

SECTION D: EROSION CONTROL

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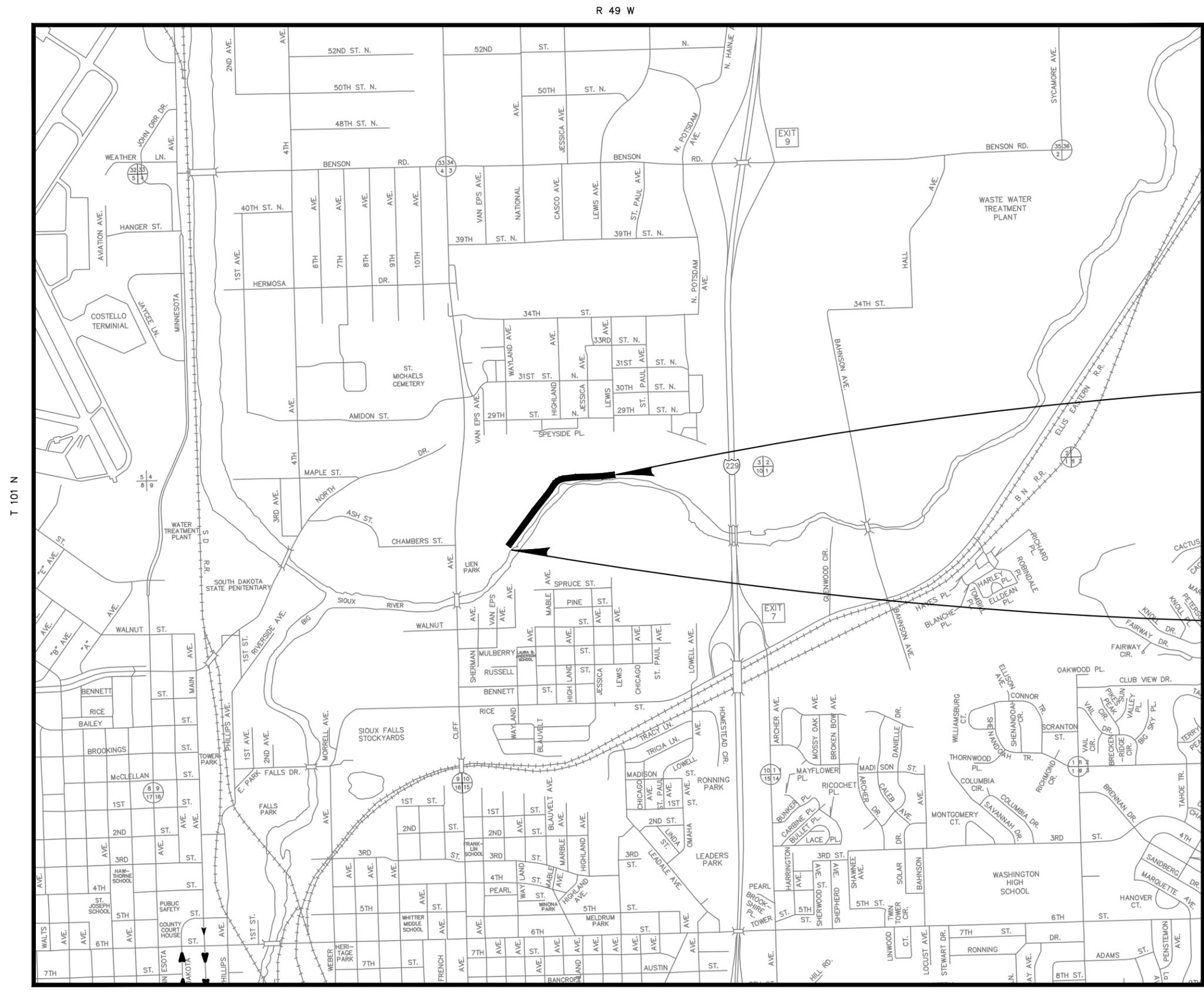
STATE OF SOUTH DAKOTA	PROJECT EM 8050(65)	SHEET NO. D1	TOTAL SHEETS D11
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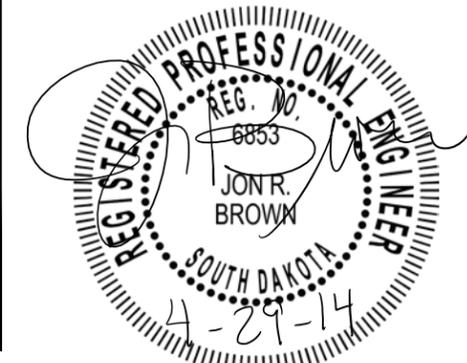
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END PROJECT EM 8050(65)
 SIOUX FALLS BIKE TRAIL STA. 25+75
 APPROX. 4500' EAST OF CLIFF AVENUE
 ALONG THE BIG SIOUX RIVER

BEGIN PROJECT EM 8050(65)
 SIOUX FALLS BIKE TRAIL STA. 0+99
 APPROX. 2000' EAST OF CLIFF AVENUE
 ALONG THE BIG SIOUX RIVER



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SECTION D ESTIMATE OF QUANTITIES

BID ITEM NUMBER	ITEM	QUANTITY	UNIT
110E1700	Remove Silt Fence	650	Ft
230E0010	Placing Topsoil	2370	CuYd
730E0100	Cover Crop Seeding	.5	Bu
730E0251	Special Permanent Seed Mixture 1	272	Lb
730E0252	Special Permanent Seed Mixture 2	22	Lb
731E0100	Fertilizing	3000	Lb
732E0200	Fiber Mulching	2.0	Ton
734E0101	Type 1 Erosion Control Blanket	507	SqYd
734E0602	Low Flow Silt Fence	2557	Ft
734E0610	Mucking Silt Fence	180	CuYd
734E0620	Repair Silt Fence	650	Ft
900E1310	Concrete Washout Facility	1	Each

PLACING TOPSOIL

The thickness will be approximately 6" in all areas.

SHRINKAGE FACTOR: Embankment +40% (Assumed)

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

Station	to	Station	Topsoil (CuYd)
00+99		25+90	2370
Total:			2370

DRILLS

In addition to the drills specified in Section 730 of the Specifications, other types of drills including no-till drills will be allowed as long as they have baffles, partitions, agitators, or augers which keep the seed distributed throughout the seed box and the seed is planted at a depth of 1/4" to 1/2".

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 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.

