WATER/ WASTEWATER SYSTEM IMPROVEMENTS PHASE 3

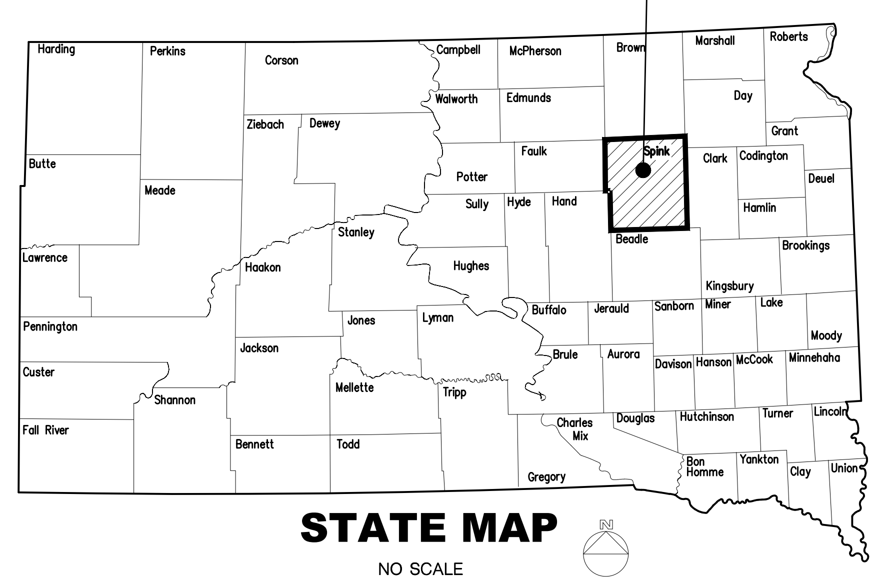
REDFIELD, SOUTH DAKOTA

PROJECT # A-6427/6428

PROJECT DESCRIPTION

Remove and Replace Existing Lift Station and Vault, Remove and Replace existing water main, sewer main along with miscellaneous related work.

REDFIELD
SOUTH DAKOTA



STATE MAP
NO SCALE

CITY OFFICIALS

Mayor	Frank Schwartz
Finance Officer	Adam Hansen
Council Member	Mathew Weller
Council Member	Dana Lewis
Council Member	Brent Derscheid
Council Member	Michael Siebrecht
Council Member	Jessi Lewis
Council Member	Amy Akin
Council Member	Joe Morrisette
Council Member	Keith Gall
Sewer/Water Superintendent	Chad Moore
Street Superintendent	Tracey Schroeder

PROJECT LEGEND

LEGEND(EXISTING)

- WATER METER PIT
- FIRE HYDRANT
- CURB STOP
- WATER VALVE
- SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- ELECTRICAL MANHOLE
- SIGN
- LIGHT POLE
- POWER POLE
- GUY WIRE
- GAS VALVE
- MAIL BOX
- TELEPHONE PEDESTAL
- ELECTRICAL PEDESTAL
- DROP INLET
- STORM MANHOLE
- BUILDING
- ASPHALT
- CONCRETE
- GRAVEL
- CURB AND GUTTER
- OVERHEAD ELECTRICAL LINES
- EXISTING WATER MAIN
- EXISTING SANITARY SEWER

LEGEND (PROPOSED)

- PROPOSED SANITARY MANHOLE
- PROPOSED WATER VALVE
- PROPOSED D.I. TEE
- PROPOSED FIRE HYDRANT
- PROPOSED D.I. BEND
- PROPOSED CURB STOP
- PROPOSED CLEANOUT
- PROPOSED WATER MAIN
- PROPOSED SEWER MAIN
- PROPOSED WATER SERVICE
- PROPOSED SEWER SERVICE
- PROPOSED ASPHALT REPAIR
- PROPOSED CONCRETE REPAIR
- PROPOSED GRASS SEEDING
- PROPOSED GRAVEL REPAIR
- PROPOSED LANDSCAPE REPAIR

No. | Revisions | Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota. Registration No.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

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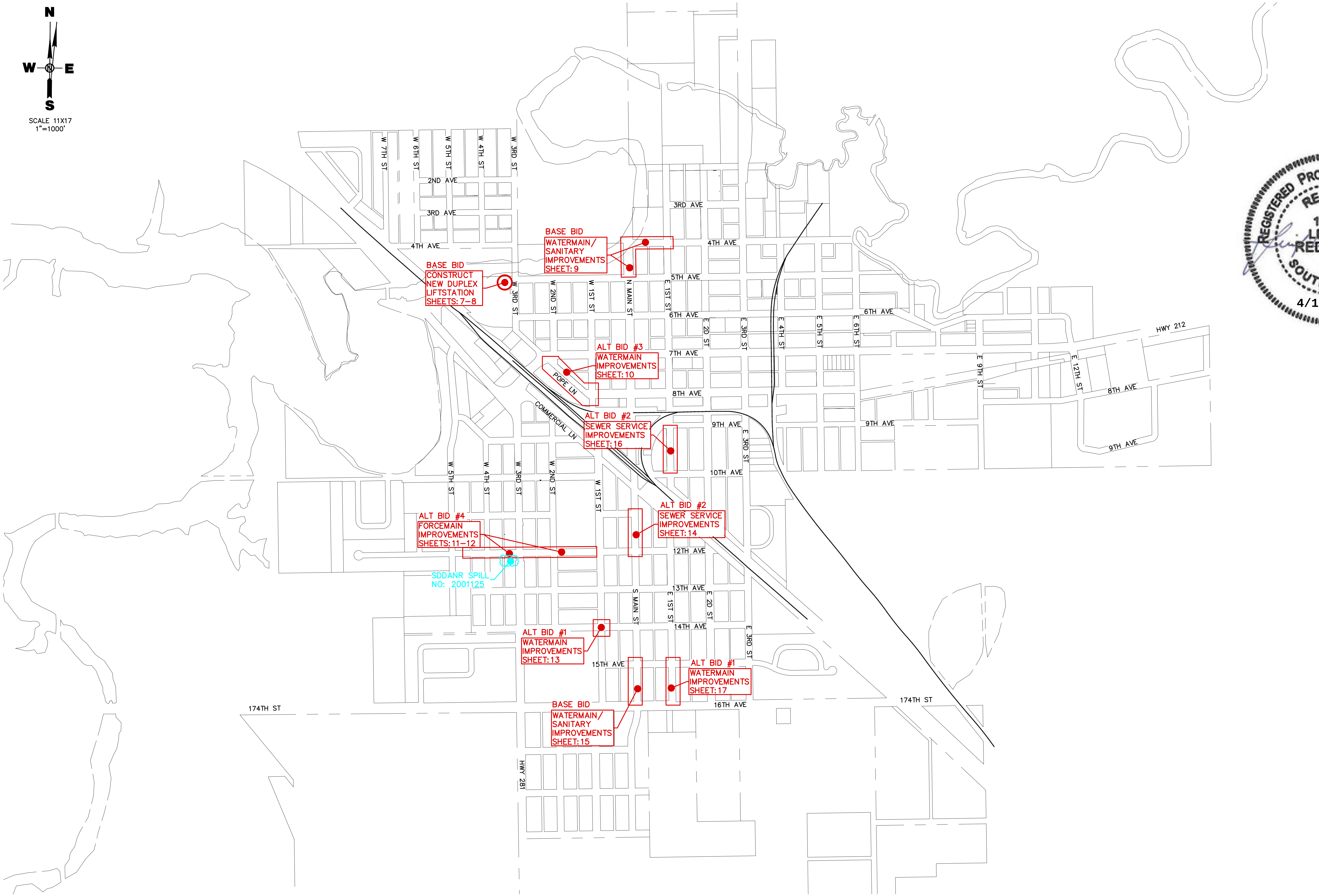
CIVIL ENGINEERS & LAND SURVEYORS

COVER SHEET

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	COVER
Date:	4/15/26



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PROJECT LAYOUT

WATER/WASTEWATER SYSTEM
IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No: / VP. No:	6428-P3-PNT / PLAYOUT
Date:	4/15/26

GENERAL PLAN NOTES

The Contractor shall take all precautions necessary to avoid property damage to adjacent properties during the construction phases of this project. The Contractor will be held solely responsible for any damages to the adjacent properties occurring during the construction phases of this project.

PROJECT CLEANUP AND SAFETY

All asphalt and concrete from streets, driveways, curb and gutter, and sidewalk crossings shall be disposed of in accordance with the waste disposal requirements in these plans. All work associated with the disposal shall be the responsibility of the Contractor and shall be considered incidental to the work items performed.

The Contractor shall be responsible for returning all disturbed areas to their original elevations within 24 hours of completion of each block; no more than 2 blocks shall be left unfinished at any one time per "Pipe Crew". If 2 blocks are not cleaned up at any one time, the Contractor will not be allowed to proceed until at least one block is completed as per the specifications.

The top 6 inches, of any area to be seeded, shall be backfilled with clean topsoil, raked free of clods and debris, and seeded by the Contractor. The Contractor shall clean the entire site on a daily basis and should not restrict local traffic over night.

In accordance with generally accepted construction practices, the Contractor is solely and completely responsible for conditions of the job site, including safety of all persons and property during performance of the work. This requirement applies continuously and is not limited to normal working hours.

The duty of the Engineer or Owner to conduct construction review of the Contractor's performance is not intended to include review of the adequacy of the Contractor's safety measures, in, on, or near the construction site.

SEQUENCE OF OPERATIONS AND TRAFFIC CONTROL

During construction of the project, the existing traffic control devices shall be removed, reset or relocated as necessary by the Contractor to safely control traffic through or around the project. Devices no longer needed shall be neatly stockpiled on the project at a location designated by the Engineer.

Throughout the project, the Contractor must maintain access to site at all times.

The Contractor shall have qualified personnel to be responsible for traffic control items 24 hours per day and 7 days per week. The Contractor shall be responsible for maintaining all existing traffic control signing for safety of traveling public. Construction operations will be allowed during daylight hours only, unless otherwise allowed by the Engineer.

Highway 212 work: Water and Sewer replacement within the State Highway 212 right-of-way shall be completed in three phases. Once one phase is completed final surfacing shall be installed prior to starting the next phase. Traffic shall be maintained at all times with no detours allowed. Contractor is responsible for furnishing and installing traffic control and maintenance of the traffic control devices during the work. Contractor shall be reimbursed for this work per the lump sum contract price for "State Highway Traffic Control" shown on the Bid Form.

WASTE DISPOSAL

All material generated by this project must be disposed of at a permitted site. Depending on what material is generated and whether it is contaminated or uncontaminated will determine which permitted facility can accept it. Permitted facilities include construction and demolition debris sites, restricted use sites, and regional landfills. Contact the SD DENR Waste Management Program at 605-773-3153 to identify locally permitted disposal sites for various categories of contaminated and uncontaminated materials.

Permitted MSW facilities in the area are the Brown County Landfill located near Aberdeen.

Failure to comply with the requirements for proper disposal may result in civil penalties in accordance with South Dakota Solid Waste Law, SDCL 34A-6-1.31.

All costs associated with loading and transporting waste to the disposal site(s) shall be incidental to the various contract items.

STORM DRAINAGE PROVISIONS

Since the proposed construction activities involves the disturbance of more than 1-acre, an EPA National Pollutant Discharge Elimination Systems (NPDES) storm water general permit for South Dakota construction activities is required. The Town will file a Notice of Intent with the NPDES department prior to start of construction activities. The Contractor will be required to sign the Owner's Storm Water Pollution Prevention Plan as provided in the plan sheets. A copy of this plan will be required to be on-site during construction activities. The Contractor may contact the SD Department of Environment and Natural Resources at 605-773-3351 or 1-800-SDSTORM for more information concerning this program.

The Contractor shall provide for and maintain drainage of storm waters away from existing buildings, homes, and exposed surfaces or provide immediate pumping of ponded areas on the work site. No compensation will be made for damage resulting from improper drainage during construction.

EXISTING UTILITIES

The Contractor is specifically cautioned that the location and/or elevation of existing utilities as shown on these plans are based on records of the various utility companies and, where possible, measurements taken in the field. The information is not to be relied on as being exact or complete. The Contractor shall call the appropriate utility companies at least 48 hours before any excavation to request exact field location of utilities. It is the responsibility of the Contractor to relocate or, coordinate relocation of, all utilities requiring relocation.

It is the responsibility of the Contractor to verify in the field, the locations of existing watermains, water services, sewermains, and sewer services. The Contractor shall be responsible for having the existing underground utilities located in the construction area. Underground utilities damaged by the Contractor due to negligence shall be repaired at the Contractor's expense. The Contractor shall be responsible for locating and preserving all existing utilities in their present condition. Existing utilities shown on the plans are for general information only and are to be located by the Contractor prior to the start of construction.

Local contact for water and sewer utilities is:
Tom Lesselyoung, City of REDFIELD @ (605) 472-4550
All utilities SD-ONE CALL
P.O.C. 1-800-781-7474

EXISTING UTILITIES CONTINUED

Existing Residential Sprinkler systems are found throughout the project. The Contractor is responsible for locating, and if damaged, repairing the existing sprinkler systems. When a sprinkler line is damaged, the Contractor shall immediately temporarily cap the broken pipe. Within 14 days the Contractor shall replace/repair the sprinkler line and or sprinkler head with similar pipe/sprinkler head. This work is incidental to the Contract and shall not be measured for payment.

CLEARING AND GRUBBING OF TREES

No separate payment will be made for clearing and grubbing for shrubs and trees as necessary to complete the work. The Contractor shall make every effort to not disturb the existing trees. Tree and shrub removal shall be incidental to the project. Tree and Shrub waste may be disposed of at the City Rubble Use Site.

CONTAMINATED MATERIAL

The Contractor shall give notice to the Engineer when contaminated soil is encountered on the project. The Engineer will contact the Department of Environment and Natural Resources (DENR) and consultant to inspect and monitor removal of any contaminated soil. When contaminated soil is discovered and the DENR has been notified, the Contractor shall allow for a 2 business day delay for the DENR to have a certified personnel on-site to test contaminated soil. Stockpiled soils suspected to be contaminated shall be covered with plastic. Should it be determined the soil is not contaminated to levels that require disposal at the Brown County Landfill, the contractor shall be reimbursed for this work at 15% the Contract Unit price for full removal and disposal of Contaminated Soils.

Contaminated soil may be located at the following sites shown on sheet 7-14.

Contaminated soil may be disposed of at the Brown County Landfill located near Aberdeen. Measurement of Contaminated Soils will be measured in cubic yards by the length and width of trench material that is considered contaminated.

All costs for excavating, stockpiling, loading, and transporting the contaminated materials to the disposal site, all fees charged per cubic yard by the disposal site, and all costs to backfill trenches with clean soil shall be included in the contract unit price per cubic yard for Contaminated Soil.

No adjustment will be made to the contract unit price for variations in the quantity of Contaminated Soil.

id	status	r1	site_name	street	city	zip_code	county	spill_cat	site_type
2001125	C	KM	Clean ATP - Chrystal's Bar	1202 W. 3rd Street	Redfield	57469	Spink	Other(See Case File)	ATP

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PLAN NOTES

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By: TMO
Chk' By: LCR
Proj. No: A6427-8
Dwg. No: 6428-P3(01)
VP. No: NOTES(1)
Date: 4/15/26

HAUL ROADS
Contractor shall obtain written permission from the proper state, county, and municipal authorities for use of local roads as haul roads. A copy shall be sent to the Owner and the Engineer prior to construction. Contractor shall obtain a written release from all cities, counties, and townships owning or maintaining the haul roads used by the Contractor upon completion of the construction. Haul road restoration shall be the responsibility of the Contractor.

EXISTING WASTEWATER OPERATIONS
Contractor shall be required to maintain operation of existing sewer and wastewater treatment operations during construction. Payment for all operations to bypass sewer system to maintain constant service shall be included in bid form under the unit price for sewer bypass. The discharge of wastewater to areas other than existing Sanitary sewers or permitted wastewater treatment facilities is not permitted under any circumstances.

EXPLORATORY EXCAVATION
Exploratory excavation is classified as excavation work completed in order to determine the location of underground utilities at the request of the Owner or Engineer. Exploratory excavation shall only begin when directed by the Engineer. The Owner's Representative and Contractor's Representative will record to the nearest hour time spent for compensation. It is anticipated that the Contractor will be required to complete 30 Hours of exploratory excavation. Payment for all necessary materials, equipment and personnel to complete the Exploratory Excavation services will be at the Contract Unit Price as indicated on the Bid Form, regardless of the amount of equipment or personnel furnished by the Contractor.

DEWATERING PERMIT
The Contractor shall be required to obtain permit coverage under the Department of Environment and Natural Resources (SD-DENR) general permit for temporary dewatering if water from temporary dewatering activities will be discharged to waters of the State during construction. For more information, contact the SD-DENR Surface Water Quality program at (605) 773-3351.

WATER FOR COMPACTION
The Contractor may utilize water from the City's water system. Water shall be obtained from a pre-arranged location with the City's Water Department. Water utilized from the City's water system shall be measured with a meter or by load count with a tank of uniform volume. If Contractor prefers different source of water supply, Contractor shall obtain all permits required and source shall be approved by Engineer.

The Contractor shall obtain a Temporary Water Rights Permit to use water for construction, testing, or drilling purposes from the SD Department of Environment and Natural Resources for **all other water sources**. Contact SD-DENR by phone at 605-773-3352 for more information.

SALVAGEABLE MATERIALS
All materials salvaged by the Contractor that are not incorporated into the project or as noted in the plans shall remain the property of the Owner. The Contractor shall be responsible for the removal and transportation of all salvaged materials to a site selected by the Owner.

WATERMAIN AND SEWERMAIN SEPARATION & LOCATION CONFLICTS
Sewermains shall be laid at least 10' horizontally from any water main. If the two mains cross, there shall be a minimum of 18" from the crown of the sewermain to the invert of the watermain. Watermain shall be field verified and the new sewermain installed to provide 10' separation.
Where water crosses the sewermain, the water shall be cased 10' on each side. This shall be paid for as "Watermain Casing Pipe". Where only sewermain is being replaced the sewermain pipe installed shall be SDR21 in a 20' length centered on the existing watermain. The quantity may vary from the plans. No adjustment will be made to the contract unit price for variations in the quantity of casing pipe.

EXISTING CULVERTS AND STORM SEWER
Contractor is responsible for culverts/storm sewer damaged by his men or equipment through negligence. Culverts will be protected and returned to original condition if removed or disturbed. Culverts/Storm Sewer that are to be replaced in the project will be paid for per linear foot. The price for "Storm sewer Repair (15"-24" RCP) shall be full compensation for furnishing, installing and tying into the existing culverts/storm sewer.
Where watermain or sewermain crosses within 24" of existing storm sewer or culvert the Contractor shall furnish and install 4"-4'x8' Rigid Foam insulation (ground contact rated) under or above the storm sewer as necessary. This work is incidental to the project.

CUTTING ASPHALT SURFACING
Contractor shall cut existing streets and sidewalks in areas shown on plans or as directed by the Engineer. Costs for cutting shall be considered subsidiary work to other contract items with no separate payment considered.

Where the new asphalt surfacing meets existing asphalt surfacing, the existing asphalt shall be cut to the full depth of asphalt to create a straight vertical edge for the tie in. All costs associated with this cutting shall be incidental to the related pavement repair items.

