completion Date _____

**** END OF SECTION ****

BID BOND

KNOW ALL MEN BY THESE PRESENTS, that we, JN Peterson & Sons dba Peterson Construction as Principal, and Merchants Bonding Company (Mutual) as Surety are held and firmly bound unto the City of Webster City, Iowa, hereinafter called "OWNER", in the penal sum of 5% of bid Dollars ($ 5%) lawful money of the United States, for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. The condition of this obligation is such that whereas the Principal has submitted the accompanying bid, dated May 5, 2022, 20___, for Water Treatment Facility Improvements Project.

NOW, THEREFORE,

A. If said Bid shall be rejected, or in the alternate.

B. If said Bid shall be accepted and the principal shall execute and deliver a contract in the form specified and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid,

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

By virtue of statutory authority, the full amount of this bid bond shall be forfeited to the Owner in liquidation of damages sustained in the event that the Principal fails to execute the contract and provide the bond as provided in the specifications or by law.

The Surety, for value received, hereby stipulates and agrees that the obligations of said surety and its bond shall in no way be impaired or affected by any extension of the time within which the Owner may accept such bid or execute such contract; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety, have hereunto set their hands and seals, and such of them as are corporations, have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers this 5th day of May, A.D. 20 22.

Witness

JN Peterson & Sons
dba Peterson Construction
Principal (Seal)

By
(Title)
Gerald Peterson President

MerchANTS Bonding Company (Mutual)
Surety (Seal)

By
(Attorney-in-Fact)
Vicky L Hahne
Attach Power of Attorney

Bid Bond Form
City of Webster City, Iowa

MERCHANTS BONDING COMPANY™

POWER OF ATTORNEY

Know All Persons By These Presents, that MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., both being corporations of the State of Iowa (herein collectively called the "Companies") do hereby make, constitute and appoint, individually, Alicia Sullivan; Bennett J O'Connor; Charlene Brown; Danielle Valentine; Derek Toomsen; Derek Zerr; Donna J Studer; Janice L Andersen; Jeffery Goodell; Justin Malloy; Laura Schiek; Malinda Grimsley; Mariah Ayala; Miranda Maggard; Samantha Johnson; Sierra Healy; Staci Schnittjer; Taylor Pruismann; Tim Anderson; Tony Bacon; Vicky L Hahne

their true and lawful Attorney(s)-in-Fact, to sign its name as surety(ies) and to execute, seal and acknowledge any and all bonds, undertakings, contracts and other written instruments in the nature thereof, on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

This Power-of-Attorney is granted and is signed and sealed by facsimile under and by authority of the following By-Laws adopted by the Board of Directors of Merchants Bonding Company (Mutual) on April 23, 2011 and amended August 14, 2015 and adopted by the Board of Directors of Merchants National Bonding, Inc., on October 16, 2015.

"The President, Secretary, Treasurer, or any Assistant Treasurer or any Assistant Secretary or any Vice President shall have power and authority to appoint Attorneys-in-Fact, and to authorize them to execute on behalf of the Company, and attach the seal of the Company thereto, bonds and undertakings, recognizances, contracts of indemnity and other writings obligatory in the nature thereof."

"The signature of any authorized officer and the seal of the Company may be affixed by facsimile or electronic transmission to any Power of Attorney or Certification thereof authorizing the execution and delivery of any bond, undertaking, recognizance, or other suretyship obligations of the Company, and such signature and seal when so used shall have the same force and effect as though manually fixed."

In connection with obligations in favor of the Florida Department of Transportation only, it is agreed that the power and aut hority hereby given to the Attorney-in-Fact includes any and all consents for the release of retained percentages and/or final estimates on engineering and construction contracts required by the State of Florida Department of Transportation. It is fully understood that consenting to the State of Florida Department of Transportation making payment of the final estimate to the Contractor and/or its assignee, shall not relieve this surety company of any of its obligations under its bond.

In connection with obligations in favor of the Kentucky Department of Highways only, it is agreed that the power and authority hereby given to the Attorney-in-Fact cannot be modified or revoked unless prior written personal notice of such intent has been given to the Commissioner-Department of Highways of the Commonwealth of Kentucky at least thirty (30) days prior to the modification or revocation.

In Witness Whereof, the Companies have caused this instrument to be signed and sealed this 11th day of January , 2022 .

MERCHANTS NATIONAL BONDING, INC. INCORPORATED -o- 2003

MERCHANTS BONDING COMPANY (MUTUAL) INCORPORATED -o- 1933

MERCHANTS BONDING COMPANY (MUTUAL)
MERCHANTS NATIONAL BONDING, INC.

By Larry Taylor
President

STATE OF IOWA
COUNTY OF DALLAS ss.
On this 11th day of January 2022 , before me appeared Larry Taylor, to me personally known, who being by me duly sworn did say that he is President of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC.; and that the seals affixed to the foregoing instrument are the Corporate Seals of the Companies; and that the said instrument was signed and sealed in behalf of the Companies by authority of their respective Boards of Directors.

NOTARIAL SEAL IOWA

POLLY MASON
Commission Number 750576
My Commission Expires
January 07, 2023

Polly Mason
Notary Public

(Expiration of notary's commission does not invalidate this instrument)

I, William Warner, Jr., Secretary of MERCHANTS BONDING COMPANY (MUTUAL) and MERCHANTS NATIONAL BONDING, INC., do hereby certify that the above and foregoing is a true and correct copy of the POWER-OF-ATTORNEY executed by said Companies, which is still in full force and effect and has not been amended or revoked.

In Witness Whereof, I have hereunto set my hand and affixed the seal of the Companies on this 5th day of May, 2022.

MERCHANTS NATIONAL BONDING, INC. INCORPORATED -o- 2003

MERCHANTS BONDING COMPANY (MUTUAL) INCORPORATED -o- 1933

William Warner Jr.
Secretary

POA 0018 (1/20)

BOLTON & MENK
Real People. Real Solutions.

1519 Baltimore Drive
Ames, IA 50010-8783

Ph: (515) 233-6100
Fax: (515) 233-4430
Bolton-Menk.com

Via email to dortiz@webstercity.com

May 6, 2022

City of Webster City
Daniel Ortiz Hernandez, City Manager
400 Second Street
PO Box 217
Webster City, IA 50595-0217

RE: Webster City Water Treatment Facility Improvements
Project No. 0M2.126087
Bid Review

Dear Mr. Ortiz Hernandez:

At 2:00 p.m. on May 5, 2022, bids were received at the City Hall in Webster City for the Water Treatment Facility Improvements Project. The Engineer's Estimate for the base bid of the project was $700,000. One bid was received. The bid was responsive, and the results are summarized below.

Bidder	Amount
Peterson Construction Company	$693,000.00
Engineer's Opinion	$700,000.00

Peterson Construction of Webster City was the lowest responsive and responsible bidder.

All addenda were received by the Bidder and a Bid Bond for 5% of the bid was included with their bid.

They included no Alternate Manufacturers to the listed Base Bid manufacturers.

Based on the information above, we recommend awarding the Webster City Water Treatment Facility Improvements Project to Peterson Construction Company of Webster City, Iowa for the total Project Base Bid Price of $693,000.00.

The construction period for the project requires final completion within two hundred (200) calendar days after the Notice to Proceed.

Please contact me with any questions regarding the bids or contract documents.

Sincerely,

Bolton & Menk, Inc.

Gregory L. Sindt, P.E.
Senior Environmental Engineer

Cc: Biridiana Bishop – City of Webster City, via email, w/enclosure
Mat Alcazar – City of Webster City, via email, w/enclosure
Nick Knowles – City of Webster City, via email, w/enclosure
Herman Dharmarajah – Bolton & Menk, Inc., via email, w/enclosure

Enclosure: Bid Tabulation

Bolton & Menk is an equal opportunity employer.

BOLTON & MENK

Real People. Real Solutions.

BID TABULATION

Project Location: City of Webster City, Iowa
Project Title: Water Treatment Facility Improvements

Project No.: 0M2.126087

Addendum(s): No. 1 – 4/26/2022
No. 2 – 4/29/2022

Engineer's Opinion: $700,000

Bid Day/Date: May 5, 2022
Bid Time: 2:00 p.m.

Bid Submittal: Public Works Department
Municipal Building

BIDDERS	TOTAL PROJECT BASE BID PRICE	BID BOND	ADDENDA
Peterson Construction	$693,000	Yes	Yes

Bolton & Menk is an equal opportunity employer.

PROJECT MANUAL

Water Treatment Facility Improvements

Webster City, Iowa
2022

Bolton & Menk Project No. 0M2.126087

BOLTON & MENK

Real People. Real Solutions.

CITY OF WEBSTER CITY
WEBSTER CITY, IOWA

WATER TREATMENT FACILITY IMPROVEMENTS
2022

CONTRACT DOCUMENTS
AND
SPECIFICATIONS

BOLTON & MENK PROJECT NO. 0M2.126087

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.

(Signature) 4/12/2022 (Date)

Printed or typed name Herman A. Dharmarajah

License number 24282

My license renewal date is 12/31/2022

Pages or sheets covered by this seal:

Entire Document

PREPARED BY
BOLTON & MENK, INC.

TABLE OF CONTENTS

Water Treatment Facility Improvements
Webster City, Iowa

SPECIFICATIONS

00100 NOTICE OF HEARING AND LETTING
00200 INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACTS
00210 ELECTRONIC/DIGITAL DOCUMENTS
00410 BID FORM
00411 BID SCHEDULE (WATER)
00412 PROJECT REFERENCES
00415 BIDDER STATUS FORM
00430 BID BOND
00450 INFORMATION REQUESTED FROM THE LOW BIDDER
00500 CONTRACT
00510 NOTICE OF AWARD
00550 NOTICE TO PROCEED
00610 PERFORMANCE BOND
00615 PAYMENT BOND
00700 EJCDC® C-700 (Rev. 1), STANDARD GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT COPYRIGHT ® 2013
00800 SUPPLEMENTAL SPECIFICATIONS
00801 RESIDENT PROJECT REPRESENTATIVE
00991 CHANGE ORDER
00992 ENGINEER'S FIELD ORDER
00993 PROPOSAL REQUEST
00994 WORK CHANGE DIRECTIVE
00995 SHOP DRAWING LETTER OF TRANSMITTAL

DIVISION 1 – GENERAL REQUIREMENTS

01010 SUMMARY OF WORK
01025 MEASUREMENT AND PAYMENT
01040 SEQUENCE OF CONSTRUCTION
01090 REFERENCES
01092 ABBREVIATIONS
01200 PROJECT MEETINGS
01300 SUBMITTALS
01400 TESTS AND INSPECTIONS
01410 REGULATORY REQUIREMENTS
01560 TEMPORARY ENVIRONMENTAL CONTROLS
01562 AIR, LAND AND WATER POLLUTION
01600 MATERIALS, EQUIPMENT, LABOR AND WORKMANSHIP
01700 PROJECT CLOSEOUT

DIVISION 11 – EQUIPMENT

11000 EQUIPMENT GENERAL PROVISIONS
11247 CARBON DIOXIDE STORAGE AND FEED SYSTEM
11260 CHLORINATION EQUIPMENT

DIVISION 15 – MECHANICAL

15000 MECHANICAL GENERAL PROVISIONS
15060 PROCESS PIPING AND PIPE FITTINGS
15100 VALVES
15140 SUPPORTS AND ANCHORS
15410 PLUMBING PIPING

DIVISION 16 – ELECTRICAL

16010 ELECTRICAL GENERAL PROVISIONS

16050 BASIC MATERIALS AND METHODS
16110 CONDUIT AND FITTINGS
16120 WIRE AND CABLE
16130 OUTLET BOXES
16131 PULL AND JUNCTION BOXES
16140 WIRING DEVICES
16150 ELECTRIC MOTORS
16440 DISCONNECTS
16475 OVERCURRENT PROTECTIVE DEVICES
16481 MOTOR STARTERS AND EQUIPMENT

APPENDIX A - CABLE AND CONDUIT SCHEDULE FOR ELECTRICAL INSTALLATION

SECTION 00100 – NOTICE OF HEARING AND LETTING

NOTICE OF HEARING AND LETTING
WATER TREATMENT FACILITY IMPROVEMENTS

Sealed Proposals will be received by the Public Works Department of Webster City, Hamilton County, Iowa, at the Municipal Building in said City, until 2 o'clock P.M. on the 5th day of May 2022 for the Water Treatment Facility Improvements Facility Improvements project, as described in the Plans and Specifications therefore now on file in the office of the City Clerk at 400 2nd Street, Webster City, IA 50595.

Proposals will be considered by the City Council of said City at a meeting to be held at the Municipal Building, Webster City, Iowa, on May 16, 2022 at 7:15 P.M. At said time and place, a hearing will also be held on the proposed form of Contract and estimate of cost for said Water Treatment Facility Improvements project and at said hearing any interested person may appear and file objections thereto or to the cost of said Water Treatment Facility Improvements Facility Improvements project.

The extent of the work involved for the Water Treatment Facility Improvements Facility Improvements project consists of:

A. Remove and replace of existing CO2 gas diffuser re-carbonation system with Owner purchased TomCo 75 lbs/hr rated pressure solution carbonic acid feed system. This equipment including the booster pumping system will be assigned to the contractor for installation. Existing Carbon-dioxide storage tank shall be reused. Remove replace carbon dioxide gas feed piping with 304 SS pipe. Install booster pump system for TomCo re-carbonation carrier water system to maintain constant 60 psi water supply. Modify baffle wall system in the existing re-carbonation basin and furnish and install sample withdrawal piping system for pH sensor for automatic control of re-carbonation system.

B. Remove and replace existing pre-chlorine and intermediate chlorine feed system. The new equipment shall include new 500 lbs/d rated ejectors, manual gas chlorinators chlorine feed rate rotameters, new vacuum tubing and carrier and chlorine solution piping and related appurtenances.

C. Furnish and install new chlorine booster pump. Provide a shelf spare chlorine booster pump.

D. Furnish and install a new gas leak monitoring system in the chlorin storage room with strobe light indicator and an alarm horn to indicate chlorine gas leak. Furnish and install new automatic shut off valve on the one-ton chlorine cylinder with a battery back-up system.

E. SCADA integration with necessary electrical wiring and motor starters, disconnect and sub-feed panels for work described above and additional work done by the owner for the following chemical feed system

   1. Lime feed system
   2. Sodium Aluminate coagulant feed system

3. Polymer feed system
4. Polyphosphate feed system
5. Orthophosphate feed system

F. There is no painting work included in the project.

All work and equipment is to be in accordance with the approved Plans, Specifications and form of Contract prepared by the City of Webster City, Iowa, which have been heretofore approved by the City Council and are now on file in the City Clerk's office in said City of Webster City, Iowa, for public examination and by this reference made a part hereof as though fully set out and incorporated herein.

Each Proposal shall be made on the Proposal form furnished by the City of Webster City, Iowa, and must be enclosed in a **SEPARATE** sealed envelope and plainly identified. Each Proposal shall be accompanied by a bid bond, certified check, cashier's check or credit union certified share draft in a separate sealed envelope in an amount equal to five (5) percent of the total amount of the bid.

If a bid bond is submitted, IT SHALL BE ON THE BID BOND FORM FURNISHED BY THE CITY. The certified check or cashier's check shall be drawn on a bank in Iowa or a bank chartered under the laws of the United States of America; the certified share draft shall be drawn on a credit union in Iowa or a credit union chartered under the laws of the United States of America; and such check or draft shall be made payable to the Treasurer of the City as security that if awarded a Contract, the Bidder shall enter into a Contract at the prices bid and furnish the required Performance Bond and Payment Bonds and Certificate of Insurance.

The certified check or cashier's check or certified share draft may be cashed or the bid bond forfeited and the proceeds retained as liquidated damages if the bidder fails to execute a Contract or file acceptable Performance Bond and Payment Bonds or provide an acceptable Certificate of Insurance within ten (10) days after the acceptance of his Proposal by resolution of the Council. No bidder shall be allowed to withdraw a Proposal within thirty (30) days after the date set for opening bids.

The City of Webster City, Iowa is registered with the Iowa Department of Revenue and Finance as a sales and use tax-exempt entity. The City of Webster City has elected to issue an authorization letter and exemption certificate to Contractors which allows purchase of qualifying items to be made exempt from Iowa sales Tax, Local Option Sales Tax, and School Infrastructure Local Option Sales Tax. Qualifying exempt items can be found on the Iowa Department of Revenue and Finance web site at www.state.ia.us/tax.

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 responsible bid, which shall be determined without regard to state or local law whereby preference is given on factors other than the amount of bid.

The City reserves the right to reject any or all Proposals and all alternate bid items, re-advertise for new bids and to waive informalities that may be in the best interest of the City.

The successful bidder shall be required to furnish a "Performance Bond" in an amount equal to one hundred (100) percent of its Contract price, said bond to be issued by a responsible surety approved by the City Council and shall guarantee the faithful performance of the Contract and the terms and conditions therein contained and the maintenance of said improvements for the City as required by the Specifications.

The successful bidder shall be required to furnish a "Payment Bond" in an amount equal to one hundred (100) percent of the Contract price, said bond to be issued by a responsible surety approved by the City Council and shall guarantee the prompt payment, as required by the law, of all persons supplying labor and materials in the execution of the work provided for in the Contract.

Payment to the Contractor shall be made by the City in cash from such funds as are legally available for such purpose and/or from the proceeds of the issuance of such bonds as may be legally issued.

Monthly payments shall be paid the Contractor in an amount equal to ninety-five (95) percent of the Contract value of the work completed and approved by the City.

Provisions may be made by the City Council to withhold larger amounts than the five (5) percent stated above where there is specific necessity and right to do so.

Final payment to the Contractor will be made no earlier than thirty-one (31) days from and after the final acceptance of work by the Council, subject to the conditions and in accordance with the provisions of Chapter 573 of the Code of Iowa.

All work on the project shall be substantially completed one hundred twenty (120) calendar days after issuance of Notice to Proceed.

OBTAINING CONTRACT DOCUMENTS AND BIDDING REQUIREMENTS: Plans and specifications and all contract documents may be obtained at the office of Bolton & Menk, Inc., 1519 Baltimore Drive, Ames, Iowa 50010, upon payment of $75.00 (refundable deposit), (includes sales tax) for each full set of specifications and accompanying drawings. Additional shipping charges will apply for delivery to any address not within the lower 48 states. Deposits will be refunded for contract documents returned within 30 days of bid, if in usable condition. Complete digital project bidding documents are available at www.questcdn.com. You may view the digital plan documents for free or download them by entering Quest project #8182498 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.

A copy of the plans and specifications may be inspected at the following locations:

- Office of Bolton & Menk Inc., 1519 Baltimore Drive, Ames, IA 50010.
- City of Webster City, 400 2nd St., Webster City, IA 50595.

Pre-Bid Meeting: A non-mandatory prebid meeting will be held at the Water Treatment Facility at 502 White Fox Road, Webster City, IA 50595 on April 27, 2022 at 1:00 PM. All bidders are encouraged to attend this meeting to familiarize with the site conditions.

PLANHOLDERS LIST, ADDENDA AND BID TABULATION: The planholders list, addenda and bid tabulation will be available on-line at www.bolton-menk.com.

Published upon order of the City Council of Webster City, Iowa.

CITY OF WEBSTER CITY, IOWA

Karyl K. Bonjour
City Clerk
Webster City, Iowa

SECTION 00200- INSTRUCTIONS TO BIDDERS FOR CONSTRUCTION CONTRACTS

Water Treatment Facility Improvements

Webster City, IA

ARTICLE 1 - DEFINED TERMS

1.01 Terms used in these Instructions to Bidders have the meanings indicated in the in the SUDAS Standard Specifications – General Provisions and Covenants (2022 Edition). Additional terms used in these Instructions to Bidders have the meanings indicated below:

A. Issuing Office – The office from which the Bidding Documents are to be issued and where the bidding procedures are to be administered.

B. The OWNER of this project may also be referred to as the Buyer.

C. The term “CONTRACTOR” shall be held to mean the firm which is given a Purchase Order and/or Contract for construction. The Contractor may also be referred to as Seller.

D. The Engineer for this project is Bolton & Menk, Inc., 1519 Baltimore Drive, Ames, IA 50010.

E. The terms "Bid" and "Proposal" have the same meaning.

ARTICLE 2 - COPIES OF BIDDING DOCUMENTS

2.01 Complete sets of the Bidding Documents may be obtained from the Issuing Office in the number and format stated in the advertisement or invitation to bid. Bid Documents deposit amount, if any, is stated in the advertisement or invitation to bid. Deposits shall be refundable, or not, as indicated in the advertisement or invitation to bid.

2.02 Complete sets of Bidding Documents shall be used in preparing Bids; neither Owner nor Engineer assumes any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bidding Documents.

2.03 Owner and Engineer, in making copies of Bidding Documents available on the above terms, do so only for the purpose of obtaining Bids for the Work and do not authorize or confer a license for any other use.

2.04 When the advertisement indicates supplemental digital formats of all or portions of the bidding documents are available for bidding purposes, the Owner and Engineer will, upon request, provide the Bidder with such documents. The terms of use of such documents shall be as set forth in the Bidding Documents (“Document 00210 - Electronic/Digital Documents”).

ARTICLE 3 - QUALIFICATIONS OF BIDDERS

3.01 To demonstrate Bidder’s qualifications to perform the Work, after submitting its Bid and within 5 days of Owner’s request, Bidder shall submit (a) written evidence establishing its qualifications such as financial data, previous experience, and present commitments, and (b) the following additional information:

1. None.

3.02 A Bidder's failure to submit required qualification information within the times indicated may disqualify Bidder from receiving an award of the Contract.

3.03 No requirement in this Article 3 to submit information will prejudice the right of Owner to seek additional pertinent information regarding Bidder's qualifications.

3.04 Bidder is advised to carefully review those portions of the Bid Form requiring Bidder's representations and certifications.

ARTICLE 4 - SITE AND OTHER AREAS; EXISTING SITE CONDITIONS; EXAMINATION OF SITE; OWNER'S SAFETY PROGRAM; OTHER WORK AT THE SITE

4.01 Site and Other Areas

A. The Site is identified in the Bidding Documents. By definition, the Site includes rights-of-way, easements, and other lands furnished by Owner for the use of the Contractor. Any additional lands required for temporary construction facilities, construction equipment, or storage of materials and equipment, and any access needed for such additional lands, are to be obtained and paid for by Contractor.

4.02 Existing Site Conditions

A. Subsurface and Physical Conditions; Hazardous Environmental Conditions

1. The Supplementary Conditions identify:

(a) those reports known to Owner of explorations and tests of subsurface conditions at or adjacent to the Site.

(b) those drawings known to Owner of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities).

(c) reports and drawings known to Owner relating to Hazardous Environmental Conditions that have been identified at or adjacent to the Site.

(d) Technical Data contained in such reports and drawings.

2. Owner will make copies of reports and drawings referenced above available to any Bidder on request. These reports and drawings are not part of the Contract Documents, but the Technical Data contained therein upon whose accuracy Bidder is entitled to rely, as provided in the General Conditions, has been identified and established in the Supplementary Conditions. Bidder is responsible for any interpretation or conclusion Bidder draws from any Technical Data or any other data, interpretations, opinions, or information contained in such reports or shown or indicated in such drawings.

3. If the Supplementary Conditions do not identify Technical Data, the default definition of Technical Data set forth in Article 1 of the General Conditions will apply.

B. Underground Facilities: Information and data shown or indicated in the Bidding Documents with respect to existing Underground Facilities at or adjacent to the Site are set forth in the Contract Documents and are based upon information and data furnished to Owner and Engineer by owners of such Underground Facilities, including Owner, or others.

4.03 Site Visit and Testing by Bidders

A. Bidder shall conduct Site visit during normal working hours, and shall not disturb any ongoing operations at the Site.

B. Bidder is not required to conduct any subsurface testing, or exhaustive investigations of Site conditions.

C. On request, and to the extent Owner has control over the Site, and schedule permitting, the Owner will provide Bidder access to the Site to conduct such additional examinations, investigations, explorations, tests, and studies as Bidder deems necessary for preparing and submitting a successful Bid. Owner will not have any obligation to grant such access if doing so is not practical because of existing operations, security or safety concerns, or restraints on Owner's authority regarding the Site.

D. Bidder shall comply with all applicable Laws and Regulations regarding excavation and location of utilities, obtain all permits, and comply with all terms and conditions established by Owner or by property owners or other entities controlling the Site with respect to schedule, access, existing operations, security, liability insurance, and applicable safety programs.

E. Bidder shall fill all holes and clean up and restore the Site to its former condition upon completion of such explorations, investigations, tests, and studies.

4.04 Owner's Safety Program

A. Site visits and work at the Site may be governed by an Owner safety program.

ARTICLE 5 - BIDDER'S REPRESENTATIONS

5.01 It is the responsibility of each Bidder before submitting a Bid to:

A. examine and carefully study the Bidding Documents, and any data and reference items identified in the Bidding Documents;

B. visit the Site, conduct a thorough, alert visual examination of the Site and adjacent areas, and become familiar with and satisfy itself as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work;

C. become familiar with and satisfy itself as to all Laws and Regulations that may affect cost, progress, and performance of the Work;

D. carefully study all: (1) reports of explorations and tests of subsurface conditions at or adjacent to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings, and (2) reports and drawings relating to Hazardous Environmental Conditions, if any, at or adjacent to the Site that have been identified in the Supplementary Conditions, especially with respect to Technical Data in such reports and drawings;

E. consider the information known to Bidder itself; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder; and (3) Bidder's safety precautions and programs;

F. agree, based on the information and observations referred to in the preceding paragraph, that at the time of submitting its Bid no further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of its Bid for performance of the Work at

the price bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents;

G. become aware of the general nature of the work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents;

H. promptly give Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder discovers in the Bidding Documents and confirm that the written resolution thereof by Engineer is acceptable to Bidder;

I. determine that the Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance and furnishing of the Work; and

J. agree that the submission of a Bid will constitute an incontrovertible representation by Bidder that Bidder has complied with every requirement of this Article, that without exception the Bid and all prices in the Bid are premised upon performing and furnishing the Work required by the Bidding Documents.

ARTICLE 6 - PRE-BID CONFERENCE

6.01 A pre-Bid conference will be held at 1:00 p.m. local time on Wednesday April 27, 2022 at the Webster City Water Treatment Facility, 502 White Fox Road, Webster City,IA 50595. Representatives of Owner and Engineer will be present to discuss the Project. Bidders are encouraged to attend and participate in the conference. Engineer will transmit to all prospective Bidders of record such Addenda as Engineer considers necessary in response to questions arising at the conference. Oral statements may not be relied upon and will not be binding or legally effective.

ARTICLE 7 - INTERPRETATIONS AND ADDENDA

7.01 All questions about the meaning or intent of the Bidding Documents are to be submitted to Engineer in writing. Interpretations or clarifications considered necessary by Engineer in response to such questions will be issued by Addenda delivered to all parties recorded as having received the Bidding Documents. Questions received less than seven days prior to the date for opening of Bids may not be answered. Only questions answered by Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

7.02 Addenda may be issued to clarify, correct, supplement, or change the Bidding Documents.

ARTICLE 8 - BID SECURITY

8.01 A Bid must be accompanied by Bid security made payable to Owner in an amount of five (5) percent of Bidder's maximum Bid price and in the form of a certified check, bank money order, or a Bid bond (on the form attached) issued by a surety meeting the requirements of the General Conditions.

8.02 The Bid security of the apparent Successful Bidder will be retained until Owner awards the contract to such Bidder, and such Bidder has executed the Contract Documents, furnished the required contract security, and met the other conditions of the Notice of Award, whereupon the Bid security will be released. If the Successful Bidder fails to execute and deliver the Contract Documents and furnish the required contract security within 15 days after the Notice of Award, 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 Owner's exclusive remedy if Bidder defaults.

8.03 The Bid security of other Bidders that Owner believes to have a reasonable chance of receiving the award may be retained by Owner until the earlier of seven days after the Effective Date of the

Contract or 61 days after the Bid opening, whereupon Bid security furnished by such Bidders will be released.

8.04 Bid security of other Bidders that Owner believes do not have a reasonable chance of receiving the award will be released within seven days after the Bid opening.

ARTICLE 9 - CONTRACT TIMES

9.01 The number of days within which, or the dates by which, Milestones are to be achieved and/or the Work is to be substantially completed and ready for final payment are set forth in the Agreement.

ARTICLE 10 - LIQUIDATED DAMAGES

10.01 Provisions for liquidated damages, if any, for failure to timely attain a Milestone, Substantial Completion, or completion of the Work in readiness for final payment, are set forth in the Agreement.

ARTICLE 11 - SUBSTITUTE AND "OR-EQUAL" ITEMS

11.01 The Contract for the Work, as awarded, will be on the basis of materials and equipment specified or described in the Bidding Documents without consideration during the bidding and Contract award process of possible substitute or "or-equal" items. In cases in which the Contract allows the Contractor to request that Engineer authorize the use of a substitute or "or-equal" item of material or equipment, application for such acceptance may not be made to and will not be considered by Engineer until after the Effective Date of the Contract.

11.02 All prices that Bidder sets forth in its Bid shall be based on the presumption that the Contractor will furnish the materials and equipment specified or described in the Bidding Documents, as supplemented by Addenda. Any assumptions regarding the possibility of post-Bid approvals of "or-equal" or substitution requests are made at Bidder's sole risk.

ARTICLE 12 - SUBCONTRACTORS, SUPPLIERS AND OTHERS

12.01 A Bidder shall be prepared to retain specific Subcontractors, Suppliers, or other individuals or entities for the performance of the Work if required by the Bidding Documents to do so. If a prospective Bidder objects to retaining any such Subcontractor, Supplier, or other individual or entity, and the concern is not relieved by an Addendum, then the prospective Bidder should refrain from submitting a Bid.

12.02 Subsequent to the submittal of the Bid, Owner may not require the Successful Bidder or Contractor to retain any Subcontractor, Supplier, or other individual or entity against which Contractor has reasonable objection.

12.03 The apparent Successful Bidder, and any other Bidder so requested, shall within five days after Bid opening, submit to Owner a list of the Subcontractors or Suppliers.

If requested by Owner, such list shall be accompanied by an experience statement with pertinent information regarding similar projects and other evidence of qualification for each such Subcontractor, Supplier, or other individual or entity. If Owner or Engineer, after due investigation, has reasonable objection to any proposed Subcontractor, Supplier, individual, or entity, Owner may, before the Notice of Award is given, request apparent Successful Bidder to submit an acceptable substitute, in which case apparent Successful Bidder shall submit a substitute, Bidder's Bid price will be increased (or decreased) by the difference in cost occasioned by such substitution, and Owner may consider such price adjustment in evaluating Bids and making the Contract award.

12.04 If apparent Successful Bidder declines to make any such substitution, Owner may award the Contract to the next lowest Bidder that proposes to use acceptable Subcontractors, Suppliers, or other individuals or entities. Declining to make requested substitutions will constitute grounds for forfeiture of the Bid security of any Bidder. Any Subcontractor, Supplier, individual, or entity so listed and against which Owner or Engineer makes no written objection prior to the giving of the Notice of Award will be deemed acceptable to Owner and Engineer subject to subsequent revocation of such acceptance as provided in the General Conditions

ARTICLE 13 - PREPARATION OF BID

13.01 The Bid Form is included with the Bidding Documents.

A. All blanks on the Bid Form shall be completed in ink and the Bid Form signed in ink. Erasures or alterations shall be initialed in ink by the person signing the Bid Form. A Bid price shall be indicated for each section, Bid item, alternate, adjustment unit price item, and unit price item listed therein.

B. If the Bid Form expressly indicates that submitting pricing on a specific alternate item is optional, and Bidder elects to not furnish pricing for such optional alternate item, then Bidder may enter the words “No Bid” or “Not Applicable.”

13.02 A Bid by a corporation shall be executed in the corporate name by a corporate officer (whose title must appear under the signature), accompanied by evidence of authority to sign. The corporate address and state of incorporation shall be shown.

13.03 A Bid by a partnership shall be executed in the partnership name and signed by a partner (whose title must appear under the signature), accompanied by evidence of authority to sign. The partnership’s address for receiving notices shall be shown.

13.04 A Bid by a limited liability company shall be executed in the name of the firm by a member or other authorized person and accompanied by evidence of authority to sign. The state of formation of the firm and the firm’s address for receiving notices shall be shown.

13.05 A Bid by an individual shall show the Bidder’s name and address for receiving notices.

13.06 A Bid by a joint venture shall be executed by an authorized representative of each joint venturer in the manner indicated on the Bid Form. The joint venture’s address for receiving notices shall be shown.

13.07 All names shall be printed in ink below the signatures.

13.08 The Bid shall contain an acknowledgment of receipt of all Addenda, the numbers of which shall be filled in on the Bid Form.

13.09 Postal and e-mail addresses and telephone number for communications regarding the Bid shall be shown.

13.10 The Bid shall contain evidence of Bidder’s authority and qualification to do business in the state where the Project is located, or Bidder shall covenant in writing to obtain such authority and qualification prior to award of the Contract and attach such covenant to the Bid. Bidder’s state contractor license number, if any, shall also be shown on the Bid Form.

13.11 The Bid shall contain the required items as listed in Section 00410.

ARTICLE 14 - BASIS OF BID

14.01 Lump Sum

A. Bidders shall submit a Bid on a lump sum basis as set forth in the Bid Form.

14.02 Allowances

A. For cash allowances the Bid price shall include such amounts as the Bidder deems proper for Contractor's overhead, costs, profit, and other expenses on account of cash allowances, if any, named in the Contract Documents, in accordance with the General Conditions.

ARTICLE 15 - SUBMITTAL OF BID

15.01 For this project, the City will only be accepting sealed bids at the time and place as indicated Section 00100 Notice of Letting and Hearing. A Bid shall be received no later than the date and time prescribed. Bids received after the date and time prescribed for the opening of bids, or not submitted in the designated manner, will not be accepted. It is the sole responsibility of the bidder to see that its proposal is received prior to the time for opening bids along with the appropriate bid security.

ARTICLE 16 - MODIFICATION AND WITHDRAWAL OF BID

16.01 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.

16.02 If a Bidder wishes to modify its Bid prior to Bid opening, Bidder must withdraw its initial Bid in the manner specified in Paragraph 16.01 and submit a new Bid prior to the date and time for the Bid award.

16.03 If within 24 hours after Bids are opened any Bidder files a duly signed written notice with Owner and promptly thereafter demonstrates to the reasonable satisfaction of Owner that there was a material and substantial mistake in the preparation of its Bid, that Bidder may withdraw its Bid, and the Bid security will be returned. Thereafter, if the Work is rebid, that Bidder will be disqualified from further bidding on the Work.

ARTICLE 17 - OPENING OF BIDS

17.01 Bids will be opened at the time and place indicated in the advertisement or invitation to bid and, unless obviously non-responsive, read aloud publicly. An abstract of the amounts of the base Bids and major alternates, if any, will be made available to Bidders after the bid award.

ARTICLE 18 - BIDS TO REMAIN SUBJECT TO ACCEPTANCE

18.01 All Bids will remain subject to acceptance for sixty (60) days after the day of the Bid opening, but OWNER may, in its sole discretion, release any Bid and return the Bid security prior to that date.

ARTICLE 19 - EVALUATION OF BIDS AND AWARD OF CONTRACT

19.01 Owner reserves the right to reject any or all Bids, including without limitation, nonconforming, nonresponsive, unbalanced, or conditional Bids. Owner will reject the Bid of any Bidder that Owner finds, after reasonable inquiry and evaluation, to not be responsible. If Bidder purports to add terms or conditions to its Bid, takes exception to any provision of the Bidding Documents, or

attempts to alter the contents of the Contract Documents for purposes of the Bid, then the Owner will reject the Bid as nonresponsive; provided that Owner also reserves the right to waive all minor informalities not involving price, time, or changes in the Work.

19.02 OWNER may consider the qualifications and experience of Subcontractors, Suppliers, and other persons and organizations proposed for those portions of the work as to which the identity of Subcontractors, Suppliers, and other persons and organizations must be submitted when requested. The Equipment and Materials List which must be submitted with the Bid. OWNER also may consider the operating costs, maintenance requirements, performance data and guarantees of major items of materials and equipment proposed for incorporation in the work when such data is required to be submitted prior to the Notice of Award or Purchase Order issuance.

19.03 OWNER may conduct such investigations as OWNER deems necessary to assist in the evaluation of any Bid and to establish the responsibility, qualifications and financial ability of Bidders, proposed Subcontractors, Suppliers and other persons and organizations to perform and furnish the work in accordance with the Contract Documents to OWNER's satisfaction within the prescribed time.

19.04 If the Contract is to be awarded, it will be awarded to the lowest Bidder whose evaluation by OWNER indicates to OWNER that the award will be in the best interests of the project.

19.05 Evaluation of Bids

A. In evaluating Bids, Owner will consider whether or not the Bids comply with the prescribed requirements, and such alternates, unit prices, and other data, as may be requested in the Bid Form or prior to the Notice of Award.

B. The bids will be reviewed and awarded on the basis of “Total Project Base Bid Price” plus “Fixed Sum Items” plus any “Bid Alternatives” selected by the Owner plus price adjustments for any alternate manufacturer listed in Equipment/Materials Schedule selected by the Owner.

19.06 In evaluating whether a Bidder is responsible, Owner will consider applicable mandatory criteria established by governing statutes and regulations, including but not limited to qualifications of the Bidder, and may consider the qualifications and experience of Subcontractors and Suppliers proposed for those portions of the Work for which the identity of Subcontractors and Suppliers must be submitted as provided in the Bidding Documents.

19.07 If the Contract is to be awarded, OWNER will give the successful Bidder a Notice of Award or issue a Purchase Order within seventy-five (75) days after the day of the Bid opening.

19.08 The award of this Contract is subject to the approval of the Construction Permit Application under review by the Iowa Department of Natural Resources .

ARTICLE 20 - BONDS AND INSURANCE

20.01 SUDAS Standard Specifications Section 1070, Part 3, sets forth Owner’s requirements as to performance and payment bonds and insurance. When the Successful Bidder delivers the Agreement (executed by Successful Bidder) to Owner, it shall be accompanied by required bonds and insurance documentation.

ARTICLE 21 - SIGNING OF AGREEMENT

21.01 When Owner issues a Notice of Award to the Successful Bidder, it shall be accompanied by the unexecuted counterparts of the Agreement along with the other Contract Documents as identified in the Agreement. Within 15 days thereafter, Successful Bidder shall execute and deliver the required

number of counterparts of the Agreement (and any bonds and insurance documentation required to be delivered by the Contract Documents) to Owner. Within ten days thereafter, Owner shall deliver one fully executed counterpart of the Agreement to Successful Bidder, together with printed and electronic copies of the Contract Documents as stated in the General Conditions.

ARTICLE 22 - SALES AND USE TAXES

22.01 Owner is exempt from Iowa state sales and use taxes on materials and equipment to be incorporated in the Work. Said taxes shall not be included in the Bid.

ARTICLE 23 - RETAINAGE

23.01 Provisions concerning Contractor's rights to deposit securities in lieu of retainage are set forth in the Agreement.

****END OF SECTION****

SECTION 00210 - ELECTRONIC/DIGITAL DOCUMENTS

PART 1 - GENERAL

1.1 SUMMARY

A. The Owner or Engineer may elect to provide copies of the contract documents or supplemental information to the Contractor in electronic/digital media format. This section governs the availability, use and limitations of information provided in electronic/digital format.

1.2 FORMAT OF DOCUMENTS AND CONTROLLING CRITERIA

A. The Agreement identifies the contract documents upon which the Bidder or Contractor may rely. The General Conditions set forth the provisions governing the intent, interpretation and use of the contract documents. This section is intended to augment the Agreement and General Conditions and to clarify limitations on the use of electronic/digital documents.

B. "Hard Copies" of the Contract Documents consist of complete sets of those documents specifically listed in the Agreement including the version of the plans and specifications that are signed and sealed with original signature (or unalterable and legally acceptable facsimile copy of said signature) denoting the designer's final intent for bidding purposes. Electronic/digital files in the "Native File Format" are saved in the default file format used by a specific software application. The native file format of an application is proprietary and these types of files are not meant to be transferred to other applications. Electronic/digital files in the native file format may be altered and may not be representative of the paper copies of the documents

C. For bidding purposes only, Hard Copies of the Contract Documents shall be construed to include electronic/digital files of the Bidding Documents (as defined in Section 00200), prepared by Engineer and provided under direction of Engineer in a Portable Document Format (PDF) format or other file format that is intended by the Engineer and Owner to be unalterable and exactly representative of the information contained in the paper copies of the documents.

D. The project plans graphically set forth design requirements for the project. These plans are a two-dimensional representation of three-dimensional existing conditions and proposed improvements. Because it is generally impossible to economically or graphically duplicate real world conditions on a two-dimensional plan format, certain approximations, graphical simplifications, intentional or unintentional inaccuracies must generally be used to adequately describe the existing conditions and work to be done on the plans. Because of these graphical compromises, certain dimensions and other supplementary notes and information may be added to the plans to control the specific requirements of the design. Electronic/digital versions of the plans in PDF format, native file format or other electronic file format may imply a spatial accuracy that exceeds the graphical limitations of the original plan set. This is also true of supplementary electronic/digital information developed from the plans or underlying support data (such as layers, hidden lines, survey points or topographic computational networks).

E. In the event of a conflict between an electronic/digital version of a Contract Document and the Hard Copy of the document, the Hard Copy shall be deemed to govern. Bidders, by submitting a bid, and the Contractor by executing the contract, acknowledge these graphical limitations to the plan development process and accept the controlling nature of the Hard Copies of all project documents as set forth in the General Conditions.

1.3 AVAILABILITY AND USE OF DIGITAL/ELECTRONIC DOCUMENTS

A. When the Advertisement for Bids or Project Manual indicate that electronic/digital copies of the Plans and Specifications are available, such documents shall be made available to the Bidder or Contractor upon request in PDF format or other file format that is intended by the Engineer and Owner to be unalterable and exactly representative of the information contained in the paper copies of the documents. However, because the Owner and Engineer cannot totally control the transmission and receipt of electronic/digital documents nor the Contractor's means of reproduction of such documents,

the Owner and Engineer cannot and do not guarantee that electronic/digital versions and reproductions prepared from those versions are identical in every manner to the paper copies.

B. Except as otherwise advised, the Bidder may use and rely upon complete sets of the PDF or other electronic/digital version of the Bidding Documents, prepared by the Engineer and provided under direction of the Engineer, for preparation of its bid. However, Contractor assumes all risks associated with differences arising from transmission/receipt of electronic/digital versions and reproductions prepared from those versions and, further, assumes all risks, costs and responsibility associated with use of the electronic/digital versions to derive information that is not explicitly contained in the paper copies of the documents and for Bidder's reliance upon such derived information.

C. When using PDF versions of the bidding documents, the Contractor shall prepare its Bid on a printed paper copy of the Bid Form from the PDF file; submit its bid together with all required submittals; and deliver the Bid in the manner described in the bidding documents. The printed copy of the Bid Form shall be clearly legible, printed on 8 ½ inch by 11 inch paper and as closely identical in appearance to the PDF Bid Form as may be practical. The Owner reserves the right to accept Bid Forms which nominally vary in appearance from the Hard Copy of the Bid Form, providing that all required information and submittals are included with the bid.

D. After a Contract is awarded, the Owner may provide or direct the Engineer to provide for the use of the Contractor such electronic/digital copies of the contract documents or other support documents in native file formats as may have been previously developed as part of the Project design process. Release of such information, if available, shall be deemed to be solely for the convenience of the Contractor. Unless the Contract Documents explicitly identify that such information shall be available to the successful Bidder, nothing herein shall create an obligation on the part of the Owner or Engineer to provide or create such information and the Contractor is not entitled to rely on the availability of such information in the preparation of its Bid or pricing of the work. In all cases, the Contractor shall take appropriate measures to verify that any electronic/digital data is appropriate and adequate for the Contractor's specific purposes. In no case shall the Contractor be entitled to extra compensation or adjustment in contract time due to claims arising from any differences between the Hard Copies of the Contract Documents and electronic/digital data.

E. Release of all electronic/digital information requested by the Contractor shall be at the sole discretion of the Owner or Engineer and a separate charge will be made to the Contractor for creation or preparation of such information.

F. Release of electronic/digital data shall be subject to the herein accompanying form, entitled "REQUEST TO PROJECT ENGINEER FOR ELECTRONIC/DIGITAL DATA AND CONDITIONS OF USE," together with such other limitations as the Owner or Engineer may deem appropriate for the Project. In the event of questions, conflicts, inconsistencies between any the electronic/digital data, the Hard Copies of the Contract Documents shall govern unless otherwise directed in writing by the Owner and Engineer.

G. In the event that Owner elects to provide or directs the Engineer to provide to the Contractor any Contractor-requested electronic/digital data that is not explicitly identified in the Contract Documents as being available to the successful bidder, the Engineer shall be reimbursed by the Contractor on an hourly basis (at $120 per hour) for all engineering costs necessary to create or otherwise prepare the data in a manner deemed appropriate by the Engineer.

****END OF SECTION****

REQUEST TO PROJECT ENGINEER (BOLTON & MENK, INC. "BMI")
FOR ELECTRONIC/DIGITAL DATA AND CONDITIONS OF USE

Project Contractor ("USER"): _____
Project Owner: City of Webster City, Iowa
Project Name: Water Treatment Facility Improvements
Description of Data/Files To Be Provided: _____

A. The electronic/digital data covered by this Request was prepared by BMI as an internal working document for its purposes solely and is being provided to USER on an "AS IS" basis without any warranties of any kind, including, but not limited to implied warranties of fitness for any purpose. As such, the USER is advised and acknowledges that the information may not be suitable for the USER's application or may require substantial modification and independent verification by the USER. Information may include intentional or unintentional inaccuracies, approximations, graphical simplifications, undocumented intermediate revisions and other devices that may affect subsequent reuse.

B. The electronic/digital data may not accurately reflect the printed products (also known as Hard Copies) that are signed or sealed by BMI. In the case of conflicts between the signed or sealed documents and electronic/digital data, the Hard Copies shall control. Files in electronic/digital media format of text, data, graphics, or of other types that are provided by BMI to USER are only for convenience of USER. Any conclusion or information obtained or derived from such electronic/digital data will be at the USER's sole risk and the USER waives any claims against BMI or PROJECT OWNER arising from use of electronic/digital data.

C. USER shall indemnify and hold harmless PROJECT OWNER and BMI and their subconsultants from all claims, damages, losses, and expenses, including attorneys' fees and defense costs arising out of or resulting from USER's use, adaptation or distribution of any electronic/digital data provided under this Request.

D. All Documents provided in electronic/digital format are instruments of service and, unless otherwise specifically identified in the Contract between the USER and PROJECT OWNER, are not Contract Documents. BMI shall retain all ownership, copyrights and property interests therein, subject to any agreement between BMI and the PROJECT OWNER. Nothing herein shall be deemed to be a transfer of the ownership rights of BMI or those of the PROJECT OWNER to the USER and USER's rights regarding any information shall be limited those explicitly described in this Request.

E. Although BMI may advise the USER of known errors or required updates in electronic/digital data provided to the USER upon discovery by BMI or notice to BMI of such conditions, the USER agrees that BMI and PROJECT OWNER are under no obligation to notify USER or correct, revise, update or otherwise maintain any electronic/digital data provided to the USER, nor shall the USER be entitled to make any claim for extra compensation or other consideration on account of using such data.

F. USER agrees not to sell, copy, transfer, give away or otherwise distribute this information (in source or modified file format) to any third party without the direct written authorization of BMI, unless such distribution is specifically identified in this request and is limited to USER's subcontractors. USER warrants that subsequent use by USER'S subcontractors shall comply with all terms of this Request.

G. Provision of this information does not include any license of software or other systems necessary to read, use or reproduce the information. USER assumes all responsibility to obtain any necessary software and appropriate licenses to utilize the information in any format or application.

H. The USER shall compensate BMI in the amount of $120.00 for all labor and expenses associated with the handling, processing and delivery of the information in an "as is" form or to adapt such information into a form which BMI, in its sole discretion, deems to reasonably reflect the limits of the accuracy or usability of the information. USER acknowledges such compensation shall be deemed to be a data processing fee and is not a design fee or part of the design fees paid by the PROJECT OWNER to BMI.

Accepted by: USER

_____
Printed Name of "USER"

_____
Date

_____
Name and Title of Authorized Representative of USER

_____
Signature of Authorized Representative of USER

Approved: Project Engineer: (BMI)

_____
Signature of Project Engineer's Representative

Version 04/11/07

SECTION 00410 - BID FORM

ARTICLE 1 - FOR CONSTRUCTION CONTRACTS

Water Treatment Facility Improvements

Webster City, IA

Bolton & Menk Project No: 0M2.126087

ARTICLE 2 - BID RECIPIENT

2.01 This Bid is submitted to:

City of Webster City, Iowa
400 2nd Street
Webster City, IA 50595-

2.02 The undersigned Bidder proposes and agrees, if this Bid is accepted, to enter into an Agreement with Owner in the form included in the Bidding Documents to perform all Work as specified or indicated in the Bidding Documents for the prices and within the times indicated in this Bid and in accordance with the other terms and conditions of the Bidding Documents.

ARTICLE 3 - BIDDER'S ACKNOWLEDGEMENTS

Bidder accepts all of the terms and conditions of the Advertisement or Invitation to Bid and Instructions to Bidders, including without limitation those dealing with the disposition of Bid security. This Bid will remain subject to acceptance for sixty (60) days after the Bid opening, or for such longer period of time that Bidder may agree to in writing upon request of Owner.

ARTICLE 4 - BIDDER'S REPRESENTATIONS

4.01 In submitting this Bid, Bidder represents that:

A. Bidder has examined and carefully studied the Bidding Documents, other related data identified in the Bidding Documents, and the following Addenda, receipt of which is hereby acknowledged:

Addendum No.	Addendum Date
_____	_____
_____	_____
_____	_____

B. Bidder has visited the Site and become familiar with and is satisfied as to the general, local, and Site conditions that may affect cost, progress, and performance of the Work.

C. Bidder is familiar with and is satisfied as to all Laws and Regulations that may affect cost, progress, and performance of the Work.

D. Bidder has carefully studied all: (1) reports of explorations and tests of subsurface conditions at or contiguous to the Site and all drawings of physical conditions relating to existing surface or subsurface structures at the Site (except Underground Facilities) that have been identified in supplementary conditions as containing reliable "technical data," and (2) reports and drawings of Hazardous Environmental Conditions, if any, at the Site that have been identified in supplementary conditions as containing reliable "technical data."

E. Bidder has considered the information known to Bidder; information commonly known to contractors doing business in the locality of the Site; information and observations obtained from visits to the Site; the Bidding Documents; and the Site-related reports and drawings identified in the Bidding Documents, with respect to the effect of such information, observations, and documents on (1) the cost, progress, and performance of the Work; (2) the means, methods, techniques, sequences, and procedures of construction to be employed by Bidder, including applying the specific means, methods, techniques, sequences, and procedures of construction expressly required by the Bidding Documents; and (3) Bidder's safety precautions and programs.

F. Based on the information and observations referred to in Paragraph 3.01.E above, Bidder does not consider that further examinations, investigations, explorations, tests, studies, or data are necessary for the determination of this Bid for performance of the Work at the price(s) bid and within the times required, and in accordance with the other terms and conditions of the Bidding Documents.

G. Bidder is aware of the general nature of work to be performed by Owner and others at the Site that relates to the Work as indicated in the Bidding Documents.

H. Bidder has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Bidder has discovered in the Bidding Documents, and the written resolution thereof by Engineer is acceptable to Bidder.

I. The Bidding Documents are generally sufficient to indicate and convey understanding of all terms and conditions for the performance of the Work for which this Bid is submitted.

ARTICLE 5 - BIDDER'S CERTIFICATION

5.01 Bidder certifies that:

A. This Bid is genuine and not made in the interest of or on behalf of any undisclosed individual or entity and is not submitted in conformity with any collusive agreement or rules of any group, association, organization, or corporation;

B. Bidder has not directly or indirectly induced or solicited any other Bidder to submit a false or sham Bid;

C. Bidder has not solicited or induced any individual or entity to refrain from bidding; and

D. Bidder has not engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract. For the purposes of this Paragraph 4.01.D:

1. "corrupt practice" means the offering, giving, receiving, or soliciting of any thing of value likely to influence the action of a public official in the bidding process;

2. "fraudulent practice" means an intentional misrepresentation of facts made (a) to influence the bidding process to the detriment of Owner, (b) to establish bid prices at artificial non-competitive levels, or (c) to deprive Owner of the benefits of free and open competition;

3. "collusive practice" means a scheme or arrangement between two or more Bidders, with or without the knowledge of Owner, a purpose of which is to establish bid prices at artificial, non-competitive levels; and

4. "coercive practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the bidding process or affect the execution of the Contract.

ARTICLE 6 - BASIS OF BID

6.01 Bidder will complete the work in accordance with the Contract Documents at the lump sum prices shown in the attached Bid Schedule (Section 00411).

ARTICLE 7 - TIME OF COMPLETION

7.01 Bidder agrees that the Work will be substantially complete and will be completed and ready for final payment in accordance with the General Conditions within the number of calendar days indicated in the Agreement.

7.02 Bidder accepts the provisions of the Agreement as to liquidated damages.

ARTICLE 8 - ATTACHMENTS TO THIS BID

8.01 The following documents are submitted with and made a condition of this Bid:

A. Required Bid security in the form of a certified check, bank money order, or a bid bond (on the form attached).

B. Section 00411- Bid Schedule

C. Section 00412- Project References

ARTICLE 9 - DEFINED TERMS

9.01 The terms used in this Bid with initial capital letters have the meanings stated in the Instructions to Bidders, the General Conditions, and the Supplementary Conditions.

SEE ATTACHED SECTION 00411 – BID SCHEDULE

BID SUBMITTAL

9.02 This Bid is submitted by:

If Bidder is:

An Individual

Name (typed or printed): _____

By: _____
(Individual's signature)

Doing business as: _____

A Partnership

Partnership Name:

By: _____
(Signature of general partner -- attach evidence of authority to sign)

Name (typed or printed): _____

A Corporation

Corporation Name: _____ (SEAL)

State of Incorporation _____
Type (General Business, Professional, Service, Limited Liability): _____

By: _____
(Signature – attach evidence of authority to sign)

Name (typed or printed) _____

Title: _____
(CORPORATE SEAL)

Attest _____

Date of Qualification to do business in [*State where project is located*] is
_____ / _____ / _____

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first venture partner – attach evidence of authority to sign)

Name (typed of printed): _____

Title: _____

Second Joint Venture Name: _____ (SEAL)

By: _____
(Signature of second venture partner – attach evidence of authority to sign)

Name (typed or printed) _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____ , 20 _____

State Contractor License No. _____ *[If applicable]*

A Joint Venture

Name of Joint Venture: _____

First Joint Venturer Name: _____ (SEAL)

By: _____
(Signature of first venture partner – attach evidence of authority to sign)

Name (typed of printed): _____

Title: _____

Second Joint Venture Name: _____ (SEAL)

By: _____
(Signature of second venture partner – attach evidence of authority to sign)

Name (typed or printed) _____

Title: _____

(Each joint venturer must sign. The manner of signing for each individual, partnership, and corporation that is a party to the joint venture should be in the manner indicated above.)

Bidder's Business Address _____

_____

Phone No. _____ Fax No. _____

E-mail _____

SUBMITTED on _____ , 20 _____

State Contractor License No. _____ *[If applicable]*

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: _____
(mm/dd/yyyy) City, State, Zip: _____

Dates: _____ to _____ Address: _____
(mm/dd/yyyy) City, State, Zip: _____

Dates: _____ to _____ Address: _____
(mm/dd/yyyy) City, State, Zip: _____

You may attach additional sheet(s) if needed.

To be completed by non-resident bidders — Part C

1. Name of home state or foreign country reported to the Iowa Secretary of State:
_____

2. Does your company's home state or foreign country offer preferences to bidders who are residents? ☐ Yes ☐ No

3. If you answered "Yes" to question 2, identify each preference offered by your company's home state or foreign country and the appropriate legal citation.
_____
_____

You may attach additional sheet(s) if needed.

To be completed by all bidders — Part D

I certify that the statements made on this document are true and complete to the best of my knowledge and I know that my failure to provide accurate and truthful information may be 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.

SECTION 00411 – BID SCHEDULE

Bid Form for construction of:

Water Treatment Facility Improvements

Webster City, Iowa

The undersigned declares that the only persons or parties interested in this Bid as principals are as stated; that the Bid is made without any collusion with other persons, firms, or corporations; that he has carefully examined all the Contract Documents as prepared by Bolton & Menk, Inc.; that he has informed himself fully in regard to all conditions pertaining to the Work and the place where it is to be done, and from them the undersigned makes this Bid. The Bid price covers all expenses incurred in performing the Work required under the Contract Documents, of which this Bid Form is a part.

Note: Bids shall include sales tax and all applicable taxes and fees.

The Bidder has based the following Total Project Base Bid Price upon providing the equipment and materials of the encircled manufacturers as listed in the Equipment/Materials Schedule attached to this Bid Form. Should Bidder fail to indicate which named manufacturer his Total Project Base Bid Price is based upon, the Bidder will supply the first-named manufacturer's equipment/material. Bidder has also indicated substitute equipment/materials that he proposes to be utilized in place of the encircled manufacturers' equipment/materials, subject to the following:

1. Allowance of "alternate" equipment does not constitute a waiver of the Specifications. If the Bidder desires to offer equipment by an "alternate" manufacturer instead of the "Basis of Bid" manufacturer, he shall indicate in the appropriate schedule the installed price of the "alternate" equipment along with the installed price of the "Basis of Bid" manufacturer. Additional "alternate" manufacturers, along with installed prices, can be listed on the sheet provided.

   If a named "alternate" is shown on the bid form, the CONTRACTOR shall indicate a price for installed deduct price. If the CONTRACTOR does not wish to supply a named "alternate" he shall indicate an installed deduct price of zero.

   No supporting documents are required for a named alternate. The OWNER reserves the right to accept or reject any or all named "alternates". The named alternates will be taken into consideration in the award of the CONTRACT.

2. In order that the Owner may determine if the proposed "alternate" manufacturer is a satisfactory substitute to that specified, the bidder shall submit one set of drawings, Specifications, full descriptive material, performance data and a detailed list of exceptions taken to the Specifications with the bid or to the ENGINEER in advance of the bid. Any revisions to structures, piping, mechanical, electrical, instrumentation and control or any other work necessary by such "alternate" equipment must be submitted for approval and the entire cost for such revisions shall be included in the installed price of "alternate."

3. The Engineer will review all proposed "Alternate" Manufacturer's equipment qualification submittals in a timely manner to determine conformance with the performance and technical requirements of this project. The Engineer will be the sole judge as to the comparative quality and suitability of such alternative equipment, products or other materials, and his/her decision shall be final.

4. If awarded a Contract on this project, all equipment items be guaranteed by the undersigned and his Surety to meet the performance requirements of the Contract Documents.

5. That all installed prices stated on the Equipment/Materials Schedule include the preparation and submittal of detailed drawings showing all modifications, if any, to the Contract Drawing necessary to accommodate such equipment and furthermore that all installed costs stated on the Schedule include complete operating installation, and the furnishing and installing of any and all

change or additions in structures, piping, buildings, mechanical and electrical work, accessories and controls, necessary to accommodate the equipment.

6. The naming of a manufacturer in this specification is not an indication that the manufacturer's standard equipment is acceptable in lieu of the specified component features. Naming is only an indication that the manufacturer may have the capability of engineering and supplying a system as specified. All exceptions to the specifications shall be indicated in the shop drawing.

This Proposal is submitted after careful study of the plans and specifications and from personal knowledge of the conditions to be encountered at the project site, which knowledge was obtained from the undersigned's own sources of information and not from any official or employee of the OWNER.

If a discrepancy appears between the written and the numerical, the written words will be used as the quoted price. If an error appears in an extension or the addition of items, the corrected extension or total of the parts shall govern.

In accordance with the above understanding, the undersigned proposes to perform the Work, furnish all materials, and complete the Work in its entirety in the manner and under the conditions required for the Lump Sum Contract Price(s) listed on the following pages.

BID of _____

(Name of Bidder)

Schedule of Prices for Construction of:

Water Treatment Facility Improvements

Webster City, Iowa

Bidder agrees to perform all of the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sums:

NOTE: BIDS shall include sales tax and all applicable taxes and fees.

BIDDER must fill in the TOTAL PROJECT BASE BID PRICE and the EQUIPMENT/MATERIALS SCHEDULE, "Basis of Bid" Manufacturer and named "Alternate" Manufacturer Installed Deduct Price as furnished and ADD ITEMS. The Lump Sum bid shall include a construction allowance of five thousand ($5,000.00) dollars. If the allowance is not required or fully used, the unused portion of the allowance shall be refunded to the OWNER.

1.1 BASE BID PRICES FOR THE FOLLOWING ITEMS:

A. Remove and replace of existing CO2 gas diffuser re-carbonation system with Owner purchased TomCo 75 lbs/hr rated pressure solution carbonic acid feed system. This equipment including the booster pumping system will be assigned to the contractor for installation. Existing Carbon-dioxide storage tank shall be reused. Remove replace carbon dioxide gas feed piping with 304 SS pipe. Install booster pump system for TomCo re-carbonation carrier water system to maintain constant 60 psi water supply. Modify baffle wall system in the existing re-carbonation basin and furnish and install sample withdrawal piping system for pH sensor for automatic control of re-carbonation system.

B. Remove and replace existing pre-chlorine and intermediate chlorine feed system. The new equipment shall include new 500 lbs/d rated ejectors, manual gas chlorinators chlorine feed rate rotameters, new vacuum tubing and carrier and chlorine solution piping and related appurtenances.

C. Furnish and install new chlorine booster pump. Provide a shelf spare chlorine booster pump.

D. Furnish and install a new gas leak monitoring system in the chlorin storage room with strobe light indicator and an alarm horn to indicate chlorine gas leak. Furnish and install new automatic shut off valve on the one-ton chlorine cylinder with a battery back-up system.

E. SCADA integration with necessary electrical wiring and motor starters, disconnect and sub-feed panels for work described above and additional work done by the owner for the following chemical feed system

1. Lime feed system
2. Sodium Aluminate coagulant feed system
3. Polymer feed system
4. Polyphosphate feed system
5. Orthophosphate feed system

$ _____

(_____

_____ DOLLARS)

EQUIPMENT/MATERIALS SCHEDULE

INSTRUCTIONS

A. Items in the following schedule have been designated as the major equipment and/or material items to be furnished. For each item, the Bidder must indicate which of the named manufacturer's equipment/material he intends to supply and upon which he developed his Total Project Base Bid Price. Such indication should be shown by circling the manufacturer's name.

B. The Bidder shall encircle one, and only one, manufacturer's name for each item in the schedule. Should Bidder fail to indicate which named manufacturer his Total Project Base Bid Price is based upon, the Bidder will supply the first-named manufacturer's equipment/material. The prices for the circled equipment/materials schedule do not have to be furnished with the Bid. The lowest three bidders shall supply the equipment/material prices as requested by the ENGINEER.

C. If the Bidder wishes to supply items by an un-named alternate manufacturer, he may propose a substitute manufacturer and indicate the amount by which his Total Project Base Bid Price may be reduced, if the substitution is acceptable to the Owner and Engineer. Substitute equipment/materials manufacturers will generally be considered provided that:

1. The substitute equipment is of equal quality, function and performance to the listed equipment item, and it will perform satisfactorily and continuously. In this case, it will be assumed that the cost to the Contractor, if the equipment proposed to be substituted is accepted, is less than the equipment named in the schedule, and, if the substitution is approved, the contract price shall be reduced a corresponding amount by a Change Order which will be executed simultaneously with the signing of the Agreement. The cost to be deducted from the Total Project Base Bid Price price for acceptable substitute equipment shall be listed in the appropriate space on this equipment schedule.

2. The equipment or material proposed for substitution is superior in construction and efficiency to that named in the Contract. In this case, there may be no Total Project Base Bid Price reduction shown (indicated by a price of zero).

3. No substitute equipment will be considered unless, in the opinion of the Owner, it conforms to the Contract Drawings and Specifications in all respects, except for make and manufacturer and minor details.

EQUIPMENT/MATERIALS SCHEDULE		
Specification Section and Equipment Item	**Equipment or Material Item (circle one – if not circled, first item will be used)**	**Name of "Alternate" Manufacturer and Amount of Deduct for "Alternate" Manufacturer**
Section 11260 Chlorination Equipment	Wallace & Tiernan/Evoqua	1. $ Installed Price Add/Deduct 2. $ Installed Price Add/Deduct
Section 16950 System Integrator	Automatic Systems Co	1. $ Installed Price Add/Deduct 2. $ Installed Price Add/Deduct

**** END OF SECTION ****

SECTION 00412 – PROJECT REFERENCES

Below is a listing of the most recent projects that meet the following minimum contractor qualifications:

MINIMUM CONTRACTOR QUALIFICATIONS: The Bidder shall have experience as a General Contractor in the successful completion of at least three municipal water or wastewater treatment plants within the last five (5) years.

1. Contracting Agency _____

   Description of Work (indicate rehab or new construction)_____

   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) _____

   _____

   Agency Representative _____

   Title _____ Phone _____ Contract Completion Date _____

2. Contracting Agency _____

   Description of Work (indicate rehab or new construction)_____

   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) _____

   _____

   Agency Representative _____

   Title _____ Phone _____ Contract Completion Date _____

3. Contracting Agency _____

   Description of Work (indicate rehab or new construction)_____

   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) _____

   _____

   Agency Representative _____

   Title _____ Phone _____ Contract Completion Date _____

4. Contracting Agency _____

   Description of Work (indicate rehab or new construction)_____

   Type of Treatment Plant (Water or Wastewater) and Capacity (gallons per minute or MGD) _____

   _____

   Agency Representative _____

   Title _____ Phone _____ Contract Completion Date _____

**** END OF SECTION ****

Bidder Status Form

Section 00415

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 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: _____

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 BOND

KNOW ALL MEN BY THESE PRESENTS, that we, _____ as Principal, and _____ as Surety are held and firmly bound unto the City of Webster City, Iowa, hereinafter called "OWNER", in the penal sum of _____ _____ Dollars ($_____) lawful money of the United States, for the payment of which sum will and truly be made, we bind ourselves, our heirs, executors, administrators, and successors, jointly and severally, firmly by these presents. The condition of this obligation is such that whereas the Principal has submitted the accompanying bid, dated _____, 20____, for _____ _____ Project.

NOW, THEREFORE,

A. If said Bid shall be rejected, or in the alternate.

B. If said Bid shall be accepted and the principal shall execute and deliver a contract in the form specified and shall furnish a bond for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said Bid,

Then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

By virtue of statutory authority, the full amount of this bid bond shall be forfeited to the Owner in liquidation of damages sustained in the event that the Principal fails to execute the contract and provide the bond as provided in the specifications or by law.

The Surety, for value received, hereby stipulates and agrees that the obligations of said surety and its bond shall in no way be impaired or affected by any extension of the time within which the Owner may accept such bid or execute such contract; and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the Principal and the Surety, have hereunto set their hands and seals, and such of them as are corporations, have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers this _____ day of _____, A.D. 20____.

_____ _____

Witness Principal (Seal)

By_____

(Title)

_____

Surety (Seal)

By_____

(Attorney-in-Fact)

Attach Power of Attorney

Bid Bond Form
City of Webster City, Iowa

DOCUMENT 00450 - INFORMATION REQUESTED FROM THE LOW BIDDER

(The low bidder may be requested to provide this information after the Bids are received but prior to issuing the Notice of Award)

GENERAL INFORMATION

The low bidder is requested to furnish the following information. Additional sheets shall be attached as required.

Contractor's name and address: _____

_____

_____

_____

Contractor's telephone number: _____

Contractor's FAX number: _____

Contractor's E-mail address: _____

Contractor's license: Primary Classification _____

State License No. _____

Supplemental Classifications held, if any _____

Number of years as a Contractor in construction work of this type _____

Names and titles of all officers of Contractor's firm: _____

_____

_____

_____

_____

ATTACH TO THIS BID a list of five (5) construction contracts completed by the Contractor during the last five (5) years involving work of similar type and comparable value. The list shall include the following information as a minimum:

- Name, address and telephone number of owner.
- Name of project.
- Location of project.
- Brief description of the work involved.
- Contract amount.
- Date of completion of contract.
- Name, address and telephone number of architect or engineer.
- Name of owner's project engineer.

LIST OF SUBCONTRACTORS

The low bidder is requested to list below the name and business address of each subcontractor who will perform work under this contract in excess of **one-half of one percent** of the Contractor's total bid price, and shall also list the portion of the work which will be done by such subcontractor.

	Work to be Performed	**Percent of Contract or Dollar Amount**	**Subcontractor Name and Address**
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			

****END OF SECTION****

SECTION 00500 - CONTRACT

THIS AGREEMENT made and entered into this _____ day of _____, 20__, by and between the CITY OF WEBSTER CITY, IOWA, hereinafter called the OWNER, and _____, of, _____, Iowa, hereinafter called the CONTRACTOR.

WITNESSETH:

That whereas the OWNER has heretofore caused to be prepared certain Plans and Specifications entitled _____ Project, which Plans and Specifications are now on file at the City Clerk and Public Works offices, Municipal Building, 400 Second Street, Webster City, Iowa, 50595.

WHEREAS, the CONTRACTOR has submitted a Proposal to perform that work as described and set forth in said Plans and Specifications, at the unit prices set forth in said Proposal for the total amount of $_____, and

WHEREAS, said Plans, Specifications, and Proposal describe the terms and conditions under which the CONTRACTOR is willing to perform said work:

NOW, THEREFORE, IT IS AGREED:

1. That the OWNER hereby accepts the Proposal of the CONTRACTOR for the work and for the sums listed therein.

2. That this Contract consists of the following component parts which are made a part of this agreement and Contract as fully and absolutely as if they were set out in detail in this Contract, and they shall govern in priority as listed below:

   a) Addenda Numbers: _____

   b) Detailed Specification Requirements

   c) Plans

   d) Standard Specifications

   e) Notice of Hearing and Letting

   f) Instructions to Bidders

   g) General Conditions- SUDAS Standard Specifications – General Provisions and Covenants (2022 Edition)

   h) Contractor's Proposal

i) This Instrument

j) This Contract shall be subject to the provisions of the Williams-Steiger Occupational Safety and Health Act of 1970. The cost of providing said measures shall be considered incidental to the project and shall be included in the bid prices submitted by the CONTRACTOR.

k) Bidders Status Form

3. 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 City of Webster City.

4. Payment to the Contractor shall be made by the City in cash from such funds as are legally available for such purpose and/or from the proceeds of the issuance of such bonds as may be legally issued. Monthly payments shall be paid the Contractor in an amount equal to ninety-five (95) percent of the Contract value of the work completed and approved by the Engineer. Provisions may be made by the City Council to withhold larger amounts than the five (5) percent stated above where there is specific necessity and right to do so. Final payment to the Contractor will be made no earlier than thirty-one (31) days from and after the final acceptance of work by the Council, subject to the conditions and in accordance with the provisions of Chapter 573 of the Code of Iowa.

5. All work under this contract shall be substantially completed within one hundred twenty (120) calendar days and fully completed within one hundred and fifty (150) calendar days after issuance of Notice to Proceed. The Bidder shall also agree to pay as liquidated damages, the sum of Five Hundred Dollars ($500.00) for each “per calendar day” thereafter as provided in the Specifications.

6. Non-Collusion Affidavit

The Bidder hereby certifies:

That the proposal submitted is not affected by, contingent on, or dependent on any other proposal submitted for any improvement with the City of Webster City; and

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

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

That the 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 the proposal are true; and that the individual(s) executing this contract have the authority to execute this contract on behalf of the Bidder.

7. Iowa Public Entity Contractor's Insurance Requirements:

A. The contractor shall purchase and maintain such insurance as will protect the Contractor from claims set forth below which may arise out of or result from the Contractor's operations under the contract, whether such operations be by the Contractor or by any subcontractor or by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable:

B. The insurance to be maintained by Contractor shall be written as follows:

1. Workers Compensation and Employers Liability Insurance as prescribed by Iowa law or the minimum limits shown below

A.	Iowa Benefits	Statutory
B.	Employers Liability	
	Bodily Injury by accident	$500,000 each accident
	Bodily Injury by disease	$500,000 each accident
	Bodily Injury by disease	$500,000 policy limit

The Workers Compensation policy shall include a *waiver of subrogation clause* in favor of the owner.

2. Commercial General Liability Insurance Combined Single Limits shown below covering Bodily Injury, Property Damage and Personal Injury:

General Aggregate Limit	$2,000,000
Products - Completed Operations Aggregate Limit	$2,000,000
Personal and Advertising Injury Limit	$1,000,000
Each Occurrence Limit	$1,000,000
Fire Damage Limit (for any one fire)	$ 100,000
Medical Damage Limit (any one person)	$ 5,000

This insurance must include the following features:

a. Coverage for all premises and operations. The policy shall be endorsed to provide the aggregate Per Project Endorsement

b. Personal and Advertising Injury.

c. Operations by independent contractors.

d. Contractual Liability coverage.

e. Coverage for property damage underground or damaged by explosion or collapse (XCU).

3. Automobile Liability insurance, covering all owned, non-owned, hired and leased vehicles with a minimum combined single limit for Bodily Injury and Property Damage of $1,000,000 per accident. Insurance must include Contractual Liability.

4. Umbrella/Excess Insurance — At Contractor's option, the limits specified may be satisfied with a combination of primary and Umbrella/Excess Insurance.

5. Additional Insured — The Contractor will include the City or Utility as additional insured on all policies except Workers' Compensation as respects all work performed.

6. Insurance Certificates — Each policy noted above shall be issued by an insurance company authorized to write such insurance in the State of Iowa and shall be reasonably acceptable to the city or utility. These insurance policies shall not be canceled without at least 30 days prior written notice to City or Utility. A properly executed Certificate of Insurance showing evidence of these insurance requirements shall be delivered to the City or Utility prior to the commencement of this lease.

7. The following clauses will be added to all liability coverages:

   The company and the insured expressly agree and state that the purchase of this policy of insurance by the insured does not waive any of the defenses of governmental immunity available to the insured under Iowa Code Section 670.4 as it now exists and as it may be amended from time to time.

   The company and the insured further agree that this policy of insurance shall cover only those claims not subject to the defense of governmental immunity under Iowa Code Section 670.4 as it now exists and as it may be amended from time to time.

C. Subrogation:

To the extent that such insurance is in force and collectible and to the extent permitted by law, the City or Utility and Contractor each hereby releases and waives all right of recovery against the other or anyone claiming through or under each of them by way of subrogation or otherwise. The foregoing release and waiver shall apply to damage to contractor's equipment, tools and other personal property as well as automobiles.

8. Above components are complementary and what is called for by one shall be as binding as if called for by all.

9. That payments are to be made to the CONTRACTOR in accordance with and subject to the provisions embodied in the documents made a part of this Contract.

10. That this Contract is executed in Triplicate.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands and seals the date first written above.

City of Webster City, Iowa

By _____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

_____(Seal)
CONTRACTOR

By _____

(Title) _____

ATTEST:

_____

(Title) _____

Notice of Award

Date: _____

Project: Water Treatment Facility Improvements, Webster City, IA

Owner: City of Webster City	Owner's Contract No.:
Contract:	Engineer's Project No.: 0M2.126087
Bidder:	
Bidder's Address:	

You are notified that your Bid dated _____ for the above Contract has been considered. You are the Successful Bidder and are awarded a Contract for: Water Treatment Facility Improvements

The Contract Price of your Contract is _____ Dollars ($_____).

_____ copies of the proposed Contract Documents (except Drawings) accompany this Notice of Award.

_____ sets of the Drawings will be delivered separately or otherwise made available to you immediately.

You must comply with the following conditions precedent within [15] days of the date you receive this Notice of Award.

1. Deliver to the Owner [_____] fully executed counterparts of the Contract Documents.

2. Deliver with the executed Contract Documents the Contract security [Bonds] as specified in the Instructions to Bidders (Article 20), General Conditions (Paragraph 5.01), and Supplementary Conditions (Paragraph SC-5.01) and required certificates of insurance.

3. Other conditions precedent:

_____

Failure to comply with these conditions within the time specified will entitle Owner to consider you in default, annul this Notice of Award, and declare your Bid security forfeited.

Within ten days after you comply with the above conditions, Owner will return to you one fully executed counterpart of the Contract Documents.

City of Webster City, Iowa
Owner

By: _____
Authorized Signature

_____
Title

Copy to Engineer

SECTION 00550 - NOTICE TO PROCEED

Date: _____

Project: Water Treatment Facility Improvements Webster City, IA	
Owner: City of Webster, Iowa	Owner's Contract No.:
Contract Amount:	Engineer's Project No.: 0M2.126087
Contractor:	
Contractor's Address:	

You are notified that the Contract Times under the above Contract will commence to run on _____, ____. On or before that date, you are to start performing your obligations under the Contract Documents. In accordance with Article 1.02 of SUDAS Standard Specification Section 1080, the date of Substantial Completion is _____, and the date of readiness for final payment is _____.

City of Webster City, Iowa

BY: _____

TITLE: _____

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by _____this, the _____ day of _____, 20___.

_____
By

_____
Title

Copy to Engineer

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____ of _____ (Hereafter called the Principal) and

_____ of_____

(Hereafter called the Surety) are held and firmly bound unto the City of Webster City, Hamilton County, Iowa, (Hereafter called the Owner) in the penal sum of _____

_____($_____),
in lawful money of the United States, to the payment of which sum, well and truly to be made, the Principal herein firmly binds himself (themselves), their heirs, executors and administrators and the said Surety binds themselves, their successors, assigns, executors and administrators, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT WHEREAS, the above bounden Principal did on the _____ day of _____, 2_____, enter into a written Contract with the Owner to:

_____

_____

Copy of which Contract, together with all of its terms, covenants, conditions and stipulations is incorporated herein and made a part hereof as fully and completely as if said Contract were recited at length and,

WHEREAS, the Principal and Sureties on this bond hereby agree to pay all persons, firms or corporations having contracts directly with the Principal or Subcontractors, all just claims due them for labor performed or materials furnished, in the performance of the Contract on account of which this bond is given when the same are not satisfied out of the portion of the Contract price which the Owner is required to retain until completion of the public improvement, but the Principal and Sureties shall not be liable to said persons, firms or corporations unless the claims of said claimants against portion of the Contract price shall have been established as provided by law.

Now, if the Principal shall in all respects fulfill his said Contract according to the terms and tenor thereof, and shall satisfy all claims and demands incurred for the same and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so and shall fully reimburse and repay the Owner, all outlays and expense which it may incur in making good any such default, then the obligation is to be void and of no effect.

Every surety on this bond shall be deemed and held, any Contract to the contrary notwithstanding, to consent without notice:

1. To any extension of time to the Contractor in which to perform the Contract.

2. That the 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.

3. To any changes in the Plans, Specifications or Contract, when such change does not involve an increase of more than twenty-five (25) percent of the total Contract price, and shall then be released only as to such excess increase.

4. To keep in good repair, storm and sanitary sewer improvements for a period of not less than two (2) years and water main and street improvements for a period of not less than two (2) years, and to keep in good repair any of the above improvements for the time specified, as a result of the failure of another. The above-mentioned two (2) year period starts the day the completed improvement is accepted by the Owner.

5. To keep in good repair, other types of improvements other than those stated in the above paragraph for a period of not less than one (1) year.

6. To the provisions of Chapters 384 and 573 of the Code of Iowa and all other applicable provisions of Iowa law.

IN WITNESS THEREOF, we have hereunto set our hands and seals this _____ day of _____, 2_____.

_____ _____
Witness Principal

_____ _____

By _____

_____
Surety

By _____

_____
Address

NOTE: Date of BOND must be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS: That we _____ of _____ (Hereafter called the Principal) and

_____ of_____

(Hereafter called the Surety) are held and firmly bound unto the City of Webster City, Hamilton County, Iowa, (Hereafter called the Owner) in the penal sum of _____

_____($_____),
in lawful money of the United States, to the payment of which sum, well and truly to be made, the Principal herein firmly binds himself (themselves), their heirs, executors and administrators and the said Surety binds themselves, their successors, assigns, executors and administrators, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, THAT WHEREAS, the above bounden Principal did on the _____ day of _____, 2_____, enter into a written Contract with the Owner to:

_____

_____

Copy of which Contract, together with all of its terms, covenants, conditions and stipulations is incorporated herein and made a part hereof as fully and completely as if said Contract were recited at length and,

WHEREAS, the Principal and Sureties on this bond hereby agree to promptly make payment to all persons, firms, subcontractors or corporations having contracts directly with the Principal or Subcontractors, all just claims due them for labor performed or materials furnished, in the performance of the Contract on account of which this bond is given when the same are not satisfied out of the portion of the Contract price which the Owner is required to retain until completion of the public improvement, but the Principal and Sureties shall not be liable to said persons, firms, subcontractors or corporations unless the claims of said claimants against portion of the Contract price shall have been established as provided by law.

Now, if the Principal shall in all respects fulfill his said Contract according to the terms and tenor thereof, and shall satisfy all claims and demands incurred for the same and shall fully indemnify and save harmless the Owner from all costs and damages which it may suffer by reason of failure to do so and shall fully reimburse and repay the Owner, all outlays and expense which it may incur in making good any such default, then the obligation is to be void and of no effect.

Every surety on this bond shall be deemed and held, any Contract to the contrary notwithstanding, to consent without notice:

1. To any extension of time to the Contractor in which to perform the Contract.

2. That the 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.

3. To any changes in the Plans, Specifications or Contract, when such change does not involve an increase of more than twenty-five (25) percent of the total Contract price, and shall then be released only as to such excess increase.

4. To the provisions of Chapters 384 and 573 of the Code of Iowa and all other applicable provisions of Iowa law.

IN WITNESS THEREOF, we have hereunto set our hands and seals this _____ day of _____, 2_____.

_____ _____
Witness Principal

_____ _____

By _____

_____
Surety

By _____

_____
Address

NOTE: Date of BOND must be prior to date of Contract.
If CONTRACTOR is Partnership, all partners should execute BOND.

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the state where the PROJECT is located.

SUDAS Standard Specifications

Division 1 – General Provisions and Covenants

Water Treatment Improvements

Webster City, IA

0M2.126087

Table of Contents

Section 1010 - Definitions **Page No.**

1.01 Description 1

1.02 Abbreviations 1

1.03 Definitions and Terms 2

Section 1020 - Proposal Requirements and Conditions

1.01 Qualification of the Bidders 1

1.02 Contents of the Proposal Forms 1

1.03 Quantities and Unit Prices 1

1.04 Examination of the Contract Documents and Site of Work 2

1.05 Interpretation of the Contract Documents 2

1.06 Addendum 3

1.07 Preference for Labor and Materials 3

1.08 Taxes 3

1.09 Preparation of the Proposal 4

1.10 Bidders Certification 5

1.11 Irregular and Nonresponsive Proposals 5

1.12 Submission of the Proposal, Identity of Bidder, and Bid Security 6

1.13 Withdrawal or Revision of the Proposal Prior to Opening of Proposals 6

1.14 Opening of Proposals 7

1.15 Limitation on Withdrawal of Proposals After Opening of Proposals 7

Section 1030 - Approval for Award and Award of Contract

1.01 Acceptance or Rejection of Proposals 1

1.02 Release of Bid Security 2

1.03 Award of Contract 2

Section 1040 - Scope of Work

1.01 Intent of the Contract Documents 1

1.02 Correlation of the Contract Documents 1

1.03 Coordination of Specifications, Plans, and Special Provisions 1

1.04 Conformity with the Contract Documents 2

Section 1040 - Scope of Work (Continued) **Page No.**

1.05 Plans 2
1.06 Increase or Decrease of Work 2
1.07 Change Orders 3
1.08 Site Conditions 3
1.09 Changed Site Conditions 4
1.10 Disputed Claims for Extra Compensation 4
1.11 Delays Caused by the Jurisdiction 6
1.12 Oral Agreements, Conversations, and Informal Communications 6
1.13 Errors or Omissions 6

Section 1050 - Control of Work

1.01 Authority of the Engineer 1
1.02 Authority and Duties of the Engineer's Authorized Representative 1
1.03 Cooperation by the Contractor 2
1.04 Cooperation with Other Contractors 2
1.05 Shop Drawings, Certificates, and Equipment Lists 3
1.06 Conflict Avoidance 3
1.07 Examination of Materials and Work 3
1.08 Removal of Defective Work and Materials 4
1.09 Unauthorized Work 4
1.10 Line and Grade Stakes 4
1.11 Providing Job Site Utilities 5
1.12 Salvage 5
1.13 Protection of Water Quality and Wetlands 5
1.14 Final Inspection and Acceptance 5
1.15 Additional Contractor Responsibilities 6

Section 1060 - Control of Materials

1.01 Materials Source of Supply and Quality Requirements 1
1.02 Alternate Processes, Equipment, or Materials and Other Substitutions 1
1.03 Samples and Testing 3
1.04 Storage of Materials 3

Section 1060 - Control of Materials (Continued) **Page No.**

1.01 Unacceptable Materials 3

1.02 Materials Supplied by the Jurisdiction 3

1.03 Materials Supplied by the Contractor 3

Section 1070 - Legal Relations and Responsibility to the Public

Part 1 - Legal Relations

1.01 Municipal Regulations, State, and Federal Laws and Regulations 1

1.02 Governing Law 2

1.03 Permits and Licenses 2

1.04 Patents and Royalties 2

1.05 Use and Occupancy Prior to Completion of Contract 2

1.06 Contractor's Responsibility for the Work 2

1.07 Responsibility for Damage Claims 3

1.08 Personal Liability of Public Officials 3

1.09 Waiver of Legal Rights 3

1.10 Acceptance by the Jurisdiction - Not a Waiver of Contractor's Obligations or a Waiver of the Jurisdiction's Rights 3

1.11 Business Organization Requirements 4

1.12 Consent to Jurisdiction of Iowa District Court or Federal District Court in Iowa 5

1.13 Severability 5

Part 2 - Responsibilities to the Public

2.01 Sanitation 6

2.02 Convenience and Safety 6

2.03 Work Area 7

2.04 Project Area for the Work 7

2.05 Explosives 8

2.06 Traffic Control 8

2.07 Protection of Aboveground and Underground Facilities 9

2.08 Protection of Property 9

2.09 Land Monuments 10

Section 1070 - Legal Relations and Responsibility to the Public (Continued) **Page No.**

2.10 Dust Control 10

2.11 Environmental and Historic Items 10

2.12 Railroad Crossings 10

2.13 Borrow and Waste Sites 10

2.14 Maintaining Postal Service 11

2.15 Finishing and Cleanup Requirements 11

Part 3 - Bonds and Insurance

3.01 Performance, Payment, and Maintenance Bond 12

3.02 Insurance Requirements 12

3.03 Contractor's Indemnity - Contractual Liability Insurance 14

3.04 Contractor's Insurance for Other Losses; Waiver of Subrogation 15

3.05 Property Insurance 16

3.06 Endorsement Naming Jurisdiction as an Additional Insured / Cancellation and Material Change / Governmental Immunities Endorsement 18

3.07 Proof of Insurance 19

3.08 Notification in Event of Liability or Damage 20

3.09 Sample Insurance Forms - See www.iowasudas.org 20

Section 1080 - Prosecution and Progress

1.01 Subletting or Assignment of Contract 1

1.02 Contract Time 2

1.03 Work Progress and Schedule 3

1.04 Preconstruction Conference 3

1.05 Notice to Proceed 3

1.06 Weekly Record of Working Days 3

1.07 Work on Sundays or Legal Holidays 4

1.08 Temporary Suspension of Working Days 5

1.09 Extension of Time 5

1.10 Contractor's Employees, Methods, and Equipment 6

1.11 Contractor's Equipment Identification 7

Section 1080 - Prosecution and Progress (Continued) **Page No.**

1.12 Liquidated Damages 7

1.13 Breach of Contract 8

1.14 Termination of Contractor's Responsibility 9

Section 1090 - Measurement and Payment

1.01 Measurement 1

1.02 Scope of Payment 1

1.03 Lump Sum Breakdowns 1

1.04 Payment for Change Orders 1

1.05 Progress Payments 2

1.06 Payment of Retainage 2

1.07 Sales and Use Tax Statement 3

1.08 Acceptance and Final Payment 3

DEFINITIONS

1.01 DESCRIPTION

Wherever the following definitions, terms, and abbreviations, or pronouns in place of them, are used in the plans, specifications, or other contract documents, the intent and meaning shall be interpreted as specified in this Section.

1.02 ABBREVIATIONS

Wherever in these specifications and contract documents the following abbreviations are used, they shall be understood to mean as follows: The serial designation of each reference shall be the latest year of adoption or revision, unless otherwise specified.

AAN - American Association of Nurserymen
AAR - Association of American Railroads
AASHTO (or AASHO) - American Association of State Highway and Transportation Officials
ACI - American Concrete Institute
AIA - American Institute of Architects
AMG - Automated Machine Guidance
ANSI - American National Standards Institute
API - American Petroleum Institute
APWA - American Public Works Association
ARA - American Railway Association
AREA - American Railway Engineering Association
ASA - America Standards Association
ASCE - American Society of Civil Engineers
ASLA - American Society of Landscape Architects
ASTM - American Society for Testing and Materials
AWPA - American Wood Preservers Association
AWS - American Welding Society
AWWA - American Water Works Association
BSC - Bituminous Seal Coat
CFR - Code of Federal Regulations
CLSM - Controlled Low Strength Material
CMP - Corrugated Metal Pipe
CPM - Critical Path Method
CRSI - Concrete Reinforcing Steel Institute
DIP - Ductile Iron Pipe
DNR - Department of Natural Resources
DOT - Department of Transportation
EEI - Edison Electric Institute
EPA - Environmental Protection Agency
FHWA - Federal Highway Administration
FSS - Federal Specification and Standards
ESAL - Equivalent Single Axle Load
GGBFS - Ground Granulated Blast Furnace Slag
GPS - Global Positioning System
GRI - Geosynthetic Research Institute
HDPE - High Density Polyethylene Pipe
HMA - Hot Mix Asphalt
IAC - Iowa Administrative Code
IEEE - Institute of Electrical and Electronics Engineers
IES - Illuminating Engineering Society
ICEA (or IPCEA) - Insulated Cable Engineers Association
IMSA - International Municipal Signal Association, Inc.
ISO - Insurance Services Office
ITE - Institute of Transportation Engineers
JMF - Job Mix Formula

1.02 ABBREVIATIONS (Continued)

MAPLE - Materials Approved Product List Enterprise
MGAL - 1,000 Gallons
MUTCD - Manual on Uniform Traffic Control Devices
NEC - National Electrical Code
NEMA - National Electrical Manufacturers Association
NFPA - National Fire Protection Association
NPDES - National Pollutant Discharge Elimination
NSF - National Sanitation Foundation
OSHA - Occupational Safety of Health Administration
PCC - Portland Cement Concrete
PLS - Pure Live Seed
PROWAG - Public Right-of-Way Accessibility Guidelines
PVC - Polyvinyl Chloride
RAP - Recycled Asphalt Pavement
RCAP - Reinforced Concrete Arch Pipe
RCP - Reinforced Concrete Pipe
SAE - Society of Automotive Engineers
SDR - Standard Dimension Ratio
SSPC - Steel Structures Painting Council
SUDAS - Statewide Urban Design and Specifications
SWPPP - Stormwater Pollution Prevention Plan
UL - Underwriters' Laboratories, Inc.
US - United States
USC - United States Code
VCP - Vitrified Clay Pipe

1.03 DEFINITIONS AND TERMS

ADDENDUM. A revision to the contract documents written and issued after the notice to bidders, and prior to the time for receipt of proposals. Changes reflected in the Addendum shall govern over all other contract documents.