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

The mycorrhizal inoculum shall be from the list below or an approved equal:

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

FERTILIZING

The Contractor shall apply an all-natural slow release fertilizer prior to seeding or placing sod. The all-natural fertilizer shall have a minimum guaranteed analysis of 4-6-4 and be USDA Certified BioBased. It should provide a minimum of 4% (N) nitrogen with a minimum water insoluble nitrogen (WIN) fraction of 3.2%, a minimum of 6% (P2O5) available phosphate, a minimum of 4% (K2O) soluble potash, and a maximum carbon to nitrogen ratio (C:N ratio) of 5:1. The all-natural fertilizer shall be free of weed-seed and pathogens accomplished through thermophilic composting, and not mechanical or chemical sterilization, to assure presence of beneficial soil microbiology. The fertilizer shall have a near neutral pH, a low salt index, a low biological oxygen demand, contain organic humic and fulvic acids, and have high aerobic organism counts. The fertilizer shall also be stable, free of bad odors, and be unattractive as a food source for animals. It should also be in a granular form that is easily spread.

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

The application rate is 1,500 pounds per acre.

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

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

DRILLS

In addition to the drills specified in Section 730 of the Standard Specifications, other types of drills including no-till drills will be allowed as long as they have baffles, partitions, agitators, or augers which keep the seed distributed throughout the seed box and the seed is planted at a depth of 1/4" to 1/2".

PERMANENT SEEDING

The areas to be seeded comprise of all newly graded areas within the project limits except for the top of roadways and temporary easements under cultivation.

All permanent seed shall be planted in the topsoil at a depth of 1/4" to 1/2".

All seed broadcast must be raked or dragged in (incorporated) within the top 1/4" to 1/2" of topsoil when possible. This requirement may be waived by the

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Engineer during construction when raking or dragging is deemed not feasible by conventional methods.

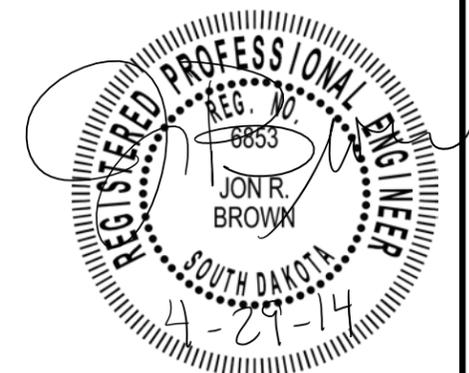
An additional 25% of total seed quantity has been added to all seed mixes to be used at the direction of the engineer.

Special Permanent Seed Mixture #1 All areas disturbed within the Seed Area "1" shall be seeded with the following mix:

	LBS/1 ACRE
Improved Kentucky Bluegrass (minimum 3 varieties)	155
Fine-Leaf Perennial Ryegrass (minimum 2 varieties)	65
Creeping Red Fescue	40
TOTALS	260LB per Acre

Special Permanent Seed Mixture #2 (MSI Short Grass Prairie Mix). All areas disturbed within the Seed Area "2" shall be seeded with the following mix:

NATIVE GRASSES		PLS LBS / 1 ACRE
Scientific Name	Common Name	
<i>Bouteloua curtipendula</i>	Sideoats Grama	3.00 LB
<i>Buchloe dactyloides</i>	Buffalograss	1.00 LB
<i>Elymus virginicus</i>	Virginia Wildrye	1.00 LB
<i>Koeleria cristata</i>	Prairie June Grass	0.50 LB
<i>Schizachyrium scoparium</i>	Little Bluestem	2.00 LB
<i>Sporobolus asper</i>	Rough Dropseed	0.20 LB
<i>Sporobolus cryptandrus</i>	Sand Dropseed	0.20 LB
<i>Sporobolus heterolepsis</i>	Prairie Dropseed	0.10 LB
<i>Bouteloua gracilis</i>	Blue Grama	2.00 LB
SEED CARRIER		
Lawn Starter w/MicroApply		15.00 LB
TOTALS		25LB bulk weight per acre



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COVER CROP SEEDING

Oats or spring wheat seed shall be used April through July and winter wheat seed shall be used August through November.

Cover crop seeding may be used on this project as a temporary erosion control measure. The quantity of cover crop seeding was estimated at the total area of Seed Area No.1. The actual limits and use of cover crop seeding shall be determined by the Engineer during construction.

Cover Crop Seeding shall take place prior to and only in seed area. The contractor shall apply Quickguard Sterile Tritcale Hybrid at a rate of .5 Bushel per acre, or an engineer approved equal.

All costs associated with cover crop seeding shall be paid for at the contract unit price per Bu for "Cover Crop Seeding".

FIBER MULCHING

Fiber mulch shall be applied in a separate operation following permanent seeding. 25% of quantity has been added to the estimate to estimate of quantities to used at the engineers direction.

An additional 2% by weight of tackifier shall be added to the fiber mulch product selected from the list below. If the product selected has guar gum tackifier included, then the additional 2% of tackifier shall be guar gum. If the product selected has synthetic tackifier included, then the additional 2% of tackifier shall be synthetic.

Fiber mulch shall be applied at the rate of 2000 pounds per acre.

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

All costs for the additional tackifier added to the fiber mulch including labor, equipment, and materials shall be incidental to the contract unit price per Ton for "Fiber Mulching".

The fiber mulch used on this project shall be one from the list below:

<u>Product</u>	<u>Manufacturer</u>
Mat-Fiber Plus	Mat, Inc. Floodwood, MN Phone: 1-888-477-3028 www.matinc.biz
Conwed Hydro Mulch 2000	Profile Products LLC Buffalo Grove, IL Phone: 1-800-366-1180 www.conwedfibers.com
EcoFibre Plus Tackifier	Profile Products LLC Buffalo Grove, IL Phone: 1-800-366-1180 www.profile-eco.com
Terra Wood	Profile Products LLC

with Tacking Agent 3

Buffalo Grove, IL
Phone: 1-800-726-6371
www.terra-mulch.com

Bindex Wood WT

American Excelsior Co.
Arlington, TX
Phone: 1-800-777-7645
www.curlex.com

Second Nature Wood
Fiber Mulch Plus

Central Fiber LLC
Canton, OH
Phone: 1-888-452-2630
www.centralfiber.com

TABLE OF FIBER MULCHING

Station	to	Station	L/R	Quantity (Ton)
0+99		25+90	LT/RT	2.0
Total:				2.0

LOW FLOW SILT FENCE

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

<http://apps.sd.gov/Applications/HC54ApprovedProducts/main.asp>

Low flow silt fence shall be placed at the locations noted in the table and at locations that will minimize siltation of adjacent streams, lakes, dams, or drainage areas as determined by the Engineer during construction. Refer to Standard Plate 734.04 for details.

