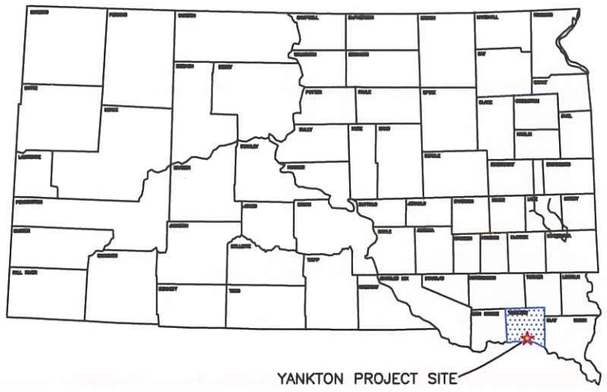
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	1	54
COVER				

2020
12TH ST. - DOUGLAS TO PINE ST.
PINE ST. - 10TH TO 15TH ST
CITY OF YANKTON, SD
STREET RECONSTRUCTION
CITY PROJECT NO. 2020-011



INDEX OF SHEETS

LEGEND

- POWER POLE
- TELEPHONE BOX
- CURB INLET
- SANITARY SEWER MANHOLE
- STORM SEWER MANHOLE
- EXISTING VALVE
- EXISTING FIRE HYDRANT
- PROPERTY LINE
- SANITARY SEWER
- STREET CENTERLINE
- CURB
- WATER
- BURIED CABLE TV
- BURIED GAS LINE
- BURIED ELECTRIC LINE
- BURIED TELEPHONE LINE
- EXISTING STORM SEWER

N.T.S.

THE CITY OF

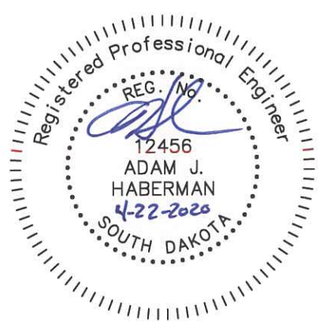
YANKTON

YANKTON COUNTY, SOUTH DAKOTA

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	2	54
QUANTITIES				

BID ITEM	DESCRIPTION	BID QUANTITY	UNIT
	REMOVALS		
1	MOBILIZATION	1	LS
2	SAW EXISTING CONCRETE	600	LF
3	SAW EXISTING ASPHALT	120	LF
4	REMOVAL OF CONCRETE PAVEMENT	1786	SY
5	REMOVAL OF ASPHALT PAVEMENT	11558	SY
6	REMOVAL OF CURB AND GUTTER	5990	LF
7	UNCLASSIFIED EXCAVATION	1	LS
8	UNDERCUTTING	75	CY
9	TOPSOIL	1	LS
10	WATER FOR EMBK. OR GRAN. MATRL.	20	KGAL
	EROSION CONTROL		
11	SEEDING	1	LS
12	VEHICLE TRACKING CONTROL	2	EA
13	INLET SEDIMENT CONTROL	14	EA
14	SILT FENCE	60	LF
15	GEOTEXTILE FABRIC	500	SY
	SANITARY SEWER		
16	REPLACE AND ADJUST MH FRAME & COVER	1	EA
	STORM SEWER		
17	2'X3' TYPE B STORM INLET	10	EA
18	4'X4' SS JUNCT. BOX	8	EA
19	F&I 18" ARCH PCP CL III	274	LF
20	REMOVE EXISTING PIPE	311	LF
21	REMOVAL OF MH/DI/JB	3	EA
	TRAFFIC CONTROL		
22	TRAFFIC CONTROL	1443	UNIT
23	TRAFFIC CONTROL MISC.	1	LS
	SURFACING		
24	6" PCCP PAVEMENT	2090	SY
25	6" PCCP FILLECT SECTION	1397	SF
26	CONCRETE C & G TYPE B66	5831	LF
27	SPECIAL C & G	970	LF
28	6" VALLEY GUTTER	288	SF
29	6" APPROACH PAVEMENT	6158	SF
30	6" SIDEWALK	873	SF
31	4" SIDEWALK	17109	SF
32	DETECTABLE WARNING PANELS	270	SF
33	RETAINGING WALL SD DOT TYPE C	1022	SF
34	AGGREGATE BASE COURSE	12400	SY



REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	3	54
QUANTITIES				

TABLE OF REMOVE AND REPLACEMENT OF CONCRETE SIDEWALK

LOCATION 12TH ST	REMOVE(SY)	REPLACE (SF)
0+00 LT.	57	427
0+00 RT.	40	269
0+00 TO 1+31 RT.		807 WITH TYPE C WALL
1+31 TO 1+59 RT.		169 (6")
1+59 TO 2+68 RT.	50	656
2+68 TO 3+04 RT.		216 (6")
3+04 TO 4+26 RT.	75	728
4+26 TO 4+49 RT.		144 (6")
4+49 TO 7+58 RT.		1854 WITH TYPE C WALL
7+66 RT. (SW COR 12TH AND PINE)		288 (24 SF DWP)
7+69 LT. (NW COR 12TH AND PINE)	58	648 (24 SF DWP)
8+39 RT. (SE COR 12TH AND PINE)	40	357 (24 SF DWP)
8+41 LT. (NE COR 12TH AND PINE)	33	340 (24 SF DWP)
8+50 TO 9+61 RT.		550
9+61 TO 9+72 RT.		56 (6")
9+72 TO 10+58 RT.		430
10+58 TO 10+73 RT.		75 (6")
10+73 TO 11+84 RT.		635 (10 SF DWP)
11+23 TO 11+84 LT.	69	750 (12 SF DWP)
SW THRU DRIVEWAYS 6"		**753** (TOTAL 6")
		8739 (TOTAL 4")
TOTAL	**422**	**9492** **118 SF DWP**

TABLE OF REMOVE AND REPLACEMENT OF CONCRETE APPROACH PAVEMENT

LOCATION 12TH ST	REMOVE(SY)	REPLACE (SF)
0+89 LT.	45	338
1+44 RT.	68	477
1+67 LT.	19	265
2+81 RT.	90	569
4+37 RT.		394
7+21 LT.		377
7+60 LT.	54	
9+43 LT.	31	290
9+67 RT.	28	156
10+17 LT.	46	321
10+37 LT.	26	209
10+66 RT.	43	202
10+92 LT.	27	278
LOCATION PINE S OF 12TH	**REMOVE(SY)**	**REPLACE (SF)**
1+67 RT.	8	256
2+45 RT.	28	260
9+14 LT.		1461
LOCATION PINE N OF 12TH ST	**REMOVE(SY)**	**REPLACE (SF)**
1+00 RT.	GRAVEL	102
3+27 RT.	23	182
3+27 LT.	105	949
3+76 RT.	31	210
4+23 LT.	100	910
TOTAL	**687**	**6158**

TABLE OF REMOVE AND REPLACEMENT OF CONCRETE SIDEWALK

LOCATION	REMOVE(SY)	REPLACE (SF)
PINE SOUTH OF 12TH ST		
0+92 LT.(NW COR PINE AND 10TH)	23	273 (24 SF DWP)
0+92 RT.(NE COR PINE AND 10TH)	26	300 (24 SF DWP)
2+06 RT.	6	50
2+68 RT.	7	66
3+41 RT.	8	71
4+03 RT.	13	114
4+76 RT.	11	96
5+15 RT. (SE COR 11TH AND PINE)	26	272 (24 SF DWP)
5+15 LT.		170 (12 SF DWP)
5+61 RT. (NE COR 12TH AND PINE)	40	357 (24 SF DWP)
7+95 TO 9+82 LT.	123	1106
7+99 RT.	15	166 (12 SF DWP)
7+99 LT.	17	171 (12 SF DWP)
PINE NORTH OF 12TH ST		
0+00 TO 0+87 RT.		494
0+87 TO 1+06 RT.		95 (6")
1+59 RT.	5	45
1+06 TO 3+22 RT.		1080
2+07 RT.	5	45
2+68 RT.	6	54
3+22 TO 3+31 RT.		45 (6")
3+28 LT.	106	950
3+31 TO 3+71 RT.		200
3+71 TO 3+81 RT.		50 (6")
3+81 TO 8+50 RT.		1066
4+24 LT.	101	910
4+50 RT.	8	74
4+94 RT.	4	38
5+90 RT. SE COR 15TH	22	202 (20 SF DWP)
SW THRU DRIVEWAYS 6"		**120** (TOTAL 6")
		8370 (TOTAL 4")
TOTAL	**422**	**8490** **152 SF DWP**

TABLE OF 6" PCC FILLET SECTION REMOVAL AND REPLACE

STATION TO STATION	RADIUS	REMOVAL SY	REPLACE (SF)
NW COR. 12th AND PINE	20'		185
NE COR. 12th AND PINE	20'		195
SW COR. 12th AND PINE	20'		198
SE COR. 12th AND PINE	20'		187
NE COR. 11th AND PINE	15'		134
SE COR. 11th AND PINE	15'		134
NW COR. 10th AND PINE	20'		185
NE COR. 10th AND PINE	20'		179
	TOTAL		**1397 SF**

TABLE OF ADJUST & REPLACE SAN. SEWER MH CASTINGS

LOCATION	QUANTITY
10+15 – 2.6' RT (12TH ST.)	1

TABLE OF DROP INLETS AND JUNCTION BOXES

LOCATION	TYPE	QUANTITY
7+46 LT. & RT. (12TH ST)	B1	2
7+46 LT. (12TH ST)	JCT. 4X4	1
8+12 (12TH ST)	JCT. 4X4	1
0+60 (PINE S.)	JCT. 4X4	1
0+74 RT. (PINE S.)	B1	1
1+01 RT. (PINE S.)	JCT. 4X4	1
1+01 LT. & RT. (PINE S.)	B1	2
5+42 RT. (PINE S.)	JCT. 4X4	1
5+72 RT. (PINE S.)	JCT. 4X4	1
5+72 LT. & RT. (PINE S.)	B1	2
1+20 RT. (PINE N.)	JCT. 4X4	1
1+20 LT. & RT. (PINE N.)	B1	2
2+19 RT. (PINE N.)	JCT. 4X4	1
2+19 LT (PINE N.)	B1	1

RETAINING WALL SD DOT TYPE C

STATION TO STATION	HEIGHT	(SF)
0+00 TO 0+80 RT. (12TH ST)	1.5' TO 2.5'	200
0+80 TO 1+15 RT. (12TH ST)	1.0' TO 1.5'	44
4+97 TO 5+42 RT. (12TH ST)	1.0 TO 1.5'	56
5+42 TO 7+56 RT. (12TH ST)	1.5' TO 2.5	482
8+03 TO 9+02 LT. (PINE S)	1.0 TO 1.5'	124
9+03 LT. ALONG DRIVEWAY	0.5' TO 1.0'	25
9+27 LT. ALONG DRIVEWAY	0.5' TO 1.0'	25
9+27 TO 9+80 LT.	1.0' TO 1.5'	66
TOTAL		**1022 SF**

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NOTES				

SPECIFICATIONS TO BE USED

City of Yankton Standard Specifications and the Standard Specifications for Roads and Bridges 2015 Edition and Required Provisions, Supplemental Specifications, and/or Special Provisions as included in the Proposal.

UTILITIES

Location and protection of all underground utilities is the Contractors responsibility. The Contractor will be required to coordinate work with the utility companies. Existing utilities and service lines that coincide with proposed underground main locations are to be located in advance by the contractor such that proposed underground mains can be adjusted to avoid conflict.

Utility locations are coordinated by calling: 1-800-781-7474 (One Call)

SEQUENCE OF OPERATIONS

The Contractor shall use the following sequence of operations that are listed on the traffic control sheets unless an alternate is approved by the Engineer. An alternate sequence must be submitted in writing a minimum of one week prior to the preconstruction meeting.

All trenches are to be backfilled, compacted and covered with service gravel on the same day the pipe is layed. Aggregate Base Course will be used in lieu of Service Gravel as directed by the engineer to temporarily re-open portions of streets after the pavement is removed.

Project to be completed in phases:

Phase I – 12th street from Douglas to Pine and Pine street from 12th street to 15th street, includes the 12th and Pine Intersection. Contractor will need to concentrate on this area first. This area should be substantially completed (c&g, base course, sidewalk and backfill installed) and ready for traffic by August 9th. This does not include the asphalt, to be done by City of Yankton.

Phase II – 12th street from Pine to Mulberry and Pine street from 10th to 12th street. This encompasses the remainder of the project. Can be constructed, as proposed by the Contractor, with City approval. All work Phase I and II must be completed by November 6th.

REMOVAL OF EXISTING CONCRETE PAVEMENT

Payment for concrete removal is included in the contract unit price per square yard for "Removal of Concrete Pavement". Payment shall be at the contract unit price per square yard, regardless of variations in thickness. Joints shall be sawed wherever existing concrete is to be connected to new construction.

When asphalt is laid over concrete pavement, removal of the asphalt surfacing shall be incidental to the unit price for "Removal of Concrete Pavement".

REMOVAL OF EXISTING ASPHALT PAVEMENT

Payment for asphalt mat removal is included in the contract unit price per square yard for "Removal of Asphalt Concrete". Payment shall be at the contract unit price per square yard, regardless of variations in thickness.

4"and 6" CONCRETE SIDEWALK

Concrete sidewalk shall be constructed in accordance with Section 651 of Standard Specifications. Base Course material, two (2) inches thick, shall be placed beneath the sidewalk.

GENERAL MAINTENANCE OF TRAFFIC

1. Storage of vehicles and equipment shall be as near the right-of-way as possible. Contractor's employees should mobilize at a location off the right-of-way and arrive at the work sites in a minimum number of vehicles necessary to perform the work. Indiscriminate driving and parking of vehicles within the right-of-way will not be permitted. Any damage to the vegetation, surfacing, embankment, delineators and existing signs resulting from such indiscriminate use shall be repaired and/or restored by the Contractor, at no expense to the City, and to the satisfaction of the Engineer.

2. The Contractor shall designate an employee whose responsibility is the maintenance of traffic, 24 hours a day and 7 days a week. The person so designated must have training and experience in the field of construction traffic control and be knowledgeable about the Manual on Uniform Traffic Control Devices (MUTCD). The cost of the traffic control person shall be incidental to the contract lump sum price for Traffic Control Miscellaneous. The employee selected must be approved by the Engineer. The name, phone number, and location of person(s) shall be provided to the county sheriff's department and the local police department. Road closure and barricading shall immediately be reported to the local police department by the Contractor. Local police department phone number 605-668-5210

3. Work activities during non-daylight hours are subject to prior approval.

4. The contractor shall maintain traffic control every day. The contractor shall have $200.00 per day deducted from the contract for each day that traffic control is not maintained. If traffic control is not in place when the contractor begins work which requires traffic control, payment for bid item "Traffic Control" will be reduced by 50%.

5. The Contractor shall notify the City of Yankton Street Department prior to construction to enable the city forces to remove and salavage existing traffic control signs. City of Yankton Street Dept. number 605-668-5211

WASTE DISPOSAL SITE

Contractor shall dispose of broken concrete and asphalt generated by this project at the city stockpile site located at 23rd and Kellen Gross Drive. No tipping fee will be assessed to Contractor for broken concrete and asphalt disposed of at this site Concrete and asphalt is to be kept separate from earth material during the removal process. Concrete and asphalt may be mixed.

Asphalt contaminated with soil during the removal process or concrete containing reinforcing steel or contaminated with soil must be disposed of at the Yankton rubble site, 23rd and Kellen Gross Drive. Disposal fees shall be the Contractors responsibility, and considered incidental to other pay items.

The Contractor will be required to use a state permitted solid waste disposal facility. The Contractor can obtain a list of permitted solid waste disposal facilities in the Yankton area or discuss proper disposal of construction and demolition debris by contacting Waste Management Program at 1-(605)-773-3153.

Construction/demolition debris may not be disposed of within the ROW.

UNCLASSIFIED EXCAVATION

Unclassified Excavation will be paid for on a lump sum basis. The bid item for "Unclassified Excavation" shall include removing the existing material to a depth of 12" inches below the new road surface shown on the typical sections. Estimated quantities in cubic yards are shown below. These estimates are based on the assumption of 4 inches of existing Asphalt Pavement over 6 inches of existing concrete being removed separately on Pine St. 10th to 15th and 4" of existing asphalt on 12th St. Douglas to Mulberry being removed separately.

Estimate of 2470 cu yds. of removal on 12th St and Pine St. Excess material is to be hauled to City property located at 33rd and Douglas Ave.

GENERAL NOTES

The Contractor will be required to raze, remove and dispose of all buildings and foundations, structures, fences, advertising signs, and other obstructions of which any portion are on the right-of-way or Temporary Easements except Utilities and those for which other provisions have been made for removal, in accordance with Section 110 of the Standard Specifications.

The removal and disposal of all buildings, foundations and other obstructions not removed under Incidental Work or on a unit basis shall be considered as subsidiary work to the other Contract Items and no separate payment will be made for their removal and disposal.

6" NONREINFORCED CONCRETE PAVEMENT

The Coarse Aggregate shall be Crushed Ledge Rock.

The fine aggregates may require screening as determined by the Engineer.

The concrete mix shall be Class A40 concrete paving mix when slip form construction is used and Class A45 when formed construction is used.

Portland Cement Concrete Pavement shall have a minimum cement content of 600 pounds per cubic yard and Class C Fly Ash will be excluded.

In lieu of an automatic subgrader operating from a preset line, a motor grader or other suitable equipment may be used to bring the base course to final grade prior to placement of the concrete.

A construction joint shall be sawed whenever new concrete pavement is placed adjacent to existing concrete pavement.

There will be no direct payment for trimming of the Base Course for PCC pavement. The trimming will be considered incidental to the related items required for PCC pavement. Trimming shall be performed as required by Section 380.3c of the Standard Specifications.

Joints to be sealed shall be thoroughly sandblasted, clean and dry as required by Section 380 P.

PEDESTRIAN TRAFFIC

The Contractor will be required to maintain pedestrian access during construction. Pedestrian access shall be ADA accessible and shall conform to the Manual on Uniform Traffic Control Devices 2009 edition. Access can either be maintained on concrete sidewalk or on a temporary boardwalk. This work may include but is not limited to sawing existing sidewalk to leave half in place, staging sidewalk removal and construction to maintain access, installing safety fence around work areas, and construction and removal of temporary boardwalk. The Contractor shall determine the actual location of temporary access during construction and shall be approved by the Engineer. Payment for all work and associated materials shall be incidental to the contract lump sum price for "Traffic Control Miscellaneous".

ACCEPTANCE TESTING

The City will be responsible for taking the first acceptance test and a backup test if required. All subsequent tests required due to failures will be paid by the Contractor by deducting the cost from the pay request.

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CONCRETE JOINT SEALER

Concrete Joint Sealer shall be hot poured elastic joint sealer and shall conform to section 870 of the Standard Specifications. Payment for concrete joint sealer shall be incidental to PCC Pavement and no separate payment shall be made.

SURFACING THICKNESS DIMENSIONS

Except as hereinafter set forth, plans square yards will be applied even though the thickness may vary from that shown on the plans.

At those locations where material must be placed to achieve a required elevation, plans square yards will not be varied to achieve the required elevation.

CURING OF CONCRETE

Portland Cement Concrete Pavement, Concrete Curb & Gutter, Sidewalks, Valley Gutters, and Fillets shall be cured. All concrete shall be cured in accordance with section 380.3.P2 of the 2015 SDDOT Standard Specifications for Roads and Bridges except as modified in this note. All concrete shall be cured with a White Pigmented Linseed Oil Base Emulsion Compound when cured using the Impervious Membrane Method. Curing compound material shall be in accordance with section 821.1.D.

GEOTEXTILE FABRIC FOR SUBGRADE STABILIZATION

Geotextile fabric shall be installed at locations designated by the engineer underneath the granular base course. The bid item GEOTEXTILE FABRIC has been established to pay for all labor, equipment and material to install the fabric.

Pay quantities for the geotextiles will be paid for at the contract price per square yard in place. Measurement for payment excludes the geotextile used for overlapping as well as seam overlaps. Installation shall be in accordance with the manufacturer's recommendations. Overlap shall be a minimum of 24". The end of the roll shall overlaps shall be 3' min.

The contractor shall not drive equipment directly on top of the geotextile. Should the geotextile be torn or punctured, the damaged area shall be repaired or replaced by the contractor at no expense to the owner. The repair shall consist of a patch of the same type of geotextile a minimum of 3' from the edge of any part of the damaged area. Geotextile fabric shall conform to the requirements listed below. The contractor shall provide a certificate of compliance verifying that the material meets the specification prior to the installation of the fabric.

1. Wide Width Tensile Strength (ASTM D-4595) 3600lb/ft min.
2. Wide Width Tensile Strength at 5% Strain(ASTM D-4595) 1350 lb/ft min.
3. Permittivity (ASTM D-4491) 0.25 sec-1 min.
4. UV Resistance at 500 hours (ASTM D-4355) 70% min.

The City has verified that the following products meet these specifications.

1. Mirafi HP370

2. Propex Getotex 3x3

3. Lumite GTF465

AGGREGATE BASE COURSE Aggregate Base Course will be supplied by the City of Yankton. Material can be obtained at City stockpile site located at 23rd and Kellen Gross Dr. This material is to be weighed before leaving landfill. The Contractor is to supply his own personnel and equipment to load trucks. Landfill hours are from 8am to 3:45pm. This material to be used under all newly placed concrete /asphalt and to maintain access to intersecting streets and driveways as needed. Unit price shall constitute full compensation for personnel and equipment to load, haul, and place material. Aggregate Base Course shall be compacted to 95% of standard proctor density.

EROSION CONTROL - SILT FENCE NOTES

1. CONSTRUCTION

The work covered by this section consists of furnishing all labor and equipment and the performance of all operations in connection with the construction, maintenance and removal of the silt fence for the control of siltation on the project, complete and in accordance with the plans and standard plates. The Contractor shall be responsible for accomplishing the required construction work on this project in such a manner as to effectively minimize and control water pollution which might be caused by soil erosion from the project. It is intended that these features be maintained in appropriate functional condition from initial construction stages to final completion of the project.

After rainfall events, the Contractor shall take all necessary precautions to prevent silt from being carried away from the project site when water is being pumped out of any area where water is backed up on the project site

In addition to the details shown in the plans, other provisions for controlling erosion may be incorporated.

2. MATERIALS

A. Steel Fence Posts

The steel line posts for field fence shall have a cross section of one and one-half inches by one and one-half inches. The average weight shall be less than 1.33 pounds per linear foot. Paint for steel fence posts shall be the manufacturers standard paint finish.

B. Silt Fabric

The approved brands of engineering fabrics for silt fence are listed below:

Manufacturer/Distributor	Brand Name
Amoco Fabrics & Fibers Co.	Silt Stop
Carthag Mills	FX-325
Linq Industries Fabrics	GTF 400 EO
Mirafi Division of Nocolon	700 XG
Webtec, Inc.	Econofence with netting

3. BACKFILL

All compaction of backfill shall be accomplished with a mechanical tamper or pneumatic tamper. All compacting equipment shall be operated according to the manufacturers recommendations.

4. PAYMENT

Payment shall be based on the lineal foot of silt fence satisfactorily constructed and measured from outside of the end posts. The work completed in accordance with the plans and specifications at the applicable contract price in the bid schedule which price shall constitute full compensation for furnishing all materials, equipment. labor. and tools necessary for completion of the work. The unit price shall also include removing muck from behind the silt fence after rain events and removing the silt fence when it is no longer needed.

EROSION CONTROL - VEHICLE TRACKING CONTROL

1. CONSTRUCTION

The work covered by this section consists of furnishing all labor and equipment and the performance of all operations in connection with the construction of temporary vehicle tracking control on the project, complete and in accordance with the plans and standard plates. The Contractor shall be responsible for accomplishing the required construction work on this project in such a manner as to effectively minimize and control water pollution which might be caused by vehicular tracking of soil. It is intended that these features be maintained in appropriate functional condition whenever vehicles come or go from the construction site where there is dirt exposed.

In addition to the details shown in the plans, other provisions for controlling erosion may be incorporated.

2.

11/2" to 3" rock shall be used. .

3. LABOR AND EQUIPMENT

All necessary labor and equipment shall be supplied to clean up any dirt or gravel off of the paved roadway surfaces at the end of each day. The contractor shall also remove any service gravel that has dirt mixed in with it from the project site when the tracking control is no longer necessary. Clean service gravel can be incorporated into the base material for the roadbed.

4. PAYMENT

Service gravel shall be paid for at the unit price bid in the contract for service gravel. Unit price for "Temporary Vehicle Tracking Control" shall be the amout paid for each site where the engineer requires the use of the temporary vehicle tracking control for however long it is needed. The Contractor will be charged $50.00 for each day that dirt is not cleaned off of the street after it is placed or tracked onto the pavement.

INLET SEDIMENT CONTROL

Refer to Standard Plates 734.10 SD DOT AND SIOUX FALLS 734.16 - Drop inlet sediment filters.

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DEWATERING AND EROSION CONTROL

Pumping required for the removal of surface water from the work area and/or depressions will be considered incidental to other pay items and not paid for separately. The Contractor shall be responsible for obtaining the required erosion control permits from the South Dakota Department of Environment and Natural Resources.

SITE MAINTENANCE

The Contractor is to keep the project site properly maintained and graded to drain storm water. No standing water is permitted on site. A penalty of $500/day will be assessed each day standing water is not removed from site. All regulations pertaining to Storm Water Pollution Prevention will be enforced. Direct discharge of storm water into the storm sewer system is not acceptable.

MANHOLE EXTERNAL FRAME SEAL

The furnishing and installing of the manhole frame seal shall be paid for under replace and adjust manhole rim and cover bid item. Full compensation for furnishing and installing of the complete manhole frame seal and all appurtenances necessary for the proper installation of the manhole frame seal for the manhole.(See section 210 of the City of Yankton standard specifications for sanitary sewer mains, service lines and appurtenances for approved products list.)

MANHOLE ADJUSTMENT

All costs for adjustment of the sewer manhole frame and lid to finished grade including removal and repair upper courses of brick or concrete, grouting, water-proofing external frame seal and adjustment rings shall be incidental to the contract unit price per each for "Adjust Manhole".

All existing rims & covers will be replaced with Neenah R1733 frame and lid. The lids shall contain concealed pick holes and be equipped with a gasketed self-sealing type covers.

SEEDING

All grass areas disturbed by construction are to be hydromulched. Lump sum price will be for all areas disturbed by Contractor. Price shall also include the cost for fertilizer and fiber mulch, refer to SD-DOT Standard Specs 2015 Edition section 730 and 731. The following will be provided, by the Contractor, for use on the project unless an alternate is approved by the Engineer. Topsoil not seeded within **14** days of soil placed shall have the top 2" tilled and regraded prior to seeding.

The estimated amount of area to be seeded: 42680 sf

SEED MIXTURE	PURE LIVE SEED/ 1000 FT. SQ.
Kentucky Bluegrass	1 pound
Perennial Rye Grass	1 pound
Park Kentucky Bluegrass	1 pound

FERTILIZER AND MULCHING

Fertilizer shall be a guaranteed analysis of 12-24-6. Rate applied shall be 3.2 lbs. per 1000 S.F. All areas shall be wood fiber mulched at a rate of 50 lbs./1000 S.F. with tackifier at a rate of 1.5lbs./1000 S.F. Method of payment will be incidental to the seeding lump sum bid price. Refer to SD-DOT Specs. 2015 Edition-section 731 and 732 for additional requirement for fertilizer and fiber mulch.

SALVAGING, STOCKPILING, AND PLACING TOPSOIL

Existing vegetation shall be salvaged, incorporated and placed with the topsoil as far as practicable.

The areas to be covered with topsoil to a depth of +/- 3 inches comprise all newly graded areas. Material shall be free of rock and debris.

The estimated amounts of salvaged topsoil required to cover the designated areas to the specified depth are as follows:

Table of Topsoil	Cu.Yd.
12TH ST AND PINE ST	520

PRIVATE SPRINKLER SYSTEMS

Private sprinkler systems that are located within the construction limits. The City will notify all property owners about the expected construction and the procedures for preparing their systems for construction. When found, the Contractor shall notify the Engineer and take reasonable measures to minimize any damage to the system. It will be the responsibility of the City to pay the property owner's sprinkler contractor directly for repairs. The Contractor will be responsible for any damaged due to Contractor's negligence.

The Contractor shall notify the Engineer when the sprinkler system can be restored and the City will coordinate with the property owner and sprinkler contractor. The system should be restored before seed or sod placement and the Contractor shall make reasonable accommodations to allow for the homeowner's sprinkler contractor to make final repairs and adjustments.

