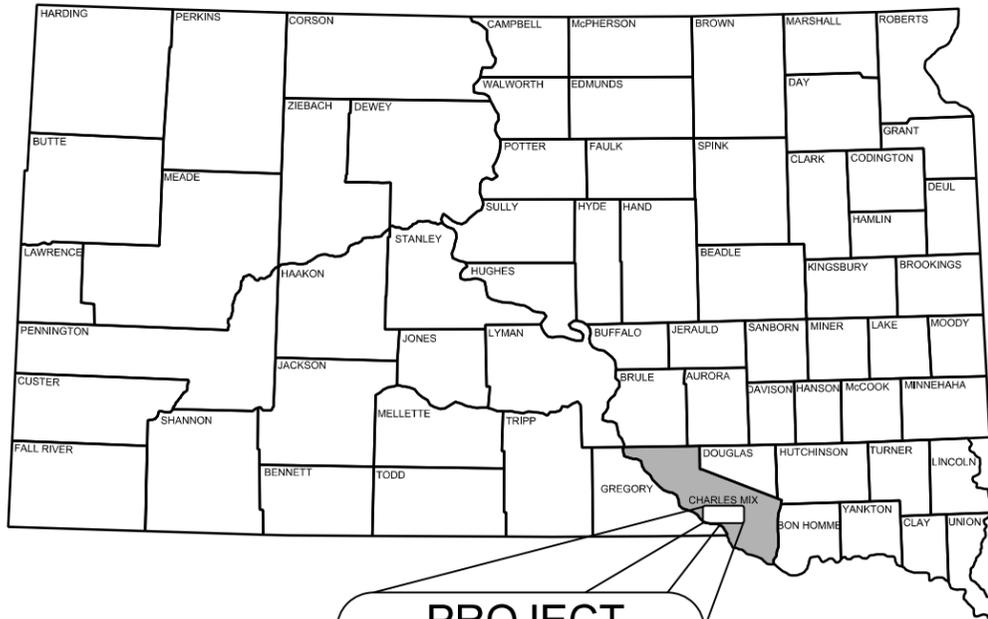


FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	1	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			



PROJECT
0.5 miles South and
.05 miles East
of Lake Andes South Dakota

END PROJECT
At Sta. 16+86 = A Point Approx. 46' East and 36'
South of the NE Corner of Section 10, T96N, R65W

START PROJECT
At Sta. 0+00 = A Point Approx. 50' East and 1698'
South of the NE Corner of Section 10, T96N, R65W

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

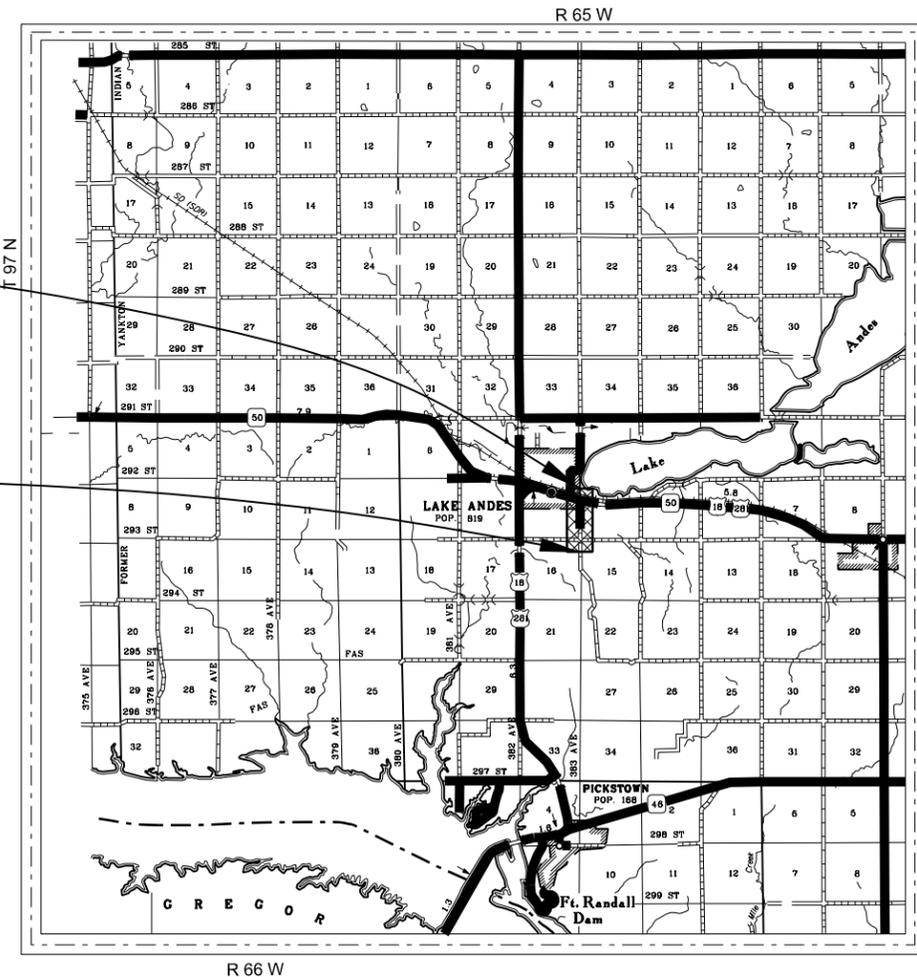
PLANS FOR PROPOSED
PROJECT P TAPR (01)
CHARLES MIX COUNTY
Yankton Sioux Tribe Shared Use Path
along BIA Route 31 near Lake Andes

PCN 04QH



INDEX OF SHEETS

SHEET 1	TITLE AND LAYOUT MAP
SHEET 2-6	ESTIMATE OF QUANTITIES AND GENERAL NOTES
SHEET 7-9	SWPPP
SHEET 10	TYPICAL SECTION
SHEET 11	EROSION CONTROL
SHEET 12-15	PLAN & PROFILE
SHEET 16	PERMANENT SIGNING
SHEET 17-26	STANDARD PLATES
SHEET 27-30	CROSS SECTIONS



PLANS BEI# S13-P648
Survey by: Brosz Engineering, Inc.
Pierre, SD
Plans by: Brosz Engineering, Inc.
Pierre, SD

STORM WATER PERMIT

Major Receiving Body of Water: Lake Andes
Area Disturbed: 2.48 Acres
Total Project Area: 3.00 Acres
Latitude: 43° 8' 45.12"N
Longitude: 98° 31' 33.76"W

Gross length 1665.00 Feet 0.32 Miles
Length of exceptions none Feet 0.00 Miles
Net length 1665.00 Feet 0.32 Miles

ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
009E0010	Mobilization	Lump Sum	LS
100E0100	Clearing	Lump Sum	LS
110E0300	Remove Concrete Curb and Gutter	14	Ft
110E1010	Remove Asphalt Concrete Pavement	31.0	SqYd
110E1700	Remove Silt Fence	999	Ft
120E0010	Unclassified Excavation	1,869	CuYd
120E0300	Borrow Unclassified Excavation	3,328	CuYd
230E0010	Placing Topsoil	1,527	CuYd
320E2000	Maintenance Patching	15.0	Ton
450E0122	18" RCP Class 2, Furnish	88	Ft
450E0130	18" RCP, Install	88	Ft
450E0142	24" RCP Class 2, Furnish	24	Ft
450E0150	24" RCP, Install	24	Ft
450E2008	18" RCP Flared End, Furnish	6	Each
450E2009	18" RCP Flared End, Install	6	Each
450E2016	24" RCP Flared End, Furnish	2	Each
450E2017	24" RCP Flared End, Install	2	Each
450E4769	24" CMP 16 Gauge, Furnish	42	Ft
450E4770	24" CMP, Install	42	Ft
450E5410	24" CMP Safety End, Furnish	1	Each
450E5411	24" CMP Safety End, Install	1	Each
632E1320	2.0"x2.0" Perforated Tube Post	108.0	Ft
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	62.5	SqFt
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	1	Each
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
651E0160	6" Reinforced Concrete Sidewalk	16,959	SqFt
651E7000	Type 1 Detectable Warnings	120	SqFt
730E0204	Type C Permanent Seed Mixture	16	Lb
730E0251	Special Permanent Seed Mixture 1	5	Lb
732E0100	Mulching	4.2	Ton
734E0154	12" Diameter Erosion Control Wattle	50	Ft
734E0604	High Flow Silt Fence	999	Ft
734E0610	Mucking Silt Fence	100	CuYd

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 A: WETLANDS

Approximately 0.744 acres of wetlands will be impacted by the project. Refer to erosion control sheet for location and boundaries of the impacted

wetlands. These unavoidable impacts to wetlands shall be mitigated on-site off-site of the project, through an approved wetland mitigation bank site, through In Lieu Fee wetland program at the time of construction.

Table of Impacted Wetlands

Wetland No.	Type	Station	Impact Left (Acres)	Impact Right (Acres)	Temporary Impact (Acres)	Total Impact (Acres)
1	N/A	8+70 to 16+60	0.372	0.372	0.00	0.744

Action Taken/Required:

A total of 0.844 acres of compensatory wetlands will be created on-site to account for project impacts to existing wetlands. The locations and boundaries of the mitigation site(s) are shown the erosion control sheet.

A mitigation plan has been provided by the SDDOT Environmental Office. A monitoring plan has been included and responsibilities are accounted for. The contact person is the Environmental Project Scientist of the SDDOT Environmental Office at 605-773-3268.

Table of Wetland Mitigation

Wetland Mitigation Site No.	Location	Latitude	Longitude	Mitigation (Acres)
1	Sec 10, T96N R65W	43.1490	98.5252	0.844

Wetland Topsoil

Wetland topsoil shall be stripped from all wetland areas which will be impacted by the project. The wetland topsoil shall be stripped to a depth that sufficiently allows 6 inches of the wetland topsoil to be re-utilized as the upper stratum of wetland mitigation site(s).

The wetland topsoil shall be stockpiled separately from other topsoil in a location approved by the Project Engineer. Locate wetland stockpile a minimum of 50 feet away from concentrated flows of storm water, drainage courses, and inlets. All wetland topsoil that is stripped shall be spread in the mitigation site(s) so that it is evenly distributed to a minimum depth of 6 inches. Surplus wetland topsoil shall be used to flatten embankment slopes or placed in other locations as approved by the Project Engineer.

All costs to remove and stockpile the wetland topsoil shall be incidental to the contract unit price per cubic yard for "Unclassified Excavation". The cost to place topsoil shall be at the contract unit price per cubic yard for "Placing Topsoil".

COMMITMENT B: FEDERALLY THREATENED, ENDANGERED, AND PROTECTED SPECIES

COMMITMENT B2: WHOOPING CRANE

The Whooping Crane is a spring and fall migratory bird in South Dakota that is about 5 feet tall and typically stops on wetlands, rivers, and agricultural lands along their migration route. An adult Whooping Crane is white with a red crown and a long, dark, pointed bill. Immature Whooping Cranes are cinnamon brown. While in flight, their long necks are kept straight and their

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	P TAPR (01)	2	30

long dark legs trail behind. Adult Whooping Cranes' black wing tips are visible during flight.

Action Taken/Required:

Harassment or other measures to cause the Whooping Crane to leave the site is a violation of the Endangered Species Act. If a Whooping Crane is sighted roosting in the vicinity of the project, borrow pit, or staging site associated with the project, cease construction activities in the affected area until the Whooping Crane departs and contact the Project Engineer. The Project Engineer will contact the Environmental Office so that the sighting can be reported to USFWS.

COMMITMENT B4: BALD EAGLE

Bald eagles are known to occur in this area.

Action Taken/Required:

If a nest is observed within one mile of the project site, notify the Project Engineer immediately so that he/she can consult with the Environmental Office for an appropriate course of action.

COMMITMENT C: WATER SOURCE

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 D: WATER QUALITY STANDARDS

COMMITMENT D2: SURFACE WATER DISCHARGE

Lake Andes is classified as warm water, marginal fishery with a Surface Water Discharge standard of 150 milligrams/liter total suspended solids.

Action Taken/Required:

If construction dewatering is required, the Contractor shall obtain a Temporary Discharge Permit from the DENR and provide a copy to the Project Engineer. Contact the DENR Surface Water Program at 605-773-3351 to apply for a permit.

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 Discharge to Waters of the United States within Indian Reservations".

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://www.sddot.com/business/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.

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.

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

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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.

COMMITMENT N: SECTION 404 PERMIT

The SDDOT has obtained a Section 404 Permit from the US Army Corps of Engineers for the permanent actions associated with this project.

Action Taken/Required:

The Contractor shall comply with all requirements contained in the Section 404 permit.

The Contractor shall also be responsible for obtaining a Section 404 permit for any dredge, excavation, or fill activities associated with staging areas, borrow sites, waste disposal sites, or material processing sites that affect wetlands or waters of the United States.



UTILITIES

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, might be relocated or replaced by a new utility facility during the construction of this project, or might 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 utility contact information is provided elsewhere in the plans or bidding documents.

The Contractor shall be responsible for all damage to utilities in the limits of the proposed construction at no cost to the Owners.

South Dakota One Call 1-800-781-7474

CLEARING

Before clearing activities begin, the Contractor shall contact the Engineer to determine the limits of clearing for the project and mark the trees that are to be cleared. 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. Fill material around the trees shall be warped as to avoid damage to the trees during grading activities. This is specific to the trees on the edge of the grading limits from Sta. 4+00 L&R to Sta. 5+25 L&R.

**REMOVAL OF EXISTING ASPHALT CONCRETE PAVEMENT
STA. 03+69.00 to STA. 03+96.74**

Existing asphalt concrete and/or existing asphalt concrete patch work that was placed above the existing concrete pavement is included in the quantity for "Remove Asphalt Concrete Pavement". The Contractor shall dispose of the concrete pavement and asphalt concrete at a site approved by the Engineer.

The contractor shall install asphalt concrete composite on the areas of removed asphalt. Asphalt concrete composite shall conform to Section 324 of the Specification and shall be paid at the contract unit price per ton of "Maintenance Patching".

TABLE OF ASPHALT CONCRETE PAVEMENT REMOVAL

Station	to	Station	L/R	Quantity (SqYd)
03+69		03+96	CL	31.0
Total:				31.0

TABLE OF CONCRETE CURB AND GUTTER REMOVAL

Station	to	Station	L/R	Quantity (Ft)
0+00		0+00	L & R	14.0
Total:				14.0

UNCLASSIFIED EXCAVATION

The cost of water shall be incidental to the contract unit prices per cubic yard for Unclassified Excavation and Borrow Unclassified Excavation.

Excavation and construction of embankments for grading shall be performed in accordance with Section 120 of the Specifications.

Compaction of embankments shall be governed by the Ordinary Compaction Method.

The path will be constructed to the typical sections shown in the plans. Additional grading may be required as directed by the Engineer to provide a smooth profile free from abrupt changes in grade. The grade shall conform to the guidelines as stated in the current AASHTO publication of "Guide for development of Bicycle Facilities".

All costs for excavation and construction of embankments required for grading shall be incidental to the contract unit prices per cubic yard for "Unclassified Excavation" or "Borrow Unclassified Excavation".

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

TABLE OF UNCLASSIFIED EXCAVATION

	(CuYd)
Path Excavation	1,174
Path Topsoil	695
Total:	1,869

BORROW UNCLASSIFIED EXCAVATION

Borrow material will come from existing Berm located on the project site at Sta 14+00.

Six (6") inches of topsoil from this area shall be stockpiled at a location as determined by the Engineer. Topsoil removed from within the wetland (832 CuYd.) shall be stockpiled separately from the non-wetland topsoil (695 CuYd.) but within the same designated area. The borrow site shall be brought down to an elevation of 1439.0. The original wetland topsoil shall be brought in and placed to an elevation of 1439.5. The contract unit price for Borrow Unclassified Excavation shall include stripping and stockpiling the topsoil, excavating to the borrow site limits to the required elevation.

A 30% shrinkage factor was used to compute the volume of Borrow Unclassified Excavation needed. Final quantity will be determined from a cross section survey of the borrow site.

TOPSOIL

Prior to the path development, topsoil shall be removed to a depth of 6" +/- and stockpiled at a location as shown on the Drawings. Silt Fence will be utilized at various break points along the topsoil pile to allow for drainage to leave the project. Excavation other than topsoil shall be separated and utilized as fill material if suitable. Following completion of the section development, topsoil shall be re-spread evenly over the disturbed areas that are not surfaced. All cost associated with laying topsoil shall be included in and paid for under the item "Placing Topsoil". Plans quantity will be the basis for payment unless changes are ordered by the Engineer.

Topsoil on existing wetland area shall be stockpiled separately in accordance with Environmental Commitment A. Topsoil take from the existing wetland area shall be used as topsoil for the created wetland mitigation area. If additional wetland topsoil material is available, Contractor may use this material in the shared use path project limits.

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CORRUGATED METAL PIPE

Corrugated metal pipes shall have 2 3/8-inch X 1/2-inch corrugations for 42-inch and smaller round pipe and 48-inch and smaller arch pipe unless otherwise stated in the plans. Corrugated metal pipes shall have 3-inch X 1-inch or 5-inch X 1-inch corrugations for 48-inch and larger round pipe and 54-inch and larger arch pipe unless otherwise stated in the plans.

The corrugated metal pipes including the elbows, tees, crosses, wyes, and ends shall be 16 gauge galvanized in accordance with AASHTO M36. The furnishing and installation of the required connection band and accessories to extend the existing CMP shall be incidental to the lineal foot price of pipe.

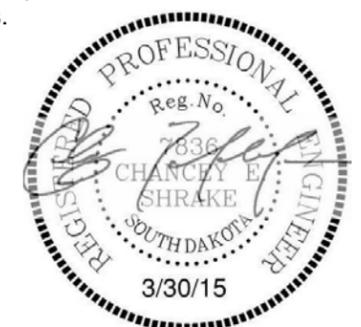
PERMANENT SIGNS

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 ASTM D4956 Type IV sheeting. 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". See breakaway post details and fixed post details regarding posts, hardware, bases, and footings. *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 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 ASTM specifications. 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. No separate payment will be made for cutting the post or for that length 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).

Payment for 2.0" x 2.0" perforated tube post shall include all cost for labor, equipment, and materials necessary to complete the following work:

1. Furnishing all posts, stiffeners, breakaway bases, soil stabilizers, and hardware.
2. Assembly and installation of breakaway base sign supports as per details shown in these plans.
3. Assembly of sign(s) to sign post as per erection details for Highway Signs as shown in these plans.
4. Installation of signpost and sign(s).



TEMPORARY TRAFFIC CONTROL

Removing, relocating, covering, salvaging and resetting of existing traffic control devices, including delineation, shall be the responsibility of the Contractor. The Contractor shall coordinate with the Engineer to determine which signs will be reset and to verify reset locations. 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 or County.

Vehicles and/or equipment used to accomplish the contract work shall be equipped with working flashing yellow warning lights when entering, leaving, or working in the roadway.

Traffic control, including necessary signs as shown on the standard plates, shall be incidental to the contract lump sum price for "Traffic Control, Miscellaneous".

