SD DOT

EROSION & SEDIMENT CONTROL

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The objective of the South Dakota Department of Transportation (SDDOT) Erosion and Sediment Control and Stormwater 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 (SDDENR) to meet the mandates of state and federal regulations.

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

1. Selection criteria for BMP's;
2. Design methods and processes;
3. Installation details and potential problems with installation; and
4. 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 stormwater quality requirements for construction sites.

The information in this training manual is intended for training purposes only and does not take precedence over the SDDOT Standard Specifications for Roads and Bridges, the SDDOT Materials Manual, or any SDDOT Policies and Procedures. See the SDDOT website for current Standard Plates or to reference materials above.

CHAPTER 1 - INTRODUCTION

The Clean Water Act is the primary federal law protecting our lakes, rivers, aquifers, and coastal areas. The purpose of the Clean Water act is to restore and maintain the chemical, physical, and biological integrity of the nation's water (i.e. swimmable /fishable).

The concerns for water quality have been evolving for over a century and the current act is over 50 years old. However, in the last 40 years there has been a growing understanding of the impact of urban development and construction activities on water quality.

The Rivers and Harbors Act of 1899 is the oldest federal environmental law in the U.S., and it protects navigable waters, or tributaries. The Federal Water Pollution Control Act of 1948 was the first major U.S. law to address water pollution.

Due to the growing public awareness and concerns for controlling water pollution, Congress passed sweeping amendments in 1972. As amended in 1972, the law became commonly known as the Clean Water Act. Congress exempted some water pollution sources from the point source definition in the 1972 Clean Water Act and it was unclear on the status of some of the other sources. Such sources were therefore considered to be nonpoint sources that were not subject to the permit program. Stormwater runoff from industrial sources, municipal storm drains, and other sources were not specifically addressed in the 1972 law. The EPA declined to include urban runoff and industrial stormwater discharges in the National Pollutant Discharge Elimination System (NPDES) program and was sued by an environmental group.

In 1977, the D.C. Circuit Court of Appeals ruled that stormwater discharges must be covered by the NPDES permit program.

The Clean Water Act was amended in 1987 with the Water Quality Act, where sections 401, 402, and 404 were created. The Water Quality Act required nonpoint pollution sources to obtain a permit from the NPDES program.

The Clean Water Act

The Clean Water Act: Water Pollution Prevention and Control is in Chapter 26 of Title 33 of the United States Code – Navigation and Navigable Waters. Title IV of Chapter 26 has three sections that are the basis for the rules affecting construction activities in and near surface water bodies:

1. 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, wastewater, and all forms of stormwater; of which highway and construction are cited as types.

2. Section 402 establishes the National Pollutant Discharge Elimination System (NPDES). This is the body of rules that enforces Section 401.
3. Section 404 is the permit requirement for dredge and fill activities within the water of the US. 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 Army Corps of Engineers administers the 404-permitting process, while the EPA and/or States administer the permits for wastewater, industrial and stormwater discharges.

The two objectives of the NPDES regulations are to:

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

Stormwater discharge is considered a nonpoint source and is caused by rainfall or snowmelt moving over and through the ground. The pollutants carried by stormwater do not come from a single source but come from multiple sources. Stormwater will carry a significant pollutant load, which the greatest percentage will be sediment from disturbed areas. The stormwater is collected in channels and discharged into water bodies. These concentrated discharges are what the Clean Water Act is requiring to be permitted and controlled. The Clean Water Act specifically cites navigable waters and "waters of the state". The definition is broad, but the key phrase is "waters of the (US) State", which 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."

The NPDES rules allow states to request delegated authority to administer the NPDES program. EPA delegated authority of the NPDES program to the SDDENR on December 30, 1993.

On April 1, 2018, the SDDENR re-issued the general permit for Stormwater Discharges Associated with Construction Activities. The general permit has similar language to EPA's general permit and reflects the current NPDES requirements. The difference is the state, not the federal government, has the authority of all permitting and enforcement activities. However, oversight authority remains with EPA. The general permit is the regulatory instrument for all construction activities in the state, not just for transportation related construction. All checklists and materials used by the SDDOT's manuals refer to this document.

Key requirements of the General Permit for Construction activities are:

1. All construction sites that disturb one acre or more must have a stormwater permit.
2. The permit is obtained by filing a Notice of Intent (NOI) which must be done 15 days before construction can begin.
3. To obtain approval of the NOI, the site must have a complete Stormwater Pollution Prevention Plan for the site.
4. 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.
5. The installation of Soil Stabilization BMP's must be initiated the following workday when earth-disturbing activities have permanently or temporarily ceased on any portion of the site. Temporary soil Stabilization BMP's must be completed as soon as practicable, but no later than 14 calendar days after initiating soil stabilization BMP's.

6. 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.
7. 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.
8. All sediment and erosion controls shall be selected, designed, and installed to function properly and withstand a 2 year/24-hour rain event.

There are three other federal laws, the Archaeological and Historic Preservation Act (AHPA), National Historic Preservation Act (NHPA), and Endangered Species Act (ESA), that may affect erosion and sediment control activities. The AHPA and NHPA, deal with historic and archaeological properties that could be damaged or lost if inundated by sediment. The ESA seeks to protect the habitat of endangered and threatened species.

SDDOT's Construction activities fall under the provisions of the SDDENR General Permit for Stormwater Discharges Associated with Construction Activities. The SDDENR has delegated authority from EPA to manage the NPDES in South Dakota. The state and federal regulations require operators to prevent the discharge of pollutants and minimizing the environmental impacts from construction activities.

CHAPTER

2

- PRINCIPLES OF EROSION AND SEDIMENT CONTROL AND STORMWATER MANAGEMENT

Erosion is the action by which soil particles are removed by rainfall, wind, ice, gravity or any other action on the soil surface and transport it to another location. When the water or wind velocity has decreased or stopped, the sediment will settle out and fall from suspension. Heavier particles, such as sand and gravel, will settle out faster than silt and clay particles. Turbidity is a measure of the degree to which water loses its transparency (e.g. cloudy or opaque) due to the presence of suspended solids in the water. Excessive cloudiness in water is an indication of high turbidity levels. High turbidity water creates a negative environment for aquatic organisms and plant life. There are three methods of controls and each work in a different manner.

1. Erosion Control Methods;
2. Sediment Control Methods; and
3. Runoff/Run-on Management Methods.

Erosion Control Methods are the preferred method to maintain soils in place and protect the site resources. Mulching, cover crops, riprap, and erosion control blankets are examples of erosion control methods.

When possible, use erosion control methods as the primary control, with sediment control methods as the secondary control. In areas of active construction, it may be difficult to implement some erosion controls. If this is the case, sediment control methods would become the primary control to prevent stormwater discharges.

Sediment control methods are practices that prevent soil particles from being transported off the construction site and into nearby streams, rivers, or lakes.

Runoff and run-on management methods control the stormwater that enters and exits the construction site. Runoff is stormwater that flows from the construction site onto adjacent property. Run-on is stormwater that flows from adjacent properties onto the construction site.

Choosing BMP's

The function of the BMP's will determine which one will be selected in the stormwater management plan. There are many BMP's that can serve multiple functions. Some BMP's may be used for velocity

control and be used for sediment control. Some BMP's may be used to divert flows and capture sediment. The key to an effective stormwater management plan is to choose the most practical BMP's for the needed function.

Stages of Erosion

The four stages of soil erosion caused by rainfall are splash erosion, sheet erosion, rill erosion, and gully erosion. Splash erosion (rain drop impact) represents the first stage in the erosion process. Raindrops displace soil particles and destroy the soil structure by impacting the exposed or bare soil. Sheet erosion is the second stage in the erosion process and is the transport of soil particles by overland flow. Sheet erosion occurs if the soil is saturated or if the rainfall rate is greater than the infiltration rate. Rill erosion is the third stage in the erosion process and is the development of concentrated flow paths which function as both a sediment source and a sediment delivery system for erosion on hillslopes. Gully erosion is the fourth stage in the erosion process and occurs when runoff water accumulates and rapidly flows in narrow channels during or immediately after heavy rains or melting snow. Gully erosion will result in the removal of soil to a considerable depth.

Precipitation

The amount of annual precipitation or rainfall an area receives will have an effect on erosion. In areas that have low annual precipitation or rainfall, there may be times throughout the year that no significant rainfall is received. However, the annual precipitation or rainfall for that area may be received in a few intense rainstorms.

Soil Permeability

Soil permeability will determine how much stormwater runoff will percolate into the soil. High permeable soils, like sand or gravel, will allow stormwater runoff to easily percolate into the soil. Low permeable soils, like clay or silt, does not allow the stormwater runoff to percolate into the soil. Stormwater that does not percolate into the soil, is considered stormwater runoff, and is an erosive force. When the soil is frozen, regardless of the soil type, the stormwater runoff will not easily percolate into the soils and the stormwater runoff volumes would be increased. Soils 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 stormwater runoff. If soils have a high-water content or are in areas with a high-water table, the soils are saturated and cannot hold additional water. If soils have a loose structure and are not saturated, the soils will have a higher water infiltration and increased 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 the amount of erosion potential. A site with a large watershed that drains into the site can anticipate increased quantities of runoff.

Land Use

If the adjacent land surrounding the project site has established vegetation, then it can be anticipated that the established vegetation will help reduce the velocity and filter out suspended soil particles from the stormwater runoff.

If the project site is next to large areas of impervious surfaces, such as a large paved parking lots, then it can be anticipated that there will be high velocity flows, and the stormwater runoff may include litter, debris, and other pollutants.

Another concern with paved surface runoff is thermal pollution. As water flows over hot pavement due to warmer weather, the temperature of the water will increase and have an impact on the adjacent property and receiving waters.

CHAPTER 3

- BEST MANAGEMENT PRACTICES (BMP'S)

What are BMP's?

BMP's are a device, practice, or method for preventing stormwater pollutants from reaching the receiving waters. The most common BMP's are silt fence and rock check dams, but BMP's can also be a policy or procedure like construction sequencing.

The goals for the placement of BMP's is to control erosion, the discharge of sediment, and to meet and/or exceed local, state, and federal requirements. BMP's should accomplish the following:

1. Minimize or prevent the stormwater run-on from adjacent properties;
2. Decrease the velocity of the internally generated stormwater runoff flowing through the site; and
3. Remove sediment from on-site stormwater runoff before it leaves the site.

Erosion Control BMP's

Erosion control BMP's are placed to protect the soil surface until permanent vegetation has been established.

Slope Protection

Five basic functions of slope protection for erosion control are:

1. Protect the soil surface to minimize the quantity of soil particles being removed and transported;
2. Preserve soil moisture;
3. Moderate soil temperatures by covering the soil;
4. Reduce the velocity of stormwater runoff; and
5. Capture soil particles that have been transported.

Exposed soil surfaces should be minimized at all times. Whenever possible, natural vegetation on the construction site should be preserved. If exposed slopes are unavoidable, it is essential to apply erosion and sedimentation control BMP's to reduce discharge of sediment to nearby receiving waters.

Surface Protection

There are two categories for surface protection:

Non-rolled materials – Slope Roughening, Tackifiers and Soil stabilizers, Mulch, Fiber Roving System, Pipe Slope Drain, Cover Crop Seeding, Hydro-Mulch, and Bonded Fiber Matrix.

- **Slope Roughening –** is a basic, simple way to slow the velocity of the water as it runs down the slope. This promotes infiltration and reduces stormwater runoff. This can be done as a temporary measure in areas likes stockpiles 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.
- **Tackifiers and Soil stabilizers –** are hydraulically applied chemicals derived from natural and synthetic sources used to promote adhesion among soil particles or mulch materials. In general, soil stabilizers (also known as soil binders) are used to increase soil adhesion, which improves soil stabilization by reducing water and wind driven erosion. Tackifiers are used as "glue" to bind and immobilize straw, cellulose products, pine needles, or other mulch that has been applied to a seeded area. Tackifiers protect seedbeds by holding the product to the soil surface and preventing movement. Relevant products include polyacrylamide, guar, chloride compounds, psyllium, resins, enzymes, surfactants, and various polymers, starches, and other compounds. Tackifiers and Soil stabilizers are temporary measures, designed to prevent short-term (e.g., two to four weeks) erosion between construction periods, and during seed germination and early growth for permanent stabilization. Tackifiers and Soil stabilizers are not intended for use in concentrated flow locations, such as streams, channels, or ditches.
- **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 stormwater runoff over an area and can protect the soil from splash erosion. It slows runoff, traps sediment, promotes infiltration, and creates conditions to assist germination and the early development of plants. Poked or crimped straw is commonly in the state and the mulch is mechanically anchored to the soil surface. Mulch is a relatively low cost, effective, available option in most areas and easy to implement.
- **Pipe Slope Drain –** is a device used to carry concentrated runoff from the top of a slope to the bottom. It may be used to direct stormwater away from or over disturbed areas of the construction site to avoid erosion. Pipe slope drains can be either temporary or permanent, depending on the method of installation and the material used. They are effective for slopes that have not been stabilized or for permanent drainage structures that have not been completed.
- **Cover Crop Seeding –** is planting a temporary cover crop of oats or winter wheat to provide interim erosion control until permanent seeding has been completed.
- **Hydromulch –** 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 seeding method.

- **Bonded Fiber Matrix (BFM) –** is composed of a hydromulch, usually wood fibers, with high volumes of 'bonding agent'. BFM material application rates are usually very high, by comparison to standard hydromulch applications. BFM products are relatively new to the hydroseeding process

and are an effective alternative to blankets and other methods where erosion control applications are not accessible.

Rolled materials – Sod, Erosion Control Blankets, plastic, and geosynthetics.

- **Sod –** is the placement of rolls or strips of grass as landscape or an erosion control method. Sod stabilizes the area immediately by covering the surface with vegetation and enabling stormwater to infiltrate into the ground. Sod is generally used on areas where immediate aesthetic effect is desired and where there is an irrigation system in place and operational.
- **Erosion Control Blankets –** 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 an exposed slope or surface. Erosion Control Blankets reduce raindrop impact and surface erosion on disturbed soils. It can also be used to protect new vegetation and aid in the establishment of vegetation by slowing the evaporation of moisture from the soil. Performance of the erosion control blankets is related to proper installation:
  1. Erosion control blankets must be installed so water does not divert under or between the overlaps; and
  2. Erosion control blankets must remain in direct contact with the soil.

Slope Flow Control/Stormwater Runoff Management

Slope Flow Controls and stormwater runoff management can be used to convert, intercept, or divert stormwater to reduce or avoid erosion on the construction site. Here are some examples of slope flow control's and/or stormwater runoff management BMP's.

Level Spreader – is an excavated depression constructed at zero percent grade across a slope and change concentrated flow to sheet flow. The stormwater is then dispersed uniformly as sheet flow over a vegetated area to allow for filtration of sediment and infiltration into the soil. A level spreader is not considered a pollutant reduction device. However, they improve the efficiency of other sediment controls, such as vegetated swales, filter strips, or infiltration devices, which depend on sheet flow to operate properly.

Interceptor Ditch – is used to intercept and drain water to a vegetated area to be safely discharged. They are commonly constructed above the top of a cut slope to collect stormwater runoff and drain the water to the bottom of the slope to prevent erosion. An interceptor ditch can intercept sediment laden water and divert it to a sediment collection device. An interceptor ditch can be used to shorten the slope length by splitting the slope into a series of shorter slopes.

Diversion Ditch – is used in the same matter as an interceptor ditch. A diversion ditch is constructed to divert the stormwater runoff away from a slope or active construction area and into a stabilized outlet or a sediment trap or pond.

Slope Velocity Controls

Slope velocity controls are used to slow the velocity of the flow across the slope face. These BMP's are also used to divert flows and to shorten slope distances. Slope Roughening, interceptor ditches, and diversion ditches are BMP's used for Slope Control, but they also they can be used as Slope Velocity controls. Here are some other examples of slope velocity controls:

Wattles – is a mesh casing filled with biodegradable fibers (e.g. straw, excelsior, or coir). The wattles are staked perpendicular to the slope following the contours, to shorten the slope lengths and help collect sediment. Wattles can be used to divert runoff similar to a diversion or interceptor ditch.

Filter Socks – is a mesh casing filled pneumatically with compost or wood mulch. Filter socks can be staked perpendicular to the slope following the contours to shorten the slope lengths and help collect or filter out sediment.

Channel Surface Control

Channel protection is needed when shear stress in a channel exceeds the limits of mature vegetation. Here are some examples of BMP's used for channel surface control:

Turf Reinforcement Mats (TRM) – are a system of flexible synthetic fibers laid out in the channel where the stormwater velocity exceeds the limits of the natural vegetation. They help establish vegetation and provide permanent support for mature vegetation.

Riprap – is a layer of large rock placed in a channel or on a slope for erosion protection. Riprap is used when the velocities are greater than what the mature vegetation, 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. The material used for riprap can be either quarry rock or field rock. The riprap must be hard and of a quality that will not disintegrate when exposed to water and weather.

Gabions – are wire baskets filled with rock used where structural strength is necessary. They are usually used at high volume and high velocity discharge points. These are made of precut pieces to form a single unit. Generally, the top, sides, ends, and bottom are assembled when delivered.

Channel Velocity Control

Channel velocity control BMP's 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. Riprap, Wattles, and Filter Socks are BMP's used for channel surface control but can also be used for channel velocity control. Here are some other examples of channel velocity controls:

Check Dams – are small dams constructed in an open channel, swale, or ditch. They can be temporary or permanent barriers to reduce or prevent excessive bank and bottom erosion by reducing velocity of the stormwater runoff. Check dams are generally placed in areas where the slope is 6% or greater combined with a large drainage area and/or where rocky soil conditions prevent the proper installation of other erosion or sediment control devices. 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. Triangular Silt Barrier can be easily removed for maintenance and are considered reusable.

Permeable Plastic Berm – is made of a UV resistant high-density polyethylene material formed into an A-shaped berm that is attached to the surface using staples. Permeable plastic berms are anchored on top of erosion control blankets or turf reinforced mats.

Sand and Gravel Bag Berm – are made from durable, weather resistant geotextile fabric and then filled with either sand or gravel. The pores in the geotextile fabric must be tight enough to retain the

filler material. These bags do not provide filtration, but aid in sediment control by reducing the velocity of the stormwater runoff, retaining the sediment-laden water and allowing for sedimentation and discharge of less sediment-laden stormwater.

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's. Straw bales 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 BMP's is to protect the soil surface, reduce velocity, and promote infiltration. Examples of outlet protection are Gabions, Riprap, and Turf Reinforcement Mats.

Sediment Control BMP's

Sediment control BMP's are used as perimeter control to prevent sediment from leaving the construction site, to slow the velocity of stormwater runoff or to detain sediment laden water long enough for sediment to settle out and to capture sediment before it can enter nearby receiving waters. Sediment controls and erosion controls are used together to make them more effective and to minimize the amount of sediment generated.

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 stabilized. As the various operations on the project change the inlet protection BMP's will need to change as well. Make sure to check the area around the inlet for the potential of flooding or unsafe conditions. All inlet BMP's must allow water to filter through and not completely block off the inlet. Inlet protection in the streets must have a safety overflow feature. All inlet protection needs to be inspected on a regular basis and sometimes several times during the day. For safety reasons, inspect for proper flow during rain events to ensure flooding does not occur, and water does not back up onto the road surface.

Inlet protection BMP's 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 installed on top of the inlet while others are installed inside the inlet. Installing a piece of geotextile fabric under the grate should not be used. Inlet protection is a fast-changing industry as new requirements and materials are developed. Always check the SWPPP, plan sheets, specifications, and DOT Standard Specifications for approved devices.

Off Street Inlet Protection BMP's

Silt Fence Box – is a box constructed out of 2x4 lumber wrapped with high flow geotextile fabric and fastened to the sides of a wooden frame. It must have structural support near the top so that it does not collapse inward. The bottom 8-12-inch portion of the geotextile is laid out as a flap on the ground with filter rock placed on top of the flap.

Excavated Sump – is an excavated area normally a foot deep surrounding the inlet protection device. The purpose for this is to increase the holding capacity of the inlet protection device.

Filter Sock Ring – is one or two layers of filter sock placed around the inlet. Filter rock may also be placed to supplement the filter sock.

Block and Filter Rock – is concrete blocks around the inlet supplemented with filter rock.

Manufactured Devices – there are numerous manufactured devices on the market. Some installed on top of the inlet and some are installed inside of the inlet.

Street Inlet Protection

Due to its limited effectiveness and numerous disadvantages, inlet protection is typically used as a secondary sediment barrier. It is used to reduce sediment in storm sewer systems by serving as a back-up system for areas that have newly applied erosion controls or for other sediment controls that cannot achieve adequate sediment removal by themselves. Inlet protection may be used as a primary sediment control only when all other primary controls are infeasible because of site configuration or the type of construction activity.

Inlet protection is best applied at low point (sump) inlets where stormwater runoff will pond behind the protection measure, and then either filter through the protection measure or flow over a weir created by the protection measure. Most inlet protection measures depend on ponding to be effective. These types of inlet protection are not applicable to on-grade curb inlets, where the inlet protection will cause stormwater runoff to bypass the inlet and overload downstream inlets. Only inlet protection measures that allow for use of the inlet opening (e.g. inlet inserts) are applicable as inlet protection for on-grade inlets.

Inlet protection is normally used in new developments with new inlets and roads that are not in public use. It has limited applications in developed areas due to the potential for flooding, traffic safety, pedestrian safety, and maintenance problems. Potential applications in developed areas are on parking lot inlets where water can pond without causing damage and during major repairs to existing roadways where no other controls are viable. The application of inlet protection is highly variable due to the wide variety of inlet configurations (existing and new) and site conditions. Inlet protection applications in most cases must be site adapted and different methods and materials may be used.

Perimeter Control

Perimeter controls are in place to prevent off-site discharge of sediment. Perimeter controls require frequent maintenance to remove accumulated sediment to remain effective. The functions of the BMP's are to control runoff and its ability to carry sediment, divert incoming flows, and capture and hold detached soil particles. Wattles, Filter Sock, Compost Logs, and Rock Logs are some of examples of perimeter control. Here are some more examples of perimeter controls.

Silt Fence – is a temporary vertical barrier of geotextile fabric (filter fabric) attached to and supported by woven wire and wood or steel posts. The bottom of the silt fence must be entrenched into the ground at least 6-8 inches. The area contributing to the drainage area should be less than 0.25 acres/100 ft of fence. To break up long fence runs and provide multiple storage areas that work like small retention areas silt fence can be installed in J-hook manner. If the silt fence does not create a ponding condition, it will not function properly.

Jersey Barrier Silt Fence – are sections of Jersey barrier wrapped with a geotextile fabric. Jersey barrier silt fence is used for heavy duty applications, for example, around stockpiles or for perimeter control around the construction site during bridge removal or bridge construction.

Vegetated Buffer Strip – is a gently sloping area of vegetative cover that runoff water flows through before entering a stream, storm sewer, or other conveyance. Vegetative buffer strips may be

undisturbed strips of natural vegetation or it can be a graded and planted area. Vegetative buffer strips act as a living sediment filter that intercepts and detains stormwater runoff. They reduce the flow and velocity of stormwater runoff, promote infiltration, and reduce pollutant discharge by capturing and holding sediments and other pollutants carried in the stormwater runoff.

Silt Curtain – is an impermeable material designed to deflect, separate, and contain sediment laden water. Silt Curtain allows for enough residence time so that sediment will settle out and not migrate to other areas. Silt curtain should contain a flotation carrier on the top and be anchored at the bottom. Silt curtain should be installed to rise and fall with the water level. Silt curtain should be installed parallel to the flow and as close to the construction activities as possible. Silt curtain should not be installed across a stream, ditch, or channel that has flow.

Water Filled Dam – is a reusable, vinyl coated polyester tubing that is first laid into position and then filled with water. The weight of the water filled dam keeps it in place and it conforms well with the terrain.

Sediment Trap – are temporary excavated areas 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, and a large surface area makes the sediment traps more effective. Sediment traps are normally used for large sediment flows. Maintenance requires removal of sediment when it reaches approximately 1/2 the designed depth of the sediment trap, or one foot, whichever is less.

Stabilized Entrance Protection

Care needs to be taken to prevent sediment from being tracked onto adjacent roadways. Here are some examples of BMP's for stabilized entrance controls:

Crushed Rock Pad – is a pad of crushed rock or stone that is installed at the entrance of a construction site adjacent to a public roadway. It is used to remove mud and sediment from vehicle tires. May require periodic replacement as sediment saturates the crushed rock or stone.

Timbers – are placed to remove sediment from vehicles tires as they enter and exit the construction site. These can be placed as a cattle guard structure or laid on the surface. Timbers may need periodic replacement as they wear down from equipment traffic.

Vehicle Washing – is an area used on construction sites where stabilized entrances are not effective by themselves. A vehicle washing system is a lined, depressed area that collects the water used in washing off the trucks, or other construction equipment, and drains into a collection or treatment system.

Street Sweeping – is used when sediment is tracked out on to the roadway from a construction site. Street sweeping is effective at cleaning stabilized entrances, shoulders, and maintenance yards. Street sweeping should occur on a regular basis and may warrant daily sweeping.

CHAPTER

4

- STORMWATER POLLUTION PREVENTION PLAN

This chapter will cover the new Section D Plan Notes, contents, how they relate to SDDENR regulatory requirements for the Stormwater 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. The SWPPP Checklist is found in Section D of the Plan Notes. The requirements for the SWPPP are located in Chapter 5 of the SDDENR General Permit for Stormwater Discharges Associated with Construction Activities.

SWPPP Sections

There are thirteen sections to the SWPPP:

1. **Personnel –** List identifying those person(s), by name or position, who are knowledgeable and experienced in the application of erosion and sediment control BMP's and who are responsible for the development and implementation of any portion of the SWPPP, for any later modifications to the SWPPP, and for compliance with the requirements of the general permit.
2. **Staff Training –** shall outline how employees and responsible parties shall be trained on the implementation of the SWPPP. Training must be provided at least annually, as new employees or responsible parties are hired, or as necessary to ensure compliance with the SWPPP and the general permit.
3. **Site Map –** Include legible maps depicting the following features and boundaries of the project:
    a. Pre-construction site conditions, including existing vegetative and nonvegetative cover (e.g. – forest, pasture, pavement, structures, etc.);
    b. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;
    c. Approximate slopes before and after major grading activities. Note areas with a slope greater than three horizontals to one vertical (3:1);
    d. Topography of the site;
    e. Drainage patterns of stormwater and authorized non-stormwater flows from the site property before and after major grading activities. Mark the flow direction with arrows on the map;

f. Locations and names, where appropriate, of all surface waters of the state that exist within or in the immediate vicinity of the site and could potentially receive discharges from the project site;

g. Locations of any surface water crossings, noting areas where work near waterbodies is necessary;

h. Location of any stormwater conveyances including, but not limited to, sediment ponds, ditches, pipes, swales, stormwater diversions, culverts, and ditch blocks;

i. Discharge locations, including locations of any storm drain inlets on or in the immediate vicinity of the site that could potentially receive discharges from the project site;

j. Locations where stormwater or allowable non-stormwater will be discharged to surface waters of the state on or in the immediate vicinity of the site;

k. Locations where sediment, soil, or other construction materials will be stockpiled;

l. Designated site access points;

m. Locations of structures and other impervious surfaces upon completion of construction;

n. Natural buffer boundaries and widths;

o. Locations of fueling activity, vehicle and equipment maintenance areas, designated wash water collection areas, lubricant and chemical storage, paint storage, material storage, staging areas, and debris collection areas;

p. Locations of all activities that could potentially generate pollutants at the site, such as dumpsters, chemical storage, construction site washout, portable toilets, or equipment storage;

q. Location and types of all sediment and erosions controls, velocity dissipation devices, post-construction controls, and all other BMPs used on the site;

r. Locations of construction support activities covered by the general permit.

4. **Description of Construction Activities –** Include a narrative description of the nature activities, including the following:

   a. A description of the overall project and type of construction activities to occur on the site and a description of the final completed project;

   b. The total size of the project and total area expected to be disturbed by construction activities;

   c. The maximum area expected to be disturbed at any one time;

   d. Description of the existing vegetation at the site and an estimate of the percent of vegetative ground cover;

   e. A description of the soil within the disturbed areas;

   f. The name of the surface waters or municipal separate storm sewer system at or near the disturbed area that could potentially receive discharges from the project site;

   g. Any construction support activity areas; and,

   h. The intended sequence and estimated dates of construction activity for the following:

      i. Implementation of BMPs, including when they will be operational and an explanation of how you will ensure the control measures are installed by the time each phase of earth-disturbing activity begins.

ii. Commencement and duration of earth-disturbing activities, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting, and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization.

iii. Cessation, temporary or permanent, of construction activities on the site or in designated portions of the site.

5. **Description of Maintenance of Control Measures –** Include a narrative description of the erosion and sediment control measures to be implemented during construction, as follows:

   a. A timeframe for the installation, maintenance, and removal (if necessary) of all selected BMP's for each phase of construction activity;

   b. Rationale for the selection of all BMP's;

   c. Whether selected BMPs are temporary or permanent;

   d. A description of maintenance specifications and procedures;

   e. A description of structural diversion practices intended to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site;

   f. A description of the removal of any temporary stormwater conveyance; and

   g. A description of the temporary and final stabilization of areas of exposed soil where construction activities have been completed or temporarily ceased.

6. **Procedures for Inspection –** Description of procedures to follow for conducting site inspections. Include the following information:

   a. Personnel responsible for conducting inspections;

   b. Required frequency of inspections;

      i. Inspections are required at least once every 7 calendar days.

      ii. Necessary repairs must be initiated within 24 hours of the site inspection report.

      iii. Silt fence must be mucked out when sediment reaches 1/3 the height of exposed fabric.

      iv. Sediment basins and traps must be mucked out when 1/2 full.

   c. Rationale for reduction of inspection frequency; and

   d. Any inspection checklists or other forms that will be used.

7. **Post Construction Stormwater Management –** Identify stormwater management practices that will be installed during the construction process to control pollutants in stormwater discharges occurring after construction operations have been completed. The following information must be included in the SWPPP:

   a. An explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels;

   b. A description of structural stormwater management practices such as stormwater ponds, open vegetated swales, natural depressions to allow infiltration of runoff onsite, and sequential systems that combine several practices or other post construction stormwater management features; and

   c. The location of velocity and energy dissipation devices placed at discharge points and appropriate erosion protection for outfall channels and ditches.

8. **Construction Site Pollutants –** Include information about all activities that could generate pollutants onsite and a list of all materials that are anticipated to be placed or stored onsite.
9. **Pollution Prevention Procedures**
    a. **Spill Prevention and Response Procedures –** The SWPPP must describe the procedures that will be followed to prevent and respond to spills and leaks, including:
        i. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. The SWPPP must identify the name or position of the employee(s) responsible for detection and response of spills and leaks;
        ii. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies as required:
            1. It is the prime contractor's responsibility to carry out these provisions.
            2. Hazardous materials spills must be reported to SDDENR.
            3. Oil spills must be reported to National Response Center Hotline.
        iii. Ways to prevent reoccurrence of such releases and steps to prevent any such releases from contaminating stormwater runoff. The SWPPP shall be modified and changes implemented as appropriate.
    b. **Waste Management Procedures –** The SWPPP must describe procedures for the handling and disposal of all wastes generated onsite, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.
10. **Non-Storm Water Discharges –** Non-storm discharges that may leave the site during construction.
11. **Required SWPPP Modifications –** The SDDOT Project Engineer will modify the SWPPP using the DOT 298 form and drawings in the plans to reflect the needed changes according to the following:
    a. Conditions Requiring SWPPP Modification – The SWPPP must be modified, including the site map(s), in response to any of the following conditions:
        i. When a new operator responsible for implementation of any part the SWPPP begins work on the site.
        ii. When changes to the construction plans, sediment and erosion control measures, or any best management practices onsite that are no longer accurately reflected in the SWPPP. This includes changes made in response to corrective actions triggered by inspections.
        iii. To reflect areas on the site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.
        iv. If inspections by site staff, local officials, SDDENR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with the general permit.
        v. To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.
        vi. If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, age rates, or different areas or methods of application.

b. **Deadlines for SWPPP Modification –** Any required revisions to the SWPPP must be completed within 7 calendar days following any of the items listed above.

c. **Documentation of Modifications to the Plan –** All SWPPP modification records are required to be maintained showing the dates of when the modification occurred. The records must include the name of the person authorizing each change and a brief summary of all changes.

d. **Certification Requirements –** All modifications made to the SWPPP must be signed and certified.

e. **Required Notice to Other Operators –** If there are multiple operators at the site, the Contractor's Erosion Control Supervisor must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

12. **SWPPP Certification –** The SWPPP must contain a certification statement and be signed by a responsible official or duly authorized personnel.

13. **Infeasibility Documentation –** If it is determined to be infeasible to comply with any of the requirements of the general permit, the infeasibility determination must be thoroughly documented in the SWPPP.

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:

1. Route inspection, analysis, and public involvement;
2. Field survey and data collection;
3. Preliminary design functions (alignment); and
4. Final design plans to letting

Use the public participation process to identify problems or conflicts that may not be clear. Be alert for potential problems related to NPDES requirements for stormwater quality during your site inspection. 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 right-of-way (ROW) and at grade separated interchanges are often stormwater quality assets. Designers should also be aware for the possible need for additional ROW to accommodate permanent stormwater quality structures.

Collect soil data to plan for the soil permeability, soil erodibility, soil texture group, and get additional information on the soil's workability and moisture relationships. All these characteristics relate directly to the soil erodibility 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 BMP's 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 SDDENR form that will be completed at the time of the project letting by the SDDOT Environmental Office.

CHAPTER 5 - SEQUENCING THE WORK

Work on the project must be conducted in a manner so that the project is in compliance with the general permit requirements during all operations and for the duration of the project. The BMP's must be installed in proper order and in a timely manner. Perimeter control around the project site must be installed before any land disturbing activities can begin. Inlet protection must be installed, sequenced and maintained as work on the project progresses. Discharge water from pumping must be monitored and treated if visible pollutants are present. Disturbed areas on the project site must be stabilized as soon as possible and protection measures installed concurrently in critical areas with the grading work. All BMP's need to be checked on a regular basis to determine if they are functioning and being maintained properly. Stabilized entrances for the project site need to be monitored for track-out onto the streets and if street sweeping is needed. Before winter shutdown or any other purpose, disturbed areas on the project site must be stabilized by temporary mulching, diversions, and supplemental BMP's.

Assessing the Project

Prior to starting work, a site inspection should be conducted to determine critical locations and be noted on the plans and in the SWPPP. During the site inspection the critical locations and BMP's should be cross referenced with the SWPPP. The initial site inspection is to gain familiarity with the project site and planning of the sequence of work.

During the site inspection, discharge points from the project site should be noted as well as any storm sewer inlets within and around the project site. Wetlands, lakes, rivers, streams, and other water bodies within or near the project site must be noted. One item to be determined during the site inspection is the location of the stabilized entrances for the project site. Another item to be determined is the type of perimeter control needed on the project site. The initial site inspection becomes the template for the weekly site inspections conducted as construction progresses.

Critical Work/Non-critical Times

After the site inspection of the project site has been conducted, a strategy must be developed to determine how the work will be conducted with minimal impact. Work exclusion dates must be included in the strategy (e.g. fish spawning). 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 (e.g. road or utility projects), various sites may be worked on independently with the most critical locations constructed during the least critical times. As the

work is conducted in the critical locations, stabilization of disturbed areas must follow immediately without delay.

Implementing the SWPPP

Implementation of the SWPPP means implementing BMP's and procedures listed in the SWPPP. Before any land disturbing activities begin the appropriate parts of the SWPPP must be implemented. This may involve installing storm drain inlet protection, stabilized construction entrances, sediment basins, and perimeter silt fences before any clearing, grading, and excavating activities may begin. After construction activities have begun, the SWPPP should describe when additional erosion and sediment controls will be installed (generally after initial clearing and grading activities are complete). Once the land disturbing activities have started, the weekly site inspections should begin. The weekly site inspections become the report card on the progress of the work being done and the continued implementation of the SWPPP. The site inspections are the checklist for maintenance of the BMP's, where additional attention is needed, if any repairs of are needed, and if any additional BMP's are needed.

Perimeter Control and Site Access Points

On most projects, locating site access points is the initial issue and may already be determined by the existing access to the roads or streets. The number of existing site access points will affect how many stabilized entrances are needed and the amount of street sweeping needed over the life of the project. Therefore, site access points are very important. On some project, it may be more efficient to have a designated entrance and a designated exit. The designated exit(s) should be located on high ground with stable soils and stabilized with rock. This will prevent trucks from driving through mud and be able to withstand loaded truck traffic and heavy equipment. In some cases, it is desirable to undercut the site access point and place compacted base material before placing rock at the entrance. Existing pavement should be left in place as long as possible.

After the stabilized entrance(s) are constructed, perimeter control must be installed along the edges of the project. Make sure to review the SWPPP for the locations of the BMP's and to determine that the correct BMP's are used. On most projects, silt fence is commonly used for perimeter control. However, compost logs, rock logs, wood chip logs, and slash mulch berms are some alternatives that may also be used.

For high traffic areas, locations of utilities, around trees, or where the site access requires the perimeter controls to removed and reinstalled, the alternatives to silt fence may be used. One of the best perimeter control BMP's is a berm constructed with the stripped topsoil from the project site. 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 constructed.

Storm Sewer Inlets

The general permit requires protection of all storm sewer inlets that could receive drainage from the project. This applies to the storm sewer inlets that are outside the project as well as storm sewer inlets within the project site. During the project site visit, conduct an inspection to determine the location of all of the storm sewer inlets on the project. Some of the storm sewer inlets may not be included in the SWPPP. Also determine the location of any pipes connected to the storm sewer inlets and where the connected pipes discharge. If possible, you may decide to temporarily block off some of the storm sewer inlets if they are not needed. Always be aware of possible flooding on the streets as well as adjacent property. Remember, safety is job number one!!!

The placement of geotextile fabric under the grate of storm sewer inlets should not be used, because it can cause flooding and unsafe conditions. The use of drop- in manufactured bags may be placed in the storm sewer inlets, but the drop-in bags must have a safety overflow built into the top of the bag. Storm sewer inlets must be protected over the life of the project and multiple devices may be required at one storm sewer inlet as work progresses. 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.

Stockpiles

Whenever possible, stockpiles should be placed within the project limits. The stockpiles should be placed in areas where material cannot be carried off and enter storm sewer inlets. The general permit requires perimeter control to be installed around stockpiles. On projects with limited space, jersey barriers wrapped with geotextile fabric may be used for the perimeter control. For contaminated stockpiles, the stockpile may be covered with plastic and compost logs may be placed around the pile for perimeter control. For stockpiles that will be unused for more than 14 days and for controlling dust, the general permit requires the stockpile to be either covered or temporary stabilization to be installed.

Track-Out Control and Street Sweeping

The most common control used to prevent vehicle track-out from construction sites are rock pads. The base material under the rock pad must be compacted to prevent the rock from pressing into the base. The rock (3 to 6-inch size) must be large enough to prevent them from becoming lodged between the dual tires of vehicles. In addition, the rock pad must be long enough to obtain at least five rotations of the largest tires but must be a minimum of at least fifty feet. Since the rock will plug up with sediment, the rock must be replenished on an as needed basis. To increase the effectiveness of the controls at stabilized construction entrances, other BMP's may be used in combination of a rock pad. For example, a 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 project sites with clay or silt soils, rock pads and other BMP's used for stabilized construction entrances 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 $1,500.

When sediment from the construction site is tracked out onto the streets, it must be removed by the end of the same workday to prevent the sediment from washing into storm sewer inlets and for the safety of those traveling the streets. To remove the sediment from the street, a municipal type pickup broom is commonly used. Most pickup brooms are not effective in removing fine sediment from the streets and the sediment may be compressed into the voids of the street surface. If water is added during the sweeping operation, the street surface may become slick and make the sediment more difficult to remove. Cyclonic street sweepers that do not need water are the best option for removing sediment. Another option is the dustpan sweeper attachment that fits on the front of a skid-steer loader. If a dustpan sweeper is used, the pavement needs to be damp to prevent dust generated from the sweeping operation.

Sequential Stabilization

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

The general permit requires soil stabilization measures to be initiated the following workday whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the site. This means that earth-disturbing activities must be currently active in that portion of the site.

Earth-disturbing activities have temporarily ceased when clearing, grading, and excavation activities have ceased within that portion of the site for a period of 14 calendar days but will resume such activities in the future. The stabilization requirements apply to work shutdowns and winter shutdowns. The disturbed areas on the project must be stabilized prior to any shutdowns on the project that last 14 calendar days or longer.

Temporary erosion control – may include temporary seeding, geotextile fabrics, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb the area.

Cover crop seeding – is planting a cover crop of oats, spring wheat or winter wheat to stabilize the soil and provide erosion control until permanent seeding is done. Oats or Spring Wheat shall be used from April through July and winter wheat shall be used from August through November.

Dormant seeding – is seeding late in the year when the seed will not germinate and is done typically from November 1st until the snow cover. It is considered dormant seeding is when soil temperatures are consistently under 53 degrees Fahrenheit.

Frozen ground mulching – is placing mulch on disturbed areas when the ground is frozen. Typically, straw mulch is used, but bonded fiber mulch and flexible growth medium may also be used.

Snow mulching – is placing mulch (straw or hay) on disturbed areas of projects that are covered with snow. Once applied, the mulch will capture sunlight and melt down into the snow. Since spray applied mulch products need to bond with the soil, they should not be used for snow mulching.

Establishment erosion control – this is placing materials over a seeded area to protect the area from erosion while the seed is germinating, and vegetation is being established. Mulch, erosion control blankets, hydro-mulch, bonded fiber matrix, or flexible growth medium may be used for an establishment erosion control. These establishment erosion controls are temporary and decompose as the vegetation is established.

Permanent stabilization – this means all earth-disturbing activities have ceased and permanent stabilization practices (e.g. established vegetation, riprap, gabions, or geotextiles) have been put in place to stabilize the area.

Permanent erosion control – this means erosion control practices have been permanently put in place to stabilize the area.

To stabilize disturbed areas of the project, either temporary or permanent erosion control practices may be used. Temporary erosion control practices may be used on stockpiles, on disturbed areas during dry weather when seed won't germinate, or on areas where additional earth-disturbing activities are needed at a later date. As soon as possible disturbed areas of the project should be shaped, topsoil placed, and permanent erosion control practices installed. Permanent stabilization should be completed as quickly as possible and is the most cost-effective way of sequencing the work.

CHAPTER

6

- 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: $A = (R)(K)(LS)(C)(P)$

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 rainstorm, 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*K*(LS)*C*P to obtain soil loss in tons/acre/year.
9. Convert to cubic yards if desired.

Example #1:

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 5:1 and an average slope length of 100 feet. The soil is a Silty Clay Loam with 2% organic matter 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 (Figure 6.1)

K = 0.32 (Figure 6.2)

LS = 3.50 (Figure 6.3)

C = 1.0 (Figure 6.4)

P = 0.80 (Figure 6.5)

$A = (R)(K)(LS)(C)(P)$

$A = 80 \times 0.32 \times 3.5 \times 1.0 \times 0.8$

A=71.68 tons/acre/yr.

Multiply by 50-acre site (71.68 tons/acre/yr. x 50 acres =3,584 tons/yr.)

To convert to cu yards/yr. multiply by 0.87 cubic yds/ton (3,584 tons/yr. x 0.87 =3,118.1 cubic yds/yr.)

Example #2:

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

Assume Sioux Falls, SD, as the locale of a construction site. The disturbed site is 50 acres in size, with an average gradient of 5:1 and an average slope length of 100 feet. The soil type is a Silty clay loam with less than 0.5% organic matter and the k value is 0.37. 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 125.

R = 125 (Figure 6.1)

K = 0.37 (Figure 6.2)

LS = 3.50 (Figure 6.3)

C = 1.0 (Figure 6.4)

P = 0.80 (Figure 6.5)

$A = (R)(K)(LS)(C)(P)$

$A = 125 \times 0.37 \times 3.5 \times 1.0 \times 0.8$

A=129.5 tons/acre/yr.

Multiply by 50-acre site (129.5 tons/acre/yr. x 50 acres =6,475 tons/yr.)

To convert to cu yards/yr. multiply by 0.87 cubic yds/ton (6,475 tons/yr. x 0.87 =5,633.25 cubic yds/yr.)

Example #3:

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

Assume Rapid City, SD, as the locale of a construction site. The disturbed site is 50 acres in size, with an average gradient of 5:1 and an average slope length of 100 feet. The soil type is a Fine Sandy loam with less than 0.5% organic matter and the k value is 0.35. 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 60.

R = 60 (Figure 6.1)

K = 0.35 (Figure 6.2)

LS = 3.50 (Figure 6.3)

C = 1.0 (Figure 6.4)

P = 0.80 (Figure 6.5)

$A = (R)(K)(LS)(C)(P)$

$A = 60 \times 0.35 \times 3.5 \times 1.0 \times 0.8$

A=58.8 tons/acre/yr.

Multiply by 50-acre site (58.8 tons/acre/yr. x 50 acres =2,940 tons/yr.)

To convert to cu yards/yr. multiply by 0.87 cubic yds/ton (2,940 tons/yr. x 0.87 = 2,558 cubic yds/yr.)

