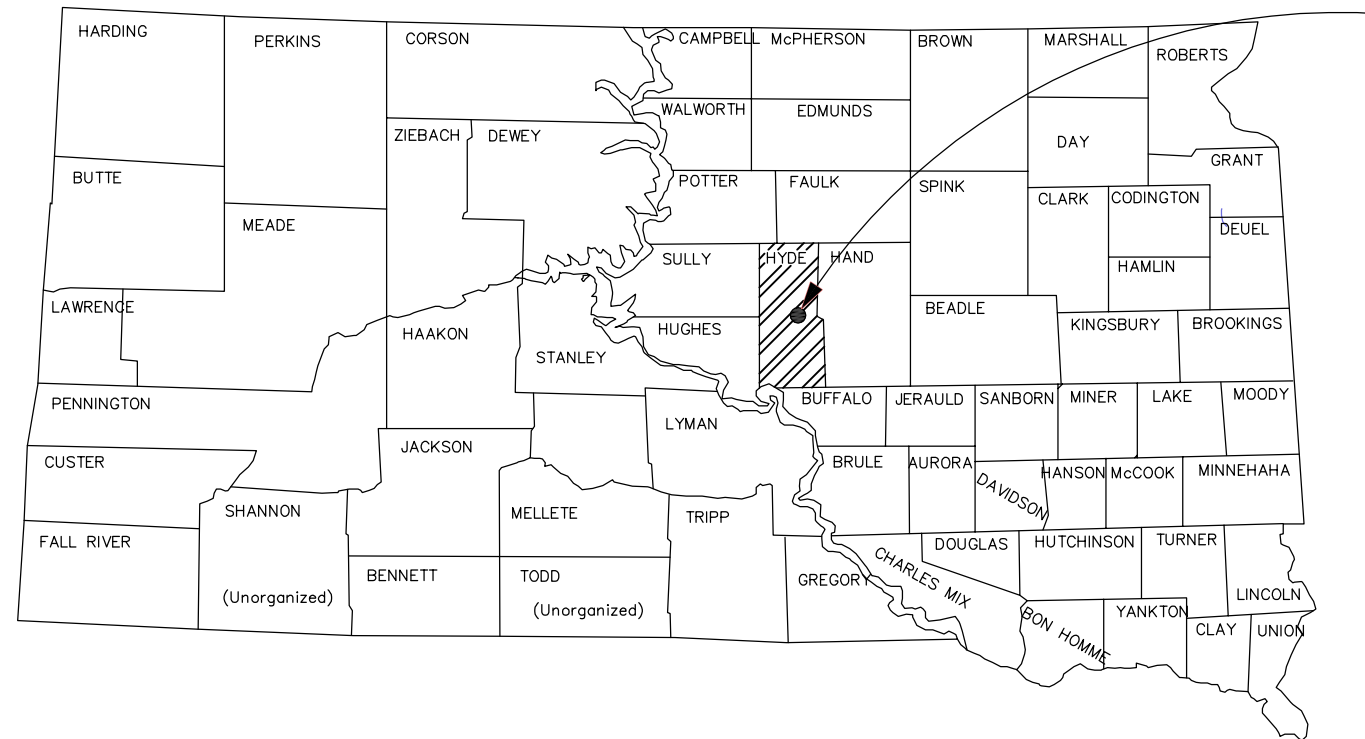


STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A360	1	20

Highmore Maintenance Shop
33660 U.S. Hwy. 14 West
Highmore, SD 57345



STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

PLANS FOR PROPOSED

PROJECT: 410A360

HIGHMORE DOT MAINTENANCE YARD

HYDE COUNTY

MILLING, GRADING, CONCRETE VALLEY GUTTERS,
CURB AND GUTTER, AC SURFACING

PCN i4a5

Storm Water Permit:

Major receiving body of water: Unnamed Tributaries
Disturbed area = 0.10 Acres
Project area = 2.57 Acres
Latitude: 44.528801
Longitude: -99.447488

-INDEX OF SHEET-

- Sheet 1.....Title Sheet
- Sheet 2.....Estimate of Quantities
- Sheet 3-4.....Environmental Commitments
- Sheet 5-6.....Plan Notes
- Sheet 7.....Traffic Control Tabulation
- Sheet 8 - 10.....Storm Water Pollution Prevention Plan
- Sheet 11 - 12.....Typical Sections
- Sheet 13.....Highmore DOT Maintenance Complex Layout
- Sheet 14.....Surfacing Removal Limits
- Sheet 15.....Drainage Layout
- Sheet 16.....Standard Plates 621.01 & 621.03
- Sheet 17.....Standard Plates 650.01 & 650.35
- Sheet 18.....Standard Plate 650.40
- Sheet 19.....Standard Plate 734.05
- Sheet 20.....Standard Plate 734.06

Survey & Design By: HOF LAND ENGINEERING
P.O. Box 1006
Aberdeen, South Dakota 57401

ESTIMATE OF QUANTITIES

Bid Item Number	Item	Quantity	Unit
009E0010	Mobilization	Lump Sum	LS
009E3200	Construction Staking	Lump Sum	LS
110E1700	Remove Silt Fence	1,655	Ft
120E0010	Unclassified Excavation	5,320	CuYd
120E6200	Water for Granular Material	81.7	MGal
110E0600	Remove Fence	530	Ft
260E1010	Base Course	2,613	Ton
260E1050	Base Course, Salvaged Asphalt Mix	3,920	Ton
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	3,920	Ton
320E0007	PG 64-22 Asphalt Binder	171.4	Ton
320E1050	Class E Asphalt Concrete	2,765	Ton
330E0100	SS-1h or CSS-1h Asphalt for Tack	2.6	Ton
621E0060	6' Chain Link Fence with Top Rail	530	Ft
634E0110	Traffic Control Signs	32.0	SqFt
634E0120	Traffic Control, Miscellaneous	Lump Sum	LS
650E0060	Type B66 Concrete Curb and Gutter	547	Ft
650E6280	8" Concrete Valley Gutter	281.8	SqYd
734E0154	12" Diameter Wattle	100	Ft
734E0604	High Flow Silt Fence	1,655	Ft
734E0610	Mucking Silt Fence	40	CuYd
734E0620	Repair Silt Fence	400	Ft
831E0200	Woven Geotextile Separator	12,444	SqYd

SPECIFICATIONS

Standard Specifications for Roads and Bridges, 2015 Edition and Required Provisions, Supplemental Specifications and Special Provisions as included in the Proposal.

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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 been adequately addressed. Unless otherwise designated, the Contractor's primary contact regarding matters associated with these commitments will be the Project Engineer. These environmental commitments are not subject to change without prior written approval from the SDDOT Environmental Office. The environmental commitments associated with this project are as follows:

COMMITMENT C: WATER SOURCE

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

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.

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

Include the following for all projects outside of Indian Reservations.

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 Public ROW.

The waste disposal site(s) shall be managed and reclaimed in accordance with the following from the General Permit for 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 Public 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 Public 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.

STATE OF SOUTH DAKOTA	PROJECT	SHEET	TOTAL SHEETS
	410A360	4	20

ESTIMATE OF QUANTITIES AND ENVIRONMENTAL COMMITMENTS

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 department designated sources and designated option material sources, stockpile sites, storage areas, and waste 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: Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas.

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

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

The Contractor shall submit the records search or cultural resources survey report and if the location of the site is within the current geographical or historic boundaries of any South Dakota reservation to SDDOT Environmental Engineer, 700 East Broadway Avenue, Pierre, SD 57501-2586 (605-773-3180). SDDOT will submit the information to the appropriate SHPO/THPO. Allow **30 Days** from the date this information is submitted to the Environmental Engineer for SHPO/THPO review.

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

SHPO/THPO review does not relieve the Contractor of the responsibility for obtaining any additional permits and clearances for Contractor furnished material sources, material processing sites, stockpile sites, storage areas, plant sites, and waste areas 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.

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A360	5	20

SCOPE OF WORK

Work on the project involves salvaging asphalt mix and granular base, unclassified excavation, placing fabric, placing concrete valley gutter, base material and asphalt concrete paving at the DOT maintenance complex in Highmore, South Dakota.

SEQUENCE OF OPERATIONS

The following Sequence of Operations shall be used for this project. The Contractor may submit an alternate Sequence of Operations for consideration by the Area Engineer. An alternate Sequence of Operations shall be submitted to the Area Engineer a minimum of 2 weeks prior to the preconstruction meeting.

1. Install construction signing.
2. Place erosion control devices as necessary.
3. Salvage asphalt mix and granular base.
4. Perform Unclassified excavation.
5. Install fabric and base material.
6. Install concrete valley gutter and curb and gutter.
7. Asphalt concrete paving.
8. Project cleanup and removal of construction signing.

The Contractor shall be required to construct the project in a continuous manner. Upon completion of the Salvage and Stockpile Asphalt Mix and Granular Base Material the Contractor shall be responsible for the subgrade. Any dewatering, unclassified excavation digouts, base course backfill material or other work due to rain events shall be the responsibility of the Contractor at no additional cost to the State.

TRAFFIC CONTROL

Two **TRUCK CROSSING** signs have been provided and need to be placed on US Hwy. 14 east and west of the DOT maintenance complex in Highmore.

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.

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

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.

UTILITIES

The Contractor shall responsible to coordinate with the Huron Area Office to have the utilities located before any construction activities begin. The Contractor shall notify the Huron Area Office a minimum of two weeks prior to starting work. Any utilities that need to be relocated for the construction of the project shall be the responsibility of the State of South Dakota.

Any utilities damaged by the Contractor shall be repaired at no cost to the State of South Dakota.

WATER FOR COMPACTION OF GRANULAR MATERIALS

Water for compaction of granular materials shall be furnished by the Contractor. Water is estimates at 12.5 gallons per ton of Material placed. Eight (8) + or – percent moisture will be required at time of compaction unless otherwise directed by the Engineer. Water for compaction shall be measured to the nearest 0.1 MGal. And paid for at the contact unit price per thousand gallons for Water For Granular Material.

MACHINE CONTROL GRADING

The Contractor will be required to utilize Machine Control Grading (MCG) on this project. The existing and proposed surfaces have very little positive drainage, therefore, the finished surface will be closely monitored and checked by field personnel. Finished Surface e-files will be provided to the Contractor by the Engineer.

