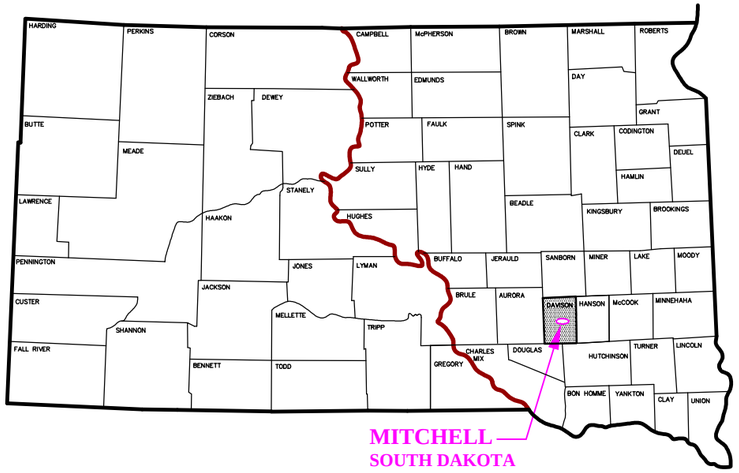
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	1	51



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION
PLANS FOR PROPOSED
PROJECT P TAPU (06)
MTI SHARED USE PATH
MITCHELL, DAVISON COUNTY, SOUTH DAKOTA
SHARED USE PATH, GRADING, CURB AND GUTTER, CONCRETE SIDEWALK AND SIGNING
PCN 04U7

INDEX OF SECTIONS

BEGIN P TAPU (06)
MTI SHARED USE PATH, MITCHELL, DAVISON COUNTY, SD
STA. 0+74.62–55.72' R ON P TAPU (06)
SOUTH ENTRANCE OF MTI APARTMENTS.
N. 503027.1950
E. 2584287.0956

R 60 W

END P TAPU (06)
MTI SHARED USE PATH, MITCHELL, DAVISON COUNTY, SD
STA. 28+09.94–11.07' L ON P TAPU (06)
WEST SIDE OF EAST ENTRANCE TO MTI UTILITY BUILDING.
N. 502497.8272
E. 2585843.7786

DESIGN DESIGNATION

GROSS LENGTH:	2794.00 FT	0.529 MILES
LENGTH OF EXCEPTIONS:	00.00 FT	0.000 MILES
NET LENGTH:	2794.00 FT	0.529 MILES

STORM WATER PERMIT

MAJOR STREAM: DRY RUN CREEK
MAJOR WATER BODY: NONE
AREA DISTURBED: 2.70 ACRES
TOTAL PROJECT AREA: 3.20 ACRES
APPROX. BEGIN LAT/LONG: 43.7300/98.0252

PROFESSIONAL ENGINEER
REG. NO. 8971
JEFFREY PAUL MACCORMICK
SOUTH DAKOTA
3/27/15
REGISTERED
#15978

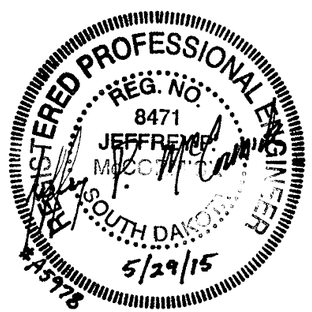
Helms & ASSOCIATES
CIVIL ENGINEERS & LAND SURVEYORS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	2	51

REV 5-29-15 NAP

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
009E3230	Grade Staking	0.532	Mile
009E3250	Miscellaneous Staking	0.532	Mile
009E3330	Three Man Survey Crew	20.0	Hour
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	223	Ft
110E1010	Remove Asphalt Concrete Pavement	174.6	SqYd
110E1100	Remove Concrete Pavement	4.3	SqYd
110E1140	Remove Concrete Sidewalk	26	SqYd
110E1700	Remove Silt Fence	23	Ft
110E7150	Remove Sign for Reset	2	Each
120E0010	Unclassified Excavation	2,015	CuYd
230E0010	Placing Topsoil	815	CuYd
260E1010	Base Course	105.9	Ton
320E1200	Asphalt Concrete Composite	30.1	Ton
451E6080	Adjust Water Valve Box	3	Each
632E1320	2.0"x2.0" Perforated Tube Post	176.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	81.1	SqFt
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	19.0	SqFt
632E3500	Reset Sign	2	Each
633E1430	Pavement Marking Paint, 24" White	330	Ft
634E0100	Traffic Control	1202	Unit
634E0120	Tracffic Control, Miscellaneous	Lump Sum	LS
650E2100	Special Concrete Curb and Gutter	496	Ft
651E0150	5" Reinforced Concrete Sidewalk	25,802	SqFt
651E0180	8" Reinforced Concrete Sidewalk	1,013	SqFt
651E5000	Sidewalk Drain	34.5	Ft
651E7000	Type 1 Dectecable Warnings	262	SqFt
730E0206	Type D Permanent Seed Mixture	288	Lb
731E0100	Fertilizing	1,398	Lb
732E0250	Fiber Mulching	2,832	Lb
734E0604	High Flow Silt Fence	90	Ft
734E0610	Mucking Silt Fence	6	CuYd
734E0620	Repair Silt Fence	23	Ft
735E3010	Salvage, Store, and Replant Tree	4	Each



Specifications

South Dakota Standard Specifications for Roads and Bridges, 2004 Edition and Required Provisions, Supplemental Specifications and special provisions as included in the proposal.

ENVIRONMENTAL COMMITMENTS

An Environmental Commitment is a measure that SDDOT commits to implement in order to avoid, minimize, and/or mitigate a real or potential environmental impact. Environmental commitments to various agencies and the public have been made to secure approval of this project. An agency mentioned below with permitting authority can influence a project if perceived environmental impacts have not been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT C: WATER SOURCE

Water for compaction is incidental to the project. Water used from City of Mitchell fire hydrants shall be metered and paid for by the Contractor.

The Contractor shall not withdraw water with equipment previously used outside the State of South Dakota without prior approval from the SDDOT Environmental Office. Thoroughly wash all construction equipment before entering South Dakota to reduce the risk of invasive species introduction into the project vicinity.

The Contractor shall not withdraw water directly from streams of the James, Big Sioux, and Vermillion watersheds without prior approval from the SDDOT Environmental Office.

Action Taken/Required:

The Contractor shall obtain the necessary permits from the regulatory agencies such as the Department of Environment and Natural Resources (DENR) and the United States Army Corps of Engineers (COE) prior to executing water extraction activities.

COMMITMENT E: STORM WATER

Construction activities constitute 1 acre or more of earth disturbance.

Action Taken/Required:

The DENR and the US Environmental Protection Agency (EPA) have issued separate general permits for the discharge of storm water runoff. The DENR permit applies to discharges on state land and the EPA permit applies to discharges on federal or reservation land. The Contractor is advised this project is regulated under the Phase II Storm Water Regulations and must receive coverage under the General Permit for Construction Activities. A Notice of Intent (NOI) will be submitted to DENR a minimum of 15 days prior to project start by the DOT Environmental Office. A letter must be received from DENR that acknowledges project coverage under this general permit before project start. The Contractor is advised that permit coverage may also be required by off-site activities, such as borrow and staging areas, which are the responsibility of the Contractor.

The Contractor shall adhere to the "Special Provision Regarding Storm Water Discharges to Waters of the State".

A major component of the storm water construction permits is development and implementation of a Storm Water Pollution Prevention Plan (SWPPP), which is a joint effort and responsibility of the SDDOT and the Contractor. Erosion control measures and best management practices will be implemented in accordance with the SWPPP. The SWPPP is a dynamic document and is to be available on-site at all times.

Information on storm water permits and SWPPPs are available on the following websites:

SDDOT:
http://sddot.com/transportation/highways/environmental/stormwater/Default.aspx

DENR: http://www.denr.sd.gov/des/sw/stormwater.aspx

EPA: http://cfpub.epa.gov/npdes/home.cfm?program_id=6

Contractor Certification Form:

The "Department of Environmental and Natural Resources – Contractor Certification Form" (SD EForm – 2110LDV1-ContractorCertification.pdf) shall be completed by the Contractor or their certified Erosion Control Supervisor after the award of the contract. Work may not begin on the project until this form is signed.

The form certifies under penalty of law that the Contractor understands and will comply with the terms and conditions of the Surface Water Discharge General Permit for Storm Water Discharges Associated with Construction Activities for the Project.

The online form can be found at:
http://denr.sd.gov/des/sw/eforms/E2110LDV1-ContractorCertification.pdf

COMMITMENT H: WASTE DISPOSAL SITE

The Contractor shall furnish a site(s) for the disposal of construction and/or demolition debris generated by this project. The City of Mitchell will accept clean concrete and asphalt waste at their disposal site located southwest of the Ohlman Street and 8th Avenue Intersection.

Action Taken/Required:

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

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for Highway, Road, and Railway Construction/Demolition Debris Disposal Under the South Dakota Waste Management Program issued by the Department of Environment and Natural Resources.

The waste disposal site(s) shall not be located in a wetland, within 200 feet of surface water, or in an area that adversely affects wildlife, recreation, aesthetic value of an area, or any threatened or endangered species, as approved by the Project Engineer.

If the waste disposal site(s) is located such that it is within view of any ROW, the following additional requirements shall apply:

1. Construction and/or demolition debris consisting of concrete, asphalt concrete, or other similar materials shall be buried in a trench completely separate from wood debris. The final cover over the construction and/or demolition debris shall consist of a minimum of 1 foot of soil capable of supporting vegetation. Waste disposal sites provided outside of the State ROW shall be seeded in accordance with Natural Resources Conservation Service recommendations. The seeding recommendations may be obtained through the appropriate County NRCS Office. The Contractor shall control the access to waste disposal sites not within the State ROW through the use of fences, gates, and placement of a sign or signs at the entrance to the site stating "No Dumping Allowed".

2. Concrete and asphalt concrete debris may be stockpiled within view of the ROW for a period of time not to exceed the duration of the project. Prior to project completion, the waste shall be removed from view of the ROW or buried and the waste disposal site reclaimed as noted above.

   The above requirements will not apply to waste disposal sites that are covered by an individual solid waste permit as specified in SDCL 34A-6-58, SDCL 34A-6-1.13, and ARSD 74:27:10:06.

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

   All costs associated with furnishing waste disposal site(s), disposing of waste, maintaining control of access (fence, gates, and signs), and reclamation of the waste disposal site(s) shall be incidental to the various contract items.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES

The SDDOT has obtained concurrence with the State Historical Preservation Office (SHPO or THPO) for all work included within the project limits and all designated option borrow sites provided within the plans.

COMMITMENT I: HISTORICAL PRESERVATION OFFICE CLEARANCES (CONTINUED)

Action Taken/Required:

All earth disturbing activities not designated within the plans require review of cultural resources impacts. This work includes, but is not limited to: staging areas, borrow sites, waste disposal sites, and all material processing sites.

The Contractor shall arrange and pay for a cultural resource survey and/or records search. The Contractor has the option to contact the state Archaeological Research Center (ARC) at 605-394-1936 or another qualified archaeologist, to obtain either a records search or a cultural resources survey. A record search might be sufficient for review; however, a cultural resources survey may need to be conducted by a qualified archaeologist.

The Contractor shall provide ARC with the following: a topographical map or aerial view on which the site is clearly outlined, site dimensions, project number, and PCN. If applicable, provide evidence that the site has been previously disturbed by farming, mining, or construction activities with a landowner statement that artifacts have not been found on the site.

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate

SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

If evidence for cultural resources is uncovered during project construction activities, then such activities shall cease and the Project Engineer shall be immediately notified. The Project Engineer will contact the SDDOT Environmental Engineer in order to determine an appropriate course of action.

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands, threatened and endangered species, or waterways. The Contractor shall provide the required permits and clearances to the Project Engineer at the preconstruction meeting.

GRADING OPERATIONS

Excavation and construction of Embankments including compaction requirements shall be performed in accordance with Section 120 of the Specifications.

The shared use path shall be completed to the elevations shown in the plans and in accordance with the typical sections. Horizontal and vertical alignments of the path may be altered if necessary at the Engineer's discretion.

All costs for excavation and construction of embankments shall be considered incidental to the contract unit price per cubic yard for Unclassified Excavation. The plans quantity for Unclassified Excavation shall be the basis of payment unless changes are directed by the Engineer.

UTILITIES

Utilities are not planned to be affected on this project. If utilities are identified near the improvement area through the SD one Call process as required by South Dakota Codified Law 49-7A and Administrative Rule Article 20:25, the Contractor shall contact the Project Engineer to determine medications that will be necessary to avoid utility impacts.

The Contractor shall be aware that the existing utilities shown in the plans were surveyed prior to the design of this project and might have been relocated or replaced by a new utility facility prior to construction of this project. It is anticipated that the utilities will not require adjustment and may remain in its current location. The Contractor shall contact each utility owner and confirm the status of all existing and new utility facilities. The following list identifies entities with utilities in the City of Mitchell.

(Name of Company) CENTURYLINK
(Mailing Address) 125 S. DAKOTA AVENUE
(City, State, Zip Code) SIOUX FALLS SD 57104

Contact Person: JEREMY STUDEMANN
Telephone Number: (605) 339-5773

(Name of Company) MITCHELL TELECOM
(Mailing Address) 1801 N. MAIN STREET
(City, State, Zip Code) MITCHELL SD 57301

Contact Person: JUSTIN THEISSE
Telephone Number: (605) 990-1000

(Name of Company) MIDCONTINENT COMMUNICATIONS
(Mailing Address) 1901 N. MAIN STREET
(City, State, Zip Code) MITCHELL SD 57301

Contact Person: JOHN ADAMS
Telephone Number: (800) 888-1300

(Name of Company) NORTHWESTERN
(Mailing Address) 514 NORTH MAIN STREET
(City, State, Zip Code) MITCHELL SD 57301

Contact Person: JAMIE HAJEK
Telephone Number: (605) 995-4410

(Name of Company) CITY OF MITCHELL WATER
(Mailing Address) 612 NORTH MAIN STREET
(City, State, Zip Code) MITCHELL SD 57301

Contact Person: RICHARD POLLREISZ
Telephone Number: (605) 995-8449

(Name of Company) CITY OF MITCHELL SEWER
(Mailing Address) 612 NORTH MAIN STREET
(City, State, Zip Code) MITCHELL SD 57301

Contact Person: JON VERMEULEN
Telephone Number: (605) 995-8446

(Name of Company) CITY OF MITCHELL STREETS
(Mailing Address) 612 NORTH MAIN STREET
(City, State, Zip Code) MITCHELL SD 57301

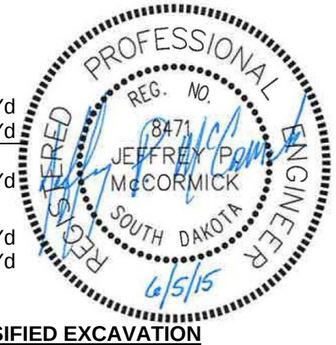
Contact Person: RON OLSON
Telephone Number: (605) 995-8465

CLEARING

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project. If the trees or shrubs that are supposed to remain within the limits of work are damaged or destroyed by the Contractor, the Contractor shall replace them with the same size and type at the Contractor's expense.

TABLE OF UNCLASSIFIED EXCAVATION

Excavation	1,200 CuYd
Topsoil	815CuYd
Total	2,015CuYd
Place Topsoil	815CuYd
Waste Material	385 CuYd



PROCEDURES FOR DETERMINING UNCLASSIFIED EXCAVATION QUANTITY

The plans quantity for Unclassified Excavation shall be the basis of payment unless changes are directed by the Engineer.

The Topsoil quantity in the Table of Unclassified Excavation is an estimate. The quantity of Topsoil from the cuts will be paid for twice as Unclassified Excavation, as it will be in both the Excavation and Topsoil quantities. This will be full compensation for Excavation, which includes necessary undercutting to provide space for placement of topsoil.

TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
3+69		6+28	L	172.7
28+10		28+13	L	1.9
			Total:	174.6

TABLE OF CONCRETE CURB AND GUTTER REMOVAL

Station	to	Station	L/R	Quantity (Ft)
0+75		0+85	R	10
1+31		1+37	R	34
1+55		1+59	R	29
11+76		11+77	L/R	14
12+22		12+24	L/R	14
14+97		14+99	L/R	14
15+44		15+46	L/R	14
21+70		21+73	L/R	14
22+01		22+03	L/R	14
24+12		24+14	L/R	14
24+35		24+37	L/R	14
27+49		27+64	L/R	30
28+05		28+05	L	8
			Total:	223

TABLE OF SIDEWALK REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
1+57		1+63	L/R	26
			Total:	26

TABLE OF REMOVE CONCRETE PAVEMENT

Station	to	Station	L/R	Quantity (SqYd)
28+05		28+10	L	4.3
			Total:	4.3

SALVAGE, STORE, AND REPLANT TREES

The trees shall be salvaged prior to the start of any unclassified excavation work. Trees to be salvaged, stored and replanted may be replanted the same day that removal occurs. If any damage occurs to the tree during salvaging, transporting or replanting, the Contractor shall replace the tree with the same type and diameter tree which was damaged.

TABLE OF SALVAGE, STORE, AND REPLANT TREES

Salvage Station	L/R	Replant Station	L/R	Quantity (Each)
1+18	48’ R	1+00	25’ R	1
17+77	9’ R	17+77	27’ R	1
18+00	9’ R	18+00	30’ R	1
24+76	10’ L	24+76	15’ L	1
	Total:			4

REMOVE AND RELOCATE SIGN

The signs called out for removal and reset are MTI informational signs. Electrical conduit, wire and boxes will need to be moved with the signs. If the existing footing is damaged during removal the Contractor shall install a new footing for the sign. The sign shall be set level and at the bury depth with which it was removed.

TABLE OF REMOVE SIGN FOR RESET

Station	L/R	Quantity (Each)
14+92	10’ L	1
22+07	8’ L	1
	Total:	2

TABLE OF RESET SIGN

Station	L/R	Quantity (Each)
14+92	18’ L	1
22+07	16’ L	1
	Total:	2

SPECIAL TYPE B CONCRETE CURB AND GUTTER

All concrete curb and gutter including P-Gutter shall be considered as Special Type B Concrete Curb and Gutter as shown on the plans.

TABLE OFSPECIALCONCRETE CURB AND GUTTER

Station	to	Station	L/R	Quantity (Ft)
0+75.07		0+85.07	R	10.0
1+30.82		1+37.15	R	34.4
1+54.72		1+59.21	R	29.1
3+69.46		3+69.46	L	4.0
3+69.46		6+27.34	L	258.0
6+27.34		6+27.34	L	4.0
11+75.52		11+77.48	L/R	14.0
12+21.99		12+23.99	L/R	14.0
14+97.42		14+99.41	L/R	14.0
15+43.54		15+45.55	L/R	14.0
21+70.47		21+72.69	L/R	14.0
22+01.18		22+03.39	L/R	14.0
24+12.40		24+14.31	L/R	14.0
24+34.79		24+36.61	L/R	14.0
27+48.75		27+64.25	L/R	29.7
28+04.94		28+04.94	L	15.0
			Total:	496.2

TYPE 1 DETECTABLE WARNINGS

Detectable warnings shall be in compliance with the Americans with Disability Act regulations.

The detectable warnings shall be installed according to the manufacturer’s installation instructions.

A concrete thickness equal to the adjacent concrete sidewalkthicknessand 4 inches of granular cushion material shall be placed below the Type 1Detectable Warnings. When concrete is placed below the detectable warnings then the concrete thickness shall be transitioned at the rate of 1” per foot to match the adjacent concrete sidewalk thickness.Cast iron plates may be a natural patina (weathered steel).When Type 1 Detectable Warnings are specified, the Contractor shall furnish and install only one of the products listed in the Type 1 Detectable Warnings table.

Type 1 Detectable Warnings

Product	Manufacturer
Detectable Warning Plate Cast Iron Plate	Neenah Foundry Company Neenah, WI 800-558-5075 http://www.neenahfoundry.com/
Detectable Warning Plate Cast Iron Plate	Deeter Foundry Lincoln, NE 800-234-7466 http://www.deeter.com/
Detectable Warning Plate Cast Iron Plate (No Coating)	East Jordan Iron Works, Inc. 301 Spring Street East Jordan, MI 49727 800-626-4653 http://www.ejiw.com
CAST-DWD Cast Iron Plate	Key 3 Casting (Northern Foundry) 555 West 25th Street Hibbing, MN55746 218-263-8871 http://key3casting.com

TABLE OF TYPE1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
0+75.91	55.58' R	20
1+33.17	27.91' R	20
1+60.42	27.89' R	20
3+87.47	6.00 L	10
11+74.42	0.00' L/R	20
12+24.96	0.00' L/R	20
14+96.42	0.00' L/R	20
15+46.54	0.00' L/R	20
21+69.59	0.00' L/R	20
22+04.29	0.00' L/R	20
24+11.35	0.00' L/R	20
24+37.73	0.00' L/R	20
27+60.02	0.00' L/R	20
28+09.94	5.07' L	12
	Total:	262

CONCRETE SIDEWALK

Fiber reinforcement shall be used in the M6 concrete sidewalk mix design. Collated fibrillated polypropylene fibers shall meet or exceed ASTM C-1116, ICBO #4151. The length of the fibers shall be 0.75" and have a specific gravity of 0.91. The absorption shall be Nil and have a melting point of 324 degrees Fahrenheit. The fibers shall be applied at a rate of 1.5 pounds per cubic yard and follow the manufacturer's recommendations for mixing.

Collated fibrillated polypropylene fibers shall be from the list below or an approved equal.

Product	Manufacturer
Fibermesh 300	Propex Concrete Systems Chattanooga TN, 37422 Phone: 1-423-892-8080 www.fibermesh.com
Grace Microfiber	Grace Concrete Products Eagan, MN 55121 Phone: 1-651-686-4477 www.grace.com

TABLE OF 5" CONCRETE SIDEWALK – 6 FOOT WIDTH

Station	to	Station	L/R	Quantity (SqFt)
28+06.94		28+12.94	L	42.0
			Total:	42.0

TABLE OF 5" CONCRETE SIDEWALK – 10 FOOT WIDTH

Station	to	Station	L/R	Quantity (SqFt)
0+74.62		1+29.58	R	883.8
1+57.10		1+69.10	R	421.3
1+59.03		3+11.10	L/R	1509.7
6+52.86		7+50.00	L/R	971.2
7+50.00		9+32.25	L/R	1,844.3
10+00.00		11+75.42	L/R	1,754.4
12+23.95		14+97.42	L/R	2,734.6
15+45.54		20+00.00	L/R	4,544.6
20+00.00		21+70.58	L/R	1,705.8
22+03.29		24+12.35	L/R	2,090.7
24+36.70		27+62.36	L/R	3,263.5
			Total:	21,723.9

TABLE OF 5" CONCRETE SIDEWALK – 12 FOOT WIDTH

Station	to	Station	L/R	Quantity (SqFt)
3+62.68		6+27.33	L/R	3181.7
			Total:	3181.7

TABLE OF 5" CONCRETE SIDEWALK – TRANSITION FROM 10 FOOT WIDTH TO 12 FOOT WIDTH

Station	to	Station	L/R	Quantity (SqFt)
3+11.10		3+62.68	L/R	573.9
6+27.33		6+52.86	L/R	280.9
			Total:	854.8

TABLE OF 8" CONCRETE SIDEWALK

Station	to	Station	L/R	Quantity (SqFt)
9+32.25		10+00.00	L/R	1,012.5
			Total:	1,012.5

SIDEWALK DRAINS

At the locations noted in the Table of Sidewalk Drains, the areas draining to the sidewalk will have the drainage carried through the sidewalk drains to the current drainage path. The sidewalk drains shall be constructed in accordance with the details shown on Standard Plate 651.50.

TABLE OF SIDEWALK DRAINS

Station	to	Station	L/R	Length (Ft)
1+58.71		1+69.21	R	10.5
4+58.31		4+58.31	L/R	12.5
9+33.64		9+33.64	L/R	11.5
			Totals:	34.5

ASPHALT CONCRETE COMPOSITE

Mineral aggregate for the Asphalt Concrete Composite shall conform to the requirements for Class E, Type 1. All other requirement in the Specifications for Asphalt Concrete Composite shall apply. The asphalt binder used in the mixture shall be PG 64-22 Asphalt Binder.

TABLE OF ASPHALT CONCRETE COMPOSITE

Station	to	Station	L/R	Quantity (Ton)
3+69		6+28	L	30.1
			Total:	30.1

BASE COURSE

Existing base course under the existing curb and gutter and asphalt surfacing shall remain in place and recompacted prior to placement of new concrete curb and gutter or asphalt concrete composite. If sufficient base course is not present, new base course shall be used. The following quantities have been provided if sufficient base course is not available.

TABLE OF BASE COURSE

Station	to	Station	L/R	Quantity (Ton)
0+75.07		0+85.07	R	0.7
1+30.82		1+37.15	R	3.6
1+54.72		1+59.21	R	3.1
3+69.46		3+69.46	L	0.4
3+69.46		6+27.34	L	81.5
6+27.34		6+27.34	L	0.4
11+75.52		11+77.48	L/R	1.5
12+21.99		12+23.99	L/R	1.5
14+97.42		14+99.41	L/R	1.5
15+43.54		15+45.55	L/R	1.5
21+70.47		21+72.69	L/R	1.5
22+01.18		22+03.39	L/R	1.5
24+12.40		24+14.31	L/R	1.5
24+34.79		24+36.61	L/R	1.5
27+48.75		27+64.25	L/R	3.1
28+04.94		28+04.94	L	1.1
			Total:	105.9

ADJUST WATER VALVE BOX

Station	L/R	Quantity (Each)
9+42.22	11.80' R	1
9+47.43	20.04' R	1
25+22.78	14.38' L	1
	Total	3

PLACING TOPSOIL

The thickness will be approximately 6inches.

The estimated amount of topsoil to be placed is as follows:

Station	to	Station	L/R	Topsoil (CuYd)
0+75		1+35	R	18
1+64		3+70	L	30
1+69		7+00	R	66
6+27		7+00	L	15
7+00		11+75	L/R	161
12+24		14+97	L/R	86
15+45		21+70	L/R	246
22+03		24+12	L/R	63
24+36		27+61	L/R	130
			Total:	815

DRILLS

In addition to the drills specified in Section 730 of the Specifications, other types of drills including no-till drills will be allowed as long as they have baffles, partitions, agitators, or augers which keep the seed distributed throughout the seed box and the seed is planted at a depth of ¼" to ½".

MYCORRHIZAL INOCULUM

Mycorrhizal inoculum shall consist of mycorrhizal fungi spores and mycorrhizal fungi-infected root fragments in a solid carrier. The carrier may include organic materials, calcinated clay, or other materials consistent with application and good plant growth. The supplier shall provide certification of the fungal species claimed and the live propagule count. The inoculum shall include the following fungal species:

Glomus intraradices	25%
Glomus aggregatu	25%
Glomus mosseae	25%
Glomus etunicatum	25%

All seed shall be inoculated by the seed supplier with a minimum of 20,000 live propagules of mycorrhizal fungi per 1,000 square feet. All costs of inoculating the seed shall be incidental to the contract unit price per pound for the corresponding permanent seed mixture.

The mycorrhizal inoculum shall be as shown below or an approved equal:

Product	Manufacturer
MycoApply	Mycorrhizal Applications, Inc. Grants Pass, OR Phone: 1-866-476-7800 http://www.mycorrhizae.com/

PERMANENT SEEDING

The areas to be seeded consistof all newly graded areas within the project limits except for the top of roadways and the shared use path.

All permanent seed shall be planted in the topsoil at a depth of ¼" to ½".

All seed broadcast must be raked or dragged in (incorporated) within the top ¼" to ½" of topsoil when possible. This requirement may be waived by the Engineer during construction when raking or dragging is deemed not feasible by conventional methods.