Figure 6.1 – Annual Rainfall Value Map (R)

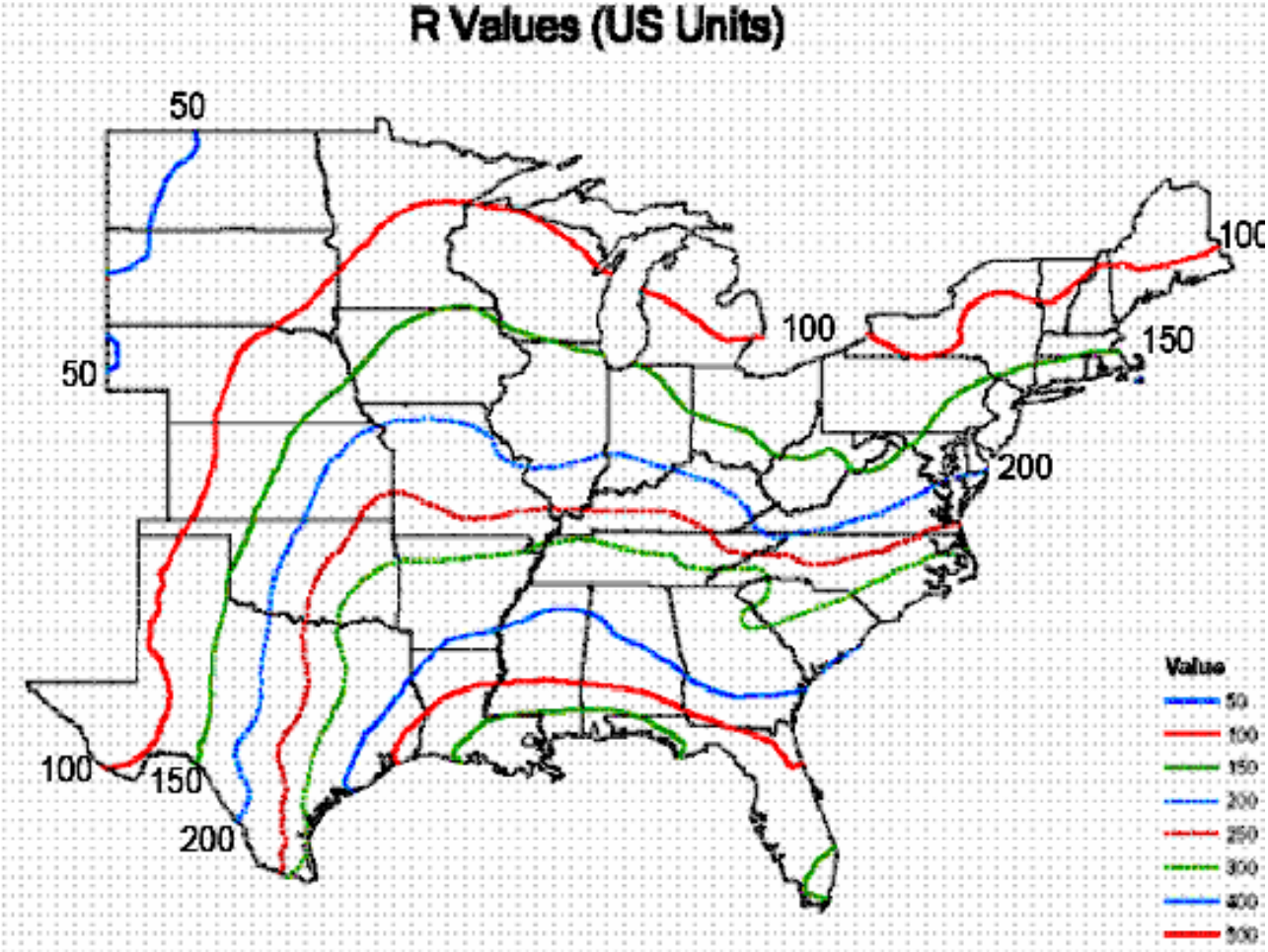


Figure 6.2 – Soil Erodibility Factor (K)

Soil Erodibility Factor K Factor (after Stewart et al. 1975) (a)

	Organic Matter Content (%)		
Textural Class	**<0.5**	**2**	**4**
Sand	0.05	0.03	0.02
Fine Sand	0.16	0.14	0.1
Very Fine Sand	0.42	0.36	0.28
Loamy Sand	0.12	0.1	0.08
Loamy Fine Sand	0.24	0.2	0.16
Loamy Very Fine Sand	0.44	0.38	0.3
Sandy Loam	0.27	0.24	0.19
Fine Sandy Loam	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 Clay Loam	0.27	0.25	0.21
Clay Loam	0.28	0.25	0.21
Silty Clay Loam	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 1.0 1.5 1.5 2.0 2.0 2.0 2.0 2.0 2.0	<5 6-10 <5 6-10 <5 6-10 11-15 16-20 21-25 26-35	0.20 0.20 0.12 0.12 0.06 0.06 0.07 0.11 0.14 0.20	200 100 300 150 325 200 150 100 75 75
Erosion Control Blanket	N/A	21-25 26-35 36-50 51-67	0.05 0.07 0.14 0.20	300 200 150 100
Wood Chips	6.7 6.7 12.1 12.1 25.0 25.0 25.0	<15 16-20 <15 16-20 <15 16-20 21-33	0.08 0.08 0.05 0.05 0.02 0.02 0.02	75 50 150 75 200 150 100

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 Matrix	3500	20-26	0.10
		27-35	0.14
		36-50	0.20
Sod	NA		0.01

Figure 6.5 – 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/ bulldozer 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

CHAPTER 7 - DEWATERING

Definition and Purpose

Dewatering is defined as the act of draining or pumping rainwater, ground water, or surface waters from building foundations, vaults, trenches, and other areas of the construction site. The water may need to be removed from cofferdams, excavations, ponds, sediment traps, depressions, or any area where stormwater or groundwater may accumulate. The water may be stagnant or seeping into the construction area. Dewatering operations can be by gravity or by pumping. An example of gravity dewatering is water flowing from the outlet of a sediment trap through a drainage cut. During dewatering operations, the water may be discolored and contain sediment. Before the water can be discharged from the site, sediment removal practices must be used to remove the sediment. The site conditions and available equipment will dictate which sediment removal practices may be used.

Dewatering Plan

If dewatering is needed, a dewatering plan should be developed and submitted to the project manager prior to any dewatering operation can occur. The plan must indicate how the dewatering operation will be conducted. At a minimum, the plan should indicate the location of the dewatering operation, the flow path of the water, the practices to be used at the inlet to minimize sediment from entering the flow, the practices to remove or settle out sediment, energy dissipation at the outlet, and the location of the discharge of the water. The dewatering plan must address how pollutants other than sediment, if they are present, will be handled.

Inlet

On the inlet hose of the pump used for dewatering, the hose must have a screen to prevent stones and debris from getting sucked through the pump. When pumping from a natural water body, the size of the mesh screen must prevent aquatic species from being sucked through the pump.

The inlet hose of the pump must be positioned to draw water from the top and must be off the bottom. The contractor may use commercially made flotation devices or build their own flotation devices (e.g. 6-inch sewer pipe glued together in a donut shape).

The contractor may use a perforated barrel with filter rock placed around the barrel, to prevent mud from entering the inlet hose of the pump. The inlet hose of the pump is then placed inside the perforated barrel.

Figure 7.1 Dewatering inlet

Sediment capture BMP's

The BMP's described in this section only apply to sediment and do not apply to any other pollutants.

Sediment traps – are temporary excavated areas 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, and a large surface area makes the sediment traps more effective. Sediment traps are normally used for large sediment flows. Adding a flocculant to the water in the sediment trap and drawing clean water off the top can make the sediment traps more effective.

Dewatering filter bags – are square or rectangular bags made of geotextile fabric. Dewatering bags are available in different sizes, which provide different flow rates. For example, a 10-foot x 15-foot dewatering bag may provide 60-100 gallons per minute of flow. The water is pumped into one end of the dewatering bag and the water filters through the geotextile material. Dewatering bags are not 100% effective and fine material can pass through the geotextile material. Either a layer of straw or filter rock is placed as a base under the dewatering bag and rock weepers or wattles may be used downstream from the dewatering bag to remove remaining sediment from the discharge water.

Dewatering dumpsters – are dumpsters converted by the contractor or from a manufacturer to collect, treat, and filter water. Dewatering dumpsters have a large compartment on the inlet side where the water can be treated with a flocculant. The water will flow through a mesh screen into a second compartment where it is filtered through a medium (e.g. wood chips or wood excelsior). The flow rate through the dewatering dumpster may be approximately 100-200 gallons per minute. To increase flow rate, additional dewatering dumpsters may be used in parallel. When the filtering medium becomes saturated with sediment, the saturated medium is removed and is replaced with new medium.

Figure 7.2 – Dewatering Dumpster

Weir tanks – are semi-trailer sized liquid storage tanks with high and low-level weirs (or internal baffles), which assist with separating out sediment. The amount of sediment removed is highly dependent on flow rate (i.e. residence time) through the weir tank. Weir tanks can be designed to remove down to 50 microns in particle size. Weir tanks can also be used as pretreatment for other methods. Flow rates through the weir tanks is typically 60-100 gallons per minute. To increase the flow rate, additional weir tanks may be used in parallel. The weir tanks need to be periodic cleaned based on visual inspection or when the flow through weir tank is reduced. When cleaning the weir tank, a vacuum truck or trailer may be used to remove the sediment.

Figure 7.3 – Weir Tank

Multi-media filters – multi-media filters generally provide a high level of treatment. Typical particle size removed is down to 5 microns. Multi-media filters can be used as a stand-alone treatment or as the final stage of a treatment system. Multi-media filter systems are available in many different sizes from small trailer mounted systems to semi-trailer systems. The flow rates are dependent on the size of the multi-media system and if the water has been pretreated. The flow rates through Multi-media filter systems can range from 9 to 1,432 gallons per minute.

Flocculants

Flocculants are used to coagulate fine suspended particles in turbid water and make the particles drop out of solution sooner than they would if the turbid water went untreated. Flocculants have been used for multiple years in sewage treatment plants, in row crop irrigation, and in food processing. Flocculants work by neutralizing the electric charge of the fine suspended particulates and are available as either cationic or anionic charge. Cationic flocculants have a positive charge whereas anionic flocculants have a negative charge. Clay and silt particles are negatively charged, and cationic flocculants would be effective for treatment of clay and silt particles. However, research conducted by the Environmental Protection Agency indicate cationic flocculants are toxic to aquatic organisms when dissolved in water and should not be used as a flocculant in water that is discharged into natural waterbodies. Based on the same research, anionic flocculants are not toxic to aquatic organisms. Anionic formulations should be used whenever possible. The manufacturer's mixing and dosing formula must be adhered to when using flocculants. Therefore, only approved flocculants should be used and not over applied.

Water conditioners can be added to the water to make the flocculants more effective. Water conditioners can be either acidic or basic, and the type of water conditioner to be used would be based on the pH of the water to treated. The flocculants must be mixed into the water and generally take 5 to 10 minutes to react to the particles. The pH of the water must also be in the neutral range of pH 6.5-7.5. The flocculants are available in granular or liquid formulations. The granular formulations can be sewn into packets and can be strung into socks or inserted to wattles. The flocculants are also available as natural or synthetic based products. Synthetic flocculants are

generally long chained linear polymers. Natural based flocculants are genera chitosan based derived from the exoskeleton of shellfish.

Before using any flocculants or water conditioners, a treatment protocol must be developed. First, obtain a sample of the water to be treated and determine the pH of the water. Litmus paper can be used to determine the pH of the water. Based on the litmus paper test, if the water is outside the neutral pH range, a water conditioner can be added to the water to adjust the pH. Second, add a couple drops of flocculant to the sample and shake the sample to mix the flocculant with the water. Let the water sample settle and observe the results. Once the flocculant has been selected, follow the manufacturer's recommendations for the correct dose rate and mixing rate.

Flocculants should be used in either a batch treatment or filtering system. The water should be treated in batches instead on in a continuous system. This will allow the sediment to settle to the bottom and the clear water is discharged off the top. The flocculant will be attached to the settled-out sediment. Flocculants can also be used in a filtering system, where the water is treated and then filtered through either a sand filter or wood-based filter prior to discharge.

CHAPTER

8

- CONSTRUCTION SITE INSPECTIONS & MANAGEMENT

Construction Site Inspections

There are two types of construction site inspections that will occur during the project. One type of construction site inspection will be those conducted by SDDOT personnel and the Contractor's Erosion Control Supervisor. The other type construction site inspection will be those conducted by SDDENR or EPA personnel.

SDDOT Inspections

SDDOT personnel and the Contractor's Erosion Control Supervisor (Inspectors) will conduct inspections on SDDOT projects. The general permit requires periodic inspections to be conducted. The general permit describes in detail how to conduct inspections, maintain the effectiveness of the construction site BMP's, and determine the frequency of the inspections. The Inspectors must successfully complete the SDDOT Erosion and Sediment Control and Stormwater Management certification training to be certified to conduct the inspections.

According to the general permit, inspections must be conducted by qualified personnel every 7 calendar days or once every 14 days and within 24 hours of precipitation that exceeds one quarter of an inch or snowmelt that generates runoff. However, the SDDOT requires inspections to be conducted at least once every 7 calendar days. It is possible for the inspections to be conducted on weekends and/or holidays. Additional inspections may need to be conducted to avoid inspections from being conducted on weekends and/or holidays.

The frequency of inspections may be reduced to once per month on any portion of your site where you have reached final stabilization. If construction activity resumes in this portion at a later date, the frequency of inspections must increase to once every 7 calendar days.

During frozen conditions, if earth-disturbing activities are suspended due to frozen conditions and all disturbed areas of the site have been temporarily or permanently stabilized, inspection frequency can be reduced to at least once per month. However, weekly inspections must resume by no later than March 1st of each year and until the construction site is permanently stabilized and the Notice of Termination has been submitted.

During the site inspection, at a minimum, the following areas need to be inspected:

1. All areas that have been cleared, graded, or excavated and have not yet reached final stabilization;
2. All sediment and erosion control measures and best management practices, including inlet protection;
3. Vegetated buffers;
4. Stockpiles, chemical and fuel storage, fertilizer and pesticide storage and other material, waste, borrow, and/or equipment storage and maintenance areas;
5. All areas where stormwater typically flows within the site, including drainage ways designed to divert, convey, and/or treat stormwater;
6. All points of discharge from the site including surface waters, drainage ditches, and conveyance systems; and
7. All dewatering activities at the site.
8. **Exception.** You are not required to inspect areas that, at the time of the inspection, are unsafe for your inspection personnel. A detailed description of the situation must be documented in your inspection records explaining the reason the site conditions prevented the inspection.

During the site inspection, at a minimum, the following items need to be identified:

1. Check whether all erosion and sediment controls and best management practices are implemented and functioning to minimize pollutant discharges. Determine if you need to replace, repair, or maintain any controls.
2. Check for spills, leaks, or other accumulation of pollutants on the site, or for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on site. Determine if you need to install additional controls or take corrective actions to prevent the discharge of these pollutants.
3. Determine if site conditions have changed and if current controls are still effective in controlling pollutants from leaving your site. Identify any locations where new or modified control measures are necessary.
4. Check for signs of erosion, scour, and sediment deposits that have occurred on or off the construction site:
    a. Inspect the discharge points and, where applicable, the banks of any surface waters of the state flowing within your property boundaries or immediately adjacent to your property.
    b. Identify areas where you need to correct erosion and remove sediment.
    c. Determine if you need controls to reduce the velocity of the discharge or prevent further erosion and sedimentation.
5. If a discharge is occurring during your inspection, you are required to:
    a. Identify all points of the property where there is a discharge;
    b. Observe and document the visual quality of the stormwater discharge and note the characteristics of the discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of Stormwater pollutants; and
    c. Document whether your control measures are operating effectively. Describe any controls that are not clearly operating as intended or need maintenance.
    d. Identify all incidents of noncompliance that you observe.

Based on the results of your inspection, you must initiate corrective action(s) where needed.

During each site inspection an inspection report must be completed and include the following information:

1. Date and time of the inspection.
2. Names and titles of the personnel conducting the inspection.
3. Date and amount of most recent precipitation event, as well as if runoff was flowing onsite and/or offsite at the time of the inspection.
4. A summary of your inspection findings, covering, at a minimum, the observations you made;
5. Specific locations where maintenance, additional best management practices, cleanup, or corrective action is needed;
6. The results of the total suspended solids levels in any dewatering discharge;
7. A summary of any corrective actions taken in response to the inspection findings, including any changes made to the SWPPP;
8. If you have determined it is unsafe to inspect a portion of your site, describe the reason(s) it was found to be unsafe and specify the locations that were not inspected;
9. If an inspection does not identify any incidents of noncompliance, a statement must be included in the report that the site is in compliance with the SWPPP and the general permit.
10. The inspection report must be signed and certified in accordance with the signatory requirements in the general permit.

SWPPP Site Inspection Form

The SWPPP inspection form needs to be completed during each inspection, be maintained on site, and made available upon request. To ensure effectiveness of the BMPs, adding or changing BMPs in the field is acceptable. All changes must be documented and maintained with the SWPPP.

The most frequent construction site violation is not updating and maintaining the SWPPP. Making changes in the field is often expected since site conditions can change over time and all changes need to be documented on the SWPPP. When repairs are required, they must be implemented no later than seven calendar days after being identified during an inspection.

Notice of Termination

The requirements in the general permit must be followed until the coverage under the general permit has been terminated. To terminate coverage under the general permit, a Notice of Termination (NOT), found in Appendix B of the general permit, must be submitted. The NOT must be submitted within 30 calendar days of meeting any of the following conditions:

1. All earth-disturbing activities have been completed on the construction site and, if applicable, all construction support activities covered by the general permit, and the following requirements have been met:
   a. The stabilization has reached final stabilization for any areas disturbed during construction;
   b. All temporary construction materials, waste and waste handling devices have been removed and properly disposed of, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use on the site following termination of your general permit coverage;
   c. All temporary control measures, including silt fence, and which was installed and maintained during construction have been removed and properly disposed of, except those

that are intended for long-term use following termination of your general permit coverage; and

d. All potential pollutants and pollutant-generating activities associated with construction activities have been removed.

Retention of Records

Copies of the SWPPP, your inspection records, all reports required by the general permit, and records of the date used to complete the NOI and NOT must be maintained for a period of at least three (3) years from the date coverage under the general permit was terminated. SDDENR may extend the time period for retaining your records with a written notification to you.

Construction Signs

The purpose of the construction signs is to provide information to the general public. The sign must be located at a safe, publicly accessible location near the project site and include the following information:

1. The general permit tracking number (found on the cover page of your general permit and in the authorization letter); and
2. A contact name and phone number for obtaining additional project information

The construction sign needs to be located so that it is visible from the public road that is closest to the active part of the construction site and must be readily viewed from a public right-of-way. For linear construction sites, the sign may need to be relocated to areas actively under construction. The construction sign is typically located at the job trailer.

SDDENR/EPA Inspections

The SDDENR or EPA personnel may conduct one of following types of inspections:

1. **Complaint-driven inspections (no advanced notice):** If a complaint is filed, the SDDENR or EPA will conduct an inspection. Photos submitted by the complainant can initiate the procedures for a Notice of Violation (NOV) without a site visit.
2. **Reconnaissance inspections (a drive by inspection):** If SDDENR or EPA personnel do not see any issues, a more thorough inspection may not be needed. However, If SDDENR or EPA personnel do see any issues, they can enter the construction site and conduct an unplanned inspection.
3. **Comprehensive compliance inspections (scheduled ahead of time):** These are most commonly conducted by SDDENR personnel and are thorough inspections.

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

1. You will receive advance notification, unless the inspection is complaint driven or there is a history of noncompliance;
2. An exit interview will be conducted at the end of the inspection to discuss their findings; and
3. You will be provided the findings of the inspections in writing.

After an inspection, any violations discovered during the inspection 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 letter indicating the problems found during the inspection. A NOV will be issued if noncompliance continues. NOV's are typically issued for repeated noncompliance or negligence. It usually takes multiple noncompliance issues before an NOV will be issued. In both instances, a time frame is set for response and if no

response is submitted within the given time frame, the violation will be raised to a higher level and more severe penalties will be accessed.

Actions that can be taken for cases of noncompliance 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 SDDENR. If an agreement cannot be reached, the case will be forwarded to the SD Attorney General's Office for Civil Protection.

EPA's Top Ten Most Common Problems

The EPA has identified the 10 most common problems they have encountered during DOT construction site inspections. Here is the list of the Top Ten most common problems:

1. Not stabilizing portions of the project in a timely manner
2. Lack of BMP maintenance
3. Vehicle tracking off site
4. Poor BMP installation/inadequate BMPs
5. Sediment discharges offsite
6. Improper stockpile placement and no perimeter control
7. Improper material storage and handling of slurry wastes
8. Lack of storm drain inlet protection
9. Changes to SWPPP and modifications not made
10. Lack of documentation and inadequate records

Inspection tips

Enter every project site assuming you will be inspected, keep all paperwork completed, filed, and available. All changes made in the field must be documented 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 certified SDDOT personnel accompany the SDDENR or EPA inspector during a site visit. Use photographs to document the site before, during, and after construction. Be a good neighbor, SDDENR will respond to all public complaints. If SDDENR or EPA has scheduled an inspection, collect all records and have them readily available. Before the inspection, conduct a self-audit to ensure all records are complete and up to date. Many inspectors have advised that 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 receiving waters.

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 receiving waters. 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 stormwater 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 installed before construction activities can commence. Signage may be necessary to keep construction activities away from designated areas. Silt fence can be used in conjunction with 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 regularly to make sure that it is functioning properly to protect the designated area. If fencing is not installed before construction activities have commenced and sensitive areas have been disturbed by vehicle and equipment parking. Fencing should be installed as soon as possible to prevent further damage to the sensitive areas.

Stabilized Construction Entrances

Stabilized construction entrances are temporary sediment control devices installed at the entrance of the construction site. This BMP is used to limit the sediment track-out from vehicles leaving the construction site. Rock pads, cattle guards, and log/timbers are types of materials that can be used for stabilized construction entrances.

Stabilized construction entrances must be sized to accommodate vehicle length and turning radius.

Inspection and Maintenance

Inspect the stabilized construction entrances for excessive sediment build up. Remove sediment and/or rebuild the stabilized construction entrance as necessary to retain the effectiveness and prevent vehicle track-out. If unable to retain sediment on site, additional street cleaning may be required.

Dust Control

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

Inspection and Maintenance

The most common practice for the control of dust is applying water or other dust suppressants. Temperature, humidity, wind velocity, and wind direction will determine the amount and frequency of the application of dust suppressant. When using chemical stabilizers, they do not need to be applied as frequently as when applying water. Surface roughening, wind barriers, and walls are examples of other techniques that can be used for controlling dust. The best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of disturbed areas at one time. Dust control measures require constant attention and special care should be taken when 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 the drainage system or receiving waters.

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; and
5. Be prepared! Don't wait until there is a problem. Be sure the contractor has a plan in place and has educated their employees and subcontractors about the procedures and practices.

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

Stockpile Management

Stockpile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) into drainage systems or receiving waters.

Maintenance and Inspections

Protect all stockpiles from stormwater runoff using perimeter controls such as silt fences, berms, sandbags, or dikes. Locate stockpiles away from concentrated stormwater 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 relocating snow by plowing, dozing, or blowing snow to an area less likely to be impacted by the runoff from the snowmelt. 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 snowmelt. Avoid snow accumulation near drainage areas or conveyance systems so that the runoff from the snowmelt does not cause flooding due to blockage from snow and ice accumulation or overwhelming the drainage areas. Snow should be placed in a stabilized area of the site to reduce snow melt impacts.

Concrete Waste Management

Concrete Waste Management is procedures and practices designed to minimize or eliminate the discharge of concrete waste materials (washout, etc.) from entering the drainage system or receiving waters.

Inspection and Maintenance

Temporary concrete washout areas must be constructed and maintained to contain all water and concrete waste generated by concrete washout operations. A sign should be placed at the concrete washout site to inform concrete equipment operators of the location of the concrete washout areas. These washout areas should be placed a minimum of 50 feet from any storm drain inlet, receiving waters, or drainage facility. They must be in an area with easy access for the concrete equipment and away from traffic. Concrete washout areas must be cleaned and/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 receiving waters.

Inspection and Maintenance

When stabilized construction entrances are not effective at preventing sediment from being tracked out onto the roadway, other forms of sediment removal must be used. Street sweeping is effective at cleaning stabilized construction entrances, shoulders, and maintenance yards. Street sweeping should occur on a regular basis and may warrant daily sweeping if the site is in an area with clay and silt soils. The frequency of street sweeping should increase during dry season to remove any accumulated sediment before the start of the wet season.

Equipment Maintenance Areas

Equipment maintenance procedures and practices should be developed to eliminate or reduce pollutants from maintenance areas entering drainage areas or receiving waters.

Inspection and Maintenance

Equipment must be cleaned regularly to prevent a buildup of oil and grease. Berms, sandbags, and other barriers can be used around the perimeter of maintenance area to prevent stormwater contamination. Maintenance areas should be designated in the SWPPP. If applicable, comply with the Spill Prevention Control and Countermeasures (SPCC) requirements in 40 CFR part 112 and Section 311 of the Clean Water Act. Ensure adequate supplies are available at all times to handle spills, leaks, and disposal of used liquids. Use drip pans and absorbents under or around leaking equipment. Dispose of or recycle oil and oily wastes in accordance with other federal, state, tribal, or local requirements. Clean up spills or contaminated surfaces immediately, using dry clean up measures (do not clean contaminated surfaces by hosing the area down), and eliminate the source of the spill to prevent a discharge or a continuation of an ongoing discharge. Regularly inspect all equipment onsite and all equipment entering and exiting the construction site.

Appendix A: DOT 298 Form

Storm Water, Erosion, and Sediment Control Inspection Report DOT-298 (12-18)

Project Information		
Project Number:	**Inspection Type**	**Inspection Date / Time:**
PCN:		**Date of Last Rainfall:**
County:	☐ **Weekly** ☐ **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) ☐ Windshield ☐ Walking ☐ 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 Describe required corrective actions, maintenance, additions, or directions given to the contractor or subcontractor responsible.
	From	To		

General Comments

Modifications to Stormwater Pollution Prevention Plan (SWPPP)

All modifications to the SWPPP must be completed within 7 days following any of the items listed in Section 5.5 (1) of the SWPPP Checklist.

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

Storm Water, Erosion, and Sediment Control Inspection Report DOT-298 (12-18)

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. Include the general location of the area.

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

Compliance Certification (check only one)

☐ With the maintenance and improvement actions noted, the site is in compliance with the SWPPP and Stormwater Permit.

☐ The site is in potential noncompliance with the SWPPP or Stormwater Permit. (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.
In accordance with Section 734.3 of the Standard Specifications, the persons listed below have been trained and certified by the South Dakota Department of Transportation in the area of erosion and sediment control.

SDDOT Representative Name (Print):	Title:	Date:
Contractor Erosion Control Supervisor Name (Print):		Date:

Contractor Signature: _____

SDDOT Signature: _____

☐ The Contractor has been notified of all Modifications to the SWPPP.	Date:	Time:

The original document must be retained with the project SWPPP records as required by the Stormwater Permit.

Table of BMP Types
Add others as needed

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	
5	Erosion Control Blanket	12	Rock Check Dam	19	Wattles	26	
6	Flexible Channel Liner	13	Rock Rip Rap	20	Erosion Bales	27	
7	Silt Fence	14	Drop Inlet Protection	21	Triangular Silt Barrier	28	

Submit Electronically to DOT.298@state.sd.us
cc: Contractor

Appendix B: SDDENR General Permit

Permit Number: SDR100000

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

General Permit Authorizing Stormwater Discharges Associated with Construction Activities Under the South Dakota 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), Article 74:52, owners and operators of stormwater 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 April 1, 2018.

General permit coverage for the [PERMITTEE] shall become effective [EFFECTIVE DATE].

This General Permit and the authorization to discharge shall expire at midnight, **March 31, 2023.**

Signed this **23rd** day of **March, 2018,**

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 has been authorized.*

TABLE OF CONTENTS

1.0 DEFINITIONS

ARSD – Administrative Rules of South Dakota.

Best Management Practices (**BMPs**) – the schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants from the construction site. 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.

Borrow Areas – the areas where materials are dug for use as fill, either onsite or offsite.

Commencement of Construction Activities – the initial disturbance of soils (or 'breaking ground') associated with clearing, grading, or excavating activities or other construction-related activities (e.g., stockpiling of fill material).

Construction Site – the land or water area where construction activities will occur and where control measures will be installed and maintained. The construction site includes construction support activities, which may be located at a different part of the property from where the primary construction activity will take place, or on a different piece of property altogether. The construction site is often a smaller subset of the lot or parcel within which the project is taking place.

Construction Site Washout – as used in this general permit, refers to any wash waters derived from the cleaning of construction trucks and/or equipment including, but not limited to, concrete, mortar, grout, stucco, form release oils, paints, curing compounds, and other construction materials.

Construction Support Activity – a construction-related activity that specifically supports the construction activity and can include activities associated with concrete or asphalt batch plants, equipment staging yards, materials storage areas, excavated material disposal areas, and borrow areas.

Construction Waste – discarded material including, but not limited to, packaging materials, scrap construction materials, masonry products, timber, steel, pipe, electrical cuttings, plastics, and Styrofoam.

Control Measures – as used in this general permit, refer to any best management practice or other method, including narrative effluent limits, used to minimize erosion and sedimentation, and thereby prevent or reduce the discharge of pollutants to surface waters of the state.

Corrective Action – as used in this general permit, refers to any action taken to (1) repair, modify, or replace any control measure used at the site; (2) clean up and dispose of spills, releases, or other deposits found on the site; or (3) remedy a permit violation.

Dewatering – the act of draining or pumping rain water, ground water, or surface waters from building foundations, vaults, trenches, and other areas of the construction site.

Discharge – the addition of any pollutant or combination of pollutants to surface waters of the state from any point source.

Earth-Disturbing Activities – as used in this general permit, means actions taken to alter the existing vegetation and/or underlying soil of a site.

Effective Operating Condition – as used in this general permit, means a control measure is kept in effective operating condition if it has been implemented and maintained in such a manner that it is working as designed to minimize pollutant discharges.

Final Stabilization – on areas not covered by permanent structures, means either (1) vegetation has been established that provides a uniform (e.g., evenly distributed, without large bare areas) perennial vegetative cover with a density of 70 percent of the natural background vegetative cover, (2) permanent non-vegetative stabilization methods have been implemented to provide effective cover for exposed portions of the site, or (3) disturbed portions of a construction site on land used for agricultural purposes must be returned to pre-construction agricultural use.

Historic Property – any building, structure, object, district, area, or site that is significant in the history, architecture, archaeology, paleontology, or culture of the state, its communities or the nation as stated in SDCL 1-19A-2.

Infeasible – as used in this general permit, means not technologically possible or not economically practicable and achievable in light of best industry practices.

Larger Common Plan of Development or Sale – 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 as any announcement or piece of documentation (including a sign, public notice or hearing, sales pitch, advertisement, drawing, permit application, zoning request, computer design, etc.) or physical demarcation (including boundary signs, lot stakes, surveyor markings, etc.) indicating construction activities may occur on a specific plot.

Minimize – to reduce and/or eliminate to the extent achievable using control measures that are technologically available and economically achievable and practicable in light of best industry practices.

Municipal Separate Storm Sewer System – a conveyance or system of conveyances (including roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, manmade channels, or storm drains) that is owned or operated by the state or a municipality and is designed or used for collecting or conveying stormwater. This definition does not include combined sewers or conveyances that are part of a publicly-owned treatment works, as defined by ARSD 74:52:01:01(36).

Municipality – 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.

Natural Buffer – as used in this general permit, means an area of undisturbed natural cover surrounding surface waters within which construction activities are restricted. Natural cover

includes the vegetation, exposed rock, or barren ground that exists prior to commencement of construction activities.

Nonpoint Source – a source of pollution that is not defined as a point source.

Non-Stormwater Discharges – discharges that do not originate from runoff events. They can include, but are not limited to, discharges of process water, air conditioner condensate, non-contact cooling water, vehicle wash water, sanitary wastes, construction washout water, paint wash water, irrigation water, or pipe testing water.

Notice of Intent or **NOI** – the form (electronic or paper) provided by the Secretary required for authorization of coverage under this general permit (Appendix A).

Notice of Termination or **NOT** – the form (electronic or paper) provided by the Secretary required for terminating coverage under this general permit (Appendix B).

Operator – as used in this general permit and in the context of stormwater discharges associated with construction activity means any party associated with a construction project that meets either of the following two criteria:

1. The party has operational control over construction plans and specifications, including the ability to make modifications to those plans and specifications; or
2. The party has day-to-day operational control of those activities at a project that are necessary to ensure compliance with the general permit conditions (e.g., they are authorized to direct workers at a site to carry out activities required by the general permit).

The operator, along with the owner, is responsible for ensuring compliance with all conditions of this general permit and with development and implementation of the stormwater pollution prevention plan.

Pesticide – any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pests, or any substance or mixture of substances intended for use as a plant regulator, defoliant, or desiccant.

Note: drugs used to control diseases of humans or animals (such as livestock and pets) are not considered pesticides; such drugs are regulated by the Food and Drug Administration. Fertilizers, nutrients, and other substances used to promote plant survival and health are not considered plant growth regulators and thus are not pesticides. Biological control agents, except for certain microorganisms, are exempted from regulation as pesticides under FIFRA. (Biological control agents include beneficial predators such as birds or ladybugs that eat insect pests, parasitic wasps, fish, etc.)

Point Source – 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 discharge. Construction sites disturbing one (1) 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.

Pollutant-Generating Activities – at construction sites, as used in this general permit, means those activities that lead to or could lead to the generation of pollutants, either as a result of earth-disturbance or a related construction support activity. Some of the types of pollutants that are typically found at construction sites are:

1. Sediment;
2. Nutrients;
3. Heavy metals;
4. Pesticides and herbicides;
5. Oil and grease;
6. Bacteria and viruses;
7. Trash, debris, and solids;
8. Treatment polymers; and
9. Any other toxic chemicals.

Prohibited Discharges – as used in this general permit, means discharges that are not allowed under this general permit, see Section 2.3.

Qualified Local Program – a municipal program for stormwater discharges associated with construction sites that has been formally approved by SDDENR to act in lieu of the state program.

Regulated Substance – the compounds designated by the department 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, 45-6B-70, 45-6C-45, 45-6D-60, and 45-9-68, including pesticides and fertilizers regulated by the Department of Agriculture; the hazardous substances designated by the federal Environmental Protection Agency pursuant to section 311 of the Federal Water Pollution Control Act and Clean Water Act (33 United States Code sections 1251 to 1387, inclusive), as amended to January 1, 2011; the toxic pollutants designated by Congress or the Federal Environmental Protection Agency pursuant to section 307 of the Toxic Substances Control Act (15 United States Code sections 2601 to 2671, inclusive), as amended to January 1, 2011; the hazardous substances designated by the Federal Environmental Protection Agency pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (42 United States code sections 9601 to 9675, inclusive), as amended to January 1, 2011; 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 Event – a precipitation event or snowmelt that results in a measurable amount of surface runoff.

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

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

Section 303(d) List or 303(d) List – a list of South Dakota's water quality-limited surface waters requiring the development of Total Maximum Daily Loads (TMDLs) to comply with Section 303(d) Report is available on the SDDENR website. A link to a map of 303(d) listed waters, waters with approved TMDLs is available on the SDDENR stormwater webpage.

Stormwater – means, for the purpose of this general permit, stormwater runoff, snowmelt runoff, or surface runoff.

Stormwater Associated with Construction Activity – means a discharge of pollutants in stormwater to surface waters of the state from areas where construction site or construction support activities occur.

Stormwater Associated with Industrial Activity – means stormwater runoff, snow melt runoff, or surface runoff and drainage from industrial activities as defined in 40 C.F.R. Section 122.26(b)(14) (July 1, 2016).

Stormwater Pollution Prevention Plan or **SWPPP –** means a site-specific, written document that, among other things: 1) identifies potential sources of stormwater pollution at the construction site; 2) describes control measures to reduce or eliminate pollutants in stormwater discharges from the construction site; and 3) identifies procedures the owner or operator will implement to comply with the terms and conditions of this general permit. See Section 5.0 for details on the requirements for a SWPPP.

Surface Waters of the State – lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the federal Clean Water Act.

Surface Water Quality Standards – water quality standards adopted pursuant to South Dakota Codified Law §§ 34A-2-10 and 34A-2-11 or actual existing beneficial uses, whichever is higher, and effluent standards adopted pursuant to SDCL § 34A-2-13 or pursuant to the best professional judgment of the Secretary, whichever is applicable. If waters have more than one designated beneficial use and criteria are established for a parameter that is common to two or more uses, such as pH, the more restrictive criterion for the common parameter applies.

Temporary Stabilization – means a condition where exposed soils or disturbed areas are provided a temporary vegetative and/or non-vegetative protective cover to prevent erosion and sediment loss. Temporary stabilization may include temporary seeding, geotextiles, mulches, and other techniques to reduce or eliminate erosion until either final stabilization can be achieved or until further construction activities take place to re-disturb the area.

Total Maximum Daily Load or **TMDL** – means the sum of the individual wasteload allocations for point sources, load allocations for nonpoint sources, and natural background. TMDLs can be expressed in terms of mass per time, toxicity, or other appropriate measures.

Upset – 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.

U.S. EPA – the United States Environmental Protection Agency.

Waters of the State – 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.

Work Day – means, for the purpose of this general permit, a calendar day on which construction activities will take place.

2.0 COVERAGE UNDER THIS GENERAL PERMIT

2.1 Eligibility Requirements

This general permit shall apply to stormwater discharges from construction sites located within the state of South Dakota. Only those projects that meet all of the following eligibility requirements may be covered under this general permit:

1. You are the owner or operator of the construction project for which discharge will be covered under this general permit. The owner must obtain coverage under this general permit and all operators at the site must comply with the permit conditions.

2. Your project:

    a. Will disturb one (1) or more acres of land; or

    b. Will disturb less than one (1) acre of land but is part of a larger common plan of development or sale that will ultimately disturb one (1) or more acres of land; or

    c. Is less than one (1) acre, but has construction support activities required to be covered and the total area exceeds one (1) or more acres of land; or

    d. Has been designated by the Secretary or the United States Environmental Protection Agency (U.S. EPA) as needing a permit.

3. You have complied with all applicable requirements imposed by the applicable county, city, or other local government entities.

4. If your project will encroach, damage, or destroy a historic property included in the national register of historic places or the state register of historic places located in South Dakota, you must have approval from the South Dakota State Historic Preservation Office prior to submitting the Notice of Intent (NOI). You must attach an approval letter from the State Historic Preservation Office with the NOI.

2.2 Discharges Authorized

The following discharges shall be authorized under this general permit:

1. Stormwater discharges from projects detailed in Section 2.1.2.

2. Stormwater discharges from construction support activities provided:

    a. The support activity is directly related to the construction site required to have permit coverage;

    b. The support activity does not continue to operate beyond the completion of the construction activity at the project it supports. If the support activity continues past the initial permitted project, you must obtain a separate permit for those activities;

c. The support activity is included in the SWPPP as required by Section 5.0; and

d. Control measures are implemented for discharges from the support activity area.

3. Stormwater construction discharges combined with discharges from an industrial source, as long as:

   a. The industrial source is located on the same site as your construction activity; and

   b. You may not combine stormwater discharges from industrial and construction activities unless each source is covered by its own permit, or are not required to obtain permit coverage.

4. Discharges to waters for which there is a total maximum daily load (TMDL) allocation for sediment, suspended solids, and turbidity are covered only if you develop a SWPPP that is consistent with the assumptions, allocations, and requirements in the approved TMDL. If a specific numeric wasteload allocation has been established that would apply to discharges from construction activity, the permittee must incorporate that allocation into the SWPPP and implement necessary steps to meet that allocation.

2.3 Discharges Not Authorized

The following discharges are not authorized by this general permit:

1. **Post-Construction Discharges**. This general permit is not designed to address post-construction discharges after you have completed construction activities and achieved final stabilization at the site. Stormwater discharges associated with industrial activities must obtain coverage under a separate stormwater permit.

2. **Discharges Mixed with Non-Stormwater**. This general permit does not authorize discharges of non-stormwater.

3. **Discharges of Fill Material**. This general permit does not authorize you to discharge fill material into surface waters of the state. You 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 your discharge from a construction site if the discharge will cause, or have the reasonable potential to cause or contribute to, violations of Surface Water Quality Standards. In such cases, the Secretary may deny you coverage under the general permit or require you to obtain an individual Surface Water Discharge permit.

5. **Discharges Threatening Endangered Species**. This general permit does not authorize your discharge from a construction site if the discharge will not ensure the protection of species that are federally-listed as endangered under the federal Endangered Species Act.

6. **Discharges of Regulated Substances**. This general permit does not authorize you to discharge regulated substances, hazardous substances, or oil resulting from onsite spills. You are subject to the federal reporting requirements of 40 CFR Part 110, Part 117, and Part 302 relating to spills or other releases of oils or hazardous substances. You must report spills in excess of the reportable quantities as required in Section 7.1.

2.4 Requesting Permit Coverage

To request coverage under this general permit, you must submit a complete and accurate Notice of Intent (NOI) (Appendix A) to SDDENR at least **15 calendar days** prior to the commencement of construction activities at the site. ***The NOI must be signed by the owner of the property where construction activities will occur.***

1. You must identify the person(s) responsible for day-to-day operations at the construction site, if different from the owner. A Contractor Authorization Form, included in Appendix C, must be submitted to SDDENR as soon as a contractor is identified if the contractor was not identified on the NOI.

2. You are not prohibited from submitting a late NOI. When you submit a late NOI, your authorization to discharge is only for discharges that occur after SDDENR grants coverage. SDDENR reserves the right to take appropriate enforcement action for any unpermitted discharges that may have occurred between the commencement of construction activities and the time authorization for your discharge is granted.

3. SDDENR will not process incomplete NOIs.

4. You must submit a completed and signed NOI to SDDENR by emailing the NOI to stormwater@state.sd.us, or mailing the NOI to SDDENR at the address in Section 7.3.

5. SDDENR will review each complete NOI and make a decision to grant or deny coverage or request additional information. You will receive an authorization letter from SDDENR if permit coverage is granted for your project.

6. Upon the effective date of this general permit, the Secretary will terminate the existing general permit.

    a. If you are authorized under the existing general permit and you have submitted the Notice of Intent for Reauthorization Form (found in Appendix E) prior to permit expiration date, your coverage will automatically continue under the new general permit. Once the new general permit is issued, you will receive an authorization letter from SDDENR notifying you of the continued coverage.

b. Projects covered under the existing general permit must be in compliance with the conditions in the new general permit by **October 1, 2018.** You must still maintain compliance with all requirements in the existing general permit during the grace period. SDDENR may grant additional time on a case by case basis if necessary. To obtain such an extension, you must request it from SDDENR in writing.

2.5 Transferring Permit Coverage

If a new owner purchases a construction site or a portion of the site covered under this general permit, you are responsible for notifying the new owner(s) of the general permit requirements and communicating the importance of achieving final stabilization on the site. You must transfer permit coverage to the new owner. Appendix D includes a form for transferring permit coverage for all or a portion of a project or development to a new owner.

2.6 Terminating Permit Coverage

Until the Secretary terminates your coverage under this general permit, you are required to comply with all conditions and effluent limits in this general permit. To terminate coverage, you are required to submit a complete and accurate Notice of Termination (NOT), found in Appendix B, and signed in accordance with Section 7.4. You must submit the NOT within **30 calendar days** of meeting any one of the following conditions.

1. You have completed all earth-disturbing activities at your site and, if applicable, all construction support activities covered by this general permit, and you have met all the following requirements:

    a. You have met the stabilization requirements listed in Section 3.19 and have reached final stabilization for any areas disturbed during construction and over which you had control during the construction activities;

    b. You have removed and properly disposed of all temporary construction materials, waste and waste handling devices, and have removed all equipment and vehicles that were used during construction, unless intended for long-term use on the site following termination of your general permit coverage;

    c. You have removed and properly disposed of all temporary control measures, including silt fence, and of which you installed and maintained during construction, except those that are intended for long-term use following termination of your general permit coverage; and

    d. You have removed all potential pollutants and pollutant-generating activities associated with construction.

2. You have obtained coverage under an individual or alternative general permit that addresses the discharges from the construction site.

2.7 Reporting Requirements

On October 22, 2015, the U.S. EPA published in the federal register a rule that has made electronic reporting of permit and compliance monitoring information mandatory for all National Pollution Discharge Elimination System (NPDES) permits. These are referred to as Surface Water Discharge (SWD) permits in South Dakota. The final rule became effective December 21, 2015.

Phase II of the final rule requires that authorized state NPDES programs begin electronically collecting, managing, and sharing construction stormwater permitting information by December 21, 2020. This includes general permit reports such as Notices of Intent (NOI), Notices of Termination (NOT), and all other remaining NPDES program reports. SDDENR is currently developing programs to meet this requirement and will notify facilities as they become available.

Electronic reporting will be required once SDDENR has fully developed an electronic reporting system. In the interim, all general permit reports must be submitted by email (stormwater@state.sd.us), or to the address listed in Section 7.3.

A hybrid approach will be available for owners/operators that do not expect to submit NOIs for multiple projects. This approach will provide users the ability to electronically submit the data for construction stormwater general permit reports without using the electronic signature verification process. Following electronic submittal of the reports, a hard copy of the Certification of Applicant with an original signature must be mailed to SDDENR.

2.8 Requiring an Individual Permit or an Alternative General Permit

SDDENR may either deny coverage or require you to apply for an individual Surface Water Discharge permit or an alternative general permit. In considering whether we deny coverage or require an alternative permit, the following will be taken into consideration:

1. You cannot comply with the conditions of this general permit;

2. There has been a change 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 or revised for point sources covered by this general permit;

4. A water quality management plan is approved containing requirements applicable to your construction site;

5. Your discharge is a significant contributor of pollution to surface waters of the state or it presents a health hazard; or

6. You are discharging to an impaired water body and the best management practices are not sufficient to implement the assigned wasteload allocations in a Total Maximum Daily Load (TMDL) approved by the U.S. EPA.