HAZARDOUS WASTES:

Should any hazardous waste be generated during the implementation of this project, the generator must abide by all applicable hazardous waste regulations found in ARSD 74:28 and 40 CFR Part 262.

If any contamination is encountered during construction activities, the Contractor, the Owner, or Party responsible for the release must report the contamination to the Department of Environmental and Natural Resources at (605) 773-3296. Any contaminated soil encountered must be temporarily stockpiled and sampled to determine disposal requirements.

UNCLASSIFIED EXCAVATION

The Contractor shall be required to remove material necessary to achieve subgrade elevations after salvaging and stockpiling the six inches of asphalt mix and granular material. After completion of all work on the project, any excess material not required for the project, as directed by the Engineer, shall become the property of the Contractor for his/her disposal.

When subgrade elevation is achieved, the Contractor shall scarify and compact the top 6" of the subgrade surface to the satisfaction of the Engineer prior to beginning base course placement operations.

SALVAGE AND STOCKPILE ASPHALT MIX AND GRANULAR BASE MATERIAL

An estimated 3,920 tons (2,074 cubic yards) of asphalt mix and granular base material shall be salvaged from the entire Highmore Maintenance complex and stockpiled at a site(s) satisfactory to the Engineer.

The quantity of salvage asphalt mix and granular base material may vary from the plans. No adjustment will be made to the contract unit price for variations of the quantity of "Salvage and Stockpile Asphalt Mix and Granular Base Material".

The salvage and stockpile quantity of asphalt mix and granular base is computed by multiplying the in place cubic yards by 1.89 to convert to stockpile tons. The in place cubic yards was computed by salvaging and stockpiling an average of 6 inches of asphalt mix and granular base.

"Salvage and Stockpile Asphalt Mix and Granular Base Material" shall conform to Section 332.2 of the Standard Specification. Any Material over 1 1/2" size specification shall be subject to crushing.

BASE COURSE, SALVAGE ASPHALT MIX

Base Course, Salvaged Asphalt Mix material shall be obtained from the stockpile site(s) and may be used without further testing. All other requirements of the Standard Specifications for Base Course shall apply, except that the compaction shall be to the satisfaction of the Engineer.

No adjustment to the contract unit price shall be allowed as a result of variations in quantities of Base Course, Salvaged Asphalt Mix.

The Contractor shall be required to use all the Base Course, Salvaged Asphalt Mix before placing Base Course.

BASE COURSE

Aggregate for Base Course shall conform to the Standard Specifications, except that the compaction shall be to the satisfaction of the Engineer.

WOVEN GEOTEXTILE SEPARATOR

The woven geotextile separator shall be placed under the base course. Geotextile shall be a woven material meeting or exceeding the requirements of Section 831 of the Standard Specifications. Material specified shall be the requirements for woven geotextile separator.

Vehicles and equipment shall not be operated directly on the woven geotextile separator

Measurement for geotextile shall be per square yard coverage and does not include overlaps. Geotextile shall be overlapped a minimum of 1-foot on all edges. Contractor shall include costs for overlapping in the contract unit price per square yard for Woven Geotextile Separator.

CLASS E ASPHALT CONCRETE

The Contractor shall furnish asphalt concrete. Mineral aggregate for asphalt concrete shall conform to the requirements of the Standard Specifications for Class E, Type I. The asphalt cement shall be PG 64-22. The Contractor shall provide the supporting mix design data prior to production.

If the tensile strength ratio (TSR) of the composite mixture, as determined by ASTM D4867, is less than 75, the aggregates shall be rejected or the asphalt treated with an approved anti-stripping agent. The amount of anti-stripping agent added to the asphalt shall be sufficient to produce a tsr of not less than 75. If an anti strip agent is required, the Contractor will provide it at no additional cost to the State.

The Class E Asphalt Concrete shall be placed in lifts not to exceed 2 inches.

A bituminous tack coat (SS-1h or CSS-1h) shall be applied between each lift at a rate of 0.05 gallons per square yard.

Density requirements shall be to the satisfaction of the Engineer.

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CONCRETE VALLEY GUTTER

8" Concrete Valley Gutter shall be 8 feet wide and constructed in accordance with Standard Plate No. 650.40 as included in the plans. Location for the 8" Concrete Valley Gutter is shown on Sheet 15 of 20. The 8" Concrete Valley Gutter shall be constructed as detailed on the "Proposed Typical Section" shown on Sheet 12 of 20.

All costs associated with construction of the 8" Valley Gutter shall be paid at the contract unit price per square yard for 8" Concrete Valley Gutter.

TYPE B CONCRETE CURB AND GUTTER

Type B Concrete Curb and Gutter shall be Type B66 and shall be constructed in accordance with Standard Plate No. 650.01 as included in the plans. Location for the Type B66 Concrete Curb and Gutter is shown on Sheet 15 of 20. The Type B66 Concrete Curb and Gutter shall be constructed as detailed on the "Proposed Typical Section" shown on Sheet 12 of 20.

All costs associated with construction of the Type B66 Concrete Curb and Gutter shall be paid at the contract unit price per linear foot for Type B66 Concrete Curb and Gutter.

EROSION CONTROL WATTLE

Erosion control wattles for restraining the flow of runoff and sediment shall be installed at locations determined by the Engineer during construction. Refer to Standard Plate 734.06 for details.

The Contractor shall provide certification that the erosion control wattles do not contain noxious weed seeds.

Erosion control wattles shall remain on the project to decompose.

The erosion control wattle provided shall be from the approved product list. The approved product list for erosion control wattle may be viewed at the following internet site:

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

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://www.state.sd.us/Applications/HC54ApprovedProducts/main.asp>

High flow silt fence shall be placed at the locations shown on Sheet 15 of 20 and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.05 for details.

REMOVE SILT FENCE:

Silt Fence shall be removed when vegetation is established. Some or all of the silt fence may be left on the project until vegetation is established. Quantities for all silt fence left in place will be deducted from the quantity for the Bid Item "Remove Site Fence". It is the responsibility of the County for removal of the silt fence after vegetation is established.

All costs for removal of the silt fence and posts from the project limits including labor and equipment shall be incidental to the Contract Unit Price per Foot for "Remove Silt Fence".

MUCKING SILT FENCE:

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

FENCE NOTE:

The existing woven wire fence, as located and shown on Sheet 15 of 20 shall be removed and disposed of by the Contractor as shown and as directed by the Engineer. A new 6' Chain Link Fence shall be placed as detailed on Standard Plate 621.01 by the Contractor as directed by the Engineer.

DETENTION POND NOTE:

A detention pond shall be constructed by the Contractor as shown on Sheet 15 of 20. A quantity of 480 Cubic Yards of Unclassified Excavation has been included in the quantities for the work required to construct the detention pond. Plans quantity Unclassified Excavation will be paid for the detention pond excavation, unless additional excavation is directed by the Engineer. After completion of the construction of the detention pond, all excess material not required on the project, as directed by the Engineer shall become the property of the Contractor for his/her disposal.

SUMP BASIN NOTE:

SDDOT Maintenance forces are currently constructing, and/or contracting the construction of a sump basin in the extreme southeast corner of the Maintenance Yard Complex. The Contractor will be required to shape the proposed surfacing around and next to the newly constructed sump basin as directed by the Engineer.

CONSTRUCTION STAKING:

The Contractor shall perform all construction staking. The staking work includes, but is not limited to, establishing or re-establishing control points and bench marks as needed, setting additional benchmarks as needed, and any miscellaneous staking as needed to construct the project as per the plans.

The Engineer will not allow the Contractor to use Machine Control Grading as a substitute for conventional staking for grade control needed for Valley Gutter or Curb and Gutter. Grade stakes shall be set at 20' intervals for Valley Gutter and Curb and Gutter.

Construction Staking will be paid at the contract lump sum bid for "Construction Staking".

ITEMIZED LIST FOR TRAFFIC CONTROL SIGNS

SIGN CODE	SIGN DESCRIPTION	CONVENTIONAL ROAD			
		NUMBER	SIGN SIZE	SQFT PER SIGN	SQFT
W8-6	TRUCK CROSSING	2	48" x 48"	16.0	32.0
					32.0

STORM WATER POLLUTION PREVENTION PLAN CHECKLIST

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

❖ **SITE DESCRIPTION (4.2 1)**

- **Project Limits: See Title Sheet (4.2 1.b)**
- **Project Description: See Title Sheet (4.2 1.a.)**
- **Site Map(s): See Title Sheet and Plans (4.2 1.f. (1)-(6))**
- **Major Soil Disturbing Activities** (check all that apply)
 - Clearing and grubbing
 - Excavation/borrow
 - Grading and shaping
 - Filling
 - Cutting and filling
 - Other (describe):
- **Total Project Area** 2.57 Acres **(4.2 1.b.)**
- **Total Area To Be Disturbed** : 0.10 Acres **(4.2 1.b.)**
- **Existing Vegetative Cover (%)** : 5%
- **Soil Properties:** AASHTO Soil A-2 Cassification **(4.2 1. d.)**
- **Name of Receiving Water Body/Bodies** : Unnamed Tributaries **(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.)

- **See Sequence of Operations**

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

(Check all that apply)

➤ **Stabilization Practices (See Detail Plan Sheets)**

- Temporary or Permanent Seeding
- Sodding
- Planting
- Mulching (Straw or Cellulose Fiber)
- Erosion Control Blankets or Mats
- Vegetation Buffer Strips
- Roughened Surface (e.g. tracking)
- Gabions-Gabion Mattress
- Other

➤ **Structural Temporary Erosion and Sediment Controls**

- Silt Fence
- Straw Bale Check
- Temporary Berm
- Temporary Slope Drain
- Straw Wattles or Rolls
- Diversion Channels/Swales
- Channel Liners (TRM)
- Stone Rip Rap Sheet
- Rock Check Dams

- Sediment Traps/Basins
- Inlet Protection
- Outlet Protection
- Surface Inlet Protection
- Curb Inlet Protection
- Stabilized Construction Entrances
- Other

➤ **Wetland Avoidance**

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

➤ **Storm Water Management (4.2 2.b., (1) and (2))**

Storm water management will be handled by temporary controls outlined in "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.

➤ **Maintenance and Inspection Practices(Continued)**

- Silt fence will be inspected for depth of sediment and for tears in order to ensure the fabric is securely attached to the posts and that the posts are well anchored. Sediment buildup will be removed from the silt fence when it reaches 1/3 of the height of the silt fence.