An asphalt cutting wheel or milling may be used to cut asphalt surfacing along trenches if, by demonstration, it is shown that the cutting wheel/mill will provide a straight edge with minimal breakage of the asphalt along the sides of the trench. It may be necessary for the Contractor to cut the trench width at a width less than full width and then cut the asphalt to the full width just prior to street repair. If the asphalt cutting wheel, in the opinion of the Engineer, does not create a satisfactory edge for repairing the streets, the Contractor shall saw cut the asphalt to provide straight and vertical edges.

SALVAGING, STOCKPILING, AND PLACING TOPSOIL
The Contractor shall remove a minimum of eight (8) inches of soil cover for topsoiling operations. The Contractor shall separate the material during excavation to prevent contamination with other excavated materials. The Contractor shall place a minimum of six (6) inches of topsoil evenly over the disturbed areas upon completion of grading operations. If sufficient topsoil is not available, or the Contractor fails to salvage clean topsoil, the Contractor shall provide topsoil to complete topsoil operations.

Measurement and payment for all topsoiling operations shall be as specified in the specifications. See Section 31 23 16 for topsoiling requirements and Section 32 92 19 for seeding and fertilizing requirements.

SERVICE LINE CONNECTIONS
All fittings required for connecting to existing sewer service line shall be included in the unit price for "Connection to Existing Services."

The locations of service lines shown on the plans are general and will be verified during construction. The Contractor shall locate existing service lines and connect with cleanout in the right of way. Some services may require the Contractor to install a short length of service line from the new cleanout to the existing service pipe. The Contractor shall try to align the cleanouts on a common offset from the sewermain as to ease locating by the Owner.
If a service line is found during excavation to an area not shown on plans, the Contractor shall notify the Engineer to determine whether the service will be replaced or abandoned. Locating the actual service lines from the main to the property line shall be incidental to the service line piping or connection to existing services with no additional compensation from the Owner.

DISTURBED ALLEYS
All alleys to have new sewermain shall be surfaced with 6" thick, 15 feet wide gravel surfacing. Edges will be topsoiled and seeded.

SANITARY SEWERMAIN TO HAVE CIPP LINER INSTALLED
The entire Sanitary Sewer System for REDFIELD was cleaned and televised in 2018 & 2019. Electronic copies of this report are available at the office of Helms and Associates. Contractor requesting copies shall provide a portable hard drive device for transfer of files.

SERVICE LINE CONNECTION TO CIPP
All services connecting to CIPP shall be cut out.
Base Bid: The services shall have a lateral connection repair and be lined.
Alternative Bid: The services shall have a saddle wye with new service pipe and cleanout.

EXISTING FIRE HYDRANTS
Fire hydrants that are removed shall remain the property of the Owner and shall be handled with care and delivered to a designated area chosen by the Owner. At the discretion of the Owner, the Contractor shall remove and dispose of some or all the fire hydrants, gate valve and valve boxes.

EXISTING GATE VALVES AND CURB BOXES
Contractor shall remove the existing gate valves and boxes. The gate valves and box shall be salvaged for the Owner and delivered to a designated area chosen by the owner.

EXISTING WATERMAIN PIPING
When new piping is laid within the same trench as the existing watermain, the Contractor shall make all attempts to remove and dispose the existing pipe. When AC pipe is removed, it will be disposed of by the contractor in accordance with the SD-DENR Requirements.

EXISTING SEWER PIPING AND MANHOLES
The Contractor shall remove existing sanitary sewer piping and manholes during the installation of new sewer piping and manholes. Contractor shall dispose of sanitary sewer piping and manholes in accordance with the "Waste Disposal" requirements provided in these plans. The Owner shall consider all costs for removal and disposal of sanitary sewer piping and manholes incidental to the associated installation work with no separate measurement or payment made to the Contractor.

EXISTING STREET CONDITIONS
The Contractor shall route all construction related equipment and loaded trucks on streets that shall be disturbed OR designated Truck Routes. Contractor shall avoid all streets that shall remain undisturbed with construction traffic, staging equipment, etcetera, to avoid excess damage to City streets. Contractors that do not heed this decree shall be responsible for repair of existing streets. If trafficking City streets is unavoidable, the Contractor shall notify the City and/or Engineer and request a written "onetime" route approved. This is especially critical with wheeled loader traffic.

LEAD SERVICES
Where existing water service is discovered to be lead, the Contractor shall notify the Engineer. If lead services are discovered outside the areas to be scheduled for new watermain the contractor shall be required to replace those lead water services within the right-of-way as directed by the Engineer. Work shall be completed at the Contract Unit Price as shown on the Bid Form.

No.	Revisions	Date

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PLAN NOTES

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
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TEMPORARY WATER SERVICE

At no time shall any home or business have a water service interruption for more than 4 hours. See Section 33 11 00 of the Contract Documents for additional information.

The Contractor shall provide temporary water services for homes and businesses along the watermain replacement route. The Contractor shall contact any home or business a minimum of 1 business day (24hours) before any water service interruption may occur. If unanticipated interruption occurs the contractor shall immediately begin to provide temporary water service to that business or home prior to continuing with any other work or leaving the project site. If an interruption is discovered after the Contractor leaves the site the Contractor shall immediately return to the project site and re-establish service or provide temporary service.

At no time will a house to house connection for temporary water service be allowed.

CONTAMINATED SOIL AND WATER PIPE

Where contaminated soils are discovered the waterrmain pipe shall be PVC C-900. All services within the contaminated soil area plus 50ft buffer, the water service pipe shall be copper. In no case shall Polypropylene (PE) water service pipe be allowed in or around areas of contaminated soil. An arbitrary amount of copper water service pipe is included in the project for this purpose. No additional compensation will be made for curb stops and corp stops that must be exchanged for ones nominally sized for copper.

In addition, clay barriers will be installed at the beginning and end of each contaminated soil area around the pipe (water and sewer) in lieu of bedding material to limit the contaminated ground water movement through the bedding material. Clay barriers shall be installed at nominal moisture and compaction as determined by standard proctor in a careful manner to protect the pipe for a minimum length and depth of 4ft. No additional compensation shall be made for this work and is considered incidental to other work.

PIPE BORING

Borings under Highway shall consist of a "Jack and Bore" method utilizing a steel casing 8" larger than carrier pipe size.

All borings shall be accompanied with a tracer wire that shall have a tracer wire terminal box installed adjacent to the starting and receiving structures.

DUST CONTROL

The Contractor shall provide chemical treatment dust control on streets backfilled but prior to asphalt as directed by the Engineer. Dust control application will be required when a minimum of 5 or more blocks are ready for treatment. Streets shall be shaped to a uniform grade and crown immediately prior to the treatment process with a motor grader or similar equipment suitable for the work.

If settling occurs and additional gravel is required the Contractor shall re-apply dust control measures at no additional cost to the Owner.

See Section 01 57 00 Temporary Controls of the Specifications for additional requirements and application rates.

All material, equipment and labor required to prep and treat the gravel shall be incidental to the Contract Unit Price for "Dust Control Chemical".

TRENCH DEWATERING

High ground water table may be encountered based on past construction projects. Dewatering will be at the Contractors discretion as required to complete the work in a timely and efficient manner. The Contractor shall dispose of groundwater as follows:

A. Obtain a discharge permit for water disposal from authorities having jurisdiction.
B. Treat water collected by dewatering operations, as required by regulatory agencies, prior to discharge.
C. Discharge water as required by discharge permit and in manner that will not cause erosion or flooding, or otherwise damage existing facilities, completed Work, or adjacent property.
D. Remove solids from treatment facilities and perform other maintenance of treatment facilities as necessary to maintain their efficiency.
E. Any temporary dewatering trenches or well points shall be restored following dewatering operations to reduce permeability in those areas as approved by the regulatory authority and Engineer.

Dewatering shall be incidental to other work as required to complete the project as shown on the plans and specified and will not be measured for separate payment.

ASPHALT MILLINGS

The Contractor may mill the existing asphalt "residential" Streets. Asphalt milled may be reused on the project as a base course substitute after it has passed through 3" screen and installed for a maximum depth of 4 inches. Compensation for millings will be the same as base course and must be measured for weight with scale tickets provided to the Engineer for payment. The Contractor shall mill the existing highway. Millings must be reused as bottom 6" of base. Compensation will be the same as Base Course as indicated on the Bid Form and measured per ton installed.

STREET REPAIR

Contractor shall remove existing street surfacing outside the trench repair area as directed by the Engineer or as shown on the plans when it is determined the remaining existing surfacing is not salvageable. This work shall be reimbursed at the Contract Unit price for "Remove and Dispose of Asphalt Street or Highway". Contractor shall still make every effort to minimize trench width and reduce the necessary street repair required.

Contractor shall provide street maintenance until asphalt and concrete street repair is completed, including blading and adding gravel when directed by the Engineer. The cost of "Blading" will be at the Contract Unit Price as indicated in the Bid Form. Base Course cost is paid for at the Contract Unit Price per ton.

Prior to Asphalt Street Repair Operations, the contractor shall remove excess base course from repair area, water and compact to the specified requirements. Excess Base Course shall be stockpiled at an area designated by the City. That area shall be within the City limits.

Date	No.	Revisions

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PLAN NOTES

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Drawn By:	TMO
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VP. No:	NOTES(3)
Date:	4/15/26

Drawn By: TMD
Chk' By: LCR
Proj. No: A6427-8
Dept. No: 6428-230(01)
VP. No: 01-217
Date: 4/15/26

ESTIMATE OF QUANTITIES

WATER/WASTEWATER SYSTEM
IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

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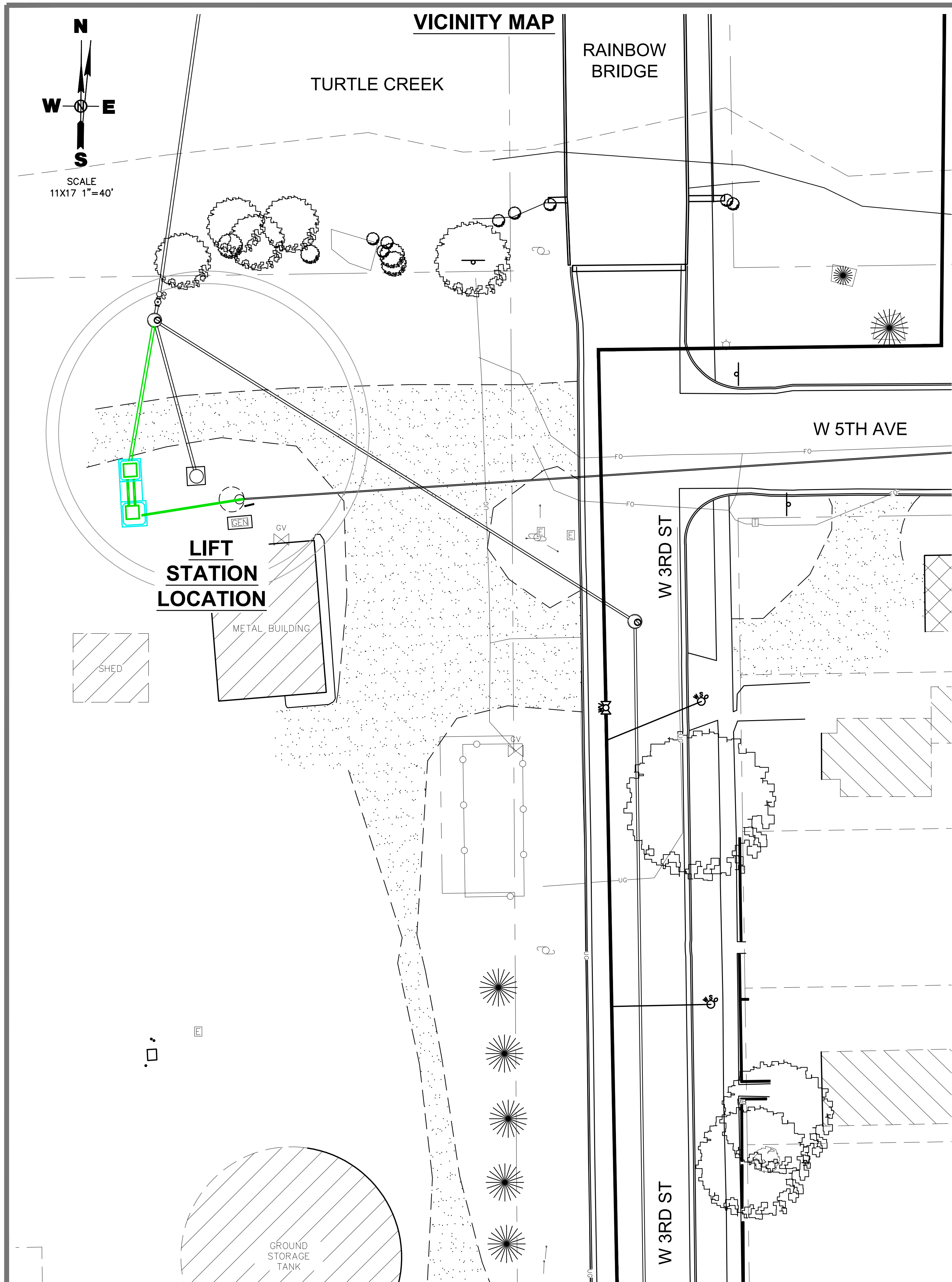

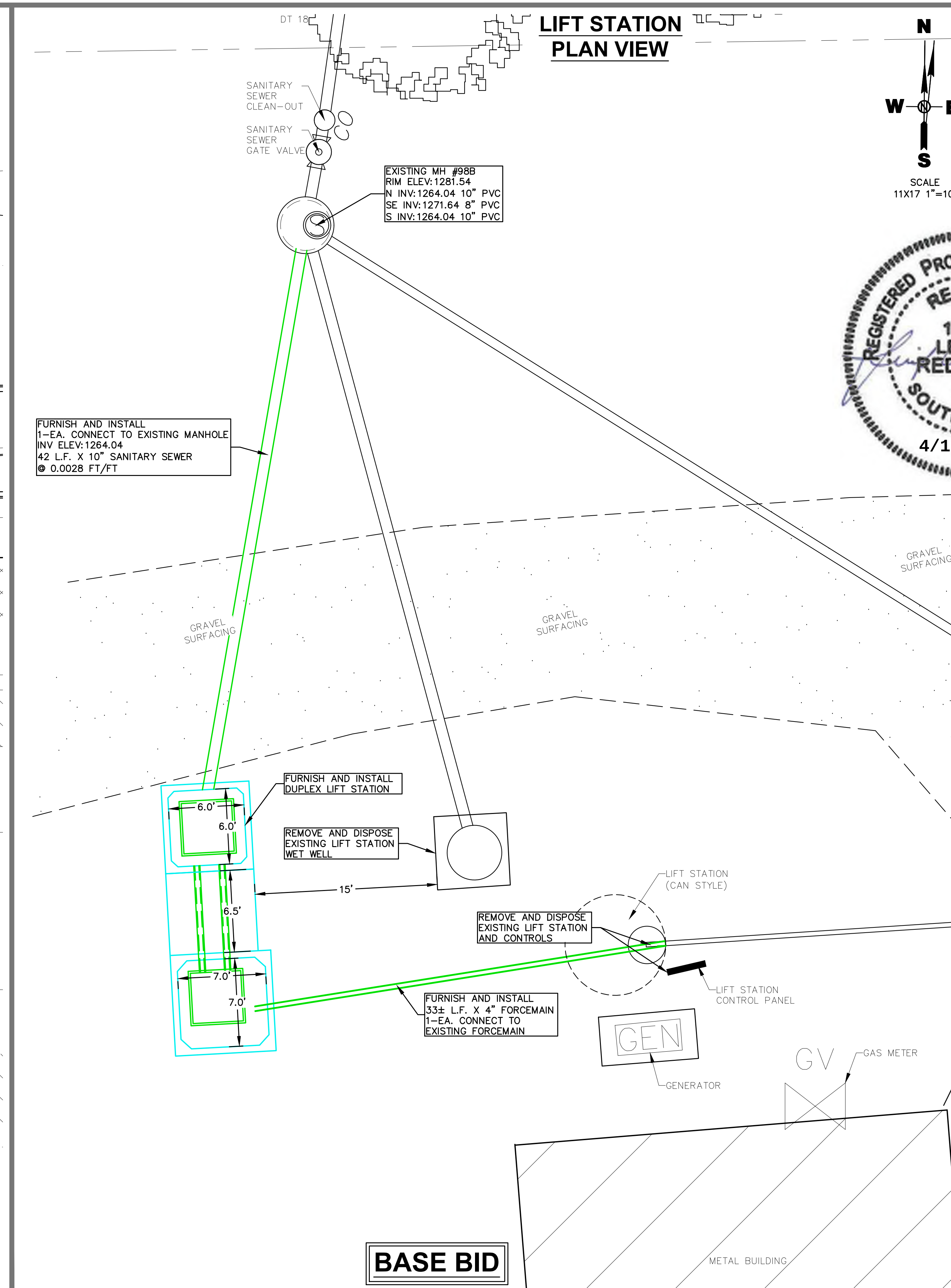

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LIFT STATION IMPROVEMENT PLANS