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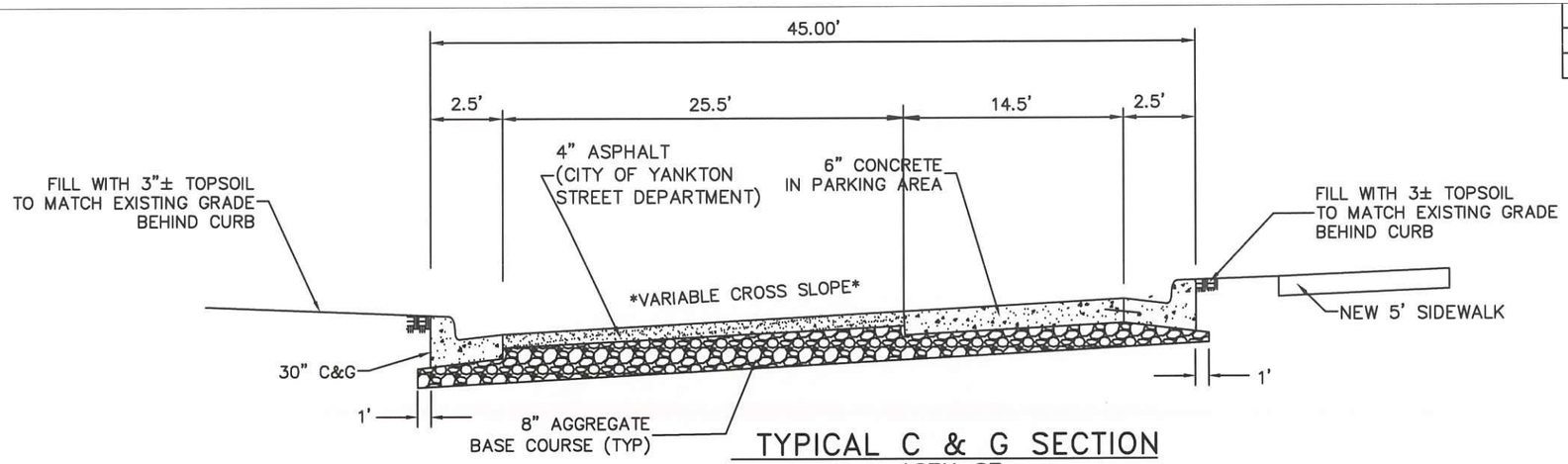
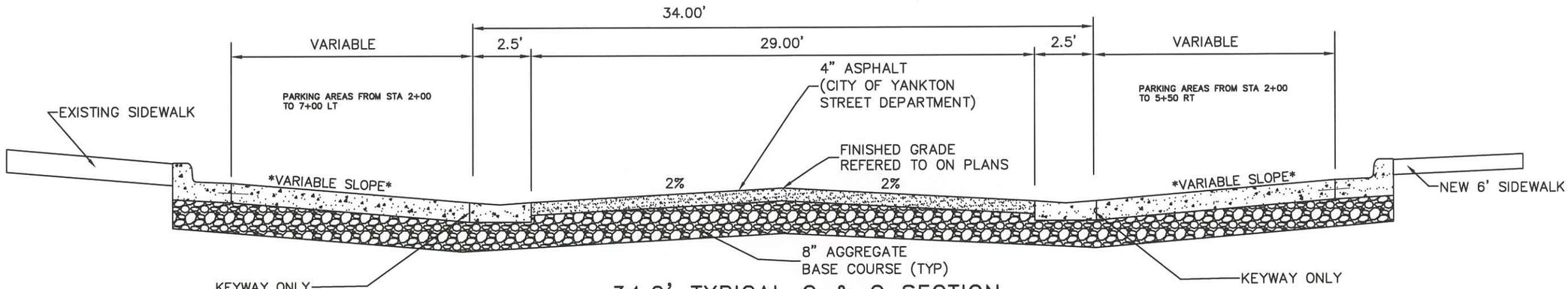
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	7	54

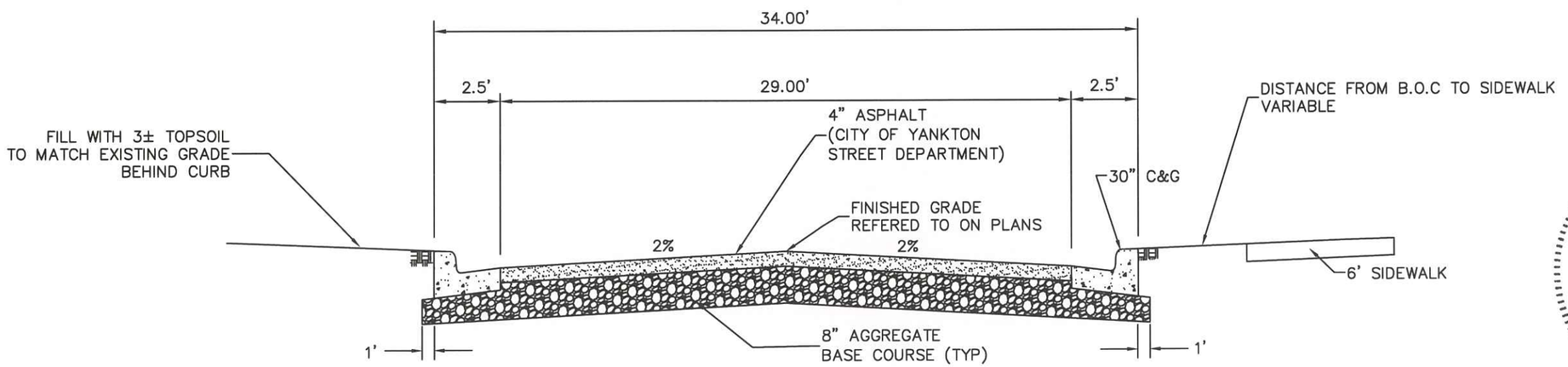
TYPICAL SECTION



TYPICAL C & G SECTION
12TH ST.
STA 8+74 TO 11+50



34.0' TYPICAL C & G SECTION
12TH STREET
STA 1+76 TO 7+00



34.0' TYPICAL C & G SECTION
12TH STREET
STA 1+76 TO 1+50

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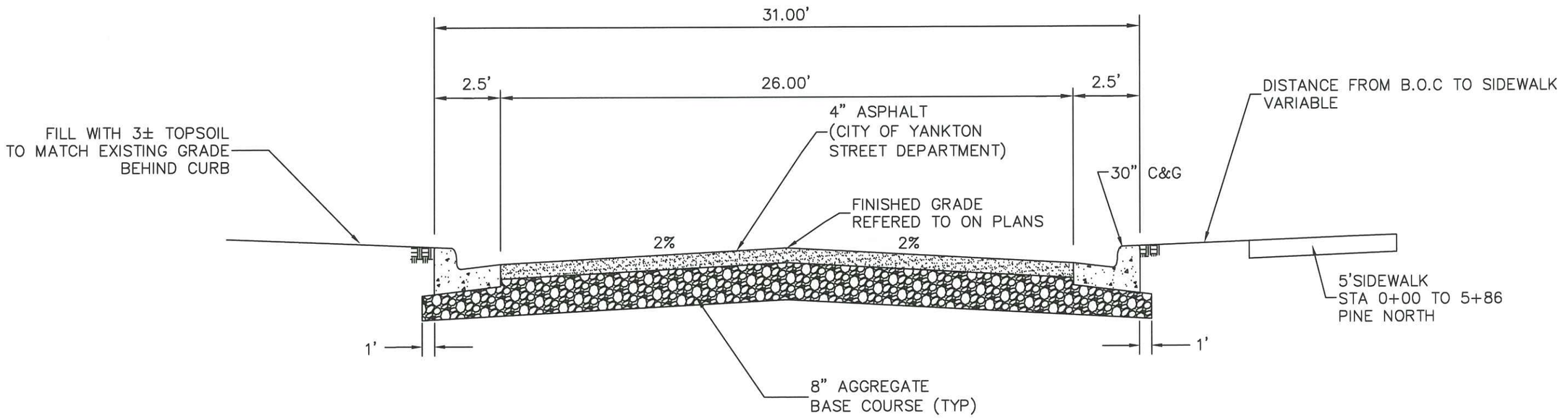
8	S.D.	2020-011	8	54
NOTES				



31.0' TYPICAL C & G SECTION

PINE STREET
STA 1+00 TO 9+87 S
STA 0+00 TO 5+86 N

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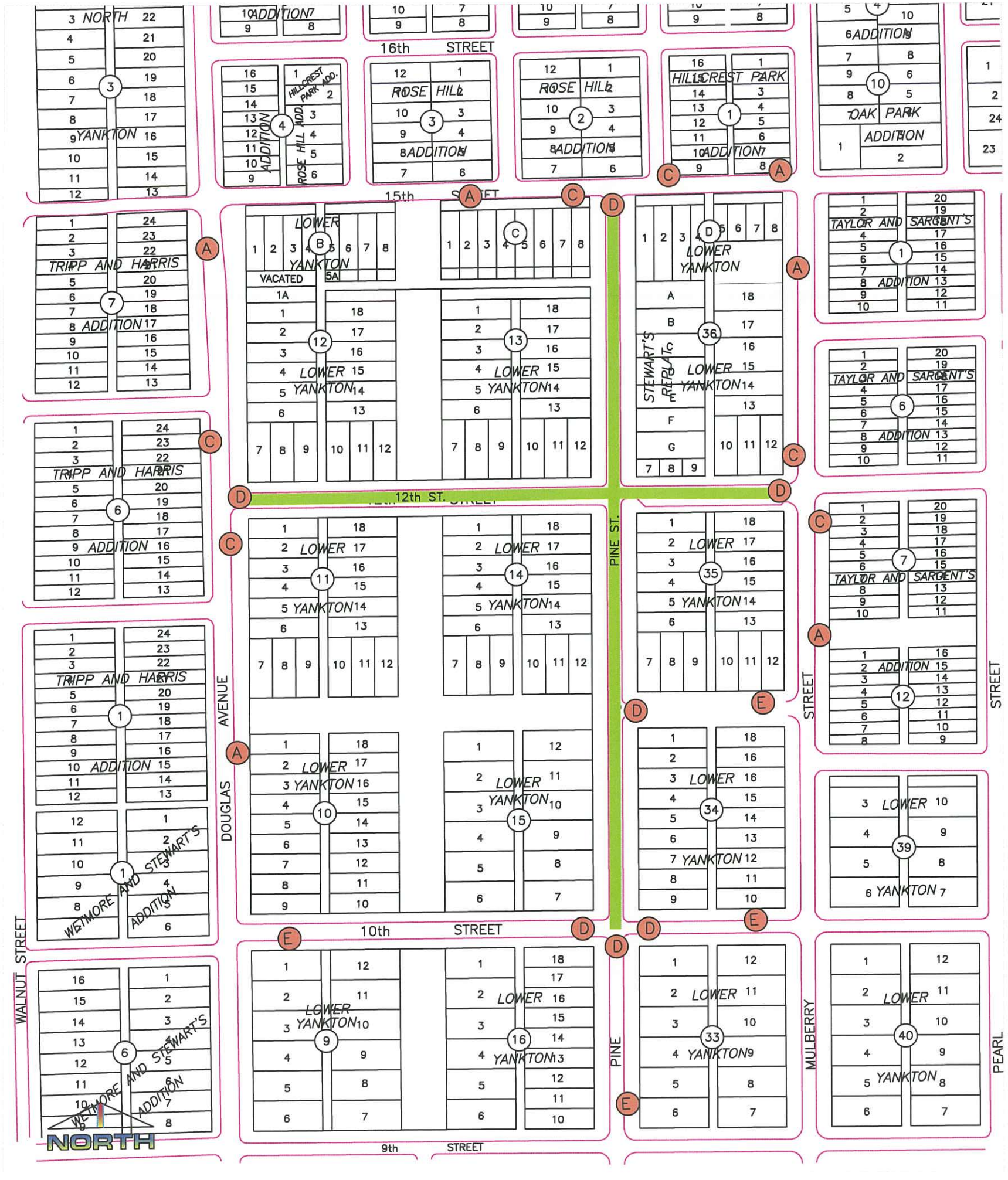
8	S.D.	2020-011	9	54
TRAFFIC CONTROL				



C

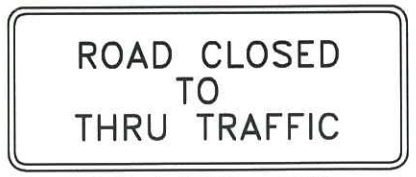
R3-1 (24" x 24")

R3-2 (24" x 24")

A

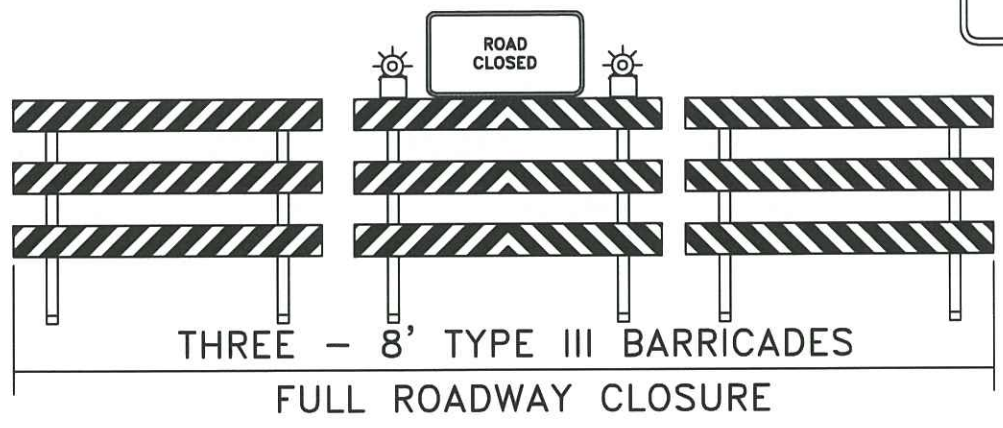
W20-1 (48" x 48")

ALL FIXED LOCATION SIGNS REMAIN IN PLACE UNTIL PERMANENT PAVEMENT MARKING IS COMPLETE.



R11-4 (60" x 30")

D

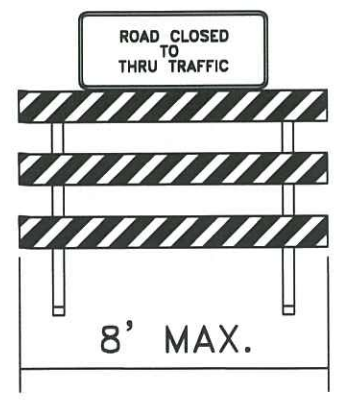


THREE – 8' TYPE III BARRICADES

FULL ROADWAY CLOSURE

R11-2 (48"x 30")

E



LIST OF OTHER TRAFFIC CONTROLS FOR ROAD CONSTRUCTION

BID ITEM	DESCRIPTION	QUANTITY
TRAFFIC CONTROL MISC.	TYPE I & II BARRICADES, CONES, VERTICAL PANELS, DRUMS, BARRICADE WARNING LIGHTS, DELINEATORS. WATCHMAN, TUBULAR MARKERS, AND INSTALLATION OF CITY SIGNS.	LUMP SUM

ITEMIZED LIST FOR TRAFFIC CONTROL BID ITEM

SIGN NUMBER	SIGN SIZE	DESCRIPTION	AMOUNT REQUIRED	UNITS PER AMOUNT	SUB TOTAL
R11-2	48" x 30"	ROAD CLOSED	7	27	189
R3-1	24" x 24"	NO RIGHT TURN (SYMBOL)	3	15	45
R3-2	24" x 24"	NO LEFT TURN (SYMBOL)	3	15	45
W20-1	48" x 48"	ROAD WORK AHEAD	6	34	204
R11-4	60" x 30"	ROAD CLOSED TO THRU TRAFFIC	4	30	120
		TYPE III BARRICADES	168 L.F.	5 UNITS/L.F.	840
				TOTAL	1443

PROJECT AREA

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PEDESTRIAN TRAFFIC CONTROL

TRAFFIC CONTROL DEVICES FOR SIDEWALK CLOSURES AND PEDESTRIAN DETOURS SHALL BE PAID FOR UNDER TRAFFIC CONTROL MISC.
(SDDOT STANDARD PLATE #634.33 MAY BE USED AS A GUIDE FOR THESE SITUATIONS)

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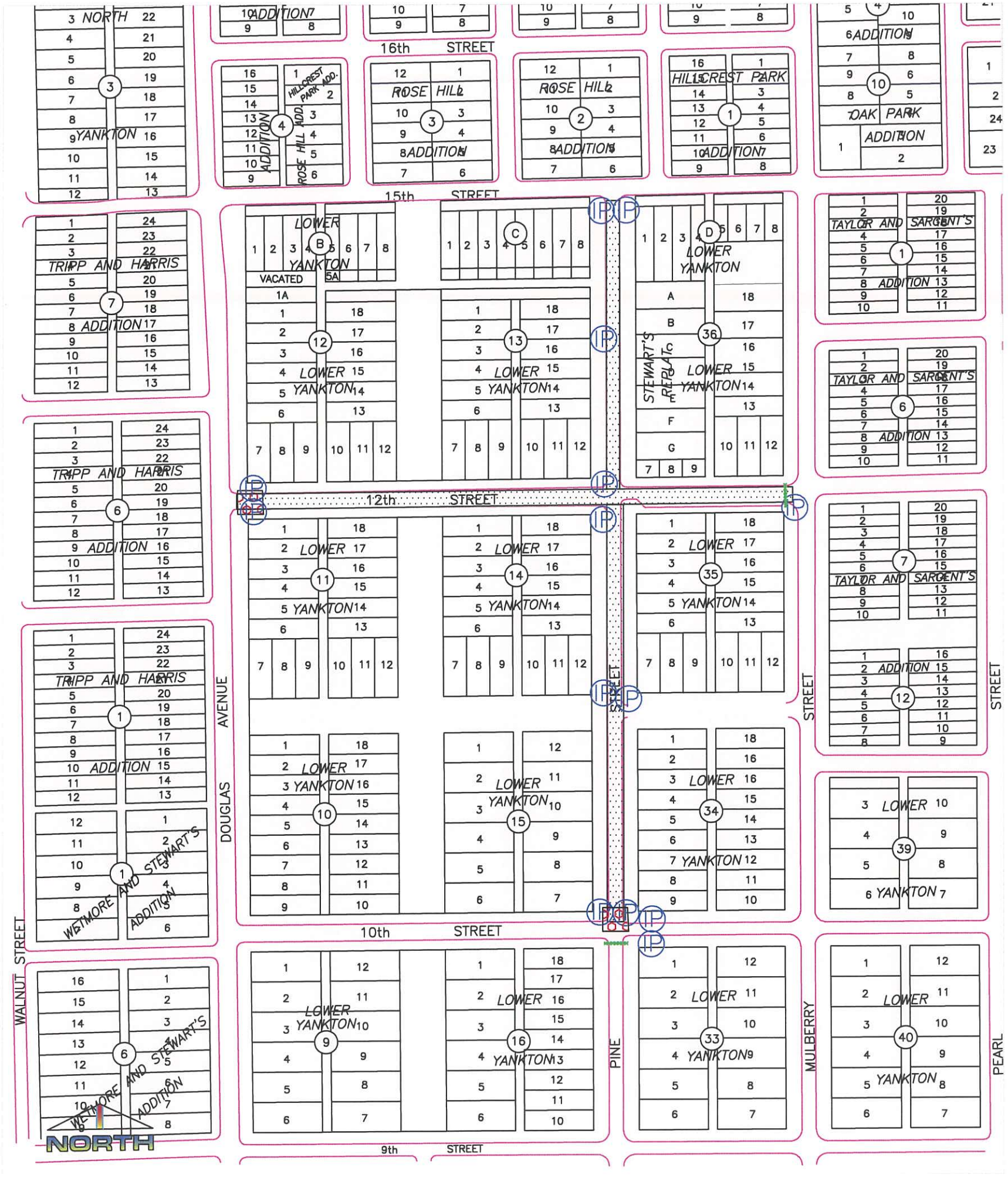
8	S.D.	2020-011	10	54
EROSION CONTROL				



LEGEND

-VEHICLE TRACKING CONTROL (TYP.)
SEE DETAIL SHEET PLATE # 734.02
-1 USED (12TH ST)
-1 USED (10TH AND PINE)

-SILT FENCE (TYP.)
SEE SHEET #
60 L.F. USED

PROJECT AREA

-INLET PROTECTION (TYP.)
SEE SHEET # 40
-2 USED AT 12TH ST. STA 0+03 LT AND RT
-1 USED AT 12TH ST STA 7+85 LT IN RADIUS
-1 USED AT 12TH ST STA 12+02 RT IN RADIUS
-1 USED AT 10TH ST STA 0+50 RT
-1 USED AT 10TH ST SOUTH STA 0+70 RT
-2 USED AT PINE ST SOUTH STA 0+90 LT AND RT
-2 USED AT PINE ST SOUTH STA 5+58 LT AND RT
-1 USED AT PINE ST SOUTH STA 9+77 LT
-1 USED AT PINE ST NORTH STA 2+19 LT
-2 USED AT PINE ST NORTH STA 5+88 LT AND RT

CITY OF YANKTON	PROJECT	SHEET NO.	TOTAL SHEETS
	2020-011	11-13	54

STORM WATER POLLUTION PREVENTION PLAN

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

❖ **SITE DESCRIPTION (4.2 1)**

- **Project Limits: See Title Sheet (4.2 1.b)**
- **Project Description: See Title Sheet (4.2 1.a.)**
- **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**
- **Major Soil Disturbing Activities** (check all that apply)
  - ☐ Clearing and grubbing
  - ☒ Excavation/borrow
  - ☒ Grading and shaping
  - ☐ Filling
  - ☒ Cutting and filling
  - ☐ Other (describe):
- **Total Project Area** 3.0 acres **(4.2 1.b.)**
- **Total Area To Be Disturbed** .90 acres **(4.2 1.b.)**
- **Existing Vegetative Cover (%)** 25%
- **Soil Properties:** AASHTO Soil Classification **(4.2 1. d.)**
- **Name of Receiving Water Body/Bodies** Missouri River **(4.2 1.e.)**

❖ **ORDER OF CONSTRUCTION ACTIVITIES (4.2 1.c.)**

(Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.)

- **Special sequencing requirements** (see sheet).
- **Install stabilized construction entrance(s).**
- **Install perimeter protection where runoff sheets from the site.**
- **Install channel and ditch bottom protection.**
- **Clearing and grubbing.**
- **Remove and store topsoil.**
- **Stabilize disturbed areas.**
- **Install utilities, storm sewers, curb and gutter.**
- **Install inlet and culvert protection after completing storm drainage and other utility installations.**
- **Complete final grading.**
- **Complete final paving and sealing of concrete.**
- **Complete traffic control installation and protection devices.**
- **Reseed areas disturbed by removal activities**.

❖ **EROSION AND SEDIMENT CONTROLS (4.2 2.a.(1)(a)-(f))**

(Check all that apply)

- **Stabilization Practices (See Detail Plan Sheets)**
  - ☒ Temporary or Permanent Seeding
  - ☐ Sodding
  - ☐ Planting
  - ☒ Mulching (Straw or Cellulose Fiber)
  - ☐ Erosion Control Blankets or Mats
  - ☐ Vegetation Buffer Strips
  - ☐ Roughened Surface (e.g. tracking)
  - ☐ Gabions-Gabion Mattress
  - ☐ Other
- **Structural Temporary Erosion and Sediment Controls**
  - ☒ Silt Fence
  - ☐ Straw Bale Check
  - ☐ Temporary Berm
  - ☐ Temporary Slope Drain
  - ☐ Straw Wattles or Rolls
  - ☐ Diversion Channels/Swales
  - ☐ Channel Liners (TRM)
  - ☐ Stone Rip Rap Sheet
  - ☐ Rock Check Dams
  - ☐ Sediment Traps/Basins
  - ☒ Inlet Protection
  - ☐ Outlet Protection
  - ☐ Surface Inlet Protection
  - ☐ Curb Inlet Protection
  - ☒ Stabilized Construction Entrances
  - ☐ Other
- **Wetland Avoidance**

  Will construction and/or erosion and sediment controls impinge on regulated wetlands? Yes ☐ No ☒ 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.
- **Storm Water Management (4.2 2.b., (1) and (2))**

  Storm water management will be handled by temporary controls outlined in Section 3 above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Permanent controls will be shown on the plans and noted as permanent.
- **Other Storm Water Controls (4.2 2.c., (1) and (2))**
  - **Waste Disposal**

    All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. 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 in the field office. The general contractor's representative responsible for the conduct of work on the site will be responsible for seeing 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 individual designated as the contractor's on-site representative 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 in a timely manner by a licensed waste management contractor or as required by any local regulations.

❖ **Maintenance and Inspection (4.2 3. and 4.2 4.)**

- **Maintenance and Inspection Practices**
  - Inspections will be conducted at least one time per week and after a storm event of 0.50 inches or greater.
  - All controls will be maintained in good working order. Necessary repairs will be initiated within 24 hours of the site inspection report.
- **Maintenance and Inspection Practices(Continued)**
  - Silt fence will be inspected for depth of sediment and for tears in order 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, and 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 prepared on form DOT 298 for each site inspection, this form will also be used to document changes to the SWPPP. A copy of the completed inspection form will be filed with the SWPPP documents.
  - The City Engineer and contractor's site superintendent are responsible for inspections. Maintenance, repair activities are the responsibility of the contractor. The City Engineer will complete the inspection and maintenance reports and distribute copies per the distribution instructions on DOT 298.

❖ **Non-Storm Water Discharges (3.0)**

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

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

❖ **Materials Inventory (4.2. 2.c.(2))**

The following materials or substances are expected to be present on the site during the construction period. These materials will be handled as noted under the headings "EROSION AND SEDIMENT CONTROLS" and "SPILL PREVENTION" (check all that apply).

- ☒ Concrete and Portland Cement
- ☐ Detergents
- ☐ Paints
- ☐ Metals
- ☒ Bituminous Materials
- ☒ Petroleum Based Products
- ☐ Cleaning Solvents
- ☐ Wood
- ☒ Cure
- ☐ Texture
- ☐ Chemical Fertilizers
- ☐ Other

❖ **Spill Prevention (4.2 2.c.(2))**

➢ **Material Management**

- Housekeeping
  - Only needed products will be stored on-site by the contractor.
  - Except for bulk materials the contractor will store all materials under cover and 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.
  - Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

- Hazardous Materials
  - Products will be kept in original containers unless the container is not resealable.
  - Original labels and material safety data sheets will be retained in a safe place to relay important product information.
  - If 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 storm water system or storm water treatment system.
  - Potential pH-modifying materials such as: bulk cement, cement kiln dust, fly ash, new concrete washings, concrete pumping, and mixer washout waters will be collected on site and managed to prevent contamination of storm water runoff.

➢ **Product Specific Practices (6.8)**

- 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 Plans. Once applied, fertilizers will be worked into the soil to limit the exposure to storm water. Fertilizers will be stored in an enclosed area. The contents of partially used fertilizer bags will be transferred to sealable containers to avoid spills.

➢ **Product Specific Practices (6.8) (Continued)**

- 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 areas on the site. These areas must be self contained and not connected to any storm water outlet of the site. Upon completion of construction washout areas will be properly stabilized.

➢ **Spill Control Practices (4.2 2 c.(2))**

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 clean up 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 booms, dust pans, mops, rags, gloves, goggles, kitty litter, sand, sawdust, and plastic and metal trash containers specifically for clean up 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 measures taken. The spill prevention plan will be adjusted to include measures to prevent this type of spill from reoccurring, as well as clean up instructions in the event of reoccurrences.
- The contractor's site superintendent, responsible for day-to-day operations, will be the spill prevention and cleanup coordinator. The contractor is responsible for ensuring that the site superintendent has had appropriate training for hazardous materials handling, spill management, and cleanup.

➢ **Spill Response (4.2 2 c.(2))**

The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize migration into storm water runoff and conveyance systems. If the release has impacted on-site storm water, it is critical to contain the released materials on-site and prevent their release into receiving waters. If a spill of pollutants threatens storm water 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 the 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 Response (4.2 2 c.(2)) (Continued)**

- 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 DENR.
- Personnel with primary responsibility for spill response and clean up 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.

❖ **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 reportable spill is a quantity of 25 gallons or more or any spill of oil which: 1) violates water quality standards, 2) produces a "sheen" on a surface water, or 3) causes a sludge or emulsion must be reported immediately to the National Response Center .

➢ Any spill of oil or hazardous substance to waters of the state must be reported immediately by telephone to the SD DENR.

❖ **Construction Changes (4.4)**

When changes are made to the construction project that will require alterations in the temporary erosion controls of the site, the Storm Water Pollution Prevention Plan (SWPPP) will be amended to provide appropriate protection to disturbed areas, all storm water structures, and adjacent waters. The City Engineer will modify the SWPPP plan (DOT 298) and drawings to reflect the needed changes. Copies of changes will be routed per DOT 298. Copies of forms and the SWPPP will be retained in a designated place for review over the course of the project.

❖ 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 sediment and erosion control plans, permits, notices or documentation as appropriate.

➢ City of Yankton

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 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. (See the General Permit, Section 6.7.1.C.)

➢ Prime Contractor

This section is to be executed by the General Contractor after the award of the contract and at least 15 days prior to the beginning of construction. 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 were prepared 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. (See the General Permit, Section 6.7.1.a .or b.)

