

ADDENDUM NO. 1
TO
CONTRACT DOCUMENTS, DRAWINGS, AND SPECIFICATIONS
FOR CITY OF YANKTON, SD
2014 WATER TREATMENT PLANT IMPROVEMENTS, HORIZONTAL COLLECTOR WELL

City Project No. ES14-5
HDR Project No. 135-223788

TO: PROSPECTIVE BIDDERS AND OTHER INTERESTED PARTIES

Addendum No. 1 is being sent out to all plan holders.

THE CONTRACT DOCUMENTS AND SPECIFICATIONS, INCLUDING THE CONTRACT DRAWINGS ARE HEREBY MODIFIED BY THE FOLLOWING ITEMS:

SPECIFICATIONS

AD-1 ITEM 1: TABLE OF CONTENTS

1. A revised Table of Contents is included with this addendum and includes the following changes:
 - a. Under Division 08 – Doors and Windows
 - 1) Add: “08110AD-1 BULLET RESISTANT DOORS AND FRAMES”
 - 2) Delete: “08120 ALUMINUM DOORS AND FRAMES”
 - 3) Change: “08700 FINISHED HARDWARE”
To: “08700AD-1 FINISHED HARDWARE”
 - 4) Change: “08700 GLASS AND GLAZING”
To: “08700AD-1 GLASS AND GLAZING”
 - b. Under Division 09 – Finishes:
 - 1) Change: “09905 PAINTING AND PROTECTIVE COATINGS”
To: “09905AD-1 PAINTING AND PROTECTIVE COATINGS”

AD-1 ITEM 2: INSTRUCTION TO BIDDERS

1. On Page 3 of 3 of the Instruction to Bidders, add the following two paragraphs:

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.

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.

AD-1 ITEM 3: BID PROPOSAL

1. Delete Bid Proposal in its entirety and insert attached **BID PROPOSAL – ADDENDUM NO.1**.
 - a. Note that the completion has been changed from “November 30, 2015” to “April 30, 2016.”
 - b. The pre-negotiated price has been added on Page 2 in the paragraph prior to the list of bid items.
2. It is the Contractor’s responsibility to determine the appropriate taxes to include in their bid proposal. Questions regarding sales and excise taxes to be applied to this project should be directed to the South Dakota Department of Revenue, Business Tax Division at 1-800-829-9188.

AD-1 ITEM 4: TRANSCANADA PIPELINE ENCROACHMENT AGREEMENT

1. An Encroachment Agreement for crossing the TransCanada Pipeline Easement to access the collector well site and to construct the access road is attached to this addendum. The Contractor is responsible for adhering to the terms and requirements outlined in the Encroachment Agreement.

AD-1 ITEM 5: SECTION 01020: MEASUREMENT AND PAYMENT

1. Part 1- General and 1.3 Measurement and Payment, on page 01020-5, Item No. 19 Earthwork (Access Road and Generator Site), add the following sentence at the end of line 4: "This bid item shall also include the cost of any borrow material required for the construction of the access road and generator site."

AD-1 ITEM 6: SECTION 01560: ENVIRONMENTAL PROTECTION AND SPECIAL CONTROLS

1. Part 3- Execution and 3.1 Installation, on page 01560-3, Paragraph K.1, in line 27, change "The Contractor" to read "The Owner and Engineer".

AD-1 ITEM 7: SECTION 02444: CHAIN LINK FENCE AND GATES

1. Part 2 - Products, under 2.2 Components, paragraph A.1., on Page 02444-2, after line 22, add:
"b. Continuous, black colored, polyvinyl chloride coating, ASTM – F668, Class 2a, and adhered to the metallic coated wire fabric."
2. Part 2 - Products, under 2.2 Components, on Page 02444-2, in line 41, change "1-1/4 IN" to "1-5/8 IN".
3. Part 2 - Products, under 2.2 Components, under H. Barbed Wire, on Page 02444-3, change line 5 and line 6 to read:
"1. Three strand, 12½ gauge steel wire with black plastic coating and 14 gauge, 4 point round steel barbs spaced approximately 5 in. on center."
4. Part 2 - Products, under 2.2 Components, on Page 02444-3, under "I. Swing Gate:", add the following after line 12.
"4. Gate Posts (for swing gates):
 - a. ASTM F1083 Pipe
 - b. Schedule 40 pipe
 - c. Diameter: 4 IN OD."
5. Part 2 – Products, under 2.2 Components, on Page 02444-3, after line 12 add the following:
"J. Extension Arms:
 1. 18 IN long: 45 degree bracket type.
 2. 3 slots at even spaces for 3 stands of barbed wire.
 3. Cast steel with provisions for attachment to post without welding.
 4. Break away swing-down type.
 5. One per post."

AD-1 ITEM 8: SECTION 08110AD-1: BULLET RESISTANT DOORS AND FRAMES

1. Add Specification Section 08110: Bullet Resistant Doors and Frames in its entirety.

AD-1 ITEM 9: SECTION 08120: ALUMINUM DOORS AND FRAMES

1. Delete Specification Section 08120: Aluminum Doors and Frames in its entirety.

AD-1 ITEM 10: SECTION 08700: FINISH HARDWARE

1. Specification Section 08700 is being reissued. Replace Section 08700 in its entirety with attached Specification in Section 08700AD-1: Finish Hardware.

AD-1 ITEM 11: SECTION 08800: GLASS AND GLAZING

1. Specification Section 08800 is being reissued. Replace Section 08800 in its entirety with attached Specification Section 08800AD-1: Glass and Glazing.

AD-1 ITEM 12: SECTION 09905: PAINTING AND PROTECTIVE COATINGS

- 1. Specification Section 09905 is being reissued. Replace Section 09905 in its entirety with attached Specification in Section 09905AD-1: Painting and Protective Coatings.

AD-1 ITEM 13: SECTION 11072: PUMPING EQUIPMENT: VERTICAL TURBINE (LINE SHAFT)

- 1. Part 2 – Products, Page 11072-1, 2.1 Acceptable Manufacturers, on line 34, after Peerless, add “Model 24 MA, 3 Stages, and Impeller No.: 2603427/MC.

AD-1 ITEM 14: SECTION 13440: INSTRUMENTATION FOR PROCESS CONTROL: BASIC REQUIREMENTS

- 1. Replace the Quote from DSI dated October 6, 2014 in its entirety with the Quote from DSI dated October 22, 2014 attached to this addendum.

AD-1 ITEM 15: SECTION 13441: CONTROL LOOP DESCRIPTIONS

- 1. Part 3 – Execution, on Pages 13441-5 and 6, replace the existing text on lines 47-52 on page 5 and lines 1-6 on page 6 with the following:
 - 1. Control Logic:
 - a. An alarm is generated at the OIT and the SCADA HMIs immediately whenever any of the following are open:
 - 1) Main Door.
 - 2) North roof hatch.
 - 3) South roof hatch.
 - 4) Valve level hatch.
 - b. ACTIVE – BYPASS selector switch HS-50 with key lock is utilized to bypass the door and hatches intrusion alarms. Intrusion alarms are generated at the OIT/HMIs after a time delay (adjustable from 0 to 60 seconds) following the opening of the door or hatch. No intrusion alarm is generated when HS-50 is in the BYPASS position. Control logic associated with the BYPASS mode and the time delay associated with the ACTIVE mode resides within the PLC.

- 2. Part 3 – Execution, on Pages 13441-6, add the following text immediately after line 11:

e. Indication that intrusion alarms are bypassed (selector switch HS-50 is in BYPASS position): ZI-50.

AD-1 ITEM 16: SECTION 13442: PRIMARY METERS AND TRANSMITTERS

- 1. Part 2 – Products, on Page 13442-5, immediately following line 35, change “TBD” in schedule for LT-06 Span (FT) to read 0-115.

AD-1 ITEM 17: SECTION 13500: PROGRAMMABLE LOGIC CONTROLLER (PLC) CONTROL SYSTEM

- 1. Part 3 – Execution, on Page 13500-8, immediately following line 6, add the following Discrete Input:

10.	ZA-10	Generator not in AUTO control mode	Generator CP
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AD-1 ITEM 18: SECTION 15064: PIPE: PLASTIC

- 1. Part 2 – Products, on Page 15064-3, line 3, under 2.2 Pressure Piping (Underground), Sentence A.1., change “Table A3” to read “Table A.2”.
- 2. Part 2 - Products, on Page 15064-3, line 4, under 2.2 Pressure Piping (Underground), Sentence A.2., after the word “PVC” insert “(C.I.O.D), DR-18” and change “200 psi” to “265 psi”.
- 3. Part 2 – Products, on Page 15064-3, under 2.2 Pressure Piping (Underground), after line 7, add the following Sentence A.5.
 - “5. 14-24 IN: AWWA C905 PVC (C.I.O.D), DR-18, with pressure class 235 psi per Table 2, AWWA C905.

4. Part 2 - Products, on Page 15064-3, after line 12, under 2.2 Pressure Piping (Underground), add the following paragraph C.
 “C. Fittings:
 1. Fittings for buried PVC pressure Pipe, 4 – 36 IN to be ductile iron AWWA/ANSI C110/A21.10 or AWWA/ANSI C153/A21.53 ductile iron compact fittings.
 2. Fitting joint restraints for buried PVC pressure pipe, 4-36 IN to be EBAA Series 2000PV, Series 2000SV, or equal.”

AD-1 ITEM 19: SECTION 15000: VALVE REQUIREMENTS

1. In the valve schedule at the end of Section 15000 add the following valves:

Valve	Location	Size	Type	Actuator	Exposed/ Buried	Joints
SV01	Collector Well Pump No. 1 Pre-Lube Line	¾ IN	Solenoid	Automatic	Exposed	Threaded
SV02	Collector Well Pump No. 2 Pre-Lube Line	¾ IN	Solenoid	Automatic	Exposed	Threaded
SV03	Collector Well Pump No. 3 Pre-Lube Line	¾ IN	Solenoid	Automatic	Exposed	Threaded

AD-1 ITEM 20: SECTION 15100: VALVES: BASIC REQUIREMENTS

1. Part 2 – Products, 2.3 Valve Actuators, on Page 15100-3, line 3, Sentence 6.b., after the word “Solid” insert “Stainless”.
2. Part 2 – Products, 2.3 Valve Actuators, on Page 15100-3, 6.b., line 4, add the following after the word “shaft.”: “1-1/4Ø” Stainless Steel Pipe and couplings may be used in-lieu of solid stainless steel rods. However, Contractor to provide calculations indicating that the stainless steel pipe will meet industry standards at the valve torque requirements.
3. Part 2 - Products, 2.3 Valve Actuators, on Page 15100-3, after line 6, add the following sentences 6.e. and 6.f.:
 “e. Weld a plate to valve stem to support extension stem.”
 “f. Cast-Iron or Ductile Iron stem guides with brass or bronze bushings shall be provided as shown on the drawings. Stem guides shall be spaced at 10 foot intervals or as recommended by the manufacturer.”

AD-1 ITEM 21: SECTION 15101: GATE VALVES

1. Part 2 – Products, 2.3 Valve: Water (Hot, Cold, Heating, Cooling, Service, Process, Potable, and Non-Potable), on Page 15101-2, line 36, at the end of the sentence add “or AWWA C515.”
2. Part 2 – Products, 2.3 Valve: Water (Hot, Cold, Heating, Cooling, Service, Process, Potable, and Non-Potable), on Page 15101-2, line 38, at the end of the sentence add “or Stainless Steel.”

AD-1 ITEM 22: SECTION 15106: CHECK VALVES

2. Part 2 – Products, 2.5 Automatic Control Valves (Pump Control Valves, PCV01, PCV02, and PCV03), Page 15106-3, following line 13, add the following under the list of Acceptable manufacturers:
 “c) Ross Model D-42WRS-SO”

DRAWINGS

AD-1 ITEM 23: SHEET 01C103 LATERAL PLAN

1. Add the following General Note 2.
 - “2. Contractor will be responsible for the proper removal of any existing Test Wells (TW) and Observation Wells (OW) required to be removed for construction of the well caisson and laterals. The Cost for TW and OB well removal is to be included under Bid Item No. 4. Location of existing TWs and OWs are shown on Sheet 01C101.”

AD-1 ITEM 24: SHEET 01C503 CIVIL DETAILS

1. In the Security Fence Detail, change the note that reads “1 ¼” OD Top Rail” to read “1 5/8” OD Top Rail”.
2. In the Security Fence Detail, change the note that reads “1 ¼” OD Brace Tube” to read “1 5/8” OD Brace Tube”.
3. In the Security Fence Detail, in the note that reads “Chain Link Fabric #9 Gauge 2” Mesh” add: “Black, Polyvinyl Chloride Coated” to the note.
4. In the Swing Gate Detail, in the note that reads “Chain Link Fabric #9 Gauge 2” Mesh” add: “Black, Polyvinyl Chloride Coated” to the note.

AD-1 ITEM 25: SHEET 02S101 LOWER AND INTERMEDIATE LEVEL PLANS

1. In Section A add the following note”

“Following contract award, the Contractor may submit for review and approval by the Engineer alternative locations of construction joints and forming of the cast-in-place concrete floor, buttresses, and building walls. Alternate means of construction of the floor, buttresses, and building walls submitted by the Contractor and approved by the Engineer, will be at no additional cost.”

AD-1 ITEM 26: SHEET 02A102 FLOOR PLANS MAIN LEVEL AND ROOF PLAN

2. Sheet 02A102 has been reissued. Replace Sheet 02A102 in its entirety with attached Sheet 02A102. Note that changes to this sheet are shown clouded.

AD-1 ITEM 27: SHEET 02A201 BUILDING ELEVATIONS

1. Sheet 02A201 has been reissued. Replace Sheet 02A201 in its entirety with attached Sheet 02A201. Note that changes to this sheet are shown clouded.

AD-1 ITEM 28: SHEET 02A202 BUILDING ELEVATIONS

1. Sheet 02A202 has been reissued. Replace Sheet 02A202 in its entirety with attached Sheet 02A202. Note that changes to this sheet are shown clouded.

AD-1 ITEM 29: SHEET 02A301 BUILDING SECTION

1. Sheet 02A301 has been reissued. Replace Sheet 02A301 in its entirety with attached Sheet 02A301. Note that changes to this sheet are shown clouded.

AD-1 ITEM 30: SHEET 02A302 WALL SECTIONS

1. Sheet 02A302 has been reissued. Replace Sheet 02A302 in its entirety with attached Sheet 02A302. Note that changes to this sheet are shown clouded.

AD-1 ITEM 31: SHEET 02A502 BUILDING DETAILS

1. Sheet 02A502 has been reissued. Replace Sheet 02A502 in its entirety with attached Sheet 02A502. Note that changes to this sheet are shown clouded.

AD-1 ITEM 32: SHEET 02D301 PROCESS SECTIONS

1. In the "Partial Section Through Lower Level", note that the 4'-0" dimension shown for the thickness of the caisson plug is a minimum thickness. The plug thickness is to be determined by the caisson construction contractor based on design calculations required by Specification Section 13200 – Horizontal Collector Well.

AD-1 ITEM 33: SHEET 02E503 ELECTRICAL DETAILS

1. Revise Submersible Level Transmitter Installation Detail 1 to show a PVC Pipe Extended from the Valve Room Floor to below the Level Sensor with Weight and add the following note: Level Sensor to be installed in a 4"Ø Minimum Schedule 40 PVC Pipe with solvent welded joints. Provide wall supports per manufacturers recommendations".

AD-1 ITEM 34: SHEET 02E631 CONTROL BLOCK DIAGRAM

2. The 12-strand fiber currently shown connected to the RIO Panel at Power Pad is to be connected at the other end to an FIC (Fiber Interconnect Center) located in the Collector Well Building. A 2-strand fiber jumper is to connect the FIC to CP01.
3. Change designation from C8 to C10 for control circuits between the GEN and RIO AT POWER PAD.

AD-1 ITEM 35: SHEET 02Y601 CONTROL SYSTEM COMMUNICATION DIAGRAM

1. Move the FIC (Fiber Interconnect Center) out of the Collector Well Control Panel and show it located within the New Collector Well Building. Place Keynote #3 adjacent to the relocated FIC in the Collector Well Building and also adjacent to the FIC in the Remote I/O Panel.
2. Add Keynote #3 text to read as follows: PROVIDE FIBER INTERCONNECT CENTERS (FIC) BY CORNING OR EQUAL IN NEW COLLECTOR WELL BUILDING AND IN THE REMOTE I/O PANEL. CONNECT FIBER JUMPERS FROM ETHERNET SWITCHES TO LC CONNECTORS IN INTERCONNECT CENTERS. CONNECT ALL FIBER STRANDS TO CONNECTOR PANELS WITHIN EACH FIC. FIC IN COLLECTOR WELL BUILDING TO BE LOCKABLE AND DUSTPROOF.
3. Change "ENBT MOD" to "EN2T MOD" in two places: Collector Well Control Panel and Remote I/O Panel.

The Pre-Bid Conference Meeting Minutes and Sign-In Sheet are attached for reference purposes only.

ALL ITEMS IN CONFLICT WITH THE ADDENDA ARE HEREBY DELETED.

THIS ADDENDUM IS MADE PART OF THE CONTRACT DOCUMENTS AND SHALL BE NOTED IN THE PROPOSAL.

I hereby certify that this addendum was prepared by me or under my direct supervision and that I am a duly licensed professional engineer under the laws of the State of South Dakota

Kevin F. Newman

Kevin F. Newman, P.E.

Date: October 24, 2014

Lic. No: 6247



2014/10/23

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(SDG071106)**

**APPENDIX C - GENERAL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH
CONSTRUCTION ACTIVITIES (SDR10G804)**

BID PROPOSAL – ADDENDUM NO. 1

**2014 Water Treatment Plant Improvements, Horizontal Collector Well
Project # ES14 -5**

Date: _____

Proposal of _____ (hereinafter

called "BIDDER") a corporation, organized and existing under the laws of the State of

_____, a partnership, or an individual doing business as:

_____.

To: City Finance Officer
City of Yankton
Yankton, South Dakota

Proposals to be filed
no later than 3:00 P.M.
on November 5, 2014

Gentlemen:

The BIDDER, in compliance with your invitation to bid for this project, having examined the specifications and related documents, being familiar with the site of the proposed work, and being familiar with all of the conditions surrounding the proposed project, including the availability of materials and labor hereby proposes to furnish all labor, materials, and supplies in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below. This price covers all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

The undersigned bidder does hereby declare and stipulate that each proposal is made in good faith, without collusion or connection with any other person or persons bidding for the same work, and that it is made in pursuance of and subject to the detailed specifications, and all other contract documents, pertaining to the work to be done, all of which have been examined by the undersigned.

All the various phases of work enumerated in the contract documents with their individual jobs and overhead, whether specifically mentioned, included by implication or appurtenant thereto, are to be performed by the Contractor.

This project may be funded wholly or in part by the State Revolving Fund (SRF) program and as such, must comply with all requirements. Five forms at the end of this bid proposal form and listed in the following must be submitted with the bid except for EPA Form 6100-3. The apparent low bidder will have 10 days to get that form prepared and get it submitted to DENR. Failure to complete and submit these 5 forms as required will be cause to consider the bid as non-responsive.

- ***DBE Subcontractor Solicitation Information Form (DBE-6);***
- ***Bidder's Activity Report***
- ***EPA Form 6100-3, DBE Subcontractor Performance Form (DBE-9);***
- ***EPA Form 6100-4, DBE Subcontractor Utilization Form (DBE-11);***

***Certification Regarding Debarment, Suspension, & Other Responsibility Matters
(Debar-2)***

Bid also requires meeting the EPA requirements for American Iron and Steel. Bidders are referred to the State Revolving Fund (SRF) General Conditions with Davis-Bacon & American Iron and Steel Provisions for Use of American Iron and Steel Requirements. The provisions outlined in the Use of American Iron and Steel (AIS) Requirements are different than previous “Buy American” provisions that bidders and suppliers may be familiar with. For compliance with the bid, Bidders and material suppliers shall follow the AIS Requirements. The State Revolving Fund (SRF) General Conditions with Davis-Bacon & American Iron and Steel Provisions include the full guidance memorandum published by the United States Environmental Protection Agency, dated March 20, 2014. The memorandum defines covered iron and steel products, (Question/Answers 11 – 15) as well as defining the definition for “produced in the United States” (Question/Answers 16 – 24). Certification letters are required for all products covered within the AIS Requirements and must be submitted at the time products are shipped. Letters stating that the all products will meet the AIS requirements must be included with shop drawing submittals as described in Specification Section 01340, Submittals.

The BIDDER hereby agrees to fully complete the PROJECT no later than **April 30, 2016**. The BIDDER further agrees that if he does not complete the project within the time period specified, to pay as liquidated damages, the sum of \$900.00 for each consecutive calendar day the project exceeds the completion date as provided in Section 15 of the GENERAL CONDITIONS.

The BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum. The BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following unit prices or lump sum. Bid Item 3 shall include the pre-negotiated price of **\$145,442.00** for equipment and services specified in Specification Sections 13440 through 13504 related project instrumentation. (Note: BIDS shall include all applicable taxes and fees.) Refer to Section 01020 – Measurement and Payment for a description of each Bid Item.