An additional 100 feet of Low Flow Silt Fence has been added to the Estimate of Quantities for temporary sediment control.

TABLE OF LOW FLOW SILT FENCE

Station	L/R	Quantity (Ft)
0+88 to 17+00	RT	1607
16+40 to 16+60	LT	20
18+20 to 25+90	RT	750
18+25 to 18+45	LT	20
19+90 to 20+10	LT	20
21+80 to 22+00	LT	20
23+30 to 23+50	LT	20
Additional Quantity:		100
Total:		2557

MUCKING SILT FENCE

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

REMOVE SILT FENCE

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

EROSION CONTROL BLANKET

Erosion control blanket shall be installed at the locations noted in the table and at locations determined by the Engineer during construction.

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

<http://apps.sd.gov/Applications/HC54ApprovedProducts/main.asp>

The Contractor shall install erosion control blanket according to the manufacturer's installation instructions.

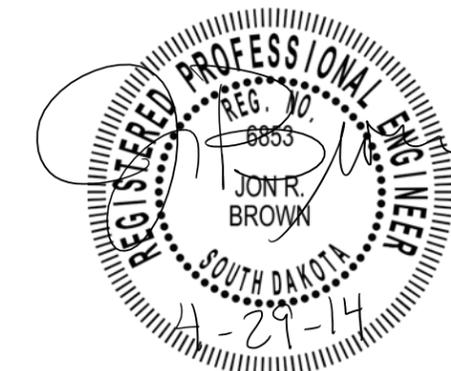
The Contractor shall have a representative from the erosion control blanket manufacturer or company on site to ensure proper installation.

An additional quantity of 100 square yards of Type 1 Erosion Control Blanket has been added to the Estimate of Quantities for temporary erosion control.

TABLE OF EROSION CONTROL BLANKET

Station	L/R	Location	Type	Quantity (SqYd)
13+70	RT	Pipe Outlet	1	70
16+50	LT/RT	Pipe Outlet	1	110
18+45	LT/RT	Pipe Outlet	1	27
20+00	LT/RT	Pipe Outlet	1	64
21+85	LT/RT	Pipe Outlet	1	47
23+40	LT/RT	Pipe Outlet	1	89
Additional Quantity:			1	100

Total Type 1 Erosion Control Blanket: 507



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** 2.03 Acres **(4.2 1.b.)**
- **Total Area To Be Disturbed** 2.03 Acres **(4.2 1.b.)**
- **Existing Vegetative Cover (%)** 90
- **Soil Properties:** AASHTO Soil or USDA-NRCS Soil Series Classification A-7-6 **(4.2 1. d.)**
- **Name of Receiving Water Body/Bodies** Big Sioux River **(4.2 1.e.)**

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

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

- **Install perimeter protection where runoff sheets from the site.**
- **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
 - Erosion Control Blankets or Mats
 - Vegetation Buffer Strips
 - Roughened Surface (e.g. tracking)
 - Dust Control
 - Other:
- **Structural Temporary Erosion and Sediment Controls**
 - Silt Fence

- Floating Silt Curtain
- Straw Bale Check
- Temporary Berm
- Temporary Slope Drain
- Straw Wattles or Rolls
- Turf Reinforcement Mat
- Rip Rap
- Gabions
- Rock Check Dams
- Sediment Traps/Basins
- Inlet Protection
- Outlet Protection
- Surface Inlet Protection (Area Drain)
- Curb Inlet Protection
- Stabilized Construction Entrances
- Entrance/Exit Equipment Tire Wash
- Interceptor Ditch
- Concrete Washout Area
- Temporary Diversion Channel
- Work Platform
- Temporary Water Barrier
- Temporary Water Crossing
- Other:

➤ **Wetland Avoidance**

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

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

Storm water management will be handled by temporary controls outlined in "EROSION AND SEDIMENT CONTROLS" above, and any permanent controls needed to meet permanent storm water management needs in the post construction period. Permanent controls will be shown on the plans and noted as permanent.

➤ **Other Storm Water Controls (4.2 2.c., (1) and (2))**▪ **Waste Disposal**

All liquid waste materials will be collected and stored in sealed metal containers approved by the project engineer. All trash and construction debris from the site will be deposited in the approved containers. Containers will be serviced as necessary, and the trash will be hauled to an approved disposal site or licensed landfill. All onsite personnel will be instructed in the proper procedures for waste disposal, and notices stating proper practices will be posted in the field office. The general contractor's representative responsible for the conduct of work on the site will be responsible for seeing that these practices 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 $\frac{1}{3}$ 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 $\frac{1}{2}$ 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)**

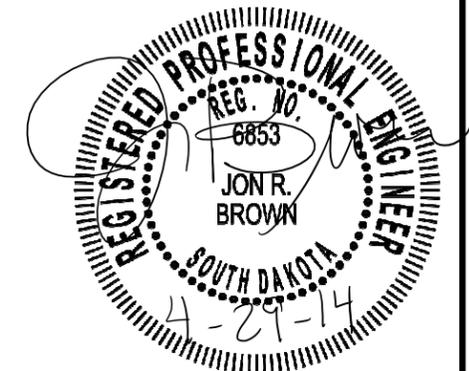
The following non-storm water discharges are anticipated during the course of this project (check all that apply).

- 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:



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❖ **Spill Prevention (4.2 2.c.(2))**

➤ **Material Management**

▪ **Housekeeping**

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

▪ **Hazardous Materials**

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

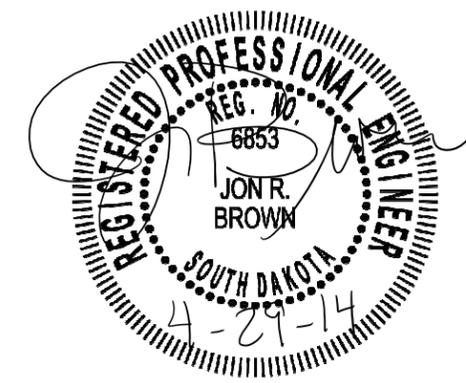
- If a spill occurs the superintendent or the superintendent's designee will be responsible for completing the spill reporting form and for reporting the spill to SD DENR.
- Personnel with primary responsibility for spill response and clean up will receive training by the contractor's site superintendent 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.