❖ CONTACT INFORMATION

➢ Contractor Information:

- Prime Contractor Name:
- Contractor Contact Name:
- Address:
- Address:
- City: State: Zip:
- Office Phone: Field: Cell: Fax:

Erosion Control Supervisor

- Name:
- Address:
- Address:
- City: State: Zip:
- Office Phone: Cell: Fax:

➢ City Engineer

- Name: Brad Moser
- Business Address: 416 Walnut
- Job Office Location 416 Walnut
- City: Yankton State: SD Zip: 57078
- Office Phone: 605-668-5255 Field: Cell: Fax:

➢ SD DENR Contact Spill Reporting

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

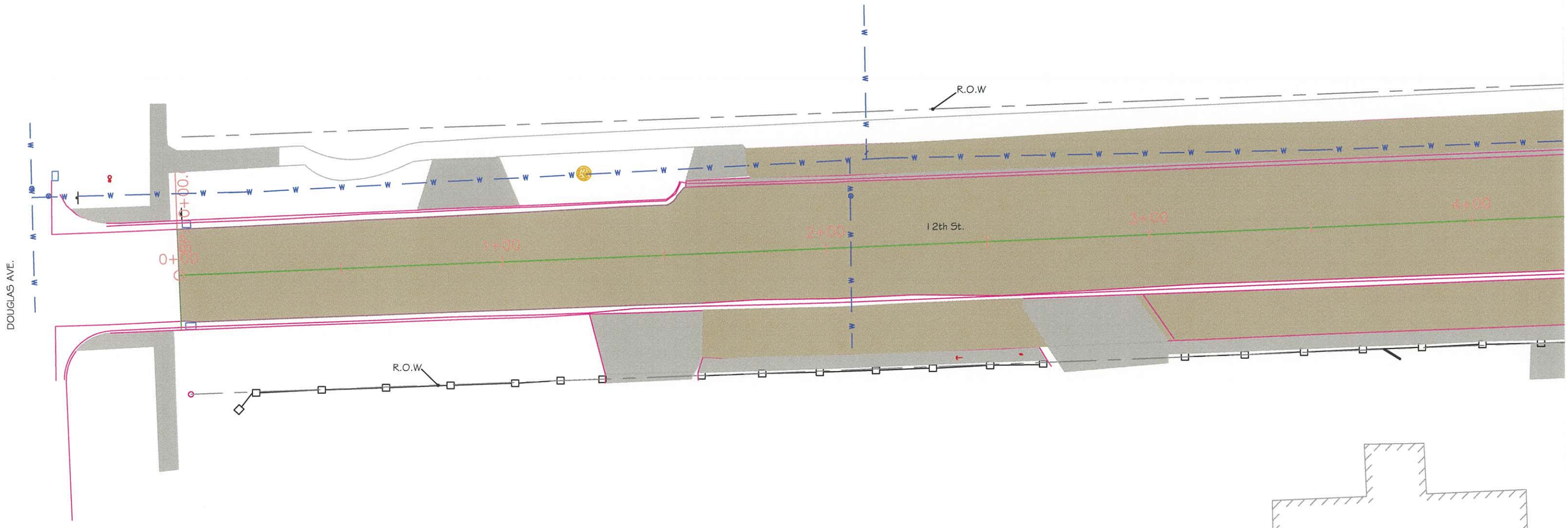
➢ SD DENR Contact for Hazardous Materials.

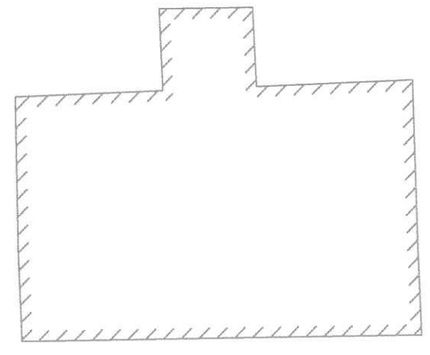
- (605) 773-3153

➢ National Response Center Hotline

- (800) 424-8802.

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	14	54
REMOVALS				





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REG. No.
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ADAM J.
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4-22-2020
SOUTH DAKOTA

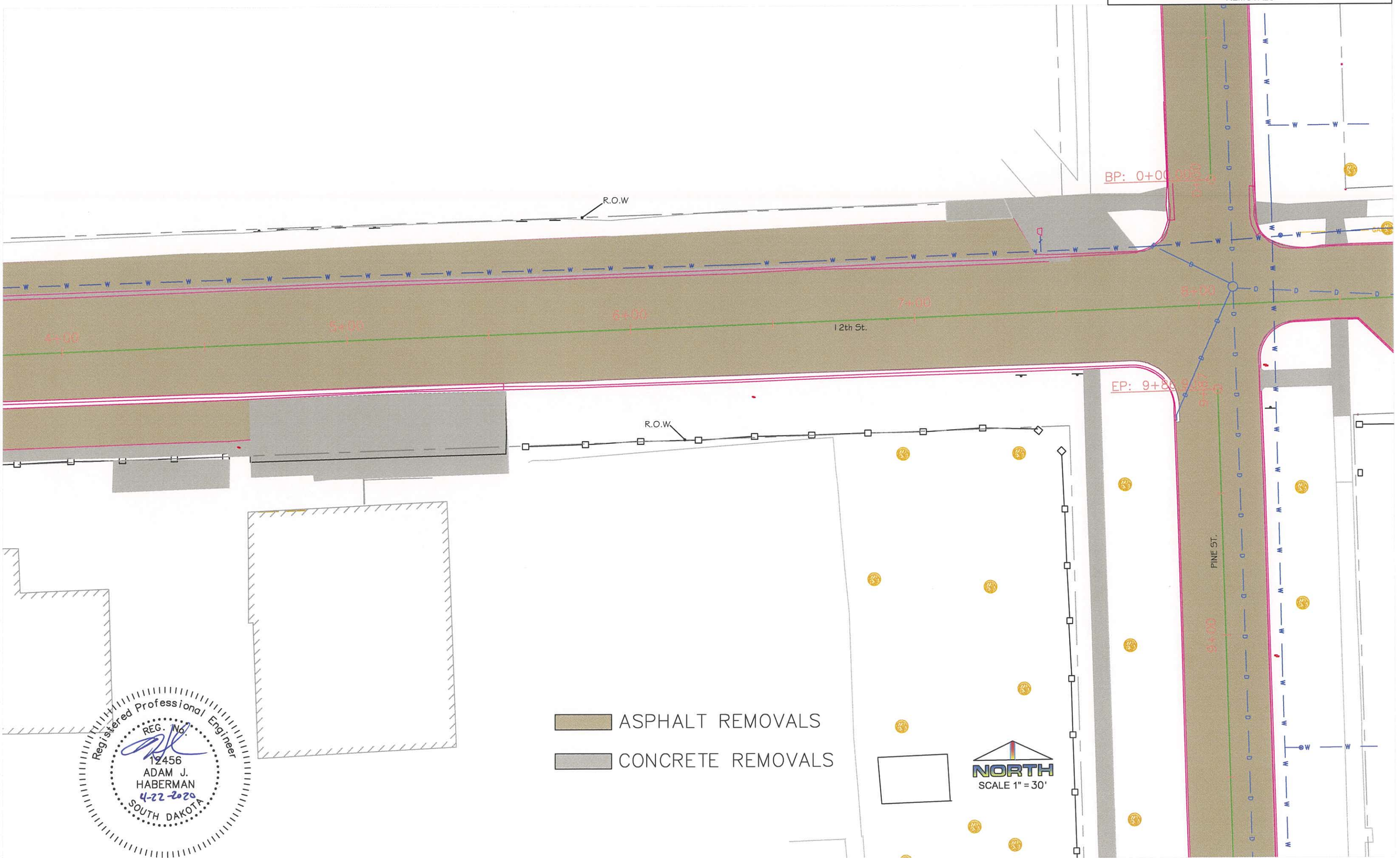
ASPHALT REMOVALS

CONCRETE REMOVALS

NORTH
SCALE 1" = 30'

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	15	54

REMOVALS



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REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	16	54

REMOVALS

BP: 0+00

EP: 9+80

8+00

9+00

10+00

11+00

12th St.

MULBERRY ST.

R.O.W

R.O.W

ASPHALT REMOVALS

CONCRETE REMOVALS

NORTH

SCALE 1" = 30'

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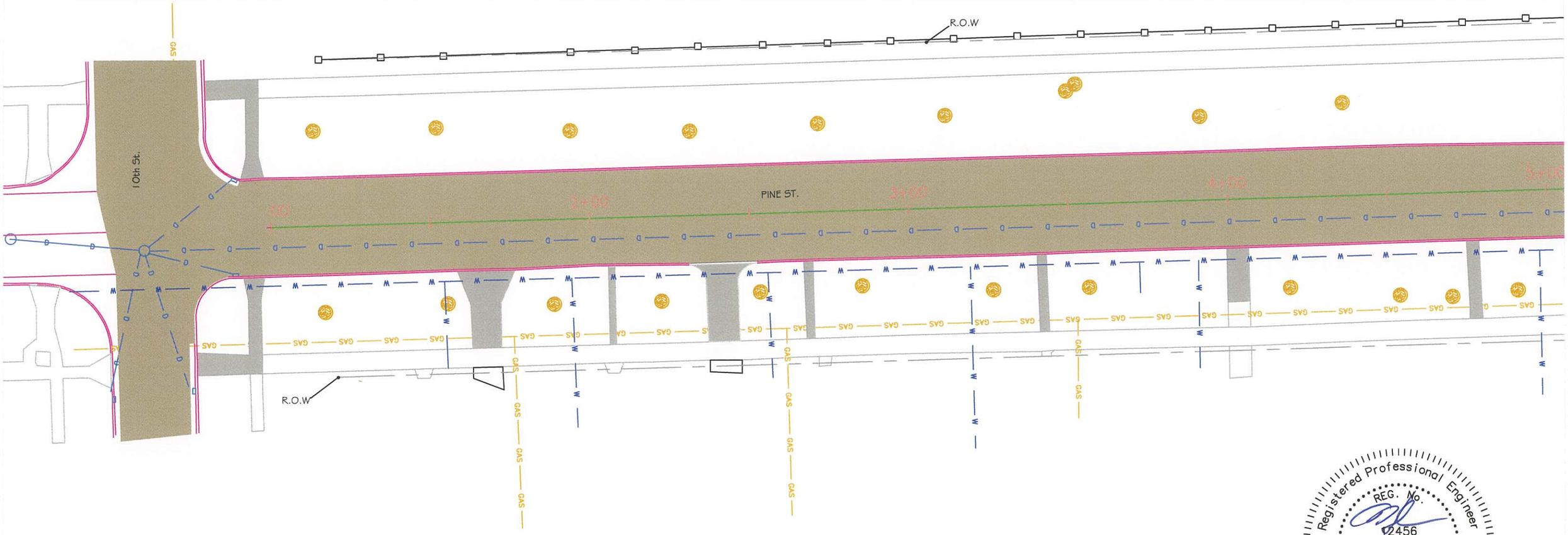
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	17	54
REMOVALS				



ASPHALT REMOVALS

CONCRETE REMOVALS

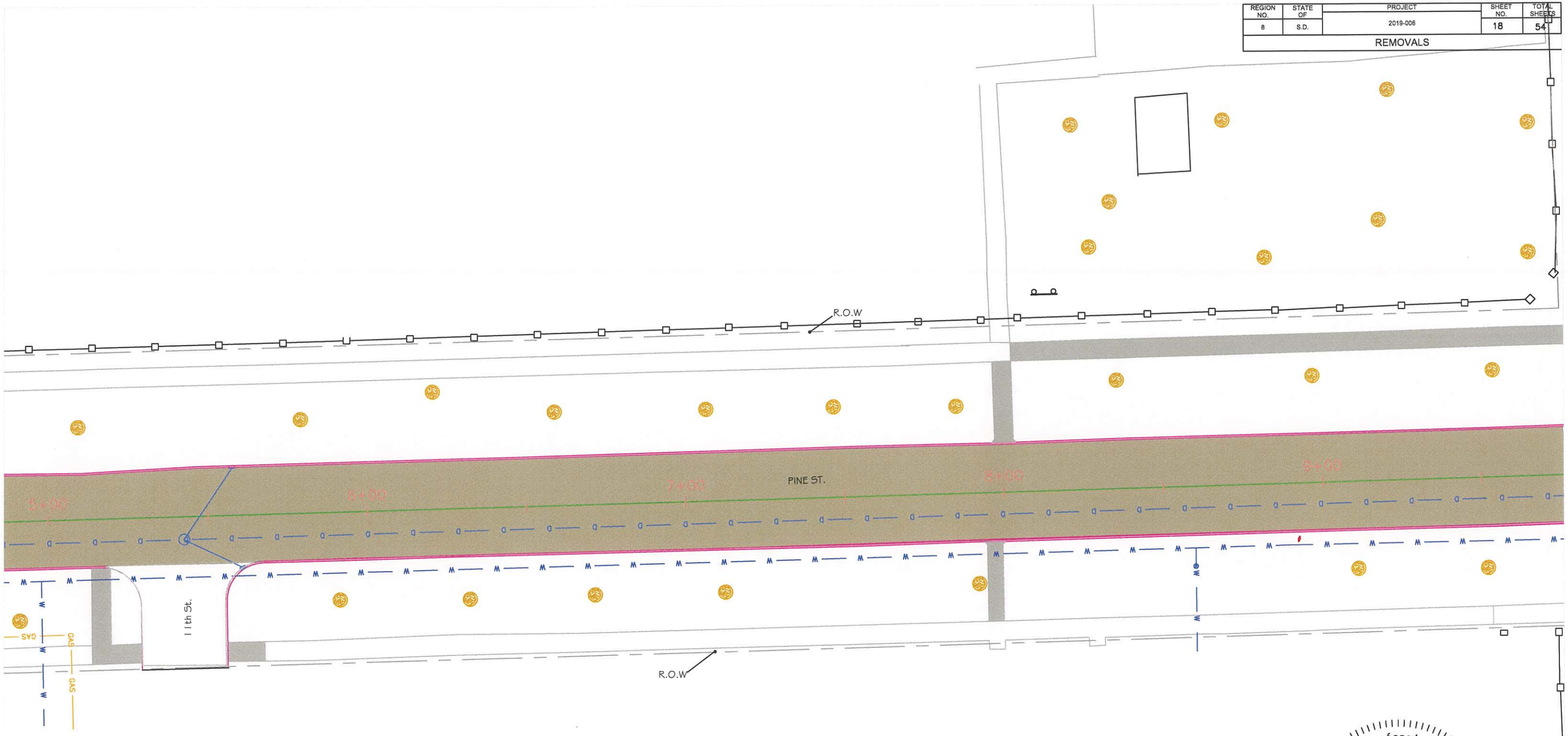
NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	18	54

REMOVALS



ASPHALT REMOVALS

CONCRETE REMOVALS

NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	19	54

REMOVALS

R.O.W

PINE ST.

R.O.W

12th St.

ASPHALT REMOVALS

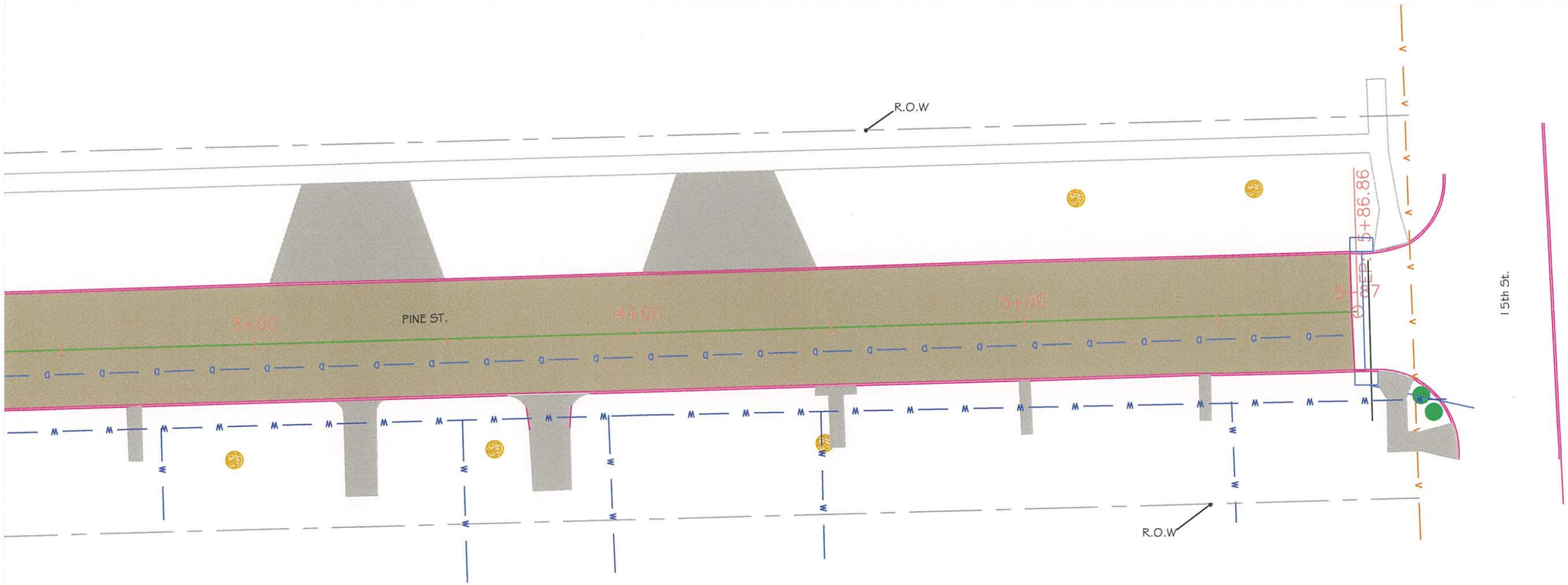
CONCRETE REMOVALS

NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	20	54
REMOVALS				



ASPHALT REMOVALS

CONCRETE REMOVALS

NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2024
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	21	54
PAVING				

NOTE: PARKING AREAS TO BE DONE IN CONCRETE. 12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.

⑫ STA. -0+11 - 17.0' LT.
MATCH EXISTING

⑬ STA. 0+50 - 17.0' LT.
TOC ELEV. 1242.21

⑭ STA. 1+00 - 17.0' LT.
TOC ELEV. 1243.12

⑮ STA. 1+50 - 17.0' LT.
TOC ELEV. 1244.03

⑯ STA. 1+78.60 - 17.0' LT.
GRADE CHANGE
TOC ELEV. (THEO.)1244.48

⑰ STA. 2+00 - 17.0' LT.
TOC ELEV. (THEO.)1244.67

⑱ STA. 2+50 - 17.0' LT.
TOC ELEV 1245.11

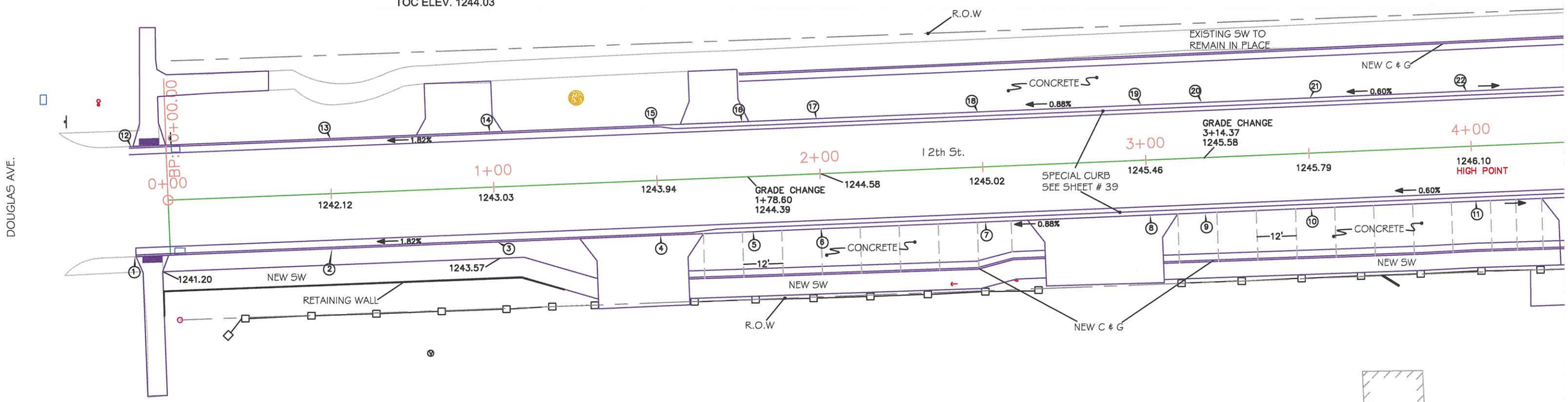
⑲ STA. 3+00 - 17.0' LT.
TOC ELEV. 1245.55

⑳ STA. 3+14.37 - 17.0' LT.
GRADE CHANGE
TOC ELEV 1245.67

㉑ STA. 3+50 - 17.0' LT.
TOC ELEV 1245.88

㉒ STA. 3+00 - 17.0' LT.
HIGH POINT
TOC ELEV. 1246.19

Registered Professional Engineer
REG. No. 12456
ADAM J. HABERMAN
4-22-2020
SOUTH DAKOTA



① STA. -0+11 - 17.0' RT.
TOC ELEV. MATCH EXISTING

② STA. 0+50 - 17.0' RT.
TOC ELEV. 1242.21

③ STA. 1+00 - 17.0' RT.
TOC ELEV. 1243.12

④ STA. 1+50 - 17.0' RT.
TOC ELEV. (THEO.) 1244.03

⑤ STA. 1+78.60 - 17.0 ' RT
GRADE CHANGE
TOC ELEV. (THEO.) 1244.48.

⑥ STA. 2+00 - 17.0' RT.
TOC ELEV. (THEO.) 1244.67

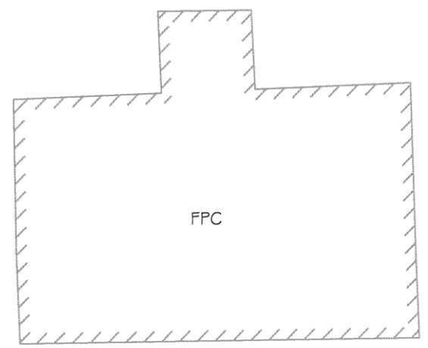
⑦ STA. 2+50 - 17.0 ' RT
TOC ELEV. (THEO.) 1245.11

⑧ STA. 3+00 - 17.0' RT.
TOC ELEV. (THEO.)1245.55

⑨ STA. 3+14.37 - 17.0' RT.
GRADE CHANGE
TOC ELEV. (THEO.)1245.67

⑩ STA. 3+50- 17.0' RT.
TOC ELEV. (THEO.)1245.88

⑪ STA. 4+00 - 17.0' RT.
TOC ELEV. (THEO.)1246.19



LEGEND

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS —L———L———

LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS ——LT——LT——

TRANSVERSE CONTRACTION JOINT WITHOUT TIE BARS — — — — — —

NORTH
SCALE 1" = 30'

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019006	22	54

PAVING

NOTE: PARKING AREAS TO BE DONE IN CONCRETE.
12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.

LEGEND

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS —L——L——

LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS —LT——LT——

TRANSVERSE CONTRACTION JOINT WITHOUT TIE BARS — — — — —

(12) STA. 4+00 - 17.0' LT.
TOC ELEV (THEO.)1246.19

(13) STA. 4+50 - 17.0' LT.
TOC ELEV. (THEO.)1246.01

(14) STA. 5+00 - 17.0' LT.
TOC ELEV. (THEO.)1245.79

(15) STA. 5+12.42 - 17.0' LT.
GRADE CHANGE
TOC ELEV. (THEO.)1245.76

(16) STA. 5+50 - 17.0' LT.
TOC ELEV. (THEO.)1245.72

(17) STA. 5+90 - 17.0' LT.
TOC ELEV. (THEO.)1245.56

(18) STA. 6+00 - 17.0' LT.
TOC ELEV (THEO.)1245.50

(19) STA. 6+50 - 17.0' LT.
TOC ELEV. (THEO.)1245.20

(20) STA. 7+00 - 17.0' LT.
GRADE CHANGE
TOC ELEV (THEO.)1244.90

(21) STA. 7+46 - 17.0' LT.
TOC ELEV 1244.68

(22) STA. 7+72.14 - 17.0' LT.
BEGIN 20' RADIUS
TOC ELEV. 1244.50

(23) STA. 7+90.59 - 37.13' LT.
END 20' RADIUS
TOC ELEV 1244.52

(24) STA. 7+90.62 - 44.23' LT.
HIGH POINT
TOC ELEV. 1244.60

(1) STA. 4+00 - 17.0' RT.
TOC ELEV. (THEO.) 1246.19

(2) STA. 4+50 - 17.0' RT.
TOC ELEV. (THEO.) 1246.01

(3) STA. 5+00 - 17.0' RT.
TOC ELEV. (THEO.) 1245.79

(4) STA. 5+12.42 - 17.0' RT.
GRADE CHANGE
TOC ELEV. (THEO.) 1245.76

(5) STA. 5+50 - 17.0 ' RT
TOC ELEV. (THEO.) 1245.72

(6) STA. 5+90 - 17.0' RT.
GRADE CHANGE
TOC ELEV. 1245.56

(7) STA. 6+00 - 17.0 ' RT
TOC ELEV. 1245.50

(8) STA. 6+50 - 17.0' RT.
TOC ELEV. 1245.20

(9) STA. 7+00 - 17.0' RT.
GRADE CHANGE
TOC ELEV. 1244.90

(10) STA. 7+46- 17.0' RT.
TOC ELEV. 1244.68

(11) STA. 7+69.47 - 17.0' RT.
BEGIN 20' RADIUS
TOC ELEV. 1244.51

(11A) STA. 7+89.94 - 32.13' RT.
END 20' RADIUS
TOC ELEV. 1244.05

Registered Professional Engineer
REG. No.
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ADAM J.
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4-22-2026
SOUTH DAKOTA

NORTH
SCALE 1" = 30'

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	23	54
PAVING				

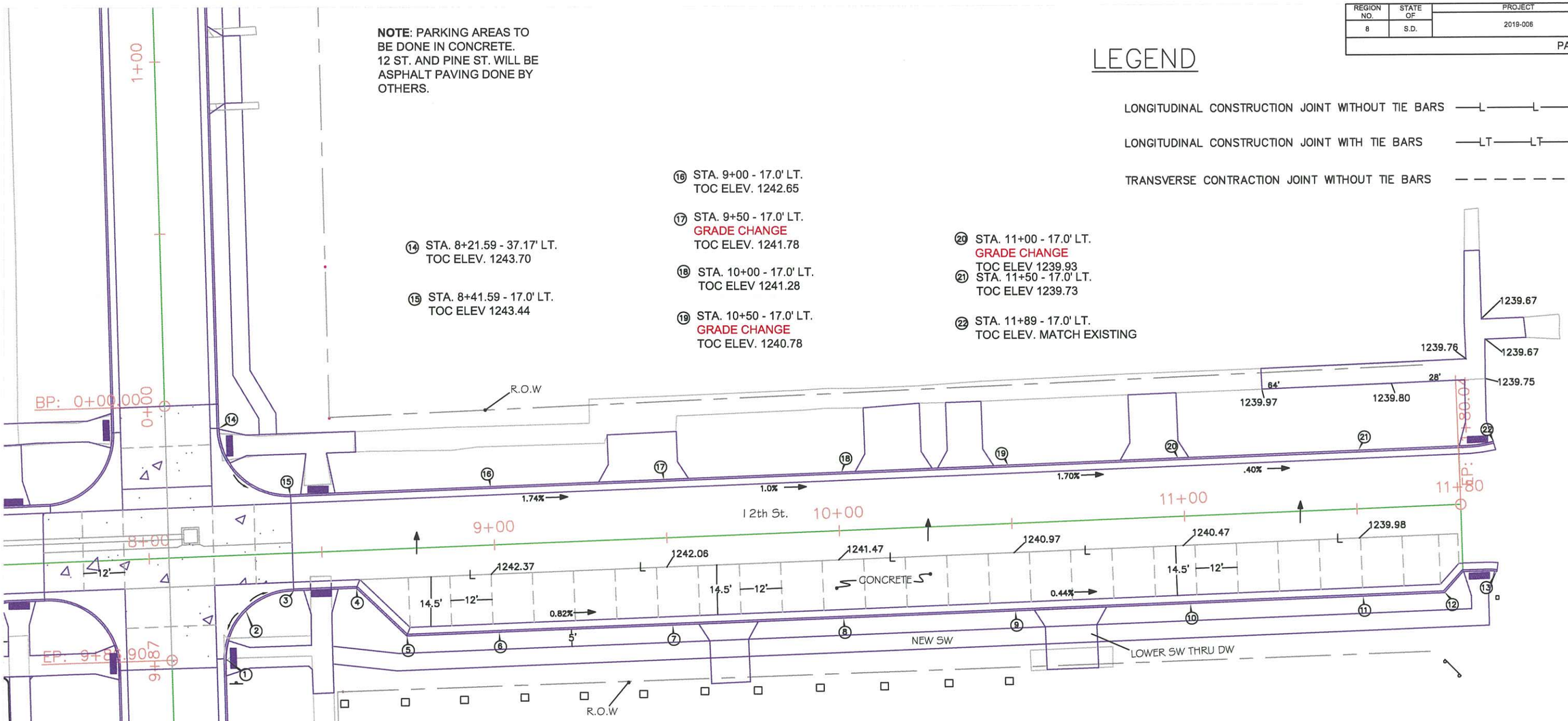
NOTE: PARKING AREAS TO BE DONE IN CONCRETE. 12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.