Base Bid

Item No.	Description	Quantity	Unit	Unit Price	Total Cost
1.	General Conditions/Mobilization	1	LS	\$	\$
2.	Site Clearing and Grubbing	1	LS	\$	\$
3.	Instrumentation and Process Control	1	LS	\$	\$
4.	Concrete Caisson	1	LS	\$	\$
5.	Well Laterals (10” x 12”)	2,405	LF	\$	\$
6.	12-IN Well Lateral Gate Valves with Extension Stems	13	EA	\$	\$
7.	Pump Station Building	1	LS	\$	\$
8.	Vertical Turbine Pumps	3	EA	\$	\$
9.	Vertical Turbine Pump Discharge and Header Piping	1	LS	\$	\$
10.	30-IN DIP Raw Water	105	LF	\$	\$

	Transmission Main				
11.	24-IN PVC Raw Water Transmission Main	813	LF	\$	\$
12.	Air/Vacuum Manhole and Valve	1	LS	\$	\$
13.	Ductile Iron Fittings	14,815	LBS	\$	\$
14.	Fire Hydrant & Valve	1	EA	\$	\$
15.	Diesel Engine Generator	1	LS	\$	\$
16.	Site Distribution Switchgear and Electrical Service Equipment	1	LS	\$	\$
17.	Electrical Service to Pump Station Building	1	LS	\$	\$
18.	Traffic Control	1	LS	\$	\$
19.	Earthwork (Access Road and Generator Site)	3,500	CY	\$	\$
20.	Scarify and Recompact Subgrade	5,700	SY	\$	\$
21.	Gravel Surfacing	1,800	TON	\$	\$
22.	Geotextile Fabric	3,700	SY	\$	\$
23.	8 ft. High Chainlink Fence W/Barbed Wire	466	LF	\$	\$
24.	8 ft. High Double Swing Gate W/Barbed Wire	1	EA	\$	\$
25.	Hackberry Tree Planting	9	EA	\$	\$
26.	Kentucky Coffeetree Planting	6	EA	\$	\$
27.	Siouxland Popler Planting	5	EA	\$	\$
28.	Bur Oak Planting	2	EA	\$	\$
29.	Sea Green Juniper Planting	25	EA	\$	\$
30.	Hancock Coralberry Planting	120	EA	\$	\$
31.	Buffalo Grass Sod	5,350	SF	\$	\$
32.	No-Mow Grass	3.2	AC	\$	\$
33.	Remove Sediment	6.5	CY	\$	\$
34.	Remove Erosion Control Wattle	4,260	FT	\$	\$
35.	Type 1 Erosion Control Blanket	2,030	SY	\$	\$
36.	20" Diameter Erosion Control Wattle	4,260	FT	\$	\$
37.	Remove and Reset Erosion Control Wattle	1,065	FT	\$	\$
38.	Concrete Pavement Replacement	1400	SY	\$	\$

Total Base Bid \$ _____

(Total Base Bid Amount Written Out)

Bidder acknowledges receipt of the following addenda:

Date: _____ Number: _____

The Bidder understands that the Owner reserves the right to reject any or all bids, to waive any informalities in the bidding and to award the contract in the best interest of the Owner.

Respectfully submitted:

_____	_____
Name of Firm	Federal ID No.

Officer	

_____	_____
Address	Telephone No.

DBE/WBE Goal Requirements

SRF BIDDING DOCUMENTS

The following SRF documents must be completed and submitted with the Contractor's **Bid Proposal**. These documents can also be found in the SRF General Conditions

DBE SUBCONTRACTOR SOLICITATION INFORMATION

PROJECT NAME:

Subcontractor Name and Telephone Number	MBE or WBE	Description of Work Offered	Date of Phone Follow-up & Person Contacted	Amount of Bid or Reason for not Quoting	Bid Accepted or Rejected? Include Reason for Rejection

This information is true and correct to the best of my knowledge

Contractor Name, Address and Telephone Number _____

This form shall be submitted as part of the contractor's bid.

Signature Title _____

Date _____



Environmental
Protection Agency

OMB Control No: _____
Approved: _____
Approval Expires: _____

**Disadvantaged Business Enterprise Program
DBE Subcontractor Performance Form**

NAME OF SUBCONTRACTOR ¹		PROJECT NAME
ADDRESS		BID/PROPOSAL NO.
TELEPHONE NO.	E-MAIL ADDRESS	
PRIME CONTRACTOR NAME		
CONTRACT ITEM NO.	ITEM OF WORK OR DESCRIPTION OF SERVICES BID TO PRIME	PRICE OF WORK SUBMITTED TO PRIME CONTRACTOR
Currently certified as an MBE or WBE under EPA's DBE Program? _____ Yes _____ No		
_____ Signature of Prime Contractor		_____ Date
_____ Print Name		_____ Title
_____ Signature of Subcontractor		_____ Date
_____ Print Name		_____ Title

¹Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.



Environmental
Protection Agency

OMB Control No: 2090-0030
Approved: 05/01/2008
Approval Expires: 01/31/2011

**Disadvantaged Business Enterprise Program
DBE Subcontractor Utilization Form**

BID/PROPOSAL NO.	PROJECT NAME
NAME OF PRIME BIDDER/PROPOSER	E-MAIL ADDRESS
ADDRESS	
TELEPHONE NO.	FAX NO.

The following subcontractors will be used on this project:			
COMPANY NAME, ADDRESS, PHONE NUMBER, AND E-MAIL ADDRESS	TYPE OF WORK TO BE PERFORMED	ESTIMATED DOLLAR AMOUNT	CURRENTLY CERTIFIED AS AN MBE OR WBE?

I certify under penalty of perjury that the forgoing statements are true and correct. In the event of a replacement of a subcontractor, I will adhere to the replacement requirements set forth in 40 CFR Part 33 Section 33.302(c)

Signature of Prime Contractor	Date
Print Name	Title

*Subcontractor is defined as a company, firm, joint venture, or individual who enters into an agreement with a contractor to provide services pursuant to an EPA award of financial assistance.

EPA FORM 6100-4 (DBE Subcontractor Utilization Form)

CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS

A. INSTRUCTIONS

Under Executive Order 12549, an individual or organization debarred or excluded from participation in Federal assistance or benefit programs may not receive any assistance award under a Federal program, or a subagreement thereunder for \$25,000 or more. The status of prospective individuals or organizations can be checked at:

<http://epls.arnet.gov/>

Accordingly, each prospective recipient of an EPA grant, loan, or cooperative agreement and any contract or subagreement participant thereunder must complete the attached certification or provide an explanation why they cannot complete the certification. For further details, see 40 CFR 32.510, Participants Responsibilities.

B. WHERE TO SUBMIT

A prospective prime contractor must submit a completed certification or explanation to the project owner for the project. Each prospective subcontractor must submit a completed certification or explanation to the prime contractor for the project.

C. HOW TO OBTAIN FORMS

This form may reproduced as necessary. If needed, additional forms may be obtained from the Department of Environment and Natural Resources.

SRF Project Number

United States Environmental Protection Agency
Washington, DC 20460

**Certification Regarding
Debarment, Suspension, and Other Responsibility Matters**

The prospective participant certifies to the best of its knowledge and belief that it and its principals:

- (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
- (b) Have not within a three year period preceding this proposal been convicted of or had a civil judgement rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State, or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
- (c) Are not presently indicted for or otherwise criminally or civilly charged by a government entity (Federal, State, or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
- (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State, or local) terminated for cause or default.

I understand that a false statement on this certification may be grounds for rejection of this proposal or termination of the award. In addition, under 18 USC Sec. 1001, a false statement may result in a fine of up to \$10,000 or imprisonment for up to 5 years, or both.

Typed Name & Title of Authorized Representative

Signature of Authorized Representative

Date

_____ I am unable to certify to the above statements. My explanation is attached.

ENCROACHMENT AGREEMENT

City of Yankton

October 13, 2014

**Re: Collector Well Access Road
Crossing Keystone's 30" H.P. Nat. gas pipeline.
M.P. 438, Keystone | Tract ML-SD-YA-1014.0000
Part of Sec. 18-93N-55W
Yankton County, South Dakota**

TransCanada's Pipeline Integrity Group Engineer has completed a review of your proposal for the above captioned project. The results of the review are contained in the Engineering Guidelines dated October 9, 2014 and attached hereto. You, your contractors and/or your company will be held responsible to adhere to the terms herewith provided by which KEYSTONE PIPELINE, LP (hereinafter "Keystone") issues this Agreement.

- 1 All work must comply with the above stated guidelines and your drawings stamped "Reviewed and Approved as Noted TransCanada Engineering L.J. Jaskowiec, P.E." All of which are attached and hereby made part of this Encroachment Agreement. Any changes to the design, description, and/or construction must be approved in advance of any construction by TransCanada's Pipeline Integrity Group Engineer.
- 2 The crossing of Keystone pipeline shall be made in accordance with all applicable laws, rules and regulations relative to pipeline construction.
- 3 Keystone must have a representative on site at all times when work is being performed over/near its pipeline and/or within its Right of Way and Easement.
- 4 Notice of at least seventy-two (72) hours in advance of construction must be provided. You must contact Keystone field representative: Joe Mueller | Cell: (605)464-1371. *Please note that voice messages do not constitute 72 hour notice. Person to person contact must be made.*
- 5 Compliance with these terms and those contained in the Engineering Guidelines does not suggest or imply that you, your contractors, consultants or any other associated party is relieved of any responsibility or liability in the event Keystone pipeline or facilities are damaged in any way before, during or after the construction of the encroachment. Keystone will hold all parties responsible for costs incurred for any breach of pipeline or facility integrity.
- 6 The responsibilities and obligations of the City of Yankton pursuant to this agreement shall extend to its successors and assigns.
- 7 All rights granted hereunder shall be subject and subordinate to the paramount rights granted to Keystone to occupy and use all or any portion or portions of its right of way and easement in its operations.
- 8 Please be advised that Keystone is now and will continue to utilize the land included within said easement for pipeline purposes and that in doing so, may at any time, or from time to time, enter upon said land, place and transport machinery and equipment thereon, and excavate trenches and ditches thereon; and in such an event, Keystone, except for normal back filling, will not restore the surface, including any improvements constructed pursuant of this approval.
- 9 Keystone its parent, affiliates, subsidiaries, and their directors, officers, employees, representatives and agents will be indemnified and held harmless against any and all loss (including attorney's fees), damages, cost or liability, personal injury, claims, actions or judgments that may arise or result from the negligent acts or omissions of the City of Yankton or its contractors, employees, or agents pursuant to the permission granted by this agreement.

October 13, 2014

Page 2

- 10 Keystone review does not cover any other agency or property owner approvals required.
- 11 Prior to any construction activities within 25 feet of our pipeline facilities all contractors must be provided and have in their possession a copy of this Agreement and the Engineering Guidelines dated October 9, 2014 to ascertain that they are aware of the conditions for crossing.
- 12 **Keystone requires that each contractor/subcontractor on this project submit State One Call tickets (call 811) in accordance with the applicable One Call system's advance notification requirements for each different phase of the project that involves earth disturbance (grading, excavating, trenching, digging, etc.).**

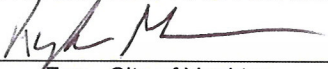
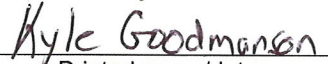
Keystone looks forward to working with you to minimize impact resulting from this project and also provide for the safety of the general public and the integrity of our pipeline. Should you have any further questions in regard to this Agreement please contact me at (248)205-7473.

No work is permitted under the terms of this Encroachment Agreement until the Encroachment Agreement has been countersigned, dated and returned to: TransCanada, Attn: Crossings and Encroachments, 5250 Corporate Drive, Troy, MI 48098.

TransCanada Crossings & Encroachments


Jordan P. Konyha

COUNTERSIGNED AND AGREED TO:

By: 
For: City of Yankton

Printed name/date

The signature below is to be secured on site prior to construction activity within the Keystone Right of Way to confirm presence of a TransCanada Representative.

TransCanada representative: _____

Printed Name: _____

cc: Area Manager w/att
Land Agent w/att
Field Tech(s) w/att
C&E File No. K-L-19-2014



October 9, 2014

The crossing application submitted by the City of Yankton has been reviewed. The City of Yankton plans to construct a 12' wide gravel access road in Yankton County, South Dakota.

Work within the TransCanada right-of-way will be performed in accordance with TransCanada procedures to protect the safety of TransCanada facilities. The following guidelines, although not inclusive, are provided in order to accommodate your request and protect our pipelines and facilities:

1. No ground disturbance shall be made within TransCanada' right of way or within 25 ft., measured at right angles, of our pipeline(s) except in the presence of our company representative.
2. Notice of at least seventy-two (72) hours in advance of construction must be provided. The City of Yankton must contact the following TransCanada field representatives:

Name: Joseph Mueller | Cell: 605-464-1371

TransCanada will arrange for a representative to be on site when work is occurring on or near the Right of Way area, or within 25' of the pipelines. After hours call 1-800-447-8066.

3. The City of Yankton, or its contractor must hydro-vac or hand expose TransCanada' buried pipeline(s) prior to use of mechanical equipment within 15ft. of the pipeline(s).
4. In the event of equipment crossings outside of existing road right of way or wherever our technician determines that inadequate cover exists, the contractor shall install and maintain temporary crossings of TransCanada' pipeline(s) at location(s) specified by TransCanada and that are/is perpendicular to TransCanada' pipeline(s). A minimum of five (5) feet of total cover over TransCanada' pipeline(s) is required. If fill is required to obtain the minimum cover, a suitable material (preferably a bank run gravel material, or a combination of wooden mats and bank run gravel, or a TransCanada approved "Portable Land Bridge") will be placed on the existing surface of the ground over the pipeline(s) from a point fifteen (15) feet ahead of the pipeline crossing to a point

fifteen (15) feet beyond the pipeline crossing. The crossing area should be a minimum of twenty (20) feet wide so as to adequately bear the crossing weights of the heavy equipment. All vehicular traffic will cross TransCanada' pipeline(s) at these designated locations only.

5. The applicable state one-call system must be contacted at 811 in accordance with its advance notification requirements prior to any ground disturbance.

Respectfully Submitted,

A handwritten signature in blue ink that reads "L. J. Jaskowiec". The signature is written in a cursive style with a large initial "L" and "J".

Lawrence Jaskowiec, P.E.
Senior Engineer
Pipeline Integrity
TransCanada US Pipelines
5250 Corporate Drive ~ Troy, MI 48098
Phone: 248-205-7550 ~ Fax: 248-205-4750
Lawrence_Jaskowiec@TransCanada.com

1 2014/10/23

2

SECTION 08110AD-1

3

BULLET RESISTANT DOORS AND FRAMES

4 PART 1 - GENERAL

5 1.1 SUMMARY

6

A. Section Includes: Bullet resistant door and frame assembly.

7

B. Related Specification Sections include but are not necessarily limited to:

8

1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.

9

2. Division 01 - General Requirements.

10

3. Section 08700 - Finish Hardware.

11

4. Section 09905 - Painting and Protective Coatings.

12

1.2 QUALITY ASSURANCE

13

A. Referenced Standards:

14

1. ASTM International (ASTM):

15

a. A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

16

2. National Association of Architectural Metal Manufacturers (NAAMM):

17

a. Hollow Metal Manufacturers Association (HMMA).

18

3. Steel Door Institute (SDI):

19

a. 117, Manufacturing Tolerances for Standard Steel Doors and Frames.

20

b. All SDI publications.

21

4. Steel Door Institute/American National Standards Institute (SDI/ANSI):

22

a. A250.6, Recommended Practice for Hardware Reinforcing on Standard Steel Doors and Frames.

23

b. A250.7, Nomenclature for Standard Steel Doors and Steel Frames.

24

c. A250.8 (formerly SDI 100), Recommended Specifications for Standard Steel Doors and Frames.

25

d. A250.10, Test Procedure and Acceptance Criteria for Prime Painted Steel Surfaces for Steel Doors and Frames.

26

e. A250.11, Recommended Erection Instructions for Steel Frames.

27

5. Underwriters Laboratories, Inc. (UL):

28

a. 752, Bullet Resistant Equipment.

29

6. Building Code:

30

a. International Code Council (ICC):

31

1) International Building Code and associated standards, 2003 Edition including all amendments, referred to herein as Building Code.

32

33

B. Qualifications: Manufacturer must be current member of SDI, and NAAMM (HMMA).

34

C. Wipe coat galvanized steel is not acceptable as substitute for galvanizing finish specified.

35

1.3 DEFINITIONS

36

A. As identified in SDI/ANSI A250.7.

37

1.4 SUBMITTALS

38

A. Shop Drawings:

39

1. See Specification Section 01340 for requirements for the mechanics and administration of the submittal process.

40

2. Product technical data including:

41

a. Acknowledgement that products submitted meet requirements of standards referenced.

42

b. Manufacturer's installation instructions.

- 1 3. Schedule of doors and frames using same reference numbers as used on Drawings.
- 2 4. SDI certification.

3 **1.5 DELIVERY, STORAGE, AND HANDLING**

- 4 A. Store doors and frames in accordance with SDI/ANSI A250.11.

5 **PART 2 - PRODUCTS**

6 **2.1 ACCEPTABLE MANUFACTURERS**

- 7 A. Subject to compliance with the Contract Documents, the following manufacturers are
8 acceptable:
- 9 1. Metal doors and frames:
 - 10 a. CECO Corporation.
 - 11 b. Steelcraft Manufacturing Co.
 - 12 c. Curries Company.
 - 13 d. Total Security Solutions.
 - 14 e. Armortex, Safeguard Security Services, Inc.
 - 15 f. Protective Structures.
 - 16 g. Chicago Bullet Proof Systems.
 - 17 h. National Bullet Proof.
 - 18 i. Any manufacturer meeting this Specification.

- 19 B. Submit request for substitution in accordance with Specification Section 01640.

20 **2.2 MATERIALS**

- 21 A. Steel Sheet: Hot-dipped galvanized steel, ASTM A653, A60 coating.
- 22 B. Frames: Hot-dipped galvanized steel, ASTM A653, A60 coating.
- 23 C. Supports and Reinforcing: Hot-dipped galvanized steel, ASTM A653, A60 coating.
- 24 D. Inserts, Bolts and Fasteners: Manufacturer's standard.
- 25 E. Primer: Manufacturer's standard coating meeting SDI/ANSI A250.10.
- 26 F. Galvanized Coating Repair: See Specification Section 09905.
- 27 G. Thermal Insulation: Polyurethane, CFC free.
- 28 H. Bullet Resistive Material: Fiberglass or armor steel.

29 **2.3 ACCESSORIES**

- 30 A. Frame Anchors:
- 31 1. Jamb anchors:
 - 32 a. Wall anchor: Minimum 18 GA, galvanized.

33 **2.4 FABRICATION**

- 34 A. General:
- 35 1. SDI/ANSI A250.8.
 - 36 2. Fabricate rigid, neat in appearance and free from defects.
 - 37 3. Form to sizes and profiles indicated on Drawings.
 - 38 a. Beveled edge.
 - 39 4. Fit and assemble in shop wherever practical.
 - 40 5. Mark work that cannot be fully assembled in shop to assure proper assembly at site.
 - 41 6. Continuously wire weld all joints, dress exposed joints smooth and flush.
 - 42 7. Fabricate doors and frames to tolerance requirements of SDI 117.
 - 43 8. Fit doors to SDI clearances.
 - 44 9. All doors shall be handed.

- 1 10. Hinge cut-out depth and size on doors and frames shall match hinge specified in
- 2 Specification Section 08700.
- 3 11. Design and fabricate doors to requirements of the Building Code.
- 4 B. Hollow Metal Doors:
- 5 1. General:
- 6 a. 1-3/4 IN thick.
- 7 b. Protection Level: Level 3 per UL 752.
- 8 c. Non-Ricochet type.
- 9 d. Exterior side is threat side.
- 10 e. Fabricate with flush top caps.
- 11 1) Thickness and material to match door face.
- 12 2) Exterior doors: Seal weld top cap to door face and grind smooth and flush.
- 13 3) Interior doors:
- 14 a) Attach top cap to door with concealed fasteners or by welding.
- 15 b) Factory seal if attached with fasteners.
- 16 c) No exposed fasteners will be accepted.
- 17 f. Continuously wire weld all joints and dress, smooth and flush.
- 18 2. Exterior:
- 19 a. SDI/ANSI A250.8, Level 4, and physical performance level A, Model 2.
- 20 1) Face sheet minimum thickness: 16 GA.
- 21 2) Liner: Bullet Resistive Material.
- 22 a) Armor Steel:
- 23 (1) Thickness for Armor Steel: 1/4 IN (minimum).
- 24 (2) Brinnell Hardness range of 220 to 350 or to meet thickness and hardness
- 25 for protection level.
- 26 b) Fiberglass:
- 27 (1) The panels shall be made of multiple layers of woven roving ballistic
- 28 grade fiberglass cloth impregnated with a thermoset polyester resin and
- 29 compressed into flat rigid sheets. The production technique and materials
- 30 used shall provide the controlled internal delamination to permit the
- 31 capture of a penetrating projectile.
- 32 (2) Thickness: 7/16 IN minimum.
- 33 3) Insulated: Foamed-in-place with urethane minimum R10.
- 34 3. Interior:
- 35 1) SDI/ANSI A250.8, Level 4, and physical performance level "A", Model 2.
- 36 2) Face sheet minimum thickness: 16 GA.
- 37 4. Basis of Design: Armortex.
- 38 C. Hollow Metal Frames:
- 39 1. Door frames:
- 40 a. Protection Level: to match door rating.
- 41 b. Provide 2 IN face at all heads, jambs and mullions for frames in stud walls.
- 42 c. Galvanized steel boxes welded to frame at back of all hardware cutouts.
- 43 d. Steel plate reinforcement welded to frame for hinge, strikes, closers and surface-
- 44 mounted hardware reinforcing.
- 45 1) All plate reinforcement shall meet size and thickness requirements of
- 46 SDI/ANSI A250.8.
- 47 e. Split type frames not acceptable.
- 48 1) All horizontal and vertical mullions and transom bars shall be welded to adjacent
- 49 members.
- 50 f. Conceal all fasteners.
- 51 g. Frames shall be set up, all face joints continuously wire welded and dressed smooth.
- 52 h. Exterior: 14 GA.
- 53 i. Provide removable spreaders at bottom of frame.