ALLEY. See Street.

APPROVED EQUAL (EQUIVALENT). A product, process, equipment, or material that, upon approval of the Engineer, is determined to meet or exceed the requirements called for by the specifications. Upon approval, the item will be allowed in lieu of the specified material, process, equipment, or product.

AWARD. The acceptance of the proposal of the lowest responsive, responsible bidder for the work, which shall not be binding upon the Contracting Authority until the contract for the said work has been executed by the bidder and by the Contracting Authority and bond(s) has been provided by the bidder as required by law.

BID. A properly signed and guaranteed written offer of the bidder containing the bid amount to perform the work. Bid is the same as Proposal.

BID AMOUNT. The aggregate sum obtained by totaling the amounts arrived at by multiplying the quantity of each bid item, as shown in the bid or proposal, by the unit price specified in the proposal for that bid item, including lump sum bid items.

BID ITEM. A specifically described unit of work for which a price is provided in the proposal. A bid item may also be referred to as a contract item.

BID SECURITY. The security furnished by the bidder with its bid as guaranty that the bidder will execute the contract and furnish bond for the work if the proposal is accepted. For bids submitted to governmental entities, the bidder shall furnish bid security as defined in Iowa Code Chapter 26.

1.03 DEFINITIONS AND TERMS (Continued)

BIDDER. Any individual, firm, partnership, joint venture, corporation, or association licensed or otherwise authorized by law to do business where the work is located, which has submitted a proposal for the work, acting directly or through a duly authorized representative.

CALENDAR DAY. Every day shown on the calendar.

CHANGE ORDER. A written order to the Contractor signed and approved by the Contracting Authority, ordering a change in the work from that originally shown by the plans and specifications. Change orders duly signed and executed by the Contracting Authority and the Contractor shall constitute authorized modifications of the contract.

COMMENCEMENT OF WORK. Work will be considered commenced when the Contractor's operations are started on items of work covered by the contract documents, or when the Contractor notifies the Engineer, and the Engineer agrees, that the Contractor's equipment and personnel are available to the site but the operations are prevented by conditions outside the Contractor′s control.

COMPETITIVE QUOTATION. A properly signed written offer of the Contractor according to Iowa Code Chapter 26.

CONTRACT. The written agreement, between the Contractor and the Contracting Authority, setting forth the terms and conditions under which the work is to be performed. The contract includes all contract documents.

CONTRACT AMOUNT. The bid amount plus approved change orders.

CONTRACT DOCUMENTS. The contract documents consist of the following: The notice to bidders and notice of public hearing; the instructions to bidders; special provisions; standard specifications; general supplemental specifications; supplemental specifications; plans; addenda; proposal; contract; performance, payment, and maintenance bond; insurance certificate(s); Notice to Proceed; and change orders. These documents form the agreement whereby the Contractor will furnish all labor, equipment, tools, and materials, and perform all work necessary to satisfactorily accomplish the proposed improvement. The contract documents are complementary and what is called for by one shall be as binding as if called for by all.

CONTRACTING AUTHORITY. The body, entity, board, commission, officer, or governmental entity having authority to award a contract.

CONTRACTOR. The individual, firm, partnership or corporation, and the heirs, executors, administrators, successors and assigns thereof, or the lawful agent of any such individual, firm, partnership, or corporation, or the surety thereof under the contract bond, constituting one of the principals to the contract and undertaking to perform the work herein specified. Where the pronoun "it" is used as referring to the word "Contractor" it shall mean the Contractor as defined above.

CONTROLLING ITEM OF WORK. The unique activity of a contract that will determine the duration of the construction period or if a working day is charged. The character of this work may change during the project. It is the work that could be in progress at any time that would have the greatest influence on the duration of the project.

CULVERT. A structure not classified as a bridge or storm sewer which provides an opening under a roadway or embankment, except that such term shall not include tiles crossing the road, or intakes thereto, where such tiles are part of a tile line or system designed to aid subsurface drainage.

1.03 DEFINITIONS AND TERMS (Continued)

DEPARTMENT OF TRANSPORTATION, (THE DEPARTMENT). The Department of Transportation, as defined in Iowa Code Chapter 307.

EMPLOYEE. Any person working on the project mentioned in the contract of which these specifications are a part, and who is under the direction or control, or receives compensation from, the Contractor or subcontractor.

ENGINEER. For publicly owned projects, the Engineer is a Professional Engineer licensed in the State of Iowa and is the authorized representative of the Contracting Authority. For privately contracted projects, with improvements that are to become publicly owned, the Engineer is the Professional Engineer licensed in the State of Iowa and is the authorized representative of the Jurisdiction ultimately accepting ownership of the improvement. For all other projects, the Engineer is the Professional Engineer licensed in the State of Iowa and is the owner's authorized representative. The Engineer may act directly or through duly authorized representatives.

EQUIPMENT. All machinery and equipment, together with the necessary supplies for upkeep and maintenance, and also tools and apparatus necessary for the proper construction and acceptable completion of the work.

EXTRA WORK. Work not provided for in the contract, as awarded, but deemed essential to the satisfactory completion of the contract and authorized by the Engineer. Extra work shall not include additional materials, equipment, and labor used due to natural variations in surface and subsurface conditions, except as specifically provided for elsewhere in the contract documents.

GENERAL SUPPLEMENTAL SPECIFICATIONS. Specifications approved by the Board of Directors for the Iowa SUDAS Corporation subsequent to publication of the latest edition of the SUDAS Standard Specifications. They involve changes in the SUDAS Standard Specifications and apply only when specified in the contract documents.

GOVERNMENTAL ENTITY. As defined in Iowa Code Chapter 26.

IMPROVEMENT. Shall mean any public improvements as defined in Iowa Code Chapter 26 and shall also include highway, bridge, or culvert projects.

INCIDENTAL ITEMS. Materials, equipment, or labor essential for the proper completion of the work that are not specified as bid items in the contract documents and the cost of which shall be included in other bid items.

INSPECTOR. The authorized representative of the Engineer assigned to make a detailed inspection of any or all portions of the work, or materials.

IOWA DEPARTMENT OF TRANSPORTATION (DOT) STANDARD SPECIFICATIONS. The Iowa Department of Transportation Standard Specifications for Highway and Bridge Construction and the General Supplemental Specifications effective at the date of publication of the Notice to Bidders unless a different effective date is identified in the contract documents.

JOINT VENTURE. The joining of two or more contractors for the purpose of combining equipment, personnel, and finances in order to submit a bid on a single project.

JURISDICTION. A governmental entity or the Iowa Department of Transportation, acting through its governing body, or through the authorized representatives of such governing body when so authorized.

JURISDICTIONAL ENGINEER. See Engineer.

1.03 DEFINITIONS AND TERMS (Continued)

LABORATORY. The testing laboratory of the Jurisdiction, or any other testing laboratory which may be designated by the Engineer.

LIQUIDATED DAMAGES. The dollar amount established by the Contracting Authority and set forth in the contract documents as compensation for the damage to the Contracting Authority, or public, for delay in completion of the work, to be paid to the Contracting Authority, or to be deducted from any payments due or to become due the Contractor.

LUMP SUM. Unit of measurement for a bid item where no direct measurement will be made. The bid item amount is complete payment for all work described in the contract documents and necessary to complete the work for that item. The estimated quantities of lump sum work shown in the contract documents are approximate.

MAPLE. Iowa DOT's materials approved product list enterprise. MAPLE contains a searchable database of most of the approved products, sources, producers, and suppliers of materials for Iowa highway projects. MAPLE may be searched by the brand/product name, producer, Iowa DOT Materials Instructional Memorandum (IM) number, or material name. New approvals are continually added as Iowa DOT approves them for use.

MATERIALS. Any substances specified for the use in the construction of the project and its appurtenances.

MATERIALS INSTRUCTIONAL MEMORANDUM (MATERIALS I.M.). This is an instruction prepared by the Iowa DOT's Construction and Materials Bureau. These may identify approved sources of various qualities or types of materials, sampling, testing, and approval procedures, and conditions for acceptance and use.

MEDIAN. The portion of a divided roadway separating the traveled ways for traffic.

MOBILIZATION. Mobilization shall consist of preparatory work and operations for all items under the contract, including, but not limited to, those necessary for the movement of personnel, equipment, supplies, and incidentals to the project site, and for the establishment of all offices, buildings, and other facilities, which must be performed or costs incurred prior to beginning work on the various items on the project site.

NOTICE OF PUBLIC HEARING. The public announcement or publication by the governmental entity, as required under Iowa Code Chapter 26, notifying the public of the time and place where any interested person may appear and file objections to the proposed plans, specifications, contract, or estimated cost of the improvement.

NOTICE TO BIDDERS. The public announcement, publication, or solicitation by the Contracting Authority, inviting bids for work to be performed or materials to be furnished as required by Iowa Code Chapter 26.

NOTICE TO PROCEED. A written notice to the Contractor issued by the Engineer stating the date, on or before which, the Contractor is to begin the work. The date set forth in this notice shall be considered as the official starting date.

PERFORMANCE, PAYMENT, AND MAINTENANCE BOND. The bond submitted by the designated low bidder, in the amount specified in the contract documents, for the faithful performance of the contract and the terms and conditions therein contained, for payment for all labor and materials provided, and for maintenance of improvements in good repair for the specified number of years from the time of acceptance of the improvements by the Jurisdiction.

1.03 DEFINITIONS AND TERMS (Continued)

PLANS. Plans are the official drawings, standard plans, profiles, typical cross-sections, and supplemental drawings or reproductions thereof, approved and furnished by the Jurisdiction, which show the location, character, dimensions, and details of the work. All such documents are to be considered as a part of the plans whether attached to the plans or separate.

PROFILE GRADE. The trace of a vertical plan intersecting the top surface of the proposed wearing surface, usually along the longitudinal center line of the roadbed. Profile grade means either elevation or gradient or such trace, according to the context.

PROJECT AREA. The area of the specified project limits shown on the plans, and any additional area which is necessary for the Contractor to place traffic control devices required by the contract documents or necessary to protect the work.

PROPOSAL. The proposal is a properly signed and guaranteed written offer of the bidder containing the bid amount to perform the work. Proposal is the same as Bid.

PROPOSAL FORM. A form provided by the Jurisdiction, to the bidder, containing a listing of the bid items and quantities, and locations to enter unit prices and the bid amount.

PROWAG. The July 26, 2011 “Proposed Accessibility Guidelines for Pedestrian Facilities in the Public Right-of-Way” was written by the US Access Board and is also known as the Public Right-of-Way Accessibility Guidelines or PROWAG.

RESIDENT BIDDER. A person or entity authorized to transact business in this state and having a place of business for transacting business within the state at which it is conducting and has conducted business for at least three years prior to the date of the first advertisement for the public improvement. If another state or foreign country has a more stringent definition of a resident bidder, the more stringent definition is applicable as to bidders from that state or foreign country.

RESPONSIVE, RESPONSIBLE BID. A bid submitted in accordance with the Notice to Bidders by a bidder that acknowledged all addenda, that responded to all proposal requirements, and that agreed to do everything required by the plans and specifications and other bid documents without any conditions, qualifications, or exclusions.

A bid submitted by a bidder that is capable of performing the work, possess the necessary financial and technical capability to perform the work, as well as the ability to complete the work in a timely and acceptable manner as demonstrated by past performance or other appropriate considerations, including but not limited to the ability to obtain and maintain insurance and bonding requirements.

RESPONSIVE, RESPONSIBLE BIDDER. A bidder that has submitted a bid that has been determined by the governmental entity to be both responsive and responsible.

RIGHT-OF-WAY. The land area of which the right to possession is secured or reserved by the Jurisdiction for the project, including permanent roadway easements.

ROAD. See Street.

ROADBED. The area of the roadway between the tops of foreslopes.

ROADWAY. The portion of the right-of-way designated or ordinarily used for vehicular travel.

SHOP DRAWINGS. Information and details for materials, products, or equipment to be supplied for the project, which are typically delivered to the project in an assembled or ready-to-use condition.

1.03 DEFINITIONS AND TERMS (Continued)

SHOULDER. That portion of the roadbed contiguous with the traveled way for accommodation of stopped vehicles, for emergency use, and for lateral support of base and surface courses.

SIDEWALK. That portion of the street primarily constructed for the use of pedestrians.

SLOPE. The inclination of a line or surface expressed as a ratio of horizontal distance to vertical distance.

SPECIAL PROVISIONS. Additions and revisions to the SUDAS Standard, General, and Supplemental Specifications covering conditions peculiar to an individual project. They only apply to a project when specified in the contract documents.

SPECIALTY ITEMS. Portions of work designated in the contract documents requiring equipment, skills, or crafts not ordinarily associated with the expertise of the Contractor or the major types of work covered by the contract; typically including, but not limited to, earthwork for building construction, electrical, mechanical, masonry, roofing, drywalling, floor covering, glass and glazing, painting, conveying systems, etc.

SPECIFICATIONS. The general term comprising all the written directions, provisions, and requirements including the SUDAS Standard Specifications and those added or adopted as Supplemental Specifications or Special Provisions all of which are necessary for the proper performance of the contract.

SPEED LIMIT. Refers to the legally established speed limit before construction and not the advisory speed during construction.

STANDARD ROAD PLAN. The Iowa Department of Transportation's manual of detailed drawings showing standardized design features, construction methods, and approved materials.

STATE. The State of Iowa acting through its authorized representatives.

STATION. One hundred linear feet.

STREET. A general term denoting public way for vehicular travel, including the entire area within the right-of-way.

SUBBASE. The layer or layers of specified or selected material of designed thickness upon which a base course or pavement is constructed.

SUBCONTRACTOR. The subcontractor is any individual, firm, partnership, joint venture, corporation, or association to whom the Contractor, with the written consent of the Jurisdiction, sublets a part of the work.

SUBGRADE. The top surfaced of a roadbed upon which the pavement structure and shoulders are constructed.

SUDAS STANDARD SPECIFICATIONS. The requirements contained herein applying to the contract, and pertaining to the method and manner of performing the work, or to the quantity and quality of the materials to be furnished under the contract. Previously referred to as the Iowa Statewide Urban Standard Specifications for Public Improvements.

SUPERINTENDENT. The Contractor's authorized representative in responsible charge of the work.

SUPPLEMENTAL CONTRACT (AGREEMENT). Written agreement between the Contractor and Contracting Authority modifying the original contract pursuant to the Iowa Code.

1.03 DEFINITIONS AND TERMS (Continued)

SUPPLEMENTAL SPECIFICATIONS. Specifications adopted by a Jurisdiction that involve changes to the SUDAS Standard Specifications. They only apply to a project when specified in the contract documents.

SURETY. The corporation, partnership, or individual, other than the Contractor, executing a bond furnished by the Contractor.

TARGET VALUE. When a target or target value is specified, a continuous and determined effort is expected to reach and maintain that value, as a goal.

UNAUTHORIZED WORK. Unauthorized work is work done contrary to, in addition to, or regardless of, the contract documents, or the instruction of the Engineer; work done without lines, grade, and/or cross-section stakes and grades shown on the plans or as given by the Engineer; or work done in deviation from the contract documents without written authority.

UTILITY. Includes all privately, publicly, municipally, or co-operatively owned structures and systems for supplying water, sewer, electric lights, street lights and traffic lights, gas, power, telegraph, telephone, communications, transit, pipelines, and the like.

UTILITY AGENCY. Means and includes (1) all franchised utilities having utility system facilities within the Jurisdiction, including but not limited to gas, electric, telephone, cable television, and communications; (2) communications systems licensed by the Jurisdiction; and (3) all governmental agencies owning or operating governmental utility systems, including but not limited to water, sewer, traffic control, and communications.

WORK. The work shall mean the furnishing of all labor, materials, equipment, and other incidentals necessary for construction of the improvement, successful completion of the contract, and the carrying out of all duties and obligations imposed by the Contract, including the submission of all necessary paperwork relating to payrolls, sales tax, warranties, owner's manuals, maintenance manuals, and the like.

WORKING DAY. Any calendar day, exclusive of Saturdays, Sundays, or a recognized legal holiday, on which weather or other conditions (not under control of the Contractor) will permit construction operations to proceed for not less than 3/4 of a normal work day in the performance of a controlling item of work.

END OF SECTION

PROPOSAL REQUIREMENTS AND CONDITIONS

1.01 QUALIFICATION OF THE BIDDERS

A. The Jurisdiction reserves the right to reject any bid that is not responsive to the proposal form or contract documents, or not submitted by a responsive, responsible bidder.

B. Upon request of the Engineer, the apparent lowest responsive bidder, whose bid is under consideration for award of a contract, shall submit evidence of its financial resources, construction experience, and organization available for performance of the proposed work. A bidder's ability to promptly secure the required bonds and insurance coverages for the proposed work, as well as the bidder's demonstrated ability to continuously maintain insurance coverages on past projects, may be considered an indication of financial responsibility and the bidder's qualification as a responsive, responsible bidder.

1.02 CONTENTS OF THE PROPOSAL FORMS

A. Each prospective bidder will be furnished with a proposal form showing the location and description of the proposed work, the approximate quantities of work to be performed for which bid prices are requested, and the completion provisions. The contract documents will contain any special provisions that shall apply to the work to be performed.

B. The purpose of the contract documents is to require the furnishing of highest quality equipment, material, and workmanship, and best accepted construction practice. The Bidder is expected to base its bid on materials and equipment complying fully with the contract documents. Each bidder, in submitting its bid, acknowledges its willingness to comply with the terms of these contract documents.

1.03 QUANTITIES AND UNIT PRICES

A. Bidders shall submit a lump sum bid or unit bid price, as required by the proposal for the work covered by the contract documents. Prices shall cover complete work and include all costs incidental thereto.

B. When unit prices are requested in the proposal form, the quantities indicated on the proposal form are approximate only, and do not constitute a warranty or guarantee by the Jurisdiction as to the actual quantities involved in the work. Such quantities are to be used for the purpose of comparison of bids and determining the amount of bid security, contract, and performance, payment, and maintenance bond. In the event of discrepancies between unit prices and unit price extensions listed in a bidder’s proposal, unit prices shall govern and unit price extensions shall be corrected, as necessary, for agreement with unit prices. The Jurisdiction expressly reserves the right to increase or decrease the quantities during construction as outlined in Section 1040, 1.06 - Increase or Decrease of Work, and to make reasonable changes in design, provided such changes do not materially change the intent of the contract. The amount of work to be paid for shall be based upon the actual quantities performed.

C. The proposal may have a lump sum item for mobilization. The bidder will indicate its bid price in dollars, and this will be the contract price for mobilization.

D. Materials, equipment, or labor essential for the proper completion of the work that are not specified as bid items in the contract documents and are incidental, and the cost of which shall be included in other bid items.

1.04 EXAMINATION OF THE CONTRACT DOCUMENTS AND SITE OF WORK

A. By submission of a proposal on the work, the bidder represents that it has carefully examined the site of the proposed work; the plans, specifications, and all other contract documents; and that the bidder is fully informed concerning the requirements of the contract, the physical conditions to be encountered in the work, and the character, quality, and the quantity of work to be performed, as well as materials to be furnished. The Contractor will not be entitled to additional compensation if it subsequently finds that conditions require methods or equipment other than that anticipated by the Contractor in making its proposal, except as provided in Section 1040, 1.09 - Changed Site Conditions.

B. The attention of the bidder is directed to the fact that contracts for work, other than the proposed work, may have been awarded or may be awarded in the future. Completion of the proposed work may be contingent upon certain work by others or covered by other contracts being performed on the project in advance of this work; likewise, completion of work by others or covered by other contracts may be dependent upon completion of the proposed work. The bidder is expected to become familiar with work already in progress or previously let on this project, the contract periods, the progress being made, and any other conditions regarding work that may affect the bid or the bidder's performance under this contract.

C. The bidder on this work acknowledges the facts set out in the proceeding paragraph and agrees it is in the public interest to have the work of other contracts and agencies performed concurrently rather than consecutively. The bidder further agrees to cooperate and coordinate the work with other contractors or agencies to the mutual interest of all parties doing work on the project.

D. By the submission of a bid on this work, the bidder acknowledges and agrees investigation and inquiry has been made regarding the contracts for work with which this work must be coordinated. In the event disputes arise between contractors or other agencies doing work on the project as to their mutual rights or obligations, the Engineer will define the rights of all interested parties regarding the work.

E. The Jurisdiction does not warrant, impliedly or explicitly, the nature of the work, the conditions that will be encountered by the bidder, the adequacy of the contract documents for the Contractor to perform the work, or the conditions or structures to be encountered under any surface. Any such data supplied on the plans or other contract documents, or interpretation thereof by the Engineer, are merely for the convenience of the prospective bidders, who are to rely upon their own explorations of latent or subsurface site conditions, before completing and filing their proposal, except as provided in Section 1040, 1.09 - Changed Site Conditions.

1.05 INTERPRETATION OF THE CONTRACT DOCUMENTS

If any prospective bidder is in doubt as to the true meaning of any parts of the contract documents, the bidder may request an interpretation from the Engineer. Any interpretation of the contract documents will be made only by an addendum duly mailed or delivered to each prospective bidder who received, or in the future requests, contract documents from the Jurisdiction.

1.06 ADDENDUM

Each bidder will receive a notice of addendum for any changes in the contract documents made prior to the time established for the receipt of bids. The notice will be delivered in the manner chosen by the Jurisdiction to the bidder's business address with an acknowledgement of receipt required. Acknowledgement of the receipt of the addendum will be as provided in the proposal form.

1.07 PREFERENCE FOR LABOR AND MATERIALS

A. 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 Code Chapter 73.

B. Such preferences will not be given where funding requirements, federal or otherwise, prohibit the giving of such preferences.

1.08 TAXES

A. Sales Tax Exemption Certificate: The Jurisdiction, as a designated exempt entity awarding construction contracts, will issue Sales Tax Exemption Certificates to contractors and subcontractors allowing them to purchase, or withdraw from inventory, materials for the contract free from sales tax pursuant to Iowa Code Sections 423.2 and 423.45 and Iowa Administrative Code rule 701-219(423). This Sales Tax Exemption Certificate may also allow a manufacturer of building materials to consume materials in the performance of a construction contract without owing tax on the fabricated cost of those materials.

1. Upon award of contract, the Jurisdiction will register the contract, Contractor, and each subcontractor with the Iowa Department of Revenue and Finance; and distribute Sales Tax Exemption Certificates and authorization letters to the Contractor and each subcontractor duly approved by the Jurisdiction according to Section 1080, 1.01 - Subletting or Assignment of Contract. These documents allow the Contractor and subcontractors to purchase materials for the contract free from sales tax. The Contractor and subcontractors may make copies of the Sales Tax Exemption Certificate and provide a copy to each supplier providing construction material. These Sales Tax Exemption Certificates and authorization letters are applicable only for the work under the contract.

2. At the time the Contractor requests permission to sublet according to Section 1080, 1.01 - Subletting or Assignment of Contract, the Contractor shall provide a listing to the Jurisdiction identifying all subcontractors. For each subcontractor, include the Federal Employee Identification Number (FEIN), contact information, the name of a representative for the organization, a description of the work to be sublet, and the associated cost.

3. The Contractor and each subcontractor shall comply with said Iowa Code sales tax requirements, shall keep records identifying the materials and supplies purchased and verify they were used on the contract, and shall pay tax on any materials purchased tax-free and not used on the contract.

B. Alternate Sales and Use Tax: If the Jurisdiction, at its option, decides to utilize the sales and use tax option, it will so state by special provision and publication in the Notice of Hearing and Letting.

1. The bidders shall include in their proposals all amounts payable by the Contractor for taxes imposed by any taxing authority on the sale, purchase, or use of materials and equipment covered by the contract documents. All taxes of the foregoing description shall be paid by the Contractor.

1.08 TAXES (Continued)

2. After delivery of materials and equipment, the Contractor shall submit to the Jurisdiction a statement (on a current Iowa Department of Revenue form) of all taxes of the foregoing description paid on materials and equipment incorporated in the complete construction. If a Sales Tax Exemption Certificate is issued by the Jurisdiction according to Section 1020, 1.08, A, no statement is required.

C. Income Tax: The bidder who is awarded the contract will be subject to payment of Iowa income tax on income from this work in amounts prescribed by law. If such bidder is a non-Iowa partnership, individual, or association, it shall furnish evidence, prior to execution of contract, that bond or securities have been posted with the State of Iowa Department of Revenue in the amount required by law and shall file a certificate issued by the Department, as provided in Iowa Code Section 422.17, releasing the Jurisdiction from withholding any and all sums required by the provision of Iowa Code Section 422.17.

1.09 PREPARATION OF THE PROPOSAL

A. Proposal: Proposals shall be legibly written in ink or typed on the forms provided by the Jurisdiction and shall be completely executed by the bidder with the requisite full signatures. The bidder must indicate in the proposal whether the proposal is submitted by an individual, partnership, joint venture, limited liability company, or a corporation. If the proposal is submitted by an artificial entity, it must be executed by an officer of such entity with authority to bind such bidder to perform the contract upon award. The business address of the bidder shall be typed or printed on the proposal. The Bidder Status Form is required by the Iowa Labor Commissioner, pursuant to Iowa Administrative Code rule 875-156.2(1). The bidder must complete the form and submit it with the proposal. Failure to provide the Bidder Status Form with the bid may result in the bid being deemed non-responsive and may result in the bid being rejected. If the bidder does not qualify as a resident bidder, the non-resident bidder shall specify on the Bidder Status Form whether any preference to resident bidders, 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 is in effect in the non-resident bidder's state or country of domicile at the time of a bid submittal.

B. Unit Price Attachment: The Engineer, at its option, may allow the bidder to submit a computer-generated attachment, hereinafter referred to as unit price attachment, in lieu of completing that portion of the proposal identifying the bid items, description, unit, quantity, and unit prices. If the Jurisdiction decides to allow this unit price attachment option, it will so state by special provision.

1. If a unit price attachment is submitted, it shall be attached to the proposal and shall include the following minimum information at the top of each page: project title, letting date, bidder's company name.

2. The unit price attachment shall have the same columns as the proposal; e.g. item number, description, unit, quantity, unit price, bid amount, etc. for each item. The bid item numbers and order on the unit price attachment shall follow that of the proposal.

3. The total amount bid shall be entered below the last bid item on the unit price attachment.

4. The unit price attachment page and print size shall be approximately the same as the proposal. Solid lines for separating the columns and lines need not be printed. Pages should be numbered by page number of the total pages (e.g. Page 1 of 4).

5. The bidder's company name, as well as the authorized person signature, name, and title, shall be in ink and shall follow the total amount bid; and shall be the same person that signs the proposal.

1.09 PREPARATION OF THE PROPOSAL (Continued)

6. In case of discrepancy in the item number, description, unit, or quantity between the unit price attachment and the proposal, the proposal shall govern. The unit price shown on the unit price attachment shall govern.

7. The bidder is solely responsible for the content, completeness, and accuracy of all the information contained in the unit price attachment. If the information in the unit price attachment is incomplete, the bid must be considered incomplete and be rejected.

8. When evaluating and tabulating the bids, the Jurisdiction shall utilize only the unit price as shown on the unit price attachment, and the item number, description, unit, and quantity as shown on the proposal.

C. The bidder, as a business organization, shall comply with the requirements of Section 1070, 1.11 - Business Organization Requirements.

D. When unit prices are requested, they shall be submitted on each and every item of work included for which bids are requested. The format for unit prices will be in dollars and whole cents only. In case of discrepancy, the unit price figures shall govern.

1.10 BIDDERS CERTIFICATION

By the submission of its proposal, the bidder certifies its bid is genuine and is not made in the interest of, or on behalf of, any undisclosed person, firm, or corporation; the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid; the bidder has not solicited or induced any person, firm, or corporation to refrain from bidding; and the bidder has not sought, by collusion or otherwise, to obtain for itself any advantage over any other bidder or over the Jurisdiction.

1.11 IRREGULAR AND NONRESPONSIVE PROPOSALS

A. Proposals will be considered irregular and may be rejected for any unauthorized changes in the proposal form or for any of the following reasons:

1. If submitted on a form other than that furnished by the Jurisdiction, or if the form is altered or any part thereof is detached or missing;

2. If the bidder submits an obviously unbalanced bid. An unbalanced bid shall be defined as a bid containing lump sum prices or unit bid prices that do not reflect reasonable actual costs plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs to complete that item;

3. If the proposal does not contain a unit price for each pay item listed, except in the case of authorized alternate pay items; or

4. If the bidder submits more than one proposal for the same work under the same or different names.

B. Proposals will be considered nonresponsive and shall be rejected for any of the following reasons:

1. If there are unauthorized additions, conditional or alternate bids, or irregularities of any kind that may tend to make the proposal incomplete, indefinite, or ambiguous as to its meaning;

2. If the bidder adds any provisions reserving the right to accept or reject an award or to enter into contract pursuant to an award;

1.11 IRREGULAR AND NONRESPONSIVE PROPOSALS (Continued)

3. If a bid on one project is tied to a bid on any other project, except as specifically authorized on the proposal form by the Jurisdiction;

4. If the bidder makes corrections or alterations to the unit prices it submits and such corrections or alterations are not initialed by the bidder. The Jurisdiction may require the bidder to identify any corrections or alteration so initialed;

5. If the bidder makes any omission of prices on items shown on the proposal forms, or any addition in writing to the form of the bid, or any condition or limitation on its proposal.

C. If the bidder notes a requirement in the contract documents it believes will require a conditioned or unsolicited alternate bid, it shall immediately notify the Engineer in writing identifying such requirement. If the Engineer finds that such a requirement does exist in the contract documents, the Jurisdiction will make corrections thereto by an addendum.

D. Proposals will be evaluated by the Jurisdiction pursuant to the provisions of Section 1030, 1.01 - Acceptance or Rejection of Proposals.

1.12 SUBMISSION OF THE PROPOSAL, IDENTITY OF BIDDER, AND BID SECURITY

A. The proposal shall be sealed in an envelope, properly identified as the proposal with the project title and the name and address of the bidder, and deposited with the Jurisdiction at or before the time and at the place provided in the Notice to Bidders. It is the sole responsibility of the bidder to see its proposal is delivered to the Jurisdiction prior to the time for opening bids, along with the appropriate bid security sealed in the separate envelope identified as bid security and attached to the outside of the bid proposal envelope. Any proposal received after the scheduled time for the receiving of proposals will be returned to the bidder unopened and will not be considered. If the Jurisdiction provides envelopes for proposals and bid security, bidders shall be required to utilize such envelopes in the submission of their bids.

B. A corporation, limited liability company, or limited partnership shall bid in the name under which it is registered with the Iowa Secretary of State. A partnership shall bid in the name under which it is registered with the County recorder. An individual operating under a trade name shall bid using the trade name registered with the County recorder if such registration is required. The bidder's exact name as registered, if required, shall appear as the "principal" on any bid bond and shall appear on any cashier's check or share draft submitted to fulfill the bid security requirement. A bidder's failure to satisfy these requirements may be grounds for rejection of the bidder's proposal.

1.13 WITHDRAWAL OR REVISION OF THE PROPOSAL PRIOR TO OPENING OF PROPOSALS

A. A bidder may request, without prejudice, to withdraw its proposal after it has been deposited with the Jurisdiction, provided such request is made in writing to the Jurisdiction prior to the time set for receiving proposals.

B. Modifications or corrections to proposals may be made on the withdrawn proposal, provided such modifications or corrections are initialed by the Bidder and are received by the Jurisdiction prior to the time set for receiving proposals. Modifications or corrections to a proposal will not be accepted if the modifications or corrections render the bid security inadequate or if not accompanied by sufficient additional bid security.

C. If a bidder has requested in writing to withdraw its proposal, said bidder may submit a different proposal and bid security at that time or any time prior to the time set for receiving proposals.

1.14 OPENING OF PROPOSALS

At the time and place set forth in the notice to bidders, proposals will be opened and read aloud. Proposals will be rejected if not accompanied by a bid security submitted in a separate, marked envelope. Submittals that do not include acknowledgement of each addendum to the contract documents will be rejected, except in those instances, in the opinion of the Engineer, where the addendum not acknowledged by a bidder will have no effect on the bid amount. Bid openings will be open to the public.

1.15 LIMITATION ON WITHDRAWAL OF PROPOSALS AFTER OPENING OF PROPOSALS

A. A bidder shall not withdraw its proposal for period of 60 calendar days after the date designated for opening of proposals, or such other period of time specified in the Notice. However, in those projects involving special assessments, and confirmation by the District Court, no bidder shall withdraw its proposal for a period of 30 calendar days after the confirmation of the assessments by the Court.

B. In the event a bidder desires to withdraw its proposal, it shall make request therefore in writing to the Engineer stating the reasons for such withdrawal.

END OF SECTION

APPROVAL FOR AWARD AND AWARD OF CONTRACT

1.01 ACCEPTANCE OR REJECTION OF PROPOSALS

A. The Jurisdiction reserves the right to accept the proposal that, in its judgment, is the lowest responsive, responsible bid; to award the contract by sections, if so specified in special provisions; to reject any or all proposals; to reject irregular or nonresponsive proposals as defined in Section 1020, 1.11 - Irregular and Nonresponsive Proposals; and to waive irregularities and/or technical deficiencies in the proposals to the extent allowed by law.

B. An individual, firm, partnership, corporation, or any association under the same or different names shall not submit more than one proposal. When reasonable evidence exists that a bidder has submitted more than one proposal at any letting for the same work under the same or different names, said proposals may be rejected.

C. Any or all proposals may be rejected if there is reason to believe collusion exists among bidders. Proposals received from participants in such collusion may not be considered for the same work if re-advertised.

D. Proposals may be rejected if the apparent lowest responsive bidder has failed to promptly meet financial obligations undertaken in connection with other work under contract, or is in default on a previous contract, or has an unsatisfactory record of performance and cooperation on any such previous contract, or has failed to maintain satisfactory progress on work already under contract.

E. In the event the bid specifies the use of materials, workmanship, methods, or equipment not in conformance with the contract documents, the bid will be rejected. In the event the bid was based on, but did not specify, the use of materials, workmanship, methods, or equipment not in conformance with the contract documents, the bidder will be held responsible for furnishing or using materials, workmanship, methods, and equipment in conformance with the contract documents at no change in the bid price.

F. When a contract for a public improvement is to be awarded to the lowest responsible bidder, a resident bidder shall be allowed a preference as against a non-resident 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 non-resident bidder is a resident. In the instance of a resident labor force preference, a non-resident 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 non-resident bidder is a resident. Application of the preference against a non-resident bidder shall be in accordance with the information filed with the proposal on the Bidder Status Form.

G. Promptly after the proposals are opened and evaluated, the Jurisdiction shall give careful consideration to its needs, available funding, and other project considerations; and shall either designate the lowest responsive, responsible bidder and proceed with award of contract, or reject all bids and reconsider the project.

1.02 RELEASE OF BID SECURITY

A. After the proposals are opened, verified, and duly considered, the Jurisdiction will promptly release the bid security of all except the lowest two bidders after the Jurisdiction's designation of the lowest responsive, responsible bidder. The bid security of the lowest two bidders will be promptly released after the Jurisdiction's approval of the contract executed by the lowest bidder. If all bids are rejected, all bid security will be promptly released.

B. Bid security shall be released to bidders, either by making such bid security available for retrieval by bidders, or, if requested by a bidder, by mailing the bid security to the bidder.

1.03 AWARD OF CONTRACT

A. Contract Document Submittal: Within 10 calendar days after notification by the Engineer, unless otherwise provided in the contract documents, the Contractor shall present the signed and executed contract documents, including contract, performance, payment, and maintenance bond; certificate of insurance; and all other items required by the contract documents. The performance, payment, and maintenance bond and insurance certificate shall meet the requirements of Section 1070, Part 3 - Bonds and Insurance as required by the Jurisdiction. The Jurisdiction will thereupon receive and file such documents and award the contract.

B. Deferred Award: The Jurisdiction reserves the right to defer award of any contract for a period not to exceed 60 calendar days from the date of opening of proposals. No claims for compensable delay shall arise as the result of delay in the approval of award.

C. Failure to Execute the Contract: It is agreed by the bidder that upon its failure to enter into the contract and furnish the necessary insurance certificate and performance, payment and maintenance bond within 10 calendar days after notification by the Jurisdiction, the amount of the bidder's bid security may at the Jurisdiction's option be forfeited and shall become the property of the Jurisdiction, to be retained not as a penalty, but as liquidated damages. The award of the contract may then, at the discretion of the Jurisdiction, be made to the next lowest responsive, responsible bidder, or the work may be re-advertised or may be constructed by the Jurisdiction in any legal manner.

D. Disclosure of Subcontractors:

1. The lowest responsive, responsible bidder shall be required to file a list of the names and subcontract amounts of all subcontractors who are expected to work on the project according to Section 1080, 1.01 - Subletting or Assignment of Contract.

2. If after award of the contract a subcontractor is replaced, or the subcontract price or the work under the subcontract is changed, the bidder shall disclose the name of the new subcontractor, the revised subcontract price, or the change in the scope of subcontract work.

   If a new subcontractor is added after award of the contract, the Contractor shall disclose the name of the new subcontractor.

END OF SECTION

SCOPE OF WORK

1.01 INTENT OF THE CONTRACT DOCUMENTS

A. These SUDAS Standard Specifications have been prepared to provide construction utilizing the best general practices and construction methods, utilizing first quality materials and work. The Contractor shall be responsible for providing or undertaking all work, labor, materials, equipment, tools, transportation, supplies, and activities included in these specifications, unless the responsibility for undertaking or providing same is specifically assigned to an identified party other than the Contractor.

B. The intent of the contract documents is to provide for the construction and completion in every detail of the work described or as may be amended. The Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work according to the plans, specifications, and terms of the contract documents. The apparent silence or omission of the contract documents as to any detail shall be regarded as meaning only the best general practice is to prevail and only first quality materials and work are to be used.

C. To prepare the plans, specifications, and contract documents, the Engineer may have performed exploratory work to gain information relative to surface and subsurface conditions. This information, when shown in the contract documents, represents a summary of conditions as of the date the survey was made; it is only an approximate estimation of the site conditions made for the Jurisdiction to identify construction conditions and quantities and classes of work. The appearance of this information in the contract documents will not constitute a guarantee conditions other than those indicated will not be encountered at the time of construction. The Contractor's bid shall be prepared based upon its examination of the site and its exploratory work.

D. Before making whatever additional investigations it feels are advisable, a bidder should contact the Engineer to determine available project area. If the Jurisdiction has not obtained right-of-entry for such investigation, the bidder shall be responsible to secure right-of-entry to any parcels where the Jurisdiction has not previously obtained right-of-entry before doing any investigation work. The bidder shall also be responsible for any traffic control necessary for any investigation work. The bidder shall further be responsible to obtain prior utility locates necessary to conduct such investigations.

1.02 CORRELATION OF THE CONTRACT DOCUMENTS

The plans and specifications are intended to supplement each other so any work shown on the plans and not mentioned in the specifications, or vice versa, shall be as binding and shall be completed the same as if that work was mentioned or shown on both and to the true intent and meaning of said plans and specifications.

1.03 COORDINATION OF SPECIFICATIONS, PLANS, AND SPECIAL PROVISIONS

A. In case of any discrepancy between the various items included in the contract documents, the items shall prevail, or govern, in the following descending order:

1. Change Orders
2. Addenda
3. Proposal and Contract
4. Special Provisions
5. Plans, including plan notes

1.03 COORDINATION OF SPECIFICATIONS, PLANS, AND SPECIAL PROVISIONS (Continued)

6. Supplemental Specifications (Jurisdictional document)

7. General Supplemental Specifications (SUDAS)

8. SUDAS Standard Specifications

In case of a discrepancy within any contract document, the following shall prevail, or govern, in descending order: written text, numerals, drawings.

B. The Contractor shall not take advantage of any apparent error or omission in the plans or specifications or of any discrepancy between the plans or specifications.

1.04 CONFORMITY WITH THE CONTRACT DOCUMENTS

A. Reasonably Close Conformity: All work performed and all materials furnished shall comply with the lines, grades, cross sections, dimensions, and material requirements, including tolerances, shown in the contract documents. Where tolerances are not specified, work shall comply with reasonable and customary manufacturing and industry standards. The Engineer may, in the Engineer's sole discretion, accept variations beyond such requirements or tolerances where they will not materially affect the value or utility of the work and interests of the Jurisdiction.

B. Defective Work: Work not in reasonably close conformity with the contract documents, or requirements thereof that, in the sole discretion of the Engineer, has resulted in inferior or unsatisfactory work. Defective work shall be removed and replaced or otherwise corrected by and at the expense of the Contractor.

C. Deficient Work: Work not in reasonably close conformity with the contract requirements but that, in the sole discretion of the Engineer, may be accepted and allowed to remain in place with a price adjustment and/or extended warranty period. In the event the Engineer agrees to accept deficient work with a price adjustment/extended warranty, the Engineer will document the basis of acceptance by contract modification making appropriate adjustments in the contract price for such work or materials.

1.05 PLANS

The final plans on file in the Jurisdiction show the location, typical construction details, and dimensions of the work contemplated. The work shall be performed in conformity therewith, except in case of error or unforeseen contingency.

Electronic support files, if available, will be provided prior to letting and are for information only. Should there be a discrepancy between an electronic support file and a contract document, the contract documents shall govern. No guarantee is made that the data systems used by the Engineer will be directly compatible with the systems the Contractor uses.

Electronic information shall not be considered a representation of actual conditions to be encountered during construction. Providing the Contractor this information does not relieve the Contractor from the responsibility of making an investigation of conditions to be encountered, including, but not limited to, site visits and basing the bid on information obtained from these investigations and professional interpretations and judgment. The Contractor assumes the risk of error if the information is used for any purposes for which the information was not intended. Assumptions the Contractor makes from this electronic information or manipulation of the electronic information is at their risk.

If changes are made during construction, regardless if the change is initiated by the Contracting Authority or Contractor, it shall be the Contractor's sole responsibility to update electronic files that they will use.

1.06 INCREASE OR DECREASE OF WORK

A. The Jurisdiction reserves the right to make such alterations in the plans or in the quantities of work as may be considered necessary. Such alterations shall be in writing by the Engineer and shall not be considered as a waiver of any conditions of the contract documents or to invalidate any of the provisions thereof.

B. Unless such alterations, increases, or decreases materially change the character of the work to be performed or the cost thereof, the altered work shall be paid for at the same unit prices as other parts of the work. Quantity changes amounting to 20% or less of the total bid for an item shall not affect the unit price of that item. If, however, the character of the work or the unit costs thereof are materially changed, due to unforeseen events, an allowance shall be made on such basis as may have been agreed to in advance of the performance of the work.

C. Whenever materials have been delivered to the Contractor or to the work site and the bid item related to those materials is deleted, the Jurisdiction will determine one of the following:

1. Pay invoiced cost for the materials, not to exceed 80% of the authorized amount for the bid item, plus 10% of the invoiced material cost as an overhead charge in addition to documented transportation costs to have the Contractor deliver the materials to the site designated by the Engineer

   OR

2. Pay the invoiced restocking fee (not to exceed 15% of the actual material cost), plus 10% of the restocking fee as an overhead charge, in addition to documented transportation costs incurred by the Contractor to return the materials.

1.07 CHANGE ORDERS

A. Oral Orders: The Engineer shall have authority to give oral orders for minor or incidental changes in the work not involving extra cost and not inconsistent with the proposed purpose of the work.

B. Written Orders: The Engineer may in his/her discretion, and subject to formal approval by the Jurisdiction, if required, issue written change orders changing the scope of the work and/or adjusting the amount to be paid to the Contractor for performing such work; however, the Engineer may, in case of emergency of endangering life or property, orally authorize such a change order without formal approval by the Jurisdiction. Each written change order for extra work shall be explicit in its instruction and shall be duly executed by the Jurisdiction. One copy of said change order shall be filed with the Contractor. Each change order shall stipulate the amount and method of payment.

1.08 SITE CONDITIONS

A. The Contractor is required by Section 1020, 1.04 - Examination of the Contract Documents and Site of Work to make reasonable investigation and examination to determine latent and subsurface conditions at the site of the work prior to preparing its proposal. The Jurisdiction makes no guarantee of any conditions, latent or subsurface, at the site of the work. The Jurisdiction shall not be obligated to make any payments to the Contractor by reason of any latent or subsurface conditions.

B. Failure of the Contractor in determining adverse site conditions prior to filing its proposal, or in any phase of its performance of the work, shall be grounds for refusal by the Jurisdiction to agree to pay for additional work by the contractor necessitated by such site conditions.

1.09 CHANGED SITE CONDITIONS

A. Latent or Subsurface Conditions:

1. If the Contractor encounters latent or subsurface conditions differing materially from those indicated in the contract documents or from those ordinarily encountered in performing work of the character involved, and which the Contractor could not have discovered by a reasonable site investigation and examination of the type customarily undertaken by prudent and competent contractors, and if these unusual or changed conditions are considered by the Contractor as a basis for compensation in addition to the contract price, the Contractor shall promptly after discovery thereof notify the Engineer of its claim in writing. Before disturbing the site at which the latent or subsurface condition is alleged to exist, the Contractor shall give the Engineer the opportunity to inspect the same.

2. After inspection by the Engineer, the Jurisdiction may, in its discretion, authorize the Contractor to proceed with or abandon the work. The Contractor shall resume construction operations pending a decision regarding its claim by the Jurisdiction. Failure of the Contractor to give prompt written notice and to give the Engineer full opportunity to inspect the condition before disturbing the site shall be deemed a waiver by the Contractor of all claims for extra compensation arising out of the alleged condition.

B. Compensation:

1. If the Engineer determines the condition could not reasonably have been discovered, the Contractor is entitled to additional compensation by reason of increased expense caused by the condition, and said condition requires work not contemplated by the contract, a change order will be executed by the parties providing for additional compensation for such amount as the parties may agree upon.

2. If the Engineer determines the condition to be such as to justify an extension in contract time, such additional time will be granted according to Section 1040, 1.11 - Delays Caused by the Jurisdiction and Section 1080, 1.09 - Extension of Time.

1.10 DISPUTED CLAIMS FOR EXTRA COMPENSATION

A. Basis of Claim for Extra Compensation:

1. In any case where the Contractor believes extra compensation is due for work or material beyond the scope of the work under the contract and not ordered by the Engineer as extra work as defined herein, the Contractor shall notify the Engineer in writing of its intention to make claim for such extra compensation before beginning the work on which the claim is based. The Contractor shall not proceed with that work until the Contractor and the Jurisdiction have executed a change order with respect to extra compensation.

2. The Jurisdiction shall be responsible for damages attributable to the performance, nonperformance, or delay, of any other contractor, governmental agency, utility agency, firm, corporation, or individual authorized to do work on the project, only when such damages result from negligence on the part of the Jurisdiction, its Engineer, or any of its officers or employees.

3. In any case where the Contractor deems that extra compensation is due from the contracting authority as damages resulting from such performances, nonperformances, or delays, the Contractor shall notify the Engineer in writing at the time the delay occurs.

1.10 DISPUTED CLAIMS FOR EXTRA COMPENSATION (Continued)

4. In either case, if such notification is not given, or if after such notification is given, the Engineer is not allowed facilities for keeping strict account of actual costs as defined for force-account construction, the Contractor thereby agrees to waive the claim for extra compensation for such work. Such notice by the Contractor, and the fact the Engineer has kept account of the cost as aforesaid, shall not be construed as establishing the validity of the claim.

5. The claim, when filed, shall be in writing and in sufficient detail to permit auditing and an evaluation by the Jurisdiction. The claim shall be supported by such documentary evidence as the claimant has available and shall be verified by affidavit of the claimant or other person having knowledge of the facts.

B. Presentation and Consideration of Claim: If the claimant wishes an opportunity to present its claim in person, the claim shall be accompanied by a written request to do so. Where the claimant asks an opportunity to present its claim in person, the Jurisdiction, within 30 calendar days of the filing of the claim, shall fix a time and place for a meeting between the claimant and the Jurisdiction or its designated representatives or representative. The Jurisdiction shall, within a reasonable time after the filing of the claim or the meeting above referred to, whichever is later, rule upon the validity of the claim and notify the claimant, in writing, of its ruling together with the reasons therefore. In case the claim is found to be just, in whole or in part, it shall be allowed and paid to the extent so found.

C. Request for Arbitration: In the event a Contractor's claim as outlined in the above procedure has been disallowed, in whole or in part, the Contractor may, within 30 calendar days from the date the ruling of the Jurisdiction is mailed, make a written request to the Jurisdiction that its claim or claims be submitted to a board of arbitration. The Jurisdiction shall decide if the matter is subject to arbitration and shall, within 30 calendar days of the receipt of the request for arbitration, grant or deny the request for arbitration. The Jurisdiction's decision shall be final.

D. Board of Arbitration:

1. The board of arbitration shall consist of three persons - one to be appointed by the Jurisdiction, one to be appointed by the Contractor, and the third to be appointed by the two arbitrators thus chosen.

2. The arbitrators selected shall be persons experienced and familiar with construction or engineering practices in the general type of work involved in the contract, but shall not have been a regular employee or an individual retained by either party at the time the claim arose, or at the time of arbitration.

E. Arbitration Proceedings: The board of arbitration shall make its own rules of procedure and shall have authority to examine records kept by the Jurisdiction and the Contractor. If the desired records are not produced within 10 calendar days after they are requested, the board of arbitration shall proceed without them as best it may. Notification of arbitration proceedings shall be made by the arbitration board to both the Jurisdiction and the Contractor, and each shall have the opportunity to attend all sessions of the arbitration board. In determining the findings or award or both, a majority vote of the board shall govern. Copies of the findings or award or both, signed by the arbitrators, shall be filed with the Jurisdiction and the Contractor. A unanimous report or majority report may be used. The board of arbitration shall fix the cost of the proceedings, including a reasonable compensation to the arbitrators, and shall determine how the total cost shall be borne by the parties.

1.10 DISPUTED CLAIMS FOR EXTRA COMPENSATION (Continued)

F. Jurisdiction of Board of Arbitration: The board of arbitration shall have jurisdiction to pass upon questions involving compensation to the Contractor for work actually performed or materials furnished and upon claims for extra compensation that have not been allowed by the Jurisdiction. The board's jurisdiction shall not extend to a determination of quality of workmanship or materials furnished, or to an interpretation of the intent of the plans and specifications except as to matters of compensation. Jurisdiction of the board shall not extend to setting aside or modifying the terms or requirements of the contract.

G. Determination of Board of Arbitration Final: The findings or award, or both, of the arbitration board, if acceptable to both parties to the contract, may become a basis for final payment. If the findings of the arbitration board are unacceptable to either party to the contract, said findings may become the basis for further negotiation between the parties. In the event a solution agreeable to both parties has not been reached through the filing of a claim, through arbitration, or if arbitration has been denied, either party may resort to whatever other methods for resolving the claim are available to it. The Contractor shall not initiate any suit against the Jurisdiction for the adjudication of any claim until said claim has been first presented to the Jurisdiction, pursuant to this article, and either submitted to arbitration or a request for arbitration is denied.

1.11 DELAYS CAUSED BY THE JURISDICTION

If the Jurisdiction or its agents should cause a delay in any part of the work or in the final completion of the job, this fact shall not make void the provisions of the contract as to liquidated damages; but the Contractor will promptly be given such extension of time for the final completion of the job as the Jurisdiction may deem proper to compensate the Contractor for such delay.

1.12 ORAL AGREEMENTS, CONVERSATIONS, AND INFORMAL COMMUNICATIONS

No oral agreement or conversation made or had with any officer, agent, or employee of the Jurisdiction, and no informal written communication from any officer, agent, or employee of the Jurisdiction, occurring either before or after execution of the contract, shall affect or modify any of the terms or obligations contained in any of the contract documents. Such oral contact and such informal writings shall be considered as unofficial information and in no way binding upon the Jurisdiction.

1.13 ERRORS OR OMISSIONS

The Contractor shall examine the plans before beginning construction work. If errors or omissions are discovered in the plans, the Contractor shall call them to the attention of the Engineer before proceeding with the work. In no case shall the Contractor make the corrections therefore without written permission from the Jurisdiction. In case revised plans of a supplementary or explanatory nature are necessary or desirable for clarification, or to correct any errors or omissions, they will be furnished by the Jurisdiction from time to time as the work progresses.

END OF SECTION

CONTROL OF WORK

1.01 AUTHORITY OF THE ENGINEER

A. The work included in the contract is to be done to the complete satisfaction of the Engineer, and the decision of the Engineer as to the true construction and meaning of the contract documents, plans, specifications, estimates, and as to all questions arising as to proper performance of the work, shall be final, except as provided in Section 1040, 1.10 - Disputed Claims for Extra Compensation.

B. The Engineer shall determine the unit quantities and the classification of all work done and materials furnished under the provisions of the contract documents, and the Engineer's determination thereof shall be final except as provided in Section 1040, 1.10 - Disputed Claims for Extra Compensation.

C. The Engineer shall decide any and all questions that may arise regarding the quality or acceptability of materials furnished and work performed, the rate of progress of the work, including cleanup and restoration, acceptable fulfillment and performance of the contract on the part of the Contractor, and compensation. The decision of the Engineer in such matters shall be final except as provided in Section 1040, 1.10 - Disputed Claims for Extra Compensation.

D. Nothing contained in this section or in the contract documents shall be construed as requiring or permitting the Engineer to direct the means, methods, sequences, or procedures, including safety measures, of performing any work under the contract or contract documents, except to ensure the quality of work conforms to these specifications and other provisions of the contract documents and the contract will be completed as scheduled.

1.02 AUTHORITY AND DUTIES OF THE ENGINEER'S AUTHORIZED REPRESENTATIVE

A. The Engineer may appoint a representative to monitor any or all materials used and work done. Such observation may extend to any or all parts of the work and to the preparation or manufacture of the materials to be used. The Engineer's authorized representative will not be authorized to revoke, alter, enlarge, or relax the provisions of these specifications. When placed on the work, the Engineer's authorized representative will keep the Engineer informed as to the progress and quality of the work and the manner in which it is being done.

B. Results of tests and examinations may be available to the Contractor on an informational basis. Absence or presence of representative test data does not alter the Contractor's responsibility for compliance with the contract documents. The Engineer's authorized representative will call to the attention of the Contractor any lack of compliance with the contract documents. However, failure of the Engineer's authorized representative or the Engineer to call the attention of the Contractor to faulty work or to lack of compliance with the contract documents shall not constitute acceptance of such work.

C. The Engineer's authorized representative will not be authorized to approve or accept any portion of the work or to issue instructions contrary to the contract documents. The Engineer's authorized representative will act under the authority of the Engineer to reject defective work or material, and to suspend any work that is not being properly performed, subject to the final decision of the Engineer.

D. The Engineer's authorized representative will not act as supervisor or perform other duties for the Contractor, nor improperly interfere with management of the work. The Engineer's authorized representative will exercise such additional authority as may, from time to time, be delegated by the Engineer.

1.03 COOPERATION BY THE CONTRACTOR

A. A set of approved plans, specifications, contract documents, and any special provisions and authorized alterations will be supplied to the Contractor, and the Contractor shall have them available on the job site at all times.

B. A competent, authorized representative of the Contractor shall be present on the site of the work continually during its progress. This representative must be capable of reading and thoroughly understanding the contract documents and experienced in the type of work being performed. This representative shall supervise, direct, and control the Contractor's operations, personnel, and work, and oversee the Subcontractor's operations.

C. The Contractor shall give the Engineer written notification of the name of the Superintendent. The Contractor or its Superintendent shall receive from the Engineer all explanations and directions necessary for the satisfactory prosecution and completion of the work.

D. The Contractor shall not cause any unnecessary delay or hindrance to other contractors on the work and shall be required to cooperate with other contractors to the fullest extent.

1.04 COOPERATION WITH OTHER CONTRACTORS

A. The Jurisdiction reserves the right to award other contracts in connection with this work and the total improvement. The Contractor is required to become fully informed of the conditions relating to construction and labor under which the work will be or is now being performed, and the Contractor shall employ, as far as possible, such methods and means in the carrying out of its work as will not cause any interruption or interference with any other contractor or agency. The Contractor shall give other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work, and shall properly integrate, incorporate, and/or coordinate its work with theirs.

B. If any part of the Contractor's work depends for proper execution or results on the work of any other contractor, the Contractor shall inspect and promptly report to the Engineer any defect in such work by another contractor that renders it unsuitable for such proper execution and results. The Contractor's failure to inspect and report such defects shall constitute an acceptance of the other contractor's work as fit and proper for the integration or incorporation of its work, except as to defects that may develop in the other contractor's work after the execution of the Contractor's work.

C. Wherever work being done by the Jurisdiction's forces or by other contractors is contiguous to work covered by the contract, the respective rights of the various interests involved shall be established by the Engineer, in order to secure the completion of the various portions of the work in general harmony.

D. Unless otherwise specified in the contract documents, the Contractor shall give notice, as hereafter provided, to all utilities, public and private agencies, abutting property owners, and all others affected by its operations as to time for starting and for completion of its work, names of streets or locations of alleys closed, schedule of operations, and routes of detours where possible. Notification shall be made sufficiently ahead of time to provide proper re-routing of traffic and erecting of signs before the work is to begin.

E. The Contractor shall properly coordinate and expedite its work in such a manner as to cause the least amount of conflict and interference between its operation and those of all others affected by its operations. Any or all damages or claims resulting from the improper or insufficient notification of all others affected by its operations shall be the responsibility of the Contractor.

1.05 SHOP DRAWINGS, CERTIFICATES, AND EQUIPMENT LISTS

A. Submission of Drawings:

1. The Contractor shall submit to the Engineer all shop drawings and equipment drawings or lists as called for in the contract documents or as requested by the Engineer. Drawings and listings shall be complete and shall contain all required detail information conveyed according to the latest recommended standards for detailing.

2. The Contractor shall make any corrections required by the Engineer and submit the revised shop or equipment drawings or listings for review. After review by the Engineer, the shop or equipment drawings or listings will be so marked, dated, signed by the Engineer, and forwarded to the Contractor for reproduction and distribution.

B. Submission of Equipment Lists:

1. If requested in the contract documents, as soon as practicable after award of contract and before any items of material or equipment are purchased, the Contractor shall submit to the Engineer for review a complete list of the principal fixtures and equipment to be incorporated into the work.

2. The Contractor shall also submit applicable brochures, technical data, catalogs, cuts, diagrams, manufacturer's drawings and installation instructions, samples if required, and other descriptive data including the complete description, trade name, model number, type, size, and rating.

C. Engineer's Review:

1. Review by the Engineer shall not be construed as a complete check but will indicate only that the general method of construction and detail is satisfactory. The Engineer assumes no responsibility for errors in dimensions in the shop drawings and assumes the Contractor will use material complying with requirements of the contract documents or, where not specified, those of sound and reasonable quality, and will erect the subjects of such shop drawings according to recognized standards of first quality work or, when specified, according to standards of the contract documents.

2. Any work done or material ordered by the Contractor prior to review by the Engineer shall be at the Contractor's risk.

1.06 CONFLICT AVOIDANCE

A. Expose possible conflicts, such as utility lines and drainage structures. Verify elevations of each and verify clearances for proposed construction.

B. Complete elements of the work that can affect line and grade in advance of other open cut construction unless noted on the plans.

C. See Section 1040, 1.09 - Changed Site Conditions if unknown or changed conditions are encountered.

1.07 EXAMINATION OF MATERIALS AND WORK

A. The Contractor shall furnish the Engineer and its agents every reasonable opportunity to ascertain whether the work and materials are in reasonably close conformity with the contract documents. At any time before final acceptance of the work, at the request of the Engineer, the Contractor shall remove or uncover portions of the work for examination. After examination, the Contractor shall restore such portions of the work to the standards required by the contract documents.

1.07 EXAMINATION OF MATERIALS AND WORK (Continued)

B. Should the work thus exposed and examined prove acceptable, the uncovering, removing, and replacing of such work shall be paid for as specified in Section 1090, 1.04 - Payment for Change Orders. Should the work thus exposed and examined prove unacceptable, the uncovering, removing, and replacing of such work shall be at the Contractor's expense.

1.08 REMOVAL OF DEFECTIVE WORK AND MATERIALS

A. Defective work or materials may be condemned by the Engineer any time before the final acceptance of the work. Notice of such condemnation shall be given in writing by the Engineer. Such condemned work shall be immediately corrected to the satisfaction of the Engineer. Failure or neglect on the part of the Engineer to condemn unsatisfactory material or reject inferior workmanship shall not release the Contractor, nor shall it be construed as an acceptance of such work, nor shall the final acceptance of such work bar the Jurisdiction from recovering damages on account thereof.

B. Any defective work shall be removed and replaced at the Contractor's expense. Should the Contractor fail or refuse to remove defective work when so ordered by the Engineer, the Engineer shall have authority to order the Contractor to suspend further operations, and may withhold payment on estimates until such defective work has been removed and replaced according to the contract documents.

C. Continued failure or refusal on the part of the Contractor to correct defective work promptly shall be sufficient cause for the Jurisdiction to declare the contract in default. No compensation will be paid to Contractor for defective work or materials, or for the satisfactory removal, correction, or disposal thereof.

1.09 UNAUTHORIZED WORK

A. Unauthorized work is work done contrary to the work shown in the contract documents. The Jurisdiction will not pay for unauthorized work.

B. Unauthorized work may be ordered to be removed and replaced immediately at the Contractor's expense.

1.10 LINE AND GRADE STAKES

A. Minimum standards for construction survey provided by the Jurisdiction will meet the requirements of Section 11,010. The Engineer will set the necessary stakes promptly upon notification by the Contractor that stakes are needed.

B. The work shall be performed in strict conformity with the contract documents and to the lines and grades as fixed by the Engineer, and shall be according to such instructions as may be given by the Engineer. When such stakes or lines are given by the Engineer, the Jurisdiction will be responsible for the correctness thereof, and the Contractor will be responsible for their proper use, interpretation, and preservation.

C. The Contractor shall protect and preserve in their original position all stakes, points, or marks set for the work by the Engineer. Where the Engineer shall consider such stakes, points, or marks to have been unnecessarily altered or destroyed, the Engineer may cause the expense of correcting or replacing them to be charged to the Contractor and the amount of such costs deducted from any monies due or which may become due to the Contractor under the contract.

1.11 PROVIDING JOB SITE UTILITIES

A. The Contractor shall make all necessary arrangements for the provision to the job site of all required utilities for the project. The Contractor shall arrange its work so it will not be delayed because such regulations or requirements relating to the use of utilities. All costs for the provision of utilities to the job site shall be borne by the Contractor.

B. Fire hydrants shall not be used by the Contractor or its subcontractors unless authorization for such use has been obtained from the appropriate water utility agency.

1.12 SALVAGE

A. When the contract documents specify salvage of materials for the Jurisdiction as part of the work, the material to be salvaged shall be carefully salvaged and delivered to the designated location in the best condition and ready for storage. When the contract documents provide for salvage of such materials by the Contractor, the Contractor shall salvage such materials and promptly remove them from the site.

B. The Contractor shall not allow inspection or sale of salvage materials to third parties at the site without written approval of the Jurisdiction.

1.13 PROTECTION OF WATER QUALITY AND WETLANDS

A. The Contractor shall comply with the requirements of the Clean Water Act (33 U.S.C. 1344 and 33 CFR 323) and Executive Order 11990. When it becomes necessary for the Contractor to work in waters of the United States, the Contractor shall be aware that a Section 404 permit may be required.

B. When required, the Contracting Authority will obtain a Section 404 permit for essential work on the right-of-way prior to the award of the contract. The Contractor shall adhere to the requirements of the permit. Activities occurring in or across waters of the United States not specifically reviewed and approved in the permit are not authorized. If the Contractor desires to use construction methods that are not specifically approved by the permit, the Contractor shall be responsible for obtaining approval in the form of a new Section 404 permit from the U.S. Army Corps of Engineers and possibly Iowa DNR. The Contractor shall not use construction methods that require additional mitigation by the Contracting Authority. The Contractor will not be granted additional compensation or contract time due to their request for a new permit. If, however, due to no fault of the Contractor, a Section 404 permit modification involving activities within the right-of-way is deemed necessary by the Engineer, additional contract time and/or compensation may be considered.

1.14 FINAL INSPECTION AND ACCEPTANCE

A. As soon as practicable after the completion of the work, it will be inspected thoroughly by the Engineer. The Contractor will be notified when the inspection is to be made so it or its representative may be present.

B. If the inspection reveals any defects in the work as contemplated by the specifications, such defects shall be repaired or unsatisfactory work shall be replaced, as the Engineer may direct, before final acceptance. The cost of all such repairs and replacement shall be borne by the Contractor, and no extension of the contract time shall be granted because of the time required to remedy such defects.

C. When the work is found to be satisfactory, it will be accepted as provided in Section 1090, 1.08 - Acceptance and Final Payment. Such final acceptance will not be reopened after having once been made, except on evidence of collusion, fraud, or obvious error.

1.15 ADDITIONAL CONTRACTOR RESPONSIBILITIES

If a form of automated machine guidance (AMG) is used for grading or paving operations, the following is required:

A. At least one week prior to the preconstruction meeting, submit to the Engineer for review a written AMG work plan which indicates the following:
- Equipment type
- Control software manufacturer and version
- Proposed location of GPS base station for broadcasting differential correction data to rover units
- Proposed locations where AMG will be utilized

B. Provide Engineer with up to 8 hours of formal training on Contractor's AMG systems.

C. For grading contracts, provide a rover for use by the Engineer.

D. Check and recalibrate, if necessary, the AMG system at the beginning of each work day.

E. Contractor will bear all costs associated with use of the AMG system, including but not limited to reconstruction of work that may be incurred due to errors in application of the AMG system. Correction of grade elevation errors and any associated quantity adjustments resulting from the Contractor's activities are to be done at no cost to the Contracting Authority.

END OF SECTION

CONTROL OF MATERIALS

1.01 MATERIALS SOURCE OF SUPPLY AND QUALITY REQUIREMENTS

A. Materials used in the work shall meet all quality requirements of the contract documents. In order to expedite inspection and testing of materials, the Contractor shall notify the Engineer in writing of the proposed sources of those materials requested by the Engineer promptly after being awarded the contract. Any material shall be produced with a reasonably uniform quality and within requirements specified; the producer shall perform quality control tests and evaluations the producer believes necessary to control the product adequately. All materials for use in the project are subject to inspection and tests at any time prior to being incorporated into the work.

B. For the convenience of the Contractor, and when convenient to the Engineer, materials may be inspected at the site of production. Materials tested and found in compliance at the site of production may be later inspected for reasonably close conformity and normally will not be rejected except for obvious mistakes, contamination, quality change, or mishandling. To avoid later rejection, materials that usually show an extreme change in character or quality prior to or during the process of incorporation into the work should be produced to more rigid limits than those required by the specifications.

C. At the option of the Engineer, approval of the source, or approval of materials at the source prior to delivery, may be required. If it is found after trial that sources of supply for previously approved materials do not produce specified products or when conditions are such that use of unfit materials can not be prevented except by extraordinary inspection methods, the Contractor shall furnish materials from other sources. Before delivery, and at any time during the process of preparation and use, materials shall be subject to the approval of the Engineer.

D. Materials not previously inspected will be inspected at the project site. Acceptance at that time will be based on sampling and testing, producer's certifications, visual inspection, or any combination of these at the discretion of the Engineer.

E. Use of materials on the basis of the producer's certification, quality control tests, and evaluations may be permitted or required. The Engineer may require specific data obtained by qualified persons and procedures be provided with the material, when delivered. Certified gradation testing by a certified aggregate technician will be required for all aggregates to be furnished by the Contractor, and shall be done according to the current Iowa DOT Materials I.M. 209.

1.02 ALTERNATE PROCESSES, EQUIPMENT, OR MATERIALS AND OTHER SUBSTITUTIONS

A. General: In order to establish a basis of quality for the work, performance, or economy of operation, certain processes, types of machinery and equipment, or kind of material may be referenced in the contract documents by designating a manufacturer by name and referring to its brand or model numbers. Such reference is not intended to foreclose other processes, equipment or materials that will in the sole discretion of the Engineer meet, or exceed, the designated standards. There may be instances where the Engineer will not consider alternate processes, equipment, or materials.

B. Consideration:

1. The Jurisdiction may consider alternate processes, equipment, or materials for those specified in the contract documents; however, it is only an indication that the Jurisdiction will not foreclose consideration of the bidder’s/contractor’s request, and is not an approval. Following are the steps for consideration of alternate processes, equipment, or materials:

1.02 ALTERNATE PROCESSES, EQUIPMENT, OR MATERIALS AND OTHER SUBSTITUTIONS (Continued)

a. If a bidder/contractor desires to use alternate processes, equipment, or materials, the bidder/contractor shall contact the Engineer to confirm the Jurisdiction would consider alternate processes, equipment, or materials for those as specified in the contract documents.
b. Support/requirements for submissions of alternatives:
   1) The Engineer will consider and evaluate other products, equipment, methods, and systems only when such items are accompanied by full and complete technical data, test data, code compliance, and other relevant information, including samples and finishes where appropriate.
   2) The bidder/contractor shall submit design information, material compatibility, performance, durability, laboratory tests, chemical analysis, color, manufacturer's specifications, and other relevant information as proof of quality and integrity when presenting proposed alternatives to the Engineer for consideration. The bidder/contractor must include the kind, quality, design, and performance of the proposed materials and equipment.
   3) If alternate methods are proposed, the contractor shall furnish complete engineering plans covering the proposed change.
   4) It is the sole responsibility of the proposer of any alternative product to have pre-qualified the product proposed for its intended use for compliance with all applicable codes within the Jurisdiction prior to submittal to the Engineer for consideration.
c. In making an alternative request, the contractor shall be responsible for all costs including reimbursing the Engineer for services furnished and any time required to review the proposed change.
d. If the bidder/contractor desires to use alternate processes, equipment, or materials for those as specified in the contract documents, the bidder/contractor shall secure the written approval of the Engineer before entering an order therefore.
e. Proposed alternative processes, equipment, or materials that will in the sole discretion of the Engineer meet, or exceed, the designated standards will be given written approval to be used on the project as an "Approved Equal" or "Equivalent" to the specified item.
f. If approval as an "Approved Equal" or "Equivalent" is given by the Engineer, such approval will be on the condition that the bidder/contractor shall be fully responsible for producing construction work in reasonably close conformity with contract requirements.
g. In order to ensure fair competitive bidding, it is critical that all bidders base their bids on providing the material, equipment or process (including those trade named) fully complying with the contract documents.
h. The contractor shall not be entitled to any additional compensation if the Engineer does not approve the contractor's request for alternate processes, equipment, or materials after the contract is awarded. The bidder/contractor is solely at risk until the Engineer issues written notification of "Approved Equal" or "Equivalent."
i. The Jurisdiction reserves the right to adjust the contract price when the cost of an "Approved Equal" or "Equivalent" is less than the cost of the specified item. The contractor shall estimate the net savings of the proposed alternate and if the Engineer approves the proposal, a change order may be processed to reduce the contract amount by up to 50% of the estimated net savings of the "Approved Equal" or "Equivalent."

2. If the contract documents state that the Jurisdiction will not consider alternate processes, equipment, or materials, the bidder/contractor shall not propose any alternates to those specified in the contract documents.

1.03 SAMPLES AND TESTING

A. Each consignment of material shall be tested or inspected before being incorporated into the work and shall be approved by the Engineer in charge of the work before it is used. The Contractor shall allow such facilities for collecting and forwarding samples and subsequent testing as the Engineer may require.

B. Samples shall be supplied to allow ample time for testing without delaying the work. No material for which samples are requested shall be used until the samples have been approved. If necessary, work will be delayed or suspended, at no cost to the Jurisdiction, to permit the completion of all specified tests and examinations. Tests made on the samples of materials utilized for improvements constructed under these specifications will be made by the Jurisdiction at no cost to the Contractor.

C. All tests shall be made by the Jurisdiction testing laboratory, or at such independent testing laboratories as the Engineer shall approve. Except as otherwise specified, the testing of materials furnished for use under these specifications shall be done according to the methods described in the specific ASTM, AASHTO, AWWA, or other authorized specifications for each material. Results of all tests shall be submitted to the Engineer.

1.04 STORAGE OF MATERIALS

The Contractor shall be responsible for care and storage of materials delivered to the work site or purchased for use. Material delivered to the work site and damaged before actual incorporation in the work may be rejected by the Engineer even though it may have been previously acceptable. Stored materials shall be located to facilitate thorough inspections, to minimize environmental damage, and not interfere with operations.

1.05 UNACCEPTABLE MATERIALS

All materials not conforming to the requirements of the specifications at the time they are to be used shall be considered unacceptable, and all such materials will be rejected and shall be removed immediately from the work site unless otherwise instructed by the Engineer. No rejected material, the defects of which have been corrected, shall be used until approval has been given by the Engineer.

1.06 MATERIALS SUPPLIED BY THE JURISDICTION

When any materials are to be furnished by the Jurisdiction, the designation of such materials and the time of availability will be included in the contract documents.

1.07 MATERIALS SUPPLIED BY THE CONTRACTOR

A. Unless otherwise stated in the contract documents, all materials and equipment needed for, or to become a part of, the work shall be furnished by the Contractor. The Contractor shall assume full responsibility for ordering materials and equipment of the quality specified and of the quantity necessary, and shall be responsible for payment of the purchase and/or delivery cost of such materials and equipment.

B. All materials and equipment that become the property of the Jurisdiction as a part of the project shall be unused and newly produced or manufactured with original materials (as opposed to recycled or used materials), shall be state of the art for that material or equipment, and shall be properly stored to protect the integrity of the material and equipment. The Engineer may waive this provision and accept used or recycled material or equipment prior to submission of the bid. Such waiver must be in the form of an addendum.

END OF SECTION

LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC

PART 1 - LEGAL RELATIONS

1.01 MUNICIPAL REGULATIONS, STATE, AND FEDERAL LAWS AND REGULATIONS

A. The Contractor shall at all times observe and comply with all applicable Federal, State, County, or City laws, ordinances, orders, and regulations.

B. References in these specifications to particular chapters or sections of the Iowa Code shall be to those chapters or sections as they appear in the current version of the Iowa Code. In the event such chapters or sections of the Iowa Code are subsequently amended, the specifications shall be deemed to refer to those chapters or sections as amended.

C. During the performance of this contract, the contractor (for itself), its assignees, and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

1. Compliance with Regulations: The contractor shall comply with the Regulations relative to non-discrimination in Federally assisted programs of the DOT Title 49, Code of Federal Regulations, Part 21, as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

2. Nondiscrimination: The contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, national origin, sex, age, or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

3. Solicitations for Subcontracts, Including Procurement of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurement of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to non-discrimination on the grounds of race, color, national origin, sex, age, or disability.

4. Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant there to, and shall allow access to its books, records, accounts, other sources of information, and its facilities as may be determined by the Contracting Authority, the Iowa DOT, or FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the Contracting Authority, the Iowa DOT, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

5. Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the Contracting Authority, the Iowa DOT, or the FHWA shall impose such contract sanctions as they may determine to be appropriate, including, but not limited to:
   a. Withholding of payments to the contractor under the contract until the contractor complies, and/or
   b. Cancellation, termination, or suspension of the contract, in whole or in part.

1.01 MUNICIPAL REGULATIONS, STATE, AND FEDERAL LAWS AND REGULATIONS (Continued)

6. Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurement of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto. The contractor shall take such action with respect to any subcontract or procurement as the Contracting Authority, the Iowa DOT, or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the Contracting Authority or the Iowa DOT to enter into such litigation to protect the interests of the Contracting Authority or the Iowa DOT; and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

1.02 GOVERNING LAW

The law of the State of Iowa shall govern this contract and all subcontracts for materials and services entered into by the Contractor.

1.03 PERMITS AND LICENSES

The Contractor shall procure all necessary permits for the construction of the work and for temporary excavations, obstructions, enclosures, and street openings arising from the construction and completion of the work described in the contract documents. The cost for all required Jurisdictional permits and licenses will be waived by the Jurisdiction. The Contractor shall be responsible for all violations of the law for any cause in connection with the construction of the work or caused by the obstruction of roads, streets, highways, or sidewalks, and shall give all requisite notices to the Jurisdiction or other public authorities in connection therewith.

1.04 PATENTS AND ROYALTIES

The Contractor shall defend, indemnify, and save the Jurisdiction harmless against all claims arising from alleged infringements of patents and royalties covering tools, machinery, processes, appliances, devices, or materials used in connection with the work. Unit prices provided in the proposal shall include payment of all necessary royalties or licenses.

1.05 USE AND OCCUPANCY PRIOR TO COMPLETION OF CONTRACT

The Contractor shall complete any portion or portions of the work in such order and at such time as the Engineer may require. The Jurisdiction shall have the right to use any completed or partially completed portions of the work at any time, but such possession and use shall not be deemed an acceptance of the work so used or any part thereof. If such prior use increases the cost of or delays the work, the Contractor shall be entitled to such extra compensation or extension of time, or both, as the Engineer may determine appropriate. When improvements are released to the Jurisdiction for public use prior to final approval and acceptance, the Contractor will be relieved of the responsibility for damages due to the elements or due to ordinary public use, but only the released and used portion of the improvements. Such release by the Contractor to the Jurisdiction for public use shall be directed in writing by the Engineer.

1.06 CONTRACTOR'S RESPONSIBILITY FOR THE WORK

A. Until the work is accepted by the Jurisdiction, it shall be in the custody of and under the charge, care, and control of the Contractor, who shall take every precaution against damage to the work by action of the elements or any other cause. The Contractor shall rebuild, repair, restore, and make good at its own expense, all damages to any portion of the work before acceptance thereof by the Jurisdiction. Issuance of any estimate or partial payment for work done will not be considered as final acceptance of any work completed.

1.06 CONTRACTOR'S RESPONSIBILITY FOR THE WORK (Continued)

B. If the Contractor completes a unit or portion of the work, the Jurisdiction may at its discretion accept such work and the Contractor may be relieved of further responsibility for such unit or portion of the work. Such partial acceptance shall not void or alter any of the terms of the contract, nor shall it constitute final acceptance of the work as provided in Section 1090, 1.08 - Acceptance and Final Payment.

1.07 RESPONSIBILITY FOR DAMAGE CLAIMS

The parties agree that it is their intent that there be no third-party beneficiaries to this contract. No provision of this contract or of any addendum, materials instructional memorandums, plans, proposal, special provision, developmental specification, supplemental specification, or general supplemental specification shall be construed as creating any third-party beneficiaries.

1.08 PERSONAL LIABILITY OF PUBLIC OFFICIALS

Neither the Engineer nor the Engineer's authorized representatives, agents, or assistants shall have any liability, either personally or as officials of the Jurisdiction, in carrying out any of the provisions of the Contract or in exercising any power or authority granted to them thereby. It being understood that in such matters they will act as the agents and representatives of the Jurisdiction.

1.09 WAIVER OF LEGAL RIGHTS

A. The Jurisdiction shall not be precluded or estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment therefore, from showing the true amount and character of the work performed and the materials furnished by the Contractor, or from showing that any such measurement, estimate, or certificate is untrue or incorrectly made, or from showing that the work or materials do not in fact conform to the contract documents.

B. The Jurisdiction shall not be precluded or estopped, notwithstanding any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor and its surety such damages as it may sustain, and all outlay and expense it incurs, by reason of the Contractor's failure to comply with the terms of the Contract. Neither the acceptance by the Jurisdiction nor any of its representatives, nor any payment for acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the Jurisdiction, shall operate as a waiver of any portion of the contract, or any powers herein reserved, or any right to damages herein provided. A waiver of any breach of the contract shall not be held to be a waiver of any other subsequent breach.

C. The Contractor hereby waives any claims it may hereafter be entitled to assert against the Jurisdiction, its officers, agents, employees, or consultants, on its behalf or on behalf of its employees, agents, subcontractors, sub-subcontractors, and suppliers, for loss of or damage to personal property, tools, or equipment owned by it or its employees, agents, subcontractors, sub-subcontractors, and suppliers, which loss or damage is sustained on the Jurisdiction's project property, or which occurs during work on the project, and the Contractor agrees to assume liability or responsibility for such claims and to procure insurance to cover its exposure in that regard.

1.10 ACCEPTANCE BY THE JURISDICTION - NOT A WAIVER OF CONTRACTOR'S OBLIGATIONS OR A WAIVER OF THE JURISDICTION'S RIGHTS

A. In various provisions of the contract documents, including these specifications, the Jurisdiction has reserved to itself or the Engineer the authority to test or inspect materials, equipment, or manufactured assemblies and to accept or reject those and other elements of the work.

1.10 ACCEPTANCE BY THE JURISDICTION - NOT A WAIVER OF CONTRACTOR'S OBLIGATIONS OR A WAIVER OF THE JURISDICTION'S RIGHTS (Continued)

B. In various provisions of the contract documents, including these specifications, the Jurisdiction has reserved to itself or the Engineer the authority to require the Contractor's preparation of shop drawings for review and to accept or reject same. If unanticipated and either unusual or complex construction procedures or site conditions occur, the Engineer may require the Contractor to submit such shop drawings as, in the judgment of the Engineer, are necessary to satisfactorily complete the proposed construction.

C. Acceptance or approval by the Engineer as therein provided shall not operate to relieve the Contractor of its obligation (1) to perform the work as required by the contract documents in a workmanlike manner and according to the standards for construction applicable to the type of work covered by this contract generally observed by contractors in this locale and (2) to provide materials and equipment meeting the quality requirements as provided in the contract documents. The Jurisdiction assumes no responsibility for errors in shop drawings and assumes the Contractor will use material complying with requirements of the contract documents or, where not specified, those of sound and reasonable quality, and will erect the subjects of such shop drawings according to recognized standards of first quality work or, when specified, according to standards of the contract documents.

D. No such acceptance by the Jurisdiction shall constitute a waiver by the Jurisdiction of its right to subsequently reject defective work, materials, or equipment. Further, no such acceptance by the Jurisdiction or the Engineer shall be deemed a waiver by the Jurisdiction of its right to recover from the Contractor all losses, damages, outlay, or expense it incurs, which is attributable to such defective work, materials or equipment, or manufactured assemblies, nor shall such acceptance or approval be deemed a waiver of the Jurisdiction's right to indemnity from the Contractor for damage or injury to third parties occasioned by such defective work, materials, or equipment.

1.11 BUSINESS ORGANIZATION REQUIREMENTS

The bidder, or contractor, as a business organization shall comply with the following:

A. A corporation, limited liability company, limited partnership, or other type of business organization governed under Iowa statutes must be registered with the Iowa Secretary of State, must use the name under which it is registered with the Iowa Secretary of State, must be authorized to do business in Iowa, and must be registered as a contractor with the Iowa Department of Labor.

B. A partnership, sole proprietorship, company operating under a trade name, or other type of business organization not governed under Iowa statutes should be registered in the Office of the County Recorder where it is located or where the work is to be performed, must use the name under which it is registered, and must be registered as a contractor with the Iowa Department of Labor. Prior to entering into contract, the designated low bidder, if it is not required to be registered with the Iowa Secretary of State, shall provide to the Jurisdiction the name and address of its registered agent or lawful representative upon whom legal notices and processes may be served. The registered agent or lawful representative must be an Iowa resident, an Iowa profit or nonprofit corporation, or a foreign profit or nonprofit corporation qualified to do business in Iowa.

C. A foreign business organization, organized under the laws of a state other than Iowa, shall file with the Engineer’s documentation that it has complied with all the provisions of this section prior to entering into a contract.

1.11 BUSINESS ORGANIZATION REQUIREMENTS (Continued)

D. If a bid is proposed to be submitted by two persons or entities as a joint venture, the names of the two persons or entities appearing on the documents must be followed by the notation – "a joint venture." In that instance, the bid must also be signed by authorized agents of both entities, and the bid security must indicate that it "applies to and covers the proposal for construction of (Project Name) submitted by the (principal on bond) and (name of other company), submitted as a joint venture proposal." A bid submitted by two persons or entities without any indication they are submitting it as a joint venture, without being signed by authorized representatives of both entities, and without bid security covering both entities as a joint venture, will be rejected.

1.12 CONSENT TO JURISDICTION OF IOWA DISTRICT COURT OR FEDERAL DISTRICT COURT IN IOWA

The Contractor agrees that any causes of action that accrue to it, or which by subrogation or assignment accrue to its sureties or insurers, arising out of or connected with this contract shall be brought in the Iowa District Court in and for the County where the Jurisdiction is located or in the United States District Court in and for the District where the Jurisdiction is located. Contractor further consents, on behalf of itself and its subrogees and assigns, to the jurisdiction of either the Iowa District Court in and for the County where the Jurisdiction is located or the United States District Court in and for the District where the Jurisdiction is located, as to any causes of action brought against it arising out of this contract or any work performed under it by Contractor or its subcontractors, and further agrees, on behalf of itself, its subrogees and assigns, to waive any and all objections to the jurisdiction of said court as to any such cause of action.

1.13 SEVERABILITY

It is the intent of the Jurisdiction and the Contractor that the lawful provisions of this contract shall be severable from any provisions of this contract that are hereafter declared to be illegal or void by a court of competent jurisdiction.

PART 2 - RESPONSIBILITIES TO THE PUBLIC

2.01 SANITATION

The Contractor shall arrange for the necessary sanitary conveniences, properly secluded, for the workers on the project. These shall be maintained in a manner inoffensive to the public and in compliance with the local health regulations.

2.02 CONVENIENCE AND SAFETY

A. Use of Streets: The Contractor is granted the privilege of using Jurisdictional roads, streets, or highways, as shown on the plans, for the purpose of doing work specified in the contract, but is not granted exclusive use of such roads, streets, or highways.

B. Protection of Workers and the Public: The Contractor shall erect and maintain good and sufficient guards, barricades, and signals at or near the work according to the MUTCD and all applicable laws, regulations, and specifications. The Contractor shall, in all cases, maintain safe passageways at all road crossings, crosswalks, and street intersections and shall do all other things necessary to prevent an accident or loss of any kind.

After November 24, 2008, all personnel shall wear ANSI 107 Class 2 apparel at all times when exposed to traffic or construction equipment in the right-of-way.

C. Convenience and Access: The Contractor shall handle the work in a manner that will cause the least inconvenience and annoyance to the general public and to the property owners abutting the work area. The Contractor shall also provide access to the abutting property to the greatest extent practicable.

D. Worker Safety: The Contractor shall comply with all current and future federal and state OSHA requirements. Nothing in this contract or any action by the Jurisdiction shall be interpreted or construed as a waiver of OSHA requirements. It is the Contractor's obligation to follow OSHA requirements and standards at all times.

E. Project Area or Work Site Safety:

1. In accordance with Section 1070, 1.06, until the work is accepted by the Jurisdiction, the work shall be in the custody of and under the charge, care, and control of the Contractor. The Contractor is also responsible for the project area or work site. The Contractor is solely responsible for the safety of everyone on its work site.

2. The Contractor should have a safety program; however, the Contractor need not submit a safety program to the Jurisdiction, and the Jurisdiction will not review or approve the Contractor’s safety program. The Jurisdiction assumes that the Contractor will maintain a safe worksite; however, the Jurisdiction’s staff will not intrude in the Contractor’s responsibility for safety issues.

3. The Engineer may assign some or all of the duties and responsibilities of the Engineer to an authorized representative for a given project. Nothing contained in this section or in the contract documents shall be construed as requiring or permitting the Engineer to direct the means, methods, sequences, or procedures, including safety measures, of performing any work under the contract or contract documents, except to assure that the quality of work conforms to these specifications and other provisions of the contract documents and that the contract will be completed as scheduled.

2.02 CONVENIENCE AND SAFETY (Continued)

4. The Engineer may appoint an authorized representative on the work site to monitor the materials used and the work done by the Contractor. The Engineer's authorized representative is not a safety inspector and is not responsible for monitoring, directing, or otherwise ensuring the safety of the Contractor, its subcontractors, its suppliers, or any others that may be on the work site.

5. Construction of the work included in the contract is by its nature dangerous work; and the Contractor is hereby notified that it is the Contractor's sole responsibility to provide as safe a working site as possible given the nature of the work. It is the Contractor's responsibility to notify and advise its employees, subcontractors, suppliers, and everyone on the worksite of the dangers associated with the work, and provide them with appropriate safety information to protect them from those dangers.

2.03 WORK AREA

A. The Contractor shall confine its work to the Jurisdiction's premises, including construction easements and construction limit lines as shown in the contract documents and verified by the Engineer. The Contractor shall not enter upon or place materials on any private property for which the Jurisdiction has not obtained an easement for such use. The Contractor agrees to defend, indemnify, and hold the Jurisdiction harmless from all suits and actions of every kind and description resulting from the Contractor's use of private property. Before beginning construction, the Contractor shall check with the Engineer for any special instructions concerning easements.

B. Temporary buildings, storage sheds, shops and office, etc., may be erected by the Contractor only with the prior approval of the Engineer and shall be built with labor and materials furnished by the Contractor without expense to the Jurisdiction. Such temporary buildings and utilities shall remain the property of the Contractor and shall be removed by the Contractor, at its expense, after the completion of the work.

2.04 PROJECT AREA FOR THE WORK

A. Acquisition: Existing and proposed additional right-of-way or easements shown on the plans and/or in the contract documents will provide, without cost to the Contractor, adequate space for the performance of the work. If the contract documents do not contain a notice to the Contractor of non-acquired additional right of way or easements, as shown on the plans, and the Contractor provides documentation acceptable to the Engineer, compensation will be allowed for loss or damage occasioned by delays in securing said right-of-way or easements; and, if the need to acquire such additional right-of-way or easements is the sole and only cause of the impossibility of completing the work within the specified time, the Jurisdiction may grant an extension of time if requested by the Contractor. Before beginning construction, the Contractor shall obtain from the Engineer a list of any easements or right-of-way not acquired and any special instructions pertaining to properties affected by the work.

B. Location: Property lines, limits of easements, and limits of construction permits are indicated on the plans, and it shall be the Contractor's responsibility to confine its construction activities within those limits.

C. Use: The Contractor shall confine its equipment, storage of materials, and operation of work to the limits indicated by laws, ordinances, permits, or direction of the Engineer and shall not unreasonably encumber the premises with its materials. The Contractor shall comply with the Engineer's instructions regarding signs and advertisements.

D. Encroachments: Any damage resulting to persons or property from the Contractor's encroachment beyond the specified limits shall be the sole responsibility of the Contractor.

2.05 EXPLOSIVES

A. Use: The Contractor shall not blast any rock or other materials or allow the same to be done in prosecution of the work, unless it secures the Engineer's approval, proper insurance coverages, and a blasting permit when required.