MAINTENANCE OF TRAFFIC

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 bottom of signs on portable or temporary supports shall not be less than seven feet above the pavement in urban areas and one foot above the pavement in rural areas. Portable sign supports may be used as long as the duration is less than 3 days. If the duration is more than 3 days the signs shall be on fixed location, ground mounted, breakaway supports.

The Contractor shall provide documentation that all breakaway sign supports comply with FHWA NCHRP Report 350 or MASH crash-worthy requirements.

The Contractor shall provide details at the preconstruction meeting for all breakaway sign support assemblies.

6" REINFORCED CONCRETE SIDEWALK

The bid item 6" Reinforced Concrete Sidewalk shall include all materials, tools, and labor necessary to install the concrete path.

The reinforcing steel shall conform to ASTM A615 Grade 60. The longitudinal reinforcement shall consist of seven No. 4 bars spaced as per typical section. The lap splices for the longitudinal steel shall be staggered a minimum of 4'. The transverse reinforcement shall consist of No. 4 bars fabricated into chair assemblies or other support approved by the engineer capable of supporting longitudinal reinforcement without displacement placed on 48" spacing using wire legs or by using regular rebar chairs. Contraction joints shall be equally spaced transversely across the new concrete at 10' spacing. Expansion joints will be placed at 70 feet as per the Typical Joint and Rebar Layout Detail. All materials and labor for the installation of the contraction and expansion joints shall be incidental to the cost of the sidewalk.

Subgrade within cut sections shall be scarified and recompactd prior to placing gravel cushion.

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TABLE OF 6" CONCRETE SIDEWALK

Station	to Station	L/R	Quantity (SqFt)
0+00	16+85.89	CL	16,959.0
Total:			16,959.0

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 sidewalk thickness and 2 inches of granular cushion material shall be placed below the Type 1 Detectable 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.

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 25 th Street Hibbing, MN 55746 218-263-8871 http://key3casting.com

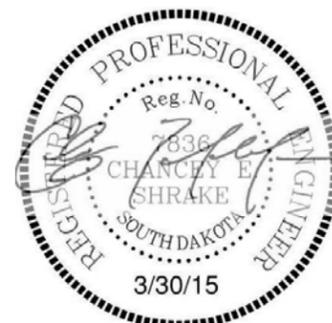


TABLE OF TYPE 1 DETECTABLE WARNINGS

Station	L/R	Quantity (SqFt)
0+00	CL	20
3+68	CL	20
3+98	CL	20
6+95	CL	20
7+11	CL	20
16+86	CL	20
Total:		120

PERMANENT SEEDING

The contractor shall be responsible for preparing all disturbed areas for seeding which will include proper topsoil replacement and preparation. The areas to be seeded comprise all newly graded areas within the project limits except for the top of paths.

The wetland area (0.844 Acres) will require special seed mixtures, and shall be paid for under the bid item for "Special Permanent Seed Mixture 1". The special permanent seed mixture shall consist of the following:

Scientific Name	Common Name	Pure Live Seed (PLS) (Pounds/Acre)
Calamagrostis Canadensis	Blue Joint Teed Grass	0.05
Elymus Virginicus	Virginia Wildrye	1.50
Glyceria Grandis	Reed Manna Grass	0.20
Leersia Oryzoides	Rice Cut Grass	0.40
Glyceria Striata	Fowl Manna Grass	0.03
Spartina Pectinata	Prairie Cord Grass	0.40
Poa Palustris	Fowl Bluegrass	0.45
Beckmannia Syzigachne	American Slough Grass	0.50
Alisma Subcordatum	Common Water Plantain	0.20
Asclepias Incarnate	Swamp Milkweed	0.05
Eupatorium Perfaliatum	Boneset	0.02
Verbena Hastate	Blue Vervain	0.25
Carex Vulpinodea	Brown Fox Sedge	0.30
Scirpus Atrovirens	Dark Green Bulrush	0.30
Scirpus Fluvialtilis	River Buorush	0.10
Spatganium Eurycarpum	Giant Bur Reed	0.25
Total:		5.00

PERMANENT SEEDING

The remaining path area (0.86 acres) shall require Type C Permanent Seed Mixture and shall be paid for under the bid item for "Type C Permanent Seed Mixture". The seed mix shall consist of the following:

Grass Species	Variety	Pure Live Seed (PLS) (Pounds/Acre)
Western Wheatgrass	Flintlock, Rodan, Rosana	16
Canada Wildrye	Mandan	2
Total:		18

South Dakota native grown seed is an acceptable alternative to any of the seed varieties listed above. South Dakota native grown seeds used as an alternative shall conform to the same specification and requirements for that individual seed type.

All seed shall comply with the requirements of the South Dakota Seed Law.

All seed broadcast, including the use of a hydroseeder, must be raked or dragged in (incorporated) with the top 1/4 to 1/2 inch 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.

Seeding may be done with drills other than press drills provided they are equipped with packer wheels which follow directly behind double disk furrow openers and provide compaction of the seeded drill rows similar to the compaction obtained by a press drill. All other requirements as specified in Sec. 730.3 D.3. of the Specifications shall apply.

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:

<i>Glomus intraradices</i>	25%
<i>Glomus aggregatu</i>	25%
<i>Glomus mosseae</i>	25%
<i>Glomus etunicatum</i>	25%

All seed shall be inoculated by the seed supplier with a minimum of 100,000 live propagules of mycorrhizal fungi per acre. 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 from the list below or an approved equal:

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

MULCHING (GRASS HAY OR STRAW)

Following permanent seeding, mulch consisting of grass hay or straw shall be blown on at the rate of 2 tons per acre. Bales with noxious weed contamination will be rejected and the Contractor will be required to remove the contaminated bales from the project.

The maximum time an area can remain open when the area is not being actively seeded is 14 calendar days. If this time is to be exceeded Contractor shall perform Temporary Erosion Control via Mulching in the interim.

An additional 1.7 tons of Grass Hay or Straw Mulch has been added to the Estimate of Quantities for temporary erosion control on areas determined by the Engineer during construction.

All disturbed ground shall be mulched with the exception of the wetland mitigation area.

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 that will minimize siltation of adjacent streams, lakes, dams, and drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

Silt Fence will also be utilized at various break points along the topsoil windrow to allow for drainage to leave the project. The engineer has estimated 100 feet of High Flow Silt Fence to be used at his discretion.

Plans quantity for silt fence may be adjusted due to requirements on site. Acceptable alternates to silt fence may be used, but must be approved by the engineer, and must meet SDDOT and SDDENR requirements for the general permit. Should the contractor choose to alter the erosion control plan, an alternate plan will be submitted to the engineer for review.

MUCKING SILT FENCE

Contractor will be responsible for maintaining and mucking silt fence. Silt fence shall be mucked when silt builds up to 1/3 of the height of the silt fence.

REMOVE SILT FENCE

Silt Fence shall be removed when vegetation is established. Some or the entire fence may be left on the project until vegetation is established. Quantities for all silt fence left in place will be deducted from the quantity for the bid item "Remove Silt Fence".

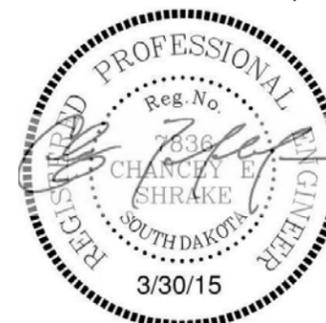
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	P TAPR (01)	6	30

HORIZONTAL ALIGNMENT DATA

Type	Station			Northing	Easting
POB	0+00.00			300924.27	2450951.90
		TL = 22.53	N 89°19'22" W		
PC	0+22.53			300946.79	2450951.38
PI	0+29.56	R = 125.17	Delta = 6°26'07" R	300951.72	2450946.35
PCC	0+36.59			300957.17	2450941.91
PI	0+42.76	R = 30.87	Delta = 22°36'03" R	300961.97	2450938.03
PCC	0+48.77			300967.89	2450936.29
PI	0+54.55	R = 30.70	Delta = 21°20'35" R	300973.47	2450934.78
PCC	0+60.20			300979.22	2450935.41
PI	0+75.78	R = 77.5	Delta = 22°43'31" R	300994.63	2450937.68
PT	0+90.94			301007.97	2450945.73
		TL = 15.03	N 28°43'53" E		
PC	1+05.97			301021.14	2450952.96
PI	1+16.68	R = 43.38	Delta = 27°44'10" L	301030.48	2450958.21
PT	1+26.97			301041.18	2450958.52
		TL = 15.24	N 2°14'11" E		
PC	1+42.21			301056.41	2450959.11
PI	1+70.12	R = 674.29	Delta = 4°44'24" L	301084.32	2450959.32
PT	1+98.00			301112.15	2450957.22
		TL - 27.12	N 6°03'47" W		
PC	2+25.12			301139.12	2450954.36
PI	2+64.59	R = 308.69	Delta = 14°34'32" R	301178.23	2450949.02
PCC	3+03.65			301217.43	2450953.70
PI	3+32.11	R = 578.11	Delta = 5°38'14" L	301217.43	2450953.70
PT	3+60.53			301274.11	2450958.21
		TL = 12.64	N 1°13'09" E		
PI	3+73.16			301286.74	2450958.48
		TL = 59.69	N 0°00'34" W		
PI	4+32.85			301346.43	2450958.47
		TL = 1152.33	N 1°03'31" W		
PI	15+85.18			302498.56	2450937.18
		TL = 13.58	N 2°37'15" W		
PI	15+98.76			302512.13	2450936.56
		TL = 5.88	N 2°37'15" W		
PC	16+04.64			302517.98	2450935.90
PI	16+12.98	R = 37.85	Delta = 24°51'12" L	302526.26	2450934.91
PCC	16+21.06			302533.35	2450930.52
PI	16+28.19	R = 79.59	Delta = 10°14'00" L	302539.52	2450926.95
PCC	16+35.28			302544.96	2450922.35
PI	16+44.36	R = 144.62	Delta = 7°11'30" L	302522.30	2450916.99
PT	16+53.43			302588.91	2450910.75
		TL = 4.99	N 38°05'58" W		
PC	16+58.41			302562.83	2450907.67
PI	16+72.47	R = 56.86	Delta = 27°45'44" R	302573.33	2450898.33
POE	16+85.97			302586.97	2450894.95

The coordinates shown on this sheet are based on the South Dakota State Plane Coordinate System. South Zone (NAD 83/96) SF = 0.9998911



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)

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❖ **SITE DESCRIPTION (4.2 1)**

- **Project Limits: See Title Sheet (4.2 1.b)**
- **Project Description: See Title Sheet (4.2 1.a.)**
- **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**
- **Major Soil Disturbing Activities** (check all that apply)
 - Clearing and grubbing
 - Excavation/borrow
 - Grading and shaping
 - Filling
 - Cutting and filling
 - Other (describe):
- **Total Project Area 3.0 Ac (4.2 1.b.)**
- **Total Area To Be Disturbed 2.48 Ac (4.2 1.b.)**
- **Existing Vegetative Cover (%) 98%**
- **Soil Properties: AASHTO Soil or USDA-NRCS Soil Series Classification (4.2 1. d.)**
- **Name of Receiving Water Body/Bodies Lake Andes (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.)
- **Clearing and grubbing.**
 - **Remove and store topsoil.**
 - **Stabilize disturbed areas.**
 - **Install utilities, storm sewers, curb and gutter.**
 - **Install inlet and culvert protection after completing storm drainage and other utility installations.**
 - **Complete final grading.**
 - **Complete final paving and sealing of concrete.**
 - **Complete traffic control installation and protection devices.**
 - **Reseed areas disturbed by removal activities.**

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

- (Check all that apply)
- **Stabilization Practices (See Detail Plan Sheets)**
 - Temporary 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
 - 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
- 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 1/3 of the height of the silt fence.
- Sediment basins and traps will be checked. Sediment will be removed when depth reaches approximately 50 percent of the structure's capacity, and at the conclusion of the construction.
- Check dams will be inspected for stability. Sediment will be removed when depth reaches 1/2 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.

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- 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, degreasing 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 waters will be collected on site and managed to prevent contamination of storm water runoff.

➤ **Product Specific Practices (6.8)**

▪ **Petroleum Products**

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

▪ **Fertilizers**

Fertilizers will be applied only in the amounts specified by the 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.

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➤ **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:

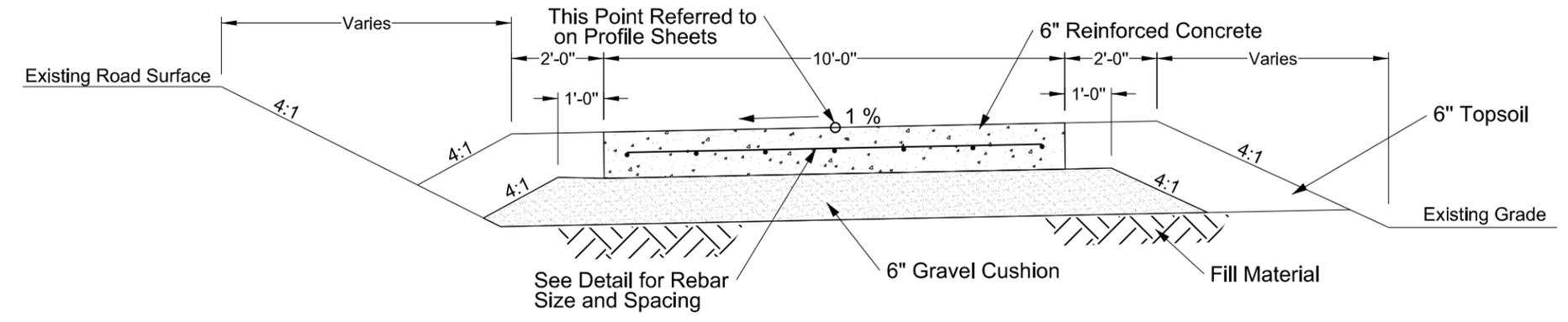
- Address:
- City: State: Zip:
- Office Phone: Field:
- Cell Phone: Fax:
- **SDDOT Project Engineer**
 - Name:
 - Business Address:
 - Job Office Location:
 - City: State: Zip:
 - Office Phone: Field:
 - Cell Phone: Fax:
- **SD DENR Contact Spill Reporting**
 - Business Hours Monday-Friday (605) 773-3296
 - Nights and Weekends (605) 773-3231
- **SD DENR Contact for Hazardous Materials.**
 - (605) 773-3153
- **National Response Center Hotline**
 - (800) 424-8802.

SHARED USE PATH TYPICAL SECTION

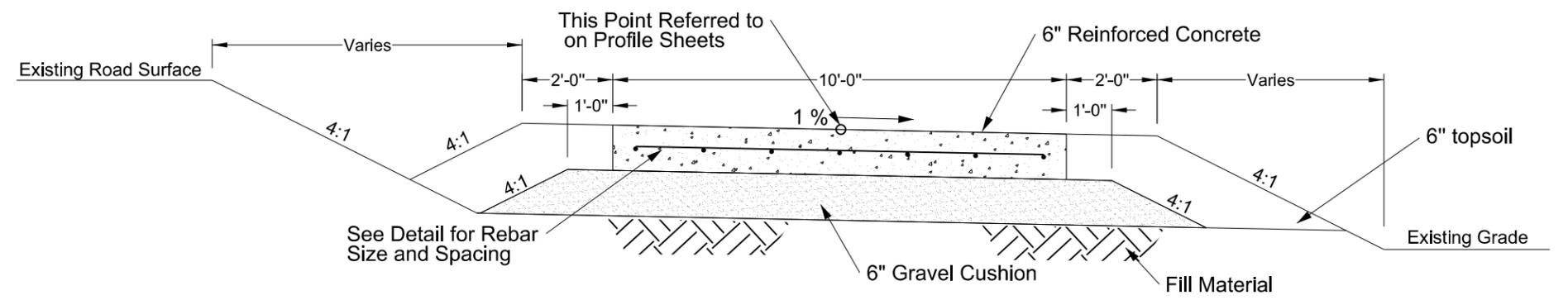
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STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	10	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			