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❖ **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.



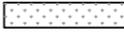
EROSION CONTROL

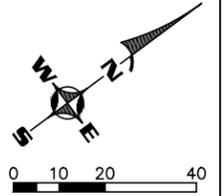
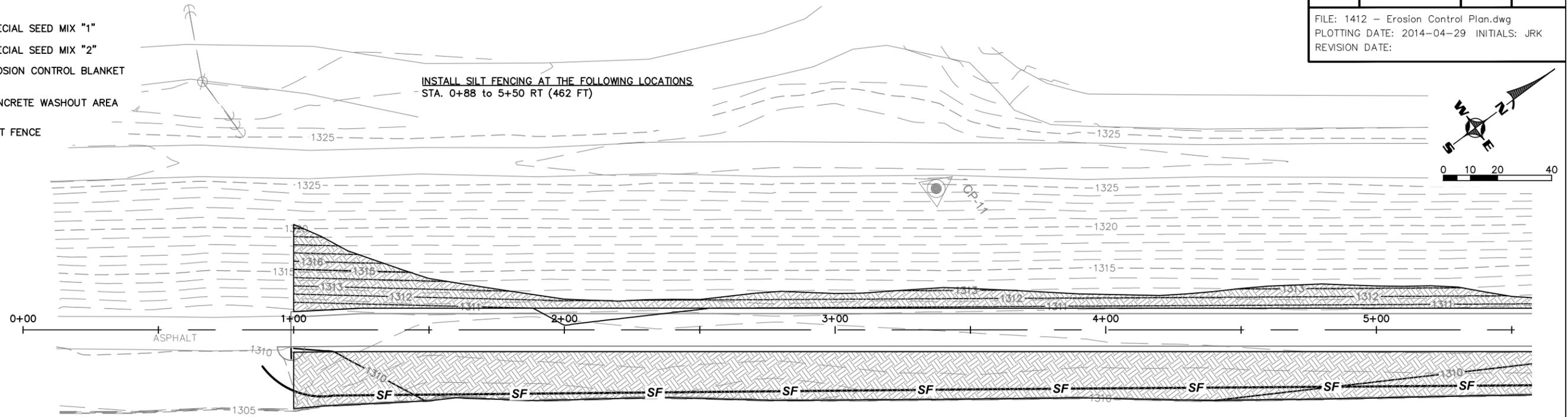
FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT EM 8050(65)	SHEET NO. D7	TOTAL SHEETS D11
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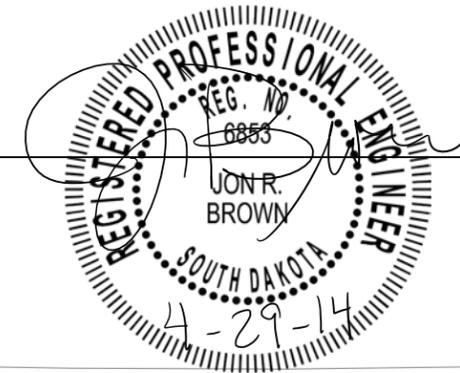
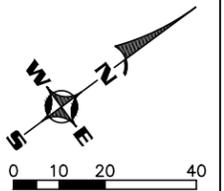
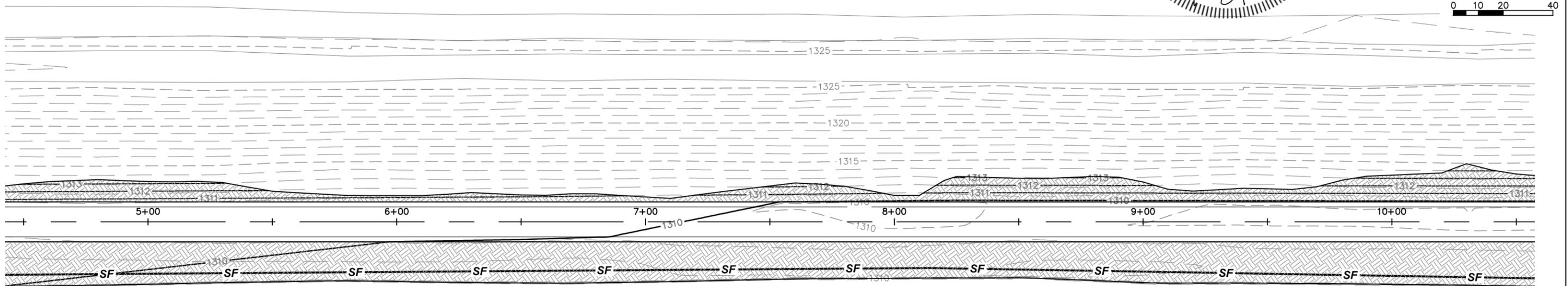
FILE: 1412 - Erosion Control Plan.dwg
 PLOTTING DATE: 2014-04-29 INITIALS: JRK
 REVISION DATE:

LEGEND

-  - SPECIAL SEED MIX "1"
-  - SPECIAL SEED MIX "2"
-  - EROSION CONTROL BLANKET
-  - CONCRETE WASHOUT AREA
-  - SILT FENCE



INSTALL SILT FENCING AT THE FOLLOWING LOCATIONS
 STA. 5+50 TO 10+50 RT (500 FT)