LEGEND

LONGITUDINAL CONSTRUCTION JOINT WITHOUT TIE BARS —L——L—

LONGITUDINAL CONSTRUCTION JOINT WITH TIE BARS —LT——LT—

TRANSVERSE CONTRACTION JOINT WITHOUT TIE BARS — — — — —



① STA. 9+86.88 - 15.5' RT. (pine)
BEGIN 20' RADIUS
TOC ELEV. 1244.05

② STA. 8+27.31 - 16.29' RT. (12th)
HIGH POINT
TOC ELEV. 1244.15

③ STA. 8+41.6 - 11.0' RT.
END 20' RADIUS
TOC ELEV. 1243.95

④ STA. 8+59.60 - 11.0' RT.
TOC ELEV. 1243.78

⑤ STA. 8+73.57 - 25.5 ' RT
TOC ELEV. 1243.42

⑥ STA. 9+00 - 25.5' RT.
TOC ELEV. 1243.21

⑦ STA. 9+50 - 25.5 ' RT
GRADE CHANGE
TOC ELEV. 1242.80

⑧ STA. 10+00 - 25.5' RT.
TOC ELEV. 1242.29

⑨ STA. 10+50 - 25.5' RT.
TOC ELEV. 1241.79

⑩ STA. 11+00- 25.5' RT.
TOC ELEV. 1241.29

⑪ STA. 11+50 - 25.5' RT.
TOC ELEV. 1240.79

⑫ STA. 11+74.22 - 25.5' RT.
TOC ELEV. 1240.64

⑫ STA. 11+89 - 25.5' RT.
MATCH EXISTING

⑭ STA. 8+21.59 - 37.17' LT.
TOC ELEV. 1243.70

⑮ STA. 8+41.59 - 17.0' LT.
TOC ELEV 1243.44

⑯ STA. 9+00 - 17.0' LT.
TOC ELEV. 1242.65

⑰ STA. 9+50 - 17.0' LT.
GRADE CHANGE
TOC ELEV. 1241.78

⑱ STA. 10+00 - 17.0' LT.
TOC ELEV 1241.28

⑲ STA. 10+50 - 17.0' LT.
GRADE CHANGE
TOC ELEV. 1240.78

⑳ STA. 11+00 - 17.0' LT.
GRADE CHANGE
TOC ELEV 1239.93

㉑ STA. 11+50 - 17.0' LT.
TOC ELEV 1239.73

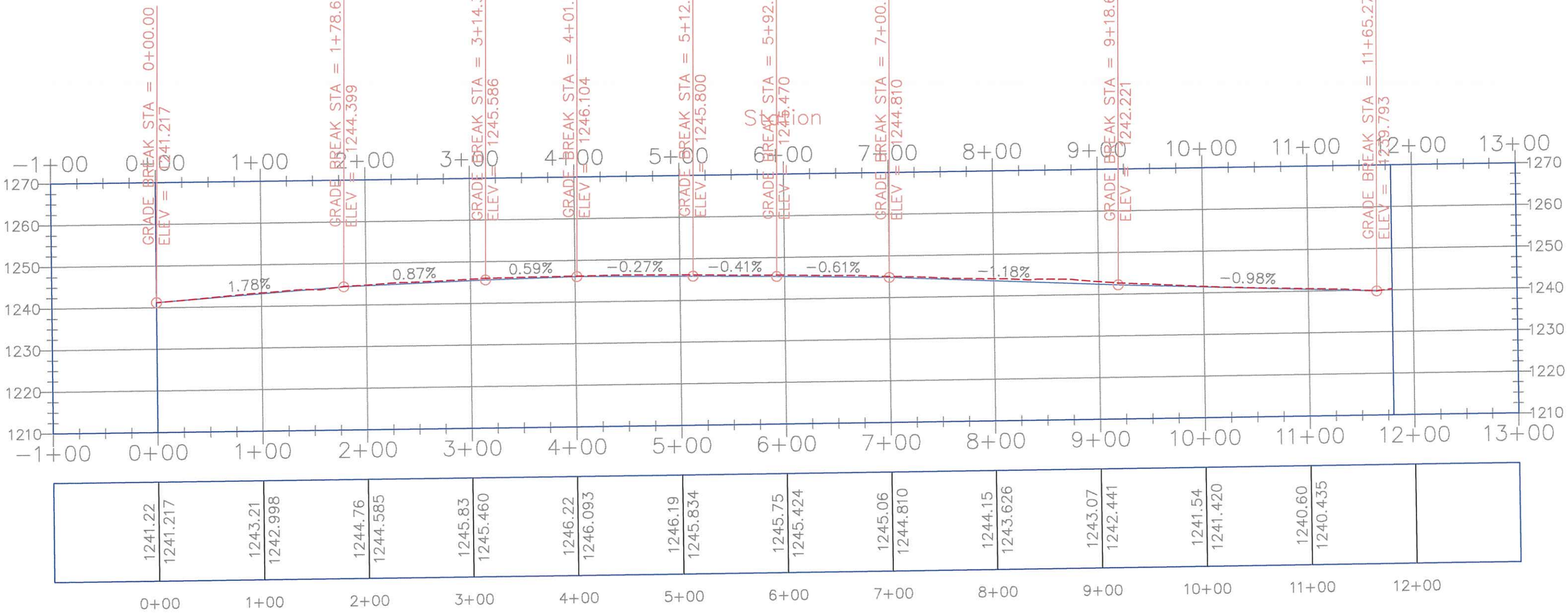
㉒ STA. 11+89 - 17.0' LT.
TOC ELEV. MATCH EXISTING

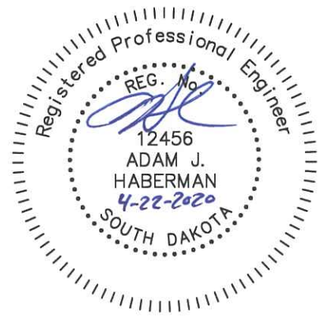
NORTH
SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	24	54
		PAVING		

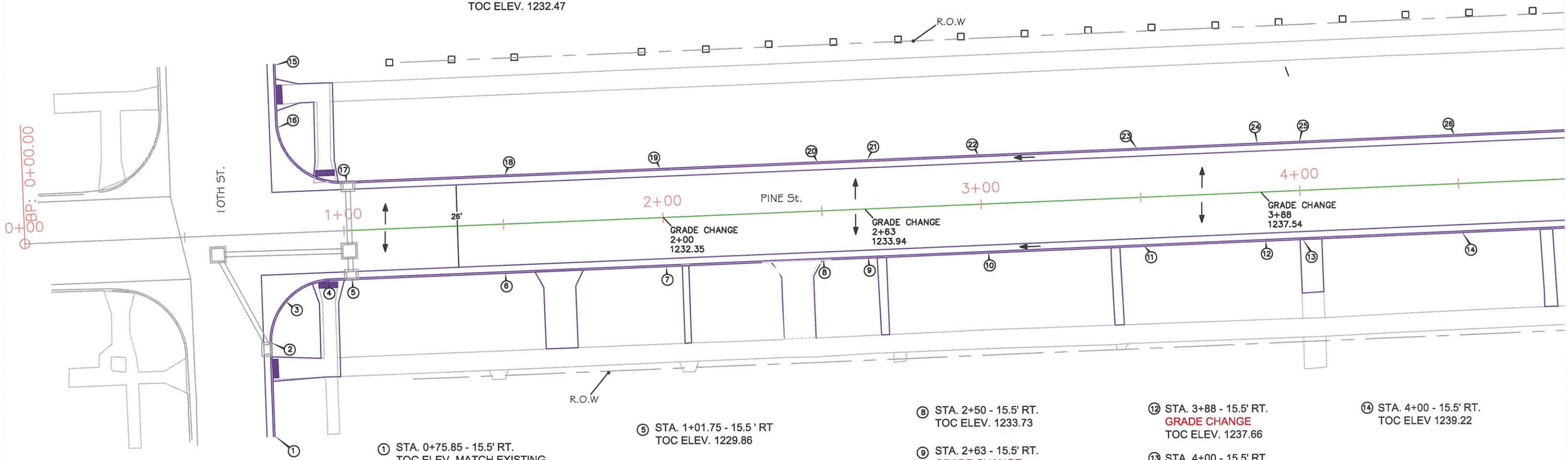
12th st PROFILE





REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	25	54
PAVING				

NOTE: PARKING AREAS TO BE DONE IN CONCRETE.
12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.



15 STA. 0+80.41 - 53.38' LT.
TOC ELEV. MATCH EXISTING

16 STA. 0+80.40 - 33.78' LT.
BEGIN 20' RADIUS
TOC ELEV. 1228.97

17 STA. 1+01.79 - 15.5' LT.
END 20' RADIUS
TOC ELEV. 1229.80

18 STA. 1+50 - 15.5' LT.
TOC ELEV 1230.93

19 STA. 2+00 - 15.5' LT.
GRADE CHANGE
TOC ELEV. 1232.47

20 STA. 2+50 - 15.5' LT.
TOC ELEV 1233.73

21 STA. 2+63 - 15.5' LT.
GRADE CHANGE
TOC ELEV 1234.06

22 STA. 3+01.83 - 15.5' LT.
TOC ELEV. 1235.65

23 STA. 3+50 - 15.5' LT.
TOC ELEV 1236.71

24 STA. 3+88 - 15.5' LT.
GRADE CHANGE
TOC ELEV 1237.66

25 STA. 4+00 - 15.5' LT.
TOC ELEV. 1237.94

26 STA. 4+50 - 15.5' LT.
TOC ELEV. 1239.22

1 STA. 0+75.85 - 15.5' RT.
TOC ELEV. MATCH EXISTING

2 STA. 8+27.31 - 33.92' RT.
LOW POINT BEGIN 20' RADIUS
TOC ELEV. 1229.50

3 STA. 0+81.94 - 20.73' RT.
MID POINT
TOC ELEV. 1229.63

4 STA. 0+95.46 - 15.5' RT.
END RADIUS
TOC ELEV. 1229.76

5 STA. 1+01.75 - 15.5 ' RT
TOC ELEV. 1229.86

6 STA. 1+50 - 15.5' RT.
TOC ELEV. 1230.93

7 STA. 2+00 - 15.5 ' RT
GRADE CHANGE
TOC ELEV. 1232.47

8 STA. 2+50 - 15.5' RT.
TOC ELEV. 1233.73

9 STA. 2+63 - 15.5' RT.
GRADE CHANGE
TOC ELEV. 1234.06

10 STA. 3+01.83- 15.5' RT.
GRADE CHANGE
TOC ELEV. 1235.65

11 STA. 3+50 - 15.5' RT.
TOC ELEV. 1236.71

12 STA. 3+88 - 15.5' RT.
GRADE CHANGE
TOC ELEV. 1237.66

13 STA. 4+00 - 15.5' RT.
TOC ELEV 1237.94

14 STA. 4+00 - 15.5' RT.
TOC ELEV 1239.22

NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	26	54
PAVING				

NOTE: PARKING AREAS TO BE DONE IN CONCRETE. 12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.

16 STA. 5+00 - 15.5' LT.
TOC ELEV. 1240.50

17 STA. 5+58 - 15.5' LT.
GRADE CHANGE
TOC ELEV. 1242.00

18 STA. 6+00 - 15.5' LT.
TOC ELEV 1242.22

19 STA. 6+43 - 15.5' LT.
GRADE CHANGE
TOC ELEV. 1242.38

20 STA. 6+50 - 15.5' LT.
TOC ELEV 1242.42

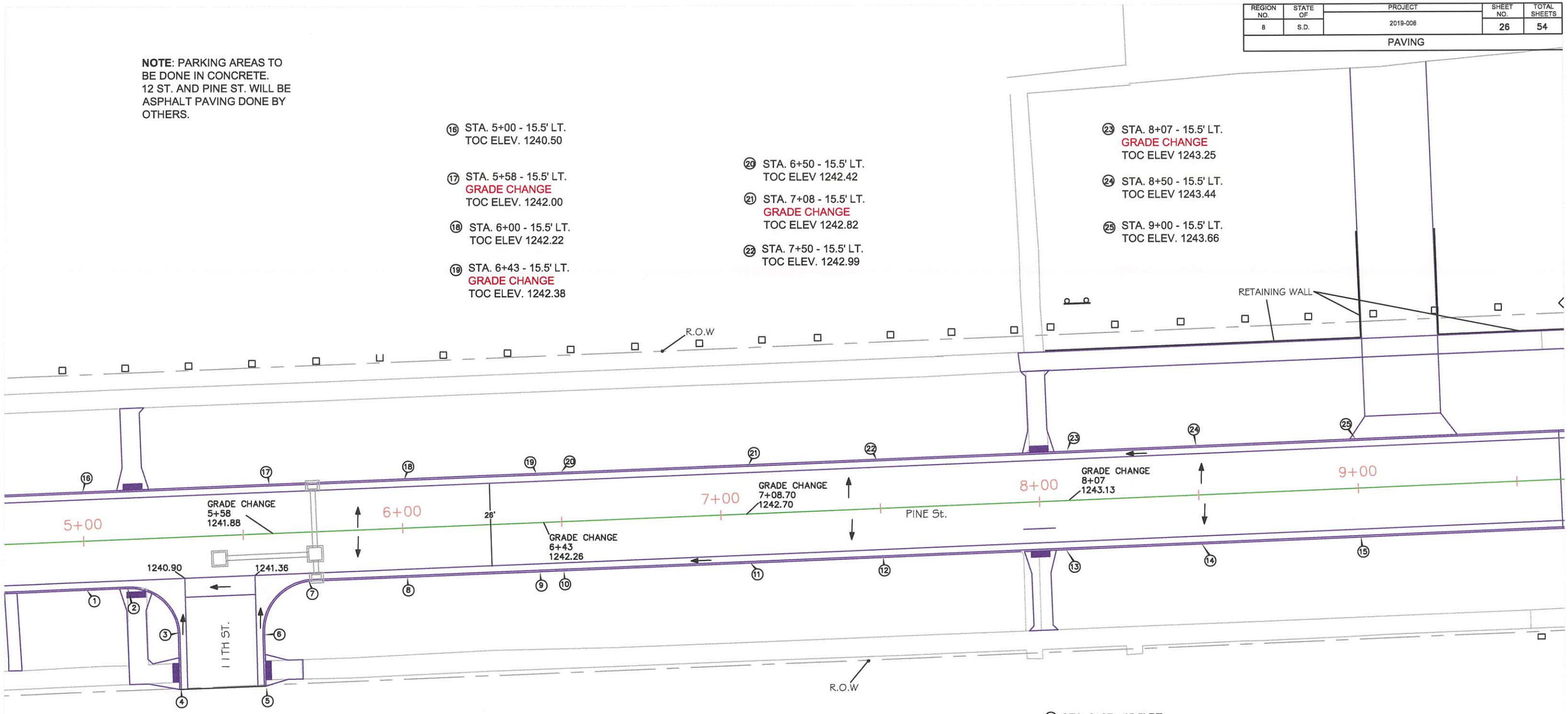
21 STA. 7+08 - 15.5' LT.
GRADE CHANGE
TOC ELEV 1242.82

22 STA. 7+50 - 15.5' LT.
TOC ELEV. 1242.99

23 STA. 8+07 - 15.5' LT.
GRADE CHANGE
TOC ELEV 1243.25

24 STA. 8+50 - 15.5' LT.
TOC ELEV 1243.44

25 STA. 9+00 - 15.5' LT.
TOC ELEV. 1243.66



1 STA. 5+00 - 15.5' RT.
TOC ELEV. 1240.55

2 STA. 5+13.20 - 15.5' RT.
BEGIN 15' RADIUS
TOC ELEV. 1241.20

3 STA. 5+28.45 - 31.45' RT.
END 15' RADIUS
TOC ELEV. 1241.75

4 STA. 5+28.40 - 47.92' RT.
TOC ELEV. 1242.05

5 STA. 5+55.25 - 48.0 ' RT
TOC ELEV. 1242.52

6 STA. 5+55.30 - 31.70' RT.
BEGIN 15' RADIUS
TOC ELEV. 1242.24

7 STA. 5+69.95 - 15.5 ' RT
END 15' RADIUS
TOC ELEV. 1242.10

8 STA. 6+00 - 15.5' RT.
TOC ELEV. 1242.22

9 STA. 6+43 - 15.5' RT.
GRADE CHANGE
TOC ELEV. 1242.38

10 STA. 6+50 - 15.5' RT.
TOC ELEV. 1242.42

11 STA. 7+08- 15.5' RT.
GRADE CHANGE
TOC ELEV. 1242.82

12 STA. 7+50 - 15.5' RT.
TOC ELEV. 1242.99

13 STA. 8+07 - 15.5' RT.
GRADE CHANGE
TOC ELEV. 1243.25

14 STA. 8+50 - 15.5' RT.
TOC ELEV 1243.44

15 STA. 9+00 - 15.5' RT.
TOC ELEV 1243.66

NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2019-006	27	54
PAVING				

NOTE: PARKING AREAS TO BE DONE IN CONCRETE. 12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.

⑩ STA. 0+00 - 15.5' LT.
HIGH POINT
TOC ELEV. 1244.60

⑪ STA. 0+50 - 15.5' LT.
TOC ELEV. 1244.06

⑫ STA. 1+00 - 15.5' LT.
TOC ELEV. 1243.56

⑬ STA. 1+20 - 15.5' LT.
GRADE CHANGE/ LOW POINT
TOC ELEV. 1243.36

⑭ STA. 1+50 - 15.5' LT.
TOC ELEV 1243.50

⑮ STA. 2+00 - 15.5' LT.
TOC ELEV 1243.74

⑯ STA. 2+20 - 15.5' LT.
TOC ELEV. 1243.83

⑰ STA. 2+50 - 15.5' LT.
TOC ELEV. 1243.97

⑱ STA. 3+00 - 15.5' LT.
HIGH POINT
TOC ELEV 1244.20

R.O.W

9+50
TC 1243.88

9+86.90
BEP

9+87

CONCRETE

7+00

0+00.00
BP

0+00

1+00

GRADE CHANGE
1+20
1243.24

PINE St.

2+00

3+00

26'

4.5'

9+00

R.O.W

① STA. -0+07 - 15.5' RT.
TOC ELEV. 1243.70

② STA. 0+20 - 15.5' RT.
HIGH POINT
TOC ELEV. 1243.96

③ STA. 0+50 - 15.5' RT.
TOC ELEV. 1243.78

④ STA. 1+00 - 15.5' RT.
TOC ELEV. 1243.48

⑤ STA. 1+20 - 15.5 ' RT
GRADE CHANGE / LOW POINT
TOC ELEV. 1243.36

⑥ STA. 1+50 - 15.5' RT.
TOC ELEV. 1243.50

⑦ STA. 2+00 - 15.5 ' RT
TOC ELEV. 1243.74

⑧ STA. 2+50 - 15.5' RT.
TOC ELEV. 1243.97

⑨ STA. 3+00 - 15.5' RT.
HIGH POINT
TOC ELEV. 1244.20

9+00

12TH ST.

CONCRETE

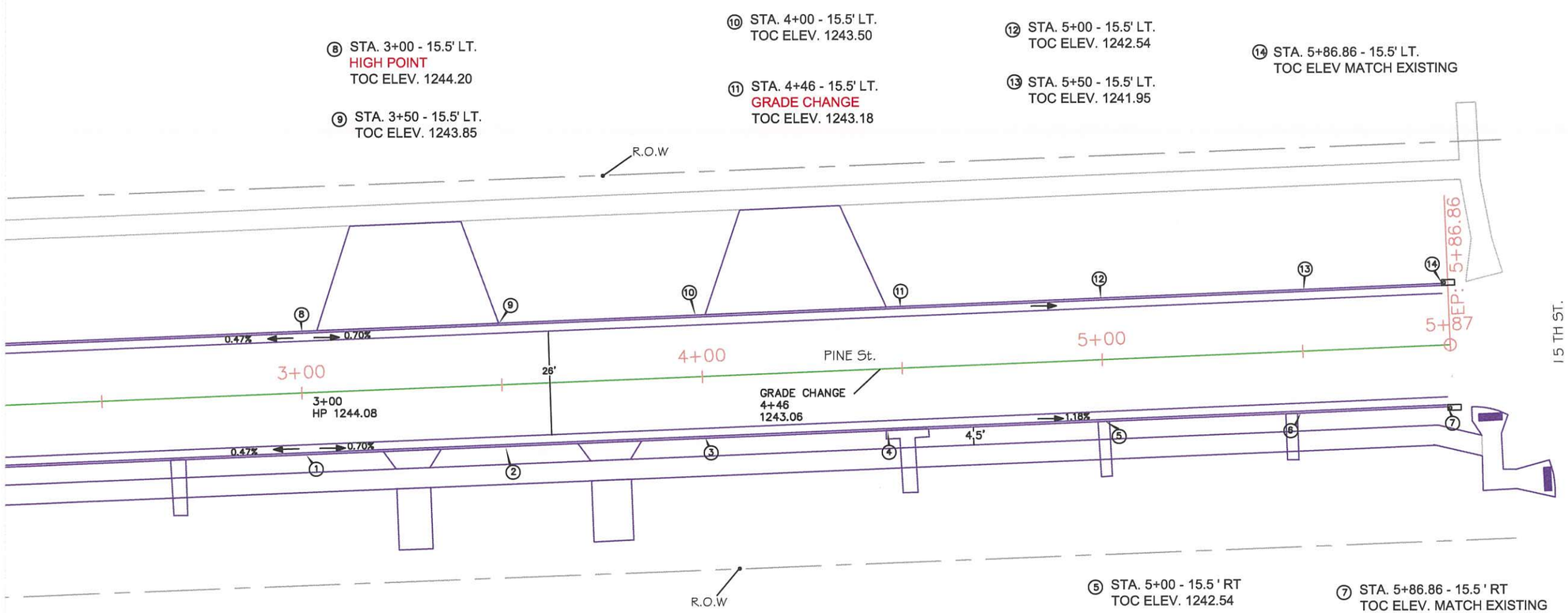
NORTH

SCALE 1" = 30'

Registered Professional Engineer
REG. NO.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	28	54
PAVING				

NOTE: PARKING AREAS TO BE DONE IN CONCRETE. 12 ST. AND PINE ST. WILL BE ASPHALT PAVING DONE BY OTHERS.



NORTH

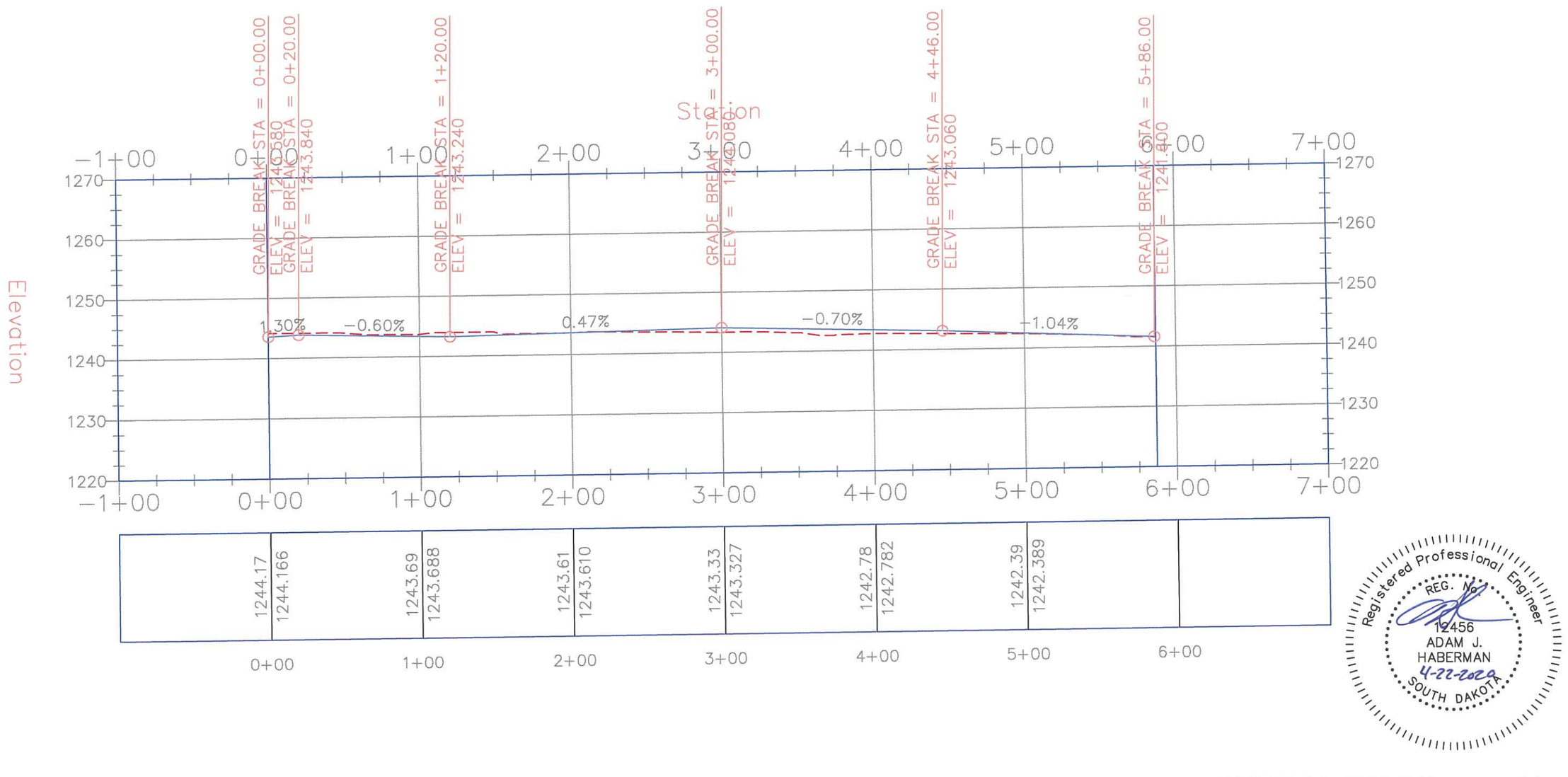
SCALE 1" = 30'