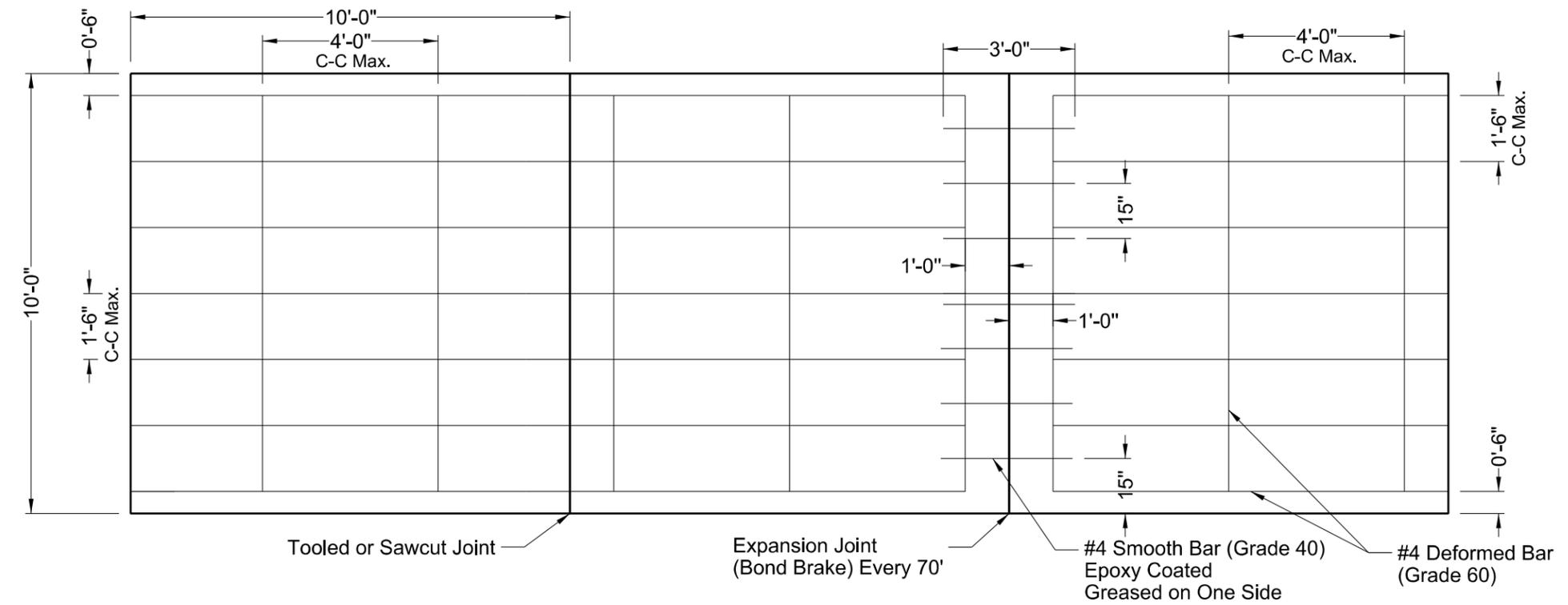
SECTION 0+00 TO 6+75



SECTION 7+25 TO 16+86



TYPICAL JOINT AND REBAR LAYOUT



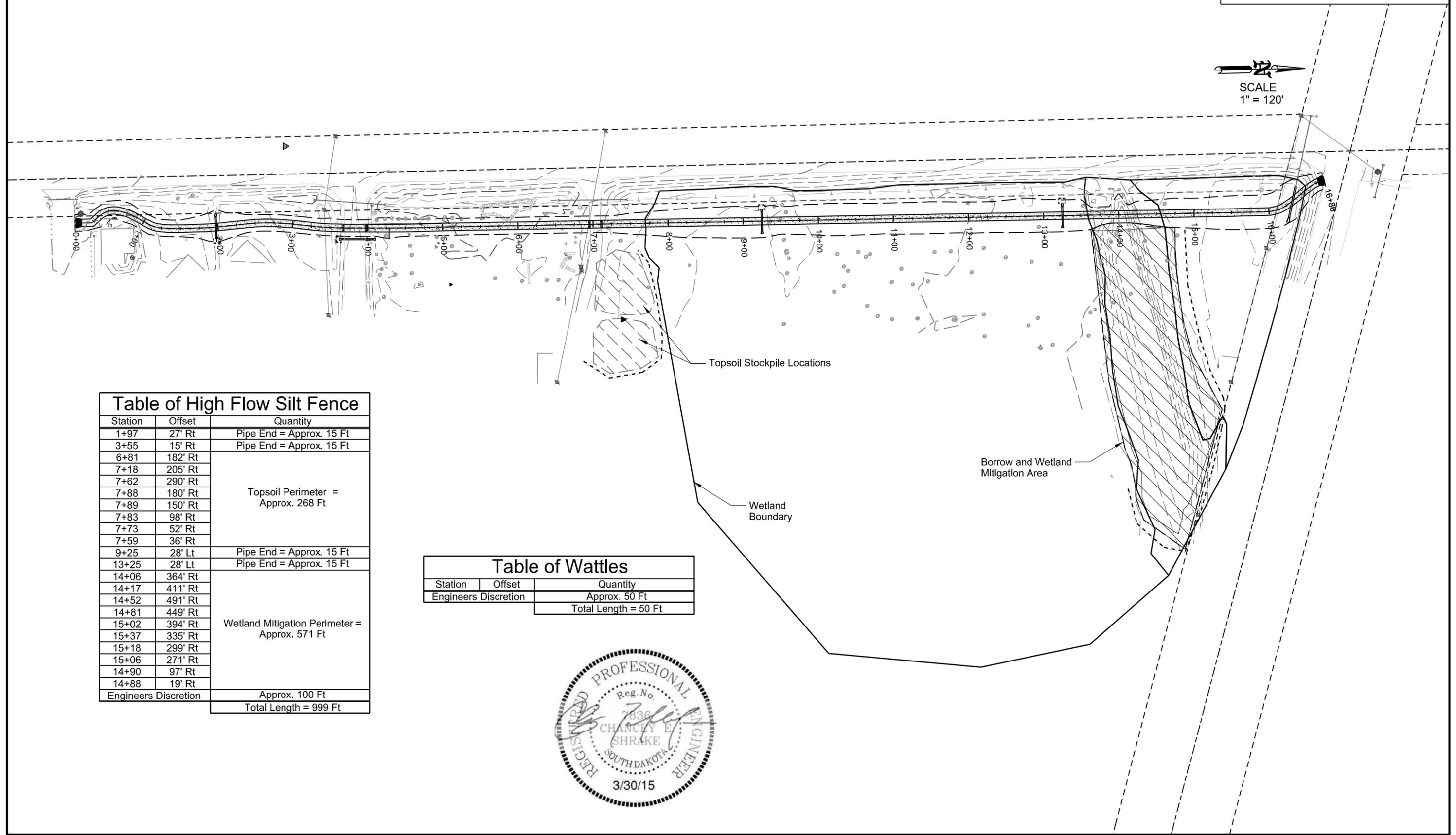
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EROSION CONTROL

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Plotting Date: 6/20/14
Revised Date: 11/5/14
Initials: CVS

SCALE
1" = 120'



Station	Offset	Quantity	
1+97	27' Rt	Pipe End = Approx. 15 Ft	
3+55	15' Rt	Pipe End = Approx. 15 Ft	
6+81	182' Rt	Topsoil Perimeter = Approx. 268 Ft	
7+18	205' Rt		
7+62	290' Rt		
7+88	180' Rt		
7+89	150' Rt		
7+83	98' Rt		
7+73	52' Rt		
7+59	36' Rt	Wetland Mitigation Perimeter = Approx. 571 Ft	
9+25	28' Lt		Pipe End = Approx. 15 Ft
13+25	28' Lt		Pipe End = Approx. 15 Ft
14+06	364' Rt		Wetland Mitigation Perimeter = Approx. 571 Ft
14+17	411' Rt		
14+52	491' Rt		
14+81	449' Rt		
15+02	394' Rt		
15+37	335' Rt		
15+18	299' Rt		
15+06	271' Rt	Approx. 100 Ft	
14+90	97' Rt		
14+88	19' Rt		
Engineers Discretion		Total Length = 999 Ft	

Station	Offset	Quantity
Engineers Discretion		Approx. 50 Ft
		Total Length = 50 Ft



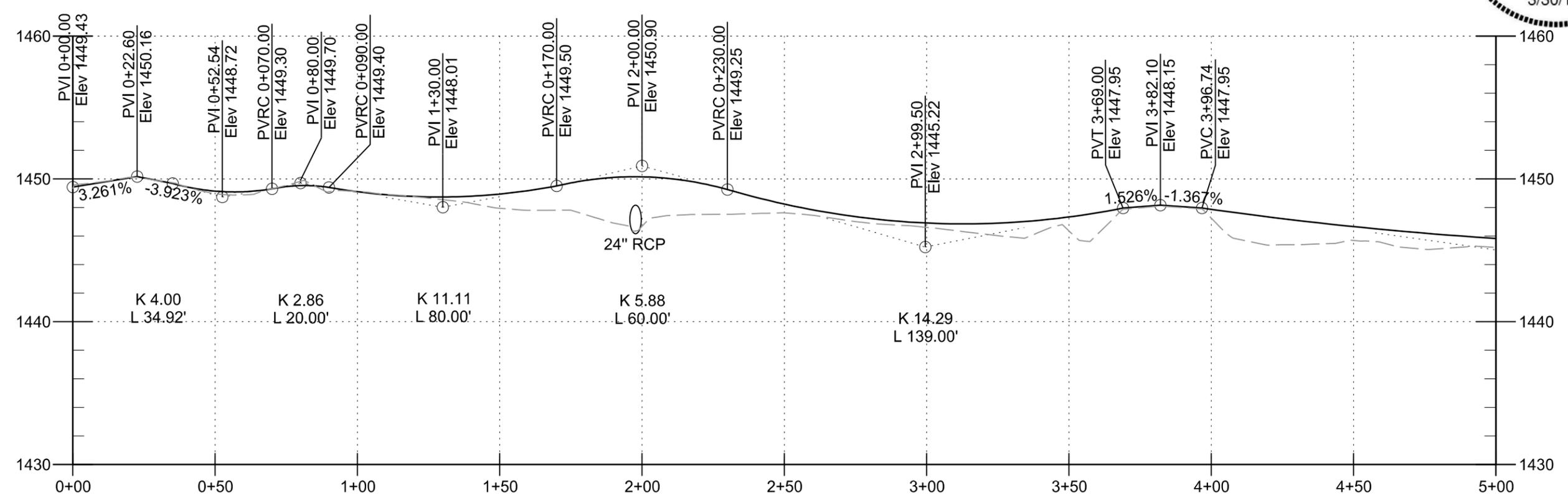
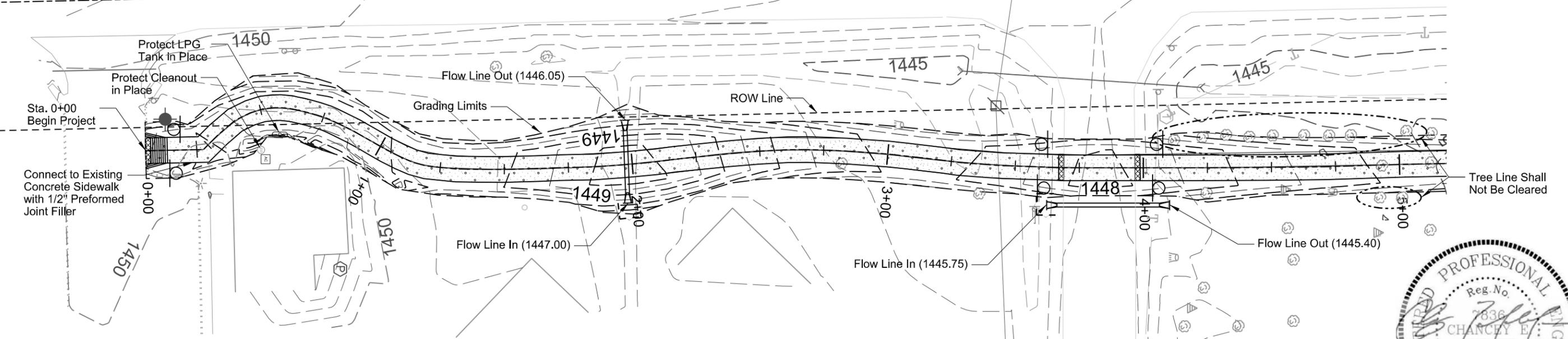
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	12	30
Plotting Date: 6/20/14 Revised Date: 2/18/15 Initials: CVS			

- Sta 0+00.0 - Install Type 1 Curb Ramp With Detectable Warning Panels (20 SqFt)
- Sta 0+12.0 8' L - Remove 14 Ft. of Curb and Gutter
- Sta 0+12.0 8' R - Install R1-1 (Stop) Sign
- Sta 1+97.7 - Install D11-1 (Bike Route) and R5-3 (No Motor Vehicles) Signs
- Sta 3+58.0 16' R - Install (24") 24" RCP With 2 Flared End Sections
- Sta 3+60.0 8' L - Remove and Rest Existing Traffic Sign At a Location Determined by the Engineer
- Sta 3+60.0 8' L - Install D11-1 (Bike Route) and R5-3 (No Motor Vehicles) Signs

- Sta 3+60.0 8' R - Install R1-2 (Yield) Sign
- Sta 3+62.5 15' R to Sta 4+14.7 14' R - Install (40') 18" RCP Culvert With 2 Flared End Sections
- Sta 3+68.0 - Install Detectable Warning Panel (20 SqFt)
- Sta 3+69 to Sta. 3+98 - Remove 30 SqYd. of Asphalt Concrete Pavement
- Sta 3+98.0 - Install Detectable Warning Panel (20 SqFt)
- Sta 4+06.0 8' R - Install D11-1 (Bike Route) and R5-3 (No Motor Vehicles) Signs
- Sta 4+06.0 8' L - Install R1-2 (Yield) sign

CP1:
Sta. 2+82 102' L
Northing: 301203.6960
Easting: 2450849.9110
Elevation: 1447.58

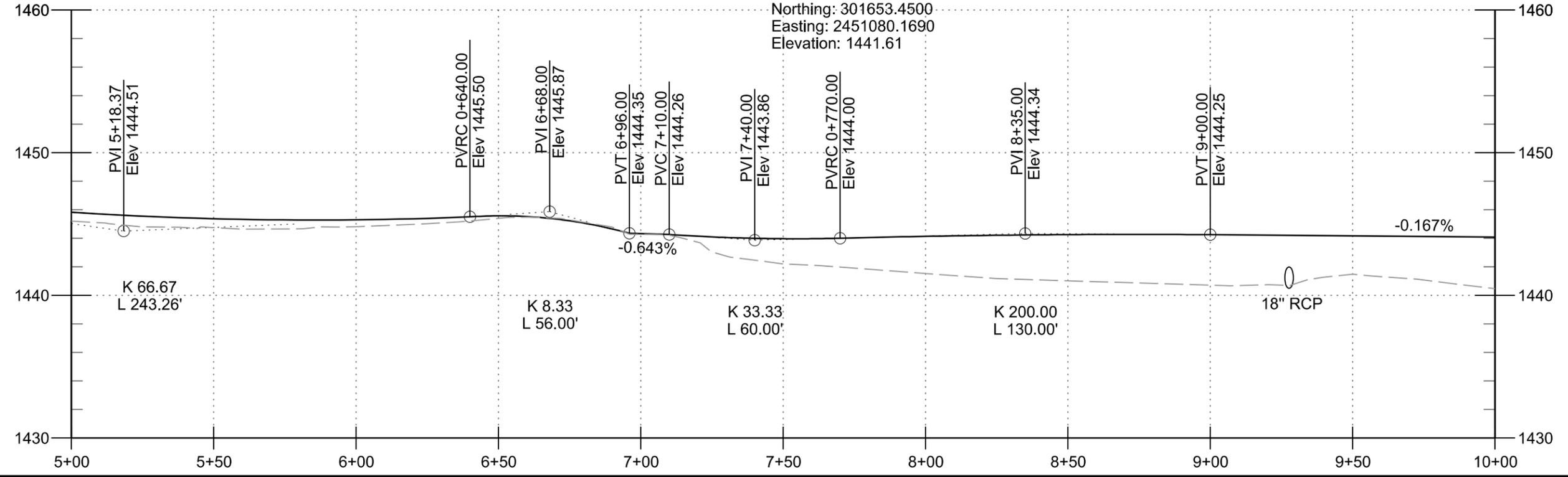
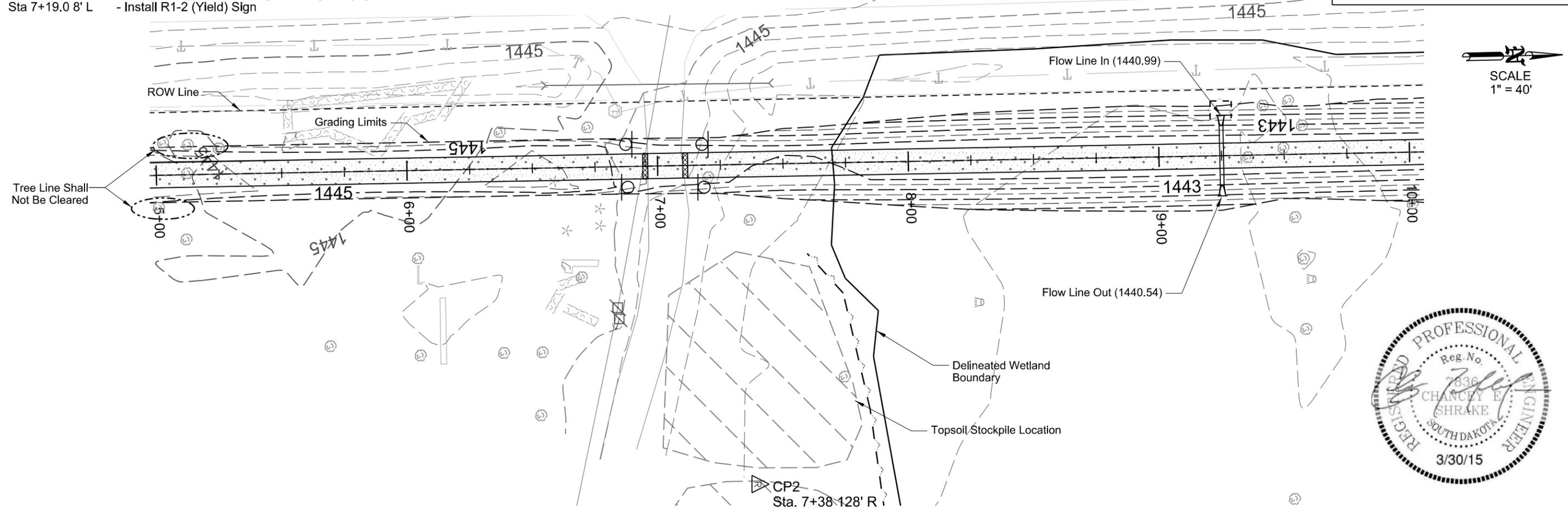


- Sta 6+87.0 8' R - Install R1-2 (Yield) Sign
- Sta 6+87.0 8' L - Install D11-1 (Bike Route) and R5-3 (No Motor Vehicles) Signs
- Sta 6+95.0 - Install Detectable Warning Panels (20 SqFt)
- Sta 7+11.0 - Install Detectable Warning Panels (20 SqFt)
- Sta 7+19.0 8' L - Install R1-2 (Yield) Sign

- Sta 7+19.0 8' R - Install D11-1 (Bike Route) and R5-3 (No Motor Vehicles) Signs
- Sta 9+25.0 - Install (24') 18" RCP Culvert With 2 Flared Ends

FOR BIDDING PURPOSES ONLY
383rd Ave.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	13	30
Plotting Date: 6/20/14		Revised Date: 2/18/15	
Initials: CVS			