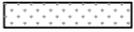
EROSION CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT EM 8050(65)	SHEET NO. D8	TOTAL SHEETS D11
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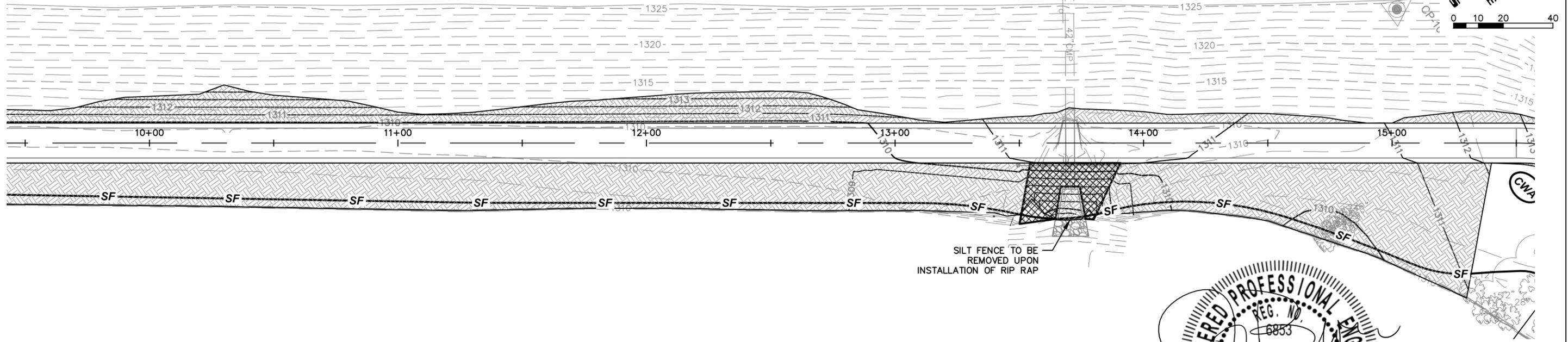
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 PLOTTING DATE: 2014-04-29 INITIALS: JRK
 REVISION DATE:

LEGEND

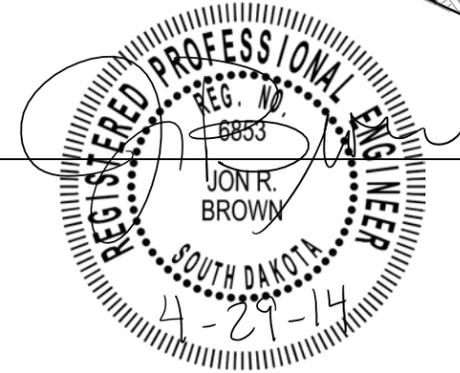
-  - SPECIAL SEED MIX "1"
-  - SPECIAL SEED MIX "2"
-  - EROSION CONTROL BLANKET
-  - CONCRETE WASHOUT AREA
-  - SILT FENCE

INSTALL SILT FENCING AT THE FOLLOWING LOCATIONS
 STA. 10+50 TO 15+50 RT (500 FT)

INSTALL TYPE 1 EROSION CONTROL BLANKET AT THE FOLLOWING LOCATIONS
 STA. 13+70 RT (70 SY)



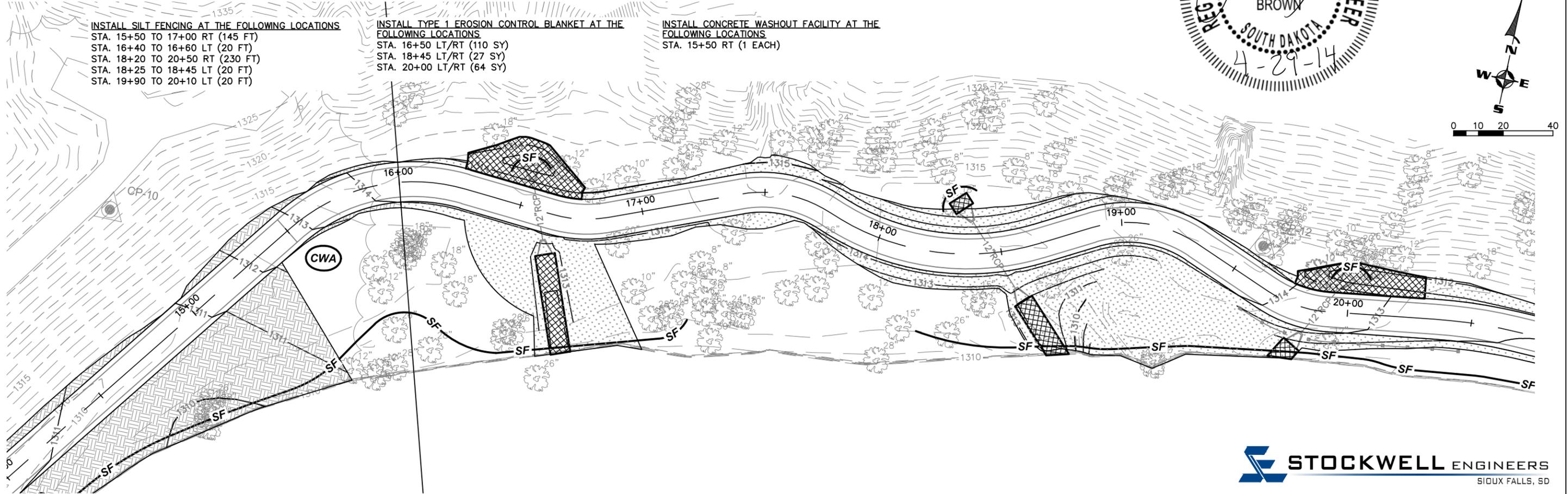
SILT FENCE TO BE REMOVED UPON INSTALLATION OF RIP RAP



INSTALL SILT FENCING AT THE FOLLOWING LOCATIONS
 STA. 15+50 TO 17+00 RT (145 FT)
 STA. 16+40 TO 16+60 LT (20 FT)
 STA. 18+20 TO 20+50 RT (230 FT)
 STA. 18+25 TO 18+45 LT (20 FT)
 STA. 19+90 TO 20+10 LT (20 FT)

INSTALL TYPE 1 EROSION CONTROL BLANKET AT THE FOLLOWING LOCATIONS
 STA. 16+50 LT/RT (110 SY)
 STA. 18+45 LT/RT (27 SY)
 STA. 20+00 LT/RT (64 SY)

INSTALL CONCRETE WASHOUT FACILITY AT THE FOLLOWING LOCATIONS
 STA. 15+50 RT (1 EACH)