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	29	54

PINE NORTH PROFILE

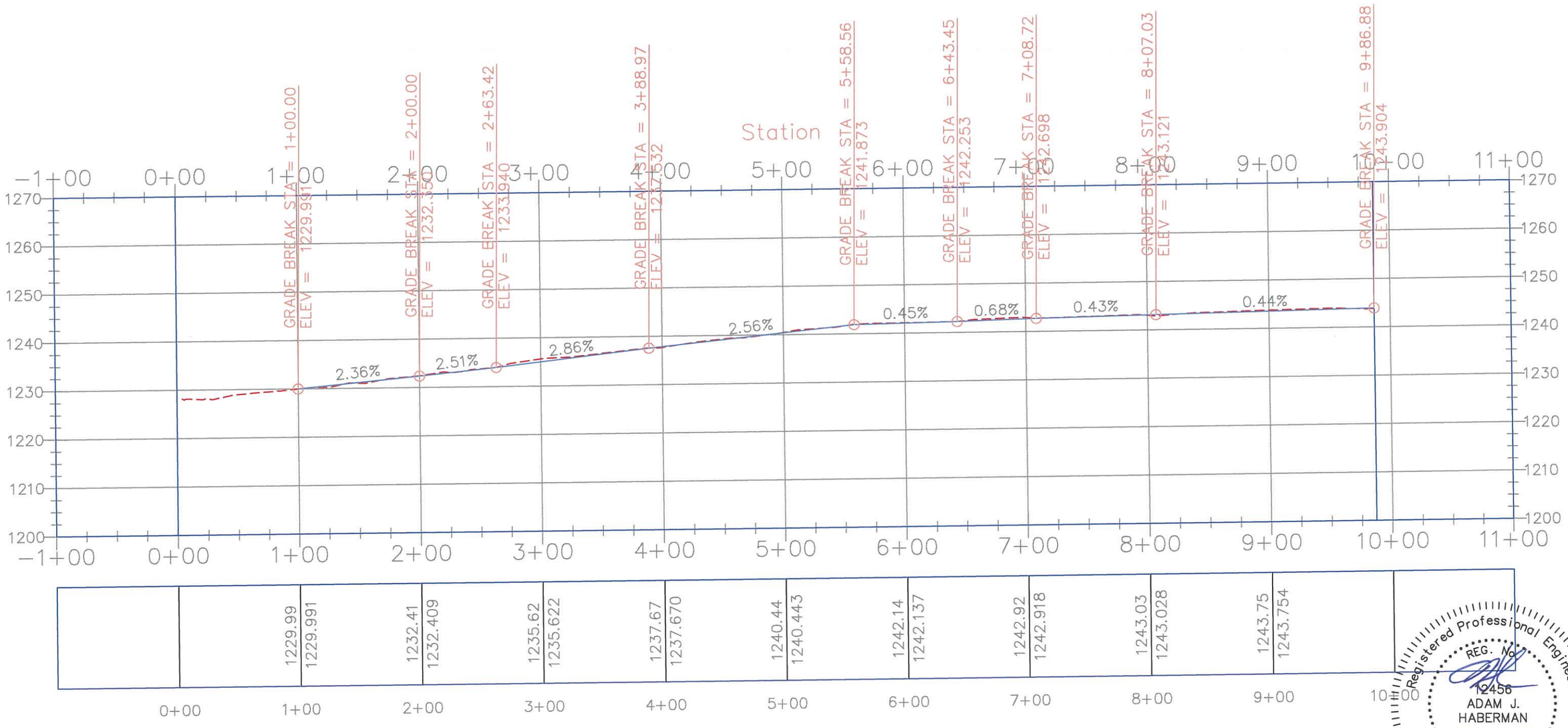
PINE ST NORTH PROFILE



Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	30	54
PINE SOUTH PROFILE				

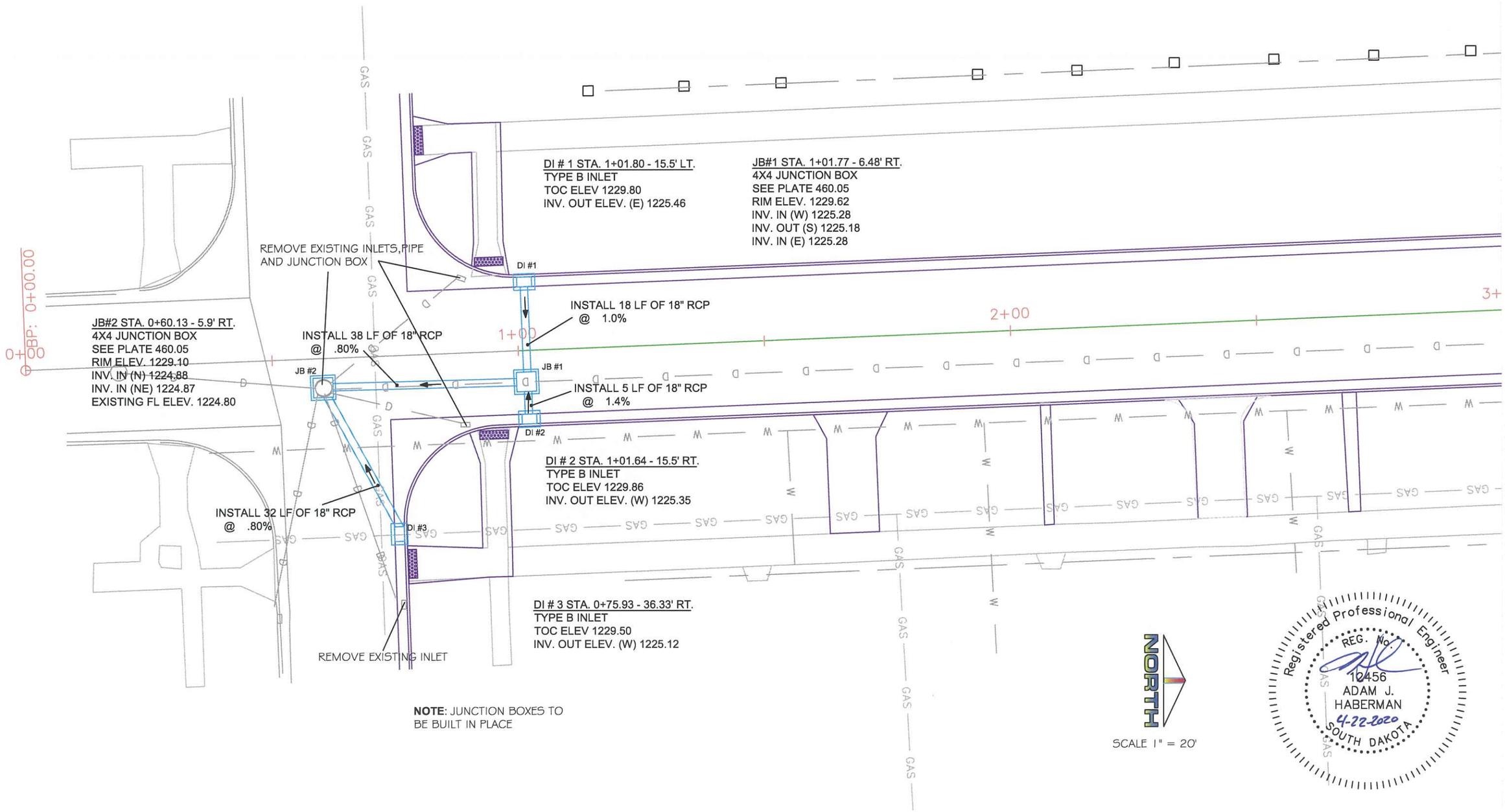
PINE ST SOUTH PROFILE



Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	31	54

STORM SEWER

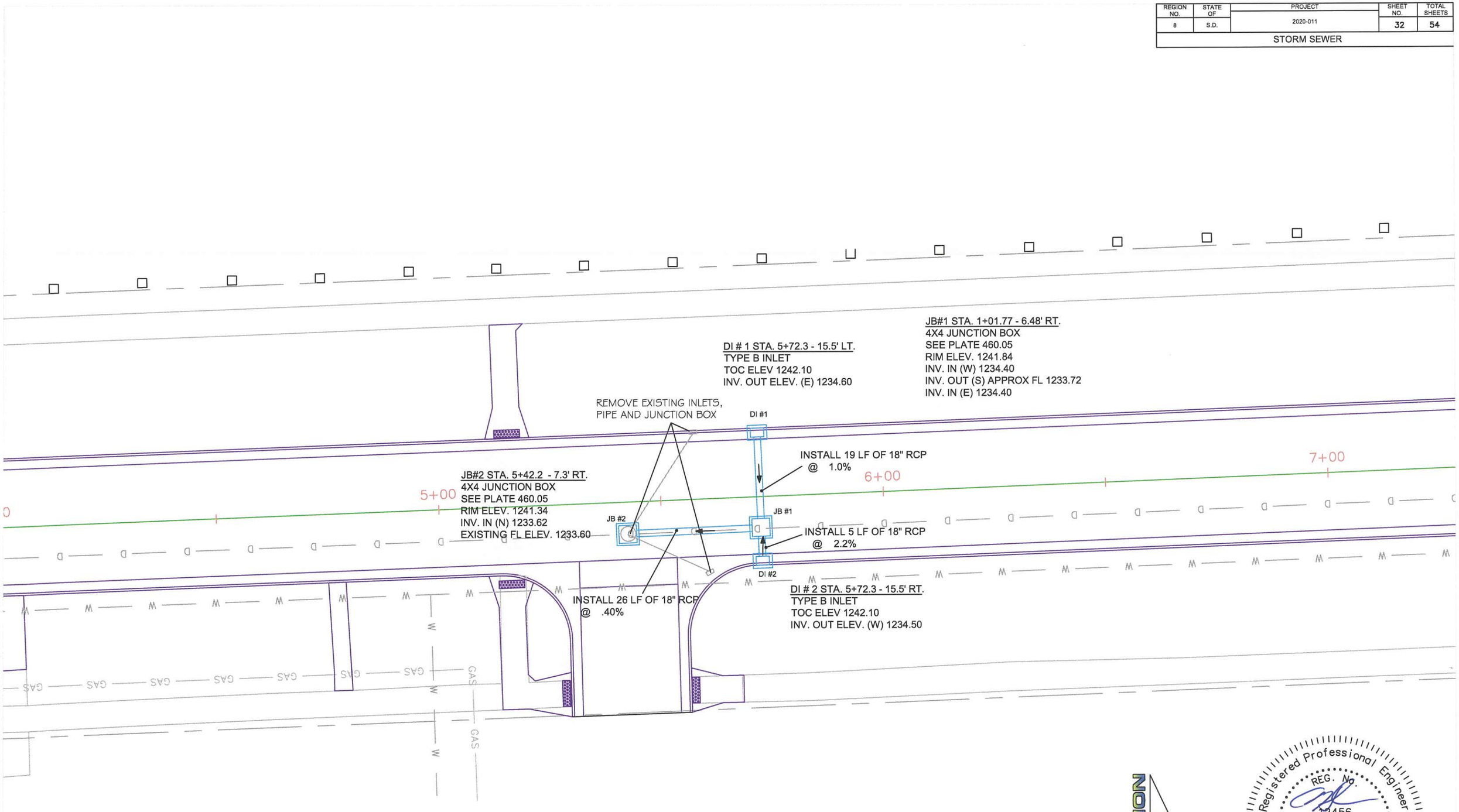


NOTE: JUNCTION BOXES TO BE BUILT IN PLACE

Registered Professional Engineer
REG. No.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	32	54

STORM SEWER



NOTE: JUNCTION BOXES TO BE BUILT IN PLACE

NORTH

SCALE 1" = 20'

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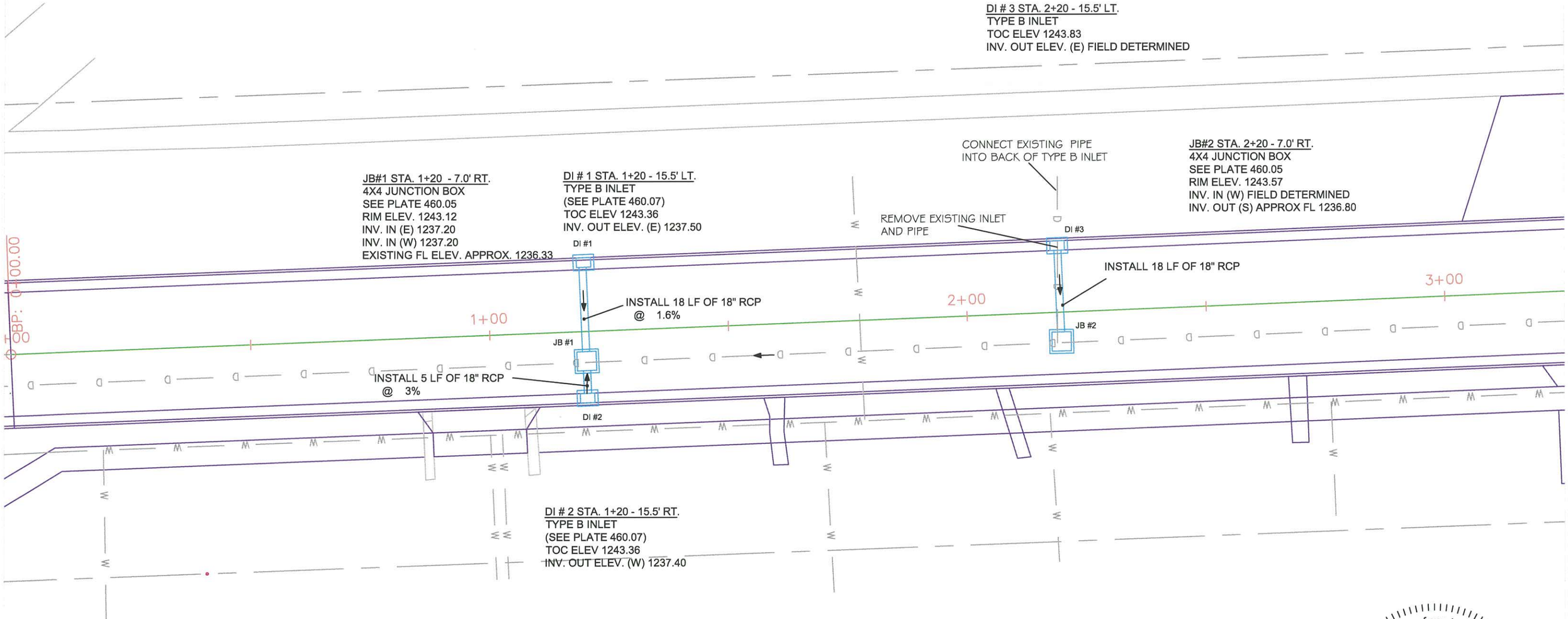
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	33	54
STORM SEWER				



NOTE: JUNCTION BOXES AND INLET #3 TO BE BUILT IN PLACE

NORTH

SCALE 1" = 20'

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REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	34	54

STORM SEWER

JB#1 STA. 7+46 - 6.24' LT.
4X4 JUNCTION BOX
SEE PLATE 460.05
RIM ELEV. 1244.47
INV. IN (S) 1237.80
INV. IN (N) 1237.80
INV. OUT (E) 1237.60

DI # 1 STA. 7+46 - 17.0' LT.
TYPE B INLET
(SEE PLATE 460.07)
TOC ELEV 1244.68
INV. OUT ELEV. (S) 1237.88

BP: 0+00.00

DI #1

INSTALL 8 LF OF 18" RCP
@ 1%

JB #1

INSTALL 62 LF OF 18" RCP
@ 2.1%

JB #2

JB#1 STA. 8+12.26 - 6.2' LT.
4X4 JUNCTION BOX
SEE PLATE 460.05
RIM ELEV. 1244.20
INV. IN (W) 1236.30
EXISTING SOUTH FL APPROX. 1235.70

7+00

8+00

9+00

REMOVE EXISTING INLET, JB AND PIPE

DI #2

INSTALL 20 LF OF 18" RCP
@ 1.3%

EP: 9+36.90

DI # 2 STA. 7+46 - 17.0' RT.
TYPE B INLET
(SEE PLATE 460.07)
TOC ELEV 1244.68
INV. OUT ELEV. (N) 1238.06

NORTH
SCALE 1" = 20'

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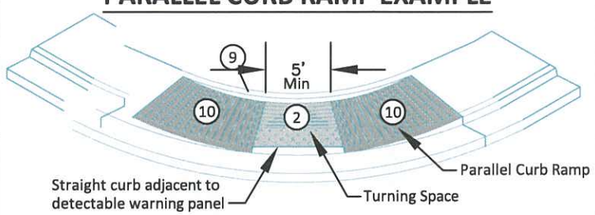
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	35	54

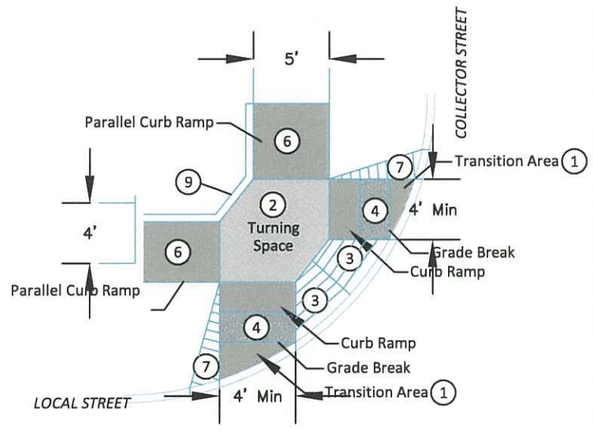
DETAILS

PARALLEL CURB RAMP EXAMPLE

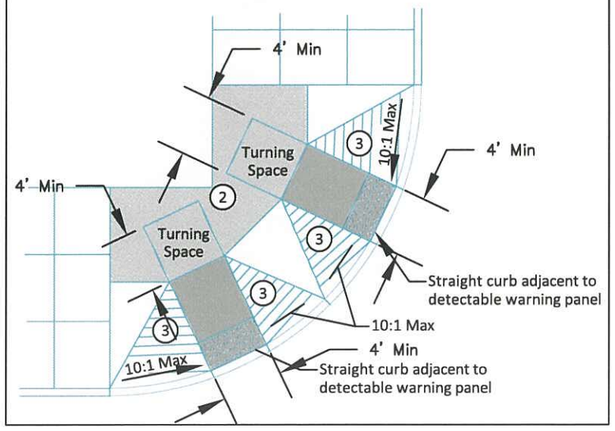


DIRECTIONAL SIDEWALK RAMP EXAMPLE

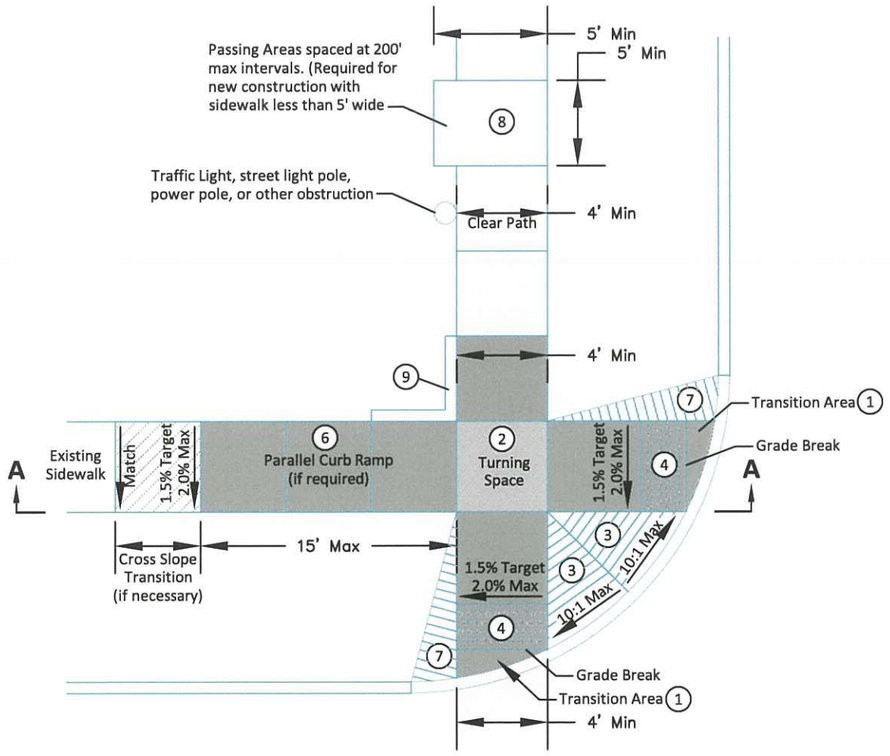
(Typical of a local/collector intersection with a 20' radius)



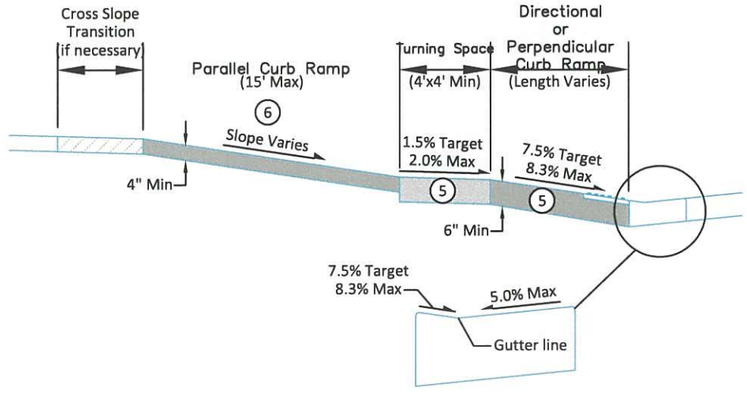
PERPENDICULAR CURB RAMP EXAMPLE



DIRECTIONAL SIDEWALK RAMP EXAMPLE



SECTION A-A



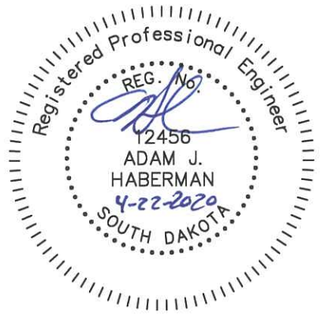
NOTES:

1. Transition from the the 2% maximum cross slope on the ramp and the pedestrian street crossing grade in this area. The maximum cross slope on the pedestrian street crossing (including the fillet or curb and gutter) is 2% on stop or yield controlled legs and 5% on uncontrolled or signalized legs.
2. Minimum 4 feet by 4 feet. Target cross slope of 1.5% with a maximum cross slope of 2.0% in any direction. Where the turning space is confined at the back of sidewalk (example: 6" curb or building), the turning space shall be 4 foot by 5 foot minimum. The 5 foot dimension shall be in the direction of the ramp run. The grade change between the turning space and the curb ramp must be perpendicular to the direction of travel.
3. Areas where the pedestrian circulation path crosses a curb ramp are considered flare sides. The maximum slope of the flare sides is 10%. Full curb height may not be able to be reestablished on flare slopes but as much curb height as possible should be reestablished.
4. Provide a minimum 2 foot width of detectable warning surfaces in the direction of pedestrian travel across the full width of the curb ramp or turning space, exclusive of curbs or flares. Orient domes in the direction of pedestrian travel unless otherwise stated in plans.
5. The concrete in the turning space, curb ramp, and flare slope areas shall be a minimum thickness of 6 inches.
6. If normal sidewalk elevation cannot be achieved with the perpendicular ramp between the street and turning space due to limited ramp length, provide a parallel ramp to make up the elevation difference between the turning space and the standard sidewalk. This parallel ramp shall not exceed 8.3% slope. However, the length of the ramp is not required to exceed 15 feet, regardless of slope. The minimum sidewalk thickness for the parallel ramp in this area is 4 inches.
7. Install a 2 foot taper when additional sidewalk will not be located adjacent to the curb ramp.
8. Depending on the conditions, a curb up to 6 inches high may need to be installed on the back of the turning space or adjoining sidewalk.
9. The slope of curb ramp and adjacent curb is designed at 7.5% or less but shall not be steeper than 8.3% unless otherwise specified in the plans. The curb ramp is not required to exceed 15 feet, regardless of slope. The cross slope target is 1.5% with a maximum cross slope of 2.0%.

GENERAL NOTES:

The turning space, curb ramp, and detectable warning panel area will be paid for at the contact unit price for the corresponding concrete sidewalk bid item.

The detectable warning panel shall be measured and paid for to the nearest square foot. Payment shall include all costs for materials, labor, and equipment necessary for the installation of the detectable warning panels.

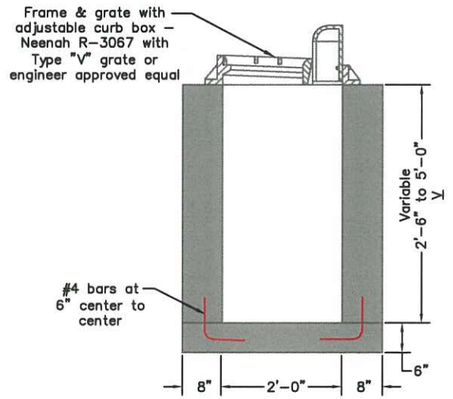


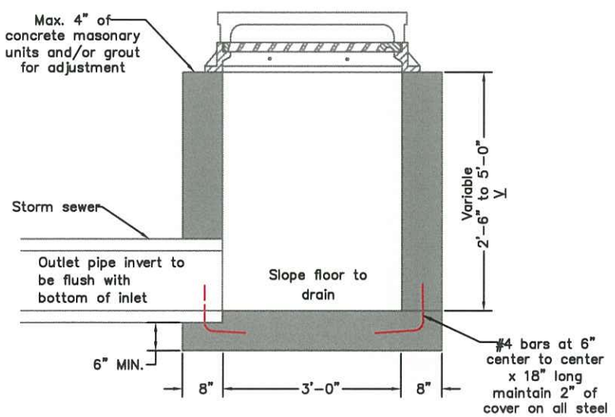
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	36	54

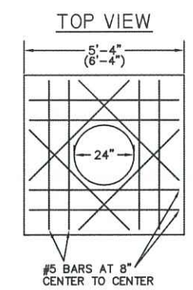
DETAILS

Estimated Quantities			
Item	Unit	Constant	Variable
* Class M6 concrete	CuYds	0.27	0.32V
Reinforcement–conc. masonry	LBS	28	---

* Constant shall be reduced for the appropriate pipe or Combination of pipes, thus; 12" Dia.=–0.03 C.Y., 15" Dia=–0.04 C.Y., 18" Dia.=–0.05 C.Y., 24" Dia.=–0.09 C.Y.







GENERAL NOTES

USE SOUTH DAKOTA STANDARD SPECIFICATIONS FOR ROADS AND BRIDGES, LATEST EDITION ,AND REQUIRED PROVISIONS, SUPPLEMENTAL SPECIFICATIONS AND/OR SPECIAL PROVISIONS AS INCLUDED IN THE PROPOSAL.

ALL REINFORCING STEEL SHALL CONFORM TO A.S.T.M. A615, GRADE 60.

ALL REINFORCING STEEL SHALL BE CUT AND/OR BENT IN THE FIELD TO

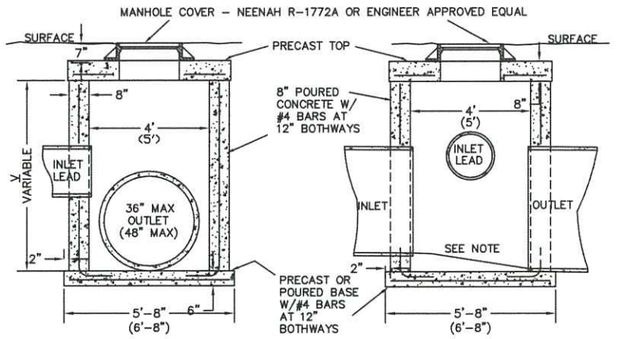
MAINTAIN A MINIMUM OF 2" COVER ON ALL REINFORCING STEEL.

NO VERTICAL CONSTRUCTION JOINTS ARE ALLOWED.

ALL CONC. SHALL BE CLASSED M–6.

UNIT STRESSES: CONCRETE Fc = 1600 P.S.I.
REINFORCING STEEL Fc = 20,000 P.S.I.

TOP OF MANHOLE COVER TO BE SET FLUSH WITH FINISHED SURFACE ELEVATION.



SIDE VIEWS

ESTIMATED QUANTITIES					
ITEM	UNIT	4' X 4' JCT. BOX		5' X 5' JCT. BOX	
		CONSTANT	VARIABLE	CONSTANT	VARIABLE
* CLASS M6 CONCRETE	CUYDS	1.29	0.46V	1.93	0.56V
REINFORCEMENT–CONC. MASONRY	LBS	103	23V	131	35V
MANHOLE RIM & COVER–AS SPECIFIED	EACH	1	----	1	----

* CONSTANT SHALL BE REDUCED FOR THE APPROPRIATE PIPE OR COMBINATION OF PIPES, THUS; 12" DIA.=–0.03 C.Y., 15" DIA=–0.04 C.Y., 18" DIA.=–0.05 C.Y., 21" DIA.=–0.07 C.Y., 24" DIA.=–0.09 C.Y., 27" DIA.=–0.11 C.Y., 30" DIA=–0.14 C.Y., 33" DIA.=–0.17 C.Y., 36" DIA.=–0.20 C.Y., 42" DIA.=–0.26 C.Y., 48" DIA.=–0.34 C.Y.

NOTES:

COVER REINFORCEMENT REQUIRES 12–#5 BARS 5'(6') LONG TO BE PLACED AS SHOWN. 2" FROM CIRCULAR OPENING AND 8" CENTER TO CENTER AT A DEPTH OF 6" W/MIN. COVER THICKNESS OF 8".

FLOOR OF JCT. BOX TO BE FINISHED IN SUCH A MANNER TO INSURE UNINTERRUPTED FLOW THRU THE BOX.

WHEN PIPE SIZES DIFFER THRU JCT. BOX, TOP OF PIPE TO MATCH WHEN POSSIBLE.

( ) INDICATES SPECIFICATIONS FOR A 5' X 5' JCT. BOX. MAXIMUM PIPE SIZE ALLOWED FOR 4' X 4' JCT. BOX IS 36" R.C.P. A 5' X 5' JCT. IS 48" R.C.P.
VARIABLE DEPTH UP TO 8'

REVISED: DECEMBER 1995

SPECIFICATION REFERENCE NO. 460	CITY OF SIOUX FALLS ENGINEERING DIVISION STANDARD STORM SEWER JUNCTION BOX TYPE I	PLATE NUMBER 460.05

Registered Professional Engineer
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4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	37	54
DETAILS				

VTC

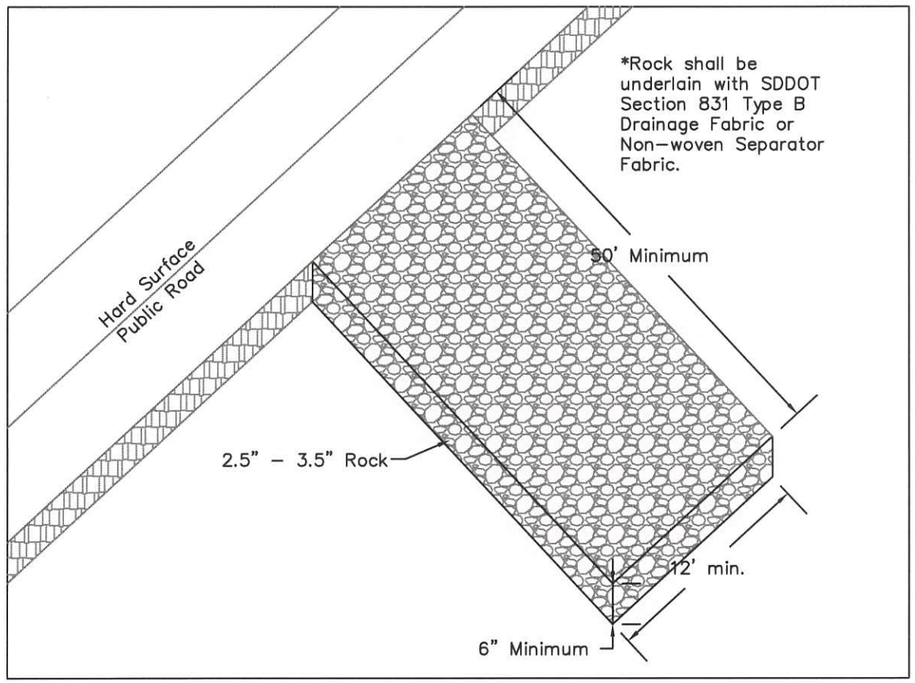
Vehicle Tracking Control

Definition:

A stone stabilized pad located at points of vehicular ingress and egress on a construction site.

Purposes:

To reduce the amount of mud transported onto public roads by motor vehicles or runoff.



Silt Fence

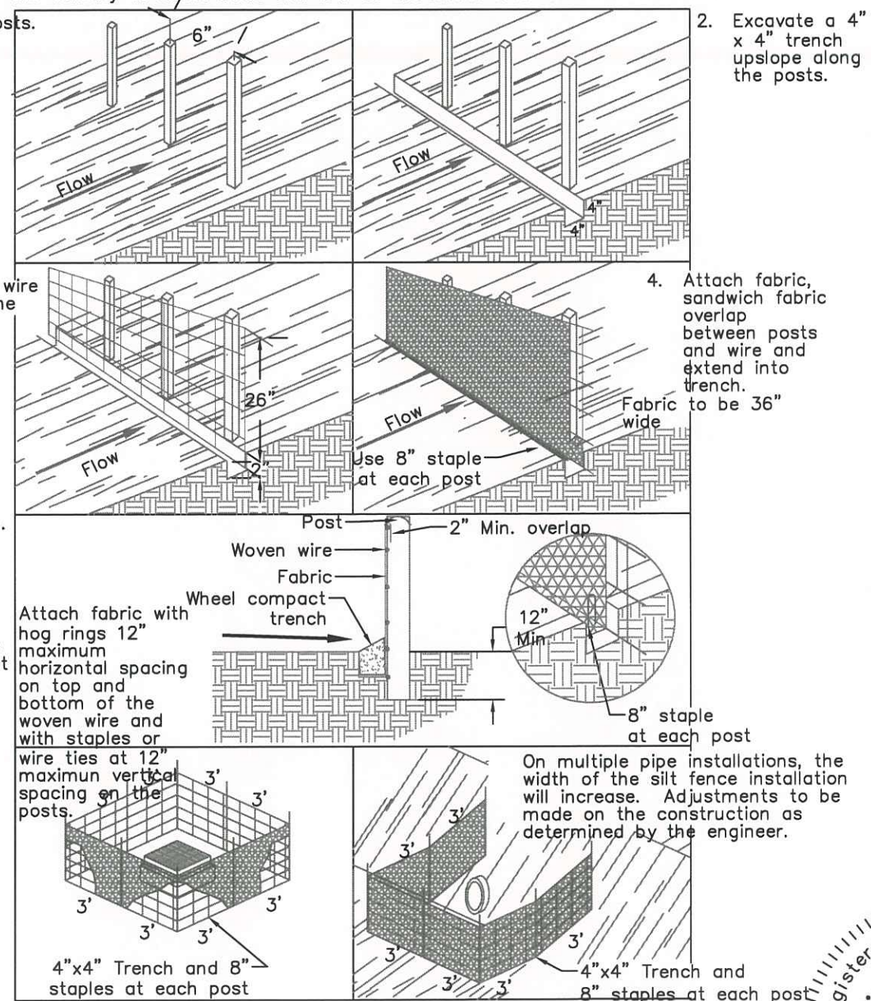
Definition:

A temporary sediment barrier consisting of a filter fabric stretched across and attached to supporting posts and entrenched. The silt fence is a temporary linear barrier constructed of synthetic filter fabric and supported by wooden or steel posts.