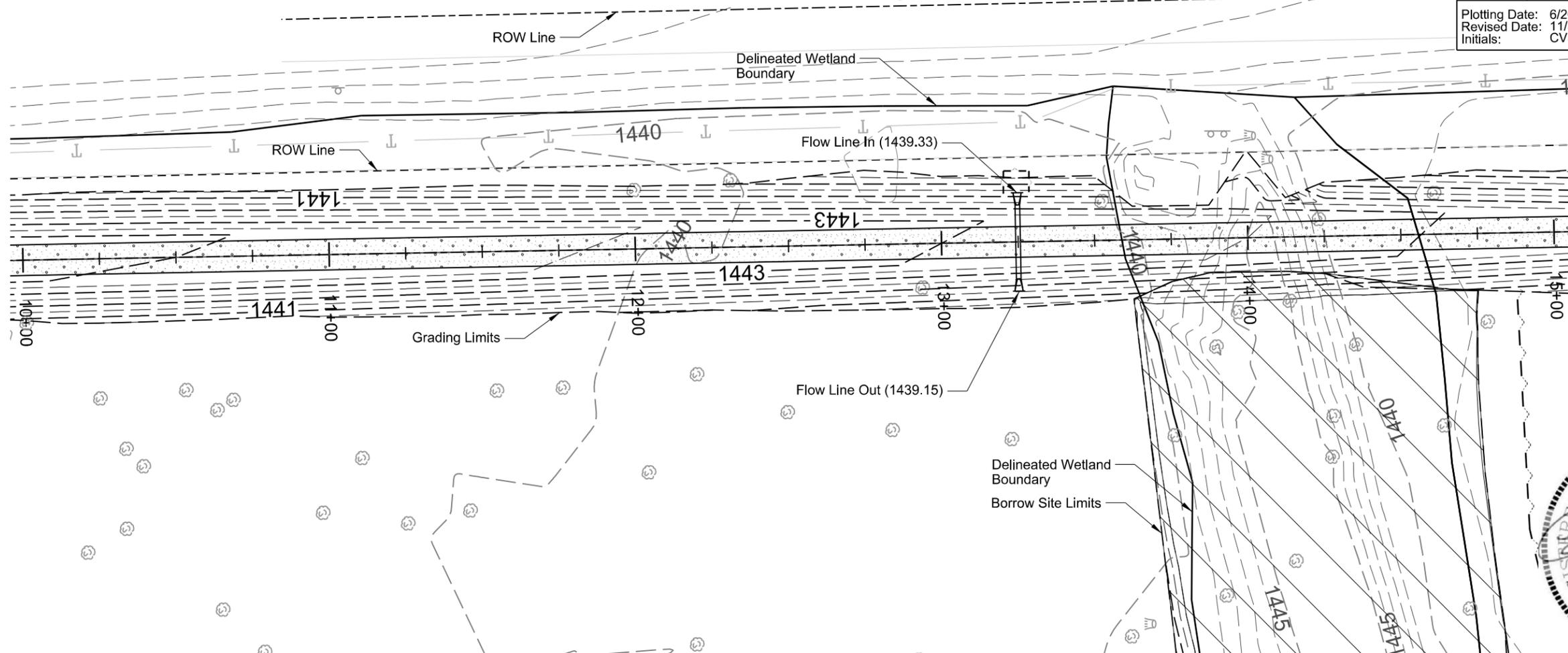


Sta 13+25.0 - Install (24') 18" RCP Culvert With 2 Flared Ends

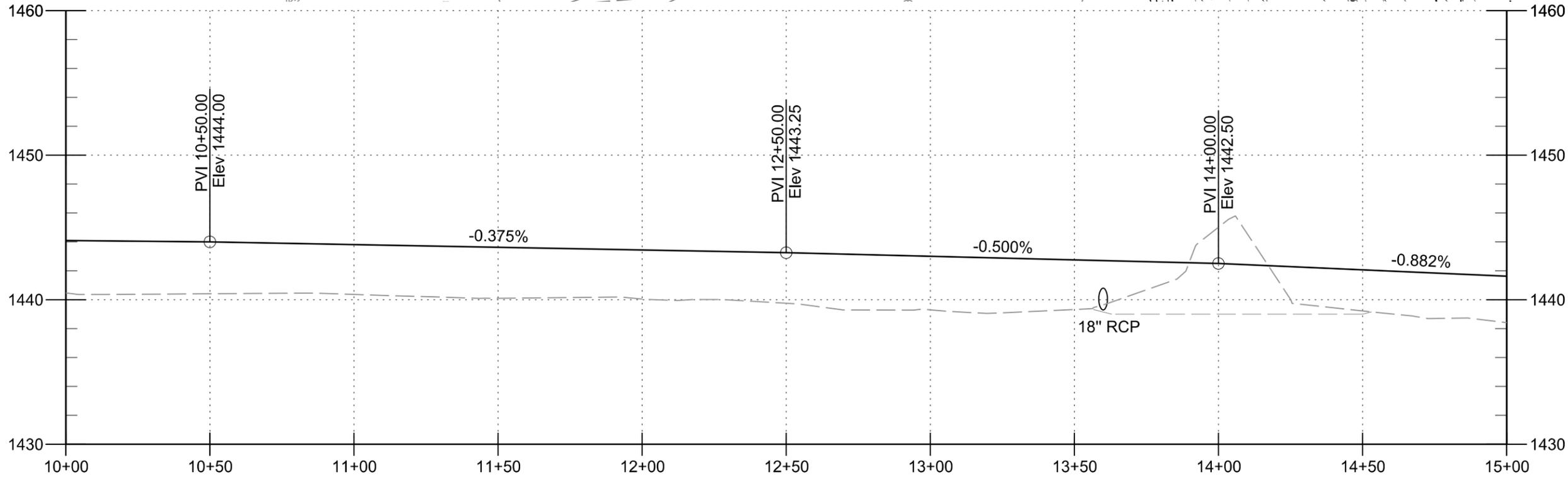
FOR BIDDING PURPOSES ONLY

383rd Ave.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	14	30
Plotting Date: 6/20/14		Revised Date: 11/5/14	
Initials: CVS			



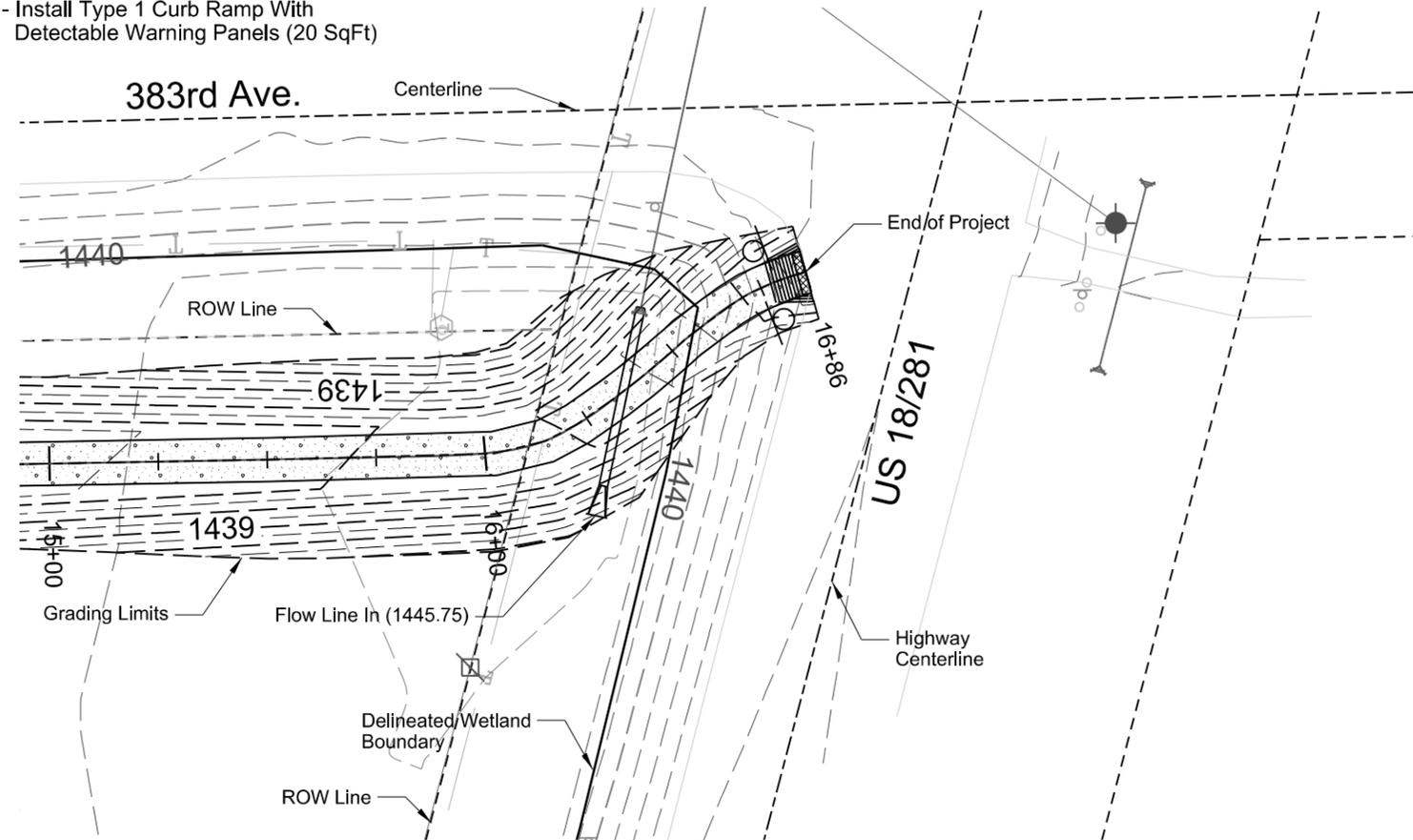
SCALE
1" = 40'



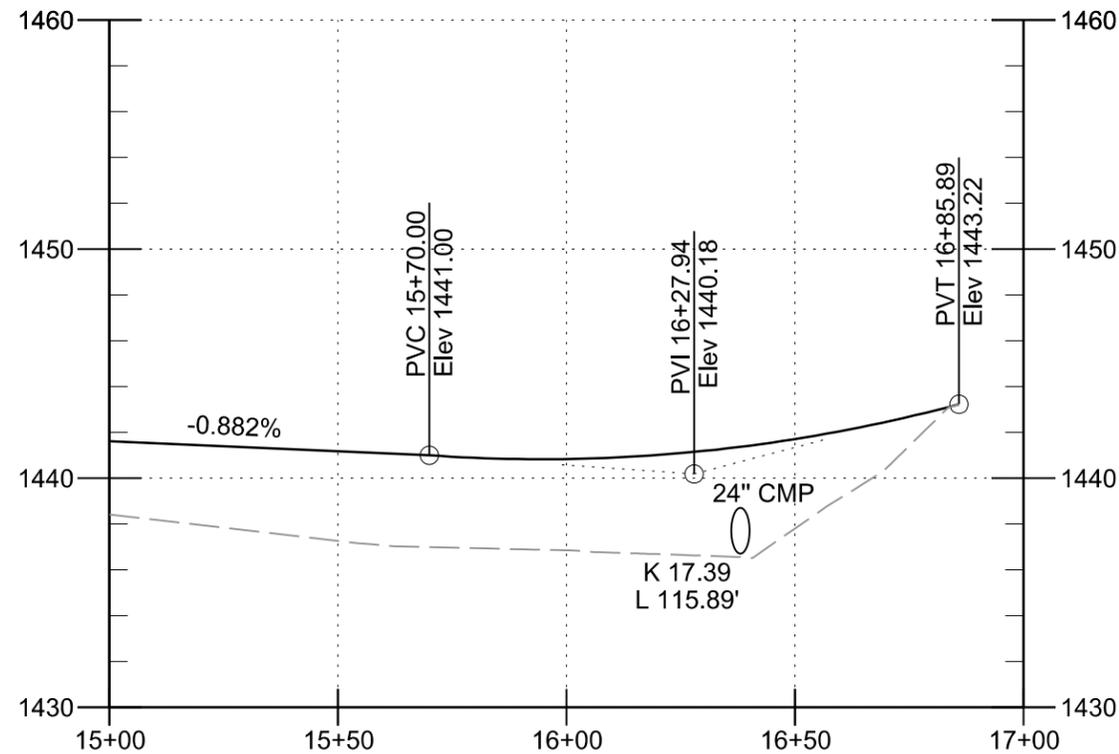
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	15	30
Plotting Date: 6/20/14 Revised Date: 2/18/15 Initials: CVS			

- Sta 16+51.2 12.2' L to Sta 16+20.9 15.2' R
- Install (42") 24" CMP Culvert With 1 Safety End
- Sta 16+78.0 8' R - Install R1-1 (Stop) Sign
- Sta 16+78.0 8' L - Install D1-11 (Bike Route)
and R5-3 (No Motor Vehicles) Signs
- Sta 16+86.0 - Install Type 1 Curb Ramp With
Detectable Warning Panels (20 SqFt)

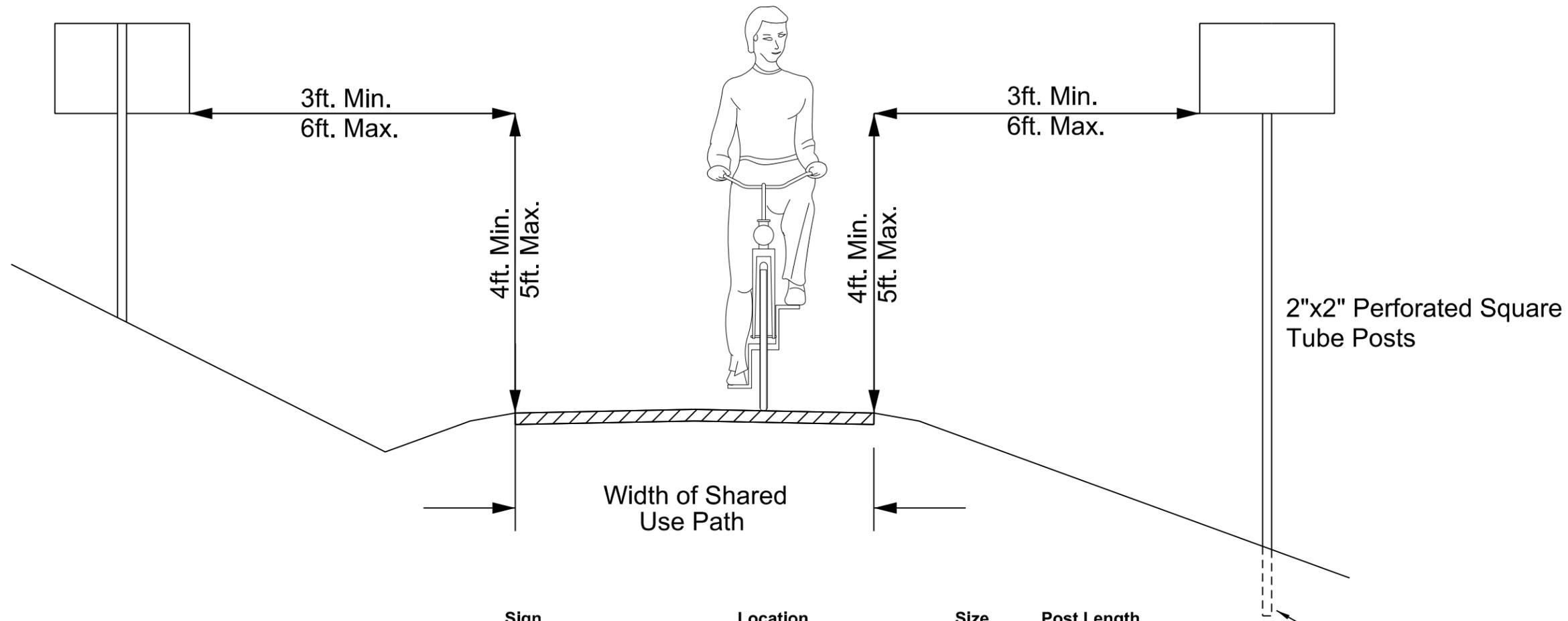


Note:
Sta. 16+50 to 16+86 R & Sta. 16+65 to 16+86 L
the contractor shall construct the inslope of the
shared use path with 6:1 slopes



TYPICAL SIGN PLACEMENT ON SHARED-USE PATH

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	16	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			



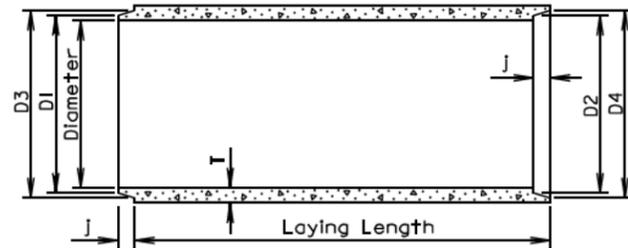
Note:
The quantity of post shown in the table on this sheet and the Estimate of Quantities is based on post length from ground elevation. The values shown does not include the length of post needed to go into the anchor. 2"x2" Perforated Tube Post shall be paid at the contract unit price for length of tubing above the ground.

Sign	Location	Size	Post Length
R1-1 (Stop)	Sta. 0+12.0 8' L	18"x18"	8'
D11-1 (Bike Route)	Sta. 0+12.0 8' R	24"x18"	10'
R5-3 (No Motor Vehicles)	Sta. 0+12.0 8' R	24"x24"	10'
R1-2 (Yield)	Sta. 3+60.0 8' R	24"x24"	8'
D11-1 (Bike Route)	Sta. 3+60.0 8' L	24"x18"	10'
R5-3 (No Motor Vehicles)	Sta. 3+60.0 8' L	24"x24"	10'
R1-2 (Yield)	Sta. 4+06.0 8' L	24"x24"	8'
D11-1 (Bike Route)	Sta. 4+06.0 8' R	24"x18"	10'
R5-3 (No Motor Vehicles)	Sta. 4+06.0 8' R	24"x24"	10'
R1-2 (Yield)	Sta. 6+87.0 8' R	24"x24"	8'
D11-1 (Bike Route)	Sta. 6+87.0 8' L	24"x18"	10'
R5-3 (No Motor Vehicles)	Sta. 6+87.0 8' L	24"x24"	10'
R1-2 (Yield)	Sta. 7+19.0 8' L	24"x24"	8'
D11-1 (Bike Route)	Sta. 7+19.0 8' R	24"x18"	10'
R5-3 (No Motor Vehicles)	Sta. 7+19.0 8' R	24"x24"	10'
R1-1 (Stop)	Sta. 16+78.0 8' R	18"x18"	8'
D11-1 (Bike Route)	Sta. 16+78.0 8' L	24"x18"	10'
R5-3 (No Motor Vehicles)	Sta. 16+78.0 8' L	24"x24"	10'

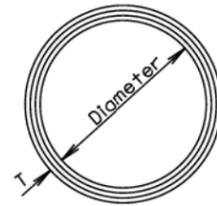
Refer to Special Detail L21 for Sign Support Details

TOLERANCES IN DIMENSIONS

Diameters: $\pm 1.5\%$ for 24" Dia. or less and $\pm 1\%$ or $\frac{3}{8}"$ whichever is more for 27" Dia. or greater.
 Diameters at Joints: $\pm 3/16"$ for 30" Dia. or less and $\pm 1/4"$ for 36" or greater.
 Length of joint (j): $\pm 1/4"$.
 Wall thickness (T): not less than design T by more than 5% or $\frac{3}{16}"$, whichever is greater.
 Laying length: shall not underrun by more than $\frac{1}{2}"$.



LONGITUDINAL SECTION



END VIEW

GENERAL NOTES:

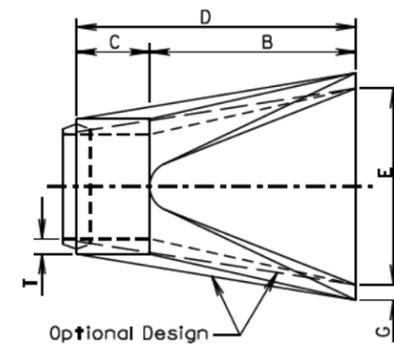
Construction of R. C. P. shall conform to the requirements of Section 990 of the Standard Specifications for Roads and Bridges.

Not more than 2 four foot sections shall be permitted near the ends of any culvert. Four foot lengths shall be used only to secure the required length of culvert.

