

FY2014

EROSION and SEDIMENT CONTROL and STORMWATER MANAGEMENT



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The objective of the South Dakota Department of Transportation (SDDOT) Erosion and Sediment Control and Storm Water Management Course is to help you understand the requirements for erosion and sediment control for construction. It will include what is expected of SDDOT, Contractors, and Consultants. This manual will also cover what is required by South Dakota Department of Environment and Natural Resources (SD DENR) in order to meet the mandates of state and federal legislation.

Best Management Practices (BMP's) for controlling sediment and erosion and managing storm water will be covered to help you with:

- selection criteria for BMP's
- design methods and processes
- installation details and potential problems with installation
- maintenance and management practices for temporary BMP's

When design and initial installation are complete, continuous inspections and maintenance activities are required to ensure that the controls remain effective throughout the term of construction. It is important that field personnel understand the full range of activities required to effectively manage a construction site.

All personnel from design, planning, and construction must understand the permit requirements and all the documents associated with meeting the current storm water quality requirements for construction sites.

INTRODUCTION

In environmental legislation, there are two primary acts that are known as the Clean Air Act and the Clean Water Act. The Clean Water Act is the primary federal law protecting our lakes, rivers, aquifers, and coastal areas. The act states its specific purpose is to restore and maintain the chemical, physical, and biological integrity of the nation's water, i.e. swimmable/fishable.

Water quality concerns have been evolving for over a century and the current act is over 50 years old. However, it has only been in the last 25 years that there has been a growing understanding of the impact of urban development and construction activities on water quality.

The first act was known as the Rivers and Harbors Act of 1899 and the first modern act was passed shortly after World War II. Then there were a series of amendments beginning in 1961 with the most significant occurring in 1987 with the Clean Water Act, where Sections 401, 402, and 404 were created. These amendments were quickly followed by the rule making process and the current requirements for erosion and sediment control and storm water management for construction sites.

The Clean Water Act

The act is part of the United States Code Title 33 -Navigation and Navigable Waters. Chapter 26 of that act is the part which has become known as the Clean Water Act: Water Pollution Prevention and Control.

Title IV of Chapter 26 has three sections that are the basis for the rules affecting construction activities in and near surface water bodies.

- Section 401 establishes the requirement to permit all surface water discharges into surface water bodies. This includes a wide range of discharges such as industrial sites, waste water, and all forms of storm water; of which highway and construction are cited as types.
- Section 402 establishes the National Pollutant Discharge Elimination System (NPDES). This is the body of rules that enforces Section 401.
- Section 404 is the permit requirement for dredge and fill. Because filling often occurred in wetlands, the term 404 has become synonymous with the wetland permit requirements, although all types of water bodies are regulated under this section. The US Corps of Engineers handles the 404 permitting process, while the EPA and/or States administer the permits for wastewater, industrial and storm water discharges.

The two objectives of the NPDES regulations are to:

- Eliminate the discharge of pollutants into the nation's water.
- Achieve water quality levels suitable for fishing and swimming.

Storm water, because it comes from all parts of a drainage basin, and because it will pick up any pollutants in its path, is usually discussed as a nonpoint source pollutant. This is true in that the actual pollutants carried in a storm water sheet or channel do not come from any single identifiable source. However, storm water generally will carry significant pollutant loads of which the greatest percentage will be soil from erosion. The water is collected in surface channels and conveyed to points of discharge in a surface water body. It is these concentrated discharges that the act and rules seeks to permit and control. The act specifically cites navigable waters and "waters of the state". This is a very broad definition than what we usually think of as a navigable waterway; the key phrase is really "waters of the (US) State", it reads:

"...all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation system, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state."

Waters specifically excluded are waste water treatment impoundment. If it is not a waste water treatment facility, and it looks like it holds water, it is probably protected by the requirements of the Clean Water Act.

Under Phase I NPDES rules the states were allowed to apply to have regulatory authority delegated to the state. South Dakota did so by incorporating the federal regulations into the state code by reference. The official delegation of administrative authority was granted by EPA, Region 8 in December of 1993. Since that time SD DENR has been the permitting authority for all Clean Water Permitting programs.

In 2002, SD DENR issued a general permit for Storm Water Discharges Associated with Construction Activities. This permit is very similar in language to the previous EPA general permit and reflects the current Phase II NPDES requirements. The big difference is that the state, and not the federal governments, has the primary responsibility of all permitting and enforcement activities. However, oversight authority remains with EPA. This general permit is the regulatory instrument for all construction activities in the state, not just for transportation related construction. All checklists and other materials used by the SDDOT manuals refer to this document.

Key requirements of the General Permit for Construction activities are:

- All construction sites that disturb one or more acres must have a storm water permit.
- The permit is obtained by filing a Notice of Intent (NOI) which must be done 15 days before construction can begin.
- To obtain approval of the NOI, the site must have a complete Storm Water Pollution Prevention Plan for the site.
- The permit requires that temporary erosion and sediment controls be in place prior to beginning construction, and that they be inspected and maintained throughout the construction period.
- Effective BMP's must be in place on all exposed soil areas where no construction activities will occur for a period of 21 days or more.
- Sequencing of construction is required. The general rule is that installation of erosion controls must be underway in the first mile of construction before opening the third mile.

- Maintenance operations, that do not change the geometry or extent of the pavement, are not considered construction activities and therefore do not require permit coverage.
- All sediment and erosion controls shall be selected, designed, and installed to meet a 2 inch/24 hour rain event.
- Disturbed areas of 10 acres or more at one time require sediment basins, which will be large enough to provide storage for a 2 inch/24 hour rain event.

There are three other acts that affect erosion and sediment control activities. The Archeological and Historic Preservation Act and The National Historic Preservation Act, which deal with historic and archeological properties that could be damaged or lost if inundated by heavy sediment loads. The Endangered Species Act, which seeks to protect the habitat of endangered and threatened species.

Construction activities of SDDOT fall under the provisions of the SD DENR General Permit for Storm Water Discharges Associated with Construction Activities. The SD DENR has delegated authority from the EPA to manage the National Pollution Discharge Elimination System in South Dakota. Preventing sediment discharge from construction sites and minimizing environmental harm is a state as well as a federal requirement.

PRINCIPLES OF EROSION AND SEDIMENT CONTROL AND STORM WATER MANAGEMENT

Erosion is the process by which soil particles are detached by rainfall, wind, ice, gravity or any other action on the soil surface. Once the soil particles are detached, they become sediment suspended in water or wind and are then available for transport. When the water or wind velocity has slowed sufficiently, and for a long enough period of time, soil particles fall from suspension the process of settling out of suspension is called sedimentation. Heavier soil particles, such as sand and gravel, settle more quickly than finer silt and clay particles. For example, coarse sand with a particle size of 0.3 mm may settle one meter in 30 seconds. However, clay with a particle size of 0.0015 may take almost 80 hours to settle one meter. Turbidity is the presence of suspended solids in water, i.e., muddy looking water. This creates a negative environment for water dwelling animals and plant life. Since water erosion is the concern of current regulations, it will be the primary erosive force discussed.

Erosion controls are preferred because they keep soil in place, and protect site resources. When possible, use erosion controls as the primary protection, with sediment controls as a backup system. In areas of active construction, it is sometimes difficult to implement erosion control. Therefore, sediment control becomes the primary BMP system to prevent off-site sediment discharge. However, if construction has ceased for 14 days and will not resume before the 21st day, temporary control of the site is required.

Sediment control is any practice that traps the soil particles after they have been detached and transported.

There are three basic groups of physical controls and each work in a different manner.

- Erosion Control
- Runoff/Run-on Management
- Sediment Control

Choosing a BMP

The first step in choosing a BMP is to decide its function within the storm water management plan. Many BMPs serve multiple functions. Some may be placed as velocity control and used as sediment control also. Some divert flows and capture sediment. The key to effective storm water management is to choose the most practical BMP for the needed function.

- Surface protection either on a slope or in a channel
- Minimization of concentrated flows
- Velocity reduction either on slopes or in channels
- Sediment capture
- Runoff/run-on management

You need to decide what is needed for site management. The more vegetation that is present on a site, the less runoff can be anticipated because vegetation will: reduce runoff velocity, promote infiltration, capture sediment. In some cases, depending on the vegetation, the effect could be: an impermeable surface, increased runoff velocities, and reduced infiltration.

Types and Causes of Erosion

There are several ways in which the surface of the soil erodes. With water caused erosion, the process begins with the initial soil particle detachment caused by energy impact of raindrops. This is referred to as splash or raindrop erosion. Because water is cohesive, or affixes to itself, it will accumulate as a collective force. Water will find the quickest, easiest path downstream and will collect as it heads downstream. This collective force flows downstream, eroding the soil in many different ways. As sheet flow, the water accumulates as a thin, broad layer of water. This causes sheet erosion which is generally less destructive than concentrated flows because it usually has less energy or velocity. Sheet flow and sheet erosion usually occur on surfaces that have a relatively flat slope. On steeper slopes, this generally occurs at the top of the slope prior to the water collecting into concentrated flow.

As the water gains velocity and collects in greater quantities, it forms rills or small eroded channels in the soil surface. These rills collect water and as more water collects, the rill grows to form a gully. The difference between a rill and a gully is size and duration. If the soil surface is reshaped, as in tilling, blading or re-grading, the rills do not form in the exactly the same location. However, rills may reform in the area due to water flowing across the surface. With a gully, unless the water above the gully location is redirected, it is likely that the gully will reform in the same location. If gullies are left in place, they can continue eroding the soil until the slope bank fails and creates in-stream damages and stream bed erosion.

Streambank or channel erosion is as natural as all other erosion. It is caused by sediment deposition that accumulates on one side and pushes the water to the opposing side thereby eroding the bank. This process is what makes streams and rivers meander. The water system handles natural sediment deposition by covering the soil with vegetation and thereby stabilizing the new soil area. However, channels may become unstable due to increased flows or changes in upstream sediment load.

Snow accumulations by drift or snowplow can cause concentrations of water during thaws. Caution must be used so conveyance systems are not overloaded, and sensitive sites are considered.

Precipitation

Precipitation or annual rainfall for an area will effect erosion. In areas that have relatively low annual precipitation, there may be times during the year that construction activities see no significant rainfall. However, in many arid areas, annual rainfall may be comprised of a few, short duration, but very intense storms.

Soil Permeability

Soil permeability or soil characteristics help determine how much runoff will percolate into the soil. Looser soils such as sand will allow the runoff to percolate into the soil. Tighter soils, such as clays, do not allow for much infiltration into the soil. Storm water that does not enter the soil, remains as runoff, and therefore an erosive force. Soil infiltration rates are decreased and runoff volumes are increased when the soil is frozen, regardless of the soil group. Soils, as classified by the Natural Resource Conservation Service (NRCS) fall into four basic Hydrologic Soil Groups based on the soil's runoff potential and are as follows:

Group A has low runoff potential and high infiltration rates even when thoroughly wetted. They consist chiefly of deep, well to excessively drained sands, gravels, loamy sand or sandy loam types of soils and have a high rate of water transmission.

Group B has a moderate infiltration rate when thoroughly wetted and consists chiefly of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures such as a silt loam or loam.

Group C has a low infiltration rate when thoroughly wetted and consists chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine structure such as a sandy clay loam.

Group D has the highest runoff potential because they have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with a high swelling potential, soils with a permanent high water table, soils with a claypan or clay layer at or near the surface, and shallow soils over nearly impervious material. These soils are usually clay loam, silty clay loam, sandy clay, silty clay or clay.

Antecedent Moisture

The antecedent moisture or existing moisture in the soil will influence the amount of runoff infiltration. If a soil has a high water content or high water table, there is little room for additional water. If a soil has a loose structure and is relatively dry, there is greater water infiltration and storage capacity within the soil structure.

Watershed Characteristics

The size of the surrounding watershed and location within a watershed area will influence the amount of runoff, and therefore the amount of erosion potential. A site with a surrounding large watershed that drains to the site can anticipate greater quantities of runoff than a site that is at the top of a watershed area or with a small surrounding watershed area.

Land Use

An erosion potential analysis will include an evaluation of adjacent land use. If the surrounding project site has established vegetation, then one can anticipate that much of adjacent storm water will be assimilated by the adjacent land cover. If the project site is next to vast areas of impervious surface, such as a large paved parking lot, then one can anticipate that there will not only be high velocity flows, but the runoff may include litter, debris, and parking lot surface pollutants. Another consideration of paved surface runoff is thermal pollution. As the pavement heats in the summer season, the water flowing into adjacent property and receiving waters is usually a higher temperature than other runoff.

BEST MANAGEMENT PRACTICE (BMP)

What is a BMP?

A BMP is a device, practice, or method for preventing storm water pollutants from reaching receiving waters. The most common physical BMPs are silt fence and rock check dams, but a BMP can also be a policy or procedure like construction sequencing.

The goals of BMP placement are the control of erosion and discharge of sediment and to meet and/or exceed local, state, and federal requirements. They should:

- Minimize run-on from off-site areas from flowing across denuded soil
- Slow down the internally generated runoff flowing across the site
- Remove sediment from on-site runoff before it leaves the site

Erosion Control BMPs

Erosion control BMPs are placed to protect the soil surface until permanent vegetation is established.

Slope Protection

Five basic functions of slope surface protection for erosion control are:

- Protect the soil surface to minimize the quantity of soil particles being detached and ready for transport
- Preserve soil moisture
- Moderate soil temperatures by covering the soil surface
- Reduce runoff velocities
- Capture and hold soil particles that have been detached

Exposed soil surfaces should be minimized at all times. Whenever possible, natural vegetation on the site should be preserved. If exposed slopes are unavoidable, it is essential to apply erosion and sedimentation control BMPs to reduce discharge of sediment to nearby streams and the storm drainage system.

Surface Protection

There are two basic categories for surface protection:

Non-rolled materials

Slope Roughening, Soil Binders, Mulch, Fiber Roving System, Pipe Slope Drain, Cover Crop Seeding, Hydro-Mulch, and Bonded Fiber Matrix.

Rolled materials

Sod, Erosion Control Blankets

Slope Roughening - this is a basic, simple way to slow the velocity of the water as it runs down the slope. This promotes infiltration and thereby reduces runoff. This can be done as a temporary measure in areas such as a stockpile in conjunction with seeding and mulching for permanent cover. Tracking must be done so that the grooves on the surface run parallel to the slope contours. Perpendicular grooves will accelerate erosion.

Soil Binders - these are spray-on products that "glue" together the soil particles and help minimize detachment. There are two basic categories:

- Organic: biodegradable- difficult to over do it. Guar-gum based is the most popular.
- Synthetic: Often used for dust control.

Soil binders have a limited life span. They can be used to adhere mulch or straw to the surface. Soil binders should not be used where they will come in contact with a stream or channel.

Mulching - is a temporary soil stabilization or erosion control practice where materials such as straw, grass, grass hay, compost, wood chips, or wood fibers are placed on or incorporated into the soil surface. In addition to stabilizing soils, mulching can reduce the velocity of storm water runoff over an area. Mulching also protects the soil from splash erosion. It retards runoff, traps sediment, promotes infiltration, and creates more favorable conditions to assist germination and the early development of plants. Poked or crimped straw is commonly used mulch in the state. Mulch is a relatively low cost, effective, available option in most areas and easy to implement.

Fiber Roving System - fiber strands are applied using compressed air and held in place with a viscous asphaltic emulsion or non-water soluble tackifier. This system will conform to uneven surfaces more easily than a rolled erosion control blanket, essentially building a three dimensional blanket in place.

Pipe Slope Drain - this is a device used to carry concentrated runoff from the top to the bottom of a slope. It may be used to convey runoff from off-site around a disturbed portion of the site without causing erosion. Pipe slope drains can be either temporary or permanent, depending on the method of installation and the material used. They are especially effective before a slope has been stabilized or before permanent drainage structures are ready for use.

Cover Crop Seeding - this is temporarily planting a cover crop of oats or winter wheat to provide interim erosion control until permanent seeding is done. It is more economical to plant a cover crop and then to permanent seed than it is to permanent seed twice.

Hydro-Mulch - Hydraulic mulching is a process where wood fiber mulch, processed grass, hay, or straw mulch are applied with a tacking agent in a slurry with water to provide temporary stabilization of bare slopes or other bare areas. This mulching method provides

uniform, economical slope protection. It may be combined with hydroseeding as a revegetation method.

Bonded Fiber Matrix (BFM) - these products are relatively new to the hydroseeding process and have become an effective alternative to blankets and other methods where erosion control applications are not easily accessible. BFM is composed of a hydro mulch, usually wood fibers, with high volumes of 'bonding agents'. BFM material application rates are usually very high, by comparison to standard hydro mulching applications.

Sod - is the placement of rolls or strips of sod as a landscape planting or erosion control measure. Sod stabilizes the area by immediately covering the surface with vegetation and enabling storm water to infiltrate into the ground. Sod is generally used on exposed areas where immediate aesthetic effect is desired and where there is an irrigation system in place and operational.

Erosion Control Blankets - these are effective tools to minimize surface erosion and promote rapid establishment of a permanent (or temporary) cover. The material is applied from a roll and anchored into place to provide a continuous sheet over the exposed slope or surface. This sheeting reduces raindrop impact and surface erosion on disturbed soils. It can also be used to protect new vegetation and aid in growth and establishment of vegetation by retarding evaporation of soil moisture. Performance of the blanket is related to proper installation:

- Blankets must be installed so water does not divert under or between laps.
- Blankets must remain in intimate contact with the soil.

Slope Flow Control

For slope flow control or runoff management these are effective BMPs.

Level Spreader - they convert concentrated flow to sheet flow, essentially and outlet for a concentrated runoff. It consists of a depressed area that allows the high energy flow to collect, is directed over a level 0% grade or spreader and is then dispersed uniformly as sheet flow over a vegetated area to allow for filtration of sediment through vegetation and runoff infiltration into the soil. A level spreader by itself is not considered a pollutant reduction device, it improves the efficiency of others such as vegetated swales, filter strips, or infiltration devices, which are dependent on sheet flow to operate properly.

Interceptors - An interceptor ditch or swale is used to collect water above cut or fill slopes where there is considerable drainage being collected above the slope and divert it to the bottom of the grade so it does not create erosion on the slope. These are usually constructed along the contour and sized according to the amount of drainage being collected. An interceptor swale prevents clean runoff from entering disturbed areas by intercepting and diverting it to a stabilized outlet. These swales can also intercept sediment laden water and divert it to a sediment trapping device. Interceptor swales can also be used to shorten the slope length by dividing it into a series of shorter slopes.

Diversions - temporary berm or diversion dikes can be made of many materials. It is generally a ridge of compacted soil, sandbags, or any BMP which will effectively intercept and divert runoff from small construction areas. Berms are used to prevent runoff onto newly constructed slopes until vegetation is established or until permanent measures are in place. They intercept flow from the construction area and direct it to temporary slope drains or to outlets where it can be safely discharged.

Slope Velocity Controls

Slope velocity controls are used to slow the flow across the slope face. These BMPs are also used to divert flows and to shorten slope distances. They include:

Slope Roughening

Interceptors

Diverter

Wattles - this is a mesh casing filled with biodegradable fibers. Stake the wattles to the slope following the contours, this will create many shorter slopes and help retain sediment. Wattles can also be used to divert runoff and can be placed at one or many places on a slope to create 'speed bump' for runoff.

Filter Socks - these consist of a mesh casing filled pneumatically with compost or wood mulch. They are then staked to the slope. These come in many sizes, the size used will depend on the application.

Channel Surface Control

Channel protection is needed when shear stress in a channel exceeds the limits of mature vegetation. BMPs used for this would be:

Turf Reinforcement Mats (TRM) - these are a flexible system of synthetic fibers laid out in channels where the desired performance exceeds the limits of the natural vegetation. They help establish vegetation and anchor mature plants to the soil.

Rock Riprap - this is a layer of large rock places on a slope for erosion protection. It is used when the velocities are greater than what the erosion control blanket or sod can withstand. It is also used where there is a continual wave action against the slope and to protect bridge berms. It must be clean, hard, and durable so it will not disintegrate when exposed to water and weather.

Gabions - these are rock and wire baskets used where structural strength is necessary, usually at high volume and high velocity discharge points. These are made of precut pieces to form a single unit, which are attached when delivered.

Channel Velocity Control

These BMPs are placed to slow the flow in channels. Slowing the velocity in a channel will allow time for infiltration and sedimentation. The slower the water, the less destructive it becomes, thereby reducing erosion and sediment.

Rock Riprap

Wattles

Filter Socks

Check Dams - these are small dams constructed in an open channel, swale, or drainage way. They can be temporary or permanent barriers to reduce or prevent excessive bank and bottom erosion by reducing the runoff velocity. The dams are often used in natural or constructed channels or swales where adequate vegetation cannot be established promptly. Check dams are considered 'fill' and should never be placed in live streams unless approved by appropriate local, state, and/or federal authorities.

Triangular Silt Barrier - consist of a triangular shaped inner material made of foam rubber or urethane foam. The outer cover is a woven geotextile fabric placed around the inner material with aprons that extend from both sides of the triangle. The barrier aprons are entrenched at the upstream side and anchored to the ground using staples, and with the downstream end being anchored with staples. These can be easily removed for maintenance and are considered reusable.

Permeable Plastic Berm - these are anchored to an unpaved channel, usually on top of an erosion control blanket or TRM.

Gravel Bag Berm

Straw Bales - provide a temporary physical barrier to sediment and reduce runoff velocities. They can be used as a barrier to divert or direct small amounts of runoff around active work areas or to a slope drain, sediment trap, or other filtration/sedimentation BMP. They have a limited life span and must be regularly inspected and replaced when damaged.

Outlet Protection

Outlet protection is necessary to prevent scour or severe erosion at discharge points. Outlets often have high velocity, high volume flows, and require strong materials that will withstand the forces of the water. The function of these BMPs is to: protect the soil surface, reduce velocity, and promote infiltration.

Gabions

Rock Riprap

TRMs

Sediment Control BMPs

Sediment control BMPs are used as perimeter control to prevent sediment from leaving the construction site, to slow runoff velocity, to retain sediment laden water long enough for soil particles to settle and to capture sediment before it can enter conveyance systems. Sediment control begins with erosion control to make it more effective and to minimize the quantity of sediment generated. Every sediment control BMP requires sediment removal to remain effective and maintenance to keep it functioning.

Inlet protection

Inlet protection is used to keep sediment from entering a conveyance system. Effective inlet protection must be provided during the project until the upstream runoff sources have been paved or stabilized. As the various operations on the project change the inlet protection BMPs will undoubtedly need to change as well. Make sure you check the area around the inlet for the potential of flooding or causing unsafe conditions. All inlet BMPs must allow water to seep through without totally blocking the inlet. Inlet protection in streets must have a safety overflow feature. All inlet protection needs to be inspected on a frequent basis; sometimes several times a day or night. For safety reasons, inspect for proper flow during rain events to ensure that flooding does not occur and water does not build up on roadway surfaces.

Inlet protection BMPs can be built in the field or can be manufactured devices. Because of the variability of inlet configurations, one size does not fit all. Some devices are on top of the inlet while others fit inside the inlet. A piece of geo-textile placed under the grate should not be used. Inlet protection is a fast changing industry as new requirements and materials are developed. Always check the Plan and special provisions for approved devices.

Off Street Inlet Protection BMP's

Silt fence box-this is a box constructed out of 2x4 with high flow geo-textile wrapped around and fastened to the sides of the wooden cage. It must have structural support near the top

so that it does not collapse inward. The bottom 8-12 inch portion of the geo-textile is laid out as a flap on the ground with filter rock placed on top of the flap.

Excavated sump - this is an excavated area normally a foot deep surrounding the inlet and inlet protection device. Its purpose is to increase the capacity of the inlet protection device.

Filter sock ring - this is one or two layers of filter sock placed as donut around the inlet. Filter rock may also be placed to supplement the filter sock.

Block and filter rock - this system uses concrete blocks around the inlet supplemented with filter rock

Manufactured devices - there are numerous manufactured devices on the market. Some fit on top of the inlet, some fit inside the inlet.

Street Inlet Protection

Inlet protection on streets is very challenging. First the size and shape of the inlet may not be very conducive to attaching or placing an inlet device. Secondly there is a high potential for flooding the road and/or nearby areas. A piece of geo-textile should not be placed under the grate of street inlets. Rock filter bags should be used with care so that they do not intrude into traffic. The best solutions are the various manufactured devices that fit inside the inlet housing. These should have safety overflow built into the device.

Perimeter Control

Perimeter protection controls are in place to prevent off-site discharge of sediment. They require frequent maintenance to remove accumulated sediment in order to remain effective as sediment controls. The basic functions of these BMPs are to: control runoff and its ability to carry sediment, divert incoming flows, capture and hold detached soil particles.

Wattles

Filter Sock

Compost Logs

Rock Logs

Silt Fence - this is the most common. The area contributing drainage area should not be more than 0.25 acres/100 ft of fence. The bottom of the geo-textile must be entrenched into the ground at least 6-8 inches and the top of the geo-textile securely fastened to metal posts with three zip ties. Wire ties should not be used and staples should not be used for fastening to wood posts. Whenever possible, silt fence should be placed on the contour. Corners where water may accumulate, can be supplemented with placing short sections of silt fence in a J hook manner.

Jersey Barrier Silt Fence - these are sections of Jersey barrier wrapped with a geo-textile. Jersey barrier silt fence is used in heavy duty applications such as around stock piles or for perimeter control of work areas during bridge removal or bridge construction.

Vegetated Buffer Strip - this is a gently sloping area of vegetative cover that runoff water flows through before entering a stream, storm sewer, or other conveyance. The buffer strip may be an undisturbed strip of natural vegetation or it can be a graded and planted area, they act as a living sediment filter that intercepts and detains storm runoff.

Floating Silt Curtain - this is a vertical barrier of geosynthetic fabric designed to deflect separate and contain sediment laden water and allow for enough residence time so that soil particles fall out of suspension and do not migrate to other areas. The curtain should float at the top and be anchored at the bottom, and be installed to rise and fall with the water level.

Water Filled Bag - a reusable, vinyl coated polyester tubing that is first laid into position and then filled with water. The weight of the filled bags keeps it in place with no trenching or staking and it conforms well with the terrain.

Sediment Trap - these use natural depressions or an excavated area to trap sediment-laden runoff. It is basically a temporary settling pond design to have a simple spillway outlet structure comprised of riprap, geotextile, or some other mechanical stabilization. Sediment traps collect sediment from concentrated flows, allow for sedimentation, and promote soil infiltration. Maintenance requires removal of sediment when it reaches approximately 1/2 the designed depth of the trap, or one foot, whichever is less.

Access Protection

Care needs to be taken to prevent sediment from being tracked onto adjacent roadways. A few BMPs to help achieve this are:

Crushed Rock - a pad of crushed rock or stone that is installed at the approach from the construction site to a public roadway. It is used to help remove mud and sediment from vehicle tires. May require periodic replacement of crushed rock or stone.

Timbers - are placed to capture sediment as it is removed from tires. These can be placed as a cattle guard structure or laid on the surface. Timbers may need periodic replacement.

Vehicle Washing - a washdown area is used on projects where the soil is silty or heavy in clay, and has the likelihood of transporting dirt and mud offsite. A typical system is a lined, depressed area that collects the water used in washing off the trucks, cars, or other construction vehicles/machinery, and drains it into a collection or treatment system.

Street Sweeping - involves using a street cleaner to keep the entrance area clean.

STORM WATER POLLUTION PREVENTION PLAN

This chapter will cover the new Section D Plan Notes, contents, how they relate to SD DENR regulatory requirements for the Storm Water Pollution Prevention Plan (SWPPP), and other permit documents. To facilitate the preparation of the SWPPP and aid contractor bidding, the SWPPP is being integrated into the contract documents package. It has been simplified and formatted to eliminate repetitive work. Section D of the Standard Plan Notes has been revised and is now called Section D: The Storm Water Pollution Prevention Plan. It replaces Section D: Erosion Control Notes. The contents of the SWPPP are enumerated in Section 4 of the SD DENR General Permit for Storm Water Discharges Associated with Construction Activities.

SWPPP Sections

There are eleven sections to the SWPPP:

- 1 Site Description - Basic information about the site. It utilizes as much standard plan data as possible.
- 2 Order of Construction Activities - Simply lists the normal order of work on projects.
- 3 Erosion and Sediment Controls - Deals with the controls and practices being used.
- 4 Maintenance and Inspection - Requirements for maintaining and inspecting the construction site BMPs.
 - Inspections are required once weekly and after a 1/2" rainfall event.
 - Maintenance must begin within 24 hours of finding a problem.
 - Silt fence should be mucked out when sediment reaches 1/3 the height of exposed fabric.
 - Sediment basins and traps must be mucked out when 1/2 full.
- 5 Non-Storm Water Discharges - Non-storm discharges that may leave the site during construction.
- 6 Materials Inventory - Listing of all materials that are anticipated to be placed or stored on the site.
- 7 Spill Prevention - Other activities mandated that are designed to prevent materials other than soil from being discharged into storm water runoff.
 - Housekeeping matters

- Handling and storage
- 8 Spill Notification - Describes what is to be done in the event of a hazardous materials spill.
 - It is the prime contractors responsibility to carry out these provisions.
 - Hazardous materials spills must be reported to SD DENR.
 - Oil spills must be reported to National Response Center Hotline.
- 9 Construction Changes - When changes are made to BMPs over the course of the construction period the following is required:
 - The text portion of the SWPPP must be revised to account for the change.
 - The plan sheet(s) affected should reflect the change.
 - The Project Engineer will make the above changes and record them on DOT 298.
- 10 Certification of Compliance - A required statement that all local, state, and federal requirements have been met.
- 11 Contact information - Lists all contacts for the project.

Planning for the SWPPP

SWPPP Planning should begin during the preliminary design functions and continue through final design plans. There are four general steps in the SDDOT project delivery process:

- Route inspection, analysis, and public involvement
- Field survey and data collection
- Preliminary design functions (alignment)
- Final design plans to letting

Use the public participation process to identify problems or conflicts that may not be readily apparent. Be alert for potential problems related to NPDES requirements for storm water quality during your site reconnaissance. This means looking for areas of conflict between needs for drainage and the connection to the receiving water body. Area and regional maps may be needed to define the limits of watersheds, wetlands, and other environmental constraints.

There should also be an inventory of existing sediment and erosion control facilities. Vegetated roadside channels and open areas within the ROW and at grade separated interchanges are often storm water quality assets. Designers should also be alert at this point for the possible need for additional ROW to accommodate permanent storm water quality structures.

Collect soil data to plan for the soil permeability, soil erosiveness, soil texture group, and get additional information on the soil's workability and moisture relationships. All of these characteristics relate directly to soil erosivity and provide a guide to developing the SWPPP. Use the field review as a chance to identify any other potential problems that may arise.

The final design plan stage results in the preparation of a final set and the Notice of Intent (NOI) document. The final roadway design and inspection should be used to review the selection of initial BMPs for sediment and erosion control. After the field inspection, the SWPPP can be finalized. This becomes the first eight sheets of the new Section D Plan Notes and the detailed sediment and erosion control plans. Finally, the preliminary NOI should be prepared. This document is a SD DENR form that will be completed at the time of the project letting by the SDDOT Environmental Office.

SEQUENCING THE WORK

Work on the project must be conducted in a manner so that the project is substantially in compliance with the permit requirements during all the various operations and for the duration of the project. BMPs must be installed in proper order and in a timely manner. Perimeter control on the edges of the project must be installed before disturbance in the contributing drainage areas is conducted. Inlet protection must be installed, sequenced and maintained as work on the project progresses. Discharge water from pumping must be monitored and if turbid, treated as necessary. Disturbed areas on the project must be stabilized as soon as possible and protection measures installed concurrently in critical areas with the grading work. All BMPs need to be checked on a routine basis that they are functioning properly, that they are cleaned out and are maintained. Exits from the project need to be checked for tracking out onto the streets and street sweeping conducted as necessary. Prior to shutdown for winter or other purposes, disturbed areas on the project need to be protected by temporary mulching, diversions, and supplemental BMPs.

Assessing the project

Prior to starting work, a field walk should be conducted to determine critical locations and denoted on the project lay out or SWPPP. During the field walk the critical locations and BMPS needed should be cross referenced with the SWPPP. The initial assessment is to gain familiarity "with the lay of the land" and possible project construction phases. On long liner projects such as roads or utility corridors, the project should be assessed on the basis of multiple sites each with its own unique requirements. On commercial or residential projects the whole project may be considered one site.

During the site assessment, discharge points from the project should be denoted as well as any street inlets in the vicinity. Wetlands, lakes, rivers, streams, and other water bodies either within the project or near the project must also be denoted. One of the important issues to determine early on is where the project or sites will be accessed and where the entrances will be located. Another important issue to consider is the type and extent of perimeter control necessary at the each of the critical areas along the project. The initial site assessment becomes the template for the weekly site inspections conducted as the project is constructed.

Critical work/Non-critical times

After the field assessment of the project has been conducted, a strategy must be formulated on how the work can be conducted with minimal impact. Work exclusion dates such as for fish spawning must be included in the strategy. If possible, culverts should be installed during dry periods and/or low flow times. Work in highly sensitive areas may be scheduled for late fall/early winter or frozen ground conditions. On linear projects, such as for power lines the various sites may be worked on independently with the most critical locations constructed during least critical times. As the work is conducted in the critical locations, stabilization of disturbed areas follows immediately without delay.

Implementing the SWPPP

Implementing the SWPPP means installing the BMPS that are in the SWPPP in a timely manner and following the provisions described. The goal is to do the construction in a manner such that the BMPs described in the SWPPP will normally be adequate. This means exercising due care, stabilizing portions of the site and sequencing the work. The weekly site inspections become the report card on how the work is being done and the on-going punch down list for SWPPP implementation. The site inspections after a rainfall event become the check list for maintenance of the BMPs, where additional attention is needed, repair of BMPs and supplementing the BMPS.

Perimeter control and exit location

The initial issue on the project is where to locate the site access and/or exit point(s). On many projects, the site access may already be predetermined by the entrance to the road or street. Nonetheless, site access location is very important since it affects the amount of stabilized exit required and the amount of street sweeping that may be needed over the life of the project. On some sites, it may advantageous to enter in one area and exit at another area. The exit location should be located on high ground with stable soils so that trucks are not plowing through mud and that a stabilized rock entrance will withstand the loaded vehicles. In some cases it is desirable to sub-cut the entrance location and place compacted base prior to placing a rock entrance. In-place bituminous should be left intact as long as possible.

After the entrance(s) are constructed, perimeter control must be installed at the various locations along the edges of the project. Check the SWPPP for locations and BMPs to use. Many times silt fence is used for perimeter control. However, compost logs, rock logs, wood chip logs, and slash mulch berms may also be used. Many of the alternates to silt fence are used in high traffic areas, where utilities are located, near trees, or where site access requires the perimeter control to be moved and reinstalled. One of the best perimeter control BMPs is constructed topsoil berms. On many sites, topsoil is to be stripped. When the topsoil is stripped, it can be placed as a berm along the outer edge of the project. Silt fence may be placed behind the topsoil berm in critical locations. Seeding of the topsoil berm should be conducted as soon as the berm is placed.

Storm sewer inlets

The permit requires protection for all storm sewer inlets that could receive drainage from the project. This applies to the storm sewer inlets in the street as well as inlets within the project site. Do a project reconnaissance to determine all the inlets. Some may not be included in the SWPPP. Also determine the location of pipes connected to the inlets and where the pipes outlet. If possible, you may decide to temporarily block some of the inlets

off if they are not needed. However, always be cognizant of possible flooding both on streets as well as adjacent property. Remember safety is job one!!!

Geo-textile fabric placed under the grate of street inlets should not be used since it can cause flooding on the street and unsafe conditions. In addition sand bags should not be placed around street inlets. Drop- in manufactured bags may be used. However the device must have a safety overflow built into the top of the bag. Inlets must be protected over the life of the adjacent work and as a result, various devices may be required at one inlet as the work and needs change. The devices must also be checked on a constant basis and any conditions that would lead to plugging or safety issues fixed immediately. All inlet protection measures must be frequently inspected and cleaned out as necessary.

Soil piles

Whenever possible, soil piles should be placed internal to the project. They should not be placed where soil can ravel off and fill storm drain inlets nearby. The permit requires perimeter control around stock piles. On sites with little room and bridge projects, jersey barriers wrapped with geo-textile may be the perimeter control selected. On contaminated soil stock piles, the pile is covered with plastic and then compost logs may be placed around the pile for perimeter control. If soil stock piles remain for more than 14-21 days, the permit requires stabilization. Stabilization or covering the pile with plastic or geo-textile may also be necessary for controlling dust.

Exit control and street sweeping

The most common exit control used to prevent track out from construction vehicles as they exit the site is a rock pad. Soils under the rock pad must be very firm so that the rock does not easily press into the subsoil. The rock must be large enough 3-6 inch size so that it does not lodge between the dual tires of vehicles. In addition, the rock pad must be long enough to obtain at least five rotations of the tires (fifty feet minimum). The rock must be replenished on an as needed basis since it does plug up with fines. To increase the effectiveness of entrance control other BMPs such as wood slash mulch or a 10 ft x 8 ft metal cattle guard near the street may be used in combination with the rock pad.

On severe sites with very sticky soils, rock pads and other common BMPs for exit control may not work. In these cases, a tire wash off system may be the only effective method. Tire wash off systems vary in complexity from automatic systems costing as much as \$150,000 to very simple component systems costing as little as \$1500.

When mud from the construction site tracks out onto streets it must be removed in a timely manner to prevent the material from washing into storm drains and for safety of those traveling the street. Typically the mud must be removed from the street on a daily or 24 hr basis. In order to remove the mud from the street municipal type pickup brooms are commonly used. Most pick brooms do not do a very good job of removing fine construction silt from streets. The silt is very fine and may even be compressed into the voids of the bituminous surfacing. Adding water during the sweeping operation may also cause a slick condition which is difficult to remove. Cyclonic street sweepers that do not need water are the best choice. Another choice is the dust pan sweeper attachment that fits on the front of a "Bobcat". If the dust pan sweeper is used the street needs to be moist to prevent dust generated from the operation.

Sequential stabilization

Sequential stabilization means stabilizing portions of the site as the construction work progresses. Stabilizing portions of the site is the most cost effective method of staying in compliance with permit requirements. It minimizes the potential for soil leaving the project and also reduces the amount of clean up or maintenance of the devices. In order to stabilize areas on the project, the areas need to be shaped and the topsoil reapplied. Then soil stabilization practices such as seeding, mulch, erosion control blankets or sod can be placed to hold the soil in place.

The permit requires stabilizing portions of the site within 14 days of having active construction operations going on in that portion of the site. This means that active operations that disturb soil must be going on directly in that portion of the site. Once equipment is no longer digging or shaping or is moved from the area in question stabilization must occur within the 14 day window. The 14 day window also applies to work shut downs and winter shutdown. Thus areas on the project must be stabilized prior to any shut downs on the project that last 14 days or longer.

Temporary erosion control- this means protecting the soil surface from erosion for a relatively short period of time with such BMS as mulch, hydro-mulch, erosion control blankets or rock. Usually the area is re-graded or dug up at a later date.

Cover crop seeding- this is temporarily planting a cover crop of oats or winter wheat to stabilize the soil and provide erosion control until permanent seeding is done.

Dormant seeding- this doing the seeding late in the year when the seed remains in a dormant condition until the following spring. Soil temperatures must be less than 40 F. Various seed mixtures are used. Oats do not dormant seed.

Frozen ground mulching- this is placing mulch late in the fall when the ground is frozen. Typically straw mulch is used. Bonded fiber mulch and flexible growth medium may also be used.

Snow mulching- this is placing mulch over disturbed areas on projects that are covered with snow. Once applied, the mulch captures sunlight and melts down into the snow. Straw or hay mulch is used. None of the spray on products should be used since they have to bond to soil.

Establishment erosion control- this is placing materials such as mulch, erosion control blankets, hydro-mulch, BFM or flexible growth medium over a seeded area to protect the area from erosion while the seed is germinating and establishing. These materials are short lived and rot up as the vegetation takes hold.

Permanent stabilization- this means the area has no active erosion and is permanently stabilized.

Permanent erosion control- this means using and placing practices that will lead to permanently stabilizing the area from erosion.

In order to stabilize portions of the project required by permit either temporary erosion control practices or permanent erosion control practices may be used. Temporary erosion control practices may be used on soil piles, during dry weather when seed wouldn't grow or on areas where additional work needs to take place at a later date. Whenever possible portions of the project should be shaped up, topsoil reapplied and permanent erosion control practices installed. Proceeding with permanent stabilization as quickly as possible is the most cost effective way of sequencing the work.

UNIVERSAL SOIL LOSS EQUATION (USLE)

The science of predicting soil erosion and sediment delivery has continued to be refined to reflect the importance of different factors on soil erosion and runoff. The importance of estimating erosion and sediment delivery has long been recognized to minimize the pollution by sediments as well as the chemicals carried with soil particles. The visual effects of erosion include rills and gullies and sediment blockages found in culverts or drainage ditches. A well planned and engineered erosion control and/or water management plan will alleviate many concerns about construction site erosion and potential.

Equation: $A=RK(LS)CP$

A is the computed soil loss per acre per year in units of tons. This quantity may be converted to cubic yards by using conversion factors.

R is the rainfall and runoff factor by geographic location. The greater the intensity and duration of the rain storm, the higher the erosion potential.

K is the soil erodibility factor. The value for the subsoil condition, usually encountered in construction sites, can be determined based on soil texture (relative percent of sand, silt, and clay).

LS is the slope length-gradient factor. The steeper and longer the slope, the higher is the risk for erosion.

C is the factor to reflect the planned cover over the soil surface. Most construction sites are void of vegetation and therefore would have a value of one (1). On construction sites where mulch or fabrics are used, the benefit derived from intercepting the erosive raindrop impact on the soil surface is calculated.

P is the support practice factor. It reflects the effects of practices that will reduce the amount and rate of the water runoff and thus reduce the amount of erosion.

Step-by-Step, How to Use USLE

1. Determine your location to find the R-value.
2. Determine the soil erodibility factor based on the soil series or the texture (K).
3. Measure the horizontal length (plan view) of slope (in feet) from the top of the slope to the bottom. The bottom is either a ditch bank (concentration of water) or flatter slope where deposition occurs and water disperses (actual field measurement).
4. Determine the percent slope (actual field measurement).
5. Look up LS value, use the measured length and percent slope obtained by field measurement.

6. Determine the Cover (C) factor—Most construction sites are void of vegetation and therefore would have a value of one.
7. Determine the P factor for the operational and support practices at on site.
8. Multiply $R \cdot K \cdot (LS) \cdot C \cdot P$ to obtain soil loss in tons/acre/year.
9. Convert to cubic yards if desired.

Example

The following example shows how the Universal Soil Loss Equation is used for estimating soil losses:

Assume Pierre, SD, as the locale of a construction site. The disturbed site is 50 acres in size, with an average gradient of 8% and an average slope length of 600 feet. The soil is a Silty Clay Loam with a K value of 0.32. The slope is compacted with bulldozer going up and down the slope. No mulch or seeding was done.

Compute soil losses from this unprotected surface for a 12 month period. The average annual rainfall erosion index (R) is 80.

$$R = 80 \text{ (Figure 10.1)}$$

$$K = 0.32 \text{ (Figure 10.2)}$$

$$LS = 3.52 \text{ (Figure 10.3)}$$

$$C = 1.0 \text{ (Figure 10.4)}$$

$$P = 0.80 \text{ (Figure 10.5)}$$

$$A = RK(LS)CP$$

$$A = 80 \times 0.32 \times 3.52 \times 1.0 \times 0.80$$

$$A = 72 \text{ tons/acre/yr}$$

Multiply by 50 acre site (72 tons/acre/yr x 50 acres = 3,604 tons/yr)

To convert to cu yrd/yr multiply by 0.87 (3,604 tons/yr x 0.87 cu yds/yr = 3,136 cu yds/yr)

Figure 6.1 Annual Rainfall Value Map (R)

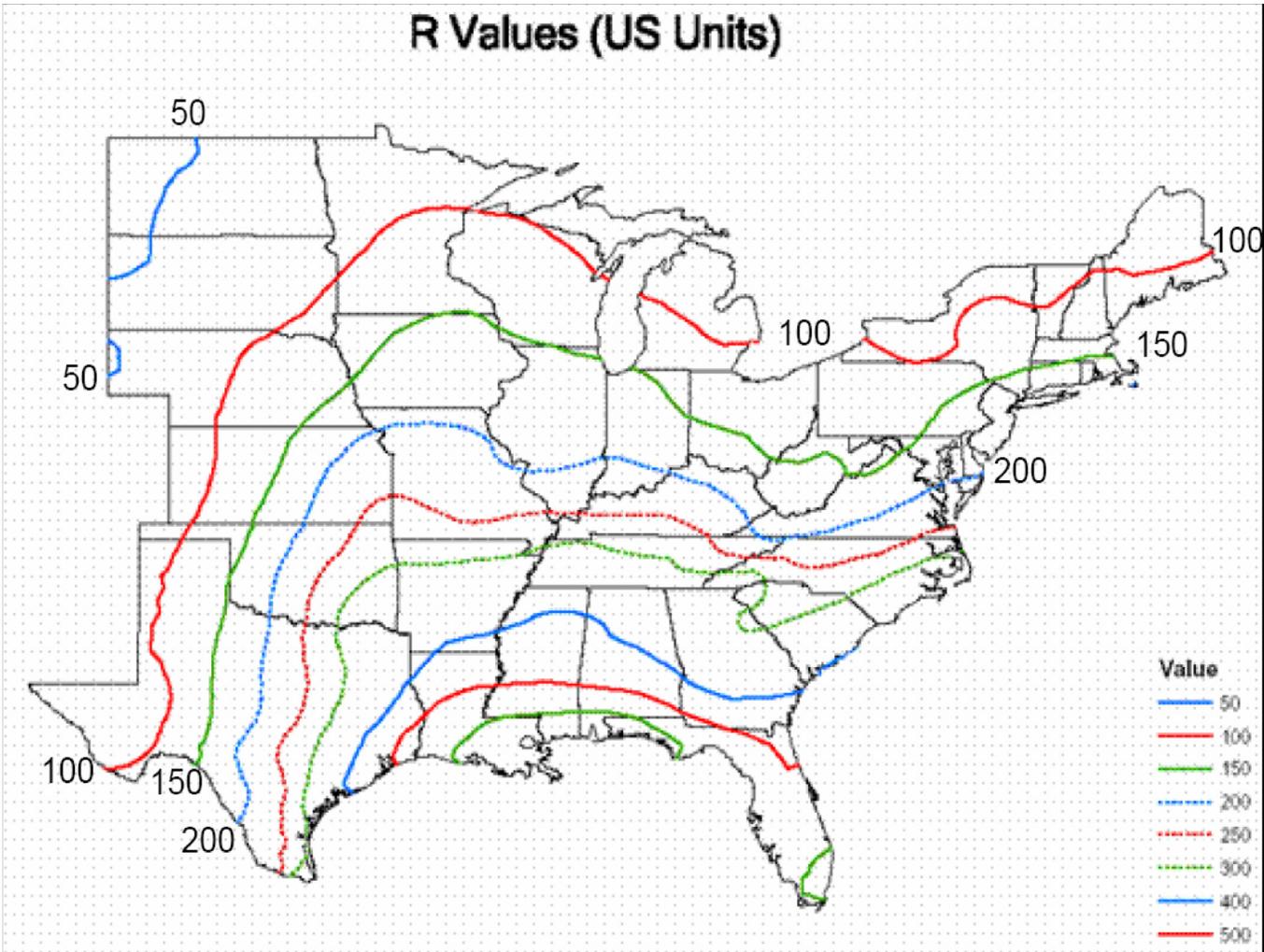


Figure 6.2 Soil Erodibility Factor (K)

Soil Erodibility Factor K Factor (after Stewart et al. 1975)(a)			
Textural Class	Organic Matter Content (%)		
	<0.5	2	4
Sand	0.05	0.03	0.02
Fine sand	0.16	0.14	0.1
Very finesand	0.42	0.36	0.28
Loamy sand	0.12	0.1	0.08
Loamy finesand	0.24	0.2	0.16
Loamy veryfine sand	0.44	0.38	0.3
Sandy loam	0.27	0.24	0.19
Fine sandyloam	0.35	0.3	0.24
Very fine sandy loam	0.47	0.41	0.33
Loam	0.38	0.34	0.29
Silt loam	0.48	0.42	0.33
Silt	0.6	0.52	0.42
Sandy clayloam	0.27	0.25	0.21
Clay loam	0.28	0.25	0.21
Silty clayloam	0.37	0.32	0.26
Sandy clay	0.14	0.13	0.12
Silty clay	0.25	0.23	0.19
Clay	0.13-0.2		

(a) The values shown are estimated averages of broad ranges of specific soil values. When a texture is near the border line of two texture classes, use the average of the two K factor values.

Figure 6.3 LS Factors

Degree of Slope / Slope Length in Feet Measured Along Slope

	3	6	9	12	15	20	25	30	40	50	60	75	100
10:1	0.35	0.37	0.38	0.39	0.40	0.49	0.57	0.63	0.74	0.91	1.05	1.20	1.46
8:1	0.36	0.42	0.47	0.49	0.51	0.62	0.73	0.80	1.00	1.20	1.45	1.60	1.95
7:1	0.38	0.46	0.52	0.56	0.59	0.74	0.89	1.03	1.21	1.39	1.71	1.93	2.34
6:1	0.40	0.51	0.59	0.67	0.74	0.89	1.03	1.21	1.39	1.71	1.93	2.30	2.87
5:1	0.41	0.54	0.66	0.74	0.82	1.02	1.21	1.37	1.57	2.06	2.42	2.80	3.50
4:1	0.43	0.62	0.78	0.90	1.01	1.26	1.51	1.55	2.23	2.59	3.10	3.56	4.45
3:1	0.48	0.73	0.95	1.12	1.30	1.61	1.93	2.22	2.85	3.42	3.89	4.28	5.87
2.5:1	0.49	0.79	1.05	1.27	1.48	1.86	2.24	2.68	3.53	3.94	4.65	5.47	6.92
2:1	0.52	0.86	1.17	1.44	1.70	2.14	2.85	2.94	3.78	4.59	5.43	6.41	8.13

Figure 6.4 C Factor

Mulch

Type	Application in tons/acre	Slope Percent	C	SL
No mulch or seeding		All	1.00	
Straw or hay mulch disc anchored to slope	1.0	<5	0.20	200
	1.0	6-10	0.20	100
	1.5	<5	0.12	300
	1.5	6-10	0.12	150
	2.0	<5	0.06	325
	2.0	6-10	0.06	200
	2.0	11-15	0.07	150
	2.0	16-20	0.11	100
	2.0	21-25	0.14	75
	2.0	26-35	0.20	75
Erosion Control Blanket	N/A	21-25	0.05	300
		26-35	0.07	200
		36-50	0.14	150
		51-67	0.20	100
Wood Chips	6.7	<15	0.08	75
	6.7	16-20	0.08	50
	12.1	<15	0.05	150
	12.1	16-20	0.05	75
	25.0	<15	0.02	200
	25.0	16-20	0.02	150
	25.0	21-33	0.02	100

C Factors when seeding with mulch

BMP	Rate (lbs/acre)	Slope (%)	C factor
Hydro mulch	2200	20-26	0.18
		27-35	0.24
		36-50	0.30
Bonded fiber mulch	3500	20-26	0.10
		27-35	0.14
		36-50	0.20
Sod	NA		0.01

Figure 11.5

P values for construction sites

Surface condition with no cover	
Compact, smooth, scraped w/bulldozer or scraper across the slope (track imprint up and down)	1.20
Same as above, except raked w/ bull dozer and root raked across the slope	0.90
Loose as a disked plow layer	1.00
Rough, irregular surface, equipment tracks in all directions	0.90
Loose with rough surface >0.3 meters depth	0.80
Loose with smooth surface <0.3 meters depth	0.90
Compact w/ bulldozer track imprints perpendicular to the slope	0.80

DEWATERING AND PUMPING

Definition and purpose

Dewatering and pumping on construction projects are defined as operations to remove water from an area so that construction operations can take place. The water to be removed may be from cofferdams, from excavations, from ponds, from traps, from depressions or from any other area where storm water or groundwater accumulates. The water may be stagnant or seeping into the construction area. Dewatering can be by gravity as well as being pumped. Examples of gravity dewatering include flow from the outlet of a sediment trap and flow through a drainage cut. Frequently the water to be dewatered is discolored and contains sediment. Practices to remove sediment must be used before the water can be discharged from the site. Site conditions and equipment available will dictate which practices may be selected.

Dewatering Plan

A dewatering plan should be put together and submitted to the project manager prior to doing the dewatering/pumping. The plan must indicate how the dewatering or pumping operation is to be conducted. As a minimum, the plan should indicate where dewatering is to take place, flow path of the water, practices to be used at the inlet end to minimize sediment from entering the flow, practices to remove or settle out sediment, energy dissipation at the outlet end, and where the water will discharge. The dewatering plan must also indicate how pollutants other than sediment, if they are present, will be handled.

Inlet end of hose

The inlet end of hoses used for pumping must have a screen to prevent stones and debris from getting sucked into the pump. If pumping from a natural water body the size of the mesh screen must not allow fish or minnows to get sucked into the hose.

The inlet end must be positioned to draw water from the top and must be raised off the bottom. Flotation devices can be used or the contractor may build their own from 6 inch sewer pipe glued together in a donut shaped fashion. Insulation styrene board can also be cut into sections, bound together and provide floatation for the inlet hose end.

Another method to prevent mud from entering the suction end is to use a barrel with holes and then place filter rock around the barrel. The inlet end of hose is then placed inside the perforated barrel.

Figure 7.1 Dewatering inlet



Sediment capture BMPs

The BMPs described herein apply to sediment only and not to other pollutants.

Sediment traps-are temporary basins formed by excavation with a stabilized outfall that acts as a weeper or a perforated standpipe supplemented with rock. Sediment traps work best in sandy soils where the water can permeate into the soil. For safety reasons, traps are normally no more than 2-3 ft deep and should have sloped side slopes. Size of traps is highly variable. A large surface area makes the trap more effective. Traps are normally used for large sediment flows. Adding a flocculant to the trapped water and drawing clean water off the top can make traps effective.

Dewatering filter bags - are square or rectangular bags made of non-woven geo-textile. Bags are available in different sizes providing different flow rates. For example a 10ftx 15ft bag may provide 60-100 gpm. Water to be treated is pumped into one end of the bag and then seeps through the bottom, sides and top of bag. Bags are not 100% effective. Fine material can seep through the geo-textile. Normally, either a layer of straw or filter rock is placed as a filter base under the bag. Rock weepers or wattles may be used down stream from the bag to further filter the discharge water.

Dewatering dumpsters- are dumpsters converted by contractor or from a manufacturer to collect, treat and filter water. The dumpster has two main compartments. The inlet end compartment is large and this is where the water is treated with a flocculant. The water then flows through a mesh screen and into the second compartment where it is filtered through a medium such as wood chips or wood excelsior. Flow rate is approximately 100-200 gpm. To increase flow rate additional dumpsters may be used in parallel. When the filtering medium becomes filled with sediment, it is replaced with fresh material.

Figure 7.2 Dewatering Dumpster



Weir tanks- are semi-trailer sized tanks delivered to the project by truck. The amount of sediment removed is highly dependent on flow rate through the tank or resonance time. With lower flow rates, typical particle size removed is down to 50 microns. The tanks can also be used as a pretreatment to other methods. The configuration and number of weirs in the tank determines the sediment removal efficiency. Flow rates are typically 60-200 gpm. To increase flow rates, additional tanks may be used in parallel. Periodic cleaning of the inside of the tank is necessary. Frequently a high pressure hose is used to remove fines during cleaning.

Sand media filters-sand media filters generally provide a high level of treatment. Typical particle size removed is down to 5 microns with 95% efficiency. Sand media filters can be used by themselves or as the final treatment in a treatment train. Sand media filter systems are available in many different sizes from small trailer mounted units to semi trailer units. This flow rate is dependent on size of the unit and if pretreatment of the water has been done. Typical flow rates range from 80-1000gpm.

Flocculants

Flocculants are used to coagulate fine suspended particles in turbid water and make these particles drop out of solution a lot faster than they would if untreated. Flocculants have been used for many years in sewage treatment plants, in row crop irrigation and in food processing. Basically flocculants work by chemical/electrical charge. Flocculants are available as either cationic or anionic. Cationic have a positive charge whereas anionic flocculants have a negative charge. Many of the soil clay minerals are negatively charged and thus cationic flocculants may be more effective. Research conducted in Wisconsin indicates that some flocculants at high rates can be harmful to invertebrates. Thus, tested approved flocculants should be used and it is important that flocculants are not over applied. The manufacture's mixing and dosing formula must be adhered to. Anionic

formulations should be used whenever possible. A conditioner can be added to the water to make them more effective. Flocculants must be mixed into the water and generally take 5-10 minutes to react. The pH of the water must also be in the neutral range of pH 6.5-7.5.

Flocculants are available in granular or liquid formulations. Granular formulations have been sewn into packets and then strung into socks or inserted to wattles. Flocculants are also available as natural or synthetic based products. Synthetic flocculants are generally long chained linear polymers. Natural based flocculants are generally chitosan based derived from the exoskeleton of shell fish.

Prior to using flocculants, a treatment protocol must be developed. First, a sample of the water should be obtained and the pH of the water should be tested. For this purpose, litmus paper can be used. If the water is outside the neutral pH range, a water conditioner can be added. Next, add a couple drops of flocculant to the sample and shake it. Observe the results. Once the proper flocculants has been selected, follow the manufacture's recommendations for dose rate and mixing.

Flocculants should be used in batch treatment or filtering systems. That is water is treated in a batch. The sediment is allowed to settle to the bottom. The clear water is discharged off the top and the flocculant is tied up in the sediment which is cleaned out. Flocculants can also be used in a filtering system whereby the water is treated and then filtered through either a sand filter or wood based filter prior to discharge. Flocculants should not be applied to natural water bodies such as lakes. They can tie up the oxygen in the water.

CONSTRUCTION SITE INSPECTIONS & MANAGEMENT

Construction Site Inspections

There are two types of construction site inspections: those conducted by SDDOT and those conducted by SD DENR. We will look at each one individually.

SDDOT Inspections

These are the projects which a SDDOT Inspector conducts inspections on SDDOT jobs performed by contractors. Inspection requirements all start with the SD General Permit for Storm Water Discharges Associated with Construction Activities. This document describes in detail how to conduct your inspections. To maintain the effectiveness of construction site BMPs, regular inspections are necessary. The inspector must successfully complete the SDDOT Erosion and Sediment Control and Storm Water Management training and maintain the certification after the course.

According to the general permit, inspections must be conducted by qualified personnel every 7 days and within 24 hours of a 1/2" rainfall. It is possible for the inspection to fall on weekends and/or holidays. During winter conditions, inspections should be conducted monthly. Four specific areas are identified for inspection:

- 1 All areas which have been disturbed and have not reached final stabilization of 70% vegetative cover.
- 2 All erosion and sediment control structural BMPs.
- 3 Areas used to store materials (including fuels, chemicals, paints, etc....)
- 4 Locations where vehicles and equipment enter and exit the site.

It is important to note that the general permit requires the inspector to not just identify evidence of pollutants leaving the site but potential as well.

The general permit also identifies when records should be taken on a job site. Dates should be documented whenever any major grading occurs, as well as when stabilization measures are initiated. This information will be important in the event of non-compliance issues which may occur. Good record keeping can eliminate future problems and indicate SDDOT's efforts at maintaining a compliant construction site.

Tools for Quality Control

Three checklists are available to assist the inspectors and project engineers. To ensure compliance the following site inspection forms were developed. These forms fulfill the requirements of EPA and SD DENR. If these forms are completed and followed correctly, the construction site will be in full compliance with SD DENR. They are the SWPPP Site Inspection Form, Mobilization Checklist, and Final Inspection Checklist.

SWPPP Site Inspection Form

This form should be completed after each inspection, kept on site, and made available upon request. Adding or changing BMPs in the field to ensure effectiveness is acceptable. You must make sure the changes are reflected in the documentation. A site inspection form must be filled out for each inspection; this documentation helps keep you in compliance.

Some of the benefits of this new inspection form are:

- It includes checkboxes which reduce the narrative writing the inspector must do.
- It is a MS Word document that can be on a laptop and taken to the field.
- It includes more data than the previous form, this helps with documenting compliance issues.
- It provides precise location information, in line with the General Permit requirements.
- The increased information will be useful when creating compliance reports.

Note Not updating the plan has proven to be the most frequent construction site violation.

Making changes in the field is not only acceptable but often expected since site conditions change over time, any changes must be indicated on the plans. When repairs are required, they must be implemented no later than seven days after identified during the inspection.

Final Inspection Checklist

This was developed in order to assist the Project Manager in the necessary procedures required to file the Notice of Termination (NOT). This checklist should be used to inspect the site, and maintained with the required SWPPP project records as required by SD DENR.

The checklist covers the removal of the structural erosion and sediment control BMPs, as well as waste disposal and spill management to ensure the site has been properly cleaned and restored.

Retention of Records

These reports shall be retained as part of the plan for at least three (3) years after the site has reached final stabilization and coverage under the permit has been terminated. A copy of the SWPPP and SD DENR's letter granting coverage under the permit from the date of project initiation to the date of final stabilization should also be retained on site, or made readily available.

Construction Signs

One area that causes a lot of confusion is the construction site sign requirements. The purpose of these signs is to provide information to the general public. The sign must include:

- A copy of the NOI
- Operators name and telephone number
- A brief description of the project

- The location of the SWPPP

The sign needs to be placed on the perimeter of the project so it can be read without entering the jobsite. For linear construction sites, the sign must be relocated to areas actively under construction.

SD DENR/EPA Inspections

There are three types of inspections:

- 1 Complaint-driven inspections (no advanced notice) If someone files a complaint, an inspection will be done. Photos submitted by citizens can initiate the NOV procedure without a site visit.
- 2 Reconnaissance inspections (a drive by inspection) If they see no problems, great. If they see a problem, they can enter the construction site and conduct an unplanned inspection.
- 3 Comprehensive compliance inspections (scheduled ahead of time) These are very thorough inspections; and most common by SD DENR.

In the event of an inspection, you can expect the following:

- You will receive advance notification unless it is complaint driven or there is a history of poor compliance.
- You will be provided the findings of their inspections in writing.
- An exit interview will be conducted at the end of the inspection to discuss their findings.

After an inspection, any violations must be corrected immediately. More serious violations or several violations at the same site will result in a warning letter being issued. The warning letter is typically for small or first time problems, it includes a 'friendly' letter indicating the problems. A Notice of Violation (NOV) will be issued if non compliance continues. NOV's are typically issued for repeated poor performance or neglect. It usually takes quite a bit of abuse before an NOV is issued. In both instances a time frame is set for response. In no response is submitted within the given time frame, the violation will be raised to a higher level and could incur more severe penalties.

Authorized sanctions for cases of non compliance are: issuing a stop-work order to shut down the project, deny future permits, issue monetary fine up to \$10,000 per day per violation with no maximum limit, and knowing or intentional violations can result in prison.

There is a system in place which will allow individuals and environmental groups to file complaints and initiate lawsuits based on non-compliance. Any money awarded goes to the US Treasury, not the plaintiff(s).

Appeals

There is an appeal process which includes a 30-day window only if the respondent has new information. This is a "get your facts straight" process - not a process to argue legal opinion. After a NOV is issued, the permittee will be offered an opportunity to reach a settlement agreement with SD DENR. If an agreement cannot be reached, the case will be forwarded to the SD Attorney General's Office for Civil Protection.

Five most common problems

The EPA was asked to identify the top five problems they have encountered during DOT construction site inspections. Here is the list they came up with:

- Erosion and sediment control BMPs were improperly installed or maintained.
- Poor housekeeping - construction sites generate a lot of waste.

- Construction signs missing or not visible.
- Missing or incomplete information on inspection reports.
- The SWPPP is not updated after field changes, so the plans do not match the field site conditions.

Additional recent concerns reported by the EPA include:

- Not stabilizing portions of the site in a timely manner and within the 14 day window.
- Track out on the street and not removed in a timely manner
- Ineffective stock pile protection
- Improper or no BMPs used when discharging or pumping turbid water from excavations

Inspection tips

Enter every project assuming you will be inspected, keep all paperwork accurately completed, filed, and available. Documentation must include all changes made in the field and accurately reflect exact conditions in the field. Inspection reports should include a description of all corrective actions and include locations, changes made, and relevant dates. Make sure knowledgeable SDDOT personnel accompanies the SD DENR inspector during a site visit. Use photographs to document the site before, during, and after construction. Be a good neighbor, SD DENR will respond to all public complaints.

If you have a scheduled inspection collect all record and have them readily available and conduct a self audit prior to the inspection. Many inspectors have advised that the first impressions are important.

Construction Site Management

Solid Waste Management

Solid waste management consists of procedures and practices designed to minimize and prevent solid waste (plastic, fabrics, styrofoam, general litter) associated with construction activities from entering storm drains and water courses.

Inspection and Maintenance

Waste collection sites must be provided on the site. Water-tight collection receptacles should be provided within the construction boundaries but not near drainage inlets or water courses. These receptacles must be emptied and cleaned out on a regular basis to avoid overflow. Receptacles may not be washed out on site. Sediment barriers such as berms and dikes should be used to prevent storm water from contacting collected waste.

Protective Fence

Protective fence is used to delineate areas that are off limits to vehicles, pedestrians, and equipment. This can be any suitable fencing material such as chain link and plastic safety fence. These areas may be environmentally sensitive areas, critically erodible areas, or areas of vegetation that need protection. Fencing must be in place prior to construction activity commencing. Signage may be necessary to keep activity away from designated areas. Silt fence can be used in conjunction with the other fence material where drainage patterns require sediment control protection; however, protective fencing is not a sediment control device.

Inspection and Maintenance

Inspect protective fence routinely to make sure that it is functioning to protect the designated area. If fencing is not placed prior to construction activity and sensitive areas are disturbed by vehicle and equipment parking, fencing should be installed as soon as possible to prevent further damage.

Stabilized Construction Access

Stabilized construction access is a temporary sediment removal device installed at the approach from a construction site to a public roadway. This BMP is used to limit sediment tracking from vehicles and equipment leaving the construction site. There are three types used: rock bed, cattle guard, and log/timber.

This BMP is used as a sediment control measure at all locations where construction vehicles leave the site and enter a public road and at all locations where there is a risk of sediment being transported off-site by construction traffic. They must be sized to accommodate vehicle length and turning radius if necessary.

Inspection and Maintenance

Inspect exit for excessive sediment build up. Remove sediment and rebuild the exit as necessary to retain effectiveness and prevent off-site tracking. Additional street cleaning may be required if unable to retain sediment on site.

Dust Control

Dust control procedures and practices are designed to suppress dust on a construction site during the construction process.

Inspection and Maintenance

Applying water or other dust suppressants is the most common application to control dust. Temperature, humidity, wind velocity and direction will determine amount and frequency of applications. Typically, chemical stabilizers require less frequent applications than water. Other techniques for controlling dust include surface roughening, wind barriers, walls, etc. The best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. Dust control measures require constant attention and special care should be taken with storing and handling chemicals used for dust control.

Spill Prevention/Material Handling

Spill prevention and material handling procedures and practices are designed to help prevent spilled materials (fuels, lubricants, de-icing chemicals, fertilizers, etc.) from entering drainage system or water course.

Inspection and Maintenance

- 1 Stop the source of the spill.
- 2 Be sure the contractor contains and cleans up the spill using absorbent materials rather than hosing down or redistributing the spilled material. If spilled on soil, construct earth dikes to prevent spreading.
- 3 Dispose of spilled material and clean up materials.

- 4 Plans to prevent future spills. What did you learn that can prevent this from happening again?
- 5 Be prepared! Don't wait until there is a problem. Be sure the contractor has a plan in place and has educated employees and subcontractors.

Make sure that the contractor updates spill prevention/control plans regularly and stocks appropriate cleanup materials.

Stock Pile Management

Stock pile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or water courses.

Maintenance and Inspections

Protect all stockpiles from storm water runoff using perimeter barriers such as silt fences, berms, sandbags, or dikes. Locate stockpiles away from concentrated storm water flow, drainage paths, and inlets. Stockpiles should be protected with temporary soil stabilization measures ranging from seed/vegetation to tarps, which should be repaired or replaced as needed.

Snow Management

Snow Management is the use of plowing, dozing or blowing snow to relocate to an area less likely to be impacted by melting. This can be used in conjunction with snow fences or windrows to redirect snow accumulation.

Inspection and Maintenance

Projects that extend through the winter months or high elevation areas of the state where snow accumulation lasts several months will need to move, store, and/or remove snow as necessary to reduce impact to sensitive areas that may be affected by snow accumulation or heavy snow melts. Avoid snow accumulation near drainage areas or conveyance systems so that melting snow does not cause flooding due to overwhelming quantities or blockage from snow and ice accumulations. Snow should be placed in a stabilized area of the site to reduce negative snow melt impacts.

Concrete Waste Management

Procedures/practices designed to minimize or eliminate the discharge of concrete waste materials (washout, etc.) from entering the drainage system or water course.

Inspection and Maintenance

Temporary concrete washout areas must be constructed and maintained to contain all water and concrete waste generated by washout operations. A sign should be placed at the washout site to inform concrete equipment operators of the facility location. These washout areas should be placed a minimum of 50 feet from any storm drain inlet, water course, or drainage facility. They must be located in an area with easy access for the concrete equipment and away from traffic. Existing facilities must be cleaned or replaced when they reach 75% capacity.

Street Sweeping

Street sweeping procedures and practices work to reduce the total suspended solids (TSS) and associated pollutants from public and private streets from entering drainage areas or water courses.

Inspection and Maintenance

When construction exits are not keeping construction site sediment from the roadway, other forms of sediment removal must be employed. Street sweeping is often overlooked, but should be considered an effective BMP. Street sweeping is effective at cleaning construction entrances and exits, shoulders, and maintenance yards. Depending on the desired level of sediment removal, street sweeping should occur on a regular basis and may warrant daily sweeping if the site is located in a highly erosive area. Street sweeping frequency should increase just prior to wet seasons to remove sediment accumulated during dry periods. This method is not typically effective for removing oil/grease.

Vehicle/Equipment Maintenance

Vehicle and equipment maintenance procedures and practices are designed to eliminate or reduce the discharge of pollutants from vehicle and equipment maintenance areas from entering drainage areas or water courses.

Inspection and Maintenance

Equipment and vehicles must be cleaned regularly to prevent a build up of oil and grease. Berms, sandbags, or other barriers should be used around the perimeter of the maintenance area to prevent storm water contamination. Maintenance areas should be clearly designated. Secondary containment (capable of handling 110% of material) must be provided for all fluids greater than 55 gallons. All waste fluids must be in leak-proof containers. Regularly inspect all on-site equipment, as well as those entering and exiting the site.

SWPPP Site Inspection Form

Figure 8.1 DOT-298

Storm Water, Erosion, and Sediment Control Inspection Report

DOT-298
(04-07)

Project Information		
Project Number:	Inspection Type	Inspection Date:
PCN:	<input type="checkbox"/> 24 hr (After a > 0.5" Event)	Date of Last Rainfall:
County:	<input type="checkbox"/> Weekly <input type="checkbox"/> Monthly	Amount of Last Rainfall:

Areas Inspected					
Area Type	Inspected ✓/NA	Area Type	Inspected ✓/NA	Area Type	Inspected ✓/NA
Disturbed Areas		Erosion Controls		Construction Entrance(s)	
Material Storage Areas		Sediment Controls		Other:	
How was inspection conducted? (check all that apply)			<input type="checkbox"/> Windshield	<input type="checkbox"/> Walking	<input type="checkbox"/> Other

Erosion and Sediment Controls Inspected

Except for the instances listed below, all structural sediment and erosion controls have been inspected and were found to be in working order, to require no maintenance, corrective actions, or additional controls.

BMP Type (see table)	Approximate Station		Left or Right of centerline	BMP Maintenance or Corrective Action Needed <small>Describe required corrective actions, maintenance, additions, or directions given to the contractor or subcontractor responsible.</small>
	From	To		

General Comments

Additional BMPs Needed

Any additional BMPs not shown on the SWPPP must be approved by the Project Engineer. If multiple locations are involved, identify the exact location of each addition.

BMP Type (see table)	Approximate Station		Left or Right of centerline	Description
	From	To		

Figure 8.2 DOT-298 (pg. 2)

Temporarily or Permanently Suspended Construction Activities			
Where construction activities (grading, excavating, embankment filling, or other land disturbing activities) have been suspended either temporarily or permanently, describe why stabilization measures were not initiated within 14 days, or if additional disturbance will occur within 21 days of when construction activities were temporarily suspended. Include the general location of the area.			
BMP Type (see table)	Approximate Station		Left or Right of centerline
	From	To	

Compliance Certification (check only one)	
<input type="checkbox"/>	With the maintenance and improvement actions noted, the site is in compliance with the SWPPP and SD General Permit for Construction Activities
<input type="checkbox"/>	The site is in potential noncompliance with the SWPPP or the General Permit for Construction Activities. (If this box is checked, complete the following "Potential Noncompliance Issues" section of this form.)

Potential Noncompliance Issues				
BMP Type (see table)	Approximate Station		Left or Right of centerline	Describe the potential noncompliance issue(s) e.g. repeated failure of a BMP, failure to install a required BMP, a visible off-site discharge of material (silt, sand, oily water, etc.), or potential off-site discharges or potential failures.
	From	To		

Inspection Certification		
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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.		
SDDOT Representative Name (Print):	Title:	Date:
Contractor Erosion Control Supervisor Name (Print):		Date:
Contractor Signature: _____		
SDDOT Signature: _____		
A permanent copy must be filed with the SWPPP records as required by the SD DENR General Permit for Storm Water Discharges Associated with Construction Activities.		

Table of BMP Types							
1	Temporary Seeding	8	Bonded Fiber Matrix	15	Side Inlet Protection	22	Construction entrance/exit
2	Permanent Sod or Seed	9	Diversion Berm	16	Culvert Inlet Protection	23	Slope Roughening
3	Mulch (hydraulic)	10	Diversion Swale	17	Sediment Trap (textile)	24	Floating Silt Curtain
4	Crimped straw mulch	11	Pipe Slope Drain	18	Sediment Basin	25	Other
5	Erosion Control Blanket	12	Rock Check Dam	19	Wattles	26	Other
6	Flexible Channel Liner	13	Rock Rip Rap	20	Erosion Bales	27	Other
7	Silt Fence	14	Drop Inlet Protection	21	Triangular Silt Barrier	28	Other

cc: DOT Environmental Office Contractor SDDOT Project Engineer

SWPPP Modification Form

Example layout of a SWPPP Modification Form.