Purposes:

1. To intercept and detain small amounts of sediment from disturbed areas during construction operations in order to reduce sediment in runoff from leaving the site.
2. To decrease the velocity of sheet flows and low-to-moderate level concentrated flows.

1. Set posts.
2. Excavate a 4" x 4" trench upslope along the posts.
3. Attach a supporting wire fence to the posts
4. Attach fabric, sandwich fabric overlap between posts and wire and extend into trench.
5. Backfill trench. If rock type soils are encountered, utilize 30 to 40 lb sandbags butted end to end to prevent underflow.



Fence material shall conform to geotextile specifications, Section 831 of SDDOT Standard Specifications for Roads and Bridges, latest edition.

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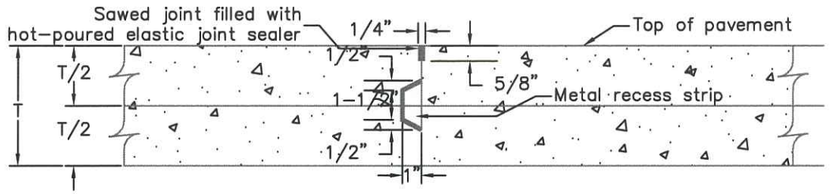
8	S.D.	2020-011	38	54

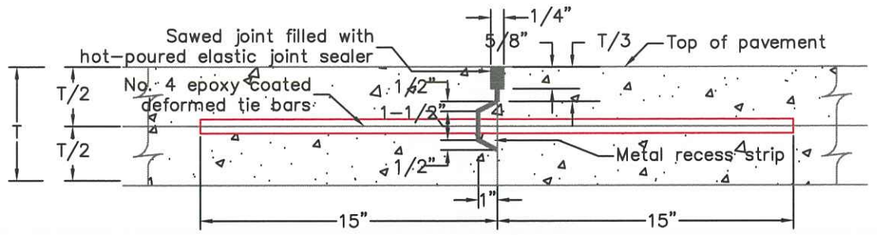
DETAILS



If proposed, approval of alternate designs of the keyway will be considered by the engineer.

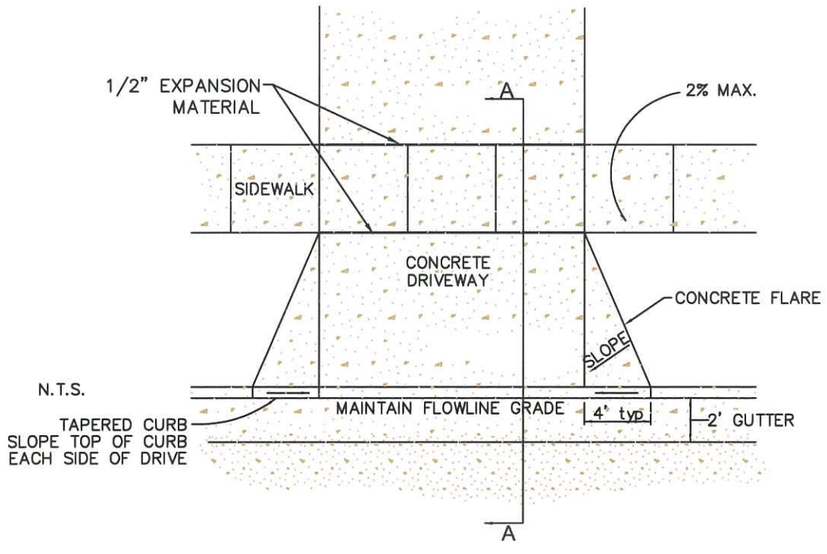
Fillet pavement and adjacent PCC pavement joints shall be keyway construction joints without tie bars.

KEYWAY CONSTRUCTION JOINT WITHOUT TIE BARS



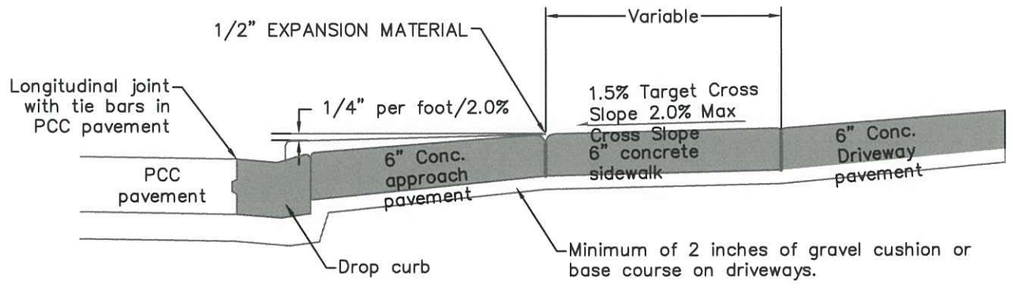
If proposed, approval of alternate designs of the keyway will be considered by the engineer for longitudinal construction joints. The No. 4 epoxy coated deformed tie bars shall be spaced approximately 48" center to center.

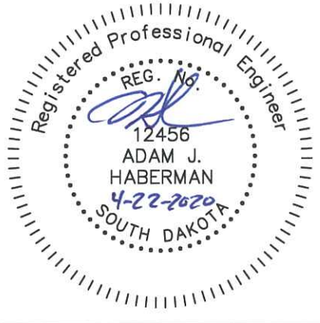
KEYWAY CONSTRUCTION JOINT WITH TIE BARS



DETAIL FOR CONCRETE FLARES AND TAPERED CURB AT DRIVEWAYS

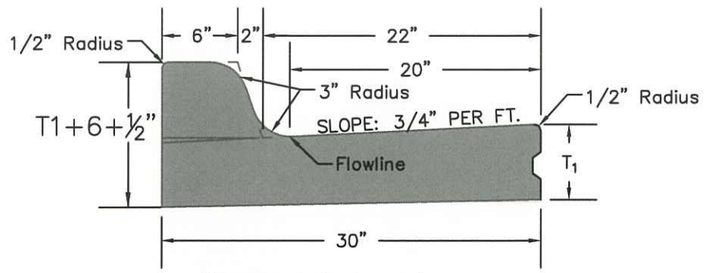
N.T.S.



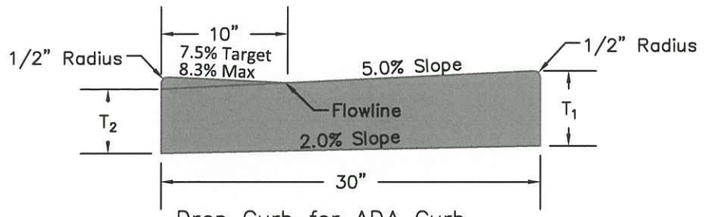


REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	39	54
DETAILS				

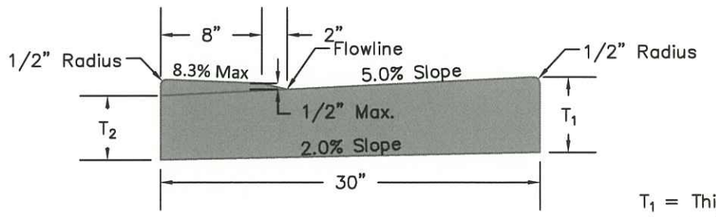
30" CONCRETE CURB AND GUTTER
N.T.S



Standard Curb and Gutter



Drop Curb for ADA Curb Ramps

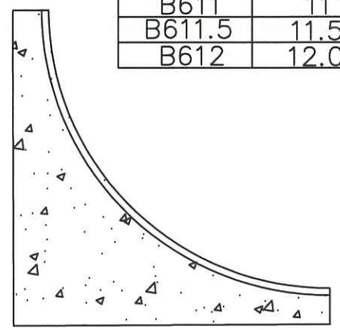


Drop Curb for Driveway Approach

T_1 = Thickness shall be equal to the depth of the adjacent pavement but not less than 6"

$T_2 = T_1 - 7/8"$

TYPE	T1 INCHES	CU. YD PER LIN. FT.
B66	6"	0.055
B67	7"	0.063
B68	8"	0.071
B68.5	8.5"	0.074
B69	9"	0.078
B69.5	9.5"	0.082
B610	10"	0.086
B610.5	10.5"	0.090
B611	11"	0.094
B611.5	11.5"	0.098
B612	12.0"	0.102



TYPICAL FILLET SECTION
N.T.S.

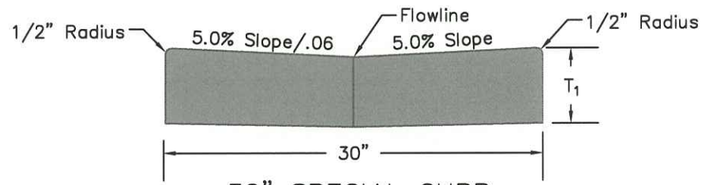
All Fillet sections to contain fiber mesh reinforced concrete.

1/2" Preformed Expansion Joint Fillers shall be placed, Tranversely in the Curb & Gutter as follows:

(1) At each junction of Radius return Curb & Gutter and the Curb & Gutter which is parallel to the project centerline.
(2) At each junction with existing Concrete Curb or Concrete Curb & Gutter
(3) At each junction with existing sidewalk, to the depth of the sidewalk.
(4) At a maximum of 195 L.F. appart, measured along the face of the Curb & Gutter.

1/2" Preformed Expansion Joint Filler shall be placed, Longitudinally, along the backface of the Curb, to the depth of the sidewalk, where such backface of Curb is adjacent to an existing Concrete Sidewalk.

Weakened Plane Joints shall be constructed at Approx. 10' intervals. The joints shall be constructed to a minimum depth of one inch by scoring with a tool which coincide with pavement joints leave the corners rounded and insure a free movement of the Concrete at the joint.



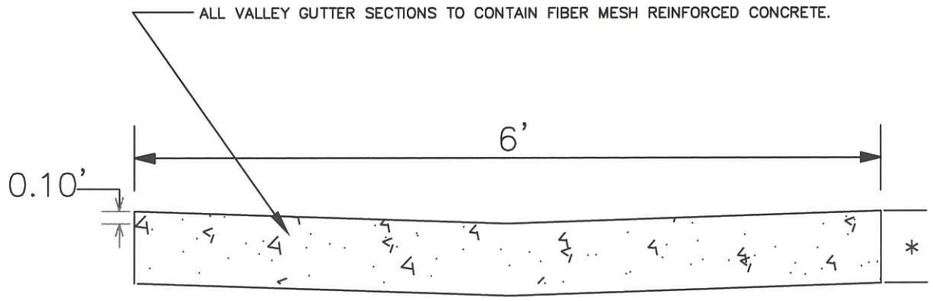
30" SPECIAL CURB

GENERAL NOTES:

1) On PCC pavement a keyway longitudinal joint with tie bars shall be used when curb and gutter is poured separately.

2) Curb and gutter shall be constructed using M-6 concrete unless monolithically constructed with the adjacent pavement. In monolithic paving, concrete mix for the curb and gutter may be the same as the adjacent concrete pavement.

3) The curb transition length at ADA curb ramps will be dependent on the type of curb ramp being installed. The plans should call out the length of the transitions. Refer to plate 651.02 for additional curb transition information.

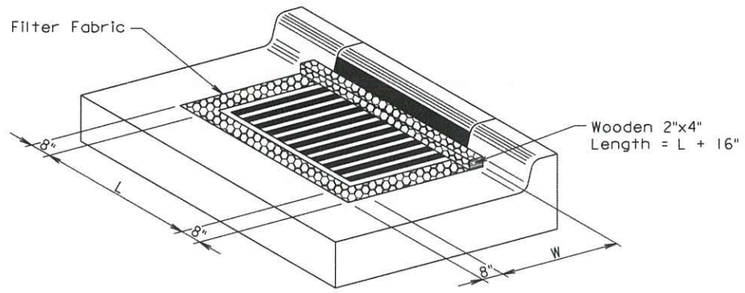


TYPICAL VALLEY GUTTER DETAIL
N.T.S.

* ALL VALLEY GUTTER SECTIONS TO A MINIMUM OF 6" OR THE SAME THICKNESS AS THE ADJOINING CONCRETE PAVING.

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	40	54
DETAILS				

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 shall be placed at locations stated in the plans or at locations determined by the Engineer.

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

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

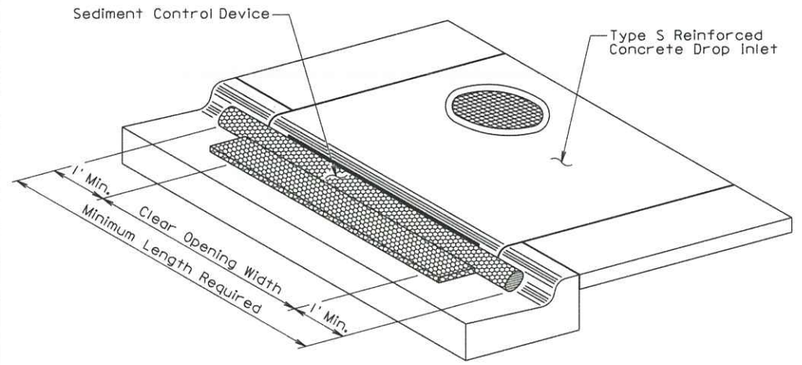
The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing accumulated sediment and replacing torn filter fabric with new filter fabric.

The removed sediment shall 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 shall be incidental to the contract unit price per each for "Sediment Control at Inlet with Frame and Grate".

September 14, 2005

Published Date: 1st Qtr. 2012	SDDOT	SEDIMENT CONTROL AT INLETS WITH FRAMES AND GRATES	PLATE NUMBER 734.10
			Sheet 1 of 1



ISOMETRIC VIEW

GENERAL NOTES:

The type of sediment control device shown is for illustrative purposes only.

The type of sediment control device used shall be one of the types as specified in the plans.

The sediment control device shall be placed at the drop inlets according to the manufacturers' installation instructions.

The sediment control at inlet for type S reinforced concrete drop inlet shall be placed at locations stated in the plans or at locations determined by the Engineer.

The Contractor shall inspect and maintain the sediment control device once every week and within 24 hours after every rainfall event. The Contractor shall maintain the sediment control device by removing the device, removing accumulated sediment, and resetting the device.

The removed sediment shall 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.

Payment for the "Sediment Control at Type S Drop Inlet" shall be based on the minimum length required at the drop inlets. Some of the sediment control devices specified in the plans will have to be longer due to available length.

All costs for furnishing, installing, inspecting, maintaining, removing, and resetting the sediment control device at the drop inlet including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Sediment Control at Type S Reinforced Concrete Drop Inlet".

September 14, 2005

Published Date: 1st Qtr. 2012	SDDOT	SEDIMENT CONTROL AT INLETS FOR TYPE S REINFORCED CONCRETE DROP INLETS	PLATE NUMBER 734.15
			Sheet 1 of 1

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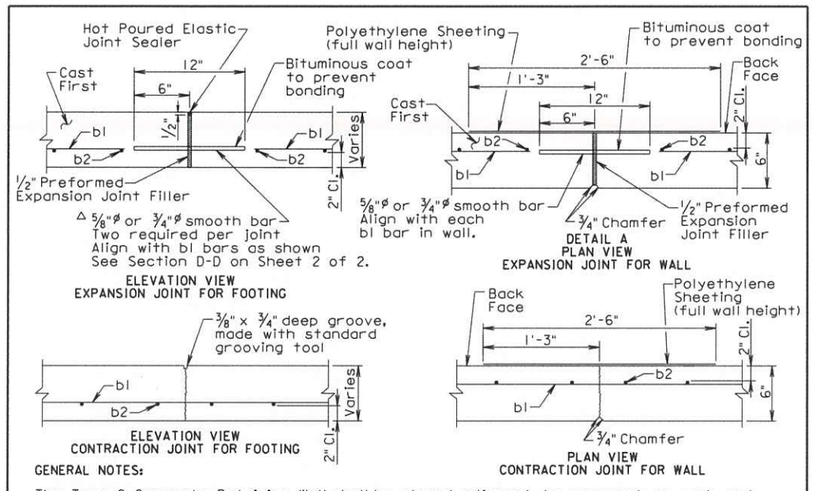
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	41	54
DETAILS				



GENERAL NOTES:

The Type C Concrete Retaining Wall shall be placed adjacent to pavement or curb and gutter as shown in Section D-D on sheet 2 of 2.

* The sidewalk width of the Type C Concrete Retaining Wall shall not be wider than 8 feet or narrower than 5 feet. See plans for specified width.

In the areas where the retaining wall footing is to be placed, a 2 inch thickness of cushion material shall be placed and compacted. The cushion material shall conform to Section 651.2 C of the Specifications.

All concrete shall be Class M6 and conform to Section 462 of the Specifications.

All reinforcing steel shall be epoxy coated and shall conform to ASTM A615, Grade 60. The smooth bar may conform to ASTM A615, Grade 40. The epoxy coating shall conform to ASTM A775.

For variable height walls, the top b1 bar shall be placed parallel to the top of the wall.

The b1 bars shall be lapped a minimum of 12 inches.

A 3/4 inch chamfer shall be provided on all exposed retaining wall edges.

Use Detail B on sheet 2 of 2 for constructing corners in the retaining wall.

The maximum expansion joint spacing shall be 90 feet and the maximum contraction joint spacing shall be 30 feet. The contraction and expansion joints shall be placed to match pavement or curb joints where possible.

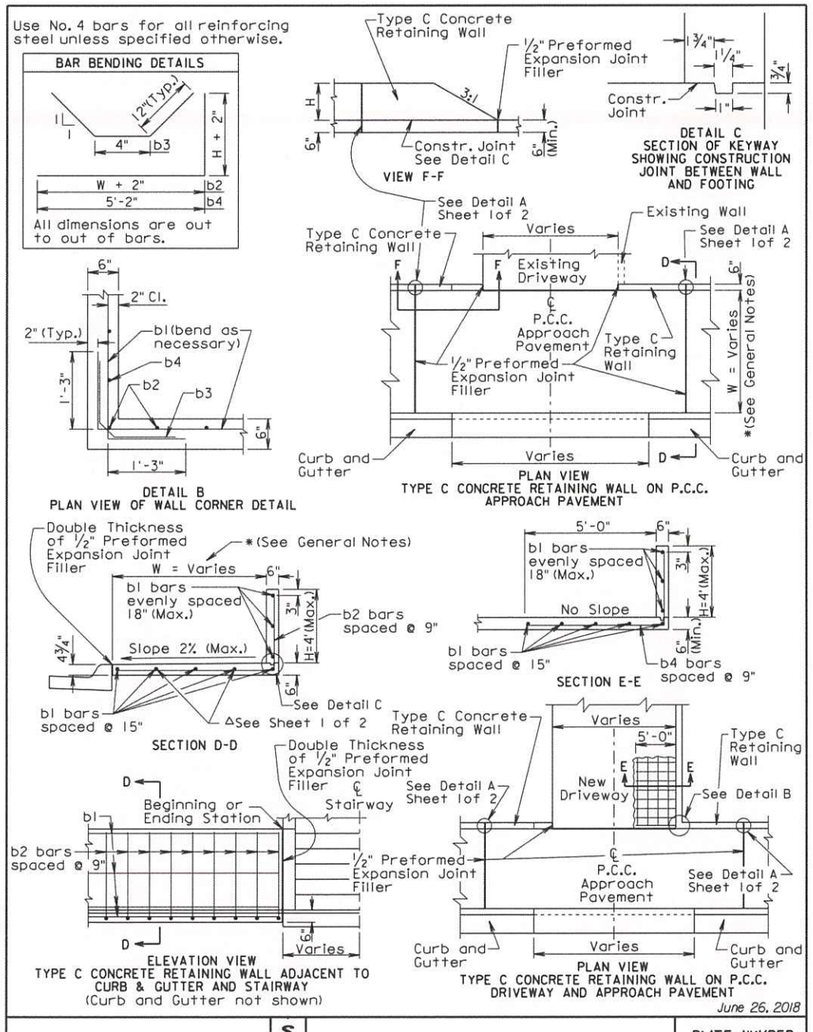
The exposed retaining wall surfaces shall receive a finish in accordance with 460.3 L of the Specifications. The exposed surface of the retaining wall footing, when used as a sidewalk, shall receive a broom finish.

The Type C Concrete Retaining Wall shall be measured to the nearest square foot of front face area of the wall. The front face of the footing is excluded from the measurement.

All costs for excavation, furnishing and placing backfill and cushion material, labor, equipment, preformed expansion joint filler, all reinforcing steel including the smooth bars, and all concrete except in the areas of PCC driveway and approach pavement, shall be incidental to the contract unit price per square foot for "Type C Concrete Retaining Wall".

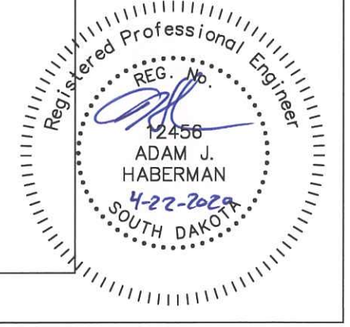
The concrete used for the retaining wall footing that extends into the approach and/or driveway pavement shall be paid for at the contract unit price per square yard for the corresponding "PCC Approach Pavement" and/or "PCC Driveway Pavement" bid items. June 26, 2018

Published Date: 1st Qtr. 2019	SDDOT	TYPE C CONCRETE RETAINING WALL	PLATE NUMBER 530.01
			Sheet 1 of 2



June 26, 2018

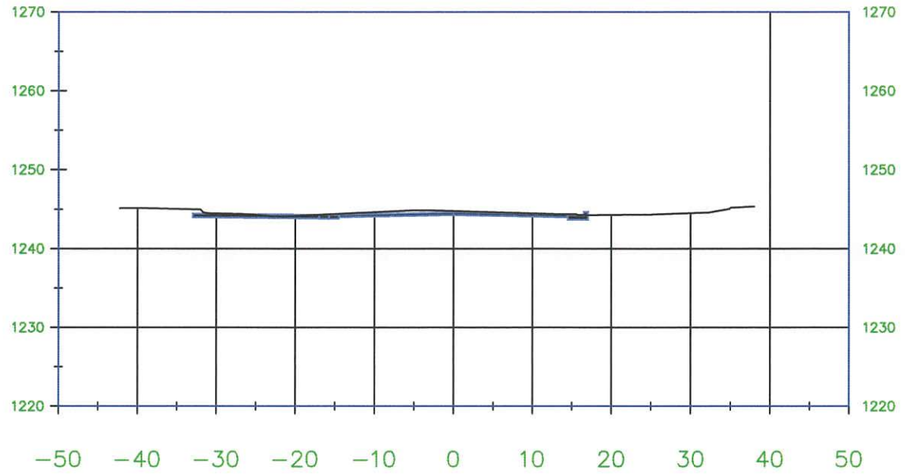
Published Date: 1st Qtr. 2019	SDDOT	TYPE C CONCRETE RETAINING WALL	PLATE NUMBER 530.01
			Sheet 2 of 2

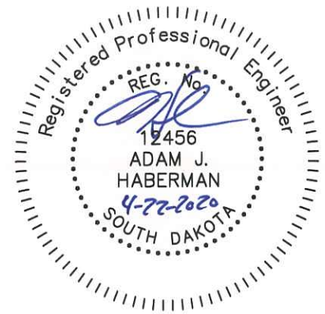


REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	42	54
CROSS SECTIONS 12TH				

12TH STREET

2+00.00





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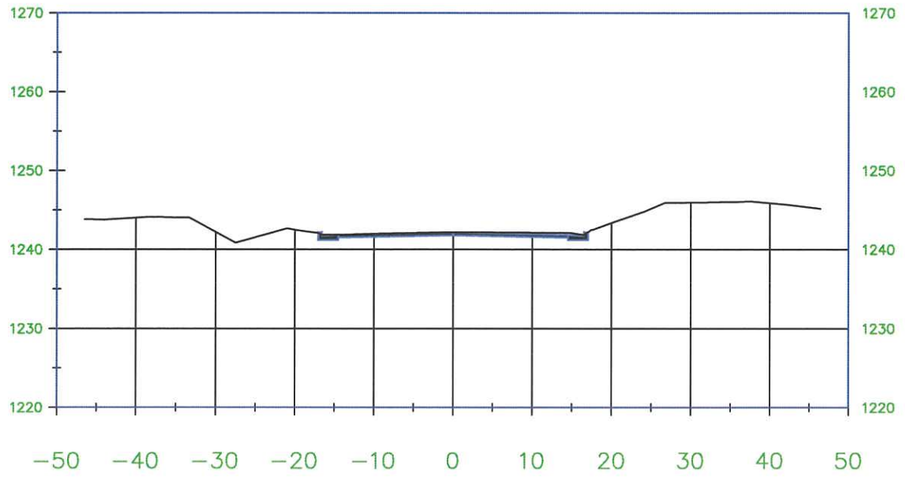

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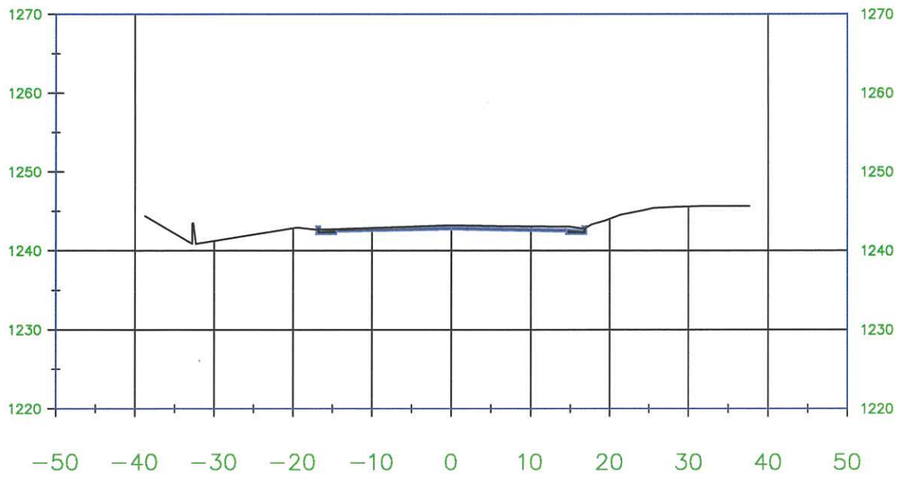
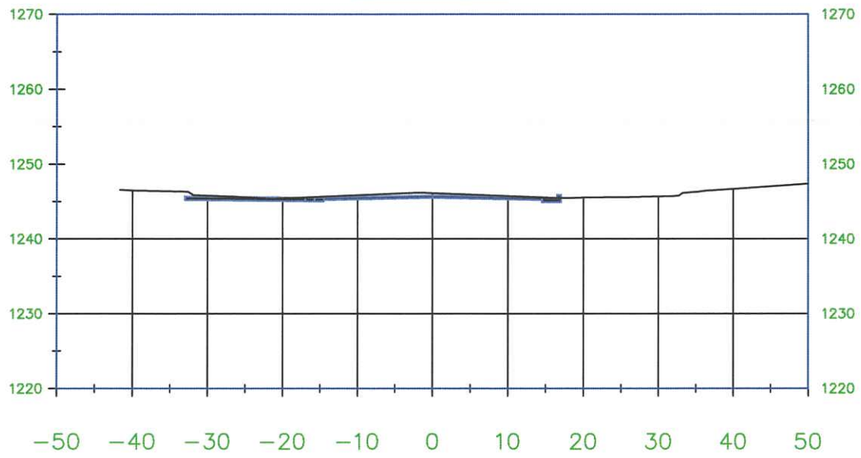


REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	43	54
CROSS SECTIONS 12TH				

12TH STREET

3+50.00



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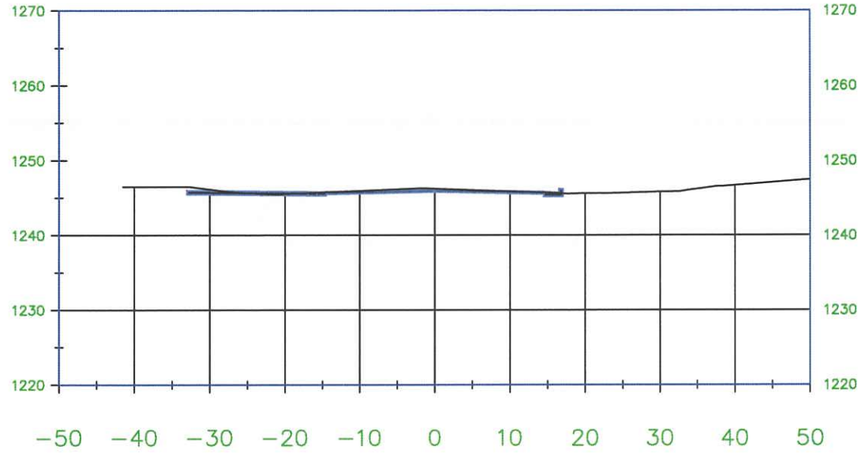