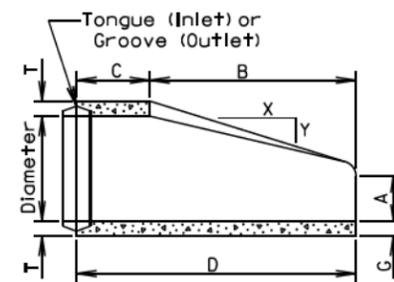
Diam. (in.)	Approx. Wt. /Ft. (lb.)	T (in.)	J (in.)	D1 (in.)	D2 (in.)	D3 (in.)	D4 (in.)
12	92	2	1 3/4	13 1/4	13 5/8	13 3/8	14 1/4
15	127	2 1/4	2	16 1/2	16 1/8	17 1/4	17 5/8
18	168	2 1/2	2 1/4	19 5/8	20	20 3/8	20 3/4
21	214	2 3/4	2 1/2	22 1/8	23 1/4	23 3/4	24 1/8
24	265	3	2 3/4	26	26 5/8	27	27 3/8
27	322	3 1/4	3	29 1/4	29 5/8	30 1/4	30 5/8
30	384	3 1/2	3 1/4	32 3/8	32 3/4	33 1/2	33 3/8
36	524	4	3 3/4	38 3/4	39 1/4	40	40 1/2
42	685	4 1/2	4	45 1/8	45 5/8	46 1/2	47
48	867	5	4 1/2	51 1/2	52	53	53 1/2
54	1070	5 1/2	4 1/2	57 1/8	58 3/8	59 3/8	59 3/8
60	1296	6	5	64 1/4	64 3/4	66	66 1/2
66	1542	6 1/2	5 1/2	70 5/8	71 1/8	72 1/2	73
72	1810	7	6	77	77 1/2	79	79 1/2
78	2098	7 1/2	6 1/2	83 3/8	83 1/8	85 5/8	86 1/8
84	2410	8	7	89 3/4	90 1/4	92 1/8	92 5/8
90	2740	8 1/2	7	95 3/4	96 1/4	98 1/8	98 5/8
96	2950	9	7	102 1/8	102 5/8	104 1/2	105
102	3075	9 1/2	7 1/2	109	109 1/2	111 1/2	112
108	3870	10	7 1/2	115 1/2	116	118	118 1/2

March 31, 2000

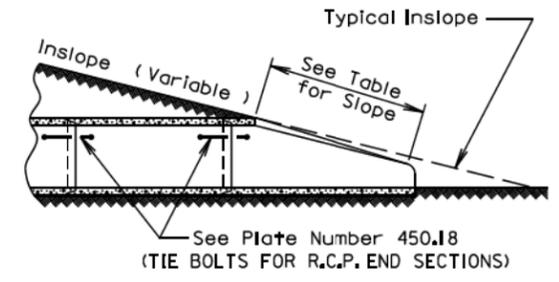
S D D O T	REINFORCED CONCRETE PIPE	PLATE NUMBER 450.01
	Published Date: 4th Qtr. 2014	Sheet 1 of 1



TOP VIEW



LONGITUDINAL SECTION

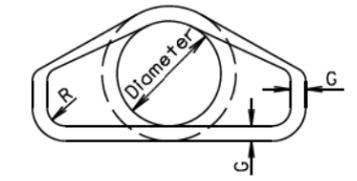


SLOPE DETAIL

GENERAL NOTES:

Lengths of concrete pipe shown on Plan Sheets are between flared Ends only.

Construction of R.C.P. Flared End shall conform to the requirements of Section 990 of the Standard Specifications for Roads and Bridges.



END VIEW

Dia. (in.)	Approx. Wt. of Section (lbs.)	Approx. Slope (X to Y)	T (in.)	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	G (in.)	R (in.)
12	530	2.4:1	2	4	24	48 1/8	72 1/8	24	2	1 1/2
15	740	2.4:1	2 1/4	6	27	46	73	30	2 1/4	1 1/2
18	990	2.3:1	2 1/2	9	27	46	73	36	2 1/2	1 1/2
21	1280	2.4:1	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	1 1/2
24	1520	2.5:1	3	9 1/2	43 1/2	30	73 1/2	48	3	1 1/2
27	1930	2.5:1	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	1 1/2
30	2190	2.5:1	3 1/2	12	54	19 3/4	73 3/4	60	3 1/2	1 1/2
36	4100	2.5:1	4	15	63	34 3/4	97 3/4	72	4	1 1/2
42	5380	2.5:1	4 1/2	21	63	35	98	78	4 1/2	1 1/2
48	6550	2.5:1	5	24	72	26	98	84	5	1 1/2
54	8240	2:1	5 1/2	27	65	33 1/4	98 1/4	90	5 1/2	1 1/2
60	8730	1.9:1	6	35	60	39	99	96	5	1 1/2
66	10710	1.7:1	6 1/2	30	72	27	99	102	5 1/2	1 1/2
72	12520	1.8:1	7	36	78	21	99	108	6	1 1/2
78	14770	1.8:1	7 1/2	36	90	21	111	114	6 1/2	1 1/2
84	18160	1.6:1	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2
90	20900	1.5:1	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	6

March 31, 2000

S D D O T	R. C. P. FLARED ENDS	PLATE NUMBER 450.10
	Published Date: 4th Qtr. 2014	Sheet 1 of 1

Wall "t" (in.)	Rod Dia. (in.)	Pipe Sleeve Dia. (nominal)
< 3/4	5/8	3/4
3/2-6/2	3/4	1
> 7	1	1 1/4

GENERAL NOTES:
Tie bolts shall conform to ASTM F1554 Grade 36 or ASTM A36. Nuts shall be heavy hex conforming to ASTM A563. Washers shall conform to ASTM F436.
Pipe Sleeve shall conform to ASTM A500 or A53, Grade B.
Galvanize adjustable eye bolt tie assembly in accordance with ASTM A153.

ASTM F1554 Grade 36 or ASTM A36 Tie Bolt with 2 Heavy Hex Nuts and 2 Washers

ASTM F1554 Grade 36 or ASTM A36 Rod with Heavy Hex Nut and Washer

ADJUSTABLE EYE BOLT TIE

Pipe Dia. (in.)	L* (in.)	Bolt Dia. (in.)
< 48	4	3/4
> 48	6	1

GENERAL NOTES:
Angles shall conform to ASTM A36.
Bolts shall conform to ASTM A307. Nuts shall be heavy hex conforming to ASTM A563. Washers shall conform to ASTM F436.
Galvanize angles, bolts, nuts, and washers in accordance with ASTM A153.

ASTM A307 Bolt with Heavy Hex Nut and 2 Washers

ANGLE AND BOLT TIE

GENERAL NOTES:
In lieu of the tie bolts detailed above other types of tie bolt connections may be installed as approved by the Office of Bridge Design.
All pipe sections of R.C.P. and R.C.P. Arch shall be tied with tie bolts except for pipe located between drop inlets, manholes, and junction boxes. All pipe sections of pipes that only enter or exit drop inlets, manhole, and junction boxes shall be tied with tie bolts.
There will be no separate measurement or payment for the tie bolts. The cost for furnishing and installing the tie bolts shall be incidental to the contract unit price per foot for the corresponding bid item for R.C.P. or R.C.P. Arch.

END VIEW "CIRCULAR" **END VIEW "ARCH"**

ELEVATION VIEW

24" (Max.) Spacing

1" x 3/16" Slotted Hole

Safety Bars (Typ.)*

Pipe Size

DETAIL OF SAFETY BARS

3" Galvanized Pipes Flatten end, then bend outside 4" to match end section sides.

7/16" (Min.) Dia. Galvanized Steel Rod or No. 4 Galvanized Reinforcing Bar.

SECTION A-A

SECTION B-B

Corrugation sized to fit pipe.

Pipe

1/2" Dia. Hex. Head Bolts (Typ.)

ISOMETRIC VIEW

Reinforced Edge Full Length of End Section (See Section A-A)

Bolts to hold the Surfaces tightly together

Optional Toe Plate Extension (Same Gage as End Section)

Holes spaced at 12" (Max.)

Pipe Size

4"

Rise

Overall Width

Overall Width

FRONT VIEW **FRONT VIEW**

1/2" Threaded rod with flanged nuts. Form over top of end section. Side lugs to be bolted to end section

1/2" x 6" Culvert bolt with flanged nut

Side Lug

Galvanized strap

TYPE #2 CONNECTOR DETAIL
(For 30" and Larger)
(For 21" X 15" and Larger)

TYPE #1 CONNECTOR DETAIL
(For 15" Through 24")

ARCH C.M.P. SAFETY ENDS										
Equiv. Dia. (Inch)	(Inches)		Min. Thick.		Dimensions (Inches)				L Dimensions	
	Span	Rise	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)
18	21	15	.064	16	8	6	27	43	6:1	30
21	24	18	.064	16	8	6	30	46	6:1	48
24	28	20	.064	16	8	6	34	50	6:1	60
30	35	24	.079	14	12	9	41	65	6:1	84
36	42	29	.109	12	12	9	48	72	6:1	114
42	49	33	.109	12	16	12	55	87	6:1	138
48	57	38	.109	12	16	12	63	95	6:1	168
54	64	43	.109	12	16	12	70	102	6:1	198
60	71	47	.109	12	16	12	77	109	6:1	222
72	83	57	.109	12	16	12	89	121	6:1	282

CIRCULAR C.M.P. SAFETY ENDS									
Pipe Dia. (Inch)	Min. Thick.		Dimensions (Inches)				L Dimensions		
	Inch	Gage	A	H	W	Overall Width	Slope	Length (Inch)	
15	.064	16	8	6	21	37	6:1	30	
18	.064	16	8	6	24	40	6:1	48	
21	.064	16	8	6	27	43	6:1	66	
24	.064	16	8	6	30	46	6:1	84	
30	.109	12	12	9	36	60	6:1	120	
36	.109	12	12	9	42	66	6:1	156	
42	.109	12	16	12	48	80	6:1	192	
48	.109	12	16	12	54	86	6:1	228	
54	.109	12	16	12	60	92	6:1	264	
60	.109	12	16	12	66	98	6:1	300	

GENERAL NOTES:

Safety ends shall be fabricated from galvanized steel conforming to the requirements of the Standard Specifications.

Safety bars shall be fabricated from steel schedule 40 pipe in conformance with ASTM A53, grade B or HSS 3.5X.216 in conformance with ASTM A500, grade B.

Slotted holes for safety bar attachment shall be provided for all end sections.

Attachment to circular pipes 15" through 24" diameter shall be made with Type #1 straps. All other sizes shall be attached with Type #2 rods and lugs.

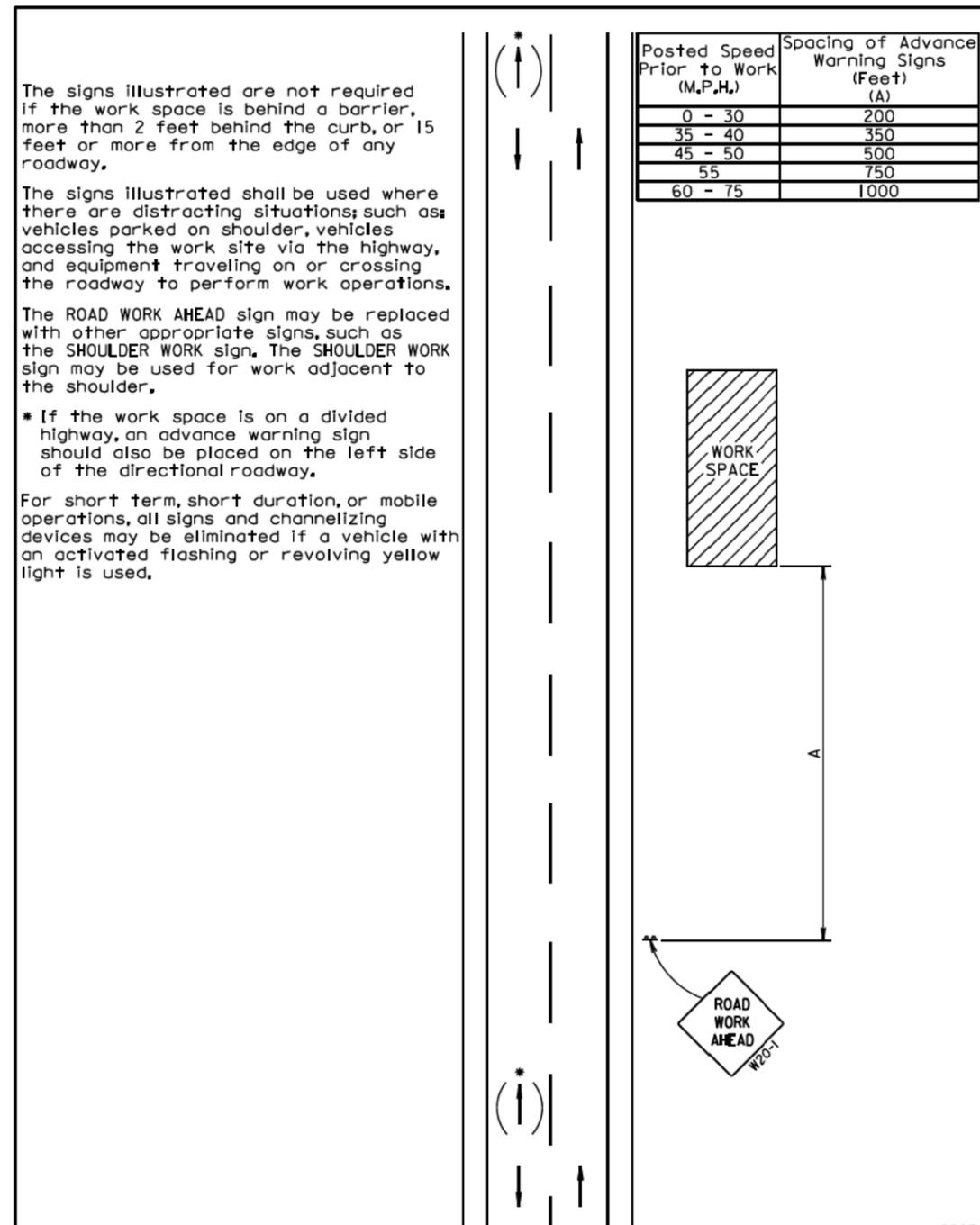
When stated in the plans, optional toe plate extension shall be punched and bolted to end section apron lip with 3/8" diameter galvanized bolts. Steel for toe plate extension shall be same gauge as end section. Dimensions shall be overall width less 6" by 8" high.

Installation shall be performed in accordance with the Standard Specifications.

Cost of all work and materials required for fabrication and installation of safety ends shall be incidental to the bid items for the various sizes of safety ends.

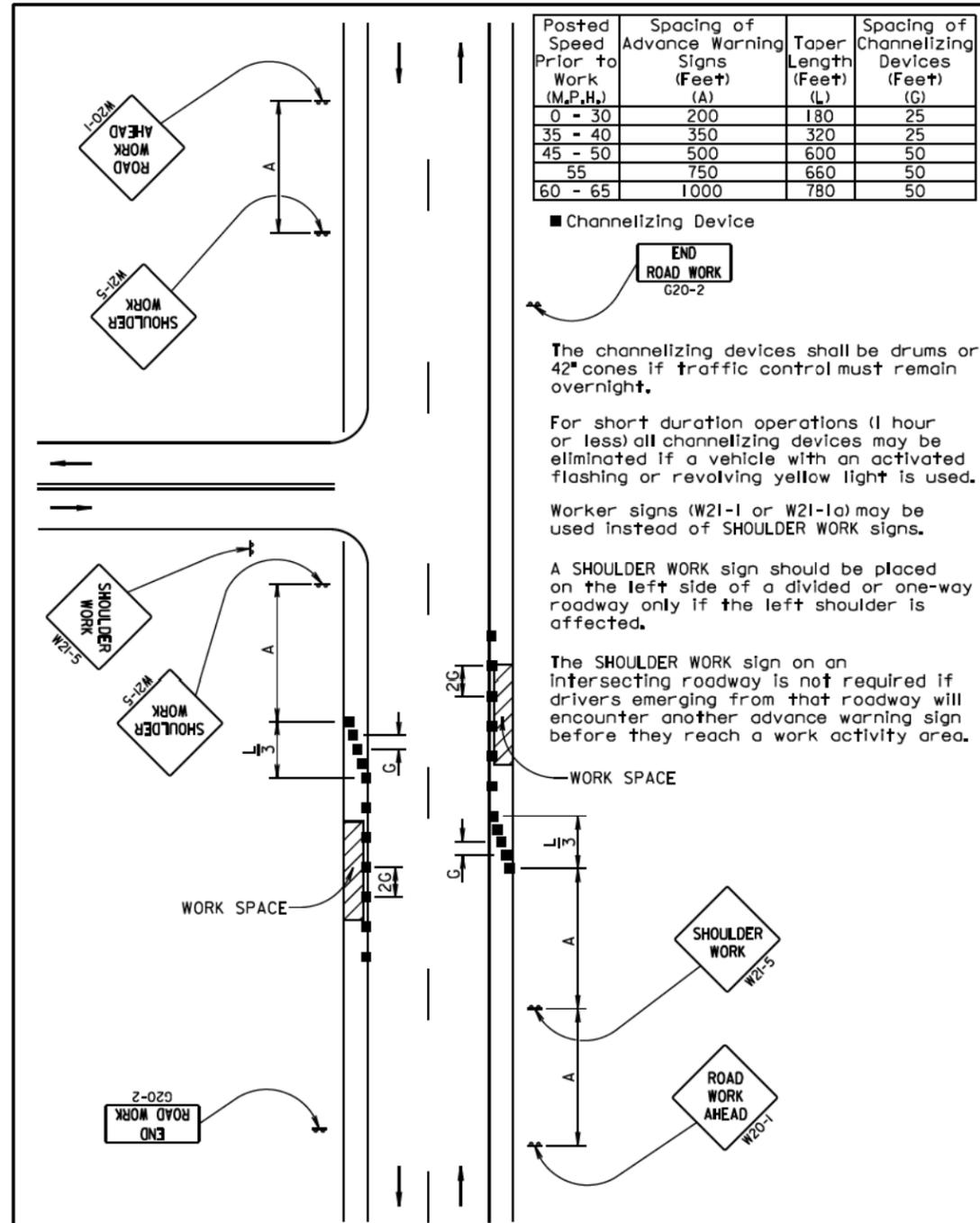
August 31, 2013

Published Date: 4th Qtr. 2014	S D D O T	C. M. P. SAFETY ENDS	PLATE NUMBER 450.38
			Sheet 2 of 2