SWPPP Modification			
Project Number:		PCN:	
County		Project Length:	
Changes			
Certification			
I certify under penalty of law that I understand the terms and conditions of the General Storm Water Permit for Construction Activities from the SD DENR that authorized the storm water discharges from the construction site, and will follow these requirements as detailed in this plan.			
Signed: _____ Contractor's Project Superintendent		Date: _____	
Title: _____			
The South Dakota Department of Transportation approves the modifications to the Storm Water Pollution Prevention Plan as described above and authorizes the Contractor to proceed with construction.			
Signed: _____ Contractor's Project Superintendent		Date: _____	
Title: _____			

Final Inspection Checklist

Example layout of a Final Inspection Checklist.

FINAL INSPECTION CHECKLIST

Use this form for the final inspection of the site leading up to the NOT filing. Prior to filing the NOT, all temporary erosion and sediment controls are to be removed from the site. This checklist should be used to inspect the site and should be maintained with the required SWPPP project records as required by the SD DENR.

Removal of Structural Erosion and Sediment Control BMPs

- All erosion and sediment controls shown on the revised SWPPP and plan sheets have been removed.
- Any additional disturbance caused by the removal of BMPs has been reseeded or repaired so that no sediment-laden discharge will leave the site.
- All side slopes and embankments have achieved a cover equivalent to 70% of adjacent surface cover. Cover is generally uniform with no large bare spots, and no significant rilling is present.
- All ingress and egress points to the site have been restored and have either permanent paved surfaces or have been revegetated to the standard of 70% of adjacent cover.

Waste Disposal and Spill Management

- No areas of the site have, or appear to have, any residual contamination from spills. Any spills that did occur have been completely cleaned and appropriate surface cover is in place.
- There is no evidence of petroleum residue or spills left in areas used for equipment or material storage, and surfaces have been properly restored.

NOTES:

In this section note any deficiencies, additions, or corrections that need to be made prior to filing the NOT.

Signature: _____ Date: _____

SDDOT Project Engineer

Signature: _____

Contractor Site Superintendent

EXPEDITED SETTLEMENT OFFER (ESO)

The following expedited worksheet from the EPA is frequently used or referred to when inspections of projects are made by EPA regional staff. The worksheet also provides information on what EPA would be looking for if they were to do an inspection of your project.

Expedited Settlement Offer Worksheet
Findings and Alleged Violations
*Consult instructions regarding eligibility criteria
and procedures prior to use*

1	Legal Name and Mailing Address of Operator	Telephone Number	NPDES Permit Number		
2	Location and Address of Site				
	Name of Site Contact (ESO Worksheet recipient):				
	Name of Authorized Official (40 CFR 122.22):				
	Inspection Date:				
	Start Construction Date:				
	Estimated Completion Construction Date:				
	If Unpermitted, Number of Months Unpermitted:				
	Name of Receiving Water Body (Indicate whether 303(d) listed):				
	Acres Disturbed (whole common plan):				
	Is Site Eligible for Rainfall Erosivity or TMDL Waiver per 44 CFR 122.26(b)(15)?				
		Citation Reference	No. of Violations	Violation Amount	Settlement Offer
3	Operator(s) in control of site specifications unpermitted for _____ months (# of months = # of violations)	CWA 301	0	\$500.00	\$0.00
4	Operator(s) in control of day-to-day activities unpermitted for _____ months (# of months = # of violations)	CWA 301	0	\$500.00	\$0.00
5	SWPPP not prepared (If no SWPPP, leave elements 6 - 31 blank)	CGP 3.1.A	0	\$4,000.00	\$0.00
6	SWPPP prepared but prepared after construction start (# of months = # of violations)	CGP 3.1.A	0	\$75.00	\$0.00
7	SWPPP does not identify all potential sources of pollution to include: porta-pottys, fuel tanks, staging areas, waste containers, chemical storage areas, concrete cure, paints, solvents, etc...	CGP 3.1.B	0	\$250.00	\$0.00
8	SWPPP does not identify all operators for the project site and the areas of the site over which each operator has control	CGP 3.3.A	0	\$500.00	\$0.00
9	SWPPP does not have site description, as follows:				
	A Nature of activity in description	CGP 3.3.B.1	0	\$100.00	\$0.00
	B Intended sequence of major activities	CGP 3.3.B.2	0	\$100.00	\$0.00
	C Total disturbed acreage	CGP 3.3.B.3	0	\$100.00	\$0.00
	D General location map	CGP 3.3.B.4	0	\$100.00	\$0.00
	E Site map	CGP 3.3.C	0	\$500.00	\$0.00
	F Site map does not show drainage patterns, slopes, areas of disturbance, locations of major controls, structural practices shown, stabilization practices, offsite materials, waste, borrow or equipment storage areas, surface waters, discharge points, areas of final stabilization (count each omission under 9F as 1 violation)	CGP 3.3.C 1 - 8	0	\$50.00	\$0.00
	G. Location/description industrial activities, like concrete or asphalt batch plants	CGP 3.3.D	0	\$500.00	\$0.00
10	SWPPP does not:				
	A Describe all pollution control measures (e.g. BMPs)	CGP 3.4.A	0	\$750.00	\$0.00

	B Describe sequence for implementation	CGP 3.4.A	0	\$250.00	\$0.00
	C Detail operator(s) responsible for implementation	CGP 3.4.A	0	\$250.00	\$0.00
11	SWPPP does not describe interim stabilization practices	CGP 3.4.B	0	\$250.00	\$0.00
12	SWPPP does not describe permanent stabilization practices	CGP 3.4.B	0	\$250.00	\$0.00
13	SWPPP does not describe a schedule to implement stabilization practices	CGP 3.4.B	0	\$250.00	\$0.00
14	Following dates are not recorded: major grading activities; construction temporarily or permanently ceased; stabilization measures initiated (count each omission under 14 as 1 violation)	CGP 3.4.C.1-3	0	\$250.00	\$0.00
15	SWPPP does not have description of structural practices to divert flows from exposed soils, retain flows, or limit runoff from exposed areas	CGP 3.4.D	0	\$500.00	\$0.00
16	SWPPP does not have a description of measures that will be installed during the construction process to control pollutants in storm water discharges that will occur AFTER construction operations have been completed	CGP 3.4.E	0	\$500.00	\$0.00
17	SWPPP does not describe measures to prevent discharge of solid materials to waters of the US, except as authorized by 404 permit	CGP 3.4.F	0	\$500.00	\$0.00
18	SWPPP does not describe measures to minimize off-site vehicle tracking and generation of dust	CGP 3.4.G	0	\$500.00	\$0.00
19	SWPPP does not include description of construction or waste materials expected to be stored on site w/updates re: controls used to reduce pollutants from these materials	CGP 3.4.H	0	\$250.00	\$0.00
20	SWPPP does not have description of pollutant sources from areas other than construction (asphalt or concrete plants) w/ updates re: controls to reduce pollutants from these materials	CGP 3.4.I	0	\$500.00	\$0.00
21	SWPPP does not identify allowable sources of non-storm water discharges listed in subpart 1.3.B of the CGP	CGP 3.5	0	\$500.00	\$0.00
22	SWPPP does not identify/ensure implementation of pollution prevention measures for non-storm water discharges	CGP 3.5	0	\$500.00	\$0.00
23	Endangered Species Act documentation is not in SWPPP	CGP 3.7	0	\$500.00	\$0.00
24	Historic Properties (Reserved)	CGP 1.3.C.7			
25	Copy of permit and/or NOI not in SWPPP (count each omission under 25 as 1 violation)	CGP 3.8	0	\$250.00	\$0.00
26	SWPPP is not consistent with requirements specified in applicable sediment and erosion site plans or site permits, or storm water management plans or site permits approved by State, Tribal or local officials (e.g., MS4 requirements)	CGP 3.9	0	\$750.00	\$0.00
27	SWPPP has not been updated to remain consistent with changes applicable to protecting surface waters in State, Tribal or local erosion plans	CGP 3.9	0	\$250.00	\$0.00
28	Copies of inspection reports have not been retained as part of the SWPPP for 3 years from date permit coverage terminates	CGP 3.10.G	0	\$500.00	\$0.00
29	SWPPP has not been updated/modified to reflect change at site effecting discharge, or where inspections identify SWPPP/BMPs as ineffective, updates to SWPPP regarding modifications to BMPs not made within 7 days of such inspection (count each omission under 29 as 1 violation)	CGP 3.11.C	0	\$50.00	\$0.00
30	Copy of SWPPP not retained on site	CGP 3.12.A	0	\$500.00	\$0.00
	A SWPPP not made available upon request	CGP 3.12.C	0	\$500.00	\$0.00
31	SWPPP not signed/certified	CGP 3.12.D	0	\$500.00	\$0.00
32	Inspections not performed either once every 7 days, or once every 14 days and within 24 hours after storm event greater than 0.5 inches or greater (not required if: temp stabilization; runoff unlikely due to winter conditions; construction during arid periods in arid areas)	CGP 3.10.A, 3.10.B	0	\$75.00	\$0.00
33	Inspections not conducted by qualified personnel	CGP 3.10.D	0	\$500.00	\$0.00
34	All areas disturbed by construction activity or used for storage of materials and which exposed to precipitation not inspected	CGP 3.10.E.	0	\$50.00	\$0.00
35	All pollution control measures not inspected to ensure proper operation	CGP 3.10.E.	0	\$500.00	\$0.00
36	Discharge locations are not observed and inspected	CGP 3.10.E.	0	\$50.00	\$0.00
37	For discharge locations that are not accessible, nearby locations are not inspected	CGP 3.10.E.	0	\$50.00	\$0.00

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EROSION CONTROL SUPERVISOR

On South Dakota DOT projects, the general contractor must provide an erosion control supervisor. The erosion control supervisor must be trained and knowledgeable in storm water permit requirements as well as methods to prevent off site sediment discharge from construction projects. The erosion control supervisor is the contractor's representative and the "go to person" for issues relative to the contractor's means and methods for permit compliance. The erosion control supervisor must be a responsible person of the general contractor and have authority on the project to resolve issues on behalf of the general contractor relative to permit requirements and conduct of the work. Basically, the erosion control supervisor is the contractor's representative to implement the provisions of the Storm Water Pollution Prevention Plan. Some of the duties include the following:

- Implement and revise the Storm Water Pollution Prevention Plan (SWPPP) to reflect project conditions.
- Attend construction meetings to discuss findings of NPDES site inspections.
- Ensure that erosion/sediment control work is scheduled in accordance with the SWPPP on the part of the contractor and conducted in the time frame stated in permits.
- When requested, prepare schedules on erosion /sediment control and present to the Engineer.
- Ensure proper cleanup from vehicle tracking on paved surfaces or any location where sediment leaves the right of way.
- Provide for erosion/sediment control methods for contractors temporary operations which are not shown on the plans such as pumping operations, work platforms, cofferdams and temporary fills, and dewatering systems.
- Ensure that work, if permitted, conducted in rivers, streams and other water bodies is done in a manner that meets applicable permit requirements and maintains water quality standards.
- Ensure that disturbed areas within the project is properly protected prior to suspension of the work.

The following is included in the current supplemental specifications to the Standard Specifications for Roads and Bridges 2004 edition. In the next edition of the Standard Specifications for Roads and Bridges, it will be part of the specifications (Section 734.2).

"The Contractor shall designate an employee as Erosion Control Supervisor whose responsibility is the construction and maintenance of erosion and sediment control. This person shall be available to be reached by phone 24 hours a day, 7 days a week, and must

be able to respond to emergency situations at the job site within 12 hours. The person so designated must have training and be certified by the South Dakota Department of Transportation in the area of erosion and sediment control. The name, phone number, and location of the person shall be provided to the Department at the preconstruction meeting.”

11

STANDARD PLATES

On the following pages are the current Standard Plates for Erosion and Sediment Control.

Figure 11.1 Bank and Channel protection gabions

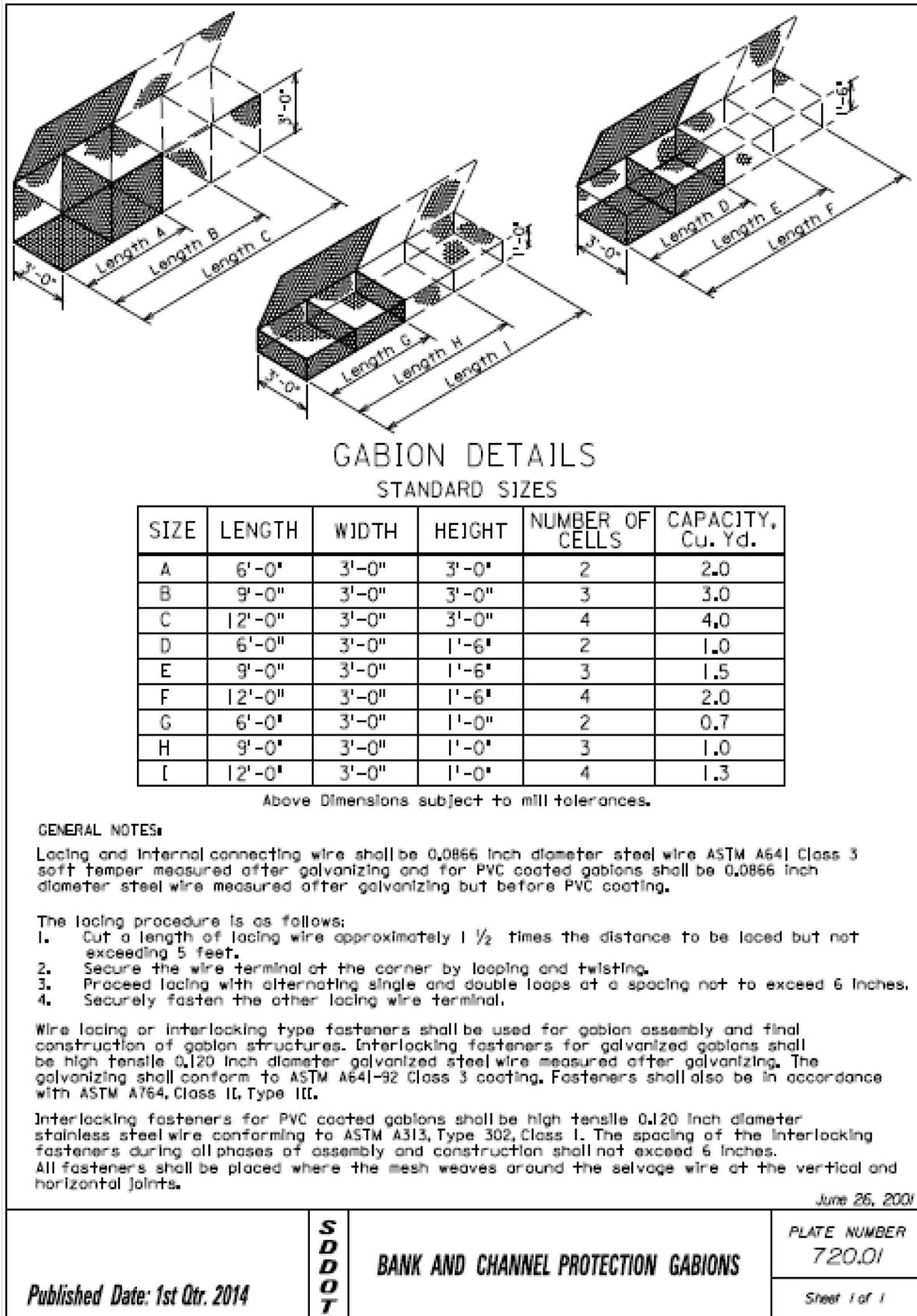


Figure 11.2 Bank and Channel protection gabion placement under pipe end sections

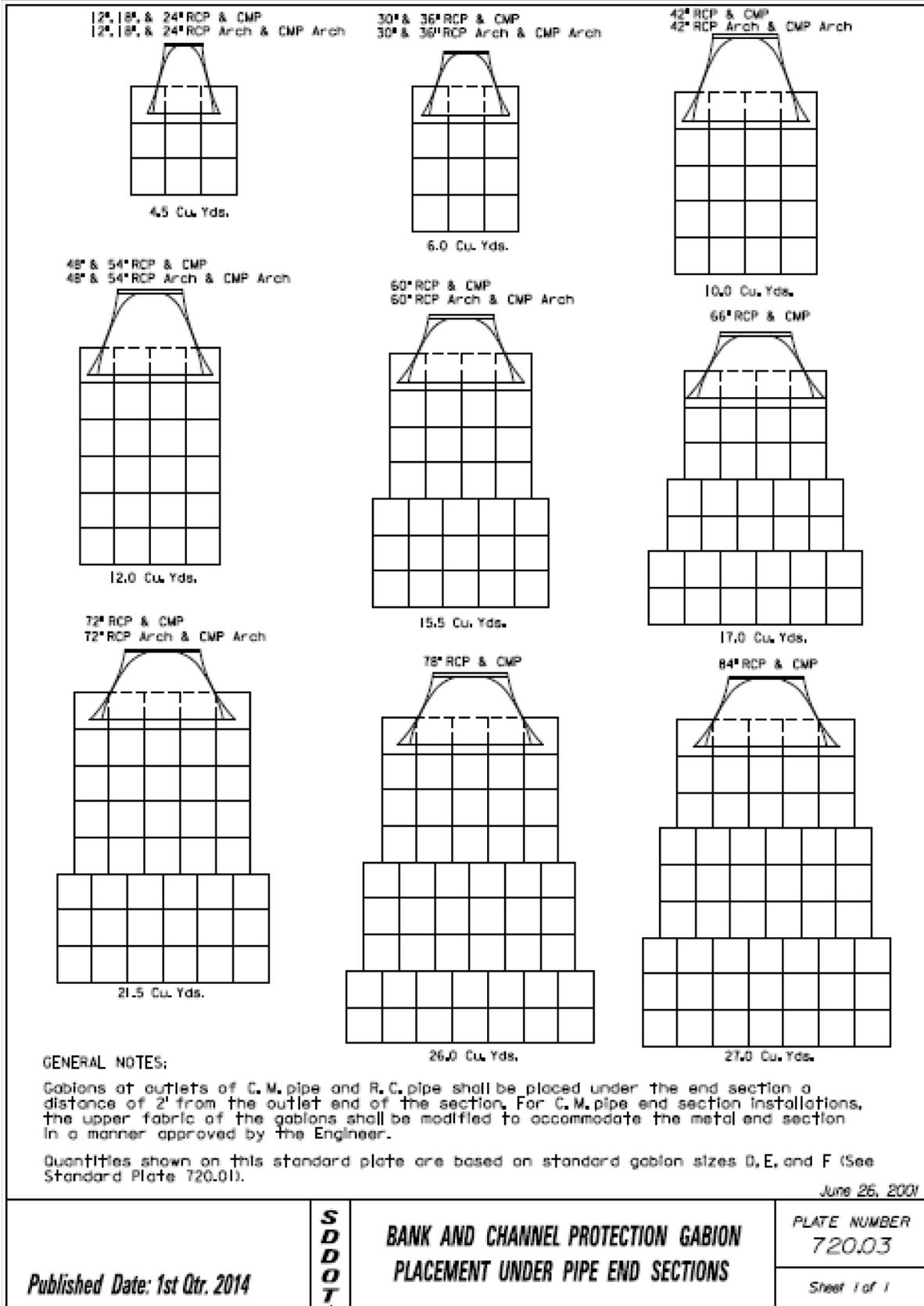


Figure 11.3 Erosion Control Blanket

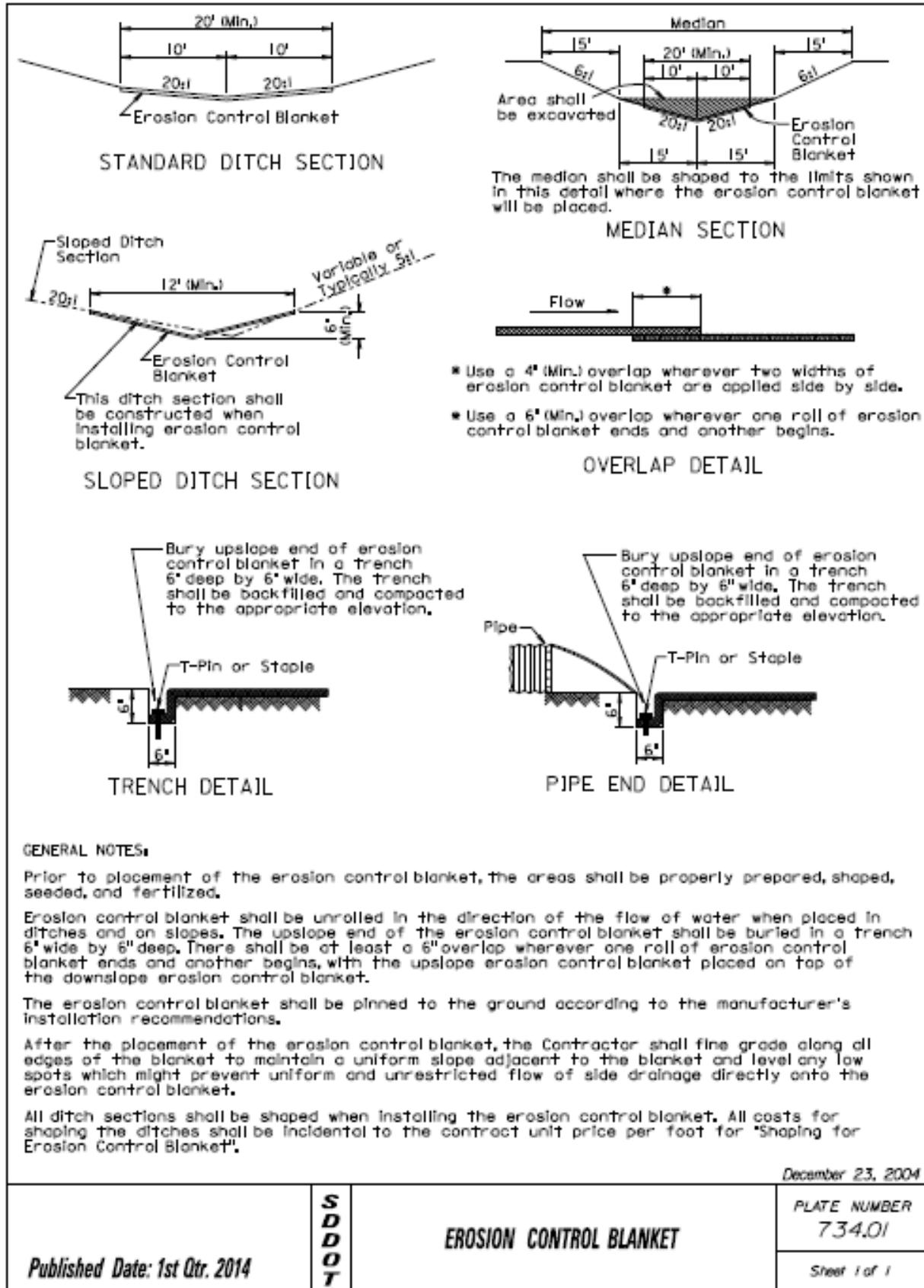
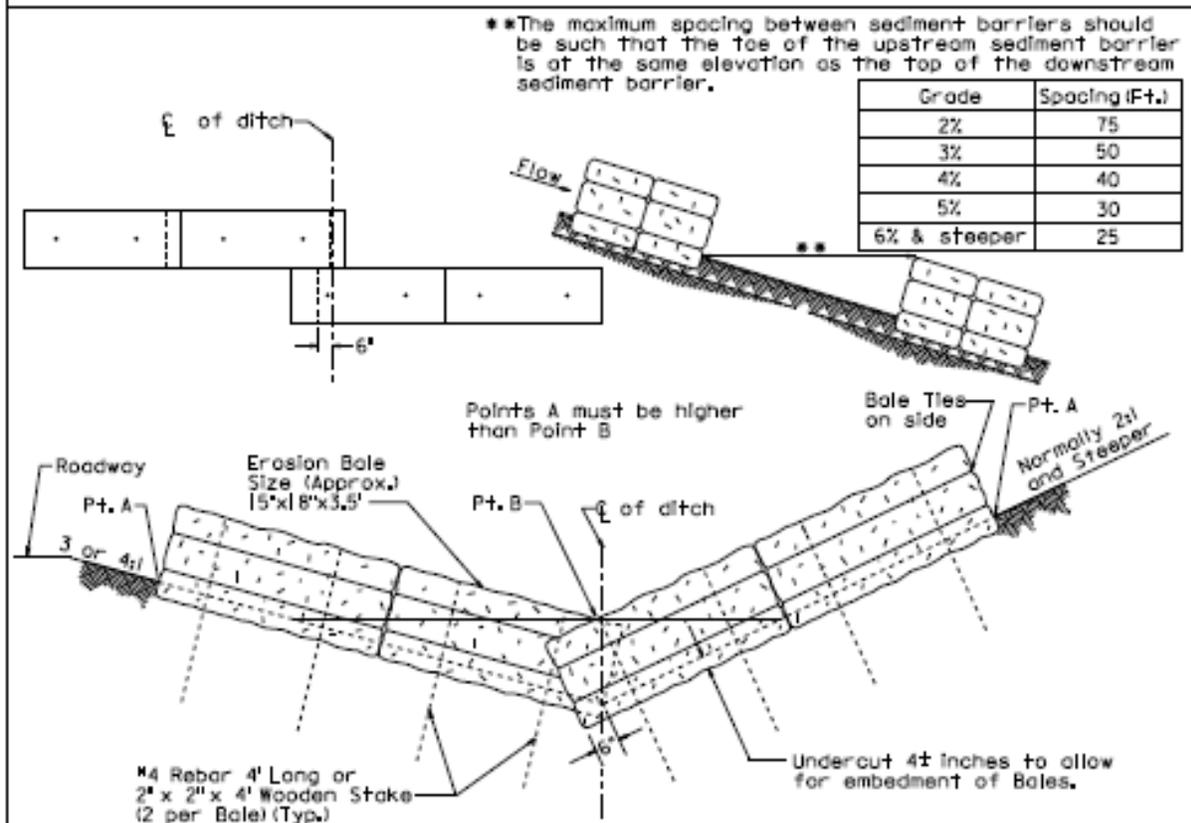
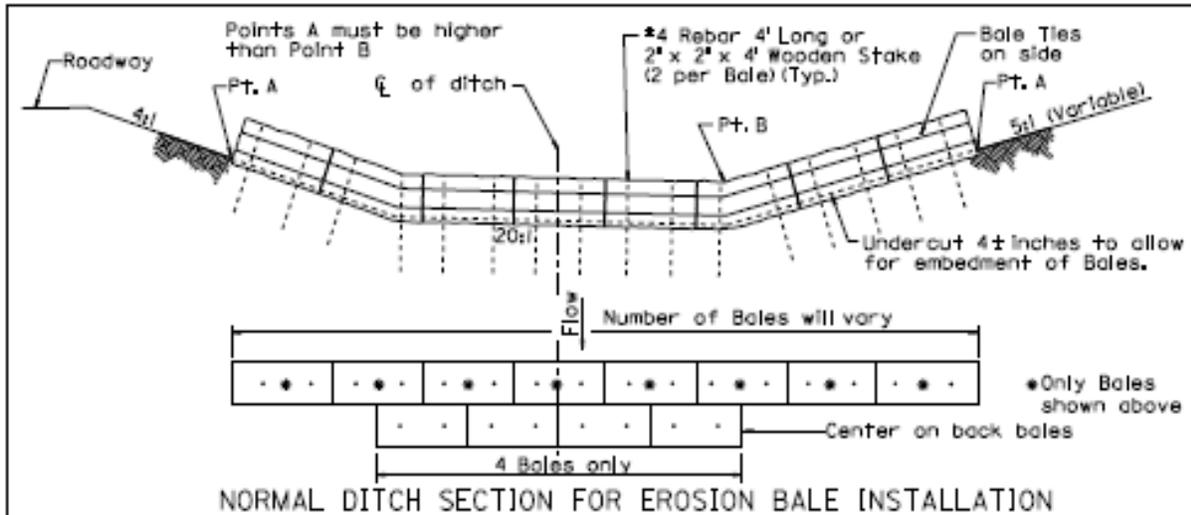


Figure 11.4 Erosion Bales



GENERAL NOTES:

The erosion bale sediment barrier must be entrenched and backfilled. A trench should be excavated the width of a bale and the length of the proposed sediment barrier to a minimum depth of 4 inches. After the bales are staked with rebar or wood stakes, the excavated soil must be backfilled against the sediment barrier. The sediment barrier must be extended to such a length that the bottoms of the end bales are higher in elevation than the top of the lowest middle bale.

March 28, 2001

<p><i>Published Date: 1st Qtr. 2014</i></p>	<p>S D D O T</p>	<p>EROSION BALES</p>	<p>PLATE NUMBER 734.02</p>
			<p>Sheet 1 of 1</p>

Figure 11.5 Rock Check Dam

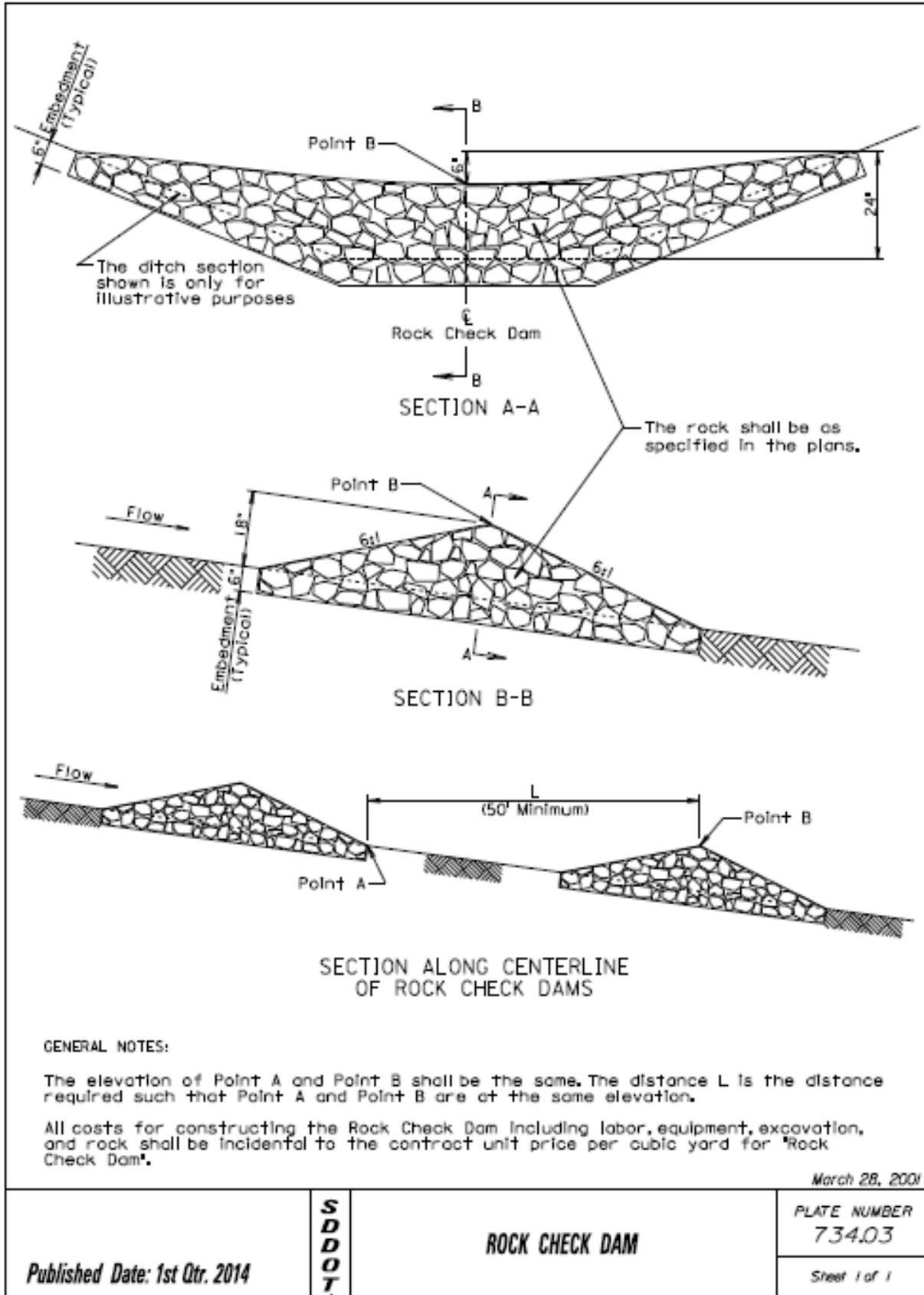


Figure 11.6 Low Flow Silt Fence and Silt Trap

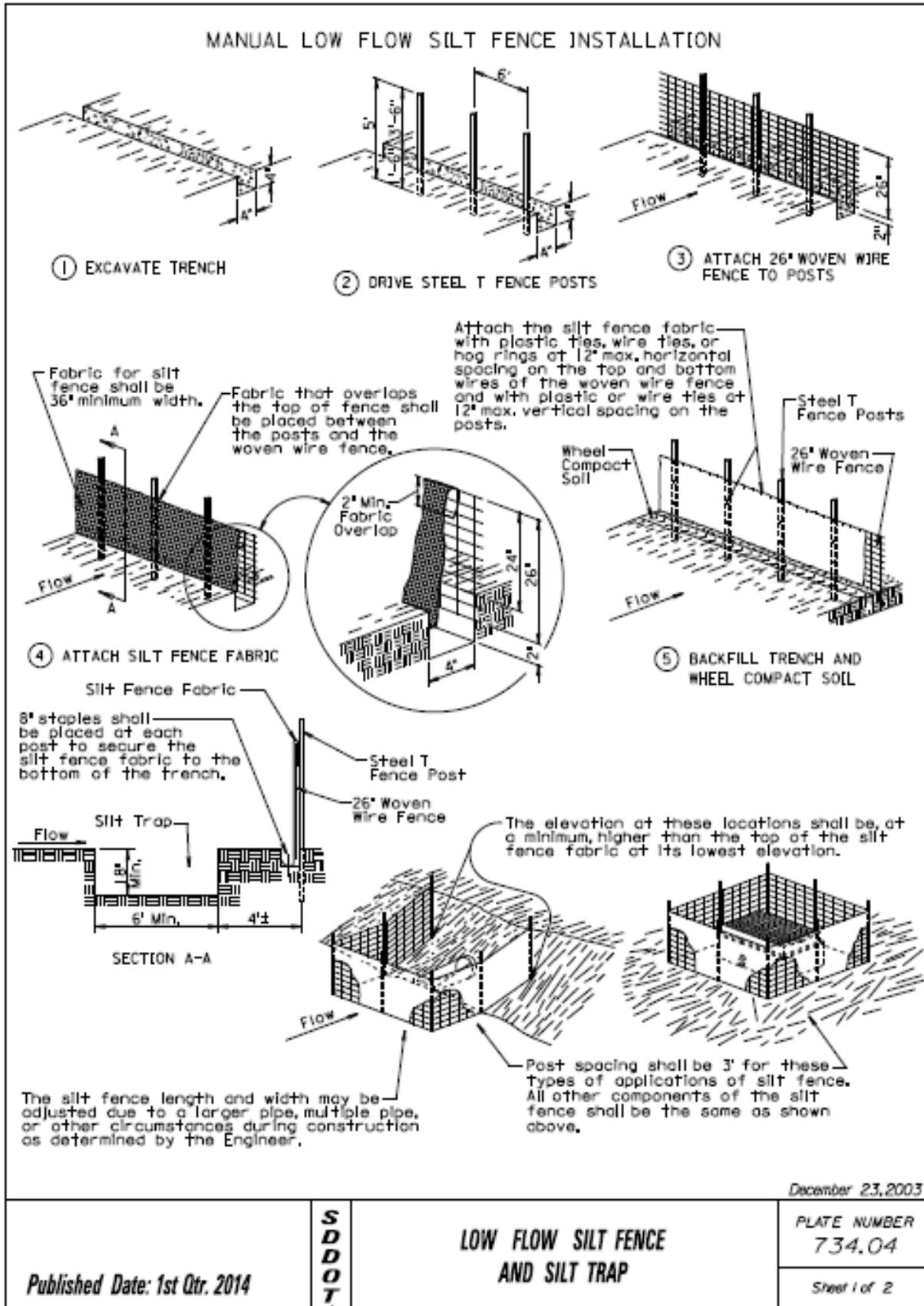


Figure 11.7 Low Flow Silt Fence and Silt Trap (pg. 2)

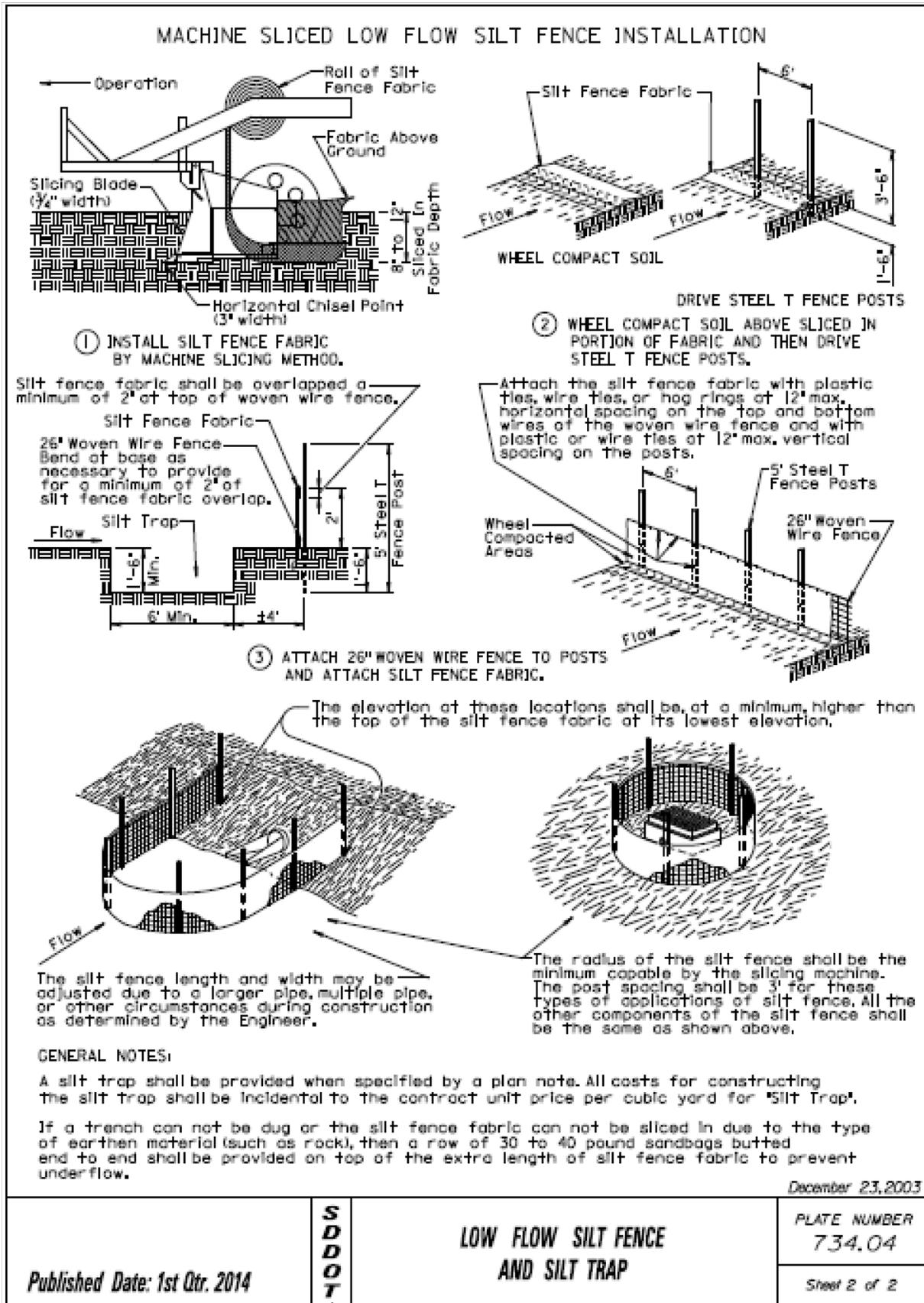


Figure 11.8 High Flow Silt Fence

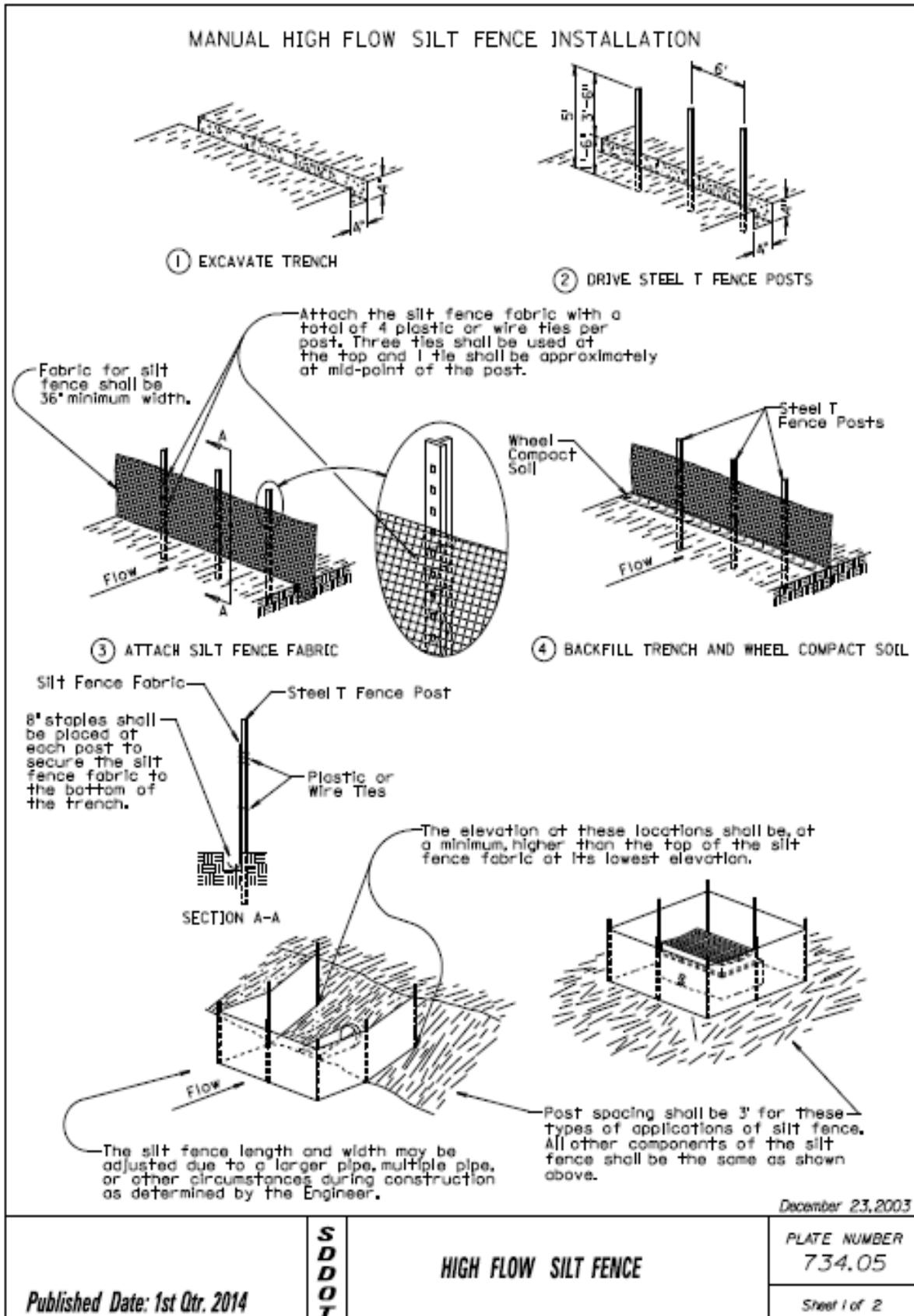


Figure 11.9 High Flow Silt Fence (pg. 2)

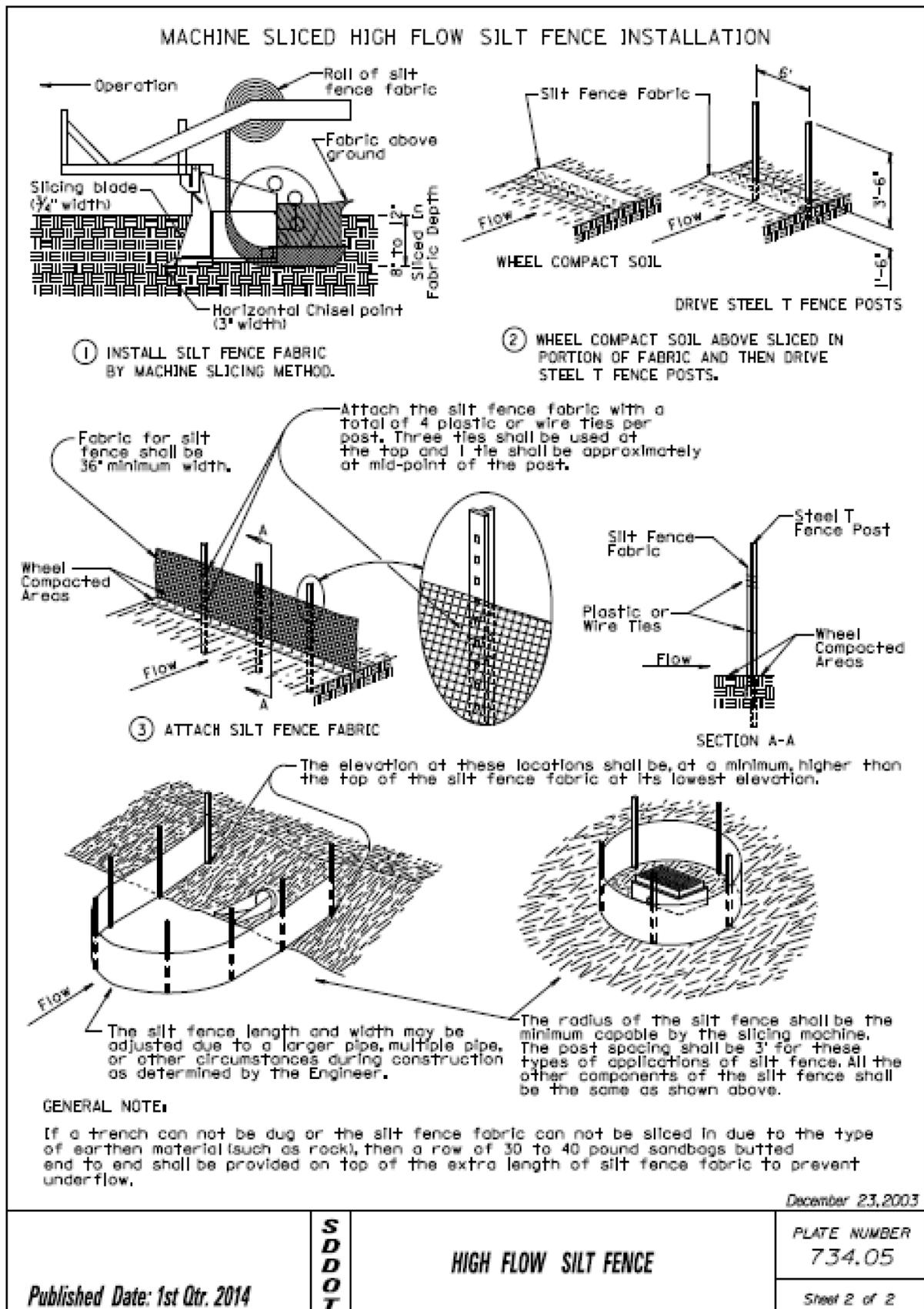
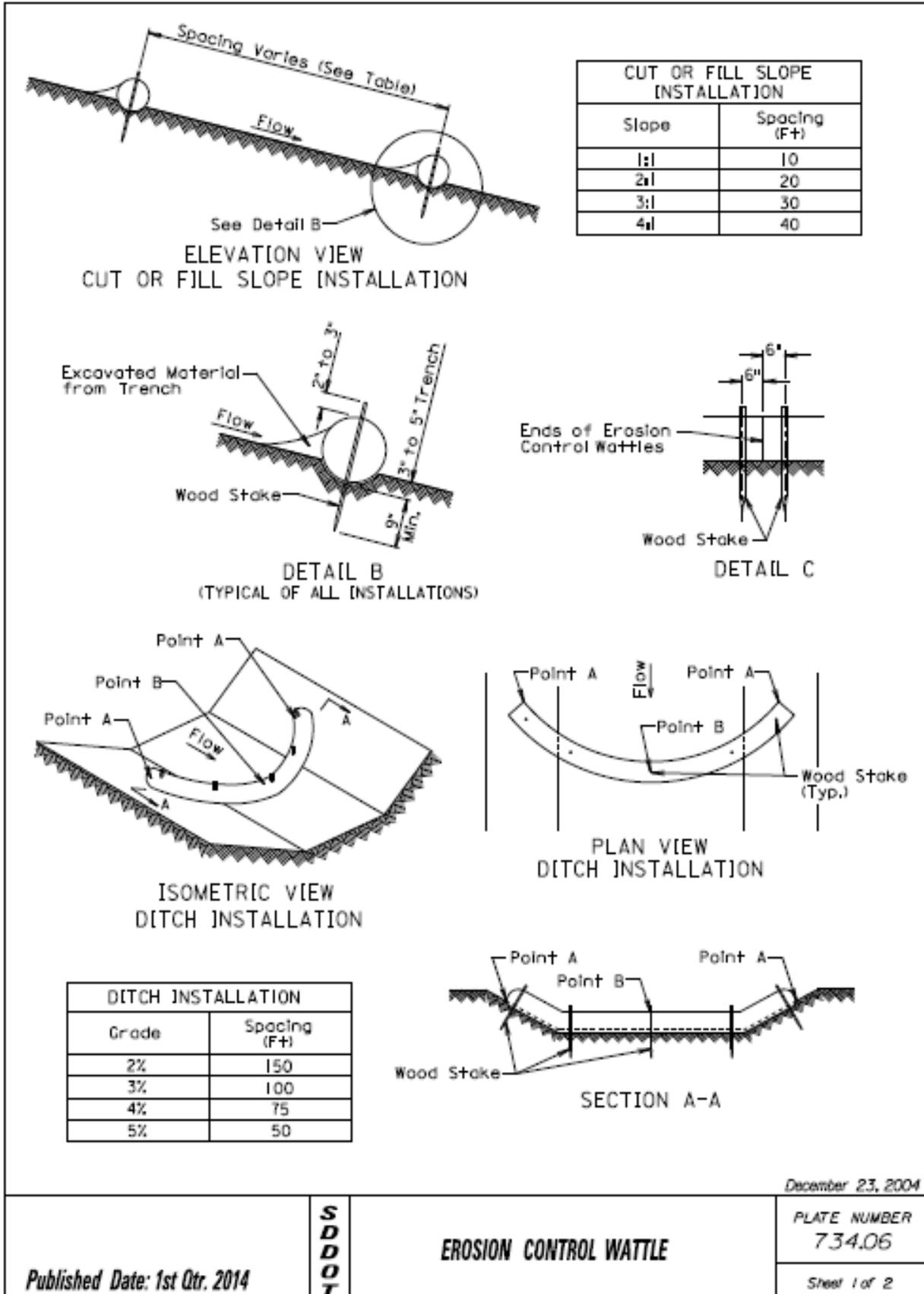


Figure 11.10 Erosion Control Wattle



December 23, 2004

Published Date: 1st Qtr. 2014

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EROSION CONTROL WATTLE

PLATE NUMBER
734.06

Sheet 1 of 2

Figure 11.11 Erosion Control Wattle (pg. 2)

GENERAL NOTES:

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

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

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

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

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

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

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

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

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

December 23, 2004

<i>Published Date: 1st Qtr. 2014</i>	S D D O T	EROSION CONTROL WATTLE	PLATE NUMBER 734.06
			Sheet 2 of 2

Figure 11.12 Sediment Control at Inlets w/frames and grates

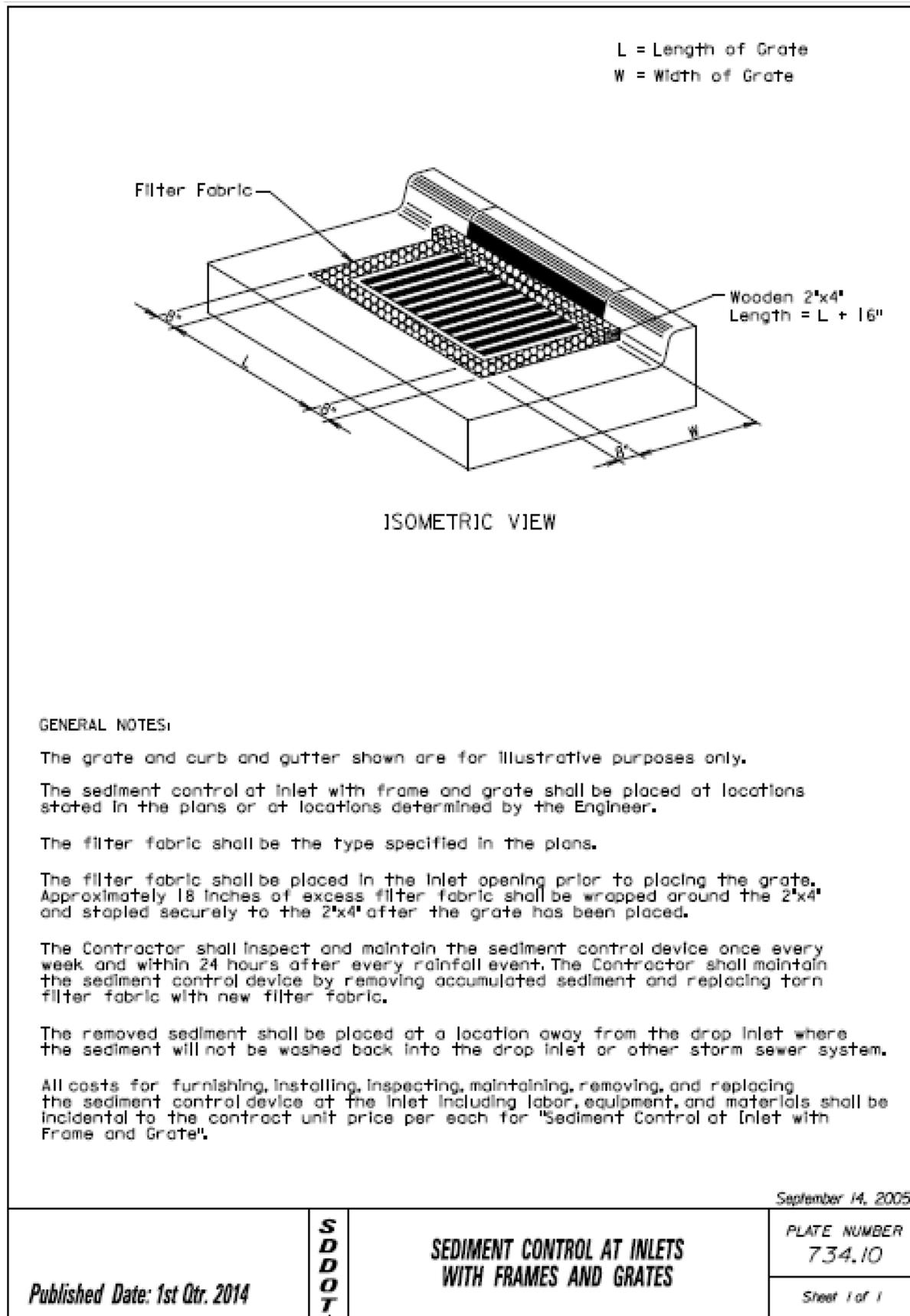
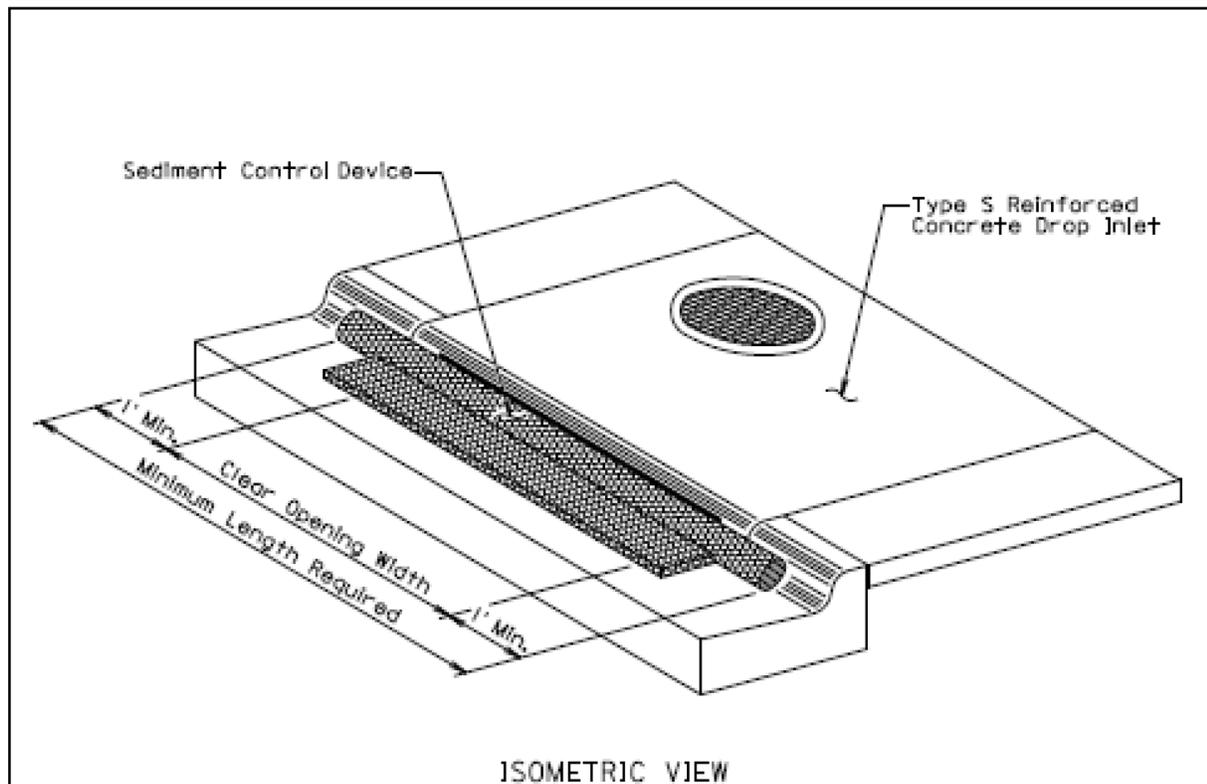


Figure 11.13 Sediment Control at Inlets for Type S Reinforced Concrete Drop Inlets



GENERAL NOTES:

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

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

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

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

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

The removed sediment shall be placed at a location away from the drop inlet where the sediment will not be washed back into the drop inlet or other storm sewer system.

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

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

September 14, 2005

<i>Published Date: 1st Qtr. 2014</i>	S D D O T	SEDIMENT CONTROL AT INLETS FOR TYPE S REINFORCED CONCRETE DROP INLETS	PLATE NUMBER 734.11
			Sheet 1 of 1

Figure 11.14 Cut Interceptor Ditch

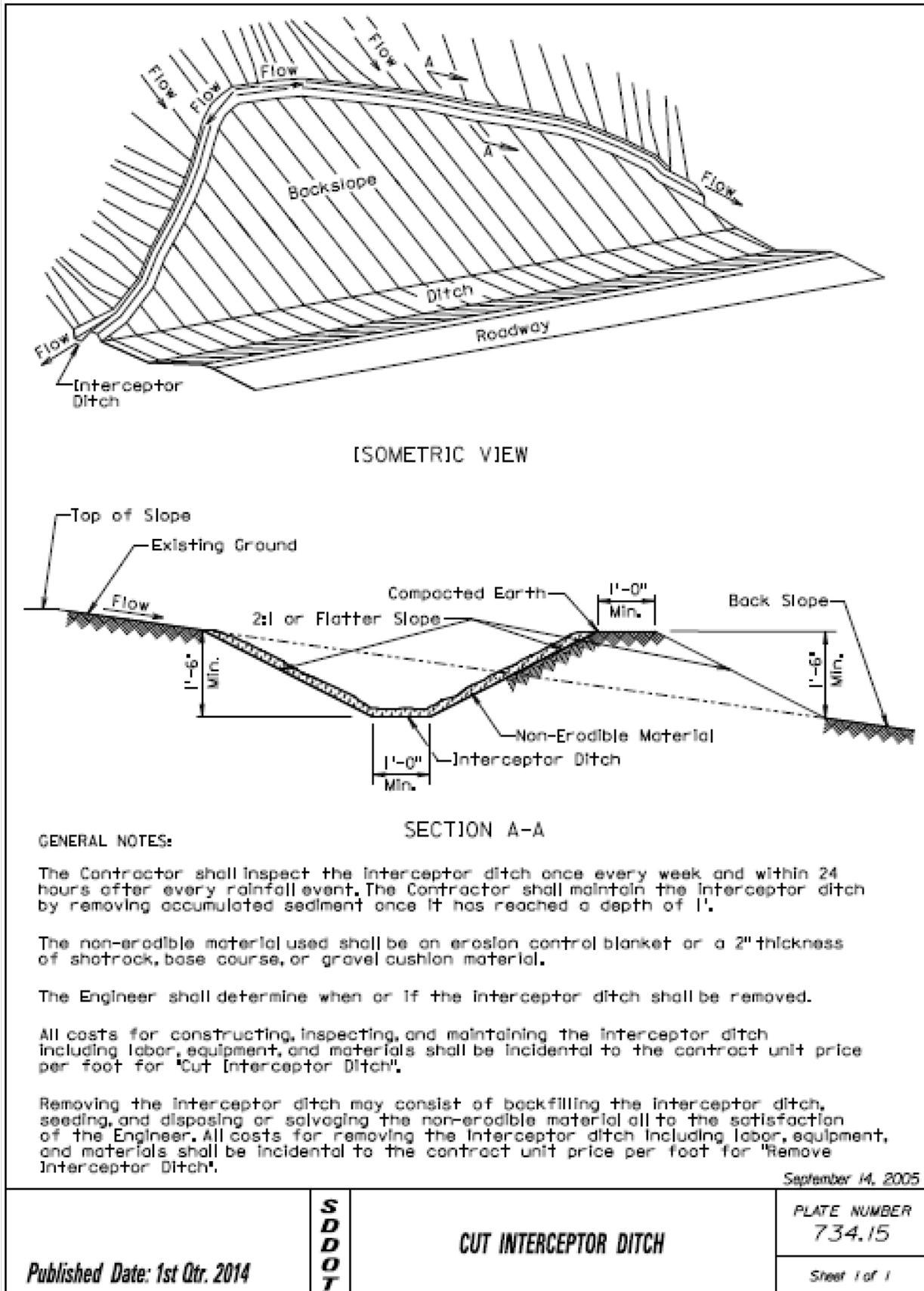


Figure 11.15 Temporary Slope Drain

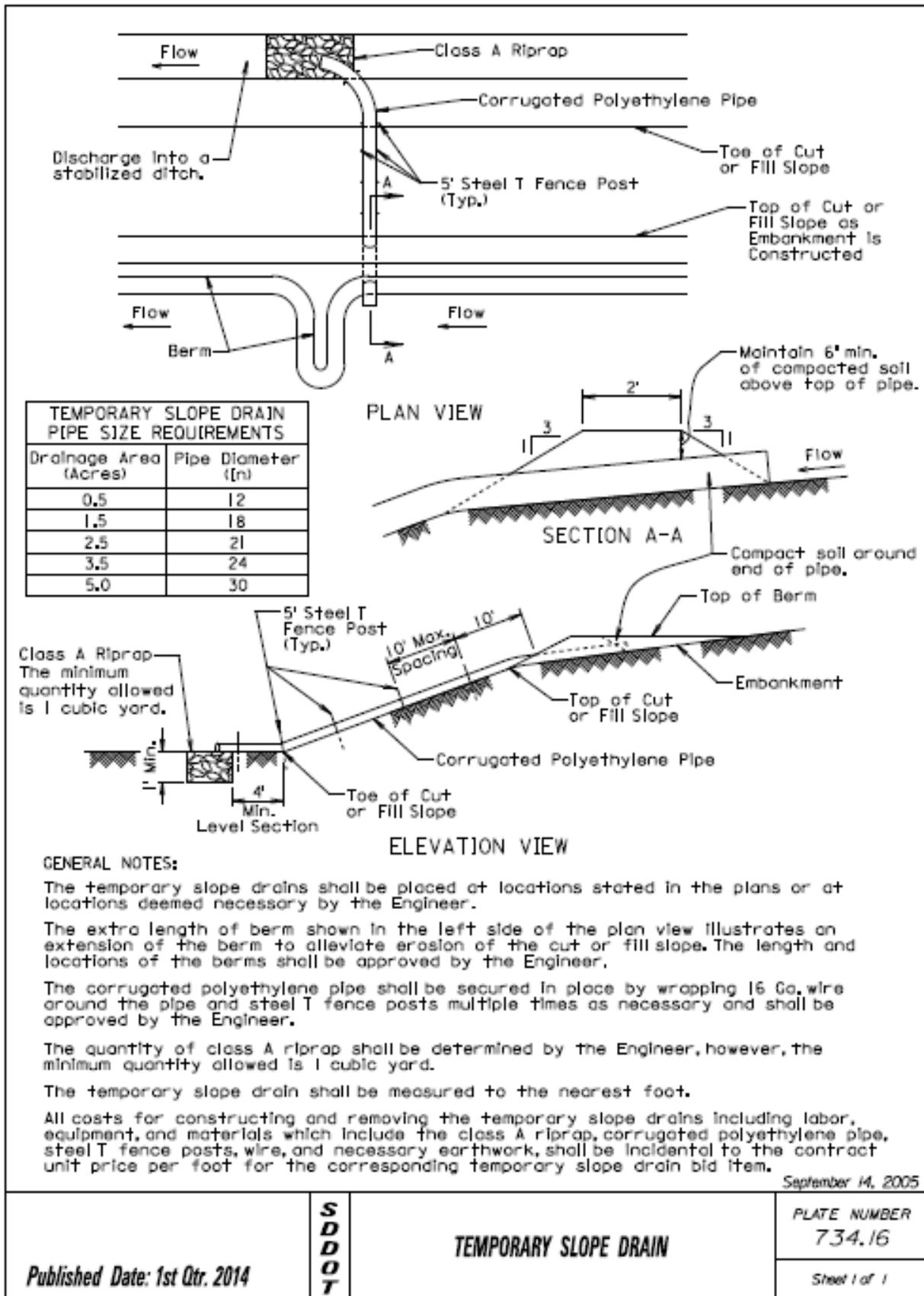
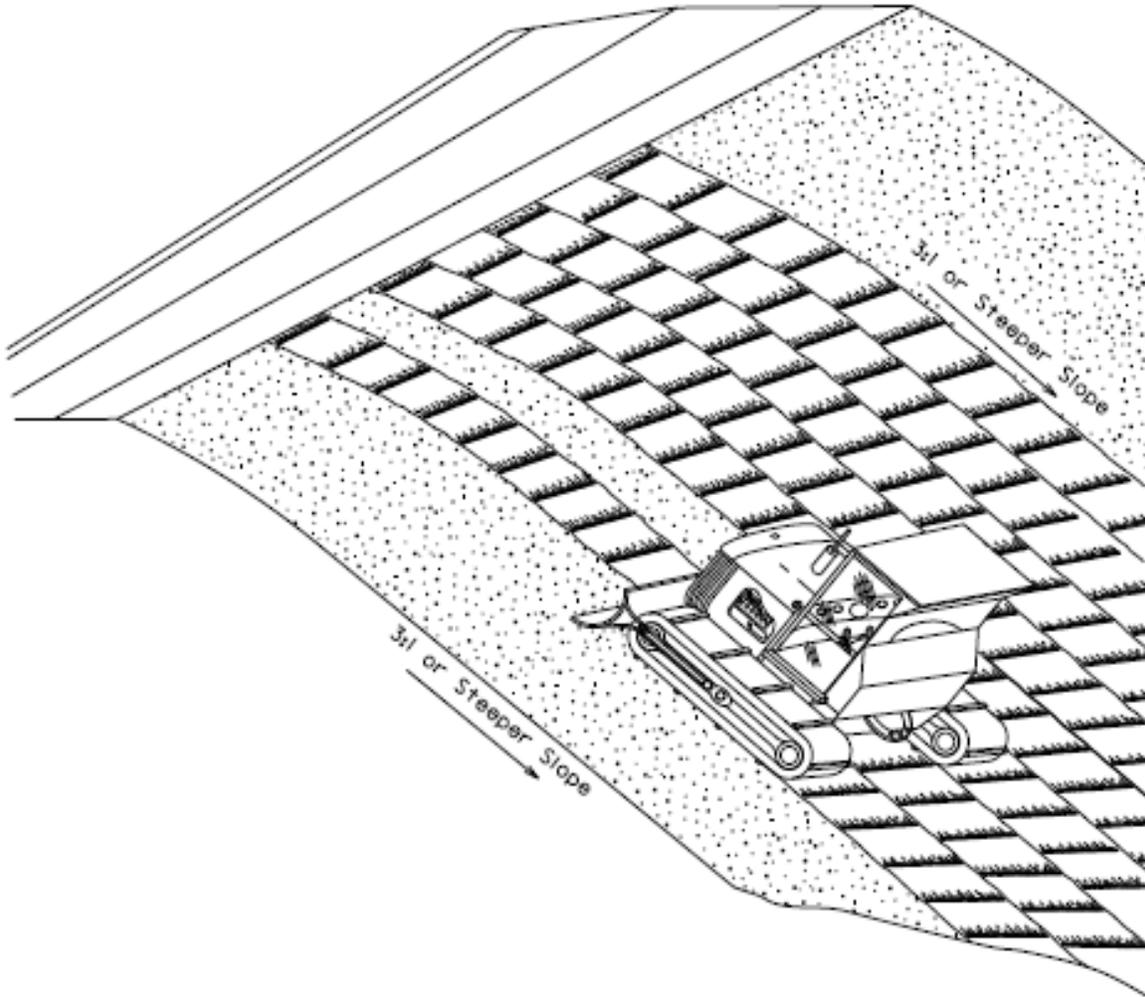


Figure 11.16 Surface Roughening



GENERAL NOTES:

Where practical, surface roughening shall be done on slopes 3:1 and steeper and on slopes deemed necessary by the Engineer.

The equipment used for surface roughening shall be equipped with tracks that are capable of creating ridges in the soil that are perpendicular to the slope. The final condition of the surface roughening shall be approved by the Engineer.

Measurement for surface roughening shall be to the nearest tenth of an acre.

All costs associated with surface roughening including labor, equipment, and materials shall be incidental to the contract unit price per acre for "Surface Roughening".

June 26, 2009

Published Date: 1st Qtr. 2014

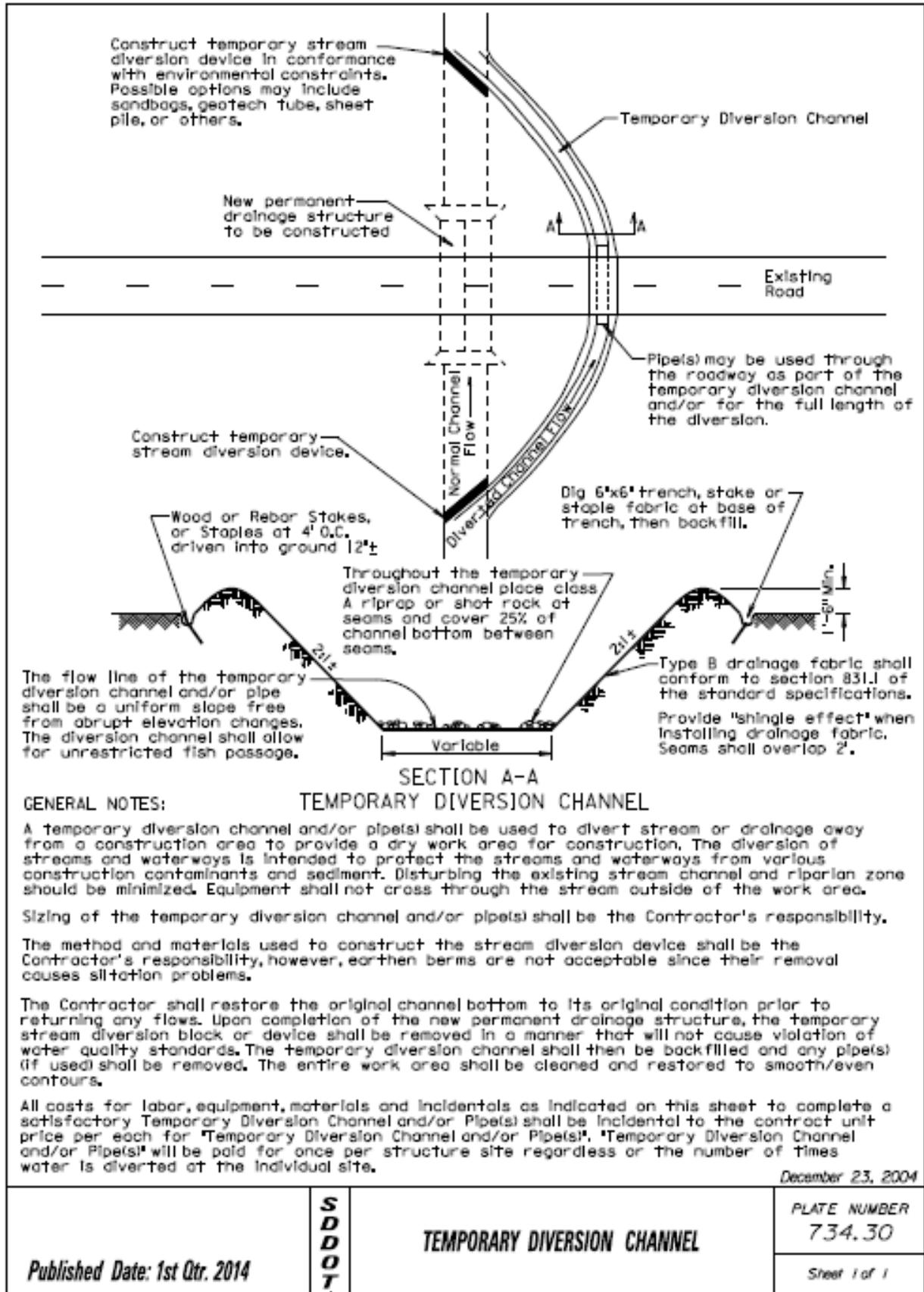
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SURFACE ROUGHENING

PLATE NUMBER
734.25

Sheet 1 of 1

Figure 11.17 Temporary Diversion Channel



APPENDIX

12

CONSTRUCTION GENERAL PERMIT

Permit No.: SDR100000

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3181

**GENERAL PERMIT FOR STORM WATER DISCHARGES
ASSOCIATED WITH CONSTRUCTION ACTIVITIES**

**Authorization to Discharge Under the
Surface Water Discharge System**

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD) Chapters 74:52:01 through 74:52:11, operators of storm water discharges from **construction** activities, located in the State of South Dakota are authorized to discharge in accordance with the conditions and requirements set forth herein.