2.9 Continuation of Coverage for Expired General Permit

If you wish to continue to be covered by this general permit after its expiration date, you must submit a Notice of Intent for Reauthorization (Appendix E). An expired general permit continues in full force and effect until a new general permit is issued. You will continue to have coverage under the current general permit until a new general permit is issued.

2.10 Requirement to Post Notice of Your General Permit Coverage

You must post a sign or other notice at a safe, publicly accessible location near the project site.

1. At a minimum, your notice must include the general permit tracking number (found on the cover page of your general permit and in the authorization letter) and a contact name and phone number for obtaining additional project information.

2. The notice must be located so that it is visible from the public road that is nearest to the active part of the construction site and must be readily viewed from a public right-of-way.

2.11 Property Rights

1. The Secretary's issuance of this general 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.

2. The State does not warrant that your compliance with this general permit, design criteria, approved plans and specifications, 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. You are 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, that may result from actions taken under this general permit.

2.12 Reopener Provisions

SDDENR may reopen and modify this general permit to include appropriate conditions (following proper administrative procedures) if state or federal statutes or regulations change.

2.13 Severability

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

2.14 Permit Actions

This general permit may be modified, revoked and reissued, or terminated by the Secretary for cause. Any request for such changes does not stay any permit condition.

3.0 EFFLUENT LIMITS

You are required to comply with the following effluent limits for discharges from your construction site and/or from construction support activities representing the degree of effluent reduction attainable through the best practicable control technology currently available to minimize the pollutants present in the discharges. In order to achieve compliance with the conditions of this permit, you are required to address the following effluent limits by developing a Stormwater Pollution Prevention Plan (SWPPP) as required in Section 5.0. If you determine any of the following limits are infeasible, you must document your rationale in your SWPPP.

Stormwater discharges regulated under this general permit that may discharge to a surface water with an approved TMDL for sediment, total suspended solids, or turbidity must be consistent with the TMDL and any associated wasteload allocation (WLA) for construction or stormwater related discharges. In most cases compliance with this permit will be considered adequate, unless otherwise notified by the Secretary. The Secretary may require an individual permit, as referenced in Section 2.8, should compliance with this general permit be deemed insufficient to meet relevant WLAs.

3.1 Proper Operation and Maintenance

You must properly operate and maintain all sediment and erosion controls, best management practices, treatment systems, and any other control(s) used to achieve compliance with the conditions of this general permit in accordance with manufacturer's specifications, good engineering practices, and design specifications of the SWPPP.

3.2 Erosion and Sediment Control Requirements

1. You must design, install, and maintain effective erosion and sediment controls to minimize soil erosion and the discharge of pollutants during earth-disturbing activities. The stormwater controls must be designed to function properly and withstand a 2-year, 24-hour precipitation event. See Appendix F for instructions to determine your construction site's precipitation for a 2-year, 24-hour event.

2. You must account for the following factors when designing your erosion and sediment controls:

    a. The nature of resulting stormwater runoff and run-on at the construction site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. Controls must be able to control stormwater volume, velocity, and flow rates from a 2-year, 24-hour precipitation event across the construction site.

    b. Anticipated soil characteristics at the construction site, including soil type and range of particle sizes.

3.3 Installation Requirements

1. You must complete installation of down gradient erosion and sediment controls before any land disturbing activity takes place in order to control discharges.

2. You must install all other control measures planned for each phase of the project as described in your SWPPP as soon as conditions on the site allow.

3. You must install all control measures using good engineering practices and follow the manufacturer's specifications. Any departures from the manufacturer's specifications must reflect good engineering practices and must be explained in your SWPPP.

3.4 Perimeter Controls

You must have effective down gradient sediment controls, and controls for any side slope boundaries deemed appropriate for individual site conditions, to minimize pollutant discharges from the construction site.

3.5 Sediment Basins

If you use a sediment basin to control the discharge of sediment from the site, you must meet the requirements listed below.

1. Sediment basins must be designed, constructed, and operated in accordance with the requirements found in your local city or county drainage board.

2. Outlet structures must withdraw water from the surface of the sediment basin or impoundment to allow for proper sediment removal in the pond.

3. Erosion controls and velocity dissipation devices must be used to prevent erosion within the sediment basin as well as at inlets and outlets from the basin.

4. Sediment basins must be situated outside of surface waters and any natural buffers established under Section 3.10. The basins must be designed to avoid collecting water from wetlands and other water bodies.

3.6 Minimize Sediment Track-Out

You must minimize the track-out of sediment from the construction site where vehicles leave the site. To comply with this requirement, you must:

1. Restrict vehicle use to properly designated access points;

2. Use appropriate stabilization techniques at all construction site access point(s) so sediment removal occurs prior to vehicle exit.

3. Where sediment has been tracked out from your site onto offsite streets, other paved areas, and/or sidewalks, remove the deposited sediment by the end of the same work

day in which the track-out occurs. You must remove the track-out by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. You are prohibited from hosing or sweeping tracked-out sediment into storm drain inlet, surface waters of the state, or any stormwater conveyance unless the conveyance is connected to a sediment basin, sediment trap, or similar effective control. You must obtain approval from the owner of the sediment traps before hosing or sweeping sediment into those controls.

3.7 Remove Offsite Accumulation

If sediment escapes the construction site, you must initiate removal of the offsite accumulations to minimize impacts by the end of the same work day. You must revise your SWPPP and implement controls to minimize further offsite accumulation.

3.8 Minimize Dust

You must minimize the generation of dust at the construction site to avoid pollutants from being deposited into surface waters of the state. This can be accomplished through the appropriate application of water or other dust suppression techniques.

3.9 Minimize Run-on

You must minimize run-on to your construction site.

3.10 Provide Natural Buffers

You must comply with the following requirements if disturbed portions of the construction site are within fifty (50) feet of 1) a lake assigned immersion recreation or limited contact recreational beneficial uses in ARSD 74:51:02:02 and listed in ARSD 74:51:02:04; or 2) a river or stream assigned any of the warmwater or coldwater fish life propagation beneficial uses in ARSD 74:51:03:02 and listed in ARSD 74:51:03:04 to 74:51:03:27, inclusive.

1. Provide and maintain a 50-foot undisturbed natural buffer.

    a. When the natural buffer between the disturbed area(s) and surface waters of the state is less than fifty (50) feet, you must provide a combination of undisturbed buffer and supplemental erosion and sediment controls that achieves the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

    b. When no undisturbed buffer can be provided between the disturbed area(s) and surface waters of the state, you must provide erosion and sediment controls that achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

    c. Document in your SWPPP how any undisturbed natural buffer and the supplemented erosion and sediment controls achieve the sediment load reduction equivalent to a 50-foot undisturbed natural buffer.

2. Direct surface runoff to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges.

3. Delineate and clearly mark all natural buffer areas with flags, tape, or other similar marking device. No construction or other activity should occur in the delineated buffer area.

4. **Exception.** You are not required to maintain a 50-foot undisturbed natural buffer or install additional controls if there is no discharge of stormwater to surface waters of the state through the area between your site and the surface waters. This includes situations where you have implemented control measures, such as a berm or other barrier, to prevent such discharges.

3.11 Preserve Topsoil

You must preserve native topsoil on your site, unless infeasible. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.

3.12 Minimize Steep Slope Disturbance

You must minimize the disturbance of slopes that are greater than a three horizontal to one vertical (3:1) slope, unless infeasible.

3.13 Protect Storm Drain Inlets

1. You must protect all storm drain inlets that receive stormwater flows from the construction site by using appropriate best management practices during construction to minimize the discharge of pollutants from the site.

2. You must maintain the inlet protection until you have permanently stabilized all sources that have the potential to discharge pollutants to the inlet. If local officials require you to remove the inlet controls during the winter, you must install alternative controls to prevent sediment from entering the storm drain inlet.

3.14 Erosive Velocity Control

1. You must use erosion controls and velocity dissipation devices where necessary along the length of stormwater conveyance channels and outlets to minimize erosion of the channel, adjacent stream bank, slope, and downstream waters.

2. You must provide energy dissipation BMPs prior to connecting pipe or culvert outlets to surface water.

3. You must control the stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion and scour in the immediate vicinity of discharge points.

3.15 Minimize Soil Compaction

In areas of your site where final vegetative stabilization or infiltration will occur, you must either:

1. Restrict vehicle and equipment use in these locations to avoid soil compaction; or

2. Condition areas of compacted soil prior to seeding or planting to support vegetation growth.

3. **Exception.** You are not required to minimize soil compaction where the intended function of a specific area of the site dictates that soil be compacted.

3.16 Minimize Exposed Soil

You must schedule and sequence soil disturbing and stabilizing activities to minimize the amount and duration of soil exposure to erosion and sedimentation by wind, rain, surface runoff, and vehicle tracking. Consider factors such as high precipitation seasons when scheduling soil disturbing activities.

3.17 Protect Stockpiles

For any stockpiles or land clearing debris you must:

1. Locate the stockpiles and debris outside of any natural buffers established as required in Section 3.10 and away from any stormwater conveyances, drain inlets, and areas where stormwater flow is concentrated;

2. Protect the stockpiles debris from contact with stormwater run-on by using temporary sediment controls, berms, or other BMPs;

3. Properly maintain and position stockpiles to minimize dust generation and wind transport of sediment; and

4. Minimize stormwater runoff from the piles by properly positioning stockpiles and debris or installing effective sediment controls.

5. You are prohibited from placing stockpiles in surface waters of the state.

3.18 Stabilization Requirements

You are required to stabilize exposed portions of your site in accordance with the requirements of this section. You are responsible for implementing winter stabilization methods during frozen ground conditions if the site was not stabilized prior to the ground freezing.

1. **Deadline to Initiate Stabilization.** You must begin soil stabilization measures by the following work day whenever earth-disturbing activities have permanently or temporarily ceased on any portion of the site.

a. Earth-disturbing activities have permanently ceased when you complete clearing, grading, and excavation within any area of your site that will not include permanent structures.

b. Earth-disturbing activities have temporarily ceased when you cease clearing, grading, and excavation within any area for a period of at least **14 calendar days**, but will resume such activities in the future.

2. **Deadline to Complete Temporary Stabilization**. As soon as practicable, but no later than **14 calendar days** after initiating soil stabilization measures, you are required to have completed:

   a. All activities necessary to initially seed or plant the area to be stabilized for vegetative stabilization practices.

   b. The installation or application of all non-vegetative measures.

   c. As soon as practicable after seeding or planting, select, design, and install non-vegetative erosion controls (e.g., mulch or rolled erosion control products) to prevent erosion on the seeded or planted areas while vegetation establishes.

3. **Criteria for Final Stabilization**. To be considered as having reached final stabilization, you must meet the criteria below based on the type of cover you are using.

   a. **Vegetative Stabilization**. If you are seeding or planting vegetation to stabilize the site, you must meet the following requirements:

      i. Provide 70 percent or more of the density of coverage that was provided by vegetation prior to commencement of construction activities.

      ii. Provide perennial vegetative cover.

      iii. Minimize the presence of invasive species.

   b. **Non-Vegetative Stabilization**. If you are using non-vegetative controls for final stabilization at your site, the controls must provide effective cover to properly stabilize the exposed portions of your site.

   c. **Return to Pre-construction Agricultural Land Use.** 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 purposes, such as buffer strips immediately next to surface waters and areas not being returned to pre-agricultural use must meet the final stabilization criteria listed in (a) and (b) above.

4. **Site Specific Stabilization Requirements**. If you are constructing in the specific areas listed below, you must complete the following stabilization requirements as soon as practicable, but no later than the deadlines listed below after initiating soil stabilization measures:

    a. Stream diversions or drainage ditches that divert water around or drain water from your construction site must be stabilized with appropriate controls prior to connection with any surface water.

    b. For stockpiles that will be unused for 14 or more days, provide cover or appropriate temporary stabilization consistent with Section 3.18.

3.19 Maintenance Requirements

1. **Effective operating condition.** You must ensure that all erosion and sediment controls remain in effective operating condition until final stabilization is complete. At a minimum, you must:

    a. Remove sediment from sedimentation basins when the design capacity has been reduced by 50% or more.

    b. Remove sediment from sediment controls before the deposit reaches 50% of the above-ground height of the control.

    c. Repair vegetative buffers if they become silt-covered, contain rills, or are otherwise rendered ineffective.

    d. You must repair and stabilize eroded areas by the end of the same work day they are identified. If repair is infeasible, you must implement alternative control measures.

    e. Clean inlet protection devices when sediment accumulates, or when the filter becomes clogged, or performance is compromised.

    f. Ensure that all controls remain in effective operating condition and are protected from activities that would reduce their effectiveness.

    g. All nonfunctional BMPs must be repaired, replaced, maintained or supplemented with functional BMPs. If a nonfunctioning BMP is supplemented, the nonfunctional BMP shall be removed.

2. **Deadline for maintenance.** If you find a problem or if your inspections identify that control measures are not operating effectively, you must make the necessary repairs or modifications as follows:

    a. If you discover a problem that does not require repair or replacement, you must initiate work to fix the problem on the same day. If the problem is identified at a time in the work day when it is too late to complete the corrective actions, you must initiate work to fix the problem on the following work day or before the next anticipated runoff event, whichever comes first.

    b. If you need to install new erosion or sediment controls or need to complete repairs, you must complete the work before the next anticipated runoff event or by no later than seven (7) calendar days from the time the problem is discovered, whichever comes first.

    c. You must modify your SWPPP within seven (7) calendar days of completing the work. The SWPPP must address any changes to the controls and must detail the necessary steps to prevent similar damage in the future.

3.20 Pollution Prevention Procedures

You must design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants from the activities listed below. Spills must be reported as required in Section 7.1 of this general permit.

1. **Prohibited Discharges.** You are prohibited from discharging the following from your construction site:

    a. Wastewater from washout and cleanout of concrete, stucco, paint, form release oils, curing compounds, and other construction materials.

    b. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.

    c. Detergents, soaps, or solvents used in vehicle and equipment washing.

    d. Toxic or hazardous substances from a spill or other release.

    e. Waste, garbage, floatable debris, construction debris, and sanitary waste.

2. **Fueling and Maintenance of Equipment or Vehicles**. If you fuel or maintain equipment or vehicles at your site, you must minimize the discharge of spilled or leaked materials from the area where these activities take place.

3. **Washing of Equipment and Vehicles**. You must provide an effective means of minimizing the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other types of washing. The washing must be limited to a defined area of the site and must be properly disposed.

4. **Management of Construction Products, Chemicals, Materials, and Wastes**. You must properly store, handle, and dispose of any construction products and materials, chemicals, landscape materials, and wastes in order to minimize the exposure to stormwater. Products or wastes that are either not a source of contamination to stormwater or are designed to be exposed to stormwater are not held to this requirement. Requirements are as follows:

    a. You must cover or otherwise protect any materials that have the potential to leach pollutants in order to minimize contact with stormwater and prevent the discharge of pollutants.

    b. Clean up spills by the end of the same work day in which the spill occurred, using dry clean-up methods where possible, and dispose of used materials properly. Do not clean surfaces or spills by hosing the area down. Eliminate the source of the spill to prevent a discharge or continuation of an ongoing discharge.

    c. For registered pesticides and fertilizers, you must comply with all application and disposal requirements included on the label. Pesticides and fertilizers must be stored under cover or other effective means designed to minimize contact with stormwater. You must document any departures from the manufacturer's specifications for applying fertilizers and pesticides.

    d. Store all diesel fuel, oil, hydraulic fluids, other petroleum products, and other chemicals and products in water-tight container.

    e. Hazardous or toxic wastes that may be present at construction sites include, but are not limited to, paints, solvents, petroleum-based products, wood preservatives, additives, curing compounds, acids, and alkaline materials. For these materials and wastes, you must:

        i. Separate hazardous or toxic wastes and materials from construction and domestic waste.

        ii. Store hazardous or toxic wastes and materials in sealed containers and provide secondary containment as applicable. These containers must be constructed of suitable materials to prevent leakage and corrosion. These containers must be labeled in accordance with the applicable Resource Conservation and Recovery Act (RCRA) requirements and all other applicable federal, state, or local requirements.

        iii. Dispose of hazardous or toxic wastes in accordance with the manufacturer's recommended method of disposal and in compliance with federal, state, and local requirements.

f. You must provide effective containment for all liquid and solid wastes generated by washout operations including, but not limited to, concrete, stucco, paint, form release oils, curing compounds, and other construction materials related to the construction activity. For these materials and wastes, you must comply with the following requirements:

   i. Designate areas to be used for washout and cleanout activities. The containment must be designed so that it does not result in runoff from washout operations or during runoff events;

   ii. Install signs adjacent to each washout facility directing site personnel to use the proper facilities for concrete disposal and other washout wastes;

   iii. Direct all wash water into a leak-proof container or leak-proof pit;

   iv. Do not dump liquid wastes in the storm sewers; and,

   v. Clean up and properly dispose of any accumulated wastes in designated waste containers.

g. You must provide proper waste disposal receptacles of sufficient size and number to handle construction wastes including, but not limited to, packaging materials, scrap construction materials, masonry products, timber, pipe, and electrical cuttings, plastics, Styrofoam®, concrete, and other trash or building materials.

   i. For sanitary waste, you must position portable toilets so they are secure and will not be tipped or knocked over. You must properly remove and dispose of wastes from the portable toilets.

3.21 Construction Dewatering

You are prohibited from discharging from dewatering activities, including discharges from dewatering of trenches and excavation, unless the discharges are managed by the following controls:

1. You shall not discharge toxic pollutants in toxic amounts.

2. Your discharge shall not impart a visible film or sheen to the surface of the receiving water or adjoining shoreline.

3. Your discharge shall not contain visible pollutants. You must visually monitor the discharge for suspended solids. If you observe suspended solids in the discharge, you must implement the following requirements:

   a. You must install additional best management practices and update your stormwater pollution prevention plan to reduce the visible solids.

b. You must sample the dewatering discharge for total suspended solids on a daily basis until there is no longer a discharge of visible solids. The samples must be analyzed in accordance with Title 40 of the Code of Federal Regulations, Part 136. If the total suspended solids value exceeds 53 mg/L in any sample or measurement, you must cease the dewatering discharge to surface waters of the state until you can demonstrate the additional best management practices are sufficient to eliminate the visible pollutants. You must also document this in your stormwater pollution prevention plan (SWPPP).

4. You must use best management practices to minimize or prevent stream channel scouring or erosion caused by dewatering discharges.

5. You cannot add chemicals to the discharge without prior approval from SDDENR.

6. You must obtain a Temporary Water Right. Contact SDDENR Water Rights Program at (605) 773-3352 for more information and to obtain a temporary water right.

4.0 INSPECTION REQUIREMENTS

You are required to conduct site inspections to determine the effectiveness of your control measures and your compliance with the conditions of the general permit.

4.1 Person(s) Responsible for Inspecting the Site

The person(s) inspecting your site may be a member of your staff or a third party you hire to conduct the inspections. You are responsible for ensuring the person who conducts the inspection is knowledgeable in the principles and practice of erosion and sediment controls and pollution, possesses the skills to assess conditions at the site that could impact stormwater quality, and is able to assess the effectiveness of any control measures selected and installed to meet the requirements of the general permit.

4.2 Frequency of Inspections

At a minimum, you must conduct a site inspection at the following frequencies:

1. Once every 7 calendar days; or

2. Once every 14 calendar days **and** within 24 hours of precipitation that exceeds 0.25 inches or snowmelt that generates runoff. You must keep a properly maintained rain gauge on your site.

4.3 Reduction of Inspection Frequency

You may reduce your inspection frequency from the requirements above under the following circumstances. You must document the beginning and ending dates of these periods in your inspection records.

1. **Partial final stabilization.** You may reduce the frequency of inspections to once per month on any portion of your site where you have reached final stabilization. If construction activity resumes in this portion at a later date, you must increase the frequency as required in Section 4.2 above.

2. **Frozen conditions.** If you are suspending earth-disturbing activities due to frozen conditions and all disturbed areas of the site have been temporarily or permanently stabilized as required in Section 3.19, you shall conduct inspections at least once per month. You must resume weekly inspections by no later than March 1st of each year until your site is permanently stabilized and you have submitted a Notice of Termination (NOT) in accordance with Section 2.6.

4.4 Areas that Need to Be Inspected

During your site inspections you must, at a minimum, inspect the following areas:

1. All areas that have been cleared, graded, or excavated and have not yet reached final stabilization;

2. All sediment and erosion control measures and best management practices, including inlet protection;

3. Vegetated buffers;

4. Stockpiles, chemical and fuel storage, fertilizer and pesticide storage and other material, waste, borrow, and/or equipment storage and maintenance areas;

5. All areas where stormwater typically flows within the site, including drainage ways designed to divert, convey, and/or treat stormwater;

6. All points of discharge from the site including surface waters, drainage ditches, and conveyance systems; and,

7. All dewatering activities at the site.

8. **Exception.** You are not required to inspect areas that, at the time of the inspection, are unsafe for your inspection personnel. A detailed description of the situation must be documented in your inspection records explaining the reason the site conditions prevented the inspection.

4.5 Requirements for Inspections

During your site inspections you must, at a minimum:

1. Check whether all erosion and sediment controls and best management practices are implemented and functioning to minimize pollutant discharges. Determine if you need to replace, repair, or maintain any controls.

2. Check for spills, leaks, or other accumulation of pollutants on the site, or for the presence of conditions that could lead to spills, leaks, or other accumulations of pollutants on site. Determine if you need to install additional controls or take corrective actions to prevent the discharge of these pollutants.

3. Determine if site conditions have changed and if current controls are still effective in controlling pollutants from leaving your site. Identify any locations where new or modified control measures are necessary.

4. Check for signs of erosion, scour, and sediment deposits that have occurred on or off the construction site:

    a. Inspect the discharge points and, where applicable, the banks of any surface waters of the state flowing within your property boundaries or immediately adjacent to your property.

    b. Identify areas where you need to correct erosion and remove sediment.

c. Determine if you need controls to reduce the velocity of the discharge or prevent further erosion and sedimentation.

5. If a discharge is occurring during your inspection, you are required to:

   a. Identify all points of the property where there is a discharge;

   b. Observe and document the visual quality of the stormwater discharge and note the characteristics of the discharge, including color, odor, floating, settled, or suspended solids, foam, oil sheen, and other obvious indicators of stormwater pollutants; and

   c. Document whether your control measures are operating effectively. Describe any controls that are not clearly operating as intended or are in need of maintenance.

6. Identify all incidents of noncompliance that you observe.

7. Based on the results of your inspection, you must initiate corrective action(s) where needed.

4.6 Inspection Report

You must complete an inspection report in conjunction with each site inspection.

1. Each inspection report must be maintained in accordance with the requirements in Section 7.3 and must include the following information;

   a. Date and time of the inspection.

   b. Names and titles of the personnel conducting the inspection.

   c. Date and amount of most recent precipitation event, as well as if runoff was flowing onsite and/or offsite at the time of the inspection.

   d. A summary of your inspection findings, covering, at a minimum, the observations you made as required in Sections 4.4. and 4.5;

   e. Specific locations where maintenance, additional best management practices, cleanup, or corrective action is needed;

   f. The results of the total suspended solids levels in any dewatering discharge, as required by Section 3.21; and

   g. A summary of any corrective actions taken in response to the inspection findings, including any changes made to the SWPPP.

2. If you have determined it is unsafe to inspect a portion of your site, you must describe the reason(s) you found it to be unsafe and specify the locations that were not inspected.

3. If an inspection does not identify any incidents of noncompliance, you must include a statement in the report that the site is in compliance with the SWPPP and the general permit.

4. You must sign and certify each inspection report in accordance with the signatory requirements found in Section 7.4.

5.0 STORMWATER POLLUTION PREVENTION PLAN

You must develop a stormwater pollution prevention plan, also referred to as a "SWPPP," to be covered under this general permit. Stormwater management documents developed under other regulatory programs may be included or incorporated by reference in the SWPPP, or used in whole as a SWPPP if it meets the requirements of this section.

5.1 SWPPP Deadlines

1. You must develop the SWPPP **prior** to the submittal of the NOI.

   Note: If you were covered under the February 1, 2010, general permit and reauthorized under this general permit, you must update your SWPPP to comply with the conditions of this general permit by **October 1, 2018**.

2. You must implement and maintain the SWPPP for any construction activity requiring this general permit until final stabilization is reached.

5.2 TMDL

For projects that discharge stormwater to a water body listed as impaired under section 303(d) of the Federal Clean Water Act due to sediment, suspended solids, or turbidity, you must identify the water body and impairment in the SWPPP. Your SWPPP must describe and conform to any Wasteload Allocation (WLA) for the water body as required in Section 2.2.4

5.3 SWPPP Contents

You must develop your SWPPP to ensure compliance with the effluent limits in Section 3.0. Your SWPPP must include the following information, at a minimum.

1. **Personnel**. Your SWPPP must identify those person(s), by name or position, who are knowledgeable and experienced in the application of erosion and sediment control BMPs and who are responsible for the development and implementation of any portion of the SWPPP, for any later modifications to the SWPPP, and for compliance with the requirements of this general permit.

2. **Staff Training**. The SWPPP shall outline how employees and responsible parties shall be trained on the implementation of the SWPPP. Training must be provided at least annually, as new employees or responsible parties are hired, or as necessary to ensure compliance with the SWPPP and this general permit. Employees and responsible parties include individuals who are responsible for conducting inspections or for the design, installation, maintenance, or repair of stormwater controls.

3. **Description of Construction Activities**. Your SWPPP must include a narrative description of the nature of your construction activities, including the following:

a. A description of the overall project and type of construction activities to occur on the site and a description of the final completed project;

b. The total size of the project and total area expected to be disturbed by construction activities;

c. The maximum area expected to be disturbed at any one time;

d. Description of the existing vegetation at the site and an estimate of the percent of vegetative ground cover;

e. A description of the soil within the disturbed areas;

f. The name of the surface waters or municipal separate storm sewer system at or near the disturbed area that could potentially receive discharges from the project site;

g. Any construction support activity areas; and,

h. The intended sequence and estimated dates of construction activity for the following:

i. Implementation of BMPs, including when they will be operational and an explanation of how you will ensure the control measures are installed by the time each phase of earth-disturbing activity begins.

ii. Commencement and duration of earth-disturbing activities, including clearing and grubbing, mass grading, site preparation (i.e., excavating, cutting and filling), final grading, and creation of soil and vegetation stockpiles requiring stabilization.

iii. Cessation, temporary or permanent, of construction activities on the site or in designated portions of the site.

4. **Site Map.** You must include a legible site map depicting the following features and boundaries of the project:

a. Pre-construction site conditions, including existing vegetative and non-vegetative cover (e.g. – forest, pasture, pavement, structures, etc.);

b. Locations where earth-disturbing activities will occur, noting any phasing of construction activities;

c. Approximate slopes before and after major grading activities. Note areas with a slope greater than three horizontal to one vertical (3:1);

d. Topography of the site;

e. Drainage patterns of stormwater and authorized non-stormwater flows from the site property before and after major grading activities. Mark the flow direction with arrows on the map.

f. Locations and names, where appropriate, of all surface waters of the state that exist within or in the immediate vicinity of the site and could potentially receive discharges from the project site.

g. Locations of any surface water crossings, noting areas where work near waterbodies is necessary;

h. Location of any stormwater conveyances including, but not limited to, sediment ponds, ditches, pipes, swales, stormwater diversions, culverts, and ditch blocks;

i. Discharge locations, including locations of any storm drain inlets on or in the immediate vicinity of the site that could potentially receive discharges from the project site;

j. Locations where stormwater or allowable non-stormwater will be discharged to surface waters of the state on or in the immediate vicinity of the site.

k. Locations where sediment, soil, or other construction materials will be stockpiled;

l. Designated site access points;

m. Locations of structures and other impervious surfaces upon completion of construction;

n. Natural buffer boundaries and widths;

o. Locations of fueling activity, vehicle and equipment maintenance areas, designated wash water collection areas, lubricant and chemical storage, paint storage, material storage, staging areas, and debris collection areas;

p. Locations of all activities that could potentially generate pollutants at the site, such as dumpsters, chemical storage, construction site washout, portable toilets, or equipment storage.

q. Location and types of all sediment and erosions controls, velocity dissipation devices, post-construction controls, and all other BMPs used on the site.

r. Locations of construction support activities covered by this general permit.

5. **Description and Maintenance of Control Measures.** Your SWPPP must include a narrative description of the erosion and sediment control measures that will be implemented during construction at your site to meet the conditions of this general permit. For each control measure you must provide a narrative on the following:

a. A timeframe for the installation, maintenance, and removal (if necessary) of all selected BMPs for each phase of construction activity;

b. Your rationale for the selection of all BMPs, including calculations as necessary;

c. Whether selected BMPs are temporary or permanent;

d. A description of maintenance specifications and procedures;

e. A description of structural diversion practices intended to divert flows from exposed soils, store flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site;

f. A description of the removal of any temporary stormwater conveyance; and

g. A description of the temporary and final stabilization of areas of exposed soil where construction activities have been completed or temporarily ceased. Your SWPPP must describe the specific vegetative and/or non-vegetative practices you will use to comply with the stabilization requirements in Section 3.19, along with the reasons for choosing each practice.

6. **Procedures for Inspections.** The SWPPP must describe the procedures you will follow for conducting site inspections and, where necessary, taking corrective actions. The following information must also be included in your SWPPP:

   a. Personnel responsible for conducting inspections;

   b. Required frequency of inspections;

   c. Rationale for reduction of inspection frequency; and,

   d. Any inspection checklists or other forms that you will use.

7. **Post Construction Stormwater Management.** You must identify stormwater management practices that will be installed during the construction process to control pollutants in stormwater discharges occurring after construction operations have been completed. Maintenance for onsite stormwater management features is the responsibility of the permittee until the NOT is submitted or the feature is accepted by the party responsible for long term maintenance. The following information must be included in your SWPPP:

   a. An explanation of the technical basis used to select the practices to control pollution where flows exceed pre-development levels;

   b. A description of structural stormwater management practices such as stormwater ponds, open vegetated swales, natural depressions to allow

infiltration of runoff onsite, and sequential systems that combine several practices or other post construction stormwater management features; and

c. The location of velocity and energy dissipation devices placed at discharge points and appropriate erosion protection for outfall channels and ditches.

8. **Pollution Prevention Procedures**

a. **Spill Prevention and Response Procedures**. Your SWPPP must describe the procedures you will follow to prevent and respond to spills and leaks, including:

i. Procedures for expeditiously stopping, containing, and cleaning up spills, leaks, and other releases. The SWPPP must identify the name or position of the employee(s) responsible for detection and response of spills and leaks;

ii. Procedures for notification of appropriate facility personnel, emergency response agencies, and regulatory agencies as required by Section 7.1; and,

iii. Ways to prevent reoccurrence of such releases and steps to prevent any such releases from contaminating stormwater runoff. The SWPPP shall be modified and changes implemented as appropriate.

b. **Waste Management Procedures**. The SWPPP must describe procedures for how you will handle and dispose of all wastes generated at your site, including, but not limited to, clearing and demolition debris, sediment removed from the site, construction and domestic waste, hazardous or toxic waste, and sanitary waste.

9. **Construction Site Pollutants**

a. You must include information in your SWPPP about all activities that could generate pollutants at your site. Examples of pollutant-generating activities include, but are not limited to: paving operations; concrete, paint, and stucco washout; solid waste storage and disposal; storage of fertilizers, pesticides, solvents, fuels, and soils. You must include in your SWPPP a description of the removal of construction equipment and vehicles and any cessation of any pollutant generating activities.

b. You must include an inventory of the pollutants and chemicals associated with your construction activity and consider where potential spills and leaks could occur.

c. If SDDENR approves the use of water treatment chemicals, your SWPPP must include:

i. A listing of all water treatment chemicals planned for use at the site and why these chemicals were selected;

ii. The proper dosage and method of application for all water treatment chemicals;

iii. All applicable Safety Data Sheets (SDS) for chemicals planned to be used;

iv. Schematic drawings of any controls or treatment system used for the application of the water treatment chemicals;

v. A description of how the chemicals will be stored;

vi. Copies of the applicable manufacturer's specifications regarding the use of the water treatment chemicals and chemical treatment systems;

vii. A description of the training that personnel who handle, apply, or store the chemicals have received or will receive prior to the use of water treatment chemicals and chemical treatment systems;

viii. A description of safe handling, spill prevention, and spill response procedures; and

ix. A copy of the approval letter from SDDENR, approving the use of the water treatment chemicals and/or chemical treatment system.

10. **Non-Stormwater Discharges.** You must identify in your SWPPP all sources of non-stormwater discharges.

11. **Infeasibility Documentation.** If you determine it is infeasible to comply with any of the requirements of this general permit, you must thoroughly document your rationale in your SWPPP.

5.4 SWPPP Certification

You must sign and date your SWPPP as required by Section 7.4.

5.5 Required SWPPP Modifications

1. **Conditions Requiring SWPPP Modification**. You must modify your SWPPP, including the site map(s), in response to any of the following conditions:

   a. When you have a new operator responsible for implementation of any part the SWPPP.

   b. When you make changes to your construction plans, sediment and erosion control measures, or any best management practices at your site that are no longer accurately reflected in your SWPPP. This includes changes made in response to corrective actions triggered by inspections.

c. To reflect areas on your site map where operational control has been transferred (including the date of the transfer) or has been covered under a new permit since initiating coverage under this general permit.

d. If inspections by site staff, local officials, SDDENR, or U.S. EPA determine that SWPPP modifications are necessary for compliance with this general permit.

e. To reflect any revisions to applicable federal, state, or local requirements that affect the control measures implemented at the site.

f. If approved by the Secretary, to reflect any changes in chemical water treatment systems or controls, including the use of a different water treatment chemical, different dosage rates, or different areas or methods of application.

2. **Deadlines for SWPPP Modification**. You must complete the required revisions to the SWPPP within 7 calendar days following any of the items listed above.

3. **Documentation of Modifications to the Plan**. You are required to maintain records showing the dates of all SWPPP modifications. The records must include the name of the person authorizing each change and a brief summary of all changes.

4. **Certification Requirements**. All modifications made to your SWPPP must be signed and certified as required in Section 7.4.

5. **Required Notice to Other Operators**. If there are multiple operators at the site, you must notify each operator that may be impacted by the change to the SWPPP within 24 hours.

6.0 SPECIAL CONDITIONS

6.1 Qualified Local Programs

1. To receive approval as a qualified local program, SDDENR will review the local requirements to ensure they comply with both state and federal requirements. SDDENR 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. SDDENR 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 (NOI) to SDDENR 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. At this time only the City of Sioux Falls is meeting SDDENR'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.

7.0 REPORTING AND RECORDKEEPING REQUIREMENTS

7.1 Emergency Spill Notification

1. You must report a release or spill of a regulated substance (including petroleum and petroleum products) to SDDENR as soon as you become aware of it if any one of the following conditions exists:

    a. The release or spill threatens or is in a position to threaten waters of the state (surface water or ground water);

    b. The release or spill causes an immediate danger to human health or safety;

    c. The release or spill exceeds 25 gallons;

    d. The release or spill causes a sheen on surface water;

    e. The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01;

    f. The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01;

    g. The release or spill of any substance that harms or threatens to harm wildlife or aquatic life;

    h. The release or spill of crude oil in field activities under SDCL chapter 45-9 is greater than 1 barrel (42 gallons); or

    i. The release or spill is required to be reported according to Superfund Amendments and Reauthorization Act (SARA) Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

2. To report a release or spill, call SDDENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to SDDENR does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, you must also contact local authorities to determine the local reporting requirements for releases. A written report of the unauthorized release of any regulated substance, including quantity discharged and the location of the discharge shall be sent to SDDENR within 14 days of the discharge.

7.2 Planned Changes

You must notify SDDENR as soon as possible of any planned physical alterations or additions to your site. Notice is required only when the alteration or addition could significantly change the nature or increase the quantity of pollutant discharged, or could result in noncompliance with permit conditions. This notification also applies to pollutants that are not addressed by the effluent limits in Section 3.0.

7.3 Records Contents & Retention

1. You must maintain onsite, or make readily available to SDDENR, the following documents:

    a. The SWPPP, including all certificates, reports, records, or other information required by this general permit.

    b. A copy of the Notice of Intent (NOI) submitted to SDDENR, along with any correspondence related to coverage under this general permit.

    c. A copy of the authorization letter you receive from SDDENR granting coverage under this general permit.

    d. A copy of this general permit.

2. You must retain copies of the SWPPP, your inspection records, all reports required by this general permit, and records of the date you used to complete the NOI and NOT for a period of at least three (3) years from the date you terminate your coverage under the general permit. SDDENR may extend the time period for retaining your records with a written notification to you.

3. You must submit all reports and documents required to be submitted to SDDENR by this general permit by email (stormwater@state.sd.us), or to the address below:

    SD Department of Environment and Natural Resources
    Surface Water Quality Program
    523 East Capitol
    Pierre, SD 57501

7.4 Signatory Requirements

1. All applications submitted to SDDENR under this general permit must be signed by either a principal executive officer or ranking elected official.

2. All reports required by the general permit and other information requested by SDDENR shall be signed by the person described in Paragraph 1 above or by a duly authorized representative of that person. A person is a duly authorized representative if:

   a. The authorization is made in writing by a person described in Paragraph 1 above and submitted to SDDENR; and

   b. The authorized representative must have responsibility for the overall operation of the site, such as the superintendent, or have overall responsibility for environmental matters. A duly authorized representative may be either a named individual or any individual occupying a named position.

3. If the authorization under Paragraph 2 above is no longer accurate, you must submit a new authorization to SDDENR.

4. You must include the following certification statement 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 personal 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 fines and imprisonment for knowing violations.

7.5 Duty to Provide Information

1. You must provide, within a reasonable period of time, any information SDDENR requests to determine whether cause exists for modifying, revoking and reissuing, or terminating this general permit, or to determine compliance with the general permit.

2. You must provide to SDDENR, upon request, copies of the records required to be kept by this general permit.

3. You must make your SWPPP available to SDDENR, U.S. EPA, or your local storm sewer operator upon request.

4. If you become aware that you failed to submit any relevant facts or submitted incorrect information in your NOI, you must promptly submit such facts or information.

5. You must provide SDDENR with an updated point of contact including a mailing address.

7.6 Availability of Information

1. Except for data determined to be confidential under ARSD Section 74:52:02:17, all reports you prepare and submit in accordance with the terms of this general permit must be available for public inspection at the offices of SDDENR.

2. Your name and address, the NOI and NOT, your SWPPP, and your inspection records will not be considered confidential.

8.0 COMPLIANCE REQUIREMENTS

8.1 Duty to Comply

1. You must comply with all conditions of this general permit. Any permit noncompliance is a violation of the South Dakota Water Pollution Control Act and the federal Clean Water Act. A violation is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

2. If you violate a condition of the general permit or make any false statement, representation, or certification, you may be subject to enforcement action under South Dakota Codified Law, Chapter 34A-2.

3. You are responsible for complying with all local ordinance and requirements. Local governments may have additional or more stringent requirements than those included in this general permit.

8.2 Duty to Mitigate

You must take all reasonable steps to minimize or prevent any discharge of pollutants in violation of this general permit if it has a reasonable likelihood of adversely affecting human health or the environment.

8.3 Need to Halt or Reduce Activity Not a Defense

It is not a defense for you in an enforcement action that it would have been necessary to halt or reduce your construction activity to maintain compliance with the conditions of the general permit.

8.4 Upset Conditions

1. 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. You will have an opportunity for a judicial determination on any claim of an upset only if SDDENR or U.S EPA bring an enforcement action for noncompliance with technology-based effluent limits.

2. If you wish to establish an affirmative defense of any upset, you must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:

    a. An upset occurred and you can identify the cause of the upset;

    b. You were properly operating the pollution controls at your site;

c. You notified SDDENR within 24 hours of becoming aware of the upset. To report a release or spill, call SDDENR at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central Standard Time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231.

d. You complied with the mitigation measures required under Section 8.2.

3. In any enforcement proceeding, you have the burden of proof to establish and document that an upset occurred.

8.5 Removed Substances

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

8.6 Inspections and Entry

You must allow SDDENR, U.S. EPA, or the operator of a municipal separate storm sewer system receiving your discharges to:

1. Enter your construction site and enter areas where you keep the records required by the general permit;

2. Have access to and copy, at reasonable times, any records that you must keep under the conditions of the general permit;

3. Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated under this general permit; and

4. At reasonable times, sample or monitor any substances or parameters at any location for the purpose of ensuring permit compliance or as otherwise authorized by the South Dakota Water Pollution Control Act (SDCL 34A-2).

8.7 Oil and Hazardous Substance Liability

Nothing in this general permit shall relieve you from any responsibilities, liabilities, or penalties you may be subject to under Section 311 of the federal Clean Water Act.

8.8 Penalties for Violations of general permit Conditions

1. If you violate a condition of the general permit, you are in violation of the provisions of SDCL 34A-2-36 and subject to penalties under SDCL 34A-2-75. In addition to a jail sentence authorized by SDCL 22-6-2, you can be subject to a criminal fine not to exceed $10,000 per day per violation. You can also be subject to a civil penalty not to exceed $10,000 per day per violation, or for damages to the environment of this state.

2. Except as provided above in the Upset Conditions in Section 8.4, nothing in this general permit relieves you of the civil or criminal penalties for noncompliance.

8.9 Penalties for Falsification of Reports

1. If you knowingly make any false statement, representation, or certification in any record or other document submitted or required to be maintained under this general permit, you are in violation of the provisions of SDCL 34A-2-77 and subject to penalties under SDCL 34A-2-75.

2. If you falsify, tamper with, or knowingly render inaccurate any monitoring device or method required to be maintained under this general permit, you are in violation of the provisions of SDCL 34A-2-77 and is subject to penalties under SDCL 34A-2-75.

3. In addition to a jail sentence authorized by SDCL 22-6-2, you can be subject to a criminal fine not to exceed $10,000 per day per violation. You are also subject to a civil penalty not to exceed $10,000 per day per violation, or for damages to the environment of this state.

Appendix A

NOTICE OF INTENT (NOI) FORM

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

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

ALL QUESTIONS MUST BE ANSWERED COMPLETELY FOR THIS FORM TO BE VALID

I. Site Owner Contact Information:

Company Name: _____

Primary Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

Type of Ownership: ☐ Private ☐ Federal ☐ State ☐ Other (Municipal, County, etc.)
(any type not listed previously)

II. Contractor 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, but before they begin construction work.)

III. Engineering Firm Contact Information (if applicable):

Contact Person: _____

Contact's Email Address: _____

IV. Construction Project Information:

Project Name: _____

Physical Project Address or Description of Construction Site Location: _____

_____

City: _____ State: _____ Zip Code: _____

On-Site Contact Person: _____

Contact's Email Address: _____

Contact's Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ County of Construction Site: _____

Latitude: _____ Longitude: _____ Source (GPS, Google, etc.): _____

Quarter(s): _____ Section(s): _____ Township(s): _____ Range(s): _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

Construction Project Information (Continued):

Is this project on Tribal Lands? ☐ Yes ☐ No

Total area disturbed by the project (in acres): _____

Will this project encroach, damage, or destroy one of the historic sites identified at the following wesites:

http://history.sd.gov/Preservation/nationalregisterofhistoricplaces.aspx ☐ Yes ☐ No

http://www.nps.gov/nhl/find/statelists/sd/SD.pdf ☐ Yes ☐ No

V. Stormwater Pollution Prevent Plan (SWPPP):

Has the SWPPP been developed as required? ☐ Yes ☐ No

(The plan must be developed **before** the NOI is submitted. DENR will not issue coverage before this has been developed.)

VI. 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.

_____

_____

VII. Nature of Discharge:

Please include a brief description of the construction project:

_____

_____

Will construction dewatering be required? ☐ Yes ☐ No If yes, please complete section IX also.

VIII. Construction Dates:

Project Start Date (MM/DD/YYYY): _____

Estimated Completion Date (MM/DD/YYYY): _____

IX. Dewatering Activities (Complete this section if you answered yes in VII):

Date dewatering will commence (MM/DD/YYYY): _____

Date dewatering will end (MM/DD/YYYY): _____

Total volume of dewatering (gallons): _____ Average flow rate (gallons per minute): _____

Source of water to be discharged: _____

Receiving water: _____

Brief description of water treatment processes to be employed, if any: _____

_____

Will the dewatering discharge contain anything other than uncontaminated groundwater and stormwater: ☐ Yes ☐ No

NOTE: If there will be dewatering activities, 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.

X. Other Information

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

_____

_____

_____

STATE OF SOUTH DAKOTA

BEFORE THE SECRETARY OF

THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF	**)**	
	)	**CERTIFICATION OF**
_____	**)**	
	)	**APPLICANT**
STATE OF _____	**)**	
	)	
COUNTY OF _____	**)**	

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

I have read and understand South Dakota Codified Law Section 1-40-27 which 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."

I certify pursuant to 1-40-27, that as an applicant, officer, director, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; (d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this _____ day of _____ , 20____ .

_____
Applicant (print)

_____
Applicant (signature)

Subscribed and sworn before me this _____ day of _____ , 20_____ .