- 1 D. Prepare for finish hardware in accordance with hardware schedule, templates provided by
- 2 hardware supplier, and SDI/ANSI A250.6.
- 3 1. Locate finish hardware in accordance with SDI/ANSI A250.8.
- 4 2. See Specification Section 08700 for hardware.
- 5 3. Prepare doors for swing direction indicated.
- 6 a. Preparing doors for non-handed hinges is not acceptable.
- 7 E. After fabrication, clean off mill scale and foreign materials and prime with rust inhibiting
- 8 primer.

9 **PART 3 - EXECUTION**

10 **3.1 INSTALLATION**

- 11 A. Install doors and frames in accordance with SDI/ANSI A250.11, the Building Code and
- 12 manufacturer's instructions.
- 13 B. Plumb, align, and brace frames securely until permanently anchored.
- 14 1. After completion of walls, remove temporary braces and spreaders.
- 15 2. Anchor frames with minimum of three (3) anchors per jamb.
- 16 a. Number and location of anchors shall be in accordance with SDI and frame
- 17 manufacturer's recommendations.
- 18 C. At concrete, precast concrete or existing masonry construction, place frames in rough opening
- 19 using existing opening anchors.
- 20 D. Immediately after erection, sand smooth rusted or damaged areas.
- 21 1. Touch-up with rust-inhibiting primer.
- 22 2. Leave finish smooth for finish painting per Specification Section 09905.
- 23 E. Protect doors and frames during construction.

24 **END OF SECTION**

1 2014/10/23

2 **SECTION 08700AD-1**
3 **FINISH HARDWARE**

4 **PART 1 - GENERAL**

5 **1.1 SUMMARY**

- 6 A. Section Includes:
- 7 1. Finish hardware.
 - 8 1. Inspection and testing of door operation.
- 9 B. Related Specification Sections include but are not necessarily limited to:
- 10 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
 - 11 2. Division 01 - General Requirements.
 - 12 3. Section 08110 - Bullet Resistant Doors and Frames.
 - 13 4. Division 16 - Electrical.

14 **1.2 QUALITY ASSURANCE**

- 15 A. All door hardware shall be provided by a single hardware supplier.
- 16 1. Hardware is to be provided under this Specification Section, unless noted otherwise, for
 - 17 doors specified in:
 - 18 a. Specification Section 08120.
- 19 B. Referenced Standards:
- 20 1. Americans with Disabilities Act (ADA):
 - 21 a. Accessibility Guidelines for Buildings and Facilities (ADAAG).
 - 22 2. American National Standards Institute/Builders Hardware Manufacturers Association
 - 23 (ANSI/BHMA):
 - 24 a. A156.1, Butts and Hinges.
 - 25 b. A156.3, Exit Devices.
 - 26 c. A156.4, Door Controls -Closers.
 - 27 d. A156.6, Architectural Door Trim.
 - 28 e. A156.8, Door Controls - Overhead Stops and Holders.
 - 29 f. A156.13, Mortise Locks and Latches Series 1000.
 - 30 g. A156.16, Auxiliary Hardware.
 - 31 h. A156.18, Materials and Finishes.
 - 32 i. A156.21, Thresholds.
 - 33 3. Door and Hardware Institute (DHI).
 - 34 4. National Fire Protection Association (NFPA):
 - 35 a. 101, Life Safety Code.
 - 36 5. Steel Door Institute (SDI).
 - 37 6. Building code:
 - 38 a. International Code Council (ICC):
 - 39 1) International Building Code and associated standards, 2003Edition including all
 - 40 amendments, referred to herein as Building Code.
- 41 C. Qualifications:
- 42 1. Installation shall be inspected by a certified Architectural Hardware Consultant (AHC).

43 **1.3 DEFINITIONS**

- 44 A. AHC: Architectural Hardware Consultant, certified by DHI.
- 45 B. Installer or Applicator:
- 46 1. Installer or applicator is the person actually installing or applying the product in the field at
 - 47 the Project site.

- 1 2. Installer and applicator are synonymous.
- 2 C. All weather: Capable of operation from -50 to +120 DegF.
- 3 D. Active Leaf: Right-hand leaf when facing door from keyed side unless noted otherwise on
- 4 Drawings.

5 **1.4 SUBMITTALS**

- 6 A. Shop Drawings:
 - 7 1. See Specification Section 01340 for requirements for the mechanics and administration of
 - 8 the submittal process.
 - 9 2. Qualifications
 - 10 a. AHC qualifications and certification.
 - 11 b. No submittals will be reviewed until Engineer has received AHC certification.
 - 12 3. Product technical data including:
 - 13 a. Acknowledgement that products submitted meet requirements of standards referenced.
 - 14 b. Manufacturer's installation instructions.
 - 15 4. Schedule of all hardware being used on each door.
 - 16 a. Number hardware sets and door references same as those indicated on Drawings.
 - 17 5. Technical data sheets on each hardware item proposed for use.
 - 18 6. Certification from AHC stating all door hardware has been reviewed by AHC and verified
 - 19 to be compatible with doors and frames.
 - 20 7. Warranty information for all hardware devices having extended warranties.
- 21 B. Informational Submittals:
 - 22 1. Certifications:
 - 23 a. Certification from AHC stating all door hardware has been provided per approved Shop
 - 24 Drawings, has been installed in accordance with manufacturer's recommended
 - 25 installation instructions and all doors have been inspected and tested and found to be in
 - 26 proper working order.
 - 27 1) Door assemblies required to swing in the direction of egress have been inspected
 - 28 and tested in accordance with NFPA 101.

29 **1.5 WARRANTY**

- 30 A. Provide all individual manufacturers' extended warranties as advertised.

31 **PART 2 - PRODUCTS**

32 **2.1 ACCEPTABLE MANUFACTURERS**

- 33 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 34 acceptable:
 - 35 1. Locksets and latchsets:
 - 36 a. Match existing manufacturer.
 - 37 1) Best Access Systems.
 - 38 2. Closers:
 - 39 a. LCN.
 - 40 b. Norton.
 - 41 c. Corbin/Ruswin.
 - 42 3. Hinges:
 - 43 a. Stanley Works.
 - 44 b. Hager Hinge Co.
 - 45 c. McKinney Manufacturing Co.
 - 46 4. Door stops and holders:
 - 47 a. Trimco.
 - 48 b. Rockwood.
 - 49 c. Ives.

- 1 5. Overhead stops:
- 2 a. Glynn-Johnson Corp.
- 3 b. Rockwood.
- 4 c. Trimco
- 5 d. Rixson.
- 6 6. Weatherstripping and thresholds:
- 7 a. Pemko Manufacturing Co.
- 8 b. Reese Enterprises, Inc.
- 9 c. Zero Weatherstripping, Inc.
- 10 d. National Guard Products, Inc.
- 11 7. Exit devices:
- 12 a. Von Duprin, Inc.
- 13 b. Corbin/Ruswin.
- 14 c. Precision.
- 15 d. Sargent.
- 16 8. Door bolts, coordinators and strikes:
- 17 a. Ives.
- 18 b. Trimco.
- 19 c. Hager.
- 20 d. Rockwood.
- 21 e. Dorma.
- 22 9. Other materials: As noted.
- 23 B. Submit request for substitution in accordance with Specification Section 01640.

24 **2.2 MATERIALS**

- 25 A. General: As indicated in the FABRICATION Article in PART 2 of this Specification Section.
- 26 B. Fasteners: Stainless steel or aluminum.
- 27 C. Closers:
- 28 1. Corrosion resistant closer:
- 29 a. Body: Aluminum.
- 30 b. All other components and fasteners: Stainless steel.
- 31 c. Closer arm bushing: Bronze.
- 32 D. Kickplates: Stainless steel.
- 33 E. Thresholds: Aluminum.
- 34 F. Overhead Stops and Wall Stops: Stainless steel or aluminum.
- 35 G. Keys: Brass or bronze.
- 36 H. Weatherstripping and Smoke Seals: Polypropylene, neoprene, or EPDM.
- 37 I. Pulls and Push Plates: Stainless steel.

38 **2.3 ACCESSORIES**

- 39 A. Strikes:
- 40 1. Curved lips.
- 41 a. Extended lips when required.
- 42 2. Furnish strike boxes.
- 43 3. Appropriate for function and hardware listed.

44 **2.4 FABRICATION**

- 45 A. Hardware - General:
- 46 1. Generally prepare for Phillips head machine screw installation.
- 47 2. Exposed screws to match hardware finish or, if exposed in surfaces of other work, to match
- 48 finish of other work as closely as possible.

- 1 3. Provide concealed fasteners unless thru bolted.
- 2 4. Through bolt closers on all doors.
- 3 5. Furnish items of hardware for proper door swing.
- 4 6. Furnish lock devices which allow door to be opened from inside room without a key or any
- 5 special knowledge.
- 6 B. Hardware:
- 7 1. Provide stainless steel dustproof strikes for all doors with automatic or manual flush bolts or
- 8 other bolts into floor.
- 9 2. Provide following ANSI/BHMA A156.18 finishes:
- 10 a. Locksets, latchsets and strikes: 630.
- 11 b. Door pulls, push bars, push plates: 630.
- 12 c. Kickplates:
- 13 1) Stainless steel: 630.
- 14 d. Exit devices: 630 or 626.
- 15 e. Butt hinges: 630.
- 16 f. Door stops, dead locks, mortise bolts, and miscellaneous hardware: 630 if available,
- 17 626 if 630 not available.
- 18 g. Door overhead stops: 630.
- 19 h. Corrosion resistant closers: 630.
- 20 i. Provide construction cores for all lockset devices.
- 21 C. Door Closers:
- 22 1. ANSI/BHMA A156.4, Grade 1.
- 23 2. Size door closers to comply with ANSI recommendations for door size and location.
- 24 3. Fabricate all closers with integral back check.
- 25 4. Provide integral stop unless noted otherwise.
- 26 a. Do not provide integral stop at closers indicated to be installed on pull side of door.
- 27 b. Provide all weather fluid for all closers used in exterior doors.
- 28 5. Full cover.
- 29 a. Manufacturer's standard plastic cover.
- 30 6. Arms, brackets, and plates: As required for complete installation.
- 31 7. Closers:
- 32 a. Corrosion resistant: Norton 7500 SS Series.
- 33 8. Provide manufacturer's standard 10 year warranty.
- 34 D. Hinges:
- 35 1. Butt hinges:
- 36 a. ANSI/BHMA A156.1.
- 37 1) A5111: Stainless steel, full-mortise, anti-friction bearing, Grade 1.
- 38 b. Ball bearing.
- 39 c. Flat button tips.
- 40 d. Butt hinges:
- 41 1) Hager BB1199.
- 42 2) McKinney T4B3386.
- 43 e. Hinge size:
- 44 1) Doors up to and including 46 IN wide: 4.5 IN x 4.5 IN.
- 45 E. Overhead Door Holders/Stop:
- 46 1. ANSI/BHMA A156.8.
- 47 2. Provide 'hold-open' function on all stops unless noted otherwise.
- 48 a. Do not provide 'hold-open' function at fire rated doors.
- 49 3. Surface mounted stops: Rockwood N14400 Series or Glynn Johnson 90 Series.
- 50 4. Concealed stops: Rockwood N11000 Series or Glynn Johnson 100 Series.
- 51 F. Kickplates:
- 52 1. ANSI/BHMA A156.6.
- 53 2. 8 IN high x 2 IN less than door width.

- 1 3. Beveled on all edges.
- 2 4. Thickness:
- 3 a. Stainless steel: 0.050 IN.
- 4 G. Thresholds:
- 5 1. ANSI/BHMA A156.21.
- 6 1. One-piece unit.
- 7 2. Height: 1/2 IN high maximum.
- 8 3. Width: 5 IN.
- 9 4. Provide required bolt cutouts.
- 10 H. Exit Devices:
- 11 1. ANSI/BHMA A156.3, Grade 1.
- 12 2. Type and function as indicated in Hardware Schedule in PART 3 of this Specification
- 13 Section.
- 14 3. Von Duprin products listed.
- 15 I. Weatherstripping:
- 16 1. Weather seal at jambs and head:
- 17 a. Self-adhesive strip: Reese #797W.
- 18 b. Color: Black.
- 19 2. Sweep at bottom of doors:
- 20 a. Reese 701.
- 21 b. Color: Clear anodized.
- 22 3. Weather seal astragal at meeting edges of pairs of doors:
- 23 a. Reese 92 each leaf.
- 24 b. Color: Clear anodized.
- 25 J. Keying:
- 26 1. Establish keying with Owner.
- 27 a. Provide and set up complete visible card indexed system with key tags and control
- 28 slips.
- 29 b. Tag and identify keys.
- 30 c. Provide two (2) keys for each lock or cylinder.
- 31 d. Master key and key in groups as directed.
- 32 e. Provide construction master keys for all exterior doors.
- 33 f. Key to existing master key system.
- 34 K. Bolts:
- 35 1. ANSI/BHMAA 156.16.
- 36 2. Surface bolts: Ives SB1640 Series with top and bottom strikes.
- 37 3. Constant latching flush bolts:
- 38 a. Ives FB51P or Rockwood No. 1845.
- 39 b. Flush bolt finish to be US26D.
- 40 c. Provide extended bolt length for doors over 86 IN tall.
- 41 4. Chain bolts:
- 42 a. Stanley 1055 with extended chain.
- 43 b. Encase chain in flexible clear polyethylene tubing full length.

44 **PART 3 - EXECUTION**

45 **3.1 INSTALLATION**

- 46 A. Install products in accordance with manufacturer's installation instructions, supervised or
- 47 inspected by an AHC.
- 48 B. Provide all hardware in accordance with Building Code.
- 49 C. Fit hardware before final door finishing.

- 1 D. Permanently install hardware after door finishing operations are complete.
- 2 E. Use SDI mounting heights for hardware.
- 3 F. Butt Hinges:
- 4 1. Provide non-removable pin (NRP) at:
- 5 a. Exterior doors.
- 6 b. Reverse handed doors equipped with locks.
- 7 2. Quantities:
- 8 a. Door height 91-114 IN: Four (4).
- 9 3. Provide transfer hinge as necessary where electrified lockset or exit device is specified or as
- 10 otherwise indicated in Hardware Schedule.
- 11 G. Closers:
- 12 1. Mount closers on push side of doors unless noted otherwise.
- 13 H. Overhead Stops:
- 14 1. Provide overhead stop when corrosion resistant closer is specified.
- 15 2. Provide as scheduled to receive a closer as follows:
- 16 a. Doors that swing more than 105 degrees without encountering a wall or obstruction.
- 17 1) Stop shall limit swing of door from impacting wall or obstruction.
- 18 b. Inactive leafs of pairs of doors.
- 19 I. Floor mounted stops are not acceptable unless noted otherwise in this Specification Section.
- 20 J. Install astragal on all pairs of doors.
- 21 K. Provide weather seal, door sweep and threshold where scheduled.
- 22 1. Set thresholds in a full bed of sealant.
- 23 2. Mount door sweeps on exterior face of door.
- 24 3. Mount weather seal astragal at meeting edges of pairs of doors on the exterior face of the
- 25 doors.
- 26 L. Mount kickplates on push side of doors.
- 27 M. Deliver permanent lockset cores to Owner.
- 28 1. Owner will change all cores and return construction cores to Contractor.

29 **3.2 FIELD QUALITY CONTROL**

- 30 A. Adjust and check each operating item of hardware to assure proper operation or function.
- 31 1. Lubricate moving parts with lubricant recommended by manufacturer.
- 32 B. During week prior to startup, make a final check and adjustment of all hardware items.
- 33 1. Clean and lubricate as necessary to assure proper function and operation.
- 34 2. Adjust door control devices to compensate for operation of heating and ventilating
- 35 equipment.
- 36 C. Inspection and Testing:
- 37 1. AHC shall inspect and test all door assemblies and provide written certification that door
- 38 assemblies are in proper working order.
- 39 a. Door assemblies required to swing in the direction of egress shall be inspected and
- 40 tested in accordance with NFPA 101.
- 41 2. Submit documentation and certification of testing in accordance with the certifications
- 42 paragraph in the SUBMITTALS Article in PART 1 of this Specification Section.

2 **SECTION 08800AD-1**
3 **GLASS AND GLAZING**

4 **PART 1 - GENERAL**

5 **1.1 SUMMARY**

- 6 A. Section Includes: Glass and glazing.
- 7 B. Related Specification Sections include but are not necessarily limited to:
- 8 1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.
- 9 2. Division 01 - General Requirements.
- 10 3. Section 07900 - Joint Sealants.
- 11 4. Section 08410 - Storefront.

12 **1.2 QUALITY ASSURANCE**

- 13 A. Referenced Standards:
- 14 1. American National Standards Institute (ANSI):
- 15 a. Z97.1, Glazing Materials Used in Buildings - Safety Performance Specifications and
- 16 Methods of Test.
- 17 2. ASTM International (ASTM):
- 18 a. C1036, Standard Specification for Flat Glass.
- 19 b. C1048, Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT Coated
- 20 and Uncoated Glass.
- 21 c. E2190, Standard Specification for Insulating Glass Unit Performance and Evaluation.
- 22 3. Code of Federal Regulations (CFR):
- 23 a. Title 16 - Commercial Practices, Chapter ii - Consumer Product Safety Commission
- 24 (CPSC), Subchapter B - Consumer Product Safety Act Regulations:
- 25 1) 16 CFR 1201, Safety Standard for Architectural Glazing Materials.
- 26 4. Glass Association of North America (GANA):
- 27 a. Glazing Manual.
- 28 5. Insulating Glass Certification Council (IGCC).
- 29 6. Insulating Glass Manufacturers Alliance (IGMA):
- 30 a. TM-3000, North American Glazing Guidelines for Sealed Insulating Glass Units for
- 31 Commercial and Residential Use.
- 32 7. Underwriters Laboratories, Inc. (UL):
- 33 a. 752, Bullet Resistant Equipment.
- 34 8. Building Code:
- 35 a. International Code Council (ICC):
- 36 1) International Building Code and associated standards, 2003 Edition including all
- 37 amendments, referred to herein as Building Code.

38 **1.3 DEFINITIONS**

- 39 A. Installer or Applicator:
- 40 1. Installer or applicator is the person actually installing or applying the product in the field at
- 41 the Project site.
- 42 2. Installer and applicator are synonymous.
- 43 B. Safety Glazing: Glazing meeting the requirements of the Building Code and CPSC 16 CFR
- 44 1201.
- 45 C. Other terms as identified in CPSC 16 CFR 1201.

1 **1.4 SUBMITTALS**

- 2 A. Shop Drawings:
- 3 1. See Specification Section 01340 for requirements for the mechanics and administration of
- 4 the submittal process.
- 5 2. Product technical data including:
- 6 a. Acknowledgement that products submitted meet requirements of standards referenced.
- 7 b. Manufacturer's installation instructions.
- 8 c. Certification that glass has been tested and approved for use in fire rated doors or walls.
- 9 1) Copies of all test criteria.
- 10 3. Certification that insulated glass units meet requirements of IGCC and are certified by
- 11 IGCC to ASTM E2190.
- 12 B. Samples:
- 13 1. 12 x 12 IN sample of each type, color, and thickness specified except clear glass (glass Type
- 14 1 and 2).
- 15 2. One (1) Sample will be retained by the Engineer and the remaining will be returned.

16 **PART 2 - PRODUCTS**

17 **2.1 ACCEPTABLE MANUFACTURERS**

- 18 A. Subject to compliance with the Contract Documents, the following manufacturers are
- 19 acceptable:
- 20 1. Insulated Low E glass units:
- 21 a. Libbey-Owens-Ford.
- 22 b. PPG.
- 23 c. Viracon.
- 24 d. Visteon.
- 25 2. Gaskets, glazing compounds, setting blocks, spacers, sealant, sealant tape, etc., as
- 26 recommended by glass manufacturer, glass unit fabricator, or as required by NFPA.
- 27 B. Submit request for substitution in accordance with Specification Section 01640.

28 **2.2 MATERIALS**

- 29 A. Clear Tempered Float Glass:
- 30 1. 1/4 IN thick.
- 31 2. ASTM C1048.
- 32 a. Kind FT, Condition A, Type 1, Class I.
- 33 3. ANSI Z97.1.
- 34 B. Tinted Tempered Float Glass:
- 35 1. 1/4 IN thick.
- 36 2. ASTM C1048.
- 37 a. Kind FT, Condition A, Type I, Class 2.
- 38 3. ANSI Z97.1.
- 39 C. Insulated Low Emissivity Vision Glass Units:
- 40 1. Glass Unit 1- Vision:
- 41 a. Product: Viracon "VE4-2M."
- 42 b. Two (2) sheets of 1/4 IN IN thick glass separated by a 1/2 IN dehydrated air space
- 43 hermetically sealed. together at edges with spacers and sealant.
- 44 1) Coating applied to #2 face.
- 45 c. 1/2 IN air space.
- 46 d. Visible light transmittance: 41 percent.
- 47 e. Visible light reflectance outside: 7 percent.
- 48 f. Solar energy transmittance: 20 percent.
- 49 g. U value summer/winter: 0.26 / 0.29 Btu/(HR x SQ FT).