This General Permit shall become effective on **February 1, 2010**.

This General Permit and the authorization to discharge shall expire at midnight,
January 31, 2015.

Signed this **31st** day of **December, 2009**



Authorized Permitting Official

Steven M. Pirner
Secretary
Department of Environment and Natural Resources

*Note – This page will be replaced
with a copy containing the
assigned permit number once
coverage is authorized.*

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ATTACHMENT E	NOTICE OF INTENT FOR REAUTHORIZATION FORM

1.0 DEFINITIONS

“**ARSD**” means the Administrative Rules of South Dakota.

“**Best Management Practices**” (“**BMPs**”) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control construction site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

“**Commencement of Construction Activities**” means the initial disturbance of soils associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

“**Concrete Washout**” as used in the General Permit refers to any wash waters derived from the cleaning of concrete trucks and/or equipment.

“**Control Measures**” as used in this General Permit, refers to any Best Management Practice or other method used to minimize erosion and sedimentation, and thereby minimize the discharge of pollutants to waters of the state.

“**DENR**” means the South Dakota Department of Environment and Natural Resources.

“**Discharge**” as used in the General Permit is as an addition of any pollutant or combination of pollutants to surface waters of the state from any point source. Construction sites disturbing one or more acres are point sources. Therefore, any water flowing off the construction site constitutes a discharge and must be covered by a Surface Water Discharge permit.

“**Final Stabilization**” means one of the following:

1. All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of 70% of the native cover for unpaved areas and areas not covered by permanent structures has been established, or equivalent permanent stabilization measures (such as the use of gravel, riprap, gabions, or geotextiles) have been employed; or
2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ($0.70 \times 0.50 = 0.35$) would require 35 percent total cover for final stabilization. On sites with no natural vegetation, no vegetative stabilization is required.
3. For construction projects on land used for agricultural purposes, final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural

activities, such as buffer strips immediately adjacent to “waters of the state,” and areas that are not being returned to their pre-construction agricultural use shall meet the final stabilization criteria in (1) or (2) above.

A **“Larger Common Plan of Development or Sale”** means a contiguous area of one or more acres where multiple separate and distinct construction activities are planned to occur at different times on different schedules under one plan.

“Minimize” means to reduce and/or eliminate to the extent achievable using control measures (including Best Management Practices) that are technologically available and economically achievable and practicable in light of best industry practice.

“MS4” or “Municipal Separate Storm Sewer System” is defined at 40 CFR §122.26(b)(8) to mean a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains):

1. Owned and operated by a state, city, town, borough, county, parish, district, association, or other public body (created by or pursuant to State law) having jurisdiction over disposal of sewage, industrial wastes, storm water, or other wastes, including special districts under state law such as a sewer district, flood control district or drainage district, or similar entity, or an Indian tribe or an authorized Indian tribal organization, or a designated and approved management agency under section 208 of the CWA that discharges to waters of the United States;
2. Designed or used for collecting or conveying storm water;
3. Which is not a combined sewer; and
4. Which is not part of a Publicly Owned Treatment Works (POTW) as defined at 40 CFR §122.2.

“Municipality” means a city, town, county, district, sanitary district, or other public body created by or under state law with jurisdiction over the disposal of sewage, industrial wastes, or other wastes.

“NOI” means Notice of Intent to be covered by this General Permit (See Attachment A).

“Nonpoint Source” means a source of pollution that is not defined as a point source.

“NOT” means Notice of Termination (See Attachment B).

“Operator” means the owner, party, person, general contractor, corporation, or other entity that has day-to-day operational control over a construction project. The operator, along with the owner, is responsible for ensuring compliance with all conditions of the General Permit and with development and implementation of the “Storm Water Pollution Prevention Plan”.

“Point Source” means any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, animal feeding operation, or vessel or other floating craft from which pollutants are or may be discharged.

“Pollutant” means any dredged spoil, solid waste, incinerator residue, sewage, sewage sludge, garbage, trash, munitions, chemical wastes, biological material, radioactive material, heat, wrecked or discarded equipment, rock, sand, cellar dirt, or any industrial, municipal, or agricultural waste discharged into waters of the state. This term does not mean sewage from watercraft; or water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil and gas production and disposed of in a well, if the well used either to facilitate production or for disposal purposes is approved by authority of the state after it is determined that such injection or disposal will not result in the degradation of ground or surface water resources.

“Qualified Local Program” is a municipal program for storm water discharges associated with construction sites that has been formally approved by DENR to act in lieu of the state program.

“Regulated Substance” means the compounds designated by DENR under South Dakota Codified Law, §§ 23A-27-25, 34A-1-39, 34A-6-1.3(17), 34A-11-9, 34A-12-1 to 34A-12-15, inclusive, 38-20A-9, 45-6B-70, 45-6C-45, 45-6D-60, and 45-9-68, including pesticides and fertilizers regulated by DENR of Agriculture, the hazardous substances designated by the EPA pursuant to section 311 of the Federal Water Pollution Control Act Amendments of 1972, Pub.L. 92-500 as amended by the Clean Water Act of 1977, Pub.L. 95-217, the toxic pollutants designated by Congress or the EPA pursuant to section 307 of the Toxic Substances Control Act, Pub.L. 99-519, the hazardous substances designated by the EPA pursuant to section 101 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub.L. 96-510, and petroleum, petroleum substances, oil, gasoline, kerosene, fuel oil, oil sludge, oil refuse, oil mixed with other wastes, crude oils, substances, or additives to be utilized in the refining or blending of crude petroleum or petroleum stock, and any other oil or petroleum substance. This term does not include sewage and sewage sludge.

“Runoff Coefficient” means the percentage of precipitation that appears as runoff. The value of the coefficient is determined on the basis of climatic conditions and physiographic characteristics of the drainage area and is expressed as a constant between zero and one.

“Secretary” means the Secretary of Department of Environment and Natural Resources, or an authorized representative.

“Storm Water” means, for the purpose of this General Permit, storm water runoff, snow melt runoff, or surface runoff and drainage.

“Storm Water Associated with Construction Activity” means the discharge of storm water runoff from construction activities including, but not limited to, clearing, grading, and excavating, that result in land disturbance of one or more acres of total land area, or which may

be part of a larger common plan of development or sale if the larger common plan will ultimately disturb one or more acres of land.

“Storm Water Associated with Industrial Activity” means storm water runoff, snow melt runoff, or surface runoff and drainage from industrial activities as defined in 40 CFR § 122.26(b)(14).

“Storm Water Management Plan” means a plan developed by a municipal separate storm sewer system to address the six minimum control measures described in the MS4 storm water regulations.

“SWD” means Surface Water Discharge.

“SWPPP” means Storm Water Pollution Prevention Plan. A SWPPP identifies potential sources of storm water pollution at a construction site and specifies structural and non-structural controls that will be in place to minimize negative impacts caused by storm water discharges associated with construction activity. The purpose of these controls is to minimize erosion and run-off of pollutants and sediment. See Section 4.0 for details on the requirements for a SWPPP.

“TMDL” or “Total Maximum Daily Load” means the sum of the individual wasteload allocations (WLAs) for point sources and load allocations (LAs) for nonpoint sources and natural background. If a receiving water has only one point source discharger, the TMDL is the sum of that point source WLA plus the LAs for any nonpoint sources of pollution and natural background sources, tributaries, or adjacent segments. TMDLs can be expressed in terms of either mass per time, toxicity, or other appropriate measure.

“Waters of the State” means all waters within the jurisdiction of this state, including all streams, lakes, ponds, impounding reservoirs, marshes, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, situated wholly or partly within or bordering upon the state.

2.0 COVERAGE UNDER THIS PERMIT

2.1 Permit Area

This General Permit shall apply to storm water discharges from construction sites located within the state of South Dakota.

2.2 Discharges Covered

The following discharges shall be covered under this General Permit:

1. All discharges of storm water associated with construction activity from construction sites resulting in the disturbance of one or more acres of total land area.
2. Storm water discharges from operators disturbing less than one acre that are part of a larger common plan of development or sale that, combined, disturb one or more acres.
3. Discharges from construction sites less than one acre that have been designated by the Secretary as needing a permit.
4. Storm water construction discharges mixed with a storm water discharge from an industrial source, where:
 - a. The industrial source is located on the same site as the construction activity; and
 - b. The storm water discharges from an industrial source is covered by a separate surface water discharge general permit or individual permit.
5. The following non-storm water discharges may also be authorized by this General Permit:
 - a. Discharges from fire fighting activities;
 - b. Uncontaminated ground water; and
 - c. Waters used as a best management practice to control dust or wash vehicles at the construction site.

These non-storm water discharges shall be identified in the SWPPP, along with an explanation of pollution prevention measures that will be implemented.

2.3 Discharges Not Covered

The following discharges are not authorized by this General Permit:

1. **Post Construction Discharges.** This General Permit does not authorize storm water discharges after construction activities have been completed and final stabilization at the site is achieved. Industrial and post-construction storm water discharges may need to be covered by a separate storm water permit.

2. **Discharges Mixed with Non-Storm Water.** This General Permit does not authorize discharges of non-storm water, except as provided in Section 2.2.
3. **Section 404 Permitted Discharges.** This General Permit does not authorize a permittee to discharge fill material into waters of the state. Such discharges are required to obtain a Section 404 federal Clean Water Act permit from the U.S. Army Corps of Engineers.
4. **Discharges Threatening Water Quality.** This General Permit does not authorize storm water discharges from construction sites the Secretary determines will cause, or have reasonable potential to cause or contribute to, violations of water quality standards. In such cases, the Secretary may deny coverage under the General Permit or require the permittee to obtain an individual Surface Water Discharge permit.
5. **Discharges of Regulated Substances.** This General Permit does not authorize the discharge of regulated substances, hazardous substances, or oil resulting from on-site spills. Permittees are subject to federal reporting requirements of 40 CFR Part 110, Part 117, and Part 302 relating to spills or other releases of oils or hazardous substances. Spills in excess of reportable quantities shall be properly reported as stated in Section 5.1.

2.4 Obtaining Authorization

1. To request coverage under this General Permit, the owner shall complete a Notice of Intent (NOI) form, included in Attachment A, and submit it to the address indicated on the form.
 - a. The owner shall identify the contractor responsible for the day-to-day operation of the construction site, if different from the owner. The Contractor Certification Form included in Attachment C shall be submitted to DENR once the contractor has been identified. A new Contractor Certification Form shall be submitted if additional or different contractors will be responsible for day-to-day operation at the construction site.
 - b. This information shall be submitted at least 15 days **prior** to when the work commences at the site.
 - c. Incomplete NOIs will not be processed and will be returned.
2. Upon receipt of a complete NOI, the Secretary shall make the decision to grant or deny coverage or request additional information. If the Secretary grants coverage under the General Permit, a letter of authorization will be sent to the permittee.
3. A copy of the Secretary's authorization letter and the cover page of the General Permit shall be posted at the construction site in a prominent place for public viewing (such as alongside a building permit) from the date construction activities are initiated until final stabilization is achieved and coverage under this General Permit is terminated.

4. When a new owner purchases a construction site after submittal of a NOI, the current permittee is responsible for notifying the new owner(s) of the General Permit requirements and the importance of achieving final stabilization on the site. Permit coverage shall be transferred to the new owner. Attachment D includes a form for transferring permit coverage for all or a portion of a project or development to a new owner.
5. Owners are not prohibited from submitting late NOIs. When a late NOI is submitted, authorization is only for discharges that occur after General Permit coverage is granted. The Secretary reserves the right to take appropriate enforcement actions for any unpermitted activities that may have occurred between the time the construction commenced and authorization of storm water discharges is granted.
6. Upon the effective date of the new General Permit, the existing General Permit will be terminated. If permittees authorized under the existing General Permit need to continue coverage under the new General Permit, a Notice of Intent for Reauthorization and Certification of Applicant shall be submitted prior to the issuance of the new General Permit. The Notice of Intent for Reauthorization and Certification of Applicant form is found in Attachment E.

2.5 Additional Notification

Facilities that are operating under approved local sediment and erosion plans, grading plans, or storm water management plans shall also submit signed copies of the NOI to the local agency approving such plans at least 15 days prior to commencing work, or sooner where required by local rules.

2.6 Terminating Coverage

1. Permittees wishing to terminate coverage under this General Permit shall submit a Notice of Termination (NOT) signed in accordance with Section 6.9. The Notice of Termination form is found in Attachment B. Compliance with this General Permit is required until a NOT is submitted and General Permit coverage has been terminated.
2. Permittees shall not submit a NOT until all storm water discharges authorized by this General Permit are eliminated and final stabilization has been achieved on all portions of the site for which the permittee is responsible.
3. All permittees shall submit a NOT within thirty (30) days after final stabilization has been achieved.
4. The General Permit allows for co-permittees on a site. However, if a permittee has transferred coverage to a new owner and no longer has responsibility for any portion of the site, a NOT shall be submitted by the previous owner terminating coverage under the General Permit.

3.0 EFFLUENT LIMITS

Effective immediately and lasting through the life of the General Permit, all permittees shall comply with the effluent limits below. All permittees are expected to meet the following effluent limits to minimize the pollutants present in the discharges associated with construction activity.

3.1 Precipitation Design Event

All sediment and erosion controls shall be selected, designed, and installed to minimize the pollutants present in runoff from a rainfall event of up to two (2) inches in a 24-hour period.

3.2 Sediment Controls

The permittee is required to implement sediment controls based on the amount of land disturbed by the project. The sediment control requirements are as follows:

1. For drainage locations serving less than 10 disturbed acres at one time, sediment basins and/or sediment traps shall be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area.
2. For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary or permanent sediment basin shall be provided. This basin shall provide storage for a calculated volume of runoff from the disturbed drainage area from a 2-inch precipitation event in a 24-hour period.
3. Where it is not possible to construct a temporary sediment basin for drainage locations that serve 10 or more disturbed acres at one time, smaller sediment basins and/or sediment traps or equivalent controls shall be used. At a minimum, equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).

The permittee shall document in the SWPPP its rationale for using alternative sediment controls instead of a sediment basin. This rationale will be reviewed during inspections of the construction site.

3.3 Maintenance of Sediment Controls

The permittee shall maintain all sediment controls in effective working order. If any controls are not operating effectively, the permittee shall perform maintenance on the controls as necessary to maintain the continued effectiveness of the storm water controls and before the next anticipated storm event or within seven (7) days of identifying the need for maintenance, whichever comes first.

1. The erosion and sediment controls required for compliance with the effluent limits shall be maintained from the beginning of the construction activity until final stabilization is complete. At a minimum, the permittee shall:

- a. Remove sediment from sedimentation ponds when design capacity has been reduced by 50% or more.
 - b. Remove sediment from silt fences and other sediment controls before the deposit reaches 50% the above-ground height.
2. All erosion and sediment control measures and other protective measures identified in the SWPPP shall be maintained in effective operating condition. If the site inspections required by Section 3.12 identify BMPs that are not operating effectively, maintenance shall be performed as stated above.

3.4 Off-Site Sediment Tracking and Dust Control

The permittee shall minimize dust generation and vehicular tracking of soil off-site. At a minimum, street sweeping shall be performed if other best management practices are not adequate to minimize sediment from being tracked on to the street.

3.5 Off-Site Accumulations

1. If sediment escapes the construction site, the permittee shall remove the off-site accumulations of sediment at a frequency sufficient to minimize impacts.
2. The permittee shall revise the SWPPP and implement controls to minimize further off-site sedimentation.

3.6 Inlet Protection

All storm drain inlets that receive storm water flows from the construction site shall be protected with appropriate best management practices during construction to minimize the discharge of pollutants from the site. The inlet protection shall be maintained until all sources with the potential for discharging to the inlet have reached final stabilization.

3.7 Erosive Velocity Control

The permittee shall place velocity dissipation devices at discharge points and along the length of a runoff conveyance, as necessary, to provide a non-erosive flow and protect the receiving water body's natural, pre-construction uses and characteristics, both physical and biological.

3.8 Soil Stockpiles

Temporary soil stockpiles shall have silt fence or other effective controls to minimize sediment runoff, at a minimum. Soil stockpiles shall not be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches, or where likely to be disturbed during storm events.

3.9 Erosion Control and Stabilization

The permittee shall stabilize disturbed portions of the site as soon as possible with appropriate BMPs, but in no case more than 14 days after construction activity has temporarily or permanently ceased on any portion of the site. An exception to this effluent limit is allowed if earth-disturbing activities will be resumed within 21 days. All other exceptions shall be approved on an individual basis by the Secretary.

3.10 Construction and Waste Materials

The permittee shall properly handle, store, and dispose of litter, construction debris, construction chemicals, and concrete washout to minimize pollutants entering storm water discharges. Permittees are required to minimize the discharge of solid materials to waters of the state (except where authorized by a Section 404 permit from the United States Army Corps of Engineers).

3.11 Spills / Releases in Excess of Reportable Quantities

1. The permittee shall have the capacity to control, contain, and remove spills at the site. If spills do occur, the permittee shall modify the SWPPP and implement controls to minimize the potential for contamination of the storm water.
2. Spills in excess of reportable quantities shall be properly reported as stated in Section 5.1.

3.12 Site Inspections

1. An inspection of the site shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of storm that is 0.5 inches or greater, or a snowmelt event that causes surface erosion. Once a site has been temporarily stabilized and construction has ceased for the winter, such inspections shall be conducted at least once per month.
2. The inspections shall be conducted by personnel who are familiar with the General Permit conditions and with the proper installation and operation of storm water controls.
3. The inspection shall include disturbed areas of the construction site that have not been finally stabilized, areas used for storage of materials, structural control measures, and locations where vehicles enter or exit the site. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system, and erosion and sediment control measures identified in the SWPPP shall be observed to ensure that they are operating correctly and sediment is not tracked off-site.
4. The permittee shall maintain records of each inspection and resulting maintenance activities, including:
 - a. Date and time of inspections;
 - b. Name(s) and title(s) of personnel conducting the inspections;
 - c. Findings of inspections;
 - d. Corrective actions taken;
 - e. Dates and amount of all rainfall events greater than 0.5 inches in 24 hours; and
 - f. Documentation of any changes made to the SWPPP.

Where an inspection does not identify any incidents of non-compliance, the report shall contain a certification that the site is in compliance with the SWPPP and this General Permit. The report shall be signed in accordance with the signatory requirements in Section 6.9.

5. The SWPPP shall be revised if the site inspections identify any non-compliance with the effluent limits. The changes shall be implemented at the site within seven (7) calendar days following the inspection.

4.0 STORM WATER POLLUTION PREVENTION PLAN

4.1 Deadlines for SWPPP Preparation and Compliance

The Storm Water Pollution Prevention Plan, also referred to as “the SWPPP,” shall be developed **prior** to the submittal of the NOI and shall be implemented for all construction activity.

For permitted sites that had been covered under the July 1, 2002 General Permit, and reauthorized under this General Permit, the SWPPP shall be updated to reflect the conditions and requirements of this General Permit by **July 1, 2010**.

4.2 Contents of SWPPP

The SWPPP shall be developed to ensure compliance with the Effluent Limits in Part 3.0. The SWPPP shall include, at a minimum, the following items:

1. Site Description

Each SWPPP shall provide the information indicated below:

- a. A description of the overall project and the type of construction activity;
- b. A description of potential pollutant sources;
- c. Estimates of the total area of the site and the total area that is expected to be disturbed by excavation, grading, grubbing, or other construction activities during the life of the project;
- d. A description of the intended sequence of activities which disturb soil;
- e. A description of the soil within the disturbed area(s);
- f. The name of the surface water(s) at or near the disturbed area that could potentially receive discharges from the project site; and
- g. A site map indicating:
 - (1) Drainage patterns with flow directions marked with arrows,
 - (2) Approximate slopes anticipated after major grading activities;
 - (3) Areas of soil disturbance, noting any phasing of construction activities;
 - (4) Location of major structural and nonstructural controls identified in the SWPPP;
 - (5) Location of areas where stabilization practices are expected to occur;
 - (6) Surface waters, including an aerial extent of wetland acreage;

- (7) Locations where storm water is discharged to surface water;
- (8) Locations of any spills, leaks, or soil contamination that could impact the storm water runoff from the site; and
- (9) Areas of concern including, but not limited to: fueling stations, waste storage, and concrete washout areas. The permittee shall provide designated areas for these activities.

2. **Controls**

For each major activity identified in the site description, the SWPPP shall describe the necessary control measures, along with the timeframe for implementing the controls and who is responsible for implementation. The description and implementation of controls shall address the following minimum components:

a. **Erosion and Sediment Controls**

(1) **Stabilization Practices**

The SWPPP shall include a description and schedule of interim and permanent stabilization practices. The SWPPP shall also include a record of the dates when major grading activities occur, when construction activities temporarily or permanently cease on a portion of the site, and when stabilization measures will be initiated. Site plans should ensure that existing vegetation is preserved where possible and that disturbed portions of the site are stabilized. Stabilization measures shall be initiated in accordance with Section 3.9.

(2) **Structural Diversion Practices**

The SWPPP shall include a description of structural practices to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site to the degree possible. Placement of structural diversion practices in floodplains and wetlands should be avoided to the degree possible. The installation of these devices may be subject to Section 404 of the federal Clean Water Act.

b. **Storm Water Management**

The SWPPP shall include a description of best management practices that will be installed during the construction process to control pollutants in storm water discharges occurring after construction operations have been completed. The SWPPP shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed predevelopment levels. Such practices may include structural methods such as storm water ponds, open vegetated swales and natural depressions to allow infiltration of runoff onsite, and sequential systems that combine several practices.

c. Other Controls

(1) The SWPPP shall include a description of procedures to maintain vegetation, erosion and sediment control measures, and other protective measures identified in the SWPPP. This includes minimizing tracking of sediments off-site and generation of dust.

(2) The SWPPP shall include a description of chemicals, construction materials, and waste materials expected to be stored on-site, with updates as appropriate. The SWPPP shall also include a description of controls to minimize pollutants from these materials, including storage practices to minimize exposure of the materials to storm water, and spill prevention measures and response.

d. Compliance with Local Requirements

Permittees shall include applicable local erosion and sediment requirements in their SWPPP. The SWPPP shall be modified if the permittee is notified the local requirements have changed.

3. Maintenance

All erosion and sediment control measures and other protective measures identified in the SWPPP shall be maintained in effective operating condition. If site inspections required in Section 3.12 identify BMPs that are not operating effectively, maintenance shall be performed in accordance with Section 3.3.

4.3 Keeping SWPPPs Current

1. The permittee shall amend the SWPPP whenever there is a change in design, construction, operation, or maintenance that has a significant effect on the potential for the discharge of pollutants to the waters of the state. The SWPPP shall also be amended if the SWPPP proves to be ineffective at minimizing pollutants present in the storm water.
2. The Secretary may notify the permittee at any time that the SWPPP does not meet the minimum requirements of this Section. This notification will identify the provisions of the General Permit that are not being met by the SWPPP and identify which provisions require modifications in order to meet the minimum requirements. Within seven (7) days of notification, the permittee shall make the required changes to the SWPPP and shall submit to the Secretary a written certification that the requested changes have been made. The Secretary may take appropriate enforcement action for the period of time the permittee was operating under a SWPPP that did not meet the minimum requirements of this General Permit.
3. If the inspections required in Section 3.12 identify necessary changes to the SWPPP, the SWPPP shall be revised and the changes implemented no later than seven (7) calendar days following the inspection.

5.0 SPECIAL CONDITIONS

5.1 Unauthorized Release of Regulated Substances

1. This General Permit does not authorize the discharge of any regulated substance listed in the Administrative Rules of South Dakota (ARSD) § 74:34:01:03, including but not limited to fertilizers, pesticides, and petroleum substances such as oil and gasoline. If a release occurs, the permittee is required to notify DENR's Ground Water Quality Program at (605) 773-3296 or Emergency Management at (605) 773-3231 within 24 hours of having knowledge of the discharge.
2. A written report of the unauthorized release of any regulated substance, including quantity discharged and the location of the discharge, shall be sent to DENR within 14 days of the discharge.
3. The SWPPP shall identify and address the following measures: ways to prevent the reoccurrence of such releases; the proper response to such releases if and when they do occur; and steps to prevent pollutants from contaminating storm water runoff. The SWPPP shall be modified and changes implemented, as appropriate.

5.2 Larger Common Plan of Development

1. When individual lots that were included as a portion of the original common plan are sold before completion of the entire plan, the current permittee shall ensure the lot is properly stabilized in accordance with Section 3.9 prior to transfer of ownership. The current permittee is responsible for notifying the new owners of the General Permit requirements and the importance of achieving final stabilization on the site.
2. Attachment D includes a form for transferring General Permit coverage for all or a portion of a project or development to a new owner. Upon transfer of coverage, an individual lot owner becomes a co-permittee and is the primary party responsible for permit compliance on their lot until final stabilization is reached.
3. A co-permittee may submit a NOT requesting DENR terminate coverage when all construction is complete for their individual lot or land area and the lot has reached final stabilization. Permit coverage will continue in full force and effect for all remaining co-permittees until each lot or disturbed area in the entire project has reached final stabilization and a NOT has been submitted for each lot.

5.3 Qualified Local Programs

1. To receive approval as a qualified local program, DENR will review the local requirements to ensure they comply with both state and federal requirements. DENR may authorize minor variations and alternative standards in lieu of the specific conditions of the General Permit based upon the unique comprehensive control measures established in the qualifying local program. DENR will review each qualifying local program for recertification during the renewal of its municipal separate storm sewer system permit.
2. If a construction site is within the jurisdiction of a qualifying local program, the

operator shall submit a Notice of Intent to DENR to be covered under the General Permit and comply with all requirements of the qualifying local program. **Compliance with the qualifying local program requirements is deemed to be compliance with this General Permit. A violation of qualifying local program requirements is also a violation of this General Permit.**

3. List of Qualifying Local Programs: At this time only the City of Sioux Falls is meeting DENR's minimum requirements. If additional municipalities are approved as a Qualifying Local Program in the future, a modification to this General Permit will be offered for public comment in the municipality's local newspaper.

6.0 STANDARD PERMIT CONDITIONS

6.1 Duty to Comply

1. The permittee shall comply with all conditions of this General Permit. Any permit noncompliance constitutes a violation of the South Dakota Water Pollution Control Act and the federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal. The permittee shall give the Secretary advance notice of any planned changes at the permitted facility or of an activity that may result in permit noncompliance.
2. Any person who violates a General Permit condition or makes any false statement, representation, or certification, may be subject to enforcement action under SDCL, Chapter 34A-2.
3. The permittee is responsible for complying with all local ordinances and requirements. Local governments may have additional or more stringent requirements than those included in this General Permit.

6.2 Continuation of the Expired General Permit

1. An expired general permit continues in force and effect until a new general permit is issued. Any permittee with coverage under the General Permit at the time of expiration will continue to have coverage until a new General Permit is issued.
2. If the permittee wishes to continue an activity regulated by this General Permit after its expiration date, the permittee must submit a Notice of Intent. Periodically during the term of this permit and at the time of reissuance, the permittee may be requested to reaffirm its eligibility to discharge under this General Permit.

6.3 Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this General Permit.

6.4 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this General Permit that has a reasonable likelihood of adversely affecting human health or the environment.

6.5 Removed Substances

Collected solids, sludges, grit, or other pollutants removed in the course of treatment shall be properly disposed of in a manner to prevent any pollutant from entering waters of the state.

6.6 Duty to Provide Information

1. The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for

modifying, revoking and reissuing, or terminating this General Permit, or to determine compliance with this General Permit. The permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this General Permit.

2. The permittee shall make the SWPPP available upon request to the Secretary, EPA, and, in the case of storm water that discharges through a municipal separate storm sewer system, to the operator of the municipal system.

6.7 Other Information

When the permittee becomes aware that he or she failed to submit any relevant facts or submitted incorrect information in the NOI or in any other report to the Secretary, the permittee shall promptly submit such facts or information.

6.8 Retention of Records

1. The permittee shall retain on-site, or make readily available, a copy of the SWPPP and DENR's letter granting coverage under this General Permit from the date of project initiation to the date of final stabilization.
2. The permittee shall retain copies of SWPPPs, inspection records, all reports required by this General Permit, and records of all data used to complete the NOI and NOT for a period of at least three (3) years from the date that the site is finally stabilized. This period may be extended by request of the Secretary at any time.
3. All reports and documents required by this General Permit shall, upon request of the Secretary, be submitted to the South Dakota Department of Environment and Natural Resources at the address below:

SD Department of Environment & Natural Resources
Surface Water Quality Program
PMB 2020
Joe Foss Building
523 East Capitol
Pierre, SD 57501-3182

6.9 Signatory Requirements

1. All Notices of Intent and Notices of Termination submitted to the Secretary shall be signed and certified by the following signatory official:
 - a. For a corporation: by a responsible corporate officer;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official; or

- d. The owner of the project.
2. All other reports required by the General Permit, SWPPPs, and other information requested by the Secretary shall be signed by a person described above, or by a duly authorized representative of that person. A person is a duly authorized representative only if:
 - a. The authorization is made in writing by a person described above and submitted to the Secretary. The authorization shall specify either an individual or a position having responsibility for the overall operation of the regulated facility or activity, such as the position of manager, operator, superintendent, or position of equivalent responsibility or an individual or position having overall responsibility for environmental matters for the company.
 - b. If an authorization under this section is no longer accurate because a different contractor has responsibility for the overall operation of the construction site, a new Contractor Certification Form shall be submitted to the Secretary prior to, or together with, any reports, information, or applications to be signed by that authorized representative.
 3. The following certification statement shall be included with all documents signed under this section:

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 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

6.10 Oil and Hazardous Substance Liability

Nothing in this General Permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the federal Clean Water Act.

6.11 Property Rights

The Secretary's issuance of coverage under this General Permit does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state, or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant that the permittee's compliance with this General Permit and operation under this General Permit will not cause damage, injury or use of private property, an invasion of personal

rights, or violation of federal, state, or local laws or regulations. The permittee is solely and severally liable for all damage, injury, or use of private property, invasion of personal rights, infringement of federal, state, or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the General Permit.

6.12 Severability

If any portion of this General Permit is found to be void or is challenged, the remaining permit requirements shall remain valid and enforceable.

6.13 Requiring an Individual Permit or an Alternative General Permit

The Secretary may either deny coverage or require any person requesting coverage under the General Permit to apply for, and obtain, an individual Surface Water Discharge permit. Cases where an individual permit may be required include, but are not limited to the following:

1. The permittee is not in compliance with the conditions of the General Permit;
2. A change has occurred in the availability of demonstrated technologies or practices for the control or abatement of pollutants applicable to construction sites;
3. Effluent limitation guidelines are promulgated for point sources covered by this General Permit;
4. A water quality management plan containing requirements applicable to construction sites is approved;
5. The discharge is a significant contributor of pollution to waters of the state or it presents a health hazard; and
6. The discharge is to an impaired water body where the best management practices are not sufficient to implement the assigned waste load allocations.

6.14 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all systems of treatment and controls that are used to achieve compliance with the conditions of this General Permit. Proper operation and maintenance requires the operation of backup or auxiliary facilities or similar systems, installed by the permittee, only when necessary to achieve compliance with the conditions of the General Permit.

6.15 Inspection and Entry

Upon the presentation of credentials and other documents as may be required by law, the permittee shall allow the Secretary, the EPA Regional Administrator, or the operator of a municipal separate storm sewer system receiving discharges from the site, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this General Permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this General Permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this General Permit; and,
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the South Dakota Water Pollution Control Act (SDCL 34A-2), any substances or parameters at any location.

6.16 Permit Actions

This General Permit may be modified, revoked and reissued, or terminated by the Secretary for cause. A request by a permittee for such changes does not stay any permit condition.

ATTACHMENT A



DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF INTENT (NOI)
 to Obtain Coverage Under the SWD General Permit for Storm Water Discharges
 Associated with Construction Activities

Return to: SD Department of Environment and Natural Resources
 Surface Water Quality Program
 PMB 2020
 523 East Capitol Avenue
 Pierre, South Dakota 57501-3181
 Telephone: (605) 773-3351 or 1-800-SDSTORM

I. Site Owner Contact Information:

Company Name: _____
 Primary Contact Person: _____
 Mailing Address: _____
 City: _____ State: _____ Zip Code: _____
 Phone Number: _____ Email Address: _____

II. Contactor Information:

Will any contractors be responsible for erosion and sediment control practices? Yes No
(A contractor certification form must be submitted for each contractor that will have day to day responsibility for erosion and sediment control practices. If these contractors have not been identified at the time this NOI is submitted, the contractor certification form may be submitted after they have been identified.)

III. Construction Project Information: *(Physical location of the construction site to be permitted)*

Project Name: _____
 Primary Contact Person: _____
 Street Address: _____
 City: _____ County: _____ State: _____ Zip Code: _____
 Latitude: _____ Longitude _____ Source: (e.g. GPS, Google, etc.) _____
 Quarter: _____ Section: _____ Range: _____ Township: _____
 Phone Number: _____ Email Address: _____

Type of Ownership: Private Federal State Public (Other than Federal or State)

Is this project located on Tribal Lands? Yes No What is the total area disturbed by the project (in acres)? _____

Do you wish to receive a full copy of the permit? Yes No Will this project encroach, damage or destroy one of the historic sites identified at the following websites: Yes No
http://www.sdhistory.org/HP/hp_streg.htm or
<http://www.nps.gov/history/nhl/designations/Lists/SD01.pdf>

IV. Storm Water Pollution Prevention Plan:

Has the Pollution Prevention Plan been developed as required? Yes No

Please note – the Plan must be developed **before** the NOI is submitted. *DENR will not issue coverage until the storm water pollution prevention plan has been developed.*

FOR DENR USE ONLY

Postmark Date: _____ Permit Number: _____ Date Permitted: _____ Initials: _____

IV. Receiving Waters:

Please list all possible waters that may receive a discharge from this site. If discharging to a Municipal Storm Sewer System, indicate which municipality and the ultimate receiving water. Attach additional sheets if necessary.

V. Nature of Discharge:

Please include a brief description of the construction project:

Will construction dewatering be required? Yes No If Yes, please complete Section VII also.

VI. Construction Project Dates:

Project Start Date (MM/DD/YYYY):

Estimated Completion Date (MM/DD/YYYY):

VII. Dewatering History: (*Construction Activities involving dewatering activities*):

Date dewatering will commence:

Date dewatering will end:

Total volume of dewatering:

Average flow rate of dewatering:

Source of water to be discharge:

Receiving water:

Brief description of water treatment processes employed, if any:

Is there any reason to believe that the dewatering discharge may contain anything other than uncontaminated groundwater and storm water?

Yes No

If yes, you must also submit a NOI for coverage under the temporary discharge general permit. The construction storm water general permit does not cover discharges of contaminated groundwater.

NOTE: Please place points of withdrawal and discharge on a topographic map, or other map if a topographic map is unavailable. This map should extend to one (1) square mile beyond the property boundaries of the facility and each of its discharge facilities, and those wells, springs, and other surface water bodies, drinking water wells, and surface water intake structures listed in public records, or otherwise known to the applicant in the map area.

VIII. Other Information

List other information which you feel should be brought to the attention of the SDDENR regarding coverage under this general permit. Attach additional sheets if necessary.

CERTIFICATION OF APPLICANT (COA)

I, _____, the applicant(s) in the above matter after being duly sworn upon oath hereby certify the following information in regard to this application:

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 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 revocation of the permit and the possibility of fine and imprisonment for knowing violations. In addition, I certify that I am aware of the terms and conditions of the General Storm Water permit and I agree to comply with those requirements.

South Dakota Codified Laws Section 1-40-27 provides:

“The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:

- (1) *The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner or resident general manager of the facility for which application has been made:*
 - (a) *Has intentionally misrepresented a material fact in applying for a permit;*
 - (b) *Has been convicted of a felony or other crime involving moral turpitude;*
 - (c) *Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;*
 - (d) *Has had any permit revoked under the environmental laws of any state or the United States; or*
 - (e) *Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or*
- (2) *The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.*

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a prima facie showing of the suitability and qualification of the applicant. If at any point in the application review, recommendation or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification, consideration of the application may be suspended and the application may be rejected as provided for under this section.

Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26.”

Pursuant to SDCL 1-40-27, I certify that I have read the forgoing provision of state law, and that I am not disqualified by reason of that provision from obtaining the permit for which application has been made.

Name (print) _____

Title _____

Signature _____

Date _____

PLEASE ATTACH SHEET DISCLOSING ALL FACTS PERTAINING TO SDCL 1-40-27 (1) (a) THROUGH (e). ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION.

ATTACHMENT B



DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF TERMINATION (NOT)
of Coverage Under the SWD General Permit for
Storm Water Discharges Associated with Construction Activities

This form is required to be submitted when a discharge permit is no longer required or necessary. Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the following address:

original to: SD Department of Environment and Natural Resources
Surface Water Quality Program
PMB 2020
523 East Capitol Avenue
Pierre, South Dakota 57501-3181
Telephone: (605) 773-3351 or 1-800-SDSTORM

I. Primary Contact Information:

Company Name: _____
Primary Contact Person: _____
Mailing Address: _____
City: _____ County: _____ State: _____ Zip Code: _____
Phone Number: _____ Email Address: _____

II. Mailing Address of Facility/Site Location

Project Name: _____
Primary Contact Person: _____
Street Address: _____
City: _____ County: _____ State: _____ Zip Code: _____

III. Permit Number: _____

I certify under penalty of law that all storm water discharges associated with construction activity from the identified facility that are authorized by a SWD general permit have been eliminated. I understand that by submitting the Notice of Termination, I am no longer authorized to discharge storm water associated with construction activity under this general permit, and that discharging pollutants in storm water associated with construction activity to waters of the state is unlawful under the federal Clean Water Act and the South Dakota Water Pollution Control Act if the discharge is not authorized by a SWD permit. I also understand that the submittal of this Notice of Termination does not release an operator from liability for any violations of this permit or the South Dakota Water Pollution Control Act. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NOTE: NOT shall be signed by the authorized chief elective or executive officer of the applicant, or by the applicant, if an individual.

Name (print) _____ Title _____
Signature _____ Date _____

FOR DENR USE ONLY		
Postmark Date: _____	Date Terminated: _____	Initials: _____

ATTACHMENT C



DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
CONTRACTOR CERTIFICATION FORM
for Coverage Under the SWD General Permit for
Storm Water Discharges Associated with Construction Activities

This form is required to be submitted when a contractor will act as an operator and have day to day responsibility for erosion and sediment control measures. Submission of this form shall in no way relieve the permittee of permit obligations. Please submit this form to the following address:

original to: SD Department of Environment and Natural Resources
Surface Water Quality Program
PMB 2020
523 East Capitol Avenue
Pierre, South Dakota 57501-3181
Telephone: (605) 773-3351 or 1-800-SDSTORM

Project Name: _____ Permit Number: _____

Site Legal Location: _____

Contractor Company Name: _____

Responsible Contact Person: _____

Contractor Address: _____

City: _____ State: _____ Zip Code: _____

Phone: _____ Email: _____

The contractor(s) responsible for the day to day operation of the construction site shall certify the following:

“I certify under penalty of law that I understand 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 identified above.”

South Dakota Codified Laws Section 1-40-27 provides:

"The secretary may reject an application for any permit filed pursuant to Titles 34A or 45, including any application by any concentrated swine feeding operation for authorization to operate under a general permit, upon making a specific finding that:

(1) The applicant is unsuited or unqualified to perform the obligations of a permit holder based upon a finding that the applicant, any officer, director, partner or resident general manager of the facility for which application has been made:

- (a) *Has intentionally misrepresented a material fact in applying for a permit;*
- (b) *Has been convicted of a felony or other crime involving moral turpitude;*
- (c) *Has habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage;*
- (d) *Has had any permit revoked under the environmental laws of any state or the United States; or*
- (f) *Has otherwise demonstrated through clear and convincing evidence of previous actions that the applicant lacks the necessary good character and competency to reliably carry out the obligations imposed by law upon the permit holder; or*

(2) The application substantially duplicates an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Nothing in this subdivision may be construed to prohibit an applicant from submitting a new application for a permit previously denied, if the new application represents a good faith attempt by the applicant to correct the deficiencies that served as the basis for the denial in the original application.

All applications filed pursuant to Titles 34A and 45 shall include a certification, sworn to under oath and signed by the applicant, that he is not disqualified by reason of this section from obtaining a permit. In the absence of evidence to the contrary, that certification shall constitute a prima facie showing of the suitability and qualification of the applicant. If at any point in the application review, recommendation or hearing process, the secretary finds the applicant has intentionally made any material misrepresentation of fact in regard to this certification, consideration of the application may be suspended and the application may be rejected as provided for under this section.

Applications rejected pursuant to this section constitute final agency action upon that application and may be appealed to circuit court as provided for under chapter 1-26."

Pursuant to SDCL 1-40-27, I certify that I have read the forgoing provision of state law, and that I am not disqualified by reason of that provision from obtaining the permit for which application has been made.

Name (print) _____
 Title _____
 Signature _____
 Date _____

PLEASE ATTACH SHEET DISCLOSING ALL FACTS PERTAINING TO SDCL 1-40-27 (1) (a) THROUGH (e). ALL VIOLATIONS MUST BE DISCLOSED, BUT WILL NOT AUTOMATICALLY RESULT IN THE REJECTION OF AN APPLICATION.

ATTACHMENT D



DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
TRANSFER OF PERMIT COVERAGE FORM
for Coverage Under the SWD General Permit for
Storm Water Discharges Associated with Construction Activities

This form is required to be submitted when ownership of a construction project or an individual lot in a larger common plan of development has been transferred to a different owner. Please submit this form to the following address:

original to: SD Department of Environment and Natural Resources
Surface Water Quality Program
PMB 2020
523 East Capitol Avenue
Pierre, South Dakota 57501-3181
Telephone: (605) 773-3351 or 1-800-SDSTORM

Project Name: _____ Permit Number: _____

Site (Lot) Legal Location: _____

Site (Lot) Description: _____

Previous Owner Name: _____ New Owner Name: _____

Stabilization Measures Implemented Prior to Transfer: _____

Date transfer of property responsibility and liability becomes effective: _____

**** NOTE:** Any change in location, operation, and/or coverage area requires that the Storm Water Pollution Prevention Plan be updated and revised to reflect all changes.

The site (lot) described above is covered under the General Permit for Storm Water Discharges Associated with Construction Activity. Temporary or permanent stabilization has been established on the site, which has now transferred ownership/responsibility as indicated above. The new owners, or operators, have been made aware of the importance of site stabilization in an effort to control pollutant runoff and/or sedimentation.

The new owner assumes responsibility for implementing best management practices to reduce or eliminate a discharge of pollutants to waters of the state. The new owner is aware that permit coverage for the site is required until all soil-disturbing activities at the site have been completed and one of the following conditions have been met:

- **all portions of the site not covered by pavement or permanent structures have a uniform perennial vegetative cover over at least 70% of the site; or**
- **equivalent permanent stabilization measures have been employed, such as the use of riprap, gabions, or geotextiles**

New Owner/Operator

Previous Owner/Operator

Date

Date

ATTACHMENT E

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

NOTICE OF INTENT (NOI) for REAUTHORIZATION
of Coverage Under the SWD General Permit for Storm Water
Discharges Associated With Construction Activities

The following facility currently has coverage under the General Permit for Storm Water Discharges Associated with Construction Activities. *This form must be submitted if you wish to continue coverage under the General Permit.* Submission of this form shall in no way relieve the permittee of permit obligations required prior to submission of this form. Please submit this form to the following address:

original to: SD Department of Environment and Natural Resources
Surface Water Quality Program
PMB 2020
523 East Capitol Avenue
Pierre, South Dakota 57501-3181
Telephone: (605) 773-3351

PLEASE PRINT OR TYPE (Update Information below as needed)

I. Permittee Information

Permittee Name: _____
Company Name: _____
Mailing Address: _____
City: _____ County: _____ State: _____ Zip Code: _____

II. Project Information

Project Name: _____
Project Description: _____
Project Start Date: _____
Estimated Completion Date: _____

III. Permit Number:

IV. Signature of Applicant

By signing this form, you are requesting to continue permit coverage under the reissued General Permit. You are certifying you will comply with the new General Permit and update your Storm Water Pollution Prevention Plan if necessary to meet the reissued General Permit conditions.

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 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 revocation of the permit and the possibility of fine and imprisonment for knowing violations. In addition, I certify that I am aware of the terms and conditions of the General Storm Water permit and I agree to comply with those requirements.

NOTE: NOI must be signed by the authorized chief elective or executive officer of the applicant, or by the applicant, if an individual.

Name (print) _____ Title _____

Signature _____ Date _____

APPENDIX

13

COVER IS **STATEMENT OF BASIS**

STATEMENT OF BASIS

PERMIT TYPE: General Surface Water Discharge Permit for **Construction Activities** in South Dakota

PERMIT NUMBER: SDR100000

This document is intended to explain the basis for the requirements contained in the South Dakota General Permit for Storm Water Discharges Associated with Construction Activity (“General Permit”). This document provides guidance to aid in complying with the storm water regulations. This guidance is not a substitute for reading the General Permit and understanding its requirements as they apply to your project or site.

BACKGROUND

Introduction

Construction activities have the potential to produce pollutants that may contaminate storm water runoff. Clearing land of grass, trees, shrubs, rocks, and other ground cover can change natural water runoff patterns and increase erosion. The disturbed soil, if not managed properly, can easily be washed off the construction site during storms, allowing sediment to enter water bodies. Sediment is one of the leading causes of water quality impairment nationwide. The deposition of sediment has contributed to reducing water depth in small streams, lakes, and reservoirs, which in turn can impair a water body’s beneficial uses. Sediment runoff rates from unmanaged construction sites are typically 10 to 20 times greater than those from agricultural lands, and 1,000 to 2,000 times greater than those of forest lands. During a short period of time, construction activity, when not managed properly, can contribute more sediment to streams than can be deposited naturally over several decades, causing physical and biological harm to waterbodies.

Some construction activities require the use of toxic or hazardous materials, which contain pollutants such as pesticides, toxic chemicals, metals, and oil that may be harmful to humans, fish, wildlife, and plants. When these materials are not properly handled or stored, the resulting leaks and spills can pollute storm water and negatively impact waters protected for drinking water, recreation, aquatic life, and other beneficial uses.

In 1972, Congress passed the Federal Water Pollution Control Act, commonly referred to as the Clean Water Act. The stated goal of the act was to *restore and maintain the chemical, physical, and biological integrity of the Nation’s waters*. To achieve this goal, the Clean Water Act states *the discharge of any pollutant by any person shall be unlawful* except in compliance with other provisions of the statute.

In 1987, Congress amended the Clean Water Act to require implementation, in two phases, of a comprehensive national program for addressing storm water discharges. The first phase of the program, commonly referred to as “Phase I,” was promulgated on November 16, 1990. Under Phase I, the Environmental Protection Agency (EPA) established the permitting requirements for

discharges of “storm water associated with construction activity,” which EPA included in its definition of “storm water discharges associated with industrial activity.” This designated construction activities that disturb five or more acres of land as point source discharges that must receive a permit for any discharge of pollutants into waters of the United States.

On December 8, 1999, EPA promulgated Phase II of the storm water regulations, expanding the point source discharge definition to include small construction activities that disturb between one and five acres of land.

The intent of the storm water regulations is to improve and protect water quality by minimizing contaminants in storm water. Storm water runoff consists of rainwater and melted snow that runs off the land and directly, or indirectly by way of storm sewers, enters waters of the state, such as lakes, rivers, streams, wetlands, and ponds. The term “construction activity” includes point source discharges from areas undergoing operations such as clearing, grading, and excavation. Construction activities can include road building, construction of residential houses, office buildings, industrial sites, or demolition. The term construction activity does not include agricultural, silviculture, or maintenance activities.

The discharge of pollutants into waters of the state from construction activities disturbing one or more acres is considered a point source and shall obtain a Surface Water Discharge permit from the South Dakota Department of Environment and Natural Resources (DENR).

Permit Description

The current General Permit was issued under South Dakota’s Surface Water Discharge regulations on July 1, 2002, and expired on June 30, 2007. The General Permit was administratively extended, pending the reissuance of the permit.

DENR is proposing to renew the General Permit. The General Permit contains requirements that are based on technology considerations, Best Management Practices, South Dakota’s Surface Water Quality Standards, and other conditions applicable to the types of storm water generated by construction activities.

As stated above, Phases I and II of EPA’s storm water regulations designated storm water runoff from construction activities disturbing one or more acres of land as “point sources.” All point sources discharging pollutants into waters of the state shall have a Surface Water Discharge permit. Due to the nature of the scheduling of these construction activities, obtaining an individual Surface Water Discharge permit would significantly impact the timing of a project.

The general permit regulations within the Administrative Rules of South Dakota (ARSD) §74:52:02:46 provide for the issuance of general permits for storm water point sources. Therefore, DENR has issued a general permit for these activities to:

1. Facilitate the scheduling of these activities by reducing the administrative delays in their authorization;
2. Establish uniform criteria for management practices and effluent limits for discharges from these activities; and

3. Promote consistent permitting with respect to these activities.

Coverage Under The General Permit

This permit authorizes the following discharges¹ of storm water from new or ongoing construction activities located in South Dakota:

- Storm water discharges associated with construction activities disturbing one or more acres;
- Storm water discharges from sites disturbing less than one acre that are part of a larger common plan of development or sale that, combined, disturbs one acre or more;

Note: In many cases, a common plan of development or sale consists of many small construction projects that, collectively, add up to one or more acres of total disturbed land. With such projects, the larger development acreage is subdivided and sold to individual owners. The original permittee shall ensure the lot is properly stabilized in accordance with Section 3.9 of the proposed General Permit prior to transfer of ownership. The original permittee is responsible for compliance with permit requirements until such time as coverage is transferred to the new owner. The original permittee is responsible for supplying the new owners with a copy of the General Permit, and notifying the new owners of the General Permit requirements and the importance of achieving final stabilization on the site.

Attachment D of the proposed General Permit includes a form for transferring permit coverage for all or a portion of a project or development to a new owner. Upon transfer of coverage, an individual lot owner becomes a co-permittee and is responsible for permit compliance on their lot until final stabilization is reached.

- Storm water discharges from sites disturbing less than one acre, but designated by the Secretary of DENR as needing coverage under the proposed General Permit.
- Any discharge authorized by a different surface water discharge permit that is commingled with discharges authorized by the proposed General Permit. Most storm water discharges are diffuse. Therefore, it can be difficult to keep a storm water discharge separate from other discharges. These commingled discharges are authorized, provided all discharges are properly addressed through the necessary surface water discharge permits.
- Non-storm water discharges from fire fighting activities, uncontaminated ground water from dewatering activities, and waters used as a best management practice to control dust or wash vehicles at the construction site can also be covered under the

¹ For the purpose of the General Permit, the term “discharge” is defined as an addition of any pollutant or combination of pollutants to surface waters of the state from any point source. As noted above, construction sites disturbing one or more acres are point sources. Therefore, any water flowing off the construction constitutes a discharge and must be covered by a Surface Water Discharge permit.

proposed General Permit. These discharges must be addressed in the storm water pollution prevention plan and must include best management practices to minimize the pollutants present in the discharge.

New Construction Projects

To obtain coverage under the proposed General Permit, the owner of the construction site shall submit a Notice of Intent (NOI) and a Certification of Applicant form to DENR at least 15 days prior to the start of construction.

Note: This is a change from the current General Permit. The current General Permit allowed either an owner **or** an operator of a site to submit the NOI. DENR is clarifying in the proposed General Permit that only the owner of the site may submit the NOI. A copy of the NOI form is included in Attachment A of the General Permit.

If a contractor other than the owner will be responsible for the day-to-day operation of the construction site, that contractor shall be identified and the owner shall submit a Contractor Certification form found in Attachment C of the proposed General Permit. As an operator of the site, any contractor performing work at the site also has responsibility for compliance with the terms of the General Permit.

Upon receipt of a complete NOI signed by the owner, the Secretary of DENR makes the decision to grant or deny coverage, or request additional information.

Existing Construction Projects

For existing construction operations already covered under the current General Permit, a NOI for Reauthorization found in Attachment E of the proposed General Permit needs to be submitted to continue coverage under the renewed General Permit. Coverage under the current General Permit will expire on the effective date of the renewed General Permit. If a permittee does not submit a NOI for Reauthorization prior to the effective date of the General Permit, the permittee's coverage under the current General Permit will be terminated and any storm water discharges associated with construction activity at the site will not be authorized and could be subject to enforcement.

Secretary Designation

While most construction sites less than one acre do not significantly impact surface waters in South Dakota, this is not universally the case. In some cases, the Secretary of DENR may require smaller construction sites to obtain coverage under a permit. In making this determination, the Secretary will take into account the beneficial uses of the receiving waters, the slope of the project, the management of the site, and other appropriate factors.

DENR is making the proposed General Permit available to these designated sites. Alternatively, the owner of the designated may request an individual permit for the site.

Oil and Gas Exemption

In Title 40 of the Code of Federal Regulations, Section 122.26(a)(2) states that EPA may not require a permit for discharges of storm water runoff from mining operations or oil and gas exploration, production, processing or treatment operations or transmission facilities, composed

entirely of flows which are from conveyances or systems of conveyances (including but not limited to pipes, conduits, ditches, and channels) used for collecting and conveying precipitation runoff and which are not contaminated by contact with or that has not come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

Therefore, owners of oil and gas field activities are exempt from the permitting requirements for any construction activity at these facilities. However, DENR does expect these operations to employ best management practices to minimize the discharge of pollutants from the site and ensure the South Dakota Surface Water Quality Standards are maintained.

RECEIVING WATERS

Beneficial Uses

The South Dakota Surface Water Quality Standards designate beneficial uses for all waters of the state. These classifications designate the minimum quality at which the surface waters of the state are to be maintained and protected. All waterbodies in South Dakota have been assigned one or more of the following beneficial uses:

- (1) Domestic water supply waters;
- (2) Coldwater permanent fish life propagation waters;
- (3) Coldwater marginal fish life propagation waters;
- (4) Warmwater permanent fish life propagation waters;
- (5) Warmwater semipermanent fish life propagation waters;
- (6) Warmwater marginal fish life propagation waters;
- (7) Immersion recreation waters;
- (8) Limited contact recreation waters;
- (9) Fish and wildlife propagation, recreation, and stock watering waters;
- (10) Irrigation waters; and
- (11) Commerce and industry waters.

The proposed General Permit was developed to ensure these beneficial uses are maintained and protected.

Total Maximum Daily Load

A Total Maximum Daily Load (TMDL) is a calculation of the maximum amount of a pollutant a waterbody can receive and still meet water quality standards. Under current EPA regulations, states establish TMDLs that include wasteload allocations from point sources, load allocations from non-point sources, and natural background conditions. Wasteload allocations are defined as the portion of a water body's loading capacity allocated to point source dischargers. TMDLs are established at levels necessary to attain and maintain the state surface water quality standards. TMDLs include seasonal variations and margins of safety to take into account any lack of knowledge about the relationship between the effluent limits and instream water quality.

TMDLs are developed on a pollutant- and waterbody-specific basis. In some instances, TMDLs may combine multiple pollutants into one set of TMDL documents. However, the specific TMDL wasteload and load allocations are pollutant-specific. States are responsible for

establishing TMDLs, which EPA approves. Once approved by EPA, TMDLs are implemented through water quality management plans and through surface water discharge permits.

The proposed General Permit is a Surface Water Discharge permit that requires best management practices to ensure the surface water quality standards are met and maintained. Therefore, the General Permit will be able to authorize discharges to waterbodies that are listed as impaired or have an approved TMDL. However, if DENR determines a specific site has the potential to cause or contribute to an impairment of the surface water quality standards, DENR can require the owner to implement additional controls and/or obtain an individual discharge permit.

EFFLUENT LIMITS

Use of Narrative Limits

Under the federal Clean Water Act, dischargers shall comply with both technology-based and water quality-based effluent limits. Where EPA has not yet issued a technology-based effluent limitation guideline, as is the case for the construction industry, states are expected to determine the appropriate technology-based level of control based on best professional judgment.

The federal Clean Water Act allows states and EPA to meet the requirement for technology-based limits using non-numeric, or “narrative,” effluent limits in permits where appropriate. EPA has developed regulations allowing the use of narrative best management practices as effluent limits (40 CFR §122.44(k)). The proposed General Permit, like the current General Permit, includes non-numeric effluent limits, including best management practices, to ensure state and federal requirements are met.

All permittees are required to implement control measures to minimize pollutants in storm water discharges. The proposed General Permit does not mandate the specific control measures permittees must use to meet the effluent limits in the proposed General Permit. Instead, the permittee shall select, design, and implement the controls needed to meet the applicable effluent limits at each specific site. The control measures can be structural devices or actions (such as processes, procedures, schedules of activities, prohibitions on practices, and other management practices) to minimize water pollution due to storm water runoff. This Statement of Basis provides examples of control measures, but permittees are expected to tailor these controls to their sites, as well as improve upon them as necessary to meet General Permit effluent limits. The examples emphasize prevention over treatment.

In an effort to make the requirements of the General Permit easier to understand and implement, DENR is specifically stating the narrative effluent limits in the proposed General Permit. In the current General Permit, the requirements for controlling pollutant discharges were combined with the storm water pollution prevention plan and inspection requirements, making it more difficult to understand DENR’s expectations with respect to the permittee’s compliance. These proposed changes do not alter DENR’s bottom-line intentions with this General Permit. Instead, these changes are intended to more clearly articulate the General Permit’s requirements.

Effluent Limits

Effective immediately and lasting through the life of the General Permit, all permittees shall comply with the narrative effluent limits below, which are based on best management practices to meet the South Dakota Surface Water Quality Standards and Best Professional Judgment (BPJ). All permittees are expected to meet the following effluent limits to minimize² the pollutants present in the discharges associated with construction activity.

1. **Precipitation Design Event.** All sediment and erosion controls shall be selected, designed, and installed to minimize the pollutants present in runoff from a rainfall event of up to two (2) inches in a 24-hour period.

In most areas of South Dakota, the two-year, 24-hour storm event is about 2 inches (see Appendix B). Both EPA and the South Dakota Department of Transportation have used a two-year, 24-hour storm event as the design event for determining the capacity of storm water controls. By establishing a 2-inch rain event as the design flow for storm water controls in the proposed General Permit, DENR will provide a consistent requirement for all permittees and ensure controls are designed to minimize pollutants present in the runoff from these events.

In setting this limit, DENR recognizes it is not possible to completely eliminate the discharge of pollutants. However, by requiring permittees to take steps to minimize the pollutants present in the discharge, the South Dakota Surface Water Quality Standards will be protected.

2. **Sediment Controls.** Permittees are required to implement sediment controls based on the amount of land disturbed by the project. This effluent limit is based on the number of *disturbed* acres, not on the entire project size. Phasing a project to minimize the amount of disturbed land is one of the most effective ways to minimize pollutants in a storm water discharge from a construction site. Therefore, this effluent limit is developed to encourage permittees to minimize the number of disturbed acres by stabilizing portions of the project and/or phasing the construction whenever possible.

In addition, sloping and managing a construction site to minimize the number of disturbed acres draining to a common location reduces the pollutants present in a storm water discharge from a construction site. This limit has also been developed to encourage permittees to minimize the number of acres draining to a common location.

The sediment control requirements are as follows:

² The current General Permit does not include a definition of the term “minimize.” However, that term is used frequently, in addition to the terms “eliminate or reduce” and “prevent.” In the proposed General Permit, DENR is clarifying the term “minimize” to mean reduce and/or eliminate to the extent achievable using control measures (including best management practices) that are technologically available and economically achievable and practicable in light of best industry practices.

- a. For drainage locations serving less than 10 disturbed acres at one time, smaller sediment basins and/or sediment traps shall be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions) of the construction area.

Note: A sediment basin providing storage for a calculated volume of runoff from a 2-inch precipitation event in a 24-hour period may be provided instead of perimeter controls.

- b. For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary or permanent sediment basin shall be provided. This basin shall provide storage for a calculated volume of runoff from the drainage area from a 2-inch precipitation event in a 24-hour period. Permittees should contact DENR's Water Rights Program at (605) 773-3352 to determine if there are additional requirements that must be met for installing a sediment basin.
- c. Where it is not possible to construct a temporary sediment basin for drainage locations that serve 10 or more disturbed acres at one time, smaller sediment basins and/or sediment traps or equivalent controls shall be used. At a minimum, equivalent sediment controls are required for all down slope boundaries (and for those side slope boundaries deemed appropriate as dictated by individual site conditions).

In determining whether installing a sediment basin is possible, the permittee may consider factors such as site soils, slope, available area on-site, site infiltration, runoff coefficients, etc. In any event, the permittee shall consider public safety, especially as it relates to children, as a design factor for the sediment basin, and alternative sediment controls shall be used if site limitations would preclude a safe design. Structural controls may be necessary due to the lag time before vegetation becomes effective. In addition, vegetative controls cannot be effectively employed in areas where soil is continually disturbed. Options for such controls include silt fences, earth dikes, drainage swales, check dams, subsurface drains, pipe slope drains, level spreaders, storm drain inlet protection, rock outlet protection, sediment traps, reinforced soil retaining systems, gabions, and temporary or permanent sediment basins. Placement of structural controls in flood plains should be avoided.

The permittee shall document the rationale for using alternative sediment controls instead of a sediment basin. This rationale will be reviewed by DENR during inspections of the construction site.

3. **Maintenance of Sediment Controls.** The permittee shall maintain all sediment controls in effective working order. If the controls are not operating effectively, the permittee shall perform maintenance on the controls as necessary to maintain the continued effectiveness of the storm water controls and before the next anticipated storm event or

within seven (7) days of identifying the need for maintenance, whichever comes first. At a minimum, the permittee shall:

- a. Remove sediment from sedimentation ponds when design capacity has been reduced by 50% or more.
- b. Remove sediment from silt fences and other controls before the deposit reaches 50% of the above-ground height.

When sediment controls are not properly maintained, the effectiveness of the control is limited. Therefore, the proposed General Permit includes a specific maintenance requirement to ensure DENR's requirements for maintenance on sediment controls are clearly communicated and to ensure the continued effectiveness of such controls. The erosion and sediment controls required for compliance with the effluent limits shall be maintained from the beginning of the construction activity until final stabilization is complete. The permittee shall properly dispose of the sediment removed from the sediment controls.

4. **Off-Site Sediment Tracking and Dust Control.** The permittee shall minimize dust generation and vehicular tracking of soil off-site to paved surfaces.

Dust and dirt-tracking can be minimized by measures such as:

- Providing gravel or paving at entrance/exit drive paths, parking areas and unpaved transit ways on the site carrying significant amounts of traffic;
- Providing entrance wash racks or stations for trucks; and
- Performing street sweeping. At a minimum, street sweeping shall be performed if other best management practices are not adequate to minimize sediment from being tracked on to the street.

5. **Off-Site Accumulations.** If sediment escapes the construction site, the permittee shall remove the off-site accumulations of sediment at a frequency sufficient to minimize impacts. The permittee shall revise the storm water pollution prevention plan and implement controls to minimize further off-site sedimentation.

Note: If sediment accumulates in waters of the state, it may be necessary to contact the United States Army Corps of Engineers to obtain additional permits for the removal of the sediment.

6. **Inlet Protection.** All storm drain inlets that would receive storm water flows from the construction site shall be protected with appropriate best management practices during construction to minimize the discharge of pollutants from the site. The inlet protection shall be maintained until all sources that have the potential for discharging to the inlet have reached final stabilization.

7. **Erosive Velocity Control.** Velocity dissipation devices shall be placed at discharge locations and along the length of any outfall channel to minimize erosion and protect the receiving waters.

Oftentimes, construction activities and the associated controls re-route drainage patterns and concentrate the flow off the site. Land development can significantly increase storm water runoff volume and peak velocity if appropriate storm water management measures are not implemented. These concentrated runoff flows and increased discharge velocities can greatly accelerate erosion near the outlet of structural measures and cause downstream sedimentation. To mitigate these effects, the permittee shall place velocity dissipation devices at discharge points (such as at the outlet of sediment basins) and along the length of a runoff conveyance, as necessary, to provide a non-erosive flow. Velocity dissipation devices help to protect a water body's natural, pre-construction uses and characteristics, both physical and biological.

8. **Soil Stockpiles.** Temporary soil stockpiles shall have silt fence or other effective controls to minimize sediment runoff, at a minimum. Soil stockpiles shall not be placed in surface waters, including storm water conveyances such as curb and gutter systems, or conduits and ditches, or where likely to be disturbed during storm events. DENR encourages the use of erosion controls for the stockpiles in conjunction with the sediment controls.
9. **Erosion Control and Stabilization.** The permittee shall stabilize disturbed portions of the site as soon as possible, but in no case more than 14 days after construction activity has temporarily or permanently ceased on any portion of the site. An exception to this effluent limit is allowed if earth-disturbing activities will be resumed within 21 days. All other exceptions shall be approved on an individual basis by the Secretary.

Stabilization practices are critical to preventing erosion. The permittee shall ensure that existing vegetation is preserved wherever possible and that disturbed portions of the site are stabilized as quickly as practicable. Stabilization practices include seeding of temporary vegetation, seeding of permanent vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, preservation of trees and mature vegetative buffer strips, and other appropriate measures. Temporary stabilization can be the single most important factor in minimizing erosion at construction sites.

Stabilization also involves preserving and protecting selected trees on the site prior to development. Mature trees have extensive canopy and root systems, which help to hold soil in place. Shade trees also keep soil from drying rapidly and becoming susceptible to erosion. Measures taken to protect trees can vary significantly, from simple ones such as installing tree armoring and fencing around the drip line, to more complex measures such as building retaining walls and tree wells.

10. **Construction and Waste Materials.** Permittees shall properly handle, store, and dispose of litter, construction debris, construction chemicals, and concrete washout to prevent pollutants from entering storm water discharges. Permittees are required to minimize the discharge of solid materials to waters of the state (except where authorized by a Section

404 permit from the United States Army Corps of Engineers). When construction and waste materials are not properly handled, storm water runoff can become polluted.

11. **Spills / Releases in Excess of Reportable Quantities.** The proposed General Permit does not authorize construction operators to discharge hazardous substances or oil resulting from on-site spills. Permittees are subject to federal reporting requirements of 40 CFR Part 110, Part 117, and Part 302 relating to spills or other releases of oils or hazardous substances. The permittee shall have the capacity to control, contain, and remove such spills if they do occur.

Note: Spills in excess of reportable quantities shall be properly reported.

Storm water runoff from spills of hazardous materials or oil could result in pollutants entering the discharge from the construction site. Therefore, if such spills do occur, the permittee shall implement controls to minimize the potential for contamination of the storm water.

12. **Site Inspections.** The permittee shall conduct an inspection of the site at least once every seven (7) calendar days and within 24 hours of the end of a storm that is 0.5 inches or greater, or a snowmelt event that causes surface erosion. Once a site has been temporarily stabilized and construction has ceased for the winter, such inspections shall be conducted at least once per month.

Note: The current General Permit allows site inspections to be reduced to once a month during winter months when the ground is frozen and there is little potential for runoff. The proposed General Permit changes this requirement; the reduced inspection frequency is only allowed if the site was properly stabilized prior to the winter months.

The inspections shall be conducted by personnel who are familiar with the General Permit conditions and with the proper installation and operation of storm water controls. Section 3.12.4 of the proposed General Permit contains the requirements for documenting the site inspections.

The storm water pollution prevention plan shall be revised if the site inspections identify any non-compliance with the effluent limits. The changes shall be implemented at the site within seven (7) calendar days following the inspection.

Many of the General Permit requirements can be reduced as portions of the site are stabilized. For example, controls may be removed and inspections ceased for a stabilized area, as long as there is no further threat of pollutants in any discharges from the stabilized area. In this situation, it would not be necessary for the permittee to revise the Notice of Intent. Instead, the permittee shall thoroughly document all activities leading up to and including final stabilization in the storm water pollution prevention plan, so that an inspector will understand that controls and regular inspections are no longer needed in that area.

STORM WATER POLLUTION PREVENTION PLAN

The permittee is required to develop and implement a Storm Water Pollution Prevention Plan (SWPPP) **prior** to submitting a NOI for new projects. This is a change from the current permit, which allowed permittees to submit the NOI before completing the SWPPP, provided the SWPPP was developed and implemented prior to commencing construction. Permittees will now be required to certify they have developed the SWPPP when the NOI is submitted.

A large number of sites are already covered under the current General Permit. While the proposed General Permit is essentially consistent with DENR's requirements under the current General Permit, there are some changes. Existing permittees will have until **July 1, 2010**, to update the pollution prevention plan to reflect the requirements of the new General Permit.

The SWPPP details the Best Management Practices (BMPs) the permittee will implement to meet the effluent limits specified in the General Permit. The General Permit requirements for the storm water pollution prevention plan were designed for maximum flexibility to allow the development of the needed storm water controls based on the specifics of the site. Some of the factors to consider when developing the plan include: local development requirements and/or building codes; precipitation patterns for the area at the time the project will be underway; soil types; slopes; sensitivity of nearby water bodies; safety concerns of the storm water controls (i.e., potential safety hazards of water in storm water retention ponds to humans and wildlife; the potential of drawing birds to retention ponds and the hazards they pose to aircraft); and coordination with other site operators.

The General Permit requires the storm water controls be described in the storm water pollution prevention plan and implemented at the site. The following information provides some examples of pollution prevention measures or best management practices. A more thorough description of these practices is given in *Developing Your Pollution Prevention Plan: A Guide for Construction Sites* (U.S. EPA, 2007). An electronic version of this document is available from EPA's web site (<http://cfpub.epa.gov/npdes/stormwater/const.cfm>), or a hardcopy of the summary document may be obtained from DENR or EPA upon request. A table listing common BMPs and their uses is also included in Appendix A of this Statement of Basis.

Erosion Controls

Erosion controls are the most effective measure to prevent off-site sedimentation. These controls provide the first line of defense in preventing off-site sedimentation and are designed to prevent erosion through protection and preservation of the soil.

Stabilization. Stabilization practices are the primary means of erosion control. Stabilization refers to covering or maintaining an existing cover over the soil. Vegetative cover includes grasses, trees, vines, shrubs, etc. Stabilization measures can also include non-vegetative controls such as geotextiles, riprap, or gabions (wire mesh boxes filled with rock). Mulches, such as straw or bark, can also be effective, especially when used with vegetation. Stabilization minimizes erosion potential by absorbing the force of raindrops that would otherwise erode unprotected soil, by allowing water to infiltrate into the ground instead of running off the surface, and by slowing the velocity of runoff, allowing sediment to filter out before reaching surface waters. Stabilization minimizes the levels of suspended sediment in discharges and receiving waters.

Examples of stabilization measures include, but are not limited to, those summarized below:

- **Temporary Vegetation.** The seeding of temporary vegetation provides a cover in areas where earth-disturbing activities have temporarily ceased, but will resume later in the construction project. Without temporary stabilization, soil can be exposed to precipitation for an extended period leaving it vulnerable to erosion, even though earth-disturbing activities are not occurring in these areas. Temporary seeding practices have been found to be up to 95% effective in minimizing erosion.
- **Permanent Seeding.** Establishing a permanent and sustainable ground cover at a site stabilizes the soil and minimizes sediment in runoff. Permanent ground cover also provides aesthetic benefits, in addition to environmental protection.
- **Mulching.** Mulching is often combined with permanent and temporary seeding. Where temporary or permanent vegetation is not yet established or is not feasible, spreading plant residues or other suitable materials on the soil surface can stabilize exposed soil. Mulching by itself provides a measure of temporary erosion control, although it generally is not as effective as vegetation. Mulching in conjunction with seeding provides erosion protection prior to the onset of plant growth. In addition, mulching protects newly applied seeds, providing a higher likelihood of successful vegetation. To maintain its effectiveness, mulch should be anchored to resist wind and rain displacement.
- **Sod Stabilization.** Sod stabilization involves establishing long-term stands of grass by planting sod on exposed surfaces. When appropriate sod is chosen and maintained, it can prevent more than 99% of the soil loss that would occur without stabilization, and is the most immediately effective vegetation method available. However, the cost of sod stabilization (relative to other vegetative controls) typically limits its use to situations where a quick vegetative cover is desired (e.g., steep or erodible slopes). Sod is also sensitive to climate and may require intensive watering and fertilization.
- **Vegetative Buffer Strips.** Vegetative buffer strips are areas where the natural vegetation has been left undisturbed. DENR recommends retaining the existing vegetation in place whenever possible. Vegetative buffer strips are encouraged at the top and bottom of a slope to slow runoff at critical locations, decreasing erosion and allowing sedimentation. Vegetative buffer strips can be especially useful for very narrow linear construction projects, such as underground utilities or pipelines, around property boundaries, and adjacent to receiving waters such as streams or wetlands.
- **Preservation of Trees.** This practice involves preserving selected trees already on-site prior to development. Mature trees provide extensive canopy and root systems, which protect and hold soil in place. Shade trees also keep soil from drying rapidly, decreasing the soil's susceptibility to erosion. Measures taken to protect trees can vary significantly, from simply installing tree armor and fences, to more complex measures, such as building retaining walls and tree wells.