❖ **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

- 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.

❖ **Spill Prevention (4.2 2.c.(2))**

➤ **Material Management**

▪ **Housekeeping**

- Only needed products will be stored on-site by the contractor.
- Except for bulk materials the contractor will store all materials under cover and in appropriate containers.
- Products must be stored in original containers and labeled.
- Material mixing will be conducted in accordance with the manufacturer's recommendations.
- When possible, all products will be completely used before properly disposing of the container off site.
- The manufacturer's directions for disposal of materials and containers will be followed.
- The contractor's site superintendent will inspect materials storage areas regularly to ensure proper use and disposal.
- Dust generated will be controlled in an environmentally safe manner.
- Vegetation areas not essential to the construction project will be preserved and maintained as noted on the plans.

▪ **Hazardous Materials**

- Products will be kept in original containers unless the container is not resealable.
- Original labels and material safety data sheets will be retained in a safe place to relay important product information.
- If surplus product must be disposed of, manufacturer's label directions for disposal will be followed.
- Maintenance and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, 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, 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 74:54:01.
 - The discharge of any substance that exceeds the surface water quality standards of ARSD chapter 74:54:01.
 - The discharge of any substance that harms or threatens to harm wildlife or aquatic life.
 - The discharge of crude oil in field activities under SDCL (South Dakota Codified Laws) chapter 45-9 is greater than 1 barrel (42 gallons).

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

❖ **Construction Changes (4.4)**

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

❖ **CERTIFICATIONS**

➤ **Certification of Compliance with Federal, State, and Local Regulations**

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

➤ **South Dakota Department of Transportation**

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



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

➤ **Prime Contractor**

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

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

Authorized Signature

❖ **CONTACT INFORMATION**

➤ **Contractor Information:**

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

➤ **Erosion Control Supervisor**

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

➤ **SDDOT Project Engineer**

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

➤ **SD DENR Contact Spill Reporting**

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

➤ **SD DENR Contact for Hazardous Materials.**

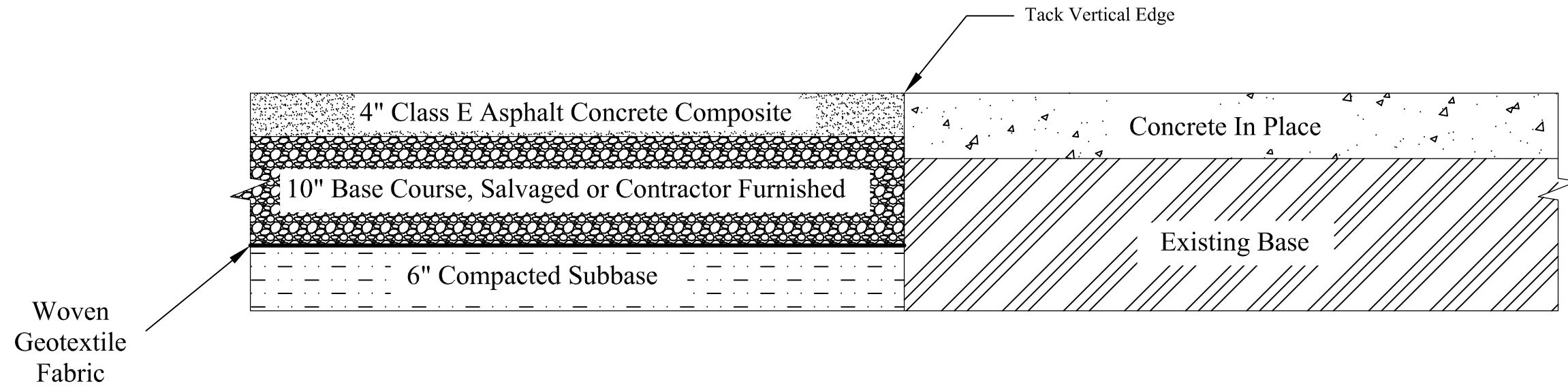
- (605) 773-3153

➤ **National Response Center Hotline**

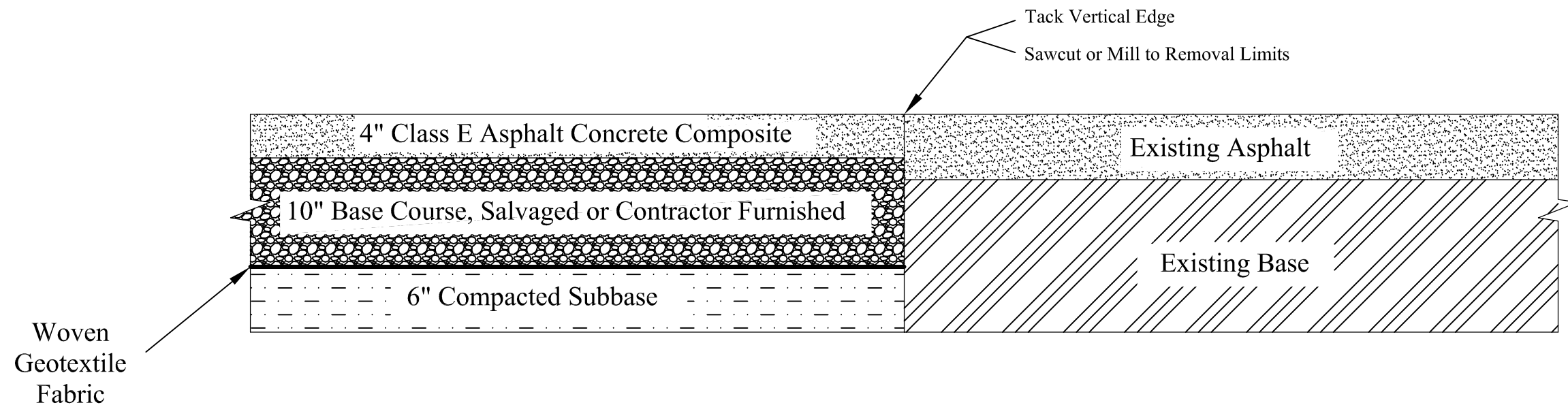
- (800) 424-8802.