- 1 h. Shading coefficient: 0.31.
- 2 i. Relative heat gain: 65 Btu/(HR x SQ FT).
- 3 j. Solar Heat Gain Coefficient: 0.26.
- 4 2. Provide alternate glass type to meet safety glazing requirements of the Building Code,
- 5 CPSC 16 CFR 1201, and any other applicable glazing safety rules, codes, laws, etc.
- 6 D. Insulated, Low E, Translucent Glass Units:
- 7 1. Glass Type 2:
- 8 a. ASTM E2190, Class A.
- 9 b. Product: Viracon "VE4-2M with silkscreen."
- 10 c. Two (2) sheets of 1/4 IN IN thick glass separated by a 1/2 IN dehydrated air space
- 11 hermetically sealed. together at edges with spacers and sealant.
- 12 1) Bronze-4, with VE4-2M on #2 surface.
- 13 2) Clear, screen #3058 with V1087 Gray Fog simulated acid etch on the #3 surface.
- 14 d. 1/2 IN air space.
- 15 e. Visible light transmittance: 18 percent.
- 16 f. Visible light reflectance outside: 9 percent.
- 17 g. Solar energy transmittance: 20 percent.
- 18 h. U value summer/winter: 0.26 / 0.29 Btu/(HR x SQ FT).
- 19 i. Shading coefficient: 0.31.
- 20 j. Relative heat gain: 65 Btu/(HR x SQ FT).
- 21 k. Solar Heat Gain Coefficient: 0.23.
- 22 l. Provide alternate glass type to meet safety glazing requirements of the Building Code,
- 23 CPSC 16 CFR 1201, and any other applicable glazing safety rules, codes, laws, etc.
- 24 E. Glass Acceptable Range Values:
- 25 1. Tolerances create a unit or numerical value range up and down from specific product values
- 26 given.
- 27 2. Visible light transmittance: ± 3 .
- 28 3. Solar energy transmittance: ± 3 .
- 29 4. U-V transmittance: ± 3 .
- 30 5. Visible light reflectance outside: ± 3 .
- 31 6. Visible light reflectance inside: ± 3 .
- 32 7. U value - summer: ± 0.03
- 33 8. U value - winter: ± 0.03 .
- 34 9. Shading coefficient (SC): ± 0.01 .
- 35 10. Relative heat gain: ± 5 .
- 36 11. Solar Heat Gain Coefficient (SHGC): ± 0.01 .
- 37 F. Glazing Compounds:
- 38 1. Non-sag, non-stain type.
- 39 2. Pigmented to match frame units not requiring painting.
- 40 3. Compatible with adjacent surfaces.
- 41 4. One- or two-part polyurethane or silicone sealant for use in setting glass.
- 42 a. Provide glazing compounds which will not be affected by chemicals stored in rooms
- 43 where glazing compounds are used.
- 44 G. Sealant Tape: Butyl rubber sealant tape or ribbon having a continuous neoprene shim.
- 45 H. Gaskets:
- 46 1. Flexible polyvinyl chloride or neoprene.
- 47 a. Provide gaskets which will not be affected by chemicals stored in rooms where gaskets
- 48 are used.
- 49 2. Extruded of profile and hardness required to receive glass and provide a watertight
- 50 installation.
- 51 I. Setting Blocks and Spacers:
- 52 1. Neoprene or EPDM, compatible with sealants used.

- 1 2. Setting blocks: 70-90 durometer.
- 2 3. Spacers: 40-50 durometer.
- 3 J. Insulating Glass Spacers:
- 4 1. Aluminum, desiccant filled.
- 5 a. Finish: Bronze anodized or black paint.
- 6 K. Compressible Filler Stock: Closed-cell jacketed rod stock of synthetic rubber or plastic foam.
- 7 L. Shims, Clips, Springs, Angles, Beads, Attachment Screws and Other Miscellaneous Items: As
- 8 required by condition.

9 **PART 3 - EXECUTION**

10 **3.1 INSTALLATION**

- 11 A. Provide safety glazing in all locations where required by the Building Code and CPSC 16 CFR
- 12 1201.
- 13 B. Install in accordance with recommendations of manufacturer, GANA Glazing Manual and
- 14 IGMA TM-3000.
- 15 C. Install setting blocks in adhesive or sealant.
- 16 D. Install spacers inside and out, of proper size and spacing, for all glass sizes larger than 50 united
- 17 inches, except where gaskets are used for glazing.
- 18 E. Provide 1/8 IN minimum bite of spacers on glass.
- 19 F. Spacer thickness to equal sealant width.
- 20 G. Prevent sealant exudation from glazing channels of insulating glass which is more than 1/2 IN
- 21 thick; colored, heat absorbing, coated or laminated glass sizes larger than 75 united inches; and
- 22 other glass more than 9/32 IN thick or larger than 125 united inches.
- 23 1. Leave void at heel (or install filler) at jambs and head.
- 24 2. Do not leave void (or install filler) at sill.
- 25 H. Miter cut and bond gasket ends together at corners.
- 26 I. Immediately after installation, attach crossed streamers to framing held away from glass.
- 27 J. Use polysulfide-based glazing sealants in window assembly and as perimeter sealant around
- 28 frames in areas which may be exposed to chlorine gas or chlorine liquid splash or spillage.
- 29 1. See Specification Section 07900 for sealants.

30 **3.2 FIELD QUALITY CONTROL**

- 31 A. Do not install glass with edge damage.
- 32 B. Do not apply anything to surfaces of glass.
- 33 C. Remove and replace damaged glass.

34 **3.3 CLEANING**

- 35 A. Maintain glass reasonably clean during construction, so that it will not be damaged by corrosive
- 36 action and will not contribute to deterioration of other materials.
- 37 B. Wash and polish glass on both faces not more than seven (7) days prior to acceptance of work in
- 38 each area.
- 39 1. Comply with glass manufacturer's recommendations.

40

END OF SECTION

SECTION 09905AD-1
PAINTING AND PROTECTIVE COATINGS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. High performance industrial coatings (HPIC).

2. Any other coating, thinner, accelerator, inhibitor, etc., specified or required as part of a complete System specified in this Specification Section.

3. Minimum surface preparation requirements.

B. Related Specification Sections include but are not necessarily limited to:

1. Division 00 - Bidding Requirements, Contract Forms, and Conditions of the Contract.

2. Division 01 - General Requirements.

3. Section 03348 - Concrete Finishing and Repair of Surface Defects.

4. Section 04220 - Concrete Masonry.

5. Section 05505 - Metal Fabrications.

6. Section 10400 - Identification Devices.

7. Section 11005 - Equipment: Basic Requirements.

1.2 QUALITY ASSURANCE

A. Referenced Standards:

1. ASTM International (ASTM):

a. D4258, Standard Practice for Surface Cleaning Concrete for Coating.

b. D4259, Standard Practice for Abrading Concrete.

c. D4261, Standard Practice for Surface Cleaning Concrete Unit Masonry for Coating.

d. D4262, Standard Test Method for pH of Chemically Cleaned or Etched Concrete Surfaces.

e. D4263, Standard Test Method for Indicating Moisture in Concrete by the Plastic Sheet Method.

f. D4414, Standard Practice for Measure of Wet Film Thickness by Notch Gages.

g. E84, Standard Test Method for Surface Burning Characteristics of Building Materials.

2. National Association of Pipe Fabricators (NAPF):

a. 500-03, Surface Preparation Standard for Ductile Iron Pipe and Fittings in Exposed Locations Receiving Special External Coatings and/or Special Internal Linings:

1) 500-03-04, Abrasive Blast Cleaning for Ductile Iron Pipe.

2) 500-03-05, Abrasive Blast Cleaning for Cast Ductile Iron Fittings.

3. National Bureau of Standards (NBS):

a. Certified Coating Thickness Calibration Standards.

4. National Fire Protection Association (NFPA):

a. 101, Life Safety Code.

5. NSF International (NSF).

6. Steel Door Institute/American National Standards Institute (SDI/ANSI):

a. A250.10, Test Procedure and Acceptance Criteria For Prime Painted Steel Surfaces for Steel Doors and Frames.

7. The Society for Protective Coatings (SSPC):

a. PA 2, Measurement of Dry Coating Thickness with Magnetic Gages.

b. SP 1, Solvent Cleaning.

c. SP 2, Hand Tool Cleaning.

d. SP 3, Power Tool Cleaning.

e. SP 16, Brush-off Blast Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steels, and Non-Ferrous Metals.

- 1 8. The Society for Protective Coatings/NACE International (SSPC/NACE):
- 2 a. SP 5/NACE No. 1, White Metal Blast Cleaning.
- 3 b. SP 6/NACE No. 3, Commercial Blast Cleaning.
- 4 c. SP 7/NACE No. 4, Brush-off Blast Cleaning.
- 5 d. SP 10/NACE No. 2, Near-White Blast Cleaning.
- 6 e. SP 12/NACE No. 5, Surface Preparation and Cleaning of Steel and Other Hard
- 7 Materials by High and Ultrahigh Pressure Water Jetting Prior to Recoating.
- 8 f. SP 13/NACE No. 6, Surface Preparation of Concrete.
- 9 B. Qualifications:
- 10 1. Coating manufacturer's authorized representative shall provide written statement attesting
- 11 that applicator has been instructed on proper preparation, mixing and application procedures
- 12 for coatings specified.
- 13 2. Applicators shall have minimum of 10 years experience in application of similar products
- 14 on similar project.
- 15 a. Provide references for minimum of three (3) different projects completed in last five (5)
- 16 years with similar scope of work.
- 17 b. Include name and address of project, size of project in value (painting) and contact
- 18 person.
- 19 C. Miscellaneous:
- 20 1. Furnish paint through one (1) manufacturer unless noted otherwise.
- 21 2. Coating used in all corridors and stairways shall meet requirements of NFPA 101 and
- 22 ASTM E84.
- 23 D. Deviation from specified mil thickness or product type is not allowed without written
- 24 authorization of Engineer.
- 25 E. Material shall not be thinned unless approved, in writing, by paint manufacturer's authorized
- 26 representative.

27 1.3 DEFINITIONS

- 28 A. Installer or Applicator:
- 29 1. Installer or applicator is the person actually installing or applying the product in the field at
- 30 the Project site.
- 31 2. Installer and applicator are synonymous.
- 32 B. Approved Factory Finish: Finish on a product in compliance with the finish specified in the
- 33 Specification Section where the product is specified or in Specification Section 11005.
- 34 C. Exposed Exterior Surface:
- 35 1. Surface which is exposed to weather but not necessarily exposed to view as well as surface
- 36 exposed to view.
- 37 2. Exterior surfaces are considered corrosive environment.
- 38 a. The following areas are considered highly corrosive:
- 39 1) All chemical unloading stations and areas within 10 FT-0 IN of containment areas.
- 40 2) All chemical unloading station containment areas.
- 41 3) All areas within a 6 FT radius of chemical tank vents.
- 42 D. Finished Area: An area that is listed in or has finish called for on Room Finish Schedule or is
- 43 indicated on Drawings to be painted.
- 44 E. Immersion Surface:
- 45 1. Any surface immersed in water or some other liquid.
- 46 2. Surface of any pipe, valve, or any other component of the piping system subject to
- 47 condensation including the pipe support system.

- 1 F. Paint includes the following:
- 2 1. High performance industrial coatings (HPIC) include: Epoxies, urethanes, vinyl ester,
- 3 waterborne vinyl acrylic emulsions, acrylates, silicones, alkyds, acrylic emulsions and any
- 4 other coating listed as a HPIC.
- 5 G. Surface Hidden from View: Surfaces such as those within pipe chases, surfaces between top
- 6 side of ceilings (including drop-in tile ceilings) and underside of floor or roof structures above,
- 7 surfaces under overhanging walkways if over five feet above adjacent walking surfaces
- 8 H. AP: Architectural paints.
- 9 I. HPIC: High performance industrial coatings.
- 10 J. SC: Special coatings.
- 11 K. Water level for purposes of painting: See Drawings.

12 **1.4 SUBMITTALS**

- 13 A. Shop Drawings:
- 14 1. See Specification Section 01340 for requirements for the mechanics and administration of
- 15 the submittal process.
- 16 2. Applicator experience qualifications.
- 17 a. No submittal information will be reviewed until Engineer has received and approved
- 18 applicator qualifications.
- 19 3. Product technical data including:
- 20 a. Acknowledgement that products submitted meet requirements of standards referenced.
- 21 b. Manufacturer's application instructions.
- 22 c. Manufacturer's surface preparation instructions.
- 23 d. If products being used are manufactured by Company other than listed in the
- 24 MATERIALS Article of this Specification Section}, provide complete individual data
- 25 sheet comparison of proposed products with specified products including application
- 26 procedure, coverage rates and verification that product is designed for intended use.
- 27 e. Contractor's written plan of action for containing airborne particles created by blasting
- 28 operation and location of disposal of spent contaminated blasting media.
- 29 f. Coating manufacturer's recommendation on abrasive blasting.
- 30 g. Manufacturer's recommendation for universal barrier coat.
- 31 h. Manufacturer's recommendation for providing temporary or supplemental heat or
- 32 dehumidification or other environmental control measures.
- 33 4. Manufacturer's statement regarding applicator instruction on product use.
- 34 5. Certification that High Performance Coating Systems proposed for use have been reviewed
- 35 and approved by Senior Corrosion Specification Specialist employed by the coating
- 36 manufacturer.
- 37 B. Samples:
- 38 1. Manufacturer's full line of colors for Engineer's preliminary color selection.
- 39 2. After preliminary color selection by Engineer provide two (2) 3 x 5 IN samples of each final
- 40 color selected.
- 41 C. Informational Submittals:
- 42 1. See Specification Section 01340 for requirements for the mechanics and administration of
- 43 the submittal process.
- 44 2. Approval of application equipment.
- 45 3. Applicator's daily records:
- 46 a. Submit daily records at end of each week in which painting work is performed unless
- 47 requested otherwise by Engineer's on-site representative.

48 **1.5 DELIVERY, STORAGE, AND HANDLING**

- 49 A. Deliver in original containers, labeled as follows:
- 50 1. Name or type number of material.

- 1 2. Manufacturer's name and item stock number.
- 2 3. Contents, by volume, of major constituents.
- 3 4. Warning labels.
- 4 5. VOC content.

5 **PART 2 - PRODUCTS**

6 **2.1 ACCEPTABLE MANUFACTURERS**

- 7 A. Subject to compliance with the Contract Documents, only the following manufacturers are
- 8 acceptable:
- 9 1. High performance industrial coatings:
- 10 a. Tnemec.
- 11 b. ICI Devoe.
- 12 c. Carboline Protective Coatings.
- 13 d. Sherwin Williams.
- 14 e. Dampney Company, Inc.
- 15 f. PPG Industries/Amercoat.
- 16 B. Submit request for substitution in accordance with Specification Section 01640.
- 17 1. Product VOC content will be an important factor when determining acceptability of
- 18 substitution.

19 **2.2 MATERIALS**

- 20 A. For unspecified materials such as thinner, provide manufacturer's recommended products.
- 21 B. Paint Systems - General:
- 22 1. P = prime coat.
- 23 2. F1, F2 . . . Fn = first finish coat, second finish coat . . . nth finish coat, color as selected by
- 24 Engineer.
- 25 3. If two (2) finish coats of same material are required, Contractor may, at his option and by
- 26 written approval from paint manufacturer, apply one (1) coat equal to mil thickness of
- 27 two (2) coats specified.
- 28 C. HPIC products listed in the MATERIALS Article, Paint Systems paragraph are manufactured by
- 29 Tnemec.
- 30 1. Products of other listed manufacturers are acceptable for use providing the product is of the
- 31 same generic resin, requires comparable surface preparation, has comparable application
- 32 requirements, meets the same VOC levels or better, provides the same finish and color
- 33 options and will withstand the atmospheric conditions of the location where it is to be
- 34 applied.
- 35 D. Paint Systems (Systems not shown are not used):
- 36 1. HPIC SYSTEM #1 - Polyamidoamine Epoxy Primer with Polyamidoamine Epoxy or
- 37 Waterborne Acrylic Polyurethane Finish Coat(s).
- 38 a. Prime coat:
- 39 1) P1 = 1 coat, 3 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 40 b. Finish coat(s):
- 41 1) Interior:
- 42 a) F1 = 1 coat, 3 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 43 b) F2 = 1 coat, 3 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 44 2) Exterior:
- 45 a) F1 = 1 coat, 3 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 46 b) F2 = 1 coat, 2.5 mils, Series 1080 Endura-Shield. W.B.(Waterborne Acrylic
- 47 Polyurethane).

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2. HPIC SYSTEM #2 - Zinc-Rich Urethane Primer with Polyamidoamine Epoxy or Waterborne Acrylic Polyurethane Finish Coat(s).
 - a. Prime coat:
 - 1) P1 = 1 coat, 3.5 mils, Series 90-97 Tneme-Zinc (Zinc-Rich Urethane).
 - b. Finish coat(s):
 - 1) Interior:
 - a) F1 = 1 coat, 6 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - 2) Exterior:
 - a) F1 = 1 coat, 6 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - b) F2 = 1 coat, 2.5 mils, Series 1080 Endura-Shield W.B.(Waterborne Acrylic Polyurethane).
 3. HPIC SYSTEM #3 - Polyamidoamine Epoxy Primer with Polyamidoamine Epoxy or Waterborne Acrylic Polyurethane Top Coat(s).
 - a. Prime coat:
 - 1) P1 = 1 coat, 5 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - b. Finish coat(s):
 - 1) Interior:
 - a) F1 = 1 coat, 5 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - 2) Exterior:
 - a) F1 = 1 coat, 2.5 mils, Series 1080 Endura-Shield W.B. (Waterborne Acrylic Polyurethane).
 4. HPIC SYSTEM #4 - Zinc-Rich Urethane Primer with Polyamidoamine Epoxy or Waterborne Acrylic Polyurethane Top Coat(s).
 - a. Prime coat:
 - 1) P1 = 1 coat, 2.5 mils, Series 90-97 Tneme-Zinc (Zinc-Rich Urethane).
 - b. Finish coat(s):
 - 1) Interior:
 - a) F1 = 1 coat, 3 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - 2) Exterior:
 - a) F1 = 1 coat, 2.5 mils, Series 1080 Endura-Shield W.B. (Waterborne Acrylic Polyurethane).
 5. HPIC SYSTEM #5 - Modified Polyamidoamine Epoxy Primer with Polyamidoamine Epoxy or Waterborne Acrylic Polyurethane Top Coat(s).
 - a. Prime coat:
 - 1) P1 = 1 coat, 2.0 mils, Series 135 Chembuild (Modified Polyamidoamine Epoxy).
 - b. Finish coat(s):
 - 1) Interior:
 - a) F1 = 1 coat, 2.5 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - 2) Exterior:
 - a) F1 = 1 coat, 2.0 mils, Series 1080 Endura-Shield W.B. (Waterborne Acrylic Polyurethane).
 6. HPIC SYSTEM #7 - Zinc-Rich Urethane Primer with Polyamidoamine Epoxy or Waterborne Acrylic Polyurethane Top Coat(s).
 - a. Prime coat:
 - 1) P1 = 1 coat, 2.5 mils, Series 90-97 Tneme-Zinc (Zinc-Rich Urethane).
 - b. Finish coat(s):
 - 1) Interior:
 - a) F1 = 1 coat, 5 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
 - 2) Exterior:
 - a) F1 = 1 coat, 3.0 mils, Series 1080 Endura-Shield W.B. (Waterborne Acrylic Polyurethane).
 7. HPIC SYSTEM #8 - Air Dry Silicone Copolymer Primer with Silicone Copolymer Top Coat.
 - a. Prime coat:
 - 1) P1 = 1 coat, 2.0 mils, Dampney Thurmalox 260C Series (Air Dry Silicone Copolymer).