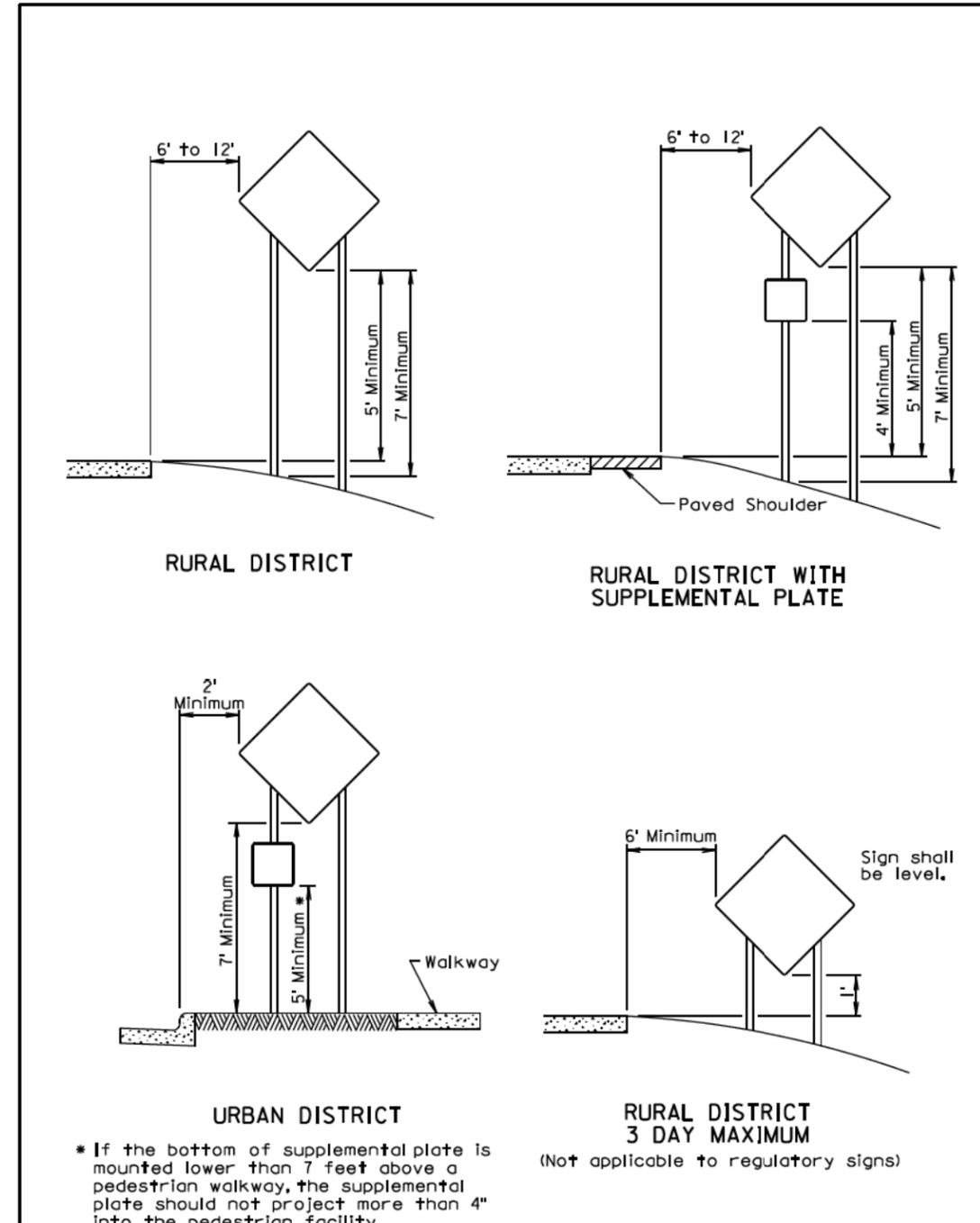


July 1, 2005

Published Date: 4th Qtr. 2014	S D D O T	GUIDES FOR TRAFFIC CONTROL DEVICES WORK BEYOND THE SHOULDER	PLATE NUMBER 634.01
			Sheet 1 of 1

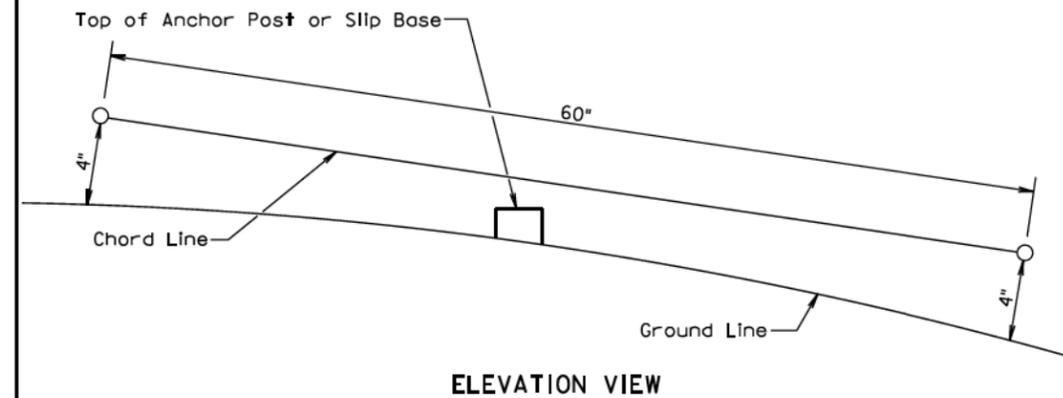
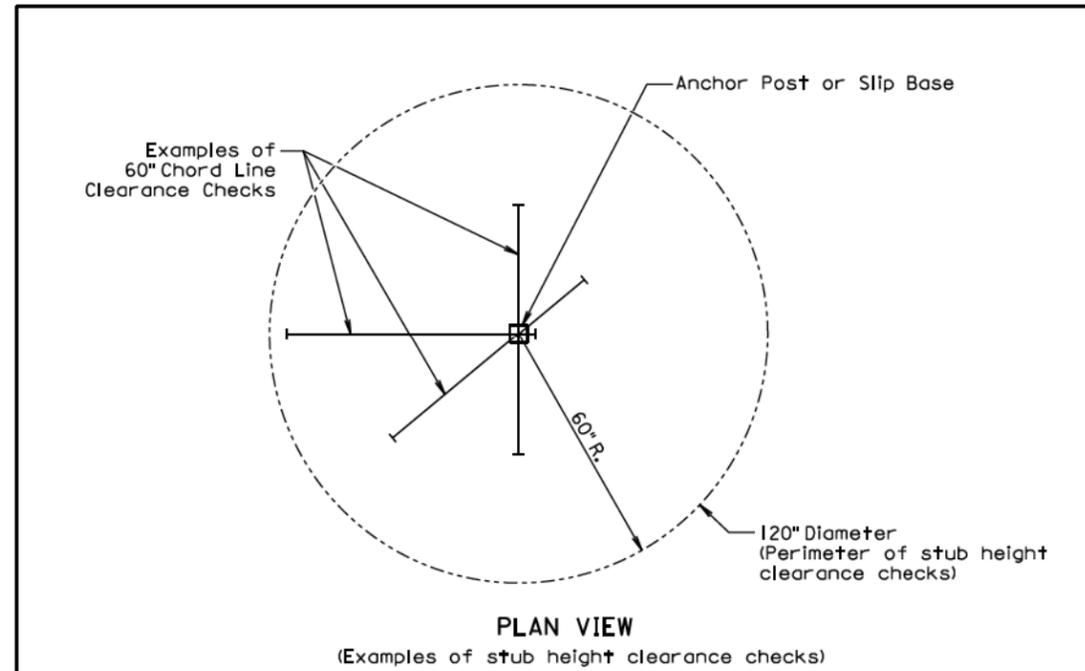


September 22, 2014



September 22, 2014

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	21	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			



GENERAL NOTES:

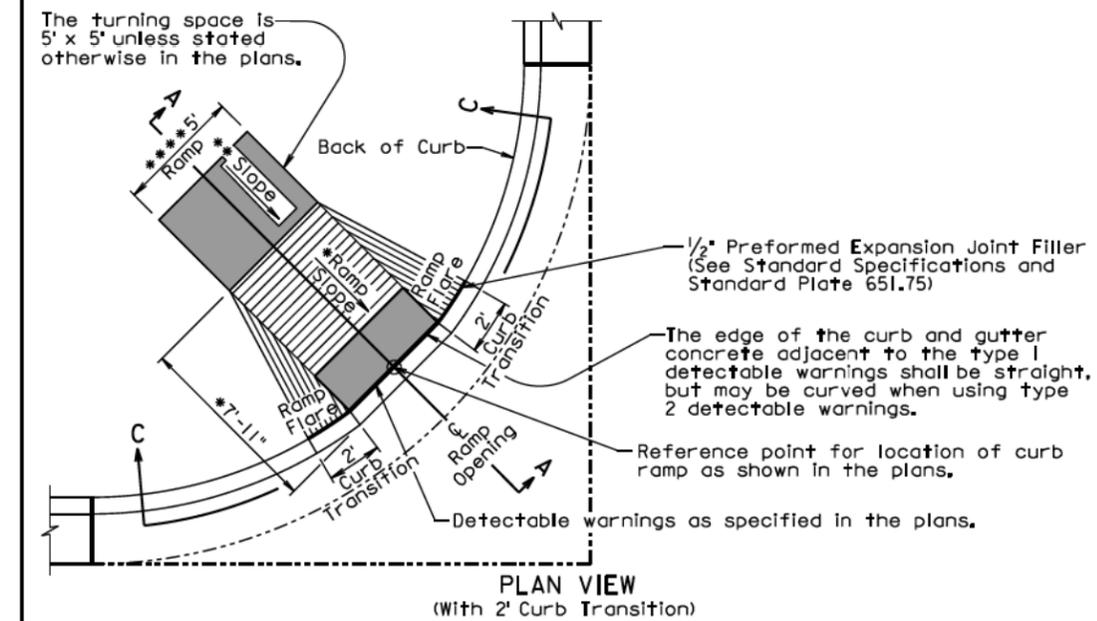
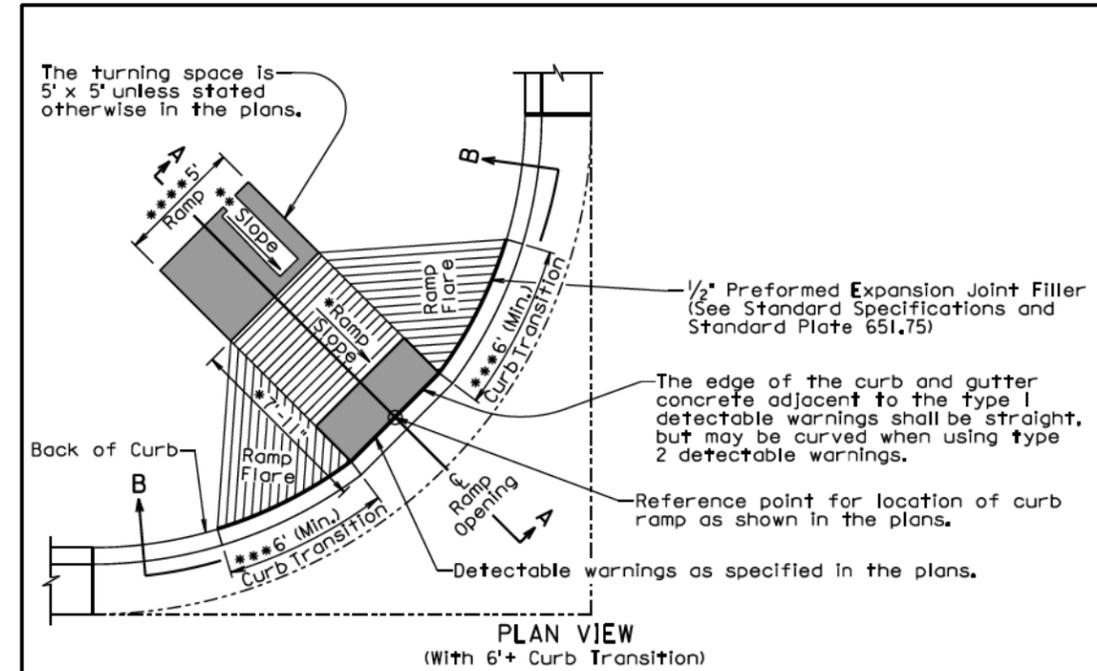
The top of anchor posts and slip bases SHALL NOT extend above a 60" chord line within a 120" diameter circle around the post with ends 4" above the ground.

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: 4th Qtr. 2014	S D D O T	BREAKAWAY SUPPORT STUB CLEARANCE	PLATE NUMBER 634.99
			Sheet 1 of 1

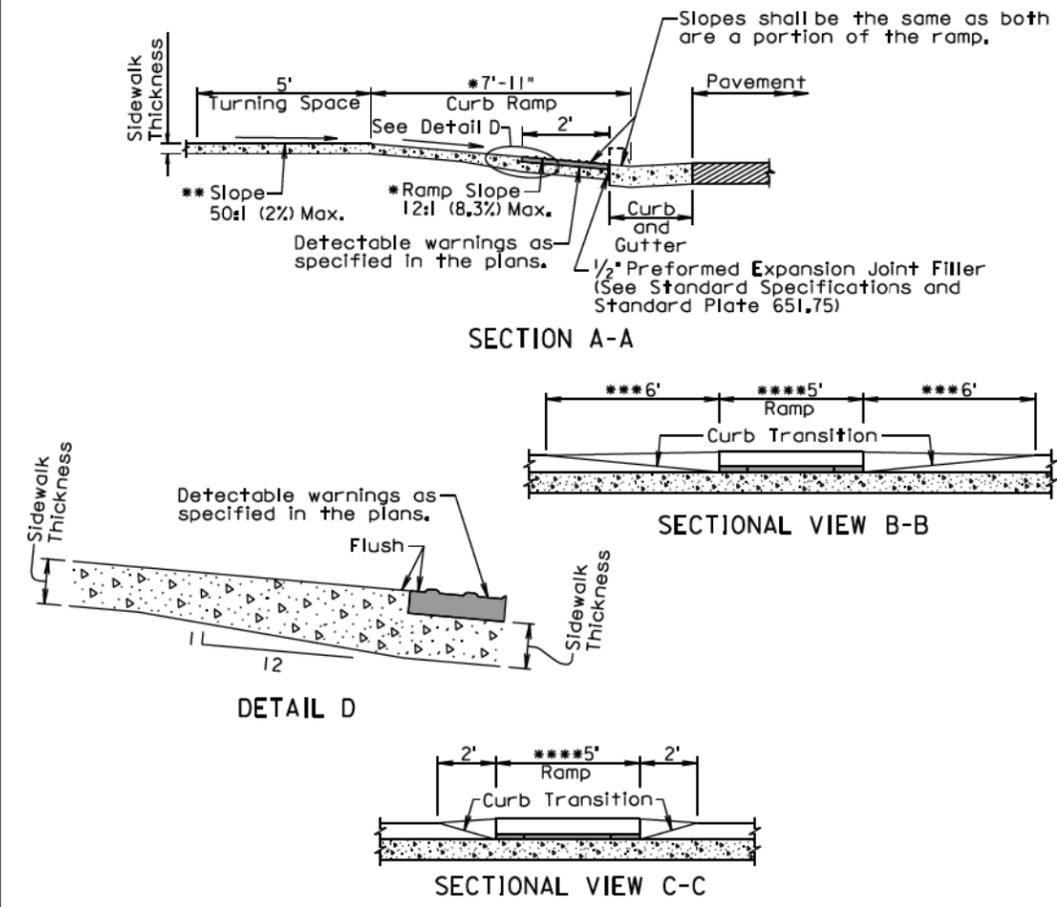


September 6, 2013

Published Date: 4th Qtr. 2014	S D D O T	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 1 of 3

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	22	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			

- The ramp slope 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 cross slope of the ramp shall not be steeper than 50:1 (2%).
- The 7'-11" dimension was computed based on a flat roadway profile, a continuous 2% theoretical slope from top of theoretical curb to the top of ramp, and a 6" high curb. The dimension shall be adjusted based on the curb type shown in the plans, the roadway geometrics, and the sidewalk geometrics.
- ** The slope in the turning space shall not be steeper than 50:1 (2%) in any direction of pedestrian travel.
- *** The curb transition shall be a minimum of 6' long, a maximum of 10' long, and the curb transition slope shall not be steeper than 10:1 (10%) unless stated otherwise in the plans.
- **** The ramp width is 5' unless stated otherwise in the plans.



September 6, 2013

Published Date: 4th Qtr. 2014	S D D O T	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 2 of 3

GENERAL NOTES:

- For illustrative purpose only, type 1 detectable warnings are shown in the drawings.
- For illustrative purpose only, PCC fillet sections are shown in 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.
- For illustrative purpose only, the curb ramp location is shown at the center of a PCC fillet section. The curb ramp shall be placed at the location stated in the plans.
- Sidewalk shall not be placed adjacent to the ramp flares when a 2' curb transition is used unless shown otherwise 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.
- 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.
- 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 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 1 detectable warnings shall be measured to the nearest square foot. All costs for furnishing and installing the type 1 detectable warnings including labor, equipment, materials, and incidentals shall be paid for at the contract unit price per square foot for "Type 1 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: 4th Qtr. 2014	S D D O T	TYPE 1 CURB RAMP (PERPENDICULAR CURB RAMP)	PLATE NUMBER 651.01
			Sheet 3 of 3

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	23	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			

ELEVATION VIEW
(PCC Sidewalk without Boulevard)

ELEVATION VIEW
(PCC Sidewalk with Boulevard)

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 1/2 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

S D D O T	PCC SIDEWALK	PLATE NUMBER 651.75
		Sheet 1 of 2
Published Date: 4th Qtr. 2014		

ELEVATION VIEW
(PCC sidewalk adjacent to asphalt concrete pavement)