WATER/WASTEWATER SYSTEM
IMPROVEMENTS PHASE 3
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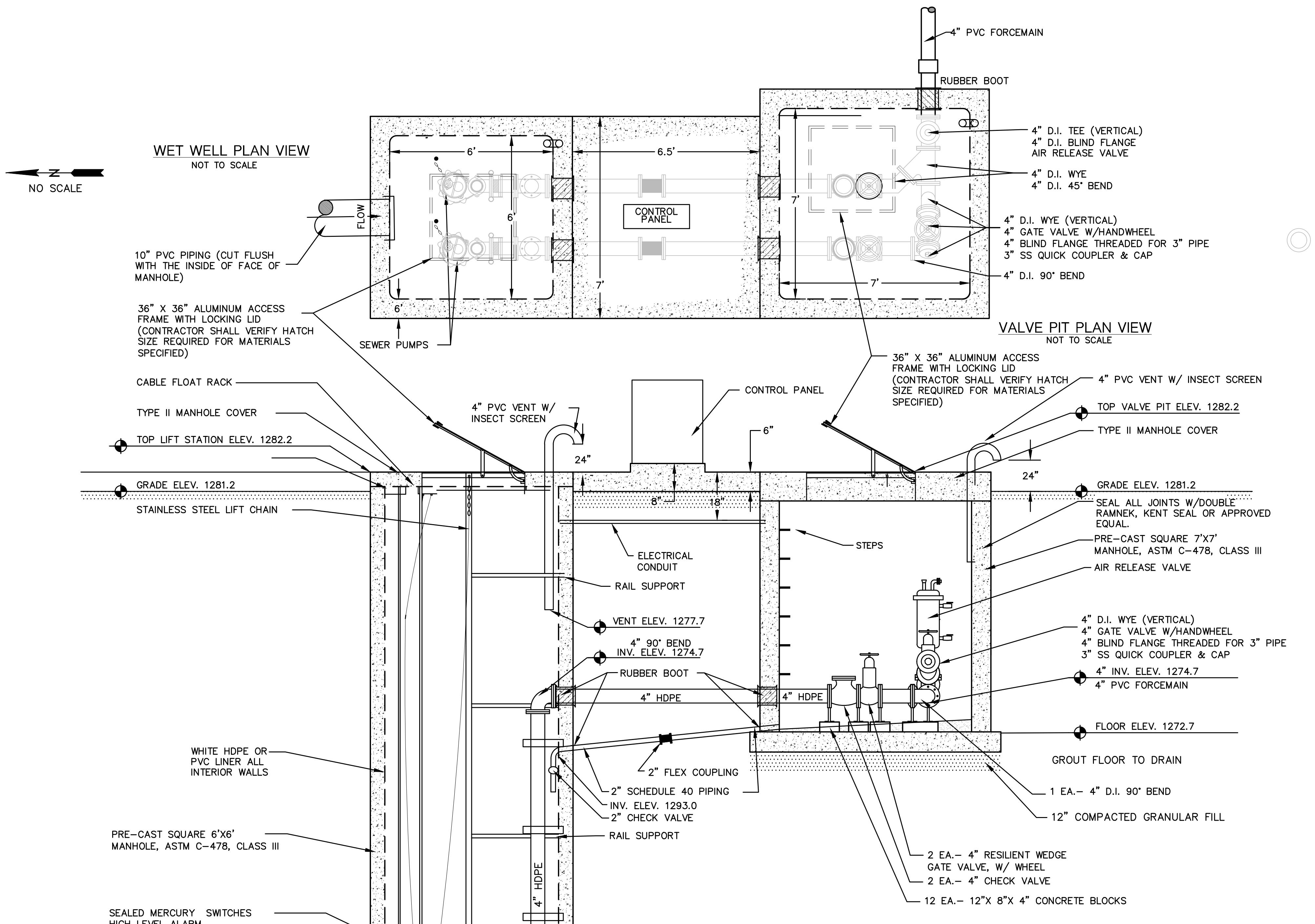
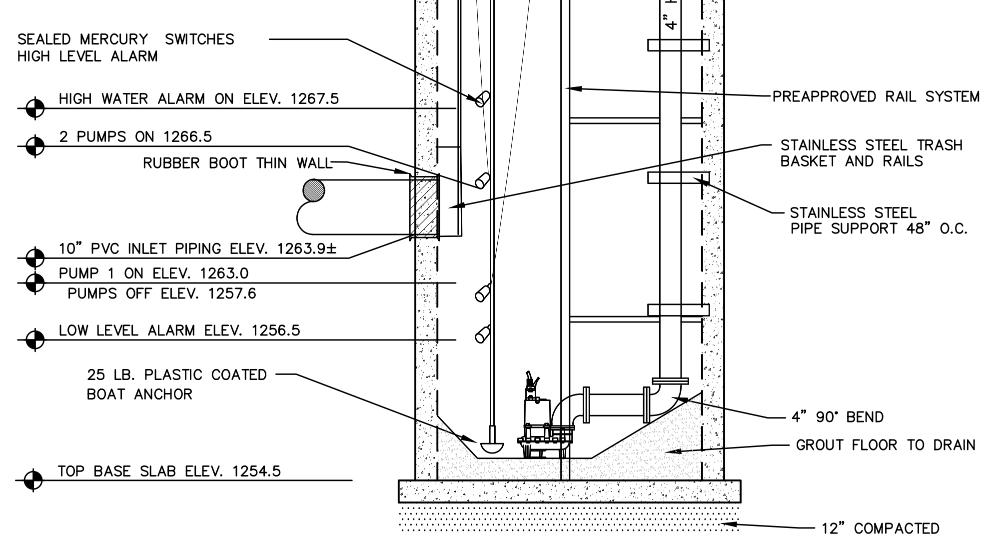
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	LS PLAN
Date:	4/15/26



VALVE PIT ELEVATION VIEW

NOT TO SCALE



WET WELL ELEVATION VIEW

NOT TO SCALE

NOTES: ALL HDPE PIPING, HDPE FITTINGS, HDPE TO PVC ADAPTERS, AND GATE VALVES SHALL BE CONSIDERED INCIDENTAL TO THE LIFT STATION.

ALL BACKFILL MATERIAL AROUND THE LIFT STATION AND VALVE PIT SHALL BE ENGINEERED FILL COMPACTED TO 95% STANDARD FILL.

ALL BRACKETS, SUPPORTS, NUTS, BOLTS, ETC. SHALL BE STAINLESS STEEL GRADE 316

NOTE: THE CONTRACTOR SHALL FURNISH AND INSTALL ON THE JOB SITE A FUSED DISCONNECT SWITCH, NECESSARY FITTINGS, AND UNDERGROUND CABLE. THIS SHALL BE IN ONE UNSPLICED LENGTH FROM THE METER TO THE CONTROL PANEL. THE CONTRACTOR SHALL COORDINATE CONNECTION TO THE NEW SERVICE WITH THE POWER COMPANY.

ALL ELECTRICAL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH STATE AND NATIONAL ELECTRICAL CODE.

BASE BID

No.	Revisions	Date

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

SPN Helms
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416 Production St N.
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Fax: 605.225.3409
Email: bobb@helmsengineering.com

LIFT STATION DETAILS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

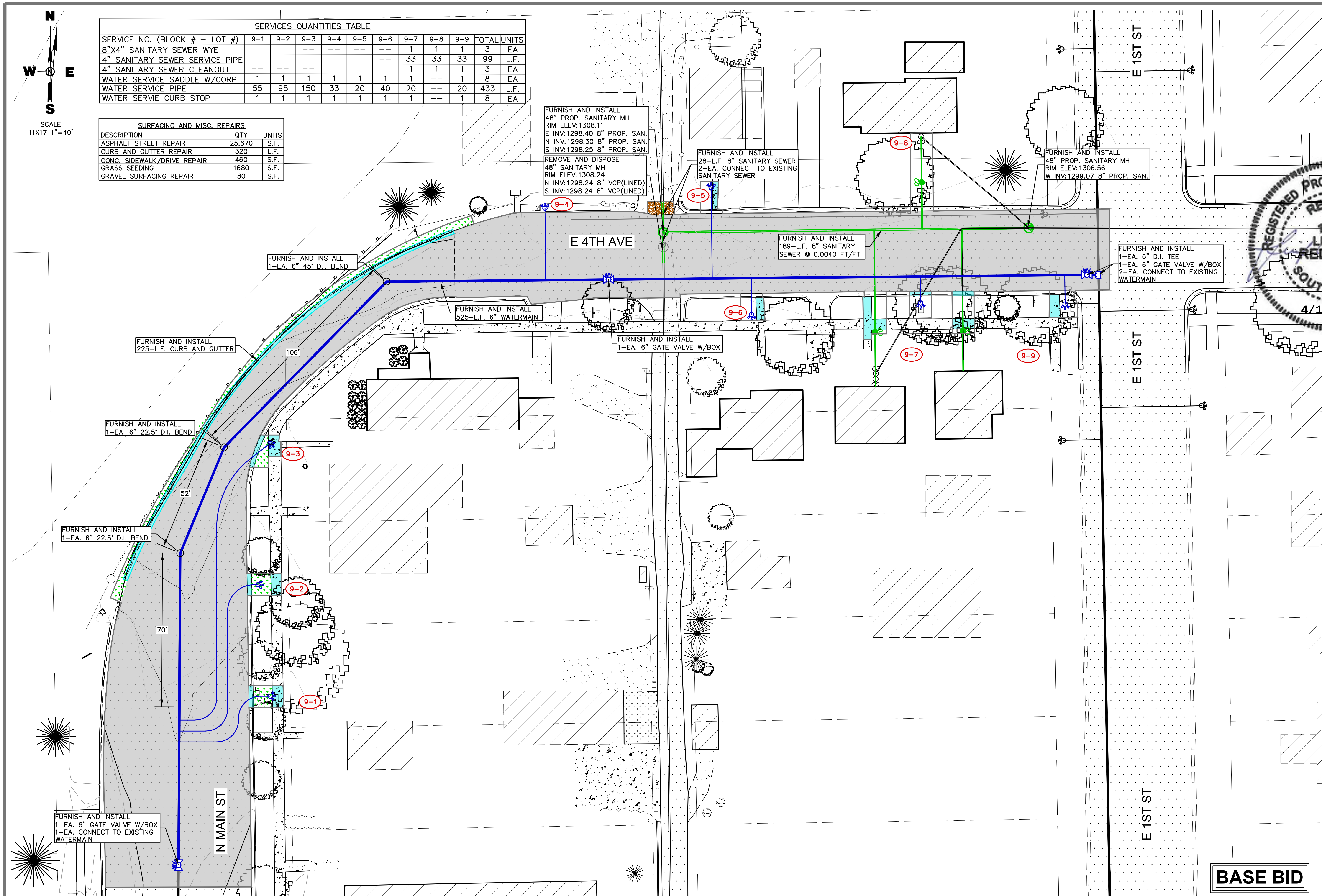
Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No: / VP. No:	6428-P3(01) LS DET
Date:	4/15/26

SERVICES QUANTITIES TABLE

SERVICE NO. (BLOCK # – LOT #)	9–1	9–2	9–3	9–4	9–5	9–6	9–7	9–8	9–9	TOTAL	UNITS
8"X4" SANITARY SEWER WYE	––	––	––	––	––	––	1	1	1	3	EA
4" SANITARY SEWER SERVICE PIPE	––	––	––	––	––	––	33	33	33	99	L.F.
4" SANITARY SEWER CLEANOUT	––	––	––	––	––	––	1	1	1	3	EA
WATER SERVICE SADDLE W/CORP	1	1	1	1	1	1	1	––	1	8	EA
WATER SERVICE PIPE	55	95	150	33	20	40	20	––	20	433	L.F.
WATER SERVIE CURB STOP	1	1	1	1	1	1	1	––	1	8	EA

SURFACING AND MISC. REPAIRS

DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	25,670	S.F.
CURB AND GUTTER REPAIR	320	L.F.
CONC. SIDEWALK/DRIVE REPAIR	460	S.F.
GRASS SEEDING	1680	S.F.
GRAVEL SURFACING REPAIR	80	S.F.



No. | Revisions | Date

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REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

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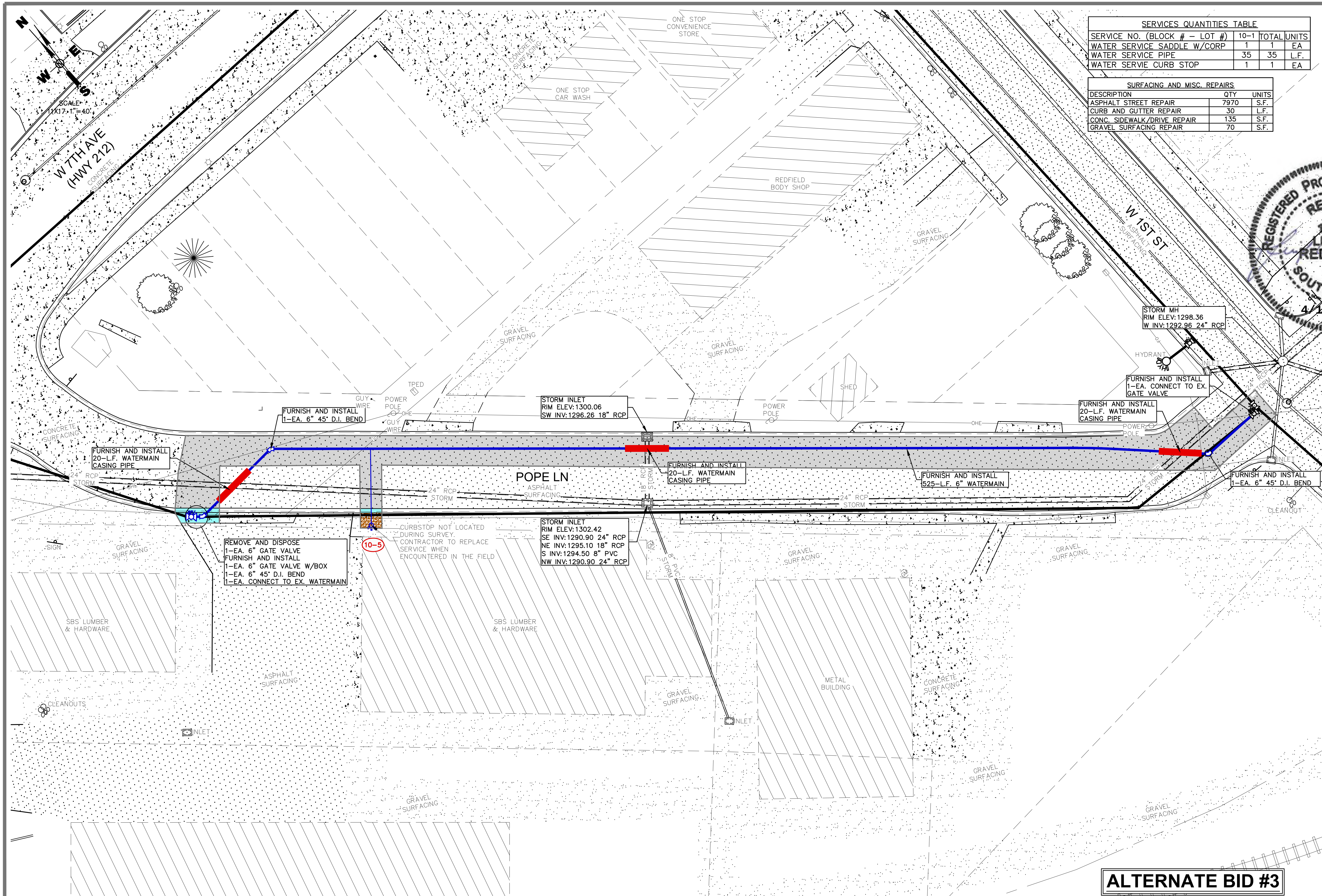
SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

N. MAIN ST- E 4TH AVE WATER/SEWER IMPROVEMENTS

WATER/WASTEWATER SYSTEM
IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	M-4
Date:	4/15/26


N
S
E
W
SCALE
11X17 1"=40'
W 7TH AVE
(HWY 212)
CONCRETE SURFACING
ONE STOP CONVENIENCE STORE
ONE STOP CAR WASH
REDFIELD BODY SHOP
W 1ST ST
ASPHALT SURFACING
GRAVEL SURFACING
SHED
POWER POLE
GUY WIRE
TPED
HYDRANT
STORM MH
RIM ELEV:1298.36
W INV:1292.96 24" RCP
FURNISH AND INSTALL
1-EA. CONNECT TO EX. GATE VALVE
FURNISH AND INSTALL
20-L.F. WATERMAIN CASING PIPE
FURNISH AND INSTALL
1-EA. 6" 45° D.I. BEND
STORM INLET
RIM ELEV:1300.06
SW INV:1296.26 18" RCP
FURNISH AND INSTALL
20-L.F. WATERMAIN CASING PIPE
FURNISH AND INSTALL
525-L.F. 6" WATERMAIN
FURNISH AND INSTALL
1-EA. 6" 45° D.I. BEND
FURNISH AND INSTALL
20-L.F. WATERMAIN CASING PIPE
POPE LN
ASPHALT SURFACING
24" RCP STORM
18" RCP STORM
8" PVC STORM
STORM INLET
RIM ELEV:1302.42
SE INV:1290.90 24" RCP
NE INV:1295.10 18" RCP
S INV:1294.50 8" PVC
NW INV:1290.90 24" RCP
REMOVE AND DISPOSE
1-EA. 6" GATE VALVE
FURNISH AND INSTALL
1-EA. 6" GATE VALVE W/BOX
1-EA. 6" 45° D.I. BEND
1-EA. CONNECT TO EX. WATERMAIN
10-5
CURBSTOP NOT LOCATED DURING SURVEY. CONTRACTOR TO REPLACE SERVICE WHEN ENCOUNTERED IN THE FIELD
SIGN
SBS LUMBER & HARDWARE
METAL BUILDING
CONCRETE SURFACING
CLEANOUTS
CLEANOUT
INLET
OHE

SERVICES QUANTITIES TABLE

SERVICE NO. (BLOCK # – LOT #)	10–1	TOTAL	UNITS
WATER SERVICE SADDLE W/CORP	1	1	EA
WATER SERVICE PIPE	35	35	L.F.
WATER SERVIE CURB STOP	1	1	EA

SURFACING AND MISC. REPAIRS

DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	7970	S.F.
CURB AND GUTTER REPAIR	30	L.F.
CONC. SIDEWALK/DRIVE REPAIR	135	S.F.
GRAVEL SURFACING REPAIR	70	S.F.

ALTERNATE BID #3

Date	No.	Revisions

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota.
Registration No.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

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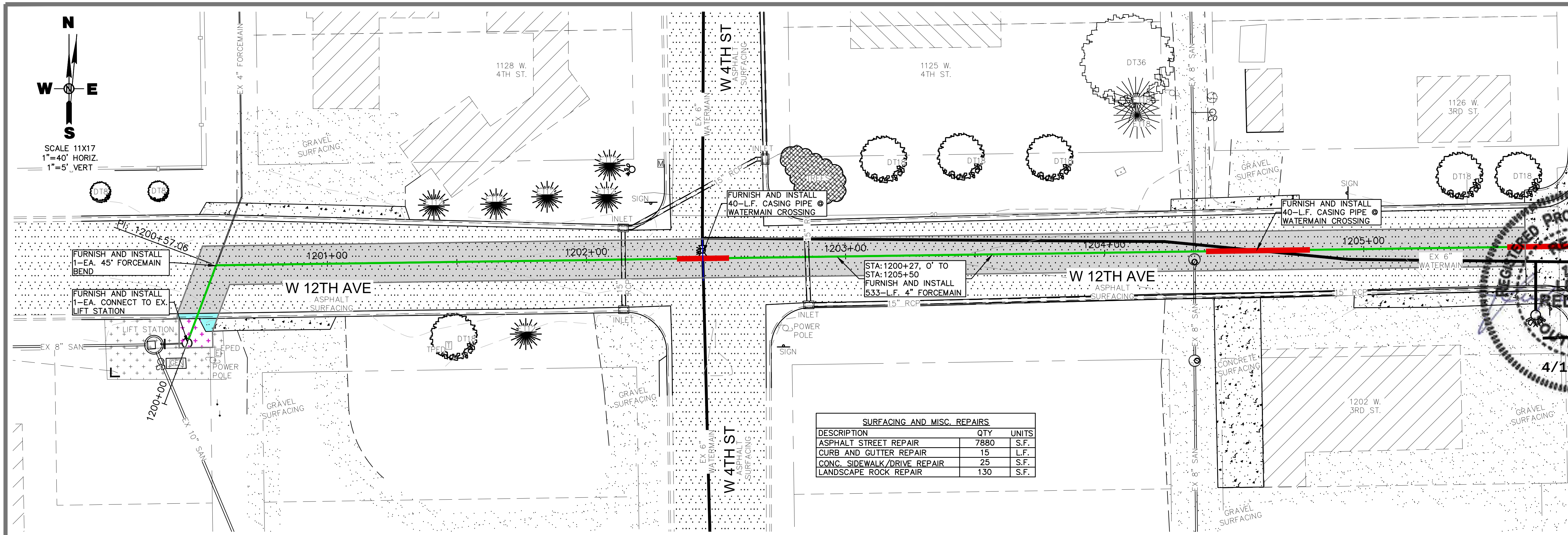
SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

POPE LANE WATER IMPROVEMENTS

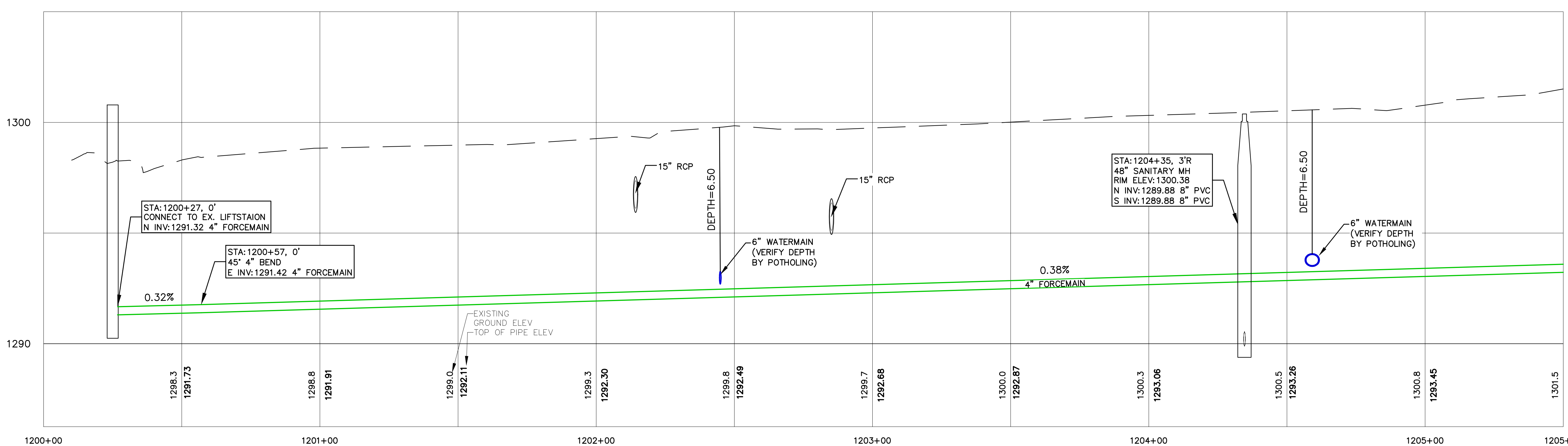
WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	POPE
Date:	4/15/26



SURFACING AND MISC. REPAIRS

DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	7880	S.F.
CURB AND GUTTER REPAIR	15	L.F.
CONC. SIDEWALK/DRIVE REPAIR	25	S.F.
LANDSCAPE ROCK REPAIR	130	S.F.