SPECIAL DETAILS

Proposed Typical Section Adjacent to In Place Concrete

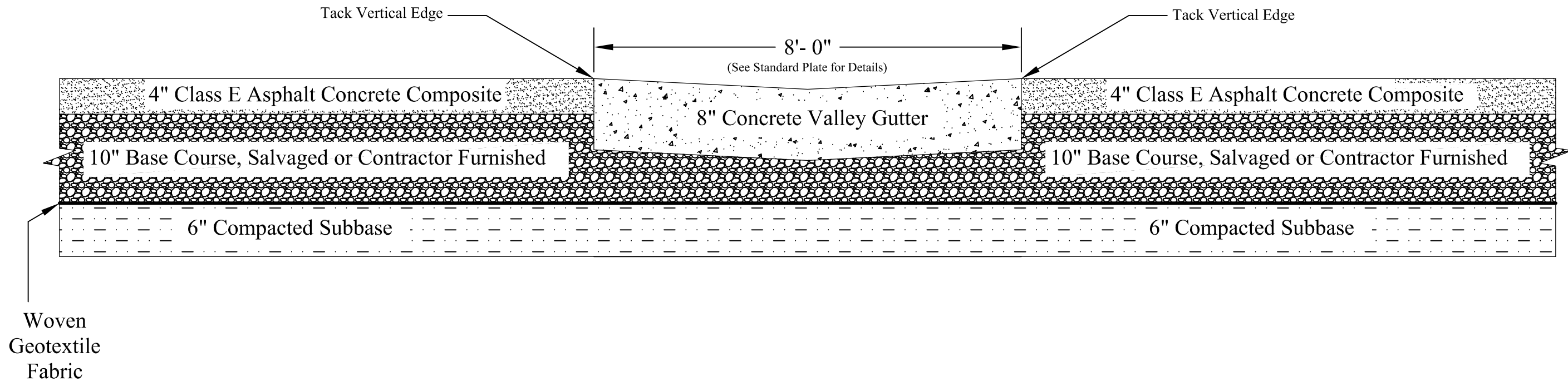


Proposed Typical Section Adjacent to In Place Asphalt Concrete

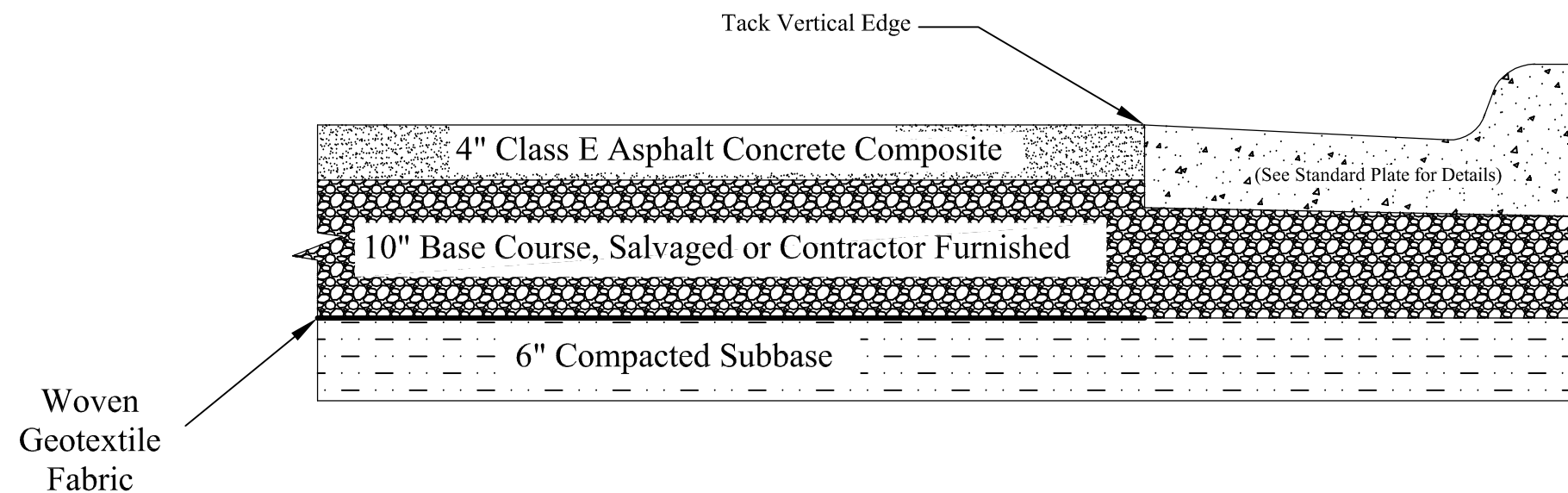


SPECIAL DETAILS

Proposed Typical Section Adjacent to Valley Gutter

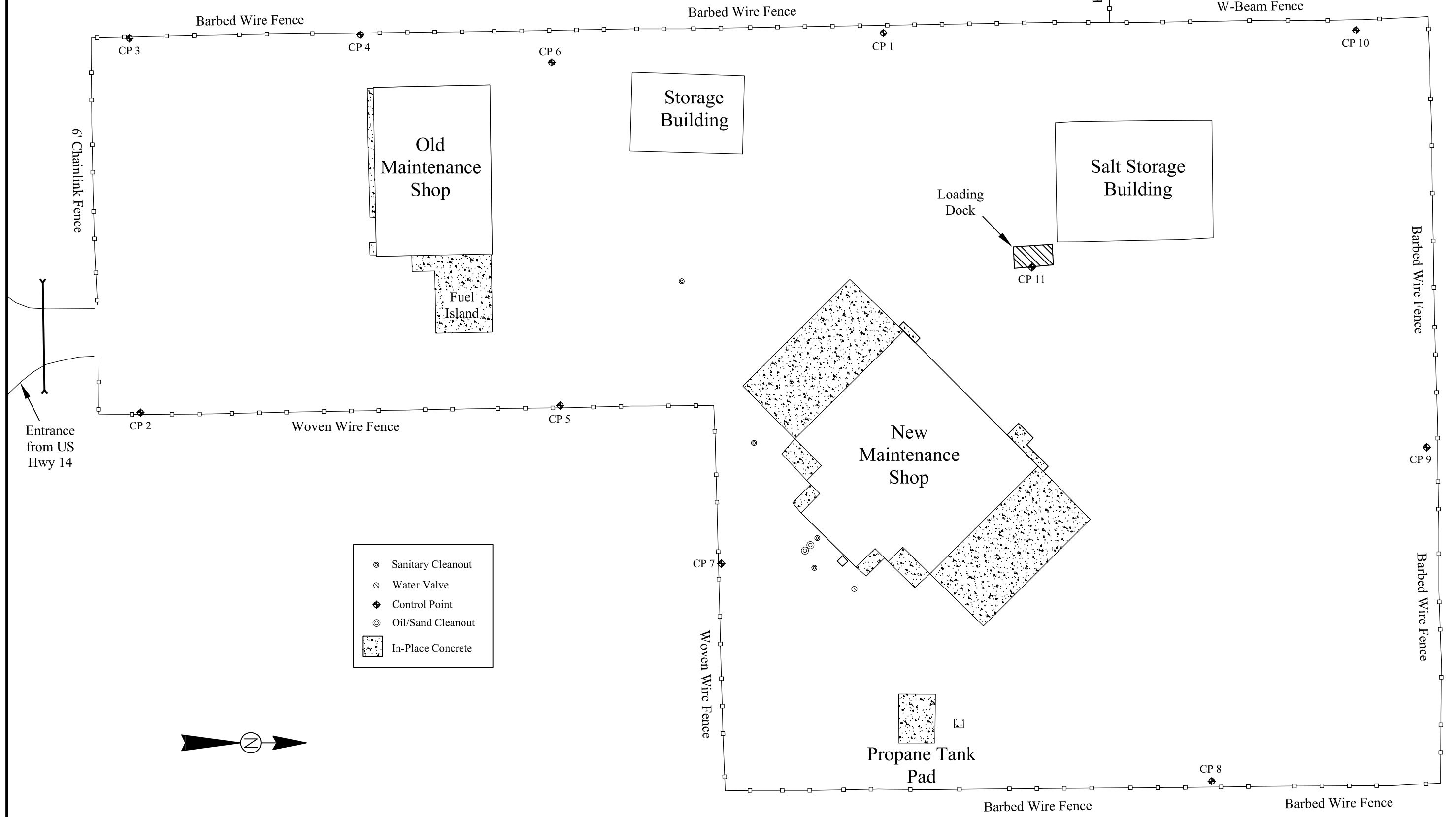


Proposed Typical Section Adjacent to Type B66 Curb and Gutter

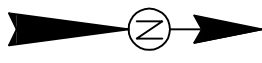


HIGHMORE DOT COMPLEX

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A360	13	20



- ⊙ Sanitary Cleanout
- ⊖ Water Valve
- ◆ Control Point
- ⊙ Oil/Sand Cleanout
- ▨ In-Place Concrete