_____
Notary Public (signature)

My commission expires: _____

(SEAL)

PLEASE ATTACH ANY ADDITIONAL INFORMATION NECESSARY TO DISCLOSE ALL FACTS AND DOCUMENTS 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

Appendix B

NOTICE OF TERMINATION
(NOT) FORM

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF TERMINATION (NOT)
of Coverage Under the SWD General Permit for
Stormwater 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:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

I. Permit Number: _____

II. Primary Contact Information:

Company Name: _____

Primary Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Mailing Address for Facility/Site Location:

Project Name: _____

Primary Contact Person: _____

Contact's Email Address: _____

Contact's Mailing Address: _____

City: _____ State: _____ Zip Code: _____

I certify under penalty of law that all stormwater 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 stormwater associated with construction activity under this general permit, and that discharging pollutants in stormwater 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: Notice of Termination shall be signed by the authorized chief elective or executive officer of the applicant, or by the applicant, if an individual.

Name: _____ Title: _____

Signature: _____ Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Letter Date: _____ Approved by: _____

Appendix C

CONTRACTOR AUTHORIZATION FORM

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
CONTRACTOR AUTHORIZATION FORM

for Coverage Under the SWD General Permit for
Stormwater 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:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

ALL QUESTIONS MUST BE ANSWERED COMPLETELY FOR THIS FORM TO BE VALID

Project Name: _____ Permit Number (if available): _____

Project Site Legal Location: _____

Contractor Company Name: _____

Responsible Contact Person: _____

Contact's Email Address: _____

Contractor Mailing Address: _____

City: _____ State: _____ Zip Code: _____ Phone Number: _____

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 Stormwater 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

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

(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."

I certify pursuant to SDCL 1-40-27, that as an applicant, officer, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this _____ day of _____, 20____.

_____

Applicant (print)

_____

Applicant (signature)

Subscribed and sworn before me this _____ day of _____, 20____.

_____

Notary Public (signature)

My commission expires: _____

(SEAL)

PLEASE ATTACH A 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.

Appendix D

TRANSFER OF PERMIT COVERAGE FORM

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
TRANSFER OF PERMIT COVERAGE FORM

for Coverage Under the SWD General Permit for
Stormwater 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:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

Project Name: _____ Permit Number: _____

Site (Lot) Legal Location: _____

Site (Lot) Description: _____

Previous Owner's Name: _____

New Owner's Name: _____

New Owner's Mailing Information:

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email: _____

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 Stormwater Pollution Prevention Plan be updated and revised to reflect all changes.**

The site (lot) described about is covered under the General Permit for Stormwater 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 measure have been employed, such as the use of riprap, gabions, or geotextiles.**

New Owner/Operator Signature: _____

Date: _____

Previous Owner/Operator Signature: _____

Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

Appendix E

NOTICE OF INTENT
FOR
REAUTHORIZATION FORM

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF INTENT (NOI) for REAUTHORIZATION
of Coverage Under the SWD General Permit for
Stormwater Discharges Associated with Construction Activities

The following facility currently has coverage under the General Permit for Stormwater 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:

Submit form to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
stormwater@state.sd.us
Telephone: 1-800-SDSTORM

Update information below as needed. Please print or type information.

I. Permit Number: _____

II. Owner Information:

Company Name: _____

Primary Contact Person: _____

Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Construction Project Information:

Project Name: _____

Project Description: _____

On-Site Contact Person: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Total area disturbed by the project (in acres): _____

Project Start Date: _____ Estimated Completion Date: _____

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 Stormwater 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 Stormwater permit and I agree to comply with those requirements.

NOTE: The NOI for Reauthorization must be signed by the authorized chief elective or executive offier of the applicant, or by the applicant, if an individual project.

Name (print): _____ Title: _____

Signature: _____ Date: _____

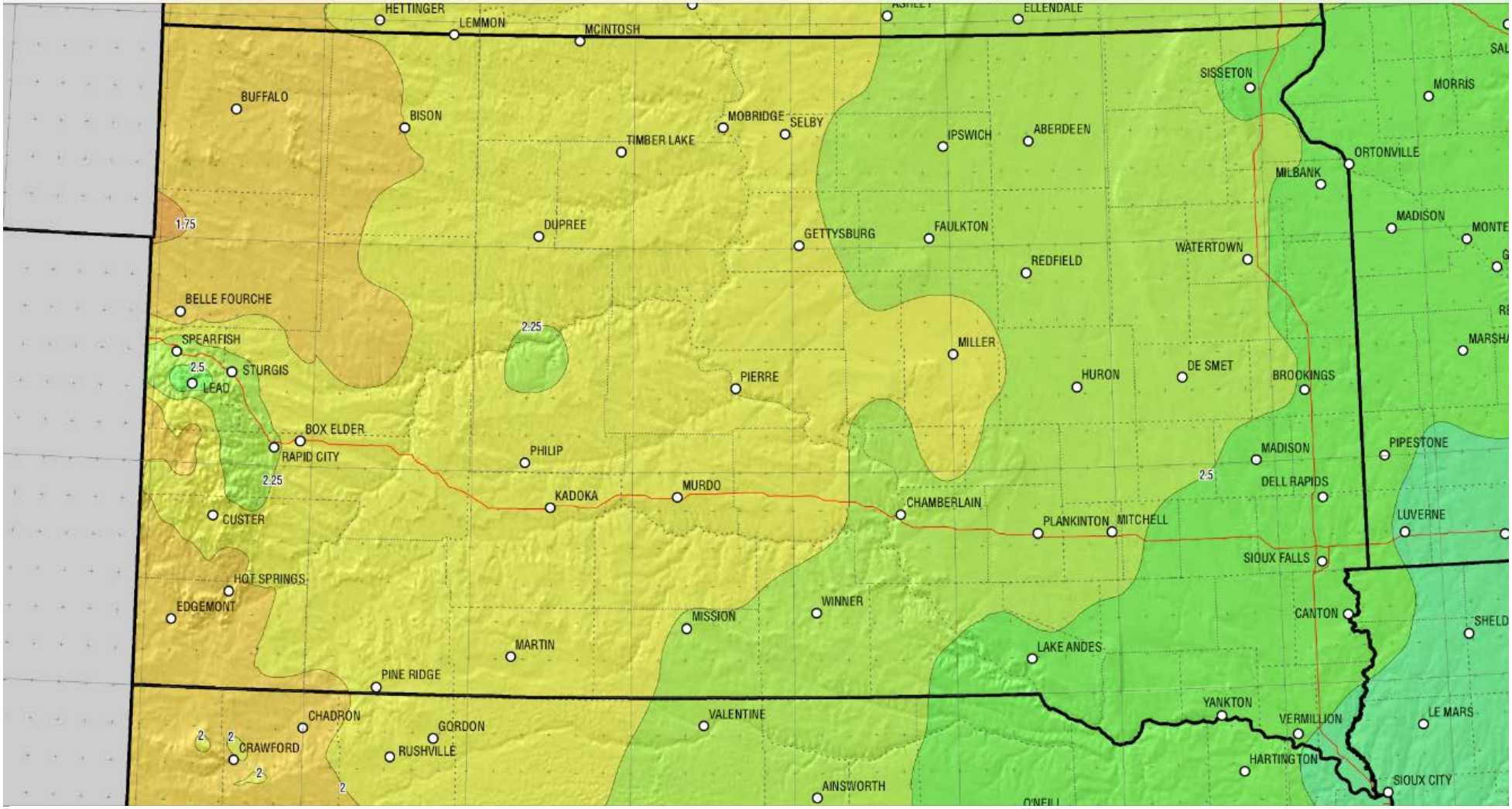
FOR DENR USE ONLY

Permit Number: _____ Date Reauthorized: _____ Approved by: _____

Appendix F

TWO YEAR, TWENTY-FOUR HOUR PRECIPITATION EVENT MAP

ftp://hdsc.nws.noaa.gov/pub/hdsc/data/mw/nd2y24h.pdf



NOAA Atlas 14, Volume 8, Version 2
Midwestern States

Prepared by U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE
OFFICE OF HYDROLOGIC DEVELOPMENT
HYDROMETEOROLOGICAL DESIGN STUDIES CENTER
April 2013

SOUTH DAKOTA

2-year 24-hour precipitation in inches

0.88 - 1.00	2.01 - 2.25	3.26 - 3.50	4.51 - 4.75
1.01 - 1.25	2.26 - 2.50	3.51 - 3.75	4.76 - 5.00
1.26 - 1.50	2.51 - 2.75	3.76 - 4.00	5.01 - 5.19
1.51 - 1.75	2.76 - 3.00	4.01 - 4.25	
1.76 - 2.00	3.01 - 3.25	4.26 - 4.50	

Legend based on entire Volume 8 project area

Appendix C: SDDENR Dewatering Permit

Permit No.: SDG070000

SOUTH DAKOTA DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

General Surface Water Discharge Permit
For Temporary Discharge Activities
Under The South Dakota Surface Water Discharge System

In compliance with the provisions of the South Dakota Water Pollution Control Act and the Administrative Rules of South Dakota, Article 74:52,

the Permittee

is authorized under this permit 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 points, effluent limits, monitoring requirements, and other conditions set forth herein. Authorization is limited to those outfalls specifically listed in the Notice of Intent. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the South Dakota Water Pollution Control Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

This permit shall become effective April 1, 2018.

General permit coverage for the [PERMITTEE] shall become effective [EFFECTIVE DATE].

This permit and the authorization to discharge shall expire at midnight, March 31, 2023.

Signed this 23rd day of March, 2018,

Authorized Permitting Official

Steven M. Pirner
Secretary
Department of Environment and Natural Resources

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1.0 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 that 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" or **"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.

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

"Discharge" is the addition of any pollutant or combination of pollutants to "surface waters of the state" from any "point source."

"DMR" means Discharge Monitoring Report, EPA Form 3320-1, or a report filed electronically by an EPA-approved electronic system, or other forms provided by the Department which are used to report sampling data.

"EPA" or **"US 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.

"gpm" means gallons per minute.

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

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 Act which will be applicable to such source if such Standards are thereafter promulgated in accordance with that section, provided that:

1. The building, structure, facility or installation is constructed at a site at which no other source is located; or

2. The building, structure, facility or installation totally replaces the process or production equipment that causes the discharge of pollutants at an existing source; or

3. The production or 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 #2 or #3 above but otherwise alters, replaces, or adds to existing process or production equipment.

Construction of a new source as defined under this definition has commenced if the owner or operator has:

1. Begun, or caused to begin as part of a continuous onsite construction program:

    a. Any placement, assembly, or installation of facilities or equipment; or

    b. 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; or

2. Entered into a binding contractual obligation for the purchase of facilities or equipment which is 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 for 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.

"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.

"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.

"Reasonable Potential (RP)" is the likelihood that an effluent will cause or contribute to an excursion above a water quality standard based on a number of factors, including the use of data (e.g. whole effluent toxicity test data). In the context of this document, references to RP and WET limits include both lethal and sub-lethal effects.

"Regulated Substance" means the compounds designated by the department 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, 45-6B-70, 45-6C-45, 45-6D-60, and 45-9-68, including pesticides and fertilizers regulated by the Department of Agriculture; the hazardous substances designated by the federal Environmental Protection Agency pursuant to section 311 of the Federal Water Pollution Control Act and Clean Water Act (33 United States Code sections 1251 to 1387, inclusive), as amended to January 1, 2011; the toxic pollutants designated by Congress or the Federal Environmental Protection Agency pursuant to section 307 of the Toxic Substances Control Act (15 United States Code sections 2601 to 2671, inclusive), as amended to January 1, 2011; the hazardous substances designated by the Federal Environmental Protection Agency pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act (42 United States code sections 9601 to 9675, inclusive), as amended to January 1, 2011; 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.

"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" is substantial physical damage to property, damage to the treatment facilities that causes them to become inoperable, or substantial and permanent loss of natural resources that 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 removed during the treatment of municipal wastewater or domestic sewage. Sewage sludge includes but is not limited to solids

removed during primary, secondary or advanced wastewater treatment, scum, septage, portable toilet pumpings, and sewage sludge products. Sewage sludge does not include grit, screenings, or ash generated during the incineration of sewage sludge.

"Surface Water Discharge (SWD) Permitting Program" is the state program that regulates the discharge of pollutants into the state's waters. This is the state's implementation of the federal National Pollutant Discharge Elimination System (NPDES) program.

"Surface Waters of the State" means lakes, ponds, streams, rivers, wetlands, and any other body or accumulation of water on the land surface that is considered to be waters of the state, but not waste treatment systems, including treatment ponds, lagoons, leachate collection ponds, or stormwater retention ponds designed to meet the requirements of the federal Clean Water Act.

"Surface Water Quality Standards" mean water quality standards adopted pursuant to South Dakota Codified Law §§ 34A-2-10 and 34A-2-11 or actual existing beneficial uses, whichever is higher, and effluent standards adopted pursuant to §34A-2-13 or pursuant to the best professional judgment of the Secretary, whichever is applicable. If waters have more than one designated beneficial use and criteria are established for a parameter that is common to two or more uses, such as pH, the more restrictive criterion for the common parameter applies.

"Temporary Discharge" is any discharge of relatively uncontaminated water which occurs for one year or less. Those discharges which will occur for greater than one year are not considered temporary in nature.

"Toxic Pollutant" is any pollutant listed as toxic under §307(a)(1) of the Federal Clean Water Act.

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

"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.

"**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 PERMIT COVERAGE

2.1 Request for Coverage under the General Permit

1. The general permit is potentially applicable to many temporary discharge activities within South Dakota that discharge relatively uncontaminated water to surface waters. A Notice of Intent (NOI) form can be found in Appendix A at the end of this general permit. The original form must be sent to the following address at least 15 calendar days prior to any anticipated discharge:

   South Dakota Department of Environment and Natural Resources
   Surface Water Quality Program
   523 East Capitol
   Pierre, South Dakota 57501

   Telephone: (605) 773-3351 or 1-800-SDSTORM (1-800-737-8676)

2. An applicant is not prohibited from submitting a late NOI. When a late NOI is submitted, the authorization to discharge is only for discharges that occur after SDDENR grants permit coverage.

3. SDDENR will review each complete NOI and make a decision to grant or deny coverage or request additional information. Each permittee will receive an authorization letter from SDDENR if permit coverage is granted for the discharge.

4. Coverage provided under this general permit is limited to those activities specifically designated in the permittee's NOI or application form. Knowingly discharging from an unauthorized location or failing to report an unauthorized discharge within a reasonable time from the permittee first learning of an unauthorized discharge could subject the permittee to penalties as provided under the South Dakota Water Pollution Control Act.

5. Upon the effective date of this general permit, the Secretary will terminate the existing general permit.

   If you are authorized under the existing general permit, your coverage will automatically terminate within 30 calendar days of permit issuance. To continue permit coverage under the new permit, contact SDDENR.

2.2 Permit Transfers

1. Coverage under this general permit may be transferred to a new permittee if:

   a. The signatory authority notifies the Secretary at least 30 days in advance of the proposed transfer date;

   b. The notice includes a written agreement between the existing and new permittee containing a specific date for transfer of permit responsibility,

coverage, and liability between them. See Transfer of Ownership form in Appendix B.; and,

c. The new permittee submits a Certification of Applicant form certifying the new permittee is qualified to perform the obligations of a permit holder in accordance with South Dakota Codified Law 1-40-27.

2. The Secretary will notify the existing and new permittee of his or her intent to transfer, modify, or revoke and reissue the permit coverage based on the information received and other permit information.

2.3 Limitations on Coverage

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 of Sanitary Wastewater. This general permit does not authorize a permittee to discharge sanitary wastewater. Any permittee with discharges of this nature are required to obtain an individual Surface Water Discharge permit, or obtain coverage under an alternative general discharge permit which authorizes discharges of sanitary wastewater.

3. Discharges That Are Not Temporary in Nature. This general permit does not authorize discharges which are not temporary in nature. For purposes of this general permit, temporary is defined as discharges which occur for one year or less. Discharges that are not temporary will be required to obtain an individual Surface Water Discharge permit, or obtain coverage under an appropriate alternative general discharge permit.

4. Discharges of Toxic Pollutants in Toxic Amounts. This general permit does not authorize discharges of toxic pollutants in toxic amounts. Such discharges are required to obtain an individual Surface Water Discharge permit.

5. Discharges That May Present a Health Hazard.

6. Discharges That May Be a Significant Contributor of Pollution.

7. 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.

8. Discharges Threatening Endangered Species. This general permit does not authorize a temporary discharge that will not ensure the protection of species that are federally-listed as endangered under the federal Endangered Species Act.

9. 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. You must report spills in excess of the reportable quantities as required in Section 5.10.

10. Discharges Containing Aquatic Invasive Species. This general permit does not authorize the discharge, transfer, or introduction of aquatic invasive species to waters of the state

2.4 Continuation of the Expired General Permit

An expired general permit continues in full 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 if the permittee submits a Notice of Intent for Reauthorization form (Appendix D) prior to permit expiration date.

2.5 Reopener Provisions

This general permit may be reopened and modified (following proper administrative procedures) to include the appropriate effluent limits or other appropriate requirements if one or more of the following events occurs:

1. Water Quality Standards: The water quality standards of the receiving waters applicable to this general permit are modified in such a manner as to require different effluent limits than contained in this general permit;

2. Water Quality Management Plan: A revision to the current water quality management plan is approved and adopted that calls for different effluent limits than contained in this general permit;

3. Effluent Guidelines: Effluent limit guidelines are promulgated or revised for point sources covered by this general permit; or

4. Total Maximum Daily Load: Additional controls are necessary in the permit to implement a total maximum daily load approved by the Secretary and/or EPA.

2.6 Duty to Reapply

If the permittee wishes to continue an activity regulated by this general permit after its expiration date, the permittee must submit a Reauthorization Notice of Intent (Appendix D) before the expiration date of the general permit. 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.

2.7 Requiring an Individual Permit

1. The Secretary may require any permittee covered under this general permit to apply for and obtain an individual permit if any of the following occur:

    a. Noncompliance. The permittee is a significant contributor of pollution to waters of the state, presents a health hazard, or is in noncompliance with the conditions of this general permit;

    b. Changes in Technology or Practices. A change has occurred in the availability of demonstrated technology or practices for the control or abatement of pollutants applicable to the point source;

    c. Effluent Guidelines. Effluent limitation guidelines are promulgated for point sources covered by this general permit;

    d. Water Quality Management Plan. A water quality management plan containing requirements applicable to the discharge is approved;

    e. Whole Effluent Toxicity. SDDENR determines there is reasonable potential for the discharge to contain Whole Effluent Toxicity.

    f. Impaired Water Body. The discharge is to an impaired water body, and the best management practices and effluent limits are not sufficient to implement the assigned wasteload allocations in a total maximum daily load; or

    g. Other Changes. Other conditions or standards change so that the permittee no longer qualifies for coverage under this general permit, such as changes in necessary effluent pollutant monitoring, the discharge is no longer considered temporary, or other items that would necessitate an individual Surface Water Discharge permit.

2. The Secretary will notify the permittee in writing that an application for an individual permit is required. When an individual permit is issued to a permittee otherwise covered under this general permit, the permittee's general permit coverage shall be automatically terminated upon the effective date of the individual permit.

2.8 Property Rights

1. The Secretary's issuance of 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.

2. 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, that may result from actions taken under the general permit.

2.9 Permit Actions

This general permit may be modified, revoked and reissued, or terminated by the Secretary for cause. Any request for such changes does not stay any permit condition.

2.10 Severability

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

2.11 Terminating Coverage

Until the Secretary terminates your coverage under this general permit, you are required to comply with all conditions and effluent limits in this general permit.

1. Permittees wishing to terminate coverage under this general permit shall submit a Notice of Termination (NOT) signed in accordance with **Section 5.5**. The NOT form is found in Appendix C. 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.

3.0 EFFLUENT LIMITS

3.1 Description of Discharge Points

The authorization to discharge provided under this general permit is limited to those outfalls and pollutants specifically identified in the Notice of Intent. Discharges at any locations or of any parameters not identified are a violation of the South Dakota Water Pollution Control Act and could subject the person(s) responsible for such discharge to penalties under Section 34A-2-75 of the Act. Knowingly discharging from an unauthorized location or failing to report a discharge as required by the general permit could subject the permittee to penalties as provided under the South Dakota Water Pollution Control Act.

3.2 Proper Operation and Maintenance

1. The permittee shall at all times properly operate and maintain all facilities and treatment and control systems that are installed or used by the permittee to achieve compliance with the conditions of this general permit or other conditions required by the Secretary upon issuance.

2. Proper operation and maintenance may also include adequate laboratory controls and appropriate quality assurance procedures.

3. This provision requires the operation of back-up or auxiliary facilities or similar systems that are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the general permit.

3.3 Inspection Requirements

The permittee shall inspect its facility and discharge locations regularly as outlined below. The inspections shall be performed to determine if proper operation and maintenance procedures are being undertaken at the facility. The permittee shall maintain a notebook recording information obtained during the inspection.

1. Facility Inspections. During a discharge, the permittee shall inspect the facility and discharge location(s) on at least a **daily** basis. The permittee shall inspect the facility and discharge location(s) on at least a **weekly** basis when not discharging.

2. Inspection Notebook. The permittee shall maintain the notebook(s) for the facility in accordance with proper record-keeping procedures and shall make the notebook(s) available for inspection, upon request, by the Secretary or the US EPA. At a minimum, the notebook(s) shall include the following:

    a. Date and time of the inspection;

    b. Name of the inspector(s);

    c. Observations of solids in the discharge;

    d. Observations of a sheen or oil and grease in the discharge;

    e. Identification of operational problems and/or maintenance problems;

    f. Recommendations, as appropriate, to remedy identified problems;

    g. A brief description of any actions taken with regard to problems identified; and

    h. Other information, as appropriate.

3.4 Effluent Limits

1. There shall be no discharge of toxic pollutants in toxic amounts. 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.

2. There shall be no discharge of process-generated wastewater not identified in the NOI.

3. There shall be no discharge of sanitary wastewater.

4. No discharge shall impart a visible film or sheen to the surface of the water or adjoining shoreline.

5. In lieu of the total suspended solids limit contained in Effluent Limits table below, the permittee may take the following steps:

    a. Develop a pollution prevention plan in accordance with Section 4.0.

    b. The discharge shall not contain visible pollutants. The permittee must visually monitor the discharge for suspended solids on a daily basis.

    c. If suspended solids are observed in the discharge, the permittee must implement the following requirements:

        i. Sample the discharge for total suspended solids on a daily basis until there is no longer a discharge of visible solids.

        ii. The samples must be analyzed in accordance with Title 40 of the Code of Federal Regulations, Part 136.

        iii. If the total suspended solids value exceeds the numeric daily maximum limit specified in the Effluent Limits table in any sample or measurement, cease the discharge to surface waters of the state until additional best management practices are employed to eliminate the visible pollutants. The pollution prevention plan must be updated to include these additional steps.

6. No chemicals, including chlorine, shall be added to the discharge without prior approval from the Secretary.

7. All reasonable measures shall be taken to prevent or minimize the possibility of stream channel scouring or erosion caused by the discharge with the implementation of appropriate best management practices.

9. There shall be no discharge of floating solids or visible foam in other than trace amounts. 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

10. Upon the effective date of this general permit and lasting through the life of the general permit, the quality of effluent discharged by the facility shall, as a minimum, be monitored and meet the effluent limits as set forth in the following table:

Effluent Parameter		**Effluent Limit and Reporting Values**	**Monitoring Requirements**	
		Daily Maximum [1]	**Frequency [2]**	**Sample Type [1]**
Total Suspended Solids (TSS) [3]	Dependent on receiving stream [4]	90 mg/L	Weekly [6]	Grab
	Dependent on receiving stream [5]	53 mg/L		
pH		The pH of the discharge shall not be less than 6.5 standard units or greater than 9.0 standard units in any sample.	Weekly	Instantaneous [7]
Total Residual Chlorine		0.019 mg/L [8, 9]	Daily	Instantaneous
Oil and Grease (Visual) [10]		No Visible Film or Sheen [11]	Daily	Visual
Oil and Grease (Hexane Ext.)	Dependent on receiving stream [12]	10.0 mg/L	Contingent [10]	Grab
	Dependent on receiving stream [13]	1.0 mg/L		
Floating Solids/Visible Foam		No Visible Pollutants [11]	Daily	Visual
Benzene [14]		5.0 µg/L	Weekly	Grab
Total BTEX [14, 15]		100.0 µg/L	Weekly	Grab
Total Flow [16]		Report Monthly Total, Gallons	Monthly	Calculate/Estimate
Flow Rate [16]		Report, GPD	Daily	Calculate/Estimate

[1] See **Section 1.0 – Definitions**.

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

[3] In lieu of sampling for this parameter, the permittee may implement a pollution prevent plan (See **Section 4.0**) that includes

best management practices to prevent total suspended solids from entering waters of the state. The discharge must still be monitored visually for suspended solids. If suspended solids are seen, the permittee must sample for TSS at the frequency indicated until solids are no longer observed in the discharge, and the samples must meet the effluent limits in this section.

[4] This limit applies to all waters of the state **except** discharges to waters classified as coldwater permanent fish life propagation waters.

[5] This limit applies to all waters of the state classified as coldwater permanent fish life propagation waters.

[6] If suspended solids are observed in the discharge, daily monitoring and sampling of TSS is required until sample results are below the numeric daily maximum limit.

[7] The 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 standards units apart. The pH meter must read to 0.01 standard units and be equipped with temperature compensation adjustment. Readings shall be reported to the nearest 0.1 standard units.

[8] SDDENR considers the analytical detection limit for total residual chlorine to be 0.05 mg/L. If the effluent value is less than the analytical detection limit, "below detection level" shall be used for reporting purposes.

[9] This limit is only applicable if the permittee is adding chlorine as part of its disinfection process. If a permittee does not add chlorine, chlorine monitoring and limits will not be required. In lieu of sampling for this parameter, the permittee may implement a pollution prevent plan (See **Section 4.0**) that includes best management practices to prevent total residual chlorine from entering waters of the state.

[10] A grab sample shall be taken if a visual sheen is observed and a concentration shall be determined using EPA method 1664A oil and grease hexane extraction with silica gel. If petroleum contamination is expected, a grab sample shall be taken on the first day of the discharge and analyzed using EPA method 1664A.

[11] The discharge shall not impart a visible film or sheen to the surface of the water or adjoining shoreline or contain visible foam or solids. The permittee shall report the presence or absence of any visible pollutants.

[12] This limit applies to all waters of the state **except** discharges to waters classified as domestic water supply waters.

[13] This limit applies to waters classified as domestic water supply waters.

[14] Benzene and BTEX monitoring is only required if petroleum contamination is possible in the water being discharged. This monitoring will required by the department on a case-by-case basis.

[15] Total BTEX shall be measured as the sum of benzene, ethyl benzene, toluene, and xylene.

[16] This parameter shall be monitored and reported, but does not have an effluent limit associated with it.

3.5 Monitoring Procedures

1. Effluent samples taken in compliance with the monitoring requirements established under this general permit shall be collected prior to discharge into the receiving waters. Samples and measurements shall be representative of the volume and nature of the monitored discharge.

2. Monitoring shall be conducted according to test procedures approved under ARSD Section 74:52:03:06 (a.b.r. 40 CFR, Part 136), unless other test procedures have been specified in this general permit or approved by the Secretary. Analysis methods shall be sufficiently sensitive to ensure the minimum detection level for a pollutant is below the general permit limit. If no sufficiently sensitive method is available, the method with the lowest minimum detection level shall be used.

3.6 Additional Monitoring by the Permittee

If the permittee monitors any pollutant more frequently than required by this general permit at the designated points, using test procedures approved under ARSD Section 74:52:03:06 (a.b.r. 40 CFR 136) or as specified in this general permit, the results of this monitoring shall be used in determining compliance with this general permit and be reported to SDDENR.

4.0 POLLUTION PREVENTION PLAN

4.1 Deadlines for Plan Preparation and Compliance

If the permittee develops a pollution prevention plan instead of TSS and/or TRC sampling, the plan must be developed and implemented prior to discontinuing TSS and/or TRC sampling.

4.2 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.

4.3 Signature and Plan Review

1. The plan shall be signed in accordance with the signatory requirements included in this general permit 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 section. 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.

4.4 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 waters of the state. The plan shall also be amended if the plan proves ineffective in eliminating or significantly minimizing pollutants present in the temporary discharge.

5.0 MONITORING, RECORD KEEPING & REPORTING REQUIREMENTS

5.1 Reporting of Monitoring Results

1. Effluent monitoring results shall be summarized for each month a discharge occurs, reported on separate Discharge Monitoring Report Forms (as defined in **Section 1.0 – Definitions**, and included in Appendix E), and submitted to SDDENR on a monthly basis if a discharge occurs.

   If no discharge occurs, no Discharge Monitoring Report Form shall be submitted for that month.

2. Legible copies of these, and all other reports required herein, shall be signed and certified in accordance with **Section 5.4 – Signatory Requirements** and submitted to the Secretary at the following address:

   South Dakota Department of Environment and Natural Resources
   Surface Water Quality Program
   523 East Capitol
   Pierre, SD 57501

   In accordance with 40 CFR, Part 122, all permit reports shall be submitted electronically starting no later than **December 21, 2020.**

3. All reports must be submitted **no later than the 28th day of the month** following the completed reporting period. If no discharge occurs during the reporting period, no Discharge Monitoring Report Form shall be submitted.

4. In accordance with SDCL 1-40-39, the Secretary is authorized to accept a document with an electronic signature. SDDENR shall provide for the authenticity of each electronic signature by adhering to any standards established by the South Dakota Bureau of Information and Telecommunications pursuant to SDCL 53-12-47 and 53-12-50 or any other standards established by rules promulgated pursuant to SDCL Chapter 1-26.

5.2 Effluent Violation, Bypass, and Emergency Discharge Reporting Requirements

1. The permittee shall report any effluent violation, bypass or emergency discharge related to this general permit or permitted facility that may endanger health or the environment as soon as possible, but no later than 24 hours after becoming aware of the circumstances as follows:

   a. During regular business hours (8:00 a.m. - 5:00 p.m. Central Time), the report shall be made at (605) 773-3351.

   b. Outside of normal business hours, the permittee shall contact the South Dakota Emergency Management at (605) 773-3231.

2. Effluent violations, bypass, and emergency discharges that do not meet the conditions above shall be reported to the Secretary within 24 hours from the time the permittee becomes aware of the circumstances as follows:

    a. During regular business hours (8:00 a.m. - 5:00 p.m. Central Time), the report shall be made at (605) 773-3351.

    b. Outside of normal business hours, the permittee shall leave a message at 1-800-GET-DENR (1-800-438-3367).

3. The permittee shall submit notice of bypass as follows:

    a. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Secretary at least 10 days before the date of the bypass.

    b. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass 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.

4. The Secretary may require the permittee to notify the general public or downstream users that could be or will be impacted by the effluent violation, bypass, or emergency discharge.

    a. In making the decision to require public notification, the Secretary will consider the potential impacts as a result of the discharge, the downstream beneficial uses (such as drinking water or recreation), and the potential for public contact.

    b. If required by the Secretary, the permittee shall notify the public and/or downstream users as soon as possible, but in no case more than 24 hours after the discharge begins.

5. In addition to verbal notification, the permittee shall submit a written report of the circumstances regarding the effluent violation, bypass, or emergency discharge to the Secretary. Effluent violations shall be reported on the Discharge Monitoring Report forms required in **Section 5.1 – Reporting of Monitoring Results**.

    a. Reports shall be submitted in accordance with **Section 5.1 – Reporting of Monitoring Results**.

    b. The written submission shall contain:

        i. A description of the event and its cause;
        ii. The period of the event, including exact dates and times;
        iii. Where the water was discharged;
        iv. The estimated time the event is expected to continue if it has not been corrected;

v. Any adverse effects, such as fish kills;
vi. If public notification was required, describe how the public was notified of the discharge; and
vii. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the event.

c. The written report shall be submitted by the 28th day of the following month. The Secretary may require a written report to be submitted sooner or may require additional information if the discharge has the potential to impact human health or the environment.

5.3 Records Contents

Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;

2. The initials or names of the individuals who performed the sampling or measurements;

3. The dates analyses were performed;

4. The time analyses were initiated;

5. The initials or names of individuals 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.

5.4 Signatory Requirements

1. All general permit NOIs, reports, or information submitted to the Secretary shall be signed and certified by either a principal executive officer or ranking elected 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.

2. All reports required by the general permit and other information requested by the Secretary shall be signed by a person described in Paragraph 1 of this section 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 superintendent or equivalent responsibility, or an individual or position having overall responsibility for environmental matters. A duly authorized representative may be either a named individual or any individual occupying a named position.

3. If an authorization under Paragraph 2 a. above is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization must be submitted to the Secretary.

4. Any person signing a document under this section shall include 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.*

5.5 Retention of Records

1. The permittee shall retain records of all monitoring information and other data required by this general permit. This includes:

   a. Data collected on site, including inspection records;

   b. Copies of all Discharge Monitoring Report Forms;

   c. A copy of the general permit and the approval letter;

   d. All calibration and maintenance records;

   e. Copies of all other reports and plans required by this general permit; and

   f. Records of all data used to complete the NOI for this general permit.

2. This information must be retained for a period of at least **three years** from the date of the sample, measurement, report, or NOI. This period may be extended by request of the Secretary at any time. Data collected on site, copies of Discharge

Monitoring Report Forms, and a copy of this general permit and approval letter must be maintained on-site during the duration of the permitted activity.

5.6 Availability of Reports

Except for data determined to be confidential under ARSD Section 74:52:02:17, all reports prepared in accordance with the terms of this general permit shall be available for public inspection at the office of SDDENR. The name and address of the permittee, general permit NOIs, general permits and approval letters, and effluent data shall not be considered confidential.

5.7 Duty to Provide Information

1. The permittee shall furnish to the Secretary, within a reasonable time, any information the Secretary may request to determine whether cause exists for modifying, revoking and reissuing, or terminating coverage under 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. If the permittee becomes aware that it failed to submit any relevant facts in the general permit NOI, or submitted incorrect information in the general permit NOI or any report to the Secretary, it shall promptly submit such facts or information.

5.8 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, or could result in noncompliance with general permit conditions. This notification also applies to pollutants that are not subject to effluent limits or other notification requirements in this general permit.

5.9 Notification of Spills and Releases

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

    a. The release or spill threatens or is in a position to threaten the waters of the state (surface water or ground water);

    b. The release or spill causes an immediate danger to human health or safety;

    c. The release or spill exceeds 25 gallons;

    d. The release or spill causes a sheen on surface water;

    e. The release or spill of any substance that exceeds the ground water quality standards of ARSD Chapter 74:54:01;

f. The release or spill of any substance that exceeds the surface water quality standards of ARSD Chapter 74:51:01;

g. The release or spill of any substance that harms or threatens to harm wildlife or aquatic life;

h. The release or spill of crude oil in field activities under SDCL chapter 45-9 is greater than 1 barrel (42 gallons); or

i. The release or spill is required to be reported according to SARA Title III List of Lists, Consolidated List of Chemicals Subject to Reporting Under the Emergency Planning and Community Right to Know Act, US Environmental Protection Agency.

2. To report a release or spill, call the department at 605-773-3296 during regular office hours (8 a.m. to 5 p.m. Central time). To report the release after hours, on weekends or holidays, call South Dakota Emergency Management at 605-773-3231. Reporting the release to the department does not meet any obligation for reporting to other state, local, or federal agencies. Therefore, the responsible person must also contact local authorities to determine the local reporting requirements for releases.

6.0 COMPLIANCE REQUIREMENTS

6.1 Duty to Comply

The permittee shall comply with all conditions of this general permit. Any general 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 general permit termination, revocation and reissuance, or modification; or for denial of a general permit renewal NOI (a violation of a condition of this general permit is subject to SDCL Section 34A-2-75).

6.2 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.

6.3 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 Upset Conditions

1. 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 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 **Section 5.2 – Effluent Violation, Bypass, and Emergency Discharge Reporting Requirements**; and,

   d. The permittee complied with mitigation measures required under **Section 6.2 – 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.

6.5 Penalties for Violations of Permit Conditions

Any person who violates a permit condition is in violation of the provisions of SDCL 34A-2-36, 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. Except as provided in **Section 6.4 – Upset Conditions**, nothing in this permit shall be construed to relieve the permittee of the civil or criminal penalties for noncompliance.

6.6 Penalties for Falsification of Reports

1. 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, is in violation of the provisions of SDCL 34A-2-77, and is subject to penalties under SDCL 34A-2-75.

2. 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.

3. 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.

6.7 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.

6.8 Oil and Hazardous Substance Liability

Nothing in this permit shall be construed to preclude SDDENR from taking any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to that the permittee is or may be subject under section 311 of the Federal Clean Water Act.

7.0 ADDITIONAL PERMIT CONDITIONS

7.1 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 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 South Dakota Water Pollution Control Act, any substances or parameters at any location.

7.2 Removed Substances

1. 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 in accordance with applicable requirements of SDCL 34A-2, -6, and -11.

2. Sludge/digestor supernatant and filter backwash shall not be directly blended with or enter either the final plant discharge and/or waters of the State.

APPENDIX A

Notice of Intent (NOI) Form

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF INTENT (NOI)

to Obtain Coverage Under the SWD General Permit for
Temporary Discharge Activities and a Temporary Water Rights Use Permit

Original to: SD Department of Environment and Natural Resources
Surface Water Quality Program
523 East Capitol Avenue
Pierre, South Dakota 57501
Telephone: 1-800-SDSTORM

ALL QUESTIONS MUST BE ANSWERED COMPLETELY FOR THIS FORM TO BE VALID

I. Primary Contact Information: ☐ Owner ☐ Operator ☐ Contractor

Contact Person: _____

Company Name: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

II. Other Contact Information: ☐ Owner ☐ Operator ☐ Contractor

Contact Person: _____

Company Name: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Project Information:

Project/Facility Name: _____

On-Site Contact Person: _____ Phone Number: _____

Physical Project Address or Description of Construction Site Location: _____

_____

City: _____ County: _____ State: _____ Zip Code: _____

Latitude: _____ Longitude: _____ Source (GPS, Google, etc.): _____

Quarter(s): _____ Section(s): _____ Township(s): _____ Range(s): _____

Is this project/facility located on Tribal Lands? ☐ Yes ☐ No

IV. Project Activities:

Please describe the activities which require the applicant to obtain a discharge permit:

_____

_____

_____

_____

_____

FOR DENR USE ONLY

Permit Number: _____ Limit Classifications: _____ Date Approved: _____ Approved by: _____

V. Discharge Information:

Estimate the following information:

A. Date water **withdrawal** will commence: _____

B. Date water **withdrawal** will cease: _____

C. Total volume of **withdrawal** (in gallons): _____

D. Date water **discharge** will commence: _____

E. Date water **discharge** will cease: _____

F. Total volume of **discharge** (in gallons): _____

G. Average flow rate of **discharge** (in gpm): _____

Source of water being withdrawn/discharged: _____

Name of receiving waters: _____

Treatment processes employed, if any: _____

_____

_____

Describe the discharge and type of wastewater from each discharge location (including overflows, bypasses or discharges from holding ponds, trenches, excavations, vessels, pipelines, etc.) Attach additional sheets if necessary.

A. Discharge 1: _____

B. Discharge 2: _____

C. Discharge 3: _____

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.

VI. Stormwater Pollution Prevent Plan (SWPPP):

Is there any reason to believe the discharge may contain any pollutants other than those limited in the permit (i.e. TSS, pH, BTEX, Benzene, & TPH)? ☐ Yes ☐ No

Has the SWPPP been developed in lieu of sampling for TSS or TRC? ☐ Yes ☐ No

Describe the best management prctices being used in liue of, or along with, sampling:

_____

_____

VII. Hydrostatic Testing:

A. Type of vessel being tested: _____

B. Material vessel is constructed from: _____

C. Check the appropriate box: ☐ Vessel has been previously used ☐ Vessel is virgin material

VIII. Other Information:

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

_____

_____

_____

_____

_____

STATE OF SOUTH DAKOTA

BEFORE THE SECRETARY OF

THE DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF	**)**	
	)	**CERTIFICATION OF**
_____	**)**	
	)	**APPLICANT**
STATE OF _____	**)**	
	)	
COUNTY OF _____	**)**	

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

I have read and understand South Dakota Codified Law Section 1-40-27 which 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."

I certify pursuant to 1-40-27, that as an applicant, officer, director, partner, or resident general manager of the activity or facility for which the application has been made that I; a) have not intentionally misrepresented a material fact in applying for a permit; b) have not been convicted of a felony or other crime of moral turpitude; c) have not habitually and intentionally violated environmental laws of any state or the United States which have caused significant and material environmental damage; (d) have not had any permit revoked under the environmental laws of any state or the United States; or e) have not otherwise demonstrated through clear and convincing evidence of previous actions that I lack the necessary good character and competency to reliably carry out the obligations imposed by law upon me. I also certify that this application does not substantially duplicate an application by the same applicant denied within the past five years which denial has not been reversed by a court of competent jurisdiction. Further;

"I declare and affirm under the penalties of perjury that this claim (petition, application, information) has been examined by me, and to the best of my knowledge and belief, is in all things true and correct."

Dated this _____ day of _____ , 20____ .

_____
Applicant (print)

_____
Applicant (signature)

Subscribed and sworn before me this _____ day of _____ , 20_____ .

_____
Notary Public (signature)

My commission expires: _____

(SEAL)

PLEASE ATTACH ANY ADDITIONAL INFORMATION NECESSARY TO DISCLOSE ALL FACTS AND DOCUMENTS 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

APPENDIX B

Transfer of Ownership Form

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
TRANSFER OF OWNERSHIP OF PERMIT COVERAGE FORM

for Coverage Under the SWD General Permit
for Temporary Discharge Activities

This form is required to be submitted when ownership of a permit for temporary discharge activities 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
523 East Capitol Avenue
Pierre, South Dakota 57501
Telephone: 1-800-SDSTORM

I. Project Information:

Project/Facility Name: _____ Permit Number: _____

Project/Facility Physical Address or Description of Construction Site Location: _____

_____

II. Permittee Information:

Previous Permittee: _____

New Permittee: _____

New Permittee's Mailing Address: _____

City: _____ State: _____ Zip Code: _____

Phone Number: _____ Email: _____

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 Stormwater Pollution Prevention Plan be updated and revised to reflect all changes.

The project described above is covered under the General Permit for Temporary Discharge Activities. 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 temporary discharge activities have ceased and a Notice of Termination (NOT) has been submitted.

New Owner/Operator Signature: _____

Date: _____

Previous Owner/Operator Signature: _____

Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Approved by: _____

APPENDIX C

Notice of Termination (NOT) Form

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF TERMINATION FORM
of Coverage Under the SWD General Permit
for Temporary Discharge 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
523 East Capitol Avenue
Pierre, South Dakota 57501
Telephone: 1-800-SDSTORM

I. Permit Number: _____

II. Primary Contact Information:

Contact Person: _____

Company Name: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Project Information:

Project/Facility Name: _____

On-Site Contact Person: _____ Phone Number: _____

Physical Project Address or Description of Construction Site Location: _____

_____

City: _____ County: _____ State: _____ Zip Code: _____

I certify under penalty of law that all temporary discharge activities 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 from temporary discharge activities under this general permit, and that discharging pollutants from temporary discharge activities 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: Notice of Termination must be signed by the authorized chief elective or executive officer of the applicant, or by the applicant, if an individual.

Name: _____ Title: _____

Signature: _____ Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Approved: _____ Letter Date: _____ Approved by: _____

APPENDIX D

Notice of Intent for Reauthorization Form

DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES
NOTICE OF INTENT (NOI) for REAUTHORIZATION
of Coverage Under the SWD General Permit for
Temporary Discharge Activities

The following facility currently has coverage under the General Permit for Temporary Discharge 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
523 East Capitol Avenue
Pierre, South Dakota 57501
Telephone: 1-800-SDSTORM

Update all information below. Please print or type information.

I. Permit Number: _____

II. Primary Contact Information: ☐ **Owner** ☐ **Operator** ☐ **Contractor**

Contact Person: _____

Company Name: _____

Mailing Address: _____

City: _____ County: _____ State: _____ Zip Code: _____

Phone Number: _____ Email Address: _____

III. Project Information:

Project/Facility Name: _____

On-Site Contact Person: _____ Phone Number: _____

Physical Project Address or Description of Construction Site Location: _____

_____

City: _____ County: _____ State: _____ Zip Code: _____

Latitude: _____ Longitude: _____ Source (GPS, Google, etc.): _____

Quarter(s): _____ Section(s): _____ Township(s): _____ Range(s): _____

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 Stormwater 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 Permit and I agree to comply with those requirements.

NOTE: The NOI for Reauthorization must be signed by the authorized chief elective or executive offier of the applicant, or by the applicant, if an individual project.