ALTERNATE BID #4

REGISTERED PROFESSIONAL ENGINEER NO. 12065 LEIF C. REDINGER SOUTH DAKOTA 4/17/2026

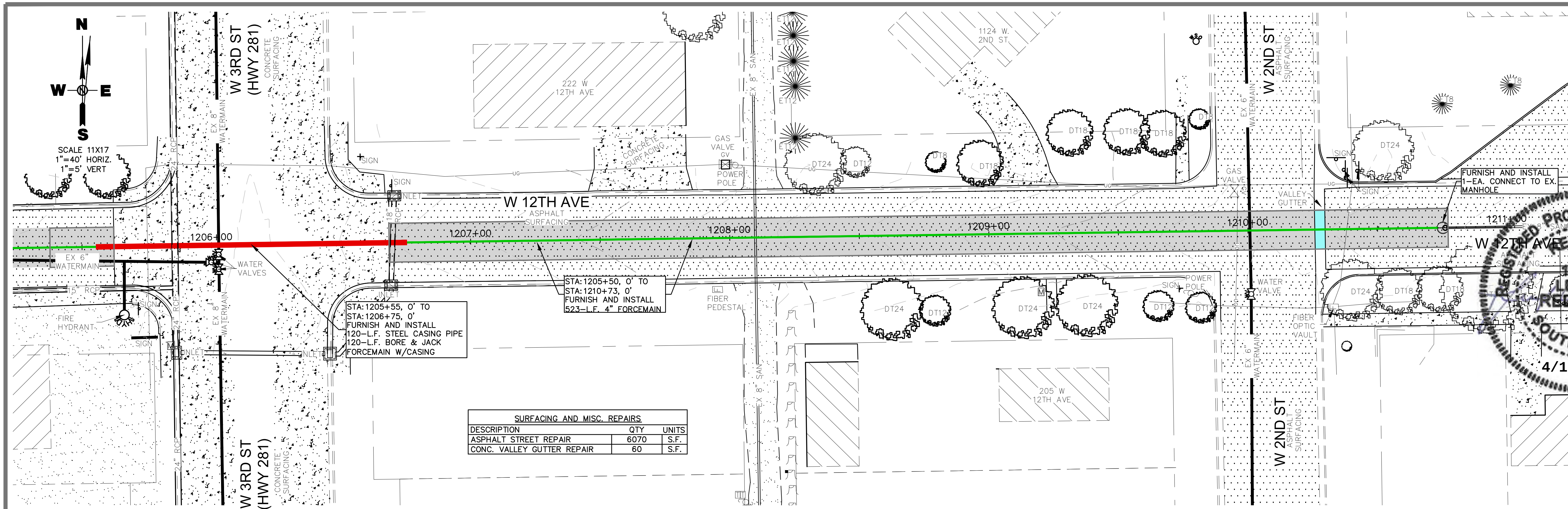
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota.

SPN Helms CIVIL ENGINEERS & LAND SURVEYORS
Aberdeen, SD 57402
Phone: 605.225.1212
Email: bobb@helmsengineering.com

W 12TH AVE FORCEMAIN STA:1200+00 TO 1205+50

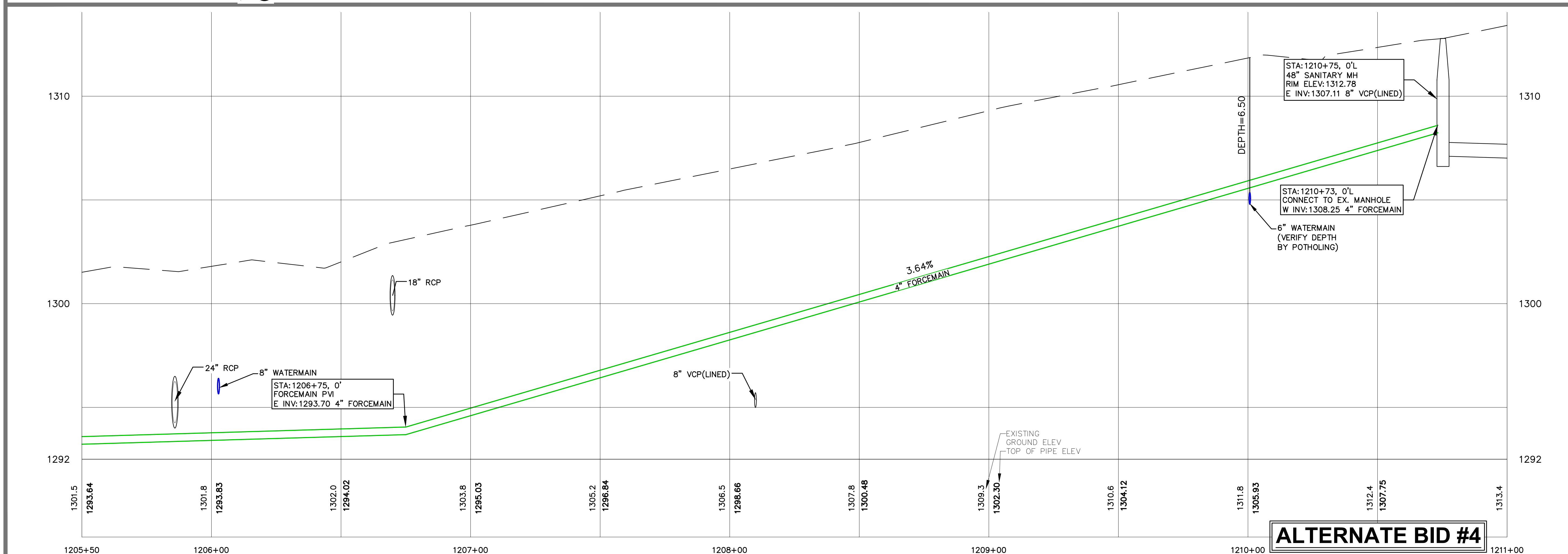
WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	W-12
Date:	4/15/26



SURFACING AND MISC. REPAIRS

DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	6070	S.F.
CONC. VALLEY GUTTER REPAIR	60	S.F.



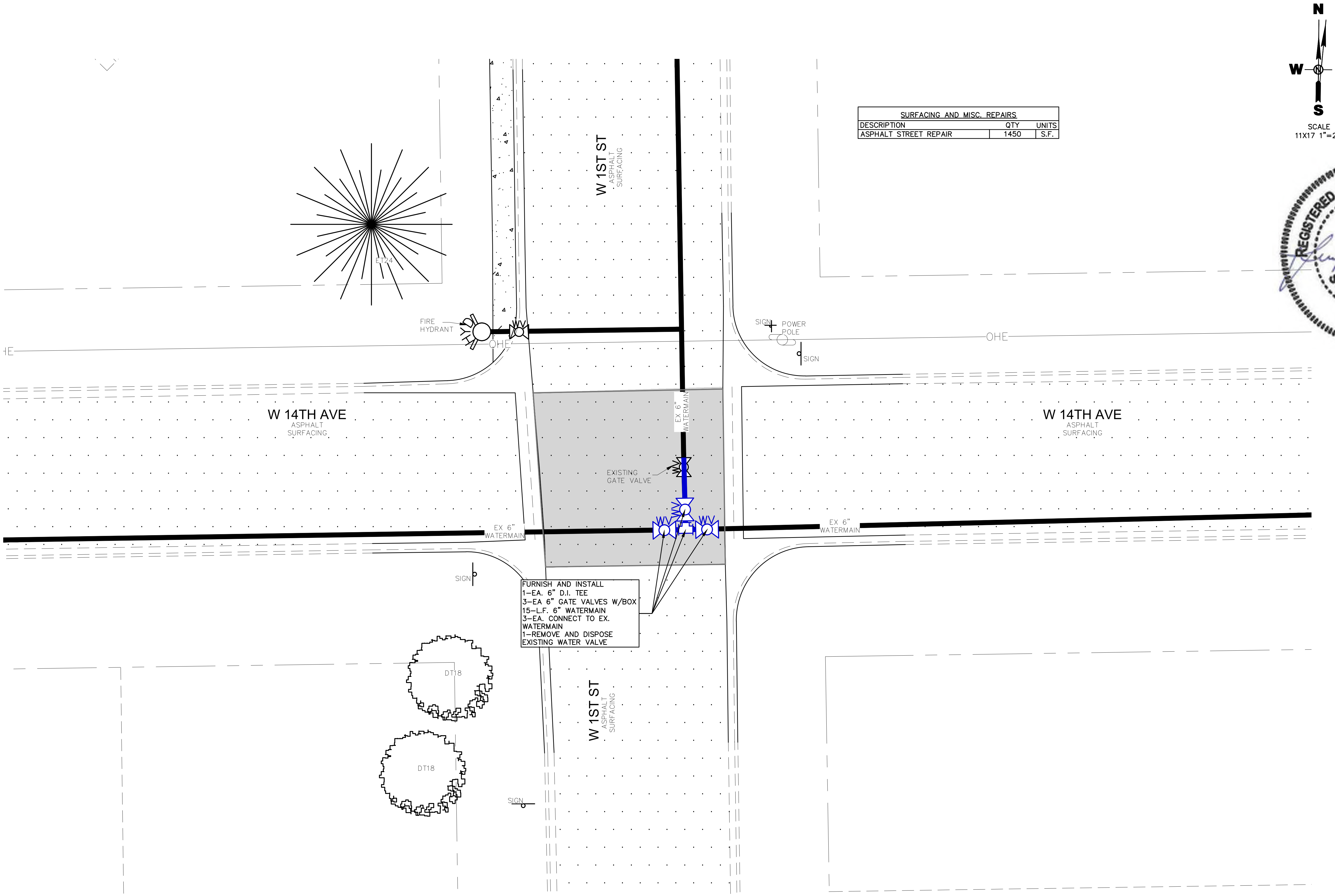
ALTERNATE BID #4

SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS
116 Houghton St N. Aberdeen, SD 57402
Email: bobb@helmsengineering.com

W 12TH AVE FORCEMAIN
STA:1200+00 TO 1205+50

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	W-12 (2)
Date:	4/15/26



SURFACING AND MISC. REPAIRS

DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	1450	S.F.

ALTERNATE BID #1

No.	Revisions	Date

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REGISTERED PROFESSIONAL ENGINEER REG. NO. 12065 LEIF C. REDINGER SOUTH DAKOTA
4/17/2026

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SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

WEST 1ST STREET/ WEST 14TH AVE WATER IMPROVEMENTS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

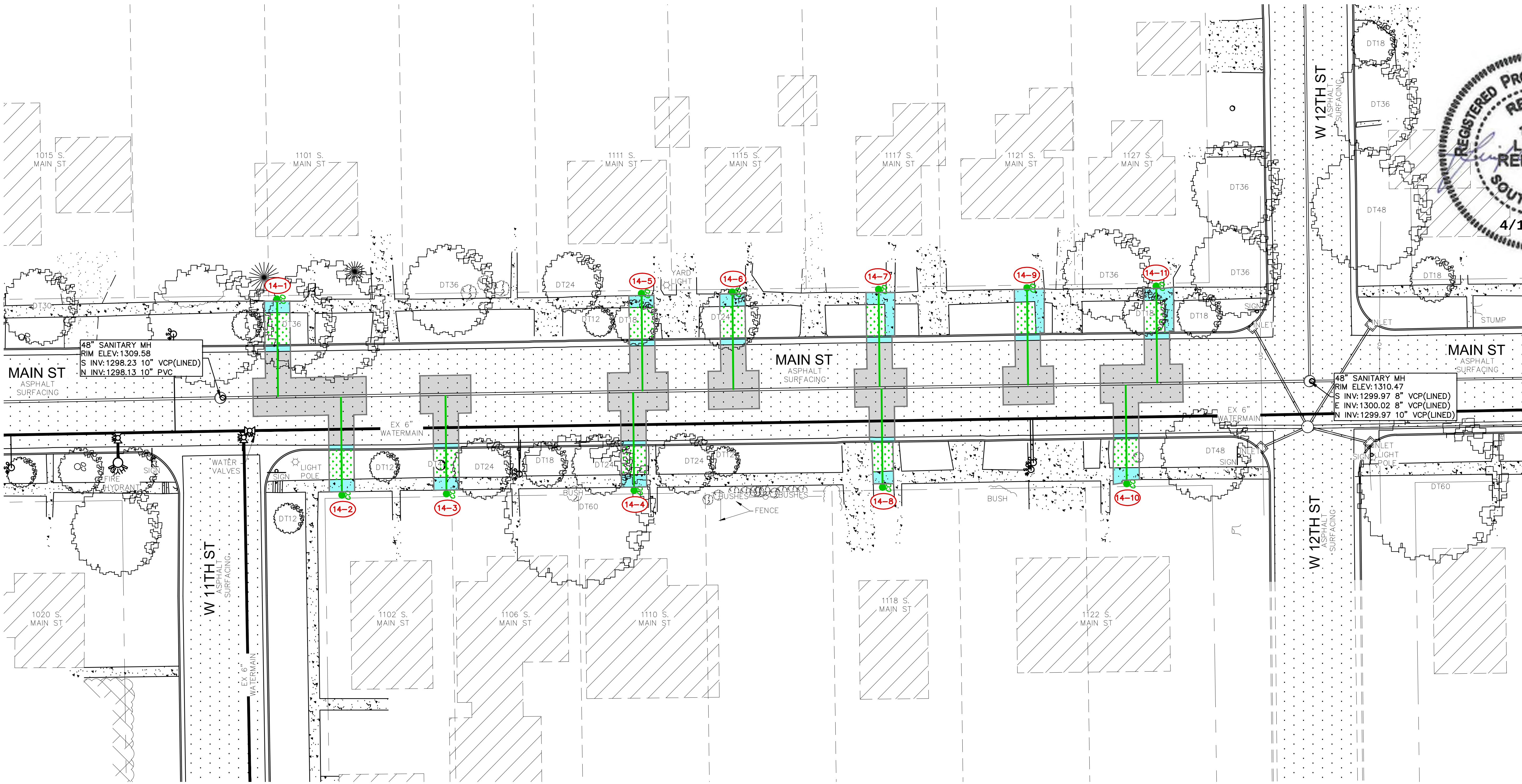
Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	W-1ST
Date:	4/15/26

SURFACING AND MISC. REPAIRS		
DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	3950	S.F.
CURB AND GUTTER REPAIR	110	L.F.
CONC. SIDEWALK/DRIVE REPAIR	690	S.F.
GRASS SEEDING	1230	S.F.

SERVICES QUANTITIES TABLE													
SERVICE NO. (BLOCK # – LOT #)	14–1	14–2	14–3	14–4	14–5	14–6	14–7	14–8	14–9	14–10	14–11	TOTAL	UNITS
8"X4" SANITARY SEWER WYE	1	1	1	1	1	1	1	1	1	1	1	11	EA
4" SANITARY SEWER SERVICE PIPE	40	40	40	40	40	40	40	40	40	40	40	440	L.F.
4" SANITARY SEWER CLEANOUT	1	1	1	1	1	1	1	1	1	1	1	11	EA

N E S W

SCALE 11X17
1"=40' HORIZ.
1"=5' VERT



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REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

No. | Revisions | Date

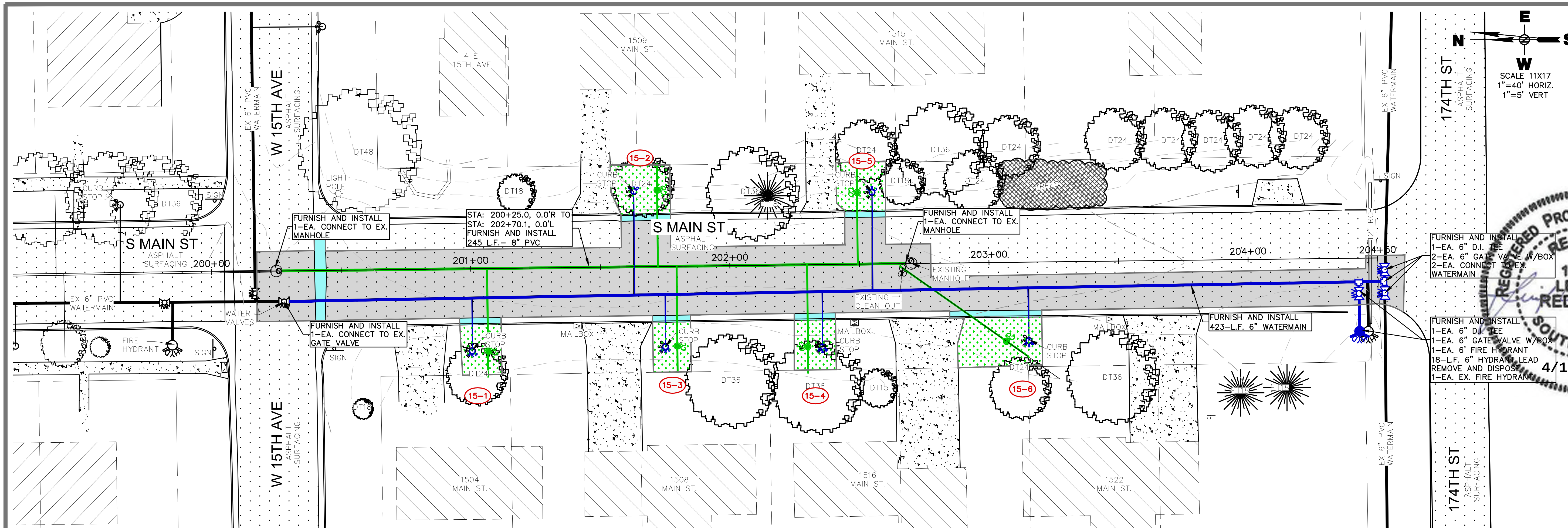
SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS
416 Production St N., Aberdeen, SD 57402
Phone: 605.225.1212, Fax: 605.225.3109
Email: bobb@helmsengineering.com