- **Check Dams.** Check dams are small temporary dams constructed across a swale or drainage ditch to reduce the velocity of runoff, thereby minimizing erosion in the swale or ditch.
- **Level Spreader.** Level spreaders are outlets for dikes and flow channels consisting of an excavated depression that converts a concentrated runoff into a diffuse flow and releases it onto areas stabilized by existing vegetation.
- **Subsurface Drain.** Subsurface drains allow water to drain more effectively through the soil and transport water to an area where the runoff can be managed effectively. Drains can be made of tile, pipe, or tubing.
- **Pipe Slope Drain.** A pipe slope drain is a temporary conveyance collecting runoff and transferring it down a slope to prevent erosion on the face of the slope.
- **Rock Outlet Protection.** Rock protection, such as riprap, placed at a storm water outlet can reduce the depth and velocity of water so the flow will not cause scouring or downstream erosion.

Care should be taken when installing controls to ensure natural flow is not obstructed.

Contouring and Protecting Sensitive Areas. Contouring refers to the practice of building in harmony with the natural flow and contour of the land. By minimizing changes in the natural contour of the land, existing drainage patterns are preserved as much as possible, minimizing erosion. Minimizing the amount of regrading will also minimize the amount of disturbed soil. Preserving sensitive areas, such as steep slopes and wetlands, should also be a priority. The disturbance of soil on steep slopes should be avoided due to vulnerability to erosion. Wetlands should be protected because they provide flood protection, pollution mitigation, and essential aquatic habitat. This permit does not authorize the disturbance of wetlands. The permittee shall contact the United States Army Corps of Engineers at (605) 224-8531 to determine any requirements for wetlands that may be disturbed or impacted during construction.

Phasing. Permittees shall construct new projects in phases whenever possible to minimize the amount of bare soil that is exposed at one time and the amount of stabilization or other controls that would be required.

Diversion. Erosion can be minimized by diverting runoff away from the disturbed areas to stable areas. Structural practices include, but are not limited to, those summarized below:

- **Earthen Dike.** Earthen dikes are temporary berms or ridges of compacted soil that channel water to a desired location. Earthen dikes should be stabilized with vegetation or another equally effective method.

- **Drainage Swales.** A drainage swale is a channel lined with grass, riprap, asphalt, concrete or other materials. Swales are installed to convey runoff without causing erosion.

Sediment Controls

Sediment controls are designed to remove sediment from runoff before the runoff is discharged from the site. These controls should be used in conjunction with erosion controls. Methods for removing sediment from runoff include diverting flows to a trapping or storage device or filtering flows through on-site devices. All sediment control practices require proper maintenance (e.g., removal of collected sediment) to remain functional and should be designed to avoid presenting a safety hazard, especially in areas frequented by humans and wildlife. Major types of sediment control practices are summarized below:

- **Silt Fence.** Silt fence is a barrier of geotextile fabric (filter cloth) used to intercept sediment in runoff. The silt fence shall be firmly anchored and may require additional support, such as reinforcing with wire mesh. Used alone, silt fences are inappropriate for flows of concentrated high volume or high velocity. Silt fences shall be properly installed and carefully maintained to ensure structural stability. The sediment shall be removed as it accumulates.
- **Sediment Traps.** A sediment trap is a containment area where sediment-laden runoff is temporarily detained under quiescent conditions, allowing sediment to settle out before the runoff is discharged. Sediment traps are formed by excavating or constructing an earthen embankment across a low drainage area.
- **Storm Drain Inlet Protection.** Storm drain inlet protection minimizes sediment entering storm drainage systems prior to permanent stabilization of disturbed areas. Examples include a sediment filter or an excavated detention area around a storm drain inlet.

This list provides examples of common sediment controls. However, other examples include temporary sedimentation basins, sump pits, entrance stabilization, waterway crossings, and wind breaks. The permittee is responsible for selecting, installing, and maintaining the controls necessary to ensure the effluent limits in the proposed General Permit are met.

Storm Water Management Measures

Construction frequently causes significant alterations in the characteristics of the affected land. One such change is a decrease in the overall permeability of the site, which can dramatically affect the site's flow patterns. An increase in runoff may increase the amount of pollutants carried by the runoff. In addition, some activities (e.g., automobile travel on newly built roads) can result in higher pollutant concentrations in runoff compared to pre-construction levels. **The county or municipal authority in the area of the construction should always be consulted when drainage changes are anticipated.** The permittee is responsible for obtaining any necessary drainage permits from the county prior to discharging or changing drainage patterns.

Traditional storm water management controls attempt to limit increases in the amount of runoff and pollution discharged from land impacted by construction. A summary of some storm water management controls is provided below:

- **On-Site Infiltration.** Encouraging infiltration through measures such as trenches or basins can reduce the volume and pollutant loadings of storm water discharges from a site. Infiltration structures tend to minimize impacts to an area's natural hydrologic characteristics. If properly designed and installed, infiltration structures can reduce high flows, recharge the groundwater, reduce storm water discharge volumes and pollutant loads, and inhibit downstream erosion.
- **Flow Reduction by Vegetation or Natural Depressions.** Vegetation or natural depressions can remove pollutants, improve infiltration, and minimize erosion. The use of vegetation can protect habitats and enhance the appearance of a site. These vegetative measures include grass swales and filter strips, as well as trees that are either preserved or planted during construction. Incorporating check dams into flow paths can provide additional infiltration and flow reduction. In general, the costs of vegetative controls are less than other storm water measures. However, given their limited capacity to accept large volumes of runoff, vegetative controls should be used in combination with other storm water devices.
- **Outfall Velocity Reduction Devices.** Outfall velocity reduction devices include riprap and stone or concrete flow spreaders. These devices slow the flow of water discharged from a site, minimizing erosion.
- **Retention Structures/Artificial Wetlands.** Retention structures are ponds and artificial wetlands that are designed to maintain a permanent pool of water. Properly installed and maintained retention structures (also known as wet ponds) can achieve a high removal rate of sediment, biochemical oxygen demand (BOD), organic nutrients, and metals. They are most cost-effective when used to control runoff from larger, intensively developed sites. These structures rely on settling and biological processes to remove pollutants. Retention ponds and artificial wetlands can also become wildlife habitats, recreation and landscape features, and increase local property values. Public safety and sound engineering judgment are stressed in the implementation of any storm water measure, control or best management practice.
- **Water Quality Detention Structures.** Storm water detention structures, which include extended detention ponds, control the flow rate after a storm event. Extended detention ponds are usually designed to completely drain within 24 to 48 hours and to remain dry at other times. These structures can provide pollutant removal efficiencies similar to those of retention ponds. Extended detention systems are typically designed to provide both water quality and water quantity (flood control) benefits.

Structural measures should be installed on upland areas to the extent feasible. The installation of such measures may be subject to section 404 of the federal Clean Water Act if they will be located in wetlands or other waters of the state.

The Department recognizes that not all controls work equally well in all circumstances. Individual site conditions should be taken into consideration when choosing proper storm water management controls.

Housekeeping Best Management Practices (BMPs)

Pollutants can also be discharged in storm water from construction sites due to poor housekeeping. The effluent limits stated above require permittees to properly handle, store, and dispose of litter, construction debris, construction chemicals, and concrete washout to prevent pollutants entering storm water discharges. To ensure this limit is met, permittees shall implement the following best management practices to prevent the discharge of pollutants:

- Designate areas for equipment maintenance and repair, taking steps to minimize spills and control the runoff from these areas;
- Provide waste receptacles at convenient locations. The receptacles should be covered and the waste should be regularly collected;
- Provide appropriate control of equipment wash waters, such as concrete washouts, to prevent unauthorized dry weather discharges and avoid mixing the wash water with storm water;
- Provide protected storage areas for chemicals, paints, solvents, fertilizers, gasoline, and other potentially toxic materials. These areas should provide containment to prevent storm water from entering the chemical storage area and prevent leaks from leaving the chemical storage area; and
- Provide adequately maintained sanitary facilities.

Keeping Storm Water Pollution Prevention Plans Current

The storm water pollution prevention plan is intended to be a living document. The permittee shall update and amend the plan as site conditions change or if the plan proves to be ineffective at minimizing the level of pollutants in the storm water discharge.

Post-Construction Storm Water Management

The SWPPP should consider necessary practices to manage and control storm water runoff after construction operations have been completed. Construction operators are required to comply with applicable federal, state, tribal, or local requirements regarding the design and installation of post-construction storm water controls. The General Permit addresses only the installation of these measures; not the ongoing operation and maintenance of them after cessation of construction activities and final stabilization. Permittees are responsible only for the installation and maintenance of storm water management measures until final stabilization of the site.

The plan shall include an explanation of the technical basis used to select the practices to control pollution where flows exceed predevelopment levels. Such post-construction practices may include:

- Storm water ponds;
- Flow reduction by use of open vegetated swales and natural depressions;
- Infiltration of runoff onsite through the use of ponds or vegetation;
- Velocity dissipation devices at discharge locations and along the length of any outfall channel to minimize erosion and protect the receiving water; and
- Sequential systems which combine several practices.

Some discharges of pollutants from post-construction storm water management structures may need to be authorized under a different surface water discharge permit (e.g., the construction project was an industrial facility required to obtain coverage under the General Permit for Storm Water Discharges Associated with Industrial Activity).

DENR strongly encourages operators to use low impact development or green infrastructure practices that promote infiltration and reduce storm water volumes after development whenever possible. Additional information on green infrastructure practices can be found at <http://www.epa.gov/npdes/greeninfrastructure>.

SELF-MONITORING REQUIREMENTS

Site Inspections

The permittee shall ensure that qualified personnel inspect the site at least once every seven days and within 24 hours after any rain event that is 0.5 inches or greater or a snowmelt event that causes surface erosion. Where runoff is unlikely due to winter conditions (e.g. the site is covered with snow, ice, or frozen ground) **and** the site has been temporarily stabilized, such inspections shall be conducted at least once every month. The inspection shall include all disturbed areas of the construction site that have not reached final stabilization, structural control measures, areas used for storage of materials, and locations where vehicles enter or exit the site. These areas shall be inspected for evidence of, or the potential for, pollutants entering the drainage system and erosion. Sediment control measures shall be inspected to ensure that they are operating correctly and that sediment is not tracked offsite. Stabilized areas should also be inspected to ensure that stabilization measures are still in place and effective.

DENR also recommends that permittees perform a “walk through” inspection of the construction site before any anticipated storm event that could potentially cause a significant amount of runoff. These types of inspections help to ensure the effective implementation of sediment and erosion controls.

For all of these inspections, records shall be kept with the storm water pollution prevention plan and made available to DENR or EPA upon request. The records shall include:

- (1) Date and time of the inspections;
- (2) Name(s) and title(s) of personnel conducting the inspections;
- (3) Findings of the inspections;
- (4) Corrective actions taken in response to the inspection findings;
- (5) Dates and amounts of all rainfall events greater than 0.5 inches in 24 hours; and
- (6) Documentation of any changes made to the storm water pollution prevention plan.

The storm water pollution prevention plan shall be revised if the site inspections identify any non-compliance with the effluent limits. The plan shall be revised and the changes implemented within seven (7) calendar days following the inspection.

Record-Keeping Requirements

The storm water pollution prevention plan and a copy of DENR's letter granting coverage under the General Permit shall be maintained on site, or made readily available, from the date construction activities are initiated until final stabilization is achieved and coverage under the General Permit is terminated. The permittee shall retain copies of storm water pollution prevention plans and all reports required by the General Permit and records of all data used to complete the Notices of Intent and Termination for this permit for a period of at least three years from the date that the site is finally stabilized. This period may be extended by request of the Secretary at any time.

Duty to Provide Information

If requested, the permittee shall submit the storm water pollution prevention plan to DENR, EPA, or the local agency approving sediment and erosion control plans, grading plans or storm water management plans. In the case of a storm water discharge to a municipal separate storm sewer system (MS4), the permittee shall submit the storm water pollution prevention plan to the municipal operator of the system upon request.

Sampling Requirements

The proposed General Permit does not require effluent monitoring as a permit requirement or as an application requirement. An adequate, fully implemented Storm Water Pollution Prevention Plan should be sufficient to meet the effluent limits of the General Permit. Therefore, sampling and testing of storm water for specific parameters is not required on a routine basis under the General Permit. However, the Secretary reserves the right to require sampling and testing on a case-by-case basis, in the event there is reason to suspect noncompliance with the effluent limits or to measure the effectiveness of the BMPs in removing pollutants in the effluent.

TERMINATION OF COVERAGE

After construction activities are completed in an area, the site shall be permanently stabilized as soon as possible to prevent further soil erosion. When construction activities are complete and final stabilization has been achieved, the permittee is required to submit a Notice of Termination (NOT) to DENR. The NOT indicates that all earthmoving activities have ended and the site has

achieved final stabilization as required by the General Permit. Coverage under the General Permit shall be maintained until all disturbed areas on the entire project site have achieved final stabilization, as defined in the General Permit.

“Final Stabilization” means one of the following:

1. All soil disturbing activities at the site have been completed and a uniform perennial vegetative cover with a density of 70% of the native cover for unpaved areas and areas not covered by permanent structures has been established, or equivalent permanent stabilization measures (such as the use of riprap, gabions, or geotextiles) have been employed; or
2. When background native vegetation will cover less than 100 percent of the ground (e.g., arid areas, beaches), the 70 percent coverage criteria is adjusted as follows: if the native vegetation covers 50 percent of the ground, 70 percent of 50 percent ($0.70 \times 0.50 = 0.35$) would require 35 percent total cover for final stabilization. On sites with no natural vegetation, no vegetative stabilization is required.
3. For construction projects on land used for agricultural purposes, final stabilization may be accomplished by returning the disturbed land to its pre-construction agricultural use. Areas disturbed that were not previously used for agricultural activities, such as buffer strips immediately adjacent to “waters of the state,” and areas that are not being returned to their pre-construction agricultural use shall meet the final stabilization criteria in (1) or (2) above.

As noted above for a larger common plan of development, the developer as the original permittee can transfer coverage for selected properties as the individual lots are sold. A developer may request to be released from the General Permit requirements once all of the lots have been sold and he/she no longer owns any part of the property. The developer shall ensure coverage under the General Permit is properly transferred to each new owner and provide documentation of the sale(s) prior to submitting the request for release under the General Permit. Permit coverage will remain in effect for the lots in the development that have not been stabilized, with each of the individual lot owners a co-permittee. DENR will hold each individual lot owner responsible for final stabilization of their site.

The individual lot owner shall submit a NOT to DENR certifying the lot has been stabilized when all construction is complete and final stabilization has been reached on that lot. Permit coverage remains in effect for the remaining lots until a NOT has been submitted for each lot.

REQUIRING AN INDIVIDUAL PERMIT

Based upon a number of different situations (e.g., applicable numeric effluent limitations resulting from a TMDL, or a determination that the operator has the potential to cause or contribute to a water quality standard excursion), DENR may determine that coverage under an individual permit is necessary. If a permittee is currently discharging under this General Permit and DENR determines that individual coverage is required, written notification of this required

change in permit coverage, including reasoning for this decision, an application form, and a deadline for filing the application, will be provided to the permittee by DENR.

Additionally, any permittee may apply for an individual permit rather than applying for coverage under this General Permit. An individual application shall be submitted for coverage under such a permit with reasoning supporting the request. DENR will review the request and will determine if individual permit coverage is appropriate. If DENR issues an individual permit to a permittee currently covered under this General Permit, or coverage under an alternative general permit is obtained, coverage under the General Permit is terminated on the effective date of the new permit.

If a permittee, currently covered under the General Permit, requests an alternative permit and is denied, coverage under the General Permit may also be terminated on the date of such denial, unless otherwise specified by DENR.

QUALIFIED LOCAL PROGRAM

The regulations at 40 CFR 122.44(s) allow DENR to designate a permitted MS4's local construction storm water program as a qualified local program (QLP). Once designated, the QLP would be allowed to implement all or part of the state's construction storm water program. The QLP shall include all requirements of the proposed General Permit and meet the requirements of 40 CFR 122.44(s) to be approved.

The storm water regulations allow DENR to waive state permitting requirements for construction activities less than 5 acres, but not for larger construction activities. However, this would result in a situation where some construction activities within a municipality would be permitted by the QLP and some would be permitted by DENR. This could create a significant amount of confusion.

Therefore, DENR will require all construction activities to submit a Notice of Intent to be covered under DENR's proposed General Permit. The QLP would be authorized to implement all other components of the state's construction storm water program, such as inspections and enforcement, within the jurisdiction of the QLP. The department will act in an oversight role to review the activities of the QLP. The permittee would then be deemed to be in compliance with the requirements of the General Permit as long as all requirements of the QLP are met. Any violation of the QLP requirements would also be a violation of the General Permit.

Currently only the city of Sioux Falls is approved as a QLP. If additional municipalities are approved as a QLP in the future, a modification to the General Permit will be offered for public comment in the municipality's local newspaper.

ENDANGERED SPECIES

Compliance with the terms and conditions of this proposed General Permit will ensure no listed endangered species are impacted.

GENERAL PERMIT DURATION

The General Permit is proposed to be issued for five years. Periodically during the term of this General Permit and at the time of renewal, the permittee may be requested to reaffirm the eligibility of the permitted site to discharge under this General Permit.

The proposed General Permit specifies procedures for continued coverage if the General Permit expires prior to a replacement permit being issued. In short, the expired General Permit would remain in full force and effect until the earliest of:

- The General Permit is reissued or replaced;
- The permittee terminates coverage by submitting a Notice of Termination;
- Issuance of an individual permit for the permittee's discharges; or
- A formal decision by the Secretary of DENR not to reissue the General Permit, at which time all permittees shall seek coverage under an alternative general permit or an individual permit.

PERMIT CONTACT

Any questions pertaining to this Statement of Basis can be directed to Dale Healey, Natural Resources Project Engineer at (605) 773-3351.

September 30, 2009

APPENDIX A

Common Best Management Practices

Construction Site Best Management Practices (BMPs)

BEST MANAGEMENT PRACTICE	USES
Block and Gravel Inlet Protection	<ul style="list-style-type: none"> • Used in small drainage areas before the area has been permanently stabilized • Where there is danger of silting in an inlet
Buffer Zones	<ul style="list-style-type: none"> • Floodplains, next to wetlands, along stream banks, and next to steep, unstable slopes
Check Dams	<ul style="list-style-type: none"> • Across swales or drainage ditches to reduce the velocity of flow
Dust Control	<ul style="list-style-type: none"> • Used where open, dry areas of soil are anticipated on the site
Drainage Swale or Earth Dike	<ul style="list-style-type: none"> • Divert upslope flows from disturbed areas and to divert runoff to a stabilized outlet • To reduce the length of slope the runoff will cross • At the perimeter of the construction site to prevent sediment-laden runoff from leaving the site • To direct sediment-laden runoff to a sediment trapping device
Excavated Gravel Inlet Protection	<ul style="list-style-type: none"> • Used in small drainage areas before the area has been permanently stabilized • Where there is danger of silting in an inlet • Where ponds around the inlet structure could be a problem to traffic on site
Filter Fabric Inlet Protection	<ul style="list-style-type: none"> • Used in small drainage areas before the area has been permanently stabilized • Where there is danger of silting in an inlet
Geotextiles	<ul style="list-style-type: none"> • Stabilize the flow on channels and swales • Areas where slopes are steeper than 2:1 • Where runoff is flowing across the area
Mulching	<ul style="list-style-type: none"> • Used on recently planted slopes to protect seedlings until they become established • When seedlings need protection from inclement weather
Permanent Seeding and Planting	<ul style="list-style-type: none"> • Areas where soils are unstable because of their texture, structure, water table, winds, or slopes • Filter strips, buffer areas, vegetated swales, steep slopes, and stream banks
Pipe Slope Drain	<ul style="list-style-type: none"> • On slopes before permanent storm water drainage structures have been installed • Where diversion measures have been used to concentrate flows • On any slope where concentrated runoff crossing the face of the slope may cause gullies, channel erosion, or saturation of slide-prone soils • As an outlet for a natural drainageway
Silt Fence	<ul style="list-style-type: none"> • Immediately upstream of the point(s) of runoff discharge from a site before flow becomes concentrated • Below disturbed areas where runoff may occur in the form of overland flow

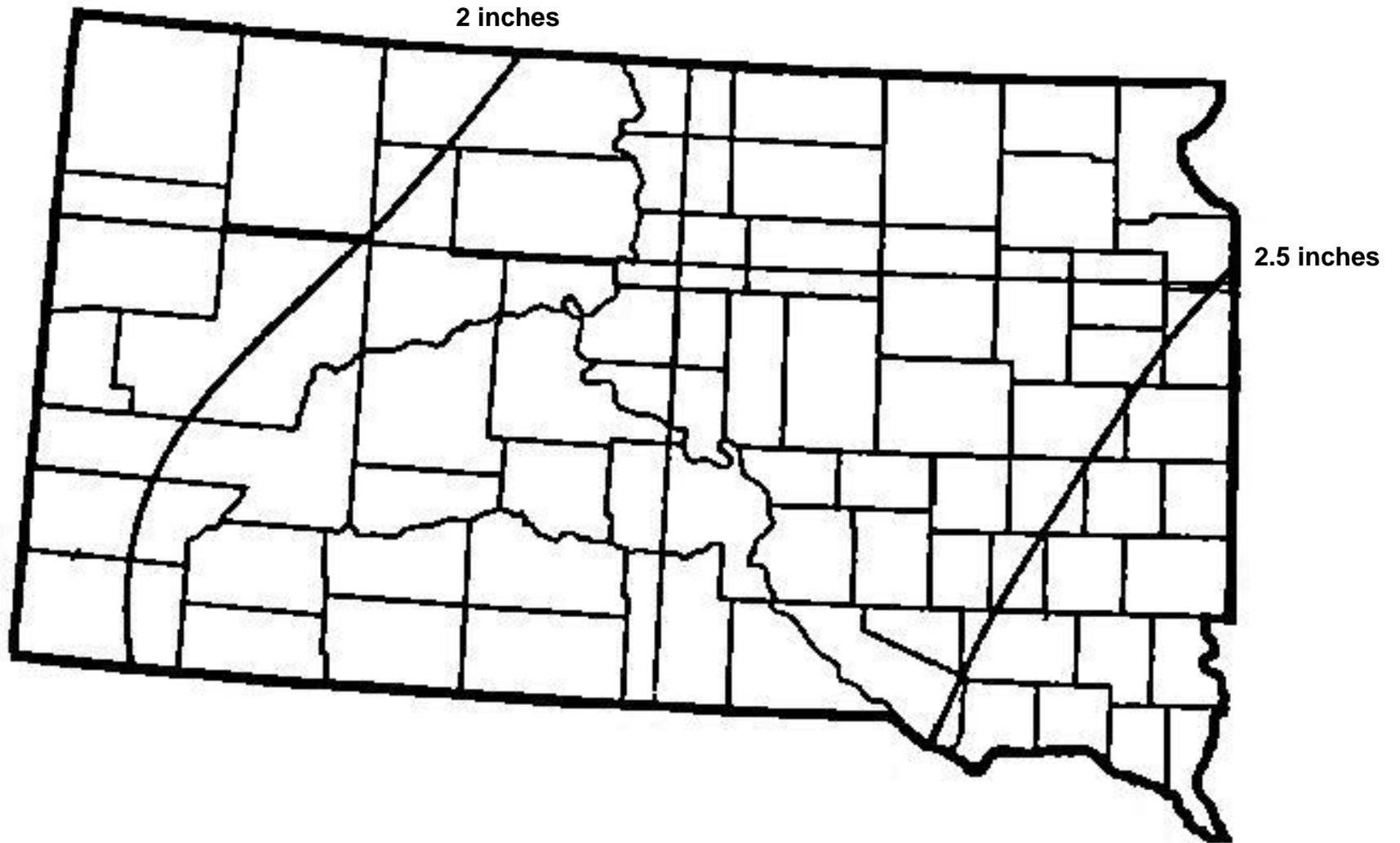
BEST MANAGEMENT PRACTICE	USES
Stabilized Construction Entrance	<ul style="list-style-type: none"> • Wherever vehicles are leaving a construction site and enter onto a public road • At any unpaved entrance/exit where there is risk of transporting mud or sediment off-site
Temporary Sediment Trap	<ul style="list-style-type: none"> • At the outlet of the perimeter controls installed during the first stage of construction • At the outlet of any structure which concentrates sediment-laden runoff, e.g. at the discharge point of diversions, channels, slope drains, or other runoff conveyances • Above a storm water inlet that is in line to receive sediment-laden runoff
Temporary Seeding	<ul style="list-style-type: none"> • Areas which have been disturbed by construction and which are likely to be re-disturbed, e.g. denuded areas, soil stockpiles, dikes, dams, sides of sediment basins, and temporary road banks

Information obtained from the Environmental Protection Agency's "Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices" (September 1992)

APPENDIX B

Two-Year, 24-Hour Rainfall Map

**2-Year Return Period, 24-hour Duration Precipitation, inches
(SCS, 1986):**



Addendum to the Statement of Basis Response to Comments

PERMIT TYPE: General Surface Water Discharge Permit for **Construction Activities** in South Dakota

PERMIT NUMBER: SDR100000

BACKGROUND

On October 1, 2009, the South Dakota Department of Environment and Natural Resources (DENR) offered its proposed General Permit for Storm Water Discharges Associated with Construction Activities in South Dakota. The permit was published in 11 daily newspapers across the state, announcing the availability of the general permit and requesting comments.

DENR received comments from five entities: the Sioux Falls Infrastructure Review Advisory Board, the city of Sioux Falls, the South Dakota Department of Transportation, the South Dakota Historic Preservation Office, and the Home Builders Association of the Sioux Empire. This document details DENR's response to these comments and outlines our changes to the permit as a result of these comments.

COMMENTS

Sioux Falls Infrastructure Review Advisory Board (IRAB) Comments

1. Section 3.12: Please clarify what the SD DENR interpretation of "temporarily stabilized" will be for a winter condition.

As noted in the Statement of Basis for the general permit, temporary stabilization practices can include seeding of temporary vegetation, mulching, geotextiles, sod stabilization, vegetative buffer strips, preservation of trees and mature vegetative buffer strips, and other appropriate measures. The site conditions will ultimately dictate the steps necessary to temporary stabilize each site. However, DENR's expectation is these steps will ensure erosion and sedimentation are minimized during spring runoff.

2. Section 3.2 2: Revise language for sediment basin storage volume design to allow for the use of 3,600 CF per acre of disturbed area or the calculated volume of runoff from the disturbed drainage area from a 2" precipitation event in a 24-hour period.

DENR's initial intention with this requirement is that a sediment basin must be designed to contain the amount of water that would be generated from a two-inch rain event. However, the Sioux Falls Infrastructure Review Advisory Board (and the city of Sioux Falls, see below) raise a good point that merits further clarification. If the permittee provides adequate calculations that demonstrate the amount of runoff that

would actually be generated during a two-inch precipitation event in a 24-hour period based on soil types, runoff coefficients, etc., the department will accept those calculations as part of the SWPPP when determining compliance with the permit. If those calculations are not completed and included in the SWPPP, DENR will expect the sediment basins and other controls to be designed based on the volume needed to contain 2 inches of precipitation for every acre disturbed. This equates to approximately 7,200 CF per acre. The current language in the permit is appropriate to address this issue and no further changes are necessary.

3. Section 3.3: Allow local Qualifying Local Program (QLP) to allow early removal of sediment controls (e.g. sediment basins and sediment traps) from larger common plans of development and sale if adequate controls are in place for individual lot development.

In this general permit, DENR is approving the city of Sioux Falls as a qualifying local program. DENR recognizes Sioux Falls' program is different than the state's program. Many of these differences have been developed to meet the unique needs of the city. Other differences are acceptable in light of DENR's review of Sioux Falls' entire storm water program. For example, DENR recognizes the city of Sioux Falls allows permittees to remove sediment controls over the winter months.

The city of Sioux Falls is able to more closely monitor the permittees in Sioux Falls than DENR is able to on a state-wide basis. Therefore, it is acceptable and appropriate to approve the city's system with such variances, in light of Sioux Falls' inspection program.

However, DENR does not believe this approach would be effective on a state-wide basis or even necessarily effective for other communities. Therefore, we are not going to make any changes to Section 3.3 in light of this comment. Instead, DENR is proposing the following changes to Section 5.3 of the general permit (formerly Section 5.4):

To receive approval as a DENR will review all qualified local programs, DENR will review the local requirements to ensure they comply submitted for approval to ensure they meet or exceed with both state requirements outlined in this General Permit and federal requirements in 40 CFR122.44(s). DENR may authorize minor variations and alternative standards in lieu of the specific conditions of the General Permit based upon the unique comprehensive control measures established in the qualifying local program.

If DENR approves a qualifying local program, the program requirement shall at the minimum meet DENR's requirements. This would include all templates and forms. DENR will review the each qualifying local program for recertification during the renewal of its municipal separate storm sewer system permit at least every five (5) years for recertification.

These changes clarify the fact that a qualifying local program is allowed to be unique, provided it meets the overarching goals of South Dakota's program. DENR believes this more adequately addresses the concerns raised in this comment.

4. Section 3.6: Revise to allow for QLP exceptions as they relate to winter conditions, public safety, and/or private property damage.

See DENR's response to Comment #3 above. DENR believes this adequately addresses the concerns raised in this comment.

5. Section 4.1: Propose to change language to only require those areas outside of an accepted QLP to have their SWPPP prepared prior to submittal of an NOI.

The city of Sioux Falls requires all SWPPPs for projects within city limits to be submitted to the city for review and approval. DENR supports and approves of this aspect of the city's program and we do not want to create potential conflicts between the general permit and the city's required sequence of SWPPP submittal and approval. DENR is simply asking a permittee to certify the SWPPP has been developed at the time the NOI is submitted. The SWPPP does not have to be approved by the City of Sioux Falls at the time the NOI is submitted. The city can continue to work with the permittees in Sioux Falls to review and approve the SWPPPs.

6. Section 5.4.3: Revise language to clarify the NOI must be submitted to the SD DENR.

DENR agrees. This change has been made and is reflected in permit condition 5.3.2, formerly Section 5.4.3., as follows (Note: the numbering of this section has changed slightly due to other changes as summarized in this document). :

If a construction site is within the jurisdiction of a qualifying local program, the operator shall submit a Notice of Intent to DENR to be covered under the General Permit and comply with all requirements of the qualifying local program.

City of Sioux Falls Comments

GENERAL COMMENTS AND DISCUSSIONS:

1. Ensure that any modification that have or will be made to this draft permit have corresponding changes made to the permit's Statement of Basis.

When DENR develops a permit for public notice, the statement of basis describes the rationale and supporting documentation for the development of the proposed permit conditions. Therefore, the statement of basis is a final document upon public notice and is not changed, even if comments are received. Instead, DENR develops a formal response to all comments received during the public notice period. This provides a good record documenting both DENR's original permit rationale, as well as any changes that were made as a result of comments. These comments will be added as an attachment to the original Statement of Basis.

2. It is our understanding that the City of Sioux Falls Stormwater Construction's Qualifying Local Program (QLP) will be required to be updated to reflect the conditions and requirements of this new General Permit when its Municipal Separate Stormwater Sewer System (MS4) surface water discharge permit #SDS-000001 is renewed.

It may be necessary for the city of Sioux Falls to make some changes to its MS4 program in light of this general permit. However, as noted above in DENR's response to Comment #3 from the Sioux Falls Infrastructure Review Advisory Board, we are approving Sioux Falls' current program as a qualifying local program.

When the City of Sioux Falls MS4 permit is renewed, DENR will discuss any required changes with the city and develop a schedule giving the city time to make those changes (if changes are deemed to be necessary). These changes will be offered for public comment before the city's MS4 permit is finalized. At this time, DENR is not requiring the city to make changes to its program.

3. Ensure that there is adequate language in permit or statement of basis to allow the SD DENR to authorize and approve local variations and alternatives to a QLP from conditions of this General Permit to clarify and provide more efficient management of local stormwater programs.

DENR agrees and has reworded Section 5.3.1, as noted above.

4. What is the current and future terminology trend in this industry to use stormwater or storm water?

The terms "stormwater" and "storm water" seem to be used interchangeably. The Administrative Rules of South Dakota, Section 74:52:01:01 includes a definition of "storm water discharges associated with industrial activity" and "storm water discharge associated with small construction activity". Therefore, DENR chose to use the term as two words, "storm water," in the general permit.

PERMIT SPECIFIC COMMENTS:

1. Section 1.0: Definitions
 - a. Recommend provide a definition for "temporary revegetation"
 - b. Recommend provide a definition for "permanent revegetation"
 - c. Recommend provide definition for "temporary stabilization measures"
 - d. "Storm Water Management Plan" Concern that definition may cause confusion with current intent of other sections of permit (e.g. Section 5.3).

While DENR is trying to be more prescriptive with this general permit, the inherent nature of the storm water program is to implement site specific BMPs to protect water quality. DENR believes that by adding formal definitions for "temporary revegetation," "permanent revegetation," and "temporary stabilization measures," we could risk the

flexibility necessary for the implementation of the general permit. Therefore, no changes will be made to the general permit in response to comments a., b., and c.

In response to comment d., DENR has made some changes. The definition of “storm water management plan” was intended to clarify this referred to an MS4’s plan for managing storm water runoff within the jurisdiction of the MS4. However, DENR agrees there were some confusing references to “storm water management plan” in the general permit. The requirement to consider runoff from post construction is adequately addressed in Section 4.2.2.b. in the general permit. Therefore, DENR removed the section entitled “Post Construction,” which was originally labeled “Section 5.3.” The section formerly labeled 5.4 is now the new Section 5.3.

2. Section 2.4 4: Allow QLP to develop and administer an alternative system to relay the importance of achieving final stabilization and transfer of General Permit coverage to new owner(s) within larger common plan of development or sale. Similar to the process currently being implemented by the Sioux Falls Minor Impact Construction Site (MICS) Program.

Please see DENR’s response to Comment #3 from the Sioux Falls Infrastructure Review Advisory Board above.

3. Section 3.12: Please clarify what the SD DENR interpretation of “temporarily stabilized” will be for a winter condition.

See DENR’s response to Comment #1 from the Sioux Falls Infrastructure Review Advisory Board above.

4. Section 3.2 1.: First sentence delete “shall” and insert “may” since smaller sites may adequately be controlled by silt fence, buffer strips or equivalent sediment controls.

Section 3.2.1 requires smaller sites to have sediment basins or sediment traps. DENR agrees with the city that smaller sites could be adequately controlled by silt fences, buffer strips, or other controls. Silt fences and buffer strips are considered sediment traps. Therefore, no changes are needed to this section.

5. Section 3.2 2: Revise language for sediment basin storage volume design to allow for the use of 3,600 CF per acre of disturbed area or the calculated volume of runoff from the disturbed drainage area from a 2” precipitation event in a 24-hour period.

See DENR’s response to Comment #2 from the Sioux Falls Infrastructure Review Advisory Board above.

6. Section 3.3 1.: Allow local Qualifying Local Program (QLP) to allow early removal of sediment controls (e.g. sediment basins and sediment traps) from larger common plans of development and sale if adequate controls are in place for individual lot development.

Please see DENR's response to Comment #3 from the Sioux Falls Infrastructure Review Advisory Board above.

In addition to the changes outlined in Section 5.3.1, DENR is changing Section 5.3.2 as follows:

If a construction site is within the jurisdiction of a qualifying local program, the operator shall submit a Notice of Intent to DENR to be covered under the General Permit and comply with all requirements of the qualifying local program. ~~The construction site is then authorized to discharge storm water associated with construction activity under the qualifying local program requirements only.~~ Compliance with the qualifying local program requirements is deemed to be compliance with this General Permit. A violation of qualifying local program requirements is also a violation of this General Permit.

DENR believes these changes adequately address the flexibility needed in the general permit to allow the city of Sioux Falls to continue implementing its MS4 program.

7. Section 3.6: Revise to allow for QLP exceptions as they relate to winter conditions, public safety, and/or private property damage.

Please see DENR's responses to Comment #3 from the Sioux Falls Infrastructure Review Advisory Board and Comment #6 from the city above.

8. Section 4.1: Propose to change language to only require those areas outside of an accepted QLP to have their SWPPP prepared prior to submittal of an NOI.

Please see DENR's response to Comment #5 from the Sioux Falls Infrastructure Review Advisory Board above

9. Section 4.1: Recommend adding the following paragraph.
 - a. Permitted sites within a QLP shall update their SWPPP at the time that the QLP has adopted modifications to reflect the conditions and requirements of this General Permit.

Permitted sites within QLPs must work with their local MS4 to determine a reasonable schedule for implementation of any new requirements. Under this general permit, we are approving the City of Sioux Falls' current program as a QLP. As noted above, DENR acknowledges differences between this general permit and Sioux Falls' MS4 programs. However, DENR does not want to be too prescriptive in QLP requirements in this general permit, as that could limit flexibility for other MS4s that wish to receive approval as a qualifying local program.

10. Section 4.2 2. b.: Requirement to include post construction BMPs along with the SWPPP is in conflict and more restrictive than permit Section 5.3 which just requires this to be

completed before submittal of the NOT. Sioux Falls QLP requires post-construction BMP design during plan set but is not required as part of SWPPP.

DENR agrees and, as noted above, we deleted the original Section 5.3. In accordance with South Dakota Codified Law 46A-10A-20, the SD Legislature has given local governments the authority to address drainage issues. Post construction storm water issues are drainage issues that need to be addressed through the local MS4 programs.

However, EPA regulations require a permittee's SWPPP give some consideration to post construction impacts. Therefore, Section 4.2.2.b. will remain in the final permit.

11. Section 5.2 1.: Recommend the following language change to this section.
“When individual lots that were included as a portion of the original common plan are sold before completion of entire plan, the permittee shall ensure the lot is properly stabilized in accordance with Section 3.9 or formally transfer that responsibility to the new owner prior to transfer of ownership.”

The permit already requires temporary stabilization if no work is going to take place for 14 days or more at the site. DENR believes that in most cases, it will be necessary for a developer to stabilize these individual lots prior to transfer to meet this requirement.

When responsibility is transferred to the new owner, the new owner becomes responsible for entire permit compliance, not just temporary stabilization of the site. Therefore, DENR does not believe this recommended change is necessary.

However, in response to this comment, DENR added Section 2.6 (4) to clarify transfer of coverage and multiple owners:

The General Permit allows for co-permittees on a site. However, if a permittee has transferred coverage to a new owner and no longer has responsibility for any portion of the site, a NOT shall be submitted by the previous owner terminating coverage under the General Permit.

12. Section 5.2 2.: Recommend adding language at end of sentence “or subsequently sold and General Permit is again transferred.” Necessary to address the possibility of multiple owners of property prior to final development.”

This section addresses a current owner and permittee transferring coverage to a new owner. The property could change hands multiple times. However, in that scenario, there is still a current owner transferring coverage to new owner. The language as currently written does not preclude a future change in ownership.

13. Section 5.2 2.: Repeat comment #2 above concerning QLP alternative programs.

Noted.

14. Section 5.3: Need clarification that construction sites within Phase I and II MS4s must comply with local stormwater program post construction control measures. Need further clarification that some construction sites may be protected by regional post construction water quality BMPs while some may need to develop site-specific post construction water quality BMPs. Concern that requiring post construction plans during SWPPP may be too early or requiring the plans at time of NOT may be too late. Recommend following language for this section:

“Pollution caused by storm water discharges from the site after construction is completed, including but not limited to rooftops, parking lots, roadways and the maintenance of pervious and impervious areas, should be addressed by BMPs on a regional or site-specific basis. Post construction water quality assessments should be addressed during the construction design phase of project. Construction site within the jurisdictional boundaries of a Phase I or Phase II permitted MS4 shall address the local program’s post construction pollution minimum control measures.”

As noted above, DENR has removed this section.

15. Section 5.4 2.” Recommend adding the following sub section:
 - a. DENR may authorize minor variations and alternative standards in lieu of specific conditions of this General Permit based upon unique comprehensive control measures established in the QLP.

Please see DENR’s response to Comment #3 from the Sioux Falls Infrastructure Review Advisory Board above.

16. Section 5.4.3: Revise language to clarify the NOI must be submitted to the SD DENR.

This change has been made and is reflected in Section 5.3.2.

17. Attachment D: Finalize form and include page 2.

The form has been finalized and page 2 is now included.

South Dakota Department of Transportation Comments

1. Section 2.6 TERMINATING COVERAGE: Consider adding provisions for partial permit termination for larger projects (i.e. greater than 100 AC). Jobs would be eligible to terminate specific areas at different times.

DENR expects the SWPPP to be continually updated to identify stabilized areas. On large construction sites, DENR encourages and supports the concept of phasing construction to minimize the impact due to disturbed areas. With this in mind, there may well be areas that have reached final stabilization. These areas should be

identified in the SWPPP as complete. Once an area of the site has reached final stabilization and is complete, many of the permit conditions are no longer required for those portions. For example, it would not be necessary to maintain erosion controls or conduct weekly inspections of these areas. However, permit coverage must be retained until the entire project has reached final stabilization or coverage has been transferred to a new owner.

2. Section 3.0 EFFLUENT LIMITS: 3.1 Precipitation Design Event – Consider using IDF Curves for determining 2 year events.

During the development of the permit, DENR reviewed the best ways to set a design flow for the effluent limits. We determined that having a consistent statewide design standard of 2" would be the simplest way to implement this requirement and would alleviate confusion.

Will there be guidelines regarding TMDL's?

As noted in the Statement of Basis:

“The proposed General Permit is a Surface Water Discharge permit that requires best management practices to ensure the surface water quality standards are met and maintained. Therefore, the General Permit will be able to authorize discharges to waterbodies that are listed as impaired or have an approved TMDL. However, if DENR determines a specific site has the potential to cause or contribute to an impairment of the surface water quality standards, DENR can require the owner to implement additional controls and/or obtain an individual discharge permit.”

For further information, please see the 2008 Integrated Report for Surface Water Quality Assessment, available at: <http://denr.sd.gov/documents/08IRFinal.pdf>

3. Section 5.0 SPECIAL CONDITIONS: Is Section 5.3 necessary in all instances? This appears to be more geared for wetlands or highly sensitive environmental areas.

As noted above, DENR removed Section 5.3.

4. CONTRACTOR CERTIFICATION FORM: Is this intended to be included in the plans?

Thank you for noting that omission. Signature lines have been added to the certification form.

State Historic Preservation Office Comment

During the comment period, the State Historic Preservation Office (SHPO) made DENR aware of their obligation to assure compliance with the state and federal historical

preservation acts. SHPO must be provided the opportunity to comment on any projects that have the potential to encroach upon, damage or destroy portions of the national or state register listed properties. Therefore, DENR added a question on the Notice of Intent form asking if this property will encroach, damage, or destroy one of these sites and included a link to verify these locations. If the applicant answers ‘yes’ to that question on the NOI, DENR will provide SHPO with a copy of the NOI and allow them opportunity to comment before issuing permit coverage.

Home Builders Association of the Sioux Empire (HBASE) Comments

1. Page 6, Section 2.4.2: “Upon receipt of a complete NOI, the Secretary shall make the decision to grant or deny coverage or request additional information. If the Secretary grants coverage under the General Permit, a letter of authorization will be sent to the permittee.” – HBASE recommends DENR establish a timeframe to review and respond to a permittee’s NOI in an efficient and reasonable amount of time.

Section 2.4.1 states the NOI must be submitted at least 15 days prior to commencement of work at the site. This 15-day period is to allow DENR time to process the application and avoid delays with the construction project. DENR is issuing a general permit for construction activities to streamline the permitting process and avoid delays. We make every effort to issue permits well within the 15-day time period and in extreme circumstances have worked with a project to issue coverage within an hour or less of receiving the application.

However, there are circumstances beyond DENR’s control that could delay the issuance of general permit coverage. Two examples are highlighted above. If a project could impact impaired waters or historic properties, DENR might need to delay general permit coverage. Therefore, we feel it is best to leave the language as currently written. We will continue to expedite our issuance of general permit coverage whenever possible.

2. Page 8, Section 3.2.2: “For common drainage locations that serve an area with 10 or more acres disturbed at one time, a temporary or permanent sediment basin shall be provided. The basin shall provide storage for a calculated volume of runoff from the disturbed drainage area from a 2-inch precipitation event in a 24-hour period.” - HBASE encourages DENR to revise language for sediment basin storage volume design to allow for the use of 3,600 cubic feet per acre of disturbed area or the calculated volume runoff from the disturbed drainage area from a 2” precipitation event in a 24-hour period.

Please see DENR’s responses to Comment #2 from the Sioux Falls Infrastructure Review Advisory Board and Comment #6 from the city above.

3. Page 9, Section 3.4: “The permittee shall minimize dust generation and vehicular tracking of soil off-site.” – HBASE suggests modifying the above language by removing

“minimize dust generation” as follows: “The permittee shall provide for vehicular tracking of soil off-site.”

Minimizing dust generation is a requirement of the current General Permit. In addition, DENR feels this is a good housekeeping practice and an important way to protect water quality. Therefore, DENR will leave this requirement in the General Permit.

4. Page 9, Section 3.6: “All storm drain inlets that receive storm water flows from the construction site shall be protected with appropriate best management practices during construction to minimize the discharge of pollutants from the site. The inlet protection shall be maintained until all sources with the potential for discharging to the inlet have reached final stabilization.” – HBASE suggests revising this language to allow Qualified Local Program exceptions as they relate to winter conditions, public safety, and/or property damage.

Please see DENR’s response to Comment #3 from the Sioux Falls Infrastructure Review Advisory Board above.

5. Page 9, Section 3.9: “The permittee shall stabilize disturbed portions of the site as soon as possible, but in no case more than 14 days after construction activity has temporarily or permanently ceased on any portion of the site. An exception to this effluent limit is allowed if earth-disturbing activities will be resumed within 21 days. All other exceptions shall be approved on an individual basis by the Secretary.” – HBASE suggests adding “BMP’s” to the above language as follows: “The permittee shall stabilize disturbed portions of the site as soon as possible with BMP’s but in no case more than 14 days after construction activity has temporarily or permanently ceased on any portion of the site.”

DENR agrees. Section 3.9 has been modified and now states:

“The permittee shall stabilize disturbed portions of the site as soon as possible with appropriate BMPs, but in no case more than 14 days after construction activity has temporarily or permanently ceased on any portion of the site.”

6. Page 10, Section 3.12.1: “All(sp) inspection of the site shall be conducted at least once every seven (7) calendar days and within 24 hours of the end of storm that is 0.5 inches or greater, or a snowmelt event that causes surface erosion.” – HBASE suggest revising site inspections to “once every 14 calendar days and within 48 hours of the end of a storm that is 0.5 inches or greater.”

DENR believes more frequent inspections are necessary. It is not uncommon for construction sites in South Dakota to experience multiple precipitation events in a short period of time. This can lead to an increased chance of erosion and sedimentation. The site inspections are necessary to ensure the best management practices employed at the site are in effective working order and minimizing pollutants to the maximum extent practicable.

Page 10, Section 3.12.1: “Once a site has been temporarily stabilized and construction has ceased for the winter, such inspections shall be conducted at least once per month.” – HBASE suggests clarification from DENR on its interpretation of “temporary stabilized” during the winter.

See DENR’s response to Comment #1 from the Sioux Falls Infrastructure Review Advisory Board above.

7. Page 12, Section 4.1: “The Storm Water Pollution Prevention Plan, also referred to as “the SWPPP,” shall be developed prior to the submittal of the NOI and shall be implemented for all construction activity.” – HBASE suggests revising language to only require those areas outside of an accepted Qualifying Local Program to have their SWPPP prepared prior to submittal of an NOI.

See DENR’s response to Comment #5 from the Sioux Falls Infrastructure Review Advisory Board above.

8. Page 15, Section 5.2.2: “Upon transfer of coverage, an individual lot owner becomes a co-permittee and is responsible for permit compliance on their lot until final stabilization is reached.” – HBASE suggests the following language change: “Upon transfer of coverage(sp), an individual lot owner becomes a co-permittee and is the primary party for permit compliance on their lot until final stabilization is reached.”

DENR agrees. Section 5.2.2 has been modified and now states:

“Upon transfer of coverage, an individual lot owner becomes a co-permittee and is the primary party responsible for permit compliance on their lot until final stabilization is reached.”

9. Page 16, Section 5.4.2: “If DENR approves a qualifying local program, the program requirements shall at the minimum meet DENR’s requirements.” – HBASE suggests adding an additional language that states, “DENR may authorize minor variations and alternative standards in lieu of specific conditions of this General Permit based upon unique comprehensive control measures established in the QLP.”

DENR agrees and has reworded Section 5.3.1, as noted above in Comment #3 from the Sioux Falls Infrastructure Review Advisory Board above.

10. Page 16, Section 5.4.3: “If a construction site is within the jurisdiction of a qualifying local program, the operator shall submit a Notice of Intent to be covered under the General Permit and comply with all requirements of the qualifying local program.” – HBASE suggest revising language to clarify the NOI must be submitted to the DENR.

DENR agrees. This change has been made as noted above in DENR’s response to question #6 by the city of Sioux Falls.

11. Page 17, Section 6.2.2: “If the permittee wishes to continue an activity regulated by this General Permit after its expiration date, the permittee must submit a Notice of Intent.” – HBASE suggests DENR send notice to permittees that they must re-submit a Notice of Intent.

DENR agrees, and this is the approach DENR used for reissuing the current General Permit and DENR will take that suggestion into consideration when the permit is renewed in five years.

APPENDIX

14

OWNER'S **TOPEKA SHINER**

**STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION**

**SPECIAL PROVISION
FOR
CONSTRUCTION PRACTICES IN STREAMS
INHABITED BY THE TOPEKA SHINER**

MAY 10, 2010

I. DESCRIPTION

This project crosses a stream inhabited by the Topeka Shiner, a federally endangered species. The following conditions shall be implemented to minimize the impact of stream crossing construction on the Topeka shiner. Failure to implement the following conditions may result in violation of the Endangered Species Act.

II. MATERIALS (None Required)

III. CONSTRUCTION REQUIREMENTS

A. GENERAL CONSTRUCTION

Construction activities within the stream, along the stream banks, and in areas that drain into the stream will not be allowed unless comprehensive and effective Best Management Practices (BMPs), that will prevent sediment, fuels, chemicals, concrete wash water, and other pollutants from entering into the stream, are in-place and functioning properly. Erosion and sediment controls shall be maintained in good working condition until vegetation is restored to 70% of the pre-disturbance condition. Erosion and sediment controls implemented shall be those appropriate for the specific site conditions. Fill material shall not be placed below the ordinary high water elevation except as directed by the plans or as allowed by the United States Army Corps of Engineers 404 permit.

B. MEASUREMENT OF STREAM TURBIDITY

Construction activities shall not produce sediment discharges that increase stream turbidity (i.e., water clarity) by more than 50 Nephelometric Turbidity Units (NTU) over the background turbidity level. Construction methods that produce sediment discharges exceeding this turbidity standard shall cease and may resume only after the Engineer has approved an acceptable plan. The Contractor shall immediately notify the Engineer if it is suspected that

stream turbidity has been increased. Turbidity will be monitored during all stages of the project. An emphasis will be placed on monitoring construction activities causing disturbance to the stream channel.

- 1. Turbidity Meter and Maintenance:** Measurements shall be taken by the Engineer with a Global Water WQ 770 turbidity meter or equivalent, supplied by the Engineer. Turbidity meters shall be maintained and operated in accordance with manufacturer recommendations.
- 2. Definition of Turbidity Sample:** A turbidity sample shall be defined as the average of five measurements taken at a sampling location.
- 3. Obtaining a Turbidity Sample:** To obtain a turbidity sample, the sensor of the turbidity meter shall be submerged in the stream and allowed to run continuously for at least one minute before taking the first turbidity measurement. Subsequent turbidity measurements shall be taken at thirty second intervals until five measurements have been obtained. Turbidity measurements shall be taken by the Engineer or a designated representative. Turbidity samples shall be taken in accordance with manufacture recommended procedures.
- 4. Location of Turbidity Samples:** Turbidity shall be measured at two sampling locations. A control sample will be taken from a point 100 feet upstream of the work area to determine the background turbidity level. Another sample will be taken from a point 100 feet downstream of the work area. The location of turbidity samples may be modified at the Engineers discretion depending on constraints such as easement limits. Turbidity shall be measured at the midpoint of stream flow. If the stream is not flowing turbidity shall be measured at the center of the stream.
- 5. Documentation of Turbidity Sample Measurements:** Turbidity data shall be recorded on a Stream Turbidity Inspection Form (DOT-283) and be delivered to the SDDOT environmental office within 14 days of testing. Turbidity samples that indicate a 50 NTU increase over the background turbidity level shall be immediately reported to the Biologist.
- 6. Frequency of Turbidity Measurements:** Turbidity measurements shall be taken in conjunction with normal storm water inspections. Turbidity measurements shall also be taken at the Engineers discretion during construction activities that may result in increased turbidity (e.g., placing rip rap or installing a coffer dam).

C. DE-WATERING, ISOLATED WORK AREAS, AND WATER EXTRACTION

If fish are present or suspected to be present within a work area isolated from the remaining water body, construction activities within that enclosed area will

not be allowed until the Biologist has confirmed that fish have been moved from the enclosed area to the greatest extent possible considering site conditions. The Biologist shall be notified prior to the installation of any temporary water barriers that may isolate stream segments or the dewatering of any stream segments. The Biologist shall be notified if stream discharge reenters any areas previously cleared of fish.

Fish screens shall be used on all pump intakes that may be exposed to fishes. Pump intake screens shall be sized to prevent fish from being entrained into the pump intake or from being impinged on the intake screen. Screen mesh shall not have openings that exceed 1/8" measured diagonally across the opening. The surface area of fish screens shall be at least 18 ft². The Biologist shall be contacted to determine the appropriate surface area for fish screens used on pumps extracting water at a rate exceeding 500 gpm.

The extraction of water for use during construction from free flowing streams will not be permitted unless approved by the Biologist. The Contractor shall provide the Biologist with the estimated volume of water to be extracted, the duration (timeframe) of the extraction, rate at which water will be extracted, and the location(s) where water will be extracted. Water will not be allowed to be extracted for use during construction from streams that are not flowing.

D. TEMPORARY WORKS (FALSEWORK AND WORK PLATFORMS)

Falsework or work platforms shall conform to Section 423 of the Standard Specifications and any applicable requirements of this provision.

Temporary piling shall be cutoff at or driven flush with the streambed, or extracted in a manner that minimizes sedimentation as much as possible, when no longer needed.

The Contractor shall consider how falsework or work platforms will be installed and removed when preparing the Construction Plan and include any special construction methods or sequencing that may be required to protect the Topeka Shiner.

Design of temporary works shall be as specified in Section 423 of the Standard Specifications.

E. REMOVAL OF STRUCTURES & OBSTRUCTIONS

Removal of structures and obstructions shall conform to Section 110 of the Standard Specifications and any applicable requirements of this provision.

Construction, demolition and/or removal operations conducted over or in the vicinity of the stream shall be controlled to prevent materials from falling in the

waterway. Any materials that do fall into the waterway or into areas below the ordinary high water elevation shall be removed promptly by hand or with equipment located above the stream bank at the discretion of the Engineer.

F. TEMPORARY DIVERSION CHANNELS

Temporary diversion channels constructed according to Standard Plate number 734.30 shall be constructed to approximately the existing channel slope, roughness, and width to allow upstream fish movement during normal stream discharges.

G. PRECONSTRUCTION MEETING AND CONTRACTOR WORK PLAN

A pre-construction meeting shall be held with the Contractor, all Sub-Contractors, Engineer and Biologist to ensure that the conditions of this provision and all environmental permits are clearly understood. The Contractor shall provide an estimated date at the pre-construction meeting when the Biologist will be needed on site to monitor any fish transfer. The Contractor shall notify the Engineer two days before the Biologist is needed on site.

The Contractor shall submit a detailed Construction Plan, prior to the preconstruction meeting, to the Engineer for approval. The plan shall include products, materials and methods of construction and removal for temporary water barriers, cofferdams, and diversion channels including de-watering, handling, storage, and disposal of excavated material and pumped effluent. The Construction Plan shall include all necessary information to provide assurance that the conditions of this provision are adequately addressed. Work shall not proceed without approval of the Construction Plan by the Engineer.

IV. METHOD OF MEASUREMENT

- A. Temporary Water Barriers:** Temporary water barriers will be measured to the nearest foot.
- B. Cofferdams:** Measurement for cofferdams will be as per Section 423.4 of the Standard Specifications.
- C. Dewatering:** Measurement for dewatering will not be made.
- D. Temporary Works:** Measurement for temporary works will be as per Section 423.4 of the Standard Specifications.

- E. Removal of Structures and Obstructions:** Measurement for removal of structures and obstructions shall be as per Section 110.4 of the Standard Specifications.
- F. Temporary Diversion Channel for Box Culverts:** Measurement for temporary diversion channel for box culverts shall be in accordance with Standard Plate number 734.30.
- G. Temporary Stream Diversion for Box Culvert Extensions:** Measurement for temporary stream diversions for box culvert extensions will be on a per each basis.
- H. Temporary Stream Diversion for Pipe Culvert Extensions:** Measurement for temporary stream diversions for pipe culvert extensions will be on a per each basis.
- I. Erosion Control for Box Culvert Extension:** Measurement for erosion and sediment control for box culvert extensions will not be made.
- J. Erosion Control for Pipe Culvert Extension:** Measurement for erosion and sediment control for pipe culvert extensions will not be made.
- K. Erosion Control for Bridge:** Measurement for erosion and sediment control for bridge will not be made.

V. BASIS OF PAYMENT

- A. Temporary Water Barriers:** Temporary water barriers will be paid for at the contract unit price per foot. Payment for this bid item shall be made only once at each location, regardless of the number of times the barrier is changed or moved at that location. Payment will be full compensation for labor, equipment, materials, and all incidentals necessary for constructing the temporary water barrier.
- B. Cofferdams:** Payment for cofferdams shall be as specified in Section 423.5 of the Standard Specifications.
- C. Dewatering:** Payment for Dewatering will not be made. All costs associated with dewatering shall be incidental to the other bid items.
- D. Temporary Works:** Payment for temporary works shall be as specified in Section 423.5 of the Standard Specifications.
- E. Removal of Structures and Obstructions:** Payment for removal of structures and obstructions shall be as specified in Section 110.5 of the Standard Specifications.

- F. Temporary Diversion Channel for Box Culverts and Pipe:** Payment for temporary diversion channels for box culverts shall be in accordance with Standard Plate number 734.30.
- G. Temporary Stream Diversion for Box Culvert Extensions:** Temporary stream diversion for box culvert extensions will be paid for at the contract unit price per each. Payment for this bid item will be made only once, regardless of the number of times the diversion is changed or moved at this site. Payment will be full compensation for labor, equipment, materials, and all incidentals necessary for constructing the temporary diversion.
- H. Temporary Stream Diversion for Pipe Culvert Extensions:** Temporary stream diversion for pipe culvert extensions will be paid for at the contract unit price per each. Payment for this bid item will be made only once, regardless of the number of times the diversion is changed or moved at this site. Payment will be full compensation for labor, equipment, materials, and all incidentals necessary for constructing the temporary diversion.
- I. Erosion Control for Box Culvert Extension:** Erosion control for box culvert extension will be paid for at the contract lump sum price. The contract lump sum price shall be full compensation for all labor, equipment, materials, and incidentals necessary to install and maintain erosion and sediment control measures for box culvert extensions. Payment for erosion control measures not shown on the approved Construction Plan will be measured and paid for under their respective bid items (i.e. silt fence, erosion bale, etc.).
- J. Erosion Control for Pipe Culvert Extension:** Erosion control for pipe culvert extension will be paid for at the contract lump sum price. The contract lump sum price shall be full compensation for all labor, equipment, materials, and incidentals necessary to install and maintain erosion and sediment control measures for pipe culvert extensions. Payment for erosion control measures not shown on the approved Construction Plan will be measured and paid for under their respective bid items (i.e. silt fence, erosion bale, etc.).
- K. Erosion Control for Bridge:** Erosion control for bridge will be paid at the contract lump sum price. The contract lump sum price will be full compensation for all labor, equipment, materials, and incidentals necessary to install and maintain erosion and sediment control measures for necessary for bridge construction. Payment for erosion control measures not shown on the approved Construction Plan will be measured and paid for under their respective bid items (i.e. silt fence, erosion bale, etc.).

* * * * *

APPENDIX

15

SD DENR DEWATERING PERMIT

**SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT
AND NATURAL RESOURCES
JOE FOSS BUILDING
523 EAST CAPITOL AVENUE
PIERRE, SOUTH DAKOTA 57501-3181**

**AUTHORIZATION TO DISCHARGE UNDER THE
SURFACE WATER DISCHARGE SYSTEM**

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota (ARSD), Chapters 74:52:01 through 74:52:11,

the permittee

is authorized to discharge from the **temporary discharge activities described in the permittee's Notice of Intent form**
to **waters of the state identified in the permittee's Notice of Intent form**

in accordance with discharge point(s), effluent limits, monitoring requirements and other conditions set forth herein. Authorization for discharge is limited to those outfalls specifically listed in the permit.

This permit shall become effective September 1, 2011.

This permit and the authorization to discharge shall expire at midnight, August 31, 2016.

Signed this 30th day of August, 2011.



Steven M. Pirner
Secretary
Department of Environment and Natural Resources

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DEFINITIONS

30-day (and monthly) average means the arithmetic average of all samples collected during a consecutive 30-day period or calendar month, whichever is applicable. The calendar month shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms.

7-day (and weekly) average means the arithmetic mean of all samples collected during a consecutive 7-day period or calendar week, whichever is applicable. The calendar week which begins on Sunday and ends on Saturday, shall be used for purposes of reporting self-monitoring data on discharge monitoring report forms. Weekly averages shall be calculated for all calendar weeks with Saturdays in the month. If a calendar week overlaps two months (i.e., the Sunday is in one month and the Saturday in the following month), the weekly average calculated for that calendar week shall be included in the data for the month that contains the Saturday.

ARSD means the Administrative Rules of South Dakota.

An **Authorized Release** is a discharge from a permitted outfall that meets all permit conditions and effluent limits.

Best Management Practices (BMPs) means schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control site runoff, spillage, or leaks, sludge, or waste disposal, or drainage from raw material storage.

BTEX means the sum of the concentrations of benzene, ethyl benzene, toluene, and xylene.

A **Bypass** is the intentional diversion of waste streams from any portion of a treatment facility.

Composite samples shall be flow proportioned. The composite sample shall contain at least four samples collected over the compositing period. Unless otherwise specified, the time between the collection of the first sample and the last sample shall not be less than six hours nor more than 24 hours. Acceptable methods for preparation of composite samples are as follows:

- a. Constant time interval between samples, sample volume proportional to flow rate at time of sampling;
- b. Constant time interval between samples, sample volume proportional to total flow (volume) since last sample. For the first sample, the flow rate at the time the sample was collected may be used;
- c. Constant sample volume, time interval between samples proportional to flow (i.e. sample taken every "X" gallons of flow); and
- d. Continuous collection of sample, with sample collection rate proportional to flow rate.

Daily Maximum (Daily Max.) is the maximum value allowable in any single sample or instantaneous measurement.

DMR means Discharge Monitoring Report.

EPA or U.S. EPA means United States Environmental Protection Agency.

Existing Source means any building, structure, facility or installation from which there is or may be a discharge of pollutants, which is not considered a New Source.

A **grab** sample, for monitoring requirements, is a single "dip and take" sample collected at a representative point in the discharge stream.

gpm means gallons per minute.

An **instantaneous** measurement, for monitoring requirements, is a single reading, observation, or measurement either taken at the facility or within 15 minutes of the sample.

New Source means any building, structure, facility or installation from which there is or may be a discharge of pollutants, the construction of which commenced after the publication of proposed Pretreatment Standards under Section 307(c) of the Federal Clean Water Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:

- a. The building, structure, facility or installation is constructed at a site at which no other source is located; or
- b. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or
- c. The wastewater generating processes of the building, structure, facility, or installation are substantially independent of an existing source at the same site. In determining whether these are substantially independent, factors such as the extent to which the new facility is integrated with the existing plant, and the extent to which the new facility is engaged in the same general type of activity as the existing source should be considered.

Construction on a site at which an existing source is located results in a modification rather than a new source if the construction does not create a new building, structure, facility or installation meeting the criteria of (b.) or (c.) of this section but otherwise alters, replaces, or adds to existing process or production equipment. Construction of a new source has commenced if the owner or operator has:

- a. Begun, or caused to begin as part of a continuous onsite construction program:
 - (1) Any placement, assembly, or installation of facilities or equipment; or
 - (2) Significant site preparation work including clearing, excavation, or removal of existing buildings, structures, or facilities which is necessary for the placement, assembly, or installation of new source facilities or equipment.
- b. Entered into a binding contractual obligation for the purchase of facilities or equipment which are intended to be used in its operation within a reasonable time. Options to purchase or contracts which can be terminated or modified without substantial loss, and contracts of feasibility, engineering, and design studies do not constitute a contractual obligation under this paragraph.

pH is the measure of the hydrogen ion concentration of water or wastewater; expressed as the negative log of the hydrogen ion concentration. A pH of 7 is neutral. A pH less than 7 is acidic, and a pH greater than 7 is basic.

Process Wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product.

SDDENR means the South Dakota Department of Environment and Natural Resources.

Secretary means the Secretary of the South Dakota Department of Environment and Natural Resources, or authorized representative.

Severe property damage means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

Sewage Sludge is any solid, semi-solid or liquid residue that contains materials removed from domestic sewage during treatment. Sewage sludge includes, but is not limited to, primary and secondary solids and sewage sludge products.

TSS means **Total Suspended Solids**. TSS is a measure of the filterable solids present in a sample.

An **Unauthorized release** is a discharge from the lower end of the treatment or containment system through a release structure or over or through retention dikes that does not meet all permit conditions or effluent limits.

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology-based permit effluent limits because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

1.0 COVERAGE UNDER THIS PERMIT

1.1 Applicability of the General Permit

This general permit is potentially applicable to all facilities conducting temporary discharge activities within the State of South Dakota. The water discharged from these activities must be relatively uncontaminated and must not cause a violation of the South Dakota Surface Water Quality Standards.

1.2 Discharges Covered

The following types of discharges may be covered under this general permit:

1. Discharges of storm water and ground water from construction dewatering activities.
2. Discharges of water used for hydrostatic testing of vessels and pipelines.
3. Discharges of water from pump testing of wells.
4. Discharges of water from swimming pools, hot tubs, and other similar structures.
5. Discharges of petroleum contaminated ground water.
6. Discharges of ground water with other contaminants. The limits for these contaminants will be set on a case by case basis at the Surface Water Quality Standard for that pollutant.
7. Other short term discharges of relatively uncontaminated water.

1.3 Discharges Not Covered

The following discharges are not authorized by this general permit:

1. **Section 404 Permitted Discharges.** This general permit does not authorize a permittee to discharge fill material into waters of the state. Such discharges are required to obtain a Section 404 federal Clean Water Act permit from the U.S. Army Corps of Engineers.
2. **Discharges Threatening Water Quality.** This general permit does not authorize discharges the Secretary determines will cause, or have reasonable potential to cause or contribute to, violations of water quality standards. In such cases, the Secretary may deny coverage under the general permit or require the permittee to obtain an individual Surface Water Discharge permit.
3. **Discharges of Regulated Substances.** This general permit does not authorize the discharge of regulated substances, hazardous substances, or oil resulting from on-site spills. Permittees are subject to federal reporting requirements of 40 CFR Part 110, Part 117, and Part 302 relating to spills or other releases of oils or hazardous substances. Spills in excess of reportable quantities shall be immediately reported. Spills resulting in a sheen to water bodies must be immediately reported to the National Response Center at 800-424-8802.

1.4 Request for Authorization

In order to be considered eligible for authorization to discharge wastewater under the terms and conditions of this permit, the owner, operator, and/or authorized agent of any facility desiring to discharge must complete and submit, a Notice of Intent form and a Certification of Applicant form (located in Attachment A at the end of this permit) at least thirty days prior to the first anticipated date of discharge. This submittal shall also be considered a request for a temporary water use permit, if required.

Such information shall be submitted to the following address:

original to: South Dakota Department of Environment and Natural Resources
Surface Water Quality Program
Joe Foss Building
PMB2020
523 East Capitol
Pierre, South Dakota 57501-3182
Telephone: (605) 773-3351

The permit issuing authority shall have up to thirty days after receipt of the Notice of Intent form to request additional data and/or deny the authorization under this general permit for any particular discharge. For existing individually authorized discharges, coverage under the general permit will not be effective unless and until the individual permit is either revoked or inactivated. SDDENR may waive, at its discretion, the thirty-day period.

1.5 Terminating Coverage

1. Permittees wishing to terminate coverage under this general permit shall submit a Notice of Termination (NOT) signed in accordance with Section 4.14. The NOT form is found in Attachment B. Compliance with this general permit is required until a NOT is submitted and general permit coverage has been terminated.
2. Permittees shall not submit a NOT until all discharges authorized by this general permit are eliminated.
3. Permittees shall submit a NOT within thirty (30) days after all authorized discharges have ceased.

2.0 EFFLUENT LIMITS AND MONITORING REQUIREMENTS

2.1 Effluent Limits

Effective immediately and lasting through the life of this permit, the quality of effluent discharged by the facility shall, as a minimum, meet the limits as set forth below:

1. There shall be no discharge of any process-generated wastewater except wastewater resulting from activities described in the Notice of Intent Form and authorized by the Secretary.
2. Collected screenings, grit, solids, sludges, or other pollutants removed in the course of treatment shall be disposed of in such a manner so as to prevent any pollutant from entering any waters of the state or creating a health hazard. Sludge/digester supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the State.
3. There shall be no discharge of sanitary wastewater from toilets or related facilities.
4. There shall be no discharge of floating solids or visible foam in other than trace amounts.
5. There shall be no discharge of toxic pollutants in toxic amounts.
6. No chemical may be added to the discharge unless prior permission for the use of the additive is specifically granted by the SDDENR.
7. The permittee shall take such steps as are necessary to prevent or minimize stream scouring or bank erosion caused by the discharge.

Limits for Oil and Grease

8. The concentration of Oil and Grease in any single sample shall not exceed 10 mg/L nor shall there be a visible sheen in the discharge. **(for discharges to all waters except those classified as domestic water supplies)**

OR

8. The concentration of Oil and Grease in any single sample shall not exceed 1 mg/L nor shall there be a visible sheen in the discharge. **(for discharges to waters classified as domestic water supplies)**

Limits for pH

9. The pH of the discharged water shall not be less than 6.5 standard units nor greater than 9.0 standard units at all times.

Limits for TSS

10. The Total Suspended Solids concentration shall not exceed 90 mg/L in any single sample. **(for discharges to all waters except those classified as coldwater permanent fish life propagation waters)**

OR

10. The Total Suspended Solids concentration shall not exceed 53 mg/L in any single sample. **(for discharges to waters classified as coldwater permanent fish life propagation waters)**

Limits for potentially petroleum contaminated water

- 11. The total BTEX concentration shall not exceed 100 µg/L in any single sample. BTEX shall be measured as the sum of benzene, ethyl benzene, toluene, and xylene.
- 12. The benzene concentration shall not exceed 5 µg/L in any single sample.

Limits for potentially toxics contaminated water

- 13. The individual toxics concentrations shall not exceed the values established on a case by case basis from the acute aquatic life water quality standards in any single sample.

Limits for potentially chlorinated water

- 14. The total residual chlorine concentration shall be non-detectable at the point the discharge enters the receiving waters in all samples. SDDENR considers the analytical detection limit for total residual chlorine to be 0.05 mg/L. Any sample results less than 0.05 mg/L will be considered non-detectable.

2.2 Self-Monitoring and Reporting Requirements

- 1. Daily logs. The permittee shall maintain a daily log relating to any discharge(s). The log shall contain:
 - a. flow information and data;
 - b. sample results;
 - c. records of visual observations; and
 - d. notations of any problems relating to treatment of the discharge.
- 2. Samples shall be taken as often as necessary to provide representative information as to the nature and volume of the discharge(s). At a minimum, samples of each discharge shall be taken as follows:

Parameter	Sample Frequency ¹	Sample Type ²
Flow Rate (gpm)	Daily	Measure or Estimate
Total Flow Volume (gallons)	Monthly	Measure or Estimate
pH (s.u.)	Weekly	Instantaneous ³
Oil and Grease	Daily	Visual
Oil and Grease (mg/L)	Contingent	Grab ^{4,5}
Total Suspended Solids ⁶ (mg/L)	Weekly	Visual/Grab

¹ If the duration of the discharge is shorter than the required sample frequency, a minimum of one sample shall be taken for all parameters.

² See definitions section of permit for definitions.

³ pH shall be taken within 15 minutes of sample collection with a pH meter. The pH meter must be capable of simultaneous calibration to two points on the pH scale that bracket the expected pH and are approximately three standard units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment.

⁴ Oil and grease shall be visually monitored daily. If a visual sheen is observed, an oil and grease sample shall be taken and analyzed using SM5520 hexane extractable materials. An oil and grease sample shall be taken during the first day of the discharge if petroleum contaminated groundwater is expected.

⁵ An oil and grease sample shall be taken during the first day of the discharge if petroleum contaminated ground water is expected.

Benzene ⁷ (µg/L)	Weekly	Grab
Total BTEX ⁷ (µg/L)	Weekly	Grab
Toxics ⁸ (µg/L)	Weekly	Grab
Total Residual Chlorine ⁹ (mg/L)	Daily	Grab
There shall be no discharge of floating solids or visible pollutants in more than trace amounts.		
There shall be no discharge of process wastewater not identified in NOI or sanitary wastewater.		
No chemicals shall be added to the discharge without prior approval of SDDENR.		

⁶ In lieu of sampling for this parameter, the secretary may allow the facility to implement a pollution prevention plan that includes best management practices to prevent total suspended solids and other pollutants from entering the waters of the state.

⁷ Benzene and BTEX monitoring is only required if petroleum contamination is expected in the water being discharged. This monitoring will be required by the department on a case by case basis.

⁸ The specific toxics to be monitored for will be determined on a case by case basis based on the potential contamination at that site.

⁹ Total Residual Chlorine monitoring is only required for the discharge of potentially chlorinated water. This monitoring will be required by the department on a case by case basis.

3. If sampling performed by the permittee indicates a violation, the permittee shall notify SDDENR in accordance with the provisions in **Part 4.8** of this permit. The permittee shall also repeat the sampling and analysis and submit the results of the repeat analysis to the department within thirty days after becoming aware of the violation.

3.0 POLLUTION PREVENTION PLANS

3.1 Deadlines for Plan Preparation and Compliance

If the permittee develops a pollution prevention plan instead of TSS sampling, the plan must be developed and implemented prior to discontinuing TSS sampling.