- 1 b. Finish coat:
- 2 1) Interior or exterior:
- 3 a) F1 = 1 coat, 2.0 mils, Dampney Thurmalox 260C Series (Air Dry Silicone
- 4 Copolymer).
- 5 8. HPIC SYSTEM #10 - Modified Silicone Co-Polymer Primer with Modified Silicone Co-
- 6 Polymer Top Coat(s).
- 7 a. Prime coat:
- 8 1) P1 = 1 coat, 4.0 to 5.0 mils, Dampney Thurmalox 225 HD (Modified Silicone Co-
- 9 Polymer).
- 10 b. Finish coat(s):
- 11 1) F1 = 1 coat, 2.5 to 3.0 mils, Dampney Thurmalox 230C.
- 12 9. HPIC SYSTEM #15 - Polyamidoamine Epoxy Primer with Polyamidoamine Epoxy Top
- 13 Coat.
- 14 a. Prime coat:
- 15 1) P1 = 1 coat, 4 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 16 b. Finish coat:
- 17 1) Interior:
- 18 a) F1 = 1 coat, 6 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 19 b) F2 = 1 coat, 6 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 20 10. HPIC SYSTEM #19 - Polyamidoamine Epoxy Coating.
- 21 a. Prime coat:
- 22 1) P1 = 1 coat, 5 mils, Series L69 Epoxoline (Polyamidoamine Epoxy).
- 23 11. HPIC SYSTEM #21 - Modified Polyamidoamine Epoxy.
- 24 a. Prime coat:
- 25 1) P1 = 1 coat, 5 mils, 135-1243 Chembuild (Modified Polyamidoamine Epoxy).
- 26 12. HPIC SYSTEM #23 - Zinc-Rich Urethane Potable Water Approved Primer with Polyamine
- 27 Epoxy Potable Water Approved Top Coats.
- 28 a. Prime coat:
- 29 1) P1 = 1 coat, 3 mils, Series 91 H₂O Hydro-Zinc (Zinc-Rich Urethane).
- 30 b. Finish coat(s):
- 31 1) Interior:
- 32 a) F1 = 1 coat, 25 mils, Series 22 Pota-Pox 100 (Modified Polyamine Epoxy).
- 33 13. HPIC SYSTEM #24 - Vinyl Ester Primer with Vinyl Ester Top Coat.
- 34 a. Prime coat:
- 35 1) P1 = 1 coat, 17 mils, Series 120-5002 Vinester (Vinyl Ester).
- 36 b. Finish coat:
- 37 1) F1 = 1 coat, 17 mils, Series 120-5001 Vinester (Vinyl Ester).
- 38 14. SYSTEM #41 - Touch-up of galvanized surfaces not requiring a top coat.
- 39 a. Refer to Specification Section 05505.

40 **PART 3 - EXECUTION**

41 **3.1 ITEMS TO BE PAINTED**

- 42 A. General:
- 43 B. Exposed Exterior Surfaces including:
- 44 1. Equipment supports, and pipe supports .
- 45 2. Piping, valves, fittings, and supports.
- 46 a. Field welded connections of factory painted piping.
- 47 3. Miscellaneous ferrous metal surfaces.
- 48 4. Steel pipe bollards.
- 49 5. Steel lintels.
- 50 6. Steel components of concrete lintels.
- 51 a. Steel components shall be completely painted (with both prime and finish coats) prior
- 52 to installing in the wall.

- 1 7. Galvanized metal surfaces.
- 2 8. Cast iron pipe plumbing vents.
- 3 C. Surfaces in Areas Not Considered Finished:
- 4 1. Paint following surfaces in areas not considered as finished area:
- 5 a. Piping, valves, fittings, and supports.
- 6 b. Ductwork and supports.
- 7 c. Miscellaneous ferrous metal surfaces.
- 8 d. Steel lintels.
- 9 e. Steel components of concrete lintels.
- 10 1) Steel components shall be completely painted (with both prime and finish coats)
- 11 prior to installing in the wall.

12 **3.2 ITEMS NOT TO BE PAINTED**

- 13 A. General: Do not paint items listed in this Article unless specifically noted in the Contract
- 14 Documents to be painted.
- 15 B. Items with Approved Factory Finish: These items may require repair of damaged painted areas
- 16 or painting of welded connections.
- 17 C. Electrical Equipment:
- 18 1. Do not field paint electrical equipment except where painting is specifically stated
- 19 elsewhere in these Contract Documents, or where the equipment is subject to a corrosive
- 20 environment and is specifically noted to be painted.
- 21 D. Other Items:
- 22 1. Stainless steel surfaces except:
- 23 a. Piping where specifically noted to be painted.
- 24 b. Banding as required to identify piping.
- 25 2. Aluminum surfaces except:
- 26 a. Where specifically shown in the Contract Documents.
- 27 b. Where in contact with concrete.
- 28 c. Where in contact with dissimilar metals.
- 29 3. Fiberglass surfaces except:
- 30 a. Fiberglass piping where specifically noted to be painted.
- 31 b. Piping supports where specifically noted to be painted.
- 32 4. Interior of pipe, ductwork, and conduits.
- 33 5. Moving parts of mechanical and electrical units where painting would interfere with the
- 34 operation of the unit.
- 35 6. Code labels and equipment identification and rating plates.
- 36 7. Exterior concrete or precast concrete surfaces.
- 37 8. Interior surfaces of wet well.
- 38 9. Concrete stair.
- 39 10. Face brick.
- 40 11. Aluminum doors and frames.
- 41 12. Pre-colored masonry
- 42 13. Aluminum windows, curtainwall and storefront framing systems.
- 43 14. Structural aluminum.
- 44 15. Clad aluminum, clad steel, anodized aluminum.
- 45 16. Contact surfaces of friction-type connections.
- 46 17. Bituminous coated ductile iron pipe.
- 47 a. See the ITEMS TO BE PAINTED Article, Interior Finished Areas paragraph of this
- 48 Specification Section.

1 **3.3 SCHEDULE OF ITEMS TO BE PAINTED AND PAINTING SYSTEMS**

- 2 A. Steel:
- 3 1. Potable water storage tanks and all ferrous metal items subject to contact with potable water
4 requiring NSF approval: SYSTEM #23.
- 5 a. Includes all ferrous metal surfaces subject to splash, spillage, vapor, condensation or
6 other chronic potable water exposure.
- 7 b. Also includes ferrous metal surfaces within concrete potable water storage tankage
8 requiring NSF approval.
- 9 c. Exterior surfaces of potable water storage tanks: SYSTEM #7.
- 10 B. Ferrous metals: SYSTEM #2.
- 11 1. Includes ferrous, piping pumps, and similar items.
- 12 2. Does not include items subject to contact with potable water.
- 13 C. Galvanized Metals: SYSTEM #3
- 14 D. Steel (hollow metal) doors and frames primed in the factory in accordance with SDI/ANSI
15 A250.10.
- 16 1. For doors and frames in non-corrosive environments: SYSTEM #5.
- 17 E. Non-ferrous metals: SYSTEM #3.
- 18 1. Includes copper, brass, aluminum and aluminum flashing specifically indicated on the
19 Drawings to be painted.
- 20 F. Electrical Conduit: SYSTEM #3
- 21 G. Pipe, Valves, and Fittings:
- 22 1. Steel pipe bollards: SYSTEM #3.
- 23 2. Steel, cast-iron, and uncoated ductile iron not in immersion service: SYSTEM #2.
- 24 3. Brass and bronze: SYSTEM #3.
- 25 H. Aluminum buried in concrete, between dissimilar metals and dissimilar materials: SYSTEM
26 #19.
- 27 I. Emergency generator engine exhaust piping: SYSTEM #10.

28 **3.4 PREPARATION**

- 29 A. General:
- 30 1. Verify that atmosphere in area where painting is to take place is within paint manufacturer's
31 acceptable temperature, humidity and sun exposure limits.
- 32 a. Provide temporary heating, shade and/or dehumidification as required to bring area
33 within acceptable limits.
- 34 1) Provide temporary dehumidification equipment properly sized to maintain
35 humidity levels required by paint manufacturer.
- 36 2) Provide clean heat with heat exchanger type equipment sufficient in size to
37 maintain temperature on a 24 HR basis.
- 38 a) Vent exhaust gases to exterior environment.
- 39 b) No exhaust gases shall be allowed to vent into the space being painted or any
40 adjacent space.
- 41 2. Prepare surfaces to be painted in accordance with coating manufacturer's instructions and
42 this Specification Section unless noted otherwise in this Specification Section.
- 43 a. Where discrepancy between coating manufacturer's instructions and this Specification
44 Section exists, the more stringent preparation shall be provided unless approved
45 otherwise, in writing, by the Engineer.
- 46 3. Remove all dust, grease, oil, compounds, dirt and other foreign matter which would prevent
47 bonding of coating to surface.

- 1 4. Adhere to manufacturer's recoat time surface preparation requirements.
- 2 a. Surfaces that have exceeded coating manufacturer's published recoat time and/or have
- 3 exhibited surface chalking shall be prepared prior to additional coating in accordance
- 4 with manufacturer's published recommendations.
- 5 1) Minimum SSPC SP 7/NACE No. 4 unless otherwise approved by Engineer.
- 6 B. Protection:
- 7 1. Protect surrounding surfaces not to be coated.
- 8 2. Remove and protect hardware, accessories, plates, fixtures, finished work, and similar
- 9 items; or provide ample in-place protection.
- 10 C. Prepare and paint before assembly all surfaces which are inaccessible after assembly.
- 11 D. Ferrous Metal:
- 12 1. Prepare ductile iron pipe in accordance with pipe manufacturer's recommendations and
- 13 NAPF.
- 14 a. All piping, pumps, valves, fittings and any other component used in any water piping
- 15 system that requires preparation for painting shall be prepared in accordance with
- 16 requirements for immersion service.
- 17 1) Pipe: NAPF 500-03-04.
- 18 2) Fittings: NAPF 500-03-05
- 19 b. Prepare all areas requiring patch painting in accordance with recommendations of
- 20 manufacturer and NAPF.
- 21 c. Remove bituminous coating per piping manufacturer, paint manufacturer and NAPF
- 22 recommendations.
- 23 1) The most stringent recommendations shall apply.
- 24 2. Complete fabrication, welding or burning before beginning surface preparation.
- 25 a. Chip or grind off flux, spatter, slag or other laminations left from welding.
- 26 b. Remove mill scale.
- 27 c. Grind smooth rough welds and other sharp projections.
- 28 3. Solvent clean in accordance with SSPC SP 1 or detergent and low-pressure water clean in
- 29 accordance with SSPC SP 12/NACE No. 5 all surfaces scheduled to receive additional
- 30 SSPC surface preparation.
- 31 4. Surfaces subject to immersion service:
- 32 a. Near-white blast clean in accordance with SSPC SP 10/NACE No. 2.
- 33 5. Surfaces subject to high temperatures.
- 34 a. Heat in excess of 600 DegF: SSPC SP 10/NACE No. 2.
- 35 6. All fusion bonded epoxy coated surfaces identified to be field painted:
- 36 a. Remove all traces of gloss finish by sanding or by abrasive brush blasting.
- 37 b. Clean surface after removing gloss finish to remove sanding or blasting residue.
- 38 7. Restore surface of field welds and adjacent areas to original surface preparation.
- 39 8. Black iron piping: Remove surface varnish by solvent or waterjet and detergent cleaning or
- 40 brush-off blast cleaning in accordance with SSPC SP 7/NACE No. 4.
- 41 E. Galvanized Steel and Non-ferrous Metals:
- 42 1. Solvent clean in accordance with SSPC SP 1 followed by brush-off blast clean in
- 43 accordance with SSPC SP 16 to remove zinc oxide and other foreign contaminants.
- 44 a. Provide uniform 1 mil profile surface.
- 45 F. Abrasive blast clean the following equipment or surfaces regardless of previous finish, if any.
- 46 1. Bituminous coated ductile iron pipe where exposed.
- 47 G. Concrete:
- 48 1. Cure for minimum of 28 days.
- 49 2. Verify that concrete surfaces have been cleaned and that voids have been patched in
- 50 accordance with Specification Section 03348.
- 51 a. Concrete surfaces shall be cleaned in accordance with ASTM D4258.

- 1 3. Mechanically abrade concrete surfaces in accordance with ASTM D4259 as recommended
- 2 by coating manufacturer.
- 3 4. Abrasive blast concrete surfaces in accordance with SSPC SP 13/NACE No. 6 to provide
- 4 profile recommended by coatings manufacturer.
- 5 5. Test pH of surface to be painted in accordance with ASTM D4262.
- 6 a. If surface pH is not within coating manufacturer's required acceptable range, use
- 7 methods acceptable to coating manufacturer as required to bring pH within acceptable
- 8 range.
- 9 b. Retest pH until acceptable results are obtained.
- 10 6. Verify that moisture content of surface to be painted is within coating manufacturer's
- 11 recommended acceptable limits.
- 12 a. Test moisture content of surface to be coated in accordance with ASTM D4263.
- 13 b. After remedial measures have been taken to lower or raise moisture content, retest
- 14 surface until acceptable results are obtained.
- 15 H. Preparation by Abrasive Blasting:
- 16 1. All abrasive-blasted ferrous metal surfaces shall be inspected immediately prior to
- 17 application of paint coatings.
- 18 a. Inspection shall be performed to determine cleanliness and profile depth of blasted
- 19 surfaces and to certify that surface has been prepared in accordance with these
- 20 Specifications.
- 21 2. Schedule the abrasive blasting operation so blasted surfaces will not be wet after blasting
- 22 and before painting.
- 23 3. Perform additional blasting and cleaning as required to achieve surface preparation required.
- 24 a. Prior to painting, reblast surfaces allowed to set overnight and surfaces that show rust
- 25 bloom.
- 26 b. Surfaces allowed to set overnight or surfaces which show rust bloom prior to painting
- 27 shall be reinspected prior to paint application.
- 28 4. Profile depth of blasted surface: Not less than 1 mil or greater than 2 mils unless required
- 29 otherwise by coating manufacturer.
- 30 5. Provide compressed air for blasting that is free of water and oil.
- 31 a. Provide accessible separators and traps.
- 32 6. Confine blast abrasives to area being blasted.
- 33 a. Provide shields of polyethylene sheeting or other such barriers to confine blast material.
- 34 b. Plug pipes, holes, or openings before blasting and keep plugged until blast operation is
- 35 complete and residue is removed.
- 36 7. Protect nameplates, valve stems, rotating equipment, motors and other items that may be
- 37 damaged from blasting.
- 38 8. Reblast surfaces not meeting requirements of these Specifications.
- 39 9. Abrasive blasting media may be recovered, cleaned and reused providing Contractor
- 40 submits, for Engineer's review, a comprehensive recovery plan outlining all procedures and
- 41 equipment proposed in reclamation process.
- 42 10. Properly dispose of blasting material contaminated with debris from blasting operation not
- 43 scheduled to be reused.
- 44 I. All Plastic Surfaces and Non-Ferrous Surfaces Except Galvanized Steel:
- 45 1. Sand using 80-100 grit sandpaper to scarify surfaces.

46 3.5 APPLICATION

47 A. General:

- 48 1. Thin, mix and apply coatings by brush, roller, or spray in accordance with manufacturer's
- 49 installation instructions.
- 50 a. Application equipment must be inspected and approved in writing by coating
- 51 manufacturer.
- 52 b. Hollow metal shall be spray applied only.

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2. Temperature and weather conditions:
 - a. Do not paint surfaces when surface temperature is below 50 DegF unless product has been formulated specifically for low temperature application and application is approved in writing by Engineer and paint manufacturer's authorized representative.
 - b. Avoid painting surfaces exposed to hot sun.
 - c. Do not paint on damp surfaces.
 3. Provide complete coverage to mil thickness specified.
 - a. Thickness specified is dry mil thickness.
 - b. All paint systems are "to cover."
 - 1) In situations of discrepancy between manufacturer's square footage coverage rates and mil thickness, mil thickness requirements govern.
 - c. When color or undercoats show through, apply additional coats until paint film is of uniform finish and color.
 4. If so directed by Engineer, do not apply consecutive coats until Engineer has had an opportunity to observe and approve previous coats.
 5. Apply materials under adequate illumination.
 6. Evenly spread to provide full, smooth coverage.
 7. Work each application of material into corners, crevices, joints, and other difficult to work areas.
 8. Avoid degradation and contamination of blasted surfaces and avoid intercoat contamination.
 - a. Clean contaminated surfaces before applying next coat.
 9. Smooth out runs or sags immediately, or remove and recoat entire surface.
 10. Allow preceding coats to dry before recoating.
 - a. Recoat within time limits specified by coating manufacturer.
 - b. If recoat time limits have expired re-prepare surface in accordance with coating manufacturer's printed recommendations.
 11. Allow coated surfaces to cure prior to allowing traffic or other work to proceed.
 12. Coat all aluminum in contact with dissimilar materials.
 13. When coating rough surfaces which cannot be backrolled sufficiently, hand brush coating to work into all recesses.
- B. Prime Coat Application:
1. Prime all surfaces indicated to be painted.
 - a. Apply prime coat in accordance with coating manufacturer's written instructions and as written in this Specification Section.
 2. Ensure field-applied coatings are compatible with factory-applied coatings.
 - a. Employ services of coating manufacturer's qualified technical representative.
 - 1) Certify through material data sheets.
 - 2) Perform test patch.
 - b. If field-applied coating is found to be not compatible, require the coating manufacturer's technical representative to recommend, in writing, product to be used as barrier coat, thickness to be applied, surface preparation and method of application.
 - c. At Contractor's option, coatings may be removed, surface re-prepared, and new coating applied using appropriate paint system listed in the MATERIALS Article, Paint Systems paragraph of this Specification Section.
 - 1) All damage to surface as result of coating removal shall be repaired to original condition or better by Contractor at no additional cost to Owner.
 3. Prime ferrous metals embedded in concrete to minimum of 1 IN below exposed surfaces.
 4. Apply zinc-rich primers while under continuous agitation.
 5. Ensure abrasive blasting operation does not result in embedment of abrasive particles in paint film.
 6. Brush or spray bolts, welds, edges and difficult access areas with primer prior to primer application over entire surface.
 7. Touch up damaged primer coats prior to applying finish coats.
 - a. Restore primed surface equal to surface before damage.

- 1 8. All surfaces of steel lintels and steel components of concrete lintels used in wall
2 construction shall be completely painted with both prime and finish coats prior to placing in
3 wall.

4 C. Finish Coat Application:

- 5 1. Apply finish coats in accordance with coating manufacturer's written instructions and in
6 accordance with this Specification Section; manufacturer instructions take precedent over
7 these Specifications.
8 2. Touch up damaged finish coats using same application method and same material specified
9 for finish coat.
10 a. Prepare damaged area in accordance with the PREPARATION Article of this
11 Specification Section.

12 **3.6 COLOR CODING**

13 A. Color and band piping in accordance with the SCHEDULE Article of this Specification Section.

- 14 1. Band piping using maximum of three (3) different colors at 20 FT maximum centers.
15 2. Factory painted piping shall be color banded in the factory per the Schedule in the
16 SCHEDULE Article of this Specification Section.
17 3. Place bands:
18 a. Along continuous lines.
19 b. At changes in direction.
20 c. At changes of elevation.
21 d. On both sides of an obstruction (e.g., wall, ceiling) that painted item passes through.
22 4. Band width for individual colors (pipe diameter measured to outside of insulation, if
23 applicable):
24 a. Piping up to 8 IN DIA: 2 IN minimum.
25 b. Piping greater than 8 IN up to 24 IN DIA: 4 IN minimum.
26 c. Piping greater than 24 IN up to 48 IN DIA: 6 IN minimum.
27 d. Piping greater than 48 IN DIA: 8 IN minimum.

28 **3.7 FIELD QUALITY CONTROL**

29 A. Contractor to provide protection for surfaces painted with epoxy coatings to prevent chalking.

- 30 1. Surfaces showing chalking will not be accepted.

31 B. Maintain Daily Records:

- 32 1. Record the following information during application of each coat of paint applied:
33 a. Date, starting time, end time, and all breaks taken by painters.
34 b. For exterior painting:
35 1) Sky condition.
36 2) Wind speed and direction.
37 c. Air temperature.
38 d. Relative humidity.
39 e. Moisture content and surface temperature of substrate prior to each coat.
40 f. Provisions utilized to maintain work area within manufacturer's recommended
41 application parameters including temporary heating, ventilation, cooling,
42 dehumidification and provisions utilized to mitigate wind blown dust and debris from
43 contaminating the wet paint film.
44 g. Record environmental conditions, substrate moisture content and surface temperature
45 information not less than once every four (4) hours during application.
46 1) Record hourly when temperatures are below 50 DegF or above 100 DegF.
47 2. Record the following information daily for the paint manufacturer's recommended curing
48 period:
49 a. Date and start time of cure period for each item or area.
50 b. For exterior painting:
51 1) Sky conditions.
52 2) Wind speed and direction.

- 1 c. Record environmental conditions not less than once every 12 hours.
- 2 1) Record once every four (4) hours when ambient temperature is below 35 DegF.
- 3 d. Provisions utilized to protect each item or area and to maintain areas within
- 4 manufacturer's recommended curing parameters.
- 5 3. Format for daily record to be computer generated.
- 6 C. Measure wet coating with wet film thickness gages in accordance with ASTM D4414.
- 7 D. Measure coating dry film thickness in accordance with SSPC PA 2 using Mikrotest gage
- 8 calibrated against NBS "Certified Coating Thickness Calibration Standards."
- 9 1. Engineer may measure coating thickness at any time during project to assure conformance
- 10 with these Specifications.
- 11 E. Measure surface temperature of items to be painted with surface temperature gage specifically
- 12 designed for such.
- 13 F. Measure substrate humidity with humidity gage specifically designed for such.
- 14 G. Provide wet paint signs.

15 **3.8 CLEANING**

- 16 A. Clean paint spattered surfaces.
- 17 1. Use care not to damage finished surfaces.
- 18 B. Upon completion of painting, replace hardware, accessories, plates, fixtures, and similar items.
- 19 C. Remove surplus materials, scaffolding, and debris.

20 **3.9 SCHEDULE**

- 21 A. Piping and Pipe Banding Color Schedule (Colors based on Tnemec):
- 22 1. Match piping and banding colors to Owners existing colors scheme.
- 23 2. Piping systems shown in italics with no paint color shown for the pipe but having paint
- 24 colors shown for the banding color are systems that will be banded using material other than
- 25 paint.
- 26 a. Refer to Specification Section 10400 for the piping system and banding material and
- 27 refer to this Specification Section and this Schedule for the banding colors.
- 28 b. Collector Well Piping Schedule:
- 29

SERVICE	SYMBOL	PIPE COLOR
Collector Well Pump Discharge:	CWPDIS	110 GN - Clover
Condenser Water Return	CWR	32GR-Gray
Condenser Water Supply	CWS	32GR-Gray
Raw Water Return	RWR	32GR-Gray
Raw Water Supply	RWS	32GR-Gray
Pre-Lube	PL	32GR-Gray

30

31 **END OF SECTION**

October 22, 2014



Dave Penner
HDR Engineering INC.