SOUTH MAIN STREET SEWER SERVICE IMPROVEMENTS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	S-MAIN (2)
Date:	4/15/26

ALTERNATE BID #2

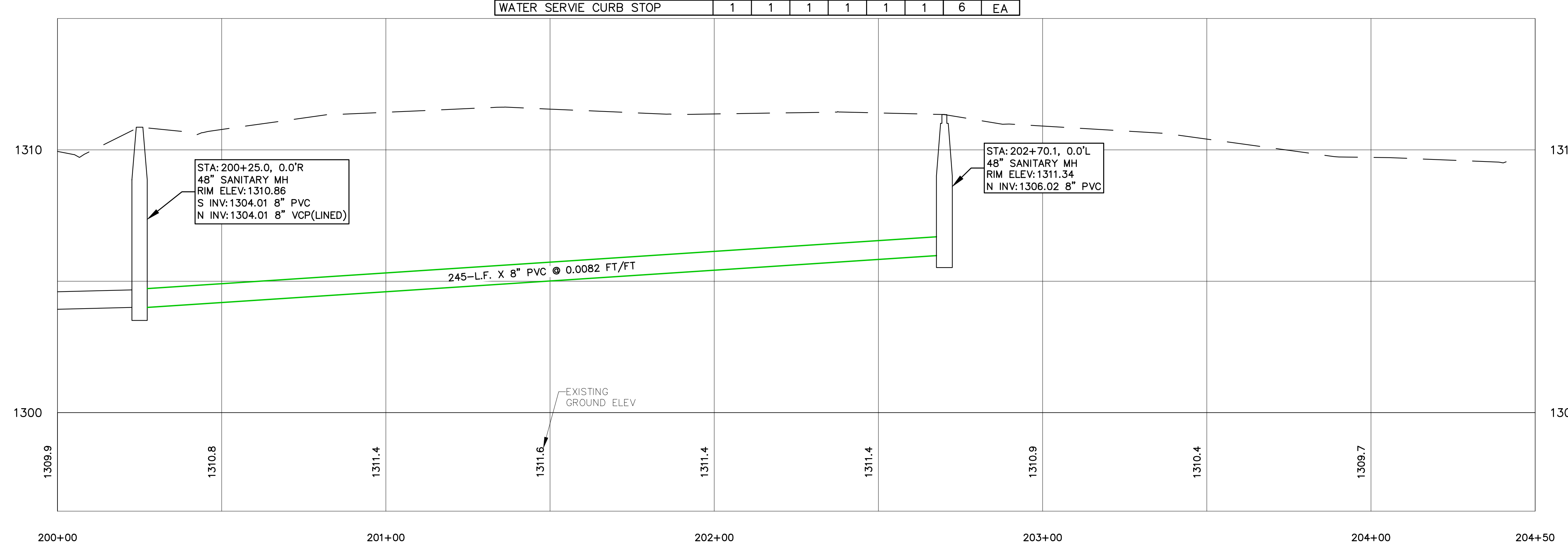


SERVICES QUANTITIES TABLE

SERVICE NO. (BLOCK # - LOT #)	15-1	15-2	15-3	15-4	15-5	15-6	TOTAL	UNITS
8"X4" SANITARY SEWER WYE	1	1	1	1	1	1	6	EA
4" SANITARY SEWER SERVICE PIPE	33	33	33	33	33	33	198	L.F.
4" SANITARY SEWER CLEANOUT	1	1	1	1	1	1	6	EA
WATER SERVICE SADDLE W/CORP	1	1	1	1	1	1	6	EA
WATER SERVICE PIPE	23	40	23	23	40	50	199	L.F.
WATER SERVIE CURB STOP	1	1	1	1	1	1	6	EA

SURFACING AND MISC. REPAIRS

DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	9720	S.F.
CURB AND GUTTER REPAIR	90	L.F.
CONC. VALLEY GUTTER REPAIR	60	S.F.
GRASS SEEDING	2250	S.F.



BASE BID

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REGISTERED PROFESSIONAL ENGINEER 12065 LEIF C. REDINGER SOUTH DAKOTA 4/17/2026

SPN Helms CIVIL ENGINEERS & LAND SURVEYORS

Email: bobb@helmsengineering.com

SOUTH MAIN STREET
STA:200+00 TO 204+50

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	S-MAIN
Date:	4/15/26

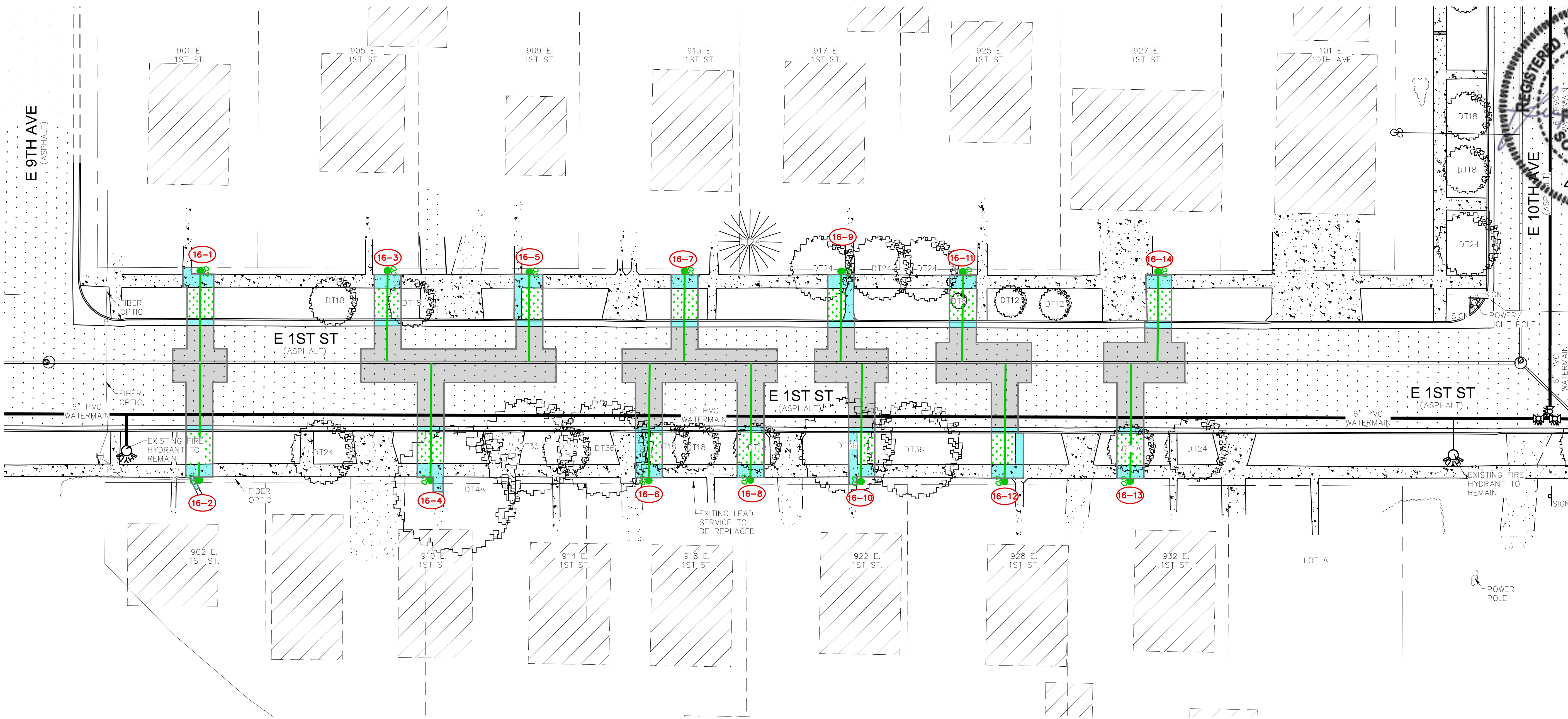
SURFACING AND MISC. REPAIRS		
DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	4920	S.F.
CURB AND GUTTER REPAIR	140	L.F.
CONC. SIDEWALK/DRIVE REPAIR	960	S.F.
GRASS SEEDING	1480	S.F.

SERVICES QUANTITIES TABLE

SERVICE NO. (BLOCK # – LOT #)	16–1	16–2	16–3	16–4	16–5	16–6	16–7	16–8	16–9	16–10	16–11	16–12	16–13	16–14	TOTAL	UNITS
8"X4" SANITARY SEWER WYE	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	EA
4" SANITARY SEWER SERVICE PIPE	40	40	40	40	40	40	40	40	40	40	40	40	40	40	560	L.F.
4" SANITARY SEWER CLEANOUT	1	1	1	1	1	1	1	1	1	1	1	1	1	1	14	EA

N E S W

SCALE 11X17
1"=40' HORIZ.
1"=5' VERT



ALTERNATE BID #2

No. | Revisions | Date

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REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

SPN Helms
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EAST 1ST STREET SANITARY SEWER SERVICE IMPROVEMENTS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

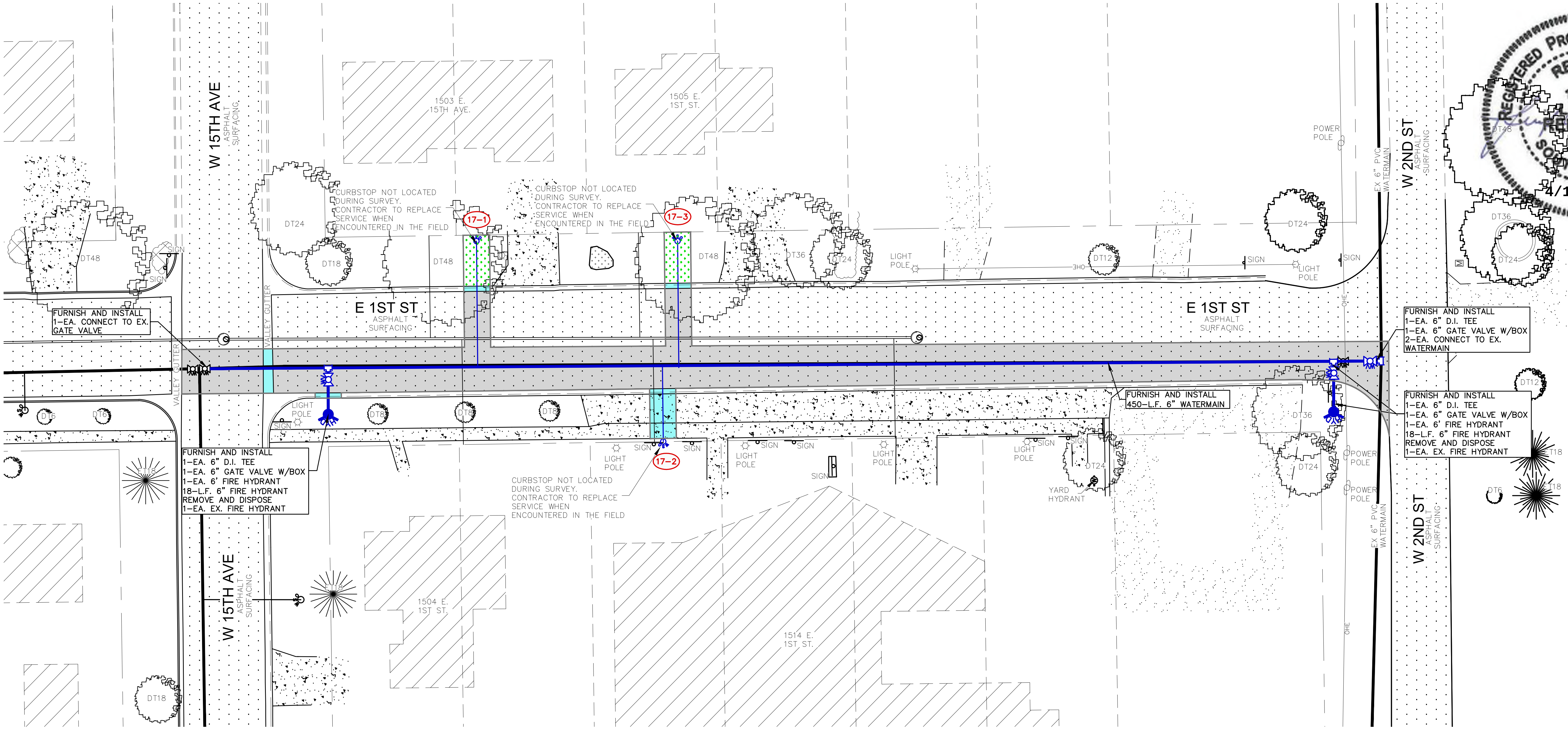
Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	E-1ST (2)
Date:	4/15/26

SERVICES QUANTITIES TABLE					
SERVICE NO. (BLOCK # – LOT #)	17–1	17–2	17–3	TOTAL	UNITS
WATER SERVICE SADDLE W/CORP	1	1	1	3	EA
WATER SERVICE PIPE	50	30	50	130	L.F.
WATER SERVIE CURB STOP	1	1	1	3	EA

SURFACING AND MISC. REPAIRS		
DESCRIPTION	QTY	UNITS
ASPHALT STREET REPAIR	7830	S.F.
CURB AND GUTTER REPAIR	30	L.F.
CONC. SIDEWALK/DRIVE REPAIR	180	S.F.
CONC. VALLEY GUTTER REPAIR	60	S.F.
GRASS SEEDING	400	S.F.

N E S W

SCALE 11X17
1"=40' HORIZ.
1"=5' VERT



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

ALTERNATE BID #1

SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

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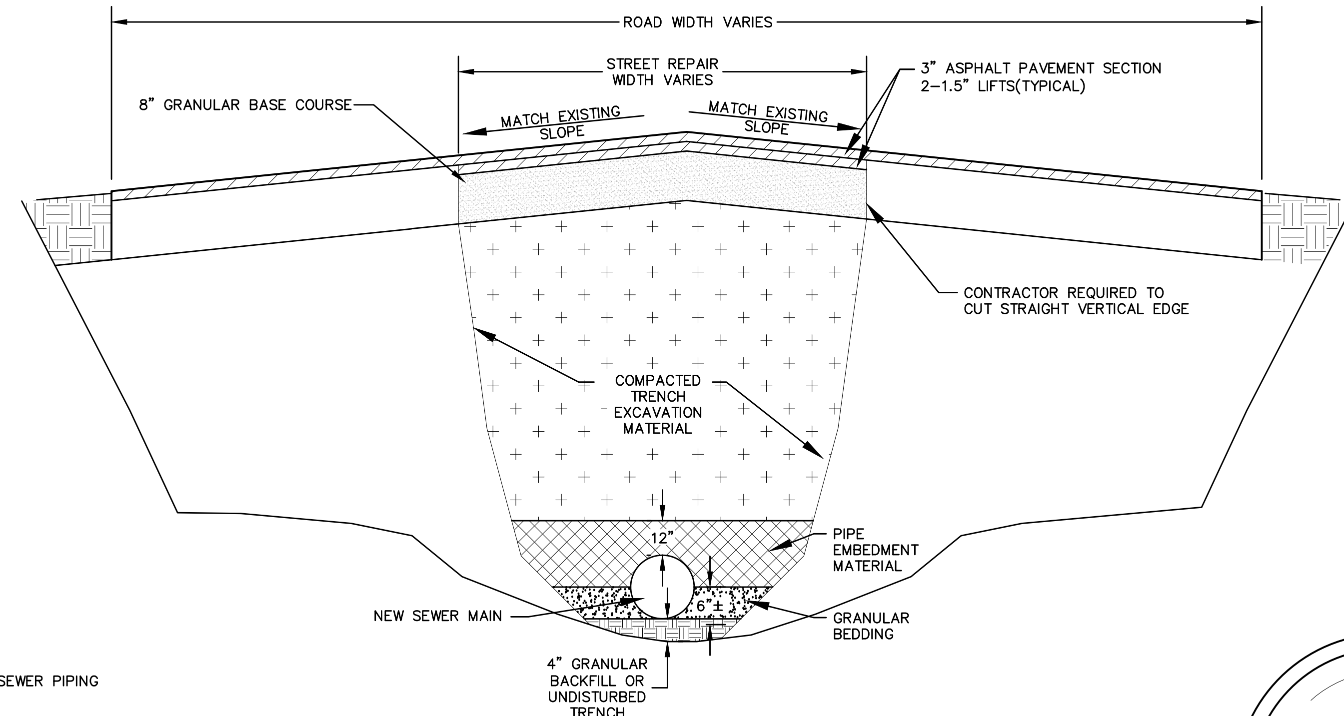
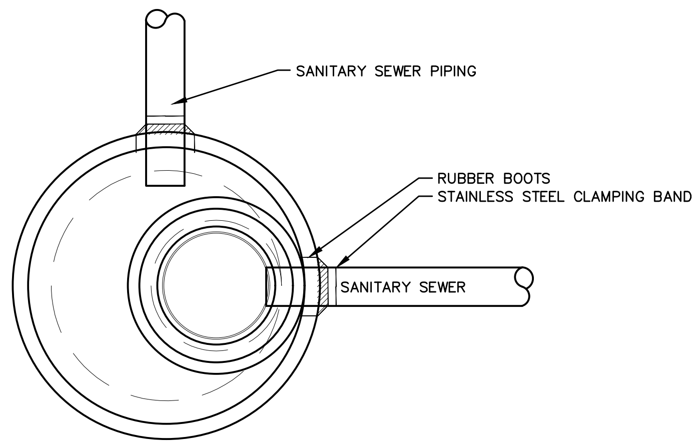
EAST 1ST STREET WATERMAIN IMPROVEMENTS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

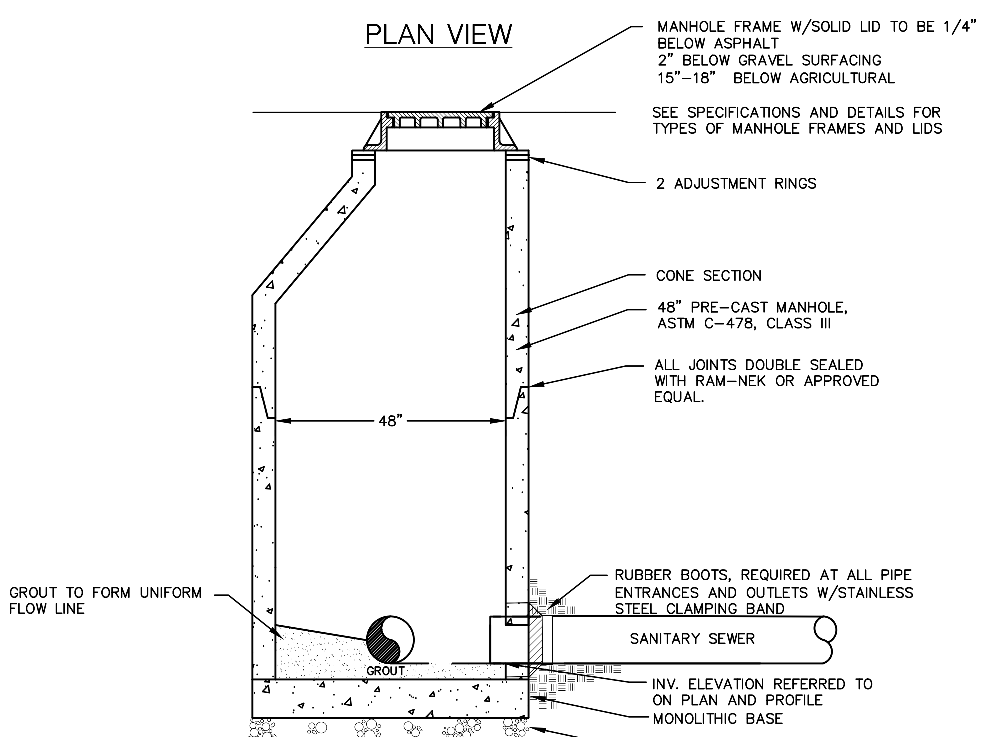
Drawn By:	TMO
Chk'd By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	E-1ST
Date:	4/15/26