B. Safety: The Contractor is solely responsible for all damage resulting from blasting operations performed by the Contractor or its agents. The Contractor shall use the utmost care to not endanger life or damage property; and whenever ordered by the Engineer, the number and size of the charges shall be reduced. Suitable coverages or mats shall be provided to confine all materials lifted by blasting within the limits of the excavation or trench. All explosives shall be stored in a secure manner and clearly marked according to all applicable laws and regulations.

C. Regulations: The Contractor shall abide by all existing Federal, State, and Local regulations regarding the use of explosives, including, but not limited to, Uniform Fire Code, Article 77, and National Fire Protection Association 495, Explosive Materials Code of the National Fire Codes.

2.06 TRAFFIC CONTROL

A. General:

1. The Contractor shall maintain traffic and shall provide and maintain traffic control devices according to the contract documents. If there is no specific traffic control plan, then the Contractor's traffic control devices shall meet the requirements of and be placed according to the current edition of MUTCD.

2. During construction, areas to be maintained for traffic shall be kept clear of all hazardous materials, including but not limited to construction debris, dust, and mud.

B. Closing Streets to Traffic:

1. Upon the Engineer's approval, the Contractor may close streets or parts of streets to vehicular traffic as soon as the construction work is started; such streets or parts of streets shall remain closed as long as construction work or condition of the finished work requires. The Engineer will determine how many streets or parts of streets may be closed by the Contractor at one time, and may refuse to allow the closing of additional streets until some of the improvement is finished and opened to traffic.

2. The Contractor shall notify the Engineer 48 hours in advance (excluding weekends) of closing any roads, streets, or public thoroughfares. No road or street shall be closed without prior approval from the Engineer.

3. The Contractor shall not remove, relocate, or reset any permanent Jurisdictional traffic control devices unless authorized to do so by the Engineer or contract documents. If a sign must be removed or relocated for any phase of construction, the Contractor shall notify the Engineer of the necessity for removal. The Engineer shall arrange for the removal, relocation, or resetting of permanent traffic control devices by Jurisdictional personnel as needed to allow the work to proceed. If Jurisdictional personnel are not available, the authorized Jurisdictional representative may give authorization to the Contractor to remove, relocate, or reset the permanent traffic control devices.

4. In the event the Contractor removes or relocates a traffic control sign without prior notice to or authorization from the Engineer, the Contractor shall bear all responsibility and liability to any person sustaining bodily injury or property damage on account thereof.

2.07 PROTECTION OF ABOVEGROUND AND UNDERGROUND FACILITIES

A. The Engineer has attempted to show on the plans all aboveground and underground facilities, including public and private utilities, which may be affected by the work. The location, depth, and size of each such facility shown on the plans is approximate only and is not guaranteed. Other underground facilities may exist and their location may not be presently known or identified. It is the Contractor's responsibility to determine the existence and exact location of all such facilities located within the construction area to avoid damage.

B. Where existing facilities are shown in the contract documents or encountered within the construction area, it shall be the responsibility of the Contractor to notify the operators of those facilities prior to beginning any construction activities. The Contractor shall allow access to those facilities for necessary modification of services. The Contractor shall support, sustain, and protect existing pipes, conduits, poles, wires, and other apparatus located under, over, along, across, or adjacent to the work site. If such utilities are damaged through Contractor's negligence, they will be repaired by the agencies having control of same, but the cost of such repairs shall be paid by the Contractor.

C. The Contractor shall, prior to commencing any excavation or other operation that may affect underground facilities, notify the "Iowa One Call" underground facility locate system, established pursuant to Iowa Code Chapter 480. The Contractor shall, if requested by the operator of an underground facility, assist in the location of its facilities; provided, however, the Jurisdiction shall not be responsible to the Contractor or to any operator of an underground facility for the cost of locating such facility, or for any damage to such facility that occurs in attempting to locate it, or for any damage to the facility occasioned by the Contractor's performance of work under the contract.

D. Claims for additional compensation will not be allowed to the Contractor for any interference, delay, or additional work occasioned by the location or adjustment of aboveground or underground facilities, or connections thereto.

2.08 PROTECTION OF PROPERTY

A. The Contractor shall continuously maintain adequate protection of all its work from damage and shall protect the Jurisdiction's property and adjacent private property from injury or loss arising in connection with the work. The Contractor shall repair or restore any such damage, injury, or loss to Jurisdiction property or adjacent private property.

B. Protect existing facilities, trees, and shrubs to remain in place. Any damage to existing trees or shrubs, branches, and root systems to remain and to be protected shall be repaired and/or pruned by an experienced tree surgeon or arborist. Do not disturb soil within 10 feet of the drip line of trees without notifying the Engineer. The Contractor shall mark the 10 foot limit from the drip line.

C. The Contractor shall continuously maintain its work area by undertaking mowing, weed control, and solid waste management in a manner matching the maintenance level of the area properties. Failure to do so within three working days after direction from the Engineer may cause the Jurisdiction to do the work and the cost thereof deducted from the Contractor’s next payment.

2.09 LAND MONUMENTS

A. The Contractor will be required to preserve all center stones, land monuments, or other property marks the Contractor may find in prosecuting the work. The Contractor shall notify the Engineer of the finding of any land monuments and shall not remove or disturb same until permission is given to do so, at which time the Contractor shall properly remove said landmarks under the direction of the Engineer.

B. For every land monument lost or destroyed by the Contractor, the Contractor may be charged, and such amount shall be deducted from any monies due or may become due to the Contractor under the contract.

2.10 DUST CONTROL

During construction operations, the Contractor shall be responsible for the control of dust to a degree compatible with the area in which the construction is being performed and with existing environmental regulations. In the event the Contractor does not control dust as specified, the Jurisdiction reserves the right to order dust control to be performed by other forces and withhold the cost thereof from any monies due or may become due to the Contractor under the contract.

2.11 ENVIRONMENTAL AND HISTORIC ITEMS

If contaminated soils, historical artifacts, or other environmental or historic items are encountered, stop work and notify the Engineer.

2.12 RAILROAD CROSSINGS

The authority for performing work beneath, at grade, or over railroad tracks will have been previously secured by the Jurisdiction. It shall be the Contractor's responsibility to contact the railroad company officials prior to beginning the work on railroad property or easements. The Contractor shall perform the work without damage to the facilities and property of the railroad or its lessees, and in strict observance of requirements for the safety of the railroad property and operations. All such work will be subject to the inspection of the railroad's representative. The Contractor shall protect, indemnify, and hold the Jurisdiction harmless from any and all damages resulting from its operations on railroad property or easements or in the construction of railroad crossings according to Section 1070, Part 3 - Bonds and Insurance.

2.13 BORROW AND WASTE SITES

A. Unless borrow or waste sites are designated on the plans or specified in the special provisions, the Contractor shall secure and operate such sites at its own expense.

B. In all cases, borrow and waste sites shall be operated in such a manner as to meet Federal, State, and local safety, environmental, and health requirements. Site operations, or the result of such operation, that create a definite nuisance or result in damage to public or private property will not be permitted. In all cases, sites shall be approved by the Engineer before use.

2.14 MAINTAINING POSTAL SERVICE

A. It shall be the Contractor's responsibility to contact the U.S. Postal Service to ascertain its requirements for the maintenance of postal service to residents or businesses in the vicinity of the work site according to the instructions of the Postal Service. The Contractor shall be responsible for mailboxes at temporary locations designated by the Postal Service, and at the completion of the work, the Contractor shall replace all mailboxes in locations and conditions satisfactory to the Postal Service.

B. Not less than 24 hours prior to removing any mailbox, the Contractor shall notify each affected resident or business addressee in writing advising them of the move and the location of their temporary mailbox during construction.

C. For each residential or business address affected by the work, the Contractor shall place a temporary mailbox at a location approved by the Postal Service. Temporary mailboxes shall be in place so postal service is maintained at all times. Any permanent mailbox that must be removed shall be stored on the property from which it is removed and at a sufficient distance from the work area to ensure it will not be damaged by construction activities.

2.15 FINISHING AND CLEANUP REQUIREMENTS

From time to time, as may be ordered by the Engineer, and immediately after completion of the improvement, the Contractor shall, at its expense, cleanup and remove all refuse and unused materials of any kind resulting from the work. Upon failure to do so within three working days after such request by the Engineer, the work may be done by the Jurisdiction and the cost thereof charged to the Contractor and deducted from its final payment. Upon completion of the work, the Contractor shall remove all its equipment and put the area of the work in a neat and clean condition and do all other cleaning necessary to complete the work in a workmanlike manner satisfactory to the Engineer.

PART 3 - BONDS AND INSURANCE

3.01 PERFORMANCE, PAYMENT, AND MAINTENANCE BOND

A. The lowest responsive, responsible bidder shall be required to file, before the contract is awarded, a surety bond for performance, payment, and/or maintenance on a form provided by the Jurisdiction and in penal sum equal to the total bid amount. Said bond shall be executed by a corporation authorized to contract as a surety in the state of Iowa. Said bond shall be filed in the specified number of copies as a part of the executed contract documents for the Jurisdiction's approval and award.

B. Said bond shall provide that the Contractor shall well and satisfactorily perform and execute the work in all respects, according to the contract documents therefore, and according to the time and conditions of the contract documents, and also that the Contractor shall pay all debts incurred by it in the prosecution of such work, including those for labor and materials furnished. Said bond may also provide for the maintenance of the improvement for the number of years stipulated in the contract documents, and shall remain in full force for the entire maintenance period. Said bond shall in all cases comply with the laws of the State of Iowa and shall be subject to the approval of the Jurisdiction.

C. Within the time period specified in the maintenance portion of the bond, the Contractor shall, as and when ordered by the Engineer, repair, replace, or rebuild such portions of the work found to be faulty because of materials or workmanship. After being notified of the need for repairs, the Contractor shall submit, within seven calendar days, a written report stating its intentions and schedule for completing the repairs for approval by the Engineer. If the Contractor fails to submit such written report or to make the repairs as approved by the Engineer, the Jurisdiction shall have the right to make such repairs and to collect from the Contractor or its surety all outlay and expense the Jurisdiction incurs in making the repair, and in attempting to enforce the terms of the contract and the bond against the Contractor and its surety.

3.02 INSURANCE REQUIREMENTS

A. The Contractor shall purchase and maintain insurance to protect the Contractor and the Jurisdiction against all hazards herein enumerated throughout the duration of the contract. Said insurance shall be provided by an insurance company or companies, “admitted” or “non-admitted” to do business in the State of Iowa, having an A.M. Best rating of no less than “B+.”

B. "Insurance," "insurance policy," or "insurance contract" when used in these specifications shall have the same meaning as "insurance policy" and "insurance contract" under Iowa Code Section 507B.2. All insurance required by this section shall provide coverage on an occurrence basis, not on a claims-made basis, and the person or other entity shall provide evidence of such coverage through an "insurance policy," "contract of insurance," or "certificate of insurance" that clearly discloses on its face coverage on an occurrence basis. Insurance coverage required for hazardous materials abatement including removal of lead, asbestos, PCB's, or the like may be provided on a claims-made basis when it is demonstrated to the satisfaction of the Jurisdiction that occurrence coverage is not reasonably available.

C. Except for workers compensation insurance, the Contractor shall purchase and maintain such insurance as will protect the Contractor and the Jurisdiction as set forth below, which may arise out of or result from the Contractor’s operations under the contract, whether such operations be by the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them. In addition, the Contractor shall purchase and maintain workers compensation insurance to cover its employees.

3.02 INSURANCE REQUIREMENTS (Continued)

1. Workers Compensation: A standard Workers Compensation policy approved for use in the State of Iowa shall be issued with the following coverages.
   a. Statutory Benefits covering all employees injured on the job by accident or disease as prescribed by Iowa Code Chapter 85.
   b. Employers Liability insurance with the following limits:

Bodily injury by accident	$500,000 each accident
Bodily injury by disease	$500,000 each accident
Bodily injury by disease	$500,000 policy limit

2. Commercial General Liability Insurance: No less comprehensive and no more restrictive than the coverage provided by a standard form Commercial General Liability Policy (ISO CG 0001 or its equivalent) with all standard exclusions with minimum limits shown below covering claims for damages because of bodily injury, personal injury, or damage to property that occur on the premises under contract or arise out of the operations in performance of the contract. Any additional exclusions shall be identified on the Certificate of Insurance and shall be subject to the review and approval of the Jurisdiction.

General Aggregate Limit	$2,000,000
Products' Completed Operations Aggregate Limit	$2,000,000
Personal and Advertising Injury Limit	$1,000,000
Each Occurrence Limit	$1,000,000
Fire Damage Limit (any one fire)	$50,000
Medical Damage Limit (any one person)	$5,000

This insurance must include the following features:

a. Coverage for all premises and operations. The policy shall be endorsed to provide the Designated Construction Project(s) General Aggregate Limit Endorsement (ISO CG 2503 or its equivalent).
b. Personal and advertising injury.
c. Operations by independent contractors.
d. Contractual liability coverage. If work to be performed by Contractor includes construction or demolition operations within 50 feet of any railroad property and affecting any railroad bridge or trestle, tracks, roadbeds, tunnel, underpass, or crossing, then such policy will include a Railroad's Contractual Liability Endorsement (ISO CG 2417 or its equivalent).
e. Coverage for demolition of any building or structure, collapse, explosion, blasting, excavation, and damage to property below the surface of the ground (XCU coverage).
f. Any fellow employee exclusions shall be deleted as it applies to managerial and supervisory employees.
g. The policy shall not contain a total or absolute pollution exclusion. Coverage shall be provided for pollution exposures arising from products and completed operations.
h. Products and completed operations shall be maintained for the duration of the work; and shall be further maintained for a minimum period of time after final acceptance and payment if required in the Special Provisions.
i. Contractual liability coverage will also include contractually assumed defense costs in addition to policy limits.
j. In lieu of including the Jurisdiction as an additional insured on the Contractor's Commercial General Liability Insurance, the Jurisdiction, at its option, may require the Contractor to provide an Owner's Protective Liability Policy by Special Provision, or may allow the Contractor to provide an Owner's Protective Liability Policy by Change Order. If an Owner's Protective Liability Policy is provided, the minimum coverage, limits, and exclusions shall be as shown above; and the Contractor's premium cost of obtaining such insurance shall be considered incidental to the work and shall not be subject to reimbursement by the Jurisdiction.

3.02 INSURANCE REQUIREMENTS (Continued)

3. Automobile Liability Insurance: Covers all owned, non-owned, hired, and leased vehicles with a minimum combined single limit of $1,000,000 per accident covering claims for damages because of bodily injury, personal injury, or damage to property that arise out of operations in performance of the contract. The insurance must include contractual liability coverage. Any fellow employee exclusion shall be deleted. The policy shall provide Auto Cargo Pollution Endorsement (ISO CA 99 48 or its equivalent), if required in the special provisions.

4. Railroad Protective Liability: If required by the Jurisdiction by special provision, or by an affected railroad, the Contractor shall procure and maintain Railroad Protective Liability Insurance naming the railroad as the insured with minimum limit for bodily injury and property damage liability of $2,000,000 per occurrence, $6,000,000 aggregate, or with such other limits as the railroad shall require. The original of said policy shall be furnished to the railroad and a certified copy of said policy shall be furnished to the Jurisdiction prior to any construction or entry upon the railroad easement premises by the Contractor.

5. Umbrella/Excess Insurance: At the Contractor's option, the limits specified in Section 1070, 3.02, C, 1, 2, 3 may be satisfied with a combination of primary and Umbrella/Excess Insurance. At the Jurisdiction's option, the minimum insurance limits specified above may be increased by special provision. This increase may be satisfied with a combination of primary and Umbrella/Excess Insurance.

6. Additional Insured Endorsements: Except for Workers Compensation, the insurance specified shall:
   a. Include the Jurisdiction as an additional insured, per Section 1070, 3.06, B; and
   b. Be primary to and not in excess of or contributory with any other insurance available to the Jurisdiction.

7. Reference to ISO: Wherever the term "ISO" appears in these specifications, any subsequent equivalent ISO form or non-ISO equivalent form may be used.

3.03 CONTRACTOR'S INDEMNITY - CONTRACTUAL LIABILITY INSURANCE

A. To the extent covered by the standard insurance forms listed in Section 1070, 3.02, the insurance shall include contractual liability insurance to cover all indemnification and hold harmless agreements and provisions in the contract documents, including the following provision.

B. To the fullest extent permitted by law, the Contractor shall defend, indemnify, and hold harmless the Jurisdiction and its officers, agents, employees, and consultants from and against all claims, damages, losses, and expenses, including but not limited to, attorney's fees, arising out of or resulting from the performance or prosecution of the work by the Contractor, its subcontractors, agents, or employees; or arising from any neglect, default, or mismanagement or omissions by the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them in the performance of any duties imposed by the contract or by law; provided any such claim, damage, loss, or expense:

1. is attributable to bodily injury, sickness, disease or death, or to injury to or destruction of tangible property (other than the work itself) including economic damages and the loss of use resulting therefrom, and

3.03 CONTRACTOR'S INDEMNITY - CONTRACTUAL LIABILITY INSURANCE (Continued)

2. is caused in whole or in part by any act or omission of the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them, or anyone for whose acts any of them may be liable, regardless whether or not it 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 that would otherwise exist as to any party or person described in this subsection.

C. In any and all claims against the Jurisdiction or the Engineer or any of their agents, officers, employees, or consultants by any employee of the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them, or anyone for whose acts any of them may be liable, the indemnification obligation under this subsection shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for the Contractor or any subcontractor under workers' compensation acts, disability benefit acts, or other employee benefit acts.

D. The obligations of the Contractor under this subsection shall not extend to the liability of the Engineer, the Engineer's agents, employees, or consultants, arising out of:

1. the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, design standards, or specifications; or

2. the giving of or the failure to give directions or instructions by the Engineer, the Engineer's agents, employees, or consultants.

provided the preparation or the giving or failure to give directions or instructions is the sole proximate cause of the injury or damage.

E. If any litigation on account of such claims shall be commenced against the Jurisdiction, the Contractor, upon notice thereof from the Jurisdiction, shall defend the same at its sole cost and expense; and the record of any judgment rendered against the Jurisdiction on account of such claims for damages shall be conclusive as against said Contractor and entitle the Jurisdiction to recover the full amount thereof, with interest and cost, and attorney's fees incurred by said Jurisdiction, whether the Jurisdiction paid such amounts or not.

3.04 CONTRACTOR'S INSURANCE FOR OTHER LOSSES; WAIVER OF SUBROGATION

A. The Contractor shall assume full responsibility for all loss or damage from any cause whatsoever to any tools owned by the mechanics; or any tools, machinery, equipment, or motor vehicles owned or rented by the Contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them; or to any shed or other temporary structures, scaffolding and stagings, protective fences, and bridges belonging to the contractor, its subcontractors or consultants, suppliers, third parties, or the agents, officers, or employees of any of them, not covered by the Jurisdiction’s Builders Risk Insurance.

B. Contractor shall cause each of its subcontractors, consultants, suppliers, third parties, or the agents of any of them, to carry insurance sufficient to cover all loss to such materials, tools, motor vehicles, and equipment. All insurance carried by the Contractor, or its subcontractors, consultants, suppliers, third parties or the agents of any of them, covering risk of loss or damage to materials, tools, motor vehicles, and equipment used in the performance of the Work, shall provide a waiver of subrogation against the Jurisdiction. To the extent that any subcontractors, consultants, suppliers, third parties or the agents of any of them, do not provide such coverages, any uninsured loss shall be the sole responsibility of the Contractor.

3.05 PROPERTY INSURANCE

A. When stated in the special provisions, the Jurisdiction shall purchase and maintain property insurance, a.k.a. Builder's Risk Insurance, in the amount of the initial bid amount, or in an amount equal to the estimated value of actual building construction, whichever is less, as well as applicable modifications thereto for the entire work at the site on a replacement cost basis. Such property insurance shall be maintained, unless otherwise provided in the contract documents or otherwise agreed in writing by all persons and entities who are beneficiaries of such insurance, until final acceptance of the work by the Jurisdiction. The insurance shall include interests of the Jurisdiction, the Contractor, subcontractors, and sub-subcontractors in the work. This property insurance covering the work will have a deductible of $5,000 for each occurrence, or as stated in the special provisions, which will be the responsibility of the Contractor.

B. Property insurance shall be on an all-risk policy form and shall insure against the perils of fire and extended coverage and physical loss or damage including, without duplication of coverage, flood and earthquake, theft, vandalism, malicious mischief, collapse, falsework, temporary buildings and debris removal, including demolition occasioned by enforcement of any applicable legal requirements, and shall cover reasonable compensation for the Jurisdiction's services and expenses required as a result of such insured loss. Coverage for other perils shall not be required unless otherwise provided in the contract documents.

C. Unless otherwise provided in the contract documents, this property insurance shall cover portions of the work stored off the site, after written approval of the Jurisdiction, at the value established in the approval, and portions of the work in transit. Coverage for work stored off the site and in transit will be not less than 10% of the policy amount.

D. Boiler and Machinery Insurance: The Jurisdiction, at the Jurisdiction's option, may purchase and maintain Boiler and Machinery Insurance required by the contract documents or by law, which shall specifically cover such insured objects during installation and until final acceptance by the Jurisdiction; this insurance shall include interest of the Jurisdiction, Contractor, subcontractors, and sub-subcontractors in the work, and the Jurisdiction and Contractor shall be named insureds.

E. Loss of Use Insurance: The Jurisdiction, at the Jurisdiction's option, may purchase and maintain insurance to insure the Jurisdiction against loss of use of the Jurisdiction's property due to fire or other hazards, however caused. In the event the Jurisdiction purchases such insurance, the Jurisdiction shall waive all rights of action against the Contractor for loss of use of the Jurisdiction's property, including consequential losses due to fire or other hazards, however caused.

F. If the Contractor requests in writing that insurance for risks other than those described herein or for other special hazards be included in the property insurance policy, the Jurisdiction shall, if possible, include such insurance, and the cost thereof shall be charged to the Contractor by appropriate change order.

G. If during the project construction period, the Jurisdiction insures properties, real or personal or both, adjoining or adjacent to the site by property insurance under policies separate from those insuring the project or if after final acceptance, property insurance is to be provided on the completed project through a policy or policies other than those insuring the project during the construction period, the Jurisdiction shall waive all rights according to the terms of Section 1070, 3.05, I, for damages caused by fire or other perils covered by this separate property insurance. All separate policies shall provide this waiver of subrogation by endorsement or otherwise.

3.05 PROPERTY INSURANCE (Continued)

H. Before an exposure to loss may occur, the Jurisdiction shall file with the Contractor a copy of each policy that includes insurance coverages required by this section. Each policy shall contain all generally applicable conditions, definitions, exclusions, and endorsements related to this project. Each policy shall contain a provision that the policy will not be cancelled or allowed to expire until at least 30 calendar days prior written notice has been given to the Contractor.

I. Waivers of Subrogation: The Jurisdiction and Contractor waive all rights against (1) each other and any of their subcontractors, sub-subcontractors, agents, and employees, each of the other, and (2) the Jurisdiction's consultants, separate contractors, if any, and any of their subcontractors, sub-subcontractors, agents, and employees, for damages caused by fire or other perils to the extent covered by property insurance obtained pursuant to this section or other property insurance applicable to the work, except such rights as they have to proceeds of such insurance held by the Jurisdiction as fiduciary. The Jurisdiction or Contractor, as appropriate, shall require of the Jurisdiction's consultants, separate contractors, if any, and the subcontractors, sub-subcontractors, agents, and employees of any of them, by appropriate agreements, written where legally required for validity, similar waivers each in favor of other parties enumerated herein. The policies shall provide such waivers of subrogation by endorsement or otherwise. A waiver of subrogation shall be effective as to a person or entity even though that person or entity would otherwise have a duty of indemnification, contractual or otherwise, did not pay the insurance premium directly or indirectly, and whether or not the person or entity had an insurable interest in the property damaged.

J. A loss insured under the Jurisdiction's property insurance shall be adjusted by the Jurisdiction as fiduciary and made payable to the Jurisdiction as fiduciary for the insureds, as their interest may appear, subject to requirements of any applicable mortgagee clause and of Section 1070, 3.05, K. The Contractor shall pay subcontractors their shares of insurance proceeds received by the Contractor, and by appropriate agreements, written where legally required for validity, shall require subcontractors to make payments to their sub-subcontractors in a similar manner.

K. The Jurisdiction as fiduciary shall have power to adjust and settle a loss with insurers unless one of the parties in interest shall object in writing within five calendar days after occurrence of loss to the Jurisdiction's exercise of this power; if such objection be made, arbitrators shall be chosen according to Section 1040, 1.10, D, provided one arbitrator shall be appointed by the Jurisdiction, one by the party in interest making objection, and the third to be appointed by the two arbitrators thus chosen. Arbitration shall thereafter proceed as provided in Section 1040, 1.10, E through G. The Jurisdiction as fiduciary shall, in that case, make settlement with insurers according to the direction of such arbitrators. If distribution of insurance proceeds by arbitration is required, the arbitrators will direct such distribution.

L. Partial occupancy or use of the work shall not commence until the insurance company or companies provided property insurance have consented to such partial occupancy or use by endorsement or otherwise. The Jurisdiction and the Contractor shall take reasonable steps to obtain consent of the insurance company or companies and shall, without mutual written consent, take no action with respect to partial occupancy or use that would cause cancellation, lapse, or reduction of insurance.

M. Installation Floater: Under contracts where the Jurisdiction does not provide Builders Risk Insurance, the Jurisdiction may by special provision require the Contractor to provide coverage under an “Installation Floater” covering all materials, fixtures, equipment, and supplies provided for the job. Such insurance shall be on an “*all risk*” form in an amount equal to the maximum value of such materials, equipment, or supplies covered on the job site, off-premises at any temporary storage location, or in transit. The Installation Floater covering the equipment shall have a maximum deductible no greater than $5,000 for each occurrence, which will be the responsibility of the Contractor.

3.06 ENDORSEMENT NAMING JURISDICTION AS AN ADDITIONAL INSURED / CANCELLATION AND MATERIAL CHANGE / GOVERNMENTAL IMMUNITIES ENDORSEMENT

A. All liability insurance policies the Contractor is required to provide pursuant to this Section 1070, Part 3 - Bonds and Insurance shall be by endorsement name and designate the Jurisdiction as an additional insured.

B. The Additional Insured Endorsement shall include the following provisions:

The Jurisdiction, including all its elected and appointed officials, all its employees and volunteers, all its boards, commissions and/or authorities and their board members, employees, and volunteers, and all its officers, agents, and consultants, are named as Additional Insureds with respect to liability arising out of the Contractor's work and services performed for the Jurisdiction. This coverage shall be primary to the Additional Insureds, and not contributing with any other insurance or similar protection available to the Additional Insureds, whether other available coverage by primary, contributing, or excess.

The Additional Insured Endorsement shall be included on all Commercial General Liability, Automobile Liability, and Umbrella/Excess Insurance policies.

C. The Cancellation and Material Change Endorsement shall include the following provisions:

Thirty calendar days advance written Notice of Cancellation, Non-Renewal or Reduction in Insurance coverage and/or Limits, and 10 calendar days written Notice of Non-payment of Premium, shall be sent to the Jurisdiction at the office and attention of the Certificate Holder. This endorsement supersedes the standard cancellation statement on the Certificate of Insurance to which this endorsement is attached.

This Cancellation and Material Change Endorsement shall be included on insurance policies required by the SUDAS Standard Specifications.

D. All liability policies that include the Jurisdiction as an additional insured shall include a Governmental Immunities Endorsement, pursuant to Iowa Code Section 670.4, which endorsement shall include the following provisions:

1. Nonwaiver of Government Immunity: The insurance carrier expressly agrees and states the purchase of this policy and including the Jurisdiction as an Additional Insured does not waive any of the defenses of governmental immunity available to the Jurisdiction under Iowa Code Section 670.4 as it now exists and as it may be amended from time to time.

2. Claims Coverage: The insurance carrier further agrees this policy of insurance shall cover only those claims not subject to the defense of governmental immunity under Iowa Code Section 670.4 as it now exists and as it may be amended from time to time.

3. Assertion of Government Immunity: The Jurisdiction shall be responsible for asserting any defense of governmental immunity, and may do so at any time and shall do so upon the timely written request of the insurance carrier. Nothing contained in this endorsement shall prevent the carrier from asserting the defense of governmental immunity on behalf of the Jurisdiction.

4. Non-Denial of Coverage: The insurance carrier shall not deny coverage or deny any of the rights and benefits accruing to the Jurisdiction under this policy for reasons of governmental immunity unless and until a court of competent jurisdiction has ruled in favor of the defense(s) of governmental immunity asserted by the Jurisdiction.

3.06 ENDORSEMENT NAMING JURISDICTION AS AN ADDITIONAL INSURED / CANCELLATION AND MATERIAL CHANGE / GOVERNMENTAL IMMUNITIES ENDORSEMENT (Continued)

5. No Other Change in Policy: The insurance carrier and the Jurisdiction agree the above preservation of governmental immunities shall not otherwise change or alter the coverage available under the policy.

This Government Immunities Endorsement shall be included on all insurance policies that include the Jurisdiction as Additional Insured.

E. All liability policies purchased in the Jurisdiction's name shall include a Governmental Immunities Endorsement, pursuant to Iowa Code Section 670.4, which endorsement shall include the following provisions:

1. Nonwaiver of Government Immunity: The insurance carrier expressly agrees and states the purchase of this policy does not waive any of the defenses of governmental immunity available to the Jurisdiction under Iowa Code Section 670.4 as it now exists and as it may be amended from time to time.

2. Claims Coverage: The insurance carrier further agrees this policy of insurance shall cover only those claims not subject to the defense of governmental immunity under Iowa Code Section 670.4 as it now exists and as it may be amended from time to time.

3. Assertion of Government Immunity: The Jurisdiction shall be responsible for asserting any defense of governmental immunity, and may do so at any time and shall do so upon the timely written request of the insurance carrier. Nothing contained in this endorsement shall prevent the carrier from asserting the defense of governmental immunity on behalf of the Jurisdiction.

4. Non-Denial of Coverage: The insurance carrier shall not deny coverage or deny any of the rights and benefits accruing to the Jurisdiction under this policy for reasons of governmental immunity unless and until a court of competent jurisdiction has ruled in favor of the defense(s) of governmental immunity asserted by the Jurisdiction.

5. No Other Change in Policy: The insurance carrier and the Jurisdiction agrees that the above preservation of governmental immunities shall not otherwise change or alter the coverage available under this policy.

This Government Immunities Endorsement shall be included in all Insurance Policies in the Jurisdiction's name.

3.07 PROOF OF INSURANCE

A. The Contractor shall, prior to the Jurisdiction's approval and execution of the Contract, provide to the Jurisdiction a certificate or certificates of insurance evidencing all required insurance coverages as required in this Section 1070, Part 3 – Bonds and Insurance, utilizing the ACORD certificate form, or equivalent, required by the Jurisdiction. The Certificate of Insurance requirement may be satisfied with a blanket certificate.

B. The Description of Operations on the Certificate of Insurance for the work must state either: 1) Blanket certificate of coverage of all work, services, or projects with the Jurisdiction, or 2) Identify the specific project by name and project number. The Contract will not be submitted for approval execution by the Jurisdiction until all certificates of insurance are correct and have received staff approval.

C. The Cancellation statement on the Certificate of Insurance shall be superseded by the Cancellation and Material Changes Endorsement, which shall be attached to the certificate.

3.07 PROOF OF INSURANCE (Continued)

D. All endorsements required for the work shall be attached to the appropriate Certificate or Certificates of Insurance and shall be, on the face thereof, listed by name.

E. If an Owner's Protective Policy is provided, the policy with appropriate endorsements shall be submitted to the Jurisdiction. The Contract will not be submitted for approval and execution by the Jurisdiction until the Owner's Protective Policy and all certificates of insurance are correct and have received staff approval.

3.08 NOTIFICATION IN EVENT OF LIABILITY OR DAMAGE

A. Upon the occurrence of any event, the liability for which is herein assumed by the Contractor, the Contractor agrees to forthwith notify the Jurisdiction in writing of such happening, which notice shall give the details as to the happening, the cause as far as can be ascertained, the estimate of loss or damage done, the names of witnesses, if any, and stating the amount of any claim.

B. In the event the Jurisdiction has or obtains actual knowledge of any event that may result in a claim, the liability for which is herein assumed by the Contractor, the Jurisdiction agrees to notify the Contractor of such event within a reasonable period of time after acquiring knowledge thereof; provided however, the Jurisdiction shall have no duty to inspect the project to obtain knowledge of such events; and provided further the Jurisdiction's failure to so notify the Contractor shall not relieve the Contractor of any liability or obligation herein assumed by the Contractor.

3.09 SAMPLE INSURANCE FORMS

See the SUDAS website (www.iowasudas.org) for examples of standard insurance forms.

END OF SECTION

PROSECUTION AND PROGRESS

1.01 SUBLETTING OR ASSIGNMENT OF CONTRACT

A. Work by Contractor:

1. The Contractor shall perform, with its own organization and forces, work amounting to no less than 30% of the total contract cost, except any items designated in the contract documents as "specialty items" may be performed by subcontract, and the cost of any such "specialty items" may be deducted from the total contract cost before computing the amount of work required to be performed by the Contractor with its own organization. Any items that have been selected as "specialty items" for the contract will be listed as such in the contract documents.

2. In order to meet this 30% requirement, the Contractor shall not purchase any materials for a subcontracted item, nor shall it place other contractor's employees on its payroll.

3. The Contractor shall not assign this Contract to another person, firm, or corporation without the prior consent of the Jurisdiction. The Jurisdiction may refuse to approve a proposed assignment of contract if such assignment would not be in the best interests of the Jurisdiction, or if such assignment would be contrary to law or public policy. An assignment of contract and all subcontracts shall be in writing.

B. Permission to Sublet:

1. The Contractor shall not sublet, assign, or otherwise dispose of any portion of the contract, except for the furnishing and transportation of materials, without a written "permission to sublet" order duly approved by the Jurisdiction.

2. Requests for permission to sublet, assign, or otherwise dispose of any portion of the contract shall be in writing and shall provide the name, address, telephone number, and representative of the organization that will perform the work, a description of the work is to be sublet, and the associated cost. When requested by the Engineer, the Contractor shall provide a written report showing the organization that will perform the work is particularly experienced and equipped for such work.

3. Consent to sublet, assign, or otherwise dispose of any portion of the contract shall not be construed to relieve the Contractor of any responsibility for the fulfillment of the contract or in any way create any contractual relationship between the subcontractor and the Jurisdiction.

C. Subcontracts:

1. Upon request of the Engineer, the Contractor shall submit a copy of each subcontract agreement within 10 calendar days.

2. The Contractor shall be responsible to include all conditions and requirements of the contract documents in all its subcontracts and enforce said requirements with its subcontractors.

1.02 CONTRACT TIME

A. When a completion date is specified in the contract documents, the contract time shall be the time from the starting date stated in the Notice to Proceed to the date specified for completion as shown in the contract, both dates inclusive. When working days or calendar days are specified in the contract documents, the contract time shall be the time as calculated with the number of working days or calendar days as specified in the contract and the starting date in the Notice to Proceed. The contract time may be extended by the Jurisdiction as provided in these specifications, in which event the contract time includes the new extension of time. The Contractor acknowledges that if it fails to complete the contract in said time, liquidated damages will be assessed against it as specified in Section 1080, 1.12 - Liquidated Damages.

1. Completion Date Contracts: The Contractor shall complete the contract on or before the completion date. Unless otherwise noted in the proposal form, the Contractor may commence work any time after receipt of the signed contract, specifications permitting and issuance of the Notice to Proceed. Section 1080, 1.06 will not apply. Liquidated damages will be assessed according to Section 1080, 1.12 for each calendar day beyond the completion date that the contract remains uncompleted.

2. Calendar Day Contracts: The Contractor shall complete the contract within the number of consecutive calendar days specified. The calendar day count will commence on the date specified by the Notice to Proceed. Section 1080, 1.06 will not apply. Liquidated damages will be assessed according to Section 1080, 1.12 for each calendar day beyond the specified number of calendar days that the contract remains uncompleted.

3. Working Day Contracts: The three types of start dates are as follows:

   a. Specified Start Date: Working days will be charged to the Contractor starting on the specified start date, the date noted in the Notice to Proceed, or 14 calendar days after execution of the contract, whichever is later. Starting work prior to the specified start date will be considered upon request, and working days will be charged when work starts.

   b. Approximate Start Date: It is expected the site will be available by the approximate start date. If it appears the site will not be available by the approximate start date, the Engineer will inform the Contractor of the delay and if possible the duration of the delay. The Contractor may commence work, weather and specifications permitting, any time after execution of the contract, after receipt of the Notice to Proceed, and on or after the approximate start date provided the site has become available. If work is started under these conditions, working days will be charged. Starting work before the approximate start date and before the site is available, will be considered only after the Contractor has submitted a signed waiver of any right to claim extra compensation for damages due to delays from any cause related to early commencement. If approved, working days will not be charged when working prior to the date of site availability. If the Contractor is working on the project when the site becomes available, working days will be first charged on the following day.

   c. Late Start Date: Unless otherwise noted in the proposal form, the Contractor may commence work any time after receipt of the signed contract, receipt of the Notice to Proceed, and weather and specifications permitting. Working days will begin to be charged whenever the Contractor starts work. Charging of working days will begin on the late start date if the Contractor has not started work prior to this date.

      If the Contractor wishes to start preliminary work prior to the late start date and move out intending to return at a later date to complete the project, the Contractor shall request approval from the Engineer for temporary suspension of work according to Section 1080, 1.08. Approval of suspension of work in this circumstance will be based on if the project area is in a condition that is at least as safe as it was before the start of the work. The Engineer will submit in writing to the Contractor approval for suspension of work and a computed revised late start date. The revised late start date will be computed by adding the working days used for the preliminary work to the late start date listed on the proposal form. The charging of the remainder of the working days will resume on the revised late start date or when the Contractor recommences work if prior to the revised late start date.

1.02 CONTRACT TIME (Continued)

B. Intermediate contract periods may be designated for completion of a specific item or certain portions of the contract. The contract period and the liquidated damages, if any, for each portion will be listed in the contract documents.

1.03 WORK PROGRESS AND SCHEDULE

A. The progress of the work shall be at a rate sufficient to complete the contract within the time allowed. The Contractor's sequence of operations shall be such as to cause as little inconvenience to the general public as possible.

B. After being awarded the contract, and if requested by the Engineer, the Contractor shall immediately prepare and submit to the Engineer for approval a progress schedule that will ensure the completion of the project within the time specified. Adequate equipment and forces shall be made available by the Contractor to start work immediately upon Notice to Proceed by the Engineer and to prosecute the work to completion according to schedule and within the time specified.

C. If it appears the rate of progress is such that the contract will not be completed within the time allowed, or if the work is not being executed in a satisfactory and workmanlike manner, the Engineer may order the Contractor to take such steps as necessary to complete the contract within the period of time specified or to prosecute the work in a satisfactory manner. If the Contractor fails to comply with such order within two weeks after receipt of the order, the Jurisdiction will have the right to declare the contract in default.

1.04 PRECONSTRUCTION CONFERENCE

The Engineer may schedule and conduct a preconstruction conference. The Contractor and the intended subcontractors, if known, shall participate in this conference. The Engineer will invite representatives of railroads and utilities and others having responsibilities or interest in the work.

1.05 NOTICE TO PROCEED

A. The return of the signed and executed contract to the Contractor shall serve as notice the contract bond is acceptable, the contract is in force, and the Contractor may complete arrangements for materials and other work according to the contract documents.

B. The Contractor shall begin work as specified in the Notice to Proceed issued by the Engineer and shall prosecute the work vigorously and continuously to completion, except when it is physically impossible to do so due to weather conditions or other unavoidable handicaps. The necessity of discontinuing and resuming work on any portion of the contract shall be determined by the Engineer.

C. The Jurisdiction may, if provided for in the contract documents, give a limited Notice to Proceed as to any portion of the work under the contract.

1.06 WEEKLY RECORD OF WORKING DAYS

A. On contracts with completion provisions based upon working days, the Engineer will furnish the Contractor a weekly statement showing the number of working days charged to the Contractor for the preceding week, the number of working days specified for completion of the project, the number of working days remaining to complete the contract, and the revised date for completion.

1.06 WEEKLY RECORD OF WORKING DAYS (Continued)

B. Working days will be charged under the following circumstances:

1. Prior to Commencement of Work: Beginning on the date designated in the Notice to Proceed, or beginning on the specified starting date or as soon thereafter as provided in the specifications, a working day will be charged for every calendar day other than Saturday, Sunday, or a recognized legal holiday. Working days will be charged for Saturdays if a mandatory six-day work week is specified in the contract documents.

2. After Commencement of Work: One full working day will be charged for any weekday, exclusive of Saturdays, Sundays, or a recognized legal holiday, when weather or other conditions (not under control of the Contractor) will permit construction operations to proceed for not less than 3/4 of a normal workday in the performance of a controlling item of work as determined by the Engineer. If such conditions allow operations to proceed for at least 1/2 but less than 3/4 of the normal working hours, one-half working day will be charged.

   Working days will not be charged for Saturdays (unless a mandatory six-day work week is specified in the contract documents), Sundays, and recognized legal holidays the Contractor does not work. Working days will be charged for Sundays and recognized legal holidays the contractor does work.

   As an incentive to the Contractor to expedite the work, working days will not be charged for Saturdays that the Contractor does work, unless a mandatory six-day work week is specified in the contract documents.

   Upon written notice to the Contractor, the Engineer may suspend charging of working days on substantially completed contracts for up to 30 calendar days when only cleanup of the project site or minor work items remain. If the designated time has expired and the remaining work items and site cleanup remain uncompleted, the Engineer may restart charging of working days effective at the end of the designated period by providing written notice to the Contractor.

C. Any objection by the Contractor to such weekly determinations shall be deemed waived and shall not thereafter be made the basis of any claim, unless the Contractor shall, within seven calendar days after receipt of a weekly statement, file with the Engineer its written protest setting forth its objections and reasons. If the Contractor's objection to the working day count is made on the grounds it was unable to work due to causes beyond its control, the Contractor shall state its reasons in writing, furnish proof to establish its claim, and state the approximate number of calendar days it estimates it was delayed. The Engineer shall then determine the appropriate number of working days to be charged under the contract.

1.07 WORK ON SUNDAYS OR LEGAL HOLIDAYS

A. Except when an accelerated work schedule is required in the contract documents, no work requiring inspection will be allowed on Sundays or holidays observed by the Jurisdiction except with permission of the Engineer. The Contractor should request a determination of the holidays observed by the Jurisdiction.

B. Such work as may be required to properly maintain or protect completed or partially completed construction, or to maintain lights and barricades, will be permitted on Sundays or holidays without specific permission of the Engineer.

1.08 TEMPORARY SUSPENSION OF WORKING DAYS

When, in the judgment of the Engineer, unfavorable weather makes it impractical to secure acceptable results or other conditions warrant an order to suspend working days, the Engineer shall issue to the Contractor a written order to suspend working days wholly or on any part of the contract. When conditions are again favorable for prosecution of the working days, the Engineer shall issue to the Contractor a written order to resume the suspended working days. Orders to suspend working days will not be written for short intermittent shutdowns due to weather conditions. The Contractor shall take every precaution to prevent any damage or unreasonable deterioration of the work during the time of suspended operations.

1.09 EXTENSION OF TIME

A. Allowances for Delays: The Contractor expressly covenants and agrees that in undertaking to complete the work within the contract time, it has taken into consideration and made allowance for all delays and hindrances that would ordinarily be anticipated in performing such work.

B. Request for Extension of Time: Whenever the Contractor becomes aware of its inability to complete the work under the contract within the contract period, it shall request an extension in writing. Such request shall be submitted to the Engineer at least two weeks prior to the expiration of the contract time to allow for the Jurisdiction's action before termination. The submission or acceptance of a request for extension of time shall not guarantee such extension will be granted. The following items may be justification for extension of time:

1. **Weather:** Extension of time due to adverse weather conditions at the site, so unusual or severe as not to be reasonably anticipated, as determined by the Engineer, may be requested. An average or usual number of inclement working days when work cannot proceed are to be anticipated during the construction period and are not to be considered as warranting extension of time.

2. **Other Contractors:** An extension of time may be requested for delays caused by the noncompletion of essential work of other contractors, provided such noncompletion is the sole and only cause of delay, and where the Contractor has available on the site of the work all equipment, material, and labor necessary to proceed with the work.

3. **Change Orders:** An extension of time may be requested for delays caused by the issuance of a change order, where the work occasioned by the change order is the sole and only cause of the impossibility to complete the work within the specified time.

4. **Work Stoppage:** An extension of time may be requested for delays caused by a general work stoppage in the area or a work stoppage affecting this project that is beyond the control of the Contractor, or where the Contractor has taken in good faith all steps made available to it by law to resolve the causes thereof and to terminate such work stoppage.

5. **Acts by U.S. Government:** An extension of time may be requested for delays caused by any act taken by the United States government that would affect fabrication or delivery of materials or equipment to the work site.

6. **Court Proceedings:** An extension of time may be requested for delays caused by any court proceedings.

7. **Other Delays:** An extension of time may be requested for other delays encountered by the Contractor beyond its control and impossible for the Contractor to complete the contract within the specified time.

1.09 EXTENSION OF TIME (Continued)

C. Claims for Damages: The Contractor shall have no claim for damages for any extensions or delays provided or mentioned in the preceding portions of this section; but the Contractor shall, in such cases, be allowed to petition for such extension of time as the Jurisdiction may grant in writing on account of such delay, provided, however, the claim for such extension of time is made by the Contractor in writing to the Jurisdiction immediately after any such delay occurs.

D. Extension of Time Granted: No extension of time shall be granted or recognized except as specifically approved by the Jurisdiction in writing to the Contractor. Oral representations or agreements by Jurisdiction agents or employees regarding time extension shall not be binding on the Jurisdiction.

1.10 CONTRACTOR'S EMPLOYEES, METHODS, AND EQUIPMENT

A. Superintendent:

1. All work under the contract shall be performed under the continuous supervision of competent personnel, thoroughly experienced in the class of work specified.

2. Prior to beginning work, the Contractor shall give the Engineer, in writing, the name of the Contractor's official representative or superintendent for the project. The superintendent shall be capable of providing adequate supervision of the project and shall be responsible for receiving instructions, notices, and written orders from the Engineer. A change of the superintendent shall be reported to the Engineer in writing. Failure to provide adequate supervision of the project shall be grounds for the Engineer to require a change in supervision before allowing the work to proceed. The superintendent shall be responsible for reporting to the Engineer any inconsistencies, omissions, or lack of definite detail in the plans, special provisions, or contract documents that may be discovered.

3. The lack of proper supervision by the Contractor or by its supervisory personnel shall be just cause for termination of the contract.

B. Workers:

1. The Contractor shall employ competent and efficient workers for every kind of work. The Jurisdiction reserves the right to direct the suspension or discharge from the work any worker, employee, agent, overseer, foreman, or superintendent in the employ of the Contractor, who, in the opinion of the Engineer, shall be incompetent, negligent, unfaithful, insubordinate, or disorderly, and any such person shall immediately be suspended or discharged by the Contractor whenever so directed by the Engineer.

2. The Contractor shall not employ or hire any of the employees of the Jurisdiction without permission of the Engineer.

C. Methods and Equipment:

1. The methods and equipment used by the Contractor shall produce a satisfactory quality of work and shall be adequate to maintain the schedule of progress specified. Equipment used on any portion of the project shall be such, and its use so regulated, that no serious or irreparable damage to the roadway, adjacent property, or other streets or highways will result from its use. If damage does occur to the street or highway, suitable repairs shall be made at the Contractor's expense.

1.10 CONTRACTOR'S EMPLOYEES, METHODS, AND EQUIPMENT (Continued)

2. When the methods and equipment to be used by the Contractor in accomplishing the construction are not prescribed in the contract documents, the Contractor is free to use any methods or equipment that will accomplish the contract work in conformity with the requirements of the contract documents, as demonstrated to the satisfaction of the Engineer.

3. When the contract documents specify that the construction be performed by use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer.

4. If the Contractor desires to use a method or type of equipment other than specified in the contract documents, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the method and equipment proposed to be used and an explanation of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor shall be fully responsible for producing construction work in conformity with contract requirements.

5. If after trial use of the substituted methods or equipment, the Engineer determines the work produced does not meet the requirements of the contract documents, the Contractor shall discontinue use of the substitute method or equipment and shall complete the remaining construction with the specified methods and equipment. The Contractor shall remove the defective work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the construction items involved, or in contract time, as a result of authorizing a change in methods or equipment under these provisions.

1.11 CONTRACTOR'S EQUIPMENT IDENTIFICATION

All vehicles and major construction equipment utilized on Jurisdiction's projects, with the exception of vehicles used for personal purposes and rented equipment bearing the name, address, and telephone number of the rental company, shall exhibit the Contractor's name in at least two locations on each piece of equipment. This identification can be either a decal or painted lettering of a type and size, and with a contrasting color, rendering it legible from a distance of no less than 50 feet.

1.12 LIQUIDATED DAMAGES

A. Time is of the essence of the contract. As delay in the diligent prosecution of the work may inconvenience the public, obstruct traffic, interfere with business, and/or increase costs to the Jurisdiction such as engineering, administration, and inspection, it is important the work be prosecuted vigorously to completion. Should the Contractor, or in case of default the surety, fail to complete the work within the contract time plus such extensions of time as may be allowed by the Jurisdiction, a deduction at the liquidated damages rate specified in the contract will be made for each and every calendar day or working day, whichever is specified, that such contract remains uncompleted after expiration of the contract time. In either event, the Contractor or the Contractor's surety shall be responsible for all costs incident to the completion of the work, and shall be required to pay to the Jurisdiction the liquidated damages stipulated in the proposal form.

B. The liquidated damages rate specified in the contract documents is hereby agreed upon as the true and actual damages due the Jurisdiction for loss to the Jurisdiction and to the public due to obstruction of traffic, interference with business, and/or increased costs to the Jurisdiction such as engineering, administration, and inspection after the expiration of the contract time, or extension thereof. Such liquidated damages may be deducted from any money due or to become due the Contractor under the contract, and the Contractor and its surety shall be liable for any liquidated damages in excess of the amount due the Contractor.

1.12 LIQUIDATED DAMAGES (Continued)

C. Allowing the Contractor to continue and finish the work, or any part of it, after the expiration of the contract time or extension thereof shall in no way operate as a waiver on the part of the Jurisdiction of any of its rights or remedies under the contract, including its right to liquidated damages pursuant to this provision.

1.13 BREACH OF CONTRACT

A. The Contractor's failure to perform in any of the following particulars shall constitute a breach of contract:

1. Failure by the Contractor to begin work at the time specified;

2. Failure by the Contractor to complete the work within the contract period or any extension thereof;

3. Failure or refusal by the Contractor to comply with an order of the Engineer within a reasonable time;

4. Contractor's persistent disregard of laws, ordinances, or instructions of the Engineer;

5. Contractor's repeated failure to provide sufficient workers, equipment, or materials to ensure the proper and timely completion of the work;

6. Failure or refusal by the Contractor to remove rejected materials;

7. Failure or refusal by the Contractor to replace, perform anew, or correct any defective or unacceptable work;

8. Contractor's discontinuance of the work without authorization by the Jurisdiction;

9. Bankruptcy or insolvency of the Contractor, or the making of an assignment for the benefit of creditors by the Contractor; or

10. Failure by the Contractor to carry on the work in an acceptable manner.

Upon Contractor's breach of the contract in any particular above, the Jurisdiction shall be entitled to give notice of default to the Contractor. The notice of default shall indicate how the contract has been breached and shall indicate what action the Contractor must take to cure such breach.

B. If the Contractor or its surety does not, within the time for cure provided in the notice of default, take action to cure such breach, the Contractor shall, at the direction of the Engineer, relinquish possession and control of the work, and the Jurisdiction shall thereupon have full power and authority, without violating the contract or bond, to take over the completion of the work, to appropriate or use any or all materials and equipment at the site that may be suitable and acceptable, to enter into agreements with others for the completion of said contract according to the terms and provisions thereof, or to use such other methods as in the Jurisdiction's opinion may be required for the completion of said contract in an acceptable manner.

1.13 BREACH OF CONTRACT (Continued)

C. The Contractor and its surety shall be liable for all outlay and expense incurred by the Jurisdiction, together with the costs of completing the work, and such costs may be deducted from any monies due or which may become due to the Contractor. In case the outlay and expense incurred by the Jurisdiction in completing the work is less than the sum that would have been payable under the contract if it had been completed by the Contractor, then the Contractor will be entitled to receive the difference. In case such outlay and expense exceeds the sum that would have been payable under the contract, then the Contractor and its surety shall be liable for and shall pay to the Jurisdiction the amount of said excess.

D. Neither the Jurisdiction, nor any officer, agent, or employee thereof, shall be in any way liable or accountable to the Contractor or the Contractor's surety for the method by which the completion of said work, or any portion thereof, may be accomplished, or for the price paid therefore. Neither by taking over the work nor by declaring the contract in default shall the Jurisdiction forfeit the right to recover damages from the Contractor or the Contractor's surety for failure to complete the entire contract.

E. The Contractor shall be liable for the Jurisdiction’s attorney fees incurred as a result of the Contractor’s breach of contract.

1.14 TERMINATION OF CONTRACTOR'S RESPONSIBILITY

The contract will be considered completed when the work has been accepted in writing by the Jurisdiction as provided in Section 1090, 1.08 - Acceptance and Final Payment hereof. Such final acceptance shall release the Contractor from all further obligation with respect thereto, except as to conditions and requirements as set forth in the bond and Jurisdiction's specifications regarding insurance.

END OF SECTION

MEASUREMENT AND PAYMENT

1.01 MEASUREMENT

The determination of quantities of work performed under the contract will be made by the Engineer, based upon the lines and grades as shown on the plans and as given during the progress of the work or as evidenced by approved tickets for weight or liquid measure or by measurements made by the Engineer. All items will be computed in the units shown in the contract.

1.02 SCOPE OF PAYMENT

A. The Contractor shall receive and accept the compensation provided in the contract at unit prices, if it be a unit price contract; or at the lump sum price, if it be a lump sum price contract, except as may be modified by change orders. The compensation provided for in the contract shall constitute full payment for furnishing all labor, equipment, tools, and materials and for performing all work contemplated and embraced under the contract; for all loss or damage arising out of the nature of the work or from the action of the elements; for all expenses incurred by, or in consequence of, the suspension or discontinuance of the said prosecution of the work or from any unforeseen difficulties or obstructions that may arise or be encountered during the prosecution of the work; and for all risks of every description connected with the prosecution of the work until the final acceptance of the work by the Jurisdiction.

B. Neither the payment of any progress payment nor of any retained percentage shall relieve the Contractor of any obligation to make good any defective work or material. Payment will be made only for materials actually incorporated in the work, except as provided in Section 1090, 1.05 - Progress Payments.

C. The contract price for any item shall be full compensation for all labor, materials, supplies, equipment, tools, and all things of whatsoever nature required for the complete incorporation of the item into the work the same as though the item were to read "in place," unless the contract documents shall provide otherwise.

1.03 LUMP SUM BREAKDOWNS

A. If the contract is based on a lump sum bid price, or contains one or more lump sum items for which progress payments are to be made, the Contractor shall prepare and submit a breakdown estimate covering each lump sum item to the Engineer for approval. The breakdown estimate shall show the estimated value of each kind or item of work. The sum of the lump sum items listed in the breakdown estimates shall equal the contract lump sum. Overhead and profit shall not be listed as separate items.

B. The breakdown estimate shall be approved by the Engineer before any progress payments are prepared. An unbalanced breakdown estimate providing for overpayment to the Contractor for items of work to be performed first will not be approved but shall be revised by the Contractor and resubmitted until acceptable to the Engineer.

1.04 PAYMENT FOR CHANGE ORDERS

A. The Contractor's claims for extra work will not be paid unless the extra work covered by such claims was authorized by a change order as specified in Section 1040, 1.07 - Change Orders.

B. Payment for extra work shall be made in one or more of the following ways as determined by the agreement between the parties to the contract prior to the starting of the work.

1.04 PAYMENT FOR CHANGE ORDERS (Continued)

1. Unit Prices: By unit prices contained in the Contractor's original proposal and incorporated in the construction contract, so far as the same may apply.

2. Supplemental Schedule: By supplemental schedule of prices to include costs of all equipment, material, labor, supervision, management, insurance, overhead, and incidentals, said schedule to be submitted by the Contractor upon request of the Engineer and to be accepted by the Jurisdiction.

3. Lump Sum: By an acceptable lump sum proposal from the Contractor.

C. The percentage markup to be allowed to the Contractor for extra work performed by a subcontractor shall be in accordance with the following:

1. 10% of the first $50,000 with a $100 minimum.

5% of the portion over $50,000.

1.05 PROGRESS PAYMENTS

A. Limits: Progress payments made under the contract, unless provided otherwise by law, shall be made according to Iowa Code Chapter 573, and shall be made on the basis of monthly estimates of labor performed and material delivered and incorporated in to the work, as determined by the Engineer. Payment may be made for materials not incorporated into the project if they can be specifically identified and cost verified by invoice. Progress payment requests shall be accompanied by the documentation required in Section 1090, 1.07, B - Sales Tax and Use Tax.

B. Retainage: The Jurisdiction shall retain from each monthly progress payment 5% of the amount determined to be due according to the estimate of the Engineer.

C. Quantities: Quantities used for progress payments shall be considered as only approximate and provisional and shall be subject to recalculation, adjustment, and correction by the Engineer in subsequent partial payments and in the final payment. Inclusion of any quantities in a progress payment, or failure to disapprove the work at the time of any progress payment, shall not be construed as acceptance of the corresponding work or materials.

1.06 PAYMENT OF RETAINAGE

A. Retained funds shall be retained by the Jurisdiction for a period of 30 calendar days after the completion and final acceptance of the improvement by the Jurisdiction. If at the end of the 30 calendar day period claims are on file as provided, the Jurisdiction shall continue to retain from the unpaid funds, a sum equal to double the total amount of all claims on file. The remaining balance of the unpaid fund, or if no claims are on file, the entire unpaid fund, shall be released and paid to the Contractor.

B. The Jurisdiction, the Contractor, any claimant for labor or material who has filed a claim, or the surety on any bond given for the performance of the contract, may, at any time after the expiration of 30 calendar days, and not later than 60 calendar days, following the completion and final acceptance of said improvement, bring action in equity in the county where the improvement is located to adjudicate all rights to said fund, or to enforce liability on said bond, pursuant to Iowa Code Chapter 573. Upon written demand of the Contractor, served in the manner prescribed for original notices, on the person filing a claim, requiring the claimant to commence action in court to enforce the claim, an action shall be commenced within 30 calendar days, otherwise the retained and unpaid funds due the Contractor shall be released to the Contractor.

1.07 SALES AND USE TAX STATEMENT

A. At the completion of the contract and before final payment can be made thereon, the Contractor and all subcontractors shall file with the Engineer in triplicate, with original signatures on all three sets, a statement under oath on forms provided by the Iowa Department of Revenue and Finance showing the data with reference to sales, use, and service taxes required by Iowa Code Section 423.4, as amended. On projects with a total contract cost greater than $1 million or with supplies and materials in excess of 50% of the contract price and when directed by the Engineer, the Contractor shall submit with each progress pay estimate completed sales and use tax forms from the Iowa Department of Revenue listing all supplies and materials purchased since the previous progress payment.

B. If a Sales Tax Exemption Certificate(s) is issued by the Jurisdiction according to Section 1020, 1.08, no sales, use, or service statement is required.

1.08 ACCEPTANCE AND FINAL PAYMENT

A. Final payment will be based on the actual final total amount of the work accomplished and finally accepted by the Jurisdiction under the contract. Under no circumstances or conditions will the Contractor be paid anything for anticipated profits for the work, nor will it be paid for any work not actually included in the improvement. The Jurisdiction will not give final acceptance of the work until the Contractor has submitted all documentation required by the contract documents.

B. The Engineer shall, after determining the work has been finally and fully completed according to the contract documents, make a final estimate of the amount of work done and the value thereof.

C. Final acceptance of construction shall be defined as final approval of the project only in the sense that it has been constructed, cleaned up, and completed in apparent substantial compliance with the contract documents. Said final acceptance is stipulated to mean a written acceptance by the Jurisdiction.

D. It is mutually agreed between the parties to the contract that a certificate of completion of the project, submitted by the Engineer and approved by the Jurisdiction, shall constitute final acceptance of the work and materials included in the contract on the date of such approval, subject to the provision any such approval, acceptance, or payment as herein provided shall not constitute an acceptance of any unauthorized or defective work, or of any improper material.

END OF SECTION

CITY OF WEBSTER CITY GENERAL SUPPLEMENTAL SPECIFICATIONS TO THE SUDAS STANDARD SPECIFICATIONS 2022 EDITION

Effective Date: March 7, 2022

This project will be constructed in accordance with the SUDAS Standard Specifications, 2022 Edition, which were adopted by the City of Webster City, under Ordinance No. 2022-1854, as amended by these City of Webster City General Supplemental Specifications.

The SUDAS Standard Specifications, 2022 Edition, may be viewed at the Iowa SUDAS website https://iowasudas.org/manuals/specifications-manual/, or can be purchased online from the Iowa SUDAS website at: http://iowasudas.org/order-the-manuals/ .

PART 3 – BONDS AND INSURANCE

3.05 PROPERTY INSURANCE

Delete paragraph 3.05.G in its entirety

SECTION 00801 - RESIDENT PROJECT REPRESENTATIVE

PART 1 -- GENERAL

1.1 RESIDENT PROJECT REPRESENTATIVE

A. If OWNER and ENGINEER agree, the ENGINEER will furnish a Resident Project Representative (RPR), assistants and other field staff to assist ENGINEER in observing performance of the Work of the CONTRACTOR.

1.2 LIAISON WITH THE ENGINEER

A. Through more extensive on-site observations of the Work in progress and field checks of materials and equipment by the RPR and assistants, ENGINEER endeavors to provide further protection for OWNER against defects and deficiencies in the Work; but, the furnishing of such services will not make ENGINEER responsible for or give ENGINEER control over construction means, methods, techniques, sequences or procedures or for safety precautions or programs, or responsibility for CONTRACTOR'S failure to perform the Work in accordance with the Contract Documents.

1.3 DUTIES AND RESPONSIBILITIES OF THE RPR

A. The duties and responsibilities of the RPR are limited to those of ENGINEER in the construction Contract Documents, and are further limited and described as follows:

B. General

1. RPR is ENGINEER'S agent at the site, will act as directed by and under the supervision of ENGINEER, and will confer with ENGINEER regarding RPR's actions. RPR's dealings in matters pertaining to the on-site work shall in general be with ENGINEER and CONTRACTOR keeping OWNER advised as necessary. RPR's dealings with subcontractors shall only be through or with the full knowledge and approval of CONTRACTOR. RPR shall generally communicate with OWNER with the knowledge of and under the direction of ENGINEER.

C. Duties and Responsibilities of RPR

1. **Schedules:** Review the progress schedule, schedule of Shop Drawing submittals and schedule of values prepared by CONTRACTOR and consult with ENGINEER concerning acceptability.

2. **Conferences and Meetings:** Attend meetings with CONTRACTOR, such as preconstruction conferences, progress meetings, job conferences and other project related meetings, and prepare and circulate copies of minutes thereof.

3. Liaison:

(a) Serve as ENGINEER'S liaison with CONTRACTOR, working principally through CONTRACTOR'S superintendent and assist in understanding the intent of the Contract Documents; and assist ENGINEER in serving as OWNER'S liaison with CONTRACTOR when CONTRACTOR'S operations affect OWNER'S on-site operations.

(b) Assist in obtaining from OWNER additional details or information, when required for proper execution of the Work.

4. Shop Drawings and Samples:

(a) Record date of receipt of Shop Drawings and samples.

(b) Receive samples which are furnished at the site by CONTRACTOR, and notify ENGINEER of availability of samples for examination.

(c) Advise ENGINEER and CONTRACTOR of the commencement of any Work requiring a Shop Drawing or sample if the submittal has not been approved by ENGINEER.

5. Review of Work, Rejection of Defective Work, Inspections and Tests:

(a) Conduct on-site observations of the Work in progress to assist ENGINEER in determining if the Work is in general proceeding in accordance with the Contract Documents.

(b) Report to ENGINEER whenever RPR believes that any Work is unsatisfactory, faulty or defective or does not conform to the Contract Documents, or has been damaged, or does not meet the requirements of any inspection, test or approval required to be made; and advise ENGINEER of Work that RPR believes should be corrected or rejected or should be uncovered for observation, or requires special testing, inspection or approval.

(c) Verify that tests, equipment and systems startups and operating and maintenance training are conducted in the presence of appropriate personnel, and that CONTRACTOR maintains adequate records thereof; and observe, record and report to ENGINEER appropriate details relative to the test procedures and startups.

(d) Accompany visiting inspectors representing public or other agencies having jurisdiction over the Project, record the results of these inspections and report to ENGINEER.

6. **Interpretation of Contract Documents:** Report to ENGINEER when clarifications and interpretations of the Contract Documents are needed and transmit to CONTRACTOR clarifications and interpretations as issued by ENGINEER.

7. **Modifications:** Consider and evaluate CONTRACTOR'S suggestions for modifications in Drawings or Specifications and report with RPR's recommendations to ENGINEER. Transmit to CONTRACTOR decisions as issued by ENGINEER.

8. Records:

(a) Maintain orderly files for correspondence, reports or job conferences, Shop Drawings and samples, reproductions of original Contract Documents including all Work Directive Changes, Addenda, Change Orders, Field Orders, additional Drawings issued subsequent to the execution of the Contract, ENGINEER'S clarifications and interpretations of the Contract Documents, progress reports, and other project related documents.

(b) Keep a diary or log book, recording CONTRACTOR hours on the job site, weather conditions, data relative to questions of Work Directive Changes, Change Orders or changed conditions, list of job site visitors, daily activities, decisions, observations in general, and specific observations in more detail as in the case of observing test procedures.

(c) Record names, addresses and telephone numbers of all contractors, subcontractors and major suppliers of materials and equipment.

9. Reports:

(a) Furnish ENGINEER periodic reports as required of progress of the Work and of CONTRACTOR'S compliance with the progress schedule and schedule of Shop Drawing and sample submittals.

(b) Consult with ENGINEER in advance of scheduled major tests, inspections or start of important phases of the Work.

(c) Draft proposed Change Orders and Work Directive Changes, obtaining backup material from CONTRACTOR and recommend to ENGINEER Change Orders, Work Directive Changes, and Field Orders.

(d) Report immediately to ENGINEER and OWNER upon the occurrence of any accident.

10. **Payment Requests:** Review applications for payment with CONTRACTOR for compliance with the established procedure for their submission and forward with recommendations to ENGINEER, noting particularly the relationship of the payment requested to the schedule of values, Work completed and materials and equipment delivered at the site but not incorporated in the Work.

11. **Certificates, Maintenance and Operation Manuals:** During the course of the Work, verify that certificates, maintenance and operation manuals and other data required to be assembled and furnished by CONTRACTOR are applicable to the items actually installed and in accordance with the Contract Documents, and have this material delivered to ENGINEER for review and forwarding to OWNER prior to final payment for the Work.

12. Completion:

    (a) Conduct final inspection in the company of ENGINEER, OWNER, and CONTRACTOR and prepare a final list of items to be completed or corrected.

    (b) Observe that all items on final list have been completed or corrected and make recommendations to ENGINEER concerning acceptance.

D. Limitations of Authority

1. Resident Project Representative:

    (a) Shall not authorize any deviation from the Contract Document or substitution of materials or equipment, unless authorized by ENGINEER.

    (b) Shall not exceed limitations of ENGINEER'S authority as set forth in the Contract Documents.

    (c) Shall not undertake any of the responsibilities of CONTRACTOR, subcontractor or CONTRACTOR'S superintendent.

    (d) Shall not advise on, issue directions relative to or assume control over any aspect of the means, methods, techniques, sequences or procedures of construction unless such advice or directions are specifically required by the Contract Documents.

    (e) Shall not advise on, issue directions regarding or assume control over safety precautions and programs in connection with the Work.

PART 2 -- NOT USED

PART 3 -- NOT USED

**** END OF SECTION ****

SECTION 00991 – CHANGE ORDER

(Instructions on reverse side) No.

PROJECT: Water Treatment Facility Improvements

DATE OF ISSUANCE: EFFECTIVE DATE:

OWNER: City of Webster City

ENGINEER'S Project No.: 0M2.126087

CONTRACTOR: ENGINEER:

You are directed to make the following changes in the Contract Documents.

Description:

Reason for Change Order:

Attachments: (List documents supporting change)

CHANGE IN CONTRACT PRICE:	CHANGE IN CONTRACT TIMES:
Original Contract Price $_____	Original Contract Times Substantial Completion :_____days or dates Ready for final payment :_____days or dates
Net changes from previous Change Orders No. ___ to No. ___ $_____	Net changes from previous Change Orders No.___to No.___ ____days
Contract Price Prior to this Change Order $_____	Contract Times prior to this Change Order Substantial Completion :_____ days or dates Ready for final payment :_____days or dates
Net (Increase/Decrease/No Change) of this Change Order $_____	Net (Increase/Decrease/No Change) of this Change Order ____days
Contract Price with all approved Change Orders $_____	Contract Times with all approved Change Orders Substantial Completion :_____days or dates Ready for final payment :_____days or dates

RECOMMENDED:	APPROVED:	ACCEPTED:
By:_____ Engineer (Authorized Signature)	By:_____ Owner (Authorized Signature)	By:_____ Contractor (Authorized Signature)
Date:_____	Date:_____	Date:_____

EJCDC No. 1910C8-B (1990 Edition)

Prepared by the Engineers Joint Contract Documents Committee and endorsed by The Associated General Contractors of America.

CHANGE ORDER

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed to provide a uniform format for handling contract changes that affect Contract Price or Contract Times. Changes that have been initiated by a Work Change Directive must be incorporated into a subsequent Change Order if they affect Contract Price or Times.

Changes that affect Contract Price or Contract Times should be promptly covered by a Change Order. The practice of accumulating change order items to reduce the administrative burden may lead to unnecessary disputes.

If Milestones have been listed, any effect of a Change Order thereon should be addressed.

For supplemental instructions and monitor changes not involving a change in the Contract Price or Contract Times, a Field Order may be used.

B. COMPLETING THE CHANGE ORDER FORM

Engineer initiates the form, including a description of the changes involved and attachment based upon documents and proposals submitted by Contractor, or requests from Owner, or both.

Once Engineer has completed and signed the form, all copies should be sent to Contractor for approval. After approval by Contractor, all copies should be sent to Owner for approval. Engineer should make distribution of executed copies after approval by Owner.

If a change only applies to Contract Price or to Contract Times, cross out the part of the tabulation that does not apply.

SECTION 00992 – ENGINEER'S FIELD ORDER

ENGINEER'S FIELD ORDER

OWNER ☐
ENGINEER ☐
CONSULTANTS ☐
CONTRACTOR ☐
FIELD ☐
OTHER ☐

PROJECT: (name, address) Water Treatment Facility Improvements

FIELD ORDER NO:

OWNER: City of Webster City

DATE:

TO: (CONTRACTOR)

ENGINEER'S PROJECT NO: 0M2.126087

CONTRACT FOR:

CONTRACT DATED:

You are hereby directed to execute promptly this Field Order which interprets the Contract Documents or orders minor changes in the Work without change in Contract Sum or Contract Time.

If you consider that a change in Contract Sum or Contract Time is required, please submit your itemized proposal to the Engineer immediately and before proceeding with this Work. If your proposal is found to be satisfactory and in proper order, this Field Order will in that event be suspended by a Change Order.

Description: (Here insert a written description of the interpretation or change)

Attachments: (Here insert listing of attached documents that support description)

ENGINEER: DATE:

SECTION 00993 – PROPOSAL REQUEST

PROPOSAL REQUEST

- OWNER ☐
- ENGINEER ☐
- CONSULTANTS ☐
- CONTRACTOR ☐
- FIELD ☐
- OTHER ☐

PROJECT: (name, address) Water Treatment Facility Improvements

PROPOSAL REQUEST NO:

OWNER: City of Webster City

DATE:

TO: (CONTRACTOR)

ENGINEER'S PROJECT NO: 0M2.126087

CONTRACT FOR:

CONTRACT DATED:

Please submit an itemized quotation for changes in the Contract Sum and/or Time incidental to proposed modifications to the Contract Documents described herein.

THIS IS NOT A CHANGE ORDER NOR A DIRECTION TO PROCEED WITH THE WORK DESCRIBED HEREIN.

Description: (Written Description of the Work)

Attachments: (List Attached Documents that Support Description)

ENGINEER:

DATE:

SECTION 00994 – WORK CHANGE DIRECTIVE

(Instructions on reverse side) No.

PROJECT: Water Treatment Facility Improvements

DATE OF ISSUANCE: EFFECTIVE DATE:

OWNER: City of Webster City

OWNER's Contract No.:

CONTRACTOR: ENGINEER:

You are directed to proceed promptly with following change(s).

Description:

Purpose of Work Change Directive:

Attachments: (List documents supporting change)

If a claim is made that the above change(s) have affected Contract Price or Contract Times, any claim for a Change Order based thereon will involve one or more of the following methods of determining the effect of the change(s).

Method of determining change in Contract Price:

☐ Unit Prices
☐ Lump Sum
☐ Other _____

Estimated Increase (Increase/Decrease) in Contract Price:
$
If the change involves an increase, the estimated amount is not to be exceeded without further authorization.

Method of determining change in Contract Times:

☐ Contractor's records
☐ Engineer's records
☐ Other _____

Estimated Increase (Increase/Decrease) in Contract Times:
Substantial Completion: days;
Ready for final payment: days.
If the change involves an increase, the estimated times are not to be exceeded without further authorization.

RECOMMENDED:

_____
ENGINEER

By:_____
(Authorized Signature)

AUTHORIZED:

_____
OWNER

By:_____
(Authorized Signature)

WORK CHANGE DIRECTIVE

INSTRUCTIONS

A. GENERAL INFORMATION

This document was developed for use in situations involving changes in the Work which, if not processed expeditiously, might delay the Project. These changes are often initiated in the field and may affect the Contract Price or the Contract Times. This is not a Change Order, but only a directive to proceed with Work that may be included in a subsequent Change Order.

For supplemental instructions and minor changes not involving a possible change in the Contract Price or the Contract Times a Field Order may be used.

B. COMPLETING THE WORK CHANGE DIRECTIVE FORM

Engineer initiates the form, including a description of the items involved and attachments.

Based on conversations between Engineer and Contractor, Engineer completes the following:

METHOD OF DETERRING CHANGE, IF ANY, IN CONTRACT PRICE: Mark the method to be used in determining the final cost of Work involved and the estimated net effect on the Contract Price. If the change involves an increase in the Contract Price and the estimated amount is approached before the additional or change Work is completed, another Work Change Directive must be issued to change the estimated price or Contractor may stop the changed Work when the estimated price is reached. If the Work Change Directive is not likely to change the Contract Price, the space for estimated increase (decrease) should be marked "Not Applicable".

METHOD OF DETERMINING CHANGE, IF ANY, IN CONTRACT TIMES: Mark the method to be used in determining the change in Contract Times and the estimated increase or decrease in Contract Times. If the change involves an increase in the Contract Times and the estimated times are approached before the additional or changed Work is complete, another Work Change Directive must be issued to change the times or Contractor may stop the changed Work when the estimated times are reached. If the Work Change Directive is not likely to change the Contract Times, the space for estimated increase (decrease) should be marked "Not Applicable".

Once Engineer has completed and signed the form, all copies should be sent to Owner for authorization because Engineer alone does not have authority to authorize change in Price or Times. Once authorized by Owner, a copy should be sent by Engineer to Contractor. Price and Times may only be changed by Change Order signed by Owner and Contractor with Engineer's recommendation.

Once the Work covered by this directive is completed or final cost and times are determined, Contractor should submit documentation for inclusion in a Change Order.

THIS IS A DIRECTIVE TO PROCEED WITH A CHANGE THAT MAY AFFECT THE CONTRACT PRICE OR THE CONTRACT TIMES. A CHANGE ORDER, IF ANY, SHOULD BE CONSIDERED PROMPTLY.

BOLTON & MENK
Real People. Real Solutions.

1519 Baltimore Drive
Ames, IA 50010-8783

Ph: (515) 233-6100
Fax: (515) 233-4430
Bolton-Menk.com

LETTER OF TRANSMITTAL

Contractor Name

ATTN

Contractor Address

Contractor City, State, Zip

DATE:

BMI #. 0M2.126087

ATTENTION:

RE: Water Treatment Facility Improvements

Project Name

Webster City, IA

Project Location

SUBMITTAL NO.

WE ARE SENDING YOU ☒ Attached ☐ Under separate cover via_____the following items:

☒ Shop drawings ☐ Prints ☐ Specifications ☐ Copy of letter

☐ _____

No. Copies Submitted	Specification Section *(One (1) spec section per submittal)*	Subject of Shop Drawing or Other Submittal	Review Action *(To be filled in by Engineer)*

Review Action Explanation:
A. No Exceptions Taken
B. Make Corrections Noted
C. Amend-Resubmit
D. Rejected-Resubmit

Comments: *(To be filled in by Engineer)*

☐ The CONTRACTOR hereby notifies the OWNER that this Shop Drawing is in conformance with Article 7 of the General Conditions to the Contract Documents.

☐ The CONTRACTOR hereby notifies the OWNER that this Shop Drawing is not in conformance with Article 7 of the General Conditions to the Contract Documents and nevertheless asks approval thereof. The features not in conformance are as follows:

1._____

2._____ CONTRACTOR SIGNED:_____

3._____

4._____ DATE: _____

5._____

(To be filled in by Engineer)

COPY TO: _____

_____ ENGINEER SIGNED: _____

_____ DATE: _____

_____

Distribution: ☐ Contractor ☐ Owner ☐ File ☐ Field Office ☐ Other

DIVISION 1

GENERAL REQUIREMENTS

SECTION 01010 - SUMMARY OF WORK

PART 1 -- GENERAL

1.1 GENERAL

A. The WORK to be performed under this Contract shall consist of furnishing all plant, tools, equipment, materials, supplies, and manufactured articles and for furnishing all transportation and services, including fuel, power, water, and essential communications, and for the performance of all labor, work, or other operations required for the fulfillment of the Contract in strict accordance with the Contract Documents. The WORK shall be complete, and all work, materials, and services not expressly shown or called for in the Contract Documents which may be necessary for the complete and proper construction of the WORK in good faith shall be performed, furnished, and installed by the CONTRACTOR as though originally so specified or shown, at no increase in cost to the OWNER.

1.2 PROJECT LOCATION

A. The project is located in the City of Webster City, Iowa, which is located in Hamilton County, Iowa. The project is at the existing Water Treatment Facility.

1.3 PROJECT DESCRIPTION

A. The work hereafter referred to requires the complete construction and start-up necessary for the facility with all required necessary equipment, generally described, but not limited to, in the following paragraphs.

B. Remove and replace of existing CO2 gas diffuser re-carbonation system with Owner purchased TomCo 75 lbs/hr rated pressure solution carbonic acid feed system. This equipment including the booster pumping system will be assigned to the contractor for installation. Existing Carbon-dioxide storage tank shall be reused. Remove replace carbon dioxide gas feed piping with 304 SS pipe. Install booster pump system for TomCo re-carbonation carrier water system to maintain constant 60 psi water supply. Modify baffle wall system in the existing re-carbonation basin and furnish and install sample withdrawal piping system for pH sensor for automatic control of re-carbonation system.

C. Remove and replace existing pre-chlorine and intermediate chlorine feed system. The new equipment shall include new 500 lbs/d rated ejectors, manual gas chlorinators chlorine feed rate rotameters, new vacuum tubing and carrier and chlorine solution piping and related appurtenances.

D. Furnish and install new chlorine booster pump. Provide a shelf spare chlorine booster pump.

E. Furnish and install a new gas leak monitoring system in the chlorin storage room with strobe light indicator and an alarm horn to indicate chlorine gas leak. Furnish and install new automatic shut off valve on the one-ton chlorine cylinder with a battery back-up system.

F. SCADA integration with necessary electrical wiring and motor starters, disconnect and sub-feed panels for work described above and additional work done by the owner for the following chemical feed system

1. Lime feed system
2. Sodium Aluminate coagulant feed system
3. Polymer feed system
4. Polyphosphate feed system

5. Orthophosphate feed system

G. There is no painting work included in the project.

1.4 ORDER OF THE WORK

A. The work shall be carried on at such places on the project and also in such order or precedence as may be found necessary by the Engineer to expedite the completion of the project. After work has begun on any portion of the project, it shall be carried forward to its final completion. All work shall conform to the provisions of the approved Contractor's schedule.

1.5 INTERFERENCE WITH WORK ON UTILITIES

A. The Contractor shall cooperate fully with all utility forces of the OWNER or forces of other public or private agencies engaged in the relocation, altering, or otherwise rearranging of any facilities which interfere with the progress of the work, and shall schedule the work so as to minimize interference with said relocation, altering, or other rearranging of facilities.

1.6 SEQUENCE OF CONSTRUCTION

A. The Contractor shall at all times conduct his operations so as to minimize any impact on existing treatment processes and water supply. At no time shall the Contractor's operations cause the OWNER to abandon any portion of the treatment process.

B. The Contractor shall coordinate all process interruptions with the OWNER, Engineer and operations staff. All construction shall be coordinated with the plant operations staff at all times. Any night work and overtime payments which may be required for modifications performed at low flow shall be considered to have been included in the price bid for work.

1.7 CONTRACTOR USE OF PROJECT SITE

A. The CONTRACTOR's use of the project site shall be limited to its construction operations, including on-site storage of materials, on-site fabrication facilities, and field offices.

1.8 OWNER USE OF THE PROJECT SITE

A. The OWNER may utilize all or part of the existing site and existing facilities during the entire period of construction. The CONTRACTOR shall cooperate with the OWNER to minimize interference with the CONTRACTOR's operations and to facilitate the OWNER's operations. In any event, the OWNER shall be allowed access to the project site during the period of construction.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01025 - MEASUREMENT AND PAYMENT

PART 1 -- GENERAL

1.1 SCHEDULE OF VALUES

A. Within ten days after the Effective Date of the Agreement, the CONTRACTOR shall prepare and submit to the ENGINEER for approval, a detailed Schedule of Values or cost by breakdown by major specification sections of the total contract price. The Schedule of Values shall be sufficiently detailed to provide a basis for progress payments.

1.2 REQUEST FOR PAYMENTS

A. Applications for payment shall be submitted in accordance with the Schedule of Values and General Conditions and shall be submitted on forms approved by the ENGINEER. Application for payment shall be made at least two days prior to the monthly Construction Progress Meeting.

B. The CONTRACTOR shall furnish the ENGINEER promptly, upon request, all information and records necessary to determine the cost of the work for purposes of estimating monthly payments, including a satisfactory itemized statement of the actual cost of all acceptable materials delivered by the CONTRACTOR to the site as required by paragraph 14.02 of the General Conditions.

1.3 ENGINEER'S PAY ESTIMATE

A. On or about the 25th day of each month, the ENGINEER will prepare and certify to the OWNER, an estimate of the cumulative amount and value of work performed by the CONTRACTOR up to that date. Said amount will include all acceptable materials and equipment delivered to the site of the work as defined in the General Conditions. Said value will be based on certified copies of invoices delivered by the CONTRACTOR to the ENGINEER. To this figure will be added all amounts due or paid the CONTRACTOR for performance of extra work in accordance with change orders.

B. The ENGINEER's estimate of the monthly payment due the CONTRACTOR will not be required to be made by strict measurement, and an approximate estimate will suffice. The monthly payments may be withheld or reduced if, in the ENGINEER's opinion, the CONTRACTOR is not diligently or efficiently endeavoring to comply with the intent of the contract, or if the CONTRACTOR fails to pay his labor and material bills as they become due.

C. No monthly payment shall be construed as an acceptance of the work or of any portion of the work, nor shall the making of such payment preclude the OWNER from demanding and recovering from the CONTRACTOR any damages caused by the CONTRACTOR's failure to comply with the requirements of the Contract.

1.4 PROGRESS PAYMENT

A. Progress payments will become due thirty days after presentation of the Application for Payment with ENGINEER's recommendation as required by paragraph 14.02 B. and subject to the provisions of paragraph 14.02 of the General Conditions and as modified by Paragraph 1.19 of Section 00800, Supplemental Conditions.

B. The schedule of Progress Payments may be altered by the Agreement or Purchase Order.

1.5 FINAL PAYMENT

A. Final payment will be made as specified in Section 01700 and subject to provisions of paragraph 14.07 of the General Conditions and as modified in paragraph 1.21 of Section 00800 Supplementary Conditions.

1.6 CHANGE ORDER PROCEDURES

A. Changes in the Work will be authorized by a written Change Order, or Engineer's Field Order.

B. Changes of contract price will be made by a written Change Order.

C. The ENGINEER or OWNER will request an official proposal for change orders.

D. Refer to the General Conditions for change order details.

E. Blank copies of a Change Order, Proposal Request and Engineer's Field Order are included in project section 00991, 00992 and 00993.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01040 - SEQUENCE OF CONSTRUCTION

PART 1 -- GENERAL

1.1 INTERRUPTION OF WATER SUPPLY AND DISTRIBUTION

A. The Contractor shall at all times conduct his operations so as to minimize any impact on existing water supply and distribution system. At no time shall Contractor's activities result in loss of system pressure in the distribution system or inability to maintain level in the storage reservoirs and or elevated water towers.

B. The Contractor shall coordinate all process interruptions with the OWNER, Engineer and operations staff. All construction shall be coordinated with the operations staff at all times. Construction if requires interruption shall not proceed until written approval has been given by the Engineer. Any night work and overtime payments required for modifications performed at low flow or demand period shall be considered to have been included in the price bid for work.

C. The contractor shall notify the Owner at least 72 hours in advance before taking down the recarbonation tank for installation of new equipment. Bypassing duration of the lime softening and recarbonation treatment shall be minimized and no condition shall exceed five working days. Installation of new intermediate chlorine injection diffuser system shall be performed with treatment shut down not exceeding 6 hours. In the event the Water Plant employees need to start the plant during these hours due to an emergency, the Contractor shall cooperate with Owner's staff to expedite the start-up of the plant.

1.2 SEQUENCE OF CONSTRUCTION

A. General

1. Work under the contract shall be scheduled and performed in such a manner as to result in the least possible disruption to the operation of the existing system or treatment facilities. The Contractor shall submit to the Engineer a construction schedule covering the entire work before any work is commenced. The schedule shall be complete with estimated dates for start and finish of each item of work. The following construction constraints should be used as a guideline in preparing the scheduling. Deviation from these suggested sequences is permitted if techniques and methods known to the Contractor will result in reducing the disruption of the facility operation and is concurred with by the Engineer.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

*** END OF SECTION ***

SECTION 01090 - REFERENCES

PART 1 -- GENERAL

1.1 GENERAL

A. Applicable codes and standards referred to in these specifications shall establish minimum requirements for equipment, materials, construction and shall be superseded by more stringent requirements of drawings and specifications when and where they occur.

B. Reference to standard specifications of any technical society, organization, or association or to codes of local or State authorities shall mean the latest standard, code, specification or tentative specification adopted and published at the date of taking bids, unless specifically stated otherwise.

C. All equipment furnished and installed under the contract shall be so designed, fabricated, assembled, installed, and placed into service that such equipment will conform to the applicable provisions of the Federal and State Safety and Health Standards.

D. All construction methods and tools shall conform to the applicable provisions of the Federal and State Safety and Health Standards, and shall comply with commonly accepted standards for safety and health of personnel engaged on construction work.

E. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall bid the most stringent requirements.

1.2 TRADE NAMES AND ALTERNATIVES

A. For convenience in designation in the Contract Documents, materials to be incorporated in the WORK may be designated under a trade name or the name of a manufacturer and its catalog information. The use of alternative material which is equal in quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements:

1. The burden of proof as to the quality and suitability of such alternative equipment products, or other materials shall be upon the CONTRACTOR.

2. The ENGINEER will be the sole judge as to the comparative quality and suitability of such alternative equipment, products, or other materials and its decision shall be final.

B. Wherever in the Contract Documents the name or the name and address of a manufacturer or distributor is given for a product or other material, or if any other source of a product or material is indicated, such information is given for the convenience of the CONTRACTOR only, and no limit, restriction, or direction is indicated or intended thereby, nor is the accuracy or reliability of such information guaranteed. It shall be the responsibility of the CONTRACTOR to determine the accuracy of the information and to identify and locate any such manufacturer, distributor, or other source of any product or material called for in the Contract Documents.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01092 - ABBREVIATIONS

PART 1 -- GENERAL

1.1 GENERAL

A. Wherever in these Specifications references are made to the standards, specifications, or other published data of the various national, regional, or local organizations, such organizations may be referred to by their acronym or abbreviation only. As a guide to the user of these specifications, the following acronyms or abbreviations which may appear in these specifications shall have the meanings indicated herein.

1.2 ABBREVIATIONS AND ACRONYMS

AAMA	American Architectural Manufacturers Association
AASHTO	American Association of the State Highway and Transportation Officials
ACI	American Concrete Institute
AFBMA	Anti-Friction Bearing Manufacturer's Association, Inc.
AGA	American Gas Association
AGMA	American Gear Manufacturers' Association
AI	The Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ANSI	American National Standards Institute
APA	American Plywood Association
API	American Petroleum Institute
APWA	American Public Works Association
ASA	Acoustical Society of America
ASAE	American Society of Agriculture Engineers
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASLE	American Society of Lubricating Engineers
ASME	American Society of Mechanical Engineers
ASQC	American Society for Quality Control
ASSE	American Society of Sanitary Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BBC	Basic Building Code, Building Officials and Code Administrators International
BHMA	Builders Hardware Manufacturer's Association
CBM	Certified Ballast Manufacturers
CEAM	City Engineer's Association of Minnesota
CGA	Compressed Gas Association
CLFMI	Chain Link Fence Manufacturers Institute
CMA	Concrete Masonry Association
CRSI	Concrete Reinforcement and Steel Institute
EIA	Electronic Industries Association
ETL	Electrical Test Laboratories
IBC	International Building Code, International Conference of Building Officials
ICBO	International Conference of Building Officials

IEEE	Institute of Electrical and Electronics Engineers
IES	Illuminating Engineering Society
IFI	Industrial Fasteners Institute
IPCEA	Insulated Power Cable Engineers Association
ISA	Instrument Society of America
ISO	Insurance Services Office
MBMA	Metal Building Manufacturer's Association
MnDOT	Minnesota Department of Transportation
MPTA	Mechanical Power Transmission of Association
NAAMM	National Association of Architectural Metal Manufacturer's
NACE	National Association of Corrosion Engineers
NBS	National Bureau of Standards
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NFPA	National Fire Protection Association
NGLI	National Lubricating Grease Institute
OSHA	Occupational Safety and Health Act of 1970
PCA	Portland Cement Association
SAE	Society of Automotive Engineers
SAMA	Scientific Apparatus Makers Association
SMA	Screen Manufacturer's Association
SSPC	Steel Structures Painting Council
SSPWC	Standard Specifications for Public Works Construction
UL	Underwriters' Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WCRSI	Western Concrete Reinforcing Steel Institute
WRI	Wire Reinforcement Institute, Inc.
WWPA	Western Wood Products Association

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01200 - PROJECT MEETINGS

PART 1 -- GENERAL

1.1 PRECONSTRUCTION CONFERENCE

A. Prior to the start of construction, a joint meeting will be held with representatives of the Contractor, the OWNER, the Engineer, and any other interested parties. This meeting is intended to introduce the various key personnel from each organization and to discuss the start of construction, order of work, labor and legal requirements, provisions of State labor laws, insurance requirements, method of payment, weekly payrolls, shop drawing requirements, protection of existing facilities, location of disposal and stockpile areas, and other pertinent items associated with the project.