Name (print): _____ Title: _____

Signature: _____ Date: _____

FOR DENR USE ONLY

Permit Number: _____ Date Reauthorized: _____ Approved by: _____

APPENDIX E

Discharge Monitoring Report Form

Permittee:

SOUTH DAKOTA SURFACE WATER DISCHARGE SYSTEM
DISCHARGE MONITORING REPORT
Permittee should complete all unshaded portions of this form

Permit #		Monitoring Period							Outfall #
	From	Year	Mo	Day	To	Year	Mo	Day	

PARAMETER		Quantity or Concentration			No. of Exceedences	Frequency of Analysis	Sample Type
		Minimum	Maximum	Units			
Flow Rate 00056	Sample Measurement						
	Permit Limit		Report	GPD		Daily	Calculate or Estimate
Total Flow 51500	Sample Measurement						
	Permit Limit		Report	gallons		Monthly	Calculate or Estimate
pH 00400	Sample Measurement						
	Permit Limit	6.5	9.0	units		Weekly	Instantaneous
Floating Solids/Visible Foam 45613 **"0" if no solids/foam observed** **"1" if solids/foam is observed**	Sample Measurement						
	Permit Limit		1	--		Daily	Visual
Oil and Grease (Visual) 84066 **"0" if no sheen observed** **"1" if sheen is observed**	Sample Measurement						
	Permit Limit		1	--		Daily	Visual
Oil and Grease 00552	Sample Measurement						
	Permit Limit		1 or 10	mg/L		See permit	Grab
Total Suspended Solids 00530	Sample Measurement						
	Permit Limit		53 or 90	mg/L		Weekly / See Permit	Grab
	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.						
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (PRINT)					**SIGNATURE**		**DATE**

Permittee:

SOUTH DAKOTA SURFACE WATER DISCHARGE SYSTEM
DISCHARGE MONITORING REPORT
Permittee should complete all unshaded portions of this form

Permit #		Monitoring Period							Outfall #
	From	Year	Mo	Day	To	Year	Mo	Day	

PARAMETER		Quantity or Concentration			No. of Exceedences	Frequency of Analysis	Sample Type
		Minimum	Maximum	Units			
Benzene 34030	Sample Measurement						
	Permit Limit		5.0	µg/L		Weekly	Grab
Total BTEX 49491	Sample Measurement						
	Permit Limit		100	µg/L		Weekly	Grab
Total Residual Chlorine 50060	Sample Measurement						
	Permit Limit		0.019	mg/L		Daily	Instantaneous

	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.		
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER (PRINT)		**SIGNATURE**	**DATE**

Appendix D: 2019 Average Bid Prices

South Dakota Department of Transportation
Bid Item Price Report

January 01, 2019 to December 31, 2019

Office of Project Development – Bid Letting

Department of Transportation

Office of Project Development – Bid Letting

700 E Broadway Avenue
Pierre, South Dakota 57501-2586
PH: 605.773.3268

March 24, 2020

2019 SDDOT Bid Item Price Report

To All Interested Parties:

The South Dakota DOT Bid Item Price Report is assembled each year to provide bid data representing bid pricing received for all construction contracts let and awarded throughout the year. The report includes unit bid price averages for certain major categories of work (*groups of items*) and compares the current years quantities and pricing to the data from five years earlier. The report also includes data for each individual bid item including: the total quantity bid; the total low bid cost; the average unit low bid price (*price submitted by the bidder awarded the contract*); the average unit price of the lowest three bids received; and the number of times the bid item was included in a contract.

The bid data provided for the 2019 report is representative of: 164 contracts let and awarded through the South Dakota Electronic Bid System (SDEBS); 564 bids received; and $459.20 million in contract awards, which was 1.18 percent, or $5.352 million over the Engineer's Estimate. In addition, it should be noted that bids for 14 contracts were rejected during 2019 and this report does not contain bid data from those contracts.

We hope you find the 2019 SDDOT Bid Item Price Report informative and helpful.

Sincerely,

SDDOT Bid Letting Staff

Average Unit Bid Prices for Bid Item Groups (Awarded Contracts)
January 2019 - December 2019

Major Construction Items
South Dakota Department of Transportation

	Item Description	Unit	2015 Quantity	2015 Average Unit Price	2019 Quantity	2019 Average Unit Price	Average Unit Price % Difference
1	Unclassified Excavation (10,000-149,999)	CuYd	673,692.000	$3.69	486,430.000	$5.70	54.400%
2	Unclassified Excavation (150,000 and above)	CuYd	2,312,304.000	$3.35	3,617,660.000	$2.32	-30.800%
3	Granular Base (10,000 and above)	Ton	458,034.500	$14.73	487,981.200	$18.34	24.600%
4	Asphalt Binder (500 and above)	Ton	58,693.400	$624.42	88,638.100	$639.41	2.400%
5	Asphalt Concrete (10,000 and above)	Ton	1,172,550.800	$36.19	1,846,830.200	$40.96	13.200%
6	Nonreinforced PCC Pavement (20,000 and above)	SqYd	389,906.800	$44.91	193,192.900	$44.44	-1.000%
7	PCC Overlay	SqYd	365,781.200	$30.38	174,522.100	$37.88	24.700%
8	Nonreinforced Concrete Sidewalk (5,000 and above)	SqYd	314,516.000	$6.13	289,961.000	$6.68	8.900%
9	Classs A45 Concrete (Bridge)	CuYd	6,549.300	$905.63	10,839.900	$1,096.91	21.100%
10	Class A45 Concrete (Box Culvert) (100 and above)	CuYd	3,004.500	$616.23	2,692.600	$871.56	41.400%
11	Reinforcing Steel (10,000 and above)	Lbs	1,892,577.000	$1.21	2,770,065.000	$1.53	26.800%
12	Prestressed Girder (27"-45")	Ft	N/A	N/A	3,153.000	$273.57	N/A
13	Prestressed Girder (54" and above)	Ft	4,202.000	$285.83	1,751.000	$299.14	4.700%
14	Structural Steel	Lbs	N/A	N/A	440,467.00	$2.60	N/A
15	Bridge Painting (5,000 and above)	SqFt	N/A	N/A	91,342.00	$5.54	N/A
16	Two Coat Bridge Deck Polymer Chip Seal	SqYd	N/A	N/A	42,021.200	$57.91	N/A
17	Signal Poles with Mast Arms (up to 65' mounting height)	Each	8.000	$15,648.93	12.000	$12,919.08	-17.400%
18	Breakaway Base Luminaire Poles (40'-50' mounting height)	Each	304.000	$2,880.65	262.000	$2,911.46	1.100%

Bid Items & Parameters:

1 Includes Unclassified Excavation for projects between 10,000 CuYds and 149,999 CuYds
2 Includes Unclassified Excavation for projects over 150,000 CuYds
3 Includes Base Course & Gravel Cushion for projects over 10,000 Tons
4 Includes PG 58-28, 58-34, 64-22, 64-28 & 64-34 Asphalt Binders for projects over 500 Tons
5 Includes Class Q1, Q2, Q3, Q4, Q5, Q1R, Q2R, Q3R, Q4R, Q5R, E, G, HR, S & Modified S Asphalt Concrete for projects over 10,000 Tons
6 Includes 8" through 12.5" nonreinforced PCC pavment for projects over 20,000 SqYds
7 Includes 5" through 8.5" PCC Overlay Placement, PCC Overlay Furnish & Bond Breaker Fabric
8 Includes 4" through 6" nonreinforced concrete sidewalk for projects over 5,000 SqYds
9 Includes Class A45 Concrete, Bridge Deck & Class A45 Concrete Bridge
10 Includes Class A45 Concrete, Box Culvert for projects over 100 CuYds
11 Includes Reinforcing Steel and Epoxy Coated Reinforcing Steel for projects over 10,000 lbs
12 Includes 27", 36" and 45" Minnesota Shape Prestressed Concrete Beam
13 Includes 54", 63", 72" & 81" Minnesota Shape Prestressed Concrete Beam
14 Includes Structural Steel (Steel Girders)
15 Includes Bridge Repainting Class II, Paint Residue Removal and Containment & Rust Penatrating Sealer for projects over 5,000 SqFt
16 Includes Two Coat Bridge Deck Polymer Chip Seal, Abrasive Blasting of Bridge Deck & Bridge Deck Grinding
17 Includes Signal Poles with Mast Arms up to 65' (does not include signal poles with luminaire arms or decorative signal poles)
18 Includes Breakaway Base Luminaire Poles with Arm & Twin Arms, Breakaway Base Luminaire Poles Top Mount & Top Twin Mount from 40' to 50' Mounting Height

South Dakota Department of Transportation
2019 Average Unit Price Report

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
004E0020	Construction and Maintenance of Detour(s)	LS	3.00	61,500.00	20,500.00	43,642.86	3
004E0030	Maintenance of Traffic Diversion(s)	LS	8.00	312,311.83	39,038.98	34,326.39	8
004E0050	Remove Traffic Diversion(s)	LS	9.00	477,731.97	53,081.33	57,107.63	9
009E0010	Mobilization	LS	164.00	34,960,742.11	213,175.26	261,667.09	164
009E3200	Construction Staking	LS	9.00	110,630.00	12,292.22	14,197.58	9
009E3210	Construction Staking	Mile	30.81	23,107.50	750.00	783.33	1
009E3220	Reestablish Right-of-Way and Property Corner	Each	761.00	41,812.05	54.94	54.75	10
009E3230	Grade Staking	Mile	115.78	363,798.77	3,142.24	2,972.08	20
009E3240	Graded Centerline Staking	Mile	14.90	25,015.23	1,679.10	1,699.54	1
009E3245	Final Cross Section Survey	Mile	31.19	35,143.70	1,126.87	1,722.14	5
009E3250	Miscellaneous Staking	Mile	247.43	652,586.80	2,637.46	3,014.27	29
009E3260	Miscellaneous Staking	LS	8.00	57,171.82	7,146.48	9,251.93	8
009E3280	Slope Staking	Mile	57.00	149,742.13	2,627.29	2,819.30	18
009E3290	Structure Staking	Each	70.00	112,700.52	1,610.01	1,856.41	19
009E3305	As-Built Survey	LS	4.00	30,500.00	7,625.00	26,416.67	4
009E3310	Bridge Elevation Survey	LS	13.00	27,071.69	2,082.44	2,069.22	13
009E3320	Checker	LS	24.00	388,153.92	16,173.08	18,789.85	24
009E3500	Weigh-In-Motion System	Each	1.00	281,983.80	281,983.80	281,983.80	1
009E4200	Construction Schedule, Category II	LS	6.00	47,580.71	7,930.12	5,576.91	6
009E4220	Project Management, Category II	LS	1.00	3,000.00	3,000.00	47,852.99	1
009E4300	Construction Schedule, Category III	LS	7.00	132,000.00	18,857.14	16,272.77	7
009E4330	Project Management, Category III	LS	7.00	328,500.00	46,928.57	50,264.21	7
009E5000	Concrete Penetrating Sealer	SqYd	17,978.10	125,611.46	6.99	7.02	11
009E9900	Training Program	Hour	28,000.00	135,360.00	4.83	4.72	28
100E0020	Clear and Grub Tree	Each	1,558.00	165,138.87	105.99	147.78	11
100E0100	Clearing	LS	32.00	542,070.65	16,939.71	16,718.54	32
110E0010	Remove Concrete Bridge Approach Slab	SqYd	2,737.90	146,921.20	53.66	55.19	8
110E0020	Remove Bridge Railing	Ft	843.00	9,370.88	11.12	11.34	3
110E0040	Remove Concrete Bridge Slab	SqYd	2,236.70	453,778.45	202.88	194.06	2
110E0050	Remove Steel Diaphragm	Each	1.00	5,000.00	5,000.00	3,750.00	1
110E0080	Remove Concrete Anchor Block	Each	4.00	18,000.00	4,500.00	2,400.70	1
110E0100	Remove Concrete Footing(s)	LS	4.00	10,908.65	2,727.16	4,654.32	4
110E0130	Remove Traffic Sign	Each	13,166.00	169,333.31	12.86	19.92	29
110E0135	Remove Delineator	Each	2,038.00	25,507.98	12.52	12.46	7
110E0200	Remove Building	Each	1.00	6,797.92	6,797.92	7,075.28	1
110E0300	Remove Concrete Curb and/or Gutter	Ft	25,002.00	155,936.69	6.24	5.96	21
110E0370	Remove Curb Stop	Each	18.00	1,350.00	75.00	154.98	1
110E0400	Remove Drop Inlet	Each	120.00	47,515.39	395.96	389.52	14
110E0420	Remove Drop Inlet Frame and Grate Assembly	Each	27.00	2,179.04	80.71	102.97	5
110E0460	Remove Manhole	Each	40.00	18,427.75	460.69	449.65	6
110E0480	Remove Manhole Frame and Lid	Each	19.00	2,736.00	144.00	144.00	1
110E0500	Remove Pipe Culvert	Ft	5,950.00	114,398.50	19.23	21.12	22
110E0510	Remove Pipe End Section	Each	250.00	59,256.46	237.03	242.18	23
110E0520	Remove Sewer Pipe	Ft	7,121.00	21,435.70	3.01	5.15	5
110E0530	Remove Storm Sewer Pipe	Ft	72.00	836.64	11.62	27.54	1
110E0590	Remove Cattle Pass	Ft	183.00	10,980.00	60.00	86.00	1
110E0595	Remove Cattle Pass End Section	Each	10.00	5,500.00	550.00	928.33	1
110E0600	Remove Fence	Ft	324,102.00	120,214.46	0.37	0.42	21
110E0605	Remove Chain Link Fence	Ft	2,483.00	8,147.25	3.28	2.89	2
110E0655	Remove Interim Crossover Closure	Ft	512.00	1,075.20	2.10	2.13	1
110E0700	Remove 3 Cable Guardrail	Ft	32,981.00	90,045.98	2.73	2.67	13
110E0707	Remove High Tension 4 Cable Guardrail	Ft	1,676.00	5,051.60	3.01	2.65	2
110E0730	Remove Beam Guardrail	Ft	46,588.80	166,887.04	3.58	4.17	30
110E0740	Remove 3 Cable Guardrail Anchor Assembly	Each	209.00	59,481.80	284.60	276.26	13
110E0745	Remove 3 Cable Guardrail Slip Base Anchor Assembly	Each	16.00	5,592.00	349.50	338.70	2
110E0749	Remove High Tension 4 Cable Guardrail Anchor Assembly	Each	9.00	3,045.50	338.39	287.64	2

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
110E0760	Remove Beam Guardrail Trailing End Terminal	Each	1.00	155.00	155.00	135.00	1
110E0770	Remove W Beam Guardrail Breakaway Cable Terminal	Each	8.00	1,220.00	152.50	155.50	2
110E0800	Remove W Beam Guardrail End Terminal	Each	115.00	29,980.92	260.70	275.86	9
110E0810	Remove Rubrail	Ft	459.60	2,108.50	4.59	4.61	5
110E1010	Remove Asphalt Concrete Pavement	SqYd	91,468.90	550,937.01	6.02	6.26	43
110E1050	Remove Asphalt Concrete Approach Pavement	SqYd	57.00	399.00	7.00	8.40	1
110E1100	Remove Concrete Pavement	SqYd	148,500.60	1,033,763.58	6.96	7.11	22
110E1120	Remove Concrete Median Pavement	SqYd	705.20	6,109.96	8.66	9.54	4
110E1130	Remove Concrete Driveway Pavement	SqYd	6,911.20	41,278.34	5.97	5.89	12
110E1140	Remove Concrete Sidewalk	SqYd	14,696.00	109,932.20	7.48	7.48	20
110E1300	Remove Concrete Retaining Wall	Ft	137.40	3,238.75	23.57	25.13	3
110E1510	Remove Luminaire Pole	Each	43.00	17,250.00	401.16	380.35	2
110E1520	Remove Signal Equipment	LS	2.00	6,158.23	3,079.12	6,086.37	2
110E1530	Remove Signal Pole Footing	Each	36.00	20,149.30	559.70	587.52	6
110E1540	Remove Luminaire Pole Footing	Each	127.00	35,455.39	279.18	265.26	9
110E1600	Remove Riprap	SqYd	26.00	598.00	23.00	22.01	1
110E1650	Remove Bank and Channel Protection Gabion	Each	100.00	8,500.00	85.00	65.17	1
110E1690	Remove Sediment	CuYd	288.70	14,967.95	51.85	54.75	42
110E1693	Remove Erosion Control Wattle	Ft	14,474.00	7,834.71	0.54	0.48	20
110E1695	Remove Sediment Filter Bag	Ft	14,153.00	9,627.34	0.68	0.61	11
110E1700	Remove Silt Fence	Ft	43,858.00	35,039.16	0.80	0.72	48
110E1910	Remove Fire Hydrant	Each	16.00	4,545.65	284.10	273.19	3
110E1960	Remove Valve Box	Each	2.00	393.47	196.74	296.18	2
110E1965	Remove Gate Valve	Each	11.00	2,235.21	203.20	205.73	2
110E1970	Remove Water Main	Ft	2,591.00	11,444.50	4.42	6.04	6
110E4330	Salvage W Beam Guardrail	Ft	76.00	380.00	5.00	4.67	1
110E5010	Salvage Delineator	Each	90.00	464.40	5.16	5.18	2
110E5020	Salvage Traffic Sign	Each	906.00	16,853.30	18.60	18.28	8
110E5100	Salvage Luminaire Pole	Each	75.00	15,630.99	208.41	207.29	4
110E5110	Salvage Signal Equipment	LS	10.00	51,534.63	5,153.46	4,729.90	10
110E5451	Salvage Riprap	Ton	1,580.60	15,392.40	9.74	9.31	3
110E5700	Salvage Manhole Frame and Lid	Each	1.00	225.00	225.00	210.00	1
110E5740	Salvage Fire Hydrant	Each	8.00	1,280.00	160.00	245.00	1
110E5750	Salvage Fire Hydrant with Valve and Box	Each	5.00	1,750.00	350.00	513.33	1
110E5800	Salvage Fence	Ft	30.00	120.00	4.00	3.00	1
110E5900	Salvage Bridge Railing	Ft	137.00	3,856.55	28.15	34.08	1
110E6000	Remove 3 Cable Guardrail for Reset	Ft	166.00	996.00	6.00	5.00	1
110E6006	Remove High Tension 4 Cable Guardrail for Reset	Ft	1,030.00	2,111.50	2.05	2.12	1
110E6016	Remove High Tension 4 Cable Guardrail Anchor Assembly for Reset	Each	4.00	2,060.00	515.00	405.00	1
110E6200	Remove Double Thrie Beam Guardrail for Reset	Ft	175.00	2,608.75	14.91	13.93	3
110E6210	Remove Thrie Beam Guardrail for Reset	Ft	225.00	3,850.63	17.11	13.14	4
110E6230	Remove W Beam Guardrail for Reset	Ft	787.50	6,262.50	7.95	7.65	5
110E6240	Remove W Beam to Thrie Beam Guardrail Transition for Reset	Each	11.00	1,467.90	133.45	116.97	3
110E6250	Remove Beam Guardrail Trailing End Terminal for Reset	Each	4.00	60.00	15.00	12.68	1
110E6300	Remove Rubrail for Reset	Ft	67.00	133.50	1.99	2.49	2
110E6410	Remove Type 1 MGS for Reset	Ft	437.50	5,757.50	13.16	13.05	1
110E7000	Remove Crossover Closure for Reset	Ft	1,024.00	2,801.60	2.74	2.68	3
110E7020	Remove Interim Crossover Closure for Reset	Ft	224.00	739.20	3.30	3.37	1
110E7040	Remove Gate for Reset	Each	5.00	1,218.12	243.62	268.88	2
110E7150	Remove Sign for Reset	Each	373.00	10,399.45	27.88	33.93	20
110E7152	Remove Delineator for Reset	Each	318.00	4,707.40	14.80	14.08	4
110E7500	Remove Pipe for Reset	Ft	2,126.00	90,911.60	42.76	44.97	18
110E7510	Remove Pipe End Section for Reset	Each	348.00	88,387.14	253.99	258.85	23
110E7530	Remove Cattle Pass for Reset	Ft	54.00	4,590.00	85.00	84.67	1

South Dakota Department of Transportation
2019 Average Unit Price Report

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
110E7540	Remove Cattle Pass End Section for Reset	Each	4.00	6,500.00	1,625.00	1,370.00	2
110E7700	Remove Drop Inlet Frame and Grate Assembly for Reset	Each	23.00	4,753.00	206.65	207.74	8
110E7800	Remove Chain Link Fence for Reset	Ft	324.00	1,625.85	5.02	6.41	2
110E7802	Remove Fence for Reset	Ft	2,527.00	5,661.50	2.24	2.79	4
120E0010	Unclassified Excavation	CuYd	4,199,139.00	12,145,801.62	2.89	3.19	64
120E0020	Unclassified Excavation	LS	2.00	54,660.20	27,330.10	26,573.42	2
120E0200	Unclassified Excavation, Structure	CuYd	261.00	3,194.10	12.24	17.18	2
120E0300	Borrow Unclassified Excavation	CuYd	37,370.00	306,337.50	8.20	6.33	2
120E0420	Contractor Furnished Select Subgrade Topping	CuYd	42,313.00	502,043.11	11.86	11.90	2
120E0500	Option Borrow Excavation	CuYd	527,560.00	3,555,160.23	6.74	7.65	5
120E0600	Contractor Furnished Borrow Excavation	CuYd	249,641.00	2,875,234.52	11.52	12.14	42
120E0900	Contaminated Material Excavation	CuYd	2,000.00	157,850.00	78.92	74.82	4
120E1000	Muck Excavation	CuYd	60,899.00	381,701.80	6.27	5.61	10
120E1100	Unclassified/Rock Excavation	CuYd	139,158.00	765,369.00	5.50	6.92	1
120E2000	Undercutting	CuYd	884,965.00	1,147,133.96	1.30	1.29	22
120E6200	Water for Granular Material	MGal	17,079.50	327,549.04	19.18	19.56	33
120E6300	Water for Vegetation	MGal	11,510.30	71,927.06	6.25	5.21	6
120E7000	Select Granular Backfill	Ton	3,121.80	55,232.02	17.69	15.55	5
120E7052	Granular Material for Reinforced Embankment	Ton	3,415.10	71,614.65	20.97	20.83	1
120E9000	Pit Run	Ton	22,884.50	355,327.10	15.53	19.22	2
205E0010	Dust Control Chloride	Lb	132,640.00	50,564.16	0.38	0.39	3
210E1000	Shoulder Preparation	Mile	197.78	642,693.78	3,249.62	3,007.28	8
210E1005	Surface Preparation	Mile	0.17	21,199.94	122,543.00	59,181.00	1
210E3000	Ordinary Roadway Shaping	Mile	9.97	99,700.00	10,000.00	8,666.67	1
230E0010	Placing Topsoil	CuYd	504,226.00	1,263,534.82	2.51	2.74	47
230E0020	Contractor Furnished Topsoil	CuYd	18,322.00	602,130.10	32.86	35.61	9
230E0100	Remove and Replace Topsoil	LS	26.00	542,367.01	20,860.27	22,401.51	26
240E0010	Obliterate Old Road	Sta	106.00	57,900.00	546.23	638.46	3
250E0010	Incidental Work	LS	11.00	149,727.26	13,611.57	14,463.74	11
250E0020	Incidental Work, Grading	LS	47.00	967,473.14	20,584.53	24,156.22	47
250E0030	Incidental Work, Structure	LS	25.00	2,154,759.28	86,190.37	88,387.42	25
260E1010	Base Course	Ton	562,313.60	11,028,679.80	19.61	21.75	68
260E1030	Base Course, Salvaged	Ton	505,441.60	2,917,256.34	5.77	6.45	28
260E1050	Base Course, Salvaged Asphalt Mix	Ton	18,065.90	193,516.58	10.71	12.32	9
260E1080	Base Course, Salvaged, State Furnished	Ton	21,238.00	168,099.00	7.92	9.12	3
260E2010	Gravel Cushion	Ton	59,779.30	1,020,614.42	17.07	17.72	16
260E2030	Gravel Cushion, Salvaged	Ton	36,792.90	189,483.44	5.15	6.82	1
260E2080	Gravel Cushion, Salvaged, State Furnished	Ton	34,185.60	206,822.88	6.05	9.85	1
260E3010	Gravel Surfacing	Ton	84,533.30	1,264,407.10	14.96	16.29	6
260E3030	Gravel Surfacing, Salvaged	Ton	1,112.00	5,282.00	4.75	5.35	1
260E5000	Shot Rock	Ton	73.30	2,932.00	40.00	40.00	1
260E6000	Granular Material, Furnish	Ton	166,336.90	2,215,227.91	13.32	16.58	24
260E6010	Granular Material	Ton	6,305.00	132,215.00	20.97	20.11	2
270E0020	Salvage and Stockpile Asphalt Mix Material	Ton	36,154.40	190,929.78	5.28	5.93	2
270E0040	Salvage and Stockpile Asphalt Mix and Granular Base Material	Ton	393,212.00	2,169,113.99	5.52	5.86	11
270E0110	Salvage and Stockpile Granular Material	Ton	32,567.30	113,991.68	3.50	3.50	3
270E0112	Salvage Granular Material	Ton	24,802.00	81,846.60	3.30	3.52	1
270E0200	Blend, Haul, and Stockpile Granular Material	Ton	197,936.00	1,105,873.21	5.59	6.92	16
270E0210	Haul and Stockpile Granular Material	Ton	40,741.20	315,352.30	7.74	7.73	6
270E0220	Blend and Stockpile Granular Material	Ton	168,340.00	938,359.75	5.57	4.68	14
280E0010	Full Depth Reclamation	SqYd	598,357.00	598,357.00	1.00	1.05	1
320E0005	PG 58-34 Asphalt Binder	Ton	55,566.90	35,139,464.17	632.38	627.22	29
320E0007	PG 64-28 Asphalt Binder	Ton	2,007.60	1,296,623.30	645.86	628.91	4
320E0008	PG 64-34 Asphalt Binder	Ton	31,025.30	20,344,806.10	655.75	668.85	12
320E0300	CQS-1P Asphalt Emulsion for Microsurfacing	Gal	339,092.00	881,639.20	2.60	2.93	1
320E0402	Asphalt Repair Mastic Type 2	Lb	329,512.00	330,450.80	1.00	1.08	2
320E1003	Class Q3 Hot Mixed Asphalt Concrete	Ton	164,883.10	7,314,275.60	44.36	45.29	3

South Dakota Department of Transportation
2019 Average Unit Price Report

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
320E1004	Class Q4 Hot Mixed Asphalt Concrete	Ton	97,079.80	4,533,626.66	46.70	50.07	1
320E1050	Class E Asphalt Concrete	Ton	44,592.00	2,288,786.08	51.33	51.90	5
320E1060	Class G Asphalt Concrete	Ton	13,165.30	876,381.82	66.57	65.88	2
320E1070	Class HR Asphalt Concrete	Ton	166,927.40	5,993,274.52	35.90	36.54	5
320E1080	Class S Asphalt Concrete	Ton	64,270.50	3,459,264.10	53.82	55.13	3
320E1090	Modified Class S Asphalt Concrete	Ton	93,073.10	6,008,043.07	64.55	67.00	3
320E1200	Asphalt Concrete Composite	Ton	82,309.50	8,538,655.21	103.74	107.52	57
320E1202	Class Q2R Hot Mixed Asphalt Concrete	Ton	316,467.00	11,373,375.80	35.94	40.53	9
320E1203	Class Q3R Hot Mixed Asphalt Concrete	Ton	742,773.70	29,220,248.86	39.34	43.17	14
320E1204	Class Q4R Hot Mixed Asphalt Concrete	Ton	150,561.80	5,131,434.37	34.08	36.18	2
320E1410	Contractor Furnished and Placed Asphalt Concrete	Ton	5,844.00	469,098.84	80.27	68.54	2
320E1800	Asphalt Concrete Blade Laid	Ton	48,228.00	2,149,660.16	44.57	48.38	19
320E1810	Asphalt Concrete Leveling Lift	Ton	35,089.90	1,595,923.40	45.48	48.49	4
320E1900	Asphalt Concrete Cold Mix	Ton	10.00	2,000.00	200.00	347.33	1
320E2500	Asphalt Concrete Curb	Ft	59.00	5,900.00	100.00	72.33	1
320E2713	Hot Applied Elastomeric Membrane	SqYd	21.40	3,210.00	150.00	159.40	1
320E3000	Compaction Sample	Each	60.00	17,487.75	291.46	283.62	10
320E3100	Stabilizing Additive for Asphalt Concrete	Ton	421.60	396,172.80	939.69	989.79	6
320E4000	Hydrated Lime	Ton	16,359.00	3,109,453.05	190.08	187.31	32
320E4510	Mineral Aggregate for Microsurfacing	Ton	11,117.60	1,040,607.36	93.60	89.49	1
320E5000	Saw and Seal Joint in Asphalt Concrete	Ft	21,977.00	65,931.00	3.00	2.43	1
320E5010	Saw and Seal Shoulder Joint	Ft	478,938.00	309,691.06	0.65	0.74	7
320E5020	Saw Joint in Asphalt Concrete	Ft	99,404.00	152,326.10	1.53	1.56	2
320E6000	Temporary Asphalt	Ton	1,305.00	160,887.65	123.29	129.12	2
320E7008	Grind 8" Rumble Strip or Stripe in Asphalt Concrete	Mile	323.00	229,959.60	711.95	703.56	8
320E7012	Grind 12" Rumble Strip or Stripe in Asphalt Concrete	Mile	810.90	580,075.32	715.35	722.40	30
320E7030	Grind Sinusoidal Centerline Rumble Stripe in Asphalt Concrete	Mile	108.70	136,809.90	1,258.60	1,364.79	9
320E7035	Grind Sinusoidal Transverse Rumble Strip in Asphalt Concrete	SqFt	13,525.60	112,586.08	8.32	14.40	6
320E7600	Asphalt Joint Adhesive	Ft	279,970.00	203,850.08	0.73	0.76	3
330E0010	MC-70 Asphalt for Prime	Ton	2,587.00	2,495,257.26	964.54	932.62	22
330E0100	SS-1h or CSS-1h Asphalt for Tack	Ton	7,894.80	4,789,272.60	606.64	592.84	44
330E0210	SS-1h or CSS-1h Asphalt for Flush Seal	Ton	2,299.10	1,732,768.73	753.67	771.47	40
330E0300	SS-1h or CSS-1h Asphalt for Fog Seal	Ton	3,009.60	1,775,420.40	589.92	710.16	16
330E1000	Blotting Sand for Prime	Ton	2,769.60	162,900.43	58.82	53.68	5
330E2000	Sand for Flush Seal	Ton	24,240.90	1,200,696.85	49.53	49.56	36
330E3000	Sand for Fog Seal	Ton	795.00	17,563.80	22.09	27.12	13
332E0010	Cold Milling Asphalt Concrete	SqYd	7,234,638.00	6,570,959.63	0.91	0.91	42
332E0070	Placing Cold Milled Material	Ton	1,332.00	18,554.76	13.93	12.95	1
332E0100	Cold Milling Asphalt Concrete and Placing Cold Milled Material	SqYd	85,502.00	34,200.80	0.40	0.54	1
350E0010	Asphalt Concrete Crack Sealing	Lb	643,056.00	1,086,134.16	1.69	1.91	9
360E0020	AE150S Asphalt for Surface Treatment	Ton	6,097.10	2,251,760.13	369.32	489.38	9
360E0042	CRS-2P Asphalt for Surface Treatment	Ton	9,367.60	4,701,664.23	501.91	579.42	8
360E1010	Type 1A Cover Aggregate	Ton	14,159.20	433,622.77	30.62	46.00	8
360E1020	Type 1B Cover Aggregate	Ton	16,149.40	430,421.56	26.65	46.53	7
360E1030	Type 2A Cover Aggregate	Ton	15,212.30	510,651.03	33.57	47.43	4
360E1040	Type 2B Cover Aggregate	Ton	17,710.50	766,691.15	43.29	43.54	10
360E1050	Type 3 Cover Aggregate	Ton	4,944.50	244,833.18	49.52	40.80	3
380E0050	8" Nonreinforced PCC Pavement	SqYd	5,149.40	320,388.60	62.22	67.89	5
380E0060	8.5" Nonreinforced PCC Pavement	SqYd	154,989.20	6,436,566.22	41.53	46.03	3
380E0070	9" Nonreinforced PCC Pavement	SqYd	1,308.50	98,465.50	75.25	85.41	2
380E0080	9.5" Nonreinforced PCC Pavement	SqYd	41,783.30	2,490,216.22	59.60	57.00	2
380E0090	10" Nonreinforced PCC Pavement	SqYd	7,957.70	693,073.00	87.09	89.97	5
380E0100	10.5" Nonreinforced PCC Pavement	SqYd	53,567.00	2,630,043.83	49.10	52.85	3
380E0540	10" Continuously Reinforced PCC Pavement	SqYd	9.40	7,266.20	773.00	669.11	1
380E0800	PCC Shoulder Pavement	SqYd	3,093.40	201,071.00	65.00	63.72	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
380E1060	9.5" Miscellaneous PCC Pavement	SqYd	30.80	3,080.00	100.00	110.37	1
380E1080	10.5" Miscellaneous PCC Pavement	SqYd	324.80	38,976.00	120.00	120.62	1
380E1120	Miscellaneous PCC Pavement	SqYd	331.80	46,452.00	140.00	155.41	1
380E1500	PCC Overlay, Furnish	CuYd	41,263.30	4,580,226.30	111.00	115.57	1
380E1580	8" PCC Overlay, Placement	SqYd	174,522.10	1,308,915.75	7.50	7.39	1
380E2450	Concrete Barrier and 10' Continuously Reinforced Concrete Shoulder	Ft	325.00	127,897.25	393.53	353.53	1
380E2556	6" Barrier Type Median PCC Pavement	SqYd	227.50	27,092.98	119.09	119.43	1
380E2564	4" Barrier Type Colored Median PCC Pavement	SqYd	9,498.20	590,202.93	62.14	59.97	3
380E2566	6" Barrier Type Colored Median PCC Pavement	SqYd	2,156.40	174,953.40	81.13	75.42	2
380E2574	4" Barrier Type Colored and Patterned Median PCC Pavement	SqYd	76.60	7,238.70	94.50	91.70	1
380E3020	6" PCC Driveway Pavement	SqYd	3,709.10	225,061.21	60.68	59.34	7
380E3025	6" Reinforced PCC Driveway Pavement	SqYd	42.00	3,654.00	87.00	88.50	1
380E3040	8" PCC Driveway Pavement	SqYd	212.70	14,889.00	70.00	71.67	1
380E3520	6" PCC Approach Pavement	SqYd	3,510.60	207,937.71	59.23	56.92	7
380E3525	6" Reinforced PCC Approach Pavement	SqYd	829.00	45,734.38	55.17	65.35	3
380E3540	8" PCC Approach Pavement	SqYd	3,220.80	221,264.06	68.70	67.94	7
380E3545	8" Reinforced PCC Approach Pavement	SqYd	2.80	229.60	82.00	105.33	1
380E4010	6" PCC Fillet Section	SqYd	74.80	7,127.00	95.28	79.13	3
380E4050	8" PCC Fillet Section	SqYd	1,185.10	151,411.10	127.76	128.52	4
380E4060	8.5" PCC Fillet Section	SqYd	1,198.10	138,360.80	115.48	110.39	3
380E4070	9" PCC Fillet Section	SqYd	321.00	27,285.00	85.00	101.67	1
380E4080	9.5" PCC Fillet Section	SqYd	404.20	40,047.70	99.08	108.45	3
380E4090	10" PCC Fillet Section	SqYd	1,364.70	136,470.00	100.00	111.67	1
380E4100	10.5" PCC Fillet Section	SqYd	193.70	24,826.70	128.17	118.76	2
380E5010	Fast Track Concrete	SqYd	693.10	51,982.50	75.00	76.05	1
380E5020	Fast Track Concrete for PCC Pavement Repair	SqYd	151.60	27,305.00	180.11	193.67	2
380E5030	Nonreinforced PCC Pavement Repair	SqYd	8,764.70	1,955,418.07	223.10	230.93	9
380E5080	Nonmetallic Fiber Reinforced PCC Pavement Repair	SqYd	314.10	62,820.00	200.00	252.50	1
380E5100	Continuously Reinforced PCC Pavement Repair	SqYd	232.80	122,224.32	525.02	507.13	2
380E6000	Dowel Bar	Each	265,231.00	2,363,817.75	8.91	9.11	22
380E6110	Insert Steel Bar in PCC Pavement	Each	18,020.00	299,924.62	16.64	15.80	27
380E6150	Tie Bar Retrofit	Each	240.00	19,982.40	83.26	83.26	1
380E6200	Tie Bar Retrofit, Stitching	Each	4,360.00	58,860.00	13.50	13.50	1
380E6300	Reseal PCC Pavement Joint - Silicone	Ft	82,055.00	177,986.10	2.17	2.23	2
380E6302	Reseal PCC Pavement Joint - Hot Pour	Ft	826,137.00	1,571,304.84	1.90	1.90	7
380E6310	Seal Random Cracks in PCC Pavement	Ft	17,243.00	73,276.02	4.25	4.19	4
380E6450	Saw Joint in PCC Pavement	Ft	462,179.00	378,224.58	0.82	0.82	2
380E6500	Planing PCC Pavement	SqYd	39,340.00	267,792.33	6.81	6.93	5
380E6510	Grinding PCC Pavement	SqYd	253,497.20	1,260,332.77	4.97	6.22	5
380E6545	Grind 12" Rumble Strip or Stripe in PCC Pavement	Mile	0.30	15,000.00	50,000.00	26,250.00	1
390E0100	Saw and Seal Joint	Ft	312,148.00	377,255.60	1.21	1.33	3
390E0200	Repair Type A Spall	SqFt	3,336.00	370,199.91	110.97	113.79	4
393E0100	Cracking and Seating PCC Pavement	SqYd	200,033.00	80,013.20	0.40	0.43	1
393E0300	Cored or Sawed Sample	Each	27.00	2,970.00	110.00	104.00	1
410E0020	Structural Steel	LS	1.00	1,143,108.83	1,143,108.83	1,146,346.68	1
410E0030	Structural Steel, Miscellaneous	LS	12.00	359,939.20	29,994.93	31,814.78	12
410E0101	Fatigue Retrofit Steel Girder, Peening	Each	32.00	7,200.00	225.00	379.43	1
410E0104	Fatigue Retrofit Steel Girder, Coring	Each	18.00	32,490.00	1,805.00	1,013.55	1
410E0250	Heat Straighten Steel Member(s)	LS	1.00	128,238.00	128,238.00	100,637.67	1
410E0300	Modify Girder End	Each	21.00	155,501.75	7,404.85	6,571.31	2
410E0320	Bolted Girder Splice	Each	2.00	8,203.80	4,101.90	6,700.63	1
410E0350	Remove and Replace Web	Each	3.00	5,406.00	1,802.00	6,287.33	1
410E0365	Remove and Replace Transverse Stiffener	Each	4.00	3,620.00	905.00	3,285.00	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
410E0380	Remove and Replace Steel Diaphragm	Each	6.00	15,099.00	2,516.50	4,625.73	2
410E0385	Repair Steel Diaphragm	Each	2.00	2,230.00	1,115.00	2,770.02	1
410E0410	Stud Shear Connector	Each	1,057.00	17,185.73	16.26	14.23	2
410E0508	Field Weld	In	6,699.00	31,781.34	4.74	8.49	4
410E0512	Grind Weld	In	2,859.00	11,029.00	3.86	9.34	3
410E0513	Tack Weld Removal	Each	69.00	7,145.64	103.56	103.85	1
410E0515	Drill Hole in Existing Steel	Each	1.00	310.06	310.06	203.35	1
410E0520	Surface Grinding of Structural Steel	SqIn	600.00	954.00	1.59	10.53	1
410E0560	Jack Superstructure and Shift Bearing Shoes	LS	1.00	40,148.63	40,148.63	30,820.71	1
410E1110	Laminated Elastomeric Bearing Pad	Each	73.00	90,718.56	1,242.72	1,246.24	1
410E2220	Replace Expansion Device	Each	2.00	118,854.54	59,427.27	59,846.75	1
410E2500	Inverted V Shaped Seal Joint	Ft	547.00	83,989.22	153.55	125.07	4
410E2600	Membrane Sealant Expansion Joint	Ft	4,055.40	446,513.45	110.10	101.96	18
410E3010	Magnetic Particle Weld Inspection	In	14,703.00	74,710.04	5.08	7.16	4
410E3020	Ultrasonic Weld Inspection	In	76.00	1,587.64	20.89	34.63	1
410E3030	Magnetic Particle Weld Inspection, Impact Damage Repair	SqIn	5,880.00	32,751.60	5.57	10.02	1
411E0100	Bridge Painting	LS	1.00	2,889.28	2,889.28	5,623.12	1
412E0100	Bridge Repainting, Class I	LS	4.00	48,669.82	12,167.46	38,512.09	4
412E0120	Bridge Repainting, Class II	LS	4.00	519,186.90	129,796.72	232,422.15	4
412E0400	Rust Penetrating Sealer	LS	3.00	16,500.00	5,500.00	11,471.17	3
412E0500	Paint Residue Containment	LS	8.00	496,275.43	62,034.43	85,964.89	8
420E0100	Structure Excavation, Bridge	CuYd	8,450.00	3,451,294.02	408.44	457.42	17
420E0200	Structure Excavation, Box Culvert	CuYd	2,217.00	74,007.63	33.38	59.73	17
420E0300	Structure Excavation, Retaining Wall	CuYd	9.00	1,475.00	163.89	168.19	2
420E0400	Structure Excavation, Miscellaneous	CuYd	509.00	40,198.23	78.97	77.38	8
421E0110	Pipe Culvert Undercut for Alternate Bidding	CuYd	39.00	2,250.00	57.69	28.33	2
421E0200	Box Culvert Undercut	CuYd	6,451.00	490,990.19	76.11	105.07	16
421E1000	Footing Undercut	CuYd	9.00	1,350.00	150.00	159.50	1
421E2040	4" Extruded Polystyrene Insulation Board	SqYd	9.00	117.00	13.00	91.00	1
430E0200	Bridge End Embankment	CuYd	12,051.00	212,849.31	17.66	21.59	17
430E0300	Granular Bridge End Backfill	CuYd	1,785.40	230,617.30	129.17	133.57	18
430E0510	Approach Slab Underdrain Excavation	CuYd	82.00	18,314.46	223.35	190.31	12
430E0700	Precast Concrete Headwall for Drain	Each	537.00	198,218.36	369.12	360.92	16
450E0102	12" RCP Class 2, Furnish	Ft	48.00	1,223.52	25.49	26.75	1
450E0105	12" RCP Class 5, Furnish	Ft	40.00	378.00	9.45	9.39	1
450E0110	12" RCP, Install	Ft	88.00	2,073.76	23.57	42.12	2
450E0112	15" RCP Class 2, Furnish	Ft	42.00	1,060.50	25.25	25.55	1
450E0113	15" RCP Class 3, Furnish	Ft	50.00	561.50	11.23	11.16	1
450E0120	15" RCP, Install	Ft	92.00	3,527.28	38.34	38.51	2
450E0122	18" RCP Class 2, Furnish	Ft	16,572.00	277,988.24	16.77	16.28	13
450E0123	18" RCP Class 3, Furnish	Ft	7,054.00	105,195.86	14.91	15.29	6
450E0130	18" RCP, Install	Ft	23,626.00	832,457.84	35.23	34.42	19
450E0142	24" RCP Class 2, Furnish	Ft	14,808.00	441,437.12	29.81	29.93	28
450E0143	24" RCP Class 3, Furnish	Ft	2,828.00	85,830.58	30.35	30.26	6
450E0144	24" RCP Class 4, Furnish	Ft	308.00	13,112.00	42.57	43.87	2
450E0145	24" RCP Class 5, Furnish	Ft	308.00	15,949.60	51.78	52.79	2
450E0150	24" RCP, Install	Ft	18,252.00	778,979.84	42.68	48.62	31
450E0162	30" RCP Class 2, Furnish	Ft	4,948.00	177,044.80	35.78	35.14	11
450E0163	30" RCP Class 3, Furnish	Ft	1,106.00	38,001.60	34.36	34.91	3
450E0164	30" RCP Class 4, Furnish	Ft	122.00	6,954.00	57.00	59.16	1
450E0170	30" RCP, Install	Ft	6,176.00	278,980.28	45.17	46.83	13
450E0182	36" RCP Class 2, Furnish	Ft	2,978.00	132,962.46	44.65	45.39	8
450E0183	36" RCP Class 3, Furnish	Ft	934.00	65,567.88	70.20	70.25	3
450E0184	36" RCP Class 4, Furnish	Ft	234.00	20,124.00	86.00	89.34	1
450E0185	36" RCP Class 5, Furnish	Ft	182.00	18,564.00	102.00	105.91	1
450E0190	36" RCP, Install	Ft	4,328.00	208,253.26	48.12	54.60	11
450E0192	42" RCP Class 2, Furnish	Ft	454.00	33,260.24	73.26	78.20	7
450E0193	42" RCP Class 3, Furnish	Ft	392.00	29,493.36	75.24	92.06	2
450E0194	42" RCP Class 4, Furnish	Ft	140.00	10,671.50	76.22	106.50	2