3.2 Contents of the Plan

The plan shall include, at a minimum, the following items:

1. Site Description

Each plan shall provide a description of pollutant sources and other information as indicated below:

- a. The type of temporary discharge activity;
- b. Estimates of the total volume of water to be discharged;
- c. The name of the receiving waters; and
- d. A Site map indicating:
 - (1) Drainage patterns;
 - (2) Location of major structural and nonstructural controls identified in the plan;
 - (3) Location of areas where stabilization practices are expected to occur;
 - (4) Surface waters and extent of wetland acreage; and
 - (5) Location of discharge point(s).

2. Best Management Practices

The plan shall describe appropriate best management practices and when and where they will be implemented for each temporary discharge activity identified in the Notice of Intent.

3. Inspection Requirements

The permittee shall ensure that qualified personnel inspect the site on a daily basis. The inspection shall include the temporary discharge site, areas where the best management practices are being implemented, and the discharge location. These areas shall be inspected to ensure that the best management practices are operating correctly and for evidence of, or the potential for, pollutants entering the receiving waters. If any pollutants are suspected of being discharged, a sample must be taken for those parameters listed in **part 2.2** of this permit.

The permittee shall maintain a notebook recording information obtained during the inspection. At a minimum, the notebook shall include the following:

- a. Date and time of the inspection;
- b. Name of the inspector(s);
- c. Identification of operational problems and/or maintenance problems;
- d. Recommendations, as appropriate, to remedy identified problems;
- e. A brief description of any actions taken with regard to problems identified; and
- f. Other information, as appropriate.

The permittee shall maintain the notebook in accordance with proper record-keeping procedures and shall make the notebook available for inspection, upon request, by the Secretary or the U.S. Environmental Protection Agency.

3.3 Signature and Plan Review

1. The plan shall be signed in accordance with the signatory requirements and retained at the site where the temporary discharge is occurring.

2. The permittee shall make plans available upon request to the Secretary and in the case of a discharge through a municipal separate storm sewer system, to the operator of the municipal system.
3. The Secretary may notify the permittee at any time that the plan does not meet the minimum requirements of this part. Such notification shall identify those provisions of the permit which are not being met by the plan and identify which provisions require modifications in order to meet the minimum requirements. Within seven days of notification, the permittee shall make the required changes to the plan and shall submit to the Secretary a written certification that the requested changes have been made.

3.4 Keeping Plans Current

The permittee shall amend the plan whenever there is a change in design, construction, operation, or maintenance, which has a significant effect on the potential for the discharge of pollutants to the waters of the state. The plan shall also be amended if the plan proves to be ineffective in eliminating or significantly minimizing pollutants present in the temporary discharge.

4.0 MONITORING, RECORDING AND REPORTING REQUIREMENTS

4.1 Representative Sampling

Samples taken in compliance with the monitoring requirements established under **Part 2.2** shall be collected from the effluent stream prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

4.2 Monitoring Procedures

Monitoring must be conducted according to test procedures approved under ARSD 74:52:03:06, a.b.r. 40 CFR, Part 136, unless other test procedures have been specified in this permit.

4.3 Reporting of Monitoring Results

Effluent monitoring results obtained during the previous month shall be summarized and reported on a Discharge Monitoring Report Form (EPA No. 3320-1), postmarked no later than the 28th day of the month following the completed reporting period. If no discharge occurs during the reporting period, "no discharge" shall be reported. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with the **Signatory Requirements** (see Part 4.14), and submitted to the Secretary at the following address:

original to: South Dakota Department of
Environment and Natural Resources
Surface Water Quality Program
PMB 2020
Joe Foss Building
523 East Capitol Avenue
Pierre, South Dakota 57501-3182

4.4 Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any Compliance Schedule of this permit shall be submitted no later than 14 days following each schedule date.

4.5 Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this permit, using test procedures approved under ARSD 74:52:03:06, a.b.r. 40 CFR 136 or as specified in this permit, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR. Such increased frequency shall also be indicated.

4.6 Records Contents

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The initials or name(s) of the individual(s) who performed the sampling or measurements;
3. The date(s) analyses were performed;
4. The time analyses were initiated;
5. The initials or name(s) of individual(s) who performed the analyses;
6. References and written procedures, when available, for the analytical techniques or methods used; and,

7. The results of such analyses, including the bench sheets, instrument readouts, computer disks or tapes, etc., used to determine these results.

4.7 Retention of Records

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the Secretary at any time. Data collected on site, copies of Discharge Monitoring Reports, and a copy of this permit must be maintained on site during the duration of activity at the permitted location.

4.8 Twenty-four Hour Notice of Noncompliance Reporting

1. The permittee shall report any noncompliance which may endanger health or the environment as soon as possible, but no later than twenty-four (24) hours from the time the permittee first became aware of the circumstances. The report shall be made to the State of South Dakota at (605) 773-3231 and the EPA, Region VIII, Emergency Response Branch at (303) 293-1788.
2. The following occurrences of noncompliance shall be reported by telephone to the Secretary at (605) 773-3351 by the first workday (8:00 a.m. – 5:00 p.m. Central Time) following the day the permittee became aware of the circumstances:
 - a. Any unanticipated bypass which exceeds any effluent limit in the permit (See **Part 5.6 – Bypass of Treatment Facilities**);
 - b. Any upset which exceeds any effluent limit in the permit (See **Part 5.7 – Upset Conditions**); or
 - c. Violation of a maximum daily discharge limit for any of the pollutants listed in the permit to be reported within 24 hours.
3. A written submission shall also be provided within five days of the time that the permittee becomes aware of the circumstances. The written submission shall contain:
 - a. A description of the noncompliance and its cause;
 - b. The period of noncompliance, including exact dates and times;
 - c. The estimated time noncompliance is expected to continue if it has not been corrected; and,
 - d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
4. The Secretary may waive the written report on a case-by-case basis if the oral report has been received within 24 hours by the Surface Water Quality Program, South Dakota Department of Environment and Natural Resources, Pierre, (605) 773-3351.
5. Reports shall be submitted to the addresses in **Part 4.3 – Reporting of Monitoring Results**.

4.9 Other Noncompliance Reporting

Instances of noncompliance not required to be reported within 24 hours shall be reported at the time that monitoring reports for **Part 4.3** are submitted. The reports shall contain the information listed in **Part 4.8.3**.

4.10 Changes in Discharge of Toxic Substances

Notification shall be provided to the Secretary as soon as the permittee knows of, or has reason to believe that any activity has occurred or will occur which would result in the discharge of a toxic pollutant, as defined in ARSD 74:52:01:01, which is not limited in the permit and if that discharge will exceed the highest of the following notification levels:

1. One hundred micrograms per liter (100 µg/L);
2. Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile;
3. Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
4. One milligram per liter (1 mg/L) for antimony; or
5. Five (5) times the maximum concentration value reported for that pollutant in the permit application.

4.11 Planned Changes

The permittee shall give notice to the Secretary as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged. This notification applies to pollutants which are not subject to effluent limits in the permit. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source (see ARSD, Chapter 74:52:01:01(30)).

4.12 Duty to Provide Information

The permittee shall furnish to the Secretary, within a reasonable time, any information which the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall also furnish to the Secretary, upon request, copies of records required to be kept by this permit.

4.13 Other Information

When the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Secretary, it shall promptly submit such facts or information.

4.14 Signatory Requirements

All applications, reports or information submitted to the Secretary shall be signed and certified.

1. All permit applications shall be signed as follows:
 - a. For a corporation: by a responsible corporate officer;
 - b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively;
 - c. For a municipality, State, Federal, or other public agency: by either a principal executive officer or ranking elected official.
2. All reports required by the permit and other information requested by the Secretary shall be signed by a person described above or by a duly authorized representative of that person. A person is a duly authorized representative only if:

- a. The authorization is made in writing by a person described above and submitted to the Secretary; and,
 - b. The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility, such as the position of plant manager, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters. (A duly authorized representative may thus be either a named individual or any individual occupying a named position.)
3. Changes to authorization. If an authorization under paragraph 2 of this section is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph 2 of this section must be submitted to the Secretary prior to or together with any reports, information, or applications to be signed by an authorized representative.
 4. Certification. Any person signing a document under this section shall make the following certification:

“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.”

5.0 COMPLIANCE RESPONSIBILITIES

5.1 Duty to Comply

The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. The permittee shall give the director advance notice of any planned changes at the permitted facility or of an activity which may result in permit noncompliance.

5.2 Continuation of the Expired General Permit

1. An expired general permit continues in force and effect until a new general permit is issued. Any permittee with coverage under the general permit at the time of expiration will continue to have coverage until a new general permit is issued.
2. If the permittee wishes to continue an activity regulated by this general permit after its expiration date, the permittee must submit a Notice of Intent. Periodically during the term of this permit and at the time of reissuance, the permittee may be requested to reaffirm its eligibility to discharge under this general permit.

5.2 Duty to Mitigate

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5.3 Proper Operation and Maintenance

The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit. However, the permittee shall operate, as a minimum, one complete set of each main line unit treatment process whether or not this process is needed to achieve permit effluent compliance.

5.4 Need to Halt or Reduce Activity not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

5.5 Inspection and Entry

The permittee shall allow the Secretary or EPA, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and,
4. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by the Act, any substances or parameters at any location.

5.6 Bypass of Treatment Facilities

1. Bypass not exceeding limits. The permittee may allow any bypass to occur which does not cause effluent limits to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2 and 3 of this section.
2. Notice:
 - a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 60 days before the date of the bypass.
 - b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required under **Part 4.8 – Twenty-four Hour Notice of Noncompliance Reporting**.
3. Prohibition of bypass.
 - a. Bypass is prohibited and the Secretary may take enforcement action against a permittee for a bypass, unless:
 - (1) The bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 - (2) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgement to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and,
 - (3) The permittee submitted notices as required under paragraph 2. of this section.
 - b. The Secretary may approve an anticipated bypass, after considering its adverse effects, if the Secretary determines that it will meet the three conditions listed above in paragraph 3.a. of this section.

5.7 Upset Conditions

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with technology based permit effluent limits if the requirements of paragraph 2. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review (i.e., Permittees will have the opportunity for a judicial determination on any claim of upset only in an enforcement action brought for noncompliance with technology-based permit effluent limits).
2. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - b. The permitted facility was at the time being properly operated;
 - c. The permittee submitted notice of the upset as required under **Part 4.8 – Twenty-four Hour Notice of Noncompliance Reporting**; and

- d. The permittee complied with any remedial measures required under **Part 5.2 – Duty to Mitigate**.
3. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

5.8 Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the Federal Clean Water Act for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

5.9 Anticipated Noncompliance

The permittee shall give advance notice to the Secretary of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

5.10 Permit Actions

This permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

5.11 Duty to Reapply

If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit. The application should be submitted at least 180 days before the expiration date of this permit.

5.12 Availability of Reports

Except for data determined to be confidential under ARSD 74:52:02:17, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of SDDENR and EPA. Permit applications, permits and effluent data shall not be considered confidential.

5.13 Property Rights

The Secretary's issuance of this permit, adoption of design criteria, and approval of plans and specifications, does not convey any property rights of any sort, any exclusive privileges, any authorization to damage, injure or use any private property, any authority to invade personal rights, any authority to violate federal, state or local laws or regulations, or any taking, condemnation or use of eminent domain against any property owned by third parties. The State does not warrant that the permittee's compliance with this permit, design criteria, approved plans and specifications, and operation under this permit, will not cause damage, injury or use of private property, an invasion of personal rights, or violation of federal, state or local laws or regulations. The permittee is solely and severally liable for all damage, injury or use of private property, invasion of personal rights, infringement of federal, state or local laws and regulations, or taking or condemnation of property owned by third parties, which may result from actions taken under the permit.

5.14 Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

5.15 Requiring an Individual Permit or an Alternative General Permit

The Secretary may either deny coverage or require any person requesting coverage under the general permit to apply for, and obtain, an individual Surface Water Discharge permit or an alternative general permit. Cases where an individual or alternative general permit may be required include, but are not limited to the following:

1. The permittee is not in compliance with the conditions of the general permit;
2. A change has occurred in the availability of demonstrated technologies or practices for the control or abatement of pollutants applicable to construction sites;
3. Effluent limitation guidelines are promulgated for point sources covered by this general permit;
4. A water quality management plan containing requirements applicable to discharges covered by this general permit is approved;
5. The discharge is a significant contributor of pollution to waters of the state or it presents a health hazard; or
6. The discharge is to an impaired water body where the best management practices are not sufficient to implement the assigned waste load allocations.

5.16 Transfers

This permit may be automatically transferred to a new permittee if:

1. The current permittee notifies the Secretary at least 30 days in advance of the proposed transfer date;
2. The notice includes a written agreement between the existing and new permittees containing a specific date for transfer of permit responsibility, coverage, and liability between them; and,
3. The Secretary does not notify the existing permittee and the proposed new permittee of his or her intent to modify, or revoke and reissue the permit. If this notice is not received, the transfer is effective on the date specified in the agreement mentioned in paragraph 2. above.

5.17 Reopener Provision

This permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limits (and compliance schedule, if necessary), or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards: The water quality standards of the receiving water(s) to which the permittee discharges are modified in such a manner as to require different effluent limits than contained in this permit.
2. Total Maximum Daily Load: Additional controls in the permit are necessary to implement a total maximum daily load approved by the Secretary and/or EPA.
3. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted which calls for different effluent limits than contained in this permit.

6.0 PENALTIES FOR NONCOMPLIANCE

6.1 Penalties for Violations of Permit Conditions

Any person who violates a permit condition shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state. Except as provided in permit conditions on **Part 5.6 – Bypass of Treatment Facilities** and **Part 5.7 – Upset Conditions**, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

6.2 Penalties for Tampering

Any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit is in violation of the provisions of SDCL 34A-2-77, and is subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, such violators are subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, or for damages to the environment of this state.

6.3 Penalties for Falsification of Reports

Any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a Class 1 misdemeanor. In addition to a jail sentence authorized by SDCL 22-6-2, a Class 1 misdemeanor imposed by SDCL, Chapter 34A-2, is subject to a criminal fine not to exceed ten thousand dollars per day of violation. The violator is also subject to a civil penalty not to exceed ten thousand dollars per day of violation, for damages to the environment of this state, or both.

6.4 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Federal Clean Water Act.

ATTACHMENT A

ATTACHMENT B

APPENDIX

16

MINNESOTA PERMIT

**GENERAL PERMIT
AUTHORIZATION TO DISCHARGE
STORMWATER ASSOCIATED WITH CONSTRUCTION ACTIVITY
UNDER THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM/
STATE DISPOSAL SYSTEM PROGRAM**

ISSUANCE DATE: August 1, 2013

EXPIRATION DATE: August 1, 2018

This permit is issued in compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et seq.), 40 Code of Federal Regulations (CFR) 122, 123, 124, and 450 as amended; Minnesota Statute chapters 115 and 116, as amended, and Minn. R. chs. 7001, 7050, 7060 and 7090.

This permit regulates discharges associated with **stormwater** affected by **construction activity** to **waters of the state** of Minnesota. This permit covers the **stormwater** discharges identified in Part I.A. of this permit. The limitations on permit coverage are identified in Part I.B. of this permit.

Minn. R. 7090.2040 requires **owner(s)** of a **construction activity** to complete a **Stormwater Pollution Prevention Plan (SWPPP)** prior to submitting an application for this permit and prior to conducting any **construction activity**. No person shall commence **construction activity** covered by Part I.A. until permit coverage under this permit is effective or, if applicable, until the Minnesota Pollution Control Agency (MPCA) has issued an individual **National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) Construction Stormwater (CSW) Permit** for the **project**.

Unless notified by the MPCA to the contrary, applicants who submit a complete and accurate application (including permit fee) in accordance with the requirements of this permit are authorized to discharge **stormwater** associated with construction activity under the terms and conditions of this permit as described in Part II.B.

Signature: 

John Linc Stine
Commissioner

If you have questions on this permit, including the specific permit requirements, permit reporting or permit compliance status, please contact the appropriate MPCA offices. Note that **bolded** words throughout the permit are defined in Appendix B.

**Minnesota Pollution Control Agency
Municipal Division
Construction Stormwater Program
520 Lafayette Road North
St. Paul, MN 55155-4194
Telephone: 651-296-6300
Toll free in MN: 800-657-3864**

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PART I. PERMIT COVERAGE AND LIMITATIONS

I.A. PERMIT COVERAGE

1. This permit is required for **construction activity** that results in land disturbance of equal to or greater than one acre or a **common plan of development or sale** that disturbs greater than one acre, and authorizes, subject to the terms and conditions of this permit, the discharge of **stormwater** associated with **construction activity**.

Construction activity does not include a disturbance to the land of less than five (5) acres for the purpose of routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility. Pavement rehabilitation that does not disturb the underlying soils (e.g., mill and overlay **projects**) is not considered construction activity.

2. This permit covers all areas of the State of Minnesota.
3. Coverage under this permit is not required when all stormwater from **construction activity** is routed directly to and treated by a "treatment works", as defined in Minn. Stat. § 115.01, subd. 21, that is operated under an individual **NPDES/SDS** permit with a Total Suspended Solids effluent limit for all treated runoff.
4. Previously Permitted Ongoing **Projects: Permittee(s)** of ongoing **projects** covered initially under the previous MPCA-issued **NPDES/SDS** Construction Stormwater General Permit (issuance date August 1, 2008) are granted coverage under this reissued permit.
 - a. The **Permittee(s)** of those ongoing **projects** shall amend the **SWPPP** for the **project** to meet the requirements of this reissued permit no later than 18 months after the issuance date of this reissued permit if the termination-of-coverage requirements in Part II.C. will not be met within 18 months of the issuance date of this reissued permit and shall thereafter comply with this permit. However, additional permanent treatment required in this reissued permit is not required for previously permitted **projects**.
 - b. If the previously permitted ongoing **project** will meet the termination-of-coverage requirements in Part II.C. within 18 months of the issuance date of this reissued permit, the **Permittee(s)** shall comply with the 2008 construction general permit until the **project** is complete and a **Notice of Termination (NOT)** consistent with Part II.C. of this reissued permit is submitted.
 - c. If a previously permitted ongoing **project** will not be able to meet the terms and conditions of this reissued permit (other than the additional permanent treatment requirement) and will continue longer than 18 months after the issuance date of this permit, the **Permittee(s)** shall apply for an individual permit in accordance with Minn. R. ch. 7001.

I.B. LIMITATIONS OF COVERAGE

This permit does not authorize discharges related to the following activities:

1. Discharges or releases that are not **stormwater** (except those non-**stormwater** discharges

authorized under Part IV.D.).

2. The placement of fill into **waters of the state** requiring local, state or federal authorizations (such as U.S. Army Corps of Engineers Section 404 permits, Minnesota Department of Natural Resources Public Waters Work Permits or Local Governmental Unit Wetland Conservation Act replacement plans or determinations).
3. Discharges associated with industrial activity except for **construction activity**. Discharges associated with industrial activity may need to obtain coverage under a separate NPDES/SDS permit once day-to-day operational activities commence even if construction is ongoing.
4. Discharges from non-point source agricultural and silvicultural activities excluded from **NPDES** permit requirements under 40 CFR pt. 122.3(e).
5. Discharges to the waters identified below unless the requirements of Appendix A are complied with:
 - a. Discharges into outstanding resource value waters as listed in Minn. R. 7050.0180, subp. 3, 4, 5, 6, 6a and 6b.
 - b. Discharges into trout waters as listed in Minn. R. 6264.0050, subp. 2 and 4.
 - c. Discharges into **wetlands** as defined in Minn. R. 7050.0186 subd.1a.B.
 - d. Discharges from **projects** that have not completed applicable Environmental Review requirements under state or federal laws.
 - e. Discharges that adversely impact or contribute to adverse impacts on a state or federally listed endangered or threatened species or adversely modify a designated critical habitat.
 - f. Discharges that adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites.
6. Discharges to waters identified as impaired pursuant to section 303(d) of the federal Clean Water Act (33 U.S.C. § 303(d)) where the identified pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment), and with or without a U.S. Environmental Protection Agency (USEPA) approved Total Maximum Daily Load (TMDL) for any of these identified pollutant(s) or stressor(s), unless the applicable requirements of Part III.A.8. are met.

PART II. SUBMITTING THE APPLICATION

II.A. PREREQUISITE FOR SUBMITTING A PERMIT APPLICATION

The **owner** must develop an accurate and complete **SWPPP** in accordance with Part III. (Stormwater Discharge Design Requirements) of this permit prior to submitting the application for coverage. The **SWPPP** is not required to be submitted to the MPCA (unless the **project** size is 50 acres or more and will discharge to certain waters as described in Part II.B.1.b.) but is to be retained by the **owner** in

accordance with Part III.E. (Record Retention). The **owner's** failure to prepare an accurate and complete **SWPPP** prior to submitting the application is grounds for MPCA to revoke the permit.

II.B. APPLICATION AND DURATION OF COVERAGE

1. Application Required.

- a. The **owner** and **operator** shall submit a complete and accurate on-line application form with the appropriate fee to the MPCA for each **project** that disturbs one (1) or more acres of land or for a **common plan of development or sale** that will ultimately disturb one (1) or more acres. If the applicant is not able to apply on-line, contact the MPCA for technical assistance or a waiver.
 - b. For certain **projects** or **common plans of development or sale** disturbing 50 acres or more, the application must be submitted at least 30 days before the start of **construction activity**. This requirement pertains to **projects** that have a discharge point on the **project** that is within one mile (**aerial radius measurement**) of, and flows to, a special water listed in Appendix A, Part B. or waters listed as impaired under section 303(d) of the federal Clean Water Act (see the MPCA's website) where the identified pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). Applicants of **projects** listed in this part must submit a complete and accurate application form and **SWPPP** including all calculations for the Permanent **Stormwater** Management System (see Parts III.A.-D.).
2. All persons meeting the definition of **owner** and **operator** are **Permittees** and must be listed on the application. The **owner** is responsible for compliance with all terms and conditions of this permit. The **operator** is responsible for compliance with Parts II.B, II.C, III.B-F, IV, V, and applicable **construction activity** requirements found in Appendix A, Part C. of this permit and is jointly responsible with the **owner** for compliance with those portions of the permit.
 3. Permit Coverage Effective Date: The commencement of any **construction activity** (e.g., land disturbing activities) covered under Part I.A. of this permit is prohibited until permit coverage under this permit is effective.
 - a. For **projects** listed in Part II.B.1.a. permit coverage will become effective seven (7) calendar days after the electronic submittal date or the postmarked date of a complete application form.
 - b. For **projects** listed in Part II.B.1.b. permit coverage will become effective 30 calendar days after the electronic submittal date, the postmarked date or MPCA date stamp (whichever is first) of the complete application. For incomplete applications (e.g., lack of fees or signature) or incomplete **SWPPPs** (e.g., missing calculations, **Best Management Practice (BMP)** specifications, estimated quantities of the **BMPs**, or timing of **BMP** installation narrative), the permit becomes effective 30 calendar days after all required information is submitted.
 4. Coverage Notification: **Permittee(s)** will be notified of coverage in a manner as determined by the **Commissioner** (e.g., e-mail, online notification or letter).

5. Change of Coverage: For construction **projects** where the **owner** or **operator** changes, (e.g., an original developer sells portions of the property to various homebuilders or sells the entire site to a new **owner**) the current **owner** and the new **owner** or **operator** shall submit a complete permit modification on a form provided by the **Commissioner**. The form must be submitted prior to the new **owner** or **operator** commencing **construction activity** on site or in no case later than 30 days after taking ownership of the property. The **owner** shall provide a **SWPPP** to the new **owner** and **operator** that specifically addresses the remaining **construction activity**.

II.C. TERMINATION OF COVERAGE

1. Termination of coverage when construction is complete: All **Permittee(s)** must submit a **Notice of Termination (NOT)** to the MPCA on a form provided by the **Commissioner** within 30 days after all activities required for **Final Stabilization** (see Part IV.G.) are complete. The **Permittee(s)**' coverage under this permit terminates at midnight on the submission date of the **NOT**.
2. Termination of coverage when transfer of ownership occurs: All **Permittee(s)** must submit a **NOT** on a form provided by the **Commissioner** within 30 days after selling or otherwise legally transferring the entire site, including permit responsibility for roads (e.g., street sweeping) and **stormwater** infrastructure final clean out, or transferring portions of a site to another party. The **Permittee(s)**' coverage under this permit terminates at midnight on the submission date of the **NOT**.
3. **Permittee(s)** may terminate permit coverage prior to completion of all **construction activity** if all of the following conditions are met. After the permit is terminated under this Part, if there is any subsequent development on the remaining portions of the site where **construction activity** was not complete, new permit coverage must be obtained if the subsequent development itself or as part of the remaining **common plan of development or sale** will result in land disturbing activities of one (1) or more acres in size.
 - a. **Construction activity** has ceased for at least 90 days.
 - b. At least 90 percent (by area) of all originally proposed **construction activity** has been completed and **permanent cover** established on those areas.
 - c. On areas where **construction activity** is not complete, **permanent cover** has been established.
 - d. The site is in compliance with Part IV.G.2. and Part IV.G.3. and where applicable, Part IV.G.4. or Part IV.G.5.
4. **Permittee(s)** may terminate coverage upon approval by the MPCA if information is submitted to the MPCA documenting that termination is appropriate because the project is cancelled.

PART III. **STORMWATER DISCHARGE DESIGN REQUIREMENTS**

III.A. STORMWATER POLLUTION PREVENTION PLAN CONTENT

The **owner** must develop a **Stormwater Pollution Prevention Plan (SWPPP)**. The **SWPPP** shall be

completed prior to submitting any permit application and prior to conducting any **construction activity** by any required **Permittee(s)**. For **stormwater** discharges from **construction activity** where the **owner** or **operator** changes, the new **owner** or **operator** can implement the original **SWPPP** created for the **project**, modify the original **SWPPP**, or develop and implement their own **SWPPP**. **Permittee(s)** shall ensure either directly or through coordination with other **Permittee(s)** that their **SWPPP** meets all terms and conditions of this permit and that their activities do not render another party's **erosion prevention** and **sediment control BMPs** ineffective. The **SWPPP** must include the following:

1. A description of the **construction activity**: The description must be a combination of narrative, plan sheets, and (if appropriate) standard detail sheets that address the foreseeable conditions, at any stage in the construction or post construction activities. The **SWPPP** must identify the potential for discharge of sediment and/or other potential pollutants from the site. The **SWPPP** must propose **erosion prevention and sediment control BMPs** to control the discharge of sediment and/or other potential pollutants from the site.
2. Knowledgeable person/chain of responsibility: As part of the **SWPPP**, the **owner** must identify a person knowledgeable and experienced in the application of **erosion prevention and sediment control BMPs** who will oversee the implementation of the **SWPPP**, and the installation, inspection and maintenance of the **erosion prevention and sediment control BMPs** (see Part III.F.1.) before and during construction. The **owner** must identify in the **SWPPP** who will have the responsibility for long-term operation and maintenance of the Permanent **Stormwater Management System** (see Part III.D.). The **owner** shall include in the **SWPPP** a chain of responsibility with all **operators** on the site, or if not known, the title or position of the responsible party, to ensure that the **SWPPP** will be implemented and stay in effect until the construction **project** is complete, the entire site has undergone **Final Stabilization**, and an **NOT** has been submitted to the MPCA. Once the identity of the responsible party is known, the **SWPPP** must be amended to include this information.
3. Training documentation: The **Permittee(s)** shall ensure the individuals identified in Part III.F. have been trained in accordance with this Permit's training requirements. The **Permittee(s)** shall ensure the training is recorded in or with the **SWPPP** before the start of construction or as soon as the personnel for the **project** have been determined. Documentation shall include:
 - a. Names of the personnel associated with this **project** that are required to be trained per Part III.F.1. of this permit.
 - b. Dates of training and name of instructor(s) and entity providing training.
 - c. Content of training course or workshop including the number of hours of training.
4. Designs, calculations, and narrative: The **SWPPP** must incorporate the requirements of Part III (**Stormwater Discharge Design Requirements**) including calculations, Part IV (**Construction Activity Requirements**) and Appendix A for the **project**. A narrative describing the timing for installation of all **erosion prevention and sediment control BMPs** and permanent **stormwater management systems** required in Part III, Part IV and Appendix A must also be included in the **SWPPP**.
5. **SWPPP** components: The **SWPPP** requirements must be incorporated into the **project's** final

plans and specifications and/or **project** documentation, as appropriate, and must include:

- a. Location and type of all temporary and permanent **erosion prevention** and **sediment control BMPs** along with procedures to be used to establish additional temporary **BMPs** as necessary for the site conditions during construction. **Standard details** and/or specifications for the **BMPs** used on the **project** must be included in the final plans and specifications for the **project**.
- b. Quantities: Estimated preliminary quantities tabulation anticipated at the start of the **project** for the life of the **project** must be included for all **erosion prevention** and **sediment control BMPs** in the **SWPPP** (e.g., linear feet of silt fence or ft² of erosion control blanket).
- c. Impervious surface: The number of acres of **impervious surface** for both pre- and post-construction must be specified.
- d. Site map: A site map with existing and final grades, including dividing lines and direction of flow for all pre- and post-construction **stormwater** runoff drainage areas located within the **project** limits must be included. The site map must indicate the areas of **steep slopes**. The site map must also include **impervious surfaces**, soil types and locations of potential pollutant-generating activities as identified in Part IV.F.
- e. Locations of areas not to be disturbed: Buffer zones, as required for temporary **BMPs** during construction in Part IV.C.9., or if required as permanent **BMPs** in Appendix A, Part C.3., must be described and identified on plan sheets or **project** maps in the **SWPPP**.
- f. Construction phasing: Location of areas where construction will be phased to minimize duration of exposed soil areas must be described.
- g. Maps of surface waters and wetlands: The **SWPPP** must include a map of all **surface waters**, existing **wetlands**, and **stormwater** ponds or basins which can be identified on maps such as United States Geological Survey 7.5 minute quadrangle maps, the National Wetland Inventory map or equivalent maps within one mile (**aerial radius measurement**) from the **project** boundaries that will receive **stormwater** from the construction site, during or after construction. Where **surface waters** receiving **stormwater** associated with **construction activity** will not fit on the plan sheet, they must be identified with an arrow, indicating both direction and distance to the **surface water**. The **SWPPP** must identify if the **surface water** is a special or impaired water. The site map must also show **construction activity** areas that are adjacent to and drain to **Public Waters** for which the Department of Natural Resources has promulgated "work in water restrictions" during specified fish spawning time frames.
- h. **Final stabilization**: Methods to be used for **Final Stabilization** of all exposed soil areas must be described.
- i. **BMP design factors**: The **SWPPP** must account for the following factors in designing the temporary **erosion prevention** and **sediment control BMPs**:
 - i. The expected amount, frequency, intensity, and duration of precipitation.
 - ii. The nature of **stormwater** runoff and run-on at the site, including factors such as

expected flow from **impervious surfaces**, slopes, and site drainage features.

- iii. If any **stormwater** flow will be channelized at the site, the **Permittee(s)** must design **BMPs** to control both peak flowrates and total **stormwater** volume to minimize erosion at outlets and to minimize downstream channel and streambank erosion.
 - iv. The range of soil particle sizes expected to be present on the site.
- j. Soil Management: Methods used to minimize soil compaction and preserve topsoil must be described. Minimizing soil compaction is not required where the function of a specific area of the site dictates that it be compacted.
 - k. Maintenance plan: For **projects** that include permanent **stormwater** treatment systems, the **SWPPP** must include a maintenance plan identifying who will be performing future maintenance of the system.
 - l. Chemical treatments: Any specific chemicals and the chemical treatment systems that may be used for enhancing the sedimentation process on the site, and how compliance will be achieved with the requirements in Part IV.C.10., must be described.
 - m. Documentation of **infeasibility**: If the **Permittee(s)** determine(s) that compliance with the requirement for temporary sediment basins (Part III.C.) is **infeasible** on the **project** site; the **Permittee(s)** must document that determination and the substitute **BMPs** in the **SWPPP**. If **Permittee(s)** cannot obtain right-of-way for the permanent stormwater management system; the **Permittee(s)** must document the infeasibility of obtaining right-of-way (Part III.D.)
6. Stormwater pollution mitigation measures identified in environmental review or other required review: The **SWPPP** must include any **stormwater** mitigation measures approved as part of a final environmental review document, endangered species review, archeological or other required local, state or federal review conducted for the **project**. For the purposes of this permit provision, mitigation measures means actions necessary to avoid, minimize, or rectify (e.g., repairing, rehabilitating, restoring), reducing, eliminating or compensating for impacts related to: (1) **stormwater** discharges associated with the **project's construction activity**; and (2) **erosion prevention, sediment control** and the Permanent **Stormwater** Management System for the **project**.
 7. Karst areas: The **SWPPP** must identify additional or different measures necessary (e.g. impervious liner in pond bottom) to assure compliance with **surface and groundwater** standards in Minn. R. chs. 7050 and 7060 in karst areas and to ensure protection of drinking water supply management areas (see Minn. R. 4720.5100, subp. 13).
 8. Impaired Waters and Total Maximum Daily Loads (TMDLs): The **SWPPP** must address the following:
 - a. For **projects** that have a discharge point on the **project** that is within one mile (**aerial radius measurement**) of and which flows to an impaired water, the **Permittee(s)** must identify the impaired water(s) in the **SWPPP**, and whether or not there is a USEPA-approved TMDL for the pollutant(s) or stressor(s) identified in Appendix A, Part B.10. Unless otherwise notified by the MPCA in writing, the **Permittee(s)**' identification of impaired waters must be based

on the most recent USEPA approved section 303(d) Clean Water Act list of impaired waters and USEPA approved TMDLs at the time a complete permit application is submitted. The **Permittee(s)**' identification must include those TMDLs, applicable to the **project's stormwater** discharge, that were approved at any time prior to permit application submittal and are still in effect.

- b. If the TMDL identifies specific implementation activities regarding construction **stormwater** that would apply to the site discharges, the **Permittee(s)** must include the **BMPs** identified in the TMDL and any other specific construction **stormwater** related implementation activities identified in the TMDL.

III.B. SWPPP AMENDMENTS

The **Permittee(s)** must amend the **SWPPP** as necessary to include additional requirements, such as additional or modified **BMPs** that are designed to correct problems identified or address situations whenever:

1. There is a change in design, construction, operation, maintenance, weather or seasonal conditions that has a significant effect on the discharge of pollutants to **surface waters** or **underground waters**.
2. Inspections or investigations by site **owner** or **operators**, USEPA or MPCA officials indicate the **SWPPP** is not effective in eliminating or significantly minimizing the discharge of pollutants to **surface waters** or **underground waters** or that the discharges are causing water quality standard exceedances (e.g., nuisance conditions as defined in Minn. R. 7050.0210, subp. 2).
3. The **SWPPP** is not achieving the general objectives of minimizing pollutants in **stormwater** discharges associated with **construction activity**, or the **SWPPP** is not consistent with the terms and conditions of this permit.
4. At any time after permit coverage is effective, the MPCA may determine that the **project's stormwater** discharges may cause, have reasonable potential to cause, or contribute to non-attainment of any applicable water quality standard, or that the **SWPPP** does not incorporate the applicable requirements in Part III.A.8., (Impaired Waters and TMDLs). If a water quality standard changes during the term of this permit, the MPCA will make a determination as to whether a modification of the SWPPP is necessary to address the new standard. If the MPCA makes such determination(s) or any of the determinations in Parts III.B.1.-3., the MPCA will notify the **Permittee(s)** in writing. In response, the **Permittee(s)** must amend the **SWPPP** to address the identified concerns and submit information requested by the MPCA, which may include an individual permit application. If the MPCA's written notification requires a response, failure to respond within the specified timeframe constitutes a permit violation.

III.C. TEMPORARY SEDIMENT BASINS

Where ten (10) or more acres of disturbed soil drain to a common location, the **Permittee(s)** must provide a temporary sediment basin to provide treatment to the runoff before it leaves the construction site or enters **surface waters**. A temporary sediment basin may be converted to a permanent basin after construction is complete. The temporary basin is no longer required when

permanent cover has reduced the acreage of disturbed soil to less than ten (10) acres draining to a common location. The **Permittee(s)** is/are encouraged, but not required, to install temporary sediment basins where appropriate in areas with **steep slopes** or highly erodible soils even if less than ten (10) acres drains to one area. The basins must be designed and constructed according to the following requirements:

1. The basins must provide live storage for a calculated volume of runoff from a two (2)-year, 24-hour storm from each acre drained to the basin, except that in no case shall the basin provide less than 1,800 cubic feet of live storage from each acre drained to the basin.
2. Where the calculation in Part III.C.1. has not been performed, a temporary sediment basin providing 3,600 cubic feet of live storage per acre drained to the basin shall be provided for the entire drainage area of the temporary basin.
3. Temporary basin outlets must be designed to prevent short-circuiting and the discharge of floating debris. The basin must be designed with the ability to allow complete basin drawdown for maintenance activities, and must include a **stabilized** emergency overflow to prevent failure of pond integrity. The outlet structure must be designed to withdraw water from the surface in order to minimize the discharge of pollutants, except that the use of a surface withdrawal mechanism for discharge of the basin may be temporarily suspended during frozen conditions. **Energy dissipation** must be provided for the basin outlet (see Part IV.B.5.).
4. Sediment Basins must be situated outside of surface waters and any buffer zone required under Appendix A.C.3, and must be designed to avoid draining water from **wetlands** unless the impact to the **wetland** is in compliance with the requirements of Appendix A, Part D.
5. The temporary basins must be constructed and made operational prior to 10 or more acres of disturbed soil draining to a common location.
6. Where a temporary sediment basin meeting the requirements of this part is **infeasible**, equivalent **sediment controls** such as smaller sediment basins, and/or sediment traps, silt fences, vegetative buffer strips, or any appropriate combination of measures are required for all down-slope boundaries of the construction area and for side-slope boundaries as dictated by individual site conditions. In determining whether installing a sediment basin is **infeasible**, the **Permittee(s)** must consider public safety and may consider factors such as site soils, slope, and available area on site. This determination of **infeasibility** must be documented in the **SWPPP** per Part III.A.5.m.

III.D. PERMANENT STORMWATER MANAGEMENT SYSTEM

The **Permittee(s)** shall design the **project** so that all **stormwater** discharged from the **project** during and after **construction activities** does not cause a violation of state water quality standards, including nuisance conditions, erosion in receiving channels or on downslope properties, or a significant adverse impact to **wetlands** caused by inundation or decrease of flow.

The **Permittee(s)** shall construct a permanent stormwater management system meeting the requirements of this Part, or if the **project** is located in a jurisdiction subject to a **NPDES/SDS** Municipal Separate Storm Sewer System (MS4) permit and that permit has established permanent treatment requirements that include volume reduction, the **Permittee(s)** can comply with the

permanent treatment requirements established under the MS4 permit in lieu of the permanent treatment requirements of this permit.

Where a **project's** ultimate development replaces vegetation and/or other pervious surfaces with one (1) or more acres of cumulative **impervious surface**, the **Permittee(s)** must design the **project** so that the **water quality volume** of one (1) inch of runoff from the new **impervious surfaces** created by the **project** is retained on site (i.e. infiltration or other volume reduction practices) and not discharged to a **surface water**. For purposes of this part, **surface waters** does not include man-made drainage systems that convey **stormwater** to a compliant permanent **stormwater** management system.

For those **projects** where infiltration is prohibited (see Part III.D.1.j.), the **Permittee(s)** shall consider other methods of volume reduction and the **water quality volume** (or remainder of the **water quality volume** if some volume reduction is achieved) must be treated by a wet sedimentation basin, filtration system, regional ponding or equivalent methods prior to the discharge of **stormwater** to **surface waters**.

Where the proximity to bedrock precludes the installation of any of the permanent **stormwater** management practices outlined in Part III.D., other treatment, such as grassed swales, filtration systems, smaller ponds, or grit chambers, is required prior to the discharge of **stormwater** to **surface waters**.

For work on linear **projects** with lack of right-of-way where the **Permittee(s)** cannot obtain an easement or other permission for property needed to install treatment systems capable of treating the entire **water quality volume** on site, the **Permittee(s)** must maximize the **water quality volume** that can be treated prior to discharge to **surface waters**. Treatment can be provided through other methods or combination of methods such as grassed swales, filtration systems, smaller ponds, or grit chambers, prior to discharge to **surface waters**. A reasonable attempt must be made to obtain right-of-way during the **project** planning process. Documentation of these attempts must be in the **SWPPP** per Part III.A.5.m. in the section addressing **infeasibility**.

When constructing any of the permanent **stormwater** management systems in this part, the **Permittee(s)** must incorporate the following design parameters:

1. Infiltration/Filtration

- a. Infiltration/Filtration options include but are not limited to: infiltration basins, infiltration trenches, rainwater gardens, sand filters, organic filters, bioretention areas, natural or enhanced swales, dry storage ponds with underdrain discharge, off-line retention areas, and natural depressions. Infiltration must be used only as appropriate to the site and land uses. The method selected by the **Permittee(s)** must remove settleable solids, floating materials, and oils and grease from the runoff to the maximum extent practicable before runoff enters the infiltration/filtration system. Filtration systems must be designed to remove at least 80 percent of total suspended solids. When designing the system the **Permittee(s)** must evaluate the impact of constructing an infiltration practice on existing hydrologic features (e.g., existing **wetlands**) and the system must be designed to maintain pre-existing conditions (e.g., do not breach a perched water table that is supporting a **wetland**). For a discussion of potential **stormwater** hotspots, groundwater warnings, design measures, maintenance considerations or other retention, detention, and treatment devices, see the

Minnesota Stormwater Manual found on the MPCA's website.

- b. Infiltration systems must not be excavated to final grade until the contributing drainage area has been constructed and fully **stabilized** unless rigorous erosion prevention and sediment controls are provided (Part III.D.1.c.).
- c. When an infiltration system is excavated to final grade (or within three (3) feet of final grade), the **Permittee(s)** must employ rigorous **erosion prevention** and **sediment controls** (e.g., diversion berms) to keep sediment and runoff completely away from the infiltration area. The area must be staked off and marked so that heavy construction vehicles or equipment will not compact the soil in the proposed infiltration area.
- d. To prevent clogging of the infiltration or filtration system, the **Permittee(s)** must use a pretreatment device such as a vegetated filter strip, small sedimentation basin, or water quality inlet (e.g., grit chamber) to settle particulates before the **stormwater** discharges into the infiltration or filtration system.
- e. The **Permittee(s)** must design infiltration or filtration systems that provide a **water quality volume** (calculated as an instantaneous volume) of one (1) inch of runoff (or one (1) inch minus the volume of **stormwater** treated by another system on the site) from the new impervious surfaces created by the **project**.
- f. The **Permittee(s)** must design the infiltration/filtration system to discharge the **water quality volume** routed to the system through the soil surface or filter media within 48 hours or less. Additional flows that cannot be infiltrated or filtered within 48 hours must be routed to bypass the system through a **stabilized** discharge point. The **Permittee(s)** must design the infiltration system to provide a means to visually verify that the system is discharging through the soil surface or filter media within 48 hours or less.
- g. The **Permittee(s)** shall employ appropriate on-site testing consistent with the recommendations found in the **Minnesota Stormwater Manual** to verify soil type and to ensure a minimum of three (3) feet of separation from the seasonally **saturated soils** (or from bedrock) and the bottom of the proposed infiltration/filtration system.
- h. The **Permittee(s)** must ensure filtration systems with less than three (3) feet of separation from seasonally **saturated soils** or from bedrock are constructed with an impermeable liner.
- i. The **Permittee(s)** must design adequate maintenance access (typically eight (8) feet wide).
- j. Infiltration is prohibited when the infiltration system will be constructed in:
 - i. Areas that receive discharges from vehicle fueling and maintenance.
 - ii. Areas with less than three (3) feet of separation distance from the bottom of the infiltration system to the elevation of the seasonally **saturated soils** or the top of bedrock.

- iii. Areas that receive discharges from industrial facilities which are not authorized to infiltrate industrial **stormwater** under an **NPDES/SDS** Industrial Stormwater Permit issued by the MPCA.
 - iv. Areas where high levels of contaminants in soil or groundwater will be mobilized by the infiltrating **stormwater**.
 - v. Areas of predominately Hydrologic Soil Group D (clay) soils unless allowed by a local unit of government with a current MS4 permit.
 - vi. Areas within 1,000 feet up-gradient, or 100 feet down-gradient of active karst features unless allowed by a local unit of government with a current MS4 permit.
 - vii. Areas within a Drinking Water Supply Management Area (DWSMA) as defined in Minn. R. 4720.5100, subp. 13., unless allowed by a local unit of government with a current MS4 permit.
 - viii. Areas where soil infiltration rates are more than 8.3 inches per hour unless soils are amended to slow the infiltration rate below 8.3 inches per hour or as allowed by a local unit of government with a current MS4 permit.
2. Wet Sedimentation Basin
- a. The **Permitte(s)** must design the basin to have a permanent volume of 1,800 cubic feet of storage below the outlet pipe for each acre that drains to the basin. The basin's permanent volume must reach a minimum depth of at least three (3) feet and must have no depth greater than 10 feet. The basin must be configured such that scour or resuspension of solids is minimized.
 - b. The **Permittee(s)** must design basins to provide live storage for a **water quality volume** (calculated as an instantaneous volume) of one (1) inch of runoff (or one (1) inch minus the volume of **stormwater** treated by another system on the site) from the new impervious surfaces created by the **project**.
 - c. The **Permittee(s)** must design basin outlets such that the **water quality volume** is discharged at no more than 5.66 cubic feet per second (cfs) per acre of surface area of the pond.
 - d. The **Permittee(s)** must design basin outlets to prevent short-circuiting and the discharge of floating debris. Basin outlets must have **energy dissipation**.
 - e. The **Permittee(s)** must design the basin to include a **stabilized** emergency overflow to accommodate storm events in excess of the basin's hydraulic design.
 - f. The **Permittee(s)** must design adequate maintenance access (typically eight (8) feet wide).
 - g. The **Permittee(s)** must design sediment Basins to be situated outside of **surface waters** and any buffer zone required under Appendix A, Part C.3. and they must be designed to avoid draining water from **wetlands** unless the impact to the **wetland** is in compliance with the requirements of Appendix A, Part D.

3. Regional Ponds

When the entire **water quality volume** cannot be retained onsite, the **Permittee(s)** can use or create regional ponds provided that they are constructed ponds, not a natural **wetland** or water body, (**wetlands** used as regional ponds must be mitigated for, see Appendix A, Part D) and designed in accordance with this permit's design requirements (Part III.D.2.) for all water from **impervious surfaces** that reach the pond. **Permittee(s)** shall not construct regional ponds in **wetlands**, regardless of their condition, quality or designation by local plans, unless the mitigative sequence in Appendix A, Part D. of this permit has been completed. There must be no significant degradation of the waterways between the **project** and the regional pond. The **owner** must obtain written authorization from the applicable local governmental unit (LGU) or private entity that owns and maintains the regional pond. The LGU's or private entity's written authorization must identify that the regional pond will discharge the **water quality volume** (one (1) inch of runoff from the impervious watershed area) at no more than 5.66 cfs per acre of surface area of the pond. The **owner** must include the LGU's or private entities' written authorization in the **SWPPP**. The LGU's or private entity's written authorization must be obtained before the **owner** finalizes the **SWPPP** and before any application for this permit is made to the MPCA.

III.E RECORD RETENTION

The **SWPPP** (original or copies) including, all changes to it, and inspections and maintenance records must be kept at the site during construction by the **Permittee(s)** who has/have operational control of that portion of the site. The **SWPPP** can be kept in either the field office or in an on-site vehicle during normal working hours.

All **owner(s)** must keep the following records on file for three (3) years after submittal of the **NOT** as outlined in Part II.C. This does not include any records after submittal of the **NOT**.

1. The final SWPPP
2. Any other **stormwater** related permits required for the **project**
3. Records of all inspection and maintenance conducted during construction (Part IV.E. Inspections and Maintenance)
4. All permanent operation and maintenance agreements that have been implemented, including all right-of-way, contracts, covenants and other binding requirements regarding perpetual maintenance and
5. All required calculations for design of the temporary and permanent **Stormwater** Management Systems.

III.F. TRAINING REQUIREMENTS

The **Permittee(s)** shall ensure the following individuals identified in this part have been trained in accordance with this Permit's training requirements.

1. Who must be trained:
 - a. Individual(s) preparing the **SWPPP** for the **project**
 - b. Individual(s) overseeing implementation of, revising, and amending the **SWPPP** and individual(s) performing inspections as required in Part IV.E. One of these individual(s) must be available for an onsite inspection within 72 hours upon request by the MPCA.
 - c. Individual(s) performing or supervising the installation, maintenance and repair of **BMPs**. At least one individual on a **project** must be trained in these job duties.
2. Training content: The content and extent of training must be commensurate with the individual's job duties and responsibilities with regard to activities covered under this permit for the **project**. At least one individual present on the permitted **project** site (or available to the **project** site in 72 hours) must be trained in the job duties described in Part III.F.1.b. and Part III.F.1.c.
3. The **Permittee(s)** shall ensure that the individuals are trained by local, state, federal agencies, professional organizations, or other entities with expertise in **erosion prevention, sediment control**, permanent **stormwater** management and the Minnesota **NPDES/SDS** Construction Stormwater Permit. An update refresher-training must be attended every three (3) years starting three (3) years from the issuance date of this permit.

PART IV. CONSTRUCTION ACTIVITY REQUIREMENTS

IV.A. STORMWATER POLLUTION PREVENTION PLAN

The **Permittee(s)** must implement the **SWPPP** and the requirements of this part. The **BMPs** identified in the **SWPPP** and in this permit must be selected, installed, and maintained in an appropriate and functional manner that is in accordance with relevant manufacturer specifications and accepted engineering practices.

IV.B. EROSION PREVENTION PRACTICES

1. The **Permittee(s)** must plan for and implement appropriate **BMPs** such as construction phasing, vegetative buffer strips, horizontal slope grading, inspection and maintenance of Part IV.E. and other construction practices that minimize erosion as necessary to comply with this permit and protect **waters of the state**. The location of areas not to be disturbed must be delineated (e.g., with flags, stakes, signs, silt fence etc.) on the **project** site before work begins. The **Permittee(s)** must minimize the need for disturbance of portions of the **project** that have **steep slopes**. For those sloped areas which must be disturbed, the **Permittee(s)** must use techniques such as phasing and **stabilization** practices designed for **steep slopes** (e.g., slope draining and terracing).
2. The **Permittee(s)** must **stabilize** all exposed soil areas (including stockpiles). **Stabilization** must be **initiated immediately** to limit soil erosion whenever any **construction activity** has permanently or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. **Stabilization** must be completed no later than 14 calendar days after the **construction activity** in that portion of the site has temporarily or permanently ceased. For **Public Waters** that the Minnesota Department of Natural Resources has promulgated "work

in water restrictions” during specified fish spawning time frames, all exposed soil areas that are within 200 feet of the water’s edge, and drain to these waters must complete the **stabilization** activities within 24 hours during the restriction period. Temporary stockpiles without significant silt, clay or organic components (e.g., clean aggregate stockpiles, demolition concrete stockpiles, sand stockpiles) and the constructed base components of roads, parking lots and similar surfaces are exempt from this requirement but must be in compliance with Part IV.C.5.

3. If using **stormwater** conveyance channels ,the **Permittee(s)** must design the channels to route water around unstabilized areas on the site and to reduce erosion, unless **infeasible**. The **Permittee(s)** must use erosion controls and velocity dissipation devices such as check dams, sediment traps, riprap, or grouted riprap at outlets within and along the length of any constructed **stormwater** conveyance channel, and at any outlet, to provide a non-erosive flow velocity, to minimize erosion of channels and their embankments, outlets, adjacent stream banks, slopes, and downstream waters during discharge conditions.
4. The **Permittee(s)** must **stabilize** the **normal wetted perimeter** of any temporary or permanent drainage ditch or swale that drains water from any portion of the construction site, or diverts water around the site, within 200 lineal feet from the property edge, or from the point of discharge into any **surface water**. **Stabilization** of the last 200 lineal feet must be completed within 24 hours after connecting to a **surface water** or property edge.

The **Permittee(s)** shall complete **stabilization** of the remaining portions of any temporary or permanent ditches or swales within 14 calendar days after connecting to a **surface water** or property edge and construction in that portion of the ditch has temporarily or permanently ceased.

Temporary or permanent ditches or swales that are being used as a sediment containment system during construction (with properly designed rock-ditch checks, bio rolls, silt dikes, etc.) do not need to be **stabilized** during the temporary period of its use as a sediment containment system. These areas must be **stabilized** within 24 hours after no longer being used as a sediment containment system.

Applying mulch, hydromulch, tackifier, polyacrylamide or similar **erosion prevention** practices is not acceptable **stabilization** in any part of a temporary or permanent drainage ditch or swale.

5. Pipe outlets must be provided with temporary or permanent **energy dissipation** within 24 hours after connection to a **surface water**.
6. Unless **infeasible** due to lack of pervious or vegetated areas, the **Permittee(s)** must direct discharges from **BMPs** to vegetated areas of the site (including any **natural buffers**) in order to increase sediment removal and maximize **stormwater** infiltration. The **Permittee(s)** must use velocity dissipation devices if necessary to prevent erosion when directing **stormwater** to vegetated areas.

IV.C. SEDIMENT CONTROL PRACTICES

1. The **Permittee(s)** must employ **Sediment control** practices as necessary to minimize sediment from entering **surface waters**, including curb and gutter systems and storm sewer inlets.

- a. Temporary or permanent drainage ditches and sediment basins that are designed as part of a sediment containment system (e.g., ditches with rock-check dams) require **sediment control** practices only as appropriate for site conditions.
 - b. If the down gradient **sediment controls** are overloaded (based on frequent failure or excessive maintenance requirement), the **Permittee(s)** must install additional upgradient **sediment control** practices or redundant **BMPs** to eliminate the overloading, and the **SWPPP** must be amended to identify these additional practices as required in Part III.B 1.-3.
2. **Sediment control** practices must be established on all down gradient perimeters and be located upgradient of any buffer zones. The perimeter **sediment control** practice must be in place before any upgradient land-disturbing activities begin. These practices shall remain in place until **Final Stabilization** has been established in accordance with Part IV.G. A floating silt curtain placed in the water is not a **sediment control BMP** to satisfy perimeter control requirements in this part except when working on a shoreline and below the waterline. In those cases, a floating silt curtain can be used as a perimeter control practice if the floating silt curtain is installed as close to shore as possible. Immediately after the short term construction activity (e.g. installation of rip rap along the shoreline) in that area is complete, an upland perimeter control practice must be installed if exposed soils still drain to the surface water..
 3. The **Permittee(s)** shall re-install all **sediment control** practices that have been adjusted or removed to accommodate short-term activities such as clearing or grubbing, or passage of vehicles, immediately after the short-term activity has been completed. The **Permittee(s)** shall complete any short-term activity that requires removal of **sediment control** practices as quickly as possible. The **Permittee(s)** must re-install **sediment control** practices before the next precipitation event even if the short-term activity is not complete.
 4. All storm drain inlets must be protected by appropriate **BMPs** during construction until all sources with potential for discharging to the inlet have been **stabilized**. Inlet protection may be removed for a particular inlet if a specific safety concern (street flooding/freezing) has been identified by the **Permittee(s)** or the jurisdictional authority (e.g., city/county/township/MnDOT engineer).The **Permittee(s)** must document the need for removal in the **SWPPP**.
 5. Temporary soil stockpiles must have silt fence or other effective **sediment controls**, and cannot be placed in any **natural buffers** or **surface waters**, including **stormwater** conveyances such as curb and gutter systems, or conduits and ditches unless there is a bypass in place for the **stormwater**.
 6. Where vehicle traffic leaves any part of the site (or onto paved roads within the site):
 - a. The **Permittee(s)** must install a vehicle tracking **BMP** to minimize the track out of sediment from the construction site. Examples of vehicle tracking **BMPs** include (but are not limited to) rock pads, mud mats, slash mulch, concrete or steel wash racks, or equivalent systems.
 - b. The **Permittee(s)** must use street sweeping if such vehicle tracking **BMPs** are not adequate to prevent sediment from being tracked onto the street (see Part IV.E.5.d.).
 7. The **Permittee(s)** must install temporary sedimentation basins as required in Part III.C. of this permit.

8. The **Permittee(s)** must minimize soil compaction and, unless **infeasible**, preserve topsoil. Minimizing soil compaction is not required where the function of a specific area of the site dictates that it be compacted.
9. The **Permittee(s)** must preserve a 50 foot **natural buffer** or (if a buffer is **infeasible** on the site) provide redundant **sediment controls** when a **surface water** is located within 50 feet of the **project's** earth disturbances and stormwater flows to the **surface water**. **Natural buffers** are not required adjacent to road ditches, judicial ditches, county ditches, **stormwater** conveyance channels, storm drain inlets, and sediment basins. The **Permittee(s)** is/are not required to enhance the quality of the vegetation that already exists in the buffer or provide vegetation if none exist. However, **Permittee(s)** can improve the natural buffer with vegetation.
10. If the **Permittee(s)** intend to use polymers, flocculants, or other sedimentation treatment chemicals on the **project** site, the **Permittee(s)** must comply with the following minimum requirements:
 - a. The **Permittee(s)** must use conventional erosion and **sediment controls** prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated **stormwater** is directed to a **sediment control** system which allows for filtration or settlement of the floc prior to discharge.
 - b. Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction, and to the expected turbidity, pH, and flow rate of **stormwater** flowing into the chemical treatment system or area.
 - c. Chemicals must be used in accordance with accepted engineering practices, and with dosing specifications and sediment removal design specifications provided by the manufacturer or provider/supplier of the applicable chemicals.

IV.D. DEWATERING AND BASIN DRAINING

1. The **Permittee(s)** must discharge turbid or sediment-laden waters related to **dewatering** or basin draining (e.g., pumped discharges, trench/ditch cuts for drainage) to a temporary or permanent sedimentation basin on the **project** site unless **infeasible**. The **Permittee(s)** may discharge from the temporary or permanent sedimentation basins to **surface waters** if the basin water has been visually checked to ensure adequate treatment has been obtained in the basin and that nuisance conditions (see Minn. R. 7050.0210, subp. 2) will not result from the discharge. If the water cannot be discharged to a sedimentation basin prior to entering the **surface water**, it must be treated with the appropriate **BMPs**, such that the discharge does not adversely affect the receiving water or downstream properties. If the **Permittee(s)** must discharge water that contains oil or grease, the **Permittee(s)** must use an oil-water separator or suitable filtration device (e.g. cartridge filters, absorbents pads) prior to discharging the water. The **Permittee(s)** must ensure that discharge points are adequately protected from erosion and scour. The discharge must be dispersed over natural rock riprap, sand bags, plastic sheeting, or other accepted **energy dissipation** measures.

2. All water from **dewatering** or basin-draining activities must be discharged in a manner that does not cause nuisance conditions, erosion in receiving channels or on downslope properties, or inundation in **wetlands** causing significant adverse impact to the **wetland**.
3. If the **Permittee(s)** is/are using filters with backwash water, the **Permittee(s)** must haul the backwash water away for disposal, return the backwash water to the beginning of the treatment process, or incorporate the backwash water into the site in a manner that does not cause erosion. The Permittee(s) may discharge backwash water to the sanitary sewer if permission is granted by the sanitary sewer authority. The **Permittee(s)** must replace and clean the filter media used in **dewatering** devices when required to retain adequate function.

IV.E. INSPECTIONS AND MAINTENANCE

1. The **Permittee(s)** must ensure that a trained person (as identified in Part III.A.3.a.) will routinely inspect the entire construction site at least once every seven (7) days during active construction and within 24 hours after a rainfall event greater than 0.5 inches in 24 hours. Following an inspection that occurs within 24 hours after a rainfall event, the next inspection must be conducted within seven (7) days after the rainfall event.
2. All inspections and maintenance conducted during construction must be recorded within 24 hours in writing and these records must be retained with the **SWPPP** in accordance with Part III.E. Records of each inspection and maintenance activity shall include:
 - a. Date and time of inspections
 - b. Name of person(s) conducting inspections
 - c. Findings of inspections, including the specific location where corrective actions are needed
 - d. Corrective actions taken (including dates, times, and party completing maintenance activities)
 - e. Date and amount of all rainfall events greater than 1/2 inch (0.5 inches) in 24 hours. Rainfall amounts must be obtained by a properly maintained rain gauge installed onsite, a weather station that is within 1 mile of your location or a weather reporting system that provides site specific rainfall data from radar summaries.
 - f. If any discharge is observed to be occurring during the inspection, a record of all points of the property from which there is a discharge must be made, and the discharge should be described (i.e., color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of pollutants) and photographed.
 - g. Any amendments to the **SWPPP** proposed as a result of the inspection must be documented as required in Part III.B. within seven (7) calendar days.
3. Inspection frequency adjustment
 - a. Where parts of the **project** site have **permanent cover**, but work remains on other parts of the site, the **Permittee(s)** may reduce inspections of the areas with **permanent cover** to

once per month.

- b. Where construction sites have **permanent cover** on all exposed soil areas and no **construction activity** is occurring anywhere on the site, the site must be inspected during non-frozen ground conditions at least once per month for a period of twelve (12) months. Following the twelfth month of **permanent cover** and no **construction activity**, inspections may be terminated until **construction activity** is once again initiated unless the **Permittee(s)** is/are notified in writing by the MPCA that erosion issues have been detected at the site and inspections need to resume.
 - c. Where work has been suspended due to frozen ground conditions, the inspections may be suspended. The required inspections and maintenance schedule must begin within 24 hours after runoff occurs at the site or 24 hours prior to resuming construction, whichever comes first.
4. The **Permittee(s)** is/are responsible for the inspection and maintenance of temporary and permanent water quality management **BMPs**, as well as all **erosion prevention** and **sediment control BMPs**, until another **Permittee** has obtained coverage under this Permit according to Part II.B.5. or the **project** has undergone **Final Stabilization**, and an **NOT** has been submitted to the MPCA.
 5. The **Permittee(s)** must inspect all **erosion prevention** and **sediment control BMPs** and Pollution Prevention Management Measures to ensure integrity and effectiveness during all routine and post-rainfall event inspections. All nonfunctional **BMPs** must be repaired, replaced, or supplemented with functional **BMPs** by the end of the next business day after discovery, or as soon as field conditions allow access unless another time frame is specified below. The **Permittee(s)** must investigate and comply with the following inspection and maintenance requirements:
 - a. All perimeter control devices must be repaired, replaced, or supplemented when they become nonfunctional or the sediment reaches one-half (1/2) of the height of the device. These repairs must be made by the end of the next business day after discovery, or thereafter as soon as field conditions allow access.
 - b. Temporary and permanent sedimentation basins must be drained and the sediment removed when the depth of sediment collected in the basin reaches one-half (1/2) the storage volume. Drainage and removal must be completed within 72 hours of discovery, or as soon as field conditions allow access (see Part IV.D.).
 - c. **Surface waters**, including drainage ditches and conveyance systems, must be inspected for evidence of erosion and sediment deposition during each inspection. The **Permittee(s)** must remove all deltas and sediment deposited in **surface waters**, including drainage ways, catch basins, and other drainage systems, and restabilize the areas where sediment removal results in exposed soil. The removal and **stabilization** must take place within seven (7) days of discovery unless precluded by legal, regulatory, or physical access constraints. The **Permittee(s)** shall use all reasonable efforts to obtain access. If precluded, removal and **stabilization** must take place within seven (7) calendar days of obtaining access. The **Permittee(s)** is/are responsible for contacting all local, regional, state and federal authorities and receiving any applicable permits, prior to conducting any work in surface waters.

- d. Construction site vehicle exit locations must be inspected for evidence of off-site sediment tracking onto paved surfaces. Tracked sediment must be removed from all paved surfaces both on and off site within 24 hours of discovery, or if applicable, within a shorter time to comply with Part IV.C.6.
 - e. Streets and other areas adjacent to the **project** must be inspected for evidence of off-site accumulations of sediment. If sediment is present, it must be removed in a manner and at a frequency sufficient to minimize off-site impacts (e.g., fugitive sediment in streets could be washed into storm sewers by the next rain and/or pose a safety hazard to users of public streets).
6. All infiltration areas must be inspected to ensure that no sediment from ongoing **construction activity** is reaching the infiltration area. All infiltration areas must be inspected to ensure that equipment is not being driven across the infiltration area.

IV.F. POLLUTION PREVENTION MANAGEMENT MEASURES

The **Permittee(s)** shall implement the following pollution prevention management measures on the site:

1. Storage, Handling, and Disposal of Construction Products, Materials, and Wastes: The **Permittee(s)** shall comply with the following to minimize the exposure to **stormwater** of any of the products, materials, or wastes. Products or wastes which are either not a source of contamination to stormwater or are designed to be exposed to stormwater are not held to this requirement:
 - a. Building products that have the potential to leach pollutants must be under cover (e.g., plastic sheeting or temporary roofs) to prevent the discharge of pollutants or protected by a similarly effective means designed to minimize contact with **stormwater**.
 - b. Pesticides, herbicides, insecticides, fertilizers, treatment chemicals, and landscape materials must be under cover (e.g., plastic sheeting or temporary roofs) to prevent the discharge of pollutants or protected by similarly effective means designed to minimize contact with **stormwater**.
 - c. Hazardous materials, toxic waste, (including oil, diesel fuel, gasoline, hydraulic fluids, paint solvents, petroleum-based products, wood preservatives, additives, curing compounds, and acids) must be properly stored in sealed containers to prevent spills, leaks or other discharge. Restricted access storage areas must be provided to prevent vandalism. Storage and disposal of hazardous waste or hazardous materials must be in compliance with Minn. R. ch. 7045 including secondary containment as applicable.
 - d. Solid waste must be stored, collected and disposed of properly in compliance with Minn. R. ch. 7035.
 - e. Portable toilets must be positioned so that they are secure and will not be tipped or knocked over. Sanitary waste must be disposed of properly in accordance with Minn. R. ch. 7041.

2. Fueling and Maintenance of Equipment or Vehicles; Spill Prevention and Response: The **Permittee(s)** shall take reasonable steps to prevent the discharge of spilled or leaked chemicals, including fuel, from any area where chemicals or fuel will be loaded or unloaded including the use of drip pans or absorbents unless infeasible. The **Permittee(s)** must conduct fueling in a contained area unless infeasible. The **Permittee(s)** must ensure adequate supplies are available at all times to clean up discharged materials and that an appropriate disposal method is available for recovered spilled materials. The **Permittee(s)** must report and clean up spills immediately as required by Minn. Stat. § 115.061, using dry clean up measures where possible.
3. Vehicle and equipment washing: If the **Permittee(s)** wash the exterior of vehicles or equipment on the **project** site, washing must be limited to a defined area of the site. Runoff from the washing area must be contained in a sediment basin or other similarly effective controls and waste from the washing activity must be properly disposed of. The **Permittee(s)** must properly use and store soaps, detergents, or solvents. No engine degreasing is allowed on site.
4. Concrete and other washouts waste: The **Permittee(s)** must provide effective containment for all liquid and solid wastes generated by washout operations (concrete, stucco, paint, form release oils, curing compounds and other construction materials) related to the **construction activity**. The liquid and solid washout wastes must not contact the ground, and the containment must be designed so that it does not result in runoff from the washout operations or areas. Liquid and solid wastes must be disposed of properly and in compliance with MPCA rules. A sign must be installed adjacent to each washout facility that requires site personnel to utilize the proper facilities for disposal of concrete and other washout wastes.

IV.G. FINAL STABILIZATION

The **Permittee(s)** must ensure **Final Stabilization** of the site. **Final Stabilization** is not complete until all requirements of Parts IV.G.1-5. are complete:

1. All soil disturbing activities at the site have been completed and all soils are **stabilized** by a uniform perennial vegetative cover with a density of 70 percent of its expected final growth density over the entire pervious surface area, or other equivalent means necessary to prevent soil failure under erosive conditions.
2. The permanent **stormwater** management system is constructed, meets all requirements in Part III.D. and is operating as designed. Temporary or permanent sedimentation basins that are to be used as permanent water quality management basins have been cleaned of any accumulated sediment. All sediment has been removed from conveyance systems and ditches are **stabilized** with **permanent cover**.
3. All temporary synthetic and structural **erosion prevention** and **sediment control BMPs** (such as silt fence) have been removed on the portions of the site for which the **Permittee(s)** is/are responsible. **BMPs** designed to decompose on site (such as some compost logs) may be left in place.
4. For residential construction only, individual lots are considered finally **stabilized** if the structure(s) are finished and **temporary erosion protection** and downgradient perimeter control has been completed and the residence has been sold to the homeowner. Additionally, the **Permittee** has distributed the MPCA's "**Homeowner Fact Sheet**" to the homeowner to inform

the homeowner of the need for, and benefits of, **permanent cover**.

5. For construction **projects** on agricultural land (e.g., pipelines across crop, field pasture or range land) the disturbed land has been returned to its preconstruction agricultural use.

PART V. GENERAL PROVISIONS

V.A. APPLICABILITY CRITERIA

1. If the **Commissioner** determines that pollution in **stormwater** discharges associated with a **construction activity** are contributing to a violation of a water quality standard or due to specific site considerations rendering a substantial portion of the requirements of this permit impossible to comply with, and the **Commissioner** determines that the **construction activity** would be more appropriately regulated by an individual permit, the **Commissioner** may terminate coverage under this general permit and require the **owner and operator** to continue the **construction activity** subject to an individual **stormwater** discharge permit. Upon issuance of an individual permit, this general permit would no longer apply. Prior to termination of coverage under this general permit, the **Commissioner** will provide notice and an opportunity to request a contested case hearing.
2. If the terms and conditions of this general permit cannot be met, an **owner** may request an individual permit, in accordance with Minn. R. 7001.0210 subp. 6.
3. Any interested person may petition the MPCA to require an individual **NPDES/SDS** permit in accordance with 40 CFR 122.28(b)(3).

V.B. RECORD AVAILABILITY

1. The **Permittee(s)** must make the **SWPPP**, including all certificates, reports, records, or other information required by this permit, available to federal, state, and local officials within 72 hours upon request for the duration of the permit and for three (3) years following the **NOT**. This does not include any records after submittal of the **NOT**.
2. When requested by the MPCA, the **Permittee(s)** must make the responsible person trained as required in Part III.F.1.b. or Part III.F.1.c. available to be onsite during an MPCA inspection within 72 hours of a request.

V.C. PROHIBITIONS

This permit prohibits discharges of any material other than **stormwater** treated in compliance with this permit and discharges from **dewatering** or basin draining activities in accordance with Part IV.D.1.-2. Prohibited discharges include (but are not limited to) wastewater from washout of concrete, stucco, paint, form release oils, curing compounds and other construction materials, fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance, soaps or solvents used in vehicle and equipment washing and maintenance, and other hazardous substances or wastes.

V.D. TRANSFER OF OWNERSHIP OR CONTROL

This permit may not be assigned or transferred by the **Permittee(s)** except when transfer occurs in accordance with the applicable requirements of Part II.B.5.

V.E. CIVIL AND CRIMINAL LIABILITY

Nothing in this permit must be construed to relieve the **Permittee(s)** from civil or criminal penalties for noncompliance with the terms and conditions provided herein. Nothing in this permit must be construed to preclude the initiation of any legal action or relieve the **Permittee(s)** from any responsibilities, liabilities, or penalties to which the **Permittee(s)** is/are or may be subject to under Section 311 of the Clean Water Act and Minn. Stat. § 115 and 116, as amended. The **Permittee(s)** is/are not liable for permit requirements for activities occurring on those portions of a site where the permit has been transferred to another party as required in Part II.B.5. or the **Permittee(s)** **has/have** submitted the **NOT** as required in Part II.C.

V.F. SEVERABILITY

The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit must not be affected thereby.

V.G. NPDES/SDS RULE STANDARD GENERAL CONDITIONS

The **Permittee(s)** must comply with the provisions of Minn. R. 7001.0150, subp. 3 and Minn. R. 7001.1090, subp. 1(A), 1(B), 1(C), 1(H), 1(I), 1(J), 1(K), and 1(L).

V.H. INSPECTION AND ENTRY

The **Permittee(s)** must allow access as provided in 40 CFR 122.41(i) and Minn. Stat. § 115.04. The **Permittee(s)** shall allow representatives of the MPCA or any member, employee or agent thereof, when authorized by it, upon presentation of credentials, to enter upon any property, public or private, for the purpose of obtaining information or examination of records or conducting surveys or investigations.

APPENDIX A

A. GENERAL REQUIREMENTS

All requirements in this Appendix are in addition to **BMPs** already specified in the permit. Where provisions of Appendix A, conflict with requirements elsewhere in the permit, the provisions in Appendix A take precedence. All **BMPs** used to comply with this Appendix must be documented in the **SWPPP** for the **project**. If the terms and conditions of this Appendix cannot be met, an individual permit will be required in accordance with Minn. R. ch. 7001.

B. REQUIREMENTS FOR DISCHARGES TO SPECIAL WATERS AND IMPAIRED WATERS

Additional **BMPs** and enhanced runoff controls identified in this Part are required for discharges to the following special waters (Part B.1 through B.9 of Appendix A) and impaired waters (Part B.10 of Appendix A). The **BMPs** identified for each special or impaired water are required for those areas of

the **project** draining to a discharge point on the **project** that is within one mile (**aerial radius measurement**) of special or impaired water and flows to that special or impaired water.