B. The Contractor shall be required to discuss his proposed detailed construction progress schedule as presented in Section 01300, and Schedule of Values as required by paragraph 2.05.A.3. of the General Conditions at this conference. All such construction schedules shall be subject to the approval of the Engineer and applicable public agencies.

1.2 CONSTRUCTION PROGRESS MEETINGS

A. Meetings may be held at least monthly or as needed between the OWNER, Contractor and Engineer for the purpose of reviewing the project schedule, the status of the project, and the Contractor's request for payment.

B. The Contractor shall submit within at least two working days before the Construction Progress Meeting, a brief written report as to status of project in relation to the construction schedule and issues to be discussed at the Construction Progress Meeting.

C. The Contractor shall submit to the Engineer at least two working days before the monthly progress meeting a request for payment.

1.3 FINAL PROJECT COMPLETION MEETINGS

A. Final project completion meetings shall be held between the Contractor, the OWNER, and the Engineer and any other interested parties to determine final acceptance of the project. The final project completion meeting shall follow the loan or grant issuing agency and state regulatory agency completion of construction policy.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01300 - SUBMITTALS

PART 1 -- GENERAL

1.1 LIST OF SUBCONTRACTORS AND SUPPLIERS

A. Prior to the execution and delivery of the contract, the successful bidder shall submit a complete list of all sub-contractors and suppliers with whom he proposes to contract. The list shall be divided into sections corresponding to the specification divisions, and shall state name, address and telephone numbers together with work or items to be furnished. The list cannot be revised without written approval by the OWNER. The CONTRACTOR is responsible for compliance with specified requirements by all sub-contractors.

B. This list shall be submitted in addition to or as a supplement to any similar lists required to be submitted with the bid.

1.2 CONSTRUCTION PROGRESS SCHEDULE

A. A project management tool such as a bar chart shall be employed by the CONTRACTOR for cost value reporting, planning and scheduling of all work required under the Contract Documents.

B. **Time of Submittal:** Within 10 working days after the Effective Date of the Agreement, the CONTRACTOR shall submit for approval of the ENGINEER a bar chart diagram describing the activities to be accomplished in the project and their dependency relationships. The schedule produced and submitted shall indicate a project completion date on or before the contract completion date. The ENGINEER, within 10 working days after receipt of the bar chart diagram, shall meet with a representative of the CONTRACTOR to review the proposed plan and schedule.

C. **Review Period:** Within five working days after the conclusion of the ENGINEER's review period, the CONTRACTOR shall revise the bar chart diagram as required and re-submit the diagram.

D. **Acceptance:** When the initial construction schedule has been accepted, the CONTRACTOR shall submit to the ENGINEER four copies of the accepted schedule.

E. **Construction Schedule Revisions:** The ENGINEER may require the CONTRACTOR to modify any portions of the bar chart schedule that become infeasible because of "activities behind schedule" or for any other valid reason. An activity that cannot be completed by its original latest completion date shall be deemed to be behind schedule. Failure to submit a revised project schedule where so requested by the ENGINEER shall be cause for withholding a requested progress payment.

F. **Revision Due to Change Order:** Upon approval of a change order, the approved change shall be reflected in the next bar chart submittal by the CONTRACTOR.

1.3 SCHEDULE OF VALUES

A. Schedule of values shall be submitted as specified in Section 01025 "Measurement and Payment."

1.4 CONTRACTOR'S DAILY REPORTS

A. The CONTRACTOR shall complete a daily report on forms furnished by the ENGINEER indicating manpower, equipment and sub-contractors involved in performance of the work.

B. CONTRACTOR shall submit copies of daily report forms to the ENGINEER monthly.

1.5 MONTHLY PROJECT STATUS REPORT

A. The CONTRACTOR shall submit within two working days before the Construction Progress Meeting, a brief written Monthly Project Status Report.

B. The Monthly Project Status Report shall discuss the status of the project in relation to the construction progress schedule and identify issues to be discussed at the Monthly Construction Progress Meeting.

1.6 SHOP DRAWINGS

A. The CONTRACTOR shall submit, within 10 days after the effective date of the agreement a complete list of equipment and materials requiring shop drawing approval. The term "shop drawing" as used herein shall be understood to include detailed design calculations, fabrication and installation drawings, erection drawings, lists, graphs, operating instructions, catalog sheets, data sheets and similar items. Unless otherwise required, said drawings shall be submitted at a time sufficiently early to allow review of same by the ENGINEER, and to accommodate the rate of construction progress required under the contract. The shop drawing list shall contain an estimated submittal date for each piece of equipment. The ENGINEER shall return prints of each shop drawing with his comments within 30 calendar days after receipt of shop drawings from the CONTRACTOR. If the CONTRACTOR and OWNER determines that a speedy review of a submittal is critical to progress of the project, then he should notify the ENGINEER at least 15 days in advance and request a speedy review of the submittal. The ENGINEER will return submittal within 15 days such critical submittals. If the review by the ENGINEER is delayed beyond a reasonable period usually sixty days then the CONTRACTOR shall notify the ENGINEER in writing that unless the said shop drawing is returned to the contractor within three (3) business days or there may be a delay CONTRACTOR's construction schedule.

B. The CONTRACTOR shall review all the submittals before forwarding them to the ENGINEER for review. The submittals shall be on conformance with the CONTRACT DOCUMENTS and any minor variations shall be noted in the transmittal form. It is considered reasonable that the CONTRACTOR shall make a complete and acceptable submittal by the second submission of drawings. The OWNER reserves the right to withhold money due the CONTRACTOR to cover additional costs of the ENGINEER's review beyond the second submission. Six copies of shop and settings drawings and schedules are required. The CONTRACTOR shall make any corrections required by the ENGINEER, file with him six corrected copies, and furnish such other copies as required. If the CONTRACTOR desires more than one approved copy, he shall submit additional drawings. All shop drawings shall be submitted through the General CONTRACTOR and be accompanied by the ENGINEER's standard shop drawing transmittal form. This form may be obtained in quantity from the ENGINEER at reproduction cost. All resubmittals shall include one copy of the previously rejected submittal.

C. Revisions indicated on shop drawings shall be considered as changes necessary to meet the requirements of the Contract Drawings and Specifications, and shall not be taken as the basis of claims for extra work. The CONTRACTOR shall have no claim for damages or extension of time due to any delay resulting from the CONTRACTOR's having to make the required revisions to shop drawings. The review of said drawings by the ENGINEER will be limited to checking for general agreement with the specifications and drawings, and shall in no way relieve the CONTRACTOR of responsibility for errors or omissions contained therein, nor shall such review operate to waive or modify any provision contained in the Specifications or Contract Drawings. Fabricating dimensions, quantities of material, applicable code requirements and other contract requirements shall be the CONTRACTOR's responsibility. The ENGINEER will not be responsible for any delays arising from equipment supplier’s delay in making the changes requested to meet the specifications.

D. Each submittal shall contain data representing only one specification Section.

1.7 SAMPLES

A. Unless otherwise specified, whenever in the Specifications samples are required, the CONTRACTOR shall submit not less than two samples of each such item or material to the ENGINEER for approval at no additional cost to the OWNER.

B. Samples, as required herein, shall be submitted for approval a minimum of 21 days prior to ordering such material for delivery to the job-site, and shall be submitted in an orderly sequence so that dependent materials or equipment can be assembled and reviewed without causing delays in the work.

C. All samples shall be individually and indelibly labeled or tagged, indicating thereon all specified physical characteristics and manufacturer's names for identification and submittal to the ENGINEER for approval. Upon receiving approval of the ENGINEER, one set of the samples will be stamped and dated by the ENGINEER and returned to the CONTRACTOR. One set will be retained by the ENGINEER until completion of the work.

D. Unless otherwise specified, all colors and textures of specified items will be selected by the ENGINEER from the manufacturer's standard colors and standard materials, products or equipment lines.

1.8 MAINTENANCE MANUALS

A. The CONTRACTOR shall submit to the ENGINEER, four (4) copies of the manufacturer's maintenance manuals for all mechanical, electrical and instrumentation equipment provided under this contract.

B. All maintenance manuals shall be submitted together with a copy of approved shop drawings for the respective item of equipment. Maintenance manuals shall be submitted prior to the 75 percent project completion stage.

C. The maintenance manuals shall be complete with recommended maintenance procedures, recommended spare parts and complete assembly and disassembly instructions.

D. Operation and maintenance instructions shall include, as a minimum, the following data for each item of mechanical, electrical, and instrumentation equipment:

1. An itemized list of all data provided.
2. Name and location of the manufacturer, the manufacturer's local representative, the nearest supplier and spare parts warehouse.
3. Approved submittal information applicable to operation and maintenance.
4. Recommended installation, adjustment, start-up, calibration, and troubleshooting procedures.
5. Tabulation of proper setting for all pressure relief valves (low/high), pressure switches and other related equipment protection devices.
6. Recommended lubrication, including lubricant SAE grade, frequency of required lubrication and an estimate of yearly quantity needed.
7. Recommended step-by-step procedures for all modes of operation.
8. Complete internal and connection wiring diagrams, including list of all electrical relay settings.
9. Recommended preventive maintenance procedures and schedule.
10. Complete parts lists, by generic title and identification number with exploded views of each assembly.

11. Recommended spare parts.

12. Disassembly, overhaul, and reassembly instructions.

E. The CONTRACTOR shall furnish four (4) complete sets of maintenance manuals bound in black expandable three post binders. Each set shall include a table of contents and a quick reference list of local manufacturer's representatives.

1.9 RECORD DRAWINGS

A. The CONTRACTOR shall maintain at the construction site one complete set of drawings suitably marked to show all deviations from the original set of drawings and other information as specified. Supplementary sketches shall be included, if necessary, to clearly indicate all work as constructed.

B. All work shall be clearly shown, and the record drawings shall be satisfactory to the OWNER in order to insure that adequate information is indicated to show the actual construction. The complete set of the record drawings shall be submitted to the ENGINEER prior to submittal of the final Application for Payment. Failure of the CONTRACTOR to maintain an up-to-date set of record drawings on the project site shall be reason to withhold payments. All underground lines shall be determined from the record drawings.

1.10 MATERIAL SAFETY DATA SHEETS

A. The Contractor shall submit two copies of material safety data sheets for each material on site to the OWNER.

B. The Contractor shall maintain an orderly file of material safety data sheets at the job site.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01400 - TESTS AND INSPECTIONS

PART 1 -- GENERAL

1.1 SCOPE OF TESTS

A. All materials, equipment, installation, and workmanship included in this contract, if so required by the ENGINEER, shall be tested and inspected to prove compliance with the contract requirements.

B. No tests specified herein shall be applied until the item to be tested has been inspected and approval given for the application of such test.

C. Tests and inspections shall include:

1. The delivery acceptance tests and inspections.
2. The installed tests and inspections of items as installed.
3. Performance guarantee tests.
4. Final testing and start-up.

D. Tests and inspections, unless otherwise specified or accepted, shall be in accordance with the recognized standards of the industry.

E. The CONTRACTOR shall pay for tests and inspections normally conducted by manufacturers and material suppliers and for any other tests and inspections, which may be so specified herein. The OWNER shall pay the cost of testing and inspection not normally conducted by manufacturers or material suppliers or not specified herein.

F. CONTRACTOR shall conduct field tests on his work as required to comply with applicable codes, to determine acceptability of workmanship, and as specified including but not limited to the following:

1. Hydrostatic tests of piping, equipment and water retaining structures.
2. Tests of welded joints as specified.
3. Leakage tests on steel tanks assembled by CONTRACTOR and hydraulic structures.
4. Calibration tests.
5. Simulation tests on control systems.
6. Preliminary tests and checks associated with placing equipment and systems into service.
7. Thickness and holiday tests on painting.
8. Other tests as defined in the specifications.

1.2 EVIDENCE OF TEST

A. The form of evidence of satisfactory fulfillment of delivery acceptance test and of installed test and inspection requirements shall be, at the discretion of the ENGINEER, either by tests and inspections carried out in his presence or by certificates or reports of tests and inspections carried out by approved persons or organizations.

1.3 DELIVERY ACCEPTANCE TESTS

A. The delivery acceptance tests and inspections shall be at the CONTRACTOR's expense for any materials or equipment specified herein and shall include the following:

1. Test of items during the process of manufacture and/or on completion of manufacture, comprising material test, hydraulic pressure tests, electric tests, performance and operating tests, and inspections in accordance with the relevant standards of the industry and, more particularly, as detailed in individual clauses of these specifications or as may be required by the ENGINEER to satisfy himself that the items tested and inspected comply with the requirements of this contract.

2. Inspection of all items delivered at the site in order that the ENGINEER may be satisfied that such items are of the specified quality and workmanship and are in good order and condition at the time of delivery.

1.4 INSTALLED TESTS AND INSPECTIONS OF ITEMS AS INSTALLED

A. All mechanical and electrical equipment shall be tested by the CONTRACTOR to the satisfaction of the ENGINEER before any facility is put into operation. Tests shall be as specified herein and shall be made to determine whether the equipment has been properly assembled, aligned, adjusted, and connected. Any changes, adjustments, or replacements required to make the equipment operate as specified shall be carried out by the CONTRACTOR as part of the work.

1.5 PERFORMANCE GUARANTEE TEST

A. Where performance guarantee tests are required, the CONTRACTOR shall conduct the test as specified in the presence of ENGINEER.

1.6 FINAL TESTING AND START-UP

A. At least 60 days before the time allowed in his construction schedule for commencing testing and start-up procedures, the CONTRACTOR shall submit to the ENGINEER, in duplicate, details of the procedures he proposed to adopt for testing and start-up of all mechanical and electrical equipment to be operated singly and together, excepting when such procedures have been covered in the specifications. Tests of pumps or other equipment requiring water for operation shall be conducted using clear water. The water required for such tests shall be provided by the CONTRACTOR.

B. During the testing of mechanical, instrumentation, and electrical equipment, the CONTRACTOR shall make available experienced factory-trained representatives of the manufacturers of all the various pieces of equipment, who shall instruct the OWNER's personnel in the operation and care thereof. Instruction shall include step-by-step troubleshooting procedures with all necessary test equipment.

C. After successful testing, the manufacturer's representatives shall provide the CONTRACTOR with an affidavit that the equipment installation is complete and has been carried out in full conformance with the manufacturer's recommendations. The CONTRACTOR shall forward to the ENGINEER copies of each affidavit received prior to final payment.

D. If, under test, any portion of the work fails to fulfill the contract requirements and is altered, renewed or replaced, tests on that portion so altered, removed, replaced, together with all other portions of the work as are affected thereby, shall, if so required by the ENGINEER, be repeated within reasonable time and in accordance with the specified conditions, and the CONTRACTOR shall pay to the OWNER all reasonable expenses incurred by the OWNER as a result of the carrying out of such tests.

E. Before final acceptance of the work, the CONTRACTOR shall return any units, which have been put in temporary storage to an operating condition. He shall demonstrate that all components of the

mechanical systems are properly functioning and in a fully operational condition. All pumps, motors, and related equipment shall be operated during the trial period. A range of discharge head conditions shall be affected for pumping units by partially closing valves as directed by the ENGINEER. In the event malfunctions are discovered, the CONTRACTOR shall correct them. If necessary, manufacturer's representatives shall be recalled to make corrections or adjustments.

F. Final testing and start-up shall be combined with the instruction of operating personnel to the end that when final testing is completed, the stations can be turned over to the OWNER in an operating condition and the district personnel will be prepared to continue the operation in an orderly manner. Instruction of operating personnel by manufacturer's representatives shall be performed during this period.

1.7 REPEAT TESTS

A. Where, in the case of an otherwise satisfactorily installed test, any doubt, dispute or difference should arise between the ENGINEER and the CONTRACTOR regarding the test results or the methods or equipment used in the carrying out by the CONTRACTOR of such test, then the ENGINEER may order the test to be repeated. If the repeat test, using such modified methods or equipment as the ENGINEER may require, substantially confirms the previous test, then all costs in connection with the repeat test will be paid the OWNER; otherwise, the costs shall be borne by the CONTRACTOR. Where the results of any installed test fail to comply with the contract requirements for such test, then such repeat tests as may be necessary to achieve the contract requirements shall be made by the CONTRACTOR at his own expense.

1.8 TESTING AND LABORATORY SERVICES

A. **Independent Testing Laboratory:** Where test or inspections by an independent testing laboratory are required by this specification, the CONTRACTOR shall employ and arrange for, at his expense, the services of an approved independent testing laboratory satisfactory to the ENGINEER to perform the testing utilizing recognized standard procedures and criteria.

B. **Reports and Certificates:** The CONTRACTOR shall submit reports and certificates of all inspections and test to ENGINEER in duplicate. The reports and certificates become the property of the OWNER.

C. **Sample Materials:** The CONTRACTOR shall furnish all sample materials required for these tests and shall deliver same without charge to the testing laboratory or other designated agency when and where directed by them.

D. **Additional Tests:** Any additional tests required beyond these required under this specification may be ordered by the ENGINEER to settle disagreements with the CONTRACTOR regarding quality of work done. If the work is defective, the CONTRACTOR shall pay all costs of the extra tests and shall correct the work. If the work is satisfactory, the OWNER will pay for extra tests.

1.9 ENGINEER'S REPRESENTATIVE AND INDEPENDENT LABORATORY TESTING

A. The ENGINEER will provide a full time Resident Project Representative (RPR) to ascertain that the work is generally accomplished properly and in accordance with the plans and specifications. Whether in the field or in the CONTRACTOR's shop or shops of his subcontractors, the RPR shall have full access to the work and shall be given full cooperation. The RPR shall have the authority, subject to the final decision of the ENGINEER, to reject any defective work or material or to suspend the work if not being properly performed. The RPR shall have no authority to permit any deviation from the plans and specifications except on written order from the ENGINEER.

B. The OWNER will retain and compensate a qualified testing laboratory to provide testing of concrete, earthwork, roadway surfacing and similar items of work. Field tests and job samples shall be made by the CONTRACTOR at the option of the ENGINEER to ensure proper control of materials and installation of materials under this Contract.

1.10 LEAKAGE TESTING AND DISINFECTION

A. General

1. Except as otherwise provided herein, the CONTRACTOR shall furnish all equipment, labor and materials required for testing hydraulic structures and pipelines as specified. Water for testing and disinfecting will be furnished by the OWNER; however, the CONTRACTOR shall make all necessary provisions for conveying the water from the OWNER-designated source to the points of use.

2. All hydraulic structures and pressure pipelines shall be tested; however, disinfection shall be limited to pipelines, tanks, and structures designed for potable water service. Disinfection shall be accomplished by chlorination. Chlorine dosages will be computed by the ENGINEER who will furnish the CONTRACTOR with instructions for proper application of the chlorine. All chlorinating and testing operations shall be done in the presence of the ENGINEER.

3. Disinfection operations shall be scheduled by the CONTRACTOR as late as possible during the Contract time period, so as to assure maximum degree of sterility of the facilities at the time work is accepted by the OWNER. Bacteriological testing shall be performed by a certified testing laboratory acceptable to the OWNER. Results of the testing shall be satisfactory to the Department of Health.

4. Release of water from structures and pipelines, after testing and disinfecting have been completed, shall be as directed by the ENGINEER.

5. Prior to both testing and disinfecting, all hydraulic structures shall be cleaned by thoroughly hosing down all surfaces with a high pressure hose and nozzle of sufficient size to deliver a minimum flow of 50 gpm; all pipelines shall be thoroughly flushed or blown out, as appropriate.

B. Disinfection of Hydraulic Structures and Appurtenant Pipelines

1. All hydraulic structures, which store or convey potable water, shall be disinfected by chlorination. Chlorination of hydraulic structures shall be performed in accordance with the requirements of AWWA C652 using Method 1, 2 or 3 or a combination of methods, except that filter basins shall be disinfected in accordance with AWWA C653.

C. Hydrostatic Testing of Pipelines

1. Piping shall be field tested for leakage at 100 psi in accordance with the appropriate section (hydrostatic tests) of AWWA C600-87. Test pressure and duration shall be per AWWA C600-87, and allowable leakage shall be determined in accordance with the formula:
$L = \frac{SD\sqrt{P}}{133{,}200}$ where factors and units are defined as follows: L=Leakage (gal/hr), S=Length (ft.), D = Nominal Diameter (in.), and P = Average Test Pressure (PSI).

CONTRACTOR shall conduct tests under supervision of the ENGINEER.

Line	Test Pressure*
High Service Pump Discharge Piping	150 psi
Two-Inch Water Service	150 psi
Gravity Full Flow Process Piping	50 psi

* Test pressure based on the elevation of the lowest point in the line under test and corrected to the elevation of the test gauge.

D. Disinfecting Pipelines

1. All potable water pipelines, except those appurtenant to hydraulic structures, shall be disinfected in accordance with the requirements of AWWA C651 using either continuous-feed method as modified herein.
2. **Chlorination:** A chlorine-water mixture shall be uniformly introduced into the pipeline by means of solution feeding equipment. The chlorine solution shall be introduced at one end of the pipeline through a tap such that an initial concentration of 50 mg/L shall be obtained in the watermain being tested. The dosage of calcium hypochlorite powder containing 70% available chlorine shall be one pound for each 1680 gallons of water of pipe capacity.
3. **Retention Period:** Chlorinated water shall be retained in the pipeline for at least 24 hours. After the chlorine treated water has been retained for 24 hours, the free chlorine residual at the pipeline extremities and at other representative points shall be at least 10 mg/L.
4. **Final Flushing:** After applicable retention period, the heavily chlorinated water shall be flushed from the pipeline until chlorine measurements show that the concentration in the water leaving the pipeline is no higher than that generally prevailing in the system or is acceptable for domestic use. If there is any question that chlorinated discharge will cause damage to the environment, a reducing agent shall be applied to the water to neutralize thoroughly the chlorine residual remaining in the water.
5. **Bacteriological Testing:** After final flushing and before the pipeline is placed in service, a sample (or samples) shall be collected from the end of the pipeline and shall be tested for bacteriological quality in accordance with the requirements of the Department of Health. For this purpose, the pipe shall be re-filled with fresh potable water and left for a period of 24 hours before any sample is collected. Should the initial disinfection treatment fail to produce satisfactory bacteriological test results, the disinfection procedure shall be repeated until acceptable results are obtained.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01410 - REGULATORY REQUIREMENTS

PART 1 -- GENERAL

1.1 SUMMARY

A. Applicable codes and standards referred to in these specifications shall establish minimum requirements for equipment, materials, construction and shall be superseded by more stringent requirements of drawings and specifications when and where they occur.

B. All equipment furnished and installed under the contract shall be designed, fabricated, assembled, installed, and placed into service. The equipment will conform to the applicable provisions of the Federal and State Safety and Health Standards, including but not limited to Federal Occupational Safety and Health Regulations for Construction; the State regulatory agencies, such as the Iowa Department of Natural Resources; and ordinances of the City that apply to this work.

C. All construction methods and tools shall comply with commonly accepted standards for safety and health of personnel engaged on construction, including but not limited to Federal Occupational Safety and Health Regulations for Construction; the State regulatory agencies, such as the Iowa Department of Natural Resources; and ordinances of the City that apply to this work.

D. Any conflicts between specifications and applicable codes and standards shall be referred to the Engineer.

1.2 PERMITS OBTAINED BY OWNER

A. The Owner has applied for the following permits from appropriate authorities. It is anticipated that permission to proceed will be authorized prior to execution of Contract. The Contractor shall perform all work and conduct itself in full accordance with the requirements of the applicable permit.

B. Contractor shall be responsible for posting any bonds, which may be required as a condition to any permit, and for securing and paying the cost of any other permits not mentioned above, which may be required.

1.3 PERMITS OBTAINED BY THE CONTRACTOR

A. The Contractor shall secure and pay the cost of these and any other permits not mentioned, which may be required including but not limited to:

1. Work within City right-of-way permit.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01560 - TEMPORARY ENVIRONMENTAL CONTROLS

PART 1 -- GENERAL

1.1 EXPLOSIVES AND BLASTING

A. The use of explosives will not be permitted.

1.2 DUST ABATEMENT

A. The CONTRACTOR shall furnish all labor, equipment and means required and shall carry out effective measures wherever and as often as necessary to prevent his operation from producing dust in amounts damaging to property, cultivated vegetation, or domestic animals, or causing a nuisance to persons living in, or occupying buildings in, the vicinity. The CONTRACTOR shall be responsible for any damage resulting from any dust originating from his operations. The dust abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the ENGINEER. No separate payment will be allowed for dust abatement measures and all costs thereof shall be included in the CONTRACTOR's bid price.

1.3 RUBBISH CONTROL

A. During the progress of the work, the CONTRACTOR shall keep the site of the work and other areas used by him in a neat and clean condition, and free from any accumulation of rubbish. The CONTRACTOR shall dispose of all rubbish and waste materials of any nature occurring at the work site, and shall establish regular intervals of collection and disposal of such materials and waste. He shall also keep his haul roads free from dirt, rubbish, and unnecessary obstructions resulting from his operations. Equipment and material storage shall be confined to areas approved by the ENGINEER. Disposal of all rubbish and surplus materials shall be off the site of construction, at the CONTRACTOR's expense, all in accordance with local codes and ordinances governing locations and methods of disposal, and in conformance with all applicable safety laws, and to the particular requirements of Subpart H, Section 1926.252 of the OSHA Safety and Health Standards for Construction.

1.4 CHEMICALS

A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of another classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instructions of the manufacturer.

1.5 EROSION CONTROL

A. The CONTRACTOR shall furnish all labor, equipment and means required and shall carry out effective measures wherever and as often as necessary to prevent his operation from producing any soil erosion in amounts damaging to property or adjacent lands. The CONTRACTOR shall be responsible for any damage resulting from any soil erosion originating from his operations. Erosion abatement measures shall be continued until the CONTRACTOR is relieved of further responsibility by the ENGINEER. No separate payment will be allowed for erosion abatement measures and all costs thereof shall be included in the CONTRACTOR's bid price.

B. Suggested erosion abatement measures are as follows:

1. Proper site grading and prompt turf re-establishment.
2. The use of bales on all excavated or non re-established turf slopes.
3. Completion of all county ditch crossings during workday.
4. Pave all disturbed streets as quickly as practical.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION

3.1 CONSTRUCTION REQUIREMENTS

A. Minimize stripping vegetation or turf cover and exposing soils.

B. Provide and maintain storm sewer inlet protection at project site and down gradient of project.

C. Any excavations shall not be left open at night and shall require chain link fence around the pit or heavy steel plates over the pit.

D. Protect stockpiles from erosion.

E. Repair disturbed streets as quickly as possible.

**** END OF SECTION ****

SECTION 01562 - AIR, LAND AND WATER POLLUTION

PART 1 -- GENERAL

1.1 AIR AND WATER POLLUTION

A. Pollution of natural resources of air, land and water by operations under this contract shall be prevented, controlled, and abated in accordance with the rules, regulations and standards adopted and established by the State Regulatory Agency, and in accordance with the local city and county ordinances.

B. The Contractor shall perform dust control operations whenever necessary to prevent the production of dust in amounts damaging to property, vegetation, animals, or persons in the vicinity of the construction. The Contractor shall be responsible for any damage resulting from dust originating from the construction. The dust abatement measures shall be continued until the Contractor is relieved of further responsibility by the Engineer.

C. The Contractor shall provide and maintain all sanitary accommodations for use by employees as may be necessary to provide for their health and welfare which complies with Federal, State and local codes and regulations.

D. All solid waste material shall be disposed by the Contractor in accordance with the local and State solid waste disposal regulations.

1.2 USE OF CHEMICALS

A. All chemicals used during project construction or furnished for project operation, whether defoliant, soil sterilant, herbicide, pesticide, disinfectant, polymer, reactant or of another classification, shall show approval of either the U.S. Environmental Protection Agency or the U.S. Department of Agriculture.

B. Use of all such chemicals and disposal of residues shall be in strict accordance with the printed instruction of the manufacturer.

1.3 EROSION CONTROL

A. Contractor shall furnish and install the necessary materials and equipment to control soil erosion within and from the construction site.

1.4 COMPENSATION

A. Additional compensation will not be paid for air, land and water pollution control, including but not limited to temporary check dams, dikes, berms, silt fences, sediment basins, culverts, hay bales, and the application of water, unless specifically identified as a payable unit of work.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

****END OF SECTION****

SECTION 01600 - MATERIALS, EQUIPMENT, LABOR AND WORKMANSHIP

PART 1 -- GENERAL

1.1 THE REQUIREMENTS

A. Products

B. Transportation and Handling

C. Storage and Protection

1.2 PRODUCTS

A. In case of conflict between codes, reference standards, drawings and the other Contract Documents, the most stringent requirements shall govern. All conflicts shall be brought to the attention of the ENGINEER for clarification and directions prior to ordering or providing any materials or labor. The CONTRACTOR shall bid the most stringent requirements.

B. The naming of a manufacturer in this specification is not an indication that the manufacturer's standard equipment is acceptable in lieu of the specified component features. Naming is only an indication that the manufacturer may have the capability of engineering and supplying a system as specified. All exceptions to the specifications shall be indicated in the shop drawing.

C. Unless otherwise specified, all equipment and materials shall be new and of first line quality. All workmanship shall be of first line quality and free from defects.

D. All equipment and materials incorporated in the work shall be designed to meet the applicable safety standards of federal, state and local laws, rules and regulations. All equipment requiring electrical power shall have Underwriter Laboratories "UL" label. Equipment sent to the project site without "UL" label will be rejected.

E. The CONTRACTOR shall, if required, furnish satisfactory evidence as to the source, kind and quality of equipment and materials.

F. CONTRACTOR shall furnish, or require his subcontractors to furnish, proper tools and equipment and the services of all mechanics, laborers, and other employees necessary in the construction, testing, and execution of the work and the placing of all equipment in service.

G. All equipment and materials shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instructions of the applicable manufacturer, fabricator, or processor, except as otherwise provided in the Contract Documents.

1.3 TRADE NAMES AND ALTERNATIVES

A. For convenience in designation in the Contract Documents, materials to be incorporated in the WORK may be designated under a trade name or the name of a manufacturer and its catalog information. The use of alternative material which is equal in quality and of the required characteristics for the purpose intended will be permitted, subject to the following requirements:

1. The burden of proof as to the quality and suitability of such alternative equipment products, or other materials shall be upon the CONTRACTOR.

2. The ENGINEER will be the sole judge as to the comparative quality and suitability of such alternative equipment, products, or other materials and its decision shall be final.

B. Wherever in the Contract Documents the name or the name and address of a manufacturer or distributor is given for a product or other material, or if any other source of a product or material is indicated, such information is given for the convenience of the CONTRACTOR only, and no limit, restriction, or direction is indicated or intended thereby, nor is the accuracy or reliability of such information guaranteed. It shall be the responsibility of the CONTRACTOR to determine the accuracy of the information and to identify and locate any such manufacturer, distributor, or other source of any product or material called for in the Contract Documents.

1.4 TRANSPORTATION AND HANDLING

A. All equipment shall be adequately and effectively protected against damage from moisture, dust, handling, or other cause during transport from the CONTRACTOR's premises to the site. Ponding of water shall not be permitted in the equipment storage area.

B. Prior to any equipment delivery, the CONTRACTOR shall attain the manufacturer's storage requirements for his equipment and forward one copy to the ENGINEER.

C. Each item or package shall be clearly marked with the appropriate number of this specification, and each separate portion of the plant shall receive, as far as practicable, a fitting or distinguishing mark which shall be shown on the packing lists. Each item of equipment shall have a firmly affixed label or tag with its equipment number or other discrete identifying marks.

D. The bearings of motors shall be relieved of load during transport by means of jacks or some other method to prevent "Brinelling."

E. Stiffeners shall be used where necessary to maintain shapes and to give rigidity. Parts or equipment may be delivered in assembled or sub-assembled units where possible.

1.5 STORAGE AND PROTECTION

A. Products shall be stored in accordance with the manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight enclosures which maintain temperature and humidity recommended by the manufacturer.

B. Store loose granular materials on solid surfaces in well-drained area; prevent mixing with foreign matter.

C. Arrange storage to provide access for inspection.

D. Prior to and after installation, all equipment shall be protected against weather, dust, moisture and mechanical damage. During concrete operations, including finishing, all equipment that may be affected by cement dust must be completely covered. During painting operations, all grease fittings and similar openings shall be covered to prevent the entry of paint. Electrical switchgear, unit substation, and motor load centers shall not be installed until after the concrete work in those areas has been completed and accepted and the ventilation systems installed.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 01700 - PROJECT CLOSEOUT

PART 1 -- GENERAL

1.1 CLEANUP

A. The CONTRACTOR shall keep the premises free from accumulations of waste materials, rubbish, and other debris resulting from the work, and at the completion of the work he shall remove all waste materials, rubbish and debris from the premises as well as all tools, construction equipment and machinery, and surplus materials. He shall leave the site clean and ready for occupancy by the OWNER. Early acceptance of process equipment shall not waive clean up prior to final acceptance.

B. The Contract shall provide cleaning of all surfaces, systems and fixtures, including removal of labels, tags, grease, oil, dirt stains, etc.

C. This cleaning will include removal of dust from walls and other vertical surfaces and ceilings, washing of all glass and counter surfaces. It also will include cleaning and waxing or sealing of all floors as specified for the individual floor material.

D. Upon acceptance of a building, the OWNER will assume the normal janitorial cleaning services. Re-cleaning of any soiled areas due to CONTRACTOR's operation shall be the responsibility of the CONTRACTOR.

1.2 GUARANTEE

A. The CONTRACTOR shall guarantee all work and material against all defects for a period as specified in the General Conditions and or as modified by the Supplementary Conditions from the date of substantial completion. The CONTRACTOR shall repair or replace any such defective work and materials to conform to the provisions of the contract and without expense to the OWNER, within ten (10) days after notification in writing by the OWNER or ENGINEER of such defective work or material. The CONTRACTOR shall perform his work so as to cause the OWNER a minimum of inconvenience and interruption of services. If the CONTRACTOR has not done said repairs or replacements or made arrangements for the correction thereof within the period specified above, the OWNER may do so and charge the cost to the CONTRACTOR.

B. Guarantee on equipment placed into operation prior to substantial completion shall start from the date of substantial completion.

C. If performance bond is posted, the performance bond will not be released until the guarantee period is over.

1.3 CORRECTION OF DEFECTIVE WORK DURING THE WARRANTY PERIOD

A. If, during the warranty period, any work is found to be defective, the CONTRACTOR shall promptly, without cost to the OWNER and in accordance with the OWNER's written instructions, either correct such defective work, or if it has been rejected by the OWNER, remove it from the site and replace it with acceptable work.

B. Replacement of earth fill or backfill, where it has settled below the required finish elevations, shall be considered as a part of such required repair work, and any repair or resurfacing constructed by the CONTRACTOR which becomes necessary by reason of such settlement shall likewise be considered as part of such required repair work.

C. If the CONTRACTOR does not promptly comply with the terms of such instructions, the OWNER may have the defective work corrected or the rejected work removed and replaced and all direct and indirect costs of such correction or removal and replacement, including compensation for additional professional services, shall be paid by the CONTRACTOR.

D. The OWNER shall give notice of observed defects with reasonable promptness.

E. Under emergency conditions, the OWNER may remedy defective work without waiting for action by the CONTRACTOR. The OWNER will notify the CONTRACTOR immediately of the circumstances and actions taken and the CONTRACTOR shall pay all reasonable substantiated costs of such actions.

1.4 FINAL INSPECTION

A. After the cleaning up of the work, premises, and all other areas and structures connected with the performance of the contract, the work as a whole, shall be inspected by the ENGINEER and OWNER; and, any workmanship or materials found not meeting the requirements of the specifications shall be removed by, and at the expense of, the CONTRACTOR and good and satisfactory workmanship or material substituted therefore. All settlement, defects or damage upon any part of the work shall be remedied and made good by the CONTRACTOR.

1.5 PROJECT ACCEPTANCE

A. The project shall be accepted after the final inspection has been conducted and all settlement, defects, damages, etc., discovered during the final inspection have been remedied.

1.6 FINAL SUBMITTALS

A. The CONTRACTOR, prior to requesting final payment, shall obtain and submit the following items to the ENGINEER for transmittal to the OWNER:

1. Written guarantee, where required.
2. Operating manuals and instructions.
3. Keying schedule.
4. Maintenance stock items; spare parts, special tools.
5. Completed record drawings.
6. Bonds for roofing, maintenance, etc., as required.
7. Certificates of inspection and acceptance by local governing agencies having jurisdiction.
8. Releases from all parties who are entitled to claims against the subject project, property or improvement pursuant to the provision of the law.

1.7 FINAL ESTIMATE AND PAYMENT

A. When the ENGINEER is of the opinion that the CONTRACTOR has completely performed all work required under the contract, he will submit to the CONTRACTOR a draft of the final estimate. The CONTRACTOR will be expected to submit his written approval of said final estimate within 5 calendar days after receipt, or in the event the CONTRACTOR disagrees with said final estimate, he shall within said 5 day period, file a written statement of all claims which he intends to present. If the CONTRACTOR delays more than 5 calendar days in approving said final estimate or in presenting his own claims, the time for the final payment shall be extended by the period of such delay.

B. Upon receipt by the ENGINEER of the CONTRACTOR's written approval of said final estimate, the ENGINEER will certify physical completion of the work to the OWNER and will recommend acceptance of the work.

C. After acceptance of the work by the OWNER's governing body and 30 calendar days after filing of the Notice of Completion, the OWNER will pay to the CONTRACTOR the amount remaining after deducting all prior payments and all amounts to be kept or retained under the provisions of the contract. In the event acceptance of the work is delayed more than 30 calendar days beyond the date of the last partial payment under the contract, the OWNER will make a further partial payment.

D. If the CONTRACTOR disagrees with the ENGINEER's final estimate and files a written statement of his claims in accordance with Subsection 01700-1.7 A., the ENGINEER will issue, as a semi-final estimate, the proposed estimate submitted to the CONTRACTOR, and the OWNER will make payment to the CONTRACTOR in accordance with the provisions of Subsection 01700-1.7 C. The ENGINEER then will investigate the CONTRACTOR's claims, make any revisions to said semi-final estimate as he deems appropriate, and certify in writing to the OWNER the amount and value of the work performed by the CONTRACTOR. The OWNER then will make final payment to the CONTRACTOR in accordance with the provisions of Subsection 01700-1.7 C.

E. Final payment terminates liability of OWNER. The acceptance by the CONTRACTOR of the final payment shall be a release of the OWNER and its agents from all claims of and liability to the CONTRACTOR for anything done or furnished for, or relating to, the work or for any act or neglect of the OWNER or of any person relating to or affecting the work, except claims against the OWNER for the remainder, if any, of the amounts kept or retained. The CONTRACTOR shall certify that all claims against the CONTRACTOR by reason of the CONTRACT have been paid or satisfactorily secured.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

DIVISION 11

EQUIPMENT

SECTION 11000 - EQUIPMENT GENERAL PROVISIONS

PART 1 -- GENERAL

1.1 THE REQUIREMENTS

A. The Contractor shall furnish all equipment not designated as OWNER furnished in the bidding documents.

B. The Contractor shall install all equipment complete with necessary appurtenances to provide a complete and operable system.

C. The Contractor shall furnish complete shop drawings of all mechanical equipment, together with appurtenant piping, valves, and controls.

D. Each item of equipment shipped shall have a legible identifying mark or tag corresponding to the equipment number shown or specified for the particular item.

E. All equipment shall be designed to meet federal and state noise levels and safety requirements.

F. The Contractor shall furnish and install all oils and lubricants required for initial equipment start-up.

G. Contractor's bid price shall include the costs of any necessary manufacturer's representatives which may be required for equipment installation and start-up. Unless otherwise specified, a manufacturer's field representative shall be provided for a minimum of 8 hours start-up services for each piece of process equipment.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01300 Submittals

B. Section 05500 Miscellaneous Metal

C. Section 15060 Process Piping and Pipe Fittings

D. Section 15100 Valves

E. Section 16010 Electrical General Provisions

F. Section 16150 Electric Motors

G. Section 16480 Motor Control Centers

H. Section 16950 Instrumentation and Control

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Codes:

1. International Building Code (IBC) - Latest Edition
2. National Electric Code ANSI/NFPA 70

3. References herein to "Plumbing Code" or NPC shall mean the National Plumbing Code of the American Public Health Association and the American Society of Mechanical Engineers (APHA/ASME). The latest edition of the codes, as adopted as of the date of award by the agency having jurisdiction, shall apply to the work herein.

B. Commercial Standards

1. All equipment, products, and their installation shall be in accordance with the following standards, as applicable, and as specified in each Section of these specifications:

(a) American Society for Testing and Materials (ASTM).

(b) American Public Health Association (APHA).

(c) American National Standards Institute (ANSI).

(d) American Society of Mechanical Engineers (ASME).

(e) American Water Works Association (AWWA).

(f) American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE).

(g) American Welding Society (AWS).

(h) National Fire Protection Association (NFPA).

(i) Federal Specifications (FS).

(j) National Electrical Manufacturers Association (NEMA).

(k) Manufacturer's published recommendations and specifications.

(l) General Industry Safety Orders (OSHA).

2. The following standards have been referred to in this Section of the specifications:

ANSI B16.1-75	Cast Iron Pipe Flanges and Flanged Fittings Class 25, 125, 250 and 800.
ANSI B16.5-81	Pipe Flanges and Flanged Fittings, Steel, Nickel Alloy, and Other Special Alloys.
ANSI B46.1-78	Surface Texture.
ANSI S12.6-84	Method for the Measurement of the Real-Ear Attenuation of Hearing Protectors.
ANSI/ASME B1.20.1-83	General Purpose Pipe Threads (Inch).
ANSI/ASME B31.1-83	Power Piping.
ANSI/AWWA D100-84	Welded Steel Tanks for Water Storage.
AWWA C206-82	Field Welding of Steel Water Pipe.
ASTM A 48-83	Specification for Gray Iron Castings.
ASTM A 108-81	Specification for Steel Bars, Carbon, Cold-Finished, Standard Quality.

1.4 CONTRACTOR SUBMITTALS

A. Shop Drawings: The CONTRACTOR shall furnish complete shop drawings for all equipment specified in the various Sections, together with all piping, valves, and controls for review by the ENGINEER in accordance with Section 01300 entitled "Submittals".

B. O & M Manuals: Complete and descriptive operation and maintenance manuals shall be submitted in accordance with Section 01300 entitled "Submittals".

C. Tools: The CONTRACTOR shall supply one complete set of special wrenches or other special tools necessary for the assembly, adjustment, and dismantling of the equipment. All tools shall be of best quality hardened steel forgings with bright, finished heads and with work faces dressed to fit nuts. The set of tools shall be neatly mounted in a labeled toolbox of suitable design provided with a hinged cover.

D. Spare Parts: The CONTRACTOR shall obtain and submit from the Supplier a list of suggested spare parts for each piece of equipment. After approval, he shall furnish such spare parts suitably packaged, identified with the equipment number, and labeled. He shall also furnish the name, address, and telephone number of the nearest distributor for each piece of equipment.

E. Torsional Analysis: The CONTRACTOR shall furnish to the ENGINEER a torsional analysis of the following, which shall be submitted in accordance with Section 01300 entitled "Submittals".

1. All engine drives.
2. All blowers and compressors with drives of 100 horsepower and over.
3. All other equipment where specified.

1.5 QUALITY ASSURANCE

A. Inspection, Start-up, and Field Adjustment: The CONTRACTOR shall demonstrate that all equipment meets the specified performance requirements. Upon completion of installation of mechanical equipment controls, the CONTRACTOR shall provide the services of an experienced, competent, and authorized service representative of the manufacturer or supplies of each item of major equipment who shall visit the site of work to perform the following tasks:

1. Assist the CONTRACTOR in the installation of the equipment.
2. To inspect, check, adjust if necessary and approve the equipment installation.
3. To start-up and field-test the equipment for proper operation, efficiency, and capacity.
4. To perform necessary field adjustments during the test period until the equipment installation and operation are satisfactory to the ENGINEER.
5. To instruct the OWNER's personnel in the operation and maintenance of the equipment. Instruction shall include step-by-step trouble shooting procedures with all necessary test equipment.

B. The costs of all inspection, start-up, testing, adjustment, and instruction work performed by said factory-trained representatives shall be borne by the CONTRACTOR.

C. Public Inspection: It shall be the responsibility of the CONTRACTOR to inform the local authorities, such as building and plumbing inspectors, fire marshal, OSHA inspectors, and others, to witness all required tests for piping, plumbing, fire protection systems, pressure vessels, safety systems, etc., to obtain all required permits and certificates, and pay all fees.

PART 2 -- PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Noise Level: When in operation, no single piece of equipment shall exceed the OSHA noise level requirements for a one hour exposure.

B. Service Factors: Service factors shall be applied in the selection or design of mechanical power transmission components. Unless otherwise specified, the following load classifications shall apply in determining service factors:

Type of Equipment	**Load Classification**
Blower:	
Centrifugal or vane	Uniform
Lobe	Uniform
Reciprocating Air Compressor:	
Multi-Cylinder	Moderate Shock
Single-Cylinder	Heavy Shock
Pump:	
Centrifugal or Rotary	Uniform
Reciprocating	Moderate Shock
Diaphragm	Moderate Shock
Mixer:	
Constant Density	Uniform
Variable Density	Moderate Shock
Crane or Hoist	Moderate Shock
Fans	Uniform

C. For service factors of electric motors, see Section 16950 entitled "Electric Motors". Where load classifications are not specified, best modern practice shall be used.

D. Welding: Unless otherwise specified or shown, all welding shall conform to the following:

1. Latest revision of ANSI/AWWA D100.
2. Latest revision of AWWA C206.
3. All composite fabricated steel assemblies which are to be erected or installed inside a hydraulic structure, including any fixed or movable structural components of mechanical equipment, shall have continuous seal welds to prevent entrance of air or moisture.
4. All welding shall be by the metal-arc method or gas-shielded arc method as described in the American Welding Society's "Welding Handbook" as supplemented by other pertinent standards of the AWS. Qualification of welders shall be in accordance with the AWS Standards governing same.
5. In assembly and during welding, the component parts shall be adequately clamped, supported, and restrained to minimize distortion and for control of dimensions. Weld reinforcement shall be as specified by the AWS code. Upon completion of welding, all weld splatter, flux, slag, and burrs left by attachments shall be removed. Welds shall be repaired to produce a workmanlike appearance, with uniform weld contours and dimensions. All sharp corners of material which is to be painted or coated shall be ground to a minimum of 1/32-inch on the flat.

E. Protection of Equipment: All equipment shall be boxed, crated, or otherwise protected from damage and moisture during shipment, handling, and storage. All equipment shall be protected from exposure to corrosive fumes and shall be kept thoroughly dry at all times. Pumps, motors, drives, electrical equipment, and other equipment having anti-friction or sleeve bearing shall be stored in weather tight storage facilities prior to installation. For extended storage periods, plastic equipment wrappers should be avoided, to prevent accumulation of condensate in gears and bearings.

F. Identification of Equipment Items: Each item of equipment shipped shall have a legible identifying mark corresponding to the equipment number shown or specified for the particular item.

G. Vibration Level: All equipment subject to vibration shall be provided with restrained spring-type vibration isolators or pads per manufacturer's written recommendations.

H. Shop Fabrication: Shop fabrication shall be performed in accordance with the Contract Documents and the approved shop drawings.

2.2 ANCHORING OF MECHANICAL EQUIPMENT

A. Equipment that does not vibrate during normal operation shall be rigidly attached to the foundation or other adequate support to prevent lateral and vertical displacement. Equipment that vibrates during normal operation shall be provided with isolators with mechanical stops which are securely anchored to foundation or other adequate support.

B. Jacking screws shall be provided in the equipment bases and bedplates to aid in leveling prior to grouting.

C. Equipment suppliers shall furnish anchor bolts, nuts, washers, and sleeves of adequate design as required for proper anchorage of the bases and bedplates to the concrete bases. Sleeves shall be a minimum of 1-1/2 times the diameter of the anchor bolts. Unless otherwise shown or specified, anchor bolts for items of equipment mounted on baseplates shall be long enough to permit 1-1/2 inches of grout beneath the baseplate and to provide adequate anchorage into structural concrete.

D. Anchor bolts, together with templates or setting drawings, shall be delivered sufficiently early to permit setting the anchor bolts when the structural concrete is placed.

E. All bolts and anchor bolts, buried, submerged, or below the top of the wall of any hydraulic structure shall be of Type 18-8 stainless steel.

F. The Contractor shall submit, along with the mechanical equipment shop drawings, complete details showing method of anchoring equipment and/or mechanical stops in full compliance with these requirements. All engineering required to comply with these provisions shall be the Contractor's responsibility. Submittals shall state the weight of the equipment involved, the materials of the anchor system, and show all information in sufficient detail to permit an evaluation of its structural adequacy. Submittals not meeting these requirements in full will be returned, not approved, with deficiencies noted. The Contractor shall be required to correct all deficiencies and resubmit the proposed system of anchorage for approval.

2.3 EQUIPMENT INSTALLATION

A. The Contractor shall obtain installation instruction booklets or other recommendations from the equipment manufacturers as to procedures for, sequence of, and tolerances allowed in equipment installation. In particular, the manufacturer's recommendations as to grout spaces required, type of grout to be used, and tolerances for level and alignment, both vertical and horizontal, shall be obtained and followed. Whenever applicable, the Contractor shall obtain the service of a manufacturer's representative specifically trained in erection of his equipment to supervise the installation.

B. Skilled craftsmen experienced in installation of the equipment or similar equipment shall be used. Applicable specialized tools and equipment, such as precision machinist levels, dial indicators, and gauges, shall be utilized as required in the installations. The work shall be accomplished in a workmanlike manner to produce satisfactory equipment installation free of vibration or other defects.

C. All equipment shall be installed on 3-inches high concrete housekeeping pad unless noted otherwise. After assembly and installation on the concrete base, each unit shall be leveled and aligned in place but not grouted until after the initial fitting and alignment of connecting piping. Each unit shall then be grouted to the concrete base. Each base and bedplate shall be completely filled with grout. The grout shall extend to the edge of each base or bedplate and shall be beveled at 45 degrees all around the unit. Grout which is exposed at horizontal surfaces shall be rounded to provide drainage to appropriate points. After grout has set, jacking screws shall be removed and nuts on anchor bolts shall be tightened, followed by an overall check on leveling and alignment. Should equipment not meet tolerances of level and alignment, as recommended by the manufacturer, corrective measures shall be taken to obtain the tolerances required.

D. Non-shrink grout used in setting machinery and anchor bolts shall be made with a hydraulic-type cement which, when mixed with water according to manufacturer's instructions, will harden rapidly to produce a permanent high-strength material. Non-shrink grout shall be POR-ROK, as manufactured by the Hallemite Manufacturing Company of Cleveland, Ohio; Burke-Stone manufactured by Burke Concrete Accessories, Inc., Oakland, California; or equal.

2.4 PROTECTION OF EQUIPMENT

A. All equipment shall be boxed, crated, or otherwise completely enclosed and protected during shipment, handling, and storage. All equipment shall be protected from exposure to the elements and shall be kept thoroughly dry at all times. Pumps, motors, drives, electrical equipment, and other equipment having anti-friction or sleeve bearings shall be stored in weather-tight storage facilities such as warehouses.

B. Painted surfaces shall be protected against impact, abrasion, discoloration, and other damage. All painted surfaces which are damaged prior to acceptance of equipment shall be repainted.

C. Electrical equipment, controls, and insulation shall be protected against moisture or water damage. All space heaters provided in the equipment shall be connected and operating at all times from the time of delivery until equipment is placed in operation.

2.5 COUPLINGS

A. Flexible couplings shall be provided between the driver and the driven equipment to accommodate angular misalignment, parallel misalignment, end float, and to cushion shock loads. Where required for vertical shafts, 3-piece spacer coupling shall be installed.

B. The CONTRACTOR shall have the equipment manufacturer select or recommend the size and type of coupling required to suit each specific application.

C. Taper lock bushings may be used to provide for easy installation and removal on shafts of various diameters.

D. Where universal type couplings are shown, they shall be of the needle bearing type construction, equipped with commercial type grease fittings.

2.6 SHAFTING

A. General: All shafting shall be continuous between bearings and shall be sized to transmit the power required. Keyways shall be accurately cut in line. Shafting shall not be turned down at the ends to accommodate bearings or sprockets whose bore is less than the diameter of the shaft. All shafts shall rotate in the end bearings and shall be turned and polished, straight, and true.

B. Materials: Shafting materials shall be appropriate for the type of service and torque transmitted. Environmental elements such as corrosive gases, moisture, and fluids shall be taken into consideration. Materials shall be as shown or specified unless furnished as part of an equipment assembly.

1. Low carbon cold-rolled steel shafting shall conform to ASTM A 108, Grade 1018.
2. Medium carbon cold-rolled shafting shall conform to ASTM A 108, Grade 1045.
3. Corrosion-resistant shafting shall be stainless steel or Monel, whichever is most suitable for the intended service.

C. Differential Settlement: Where differential settlement between the driver and the driven equipment may be expected, a shaft of sufficient length with 2 sets of universal type couplings shall be provided.

2.7 BEARINGS

A. General: Bearings shall conform to the standards of the Anti-Friction Bearings Manufacturing Association (AFBMA).

B. To assure satisfactory bearing application, fitting practice, mounting, lubrication, sealing, static rating, housing strength, and other important factors shall be considered in bearing selection.

C. All re-lubricatable type bearings shall be equipped with a hydraulic grease fitting in an accessible location and shall have sufficient grease capacity in the bearing chamber.

D. All lubricated-for-life bearings shall be factory-lubricated with manufacturer's recommended grease to insure maximum bearing life and best performance.

E. Bearing Life: Except where otherwise specified or shown, all bearings shall have a minimum B-10 life expectancy of 5 years or 20,000 hours, whichever occurs first. Where so specified, bearings shall have a minimum rated B-10 life expectancy corresponding to the type of service, as follows:

Type of Service	**Design Life (Years)**	**B-10 Design Life (Hours)**
	(whichever comes first)	
8-hour shift	10	20,000
16-hour shift	10	40,000
Continuous	10	60,000

F. Bearing housings shall be of cast iron or steel and bearing mounting arrangement shall be as specified or shown, or as recommended in the published standards of the manufacturer. Split-type housings may be used to facilitate installation, inspection, and disassembly.

G. Sleeve-type bearings shall have a Babbitt or bronze liner, unless otherwise shown.

2.8 GEARS AND GEAR DRIVES

A. Unless otherwise specified, gears shall be of the helical or spiral-bevel type, designed and manufactured in accordance with AGMA Standards, with a minimum service factor of 1.7, a minimum B-10 bearing life of 60,000 hours and a minimum efficiency of 94 percent. Worm gears shall not be used.

B. All gear speed reducers or increasers shall be of the enclosed type, oil or grease-lubricated and fully sealed, with a breather to allow air to escape but keep dust and dirt out. The casing shall be of cast iron

with lifting lugs and an inspection cover for each gear train. An oil level sight glass and an oil flow indicator shall be provided.

C. Gears and gear drives as part of an equipment assembly shall be shipped fully assembled for field installation.

D. Material selections shall be left to the discretion of the manufacturer, provided the above AGMA values are met. Input and output shafts shall be adequately designed for the service and load requirements. Gears shall be computer-matched for minimum tolerance variation. The output shaft shall have 2 positive seals to prevent oil leakage.

E. Oil level and drain location relative to the mounting arrangement shall be considered in selection of gear drives. Oil drains shall be provided with adequate clearance to allow for a container of sufficient size to be placed to collect the full amount of oil to be drained. Oil coolers or heat exchangers with all required appurtenances shall be furnished when necessary.

F. Where gear drive input or output shafts have to connect to couplings or sprockets supplied by others, the CONTRACTOR shall have the gear drive manufacturer supply matching key taped to the shaft for shipment.

2.9 DRIVE CHAINS

A. Power drive chains shall be commercial type roller chains and meet ANSI Standards.

B. A chain take-up or tightener shall be provided in every chain drive arrangement to provide easy adjustment.

C. A minimum of one connecting or coupler link shall be provided with each length of roller chain.

D. Chain and attachments shall be of the manufacturer's best standard material and suitable for the process fluid.

2.10 SPROCKETS

A. General: Sprockets shall be used in conjunction with all chain drives and chain-type material handling equipment.

B. Materials: Unless otherwise specified, materials shall be as follows:

1. Sprockets with 25 teeth or less, normally used as a driver, shall be made of medium carbon steel in the 0.40 to 0.45 percent carbon range.
2. Type A and B sprockets with 26 teeth or more, normally used as driven sprockets, shall be made of minimum 0.20 percent carbon steel.
3. Large diameter sprockets with Type C hub shall be made of cast iron conforming to ASTM A 48, Class 30.

C. All sprockets shall be accurately machined to ANSI Standards. Sprockets shall have deep hardness penetration in tooth sections.

D. Finish bored sprockets shall be furnished complete with keyseat and set screws.

E. To facilitate installation and disassembly, sprockets shall be of the split type or shall be furnished with taper-lock bushings as required.

F. Idler sprockets shall be furnished with brass or Babbitt bushings, complete with oil hole and axial or circumferential grooving. Steel collars with set screws may be provided in both sides of the hub.

2.11 V-BELT DRIVES

A. V-belts and sheaves shall be of the best commercial grade and shall conform to ANSI, MPTA, and RMA Standards.

B. Unless otherwise specified, sheaves shall be machined from the finest quality gray cast iron.

C. All sheaves shall be statically balanced. In some applications where vibration is a problem, sheaves shall be dynamically balanced. Sheaves operating at belt speeds exceeding 6,500 fpm may be required to be of special materials and construction.

D. To facilitate installation and disassembly, sheaves shall be furnished complete with taper-lock or QD bushings as required.

E. Finish bored sheaves shall be furnished complete with keyseat and set screws.

F. Sliding motor bases shall be provided to adjust the tension of V-belts.

2.12 DRIVE GUARDS

A. All power transmission, prime movers, machines, and moving machine parts shall be guarded to conform with the OSHA Safety and Health Standards (29CFR1910).

2.13 FLEXIBLE CONNECTORS

A. General: Flexible connectors shall be installed in all piping connections to engines, blowers, compressors, and other vibrating equipment and in piping systems in accordance with the requirements of Section 15060 entitled "Process Piping and Fittings". Flexible connectors shall serve to isolate vibrations and compensate for pipe misalignment, movement, and offsets.

2.14 THREADED INSULATING CONNECTIONS

A. General: Threaded insulating bushings, unions, or couplings, as appropriate, shall be used for joining threaded pipes of dissimilar metals and for piping systems where corrosion control and cathodic protection are involved.

B. Materials: Threaded insulating connections shall be of nylon, Teflon, ploy-carbonate, polyethylene, or other non-conductive materials, and shall have ratings and properties to suit the service and loading conditions.

2.15 GASKETS AND PACKINGS

A. Gaskets shall be full-faced, 1/16-inch thick compressed sheets of aramid fiber base with nitrile binder and non-stick coatings, suitable for temperatures to 700 degrees F, a pH of 1 to 11, and pressures to 1000 psig as manufactured by Garlock Style 3000 or 3400, John Crane Style 2160, or equal. Where blind flanges are shown, the gaskets shall cover the entire inside surface of the blind flanges and shall be cemented to the blind flanges. Ring gaskets shall not be permitted.

B. Packing around valve stems and reciprocating shafts shall be of compressible material, compatible with the fluid being used. Chevron-type "V" packing shall be Garlock No. 432, John Crane "Everseal", or equal.

C. Packing around rotating shafts (other than valve stems) shall be "O"-rings or similar seals, or mechanical seals, as recommended by the manufacturer and approved by the ENGINEER.

2.16 NAMEPLATES

A. Equipment nameplates of stainless steel shall be engraved or stamped and fastened to the equipment in an accessible location with No. 4 or larger oval head stainless steel screws or drive pins. Nameplates shall contain manufacturer's name, model, serial number, size, characteristics, and appropriate data describing the machine performance ratings.

2.17 SAFETY REQUIREMENTS

A. Where work areas are located within a flammable or toxic gas environment, suitable gas detection, ventilating, and oxygen deficiency equipment shall be provided. Workers shall be equipped with approved breathing apparatus.

PART 3 -- EXECUTION

3.1 COUPLINGS

A. The CONTRACTOR shall have the equipment manufacturer select or recommend the size and type of coupling required to suit each specific application; installation shall be per equipment manufacturer's printed recommendations.

3.2 INSULATING CONNECTIONS

A. All insulating connections shall be installed in accordance with manufacturer's printed instructions.

**** END OF SECTION ****

SECTION 11247- CARBON DIOXIDE STORAGE AND FEED SYSTEM

PART 1 -- GENERAL

1.1 SUMMARY

A. The Contractor shall install one (1) complete carbon dioxide feed system as specified herein and as shown on the drawings. All the equipment specified in this section will be purchased by the OWNER and assigned to the contractor for installation. The equipment shall be fabricated, erected, assembled and placed in proper operating condition in full conformity with these plans and specifications, and the instruction and recommendations of the equipment manufacturer.

B. The entire carbon dioxide system shall be designed, coordinated and supplied by one manufacturer/supplier having prior experience in supplying carbon dioxide systems of the type specified, with equal or high capacity for at least six (6) water treatment facilities in the past three (3) years. The system manufacturer/supplier shall take sole responsibility for the products incorporated in the package.

C. The Specifications and applicable Drawings are based on equipment, products, and services offered by TOMCO2 Systems, Loganville, Georgia. Changes in the dimensions, layout, or location of equipment or accessories, or type of accessories required to accommodate alternate carbon dioxide feed system manufacturers and models shall be at the Contractor's expense. Design changes shall be performed by discipline engineers registered in the State of Iowa, at Contractor's expense. This includes all civil, structural, mechanical, electrical, or instrumentation and controls changes that may be determined necessary to accommodate the system(s) of other manufacturers. The Contractor shall also be solely responsible for all permit modifications necessary to accommodate an alternate manufacturer's design.

D. No alternate manufacturer will be considered unless, in the opinion of the Engineer and/or Owner the equipment conforms to the specification in all aspects. Alternate equipment which is a "standard product" of the Manufacturer shall be modified, redesigned or furnished with special features or materials as may be necessary to conform to the requirements of this specification and contract drawings. No alternate manufacturer will be considered unless documentation is submitted 10 days prior to bid date supporting and detailing all aspects of the Manufacturers Qualifications are met.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01300 - Submittals

B. Section 11000 - Equipment General Provisions

C. Section 11240 - Chemical Feed System, General

D. Section 15060 - Process Pipes and Pipe Fittings

E. Section 15100 - Valves

F. Section 16010 - Electrical General Provisions

G. Section 16950 - Instrumentation and Control

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Commercial Standards

1. All welding and welding procedures shall be qualified to AWS D1.1.

1.4 SUBMITTALS

A. Submit shop drawings and product data in accordance with Section 01300 and include the following:

1. Shop drawings indicating system schematics, equipment locations, details, and control schematics.

2. Product data indicating chemical treatment methods, chemicals, and equipment.

3. Manufacturer's installation instructions.

B. Operation and Maintenance Manuals

1. Prior to start-up, the Contractor shall furnish operation and maintenance manuals in accordance with Section 01300.

1.5 WARRANTY

A. The contractor shall provide a written guarantee from the manufacturer/supplier for all materials and workmanship extending twelve (12) months after start-up. All materials, equipment and workmanship furnished under these specifications shall be free from defects in material or workmanship.

B. The manufacturer/supplier shall be responsible for repair or replacement of any part which fails to meet the specified design requirements, or which is found to be defective during the warranty period. Repair or replacements of any such equipment shall be completed at no additional cost to the OWNER.

1.6 SYSTEM DESCRIPTION

A. The basic system consists of the following equipment and materials:

1. . Reuse existing Liquid Carbon Dioxide storage tank, electric vaporizer and CO2 vapor heater.

2. One (1) First stage CO_2 regulator. One (1) shelf spare.

3. One (1) Automatic pH controlled carbonic acid feed panel

4. One (1) Carbonic Acid Solution Diffuser Assembly

5. Instrumentation and control equipment, as specified

B. The liquid carbon dioxide storage unit converts liquid carbon dioxide to carbon dioxide gas. Carrier water and CO_2 vapor is fed to the pressurized solution feed (PSF) panel located inside of the water treatment plant. The PSF system forces the gas into a solution under high pressure. The carbonated solution, which is now carbonic acid and any minimal excess carbon dioxide, is injected in the re-carbonation tank upstream of the pH probe in the tank through the injector which maintains the PSF system's pressure. The PSF system automatically controls the gas injection rate as detected by the downstream pH probe to maintain a consistent pH as specified in this section.

C. The system shall be designed to lower the pH of water exiting the softening basins from 11 to 8.5 in the re-carbonation tank at a flow rate of 1800-2200 gpm.

1.7 MANUFACTURERS

A. $TOMCO_2$

PART 2 -- PRE-APPROVED EQUAL PRODUCTS

2.1 LIQUID CARBON DIOXIDE STORAGE TANK

A. Reuse existing storage tank.

2.2 CARBON DIOXIDE ELECTRIC VAPORIZER

A. Reuse existing electric vaporizer

2.3 CARBON DIOXIDE VAPOR HEATER

A. Reuse existing vapor heater

2.4 FIRST STAGE PRESSURE REGULATOR

A. Reuse existing pressure regulator.

2.5 AUTOMATIC PRESSURIZED SOLUTION FEED (PSF) SYSTEM

A. The CO_2 solution feed system shall be capable of feeding the following range of carbon dioxide dose.

1. Maximum CO_2 feed rate: 75 pounds CO_2 per hour
2. Minimum CO_2 feed rate: 10 pounds CO_2 per hour
3. Minimum carrier water pressure: 55 psig

B. Provide the following:

1. One (1) factory assembled stainless steel, free-standing PSF feed control assembly will be provided. All CO_2 piping and fittings will be Type 304 stainless steel. All water piping and fittings will be Schedule 10 stainless steel. The assembly will include the pH controller mounted in the cabinet door. The assembly shall contain the following, either mounted within the panel or supplied for field installation. The control assembly shall receive 1, separate, dedicated 120 VAC, single-phase supply.
2. Automatic control of the system shall be by standard pH control as described herein. A manual by-pass valve shall be provided for local by-pass control of the CO2 control valve for manual redundancy. A feed panel without a manual by-pass valve will not be accepted.
3. One (1) stainless steel "Y" strainer provided on the inlet side of the CO_2 feed panel to remove any debris that might pass through the CO_2 vapor line.
4. One (1) CO_2 pressure regulator will be provided for reducing the pressure of the CO_2 vapor to 65 psig prior to entering the flow indicator. Pressure regulator shall be Fisher 627. One pressure gage, 2-1-2-inch dial, 0 to 100 psi range, complete with isolation valve will be provided for indication of the CO_2 pressure downstream of the regulator.
5. One (1) "Varea-Meter" glass tube-type indicating CO_2 flow meter shall be provided. The frame will be stainless steel with stainless steel end fittings. A 5-inch glass tube with direct reading scale and a stainless steel float will be utilized. Accuracy of the meter will be 2 percent of full scale. The flow meter shall be sized to correspond with the design rate of carbon dioxide per 24 hours.
6. One (1) electronic actuated CO_2 flow control valve will be provided. The valve will be supplied complete with an actuator to receive a 4 to 20 mA dc proportional control signal. Actuator shall be Badger EVA-1, with Model 807 stainless steel valve.
7. One (1) manually operated bypass CO_2 flow control valve for use in varying the CO_2 flow to the static mixer in case of malfunction of the electronic actuated control valve. Valve body to be of stainless steel construction. The valve to be especially designed for positive control of small gas flows.
8. Three (3) CO_2 isolation valves will be supplied. The valve bodies will be of stainless steel construction with stainless steel trim. The valves will be designed specifically for CO_2 service.
9. One (1) stainless steel, ball check valve will be provided in the CO_2 injection line.

10. One (1) pH indicating PID controller will be provided with a manual selector switch to allow the operator to select one of two pH probes to monitor. The controller will be complete with proportional band and reset control functions, set point dial, manual-automatic selector switch and manual output adjustment. The indicating controller will be provided mounted inside the NEMA-4 weatherproof enclosure. The controller will transmit a control signal to the CO_2 control valve to vary the CO_2 flow to the diffuser based on the pH of the re-carbonated water. The controller shall be Rosemount.

    Two (2) insertion-type pH electrode assemblies shall be provided for the re-carbonation tank as indicated on the drawings. The pH probes and the controller shall be Rosemount Model 56. Each electrode assembly shall include a pH glass electrode, a reference electrode, a thermos-compensator, and a preamplifier, all enclosed in a corrosion-resistant CPVC body. The electrode assemblies will be located downstream of the CO_2 application point, as shown on the Drawings, for measurement of the pH and transmitting the pH measurement signal to the pH controller. Provide electrical shielded cable to length shown on the Drawings. The electrodes shall be Rosemount.

11. Two (2) in-line mixers designed to continuously mix carbon dioxide with the water. The CO_2 vapor will be injected upstream of the mixer through a stainless steel porous element to provide fine bubbles. Pressure indicators will be provided on each side of the mixers to indicate possible excessive pressure drop through the mixers. Mixers shall be PVC static mixers.

12. One (1) solution dispersion assembly will be provided for field installation. The assembly will disperse the concentrated solution back into the pipeline shown on the Drawings. The injection assembly will be constructed of stainless steel.

13. All necessary valves, safeties, gages, pipe, pipe fittings, etc., will be included as part of the PSF system.

14. The above components will be factory assembled and all field connections clearly marked. The entire assembly shall be shop tested and calibrated.

2.6 CARBONIC ACID DIFFUSER

A. One (1) Carbonic Acid diffuser will be supplied to input carbonic acid counter flow in the 20-inch recarbonation influent, exiting the softeners. The diffuser will be constructed of stainless steel and provided with a 3-inch x 2 inch 150# FFSO mounting flanges. The diffuser shall be placed in upstream of the opening in the modified redwood baffle wall as described in Paragraph 2.8A.7.

2.7 CARRIER WATER BOOSTER PUMP

A. Furnish and install one (1) Hydro MPC-E duplex variable speed, variable flow factory assembled water booster system, Model 2CRE15-02 as manufactured by Grundfos. The unit shall be rated for a system capacity of 100 gpm at a system pressure of 75 ft. TDH.

1. The complete packaged pumping system, including pumps, motors, control equipment, variable frequency drives, tank, valves, fittings, and manifolds must be UL listed under Category QCZJ (Packaged Pumping Systems). In addition to the UL listing for the complete system, the control panel assembly must be separately listed under UL 508A (Industrial Control Panels). All welding shall be performed by certified welders in accordance with ASME Section IX.

2. The motors shall be MLE consisting of a 2-pole, TEFC rated enclosure, NEMA C-faced motor and an integrated variable frequency drive in a NEMA 3R enclosure.

3. A suction manifold of 316Ti stainless steel is fitted on the suction side of the pumps. An isolating valve is fitted between the suction manifold and the individual pump. A discharge manifold of 316Ti stainless steel is fitted on the discharge side of the pumps. An isolating valve and a check valve are fitted between the discharge manifold and the individual pump.

4. The control unit of the Hydro MPC (CU 351) is mounted in the door of the control cabinet. The control panel enables manual setting and change of parameters. The CU 351 includes application optimized software for setting the booster operation.

B. Provide a hydro-pneumatic tank with a carbon steel shell and a replaceable F.D.A. approved heavy duty bladder to separate the air and water. No water shall come in contact with the metal walls of the tank. Features shall include an air fill valve and bottom system connection suitable for 100% drawdown. The total capacity of the bladder tank shall be at least 14 gallons.

2.8 MISCELLANEOUS EQUIPMENT

A. The General Contractor shall provide the following equipment and materials in accordance with the manufacturer's guidelines and recommendations:

1. Concrete pads, equipment supports, and anchor bolts.
2. Electrical wire, junction boxes, conduit, etc. for the installation of equipment.
3. Baffles, piping supports, wall sleeves, hangers, etc. for piping.
4. Inter-connecting piping between the storage tank and feed control panel.
5. Inter-connecting piping between the feed control panel and diffuser assemblies.
6. Carrier piping for the control panel as shown on the Mechanical Drawings.
7. The existing re-carbonation tank has a redwood baffle wall. This baffle wall is 11 ft long and has 2’6” high underflow opening below. The baffle wall shall be modified to have a 2ft wide opening at the center by blocking on both sides. The CO2 solution diffuser shall be placed in front of this modified opening.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Provide at least two (2) full days of installation supervision by the manufacturer's representative.

B. Install equipment at the locations shown on the Drawings.

C. Install equipment and accessories in accordance with the manufacturer's instructions.

3.2 INSPECTION START-UP AND ADJUSTMENT

A. The manufacturer or single source supplier of equipment shall inspect the completed installation, make all necessary adjustments, corrections, or modifications prior to start-up.

B. After start-up is authorized by the Engineer, the manufacturer or supplier shall furnish a qualified representative to inspect the completed installation, to supervise the system’s initial start-up, and to train the operating personnel in the operation and equipment maintenance. At least two (2) full days shall be reserved for start-up and adjustment.

C. After equipment has been placed into operation, the manufacturer’s representative shall make all final adjustments for the proper operation of the equipment.

3.3 OPERATOR TRAINING

A. Provide a minimum of 8 hours of operator training at the Owner’s convenience after equipment is operational.

B. The plant's personnel shall be sufficiently trained and thoroughly acquainted with the operations and maintenance materials to operate all components of the system.

**** END OF SECTION ****

SECTION 11260 - CHLORINATION EQUIPMENT

PART 1 -- GENERAL

1.1 THE REQUIREMENT

A. The CONTRACTOR shall furnish and install chlorine gas and chlorine solution handling equipment, and all appurtenant work, complete and operable, including all necessary controls, valves, piping, gages, switches, regulators, strainers, tanks, fittings, adapters, etc., all in accordance with the requirements of the Contract Documents.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 11240 – Chemical Feed System, General

B. Section 15060 – Pipe and Pipe Fittings

C. Section 15410 – Plumbing Piping

D. Section 16950 – Instrumentation and Control

1.3 SUBMITTALS

A. All submittals shall be as specified in Section 11240, Paragraph 1.4.

B. The CONTRACTOR shall submit detailed plumbing drawings for fully operational chemical feed system. Drawings shall indentify the components furnished and additional components to be furnished by the Contractor to provide a fully functional system. The chemical feed equipment supplier visiting the project site to assist the contractor in installation in-lieu of providing drawings will not be accepted.

1.4 STARTUP AND TRAINING

A. Equipment manufacturer/supplier shall provide startup and training as specified in Section 11240, Paragraph 1.5.

PART 2 -- PRODUCTS

2.1 GENERAL

A. All equipment shall be of rugged construction with all components designed for long and continuous operation in a corrosive (chlorine) atmosphere. Unless otherwise specified, all equipment and components of the chlorine system shall be as recommended by the Chlorine Institute, Inc. All gas piping shall be suitable for intended application.

2.2 SCHEDULE OF EQUIPMENT

A. The following solution feed, vacuum type, wall mounted chlorinators shall be furnished and installed. The chlorinator capacity and the control mode shall be as follows:

Chlorine Feed Location	Capacity (PPD)	Control Mode	Control Signal
Raw Water	100	Manual	None
Aerator Discharge-Pre-chlorination	250	Manual	None
Filter Effluent-Intermediate Chlorination	250	Manual	None

B. The chlorinators shall be constructed of durable corrosion resistant materials.

C. The chlorinators shall be furnished with the following equipment:

1. A vacuum gage in the vacuum system to indicate proper operation of the equipment.
2. Vacuum regulator shall be vented to the atmosphere outside the chemical feed room or the chlorine room.
3. A check valve shall prevent the backflow of injector water into chlorine gas lines.
4. Manual dosage and adjustment on the face of the chlorinator.

D. Manufacturers:

1. Wallace and Tiernan S10K
2. Hydro Instruments Model Series 300

E. INJECTORS

1. 500 ppd (1") injectors to create the vacuum. (4 required – One for each feed point and a spare)

2.3 SUPPLEMENTAL EQUIPMENT

A. The following items of supplemental equipment including valves, adapters and piping shall be furnished and installed as part of the chlorination equipment:

1. One (1) chlorine gas leak detector.
2. Standard chlorine gas ejectors with open and pipeline diffuser. The diffuser and nozzle selection shall be suitable to deliver the specified amount of chlorine. The water supply pressure where booster pumps are used shall not exceed 160 PSI to deliver the specified amount of chlorine. Intermediate chlorine application shall be via pipe diffuser system placed in front of the 30" diameter filter effluent piping in the filter effluent wetwell.
3. PVC ball valves, various sizes, for vacuum lines to the ejector.
4. Pressure gages with valves (mounted upstream of the ejector on the water supply line). Gauges shall be filled with glycerin and shall be at least 3.5 inches in diameter.
5. Two (2) chlorine booster pumps as specified in Paragraph 2.5. One booster pump shelf spare.

2.4 EXTRA PARTS AND ACCESSORIES

A. The CONTRACTOR shall furnish the following extra parts, all of which shall meet the requirements of the Specifications:

Item No.	Description		Quantity
1	Preventative maintenance kit for vacuum regulating check units		1
2	Complete set of O-rings and gaskets		2 sets
3	Spare rotameter	250 ppd	2
		100 ppd	1
4	Spare rupture disks for all safety heads		1 set

2.5 WATER SUPPLY SYSTEM

A. Utility water supply for the solution-feed injectors shall be obtained from the plant potable water supply system as shown in the Plans. Solenoid valve and the chlorine booster pumps shall be provided by the chlorine equipment supplier and shall coordinate with the instrumentation and control supplier (Section 16900) for the proper control of these valves and pumps. The booster pump shall supply 30 gpm at 150 ft. TDH. The pump motor shall be 3 Hp, 460 volts, 3 phase, and shall comply with Section 16150 -" Motors". The booster pump size listed is for bidding purposes only. The supplier shall furnish design calculation based on proposed throat size and nozzle size the flow and pressure requirements of the booster pump. The back pressure at feed locations shall be field verified. Furnish a shelf spare booster pump. A total of two (2) booster pumps shall be supplied.

2.6 CHLORINE GAS LEAK DETECTORS

A. **General:** The chlorine gas detection system shall provide a warning of the presence of chlorine gas in the chlorine storage room.

B. **Design:** The detectors shall contain electro-chemical sensing cells requiring minimum maintenance and shall be sensitive to the presence of chlorine gas only. The sensing cell shall be connected to the electrical circuit to give an alarm when one ppm or more chlorine gas (by volume) is present in the air. The system shall be "fail safe" with failures in the internal electrical circuit. A one-year supply of materials for its operation shall be furnished with the equipment. The detectors shall be suitable for operation on 120 volts, single phase, 60 Hertz, ac, and they shall be wall-mounted units. A normally closed contact shall be provided to operate annunciators, and a normally-open dry contact shall be provided to operate exhaust fans in case of chlorine leaks and an outside red strobe light. Furnish and install an outside red strobe light.

C. Suppliers or equal:

1. Wallace and Tiernan (Pennwalt) ACUTEC 35 Monitor Type.
2. Hydro Instruments Model GA-180.

2.7 EMERGENCY SHUTOFF SYSTEM

A. Scope

1. This specification describes the Series CR-1Y Emergency Shutoff System for Chlorine Cylinder and Ton container Valves as manufactured by . JCS Industries Robo Valve. The system shall be suitable use with single one ton cylinder

B. Description

1. The emergency shut off system shall be comprised of one(1) electrically driven Actuators that act directly upon the cylinder or ton container valve stem. The Actuators shall mount upon the

cylinder or ton container valve and yoke assemblies by means of a clamping mechanism and a valve stem coupling so as to be removable during cylinder changes.

2. The Actuator shall deliver 40-50 Ft.-Lb. of closing torque to the valve stem upon receipt of a shutdown signal. The Actuator shall be powered only in the closing direction with provision for manual override in either the open or closed direction. Power for the Actuator shall be supplied by an uninterruptable 12 volt battery power supply and control system.

C. Actuator Design

1. Each Actuator shaft shall couple to the valve stem and provide an extension through the Actuator such that a standard chlorine wrench may be applied to the extension to manually operate the valve while the actuator is in place. The extension shaft shall be coupled to the drive motor and reduction gearing by means of a one way, positive engagement clutch that may be selectively disengaged for manual operation. Pushing in on the shaft shall disengage the clutch for manual operation of the valve. The clutch shall have a toggle mechanism such that it remains disengaged, free to rotate in either direction, for manual operation. The clutch shall automatically reengage, for automatic closure upon activation of the motor and gear train.

D. Actuator Components

1. Motor Driver

(a) Motive power for the Actuators shall be provided by 12 volt DC electric motors acting through a gear reduction system.

2. Clutch & Shaft

(a) The Actuator shall be constructed of materials suitable for the chlorine environment. The valve stem extension shaft shall be machined from a single piece of Monel. The valve stem connection coupling and shaft bearing/seal shall be of Aluminum-Silicon Bronze, C-642 Teflon coated for additional corrosion resistance. The valve stem engagement spring shall be of heat treated Hastelloy C-276.

3. Valve Stem Coupling

(a) The element that couples the driven shaft to the valve stem shall be designed to accommodate slight misalignment of the Actuator shaft with the axis of the valve stem without restricting rotation.

4. Clamp/Frame

(a) The clamping mechanism for yoke mounting shall require no tools for installation on the valve and valve yoke.

(b) Adapters shall be available to unitize the Actuator with regulator clamping systems commonly used in the industry. Regulator mounting shall require only an adjustable wrench for mating to the regulator. The regulator manufacturer is to be specified.

(c) All clamp and frame components shall be coated with fusion bonded polyester for corrosion resistance.

5. Sealing Devices

(a) Shaft entrances to the Actuator mechanism shall be sealed with double “O” ring seals of Viton and/or Teflon. The motor canister and main enclosure will be sealed with static, Viton “O” ring seals.

E. Control Panel Design

1. The Duplex control panels shall be contained within a single electrical enclosure of NEMA 4X rating. All cables, connectors, switches and fittings shall be of a similar rating to resist the chemical environment. Each actuator shall have a dedicated power source (battery) and

microprocessor controller. Electrical power shall be delivered to each Actuator by means a flexible cable. Each individual control panel shall have indicator lights to display the status of key system elements. The control panel shall accept signals from sources such as gas detectors, remote station alarms, seismic or fire sensors and manual switches to trigger the Actuator to automatically close one or both of the cylinder or ton container valves. The panel shall have the capability of accepting input signals to initiate either simultaneous or independent operation of each Actuator and valve.

F. Control Panel Components

1. Control Circuitry

(a) An electronic circuit board in the control panel shall contain a microprocessor programmed to precisely control the valve closing cycle and the torque applied to the valve stem. The microprocessor shall also monitor and display status of the battery, charging power and system readiness as well as provide a diagnostic system check during the test cycle. Electro-mechanical relays or contacts, which are susceptible to corrosion failure, shall not be used in the control circuitry. The entire control system shall be comprised of encapsulated solid state devices.

(b) In the event of a sustained loss of charging power (seven to ten days), the microprocessor shall detect a declining battery charge to initiate Actuator closure while sufficient power remains to apply the specified torque to the valve stem.

2. Battery and Charger

(a) The batteries shall be of the gel-cell lead-acid type rated at 7 ampere-hours. Each charging system shall provide a variable controlled charge current that is temperature compensated to optimize battery performance and service life.

3. Status Lights

(a) The control panel enclosure shall have a window in the front cover through which the operator may observe the status lights. The status lights for each respective system are as follows:

(1) **Charge Power** – (Normally On) Green to indicate that charge power is available.

(2) **Armed/Ready** – (Normally On) Rapidly pulsating Green to indicate the microprocessor is functioning and ready to operate. Flashing Green during operation and for a 15 second reset period after activation.

(3) **Battery Low** – (Normally Off) Flashing red to indicate that the battery should be replaced.

4. Input Signals

(a) The control panel shall contain a terminal strip to accept multiple incoming signals for either simultaneous or individual Actuator operation. External signals shall consist of a “Normally Open” dry contact, closure to initiate the Actuator.

5. Output Signal

(a) Upon initiation of the Actuator, the control system shall provide an output signal (0.2 amp @ 24V dc/ac) to indicate Actuator operation. These may be employed to trigger other displays or alarms.

6. Testing

(a) Mounted externally on the control panel shall be a Test switch to provide a full cycle test of each individual actuator. During the test cycle the microprocessor shall self-test as well as check cable-motor continuity, and the battery under load conditions. Test procedures as outlined on the Actuator and control panel labels shall provide the operator with “Go”-”No-

Go" criteria. Test results are confirmed by operator observation and the tactile force required in re-opening the valve.

G. Power Requirements

1. The power supply to operate the control panel shall be (115V ac, 60 Hz) single phase. Current consumption shall be 0.5 amp at 120V ac.

H. Accessories

1. Standard accessories for each Actuator system shall include (1) Stowage bracket for temporary placement of the Actuator during cylinder changes. (2) A twisted type chlorine cylinder wrench.

I. Manufacturer

1. Halogen Gemini Controller System
2. Robo-Control Model U150-21111 suitable for single one ton cylinder.

2.8 CHLORINE INJECTOR

A. **General:** Chlorine injectors shall be suitable for the capacities and pressure conditions shown. They shall be provided with threaded or flanged connections, manual throat adjustment and diaphragm shut-off. Chlorine injector shall be rated to 500 ppd.

B. Supplier or equal:

1. Wallace & Tiernan
2. Hydro Instruments

2.9 SAFETY SIGN

A. The CONTRACTOR shall furnish a hazard warning sign for chlorine gas. The sign shall be USA Blue Book Stock #60205 or Equal. Sign shall read "Danger Chlorine Gas".

2.10 FREE AND TOTAL CHLORINE ANALYZER

A. Analyzer Requirements

1. Range: 0 to 5 mg/L total residual chlorine.
2. Accuracy: ±5% or 0.035 mg/L as Cl_2, whichever is greater.
3. Precision: ±5% or 0.005 mg/L as Cl_2, whichever is greater.
4. Minimum Detection Limit: 0.035 mg/L
5. Cycle Time: One complete sample analysis every 2-1/2 minutes.
6. Recorder Outputs: One 4-20 mA with an output span programmable over any portion of the 0 to 5 mg/L range. 130 V isolation from earth ground.
7. Alarms: Two alarms selectable for sample concentration, system warning or system shut-down. Each alarm is equipped with an SPDT relay with contacts rated 5 A resistive load at 230 Vac.
8. Power: 100-115 Vac, 60 Hz, 90 VA maximum.
9. Compliance/Certification: UL1262
10. Enclosure: ABS plastic, IP62 enclosure rating with two clear polycarbonate windows.
11. Manufacturer: Hach CL-17 or equal.
12. One full year supply of reagents to measure total chlorine residual shall be supplied.

B. Reagents

1. One full year's supply of reagents to measure total chlorine residual shall be supplied.

C. Accessories

1. One wound cartridge filter with ¾" FPT inlet and outlet shall be provided. Filter chamber shall be clear in color and shall be provided with mounting bracket cap.

2. The filter housing shall be rated for 125 psi.

3. Provide two (2) spare filter cartridges.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. **General:** All equipment shall be installed in accordance with the manufacturers recommended and approved procedures submitted with the shop drawings, and with the recommendations of the Chlorine Institute, Inc., and as shown or specified, unless otherwise approved.

B. **Chlorine Diffusers:** Chlorine diffusers shall be installed as detailed and where shown to feed chlorine solution into the water stream. All diffusers shall be well supported with corrosion resistant supports, and they shall be installed for easy removal and disconnection.

C. **Piping:** All pressure and vacuum gages mounted on chlorine gas shall be protected with diaphragm seals. Pipe and pipe fittings used for chlorine gas under vacuum, and chlorine solution, shall be compatible for conveying the chemical. Flexible PVC piping shall not be used.

**** END OF SECTION ****

DIVISION 15

MECHANICAL

SECTION 15000 - MECHANICAL GENERAL PROVISIONS

PART 1 -- GENERAL

1.1 THE REQUIREMENTS

A. The General Conditions, Supplementary Conditions and Special Conditions of these Contract Documents apply to Sections 15000 through 15950 of Division 15 and all mechanical subcontractors must comply with the requirements of those conditions, in addition to the requirements of sections 15000 through 15950.

1.2 SUMMARY OF WORK

A. The work to be done under this specification and the accompanying drawings includes the furnishing of all labor, materials, equipment and services necessary for the completion of all mechanical work. In general, this consists of the plumbing and heating and ventilation systems, as described in Sections 15075 through 15950 of the specification and applicable drawings. The mechanical work shall be complete with all piping, ductwork, fittings, equipment and connections as specified or required.

B. The omission of express reference to any parts necessary for or reasonably incidental to a complete installation shall not be construed as releasing the CONTRACTOR from furnishing such parts.

1.3 INSPECTION OF SITE

A. Before submitting a proposal on the work contemplated in this specification and accompanying drawings, each bidder shall examine the site and check as to the means of making connections to services and shall familiarize himself with all the existing conditions and limitations. No extras will be allowed because of the CONTRACTOR'S misunderstanding as to the amount of work involved or his lack of knowledge of any site conditions which may affect his work. Any apparent variance of the plan or specification from the existing conditions at the site shall be called to the attention of the Engineer.

B. The existence of any wires, conduits, pipes, ducts or other facilities are shown in a general way only. It will be the duty of the CONTRACTOR to visit the site and make exact determination of the existence of any such facilities prior to the submission of his bid. It is understood that he will be responsible for making the exact determination of the location and condition of such facilities.

1.4 FEES, PERMITS AND INSPECTIONS

A. All required permits and inspections shall be obtained by the CONTRACTOR under the section of the specifications and the fees for such permits and/or inspection shall be paid by the CONTRACTOR.

B. Public Inspection: It shall be the responsibility of the CONTRACTOR to inform the local authorities, such as building and plumbing inspectors, fire marshal, OSHA inspectors, and others, to witness all required test for piping, plumbing, fire protection systems, pressure vessels, safety systems, etc.

C. Certificate of Final Inspection. Under each applicable section of the specifications, the CONTRACTOR shall, upon completion of the work under that section, furnish a certificate of final inspection to the Engineer from the inspection department having jurisdiction.

1.5 CODES AND STANDARDS

A. All materials and workmanship shall comply with all applicable codes, specifications, local ordinances, industry standards and utility company regulations.

B. In case of difference between building codes, specifications, state laws, local ordinances, industry standards and utility company regulations and the contract documents, the most stringent shall govern. The CONTRACTOR shall promptly notify the Engineer in writing of any such difference.

C. Non-Compliance - Should the CONTRACTOR perform any work that does not comply with the requirements of the applicable building codes, state laws, local ordinances, industry standards and utility company regulations, he shall bear all costs arising in correcting the deficiencies.