The varieties listed for the seed mixture are preferred varieties. Native harvest seed will be allowed.

41,118 square feet of newly graded areas are to be seeded.

Type D Permanent Seed Mixture shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/1000 SqFt)
Kentucky Bluegrass	Avalanche, Appalachian, Wildhorse, Blue Bonnet	1.4
Perennial Ryegrass	Turf Type Varieties	1.4
Creeping Red Fescue	Epic, Boreal	1.4
Chewings Fescue	Ambrose, K2, VNS, Zodiac	1.4
Alkali Grass	Fults, Fults II, Quill, Salty	1.4
	Total:	7

FERTILIZING

The Contractor shall apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer shall have a minimum guaranteed analysis of 4-6-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 3.2%, a minimum of 6% (P_2O_5) available phosphate, a minimum of 4% (K_2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer shall be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer shall have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer shall also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

The all-natural slow release fertilizer shall be applied according to the manufacturer's application recommendations.

The application rate is 34 pounds per 1,000 square feet.

The all-natural slow release fertilizer shall be from the list below or an approved equal:

Product	Manufacturer
Sustane	Sustane Corporate Headquarters Cannon Falls, Minnesota Phone: 1-800-352-9245 http://www.sustane.com/

FIBER MULCHING

Fiber mulch shall be applied in a separate operation following permanent seeding.

Fiber mulch shall be applied at the rate of 3000 pounds per acre.

The Contractor shall allow the fiber mulch to cure a minimum of 18 hours prior to watering or any storm event to ensure proper cohesion between the soil and fiber particles.

The fiber mulch provided shall be from the approved product list. The approved product list for fiber mulch may be viewed at the following internet site:
http://sddot.com/business/certification/products/Default.aspx

TABLE OF FIBER MULCHING

Station	to	Station	L/R	Quantity (Lb)
0+75		1+35	R	59.6
1+64		3+70	L	103.0
1+69		7+00	R	50.3
6+27		7+00	L	227.1
7+00		11+75	L/R	566.3
12+24		14+97	L/R	298.4
15+45		21+70	L/R	859.0
22+03		24+12	L/R	217.5
24+36		27+61	L/R	450.7
			Total:	2831.8

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HIGH FLOW SILT FENCE

The high flow silt fence fabric provided shall be from the approved product list. The approved product list for high flow silt fence may be viewed at the following internet site:

http://sddot.com/business/certification/products/Default.aspx

High flow silt fence shall be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

TABLE OF HIGH FLOW SILT FENCE

Station	L/R	Location	Quantity (Ft)
9+94	R	Pipe Invert	15
12+44	R	Pipe Invert	15
15+52	R	Pipe Invert	15
21+52	R	Pipe Invert	15
23+96	R	Pipe Invert	15
27+31	R	Pipe Invert	15
		Total:	90

MUCKING SILT FENCE

Mucking silt fence shall consist of removing muck trapped by the silt fence and spreading the material evenly over the adjacent area to conform to the existing grade.

REMOVE SILT FENCE

Silt fence shall be removed when vegetation is established. Some or all of the silt fence may be left on the project until vegetation is established.

GENERAL MAINTENANCE OF TRAFFIC

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. Cost for this work shall be incidental to the contract unit prices for the various items unless otherwise specified in the plans. Any delineators and signs damaged or lost shall be replaced by the Contractor at no cost to the State.

Storage of vehicles and equipment shall be outside the clear zone and as near as possible to the right-of-way line. 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 State, and to the satisfaction of the Engineer.

The Contractor shall provide documentation that all breakaway sign supports comply with NCHRP Report 350 or MASH crash-worthy requirements. The Contractor shall provide installation details at the preconstruction meeting for all breakaway sign support assemblies.

TRAFFIC CONTROL

There are three access points which allow traffic to enter the parking areas for the MTI Housing, Technology Center and the Administration Center. Access must be maintained to the MTI Housing, Technology Center and the Administration Center. The Contractor shall coordinate his work to allow one access point at all times to these facilities. The work directly south of the MTI Housing shall not block access to the parking lot. Traffic Control Drums will be utilized to protect traffic entering and leaving MTI Housing parking lot. Work shall be completed on one side of the street before starting work on the opposite side of the street into the MTI Housing. Traffic Control Drums will also be utilized south of the Utility Building to direct vehicles and pedestrians around the improvements.

PERMANENT PAVEMENT MARKING

All areas to be painted shall be thoroughlybroomed prior to placement of any permanent paint to the satisfaction of the Engineer. Completed sections of permanent pavement markings shall be completed prior to opening to traffic.

PERMANENT SIGNING

The Contractor shall furnish all signs, posts, stiffeners, bases, hardware, and labor for installation of permanent signs in size, type, and quantity as shown in these plans and/or as required by the Engineer.

The Contractor shall provide all labor and equipment necessary to install permanent signing, remove existing signs, and reset existing signs as detailed in these plans and/or as required by the Engineer. Payment for furnishing and installing permanent signs will be paid for at the contract unit price for each type of sign based on sheeting requirements per square foot of sign. All signs shall have Type IV (High Intensity) or Type XI (Super/Very High Intensity). Payment for new signposts, hardware, bases, and labor will be made at the contract unit price per foot for 2.0" x 2.0" perforated tube post**.** Breakaway post details regarding posts, hardware, and bases shall be followed as per the manufacturer's recommendations.
Measurement of post lengths for payment will be for above ground post lengths as field measured. The sign post contract items shall include post bases and all hardware. The lengths of the posts in the sign tables are approximate lengths only. The post lengths shall be verified by the Contractor. The Contractor is urged to cut posts to length on job site after verification of post length.

The Contractor shall use Telespar brand (or equivalent) posts and bases on all new standard highway signs as approved by the Engineer. All post materials shall conform to Section 982 of the Specifications, and be in accordance with 4 foot long base assembly with a shear breakaway base connecting the base to the signpost. The height of the post shall not exceed the minimum height needed by more than 0.5 feet. Any portion that extends above the sign shall be cut off. All posts and bases shall be accompanied by Certificates of Compliance and shall meet all safety standards as set forth in the current edition of the Manual on Uniform Traffic Control Devices (MUTCD).

The Contractor shall stake the signs and Engineer will verify the locations prior to installation. The lateral distance from the pathway and the height of the sign shall be established by the Contractor according to the Permanent Signing Typicals, as well as the Standard Plates in the Plans and MUTCD.

TABLE OF CONSTRUCTION STAKING

(See Special Provision for Contractor Staking)

Roadway and Description	Begin Station	End Station	Number of Lanes	Length (Ft)	Grade Staking Length (Mile)	Grade Staking Lane Factor	Grade Staking *Sets of Stakes	Grade Staking **Grade Staking Quantity (Mile)	Miscellaneous Staking Quantity (Mile)
MTI Shared use Path	00+74.62-55.72' R	28+09.94-11.07' L	1	2811.00	0.532	1.0	1	0.532	0.532
							Totals:	0.532	0.532

* 1 -Blue top Stakes Only
** Grade Staking Quantity- (Length) x (Lane Factor) x (Sets of Stakes)

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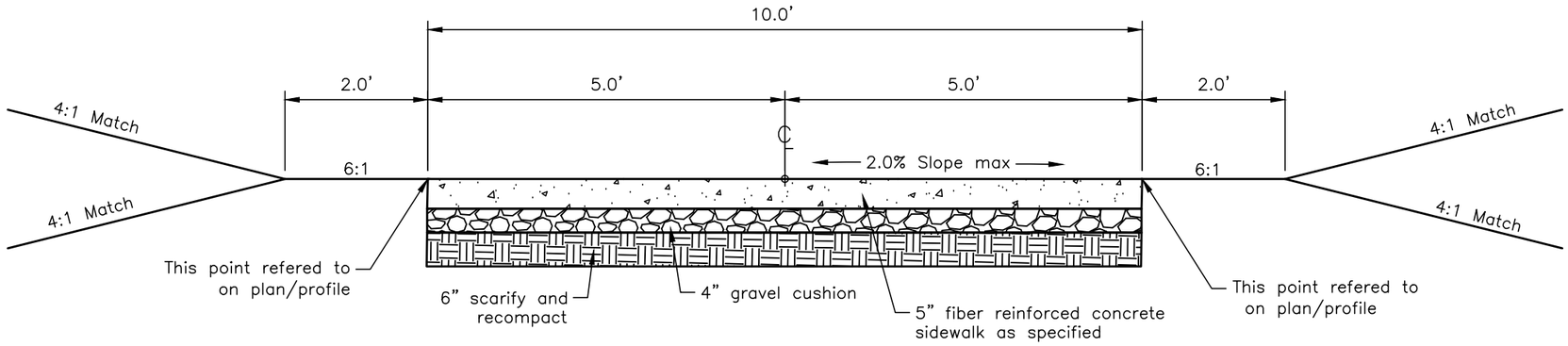
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	9	51

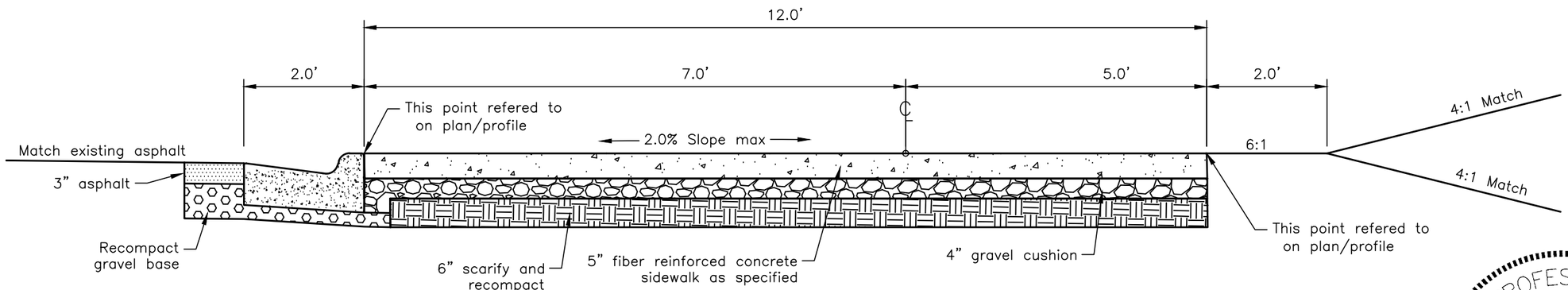
TYPICAL SECTIONS



TYPICAL 5" SHARED USE PATH SECTION

Sta. 0+74.62 to 1+29.58
Sta. 1+57.10 to 1+69.10
Sta. 1+59.03 to 3+11.10
Sta. 6+52.86 to 9+32.25
Sta. 10+00.00 to 11+75.42
Sta. 12+23.95 to 14+97.42
Sta. 15+45.54 to 21+70.58
Sta. 22+03.29 to 24+12.35
Sta. 24+36.70 to 27+62.36

Transition between 10' to 12'
Sta. 3+11.10 to 3+62.68
Sta. 6+27.33 to 6+52.86



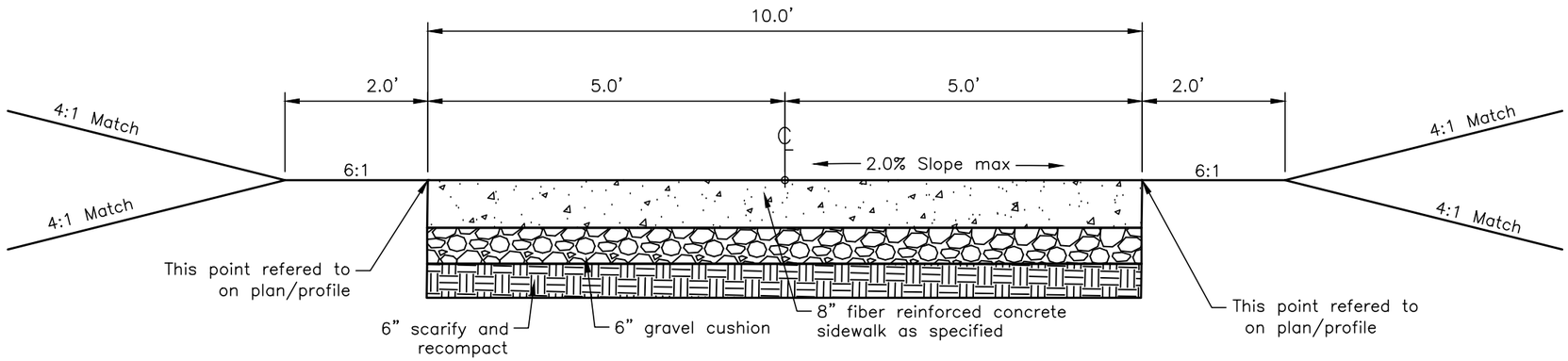
TYPICAL 5" SHARED USE PATH SECTION

Sta. 3+62.68 to 6+27.33

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	10	51

REV 5-29-15 NAP

TYPICAL SECTIONS



TYPICAL 8" SHARED USE PATH SECTION

Sta. 9+32.25 to 10+00.00

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	11	51

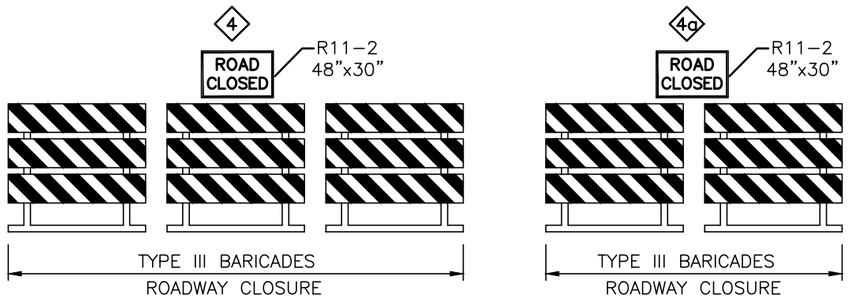
ITEMIZED LIST FOR TRAFFIC CONTROL

	SIGN CODE	SIGN SIZE	DESCRIPTION	NUMBER REQUIRED	UNITS PER SIGN	UNITS
1	W20–1	48"x48"	Road Work Ahead	2	34	68
2	G20–2	36"x18"	End Road Work	2	17	34
3	R1–1	30"x30"	Stop Sign	2	21	42
4/4a	R11–2	48"x30"	Road Closed	6	27	162
–	–	–	Type III Barricade–8' Double Sided	16	56	896
					TOTAL	1202

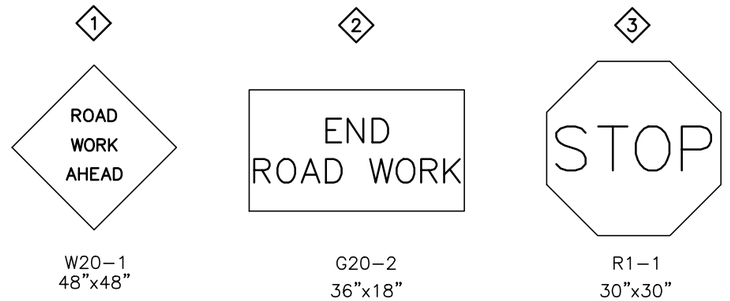
The itemized list for traffic control bid items reflects two access closures to the MTI Housing, Technology Center and Administration Center. Relocation of signs shall be considered incidental to traffic control, miscellaneous.

Cones, Drums, Type II Barricades or Fencing Shall be used to block Driveway Entrances, Alleys and Turn lanes as needed during Construction. Miscellaneous Safety devices Shall be Incidental to the contract lump sum price for "Traffic Control, Miscellaneous."

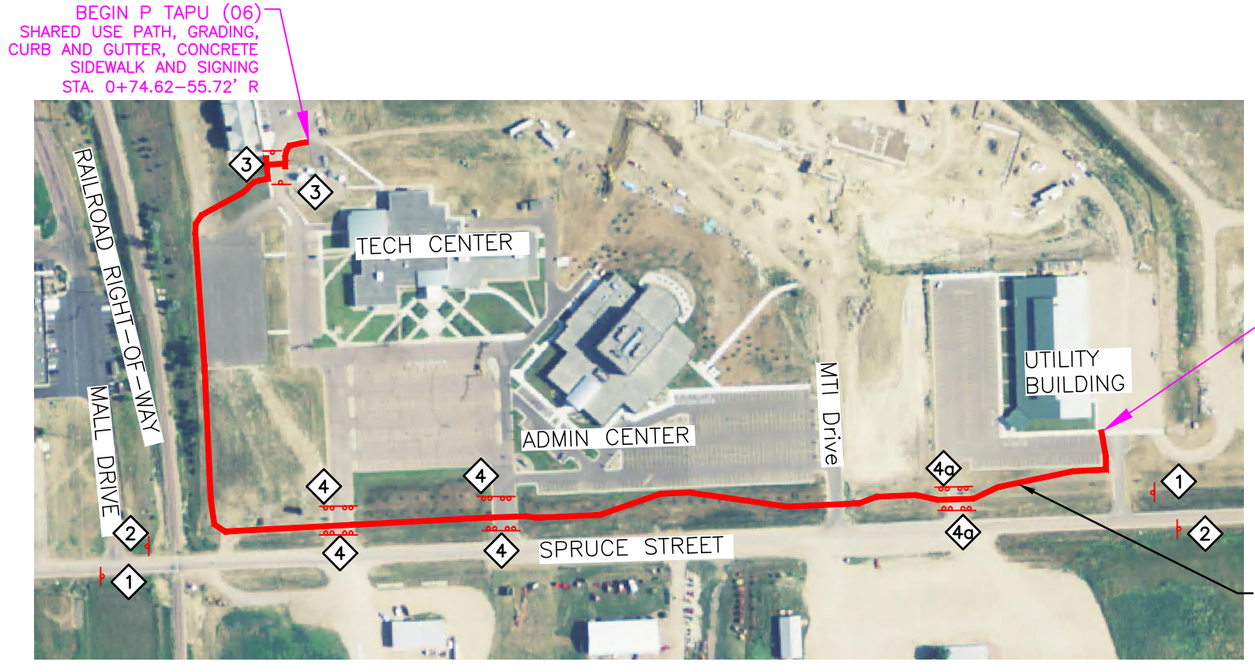
Six (6) traffic control drums shall be utilized to direct traffic around the work into the MTI housing parking lot. The drums shall be spaced no greater then six (6) feet apart.



NOTE: The direction of stripes on type 3 barricades for each road closure shall be oriented to meet the requirements of the MUTCD latest edition.



NOTE: The W20–1, G20–2 and R1–1 signs are fixed location signs and should have ground mounted supports.



Ten (10) traffic control drums shall be utilized to direct traffic around the work adjacent to the Utility Building. The drums shall be spaced no greater then six (6) feet apart.

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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	12	51

REV 5-29-15 NAP

EROSION AND SEDIMENT CONTROL PLAN

FINAL STABILIZATION

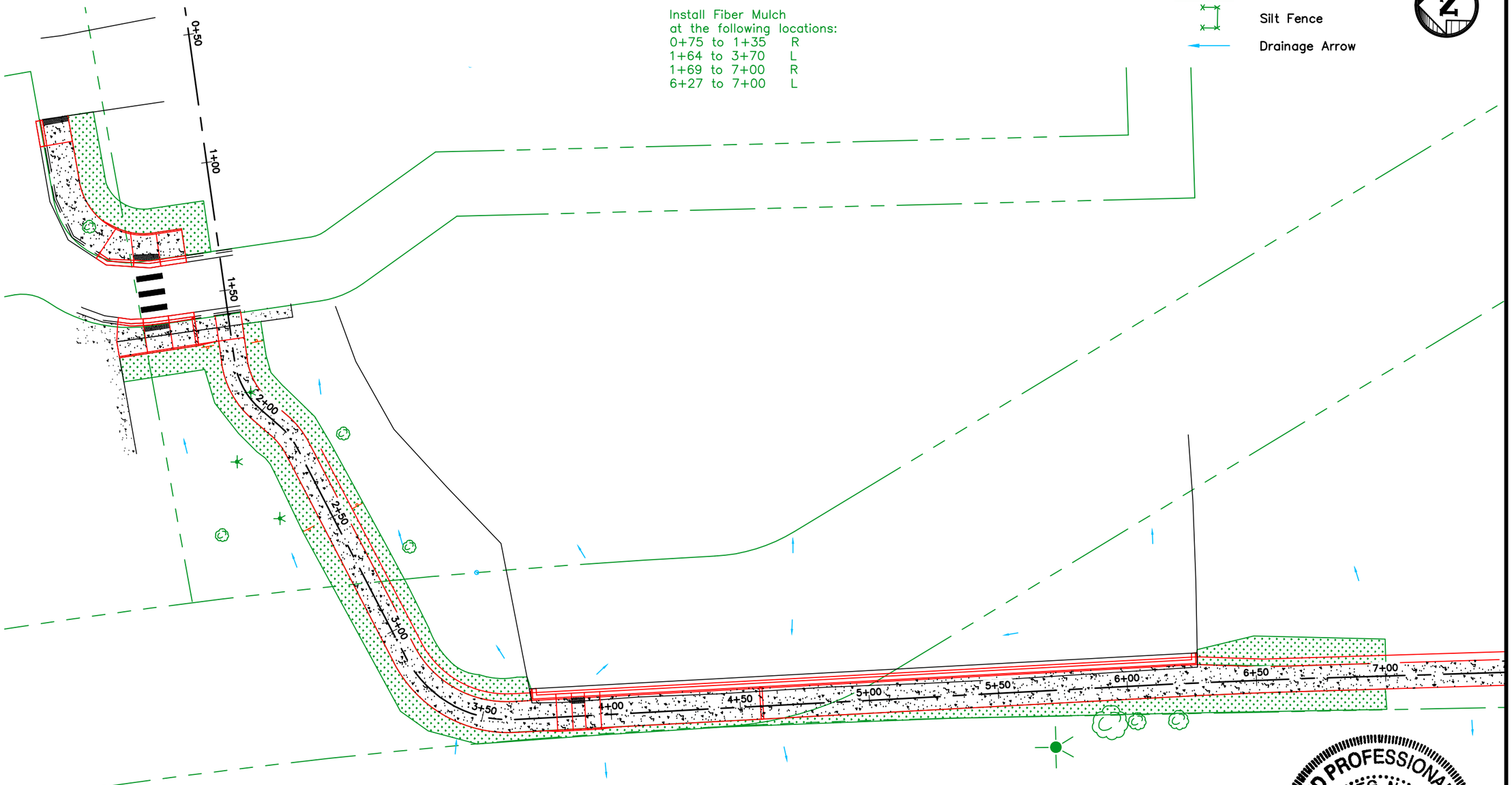
Install Fiber Mulch
at the following locations:
0+75 to 1+35 R
1+64 to 3+70 L
1+69 to 7+00 R
6+27 to 7+00 L

Legend

Fiber Mulching

Silt Fence

Drainage Arrow



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	13	51

REV 5-29-15 NAP

EROSION AND SEDIMENT CONTROL PLAN

Legend

- Fiber Mulching
- Silt Fence
- Drainage Arrow

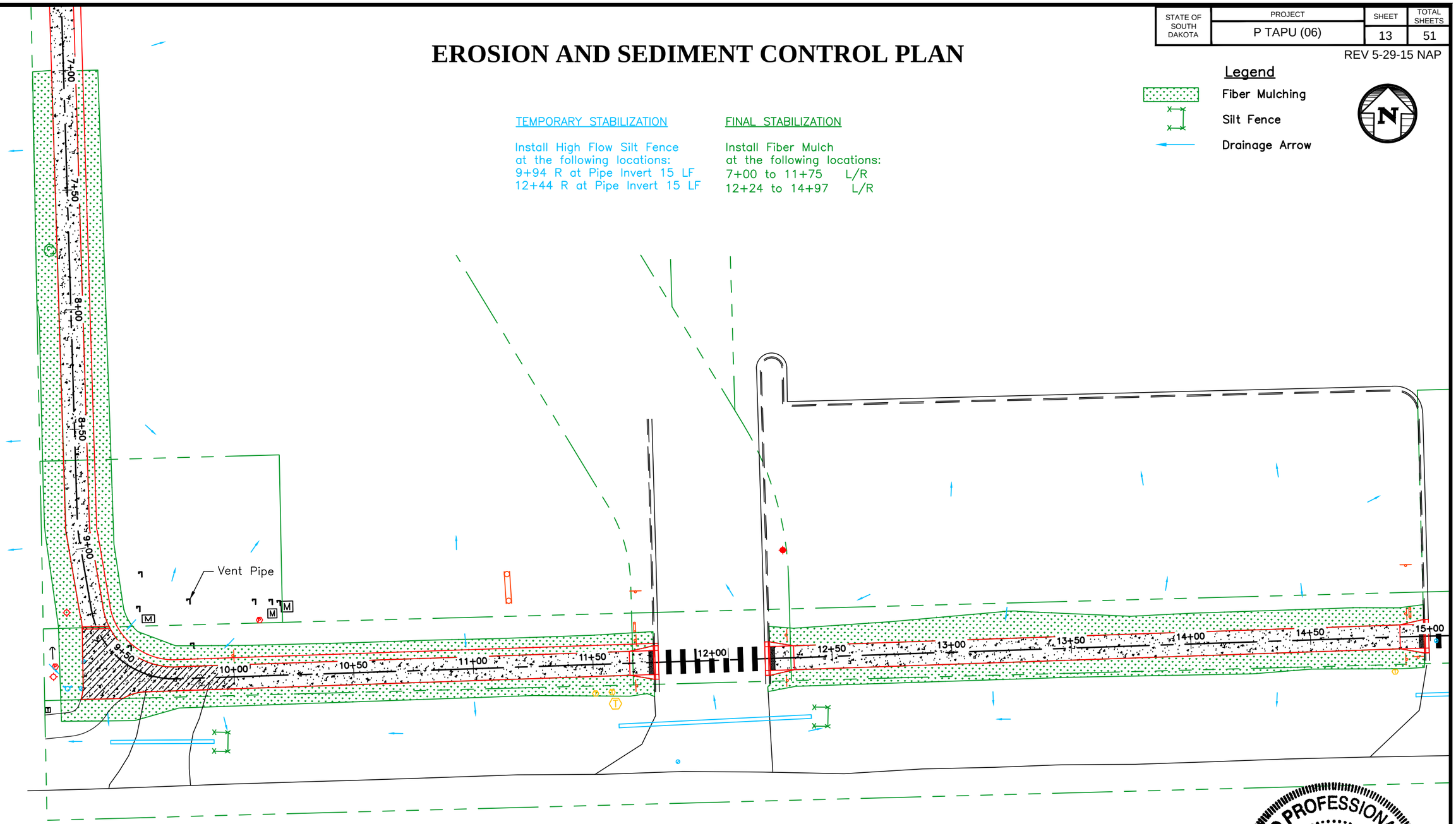
N

TEMPORARY STABILIZATION

Install High Flow Silt Fence
at the following locations:
9+94 R at Pipe Invert 15 LF
12+44 R at Pipe Invert 15 LF

FINAL STABILIZATION

Install Fiber Mulch
at the following locations:
7+00 to 11+75 L/R
12+24 to 14+97 L/R