1. Wilderness areas: Boundary Waters Canoe Area Wilderness; Voyageurs National Park; Kettle River from the site of the former dam at Sandstone to its confluence with the Saint Croix River; Rum River from Ogechie Lake spillway to the northernmost confluence with Lake Onamia. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2., and C.3. of this Appendix.
2. Mississippi River: Those portions from Lake Itasca to the southerly boundary of Morrison County that are included in the Mississippi Headwaters Board comprehensive plan dated February 12, 1981. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2. and C.3. of this Appendix.
3. Scenic or recreational river segments: Saint Croix River, entire length; Cannon River from northern city limits of Faribault to its confluence with the Mississippi River; North Fork of the Crow River from Lake Koronis outlet to the Meeker-Wright county line; Kettle River from north Pine County line to the site of the former dam at Sandstone; Minnesota River from Lac qui Parle dam to Redwood County State Aid Highway 11; Mississippi River from County State Aid Highway 7 bridge in Saint Cloud to northwestern city limits of Anoka; and Rum River from State Highway 27 bridge in Onamia to Madison and Rice streets in Anoka. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2. and C.3. of this Appendix.
4. Lake Superior: (Prohibited and restricted) Discharges to Lake Superior must incorporate the **BMPs** outlined in C.1., C.2. and C.3. of this Appendix.
5. Lake Trout Lakes: Identified in Minn. R. 7050.0470, including those inside the boundaries of the Boundary Waters Canoe Area Wilderness and Voyageurs National Park. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2., and C.3. of this Appendix.
6. Trout Lakes: Identified in Minn. R. 6264.0050, subp. 2. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2., and C.3., of this Appendix.
7. Scientific and natural areas: Boot Lake, Anoka County; Kettle River in sections 15, 22, 23, T 41 N, R 20, Pine County; Pennington Bog, Beltrami County; Purvis Lake-Ober Foundation, Saint Louis County; waters within the borders of Itasca Wilderness Sanctuary, Clearwater County; Iron Springs Bog, Clearwater County; Wolsfeld Woods, Hennepin County; Green Water Lake, Becker County; Blackdog Preserve, Dakota County; Prairie Bush Clover, Jackson County; Black Lake Bog, Pine County; Pembina Trail Preserve, Polk County; and Falls Creek, Washington County. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2., and C.3. of this Appendix.
8. Trout Streams: Listed in Minn. R. 6264.0050, subp. 4. Discharges to these waters must incorporate the **BMPs** outlined in C.1., C.2., C.3., and C.4. of this Appendix.
9. Calcareous Fens: Listed in Minn. R 7050.0180 subp.6b. Discharges to these Calcareous Fens must incorporate the **BMPs** outlined in C.1. and C.2. of this Appendix.
10. Impaired Waters: Waters identified as impaired under section 303 (d) of the federal Clean Water

Act for phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen or aquatic biota (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment).

- a. Impaired Water Without an Approved TMDL or With an Approved TMDL and No Waste Load Allocation:

If runoff from the site discharges to an impaired water, and a TMDL has not been approved by USEPA or there is a USEPA approved TMDL that does not establish a Waste Load Allocation (WLA) for construction **stormwater**, discharges to these waters must incorporate the **BMPs** outlined in C.1. and C.2. of this Appendix.

- b. Impaired Water With an Approved TMDL and WLA:

If runoff from the site discharges to an impaired water for which there is a USEPA approved TMDL that establishes a WLA for construction **stormwater**, and the TMDL does not identify any specific implementation activities that would apply to the site discharges, discharges to these waters must incorporate the **BMPs** outlined in C.1. and C.2. of this Appendix.

If the TMDL identifies specific implementation activities regarding construction **stormwater** that would apply to the site discharges, the **Permittee(s)** must include the following in the **SWPPP**:

- i. Identify the receiving water, the areas of the site discharging to it, and the pollutant(s) identified in the TMDL and
- ii. **BMPs** identified in the TMDL and any other specific construction **stormwater** related implementation activities identified in the TMDL.

Note on impaired waters listing terminology: The terms in parenthesis in Appendix A, Part B.10. above are the most current terminology used to list waters as impaired at the time of permit issuance. These terms are subject to change. For example, at one time waters were listed as impaired for phosphorus and now those same waters are listed as impaired for nutrient eutrophication biological indicators. If the terminology changes for one of the pollutant(s) or stressor(s) identified in the permit, the MPCA will keep a list of the new terms on its construction **stormwater** website.

C. ADDITIONAL **BMPs** FOR SPECIAL WATERS AND IMPAIRED WATERS

For the **BMPs** described in C.2., and C.4. of this Appendix:

Where the proximity to bedrock precludes the installation of any of the permanent **stormwater** management practices outlined in Appendix A, other treatment (such as grassed swales, smaller ponds, or grit chambers) is required prior to discharge to **surface waters**.

For work on linear **projects** with lack of right-of-way where the **Permittee(s)** cannot obtain an easement or other permission for property needed to install treatment systems capable of treating the entire **water quality volume** on site, the **Permittee(s)** must maximize the **water quality volume** that can be treated prior to discharge to **surface waters**. Treatment can be provided through other

methods or combination of methods such as grassed swales, filtration systems, smaller ponds or grit chambers prior to discharge to **surface waters**. A reasonable attempt must be made to obtain right-of-way during the **project** planning process. Documentation of these attempts must be in the **SWPPP** per Part III.A.5.m. in the section addressing **infeasibility**.

1. During construction:
 - a. **Stabilization** of all exposed soil areas must be **initiated immediately** to limit soil erosion but in no case completed later than seven (7) days after the **construction activity** in that portion of the site has temporarily or permanently ceased.
 - b. Temporary sediment basin requirements described in Part III.C. must be used for common drainage locations that serve an area with five (5) or more acres disturbed at one time.
2. Post construction: The **water quality volume** that must be retained on site by the **project's** permanent **stormwater** management system described in Part III.D. shall be one (1) inch of runoff from the new **impervious surfaces** created by the **project**. See Part III.D.1. for more information on infiltration design, prohibitions and appropriate site conditions.
3. Buffer zone: The **Permittee(s)** shall include an undisturbed buffer zone of not less than 100 linear feet from the special water (not including tributaries) and this buffer zone shall be maintained at all times, both during construction and as a permanent feature post construction, except where a water crossing or other encroachment is necessary to complete the **project**. The **Permittee(s)** must fully document the circumstance and reasons that the buffer encroachment is necessary in the **SWPPP** and include restoration activities. Replacement of existing **impervious surface** within the buffer is allowed under this permit. All potential water quality, scenic and other environmental impacts of these exceptions must be minimized by the use of additional or redundant **BMPs** and documented in the **SWPPP** for the **project**.
4. Temperature Controls: The **Permittee(s)** must design the Permanent **Stormwater** Management System such that the discharge from the **project** will minimize any increase in the temperature of trout stream receiving waters resulting from the one (1)-and two (2)-year 24-hour precipitation events. This includes all tributaries of designated trout streams within the Public Land Survey System (PLSS) Section that the trout stream is located. **Projects** that discharge to trout streams must minimize the impact using one or more of the following measures, in order of preference:
 - a. Minimize new **impervious surfaces**.
 - b. Minimize the discharge from connected **impervious surfaces** by discharging to vegetated areas, or grass swales, and through the use of other non-structural controls.
 - c. Infiltration or other volume reduction practices to reduce runoff in excess of pre-**project** conditions (up to the two (2)-year 24-hour precipitation event).
 - d. If ponding is used, the design must include an appropriate combination of measures such as shading, filtered bottom withdrawal, vegetated swale discharges or constructed wetland treatment cells that will limit temperature increases. The pond should be designed to draw down in 24 hours or less.

- e. Other methods that will minimize any increase in the temperature of the trout stream.

D. REQUIREMENTS FOR DISCHARGING TO WETLANDS

If the **project** has any discharges with the potential for significant adverse impacts to a **wetland**, (e.g., conversion of a natural **wetland** to a **stormwater** pond) the **Permittee(s)** must demonstrate that the **wetland** mitigative sequence has been followed in accordance with D.1 or D.2 of this Appendix.

1. If the potential adverse impacts to a **wetland** on a specific **project** site have been addressed by permits or other approvals from an official statewide program (U.S. Army Corps of Engineers 404 program, Minnesota DNR, or the State of Minnesota Wetland Conservation Act) that are issued specifically for the **project** and **project** site, the **Permittee(s)** may use the permit or other determination issued by these agencies to show that the potential adverse impacts have been addressed. For the purposes of this permit, de minimus actions are determinations by the permitting agency that address the **project** impacts, whereas a non-jurisdictional determination does not address **project** impacts.
2. If there are impacts from the **project** that are not addressed in one of the permits or other determinations discussed in Appendix A, Part D.1. (e.g., permanent inundation or flooding of the **wetland**, significant degradation of water quality, excavation, filling, draining), the **Permittee(s)** must minimize all adverse impacts to **wetlands** by utilizing appropriate measures. Measures used must be based on the nature of the **wetland**, its vegetative community types and the established hydrology. These measures include in order of preference:
 - a. Avoid all significant adverse impacts to **wetlands** from the **project** and post-**project** discharge.
 - b. Minimize any unavoidable impacts from the **project** and post-**project** discharge.
 - c. Provide compensatory mitigation when the **Permittee(s)** determine(s) that there is no reasonable and practicable alternative to having a significant adverse impact on a **wetland**. For compensatory mitigation, **wetland** restoration or creation shall be of the same type, size and whenever reasonable and practicable in the same watershed as the impacted **wetland**.

E. DISCHARGES REQUIRING ENVIRONMENTAL REVIEW

This permit does not replace or satisfy any environmental review requirements, including those under the Minnesota Environmental Policy Act or the National Environmental Policy Act. The **owner** must verify that any environmental review required by law, including any required Environmental Assessment Work sheets or Environmental Impact Statements, Federal environmental review, or other required review is complete before making application for coverage under this permit, and the **owner** must incorporate any **stormwater** mitigation measures required as the result of any environmental review into the **SWPPP** for the **project**. If any part of your **common plan of development or sale** requires environmental review, coverage under this permit cannot be obtained until such environmental review is complete.

F. DISCHARGES AFFECTING ENDANGERED OR THREATENED SPECIES

This permit does not replace or satisfy any review requirements for endangered or threatened species, from new or expanded discharges that adversely impact or contribute to adverse impacts on a listed endangered or threatened species, or adversely modify a designated critical habitat. The **owner** must conduct any required review and coordinate with appropriate agencies for any **project** with the potential of affecting threatened or endangered species, or their critical habitat.

G. DISCHARGES AFFECTING HISTORIC PLACES OR ARCHEOLOGICAL SITES

This permit does not replace or satisfy any review requirements for historic places or archeological sites, from new or expanded discharges that adversely affect properties listed or eligible for listing in the National Register of Historic Places or affecting known or discovered archeological sites. The **owner** must be in compliance with National Historic Preservation Act and conduct all required review and coordination related to historic preservation, including significant anthropological sites and any burial sites, with the Minnesota Historic Preservation Officer.

APPENDIX B. – DEFINITIONS

1. **“Aerial radius measurement”** means the shortest straight line distance measurement between the point of **stormwater** discharge from a **project** construction site to the nearest edge of the water body the **stormwater** will flow to. This measurement does not follow the meander flow path.
2. **“Best Management Practices (BMPs)”** means the most effective and practicable means of **erosion prevention** and **sediment control**, and water quality management practices that are the most effective and practicable means of to control, prevent, and minimize degradation of **surface water**, including avoidance of impacts, construction-phasing, minimizing the length of time soil areas are exposed, prohibitions, pollution prevention through good housekeeping, and other management practices published by state or designated area-wide planning agencies.

Individual **BMPs** found in this permit are described in the current versions of Protecting Water Quality in Urban Areas, MPCA and The Minnesota Stormwater Manual, MPCA. **BMPs** must be adapted to the site and can be adopted from other sources. However, they must be similar in purpose and at least as effective and stringent as MPCA’s **BMPs**. (Other sources include manufacturers specifications, Storm Water Management for Construction Activities: Developing Pollution Prevention Plans and Best Management Practices, U.S. Environmental Protection Agency 1992, and Erosion Control Design Manual, Minnesota Department of Transportation, et al, 1993).

3. **“Commissioner”** means the **Commissioner** of the MPCA or the **Commissioner's** designee.
4. **“Common Plan of Development or Sale”** means a contiguous area where multiple separate and distinct land-disturbing activities may be taking place at different times, on different schedules, but under one proposed plan. One plan is broadly defined to include design, permit application, advertisement or physical demarcation indicating that land-disturbing activities may occur.
5. **“Construction Activity”** includes **construction activity** as defined in 40 C.F.R. pt. 122.26(b)(14)(x) and small construction activity as defined in 40 C.F.R. pt. 122.26(b)(15) and **construction activity** as defined by Minn. R. 7090.0080, subp. 4. This includes a disturbance to the land that results in a change in the topography, existing soil cover (both vegetative and non-vegetative), or the existing soil topography that may result in accelerated **stormwater** runoff, leading to soil erosion and

movement of sediment into **surface waters** or drainage systems. Examples of **construction activity** may include clearing, grading, filling, and excavating. **Construction activity** includes the disturbance of less than one acre of total land area that is a part of a larger **common plan of development or sale** if the larger common plan will ultimately disturb one (1) acre or more. **Construction activity** does not include a disturbance to the land of less than five (5) acres for the purpose of routine maintenance that is performed to maintain the original line and grade, hydraulic capacity, or original purpose of the facility.

6. **“Dewatering”** means the removal of surface or ground water to dry and/or solidify a construction site to enable **construction activity**. Dewatering may require a Minnesota Department of Natural Resources water appropriation permit and, if dewatering water is contaminated, discharge of such water may require an individual MPCA **NPDES/SDS** permit.
7. **“Energy Dissipation”** means methods employed at pipe outlets to prevent erosion caused by the rapid discharge of water scouring soils. Examples include, but are not limited to: concrete aprons, riprap, splash pads, and gabions that are designed to prevent erosion.
8. **“Erosion Prevention”** means measures employed to prevent erosion. Examples include but not limited to: soil **stabilization** practices, limited grading, mulch, **temporary erosion protection or permanent cover**, and construction phasing.
9. **“Final Stabilization”** means required actions in Part IV.G. taken after the completion of **construction activities** and prior to submitting the **NOT** that are intended to prevent discharge of pollutants associated with stormwater discharges from the **project**.
10. **“Homeowner Fact Sheet”** means a fact sheet developed by the MPCA and available on the MPCA Construction **Stormwater** website to be given to homeowners at the time of sale by a builder to inform the homeowner of the need for, and benefits of, **Final Stabilization**.
11. **“Infeasible”** means not technologically possible or not economically practicable and achievable in light of the best industry practices.
12. **“Initiated immediately”** means taking an action to commence **stabilization** as soon as practicable, but no later than the end of the work day, following the day when the earth-disturbing activities have temporarily or permanently ceased, if the **Permittee(s)** know that construction work on that portion of the site will be temporarily ceased for 14 or more additional calendar days or 7 calendar days where Appendix A.C.1.a applies. The following activities can be taken to initiate **stabilization**:
 1. prepping the soil for vegetative or non-vegetative **stabilization**
 2. applying mulch or other non-vegetative product to the exposed soil area
 3. seeding or planting the exposed area
 4. starting any of the activities in # 1 – 3 on a portion of the area to be **stabilized**, but not on the entire area and
 5. finalizing arrangements to have **stabilization** product fully installed in compliance with the applicable deadline for completing **stabilization**

13. **“Impervious Surface”** means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. Examples include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads.
14. **“National Pollutant Discharge Elimination System (NPDES)”** means the program for issuing, modifying, revoking, reissuing, terminating, monitoring, and enforcing permits under the Clean Water Act (Sections 301, 318, 402, and 405) and United States Code of Federal Regulations Title 33, Sections 1317, 1328, 1342, and 1345.
15. **“Natural Buffer”** means an area of undisturbed cover surrounding surface waters within which construction activities are restricted. **Natural buffer** includes the vegetation, exposed rock, or barren ground that exists prior to commencement of earth-disturbing activities.
16. **“Normal Wetted Perimeter”** means the area of a conveyance, such as a ditch, channel, or pipe that is in contact with water during flow events that are expected to occur from a two-year 24-hour storm event.
17. **“Notice of Termination (NOT)”** means notice to terminate coverage under this permit after construction is complete, the site has undergone **Final Stabilization**, and maintenance agreements for all permanent facilities have been established, in accordance with all applicable conditions of this permit.
18. **“Operator”** means the person designated by the **owner**, who has day to day operational control and/or the ability to modify **project** plans and specifications related to the **SWPPP**. The operator must be named on the permit as a **Permittee**.
19. **“Owner”** means the person or party possessing the title of the land on which the construction activities will occur; or if the **construction activity** is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement or mineral rights license holder; or the contracting government agency responsible for the **construction activity**.
20. **“Permanent Cover”** means surface types that will prevent soil failure under erosive conditions. Examples include: gravel, asphalt, concrete, rip rap, roof tops, perennial cover, or other landscaped material that will permanently arrest soil erosion. A uniform perennial vegetative cover (i.e. evenly distributed, without large bare areas) with a density of 70 percent of the native background vegetative cover for the area must be established on all unpaved areas and areas not covered by permanent structures, or equivalent permanent stabilization measures. **Permanent cover** does not include the practices listed under **temporary erosion protection**.
21. **“Permittee(s)”** means the person or persons, firm, or governmental agency or other entity that signs the application submitted to the MPCA and is responsible for compliance with the terms and conditions of this permit.
22. **“Project(s)”** means all **construction activity** that is planned and/or conducted under a particular permit. The **project** will occur on the site or sites described in the permit application, the **SWPPP** and in the associated plans, specifications and contract documents.

23. **“Public Waters”** means all water basins and watercourses that are described in Minn. Stat. § 103G.005 subd. 15.
24. **“Saturated Soil”** means the highest seasonal elevation in the soil that is in a reduced chemical state because of soil voids being filled with water **Saturated soil** is evidenced by the presence of redoximorphic features or other information.
25. **“Sediment Control”** means methods employed to prevent sediment from leaving the site. **Sediment control** practices include silt fences, sediment traps, earth dikes, drainage swales, check dams, subsurface drains, bio rolls, rock logs, compost logs, storm drain inlet protection, and temporary or permanent sedimentation basins. A floating silt curtain placed in the water is not a **sediment control BMP** to satisfy perimeter control requirements, except as provided for in Part IV.C.2.
26. **“Stabilize, Stabilized, Stabilization”** means the exposed ground surface has been covered by appropriate materials such as mulch, staked sod, riprap, erosion control blanket, mats or other material that prevents erosion from occurring. Grass, agricultural crop or other seeding alone is not **stabilization**. Mulch materials must achieve approximately 90 percent ground coverage (typically 2 ton/acre).
27. **“Standard details”** means generic drawings showing a common or repeated **construction activity** or practice.
28. **“Stormwater”** is defined under Minn. R. 7077.0105, subp. 41(b), and includes precipitation runoff, **stormwater** runoff, snowmelt runoff, and any other surface runoff and drainage.
29. **“Steep Slopes”** means slopes that are 1:3 (V:H) (33.3 percent) or steeper in grade.
30. **“Storm Water Pollution Prevention Plan (SWPPP)”** means a plan for **stormwater** discharge that includes all required content under Part III of this Permit and which describes the **erosion prevention BMPs, sediment control BMPs** and Permanent **Stormwater** Management Systems that, when implemented, will decrease soil erosion on a parcel of land and decrease off-site nonpoint pollution.
31. **“Surface Water or Waters”** means all streams, lakes, ponds, marshes, **wetlands**, reservoirs, springs, rivers, drainage systems, waterways, watercourses, and irrigation systems whether natural or artificial, public or private, except that **surface waters** do not include treatment basins or ponds that were constructed from upland. Treatment basins or ponds that were constructed in **wetlands** and mitigated in accordance with Appendix A.D are also not considered surface waters for purposes of this permit.
32. **“Temporary Erosion Protection”** means methods employed to prevent erosion during construction activities. Examples of **temporary erosion protection** include, but are not limited to: straw, wood fiber blanket, wood chips, vegetation, mulch, and rolled erosion control products.
33. **“Underground Waters”** means water contained below the surface of the earth in the saturated zone including, without limitation, all waters whether under confined, unconfined, or perched conditions, in near surface unconsolidated sediment or regolith, or in rock formations deeper underground. The term ground water shall be synonymous with underground water.

34. **“Waters of the State”** (as defined in Minn. Stat. § 115.01, subd. 22) means all streams, lakes, ponds, marshes, watercourses, waterways, wells, springs, reservoirs, aquifers, irrigation systems, drainage systems and all other bodies or accumulations of water, surface or underground, natural or artificial, public or private, which are contained within, flow through, or border upon the state or any portion thereof.
35. **“Water Quality Volume”** means one (1) inch of runoff from the new **impervious surfaces** created by this **project** (calculated as an instantaneous volume) and is the volume of water to be treated in the Permanent **Stormwater** Management System, as required by this permit.
36. **“Wetland” or “Wetlands”** is defined in Minn. R. 7050.0186, subp. 1a.B. and includes those areas that are inundated or saturated by **surface water** or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in **saturated soil** conditions. **Wetlands** generally include swamps, marshes, bogs, and similar areas. Constructed wetlands designed for wastewater treatment are not **waters of the state**. **Wetlands** must have the following attributes:
- a. A predominance of hydric soils
 - b. Inundated or saturated by **surface water** or groundwater at a frequency and duration sufficient to support a prevalence of hydrophytic vegetation typically adapted for life in a **saturated soil** condition and
 - c. Under normal circumstances support a prevalence of such vegetation.



Minnesota Pollution Control Agency
 520 Lafayette Road North
 St. Paul, MN 55155-4194

Application for General Stormwater Permit for Construction Activity

(NPDES/SDS Permit: MN R100001)
 Construction Stormwater Permit Program

Doc Type: Permit Application

Instructions on Page 4

To obtain a Submittal Number, please contact the Construction Stormwater Program staff at 651-757-2119 or 800-657-3804 or by e-mail at csw.pca@state.mn.us. **Note:** this form will be returned to sender without a Submittal Number granted by the Minnesota Pollution Control Agency (MPCA).

Submittal No.: _____

Please read: All permits must be applied for online unless granted a Submittal Number from the MPCA. Sites that disturb 50 acres or more and have a discharge point within one mile of, and flows to, a Special or Impaired Water listed in Appendix A of the Construction Stormwater General Permit must apply using this form with the MPCA-granted Submittal Number, 30 days before the anticipated start date. Mail, fax, or deliver this Permit Application, Stormwater Pollution Prevention Plan (SWPPP), and the required attachments (if applicable) to the MPCA. SWPPPs may be submitted electronically to: csw.pca@state.mn.us or you may request other electronic means of submittal.

This form is for new permit applications only. Use the *Notice of Termination/Permit Modification* form to transfer permit coverage for a project or a portion of a project to a new owner/contractor. Forms are available at the MPCA's Construction Stormwater website: <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html>.

Please refer to the application instructions and the National Pollutant Discharge Elimination System (NPDES)/State Disposal System (SDS) General Stormwater Permit for Construction Activity (MN R100001) as you complete this form. Brackets '[']' refer to specific parts of the permit.

Submit form and check to: Fiscal Services – 6th floor
 Minnesota Pollution Control Agency
 520 Lafayette Road North
 St. Paul, MN 55155-4194

Questions: Call the Construction Stormwater Program at 651-757-2119 or toll-free at 800-657-3804.

Application Checklist (check to determine if ready to apply)

1. Stormwater Pollution Prevention Plan (SWPPP):

- a. Has a SWPPP been developed for this project and incorporated into the project's plans and specifications as required in the General Stormwater Permit [Part III.A]? Yes No
- b. If an environmental review was required for this project or any part of a common plan of development or sale that includes this project, has this review been completed and all Stormwater related mitigation measures contained in it incorporated into the SWPPP [Part III.A.6]? Yes No N/A

2. Discharges to special or impaired waters:

- a. If any portion of the project has a discharge point within one mile (aerial radius measurement) of a special water or a water that is impaired for sediment or a sediment related parameter [Appendix A, Part B.10], does the SWPPP contain the additional requirements found in Appendix A, Part A-C? If the project does not have a discharge point within one mile of a special water or a water that is impaired for sediment or a sediment related parameter of the permit indicate 'NA'. Yes No N/A

Stop if you responded 'No' to any question above.
 A SWPPP must be developed prior to submitting a permit application.
 Complete the above requirements and check 'Yes' before submitting this application.
 Continue if you responded 'Yes' or 'N/A' to all questions above.

3. Additional application review:

- a. Will the project disturb 50 acres or more and is there a discharge point within one mile of an impaired or special water whose discharge may reach an impaired or special water listed in Appendix A of the permit? [Part II.B.1.b] If yes, this application and the SWPPP must be submitted a minimum of 30 days before construction starts. Yes No
- b. If 'Yes,' is the SWPPP (including a map of the project) included with this application or has it been submitted to the MPCA? Yes No

4. Application fee:

- a. Is the required \$400 Application Fee (payable to the MPCA) enclosed? Yes

Construction Activity Information

5. Project name:

6. Project location:

a. Briefly describe where the construction activity occurs (For example: "Intersection of 45th St. and Irving Ave.") Include address if available:

b. List all of the cities where the project will occur:

c. List all of the counties where the project will occur:

d. List all of the townships where the project will occur:

e. Project zip code: _____

f. Latitude and longitude of approximate centroid of project:

Latitude: ____ . ____ ° N (decimal) Preferred

Longitude: ____ . ____ ° W (decimal) Preferred

____ ° ____ ' ____ " N (degrees, minutes, seconds)

°

____ ° ____ ' ____ " W (degrees, minutes, seconds)

g. Method used to collect latitude and longitude:

GPS USGS topographic map – map scale: _____ Other: _____

7. Project size:

Number of acres to be disturbed to the nearest tenth acre: _____

8. Project type:

- | | |
|--|---|
| <input type="checkbox"/> Residential | <input type="checkbox"/> Residential/Road construction |
| <input type="checkbox"/> Commercial/Industrial | <input type="checkbox"/> Commercial/Road construction |
| <input type="checkbox"/> Road construction | <input type="checkbox"/> Commercial/Residential/Road construction |
| <input type="checkbox"/> Other: _____ | |

9. Cumulative impervious surface:

a. Existing area of impervious surface in acres: _____

b. Post-construction area of impervious surface in acres (If additional new impervious surface created by the project is less than one acre, skip to Question 11): _____

10. Permanent stormwater management:

Check the type (**check all that apply**) of permanent stormwater management that will be used if one or more acres of new impervious surface area is created by this project [Part III.D].

- Infiltration
- Stormwater harvest and reuse
- Filtration
- Wet sedimentation basin
- Regional ponding
- Other (e.g., payment in lieu of onsite treatment, green roofs or other technologies)

11. Receiving waters:

Identify surface waters within one mile of project boundary that will receive stormwater from the site or discharge from permanent stormwater management system. Include waters shown on USGS 7.5 minute quad or equivalent, and all Special Waters and Impaired waters identified in Appendix A of the permit (To find Special or Impaired Waters, use the [Special and Impaired Waters Search tool](http://www.pca.state.mn.us/water/stormwater/stormwater-c.html) at <http://www.pca.state.mn.us/water/stormwater/stormwater-c.html>). The Impaired Waters* list, also known as the Section 303(d) list can be found at <http://www.pca.state.mn.us/water/tmdl/index.html>. Attach additional paper if necessary.

* Impaired waters for the purpose of this permit are those identified as impaired for the following pollutant(s) or stressor(s): phosphorus, turbidity, dissolved oxygen, or biotic impairment.

Name of water body	Type of water body (Ditch, pond, wetland, stream, river, calcareous fen)	Special Water? (See Stormwater Permit, Appendix A)	Impaired Water? (See Stormwater Permit, Appendix A)
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No
		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No

12. Dates of construction:

Note: For the purposes of this permit, the construction start date is defined as the day land disturbing activity is expected to commence.

a. Start date (mm/dd/yyyy): _____ b. Estimated completing date (mm/dd/yyyy): _____

13. Applicant type:

Select the title below that best describes you as the person completing this application for this Permit.

- Owner of project or site (company)
- Operator/General contractor
- 3rd party agent of behalf of permittee

Both parties must sign
This form will not be accepted if the owner and contractor contact information sections are not completed and signed. Note: If the owner is also the contractor, or a contractor has not yet been selected, the owner must also fill out the contractor information section and sign again.

Certification

Owner

Name of firm or organization: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Contact name: _____ Title: _____
Contact phone: _____ E-mail: _____
Alternate contact: _____ Phone: _____ E-mail: _____

Operator/General Contractor

Name of firm or organization: _____
Mailing address: _____
City: _____ State: _____ Zip code: _____
Contact name: _____ Title: _____
Contact phone: _____ E-mail: _____
Alternate contact: _____ Phone: _____ E-mail: _____

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 this system, or the persons directly responsible for gathering the information, the information 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.

I also certify under penalty of law that I have read, understood, and accepted all terms and conditions of the NPDES/SDS General Stormwater Permit Construction Activity (MN R100001) that authorizes stormwater discharges associated with the construction site identified on this form.

Authorized signatures

This application must be signed by:

- **Corporation:** a principal executive officer of at least the level of vice-president or the duly authorized representative or agent of the executive officer if the representative or agent is responsible for the overall operation of the facility that is the subject of the permit application.
- **Partnership or Sole Proprietorship:** a general partner or the proprietor.
- **Municipality, State, Federal, or Other Public Agency:** principal executive officer or ranking elected official.

Owner:

Print name: _____

Title: _____ Date: _____

Signature: _____

Operator/General Contractor

Print name: _____

Title: _____ Date: _____

Signature: _____

Instructions

Submission of an application is notice that the owner and general contractor identified on the application intend to be authorized by an NPDES/SDS permit issued for Stormwater discharges associated with a construction activity in the State of Minnesota.

All permits must be applied for online unless granted a Submittal Number from the Minnesota Pollution Control Agency (MPCA). Sites that disturb 50 acres or more and have a discharge point within one mile of a Special or Impaired Water listed in Appendix A of the Construction Stormwater General Permit must apply using this form with the MPCA granted Submittal Number, 30 days before the anticipated start date. Mail, fax, or deliver this Permit Application, Stormwater Pollution Prevention Plan (SWPPP), and the required attachments (if applicable) to the MPCA. SWPPPs may be submitted electronically to: csw.pca@state.mn.us or you may request other electronic means of submittal.

To obtain a Submittal Number, please contact the Construction Stormwater Program staff at 651-757-2119 or 800-657-3804 or by e-mail at csw.pca@state.mn.us. Note: this form will be returned to sender without a Submittal Number granted by the Minnesota Pollution Control Agency (MPCA).

Application Checklist (check to determine if ready to apply)

1. Indicate if a **Stormwater Pollution Prevention Plan (SWPPP)** has been prepared and the appropriate sections (a. and b. of this question) have been addressed by answering “**Yes**” or “**No.**” A SWPPP is a plan for Stormwater discharge that includes erosion prevention measures and sediment controls that, when implemented, will decrease soil erosion on a parcel of land and decrease pollution in receiving waters. This plan must be developed prior to submitting a permit application. A sample plan and development tools are available from the U.S. Environmental Protection Agency (EPA) Stormwater Pollution Prevention Plans for Construction Activities website at <http://cfpub1.epa.gov/npdes/stormwater/swppp.cfm> and from the MPCA “[Stormwater Compliance Tool Kit for Small Construction Operators](#)”.

For section “b” indicate if an **Environmental Review** has been completed if required, by answering “**Yes**” or “**No**” or “**N/A**” (not applicable). Environmental review looks at how a proposed project could potentially affect the environment and looks at ways to avoid or minimize impacts before the project is permitted and built. Examples of categories that may need an environmental review include residential development; industrial, commercial, and institutional facilities; and also highway projects. For certain projects, environmental review is mandatory. For more details see the [Guide to Minnesota Environmental Review Rules, Chapter 6](#) found on the Department of Administration website at <http://www.mnplan.state.mn.us/>.

2. Discharges to Special or Impaired Waters
 - a. Special waters have qualities that warrant extra protection. There are several categories of special waters and the requirements are different for each. A list of these special water categories can be found in Appendix A of the permit. The additional requirements apply only to those portions of a project that drain to a discharge point on the project that is within one mile of and flows to the special water. Refer to Appendix A of the permit for the list of special waters and what additional requirements apply to each. The information is also available using the [Special and Impaired Waters Search Tool](#) found on the MPCA Stormwater Program for Construction Activity webpage at <http://www.pca.state.mn.us/wfhy5b>.

Impaired waters are bodies of water that do not meet the water quality standards set up for their designated use as determined by the State. Projects discharging to impaired waters also have additional requirements. The additional requirements apply only to those portions of a project that drain to a discharge point on the project that is within 1 mile of and flows to the impaired water. The specific requirements can be found in Appendix A of the permit. Impaired waters for the purpose of this permit are limited to those identified as impaired pursuant to section 303(d) of the Clean Water Act where the pollutant(s) or stressor(s) are phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). Use the interactive [Special and Impaired Waters Search Tool](#) (found on the MPCA Stormwater Program for Construction Activity webpage at <http://www.pca.state.mn.us/wfhya5b>) to determine if your project is required to follow the additional requirements. On the application, indicate if the SWPPP for the project incorporates the additional requirements, if applicable. Consult the MPCA's Minnesota Impaired Waters and TMDLs webpage at <http://www.pca.state.mn.us/xgqx950> for additional information including a list of impaired waters.

3. Additional Application Review
 - a. If the project disturbs **50 acres or more** and has a discharge point (including sheet flow) that is within one mile of and flows to an impaired or special water listed in Appendix A, the application and SWPPP need to be submitted to the MPCA a minimum of **30** days prior to the start of construction.
 - b. Include the SWPPP with the application or submit it to the MPCA electronically. SWPPPs may be submitted electronically to: csw.pca@state.mn.us or you may request other electronic means of submittal.
4. The application requires a \$400 application **fee**. Indicate that the application fee has been enclosed by answering “**Yes.**” Please make checks payable to: **Minnesota Pollution Control Agency** and submit the check with the completed application to: Fiscal Services- 6th Floor, Minnesota Pollution Control Agency, 520 Lafayette Road North, St. Paul, MN 55155-4194. Applications received without the required fee will be returned to the sender.

Construction Activity Information

5. List the construction project's **name**. Be specific. Examples: “Driveway at 123 Main St, Hudson,” “Highway 169 bridge replacement (#79605) at the Rum River.”
6. Project Location
 - a. Provide an **address** (if available) and **brief description** of the construction activity's location (*for example, “North West Corner of the Intersection of 45th Street and Irving Avenue, Minneapolis, MN”*). Use any type of description that accurately portrays the project location.
 - b-e. Provide the names of all cities, counties, zip codes, and townships the construction activity takes place in (*for example, a roadway may cross county, city, or township boundaries*).
 - f. Give the latitude and longitude of the centroid of the site. If the centroid of the site is not within the site, give the latitude and longitude of a point within the site that is closest to the centroid of the site. Give these values in degrees and decimal of degrees (preferred) alternatively in degrees, minutes and seconds. To obtain the decimals of a degree, divide the minutes by 60 and the seconds by 360 and add this to the degrees.
 - g. State how the information was gathered, if by GPS, by using a USGS topographic map (give the scale), or an online tool, such as the Toxics Release Inventory Facility Siting Tool found on the EPA's website at <http://www2.epa.gov/toxics-release-inventory-tri-program>. To use this tool, type either the zip code or the city/township and the state. Zoom in to obtain the latitude and longitude.
7. List, in acres, the **amount** of area that will be **disturbed** for this project. This is not the size of the property; do not include areas of the project that will not be disturbed.
8. Indicate the type of construction activity by **checking the appropriate box**. Check “Residential and Road Construction” if the road is part of a common plan of development and is developed in association with residential development. If you check “Other”, describe the project.
9. Indicate to the nearest quarter acre, the existing and resulting **areas of impervious surfaces**. Impervious surface means a constructed hard surface that either prevents or retards the entry of water into the soil and causes water to run off the surface in greater quantities and at an increased rate of flow than prior to development. **Examples** include rooftops, sidewalks, patios, driveways, parking lots, storage areas, and concrete, asphalt, or gravel roads. (a.) “Existing” area means the area of impervious surface that is present prior to the start of this construction project. (b.) “Post construction” means the entire area of impervious surface after construction is completed. Subtract (a.) from (b.) to determine the area of new impervious surface.
10. For projects creating one or more acres of cumulative new impervious surfaces, **check the appropriate box** to indicate which type(s) of **permanent stormwater management practices** will be used. The “Other” box is limited to those situations (such as proximity to bedrock) that are described in Part III.D of the permit. See the permit for a further description. If the “Other” box is checked, describe which situation outlined in Part III. D fits the project and what other permanent treatment (such as grassed swales, smaller ponds and/or grit chambers) will be used on the project.

11. **Briefly** describe which **water body(s)** will receive stormwater runoff from the construction site or from the discharge from permanent Stormwater management systems by **completing the table**. To determine which water body(s) will receive stormwater runoff discharges, make a brief survey of the project's surrounding area. Include the waters identified on a USGS 7.5-minute quad or equivalent map. See Appendix A [Special Waters List](#) of this permit to determine if a water body is a special water found on the MPCA Stormwater Program for Construction Activity website at <http://www.pca.state.mn.us/wfhy5b>. Impaired waters for the purpose of this permit are those identified as impaired for the following pollutant(s) or stressor(s) phosphorus (nutrient eutrophication biological indicators), turbidity, dissolved oxygen, or biotic impairment (fish bioassessment, aquatic plant bioassessment and aquatic macroinvertebrate bioassessment). The easiest way to find special or impaired waters in addition to all waterbodies is to use the interactive map tool, [Special and Impaired Waters Search tool](#) (found on the MPCA Stormwater Program for Construction Activity webpage at <http://www.pca.state.mn.us/wfhy5b>).
12. List the **start** and estimated **completion dates** of the construction project.
13. Select the title that best describes the person completing this application for this Permit.

Responsible Parties

14. **Owner Information:** Provide the information requested of the owner of the company, organization, or other entity for which this construction project is being done. The **Owner** means the person or party possessing the title of the land on which the construction activities will occur; or if the construction activity is for a lease, easement, or mineral rights license holder, the party or individual identified as the lease, easement or mineral rights license holder; or the contracting government agency responsible for the construction activity. **The owner is the party responsible for the compliance with all terms and conditions of the permit.** The **alternate contact** should be the owner's representative in charge of the project that the MPCA can, if needed, contact regarding the SWPPP or the conditions of the construction site.

After completing this application, certify it with a **signature and date** from an individual authorized to sign the application. This application form must be signed by either a principal executive officer, vice president, representative agent responsible for overall operations, general partner, or a proprietor. If the activity is being conducted by a unit of government (state, county, municipality, or township), this application must be signed by a principal executive officer or ranking elected official (**for example**, city or county engineer, administrator, or manager; director of public works; mayor, etc.) For additional information, see Minnesota Rules 7001.0060.

15. **Contractor (Operator) Information:** Provide the information requested of the contractor. The **Contractor** means the party who signs the construction contract with the owner to construct the project described in the final plans and specifications. Where the construction project involves more than one contractor, the general contractor will be the party responsible for managing the project on behalf of the owner. In some cases the owner may be the general contractor. In these cases, the owner may contract an individual as the operator who would be the co-permittee. **The operator (usually the general contractor) is jointly responsible with the owner for compliance with Part II.B., Part II.C., and Part IV of the permit.**

After this application has been completed by the owner, the contractor must certify it with a **signature and date** from an individual authorized to sign the form. The application must be signed by either a principal executive officer, vice president, representative agent responsible for overall operations, general partner, or a proprietor. If the general contractor is a unit of government (state, county, municipality, or township), this application must be signed by a principal executive officer, ranking elected official, administrator, manager, coordinator, or engineer. (For additional information, see Minnesota Rules 7001.0060.) The **alternate contact** should be the contractor's representative in charge of the project that the MPCA can, if needed, contact regarding the SWPPP or the conditions of the construction site.

APPENDIX

17

CHAPTER 17 **SD DOT AVERAGE UNIT PRICES 2012**

**South Dakota Department of Transportation
Average Unit Prices from All Bids**

January 1, 2012 to December 31, 2012



Office of Project Development – Bid Letting

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
004E0010	Blading	Hour	270.00	\$38,256.90	\$141.69	6
004E0030	Maintenance of Traffic Diversion(s)	LS	24.00	\$293,654.33	\$12,235.60	24
004E0050	Remove Traffic Diversion(s)	LS	36.00	\$2,048,343.76	\$56,898.44	36
004E0060	Temporary Detour Structure	Each	5.00	\$64,946.80	\$12,989.36	5
009E0010	Mobilization	LS	925.20	\$183,940,737.81	\$198,811.87	960
009E1350	Restoration of Stockpile Site	LS	12.00	\$426,240.35	\$35,520.03	12
009E3010	Public Information	LS	2.00	\$102,648.01	\$51,324.01	2
009E3200	Construction Staking	LS	11.00	\$73,489.74	\$6,680.89	11
009E3210	Construction Staking	Mile	700.83	\$419,899.09	\$599.14	21
009E3230	Grade Staking	Mile	1,503.50	\$2,778,768.36	\$1,848.20	108
009E3240	Graded Centerline Staking	Mile	466.67	\$566,487.12	\$1,213.90	42
009E3245	Final Cross Section Survey	Mile	89.64	\$136,074.06	\$1,517.97	17
009E3250	Miscellaneous Staking	Mile	828.19	\$1,628,349.22	\$1,966.15	118
009E3260	Miscellaneous Staking	LS	5.00	\$27,885.00	\$5,577.00	5
009E3280	Slope Staking	Mile	285.51	\$505,207.90	\$1,769.50	90
009E3290	Structure Staking	Each	97.00	\$106,685.14	\$1,099.85	21
009E3310	Bridge Elevation Survey	LS	45.00	\$108,330.99	\$2,407.36	45
009E3320	Checker	LS	111.00	\$1,329,657.84	\$11,978.90	111
009E5000	Concrete Penetrating Sealer	SqYd	17,887.00	\$85,682.26	\$4.79	14
009E9900	Training Program	Hour	125,400.00	\$384,756.00	\$3.07	134
100E0010	Clear and Grub Stump	Each	8.00	\$1,947.32	\$243.42	2
100E0020	Clear and Grub Tree	Each	1,570.00	\$494,315.00	\$314.85	55
100E0100	Clearing	LS	174.00	\$1,740,578.69	\$10,003.33	174
110E0010	Remove Concrete Bridge Approach	SqYd	21,864.80	\$742,317.75	\$33.95	29
110E0020	Remove Bridge Railing	Ft	34,902.00	\$480,470.12	\$13.77	55
110E0040	Remove Concrete Bridge Slab	SqYd	4,104.00	\$488,950.56	\$119.14	4
110E0050	Remove Steel Diaphragm	Each	18.00	\$4,710.00	\$261.67	3
110E0055	Remove Structural Steel Member(s)	LS	4.00	\$46,144.34	\$11,536.09	4
110E0060	Remove Weld	In	384.00	\$10,748.96	\$27.99	11
110E0070	Remove Rubberized Asphalt Chip Seal	SqYd	25,509.20	\$279,336.24	\$10.95	19
110E0100	Remove Concrete Footing(s)	LS	24.00	\$74,515.07	\$3,104.79	24
110E0130	Remove Traffic Sign	Each	5,252.00	\$339,317.98	\$64.61	65
110E0200	Remove Building	Each	2.00	\$47,781.12	\$23,890.56	2
110E0210	Remove Building(s)	LS	2.00	\$14,113.44	\$7,056.72	2
110E0300	Remove Concrete Curb and Gutter	Ft	369,632.00	\$1,847,868.08	\$5.00	155
110E0310	Remove Concrete Curb	Ft	2,186.00	\$18,200.10	\$8.33	13
110E0320	Remove Concrete Gutter	Ft	13,269.00	\$101,479.04	\$7.65	20
110E0370	Remove Curb Stop	Each	199.00	\$31,558.70	\$158.59	5
110E0400	Remove Drop Inlet	Each	703.00	\$254,645.93	\$362.23	65
110E0415	Remove Edge Drains	LS	4.00	\$171,795.91	\$42,948.98	4
110E0420	Remove Drop Inlet Frame and Grate	Each	35.00	\$8,217.44	\$234.78	21
110E0460	Remove Manhole	Each	204.00	\$105,383.46	\$516.59	47
110E0480	Remove Manhole Frame and Lid	Each	8.00	\$354.00	\$44.25	2
110E0500	Remove Pipe Culvert	Ft	21,157.00	\$311,909.64	\$14.74	84
110E0510	Remove Pipe End Section	Each	2,242.00	\$346,979.82	\$154.76	106
110E0520	Remove Sewer Pipe	Ft	23,692.00	\$107,137.21	\$4.52	20
110E0530	Remove Storm Sewer Pipe	Ft	28,388.00	\$318,670.38	\$11.23	18
110E0550	Remove Cattle Guard	Each	4.00	\$5,882.39	\$1,470.60	4

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
110E0595	Remove Cattle Pass End Section	Each	9.00	\$2,920.24	\$324.47	9
110E0600	Remove Fence	Ft	2,668,249.00	\$799,880.52	\$0.30	100
110E0605	Remove Chain Link Fence	Ft	492.00	\$3,460.40	\$7.03	3
110E0650	Remove Crossover Closure	Ft	6,272.00	\$17,828.16	\$2.84	4
110E0655	Remove Interim Crossover Closure	Ft	3,648.00	\$8,580.80	\$2.35	11
110E0700	Remove 3 Cable Guardrail	Ft	226,291.00	\$339,776.97	\$1.50	76
110E0705	Remove Cable Guardrail	Ft	22,634.00	\$34,954.90	\$1.54	8
110E0730	Remove Beam Guardrail	Ft	115,426.70	\$363,756.02	\$3.15	159
110E0740	Remove 3 Cable Guardrail Anchor	Each	1,095.00	\$189,663.70	\$173.21	77
110E0745	Remove 3 Cable Guardrail Slip Base	Each	64.00	\$13,890.86	\$217.04	28
110E0760	Remove Beam Guardrail Trailing End	Each	55.00	\$5,130.00	\$93.27	11
110E0770	Remove W Beam Guardrail Breakaway	Each	595.00	\$99,692.16	\$167.55	59
110E0780	Remove W Beam Guardrail Modified	Each	56.00	\$8,644.56	\$154.37	14
110E0790	Remove W Beam Guardrail Deformed	Each	28.00	\$4,459.00	\$159.25	4
110E0800	Remove W Beam Guardrail End	Each	216.00	\$38,318.79	\$177.40	26
110E0810	Remove Rubrail	Ft	5,458.20	\$23,840.44	\$4.37	47
110E1000	Remove Asphalt Concrete Pavement	LS	1.00	\$1,277.74	\$1,277.74	1
110E1010	Remove Asphalt Concrete Pavement	SqYd	263,398.60	\$1,349,874.37	\$5.12	163
110E1020	Remove Asphalt Concrete Pavement	CuYd	56,888.80	\$705,966.48	\$12.41	8
110E1030	Remove Asphalt Concrete Bridge Deck	SqYd	1,731.20	\$30,395.54	\$17.56	4
110E1050	Remove Asphalt Concrete Approach	SqYd	2,037.60	\$11,655.07	\$5.72	3
110E1100	Remove Concrete Pavement	SqYd	6,544,834.90	\$21,325,063.71	\$3.26	162
110E1105	Remove Concrete Pavement	CuYd	95,726.40	\$2,560,441.88	\$26.75	4
110E1110	Remove Concrete Approach Pavement	SqYd	22,120.30	\$198,509.73	\$8.97	39
110E1120	Remove Concrete Median Pavement	SqYd	368.50	\$6,428.93	\$17.45	11
110E1130	Remove Concrete Driveway Pavement	SqYd	11,857.90	\$66,288.19	\$5.59	24
110E1140	Remove Concrete Sidewalk	SqYd	73,932.10	\$687,366.62	\$9.30	108
110E1180	Remove Spalled Concrete	SqFt	2,364.00	\$36,671.55	\$15.51	4
110E1300	Remove Concrete Retaining Wall	Ft	453.00	\$4,890.89	\$10.80	3
110E1310	Remove Metal Bin Retaining Wall	LS	3.00	\$20,086.37	\$6,695.46	3
110E1400	Remove Pavement Marking, 4" or	Ft	2,634,909.00	\$863,280.97	\$0.33	105
110E1410	Remove Pavement Marking, Arrow	Each	153.00	\$15,552.65	\$101.65	8
110E1440	Remove Pavement Marking, Railroad	Each	4.00	\$2,125.11	\$531.28	4
110E1510	Remove Luminaire Pole	Each	27.00	\$5,571.00	\$206.33	3
110E1520	Remove Signal Equipment	LS	26.00	\$102,125.46	\$3,927.90	26
110E1530	Remove Signal Pole Footing	Each	177.00	\$82,915.53	\$468.45	20
110E1540	Remove Luminaire Pole Footing	Each	68.00	\$38,505.99	\$566.26	24
110E1550	Remove Light Tower	Each	3.00	\$10,700.00	\$3,566.67	3
110E1600	Remove Riprap	SqYd	265.00	\$2,090.85	\$7.89	5
110E1640	Remove Granular Material	CuYd	20,276.80	\$369,544.68	\$18.23	4
110E1650	Remove Bank and Channel Protection	Each	30.00	\$6,270.00	\$209.00	5
110E1690	Remove Sediment	CuYd	4,597.50	\$54,705.30	\$11.90	134
110E1693	Remove Erosion Control Wattle	Ft	109,418.00	\$87,067.22	\$0.80	129
110E1695	Remove Sediment Filter Bag	Ft	42,165.00	\$19,322.82	\$0.46	28
110E1697	Remove Triangular Silt Barrier	Ft	1,260.00	\$2,639.70	\$2.10	2
110E1700	Remove Silt Fence	Ft	354,530.00	\$198,736.36	\$0.56	286
110E1910	Remove Fire Hydrant	Each	94.00	\$49,325.96	\$524.74	25
110E1960	Remove Valve Box	Each	94.00	\$16,172.40	\$172.05	5

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
110E1965	Remove Gate Valve	Each	117.00	\$27,162.88	\$232.16	12
110E1970	Remove Water Main	Ft	24,373.00	\$215,345.26	\$8.84	19
110E4290	Salvage Beam Guardrail	Ft	13,675.50	\$44,586.50	\$3.26	6
110E4330	Salvage W Beam Guardrail	Ft	37.50	\$131.63	\$3.51	3
110E4360	Salvage W Beam Guardrail Breakaway	Each	3.00	\$631.17	\$210.39	3
110E4380	Salvage W Beam Guardrail Tangent	Each	20.00	\$6,180.56	\$309.03	5
110E5010	Salvage Delineator	Each	15,613.00	\$258,837.73	\$16.58	67
110E5020	Salvage Traffic Sign	Each	28,643.00	\$845,914.13	\$29.53	104
110E5040	Salvage Road Closure Gate	Each	2.00	\$1,459.00	\$729.50	2
110E5100	Salvage Luminaire Pole	Each	19.00	\$3,295.70	\$173.46	10
110E5110	Salvage Signal Equipment	LS	36.00	\$61,025.98	\$1,695.17	36
110E5450	Salvage Riprap	CuYd	180.00	\$3,290.50	\$18.28	6
110E5451	Salvage Riprap	Ton	948.60	\$17,974.59	\$18.95	6
110E5500	Salvage Pipe	Ft	1,464.00	\$13,871.40	\$9.48	4
110E5510	Salvage Pipe End Section	Each	8.00	\$3,850.24	\$481.28	4
110E5720	Salvage Drop Inlet Frame and Grate	Each	32.00	\$3,488.00	\$109.00	4
110E5740	Salvage Fire Hydrant	Each	8.00	\$3,795.32	\$474.42	4
110E5765	Salvage Valve and Valve Box	Each	8.00	\$3,360.90	\$420.11	4
110E5770	Salvage Valve Box	Each	8.00	\$470.12	\$58.77	4
110E5790	Salvage Water Main Fitting	Each	56.00	\$11,168.08	\$199.43	4
110E6000	Remove 3 Cable Guardrail for Reset	Ft	58,301.00	\$78,096.07	\$1.34	43
110E6010	Remove 3 Cable Guardrail Anchor	Each	40.00	\$5,678.30	\$141.96	12
110E6200	Remove Double Thrie Beam Guardrail	Ft	3,550.00	\$17,699.50	\$4.99	43
110E6210	Remove Thrie Beam Guardrail for	Ft	200.00	\$977.38	\$4.89	7
110E6220	Remove Double W Beam Guardrail for	Ft	1,000.00	\$4,761.00	\$4.76	10
110E6230	Remove W Beam Guardrail for Reset	Ft	34,025.50	\$110,656.48	\$3.25	71
110E6240	Remove W Beam to Thrie Beam	Each	252.00	\$10,894.40	\$43.23	46
110E6260	Remove W Beam Guardrail Breakaway	Each	33.00	\$5,725.75	\$173.51	17
110E6269	Remove W Beam Guardrail End	Each	33.00	\$10,890.00	\$330.00	3
110E6270	Remove W Beam Guardrail Flared End	Each	135.00	\$33,461.24	\$247.86	27
110E6280	Remove W Beam Guardrail Tangent	Each	53.00	\$16,653.55	\$314.22	8
110E6300	Remove Rubrail for Reset	Ft	538.00	\$1,780.46	\$3.31	11
110E7000	Remove Crossover Closure for Reset	Ft	7,744.00	\$18,735.36	\$2.42	20
110E7020	Remove Interim Crossover Closure for	Ft	7,488.00	\$17,003.84	\$2.27	16
110E7030	Remove Road Closure Gate for Reset	Each	2.00	\$215.00	\$107.50	2
110E7040	Remove Gate for Reset	Each	26.00	\$2,718.10	\$104.54	6
110E7150	Remove Sign for Reset	Each	530.00	\$21,421.88	\$40.42	39
110E7152	Remove Delineator for Reset	Each	13,058.00	\$158,241.94	\$12.12	29
110E7500	Remove Pipe for Reset	Ft	2,876.00	\$74,476.44	\$25.90	67
110E7510	Remove Pipe End Section for Reset	Each	1,687.00	\$422,817.23	\$250.63	105
110E7530	Remove Cattle Pass for Reset	Ft	96.00	\$9,302.06	\$96.90	13
110E7540	Remove Cattle Pass End Section for	Each	41.00	\$15,338.46	\$374.11	18
110E7700	Remove Drop Inlet Frame and Grate	Each	789.00	\$103,814.13	\$131.58	75
110E7710	Remove Manhole Frame and Lid for	Each	40.00	\$5,944.00	\$148.60	5
110E7800	Remove Chain Link Fence for Reset	Ft	398.00	\$4,756.90	\$11.95	15
110E7802	Remove Fence for Reset	Ft	16,256.00	\$25,370.68	\$1.56	36
120E0010	Unclassified Excavation	CuYd	17,360,719.00	\$40,261,028.50	\$2.32	324
120E0020	Unclassified Excavation	LS	18.00	\$150,082.21	\$8,337.90	18

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
120E0200	Unclassified Excavation, Structure	CuYd	9,384.00	\$110,449.68	\$11.77	3
120E0300	Borrow Unclassified Excavation	CuYd	2,503,037.00	\$7,024,422.51	\$2.81	18
120E0400	Select Subgrade Topping	CuYd	1,097,587.00	\$6,073,338.05	\$5.53	17
120E0420	Contractor Furnished Select Subgrade	CuYd	47,588.00	\$380,320.62	\$7.99	8
120E0500	Option Borrow Excavation	CuYd	7,643,401.00	\$22,514,383.16	\$2.95	29
120E0600	Contractor Furnished Borrow	CuYd	2,284,164.00	\$18,503,723.40	\$8.10	322
120E0900	Contaminated Material Excavation	CuYd	6,214.00	\$168,962.34	\$27.19	11
120E1000	Muck Excavation	CuYd	339,543.00	\$1,752,296.53	\$5.16	40
120E1100	Unclassified/Rock Excavation	CuYd	69,380.00	\$1,410,184.65	\$20.33	7
120E2000	Undercutting	CuYd	3,211,825.00	\$4,358,396.35	\$1.36	111
120E3000	Placing Embankment	CuYd	500.00	\$13,520.00	\$27.04	5
120E3100	Bridge End Embankment	CuYd	16,852.00	\$154,762.36	\$9.18	16
120E4000	Grading	Sta	34.00	\$32,898.84	\$967.61	9
120E4100	Reprofiling Ditch	Sta	397.80	\$89,356.01	\$224.63	26
120E6000	Water for Dust Control	MGal	6,241.90	\$117,835.70	\$18.88	21
120E6200	Water for Granular Material	MGal	181,810.20	\$3,486,275.64	\$19.18	322
120E6300	Water for Vegetation	MGal	19,628.40	\$462,757.15	\$23.58	37
120E7000	Select Granular Backfill	Ton	3,500.00	\$26,532.50	\$7.58	9
120E7100	Select Rock Fill Material	CuYd	19,240.00	\$661,519.30	\$34.38	4
120E9000	Pit Run Material	Ton	1,362,401.60	\$11,906,127.38	\$8.74	149
205E0010	Dust Control Chloride	Lb	1,592,235.00	\$513,831.41	\$0.32	13
210E1000	Shoulder Preparation	Mile	86.40	\$104,484.63	\$1,209.31	5
210E1005	Surface Preparation	Mile	260.01	\$1,375,842.87	\$5,291.52	93
210E2000	Shoulder Shaping	Mile	1,068.89	\$2,228,087.03	\$2,084.48	41
210E3000	Ordinary Roadway Shaping	Mile	289.77	\$2,331,466.35	\$8,046.00	53
210E3020	Ordinary Roadway Shaping	SqYd	3,924.00	\$22,555.50	\$5.75	9
210E3500	Heavy Roadway Shaping	Mile	105.02	\$1,466,312.21	\$13,961.95	22
210E3510	Heavy Roadway Shaping	SqYd	71,672.00	\$65,400.70	\$0.91	4
230E0010	Placing Topsoil	CuYd	2,088,788.00	\$4,274,256.79	\$2.05	169
230E0020	Placing Contractor Furnished Topsoil	CuYd	65,194.00	\$1,318,531.47	\$20.22	60
230E0030	Placing State Furnished Topsoil	CuYd	800.00	\$7,318.00	\$9.15	4
230E0100	Remove and Replace Topsoil	LS	195.00	\$4,541,925.41	\$23,291.93	195
240E0010	Obliterate Old Road	Sta	96.00	\$89,702.31	\$934.40	12
250E0010	Incidental Work	LS	186.00	\$2,741,490.92	\$14,739.20	186
250E0020	Incidental Work, Grading	LS	143.00	\$2,443,292.44	\$17,085.96	143
250E0030	Incidental Work, Structure	LS	98.00	\$2,309,239.73	\$23,563.67	98
260E0010	Subbase	Ton	17,472.00	\$352,322.88	\$20.17	2
260E0070	Subbase, Salvaged, State Furnished	Ton	87,500.00	\$577,675.00	\$6.60	5
260E1010	Base Course	Ton	4,006,730.70	\$55,991,532.40	\$13.97	440
260E1030	Base Course, Salvaged	Ton	563,173.60	\$3,688,141.54	\$6.55	82
260E1050	Base Course, Salvaged Asphalt Mix	Ton	414,781.80	\$4,956,259.88	\$11.95	119
260E1080	Base Course, Salvaged, State	Ton	131,758.20	\$986,868.92	\$7.49	7
260E2010	Gravel Cushion	Ton	617,909.70	\$9,402,594.79	\$15.22	86
260E2030	Gravel Cushion, Salvaged	Ton	2,851,478.50	\$8,397,727.10	\$2.95	43
260E2060	Gravel Cushion, Modified	Ton	1,606,865.20	\$16,550,050.55	\$10.30	35
260E3010	Gravel Surfacing	Ton	477,475.30	\$9,837,226.92	\$20.60	67
260E3040	Gravel Surfacing, Salvaged	CuYd	872.00	\$6,569.40	\$7.53	7
260E6000	Granular Material, Furnish	Ton	814,009.60	\$5,899,151.03	\$7.25	57

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Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
260E6010	Granular Material	Ton	4,202.00	\$188,662.40	\$44.90	11
270E0020	Salvage and Stockpile Asphalt Mix	Ton	1,177,248.10	\$6,316,230.36	\$5.37	34
270E0040	Salvage and Stockpile Asphalt Mix and	Ton	2,071,107.30	\$8,088,487.57	\$3.91	102
270E0042	Salvage Asphalt Mix and Granular	Ton	19,409.60	\$222,725.16	\$11.48	4
270E0110	Salvage and Stockpile Granular	Ton	83,830.50	\$351,936.19	\$4.20	10
270E0112	Salvage Granular Material	Ton	6,603.60	\$36,782.05	\$5.57	3
270E0200	Blend, Haul, and Stockpile Granular	Ton	865,562.60	\$2,806,997.04	\$3.24	44
270E0210	Haul and Stockpile Granular Material	Ton	79,322.40	\$523,380.02	\$6.60	16
270E0220	Blend and Stockpile Granular Material	Ton	858,798.00	\$1,741,312.47	\$2.03	13
280E0010	Process In Place Surfacing	SqYd	735,960.00	\$902,596.64	\$1.23	10
320E0004	PG 58-28 Asphalt Binder	Ton	31,591.30	\$21,018,614.10	\$665.33	50
320E0005	PG 58-34 Asphalt Binder	Ton	189,718.50	\$143,968,842.26	\$758.86	134
320E0006	PG 64-22 Asphalt Binder	Ton	26,199.30	\$17,122,002.97	\$653.53	33
320E0007	PG 64-28 Asphalt Binder	Ton	164,103.20	\$124,653,608.88	\$759.60	129
320E0008	PG 64-34 Asphalt Binder	Ton	20,201.80	\$17,013,527.48	\$842.18	16
320E0300	Asphalt Emulsion for Microsurfacing	Gal	266,920.00	\$1,026,974.70	\$3.85	4
320E0402	Asphalt Repair Mastic Type 2	Lb	448,224.00	\$518,445.76	\$1.16	3
320E1002	Class Q2 Hot Mixed Asphalt Concrete	Ton	1,781,944.30	\$78,661,700.34	\$44.14	58
320E1003	Class Q3 Hot Mixed Asphalt Concrete	Ton	607,979.40	\$23,476,003.34	\$38.61	8
320E1050	Class E Asphalt Concrete	Ton	963,181.50	\$39,456,746.01	\$40.97	75
320E1060	Class G Asphalt Concrete	Ton	101,507.00	\$5,390,430.80	\$53.10	7
320E1070	Class HR Asphalt Concrete	Ton	750,612.40	\$28,665,365.59	\$38.19	48
320E1090	Modified Class S Asphalt Concrete	Ton	181,783.50	\$10,226,398.96	\$56.26	13
320E1200	Asphalt Concrete Composite	Ton	335,093.60	\$36,091,403.22	\$107.71	325
320E1202	Class Q2R Hot Mixed Asphalt Concrete	Ton	2,795,970.30	\$105,213,107.82	\$37.63	67
320E1203	Class Q3R Hot Mixed Asphalt Concrete	Ton	1,137,708.70	\$44,279,230.98	\$38.92	28
320E1400	Contractor Furnished Asphalt Concrete	Ton	74,902.00	\$2,666,092.46	\$35.59	53
320E1800	Asphalt Concrete Blade Laid	Ton	238,988.40	\$10,546,123.51	\$44.13	90
320E1810	Asphalt Concrete Leveling Lift	Ton	76,582.50	\$3,155,455.85	\$41.20	13
320E2000	Maintenance Patching	Ton	21,544.00	\$3,339,617.99	\$155.01	28
320E2500	Asphalt Concrete Curb	Ft	1,990.00	\$18,403.52	\$9.25	5
320E2701	Asphalt Concrete Bridge Deck Overlay	SqYd	1,335.00	\$56,070.00	\$42.00	3
320E2711	Prefabricated Membrane Strip for Deck	SqYd	1,335.00	\$24,920.00	\$18.67	3
320E2713	Hot Applied Elastomeric Membrane	SqYd	1,310.10	\$42,425.41	\$32.38	3
320E3000	Compaction Sample	Each	429.00	\$138,223.56	\$322.20	115
320E3100	Stabilizing Additive for Asphalt	Ton	519.40	\$454,938.30	\$875.89	13
320E4000	Hydrated Lime	Ton	66,882.50	\$10,432,920.23	\$155.99	226
320E4510	Mineral Aggregate for Microsurfacing	Ton	8,744.00	\$779,309.00	\$89.13	4
320E5010	Saw and Seal Shoulder Joint	Ft	5,159,404.00	\$2,542,549.10	\$0.49	54
320E7008	Grind 8" Rumble Strip or Stripe in	Mile	5,213.10	\$1,840,582.50	\$353.07	105
320E7012	Grind 12" Rumble Strip or Stripe in	Mile	4,441.90	\$1,603,397.92	\$360.97	140
320E7016	Grind 16" Rumble Strip in Asphalt	Mile	126.40	\$46,357.48	\$366.75	9
330E0010	MC-70 Asphalt for Prime	Ton	20,097.00	\$18,425,574.68	\$916.83	142
330E0100	SS-1h or CSS-1h Asphalt for Tack	Ton	25,849.90	\$16,391,053.99	\$634.09	291
330E0210	SS-1h or CSS-1h Asphalt for Flush	Ton	14,433.00	\$10,134,903.35	\$702.20	277
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	Ton	15,612.40	\$11,926,616.97	\$763.92	77
330E1000	Blotting Sand for Prime	Ton	5,038.20	\$252,040.72	\$50.03	34
330E2000	Sand for Flush Seal	Ton	169,112.90	\$6,694,679.35	\$39.59	246

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
330E3000	Sand for Fog Seal	Ton	10,536.90	\$331,671.15	\$31.48	62
332E0010	Cold Milling Asphalt Concrete	SqYd	26,725,134.00	\$22,743,157.79	\$0.85	285
332E0020	Cold Milling Asphalt Concrete	Ton	1,390.50	\$84,681.45	\$60.90	5
332E0100	Cold Milling Asphalt Concrete and	SqYd	301,312.00	\$548,387.84	\$1.82	4
350E0010	Asphalt Concrete Crack Sealing	Lb	1,565,359.00	\$2,503,853.41	\$1.60	32
360E0020	AE150S Asphalt for Surface Treatment	Ton	37,069.70	\$21,520,839.93	\$580.55	68
360E0042	CRS-2P Asphalt for Surface Treatment	Ton	42,406.60	\$28,844,714.04	\$680.19	24
360E1020	Type 1B Cover Aggregate	Ton	5,092.40	\$197,788.82	\$38.84	4
360E1030	Type 2A Cover Aggregate	Ton	52,576.20	\$1,840,812.29	\$35.01	14
360E1050	Type 3 Cover Aggregate	Ton	5,675.00	\$213,050.85	\$37.54	5
360E1200	Modified Cover Aggregate	Ton	567,010.60	\$19,653,844.10	\$34.66	306
380E0050	8" Nonreinforced PCC Pavement	SqYd	1,042,432.60	\$29,971,983.28	\$28.75	42
380E0060	8.5" Nonreinforced PCC Pavement	SqYd	750,300.60	\$20,971,885.52	\$27.95	12
380E0070	9" Nonreinforced PCC Pavement	SqYd	1,412,397.20	\$41,614,605.39	\$29.46	47
380E0080	9.5" Nonreinforced PCC Pavement	SqYd	101,283.20	\$4,457,473.63	\$44.01	4
380E0090	10" Nonreinforced PCC Pavement	SqYd	1,432,168.50	\$43,450,189.48	\$30.34	11
380E0100	10.5" Nonreinforced PCC Pavement	SqYd	3,487,902.10	\$104,628,311.82	\$30.00	15
380E0110	11" Nonreinforced PCC Pavement	SqYd	484,303.60	\$19,510,170.53	\$40.29	4
380E0130	12" Nonreinforced PCC Pavement	SqYd	136,716.80	\$5,798,937.46	\$42.42	5
380E0540	10" Continuously Reinforced PCC	SqYd	104.00	\$29,026.14	\$279.10	4
380E1000	6" Miscellaneous PCC Pavement	SqYd	428.40	\$23,407.51	\$54.64	7
380E1030	8" Miscellaneous PCC Pavement	SqYd	16,656.00	\$653,807.78	\$39.25	16
380E1050	9" Miscellaneous PCC Pavement	SqYd	29,813.60	\$1,310,940.31	\$43.97	11
380E1070	10" Miscellaneous PCC Pavement	SqYd	1,128.00	\$92,496.00	\$82.00	3
380E1500	PCC Overlay, Furnish	CuYd	364,636.80	\$33,385,513.37	\$91.56	12
380E1550	5" PCC Overlay, Placement	SqYd	213,710.70	\$651,817.64	\$3.05	3
380E1580	8" PCC Overlay, Placement	SqYd	1,376,367.60	\$7,133,940.26	\$5.18	9
380E2450	Concrete Barrier and 10' Continuously	Ft	1,224.00	\$355,857.60	\$290.73	6
380E2451	Concrete Barrier and 10' Plain Jointed	Ft	1,368.00	\$356,548.68	\$260.64	6
380E2554	4" Barrier Type Median PCC Pavement	SqYd	744.30	\$35,030.22	\$47.06	14
380E2556	6" Barrier Type Median PCC Pavement	SqYd	570.00	\$23,018.50	\$40.38	3
380E2558	8" Barrier Type Median PCC Pavement	SqYd	22.50	\$1,369.17	\$60.85	5
380E2564	4" Barrier Type Colored Median PCC	SqYd	9,084.60	\$470,915.15	\$51.84	9
380E2576	6" Barrier Type Colored and Patterned	SqYd	3,195.60	\$189,658.86	\$59.35	4
380E3020	6" PCC Driveway Pavement	SqYd	8,285.90	\$390,057.80	\$47.07	24
380E3025	6" Reinforced PCC Driveway Pavement	SqYd	4,944.20	\$278,281.00	\$56.28	6
380E3040	8" PCC Driveway Pavement	SqYd	1,400.80	\$65,319.30	\$46.63	4
380E3520	6" PCC Approach Pavement	SqYd	12,590.40	\$733,891.89	\$58.29	34
380E3540	8" PCC Approach Pavement	SqYd	12,222.50	\$642,836.44	\$52.59	30
380E3542	8" Fast Track Concrete Approach	SqYd	332.80	\$22,430.72	\$67.40	2
380E4010	6" PCC Fillet Section	SqYd	13,648.10	\$1,103,165.79	\$80.83	43
380E4030	7" PCC Fillet Section	SqYd	556.20	\$53,951.40	\$97.00	2
380E4050	8" PCC Fillet Section	SqYd	9,297.00	\$862,777.52	\$92.80	27
380E4060	8.5" PCC Fillet Section	SqYd	2,989.50	\$373,024.50	\$124.78	6
380E4070	9" PCC Fillet Section	SqYd	335.50	\$34,187.02	\$101.90	12
380E4080	9.5" PCC Fillet Section	SqYd	870.60	\$86,324.34	\$99.15	4
380E4090	10" PCC Fillet Section	SqYd	4,797.00	\$354,066.57	\$73.81	3
380E4906	6" PCC Ditch Liner	SqYd	95.40	\$8,713.36	\$91.34	2

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
380E5010	Fast Track Concrete	SqYd	45,217.50	\$2,231,737.53	\$49.36	26
380E5020	Fast Track Concrete for PCC	SqYd	2,965.40	\$515,696.08	\$173.90	17
380E5030	Nonreinforced PCC Pavement Repair	SqYd	139,043.60	\$19,075,368.17	\$137.19	41
380E5100	Continuously Reinforced PCC	SqYd	4,908.00	\$973,739.02	\$198.40	6
380E5200	PCC Pavement Partial Depth Patch	SqFt	46,452.00	\$1,414,364.40	\$30.45	12
380E6000	Dowel Bar	Each	4,678,578.00	\$38,623,096.06	\$8.26	139
380E6005	Dowel Bar, State Furnished	Each	73,353.00	\$203,183.64	\$2.77	18
380E6110	Insert Steel Bar in PCC Pavement	Each	341,069.00	\$3,623,520.26	\$10.62	154
380E6200	Tie Bar Retrofit, Stitching	Each	1,550.00	\$29,853.00	\$19.26	5
380E6300	Reseal PCC Pavement Joint - Silicone	Ft	525,904.00	\$1,134,763.40	\$2.16	13
380E6302	Reseal PCC Pavement Joint - Hot Pour	Ft	640,200.00	\$960,137.20	\$1.50	17
380E6310	Seal Random Cracks in PCC	Ft	216,734.00	\$565,600.02	\$2.61	33
380E6450	Saw Joint in PCC Pavement	Ft	524,309.10	\$321,576.25	\$0.61	3
380E6500	Planing PCC Pavement	SqYd	163,089.80	\$2,088,469.57	\$12.81	36
380E6510	Grinding PCC Pavement	SqYd	5,673.20	\$93,374.55	\$16.46	11
380E6520	Grooving PCC Pavement	SqYd	917,617.60	\$1,647,123.59	\$1.79	8
380E6550	Grind 16" Rumble Strip in PCC	Mile	306.00	\$172,584.00	\$564.00	3
380E9010	Temporary Gravel Crossing	Each	43.00	\$80,280.37	\$1,866.99	13
390E0100	Saw and Seal Joint	Ft	3,168.00	\$22,706.64	\$7.17	4
390E0200	Repair Type A Spall	SqFt	28,503.50	\$3,600,493.33	\$126.32	31
393E0100	Cracking and Seating PCC Pavement	SqYd	2,321,189.50	\$648,184.15	\$0.28	12
393E0300	Cored or Sawed Sample	Each	357.00	\$50,532.30	\$141.55	12
410E0020	Structural Steel	LS	10.00	\$8,647,969.11	\$864,796.91	10
410E0030	Structural Steel, Miscellaneous	LS	53.00	\$1,069,297.43	\$20,175.42	53
410E0103	Fatigue Retrofit Steel Girder, Type C	Each	3,708.00	\$436,384.20	\$117.69	18
410E0300	Modify Girder End	Each	128.00	\$174,034.00	\$1,359.64	7
410E0320	Bolted Girder Splice	Each	128.00	\$679,011.84	\$5,304.78	4
410E0410	Stud Shear Connector	Each	9,112.00	\$127,727.46	\$14.02	4
410E0508	Field Weld	In	988.00	\$52,334.63	\$52.97	19
410E0512	Grind Weld	In	608.00	\$16,239.22	\$26.71	8
410E0515	Drill Hole in Existing Steel	Each	324.00	\$26,737.29	\$82.52	4
410E0550	Jack Superstructure, Steel Girder	LS	8.00	\$258,620.45	\$32,327.56	8
410E0560	Jack Superstructure and Shift Bearing	LS	15.00	\$547,363.88	\$36,490.93	15
410E0570	Bridge End Support	LS	8.00	\$163,689.00	\$20,461.13	8
410E0700	Abutment Joint Drain	Each	26.00	\$251,621.68	\$9,677.76	8
410E1000	Bearing, Furnish	Each	3.00	\$24,980.93	\$8,326.98	3
410E1001	Bearing, Install	Each	3.00	\$3,902.19	\$1,300.73	3
410E1500	Reset Bearing	Each	146.00	\$211,184.10	\$1,446.47	9
410E1600	Fix Expansion Bearing	Each	32.00	\$63,678.24	\$1,989.95	4
410E2100	Finger Type Expansion Joint Assembly	Each	26.00	\$1,843,653.16	\$70,909.74	8
410E2220	Replace Expansion Device	Each	53.00	\$1,472,208.99	\$27,777.53	26
410E2310	Strip Seal Gland	Ft	484.50	\$59,325.92	\$122.45	9
410E2600	Membrane Sealant Expansion Joint	Ft	32,852.90	\$3,153,406.29	\$95.99	113
410E3010	Magnetic Particle Weld Inspection	In	6,304.00	\$109,208.48	\$17.32	26
411E0100	Bridge Painting	LS	5.00	\$990,116.01	\$198,023.20	5
412E0100	Bridge Repainting, Class I	LS	45.00	\$575,287.53	\$12,784.17	45
412E0120	Bridge Repainting, Class II	LS	14.00	\$3,988,488.58	\$284,892.04	14
412E0190	Field Painting	LS	3.00	\$19,971.00	\$6,657.00	3