D. Applicable codes and standards shall include all state laws, local ordinances, utility company regulations and the applicable requirements of nationally accepted codes and standards.

1.6 ELECTRICAL CHARACTERISTICS

A. The CONTRACTOR shall furnish and install all electric motors for equipment included in his contract unless specifically noted otherwise. It shall be the responsibility of each Sub-Contractor and supplier to check any notations made in motor, appliance and equipment schedule on drawings.

B. Unless specifically noted otherwise, all motor starters, control devices and the wiring of motors and controls will be by the Electrical Contractor. Any exception to the preceding will be described under that part of this specification which is directly affected.

C. The CONTRACTOR shall verify the ratings and characteristics of all electrical equipment which he is to furnish to assure that the equipment will be compatible with the services provided and equipment furnished by other contractors.

D. Any electrical wiring which is included in the mechanical work must comply with the standards set forth in the specifications for electrical work, Division 16.

E. If the CONTRACTOR has any doubt as to whether any item of electrical equipment or wiring is to be included in his contract, he shall either assume that it is to be included or shall obtain clarification from the Engineer prior to bidding.

1.7 DRAWINGS

A. The drawings are to scale as noted but the CONTRACTOR shall refer to architectural and structural drawings for exact location of partitions, walls, beams, shafts, equipment, etc.

B. The drawings show the general arrangement of all piping, equipment, and appurtenances and shall be followed as closely as actual building construction and the work of other trades will permit. The mechanical work shall conform to the requirements shown on all of the drawings. General and structural drawings shall take precedence over mechanical drawings. Because of the small scale of the mechanical drawings, it is not possible to indicate all offsets, fittings and accessories which may be required.

C. The CONTRACTOR, before roughing in any facilities or installation of any equipment shall consult all drawings, general, structural, mechanical, electrical, etc., and shall inform himself of materials, finishes, locations of ceilings, structural members, pipes, ducts, recessed lighting fixtures, conduits, etc., which may affect the installation. The CONTRACTOR in installing his equipment shall leave adequate room for the installation of equipment by other Contractors where space is limited. Consideration has been given to such conditions of limited space in the preparation of the drawings

and the locations and dimensions of equipment have been selected accordingly. The CONTRACTOR shall be warned that in certain instances, space may be limited to the extent that there may be only one arrangement of equipment or facilities which will allow installation of same.

D. Discrepancies discovered before or after work has started, shall be brought to the attention of the Engineer immediately and the Engineer reserves the right to require minor changes in the work of any CONTRACTOR to eliminate such discrepancies with no change in contract cost.

E. The plans and specifications are complementary and what is called for in either one shall be as binding as if called for in both.

1.8 SYMBOLS AND ABBREVIATIONS

A. Refer to symbol sheets on drawings. Other symbols are in common usage but if uncertainty exists regarding any plan symbols or abbreviations they shall be brought to the attention of the Engineer, and he shall clarify same by issuing an addendum.

B. Where the phrase starts "Provide------," "provide" shall be construed to mean the same as "Furnish and install------."

1.9 APPROVED MANUFACTURERS

A. Throughout these specifications manufacturers and materials are listed as approved equal. The approval applies only insofar as they comply with the requirements of the drawings and specifications and is subject to final approval with submission of shop drawings.

B. Any extra costs of any changes in any trades' work as a result of any substitutions shall be borne by the CONTRACTOR making the substitutions.

PART 2 -- PRODUCTS

2.1 SHOP DRAWINGS AND EQUIPMENT DATA

A. All submittals of Shop Drawings and Equipment Data shall be as specified in Section 01300 "Submittals".

2.2 ELECTRICAL MOTOR SPECIFICATION

A. Equipment requiring electric motors shall be equipped with motors conforming to the specification for motors in Section 16150.

B. Equipment requiring electric motors shall be equipped with motors conforming to the following, unless specifically noted otherwise.

1. Motors smaller than 1/2 hp shall be single-phase designed for operation at 115 volts, 60 cycles AC.

2. Motors 1/2 hp and larger shall be three-phase designed for operation at 240/480 volts, 60 cycles AC.

3. The motor furnished shall have the above design voltage inscribed on the nameplate.

2.3 HOLES THROUGH MASONRY AND CONCRETE

A. Each CONTRACTOR shall provide all holes and openings required for his work unless such openings are shown on the architectural and/or structural drawings which are included in the bidding documents.

The notes on structural drawings are included in the bidding documents. The notes on structural drawings are particularly significant when pre-cast and pre-stressed members are used.

B. Holes made in the field for piping shall be core drilled large enough to receive a pipe sleeve. Pipe insulation shall be continuous wherever a vapor barrier is specified on the piping. Size hole accordingly. Grout steel into wall or floor for watertightness.

C. The above method shall be employed whenever holes are made on the job including holes required by change orders or omissions made inadvertently by the CONTRACTOR.

D. Each CONTRACTOR shall be responsible for grouting airtight any openings adjacent to his work when such openings affect air balance (such as in a plenum) or in a shaft wall when it might affect the fire rating or the seal against passage of smoke or vapors.

E. Each CONTRACTOR shall be responsible for providing and disposing of water used in the core drilling operation. Work shall be scheduled, and other trades coordinated so that damage will not result from the use of water.

1. Special attention shall be given to core drilling operations which occur in areas adjacent to or over finished rooms which could be damaged by water. CONTRACTOR shall provide collection pans and other means of containing water.

2.4 CUTTING AND PATCHING

A. Each Contractor shall perform all cutting and patching necessary in order to perform his work unless such work has been delegated to the General CONTRACTOR. However, special permission shall be obtained from the Engineer before cutting structural members or finished material. All patching shall be performed in such a manner as to leave no visible trace and to return the part affected to the condition of undisturbed work. Patching work shall be performed by men experienced, skilled and licensed for the particular type of work involved. Inferior work will not be accepted. All holes in masonry shall be drilled with rotary drills. Impact tools shall not be used.

B. Pavements, sidewalks, roads and curbs shall be cut, patched, repaired and/or replaced as required to permit the patching, repairing and replacing shall be the responsibility of and paid for by the CONTRACTOR under the section of the specifications for the trade requiring the work.

C. Each trade shall bear the expense of all cutting, patching, repairing or replacing of the work of other trades required because of his fault, error or tardiness or because of any damage done by him.

2.5 CONCRETE BASES AND PADS (EXCEPT OIL TANK SLAB)

A. Exterior concrete pads shall be furnished by the Mechanical Contractor unless noted otherwise.

B. Mechanical Contractor shall furnish all required interior concrete pads or bases for mechanical equipment.

C. Anchoring slabs for underground storage tanks shall be specified in Section 15550.

PART 3 -- EXECUTION

3.1 ENTRY OF EQUIPMENT

A. The CONTRACTOR shall make all provisions for the entry of the equipment provided under his contract including, but not limited to, building openings, excavating, backfilling and repairs necessary to restore site and building to original condition.

3.2 PREFABRICATION BY CONTRACTOR

A. If a Contractor elects to prefabricate piping and ductwork, he is still obligated to abide by all requirements for cooperation with other trades. He shall not assume that this material will be installed first, and other trades must follow. If changes are made by the Architect/Engineer reasonably in advance of installation, the OWNER shall not be penalized for the use of prefabricated materials.

3.3 DRAIN LINES FROM EQUIPMENT

A. Unless noted otherwise, each item of equipment requiring a drain line or a conductor for liquid shall be provided with drain piping by the CONTRACTOR installing the item. Drains in finished spaces shall be copper, painted with silver paint. Provide a loop in the piping to provide gas or air seal.

B. Cooling unit drain pan shall be fitted with drain lines to nearest floor drain or receptor. Piping shall be copper or galvanized steel and shall include a "trap."

C. Heating system relief valves, blow-off valves, etc., shall be conducted to the nearest floor drain or receptor. Piping shall be black steel, neatly installed and secured to wall or column.

3.4 CLEANUP

A. CONTRACTOR shall periodically clear away all debris, surplus materials, etc., resulting from his work or operations, leaving the job and the equipment furnished under any or all contracts in a clean condition.

3.5 TEMPORARY SERVICES

A. The CONTRACTOR shall carefully examine all parts of the specification for requirements regarding temporary heat and other services. CONTRACTOR shall include in his bid, an amount to cover this portion of such services.

3.6 INSTRUCTION OF OPERATING EMPLOYEES

A. The CONTRACTOR shall furnish, without additional expense to the OWNER, the services of competent instructors, who will give full instruction in the care, adjustment and operation of all parts of the mechanical equipment to the OWNER's permanent employees who are to have charge of the equipment.

B. Each instructor shall be thoroughly familiar with all parts of the installation on which he is to give instruction and shall be trained in operating theory as well as in practical operation and maintenance work. Factory trained instructors shall be employed wherever they are available. Instruction shall be given during the regular workweek and at a time just prior to the time the equipment is accepted and turned over to the OWNER for regular operation.

C. Operations and maintenance manuals for all equipment complete with information on all auxiliary equipment and accessories shall be submitted in accordance with requirements of the special provisions.

3.7 TESTS

A. The CONTRACTOR shall test the equipment installed under this specification and shall demonstrate its proper operation to the OWNER's operating Engineer.

B. No equipment shall be tested, or operated for any purpose until it has been fully lubricated and properly connected and ready for normal operation. Any damage to equipment occasioned by

improper or ill-timed operation or testing shall be made good at the CONTRACTOR's own expense, before final inspection and acceptance.

3.8 AS-BUILT DRAWING NOTES

A. The CONTRACTOR shall mark up a set of prints to show the as-built conditions if they vary from the original. A complete set of drawings shall be kept at the job site at all times upon which any field change shall be marked. The Engineer will furnish a newly printed set of blue-line drawings for this purpose upon request. This work shall be completed and accepted by the Engineer before approval of final payment.

**** END OF SECTION ****

SECTION 15060 - PROCESS PIPING AND PIPE FITTINGS

PART 1 -- GENERAL

1.1 THE REQUIREMENTS

A. The CONTRACTOR shall furnish and install all piping systems shown and specified, in accordance with the requirements of the Contract Documents. Each system shall be complete with all necessary fittings, hangers, supports, anchors, expansion joints, flexible connectors, valves, accessories, heat tracing, insulation, lining and coating, testing, disinfection, excavation, backfill and encasement, to provide a functional installation.

B. The piping shown is intended to define the general layout, configuration, routing, method of support, pipe size, and pipe type. The mechanical drawings are not pipe construction or fabrication drawings. It is the CONTRACTOR's responsibility to develop the details necessary to construct all mechanical piping systems, to accommodate the specific equipment provided, and to provide and install all spools, spacers, adapters, connectors, etc., for a complete and functional system.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01300 Submittals

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Commercial Standards:

ANSI/AWWA C104/A21.4	Cement-Mortar Lining for Ductile-Iron Pipe and Fittings for Water.
ANSI/AWWA C105/A21.5	Polyethylene Encasement for Ductile-Iron Piping for Water and Other Liquids.
ANSI/AWWA C110/A21.10	Ductile-Iron and Gray-Iron Fittings, 3 in. Through 48 in. for Water and Other Liquids.
ANSI/AWWA C111/A21.11	Rubber-Gasket Joints for Ductile-Iron and Gray-Iron Pressure Pipe and Fittings.
ANSI/AWWA C115/A21.15	Flanged Ductile-Iron and Gray-Iron Pipe with Threaded Flanges.
ANSI/AWWA C150/A21.50	Thickness Design of Ductile-Iron Pipe.
ANSI/AWWA C151/A21.51	Ductile-Iron Pipe, Centrifugally Cast in Metal Molds or Sand-Lined Molds, for Water or Other Liquids.
ANSI/AWWA C153/A21.53	Ductile-Iron Compact Fittings, 3 in. Through 12 in. for Water and Other Liquids.
AWWA C200	Steel Water Pipe 6-inch and Larger.
AWWA C205	Standard for Cement-Mortar Protective Lining and Coating for Steel Water Pipe - 4 inch and Larger - Shop Applied.
AWWA C206	Standard for Field Welding of Steel Water Pipe.
AWWA C207	Standard for Steel Pipe Flanges for Waterworks Service - Sizes 4 inch through 144 inches.
AWWA C208	Dimensions for Fabricated Steel Water Pipe Fittings.
AWWA C209	Cold-Applied Tape Coatings for the Exterior of Special Sections, Connections, and Fittings for Steel Water Pipelines.
AWWA C210	Standard for Liquid Epoxy Coating for the Interior and Exterior of Steel Water Pipelines.
AWWA C213	Standard for Fusion-Bonded Epoxy Coating for the Interior and Exterior of Steel Water Pipelines.

AWWA C214	Tape Coating Systems for the Exterior of Steel Water Pipelines.
AWWA C600	Installation of Ductile Iron Water Mains and Their Appurtenances.
AWWA M-11	Steel Water Pipe - A Guide for Design and Installation.
ASTM C150	Specification for Portland Cement.
ASTM A53	Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
ASTM A139	Specification for Electric-Fusion (ARC) welded steel pipe (NPS 4 and over).
ASTM A312	Specification for seamless and welded Austenitic stainless steel pipes.
ASTM A234	Specifications for pipe fittings of wrought carbon steel and alloy steel for moderate and elevated temperatures.
ASTM A774	Specification for as-welded wrought Austenitic stainless steel fittings for general service at low and moderate temperatures.
ASTM D1785	Specification for Polyvinyl Chloride Plastic Pipe, Schedules 40, 80 and 120.
ASTM D2241	Specification for Polyvinyl Chloride Pressure-Rated Pipe (SDR Series).

1.4 CONTRACTOR SUBMITTALS

A. The CONTRACTOR shall submit complete shop drawings and certificates, test reports, affidavits of compliance, of all piping systems, in accordance with the requirements in Section 01300, "Submittals". The submittals shall include detailed layout, spool, or fabrication drawings which show all pipe spools, spacers, adapters, connectors, fittings, and pipe supports necessary to accommodate the equipment and valves provided in a complete and functional system.

PART 2 -- PRODUCTS

2.1 PIPES AND FITTINGS

A. Ductile Iron Pipe and Fittings

1. Ductile iron pipe shall conform to the requirements of ANSI A221.51 (AWWA C151) standard specification for centrifugally cast ductile iron pipe for water or other liquids.

2. Ductile iron pipe in exterior locations shall be provided with either mechanical joint type or push-on type ends, and shall be of ANSI/AWWA thickness class as follows:

Pipe Diameter	ANSI Thickness Class
4"	Class 52
6" or larger	Class 52

3. Ductile iron pipe in interior locations shall be provided with flanged, or mechanical joint type ends as shown on the plans and all interior ductile iron piping shall be ANSI/AWWA thickness Class 53 (minimum). Grooved and shouldered type joints conforming to AWWA C606 will be permitted, and at some locations are designated for use for special applications or for clearance.

4. Ductile iron flanges shall conform to ANSI/AWWA C115 standard 125# template and shall be rated for 250 psi. Mechanical joints and push-on joints shall conform to ANSI/AWWA C111 standard for rubber gasket joints for ductile iron and gray iron pressure pipe and fittings.

5. Unless otherwise shown on the plans, ANSI/AWWA short-body ductile iron fittings shall be furnished. Short body fittings shall conform to ANSI/AWWA C110. Flanged long radius elbows, reducing on-the-run tees, side outlet fittings, eccentric reducers and laterals shall conform to ANSI

B16.1 standard specification for flanged fittings and flanges. Compact fittings conforming to ANSI/AWWA C153/A21.53 may be supplied for mechanical and push-on joints.

6. The interior coating for the ductile iron pipe and fittings shall be cement mortar lined with asphalt seal coating. Pipe used for buried locations shall be furnished with standard bituminous exterior coating. Pipe used for interior and exposed location shall not have a bituminous exterior coating but shall be furnished with a shop primed coating of Tnemec Primer, or equal.

B. Welded Steel Pipe (Water Service)

1. **Pipe:** Pipe shall be furnished in accordance with AWWA C-200, manufactured to meet the requirements of ASTM A139 Grade B or ASTM A53 Grade B - Type E or S; or may be fabricated to meet the requirements of AWWA C200 from steel sheet conforming to ASTM A570 Grade 36 (or higher) or steel plate conforming to ASTM A36 or ASTM A572 Grade 42. All outlets, 4-inch in diameter and larger, shall be provided with reinforcing designed for 150 lbs. water working pressure. For pipes 14-inches in diameter and larger, the inside diameter after lining shall not be less than the nominal diameter. Pipes smaller than 14-inches in diameter may be furnished in standard outside diameters. Pipe and fittings shall have minimum wall thickness as follows unless shown otherwise on drawings:

Nominal Pipe Diameter (in.)	Minimum Thickness (in.)
6" through 24"	3/16" (0.187)
26" through 48"	1/4" (0.250)

2. **Fittings:** Fittings shall be wrought carbon steel fitting conforming to ASTM A234 Grade B or fabricated from previously hydrostatically tested straight pipe specified above by certified welders in accordance with AWWA C200 Section 3.3.3.1. Fabricated fittings shall be of mitered construction conforming to AWWA C208 Tables 1 and 2.

3. **Flanges:** Flanges shall conform to AWWA C207 Class D or E or ANSI B 16.5 150-lb. class. Attachment of the flanges to the pipe shall conform to the requirements of AWWA C207.

4. **Pipe Connections:** Pipes inside buildings and pipes 24-inches in diameter and smaller shall be connected using butt weld, flanges or mechanical couplings. Pipes over 24-inches in diameter within buildings may have joints field welded in accordance with AWWA C206 using butt weld or butt strap joints.

5. **Welding:** All field welding shall be done by certified welder in accordance with AWWA C206.

6. **Shop Testing:** Upon completion of the welding, but before lining, each steel fabricated special fitting shall be bulkheaded and tested under a hydrostatic pressure not less than 1-1/2 times the pressure for which the pipe has been designed. The circumferential welds in the special fittings may be tested with dye penetration process without any further hydrostatic test if straight pipe used in fabricating the specials have been previously subjected to hydrostatic test. Any pinholes or porous welds which may be revealed by the test shall be chipped out and re-welded and the pipe or fitting retested.

7. **Lining:** All welded steel pipe and fitting shall be lined with cement mortar in accordance with AWWA C205 or epoxy coated with Tnemec Pota-Pox Plus Series N140 or equal on the interior surfaces in accordance with AWWA C210 or AWWA C213. All damages to the coating system due to field welding or otherwise shall be repaired.

8. **Coating:** The exterior surfaces of welded steel pipe and fittings which are not encased in concrete shall be cleaned, primed with one shop coat of Tnemec Series 66-1255 Hi-Build Epoxoline or equal. After field welding, joints shall be cleaned and primed.

9. **Connection to Other Pipe Material:** An electrically insulating joint shall be used when connecting steel pipe to either ductile iron, galvanized pipe or to copper pipe. The insulating joint on the flanged connection shall have insulating gaskets with sleeves and washers.

2.2 RUBBER EXPANSION JOINTS (FLEXIBLE CONNECTORS)

A. Flexible Connectors

1. Flexible connectors shall be Metra-Flex Style 711 or Mercer Rubber Style 450, filled single arched style with control rods to prevent over extension. The connectors shall be able to withstand pressure from 150 psig to 10 in Hq vacuum and temperature from 20°F to 240°F. The ends shall be able to mate to 125 lbs. ANSI flanges. The connectors shall be of molded construction made of Buna-N.

2.3 COUPLINGS

A. Flanged Coupling Adapters (FCA)

1. Flanged coupling adapters shall be provided where indicated. CONTRACTOR may install additional FCA at no additional cost as he desires for ease of piping installation. FCA and piping shall be secured against movement with fixed supports or tie rods. FCA shall be Dresser Style 127, Rockwell/Smith-Blair Type 912 with anchor studs for 12 inches and under; Type 913 for 14 inches and over. Coupling adapters shall be of cast iron construction with shop coating.

B. Sleeve-Type Couplings

1. Flexible sleeve-type pipe couplings shall be installed where shown on the plans or for transition between pipe materials. Couplings shall be provided as recommended by the pipe manufacturer to accommodate pipe movement due to temperature changes, and shall be constructed of materials compatible with the contained fluid. Couplings and piping on pressure lines shall be secured against movement with tie rods. Couplings shall be suitable for the type and dimension of pipes to be connected. Interior of steel middle rings shall be epoxy-coated. Couplings shall be as manufactured by Dresser, Smith-Blair/Rockwell or equal.

2. Mechanical Couplings

C. Couplings: Dresser Style 38, Rockwell/Smith-Blair 411 or 441 or equal without pipe stop.

D. Gaskets: Oil resistant synthetic rubber meeting the requirements of ASTM D2000.

E. Grooved End Couplings

1. Ductile Iron Pipe Couplings

F. Coupling: Victaulic Style 31 or equivalent Grinnell Gruvlok.

G. Gasket: Grade M flush seal gasket.

1. Steel Pipe Couplings

H. Coupling: Victaulic Style 77 or Style 07 or equivalent Grinnell Gruvlok.

I. Gasket: Grade E rubber gaskets.

1. PVC Pipe Couplings

J. Coupling: Victaulic Style 775 or equivalent Grinnell Gruvlok.

K. Gasket: Grade E rubber gasket

2.4 PIPE HANGERS AND SUPPORTS

A. Pipe hangers or supports shall be furnished and installed for all interior or exposed process piping as shown on the plans or at intervals not to exceed 8'-0". Hangers shall be Grinnell Figure 260, Michigan Hanger No. 400 or equal. Hangers shall be supported by solid rods and nuts to brackets, concrete

inserts or as shown on the plans. Brackets shall be Grinnell Figure 195, Michigan Hanger No. 352 or equal. All supports shall be hot-dip galvanized.

B. Unless shown otherwise on the plans, pedestal supports shall be used when piping is installed at or near floor level, and shall consist of galvanized floor flange, pipe and saddle. Anchor bolts shall be provided where necessary. All supports shall be adjustable except when specifically shown otherwise on the Plans.

PART 3 -- EXECUTION

3.1 HANDLING

A. Pipe, fittings, and accessories shall be handled in a manner that will insure installation in sound, undamaged condition. Equipment, tools, and methods used in handling and installing pipe and fittings shall not damage the pipe and fittings.

B. Hooks inserted in ends of pipe shall have broad, well padded contract surfaces.

C. Pipe and fittings in which the cement lining has been damaged shall be replaced. Small and readily accessible damaged areas may be repaired.

D. All pipe coating which has been damaged shall be repaired by the CONTRACTOR before installing the pipe.

3.2 CUTTING PIPE

A. Cutting shall be done in a neat manner, without damage to the pipe or to the cement lining.

B. Cuts shall be smooth, straight, and at right angles to the pipe axis. After cutting, the end of the pipe shall be dressed with a file to remove all roughness and sharp corners.

C. Ends of ductile iron pipe shall be cut with a saw, abrasive wheel, or oxyacetylene torch. Field cut holes for saddles shall be cut with mechanical cutters; oxyacetylene cutting will not be permitted.

3.3 CLEANING

A. The interior of all pipe and fittings shall be thoroughly cleaned of foreign matter before being installed and shall be kept clean until the work has been accepted.

B. Before jointing, all joint contact surfaces shall be wire brushed, if necessary, wiped clean, and kept clean until jointing is completed.

C. Precautions shall be taken to prevent foreign material from entering the pipe during installation. Debris, tools, clothing, or other materials shall not be placed in or allowed to enter the pipe.

D. Whenever pipe laying is stopped, the open end of the pipe shall be sealed with a watertight plug which will prevent trench water from entering the pipe.

3.4 INSPECTION

A. Pipe and fittings shall be carefully examined for cracks and other defects immediately before installation; spigot ends shall be examined with particular care.

B. All defective pipe and fittings shall be removed from site of the work.

3.5 ALIGNMENT

A. Pipelines or runs intended to be straight shall be laid straight.

B. Deflection from a straight line or grade shall not exceed the values stipulated in Table 1 or Table 2 of AWWA C600, unless specially designed bells and spigots are provided.

C. Either shorter pipe sections or fittings shall be installed where the alignment or grade requires them.

3.6 PIPE LAYING

A. The type of pipe to be used shall be as shown on the plans. All pipe shall be laid and maintained to the required line and grade.

B. Proper implements, tools and facilities satisfactory to the ENGINEER shall be provided and used by the CONTRACTOR for the safe and convenient prosecution of the work.

C. Cutting of pipe shall be done in a neat and workmanlike manner without damage to pipe or lining. Pipe shall be handled properly. Materials must at all times be handled with care to prevent damage. Under no circumstances will pipe be dropped or damaged. Hook ends shall not be used for installing or removing pipe.

D. The pipe and fittings shall be inspected for defects and, while suspended above grade, be rung with a light hammer to detect cracks.

E. Every precaution shall be taken to prevent foreign material from entering the pipe while it is being placed in the line. During laying operations, no debris, tools, clothing or other materials shall be placed in the pipe.

F. After placing a length of pipe in the trench, the spigot end shall be centered in the bell and the pipe forced home and brought to correct line and grade. The pipe shall be secured in place with approved backfill material tamped under it except at the bells. Pipe joint deflection shall not exceed manufacturer's recommendations.

G. At times when pipe laying is not in progress, the open ends of pipe shall be closed by a watertight plug or other means approved by the ENGINEER.

H. Pipe shall be laid with bell ends facing in the direction of laying unless directed otherwise by the ENGINEER.

I. No pipe shall be laid in water or when, in the opinion of the ENGINEER, trench conditions are unsuitable.

3.7 FIELD JOINTS

A. Joints in buried locations shall be mechanical joint or push-on type unless otherwise indicated on the drawings.

B. Bells on wall castings and wall sleeves shall be mechanical joint with tapped holes for tie rods or stud bolts.

C. All other joints shall be flanged unless otherwise indicated on the drawings.

3.8 MECHANICAL JOINTS

A. Mechanical joints shall be carefully assembled in accordance with the manufacturer's recommendations. If effective sealing is not obtained, the joint shall be disassembled, thoroughly cleaned, and reassembled.

B. Over-tightening bolts to compensate for poor installation practice will not be permitted. Anchored mechanical joints, A.M.J., with retainer glands or other suitable means of joint restraint shall be used where indicated on the drawings.

C. The holes in mechanical joints with tie rods shall be carefully aligned to permit installation of the tie rods.

D. In flange and mechanical joint pieces, holes in the mechanical joint bells and the flanges shall straddle the top (or side for vertical piping) centerline. The top (or side) centerline shall be marked on each flange and mechanical joint piece at the foundry.

3.9 PUSH-ON JOINTS

A. The pipe manufacturer's instruction and recommendations for proper jointing operations shall be followed.

B. All joint surfaces shall be lubricated with heavy vegetable soap solution immediately before the joint is completed. Lubricant shall be suitable for use in potable water, shall be stored in closed containers, and shall be kept clean.

C. Each spigot end shall be suitably beveled to facilitate assembly.

D. Pipe ends for restrained joint pipe shall be prepared in accordance with the pipe manufacturer's recommendations.

3.10 FLANGED JOINTS

A. Pipe shall extend completely through screwed-on flanges.

B. The pipe end and flange face shall be finish machined in a single operation.

C. Flange faces shall be flat and perpendicular to the pipe centerline.

D. When bolting flanged joints, care shall be taken to avoid restraint on the opposite end of the pipe or fitting which would prevent uniform gasket compression or which would cause unnecessary stress in the flanges.

E. One flange shall be free to move in any direction while the flange bolts are being tightened.

F. Bolts shall be tightened gradually and at a uniform rate, so that gasket compression is uniform.

G. Special care shall be taken when connecting to pumping equipment to insure that no stresses are transmitted to the pump flanges by the connected piping. All such piping shall be permanently supported so that accurate matching of bolt holes and uniform contact over the entire surface of abutting pump and piping flanges are obtained before installation of any bolts in those flanges.

H. Pump connection piping shall be free to move parallel to its longitudinal centerline while the bolts are tightened.

I. Each pump shall be leveled, aligned, and wedged in a position which will fit the connecting piping, but shall not be grouted until the initial fittings and alignment of the connecting pipe so that the pump may be shifted on its foundation as necessary.

J. Each pump shall be grouted before final bolting of the connecting piping as specified in SECTION 11000, Paragraph 2.3 "Equipment Installation."

3.11 MECHANICAL COUPLINGS

A. Mechanical couplings shall be carefully installed in accordance with the manufacturer's recommendations. Pipe ends shall be clean and smooth.

B. A space of at least 1/4 inch and not more than one inch shall be left between the pipe ends.

3.12 GROOVED JOINTS

A. Piped systems with grooved joints may be provided in lieu of screwed, flanged, welded or mechanical joint system for above grade steel and ductile iron process piping. Grooved end couplings will not be permitted in buried piping. The CONTRACTOR shall make the coupling manufacturer responsible for selection of correct style of coupling and gasket for each individual location.

B. Completed joints shall be rigid and shall not allow angular deflection or longitudinal movement.

C. Special care shall be taken when connecting to pumping equipment to avoid transmitting stresses to the pump flanges by the connected piping. Piping shall be permanently supported so that accurate matching of piping and abutting pump flanges is obtained before installation of any bolts in those flanges.

3.13 ANCHORAGE OF PROCESS PIPING AND WATER SERVICES

A. For all piping with mechanical or push-on joints, at all tees and at bends deflecting 22-1/2° or more, movement shall be prevented by connecting sufficient joints together with threaded rod to withstand the test pressure specified in Paragraph 3.14 or 1.5 times the working pressure whichever is higher. The restraining length shall be calculated according to Ductile Iron Pipe Research Association (DIPRA) "Thrust Restraint Design for Ductile Iron Pipe" manual. A safety factor of 1.5 shall be used to calculate the restrained length. Concrete thrust blocks shall not be used alone to anchor pressure piping.

3.14 HYDROSTATIC TESTING

A. Process piping may be field tested for leakage at 100 psi in accordance with the appropriate section (hydrostatic tests) of AWWA C600-87. Test pressure and duration shall be per AWWA C600-87, and allowable leakage shall be determined in accordance with the formula $L = \frac{SD\sqrt{P}}{133{,}200}$ where factors and units are defined as follows: L = Leakage, S = Length, in feet,

D = Nominal Diameter (inches), and P = Average Test Pressure (Gauge Pressure PSI).

CONTRACTOR shall conduct tests under supervision of the ENGINEER.

Line	Test Pressure*
High Service Pump Discharge Piping	150 psi
Pressure Process Piping (Gravity)	50 psi
Two-Inch Water Service	150 psi

* Test pressure based on the elevation of the lowest point in the line under test and corrected to the elevation of the test gauge.

3.15 DISINFECTION OF WATER SERVICE

A. After hydrostatic testing, watermains shall be disinfected according to the requirements of the latest version of AWWA specification C651. An initial chlorine concentration of 50 mg/l shall be obtained in the watermain being tested. The chlorinated water must contain no less than 10 mg/l chlorine after the 24-hour retention period. Bacteriological samples must be determined "safe" by an approved laboratory prior to placing the line into service.

**** END OF SECTION ****

SECTION 15100 - VALVES

PART 1 -- GENERAL

1.1 THE REQUIREMENTS

A. The CONTRACTOR shall provide all tools, supplies, materials, equipment, and labor necessary for furnishing, epoxy coating, installing, adjusting, and testing of all valves and appurtenant work, complete and operable, in accordance with the requirements of the Contract Documents. Where buried valves are shown, the CONTRACTOR shall furnish and install valve boxes to grade, with covers, extensions, and position indicators. Valves located six feet or higher above operating floors shall be provided with enclosed chain wheel gear type actuators and chain. Chain shall extend to a point four feet above the operating floor.

B. All submerged valves in treatment process units shall be supplied with 304 stainless steel bolts and washers.

C. The work in this section includes:

1. Butterfly valves
2. Check valves
3. Miscellaneous Valves

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 11000 - Equipment, General Provisions

B. Section 15060 - Process Piping and Pipe Fittings

C. Section 15410- Plumbing Piping

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Commercial Standards

1.	ANSI B16.1	Cast Iron Pipe Flanges and Flanged Fittings, Class 25, 125, 250 and 800.
2.	ANSI B16.5	Pipe Flanges and Flanged Fittings, Steel Nickel Alloy and Other Special Alloys.
3.	ANSI/ASME B1.20.1	General Purpose Pipe Threads (Inch).
4.	ANSI/ASME B31.1	Power Piping.
5.	ASTM A 36	Specification for Structural Steel.
6.	ASTM A 48	Specification for Gray Iron Castings.
7.	ASTM A 126	Specification for Gray Iron Castings for Valves, Flanges, and Pipe Fittings.
8.	ASTM A 536	Specification for Ductile Iron Castings.
9.	ASTM B 61	Specification for Steam or Valve Bronze Castings.
10.	ASTM B 62	Specification for Composition Bronze or Ounce Metal Castings.

11.	ASTM B 148	Specification for Aluminum-Bronze Castings.
12.	ASTM B 584	Specification for Copper Alloy Sand Castings for General Applications.
13.	ANSI/AWWA C500	Gate Valves for Water and Sewerage Systems.
14.	ANSI/AWWA C504	Rubber-Seated Butterfly Valves.
15.	ANSI/AWWA C507	Ball Valves 6 Inches Through 48 Inches.
16.	AWWA C508	Swing-Check Valves for Waterworks Service, 2 Inches Through 24 Inches NPS.
17.	ANSI/AWWA C509	Resilient-Seated Gate Valves for Water and Sewage Systems.
18.	AWWA C517	Resilient-Seated Cast-Iron Eccentric Plug Valves
19.	AWWA C550	Protective Interior Coatings for Valves and Hydrants.
20.	SSPC-SP-2	Hand Tool Cleaning.
21.	SSPC-SP-5	White Metal Blast Cleaning.

1.4 CONTRACTOR SUBMITTALS

A. **Shop Drawings:** Shop drawings of all valves and operators including associated wiring diagrams and electrical data, shall be furnished as specified in Section 01300, “Submittals”.

B. **Valve Labeling:** The CONTRACTOR shall submit a schedule of valves to be labeled indicating in each case the valve location and the proposed wording for the label.

1.5 QUALITY ASSURANCE

A. **Valve Testing:** Unless otherwise specified, each valve body shall be tested under a test pressure equal to twice its design water-working pressure.

B. **Bronze Parts:** Unless otherwise specified, all interior bronze parts of valves shall conform to the requirements of ASTM B 62, or, where not subject to dezincification, to ASTM B 584.

PART 2 -- PRODUCTS

2.1 AWWA BUTTERFLY VALVES

A. **General:** Butterfly valves shall meet or exceed ANSI/AWWA C 504 Class 150 B specifications for rubber seated butterfly valves except as modified or supplemented herein. The interior passage of butterfly valves shall not have any obstructions or stops.

B. **Body:** The valve shall be flanged design unless noted otherwise in the plans and shall be Class 150 B. Flanged valves shall be suitable for use between ANSI B16.1 Class 125 cast iron flanges. The valve body shall be of cast iron conforming to ASTM A 126 Class B.

C. **Disc:** The valve disc shall be of cast iron conforming to ASTM A48 Class 40C with an edge of nickel or 316 stainless steel. Non-metallic discs and sprayed or plated edges are not acceptable.

D. **Seat:** The resilient seat shall be Buna “N” or synthetic rubber compound with a durometer of 50. The rubber seat shall be bonded into the disc or body of the valve, but cartridge-type seats shall not be acceptable.

E. **Shaft:** Shafts shall be designed to meet the shaft torque requirements for AWWA class 150B. Shafts shall be type 304 stainless steel. Shaft seals may be accomplished by quad rings.

F. **Bearings:** Each valve assembly shall be fitted with sleeve type, or a single two-way thrust bearing designed to hold the disc in the body at all times and with self-lubricated shaft bearings.

G. **Painting:** The valve surfaces except for disc, seating and finished portions shall be evenly coated with two coats of suitable primer for contact with drinking water or the valve shall be certified as suitable for contact with drinking water by an accredited certification organization in accordance with ANSI/NSF 61, Drinking Water System Components- Health Effects.

H. **Manual Operators:** Hand wheel operations for butterfly valves shall be provided with an enclosed worm and gear operator or traveling nut type operator limiting required operator pull to not more than 40 pounds on hand wheels. All gearing shall be enclosed suitable for running in oil with seals provided on all shafts to prevent entry of dirt and water into the actuator. All shaft bearings shall be furnished with permanently lubricated bronze bearing bushings. Actuators shall clearly indicate valve position and an adjustable stop shall be provided to set closing torque. Valve packing adjustment on non-submerged valves shall be accessible without removing the actuator from the valve. Construction of actuator housing shall be semi-steel. All exposed nuts, bolts and washers on actuators shall be zinc plated. Torque computations for valve operator and hand wheel sizing shall be based on maximum non-shock shut-off pressure of 150 psi, normal flow conditions of 5 feet per second, and extreme maximum flow conditions of 10 feet per second.

I. Manufacturers or Equal:

1. De Zurik Corporation,
2. Henry Pratt Company
3. Milliken
4. Valmatic

2.2 CHECK VALVES

A. Swing Check Type

1. Check valves shall be of either the standard or increasing swing check type as noted on the plans. Check valves shall be provided with an extended hinge pin and outside weight and lever allowing field adjustment.
2. Valve bodies shall be cast iron of minimum 175 psi pressure rating and shall be provided with ANSI standard 125# flanges. Valve gates shall be ductile or cast iron. Renewable gate ring shall be Buna-N Rubber. Body seat shall be 304 stainless steel.
3. Each check valve shall be provided with a stainless steel hinge pin extending through bronze bushings. Valves shall have outside packed glands made of carbon steel, bronze, or graphite and Kevlar.
4. Each check valve shall be provided with a proximity switch to indicate whether the valve is closed or open.
5. Manufacturers or Equal:
   (a) Golden Anderson Fig. No. 250-D
   (b) APCO (Valve and Primer Corp.)
   (c) Milliken CCNE
   (d) Crispin

2.3 MISCELLANEOUS VALVES

A. PVC Ball Valves

1. Ball valves shall be designed for a water-working pressure of not less than 150 psi, shall be constructed of PVC and, when in the fully open position, shall have a port diameter not less than Schedule 80 PVC pipe of the same nominal diameter. Valves shall be designed with union ends or top entry to permit removal of the valve or the internals from the line, and with end connectors designed for solvent welding to the pipe.

2. Ball valves shall be Chemtrol (a Division of NIBCO, Inc.), Certain-Teed Products Corp., ITT Grinnell, or equal.

PART 3 -- EXECUTION

3.1 VALVE INSTALLATION

A. **General:** All valves, gates, operating units, stem extensions, valve boxes, and accessories shall be installed in accordance with the manufacturer's written instructions and as shown and specified. All gates shall be adequately braced to prevent warping and bending under the intended use. Valves shall be firmly supported to avoid undue stresses on the pipe.

B. **Access:** All valves shall be installed to provide easy access for operation, removal, and maintenance and to avoid conflicts between valve operators and structural members or handrails.

C. **Valve Accessories:** Where combinations of valves, sensors, switches, and controls are specified, it shall be the responsibility of the CONTRACTOR to properly assemble and install these various items so that all systems are compatible and operating properly. The relationship between interrelated items shall be clearly noted on shop drawing submittals.

**** END OF SECTION ****

SECTION 15140 - SUPPORTS AND ANCHORS

PART 1 -- GENERAL

1.1 WORK INCLUDED

A. Pipe, duct and equipment hangers, supports and associated anchors.

B. Sleeves and seals.

C. Flashing and sealing equipment and pipe stacks.

1.2 WORK FURNISHED BUT INSTALLED UNDER OTHER SECTIONS

A. Furnish hanger and support inserts and sleeves for placement into formwork.

PART 2 -- PRODUCTS

2.1 PIPE HANGERS AND SUPPORTS

A. Hangers for Pipe Sizes 1/2 to 1-1/2 Inch Malleable iron, adjustable swivel, split ring.

B. Multiple or Trapeze Hangers: Steel channels with welded spacers and hanger rods; cast iron roll and stand for hot pipe sizes 6 inches and over.

C. Vertical Support: Steel riser clamp.

D. Copper Pipe Support: Carbon steel ring, adjustable, copper plated.

E. Shield for Insulated Piping 2 Inches and Smaller: 18 gauge galvanized steel shield over insulation in 180 degree segments, minimum 12 inches long at pipe support.

2.2 HANGER RODS

A. Steel Hanger Rods: Threaded both ends, threaded one end, or continuous threaded.

2.3 FLASHING

A. Metal Flashing: 26 gauge thick galvanized steel.

B. Lead Flashing: 5 lb/sq ft sheet lead for waterproofing; one lb/sq ft sheet lead for soundproofing.

C. Flexible Flashing: 47 mil thick sheet; compatible with roofing.

D. Caps: Steel, 22 gauge minimum; 16 gauge at fire resistant elements.

2.4 FABRICATION

A. Size sleeves large enough to allow for movement due to expansion and contraction. Provide for continuous insulation wrapping.

B. Design hangers without disengagement of supported pipe.

C. Provide copper plated hangers and supports for copper piping or sheet lead packing between hanger or support and piping.

PART 3 -- EXECUTION

3.1 PIPE HANGERS AND SUPPORTS

A. Support horizontal piping as follows:

PIPE SIZE	MAX. HANGER SPACING	HANGER DIAMETER
½" to 1-1/4 in.	5'-0"	3/8"
1-1/2" to 2 in.	8'-0"	3/8"
2-1/2" to 4 in.	10'-0"	½"

B. Install hangers to provide minimum 1/2 inch space between finished covering and adjacent work.

C. Place a hanger within 12 inches of each horizontal elbow.

D. Use hangers with 1-1/2 inch minimum vertical adjustment.

E. Where several pipes can be installed in parallel and at same elevation, provide multiple or trapeze hangers.

3.2 EQUIPMENT BASES AND SUPPORTS

A. Provide templates, anchor bolts, and accessories for mounting and anchoring equipment.

B. Construct support of steel members. Brace and fasten with flanges bolted to structure.

3.3 FLASHING

A. Provide flexible flashing and metal counter flashing where piping and ductwork penetrate weather or waterproofed walls and roofs.

B. Flash vent and soil pipes projecting 8 inches minimum above finished roof surface with roofing material worked one-inch minimum onto hub, 8 inches minimum clear on sides with 24 x 24 inches sheet size. For pipes through outside walls, turn flanges back into wall and caulk, metal counter flash and seal.

3.4 SLEEVES

A. Set sleeves in position in formwork. Provide re-enforcing around sleeves.

B. Extend sleeves through floors one-half (1/2) inch above finished floor level. Caulk sleeves full depth and provide floor plate.

C. Install chrome plated steel escutcheons at finished surfaces. Use plastic escutcheons in damp areas of toilet/showers.

3.5 HANGER AND SUPPORT PAINTING

A. None.

**** END OF SECTION ****

SECTION 15410 - PLUMBING PIPING

PART 1 -- GENERAL

1.1 THE REQUIREMENTS

A. Provide plumbing where shown on the drawings as specified herein, and as needed for a complete and proper installation including, but not necessarily limited to:

1. Cold water piping system;
2. Drain, waste and vent systems;
3. Chemical feed and flush systems;
4. Carbon dioxide gas piping system;
5. Plumbing fixtures and trim as shown on the drawings;

B. Connections and Layout:

1. It shall be the responsibility of the CONTRACTOR to make connections at terminal points of contact. The piping, ducting and equipment, etc., may be shown with excess clearances for clarity. However, the CONTRACTOR shall group pipe and arrange all ducts and equipment to present a neat and workmanlike appearance and to avoid blocking passageways.
2. The plumbing drawings shall not be scaled to obtain exact dimensions. Reference shall be made to detailed drawings where dimensions are noted.

C. Cutting and Patching:

1. The CONTRACTOR shall perform all cutting and patching necessary in order to perform his work. However, special permission shall be obtained from the ENGINEER before cutting structural members or finished material. All patching shall be performed in such a manner as to leave no visible trace and to return the part affected to the condition of undisturbed work. Patching work shall be performed by men experienced, skilled and licensed for the particular type of work involved. Inferior work will not be accepted.

D. Piping in General:

1. All piping shall be installed in a neat and workmanlike manner and shall be run plumb and straight and as close as possible to ceilings and beams to insure the highest possible head room. All piping shall be run concealed where possible. Piping shall be coordinated with the ventilation and electrical work so all may be properly installed.
2. All water branches shall be provided with isolating valves.
3. It is deemed that the CONTRACTOR shall be responsible for the miscellaneous small piping not specifically called for in these specifications, but essential to the complete and satisfactory installation and operation of this contract.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 09900 – Painting

B. Section 11000 – Equipment General Provisions

C. Section 15000 – Mechanical General Provisions

D. Section 15100 – Valves

E. Section 15250 – Mechanical Insulation

F. Section 15430 – Plumbing Specialties

G. Section 15440 – Plumbing Fixtures

H. Section 15450 – Plumbing Equipment

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. **General:** The work, materials and equipment covered by these specifications shall comply in all respects with the requirements of state, county and city ordinances, regulations and codes. In addition, the following published standards shall be adhered to where applicable:

American Concrete Institute
American Society of Mechanical Engineers
American Society of Testing Materials
American Institute of Electrical Engineers
American Institute of Steel Construction
American Standards Association
American Welding Society
State Plumbing Code
National Board of Fire Underwriters
National Bureau of Standards
National Electrical Code
Factory Insurance Association

1.4 PERMITS, LICENSES, FEES AND SERVICE CHARGES

A. All permits, licenses, fees and service charges required in connection with this work shall be secured and paid for by the installing CONTRACTOR; and upon completion of the work, he shall furnish the OWNER with proof of approval from the proper local or State Department having jurisdiction.

1.5 CONTRACTOR SUBMITTALS

A. Submit product data as specified in Section 01300 “Submittals”.

B. Manufacturer’s specifications, catalog cuts, and other data to prove compliance with the specified requirements.

C. Shop drawings and other data as required to indicate method of installation and attaching equipment, except where such details are provided on the drawings.

PART 2 -- PRODUCTS

2.1 PLUMBING PIPING AND FITTINGS

A. Cold Water and Hot Water (Unless shown differently in the plans)

1. Below Grade:

(a) Type “K” soft annealed copper tubing (ASTM B-88) with wrought copper solder fittings (ASTM B-75, ANSI B16-22). 95-5 Solder.

2. Above Grade:

(a) Type “L” hard drawn copper tubing with wrought copper solder fittings. 95-5 solder.

(b) Schedule 40 (ASTM A-53, ANSI B36-20) galvanized piping may be used for piping 2 1/2" and larger.

(c) Verify compatibility of materials with local water conditions.

B. Utility Water System

1. Provide the necessary pipe and accessories of the type and material listed below and/or called for in these specifications. All pipe shall be new, and free from defects.

2. The pipe shall be Schedule 80 PVC or standard weight galvanized steel as indicated on the drawings.

3. The Dielectric Unions shall be EPCO, or approved equal, dielectrical pipe unions shall be provided between all galvanized iron piping, ferrous materials, and all copper piping or attenuation to installing these and not that this includes one such union wherever pipe materials is changed from copper to galvanized iron.

4. The pipe for below grade cold water piping shall be Seamless Copper Water Tube, Type K, Soft annealed temper, conforming to ASTM B88.

C. Soil and Waste Piping

1. All underground, rainwater, sewer, waste, and vent piping, unless specified or noted otherwise, shall be service weight cast iron pipe conforming to ASTM A74, centrifugally cast and fittings as approved by the State Plumbing Code, Type 1B. Cast iron sewer pipe shall be hub and spigot soil type, free from defects and coated inside and outside with tar. Extra heavy cast iron soil pipe may also be used at CONTRACTOR'S option.

2. Joints for cast iron shall be made with Tyler "Ty-Seal" fittings and gaskets or other equal fittings and gaskets approved by the State Department of Health.

3. All drainage piping shall be pitched as shown on the drawings.

4. "No Hub" soil pipe may be used for above and below ground waste and rainwater leaders if approved by the local and state inspectors.

5. The plumbing subcontractor, at his option, may use any of the materials listed below for the "above" grade waste or vent drain piping except where such materials may be contrary to specific requirements of the Health Department.

PIPE	FITTINGS
Galvanized Mild Steel Schedule 40	Cast Iron Threaded Drainage Type (Tar Coated Inside and Out) Use Long Sweep Fittings Where Possible
Copper, Type "M", ASTM B-88-66A	Cast Bronze Solder Type Drainage Fittings
PVC - Drain, Waste, Vent Pipe, Schedule 40, ASTM D-2665, NSF 14-CS-272	ASTM D 2661
ABS Drain Waste, Vent Pipe, Schedule 40, ASTM D-2661, NSF 14-CS-270	ASTM D-2661

D. Vent and Waste Carrying Laboratory Waste:

1. Polyethylene pipe conforming to ASTM F1412 and bearing seal of approval of National Sanitation Foundation. All fittings, traps, etc. shall be of material identical to the pipe.

2. Pipe shall be joined by the thermo-seal fusion process.

E. Carbon Dioxide Gas Piping

1. Carbon dioxide gas piping shall be 304 stainless steel (TP 304) schedule 40 piping and shall be provided with welded connections.

F. Compressed Air and Instrument Air Piping (3/4-Inch and Smaller)

1. Hard drawn copper tubing conforming to ASTM B75. The piping shall be provided with shut-off valve and union at each connection to the valves and other devices.

2.2 UNIONS

A. Provide unions in all piping to facilitate repairs as required by the installation and as shown.

B. Unions shall be galvanized malleable iron for galvanized piping, ground joint on black steel pipe and ground joint solder type on copper tubing and piping.

C. Provide dielectric unions between dissimilar pipe materials. Dielectric union shall be EPCO or equal.

2.3 SLEEVES

A. Around all pipes passing through walls, floors, partitions, etc., there shall be provided standard weight black steel pipe sleeve two sizes larger than the bare pipe or insulated pipe. The pipe shall be centered in this sleeve and move freely through it. There shall be 1/2" space around the pipe or insulation for movement.

B. For piping above 6" diameter, instead of using standard weight pipe sleeves, the sleeves shall be made of galvanized metal not less than #16 gauge, except in bearing walls or through foundation walls where iron pipe must be used.

C. Sleeves shall be set in any new floor when they are constructed. The top of all sleeves shall be 2" above the floor slab.

2.4 HANGERS AND SUPPORTS

A. Pipe Supports:

1. Plastic Pipe: At least every 32 inches
2. Cast Iron: At least every 5 feet; or 10 feet when 10 foot lengths pipe are used
3. Copper Tubing (1-1/4" or Less): At least every six feet
4. Copper Tubing (1-1/2" and Over): At least every 10 feet

B. Piping shall be supported at intervals not to exceed 6' for pipes 1-1/2" and smaller, 8' for pipes 2" and larger. Hangers for steel pipe 3" and smaller shall be similar to Grinnell Fig. 107, as manufactured by Grinnell, Fee and Mason or equal, split ring pipe hanger, sized to fit the pipe. Hanger rods shall be solid steel rods capable of screw adjustment after erection, and shall be the maximum diameter allowed by the hanger. Pipe hangers shall be supported with clamps and concrete inserts wherever possible. Vertical pipes shall be supported at each floor with suitable pipe clamps resulting on the floor sleeve.

C. The above hanger information indicates a general class of pipe supports required. Where situations are encountered that require other types of supports, they shall be provided to complement those specified.

D. All hangers shall be located to properly and adequately support the piping system to eliminate pipe stresses and vibrations and yet allow pipe expansion. Spring supports and vibration dampeners shall be provided as found to be required.

E. Where sufficient structural steel and concrete is not available for supports, auxiliary member shall be provided by the CONTRACTOR.

F. The CONTRACTOR shall check the elevations of the hangers and shall install hangers so ample headroom will result.

2.5 VALVES

A. **General:** The valve fixture numbers listed below are used to indicate general quality of product. Other valves of a quality acceptable to the ENGINEER may be used, after approval. Valves shall be positioned to provide proper shut-off and balance of systems where necessary.

B. Gate Valves:

1. 2" and smaller - screwed bronze, 150#, rising stem Stockham B-100, Kennedy or equal.

2. 2-1/2" and larger - flanged iron, bronze mounted, 125# outside screw, rising stem, Stockham G-623, Kennedy or equal.

C. Globe Valves:

1. 2" and smaller - screwed bronze, 150# rising stem, Stockham B-22, Kennedy or equal.

2. 2-1/2" and larger - iron body, rising stem, bolted bonnets, outside yoke, solid bronze discs and flanged ends, suitable for 125 psi working pressure. Stockham G-512 or equal.

D. Check Valves:

1. 2" and smaller - screwed bronze, 200#, swing check Stockham B-345, Kennedy or equal.

2. 2-1/2" and larger - iron body, bronze-mounted, swing check 125#, flanged ends, Stockham G-931, Kennedy or equal.

3. Plastic check valves - for chemical or corrosive fluids as specified in Section 15100, Paragraphs 2.5 C and D.

E. Square Head Cock:

1. 150#, bronze Lunkenheimer #454, Kennedy or equal.

F. Ball Valves:

1. Two (2) inch and smaller ball valves for air & water service shall be bronze construction with two piece end entry body, bronze or brass ball, Teflon or Viton stem seal, reinforced Teflon seats and thrust washer, a removable operating lever and threaded ends. Blow out proof stem design, 500 psi non-shock cold WOG and shall be drip tight in both directions. Valves shall be Apollo Series 70-100 series, Powell "Fig. 4210T", Stockham S-216, or Milwaukee BA100 Series.

2. Three inch and larger ball valves for air and water service shall be ANSI Class 150 regular port valves with end entry carbon steel body, hard chrome plated carbon steel ball, Teflon seats, Teflon upper and lower stem seal, Teflon body seal, a removable operating lever and flanged ends. Flange diameter and drilling shall conform to ANSI B16.5, Class 150. Valves shall be drip tight in both directions and shall be Apollo 88-100 Series, Powell Fig. 4224T or Milwaukee ball valves.

3. Two inch and smaller ball valves for diesel fuel piping shall be three-piece design with carbon steel body and end caps, stainless steel or hard chrome plated ball and stem, reinforced Teflon seats and seals, socket welding ends. Valves shall be of fire safe design and shall utilize secondary metal seating surfaces to ensure shutoff if the primary seats are destroyed by fire. Fire safe ball valves shall be Contromatics C-1122-BB-FS or Jamesbury 4C2236TT-1.

G. PVC Ball Valves:

1. Ball valves shall be designed for a water-working pressure of not less than 150 psi, shall be constructed of PVC and, when in the fully open position, shall have a port diameter not less than the ID of Schedule 80 PVC pipe of the same nominal diameter. Valves shall be "True Union Ball Valve" with Viton O-rings, Teflon seats and socket or flanged ends.

2. Ball valves shall be Chemtrol (a Division of NIBCO, Inc.) “Tru-Bloc”, Hayward Plastic Products “True Union”, or equal.

H. Stainless Steel Ball Valves

1. The ball valves shall include multiple piece Chevron stem packing, full NPT thread depths and stainless steel body and tail piece materials (ASTM-A351/A744 (CF8M).

2. Each valve shall be tested for zero sect leakage.

3. Manufacturer: Milwaukee 20SSOR series or equal.

I. Air Pressure Reducing Valves:

1. Air pressure reducing valves shall have a pressure rating of 250 psi, shall have bronze body, nickel alloy seat, and threaded union ends.

2. Air pressure reducing valves shall be Fischer Controls, Mueller, or equal.

J. Temperature and Pressure Relief Valves:

1. For cold and hot water systems, temperature and pressure relief valve shall be bronze body and shall be Watts Regulator Co., Crane, Cash Acme, or equal.

K. Solenoid Valves

1. Solenoid valves shall be designed for not less than 150 psi water-working pressure. Valves for water, air, or gas service shall have brass or bronze body with screwed ends, stainless steel trim and spring, Teflon or other resilient seals with material best suited for the temperature and fluid handled. Solenoid valves in corrosive environment shall have stainless steel bodies. For chemicals and all corrosive fluids, solenoid valves with Teflon bodies and springs or other suitable materials shall be used. Unless indicated otherwise on the plans, the enclosure shall be NEMA, Type 1. All coil ratings shall be for continuous duty. For electrical characteristics see electrical drawings. Water hammer free solenoid valves shall be used wherever the pressure differential is more than 30 psi or where the supply pressure exceeds 100 psi.

2. Manufacturers or Equal:

(a) For general duty:

(1) Automatic Switch Co. (ASCO), Model “RED HAT”

(2) Skinner Valve Division of Honeywell, Model “LANCER”

(3) Magnatrol Valve Corporation

3. For corrosive fluids:

(a) Valcor Engineering Corporation

(b) GF Plastic Systems, Inc.

4. Water Hammer Free:

(a) Burkett

L. Gas Cocks

1. All gas cocks over one inch (1”) in size shall be CRANE 930-TF bronze 500 lbs. WOGTORK-SEAL Ball Valve or Equal.

2. All gas cocks one inch (1”) in diameter or less shall be CRANE No. 298 bronze gas service stops or equal.

PART 3 -- EXECUTION

3.1 PIPE JOINTS

A. Pipe joints shall be carefully and neatly made in accordance with the requirements which follow.

B. Threaded joints shall conform to ANSI B2.1, NPT, and shall be full and cleanly cut with sharp dies. Not more than three threads at each pipe connection shall remain exposed after installation. Ends of pipe shall be reamed, after threading and before assembly, to remove all burrs.

C. For Compression Joints: Ends of pipe and tubing shall be cut square and all burrs shall be removed. Joint contact surfaces shall be cleaned with steel wool before assembly.

D. For Flared Joints: Ends of annealed copper tubing shall be cut square and all burrs shall be removed. Flared ends shall be uniform without scratches or grooves.

E. For Solder and Brazed Joints: Joints in 2-inch and larger copper tubing shall be brazed. Where solder fittings are specified for lines smaller than 2-inch, joints may be soldered or brazed at the option of the CONTRACTOR. Surfaces to be joined shall be thoroughly cleaned with flint paper and coated with a thin film of flux. At each joint, tubing shall enter to the full depth of the fitting socket.

3.2 PIPE INSTALLATION

A. Pipe shall be installed as specified, as indicated on the drawings or, in the absence of detail piping arrangement, in a manner acceptable to the ENGINEER.

B. Waste and Vent and Rainwater Leaders - Pitch all rainwater leaders and waste and vent piping 1/4 inch per foot where possible and 1/8 inch per foot minimum to drain to the main stacks. Provide all supports required so piping will form no sags or pockets. Appropriate lubricant shall be applied to single rubber compression gaskets before bell end is inserted. Pipe shall be thoroughly seated in No-Hub couplings and bands thoroughly tightened. Piping shall be properly supported for the type of area of installation and shall be approved by the ENGINEER.

C. Drain Piping Through Disturbed Soil - At points where disturbed earth may be encountered along foundations, basement walls, etc., use ductile or gray cast iron pipe which shall be extended to a point beyond the backfill where undisturbed soil is located to support piping properly. Where backfill is compacted to the satisfaction of the ENGINEER, regular standard grade cast iron soil pipe may be used.

D. Waste and Vent Piping Below Floors, Structures and Footings - All piping under floors, structures and footings shall be encased in concrete with a minimum compressive strength of 3000 psi. The length of encasement shall extend at least 24-inches beyond the floor, structure or footing exterior side.

E. Plant and instrument air supply piping shall be provided with sectionalizing valves and valved air inlet connections as required for isolation of portions of the system for periodic testing.

F. A union shall be provided within 2 feet of each threaded end valve unless there are other connections which will permit easy removal of the valve.

G. Unions shall also be provided in piping at locations adjacent to devices or equipment which may require removal in the future and at locations required by the drawings or specifications.

H. Piping shall not obstruct openings or passageways.

I. Pipe shall be cut from measurements taken at the site and not from the drawings, and all necessary provisions shall be taken in laying out piping to provide throughout for expansion and contraction.

J. All plant and instrument air piping shall be graded to points of drainage collection where drip legs and drain valves shall be provided.

K. In all piping except air and gas piping, insulating fittings shall be provided to prevent contact of dissimilar metals wherever copper tubing or fittings are connected to iron or steel pipe or fittings.

L. Prepare pipe, fittings, supports, and accessories not pre-finished, ready for finish painting, as specified in Section 09910 “Painting”.

M. Excavate and backfill in accordance with Section 02200.

3.3 VALVE INSTALLATION

A. Install valves with stems upright or horizontal, not inverted.

B. Install ball valves for shut-off and to isolate equipment, part of systems, or vertical risers.

3.4 CLEANING

A. The inside of all pipes, valves, and fittings shall be smooth, clean and free from blisters, loose mill scale, sand and dirt when erected. All lines shall be thoroughly blown before placing in service.

3.5 PIPE INSULATION

A. The CONTRACTOR shall insulate the following type systems or special areas of piping:

Hot water system.

Cold and utility water piping.

Rainwater leaders.

Buried water pipes near perimeter walls.

All piping above acoustical tile ceiling including roof drains.

Special area denoted on the Plans and in the Specifications.

B. Flanges and valve bodies shall not be insulated unless otherwise noted. Pipe insulation shall extend through sleeves for a continuing insulated surface. All insulation shall be applied by skilled craftsmen.

C. Insulation shall be fiberglass with PVC jacketing as specified in Section 15250. Insulation shall be applied over clean, dry pipe with all joints butted firmly together. The longitudinal lap of the jacket shall be adhered smoothly over the insulation adhesive specified for such type of jacket.

3.6 TESTS

A. Tests shall be made in the presence of the proper inspectors and the ENGINEER, or their authorized representative. All tests shall be made by the CONTRACTOR at his own expense, and he shall furnish the ENGINEER a certificate that satisfactory tests have been made. Tests to be made are described as follows:

B. When all work including sewer, waste and vent piping has been installed and connected up, it shall be subjected to an air pressure test of five (5) pounds per square inch and this pressure shall remain constant for 15 minutes without the addition of air. If there are any leaks, they shall be properly repaired, and the test shall be repeated.

C. The domestic water system shall be tested by hydrostatic pressure of 150 pounds per square inch for a period of not less than two hours.

D. The results of all tests shall have the approval of the ENGINEER.

3.7 DISINFECTION OF DOMESTIC WATER PIPING SYSTEM

A. The CONTRACTOR shall chlorinate all domestic water systems before using for domestic purposes.

**** END OF SECTION ****

DIVISION 16

ELECTRICAL

SECTION 16010 - ELECTRICAL GENERAL PROVISIONS

PART 1 -- -- GENERAL

1.1 THE REQUIREMENTS

A. Provide all labor, products and services required for the checkout and start-up of all systems shown and specified.

B. Where the work of several crafts is involved, coordinate all related work to provide each system in complete and proper operating order.

C. Cooperate with all others involved in the project, with due regard to their work, to promote rapid completion of the entire project.

D. Local Conditions: The Contractor shall thoroughly familiarize himself with the work as well as the local conditions under which the work is to be performed. Schedule work with regard to seasons, weather, climatic conditions, and all other local conditions which may affect the progress and quality of the work.

E. Utility Coordination: Coordinate all work with the serving utilities (electrical, telephone, etc.) and provide equipment and installation in accordance with the respective utility requirements. Meet with the serving utilities and coordinate the installation and location of the services. Provide a written statement of approval from the serving utility.

1.2 REFERENCE SPECIFICATION, CODES AND STANDARDS

A. **General:** Perform all work in strict accordance with all applicable national, state and local codes; including but not limited to the latest legally enacted editions of the following specifically noted requirements:

B. Codes and Standards.

1. NFPA 70, National Electrical Code - NEC
2. ANSI -C2, National Electrical Safety Code - NESC
3. International Building Code - IBC
4. Uniform Fire Code - UFC
5. American Society of Heating Refrigerating and Air Conditioning Engineers - ASHRAE (Standard 90-75)

C. Commercial Standards

ANSI C80.1	Specification for Zinc Coated Rigid Steel Conduit.
ANSI Z55.1	Gray Finishes for Industrial Apparatus and Equipment.
ANSI/UL 467	Safety Standard for Grounding and Bonding Equipment.
NEMA PB-1	Panelboards.
UL 943	Ground Fault Circuit Interrupts.
IPCEA S-66-524	Latest Issue for Cross-linked Polyethylene.
IPCEA S-61-402	Thermoplastic-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy.
IPCEA S-19	Rubber-Insulated Wire and Cable for the Transmission and Distribution of Electrical Energy

1.3 SPECIFICATION TERMINOLOGY

A. Streamlining - In many instances, the products, reference standards, and other itemized specifications have been listed without verbiage. In these cases, it is implied that the Contractor shall provide the products and perform in accordance with the references listed.

B. "Provide" means furnish all products, labor, sub-contracts, and appurtenances required and install to a complete and properly operating, finished condition.

C. "Furnish" means to purchase material as shown and specified, and cart the material to an approved location at the site or elsewhere as noted or agreed, to be installed by supporting crafts.

D. "Install" means to set in place and connect, ready for use and in complete and properly operating finished condition, material that has been furnished.

E. "Rough-in and connect" means provide an appropriate system connection such as conduit with junction boxes, wiring, switches, disconnects, etc., and all wiring connections. Equipment furnished is received, uncrated, assembled and set in place under the Division in which it is specified.

F. "Accessible" means arranged so that an appropriately dressed man, 6'-2" tall, weighing 250 pounds, may approach the area in question with the tools and products necessary for the work intended, and may then position himself to properly and safely perform the task to be accomplished, without disassembly or damage to the surrounding installation.

G. "Serviceable" means arranged so that the component or product in question may be properly removed, and replaced without disassembly, destruction or damage to the surrounding installation.

H. "Product" is a generic term which includes materials, equipment, fixtures and any physical item used on the project.

I. "Contracting Agency" is the OWNER's Representative, Resident Engineer, Other as defined in the General Conditions of the Contract.

1.4 DRAWINGS, SPECIFICATIONS AND SYMBOLS

A. The drawings and specifications are complementary; what is shown on one is as binding as if called for in both. Do not scale the drawings. Locations of devices, fixtures and equipment are approximate unless dimensioned.

B. The drawings are partly diagrammatic and do not show precise routing of conduits or exact location of all products, and may not show in minute detail all features of the installation; however, provide all systems complete and in proper operating order.

C. Drawing symbols used for basic materials, equipment and methods are commonly used by the industry and should be universally understood. Special items are identified by a supplementary list of graphical illustrations, or called for on the drawings or in the specifications.

1.5 CONTRACTOR SUBMITTALS

A. **General:** Provide submittals for all products and systems described in Division 16 and shown on the drawings to demonstrate compliance with the requirements of the projects. Submit data not later than 60 days after award of contract or, in any case, to allow sufficient time for review without delaying construction. Furnish equipment submittals in the manner described elsewhere in these specifications. In addition, include data for review, and organize data, as noted below:

1. Specification reference and/or drawing reference for which literature is submitted for review with an index, following specification format, and item by item identification.
2. Manufacturer's name and address, and supplier's name, address and phone number.
3. Catalog designation or model number.
4. Rough-in data and dimensions.
5. Operation characteristics.
6. Complete customized listing of characteristics required. Indicate whether item is "As Specified" or "Proposed Substitution." Indicate any deviations on submittal. Mark out all non-applicable items. The terminology "As Specified" used without this customized listing is not acceptable.
7. Wiring diagrams for the specific system.
8. Coordination data to check protective device.
9. Working construction drawings (shop drawings).

B. SUBMITTAL DATA

1. Prior to the submission of the required shop drawings, hold a meeting with all the trades and check the shop drawings for discrepancies, dimensional errors, omissions, contradictions and departures from the contract requirements. The shop drawings shall then be corrected and submitted to the Contracting Agency with appropriate notes.

C. With prior permission from the Contracting Agency, partial submittals will be considered for review provided that they are complete sections, as listed below:

1. Individual Special Systems
2. Motor Controls and Disconnects.
3. Raceways, Fittings, and Supports
4. Switchgear, Panels and Transformers
5. Wire and Cable
6. Wiring Devices

D. Mark submittal literature and shop drawings clearly and bind 8-1/2 x 11 literature in three-hole loose-leaf binders by individual sets.

E. Submittal review is for general design and arrangement only and does not relieve the Contractor from any of the requirements of the Contract Documents. Submittals will not be checked for quantity, dimension, fit or proper technical design of manufactured equipment. Where deviations of substitute product or system performance have not been specifically noted in the submittal by the Contractor, provision of a complete and satisfactory working installation of equal quality to system specified is the responsibility of the Contractor.

1.6 PERMITS, TESTS AND INSPECTIONS

A. Schedule, obtain, and pay for all permits, fees, and/or services required by local authorities and by these specifications.

B. REQUEST FOR TESTS

1. Notify the Contracting Agency a minimum of 24 hours in advance of tests. In the event the Contracting Agency does not witness the test, certify in writing that all specified tests have been made in accordance with the specifications.

C. DEFICIENCIES

1. Immediately correct all deficiencies which are evident during the tests and repeat tests until system is approved. Do not cover or conceal electrical installations until satisfactory tests are made and approved.

D. OPERATING TESTS

1. Upon request from the Contracting Agency, place the entire electrical installation and/or any portion thereof, in operation to demonstrate satisfactory operation.

1.7 IDENTIFICATION

A. EQUIPMENT LABELS AND NAMEPLATES

1. Provide rigid engraved labels and nameplates of laminated plastic 1/16 inch thick with white letters on a black or gray background. Label emergency equipment red with white letters.

   (a) Securely attach labels with two screws, minimum, per label.

   (b) Temporary markings not permitted on equipment. Repaint trims, housing, etc., where markings cannot be readily removed. Refinish defaced finish.

   (c) No labeling abbreviations will be permitted without prior approval.

B. LABEL AND NAMEPLATE LOCATIONS

1. Provide 1/2" minimum height letters on following equipment:

   (a) Service disconnect (red background).

   (b) Secondary feeder breakers in distribution equipment. Designation as required by load served.

   (c) Special equipment housed in cabinets, as designated on plans, on outside of door.

   (d) Panelboards, switchboards, motor control centers, as designated on plans, on outside of door.

2. Provide 1/4" minimum height letters on:

   (a) Disconnects and starters for motors or fixed appliances. (Include item designation and branch feeder number, i.e., FAN #4, MCC-2).

   (b) Designated electrical equipment.

3. Provide 1/8" minimum height, engraved device plates on switches and receptacles where item controlled is not visible from the switch, or as noted on drawings.

4. Provide 1/8" minimum height letters on lighting control relays, dimmer controls and remote lighting control equipment.

5. External Power Sources

   (a) Provide 1/8" white letters on red background on all starters or controllers that receive power from an external source that is not de-energized by operating the associated disconnecting means.

C. BRANCH CIRCUIT PANELBOARD DIRECTORIES

1. Provide neatly typed schedule (odd numbered circuits on left side or top, even on right side or bottom) under plastic jacket or protective cover to protect the schedule from damage or dirt. Securely mount on inside face of panelboard door. Define briefly, but accurately, nature of connected load (i.e., Lighting Room 102, Receptacles Boiler Room, Etc.) as approved. Sequentially numbered schedules shall not be used.

D. ONE-LINE DIAGRAM

1. Provide approved print for the "As-Built" distribution system. Mount behind protective cover (1/8 inch minimum thickness clear plexiglass) in substantial frame, in accessible location at main switchboard.

E. EMPTY CONDUITS

1. Provide tags with typed description of purpose, and location of opposite end, wired to each end of conduits provided for future equipment.

F. CONDUITS

1. Mark all conduits entering or leaving panelboards with indelible black magic marker with the circuit numbers of the circuits contained inside.

G. JUNCTION BOXES

1. Mark the circuit numbers of wiring on all junction boxes with sheet steel covers. Mark with indelible black marker. On exposed junction boxes in public areas mark on inside of cover.

1.8 RECORD DRAWINGS

A. Record drawings shall be provided at the completion of the project noting all field modifications.

B. In addition to other requirements, mark up a clean set of drawings as the work progresses, to show the dimensioned location and routing of all electrical work which will become permanently concealed. Show routing and location of items cast in concrete or buried underground. Show routing of work in permanently concealed blind spaces within the building. Show complete routing and sizing of any significant revisions to the systems shown.

C. Maintain "record document" drawings in an up-to-date fashion in conjunction with the actual progress of installation. Accurate progress mark-ups shall be available on-site for examination by the Contracting Agency or his representative at all times.

D. Prepare wiring diagrams on reproducible media for all individual special systems as installed. Identify all components and show all wire and terminal numbers and connections.

E. At completion of project, deliver these drawings to the Contracting Agency and obtain written receipt.

1.9 OPERATING INSTRUCTIONS

A. Prior to final acceptance, instruct an authorized representative of the OWNER for 8 hours on the proper operation and maintenance of all electrical systems and equipment under this contract. This requirement is for several systems, and is in addition to all special training specified in other sections. Make available a qualified technician for each component of the installation for this instruction. Give these operating instructions after the operation and maintenance manuals have been furnished to the OWNER. Submit written certification, signed by the Contractor and an authorized representative of the OWNER, that this has been completed.

1.10 OPERATION AND MAINTENANCE MANUALS

A. Provide Operation and Maintenance Manuals in the manner described elsewhere in these specifications. In addition, organize manual and include data and narrative as noted below. Bind each manual in a hard-backed loose-leaf binder.

B. Provide a separate chapter for each section of the electrical specifications with sub-chapters for each class of equipment or system. Provide a table of contents for each chapter, and each major item in

each chapter, to indicate the page number of each. Label all pages to assure correct placement in manual. Identify each piece of equipment with its associated specification description.

C. OPERATING SEQUENCE NARRATIVE

1. In each chapter, describe the procedures necessary for personnel to operate the system and equipment covered in that chapter.

2. Describe procedures for start-up, operation, emergency operation and shutdown of each system. If a particular sequence is required, give step-by-step instructions in that order.

3. Describe all seasonal adjustments which should be accomplished for each system.

4. Provide the above descriptions in typewritten, simple outline, narrative form.

D. MAINTENANCE INSTRUCTIONS

1. Provide complete information for preventive maintenance for each product, including recommended frequency of performance for each preventive maintenance task.

2. Provide instructions for minor repair or adjustments required for preventive maintenance routines, limited to repairs and adjustments which may be performed without special tools or test equipment, and which require no extensive special training or skills.

3. Provide all information of a maintenance nature covering warranty items, etc., which have not been discussed in the manufacturers' literature or the operating sequence narrative.

4. Provide complete informational data for all the spare and replacements parts for each product and system. Properly identify each part-by-part number and manufacturer.

E. MANUFACTURERS' BROCHURES

1. Include manufacturers' descriptive literature covering all products used in each system, together with illustrations, exploded views and renewal parts lists. Highlight all applicable items and instructions, or mark-out non-applicable items.

F. SHOP DRAWINGS

1. Provide a copy of all corrected, approved shop drawings for the project either with the manufacturers' brochures or properly identified in a separate subsection.

G. Operation and Maintenance Manuals shall be fully corrected to include review comments prior to final submission to the Engineer for review. The Engineer will forward the manuals to the OWNER.

H. This Contractor shall also supervise the initial operation of all equipment and instruct the operator selected by the OWNER in such operation as required to acquaint him thoroughly with the best practice.

1.11 PROJECT COMPLETION AND DEMONSTRATION

A. **Tests:** During final inspection, conduct operating tests for approval. Demonstrate installation to operate satisfactorily in accordance with requirements of Contract Documents. Should any portion of installation fail to meet requirements of Contract Documents, repair or replace items failing to meet requirements until items can be demonstrated to comply. Have instruments available for measuring light intensities, voltage and current values and for the demonstration of continuity, grounds, or open circuit conditions. Furnish personnel to assist in taking measurements and making tests. In the event that systems are not complete and fully operational at the time of final inspection, all costs of any subsequent inspections shall be borne by the Contractor at not additional cost to the OWNER.

PART 2 -- PRODUCTS (NOT USED)

PART 3 -- EXECUTION (NOT USED)

**** END OF SECTION ****

SECTION 16050 - BASIC MATERIALS AND METHODS

PART 1 -- GENERAL

1.1 SUMMARY

A. Description

1. This section describes specific requirements, products and methods of execution which are typical throughout the electrical work of this project. Additional requirements for the specific systems and equipment may modify these requirements.

B. Coordination

1. Lay out all the work in advance and avoid conflict with other work in progress. Physical dimensions shall be determined from architectural and structural plans. Verify locations for junction boxes, disconnect switches, stub-ups, etc., for connection to equipment furnished by others or in other divisions of this work.

C. Serviceability of Products

1. Furnish all products to provide the proper orientation of serviceable components to access space provided.

2. Coordinate installation of panels, equipment, system components and other products to allow proper service areas for all items requiring periodic maintenance inspection or replacement.

3. Replace or relocate all products incorrectly ordered or installed.

D. Accessibility of Products

1. Arrange all work to provide access to all serviceable and/or operable products. Layout work to optimize net usable access space within confines of space available. Advise contracting agency in a timely manner of areas where proper access cannot be maintained. Furnish layout drawings to verify this claim, if requested.

2. Provide access doors in ceilings, walls, floors, etc., for access to junction boxes, automatic devices and all serviceable or operable equipment in concealed spaces.

1.2 PRODUCT DELIVERY, STORAGE AND HANDLING

A. **Delivery and Storage:** All items shall be delivered and stored in original containers, which shall indicate manufacturer's name, the brand and the identifying number. Items subject to moisture and/or thermal damage shall be stored in a dry, heated place. All items shall be covered and protected against dirt, water, chemical and/or mechanical damage.

B. **Protection of Material and Equipment:** The Contractor shall be responsible for any and all materials and equipment to be installed under this Contract. The Contractor shall make good, at his own cost, any injury or damage which said materials or equipment may sustain from any source or cause whatsoever before final acceptance.

1.3 WARRANTY

A. Unless otherwise specified, the warranty starts on the date written notice is given that the project is complete, and all required corrections have been made. Warranty shall certify that all defects in

materials or workmanship shall be promptly repaired or replaced by the Contractor to the satisfaction of the OWNER, for a period of two (2) years, except when, in the opinion of the contracting agency, such failure is due to neglect or carelessness by the OWNER.

PART 2 -- PRODUCTS

2.1 MATERIALS AND EQUIPMENT FURNISHED IN DIVISION 16

A. All materials furnished and installed in permanent construction shall be American made, new, full-weight, standard in every way, and in first class condition.

B. All materials shall conform with the standards of an organization acceptable to the authority having jurisdiction and concerned with product evaluation that maintains periodic inspection of labeled equipment or materials and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified manner. Only materials designed for the purpose employed shall be used.

C. Materials shall be identical with apparatus or equipment which has been in successful operation. All materials of similar class or service shall be of one manufacturer.

D. Capacities, sizes and dimensions given are minimum unless otherwise indicated. All systems, materials and equipment proposed for use on this project shall be subject to review for adequacy and compliance with contract documents.

2.2 MATERIALS AND EQUIPMENT FURNISHED IN OTHER DIVISIONS

A. Controls, including conduit, wiring and control devices required for the operation of systems furnished in other Divisions, shall be wired and connected complete under this Division.

B. All work on the project that falls under the jurisdiction of the electrical trade shall be performed by licensed electricians in conformance with the electrical specifications.

C. Provide complete power connections to equipment including, but not limited to, feeders, connections, disconnects and motor running over current protection. Where starters are provided as part of a packaged equipment, over current heaters shall be provided by the electrical contractor.

D. Unless otherwise specified, the Contractor responsible for furnishing such equipment is also responsible for setting the equipment in place.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. All materials and equipment shall be installed by skilled craftsmen. The norms for execution of the work shall be in conformity with NEC Chapter 3 and the National Electrical Contractors' Association "Standards of Installation", which herewith is made part of these specifications.

B. Repair all surfaces and furnish all required material and labor to maintain fireproof, airtight and waterproof characteristics of the construction.

C. Installation of all equipment shall be in accordance with manufacturers' instructions.

3.2 SUPPORT SYSTEMS

A. Pipe straps and hanger rods shall be fastened to concrete by means of inserts, expansion bolts or power-driven fasteners, to brickwork by means of expansion bolts, and to hollow masonry by means of toggle bolts.

B. Hanger rods with spring steel fasteners may be used for 1 1/2 inch EMT and smaller conduits in dry locations.

C. Cable trays, multi-conduit runs, etc., shall be supported by double rods at each point of support and be supported independently of any other building system.

3.3 MOUNTING HEIGHTS

A. Mounting height shall be to center of box above finished floor (AFF) as noted below unless otherwise shown or indicated. Other mounting heights are indicated on the drawings by detail. Specific dimensions AFF are shown adjacent to the symbol. Where devices are shown on architectural elevations, the elevation height shall govern.

ITEM	MOUNTING HEIGHT
Lighting switches	48 inches
Convenience outlets and similar devices	16 inches
Convenience outlets above lab counters	48 inches
Convenience outlets in mechanical, boiler rooms	48 inches
Motor controllers	60 inches to top
Panelboards	76 inches to top
Bracket lights	84 inches
Exterior WP convenience outlets	24 inches AFF
Telephone outlets	16 inches
Human Machine Interface (HMI) (Supervisory)	60 inches
Operator Interface Terminal (OIT) (supervisory)	60 inches

3.4 EXCAVATING, TRENCHING AND BACKFILLING

A. The CONTRACTOR shall perform excavation to the depths indicated on the drawings or specified. During excavation, material suitable for backfilling shall be piled in an orderly manner a sufficient distance from the trench or other excavations to prevent slides or cave-ins. Excavated materials not required or usable for backfilling shall be removed from the site. Necessary grading shall be done to prevent surface water from flowing into trenches or other excavations and onto adjacent property. Furnish pumping required to keep excavated space clear of water during construction. The Engineer will inspect excavation and approve soil conditions and direct procedure if unsatisfactory conditions are discovered. Provide sheeting and shoring as may be necessary for the protection of the work and the safety of personnel. Protect the bottom of the excavation from frost and do not place structures or pipe on frozen ground. Excavation below the required depth shall be filled with compacted gravel.

3.5 FILL UNDER SLABS

A. Areas below slabs on the ground shall have a minimum of eight inches of pit-run grave or coarse sand free from perishable rubbish, compacted and level to receive slab. If natural earth is of granular structure of same material as specified above, it shall not be required to replace the natural earth with pit-run gravel or coarse sand. Where fill is required to raise the sub-grade to elevations shown, it shall be made in horizontal layers not to exceed eight inches in depth and compacted. Compaction shall be

done with approved equipment until its relative density is not less than 95 percent of the maximum density at optimum moisture content, as determined by standard laboratory compaction tests.

3.6 BACKFILLING (OUTSIDE)

A. Backfill excavations below finished grades with similar materials to that removed in excavation shall be free from rubbish and other unsuitable material. Backfilling shall be done to finished grades indicated on the drawings. If no finished grading is to be done in excavated areas, this Contractor shall backfill to the existing grades and restore the surface to its original condition. Backfill shall be compacted and tested as specified under "Fill Under Slabs."

3.7 COMPACTION TESTS

A. The Contractor shall notify the testing laboratory thirty-six hours prior to starting compaction.

B. The Contractor shall arrange to have a representative of the testing laboratory on the job during the entire period of compaction and density tests. These tests shall be made for every eighteen inches in depth of fill and at intervals not more than fifty feet in both directions of the compaction area. Refer to Section 02200 for compaction tests.

C. Compaction over ditches less than three feet in width and around perimeters of walls and columns for a distance of three feet from the wall or column shall be done by the use of electrical hand compactors such as a Jackson compactor or similar.

3.8 PROTECTION

A. The Contractor shall be responsible for protecting trenches and providing adequate crossovers where pedestrian and vehicular traffic occurs. Guard rails, flags, lamps, etc., shall be used for such protection.

3.9 REPLACEMENT RESPONSIBILITIES

A. This Contractor shall be responsible for the replacement of existing street pavement, curbs, sidewalks, etc., removed or damaged by him in the course of the work unless such pavement, curbs and sidewalks are to be reconstructed under the general contract. This Contractor shall make necessary arrangements to perform such repairs and shall pay costs in connection therewith and include it in his bid.

3.10 DEMOLITION AND REMODELING WORK

A. The Contractor shall visit existing buildings before submitting the bid and becoming familiar with the existing conditions.

B. Existing equipment removed and not shown to be reused shall become the Contractor's property and be removed from the site unless otherwise specified or shown.

C. Work shall be coordinated with utility and OWNER and rescheduled for minimum of service interruption.

D. Wiring in existing buildings shall remain as is except as noted on drawings or specified elsewhere.

E. When existing walls, ceilings, floors, electrical panels, light fixtures, switches or other outlets are removed, Contractor shall extend existing circuiting if required; install junction boxes in walls, ceilings or floors if required to continue circuiting; remove all unused wire; remove all unused conduit where accessible; and install new plates with blank gangs as required on existing outlet boxes.

F. Added loads to existing circuiting shall be balanced between phases. On existing panelboards where circuitry is changed, Contractor shall furnish a revised, typed panel directory.

G. Contractor shall assume in his bid that existing equipment and fixtures shown to be reused are in good working condition and can be installed without any repairs. If certain items are found to be in need of repair or in unusable condition, Contractor shall notify the Engineer for decision. However, Contractor shall be responsible for any damage caused by him to equipment in removal or handling.

H. Fixtures and other equipment removed and to be re-used shall be cleaned before reinstallation. New lamps shall be provided for fixtures.

3.11 CUTTING AND PATCHING

A. Obtain written permission of the Contracting Agency before cutting or piercing structural members.

B. Sleeves through floors and walls to be black iron pipe or paper, flush with walls, ceilings or finished floors sized to accommodate the raceway. Grout all penetrations through concrete walls or floors. Holes through existing concrete shall be core drilled.

3.12 PROTECTIVE FINISHES

A. Take care not to scratch or deface factory finish of electrical apparatus and devices. Repaint all marred or scratched surfaces.

B. Provide hot dip galvanized components for ferrous materials exposed to the weather.

3.13 PAINTING

A. Painting will be accomplished by the General Contractor. Special equipment may be specified herein to be furnished with a prime finish ready for painting. Refer to individual specification paragraphs.

3.14 TESTING

A. Prior to final test, all switches, panelboards, devices and fixtures shall be in place.

B. Test all electrical systems. They shall be free from short circuits and unintentional grounds.

C. Make all changes necessary to balance the actual electrical loads on the complete system. Arrange for balanced conditions of circuits under connected load demands as contemplated by the normal working conditions. Final load and balance test shall be demonstrated in the presence of the Contracting Agency.

D. Conduct a performance test of the ground fault system in accordance with NEC Article 230-95(c).

E. Furnish one copy of certified test results to the Contracting Agency prior to final inspection.

3.15 CLEANUP AND COMMISSIONING

A. Throughout the work, the Contractor shall keep the work area reasonably neat and orderly by periodic cleanups.

1. Special care must be taken for protection of panels, switches, starters, etc. All must be kept completely protected from weather elements, painting, etc., until the building is substantially completed. Damage from rust, paint, scratches, etc., shall be corrected as directed by the Engineer.

2. Clean switchgear, motor controls, etc., and take special care to remove dirt, mortar, wire scraps, etc., from junction boxes and switchgear interiors.

3. Clean light fixtures and lamps thoroughly, just prior to final inspection. Fixture globes, enclosures, shielding etc., shall be cleaned by an approved dip tank method. The dip tank cleaning can be omitted if the shielding items are stored in properly sealed original containers until final installation stage.

4. Protection of electrical equipment during painting of the building shall be the responsibility of the painting contractor. This shall not relieve the electrical contractor of the responsibility for checking to assure that adequate protection is being provided.

B. As independent parts of the installation are completed, they may be commissioned and utilized during construction.

**** END OF SECTION ****

SECTION 16110 - CONDUIT AND FITTINGS

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes specific requirements, products, and methods of execution relating to conduit and conduit fittings approved for use on this project. Type, size and installation methods shall be as shown on drawings, required by code and specified in the following.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 01300 - Submittals

B. Section 16120 - Wire and Cable

C. Section 16131 - Pull and Junction Boxes

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Commercial Standards:

ANSI C80.1	Rigid Steel Conduit, Zinc Coated
ANSI C80.3	Electrical Metallic Tubing, Zinc Coated
ANSI C80.5	Rigid Aluminum Conduit
ANSI/NEMA FB1	Fittings, Cast Metal Boxes, and Conduit Bodies for Conduit and Cable Assemblies
NEMA RN1	Polyvinyl Chloride (PVC) Externally Coated Galvanized Rigid Steel Conduit and Intermediate Metal Conduit
NEMA TC3	PVC Fittings for Use with Rigid PVC Conduit and Tubing

1.4 QUALITY ASSURANCES

A. Conduit and conduit fittings shall be standard types and sizes as manufactured by a nationally recognized manufacturer of this type of materials and be in conformity with applicable standards and UL listings.

PART 2 -- PRODUCTS

2.1 CONDUITS

A. Conduit types approved for use on this project shall be of the following types:

1. Galvanized rigid steel conduit - GRC
2. Rigid copper-free aluminum conduit - RAC
3. Schedule 40, polyvinyl chloride conduit - PVC
4. Electrical metallic tubing - EMT
5. Liquid-tight flexible metallic conduit - LT
6. Types specifically identified on the drawings or in the specifications

B. Minimum sizes for rigid steel, aluminum and PVC-40 conduits shall be 3/4". If conduit contains only twisted shielded pairs, 1/2" conduit will be allowed.

2.2 FITTINGS

A. Fittings utilized with rigid steel and aluminum shall be galvanized steel or iron or copper-free aluminum. Conduit bushings shall be of the insulated types. Where grounding bushings are required, insulated grounding bushings with pressure type lugs shall be provided.

B. Fittings for PVC 40 shall be polyvinyl chloride, installed using PVC solvent to form a watertight joint, except elbows shall be galvanized rigid steel.

C. Fitting for liquid-tight flexible conduit shall be steel or malleable iron, of a type incorporating a threaded grounding cone, nylon or plastic compression ring, and a tightening gland, providing a low resistance ground connection. All throats shall be insulated.

D. In hazardous locations flexible metal conduit shall be Crouse-Hinds ECGJH or equal.

E. Conduit seals shall be copper free aluminum. Crouse-Hinds EYS for vertical or horizontal or equal.

2.3 SURFACE METAL WIREWAYS

A. Surface Metal Wireways shall be Square D, or equal and approved, surface wireway, gray color, with matching boxes, fittings and combination hinged and screw cover. Wireways shall be of the lay-in type with standard knockouts and shall be securely supported by approved methods of five foot intervals. Wireways installed outdoors shall be of the rain-tight type.

B. Size and mounting shall be as shown.

PART 3 -- EXECUTION

3.1 USES PERMITTED

A. Conduits shall be of the size shown on the drawings or as required by the NEC whichever is larger. Base sizes on using Type THW wire for wires size #6 AWG and larger. Base sizes on THWN for size #8 AWG and smaller. Conduits installed in the following locations shall be of the types specifically identified only:

1. Underground - rigid steel or PVC-40 encased in concrete.
2. Encased in poured concrete - rigid steel or PVC-40.
3. Outdoors above-ground or damp locations - rigid aluminum.
4. Dry indoor locations, concealed or exposed -rigid steel, rigid aluminum.
5. Motor and equipment flexible connections -liquid-tight flexible conduit.
6. Use PVC conduit in hazardous or corrosive locations.
7. EMT will be allowed at locations approved by the ENGINEER.