PIPE INSTALLATION AND TYPICAL ASPHALT STREET TRENCH REPAIR DETAIL



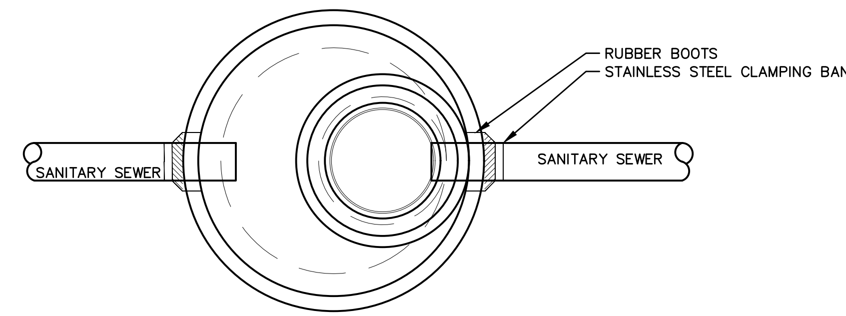
PLAN VIEW



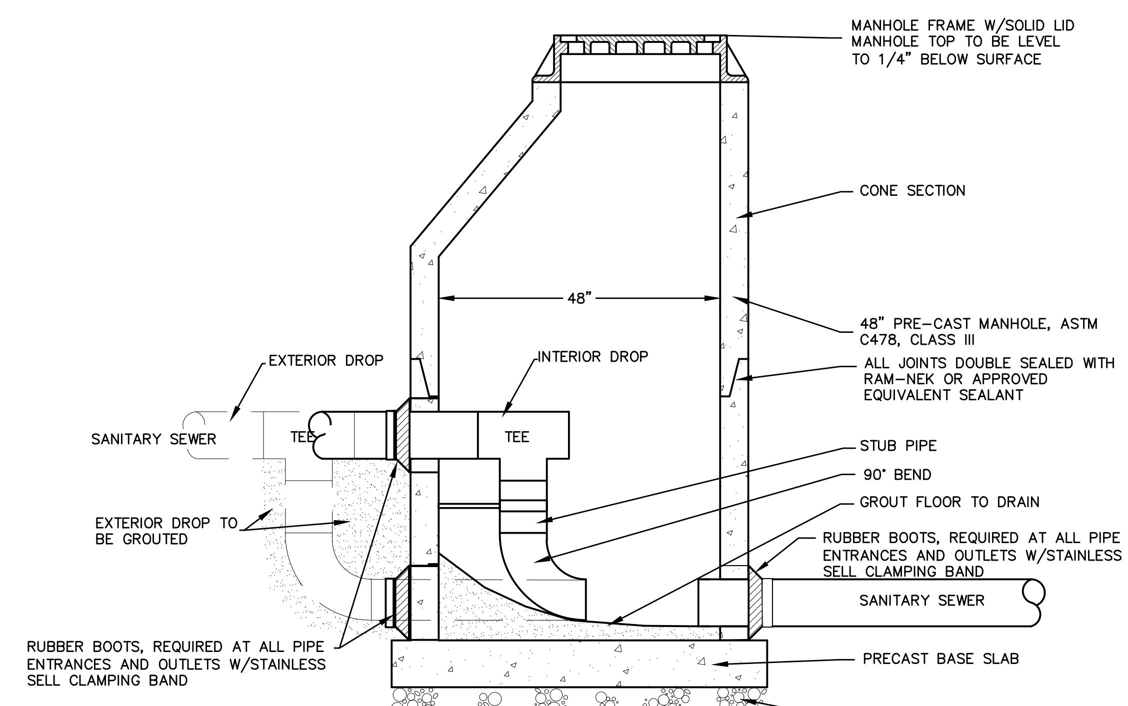
ELEVATION VIEW

48" SANITARY SEWER MANHOLE DETAIL

NO SCALE



PLAN VIEW



ELEVATION VIEW

48" DIA. SANITARY SEWER WITH INTERIOR OR EXTERIOR DROP MANHOLE DETAIL

NO SCALE

No. | Revisions | Date

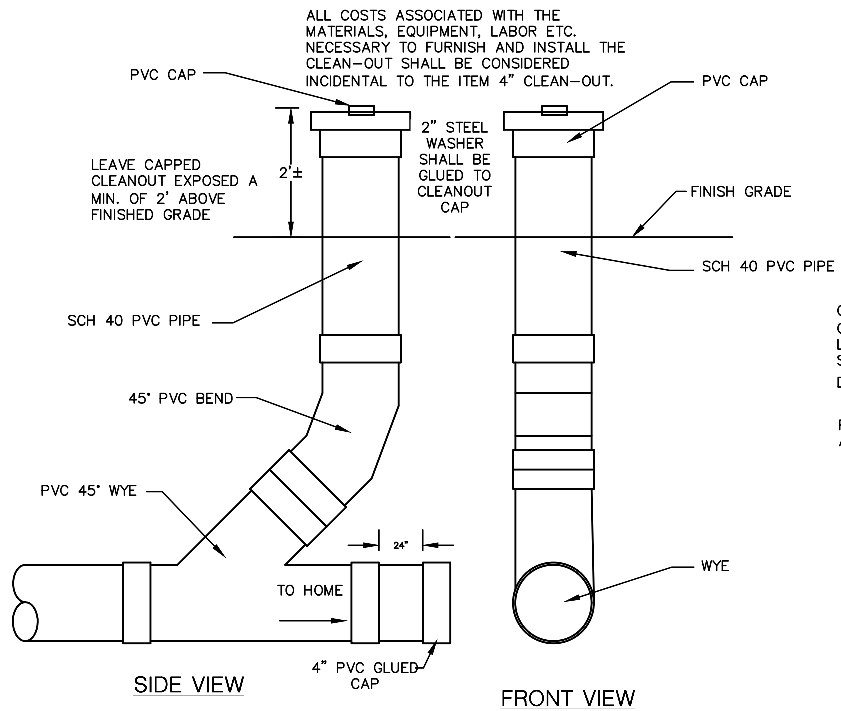
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS
Email: bobb@helmsengineering.com

DETAILS

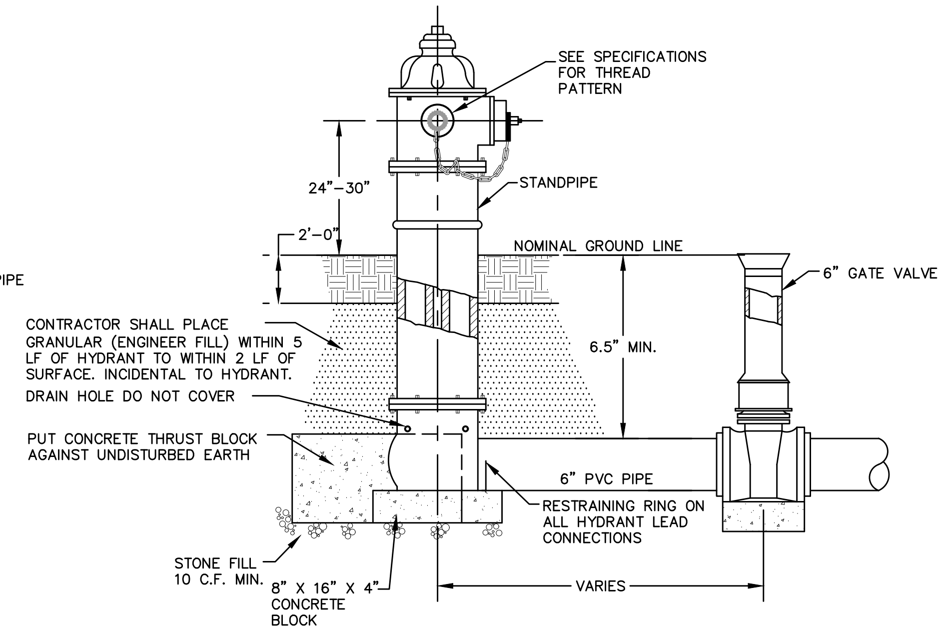
WATER/WASTEWATER SYSTEM
IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	DET(1)
Date:	4/15/26



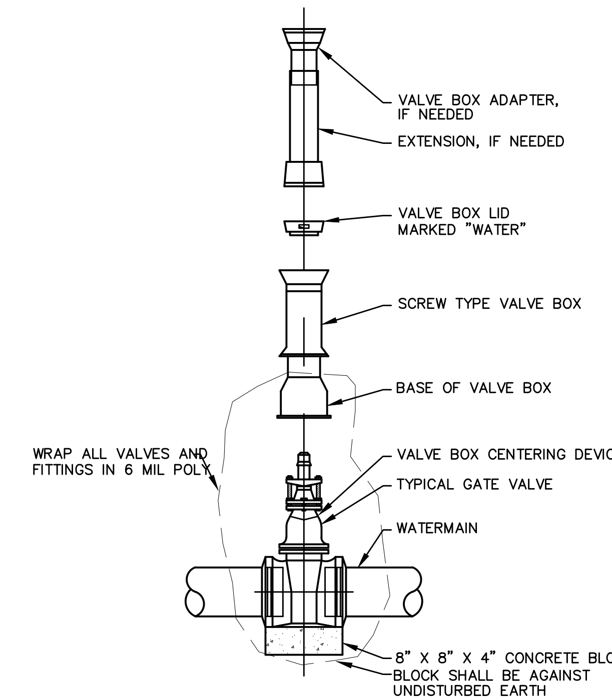
SANITARY SEWER CLEAN-OUT

NO SCALE



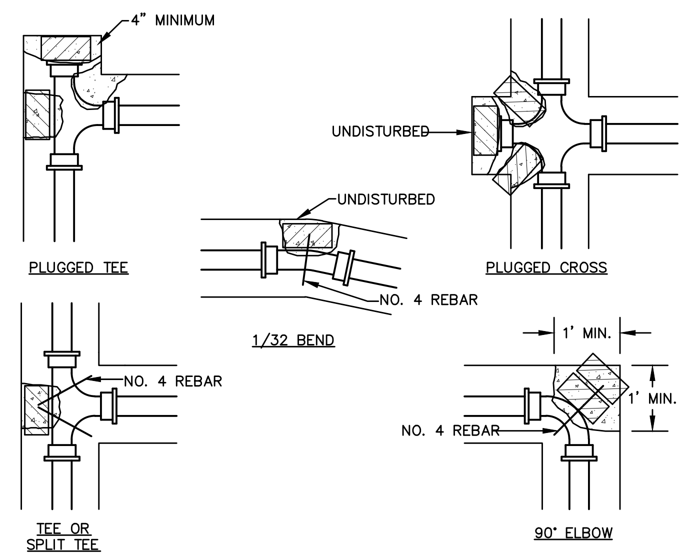
TYPICAL FIRE HYDRANT DETAIL

NO SCALE



TYPICAL GATE VALVE DETAIL

NO SCALE

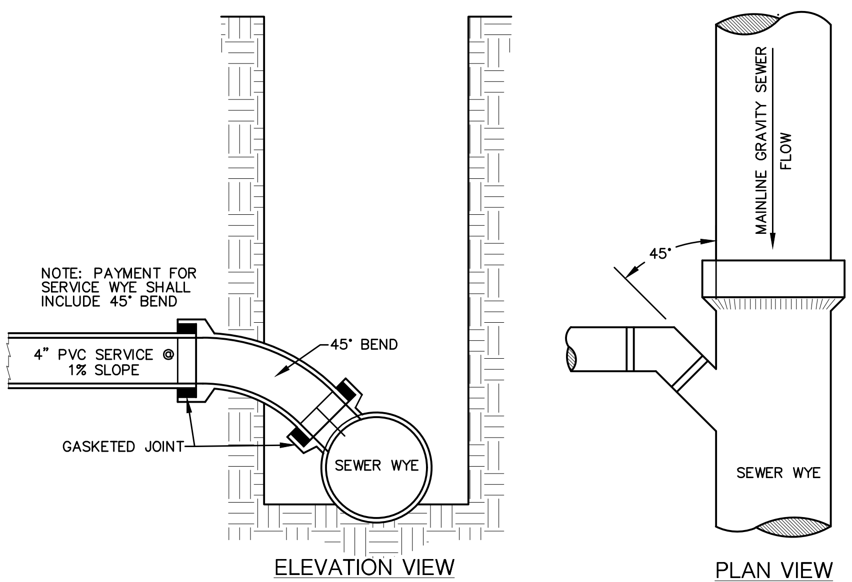


NOTE: SIZE AND TYPE OF THRUST BLOCKING SHALL BE DEPENDENT IN PART ON WATER PRESSURE, PIPE SIZE, TYPE OF FITTING, AND SOIL. CONTRACTOR SHALL DETERMINE EXISTING SOIL TYPE AND CONDITION. CONTRACTOR SHALL SIZE THRUST BLOCKING IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED INSTALLATION PROCEDURES AND GUIDELINES.

PRECAST CONCRETE SOLID BLOCKS MAY BE USED FOR BLOCKING ALL BLOCKS USED MUST BE IN 4" MINIMUM THICKNESS X 8" WIDE X 16" LONG.

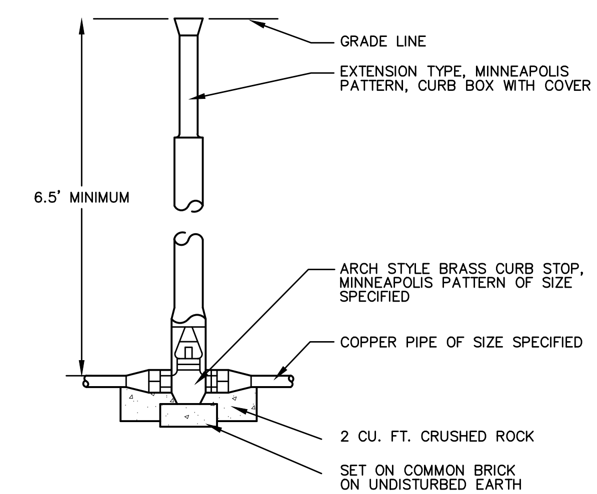
TYPICAL THRUST BLOCK DETAILS

NO SCALE



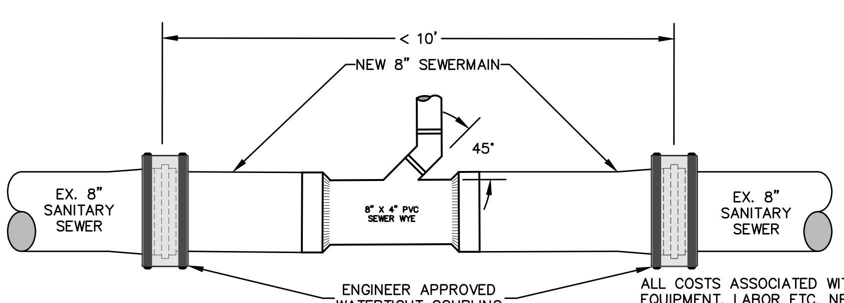
TYPICAL SERVICE WYE

NO SCALE



TYPICAL CURB STOP DETAIL

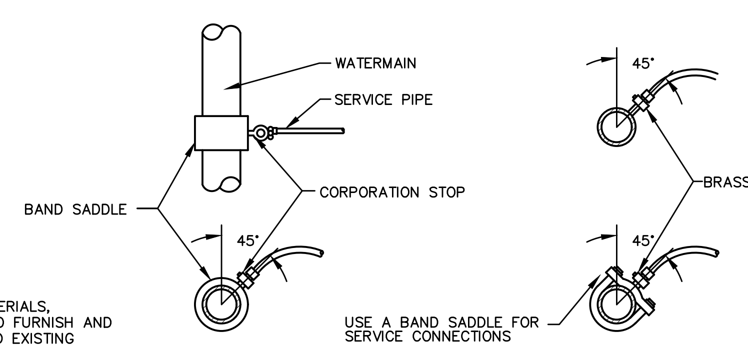
NO SCALE



ALL COSTS ASSOCIATED WITH THE MATERIALS, EQUIPMENT, LABOR ETC. NECESSARY TO FURNISH AND INSTALL THE WYE, AND CONNECTION TO EXISTING SEWERMAIN SHALL BE CONSIDERED INCIDENTAL TO THE ITEM "8 X 4 SANITARY SEWER WYE (LINING BLOCK)"

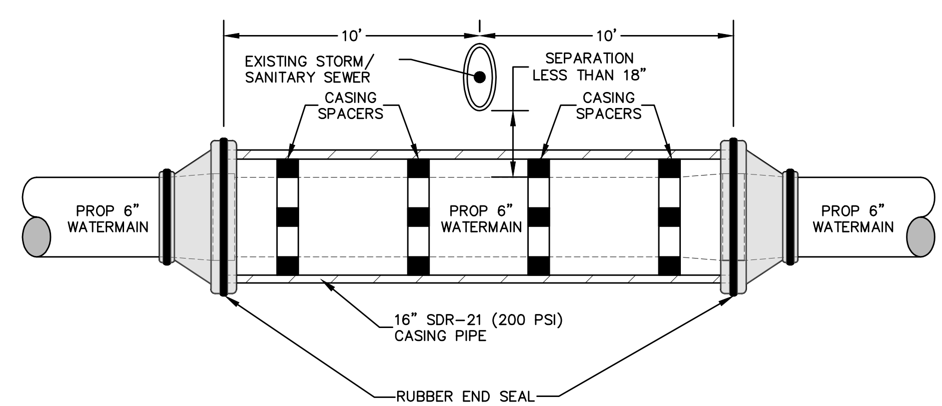
SERVICE WYE (LINING BLOCK)

NO SCALE



TYPICAL CORPORATION STOP DETAIL

NO SCALE



WATERMAIN ENCASEMENT

NO SCALE

No.	Revisions	Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota. Registration No.