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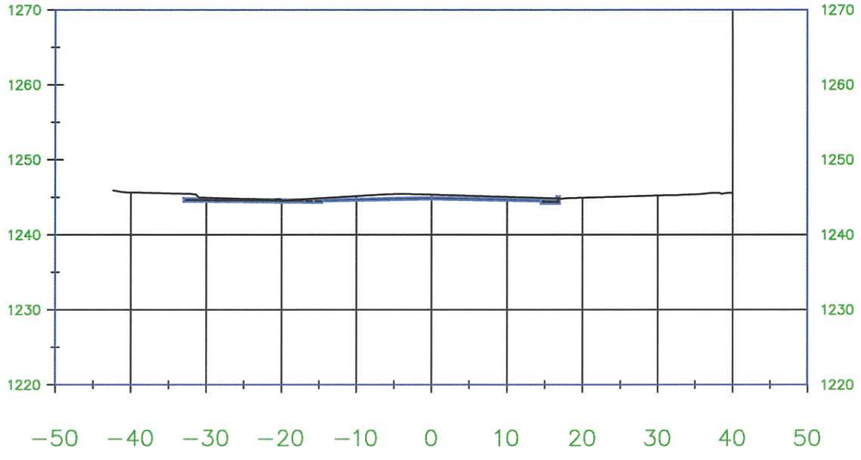

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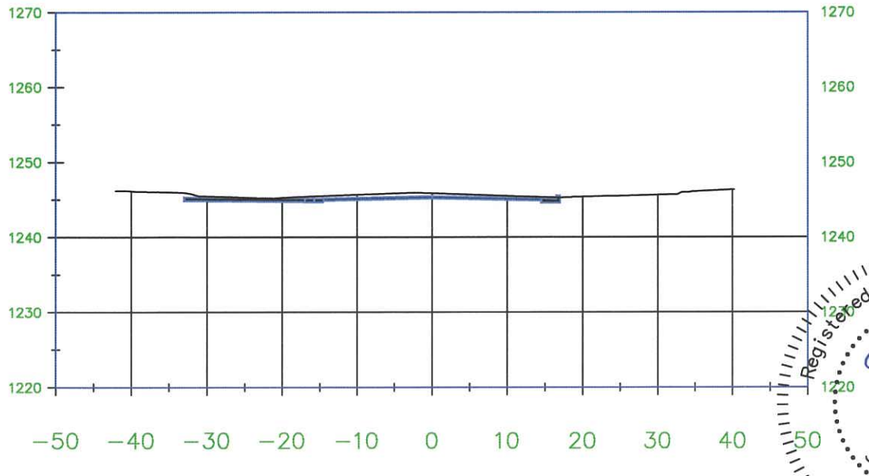
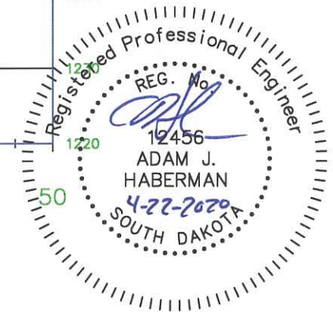
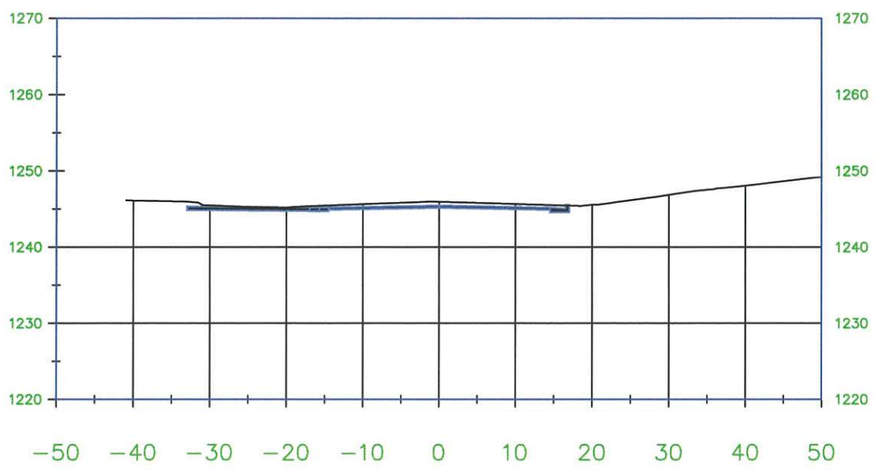




REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	44	54
CROSS SECTIONS 12TH				

12TH STREET

5+50.00



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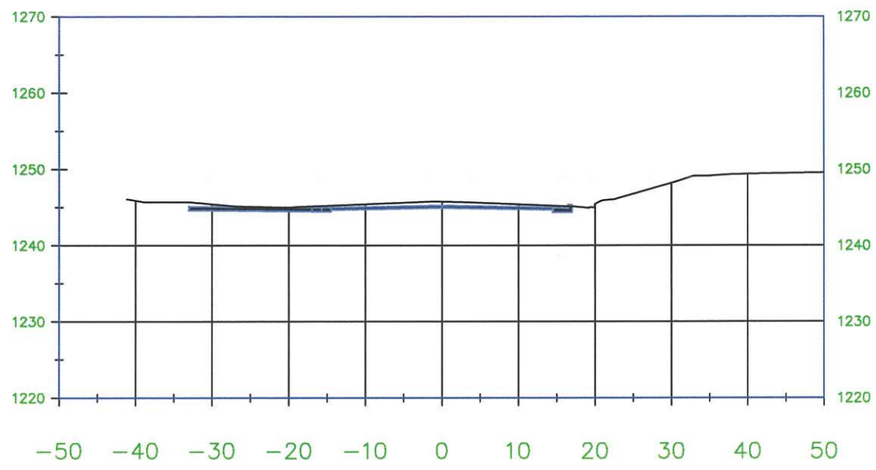

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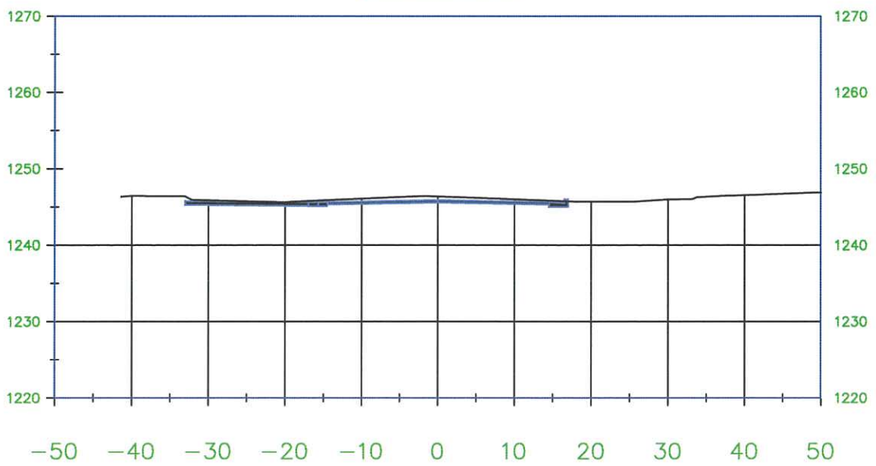

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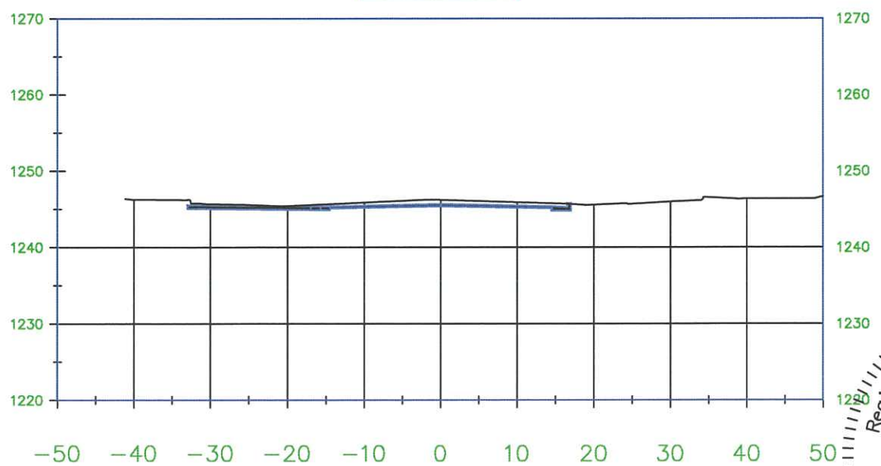
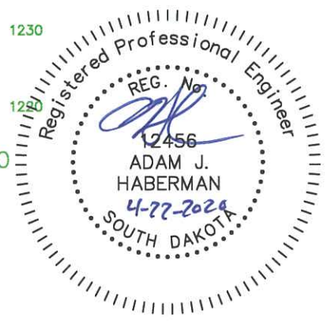
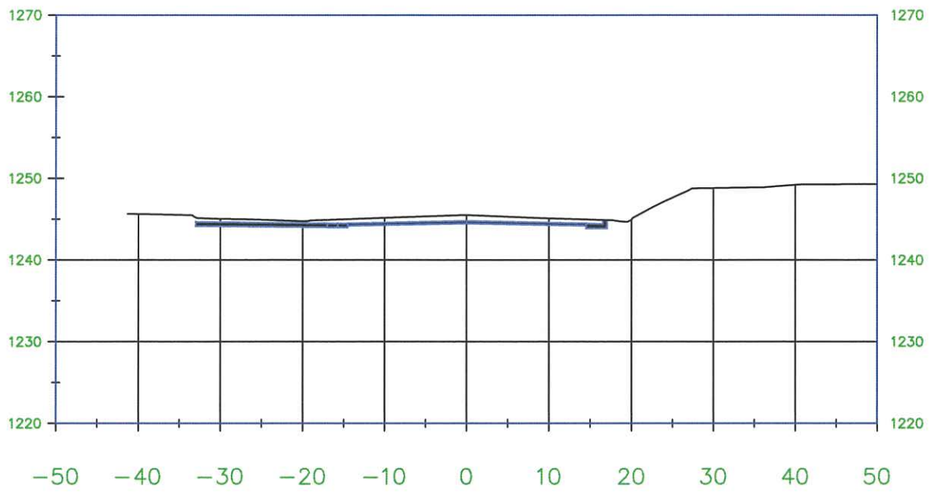




REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	45	54
CROSS SECTIONS 12TH				

12TH STREET

6+50.00



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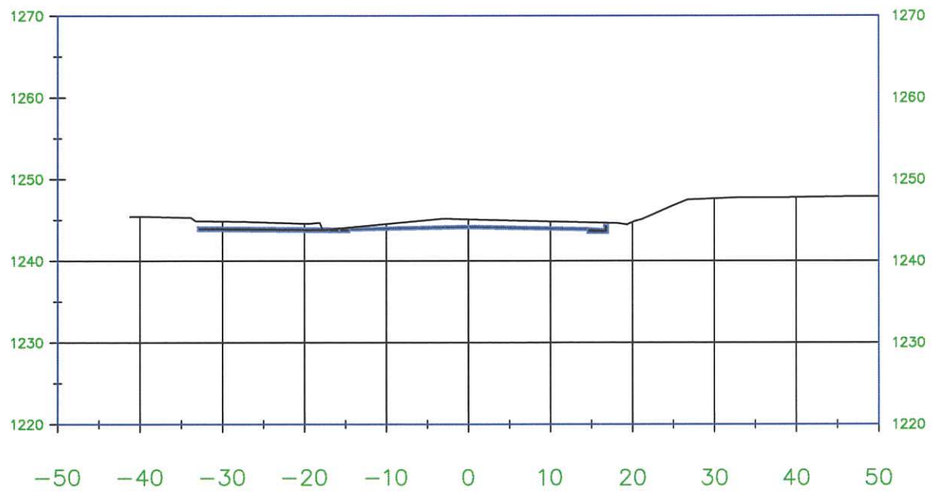

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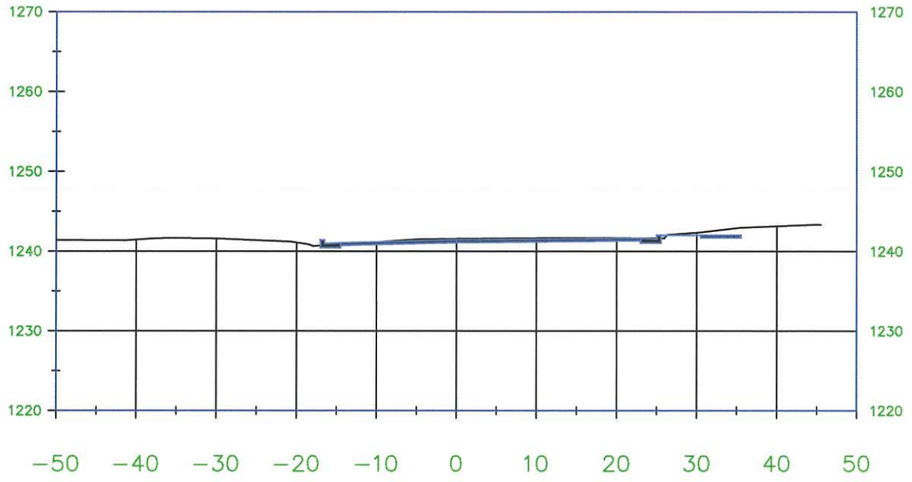
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	46	54
CROSS SECTIONS 12TH				

12TH STREET

10+00.00



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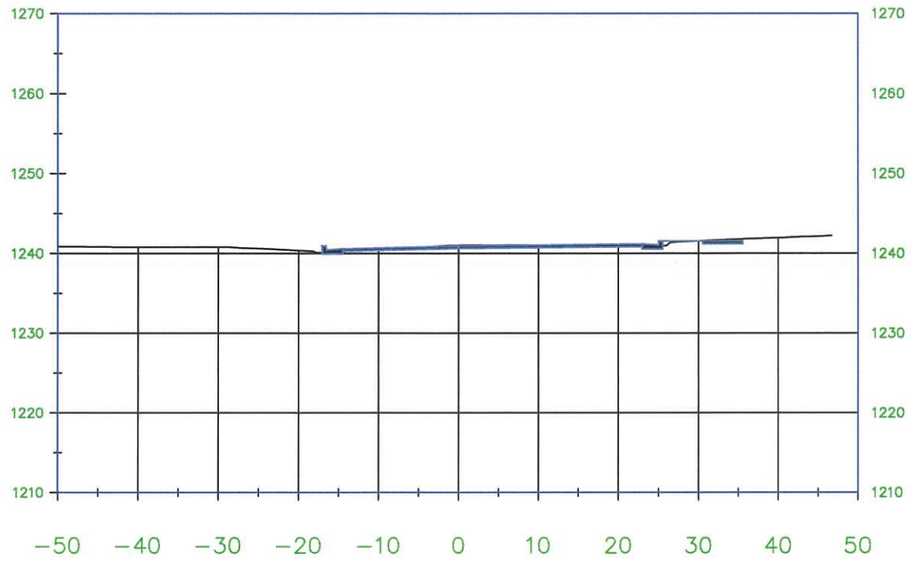

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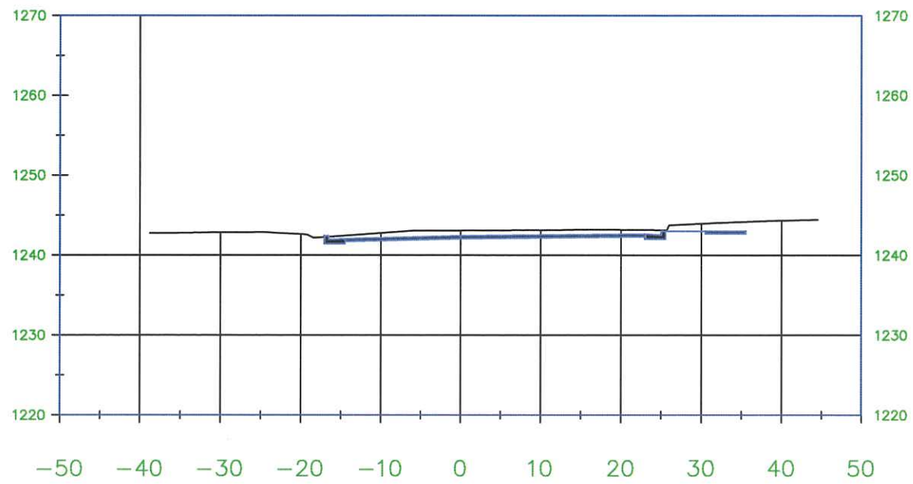

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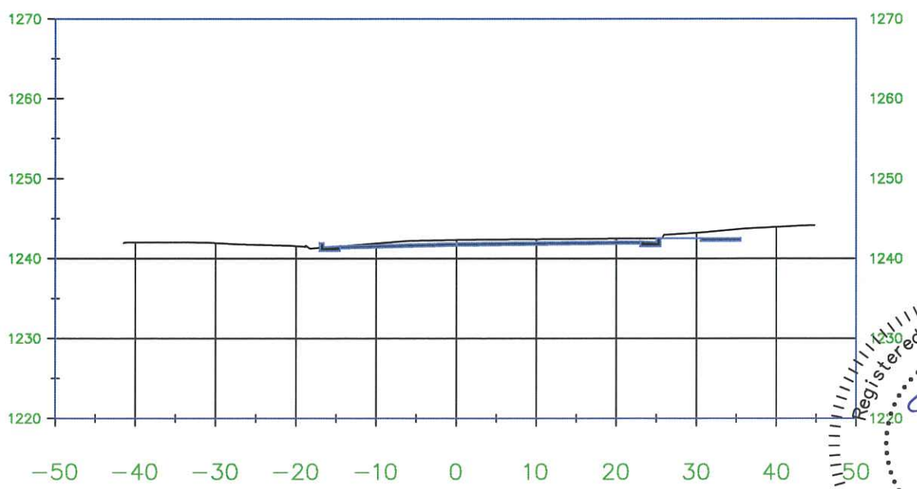

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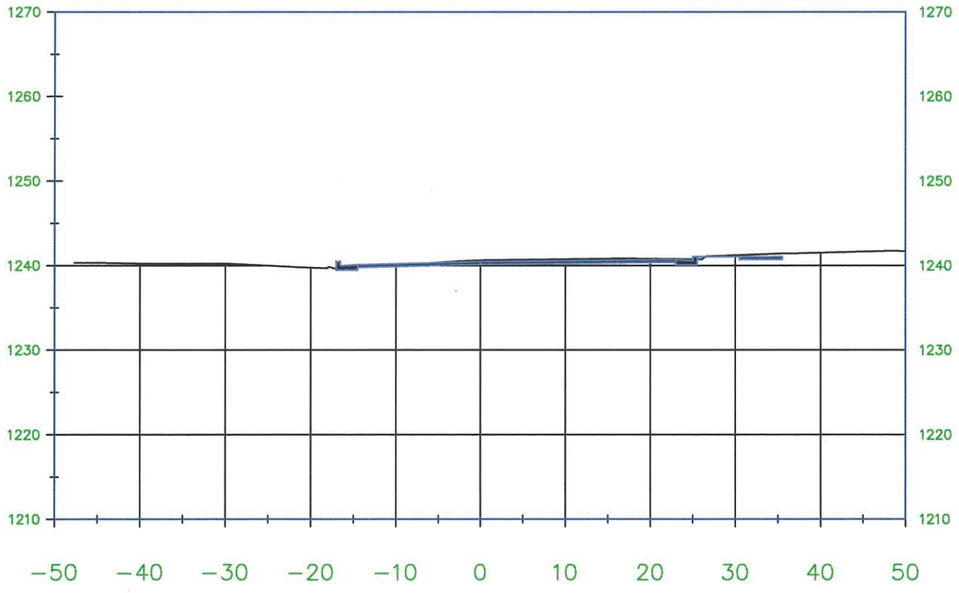
12TH STREET

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	47	54
CROSS SECTIONS 12TH				

11+00.00



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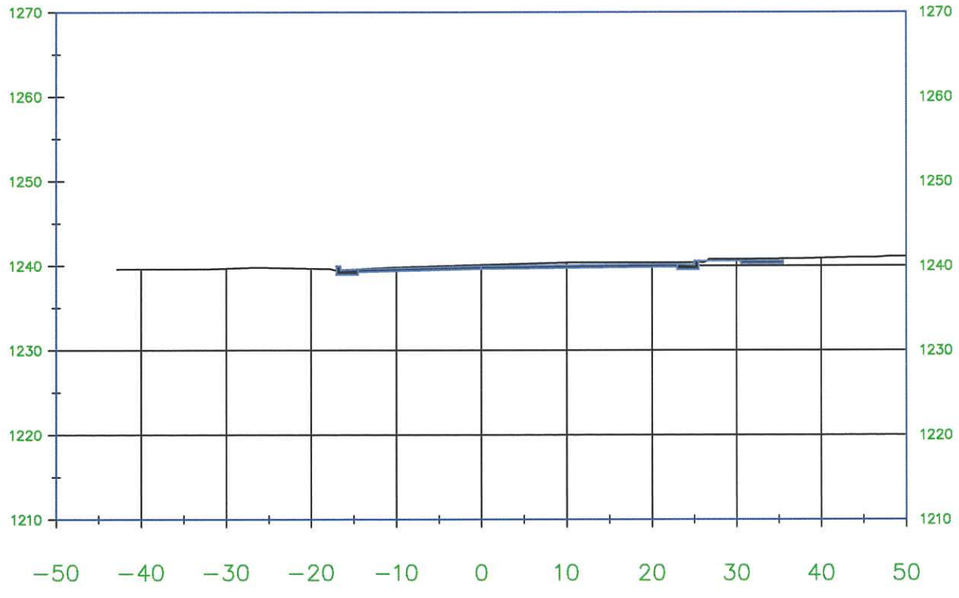

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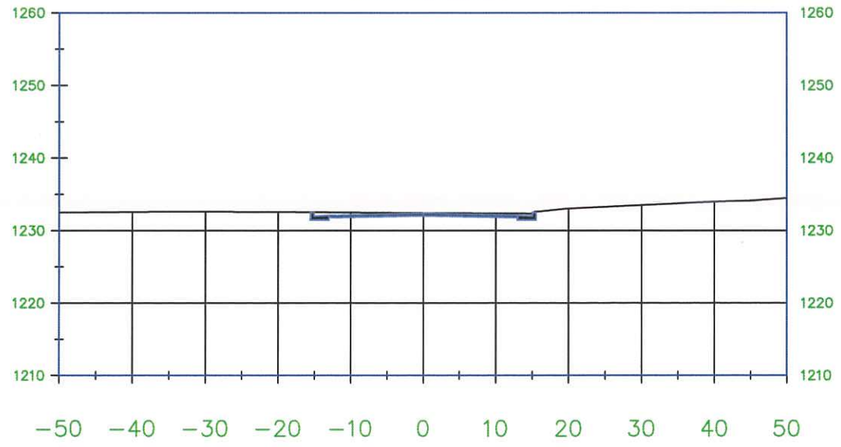
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	48	54
CROSS SECTIONS PINE				

PINE STREET

2+00.00



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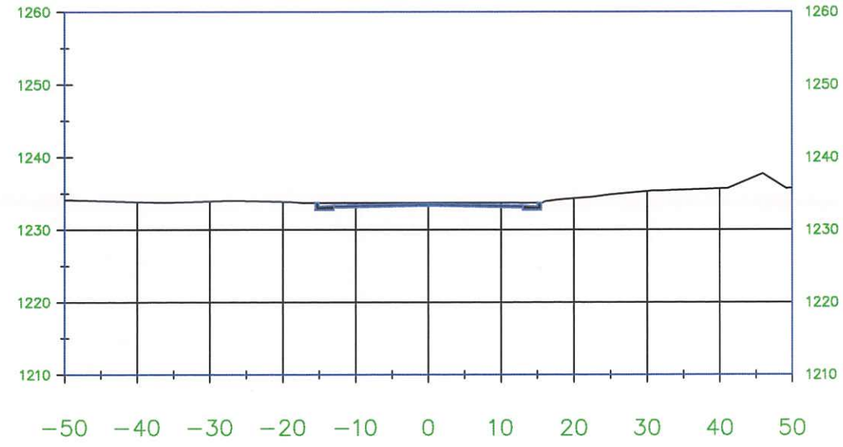

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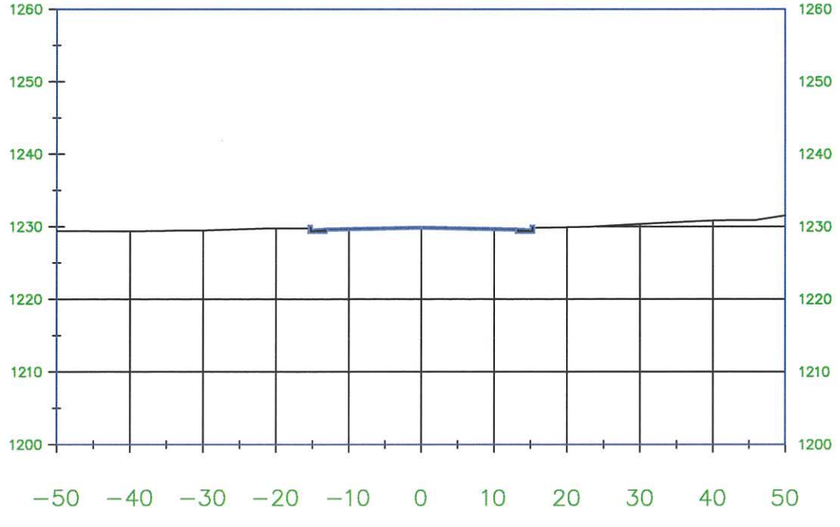

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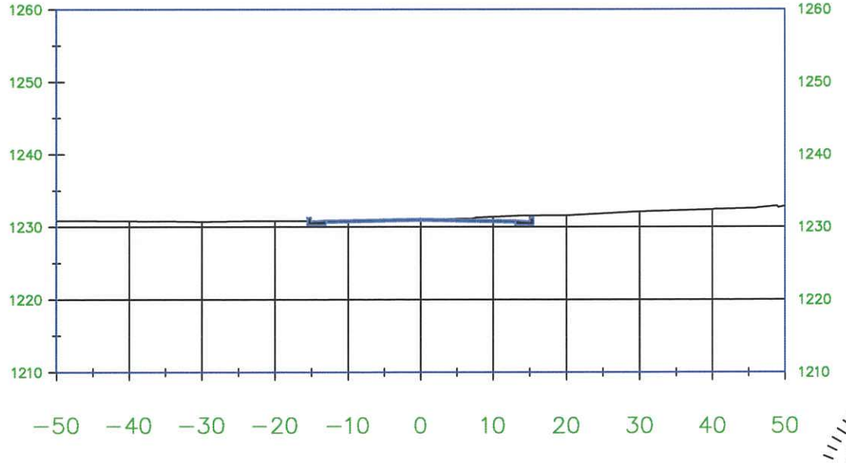

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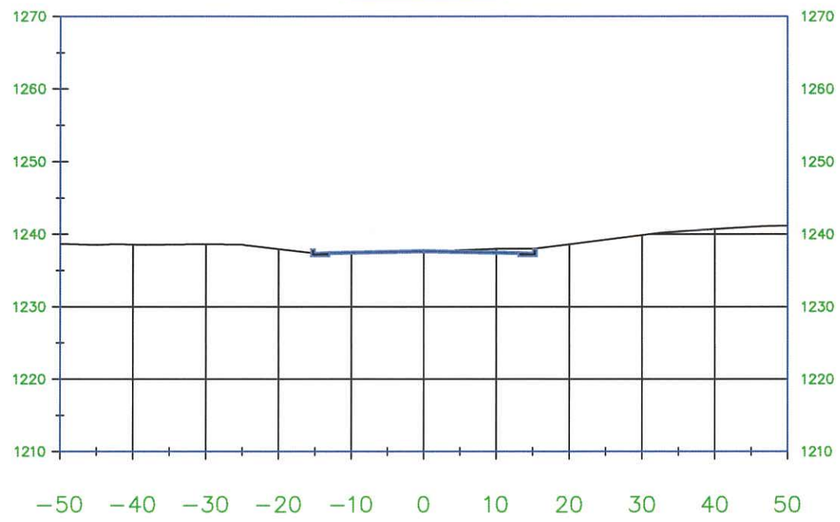
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	49	54
CROSS SECTIONS PINE				

PINE STREET

4+00.00



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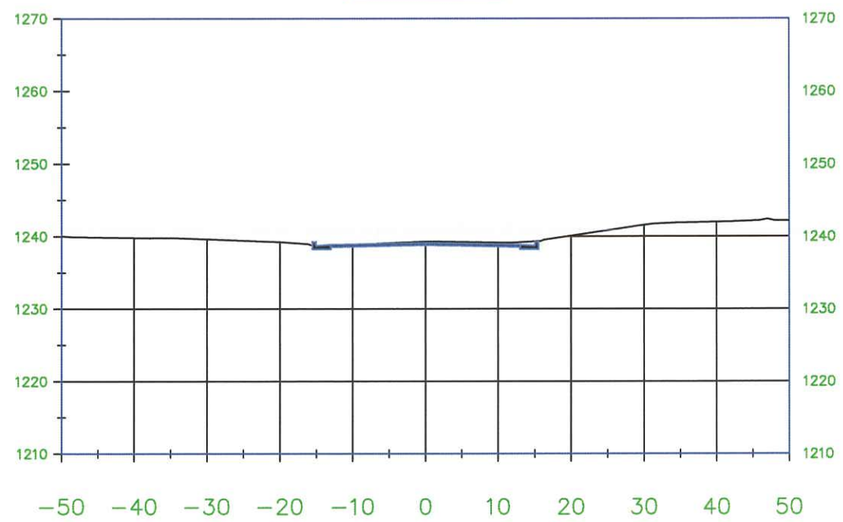