B. INSTALLATION METHODS

1. All conduit and tubing shall be cut square and reamed smooth at the ends and all joints made tight. Conduit threads shall be lubricated with an approved thread lubricant.
2. Exposed raceways shall be run parallel or perpendicular to building lines and bent symmetrically or made up with standard elbows or fittings. Concealed raceways shall be routed as directly as possible with a minimum of bends.
3. Liquid-tight flexible conduit with supplemental ground jumper shall be used for all motor and transformer connections. The ground jumper in flexible conduits may be either within or bonded to the exterior of the conduit. Length of flexible conduit shall not exceed 24”.

4. Each conduit shall enter and be securely connected to a cabinet, junction box, pull box or outlet box by means of a locknut on the outside and a locknut bushing on the inside, or by means of a liquid-tight, threaded, self-locking, cold-weld type wedge adapter. All locknuts shall be the bonding type with sharp edges and shall be installed in a manner that will assure a locking installation. Locknuts and bushings or self-locking adapters will not be required where conduits are screwed into threaded connections. All runs of conduit shall be protected from the entrance of foreign material prior to the installation of conductors.
5. Conduit or tubing deformed or crushed in any way shall not be installed. Conduit shall be bent only with approved bender (hydraulic or hickey). Bending machines shall be used to make field bends in conduit of 1-1/4 inch size and LARGER. Torches shall not be used in making conduit bends.
6. Raceways shall be run at least 5" from parallel runs of heating system pipes, flues, or other high temperature piping systems.
7. Pull wires shall be left in all spare and unused conduits. (Nylon "jet-line" or equal.)
8. All conduit stubbed up out of floor and terminating inside of an enclosure shall have insulating grounding bushings installed.
9. Raceways penetrating vapor barriers or traversing from warm to cold areas shall be sealed with a non-hardening duct sealing compound to prevent the accumulation of moisture.
10. Raceways shall be provided with expansion joints where necessary to allow for thermal expansion and contraction.
11. Conduits in poured concrete shall be provided with expansion fittings where the conduits cross building expansion joints. Expansion fittings shall be OZ Electrical Mfg. Company Type AX or equal.
12. Exterior conduit shall be installed a minimum of 18 inches below grade. Where multiple conduit runs are indicated they shall be installed in the same trench. Backfilling shall be as specified elsewhere. Provide drain tees in each conduit and pitch conduit to drain tee. Provide gravel drain packet below drain tee. On long runs, drain tees shall be installed a maximum of 100 feet apart.
13. Conduits in "Mechanical or Electrical" rooms shall be run exposed and shall not be installed in the slab, unless noted otherwise.
14. Conduits in poured concrete shall not be larger than 1/3 of the thickness of the slab and shall be located entirely within the middle 1/3 of the concrete member.
15. Where conduits pass vertically through a floor slab, a metal sleeve or concrete curb shall be installed around the conduit or group of conduits, to provide a 4-inch high watertight barrier.
16. Where conduits pass through roof, care should be taken to provide proper flashing and seal against moisture leakage.
17. Conduits in detention tanks, filters, or other liquid bearing vessels shall be run as high above the high water level as situation permits. In no case shall the conduits become the determining factor in maximum tank level.
18. Conduit shall not be installed outside of building walls or exterior court areas except where specifically noted.
19. Conduit systems must be installed complete before conductors are pulled in.
20. In no cases where conduit is installed in filters or tanks, shall conduit be installed below the tank high level elevation.

**** END OF SECTION ****

SECTION 16120 - WIRE AND CABLE

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes specific requirements, products, and methods of execution relating to wire and cable, 600 volts or less, approved for use on this project.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 16110 - Conduit and Fittings

1.3 QUALITY ASSURANCE

A. All conductors shall be sized according to American Wire Gauge (AWG). Stranding, insulation, rating and geometrical dimensions shall conform to UL and ICEA specifications.

PART 2 -- PRODUCTS

2.1 SERVICE AND FEEDER CABLE

A. Insulation shall be type THW, RHW-2, THHN/THWN-2 or XHHW-2. Do not install thermoplastic insulated conductors when the temperature is below 0 degrees F.

2.2 BRANCH CIRCUIT WIRING

A. Insulation shall be 600 volt type THW, THHN/THWN-2 or XHHW-2. Wiring in fixture channels shall be rated 90 degrees C or over, 600 volt. Do not install thermoplastic insulated conductors when the temperature is below 0 degrees F.

2.3 FLEXIBLE CORD

A. All flexible cord shall be type SO or ST or for the larger size cable, type G.

2.4 SHIELDED INSTRUMENT CABLE

A. Conductors for 4-20ma low level signals shall be AWG No. 18, twisted, shielded pair, with 20 AWG copper drain wire, Beldfoil shield and PVC jacket. Belden No. 8760 or equal.

2.5 MISCELLANEOUS

A. Miscellaneous wire and cable for special purpose applications and not covered in the categories as indicated above, shall be as shown on the plans and/or required by the intended use.

2.6 MINIMUM SIZE

A. Unless specified otherwise minimum wire sizes shall be as follows:

1. #12 AWG for branch circuit wiring.
2. #14 for control circuit wiring.
3. #10 AWG for all 120V Homeruns over 75 feet and for all 277V Homeruns over 125’.
4. Cable or conductors for special systems shall be as described in other sections of the specifications, noted on the drawing, or recommended by the equipment manufacturer, whichever is greater.

5. PLC cable shall be per manufacturer recommendations. If no recommendation is made, cable shall meet the requirements of level 5 communication standard.

2.7 CONDUCTORS

A. All conductors used on this project shall be copper and stranded.

B. Stranded control, communication, and alarm conductors shall have compression terminations where terminated on screw terminals.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Conduit shall be completely installed, free from obstructions, and clean before conductors are installed. Provide conductors from outlet to outlet and splice only at outlet or junction boxes. Install all conductors in a single raceway at one time and leave sufficient cable at all fittings or boxes. Keep all conductors within the manufacturer's allowable tension. Do not violate minimum bending radii. Lubricants for wire pullings, if used, shall conform to UL requirements for the insulation and raceway material.

B. Provide conductor supports as recommended by the NEC or cable manufacturer in vertical conduits.

C. No splicing or joints will be permitted in either feeder or branch circuits except at outlet or accessible junction boxes. Utilize compression type solderless connectors when making splices or taps in conductors No. 8 AWG or larger. Utilize pre-insulated connectors, 3M Company "Scotchlok" or Ideal Industries, Inc. or equal, "Super Nut" or equal, for splices and taps in conductors No. 10 AWG and smaller. Tape all splices and joints with Scotch #88 plastic tape or equal, to secure insulation strength equal to that of the conductors joined. Keep splices in underground junction boxes, handholes, and manholes to an absolute minimum. Where splices are necessary, use resin splicing kits manufactured by 3M Company to totally encapsulate the splice.

D. Provide all power and control conductors that terminate on equipment or terminal strips with solderless lugs or T & B "Sta-Kon" terminals or equal.

3.2 CONDUCTOR PHASE COLOR CODING

A. All service, feeder and branch circuit conductors throughout the project secondary electrical system shall be color coded as follows:

Phase	277/480 Volts	120/240 Volts
A	Yellow	Black
B	Brown	Red
C	Orange	Blue
Neutral	Grey	White
Ground	Green	Green

B. Where color coded conductors are not commercially available, colored non-aging, plastic tape may be utilized where permitted by NEC.

C. Phases in panel boards and similar equipment shall be connected Phase A, B, C from left to right, top to bottom, or front to back.

3.3 DERATING OF CONDUCTORS

A. Derating of conductors shall be per National Electrical Code “Notes to Tables 310-16 through 310-19.” The maximum allowable load current shall be determined by the trip setting of the overcurrent protection.

3.4 VOLTAGE DROP

A. The maximum total voltage drop shall not exceed three (3) percent in branch circuits or feeders, for a total of five (5) percent to the farthest outlet based on steady state design load conditions. Wire sizes shown on the drawings are for minimum ampacity. Wire and conduit sizes shall be increased to limit voltage drop based upon actual lengths required in the field.

3.5 PLC OR COMMUNICATION CABLES

A. The Contractor shall provide the Engineer with certification of cable tests performed. At a minimum, cable shall be tested for short circuit, open circuit and grounding.

**** END OF SECTION ****

SECTION 16130 - OUTLET BOXES

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes general requirements, products and methods of execution relating to outlet boxes for use with wiring devices and lighting fixture outlets approved for use on this project. All boxes shall be sized per NEC Article 370.

1.2 QUALITY ASSURANCE

A. Underwriters' Laboratory listing for intended usage shall constitute proof of acceptable quality.

PART 2 -- PRODUCTS

2.1 OUTLET BOXES

A. Cast Boxes (Crouse Hinds type) with threaded hubs and gasketed covers shall be used in the following locations:

1. All exterior locations
2. All wet or damp locations
3. Shops, mechanical rooms, pump stations, etc., where exposed to mechanical damage
4. Floor boxes installed in concrete
5. All exposed interior locations
6. Where shown on drawings

B. Explosion proof boxes shall be used in hazardous locations.

C. Galvanized Pressed Steel Boxes may be used in office or lab areas.

D. Ceiling Boxes and wall boxes for bracket light shall be not less than 4" in diameter by 1-1/4" deep and shall have 3/8" malleable iron fixture studs if required.

E. Grounding Screw - All stamped steel boxes shall have a drilled and tapped hole in the back of the box for a grounding screw.

F. Accessories - Box covers, extension rings, bases, hanger bars, etc., for use in connection with the installation, shall be approved for use in the various applications.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Outlet boxes shall be securely fastened in position and supported independently of the conduit system.

B. Outlet boxes located in suspended ceiling system shall be fastened to cross-members supported by the main ceiling support members, or from hanger rods with solid supports from above.

C. Boxes shall be installed true to the building lines and at equal heights in conformity with mounting heights specified in other sections of the specification.

D. Provide the best suitable box for each outlet requirement.

E. Boxes shall have only the holes necessary to accommodate the conduits at point of installation. All boxes shall have lugs or ears to secure covers.

F. All boxes shall be rigidly secured in position. All boxes shall be so set that the front edge of the box shall be flush with the finished wall or ceiling line, or not more than 1/8" back of same. This requirement is more stringent than NEC requirements.

G. All boxes shall be accessible.

H. Outlets shall be installed at the heights and approximate designated positions as shown on drawings and in Section 16050. Outlets in similar rooms shall be installed in the same relative location in each room. Outlets shall not be installed back-to-back but shall be offset approximately 12 inches.

I. Outlets shall be located to clear piping, ductwork and other obstructions. Switch outlets shall be on latch side of door except where type of construction dictates otherwise. Outlets in masonry or tile shall be located as far as practical adjacent to horizontal and vertical mortar joints to minimize cutting.

J. Verify locations and dimensions of electrical equipment particularly in the case of door swings, heights of cabinets and counters, shelves and location of equipment installed by the OWNER or other trades.

K. Mounting heights indicated on drawings and in Section 16050 shall be to centerline of outlet unless indicated otherwise. Heights may be adjusted to align with mortar joints as specified above; however, similar outlets in a given area shall be adjusted to the same height unless specifically noted at the outlet.

**** END OF SECTION ****

SECTION 16131 - PULL AND JUNCTION BOXES

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes general provisions, products and methods of execution relating to pull and junction boxes approved for use on this project. Furnish all such boxes, whether shown or not, in order to conform to requirements for maximum pulling length and maximum number of bends allowed.

1.2 QUALITY ASSURANCE

A. Pull and junction boxes 150 cubic inches and smaller shall conform to specifications for outlet boxes, Section 16130.

B. Pull and junction boxes larger than 150 cubic inches shall conform to U.L. Standard 50-197, Cabinets and Boxes. The UL label shall constitute proof of acceptable quality.

PART 2 -- PRODUCTS

2.1 PULL AND JUNCTION BOXES

A. Pull and Junction Boxes shall conform to Article 370 of the NEC and the following requirements:

1. Sheet metal boxes shall be approved for use in all dry, interior, non-hazardous locations.
2. Boxes exposed to rain or installed in wet locations shall be NEMA 3R or 4, as noted.
3. Boxes installed underground shall be either pre-cast concrete, cast iron, or pre-cast plastic.
4. Special boxes, as noted on the drawings, shall be installed in areas of specific service and/or hazards.

2.2 HANDHOLES

A. Handholes shall be of size noted on the drawings and shall be pre-cast plastic, pre-cast concrete or cast iron. Plastic material shall be self-extinguishing and shall be designed and tested to -50 degrees F and shall meet ASTM Designation: D-635, and shall show no appreciable change in physical properties with exposure to the weather. Materials shall be dense and free of voids or porosity. Top dimensions of plastic pull boxes shall not exceed the bottom dimensions by more than one inch. Extensions for plastic pull boxes shall be of the same material as the pull boxes, and shall be attached to the pull boxes in a manner that will maintain the minimum combined depths shown on the plans. Handholes shall be structurally designed for light vehicular traffic.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. All boxes shall be installed so that covers are readily accessible and adequate working clearance is maintained after completion of the installation.

B. Provide handholes where shown on the drawings or as required.

C. All handholes shall have a drain opening in bottom. Holes for handholes shall be dug out at least 24 inches deeper than box depth requirement and bottom of hole shall be filled with gravel to depth of bottom of box. Boxes shall be placed, aligned, raceways installed and then grouted in place with concrete so that box and cover are secure in position.

D. All steel conduits entering handholes shall be terminated with insulated bushing having grounding lugs.

**** END OF SECTION ****

SECTION 16140 - WIRING DEVICES

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes general provisions, products and methods of execution relating to line voltage wiring devices approved for use on this project.

1.2 QUALITY ASSURANCE

A. Manufacturers mentioned and catalog numbers specified are for establishment of type, configuration and quality. Other manufacturers and types may be submitted for approval.

PART 2 -- PRODUCTS

2.1 WIRING DEVICES

A. Provide wiring devices indicated. Catalog numbers shown are Hubbell unless noted otherwise. Equal devices manufactured by Pass and Seymour, Leviton, Bryant, Slater and G.E. are acceptable as well as other equal devices. Provide all similar devices of same manufacturer. Provide devices and device plates of a color and finish specified unless noted otherwise on the drawings.

2.2 SWITCHES

A. Provide 20 AMP, 250V rated switches with UL listing for tungsten lamp loads or inductive loads without derating. Switches shall be as follows:

20A	
Single Pole	CAT. NO. 1221
Three-way	CAT. NO. 1223
Four-way	CAT. NO. 1224
Key Operated	CAT. NO. 1221-L
Momentary Cont.	CAT. NO. 1557
Double Pole	CAT. NO. 1222
Pilot Switch	CAT. NO. 1221-PL
Explosion Proof	APPLETON NO. EDS 150

B. Multiple 250V switches shall be installed in partition boxes or shall be furnished with shields.

C. Weatherproof switch covers shall be cast aluminum or Feralloy equal to Crouse-Hinds #DS128. Sheet steel will not be allowed.

D. Other switch types shall be provided as called for on the Drawings or as required by the application.

2.3 RECEPTACLES

A. Provide grounding type receptacles as follows, or as required to match equipment furnished in this or other divisions.

Single phase, 3-wire devices

15A-125V	CAT. NO. 5262	NEMA #5-15R
15A-125V GFCI	CAT. NO. GF-5262	NEMA #5-15R
15A-250V	CAT. NO. 5662	NEMA #6-15R
20A-125V	CAT. NO. 5362	NEMA #5-20R
20A-125V GFCI	CAT. NO. GF-5362	NEMA #5-20R
20A-250V	CAT. NO. 5462	NEMA #6-20R
15A-125V	APPLETON NO. EFS 150	Explosion Proof

B. Outlets requiring ratings and configurations different from those listed above shall be provided as shown on the plans and/or required by the equipment served.

C. Weatherproof duplex receptacles shall be specification grade, rated 15 AMPS, 125 volts, grounded type as specified, in an FS box for surface mounting or standard box for flushing mounting. Cover shall be a Hubbell No. 5205 for standard box or No. 5206 for F.S. boxes. Mount receptacles in the horizontal plane.

D. Provide a matching explosion proof plug for each explosion proof receptacle.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Install all wiring devices indicated complete with cover plates. Cover plates shall fit snugly against finished surfaces and line up true with adjacent building lines, and by symmetrical in location and appearance.

B. All switches shall be installed so their handles move in a vertical plane.

C. Door swings shall be checked and, if necessary, switches shall be relocated to place them on the strike side of the door.

D. Receptacles shall not be placed back-to-back in adjacent rooms. They shall be offset at least 12”.

E. Unless otherwise noted on the drawings, receptacles shall be installed in the vertical position with the grounding pin down.

**** END OF SECTION ****

SECTION 16150 - ELECTRIC MOTORS

PART 1 -- GENERAL

1.1 THE REQUIREMENT

A. The electric motors furnished with all equipment shall conform to this specification. If a conflict exists between provisions of this section and provisions of other sections detailing the driven equipment, the provisions of this section shall govern.

1.2 RELATED WORK SPECIFIED ELSEWHERE

A. Section 16010 - Electrical General Provisions

B. Other Electrical Work Division 16, as applicable.

C. Equipment Specifications Divisions 11, 13, and 15, as applicable.

1.3 REFERENCE SPECIFICATIONS, CODES AND STANDARDS

A. Commercial Standards:
ANSI/NEMA MG1, MG2 Motors and Generators.

1.4 CONTRACTOR SUBMITTALS

A. Complete motor data shall be submitted with the driven machinery shop drawings. Motor data shall include:

1. Machine name and specification number of driven machine.
2. Motor manufacturer.
3. Motor type or model and dimension drawing.
4. Nominal horsepower.
5. NEMA design.
6. Frame size.
7. Enclosure.
8. Winding insulation class and treatment.
9. Rated ambient temperature.
10. Service factor.
11. Voltage, phase, and frequency rating.
12. Full load current at rated horsepower for application voltage.
13. Starting code letter, or locked rotor kVA, or current.
14. Special winding configuration such as part-winding, star-delta.
15. Rated full load speed.
16. Power Factor at full load.

B. If water cooling is required for motor thrust bearings, the shop drawing submittals shall indicate this requirement.

PART 2 -- PRODUCTS

2.1 GENERAL REQUIREMENTS

A. Electric motors driving identical machines shall be identical.

B. The nominal motor horsepower shall be adequate for the driven machine without infringement upon the motor service factor.

C. **Minimum Motor hp:** The motor horsepower shall be not less than the estimated minimum specified for each driven machine. If the estimated minimum horsepower specified is not adequate to satisfy the foregoing restriction or any other requirements of these Specifications, the motor with the next larger horsepower shall be supplied at no additional cost to the OWNER. In addition, any changes caused by increase in motor horsepower shall be made by the CONTRACTOR at no additional cost to the OWNER; such changes may involve circuit breakers, magnetic starters, motor feeder conductors and conduit sizes, etc. This change shall be clearly noted in the submittal.

D. **Exempt Motors:** Motors which are for valve operators, submersible pumps, or motors which are an integral part of Standard Manufactured Equipment, i.e., non-NEMA mounting, common shaft with driven element, part of domestic or commercial use apparatus may be excepted from these Specifications to the extent that such variation reflects a necessary condition of motor service or a requirement of the specified driven equipment.

E. **Motors operated using Variable Frequency Drives**

1. Specifically designed for use with a solid-state inverter variable frequency drive (VFD).
2. Minimum service factor of 1.00 when operating from a VFD.
3. 1600V insulation system designed for inverter duty.
4. Shaft grounding ring on the drive end of the motor.
5. Insulated or insulated/ceramic bearing on the non-drive end of the motor for motors 100 hp and larger.
6. Thermal switch embedded in the motor windings to open on motor over temperature condition. Normally-closed contacts rated 5 amps at 120 volts.

2.2 DESIGN REQUIREMENTS

A. Equipment requiring electric motors shall be equipped with motors conforming to the following, unless specifically noted otherwise.

1. The motor furnished shall have its design voltage inscribed on the nameplate.
2. All motors less than 30 HP shall be designed, constructed and tested in accordance with NEMA Standards MG1 and MG2.

B. **Motor Voltage Ratings:** Motors shall have current or up-to-date voltage ratings and shall be rated in accordance with the following, unless otherwise specified:

1. Motors below 1/2-hp shall be rated 115 volts, single-phase, 60-Hz, unless noted otherwise on the plans. Dual voltage motors rated 115/230-volts, 115/208-volts, or 120-240 volts are acceptable.
2. Motors 1/2-hp and larger shall be rated 208-230 volts, 460 volts, 3-phase, 60-Hz, as required and as shown on electrical drawings. Dual voltage motors rated 230/460 volts or 208/230/460 volts are also acceptable.

C. Single-Phase Motors shall be general purpose permanent split capacitor start, induction type, alternating current, constant speed, continuous duty, shall have a temperature rise of 115 degrees C based on a 40 degrees C ambient in accord with MG1-12.41, shall have service factor in accord with

MG1-12.47, and shall be marked with a code letter. Fractional HP motors shall have NEMA frame size 42, 48, 56 or 66.

D. Three-Phase Motors 1/2 HP and larger but less than 30 HP shall be general purpose, squirrel-cage induction type, alternating current, Design B, constant speed, continuous rated, shall have a temperature rise of 115 degrees C based on a 40 degree C ambient in accord with NEMA MG1-12.42, shall have a service factor of 1.15, and shall be marked with code letter. Frame sizes shall be in accord with NEMA MG-1.

E. Three-phase motors 30 HP and larger shall be general purpose squirrel-cage induction type, alternating current, NEMA Design B, constant speed, continuous rated, shall have temperature rise of 70 degrees C based on a 40 degree C ambient in accord with NEMA MG1-12.42, shall have a service factor of 1.15, shall have a starting KVA not exceeding that for Code F and shall be marked with a code letter. Motors may be open drip-proof except where exposed to weather or otherwise specified. Motors through frame sizes 445 shall be of cast-iron construction. Larger frame sizes may be of welded steel.

F. Motor shall meet the following minimum efficiency values listed by NEMA for premium efficiency motors:

Motor Size (HP)	Totally Enclosed Fan Cooled (TEFC) and Explosion Proof (EP) Motors				Open Drip-Proof (ODP) Motors			
	RPM Levels				RPM Levels			
	900	1200	1800	3600	900	1200	1800	3600
1.0	77.0%	82.5%	85.5%	77.0%	77.0%	82.5%	85.5%	77.0%
1.5	80.0%	87.5%	86.5%	84.0%	78.5%	86.5%	86.5%	84.0%
2.0	85.5%	88.5%	86.5%	85.5%	87.5%	87.5%	86.5%	85.5%
3.0	85.5%	89.5%	89.5%	86.5%	88.5%	88.5%	89.5%	85.5%
5.0	87.5%	89.5%	89.5%	88.5%	89.5%	89.5%	89.5%	86.5%
7.5	88.5%	91.0%	91.7%	89.5%	91.0%	90.2%	91.0%	88.5%
10.0	91.0%	91.0%	91.7%	90.2%	91.7%	91.7%	91.7%	89.5%
15.0	91.0%	91.7%	92.4%	91.0%	91.7%	91.7%	93.0%	90.2%
20.0	91.7%	91.7%	93.0%	91.0%	92.4%	92.4%	93.0%	91.0%
25.0	91.7%	93.0%	93.6%	91.7%	92.4%	93.0%	93.6%	91.7%
30.0	93.0%	93.0%	93.6%	91.7%	93.0%	93.6%	94.1%	91.7%
40.0	93.0%	94.1%	94.1%	92.4%	93.0%	94.1%	94.1%	92.4%
50.0	93.6%	94.1%	94.5%	93.0%	93.6%	94.1%	94.5%	93.0%
60.0	93.6%	94.5%	95.0%	93.6%	94.1%	94.5%	95.0%	93.6%
75.0	94.5%	94.5%	95.4%	93.6%	95.0%	94.5%	95.0%	93.6%
100.0	94.5%	95.0%	95.4%	94.1%	95.0%	95.0%	95.4%	93.6%
125.0	95.0%	95.0%	95.4%	95.0%	95.0%	95.0%	95.4%	94.1%
150.0	95.0%	95.8%	95.8%	95.0%	95.0%	95.4%	95.8%	94.1%
200.0	95.4%	95.8%	96.2%	95.4%	95.0%	95.4%	95.8%	95.0%

2.3 MOTOR BEARINGS

A. **General:** Bearings shall conform with the provisions of Section 11000, "Equipment General Provisions", except as supplemented or modified by the requirements of this Specification.

B. **Standard Duty:** Unless otherwise specified, all motors shall be suitable for standard duty with a minimum bearing life of 5 years or 20,000 hours (B-10 rating), whichever comes first.

C. **Heavy Duty:** Where equipment is specified for heavy duty service, bearings shall be designed for a minimum rated B-10 life of 10 years or 40,000 hours, whichever comes first.

D. **Fractional Horsepower:** Fractional horsepower through 2 hp motors shall be furnished with Lubricated-for-Life ball bearings.

E. **Horizontal Motors Over 2 hp:** Motors larger than 2 hp shall be furnished with relubricatable ball bearings, except vertical pump motors.

F. **Vertical Motors Over 2 hp:** Vertical motors larger than 2 hp shall be furnished with relubricatable ball, spherical, roller, or plate type thrust bearings. Lubrication shall be per manufacturer's recommendation for smooth operation and long life of the bearings.

G. **Water-Cooled Motors:** If water cooling is required for the thrust bearings, cooling water lines shall be provided complete with shut-off valve, strainer, solenoid valve, flow indicator, thermometer, throttling valve and, (where subject to freezing), insulation with heat tracing.

2.4 ACCESSORY REQUIREMENTS

A. **General:** Horizontal motors 3 hp and larger, and all vertical motors, shall have split-type cast metal conduit boxes. Motors other than open drip-proof shall be gasketed.

B. **Lifting Devices:** All motors weighing 265 lb (120 Kg) or more shall have suitable lifting devices for installation and removal.

C. **Special Requirements:** The CONTRACTOR shall refer to individual equipment specifications for special requirements such as motor winding thermal protection, multi-speed windings, etc.

D. **Space Heaters:** Unless otherwise shown, all motors 25 hp and larger shall be furnished with belted space heaters. Space heater rating shall be 120 volts, single-phase, unless otherwise shown.

E. **Nameplate:** All motors shall be fitted with a permanent, non-corrosive nameplate indelibly stamped or engraved with NEMA Standard motor data, including bearing description and lubrication instructions. Insulation class, ambient temperature, altitude rating, and power factor at full load, if applicable, shall be included.

2.5 MANUFACTURER

A. The CONTRACTOR shall assign to the designated equipment supplier the responsibility to select and supply suitable electric motors for the equipment. The choice of motor manufacturer shall be subject to favorable review by the ENGINEER. Such review will consider future availability of replacement parts and compatibility with driven equipment.

B. Manufacturers, or Equal:

1. General Electric Company;
2. U.S. Motors Corporation;
3. Marathon

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Motor installation shall be performed in accordance with the motor manufacturer's written recommendations and the written requirements of the manufacturer of the driven equipment.

B. Electrical work involving connections, controls, switches, disconnects, etc., shall be performed as provided in the applicable Sections of Division 16.

**** END OF SECTION ****

SECTION 16440 - DISCONNECTS

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes general requirements, products, and methods of execution relating to fusible and non-fusible disconnecting devices approved for use on this project.

1.2 QUALITY ASSURANCE

A. Devices shall be of the latest approved design as manufactured by a nationally recognized manufacturer and in conformity with U.L. listings and the governing NEMA standards.

PART 2 -- PRODUCTS

2.1 SAFETY SWITCHES

A. Safety switches, fusible and non-fusible, shall conform to NEMA Standard KSI-1983 for type HD (heavy Duty).

1. **Switch Interior**: All switches shall have switchblades, which are fully visible in the OFF position when the door is open. Switches shall be of dead-front construction with permanently attached arc suppressors. Lugs shall be UL listed for copper and/or aluminum cables and be front removable.

2. **Switch Mechanism**: Switches shall have a quick-make and quick-break operating handle and mechanism which shall be an integral part of the box, not the cover. Switches shall have a defeatable dual cover interlock to prevent unauthorized opening of the switch door in the ON position or closing of the switch mechanism with the door open. The switch shall be capable of being locked in the OFF position with padlocks.

3. **Enclosures**: Switch enclosure shall be suitable for the environment in which the switch is mounted. NEMA 1 enclosure shall be code gauge, UL-98, sheet steel, treated with a rust inhibiting phosphate and finished in gray, baked enamel. NEMA 3R enclosure--same requirements as NEMA 1 except galvanized prior to painting.

4. **Rating**: Ampere, volt and horsepower ratings, as well as number of poles and presence of neutral bar shall be shown on the nameplate.

B. Circuit breakers used as disconnects shall meet requirements specified in Section 16475 - OVERCURRENT PROTECTIVE DEVICES. Enclosures for same shall meet the requirements as specified above.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Coordinate all details pertaining to size of motor and/or equipment, location and requirements to enclosure, ratings, etc., so as to provide the most suitable unit for the intended purpose.

B. Provide nameplates for all disconnects. Coordinate names with mechanical equipment lists.

C. Where the rating of a fused disconnect exceeds the ampacity of the conductors being protected, a permanent label noting maximum fuse size shall be installed in a conspicuous location within the switch.

D. Where recommended or required by the equipment manufacturer, or required by Underwriters' Laboratories, disconnects shall be the fusible type, fused in accordance with the equipment nameplate information.

**** END OF SECTION ****

SECTION 16475 - OVERCURRENT PROTECTIVE DEVICES

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes general requirements, products, and methods of execution relating to overcurrent protective devices approved for use on this project. Type, duty rating and characteristics, fault interrupting capability and coordination requirements shall be determined from the plans and the following specifications.

1.2 QUALITY ASSURANCE

A. Devices shall be the latest approved design as manufactured by a nationally recognized manufacturer and in conformity with applicable standards and UL listings.

PART 2 -- PRODUCTS

2.1 MOLDED CASE CIRCUIT BREAKERS

A. Circuit breakers shall be constructed using glass reinforced insulating material. Current carrying components shall be completely isolated from the handle and the accessory mounting area.

B. Circuit breakers shall have an over center, trip free, toggle operating mechanism which will provide quick-make, quick-break contact action. The circuit breaker shall have common tripping of all poles.

C. The circuit breaker handle shall reside in a tripped position between ON and OFF to provide local trip indication. Circuit breaker escutcheon shall be clearly marked ON and OFF in addition to providing International I/O markings.

D. The maximum ampere rating and UL, IEC, or other certification standards with applicable voltage systems and corresponding interrupting ratings shall be clearly marked on face of circuit breaker or short circuit condition.

E. Each circuit breaker shall be equipped with a push-to-trip button, located on the face of the circuit breaker to mechanically operate the circuit breaker tripping mechanism for maintenance and testing purposes.

F. Manufacturer shall provide electronic and hard copy time/current characteristic trip curves (and Ip & I^2t let through curves for current limiting circuit breakers) for each type of circuit breaker.

G. Circuit breakers shall be equipped with UL listed electrical accessories as noted on the associated drawing. Circuit breaker handle accessories shall provide provision s for locking handle in the ON and OFF position.

H. All circuit breakers shall be UL listed for reverse connection without restrictive line and load markings and be suitable for mounting in any position.

I. Circuit breakers shall be constructed with factory installed mechanical lugs. All circuit breakers shall be UL listed to accept field installable/removable mechanical type lugs. Lug body shall be bolted in place; snap in design not acceptable. All lugs shall be UL listed to accept solid (not larger than #8 AWG) and/or stranded copper conductors only. Lugs shall be suitable for 75°C rated wire.

J. All circuit breakers shall be capable of accepting bus connections.

K. Instantaneous Trip Motor Circuit Protectors (MCP) will be used for all motor circuits contained in the MCC and lighting panels. The breakers will be adjustable from 700% to 1300% of the motor's full load amps.

L. Thermal magnetic circuit breakers will be used for all other circuits. The circuit breakers shall have a permanent trip unit containing individual thermal and magnetic trip elements in each pole.

M. Manufacturers are Westinghouse, Square D, or equal.

2.2 FUSIBLE SWITCHES

A. Fusible switches shall be designed for individual mounting as specified in Section 16440 - Disconnects, or for panelboard mounting.

B. Switches designed for panelboard mounting shall have the same properties as specified for the individually mounted switches.

C. Switches shall conform to NEMA and UL 67 standards.

D. Switches shall be used in conjunction with fuses as specified in the following in order to constitute a complete "Overcurrent Protective Device."

2.3 FUSES

A. Fuses of the sizes and types specified on the drawings shall be installed. Fuses shall be capable of interrupting the prospective symmetrical fault current. Furnish to the OWNER one (1) complete set of spare fuses of each rating, installed. Provide fuse puller(s) for fuse sizes used.

PART 3 -- EXECUTION

3.1 INSTALLATION

A. Size devices as shown and specified, or as required by the load being served.

**** END OF SECTION ****

SECTION 16481 - MOTOR STARTERS AND EQUIPMENT

PART 1 -- GENERAL

1.1 SUMMARY

A. This section describes general requirements, products, and methods of execution relating to manual and magnetic motor starters provided in this and other Divisions. Overloads shall be furnished and installed in Division 16.

1.2 QUALITY ASSURANCE

A. Equipment shall be of the latest approved design as manufactured by a nationally recognized manufacturer and in conformity with the governing NEMA standards.

1.3 RELATED WORK SPECIFIED ELSEWHERE

A. Section 16480 - Motor Control Centers.

PART 2 -- PRODUCTS

2.1 AC FRACTIONAL MANUAL STARTERS

A. The manual starter shall consist of a manually operated toggle switch equipped with bimetallic type thermal overload relay.

B. Thermal unit shall be one-piece construction and interchangeable. Starter shall be inoperative if thermal unit is removed.

2.2 AC MANUAL STARTERS--LINE VOLTAGE TYPE

A. Manual starters shall be constructed and tested in accordance with the latest published NEMA standards.

B. The manual starters shall consist of a manually operated switch equipped with bimetallic type thermal overload relays in every phase conductor. The overload relays shall be trip-free, and the starter shall be inoperative if any thermal unit is removed. Thermal units shall be one-piece construction.

C. Starters shall be furnished in a NEMA 1 general purpose enclosure unless otherwise indicated on the plans or required by the conditions of the area in which they are installed.

2.3 AC MAGNETIC STARTERS--LINE VOLTAGE TYPE

A. Motor starters shall be across-the-line magnetic type rated in accordance with NEMA standards, sizes and horsepower ratings.

B. Starters shall be mounted in NEMA 1 general purpose enclosures unless otherwise indicated on plans or required by the conditions of the area in which they are installed.

C. Starters shall be furnished with bimetallic type thermal overload relays in every phase conductor. Each contactor shall be provided with an external manually operated push button for the overload relays mounted in the compartment door.

D. Starters through NEMA size six (6) shall be equipped with double break silver allow contacts. All contacts shall be replaceable without removing power wiring or removing starter from panel.

E. Coils shall be of molded construction and shall be 120 VAC. 480 volt starters shall have fused 120V Control Power Transformer with not less than 50 percent excess capacity for the control circuit in enclosure.

F. Overload relays shall be the bimetallic type. Thermal units shall be of one-piece construction and interchangeable.

G. Starters shall be suitable for the addition of at least four (4) external electrical interlocks of any arrangement normally open or normally closed.

H. All starters shall have enclosure mounted red running pilot light.

2.4 AC COMBINATION STARTERS WITH FUSIBLE DISCONNECT SWITCH OR CIRCUIT BREAKER

A. Combination starters shall be manufactured in accordance with the latest published NEMA standards, sizes and horsepower ratings.

B. Disconnect switch combination starters shall consist of a visible blade disconnect switch and a motor starter.

C. Combination starters shall be mounted in NEMA 1 general purpose enclosures unless otherwise indicated on the plans or required by the conditions of the area in which they are installed.

D. The disconnect handle used on combination starters shall always be in control of the disconnect device with the door opened or closed. The disconnect handle shall be clearly marked as to whether the disconnect device is "on" or "off".

E. Starters shall be as specified in Paragraph 2.3 above.

F. Short circuit protection shall be provided for each combination starter unit. Protection shall be provided by motor circuit protector (MCP) unless noted otherwise. The short circuit protective devices shall have not less than 42,000 amperes RMS symmetrical of short circuit interrupting capacity unless required otherwise.

2.5 VARIABLE FREQUENCY DRIVE

A. Variable frequency drive (VFD) unit shall be pulse with modulated (PWM) type incorporating volts per Hertz control. Unit shall bear the UL label. The unit shall be capable of dual ramp speed setting.

B. Input characteristics and requirements:

1. 480 volt (nominal) ± 10%, 3 phase, 60 Hz ± Hz.
2. Efficiency, 97.0% at full speed, input to output; input line pf, 0.95 minimum.
3. Drive shall automatically shutdown on input power abnormalities and shall automatically restart upon restoration of "normal" power.
4. Surge protection, arresters and surge capacitors, minimum.
5. VFD input circuitry shall employ 5% per unit series line reactors and 6-pulse (minimum) rectifier circuitry.

C. Ambient conditions:

1. Temperature: 0-40°C.
2. Humidity: 5-95% non-condensing.

D. Output conditions:

1. 480 volt, 3 phase.
2. Operate 480 volt, nominal 3-phase, Design B, motor with NEMA Code G locked rotor characteristics. Size VFD for not less than motor nameplate full-load ampacity.
3. Rated for 110% of drive amperage rating overload for one minute, minimum.
4. The Contractor shall be responsible for furnishing and installing all auxiliary equipment recommended by the drive manufacturer to prevent equipment damage and excessive noise. This auxiliary equipment shall include, but not be limited to, line reactors, shielded cable, motor terminators, and increased cable insulation. Such devices shall reduce ripple in the rectifier output and reduce harmonic distortion reflected into incoming power feeders to acceptable levels. These output series devices shall also protect the motor from damaging overvoltage resulting from reflected higher-order frequencies.
5. Maximum peak voltage of PWM VFD output pulse of 1200 volts, with pulse rise time of greater than 2 microseconds. Maximum frequency of PWM VFD output pulse (carrier) frequency of 3000 Hz. Should magnitudes of these characteristics be more stressful to motor insulation than specified values, furnish filter network on VFD output to protect motors.
   (a) Coordinate with the VFD manufacturer, which devices are required and will be supplied based on estimated motor lead lengths from the drive to the motor and VFD manufacturer recommendations. The application of filtering equipment shall be designed and approved by VFD manufacturer and built into the VFD enclosure.
   (b) As part of the shop drawing submittals, submit a VFD performance study for each VFD installation which provides documentation justifying the use of devices which show conformance to the VFD manufacturer's recommendations on motor lead lengths and other noise/motor damage prevention requirements. This study shall include anticipated peak voltage to the motor, anticipated pulse rise time, and the PWM output pulse frequency setting based on anticipated lead lengths from the drive to the motor for each installation.
   (c) Reset PWM pulse output frequency from the factory default to the lowest possible setting (2000 Hz), nominal. Confirm.
   (d) Coordinate minimum pump speed with the pump supplier, and program the VFD accordingly.

E. Features:

1. Front-door mounted micro-processor-based unit with digital programming panel. Panel shall have programming keys and alpha-numeric display to allow operator to view and modify drive parameters, alarms, and operating conditions.
2. Programmable parameters:
   (a) Acceleration time
   (b) Deceleration time
   (c) Frequency range
   (d) Skip frequency ranges
   (e) Number of restart attempts

(f) Overload protection (Confirm full-load rating w/motor manufacturer and program VFD to limit speed such that motor is not overloaded.)

3. Programmable displays:
   (a) Frequency
   (b) Voltage
   (c) Percent load
   (d) Percent power
4. Protection features (with separate indications for each event):
   (a) Undervoltage trip
   (b) Overvoltage trip
   (c) Drive overcurrent trip
   (d) Drive overtemp trip
   (e) Motor overcurrent trip
   (f) Motor overtemp trip (monitor normally-closed thermal switch in motor)
   (g) Output ground fault trip

F. Front-Panel Components and Control Configuration:
1. Six-digit, non-resettable running time meter. Record running time in minutes and tenths.
2. Front-panel selector switch shall have the following functions:
   (a) "Hand" - Start up and run based on keypad setting.
   (b) "Off - Drive does not operate under any condition.
   (c) "Remote" (Auto) - Drive runs when remote "required" contacts are closed. Drive speed shall be based on remote 4-20mAdc input.
3. Keypad control of speed when in "Hand" mode described above.
4. Generate 4-20 mAdc isolated signal proportional with drive speed from 0 to 100%.
5. Lockout - Where shown, prevent drive operation when remote contacts are open.
6. Auxiliary Contacts - Provide SPDT contacts for remote monitoring.
   (a) "Running" (two sets of SPDT contacts)
   (b) "Alarm" (any alarm condition)
7. "Speed Select" Inputs - When energized, force drive to a predetermined speed parameter, either an external signal or preset speed.

G. Enclosure
1. Drive and all filters and accessory equipment shall be mounted in a single motor control center section with dimensions as indicated on Drawings.

H. Manufacturer
1. Allen Bradley Powerflex 700 (no alternative equipment will be accepted)

2.6 MOTOR DISCONNECT

A. Disconnect switches shall be fused or non-fused as required and shall be of the "heavy-duty" type, Voltage, horsepower, ampacity and NEMA enclosure rating shall be as indicated.

B. Furnish and install engraved plastic type label designating equipment served. Embossed raised letter type labels shall not be acceptable. Letters shall be 1/4” high and white in color on a black background.

PART 3 -- EXECUTION

3.1 COORDINATION

A. Coordinate all details pertaining to the motor control equipment with the Division of these specifications where the equipment is specified.

3.2 CONTROL WIRING

A. Control wiring and control devices shall be provided under the specification section in which the controlled equipment is specified. Coordinate all related work.

3.3 CONNECTIONS

A. Provide liquid-tight flexible conduit connections to motors and other equipment subject to vibration. Minimum length 12".

3.4 NAMEPLATES

A. Provide nameplates for all starters. Coordinate names with mechanical equipment lists.

**** END OF SECTION ****

SECTION 16950 - CONTROLS AND INSTRUMENTATION

PART 1 -- GENERAL

1.1 THE REQUIREMENT

A. The System Integrator shall furnish systems of supervisory control and instrumentation for installation by the electrical contractor. The instrumentation system shall measure and monitor plant process variables and equipment operation. The supervisory control system shall cause treatment system to be operated both automatically and manually as described herein. The contractor will install all equipment supplied by the System Integrator. The System Integrator shall furnish detailed wiring diagrams and mounting instructions for use by the contractor for installation.

B. All control and instrumentation systems and equipment shall be guaranteed against defects in material and workmanship for a period of two (2) years from day of acceptance.

C. It is the intent of the Contract Documents that all equipment specified in this Section of the specifications be supplied by a single-source supplier ("Systems Integrator"). The supplier shall assume full responsibility for start-up procedures so as to make the system operator the intent of the Contract Documents.

D. The work specified in this Section includes furnishing, start-up, testing and adjusting of all required equipment, including instruments, equipment, hardware, software, wiring, accessory equipment, and training to provide a completely operational process instrumentation and control system.

E. It shall be the responsibility of the System Integrator to furnish a complete and fully operating system. The System Integrator shall be responsible for all details which may be necessary to properly install, adjust and place in operation the complete installation. The Contractor shall assume full responsibility for additional costs which may result from unauthorized deviations from the Contract Documents.

F. It shall be the responsibility of the System Integrator and supplier to examine all new and existing equipment that is transmitting a signal to, or receiving a signal from, equipment specified in this Section. The Contractor shall be responsible for providing signal converters, buffer amplifiers, and isolation devices to make signal levels, reference to ground, etc. compatible between devices specified in this Section and existing equipment.

1.2 SYSTEMS INTEGRATOR EXPERIENCE AND CAPABILITIES

A. The instrumentation and control system supplier (or "Systems Integrator") shall be normally engaged in the assembly, installation, repair, and maintenance of control systems for water treatment facilities.

B. The supplier shall have provided at least ten (10) successful systems of similar or larger complexity in the State of Iowa in the last three (3) years. The related projects shall have used controllers and software packages that are of the same manufacturer as controllers and software proposed by the systems integrator for this project.

C. The supplier shall modify or supplement the supplier's "standard products" to meet these specifications. Standard products of a particular supplier that do not meet the functional and technical requirements of the specifications are not acceptable.

D. The supplier shall have a minimum of ten (10) full-time qualified, trained service personnel on staff who are capable of maintaining, adjusting, troubleshooting, and programming the system furnished under this

contract. Part time or contract service technicians are not acceptable. The supplier shall have a staffed service office within 70 miles of Webster City, IA.

E. The Systems Integrator shall provide 24 hours/day, 365 days/year service through use of on-call duty technicians. System Integrator shall be capable of offering an extended service contract after completion of the warranty period, including 24-hour, 7-day per week emergency services.

F. Provide 100% supply/performance/payment bond.

G. Provide certificate showing evidence of $1,000,000 insurance coverage for professional liability/ errors and omissions.

H. Supplier shall design, engineer, assemble, program, test, and support the system using its own facilities and employees.

I. Upon request, the supplier shall submit:

1. List of four (4) projects referenced above, including customer's name, customer contact person, engineering contact person, and phone numbers. Include a description of the project hardware, software, and cost.

2. Description of service capabilities, including number of personnel, resumes, their location, and types of service contract available.

J. The instrumentation and control system shall be supplied by one of the following companies in full conformance with this specification:

1. Automatic Systems Company; Ames, Iowa.

1.3 RESPONSIBILITY

A. The supervisory control subcontractor shall be responsible for coordination of the distribution and control center components, instrumentation and sampling, and the coordination of the MCC and supervisory controls with process equipment installed. Complete shop drawings and wiring diagrams shall be furnished. In addition to the individual unit wiring diagrams, the supervisory control subcontractor shall provide a complete composite control diagram which shall incorporate distribution, motor controls, remote controls including controls provided with process equipment and instrumentation. The composite diagrams shall show all conductor terminations with numbers identical to equipment installed. Standard typical drawings of components are not adequate. The supervisory control subcontractor shall also be informed of the contents of the specification for pumps, samplers, mechanical equipment, process equipment, meters, etc. and coordinate the controls to be compatible therewith.

B. Although Class I diagrams are specified as part of the motor control center requirements, composite diagrams which are the equivalent of Class II drawings are required by the supervisory control subcontractor.

C. Motor Control Centers shall be supplied in this section.

1.4 SUBMITTALS

A. All submittals shall conform with Section 01300 "Submittals". The contractor shall provide complete submittal data and drawings for the entire system. Partial drawings or data showing modified areas shall not be acceptable.

1.5 CONTROL AND INSTRUMENTATION WIRING

A. All analog signal wiring shall be done with two conductor shielded instrument cables as specified in Section 16120. All wiring shall be in rigid metal raceways or in cabinets.

B. Cable shields shall be insulated from the ground except at one end. Shield shall be grounded only at remote end.

C. All wiring throughout the system shall be tagged at ends and in all pull and junction boxes. Conductor numbers shall be maintained throughout the system and shall be as shown on diagrams prepared by supervisory control subcontractor. Each wire number shall be unique to that wire.

D. The wiring shown on the drawing is based on the use of equipment and components specified. Should the supervisory controls be designed to require additional wiring, the Contractor shall be responsible for providing that additional wiring.

1.6 REFERENCE STANDARDS

A. Controls and control assemblies shall be manufactured and assembled and documented in accordance with NEMA Standards:

ICS-1-1978 revised

ICS-2-1978 revised

ICS-3-1978 revised

ICS-4-1977

ICS-6-1978 revised

NFPA 70	National Electrical Code (Latest Edition)
NEMA 250	Enclosures for Electrical Equipment
UL 508	Industrial Control Equipment

1.7 SIGNAL LEVELS

A. All analog and signals shall be direct current (DC) 48 volts or less. The Contractor shall provide the relays and power supplies required for the operation to be performed. All devices which produce an analog signal shall be equipped with local transmitters which shall produce a 4-20 mA signal. All devices and power supplies shall be designed for the line and load conditions to be expected in the wiring system shown and specified.

1.8 SUPERVISORY CONTROLS

A. Supervisory controls are to be installed in supervisory control portions of the Distribution and Control centers and at equipment locations. The motor, appliance and equipment schedule on the drawings lists motor driven equipment and the supervisory control required. The following description of operation and description of components is in addition thereto. Equipment which is not included in the following description of operation is to be controlled in accordance with notations in the schedule on the drawings. Other controls or conditions discussed in other sections of these specifications shall be considered as part of the supervisory controls and supplied thereas.

B. Abbreviations

MCC	Motor Control Center
SCP	Supervisory Control Panel
RTU	Remote Terminal/Telemetry Unit
PLC	Programmable Logic Controller

OIT Operator Interface Terminal

C. Operations - Supervisory controls shall be provided to perform the following operations as well as all existing operations at the water treatment facilities:

1. Chlorine Pump shall be provided with a “Hand-Off-Auto” switch on the starter bucket. In the “Hand” position, motor shall run. In the “Auto” position, the motor shall run when any wells are running.

2. PolyBlend, Orthophosphate, Sodium Aluminate, and Polyphosphate chemical feed pumps will be monitored and controlled from the existing WTP Master SCADA Panel. The SCADA system will vary the chemical feed rate based on raw water flow. Each pump will provide run, speed, and fault feedback signals to the WTP Master Panel.

3. A new RTU will be provided in the Pump Room for monitoring and control of the chlorine booster pump, CO2 system, chlorine analyzer, chlorine alarm system, booster skid, and CO2 gas monitors. The Pump Room RTU will require an ethernet connection to the WTP Master SCADA Panel located in the upper level control room.

4. The Tomco CO2 System will receive a run signal from the Pump Room RTU and running and failed contacts will be monitored.

5. The CO2 Gas Monitoring system will consist of CO2 gas monitors located in the pump room and lower pipe gallery. Amber alarm strobe lights will be located at each entrance and in the pipe gallery. An alarm horn will be installed above the RTU and silence pushbutton on the RTU door. The Pump RTU will monitor warning and alarm level contacts.

1.9 COMPONENTS AND SYSTEMS DESIGN

A. Provide green running lights for all motors on motor starter enclosure.

B. Provide hand controls for all electrically controlled equipment. Where controls are not scheduled to be on separate control panel near equipment, hand controls shall be located on motor starter enclosure. All solenoid operated valves shall have manual overrides.

C. All wiring shall be numbered, using solder less connectors where any wire is fastened to a relay, a timer, or a terminal block. Numbered wires and terminals shall correspond to the wiring diagram layouts. All outgoing wiring shall be terminated on a marked terminal strip. Flexible stranded wiring shall be used throughout. Solid wire shall not be permitted. All terminal strips shall have screw terminals rated not less than 30A, 250 volts and shall be of a "pressure pad" between the conductor and the screw.

D. Each unit, gauge, switch and light shall be identified by an engraved phenolic-nameplate. The description shall be subject to revision by the Engineer at the time of drawing approvals. Nameplates shall be located below their respective components. All components shall be marked with a tag or tape for immediate identification.

E. Adequate transient surge voltage protection shall be provided to protect all solid state equipment.

F. All electrical components are to be "UL" listed and to be of general purpose, heavy-duty grade. Custom industry sources are not to be used. Control panels shall be labeled with a UL 508A label. Control Panels shall be labeled with a UL 698A label if the control panel contains any intrinsic barrier type equipment

G. All control switches shall be of the oil tight design suitable for NEMA classification.

H. All load relays shall be of the replaceable contact type. All control relays shall be plug-in style provided with dust protecting enclosure and plug-in bases. The bases are to have screw terminals.

I. Time delay relays, and any relay whose operating cycle would indicate a life of less than 20 years, shall be solid state, either plug-in as above or with screw terminals.

J. All start, stop, on, off, etc. commands originating from level or flow measurements shall be equipped with individual time delay devices to prevent miss-operation from minor surges or fluctuations.

K. All analog signal transmitters shall conform to ISA Standard 850.1 "Capability of Analog Signals for Electronic Industrial Process Instruments." Transmitters shall be Type 2 Class U in accordance with the Standard of the Instrument Society of America #ISA-S-50.1.

1. All analog signals which are proportional to measured value shall be at 4-20 Ma.
2. Where necessary to condition signal from a primary element, the proper transducer shall be provided.
3. Signal output from devices from which an analog signal is transmitted shall be linearlized. If the transmitter does not have built-in signal conditioning, a linearlizing transducer shall be installed locally at the transmitter.

L. Elapsed Time Meters - Elapsed time meters shall be furnished to record the operating time of all motors with starters located in the MCC. Elapsed time meters shall be calibrated in 0-99,999 hours.

M. Motor running signals shall be initiated flow switches or pressure switches if shown on drawings or from motor starter auxiliary contacts unless otherwise noted.

N. Terminal strips shall be placed to be fully accessible from door opening to enclosure. Terminal strips shall not be placed in sidewalls of enclosure, shall not be behind other components or wiring, and shall not be mounted in front of other components.

O. Power supplies and signal conditioning devices shall be of ample capacity to operate all control equipment mounted in the Supervisory Control Panel as well as connected remote devices.

1.10 INDICATION AND MANUAL CONTROL PANELS

A. Provide indication and manual control devices on the face of the Supervisory Control Panel. All controls and indicators which are scheduled or specified and are not listed hereinafter shall be located in the door of the respective motor control cubicle.

PART 2 -- PRODUCTS

2.1 GENERAL

A. Instrument and control supplier shall be responsible for all primary sensors and instruments in Section 16950 that are not specifically provided in another section. Where measurements are listed as being required and no sensor exists, a new sensor shall be supplied by the instrument and control supplier.

2.2 ENCLOSURE

A. Steel frame, steel panels, NEMA 12 or NEMA 4x stainless steel as specified. Panels shall be flanged, corners welded and ground smooth. All inside and exterior surfaces treated to prevent oxidation and painted. White on interior, manufacturer's standard color on exterior. All components labeled per shop drawings.

1. Engraved labels attached with stainless steel screws.

B. All wiring terminated on barrier-type terminal strips. Terminal strips shall be labeled with engraved plastic labels.

1. Labels shall be attached with two-part epoxy adhesive.
2. 600 volt terminal strips.

3. Ring or spade type crimp connectors.
4. Wiring laced using plastic wire ties and plastic wiring troughs.
5. Wiring held down with straps attached to enclosure with screws. Adhesive only is not acceptable.
6. Separate power, control and signal conductors.
7. Power wiring: #14 AWG, stranded, 600V copper minimum.
8. Control wiring: #18 AWG, stranded, 600V copper minimum.
9. Signal wiring: shielded, 300V, copper minimum.
10. Provide 15 amp, 10000 AIC breaker on power circuits using #14 wire.
11. Connections to instruments via terminal strip or connectors. Soldering wires to terminal strips not acceptable.

C. All enclosures 24" wide or greater shall include an interior lighting kit as specified later in this section.

D. All control panels shall include a separate back chassis mounted convenience receptacle.

E. All input and output circuits which tie to field terminals shall be individually fused. Additionally each analog circuit shall include individual transient voltage surge protections as specified in the section.

F. Each control panel shall include a means for the PLC to monitor a power failure condition on the line side of the UPS.

G. All interface with existing motor starting gear shall be via interface relays. Direct output from the PLC to field terminals is not acceptable.

H. Each and every conductor in the control panels shall be labeled on each end with a number corresponding with the drawings and terminal designations. Contractor shall use Brady heat-shrink type wire markers.

I. Control Panels designated as "insulated" shall include 1" of Dow foiled backed installation on all interior surfaces including behind the back chassis.

2.3 INCOMING LINE SURGE PROTECTION

A. 120 VAC, 30 Amp rated in-line device. Listed for protection from ANSI/IEEE C62.41 Category A and B transients.

B. Circuit Design – Multi-stage hybrid Active Tracking Network

C. Protection Modes – L-N, L-G, N-G

D. Response Time - <1 nanosecond

E. Remote Alarm – NO & NC dry contacts

F. Maximum Continuous Operating Voltage – 130 Vrms

G. Peak Surge Current – 65kA

H. Innovative Technology Inc. Model HS-P-SP-120-30A-RJ, or approved equal.

2.4 AC POWER ISOLATOR

A. A. Provide power line noise suppressors to protect the electronic equipment. The units shall provide for noise attenuation at a ration of up to 20 million to 1. Noise suppressor shall meet the following specifications:

1. Common-mode noise attenuation of 20 million to 1.
2. Normal-mode noise attenuation typically 1,000 to 1 (60dB).
3. Overload capacity 500% for 1 cycle, 200% for 30 seconds.
4. Dielectric strength of 2500 VAC minimum.
5. Operating frequency of 57-63 Hz.
6. Efficiency equal to 95%.
7. Input Voltage Range = to ±10% of nominal rated voltage.
8. Load Regulation 3.5% or less from no load to full load at unity.
9. Power Factor.
10. Harmonic Distortion 1% maximum.
11. Insulation Resistance 1000 megohms minimum from windings to core measured at 50 VOC.
12. Operating Temperature 0 degrees C to 40 degrees C.
13. Operating Humidity 95% relative (non-condensation).

2.5 ANALOG SIGNAL SURGE PROTECTION

A. Circuit Design – Bi-directional, multi stage hybrid

B. Capacitance – L-L, L-G 2.5nF

C. Data Rate – Up to 200 kBPS

D. Frequency – DC to 2 MHz

E. Response - <1 nanosecond

F. Series Resistance – 10 ohms per line

G. Protections Modes – L-L & L-G

H. Max. Operating Current – 430ma

I. Peak Surge Current – 20 kA

J. Max. Peak Voltage – 30 VDC

K. Innovative Technology Inc. Model OEM-D22TX, or approved equal.

2.6 TERMINALS

A. NEMA rated tubular screw with pressure plate type.

B. 600V AC/DC

C. Maximum Current – 55 Amps

D. Wire Range - #22 to #8

E. Allen Bradley 1492-CA1 or approved equal.

2.7 DIRECT CURRENT POWER SUPPLY

A. Series pass semiconductor type, adjustable with ± 1.0% regulation, no load to full load from all causes, total.

B. Operating source: 120 VAC, 60 Hz.

C. Output protection: current limiting and "crowbar" circuit. Fuses not permitted.

D. At initial operation power supply loading shall not exceed 50% of rating under any condition.

E. Convection cooled.

2.8 CONTROL SWITCHES

A. A. Electronic Circuits

1. Selector, momentary push-button or momentary selector as required Positions as required for application.
2. Heavy duty, oil-tight type, contacts as required.
3. Gold flashed contacts; initial resistance, 0.01 ohms; 0.5 amps at 120 VAC, resistive.

B. Control Circuits

1. Selector, momentary push-button, or momentary selector as required. Positions as required for application.
2. Heavy duty, oil-tight type, contacts as required.
3. Contact rating shall conform to NEMA A-600 designation.

C. Manufacturer or Equal:

1. Allen Bradley 800T/800H or approved equal.

2.9 CONTROL/TIMER RELAYS

A. Plug-in type with dust cover, socket and locking spring when relay mounted horizontally.

1. Coil: continuous operation at 120 VAC ±10% unless shown otherwise.

2. Contacts, 3 pole, double throw, minimum

(a) 10 amps (unless shown otherwise), make-break, 120 VAC, resistive.

(b) Insulation resistance: 1000 megohms at 500 VDC.

(c) Dielectric: 2000 VAC, 60 Hz

B. Operating time

1. 35 milliseconds (nominal) energization
2. 100 milliseconds (nominal) de-energization

C. Mechanical life: 10^6 operations

D. Temperature: 0° to 70°C

E. Allen Bradley 700HX, 700HB or approved equal.

2.10 INDICATING LIGHTS

A. Nominal l-inch diameter, opaque colored lens.

B. Press-to-test feature.

C. Heavy-duty, oil-tight.

D. Allen Bradley 800T/800H or approved equal.

2.11 MAGNETIC FLOW METERS

A. See Section 15150 “Meters” (supplied under a separate contract)

2.12 PANEL SWITCHES

A. All front mounted switches shall be heavy duty, NEMA 4 and 13, oil tight switches.

2.13 INDICATOR LIGHTS

A. Indicator lamps in the supervisory control panel shall be rated for a life of 5000 hours. Power to the lamps is to be limited for extended operational life. Lamps shall be replaceable from the front of the panel without the use of tools. Lenses shall be screw type to allow easy interchange for color-coding selection.

B. Provide a common rotate-to-test switch which shall operate all lights, including the external alarm light. Dim glow lights are not a suitable alternate.

C. An externally mounted NEMA 3 light shall be provided when called for by the plans, which can be used with a 150 watt incandescent lamp. The lamp shield shall be frosted white of break resistant Herculex.

2.14 RELAYS

A. All control relays and rear panel mounted time delays are to be plug-in style, provided with dust protecting enclosure and identical, 11-blade plug-in bases with screw terminals. Relays shall have an indication flag to indicate the energized status of the relay. Time delays shall have LED indication whether the unit is energized or not, and if energized, whether the relay is still timing or if it is timed out.

Time delay relays, and any relay whose operating frequency would indicate a life of less than 20 years, shall be solid state, either plug-in, as above, or with screw terminals.

B. Adequate transient surge voltage protection shall be provided to protect the solid state equipment from normal voltage surges.

C. All electrical components are to be UL approved, and are to be of general purpose, heavy-duty grade. Custom designed components not readily available from conventional industry sources are not to be used.

2.15 MECHANICAL TIMER

A. Mechanical timers are to provide operations with a minimum ON/OFF time of 15 minutes. The enclosure is to be NEMA 3R.

B. Manufacturers are Intermatic Inc. model T1900 series or approved equal.

2.16 IDENTIFICATION

A. All components, door mounted and rear panel, are to be provided with nametags. Nameplates on the exterior of the panel shall be reverse engraved, white on black, with the exposed face flat and smooth. Rear of panel-mounted devices shall be provided with nameplates in the form of embossed tape or other similar permanent markings. All individual wires are to be wire tagged at each end with a unique number matching the wire number identification on the schematic. Multiple conductor cable, such as ribbon cable with a permanent plug connector at each end, need not be marked.

2.17 TEST EQUIPMENT AND SPARE PARTS

A. The following test equipment and spare parts shall be provided:

1. One unit or 10%, whichever is greater, spare relays and time delays of each type.
2. Ten control fuses of each type and size.
3. Ten units or 50%, whichever is greater, spare lamps of each type.

2.18 PROGRAMMABLE CONTROLLER {MICRO LOGIX 1400}

A. Programmable controller capable of performing relay logic, timing, counting, sequencing, mathematical, proportional-integral-derivative (PID) control, and other functions as required by the functional descriptions in this Section.

B. 12K word, minimum, electrically-erasable programmable read-only memory (EEPROM) to retain program during power outages.

C. Auto start-up after power failure. Retain program and setpoints so that system starts automatically when power is restored. Battery backup.

D. Provide live digital and analog inputs/outputs to satisfy the control loops described in this section.

E. Scan 1K word program in less than 0.002 seconds.

F. I/O Requirements

1. Digital inputs

(a) Optically isolated input rated to withstand up to 1500 VAC transients.

(b) Voltage as indicated, ±□l0%.

2. Digital outputs

(a) Voltage as indicated.

(b) Capable of continuously driving up to 0.5 amp load.

3. Analog inputs

(a) Two 4-20 mAdc and three 1-5 VDC inputs total.

(b) Input isolation rated 500 volts minimum.

(c) 16-bit analog-to-digital conversion having overall accuracy of +0.7% of full scale or better.

(d) 250 ohm input impedance (on 4-20 mA input).

(e) 210 kilo-ohm input impedance (on 1-5 VDC input).

4. Analog outputs

(a) 0 to 20 mAdc range. Nominal span of 4-20 mAdc.

(b) Digital-to-analog conversion having overall accuracy of +0.7% of full scale or better.

(c) Capable of driving up to 500 ohm load.

G. Programmable in ladder logic using IBM-compatible computer as described in the functional descriptions in this Section. Use programming software that is a standard product of the PLC manufacturer. Software shall allow on-line program editing without interrupting PLC operation. Software shall have an advanced instruction set including timing, sequencing, relay logic, closed-loop PID control, mathematical, trigonometric, Boolean, floating-point and integer calculations, and time and event-based interrupts.

H. Programmable controller shall have one Ethernet and one serial ports to allow communication between controller and as described in the functional descriptions in this Section.

I. Environmental

1. Operating temperature -0° to 55°C.

2. Humidity -5 to 95% (non-condensing).

3. Noise immunity - comply with NEMA ICS-2-230.

J. PLC's shall be provided with 10% spare digital I/O's or one extra card. Provide at least one spare analog input and output. Provide spares only if no spares were provided with any other PLC's supplied.

K. Manufacturer

1. Allen-Bradley MicroLogix or Equivalent CompactLogix as required to handle the necessary I/O as described in paragraph 1.8.C.

2. Or approved equal. See Division 1.

2.19 DATA HIGHWAY CABLE AND ACCESSORIES

A. Data highway cable shall meet PLC manufacturer's requirements, shall have stranded copper conductors, braided shield, and overall 300 VAC PVC insulation suitable for wet locations.

2.20 SURGE PROTECTION

A. 120 VAC, 15 Amp rated in-line device. Listed for protection from ANSI/EEE C62.41 Category A and B transients.

B. 300 V peak clamping voltage.

2.21 UNINTERRUPTIBLE POWER SUPPLY (UPS)

A. 120 VAC, 60 Hz, single-phase input and output.

B. VA capacity equal to 125% full load. (Computer full load shall be considered to include CPU power supply, monitor, and alarm printer.

C. 15 minute battery reserve (at 125% full load). 5 hour recharge time.

D. Transfer time of 4 ms maximum.

E. Powerware or equal.

2.22 CONTROL PANELS

A. Remote Telemetry Units (RTU)

1. A remote telemetry unit using PLC shall be located at in the High Service Pump Room.
2. The remote telemetry unit shall be provided with input/output cards to interface to the field and power equipment shown on the plan drawings in the lower level as described in paragraph 1.8.C. It will communicate via ethernet to the Master SCADA Panel.
3. Provide operator adjustable timer setpoints for all alarms and process variables from the local operator interface terminal or SCADA.

B. Programmable Logic Controllers

1. Allen-Bradley MicroLogix or Equivalent CompactLogix as required to handle the necessary I/O as described in paragraph 1.8.C.

2.23 FIELD DEVICES

A. Total Chlorine Analyzer

1. Provide a Hach CL17sc Colorimetric Chlorine Analyzer, 0-10 mg/L total residual chlorine, +/-5% accuracy, IP66 rated wall-mount enclosure, linear peristalic pump, indicator and buffer solutions, and SC4500 digital controller for installation in place of the existing chlorine analyzer.

B. Alarm Horn

1. 120 Vac, 100 db, NEMA 1 or 4X rated based on installation environment.

C. Strobe Light

1. 120 Vac, electronic strobe (amber), NEMA 1 or 4X rated based on installation environment.

D. Flood Switch

1. Gems LS-270 Level Switch, 304 ss stem, buna n float, 150 psi max pressure, 20 VA NO switch, w/slosh guard.

E. Chlorine Booster Pump Starter

1. NEMA 1 rated, 480 Volt, 3-phase, combination starter with through the door disconnect, NEMA rated starter, electronic overload, control power transformer, hand-off-auto selector switch, running and failure indicator light.

PART 3 -- EXECUTION

3.1 ADJUSTMENT AND START-UP

A. During checkout and start-up the Supervisory Control Subcontractor shall provide properly trained technicians at the site to check and start-up all controls, systems, and instrumentation furnished under the controls and instrumentation portion of the specifications.

B. The technician shall be in attendance at the site to perform the above tasks until all work is completed to do the start-up operation.

C. After start-up, the technician shall be in attendance at the site to perform the following tasks:

1. Verify individually that all control and instrumentation circuits are properly operating.
2. Verify that all instruments are properly operating, are properly calibrated and marked.
3. Verify that all controls and control devices are adjusted and properly operating.
4. Verify that controlled devices and control elements provided by others are correctly connected, adjusted and operating.
5. Repair, replace, adjust, calibrate or otherwise cause the proper operation of all systems and equipment provided under this part of the specification.
6. Where devices provided by others are found to be faulty, document that condition and notify proper party. When fault has ultimately been corrected, verify proper operation.
7. Verify that proper identification has been accomplished.
8. Document and properly record all completed tasks.
9. Instruct or arrange for instruction of plant personnel in system and equipment operation.
10. Coordinate and arrange the scheduling of factory personnel for checkout and start-up of equipment. If factory personnel will provide operation instruction, technician shall schedule and arrange factory personnel schedule in cooperation with Owner.

3.2 OWNER/ENGINEER INITIATED CHANGES

A. The System Integrator shall include in their bid 16 hours of programming time for Owner/Engineer initiated changes. The time spent on completing these tasks shall be documented and shall be submitted to the Engineer at the completion of each task. An estimate of the time required for the tasks requested by the Owner/Engineer shall be provided to the Engineer prior to commencing the activity and Engineer's approval shall be obtained before any work is done.

3.3 LABELING

A. Label all field mounted control devices, instrumentation, switches, etc., with tag number and item description.

B. Labels shall be engraved laminated plastic with ¼" high lettering. Labels shall be attached with stainless steel screws to the device or nearby wall.

3.4 PROGRAMMING SERVICES

A. Program the programmable logic controller (PLC) and operator interface as required by the functional descriptions.

B. Provide additional programming during start-up, training, Owner/Engineer initiated changes and call-back periods as specified.

3.5 ACCEPTANCE TESTING

A. After the installation is complete, and proper operation has been demonstrated, a 60-day acceptance test shall begin. The entire system shall be required to operate for 60 days with no malfunctions, field repairable malfunctions excepted. Any malfunction during the 60-day test which cannot be corrected within 24 hours by the supplier shall be considered a non-field repairable malfunction and, after repairs are complete, the test shall be repeated.

B. The acceptance test shall apply to all equipment furnished under this Section.

C. Substantial completion may be obtained prior to staring the acceptance test.

D. Final Completion shall not be considered prior to successful completion of the acceptance test.

3.6 CALL-BACK SERVICES

A. In addition to other services specified, provide a competent programmer/instrumentation engineer or technician to return to the project site for two (2), eight (8) hour days during the two years of operation. During each trip, the supplier's representative shall be prepared to calibrate and check equipment furnished under this contract, give miscellaneous training, and make software revisions.

B. Call-back trips shall be at times determined by the Owner.

**** END OF SECTION ****

APPENDIX A

Cable and Conduit Schedule for Electrical Installation

Equipment	From	To	Power and Control Requirements	Conductors	Notes
Chlorine Booster Pump					
	Control Room MCC Feeder Breaker	Chlorine Booster Pump Starter	480/3/60	(3) #12 AWG + gnd	
	Chlorine Booster Pump Starter	Chlorine Booster Pump	480/3/60	(3) #12 AWG + gnd	
	Pump Room RTU	Chlorine Booster Pump Starter	120 Vac I/O	(8) #14 AWG + gnd	
Booster Pump Skid					
	Control Room MCC Feeder Breaker	Booster Pump Skid	480/3/60	(3) #8 AWG + gnd	
	Booster Pump Skid	Pump Room RTU	120 Vac I/O	(16) #14 AWG + gnd	
Tomco Control Panel					
	Existing Elec Room Lighting Panel	Tomco Control Panel	120 Vac Power	(3) #12 AWG + gnd	Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Tomco Control Panel	Pump Room RTU	120 Vac I/O	(8) #14 AWG + gnd	
	Tomco Control Panel	Pump Room RTU	Ethernet Communications	(1) Cat-6 cable	
pH Sensor	pH Sensor	Tomco Control Panel	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
	Existing Elec Room Lighting Panel	pH Sensor	120 Vac Power		Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
Pump Room RTU					
	Existing Elec Room Lighting Panel	Pump Room RTU	120 Vac Power	(3) #12 AWG + gnd	Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Existing WTP Main Control Panel (Located in upper level control room)	Pump Room RTU	Ethernet Communications	(1) Cat-6 cable	
Flood Switch					
	Flood Switch	Pump Room RTU	120V DI	(3) #12 AWG + gnd	
Pipe Gallery CO2 Gas Monitor					
	Transmitter mounted in Pump Room	Pump Room RTU	120V DI	(2) #14 AWG	
	Pump Room RTU	Transmitter mounted in Pump Room	120 Vac Power	(3) #12 AWG + gnd	
	Remote mounted gas sensor	Transmitter mounted in Pump Room	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
Pump Room CO2 Gas Monitor					
	Transmitter mounted in Pump Room	Pump Room RTU	120V DI	(2) #14 AWG	
	Pump Room RTU	Transmitter mounted in Pump Room	120 Vac Power	(3) #12 AWG + gnd	
	Remote mounted gas sensor	Transmitter mounted in Pump Room	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
CO2 Alarm Strobes					
	Pump Room RTU	Each Pump Room Entrance Door Strobe Light	120V DO	(3) #12 AWG + gnd per Strobe Light	Alarm lights can be wired in parallel from RTU.
	Pump Room RTU	Pipe Gallery Strobe Light	120V DO	(3) #12 AWG + gnd per Strobe Light	
CO2 Feed Valve					
	Pump Room RTU	CO2 Feed Valve	120V DI and DO	(4) #14 AWG + gnd	
Chlorine Gas Monitor					
	Existing Lighting Panel	Chlorine Gas Transmitter	120 Vac Power	(3) #12 AWG + gnd	Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Chlorine Gas Transmitter	Pump Room RTU	120V DO	(3) #12 AWG + gnd	
Chlorine Alarm Exterior Alarm Horn and Light					
	Pump Room RTU	Alarm Horn and Light at Exterior Door	120V DO	(3) #12 AWG + gnd	
Chlorine Room Alarm Horn and Light					
	Pump Room RTU	Alarm Horn and Light in Chlorine Room	120V DO	(3) #12 AWG + gnd	
Chlorine Robovalve System					
	Pump Room RTU	Robovalve	120V DI and DO	(4) #14 AWG + gnd	
CL17 Chlorine Analyzer					
	Pump Room RTU	Chlorine Analyzer	120 Vac Power	(3) #12 AWG + gnd	
	Chlorine Analyzer	Pump Room RTU	4-20 mA analog signals	(1) #18 AWG TSP + gnd	
Existing WTP Master Control Panel					
Sodium Aluminate Chemical Feed Pump					
	Existing Lighting Panel	Sodium Aluminate Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Sodium Aluminate Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Sodium Aluminate Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	

Polymer Chemical Feed Pump					
	Existing Lighting Panel	Polymer Chemical Feed Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Polymer Chemical Feed Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Polymer Chemical Feed Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Polyphosphate Chemical Feed Pump					
	Existing Lighting Panel	Polyphosphate Chemical Feed Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Polyphosphate Chemical Feed Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Polyphosphate Chemical Feed Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Orthophosphate Chemical Feed Pump					
	Existing Lighting Panel	Orthophosphate Chemical Feed Pump	120 Vac Power	(3) #12 AWG + gnd	Provide outlet for 120 Vac Power. Verify nearest lighting panel and available circuits. Add 20A/1p circuit breaker as required.
	Orthophosphate Chemical Feed Pump	Existing WTP Master Control Panel	120V DI and DO	(6) #14 AWG + gnd	
	Orthophosphate Chemical Feed Pump	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	
Existing Soda Ash Feed System					
	Existing Soda Ash Feed System	Existing WTP Master Control Panel	4-20 mA analog signals	(2) #18 AWG TSP + gnd	

Notes:
1. Wire sizing, conduits, and grounding to be done in accordance with Division 16 specifications and NEC Code Requirements.
2. Separate conduits required between analog and 120 Vac digital signals.

WEBSTER CITY, IOWA

CONSTRUCTION PLANS FOR

WATER TREATMENT FACILITY IMPROVEMENTS

2022

SHEET INDEX

SHEET NO.	GENERAL
1.01	TITLE, LOCATION MAP AND SHEET INDEX
1.02	ABBREVIATIONS
1.03	LEGEND
1.04	STANDARD DETAILS
	PROCESS
5.01	PROCESS FLOW DIAGRAM
5.02	LOWER LEVEL PLAN
5.03	MAIN LEVEL PLAN
5.04	UPPER LEVEL PLAN

LICENSED PROFESSIONAL ENGINEER
HERMAN A. DHARMARAJAH
24282
IOWA

I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Profession Engineer under the laws of the State of Iowa.

Signature 4/12/2022 Date

Print name Herman A. Dharmarajah

License number 24282

My license renewal date is 12/31/2022

Pages or sheets covered by this seal:
100 Series, 500 Series

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

THE SUBSURFACE UTILITY INFORMATION IN THIS PLAN IS UTILITY QUALITY LEVEL D. THIS UTILITY QUALITY LEVEL WAS DETERMINED ACCORDING TO THE GUIDELINES OF CI/ASCE 38-02, ENTITLED "STANDARD GUIDELINES FOR THE COLLECTION AND DEPICTION OF EXISTING SUBSURFACE UTILITY DATA."

400 0 400 800
Graphic scale for 1"=400'

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CLIENT PROJ. NO. 0M2.126087			

WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
TITLE, LOCATION MAP AND SHEET INDEX

SHEET 1.01

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A	ACRE, ANGLE
AB	ANCHOR BOLT
ABBR	ABBREVIATION
ABUT	ABUTMENT
AC	ACTIVATED CARBON, ASPHALT CONCRETE
A/C	AIR CONDITIONING
ACOUS	ACOUSTIC, ACOUSTICAL
ACP	ASPHALTIC CONCRETE PAVEMENT, ASBESTOS CEMENT PIPE
ADJ	ADJUST, ADJACENT
AER	AERATION
AGG	AGGREGATE
AL	ALUMINUM, ALUM
ALT	ALTERNATE
ALUM	ALUMINUM
AMB	AMBIENT
ANSI	AMERICAN NATIONAL STANDARDS INSTITUTE (FORMERLY A.S.A.)
API	AMERICAN PETROLEUM INSTITUTE
APP	APPROACH
APPD	APPROVED
APPROX	APPROXIMATE
APR	APRON
ARC L	ARCH LENGTH
ARCH	ARCHITECTURAL
ASA	AMERICAN STANDARDS ASSOCIATION (NOW ANSI)
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIAL
ATM	ATMOSPHERE
AVAR	AIR VACUUM AND AIR RELEASE VALVE
AWWA	AMERICAN WATER WORKS ASSOCIATION
AZ	AZIMUTH
BAL	BALANCE
BC	BEGIN CURVE, BOLT CIRCLE, BETWEEN CENTERS
BCR	BEGIN CURVE RETURN
BD	BOARD
BE	BOX ELDER
BEG	BEGIN
BET	BETWEEN
BF	BLIND FLANGE
BFP	BACK FLOW PREVENTER
BHP	BRAKE HORSEPOWER
BIT	BITUMINOUS
BLDG	BUILDING
BLD FLG	BLIND FLANGE
BLK	BLACK, BLOCK
BLKG	BLOCKING
BM	BEAM, BENCH MARK
BO	BLOW OFF ASSEMBLY
BOD	BIOCHEMICAL OXYGEN DEMAND
BORR	BORROW
BOT	BOTTOM
BPV	BACK PRESSURE VALVE
BR	BRIDGE, BASE OF RAIL
BRG	BEARING
B & S	BELL AND SPIGOT
BS	BACK SIGHT, BOTTOM SLOPE
BSMT	BASEMENT
BTM PL	BOTTOM PLATE
BTU	BRITISH THERMAL UNIT
BV	BUTTERFLY VALVE
BVC	BEGIN VERTICAL CURVE
BWV	BACK WATER VALVE
C	CENTIGRADE, CURVE, CUT
CAB	CABINET
CAP	CAPACITY
CAR	COUNTY AID ROAD
CB	CATCH BASIN, CHALK BOARD
CC	CENTER TO CENTER
CD	CEILING DIFFUSER
CEM	CEMETERY, CEMENT
CFH	CUBIC FEET PER HOUR
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
C & G	CURB AND GUTTER
CHAN	CHANNEL
CHEM	CHEMICAL
CHG	CHANGE
CHK V	CHECK VALVE
CHXD PL	CHECKERED PLATE
CI	CAST IRON
CIP	CAST IRON PIPE
CL	CHLORINE GAS, CHLORINATOR, CHAIN LINK, CLEARANCE, CENTERLINE
CLG,CLNG	CEILING
CLR	CLEAR
CM	CENTIMETER
CML & C	CEMENT MORTAR LINED AND COATED
CMP	CORRUGATED METAL PIPE
CMP-A	CORRUGATED METAL PIPE ARCH
CMU	CONCRETE MASONRY UNIT
CO	CLEANOUT
COL	COLUMN
COM	COMPRESSOR
COMP	COMPACT
CONC	CONCRETE, CONCENTRIC
CONN	CONNECTION
CONST	CONSTRUCTION, CONSTRUCT
CONT	CONTINUED, CONTINUOUS
CONTR	CONTRACTOR
COR	CORNER
CORD	COUNTY ROAD
COTG	CLEAN-OUT TO GRADE
CP	CATTLE PASS
CPLG	COUPLING
CRK	CREEK
CS	CAUSTIC SODA, CAST STEEL, CURVE SPIRAL
C.S.A.H.	COUNTY STATE AID HIGHWAY
CT	CERAMIC TILE
CTR	CENTER
CTSK	COUNTERSINK
CTWD	COTTONWOOD
CU	COPPER, CUBIC
CU FT	CUBIC FOOT
CU YD	CUBIC YARD
CULT	CULTIVATED FIELD
CULV	CULVERT
CY	CUBIC YARD
CYL	CYLINDER
DC	DEGREE OF CURVE
DBLK	DITCH BLOCK
DAMP	DAMPER
DEP	DEPARTURE
DES	DESIGN, DESIRABLE
DET	DETAIL
DF	DRINKING FOUNDATION
DG	DOOR GRILLE, DITCH GRADE
DI	DUCTILE IRON
DIA	DIAMETER
DIAPH	DIAPHRAGM
DIP	DUCTILE IRON PIPE
DIST	DISTANCE, DISTRICT
DIV	DIVISION
DISCH	DISCHARGE
DISP	DISPENSER
DN	DOWN, DECANT
DO	DISSOLVED OXYGEN
DR	DOOR, DRAIN
DRWY	DRIVEWAY
DS	DRENCH SHOWER AND EYE WASH
DWG	DRAWING
DIFF	DIFFUSER, DIFFERENTIAL
E	EAST, RATE OF SUPERELEVATION, EXTERNAL DISTANCE
EA	EACH
EBL	EAST BOUND LANE
EC	END CURVE
ECC	ECCENTRIC
ECR	END CURB RETURN
EF	EACH FACE, EXHAUST FAN
EFF	EFFLUENT
EG	EXHAUST GRILLE
EL	ELEVATION
ELEC	ELECTRICAL, ELECTRONIC
ELEV	ELEVATION
EMB	EMBANKMENT
ENG	ENGINE
ENGR	ENGINEER
ENT	ENTRANCE
EQ	EQUAL
EQUA	EQUATION
EQUIP	EQUIPMENT
ER	EDGE OF ROAD
EST	ESTIMATE
EVAP	EVAPORATOR
EVC	END VERTICAL CURVE
EW	EACH WAY, EYE WASH
EXC	EXCAVATION
EXH	EXHAUST
EX-HY	EXTRA HEAVY
EXIST	EXISTING
EXP	EXPANSION
EXP JT	EXPANSION JOINT
EXT	EXTERIOR, EXTENSION
F	FAHRENHEIT, FINISH
FA	FEDERAL AID
FABR	FABRICATION, FABRICATE, FABRICATED
FAI	FRESH AIR INTAKE
FAI	FEDERAL AID INTERSTATE
FAP	FEDERAL AID PRIMARY
FAS	FEDERAL AID SECONDARY
FAU	FEDERAL AID URBAN
FB	FLAT BAR, FLOOR BEAM, FIELD BOOK
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FDN	FOUNDATION
FDR	FEEDER
FE	FIRE EXTINGUISHER, FINAL EFFLUENT, FLOW ELEMENT
FE COR	FENCE CORNER
FED	FEDERAL
FF	FLAT FACE, FAR FACE, FINISHED FLOOR
F TO F	FACE TO FACE
FG	FINISHED GRADE
FH	FIRE HYDRANT
FHDWL	HEAD WALL
F & I	FURNISH AND INSTALL
FIG	FIGURE
FIN	FINISHED
FL	FLOWLINE, FLOOR
FLEX	FLEXIBLE
FLOCC	FLOCCULATOR, FLOCCULATION
FLG	FLANGE
FLGD	FLANGED
FLR	FLOOR
FME	FARM ENTRANCE
FMH	FLEXIBLE METAL HOSE
FOC	FACE OF CONCRETE
FOM	FACE OF MASONRY
FOS	FACE OF STUDS
FOW	FACE OF WALL
FP	FENCE POST
FPC	FLEXIBLE PIPE COUPLING
FPM	FEET PER MINUTE
FPS	FEET PER SECOND
FR	FRAME
FR	FRONTAGE ROAD
FS	FAR SIDE, FLOOR SINK, FINISHED SURFACE, FORGED STEEL, FROTH SPRAY, FORE SIGHT, FLOW SWITCH
FT	FEET, FOOT
FTG FTNG	FOOTING
FUT	FUTURE
FWD	FORWARD
GA	GAGE, GAUGE
GAL	GALLON
GALV	GALVANIZED IRON
GAR	GARAGE
GDE	GRADE
GEN	GENERAL, GENERATOR
GFA	GROOVED FLANGE ADAPTOR
GI	GALVANIZED IRON
GLV	GLOBE VALVE
GP	GUY POLE
GPD	GALLONS PER DAY
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GR	GUARDRAIL
GR	GRAVEL
GRAN	GRANULAR
GRD	GRADE, GROUND
GR BRK	GRADE BREAK, GRADE CHANGE
GV	GATE VALVE
GYP	GYPSUM
H20	WATER
H	HAUL
HB	HOSE BIBB
HDR	HEADER
HEX	HEXAGONAL
Hg	MERCURY
HI	HEIGHT OF INSTRUMENT
HMS	HOLLOW METAL STEEL
HO	HOUSE
H, HOR	HORIZONTAL
HORIZ	HORIZONTAL
HP	HORSEPOWER, HIGH PRESSURE
HR	HEATING RETURN, HOUR
HT	HEIGHT
HTG	HEATING
HTR	HEATER
H & V	HEATING AND VENTILATION
HW	HOT WATER, HIGH WATER
H.W. EL.	HIGH WATER ELEVATION
H.W.L.	HIGH WATER LEVEL
HWL	HIGH WATER LEVEL
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWO	HANDWHEEL OPERATED
HWY	HIGHWAY
HYD	HYDRAULIC, HYDRANT
IBC	INTERNATIONAL BUILDING CODE
IC	INTERIOR ANGLE OF CURVE
ID	INSIDE DIAMETER
IF	INSIDE FACE
IH	INTERSTATE HIGHWAY
IN	INCH
INCL	INCLUDE
INFL	INFLUENT
INFO	INFORMATION
INL	INLET
INP	IN PLACE
INSL	INSULATION, INSULATED
INSUL	INSULATION
INST	INSTALL
INSTR	INSTRUMENT
INV	INVERT ELEVATION
IP	IRON PIPE
IPS	IRON PIPE SIZE
IRRG	IRRIGATION
JAN	JANITOR
JCT	JUNCTION
J & A	JACK AND AUGER
JNT, JT	JOINT
JSTS	JOISTS
KG	KILOGRAM
KM	KILOMETER
KV	KILOVOLT
KW	KILOWATT
KWH	KILOWATT HOUR
L	LITER, LENGTH, LENGTH OF CURVE
LAB	LABORATORY
LAT	LATITUDE
LAV	LAVATORY
LB	POUND
LDG	LOADING
LEV	LEVEL
LF	LINEAR FEET
LIN	LINEAR
LO	LEVEL OUT
LOR	LINE-OFFICE REVISION
LOS	LENGTH OF OFFSET SPIRAL
LP	LOW POINT, LIGHT POLE
LOC	LOCATION
LT	LEFT
LWL	LOW WATER LEVEL
LWR	LOWER
M	METER
M	MIDDLE ORDINATE (CIRCULAR CURVE), MAXIMUM OFFSET (VERTICAL CURVE)
MAG	MAGNETIC
MAN	MANUAL
MAINT	MAINTENANCE
MACH	MACHINE
MAS	MASONRY
MATL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MECH	MECHANICAL
MEMB	MEMBRANE
MET	METAL
MFR, MFGR	MANUFACTURER
MGD	MILLION GALLONS PER DAY
MH	MANHOLE
MI	MALLEABLE IRON, MILE
MIN	MINIMUM, MINUTE
MISC	MISCELLANEOUS
MK	MARK
ML	MATCH LINE, MEDIAN LINE
MM	MILLIMETER
MNDOT	MINNESOTA DEPARTMENT OF TRANSPORTATION
MO	MOTOR OPERATED, MASONRY OPENING
MOD	MODEL
MON	MONUMENT
MPH	MILES PER HOUR
MS	MOP SINK
MTC	MECHANICAL-TYPE-COUPLING
MTD	MOUNTED
MTL	MATERIAL
MTR	MOTOR
N	NORTH
NAT	NATURAL
NBL	NORTH BOUND LANE
NBS	NATIONAL BUREAU OF STANDARDS
NC	NORMALLY CLOSED
NE	NORTH EAST
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NF	NEAR FACE
NIC	NOT IN CONTACT
NO	NUMBER, NORMALLY OPEN
NPS	NOMINAL PIPE SIZE (FORMERLY I.P.S.)
NPT	NATIONAL PIPE THREAD
NRS	NON-RISING STEM
NS	NEAR SIDE
NTS	NOT TO SCALE
NW	NORMAL WATER, NORTH WEST
N & D	NEAR SIDE
OBLIT	OBLITERATE
OC	OVER CROSSING, ON CENTER
O.C.E.W.	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OF	OVERFLOW, OUTSIDE FACE
OH	OVERHEAD
OPER	OPERATOR, OPERATING
OPNG	OPENING
ORP	OXIDATION-REDUCTION POTENTIAL
OS & Y	OUTSIDE SCREW AND YOKE
OUT	OUTLET
OWG	OIL, WATER, GAS
OZ	OUNCE
P	POLE, PAGE, PLACE
PAVMT	PAVEMENT
PC	PRIMARY CLARIFIER, PORTLAND CEMENT, POINT OF CURVATURE
PCC	POINT OF COMPOUND CURVE
PCOTG	PRESSURE CLEANOUT TO GRADE
PE	PLANT EFFLUENT, POLYELECTROLYTE, POLYMER
PE	PROJECT ENGINEER, PROFESSIONAL ENGINEER, POLYETHYLENE
PERF	PERFORATED
PERMISS	PERMISSIBLE
PER PERIM	PERIMETER
PG	PRESSURE GAGE
pH	HYDROGEN ION CONCENTRATION
PI	PLANT INFLUENT, POINT OF INTERSECTION, PRESSURE INDICATOR
PL	PLATE, PROPERTY LINE, PLACE
PLAS	PLASTER, PLASTIC
PLY WD	PLYWOOD
PLF	POUNDS PER LINEAR FOOT
PLT	PLANT
PNEU	PNEUMATIC
POC	POINT OF CURVE
POP	POPLAR
POST	POINT ON SEMI TANGENT
POT	POINT ON TANGENT
PP	POWER POLE
PPD	POUNDS PER DAY
PPH	POUNDS PER HOUR
PPM	PARTS PER MILLION
PR	PAIR
PRC	POINT OF REVERSE CURVE
PRESS	PRESSURE
PROJ	PROJECT
PROP	PROPERTY
PROV	PROVISIONS
PRV	PRESSURE REGULATING, RELIEF, REDUCING VALVE
PS	PRESSURE SWITCH
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH GAUGE
PT	POINT, POINT OF TANGENCY
PTDF	PRESSURE TREATED DOUGLAS FIR
PV	PLUG VALVE
PVC	POLYVINYL CHLORIDE
Q	DISCHARGE CFS.
QUANT	QUANTITY
R	RADIUS, RISER, RANGE, ROCK, RETURN, RATE OF SLOPE, RING
RAD	RADIALLY
RAG	RETURN AIR GRILLE
RAS	RETURN ACTIVATED SLUDGE
RC	REINFORCED CONCRETE
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCP	REINFORCED CONCRETE PIPE
RD	ROOF DRAIN, ROUND, OR ROAD
RDWD	REDWOOD
RDWY	ROADWAY
RECIRC	RECIRCULATING
RECONST.	RECONSTRUCT
RED	REDUCER, REDUCING
REF	REFERENCE, REFER
REFR	REFRIGERATOR
RF	ROOF
REG	REGULATING
REINF	REINFORCE, REINFORCED
REM	REMOVE
RE-STL	REINFORCING STEEL
RET W	RETAINING WALL
REQ, REQD	REQUIRED
REV	REVISION
RM	ROOM
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE, REINFORCED PLASTIC MORTAR
RR	RAILROAD
RT	RIGHT
R/W	RIGHT OF WAY
RWL	RAINWATER LEADER
RY	RAILWAY
S	SOUTH, SCUM, SINK, SECOND, SLOPE, SAND
SA	SAMPLE
SALV	SALVAGED
SAN	SANITARY
SAR	STATE AID ROAD
SBL	SOUTH BOUND LANE
SC	SPARE CHEMICAL, SECONDARY CLARIFIER
SCD	SCREWED
SCFM	STANDARD CUBIC FEET PER MINUTE
SCH	SCHEDULE
SCHED	SCHEDULE
SCP	SECTIONAL CONCRETE PIPE
SCPA	SECTIONAL CONCRETE PIPE ARCH
SD	SERVICE DRIVE
SDR	STORM DRAINS
SE	SOUTHEAST
SEC	SECONDARY
SECT	SECTION
SER	SERIES
SETT	SETTLING
SF	STORY FRAME
SFCE	SURFACE
S-G	SAND AND GRAVEL
SH	SHOWER
SHLD	SHOULDER
SHT	SHEET
SIM	SIMILAR
SL	SLUDGE, SLOPE
SO	SOUTH
SO VALVE	SHUT OFF VALVE
SP	STATIC PRESSURE
SPEC	SPECIFICATION
SPEC'D	SPECIFIED
SPK	SPIKE
SQ	SQUARE
SQYD	SQUARE YARD
SS	SANITARY SEWER, STAINLESS STEEL, SERVICE SINK
SSU	SECONDS SAYBOLT UNIVERSAL
ST	STREET, STONE, STEEL, STUCCO, STATE
STA	STATION
STC	SLEEVE-TYPE COUPLING
STD	STANDARD
STK	STAKE
STL	STEEL
STM	STORM
STN	STAINLESS
STN STL	STAINLESS STEEL
STP	STUMP
STRUCT	STRUCTURAL, STRUCTURE
SUCT	SUCTION
SUPER	SUPER ELEVATION
SUPP	SUPPLIER, SUPPLY
SURF	SURFACE
SV	SOLENOID VALVE
SW	SIDEWALK, SOUTH WEST
SWR	SIDEWALL REGISTER, SEWER
SYM	SYMMETRICAL, SYMBOL
SYST	SYSTEM
T	THERMOSTAT, TREAD OF STAIR, TOP, TANGENT
T & B	TOP AND BOTTOM
T & G	TONGUE AND GROOVE
TAN	TANGENT
TB	TACK BOARD
TBE	THREAD BOTH ENDS
TBM	TEMPORARY BENCH MARK
TC	TOP OF CURB
TEL	TELEPHONE
TEMP CONN	TEMPORARY CONNECTION
T.F.	TOP OF FOOTING
TFE	TOP OF FOOTING ELEVATION
TH	TRUNK HIGHWAY
THR'D	THREADED
TK	TANK
TOE	THREAD ONE END
TOPOG	TOPOGRAPHY
TP	TELEPHONE POLE, TELEGRAPH POLE
TR	TREE, TRENCH, TRACK
TRANS	TRANSITION, TRANSMITTED
TRANSV	TRANSVERSE
TS	TANGENT TO SPIRAL, TOPSOIL, TOP SLOPE
TTH	TEMPORARY TRUNK HIGHWAY
TV	THERMOSTATIC VALVE
TW	TOP OF WALL, THERMOMETER WELL
TWP	TOWNSHIP
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UC	UNDER-CROSSING
UG	UNDERGROUND
UGC	UNDERGROUND CONDUIT
UH	UNIT HEATER
UL	UNDERWRITERS LABORATORIES
UNADJ	UNADJUSTED
UR	URINAL
USGS	U.S. GEOLOGICAL SURVEY
UW	UTILITY
V	VACUUM, VALVE, VERTICAL, VENT, VOLT, VOLUME
VAR	VARIES, VARIABLE
VB	VAPOR BARRIER
VC	VERTICAL CURVE
VCP	VITRIFIED CLAY PIPE
VERT	VERTICAL
VIT	VITRIFIED
VM	VEHICULAR MEASURE
VOL	VOLUME
VTC	VENT TO CEILING
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
VTR	VENT THROUGH ROOF
W	WEST, WASTE, WATER
W/	WITH
WAS	WASTE ACTIVATED SLUDGE
WBL	WEST BOUND LANE
WC	WATER COLUMN, WATER CLOSET
WCO	WALL CLEANOUT
WD	WOOD
WDW	WINDOW
W'MN	WATER MAIN
W/O	WITHOUT
WS	WATER SURFACE
WSTP	WATER STOP
WT	WEIGHT
WWM	WELDED WIRE MESH
X-OVER	CROSSOVER
X-RD	CROSS ROAD
XS	EXTRA STRONG
XSECT	CROSS SECTION
YD	YARD
YH	YARD HYDRANT