Re: Yankton WTP Collector Well Addition Scope Letter
DSI Quote # 141013-0005 –REV1

Design Solutions & Integration is pleased to provide the following scope letter on the controls integration of the Horizontal Collector Well for the City of Yankton WTP. Sections that we are covering are 13440, 13441, 13442, 13446, 13447, 13448, 13449, 13500, 13502, 13504 and Addendum #1. DSI will be providing control panels, instrumentation and programming.

Below is a list of control panels to be provided:

1. One Collector Well PLC Panel
2. One Remote I/O Panel
3. Fiber patch panel at collector well and RIO panel(Addendum #1)

Below is a list of instrumentation to be provided:

1. Three flow meters- (FE/FIT-01, FE/FIT-02, FE/FIT-03)
2. One Pressure Transmitter (PIT-05)
3. Three Pressure Switches (PSH-01, PSH-02, PSH-03)
4. Four Pressure Gages (PI-01, PI-02, PI-03, PI-05)
5. One Submersible Level Transmitter (LT-06)
6. Four Door Switches (ZS-50, ZS-51, ZS-52, ZS-53)

*Note- Pipe tubing, instrument valves, accessory hardware are **not included** and to be provided by others.

Below is a list of Telemetry equipment to be provided:

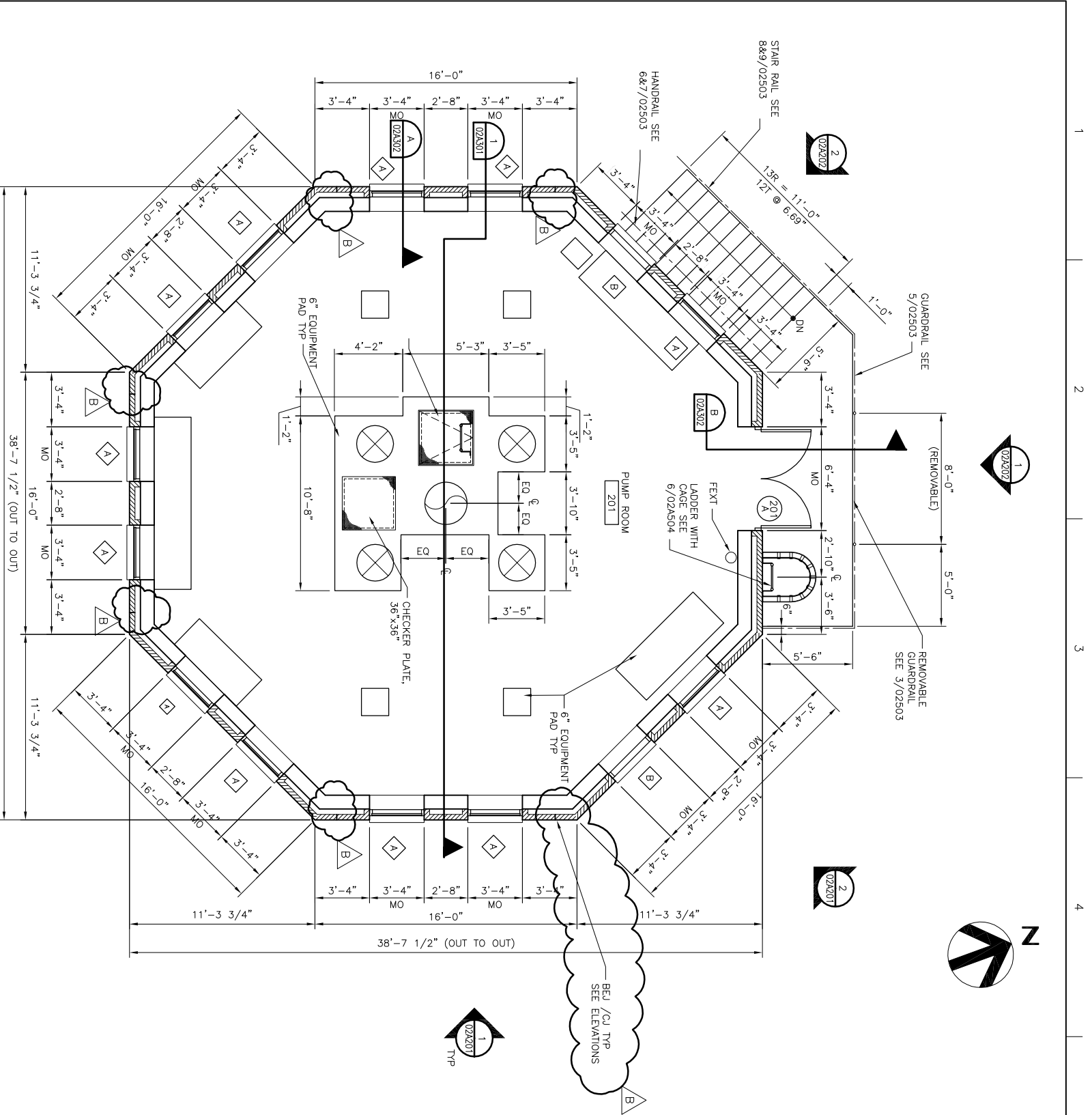
1. One MDS iNET II Radio
2. One radio antenna and cables
3. One antenna mast and mounting hardware

Labor Included in this quote

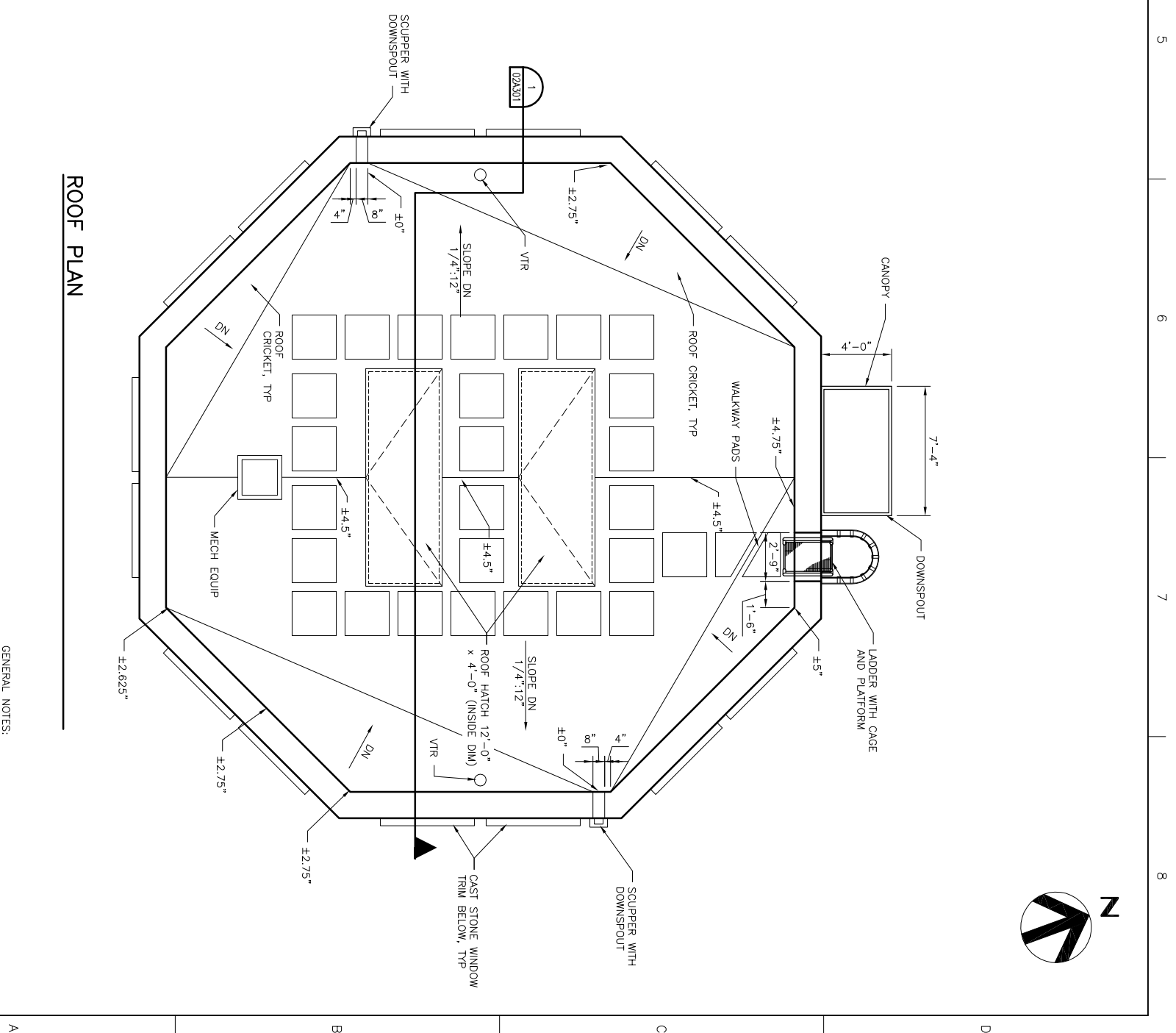
1. Drawings of control panels
2. UL 508A Listing
3. Panel building and factory test in shop
4. PLC Programming
5. HMI Programming
6. Startup Onsite
7. Submittal and O&M manuals
8. Sales tax on parts only

1 of 2

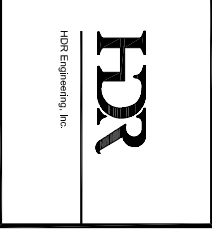
FROM CONCEPT TO COMPLETION



FLOOR PLAN - MAIN LEVEL

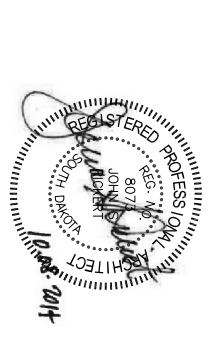


- GENERAL NOTES:
1. SEE SHEET 02A301 FOR DOOR SCHEDULE.
 2. SEE SHEET 02A301 FOR ROOM FINISH SCHEDULE.
 3. +0' = TOP OF BASE INSULATION. ALL ELEVATIONS INSULATION.
 4. ALL SPOT ELEVATIONS AT EXTERIOR WALL.



ISSUE	DATE	DESCRIPTION
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B	10/24/2014	AD-1 REISSUED DRAWING

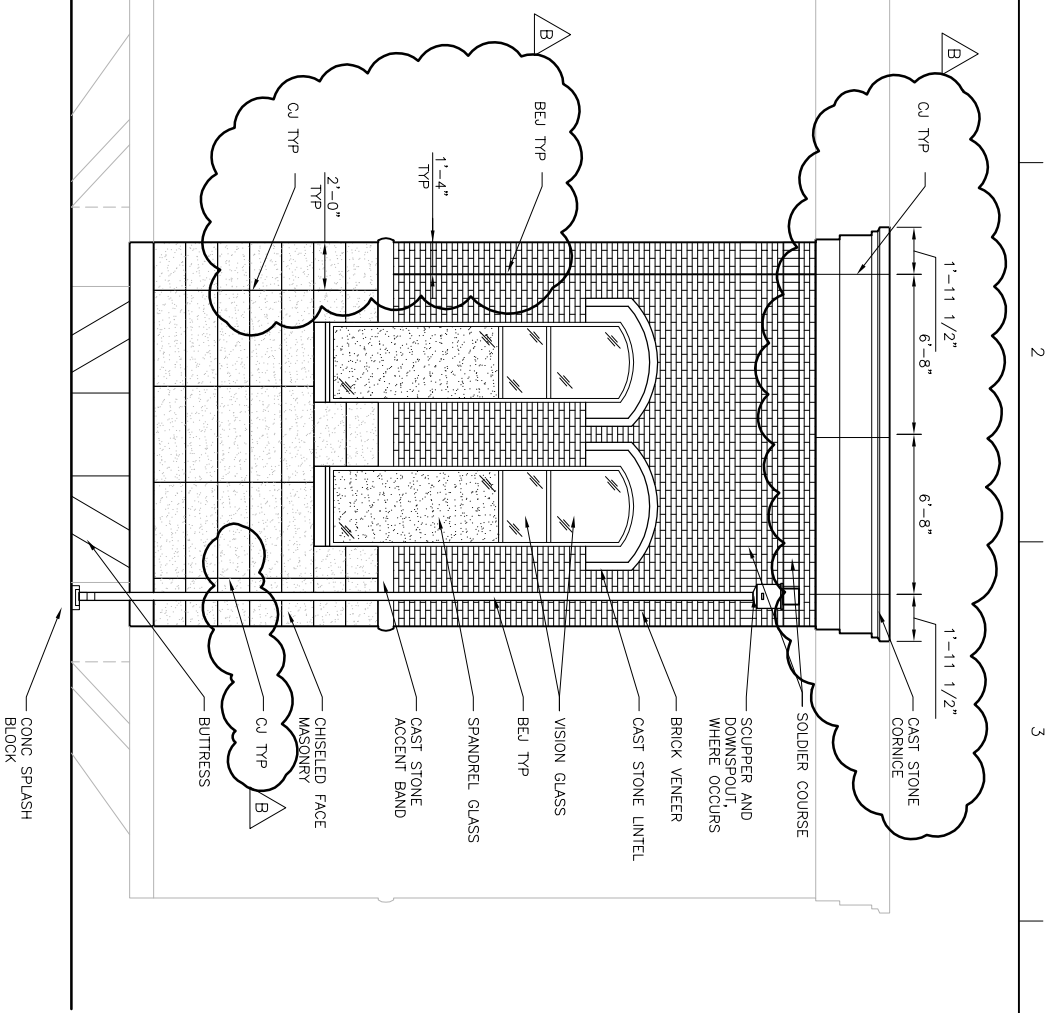
PROJECT MANAGER	STEVEN J. QUAIL
CIVIL	K. NEWMAN
STRUCTURAL	K. KIRCHNER
ARCHITECTURAL	J. RICKERT
PROCESS	K. NEWMAN
MECHANICAL	J. LEWIS
ELECTRICAL	K. THERNES
INSTRUMENTATION	D. PENNER
PROJECT NUMBER	135-223788-003



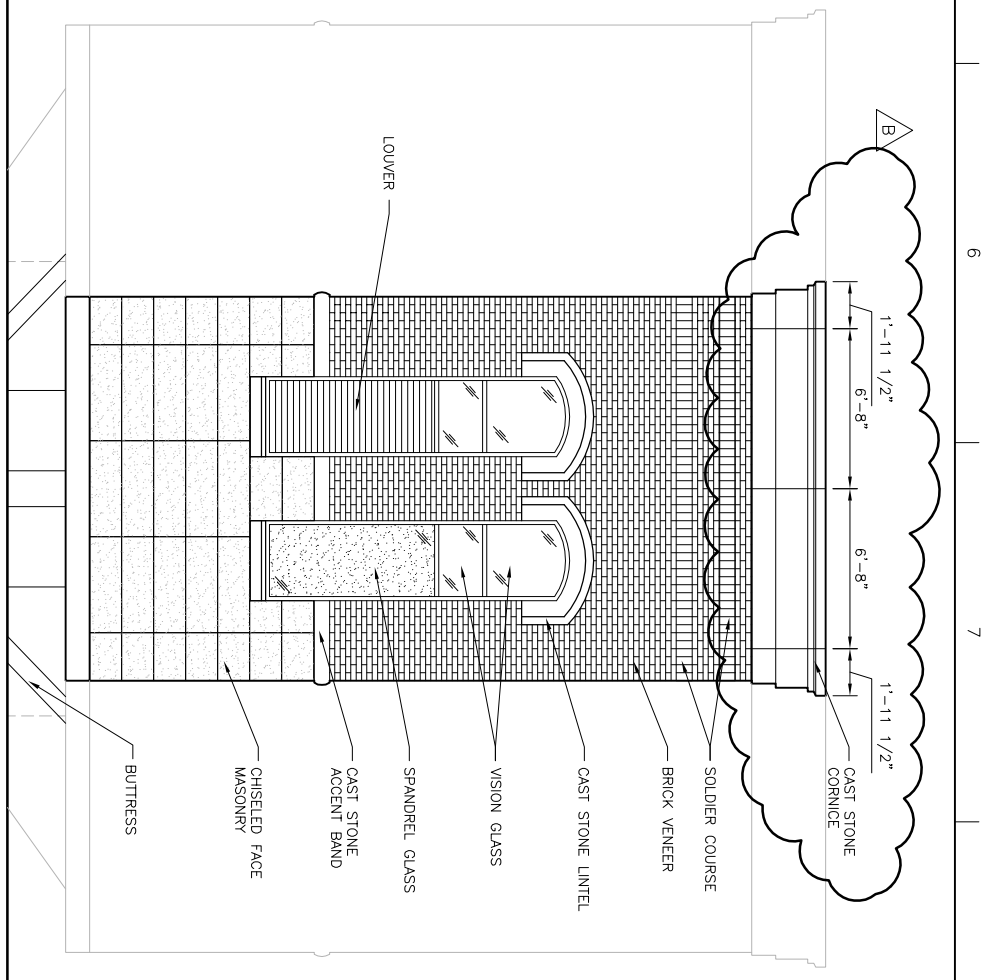
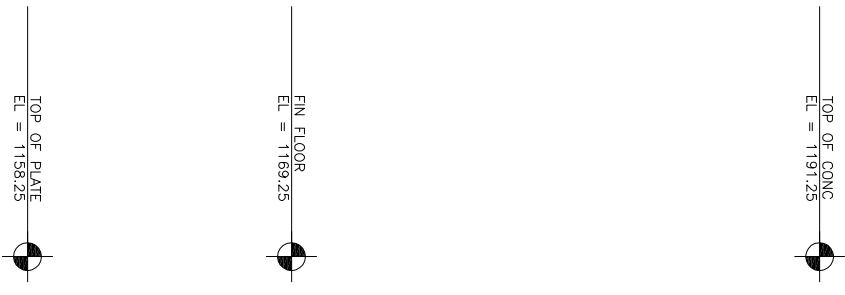
WATER SYSTEM IMPROVEMENTS
HORIZONTAL COLLECTOR WELL
CITY OF YANKTON
YANKTON, SOUTH DAKOTA
2014

FLOOR PLANS
MAIN LEVEL AND ROOF PLAN

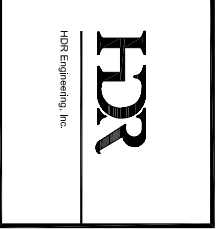
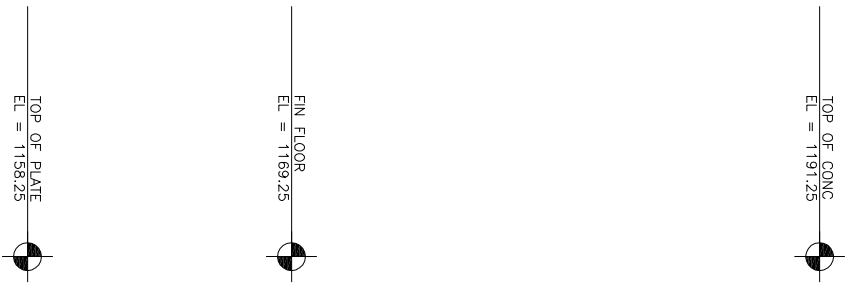
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SHEET 02A102