EROSION CONTROL

FOR BIDDING PURPOSES ONLY

STATE OF SOUTH DAKOTA	PROJECT	SHEET NO.	TOTAL SHEETS
	EM 8050(65)	D9	D11

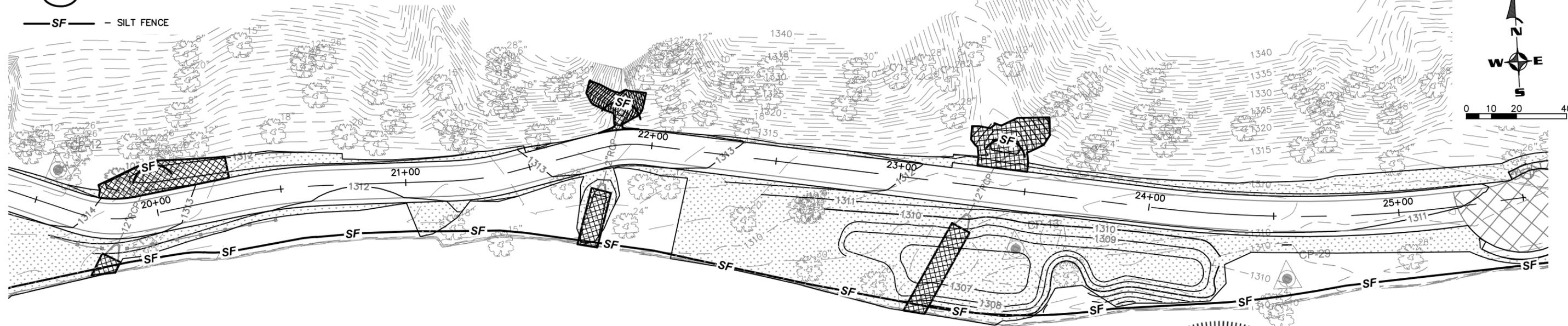
FILE: 1412 - Erosion Control Plan.dwg
 PLOTTING DATE: 2014-04-29 INITIALS: JRK
 REVISION DATE:

LEGEND

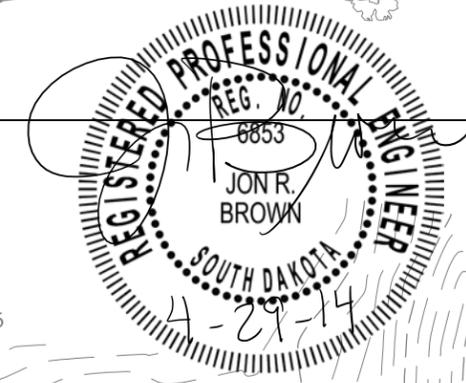
-  - SPECIAL SEED MIX "1"
-  - SPECIAL SEED MIX "2"
-  - EROSION CONTROL BLANKET
-  - CONCRETE WASHOUT AREA
-  - SILT FENCE

INSTALL SILT FENCING AT THE FOLLOWING LOCATIONS
 STA. 20+50 TO 25+00 RT (450 FT)
 STA. 21+80 TO 22+00 LT (20 FT)

INSTALL TYPE 1 EROSION CONTROL BLANKET AT THE FOLLOWING LOCATIONS
 STA. 21+85 LT/RT (47 SY)
 STA. 23+40 LT/RT (89 SY)



INSTALL SILT FENCING AT THE FOLLOWING LOCATIONS
 STA. 25+00 TO 25+90 (110 FT)



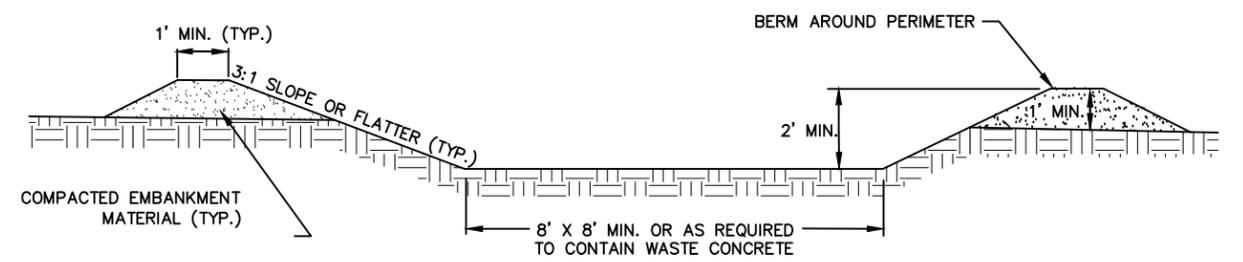
FOR BIDDING PURPOSES ONLY

CWF

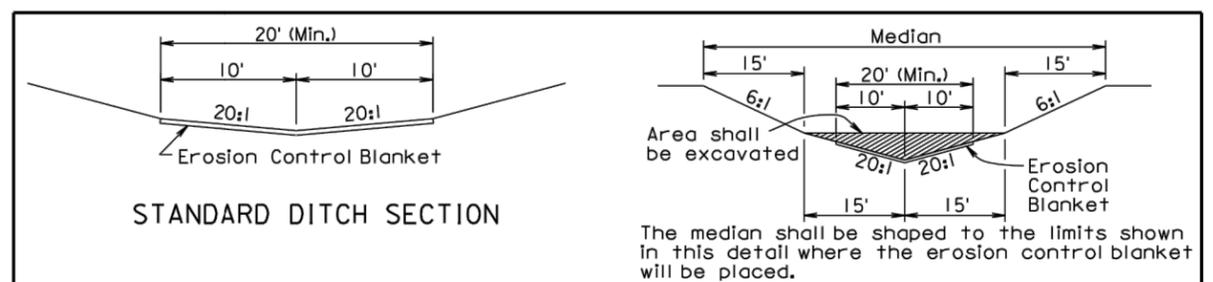
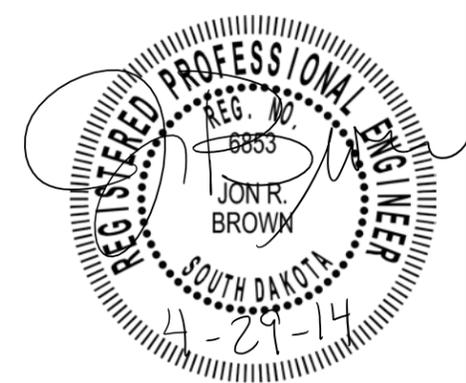
CONCRETE WASHOUT FACILITY

NOTES:

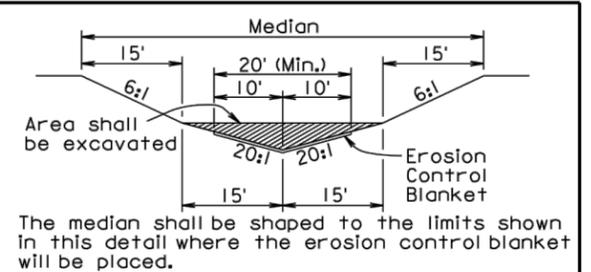
1. CONCRETE WASHOUT FACILITY SHALL BE INSTALLED PRIOR TO ANY CONCRETE PLACEMENT ON SITE.
2. A SIGN SHALL BE INSTALLED ADJACENT TO EACH WASHOUT FACILITY TO INFORM CONCRETE EQUIPMENT OPERATORS TO UTILIZE THE CWF.
3. THE CONCRETE WASHOUT FACILITY SHALL BE REPAIRED AND ENLARGED OR CLEANED OUT AS NECESSARY TO MAINTAIN CAPACITY FOR WASTED CONCRETE.
4. WHEN CWF ARE NO LONGER REQUIRED FOR THE WORK, THE HARDENED CONCRETE AND MATERIALS USED TO CONSTRUCT THE CWF SHALL BE REMOVED AND DISPOSED OF.
5. WHEN THE CONCRETE WASHOUT FACILITY IS REMOVED, THE HOLES, DEPRESSIONS OR OTHER GROUND DISTURBANCE SHALL BE BACKFILLED, REPAIRED AND STABILIZED.



CROSS SECTIONAL VIEW

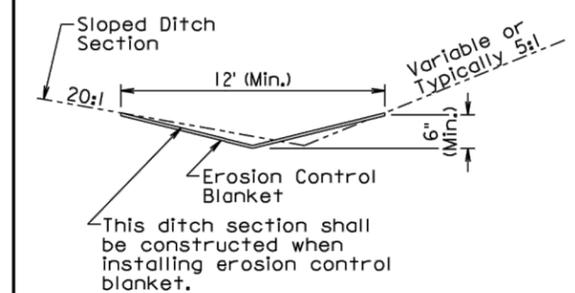


STANDARD DITCH SECTION

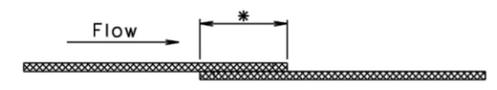


MEDIAN SECTION

The median shall be shaped to the limits shown in this detail where the erosion control blanket will be placed.

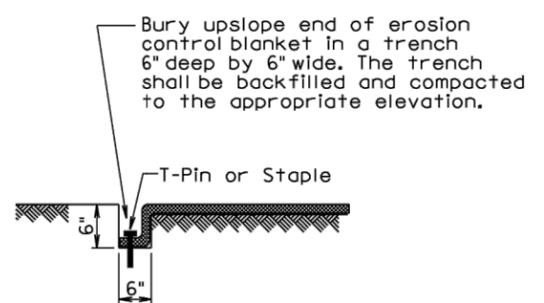


SLOPED DITCH SECTION

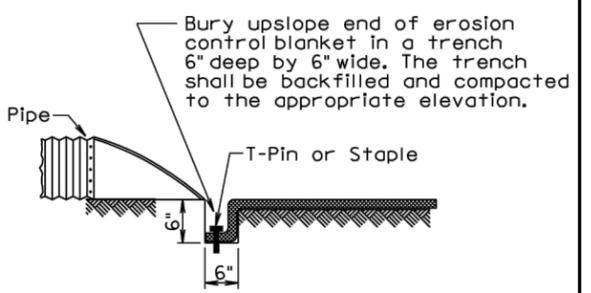


OVERLAP DETAIL

- * Use a 4" (Min.) overlap wherever two widths of erosion control blanket are applied side by side.
- * Use a 6" (Min.) overlap wherever one roll of erosion control blanket ends and another begins.



TRENCH DETAIL



PIPE END DETAIL

GENERAL NOTES:

Prior to placement of the erosion control blanket, the areas shall be properly prepared, shaped, seeded, and fertilized.

Erosion control blanket shall be unrolled in the direction of the flow of water when placed in ditches and on slopes. The upslope end of the erosion control blanket shall be buried in a trench 6" wide by 6" deep. There shall be at least a 6" overlap wherever one roll of erosion control blanket ends and another begins, with the upslope erosion control blanket placed on top of the downslope erosion control blanket.

The erosion control blanket shall be pinned to the ground according to the manufacturer's installation recommendations.

After the placement of the erosion control blanket, the Contractor shall fine grade along all edges of the blanket to maintain a uniform slope adjacent to the blanket and level any low spots which might prevent uniform and unrestricted flow of side drainage directly onto the erosion control blanket.

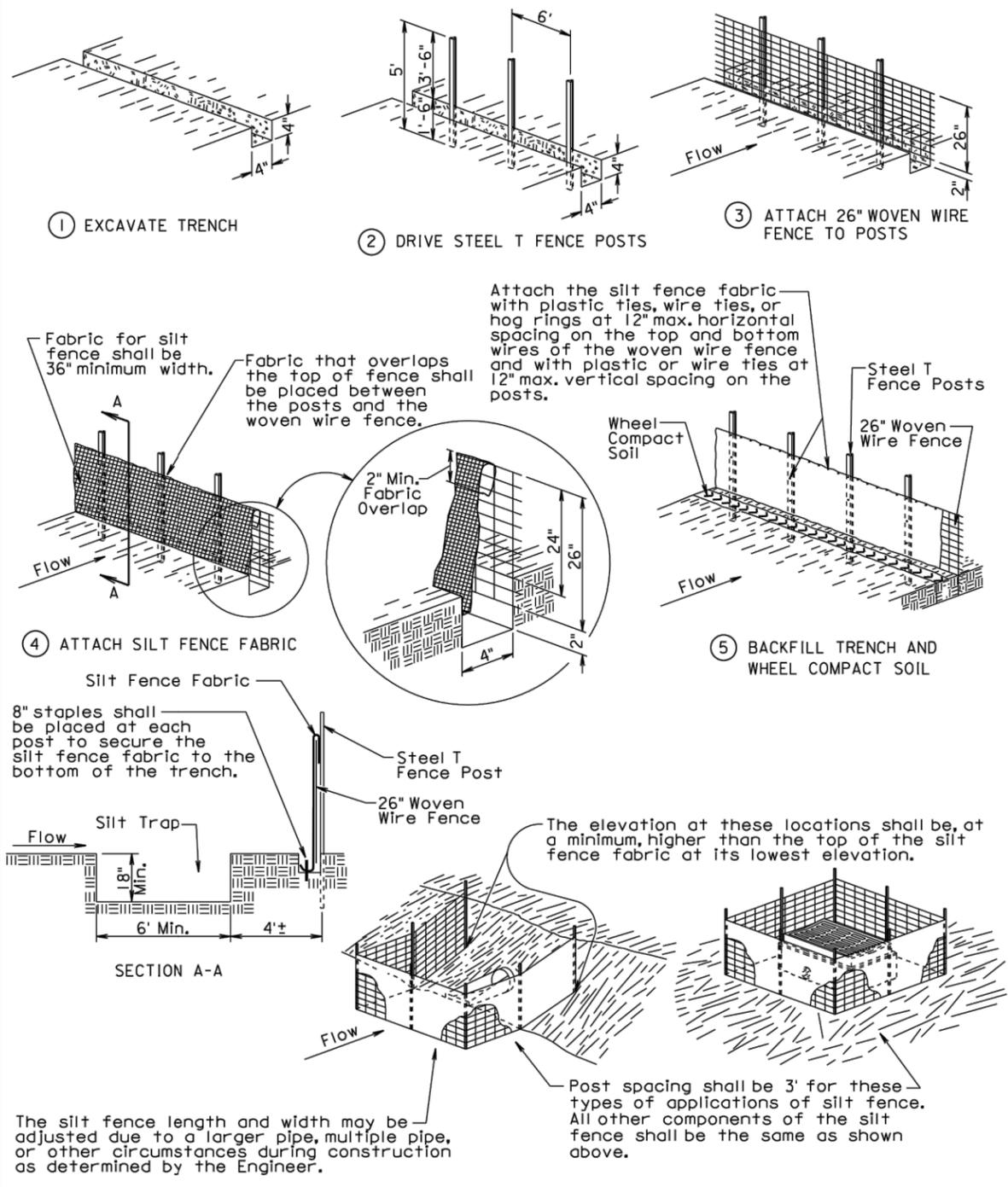
All ditch sections shall be shaped when installing the erosion control blanket. All costs for shaping the ditches shall be incidental to the contract unit price per foot for "Shaping for Erosion Control Blanket".