NOTE: SEE PIPING SCHEDULE FOR ADDITIONAL ABBREVIATIONS

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WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
ABBREVIATIONS

SHEET 1.02

PIPING & FITTING SYMBOLS

- AC — Air Cock
- P — Air Operation
- BP — Backflow Preventer
- Blind Flange
- Drip Trap
- Exhaust to Atmosphere (Inside)
- Exhaust to Atmosphere (Outside)
- FT — Flame Trap
- FC — Flame Cell
- Flanged Coupling Adapter (F.C.A.)
- Flexible Hose
- 4"F.D. — Floor Drain - Size
- Harnessed Sleeve Coupling (H.S.C.) / Sleeve Coupling (S.C.)
- HB — Hose Bib
- 1-1/2" Hose Gate
- FE X — Meter
- M — Motor Operation
- N.C. — Normally Closed
- N.O. — Normally Open
- Orifice
- Pump

Pipe & Joint Designations

- Bell & Spigot Joint
- Flanged Adapter
- Flanged Joint Fitting
- Mechanical Joint Fitting
- Wall Pipe
- Wall Sleeve
- Quick Disconnect Coupling
- Reducer
- Removable Cap
- Removable Plug
- Rupture Disc
- ST — Sediment Trap
- Sight Flow Indicator
- Union

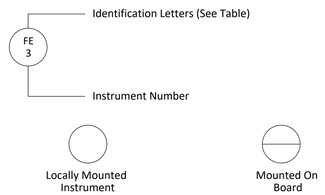
VALVE SYMBOLS

Process Flow Diagram	Plan Process Drawings
Angle Valve	Ball Valve
Ball Valve	Butterfly Valve
Butterfly Valve	Check Valve
Check Valve	Gate Valve
Diaphragm Valve	Plug Valve
Gate Valve	
Globe Valve	
Hose Gate Valve	
Knife Gate Valve	
Needle Valve	
Pinch Valve	
Plug Valve	
RPZ (Reduced Pressure Zone)	
PRV — Pressure Regulating Valve	
PT — Pressure/Temperature Relief Valve	
Relief or Safety Valve	
Shear, Slide, Sluice or Stop Gate	
3-Way Plug Valve (2-Port)	
3-Way Plug Valve (3-Port)	
3-Way Valve	
3-Way Plug Valve (4-Port)	
V — Vent	
Yard Hydrant	
Y-Type Strainer	

INSTRUMENT IDENTIFICATION LETTERS

	FIRST LETTER: MEASURED OR INITIATING VARIABLE	FIRST LETTER: MODIFIER	SUCCEEDING LETTERS: READOUT OR PASSIVE FUNCTION	SUCCEEDING LETTERS: OUTPUT FUNCTION	SUCCEEDING LETTERS: MODIFIER
A	Analysis		Alarm		
B	Burner Flame				
C	Conductivity (Electrical)			Control	
D	Density (Mass) or Specific Gravity	Differential			
E	Voltage (EMF)		Primary Element		
F	Flow Rate	Ratio (Fraction)			
G	Gauging (Dimensional)		Glass		
H	Hand (Manually Initiated)				High
I	Current (Electrical)		Indicate		
J	Power	Scan			
K	Time or Time-Schedule			Control Station	
L	Level		Light (Pilot)		Low
M	Moisture or Humidity				Middle or Intermediate
N					
O			Orifice (Restriction)		
P	Pressure or Vacuum		Point (Test) Connection)		
Q	Quantity or Event	Integrate or Totalize	Meter		
R	Radioactivity		Record or Print		
S	Speed or Frequency			Switch	
T	Temperature		Totalizing	Transmit	
U					
V	Viscosity			Valve, Damper or Louver	
W	Weight or Force		Well		
X					
Y				Relay or Compute	
Z	Position			Drive, Actuate or Unclassified Final Control Element	

INSTRUMENT IDENTIFICATION



VALVE OPERATORS

C	Cylinders	HW	Handwheel
CW	Chainwheel	L	Lever
D	Diaphragm	M	Motor
E	Electric	P	Pneumatic
F	Float	S	Solenoid
H	Hydraulic		

Soil Boring

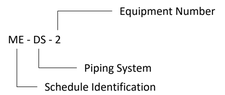
PIPING SCHEDULE

PIPING SYSTEM DESIGNATION	FLUID
AE	Aerator Effluent
AA	Aqueous Ammonia
AW	Filter Air Wash
BW	Filter Backwash
CD	Chemical Drain and Vent
CL	Chlorine (Gas or Liquid State)
CLS	Chlorine Solution
CLV	Chlorine Gas Under Vacuum
CS	Caustic Soda
CV	Chlorinator Vent and Detection Line
DW	Demineralized Water
FI	Filter Influent
FE	Filtered Effluent
FTW	Filtered Water to Waste
HF	Hydrofluosilicic Acid
HR	Heating Water Return
HS	Heating Water Supply
IA	Instrument Air
LA	Liquid Alum
MF	Membrane Feed
NG	Natural Gas
PA	Plant Air
PD	Plant Drain
PEA	Polymer - Anionic
PEC	Polymer - Catonic
PEN	Polymer - Nonionic
PO	Plant Overflow
PP	Process Piping
PPH	Poly Phosphate
PPM	Potassium Permanganate
PW	Potable Water
RW	Raw Water
SA	Sample Line
SD	Sanitary Drain and Vent
SDR	Storm Drain
SI	Sodium Silicate
SL	Sludge
SPD	Sump Pump Discharge
SS	Sanitary Sewer
SW	Filtered Surface Washwater
UW	Utility Water (Non-Potable Water)
V	Vacuum
WW	Filter Waste Washwater
WWR	Washwater Return

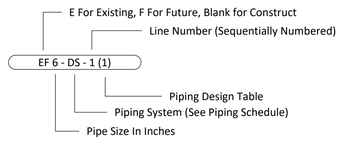
EQUIPMENT SCHEDULE

DESIGNATION	EQUIPMENT TYPE
F	Fan
ME	Miscellaneous Equipment
P	Pump
S	Special
SG	Stop Gate, shear gate, sluice gate, slide gate, flap gate
UH	Unit Heater
V	Valve (Valves 4" Diameter and Larger Included in Schedule

EQUIPMENT IDENTIFICATION



PIPE IDENTIFICATION



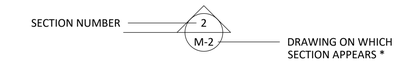
PIPE DESIGN TABLE

PDT NO.	PIPE MATERIAL	FITTING MATERIAL
1	Class (as Specified) for Ductile Iron ANSI A21.51/AWWA C151 Flanged or Mechanical Joints as Indicated. Class (as Specified) for Threaded Flange	Class 125 Ductile or Cast Iron, ANSI A21.10/AWWA C110 Flanged or Mechanical Joint as Indicated
2	Standard Weight Carbon Steel, ASTM A120, Black	3-Inch and Smaller - 150 lb. Malleable Iron, ANSI B16.3 Banded, Screwed, 3-1/2 Inch and Larger - Standard Weight -ASTM A234 ANSI B16.9 Welded Steel or 125 lb. Flanged Cast Iron as Indicated
3	Standard Weight Carbon Steel, ASTM A120, Galvanized	3-Inch and Smaller - 150 lb. Malleable Iron, ANSI B16.3 Banded, Screwed, Galvanized 3-1/2 Inch and Larger - 125 lb. Cast Iron Flanged or Mechanical Coupling as Indicated
4	Copper, ASTM B88 Buried Service - Type K, Soft Temper Exposed Service - Type L, Hard Temper	Wrought Copper or Cast Bronze Solder Joint, ANSI B16.22, 150 psi
5	Polyvinyl Chloride, Schedule 80, Normal Impact ASTM D1785	Schedule 80 Polyvinyl Chloride, Socket Solvent Weld Joints, ASTM D2467
6	Fiberglass Reinforced Plastic (FRP) ASTM D2996	Epoxy Resin Fragment Wound or Molded Type - 150 psi @ 200 F
7	Linear Low Density Poly-ethylene Tubing, Vacuum Rated, Installed Inside 3" Schedule 80 PVC Pipe	Compression Fitting
8	Cast Iron Soil ANSI A112.5.1, Service Weight, Bell and Spigot or Hubless	Cast Iron Soil ANSI A112.5.1, Service Weight, Bell and Spigot or Hubless
9	Class (as Specified) for Ductile Iron ANSI A21.51/AWWA C151, Bell and Spigot	Class 125 Ductile or Cast Iron, ANSI A21.10/AWWA C110, Mechanical Joint
10	Polyvinyl Chloride Sewer Pipe, Bell and Spigot ASTM D-3034	Polyvinyl Chloride, Bell and Spigot, ASTM D-3034
11	Standard Weight Steel, ASTM A53, Seamless. (10 Mil Polyethylene or PVC Coated @ Exterior)	Standard Weight, Butt Weld Steel ANSI B16.9 ASTM A234
12	Polyvinyl Chloride Pressure Pipe ASTM D2241 (C900) with Bell & Spigot Ends. Wall thickness as Specified	Class 125 Ductile Iron or ANSI A21.10/ AWWA C110, Flanged or Mechanical Joints as Indicated
13	Polypropylene, ASTM D2146 Schedule 40 with Heat Fused Joints	Polypropylene, Schedule 40 Drainage Type with Heat Fused Socket Joints
14	Stainless Steel AISI Type 304, ASTM A312 Schedule 5S	Stainless Steel AISI Type 316 ANSI B16.9 Butt-Welded Schedule 5S or 150 lb Flanged
15	Welded Steel, AWWA C200 with Specified Wall Thickness. Epoxy/Cement Mortar Lined for Potable Water Service	ASTM A234, Grade B, Seamless or Butt-welded. Fittings 14-inches and Larger Mitered to Conform to AWWA C208 Table 2 with Butt-Weld Ends

SECTION AND DETAIL IDENTIFICATION

SECTION IDENTIFICATION

(1) SECTION CUT ON DRAWING M-1 AS:



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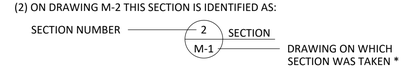
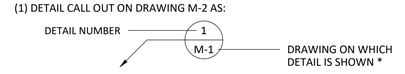


DETAIL IDENTIFICATION

(1) DETAIL CALL OUT ON DRAWING M-2 AS:



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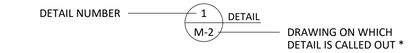
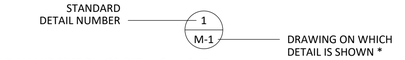


STANDARD DETAIL IDENTIFICATION

(1) DETAIL CALL OUT ON DRAWING M-2 AS:



*NOTE: IF PLAN AND SECTION (OR DETAIL CALL-OUT AND DETAIL) ARE SHOWN ON THE SAME DRAWING, DRAWING NUMBER IS REPLACED BY A LINE.

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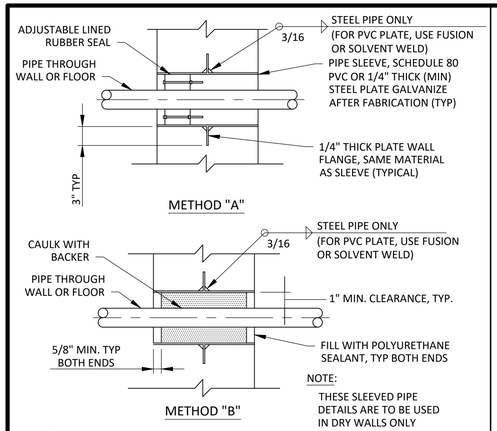
DESIGNED	NO.	ISSUED FOR	DATE
HAD	A		1/28/2022
DRAWN CAL	0		4/12/2022
CHECKED GLS			
CLIENT PROJ. NO. 0M2.126087			

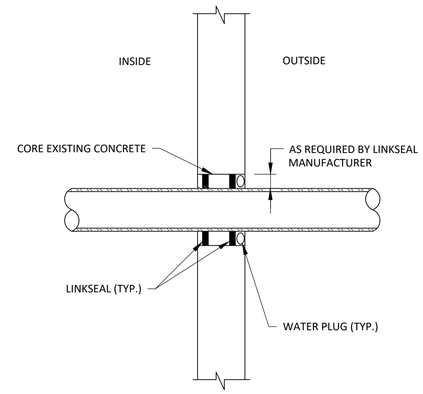
WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
LEGEND

SHEET 1.03



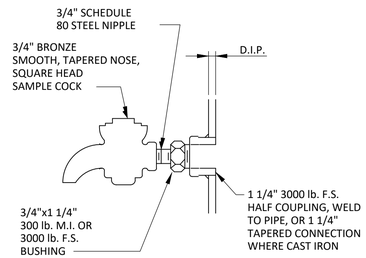
1 / 1.04 SLEEVED PIPE OPENING 3" AND SMALLER

NOT TO SCALE



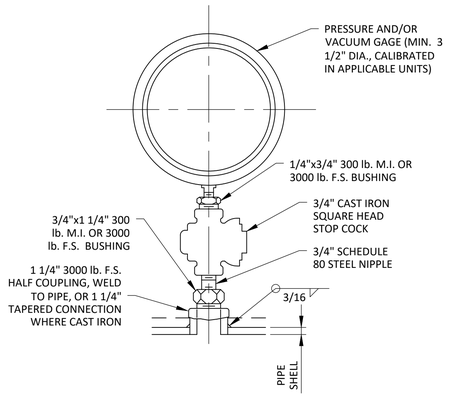
2 / 1.04 WALL PIPES IN EXISTING STRUCTURES

NOT TO SCALE



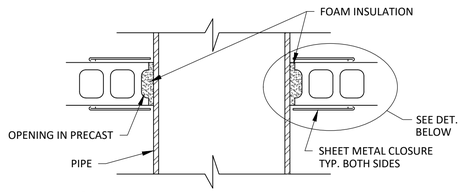
3 / 1.04 SAMPLE COCK

NOT TO SCALE



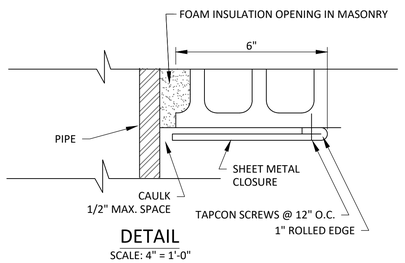
4 / 1.04 AIR PRESSURE AND/OR VACUUM GAUGE IN PIPE

NOT TO SCALE



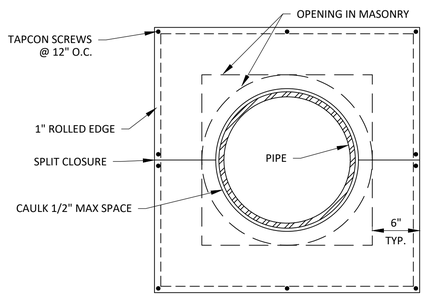
PLAN

SCALE: 3/4" = 1'-0"



DETAIL

SCALE: 4" = 1'-0"

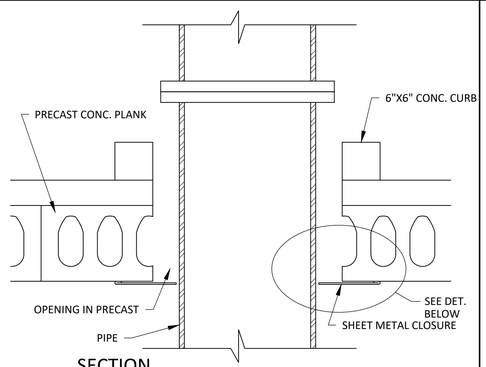


ELEVATION

SCALE: 3/4" = 1'-0"

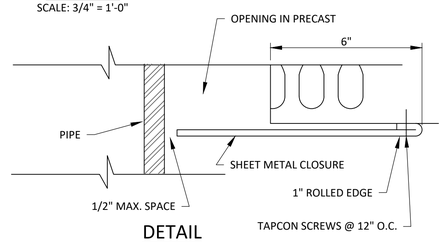
8 / 1.04 OPENING CLOSURE AT MASONRY OPENINGS

NOT TO SCALE



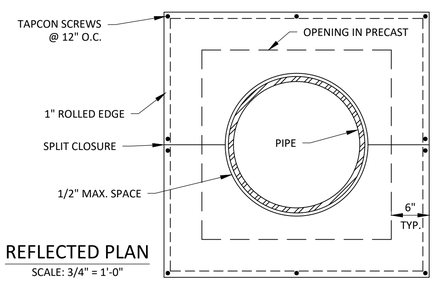
SECTION

SCALE: 3/4" = 1'-0"



DETAIL

SCALE: 4" = 1'-0"

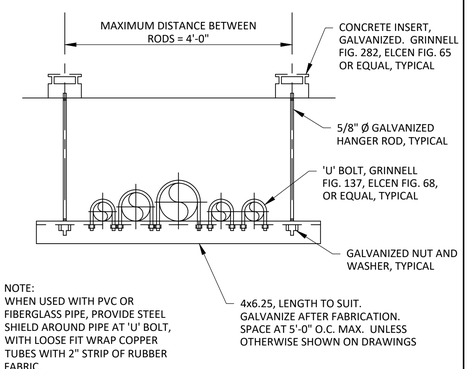


REFLECTED PLAN

SCALE: 3/4" = 1'-0"

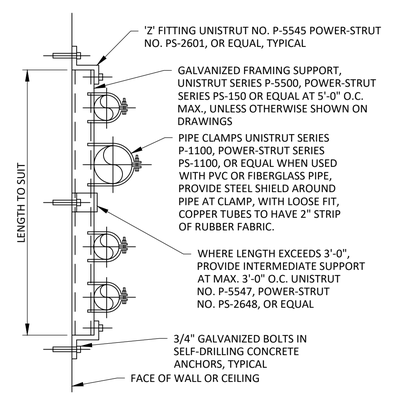
9 / 1.04 OPENING CLOSURE AT PRECAST OPENINGS

NOT TO SCALE



5 / 1.04 TRAPEZE PIPE HANGER

NOT TO SCALE

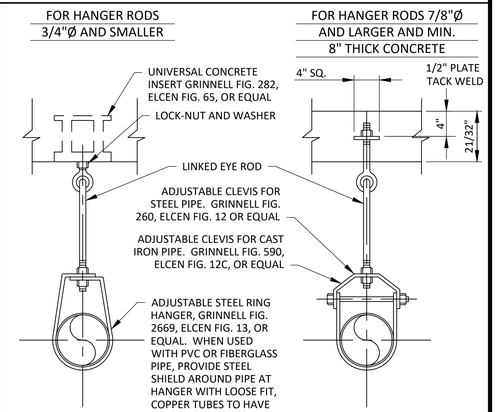


6 / 1.04 FLUSH MOUNTED PIPE SUPPORT

NOT TO SCALE

FOR HANGER RODS 3/4"Ø AND SMALLER

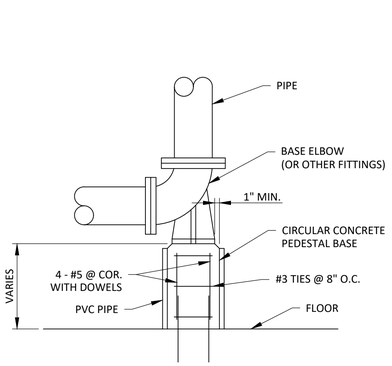
FOR HANGER RODS 7/8"Ø AND LARGER AND MIN. 8" THICK CONCRETE



7 / 1.04 PIPE BRACKET

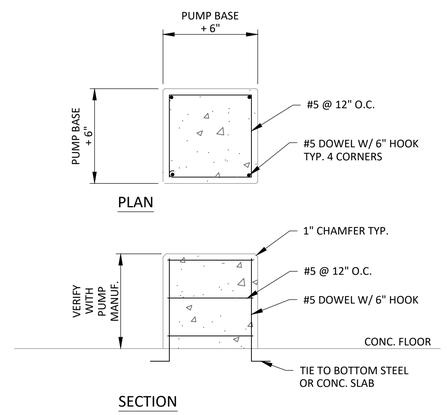
NOTE: 4" SQ. BEARING PLATE ALLOW 3800 lb. LOAD MAX. CONCRETE INSERT ALLOW 1400 lb. LOAD MAX

NOT TO SCALE



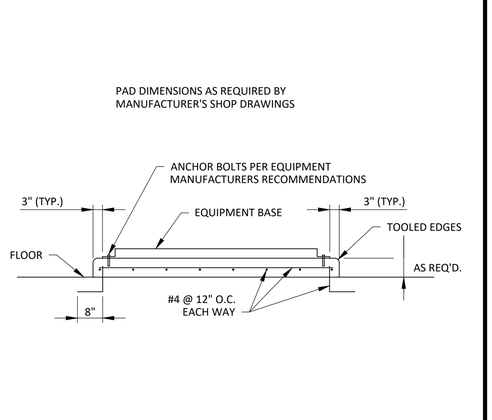
10 / 1.04 CONCRETE PEDESTAL BASE

NOT TO SCALE



11 / 1.04 CONCRETE PUMP BASE

NOT TO SCALE



12 / 1.04 CONCRETE EQUIPMENT BASE

NOT TO SCALE

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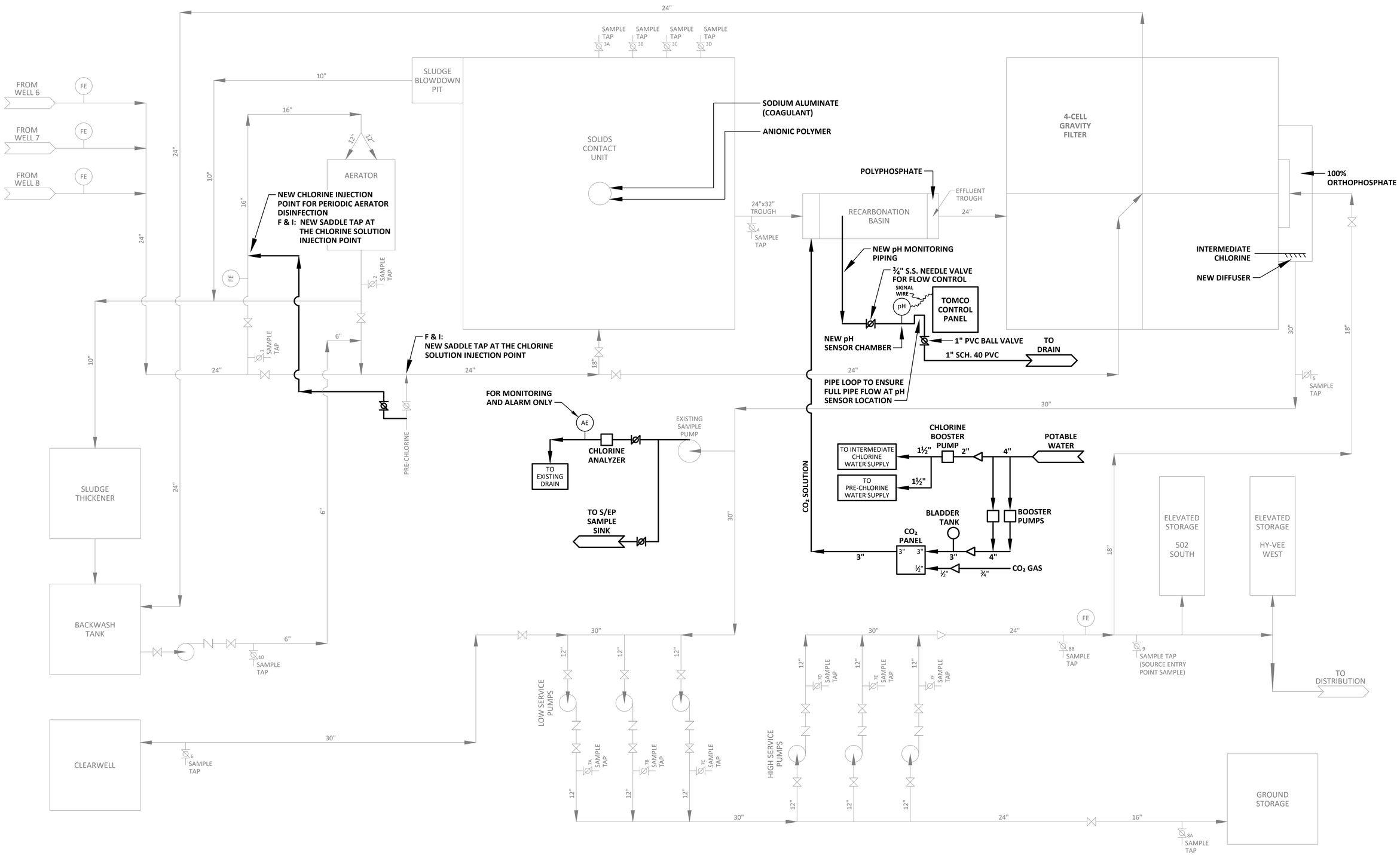
DRAWN CAL	0		4/12/2022
CHECKED GLS			
CLIENT PROJ. NO. 0M2.126087			

WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
STANDARD DETAILS

SHEET 1.04



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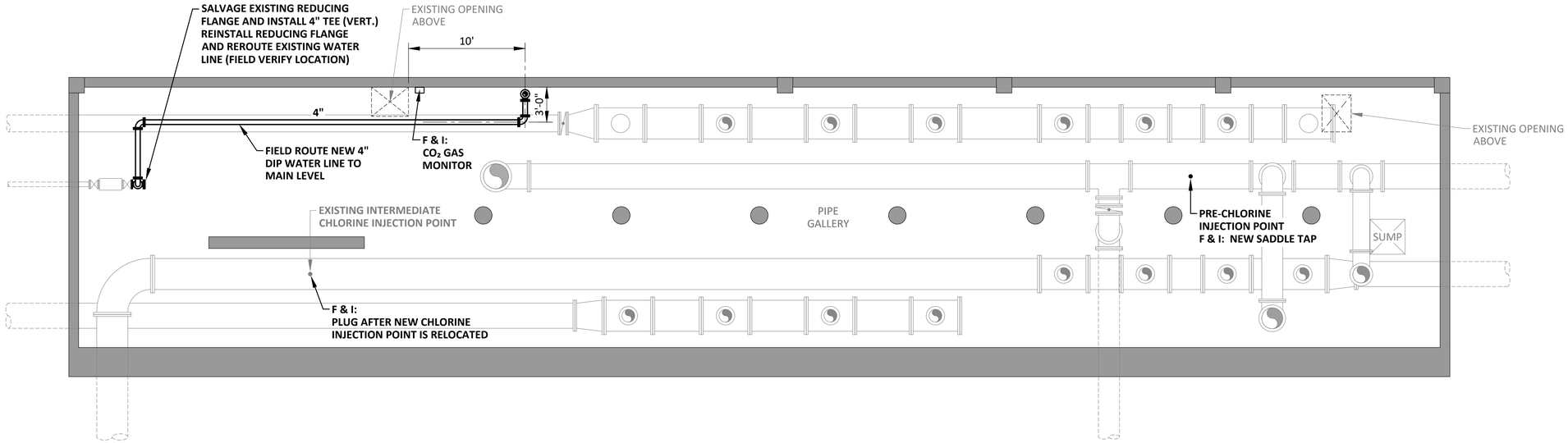
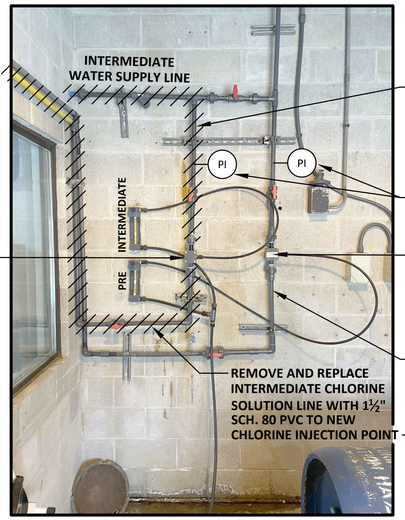
WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
PROCESS FLOW DIAGRAM

SHEET 5.01



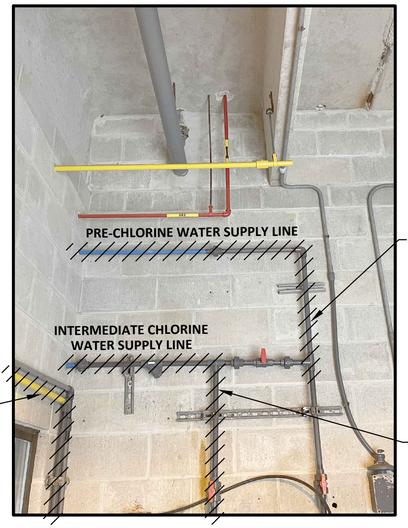
LOWER LEVEL PLAN

SCALE: 3/16"=1'-0"



1A 5.03 PHOTO

NOT TO SCALE



1B 5.03 PHOTO

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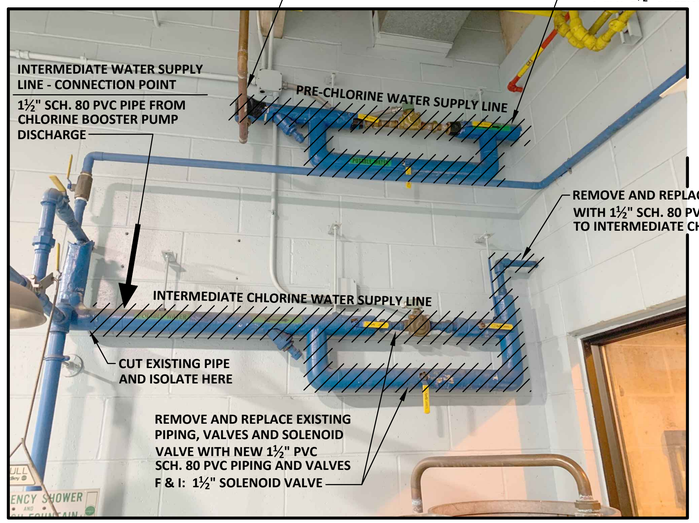
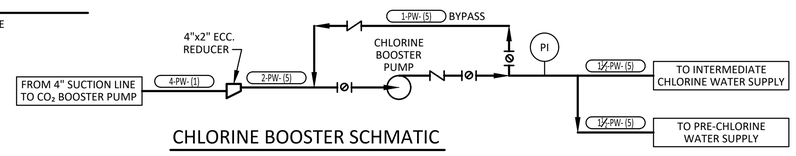


2 5.03 PHOTO

NOT TO SCALE

CHLORINE FEED PIPING MODIFICATIONS



CHLORINE BOOSTER SCHMATIC

NOT TO SCALE

0 2 4 6 8 12 16

Graphic Scale for 3/16"=1'-0"

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WEBSTER CITY, IOWA

WATER TREATMENT FACILITY IMPROVEMENTS

LOWER LEVEL PLAN AND CHLORINE FEED PIPING MODIFICATIONS

SHEET 5.02

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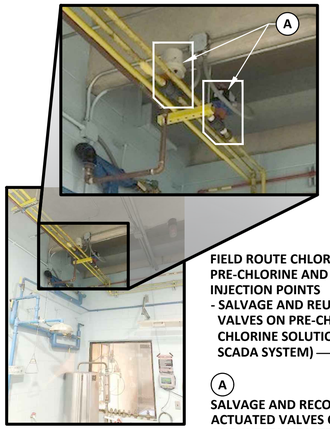


FIELD ROUTE CHLORINE SOLUTION LINES TO PRE-CHLORINE AND INTERMEDIATE CHLORINE INJECTION POINTS
- SALVAGE AND REUSE ELECTRIC ACTUATED VALVES ON PRE-CHLORINE AND INTERMEDIATE CHLORINE SOLUTION LINES (RECONNECT TO SCADA SYSTEM)

(A) SALVAGE AND RECONNECT ELECTRIC ACTUATED VALVES ON PRE-CHLORINE AND INTERMEDIATE CHLORINE SOLUTION LINES - RECONNECT TO SCADA SYSTEM

1 / 5.03 PHOTO — NOT TO SCALE

CHLORINE ROOM

HOIST BEAM

1A 5.02 PHOTO

1B 5.02 PHOTO

2 5.02 PHOTO

1 5.03 PHOTO

1½"

INTERMEDIATE WATER SUPPLY LINE - CONNECTION POINT

FIELD ROUTE NEW INTERMEDIATE CHLORINE SOLUTION ALONG CEILING

EXISTING CLHORINE FEED LINES

3" DIP WATER FEED PIPE TO CO_2 PANEL

PROPOSED 20"Ø BLADDER TANK

CORE DRILL EXIST. CONC. FLOOR (4" DIP)

EXISTING POTABLE WATER THROUGH WALL

CO_2 / H_2O FEED PANEL (2" FNPT S.S. INFLUENT AND 2" FNPT S.S. EFFLUENT)

CHLORINE BOOSTER PUMP

9"

ROUTE pH SIGNAL CABLE TO TOMCO CONTROL PANEL

F & I: CO_2 GAS MONITOR

FIELD ROUTE CHLORINE PUMP DISCHARGE PIPING TO PRE-CHLORINE WATER AND INTERMEDIATE CHLORINE SUPPLY CONNECTION POINTS

CONCRETE HOUSEKEEPING PAD

4'-6"

2 5.03 PHOTO

16'-0"

CONCRETE HOUSE-KEEPING PAD

4"x2" REDUCER

HOIST BEAM

CO_2 BOOSTER PUMP SYSTEM

BLOWER

¾" S.S. NEEDLE VALVE FOR FLOW CONTROL TO pH SENSOR

AIR COMPRESSOR

NEW INTERMEDIATE CHLORINE SOLUTION LINE FROM MAIN LEVEL THROUGH CEILING TO CEILING OF UPPER LEVEL

pH SENSOR
- MOUNT SENSOR 5ft ABOVE FINISHED FLOOR (FFE)
- INLET PIPING TO HAVE A ¾"S.S. NEEDLE VALVE FOR FLOW CONTROL
- OUTLET DRAIN TO BE PIPED TO CHLORINE ANALYZER DRAIN
- SIGNAL CABLE TO TOMCO CONTROL PANEL

LIME STORAGE SILO

SODA ASH STORAGE SILO

ELEVATOR

PUMP ROOM

HIGH SERVICE PUMPS

LOW SERVICE PUMPS

3 5.03 PHOTO

SAMPLE SINK

4 5.03 PHOTO

1" SCH. 40 PVC

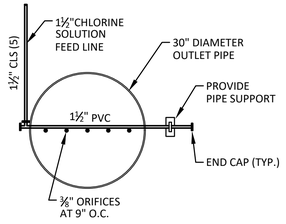
REMOVE AND REROUTE EXISTING CHLORINE SOLUTION LINES TO NEW FEED LOCATIONS
- REMOVE AND CAP POTABLE WATER LINE AS NECESSARY IN THE METERING ROOM

2 / 5.03 PHOTO — NOT TO SCALE

ROUTE NEW ¾" CO_2 SUPPLY LINE OVER THE EXISTING OVERHEAD/ROLLUP DOOR AND ALONG EXISTING CONCRETE BEAM
- NEW CO_2 GAS SUPPLY PIPING SHALL BE ¾" SCH. 40 304 S.S. PIPE - WELDED CONNECTIONS

SALVAGE AND REUSE EXISTING ELECTRIC ACTUATED VALVE ON EXISTING CO_2 GAS PIPING AND INSTALL AT THIS LOCATION
- CO_2 GAS MONITOR ALARMS WILL SHUT OFF THE VALVE ON HIGH LEVEL ALARM
- CONNECT TO SCADA/CO_2 GAS MONITOR FOR ALARM SHUT-OFF

EXISTING CO_2 STORAGE TANK



CHLORINE DIFFUSER

NOT TO SCALE

1" DIA. CORE DRILL IN CONC. SLAB ABOVE

NEW INTERMEDIATE CHLORINE INJECTION DIFFUSER PIPE

¾" SCH. 80 PVC SAMPLE DRAW OFF PIPE INSTALLED 6ft FROM THE BAFFLE WALL AT THE CENTER OF THE BAFFLE WALL OPENING PIPE END OPENING 15in ABOVE THE TANK FLOOR - PROVIDE PIPE SUPPORT AS NECESSARY

6'-0"

SAMPLE DRAW-OFF FOR TOMCO CONTROL PANEL pH MONITORING AND CONTROL

RECARBONATION BASIN

EXISTING REDWOOD BAFFLE WALL

2 5.03

3" SCH. 40 304 S.S. CO_2 SOLUTION LINE WITH WELDED CONNECTIONS
- FIELD ROUTE TO EXISTING RECARBONATION TANK
- REUSE THE EXISTING RECABONATION TANK OUTSIDE WALL PENETRATION TO ENTER RECABONATION TANK (ENLARGE EXISTING WALL PENETRATION TO ACCOMODATE NEW 3" PIPE)

FIELD VERIFY WALL PENETRATION LOCATION WITH ENGINEER - PROVIDE S.S. PIPE SUPPORT AS NECESSARY

TOMCO CO_2 SOLUTION DIFFUSER AT BAFFLE OPENING

REVISE BOTTOM OF BAFFLE OPENING BY BLOCKING WITH CONCRETE ON TWO SIDES TO PROVIDE 2ft WIDE OPENING TO DIRECT FLOW TO pH SAMPLE DRAW-OFF PIPE - SEE SHEET 5.04 FOR BAFFLE WALL MODIFICATION DETAIL

REMOVE AND REPLACE EXISTING CHLORINE ANALYZER
- MODIFY THE S/EP SAMPLE LINE TO PROVIDE THE SAMPLE FOR THE CHLORINE ANALYZER

REMOVE AND REPLACE EXISTING ¾" CO_2 GAS SUPPLY PIPING AND REROUTE AS SHOWN

SOLIDS CONTACT

EXTEND DIFFUSER PIPE BEYOND 30" PIPE OPENING AND PROVIDE SUPPORT FROM CONCRETE WALL

1" DIA. CORE DRILL IN CONC. SLAB ABOVE

F & I: 1" PVC BALL VALVE ON THE DRAIN LINE - PROVIDE PIPE LOOP IN THE DRAIN LINE TO ENSURE FULL PIPE FLOW AT pH SENSOR IS LOCATED

FILTER BED

FILTER BED

FILTER BED

FILTER BED

NEW INTERMEDIATE CHLORINE SOLUTION LINE FROM UPPER LEVEL TO INSIDE OF FILTER EFFLUENT WET WELL AND CONNECT TO CHLORINE DIFFUSER - PLACE DIFFUSER ACROSS 30" PIPE

OWNER SUPPLIED POLYPHOSPHATE FEED SYSTEM ON UPPER LEVEL
- CONNECT FEED PUMP TO SCADA SYSTEM

OWNER SUPPLIED 100% ORTHOPHOSPHATE FEED SYSTEM ON UPPER LEVEL - CONNECT FEED PUMP TO SCADA SYSTEM

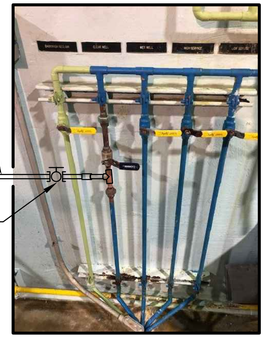
100% ORTHOPHOSPHATE FEED
- CONNECT TO EXISTING FEED POINT

MAIN LEVEL PLAN

SCALE: 3/16"=1'-0"

TO CHLORINE ANALYZER SAMPLE INLET

1" BALL VALVE



3 / 5.03 PHOTO — NOT TO SCALE

REMOVE AND REPLACE EXISTING CHLORINE ANLAYZER

4 / 5.03 PHOTO — NOT TO SCALE

0 2 4 6 8 12 16

Graphic Scale for 3/16"=1'-0"

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CHECKED GLS			
CLIENT PROJ. NO. 0M2.126087			

WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
MAIN LEVEL PLAN

SHEET 5.03

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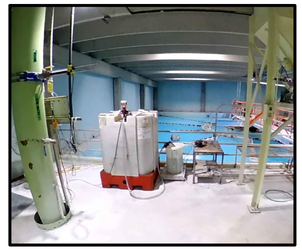


1 / 5.04 PHOTO
NOT TO SCALE

ELEVATOR

CHEMICAL FEED PANEL

CONNECT OWNER INSTALLED LIME WEIGH BELT FEED SYSTEM TO SCADA SYSTEM

1 / 5.04 PHOTO

16" AERATOR INFLUENT

BLOWER INTAKE FILTER

APPROX. EXISTING pH PROBE LOCATION

CORE DRILL 1" DIA. HOLE IN CONC. SLAB FOR 100% ORTHOPHOSPHATE FEED TUBING - FIELD VERIFY LOCATION WITH ENGINEER

INTERMEDIATE CHLORINE SOLUTION LINE FROM MAIN LEVEL UP THROUGH FLOOR TO CEILING OF UPPER LEVEL

SODA ASH DAY BIN

LIME DAY BIN

CHEMICAL FEED TOTE

CONNECT OWNER INSTALLED SODIUM ALUMINATE FEED SYSTEM TO SCADA SYSTEM

CONNECT OWNER INSTALLED POLYMER FEED SYSTEM TO SCADA SYSTEM

1½"

1½"

FIELD ROUTE NEW INTERMEDIATE CHLORINE SOLUTION LINE ALONG UPPER FLOOR CEILING

2 / 5.04

DROP NEW INTERMEDIATE CHLORINE SOLUTION LINE THROUGH UPPER LEVEL FLOOR TO INSIDE OF FILTER EFFLUENT WET WELL AND RUN ALONG BOTTOM SIDE OF CONC. SLAB AND DOWN TO CONNECT TO CHLORINE DIFFUSER
- PROVIDE 2" HIGH CONC. CURB AROUND CORE DRILLED HOLE (FIELD VERIFY LOCATION WITH ENGINEER)

OWNER SUPPLIED POLYPHOSPHATE FEED SYSTEM - CONNECT FEED PUMP TO SCADA SYSTEM

OWNER SUPPLIED 100% ORTHOPHOSPHATE FEED SYSTEM - CONNECT FEED PUMP TO SCADA SYSTEM

SOLIDS CONTACT

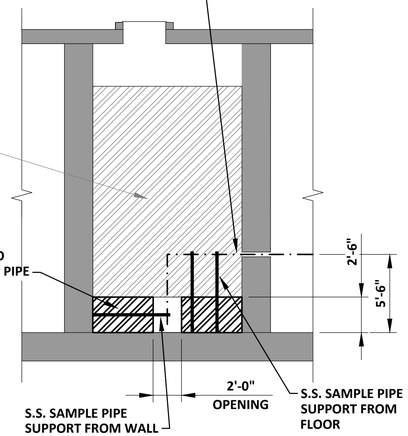
UPPER LEVEL PLAN
SCALE: 3/16"=1'-0"

0 2 4 6 8 12 16
Graphic Scale for 3/16"=1'-0"

¾" SCH. 80 PVC SAMPLE DRAW OFF PIPE TO pH SENSOR - PROVIDE LINK-SEAL AT PIPE PENETRATION ON BOTH SIDES

EXISTING REDWOOD BAFFLE WALL

REVISE BOTTOM OF BAFFLE OPENING BY BLOCKING WITH CONCRETE ON TWO SIDES TO PROVIDE 2ft WIDE OPENING TO DIRECT FLOW TO pH SAMPLE DRAW-OFF PIPE



EXISTING RECARBONATION BASIN BAFFLE WALL MODIFICATIONS

2 / 5.04 SECTION
NOT TO SCALE

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0		4/12/2022

WEBSTER CITY, IOWA
WATER TREATMENT FACILITY IMPROVEMENTS
UPPER LEVEL PLAN

SHEET 5.04

RESOLUTION NO. 2022 - _____

AWARDING CONTRACT FOR THE WATER TREATMENT FACILITY IMPROVEMENTS PROJECT

WHEREAS, pursuant to notice duly published in the manner and form prescribed by resolution of this Council and as required by law, bids and proposals were received by this Council for the Water Treatment Facility Improvements Project: and,

WHEREAS, all of the said bids and proposals have been carefully considered, and it is necessary and advisable that provision be made for the award of the contract for the project.

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

SECTION 1. The bid for the project submitted by the following contractor is fully responsive to the plans and specifications for the project, heretofore approved by the Council, and is the lowest responsible bid received, such bid being as follows:

NAME AND ADDRESS OF CONTRACTOR	**AMOUNT OF BID**
Peterson Construction Company, 1929 W Second Street, Webster City, IA	$693,000

SECTION 2. The contract for the Project be and the same is hereby awarded to such contractor at the total estimated cost set out above, the final settlement to be made on the basis of the unit prices therein set out and the actual final quantities of each class of materials furnished, the said contract to be subject to the terms of the aforementioned resolution, the notice of hearing and letting, the plans and specifications and the terms of the bidder's written proposal.

SECTION 3. The Mayor and City Clerk are hereby authorized and directed to enter into a written contract with said contractor for the project.

SECTION 4. The amount of the contractor's performance and/or payment bonds is hereby fixed and determined to be 100% of the amount of the contract.

BE IT FURTHER RESOLVED that said agreement is hereby approved upon being executed by both parties.

Passed and adopted this 16th day of May, 2022.

_____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

WEBSTER CITY

MEMORANDUM

TO: Mayor and City Council

FROM: Daniel Ortiz-Hernandez, City Manager
Biridiana Bishop, Assistant City Manager

DATE: May 16, 2022

RE: Adopt a Resolution to Enter into an Agreement with Mitchell Hansen for the Purchase of Property Located at 909 Harding Court, Webster City, Iowa

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SUMMARY: The City of Webster City previously took possession of 909 Harding Court and requested bids to rehabilitate the residential property. In order to sell the property, the City Council must set a public hearing.

PREVIOUS COUNCIL ACTION: On February 8, 2022 the City Council approved a resolution to accept the acquisition of 909 Harding Court. On May 2, 2022, the City Council adopted a resolution to set a public hearing on May 16, 2022 at 6:05 p.m. for the sale of 909 Harding Court.

BACKGROUND/DISCUSSION: We have been dealing with the dwelling at 909 Harding Court for over two years regarding its abandoned condition. Iowa State Code Section 657A.10B allows cities to petition the courts to gain possession of vacant and abandoned homes when no one will take responsibility to better its condition. A Petition for Abandonment was filed to start the Court process. On January 24, 2022, the Iowa District Court for Hamilton County awarded title of this property to the City free and clear from any liens and encumbrances. Our plan is to sell the house for rehabilitation. The City's Building Inspector has done a partial inspection of the property and believes someone could rehab it and get it back on the tax rolls. It is currently assessed at $76,650.00.

On April 26, 2022, the City received three bids for 909 Harding Court from the following:

Jose Mendez	$18,000
Mitchell Hansen	**$23,000**
Tom Yetmar	$1,000

Bidders were to submit a detailed plan of abatement for the property. Mitchell Hansen was the highest bidder with a plan for abatement of the property. In order to sell the property to the

highest bidder, the City must hold a public hearing. Attached to this staff report is the Real Estate Agreement we intend to execute with Mitchell Hansen to rehabilitate the property. He will be required to pay 90% of the sale price prior to execution of the agreement and pay the remaining balance plus additional closing costs upon successful completion of the required dwelling remodel and repairs. The required dwelling remodel and repairs will be inspected by the City Building Inspector. The buyer will have 12 months to complete the remodel and repairs.

FINANCIAL IMPLICATIONS: The City will receive $23,000 plus legal fees and associated costs from the buyer at time of sale.

RECOMMENDATION: Approve the resolution authorizing the execution of the real estate contract with Mitchell Hansen.

RESOLUTION NO. 2022 _____

RESOLUTION APPROVING EXECUTED REAL ESTATE CONTRACT CONVEYING CITY OWNED PROPERTY IN ELBERT'S ADDITION TO WEBSTER CITY, IOWA TO MITCHELL HANSEN

WHEREAS, the City of Webster City, Iowa has received a request to purchase a City owned parcel addressed as 909 Harding Court, and

WHEREAS, public notice was given as required by law and a public hearing was held on May 16, 2022, and no written or oral objections were presented to the proposed sale of the City owned property described above, and

WHEREAS, a Real Estate Contract has been prepared and executed by both parties and appears to be in proper order, and

NOW THEREFORE BE IT RESOLVED by the City Council of Webster City, Iowa, that the executed Real Estate Contract conveying the following described property to Mitchell Hansen, 902 Hardin Court, Webster City, Iowa 50595, be approved:

Lot 11, Elbert's Addition to Webster City, Iowa

Passed and adopted this _____ day of May, 2022.

CITY OF WEBSTER CITY, IOWA

_____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

REAL ESTATE CONTRACT
(SHORT FORM)
Recorder's Cover Sheet

Preparer Information: (name, address and phone number)
Zachary S. Chizek, 1620 Superior St, Unit 1
Webster City, IA 50595, Phone: (515) 832-2885

Taxpayer Information: (name and complete address)
Mitchell Hansen, 909 Harding Court, Webster City, Iowa 50595

Return Document To: (name and complete address)
Zachary S. Chizek, 1620 Superior St., Unit 1, Webster City, IA 50595

Grantors:
City of Webster City, Iowa, a Municipal Corporation

Grantees:
Mitchell Hansen

Legal Description: See Page 2

Document or instrument number of previously recorded documents:

REAL ESTATE CONTRACT
(SHORT FORM)

IT IS AGREED between City of Webster City, a Municipal Corporation ("Sellers"); and Mitchell Hansen ("Buyer").

Sellers agree to sell and Buyer agrees to buy real estate in Hamilton County, Iowa, located at 909 Harding Court, Webster City, Iowa, and described as:

Lot 11, Elbert's Addition to Webster City, Iowa

with any easements and appurtenant servient estates, but subject to the following: a. any zoning and other ordinances; b. any covenants of record; c. any easements of record for public utilities, roads and highways; and d. (consider: liens; mineral rights; other easements; interest of others.) (the "Real Estate"), upon the following terms:

1. **PRICE.** The total purchase price for the Real Estate is Twenty-Three Thousand and No/100 Dollars ($23,000.00) of which Twenty Thousand, Seven Hundred and No/100 Dollars ($20,700.00) shall be paid at time of execution of this agreement. Buyer shall pay the balance to Sellers at 400 Second Street, Webster City, Iowa 50595 or as directed by Sellers, as follows:

The unpaid balance of this contract in the amount of $2,300.00 shall be paid in accordance with the conditions and provisions herein set forth in Paragraph 16 below.

2. **REAL ESTATE TAXES.** Sellers shall pay all real estate taxes prorated to date of possession and any unpaid real estate taxes payable in prior years. Buyer shall pay all subsequent real estate taxes. Any proration of real estate taxes on the Real Estate shall be based upon such taxes for the year currently payable unless the parties state otherwise.

3. **SPECIAL ASSESSMENTS.** Sellers shall pay all special assessments which are a lien on the Real Estate as of the date of this contract. All other special assessments shall be paid by Buyer.

4. **POSSESSION CLOSING.** Sellers shall give Buyer possession of the Real Estate on May 20, 2022, provided Buyer are not in default under this contract.

5. **INSURANCE.** Sellers shall maintain existing insurance upon the Real Estate until the date of possession. Buyer shall accept insurance proceeds instead of Sellers replacing or repairing damaged improvements. After possession and until full payment of the purchase price, Buyer shall keep the improvements on the Real Estate insured against loss by fire, tornado, and extended coverage for a sum not less than 80 percent of full insurable value payable to the Sellers and Buyer as their interests may appear. Buyer shall provide Sellers with evidence of such insurance.

6. **ABSTRACT AND TITLE.** Sellers, at their expense, shall promptly obtain an abstract of title to the Real Estate continued through the date of this contract and deliver it to Buyer for examination. It shall show merchantable title in Sellers in or conformity with this contract, Iowa law and the Title Standards of the Iowa State Bar Association. The abstract shall become the property of the Buyer when the purchase price is paid in full, however, Buyer reserves the right to occasionally use the abstract prior to full payment of the purchase price. Sellers shall pay the costs of any additional abstracting and title work due to any act or omission of Sellers, including transfers by or the death of Sellers or their assignees.

7. **FIXTURES.** All property that integrally belongs to or is part of the Real Estate, whether attached or detached, such as light fixtures, shades, rods, blinds, awnings, windows, storm doors, screens, plumbing fixtures, water heaters, water softeners, automatic heating equipment, air conditioning equipment, wall to wall carpeting, built-in items and electrical service cable, outside television towers and antenna, fencing, gates and landscaping shall be considered a part of Real Estate and included in the sale except: None

8. **CARE OF PROPERTY.** Buyer shall take good care of the property; shall keep the buildings and other improvements now or later placed on the Real Estate in good and reasonable repair and shall not injure, destroy or remove the property during the term of this contract.

9. **DEED.** Upon payment of purchase price, Sellers shall convey the Real Estate to Buyer or their assignees, by Quit Claim Deed, free and clear of all liens, restrictions, and encumbrances except as provided herein. Any general warranties of title shall extend only to the date of this contract, with special warranties as to acts of Sellers continuing up to time of delivery of the deed.

10. **REMEDIES OF THE PARTIES.** a. If Buyer (a) fail to make the payments aforesaid, or any part thereof, as same become due; or (b) fail to pay the taxes or special assessments or charges, or any part thereof, levied upon said property, or assessed against it, by any taxing body before any of such items become delinquent; or (c) fail to keep the property insured; or (d) fail to keep it in reasonable repair as herein required; or (e) fail to perform any of the agreements as herein made or required; then Sellers, in addition to any and all other legal and equitable remedies which they may have, at their option, may proceed to forfeit and cancel this contract as provided by law (Chapter 656 Code of Iowa). Upon completion of such forfeiture Buyer shall have no right of reclamation or compensation for money paid, or improvements made; but such payments and/or improvements if any shall be retained and kept by Sellers as compensation for the use of said property, and/or as liquidated damages for breach of this contract ; and upon completion of such forfeiture, if the Buyer, or any other person or persons shall be in possession of said real estate or any part thereof, such party or parties in possession shall at once peacefully remove therefrom, or failing to do so may be treated as tenants holding over, unlawfully after the expiration of lease, and may accordingly be ousted and removed as such as provided by law.

b. If Buyer fail to timely perform this contract, Sellers, at their option, may elect to declare the entire balance immediately due and payable after such notice, if any, as may be required by Chapter 654, The Code. Thereafter this contract may be foreclosed in equity and the court may appoint a receiver to take immediate possession of the property and of the revenues and income accruing therefrom and to rent or cultivate the same as the receiver may deem best for the interest of all parties concerned, and such receiver shall be liable to account to Buyer only for the net profits, after application of rents, issues and profits from the costs and expenses of the receivership and foreclosure and upon the contract obligation.

It is agreed that if this contract covers less than ten (10) acres of land, and in the event of the foreclosure of this contract and sale of the property by sheriff's sale in such foreclosure proceedings, the time of one year for redemption from said sale provided by the statutes of the State of Iowa shall be reduced to six (6) months provided the Sellers, in such action file an election to waive any deficiency judgment against Buyer which may arise out of the foreclosure proceedings; all to be consistent with the provisions of Chapter 628 of the Iowa Code. If the

redemption period is so reduced, for the first three (3) months after sale such right of redemption shall be exclusive to the Buyer, and the time periods in Sections 628.5, 628.15 and 628.16 of the Iowa Code shall be reduced to four (4) months.

It is further agreed that the period of redemption after a foreclosure of this contract shall be reduced to sixty (60) days if all of the three following contingencies develop: (1) The real estate is less than ten (10) acres in size; (2) the Court finds affirmatively that the said real estate has been abandoned by the owners and those persons personally liable under this contract at the time of such foreclosure; and (3) Sellers in such action file an election to waive any deficiency judgment against Buyer or their successor in interest in such action. If the redemption period is so reduced, Buyer or their successors in interest or the owner shall have the exclusive right to redeem for the first thirty (30) days after such sale, and the time provided for redemption by creditors as provided in Sections 628.5, 628.15 and 628.16 of the Iowa Code shall be reduced to forty (40) days. Entry of appearance by pleading or docket entry by or on behalf of Buyer shall be presumption that the property is not abandoned. Any such redemption period shall be consistent with all of the provisions of Chapter 628 of the Iowa Code. This paragraph shall not be construed to limit or otherwise affect any other redemption provisions contained in Chapter 628 of the Iowa Code. Upon completion of such forfeiture Buyer shall have no right of reclamation or compensation for money paid, or improvements made; but such payments and for improvements if any shall be retained and kept by Sellers as compensation for the use of said property, and/or as liquidated damages for breach of this contract; and upon completion of such forfeiture, if Buyer, or any other person or persons shall be in possession of said real estate or any part thereof, such party or parties in possession shall at once peacefully remove therefrom, or failing to do so may be treated as tenants holding over, unlawfully after the expiration of a lease, and may accordingly be ousted and removed as such as provided by law.

c. If Sellers fail to timely perform their obligations under this contract, Buyer shall have the right to terminate this contract and have all payments made returned to them.

d. Buyer and Sellers are also entitled to utilize any and all other remedies or actions at law or in equity available to them.

e. In any action or proceeding relating to this contract the successful party shall be entitled to receive reasonable attorney's fees and costs as permitted by law.

11. **TIME IS OF THE ESSENCE.** Time is of the essence in this contract.

12. **CONSTRUCTION.** Words and phrases in this contract shall be construed as in the singular or plural number, and as masculine, feminine or neuter gender, according to the context.

13. **RELEASE OF RIGHTS.** Each of the Seller hereby relinquishes all rights of dower, homestead and distributive share in and to the property and waives all rights of exemption as to any of the property.

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

15. **INSPECTION OF PRIVATE SEWAGE DISPOSAL SYSTEM.** Seller represents and warrants to Buyer that the Property is not served by a private sewage disposal system, and there are no known private sewage disposal systems on the property.

16. **ADDITIONAL PROVISIONS.** A) The sale of this property, by contract, is conditional upon the Buyer having completed all necessary dwelling remodel and/or repairs provided in the Buyer's Plan for Abatement, attached hereto and incorporated herein as Exhibit A, and to also complete all necessary dwelling remodel and/or repairs to bring said property into compliance with the International Property Maintenance Code, including Chapter Three (3), Five (5) and Six (6), which shall include, but not be limited to, repairing or replacing the foundation, floor, walls, windows, doors and siding where needed, repairing or replacing plumbing and/or sewer where needed to ensure it is brought up to code, having all electrical and mechanical brought up to code, and repairing or replacing the roof and gutters where needed. Additionally, Buyer herein agrees to have the mold remediated by a professional third-party mold remediation company, providing Seller with proof from said company upon completion. All of the necessary dwelling remodel and/or repairs shall be completed within twelve (12) months of possession and shall be inspected and approved by the City Building Inspector. Upon the completion of the required dwelling remodel and/or repairs and subsequent inspection, the Seller will execute and deliver marketable title by Quit Claim Deed to the Buyer and Buyer shall provide Seller with remaining balance owed on contract plus all additional closing costs. In the event the Buyer fails to complete the necessary remodel and/or repairs within twelve (12) months of possession, this contract may be forfeited by the Seller pursuant to Iowa law and said property would be returned to Seller free and clear of any and all liens or encumbrances.

B) Buyer shall be responsible for all closing costs associated with this transaction.

Dated: _____

_____

By: John Hawkins, Mayor (Seller)
City of Webster City, Iowa,
a Municipal Corporation
400 Second Street
Webster City, Iowa 50595

_____

ATTEST: Karyl Bonjour
City of Webster City, Iowa,
a Municipal Corporation

_____

Mitchell Hansen (Buyer)
902 Hardin Court
Webster City, Iowa 50595

STATE OF IOWA, COUNTY OF HAMILTON

This record was acknowledged before me on May _____, 2022, by Mitchell Hansen.

_____
Signature of Notary Public

STATE OF IOWA, COUNTY OF HAMILTON

The foregoing instrument was acknowledged before me on May _____, 2022 by John Hawkins and Karyl Bonjour, the Mayor and City Clerk, respectively, of Webster City, Iowa, a municipal corporation of the State of Iowa, on behalf of the City.

_____
Signature of Notary Public

EXHIBIT A

Plan for Abatement of the Property at 909 Harding Court

- Remove all shingles and install all new shingles on the entire roof of the house.
- Replace any plywood on the roof if needed.
- Clean and repair if needed all roof gutters.
- Remove at a minimum the wall drywall and insulation on the main floor and basement areas.
- Remove at a minimum the ceiling drywall and insulation from ceiling on main floor.
- Remove all carpet, padding and any damaged floor sheathing.
- Remove kitchen cabinets.
- Remove and replace Furnace and ductwork.
- Remove and replace water heater.
- Repair any piping damaged.
- Treat all mold areas by a professional third-party mold remediation.
- Install all new insulation and drywall in areas where removed.
- Paint ceiling and walls.
- Install all new kitchen cabinets.
- Install all new flooring (carpet or laminate).
- Replace Electrical breaker panel.
- Replace all electrical fixtures.
- Replace upstairs bathroom cabinets and shower/tub.
- Perform landscaping (trim trees & shrubs, install any new shrubs if needed).
- Repair utility shed as needed.

All shall be completed in the time allow by the contract.

20220426
@ 3pm

☐ Rehab House Bid Reviews
- 909 Harding Ct.

	NAME	Bid $	Received date + time
1.)	Jose Mandez	$ 18,000.00	4-20-22 @ 12:10 pm
2.)	Mitchell Hansen	23,000.00	4-26-22 @ 1:41 pm
3.)	Tom	1,000.00	4-26-22 @ 2:56 pm
4.)			
5.)			
6.)			

Open Bid Time; 15:04

Close Bid Time; 15:03

15:04

15:04

WEBSTER CITY

400 Second St
Webster City IA
50595

TO: City of Webster City Inspection Department

BID for Abandoned Property

Bid for: 909 Harding Ct. $ 23,000

NAME: Mitchell Hansen

SIGNATURE: Mitchell R Hansen

ADDRESS: 902 Harding Ct.
Webster City IA

PHONE: 515-297-2971

DATE: April 26 2022

- ***Bidders are to submit a detailed plan of abatement for this property. This is to include a detailed time frame and all measures of abatement.***
- ***The property will need to be abated to meet specified standards found in the International Property Maintenance Code (2015).***
- ***Please note, the City of Webster City reserves the right to accept or reject any or all bids to ensure conformity with all applicable property disposal procedures and/or requirements as outlined in the Code for the State of Iowa.***

Plan for abatement of the property at 909 Harding Court

- Remove all shingles and install all new shingles on the entire roof of the house.
- Replace any plywood on the roof if needed.
- Clean and repair if needed all roof gutters.
- Remove at a minimum the wall drywall and insulation on the main floor and basement areas.
- Remove at a minimum the ceiling drywall and insulation from ceiling on main floor.
- Remove all carpet and padding.
- Remove kitchen cabinets.
- Remove and replace Furnace and ductwork.
- Remove and replace water heater.
- Repair any piping damaged.
- Treat all mold areas by a professional.
- Install all new insulation and drywall in areas where removed.
- Paint ceiling and walls.
- Install all new kitchen cabinets.
- Install all new flooring (carpet or laminate).
- Replace Electrical breaker panel.
- Replace all electrical fixtures.
- Replace upstairs bathroom cabinets and shower/tub.
- Perform landscaping (trim trees & shrubs, install any new shrubs if needed).
- Repair utility shed as needed.

All shall be completed in the time allow by the contract.

Intent is to either rent the property after completion or sell to new owners.

Mitch Hansen
515-297-2971

WEBSTER CITY

M E M O

TO: Mayor and City Council

FROM: Daniel Ortiz-Hernandez, City Manager
Dodie Wolfgram, Finance Director

DATE: May 4, 2022

RE: Public Hearing to Amend the FY22 Budget

SUMMARY: A public hearing has been set to be held on Monday, May 16, 2022 at 6:05 p.m. to amend the 2021/22 fiscal year budget.

BACKGROUND/DISCUSSION: The State requires each municipality to review their revenues and expenditures based on their current budget to determine if they anticipate any function or program to be less than originally budgeted for revenues and more for expenses. The amendments are due to the State by June 30, 2022 and require a public hearing.

Staff recommends reducing revenues by $182,101 between property taxes and miscellaneous reimbursements. The miscellaneous reimbursement is the $40,000 contract that has been terminated between the city and Frigidaire to help with costs related to the coal tar site.

This amendment will increase expenses by $1,665,979. The breakdown of increase by function is:

Public Safety - $66,870 – Police car lease payments were budgeted through Capital Equipment but paid through operations and the K9 program was not budgeted. We have received enough donations to offset the K9 program, however we need to report the expenses without the donations which could make us go over our original budget.

Public Works - $114,835 – the Airport had a couple of projects budgeted in FY21 that still had expenses in FY22.

Culture & Recreation - $77,954 – the amendment is for the unexpected expenses of the pool cover for the indoor pool at Fuller Hall ($19,002) and the mold cleanup at the Depot (58,952).

Community & Economic Development - $205,289 – these were the expenses paid from the revolving loan fund for the Elk's Building. The funds belonged to the state but held by the City and are shown on the financial reports.

General Government - $72,553 – this amendment is for personnel costs for the overlap of the Assistant City Manager/Public Works Director position, fuel costs for the Hospital (city pays for the fuel – the reimbursement money is receipted into a revenue account) and unexpected repairs to the basement at City Hall.

Capital Projects - $1,128,478 – The annual street project is a year behind with the FY21 project higher in cost than the FY22, Wilson-Brewer Improvement more than the amount budgeted (city pays the expenses but reimbursed through donations which are put into a revenue account) and 2nd Street Project was split into 2 budget years with year 2 having more expenses than estimated.

Transfers – the amended transfers offset each other and are due to the Wastewater Treatment Plant project not beginning as soon as anticipated ($7,263,409) and the city not receiving a budgeted trail grant (508,167).

RECOMMENDATION: Staff recommends amending the FY22 budget by reducing revenues $182,101 and increasing expenses by $1,665,979. We will also be reducing transfers in/out by $4,508,121.

NOTICE OF PUBLIC HEARING - AMENDMENT OF CURRENT BUDGET
City of WEBSTER CITY
Fiscal Year July 1, 2021 - June 30, 2022

The City of WEBSTER CITY will conduct a public hearing for the purpose of amending the current budget for fiscal year ending June 30, 2022

Meeting Date/Time: 5/16/2022 06:05 PM	**Contact:** Dodie Wolfgram	**Phone:** (515) 832-9141

Meeting Location: Webster City 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.

REVENUES & OTHER FINANCING SOURCES		**Total Budget as Certified or Last Amended**	**Current Amendment**	**Total Budget After Current Amendment**
Taxes Levied on Property	1	4,095,303	-142,101	3,953,202
Less: Uncollected Delinquent Taxes - Levy Year	2	0	0	0
Net Current Property Tax	3	4,095,303	-142,101	3,953,202
Delinquent Property Tax Revenue	4	0	0	0
TIF Revenues	5	273,463	0	273,463
Other City Taxes	6	948,467	0	948,467
Licenses & Permits	7	161,250	0	161,250
Use of Money & Property	8	860,031	0	860,031
Intergovernmental	9	1,477,037	0	1,477,037
Charges for Service	10	16,228,120	0	16,228,120
Special Assessments	11	0	0	0
Miscellaneous	12	1,801,981	-40,000	1,761,981
Other Financing Sources	13	0	0	0
Transfers In	14	13,321,012	-4,508,121	8,812,891
Total Revenues & Other Sources	15	39,166,664	-4,690,222	34,476,442
EXPENDITURES & OTHER FINANCING USES				
Public Safety	16	2,980,298	66,870	3,047,168
Public Works	17	1,844,318	114,835	1,959,153
Health and Social Services	18	69,949	0	69,949
Culture and Recreation	19	2,151,053	77,954	2,229,007
Community and Economic Development	20	668,529	205,289	873,818
General Government	21	381,681	72,553	454,234
Debt Service	22	1,344,765	0	1,344,765
Capital Projects	23	3,792,921	1,128,478	4,921,399
Total Government Activities Expenditures	24	13,233,514	1,665,979	14,899,493
Business Type/Enterprise	25	25,053,974	0	25,053,974
Total Gov Activities & Business Expenditures	26	38,287,488	1,665,979	39,953,467
Tranfers Out	27	13,321,012	-4,508,121	8,812,891
Total Expenditures/Transfers Out	28	51,608,500	-2,842,142	48,766,358
Excess Revenues & Other Sources Over (Under) Expenditures/Transfers Out	29	-12,441,836	-1,848,080	-14,289,916
Beginning Fund Balance July 1, 2021	30	48,387,889	0	48,387,889
Ending Fund Balance June 30, 2022	31	35,946,053	-1,848,080	34,097,973

Explanation of Changes: Anticipated reduction in property taxes, projects budgeted in FY21 got a late start with majority of costs in Fy22, added position in the City Manager's Office, police care lease payments are budgeted through Capital Equipment which is not reported on the state budget form, unexpected mold clean up expenses at the Depot, pool cover for the indoor pool at Fuller Hall, expense paid from the Revolving Loan Fund that were not budgeted,

RESOLUTION NO. 2022 -

RESOLUTION ADOPTING THE BUDGET AMENDMENT FOR FISCAL YEAR ENDING JUNE 30, 2022

WHEREAS, state law requires the adoption of a budget amendment whenever actual revenues will be lower or expenses higher than the original budget; and

WHEREAS, the adopted budget amendment needs to be certified by the county auditor no later than May 31st; and

WHEREAS, the City Council of the City of Webster City set a public hearing to be held on Monday, May 16, 2022 at 6:05 p.m. to amend the FY22 Budget; and

WHEREAS, notice of said hearing was published in the May 3, 2022 edition of the Daily Freeman Journal; and

WHEREAS, the public hearing was held on May 16, 2022; and

NOW THEREFORE BE IT RESOLVED, by the City Council of Webster City, Iowa that the FY22 budget be amended by decreasing revenues in the amount of $182,101 and increasing expenses in the amount of $1,665,979 along with decreasing the transfers in and out by $4,508,121; and

BE IT FURTHER RESOLVED, by the City Council of the City of Webster City, Iowa, that the Mayor and City Clerk are hereby authorized and directed to execute said resolution.

PASSED AND APPROVED this 16th day of May 2022.

_____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

WEBSTER CITY

MEMO

TO: Mayor and City Council

FROM: City Manager
Finance Director

DATE: May 6, 2022

RE: Accounts Receivable and Utility Write Off's

SUMMARY: Staff is asking council to approve the writing off of $44,991.21 of old utility and $4,150.99 of old billings for other services such as frozen water meters, vehicle extrication and repairs due to accidents.

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 accounts receivable 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 Offset 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 these accounts have been placed on the Iowa Offset 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 Offset 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 $142,382.97 from 664 customers from the Iowa Offset 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. 2022 - _____

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 $44,991.21 and delinquent department charges in the amount of $4,150.99; 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 $44,991.21 and department charges accumulating to $4,150.99 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 16th day of May, 2022.

_____
John Hawkins, Mayor

ATTEST:

_____
Karyl K. Bonjour, City Clerk

AR WRITE-OFFS 2022

CUST #	INVOICE #	DATE BILLED	AMOUNT	FUND		Sent to Offset Program
1711	146754	2/17/2021	$122.00	602	Frozen Water Meter	X
1532	145818	11/5/2016	$97.75	602	Frozen Water Meter	X
1743	147096	7/23/2021	$185.06	601	Pole repairs-accident	Unknown SS
1725	146908	4/8/2021	$500.00	100	Extrication from vehicle	Unknown SS
1740	147039	6/25/2021	$494.59	601	Private tree pulled svc down	X
1735	147032	6/22/2021	$416.44	601	Callout for low wire-not electric	X
1702	146647	12/2/2020	$2,120.73	601	Pole repairs-accident	Unknown SS
1742	147087	7/14/2021	$214.42	601	Called out for tripped breaker	X
	TOTAL WRITE-OFFS		**$4,150.99**			
			$500.00	General		
			$3,431.24	Electric		
			$219.75	Water		

FY22 UTILTY DELINQUENT ACCOUNT WRITE-OFFS

ACCOUNT #	TERMINATION DATE	ELECTRIC	WATER	SEWER	RECYCLE	LANDFILL	TOTAL
3.148440.12	7/2/2020	14.75	14.71	13.31	0.96	0.45	44.18
6.110705.20	7/2/2020	124.33	36.69	37.94	3.79	1.77	204.52
14.176023.13	7/14/2020	32.51	-	-	1.28	0.60	34.39
19.370100.19	7/16/2020	28.61	12.90	17.75	2.63	1.22	63.11
14.341605.10	7/21/2020	523.41	-	-	21.79	10.18	555.38
2.131601.02	7/28/2020	84.63	7.95	8.42	0.88	0.41	102.29
7.136305.18	7/28/2020	492.33	195.56	200.70	19.68	9.19	917.46
6.130506.33	7/29/2020	275.29	71.65	83.32	10.10	4.71	445.07
10.156400.27	8/4/2020	438.60	137.26	166.36	21.33	9.96	773.51
15.113203.17	8/7/2020	194.72	89.79	81.63	5.95	2.78	374.87
5.125000.34	8/7/2020	312.87	118.87	156.25	22.05	10.29	620.33
14.332478.27	8/10/2020	729.68	-	-	23.64	11.03	764.35
12.154206.13	8/13/2020	164.15	19.30	17.08	2.50	1.17	204.20
14.371404.16	8/18/2020	246.42	-	-	7.44	3.47	257.33
2.118202.14	8/19/2020	78.06	44.07	35.45	1.57	0.73	159.88
7.143609.08	8/19/2020	225.12	50.79	57.63	6.73	3.15	343.42
12.157603.26	8/21/2020	118.52	93.98	76.56	3.60	1.68	294.34
5.117556.21	8/24/2020	193.18	18.47	28.77	4.75	2.22	247.39
14.176034.17	8/26/2020	7.70	-	-	0.06	0.03	7.79
4.105201.08	9/1/2020	406.22	86.29	107.53	14.26	6.65	620.95
10.153613.36	9/1/2020	28.55	2.62	4.94	0.93	0.44	37.48
3.11904.23	9/2/2020	257.87	-	-	7.90	3.70	269.47
15.124005.21	9/2/1930	198.53	-	-	6.63	3.10	208.26
7.132900.12	9/2/2020	321.84	60.03	56.36	4.50	2.10	444.83
14.112405.11	9/9/2020	375.88	480.24	439.75	7.68	3.59	1,307.14
4.130601.03	9/11/2020	32.19	8.10	11.89	1.88	0.88	54.94
5.1360000.14	9/18/2020	415.30	183.60	158.74	9.75	4.55	771.94
12.159600.02	9/22/2020	133.38	31.57	59.57	11.17	5.21	240.90
8.126602.14	9/30/2020	133.21	27.87	33.33	4.21	1.96	200.58
8.106001.11	10/5/2020	135.21	28.76	48.31	8.43	3.93	224.64
12.167204.33	10/12/2020	105.14	32.07	39.39	5.15	2.41	184.16
2.1350000.02	10/16/2020	240.68	103.03	165.09	27.79	12.97	549.56
2.102800.02	10/16/2020	326.97	92.29	137.82	21.96	10.25	589.29
9.151001.04	10/19/2020	155.59	82.06	81.61	7.49	3.50	330.25
15.112402.18	10/21/2020	287.64	44.18	70.65	11.90	5.56	419.93
6.130801.14	10/30/2020	1,117.53	-	-	42.69	19.94	1,180.16
9.173700.18	11/2/2020	163.54	62.84	67.50	7.22	3.37	304.47
15.177001.03	11/2/2020	64.54	-	-	2.77	1.30	68.61
2.133800.01	11/16/2020	67.69	33.81	36.49	3.93	1.84	143.76
5.127205.03	11/19/2020	229.07	88.68	96.85	10.65	4.97	430.22
5.117461.14	12/4/2020	267.79	57.30	76.54	10.99	5.13	417.75
15.126402.20	12/16/2020	179.78	-	-	7.69	3.59	191.06
10.113401.05	12/18/2020	138.57	69.34	62.85	4.54	2.11	277.41
3.150004.11	12/28/2020	33.77	6.65	12.52	2.37	1.11	56.42
9.159201.03	12/29/2020	852.83	148.85	158.70	16.72	7.81	1,184.91
2.101804.18	12/29/2020	8.52	623.29	686.58	2.86	1.34	1,322.59
3.158103.13	1/11/2021	35.25	-	-	3.38	1.57	40.20
19.370207.17	1/11/2021	228.97	21.48	38.86	7.12	3.33	299.76
2.145800.10	2/14/2021	784.88	53.39	72.62	10.64	4.96	926.49
15.176001.03	2/9/2021	332.16	-	-	8.21	3.83	344.20
4.129600.36	2/10/2021	233.76	199.10	168.66	9.56	4.47	615.55
15.128006.23	2/16/2021	247.97	-	-	14.04	6.56	268.57
6.113105.22	3/1/2021	18.75	3.78	4.00	0.42	0.20	27.15
2.743500.03	3/2/2021	493.47	-	-	-	9.98	503.45
19.370504.23	4/2/2021	339.07	34.78	56.86	9.74	4.55	445.00
6.129001.09	4/5/2021	43.15	39.05	33.52	2.01	0.93	118.66

ACCOUNT #	TERMINATION DATE	ELECTRIC	WATER	SEWER	RECYCLE	LANDFILL	TOTAL
3.148501.13	4/6/2021	480.06	57.60	74.84	10.42	4.86	627.78
11.101503.21	4/7/2021	15.22	11.25	13.42	1.70	0.79	42.38
7.136406.16	4/9/2021	71.99	7.78	14.63	2.75	1.28	98.43
14.371503.10	4/9/2021	21.14	-	-	0.92	0.43	22.49
2.154408.13	4/12/2021	96.52	48.58	58.19	7.35	3.43	214.07
3.133902.35	4/15/2021	242.45	137.84	134.06	8.85	4.13	527.33
2.107605.17	4/20/2021	1,242.52	3,361.29	117.11	18.30	8.56	4,747.78
2.100807.17	4/30/2021	144.62	28.03	38.99	5.84	2.72	220.20
12.159800.08	5/3/2021	77.74	34.20	36.17	3.76	1.76	153.63
5.114611.06	5/3/2021	39.29	17.32	19.50	2.25	1.05	79.41
5.124801.15	5/4/2021	72.72	14.46	22.55	3.73	1.74	115.20
15.128604.18	5/14/2021	248.37	-	-	10.87	5.07	264.31
5.148400.03	5/27/2021	4.72	1.55	2.91	0.55	0.26	9.99
2.141402.29	5/28/2021	17.94	4.12	5.16	0.69	0.33	28.24
12.171006.09	6/1/2021	23.58	13.43	12.17	0.88	0.41	50.47
15.125804.27	1/8/2018	24.65	-	-	1.24	0.58	26.47
4.126415.06	6/17/2021	135.86	23.34	34.64	5.50	2.58	201.92
12.101409.25	6/30/2021	65.67	20.65	35.48	6.29	2.93	131.02
2.128600.01	6/30/2021	119.41	26.66	50.30	9.44	4.40	210.21
2.107200.04	7/1/2021	304.46	56.74	56.80	5.29	2.47	425.76
9.148000.07	7/7/2021	34.72	10.12	19.07	3.58	1.68	69.17
1.105200.42	7/7/2021	61.79	11.20	15.56	2.33	1.09	91.97
12.130804.15	7/8/2021	274.68	50.22	57.09	6.69	3.13	391.81
3.119004.24	7/9/2021	150.82	-	-	4.00	1.87	156.69
7.134008.13	7/9/2021	72.92	30.28	27.45	1.99	0.93	133.57
14.386606.16	7/13/2021	135.45	-	-	4.62	2.16	142.23
15.128806.27	7/14/2021	551.82	-	-	21.04	9.82	582.68
12.102002.30	7/15/2021	201.35	9.65	17.93	3.37	1.58	233.88
14.176070.24	7/15/2021	144.14	-	-	8.35	3.90	156.39
19.417806.11	8/2/2021	272.49	27.71	-	-	-	300.20
12.145331.23	8/2/2021	166.02	4.94	10.26	1.76	0.82	183.80
15.150100.12	8/2/2021	151.03	22.44	36.72	6.00	2.80	218.99
8.136205.08	8/2/2021	262.49	33.34	44.88	6.27	2.94	349.92
3.148401.15	8/3/2021	269.06	42.03	44.77	4.26	1.98	362.10
6.130506.37	8/5/2021	197.98	46.90	50.20	4.64	2.17	301.89
2.112400.02	8/6/2021	436.91	237.05	224.95	17.70	8.26	924.87
14.342203.16	8/6/2021	70.43	-	-	5.13	2.39	77.95
6.130801.16	8/6/2021	604.20	168.29	140.96	6.63	3.10	923.18
6.118701.15	8/23/2021	160.39	89.77	96.38	5.80	2.71	355.05
12.131600.19	8/23/2021	245.35	69.84	83.28	7.24	3.38	409.09
14.341605.12	8/31/2021	108.67	-	-	3.02	1.41	113.10
10.104600.09	8/31/2021	312.84	66.60	84.21	6.16	2.87	472.68
5.145600.16	9/2/2021	298.92	48.25	77.99	7.63	3.57	436.36
15.132001.03	9/2/2021	65.73	-	-	2.16	1.01	68.90
10.105000.19	9/14/2021	281.52	340.91	332.94	9.15	4.28	968.80
9.166600.06	9/15/2021	290.76	73.49	80.30	4.53	2.11	451.19
19.371608.12	9/20/2021	240.79	71.07	105.09	10.21	4.78	431.94
12.114805.04	9/21/2021	498.07	33.54	85.10	11.87	5.53	634.11
12.141604.23	9/21/2021	198.72	105.49	138.29	13.03	6.08	461.61
12.135804.12	9/30/2021	240.8	50.98	73.38	5.93	2.77	373.86
5.125000.38	10/5/2021	181.61	44.76	75.87	6.97	3.26	312.47
6.113202.02	10/5/2021	398.92	166.79	155.60	6.11	2.86	730.28
12.108201.04	10/5/2021	211.95	71.59	81.41	4.92	2.30	372.17
19.484504.15	10/8/2021	133.33			5.63	2.64	141.60
12.157603.30	10/12/2021	120.78	61.00	69.03	4.13	1.93	256.87
10.148418.23	10/14/2021	301.79	69.39	73.60	3.93	1.84	450.55
12.159600.05	10/19/2021	74.36	40.70	47.96	3.06	1.43	167.51
19.372308.12	10/29/2021	191.49	79.13	116.84	9.64	4.51	401.61

ACCOUNT #	TERMINATION DATE	ELECTRIC	WATER	SEWER	RECYCLE	LANDFILL	TOTAL
6.112704.07	11/9/2021	346.14	160.63	179.34	10.53	4.92	701.56
14.332362.15	11/12/2021	418.57	-	-	8.86	4.14	431.57
10.152004.17	11/12/2021	5.03	4.57	5.32	0.34	0.17	15.43
							-
	TOTALS	**26,553.90**	**9,824.55**	**7,347.39**	**855.74**	**409.63**	**44,991.21**

WEBSTER CITY

MEMORANDUM

TO: Mayor and City Council

FROM: Daniel Ortiz-Hernandez, City Manager
Karyl Bonjour, City Clerk
Zach Chizek, City Attorney

DATE: May 6, 2022

RE: Amend Ordinances pertaining to Legal Age

SUMMARY: The current wording in the Code of Ordinances for the City of Webster City does not have the correct legal age specified when it comes to the selling, giving or supplying of, or the purchase and use of tobacco, tobacco products, alternative nicotine products, vapor products or cigarettes. This needs to be changed to the correct legal age in two different Chapters of the Code of Ordinances.

PREVIOUS COUNCIL ACTION: No previous action has been taken on these amendments to the Code of Ordinances.

BACKGROUND/DISCUSSION: The City Attorney notified the City Clerk that the incorrect legal age was discovered by their office when working on a case in another City that discovered the same issue. After finding the City of Webster City Code of Ordinances had the incorrect legal age in these two Chapters, City Attorney Zach Chizek prepared the Ordinances with the amended changes to correct the legal age to 21 years of age and bring our Code of Ordinances up to date with the current law.

SUMMARY: Chapter 34, Article IV, Sec. 34-85 and Chapter 12, Article II, Sec. 12-25 of the Code of Ordinances for the City of Webster City, need to be amended to change the legal age in regard to the selling, giving or supplying of, or the purchase and use of tobacco, tobacco products, alternative nicotine products, vapor products or cigarettes to 21 years of age set by the current state laws.

FINANCIAL IMPLICATIONS: None

RECOMMENDATION: Approve Third Reading, then Pass and Adopt both Ordinances to be amended so the City of Webster City Code of Ordinances is in compliance with state laws.

ALTERNATIVE(s): None, these chapters of the City Code of Ordinances need to be updated to the correct age set by state regulations.

ORDINANCE NO. 2022- _____

AN ORDINANCE REPEALING THE CODE OF ORDINANCES OF THE CITY OF WEBSTER CITY, IOWA, 2019, BY AMENDING CHAPTER 34, ARTICLE IV, PERTAINING TO OFFENSES RELATING TO MINORS WITHIN THE CORPORATE LIMITS OF THE CITY OF WEBSTER CITY, IOWA.

BE IT ENACTED by the City Council of the City of Webster City, Iowa, as follows, to-wit:

SECTION 1. SECTION MODIFIED. Chapter 34, Article IX of the Code of Ordinances of the City of Webster City, Iowa, 2019, pertaining to Offenses Relating to Minors within the Corporate Limits of the City of Webster City, Iowa is hereby repealed in part and the following adopted in lieu thereof:

Sec. 34-85. - Cigarettes and tobacco.