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	14	51

REV 5-29-15 NAP

EROSION AND SEDIMENT CONTROL PLAN

TEMPORARY STABILIZATION

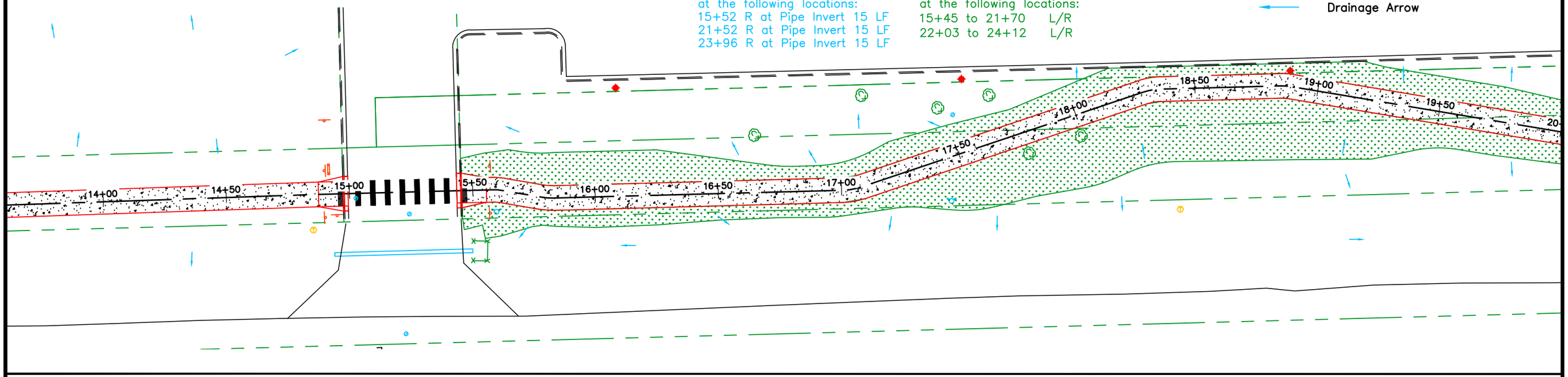
Install High Flow Silt Fence
at the following locations:
15+52 R at Pipe Invert 15 LF
21+52 R at Pipe Invert 15 LF
23+96 R at Pipe Invert 15 LF

FINAL STABILIZATION

Install Fiber Mulch
at the following locations:
15+45 to 21+70 L/R
22+03 to 24+12 L/R

Legend

- Fiber Mulching
- Silt Fence
- Drainage Arrow



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	15	51

REV 5-29-15 NAP

EROSION AND SEDIMENT CONTROL PLAN

TEMPORARY STABILIZATION

Install High Flow Silt Fence
at the following locations:
27+31 R at Pipe Invert 15 LF

FINAL STABILIZATION

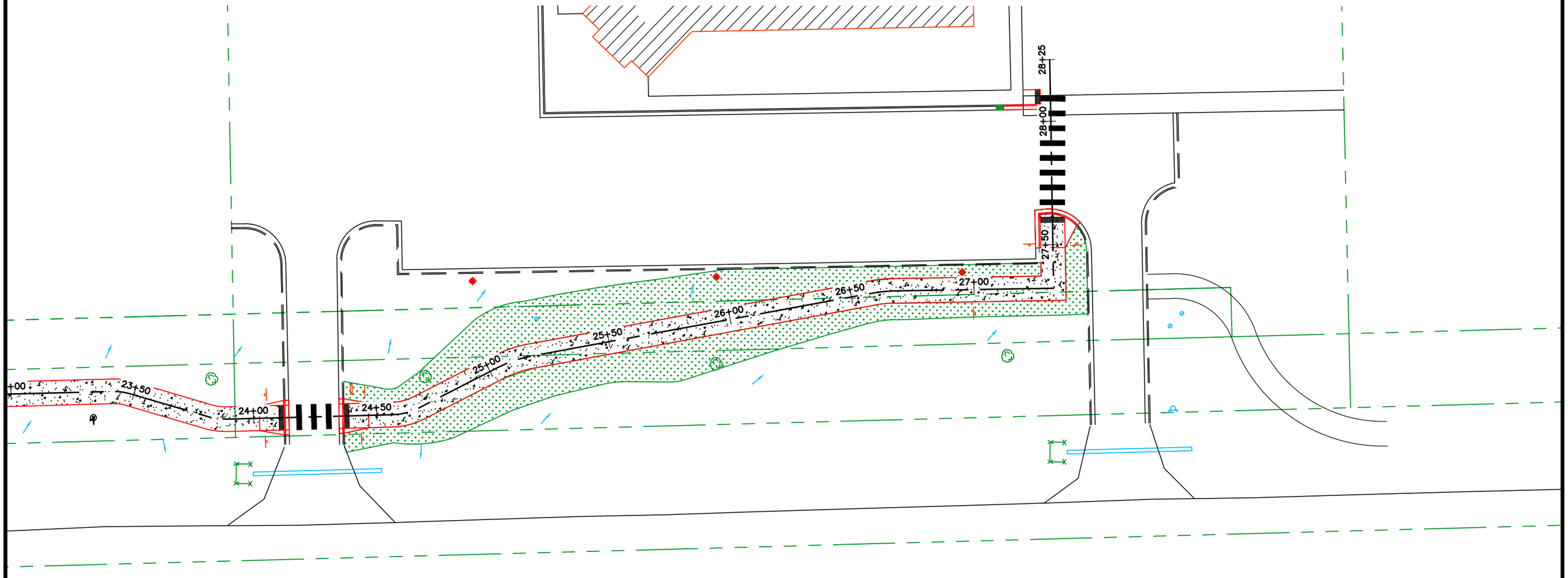
Install Fiber Mulch
at the following location:
24+36 to 27+61 L/R

Legend

Fiber Mulching

Silt Fence

Drainage Arrow



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STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	16	51

REV 5-29-15 NAP

STORM WATER POLLUTION PREVENTION PLAN (SWPPP)

STORM WATER POLLUTION PREVENTION PLAN CHECKLIST
*(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** 3.2 Acres **(4.2 1.b.)**
- **Total Area To Be Disturbed** 2.7 Acres **(4.2 1.b.)**
- **Existing Vegetative Cover (%)** 95%
- **Soil Properties:** N/A, no soil borings were taken
- Classification N/A **(4.2 1. d.)**
- **Name of Receiving Water Body/Bodies** James River **(4.2 1.e.)**

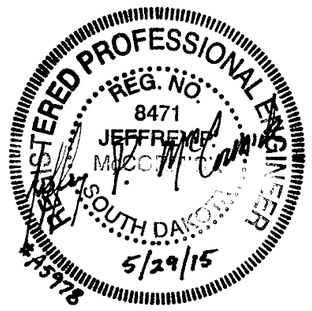
❖ **ORDER OF CONSTRUCTION ACTIVITIES (4.2 1.c.)**
(Stabilization measures shall be initiated as soon as possible, but in no case later than 14 days after the construction activity in that portion of the site has temporarily or permanently ceased. Initiation of final or temporary stabilization may exceed the 14-day limit if earth disturbing activities will be resumed within 21 days.)
- **Special sequencing requirements (None)**
- **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.**
- **Complete final grading.**
- **Complete shared use path and curb and gutter.**
- **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 Seeding (Cover Crop Seeding)
  - ☒ Permanent Seeding
  - ☐ Sodding
  - ☐ Planting (Woody Vegetation for Soil Stabilization)
  - ☐ Mulching (Grass Hay or Straw)
  - ☒ Hydraulic Mulch (Wood Fiber Mulch)
  - ☐ Soil Stabilizer
  - ☐ Bonded Fiber Matrix
  - ☐ Erosion Control Blankets or Mats
  - ☐ Vegetation Buffer Strips
  - ☐ Roughened Surface (e.g. tracking)
  - ☐ Dust Control
  - ☐ Other:
- **Structural Temporary Erosion and Sediment Controls**
  - ☒ Silt Fence
  - ☐ Floating Silt Curtain
  - ☐ Straw Bale Check
  - ☐ Temporary Berm
  - ☐ Temporary Slope Drain
  - ☐ Straw Wattles or Rolls
  - ☐ Turf Reinforcement Mat
  - ☐ Rip Rap
  - ☐ Gabions
  - ☐ Rock Check Dams
  - ☐ Sediment Traps/Basins
  - ☒ Inlet Protection
  - ☐ Outlet Protection
  - ☒ Surface Inlet Protection (Area Drain)
  - ☐ Curb Inlet Protection
  - ☐ Stabilized Construction Entrances
  - ☐ Entrance/Exit Equipment Tire Wash
  - ☐ Interceptor Ditch
  - ☐ Concrete Washout Area
  - ☐ Temporary Diversion Channel
  - ☐ Work Platform
  - ☐ Temporary Water Barrier
  - ☐ Temporary Water Crossing
  - ☐ **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 "EROSION AND SEDIMENT CONTROLS" 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.
  - 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 1/3of 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 SDDOT Project Engineer and contractor's site superintendent are responsible for inspections. Maintenance,repair activities are the responsibility of the contractor. The SDDOT Project 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, residuals from concrete saw cutting (either wet or dry), and mixer washout waterswill 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 SDDOT. 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.

▪ 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 brooms, 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 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:

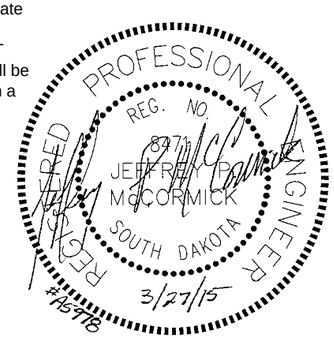
➢ A release or spill of a regulated substance (includes petroleum and petroleum products) must be reported to DENR immediately **if any one of the following** conditions exists:

- The discharge threatens or is in a position to threaten the waters of the state (surface water or ground water).
- The discharge causes an immediate danger to human health or safety.
- The discharge exceeds 25 gallons.
- The discharge causes a sheen on surface water.
- The discharge of any substance that exceeds the ground water quality standards of ARSD (Administrative Rules of South Dakota) chapter 74:51:01.
- The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:51:01.
- The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
- The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

To report a release or spill, call DENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call State Radio Communications at 605-773-3231. Reporting the release to DENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases. DENR recommends that spills also be reported to the National Response Center at (800) 424-8802.

❖ **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 SDDOT Project 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.

➢ **South Dakota Department of Transportation**

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. This section may be executed any time there is a change in the Prime Contractor of the project.

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

_____

Authorized Signature

❖ CONTACT INFORMATION

➢ **Contractor Information**:

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

➢ **Erosion Control Supervisor**

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

➢ **SDDOT Project Engineer**

- Name:
- Business Address:
- Job Office Location:
- City: State: Zip:
- Office Phone: Field:
- Cell Phone: 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.

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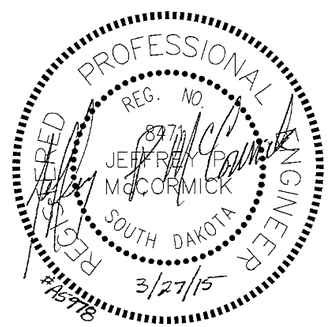
HORIZONTAL ALIGNMENT DATA

NO.	BEARING	DELTA	TANGENT	EXTERNAL	LENGTH	RADIUS	P.C.	P.I.	P.T.
1	S 75°54'02" W								0+74.62–55.72 R
2		88°13'37" Rt	39.16'	11.82'	24.76'	30.0'	1+00.76–54.75 Rt	1+29.82–28.11 Rt	1+29.46–28.11 R
3	S 80°43'02" W								1+64.42–27.93 R
4	S 9°47'23" W								1+64.03
5	S 81°01'13" W								1+77.56
6		41°02'15" Rt	29.04'	2.03'	21.49'	30.0'	1+77.56	1+88.55	1+99.33
7	S 39°58'58" W								2+09.05
8		21°37'17" Lt	14.15'	.54'	11.19'	20.0'	2+09.05	2+14.69	2+20.30
9	S 61°36'15" W								3+11.09
10		122°50'21" Rt	26.61'	8.56'	47.49'	45.0'	3+11.09	3+36.88	3+61.12
11	S 04°04'28" E								8+90.23
12		93°59'16" Lt	3.48'	.12'	4.448'	25.0'	8+90.23	8+91.96	8+93.71
13	S 10°43'24" E								9+25.73
14		131°5'18" Rt	30.55'	6.46'	46.03'	35.0'	9+25.73	9+50.85	9+57.97
15	S 87°02'48" E								15+57.76
16		95°39'16" Lt	2.48'	.12'	4.47'	25.0'	15+57.76	16+60.14	15+57.76
17	S 81°12'27" E								15+77.96
18		84°20'44" Rt	2.48'	.12'	4.93'	25.0'	15+77.96	15+80.43	15+82.89
19	N 87°29'00" E								17+00.61
20		81°29'05" Rt	3.74'	.55'	7.4'	25.0'	17+00.61	17+04+38	17+08.09
21	N 70°27'11" E								18+28.65
22		98°30'55" Lt	3.74'	.28'	7.4'	25.0'	18+28.65	18+32.36	18+36.08
23	N 87°29'00" E								18+84.69
24		84°28'57" Rt	6.03'	.12'	4.81'	25.0'	18+84.69	18+86.92	20+80.41
25	N 81°28'53" E								20+80.41
26		84°28'57" Rt	2.23'	.12'	4.63'	25.0'	20+80.41	20+89.32	20+85.04
27	N 87°29'00" E								22+25.40
28		80°2'14" Rt	4.13'	.38'	8.65'	25.0'	22+25.40	22+29.75	22+34.09
29	N 67°33'28" E								22+61.99
30		80°2'14" Lt	5.06'	.38'	8.65'	25.0'	22+61.99	22+66.34	22+70.68
31	N 87°29'00" E								23+40.71
32		98°55'7" Lt	8.87'	.31'	7.75'	25.0'	23+40.71	23+44.60	23+48.49
33	S 74°40'46" E								23+81.45
34		81°4'53" Rt	3.47'	.31'	7.57'	25.0'	23+81.45	23+85.34	23.89.05
35	S 87°29'00" E								24+56.28
36		86°44'19" Rt	4.39'	.63'	11.04'	25.0'	24+56.28	24+61.85	24+67.41
37	N 61°58'43" E								25+03.63
38		81°12'20" Rt	7.19'	.53'	14.43'	25.0'	25+03.63	25+10.87	25+18.11
39	N 78°34'02" E								26+58.97
40		85°15'43" Lt	4.02'	.17'	8.14'	25.0'	26+58.97	26+63.10	26+67.12
41	N 88°02'36" E								27+32.31
42	N 01°57'24" W								28+09.94
43	S 88°02'37" W								28+09.94–11.07' L



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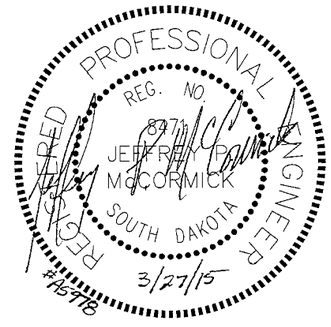
CONTROL DATA

CONTROL POINT DATA						
POINT	STATION & OFFSET		NORTHING	EASTING	ELEVATION	DESC.
BM1	15+10 – 369 L	Top Nut Fire Hydrant SE Tech. Center	502690.101	2584642.018	1352.27	TBM
BM2	27+32 – 46.82 R	Top Nut Fire Hydrant South Admin. Bldg.	502372.767	2585906.834	1353.54	TBM

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System.
South Zone NAD 83/(1996) SF=0.99990834
The elevations shown on this sheet are based on NGVD/29.



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EXISTING TOPOGRAPHY SYMBOLOGY AND LEGEND

- Anchor
- Antenna
- Approach
- Assumed Corner
- Azimuth Marker
- BBQ Grill/ Fireplace
- Bearing Tree
- Bench Mark
- Box Culvert
- Bridge
- Brush
- Buildings
- Bulk Tank
- Cattle Guard
- Cemetery
- Centerline
- Cistern
- Clothes Line
- Commercial Sign Double Face
- Commercial Sign One Post
- Commercial Sign Overhead
- Commercial Sign Two Post
- Concrete Symbol
- Creek Edge
- Curb/Gutter
- Curb
- Dam Grade/Dike/Levee
- Deck Edge
- Ditch Block
- Doorway Threshold
- Drainage Profile
- Drop Inlet
- Edge Of Asphalt
- Edge Of Concrete
- Edge Of Gravel
- Edge Of Other
- Edge Of Shoulder
- Elec. Trans./Power Jct. Box
- Fence Barbwire
- Fence Chainlink
- Fence Electric
- Fence Misc.
- Fence Rock
- Fence Snow
- Fence Wood
- Fence Woven
- Fire Hydrant
- Flag Pole
- Flower Bed
- Gas Valve Or Meter
- Gas Pump Island
- Grain Bin
- Guardrail
- Guide Sign One Post
- Guide Sign Two Post
- Gutter
- Guy Pole
- Haystack

- Hedge
- Highway R.O.W. Marker
- Interstate Close Gate
- Iron Pin
- Irrigation Ditch
- Lake Edge
- Lawn Sprinkler
- Mailbox
- Manhole Electric
- Manhole Gas
- Manhole Misc
- Manhole Sanitary Sewer
- Manhole Storm Sewer
- Manhole Telephone
- Manhole Water
- Merry-Go-Round
- Microwave Radio Tower
- Misc. Line
- Misc. Property Corner
- Misc. Post
- Overhang Or Encroachment
- Overhead Utility Line — OH —
- Parking Meter
- Pipe With End Section
- Pipe With Headwall
- Pipe Without End Section
- Playground Slide
- Playground Swing
- Power And Light Pole
- Power And Telephone Pole
- Power Meter
- Power Pole
- Power Pole And Transformer
- Power Tower Structure
- Propane Tank
- Property Pipe
- Property Pipe With Cap
- Property Stone
- Public Telephone
- Railroad Crossing Signal
- Railroad Milepost Marker
- Railroad Profile
- Railroad R.O.W. Marker
- Railroad Signs
- Railroad Switch
- Railroad Track
- Railroad Trestle
- Rebar
- Rebar With Cap
- Reference Mark
- Regulatory Sign One Post
- Regulatory Sign Two Post
- Retaining Wall
- Riprap
- River Edge
- Rock And Wire Baskets
- Rockpiles
- Satellite Dish
- Septic Tank

- Shrub Tree
- Sidewalk
- Sign Face
- Sign Post
- Slough Or Marsh
- Spring
- Stream Gauge
- Street Marker
- Subsurface Utility Exploration Test Hole
- Telephone Fiber Optics — T/F —
- Telephone Junction Box
- Telephone Pole
- Television Cable Jct Box
- Television Tower
- Test Wells/Bore Holes
- Traffic Signal
- Trash Barrel
- Tree Belt
- Tree Coniferous
- Tree Deciduous
- Tree Stumps
- Triangulation Station
- Underground Electric Line — P —
- Underground Gas Line — G —
- Underground High Pressure Gas Line — HG —
- Underground Sanitary Sewer — S —
- Underground Storm Sewer = S =
- Underground Tank
- Underground Telephone Line — T —
- Underground Television Cable — TV —
- Underground Water Line — W —
- Warning Sign One Post
- Warning Sign Two Post
- Water Fountain
- Water Hydrant
- Water Meter
- Water Tower
- Water Valve
- Water Well
- Weir Rock
- Windmill
- Wingwall
- Witness Corner

- State and National Line
- County Line
- Section Line
- Quarter Line
- Sixteenth Line
- Property Line
- Construction Line
- R. O. W. Line
- New R. O. W. Line
- Cut and Fill Limits
- Control of Access
- New Control of Access
- Proposed ROW (After Property Disposal)

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REV 5-29-15 NAP

Remove
Concrete Curb and Gutter
at the following locations:
0+75 to 0+85–63' R–10 Ft
1+31 to 1+37–47' R to 13' R–34 Ft
1+55 to 1+59–42' R to 13' R–29 Ft

Remove
Asphalt Concrete Pavement
at the following location:
3+69 to 6+28–6' L to 12' L–172.7 SqYd

Remove
Concrete Sidewalk
at the following location:
1+57 to 1+63–44' R to 5' L–26 SqYd

Salvage, Store, and Replant Trees
at the following locations:
Salvage:
1+18–48' R
Replant:
1+00–25' R

Furnish and Install
Special Concrete Curb and Gutter
at the following locations:
0+75.07 to 0+85.07–63.24' R to 62.19' R–10.0 Ft
1+30.82 to 1+37.15–47.47' R to 13.12' R–34.4 Ft
1+54.72 to 1+59.21–42.13' R to 13.01' R–29.1 Ft
3+69.46 to 6+27.34–7.00' L to 9.00' L–258.0 Ft

Furnish and Install
5" Concrete Sidewalk 10' Wide at the following location:
0+74.62 to 1+29.58–60.71' R to 13.18' R–883.8 SqFt
1+57.10 to 1+69.10–44.12' R to 5.00' R–421.3 SqFt
1+59.03 to 3+11.10–5.00' L to 5.00' R–1509.7 SqFt
6+52.86 to 7+50.00–5.00' L to 5.00' R–971.2 SqFt

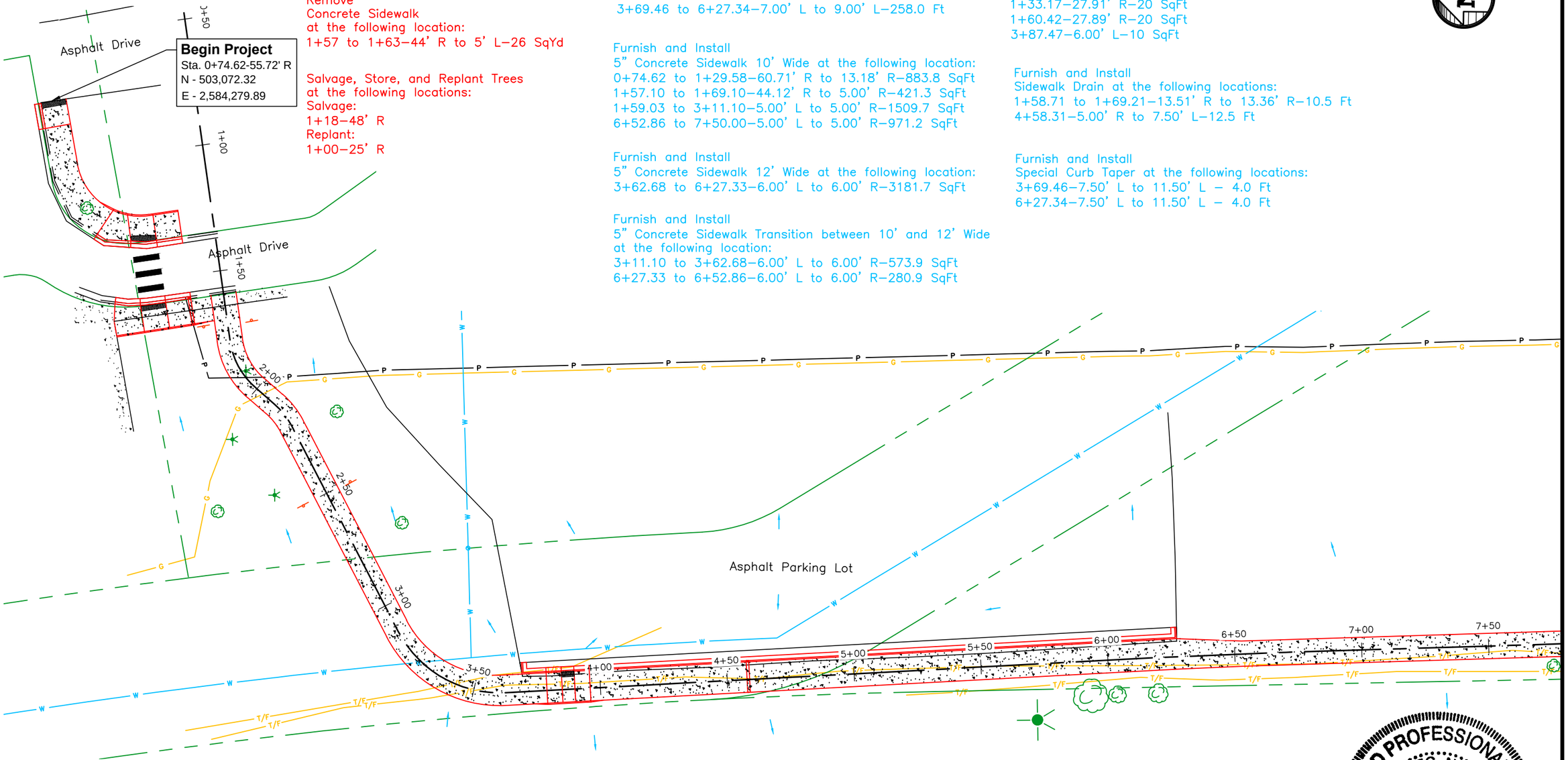
Furnish and Install
5" Concrete Sidewalk 12' Wide at the following location:
3+62.68 to 6+27.33–6.00' L to 6.00' R–3181.7 SqFt

Furnish and Install
5" Concrete Sidewalk Transition between 10' and 12' Wide
at the following location:
3+11.10 to 3+62.68–6.00' L to 6.00' R–573.9 SqFt
6+27.33 to 6+52.86–6.00' L to 6.00' R–280.9 SqFt

Furnish and Install
Type 1 Detectable Warnings
at the following locations:
0+75.91–55.58' R–20 SqFt
1+33.17–27.91' R–20 SqFt
1+60.42–27.89' R–20 SqFt
3+87.47–6.00' L–10 SqFt

Furnish and Install
Sidewalk Drain at the following locations:
1+58.71 to 1+69.21–13.51' R to 13.36' R–10.5 Ft
4+58.31–5.00' R to 7.50' L–12.5 Ft

Furnish and Install
Special Curb Taper at the following locations:
3+69.46–7.50' L to 11.50' L – 4.0 Ft
6+27.34–7.50' L to 11.50' L – 4.0 Ft



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY P. MOOTZ
SOUTH DAKOTA
5/29/15
#A5978

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
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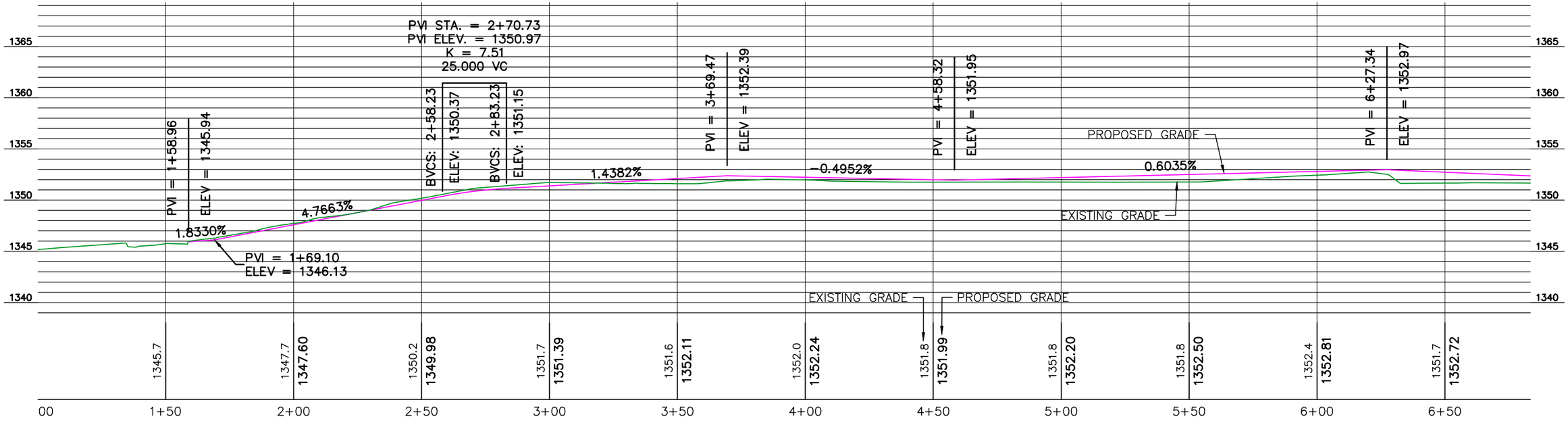
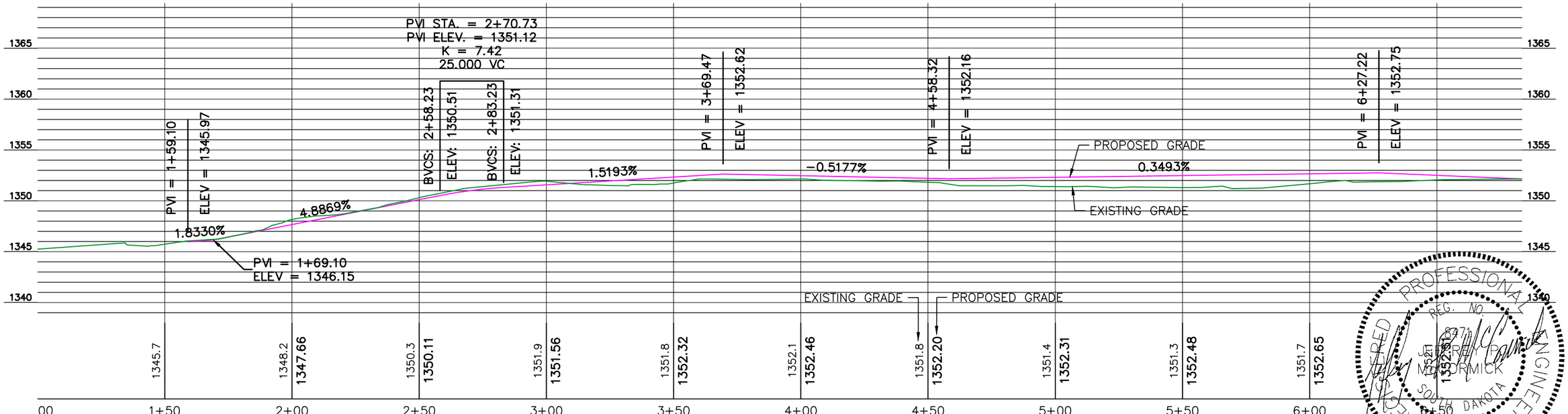
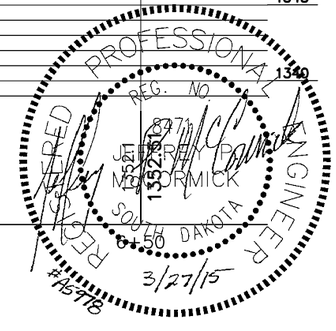
LEFT SIDE OF WALKING PATH