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
412E0400	Rust Penetrating Sealer	LS	9.00	\$217,097.75	\$24,121.97	9
412E0500	Paint Residue Containment	LS	52.00	\$5,548,286.26	\$106,697.81	52
420E0100	Structure Excavation, Bridge	CuYd	6,375.00	\$1,348,986.09	\$211.61	41
420E0200	Structure Excavation, Box Culvert	CuYd	9,587.00	\$276,471.54	\$28.84	58
420E0300	Structure Excavation, Retaining Wall	CuYd	543.00	\$18,100.00	\$33.33	3
420E0400	Structure Excavation, Miscellaneous	CuYd	2,169.00	\$99,306.74	\$45.78	39
421E0200	Box Culvert Undercut	CuYd	33,134.00	\$1,624,317.04	\$49.02	61
421E1000	Footing Undercut	CuYd	4,537.00	\$240,003.65	\$52.90	14
423E3000	Temporary Works	LS	8.00	\$288,903.59	\$36,112.95	8
430E0300	Granular Bridge End Backfill	CuYd	13,112.10	\$899,702.10	\$68.62	54
430E0400	Bridge End Backfill Underdrain Pipe	Ft	1,250.00	\$19,899.80	\$15.92	10
430E0500	Bridge End Backfill Excavation	CuYd	1,211.40	\$47,222.42	\$38.98	13
430E0510	Approach Slab Underdrain Excavation	CuYd	3,346.10	\$126,418.22	\$37.78	31
440E0500	Backfill for Long Span Structural Plate	CuYd	4,290.00	\$244,086.70	\$56.90	3
450E0102	12" RCP Class 2, Furnish	Ft	1,954.00	\$33,688.20	\$17.24	23
450E0103	12" RCP Class 3, Furnish	Ft	30.00	\$447.30	\$14.91	3
450E0104	12" RCP Class 4, Furnish	Ft	760.00	\$12,356.08	\$16.26	5
450E0110	12" RCP, Install	Ft	2,744.00	\$99,965.18	\$36.43	31
450E0112	15" RCP Class 2, Furnish	Ft	282.00	\$5,509.24	\$19.54	9
450E0114	15" RCP Class 4, Furnish	Ft	1,850.00	\$36,493.10	\$19.73	5
450E0120	15" RCP, Install	Ft	2,132.00	\$57,873.96	\$27.15	14
450E0122	18" RCP Class 2, Furnish	Ft	52,836.00	\$1,245,989.54	\$23.58	87
450E0123	18" RCP Class 3, Furnish	Ft	17,266.00	\$412,111.52	\$23.87	14
450E0125	18" RCP Class 5, Furnish	Ft	1,500.00	\$41,187.00	\$27.46	5
450E0130	18" RCP, Install	Ft	71,602.00	\$1,754,672.08	\$24.51	101
450E0142	24" RCP Class 2, Furnish	Ft	36,720.00	\$1,130,942.26	\$30.80	78
450E0143	24" RCP Class 3, Furnish	Ft	11,712.00	\$372,480.22	\$31.80	20
450E0144	24" RCP Class 4, Furnish	Ft	1,466.00	\$50,203.14	\$34.24	7
450E0150	24" RCP, Install	Ft	49,898.00	\$1,167,777.18	\$23.40	94
450E0162	30" RCP Class 2, Furnish	Ft	9,098.00	\$386,970.08	\$42.53	43
450E0163	30" RCP Class 3, Furnish	Ft	6,798.00	\$300,138.28	\$44.15	11
450E0164	30" RCP Class 4, Furnish	Ft	192.00	\$9,465.60	\$49.30	4
450E0165	30" RCP Class 5, Furnish	Ft	712.00	\$48,923.30	\$68.71	4
450E0170	30" RCP, Install	Ft	16,800.00	\$391,308.90	\$23.29	50
450E0182	36" RCP Class 2, Furnish	Ft	12,776.00	\$811,476.96	\$63.52	45
450E0183	36" RCP Class 3, Furnish	Ft	2,804.00	\$176,681.82	\$63.01	9
450E0184	36" RCP Class 4, Furnish	Ft	520.00	\$38,019.80	\$73.12	4
450E0189	36" RCP for Jacking, Furnish	Ft	348.00	\$51,515.60	\$148.03	6
450E0190	36" RCP, Install	Ft	16,100.00	\$434,524.52	\$26.99	48
450E0192	42" RCP Class 2, Furnish	Ft	1,452.00	\$144,346.82	\$99.41	10
450E0193	42" RCP Class 3, Furnish	Ft	440.00	\$42,060.00	\$95.59	10
450E0194	42" RCP Class 4, Furnish	Ft	480.00	\$51,538.40	\$107.37	8
450E0195	42" RCP Class 5, Furnish	Ft	240.00	\$36,780.00	\$153.25	4
450E0200	42" RCP, Install	Ft	2,612.00	\$118,828.38	\$45.49	14
450E0202	48" RCP Class 2, Furnish	Ft	4,634.00	\$532,159.98	\$114.84	22
450E0203	48" RCP Class 3, Furnish	Ft	384.00	\$40,962.24	\$106.67	4
450E0204	48" RCP Class 4, Furnish	Ft	512.00	\$66,376.96	\$129.64	4
450E0210	48" RCP, Install	Ft	5,530.00	\$224,185.56	\$40.54	22

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Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E0212	54" RCP Class 2, Furnish	Ft	112.00	\$15,356.70	\$137.11	15
450E0213	54" RCP Class 3, Furnish	Ft	1,794.00	\$267,521.28	\$149.12	3
450E0220	54" RCP, Install	Ft	1,906.00	\$93,519.28	\$49.07	18
450E0222	60" RCP Class 2, Furnish	Ft	132.00	\$23,666.64	\$179.29	11
450E0223	60" RCP Class 3, Furnish	Ft	4,576.00	\$804,357.12	\$175.78	7
450E0230	60" RCP, Install	Ft	4,708.00	\$235,248.40	\$49.97	18
450E0232	66" RCP Class 2, Furnish	Ft	4,572.00	\$1,067,095.92	\$233.40	16
450E0233	66" RCP Class 3, Furnish	Ft	192.00	\$39,017.28	\$203.22	4
450E0234	66" RCP Class 4, Furnish	Ft	280.00	\$73,332.00	\$261.90	4
450E0240	66" RCP, Install	Ft	5,044.00	\$362,494.76	\$71.87	20
450E0242	72" RCP Class 2, Furnish	Ft	102.00	\$24,077.10	\$236.05	3
450E0244	72" RCP Class 4, Furnish	Ft	318.00	\$105,810.26	\$332.74	3
450E0250	72" RCP, Install	Ft	420.00	\$22,615.60	\$53.85	3
450E0262	84" RCP Class 2, Furnish	Ft	416.00	\$123,639.36	\$297.21	4
450E0263	84" RCP Class 3, Furnish	Ft	456.00	\$148,490.70	\$325.64	4
450E0270	84" RCP, Install	Ft	872.00	\$28,690.98	\$32.90	4
450E0272	90" RCP Class 2, Furnish	Ft	168.00	\$108,554.88	\$646.16	2
450E0280	90" RCP, Install	Ft	168.00	\$28,000.56	\$166.67	2
450E0312	120" RCP Class 2, Furnish	Ft	648.00	\$416,232.00	\$642.33	6
450E0314	120" RCP Class 4, Furnish	Ft	612.00	\$487,713.00	\$796.92	6
450E0315	120" RCP Class 5, Furnish	Ft	1,296.00	\$1,179,792.00	\$910.33	6
450E0320	120" RCP, Install	Ft	2,556.00	\$466,470.00	\$182.50	6
450E0408	18" RCP Bend, Furnish	Each	76.00	\$37,152.59	\$488.85	16
450E0409	18" RCP Bend, Install	Each	76.00	\$22,348.79	\$294.06	16
450E0416	24" RCP Bend, Furnish	Each	72.00	\$53,890.59	\$748.48	14
450E0417	24" RCP Bend, Install	Each	72.00	\$15,455.71	\$214.66	14
450E0424	30" RCP Bend, Furnish	Each	24.00	\$24,420.00	\$1,017.50	2
450E0425	30" RCP Bend, Install	Each	24.00	\$6,480.00	\$270.00	2
450E0428	36" RCP Bend, Furnish	Each	16.00	\$22,553.88	\$1,409.62	4
450E0429	36" RCP Bend, Install	Each	16.00	\$5,343.43	\$333.96	4
450E0432	42" RCP Bend, Furnish	Each	46.00	\$67,100.91	\$1,458.72	6
450E0433	42" RCP Bend, Install	Each	46.00	\$16,998.50	\$369.53	6
450E0436	48" RCP Bend, Furnish	Each	4.00	\$9,414.22	\$2,353.56	2
450E0437	48" RCP Bend, Install	Each	4.00	\$2,289.00	\$572.25	2
450E0444	60" RCP Bend, Furnish	Each	9.00	\$26,929.05	\$2,992.12	3
450E0445	60" RCP Bend, Install	Each	9.00	\$4,974.00	\$552.67	3
450E0464	90" RCP Bend, Furnish	Each	2.00	\$13,546.67	\$6,773.34	2
450E0465	90" RCP Bend, Install	Each	2.00	\$3,866.87	\$1,933.44	2
450E0700	RCP Tee, Furnish	Each	100.00	\$133,975.86	\$1,339.76	24
450E0701	RCP Tee, Install	Each	100.00	\$36,924.55	\$369.25	24
450E1200	RCP Increaser, Furnish	Each	4.00	\$17,047.66	\$4,261.92	4
450E1201	RCP Increaser, Install	Each	4.00	\$2,150.13	\$537.53	4
450E1600	RCP Energy Dissipater Ring, Furnish	Each	10.00	\$41,213.00	\$4,121.30	2
450E1601	RCP Energy Dissipater Ring, Install	Each	10.00	\$6,416.85	\$641.69	2
450E1800	Bore and Jack RCP	Ft	348.00	\$132,128.06	\$379.68	6
450E2008	18" RCP Flared End, Furnish	Each	238.00	\$121,688.10	\$511.29	49
450E2009	18" RCP Flared End, Install	Each	238.00	\$52,069.98	\$218.78	49
450E2016	24" RCP Flared End, Furnish	Each	143.00	\$78,244.50	\$547.16	38

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E2017	24" RCP Flared End, Install	Each	143.00	\$34,130.58	\$238.68	38
450E2024	30" RCP Flared End, Furnish	Each	63.00	\$40,862.44	\$648.61	22
450E2025	30" RCP Flared End, Install	Each	63.00	\$15,407.75	\$244.57	22
450E2028	36" RCP Flared End, Furnish	Each	101.00	\$90,622.55	\$897.25	28
450E2029	36" RCP Flared End, Install	Each	101.00	\$28,800.76	\$285.16	28
450E2032	42" RCP Flared End, Furnish	Each	8.00	\$11,800.00	\$1,475.00	4
450E2033	42" RCP Flared End, Install	Each	8.00	\$6,120.00	\$765.00	4
450E2036	48" RCP Flared End, Furnish	Each	50.00	\$64,041.84	\$1,280.84	13
450E2037	48" RCP Flared End, Install	Each	50.00	\$21,524.58	\$430.49	13
450E2040	54" RCP Flared End, Furnish	Each	18.00	\$25,461.98	\$1,414.55	9
450E2041	54" RCP Flared End, Install	Each	18.00	\$9,196.34	\$510.91	9
450E2048	66" RCP Flared End, Furnish	Each	56.00	\$188,779.04	\$3,371.05	14
450E2049	66" RCP Flared End, Install	Each	56.00	\$38,904.32	\$694.72	14
450E2052	72" RCP Flared End, Furnish	Each	3.00	\$6,342.45	\$2,114.15	3
450E2053	72" RCP Flared End, Install	Each	3.00	\$1,360.87	\$453.62	3
450E2060	84" RCP Flared End, Furnish	Each	18.00	\$56,943.22	\$3,163.51	9
450E2061	84" RCP Flared End, Install	Each	18.00	\$9,276.34	\$515.35	9
450E2064	90" RCP Flared End, Furnish	Each	2.00	\$12,264.58	\$6,132.29	2
450E2065	90" RCP Flared End, Install	Each	2.00	\$5,266.87	\$2,633.44	2
450E2200	24" RCP Sloped End, Furnish	Each	601.00	\$278,587.18	\$463.54	53
450E2201	24" RCP Sloped End, Install	Each	601.00	\$140,228.64	\$233.33	53
450E2204	30" RCP Sloped End, Furnish	Each	91.00	\$55,594.47	\$610.93	24
450E2205	30" RCP Sloped End, Install	Each	91.00	\$27,349.98	\$300.55	24
450E2207	36" RCP Sloped End with Bars,	Each	55.00	\$111,197.00	\$2,021.76	16
450E2209	36" RCP Sloped End, Install	Each	55.00	\$23,434.00	\$426.07	16
450E2211	42" RCP Sloped End with Bars,	Each	12.00	\$30,290.00	\$2,524.17	6
450E2213	42" RCP Sloped End, Install	Each	12.00	\$5,136.00	\$428.00	6
450E2215	48" RCP Sloped End with Bars,	Each	10.00	\$35,280.00	\$3,528.00	5
450E2217	48" RCP Sloped End, Install	Each	10.00	\$5,040.00	\$504.00	5
450E2219	54" RCP Sloped End with Bars,	Each	11.00	\$41,675.00	\$3,788.64	11
450E2221	54" RCP Sloped End, Install	Each	11.00	\$5,595.00	\$508.64	11
450E2250	96" RCP Sectional End, Furnish	Each	10.00	\$91,276.76	\$9,127.68	5
450E2251	96" RCP Sectional End, Install	Each	10.00	\$10,753.22	\$1,075.32	5
450E2258	120" RCP Sectional End, Furnish	Each	12.00	\$101,246.00	\$8,437.17	6
450E2259	120" RCP Sectional End, Install	Each	12.00	\$38,100.00	\$3,175.00	6
450E2300	15" RCP Safety End, Furnish	Each	8.00	\$3,420.98	\$427.62	4
450E2303	15" RCP Safety End, Install	Each	8.00	\$1,018.30	\$127.29	4
450E2304	18" RCP Safety End, Furnish	Each	1,333.00	\$726,654.06	\$545.13	62
450E2307	18" RCP Safety End, Install	Each	1,333.00	\$272,335.65	\$204.30	62
450E2308	24" RCP Safety End, Furnish	Each	103.00	\$81,568.96	\$791.93	28
450E2311	24" RCP Safety End, Install	Each	103.00	\$23,144.30	\$224.70	28
450E3002	18" RCP Arch Class 2, Furnish	Ft	1,990.00	\$77,765.92	\$39.08	14
450E3010	18" RCP Arch, Install	Ft	1,990.00	\$40,580.96	\$20.39	14
450E3012	24" RCP Arch Class 2, Furnish	Ft	2,494.00	\$138,718.80	\$55.62	19
450E3020	24" RCP Arch, Install	Ft	2,494.00	\$66,630.20	\$26.72	19
450E3022	30" RCP Arch Class 2, Furnish	Ft	1,658.00	\$132,508.58	\$79.92	9
450E3023	30" RCP Arch Class 3, Furnish	Ft	1,032.00	\$80,523.52	\$78.03	3
450E3030	30" RCP Arch, Install	Ft	2,690.00	\$127,451.82	\$47.38	12

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E3032	36" RCP Arch Class 2, Furnish	Ft	4,524.00	\$418,642.48	\$92.54	9
450E3033	36" RCP Arch Class 3, Furnish	Ft	586.00	\$61,497.22	\$104.94	5
450E3040	36" RCP Arch, Install	Ft	5,110.00	\$142,686.28	\$27.92	14
450E3043	42" RCP Arch Class 3, Furnish	Ft	162.00	\$19,551.24	\$120.69	3
450E3050	42" RCP Arch, Install	Ft	162.00	\$11,210.40	\$69.20	3
450E3052	48" RCP Arch Class 2, Furnish	Ft	2,876.00	\$417,834.18	\$145.28	17
450E3060	48" RCP Arch, Install	Ft	2,876.00	\$117,808.88	\$40.96	17
450E3062	54" RCP Arch Class 2, Furnish	Ft	4,236.00	\$678,067.60	\$160.07	12
450E3063	54" RCP Arch Class 3, Furnish	Ft	176.00	\$32,954.24	\$187.24	2
450E3070	54" RCP Arch, Install	Ft	4,412.00	\$193,137.58	\$43.78	14
450E3073	60" RCP Arch Class 3, Furnish	Ft	52.00	\$12,129.78	\$233.27	2
450E3080	60" RCP Arch, Install	Ft	52.00	\$3,673.02	\$70.64	2
450E3142	90" RCP Arch Class 2, Furnish	Ft	1,344.00	\$851,520.00	\$633.57	7
450E3150	90" RCP Arch, Install	Ft	1,344.00	\$218,784.00	\$162.79	7
450E3304	18" RCP Arch Bend, Furnish	Each	2.00	\$1,135.00	\$567.50	2
450E3305	18" RCP Arch Bend, Install	Each	2.00	\$485.00	\$242.50	2
450E3320	30" RCP Arch Bend, Furnish	Each	6.00	\$7,691.00	\$1,281.83	3
450E3321	30" RCP Arch Bend, Install	Each	6.00	\$2,903.60	\$483.93	3
450E3324	36" RCP Arch Bend, Furnish	Each	2.00	\$5,827.76	\$2,913.88	2
450E3325	36" RCP Arch Bend, Install	Each	2.00	\$1,278.38	\$639.19	2
450E3332	48" RCP Arch Bend, Furnish	Each	12.00	\$46,328.76	\$3,860.73	2
450E3333	48" RCP Arch Bend, Install	Each	12.00	\$14,360.82	\$1,196.74	2
450E4508	30" RCP Arch Flared End, Furnish	Each	2.00	\$1,612.20	\$806.10	2
450E4509	30" RCP Arch Flared End, Install	Each	2.00	\$523.50	\$261.75	2
450E4512	36" RCP Arch Flared End, Furnish	Each	63.00	\$51,819.11	\$822.53	12
450E4513	36" RCP Arch Flared End, Install	Each	63.00	\$17,094.78	\$271.35	12
450E4516	42" RCP Arch Flared End, Furnish	Each	9.00	\$10,801.11	\$1,200.12	9
450E4517	42" RCP Arch Flared End, Install	Each	9.00	\$1,480.81	\$164.53	9
450E4520	48" RCP Arch Flared End, Furnish	Each	52.00	\$67,536.02	\$1,298.77	13
450E4521	48" RCP Arch Flared End, Install	Each	52.00	\$19,509.21	\$375.18	13
450E4524	54" RCP Arch Flared End, Furnish	Each	21.00	\$30,252.94	\$1,440.62	9
450E4525	54" RCP Arch Flared End, Install	Each	21.00	\$8,242.12	\$392.48	9
450E4528	60" RCP Arch Flared End, Furnish	Each	2.00	\$3,399.70	\$1,699.85	2
450E4529	60" RCP Arch Flared End, Install	Each	2.00	\$888.50	\$444.25	2
450E4600	24" RCP Arch Sloped End, Furnish	Each	16.00	\$7,469.48	\$466.84	4
450E4601	24" RCP Arch Sloped End, Install	Each	16.00	\$3,120.20	\$195.01	4
450E4604	30" RCP Arch Sloped End, Furnish	Each	32.00	\$23,500.40	\$734.39	7
450E4605	30" RCP Arch Sloped End, Install	Each	32.00	\$16,325.18	\$510.16	7
450E4606	36" RCP Arch Sloped End, Furnish	Each	14.00	\$13,242.01	\$945.86	5
450E4607	36" RCP Arch Sloped End, Install	Each	19.00	\$6,510.95	\$342.68	10
450E4609	42" RCP Arch Sloped End, Install	Each	5.00	\$1,847.00	\$369.40	5
450E4622	36" RCP Arch Sloped End with Bars,	Each	5.00	\$9,705.00	\$1,941.00	5
450E4623	42" RCP Arch Sloped End with Bars,	Each	5.00	\$11,872.00	\$2,374.40	5
450E4635	90" RCP Arch Sectional End, Furnish	Each	21.00	\$117,267.00	\$5,584.14	7
450E4636	90" RCP Arch Sectional End, Install	Each	21.00	\$20,115.00	\$957.86	7
450E4650	18" RCP Arch Safety End, Furnish	Each	71.00	\$32,016.12	\$450.93	12
450E4653	18" RCP Arch Safety End, Install	Each	71.00	\$14,080.20	\$198.31	12
450E4698	Tie Bolts for RCP	LS	7.00	\$5,836.54	\$833.79	7

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E4739	12" CMP 16 Gauge, Furnish	Ft	868.00	\$11,903.36	\$13.71	15
450E4740	12" CMP, Install	Ft	868.00	\$20,565.22	\$23.69	15
450E4749	15" CMP 16 Gauge, Furnish	Ft	5,582.00	\$92,832.16	\$16.63	25
450E4750	15" CMP, Install	Ft	5,582.00	\$149,232.72	\$26.73	25
450E4757	18" CMP 12 Gauge, Furnish	Ft	620.00	\$16,454.80	\$26.54	2
450E4759	18" CMP 16 Gauge, Furnish	Ft	28,843.00	\$544,989.12	\$18.90	124
450E4760	18" CMP, Install	Ft	29,463.00	\$697,531.46	\$23.67	126
450E4767	24" CMP 12 Gauge, Furnish	Ft	980.00	\$36,875.58	\$37.63	6
450E4768	24" CMP 14 Gauge, Furnish	Ft	2,730.00	\$84,335.16	\$30.89	5
450E4769	24" CMP 16 Gauge, Furnish	Ft	10,770.00	\$250,774.25	\$23.28	58
450E4770	24" CMP, Install	Ft	14,480.00	\$336,515.48	\$23.24	69
450E4777	30" CMP 12 Gauge, Furnish	Ft	994.00	\$44,001.72	\$44.27	10
450E4779	30" CMP 16 Gauge, Furnish	Ft	1,444.00	\$37,523.08	\$25.99	14
450E4780	30" CMP, Install	Ft	2,438.00	\$55,227.44	\$22.65	24
450E4787	36" CMP 12 Gauge, Furnish	Ft	1,766.00	\$99,951.00	\$56.60	12
450E4788	36" CMP 14 Gauge, Furnish	Ft	2,252.00	\$86,807.00	\$38.55	11
450E4789	36" CMP 16 Gauge, Furnish	Ft	264.00	\$9,262.00	\$35.08	8
450E4790	36" CMP, Install	Ft	4,282.00	\$148,983.60	\$34.79	31
450E4797	42" CMP 12 Gauge, Furnish	Ft	36.00	\$2,251.08	\$62.53	2
450E4800	42" CMP, Install	Ft	36.00	\$1,800.00	\$50.00	2
450E4807	48" CMP 12 Gauge, Furnish	Ft	6,408.00	\$477,558.66	\$74.53	5
450E4809	48" CMP 16 Gauge, Furnish	Ft	138.00	\$8,638.80	\$62.60	3
450E4810	48" CMP, Install	Ft	6,546.00	\$243,330.84	\$37.17	8
450E4848	72" CMP 12 Gauge, Furnish	Ft	1,416.00	\$145,497.34	\$102.75	12
450E4849	72" CMP 14 Gauge, Furnish	Ft	656.00	\$51,431.12	\$78.40	14
450E4850	72" CMP, Install	Ft	2,072.00	\$193,978.14	\$93.62	26
450E5000	12" CMP Elbow, Furnish	Each	8.00	\$716.00	\$89.50	4
450E5001	12" CMP Elbow, Install	Each	8.00	\$730.06	\$91.26	4
450E5005	15" CMP Elbow, Furnish	Each	24.00	\$6,050.91	\$252.12	6
450E5006	15" CMP Elbow, Install	Each	24.00	\$5,174.82	\$215.62	6
450E5010	18" CMP Elbow, Furnish	Each	92.00	\$15,303.06	\$166.34	31
450E5011	18" CMP Elbow, Install	Each	92.00	\$14,395.38	\$156.47	31
450E5015	24" CMP Elbow, Furnish	Each	100.00	\$26,617.40	\$266.17	28
450E5016	24" CMP Elbow, Install	Each	100.00	\$33,306.89	\$333.07	28
450E5020	30" CMP Elbow, Furnish	Each	18.00	\$6,525.81	\$362.55	10
450E5021	30" CMP Elbow, Install	Each	18.00	\$7,282.44	\$404.58	10
450E5025	36" CMP Elbow, Furnish	Each	33.00	\$16,205.52	\$491.08	15
450E5026	36" CMP Elbow, Install	Each	33.00	\$16,593.66	\$502.84	15
450E5035	48" CMP Elbow, Furnish	Each	108.00	\$62,310.14	\$576.95	5
450E5036	48" CMP Elbow, Install	Each	108.00	\$34,050.00	\$315.28	5
450E5100	CMP Tee, Furnish	Each	24.00	\$8,196.93	\$341.54	14
450E5101	CMP Tee, Install	Each	24.00	\$4,748.71	\$197.86	14
450E5140	CMP Wye, Furnish	Each	10.00	\$3,024.00	\$302.40	5
450E5141	CMP Wye, Install	Each	10.00	\$1,008.00	\$100.80	5
450E5203	12" CMP Flared End, Furnish	Each	54.00	\$6,294.32	\$116.56	25
450E5204	12" CMP Flared End, Install	Each	54.00	\$10,912.00	\$202.07	25
450E5211	18" CMP Flared End, Furnish	Each	71.00	\$7,727.12	\$108.83	34
450E5212	18" CMP Flared End, Install	Each	71.00	\$11,270.71	\$158.74	34

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E5215	24" CMP Flared End, Furnish	Each	72.00	\$13,878.28	\$192.75	11
450E5216	24" CMP Flared End, Install	Each	72.00	\$14,137.22	\$196.35	11
450E5219	30" CMP Flared End, Furnish	Each	21.00	\$6,670.62	\$317.65	10
450E5220	30" CMP Flared End, Install	Each	21.00	\$4,202.93	\$200.14	10
450E5223	36" CMP Flared End, Furnish	Each	42.00	\$19,277.34	\$458.98	20
450E5224	36" CMP Flared End, Install	Each	42.00	\$11,945.58	\$284.42	20
450E5227	42" CMP Flared End, Furnish	Each	2.00	\$1,765.90	\$882.95	2
450E5228	42" CMP Flared End, Install	Each	2.00	\$600.00	\$300.00	2
450E5231	48" CMP Flared End, Furnish	Each	60.00	\$71,906.18	\$1,198.44	8
450E5232	48" CMP Flared End, Install	Each	60.00	\$17,070.46	\$284.51	8
450E5235	54" CMP Flared End, Furnish	Each	56.00	\$67,784.92	\$1,210.45	19
450E5236	54" CMP Flared End, Install	Each	76.00	\$26,344.08	\$346.63	19
450E5239	60" CMP Flared End, Furnish	Each	16.00	\$23,580.00	\$1,473.75	4
450E5240	60" CMP Flared End, Install	Each	16.00	\$8,924.00	\$557.75	4
450E5247	72" CMP Flared End, Furnish	Each	59.00	\$85,829.79	\$1,454.74	23
450E5248	72" CMP Flared End, Install	Each	59.00	\$40,674.84	\$689.40	23
450E5302	15" CMP Sloped End, Furnish	Each	212.00	\$32,343.23	\$152.56	12
450E5303	15" CMP Sloped End, Install	Each	212.00	\$39,553.53	\$186.57	12
450E5306	18" CMP Sloped End, Furnish	Each	593.00	\$112,995.33	\$190.55	30
450E5307	18" CMP Sloped End, Install	Each	593.00	\$118,610.65	\$200.02	30
450E5310	24" CMP Sloped End, Furnish	Each	260.00	\$66,386.52	\$255.33	23
450E5311	24" CMP Sloped End, Install	Each	260.00	\$55,547.84	\$213.65	23
450E5314	30" CMP Sloped End, Furnish	Each	25.00	\$14,430.30	\$577.21	13
450E5315	30" CMP Sloped End, Install	Each	25.00	\$8,257.93	\$330.32	13
450E5318	36" CMP Sloped End, Furnish	Each	26.00	\$33,349.35	\$1,282.67	12
450E5319	36" CMP Sloped End, Install	Each	26.00	\$12,714.37	\$489.01	12
450E5322	42" CMP Sloped End, Furnish	Each	4.00	\$11,037.37	\$2,759.34	4
450E5323	42" CMP Sloped End, Install	Each	4.00	\$1,501.99	\$375.50	4
450E5326	48" CMP Sloped End, Furnish	Each	7.00	\$27,532.01	\$3,933.14	7
450E5327	48" CMP Sloped End, Install	Each	7.00	\$5,330.00	\$761.43	7
450E5402	15" CMP Safety End, Furnish	Each	77.00	\$12,015.59	\$156.05	16
450E5403	15" CMP Safety End, Install	Each	77.00	\$12,050.76	\$156.50	16
450E5405	18" CMP Safety End with Bars, Furnish	Each	15.00	\$5,292.00	\$352.80	5
450E5406	18" CMP Safety End, Furnish	Each	1,184.00	\$214,894.75	\$181.50	80
450E5407	18" CMP Safety End, Install	Each	1,199.00	\$151,213.72	\$126.12	85
450E5410	24" CMP Safety End, Furnish	Each	276.00	\$64,719.38	\$234.49	46
450E5411	24" CMP Safety End, Install	Each	276.00	\$37,505.80	\$135.89	46
450E5414	30" CMP Safety End, Furnish	Each	68.00	\$101,415.62	\$1,491.41	10
450E5417	30" CMP Safety End, Install	Each	68.00	\$13,250.24	\$194.86	10
450E5421	36" CMP Safety End with Bars, Furnish	Each	15.00	\$31,111.40	\$2,074.09	3
450E5423	36" CMP Safety End, Install	Each	15.00	\$3,909.85	\$260.66	3
450E5499	15" CMP Arch 16 Gauge, Furnish	Each	40.00	\$3,222.50	\$80.56	4
450E5500	15" CMP Arch, Install	Each	40.00	\$1,619.00	\$40.48	4
450E5509	18" CMP Arch 16 Gauge, Furnish	Ft	1,296.00	\$22,414.22	\$17.29	14
450E5510	18" CMP Arch, Install	Ft	1,296.00	\$19,389.46	\$14.96	14
450E5519	24" CMP Arch 16 Gauge, Furnish	Ft	344.00	\$8,860.28	\$25.76	13
450E5520	24" CMP Arch, Install	Ft	344.00	\$10,946.24	\$31.82	13
450E5800	15" CMP Arch Flared End, Furnish	Each	8.00	\$1,069.00	\$133.63	4

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E5801	15" CMP Arch Flared End, Install	Each	8.00	\$699.00	\$87.38	4
450E5902	18" CMP Arch Sloped End, Furnish	Each	8.00	\$1,410.00	\$176.25	4
450E5903	18" CMP Arch Sloped End, Install	Each	8.00	\$782.00	\$97.75	4
450E5906	24" CMP Arch Sloped End, Furnish	Each	8.00	\$1,802.00	\$225.25	4
450E5907	24" CMP Arch Sloped End, Install	Each	8.00	\$1,062.00	\$132.75	4
450E6006	18" CMP Arch Safety End, Furnish	Each	44.00	\$9,624.66	\$218.74	10
450E6007	18" CMP Arch Safety End, Install	Each	44.00	\$5,308.10	\$120.64	10
450E6010	24" CMP Arch Safety End, Furnish	Each	18.00	\$5,768.76	\$320.49	9
450E6011	24" CMP Arch Safety End, Install	Each	18.00	\$4,294.06	\$238.56	9
450E6039	54" CMP Arch Safety End with Bars,	Each	28.00	\$135,364.88	\$4,834.46	7
450E6041	54" CMP Arch Safety End, Install	Each	28.00	\$13,128.08	\$468.86	7
450E6119	15" Slotted CMP 16 Gauge, Furnish	Ft	1,160.00	\$78,387.20	\$67.58	6
450E6120	15" Slotted CMP, Install	Ft	1,160.00	\$62,864.60	\$54.19	6
450E7005	12" High Density Polyethylene Pipe,	Ft	198.00	\$1,490.46	\$7.53	7
450E7006	12" High Density Polyethylene Pipe,	Ft	198.00	\$5,337.80	\$26.96	7
450E7009	15" High Density Polyethylene Pipe,	Ft	486.00	\$4,545.72	\$9.35	3
450E7010	15" High Density Polyethylene Pipe,	Ft	486.00	\$16,838.28	\$34.65	3
450E7019	18" High Density Polyethylene Pipe,	Ft	114.00	\$1,421.96	\$12.47	3
450E7020	18" High Density Polyethylene Pipe,	Ft	114.00	\$4,738.60	\$41.57	3
450E7400	High Density Polyethylene Pipe Bend,	Each	14.00	\$1,969.24	\$140.66	7
450E7401	High Density Polyethylene Pipe Bend,	Each	14.00	\$1,825.50	\$130.39	7
450E7624	24" Steel Pipe, Furnish	Ft	2,570.00	\$255,900.04	\$99.57	5
450E7630	30" Steel Pipe, Furnish	Ft	790.00	\$108,982.08	\$137.95	5
450E7648	48" Steel Pipe, Furnish	Ft	1,968.00	\$370,640.00	\$188.33	3
450E7654	54" Steel Pipe, Furnish	Ft	850.00	\$216,263.80	\$254.43	5
450E8013	24" CMP to RCP Transition, Furnish	Each	30.00	\$8,954.60	\$298.49	11
450E8014	24" RCP to CMP Transition, Furnish	Each	14.00	\$5,033.14	\$359.51	9
450E8015	24" Pipe Transition, Install	Each	44.00	\$10,965.60	\$249.22	20
450E8018	30" CMP to RCP Transition, Furnish	Each	16.00	\$8,756.42	\$547.28	10
450E8019	30" RCP to CMP Transition, Furnish	Each	12.00	\$7,104.54	\$592.05	6
450E8020	30" Pipe Transition, Install	Each	28.00	\$10,058.47	\$359.23	10
450E8114	24" RCP Arch to CMP Arch Transition,	Each	8.00	\$2,933.16	\$366.65	4
450E8115	24" Pipe Arch Transition, Install	Each	8.00	\$1,845.94	\$230.74	4
450E8205	15" Smooth Tapered Sleeve, Furnish	Each	112.00	\$18,114.32	\$161.74	8
450E8206	15" Smooth Tapered Sleeve, Install	Each	112.00	\$23,900.52	\$213.40	8
450E8209	18" Smooth Tapered Sleeve, Furnish	Each	192.00	\$31,053.12	\$161.74	8
450E8210	18" Smooth Tapered Sleeve, Install	Each	192.00	\$40,972.32	\$213.40	8
450E8213	24" Smooth Tapered Sleeve, Furnish	Each	102.00	\$23,634.68	\$231.71	15
450E8214	24" Smooth Tapered Sleeve, Install	Each	102.00	\$26,084.56	\$255.73	15
450E8217	30" Smooth Tapered Sleeve, Furnish	Each	5.00	\$1,617.57	\$323.51	5
450E8218	30" Smooth Tapered Sleeve, Install	Each	5.00	\$1,027.91	\$205.58	5
450E8221	36" Smooth Tapered Sleeve, Furnish	Each	3.00	\$1,206.27	\$402.09	3
450E8222	36" Smooth Tapered Sleeve, Install	Each	3.00	\$938.36	\$312.79	3
450E8233	54" Smooth Tapered Sleeve, Furnish	Each	10.00	\$8,352.84	\$835.28	5
450E8234	54" Smooth Tapered Sleeve, Install	Each	10.00	\$4,211.70	\$421.17	5
450E8500	Trash Guard, Furnish	Each	2.00	\$21,932.20	\$10,966.10	2
450E8501	Trash Guard, Install	Each	2.00	\$1,988.92	\$994.46	2
450E8600	Flap Gate	Each	3.00	\$15,345.00	\$5,115.00	3

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
450E8675	Knife Gate with Operator	Each	10.00	\$142,723.20	\$14,272.32	5
450E8800	Precast Outlet Structure	Each	8.00	\$157,748.00	\$19,718.50	8
450E8900	Cleanout Pipe Culvert	Each	1,678.00	\$1,683,103.66	\$1,003.04	81
450E9000	Reset Pipe	Ft	2,924.00	\$113,355.74	\$38.77	67
450E9001	Reset Pipe End Section	Each	1,687.00	\$501,733.06	\$297.41	105
450E9218	Slipline 18" Pipe	Ft	328.00	\$25,379.00	\$77.38	2
450E9224	Slipline 24" Pipe	Ft	7,820.00	\$630,503.16	\$80.63	14
450E9226	Slipline 30" Pipe	Ft	1,112.00	\$160,622.06	\$144.44	7
450E9228	Slipline 36" Pipe	Ft	3,738.00	\$554,492.16	\$148.34	22
450E9230	Slipline 42" Pipe	Ft	1,045.00	\$235,352.81	\$225.22	5
450E9232	Slipline 48" Pipe	Ft	602.00	\$121,810.40	\$202.34	7
450E9236	Slipline 60" Pipe	Ft	910.00	\$304,931.90	\$335.09	5
450E9240	Slipline 72" Pipe	Ft	5,348.00	\$1,703,613.04	\$318.55	7
450E9244	Slipline 84" Pipe	Ft	1,960.00	\$1,265,905.20	\$645.87	5
451E0112	12" Steel Encasement Pipe	Ft	72.00	\$3,942.32	\$54.75	9
451E0116	16" Steel Encasement Pipe	Ft	345.00	\$83,800.50	\$242.90	3
451E0120	20" Steel Encasement Pipe	Ft	402.00	\$103,209.48	\$256.74	3
451E0124	24" Steel Encasement Pipe	Ft	1,450.00	\$15,561.40	\$10.73	5
451E0130	30" Steel Encasement Pipe	Ft	222.00	\$84,731.48	\$381.67	3
451E0136	36" Steel Encasement Pipe	Ft	162.00	\$66,322.80	\$409.40	3
451E0300	Install Carrier Pipe	Ft	1,522.00	\$73,462.24	\$48.27	14
451E0301	Pipe Encasement	Each	98.00	\$253,286.88	\$2,584.56	2
451E0514	4" PVC Pipe	Ft	544.00	\$14,084.16	\$25.89	2
451E0516	6" PVC Pipe	Ft	560.00	\$15,269.70	\$27.27	7
451E0520	10" PVC Pipe	Ft	564.00	\$22,868.32	\$40.55	3
451E0522	12" PVC Pipe	Ft	36.00	\$2,330.76	\$64.74	3
451E0604	4" PVC Water Main	Ft	156.00	\$5,562.24	\$35.66	13
451E0606	6" PVC Water Main	Ft	7,829.00	\$210,273.08	\$26.86	15
451E0608	8" PVC Water Main	Ft	1,786.00	\$58,996.96	\$33.03	6
451E0610	10" PVC Water Main	Ft	7,592.00	\$265,644.08	\$34.99	4
451E0620	20" PVC Water Main	Ft	4,518.00	\$612,776.34	\$135.63	2
451E0653	3" PVC Restrained Joint Water Main	Ft	2,470.00	\$89,204.05	\$36.12	2
451E0654	4" PVC Restrained Joint Water Main	Ft	206.00	\$14,108.94	\$68.49	2
451E0656	6" PVC Restrained Joint Water Main	Ft	2,044.00	\$116,651.08	\$57.07	2
451E0658	8" PVC Restrained Joint Water Main	Ft	6,788.00	\$426,453.12	\$62.82	6
451E0662	12" PVC Restrained Joint Water Main	Ft	18,012.00	\$1,383,681.84	\$76.82	2
451E0691	4" Water Main Restraining Device	Each	8.00	\$324.56	\$40.57	4
451E0692	6" Water Main Restraining Device	Each	375.00	\$26,881.24	\$71.68	15
451E0693	8" Water Main Restraining Device	Each	211.00	\$21,698.30	\$102.84	9
451E0694	10" Water Main Restraining Device	Each	96.00	\$11,137.44	\$116.02	4
451E0695	12" Water Main Restraining Device	Each	113.00	\$24,539.48	\$217.16	10
451E0697	16" Water Main Restraining Device	Each	15.00	\$3,579.09	\$238.61	5
451E0698	20" Water Main Restraining Device	Each	30.00	\$24,842.50	\$828.08	3
451E0699	24" Water Main Restraining Device	Each	172.00	\$74,934.85	\$435.67	5
451E0700	30" Water Main Restraining Device	Each	70.00	\$65,625.00	\$937.50	2
451E0706	6" Ductile Iron Water Main	Ft	141.00	\$8,296.91	\$58.84	3
451E0708	8" Ductile Iron Water Main	Ft	33,042.00	\$1,591,963.56	\$48.18	3
451E0710	10" Ductile Iron Water Main	Ft	30.00	\$2,191.70	\$73.06	3

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
451E0712	12" Ductile Iron Water Main	Ft	3,808.00	\$225,934.85	\$59.33	5
451E0716	16" Ductile Iron Water Main	Ft	8,010.00	\$493,592.22	\$61.62	5
451E0718	18" Ductile Iron Water Main	Ft	1,280.00	\$580,569.60	\$453.57	5
451E0720	20" Ductile Iron Water Main	Ft	16,230.00	\$1,463,080.40	\$90.15	3
451E0724	24" Ductile Iron Water Main	Ft	22,494.00	\$2,434,472.52	\$108.23	10
451E0730	30" Ductile Iron Water Main	Ft	9,690.00	\$1,284,118.80	\$132.52	2
451E0802	1" Copper Pipe	Ft	3,554.00	\$139,085.79	\$39.14	2
451E0806	1.5" Copper Pipe	Ft	682.00	\$45,523.50	\$66.75	2
451E0808	2" Copper Pipe	Ft	54.00	\$4,965.57	\$91.96	2
451E1004	4" PVC Sewer Pipe	Ft	448.00	\$15,680.00	\$35.00	2
451E1006	6" PVC Sewer Pipe	Ft	56.00	\$2,108.18	\$37.65	13
451E1008	8" PVC Sewer Pipe	Ft	32,102.00	\$708,074.59	\$22.06	19
451E1010	10" PVC Sewer Pipe	Ft	4,722.00	\$139,851.06	\$29.62	17
451E1012	12" PVC Sewer Pipe	Ft	132.00	\$6,025.80	\$45.65	2
451E1018	18" PVC Sewer Pipe	Ft	354.00	\$15,045.00	\$42.50	2
451E1021	21"PVC Sewer Pipe	Ft	4,082.00	\$218,468.64	\$53.52	2
451E1106	6" PVC Force Main	Ft	6,424.00	\$146,563.56	\$22.82	4
451E1204	4" Sewer Service	Ft	6,018.00	\$258,683.73	\$42.99	2
451E1206	6" Sewer Service	Ft	188.00	\$11,790.06	\$62.71	5
451E1500	Sanitary Sewer Service Cleanout	Each	2.00	\$1,296.00	\$648.00	2
451E1504	4" Sanitary Sewer Service Cleanout	Each	130.00	\$63,031.40	\$484.86	4
451E1506	6" Sanitary Sewer Service Cleanout	Each	2.00	\$1,243.18	\$621.59	2
451E2012	8"x4" Pipe Wye	Each	6.00	\$1,398.00	\$233.00	2
451E2013	8"x6" Pipe Wye	Each	3.00	\$2,163.05	\$721.02	3
451E2020	10"x4" Pipe Wye	Each	6.00	\$1,704.00	\$284.00	2
451E2021	10"x6" Pipe Wye	Each	32.00	\$11,201.76	\$350.06	10
451E2207	6"x6" Pipe Tee	Each	49.00	\$17,050.95	\$347.98	11
451E2212	8"x4" Pipe Tee	Each	3.00	\$1,299.25	\$433.08	3
451E2213	8"x6" Pipe Tee	Each	41.00	\$28,596.83	\$697.48	11
451E2214	8"x8" Pipe Tee	Each	47.00	\$31,620.50	\$672.78	5
451E2220	10"x4" Pipe Tee	Each	8.00	\$3,072.00	\$384.00	4
451E2221	10"x6" Pipe Tee	Each	24.00	\$9,883.98	\$411.83	4
451E2222	10"x8" Pipe Tee	Each	8.00	\$3,539.12	\$442.39	4
451E2223	10"x10" Pipe Tee	Each	4.00	\$2,380.51	\$595.13	4
451E2230	12"x4" Pipe Tee	Each	6.00	\$8,738.76	\$1,456.46	2
451E2231	12"x6" Pipe Tee	Each	49.00	\$69,067.50	\$1,409.54	7
451E2232	12"x8" Pipe Tee	Each	30.00	\$43,130.84	\$1,437.69	5
451E2234	12"x12" Pipe Tee	Each	10.00	\$17,720.45	\$1,772.05	2
451E2271	20"x6" Pipe Tee	Each	8.00	\$26,098.36	\$3,262.30	2
451E2272	20"x8" Pipe Tee	Each	20.00	\$28,498.89	\$1,424.94	5
451E2274	20"x12" Pipe Tee	Each	7.00	\$19,825.56	\$2,832.22	5
451E2278	20"x20" Pipe Tee	Each	2.00	\$8,675.06	\$4,337.53	2
451E2280	24"x6" Pipe Tee	Each	18.00	\$20,655.00	\$1,147.50	2
451E2281	24"x8" Pipe Tee	Each	2.00	\$2,554.50	\$1,277.25	2
451E2290	30"x6" Pipe Tee	Each	12.00	\$25,020.00	\$2,085.00	2
451E2291	30"x8" Pipe Tee	Each	6.00	\$13,761.00	\$2,293.50	2
451E2298	30"x24" Pipe Tee	Each	2.00	\$6,255.00	\$3,127.50	2
451E2300	Pipe Cross	Each	3.00	\$16,162.00	\$5,387.33	3

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
451E2314	8"x8" Pipe Cross	Each	2.00	\$4,168.05	\$2,084.03	2
451E2322	10"x8" Pipe Cross	Each	4.00	\$2,354.32	\$588.58	4
451E2332	12"x8" Pipe Cross	Each	17.00	\$28,704.72	\$1,688.51	5
451E2334	12"x12" Pipe Cross	Each	5.00	\$8,881.83	\$1,776.37	5
451E2374	20"x12" Pipe Cross	Each	6.00	\$9,641.60	\$1,606.93	3
451E2383	24"x12" Pipe Cross	Each	7.00	\$13,847.50	\$1,978.21	5
451E2393	30"x12" Pipe Cross	Each	2.00	\$7,710.00	\$3,855.00	2
451E2400	Pipe Reducer	Each	6.00	\$7,939.00	\$1,323.17	3
451E2406	6"x4" Pipe Reducer	Each	67.00	\$13,904.34	\$207.53	18
451E2413	8"x6" Pipe Reducer	Each	73.00	\$31,006.79	\$424.75	20
451E2421	10"x6" Pipe Reducer	Each	4.00	\$989.14	\$247.29	4
451E2422	10"x8" Pipe Reducer	Each	4.00	\$1,030.68	\$257.67	4
451E2431	12"x6" Pipe Reducer	Each	4.00	\$3,614.14	\$903.54	2
451E2432	12"x8" Pipe Reducer	Each	7.00	\$3,905.49	\$557.93	7
451E2433	12"x10" Pipe Reducer	Each	3.00	\$1,496.40	\$498.80	3
451E2454	16"x12" Pipe Reducer	Each	5.00	\$4,337.76	\$867.55	5
451E2498	30"x24" Pipe Reducer	Each	2.00	\$3,390.00	\$1,695.00	2
451E2500	Tapping Saddle	Each	130.00	\$53,211.60	\$409.32	2
451E2550	Smith Tap	Each	2.00	\$2,085.00	\$1,042.50	2
451E2708	6"x3" Tapping Tee	Each	2.00	\$6,414.93	\$3,207.47	2
451E2711	6"x6" Tapping Tee	Each	2.00	\$7,017.46	\$3,508.73	2
451E2793	30"x12" Tapping Tee	Each	2.00	\$22,116.03	\$11,058.02	2
451E2806	1.5" Corporation Stop with Tapping	Each	2.00	\$1,178.80	\$589.40	2
451E2808	2" Corporation Stop with Tapping	Each	2.00	\$1,489.08	\$744.54	2
451E2902	1" Curb Stop with Box	Each	138.00	\$59,988.60	\$434.70	2
451E2906	1.5" Curb Stop with Box	Each	2.00	\$1,190.48	\$595.24	2
451E2908	2" Curb Stop with Box	Each	2.00	\$1,459.21	\$729.61	2
451E3004	4" Pipe Bend	Each	16.00	\$7,177.04	\$448.57	2
451E3006	6" Pipe Bend	Each	224.00	\$72,374.98	\$323.10	22
451E3008	8" Pipe Bend	Each	107.00	\$69,174.84	\$646.49	7
451E3010	10" Pipe Bend	Each	7.00	\$3,071.29	\$438.76	7
451E3012	12" Pipe Bend	Each	122.00	\$106,376.74	\$871.94	5
451E3020	20" Pipe Bend	Each	36.00	\$74,660.58	\$2,073.91	5
451E3024	24" Pipe Bend	Each	50.00	\$65,581.70	\$1,311.63	5
451E3030	30" Pipe Bend	Each	4.00	\$10,830.00	\$2,707.50	2
451E3103	3" Pipe Cap	Each	2.00	\$505.99	\$253.00	2
451E3106	6" Pipe Cap	Each	37.00	\$4,041.97	\$109.24	12
451E3108	8" Pipe Cap	Each	110.00	\$21,184.60	\$192.59	7
451E3110	10" Pipe Cap	Each	3.00	\$519.70	\$173.23	3
451E3112	12" Pipe Cap	Each	15.00	\$3,640.00	\$242.67	3
451E3115	15" Pipe Cap	Each	4.00	\$2,954.00	\$738.50	2
451E3120	20" Pipe Cap	Each	12.00	\$6,242.00	\$520.17	3
451E3206	6" Pipe Coupling	Each	18.00	\$3,351.88	\$186.22	9
451E3208	8" Pipe Coupling	Each	32.00	\$6,135.20	\$191.73	11
451E3210	10" Pipe Coupling	Each	18.00	\$4,156.02	\$230.89	9
451E3212	12" Pipe Coupling	Each	2.00	\$518.00	\$259.00	2
451E3308	8" Pipe Transition Coupling	Each	6.00	\$1,197.61	\$199.60	6
451E3410	4" Pipe Plug	Each	8.00	\$1,023.80	\$127.98	4

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Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
451E3412	6" Pipe Plug	Each	6.00	\$1,227.51	\$204.59	6
451E3414	8" Pipe Plug	Each	27.00	\$5,456.70	\$202.10	15
451E3450	10" Pipe Plug	Each	12.00	\$3,505.89	\$292.16	4
451E3452	12" Pipe Plug	Each	10.00	\$3,930.93	\$393.09	4
451E3458	18" Pipe Plug	Each	4.00	\$632.16	\$158.04	4
451E3464	24" Pipe Plug	Each	2.00	\$1,251.00	\$625.50	2
451E3504	4" Retainer Gland	Each	3.00	\$310.70	\$103.57	3
451E3506	6" Retainer Gland	Each	75.00	\$6,740.00	\$89.87	3
451E3508	8" Retainer Gland	Each	606.00	\$58,681.00	\$96.83	3
451E3510	10" Retainer Gland	Each	9.00	\$1,120.20	\$124.47	3
451E3512	12" Retainer Gland	Each	186.00	\$25,742.40	\$138.40	3
451E3520	20" Retainer Gland	Each	174.00	\$59,638.50	\$342.75	3
451E3524	24" Retainer Gland	Each	60.00	\$27,434.00	\$457.23	3
451E3604	4" Pipe Sleeve	Each	62.00	\$12,905.50	\$208.15	13
451E3606	6" Pipe Sleeve	Each	40.00	\$12,410.30	\$310.26	18
451E3608	8" Pipe Sleeve	Each	30.00	\$11,661.40	\$388.71	5
451E3610	10" Pipe Sleeve	Each	4.00	\$1,573.97	\$393.49	4
451E3612	12" Pipe Sleeve	Each	13.00	\$5,670.15	\$436.17	5
451E3616	16" Pipe Sleeve	Each	5.00	\$4,819.63	\$963.93	5
451E3620	20" Pipe Sleeve	Each	19.00	\$37,261.80	\$1,961.15	5
451E3624	24" Pipe Sleeve	Each	2.00	\$1,878.00	\$939.00	2
451E3630	30" Pipe Sleeve	Each	2.00	\$4,170.00	\$2,085.00	2
451E4124	24" Butterfly Valve with Box	Each	9.00	\$51,454.50	\$5,717.17	3
451E4203	3" Gate Valve with Box	Each	2.00	\$2,309.43	\$1,154.72	2
451E4204	4" Gate Valve with Box	Each	6.00	\$7,927.95	\$1,321.33	2
451E4206	6" Gate Valve with Box	Each	159.00	\$180,846.49	\$1,137.40	20
451E4208	8" Gate Valve with Box	Each	196.00	\$310,627.70	\$1,584.84	11
451E4210	10" Gate Valve with Box	Each	11.00	\$24,178.58	\$2,198.05	7
451E4212	12" Gate Valve with Box	Each	126.00	\$370,092.85	\$2,937.24	7
451E4216	16" Gate Valve with Box	Each	10.00	\$76,066.46	\$7,606.65	5
451E4220	20" Gate Valve with Box	Each	39.00	\$473,694.24	\$12,146.01	5
451E4222	24" Gate Valve with Box	Each	16.00	\$283,380.00	\$17,711.25	2
451E4230	30" Gate Valve with Box	Each	6.00	\$182,925.00	\$30,487.50	2
451E4350	Valve Box	Each	2.00	\$729.00	\$364.50	2
451E4360	Valve Box Extension	Each	138.00	\$21,534.90	\$156.05	3
451E4400	Pipe Insulation	SqFt	3,864.00	\$13,650.84	\$3.53	11
451E4506	6" Fire Hydrant Extension	Each	3.00	\$1,401.65	\$467.22	3
451E4512	12" Fire Hydrant Extension	Each	12.00	\$6,042.28	\$503.52	12
451E4518	18" Fire Hydrant Extension	Each	6.00	\$3,530.60	\$588.43	3
451E4524	24" Fire Hydrant Extension	Each	9.00	\$5,855.06	\$650.56	9
451E4530	30" Fire Hydrant Extension	Each	9.00	\$5,952.15	\$661.35	3
451E4536	36" Fire Hydrant Extension	Each	3.00	\$2,140.10	\$713.37	3
451E4542	42" Fire Hydrant Extension	Each	3.00	\$2,389.50	\$796.50	3
451E4548	48" Fire Hydrant Extension	Each	6.00	\$5,194.20	\$865.70	3
451E4580	Standard Fire Hydrant	Each	114.00	\$294,000.96	\$2,578.96	18
451E4581	Temporary Fire Hydrant	Each	50.00	\$76,961.26	\$1,539.23	14
451E4585	Fire Hydrant with Auxiliary Valve & Box	Each	70.00	\$266,681.80	\$3,809.74	2
451E4590	Fire Hydrant Guard Post	Each	40.00	\$25,395.60	\$634.89	2

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Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
451E4901	Type 1 Bedding Material	Ton	2,000.00	\$38,180.00	\$19.09	2
451E4904	Type 3 Foundation Material	Ton	4,000.00	\$76,360.00	\$19.09	2
451E4905	Trench Stabilization Material	Ton	14,050.00	\$138,817.00	\$9.88	20
451E4908	Select Trench Backfill	Ton	3,700.00	\$36,421.00	\$9.84	13
451E4918	Imported Trench Backfill	CuYd	2,000.00	\$23,010.00	\$11.51	2
451E4920	Pipe Bedding Material	Ton	578.40	\$19,954.80	\$34.50	2
451E4926	Water Main Bedding Material	Ft	103,095.00	\$440,753.25	\$4.28	14
451E4930	Storm Sewer Bedding Material	Ton	31,520.00	\$386,728.00	\$12.27	8
451E4944	6" Sewer Pipe Bedding Material	Ft	6,444.00	\$33,331.59	\$5.17	4
451E4945	8" Sewer Pipe Bedding Material	Ft	3,538.00	\$16,619.43	\$4.70	6
451E4946	10" Sewer Pipe Bedding Material	Ft	1,440.00	\$8,294.40	\$5.76	4
451E4990	Excavate and Backfill Water Service	Ft	3,564.00	\$66,884.30	\$18.77	9
451E5020	Trench Dewatering	Ft	73,648.00	\$68,428.76	\$0.93	20
451E5021	Trench Dewatering, Water Main	Ft	8,504.00	\$29,678.96	\$3.49	4
451E5022	Trench Dewatering, Sewer Main	Ft	7,892.00	\$27,543.08	\$3.49	4
451E5050	Trench 0' to 6' Deep	Ft	708.00	\$29,038.62	\$41.02	2
451E5051	Trench 6' to 8' Deep	Ft	1,658.00	\$72,976.87	\$44.02	2
451E5052	Trench 8' to 10' Deep	Ft	4,254.00	\$205,871.22	\$48.39	4
451E5053	Trench 10' to 12' Deep	Ft	7,654.00	\$388,914.27	\$50.81	4
451E5054	Trench 12' to 14' Deep	Ft	3,332.00	\$194,270.70	\$58.30	4
451E5055	Trench 14' to 16' Deep	Ft	608.00	\$42,826.45	\$70.44	4
451E5112	Bore and Jack 12" Pipe	Ft	72.00	\$20,772.88	\$288.51	9
451E5124	Bore and Jack 24" Pipe	Ft	4,020.00	\$671,995.62	\$167.16	10
451E5130	Bore and Jack 30" Pipe	Ft	790.00	\$149,231.00	\$188.90	5
451E5148	Bore and Jack 48" Pipe	Ft	1,968.00	\$335,216.00	\$170.33	3
451E5154	Bore and Jack 54" Pipe	Ft	850.00	\$295,762.60	\$347.96	5
451E5190	Bore Obstruction	Each	10.00	\$15,033.48	\$1,503.35	5
451E5208	Adjust 8" Water Main	Ft	220.00	\$8,507.40	\$38.67	2
451E5224	Adjust 24" Water Main	Ft	968.00	\$55,684.20	\$57.53	2
451E6050	Temporary Water Service	Each	81.00	\$49,037.95	\$605.41	11
451E6075	Adjust Curb Stop Box	Each	99.00	\$10,923.00	\$110.33	3
451E6080	Adjust Water Valve Box	Each	682.00	\$79,675.25	\$116.83	30
451E6085	Extend Water Valve Box	Each	45.00	\$8,647.90	\$192.18	9
451E6099	Abandon Water Service	Each	20.00	\$3,403.80	\$170.19	4
451E6100	Reconnect Water Service	Each	205.00	\$169,309.35	\$825.90	11
451E6101	Abandon Water Main	Each	84.00	\$67,092.56	\$798.72	7
451E6105	Connect To Existing Water Main	Each	88.00	\$139,747.01	\$1,588.03	11
451E6106	Cut and Tie to Existing Water Main	Each	157.00	\$179,303.98	\$1,142.06	14
451E6107	Temporary Water Main Bypass	Each	6.00	\$12,542.06	\$2,090.34	3
451E6515	Remove and Reset Fire Hydrant	Each	5.00	\$14,950.00	\$2,990.00	5
451E7010	Reconnect Sewer Service	Each	315.00	\$124,742.60	\$396.01	16
451E7015	Connect Sewer Service	Each	8.00	\$4,158.90	\$519.86	4
451E7016	Connect to Existing Sewer Main	Each	32.00	\$33,363.84	\$1,042.62	2
451E7020	Sewer Bypass Pumping	LS	22.00	\$177,499.12	\$8,068.14	22
451E7025	Repair Sewer Pipe	Each	66.00	\$148,357.00	\$2,247.83	3
451E7040	Abandon Lift Station	Each	2.00	\$6,750.00	\$3,375.00	2
451E7400	Corrosion Protection	LS	2.00	\$310,539.42	\$155,269.71	2
451E7402	Test Station	Each	20.00	\$8,573.60	\$428.68	2

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Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
451E7500	Locate Utilities	Each	87.00	\$11,333.75	\$130.27	21
451E7510	Verify Utilities	Each	92.00	\$15,791.76	\$171.65	25
451E7520	Exploratory Excavation	Hour	720.00	\$39,784.40	\$55.26	6
451E8000	PVC Pipe Deflection Test	Ft	23,818.00	\$21,451.79	\$0.90	17
451E8010	Pipe Exfiltration Test	Ft	23,818.00	\$21,227.39	\$0.89	17
460E0030	Class A45 Concrete, Bridge Deck	CuYd	10,336.80	\$8,230,519.29	\$796.23	37
460E0050	Class A45 Concrete, Bridge	CuYd	5,250.60	\$3,973,960.25	\$756.86	40
460E0070	Class A45 Concrete, Bridge Repair	CuYd	3,500.00	\$4,570,417.77	\$1,305.83	109
460E0100	Class A45 Concrete, Miscellaneous	CuYd	3,400.90	\$2,509,527.42	\$737.90	13
460E0120	Class A45 Concrete, Box Culvert	CuYd	8,430.50	\$4,294,257.93	\$509.37	25
460E0150	Concrete Approach Slab for Bridge	SqYd	19,386.80	\$4,423,691.84	\$228.18	39
460E0160	Concrete Approach Sleeper Slab for	SqYd	5,607.10	\$1,738,580.53	\$310.07	39
460E0170	Concrete Patching Material	CuFt	9,723.70	\$694,816.13	\$71.46	64
460E0190	Concrete Crack Injection/Sealing	In	1,152.00	\$13,901.76	\$12.07	4
460E0200	Special Surface Finish	SqFt	48,756.00	\$300,108.70	\$6.16	52
460E0204	Anti-Graffiti Coating	SqFt	20,066.00	\$73,541.89	\$3.67	2
460E0300	Breakout Structural Concrete	CuYd	1,360.00	\$1,826,108.45	\$1,342.73	127
460E0305	Overhead Concrete Removal on	SqYd	124.80	\$56,390.46	\$451.85	3
460E0310	Breakout and Replace Grout Pad	Each	102.00	\$117,676.38	\$1,153.69	6
460E0380	Install Dowel in Concrete	Each	35,694.00	\$671,998.85	\$18.83	107
460E0500	Deck Drain, Girder Bridge	Each	178.00	\$67,529.54	\$379.38	9
460E0502	Deck Drain, Slab Bridge	Each	48.00	\$23,212.20	\$483.59	4
460E0510	Extend Deck Drain	Each	156.00	\$83,165.70	\$533.11	8
460E0700	Joint Nosing Material	SqFt	1,965.00	\$383,443.48	\$195.14	24
460E4000	Nonmetallic Fiber Reinforced Concrete	CuYd	381.20	\$293,019.86	\$768.68	4
460E8000	Column Fiber Wrap	Each	24.00	\$80,981.34	\$3,374.22	4
462E0100	Class M6 Concrete	CuYd	8,385.40	\$6,600,834.79	\$787.18	156
462E0200	Controlled Density Fill	CuYd	8,420.90	\$1,987,713.50	\$236.05	96
462E0250	Cellular Grout	CuYd	2,380.80	\$832,996.34	\$349.88	29
465E0100	Class A45 Concrete, Drilled Shaft	CuYd	554.20	\$389,913.69	\$703.56	9
465E0200	Drilled Shaft Excavation	CuYd	466.20	\$274,834.55	\$589.52	9
465E1032	32" Permanent Casing	Ft	432.00	\$70,316.64	\$162.77	4
465E1044	44" Permanent Casing	Ft	180.00	\$54,128.16	\$300.71	5
470E0020	Pipe Handrail	Ft	1,660.50	\$101,898.90	\$61.37	7
470E0030	Special Steel Railing	Ft	328.00	\$63,304.00	\$193.00	4
470E0040	Steel Pedestrian Railing	Ft	34.40	\$5,615.28	\$163.23	4
470E0120	Steel Pedestrian Railing on Sidewalk	Ft	4,186.00	\$713,415.17	\$170.43	7
470E0220	Steel Pedestrian Railing on Concrete	Ft	4,297.60	\$355,137.46	\$82.64	10
470E0420	Type T101 Bridge Railing	Ft	4,707.00	\$506,662.66	\$107.64	24
470E0430	Type T115 Bridge Railing	Ft	1,170.00	\$152,568.00	\$130.40	5
470E0440	Wyoming Bridge Railing	Ft	2,272.00	\$345,855.20	\$152.23	4
480E0100	Reinforcing Steel	Lb	5,054,699.00	\$6,463,744.43	\$1.28	221
480E0200	Epoxy Coated Reinforcing Steel	Lb	3,333,500.00	\$4,443,086.40	\$1.33	149
480E0504	No. 4 Rebar Splice	Each	2,425.00	\$46,366.12	\$19.12	52
480E0505	No. 5 Rebar Splice	Each	3,784.00	\$82,871.99	\$21.90	62
480E0506	No. 6 Rebar Splice	Each	5,297.00	\$143,706.08	\$27.13	58
480E0507	No. 7 Rebar Splice	Each	1,224.00	\$37,708.89	\$30.81	13
480E0509	No. 9 Rebar Splice	Each	132.00	\$8,707.26	\$65.96	7

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
480E0510	No. 10 Rebar Splice	Each	6.00	\$1,040.00	\$173.33	3
480E0518	No. 18 Rebar Splice	Each	420.00	\$94,833.48	\$225.79	5
480E5000	Galvanic Anode	Each	2,572.00	\$137,987.94	\$53.65	23
491E0010	Bridge Deck Epoxy Chip Seal	SqYd	1,440.00	\$48,369.60	\$33.59	3
491E0015	Two Coat Epoxy Bridge Deck Chip	SqYd	194,418.90	\$10,389,106.17	\$53.44	61
491E0100	Remove and Replace Deteriorated	SqYd	27.00	\$11,880.00	\$440.00	3
491E0110	Abrasive Blasting of Bridge Deck	SqYd	202,550.10	\$1,024,231.42	\$5.06	65
491E0120	Bridge Deck Grinding	SqYd	201,996.30	\$1,319,945.00	\$6.53	68
491E0130	Concrete Removal, Class A	SqYd	1,444.70	\$162,329.43	\$112.36	61
491E0140	Concrete Removal, Class B	SqYd	1,444.70	\$192,954.71	\$133.56	61
510E0100	Extract Pile	Each	40.00	\$19,600.00	\$490.00	5
510E0300	Preboring Pile	Ft	4,480.00	\$105,456.00	\$23.54	38
510E1311	Timber Test Pile, Furnish and Drive	Ft	1,008.00	\$48,431.04	\$48.05	6
510E1331	Timber Bearing Pile, Furnish and Drive	Ft	7,872.00	\$268,277.76	\$34.08	6
510E2331	14"x14" Prestressed Concrete Test	Ft	1,200.00	\$80,880.00	\$67.40	5
510E2335	14"x14" Prestressed Concrete Bearing	Ft	22,080.00	\$1,093,843.20	\$49.54	5
510E3120	HP 10 Pile Tip Reinforcement	Each	70.00	\$7,900.00	\$112.86	7
510E3130	HP 12 Pile Tip Reinforcement	Each	450.00	\$41,799.60	\$92.89	5
510E3361	HP 10x42 Steel Test Pile, Furnish and	Ft	1,061.00	\$56,242.48	\$53.01	8
510E3365	HP 10x42 Steel Bearing Pile, Furnish	Ft	6,444.00	\$254,253.12	\$39.46	8
510E3371	HP 10x57 Steel Test Pile, Furnish and	Ft	2,320.00	\$136,360.80	\$58.78	11
510E3375	HP 10x57 Steel Bearing Pile, Furnish	Ft	5,056.00	\$231,374.56	\$45.76	11
510E3401	HP 12x53 Steel Test Pile, Furnish and	Ft	1,260.00	\$71,437.50	\$56.70	8
510E3405	HP 12x53 Steel Bearing Pile, Furnish	Ft	7,204.00	\$354,378.64	\$49.19	8
510E3421	HP 12x74 Steel Test Pile, Furnish and	Ft	5,140.00	\$306,426.24	\$59.62	5
510E3425	HP 12x74 Steel Bearing Pile, Furnish	Ft	60,210.00	\$2,214,042.12	\$36.77	5
510E4000	Dynamic Pile Test (during driving)	Each	68.00	\$230,994.53	\$3,396.98	9
510E4010	Dynamic Pile Test (during restrike)	Each	68.00	\$183,922.91	\$2,704.75	9
510E4050	Static Pile Load Test	Each	18.00	\$572,421.64	\$31,801.20	9
510E8005	Sheet Piling, Furnish and Drive	SqFt	6,231.00	\$102,001.47	\$16.37	3
530E0100	Metal Bin Retaining Wall	SqFt	393.00	\$40,856.28	\$103.96	3
530E0300	Type C Concrete Retaining Wall	SqFt	7,048.00	\$494,089.88	\$70.10	8
530E0310	Special Type C Concrete Retaining	SqFt	3,380.00	\$304,352.10	\$90.05	2
530E0400	MSE Wire Face Wall	SqFt	491.00	\$13,998.41	\$28.51	1
530E0420	MSE Large Panel Wall, Furnish	SqFt	24,715.00	\$641,403.68	\$25.95	5
530E0422	MSE Large Panel Wall, Install	SqFt	24,715.00	\$217,887.44	\$8.82	5
530E0470	Gravity Large Concrete Block Wall	SqFt	18,747.00	\$1,043,583.00	\$55.67	3
530E0702	Granular Backfill for MSE Large Panel	CuYd	13,335.00	\$618,503.97	\$46.38	5
530E0704	Granular Backfill for MSE Wire Face	CuYd	272.00	\$14,785.92	\$54.36	1
530E2000	Shotcrete	SqFt	633.00	\$6,703.47	\$10.59	1
550E0010	Low Slump Dense Concrete Bridge	CuYd	7,402.00	\$2,568,965.67	\$347.06	58
550E0100	Concrete Removal Type 1A	SqYd	98,919.50	\$2,297,512.51	\$23.23	58
550E0105	Concrete Removal Type 2A	SqYd	11,889.20	\$134,277.24	\$11.29	40
550E0110	Concrete Removal Type 1B	SqYd	11,495.30	\$1,015,427.69	\$88.33	58
550E0120	Concrete Removal Type 1C	SqYd	5,110.10	\$493,246.72	\$96.52	54
550E0130	Concrete Removal Type 1D	SqYd	5,110.10	\$469,408.30	\$91.86	54
550E0140	Concrete Removal Type B	Ft	3,140.00	\$40,374.40	\$12.86	58
550E0200	Class A45 Concrete Fill	CuYd	1,822.50	\$556,215.81	\$305.19	58

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
550E0500	Finishing and Curing	SqYd	104,279.70	\$4,569,156.21	\$43.82	62
560E0069	7'x3' Precast Concrete Box Culvert,	Ft	3,786.00	\$452,225.08	\$119.45	3
560E0088	8'x4' Precast Concrete Box Culvert,	Ft	3,080.00	\$1,406,611.36	\$456.69	5
560E0089	8'x4' Precast Concrete Box Culvert,	Ft	3,080.00	\$271,489.68	\$88.15	5
560E0116	9'x8' Precast Concrete Box Culvert,	Ft	2,168.00	\$1,309,282.30	\$603.91	4
560E0117	9'x8' Precast Concrete Box Culvert,	Ft	2,168.00	\$182,523.92	\$84.19	4
560E0129	10'x3' Precast Concrete Box Culvert,	Ft	3,018.00	\$419,502.00	\$139.00	3
560E0130	10'x4' Precast Concrete Box Culvert,	Ft	2,364.00	\$1,311,807.24	\$554.91	2
560E0131	10'x4' Precast Concrete Box Culvert,	Ft	2,814.00	\$319,561.38	\$113.56	5
560E0136	10'x7' Precast Concrete Box Culvert,	Ft	720.00	\$447,892.20	\$622.07	4
560E0137	10'x7' Precast Concrete Box Culvert,	Ft	720.00	\$60,616.80	\$84.19	4
560E0142	10'x10' Precast Concrete Box Culvert,	Ft	408.00	\$263,742.42	\$646.43	4
560E0143	10'x10' Precast Concrete Box Culvert,	Ft	408.00	\$76,387.80	\$187.23	4
560E0179	12'x3' Precast Concrete Box Culvert,	Ft	480.00	\$81,115.20	\$168.99	3
560E1088	8'x4' Precast Concrete Box Culvert End	Each	20.00	\$77,449.28	\$3,872.46	5
560E1089	8'x4' Precast Concrete Box Culvert End	Each	20.00	\$44,851.68	\$2,242.58	5
560E1116	9'x8' Precast Concrete Box Culvert End	Each	24.00	\$188,417.28	\$7,850.72	4
560E1117	9'x8' Precast Concrete Box Culvert End	Each	24.00	\$33,481.68	\$1,395.07	4
560E1129	10'x3' Precast Concrete Box Culvert	Each	3.00	\$3,346.00	\$1,115.33	3
560E1130	10'x4' Precast Concrete Box Culvert	Each	10.00	\$69,627.00	\$6,962.70	2
560E1131	10'x4' Precast Concrete Box Culvert	Each	10.00	\$10,455.00	\$1,045.50	2
560E1136	10'x7' Precast Concrete Box Culvert	Each	8.00	\$55,931.38	\$6,991.42	4
560E1137	10'x7' Precast Concrete Box Culvert	Each	8.00	\$13,740.84	\$1,717.61	4
560E1142	10'x10' Precast Concrete Box Culvert	Each	8.00	\$80,267.70	\$10,033.46	4
560E1143	10'x10' Precast Concrete Box Culvert	Each	8.00	\$28,640.00	\$3,580.00	4
560E2050	2-7'x3' Precast Concrete Box Culvert,	Ft	420.00	\$336,140.28	\$800.33	4
560E2051	2-7'x3' Precast Concrete Box Culvert,	Ft	420.00	\$72,410.52	\$172.41	4
560E2100	2-9'x9' Precast Concrete Box Culvert,	Ft	624.00	\$626,283.84	\$1,003.66	4
560E2101	2-9'x9' Precast Concrete Box Culvert,	Ft	624.00	\$244,686.00	\$392.13	4
560E2118	2-10'x7' Precast Concrete Box Culvert,	Ft	720.00	\$758,280.60	\$1,053.17	4
560E2119	2-10'x7' Precast Concrete Box Culvert,	Ft	720.00	\$81,903.60	\$113.76	4
560E2142	2-11'x7' Precast Concrete Box Culvert,	Ft	760.00	\$840,387.10	\$1,105.77	4
560E2143	2-11'x7' Precast Concrete Box Culvert,	Ft	760.00	\$86,453.80	\$113.76	4
560E2162	2-12'x4' Precast Concrete Box Culvert,	Ft	320.00	\$380,910.08	\$1,190.34	5
560E2163	2-12'x4' Precast Concrete Box Culvert,	Ft	320.00	\$36,216.96	\$113.18	5
560E2166	2-12'x6' Precast Concrete Box Culvert,	Ft	526.00	\$667,680.52	\$1,269.35	8
560E2167	2-12'x6' Precast Concrete Box Culvert,	Ft	526.00	\$83,221.88	\$158.22	8
560E2172	2-12'x9' Precast Concrete Box Culvert,	Ft	252.00	\$327,809.16	\$1,300.83	6
560E2173	2-12'x9' Precast Concrete Box Culvert,	Ft	252.00	\$67,200.00	\$266.67	6
560E3050	2-7'x3' Precast Concrete Box Culvert	Each	6.00	\$39,369.42	\$6,561.57	4
560E3051	2-7'x3' Precast Concrete Box Culvert	Each	6.00	\$10,602.45	\$1,767.08	4
560E3100	2-9'x9' Precast Concrete Box Culvert	Each	8.00	\$119,771.14	\$14,971.39	4
560E3101	2-9'x9' Precast Concrete Box Culvert	Each	8.00	\$43,400.00	\$5,425.00	4
560E3118	2-10'x7' Precast Concrete Box Culvert	Each	8.00	\$83,934.94	\$10,491.87	4
560E3119	2-10'x7' Precast Concrete Box Culvert	Each	8.00	\$18,901.38	\$2,362.67	4
560E3142	2-11'x7' Precast Concrete Box Culvert	Each	8.00	\$90,503.22	\$11,312.90	4
560E3143	2-11'x7' Precast Concrete Box Culvert	Each	8.00	\$18,901.38	\$2,362.67	4
560E3162	2-12'x4' Precast Concrete Box Culvert	Each	10.00	\$80,796.86	\$8,079.69	5