REGISTERED PROFESSIONAL ENGINEER REG. NO. 12065 LEIF C. REDINGER SOUTH DAKOTA

4/17/2026

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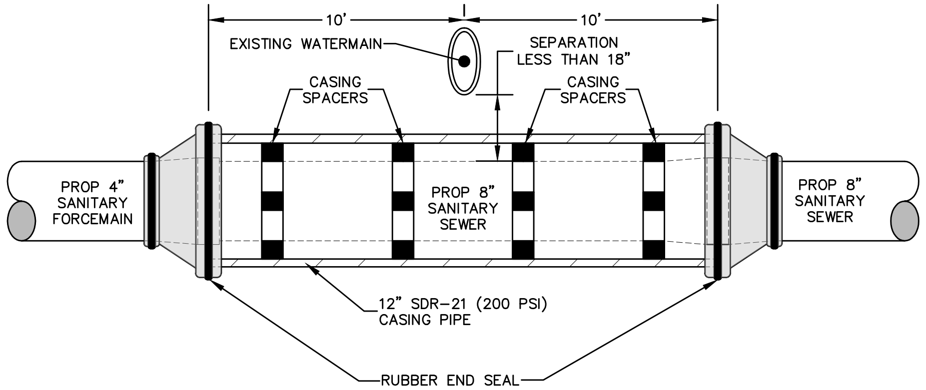
SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

DETAILS

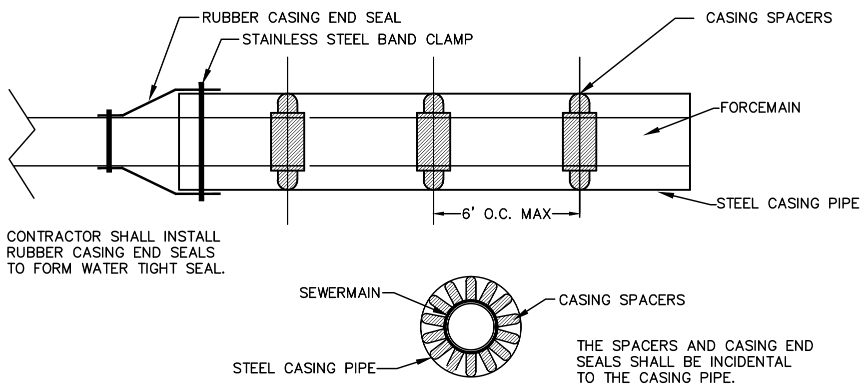
WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No: VP. No:	6428-P3(01) DET(2)
Date:	4/15/26



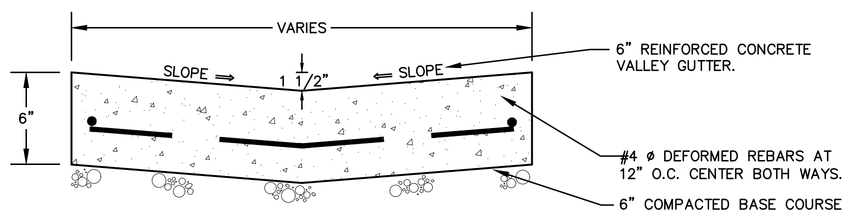
FORCEMAIN ENCASEMENT (NON HIGHWAY)

NO SCALE



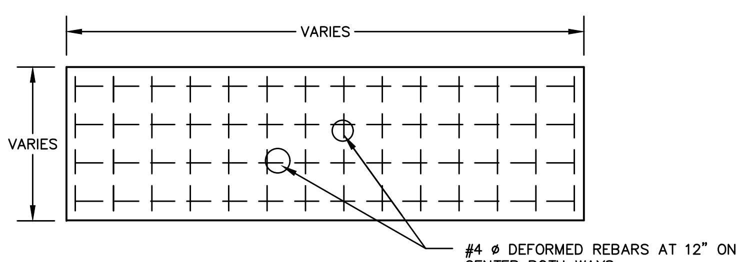
HIGHWAY CASING DETAIL

NO SCALE



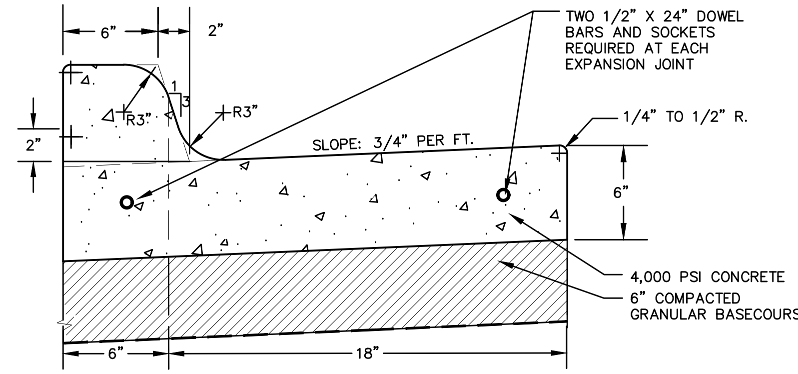
SECTION A-A

NO SCALE



CONCRETE VALLEY GUTTER DETAIL

NO SCALE



1/2" PREFORMED EXPANSION JOINT FILLERS SHALL BE PLACED TRANSVERSALLY IN THE CURB AND GUTTER AS FOLLOWS.

1. AT EACH JUNCTION OF RADIUS RETURN CURB AND GUTTER WHICH IS PARALLEL TO THE PROJECT CENTER LINE.

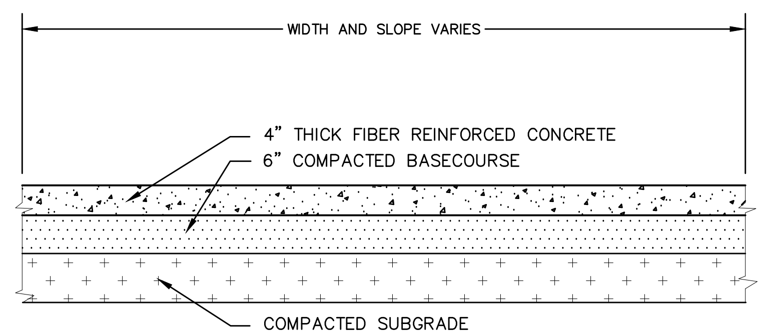
2. AT EACH JUNCTION WITH EXISTING CONCRETE CURB OR CONCRETE CURB AND GUTTER.

3. AT EACH JUNCTION WITH EXISTING CONCRETE SIDEWALK, TO THE DEPTH OF THE SIDEWALK.

WEAKENED PLANE JOINTS SHALL BE CONSTRUCTED AT 10' INTERVALS EXCEPT WHEN CURB AND GUTTER IS TO BE CONSTRUCTED ADJACENT TO PCC PAVEMENT. THEN THE JOINTS SHALL COINCIDE WITH THE PCC PAVEMENT'S TRANSVERSE JOINTS. THE JOINTS SHALL BE CONSTRUCTED TO A DEPTH OF ONE INCH BY SCORING WITH A TOOL WHICH WILL LEAVE THE CORNERS ROUNDED AND INSURE THE FREE MOVEMENT OF CONCRETE AT THE JOINT.

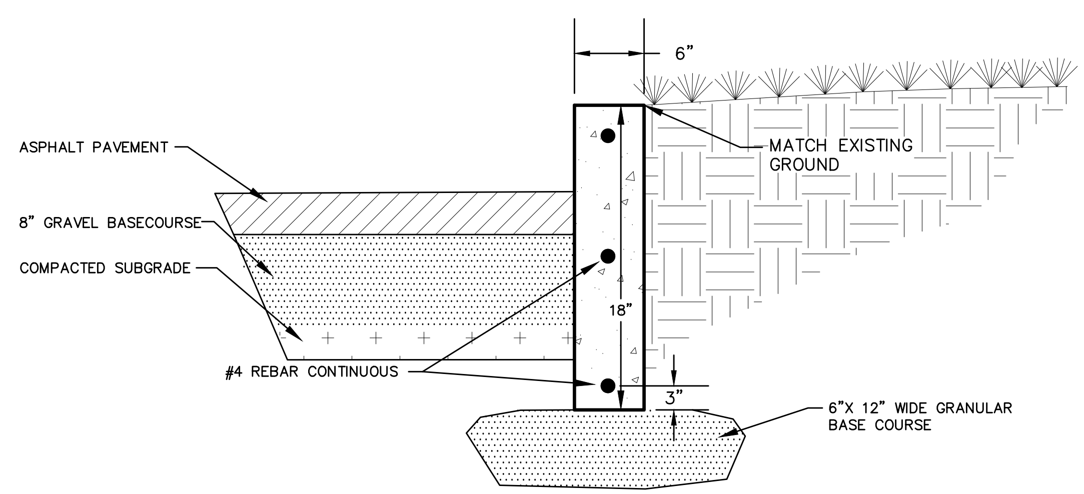
CONCRETE CURB AND GUTTER DETAIL

NO SCALE



CONCRETE CONCRETE SIDEWALK DETAIL

NO SCALE



CONCRETE HEADER CURB DETAIL

NO SCALE

No.	Revisions	Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

SPN Helms
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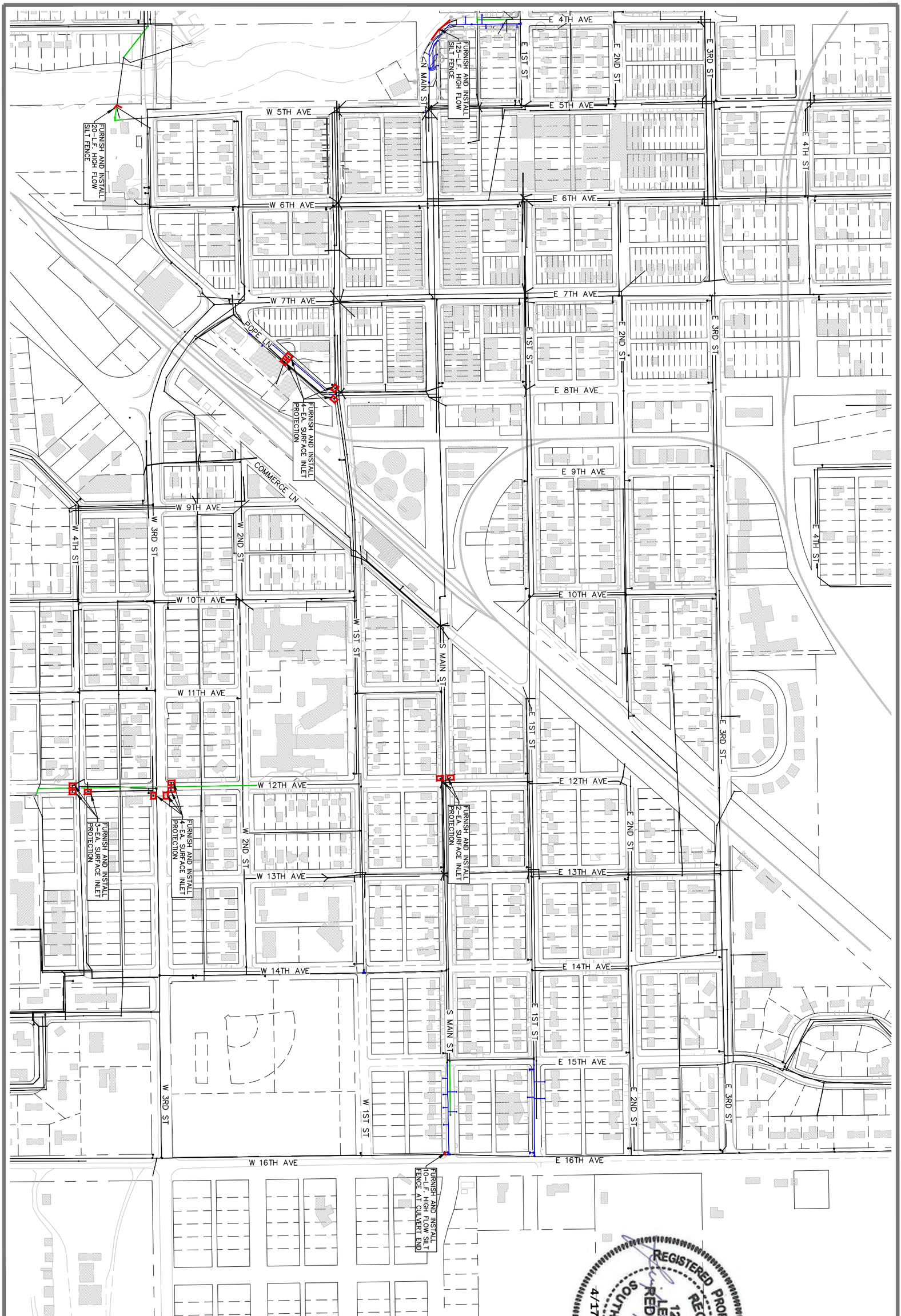
Aberdeen, SD 57402
Email: bobb@helmsengineering.com

DETAILS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	DET(3)
Date:	4/15/26



STORM WATER POLLUTION PREVENTION PLAN

WATER/WASTEWATER SYSTEM
IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

SPN Helms
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REGISTERED PROFESSIONAL ENGINEER
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12065
SOUTH DAKOTA
4/17/2023

I hereby certify that this plan, specification, or report 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.

No.	Revisions	Date

Drawn By: TMD
Chk By: LCR
Proj. No: A6427-8
Dept. No: 6428-P3(01)
VP. No: SWPPP01
Date: 4/15/26

STORMWATER POLLUTION PREVENTION PLAN CHECKLIST

(The numbers left of the title headings are **reference numbers** to the GENERAL PERMIT FOR STORM WATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES (Stormwater Permit))

5.3 (2): STAFF TRAINING/SWPPP IMPLEMENTATION

To promote stormwater management awareness specific for this project, the Contractor's Erosion Control Supervisor should provide correspondence of how the SWPPP will be implemented. The Contractor's Erosion Control Supervisor is responsible for providing this information at the preconstruction meeting, and subsequently completing an attendance log, which should identify site-specific implementation of the SWPPP and the names of the personnel who attended the preconstruction meeting. Documentation of the preconstruction meeting will be filed with the SWPPP documents.

5.3 (3): DESCRIPTION OF CONSTRUCTION ACTIVITIES

5.3 (3a): **Project Limits** (See Title Sheet)
5.3 (3a): **Project Description** (See Title Sheet)
5.3 (4): **Site Map(s)** (See Title Sheet and Plans)

Major Soil Disturbing Activities (check all that apply)

- ___ Clearing and grubbing
- _X_ Excavation/ Borrow
- ___ Filling
- _X_ Other (describe): Removal and replacement of existing Sanitary Sewer piping and manholes, and reconstruction of disturbed pavement and misc. items.

5.3 (3b): **Total Project Area:** ± 6.5 Acres
5.3 (3b) **Total Area to be Disturbed:** ±1.6 Acres
5.3 (3c) **Maximum Area to be Disturbed at One Time:** ± 1.0 Acres
5.3 (3d): **Existing Vegetative Cover (%):** 40%
5.3 (3d): **Description of Vegetative Cover:** Residential Lawns
5.3 (3e): **Soil Properties**: AASHTO Soil Classification SC and CH
5.3 (3f): **Name of Receiving Water Body/Bodies**: Turtle Creek
5.3 (3g): **Location of Construction Support Activity Areas:** See CSPP Project Layout Sheet

5.3 (4): ORDER OF CONSTRUCTION ACTIVITIES

The Contractor will enter the Estimated Start Date.

- Install perimeter protection where runoff may exit site.
- Install perimeter protection around stockpiles.
- Install inlet and culvert protection.
- Remove existing pavement surfacing and topsoil.
- Install utilities .
- Final paving.
- Final grading and topsoil replacement.
- Removal of protection devices.
- Reseed all areas disturbed by removal activities.

5.3 (5): DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES

All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report. Include the technical reasoning for selecting each control. (check all that apply)

Perimeter Controls (See Detail Plan Sheets)

- ___ Natural Buffers (within 50 ft of Waters of State)
- _X_ Silt Fence
- ___ Erosion Control Wattles
- ___ Temporary Berm / Windrow
- ___ Stabilized Construction Entrances
- ___ Entrance/Exit Equipment Tire Wash
- ___ Other:

Structural Erosion and Sediment Controls

- _X_ Silt Fence
- ___ Temporary Berm / Windrow
- ___ Erosion Control Wattles
- ___ Temporary Sediment Barriers
- ___ Erosion Bales
- ___ Temporary Slope Drain
- ___ Turf Reinforcement Mat
- ___ Riprap
- ___ Gabions
- ___ Rock Check Dams
- ___ Sediment Traps/Basins
- _X_ Culvert Inlet Protection
- ___ Transition Mats
- ___ Median/ Area Drain Inlet Protection
- _X_ Curb Inlet Protection
- ___ Interceptor Ditch
- ___ Concrete Washout Facility
- ___ Work Platform
- ___ Temporary Water Barrier
- ___ Temporary Water Crossing
- ___ Permanent Stormwater Ponds
- ___ Permanent Open Vegetated Swales
- ___ Natural Depressions to allow for Infiltration
- ___ Sequential Systems that combine several practices
- ___ Other:

Dust Controls

- ___ Tarps & Wind Impervious Fabrics
- _X_ Watering
- _X_ Stockpile location/ orientation
- ___ Dust Control Chlorides
- ___ Other:

Dewatering BMPs

- ___ Sediment Basins
- ___ Dewatering bags
- ___ Weir Tanks
- ___ Temporary Diversion Channel
- ___ Other:

Stabilization Practices (See Detail Plan Sheets)

(Stabilization measures shall begin the following work day whenever earth disturbing activity on any portion of the site has temporarily or permanently ceased. Temporary stabilization shall be completed as soon as practicable but no later than 14 days after initiating soil stabilization activities (3.18))

- ___ Vegetation Buffer Strips
- ___ Temporary Seeding (Cover Crop Seeding)
- _X_ Permanent Seeding
- ___ Sodding
- ___ Planting (Woody Vegetation for Soil Stabilization)
- ___ Mulching (Grass Hay or Straw)
- ___ Fiber Mulching (Wood Fiber Mulch)
- ___ Soil Stabilizer
- _X_ Bonded Fiber Matrix
- _X_ Fiber Reinforced Matrix
- ___ Erosion Control Blankets
- ___ Surface Roughening (e.g. tracking)
- ___ Other:

Wetland Avoidance

Will construction and/or erosion and sediment controls impinge on regulated wetland? Yes ___ No _X_ If yes, the structural and erosion and sediment controls have been included in the total project wetland impacts and have been included in the 404 permit process with the USACE.

5.3 (6): PROCEDURES FOR INSPECTIONS

- Inspections will be conducted at least once every 7 days.
- All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- Silt fence will be inspected for depth of sediment and for tears to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches ½ the height of the dam.
- All seeded areas will be checked for bare spots, washouts, and vigorous growth free of significant weed infestations.
- Inspection and maintenance reports will be included on the weekly progress report for each site inspection, this report will also be used to document changes to SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
- The Resident Project Engineer and the Contractor's Erosion Control Supervisor are responsible for ensuring the weekly inspections are completed. The Resident Project Representative (RPR) shall complete the weekly inspection and maintenance reports and provide a copy to the Project Engineer. All maintenance and repair activities are the responsibility of the Contractor.

5.3 (7): POST CONSTRUCTION STORMWATER MANAGEMENT

Stormwater management will be handled by temporary controls outlined in "DESCRIPTION AND MAINTENANCE OF CONTROL MEASURES" above, and any permanent controls needed to meet permanent stormwater management needs in the post construction period will be shown in the plans and noted as permanent.

No. Revisions Date

I Hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the law of the State of South Dakota. Registration No.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

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SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

SWPPP NOTES

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	SWPPN(1)
Date:	4/15/26

5.3 (8): POLLUTION PREVENTION PROCEDURES

5.3 (8A): Spill Prevention and Response Procedures

Material Management

House Keeping

- Only needed products will be stored on-site by the Contractor.
- Except for bulk materials the contractor will store all materials under cover and/or in appropriate containers.
- Products must be stored in original containers and labeled.
- Material mixing will be conducted in accordance with the manufacturer's recommendations.
- When possible, all products will be completely used before properly disposing of the container off-site.
- The manufacturer's directions for disposal of materials and containers will be followed.
- The Contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
- Dust generated will be controlled in an environmentally safe manner.

Hazardous Materials

- Products will be kept in original containers unless the container is not resealable and provide secondary containment as applicable.
- Original labels and material safety data sheets will be retained in a safe place to relay important product information.
- In surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, de-greasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants will be conducted on an impervious surface and under cover during wet weather to prevent the release of contaminants onto the ground.
- Wheel wash water will be collected and allowed to settle out suspended solids prior to discharge. Wheel wash water will not be discharged directly into any stormwater system or stormwater treatment system.
- Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, residuals from concrete saw cutting (either wet or dry), and mixer washout waters will be collected on site and managed to prevent contamination of stormwater runoff.