RIGHT SIDE OF WALKING PATH

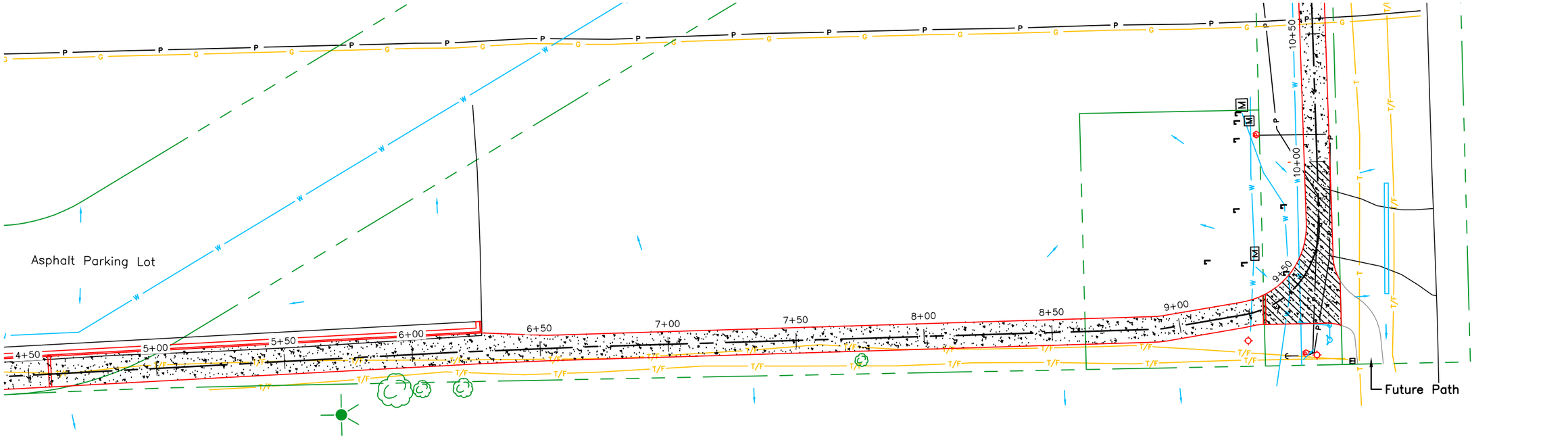




STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	24	51

REV 5-29-15 NAP

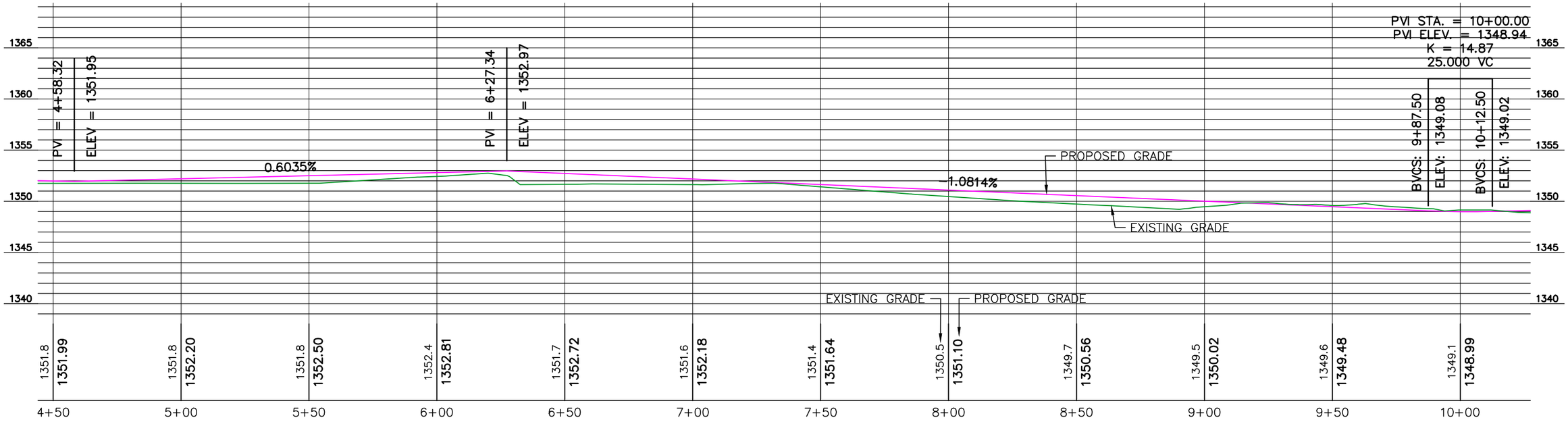
Furnish and Install
5" Concrete Sidewalk at the following locations:
7+50.00 to 9+32.25–5.00' L to 8.52' R–1,844.3 SqFt



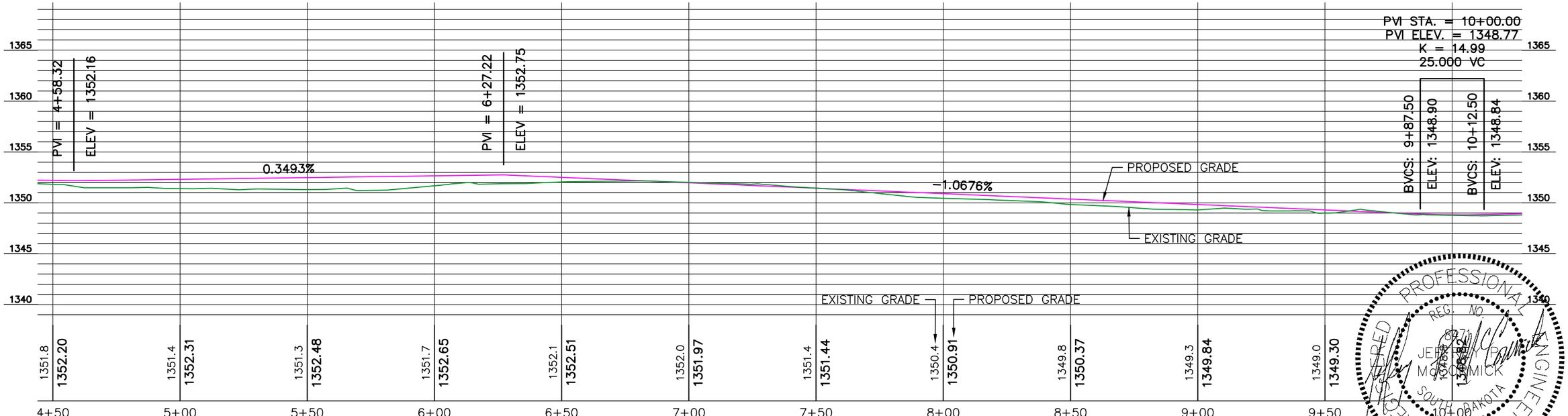
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY D. McCOMSEY
SOUTH DAKOTA
5/29/15
LA5978

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	25	51

LEFT SIDE OF WALKING PATH



RIGHT SIDE OF WALKING PATH



REGISTERED PROFESSIONAL ENGINEER
REG. NO. 13868
JEFFREY C. MCCORMICK
SOUTH DAKOTA
3/27/15
#165718

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	26	51

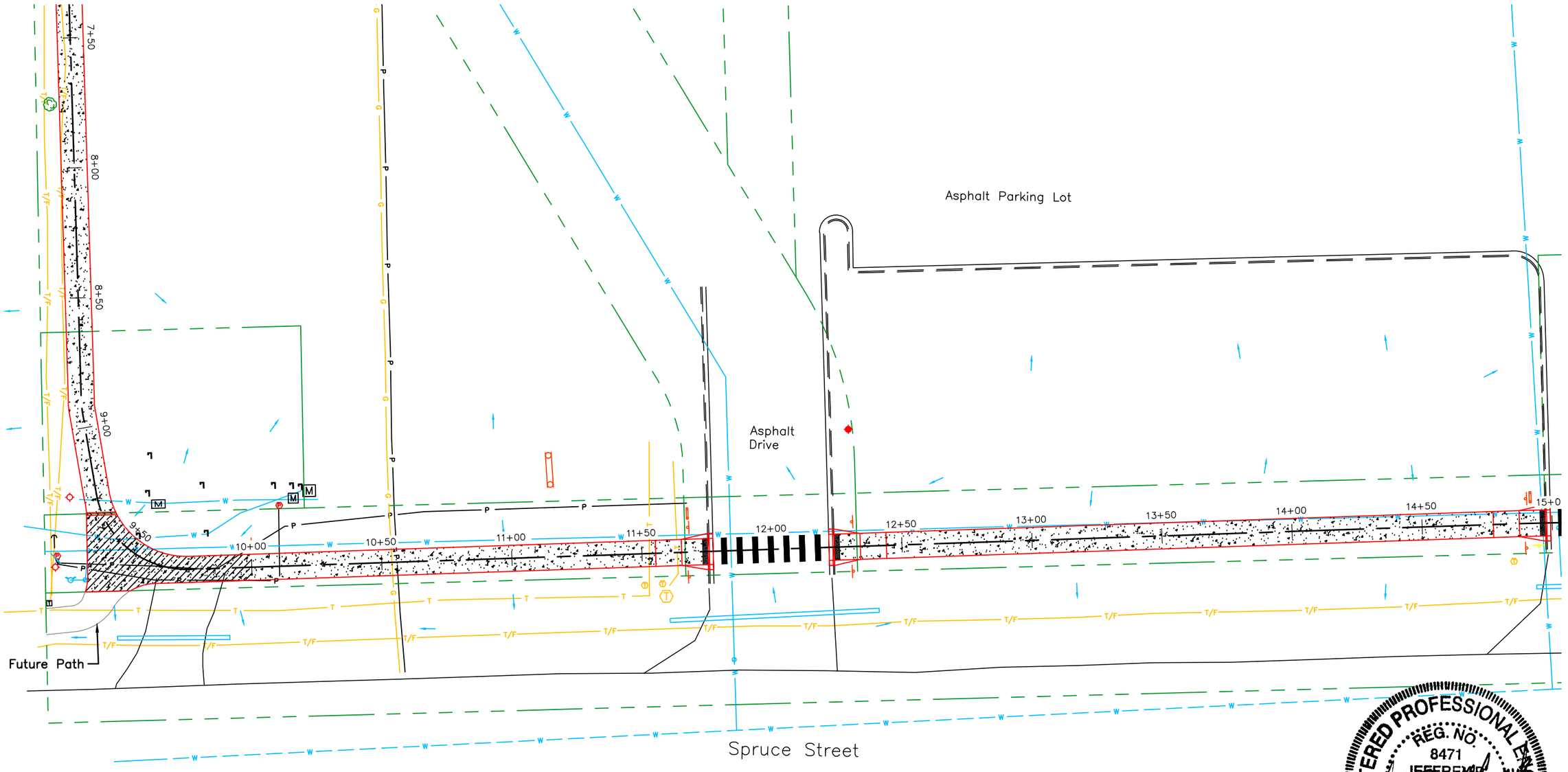
REV 5-29-15 NAP

Furnish and Install
5" Concrete Sidewalk at the following locations:
10+00.00 to 11+75.42–5.00' L to 5.00' R–1,754.4 SqFt
12+23.95 to 14+97.42–5.00' L to 5.00' R–2,734.6 SqFt

Furnish and Install
8" Concrete Sidewalk at the following location:
9+32.25 to 10+00.00–23.38' R to 5.00' L–1,012.5 SqFt

Furnish and Install
Sidewalk Drain at the following location:
9+33.64–5.71' R to 5.00' L–11.5 Ft

Adjust Water Valve Box
at the following locations:
9+42.22–11.80' R
9+47.43–20.04' R



Remove
Concrete Curb and Gutter at the following locations:
11+76 to 11+77–7' R to 7' L–14 Ft
12+22 to 12+24–7' R to 7' L–14 Ft

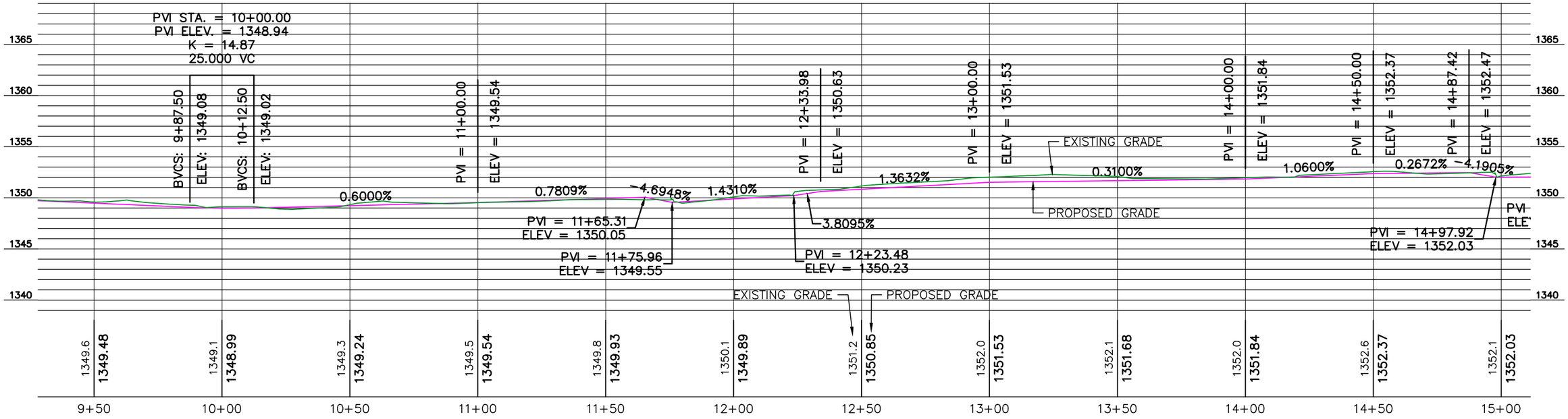
Furnish and Install
Special Concrete Curb and Gutter
11+75.52 to 11+77.48–7.00' R to 7.00' L–14.0 Ft
12+21.99 to 12+23.99–7.00' R to 7.00' L–14.0 Ft

Furnish and Install
Type 1 Detectable Warnings
at the following locations:
11+74.42–0.00' R/L–20 SqFt
12+24.96–0.00' R/L–20 SqFt

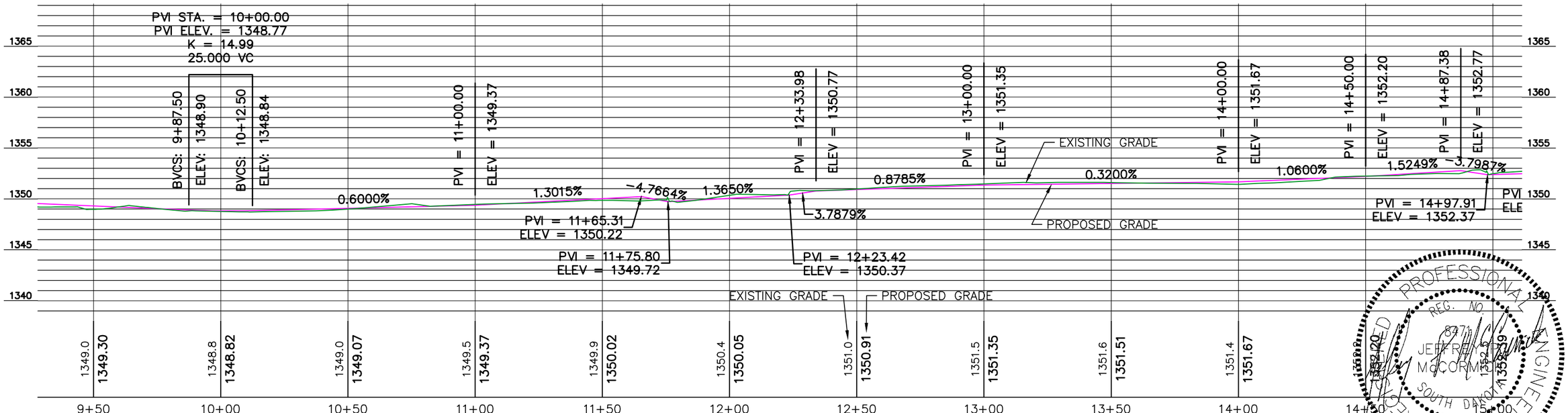
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY E. McCORMICK
SOUTH DAKOTA
5/29/15
#A5978

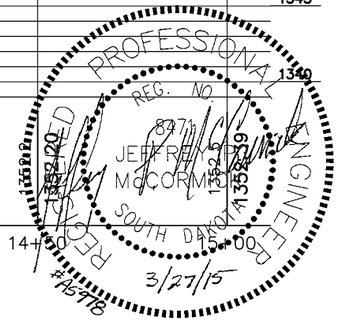
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	27	51

LEFT SIDE OF WALKING PATH



RIGHT SIDE OF WALKING PATH





STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	28	51

REV 5-29-15 NAP

Remove
Concrete Curb and Gutter
at the following locations:
14+97 to 14+99–7' R to 7' L–14 Ft
15+44 to 15+46–7' R to 7' L–14 Ft

Salvage, Store, and Replant Trees
at the following locations:
Salvage:
17+77–9' R
18+00–9' R
Replant:
17+77–27' R
18+00–30' R

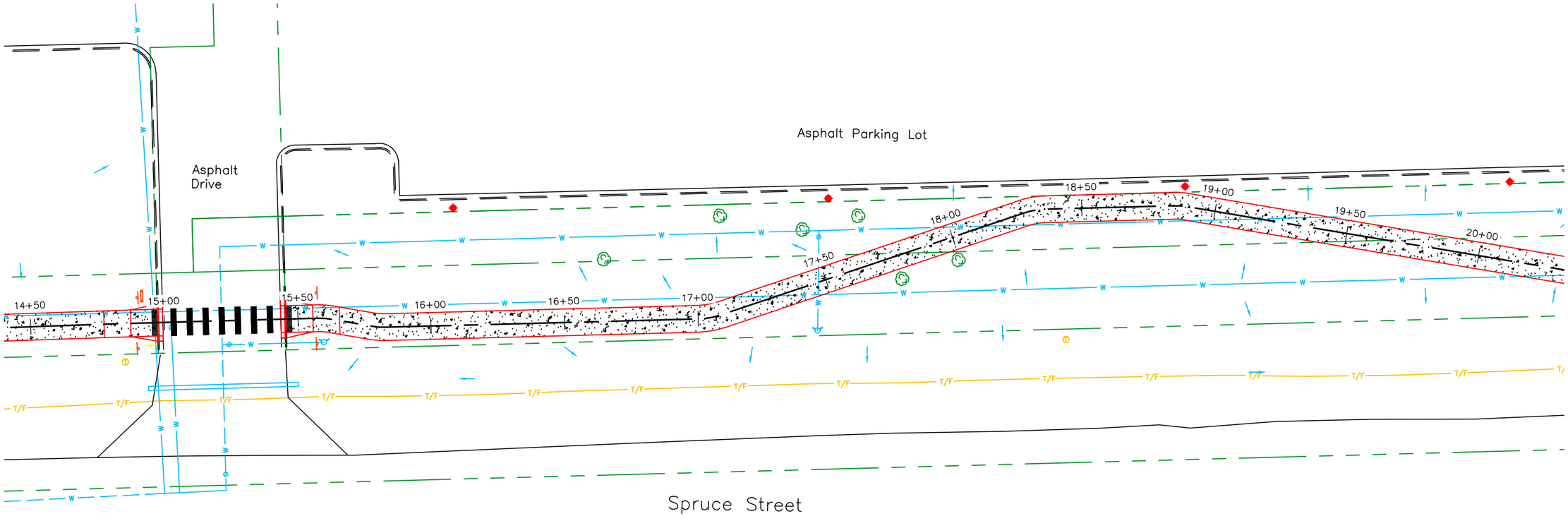
Remove Sign for Reset
at the following location:
14+92–10' L

Reset Sign
at the following location:
14+92–18' L

Furnish and Install
Special Concrete Curb and Gutter
at the following locations:
14+97.42 to 14+99.41–7.00' R to 7.00' L–14.0 Ft
15+43.54 to 15+45.55–7.00' R to 7.00' L–14.0 Ft

Furnish and Install
5" Concrete Sidewalk at the following location:
15+45.54 to 20+00.00–5.00' L to 5.00' R–4,544.6 SqFt

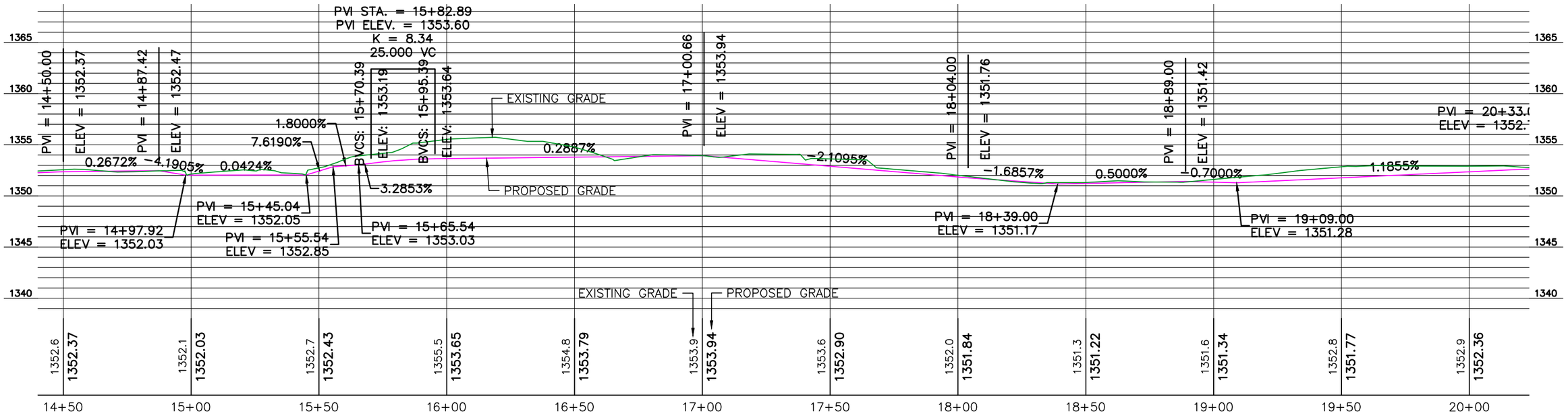
Furnish and Install
Type 1 Detectable Warnings
at the following locations:
14+96.42–0.00' R/L–20 SqFt
15+46.54–0.00' R/L–20 SqFt



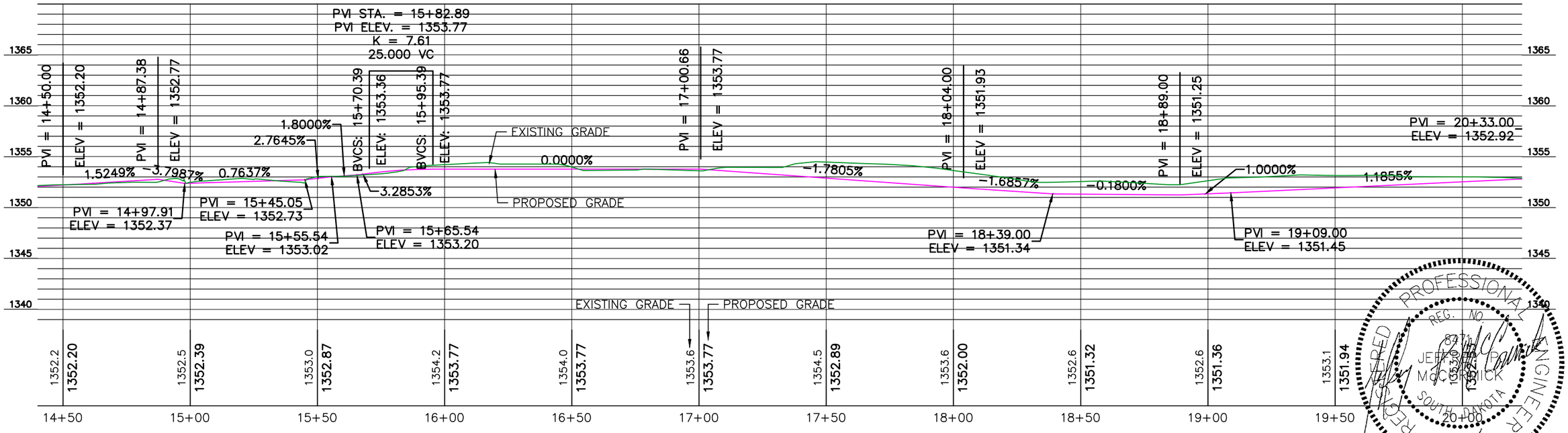
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY P. McCORMICK
SOUTH DAKOTA
5/29/15
#A5978

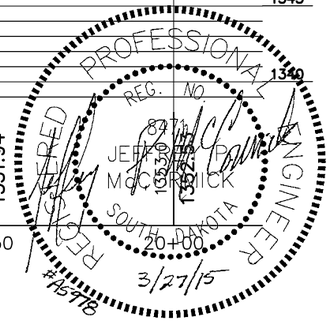
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	29	51

LEFT SIDE OF WALKING PATH



RIGHT SIDE OF WALKING PATH





STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	30	51

REV 5-29-15 NAP

Remove
Concrete Curb and Gutter
at the following locations:
21+70 to 21+73–7' R to 7' L–14 Ft
22+01 to 22+03–7' R to 7' L–14 Ft
24+12 to 24+14–7' R to 7' L–14 Ft
24+35 to 24+37–7' R to 7' L–14 Ft

Salvage, Store, and Replant Trees
at the following locations:
Salvage:
24+76–10' L
Replant:
24+76–15' L