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
560E3163	2-12'x4' Precast Concrete Box Culvert	Each	10.00	\$14,550.46	\$1,455.05	5
560E3166	2-12'x6' Precast Concrete Box Culvert	Each	16.00	\$233,976.84	\$14,623.55	8
560E3167	2-12'x6' Precast Concrete Box Culvert	Each	16.00	\$33,393.34	\$2,087.08	8
560E3172	2-12'x9' Precast Concrete Box Culvert	Each	12.00	\$206,932.02	\$17,244.34	6
560E3173	2-12'x9' Precast Concrete Box Culvert	Each	12.00	\$56,950.00	\$4,745.83	6
560E4001	Special Precast Concrete Box Culvert,	Ft	90.00	\$24,989.70	\$277.66	3
560E4002	Special Precast Concrete Box Culvert,	Ft	90.00	\$12,982.20	\$144.25	3
560E4003	Special Precast Concrete Box Culvert	Each	3.00	\$4,399.91	\$1,466.64	3
560E4004	Special Precast Concrete Box Culvert	Each	3.00	\$2,187.22	\$729.07	3
560E4011	Special Precast Concrete Box Culvert	Each	15.00	\$17,800.00	\$1,186.67	3
560E4021	Special Precast Concrete Box Culvert	Each	6.00	\$7,120.00	\$1,186.67	3
560E5001	4'x6' Reinforced Concrete Cattle Pass,	Ft	72.00	\$20,285.44	\$281.74	9
560E5002	4'x6' Reinforced Concrete Cattle Pass,	Ft	72.00	\$7,338.32	\$101.92	9
560E5003	5'x7' Reinforced Concrete Cattle Pass,	Ft	80.00	\$26,548.00	\$331.85	5
560E5004	5'x7' Reinforced Concrete Cattle Pass,	Ft	80.00	\$5,359.04	\$66.99	5
560E5051	4'x6' Reinforced Concrete Cattle Pass	Each	9.00	\$21,070.69	\$2,341.19	9
560E5052	4'x6' Reinforced Concrete Cattle Pass	Each	9.00	\$4,520.15	\$502.24	9
560E5100	Reset Reinforced Concrete Cattle Pass	Ft	96.00	\$12,927.06	\$134.66	13
560E5101	Reset Reinforced Concrete Cattle Pass	Each	41.00	\$27,085.31	\$660.62	18
560E8045	45" Minnesota Shape Prestressed	Ft	1,760.00	\$386,383.36	\$219.54	5
560E8054	54" Minnesota Shape Prestressed	Ft	6,670.00	\$1,441,973.96	\$216.19	5
560E8560	6' Wide Deck Prestressed Concrete	Ft	3,906.00	\$1,448,177.40	\$370.76	7
560E8623	3'-10" Wide Deck x 23" Prestressed	Ft	1,540.00	\$363,579.80	\$236.09	7
560E8805	Precast Concrete Plank, Furnish	SqFt	303.30	\$9,627.75	\$31.74	3
560E8806	Precast Concrete Plank, Install	SqFt	303.30	\$4,800.23	\$15.83	3
600E0100	Type I Field Laboratory	Each	38.00	\$166,483.90	\$4,381.16	38
600E0200	Type II Field Laboratory	Each	156.00	\$1,338,702.61	\$8,581.43	156
600E0300	Type III Field Laboratory	Each	145.00	\$1,166,977.35	\$8,048.12	145
620E0020	Type 2 Right-of-Way Fence	Ft	1,088,232.00	\$1,492,510.10	\$1.37	66
620E0030	Type 3 Right-of-Way Fence	Ft	1,248,025.00	\$1,478,430.95	\$1.18	13
620E0040	Type 4 Right-of-Way Fence	Ft	36,282.00	\$73,390.47	\$2.02	10
620E0060	Type 6 Right-of-Way Fence	Ft	17,152.00	\$41,507.84	\$2.42	4
620E0220	Modified Type 2 Right-of-Way Fence	Ft	2,404.00	\$15,307.47	\$6.37	4
620E0230	Modified Type 3 Right-of-Way Fence	Ft	54,264.00	\$66,686.41	\$1.23	9
620E0260	Modified Type 6 Right-of-Way Fence	Ft	59,027.00	\$119,437.65	\$2.02	5
620E0300	Special Right-of-Way Fence	Ft	28,530.00	\$571,697.89	\$20.04	10
620E0510	Type 1 Temporary Fence	Ft	197,548.00	\$221,978.77	\$1.12	50
620E0515	Type 1A Temporary Fence	Ft	175,810.00	\$173,623.65	\$0.99	20
620E0520	Type 2 Temporary Fence	Ft	4,020.00	\$4,850.80	\$1.21	3
620E1020	2 Post Panel	Each	5,416.00	\$648,478.34	\$119.73	73
620E1030	3 Post Panel	Each	3,323.00	\$465,567.34	\$140.10	51
620E1110	Wood Fence Post	Each	4,976.00	\$79,046.40	\$15.89	7
620E2012	12' Tubular Gate	Each	16.00	\$5,900.28	\$368.77	4
620E2100	Reset Gate	Each	26.00	\$7,722.18	\$297.01	6
620E4100	Reset Fence	Ft	14,006.00	\$37,134.66	\$2.65	33
621E0040	4' Chain Link Fence with Top Rail	Ft	1,090.00	\$25,608.43	\$23.49	4
621E0060	6' Chain Link Fence with Top Rail	Ft	2,325.00	\$45,615.97	\$19.62	6
621E0160	6' Chain Link Fence with Tension	Ft	2,680.00	\$40,671.68	\$15.18	5

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
621E0240	Special 4' Chain Link Fence	Ft	110.00	\$2,525.60	\$22.96	2
621E0300	Chain Link Fence for Bridge Sidewalk	Ft	8,146.00	\$227,719.75	\$27.95	20
621E0520	Reset Chain Link Fence	Ft	2,648.00	\$38,999.10	\$14.73	18
628E1000	Straight Concrete Barrier	Ft	36.00	\$4,950.00	\$137.50	1
628E1100	Movable F Shape Concrete Barrier,	Each	155.00	\$149,633.59	\$965.38	5
628E1110	Movable F Shape Concrete Barrier,	Each	32.00	\$43,009.68	\$1,344.05	7
628E1500	Concrete Barrier End Protection	Each	5.00	\$41,474.74	\$8,294.95	5
628E1510	Concrete Barrier End Protection	Each	5.00	\$4,167.57	\$833.51	5
629E0100	3 Cable Guardrail	Ft	107,792.00	\$1,089,129.44	\$10.10	61
629E0110	NCHRP 350 Test Level 3 High Tension	Ft	123,204.00	\$1,604,673.25	\$13.02	23
629E0200	Reset 3 Cable Guardrail	Ft	55,178.00	\$231,828.54	\$4.20	40
629E0220	Reset 3 Cable Guardrail, Cable Only	Ft	3,123.00	\$22,693.80	\$7.27	3
629E0290	NCHRP 350 Test Level 3 High Tension	Each	196.00	\$623,189.72	\$3,179.54	23
629E0300	3 Cable Guardrail Slip Base Anchor	Each	168.00	\$241,477.02	\$1,437.36	44
629E0400	3 Cable Guardrail Anchor Assembly	Each	626.00	\$647,778.43	\$1,034.79	66
629E0410	Reset 3 Cable Guardrail Anchor	Each	40.00	\$11,807.90	\$295.20	12
629E0450	Retension 3 Cable Guardrail	Each	16.00	\$712.20	\$44.51	4
629E1102	3 Cable Guardrail Intermediate Post	Each	498.00	\$27,224.00	\$54.67	3
629E1106	Drive Down 3 Cable Guardrail Post	Each	8.00	\$180.00	\$22.50	4
629E1107	High Tension Cable Guardrail Post	Each	1,070.00	\$63,783.43	\$59.61	20
629E1120	W Beam to 3 Cable Transition Bracket	Each	12.00	\$1,140.00	\$95.00	4
629E8000	Spreader Bar	Each	15.00	\$238.53	\$15.90	15
629E8010	Cable Tension Indicator	Each	11.00	\$26,434.28	\$2,403.12	11
629E9000	Crossover Closure	Ft	4,416.00	\$90,601.28	\$20.52	15
629E9010	Interim Crossover Closure	Ft	15,360.00	\$178,992.00	\$11.65	6
629E9050	Reset Crossover Closure	Ft	7,744.00	\$33,128.64	\$4.28	20
629E9060	Reset Interim Crossover Closure	Ft	7,488.00	\$29,604.80	\$3.95	16
630E0010	Straight Class A Thrie Beam Guardrail	Ft	250.00	\$20,578.00	\$82.31	5
630E0110	Straight Double Class A Thrie Beam	Ft	12,062.50	\$1,052,376.00	\$87.24	102
630E0250	Straight Double Class A Thrie Beam	Ft	825.00	\$73,694.50	\$89.33	3
630E1010	Straight Class A W Beam Guardrail	Ft	72,933.30	\$1,880,300.75	\$25.78	151
630E1020	Curved Class A W Beam Guardrail with	Ft	75.00	\$2,100.00	\$28.00	2
630E1050	Straight Class B W Beam Guardrail	Ft	3,100.00	\$96,166.00	\$31.02	25
630E1140	Straight Double Class A W Beam	Ft	460.00	\$16,033.50	\$34.86	10
630E1150	Straight Double Class B W Beam	Ft	3,900.00	\$212,667.00	\$54.53	33
630E1200	Straight Class A W Beam Rail	Ft	1,600.00	\$36,704.50	\$22.94	9
630E1210	Straight Class B W Beam Rail	Ft	288.00	\$7,002.00	\$24.31	4
630E2000	W Beam to Thrie Beam Guardrail	Each	860.00	\$248,959.07	\$289.49	114
630E2015	W Beam Guardrail Flared End	Each	742.00	\$1,592,471.74	\$2,146.19	121
630E2020	W Beam Guardrail Tangent End	Each	199.00	\$504,289.10	\$2,534.12	40
630E2030	W Beam Guardrail Breakaway Cable	Each	304.00	\$248,963.40	\$818.96	59
630E2035	W Beam Guardrail Special Anchor	Each	2.00	\$2,500.00	\$1,250.00	2
630E2050	Beam Guardrail Trailing End Terminal	Each	65.00	\$33,111.50	\$509.41	11
630E2100	Beam Guardrail Post	Each	808.00	\$39,508.80	\$48.90	13
630E2105	Beam Guardrail Block	Each	64.00	\$2,760.00	\$43.13	4
630E2110	Beam Guardrail Post and Block	Each	7,049.00	\$384,714.53	\$54.58	49
630E2150	End Terminal Wood Breakaway Post	Each	8.00	\$426.00	\$53.25	4
630E2230	Tangent End Terminal Wood Post and	Each	32.00	\$90,568.24	\$2,830.26	4

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
630E2300	Rubrail	Ft	3,506.50	\$112,145.49	\$31.98	24
630E5110	Reset Double Thrie Beam Guardrail	Ft	1,100.00	\$50,907.00	\$46.28	14
630E5120	Reset Thrie Beam Rail	Ft	200.00	\$4,525.75	\$22.63	7
630E5130	Reset Double Thrie Beam Rail	Ft	2,450.00	\$95,882.50	\$39.14	29
630E5140	Reset W Beam Guardrail with Wood	Ft	6,962.50	\$76,419.50	\$10.98	23
630E5160	Reset W Beam Rail	Ft	26,653.00	\$310,178.55	\$11.64	46
630E5170	Reset Double W Beam Rail	Ft	1,410.00	\$29,101.50	\$20.64	12
630E5180	Reset W Beam Guardrail Breakaway	Each	33.00	\$12,675.69	\$384.11	17
630E5190	Reset W Beam to Thrie Beam	Each	192.00	\$29,597.86	\$154.16	31
630E5200	Reset W Beam to Thrie Beam	Each	64.00	\$10,138.37	\$158.41	15
630E5207	Reset W Beam Guardrail Flared End	Each	135.00	\$116,838.74	\$865.47	27
630E5208	Reset W Beam Guardrail Tangent End	Each	53.00	\$81,382.59	\$1,535.52	8
630E5209	Reset W Beam Guardrail End Terminal	Each	33.00	\$17,600.00	\$533.33	3
630E5220	Reset Rubrail	Ft	538.00	\$6,879.80	\$12.79	11
630E5500	Furnish Beam Guardrail Post and	Each	282.00	\$15,375.58	\$54.52	3
630E5520	Drive Down Beam Guardrail Post	Each	32.00	\$1,420.00	\$44.38	4
632E0010	1.25' Diameter Breakaway Support	Ft	6,060.00	\$464,052.28	\$76.58	25
632E0012	1.5' Diameter Breakaway Support	Ft	32.00	\$2,236.00	\$69.88	2
632E0014	1.75' Diameter Breakaway Support	Ft	622.00	\$59,182.14	\$95.15	7
632E0058	2.25' Diameter Fixed Support Concrete	Ft	180.00	\$33,588.00	\$186.60	5
632E0060	2.5' Diameter Fixed Support Concrete	Ft	216.00	\$53,874.40	\$249.42	11
632E0072	4' Diameter Fixed Support Concrete	Ft	496.00	\$170,402.80	\$343.55	11
632E1100	1.12 Lb/Ft Flanged Channel Post	Ft	63.00	\$265.44	\$4.21	3
632E1225	W6x12 Steel Post	Ft	1,105.50	\$57,854.50	\$52.33	3
632E1235	W6x20 Steel Post	Ft	250.00	\$20,940.00	\$83.76	2
632E1240	W8x18 Steel Post	Ft	87.00	\$6,640.28	\$76.33	2
632E1255	W8x28 Steel Post	Ft	487.50	\$42,331.25	\$86.83	3
632E1320	2.0"x2.0" Perforated Tube Post	Ft	384,160.20	\$4,034,034.56	\$10.50	134
632E1330	2.25"x2.25" Perforated Tube Post	Ft	3,636.10	\$90,140.56	\$24.79	30
632E1340	2.5"x2.5" Perforated Tube Post	Ft	72,187.80	\$2,028,495.87	\$28.10	88
632E1415	4" Diameter Steel Post, .237" Shell	Ft	133.20	\$7,732.26	\$58.05	2
632E1505	4"x6" Wood Post	Ft	21,030.50	\$155,304.64	\$7.38	13
632E1550	Miscellaneous Post Hardware	LS	5.00	\$56,996.26	\$11,399.25	5
632E1600	Pipe End Marker Post	Each	20.00	\$1,291.50	\$64.58	2
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft	Each	2,986.00	\$63,686.54	\$21.33	37
632E2002	4"x4" Amber Delineator Back to Back	Each	416.00	\$20,154.16	\$48.45	4
632E2004	4"x8" Amber Delineator with 1.12 Lb/Ft	Each	545.00	\$13,888.09	\$25.48	28
632E2008	4" Tubular Amber Delineator with 1.12	Each	1,082.00	\$32,293.88	\$29.85	13
632E2020	4"x4" White Delineator with 1.12 Lb/Ft	Each	10,278.00	\$237,192.87	\$23.08	55
632E2022	4"x4" White Delineator Back to Back	Each	16,856.00	\$460,197.21	\$27.30	51
632E2024	4"x8" White Delineator with 1.12 Lb/Ft	Each	2,025.00	\$52,063.97	\$25.71	35
632E2028	4" Tubular White Delineator with 1.12	Each	9,443.00	\$317,627.56	\$33.64	52
632E2100	Reset Delineator	Each	13,058.00	\$225,734.74	\$17.29	29
632E2202	4"x8" Amber Delineator Reflector	Each	163.00	\$1,642.32	\$10.08	7
632E2207	4" Tubular White Delineator Reflector	Each	78.00	\$2,812.32	\$36.06	8
632E2220	Guardrail Delineator	Each	10,946.00	\$248,962.73	\$22.74	172
632E2500	Type 1 Yellow Object Marker	Each	36.00	\$1,142.22	\$31.73	6
632E2510	Type 2 Object Marker Back to Back	Each	7,496.00	\$273,505.39	\$36.49	86

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
632E2520	Type 2 Object Marker	Each	6,463.00	\$234,027.65	\$36.21	128
632E2530	Type 3 Object Marker	Each	532.00	\$40,664.08	\$76.44	39
632E2532	Type 3 Object Marker, Furnish	Each	24.00	\$1,303.12	\$54.30	6
632E2533	Type 3 Flexible Object Marker	Each	2,064.00	\$410,909.62	\$199.08	14
632E2535	End of Roadway Marker	Each	144.00	\$11,809.34	\$82.01	9
632E3103	Extruded Aluminum Sign, Removable	SqFt	2,055.10	\$60,376.74	\$29.38	9
632E3115	Extruded Aluminum Sign,	SqFt	25,275.10	\$595,443.44	\$23.56	14
632E3203	Flat Aluminum Sign, Nonremovable	SqFt	147,776.00	\$2,168,628.40	\$14.68	166
632E3205	Flat Aluminum Sign, Nonremovable	SqFt	146,477.90	\$2,584,707.07	\$17.65	127
632E3500	Reset Sign	Each	605.00	\$42,312.00	\$69.94	44
632E3520	Remove, Salvage, Relocate, and Reset	Each	4,748.00	\$466,752.80	\$98.31	134
632E3522	Modify Sign Panel	Each	6.00	\$6,423.42	\$1,070.57	2
632E3526	Install State Furnished Sign	Each	15.00	\$78,893.70	\$5,259.58	3
632E3600	Temporary Signing	SqFt	84,349.00	\$1,350,197.10	\$16.01	90
632E3710	Radar Speed Sign, Solar Powered	Each	8.00	\$48,640.00	\$6,080.00	2
632E4005	Type III Single Sided Barricade	Ft	6,384.00	\$194,978.40	\$30.54	7
632E5020	Overhead Cantilever Sign Support	Each	22.00	\$522,420.00	\$23,746.36	11
633E0010	Cold Applied Plastic Pavement	Ft	860,703.00	\$2,513,867.20	\$2.92	86
633E0015	Cold Applied Plastic Pavement	Ft	5,382.00	\$24,506.04	\$4.55	3
633E0020	Cold Applied Plastic Pavement	Ft	36,839.00	\$211,908.95	\$5.75	37
633E0021	Cold Applied Plastic Pavement Marking	Ft	300.00	\$1,569.00	\$5.23	2
633E0025	Cold Applied Plastic Pavement	Ft	68,232.00	\$614,257.10	\$9.00	23
633E0030	Cold Applied Plastic Pavement	Ft	48,509.00	\$894,219.42	\$18.43	111
633E0035	Cold Applied Plastic Pavement	SqFt	4,204.00	\$41,067.62	\$9.77	23
633E0040	Cold Applied Plastic Pavement	Each	3,686.00	\$946,777.59	\$256.86	113
633E0045	Cold Applied Plastic Pavement	Each	24.00	\$14,401.00	\$600.04	14
633E0046	Cold Applied Plastic Pavement	Each	24.00	\$45,939.96	\$1,914.17	12
633E0050	Cold Applied Plastic Pavement	Word	22.00	\$11,700.00	\$531.82	5
633E0055	Cold Applied Plastic Pavement	Each	50.00	\$68,439.62	\$1,368.79	21
633E1000	Epoxy Pavement Marking Paint, White	Gal	3.50	\$952.22	\$272.06	5
633E1100	Epoxy Pavement Marking Paint, 4"	Ft	17,335.00	\$18,323.27	\$1.06	10
633E1105	Epoxy Pavement Marking Paint, 4"	Ft	50,105.00	\$52,961.64	\$1.06	10
633E1130	Epoxy Pavement Marking Paint, 24"	Ft	1,875.00	\$11,812.50	\$6.30	5
633E1135	Epoxy Pavement Marking Paint, 24"	Ft	1,035.00	\$7,779.10	\$7.52	10
633E1145	Epoxy Pavement Marking Paint, Arrow	Each	85.00	\$3,586.15	\$42.19	5
633E1200	Waterborne Pavement Marking Paint	Gal	14,476.00	\$579,006.10	\$40.00	17
633E1205	Waterborne Pavement Marking Paint	Gal	7,745.00	\$328,923.45	\$42.47	17
633E1300	Pavement Marking Paint, White	Gal	553,612.30	\$10,481,894.39	\$18.93	433
633E1305	Pavement Marking Paint, Yellow	Gal	221,093.30	\$3,990,054.20	\$18.05	414
633E1400	Pavement Marking Paint, 4" White	Ft	245,394.00	\$115,862.86	\$0.47	59
633E1405	Pavement Marking Paint, 4" Yellow	Ft	210,168.00	\$102,976.82	\$0.49	56
633E1407	Pavement Marking Paint, 6" White	Ft	5,382.00	\$2,834.52	\$0.53	3
633E1420	Pavement Marking Paint, 12" White	Ft	15,520.00	\$108,252.00	\$6.98	4
633E1430	Pavement Marking Paint, 24" White	Ft	3,001.00	\$8,926.52	\$2.97	15
633E1435	Pavement Marking Paint, 24" Yellow	Ft	2,178.00	\$4,588.26	\$2.11	6
633E1445	Pavement Marking Paint, Arrow	Each	332.00	\$11,213.21	\$33.77	28
633E1450	Pavement Marking Paint, Combination	Each	9.00	\$471.00	\$52.33	3
633E1452	Pavement Marking Paint, Lane	Each	18.00	\$2,464.00	\$136.89	9

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
633E1455	Pavement Marking Paint, Message	Word	76.00	\$3,884.93	\$51.12	10
633E3000	Durable Pavement Marking, 4" White	Ft	6,193,521.00	\$2,964,559.59	\$0.48	61
633E3005	Durable Pavement Marking, 4" Yellow	Ft	5,169,523.00	\$2,580,558.38	\$0.50	61
633E3007	Durable Pavement Marking, 6" White	Ft	54,080.00	\$42,452.80	\$0.79	2
633E3010	Durable Pavement Marking, 8" White	Ft	21,219.00	\$37,643.16	\$1.77	16
633E3020	Durable Pavement Marking, 12" White	Ft	43,657.00	\$72,189.58	\$1.65	12
633E3030	Durable Pavement Marking, 24" White	Ft	77,494.00	\$822,432.21	\$10.61	20
633E3035	Durable Pavement Marking, 24" Yellow	Ft	6,207.00	\$55,841.02	\$9.00	29
633E3040	Durable Pavement Marking, Area	SqFt	23,100.00	\$132,600.18	\$5.74	12
633E3045	Durable Pavement Marking, Arrow	Each	141.00	\$6,674.10	\$47.33	5
633E3050	Durable Pavement Marking,	Each	6.00	\$942.00	\$157.00	3
633E3055	Durable Pavement Marking, Lane	Each	6.00	\$2,512.00	\$418.67	3
633E5000	Grooving for Cold Applied Plastic	Ft	750,333.00	\$616,039.50	\$0.82	75
633E5002	Grooving for Cold Applied Plastic	Ft	5,382.00	\$4,233.84	\$0.79	3
633E5005	Grooving for Cold Applied Plastic	Ft	37,139.00	\$74,638.31	\$2.01	37
633E5010	Grooving for Cold Applied Plastic	Ft	67,342.00	\$203,630.00	\$3.02	21
633E5015	Grooving for Cold Applied Plastic	Ft	36,767.00	\$193,601.94	\$5.27	77
633E5020	Grooving for Cold Applied Plastic	SqFt	3,596.00	\$8,499.85	\$2.36	20
633E5025	Grooving for Cold Applied Plastic	Each	3,123.00	\$310,725.00	\$99.50	87
633E5030	Grooving for Cold Applied Plastic	Each	24.00	\$4,911.40	\$204.64	14
633E5031	Grooving for Cold Applied Plastic	Each	24.00	\$24,264.60	\$1,011.03	12
633E5035	Grooving for Cold Applied Plastic	Word	160.00	\$40,472.00	\$252.95	5
633E5040	Grooving for Cold Applied Plastic	Each	40.00	\$18,392.44	\$459.81	16
633E5050	Surface Preparation for Pavement	Ft	4,383,678.00	\$963,079.00	\$0.22	49
633E5051	Surface Preparation for Pavement	SqFt	1,580.00	\$4,101.60	\$2.60	6
633E5052	Surface Preparation for Pavement	Each	274.00	\$24,933.50	\$91.00	22
633E5100	Grooving for Durable Pavement	Ft	13,863,776.00	\$7,699,759.70	\$0.56	77
633E5102	Grooving for Durable Pavement	Ft	52,080.00	\$29,946.00	\$0.58	2
633E5105	Grooving for Durable Pavement	Ft	24,300.00	\$51,532.00	\$2.12	18
633E5110	Grooving for Durable Pavement	Ft	12,285.00	\$35,337.94	\$2.88	11
633E5115	Grooving for Durable Pavement	Ft	50,646.00	\$305,851.66	\$6.04	29
633E5120	Grooving for Durable Pavement	SqFt	23,100.00	\$74,338.38	\$3.22	12
633E5125	Grooving for Durable Pavement	Each	141.00	\$3,282.10	\$23.28	5
633E5130	Grooving for Durable Pavement	Each	6.00	\$439.60	\$73.27	3
633E5131	Grooving for Durable Pavement	Each	6.00	\$942.00	\$157.00	3
633E6005	Pavement Marking Masking, 5"	Ft	402,632.00	\$269,479.80	\$0.67	17
633E6020	Pavement Marking Masking, 25"	Ft	15,025.00	\$59,640.09	\$3.97	43
633E6025	Pavement Marking Masking, Area	SqFt	1,790.00	\$17,533.60	\$9.80	8
633E6030	Pavement Marking Masking, Arrow	Each	648.00	\$45,164.72	\$69.70	35
633E6045	Pavement Marking Masking, Railroad	Each	122.00	\$26,363.46	\$216.09	24
634E0100	Traffic Control	Unit	2,505,040.00	\$5,947,041.18	\$2.37	869
634E0120	Traffic Control, Miscellaneous	LS	909.90	\$25,237,437.34	\$27,736.50	942
634E0130	Traffic Control Supervisor	Day	400.00	\$42,822.00	\$107.06	2
634E0300	Temporary Road Marker	Each	787,915.00	\$920,332.54	\$1.17	61
634E0310	Temporary Road Markers	Ft	347,520.00	\$77,562.39	\$0.22	35
634E0320	Temporary Road Markers	Mile	579.15	\$235,690.35	\$406.96	21
634E0330	Raised Pavement Markers	Ft	1,674,876.00	\$557,720.18	\$0.33	35
634E0340	Raised Pavement Markers	Mile	139.36	\$159,632.30	\$1,145.50	6

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
634E0380	Tubular Marker	Each	61,540.00	\$2,024,514.86	\$32.90	70
634E0390	Replace Tubular Marker	Each	2,710.00	\$146,126.70	\$53.92	39
634E0400	Type A Advance Warning Arrow Panel	Each	15.00	\$27,930.43	\$1,862.03	12
634E0410	Type B Advance Warning Arrow Panel	Each	28.00	\$21,805.04	\$778.75	14
634E0420	Type C Advance Warning Arrow Panel	Each	697.00	\$953,532.94	\$1,368.05	212
634E0500	4"x8" Amber Delineator Back to Back,	Each	1,790.00	\$32,523.47	\$18.17	29
634E0510	4"x8" White Delineator Back to Back,	Each	489.00	\$8,708.70	\$17.81	8
634E0520	4"x8" Delineator, Barrier Mounted	Each	832.00	\$13,277.44	\$15.96	11
634E0525	Linear Delineation System Panel,	Each	3,518.00	\$88,595.73	\$25.18	37
634E0610	4" Temporary Pavement Marking Tape	Ft	810,172.00	\$944,903.64	\$1.17	106
634E0630	Temporary Pavement Marking	Mile	15,124.91	\$6,341,154.35	\$419.25	340
634E0640	Temporary Pavement Marking	Ft	6,527,318.00	\$1,321,774.57	\$0.20	125
634E0700	Traffic Control Movable Concrete	Each	6,419.00	\$1,324,828.65	\$206.39	87
634E0705	Remove and Reset Traffic Control	Each	3,113.00	\$251,980.16	\$80.94	22
634E0750	Temporary Concrete Barrier End	Each	140.00	\$760,235.28	\$5,430.25	45
634E0755	Remove and Reset Temporary	Each	67.00	\$47,779.81	\$713.13	20
634E0760	Temporary Concrete Barrier End	Each	59.00	\$32,451.59	\$550.03	42
634E0810	Groove 6" Wide Rumble Strip	Ft	3,302.00	\$37,323.64	\$11.30	10
634E0896	Portable Temporary Traffic Signal	Each	42.00	\$706,085.67	\$16,811.56	28
634E0915	Short Term Temporary Traffic Signal	Site	22.00	\$332,816.44	\$15,128.02	14
634E0930	Intersection Control Beacon	Each	12.00	\$19,950.00	\$1,662.50	4
634E1002	Detour Signing	SqFt	38,060.80	\$664,349.34	\$17.45	61
634E1210	State Furnished Portable Changeable	Each	38.00	\$29,670.00	\$780.79	19
634E1215	Contractor Furnished Portable	Each	194.00	\$1,221,306.23	\$6,295.39	68
634E1220	Solar Powered Portable Changeable	Each	38.00	\$273,400.00	\$7,194.74	19
634E1255	Contractor Furnished Speed Monitoring	Each	8.00	\$60,788.64	\$7,598.58	2
634E2000	Longitudinal Pedestrian Barricade	Ft	2,400.00	\$175,800.00	\$73.25	5
634E2020	Temporary Curb Ramp	Each	328.00	\$257,051.96	\$783.70	31
634E2025	Longitudinal Pedestrian Channelizer	Ft	2,400.00	\$100,200.00	\$41.75	5
634E2030	Audible Message Device	Each	50.00	\$14,650.00	\$293.00	5
635E0025	Breakaway Base Luminaire Pole with	Each	3.00	\$4,615.80	\$1,538.60	3
635E0030	Breakaway Base Luminaire Pole with	Each	189.00	\$260,368.71	\$1,377.61	9
635E0035	Breakaway Base Luminaire Pole with	Each	20.00	\$35,432.96	\$1,771.65	5
635E0040	Breakaway Base Luminaire Pole with	Each	278.00	\$520,984.26	\$1,874.04	11
635E0050	Breakaway Base Luminaire Pole with	Each	550.00	\$1,251,745.09	\$2,275.90	22
635E0140	Breakaway Base Luminaire Pole with	Each	38.00	\$73,176.03	\$1,925.69	2
635E0150	Breakaway Base Luminaire Pole with	Each	6.00	\$14,008.00	\$2,334.67	3
635E0350	Breakaway Base Luminaire Pole with	Each	6.00	\$13,332.00	\$2,222.00	3
635E0650	Fixed Base Luminaire Pole with Arm,	Each	16.00	\$77,234.72	\$4,827.17	4
635E2000	Pedestal Signal Pole	Each	43.00	\$59,005.43	\$1,372.22	16
635E2020	Signal Pole with 20' Mast Arm	Each	4.00	\$31,299.74	\$7,824.94	4
635E2025	Signal Pole with 25' Mast Arm	Each	5.00	\$34,391.18	\$6,878.24	5
635E2030	Signal Pole with 30' Mast Arm	Each	9.00	\$76,051.50	\$8,450.17	9
635E2035	Signal Pole with 35' Mast Arm	Each	9.00	\$79,185.98	\$8,798.44	9
635E2040	Signal Pole with 40' Mast Arm	Each	11.00	\$159,686.83	\$14,516.98	7
635E2045	Signal Pole with 45' Mast Arm	Each	6.00	\$59,982.00	\$9,997.00	3
635E2055	Signal Pole with 55' Mast Arm	Each	2.00	\$47,297.87	\$23,648.94	2
635E2120	Signal Pole with 20' Mast Arm and	Each	24.00	\$202,084.05	\$8,420.17	8

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Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
635E2125	Signal Pole with 25' Mast Arm and	Each	18.00	\$157,649.65	\$8,758.31	10
635E2130	Signal Pole with 30' Mast Arm and	Each	28.00	\$236,381.21	\$8,442.19	18
635E2135	Signal Pole with 35' Mast Arm and	Each	38.00	\$351,628.29	\$9,253.38	18
635E2140	Signal Pole with 40' Mast Arm and	Each	21.00	\$246,483.61	\$11,737.31	15
635E2145	Signal Pole with 45' Mast Arm and	Each	18.00	\$207,185.53	\$11,510.31	10
635E2150	Signal Pole with 50' Mast Arm and	Each	14.00	\$227,065.46	\$16,218.96	12
635E2155	Signal Pole with 55' Mast Arm and	Each	5.00	\$87,870.46	\$17,574.09	5
635E2160	Signal Pole with 60' Mast Arm and	Each	2.00	\$55,447.03	\$27,723.52	2
635E2165	Signal Pole with 65' Mast Arm and	Each	4.00	\$112,569.26	\$28,142.32	2
635E2245	Signal Pole with 45' Mast Arm and	Each	2.00	\$54,004.26	\$27,002.13	2
635E2250	Signal Pole with 50' Mast Arm and	Each	4.00	\$88,778.85	\$22,194.71	4
635E2400	Span Wire System	Site	12.00	\$103,386.27	\$8,615.52	4
635E3210	Roadway Luminaire, 250 Watt	Each	6.00	\$1,804.00	\$300.67	3
635E3220	Roadway Luminaire, 400 Watt	Each	36.00	\$11,844.00	\$329.00	3
635E3330	Roadway Luminaire, 250 Watt with	Each	613.00	\$183,737.68	\$299.74	31
635E3340	Roadway Luminaire, 400 Watt with	Each	812.00	\$276,030.01	\$339.94	29
635E3384	Post Top Luminaire, 400 Watt with	Each	12.00	\$8,212.00	\$684.33	3
635E3520	Under Bridge Deck Luminaire, 150	Each	4.00	\$4,177.72	\$1,044.43	2
635E3550	Tunnel Luminaire, 70 Watt	Each	54.00	\$20,240.55	\$374.83	2
635E4010	1 Section Vehicle Signal Head	Each	104.00	\$52,891.44	\$508.57	11
635E4030	3 Section Vehicle Signal Head	Each	796.00	\$652,532.86	\$819.76	37
635E4040	4 Section Vehicle Signal Head	Each	524.00	\$510,365.48	\$973.98	33
635E4050	5 Section Vehicle Signal Head	Each	32.00	\$39,168.69	\$1,224.02	8
635E5020	2' Diameter Footing	Ft	9,156.00	\$883,014.27	\$96.44	58
635E5025	2.5' Diameter Footing	Ft	304.00	\$46,394.80	\$152.61	5
635E5030	3' Diameter Footing	Ft	2,863.00	\$578,995.32	\$202.23	34
635E5040	4' Diameter Footing	Ft	396.00	\$208,263.33	\$525.92	4
635E5301	Type 1 Electrical Junction Box	Each	81.00	\$63,292.18	\$781.38	27
635E5302	Type 2 Electrical Junction Box	Each	896.00	\$466,958.10	\$521.16	67
635E5303	Type 3 Electrical Junction Box	Each	209.00	\$137,758.27	\$659.13	32
635E5304	Type 4 Electrical Junction Box	Each	290.00	\$362,573.33	\$1,250.25	17
635E5310	Special Electrical Junction Box	Each	19.00	\$16,271.13	\$856.38	7
635E5360	Surface Mounted Junction Box	Each	6.00	\$3,043.37	\$507.23	4
635E5400	Electrical Service Cabinet	Each	117.00	\$155,610.25	\$1,330.00	43
635E5420	Circuit Control Center	Each	3.00	\$28,184.00	\$9,394.67	3
635E5430	Traffic Signal Controller	Each	201.00	\$2,950,481.55	\$14,679.01	44
635E5440	Master Controller	Each	11.00	\$157,367.23	\$14,306.11	11
635E5500	Meter Socket	Each	21.00	\$1,582.56	\$75.36	3
635E5510	Signal Flasher Unit	Each	16.00	\$21,380.69	\$1,336.29	6
635E5515	Signal Head Battery Backup and Flash	Each	28.00	\$172,416.42	\$6,157.73	20
635E5530	Preformed Detector Loop	Each	789.00	\$257,717.86	\$326.64	25
635E5540	Sawed-In Detector Loop	Each	532.00	\$388,289.42	\$729.87	19
635E5545	Wireless In Pavement Traffic Sensor	Each	344.00	\$261,719.48	\$760.81	8
635E5550	Detector Unit	Each	487.00	\$43,194.29	\$88.69	30
635E5555	Wireless Access Point	Each	11.00	\$107,909.81	\$9,809.98	8
635E5558	Wireless Repeater	Each	35.00	\$68,793.92	\$1,965.54	8
635E5560	Emergency Vehicle Preemption Unit	Each	35.00	\$102,131.66	\$2,918.05	22
635E5562	Siren Emergency Vehicle Preemption	Each	4.00	\$42,866.64	\$10,716.66	2

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
635E5570	Optical Detector	Each	90.00	\$69,552.82	\$772.81	19
635E5600	Surveillance Camera	Each	2.00	\$10,281.54	\$5,140.77	2
635E5800	Miscellaneous Signal Parts	LS	10.00	\$159,054.98	\$15,905.50	10
635E5900	Pedestrian Push Button	Each	490.00	\$81,267.42	\$165.85	31
635E5910	Pedestrian Push Button Pole	Each	510.00	\$182,232.36	\$357.32	33
635E5922	Pedestrian Signal Head with	Each	360.00	\$245,390.48	\$681.64	32
635E5930	Pedestrian Crossing Sign	Each	768.00	\$42,257.52	\$55.02	37
635E5960	Solar Powered Flashing Beacon	Each	8.00	\$29,876.12	\$3,734.52	2
635E6200	Miscellaneous, Electrical	LS	21.00	\$172,577.50	\$8,217.98	21
635E6949	Furnish Roadway Luminaire, 400 Watt	Each	10.00	\$2,912.15	\$291.22	2
635E6962	Install Traffic Signal Controller	Each	13.00	\$20,892.90	\$1,607.15	5
635E6999	Furnish Breakaway Base Luminaire	Each	10.00	\$21,426.90	\$2,142.69	2
635E7000	Install Luminaire Pole	Each	61.00	\$12,544.63	\$205.65	11
635E7018	Install Signal Pole with Mast Arm and	Each	18.00	\$17,898.00	\$994.33	3
635E7020	Install Signal Pole with Mast Arm	Each	9.00	\$9,043.20	\$1,004.80	3
635E7030	Install Signal Head	Each	148.00	\$38,872.80	\$262.65	5
635E7500	Remove and Reset Luminaire Pole	Each	10.00	\$7,740.18	\$774.02	5
635E7510	Remove and Reset Signal Pole	Each	3.00	\$4,849.22	\$1,616.41	3
635E7530	Relocate Signal Equipment	LS	17.00	\$51,471.49	\$3,027.73	17
635E7600	Maintenance of Traffic Signal(s)	Hour	160.00	\$7,574.40	\$47.34	5
635E8010	1" Rigid Galvanized Steel Conduit	Ft	1,540.00	\$11,197.20	\$7.27	11
635E8015	1.5" Rigid Galvanized Steel Conduit	Ft	1,634.00	\$24,879.66	\$15.23	5
635E8020	2" Rigid Galvanized Steel Conduit	Ft	8,307.00	\$102,573.09	\$12.35	16
635E8025	2.5" Rigid Galvanized Steel Conduit	Ft	2,215.00	\$30,912.54	\$13.96	5
635E8030	3" Rigid Galvanized Steel Conduit	Ft	9,707.00	\$205,842.04	\$21.21	9
635E8040	4" Rigid Galvanized Steel Conduit	Ft	940.00	\$25,896.60	\$27.55	5
635E8050	5" Rigid Galvanized Steel Conduit	Ft	770.00	\$26,603.50	\$34.55	2
635E8110	1" Rigid Conduit, Schedule 40	Ft	1,268.00	\$5,101.75	\$4.02	4
635E8115	1.5" Rigid Conduit, Schedule 40	Ft	15,680.00	\$40,834.40	\$2.60	11
635E8120	2" Rigid Conduit, Schedule 40	Ft	389,861.00	\$2,458,566.54	\$6.31	75
635E8130	3" Rigid Conduit, Schedule 40	Ft	5,340.00	\$27,765.67	\$5.20	28
635E8140	4" Rigid Conduit, Schedule 40	Ft	1,294.00	\$8,733.56	\$6.75	26
635E8150	5" Rigid Conduit, Schedule 40	Ft	561.00	\$5,014.34	\$8.94	14
635E8215	1.5" Rigid Conduit, Schedule 80	Ft	1,860.00	\$26,259.35	\$14.12	11
635E8220	2" Rigid Conduit, Schedule 80	Ft	57,756.00	\$706,080.98	\$12.23	59
635E8230	3" Rigid Conduit, Schedule 80	Ft	16,998.00	\$259,320.16	\$15.26	29
635E8240	4" Rigid Conduit, Schedule 80	Ft	2,022.00	\$29,215.12	\$14.45	10
635E8315	1.5" Innerduct, Schedule 40	Ft	45,884.00	\$138,864.42	\$3.03	6
635E8320	2" Innerduct, Schedule 40	Ft	25,570.00	\$79,365.40	\$3.10	8
635E8830	2/2/2/4 Aluminum Wire	Ft	80,029.00	\$153,199.41	\$1.91	12
635E9012	1/C #2 AWG Copper Wire	Ft	75,510.00	\$129,870.40	\$1.72	6
635E9013	1/C #3 AWG Copper Wire	Ft	390.00	\$516.10	\$1.32	3
635E9014	1/C #4 AWG Copper Wire	Ft	442,437.00	\$499,835.59	\$1.13	42
635E9016	1/C #6 AWG Copper Wire	Ft	512,267.00	\$465,861.30	\$0.91	57
635E9020	1/C #10 AWG Copper Wire	Ft	310,700.00	\$157,652.95	\$0.51	42
635E9021	2/C #12 AWG Copper Wire	Ft	80.00	\$780.00	\$9.75	2
635E9022	1/C #12 AWG Copper Wire	Ft	2,400.00	\$792.00	\$0.33	5
635E9024	1/C #14 AWG Copper Wire	Ft	21,540.00	\$5,370.30	\$0.25	9

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
635E9026	3/C #14 AWG Copper Wire	Ft	7,599.00	\$8,840.17	\$1.16	3
635E9301	1/C #14 AWG IMSA Copper Cable, K1	Ft	7,464.00	\$2,512.88	\$0.34	3
635E9302	2/C #14 AWG IMSA Copper Cable, K1	Ft	640.00	\$571.60	\$0.89	7
635E9304	4/C #14 AWG IMSA Copper Cable, K1	Ft	14,610.00	\$17,532.60	\$1.20	7
635E9305	5/C #14 AWG IMSA Copper Cable, K1	Ft	5,905.00	\$8,026.00	\$1.36	5
635E9307	7/C #14 AWG IMSA Copper Cable, K1	Ft	5,722.00	\$10,565.20	\$1.85	10
635E9312	12/C #14 AWG IMSA Copper Cable,	Ft	5,453.00	\$15,416.68	\$2.83	5
635E9320	20/C #14 AWG IMSA Copper Cable,	Ft	9,002.00	\$37,082.64	\$4.12	8
635E9324	24/C #14 AWG IMSA Copper Cable,	Ft	3,370.00	\$21,450.05	\$6.37	2
635E9502	2/C #14 AWG Copper Tray Cable, K2	Ft	3,648.00	\$2,969.40	\$0.81	21
635E9504	4/C #14 AWG Copper Tray Cable, K2	Ft	98,955.00	\$108,432.95	\$1.10	24
635E9505	5/C #14 AWG Copper Tray Cable, K2	Ft	4,812.00	\$5,750.02	\$1.19	13
635E9507	7/C #14 AWG Copper Tray Cable, K2	Ft	6,870.00	\$12,211.80	\$1.78	6
635E9512	12/C #14 AWG Copper Tray Cable, K2	Ft	7,535.00	\$19,102.00	\$2.54	14
635E9519	19/C #14 AWG Copper Tray Cable, K2	Ft	3,600.00	\$12,732.00	\$3.54	3
635E9524	24/C #14 AWG Copper Tray Cable, K2	Ft	32,652.00	\$154,425.98	\$4.73	20
635E9526	26/C #14 AWG Copper Tray Cable, K2	Ft	2,060.00	\$11,793.50	\$5.73	4
635E9600	#16 AWG Copper Twisted Shielded	Ft	156,498.00	\$99,374.79	\$0.63	38
635E9710	2/C #10 AWG Copper Pole and	Ft	67,830.00	\$113,660.50	\$1.68	47
635E9800	Preemption Cable	Ft	46,049.00	\$67,498.66	\$1.47	13
635E9924	24 Strand Fiber Optic Cable	Ft	11,060.00	\$16,866.50	\$1.53	2
635E9948	48 Strand Fiber Optic Cable	Ft	115,040.00	\$417,036.75	\$3.63	17
635E9950	Install Fiber Optic Cable	Ft	16,965.00	\$14,533.35	\$0.86	3
650E0059	Modified Type B66 Concrete Curb and	Ft	128,225.00	\$1,856,587.41	\$14.48	31
650E0060	Type B66 Concrete Curb and Gutter	Ft	48,136.00	\$1,069,567.84	\$22.22	49
650E0070	Type B67 Concrete Curb and Gutter	Ft	102.00	\$3,047.25	\$29.88	2
650E0080	Type B68 Concrete Curb and Gutter	Ft	41,985.00	\$577,792.61	\$13.76	26
650E0085	Type B68.5 Concrete Curb and Gutter	Ft	312.00	\$17,154.80	\$54.98	3
650E0090	Type B69 Concrete Curb and Gutter	Ft	116,726.00	\$2,715,512.60	\$23.26	41
650E0095	Type B69.5 Concrete Curb and Gutter	Ft	28,973.00	\$494,266.54	\$17.06	12
650E0100	Type B610 Concrete Curb and Gutter	Ft	6,361.00	\$141,251.40	\$22.21	13
650E0360	Type BL66 Concrete Curb and Gutter	Ft	1,972.00	\$32,719.79	\$16.59	7
650E0390	Type BL69 Concrete Curb and Gutter	Ft	39,356.00	\$436,851.60	\$11.10	4
650E0395	Type BL69.5 Concrete Curb and Gutter	Ft	744.00	\$14,574.96	\$19.59	2
650E0400	Type BL610 Concrete Curb and Gutter	Ft	1,800.00	\$29,610.00	\$16.45	3
650E1060	Type F66 Concrete Curb and Gutter	Ft	3,096.00	\$107,809.85	\$34.82	6
650E1080	Type F68 Concrete Curb and Gutter	Ft	1,840.00	\$47,840.00	\$26.00	2
650E1085	Type F68.5 Concrete Curb and Gutter	Ft	28,590.00	\$428,659.40	\$14.99	3
650E1090	Type F69 Concrete Curb and Gutter	Ft	42,240.00	\$505,376.19	\$11.96	10
650E1095	Type F69.5 Concrete Curb and Gutter	Ft	132.00	\$3,531.66	\$26.76	2
650E1390	Type FL69 Concrete Curb and Gutter	Ft	25,374.00	\$277,210.95	\$10.93	2
650E2000	Concrete Barrier Curb and Gutter	Ft	1,265.00	\$216,856.42	\$171.43	5
650E2001	Concrete Barrier Curb and Gutter End	Ft	100.00	\$22,649.80	\$226.50	5
650E2100	Special Concrete Curb and Gutter	Ft	28,277.00	\$698,517.16	\$24.70	5
650E3060	Type B6 Concrete Curb	Ft	1,796.00	\$44,965.38	\$25.04	11
650E3080	Type B8 Concrete Curb	Ft	32.00	\$1,669.76	\$52.18	1
650E4060	Type C6 Concrete Gutter	Ft	3,624.00	\$118,408.16	\$32.67	6
650E4360	Type D46 Concrete Curb and Gutter	Ft	352.00	\$11,756.80	\$33.40	4

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
650E4380	Type D48 Concrete Curb and Gutter	Ft	300.00	\$10,265.80	\$34.22	9
650E4390	Type D49 Concrete Curb and Gutter	Ft	116.00	\$4,183.54	\$36.07	4
650E4405	Type D410.5 Concrete Curb and Gutter	Ft	341.00	\$11,962.59	\$35.08	11
650E4420	Type D412 Concrete Curb and Gutter	Ft	336.00	\$16,703.68	\$49.71	6
650E4659	Modified Type P6 Concrete Gutter	Ft	3,591.00	\$48,350.82	\$13.46	9
650E4660	Type P6 Concrete Gutter	Ft	7,257.00	\$177,819.73	\$24.50	21
650E4680	Type P8 Concrete Gutter	Ft	3,308.00	\$66,356.88	\$20.06	22
650E4685	Type P8.5 Concrete Gutter	Ft	990.00	\$20,050.80	\$20.25	3
650E4690	Type P9 Concrete Gutter	Ft	6,951.00	\$182,557.35	\$26.26	21
650E4695	Type P9.5 Concrete Gutter	Ft	2,490.00	\$42,616.35	\$17.12	4
650E4700	Type P10 Concrete Gutter	Ft	543.00	\$10,182.75	\$18.75	6
650E6060	6" Concrete Valley Gutter	Ft	1,758.00	\$95,441.31	\$54.29	17
650E6080	8" Concrete Valley Gutter	Ft	720.00	\$45,049.20	\$62.57	6
651E0040	4" Concrete Sidewalk	SqFt	1,088,793.00	\$5,413,462.68	\$4.97	107
651E0050	5" Concrete Sidewalk	SqFt	91,056.00	\$423,410.40	\$4.65	2
651E0060	6" Concrete Sidewalk	SqFt	392,457.00	\$1,882,648.26	\$4.80	46
651E0080	8" Concrete Sidewalk	SqFt	4,632.00	\$25,531.50	\$5.51	6
651E0140	4" Reinforced Concrete Sidewalk	SqFt	5,326.00	\$36,696.14	\$6.89	2
651E0150	5" Reinforced Concrete Sidewalk	SqFt	164.00	\$1,004.50	\$6.13	2
651E0160	6" Reinforced Concrete Sidewalk	SqFt	3,434.00	\$41,126.99	\$11.98	10
651E0340	4" Exposed Aggregate Concrete Sidewalk	SqFt	576.00	\$5,037.12	\$8.75	4
651E0540	4" Colored Concrete Sidewalk	SqFt	23,116.00	\$125,866.62	\$5.45	4
651E2020	Permeable Pavers	SqFt	2,192.00	\$40,453.36	\$18.46	2
651E5000	Sidewalk Drain	Ft	27.60	\$6,475.65	\$234.63	4
651E7000	Type 1 Detectable Warnings	SqFt	47,176.00	\$1,794,063.20	\$38.03	94
651E7010	Type 2 Detectable Warnings	SqFt	530.00	\$19,798.30	\$37.36	8
670E1010	2' x 3' Type B Drop Inlet	Each	2.00	\$3,050.00	\$1,525.00	2
670E1015	3' x 4' Type B Drop Inlet	Each	2.00	\$1,395.52	\$697.76	1
670E1200	Type B Frame and Grate Assembly	Each	543.00	\$323,201.86	\$595.22	47
670E2015	3' x 4' Type C Drop Inlet	Each	26.00	\$50,210.06	\$1,931.16	8
670E2200	Type C Frame and Grate	Each	44.00	\$76,798.67	\$1,745.42	22
670E3000	1.5' x 3' Type D Drop Inlet	Each	39.00	\$54,738.53	\$1,403.55	9
670E3200	Type D Frame and Grate	Each	36.00	\$36,201.90	\$1,005.61	21
670E3300	Type E Frame and Grate	Each	29.00	\$29,269.00	\$1,009.28	10
670E4122	Type L Frame and Grate Assembly	Each	416.00	\$516,041.35	\$1,240.48	20
670E4205	Type M Frame and Grate Assembly	Each	362.00	\$554,493.28	\$1,531.75	15
670E4210	Type N Grate	Each	31.00	\$24,875.83	\$802.45	7
670E5200	Special Frame and Grate Assembly	Each	27.00	\$24,279.25	\$899.23	7
670E5202	Special Frame and Grate	Each	4.00	\$3,025.00	\$756.25	4
670E5205	Special Grate	Each	9.00	\$11,812.43	\$1,312.49	9
670E5300	3' x 4' Drop Inlet Cover	Each	5.00	\$2,684.04	\$536.81	5
670E5304	4' x 5' Drop Inlet Cover	Each	2.00	\$1,200.00	\$600.00	2
670E5340	4' x 11' Precast Concrete Type S Drop Inlet	Each	116.00	\$339,689.15	\$2,928.35	6
670E5342	4' x 6' Precast Concrete Type S Drop Inlet	Each	2.00	\$4,928.78	\$2,464.39	2
670E5400	Precast Drop Inlet Collar	Each	513.00	\$137,633.22	\$268.29	50
670E6000	Adjust Drop Inlet	Each	56.00	\$19,403.37	\$346.49	22
670E6900	Reset Drop Inlet	Each	192.00	\$249,600.00	\$1,300.00	4
670E7000	Reset Drop Inlet Frame and Grate	Each	798.00	\$147,374.61	\$184.68	78

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
670E8002	Trench Drain Frame and Grate	Ft	48.00	\$20,400.00	\$425.00	3
671E0050	5' x 5' Junction Box	Each	1.00	\$3,788.40	\$3,788.40	1
671E0100	Adjust Junction Box	Each	85.00	\$25,950.00	\$305.29	10
671E0500	Air Release Manhole	Each	13.00	\$171,840.00	\$13,218.46	5
671E0550	Special Manhole	Each	6.00	\$69,200.00	\$11,533.33	3
671E1048	48" Manhole	Each	77.00	\$302,294.29	\$3,925.90	5
671E1060	60" Manhole	Each	18.00	\$163,159.38	\$9,064.41	2
671E1084	84" Manhole	Each	2.00	\$24,295.05	\$12,147.53	2
671E1096	96" Manhole	Each	2.00	\$30,920.55	\$15,460.28	2
671E1130	48" Manhole 0' to 6' Deep	Each	8.00	\$19,035.00	\$2,379.38	4
671E1131	48" Manhole 6' to 8' Deep	Each	63.00	\$145,003.25	\$2,301.64	9
671E1132	48" Manhole 8' to 10' Deep	Each	20.00	\$51,184.22	\$2,559.21	11
671E1133	48" Manhole 10' to 12' Deep	Each	5.00	\$19,794.00	\$3,958.80	5
671E1134	48" Manhole 12' to 14' Deep	Each	2.00	\$5,742.00	\$2,871.00	2
671E1135	48" Manhole 14' to 16' Deep	Each	2.00	\$6,472.50	\$3,236.25	2
671E1348	48" Drop Manhole	Each	4.00	\$26,610.92	\$6,652.73	2
671E2000	External Manhole Seal	Each	143.00	\$42,664.48	\$298.35	10
671E2006	6" Manhole Boot	Each	4.00	\$437.71	\$109.43	4
671E2008	8" Manhole Boot	Each	33.00	\$4,544.00	\$137.70	9
671E2010	10" Manhole Boot	Each	12.00	\$2,070.39	\$172.53	4
671E3084	84" Manhole Base and Barrel Section	Each	5.00	\$39,577.00	\$7,915.40	5
671E5084	84" Manhole Cover Slab	Each	5.00	\$12,085.00	\$2,417.00	5
671E5510	Extra Depth for 48" Manhole	Ft	309.40	\$91,354.99	\$295.26	2
671E5512	Extra Depth for 60" Manhole	Ft	103.00	\$38,969.02	\$378.34	2
671E5516	Extra Depth for 84" Manhole	Ft	9.00	\$7,157.03	\$795.23	2
671E6000	Temporary Manhole Cover	Each	318.00	\$53,538.03	\$168.36	17
671E6007	Type A7 Manhole Frame and Lid	Each	85.00	\$31,246.74	\$367.61	26
671E6009	Type A9 Manhole Frame and Lid	Each	99.00	\$54,672.47	\$552.25	15
671E6010	Type A10 Manhole Frame and Lid	Each	122.00	\$62,245.88	\$510.21	8
671E6020	Type C Manhole Frame and Lid	Each	3.00	\$9,335.00	\$3,111.67	3
671E6030	Type S Manhole Frame and Lid	Each	272.00	\$81,678.12	\$300.29	38
671E6035	Special Manhole Frame and Lid	Each	264.00	\$113,325.04	\$429.26	16
671E6100	Manhole Frame & Lid, Install	Each	28.00	\$6,075.84	\$216.99	8
671E7000	Reset Manhole Frame and Lid	Each	40.00	\$8,440.00	\$211.00	5
671E7010	Adjust Manhole	Each	753.00	\$226,096.28	\$300.26	55
671E7020	Connect Into Existing Manhole	Each	26.00	\$30,698.16	\$1,180.70	11
671E7022	Reshape Manhole Invert	Each	18.00	\$14,884.50	\$826.92	5
671E8000	Reconstruct Manhole	Each	90.00	\$220,486.67	\$2,449.85	12
671E8002	Repair Manhole	Each	2.00	\$1,165.00	\$582.50	2
671E9000	Manhole Exfiltration/Vacuum Test	Each	110.00	\$24,521.87	\$222.93	22
671E9005	Abandon Manhole	Each	36.00	\$30,272.04	\$840.89	2
680E0010	2' Deep Edge Drain	Ft	906,912.00	\$9,533,789.21	\$10.51	12
680E0012	4' to 6' Deep Edge Drain	Ft	23,600.00	\$579,793.00	\$24.57	4
680E0015	Edge Drain Outlet	Each	1,952.00	\$699,691.86	\$358.45	12
680E0030	2' Deep Transverse Drain	Ft	8,448.00	\$763,656.96	\$90.40	4
680E0040	4" Underdrain Pipe	Ft	15,776.00	\$249,231.43	\$15.80	47
680E0100	Cutoff Drain	Each	22.00	\$107,491.16	\$4,885.96	13
680E0240	4" Corrugated Polyethylene Drainage	Ft	2,842.00	\$33,170.00	\$11.67	15

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
680E0260	6" Corrugated Polyethylene Drainage	Ft	200.00	\$2,806.00	\$14.03	2
680E0440	4" Slotted Corrugated Polyethylene	Ft	20,516.00	\$220,310.73	\$10.74	19
680E1040	4" Pipe Sock	Ft	6,874.00	\$8,931.89	\$1.30	6
680E2000	Concrete Headwall for Underdrain	Each	56.00	\$42,245.66	\$754.39	17
680E2010	Precast Concrete Headwall for Drain	Each	2,156.00	\$796,210.12	\$369.30	48
680E2500	Porous Backfill	Ton	10,149.60	\$320,411.67	\$31.57	70
700E0110	Class A Riprap	Ton	5,966.30	\$216,170.10	\$36.23	23
700E0210	Class B Riprap	Ton	420,387.20	\$16,254,165.51	\$38.66	192
700E0300	Class C Riprap	CuYd	330.00	\$16,582.50	\$50.25	3
700E0310	Class C Riprap	Ton	111,107.80	\$4,591,635.92	\$41.33	94
700E0410	Class D Riprap	Ton	5,235.00	\$357,466.74	\$68.28	5
700E2000	Place Riprap	CuYd	32.00	\$750.08	\$23.44	2
700E2010	Place Riprap	Ton	225.00	\$2,752.50	\$12.23	3
720E1010	PVC Coated Bank and Channel	CuYd	18.00	\$4,072.50	\$226.25	4
720E1015	Bank and Channel Protection Gabion	CuYd	6,370.50	\$1,862,232.08	\$292.32	81
730E0100	Cover Crop Seeding	Bu	2,889.00	\$148,452.41	\$51.39	52
730E0200	Type A Permanent Seed Mixture	Lb	6,103.00	\$197,419.48	\$32.35	27
730E0202	Type B Permanent Seed Mixture	Lb	4,910.00	\$109,073.20	\$22.21	25
730E0204	Type C Permanent Seed Mixture	Lb	3,213.00	\$118,725.60	\$36.95	26
730E0206	Type D Permanent Seed Mixture	Lb	15,116.00	\$99,821.02	\$6.60	33
730E0208	Type E Permanent Seed Mixture	Lb	64.00	\$3,634.10	\$56.78	5
730E0210	Type F Permanent Seed Mixture	Lb	28,936.00	\$512,496.26	\$17.71	69
730E0212	Type G Permanent Seed Mixture	Lb	76,500.00	\$882,511.76	\$11.54	87
730E0251	Special Permanent Seed Mixture 1	Lb	112,803.00	\$1,232,014.32	\$10.92	54
730E0252	Special Permanent Seed Mixture 2	Lb	1,268.00	\$38,185.48	\$30.11	13
730E0253	Special Permanent Seed Mixture 3	Lb	842.00	\$22,703.77	\$26.96	7
730E1200	Hydroseeding	SqYd	442,718.00	\$149,448.30	\$0.34	25
731E0100	Fertilizing	Lb	112,782.00	\$139,388.15	\$1.24	94
731E0200	Fertilizing	Ton	44.00	\$73,465.94	\$1,669.68	15
732E0100	Mulching	Ton	15,031.60	\$2,633,169.71	\$175.18	236
732E0200	Fiber Mulching	Ton	137.50	\$209,311.83	\$1,522.27	38
732E0250	Fiber Mulching	Lb	64,474.00	\$108,744.00	\$1.69	32
732E0300	Bonded Fiber Matrix	Ton	29.40	\$85,059.69	\$2,893.19	3
732E0550	Fiber Reinforced Matrix	Lb	766,739.00	\$1,186,541.35	\$1.55	24
733E0100	Sodding	SqYd	121,772.00	\$820,082.44	\$6.73	10
734E0010	Erosion Control	LS	200.00	\$682,252.03	\$3,411.26	200
734E0040	Soil Stabilizer	Lb	198,300.00	\$219,784.50	\$1.11	36
734E0101	Type 1 Erosion Control Blanket	SqYd	29,592.00	\$57,297.14	\$1.94	22
734E0102	Type 2 Erosion Control Blanket	SqYd	281,222.00	\$497,972.36	\$1.77	62
734E0103	Type 3 Erosion Control Blanket	SqYd	197,999.00	\$377,909.52	\$1.91	34
734E0104	Type 4 Erosion Control Blanket	SqYd	78,576.00	\$261,898.46	\$3.33	8
734E0131	Type 1 Turf Reinforcement Mat	SqYd	16,060.40	\$62,484.79	\$3.89	12
734E0132	Type 2 Turf Reinforcement Mat	SqYd	10,531.00	\$50,424.18	\$4.79	14
734E0133	Type 3 Turf Reinforcement Mat	SqYd	28,363.20	\$170,854.25	\$6.02	19
734E0140	Erosion Bale	Each	435.00	\$6,240.00	\$14.34	9
734E0150	6" Diameter Erosion Control Wattle	Ft	2,345.00	\$11,968.60	\$5.10	14
734E0151	9" Diameter Erosion Control Wattle	Ft	69.00	\$309.12	\$4.48	1
734E0154	12" Diameter Erosion Control Wattle	Ft	385,147.00	\$2,190,950.90	\$5.69	201

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Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
734E0160	20" Diameter Erosion Control Wattle	Ft	103,000.00	\$525,910.00	\$5.11	17
734E0165	Remove and Reset Erosion Control	Ft	48,772.00	\$115,824.74	\$2.37	76
734E0170	Temporary Sediment Barrier	Ft	13,240.00	\$57,329.20	\$4.33	2
734E0180	Sediment Filter Bag	Ft	42,165.00	\$169,155.58	\$4.01	28
734E0325	Surface Roughening	Acre	329.40	\$122,067.44	\$370.58	33
734E0400	Rock Check Dam	CuYd	458.00	\$42,802.86	\$93.46	6
734E0425	Triangular Silt Barrier	Ft	1,260.00	\$17,148.60	\$13.61	2
734E0430	Remove and Reset Triangular Silt	Ft	308.00	\$1,934.24	\$6.28	2
734E0450	Temporary Water Barrier	Ft	1,200.00	\$166,887.00	\$139.07	5
734E0510	Shaping for Erosion Control Blanket	Ft	219,649.00	\$87,988.30	\$0.40	64
734E0602	Low Flow Silt Fence	Ft	153,501.00	\$545,604.38	\$3.55	104
734E0604	High Flow Silt Fence	Ft	284,403.00	\$1,098,522.54	\$3.86	243
734E0610	Mucking Silt Fence	CuYd	31,373.00	\$202,294.40	\$6.45	282
734E0620	Repair Silt Fence	Ft	98,146.00	\$72,105.34	\$0.73	271
734E0630	Floating Silt Curtain	Ft	200,997.00	\$2,147,832.89	\$10.69	103
734E0640	Silt Trap	CuYd	80.00	\$2,291.20	\$28.64	2
734E0680	Flocculent Housing Unit	Each	31.00	\$154,377.34	\$4,979.91	26
734E0682	250K Gallon Treatment Flocculent Bag	Each	5.00	\$1,796.00	\$359.20	5
734E0683	500K Gallon Treatment Flocculent Bag	Each	23.00	\$28,816.32	\$1,252.88	21
734E0840	Sediment Control at Type B Reinforced	Each	40.00	\$6,834.60	\$170.87	4
734E0845	Sediment Control at Inlet with Frame	Each	3,653.00	\$427,268.96	\$116.96	90
734E0847	Sediment Control at Type S Reinforced	Ft	8,389.00	\$118,021.61	\$14.07	56
734E0855	Interim Sediment Control at Inlet	Each	466.00	\$50,373.18	\$108.10	28
734E0900	Temporary Diversion Channel and/or	Each	72.00	\$389,259.16	\$5,406.38	57
734E0970	Synthetic Channel Protection	SqYd	120.00	\$13,147.20	\$109.56	2
734E0980	Channel Liner	Ft	1,428.00	\$109,956.00	\$77.00	2
734E1200	Natural Streambed Material	Ton	5,194.30	\$265,647.06	\$51.14	16
734E2020	Bridge Berm Slope Protection, Crushed	SqYd	11,127.20	\$426,062.63	\$38.29	11
734E5000	Dewatering	Hour	200.00	\$42,608.28	\$213.04	17
734E5005	Dewatering	LS	39.00	\$1,727,076.71	\$44,284.02	39
734E5010	Sweeping	Hour	3,353.00	\$354,795.04	\$105.81	96
735E0100	Perennial Plant, Furnish and Plant	Each	696.00	\$9,789.24	\$14.07	2
735E0110	1 Gallon Perennial Plant, Furnish and	Each	2,364.00	\$33,929.80	\$14.35	4
735E1000	Shrub, Furnish and Plant	Each	132.00	\$3,762.00	\$28.50	2
735E1210	2 Gallon Deciduous Shrub, Furnish and	Each	728.00	\$15,244.32	\$20.94	2
735E1306	6" Coniferous Evergreen, Furnish and	Each	4.00	\$2,010.00	\$502.50	2
735E1360	6' Coniferous Evergreen, Furnish and	Each	21.00	\$6,437.90	\$306.57	3
735E2215	1.5" Caliper Deciduous Tree, Furnish	Each	10.00	\$5,354.35	\$535.44	2
735E2220	2" Caliper Deciduous Tree, Furnish and	Each	267.00	\$107,820.24	\$403.82	9
735E3000	Salvage, Store, and Replant Shrub	Each	12.00	\$4,118.34	\$343.20	2
735E3010	Salvage, Store, and Replant Tree	Each	2.00	\$938.25	\$469.13	2
735E4000	Tree Trimming	Each	15.00	\$3,022.50	\$201.50	3
735E5010	1 Gallon Ornamental Grass, Furnish	Each	2,304.00	\$32,256.72	\$14.00	4
740E0500	Crushed Aggregate Modified	Ton	16,139.00	\$498,501.43	\$30.89	10
831E0110	Type B Drainage Fabric	SqYd	830,813.00	\$2,326,420.21	\$2.80	271
831E0200	Woven Geotextile Separator	SqYd	32,060.00	\$74,376.15	\$2.32	13
831E0210	Non-woven Geotextile Separator	SqYd	434,546.00	\$884,140.89	\$2.03	39
831E0300	MSE Geotextile Fabric	SqYd	257,388.00	\$763,290.15	\$2.97	137

South Dakota Department of Transportation

Average Unit Price Report

Combined Highways

Item Number	Description	Unit of Measure	Quantity	Total Cost	Average Bid Price	Bid Cnt
831E0400	Impermeable Plastic Membrane	SqYd	4,597.00	\$33,593.85	\$7.31	5
831E1010	Geogrid Reinforcement	SqYd	56,279.00	\$252,106.65	\$4.48	22
831E1020	Asphalt Reinforcement Geogrid	SqYd	12,908.00	\$96,777.73	\$7.50	4
831E1500	Geotextile Bond Breaker Fabric	SqYd	2,534,349.00	\$6,028,740.05	\$2.38	12
900E0010	Refurbish Single Mailbox	Each	1,854.00	\$369,253.47	\$199.17	178
900E0012	Refurbish Double Mailbox	Each	564.00	\$156,583.17	\$277.63	136
900E0020	Remove and Reset Neighborhood	Each	57.00	\$14,973.30	\$262.69	16
900E0030	Remove and Reset Historical Marker	Each	6.00	\$2,260.00	\$376.67	6
900E0040	Road Closure Gate	Each	2.00	\$13,700.00	\$6,850.00	2
900E0045	Drop Arm Road Closure Gate	Each	38.00	\$413,906.75	\$10,892.28	5
900E0895	Temporary Rumble Strip	Ft	6,560.00	\$14,136.80	\$2.16	2
900E0900	Curb Stop	Each	63.00	\$11,970.00	\$190.00	3
900E1052	2" Extruded Polystyrene Insulation	SqYd	194.60	\$8,117.74	\$41.72	2
900E1080	Orange Plastic Safety Fence	Ft	48,150.00	\$193,515.75	\$4.02	8
900E1300	Granular Material for Construction	Ton	11,086.00	\$266,736.54	\$24.06	105
900E1310	Concrete Washout Facility	Each	32.00	\$21,424.67	\$669.52	23
900E1350	Temporary Surfacing	SqFt	17,640.00	\$77,968.80	\$4.42	2
900E1980	Storage Unit	Each	80.00	\$218,710.24	\$2,733.88	80
900E2030	Miscellaneous Work	Site	67.00	\$331,238.19	\$4,943.85	26
900E2508	Track Dozer	Hour	120.00	\$19,264.40	\$160.54	3
900E3100	Subsurface Void Filler	CuYd	60.00	\$186,124.35	\$3,102.07	4
900E5135	Traffic Counter Surface Utility Box	Each	24.00	\$13,587.72	\$566.16	4
900E5145	Bollard	Each	6.00	\$3,200.00	\$533.33	3
900E5147	Articulated Concrete Mattress	SqYd	3,329.00	\$400,946.23	\$120.44	8
900E5149	Landscaping Rock	CuYd	214.00	\$64,941.06	\$303.46	4
900E5151	Ornamental Landscaping Boulders	Each	48.00	\$4,769.76	\$99.37	2
900E5152	Weed Barrier Fabric	SqYd	5,926.00	\$14,763.54	\$2.49	6
900E5153	Mulch Ring	Each	74.00	\$2,554.48	\$34.52	2
900E5156	3" Depth Shredded Bark Mulch	SqYd	5,108.00	\$25,454.86	\$4.98	4
900E5157	4" Depth Shredded Bark Mulch	SqYd	780.00	\$4,282.20	\$5.49	2
900E5165	Wire Mesh	SqYd	20,304.00	\$296,912.16	\$14.62	3
900E5400	Sprinkler System	LS	1.00	\$1,150.00	\$1,150.00	1
900E5430	Irrigation System	LS	4.00	\$97,616.60	\$24,404.15	4
900E5840	Permanent Vehicle Classification	Each	28.00	\$3,132,686.62	\$111,881.67	28
900E7090	Waterproofing Membrane for Structure	SqFt	1,587.00	\$31,078.75	\$19.58	3
910E1210	Truck with Operator, Street Sweeping	Hour	900.00	\$84,577.50	\$93.98	2
998E0100	Railroad Protective Insurance	LS	78.00	\$303,405.90	\$3,889.82	78