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
450E0195	42" RCP Class 5, Furnish	Ft	94.00	9,396.00	99.96	144.71	1
450E0196	42" RCP Class 4000D, Furnish	Ft	26.00	4,888.00	188.00	212.67	1
450E0200	42" RCP, Install	Ft	1,030.00	77,395.22	75.14	95.04	8
450E0202	48" RCP Class 2, Furnish	Ft	452.00	39,905.00	88.29	88.31	4
450E0203	48" RCP Class 3, Furnish	Ft	378.00	25,420.50	67.25	66.81	1
450E0204	48" RCP Class 4, Furnish	Ft	104.00	15,288.00	147.00	138.00	1
450E0210	48" RCP, Install	Ft	934.00	76,390.86	81.79	82.16	5
450E0212	54" RCP Class 2, Furnish	Ft	194.00	22,570.00	116.34	116.01	3
450E0213	54" RCP Class 3, Furnish	Ft	18.00	2,862.00	159.00	278.00	1
450E0220	54" RCP, Install	Ft	212.00	26,130.00	123.25	132.87	4
450E0222	60" RCP Class 2, Furnish	Ft	414.00	59,855.40	144.58	144.38	2
450E0223	60" RCP Class 3, Furnish	Ft	128.00	17,202.00	134.39	190.10	1
450E0224	60" RCP Class 4, Furnish	Ft	66.00	10,028.00	151.94	227.95	1
450E0225	60" RCP Class 5, Furnish	Ft	82.00	6,812.00	83.07	238.51	1
450E0230	60" RCP, Install	Ft	730.00	69,760.00	95.56	117.00	2
450E0232	66" RCP Class 2, Furnish	Ft	94.00	23,500.00	250.00	251.67	1
450E0233	66" RCP Class 3, Furnish	Ft	82.00	17,769.40	216.70	225.85	1
450E0234	66" RCP Class 4, Furnish	Ft	90.00	24,750.00	275.00	285.32	1
450E0240	66" RCP, Install	Ft	266.00	18,536.00	69.68	110.50	2
450E0242	72" RCP Class 2, Furnish	Ft	1,106.00	328,056.00	296.61	261.14	5
450E0250	72" RCP, Install	Ft	1,106.00	136,454.00	123.38	116.24	5
450E0262	84" RCP Class 2, Furnish	Ft	142.00	46,150.00	325.00	324.00	1
450E0270	84" RCP, Install	Ft	142.00	29,110.00	205.00	276.00	1
450E0272	90" RCP Class 2, Furnish	Ft	188.00	59,784.00	318.00	331.40	1
450E0280	90" RCP, Install	Ft	188.00	11,280.00	60.00	128.33	1
450E0408	18" RCP Bend, Furnish	Each	6.00	4,529.20	754.87	688.36	3
450E0409	18" RCP Bend, Install	Each	6.00	3,010.57	501.76	393.88	3
450E0416	24" RCP Bend, Furnish	Each	6.00	4,018.45	669.74	639.75	4
450E0417	24" RCP Bend, Install	Each	6.00	2,903.13	483.86	454.76	4
450E0428	36" RCP Bend, Furnish	Each	2.00	2,400.00	1,200.00	1,206.67	1
450E0429	36" RCP Bend, Install	Each	2.00	1,000.00	500.00	458.33	1
450E0700	RCP Tee, Furnish	Each	1.00	971.93	971.93	1,093.98	1
450E0701	RCP Tee, Install	Each	1.00	5,504.58	5,504.58	6,168.19	1
450E2000	12" RCP Flared End, Furnish	Each	1.00	357.70	357.70	355.35	1
450E2001	12" RCP Flared End, Install	Each	1.00	221.68	221.68	220.22	1
450E2004	15" RCP Flared End, Furnish	Each	1.00	376.78	376.78	374.31	1
450E2005	15" RCP Flared End, Install	Each	1.00	295.57	295.57	293.63	1
450E2008	18" RCP Flared End, Furnish	Each	54.00	26,302.68	487.09	491.90	12
450E2009	18" RCP Flared End, Install	Each	54.00	16,621.06	307.80	320.00	12
450E2016	24" RCP Flared End, Furnish	Each	57.00	36,891.98	647.23	638.14	15
450E2017	24" RCP Flared End, Install	Each	57.00	19,066.20	334.49	352.98	15
450E2024	30" RCP Flared End, Furnish	Each	14.00	14,415.00	1,029.64	1,055.03	6
450E2025	30" RCP Flared End, Install	Each	14.00	5,487.00	391.93	403.03	6
450E2028	36" RCP Flared End, Furnish	Each	42.00	35,408.12	843.05	883.59	9
450E2029	36" RCP Flared End, Install	Each	42.00	23,485.42	559.18	489.35	9
450E2032	42" RCP Flared End, Furnish	Each	16.00	13,760.60	860.04	1,100.23	5
450E2033	42" RCP Flared End, Install	Each	17.00	11,977.04	704.53	729.00	5
450E2036	48" RCP Flared End, Furnish	Each	18.00	20,742.66	1,152.37	1,077.76	7
450E2037	48" RCP Flared End, Install	Each	18.00	12,646.38	702.58	691.93	7
450E2040	54" RCP Flared End, Furnish	Each	5.00	6,637.00	1,327.40	1,351.89	3
450E2041	54" RCP Flared End, Install	Each	5.00	6,000.00	1,200.00	939.08	3
450E2044	60" RCP Flared End, Furnish	Each	13.00	21,760.00	1,673.85	1,754.15	2
450E2045	60" RCP Flared End, Install	Each	13.00	14,200.00	1,092.31	839.59	2
450E2048	66" RCP Flared End, Furnish	Each	4.00	10,340.00	2,585.00	2,644.06	2
450E2049	66" RCP Flared End, Install	Each	4.00	3,112.00	778.00	774.33	2
450E2052	72" RCP Flared End, Furnish	Each	12.00	30,180.00	2,515.00	2,650.00	2
450E2053	72" RCP Flared End, Install	Each	12.00	16,600.00	1,383.33	1,530.56	2
450E2060	84" RCP Flared End, Furnish	Each	4.00	14,000.00	3,500.00	3,256.00	1
450E2061	84" RCP Flared End, Install	Each	4.00	12,000.00	3,000.00	1,906.67	1
450E2064	90" RCP Flared End, Furnish	Each	4.00	14,292.00	3,573.00	3,716.09	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
450E2065	90" RCP Flared End, Install	Each	4.00	6,000.00	1,500.00	1,333.33	1
450E2200	24" RCP Sloped End, Furnish	Each	129.00	80,811.88	626.45	639.29	15
450E2201	24" RCP Sloped End, Install	Each	129.00	53,169.38	412.17	388.80	15
450E2204	30" RCP Sloped End, Furnish	Each	34.00	21,851.03	642.68	678.73	9
450E2205	30" RCP Sloped End, Install	Each	34.00	15,909.54	467.93	387.31	9
450E2208	36" RCP Sloped End, Furnish	Each	6.00	3,600.00	600.00	628.33	1
450E2209	36" RCP Sloped End, Install	Each	6.00	3,000.00	500.00	408.33	1
450E2304	18" RCP Safety End, Furnish	Each	19.00	12,617.07	664.06	768.04	3
450E2307	18" RCP Safety End, Install	Each	19.00	7,421.68	390.61	394.65	3
450E2308	24" RCP Safety End, Furnish	Each	5.00	3,066.00	613.20	631.00	3
450E2311	24" RCP Safety End, Install	Each	5.00	1,512.50	302.50	320.00	3
450E3002	18" RCP Arch Class 2, Furnish	Ft	1,120.00	39,200.00	35.00	34.33	1
450E3010	18" RCP Arch, Install	Ft	1,120.00	40,320.00	36.00	33.67	1
450E3012	24" RCP Arch Class 2, Furnish	Ft	436.00	20,924.00	47.99	48.00	2
450E3020	24" RCP Arch, Install	Ft	436.00	18,470.00	42.36	39.27	2
450E3022	30" RCP Arch Class 2, Furnish	Ft	722.00	46,295.04	64.12	64.44	3
450E3030	30" RCP Arch, Install	Ft	722.00	64,573.66	89.44	108.04	3
450E3032	36" RCP Arch Class 2, Furnish	Ft	1,770.00	157,683.60	89.09	90.40	5
450E3040	36" RCP Arch, Install	Ft	1,770.00	90,852.40	51.33	51.75	5
450E3042	42" RCP Arch Class 2, Furnish	Ft	614.00	63,495.00	103.41	106.38	3
450E3050	42" RCP Arch, Install	Ft	614.00	54,400.00	88.60	69.74	3
450E3052	48" RCP Arch Class 2, Furnish	Ft	516.00	57,750.00	111.92	112.60	3
450E3060	48" RCP Arch, Install	Ft	516.00	56,010.00	108.55	109.02	3
450E3062	54" RCP Arch Class 2, Furnish	Ft	378.00	63,882.00	169.00	169.00	1
450E3070	54" RCP Arch, Install	Ft	378.00	8,316.00	22.00	53.95	1
450E3072	60" RCP Arch Class 2, Furnish	Ft	78.00	10,530.00	135.00	134.20	1
450E3080	60" RCP Arch, Install	Ft	78.00	11,700.00	150.00	162.50	1
450E4508	30" RCP Arch Flared End, Furnish	Each	4.00	1,800.00	450.00	416.67	1
450E4509	30" RCP Arch Flared End, Install	Each	4.00	2,200.00	550.00	516.67	1
450E4512	36" RCP Arch Flared End, Furnish	Each	26.00	19,764.00	760.15	783.22	3
450E4513	36" RCP Arch Flared End, Install	Each	26.00	12,820.00	493.08	467.64	3
450E4516	42" RCP Arch Flared End, Furnish	Each	10.00	7,800.00	780.00	746.90	2
450E4517	42" RCP Arch Flared End, Install	Each	10.00	8,100.00	810.00	675.00	2
450E4520	48" RCP Arch Flared End, Furnish	Each	14.00	15,540.00	1,110.00	1,120.48	2
450E4521	48" RCP Arch Flared End, Install	Each	14.00	10,924.00	780.29	782.48	2
450E4524	54" RCP Arch Flared End, Furnish	Each	14.00	24,150.00	1,725.00	3,291.67	1
450E4525	54" RCP Arch Flared End, Install	Each	14.00	5,040.00	360.00	776.67	1
450E4528	60" RCP Arch Flared End, Furnish	Each	2.00	2,150.00	1,075.00	1,072.34	1
450E4529	60" RCP Arch Flared End, Install	Each	2.00	2,000.00	1,000.00	850.00	1
450E4604	30" RCP Arch Sloped End, Furnish	Each	11.00	7,022.10	638.37	662.00	2
450E4605	30" RCP Arch Sloped End, Install	Each	11.00	10,523.20	956.65	621.72	2
450E4608	42" RCP Arch Sloped End, Furnish	Each	4.00	5,000.00	1,250.00	1,296.67	1
450E4609	42" RCP Arch Sloped End, Install	Each	4.00	3,000.00	750.00	723.33	1
450E4699	Tie Bolts for RCP	Each	146.00	24,090.00	165.00	160.00	1
450E4739	12" CMP 16 Gauge, Furnish	Ft	748.00	14,214.54	19.00	18.75	5
450E4740	12" CMP, Install	Ft	748.00	26,701.96	35.70	30.93	5
450E4749	15" CMP 16 Gauge, Furnish	Ft	514.00	10,721.60	20.86	21.29	2
450E4750	15" CMP, Install	Ft	514.00	11,900.00	23.15	27.05	2
450E4757	18" CMP 12 Gauge, Furnish	Ft	172.00	10,311.40	59.95	57.59	2
450E4758	18" CMP 14 Gauge, Furnish	Ft	2,150.00	56,601.78	26.33	26.20	5
450E4759	18" CMP 16 Gauge, Furnish	Ft	6,082.00	98,153.20	16.14	16.16	7
450E4760	18" CMP, Install	Ft	8,404.00	186,635.28	22.21	21.96	14
450E4768	24" CMP 14 Gauge, Furnish	Ft	1,960.00	82,720.46	42.20	40.53	7
450E4769	24" CMP 16 Gauge, Furnish	Ft	2,244.00	52,488.34	23.39	24.15	7
450E4770	24" CMP, Install	Ft	4,204.00	101,324.30	24.10	29.03	14
450E4778	30" CMP 14 Gauge, Furnish	Ft	618.00	30,408.00	49.20	43.59	5
450E4779	30" CMP 16 Gauge, Furnish	Ft	434.00	10,562.76	24.34	26.61	3
450E4780	30" CMP, Install	Ft	1,052.00	37,105.02	35.27	36.56	8
450E4788	36" CMP 14 Gauge, Furnish	Ft	94.00	5,170.00	55.00	54.00	1
450E4789	36" CMP 16 Gauge, Furnish	Ft	30.00	1,260.00	42.00	42.00	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
450E4790	36" CMP, Install	Ft	124.00	3,118.00	25.15	34.24	2
450E4798	42" CMP 14 Gauge, Furnish	Ft	40.00	2,840.00	71.00	83.38	1
450E4799	42" CMP 16 Gauge, Furnish	Ft	36.00	4,010.00	111.39	113.57	2
450E4800	42" CMP, Install	Ft	76.00	5,244.00	69.00	140.04	3
450E4818	54" CMP 14 Gauge, Furnish	Ft	8.00	2,228.00	278.50	271.83	2
450E4820	54" CMP, Install	Ft	8.00	960.00	120.00	178.33	2
450E4828	60" CMP 14 Gauge, Furnish	Ft	6.00	1,260.00	210.00	219.67	1
450E4830	60" CMP, Install	Ft	6.00	870.00	145.00	209.33	1
450E5000	12" CMP Elbow, Furnish	Each	20.00	3,896.18	194.81	187.44	3
450E5001	12" CMP Elbow, Install	Each	20.00	3,845.68	192.28	192.66	3
450E5005	15" CMP Elbow, Furnish	Each	5.00	827.94	165.59	206.31	2
450E5006	15" CMP Elbow, Install	Each	5.00	1,635.00	327.00	335.76	2
450E5010	18" CMP Elbow, Furnish	Each	19.00	5,020.51	264.24	256.44	8
450E5011	18" CMP Elbow, Install	Each	19.00	5,731.79	301.67	310.58	8
450E5015	24" CMP Elbow, Furnish	Each	39.00	15,844.00	406.26	380.10	7
450E5016	24" CMP Elbow, Install	Each	39.00	9,356.16	239.90	242.08	7
450E5020	30" CMP Elbow, Furnish	Each	4.00	2,000.00	500.00	452.50	1
450E5021	30" CMP Elbow, Install	Each	4.00	2,580.00	645.00	640.00	1
450E5025	36" CMP Elbow, Furnish	Each	3.00	1,591.00	530.33	525.67	2
450E5026	36" CMP Elbow, Install	Each	3.00	750.00	250.00	272.22	2
450E5100	CMP Tee, Furnish	Each	1.00	275.00	275.00	316.67	1
450E5101	CMP Tee, Install	Each	1.00	300.00	300.00	325.00	1
450E5203	12" CMP Flared End, Furnish	Each	14.00	1,627.32	116.24	109.61	4
450E5204	12" CMP Flared End, Install	Each	14.00	2,847.84	203.42	185.01	4
450E5211	18" CMP Flared End, Furnish	Each	22.00	3,740.00	170.00	165.18	8
450E5212	18" CMP Flared End, Install	Each	22.00	5,435.00	247.05	227.42	8
450E5215	24" CMP Flared End, Furnish	Each	33.00	8,720.00	264.24	276.12	12
450E5216	24" CMP Flared End, Install	Each	33.00	8,216.00	248.97	256.22	12
450E5219	30" CMP Flared End, Furnish	Each	12.00	6,488.00	540.67	527.43	5
450E5220	30" CMP Flared End, Install	Each	12.00	3,827.00	318.92	377.90	5
450E5223	36" CMP Flared End, Furnish	Each	10.00	8,919.00	891.90	907.88	4
450E5224	36" CMP Flared End, Install	Each	10.00	5,880.00	588.00	467.58	4
450E5227	42" CMP Flared End, Furnish	Each	9.00	11,485.00	1,276.11	1,359.74	4
450E5228	42" CMP Flared End, Install	Each	9.00	4,696.00	521.78	583.37	4
450E5231	48" CMP Flared End, Furnish	Each	2.00	4,172.00	2,086.00	2,033.67	1
450E5232	48" CMP Flared End, Install	Each	2.00	608.00	304.00	488.00	1
450E5235	54" CMP Flared End, Furnish	Each	7.00	12,486.00	1,783.71	1,958.14	4
450E5236	54" CMP Flared End, Install	Each	7.00	4,640.00	662.86	721.90	4
450E5239	60" CMP Flared End, Furnish	Each	5.00	13,629.00	2,725.80	3,050.60	3
450E5240	60" CMP Flared End, Install	Each	5.00	3,420.00	684.00	795.33	3
450E5247	72" CMP Flared End, Furnish	Each	2.00	7,480.00	3,740.00	4,230.00	1
450E5248	72" CMP Flared End, Install	Each	2.00	1,700.00	850.00	1,045.00	1
450E5302	15" CMP Sloped End, Furnish	Each	1.00	157.50	157.50	159.39	1
450E5303	15" CMP Sloped End, Install	Each	1.00	472.50	472.50	478.17	1
450E5306	18" CMP Sloped End, Furnish	Each	8.00	2,500.00	312.50	360.00	2
450E5307	18" CMP Sloped End, Install	Each	8.00	2,120.00	265.00	360.00	2
450E5310	24" CMP Sloped End, Furnish	Each	36.00	10,345.00	287.36	331.41	5
450E5311	24" CMP Sloped End, Install	Each	36.00	6,095.00	169.31	222.12	5
450E5314	30" CMP Sloped End, Furnish	Each	8.00	8,100.00	1,012.50	1,095.56	4
450E5315	30" CMP Sloped End, Install	Each	8.00	3,050.00	381.25	449.44	4
450E5321	42" CMP Sloped End with Bars, Furnish	Each	2.00	8,240.00	4,120.00	4,010.00	1
450E5322	42" CMP Sloped End, Furnish	Each	2.00	3,500.00	1,750.00	1,766.67	1
450E5323	42" CMP Sloped End, Install	Each	4.00	1,346.00	336.50	601.33	2
450E5402	15" CMP Safety End, Furnish	Each	3.00	450.00	150.00	175.00	1
450E5403	15" CMP Safety End, Install	Each	3.00	750.00	250.00	275.00	1
450E5406	18" CMP Safety End, Furnish	Each	196.00	23,433.32	119.56	144.93	8
450E5407	18" CMP Safety End, Install	Each	196.00	42,364.62	216.15	208.95	8
450E5410	24" CMP Safety End, Furnish	Each	67.00	23,196.30	346.21	345.46	6
450E5411	24" CMP Safety End, Install	Each	67.00	16,024.08	239.17	226.77	6
450E5414	30" CMP Safety End, Furnish	Each	14.00	18,131.80	1,295.13	1,296.61	3

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
450E5415	30" CMP Safety End with Bars, Furnish	Each	2.00	4,000.00	2,000.00	2,000.00	1
450E5417	30" CMP Safety End, Install	Each	16.00	4,577.50	286.09	281.25	4
450E5421	36" CMP Safety End with Bars, Furnish	Each	4.00	10,800.00	2,700.00	2,700.00	1
450E5423	36" CMP Safety End, Install	Each	4.00	1,300.00	325.00	325.00	1
450E5509	18" CMP Arch 16 Gauge, Furnish	Ft	52.00	808.60	15.55	15.55	1
450E5510	18" CMP Arch, Install	Ft	52.00	1,040.00	20.00	27.50	1
450E5529	30" CMP Arch 16 Gauge, Furnish	Ft	234.00	6,178.18	26.40	27.15	2
450E5530	30" CMP Arch, Install	Ft	294.00	11,485.22	39.07	41.70	3
450E5539	36" CMP Arch 16 Gauge, Furnish	Ft	204.00	13,260.00	65.00	65.00	1
450E5540	36" CMP Arch, Install	Ft	204.00	10,200.00	50.00	50.00	1
450E5810	30" CMP Arch Flared End, Furnish	Each	4.00	1,160.00	290.00	288.17	1
450E5811	30" CMP Arch Flared End, Install	Each	4.00	1,800.00	450.00	350.00	1
450E5814	36" CMP Arch Flared End, Furnish	Each	6.00	3,300.00	550.00	550.00	1
450E5815	36" CMP Arch Flared End, Install	Each	6.00	3,060.00	510.00	510.00	1
450E5822	48" CMP Arch Flared End, Furnish	Each	3.00	4,342.00	1,447.33	1,592.44	2
450E5823	48" CMP Arch Flared End, Install	Each	3.00	1,455.00	485.00	729.44	2
450E6006	18" CMP Arch Safety End, Furnish	Each	2.00	420.00	210.00	208.12	1
450E6007	18" CMP Arch Safety End, Install	Each	2.00	500.00	250.00	225.00	1
450E6014	30" CMP Arch Safety End, Furnish	Each	6.00	6,222.16	1,037.03	1,082.34	2
450E6017	30" CMP Arch Safety End, Install	Each	6.00	3,088.52	514.75	359.81	2
450E6119	15" Slotted CMP 16 Gauge, Furnish	Ft	260.00	13,000.00	50.00	52.80	1
450E6120	15" Slotted CMP, Install	Ft	260.00	10,920.00	42.00	42.93	1
450E6130	18" Slotted CMP, Install	Ft	152.00	3,944.40	25.95	25.78	1
450E7005	12" High Density Polyethylene Pipe, Furnish	Ft	50.00	400.00	8.00	12.68	1
450E7006	12" High Density Polyethylene Pipe, Install	Ft	50.00	1,600.00	32.00	48.08	1
450E7029	24" High Density Polyethylene Pipe, Furnish	Ft	364.00	7,136.00	19.60	21.75	2
450E7030	24" High Density Polyethylene Pipe, Install	Ft	364.00	16,760.00	46.04	41.46	2
450E7049	36" High Density Polyethylene Pipe, Furnish	Ft	116.00	7,480.00	64.48	51.61	2
450E7050	36" High Density Polyethylene Pipe, Install	Ft	116.00	10,740.00	92.59	68.94	2
450E7400	High Density Polyethylene Pipe Bend, Furnish	Each	1.00	1,750.00	1,750.00	1,728.05	1
450E7401	High Density Polyethylene Pipe Bend, Install	Each	1.00	575.00	575.00	818.85	1
450E7500	High Density Polyethylene Pipe Tee, Furnish	Each	1.00	950.00	950.00	1,036.17	1
450E7501	High Density Polyethylene Pipe Tee, Install	Each	1.00	575.00	575.00	903.28	1
450E7618	18" Steel Pipe, Furnish	Ft	570.00	51,300.00	90.00	110.00	1
450E7624	24" Steel Pipe, Furnish	Ft	954.00	97,904.00	102.62	116.30	4
450E7630	30" Steel Pipe, Furnish	Ft	440.00	54,840.16	124.64	128.57	2
450E7636	36" Steel Pipe, Furnish	Ft	220.00	36,300.00	165.00	170.00	1
450E7642	42" Steel Pipe, Furnish	Ft	698.00	116,216.00	166.50	231.53	2
450E7654	54" Steel Pipe, Furnish	Ft	240.00	68,160.00	284.00	280.00	1
450E7999	12" RCP to CMP Transition, Furnish	Each	1.00	196.93	196.93	202.95	1
450E8000	12" Pipe Transition, Install	Each	1.00	103.62	103.62	230.81	1
450E8004	15" RCP to CMP Transition, Furnish	Each	1.00	293.16	293.16	296.68	1
450E8005	15" Pipe Transition, Install	Each	1.00	630.00	630.00	637.56	1
450E8009	18" RCP to CMP Transition, Furnish	Each	4.00	2,086.00	521.50	541.47	3
450E8010	18" Pipe Transition, Install	Each	4.00	964.00	241.00	350.07	3
450E8014	24" RCP to CMP Transition, Furnish	Each	15.00	12,228.73	815.25	675.93	5
450E8015	24" Pipe Transition, Install	Each	19.00	7,748.17	407.80	392.78	6
450E8024	36" RCP to CMP Transition, Furnish	Each	1.00	456.00	456.00	476.65	1
450E8025	36" Pipe Transition, Install	Each	1.00	250.00	250.00	266.67	1
450E8030	42" Pipe Transition, Install	Each	7.00	6,941.00	991.57	1,801.85	2
450E8040	54" Pipe Transition, Install	Each	1.00	4,105.00	4,105.00	3,934.67	1
450E8045	60" Pipe Transition, Install	Each	1.00	4,541.00	4,541.00	4,450.33	1
450E8055	72" Pipe Transition, Install	Each	2.00	2,500.00	1,250.00	2,523.33	1
450E8217	30" Smooth Tapered Sleeve, Furnish	Each	2.00	700.00	350.00	350.00	1
450E8218	30" Smooth Tapered Sleeve, Install	Each	2.00	500.00	250.00	250.00	1
450E8221	36" Smooth Tapered Sleeve, Furnish	Each	2.00	890.00	445.00	445.00	1
450E8222	36" Smooth Tapered Sleeve, Install	Each	2.00	500.00	250.00	250.00	1
450E8300	Culvert Joint Cleaning	Ft	1,369.40	38,602.20	28.19	28.10	3
450E8305	Repair Culvert Joint	Ft	1,351.40	101,355.00	75.00	72.10	2
450E8310	Chemical Grout Void Fill	Gal	470.00	96,062.50	204.39	200.56	2

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
450E8450	Storm Sewer Video Inspection	Ft	599.00	2,096.50	3.50	3.57	1
450E8600	Flap Gate	Each	1.00	1,450.00	1,450.00	2,383.33	1
450E8690	Sluice Gate	Each	2.00	16,000.00	8,000.00	8,533.33	1
450E8900	Cleanout Pipe Culvert	Each	78.00	85,158.39	1,091.77	1,536.37	13
450E9000	Reset Pipe	Ft	2,126.00	159,933.80	75.23	74.72	18
450E9001	Reset Pipe End Section	Each	348.00	150,926.50	433.70	412.58	23
450E9218	Slipline 18" Pipe	Ft	80.00	15,200.00	190.00	168.33	1
450E9224	Slipline 24" Pipe	Ft	510.00	81,501.60	159.81	165.54	4
450E9226	Slipline 30" Pipe	Ft	222.00	44,460.00	200.27	200.80	3
450E9228	Slipline 36" Pipe	Ft	524.00	107,008.00	204.21	213.28	2
450E9232	Slipline 48" Pipe	Ft	314.00	106,480.00	339.11	334.82	3
450E9234	Slipline 54" Pipe	Ft	380.00	56,240.00	148.00	167.67	1
450E9236	Slipline 60" Pipe	Ft	128.00	32,640.00	255.00	438.33	1
450E9240	Slipline 72" Pipe	Ft	182.00	31,668.00	174.00	199.15	1
450E9246	Slipline 90" Pipe	Ft	146.00	87,600.00	600.00	803.33	1
451E0003	3" PVC Encasement Pipe	Ft	130.00	3,900.00	30.00	28.67	1
451E0004	4" PVC Encasement Pipe	Ft	873.00	20,355.85	23.32	24.30	2
451E0008	8" PVC Encasement Pipe	Ft	240.00	6,175.20	25.73	26.71	1
451E0010	10" PVC Encasement Pipe	Ft	40.00	2,080.00	52.00	52.00	1
451E0012	12" PVC Encasement Pipe	Ft	450.00	21,722.20	48.27	49.09	2
451E0108	8" Steel Encasement Pipe	Ft	250.00	10,657.50	42.63	44.29	1
451E0112	12" Steel Encasement Pipe	Ft	460.00	27,911.60	60.68	57.67	2
451E0116	16" Steel Encasement Pipe	Ft	30.00	1,933.80	64.46	65.34	1
451E0118	18" Steel Encasement Pipe	Ft	103.00	9,270.00	90.00	138.67	1
451E0120	20" Steel Encasement Pipe	Ft	220.00	40,069.20	182.13	140.30	2
451E0124	24" Steel Encasement Pipe	Ft	375.00	41,343.75	110.25	114.48	1
451E0300	Install Carrier Pipe	Ft	380.00	17,451.50	45.92	47.38	2
451E0301	Pipe Encasement	Each	2.00	6,000.00	3,000.00	3,000.00	1
451E0401	1" High Density Polyethylene Pipe	Ft	1,392.00	29,232.00	21.00	21.85	1
451E0406	1 1/2" High Density Polyethylene Pipe	Ft	520.00	12,012.00	23.10	23.93	1
451E0408	2" High Density Polyethylene Pipe	Ft	174.00	4,384.80	25.20	26.19	1
451E0508	2" PVC Pipe	Ft	61.00	746.03	12.23	12.40	1
451E0514	4" PVC Pipe	Ft	30.00	1,350.00	45.00	45.00	1
451E0516	6" PVC Pipe	Ft	10.00	400.00	40.00	193.82	1
451E0522	12" PVC Pipe	Ft	1,355.00	139,935.32	103.27	108.89	2
451E0604	4" PVC Water Main	Ft	1,334.00	31,194.60	23.38	24.63	2
451E0606	6" PVC Water Main	Ft	3,568.00	114,053.30	31.97	33.15	5
451E0608	8" PVC Water Main	Ft	5,881.00	206,755.66	35.16	35.29	5
451E0610	10" PVC Water Main	Ft	3,077.00	153,850.00	50.00	47.67	1
451E0612	12" PVC Water Main	Ft	2,829.00	140,121.10	49.53	49.95	2
451E0616	16" PVC Water Main	Ft	15,697.00	891,377.48	56.79	59.00	2
451E0654	4" PVC Restrained Joint Water Main	Ft	556.00	14,595.00	26.25	27.23	1
451E0656	6" PVC Restrained Joint Water Main	Ft	67.00	2,462.25	36.75	38.16	1
451E0658	8" PVC Restrained Joint Water Main	Ft	2,320.00	80,572.72	34.73	35.82	3
451E0660	10" PVC Restrained Joint Water Main	Ft	142.00	7,810.00	55.00	53.67	1
451E0662	12" PVC Restrained Joint Water Main	Ft	1,352.00	68,329.20	50.54	51.41	2
451E0666	16" PVC Restrained Joint Water Main	Ft	1,005.00	103,414.50	102.90	106.85	1
451E0692	6" Water Main Restraining Device	Each	47.00	5,390.74	114.70	117.09	2
451E0693	8" Water Main Restraining Device	Each	21.00	2,857.89	136.09	137.95	1
451E0694	10" Water Main Restraining Device	Each	4.00	779.56	194.89	197.55	1
451E0695	12" Water Main Restraining Device	Each	34.00	7,284.84	214.26	217.18	1
451E0802	1" Copper Pipe	Ft	2,139.00	56,629.50	26.47	26.29	3
451E0808	2" Copper Pipe	Ft	20.00	1,620.00	81.00	60.33	1
451E1004	4" PVC Sewer Pipe	Ft	675.00	21,937.50	32.50	32.50	1
451E1006	6" PVC Sewer Pipe	Ft	30.00	1,320.00	44.00	44.00	1
451E1008	8" PVC Sewer Pipe	Ft	4,131.00	280,486.32	67.90	54.40	4
451E1010	10" PVC Sewer Pipe	Ft	156.00	17,701.08	113.47	100.37	2
451E1012	12" PVC Sewer Pipe	Ft	1,360.00	51,303.28	37.72	39.43	3
451E1015	15" PVC Sewer Pipe	Ft	3,079.00	242,332.64	78.70	72.25	3
451E1018	18" PVC Sewer Pipe	Ft	473.00	29,799.00	63.00	73.83	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
451E1021	21" PVC Sewer Pipe	Ft	452.00	56,500.00	125.00	110.00	1
451E1024	24" PVC Sewer Pipe	Ft	370.00	31,450.00	85.00	97.83	1
451E1108	8" PVC Force Main	Ft	190.00	7,482.20	39.38	40.93	1
451E1204	4" Sewer Service	Ft	170.00	7,940.00	46.71	42.73	2
451E1206	6" Sewer Service	Ft	1,875.00	56,250.00	30.00	29.33	1
451E1275	1" Water Service	Each	117.00	3,627.00	31.00	31.00	1
451E1277	1.5" Water Service	Each	30.00	1,560.00	52.00	52.00	1
451E1278	2" Water Service	Each	30.00	2,070.00	69.00	69.00	1
451E1504	4" Sanitary Sewer Service Cleanout	Each	21.00	8,557.00	407.48	383.88	2
451E1506	6" Sanitary Sewer Service Cleanout	Each	1.00	432.00	432.00	432.00	1
451E1550	Sanitary Sewer Video Inspection	Ft	5,436.00	11,516.49	2.12	2.30	2
451E2000	Pipe Wye	Each	1.00	400.00	400.00	1,033.33	1
451E2012	8"x4" Pipe Wye	Each	5.00	1,585.00	317.00	317.00	1
451E2013	8"x6" Pipe Wye	Each	7.00	2,100.00	300.00	298.17	1
451E2040	15"x4" Pipe Wye	Each	14.00	5,250.00	375.00	375.00	1
451E2041	15"x6" Pipe Wye	Each	26.00	18,200.00	700.00	586.67	1
451E2205	4"x4" Pipe Tee	Each	3.00	1,260.00	420.00	436.33	1
451E2207	6"x6" Pipe Tee	Each	13.00	6,533.78	502.60	488.88	5
451E2212	8"x4" Pipe Tee	Each	6.00	4,077.50	679.58	628.34	2
451E2213	8"x6" Pipe Tee	Each	9.00	5,210.51	578.95	608.58	5
451E2214	8"x8" Pipe Tee	Each	1.00	467.10	467.10	473.48	1
451E2221	10"x6" Pipe Tee	Each	13.00	9,425.00	725.00	661.67	1
451E2222	10"x8" Pipe Tee	Each	2.00	1,500.00	750.00	731.67	1
451E2223	10"x10" Pipe Tee	Each	6.00	4,800.00	800.00	813.33	1
451E2231	12"x6" Pipe Tee	Each	9.00	7,566.12	840.68	826.62	2
451E2232	12"x8" Pipe Tee	Each	5.00	5,000.00	1,000.00	986.67	1
451E2251	16"x6" Pipe Tee	Each	22.00	40,425.00	1,837.50	1,907.70	1
451E2252	16"x8" Pipe Tee	Each	8.00	10,500.00	1,312.50	1,363.26	2
451E2254	16"x12" Pipe Tee	Each	1.00	2,205.00	2,205.00	2,292.57	1
451E2256	16"x16" Pipe Tee	Each	1.00	1,470.00	1,470.00	1,529.75	1
451E2332	12"x8" Pipe Cross	Each	2.00	2,400.00	1,200.00	1,223.33	1
451E2350	16"x8" Pipe Cross	Each	3.00	4,935.00	1,645.00	1,708.95	2
451E2352	16"x12" Pipe Cross	Each	3.00	7,171.50	2,390.50	2,484.62	2
451E2356	16"x16" Pipe Cross	Each	2.00	7,350.00	3,675.00	3,818.73	1
451E2406	6"x4" Pipe Reducer	Each	1.00	250.00	250.00	195.00	1
451E2413	8"x6" Pipe Reducer	Each	11.00	3,721.23	338.29	349.26	3
451E2421	10"x6" Pipe Reducer	Each	2.00	700.00	350.00	306.67	1
451E2422	10"x8" Pipe Reducer	Each	1.00	400.00	400.00	355.00	1
451E2431	12"x6" Pipe Reducer	Each	2.00	1,050.00	525.00	545.62	2
451E2433	12"x10" Pipe Reducer	Each	2.00	937.20	468.60	475.00	1
451E2600	Tapping Wye	Each	8.00	6,800.00	850.00	563.33	1
451E2802	1" Corporation Stop with Tapping Saddle	Each	76.00	40,627.50	534.57	495.59	4
451E2806	1.5" Corporation Stop with Tapping Saddle	Each	1.00	432.00	432.00	432.00	1
451E2808	2" Corporation Stop with Tapping Saddle	Each	7.00	4,886.50	698.07	730.96	2
451E2902	1" Curb Stop with Box	Each	72.00	34,082.25	473.36	467.66	5
451E2906	1.5" Curb Stop with Box	Each	5.00	2,467.00	493.40	514.63	2
451E2908	2" Curb Stop with Box	Each	7.00	4,351.19	621.60	637.38	3
451E3004	4" Pipe Bend	Each	8.00	2,852.50	356.56	334.87	2
451E3006	6" Pipe Bend	Each	65.00	25,683.72	395.13	414.67	4
451E3008	8" Pipe Bend	Each	7.00	3,378.50	482.64	509.82	3
451E3010	10" Pipe Bend	Each	23.00	13,225.00	575.00	651.67	1
451E3012	12" Pipe Bend	Each	20.00	14,035.99	701.80	648.09	3
451E3016	16" Pipe Bend	Each	14.00	19,372.50	1,383.75	1,437.99	2
451E3103	3" Pipe Cap	Each	1.00	131.25	131.25	136.31	1
451E3104	4" Pipe Cap	Each	16.00	2,492.50	155.78	161.62	3
451E3106	6" Pipe Cap	Each	11.00	1,922.30	174.75	172.88	4
451E3108	8" Pipe Cap	Each	20.00	4,962.50	248.12	225.77	5
451E3110	10" Pipe Cap	Each	11.00	3,410.00	310.00	373.33	1
451E3112	12" Pipe Cap	Each	4.00	1,575.00	393.75	409.12	2
451E3115	15" Pipe Cap	Each	1.00	430.00	430.00	395.17	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
451E3116	16" Pipe Cap	Each	8.00	5,670.00	708.75	736.71	2
451E3118	18" Pipe Cap	Each	3.00	1,255.00	418.33	352.78	2
451E3204	4" Pipe Coupling	Each	1.00	250.00	250.00	263.33	1
451E3206	6" Pipe Coupling	Each	4.00	1,120.00	280.00	310.00	1
451E3208	8" Pipe Coupling	Each	8.00	2,742.28	342.78	322.86	3
451E3210	10" Pipe Coupling	Each	9.00	5,850.00	650.00	611.67	1
451E3212	12" Pipe Coupling	Each	1.00	450.00	450.00	401.33	1
451E3304	4" Pipe Transition Coupling	Each	5.00	2,875.00	575.00	493.00	1
451E3306	6" Pipe Transition Coupling	Each	3.00	2,100.00	700.00	598.00	1
451E3312	12" Pipe Transition Coupling	Each	2.00	1,840.00	920.00	809.33	1
451E3412	6" Pipe Plug	Each	2.00	353.51	176.76	175.71	2
451E3450	10" Pipe Plug	Each	1.00	250.00	250.00	348.33	1
451E3452	12" Pipe Plug	Each	2.00	658.02	329.01	333.50	1
451E3504	4" Retainer Gland	Each	12.00	756.00	63.00	65.56	1
451E3506	6" Retainer Gland	Each	140.00	11,025.00	78.75	81.85	2
451E3508	8" Retainer Gland	Each	59.00	6,195.00	105.00	109.26	2
451E3512	12" Retainer Gland	Each	27.00	4,336.50	160.61	167.00	2
451E3516	16" Retainer Gland	Each	153.00	49,271.25	322.03	334.77	2
451E3606	6" Pipe Sleeve	Each	3.00	1,184.95	394.98	404.58	2
451E3608	8" Pipe Sleeve	Each	2.00	770.50	385.25	390.51	1
451E3610	10" Pipe Sleeve	Each	1.00	525.13	525.13	532.30	1
451E3612	12" Pipe Sleeve	Each	2.00	1,310.41	655.20	691.81	2
451E3616	16" Pipe Sleeve	Each	2.00	2,336.25	1,168.12	1,214.02	2
451E4204	4" Gate Valve with Box	Each	5.00	5,880.00	1,176.00	1,220.93	1
451E4206	6" Gate Valve with Box	Each	72.00	103,881.62	1,442.80	1,411.62	6
451E4208	8" Gate Valve with Box	Each	30.00	55,421.01	1,847.37	1,807.75	6
451E4210	10" Gate Valve with Box	Each	12.00	34,800.00	2,900.00	2,608.33	1
451E4212	12" Gate Valve with Box	Each	14.00	42,042.88	3,003.06	3,078.24	4
451E4216	16" Gate Valve with Box	Each	18.00	120,960.00	6,720.00	6,983.45	2
451E4360	Valve Box Extension	Each	7.00	918.75	131.25	136.33	1
451E4380	Tracer Wire Access Box, Type 1	Each	27.00	3,543.75	131.25	136.31	1
451E4400	Pipe Insulation	SqFt	5,372.00	12,953.60	2.41	2.29	2
451E4412	Poly Wrap Insulation for 12" Pipe	Ft	46.00	3,636.30	79.05	80.13	1
451E4506	6" Fire Hydrant Extension	Each	3.00	2,677.50	892.50	927.29	2
451E4512	12" Fire Hydrant Extension	Each	8.00	8,190.00	1,023.75	1,064.83	2
451E4518	18" Fire Hydrant Extension	Each	1.00	1,155.00	1,155.00	1,200.08	1
451E4524	24" Fire Hydrant Extension	Each	2.00	2,625.00	1,312.50	1,363.12	1
451E4580	Standard Fire Hydrant	Each	64.00	234,776.14	3,668.38	3,279.35	6
451E4581	Temporary Fire Hydrant	Each	12.00	19,070.76	1,589.23	1,624.45	2
451E4610	Thrust Block	Each	2.00	2,600.00	1,300.00	550.00	1
451E4750	Meter Pit	Each	1.00	29,667.75	29,667.75	30,837.37	1
451E4905	Trench Stabilization Material	Ton	630.00	14,598.30	23.17	22.25	3
451E4908	Select Trench Backfill	Ton	6,000.00	75,600.00	12.60	13.18	1
451E4918	Imported Trench Backfill	CuYd	1,500.00	30,000.00	20.00	18.07	1
451E4920	Pipe Bedding Material	Ton	3,884.40	87,055.00	22.41	21.66	2
451E4925	Water Main Bedding Material	Ton	2,322.00	24,381.00	10.50	3.87	1
451E4926	Water Main Bedding Material	Ft	8,236.00	49,024.88	5.95	6.17	2
451E4945	8" Sewer Pipe Bedding Material	Ft	473.00	2,445.41	5.17	5.24	1
451E4946	10" Sewer Pipe Bedding Material	Ft	66.00	433.62	6.57	6.66	1
451E4947	12" Sewer Pipe Bedding Material	Ft	704.00	6,138.88	8.72	8.84	1
451E4990	Excavate and Backfill Water Service Trench	Ft	10.00	479.90	47.99	48.64	1
451E5000	Muck Excavation, Trench	CuYd	4,000.00	21,000.00	5.25	5.45	1
451E5051	Trench 6' to 8' Deep	Ft	6.00	144.96	24.16	24.49	1
451E5052	Trench 8' to 10' Deep	Ft	12.00	328.80	27.40	27.77	1
451E5053	Trench 10' to 12' Deep	Ft	57.00	2,288.55	40.15	40.70	1
451E5054	Trench 12' to 14' Deep	Ft	132.00	7,232.28	54.79	55.54	1
451E5056	Trench 16' to 18' Deep	Ft	580.00	37,363.60	64.42	65.30	1
451E5057	Trench 18' to 20' Deep	Ft	408.00	39,425.04	96.63	97.95	1
451E5058	Trench 20' to 22' Deep	Ft	48.00	9,276.48	193.26	195.90	1
451E5110	Bore and Jack 10" Pipe	Ft	39.00	11,700.00	300.00	283.33	1

South Dakota Department of Transportation
2019 Average Unit Price Report

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
451E5112	Bore and Jack 12" Pipe	Ft	80.00	11,040.00	138.00	138.00	1
451E5118	Bore and Jack 18" Pipe	Ft	673.00	278,300.00	413.52	387.16	2
451E5120	Bore and Jack 20" Pipe	Ft	190.00	67,013.00	352.70	357.52	1
451E5124	Bore and Jack 24" Pipe	Ft	954.00	389,514.00	408.30	396.42	4
451E5130	Bore and Jack 30" Pipe	Ft	440.00	192,296.48	437.04	395.56	2
451E5136	Bore and Jack 36" Pipe	Ft	220.00	104,500.00	475.00	437.50	1
451E5154	Bore and Jack 54" Pipe	Ft	220.00	197,560.00	898.00	887.00	1
451E6002	1" Water Service, Connect Charge	Each	6.00	174.00	29.00	29.00	1
451E6006	1.5" Water Service, Connect Charge	Each	1.00	317.00	317.00	317.00	1
451E6008	2" Water Service, Connect Charge	Each	1.00	346.00	346.00	346.00	1
451E6050	Temporary Water Service	Each	20.00	12,915.00	645.75	757.17	2
451E6070	Water Service without Valve	Each	9.00	16,200.00	1,800.00	966.67	1
451E6075	Adjust Curb Stop Box	Each	13.00	3,625.00	278.85	221.32	4
451E6080	Adjust Water Valve Box	Each	85.00	30,736.86	361.61	258.40	10
451E6100	Reconnect Water Service	Each	94.00	56,306.16	599.00	527.31	5
451E6105	Connect To Existing Water Main	Each	10.00	5,550.50	555.05	756.89	4
451E6106	Cut and Tie to Existing Water Main	Each	26.00	32,633.36	1,255.13	1,331.76	3
451E7000	Sewer Pipe Stream Crossing	LS	1.00	83,000.00	83,000.00	191,333.33	1
451E7005	Adjust Sewer Service	Each	1.00	1,250.00	1,250.00	2,616.67	1
451E7010	Reconnect Sewer Service	Each	66.00	29,168.42	441.95	441.16	4
451E7015	Connect Sewer Service	Each	2.00	740.00	370.00	1,073.33	1
451E7016	Connect to Existing Sewer Main	Each	21.00	5,738.04	273.24	293.86	2
451E7017	Abandon Sewer Main	Ft	5,795.00	15,704.88	2.71	4.36	3
451E7019	Sewer Bypass Pumping	Each	4.00	20,468.64	5,117.16	5,187.01	1
451E7020	Sewer Bypass Pumping	LS	3.00	87,117.99	29,039.33	47,159.86	3
451E7500	Locate Utilities	Each	12.00	3,215.00	267.92	207.05	3
451E7510	Verify Utilities	Each	16.00	9,525.00	595.31	505.85	3
451E7520	Exploratory Excavation	Hour	89.00	24,058.70	270.32	224.86	4
451E8000	PVC Pipe Deflection Test	Ft	5,305.00	9,762.60	1.84	1.66	2
451E8010	Pipe Exfiltration Test	Ft	1,023.00	1,074.15	1.05	1.11	1
460E0030	Class A45 Concrete, Bridge Deck	CuYd	6,601.90	7,288,216.30	1,103.96	1,105.02	12
460E0050	Class A45 Concrete, Bridge	CuYd	4,238.00	4,602,172.76	1,085.93	1,082.86	15
460E0070	Class A45 Concrete, Bridge Repair	CuYd	143.10	287,876.99	2,011.72	1,962.40	10
460E0100	Class A45 Concrete, Miscellaneous	CuYd	48.50	28,670.78	591.15	598.24	1
460E0120	Class A45 Concrete, Box Culvert	CuYd	2,762.40	2,476,125.34	896.37	898.99	10
460E0150	Concrete Approach Slab for Bridge	SqYd	5,730.50	1,602,279.73	279.61	275.45	18
460E0160	Concrete Approach Sleeper Slab for Bridge	SqYd	1,167.30	368,259.14	315.48	306.10	16
460E0174	Concrete Patching Material, Miscellaneous	CuFt	144.70	45,522.28	314.60	398.89	5
460E0190	Concrete Crack Injection/Sealing	In	300.00	6,000.00	20.00	44.17	1
460E0205	Architectural Surface Finish	SqFt	2,155.00	10,602.60	4.92	4.91	1
460E0300	Breakout Structural Concrete	CuYd	191.30	301,533.85	1,576.24	1,617.07	16
460E0380	Install Dowel in Concrete	Each	5,261.00	130,927.54	24.89	25.55	15
460E0382	Install Dowel in Rock	Ft	460.00	47,770.00	103.85	95.66	2
460E0400	Form Liner	SqFt	1,715.00	8,575.00	5.00	5.46	1
460E0500	Deck Drain, Girder Bridge	Each	44.00	59,974.72	1,363.06	1,434.66	4
460E0502	Deck Drain, Slab Bridge	Each	18.00	6,355.70	353.09	438.07	2
460E0650	Roadway Canopy	LS	3.00	108,444.45	36,148.15	36,496.10	3
460E0700	Joint Nosing Material	SqFt	182.00	34,533.96	189.75	234.46	3
462E0100	Class M6 Concrete	CuYd	1,356.40	1,584,997.63	1,168.53	1,118.65	23
462E0250	Cellular Grout	CuYd	706.40	231,130.82	327.20	341.36	12
464E0100	Controlled Density Fill	CuYd	1,120.00	264,792.20	236.42	293.29	26
465E0100	Class A45 Concrete, Drilled Shaft	CuYd	192.10	147,758.35	769.17	932.85	2
465E0200	Drilled Shaft Excavation	CuYd	187.40	149,788.20	799.30	735.45	2
465E0400	Crosshole Sonic Log (CSL) Test	Each	1.00	12,500.00	12,500.00	11,446.67	1
465E1024	24" Permanent Casing	Ft	14.00	1,904.02	136.00	136.46	2
465E1030	30" Permanent Casing	Ft	200.00	38,000.00	190.00	205.00	1
465E1036	36" Permanent Casing	Ft	37.00	8,690.40	234.88	309.20	2
465E1038	38" Permanent Casing	Ft	179.70	49,417.50	275.00	298.33	1
465E1074	74" Permanent Casing	Ft	18.00	10,872.00	604.00	876.33	1
470E0020	Pipe Handrail	Ft	295.00	44,404.59	150.52	145.05	4