Remove Sign for Reset
at the following location:
22+07–8' L

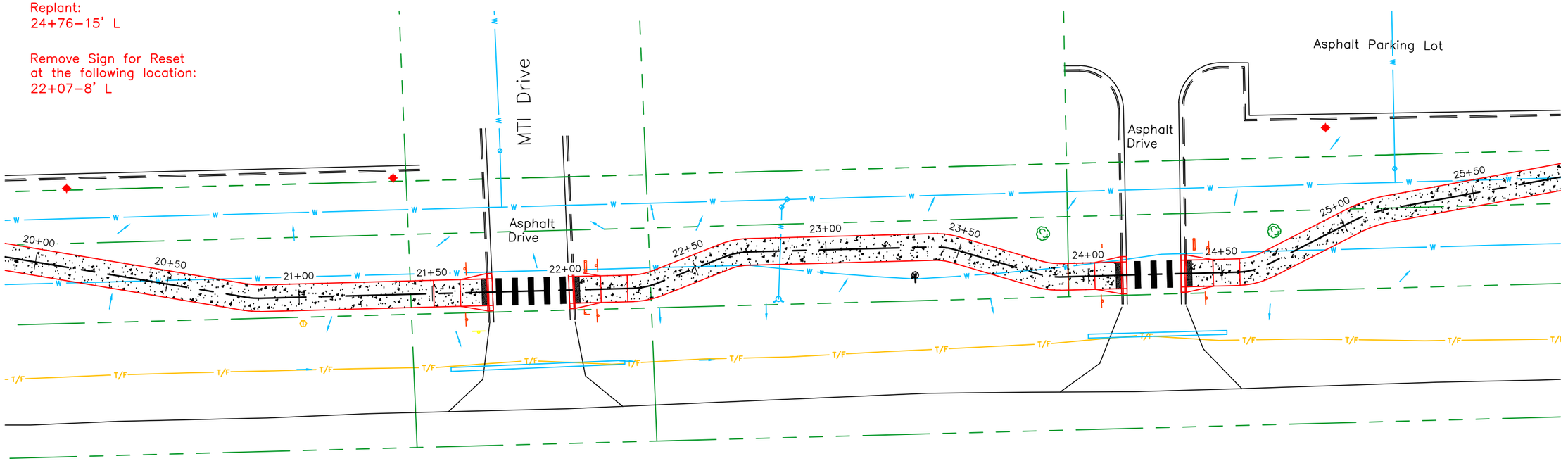
Furnish and Install
Special Concrete Curb and Gutter
at the following locations:
21+70.47 to 21+72.69–7.00' R to 7.00' L–14.0 Ft
22+01.18 to 22+03.39–7.00' R to 7.00' L–14.0 Ft
24+12.40 to 24+14.31–7.00' R to 7.00' L–14.0 Ft
24+34.79 to 24+36.61–7.00' R to 7.00' L–14.0 Ft

Reset Sign
at the following location:
22+07–16' L

Furnish and Install
Type 1 Detectable Warnings
at the following locations:
21+69.59–0.00' R/L–20 SqFt
22+04.29–0.00' R/L–20 SqFt
24+11.35–0.00' R/L–20 SqFt
24+37.73–0.00' R/L–20 SqFt

Furnish and Install
5" Concrete Sidewalk at the following locations:
20+00.00 to 21+70.58–5.00' L to 5.00' R–1,705.8 SqFt
22+03.29 to 24+12.35–5.00' L to 5.00' R–2,090.7 SqFt

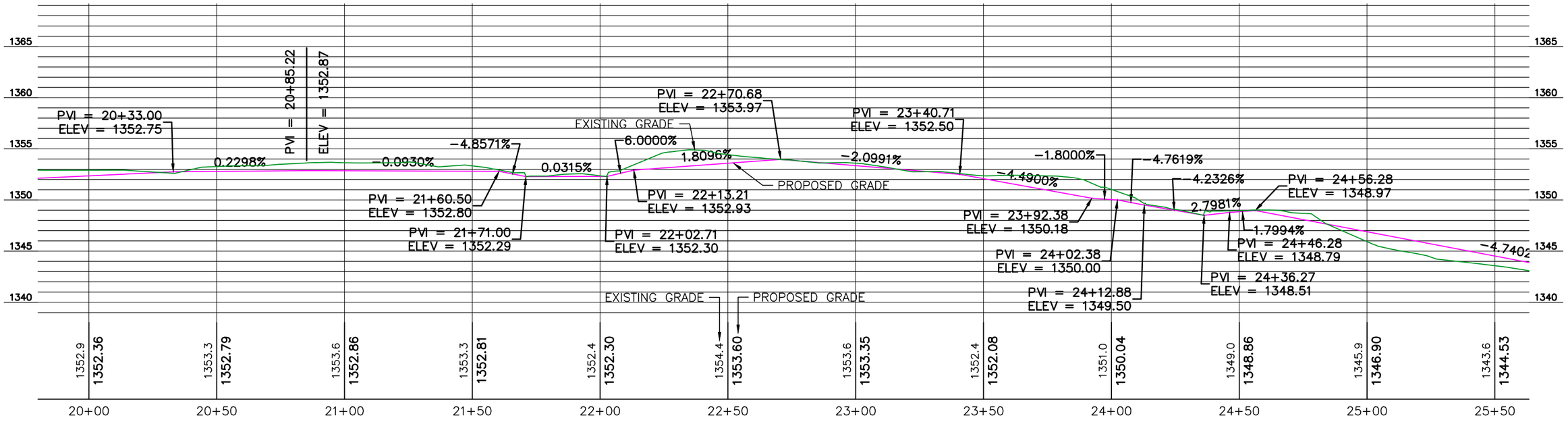
Adjust Water Valve Box
at the following locations:
25+22.78–14.38' L



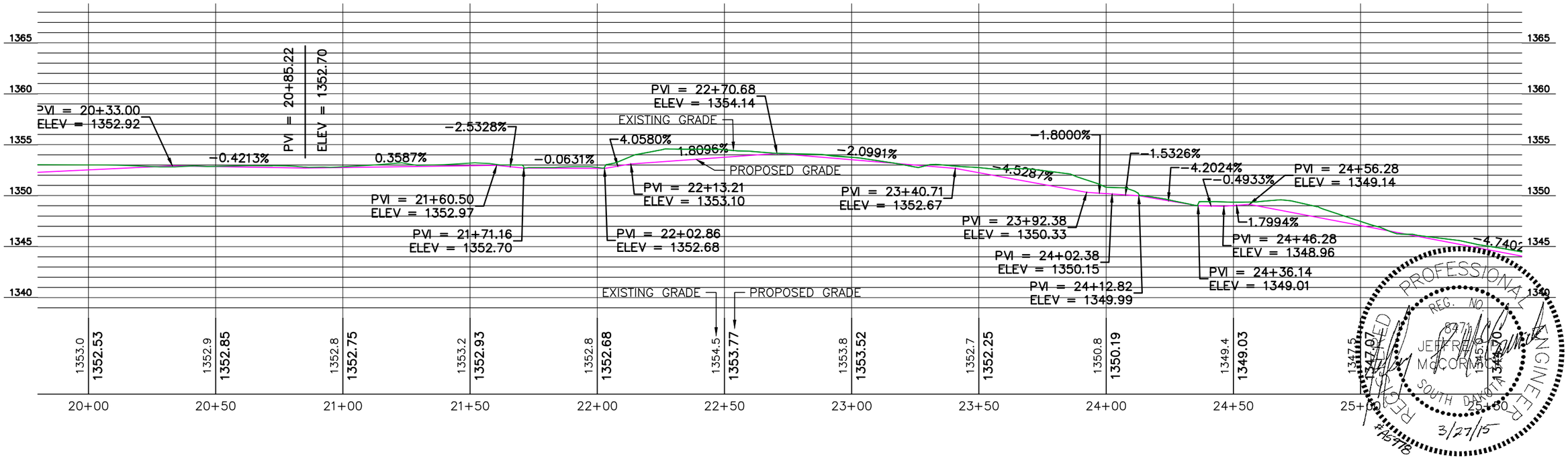
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY P. McCOMSEY
SOUTH DAKOTA
5/29/15

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	31	51

LEFT SIDE OF WALKING PATH



RIGHT SIDE OF WALKING PATH



PROFESSIONAL ENGINEER
REG. NO. 8871
JEFFREY D. MCCORMICK
SOUTH DAKOTA
3/27/15
RECEIVED #145718

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	32	51

REV 5-29-15 NAP

Remove
Concrete Pavement at the following location:
28+05 to 28+10–11.1' L to 4.1' L–4.3 SqYd

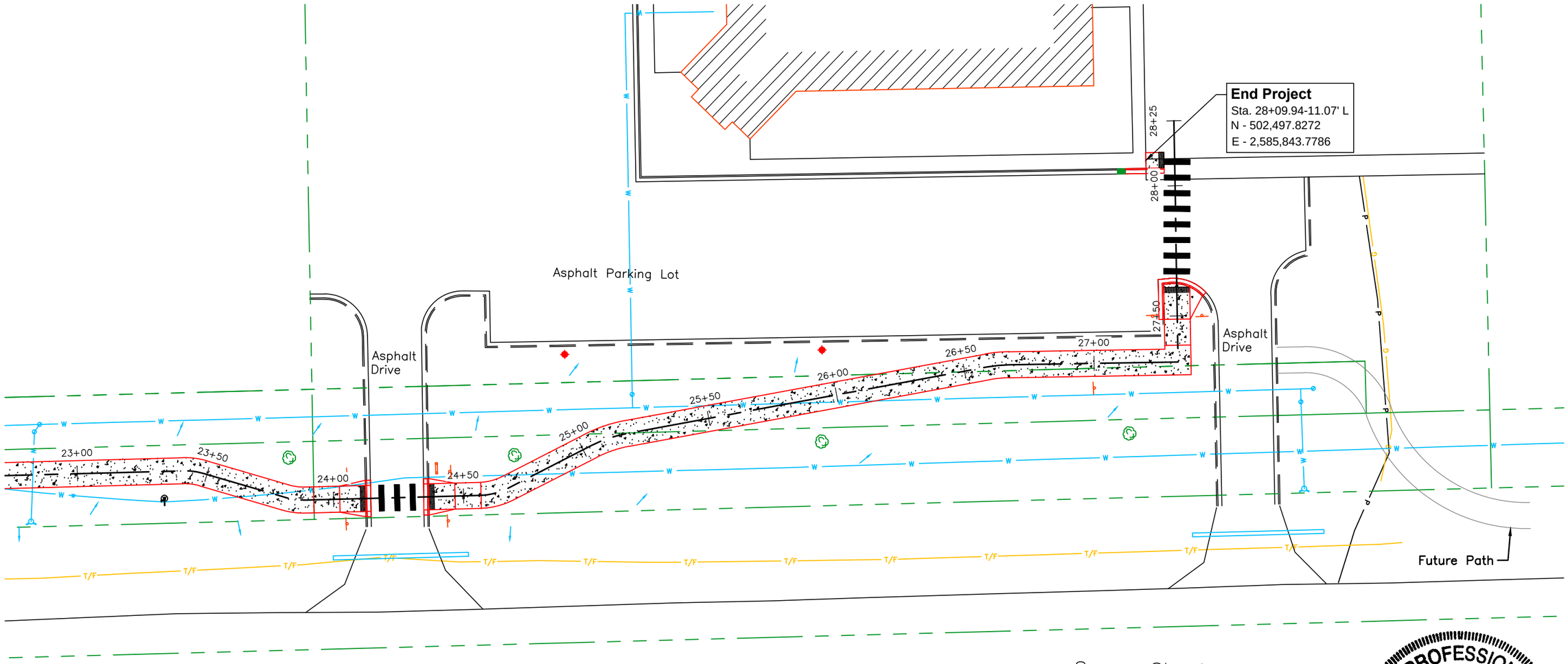
Remove
Concrete Curb and Gutter
at the following location:
27+49 to 27+64–7' R to 7' L–30 Ft
28+05–19' L to 11' L–8 Ft

Remove
Asphalt Concrete Pavement
at the following location:
28+10 to 28+13–11' L to 4' L–1.9 SqYd

Furnish and Install
5" Concrete Sidewalk at the following locations:
24+36.70 to 27+62.36–5.00' L to 5.00' R–3,263.5 SqFt
28+06.94 to 28+12.94–11.07' L to 4.07' L–42.0 SqFt

Furnish and Install
Special Concrete Curb and Gutter
at the following location:
27+48.75 to 27+64.25–7.03' R to 6.79' L–29.7 Ft
28+04.94 to 28+04.94–19.02' L to 4.07' L–15.0 Ft

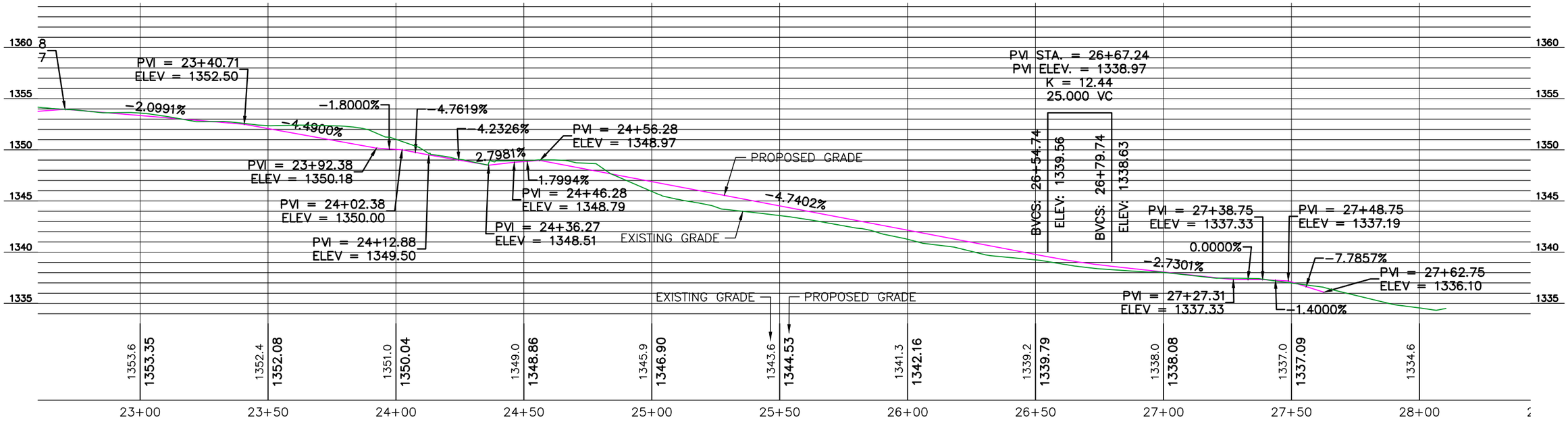
Furnish and Install
Type 1 Detectable Warnings
at the following locations:
27+60.02–0.00' R/L–20 SqFt
28+09.94–5.07' L–12 SqFt



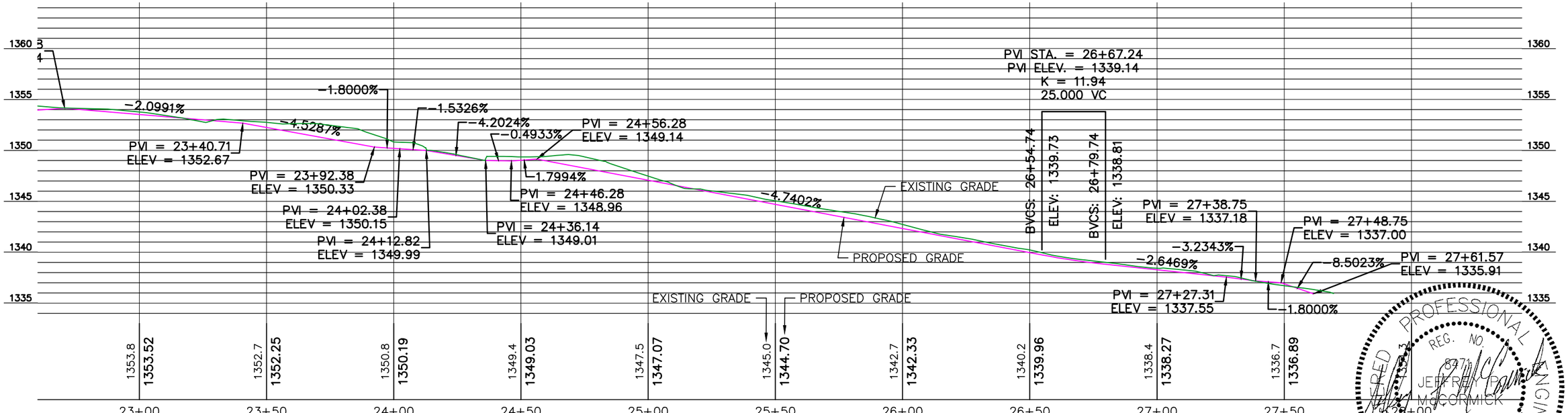
REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY L. MCCOMSEY
SOUTH DAKOTA
5/29/15

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	33	51

LEFT SIDE OF WALKING PATH



RIGHT SIDE OF WALKING PATH



PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY C. McCORMICK
SOUTH DAKOTA
3/27/15
REGISTERED
#15718

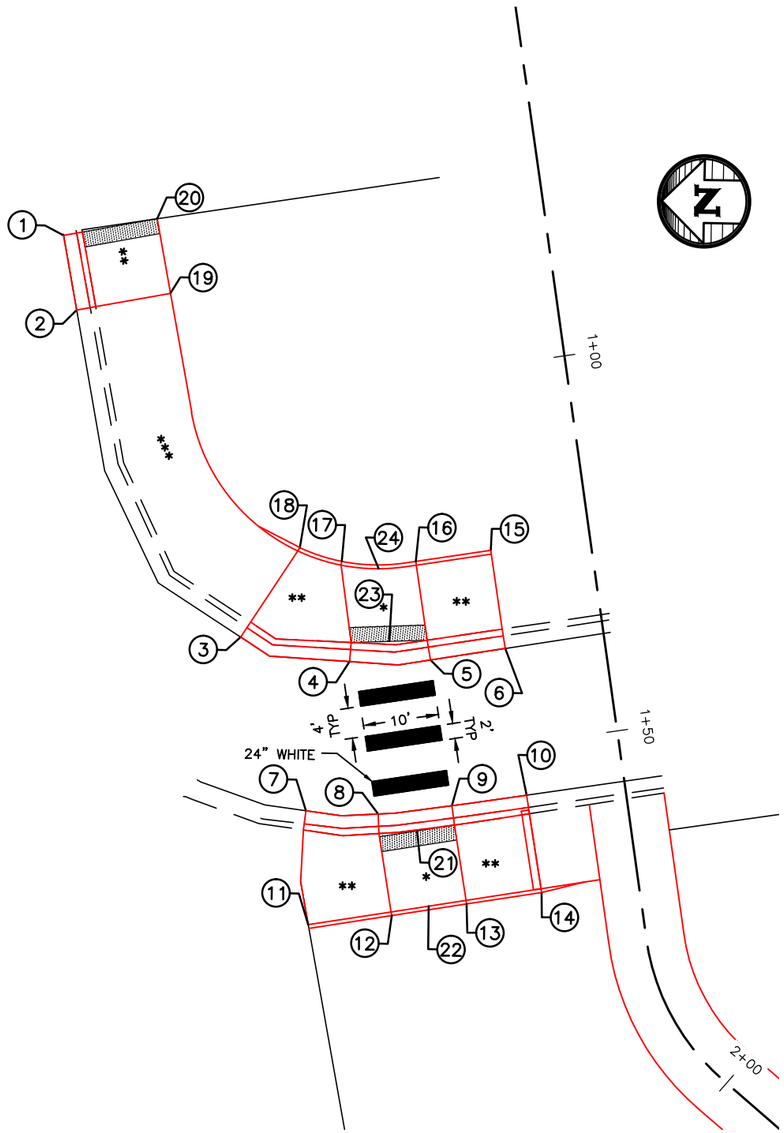
CURB RAMP DETAILS

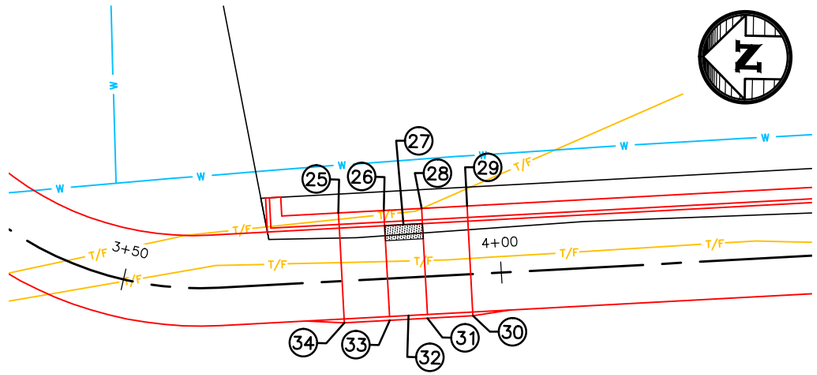
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	34	51

REV 5-29-15 NAP

LEGEND:

* Turning Space with 2% max. slope
** Ramp slopes with 8.3% max. slope
*** Sidewalk with 5% max. long slope
Detectable Warning Surface





1. 0+75.07–63.24' R
   TW Elev. Match Existing
2. 0+85.07–62.91' R
   TC Elev. Match Existing
3. 1+30.82–47.47' R
   TC Elev. Match Existing
4. 1+36.02–33.68' R
   FL Elev. 1345.42
5. 1+37.28–23.11' R
   FL Elev. 1345.45
6. 1+37.15–13.12' R
   TC Elev. Match Existing
7. 1+54.72–32.76' R
   TC Elev. Match Existing
8. 1+56.47–32.76' R
   FL Elev. 1345.57
9. 1+56.74–22.98' R
   FL Elev. 1345.54
10. 1+56.73–13.01' R
    TC Elev. Match Existing
11. 1+69.65–43.92' R
    TW Elev. Match Existing
12. 1+69.99–32.85' R
    TC Elev. 1346.26
13. 1+69.85–22.85' R
    TC Elev. 1346.22
14. 1+69.71–12.85' R
    TW Elev. 1346.13
15. 1+24.08–13.21' R
    TW Elev. 1346.05
16. 1+24.14–23.21' R
    TC Elev. 1346.01
17. 1+22.77–32.88' R
    TC Elev. 1345.98
18. 1+20.21–38.10' R
    BW Elev. 1346.02
19. 0+84.61–50.35' R
    TW Elev. 1344.80
20. 0+74.62–50.72' R
    TW Elev. 1344.30
21. 1+59.38–28.00' R
    Begin Type 3 Curb Ramp Slope
22. 1+69.42–27.86' R
    End Type 3 Curb Ramp Slope
23. 1+34.10–28.15' R
    Begin Type 3 Curb Ramp Slope
24. 1+24.41–28.20' R
    End Type 3 Curb Ramp Slope

25. 3+78.97–9.00' L
    Tc Elev. 1352.34
26. 3+84.97–9.00' L
    FL Elev. 1351.81
27. 3+87.47–7.00' L
    Begin Type 3 Curb Ramp Slope
28. 3+89.97–9.00' L
    FL Elev. 1351.79
29. 3+95.97–9.00' L
    TC Elev. 1352.26
30. 3+95.97–5.50' R
    TC Elev. 1352.23
31. 3+89.97–5.50' R
    TC Elev. 1352.23
32. 3+87.47–5.00' R
    End Type 3 Curb Ramp Slope
33. 3+84.97–5.50' R
    TC Elev. 1352.23
34. 3+78.97–5.50' R
    TC Elev. 1352.23

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY M. MACOMBER
SOUTH DAKOTA
5/29/15

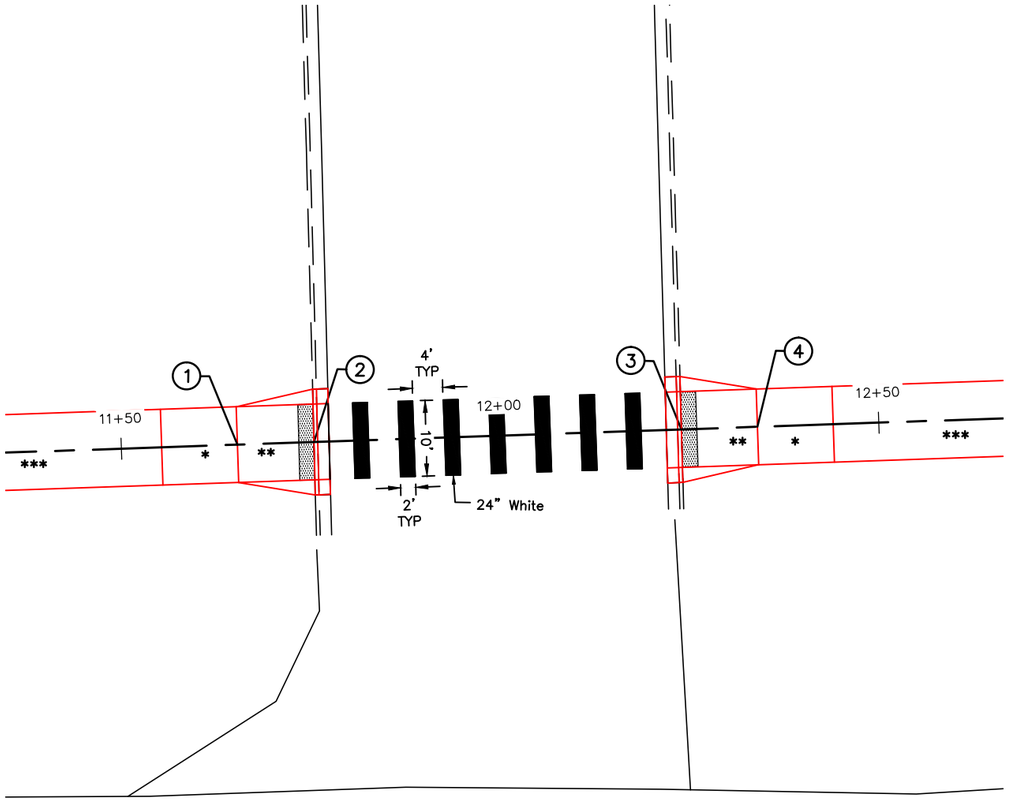
CURB RAMP DETAILS

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	35	51

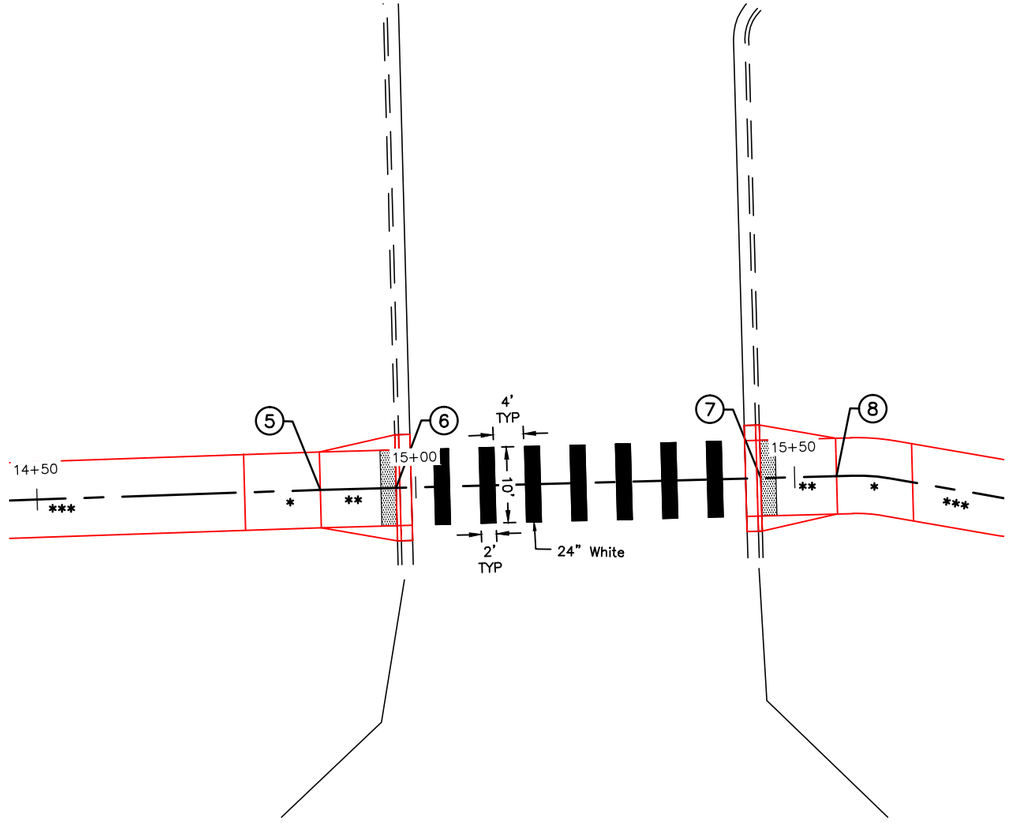
REV 5-29-15 NAP

LEGEND:

* Turning Space with 2% max. slope
** Ramp slopes with 8.3% max. slope
*** Sidewalk with 5% max. long slope
Detectable Warning Surface



1. 11+65.31–0.00' R/L
   Begin Ramp Slope
2. 11+75.42–0.00' R/L
   End Ramp Slope
3. 12+23.95–0.00' R/L
   End Ramp Slope
4. 12+33.98–0.00' R/L
   Begin Ramp Slope



5. 14+87.42–0.00' R/L
   Begin Ramp Slope
6. 14+97.42–0.00' R/L
   End Ramp Slope
7. 15+45.54–0.00' R/L
   End Ramp Slope
8. 15+55.54–0.00' R/L
   Begin Ramp Slope

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY P. MCCOMSEY
SOUTH DAKOTA
5/29/15
#A5978

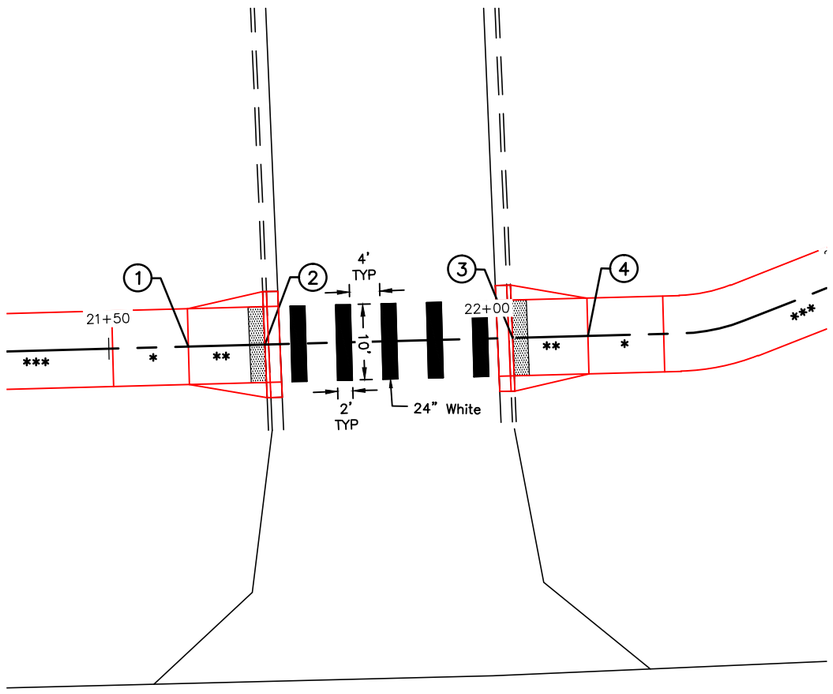
CURB RAMP DETAILS

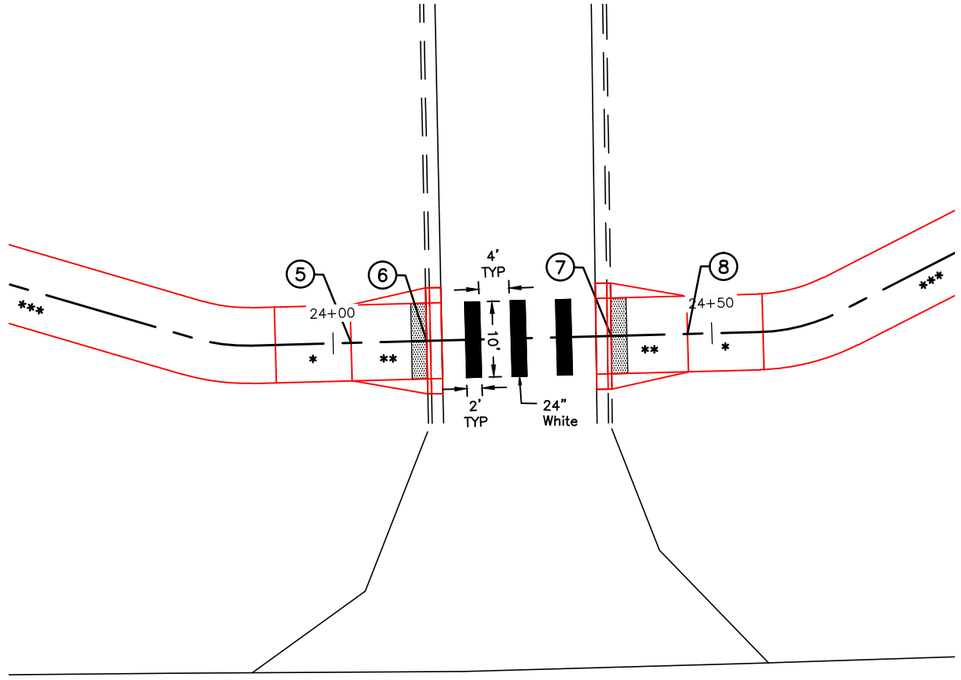
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	36	51

REV 5-29-15 NAP

LEGEND:

* Turning Space with 2% max. slope
** Ramp slopes with 8.3% max. slope
*** Sidewalk with 5% max. long slope
Detectable Warning Surface





① 21+60.50–0.00' R/L
Begin Ramp Slope

② 21+70.58–0.00' R/L
End Ramp Slope

③ 22+03.29–0.00' R/L
End Ramp Slope

④ 22+13.21–0.00' R/L
Begin Ramp Slope

⑤ 24+02.38–0.00' R/L
Begin Ramp Slope

⑥ 24+12.35–0.00' R/L
End Ramp Slope

⑦ 24+36.70–0.00' R/L
End Ramp Slope

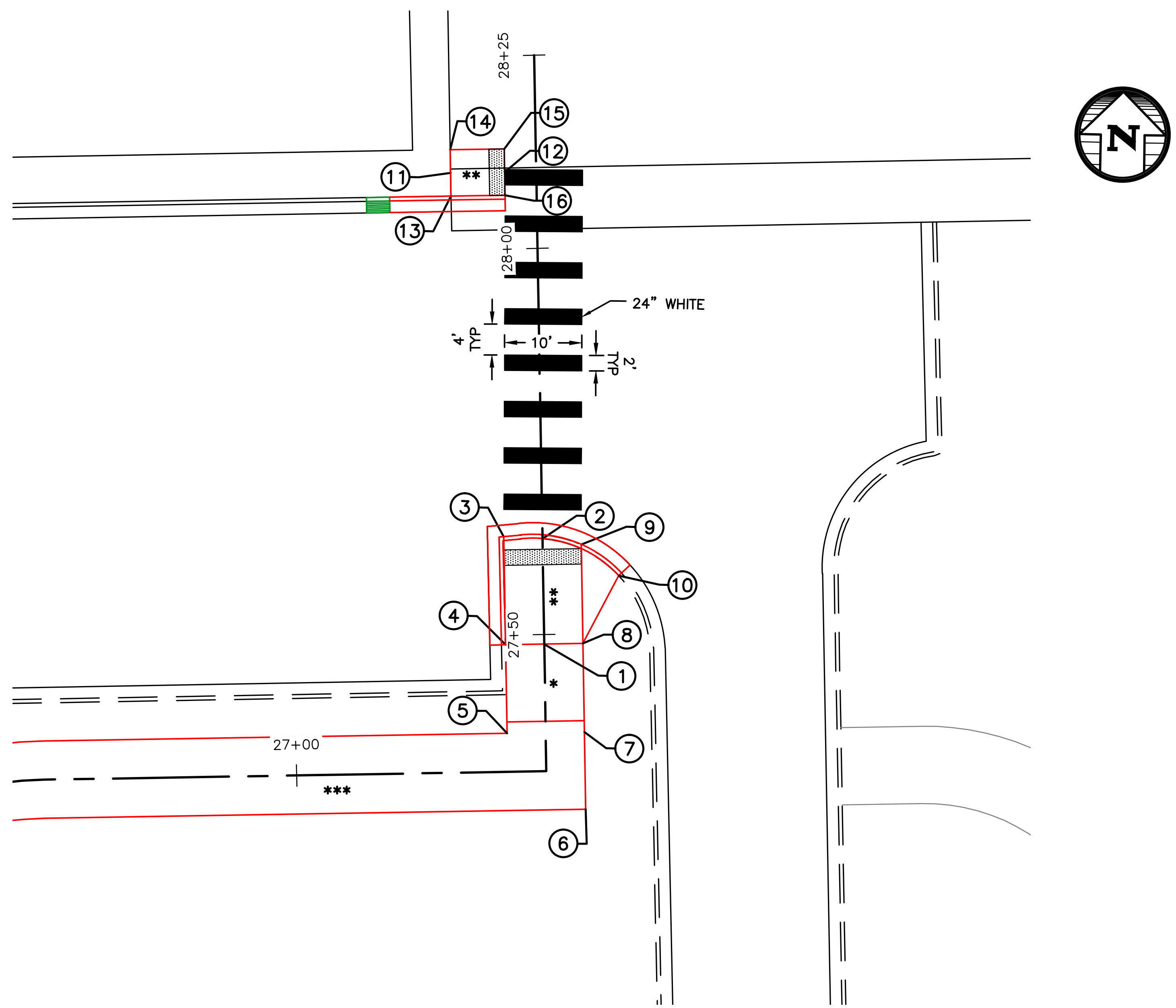
⑧ 24+46.77–0.00' R/L
Begin Ramp Slope

REGISTERED PROFESSIONAL ENGINEER
REG. NO. 8471
JEFFREY P. MACOMBER
SOUTH DAKOTA
5/29/15

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	37	51

REV 5-29-15 NAP

CURB RAMP DETAILS



LEGEND:

- * Turning Space with 2% max. slope
- ** Ramp slopes with 8.3% max. slope
- *** Sidewalk with 5% max. long slope
- Detectable Warning Surface

(1)	27+48.75–0.00' R/L	Begin Ramp Slope
(2)	27+62.40–0.00' R/L	End Ramp Slope
(3)	27+62.75–5.00' L	FL Elev. 1336.10
(4)	27+48.75–5.00' L	TW Elev. 1337.19
(5)	27+27.31–5.00' L	TW Elev. 1337.33
(6)	27+32.31–5.00' R	TW Elev. 1337.55
(7)	27+27.31–5.00' R	TW Elev. 1337.18
(8)	27+48.75–5.00' R	TW Elev. 1337.00
(9)	27+61.57–5.00' R	FL Elev. 1335.91
(10)	27+57.45–9.79' R	TC Elev. Match Existing
(11)	28+09.94–11.07' L	Begin Ramp Slope
(12)	28+09.94–4.07'	End Ramp Slope
(13)	25+06.94–11.07' L	TW Elev. Match Existing
(14)	28+12.94–11.07' L	TW Elev. Match Existing
(15)	28+12.94–4.07'	FL Elev. Match Existing
(16)	28+06.94–4.07' L	FL Elev. Match Existing

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	38	51

PERMANENT SIGN TABULATION

PERMANENT SIGN TABULATION							
	SIGN CODE	SIGN SIZE	SIGN SIZE SF	DESCRIPTION	SHEETING	NUMBER REQUIRED	TOTAL SF
(A)	D11-1	24" X 18"	3.0	Bike Route	TYPE IV	12	36.0
(B)	R1-1	18" X 18"	1.9	Stop	TYPE XI	10	19.0
(C)	R3-17BP	24" X 8"	1.4	Ends	TYPE IV	2	2.8
(D)	R5-3	24" X 24"	4.0	No Motorized Vehicles	TYPE IV	10	40.0
(E)	W1-1L	18" X 18"	2.3	Left Turn	TYPE IV	1	2.3
							TOTAL
						TYPE IV	81.1
						TYPE XI	19.0

24"x18"

(A) -D11-1

18"x18"

(B) -R1-1

24"x8"

(C) -R3-17BP

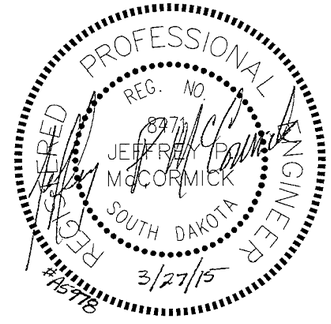
24"x24"

(D) -R5-3

18"x18"

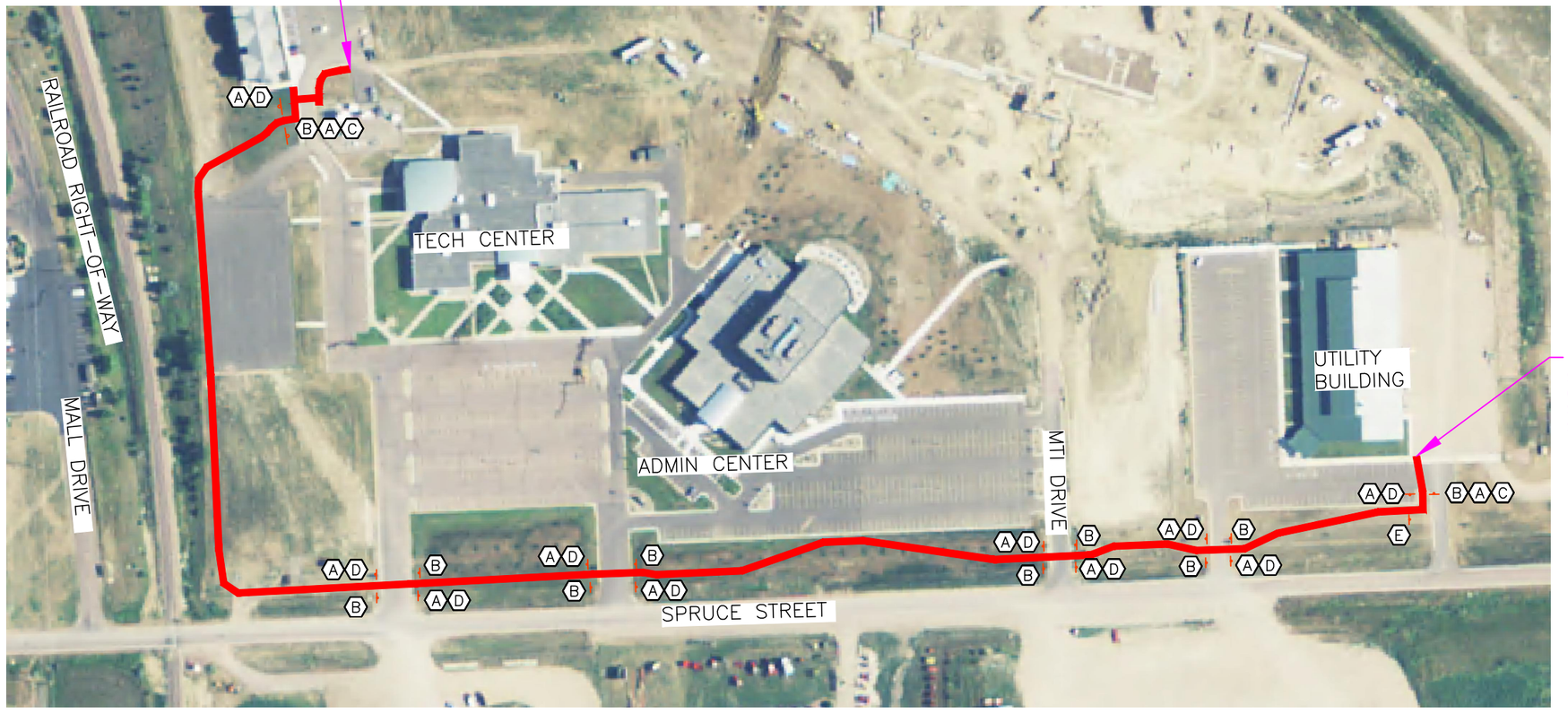
(E) -W1-1L

SIGN PLACEMENT			
STATION	Lt\Rt	SIGN CODE	2.0" X 2.0" Perforated Tube Post Length (Ft)
1+71	9.5' Lt	(B)(A)(C)	9.0
1+71	9.5' Rt	(A)(D)	9.0
11+68	9.5' Rt	(B)	8.0
11+68	9.5' Lt	(A)(D)	9.0
12+31	9.5' Lt	(B)	8.0
12+31	9.5' Rt	(A)(D)	9.0
14+90	9.5' Rt	(B)	8.0
14+90	9.5' Lt	(A)(D)	9.0
15+54	9.5' Lt	(B)	8.0
15+54	9.5' Rt	(A)(D)	9.0
15+54	9.5' Lt	(B)	8.0
15+54	9.5' Rt	(A)(D)	9.0
21+63	9.5' Rt	(B)	8.0
21+63	9.5' Lt	(A)(D)	9.0
22+11	9.5' Lt	(B)	8.0
22+11	9.5' Rt	(A)(D)	9.0
24+05	9.5' Rt	(B)	7.0
24+05	9.5' Lt	(A)(D)	8.0
24+44	9.5' Lt	(B)	8.0
24+44	9.5' Rt	(A)(D)	9.0
27+00	9.5' Rt	(E)	6.0
27+50	9.5' Rt	(B)(A)(C)	9.0
27+50	9.5' Lt	(A)(D)	9.0
		TOTAL	176.0

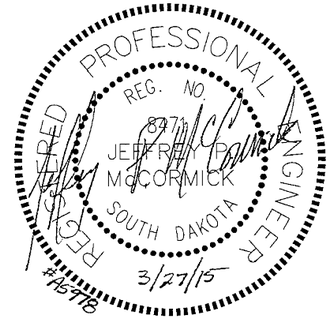


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	39	51

PERMANENT SIGN TABULATION

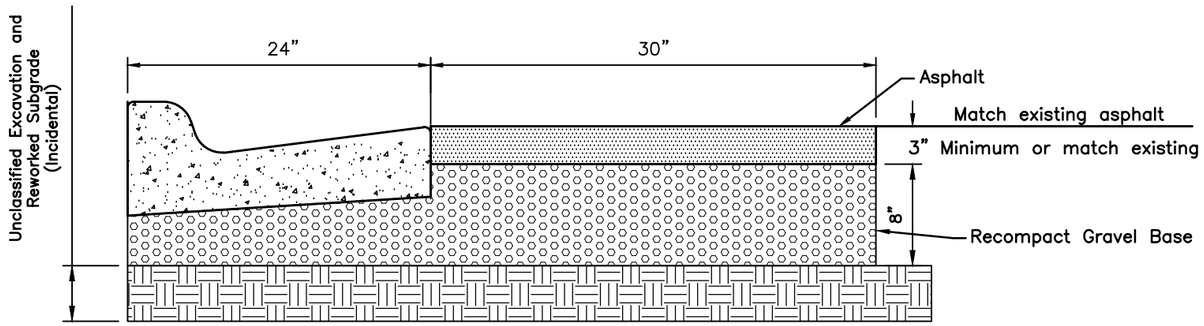


24"x18"	18"x18"	24"x8"	24"x24"	18"x18"
				
(A) –D11–1	(B) –R1–1	(C) –R3–17BP	(D) –R5–3	(E) –W1–1L



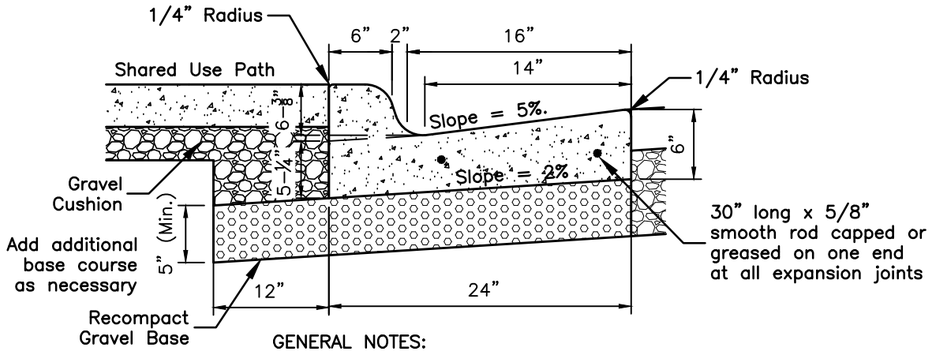
STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	40	51

DETAILS



ASPHALT REPAIR DETAIL

SCALE: NONE



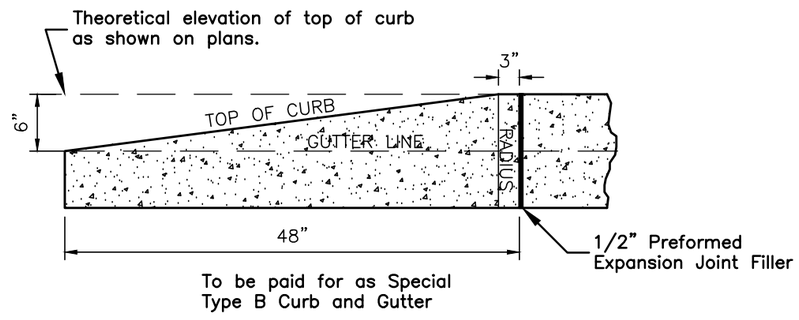
GENERAL NOTES:

1/2" Preformed expansion joint fillers shall be placed transversely in the curb and gutter at each junction of radius return curb and gutter and curb and gutter which is parallel to the project centerline and at intervals not greater than 150'.

Weakened plane joints shall be constructed at a minimum of 10' intervals. when the curb and gutter is to be constructed adjacent to PCC pavement, then the joints shall coincide with the pavement's joints. The joints shall be constructed to a minimum depth of two inches by scoring with a tool which will leave the corners rounded and insure a free movement of concrete at the joint.

SPECIAL CURB AND GUTTER DETAIL

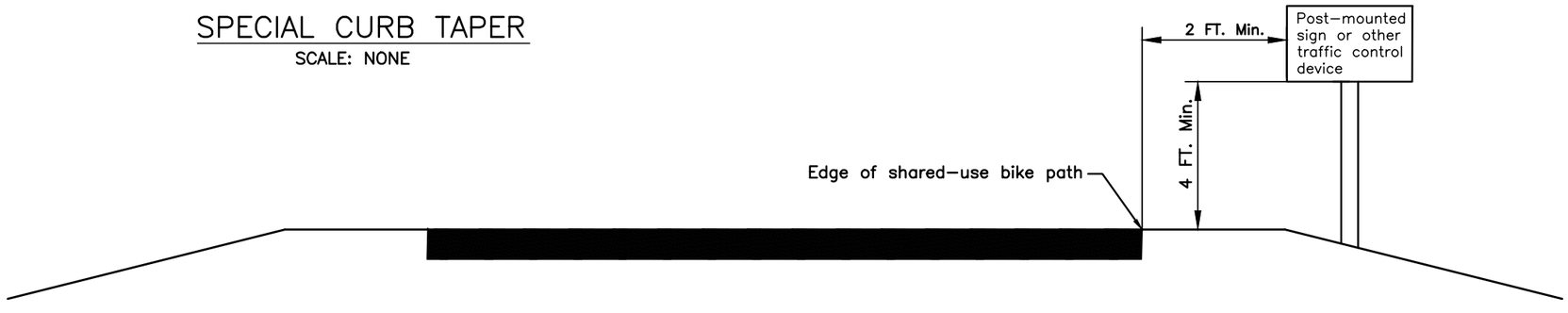
SCALE: NONE



To be paid for as Special Type B Curb and Gutter

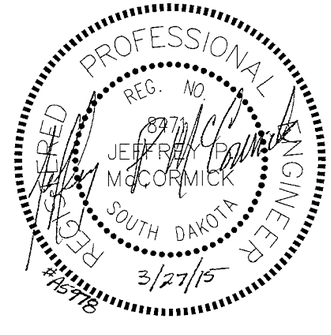
SPECIAL CURB TAPER

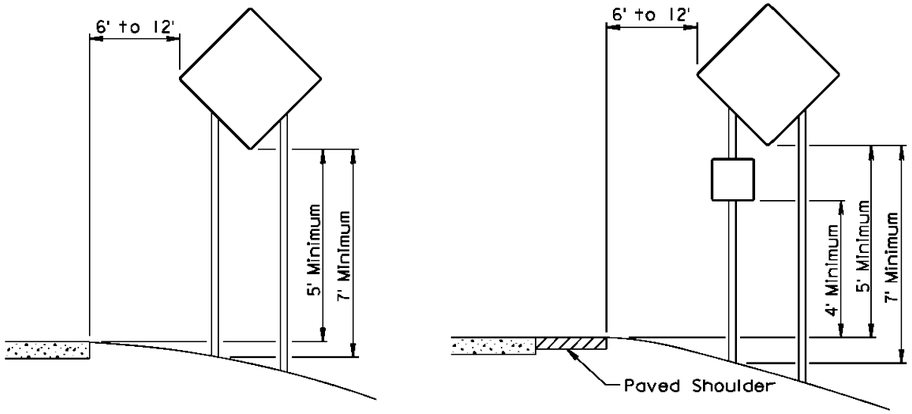
SCALE: NONE



MUTCD SIGN PLACEMENT ON SHARED-USE PATHS

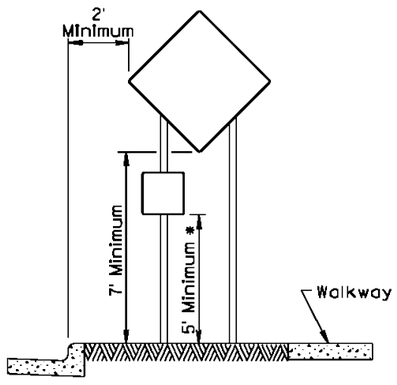
SCALE: NONE





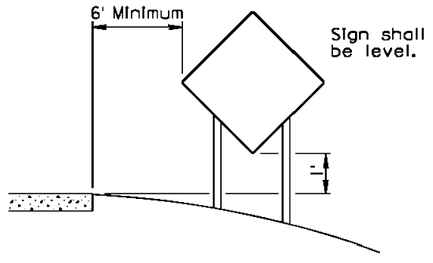
RURAL DISTRICT

RURAL DISTRICT WITH SUPPLEMENTAL PLATE



URBAN DISTRICT

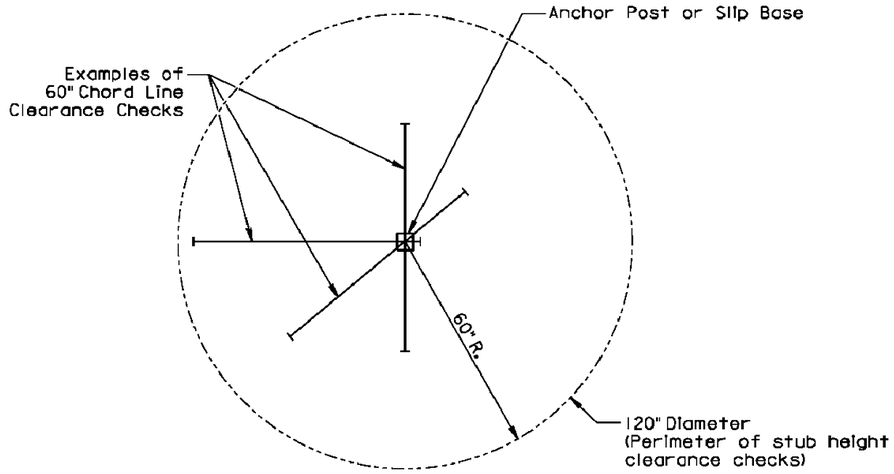
* If the bottom of supplemental plate is mounted lower than 7 feet above a pedestrian walkway, the supplemental plate should not project more than 4" into the pedestrian facility.