Entrance from US Hwy 14

6' Chainlink Fence

Barbed Wire Fence

Barbed Wire Fence

Barbed Wire Fence

W-Beam Fence

Barbed Wire Fence

Barbed Wire Fence

Barbed Wire Fence

Barbed Wire Fence

Woven Wire Fence

Woven Wire Fence

CP 3

CP 4

CP 6

CP 1

CP 10

CP 2

CP 5

CP 7

CP 9

CP 8

CP 11

Old
Maintenance
Shop

Storage
Building

Salt Storage
Building

Fuel
Island

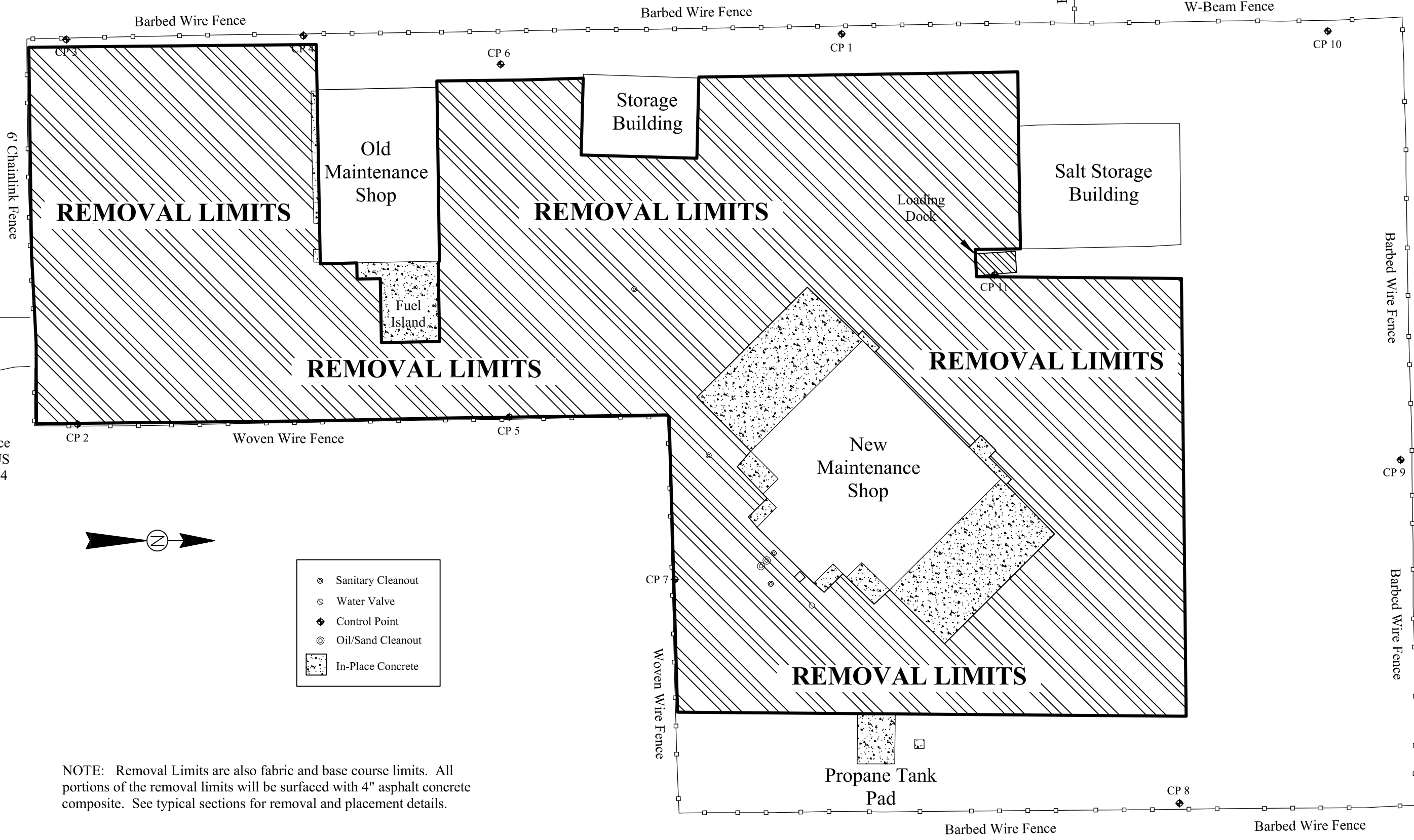
Loading
Dock

New
Maintenance
Shop

Propane Tank
Pad

HIGHMORE DOT COMPLEX

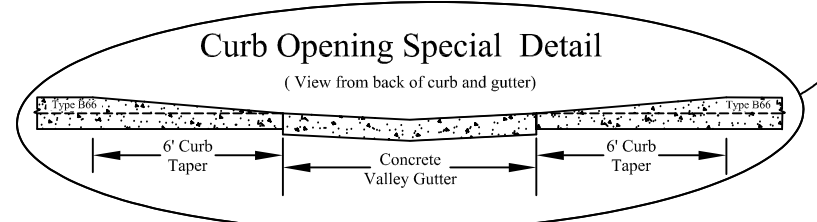
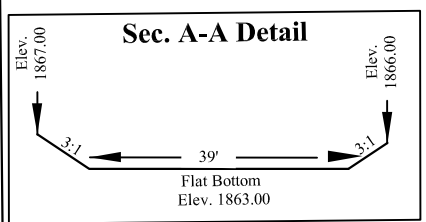
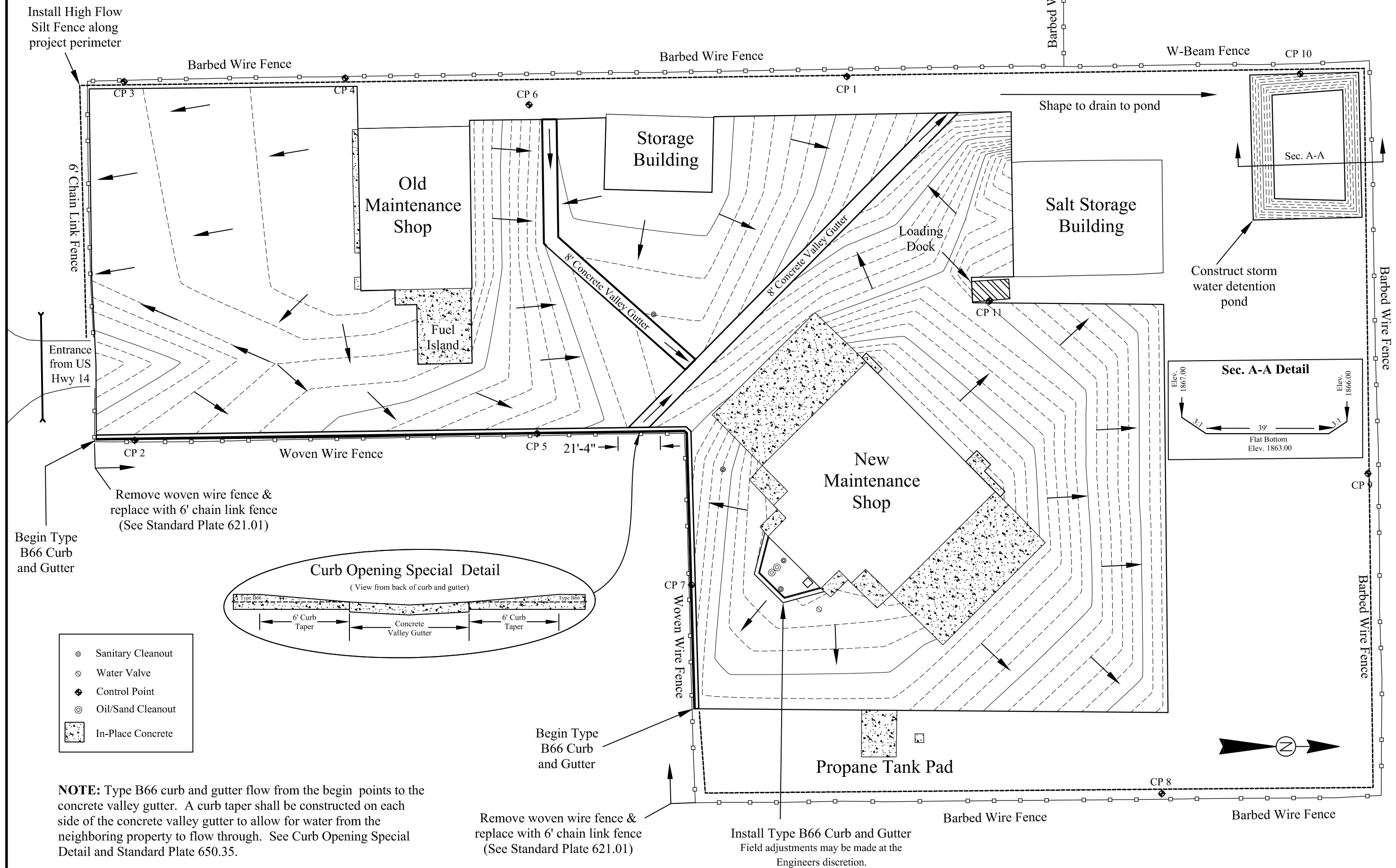
STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A360	14	20



NOTE: Removal Limits are also fabric and base course limits. All portions of the removal limits will be surfaced with 4" asphalt concrete composite. See typical sections for removal and placement details.

HIGHMORE DOT COMPLEX

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	410A360	15	20

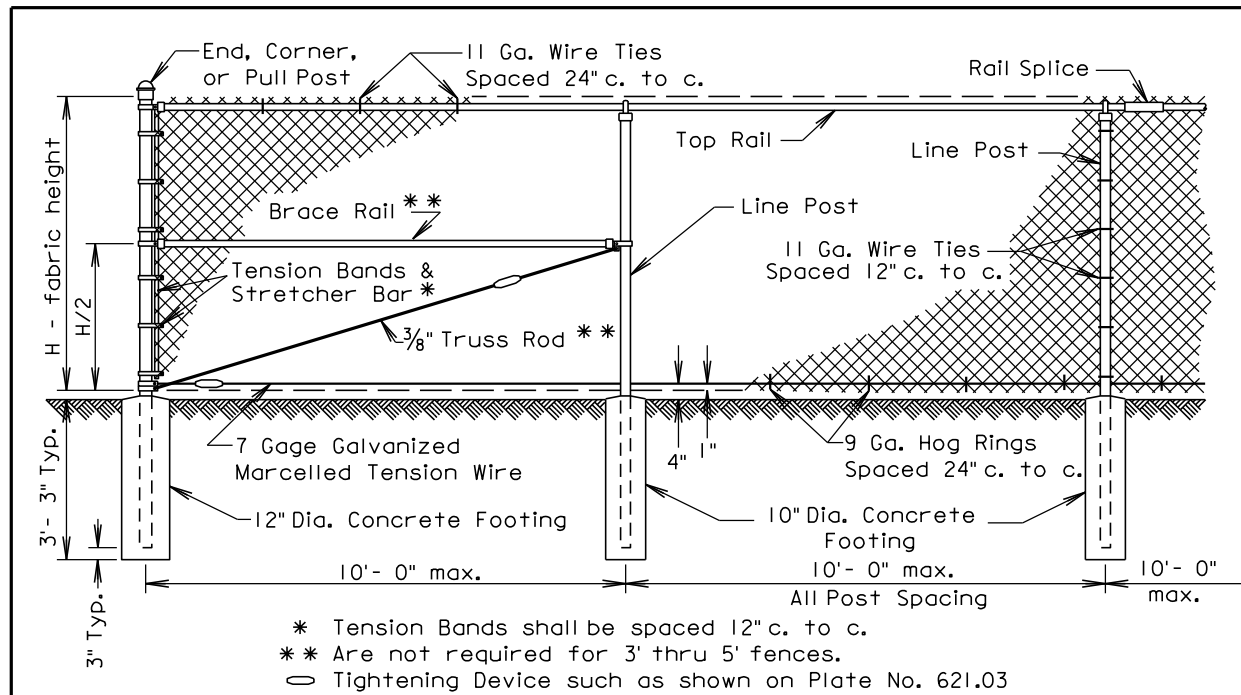


- ⊙ Sanitary Cleanout
- ⊙ Water Valve
- ◆ Control Point
- ⊙ Oil/Sand Cleanout
- ▣ In-Place Concrete

NOTE: Type B66 curb and gutter flow from the begin points to the concrete valley gutter. A curb taper shall be constructed on each side of the concrete valley gutter to allow for water from the neighboring property to flow through. See Curb Opening Special Detail and Standard Plate 650.35.

Remove woven wire fence & replace with 6' chain link fence (See Standard Plate 621.01)

Install Type B66 Curb and Gutter
 Field adjustments may be made at the Engineers discretion.



* Tension Bands shall be spaced 12" c. to c.
 ** Are not required for 3' thru 5' fences.
 ○ Tightening Device such as shown on Plate No. 621.03

Component	End, Corner & Pull Post		Line Post			Top & Brace Rail	
	Round Pipe Nominal	Roll Formed Steel	Round Pipe Nominal	"C" Section	H-Beam Steel	Round Pipe Nominal	Roll Formed Steel
Size	3.00" O. D.	3.5" x 3.5"	2.50" O. D.	1.875"x1.625"	2.25"x1.70"	1.625" O. D.	1.625"x1.25"
Weight (lb. / ft.)	5.79 or 4.64	5.14	3.65 or 3.12	2.34	3.43	2.27 or 1.84	1.35

GENERAL NOTES:
 Specific details of manufacture of component parts of the complete fence construction shall be subject to the approval of the Engineer. Commercially available items produced specifically for the use intended shall be used wherever possible in the construction of the fence.

"H" (Height of Fabric) shall be as shown on the Plans. Fabric is available in the the following heights; 36", 42", 48", 60", 72", 84", 96", 108", 120", & 144". Fabric heights 60 inches and under shall be knuckled at both selvages. Fabric heights 72 inches and over shall be knuckled at one selvage and twisted at the other selvage.