BUILDING ELEVATION (TYP)
1/4" = 1'-0"
02A101

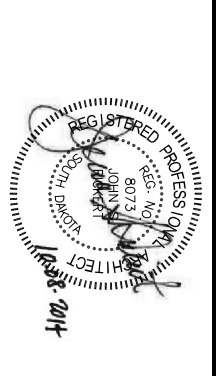


BUILDING ELEVATION
1/4" = 1'-0"
02A101



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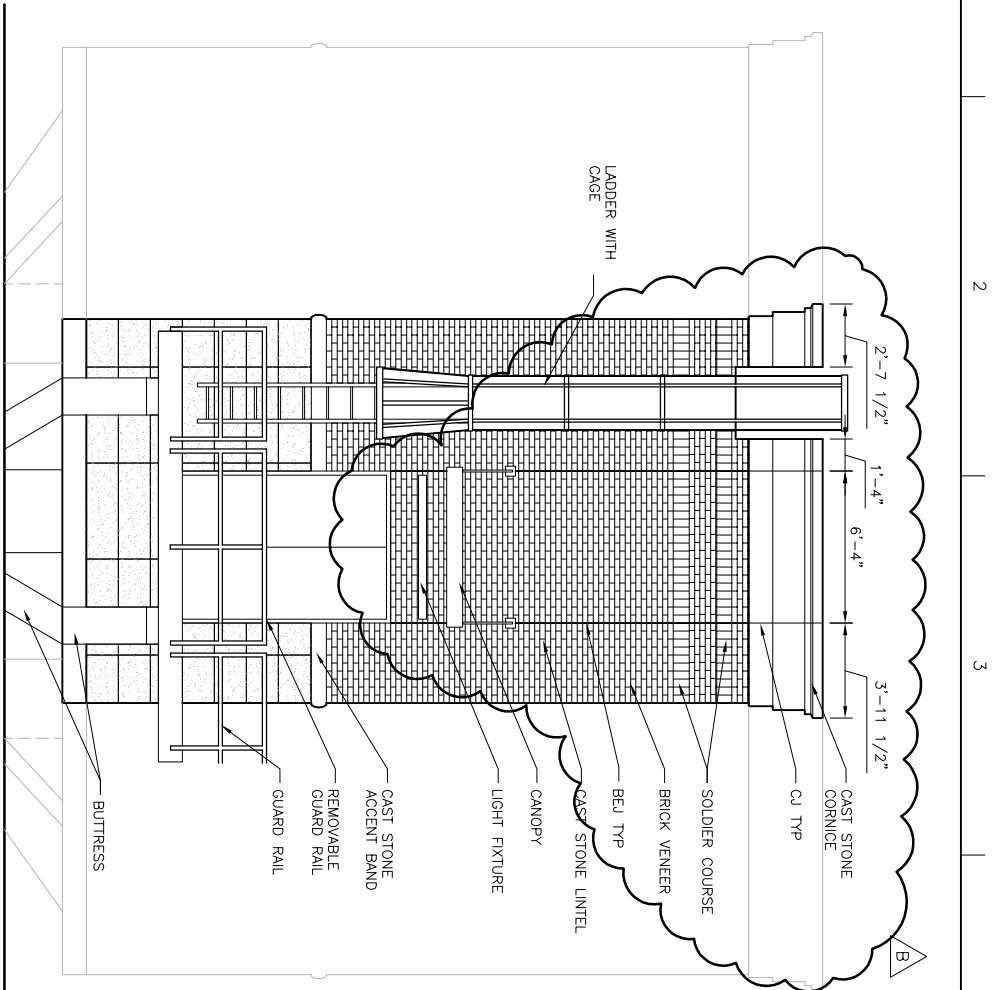
PROJECT MANAGER	STEVEN J. QUAIL
CIVIL	K. NEWMAN
STRUCTURAL	K. KIRCHNER
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**WATER SYSTEM IMPROVEMENTS
HORIZONTAL COLLECTOR WELL**
CITY OF YANKTON
YANKTON, SOUTH DAKOTA 2014

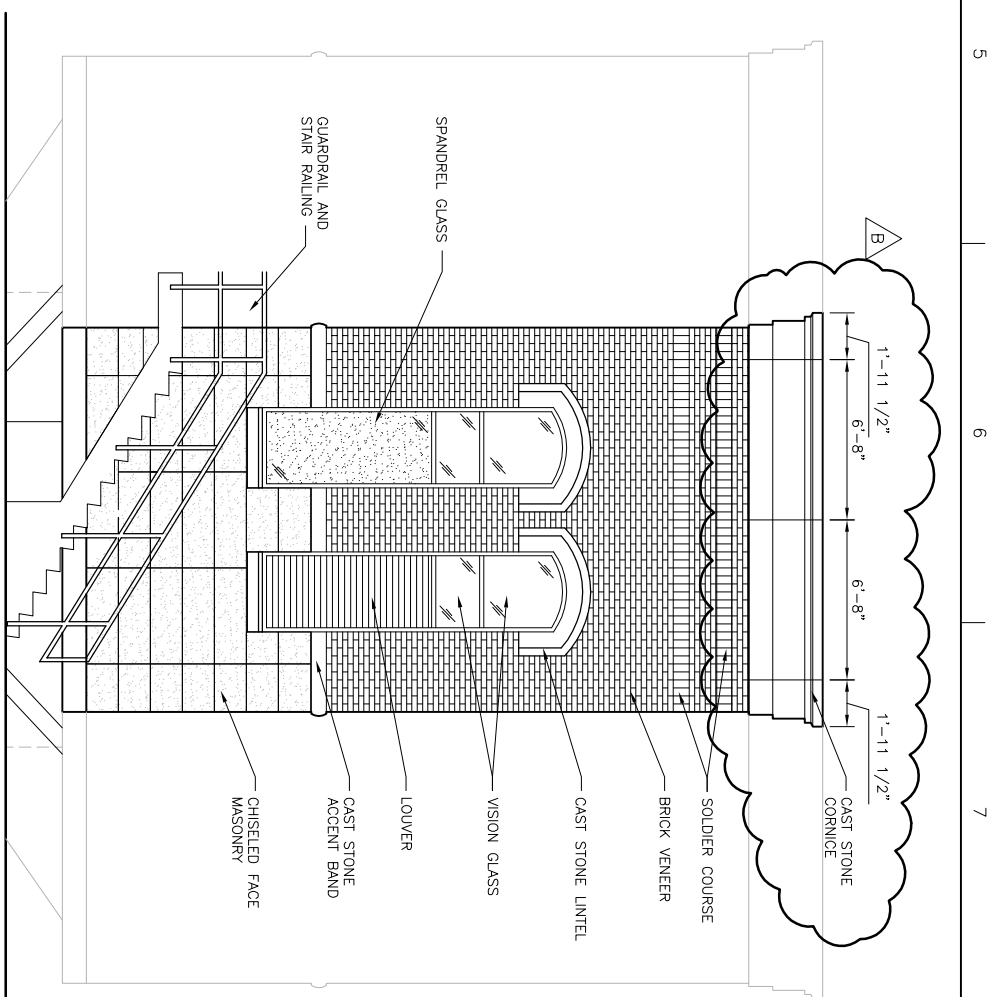
BUILDING ELEVATIONS

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SCALE: 1/4" = 1'-0"
SHEET: 02A201



BUILDING ELEVATION
1/4" = 1'-0"

1
02A101



BUILDING ELEVATION
1/4" = 1'-0"

2
02A101

TOP OF PLATE
EL. = 1158.25

FIN FLOOR
EL. = 1189.25

TOP OF CONC
EL. = 1191.25

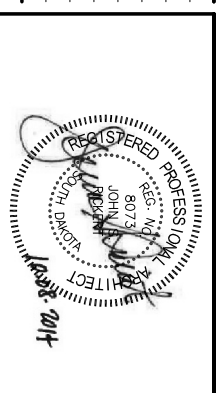
CITY OF YANKTON
SOUTH DAKOTA



HDR
HDR Engineering, Inc.

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PROJECT MANAGER	STEVEN J. QUAIL
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INSTRUMENTATION	D. PENNER
PROJECT NUMBER	135-223788-003



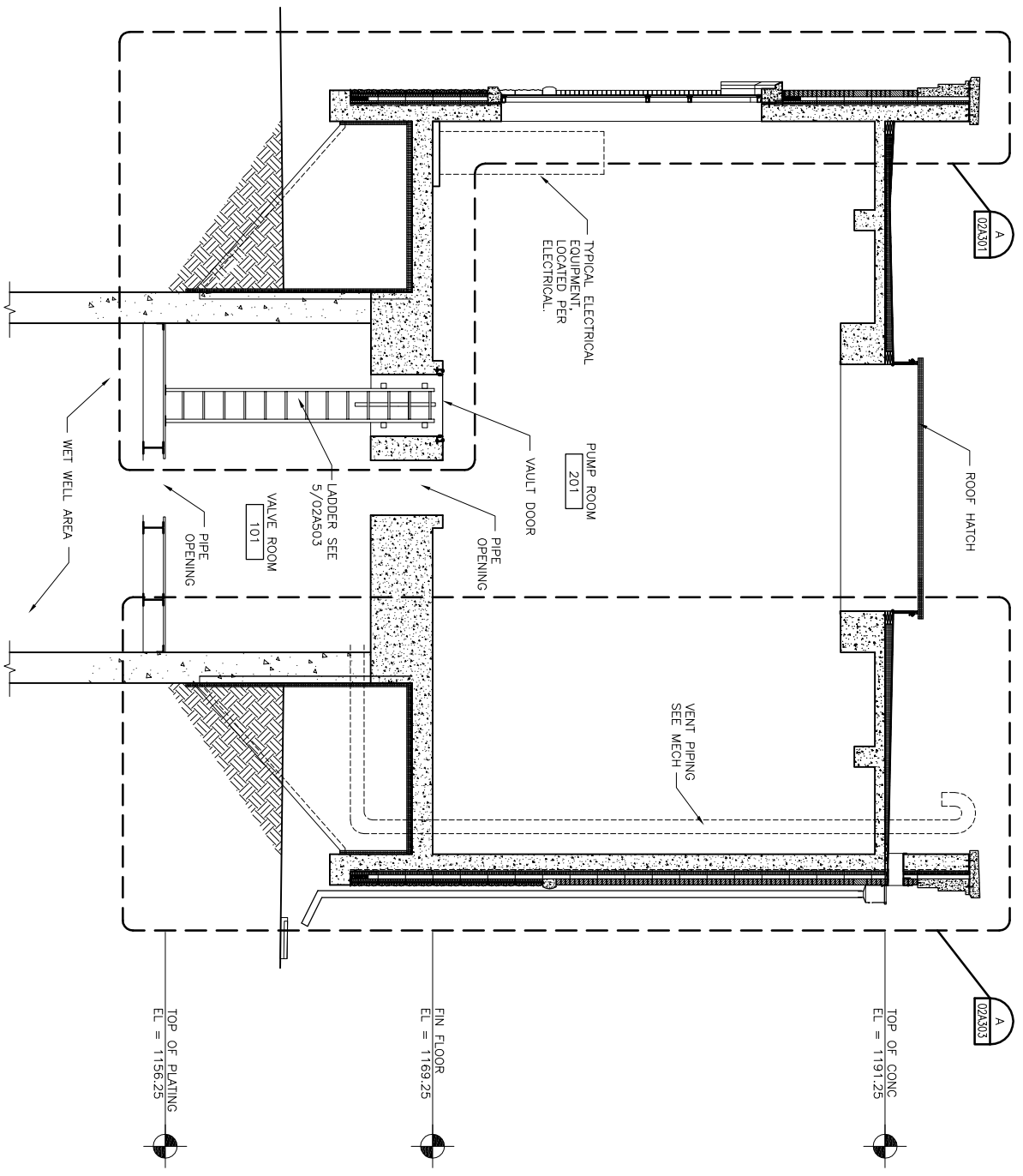
**WATER SYSTEM IMPROVEMENTS
HORIZONTAL COLLECTOR WELL**
CITY OF YANKTON
YANKTON, SOUTH DAKOTA
2014

BUILDING ELEVATIONS

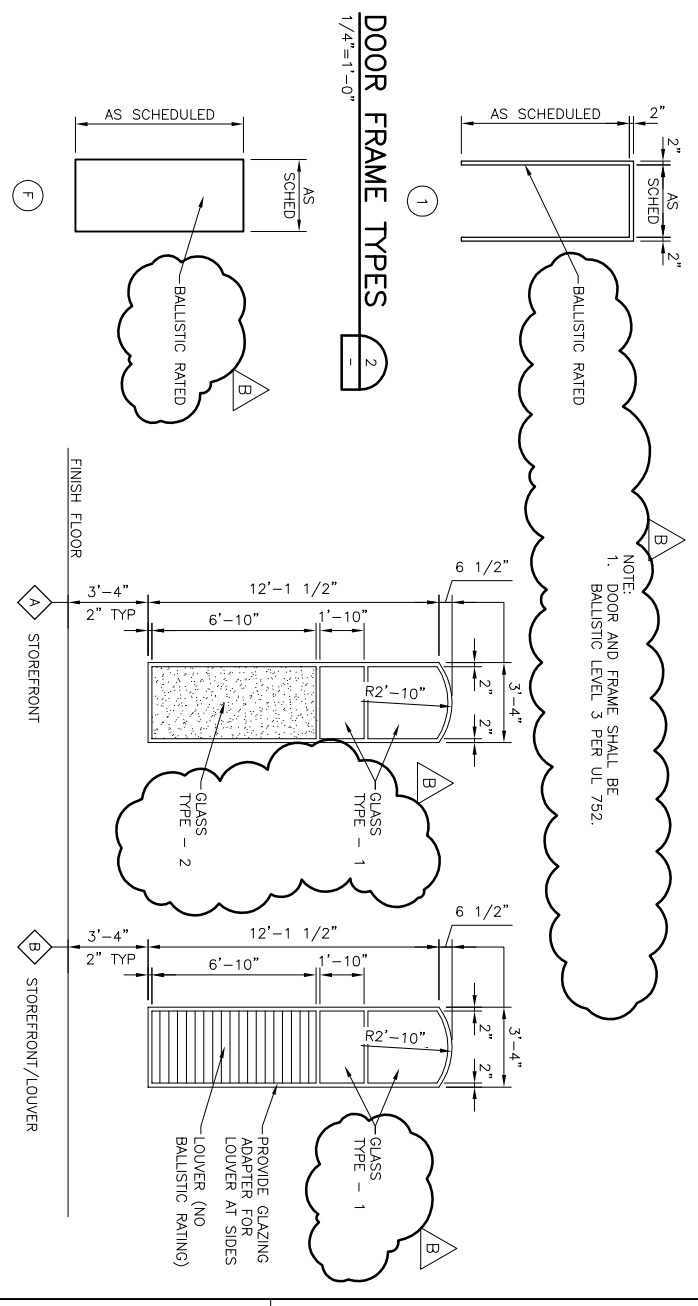
0 1" 2"

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SCALE: 1/4" = 1'-0"

SHEET
02A202



BUILDING SECTION
1/4" = 1'-0"



DOOR TYPES
1/4" = 1'-0"

WINDOW FRAME TYPES
1/4" = 1'-0"

ROOM NUMBER	ROOM NAME	DRAWING NUMBER	FLOOR	BASE	NORTH	EAST	SOUTH	WEST	CEILING	REMARKS
101	VALVE ROOM	02A101	CP	N	CF	CF	CF	CF	21'-6"	C
201	PUMP ROOM	02A102	CS-1	N	CF	CF	CF	CF	21'-6"	C

FLOOR	BASE	WALLS	CEILING
CS-1	N	CHEMICAL FLOOR SEALER	NONE
CP	N	CHECKER PLATE	CONCRETE - NO PAINT
HPIC	N	HIGH PERFORMANCE INDUSTRIAL COATING	PAINTED STRUCTURE

REMARKS:
1. PROVIDE CONCRETE FINISH NO. 5 WHERE CONCRETE WALLS ARE INDICATED TO BE PAINTED. SEE SPECIFICATION SECTION 03348

DOOR NUMBER	SIZE (W x H)	DRAWING NUMBER	TYPE	MATERIAL	FINISH	GLASS	TYPE	MATERIAL	FINISH	GLASS	BALTING	TYPE	GLASS	HARDWARE	DETAILS	REMARKS
201A	PR 3'-0" X 8'-6"	02A102	F	HM	PT	-	1	HM	PT	-	-	-	-	HW-1	1.3 / 02A.502	1

DOOR SCHEDULE

MATERIAL AND FINISH LEGEND

MATERIAL	FINISH
HM	PT
HOLLOW METAL	PAINT

NOTES:
1. SEE DOOR TYPES DETAIL 02A301 FOR DOOR ELEVATIONS.
2. SEE FRAME TYPES DETAIL 02A301 FOR FRAME ELEVATIONS.

REMARKS:
1. DOOR AND FRAME BALLISTIC RATED

CITY OF YANKTON

SOUTH DAKOTA

HDR
HDR Engineering, Inc.

ISSUE	DATE	DESCRIPTION
B	10/24/2014	AD-1 REISSUED DRAWING
A	10/08/2014	ISSUED FOR BIDS

PROJECT MANAGER: STEVEN J. QUAIL

CIVIL: K. NEWMAN

STRUCTURAL: K. KIRCHNER

ARCHITECTURAL: J. RICKERT

PROCESS: K. NEWMAN

MECHANICAL: J. LEWIS

ELECTRICAL: K. THERNES

INSTRUMENTATION: D. PENNER

PROJECT NUMBER: 135-223788-003

REGISTERED PROFESSIONAL ENGINEER

STEVEN J. QUAIL

NO. 1013

STATE OF SOUTH DAKOTA

10/28/2014

WATER SYSTEM IMPROVEMENTS

HORIZONTAL COLLECTOR WELL

CITY OF YANKTON

YANKTON, SOUTH DAKOTA

2014

BUILDING SECTION

FILENAME: 02A301.dwg

SCALE: 1/4" = 1'-0"