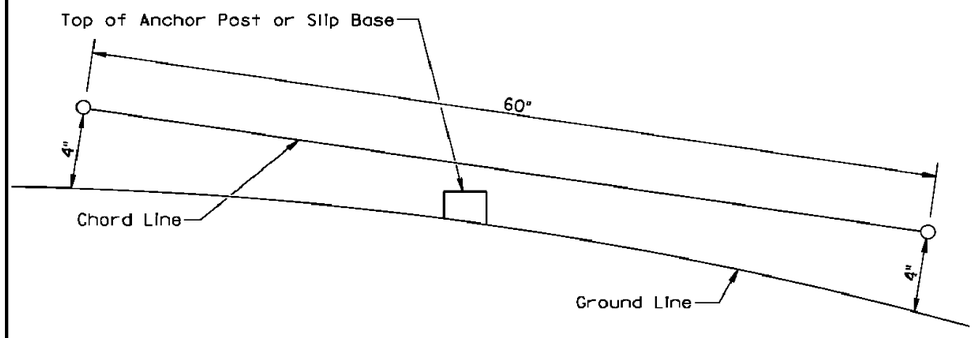
RURAL DISTRICT
3 DAY MAXIMUM
(Not applicable to regulatory signs)

September 22, 2014

Published Date: 1st Qtr. 2015	SDDOT	CRASHWORTHY SIGN SUPPORTS (Typical Construction Signing)	PLATE NUMBER 634.85
			Sheet 1 of 1



PLAN VIEW
(Examples of stub height clearance checks)



ELEVATION VIEW

GENERAL NOTES:

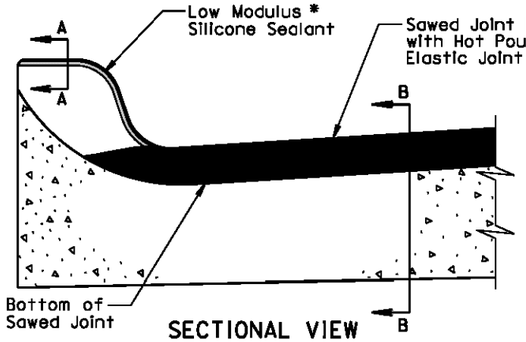
The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

At locations where there is curb and gutter adjacent to the breakaway sign support, the stub height shall be a maximum of 4" above the ground line at the localized area adjacent to the breakaway support stub.

The 4" stub height clearance is not necessary for U-channel lap splices where the support is designed to yield (bend) at the base.

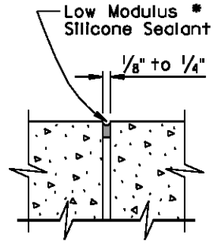
July 1, 2005

Published Date: 1st Qtr. 2015	SDDOT	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

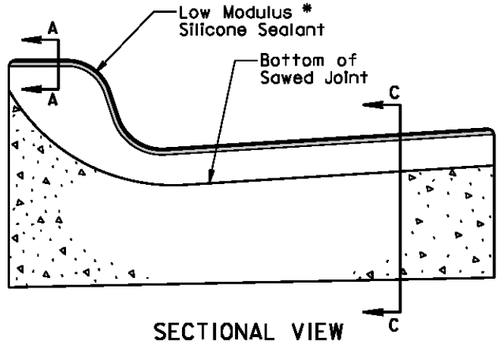


SECTIONAL VIEW

(Curb and Gutter Placed Monolithic with Adjacent Mainline PCC Pavement)

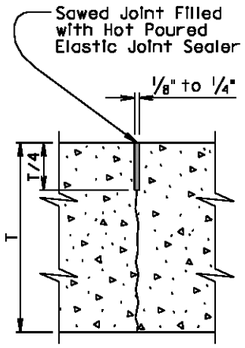


SECTION A-A

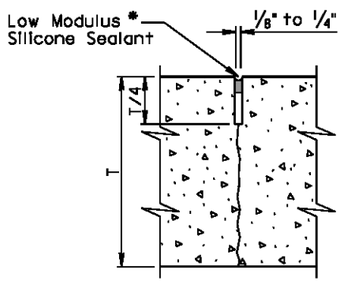


SECTIONAL VIEW

(Curb and Gutter not Placed Monolithic with Adjacent Mainline PCC Pavement or Mainline Surfacing is not PCC Pavement)



SECTION B-B

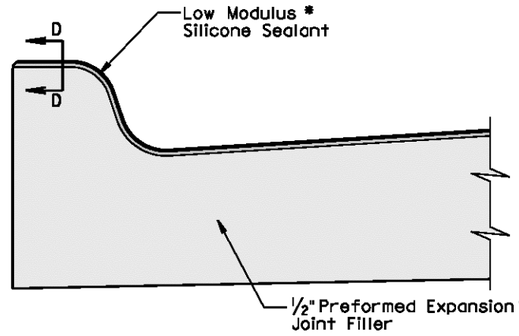


SECTION C-C

* The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

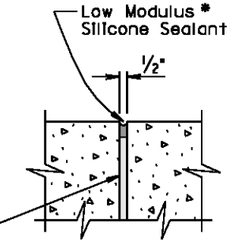
September 6, 2013

Published Date: 1st Qtr. 2015	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 1 of 2



SECTIONAL VIEW

(Curb and Gutter at 1/2" Preformed Expansion Joint Filler Location)



SECTION D-D

* The silicone sealant shall be placed such that it completely seals the joint and is bonded to the sides of the clean joint as approved by the Engineer.

GENERAL NOTES:

For illustrative reason, only the type B curb and gutter is shown.

** A 1/2" preformed expansion joint filler shall be placed transversely in the curb and gutter at the following locations:

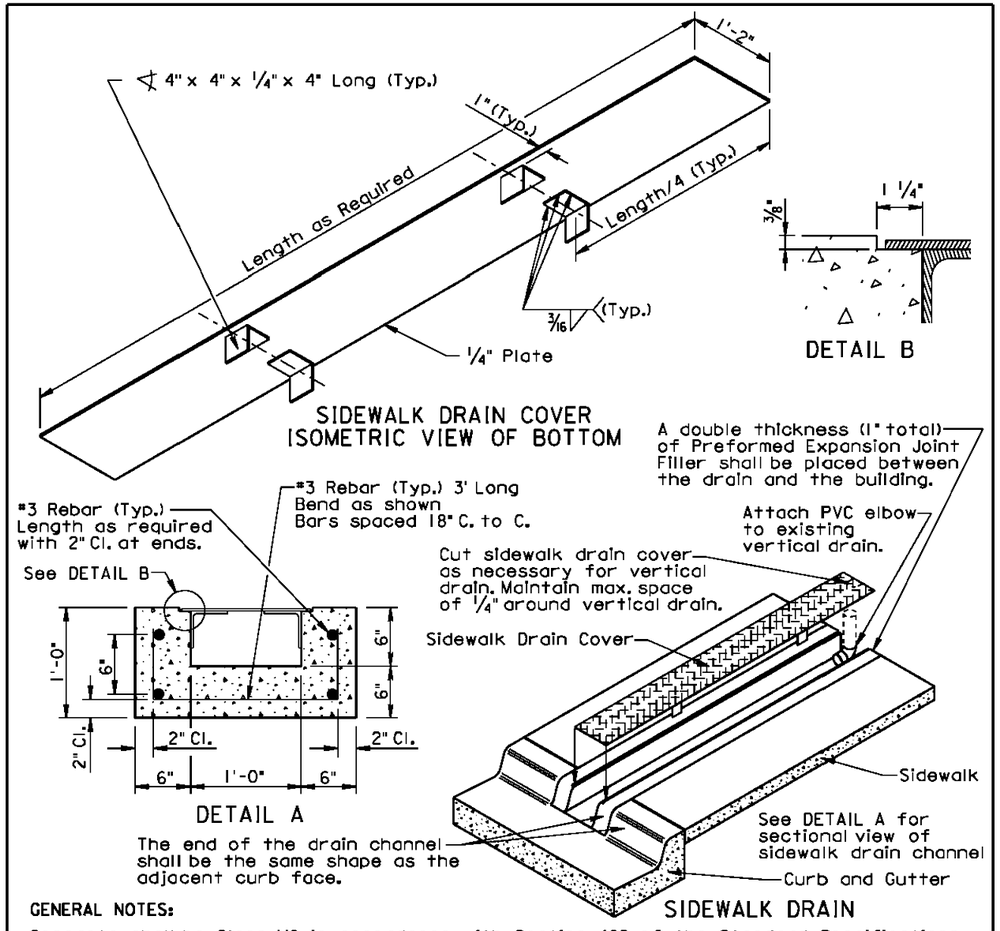
1. At each junction between the radius return of curb and gutter and curb and gutter which is parallel to the project centerline.
2. At each junction between new curb and gutter and existing curb and gutter.

Transverse contraction joints shall be constructed at 10' intervals in the concrete curb and gutter except when the concrete curb and gutter is constructed adjacent to mainline PCC pavement. When concrete curb and gutter is constructed adjacent to mainline PCC pavement, a transverse contraction joint shall be constructed in the concrete curb and gutter at each mainline PCC pavement transverse contraction joint location.

When concrete curb and gutter is not placed monolithically with the mainline PCC pavement or when the adjacent mainline surfacing is not PCC concrete, the transverse contraction joints in the concrete curb and gutter shall be 1 1/2 inches deep if formed in the fresh concrete using a suitable grooving tool. If a saw is used to cut the contraction joints, then the depth of the joint shall be at least 1/4 the thickness of the concrete and the joint shall be sealed in accordance with the details shown above.

September 6, 2013

Published Date: 1st Qtr. 2015	SDDOT	JOINTS IN CONCRETE CURB AND GUTTER	PLATE NUMBER 650.90
			Sheet 2 of 2



GENERAL NOTES:

Concrete shall be Class M6 in accordance with Section 462 of the Standard Specifications.

Reinforcing steel shall conform to ASTM A615, Grade 60.

Structural Steel shall conform to ASTM A36. The sidewalk drain cover shall conform to ASTM A786.

Welding and weld inspection shall be in conformance with the current edition of the AWS D1.1 Structural Welding Code-Steel.

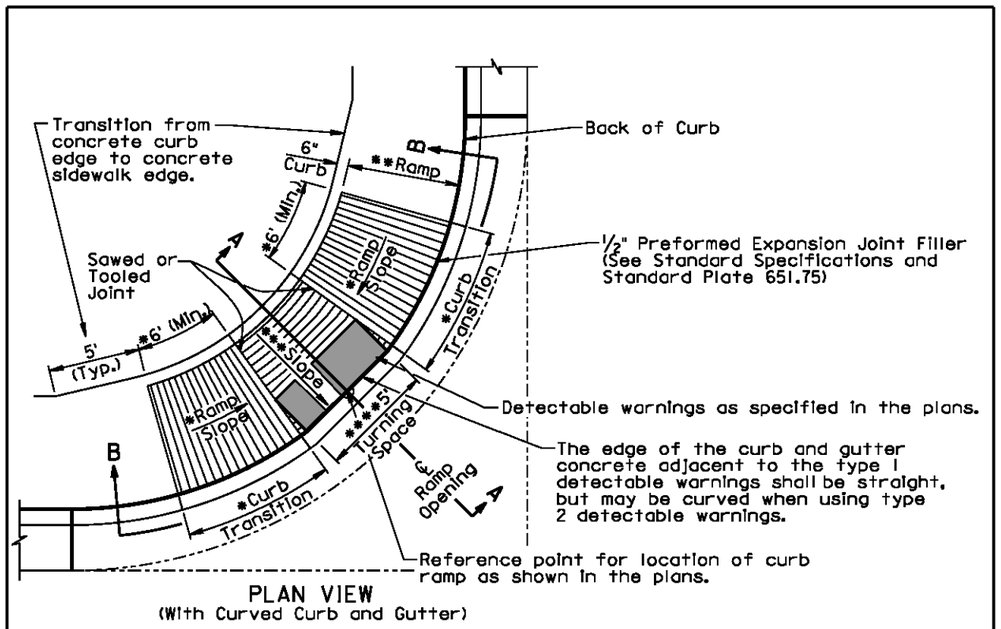
The cover plate assembly shall be galvanized after fabrication. Galvanizing shall be in accordance with ASTM 123.

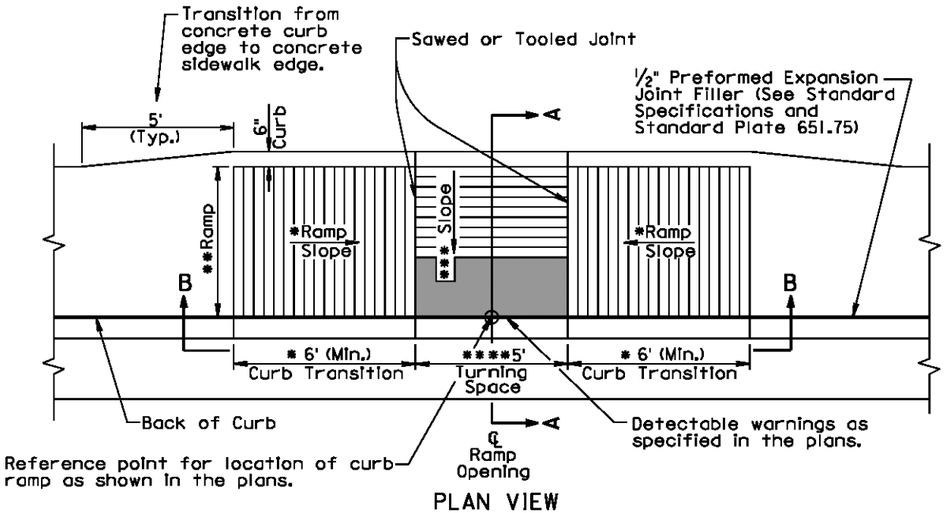
All costs associated for providing the required curb cut shall be incidental to the contract unit price per foot for the corresponding curb and gutter bid item.

The sidewalk drain shall be measured and paid for to the nearest tenth of a foot. The length of the drain shall be measured from the gutter to the necessary end location adjacent to the building. All costs associated with furnishing and installing the sidewalk drain channel and cover including the attachment to the vertical drain shall be incidental to the contract unit price per foot for "Sidewalk Drain".

June 26, 2013

Published Date: 1st Qtr. 2015	SDDOT	SIDEWALK DRAIN	PLATE NUMBER 651.50
			Sheet 1 of 1





September 6, 2013

Published Date: 1st Qtr. 2015	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 1 of 3

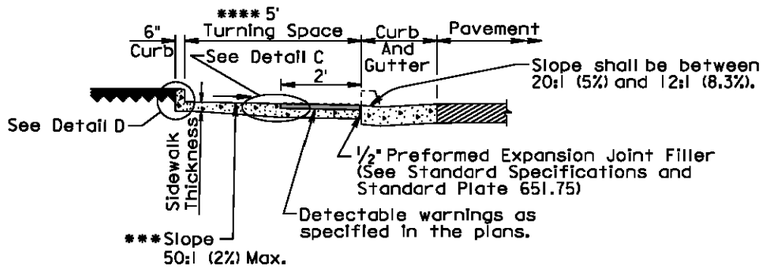
* The curb transition slope shall match the ramp slope. The ramp slope, at any location of the ramp, shall be 12:1 (8.3%) maximum. The ramp length shall not exceed 15' unless stated otherwise in the plans. Ramp slopes are designed at 12:1 (8.3%) unless stated otherwise in the plans. The minimum length of the curb transition shall be 6'.

** The ramp cross slope shall not be steeper than a 50:1 (2%) and the ramp width is 5' unless stated otherwise in the plans.

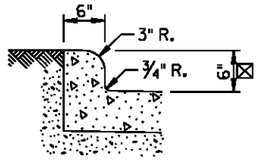
*** The slope in the turning space shall not be steeper than 50:1 (2%) in any direction of pedestrian travel.

**** The turning space is 5' x 5' unless stated otherwise in the plans.

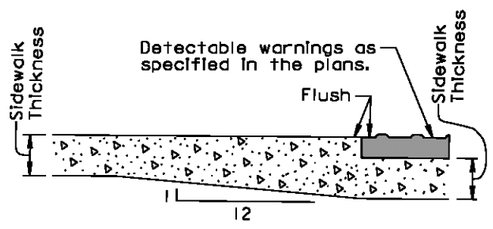
☒ The curb height shall be 6" unless stated otherwise in the plans.



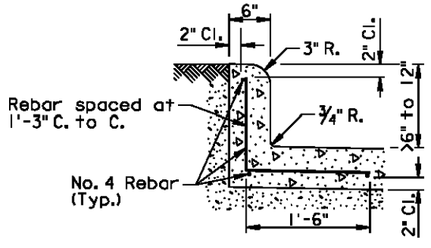
SECTION A-A



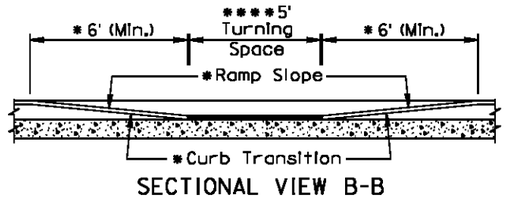
DETAIL D



DETAIL C



DETAIL D
(Use this detail when the curb height is greater than 6" and less than 12")



SECTIONAL VIEW B-B

September 6, 2013

Published Date: 1st Qtr. 2015	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 2 of 3

GENERAL NOTES:

For illustrative purpose only, type I detectable warnings are shown in the drawings.

For illustrative purpose only, a PCC fillet section is shown in one of the drawings. The curb ramp depicted on this standard plate may be used with a PCC fillet section, with curved curb and gutter, or with straight curb and gutter.

The curb ramp shall be placed at the location stated in the plans.

Sidewalk adjacent to the curb ramp shall be as shown in the plans.

Care shall be taken to ensure a uniform grade on the ramp, free of sags and short grade changes.

Surface texture of the ramp shall be obtained by coarse brooming transverse to the slope of the ramp.

The normal gutter line profile shall be maintained through the area of the ramp.

Joints shall be sawed or tooled into the concrete adjacent to the detectable warnings to alleviate possible corner cracking (see plan view for joint location).

Care shall be taken to ensure that the surface of the detectable warnings are clean and maintains a uniform color.

The detectable warnings shall be cut as necessary to fit the plan specified limits of the detectable warnings. Cost for cutting the detectable warnings shall be incidental to the corresponding detectable warning bid item.

When curb height is greater than 6" and less than 12", reinforcing steel is required in accordance with the detail on sheet 2 of 3. The reinforcing steel shall conform to ASTM A615, Grade 60. Cost for furnishing and installing the reinforcing steel shall be incidental to the contract unit price per square foot for the corresponding concrete sidewalk bid item.

There will be no separate payment for curb ramps. The curb ramp shall be measured and paid for at the contract unit price per square foot for the corresponding concrete sidewalk bid item. The square foot area of the detectable warnings and the curb along the short radius shall be included in the measured and paid for quantity of sidewalk.

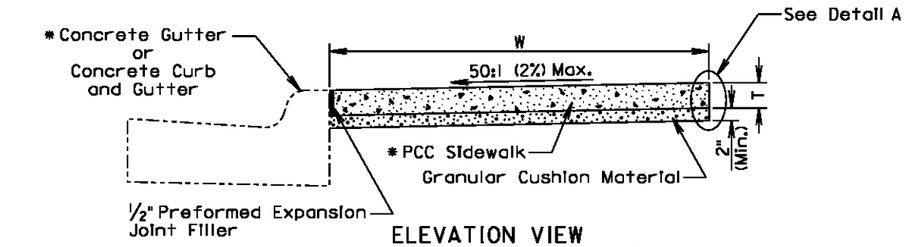
The curb transitions and ramp opening shall be measured and paid for at the contract unit price per foot for the corresponding curb and gutter bid item when curb and gutter is used. The curb transitions and ramp opening shall be measured and paid for at the contract unit price per square yard for the corresponding PCC fillet section bid item when a PCC fillet section is used.

The type I detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type I detectable warnings including labor, equipment, materials, and incidentals shall be paid for at the contract unit price per square foot for "Type I Detectable Warnings".

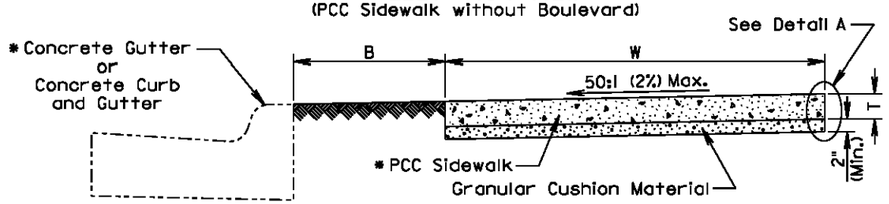
The type 2 detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type 2 detectable warnings including labor, equipment, and materials, including adhesive, necessary sealant or grout, and necessary grinding shall be paid for at the contract unit price per square foot for "Type 2 Detectable Warnings".

September 6, 2013

Published Date: 1st Qtr. 2015	SDDOT	TYPE 3 CURB RAMP (PARALLEL CURB RAMP)	PLATE NUMBER 651.03
			Sheet 3 of 3

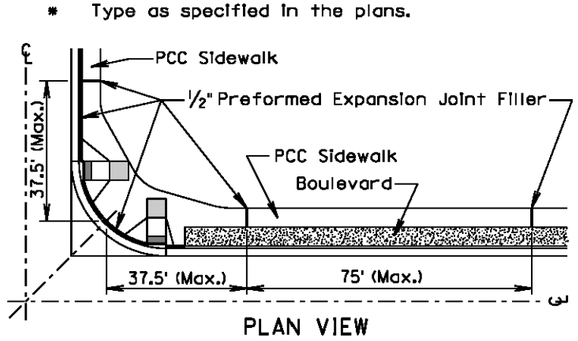


ELEVATION VIEW
(PCC Sidewalk without Boulevard)



ELEVATION VIEW
(PCC Sidewalk with Boulevard)

B Width of boulevard as specified in the plans.
T Thickness of PCC sidewalk as specified in the plans.
W Width of PCC sidewalk as specified in the plans.
* Type as specified in the plans.



PLAN VIEW

GENERAL NOTES:

The PCC sidewalk shall be constructed in accordance with Section 651 of the Standard Specifications.

The maximum length between expansion joints in PCC sidewalk is 75 feet.

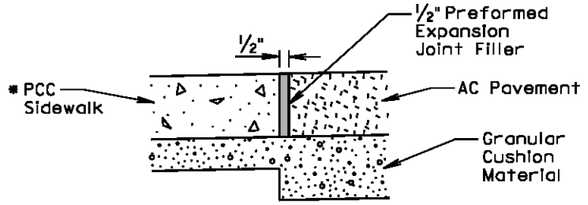
PCC sidewalk placed adjacent to intersection of roadways shall have an expansion joint placed transversely a maximum of 37.5 feet from the intersection. See PLAN VIEW.

An expansion joint in PCC sidewalk shall consist of a ½ inch thick preformed expansion joint filler material placed full depth and width of the PCC sidewalk.

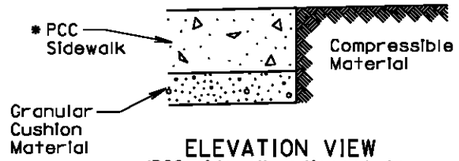
** Large areas of PCC pavement adjacent to PCC sidewalk may require a different joint treatment than shown in the detail. If a different joint detail is necessary, plans will contain the joint detail and the Contractor shall construct the joint treatment in accordance with the plans.

August 31, 2013

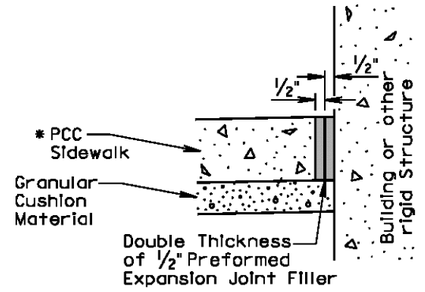
Published Date: 1st Qtr. 2015	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 1 of 2



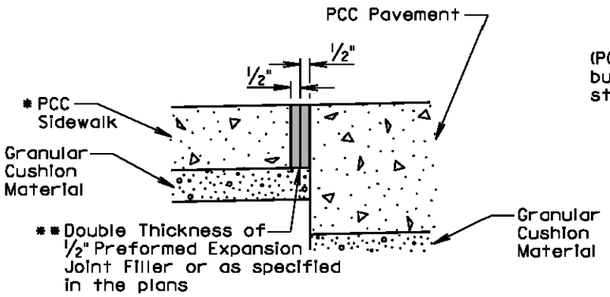
ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)



ELEVATION VIEW
(PCC sidewalk adjacent to earthen material, landscape rock, or other compressible materials)



ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)



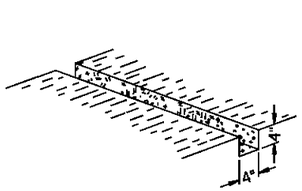
ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

Detail A
(Use Appropriate Detail(s))

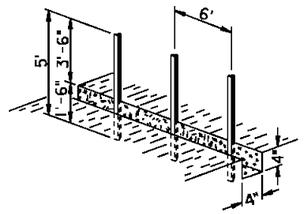
August 31, 2013

Published Date: 1st Qtr. 2015	SDDOT	PCC SIDEWALK	PLATE NUMBER 651.75
			Sheet 2 of 2

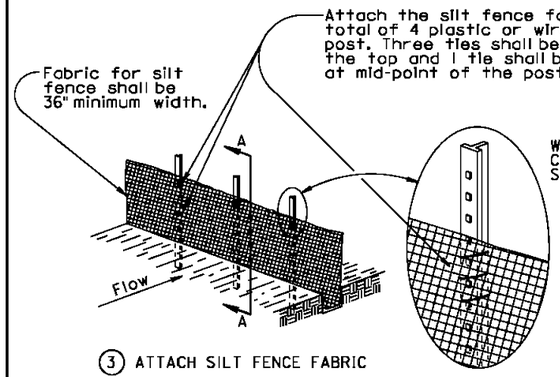
MANUAL HIGH FLOW SILT FENCE INSTALLATION



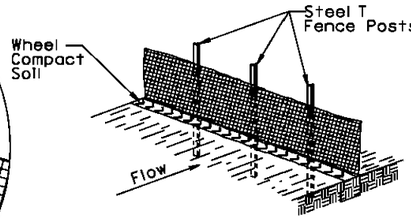
① EXCAVATE TRENCH



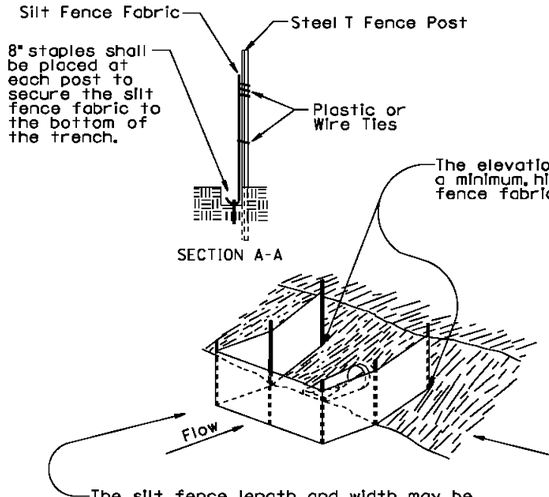
② DRIVE STEEL T FENCE POSTS



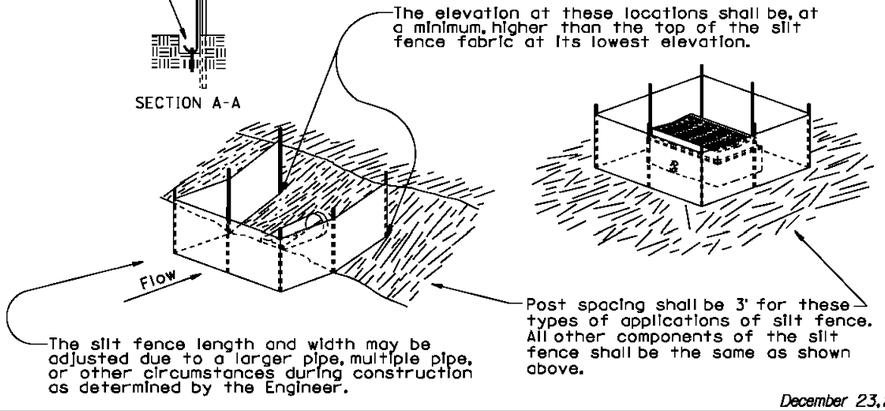
③ ATTACH SILT FENCE FABRIC



④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



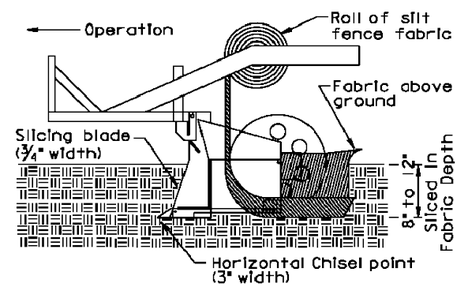
SECTION A-A



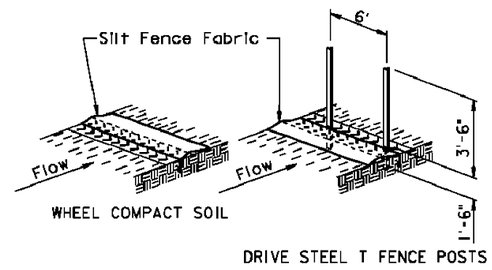
December 23, 2003

Published Date: 1st Qtr. 2015	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 1 of 2

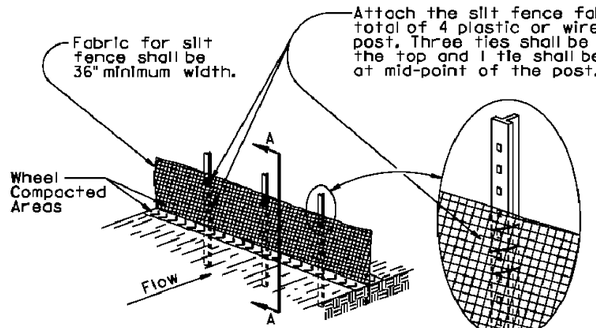
MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION



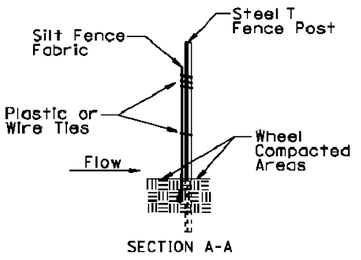
① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.