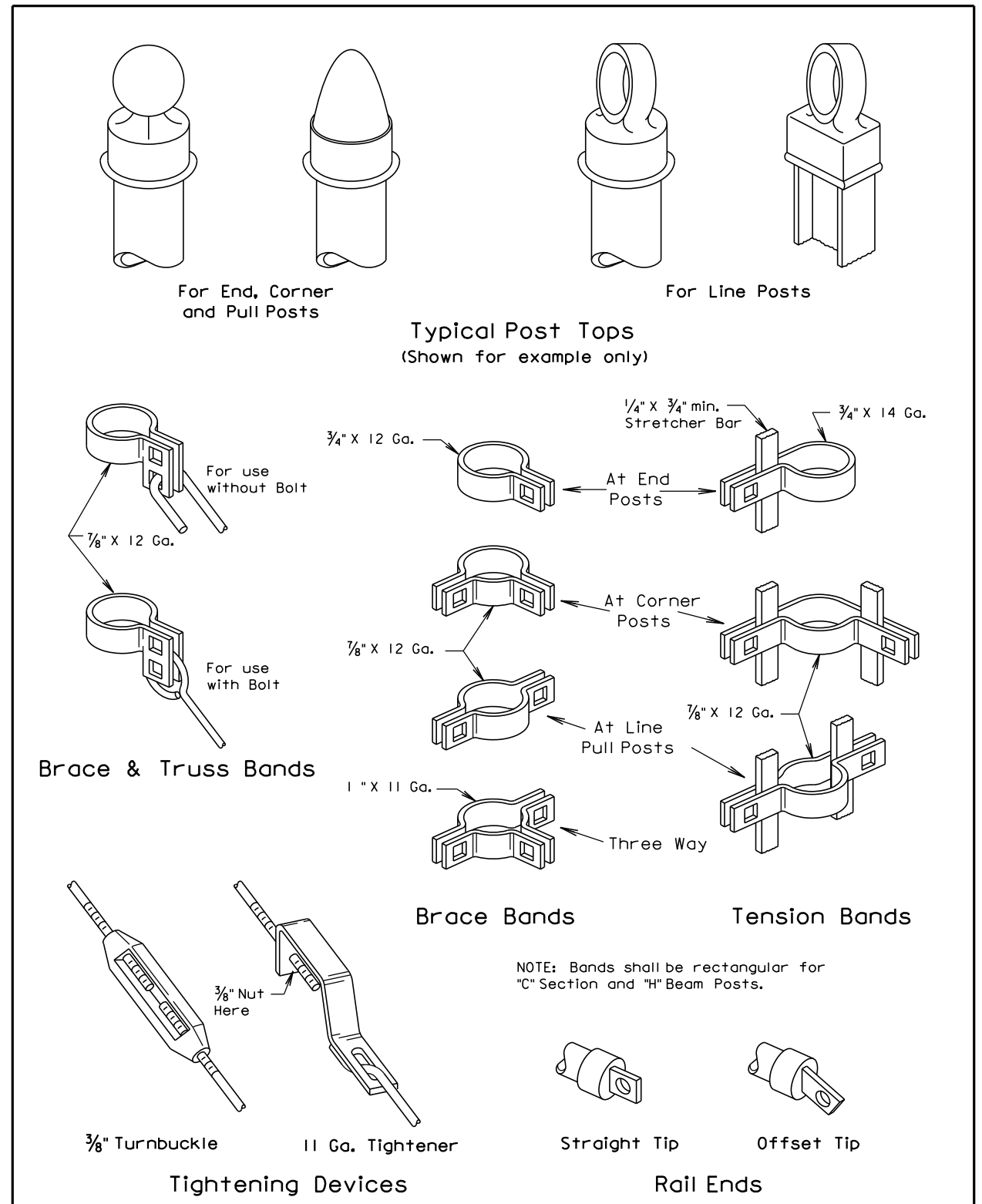
Chain Link Fabric shall be 2" mesh, No. 9 gage galvanized wire securely fastened to Tension Wire, Line Post, Rails, Braces and Stretcher Bars spaced as shown hereon.

Fence may be constructed with either Round Pipe, "C" Section, "H" Beam, or roll Formed Steel components as shown in the table above. Line post may be Round Pipe, "C" Section, or "H" Beam. The Corner Post and Rails shall be either Round Pipe or Roll Formed Steel. The type of components used shall have prior approval by the Engineer before construction.

Where fence must cross small bodies of water (such as drainage areas or ponds) that could freeze during the winter, use 11 gage Hog Rings. Provide only two ties per Tension Wire and Top Rail between line posts.

A suitable method of rail splicing shall be used to allow for expansion and contraction while maintaining proper position of the Top Rail.

March 31, 2000



Typical Post Tops
(Shown for example only)

Brace & Truss Bands

Brace Bands

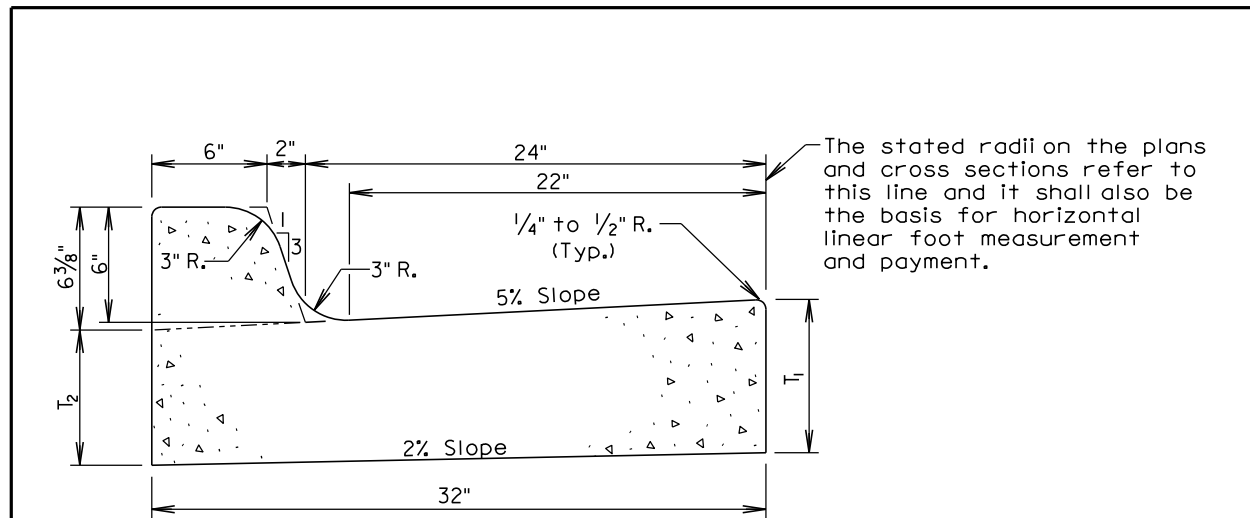
Tension Bands

Tightening Devices

Rail Ends

NOTE: Bands shall be rectangular for "C" Section and "H" Beam Posts.

March 31, 2000



Type	T ₁ (Inches)	T ₂ (Inches)	Cu. Yd. Per Lin. Ft.	Lin. Ft. Per Cu. Yd.
B66	6	5 ⁵ / ₁₆	0.057	17.7
B67	7	6 ¹ / ₁₆	0.065	15.4
B68	8	7 ¹ / ₁₆	0.073	13.7
B68.5	8.5	7 ⁹ / ₁₆	0.077	13.0
B69	9	8 ¹ / ₁₆	0.081	12.3
B69.5	9.5	8 ⁹ / ₁₆	0.085	11.7
B610	10	9 ¹ / ₁₆	0.090	11.2
B610.5	10.5	9 ⁹ / ₁₆	0.094	10.7
B611	11	10 ¹ / ₁₆	0.098	10.2
B611.5	11.5	10 ⁹ / ₁₆	0.102	9.8
B612	12	11 ¹ / ₁₆	0.106	9.4

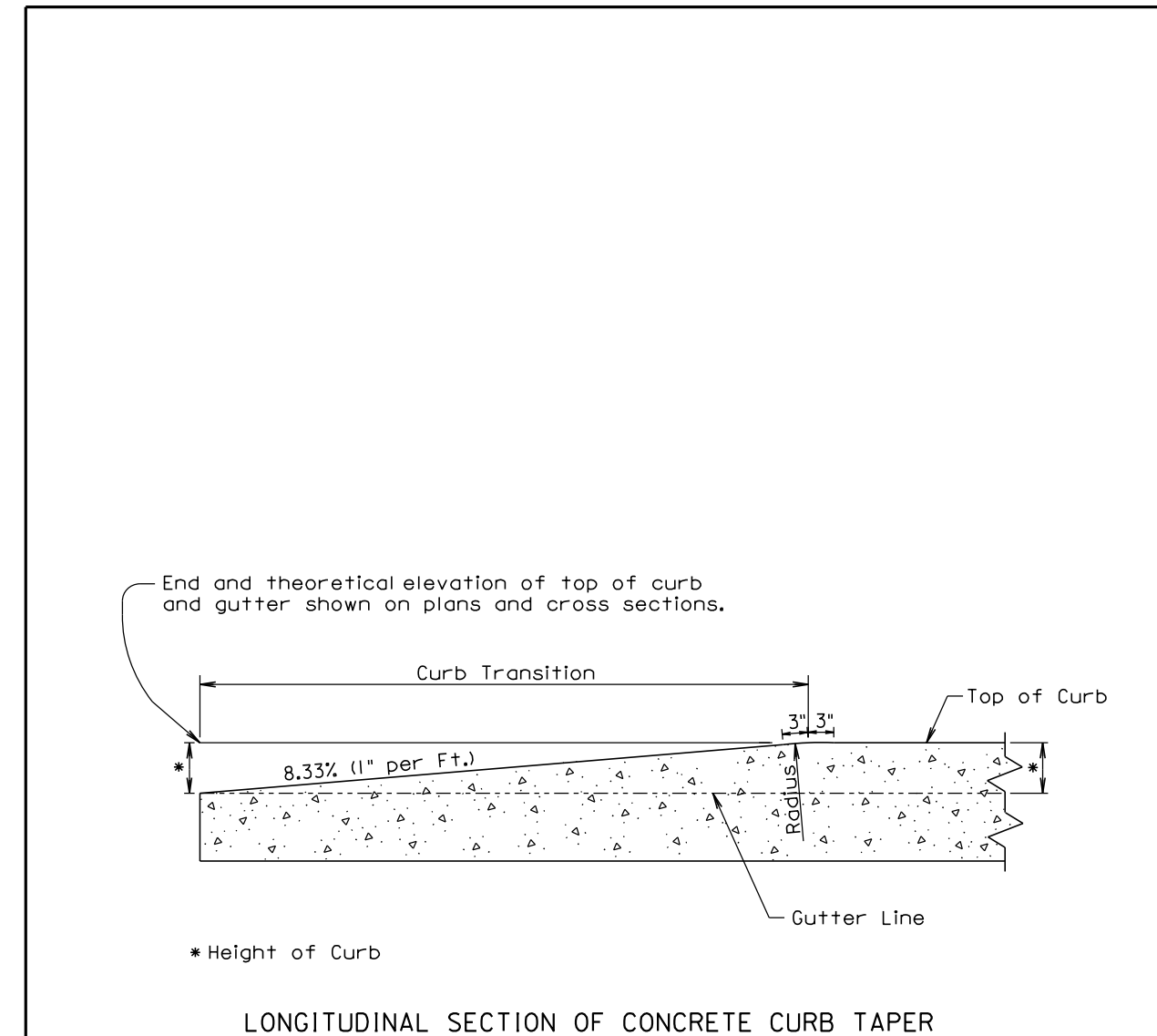
GENERAL NOTES:

When concrete curb and gutter longitudinally adjoins new concrete pavement, the method of attachment shall be by one of the methods shown on Standard Plate 380.11.

See Standard Plate 650.90 for expansion and contraction joints in the curb and gutter.