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
470E0030	Special Steel Railing	Ft	282.00	86,669.88	307.34	323.13	1
470E0040	Steel Pedestrian Railing	Ft	671.40	83,925.00	125.00	121.93	1
470E0050	Steel Bicycle Railing	Ft	100.00	25,000.00	250.00	250.00	1
470E0120	Steel Pedestrian Railing on Sidewalk	Ft	1,324.20	234,607.36	177.17	200.12	4
470E0220	Steel Pedestrian Railing on Concrete Barrier	Ft	939.30	97,725.15	104.04	119.59	2
470E0230	Steel Bicycle Railing on Concrete Barrier	Ft	2,311.00	215,223.43	93.13	124.04	1
470E0280	Reset Steel Railing	Ft	137.00	8,809.10	64.30	94.65	1
470E0380	Modify Bridge Rail	Ft	185.00	22,497.05	121.61	82.01	2
470E0420	Type T101 Bridge Railing	Ft	1,631.00	249,448.00	152.94	157.09	7
470E0440	Wyoming Bridge Railing	Ft	533.00	90,610.00	170.00	175.25	1
480E0100	Reinforcing Steel	Lb	1,334,042.00	1,989,057.12	1.49	1.52	34
480E0200	Epoxy Coated Reinforcing Steel	Lb	1,484,654.00	2,390,126.57	1.61	1.58	23
480E0300	Stainless Reinforcing Steel	Lb	31,889.00	132,020.46	4.14	4.15	1
480E0504	No. 4 Rebar Splice	Each	311.00	7,216.24	23.20	23.18	9
480E0505	No. 5 Rebar Splice	Each	370.00	10,488.20	28.35	26.95	7
480E0506	No. 6 Rebar Splice	Each	459.00	16,240.92	35.38	34.48	7
480E0507	No. 7 Rebar Splice	Each	178.00	5,704.56	32.05	39.56	2
480E0509	No. 9 Rebar Splice	Each	16.00	5,799.36	362.46	363.49	1
480E0518	No. 18 Rebar Splice	Each	28.00	9,100.00	325.00	316.00	1
480E5000	Galvanic Anode	Each	416.00	20,010.35	48.10	63.17	9
491E0005	Two Coat Bridge Deck Polymer Chip Seal	SqYd	42,021.20	1,589,452.63	37.83	41.37	10
491E0007	Two Coat Bridge Deck Polymer High Friction Chip Seal	SqYd	6,663.90	271,619.50	40.76	49.47	2
491E0010	Bridge Deck Polymer Chip Seal	SqYd	679.30	15,853.87	23.34	34.06	2
491E0110	Abrasive Blasting of Bridge Deck	SqYd	49,364.40	178,626.25	3.62	3.94	12
491E0120	Bridge Deck Grinding	SqYd	49,187.40	693,321.22	14.10	14.88	11
491E0130	Concrete Removal, Class A	SqYd	408.80	74,462.32	182.15	219.66	11
491E0140	Concrete Removal, Class B	SqYd	408.80	46,097.72	112.76	157.51	11
491E0172	Concrete Patching Material, Bridge Deck	CuFt	3,612.60	230,165.96	63.71	77.58	12
510E0100	Extract Pile	Each	127.00	3,811.44	30.01	62.13	5
510E0300	Preboring Pile	Ft	1,830.00	40,232.70	21.99	26.05	13
510E3120	HP 10 Pile Tip Reinforcement	Each	68.00	7,037.04	103.49	141.46	3
510E3140	HP 14 Pile Tip Reinforcement	Each	147.00	19,790.61	134.63	135.01	1
510E3361	HP 10x42 Steel Test Pile, Furnish and Drive	Ft	2,076.00	228,252.27	109.95	96.92	7
510E3365	HP 10x42 Steel Bearing Pile, Furnish and Drive	Ft	25,753.00	1,059,936.15	41.16	43.59	7
510E3371	HP 10x57 Steel Test Pile, Furnish and Drive	Ft	240.00	22,800.00	95.00	75.17	1
510E3375	HP 10x57 Steel Bearing Pile, Furnish and Drive	Ft	1,980.00	69,300.00	35.00	40.06	1
510E3401	HP 12x53 Steel Test Pile, Furnish and Drive	Ft	1,385.00	99,682.00	71.97	79.16	6
510E3405	HP 12x53 Steel Bearing Pile, Furnish and Drive	Ft	9,530.00	443,124.80	46.50	45.17	6
510E3521	HP 14x73 Steel Test Pile, Furnish and Drive	Ft	225.00	17,685.45	78.60	76.77	2
510E3525	HP 14x73 Steel Bearing Pile, Furnish and Drive	Ft	3,845.00	266,890.45	69.41	70.36	2
510E8005	Sheet Piling, Furnish and Drive	SqFt	4,365.00	147,967.00	33.90	42.36	3
530E0300	Type C Concrete Retaining Wall	SqFt	1,219.00	86,025.00	70.57	74.74	5
530E0310	Special Type C Concrete Retaining Wall	SqFt	2,758.00	128,522.80	46.60	57.26	1
530E0400	MSE Wire Face Wall	SqFt	8,624.00	213,961.44	24.81	21.32	1
530E0410	MSE Segmental Block Wall	SqFt	1,446.00	44,856.00	31.02	41.29	1
530E0420	MSE Large Panel Wall, Furnish	SqFt	30,507.00	760,234.44	24.92	24.66	1
530E0422	MSE Large Panel Wall, Install	SqFt	30,507.00	482,010.60	15.80	13.33	1
530E0460	Gravity Segmental Block Wall	SqFt	54.00	1,620.00	30.00	54.18	1
530E0470	Gravity Large Concrete Block Wall	SqFt	56.00	6,440.00	115.00	238.33	1
530E0702	Granular Backfill for MSE Large Panel Wall	CuYd	22,859.00	772,862.79	33.81	36.54	1
530E0704	Granular Backfill for MSE Wire Face Wall	CuYd	4,482.00	151,536.42	33.81	45.29	1
550E0010	Low Slump Dense Concrete Bridge Deck Overlay	CuYd	389.00	216,145.35	555.64	590.41	4
550E0100	Concrete Removal Type 1A	SqYd	5,687.70	127,501.57	22.42	26.99	4
550E0105	Concrete Removal Type 2A	SqYd	1,281.20	11,122.38	8.68	11.30	3
550E0110	Concrete Removal Type 1B	SqYd	754.10	114,692.18	152.09	142.79	4

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
550E0120	Concrete Removal Type 1C	SqYd	408.70	65,053.21	159.17	152.82	4
550E0130	Concrete Removal Type 1D	SqYd	376.70	44,272.68	117.53	154.11	4
550E0140	Concrete Removal Type B	Ft	110.00	1,229.50	11.18	14.19	4
550E0200	Class A45 Concrete Fill	CuYd	79.50	34,483.52	433.75	507.57	4
550E0500	Finishing and Curing	SqYd	5,608.40	188,652.38	33.64	43.66	4
560E0076	7'x7' Precast Concrete Box Culvert, Furnish	Ft	232.00	129,920.00	560.00	587.18	1
560E0077	7'x7' Precast Concrete Box Culvert, Install	Ft	232.00	17,400.00	75.00	175.00	1
560E0116	9'x8' Precast Concrete Box Culvert, Furnish	Ft	140.00	168,000.00	1,200.00	1,133.33	1
560E0117	9'x8' Precast Concrete Box Culvert, Install	Ft	140.00	73,500.00	525.00	498.33	1
560E0138	10'x8' Precast Concrete Box Culvert, Furnish	Ft	200.00	124,272.00	621.36	623.12	1
560E0139	10'x8' Precast Concrete Box Culvert, Install	Ft	200.00	86,990.00	434.95	458.53	1
560E0140	10'x9' Precast Concrete Box Culvert, Furnish	Ft	164.00	129,857.60	791.81	776.70	2
560E0141	10'x9' Precast Concrete Box Culvert, Install	Ft	164.00	60,452.80	368.61	372.55	2
560E0222	13'x11' Precast Concrete Box Culvert, Furnish	Ft	204.00	248,268.00	1,217.00	1,236.76	1
560E0223	13'x11' Precast Concrete Box Culvert, Install	Ft	204.00	40,800.00	200.00	216.67	1
560E1076	7'x7' Precast Concrete Box Culvert End Section, Furnish	Each	4.00	27,600.00	6,900.00	7,070.66	1
560E1077	7'x7' Precast Concrete Box Culvert End Section, Install	Each	4.00	4,000.00	1,000.00	1,666.67	1
560E1116	9'x8' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	32,000.00	16,000.00	15,333.33	1
560E1117	9'x8' Precast Concrete Box Culvert End Section, Install	Each	2.00	16,400.00	8,200.00	7,733.33	1
560E1140	10'x9' Precast Concrete Box Culvert End Section, Furnish	Each	4.00	48,268.86	12,067.22	11,872.40	2
560E1141	10'x9' Precast Concrete Box Culvert End Section, Install	Each	4.00	25,431.30	6,357.82	6,035.94	2
560E1222	13'x11' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	43,400.00	21,700.00	22,249.57	1
560E1223	13'x11' Precast Concrete Box Culvert End Section, Install	Each	2.00	5,000.00	2,500.00	2,900.00	1
560E2074	2-8'x6' Precast Concrete Box Culvert, Furnish	Ft	82.00	75,604.00	922.00	932.33	1
560E2075	2-8'x6' Precast Concrete Box Culvert, Install	Ft	82.00	13,940.00	170.00	172.33	1
560E2112	2-10'x4' Precast Concrete Box Culvert, Furnish	Ft	140.00	137,445.00	981.75	1,021.17	1
560E2113	2-10'x4' Precast Concrete Box Culvert, Install	Ft	140.00	36,750.00	262.50	273.33	1
560E2114	2-10'x5' Precast Concrete Box Culvert, Furnish	Ft	82.00	76,852.04	937.22	939.87	1
560E2115	2-10'x5' Precast Concrete Box Culvert, Install	Ft	82.00	19,531.58	238.19	251.10	1
560E2122	2-10'x9' Precast Concrete Box Culvert, Furnish	Ft	198.00	258,720.40	1,306.67	1,345.67	2
560E2123	2-10'x9' Precast Concrete Box Culvert, Install	Ft	198.00	78,692.80	397.44	459.65	2
560E2124	2-10'x10' Precast Concrete Box Culvert, Furnish	Ft	200.00	363,000.00	1,815.00	1,852.40	1
560E2125	2-10'x10' Precast Concrete Box Culvert, Install	Ft	200.00	55,700.00	278.50	562.50	1
560E2138	2-11'x5' Precast Concrete Box Culvert, Furnish	Ft	80.00	100,800.00	1,260.00	1,230.00	1
560E2139	2-11'x5' Precast Concrete Box Culvert, Install	Ft	80.00	46,200.00	577.50	563.75	1
560E2162	2-12'x4' Precast Concrete Box Culvert, Furnish	Ft	16.00	22,000.00	1,375.00	1,307.91	1
560E2163	2-12'x4' Precast Concrete Box Culvert, Install	Ft	16.00	19,200.00	1,200.00	1,311.20	1
560E2192	2-13'x7' Precast Concrete Box Culvert, Furnish	Ft	44.00	66,000.00	1,500.00	1,583.33	1
560E2193	2-13'x7' Precast Concrete Box Culvert, Install	Ft	44.00	26,400.00	600.00	500.00	1
560E2200	2-13'x11' Precast Concrete Box Culvert, Furnish	Ft	204.00	450,228.00	2,207.00	2,247.04	1
560E2201	2-13'x11' Precast Concrete Box Culvert, Install	Ft	204.00	40,800.00	200.00	250.00	1
560E2228	2-14'x8' Precast Concrete Box Culvert, Furnish	Ft	80.00	142,800.00	1,785.00	1,906.74	1

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560E2229	2-14'x8' Precast Concrete Box Culvert, Install	Ft	80.00	27,760.00	347.00	627.88	1
560E2232	2-14'x10' Precast Concrete Box Culvert, Furnish	Ft	80.00	145,612.80	1,820.16	1,845.05	1
560E2233	2-14'x10' Precast Concrete Box Culvert, Install	Ft	80.00	25,592.80	319.91	429.64	1
560E3074	2-8'x6' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	19,400.00	9,700.00	9,866.67	1
560E3075	2-8'x6' Precast Concrete Box Culvert End Section, Install	Each	2.00	5,660.00	2,830.00	2,901.67	1
560E3112	2-10'x4' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	14,175.00	7,087.50	7,375.00	1
560E3113	2-10'x4' Precast Concrete Box Culvert End Section, Install	Each	2.00	6,300.00	3,150.00	3,280.00	1
560E3114	2-10'x5' Precast Concrete Box Culvert End Section, Furnish	Each	1.00	8,284.80	8,284.80	8,308.27	1
560E3115	2-10'x5' Precast Concrete Box Culvert End Section, Install	Each	1.00	3,106.80	3,106.80	3,275.25	1
560E3122	2-10'x9' Precast Concrete Box Culvert End Section, Furnish	Each	4.00	77,146.74	19,286.68	19,048.06	2
560E3123	2-10'x9' Precast Concrete Box Culvert End Section, Install	Each	4.00	19,031.30	4,757.82	6,252.61	2
560E3138	2-11'x5' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	31,500.00	15,750.00	15,375.00	1
560E3139	2-11'x5' Precast Concrete Box Culvert End Section, Install	Each	2.00	23,100.00	11,550.00	11,275.00	1
560E3162	2-12'x4' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	21,000.00	10,500.00	9,565.30	1
560E3163	2-12'x4' Precast Concrete Box Culvert End Section, Install	Each	2.00	4,400.00	2,200.00	1,594.53	1
560E3192	2-13'x7' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	30,000.00	15,000.00	15,333.33	1
560E3193	2-13'x7' Precast Concrete Box Culvert End Section, Install	Each	2.00	13,000.00	6,500.00	5,283.33	1
560E3200	2-13'x11' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	59,560.00	29,780.00	30,305.43	1
560E3201	2-13'x11' Precast Concrete Box Culvert End Section, Install	Each	2.00	6,000.00	3,000.00	2,666.67	1
560E3228	2-14'x8' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	47,100.00	23,550.00	25,107.73	1
560E3229	2-14'x8' Precast Concrete Box Culvert End Section, Install	Each	2.00	10,330.00	5,165.00	4,117.98	1
560E3232	2-14'x10' Precast Concrete Box Culvert End Section, Furnish	Each	2.00	44,787.08	22,393.54	23,907.85	1
560E3233	2-14'x10' Precast Concrete Box Culvert End Section, Install	Each	2.00	11,031.30	5,515.65	7,005.22	1
560E5001	4'x6' Reinforced Concrete Cattle Pass, Furnish	Ft	12.00	3,600.00	300.00	277.67	1
560E5002	4'x6' Reinforced Concrete Cattle Pass, Install	Ft	12.00	2,580.00	215.00	300.33	1
560E5003	5'x7' Reinforced Concrete Cattle Pass, Furnish	Ft	284.00	78,668.00	277.00	288.58	1
560E5004	5'x7' Reinforced Concrete Cattle Pass, Install	Ft	284.00	17,040.00	60.00	145.00	1
560E5053	5'x7' Reinforced Concrete Cattle Pass End Section, Furnish	Each	6.00	17,160.00	2,860.00	2,980.58	1
560E5054	5'x7' Reinforced Concrete Cattle Pass End Section, Install	Each	6.00	6,000.00	1,000.00	1,133.33	1
560E5100	Reset Reinforced Concrete Cattle Pass	Ft	54.00	11,610.00	215.00	237.33	1
560E5101	Reset Reinforced Concrete Cattle Pass End Section	Each	4.00	6,790.00	1,697.50	1,962.50	2
560E8027	27" Minnesota Shape Prestressed Concrete Beam	Ft	944.00	245,440.00	260.00	277.50	1
560E8036	36" Minnesota Shape Prestressed Concrete Beam	Ft	1,266.00	263,500.00	208.14	253.15	2
560E8045	45" Minnesota Shape Prestressed Concrete Beam	Ft	943.00	353,625.00	375.00	375.00	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
560E8063	63" Minnesota Shape Prestressed Concrete Beam	Ft	1,053.00	296,946.00	282.00	350.00	1
560E8081	81" Minnesota Shape Prestressed Concrete Beam	Ft	698.00	226,850.00	325.00	396.00	1
560E8565	6'-6" Wide Deck Prestressed Concrete Bulb Tee	Ft	430.00	185,760.00	432.00	626.17	1
560E8630	3'-10" Wide Deck x 30" Prestressed Concrete Double Tee	Ft	1,360.00	317,240.00	233.26	271.30	3
560E8805	Precast Concrete Plank, Furnish	SqFt	165.00	4,620.00	28.00	31.67	1
560E8806	Precast Concrete Plank, Install	SqFt	165.00	4,950.00	30.00	20.67	1
600E0100	Type I Field Laboratory	Each	3.00	15,500.00	5,166.67	6,500.00	3
600E0200	Type II Field Laboratory	Each	12.00	134,866.19	11,238.85	12,816.47	12
600E0300	Type III Field Laboratory	Each	43.00	487,289.71	11,332.32	11,185.94	43
620E0010	Type 1 Right-of-Way Fence	Ft	4,734.00	6,426.39	1.36	1.38	3
620E0020	Type 2 Right-of-Way Fence	Ft	217,966.00	339,882.86	1.56	1.61	22
620E0030	Type 3 Right-of-Way Fence	Ft	40,268.00	56,270.10	1.40	1.39	4
620E0060	Type 6 Right-of-Way Fence	Ft	8,782.00	23,868.70	2.72	2.75	5
620E0120	Type 2s Right-of-Way Fence	Ft	7,081.00	12,887.42	1.82	1.56	1
620E0220	Modified Type 2 Right-of-Way Fence	Ft	24,638.00	33,261.30	1.35	2.02	1
620E0230	Modified Type 3 Right-of-Way Fence	Ft	12,369.00	20,313.58	1.64	1.94	4
620E0300	Special Right-of-Way Fence	Ft	5,827.00	8,740.50	1.50	1.75	1
620E0510	Type 1 Temporary Fence	Ft	21,255.00	26,784.07	1.26	1.30	11
620E0515	Type 1A Temporary Fence	Ft	106,278.00	120,578.01	1.13	1.18	14
620E0520	Type 2 Temporary Fence	Ft	4,532.00	11,281.00	2.49	2.96	6
620E0530	Type 3 Temporary Fence	Ft	2,690.00	2,690.00	1.00	1.02	1
620E1020	2 Post Panel	Each	984.00	159,851.50	162.45	160.61	24
620E1030	3 Post Panel	Each	591.00	91,263.87	154.42	157.91	13
620E1120	Install Fence Post	Each	912.00	9,120.00	10.00	15.50	1
620E2012	12' Tubular Gate	Each	4.00	1,320.00	330.00	385.00	1
620E2100	Reset Gate	Each	5.00	1,277.80	255.56	243.84	2
620E4100	Reset Fence	Ft	2,527.00	9,811.00	3.88	3.77	4
621E0060	6' Chain Link Fence with Top Rail	Ft	510.00	16,830.00	33.00	32.00	1
621E0160	6' Chain Link Fence with Tension Wired Top	Ft	1,126.00	21,641.72	19.22	19.28	1
621E0240	Special 4' Chain Link Fence	Ft	672.00	21,248.64	31.62	31.56	1
621E0300	Chain Link Fence for Bridge Sidewalk	Ft	855.00	36,369.76	42.54	43.41	3
621E0430	Double Vehicular Swing Gate	Each	1.00	2,200.00	2,200.00	2,200.00	1
621E0520	Reset Chain Link Fence	Ft	309.00	8,643.80	27.97	25.16	2
628E1100	Movable F Shape Concrete Barrier, Interior Section	Each	6.00	12,000.00	2,000.00	2,333.33	1
628E1110	Movable F Shape Concrete Barrier, End Section	Each	6.00	12,000.00	2,000.00	2,166.67	1
628E1200	Haul Movable Concrete Barrier	Each	32.00	3,200.00	100.00	78.86	1
628E1500	Concrete Barrier End Protection	Each	1.00	21,006.44	21,006.44	21,076.81	1
629E0110	High Tension Cable Guardrail	Ft	11,692.00	339,694.92	29.05	28.14	4
629E0200	Reset 3 Cable Guardrail	Ft	166.00	4,150.00	25.00	19.00	1
629E0211	Reset High Tension 4 Cable Guardrail	Ft	1,030.00	5,304.50	5.15	4.72	1
629E0290	High Tension Cable Guardrail Anchor Assembly	Each	23.00	113,993.10	4,956.22	4,819.04	4
629E0295	Reset High Tension Cable Guardrail Anchor Assembly	Each	4.00	4,120.00	1,030.00	691.67	1
629E0300	3 Cable Guardrail Slip Base Anchor Assembly	Each	1.00	1,600.00	1,600.00	1,640.00	1
629E1107	Furnish High Tension Cable Guardrail Post	Each	30.00	1,694.10	56.47	54.32	1
629E1109	Furnish High Tension Cable Guardrail Post and Sleeve	Each	10.00	1,370.60	137.06	132.35	1
629E8010	Cable Tension Indicator	Each	2.00	6,043.54	3,021.77	2,989.75	2
629E9000	Crossover Closure	Ft	448.00	7,168.00	16.00	16.33	1
629E9010	Interim Crossover Closure	Ft	512.00	5,632.00	11.00	11.17	1
629E9050	Reset Crossover Closure	Ft	1,024.00	4,875.20	4.76	4.66	3
629E9060	Reset Interim Crossover Closure	Ft	224.00	1,120.00	5.00	3.93	1

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630E0120	Straight Double Class B Thrie Beam Guardrail with Wood Posts	Ft	100.00	8,200.00	82.00	87.33	1
630E0210	Straight Class B Thrie Beam Rail	Ft	406.40	52,425.60	129.00	131.67	1
630E0500	Type 1 MGS	Ft	42,487.50	1,243,836.88	29.28	29.31	27
630E1010	Straight Class A W Beam Guardrail with Wood Posts	Ft	962.50	26,709.00	27.75	32.47	6
630E1015	Straight Class A W Beam Guardrail with CRT Posts	Ft	50.00	1,545.00	30.90	31.72	1
630E1025	Curved Class A W Beam Guardrail with CRT Posts	Ft	100.00	3,610.00	36.10	37.62	1
630E1050	Straight Class B W Beam Guardrail with Wood Posts	Ft	475.00	19,163.50	40.34	42.44	5
630E1140	Straight Double Class A W Beam Guardrail with Wood Posts	Ft	55.00	3,630.00	66.00	66.00	1
630E1150	Straight Double Class B W Beam Guardrail with Wood Posts	Ft	480.00	41,537.00	86.54	83.43	5
630E1505	Type 2A Guardrail Transition	Each	42.00	108,900.00	2,592.86	2,660.69	5
630E2005	W Beam Guardrail to MGS Transition	Each	18.00	28,200.00	1,566.67	1,605.93	3
630E2015	W Beam Guardrail Flared End Terminal	Each	16.00	54,109.64	3,381.85	3,193.74	4
630E2019	MGS Tangent End Terminal	Each	279.00	903,073.32	3,236.82	3,251.31	24
630E2020	W Beam Guardrail Tangent End Terminal	Each	20.00	55,900.00	2,795.00	2,823.26	2
630E2035	W Beam Guardrail Special Anchor Assembly	Each	4.00	7,200.00	1,800.00	1,876.67	1
630E2105	Beam Guardrail Block	Each	24.00	3,744.48	156.02	122.72	1
630E2110	Beam Guardrail Post and Block	Each	252.00	26,188.56	103.92	107.10	4
630E2300	Rubrail	Ft	376.30	12,126.00	32.22	65.63	3
630E5100	Reset Thrie Beam Guardrail with Wood Posts	Ft	175.00	13,532.50	77.33	73.57	3
630E5110	Reset Double Thrie Beam Guardrail with Wood Posts	Ft	162.50	20,573.13	126.60	131.18	2
630E5120	Reset Thrie Beam Rail	Ft	50.00	693.50	13.87	40.11	1
630E5130	Reset Double Thrie Beam Rail	Ft	25.00	1,125.00	45.00	46.10	1
630E5140	Reset W Beam Guardrail with Wood Posts	Ft	150.00	7,750.00	51.67	43.84	2
630E5160	Reset W Beam Rail	Ft	637.50	8,825.00	13.84	15.49	3
630E5190	Reset W Beam to Thrie Beam Guardrail Transition	Each	3.00	1,575.00	525.00	245.00	1
630E5200	Reset W Beam to Thrie Beam Transition Rail	Each	2.00	240.00	120.00	123.00	1
630E5210	Reset Beam Guardrail Trailing End Terminal	Each	4.00	320.00	80.00	84.30	1
630E5220	Reset Rubrail	Ft	67.00	324.00	4.84	6.26	2
632E0010	1.25' Diameter Breakaway Support Concrete Footing	Ft	248.00	17,291.52	69.72	67.92	5
632E0012	1.5' Diameter Breakaway Support Concrete Footing	Ft	28.00	4,347.00	155.25	155.75	1
632E0014	1.75' Diameter Breakaway Support Concrete Footing	Ft	22.00	5,500.00	250.00	341.67	1
632E0072	4' Diameter Fixed Support Concrete Footing	Ft	23.00	9,200.00	400.00	541.67	1
632E1225	W6x12 Steel Post	Ft	30.00	1,950.00	65.00	88.33	1
632E1230	W6x15 Steel Post	Ft	36.00	3,420.00	95.00	102.33	1
632E1235	W6x20 Steel Post	Ft	42.00	4,200.00	100.00	122.67	1
632E1250	W8x24 Steel Post	Ft	42.00	4,620.00	110.00	130.00	1
632E1320	2.0"x2.0" Perforated Tube Post	Ft	21,192.70	333,230.75	15.72	15.64	38
632E1321	2.0"x2.0" Perforated Tube Post	Each	15,885.00	1,718,938.50	108.21	116.12	3
632E1340	2.5"x2.5" Perforated Tube Post	Ft	7,118.60	269,243.81	37.82	38.91	21
632E1505	4"x6" Wood Post	Ft	146.80	1,541.40	10.50	10.83	1
632E1550	Miscellaneous Post Hardware	LS	2.00	4,570.00	2,285.00	2,346.00	2
632E1650	No Passing Zone Reference Post	Each	658.00	30,590.00	46.49	35.68	2
632E2000	4"x4" Amber Delineator with 1.12 Lb/Ft Post	Each	66.00	1,143.00	17.32	17.86	3
632E2004	4"x8" Amber Delineator with 1.12 Lb/Ft Post	Each	15.00	344.85	22.99	24.17	2
632E2008	4" Tubular Amber Delineator with 1.12 Lb/Ft Post	Each	20.00	420.00	21.00	28.34	1
632E2020	4"x4" White Delineator with 1.12 Lb/Ft Post	Each	182.00	3,693.30	20.29	22.04	3
632E2022	4"x4" White Delineator Back to Back with 1.12 Lb/Ft Post	Each	6,922.00	163,965.33	23.69	27.24	12
632E2024	4"x8" White Delineator with 1.12 Lb/Ft Post	Each	104.00	2,391.84	23.00	24.22	2

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632E2028	4" Tubular White Delineator with 1.12 Lb/Ft Post	Each	142.00	5,376.40	37.86	37.97	5
632E2100	Reset Delineator	Each	318.00	6,094.30	19.16	18.07	4
632E2207	4" Tubular White Delineator Reflector	Each	2,495.00	32,710.00	13.11	15.11	3
632E2220	Guardrail Delineator	Each	1,979.00	44,596.76	22.53	21.82	37
632E2500	Type 1 Yellow Object Marker	Each	8.00	960.00	120.00	120.00	1
632E2510	Type 2 Object Marker Back to Back	Each	3,798.00	140,267.25	36.93	36.16	24
632E2520	Type 2 Object Marker	Each	40.00	2,061.67	51.54	53.88	6
632E2530	Type 3 Object Marker	Each	20.00	1,072.00	53.60	78.00	2
632E2533	Type 3 Flexible Object Marker	Each	204.00	37,200.00	182.35	194.12	3
632E2535	Type 4 Object Marker	Each	236.00	15,760.00	66.78	76.87	4
632E3003	Aluminum Overlay Sign, Nonremovable Copy High Intensity	SqFt	7,662.50	103,443.75	13.50	13.83	1
632E3005	Aluminum Overlay Sign, Nonremovable Copy Super/Very High Intensity	SqFt	12,105.50	187,869.25	15.52	15.43	2
632E3113	Extruded Aluminum Sign, Nonremovable Copy High Intensity	SqFt	812.00	21,927.90	27.00	27.60	3
632E3115	Extruded Aluminum Sign, Nonremovable Copy Super/Very High Intensity	SqFt	878.80	21,508.15	24.47	31.06	2
632E3203	Flat Aluminum Sign, Nonremovable Copy High Intensity	SqFt	53,087.10	601,900.60	11.34	13.06	34
632E3205	Flat Aluminum Sign, Nonremovable Copy Super/Very High Intensity	SqFt	66,241.30	743,090.33	11.22	12.69	34
632E3500	Reset Sign	Each	373.00	18,881.15	50.62	47.40	20
632E3520	Remove, Salvage, Relocate, and Reset Traffic Sign	Each	364.00	23,228.01	63.81	82.17	19
632E3526	Install State Furnished Sign	Each	8.00	450.00	56.25	63.69	4
632E3710	Radar Speed Sign, Solar Powered	Each	2.00	20,000.00	10,000.00	10,000.00	1
632E4005	Type 3 Single Sided Barricade	Ft	478.00	19,632.00	41.07	51.37	4
632E5020	Overhead Cantilever Sign Support	Each	1.00	40,000.00	40,000.00	53,333.33	1
633E0010	Cold Applied Plastic Pavement Marking, 4"	Ft	331,960.00	1,046,621.98	3.15	3.19	19
633E0019	Cold Applied Plastic Pavement Marking (Contrast), 7"	Ft	1,188.00	7,377.48	6.21	6.20	1
633E0020	Cold Applied Plastic Pavement Marking, 8"	Ft	5,441.00	42,409.55	7.79	7.63	6
633E0021	Cold Applied Plastic Pavement Marking (Contrast), 8"	Ft	129.00	1,202.28	9.32	9.30	1
633E0025	Cold Applied Plastic Pavement Marking, 12"	Ft	17,088.00	163,083.88	9.54	9.40	3
633E0030	Cold Applied Plastic Pavement Marking, 24"	Ft	21,842.00	455,242.54	20.84	20.95	28
633E0035	Cold Applied Plastic Pavement Marking, Area	SqFt	1,455.00	17,879.00	12.29	12.23	8
633E0040	Cold Applied Plastic Pavement Marking, Arrow	Each	586.00	173,357.60	295.83	297.91	23
633E0045	Cold Applied Plastic Pavement Marking, Combination Arrow	Each	6.00	2,750.00	458.33	471.67	3
633E0046	Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	Each	9.00	11,981.25	1,331.25	1,329.31	3
633E0050	Cold Applied Plastic Pavement Marking, Message	Word	31.00	17,450.00	562.90	565.22	4
633E0055	Cold Applied Plastic Pavement Marking, Railroad Crossing	Each	21.00	30,600.00	1,457.14	1,516.56	7
633E0062	Cold Applied Plastic Pavement Marking, Symbol	Each	4.00	1,444.00	361.00	353.67	1
633E0210	Preformed Thermoplastic Pavement Marking, 4"	Ft	320.00	1,280.00	4.00	4.10	1
633E0220	Preformed Thermoplastic Pavement Marking, 12"	Ft	105.00	1,417.50	13.50	13.50	1
633E0225	Preformed Thermoplastic Pavement Marking, 24"	Ft	3,868.00	92,662.93	23.96	23.04	15
633E0230	Preformed Thermoplastic Pavement Marking, Area	SqFt	386.00	4,874.50	12.63	12.33	4
633E0235	Preformed Thermoplastic Pavement Marking, Arrow	Each	194.00	56,225.34	289.82	288.41	10
633E0240	Preformed Thermoplastic Pavement Marking, Combination Arrow	Each	8.00	4,077.68	509.71	504.86	1

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633E0245	Preformed Thermoplastic Pavement Marking, Message	Word	13.00	5,848.20	449.86	455.49	4
633E0250	Preformed Thermoplastic Pavement Marking, Railroad Crossing	Each	9.00	11,900.00	1,322.22	1,321.71	5
633E0255	Preformed Thermoplastic Pavement Marking, Symbol	Each	4.00	1,200.00	300.00	316.33	1
633E1200	High Build Waterborne Pavement Marking Paint, White	Gal	32,271.00	921,819.55	28.56	32.32	24
633E1205	High Build Waterborne Pavement Marking Paint, Yellow	Gal	17,417.00	689,026.25	39.56	35.64	28
633E1300	Pavement Marking Paint, White	Gal	116,913.00	1,962,948.56	16.79	18.13	40
633E1305	Pavement Marking Paint, Yellow	Gal	51,115.00	848,742.02	16.60	17.75	40
633E1400	Pavement Marking Paint, 4" White	Ft	51,989.00	17,551.90	0.34	0.39	14
633E1405	Pavement Marking Paint, 4" Yellow	Ft	42,428.00	16,130.43	0.38	0.40	15
633E1410	Pavement Marking Paint, 8" White	Ft	150.00	375.00	2.50	2.50	1
633E1430	Pavement Marking Paint, 24" White	Ft	3,084.00	12,927.09	4.19	3.89	6
633E1445	Pavement Marking Paint, Arrow	Each	24.00	1,320.00	55.00	53.50	1
633E1452	Pavement Marking Paint, Lane Reduction Arrow	Each	6.00	840.00	140.00	136.33	1
633E1460	Pavement Marking Paint, Symbol	Each	60.00	980.00	16.33	23.16	3
633E3000	Durable Pavement Marking, 4" White	Ft	1,851,757.00	879,767.53	0.48	0.47	13
633E3005	Durable Pavement Marking, 4" Yellow	Ft	1,398,607.00	706,787.05	0.51	0.51	13
633E3010	Durable Pavement Marking, 8" White	Ft	4,188.00	4,711.14	1.12	1.19	5
633E3020	Durable Pavement Marking, 12" White	Ft	39,561.00	71,873.87	1.82	2.01	8
633E3030	Durable Pavement Marking, 24" White	Ft	1,116.00	8,731.08	7.82	6.75	4
633E3035	Durable Pavement Marking, 24" Yellow	Ft	220.00	486.20	2.21	2.31	1
633E3040	Durable Pavement Marking, Area	SqFt	4,795.00	17,852.00	3.72	2.70	2
633E3045	Durable Pavement Marking, Arrow	Each	20.00	1,531.50	76.58	60.67	3
633E3050	Durable Pavement Marking, Combination Arrow	Each	2.00	1,000.00	500.00	500.00	1
633E5000	Grooving for Cold Applied Plastic Pavement Marking, 4"	Ft	184,806.00	136,370.83	0.74	0.73	18
633E5005	Grooving for Cold Applied Plastic Pavement Marking, 8"	Ft	2,378.00	5,019.00	2.11	1.95	4
633E5010	Grooving for Cold Applied Plastic Pavement Marking, 12"	Ft	16,673.00	33,779.74	2.03	2.03	4
633E5015	Grooving for Cold Applied Plastic Pavement Marking, 24"	Ft	18,597.00	98,704.91	5.31	5.27	34
633E5020	Grooving for Cold Applied Plastic Pavement Marking, Area	SqFt	1,331.00	4,247.85	3.19	3.12	11
633E5025	Grooving for Cold Applied Plastic Pavement Marking, Arrow	Each	544.00	55,756.26	102.49	104.06	27
633E5030	Grooving for Cold Applied Plastic Pavement Marking, Combination Arrow	Each	8.00	886.48	110.81	110.40	1
633E5031	Grooving for Cold Applied Plastic Pavement Marking, Lane Reduction Arrow	Each	9.00	1,236.00	137.33	162.50	3
633E5035	Grooving for Cold Applied Plastic Pavement Marking, Message	Word	20.00	2,408.47	120.42	121.30	6
633E5037	Grooving for Cold Applied Plastic Pavement Marking, Symbol	Each	8.00	816.00	102.00	93.95	2
633E5040	Grooving for Cold Applied Plastic Pavement Marking, Railroad Crossing	Each	18.00	10,918.00	606.56	582.83	7
633E5050	Surface Preparation for Pavement Marking	Ft	2,703,027.00	782,887.21	0.29	0.32	10
633E5051	Surface Preparation for Pavement Marking	SqFt	7,153.00	18,018.60	2.52	2.17	4
633E5052	Surface Preparation for Pavement Marking	Each	175.00	21,920.82	125.26	133.37	7
633E5100	Grooving for Durable Pavement Marking, 4"	Ft	4,454,318.00	1,261,758.75	0.28	0.32	22
633E5105	Grooving for Durable Pavement Marking, 8"	Ft	2,337.00	1,369.95	0.59	0.63	3
633E5110	Grooving for Durable Pavement Marking, 12"	Ft	3,663.00	6,279.33	1.71	1.87	3
633E5115	Grooving for Durable Pavement Marking, 24"	Ft	530.00	3,011.78	5.68	3.75	3
633E5120	Grooving for Durable Pavement Marking, Area	SqFt	1,570.00	1,727.00	1.10	1.13	1
633E5125	Grooving for Durable Pavement Marking, Arrow	Each	54.00	2,562.30	47.45	47.47	2

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
633E5140	Grooving for Durable Pavement Marking, Railroad Crossing	Each	1.00	200.00	200.00	204.67	1
633E6005	Pavement Marking Masking, 5"	Ft	258,608.00	29,697.10	0.11	0.22	5
633E6010	Pavement Marking Masking, 9"	Ft	28,498.00	6,370.40	0.22	0.23	3
633E6015	Pavement Marking Masking, 13"	Ft	1,000.00	2,700.00	2.70	2.52	1
633E6020	Pavement Marking Masking, 25"	Ft	9,187.00	18,386.40	2.00	3.06	9
633E6025	Pavement Marking Masking, Area	SqFt	48.00	252.00	5.25	5.42	1
633E6030	Pavement Marking Masking, Arrow	Each	374.00	34,820.00	93.10	84.13	9
633E6035	Pavement Marking Masking, Combination Arrow	Each	6.00	390.00	65.00	37.00	1
633E6040	Pavement Marking Masking, Message	Word	32.00	3,100.00	96.88	92.81	2
633E6045	Pavement Marking Masking, Railroad Crossing	Each	12.00	2,480.00	206.67	203.33	3
633E9200	Mobile Retroreflectometer Measurements	Mile	447.44	82,412.93	184.19	216.39	5
634E0110	Traffic Control Signs	SqFt	145,511.00	412,701.14	2.84	2.91	146
634E0120	Traffic Control, Miscellaneous	LS	156.00	6,845,419.25	43,880.89	42,609.38	156
634E0135	Traffic Control Supervisor	LS	3.00	126,150.00	42,050.00	41,741.67	3
634E0265	Type 3 Barricade, 6' Double Sided	Each	2.00	200.00	100.00	106.41	1
634E0280	Type 3 Barricade, 8' Single Sided	Each	6.00	600.00	100.00	106.41	1
634E0285	Type 3 Barricade, 8' Double Sided	Each	143.00	15,003.63	104.92	111.27	7
634E0310	Temporary Flexible Vertical Markers (Tabs)	Ft	102,886.00	35,607.92	0.35	0.30	4
634E0320	Temporary Flexible Vertical Markers (Tabs)	Mile	82.20	56,256.10	684.38	892.44	3
634E0330	Temporary Raised Pavement Markers	Ft	95,942.00	31,912.56	0.33	0.40	5
634E0340	Temporary Raised Pavement Markers	Mile	12.20	26,901.00	2,205.00	2,988.13	1
634E0380	Tubular Marker	Each	5,041.00	210,624.76	41.78	36.85	8
634E0390	Replace Tubular Marker	Each	350.00	9,751.10	27.86	27.39	5
634E0420	Type C Advance Warning Arrow Board	Each	189.00	145,206.35	768.29	812.19	55
634E0500	4"x8" Amber Delineator Back to Back, Barrier Mounted	Each	155.00	3,999.00	25.80	21.93	1
634E0520	4"x8" Delineator, Barrier Mounted	Each	16.00	320.00	20.00	29.00	1
634E0525	Linear Delineation System Panel, Barrier Mounted	Each	905.00	12,021.76	13.28	12.34	8
634E0560	Remove Pavement Marking, 4" or Equivalent	Ft	155,061.00	45,751.40	0.30	0.29	21
634E0565	Remove Pavement Marking, Arrow	Each	65.00	1,928.19	29.66	28.26	7
634E0570	Remove Pavement Marking, Message	Word	1.00	44.32	44.32	47.16	1
634E0575	Remove Pavement Marking, Area	SqFt	932.00	1,396.98	1.50	2.30	3
634E0600	4" Temporary Pavement Marking Tape Type I	Ft	385,784.00	309,379.83	0.80	0.75	39
634E0630	Temporary Pavement Marking	Mile	3,438.70	1,014,508.35	295.03	320.50	53
634E0640	Temporary Pavement Marking	Ft	499,476.00	107,959.97	0.22	0.23	27
634E0700	Traffic Control Movable Concrete Barrier	Each	939.00	201,169.39	214.24	221.70	8
634E0705	Remove and Reset Traffic Control Movable Concrete Barrier	Each	235.00	36,241.00	154.22	129.77	5
634E0750	Temporary Concrete Barrier End Protection	Each	18.00	86,580.38	4,810.02	4,972.53	5
634E0755	Remove and Reset Temporary Concrete Barrier End Protection	Each	13.00	27,813.90	2,139.53	1,639.27	4
634E0760	Temporary Concrete Barrier End Protection Module Set or Repair Kit	Each	7.00	8,955.79	1,279.40	1,819.71	5
634E0806	Groove 4" Wide Rumble Strip	Ft	493.00	3,451.00	7.00	7.00	1
634E0810	Groove 6" Wide Rumble Strip	Ft	5,440.00	32,778.55	6.03	7.44	5
634E0900	Portable Temporary Traffic Control Signal	Unit	64.00	343,055.42	5,360.24	5,465.79	17
634E0915	Short Term Temporary Traffic Control Signal	Site	6.00	107,217.75	17,869.62	17,966.19	3
634E1002	Detour Signing	SqFt	22,520.20	308,558.04	13.70	13.11	24
634E1020	Temporary Business Signing	SqFt	3,096.00	25,537.77	8.25	7.40	6
634E1210	State Furnished Portable Changeable Message Sign	Each	4.00	5,970.00	1,492.50	1,287.27	2
634E1215	Contractor Furnished Portable Changeable Message Sign	Each	63.00	312,429.08	4,959.19	4,889.18	18
634E1220	Solar Powered Portable Changeable Message Sign	Each	16.00	91,500.00	5,718.75	5,418.85	5
634E1235	Queue Detection System	Mth	18.00	132,273.00	7,348.50	7,372.17	1
634E1245	Maintenance of Queue Detection System	Hour	270.00	9,782.10	36.23	36.34	1