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

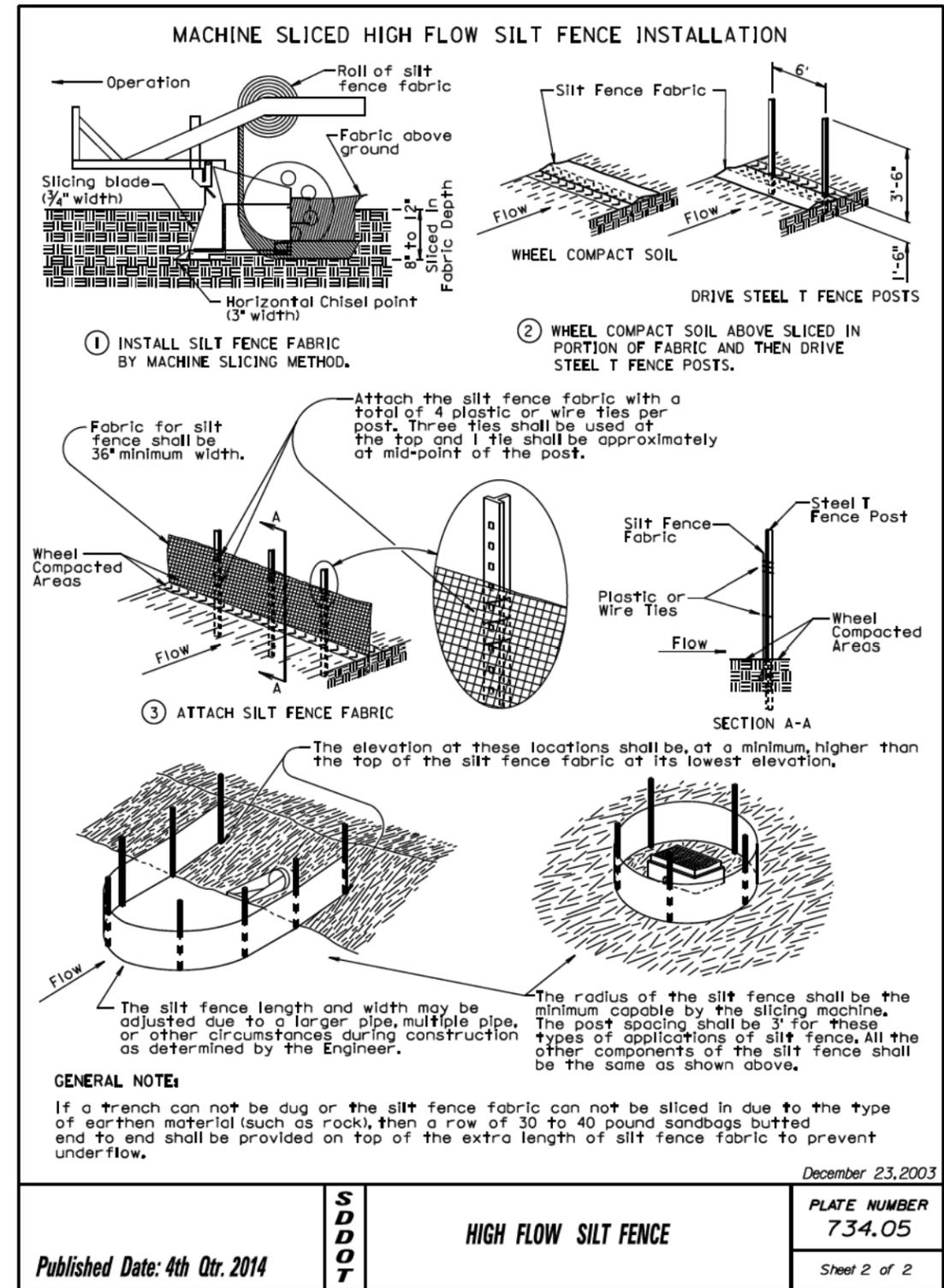
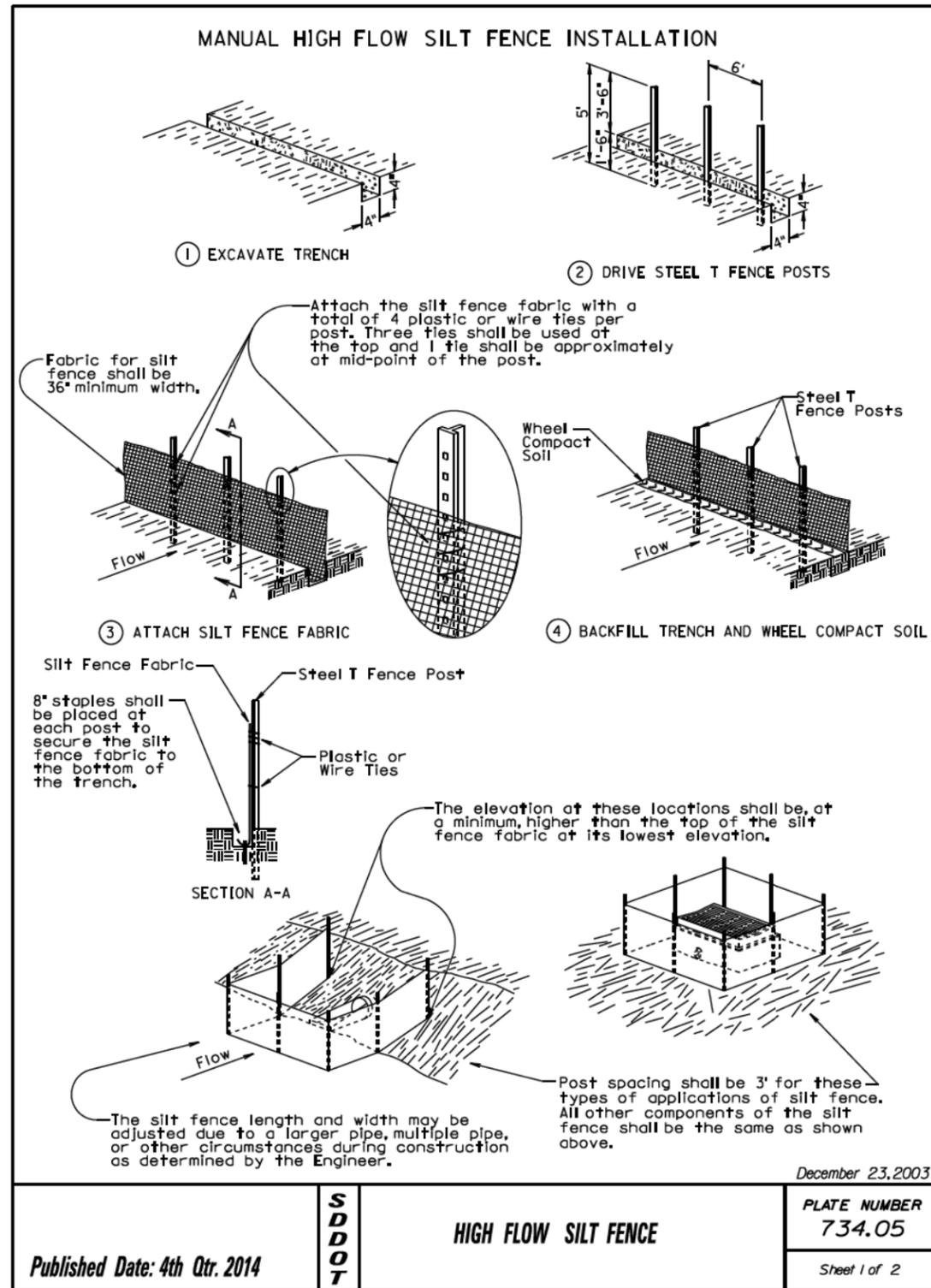
ELEVATION VIEW
(PCC sidewalk adjacent to building or other rigid structure)

ELEVATION VIEW
(PCC sidewalk adjacent to PCC pavement)

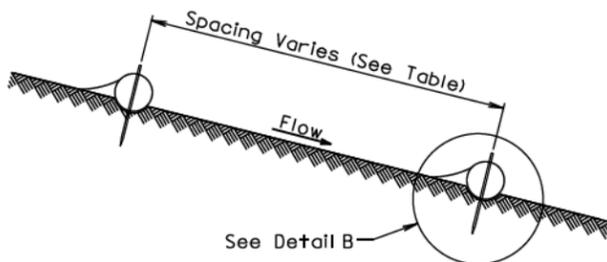
Detail A
(Use Appropriate Detail(s))

August 31, 2013

S D D O T	PCC SIDEWALK	PLATE NUMBER 651.75
		Sheet 2 of 2
Published Date: 4th Qtr. 2014		



STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	25	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			



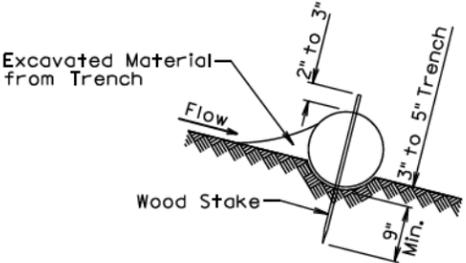
Spacing Varies (See Table)

Flow

See Detail B

**ELEVATION VIEW
CUT OR FILL SLOPE INSTALLATION**

Slope	Spacing (Ft)
1:1	10
2:1	20
3:1	30
4:1	40



Excavated Material from Trench

Flow

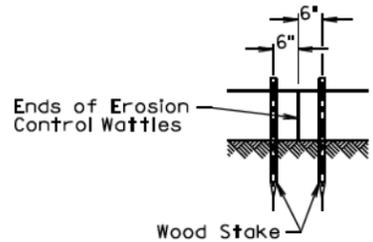
2" to 3"

3" to 5" Trench

Wood Stake

9" Min.

**DETAIL B
(TYPICAL OF ALL INSTALLATIONS)**



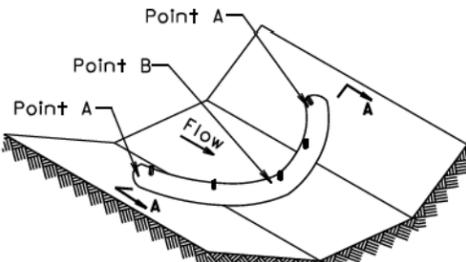
Ends of Erosion Control Wattles

6"

6"

Wood Stake

DETAIL C



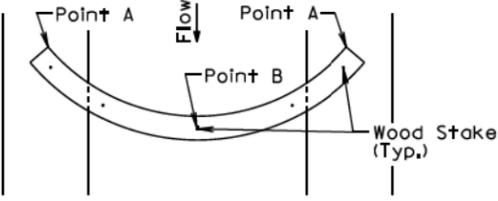
Point A

Point B

Point A

Flow

**ISOMETRIC VIEW
DITCH INSTALLATION**



Point A

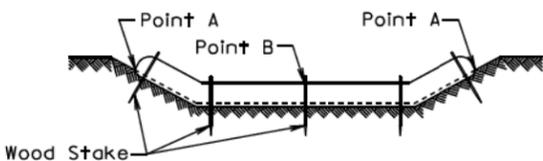
Flow

Point A

Point B

Wood Stake (Typ.)

**PLAN VIEW
DITCH INSTALLATION**



Point A

Point B

Point A

Wood Stake

SECTION A-A

Grade	Spacing (Ft)
2%	150
3%	100
4%	75
5%	50

December 23, 2004

Published Date: 4th Qtr. 2014	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 1 of 2

GENERAL NOTES:

At cut or fill slope installations, wattles shall be installed along the contour and perpendicular to the water flow.

At ditch installations, point A must be higher than point B to ensure that water flows over the wattle and not around the ends.

The Contractor shall dig a 3" to 5" trench, install the wattle tightly in the trench so that daylight can not be seen under the wattle, and then compact the soil excavated from the trench against the wattle on the uphill side. See Detail B.

The stakes shall be 1"x2" or 2"x2" wood stakes, however, other types of stakes such as rebar may be used only if approved by the Engineer. The stakes shall be placed 6" from the ends of the wattles and the spacing of the stakes along the wattles shall be 3' to 4'.

Where installing running lengths of wattles, the Contractor shall butt the second wattle tightly against the first and shall not overlap the ends. See Detail C.

The Contractor and Engineer shall inspect the erosion control wattles once every week and within 24 hours after every rainfall event greater than 1/2". The Contractor shall remove, dispose, or reshape the accumulated sediment when necessary as determined by the Engineer.

Sediment removal, disposal, or necessary shaping shall be as directed by the Engineer. All costs for removing accumulated sediment, disposal of sediment, and necessary shaping shall be incidental to the contract unit price per cubic yard for "Remove Sediment".

All costs for furnishing and installing the erosion control wattles including labor, equipment, and materials shall be incidental to the contract unit price per foot for the corresponding erosion control wattle bid item.

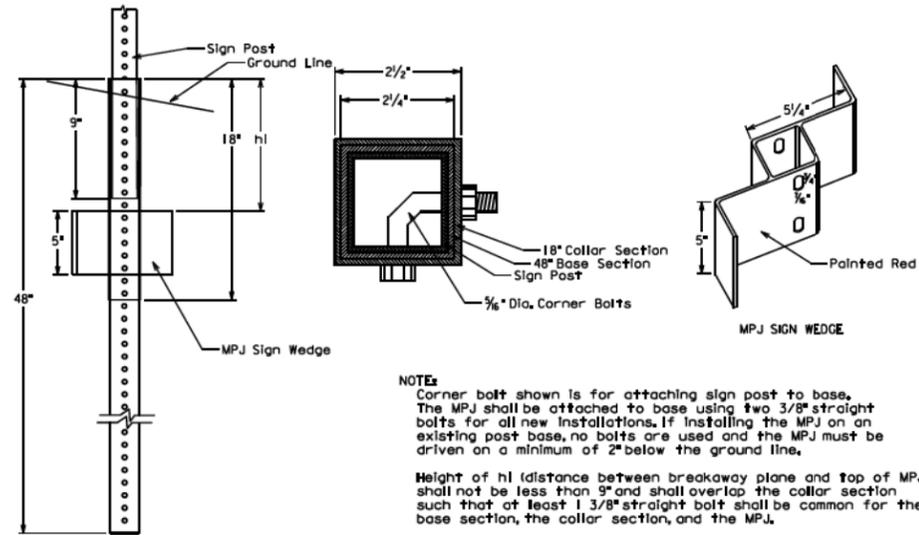
All costs for removing the erosion control wattle from the project including labor, equipment, and materials shall be incidental to the contract unit price per foot for "Remove Erosion Control Wattle".

December 23, 2004

Published Date: 4th Qtr. 2014	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

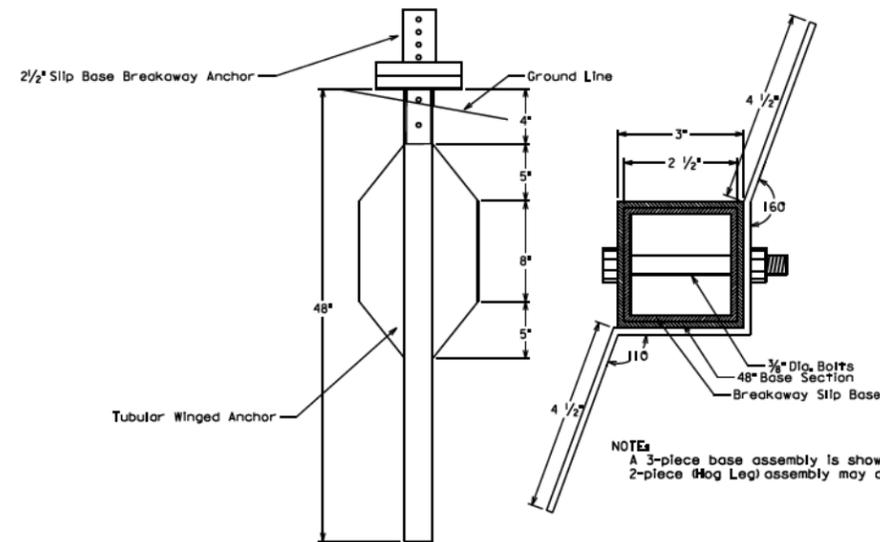
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	26	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			

SIGN BASE DETAILS FOR A 2" SIGN POST



NOTEs
 Corner bolt shown is for attaching sign post to base. The MPJ shall be attached to base using two 3/8" straight bolts for all new installations. If installing the MPJ on an existing post base, no bolts are used and the MPJ must be driven on a minimum of 2" below the ground line.
 Height of h1 (distance between breakaway plane and top of MPJ) shall not be less than 9" and shall overlap the collar section such that at least 1 3/8" straight bolt shall be common for the base section, the collar section, and the MPJ.

SIGN BASE DETAILS FOR A 2 1/2" SIGN POST



NOTEs
 A 3-piece base assembly is shown, however, a 2-piece (Hog Leg) assembly may also be used.

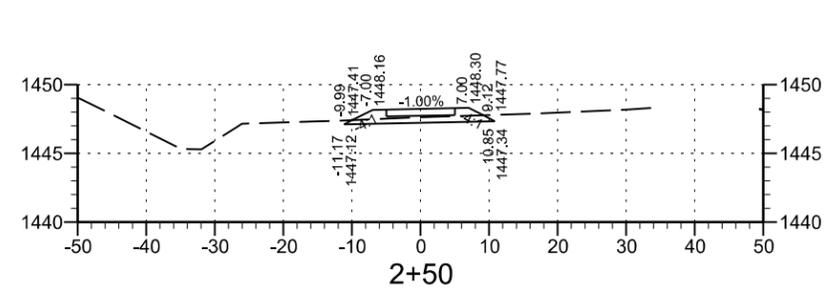
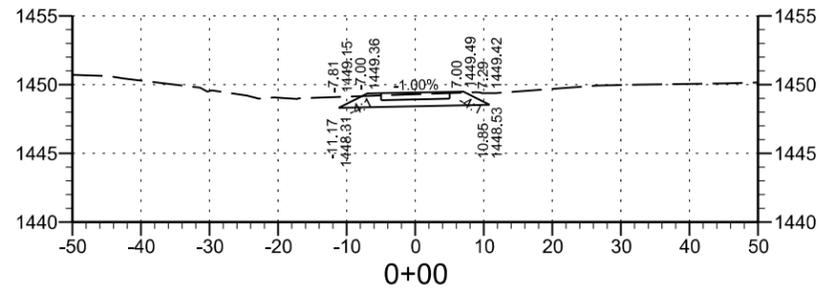
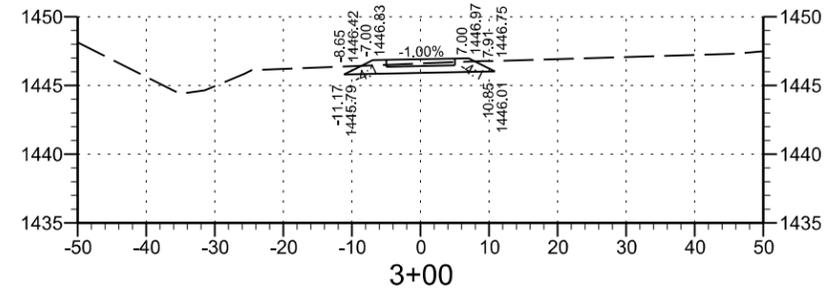
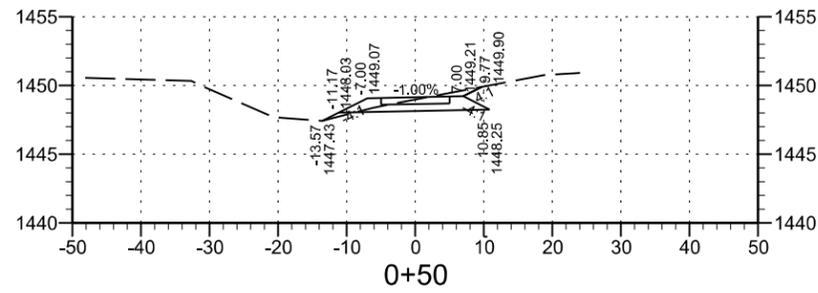
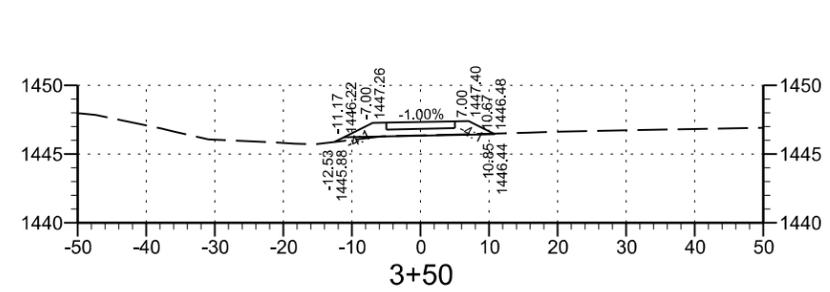
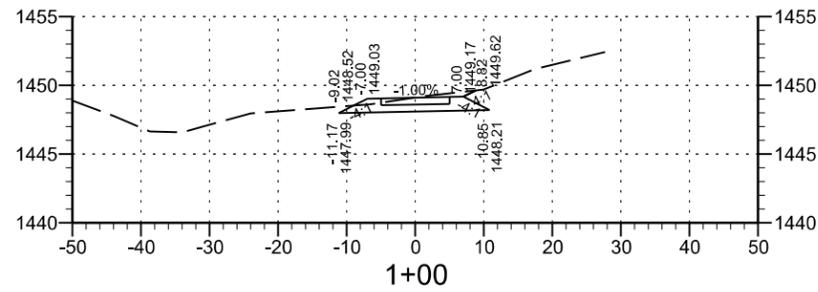
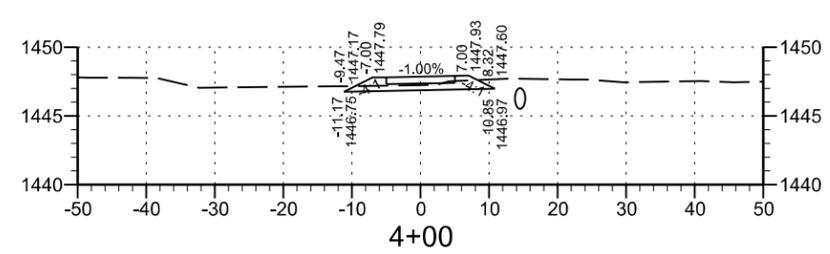
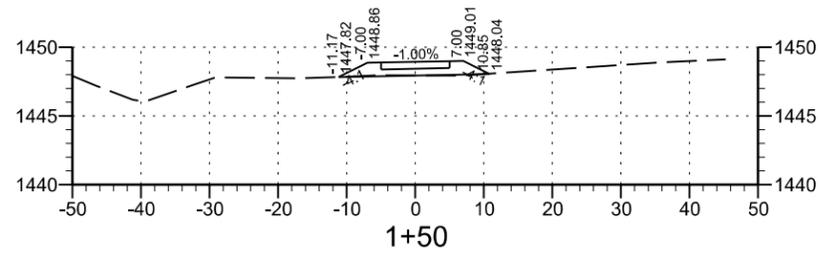
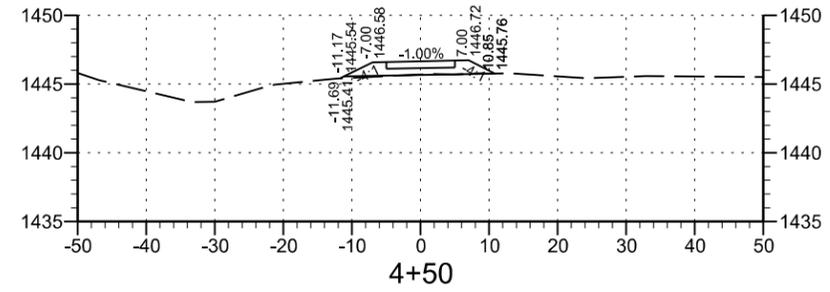
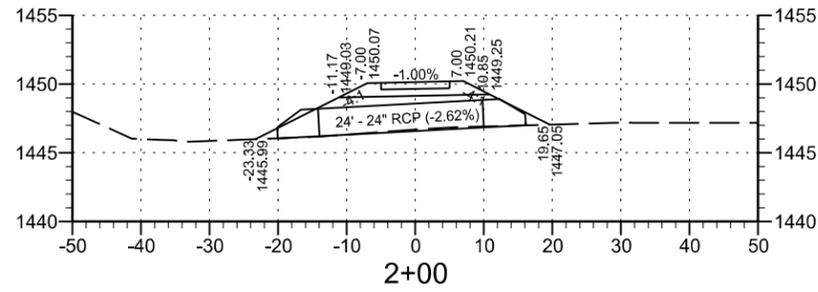
March 28, 2014