September 6, 2008

Published Date: 2nd Qtr. 2016	S D D O T	TYPE B CONCRETE CURB AND GUTTER	PLATE NUMBER 650.01
			Sheet 1 of 1

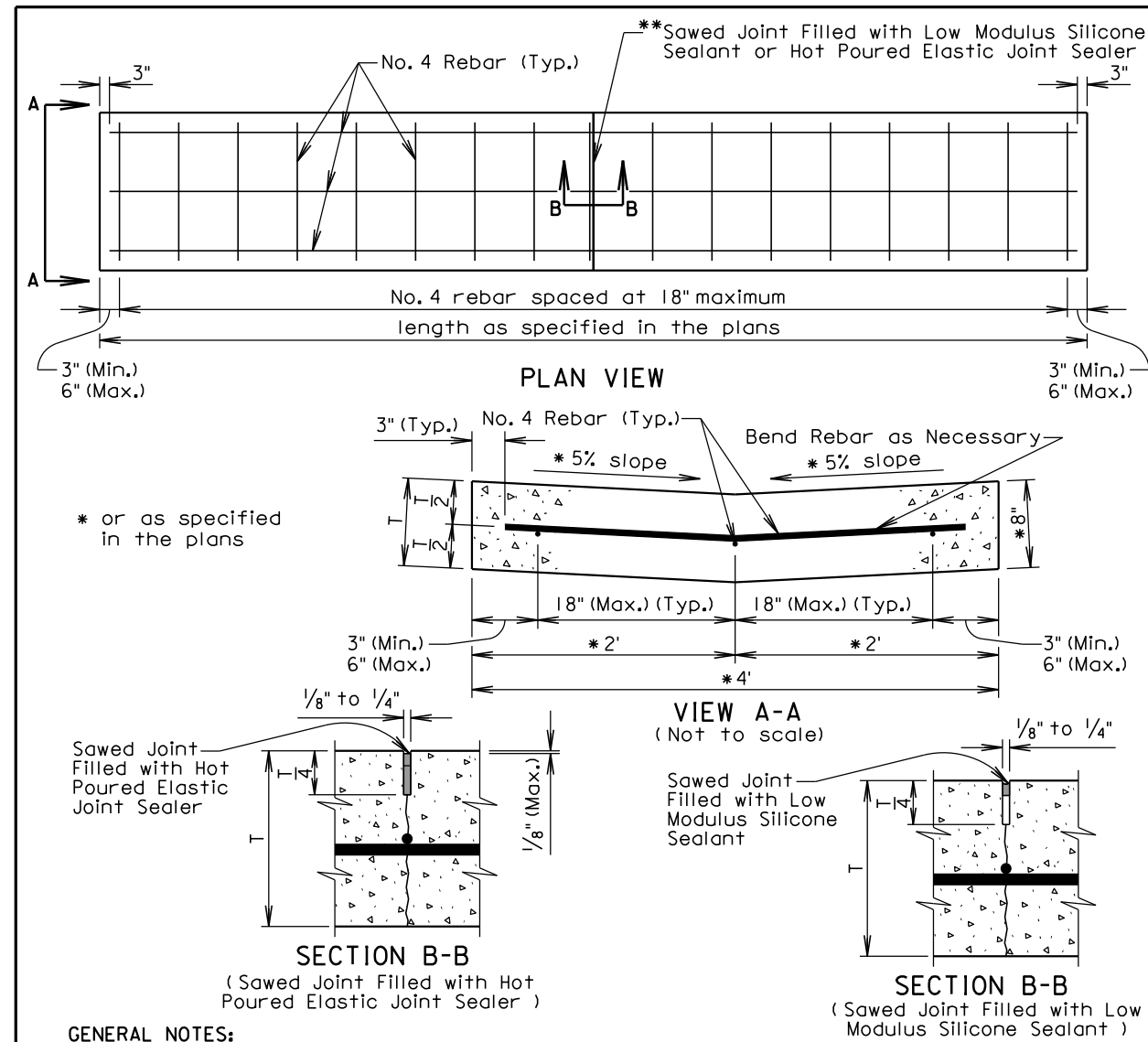


* Height of Curb

LONGITUDINAL SECTION OF CONCRETE CURB TAPER

September 14, 2005

Published Date: 3rd Qtr. 2016	S D D O T	CONCRETE CURB TAPER	PLATE NUMBER 650.35
			Sheet 1 of 1



GENERAL NOTES:

The concrete shall comply with the Specifications for Class M6 concrete.

The reinforcing steel shall comply with the requirements of the Specification Sections 480 and 1010.

If a lap splice is provided the No. 4 rebar shall be lapped a minimum of 12".

** The sawed joints shall be spaced at 12'; however, when the length of the valley gutter is 12' to 24' there shall be a joint at the midpoint of the length. The saw cut to control cracking shall be a minimum of 1/4 the thickness of the pavement.

All hot poured elastic joint sealer material spilled on the surface of the concrete pavement shall be removed as soon as the material has cooled. The extent of removal of material shall be to the satisfaction of the Engineer. All costs for removal of the spilled joint sealer material shall be borne by the Contractor.

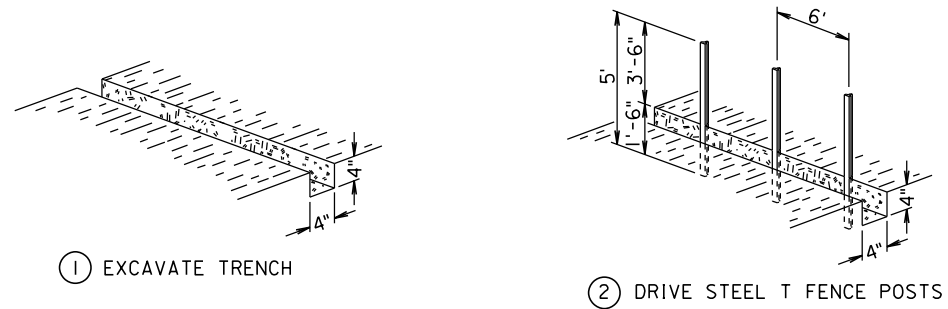
The silicone sealant shall be bonded to the sides of a clean joint to completely seal the joint as approved by the Engineer.

All costs for furnishing and installing the valley gutter including materials, equipment, labor, and incidentals shall be included in the contract unit price per square yard for the corresponding Valley Gutter bid item.

February 10, 2014

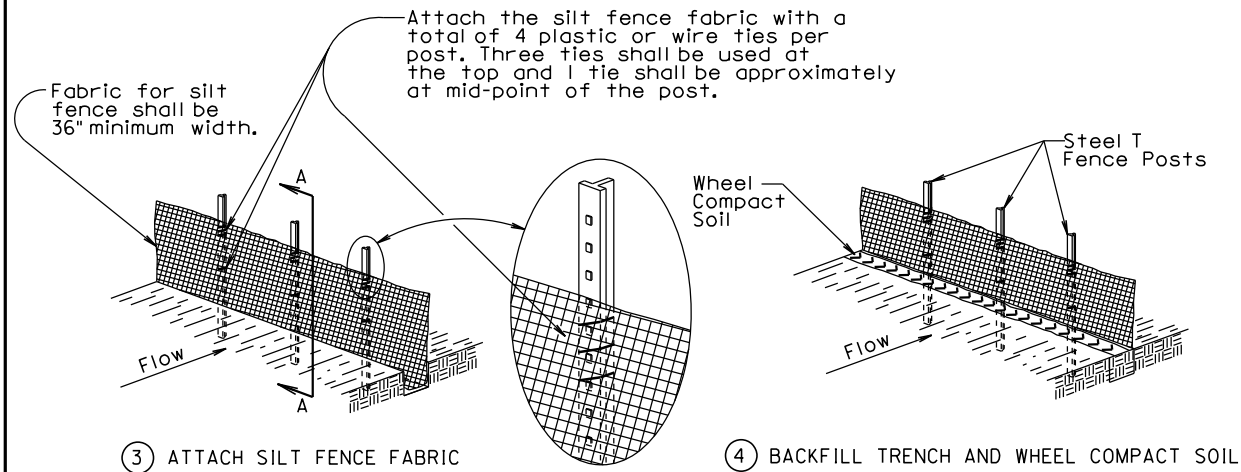
Published Date: 2nd Qtr. 2016	S D D O T	VALLEY GUTTER	PLATE NUMBER 650.40
			Sheet 1 of 1