December 23, 2004

Published Date: 3rd Qtr. 2013	S D D O T	EROSION CONTROL BLANKET	PLATE NUMBER 734.01
			Sheet 1 of 1

CONCRETE WASHOUT FACILITY

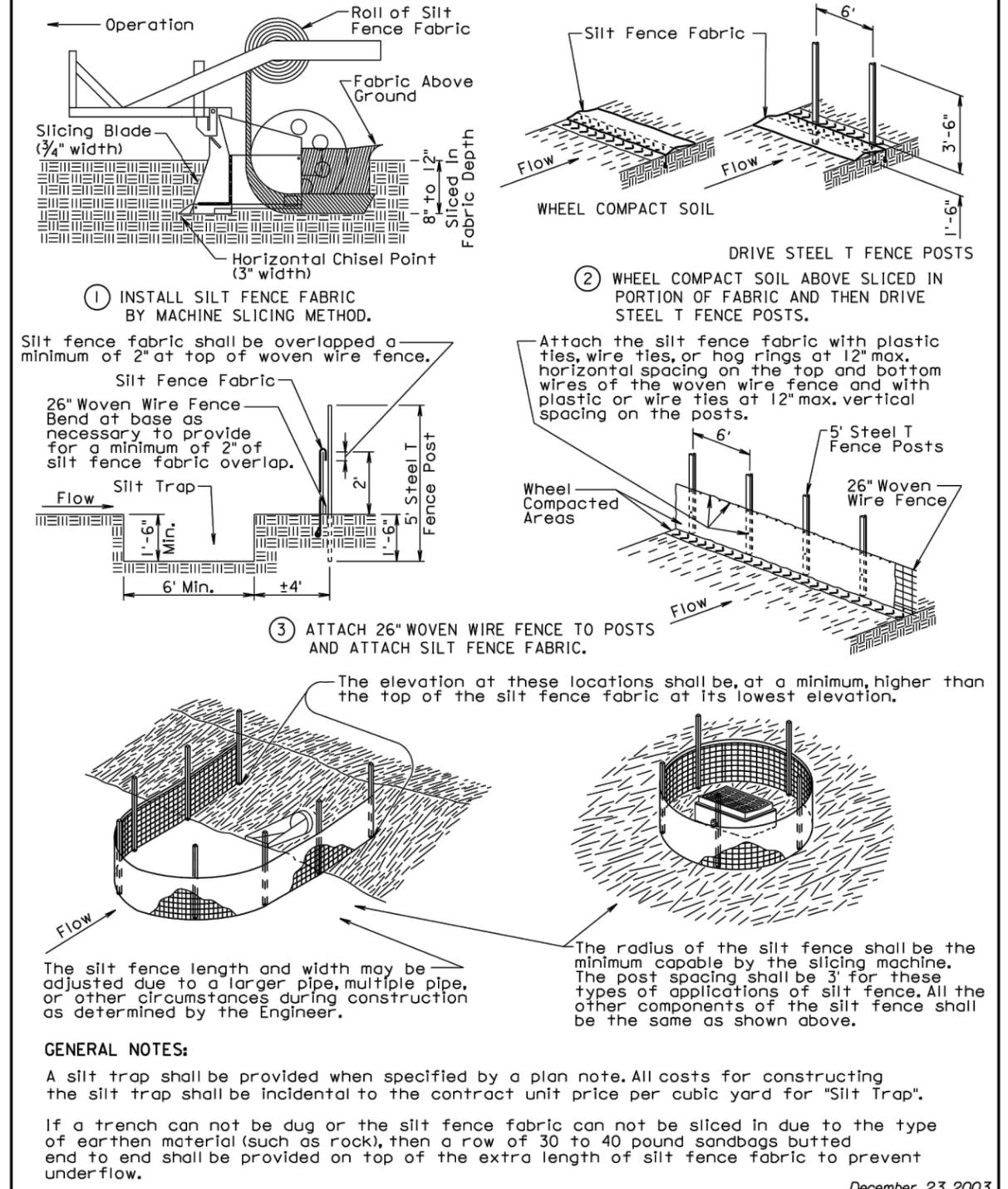
MANUAL LOW FLOW SILT FENCE INSTALLATION



December 23, 2003

Published Date: 3rd Qtr. 2013	S D D O T	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 1 of 2

MACHINE SLICED LOW FLOW SILT FENCE INSTALLATION



December 23, 2003

Published Date: 3rd Qtr. 2013	S D D O T	LOW FLOW SILT FENCE AND SILT TRAP	PLATE NUMBER 734.04
			Sheet 2 of 2