SHEET: 02A301

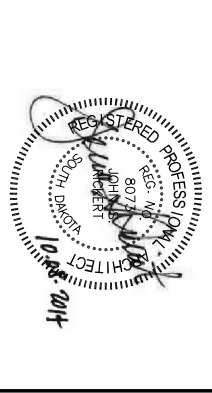
CITY OF YANKTON
SOUTH DAKOTA



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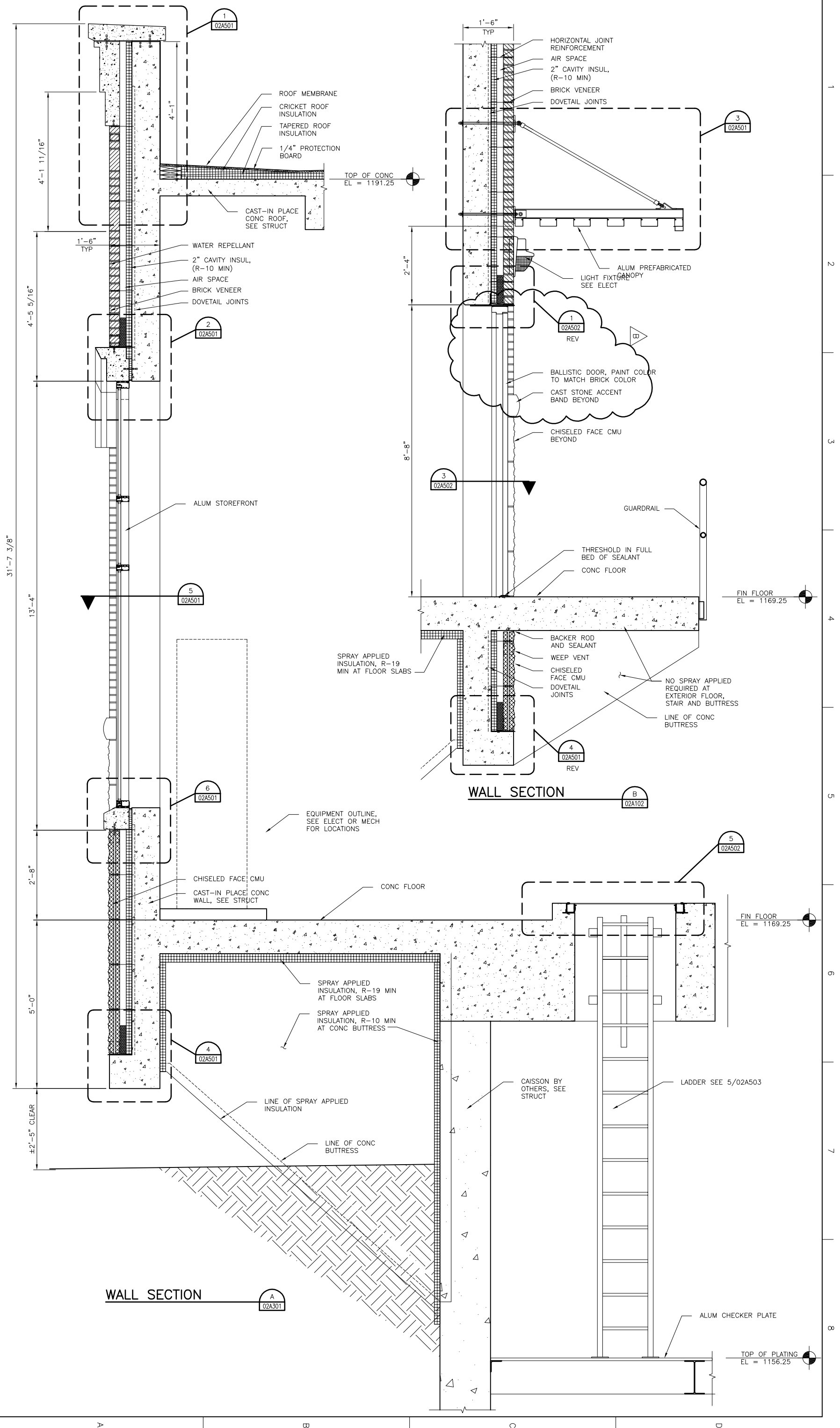
PROJECT MANAGER	STEVEN J. QUAIL
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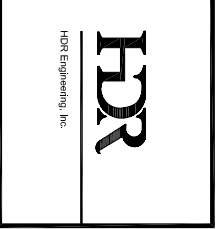
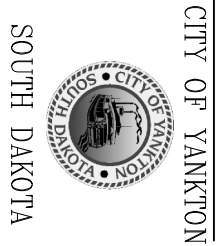
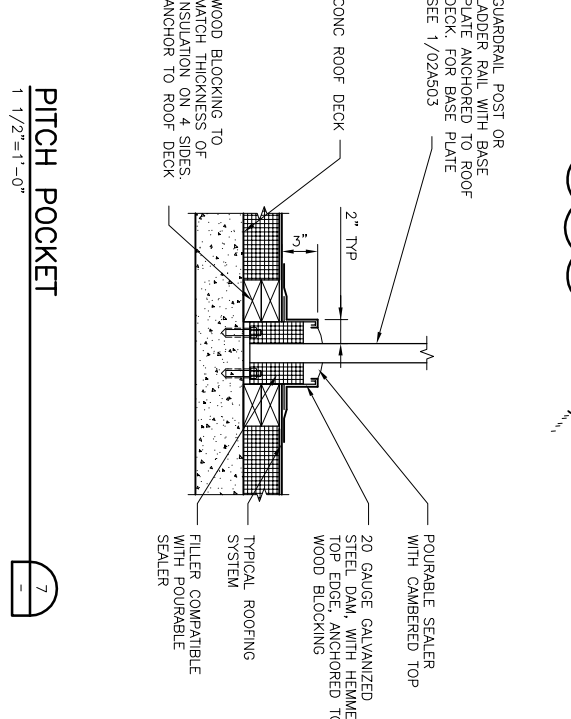
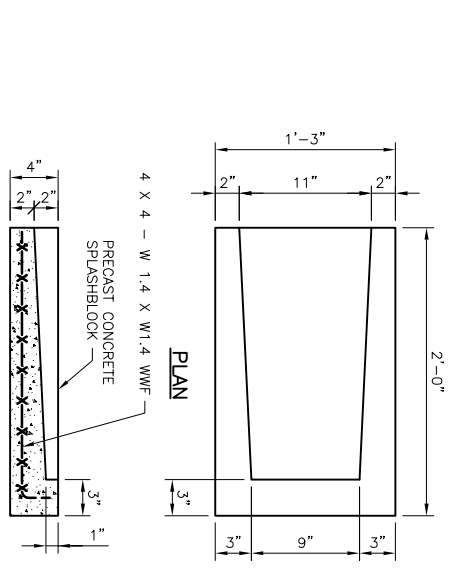
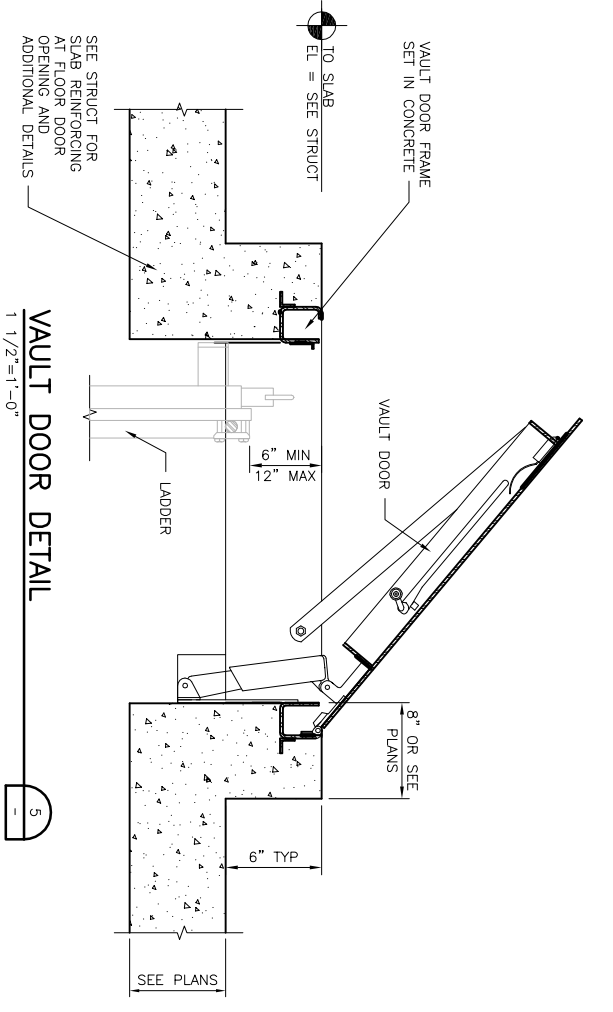
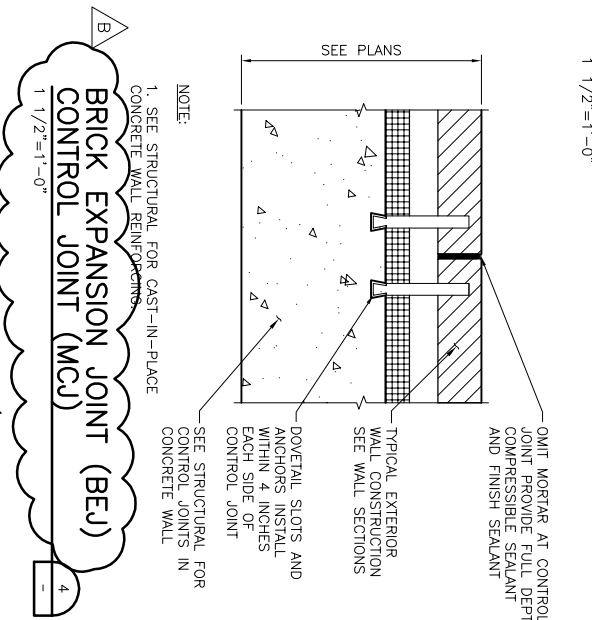
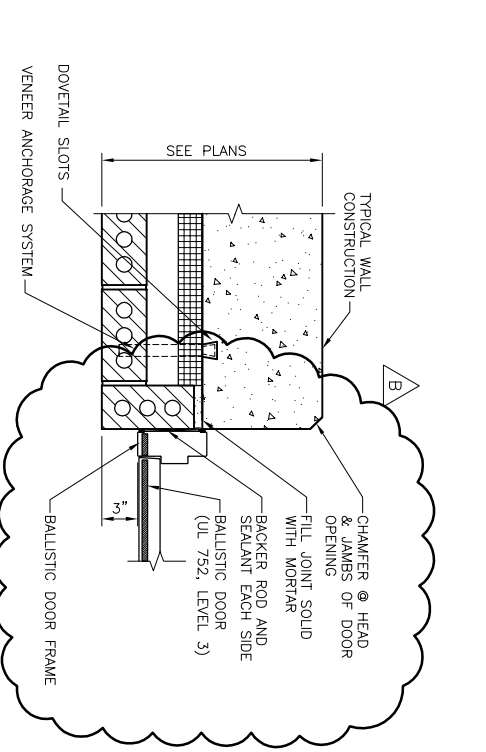
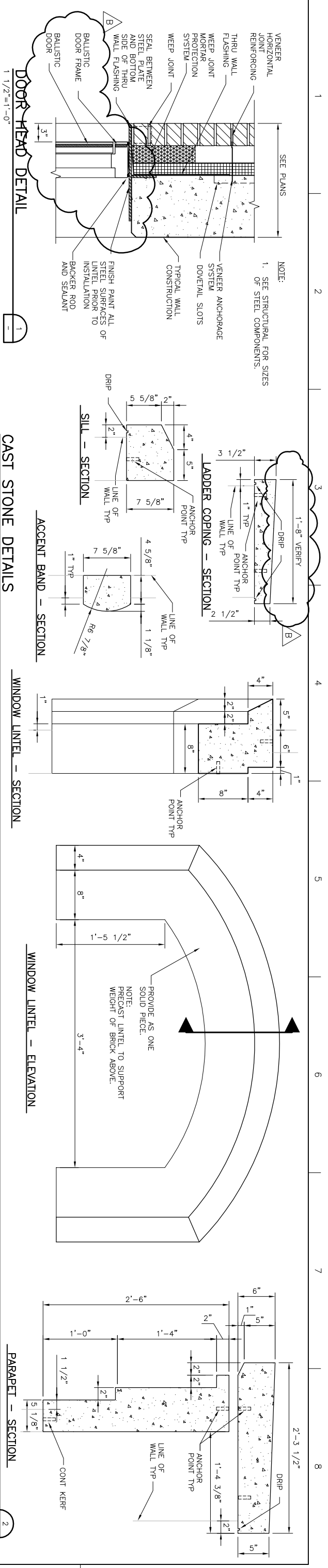


**WATER SYSTEM IMPROVEMENTS
HORIZONTAL COLLECTOR WELL**
CITY OF YANKTON
YANKTON, SOUTH DAKOTA
2014

WALL SECTIONS

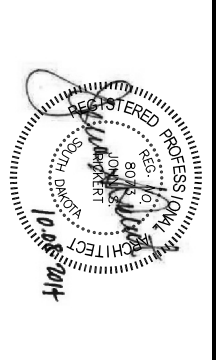
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SHEET: 02A302





ISSUE	DATE	DESCRIPTION
A	10/08/2014	ISSUED FOR BIDS
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PROJECT MANAGER	STEVEN J. QUAIL
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ARCHITECTURAL	J. RICKERT
PROCESS	K. NEWMAN
MECHANICAL	J. LEWIS
ELECTRICAL	K. THERNES
INSTRUMENTATION	D. PENNER
PROJECT NUMBER	135-223788-003



WATER SYSTEM IMPROVEMENTS
 HORIZONTAL COLLECTOR WELL
 CITY OF YANKTON
 YANKTON, SOUTH DAKOTA
 2014

BUILDING DETAILS

0 1" 2"

FILENAME 02A502.dwg
 SCALE AS NOTED

SHEET
 02A502

PRE-BID CONFERENCE NOTES

CITY OF YANKTON, SD
2014 WATER TREATMENT PLANT IMPROVEMENTS
HORIZONTAL COLLECTOR WELL
OCTOBER 22, 2014; 10:00 AM

Notes are recorded in Red

1. BID OPENING DATE AND TIME:

Bids Due: City Finance Office, 416 Walnut Street, Yankton, SD, no later than 3:00 p.m. CDT, on November 5th, 2014.

DISCUSSION NOTES:

None

2. WORK INCLUDES:

The work includes but is not limited to:

- a. Construction of new Horizontal Collector Well near the Missouri River. Components within the Horizontal Collector Well include:
 - 1) 16 FT inside diameter, 120 FT deep, cast-in-place concrete caisson.
 - 2) 13 each, 185 FT long, 10 IN by 12 IN horizontal stainless steel wire-wrapped MuniPak laterals.
 - 3) 13 each, 12 IN gate valves with operating extension stem for each lateral.
 - 4) Intermediate landing.
- b. Above grade pump superstructure including, but not necessarily limited to the following:
 - 1) 3 each, vertical turbine (lineshaft) well pumps.
 - 2) Pump discharge and header piping.
 - 3) Electrical.
 - 4) Instrumentation and Controls
 - 5) Heating, ventilation, air conditioning and dehumidification.
- c. Diesel powered standby engine generator, ATS and switch gear.
- d. Electrical service and electrical site work.
- e. Air/Vacuum Manhole and valve.
- f. 30 IN DIP raw water transmission main.
- g. 24 IN PVC raw water transmission main.
- h. Gravel access road and walking path.
- i. Chainlink fence and swing gate.
- j. Grading, seeding, sodding, and landscaping.
- k. Erosion protection, storm water pollution prevention, and other environmental protection requirements.

DISCUSSION NOTES:

None

3. PROPOSAL (BID):

- a. Use Bid Proposal Form in Contract Documents
- b. Pre-negotiated price for Instrumentation and Controls must be included as part of Bid Item No. 3. Pre-negotiated price will be provided in Addendum No. 1. Include any additional costs.
- c. Attach:
 - o Bid Bond or Certified Check. If a Bid Bond it needs to be 10% of the base bid.
 - o DBE Subcontractor Solicitation Information Form (DBE-6)
 - o Bidder's Activity Report

- EPA Form 6100-3 – DBE Program Subcontractor Performance Form
- EPA Form 6100-4 – DBE Program Subcontractor Utilization Form.
- Certification Regarding Debarment, Suspension, & Other Responsibility Matters.

Failure to submit the above is grounds for rejection of the bid.

DISCUSSION NOTES:

Make sure bid bond is 10% of the base bid as required by the State of South Dakota.

- 4. SRF FUNDING:** Project will be funded by the State Revolving Loan Funding Program. Requirements of the funding source are summarized below:
- a. Disadvantaged Business Enterprises (DBE)
 - b. MBE/WBE requirements & Elimination of Segregated Facilities Certifications.
 - c. Wage Determination: Davis Bacon and Related Acts apply to this project. All provisions relative to those acts must be met.
 - d. Use of American Iron and Steel provisions of the Consolidated Appropriations Act, 2014.
 - e. Executive Order 11246 (Equal Employment)

DISCUSSION NOTES:

Contractors are encouraged to read the American Iron and Steel requirements in the specification, which indicates iron and steel incorporated into the work, are to be produced in the United States. Contractors should make sure their suppliers are familiar with these requirements. Make sure to read Section 01340 – Submittals regarding letters that will need to be submitted with the shop drawings and certifications that will need to be submitted at the time materials are delivered to the site. A six-month exemption on minor stainless steel items has been drafted by the EPA. This exemption is expected to go into effect sometime in November. A copy of the draft short-term product waiver for stainless steel nuts & bolts can be obtained at http://water.epa.gov/grants_funding/upload/DRAFT_AIS_SS_Nuts_Bolts-Waiver_Oct_2014.pdf

5. BASIS OF AWARD AND CITY BIDDING RIGHTS

- a. The bid will be awarded to the lowest Bid from a responsive responsible bidder.
- b. Bids received after 3:00 p.m. on the bid date will be rejected.
- c. The City has the right to waive irregularities.
- d. The City has the right to reject all bids.

DISCUSSION NOTES:

None

6. PAYMENTS

- a. Payments will be made monthly. Contractor shall submit to the Engineer for review an Application for Payment and any supporting documentation.
- b. 10% retainage will be enforced on this contract both for in-place work and for materials and equipment not incorporated in the work but stored on site. Once project is 50% complete as determined by the Engineer the retainage may be reduced to 5%.
- c. Following substantial completion retainage will be reduced to 5%.

DISCUSSION NOTES:

The City Commission meets twice per month, on the 2nd and 4th Mondays of each month. Bills are approved on the second meeting of each month. Pay applications will need to be to the City one week ahead of the Commission Meeting. Therefore, pay applications will need to be submitted to the Engineer (HDR) by the second week of each month.

7. INTERPRETATIONS:

- a. Addendum No. 1 will be issued Friday October 24th, which will include the Pre-Bid Conference minutes.
- b. Only addenda can modify documents.
- c. If a significant item(s) warrants, additional addenda may be issued.

DISCUSSION NOTES:

None

8. EQUIPMENT/MATERIALS ITEMS: Substitutions considered after the bid in accordance with Specification Section 01640.

DISCUSSION NOTES:

None

9. SOIL/GEOTECHNICAL INFORMATION:

- a. Appendix A of Specifications includes Collector Well Siting Study Report, which contains information on existing soils in the Collector Well area.
- b. Bidders are responsible to interpret and/or obtain their own data

DISCUSSION NOTES:

Refer to Specification Section 13200 – Horizontal Collector Well, which indicates the Contractor shall employ a geotechnical engineer to provide any necessary soil investigations and geotechnical recommendations required for the Contractor to complete the design and construction of the caisson.

10. PERMITS, FEES, & UTILITIES:

- a. General Permit for Temporary Discharge Activities has been issued by the SDDENR.
- b. General Permit For Stormwater Discharges Associated with Construction Activities.
- c. Temporary Water Use Permit will be issued after the first of the year.
- d. Contractor will be responsible for complying with the requirements of these permits
- e. Contractor is responsible for obtaining all other permits.

DISCUSSION NOTES:

Water will need to be pumped at a higher rate for construction of the well lateral than is indicated in the Notice of Intent (NOI) to Obtain Coverage under the SWD General Permit for Storm Water Discharges Associated with Construction Activities in Appendix C. The NOI states 500 gpm. Well lateral development will require 1,000 gpm. Engineer (HDR) will discuss with the SD DENR to have the permit amended if required.

11. SUBCONTRACTS:

- a. Contractor is responsible for all subcontractors. City of Yankton and the Engineer will only work directly with the Contractor. The Contractor shall have personnel assigned to the project that will have the expertise and understanding of the subcontracted work to adequately manage and schedule subcontractors to ensure the work is performed properly and the schedule is met.
- b. List of subcontractors requested with Bid Form

DISCUSSION NOTES:

Requirements for excise taxes and sales taxes to be paid by the subcontractors was discussed. For questions on excise tax and sales tax to be applied on this project, Contractors will need to contact the SD Department of Revenue.

12. SAFETY:

- a. Safety: Is the Contractor's responsibility.

DISCUSSION NOTES:

None

13. TIME OF COMPLETION:

- a. Substantial Completion: November 30, 2015
- b. Liquidated Damages: \$900.00 per day for exceeding Substantial Completion Date.

DISCUSSION NOTES:

Project complete will be changed, by Addendum No. 1, to April 30, 2016.

14. PERFORMANCE, PAYMENT AND MAINTENANCE BOND:

- a. Performance and Payment Bonds are required as included in Contract documents.

DISCUSSION NOTES:

None

15. CONSTRUCTION SCHEDULE: Bidders attention directed to Section 01320.

- a. Due 30days after effective date of Agreement
- b. Baseline Schedule required.
- c. Monthly updates (minimum) required as outlined in 01320.

DISCUSSION NOTES:

None

16. COST BREAKDOWN:

- a. On Lump Sum Items:
 - 1) Shall be agreed upon and approved prior to first Progress Payment

DISCUSSION NOTES:

Question on why buried ductile iron fittings are being bid by the pound. Engineer (HDR) will review and determine if a change is warranted on changing how the fittings are bid. If a change is made it will be by addendum.

17. SHOP DRAWING LIST AND SCHEDULE:

- a. Submitted and approved within 20 days of receipt of Notice to Proceed.
- b. All shop drawings must be approved by the Contractor and reviewed by the Engineer prior to 50% completion.

DISCUSSION NOTES:

Engineer (HDR) has a goal of returning shop drawing submittals within 5 days after receiving from the Contractor. HDR will plan to use Project Tracker for electronic delivery of all submittals, RFIs, etc.

18. TESTING:

- a. Owner will employ and pay for services of an independent testing agency to perform testing and inspection where specified or required by the Engineer.

DISCUSSION NOTES:

None

19. PRECONSTRUCTION CONFERENCE:

- a. Held after award of the contract.
- b. Required Attendance: Contractor's Project Manager, Superintendent, Contractor's Subcontractor's representatives, and applicable utility companies.

DISCUSSION NOTES:

None

20. STAGING AREA:

- a. Contractor shall have limited use of premises for construction operations as indicated on Drawings. Do not disturb portions of Project site beyond work areas.
- b. Allow for Owner occupancy of Project site.
- c. Keep driveways, parking, loading areas, and entrances serving premises clear and available to Owner, Owner's employees and emergency vehicles at all times. Do not use parking areas for storage of materials.

DISCUSSION NOTES:

None

21. PROGRESS MEETINGS: See Section 01060 for required attendance

- a. Construction meetings shall be held every two (2) weeks at agreed upon recurring day/time.
- b. Pre-Installation Conferences shall be conducted for each material, product or system specified. To be held not more than two (2) weeks ahead of installation.

DISCUSSION NOTES:

None

22. OTHER:

- a. Contractor shall follow all requirements set forth by the individual private utility companies regarding protection of their lines and means of excavation adjacent to their lines.
- b. Surveying and Staking Requirements
 - 1) Contractor is responsible for construction staking and surveying.
- c. Environmental Surveying Requirements
 - 1) Contractor is responsible for hiring a person to survey 0.25 miles upstream and downstream of the construction limits, between April 15 and August 15 to identify potential eagle nests.

DISCUSSION NOTES:

Engineer (HDR) will review the requirement for the Contractor to hire a qualified person to complete the environmental survey required in Specification Section 01560, Paragraph 3.1, K.1. If this requirement is deleted from the Contractor's responsibility, it will be changed by addendum.

23. QUESTIONS:

- a. Alkali Silica Reactive (ASR) aggregates: Specification Section 03308 indicates that additives cannot be used to compensate for Alkali Silica Reactive (ASR) aggregates used in concrete. Concern is that it is difficult to find non-reactive aggregates in South Dakota and the concrete materials suppliers would need to haul in aggregate from a distance to meet the specification requirements. The SD DOT allows the use of fly ash to mitigate alkali reactivity of aggregates in concrete pavement and bridge superstructures. Engineer will investigate this specification requirement. If a change in the specification needs to be made it will be by addendum.

PRE-BID CONFERENCE ATTENDANCE

CITY OF YANKTON, SD
 2014 WATER TREATMENT PLANT IMPROVEMENTS
 HORIZONTAL COLLECTOR WELL
 OCTOBER 22, 2014; 10:00 a.m.

	NAME	REPRESENTING	PHONE	EMAIL
1	Kevin Newman	MDR	605-977-7760	Kevin.newman@hdtinc.com
2	Ray Tweedy	City	605-668-5272	rtweedy@cityofyankton.org
3	Kyle Goodmanson	City	605-660-6704	kgoodmanson@cityofyankton.org
4	Steve Quail	HDR	605-977-7768	stevn.quail@hdtinc.com
5	KERRY PYLKA	LAKEHEAD	715 395-2611	kpylka@lakeheadconstructors.com
6	Andy Haas	Concrete Materials	605-665-3838	ahaas@cmcsd.com
7	LEE LINDQUIST	Fermier Const.	605-665-4382	lec@sydsautoparts.com
8	LARRY ARFJUS	CHRISTIANSEN East	402-385-3027	FK@CCCPENDER.BIZ
9	KEVIN SCHULZ	WELF CONST. CORP	605-665-3258	schulzkevin@welfl.com
10	ANDY SMITH	LAYNE HEAVY CIVIL	614 888 6263	ANDY.SMITH@LAYNE.COM
11	MARK NILGES	" " "	" "	MARK.NILGES@LAYNE.COM
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