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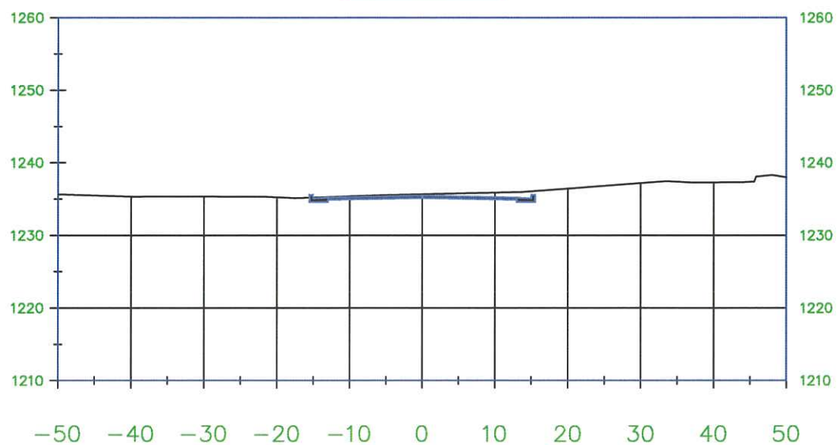

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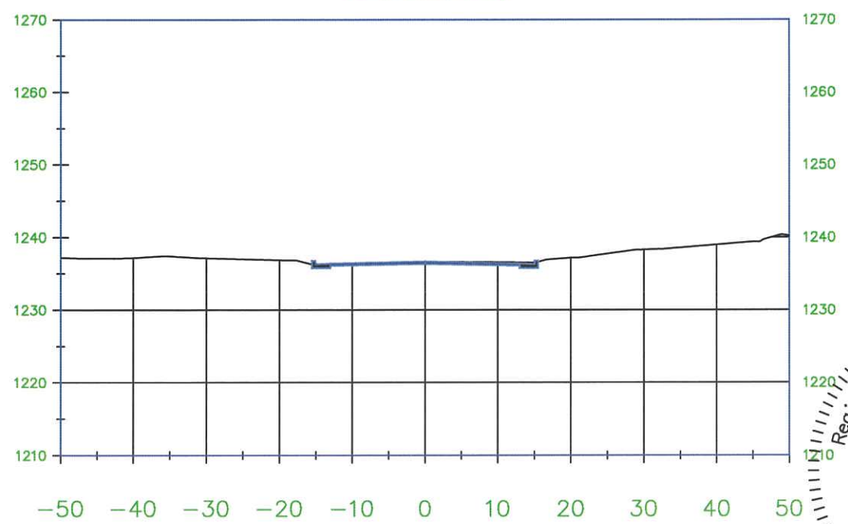
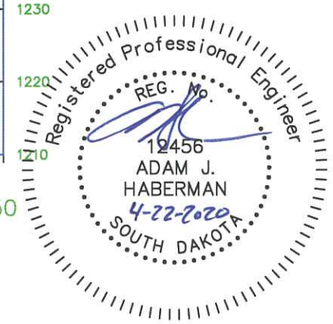
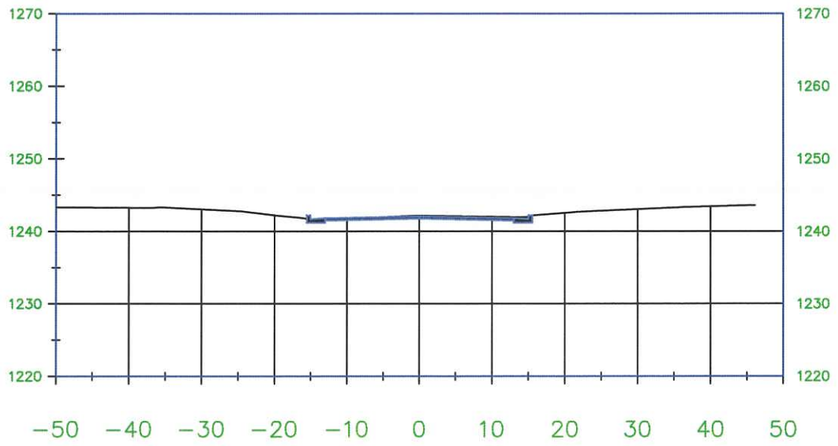




REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	50	54
CROSS SECTIONS PINE				

PINE STREET

6+00.00



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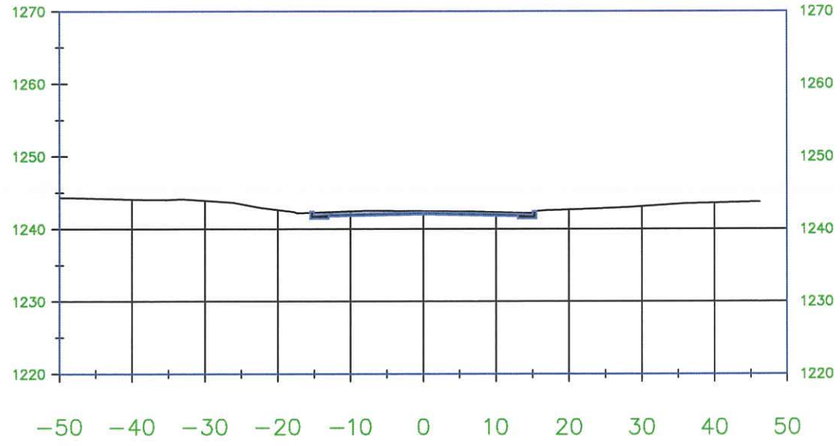

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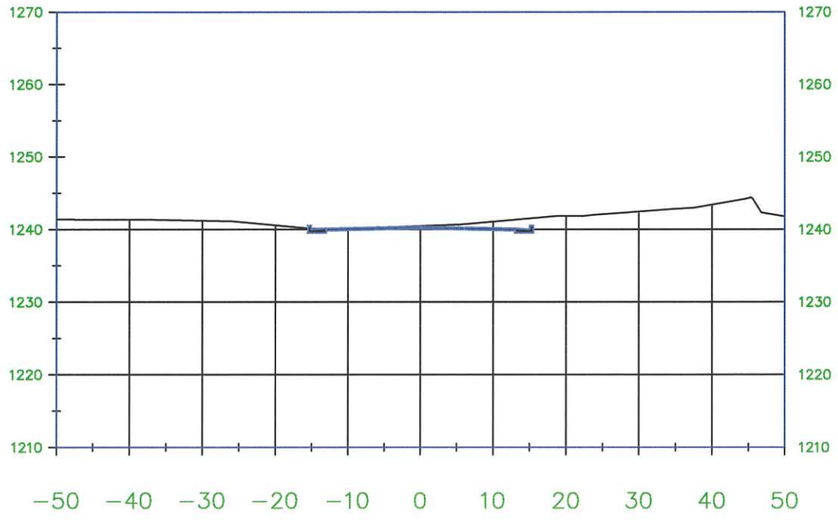

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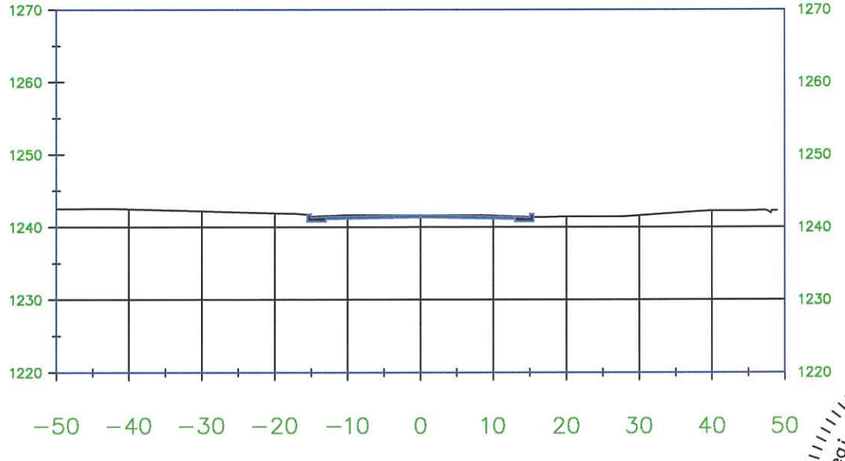

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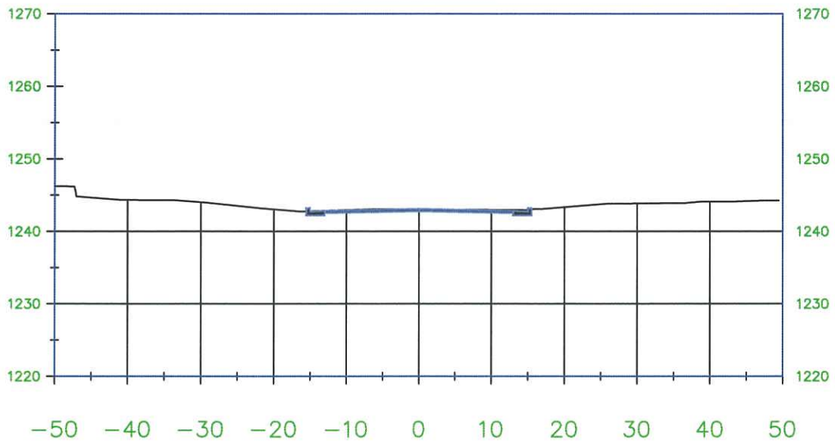
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	51	54
CROSS SECTIONS PINE				

PINE STREET

8+00.00



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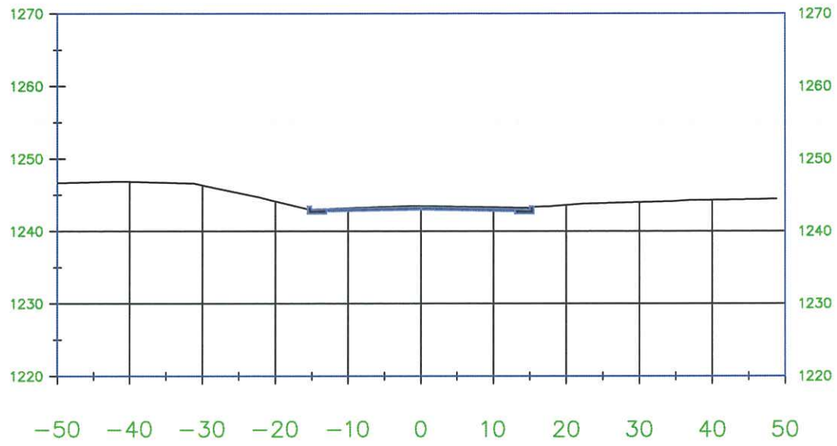

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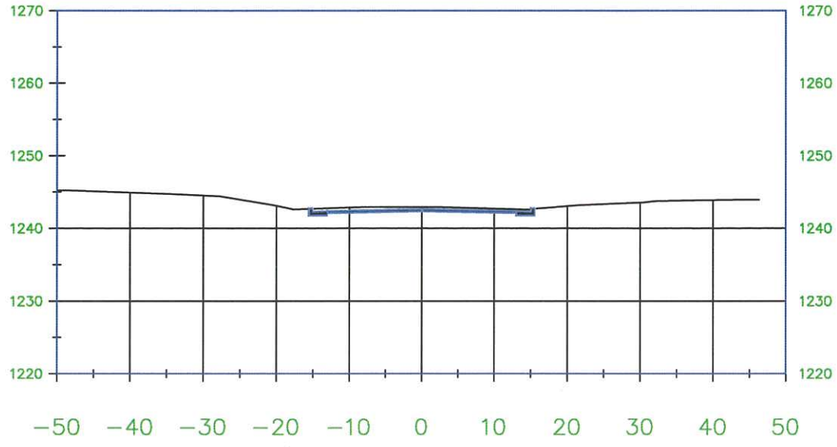

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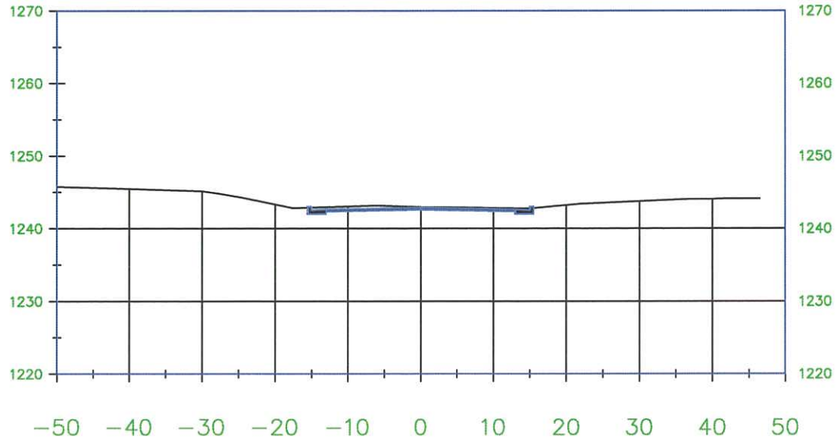
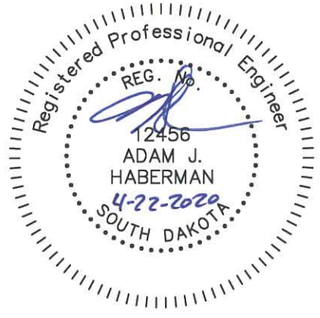
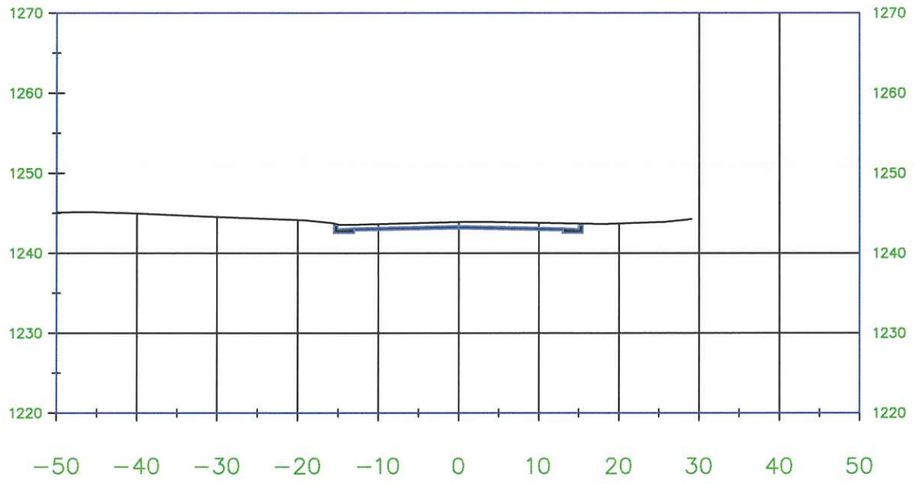




REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	52	54
CROSS SECTIONS PINE				

PINE STREET NORTH

1+50.00



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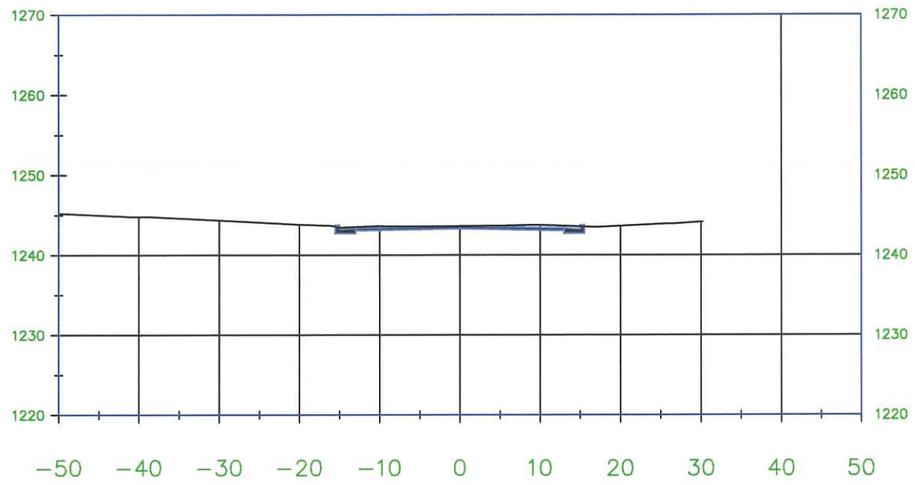

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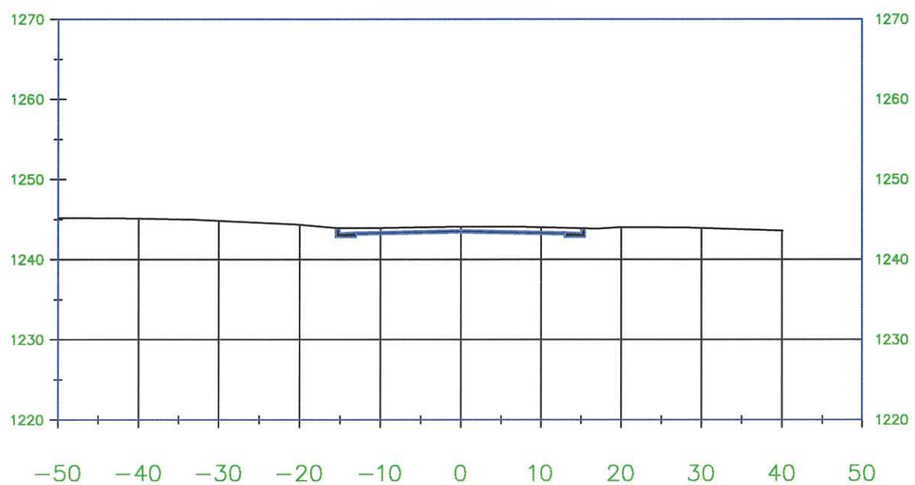

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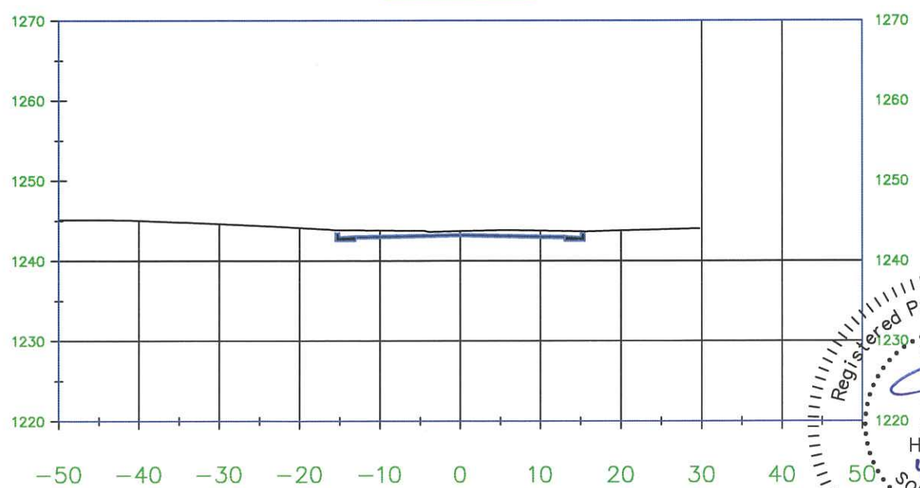
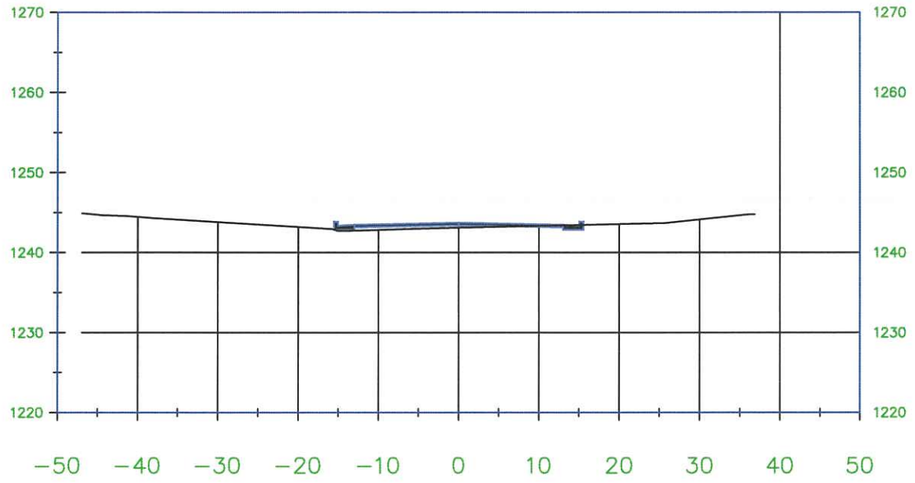


Registered Professional Engineer
REG. NO.
12456
ADAM J.
HABERMAN
4-22-2020
SOUTH DAKOTA

REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	53	54
CROSS SECTIONS PINE				

PINE STREET NORTH

3+50.00



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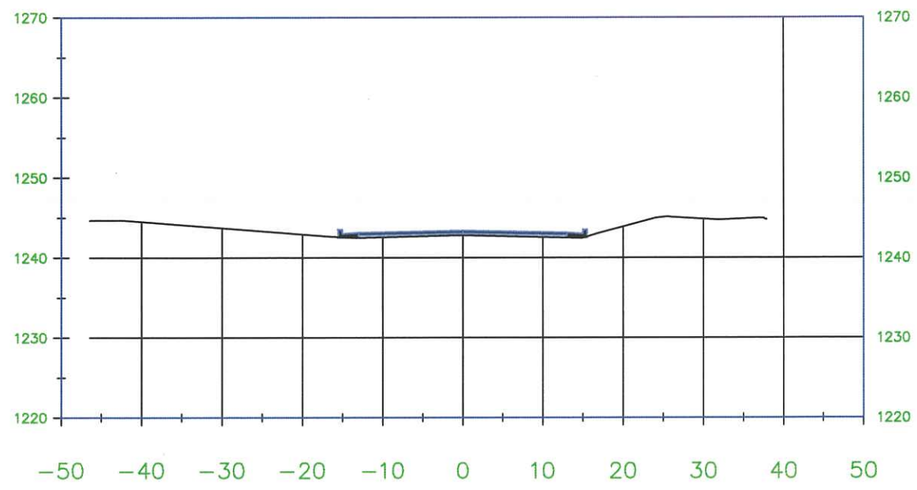

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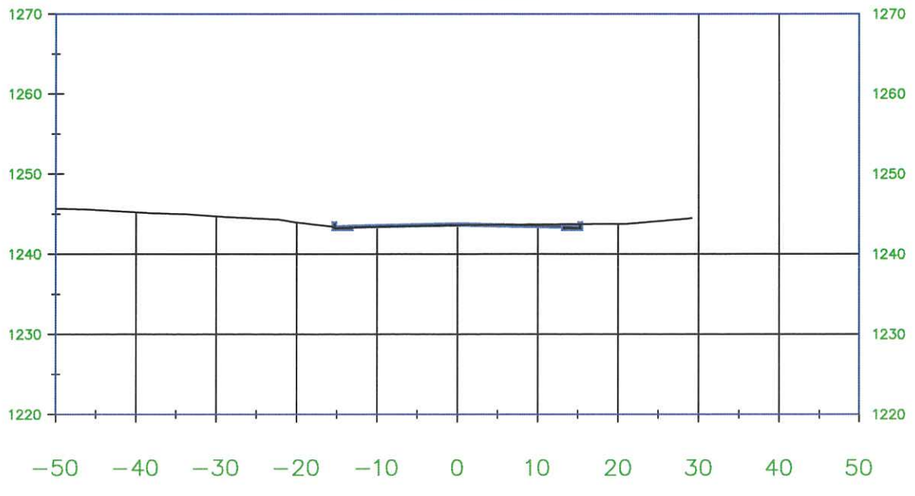

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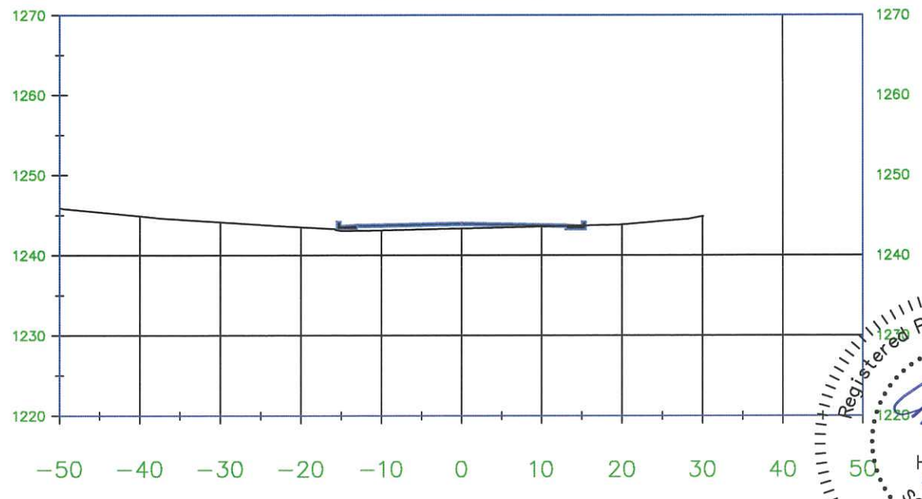

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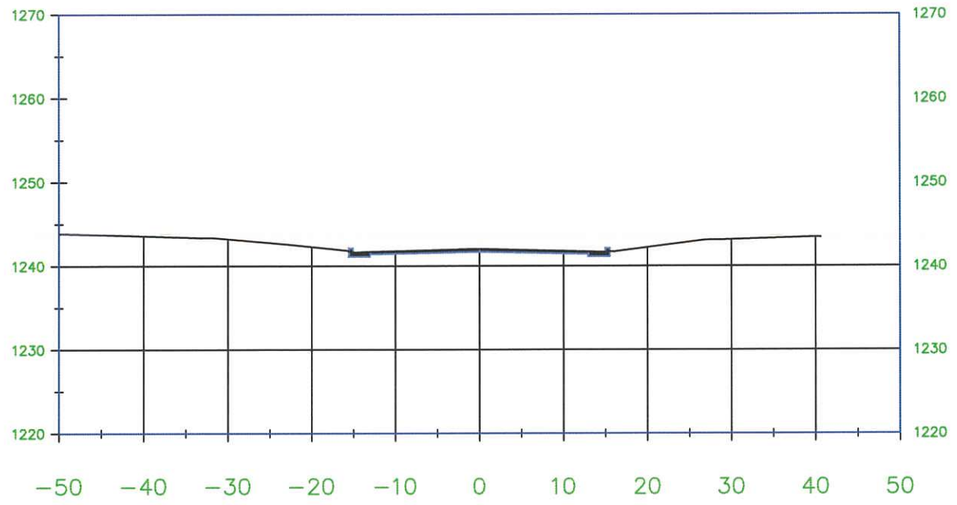
REGION NO.	STATE OF	PROJECT	SHEET NO.	TOTAL SHEETS
8	S.D.	2020-011	54	54
CROSS SECTIONS PINE				

PINE STREET NORTH

5+50.00



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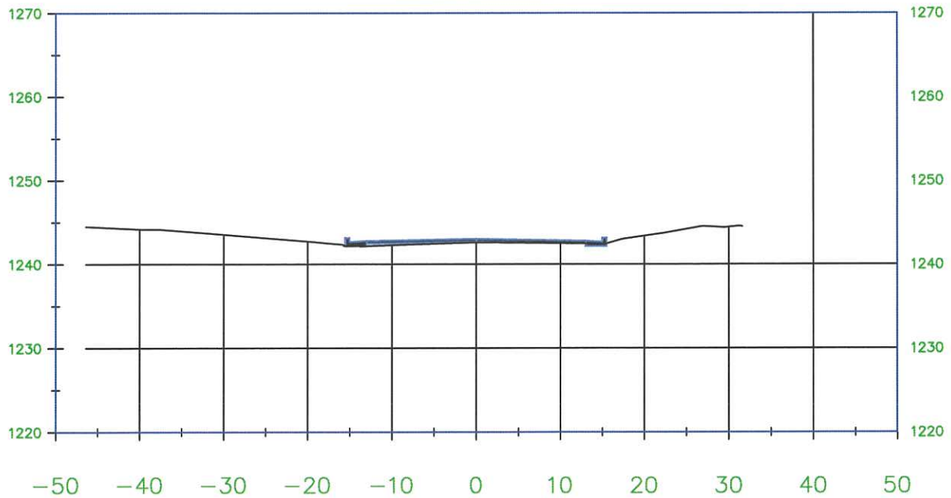

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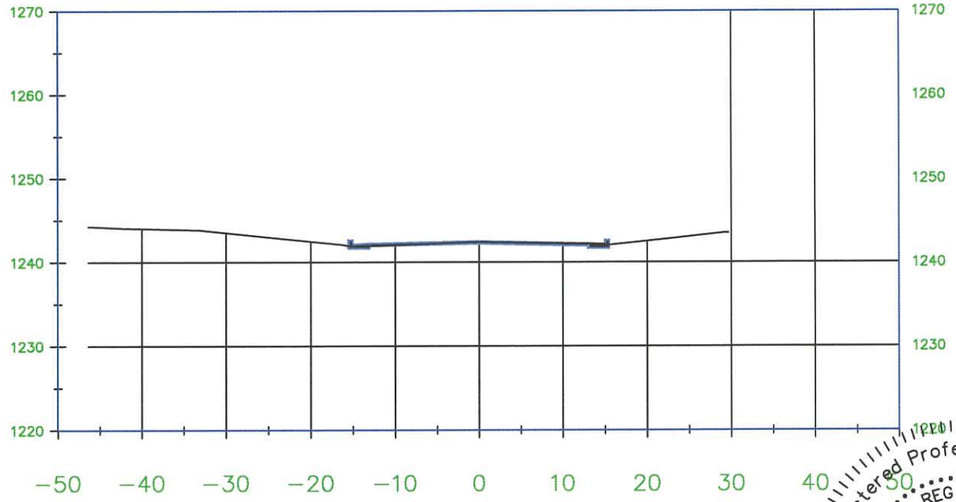

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