S D D O T	TUBULAR POST BASE DETAILS (Typical Soil Installation)	SPECIAL DETAIL L21
		Sheet 1 of 1

FOR BIDDING PURPOSES ONLY

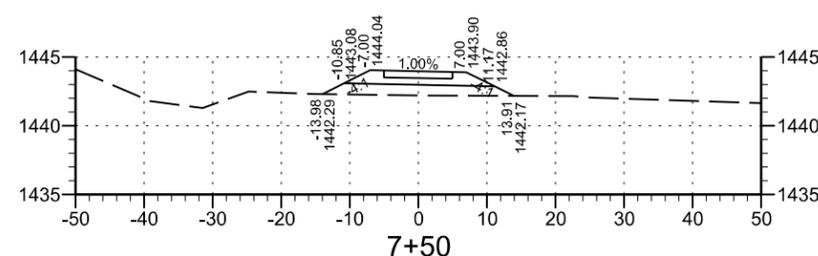
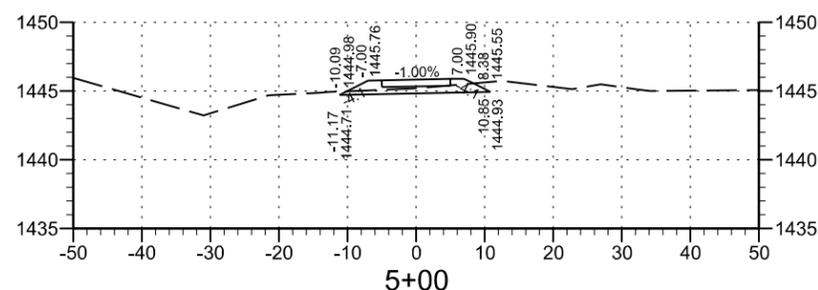
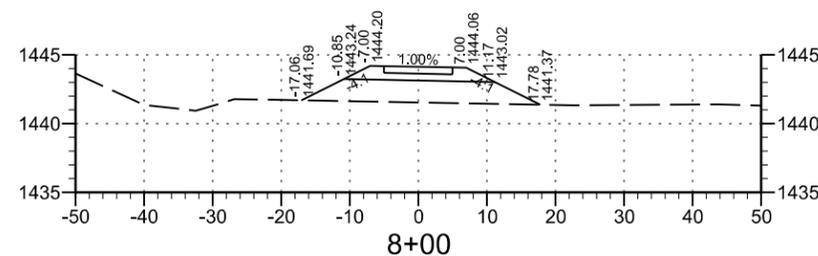
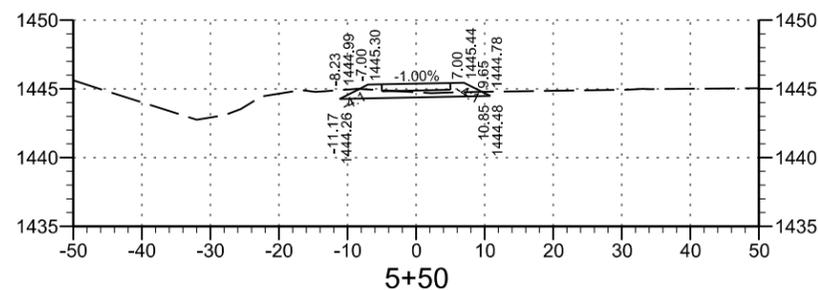
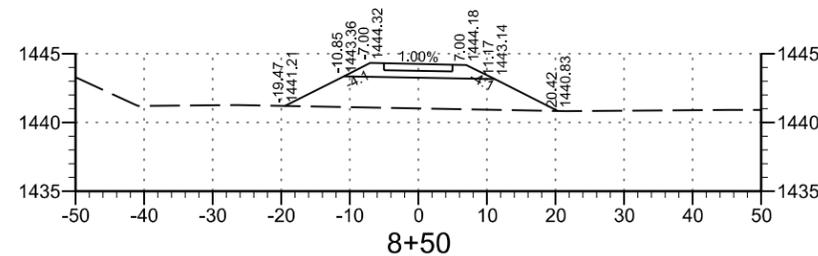
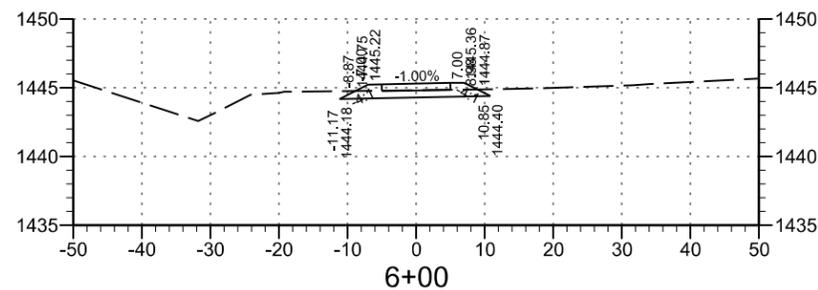
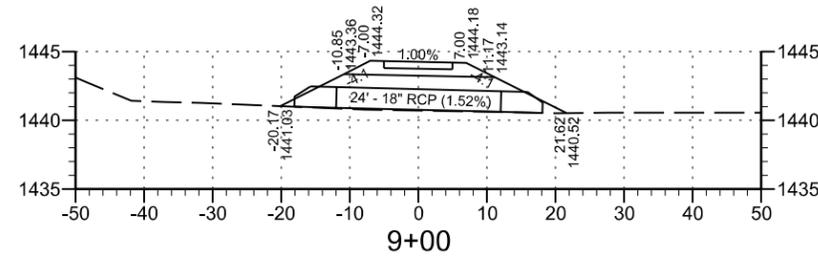
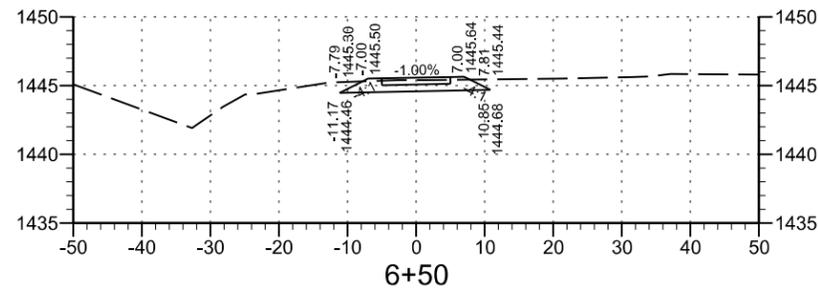
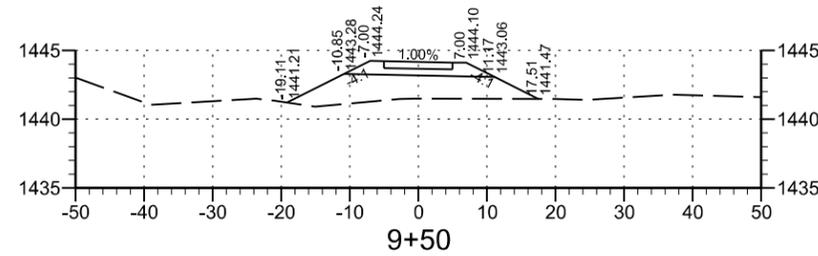
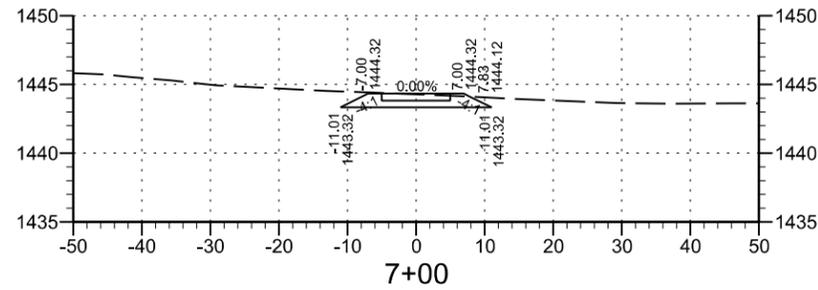
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	27	30

Plotting Date: 6/20/14
 Revised Date: 11/5/14
 Initials: CVS



FOR BIDDING PURPOSES ONLY

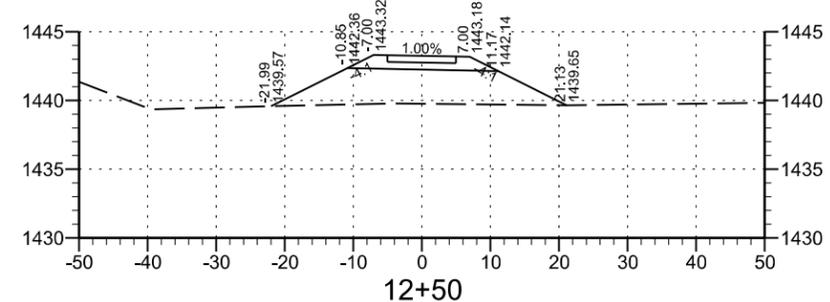
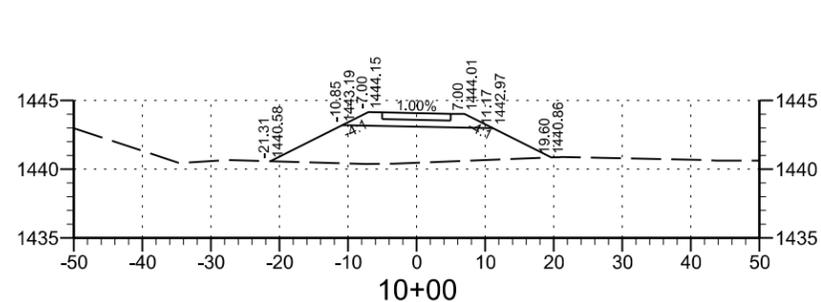
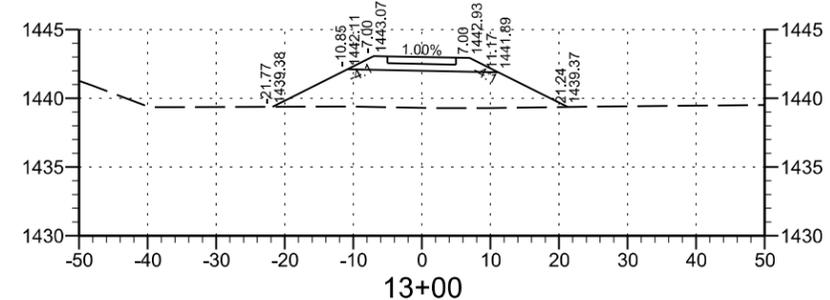
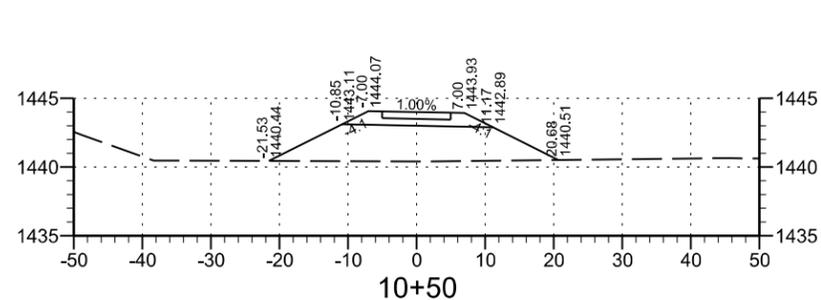
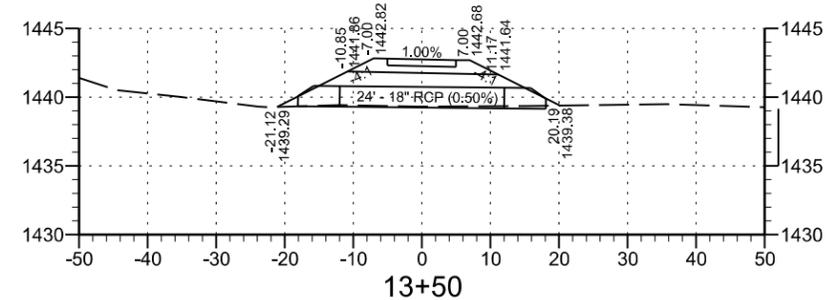
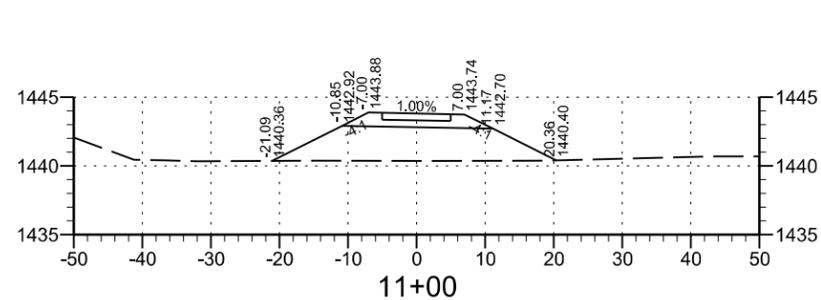
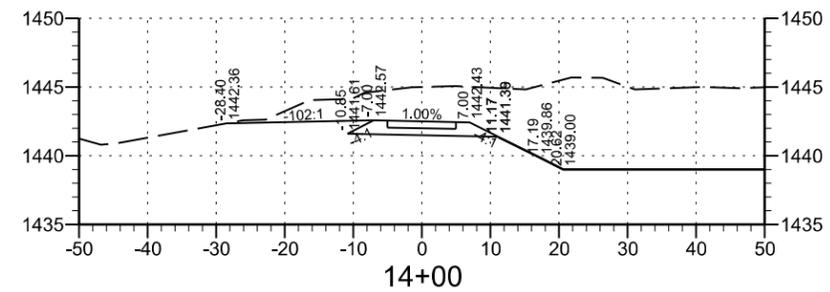
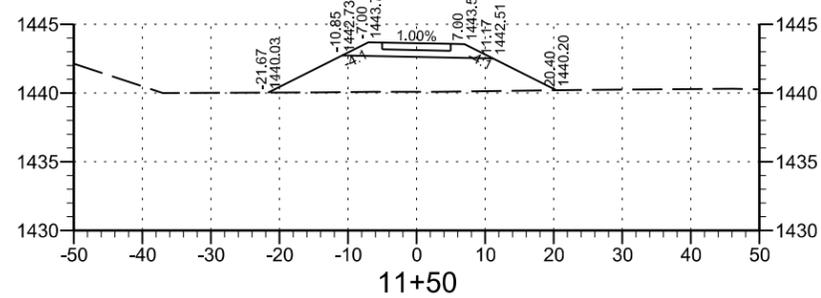
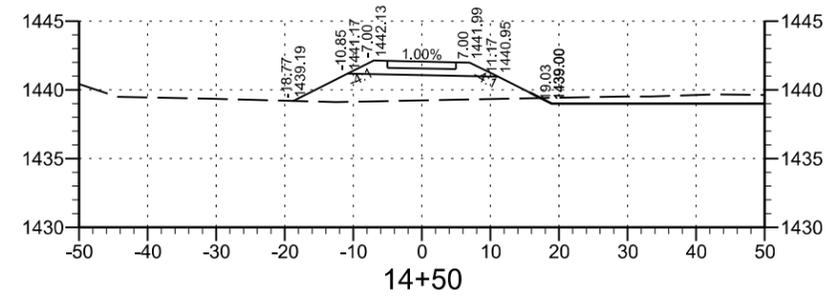
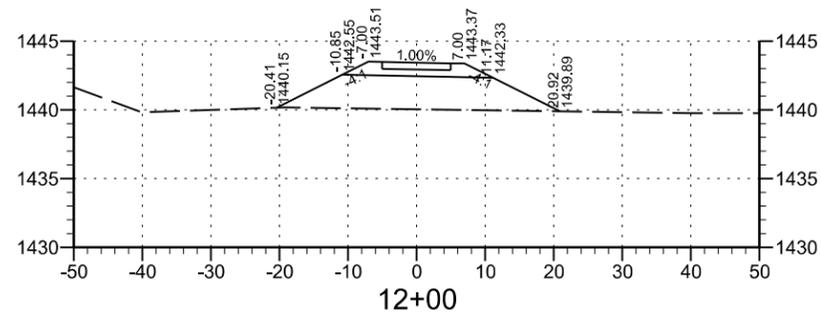
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	28	30
Plotting Date: 6/20/14 Revised Date: 11/5/14 Initials: CVS			



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	29	30

Plotting Date: 6/20/14
 Revised Date: 11/5/14
 Initials: CVS



FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	P TAPR (01)	30	30

Plotting Date: 6/20/14
Revised Date: 11/5/14
Initials: CVS