MANUAL HIGH FLOW SILT FENCE INSTALLATION



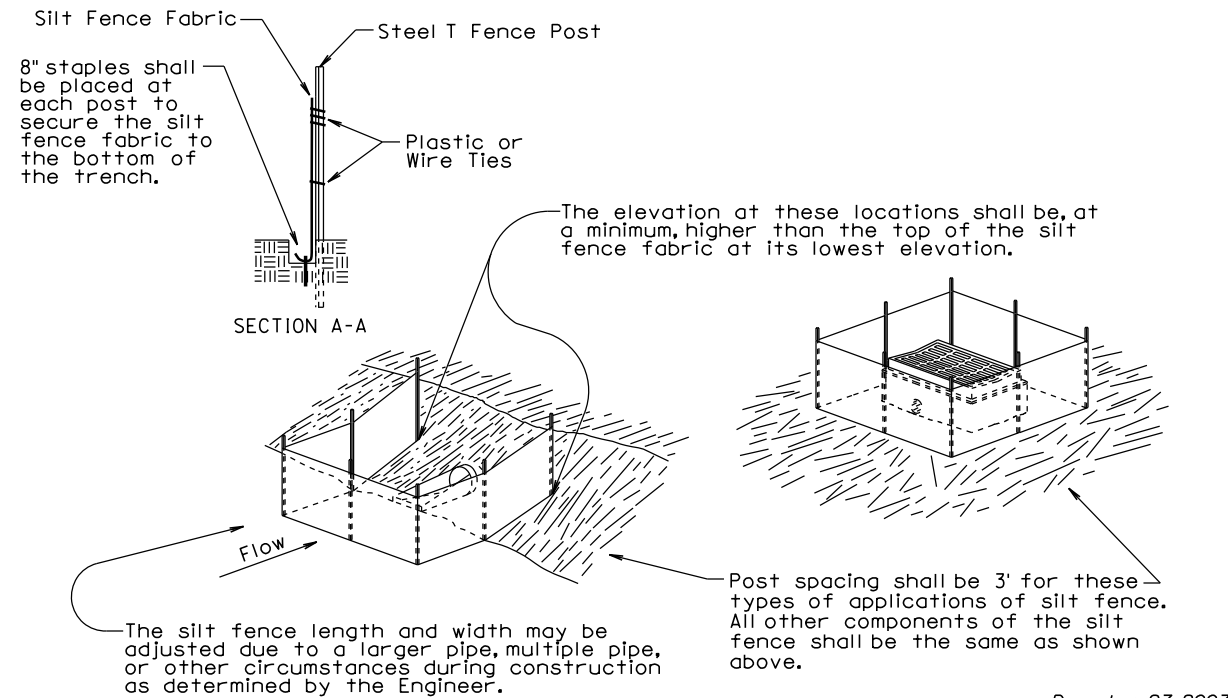
① EXCAVATE TRENCH

② DRIVE STEEL T FENCE POSTS



③ ATTACH SILT FENCE FABRIC

④ BACKFILL TRENCH AND WHEEL COMPACT SOIL



SECTION A-A

SECTION A-A

December 23, 2003

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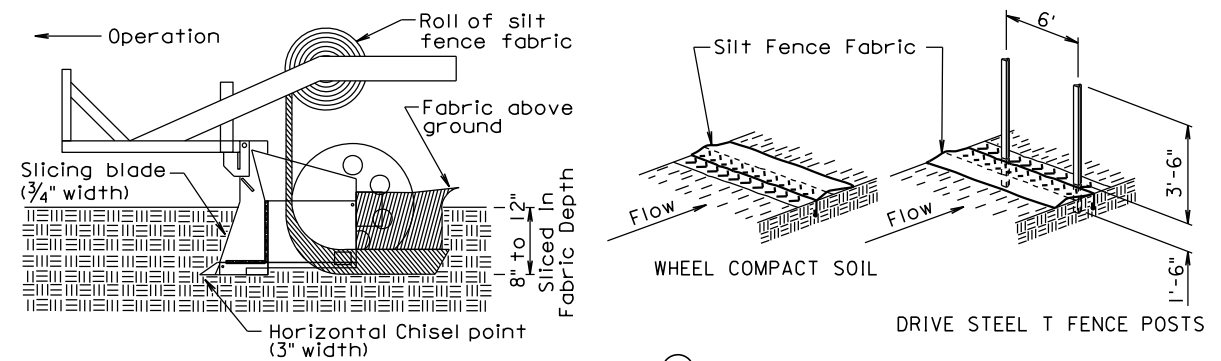
HIGH FLOW SILT FENCE

PLATE NUMBER
734.05

Sheet 1 of 2

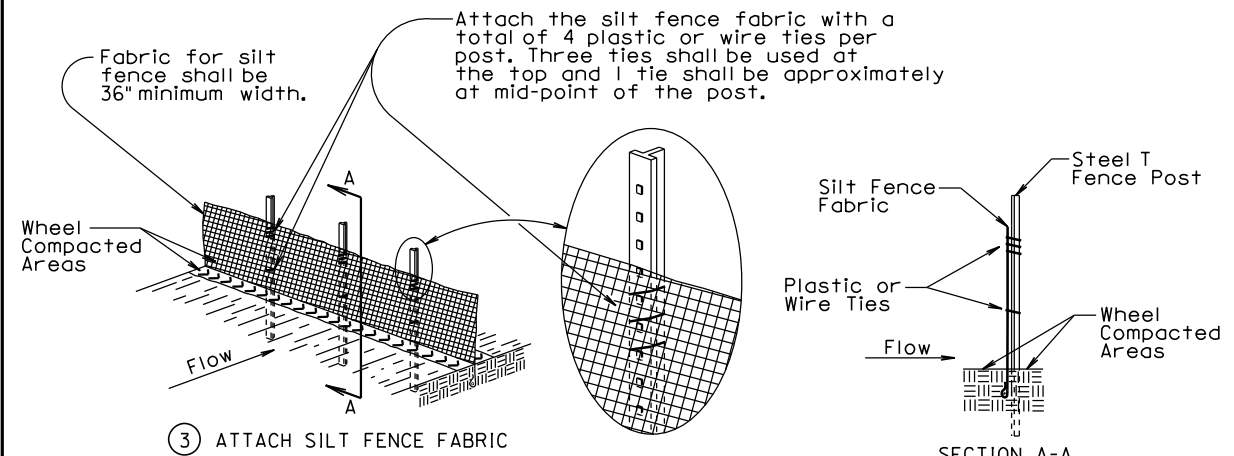
Published Date: 3rd Qtr. 2016

MACHINE SLICED HIGH FLOW SILT FENCE INSTALLATION

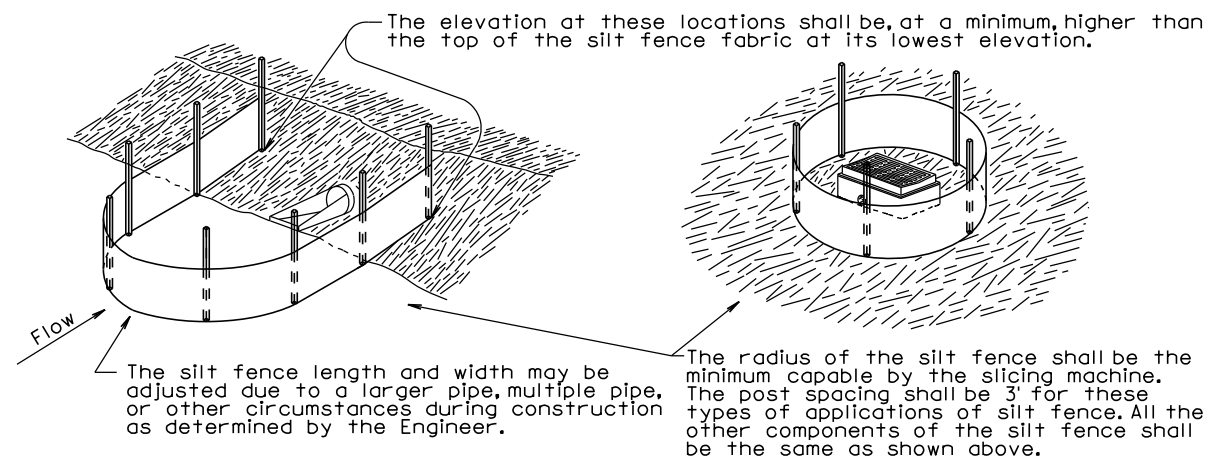


① INSTALL SILT FENCE FABRIC BY MACHINE SLICING METHOD.

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



③ ATTACH SILT FENCE FABRIC



GENERAL NOTE:

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

December 23, 2003

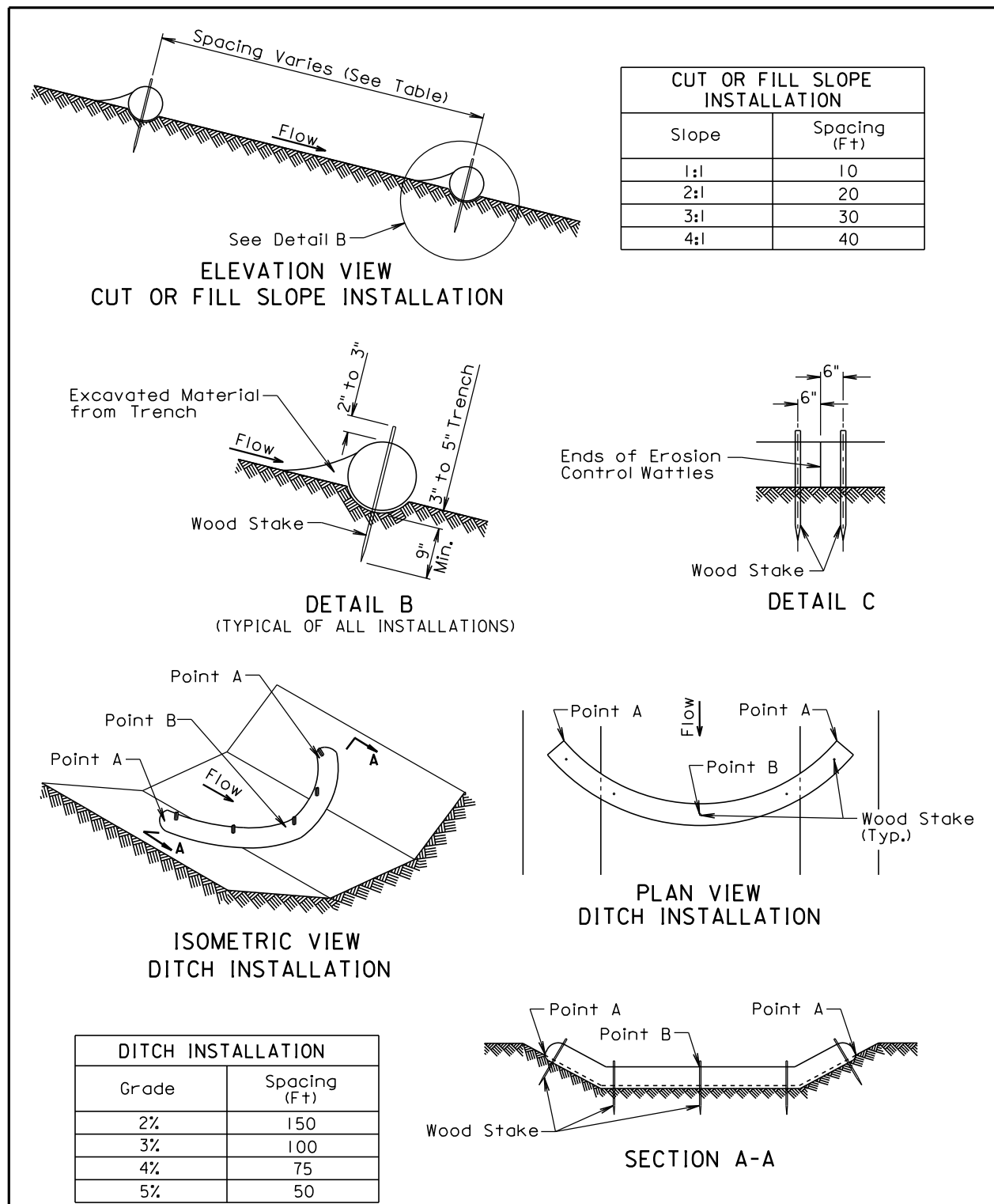
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HIGH FLOW SILT FENCE

PLATE NUMBER
734.05

Sheet 2 of 2

Published Date: 3rd Qtr. 2016



December 23, 2004

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