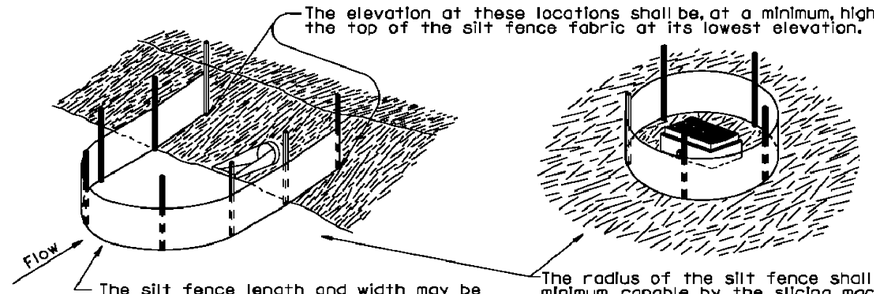
② WHEEL COMPACT SOIL ABOVE SLICED IN PORTION OF FABRIC AND THEN DRIVE STEEL T FENCE POSTS.



③ ATTACH SILT FENCE FABRIC



SECTION A-A



GENERAL NOTE:

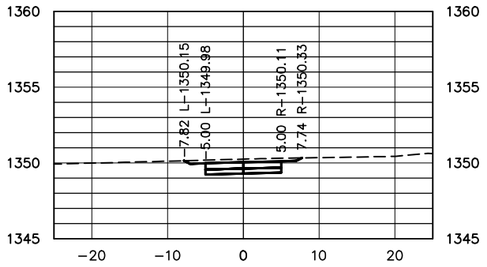
If a trench can not be dug or the silt fence fabric can not be sliced in due to the type of earthen material (such as rock), then a row of 30 to 40 pound sandbags butted end to end shall be provided on top of the extra length of silt fence fabric to prevent underflow.

December 23, 2003

Published Date: 1st Qtr. 2015	SDDOT	HIGH FLOW SILT FENCE	PLATE NUMBER 734.05
			Sheet 2 of 2

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	47	51

2+50



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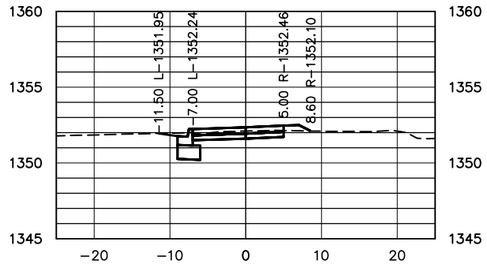

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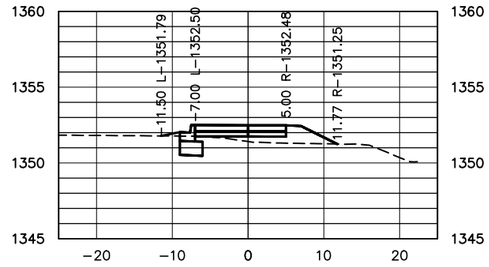

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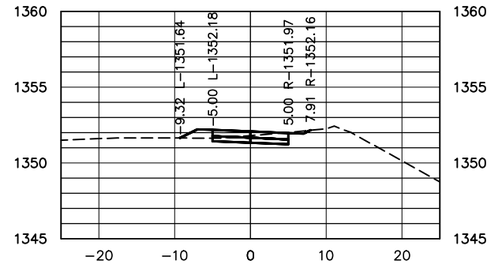

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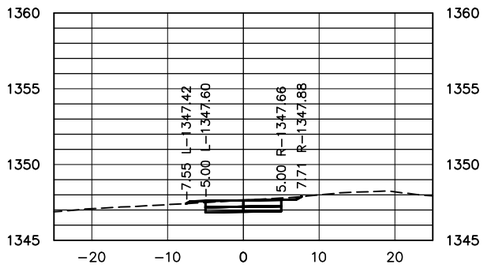

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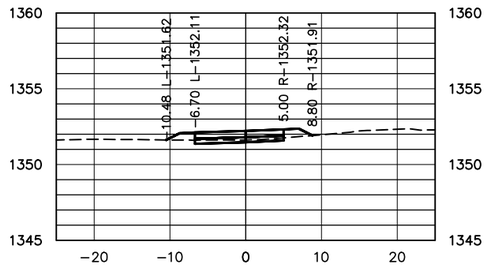

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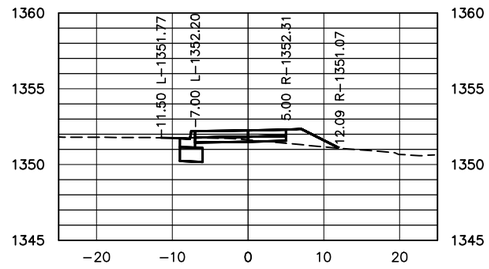

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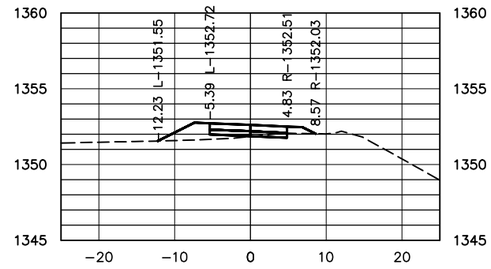
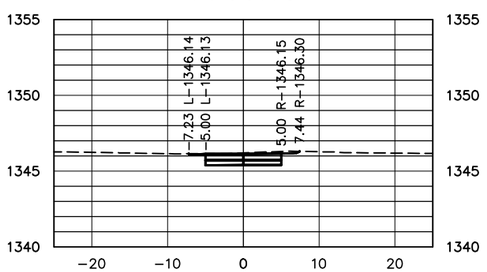


1+69.10



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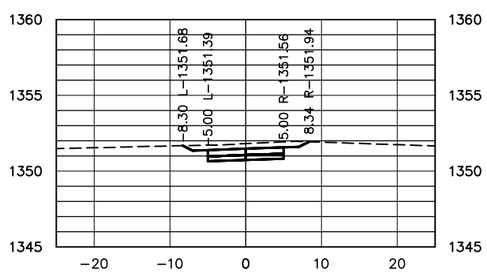

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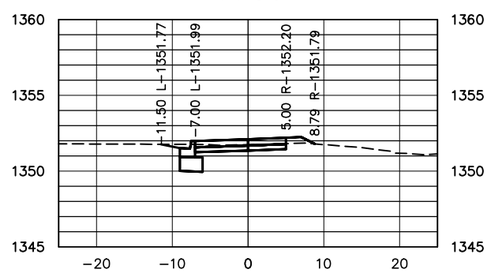

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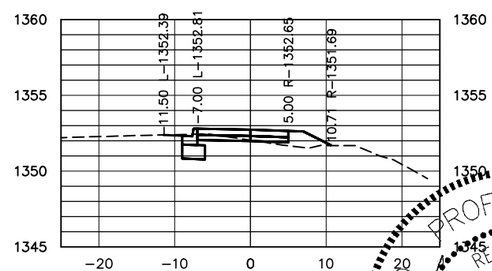
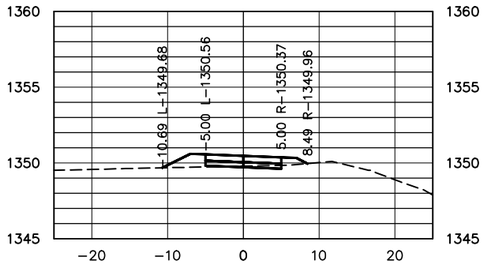


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	48	51

8+50



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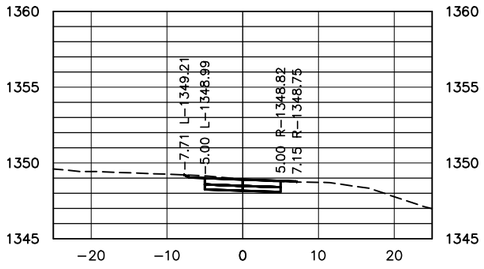

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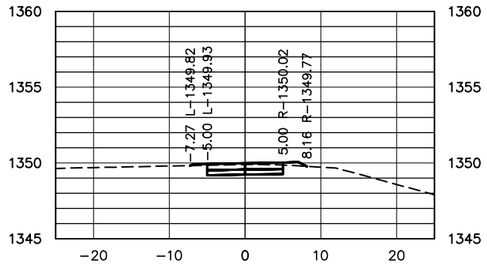

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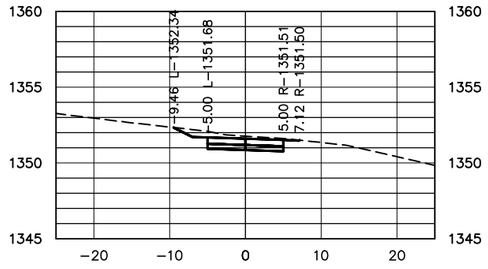

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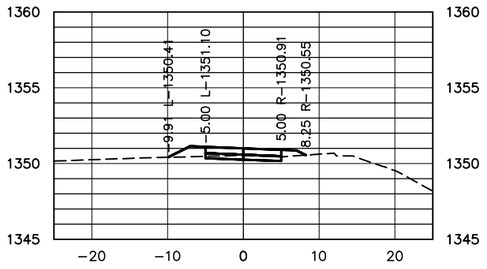

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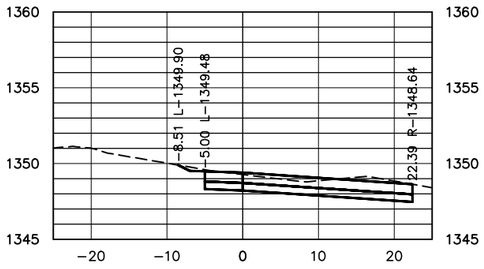

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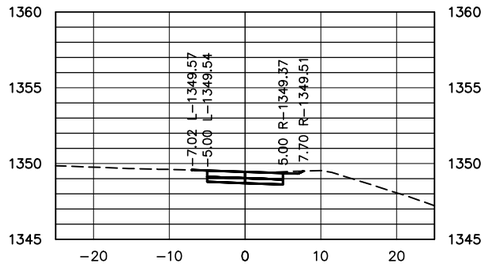

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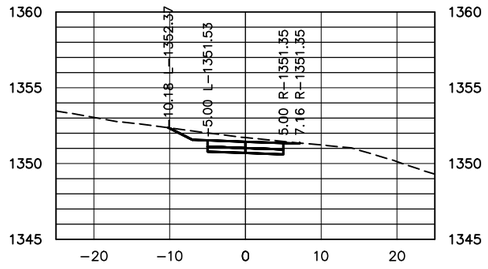

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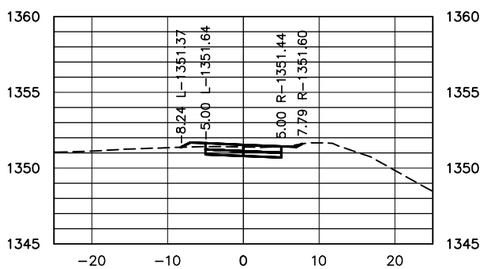

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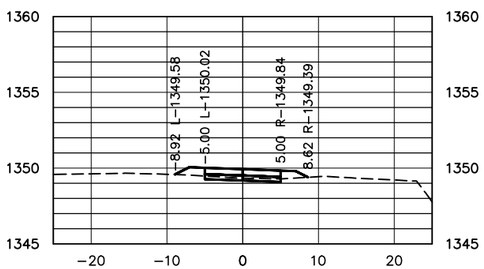

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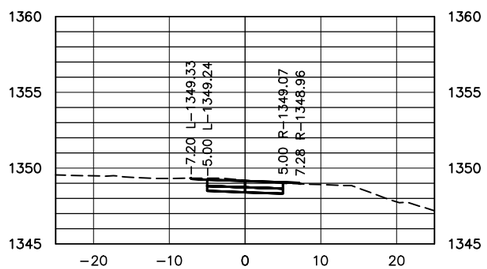

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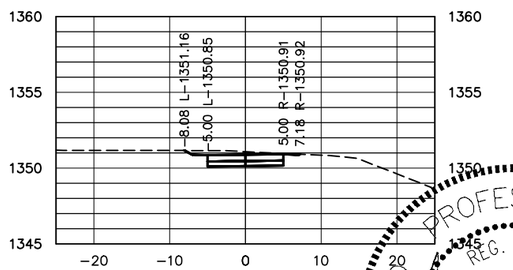
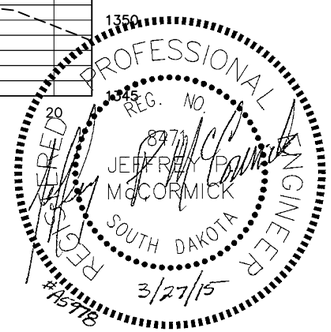
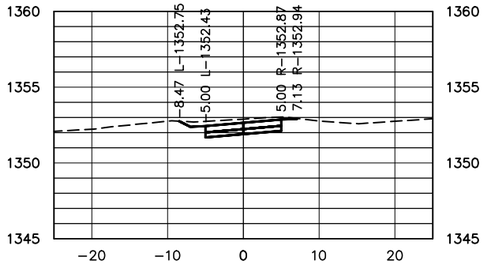




STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	49	51

15+50



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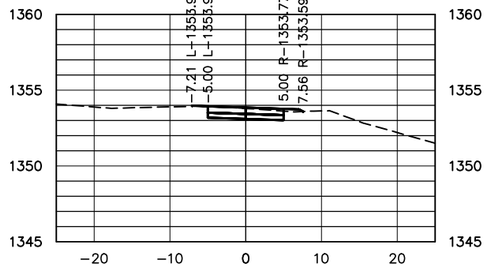

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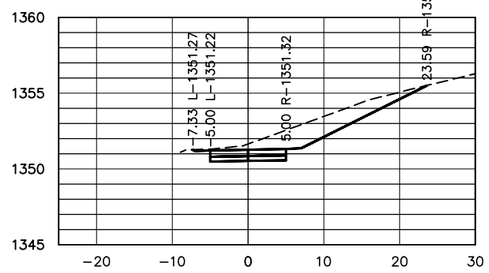

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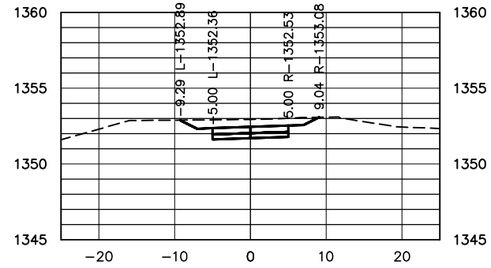

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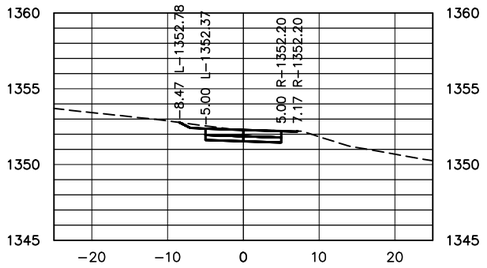

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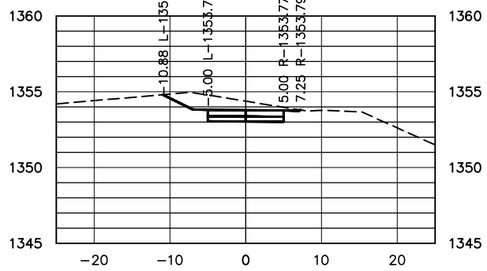

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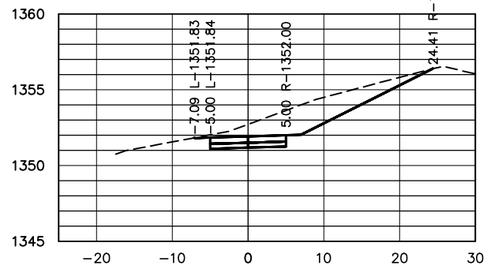

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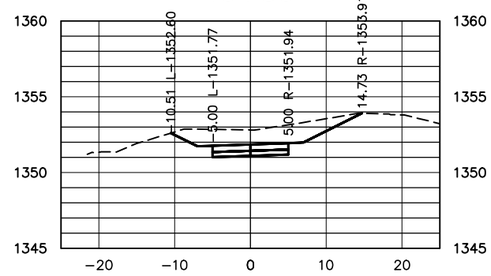

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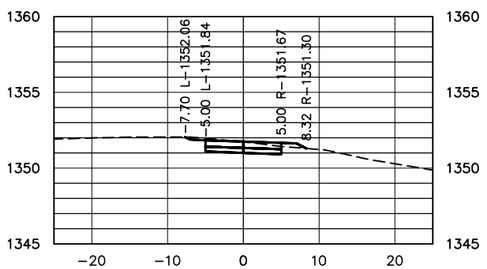

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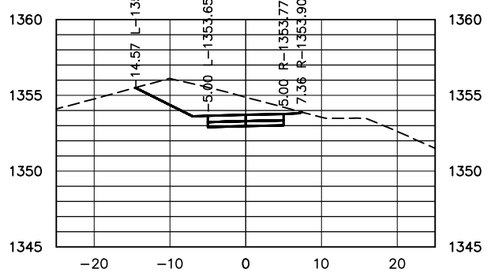

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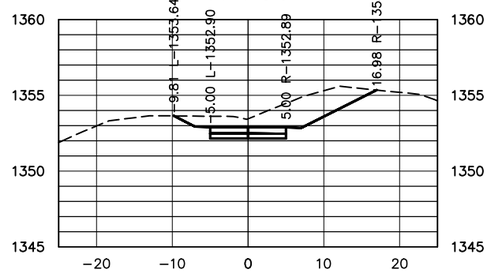
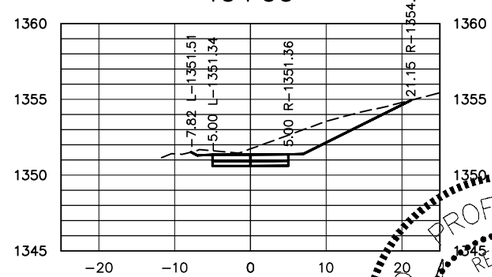
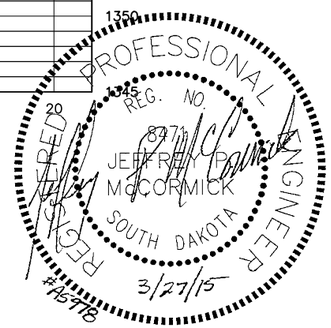


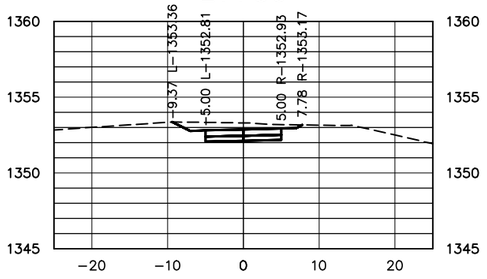
19+00



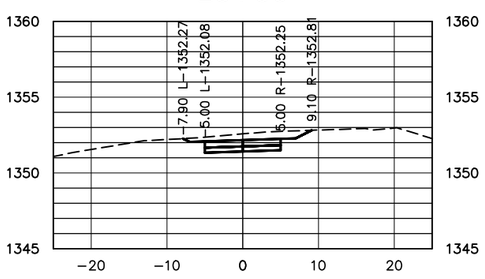


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	50	51

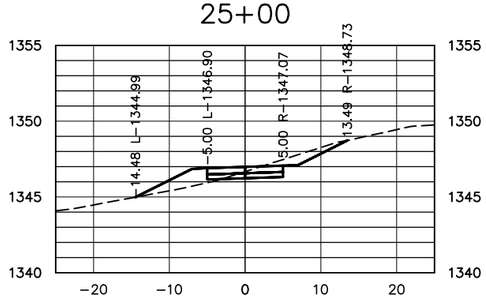
21+50



23+50



25+00



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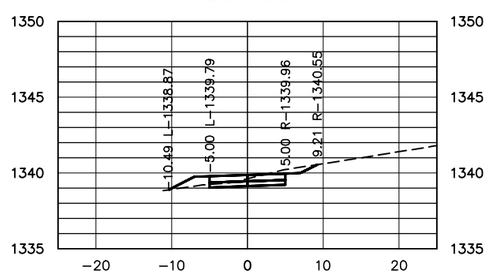

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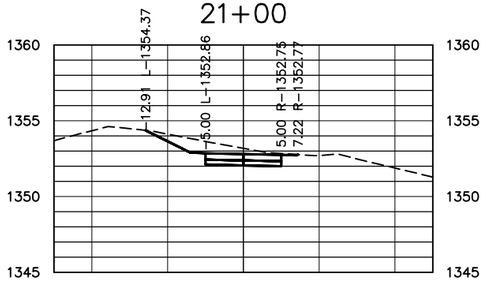

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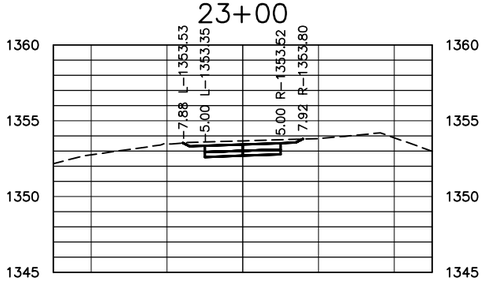

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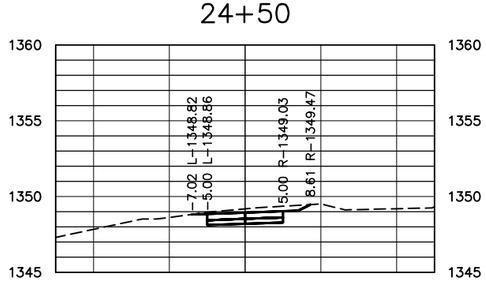

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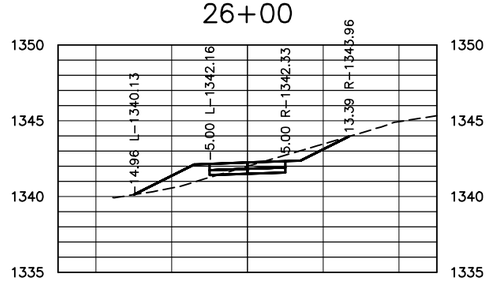

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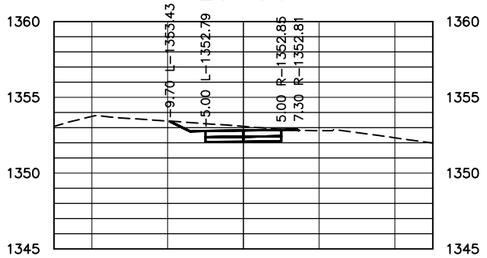

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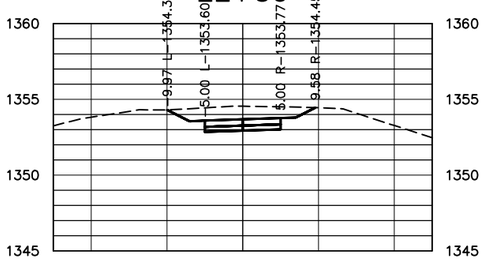

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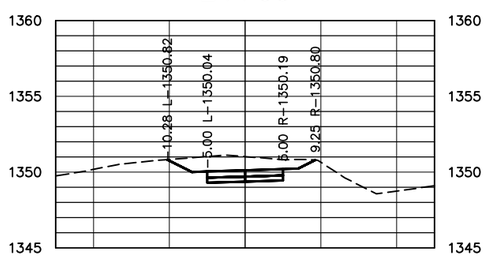

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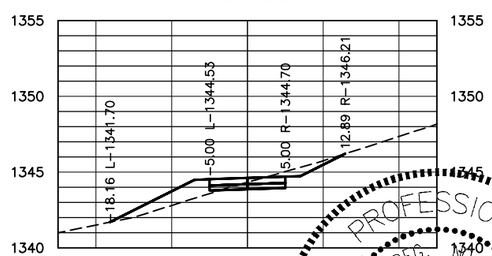
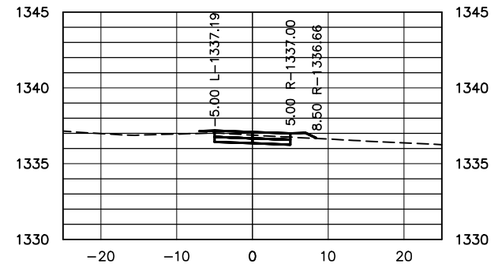


STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	P TAPU (06)	51	51

27+48.75



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