It is unlawful for any person under 21 years of age to smoke, use, possess, purchase or attempt to purchase any tobacco, tobacco products, alternative nicotine products, vapor products, or cigarettes. Possession of tobacco, tobacco products, alternative nicotine products, vapor products, or cigarettes by a person under 21 years of age shall not constitute a violation of this section if the person possesses the tobacco, tobacco products, alternative nicotine products, vapor products, or cigarettes as part of the person's employment and the person is employed by a person who holds a valid permit under the Code of Iowa Chapter. 453A and lawfully offers for sale or sells tobacco, tobacco products, alternative nicotine products, vapor products, or cigarettes.

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 16th day of May, 2022.

CITY OF WEBSTER CITY, IOWA

_____

John Hawkins, Mayor

ATTEST:

_____

Karyl K. Bonjour, City Clerk

ORDINANCE NO. 2022- _____

AN ORDINANCE REPEALING THE CODE OF ORDINANCES OF THE CITY OF WEBSTER CITY, IOWA, 2019, BY AMENDING CHAPTER 12, ARTICLE II, PERTAINING TO BUSINESSES WITHIN THE CORPORATE LIMITS OF THE CITY OF WEBSTER CITY, IOWA.

BE IT ENACTED by the City Council of the City of Webster City, Iowa, as follows, to-wit:

SECTION 1. SECTION MODIFIED. Chapter 12, Article II of the Code of Ordinances of the City of Webster City, Iowa, 2019, pertaining to Businesses within the Corporate Limits of the City of Webster City, Iowa is hereby repealed in part and the following adopted in lieu thereof:

Sec. 12-25. - Persons under legal age.
No person shall sell, give or otherwise supply any tobacco, tobacco products, alternative nicotine products, vapor products, or cigarettes to any person under 21 years of age. The provision of this section includes prohibiting a minor from purchasing cigarettes or tobacco products from a vending machine. If a retailer or employee of a retailer violates the provisions of this section, the council shall, after written notice and hearing, and in addition to the other penalties fixed for such violation, assess the following:

(1) For a first violation, the retailer shall be assessed a civil penalty in the amount of $300.00. Failure to pay the civil penalty as ordered under this subsection shall result in automatic suspension of the permit for a period of 14 days.

(2) For a second violation within a period of two years, the retailer's permit shall be suspended for a period of 30 days.

(3) For a third violation within a period of three years, the retailer's permit shall be suspended for a period of 60 days.

(4) For a fourth violation within a period of three years, the retailer's permit shall be revoked.

The clerk shall give written notice to the retailer by mailing a copy of the notice to the place of business as it appears on the application for a permit. The notice shall state the reason for the contemplated action and the time and place at which the retailer may appear and be heard.

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 16th day of May, 2022.

CITY OF WEBSTER CITY, IOWA

_____

John Hawkins, Mayor

ATTEST:

_____

Karyl K. Bonjour, City Clerk

MEMORANDUM

TO: Mayor and Council

FROM: Beth Chelesvig

DATE: May 10, 2022

RE: Health Insurance Renewal FY22-23

SUMMARY: The initial increase for our health insurance plan this year was at 4.54%. We have a claims funding reserve and with an adjustment on the claims funding level of the premium structure I am recommending no increase for FY 22-23 for the health plan, dental or vision plans.

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 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.

Each year when we receive our renewal, we have the option to adjust the plan design and claims funding amount to off-set any increase in premium. This year after meeting with the Health Insurance Committee and reviewing options it is the recommendation of the committee that we make the adjustments to the self-funding portion of the plan design which would result in no increase in premiums for FY 22-23.

We are self-funded for dental and vision coverage, there will be no increase to those premiums for FY 22-23. We did evaluate and increase some of the co-pays for the vision insurance as those had not been increased for many years but the overall impact to the premium structure was zero.

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 and Breanne Lesher.

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: The City of Webster City has been with this program since January of 2012. 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
- 20017/18 – IGHCP – 0% increase
- 2018/19 – IGHCP – 3.39% increase
- 2019/20 – IGHCP – 5% increase
- 2020/21 – IGHCP – 4% increase
- 2021/22– IGHCP – 0% increase

FINANCIAL IMPLICATIONS: There would be no increase to budget, claims funding reserve will support this plan.

RECOMMENDATION: Approval of plan as listed above.

RESOLUTION NO. 2022-

ADOPTING GROUP BENEFIT PLAN FOR CITY EMPLOYEES BEGINNING JULY 1, 2022. 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, 2022– June 30, 2023.

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, 2022 and the Administrative Services Director is hereby authorized and directed to execute the necessary documents for implementation.

Passed and adopted this 16th day of May, 2022.

ATTEST:_____ _____

Karyl Bonjour, City Clerk John Hawkins, Mayor

WEBSTER CITY

MEMORANDUM

TO: Mayor and City Council

FROM: Karyl Bonjour, City Clerk

DATE: May 9, 2022

RE: 2022 County Fair Parade

SUMMARY: Street closure request of Second Street for 2022 County Fair Parade. This is a request for a Parade Permit from the Hamilton County Fairgrounds – Hamilton County Exposition that has been granted annually for many years.

PREVIOUS COUNCIL ACTION: The current Street Closure Request has designated Second Street as a Street that needs Council approval prior to any closure taking place on any part of this street

BACKGROUND/DISCUSSION: A letter requesting a parade permit for the Annual Hamilton County Fair Parade on Tuesday, July 19, 2022 at 6:00 p.m. was received by the City Clerk. The City Clerk has notified all City Departments of the request so they can prepare for their portion of services/items needed for this event (escort, barricades, signs, cleanup, etc.). The Clerk has heard back from Police Department, Fire Department and Street Department with no objections presented. Once Council approves, the Clerk can issue the Parade Permit

FINANCIAL IMPLICATIONS: There will be some overtime expense for services provided at this event that take place after the normal working hours of the City Staff.

RECOMMENDATION: Approve the issuance of the Parade Request.

ALTERNATIVE(s): Not approve the issuance of the Parade Request, although this is an event that brings people to the Community from throughout the County.

Hamilton County Fairgrounds – Hamilton County Exposition

P O Box 563 – Webster City, Iowa 50595
515-832-1443 FAX: 515-832-6972
Email: hamcoexpo@gmail.com www.hamcoexpo.com

April 25, 2022

Karyl Bonjour, City Clerk
City of Webster City
P O Box 217
Webster City, IA 50595

Dear Ms. Bonjour,

We are preparing for our annual Hamilton County Fair that will take place July 19-24. We would like to continue to kick off the fair with the parade. We will use the same staging and same parade route again this year.

This letter is requesting official permission for a parade permit and assistance from various departments of the city. The parade will be Tuesday, July 19 and start at 6:00 PM. Staging for the parade will begin at 4:00 PM.

The street and police departments have always been a huge help with the parade. We would really appreciate their continued assistance.

The Hamilton County Fairboard request official permission to:

- Block off the area as shown in the attached map for staging to start at 4:00 PM and for the duration of the parade. Start the parade at Prospect to Second Street, to Superior Street turning east on Bank Street and continuing to the Hamilton County Fairgrounds.
- Have police lead and stop traffic where necessary.
- Turn off streetlights for the duration of the parade

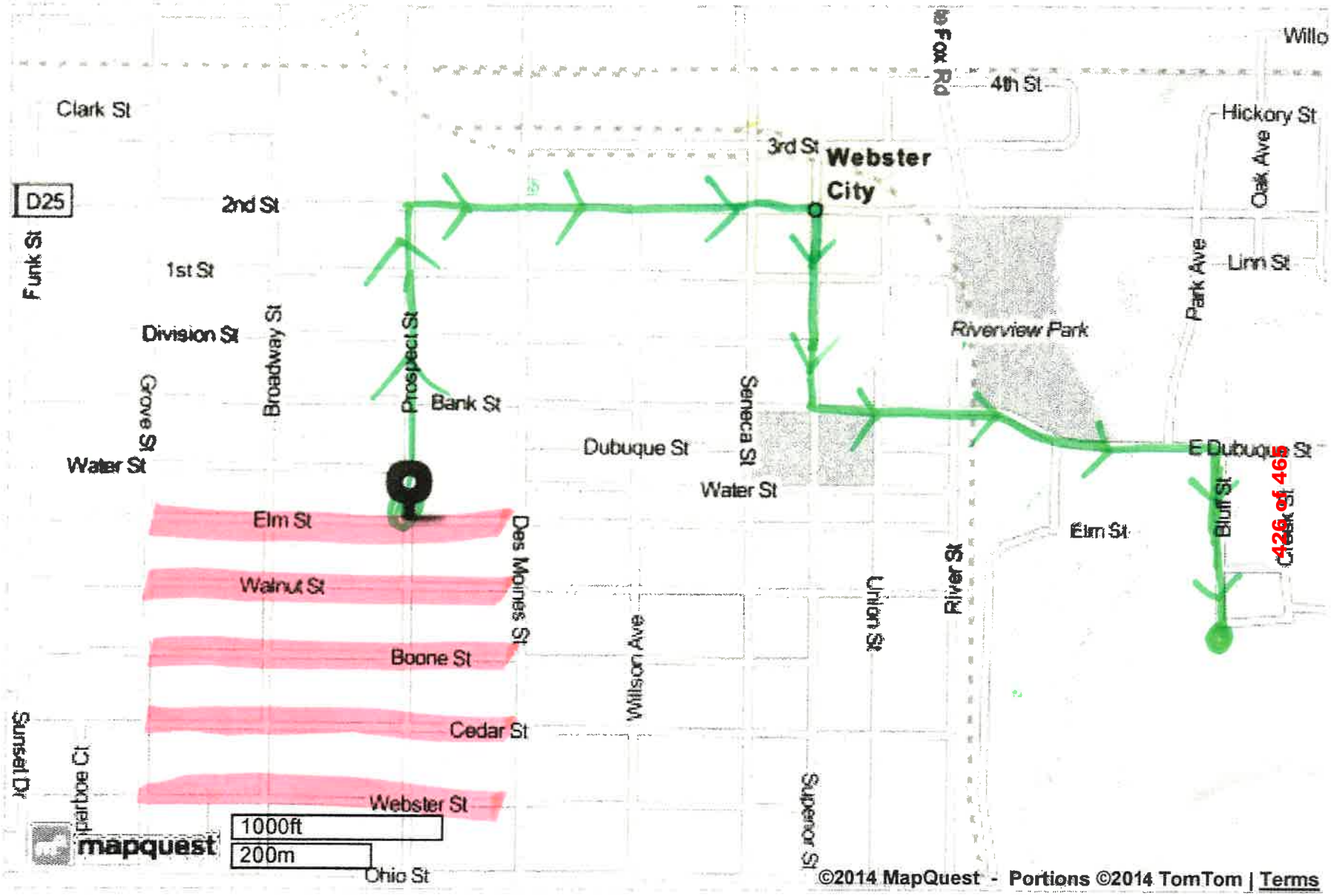
I would like to thank everyone for their assistance on this project. We want to make this fair parade a huge success as like each past year. Please call me with any questions you may have.

Sincerely,

Jamie Griffith

Jamie Griffith

Hamilton County Fair Manager



Staging Route

WASTEWATER TREATMENT PLANT REPORT FOR THE MONTH OF APRIL 2022

	MONTH April	Year to Date 2022	MONTH April	Year to Date 2021	
Total gallons flow	45,043,000	126,149,000	32,166,000	117,524,000	gal
Average daily flow	1,501,000		1,072,200		gal/da
Percentage treated	100		100		%
Total gallons raw sludge	103,563	377,283	143,523	524,817	gal
Total gallons digested sludge out	0		0		gal
Total gallons sludge transferred to storage tank	0		153,220		gal
Total gallons supernatant returned	12,916		52,372		gal
Methane gas produced	0		22,436		cu.ft.
Average effluent CBOD (25 mg/l aver. 40 mg/l max.)	16.63		12.2		mg/l
Number of days max. limit was exceeded	0		0		da
Average % removal	94.2		95.8		%
Average effluent suspended solids (30 mg/l aver. 45 mg/l max.)	9.25		10		mg/l
Number of days max. limit was exceeded	0		0		da
Average percent removal	96.82		95.7		%
Average effluent ammonia nitrogen Apr 1.5 mg/l average, 15.7 g/l max. limitation)	<1		0		mg/l
Number of days max. limit was exceeded	0		0		da

ELECTRIC REPORT FOR THE MONTH OF APRIL 2022

(Production Month-March 2022; Billing Month (Due) - April 2022

	MONTH April	Year to Date 2022	MONTH April	Year to Date 2021
TOTAL PURCHASED POWER K.W.	8,613,925	35,641,101	8,270,547	35,295,935
Gross K.W. Generated For Maint.	0	0	0	3,359,190
For Corn Belt	26,320	93,700	0	28,930
Station Power K.W.	25,578	122,876	22,595	107,030
NET K.W.TO BOARD	8,588,347	35,518,225	8,247,952	35,188,905
Billed by Clerk's Office to Customers K.W:				
Commercial Sales	2,058,696	8,896,095	1,976,917	8,637,160
Industrial Sales	2,750,037	10,379,247	2,721,476	10,164,770
Residential Sales	2,192,768	10,299,139	2,073,484	10,372,193
Sales for Resale-Wholesale	634,400	2,902,600	595,700	2,874,600
City Departments & Street Lights	416,852	1,754,547	405,038	1,734,428
KILOWATTS UNACCOUNTED	535,594	1,286,597	475,337	1,405,754
Percentage of Unaccounted for	6.24%	3.62%	5.76%	3.99%

LOAD COMPARISON	2022	2021
Peak K.W. Demand	15,388	14,970
Purchased Power	8,613,925	8,270,547
Net to Board	8,588,347	8,247,952

REMARKS:

CITY OF WEBSTER CITY, IOWA - UTILITY REPORT
ELECTRIC UTILITY PURCHASES & SALES - 2022

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 2022	8,639,681	8,610,734	8,822,858	*(212,124)*	*-2.46%*	8,610,734	8,822,858	*(212,124)*	*-2.46%*
Jan	Feb 2022	9,741,175	9,704,674	9,286,008	418,666	4.31%	18,315,408	18,108,866	206,542	1.13%
Feb	Mar 2022	8,646,320	8,614,470	8,070,009	544,461	6.32%	26,929,878	26,178,875	751,003	2.79%
Mar	Apr 2022	8,613,925	8,588,347	8,052,753	535,594	6.24%	35,518,225	34,231,628	1,286,597	3.62%
Apr	May 2022									
May	Jun 2022									
Jun	July 2022									
July	Aug 2022									
Aug	Sept 2022									
Sep	Oct 2022									
Oct	Nov 2022									
Nov	Dec 2022									
	TOTALS	35,641,101	35,518,225	34,231,628	1,286,597					

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 2022	2,233,977	2,491,803	453,671	2,851,907	791,500	28,947	8,851,805	9,074,198
Feb 2022	2,515,656	2,437,489	480,650	3,106,013	746,200	36,501	9,322,509	8,718,214
Mar 2022	2,087,766	2,699,918	403,374	2,148,451	730,500	31,850	8,101,859	8,302,559
Apr 2022	2,058,696	2,750,037	416,852	2,192,768	634,400	25,578	8,078,331	7,795,210
May 2022								
Jun 2022								
July 2022								
Aug 2022								
Sep 2022								
Oct 2022								
Nov 2022								
Dec 2022								
TOTALS	8,896,095	10,379,247	1,754,547	10,299,139	2,902,600	122,876	34,354,504	33,890,181

BILLING AMOUNT	Commercial Sales	Industrial Sales	City Depts. & St. Light Sales	Residential Sales	Wholesale Sales	Station Power	TOTAL SALES	PREVIOUS YEAR
Jan 2022	$266,192.43	$238,747.56	$48,286.20	$371,302.32	$74,090.42	N/C	$998,618.93	$1,003,457.17
Feb 2022	$292,406.50	$232,349.15	$51,330.47	$395,955.61	$72,022.25	N/C	$1,044,063.98	$973,203.82
Mar 2022	$252,092.45	$226,299.27	$43,470.35	$304,294.14	$70,530.83	N/C	$896,687.04	$945,031.60
Apr 2022	$249,397.08	$247,570.61	$45,416.24	$308,301.73	$61,881.71	N/C	$912,567.37	$876,197.73
May 2022								
Jun 2022								
July 2022								
Aug 2022								
Sep 2022								
Oct 2022								
Nov 2022								
Dec 2022								
TOTALS	$1,060,088.46	$944,966.59	$188,503.26	$1,379,853.80	$278,525.21		$3,851,937.32	$3,797,890.32

Number of Customers	Commercial	Industrial	City Depts & St. Lights	Residential	Wholesale	Total	Previous Year
Jan 2022	529	7	45	3,883	3	4,467	4,446
Feb 2022	530	7	45	3,871	3	4,456	4,438
Mar 2022	523	7	45	3,881	3	4,459	4,446
Apr 2022	526	7	48	3,872	3	4,456	4,474
May 2022							
Jun 2022							
July 2022							
Aug 2022							
Sep 2022							
Oct 2022							
Nov 2022							
Dec 2022							

WATER PLANT REPORT FOR THE MONTH OF APRIL 2022

(Production Month March 2022 Billing Month (Due) - April 2022)

	MONTH April	Year to Date 2022	MONTH April	Year to Date 2021
Total Gallons Pumped from Wells(Inf)	24,464,000	90,773,000	23,850,000	86,648,000
Average Gallons Pumped	(789,161)		(795,000)	
Gallons for Sludge	70,500	303,150	2,350	235,000
Total Gallons to Water Plant	24,393,500	90,469,850	23,847,650	86,413,000
Gallons to Distribution System From From Water Plant (Effluent reading)	27,936,000	102,820,000	27,150,000	97,479,000
TOTAL TO SYSTEM - CUBIC FEET	3,734,500	13,745,034	3,629,427	13,031,046
Billed by Clerk's Office to Customers Cubic Feet	2,296,000	9,626,300	2,328,000	9,284,500
Billed by City Departments Cubic Feet	323,500	883,000	260,800	736,000
Used by City Departments, but not billed-estimated Cubic Feet				
Fire	0	0	0	0
Meter	0	0	0	0
Sew. Disp.	0	0	0	0
Street,Water,SewerDistribution,Line *(main breaks,hydrant flush,sewer,valve rpr,w.tower, line dept*	321	113,326	13,368	139,074
Water Plant filter backwash	75,289	323,762	127,050	508,200
Ground storage tank loss				
Recreation-Drink.Fount.	0	0	0	0
Cemetery	0	0	0	0
Change in Distribution System	0	0	0	0
Used by Contractor	0	0	0	0
CUBIC FEET UNACCOUNTED FOR	1,039,390	2,798,646	900,209	2,363,273
Percentage of Unaccounted for	27.83%	20.36%	24.80%	18.14%

NOTE: 30 loads of lime sludge hauled to farm ground

NOTE: 40 loads of lime sludge hauled to farm ground

REMARKS:

WATER UTILITY PRODUCTION SALES & USAGE 2022

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 DateTo 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 2022	3,301,642	2,679,166	622,476	18.85%	3,301,642	2,679,166	622,476	18.85%
Jan	Feb 2022	3,440,269	2,792,850	647,419	18.82%	6,741,911	5,472,016	1,269,895	18.84%
Feb	Mar 2022	3,268,623	2,779,262	489,361	14.97%	10,010,534	8,251,278	1,759,256	17.57%
Mar	Apr 2022	3,734,500	2,695,110	1,039,390	27.83%	13,745,034	10,946,388	2,798,646	20.36%
Apr	May 2022								
May	Jun 2022								
June	July 2022								
July	Aug 2022								
Aug	Sep 2022								
Sep	Oct 2022								
Oct	Nov 2022								
Nov	Dec 202								
	TOTALS	13,745,034	10,946,388	2,798,646					

Billings & Usage By Type of Service-C/F	Commercial	Industrial	City Depts.	Residential	Used by City Dep i.e. water breaks flush.etc. Not metered	Total	Previous Year	Previous Year Produced
Jan 2022	651,100	425,300	167,900	1,312,300	122,566	2,679,166	2,715,312	3,127,323
Feb 2022	628,100	376,500	126,000	1,484,300	177,950	2,792,850	2,579,526	3,219,028
Mar 2022	692,100	564,100	265,600	1,196,500	60,962	2,779,262	2,643,718	3,055,269
Apr 2022	654,200	462,100	323,500	1,179,700	75,610	2,695,110	2,729,218	3,629,427
May 2022								
Jun 2022								
July 2022								
Aug 2022								
Sep 2022								
Oct 2022								
Nov 2022								
Dec 2022								
TOTALS	2,625,500	1,828,000	883,000	5,172,800	437,088	10,946,388	10,667,774	13,031,047

BILLING AMOUNT	Commercial Sales	Industrial Sales	City Depts. Sales	Residential Sales	City Depts Not Sold	TOTAL SALES	PREVIOUS YEAR
Jan 2022	$37,693.53	$17,268.67	$6,890.87	$124,567.22	N/C	$186,420.29	$ 151,572.05
Feb 2022	$36,567.17	$15,567.07	$5,443.26	$130,561.66	N/C	$188,139.16	$ 142,014.00
Mar 2022	$32,405.49	$19,022.57	$8,841.72	$93,202.01	N/C	$153,471.79	$ 146,383.30
Apr 2022	$37,930.26	$18,604.97	$12,368.17	$117,153.69	N/C	$186,057.09	$ 150,376.83
May 2022							
Jun 2022							
July 2022							
Aug 2022							
Sep 2022							
Oct 2022							
Nov 2022							
Dec 2022							
TOTALS	$144,596.45	$70,463.28	$33,544.02	$465,484.58		$714,088.33	$ 590,346.18

Number of Customers	Commercial	Industrial	City Depts.	Residential		Previous Year
Jan 2021	354	8	14	3,181	3,557	3,535
Feb 2021	355	8	14	3,174	3,551	3,534
Mar 2021	357	8	14	3,187	3,566	3,545
Apr 2021	356	8	16	3,178	3,558	3,566
May 2021						
Jun 2021						
July 2021						
Aug 2021						
Sept 2021						
Oct 2021						
Nov 2021						
Dec 2021						

INCIDENT ANALYSIS - DAY

Date 05/02/2022

Time 8:03:47AM **Agency** Webster City Police Department

Report CFS03 **Dates** 04/01/2022 **Thru** 04/30/2022

Activity		Sun	Mon	Tue	Wed	Thur	Fri	Sat	Total
Agency:	WCPD Webster City Police Department								
01050	Traffic Accident PD	0	3	3	0	1	5	3	15
1050C	Traffic Acc City Vehicle	1	1	0	0	0	0	0	2
1050H	Hit And Run	2	2	0	0	0	0	0	4
911P	911P Phone Dispatched	0	0	0	0	1	0	5	6
911R	911 Radio Dispatched	5	4	4	4	1	13	7	38
ALARM	Alarm Actual/False	1	0	3	1	0	5	5	15
ANIM	Animal Complaint	5	2	4	4	5	7	3	30
ASSAG	Asssit Other Agency	3	1	2	2	7	0	3	18
ASSLT	Assault	1	0	0	1	0	0	1	3
ASSSO	Assist Sheriffs Office	0	0	1	0	1	0	2	4
ASSSP	Assist State Patrol	0	0	0	0	1	0	0	1
BIKE	Bicycle Violations	0	0	0	1	0	0	0	1
BURG	Burg/Breaking & Entering	0	3	0	0	1	3	0	7
BURN	Burning Complaint	0	0	0	0	0	0	1	1
CIVIL	Civil Disputes	0	0	0	1	1	2	1	5
CR	Commercial/Resd Patrol	35	40	28	39	45	56	36	279
DARE	DARE Activity	0	0	1	2	0	0	0	3
DEATH	Death/Unattended	0	0	0	1	0	0	1	2
DIREC	Directed Assignment	6	5	4	5	3	6	7	36
DISO	Disorderly Conduct	0	0	1	0	0	1	0	2
DOM	Domestic Disturbances	1	2	2	0	1	0	5	11
DP	Downtown Foot Patrol	3	5	4	3	3	3	1	22
DRIVE	Driving Complaints	4	5	2	6	3	7	3	30
ESCOR	Escort	0	0	0	0	0	0	1	1
FIRE	Fire	1	1	2	0	0	1	1	6
FOLL	Follow Up	6	5	6	7	11	5	4	44
FOOT	Foot Patrol	0	1	0	0	0	1	2	4
FRAUD	Fraud	0	1	3	2	0	2	1	9
FUNER	Escort/Funeral	0	0	0	0	0	0	3	3
HARR	Harassement	0	0	0	0	0	2	5	7
INTOX	Intoxication	0	0	0	0	0	0	1	1
MISC	All Other Offenses	0	0	0	0	1	0	0	1
MISS	Missing Person	0	0	0	0	1	2	0	3
MOTOR	Motorist Assist	1	1	1	2	3	4	2	14
NOISE	Noise Complaints	2	4	1	1	0	3	3	14
NOTIF	Notification	0	0	1	0	0	0	0	1
NUIS	Nuisance Calls	0	0	0	5	9	10	2	26
OPEN	Open Window/Door	1	1	1	0	0	0	0	3
PARK	Parking Violations	8	6	3	4	6	7	9	43
PEDD	Peddler/Solicitor	0	0	0	0	1	0	0	1
PORN	Porn/Obscene Material	0	0	0	1	0	0	0	1
PROJA	Project Awareness	0	12	2	2	11	4	2	33
PROP	Lost/Found Property	3	0	1	1	1	0	0	6
PUB	Assistance Public	24	21	22	15	18	19	14	133
SHOP	Shoplifting	0	0	0	0	0	1	0	1
SP	School Foot Patrol	0	1	2	1	0	3	0	7
STAP	Staionary Patrol	2	2	1	1	2	0	0	8
STR	Debris/Street Problems	2	2	2	2	3	4	2	17
SUSP	Suspicious Activity	9	9	2	8	5	10	11	54
TCS	Traffic Control/School	0	4	7	4	3	7	0	25
THEFT	Theft	0	1	0	2	0	5	2	10
TIP	Tip	1	1	2	1	0	0	1	6

INCIDENT ANALYSIS - DAY

Date 05/02/2022

Time 8:03:47AM **Agency** Webster City Police Department

Report CFS03 **Dates** 04/01/2022 **Thru** 04/30/2022

Activity		Sun	Mon	Tue	Wed	Thur	Fri	Sat	Total
Tobac	Tobacco Violation	0	0	0	1	0	0	0	1
TRANS	Transient	0	1	0	1	0	1	0	3
TRESP	Criminal Trespass	0	1	0	1	0	0	2	4
TS	Traffic Stop	21	20	16	19	25	14	32	147
UNLOC	Vehicle Unlock	3	1	2	3	5	5	2	21
UTIL	Utility Problems	2	5	6	4	2	2	6	27
VAND	Vandalism	3	1	1	2	0	0	2	9
VIOL	Violation Restraining Ord	1	1	0	0	0	0	0	2
WARR	Warrant Served	1	1	3	3	0	3	2	13
WELF	Welfare Check	1	4	3	4	0	3	0	15
WIND	Public Window Assist	0	6	13	5	6	10	1	41
Webster City Police Department	**Agency Total**	159	187	162	172	187	236	197	1,300
	Total	159	187	162	172	187	236	197	1,300

FIRE DEPARTMENT REPORT

April 2022

ALARMS

DATE	TIME	ADDRESS	TYPE OF SITUATION FOUND	CITY, MUTUAL AID, DISTRICT
04-03	1432	635 Webster St.	Smoke removal	City
04-05	1429	1226 Water st.	Dispatched, cancelled	City
04-10	1926	280th and Tunnel Mill rd	Grass fire	District
04-11	1500	1751 210th st.	Grass fire	City
04-11	2330	1725 210th st.	Carbon Monoxide	City
04-12	2239	1441 220th st.	Arcing, electrical equip.	Mutual
04-14	1958	Area Eastern part of City	Search for person	City
04-15	1534	MM 135 Hwy 20	Vehicle fire	City
04-19	0935	735 White Fox rd.	Citizen Complaint	City
04-23	1509	305 Fair Meadow Dr.	Hazardous condition	City
04-23	2355	1100 Elm st.	Gas Leak	City
04-25	1059	1720 Lynx ave #307	Smoke removal	City
04-26	1506	Closz dr. and Commerce dr.	Vehicle accident clean up	City
03-25	2116	1000 Woolsey	Hazardous Condition	City

Year to Date Total = 51

April Total =14
City- =12
Mutual- =1
District- =1

TRAINING

	TIME	TYPE OF TRAINING	HOURS	PERSONNEL
04-11	1800	Basic Firefighter skills hose advance/RIC	2	32
04-25	1800	Confined space rescue, entrapment	2	32

Year to Date Total = 346 **April Total =128**

INSPECTIONS

DATE	BUSINESS	REASON FOR INSPECTION
04-04	True Value	Annual Fire Inspection
04-08	Edgewood dr. apartments	Final walk through sprinklers
04-12	Peoples credit union	Annual Fire Inspection
04-12	Subway	Annual Fire Inspection
04-13	Fosters Funeral Home	Annual Fire Inspection
04-18	Bowman Funeral Home	Annual Fire Inspection
04-19	Grid Iron	CMB
04-19	The Lynx	CMB
04-19	Fareway	Annual Fire Inspection
04-20	Chicago Style	Annual Fire Inspection
04-22	Bomgaars	Annual Fire Inspection
04-25	WC School Administration building	Annual Fire Inspection
04-26	Hamilton High	Annual Fire Inspection

04-27	Osweilers	Annual Fire Inspection
04-27	Iowa Specialty Clinic	Final Walk through

Year to Date Total = 34 **April Total =15**

MISCELLANEOUS

DATE	TIME	EVENT
04-01		Sewer Flushes 12,000 gallons
04-05		Flush hydrants with street dept.
04-06		Flush hydrants with street dept.
04-07		Flush hydrants with street dept.

MEETING ROOM

DATE	TIME	USED BY
	1945	Business Group Meeting all Fridays

HAMILTON COUNTY

SOLID WASTE COMMISSION

Serving:
BLAIRSBURG
ELLSWORTH
JEWELL
KAMRAR
RANDALL
STANHOPE
WEBSTER CITY
WILLIAMS
RURAL HAM. CO.

WEBSTER CITY, IOWA 50595-0128

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 11, 2022

1. Roll Call
2. Minutes of April 13, 2022
3. Approve Payment of Bills and Payrolls
4. Secretary-Treasurer's Financial Reports for April
5. Manager's Reports for April
6. 2022-2023 Budget Review
7. Resolution 22-01, Resolution Naming Depositories
8. Open Discussion
9. 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 13, 2022 at 7:02 P.M. The meeting was called to order by Chairperson Dan Campidilli and roll being called, members were present as follows:

Webster City-Biri Bishop
Hamilton County-Dan Campidilli
Stanhope-Terry Painton
Williams-Dennis Frayne
Kamrar-Jeanette Tempel

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

It was moved by Painton and seconded by Frayne that:

1. The Minutes of March 9, 2022 be approved.
2. The issuance of Payroll for the period ending March 11, 2022 and paid on March 18, 2022 in the amount of $6,414.52 be approved.
3. The issuance of Payroll for the period ending March 25, 2022 and paid on April 1, 2022 in the amount of $6,436.85 be approved.
4. Payment of Bills for March 2022 in the amount of $127,717.01 be approved.
5. The Secretary-Treasurer's Report for March 2022 be approved.

Motion carried with five ayes, Blairsburg, Randall, Jewell, and Ellsworth absent.

It was moved by Painton and seconded by Bishop that the Manager's reports for March 2022 be approved. Motion carried with five ayes, Blairsburg, Jewell, Randall, and Ellsworth absent.

Evora Consulting presented cost study information the Commission. It was moved by Bishop and seconded by Frayne to have Evora Consulting create a 10-year financial model. Motion carried with five ayes, Blairsburg, Jewell, Randall, and Ellsworth absent.

It was moved by Painton and seconded by Bishop to approve the submission of permit applications and payment for dust control as presented. Motion carried with five ayes, Blairsburg, Randall, Jewell, and Ellsworth absent.

It was moved by Frayne and seconded by Tempel to approve a one-time discounted tonnage fee of $55.00 for communities holding city wide clean up events. Motion carried with five ayes, Blairsburg, Randall, Jewell, and Ellsworth absent.

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

The Commission stood adjourned at 8:13 P.M.

Dan Campidilli, Chairperson

Cherie Ferguson, Secretary-Treasurer

Bills Approved 4/13/2022

BLUE RIBBON PELHAM WATERS	$33.25
BOMGAARS	$2.00
CARD SERVICES	$120.50
CENTRAL TRAILER SERVICE	$2,263.32
CINTAS	$507.15
COOPERATIVE TELEPHONE EXCHANGE	$133.13
EFTPS	$3,147.54
EVORA CONSULTING	$808.75
DAILY FREEMAN JOURNAL	$46.73
HY-VEE	$20.46
IPERS	$2,079.35
LIBERTY TIRE RECYCLING	$1,406.88
MIDWEST ELECTRONIC RECOVERY	$3,418.75
NAPA	$155.92
NCIARSWA	$96,004.58
OVERHEAD DOOR COMPANY OF WEBSTER COUNT	$205.00
POSTMASTER	$73.84
TITAN MACHINERY	$1,165.32
TRACKSIDE WELDING	$23.31
UNITED COOPERATIVE	$2,611.50
U.S. CELLULAR	$264.20
WEBSTER CITY MUNICIPAL UTILITIES	$485.50
WEBSTER CITY TRUE VALUE	$17.78
WELLMARK	$4,015.24
PAYROLL	$8,707.01
Total	$127,717.01

HAMILTON COUNTY SOLID WASTE COMMISSION
Check Detail
April 14 through May 11, 2022

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Liability Check	**EFT**	**04/14/2022**	**IPERS**		**OPERATING FUND**		**-2,020.41**
					Payroll Liabilities	-807.90	807.90
					Payroll Liabilities	-1,212.51	1,212.51
TOTAL						-2,020.41	2,020.41
Liability Check	**EFT**	**04/14/2022**	**United States Treasury**		**OPERATING FUND**		**-3,056.18**
					Payroll Liabilities	-1,091.00	1,091.00
					Payroll Liabilities	-796.35	796.35
					Payroll Liabilities	-796.35	796.35
					Payroll Liabilities	-186.24	186.24
					Payroll Liabilities	-186.24	186.24
TOTAL						-3,056.18	3,056.18
Check	**EFT**	**04/21/2022**	**FIRST STATE BANK**		**FIRST STATE BANK ...**		**-30.00**
					Bank Service Charges	-30.00	30.00
TOTAL						-30.00	30.00
Sales Tax Payment	**EFT**	**04/28/2022**	**TREASURER OF ST...**		**OPERATING FUND**		**-1,435.87**
			TREASURER OF ST...	LOST (LO...	Sales Tax Payable	-205.12	205.12
			TREASURER OF ST...	IOWA SA...	Sales Tax Payable	-1,230.75	1,230.75
TOTAL						-1,435.87	1,435.87
Liability Check	**EFT**	**04/28/2022**	**TREASURER OF ST...**		**OPERATING FUND**		**-1,653.00**
					Payroll Liabilities	-1,653.00	1,653.00
TOTAL						-1,653.00	1,653.00
Liability Check	**EFT**	**04/28/2022**	**MY IOWA UI**		**OPERATING FUND**		**-546.91**
					Payroll Liabilities	-546.91	546.91
TOTAL						-546.91	546.91
Liability Check	**EFT**	**05/02/2022**	**WELLMARK**		**OPERATING FUND**		**-4,015.24**
					Payroll Liabilities	-1,003.81	1,003.81
					Payroll Liabilities	-3,011.43	3,011.43
TOTAL						-4,015.24	4,015.24
Paycheck	**11706**	**04/15/2022**	**CHERIE L FERGUSON**		**FIRST STATE BANK ...**		**-474.35**
					Wages	-207.22	207.22
					Wages	-402.06	402.06
					Payroll Liabilities	38.32	-38.32
					IPERS	-57.52	57.52
					Payroll Liabilities	57.52	-57.52
					Payroll Liabilities	39.00	-39.00
					Medicare & Social Se...	-37.77	37.77
					Payroll Liabilities	37.77	-37.77
					Payroll Liabilities	37.77	-37.77
					Medicare & Social Se...	-8.84	8.84
					Payroll Liabilities	8.84	-8.84
					Payroll Liabilities	8.84	-8.84
					Payroll Liabilities	11.00	-11.00
					Unemployment Insura...	-0.61	0.61
					Payroll Liabilities	0.61	-0.61
TOTAL						-474.35	474.35

HAMILTON COUNTY SOLID WASTE COMMISSION
Check Detail
April 14 through May 11, 2022

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Paycheck	**11707**	**04/15/2022**	**KEENAN L ELLIOTT**		**FIRST STATE BANK ...**		**-1,202.68**
					Wages	-86.56	86.56
					Wages	-97.92	97.92
					Wages	-1,615.43	1,615.43
					Payroll Liabillties	113.21	-113.21
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					IPERS	-169.91	169.91
					Payroll Liabilities	169.91	-169.91
					Payroll Liabilities	114.33	-114.33
					Payroll Liabilities	168.00	-168.00
					Medicare & Social Se...	-111.59	111.59
					Payroll Liabilities	111.59	-111.59
					Payroll Liabilities	111.59	-111.59
					Medicare & Social Se...	-26.10	26.10
					Payroll Liabilities	26.10	-26.10
					Payroll Liabilities	26.10	-26.10
					Payroll Liabilities	64.00	-64.00
					Unemployment Insura...	-1.80	1.80
					Payroll Liabilities	1.80	-1.80
TOTAL						-1,202.68	1,202.68
Paycheck	**11708**	**04/15/2022**	**KEVIN S DINGMAN**		**FIRST STATE BANK ...**		**-823.01**
					Wages	-146.48	146.48
					Wages	-1,106.53	1,106.53
					Payroll Liabilities	114.33	-114.33
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					Payroll Liabilities	78.81	-78.81
					IPERS	-118.28	118.28
					Payroll Liabilities	118.28	-118.28
					Payroll Liabilities	103.00	-103.00
					Medicare & Social Se...	-77.69	77.69
					Payroll Liabilities	77.69	-77.69
					Payroll Liabilities	77.69	-77.69
					Medicare & Social Se...	-18.17	18.17
					Payroll Liabilities	18.17	-18.17
					Payroll Liabilities	18.17	-18.17
					Payroll Liabilities	38.00	-38.00
					Unemployment Insura...	-1.26	1.26
					Payroll Liabilities	1.26	-1.26
TOTAL						-823.01	823.01
Paycheck	**11709**	**04/15/2022**	**NICK T SCHUTT**		**FIRST STATE BANK ...**		**-893.95**
					Wages	-72.08	72.08
					Wages	-1,312.16	1,312.16
					Payroll Liabilities	87.07	-87.07
					IPERS	-130.67	130.67
					Payroll Liabilities	130.67	-130.67
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					Payroll Liabilities	114.33	-114.33
					Payroll Liabilities	118.00	-118.00
					Medicare & Social Se...	-85.82	85.82
					Payroll Liabilities	85.82	-85.82
					Payroll Liabilities	85.82	-85.82
					Medicare & Social Se...	-20.07	20.07
					Payroll Liabilities	20.07	-20.07
					Payroll Liabilities	20.07	-20.07
					Payroll Liabilities	65.00	-65.00
					Unemployment Insura...	-1.39	1.39
					Payroll Liabilities	1.39	-1.39
TOTAL						-893.95	893.95

HAMILTON COUNTY SOLID WASTE COMMISSION
Check Detail
April 14 through May 11, 2022

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Paycheck	11710	04/15/2022	TERRY A KLAVER		FIRST STATE BANK ...		-1,914.29
					Wages	-2,772.04	2,772.04
					Payroll Liabilities	114.33	-114.33
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					Payroll Liabilities	174.36	-174.36
					IPERS	-261.68	261.68
					Payroll Liabilities	261.68	-261.68
					Payroll Liabilities	237.00	-237.00
					Medicare & Social Se...	-171.86	171.86
					Payroll Liabilities	171.86	-171.86
					Payroll Liabilities	171.86	-171.86
					Medicare & Social Se...	-40.20	40.20
					Payroll Liabilities	40.20	-40.20
					Payroll Liabilities	40.20	-40.20
					Payroll Liabilities	120.00	-120.00
					Unemployment Insura...	-2.78	2.78
					Payroll Liabilities	2.78	-2.78
TOTAL						-1,914.29	1,914.29
Check	11732	04/19/2022	UNITED COOPERATI...		FIRST STATE BANK ...		-1,603.24
					Diesel Fuel/Fuel Oil	-1,603.24	1,603.24
TOTAL						-1,603.24	1,603.24
Check	11733	04/21/2022	KEENAN L ELLIOTT		FIRST STATE BANK ...		-68.33
					Meeting/Training Expe...	-68.33	68.33
TOTAL						-68.33	68.33
Paycheck	11734	04/29/2022	CHERIE L FERGUSON		FIRST STATE BANK ...		-475.17
					Wages	-76.16	76.16
					Wages	-534.07	534.07
					Payroll Liabilities	38.38	-38.38
					IPERS	-57.61	57.61
					Payroll Liabilities	57.61	-57.61
					Payroll Liabilities	39.00	-39.00
					Medicare & Social Se...	-37.84	37.84
					Payroll Liabilities	37.84	-37.84
					Payroll Liabilities	37.84	-37.84
					Medicare & Social Se...	-8.84	8.84
					Payroll Liabilities	8.84	-8.84
					Payroll Liabilities	8.84	-8.84
					Payroll Liabilities	11.00	-11.00
					Unemployment Insura...	-0.61	0.61
					Payroll Liabilities	0.61	-0.61
TOTAL						-475.17	475.17
Paycheck	11735	04/29/2022	KEENAN L ELLIOTT		FIRST STATE BANK ...		-1,117.98
					Wages	-1,677.10	1,677.10
					Payroll Liabilities	105.49	-105.49
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					IPERS	-158.32	158.32
					Payroll Liabilities	158.32	-158.32
					Payroll Liabilities	114.33	-114.33
					Payroll Liabilities	153.00	-153.00
					Medicare & Social Se...	-103.98	103.98
					Payroll Liabilities	103.98	-103.98
					Payroll Liabilities	103.98	-103.98
					Medicare & Social Se...	-24.32	24.32
					Payroll Liabilities	24.32	-24.32
					Payroll Liabilities	24.32	-24.32
					Payroll Liabilities	58.00	-58.00

HAMILTON COUNTY SOLID WASTE COMMISSION
Check Detail
April 14 through May 11, 2022

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
					Unemployment Insura...	-1.68	1.68
					Payroll Liabilities	1.68	-1.68
TOTAL						-1,117.98	1,117.98
Paycheck	**11736**	**04/29/2022**	**KEVIN S DINGMAN**		**FIRST STATE BANK ...**		**-886.81**
					Wages	-100.71	100.71
					Wages	-1,243.86	1,243.86
					Payroll Liabilities	114.33	-114.33
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					Payroll Liabilities	84.57	-84.57
					IPERS	-126.93	126.93
					Payroll Liabilities	126.93	-126.93
					Payroll Liabilities	114.00	-114.00
					Medicare & Social Se...	-83.36	83.36
					Payroll Liabilities	83.36	-83.36
					Payroll Liabilities	83.36	-83.36
					Medicare & Social Se...	-19.50	19.50
					Payroll Liabilities	19.50	-19.50
					Payroll Liabilities	19.50	-19.50
					Payroll Liabilities	42.00	-42.00
					Unemployment Insura...	-1.34	1.34
					Payroll Liabilities	1.34	-1.34
TOTAL						-886.81	886.81
Paycheck	**11737**	**04/29/2022**	**NICK T SCHUTT**		**FIRST STATE BANK ...**		**-897.89**
					Wages	-207.23	207.23
					Wages	-1,183.91	1,183.91
					Payroll Liabilities	87.50	-87.50
					IPERS	-131.32	131.32
					Payroll Liabilities	131.32	-131.32
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					Payroll Liabilities	114.33	-114.33
					Payroll Liabilities	119.00	-119.00
					Medicare & Social Se...	-86.25	86.25
					Payroll Liabilities	86.25	-86.25
					Payroll Liabilities	86.25	-86.25
					Medicare & Social Se...	-20.17	20.17
					Payroll Liabilities	20.17	-20.17
					Payroll Liabilities	20.17	-20.17
					Payroll Liabilities	66.00	-66.00
					Unemployment Insura...	-1.39	1.39
					Payroll Liabilities	1.39	-1.39
TOTAL						-897.89	897.89
Paycheck	**11738**	**04/29/2022**	**TERRY A KLAVER**		**FIRST STATE BANK ...**		**-1,914.29**
					Wages	-2,772.04	2,772.04
					Payroll Liabilities	114.33	-114.33
					Health Insurance	-343.01	343.01
					Payroll Liabilities	343.01	-343.01
					Payroll Liabilities	174.36	-174.36
					IPERS	-261.68	261.68
					Payroll Liabilities	261.68	-261.68
					Payroll Liabilities	237.00	-237.00
					Medicare & Social Se...	-171.87	171.87
					Payroll Liabilities	171.87	-171.87
					Payroll Liabilities	171.87	-171.87
					Medicare & Social Se...	-40.19	40.19
					Payroll Liabilities	40.19	-40.19
					Payroll Liabilities	40.19	-40.19
					Payroll Liabilities	120.00	-120.00
					Unemployment Insura...	-2.77	2.77
					Payroll Liabilities	2.77	-2.77
TOTAL						-1,914.29	1,914.29

HAMILTON COUNTY SOLID WASTE COMMISSION
Check Detail
April 14 through May 11, 2022

Type	Num	Date	Name	Item	Account	Paid Amount	Original Amount
Check	**11740**	**05/04/2022**	**UNITED COOPERATI...**		**FIRST STATE BANK ...**		**-1,163.43**
					Diesel Fuel/Fuel Oil	-1,163.43	1,163.43
TOTAL						-1,163.43	1,163.43
Check	**11750**	**04/14/2022**	**BINNS & STEVENS ...**		**FIRST STATE BANK ...**		**-1,389.00**
					Miscellaneous Expens...	-1,389.00	1,389.00
TOTAL						-1,389.00	1,389.00

HAMILTON COUNTY SOLID WASTE COMMISSION
Unpaid Bills Detail
As of May 11, 2022

	Memo	Amount
ATCO INTERNATIONAL		
SAFETY VESTS		146.78
Total ATCO INTERNATIONAL		146.78
BLUE RIBBON PELHAM WATERS		
BOTTLED WATER SERVICE		34.00
Total BLUE RIBBON PELHAM WATERS		34.00
BOMGAARS		
WORK BOOTS-SCHUTT		119.99
BOOT CLEANER		54.99
WORK BOOTS-KLAVER		169.99
Total BOMGAARS		344.97
COOPERATIVE TELEPHONE EXCHANGE		
PHONE & INTERNET SERVICE		137.27
Total COOPERATIVE TELEPHONE EXCHANGE		137.27
EVORA CONSULTING		
METHANE MONITORING		890.00
LEACHATE MEASUREMENTS		440.00
LANDFILL INSPECTION		920.00
REGULATORY ASSISTANCE		2,517.90
Total EVORA CONSULTING		4,767.90
IOWA DEPARTMENT OF NATURAL RESOURCES		
LANDFILL OPERATOR CERTIFICATION RENEWALS		72.00
Total IOWA DEPARTMENT OF NATURAL RESOURCES		72.00
IOWA FIRE CONTROL		
FIRE SUPPRESSION SYSTEM INSPECTION		218.00
Total IOWA FIRE CONTROL		218.00
NAPA AUTO PARTS		
DIESEL EXHAUST FLUID		657.50
Total NAPA AUTO PARTS		657.50
NCIARSWA		
2ND QTR 2022 ASSESSMENT		16,195.16
APRIL GATE FEES		51,337.02
Total NCIARSWA		67,532.18
REES TRUCK & TRAILER, INC		
SEMI DOOR SWITCH		170.83
Total REES TRUCK & TRAILER, INC		170.83
ROGERS TIRE SERVICE		
TIRE & SERVICE CALL		680.00
Total ROGERS TIRE SERVICE		680.00
THE SCALE GUYS		
SCALE INSPECTION		500.00
Total THE SCALE GUYS		500.00
THE TILE PROS		
LEACHATE DISPOSAL		391.53
Total THE TILE PROS		391.53

Memo	Amount
TOLLE AUTOMOTIVE	
PICKUP TIRE REPAIR	25.00
Total TOLLE AUTOMOTIVE	25.00
WEBSTER CITY MUNICIPAL UTILITIES	
ELECTRICAL SERVICE	111.63
ELECTRICAL SERVICE	260.09
Total WEBSTER CITY MUNICIPAL UTILITIES	371.72
TOTAL	**76,049.68**

HAMILTON COUNTY SOLID WASTE COMMISSION
A/R Aging Summary
As of April 30, 2022

	Current	1 - 30	31 - 60	61 - 90	> 90	TOTAL
AG FORCE	132.55	0.00	0.00	0.00	0.00	132.55
AG SOURCE	0.00	-84.57	-52.85	-47.98	-74.97	-260.37
AMERICAN SANITATION	7,118.96	0.00	0.00	0.00	0.00	7,118.96
CHAD ARNOLD	59.36	0.00	0.00	0.00	0.00	59.36
CITY OF WEBSTER CITY	676.40	0.00	0.00	0.00	0.00	676.40
CITY OF WILLIAMS	75.00	0.00	0.00	0.00	0.00	75.00
DAILY FREEMAN JOURNAL	16.05	0.00	0.00	0.00	0.00	16.05
DAVE SCOTT CONSTRUCTION	90.26	0.00	0.00	0.00	0.00	90.26
DAYTON DEVELOPMENT	141.62	0.00	0.00	0.00	0.00	141.62
FOAM CATZ	19.87	0.00	87.05	34.96	0.00	141.88
GERBER AUTO ELECTRIC	16.05	0.00	0.00	0.00	0.00	16.05
GOOD LIFE RV	111.42	0.00	0.00	0.00	0.00	111.42
HAMILTON COUNTY ENGINEER	665.00	0.00	0.00	0.00	0.00	665.00
HUBBARD CONCRETE	21.15	0.00	0.00	0.00	0.00	21.15
INTERIOR SPACES	47.77	0.00	0.00	0.00	0.00	47.77
J&C BUILDERS, LCC	0.00	0.00	-414.01	0.00	0.00	-414.01
JELINEK CONSTRUCTION	39.84	0.00	0.00	0.00	0.00	39.84
KENDALL YOUNG LIBRARY	15.00	0.00	0.00	0.00	0.00	15.00
LEONARD MOSS ROOFING	2,324.94	0.00	0.00	0.00	0.00	2,324.94
MERTZ ENGINEERING CO.	112.18	0.00	0.00	0.00	0.00	112.18
MIDWEST ECOSTRUCTION	82.04	47.77	0.00	0.00	0.00	129.81
NICK MURPHY CONSTRUCTION	228.98	85.39	0.00	0.00	0.00	314.37
NORTH CENTRAL TURF	18.70	0.00	0.00	0.00	0.00	18.70
PETERSON CONSTRUCTION	162.41	0.00	0.00	0.00	0.00	162.41
RUBA LAWN CARE	22.58	41.48	0.00	0.00	0.00	64.06
SANDE CONSTRUCTION	2,076.09	0.00	0.00	0.00	0.00	2,076.09
SEAMLESS PROS LLC	1,545.10	0.00	0.00	0.00	0.00	1,545.10
SHAWN MORAN CONSTRUCTION	124.92	41.48	0.00	0.00	0.00	166.40
SIGN UP	71.03	72.38	0.00	0.00	0.00	143.41
THE TRASH MAN	69,139.48	0.00	0.00	0.00	0.00	69,139.48
THOMPSON CONSTRUCTION	43.10	0.00	0.00	0.00	0.00	43.10
VAN DIEST MEDICAL CENTER	15.00	0.00	0.00	0.00	0.00	15.00
VAN DIEST SUPPLY COMPANY	26.02	0.00	0.00	0.00	0.00	26.02
WASTE MANAGEMENT	221.16	0.00	0.00	0.00	0.00	221.16
WEBSTER CITY COMMUNITY SCHOOLS	69.92	0.00	0.00	0.00	0.00	69.92
ZATLOUKAL CONSTRUCTION	16.05	0.00	0.00	0.00	0.00	16.05
TOTAL	**85,546.00**	**203.93**	**-379.81**	**-13.02**	**-74.97**	**85,282.13**

HAMILTON COUNTY SOLID WASTE COMMISSION
Sales by Customer Summary
Accrual Basis
April 2022

	Apr 22
AG FORCE	123.88
AG SOURCE	79.04
AMERICAN SANITATION	7,118.96
CASH	15,195.86
CHAD ARNOLD	55.48
CITY OF WEBSTER CITY	676.40
CITY OF WILLIAMS	75.00
DAILY FREEMAN JOURNAL	99.52
DAVE SCOTT CONSTRUCTION	84.36
DAYTON DEVELOPMENT	132.36
FOAM CATZ	17.03
GERBER AUTO ELECTRIC	15.00
GOOD LIFE RV	104.12
HAMILTON COUNTY ENGINEER	665.00
HUBBARD CONCRETE	19.76
INGRAHAM CONSTRUCTION	53.20
INTERIOR SPACES	44.64
IOWA DEPARTMENT OF TRANSPORTATION	173.28
J&C BUILDERS, LCC	131.48
JELINEK CONSTRUCTION	37.24
KENDALL YOUNG LIBRARY	15.00
LEONARD MOSS ROOFING	2,172.84
MERTZ ENGINEERING CO.	119.84
MIDWEST ECOSTRUCTION	76.72
NICK MURPHY CONSTRUCTION	214.08
NORTH CENTRAL TURF	17.48
PETERSON CONSTRUCTION	151.80
RUBA LAWN CARE	21.14
SANDE CONSTRUCTION	1,940.28
SEAMLESS PROS LLC	1,444.00
SHAWN MORAN CONSTRUCTION	116.78
SIGN UP	66.45
THE TRASH MAN	69,139.48
THOMPSON CONSTRUCTION	40.28
VAN DIEST MEDICAL CENTER	15.00
VAN DIEST SUPPLY COMPANY	24.32
WASTE MANAGEMENT	221.16
WEBSTER CITY COMMUNITY SCHOOLS	69.92
ZATLOUKAL CONSTRUCTION	15.00
TOTAL	100,783.18

HAMILTON COUNTY SOLID WASTE COMMISSION
Profit & Loss
Cash Basis
April 2022

	Apr 22
Income	
OPERATING FUND	
GATE CHARGES	
APPLIANCES	250.00
C&D	13,774.30
CONCRETE	32.28
ELECTRONICS	21.00
LATEX PAINT	12.00
MSW	70,382.69
PACKER	558.00
RCC FEES	31.50
TIRES	461.00
TVS	435.00
GATE CHARGES - Other	-95.65
Total GATE CHARGES	85,862.12
SCRAP METAL SOLD	528.70
OPERATING FUND - Other	15.68
Total OPERATING FUND	86,406.50
Total Income	86,406.50
Expense	
Operating Fund Expenses	
Bank Service Charges	30.00
Building and Fixture Repairs	205.00
Building Supplies	19.78
Cell Phone Service	264.20
Diesel Fuel/Fuel Oil	3,112.33
Drinking Water Service	33.25
Electricity	485.50
ELECTRONICS RECYCLING	3,418.75
Engineering Fees	808.75
Equipment and Vehicle Repairs	23.31
Gasoline	208.40
Meeting/Training Expenses	116.60
Miscellaneous Expenses	1,389.00
NCIARSWA Gate Fees	79,809.42
NCIARSWA Per Capita Assessments	16,195.16
Payroll Expenses	
Health Insurance	3,873.40
IPERS	2,081.56
Medicare & Social Security	1,686.85
Unemployment Insurance	22.05
Wages	22,050.41
Total Payroll Expenses	29,714.27
Phone & Internet Service	133.13
Public Notices	46.73
TIRE REMOVAL	1,406.88
Uniform Service	507.15
Vehicle&Equip. Parts&Supplies	3,584.56
Total Operating Fund Expenses	141,512.17
Total Expense	141,512.17
Net Income	**-55,105.67**

HAMILTON COUNTY SOLID WASTE COMMISSION
Profit & Loss Budget vs. Actual

Cash Basis

July 1, 2021 through May 7, 2022

	Jul 1, '21 - May 7, 22	Budget	$ Over Budget	% of Budget
Income				
CD INTEREST	2,711.24	0.00	2,711.24	100.0%
OPERATING FUND				
ASSESSMENTS	33,592.96	67,185.00	-33,592.04	50.0%
BAD CHECK FEES	0.00	0.00	0.00	0.0%
FARM INCOME	3,479.45	2,500.00	979.45	139.2%
GAS TAX REFUND	0.00	50.00	-50.00	0.0%
GATE CHARGES				
APPLIANCES	3,710.70	0.00	3,710.70	100.0%
C&D	196,925.21	0.00	196,925.21	100.0%
CONCRETE	348.96	0.00	348.96	100.0%
ELECTRONICS	826.00	0.00	826.00	100.0%
LATEX PAINT	201.00	0.00	201.00	100.0%
MSW				
OPENING BALANCE	0.00	0.00	0.00	0.0%
MSW - Other	615,295.90	0.00	615,295.90	100.0%
Total MSW	615,295.90	0.00	615,295.90	100.0%
PACKER	8,812.00	0.00	8,812.00	100.0%
RCC FEES	541.05	2,000.00	-1,458.95	27.1%
TIRES	6,090.00	0.00	6,090.00	100.0%
TVS	6,672.00	0.00	6,672.00	100.0%
GATE CHARGES - Other	-784.62	1,050,000.00	-1,050,784.62	-0.1%
Total GATE CHARGES	838,636.20	1,052,000.00	-213,361.80	79.7%
INTEREST	0.00	1,692.00	-1,692.00	0.0%
OTHER RECEIPTS	1,000.00	0.00	1,000.00	100.0%
REFUNDS AND REIMBURSEMENTS	44,151.60	200.00	43,951.60	22,075.8%
SCRAP METAL SOLD	13,173.35	6,000.00	7,173.35	219.6%
OPERATING FUND - Other	422.77	0.00	422.77	100.0%
Total OPERATING FUND	934,458.33	1,129,627.00	-195,168.67	82.7%
POST CLOSURE RESERVE FUND				
INTEREST ON INVESTMENTS	981.00	6,000.00	-5,019.00	16.4%
POST CLOSURE RESERVE FUND - Other	0.00	0.00	0.00	0.0%
Total POST CLOSURE RESERVE FUND	981.00	6,000.00	-5,019.00	16.4%
TRANSFER STATION CD INTEREST	0.00	500.00	-500.00	0.0%
Total Income	938,150.57	1,136,127.00	-197,976.43	82.6%
Expense				
EQUIPMENT RESERVE FUND				
EQUIPMENT PURCHASES	207,919.31	0.00	207,919.31	100.0%
EQUIPMENT RESERVE FUND - Other	0.00	0.00	0.00	0.0%
Total EQUIPMENT RESERVE FUND	207,919.31	0.00	207,919.31	100.0%
LANDFILL POST CLOSURE FUND				
CONSULTING ENGINEERING FEES	5,003.75	6,190.00	-1,186.25	80.8%
DISCONTINUATION PROJECT	0.00	0.00	0.00	0.0%
FENCE REPAIRS	0.00	0.00	0.00	0.0%
LAB TESTING	0.00	0.00	0.00	0.0%
LEACHATE DISPOSAL	2,295.41	0.00	2,295.41	100.0%
LEACHATE SEEP REPAIR	0.00	2,500.00	-2,500.00	0.0%
LEACHATE SYSTEM REPORTS	2,605.00	2,820.00	-215.00	92.4%
OTHER DISBURSEMENTS	0.00	0.00	0.00	0.0%
WATER QUALITY REPORTS	7,375.00	5,600.00	1,775.00	131.7%
LANDFILL POST CLOSURE FUND - Other	490.00	0.00	490.00	100.0%
Total LANDFILL POST CLOSURE FUND	17,769.16	17,110.00	659.16	103.9%

HAMILTON COUNTY SOLID WASTE COMMISSION
Profit & Loss Budget vs. Actual

Cash Basis

July 1, 2021 through May 7, 2022

	Jul 1, '21 - May 7, 22	Budget	$ Over Budget	% of Budget
Operating Fund Expenses				
APPLIANCE REMOVAL	0.00	0.00	0.00	
Attorney Fees	0.00	1,000.00	-1,000.00	0.0%
Audits	5,100.00	6,000.00	-900.00	85.0%
Bank Service Charges	51.28	100.00	-48.72	51.3%
Building and Fixture Repairs	2,056.56	20,000.00	-17,943.44	10.3%
Building Supplies	956.45	1,000.00	-43.55	95.6%
Cell Phone Service	1,288.69	1,650.00	-361.31	78.1%
Change Fund	0.00	50.00	-50.00	0.0%
COMMISSION FEES	943.52	2,000.00	-1,056.48	47.2%
Computer Service	492.53	1,500.00	-1,007.47	32.8%
Diesel Fuel/Fuel Oil	22,861.65	32,000.00	-9,138.35	71.4%
Drinking Water Service	357.75	600.00	-242.25	59.6%
Electricity	4,482.55	5,500.00	-1,017.45	81.5%
ELECTRONICS RECYCLING	7,470.30	17,000.00	-9,529.70	43.9%
Engineering Fees	2,251.25	2,000.00	251.25	112.6%
Equipment and Vehicle Repairs	5,124.69	18,000.00	-12,875.31	28.5%
Gasoline	748.25	750.00	-1.75	99.8%
Insurance Expense	11,840.00	10,255.00	1,585.00	115.5%
Licenses and Permits	84.00	100.00	-16.00	84.0%
Medical Supplies	0.00	550.00	-550.00	0.0%
Meeting/Training Expenses	1,292.06	1,000.00	292.06	129.2%
Membership Dues	0.00	450.00	-450.00	0.0%
MISC EXPENSES	395.65	0.00	395.65	100.0%
Miscellaneous Expenses	1,389.00	0.00	1,389.00	100.0%
NCIARSWA Buy-In Payments	0.00	0.00	0.00	0.0%
NCIARSWA Gate Fees	430,899.14	585,000.00	-154,100.86	73.7%
NCIARSWA Per Capita Assessments	49,787.72	67,185.00	-17,397.28	74.1%
Office Supplies	2,175.73	3,000.00	-824.27	72.5%
Other Capital Outlay	1,955.02	212,000.00	-210,044.98	0.9%
P.O. Box Rent	0.00	0.00	0.00	0.0%
Payroll Expenses				
Health Insurance	29,118.77	33,751.00	-4,632.23	86.3%
IPERS	15,500.06	19,055.00	-3,554.94	81.3%
Medicare & Social Security	12,560.91	15,441.00	-2,880.09	81.3%
Social Security	0.00	0.00	0.00	0.0%
Unemployment Insurance	115.65	202.00	-86.35	57.3%
Wages	164,194.87	207,849.00	-43,654.13	79.0%
Payroll Expenses - Other	0.00	0.00	0.00	0.0%
Total Payroll Expenses	221,490.26	276,298.00	-54,807.74	80.2%
Phone & Internet Service	1,343.05	1,700.00	-356.95	79.0%
Postage	397.40	550.00	-152.60	72.3%
Propane	2,128.00	3,000.00	-872.00	70.9%
Public Notices	630.44	2,000.00	-1,369.56	31.5%
PUBLIC RELATIONS/FAIR	0.00	0.00	0.00	0.0%
RCC DISPOSAL/SUPPLIES	9,937.83	15,000.00	-5,062.17	66.3%
Rock	0.00	1,000.00	-1,000.00	0.0%
Safety Clothing and Equipment	254.90	2,000.00	-1,745.10	12.7%
Security Monitoring	951.45	1,300.00	-348.55	73.2%
Signs	0.00	500.00	-500.00	0.0%
TIRE REMOVAL	8,011.91	10,000.00	-1,988.09	80.1%
Tires	7,790.11	8,000.00	-209.89	97.4%
Uniform Service	1,668.64	1,800.00	-131.36	92.7%
Vehicle&Equip. Parts&Supplies	8,755.68	12,000.00	-3,244.32	73.0%
Weed Chemicals	0.00	0.00	0.00	0.0%
WORKERS' COMP INSURANCE	762.00	6,000.00	-5,238.00	12.7%
Write Off	4.24	0.00	4.24	100.0%
Operating Fund Expenses - Other	0.00	0.00	0.00	0.0%
Total Operating Fund Expenses	818,129.70	1,329,838.00	-511,708.30	61.5%
Reconciliation Discrepancies	0.00	0.00	0.00	0.0%
Total Expense	1,043,818.17	1,346,948.00	-303,129.83	77.5%
Net Income	-105,667.60	-210,821.00	105,153.40	50.1%

HAMILTON COUNTY SOLID WASTE COMMISSION

April - 2022 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	Friday	0.00	0.00	3.00	30.00	0.00	0.00	13.75	2.30	38.06
2	Sat	0.00	0.00	0.00	0.00	1.00	15.00	16.54	2.05	12.59
3	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Monday	0.00	0.00	3.00	30.00	2.00	30.00	34.49	6.71	28.65
5	Tuesday	1.00	5.00	0.00	0.00	0.00	0.00	41.93	4.98	45.41
6	Wed	5.00	25.00	0.00	0.00	0.00	0.00	67.36	3.57	62.29
7	Thursday	0.00	0.00	0.00	0.00	0.00	0.00	62.29	0.00	36.79
8	Fri	1.00	5.00	0.00	0.00	3.00	45.00	12.90	1.00	33.38
9	Sat	11.00	55.00	4.00	40.00	2.00	30.00	15.41	3.07	18.28
10	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11	Monday	0.00	0.00	5.00	50.00	1.00	15.00	56.32	14.60	49.07
12	Tuesday	0.00	0.00	0.00	0.00	0.00	0.00	42.91	7.51	37.80
13	Wed	0.00	0.00	0.00	0.00	2.00	30.00	72.98	11.32	67.17
14	Thursday	6.00	60.00	0.00	0.00	1.00	15.00	56.51	22.50	49.47
15	Fri	7.00	31.50	2.00	20.00	0.00	0.00	53.17	15.85	78.51
16	Sat	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
17	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
18	Monday	6.00	30.00	2.00	20.00	4.00	44.00	57.21	1.92	57.88
19	Tuesday	0.00	0.00	0.00	0.00	4.00	44.00	95.17	5.81	43.09
20	Wed	77.00	385.00	0.00	0.00	0.00	0.00	32.48	0.88	57.24
21	Thursday	24.00	120.00	0.00	0.00	4.00	63.15	83.90	9.72	80.56
22	Fri	0.00	0.00	0.00	0.00	1.00	15.00	47.50	0.87	41.90
23	Sat	0.00	0.00	0.00	0.00	3.00	45.00	44.95	0.00	19.42
24	Sun	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
25	Monday	2.00	7.00	2.00	20.00	4.00	44.00	20.98	3.55	44.36
26	Tuesday	0.00	0.00	1.00	10.00	7.00	105.00	85.26	7.00	43.04
27	Wed	0.00	0.00	1.00	10.00	1.00	15.00	54.96	3.11	73.16
28	Thursday	1.00	1.00	1.00	10.00	0.00	0.00	83.02	5.53	62.63
29	Fri	2.00	2.00	2.00	20.00	2.00	30.00	63.96	6.33	51.85
30	Sat	0.00	0.00	0.00	0.00	0.00	0.00	19.95	0.00	26.98
31										
	TOTAL	**143.00**	**726.50**	**26.00**	**260.00**	**42.00**	**585.15**	**1235.90**	**140.18**	**1159.58**
	TOTAL AVG	5.72	29.06	1.04	10.40	1.68	23.41	49.44	5.61	46.38

HAMILTON COUNTY SOLID WASTE COMMISSION

April - 2022 MONTHLY REPORT

DATE	DAY	TOTAL TONS TO BLDG.	CHARGE RECEIPTS TO BLDG.	CASH RECEIPTS TO PACKER	CASH RECEIPTS TO BLDG.	TOTAL RECEIPTS	PACKER WEIGHT (TONS)	DAY PACKER DUMPED & DISPOSAL CHG	LATEX PAINT FEES
1	Fri	40.36	2779.47	0.00	343.94	3154.41			
2	Sat	14.64	666.79	80.05	581.23	1343.07			
3	Sun	0	0.00	0.00	0.00	0.00			
4	Monday	35.36	2709.28	32.00	380.62	2881.90			
5	Tuesday	45.41	3122.27	0.00	375.62	3507.89			
6	Wed	65.86	4653.29	0.00	520.80	5199.09			
7	Thursday	36.74	2698.00	8.00	142.44	2848.44			
8	Fri	34.38	2394.94	32.00	266.20	2743.14			
9	Sat	21.35	1128.61	72.00	690.80	2016.41			12
10	Sun	0	0.00	0.00	0.00	0.00			
11	Monday	63.67	4478.31	32.00	439.71	5012.02			
12	Tuesday	45.31	3224.60	24.00	300.88	3549.49			
13	Wed	78.48	4871.69	24.00	1189.25	6114.94			
14	Thursday	71.97	4847.69	40.00	875.04	5837.73			
15	Fri	80.19	5269.03	16.00	1073.06	6458.09			
16	Sat	0	0.00	0.00	0.00	0.00			
17	Sun	0	0.00	0.00	0.00	0.00			
18	Monday	59.8	4032.83	56.00	552.32	4735.15			
19	Tuesday	48.9	2915.50	40.00	890.51	3890.01			
20	Wed	58.12	4283.84	24.00	225.96	4918.80			
21	Thursday	90.28	6053.59	31.00	881.00	7148.74			
22	Fri	42.77	2837.91	16.00	445.68	3314.59			
23	Sat	19.42	1114.92	88.00	461.16	1709.08			
24	Sun	0	0.00	0.00	0.00	0.00			
25	Monday	47.91	3301.44	16.00	354.82	3743.26			
26	Tuesday	50.04	3408.24	0.00	454.60	3987.47			9.63
27	Wed	76.27	5343.22	16.00	534.40	5918.62	1.98	150.48	
28	Thursday	68.16	4825.06	32.00	399.72	5271.78			
29	Fri	58.18	3717.60	24.00	740.25	4543.85			
30	Sat	26.98	1411.78	56.00	774.86	2242.64			
31									
	TOTAL	**1280.55**	**86089.90**	**759.05**	**13894.87**	**102090.61**	**1.98**	**150.48**	**21.63**
	TOTAL AVG	49.25	3311.15	29.19	534.42	3926.56	0.08	5.79	0.83

Hamilton County Transfer Station

April 2022- Managers Monthly Report

Storm Damage Projects

On May 2nd Sadler Construction showed up onsite to begin our steel replacement project on the East side of the building. After one days work there was an 45ft. hole in the building needing steel replaced. Because of the weather they returned on May 4th to install our steel panels. That morning I did a walk around to check the project up close. I discovered panels that had come loose from the wind in our 4-month waiting period for repair. I immediately called Blake Sadler to share my findings with him. The plan is to replace four additional panels on the south wall starting from the east corner to the west. Projected wait time is 2-3 weeks for the additional panels to arrive. The balance of the steel and corners will be installed by the end of the day on the 4th. They will return at a later date once the additional 4-sheets arrive. Overhead door company is still on track with July delivery per my phone conversation with them. The doors are scheduled to be built July 1st. On time delivery has been good with Overhead doors other active projects. Damage to east rain gutters will require replacement of most of that side also. This has not been done yet.

Fall Prevention Project in Load Out Bay

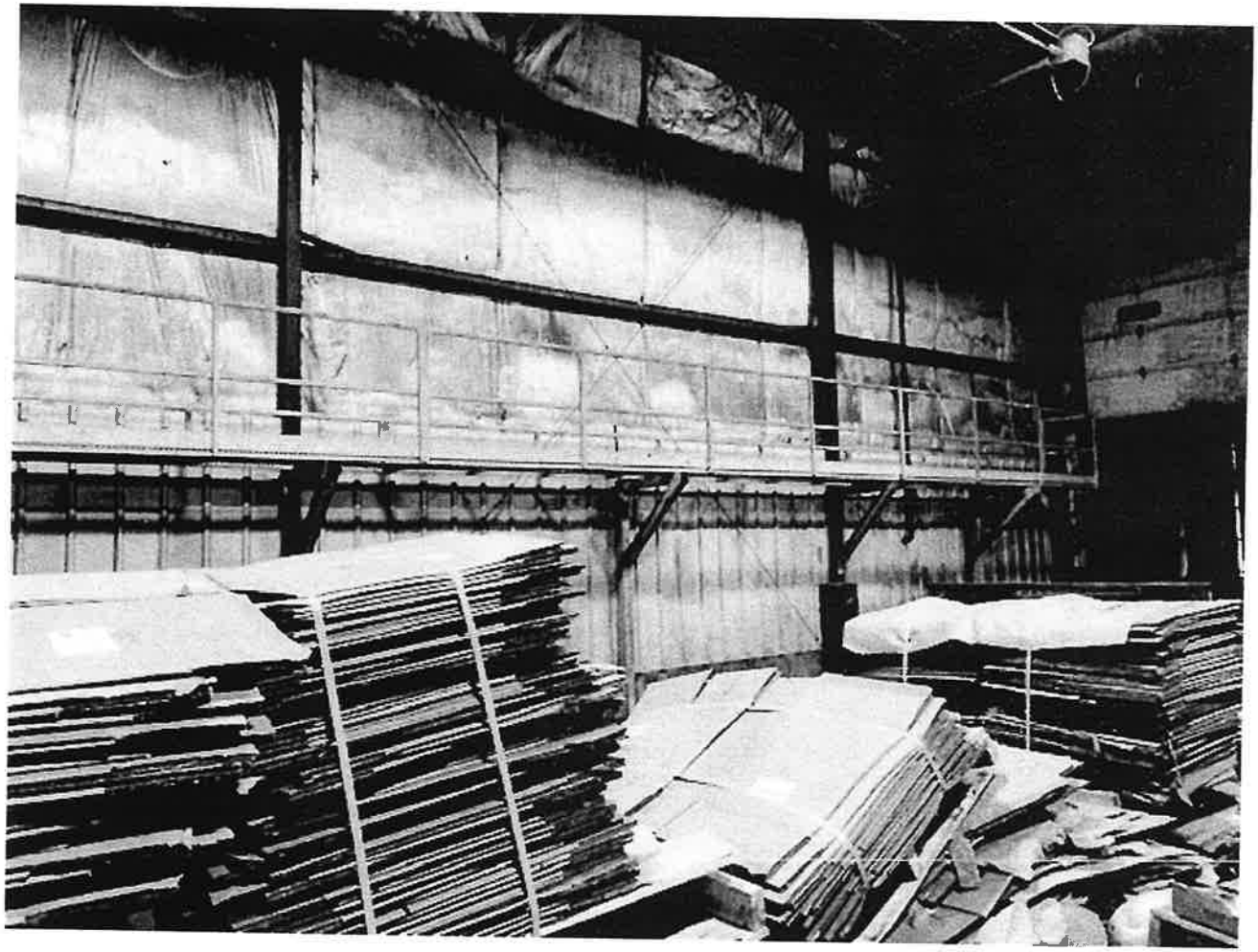
During my visit to Buena Vista Transfer Station last week, I took pictures of a couple of catwalks they had with in their facility. One of them looks like a likely fit for our application in our load out bay. There really is nothing in place to keep my operators from falling out over the top of trailer when they are walking down the loads. This process makes sure the tarp will close as intended and no objects are going to puncture or tear the mesh tarp. I will include a picture of our truck in the load out bay for further reference and discussion. My action taken thus far is a phone call to K&M Ag. or the old Bustroms Bin Service in Webster City. I presented the project to them asking them to schedule a visit out on site to capture some measurements for cost estimation. Updates on this potential project will be shared as I receive any information. Also included will be copies of above referenced photos.

Terry A. Klaver

One load out Facility/Lower Bay.

1 — B.V. FACILITY IN STORM LAKE

#2 – B.V. FACILITY IN STORM LAKE



Nuisance Officer: Colt Richardson #687

CFS#			Reported By	Nuisances Reported	Status Post Follow-Up	Follow-up info	Owner/Address/Contact
202100007446	1	912 Elm St	2	12	A	6/18- verbal to Dale Jones. He will be in minnesota for 2 weeks, and when he returns he will continue to work on the property. 8/9- observations: there has been progress, need to make contact to discuss. 8/14- observed that Dale is making progress. Follow up 1 mo. wait on vehicles. 03/13/22 spoke to Mr. Jones in the yard, he was cleaning up the property as we spoke, lots of junk and vehicles in the driveway and junk in the back yard.	**Jones, Dale Loren. Lives there. 515-832-3433**
	Junk, cars, etc.						
202100007902	2	700 blk first st (south alley)	2	99	C	All parking violations have been addressed and corrected	
	entire block numerous						
202100008315	3	820 John St	2	12	H	7/17- Junk, Furniture and tires observed. 7/22- observed black mercuru milan exp 2014(193tsp. Wisconsin) knocked, no answer, neighbor says he hasn't seen anyone there for a long time. 7/30- observation. No change. Called, no answer. Knocked at 1008 Creek St. La doesnt live there. Works at Custom Meats. 8/23- spoke to HR at custom meats, La will call me back, lives at 719 High St, 515-297-4004, says he will talk to his daughter about cleaning it up, and contact me. Send letter. PT cruiser belonging to Denise Gramblin close to property line on grass (HBV807). send letter. 8/24- spoke to Ming(daughter) on phone. informed her that I would be sending a letter giving 30 days to clean up the property, and remove the vehicle. Sent notice to owner and	**Phiouthong, La, 1008 Creek St. 515-297-0792**
	Junk on property						
202100008514	4	526 Richardson Dr	2	1	C	7/22- call made to Cory S. to inquire about city action. Cory says he isnt doing anything with property. 7/31- Informed Mark Arkland of issues with junk vehicles, 72 hour parking, parking on grass, and tire storage on property. Suggested speak with city about gravel, and update registration on vehicles. He says he is getting rid of several of them. Follow up 8/9. 8/14- Observations: Mark has made small amount of progress. says 3 vehicles are supposed to be picked up today. He has spoke with Cory S. about adding gravel. Tires are to be removed by follow up and some vehicles. Follow up 8/23. 8/24- progress, but violations still exist, send letter. wait on vehicles. 10/18- Mark Arkland cited for junk(tires), and advised of vehicles, etc. 03/12/22 Major	**Arkland, Bonnie Lee. 526 Richardson Dr**
	Junk Cars						

202100008655	5	1112 Third St	1	12	H	7/26- call, no answer. 7/30- recliner has been moved off parking, but junk still there. 7/31- knock, no aswer. Took photos, need letter sent. 8/1- sent letter. Must be corrected by 9/1/21. 9/1- There was a fire last week in the house on property. House is unliveable. I will not cite at this time. 03/12/22 junk piled in the driveway outside of the residence for some time now, will attempt to make contact tomorrow 03/13. 03/13 no answer, uninhabitable nobody lives there now since house fire. Contacted City Attorney to figure out what needs done with the residence. Current condition photos were taken.	**Brinkman, Aaron 1112 3rd St**
	junk around house.						
202100009056	6	513 Buxton Ave	2	1	C	8/10- observed blue riviera (CIF156) vehicle was present but is parked legally on a hard surface on the property	**Boughton, Michael R, Resident.**
	Blue vehicle never moves						
202100009058	7	1109 Cottage St	2	1	C	8/10- observed violation. 03/12/22 no violations observed at this time	**MMDC, LLC PO Box 82,**
	demo car parked in						
202100009059	8	524 Richardson Dr	2	1	C	8/10- observed camper parked in back yard on grass, trailer in front of garage on grass, driveway grown over??, white dodge ram with junk in it (BWY963). 03/12/22 Camper is no longer on the property, white ram is legally parked and does have junk still in the bed but is not an issue at this time	**Burnett, Randy, Resident.**
	White pickup on grass						
202100009062	9	731 Richardson Dr	2	1	C	8/10- observed 3 vehicles on what used to be gravel (grown over) black dodge ram (THE 971), white pontiac grand am (DIX771), brown dodge ram (AIH791). 03/12/22 observed the black dodge ram (THE971) still parked in the grass in front of the complex, will attempt to make contact tomorrow 03/13. 03/13 vehicle has been moved to the driveway.	**Westberg, Christina J 731 Richardson Dr**
	Vehicles on grass						
202100009063	10	805 Richardson Dr	2	1	C	8/10- observed blue vehicle not operational (KEV164). 03/12/22 vehicle is no longer on the property	**Reinsch, Lynn & Brenda 710 South St, Webster City**
	blue car on jacks for ages						
202100009065	11	1116 Harding Rd	2	1	C	8/10- Observed black pontiac grand prix (FOE873)	**Luhmann, Dale D 1019 N Terrace Dr, Webster City**
	Black vehicle						
202100009066	12	1200 Cottage Rd	2	1	C	8/10- observed white Ford Explorer in grass beside garage (GLZ960). 03/12/22 vehicle is no longer on the property	**Cross, Randy W & Brandi M 1200 Cottage Rd**
	white vehicle beside garage						
202100009070	13	524 High St	2	1	C	8/10- observed white dodge ram (ISZ259) and trailer parked on grass, used to be gravel. 03/12/22 vehicle and trailer no longer in violation	**Sandbach, Dirk & Cherin Totten, Martha 524 High St**
	white pickup on grass						
202100009072	14	1010 Creek St	2	1	C	8/10- observed black Nissan pickup on grass (DRV264). 03/12/22 vehicle no longer in violation	**Pachero, Enrique Trujillo 500 10th St, Apt 160, Gilroy , CA 95020**
	nissan pickup on grass						
202100009073	15	1014 Creek St	2	1	C	8/10- observed red chevrolet silverado(EJR185) on grass, junk and tires in yard by fence. 03/12/22 Made contact with owner, truck will be moved and junk has been cleaned up	**Inthisane, King G 1014 Creek St, Webster City , IA 50595**
	red pickup in grass						

202100009075	16	1048 Bluff St	2	1	C	8/10- observed blue ford ranger (AYK574) 03/12/22 vehicle no longer in violation and was parked on the street legally	**Draeger, Mark A 1048 Bluff St**
	blue pickup in grass						
202100009304	17	500 Buxton Rd	2	18	C	8/10- overgrown trees, vines, weeds, etc. 8/14- spoke with caretaker (Raphael) informed me that the city has been mowing that.	**With Thy Might, LLC 3325 Sugar Mill Road, Augusta , GA 30907**
	weeds						
202100009982	18	728 First St	1	1	C	8/23- observed. Send letter. Wait on vehicles. 03/12/22 vehicle is no longer at this location	**Goodpaster, Derrick J, resident, PO Box 317, Webster City , IA 50595-0317**
	junk vehicle. Dodge dakota						
202100010503	19	909 Bluff St	1	1	C	9/2- observed. vehicle no longer on property	**Smith, Rebecca, resident**
	junk vehicle in driveway no						
202100010504	20	1030 Bluff St	1	1	C	9/2- observed. Hold status for spring thaw. 03/12/22 vehicles no longer in violation	**Baker, Janet K, resident**
	Junk vehicles. Black s10,						
202100010505	21	1018 Creek St	1	12	C	9/2- observed. 10/23- spoke to female property owner regarding wood, equipment in driveway, truck with expired tags in driveway. 3 week follow up. 12/14- called, no answer. 03/12/22 equipment and vehicles no longer in violation	**Hill, Craig D & Patricia L, residents 515-832-1798**
	junk in front of residence						
202100010508	22	1011 Creek St	1	15	C	9/2- observed. Vehicles no longer on property	**Buakham, Timmy, resident**
	parking, junk vehicle, junk						
202100013662	23	1203 Walnut St	2	1 15	C	11/19- observed travel trailer parked in front yard and not on all weather surface, misc construction materials, trailers parked and stored in front yard, vehicles parked in front yard and not on all weather surface, trailer parked on street and not connected to a vehicle, vehicle in street with 2 flat tires, lawn tractors lined up in front yard. Dennis Goodrich was given a written notice to correct by 11/29/2021. hold status for spring thaw. 03/13/22 Trailer still not on all weather surface, mowers, and miscellaneous junk all over the yard. No answer at the door.03/27/22 Made contact with Mr. Goodrich, addressed the violations and answered questions. Given 30 days to fix issues.4/28/22 Cited for junk and trailer not on all weather service.	**Dennis Goodrich, resident**
	junk/camper						
202100013890	24	1305 Grove St	2	15	C	Hold status for spring thaw. Need to discuss with zach.03/13/22 Camper no longer located on the property.	**Nichols, Amanda, resident**
	camper						
202100014790	25	305 FairMeadow Dr	2	12	C	Ref cfs 202100014635. obserbed on 12/13. called mgr and left message. 12/14- items moved by dumpster, called and left msg has to be off property. 12/18- junk still by dumpster. Manager unreachable by phone. 03/12/22 Junk on parking has been cleaned up, no more visible violations.	
	Junk on parking						

202100014588	26	1111 Third St	2	12	C	12/14- notice posted on door, hold for spring thaw. 03/13/22 spoke to new resident, stated they were in the process of getting rid of all the junk that was left. Was actively cleaning it when I made contact. 04/27/22 Garbage in front of house has been cleaned up, construction materials for the house have been moved to the back yard and are organized. No new violations at this time.	**Justin Culver, Property Owner**
	Junk						
202200001485	27	927 Boone St	2	9 15	C	Person made contact with was Dominic, current resident, will clean junk the next weekend he has free. 03/17/2022 Garbage and cans have all been cleaned up and property has no violations visible at this time.	**Dominic**
	junk on yard						
202200001601	28	827 Water Street	2	14	C	Spoke to prop owner parking in grass and mud tracking into street, VW, has Tony Jones scheduled to put in a driveway	**Brandie Hennick, Resident**
	Vehicles on grass						
202200002274	29	1023 Third Street	1	15	C	03/12/22 vehicle parked on front lawn will attempt to make contact tomorrow 03/13.03/13/22 vehicle has left the property will be addressed again if seen violating.	
	Car on yard						
202200002451	30	930 Water St	1	9	A	Issued 20 day notice to clean up nuisance violations	
	Junk/Semi						
202200002451	31	929 Water St		14	C	Car has been moved, no violation at this time.	
		Car on Grass	1				
202200002452	32	1128 Betsy Lane	1	9	C	04/10/22 Garbage still present on driveway, will be cited if still there on 04/13. Issued citation on 04/09/22	
	Junk in driveway						
202200002876	33	215 Third St	1	9	A	04/09/22 spoke to property owner, some progress has been made, she stated all nuisance violations will be resolved within 21 days (April 30).	
	Garbage on property						
202200003710	34	809 Merritt	2	9 15	A	Several attempts to contact Lynn Brinkman about vehicles on grass, will be issued written notice on 04/13 Made contact on 4/14/22 and given 14 day notice to move vehicles off of grass.	
	Junk/ Vehicles						
202200003412	35	812 Merritt St	2	9 12	A	Vehicle on grass currently has no motor, spoke to owner's wife and stated the vehicle will be moved to the driveway.04/23/22 Spoke to RO of vehicle, is putting motor back in within the next 2 weeks and vehicle will be gone. Also spoke to about vehicles on grass in back yard, when ground is more solid they will get gravel brought in.	
	Junk/Vehicle in grass						
202200003411/3415	36	809 Stockdale St	2	9	C	No answer, writing written notice for trash in front of residence and yard. 04/22/22 garbage has been picked up and items organized in front of residence, no violations at this time.	

202200003418	37	820 James St	2	12	C	04/09/22 Spoke to home owner, they went outside and cleaned up majority of the garbage at this time and will be making progress over the weekend. 04/22/22 garbage has been cleaned up behind both residences. No new violations at this time.
202200003475	38	1102 James St	2	14	C	Vehicles on grass are actually on gravel, no violations at this time after observing closer with the home owner.
	Vehicles on grass					
	39	1601 James St	2	14	A	
	Junk vehicles in back yard					
202200004024	40	1109 John St	2		A	04/09/22 attempted to contact home owner, will be issued written notice on 04/13/22 if not resolved by then.
202200004026	41	409 West Curve Dr	1	14	C	14 Day notice given on 04/13/22. 04/14/22 Vehicle has been moved, no current violations.
	Vehicles on grass					
202200003974	42	835 Elm Street	1	9	C	833 Elm Street (complainant). Contact was made at 835 Elm 04/22/22 with Victor Mendez and the issues will be addressed. Photo of property line for both residences were given to both parties.
	Property line issues					
202200004306	43	1100 Elm Street	2	9	A	
	Garbage on property					
202200004481	44	1202 Des Moines St	2	99	C	Spoke to Mr. Ayers and advised him he cannot feed the stray animals due to city ordinance
	Feeding stray animals					
202200004537	45	201 Cedar St	2	9	A	Spoke to Jim Wagner and advised him of some yard items that need to be cleaned up along with lawn equipment
	Junk in yard					
202200004538	46	1237 Division St	2	9	A	
	Junk in yard					
202200004540	47	730 Webster St	2	9	A	
	Junk vehicles					
	48	1300 Superior St	1	14	A	Spoke to property owner, given 14 days to resolve issue. Already is lining up getting gravel put in next to his driveway.
	49	1244 Water St	1	9	A	No answer after repeated knocks 05/08/2022
	junk car/garbage					
	50	1425 Seneca St	1	9	A	14 day written notice given to Dan Goodpaster's son due to him being gone in Minnesota. Will contact if needing an extension of timeline.
	trailer full of junk in yard					
	51	201 Division St	1	9	A	14 day written notice given in person 05/08/2022.
	junk in yard					

LEGEND:

1	1 Self-Initiated
2	2 Community Complaint
3	99 Other

	NUISANCE:
1	32-2.(1) Abandoned and Junk Vehicles
2	32-2.(2) Air Pollution
3	32-2.(3) Airport Airspace
4	32-2.(4) Billboards
5	32-2.(5) Blocking Public and Private Ways
6	32-2.(6) Construction Materials
7	32-2.(7) Dutch Elm Disease
8	32-2.(8) Filth and Noisome Substance
9	32-2.(9) Garbage and Trash
10	32-2.(10) Houses of Ill Fame
11	32-2.(11) Impeding Passage of Navigable River
12	32-2.(12) Machinery and Junk
13	32-2.(13) Offensive Smells
14	32-2.(14) Parked Vehicles
15	32-2.(15) Parking and Storage
16	32-2.(16) Storage of Inflammable Junk
17	32-2.(17) Water Pollution
18	32-2.(18) Weeds and Grass
21	42-21. Placing Debris on; Littering
99	99 Other
	FINDINGS
S	S Satisfactory
U	U Unsatisfactory
99	99 Other
	CONTACTED:
Y	Yes
N	No
	ACTION:
V	V Verbal Notice
W	W Written Notice
CV	CV Civil Citation Issued
CR	CR Criminal Citation Issued
CA	CA Forwarded to City Attorney
Z	Z Zoning Department
99	99 Other
	REPORT STATUS:
N	N New Case
U	U Unfounded
E	E Existing/Open

	STATUS POST FOLLOW-UP
A	A Active
C	Closed
H	Hold
	ACTION NEEDED
	VERBAL/WRITTEN NOTICE IN PLACE
	CLOSED/SATISFACTORY/NOTICE RECEIVED
	OTHER
	City Mow/Citation/Infraction