Spill Control Practices

In addition to the previous housekeeping and management practices, the following practices will be followed for spill prevention and cleanup if needed.

- For all hazardous materials stored on site, the manufacturer's recommended methods for spill cleanup will be clearly posted. Site personnel will be made aware of the procedures and the locations of the information and cleanup supplies.
- Appropriate cleanup materials and equipment will be maintained by the Contractor in the materials storage area on-site. As appropriate, equipment and materials may include items such as brooms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for cleanup purposes.
- All spills will be cleaned immediately after discovery and the materials disposed of properly.
- The spill area will be kept well ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- After a spill a report will be prepared describing the spill, what caused it, and the cleanup measured taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurrences.
- The Contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator.

Spill Response

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into stormwater runoff and conveyance systems. If the release has impacted on-site stormwater, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens stormwater or surface water at the site, the spill response procedures outlined below must be implemented in a timely manner to prevent the release of pollutants.

- The Contractor's site superintendent will be notified immediately when a spill or threat of a spill is observed. The superintendent will assess the situation and determine the appropriate response.
- If spills represent an imminent threat of escaping erosion and sediment controls and entering receiving waters, personnel will be directed to respond immediately to contain the release and notify the superintendent after the situation has been stabilized.
- Spill kits containing appropriate materials and equipment for spill response and cleanup will be maintained by the Contractor at the site.
- If oil sheen is observed on surface water (e.g. settling ponds, detention ponds, swales), action will be taken immediately to remove the material causing the sheen. The Contractor will use appropriate materials to contain and absorb the spill. The source of the oil sheen will also be identified and removed or repaired as necessary to prevent further releases.
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SD DANR
- Personnel with primary responsibility for spill response and cleanup will receive training by the Contractor's site superintendent or designee. The training must include identifying the location of the spill kits and other spill response equipment and the use of spill response materials.
- Spill response equipment will be inspected and maintained as necessary to replace any materials used in spill response activities

5.3 (8b): WASTE MANAGAGEMENT PROCEDURES

Waste Disposal

- All liquid waste materials will be collected and stored in approved sealed containers. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal and notices stating proper practices will be posted. The Contractor is responsible for ensuring waste disposal procedures are followed.

Hazardous Waste

- All hazardous waste materials will be disposed of in a manner specified by local or state regulations or by the manufacturer. Site personnel will be instructed in these practices, and the Contractor will be responsible for seeing that these practices are followed.

Sanitary Waste

- Portable sanitary facilities will be provided on all construction sites. Sanitary waste will be collected from the portable units which must be secured to prevent tipping and serviced in a timely manner by a licensed waste management Contractor or as required by any local regulations.

5.3 (9): CONSTRUCTION SITE POLLUTANTS

The following materials or substances are expected to present on the site during the construction period. These materials will be handled as noted under the heading "POLLUTION PREVENTION PROCEDURES" (check all that apply)

___	Concrete and Portland Cement
___	Detergents
X	Paints
X	Metals
X	Bituminous Materials
X	Petroleum Based Products
X	Diesel Exhaust Fluid
___	Cleaning Solvents
___	Wood
___	Cure
___	Texture
___	Chemical Fertilizers
___	Other:

Product Specific Practices

Petroleum Products

All on-site vehicles will be monitored for leaks and receive regular preventive maintenance to reduce the chance of leakage. Petroleum products will be stored in tightly sealed containers which are clearly labeled.

Fertilizers

Fertilizers will be applied only in the amounts specified by the Engineer. Once applied, fertilizers will be worked into the soil to limit the exposure to stormwater. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

Paints

All containers will be tightly sealed and stored when not required for use. The excess will be disposed of according to the manufacturer's instructions and any applicable state and local regulations.

Concrete Trucks

Contractors will provide designated truck washout facilities on the site. These areas must be self contained and not connected to any stormwater outlet of the site. Upon completion of construction, the area at the washout facility will be properly stabilized.

5.3 (10): NON-STORMWATER DISCHARGES

The following non-stormwater discharges are anticipated during the course of this project (check all that apply).

___	Discharge from water line flushing
___	Pavement wash-water, where no spills or leaks of toxic or hazardous materials have occurred.
X	Uncontaminated ground water associated with dewatering activities.

5.3 (11): INFEASIBILITY DOCUMENTATION

If it is determined to be infeasible to comply with any of the requirements of the Stormwater Permit, the infeasibility determination must be thoroughly documented in the SWPPP.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
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SOUTH DAKOTA
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SWPPP NOTES

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	SWPPN(2)
Date:	4/15/26

5.3 (12): SPILL NOTIFICATION

In the event of a spill, the Contractor's site superintendent will make the appropriate notification(s), consistent with the following procedures:

A release or spill of regulated substance (includes petroleum and petroleum products) must be reported to SD DANR immediately **if any one of the following** conditions exists:

- The release or spill threatens or is able to threaten waters of the state (surface water or ground water)
- The release or spill causes an immediate danger to human health or safety
- The release or spill exceeds 25 gallons
- The release or spill causes a sheen on surface water
- The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01
- The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:54:01
- The release or spill of any substance that harms or threatens to harm wildlife or aquatic life.
- The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

To report a release or spill, call SD DANR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SD DANR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for release. A written report of the unauthorized release of any regulated substance, including quantity discharged, and the location of the discharge shall be sent to the SD DANR within 14 days of the discharge.

5.4: SWPPP CERTIFICATIONS

Certification of Compliance with Federal, State, and Local Regulations

The Storm Water Pollution Prevention Plan (SWPPP) for this project reflects the requirements of all local municipal jurisdictions for storm water management and sediment and erosion control as established by ordinance, as well as other state and federal requirements for the sediment and erosion control plans, permits, notices or documentation as appropriate.

City of Redfield

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assume that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment knowing violations.

_____

Authorized Signature (See the General Permit, Section 7.4 (1))

Prime Contractor

This section is to be executed by the General Contractor after the award of the contract. This section may be executed any time there is a change in the Prime Contractor of the project.

I certify under penalty of law that this document and all attachments will be revised or maintained under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____

Authorized Signature

CONTACT INFORMATION

The following personnel are duly authorized representatives and have signatory authority for modifications made to the SWPPP:

Contractor Information:

Prime Contractor Name:_____

Contractor Contact Name:_____

Address:_____

City:_____State:_____Zip:_____

Office Phone:_____Field:_____

Cell Phone:_____Fax:_____

Erosion Control Supervisor

Name:_____

Address:_____

City:_____State:_____Zip:_____

Office Phone:_____Field:_____

Cell Phone:_____Fax:_____

Project Engineer

Name: Leif Redinger

Business Address: 416 Production St. N

Job Office Location: Aberdeen, SD

City: Aberdeen State: SD Zip: 57402

Office Phone: (605) 225-1212 Field:_____

Cell Phone:_____Fax: (605) 216-8707

SD DANR Contact Spill Report

- Business Hours Monday-Friday (605) 773-3296
- Nights and Weekends (605) 773-3231

SD DANR Contact for Hazardous Materials

- (605) 773-3153

National Response Center Hotline

- (800) 424-8802

SD DANR Stormwater Contact Information

- SD DANR Stormwater (800) 737-8676
- Surface Water Quality Program (605) 773-3351

5.1: REQUIRED SWPPP MODIFICATIONS

5.5 (1): Conditions Requiring SWPPP Modification

The SWPPP must be modified, including the site map(s), in response to any of the following conditions:

- When a new operator responsible for implementation of any part of the SWPPP begins to work on the site.
- When Changes to construction plans, sediment and erosion control measures, or any best management practices on site that are no longer accurately reflected in the SWPPP. This included changes made in response to corrective actions triggered by inspections.
- To reflect areas on the site map where operations control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
- If inspections by site staff, local officials, SD DANR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with Stormwater Permit.
- To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
- If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, different areas, or methods of applications.

5.5 (2): Deadlines for SWPPP Modification

Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

5.5 (3): Documentation of Modifications to the Plan

All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

5.5 (5): Required Notice to Other Operators

If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

When modifications as described above occur, the SWPPP will be modified to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The Project Engineer will modify the SWPPP and drawings on the plans will be modified to reflect the needed changes. Copies of the SWPPP modifications will be given to the Contractor Erosion Control Supervisor and a copy will be emailed Owner.

No. Revisions | Date

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the law of the State of South Dakota.

REGISTERED PROFESSIONAL ENGINEER
REG. NO.
12065
LEIF C.
REDINGER
SOUTH DAKOTA
4/17/2026

SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS
416 Production St. N.
Aberdeen, SD 57402
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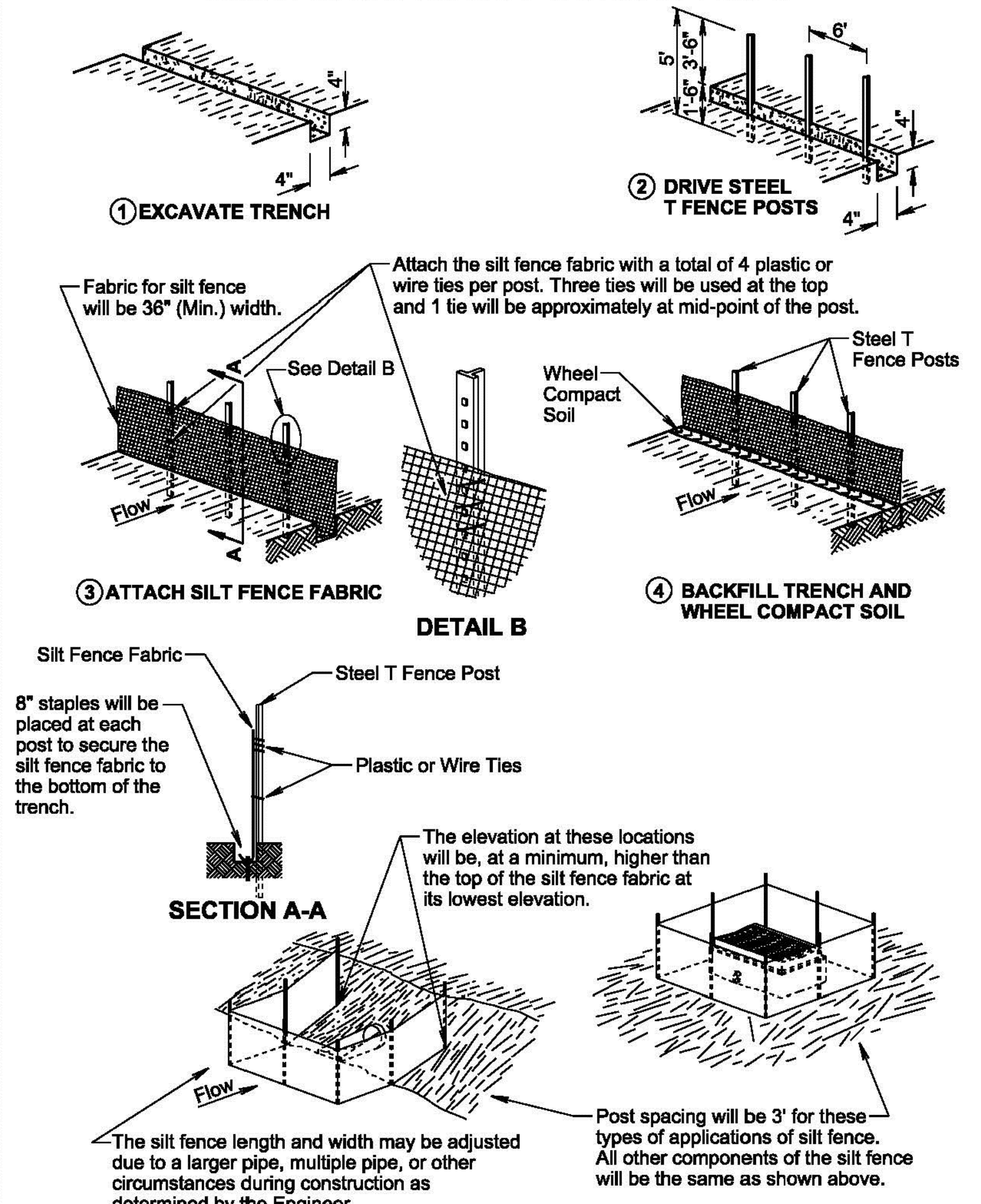
Fax: 605.225.3686
Email: bobh@helmsengineering.com

SWPPP NOTES

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	SWPPN(3)
Date:	4/15/26

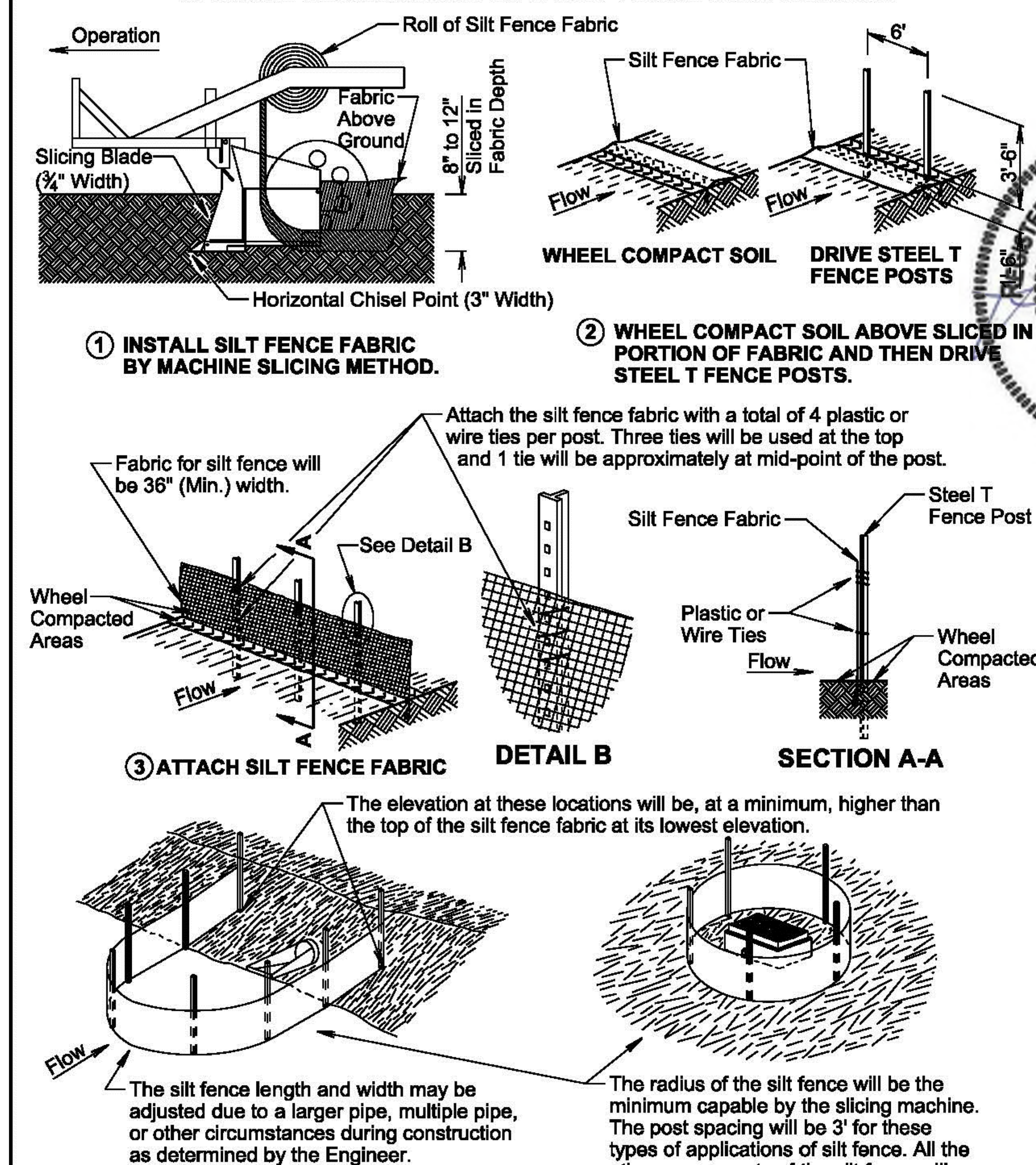
MANUAL HIGH FLOW SILT FENCE INSTALLATION



February 14, 2020

Published Date: 2026	SDDOT	*HIGH FLOW SILT FENCE*	*PLATE NUMBER* 734.05 — *Sheet 1 of 2*

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



GENERAL NOTE:

If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end will be provided on top of the extra length of silt fence fabric to prevent underflow.

February 14, 2020

Published Date: 2026	SDDOT	*HIGH FLOW SILT FENCE*	*PLATE NUMBER* 734.05 — *Sheet 2 of 2*

No. | Revisions | Date

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of South Dakota.

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS
216 [illegible] St N.
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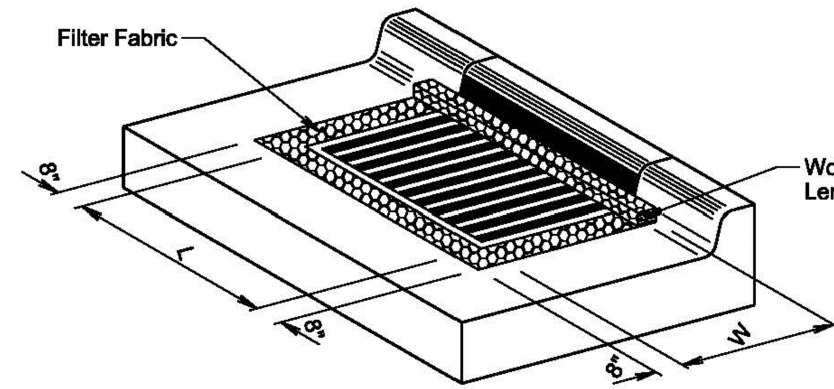
Fax: 605.225.[illegible]
Email: bobb@helmsengineering.com

SWPPP DETAILS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	SWPPD(1)
Date:	4/15/26

L = Length of Grate
W = Width of Grate



ISOMETRIC VIEW

GENERAL NOTES:

The grate and curb and gutter shown are for illustrative purposes only.

The sediment control at inlet with frame and grate will be placed at locations stated in the plans or at locations determined by the Engineer.

The filter fabric will be the type specified in the plans.

The filter fabric will be placed in the inlet opening prior to placing the grate. Approximately 18 inches of excess filter fabric will be wrapped around the 2"x4" and stapled securely to the 2"x4" after the grate has been placed.

The Contractor and Engineer will inspect the sediment control device in accordance with the storm water permit. The Contractor will maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment will be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

All costs for furnishing, installing, inspecting, maintaining, removing, and replacing the sediment control device at the inlet including labor, equipment, and materials will be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

February 14, 2020

Published Date: 1st Qtr. 2023	SDDOT	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10 — Sheet 1 of 1

SWPPP DETAILS

WATER/WASTEWATER SYSTEM IMPROVEMENTS PHASE 3
REDFIELD, SOUTH DAKOTA

SPN Helms
CIVIL ENGINEERS & LAND SURVEYORS

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 12065
LEIF C. REDINGER
SOUTH DAKOTA
4/17/2026

Drawn By:	TMO
Chk' By:	LCR
Proj. No:	A6427-8
Dwg. No:	6428-P3(01)
VP. No:	SWPPD(2)
Date:	4/15/26