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
634E1255	Contractor Furnished Speed Monitoring Radar Trailer	Each	2.00	8,280.00	4,140.00	4,153.33	1
634E2000	Longitudinal Pedestrian Barricade	Ft	2,088.00	24,865.40	11.91	10.86	20
634E2010	Temporary Pedestrian Facility(s)	LS	2.00	20,000.00	10,000.00	30,700.00	2
634E2020	Temporary Curb Ramp	Each	32.00	17,832.50	557.27	550.47	8
634E2025	Longitudinal Pedestrian Barrier	Ft	2,000.00	56,923.00	28.46	25.11	6
634E2050	Temporary Sidewalk	SqFt	3,382.00	28,861.76	8.53	7.16	3
635E0030	Breakaway Base Luminaire Pole with Arm, 30' Mounting Height	Each	6.00	12,296.52	2,049.42	2,050.70	2
635E0040	Breakaway Base Luminaire Pole with Arm, 40' Mounting Height	Each	78.00	242,063.33	3,103.38	2,871.50	3
635E0050	Breakaway Base Luminaire Pole with Arm, 50' Mounting Height	Each	167.00	473,857.33	2,837.47	2,843.58	6
635E0350	Breakaway Base Luminaire Pole with Top Twin Mount, 50' Mounting Height	Each	17.00	46,881.58	2,757.74	2,766.98	1
635E0900	Decorative Luminaire Pole	Each	36.00	224,280.00	6,230.00	6,468.00	1
635E0910	Decorative Luminaire Arm	Each	36.00	44,100.00	1,225.00	1,239.83	1
635E2000	Pedestal Signal Pole	Each	11.00	12,253.20	1,113.93	1,204.30	5
635E2025	Signal Pole with 25' Mast Arm	Each	1.00	9,313.20	9,313.20	9,344.40	1
635E2030	Signal Pole with 30' Mast Arm	Each	2.00	20,385.64	10,192.82	10,008.54	2
635E2035	Signal Pole with 35' Mast Arm	Each	1.00	11,500.00	11,500.00	11,315.83	1
635E2040	Signal Pole with 40' Mast Arm	Each	2.00	24,911.00	12,455.50	12,556.71	2
635E2045	Signal Pole with 45' Mast Arm	Each	1.00	14,500.00	14,500.00	14,126.67	1
635E2050	Signal Pole with 50' Mast Arm	Each	1.00	9,468.42	9,468.42	9,500.14	1
635E2055	Signal Pole with 55' Mast Arm	Each	3.00	47,450.76	15,816.92	15,869.91	1
635E2065	Signal Pole with 65' Mast Arm	Each	1.00	17,500.00	17,500.00	17,108.33	1
635E2125	Signal Pole with 25' Mast Arm and Luminaire Arm	Each	3.00	59,920.16	19,973.39	19,862.99	2
635E2130	Signal Pole with 30' Mast Arm and Luminaire Arm	Each	1.00	10,979.23	10,979.23	11,016.01	1
635E2135	Signal Pole with 35' Mast Arm and Luminaire Arm	Each	2.00	26,580.00	13,290.00	13,510.88	2
635E2140	Signal Pole with 40' Mast Arm and Luminaire Arm	Each	1.00	13,620.00	13,620.00	14,013.00	1
635E2145	Signal Pole with 45' Mast Arm and Luminaire Arm	Each	6.00	93,294.00	15,549.00	15,802.19	3
635E2150	Signal Pole with 50' Mast Arm and Luminaire Arm	Each	3.00	52,677.50	17,559.17	17,835.00	2
635E2155	Signal Pole with 55' Mast Arm and Luminaire Arm	Each	3.00	48,354.17	16,118.06	16,389.07	2
635E2160	Signal Pole with 60' Mast Arm and Luminaire Arm	Each	2.00	36,981.00	18,490.50	19,260.33	1
635E2400	Span Wire System	Site	1.00	11,000.00	11,000.00	9,870.00	1
635E2530	Galvanized Steel Utility Pole	Each	1.00	600.00	600.00	362.08	1
635E3497	Under Bridge Deck Luminaire, 35 Watt	Each	20.00	14,487.20	724.36	726.79	1
635E3700	Roadway Luminaire, LED with Photoelectric Cell	Each	308.00	277,947.40	902.43	929.64	8
635E3800	Roadway Luminaire, LED	Each	4.00	3,000.00	750.00	722.25	1
635E3810	Decorative Luminaire, LED	Each	56.00	91,162.80	1,627.91	1,620.64	2
635E4010	1 Section Vehicle Signal Head	Each	10.00	4,308.00	430.80	323.36	3
635E4030	3 Section Vehicle Signal Head	Each	102.00	89,424.16	876.71	876.11	7
635E4040	4 Section Vehicle Signal Head	Each	4.00	4,222.00	1,055.50	1,059.03	1
635E4050	5 Section Vehicle Signal Head	Each	8.00	10,202.58	1,275.32	1,259.81	4
635E4080	3 Section Directional Vehicle Signal Head	Each	27.00	23,021.45	852.65	863.17	3
635E4090	4 Section Directional Vehicle Signal Head	Each	26.00	35,300.00	1,357.69	1,258.62	4
635E5020	2' Diameter Footing	Ft	2,492.00	249,350.32	100.06	96.83	12
635E5030	3' Diameter Footing	Ft	415.00	95,632.31	230.44	232.98	7
635E5301	Type 1 Electrical Junction Box	Each	79.00	53,141.25	672.67	611.23	7
635E5302	Type 2 Electrical Junction Box	Each	78.00	51,918.81	665.63	674.74	7
635E5303	Type 3 Electrical Junction Box	Each	18.00	17,165.18	953.62	932.41	4
635E5304	Type 4 Electrical Junction Box	Each	41.00	68,445.00	1,669.39	1,713.90	2
635E5310	Special Electrical Junction Box	Each	90.00	96,857.58	1,076.20	1,077.26	2

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
635E5360	Surface Mounted Junction Box	Each	43.00	24,564.18	571.26	567.49	4
635E5400	Electrical Service Cabinet	Each	24.00	49,756.36	2,073.18	1,984.57	8
635E5410	Controller Cabinet	Each	1.00	4,090.00	4,090.00	4,090.00	1
635E5420	Circuit Control Center	Each	3.00	1,914.38	638.13	637.90	2
635E5430	Traffic Signal Controller	Each	10.00	193,053.02	19,305.30	20,019.00	7
635E5450	Side Mounted Cabinet	Each	6.00	17,912.38	2,985.40	2,995.40	2
635E5500	Meter Socket	Each	3.00	940.00	313.33	280.00	2
635E5510	Signal Flasher Unit	Each	2.00	330.00	165.00	165.00	1
635E5515	Battery Backup System for Traffic Signal	Each	10.00	75,490.45	7,549.04	7,619.63	7
635E5520	Video Detection System	Each	2.00	43,140.39	21,570.20	21,869.32	2
635E5530	Preformed Detector Loop	Each	126.00	41,109.00	326.26	300.06	5
635E5535	Sawed-In, Preformed Detector Loop	Each	4.00	26,825.00	6,706.25	6,603.12	1
635E5540	Sawed-In Detector Loop	Each	12.00	19,800.00	1,650.00	3,045.00	1
635E5550	Detector Unit	Each	43.00	5,080.75	118.16	120.60	2
635E5560	Emergency Vehicle Preemption Unit	Each	6.00	22,760.18	3,793.36	3,747.73	5
635E5562	Siren Emergency Vehicle Preemption System	Each	1.00	18,971.22	18,971.22	18,990.41	1
635E5570	Optical Detector	Each	22.00	22,317.28	1,014.42	1,037.34	5
635E5580	LED Blankout Sign	Each	2.00	11,173.52	5,586.76	5,695.59	1
635E5590	Vehicle Radar Detector	Each	4.00	51,400.00	12,850.00	13,034.50	1
635E5600	Surveillance Camera	Each	2.00	8,919.97	4,459.98	4,474.93	2
635E5800	Miscellaneous Signal Parts	LS	4.00	81,358.19	20,339.55	20,327.12	4
635E5880	Accessible Pedestrian Signal	Each	170.00	204,175.84	1,201.03	1,180.90	8
635E5910	Pedestrian Push Button Pole	Each	131.00	104,338.80	796.48	815.89	8
635E5922	Pedestrian Signal Head with Countdown Timer	Each	109.00	72,852.48	668.37	677.52	8
635E5930	Pedestrian Crossing Sign	Each	170.00	9,966.88	58.63	55.15	8
635E6200	Miscellaneous, Electrical	LS	6.00	43,746.80	7,291.13	7,869.23	6
635E6500	Furnish Signal Pole with Mast Arm	Each	1.00	19,557.72	19,557.72	19,623.24	1
635E6962	Install Traffic Signal Controller	Each	1.00	3,300.00	3,300.00	2,743.58	1
635E7030	Install Signal Head	Each	5.00	750.00	150.00	150.00	1
635E7500	Remove and Reset Luminaire Pole	Each	9.00	11,948.98	1,327.66	1,277.22	4
635E7530	Relocate Signal Equipment	LS	1.00	532.00	532.00	519.00	1
635E7600	Maintenance of Traffic Signal(s)	Hour	480.00	24,710.80	51.48	51.66	4
635E8020	2" Rigid Galvanized Steel Conduit	Ft	2,900.00	35,090.90	12.10	11.96	3
635E8025	2.5" Rigid Galvanized Steel Conduit	Ft	2,375.00	43,717.05	18.41	18.43	2
635E8030	3" Rigid Galvanized Steel Conduit	Ft	1,145.00	24,045.40	21.00	20.98	3
635E8040	4" Rigid Galvanized Steel Conduit	Ft	10,500.00	346,202.90	32.97	33.22	3
635E8060	6" Rigid Galvanized Steel Conduit	Ft	1,196.00	111,228.00	93.00	85.80	1
635E8108	0.75" Rigid Conduit, Schedule 40	Ft	380.00	908.20	2.39	2.40	2
635E8115	1.5" Rigid Conduit, Schedule 40	Ft	75.00	1,950.00	26.00	26.00	1
635E8120	2" Rigid Conduit, Schedule 40	Ft	90,860.00	299,572.85	3.30	3.14	12
635E8130	3" Rigid Conduit, Schedule 40	Ft	755.00	4,430.90	5.87	8.43	4
635E8140	4" Rigid Conduit, Schedule 40	Ft	60.00	821.35	13.69	13.68	2
635E8150	5" Rigid Conduit, Schedule 40	Ft	280.00	2,474.00	8.84	8.82	3
635E8220	2" Rigid Conduit, Schedule 80	Ft	11,335.00	87,483.90	7.72	6.32	10
635E8230	3" Rigid Conduit, Schedule 80	Ft	1,050.00	12,389.60	11.80	11.56	5
635E8240	4" Rigid Conduit, Schedule 80	Ft	485.00	5,631.35	11.61	11.94	3
635E8310	1" Innerduct, Schedule 40	Ft	18,840.00	19,319.75	1.03	1.09	2
635E8420	1.5" Innerduct, SDR 13.5	Ft	185.00	705.05	3.81	3.81	2
635E8830	2/2/2/4 Aluminum Wire	Ft	23,585.00	44,105.85	1.87	1.87	2
635E9010	1/C #0 AWG Copper Wire	Ft	4,050.00	10,489.50	2.59	2.60	1
635E9011	1/C #1 AWG Copper Wire	Ft	15,320.00	31,712.40	2.07	2.08	1
635E9012	1/C #2 AWG Copper Wire	Ft	20,685.00	28,959.00	1.40	1.47	1
635E9014	1/C #4 AWG Copper Wire	Ft	93,374.00	106,893.70	1.14	1.08	8
635E9016	1/C #6 AWG Copper Wire	Ft	93,573.00	76,036.90	0.81	0.80	10
635E9020	1/C #10 AWG Copper Wire	Ft	36,305.00	16,793.50	0.46	0.60	5
635E9022	1/C #12 AWG Copper Wire	Ft	8,990.00	2,607.10	0.29	0.29	2
635E9024	1/C #14 AWG Copper Wire	Ft	17,255.00	3,677.35	0.21	0.20	5
635E9302	2/C #14 AWG IMSA Copper Cable, K1	Ft	750.00	718.10	0.96	0.96	2
635E9304	4/C #14 AWG IMSA Copper Cable, K1	Ft	2,195.00	3,456.10	1.57	1.58	2

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
635E9305	5/C #14 AWG IMSA Copper Cable, K1	Ft	190.00	271.70	1.43	1.43	1
635E9307	7/C #14 AWG IMSA Copper Cable, K1	Ft	95.00	159.60	1.68	1.68	2
635E9312	12/C #14 AWG IMSA Copper Cable, K1	Ft	515.00	1,390.50	2.70	2.71	1
635E9325	25/C #14 AWG IMSA Copper Cable, K1	Ft	1,995.00	8,179.50	4.10	4.11	2
635E9502	2/C #14 AWG Copper Tray Cable, K2	Ft	19,361.00	22,994.14	1.19	1.20	5
635E9504	4/C #14 AWG Copper Tray Cable, K2	Ft	8,285.00	9,236.75	1.11	1.12	6
635E9505	5/C #14 AWG Copper Tray Cable, K2	Ft	555.00	643.25	1.16	1.11	3
635E9507	7/C #14 AWG Copper Tray Cable, K2	Ft	2,365.00	3,301.10	1.40	1.42	4
635E9512	12/C #14 AWG Copper Tray Cable, K2	Ft	330.00	660.00	2.00	2.03	1
635E9519	19/C #14 AWG Copper Tray Cable, K2	Ft	1,470.00	5,223.45	3.55	3.63	3
635E9524	24/C #14 AWG Copper Tray Cable, K2	Ft	2,405.00	9,672.60	4.02	4.05	3
635E9525	25/C #14 AWG Copper Tray Cable, K2	Ft	315.00	2,138.85	6.79	6.83	1
635E9530	30/C #14 AWG Copper Tray Cable, K2	Ft	255.00	1,593.75	6.25	5.99	1
635E9600	#16 AWG Copper Twisted Shielded Pair	Ft	21,365.00	11,011.95	0.52	0.50	3
635E9710	2/C #10 AWG Copper Pole and Bracket Cable	Ft	20,894.00	33,061.95	1.58	1.66	10
635E9800	Preemption Cable	Ft	7,590.00	17,620.50	2.32	2.32	4
635E9912	12 Strand Fiber Optic Cable	Ft	16,805.00	28,232.40	1.68	1.75	1
635E9924	24 Strand Fiber Optic Cable	Ft	3,320.00	7,636.00	2.30	1.79	1
635E9948	48 Strand Fiber Optic Cable	Ft	5,950.00	10,367.10	1.74	1.75	2
635E9950	Install Fiber Optic Cable	Ft	1,335.00	1,053.60	0.79	0.79	2
650E0059	Modified Type B66 Concrete Curb and Gutter	Ft	2,225.00	36,712.50	16.50	18.66	1
650E0060	Type B66 Concrete Curb and Gutter	Ft	11,759.00	329,132.03	27.99	26.47	9
650E0079	Modified Type B68 Concrete Curb and Gutter	Ft	324.00	11,739.00	36.23	41.61	2
650E0080	Type B68 Concrete Curb and Gutter	Ft	957.00	39,716.50	41.50	46.33	7
650E0085	Type B68.5 Concrete Curb and Gutter	Ft	4,895.00	140,362.36	28.67	23.23	4
650E0090	Type B69 Concrete Curb and Gutter	Ft	328.00	17,468.40	53.26	42.50	2
650E0095	Type B69.5 Concrete Curb and Gutter	Ft	8,229.00	148,297.00	18.02	19.88	2
650E0100	Type B610 Concrete Curb and Gutter	Ft	377.00	22,997.00	61.00	45.33	1
650E0105	Type B610.5 Concrete Curb and Gutter	Ft	2,026.00	42,546.00	21.00	23.07	1
650E0380	Type BL68 Concrete Curb and Gutter	Ft	119.00	4,760.00	40.00	36.14	1
650E0395	Type BL69.5 Concrete Curb and Gutter	Ft	292.00	11,680.00	40.00	27.18	1
650E0405	Type BL610.5 Concrete Curb and Gutter	Ft	1,894.00	39,774.00	21.00	23.07	1
650E1080	Type F68 Concrete Curb and Gutter	Ft	5,614.00	169,020.00	30.11	30.11	2
650E1085	Type F68.5 Concrete Curb and Gutter	Ft	30,609.00	412,241.63	13.47	15.82	2
650E1095	Type F69.5 Concrete Curb and Gutter	Ft	2,252.00	45,040.00	20.00	21.79	1
650E1105	Type F610.5 Concrete Curb and Gutter	Ft	1,783.00	37,443.00	21.00	23.24	1
650E1380	Type FL68 Concrete Curb and Gutter	Ft	806.00	24,180.00	30.00	30.00	1
650E1385	Type FL68.5 Concrete Curb and Gutter	Ft	28,814.00	403,396.00	14.00	17.67	1
650E1560	Type R48 Concrete Curb and Gutter	Ft	598.00	18,694.00	31.26	40.40	2
650E2100	Special Concrete Curb and Gutter	Ft	22.00	2,090.00	95.00	56.67	1
650E3060	Type B6 Concrete Curb	Ft	496.00	17,962.00	36.21	30.07	3
650E4060	Type C6 Concrete Gutter	Ft	505.00	11,110.00	22.00	25.27	1
650E4360	Type D46 Concrete Curb and Gutter	Ft	217.00	9,341.00	43.05	40.85	4
650E4390	Type D49 Concrete Curb and Gutter	Ft	128.00	2,048.00	16.00	47.42	1
650E4660	Type P6 Concrete Gutter	Ft	1,858.00	55,170.40	29.69	30.02	3
650E4680	Type P8 Concrete Gutter	Ft	228.00	8,868.00	38.89	41.07	4
650E4685	Type P8.5 Concrete Gutter	Ft	1,707.00	31,937.80	18.71	19.46	3
650E4695	Type P9.5 Concrete Gutter	Ft	1,346.00	30,607.00	22.74	21.64	2
650E4700	Type P10 Concrete Gutter	Ft	47.00	3,290.00	70.00	48.33	1
650E5000	Special Concrete Gutter	Ft	36.00	1,260.00	35.00	46.50	1
650E6080	8" Concrete Valley Gutter	Ft	603.00	34,638.00	57.44	54.87	2
650E6085	8.5" Concrete Valley Gutter	Ft	110.00	6,050.00	55.00	96.50	1
650E6280	8" Concrete Valley Gutter	SqYd	63.00	6,111.00	97.00	97.00	1
651E0040	4" Concrete Sidewalk	SqFt	134,689.00	954,015.45	7.08	7.51	13
651E0050	5" Concrete Sidewalk	SqFt	13,971.00	92,485.45	6.62	6.78	2
651E0060	6" Concrete Sidewalk	SqFt	156,394.00	1,000,196.72	6.40	6.79	9
651E0140	4" Reinforced Concrete Sidewalk	SqFt	5,175.00	42,843.00	8.28	8.02	3
651E0150	5" Reinforced Concrete Sidewalk	SqFt	32,464.00	219,132.00	6.75	6.42	1
651E0160	6" Reinforced Concrete Sidewalk	SqFt	22,479.00	204,688.50	9.11	10.17	9
651E0540	4" Colored Concrete Sidewalk	SqFt	3,138.00	25,884.60	8.25	9.19	3

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
651E0560	6" Colored Concrete Sidewalk	SqFt	1,562.00	22,667.08	14.51	11.30	3
651E0740	4" Reinforced Colored Concrete Sidewalk	SqFt	246.00	1,820.40	7.40	9.97	1
651E2010	Special Sidewalk	SqFt	65.00	3,250.00	50.00	23.67	1
651E3000	Grinding Miscellaneous Concrete	SqFt	39.00	5,460.00	140.00	80.00	1
651E5000	Sidewalk Drain	Ft	100.20	24,228.00	241.80	209.65	3
651E7000	Type 1 Detectable Warnings	SqFt	6,133.00	302,641.80	49.35	49.93	19
651E7010	Type 2 Detectable Warnings	SqFt	100.00	4,500.00	45.00	53.63	2
670E1200	Type B Frame and Grate Assembly	Each	362.00	265,434.55	733.24	699.32	10
670E2200	Type C Frame and Grate	Each	12.00	29,653.11	2,471.09	2,022.01	4
670E3000	1.5' x 3' Type D Drop Inlet	Each	20.00	45,286.82	2,264.34	2,180.25	5
670E3200	Type D Frame and Grate	Each	15.00	18,700.16	1,246.68	1,299.07	7
670E3300	Type E Frame and Grate	Each	5.00	9,050.00	1,810.00	1,919.08	1
670E4120	Type L Median Drain	Each	1.00	5,000.00	5,000.00	5,050.00	1
670E4122	Type L Frame and Grate Assembly	Each	1.00	2,500.00	2,500.00	2,020.00	1
670E4205	Type M Frame and Grate Assembly	Each	3.00	7,981.20	2,660.40	2,981.80	1
670E4210	Type N Grate	Each	1.00	307.66	307.66	345.15	1
670E5200	Special Frame and Grate Assembly	Each	11.00	10,573.00	961.18	790.76	3
670E5205	Special Grate	Each	3.00	4,572.00	1,524.00	2,520.89	2
670E5340	4' x 11' Precast Concrete Type S Drop Inlet Lid	Each	36.00	112,680.00	3,130.00	3,413.49	5
670E5342	4' x 6' Precast Concrete Type S Drop Inlet Lid	Each	34.00	62,985.00	1,852.50	2,284.31	5
670E5400	Precast Drop Inlet Collar	Each	387.00	111,263.94	287.50	361.78	17
670E6000	Adjust Drop Inlet	Each	5.00	3,185.67	637.13	1,533.04	2
670E6005	Modify Drop Inlet	Each	1.00	1,000.00	1,000.00	1,000.00	1
670E7000	Reset Drop Inlet Frame and Grate Assembly	Each	23.00	3,644.80	158.47	195.56	8
670E9010	Type I Drop Inlet	Each	1.00	3,195.66	3,195.66	5,998.55	1
671E0550	Special Manhole	Each	2.00	30,000.00	15,000.00	14,008.33	1
671E1048	48" Manhole	Each	5.00	10,927.10	2,185.42	2,215.25	1
671E1060	60" Manhole	Each	5.00	61,000.00	12,200.00	12,730.00	2
671E1131	48" Manhole 6' to 8' Deep	Each	1.00	3,230.00	3,230.00	3,230.00	1
671E1132	48" Manhole 8' to 10' Deep	Each	7.00	24,220.00	3,460.00	3,460.00	1
671E1133	48" Manhole 10' to 12' Deep	Each	5.00	17,850.00	3,570.00	3,570.00	1
671E1134	48" Manhole 12' to 14' Deep	Each	2.00	6,210.00	3,105.00	2,886.49	2
671E1135	48" Manhole 14' to 16' Deep	Each	1.00	3,800.00	3,800.00	3,800.00	1
671E1136	48" Manhole 16' to 18' Deep	Each	2.00	8,060.00	4,030.00	4,030.00	1
671E1137	48" Manhole 20' to 22' Deep	Each	3.00	14,090.00	4,696.67	4,685.09	2
671E1138	48" Manhole 22' to 24' Deep	Each	1.00	4,725.00	4,725.00	4,911.23	1
671E1142	48" Manhole 18' to 20' Deep	Each	6.00	42,935.00	7,155.83	7,766.45	2
671E1248	48" PVC Lined Manhole	Each	9.00	60,362.64	6,706.96	6,798.51	1
671E1360	60" Drop Manhole	Each	2.00	36,000.00	18,000.00	17,200.00	1
671E2000	External Manhole Seal	Each	17.00	7,020.00	412.94	325.59	2
671E2008	8" Manhole Boot	Each	12.00	1,433.34	119.44	135.55	2
671E2010	10" Manhole Boot	Each	5.00	735.35	147.07	149.08	1
671E2012	12" Manhole Boot	Each	18.00	3,093.16	171.84	175.88	2
671E2015	15" Manhole Boot	Each	2.00	577.50	288.75	300.02	1
671E4048	48" Manhole Riser Section	Ft	11.70	2,415.11	206.42	205.06	1
671E4548	48" Manhole Cone Section	Ft	10.00	8,000.00	800.00	553.08	1
671E5502	2" Adjusting Ring for Manhole	Each	1.00	30.00	30.00	63.42	1
671E5504	4" Adjusting Ring for Manhole	Each	8.00	320.00	40.00	73.90	1
671E6000	Temporary Manhole Cover	Each	26.00	3,698.84	142.26	144.65	3
671E6007	Type A7 Manhole Frame and Lid	Each	44.00	22,002.00	500.05	549.35	5
671E6009	Type A9 Manhole Frame and Lid	Each	3.00	1,650.00	550.00	595.92	1
671E6010	Type A10 Manhole Frame and Lid	Each	3.00	1,775.00	591.67	790.37	2
671E6030	Type S Manhole Frame and Lid	Each	2.00	2,200.00	1,100.00	680.00	1
671E6035	Special Manhole Frame and Lid	Each	22.00	15,841.90	720.09	839.64	3
671E7010	Adjust Manhole	Each	77.00	49,612.50	644.32	545.20	12
671E7020	Connect Into Existing Manhole	Each	1.00	10,476.31	10,476.31	10,619.31	1
671E8000	Reconstruct Manhole	Each	2.00	18,680.96	9,340.48	9,467.98	1
671E9000	Manhole Exfiltration/Vacuum Test	Each	32.00	11,760.00	367.50	432.20	3
671E9005	Abandon Manhole	Each	6.00	4,876.10	812.68	820.37	2

South Dakota Department of Transportation
2019 Average Unit Price Report

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
680E0010	Edge Drain	Ft	213,878.00	2,288,494.60	10.70	10.70	1
680E0015	Edge Drain Outlet	Each	440.00	165,356.40	375.81	375.81	1
680E0040	4" Underdrain Pipe	Ft	9,683.00	166,451.48	17.19	15.12	19
680E0100	Cutoff Drain	Each	9.00	33,905.00	3,767.22	3,668.29	3
680E0240	4" Corrugated Polyethylene Drainage Tubing	Ft	728.00	11,766.50	16.16	17.35	6
680E0260	6" Corrugated Polyethylene Drainage Tubing	Ft	100.00	1,643.00	16.43	22.14	1
680E0280	8" Corrugated Polyethylene Drainage Tubing	Ft	100.00	1,864.00	18.64	33.21	1
680E0440	4" Slotted Corrugated Polyethylene Drainage Tubing	Ft	5,391.00	63,304.50	11.74	13.74	4
680E2000	Concrete Headwall for Underdrain	Each	11.00	7,221.62	656.51	620.95	3
680E2500	Porous Backfill	Ton	1,909.40	111,812.53	58.56	52.98	21
700E0110	Class A Riprap	Ton	70.00	4,086.50	58.38	61.56	2
700E0210	Class B Riprap	Ton	28,034.00	1,304,365.98	46.53	59.13	34
700E0310	Class C Riprap	Ton	8,728.50	433,257.43	49.64	50.23	9
700E0410	Class D Riprap	Ton	45.60	3,898.80	85.50	100.75	1
700E0510	Class E Riprap	Ton	6,610.50	250,628.10	37.91	47.58	3
700E1010	Special Riprap	Ton	280.10	8,332.98	29.75	29.56	1
700E2010	Place Riprap	Ton	1,580.60	8,711.71	5.51	7.89	3
720E1010	PVC Coated Bank and Channel Protection Gabion	CuYd	1,342.00	399,351.33	297.58	364.12	15
720E1015	Bank and Channel Protection Gabion	CuYd	371.50	129,616.93	348.90	372.30	9
730E0100	Cover Crop Seeding	Bu	100.10	12,280.99	122.69	132.49	9
730E0200	Type A Permanent Seed Mixture	Lb	133.00	2,364.75	17.78	27.71	2
730E0202	Type B Permanent Seed Mixture	Lb	427.00	14,131.00	33.09	34.94	5
730E0204	Type C Permanent Seed Mixture	Lb	143.00	8,381.30	58.61	73.88	5
730E0206	Type D Permanent Seed Mixture	Lb	6,358.00	76,900.33	12.10	12.11	11
730E0208	Type E Permanent Seed Mixture	Lb	470.00	7,802.00	16.60	21.37	1
730E0210	Type F Permanent Seed Mixture	Lb	3,448.00	68,431.80	19.85	20.40	15
730E0212	Type G Permanent Seed Mixture	Lb	11,923.00	175,749.09	14.74	17.09	14
730E0251	Special Permanent Seed Mixture 1	Lb	14,286.00	171,322.17	11.99	13.93	10
730E0252	Special Permanent Seed Mixture 2	Lb	1,122.00	45,311.09	40.38	36.42	3
730E0253	Special Permanent Seed Mixture 3	Lb	578.00	9,248.00	16.00	15.33	1
730E1200	Hydroseeding	SqYd	96,894.00	17,151.36	0.18	0.17	2
731E0100	Fertilizing	Lb	45,179.00	46,230.96	1.02	1.32	14
731E0200	Fertilizing	Ton	552.59	619,296.13	1,120.72	1,047.28	16
732E0100	Mulching	Ton	2,198.60	541,541.36	246.31	244.99	37
732E0200	Fiber Mulching	Ton	61.70	132,426.99	2,146.30	1,993.36	9
732E0250	Fiber Mulching	Lb	11,572.00	21,301.40	1.84	2.17	8
732E0300	Bonded Fiber Matrix	Ton	24.40	42,923.50	1,759.16	1,756.44	1
732E0350	Bonded Fiber Matrix	Lb	2,326.00	4,652.00	2.00	1.77	1
732E0550	Fiber Reinforced Matrix	Lb	29,526.00	60,013.00	2.03	1.93	5
733E0100	Sodding	SqYd	1,132.00	6,792.00	6.00	5.83	1
734E0010	Erosion Control	LS	26.00	110,374.42	4,245.17	4,492.75	26
734E0044	Soil Stabilizer	Acre	98.40	84,902.50	862.83	794.13	7
734E0050	Chemical Grout	Gal	90.00	37,800.00	420.00	340.00	1
734E0101	Type 1 Erosion Control Blanket	SqYd	12,861.00	28,201.87	2.19	2.05	2
734E0102	Type 2 Erosion Control Blanket	SqYd	42,266.00	107,884.11	2.55	2.48	19
734E0103	Type 3 Erosion Control Blanket	SqYd	161,059.00	314,892.89	1.96	2.06	15
734E0104	Type 4 Erosion Control Blanket	SqYd	2,375.00	10,616.25	4.47	4.37	1
734E0131	Type 1 Turf Reinforcement Mat	SqYd	8,711.00	31,514.55	3.62	3.99	2
734E0132	Type 2 Turf Reinforcement Mat	SqYd	17,352.00	67,723.08	3.90	4.12	2
734E0133	Type 3 Turf Reinforcement Mat	SqYd	7,667.00	31,569.80	4.12	4.39	2
734E0140	Erosion Bale	Each	118.00	6,554.88	55.55	52.54	2
734E0151	9" Diameter Erosion Control Wattle	Ft	2,482.00	14,083.06	5.67	5.57	5
734E0154	12" Diameter Erosion Control Wattle	Ft	81,355.00	370,411.08	4.55	5.49	56
734E0165	Remove and Reset Erosion Control Wattle	Ft	17,643.00	28,290.83	1.60	2.09	26
734E0170	Temporary Sediment Barrier	Ft	20.00	800.00	40.00	63.33	1
734E0180	Sediment Filter Bag	Ft	14,185.00	43,117.82	3.04	3.48	12
734E0325	Surface Roughening	Acre	73.20	26,160.24	357.38	270.24	5
734E0400	Rock Check Dam	CuYd	1,620.00	98,400.00	60.74	66.86	2

South Dakota Department of Transportation
2019 Average Unit Price Report

Item Number	Description	Unit of Measure	Total Quantity	Total Cost	Avg Low Bid Price	Avg of 3 Lowest Bids	Bid Cnt
734E0510	Shaping for Erosion Control Blanket	Ft	78,701.00	33,432.50	0.42	0.47	27
734E0602	Low Flow Silt Fence	Ft	74,351.00	276,045.48	3.71	3.76	29
734E0604	High Flow Silt Fence	Ft	54,716.00	206,660.99	3.78	3.77	37
734E0610	Mucking Silt Fence	CuYd	8,204.00	52,116.12	6.35	5.93	52
734E0620	Repair Silt Fence	Ft	31,778.00	21,723.69	0.68	0.68	52
734E0630	Floating Silt Curtain	Ft	6,514.00	85,842.95	13.18	14.81	14
734E0635	Remove and Reset Floating Silt Curtain	Ft	590.00	7,635.00	12.94	13.83	2
734E0680	Flocculent Housing Unit	Each	3.00	13,278.40	4,426.13	5,702.96	2
734E0683	500K Gallon Treatment Flocculent Bag	Each	3.00	6,448.72	2,149.57	1,207.58	2
734E0840	Sediment Control at Type B Reinforced Concrete Drop Inlet	Each	16.00	2,800.00	175.00	163.33	1
734E0845	Sediment Control at Inlet with Frame and Grate	Each	488.00	48,852.44	100.11	97.71	18
734E0847	Sediment Control at Type S Reinforced Concrete Drop Inlet	Ft	1,659.00	33,109.02	19.96	16.46	11
734E0855	Interim Sediment Control at Inlet	Each	4.00	449.92	112.48	104.16	1
734E0900	Temporary Diversion Channel for Fish Passage	Each	8.00	91,818.90	11,477.36	15,960.60	6
734E2020	Bridge Berm Slope Protection, Crushed Aggregate	SqYd	807.70	59,390.18	73.53	73.74	1
734E5000	Dewatering	Hour	40.00	4,000.00	100.00	116.05	1
734E5005	Dewatering	LS	3.00	55,000.00	18,333.33	31,312.64	3
734E5010	Sweeping	Hour	514.00	62,366.24	121.34	133.09	17
735E2220	2" Caliper Deciduous Tree, Furnish and Plant	Each	12.00	5,029.08	419.09	420.50	1
831E0100	Type A Drainage Fabric	SqYd	21.00	420.00	20.00	35.40	1
831E0110	Type B Drainage Fabric	SqYd	49,049.00	124,012.49	2.53	3.47	53
831E0200	Woven Separator Fabric	SqYd	30,055.00	36,245.40	1.21	1.66	2
831E0210	Non-woven Separator Fabric	SqYd	49,602.00	108,025.29	2.18	2.37	4
831E0300	Reinforcement Fabric (MSE)	SqYd	31,763.00	80,139.30	2.52	2.59	15
831E0400	Impermeable Plastic Membrane	SqYd	472.00	3,710.00	7.86	10.44	3
831E1010	Geogrid Reinforcement	SqYd	31,615.00	98,334.00	3.11	2.84	4
831E1500	Geotextile Bond Breaker Fabric	SqYd	321,109.00	722,495.25	2.25	2.50	1
900E0010	Refurbish Single Mailbox	Each	366.00	79,137.52	216.22	220.67	36
900E0012	Refurbish Double Mailbox	Each	123.00	32,864.42	267.19	278.62	19
900E0015	Multiple Mailbox Support	Each	1.00	1,700.00	1,700.00	1,238.33	1
900E0030	Remove and Reset Historical Marker	Each	1.00	500.00	500.00	685.00	1
900E0900	Curb Stop	Each	18.00	9,000.00	500.00	468.93	1
900E1080	Orange Plastic Safety Fence	Ft	3,176.00	13,795.30	4.34	4.82	6
900E1250	High Friction Surface Treatment	SqYd	49,754.70	880,392.52	17.69	18.40	3
900E1256	Abrasive Blasting of PCC Pavement	SqYd	27,925.00	18,151.25	0.65	1.23	1
900E1258	Abrasive Blasting of AC Pavement	SqYd	6,454.00	4,517.80	0.70	1.25	1
900E1310	Concrete Washout Facility	Each	8.00	8,529.04	1,066.13	817.32	6
900E1320	Construction Entrance	Each	49.00	132,648.25	2,707.11	2,948.35	14
900E1350	Temporary Surfacing	SqFt	4,750.00	53,960.00	11.36	10.36	2
900E1980	Storage Unit	Each	21.00	60,154.33	2,864.49	3,275.47	21
900E2024	Miscellaneous Work, Electrical	LS	4.00	25,702.55	6,425.64	7,140.83	4
900E2030	Miscellaneous Work	Site	11.00	20,708.50	1,882.59	1,430.67	2
900E5145	Bollard	Each	2.00	3,000.00	1,500.00	983.33	1
900E5149	Landscaping Rock	CuYd	15.20	1,887.54	124.18	124.59	1
900E5150	Landscape Edging	Ft	17.00	44.03	2.59	2.60	1
900E5152	Weed Barrier Fabric	SqYd	1,229.00	319.54	0.26	0.26	1
900E5325	Grout	Ft	18.00	4,500.00	250.00	250.00	1
900E5330	Well Pump	Each	1.00	4,200.00	4,200.00	4,250.41	1
900E5400	Sprinkler System	LS	1.00	600.00	600.00	993.33	1
900E5500	Drainage System	LS	1.00	71,109.43	71,109.43	70,642.33	1
900E5835	Static Scale	Each	1.00	75,600.00	75,600.00	76,507.34	1
900E5840	Permanent Vehicle Classification System	Each	2.00	328,630.00	164,315.00	167,334.48	2
998E0100	Railroad Protective Insurance	LS	36.00	146,373.23	4,065.92	4,316.88	36

Appendix E: Topeka Shiner Provisions

STATE OF SOUTH DAKOTA
DEPARTMENT OF TRANSPORTATION

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

AUGUST 29, 2018

I. DESCRIPTION

This project crosses a stream inhabited by the Topeka shiner, a federally endangered species. The Contractor shall implement the following conditions to minimize the impact of a 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

The Contractor shall not perform construction activities within the stream, along the stream banks, and in areas that drain into the stream 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. The Contractor shall maintain erosion and sediment controls in good working condition until the Contractor restores vegetation to 70% of the pre-disturbance condition. Erosion and sediment controls implemented shall be those appropriate for the specific site conditions. The Contractor shall not place fill material 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

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

increased. The Engineer will monitor the turbidity during all stages of the project.

1. **Turbidity Meter and Maintenance:** The Engineer will take measurements with a Global Water WQ 770 turbidity meter or equivalent. The Engineer will maintain and operate the turbidity meters in accordance with manufacturer specifications and technical manual.

2. **Definition of Turbidity Sample:** The definition of a turbidity sample is the average of five measurements taken at a sampling location.

3. **Obtaining a Turbidity Sample:** The Engineer will submerge the sensor of the turbidity meter in the stream and allow the sensor to run continuously for at least one minute before taking the first turbidity measurement. The Engineer will take subsequent turbidity measurements at thirty second intervals until five measurements have been obtained. The Engineer will take turbidity measurements in accordance with manufacturer specifications and technical manual.

4. **Location of Turbidity Samples:** The Engineer will measure turbidity at two sampling locations. The Engineer will take a control sample from a point 100 feet upstream of the work area to determine the background turbidity level. The Engineer will take another sample from a point 100 feet downstream of the work area. The Engineer may modify the location of turbidity samples at the Engineers discretion depending on constraints such as easement limits. The Engineer will measure turbidity at the midpoint of the stream.

5. **Documentation of Turbidity Sample Measurements:** The Engineer will record turbidity data on a Stream Turbidity Inspection Form (DOT-283) and be delivered to the SDDOT Environmental Office within 14 calendar days of testing. Turbidity samples that indicate a 50 NTU increase over the background turbidity level shall be immediately reported to the Department’s Biologist (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 Engineer's discretion during construction activities that may result in increased turbidity (e.g., placing riprap 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, the Department will not allow construction activities within that enclosed area until the Biologist has moved the fish 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.

The Contractor shall use fish screens on all pump intakes that may be exposed to fishes. The Contractor shall size pump intake screens 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 ft^2. The Biologist shall be contacted to determine the appropriate surface area for fish screens used on pumps extracting water at a rate exceeding 500 gallons per minute.

The extraction of water for use during construction from streams will not be permitted unless approved by the Biologist. The Contractor shall provide the Biologist with the estimated volume of water the Contractor will extract, the duration (timeframe) of the extraction, the rate at which the extraction of water will occur, and the location(s) where the extraction of water will occur.

D. TEMPORARY WORKS (FALSEWORK AND WORK PLATFORMS)

Falsework or work platforms shall conform to Section 423 of the 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 to install and remove falsework or work platforms 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 specifications.

E. REMOVAL OF STRUCTURES & OBSTRUCTIONS

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

Construction, demolition, and removal operations conducted over or in the vicinity of the stream shall be controlled to prevent materials from falling in the waterway. The Contractor shall promptly remove any materials that fall into the

waterway or into areas below the ordinary high water elevation by hand or with equipment located above the stream bank at the discretion of the Engineer.

F. TEMPORARY DIVERSION CHANNELS

The Contractor shall construct temporary diversion channels constructed according to Standard Plate number 734.30 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

The Contractor shall notify the Biologist of the preconstruction meeting. The Biologist will review the conditions of this provision and all environmental permits. The Contractor shall provide an estimated date at the pre-construction meeting when the Biologist needs to be on site to conduct fish transfer. The Contractor shall notify the Engineer 2 business days before the Biologist needs to be on site.

The Contractor shall submit a detailed Contractor work plan prior to the preconstruction meeting to the Engineer for Biologist approval. The Contractor work 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 Contractor work plan shall include all necessary information to provide assurance that the Contractor has adequately addressed the conditions of this provision. Work shall not proceed without approval of the Contractor work plan by the Biologist.

IV. METHOD OF MEASUREMENT

A. Temporary Water Barriers: The Department will measure temporary water barriers to the nearest foot.

B. Cofferdams: The Department will measure cofferdams in accordance with Section 423.4 of the specifications.

C. Dewatering: The Department will not measure dewatering.

D. Temporary Works: The Department will measure for temporary works in accordance with Section 423.4 of the specifications.

E. Removal of Structures and Obstructions: The Department will measure removal of structures and obstructions in accordance with Section 110.4 of the specifications.

F. Temporary Diversion Channel for Box Culverts: The Department will measure temporary diversion channel for box culverts in accordance with Standard Plate number 734.30.

G. Temporary Stream Diversion for Box Culvert Extensions: The Department will measure temporary stream diversions for box culvert extensions on a per each basis.

H. Temporary Stream Diversion for Pipe Culvert Extensions: The Department will measure temporary stream diversions for pipe culvert extensions on a per each basis.

I. Erosion Control for Box Culvert Extension: The Department will not measure for erosion and sediment control for box culvert extensions.

J. Erosion Control for Pipe Culvert Extension: The Department will not measure for erosion and sediment control for pipe culvert extensions.

K. Erosion Control for Bridge: The Department will not measure for erosion and sediment control for bridge.

V. BASIS OF PAYMENT

A. Temporary Water Barriers: The Department will pay for temporary water barriers at the contract unit price per foot. The Department will make payment for this bid item 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 specifications.

C. Dewatering: The Department will not pay for dewatering. 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 specifications.

E. Removal of Structures and Obstructions: Payment for removal of structures and obstructions shall be as specified in Section 110.5 of the 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:** The Department will pay for temporary stream diversion for box culvert extensions at the contract unit price per each. The Department will make payment for this bid item 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:** The Department will pay for temporary stream diversion for pipe culvert extensions at the contract unit price per each. The Department will make payment for this bid item 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:** The Department will pay for erosion control for box culvert extension 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. The Department will measure and pay for erosion control measures not shown on the approved Construction Plan under their respective bid items (i.e. silt fence, erosion bale, etc.).

J. **Erosion Control for Pipe Culvert Extension:** The Department will pay for erosion control for pipe culvert extension 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. The Department will measure and pay for erosion control measures not shown on the approved Construction Plan under their respective bid items (i.e. silt fence, erosion bale, etc.).

K. **Erosion Control for Bridge:** The Department will pay for erosion control for bridge 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. The Department will measure and pay for erosion control measures not shown on the approved Construction under their respective bid items (i.e. silt fence, erosion bale, etc.).

* * * * *

Appendix F: EPA Expedited Settlement Offer Worksheet

Expedited Settlement Offer Worksheet
Deficiencies Form

Consult instructions regarding eligibility criteria and procedures prior to use

version 10.3.4

		LEGAL NAME AND MAILING ADDRESS OF OPERATOR	Telephone Number	NPDES Permit Number
1				
			Inspector Name:	
			Inspector Agency:	Other
			Entrance Interview Conducted:	
			Exit Interview Conducted:	
		LOCATION AND ADDRESS OF SITE	Exit Interview given to:	
2			Exit Interview time:	Date:

		FACILITY DESCRIPTION / CONTACT NAMES	
		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 Currently Disturbed | Acres to be Disturbed in Whole Common Plan:	
		Has Operator Requested Rainfall Erosivity or TMDL Waiver per 44 CFR 122.26(b)(15)?	

		PERMIT COVERAGE	Findings	Citation Reference**	RCA*	No. of Deficiencies		Dollar Amount		Total
3		Operator unpermitted for _____months (# months unpermitted equals number of violations)		CWA 301			X	$500.00	=	
		SWPPP REVIEW								
4		SWPPP not prepared (If no SWPPP, leave elements 5 - 30 blank)		CGP 3.1.A				$5,000.00	=	
5		SWPPP prepared but prepared after construction start (# of months = # of violations)		CGP 3.1.A			X	$75.00	=	
6		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				$250.00	=	
7		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				$500.00	=	
8		SWPPP does not have site description, as follows:								
	A	Nature of activity in description		CGP 3.3.B.1				$100.00	=	
	B	Intended sequence of major activities		CGP 3.3.B.2				$100.00	=	
	C	Total disturbed acreage		CGP 3.3.B.3				$100.00	=	
	D	General location map		CGP 3.3.B.4				$100.00	=	
	E	Site map		CGP 3.3.C				$500.00	=	
	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 ageas, surface waters, discharge points, areas of final stabilization (count each omission under 8F as 1 violation)		CGP 3.3.C.1-8			X	$50.00	=	
	G	Location/description industrial activities, like concrete or asphalt batch plants		CGP 3.3.D				$500.00	=	
9		SWPPP does not:								
	A	Describe all pollution control measures (e.g. BMPs)		CGP 3.4.A				$750.00	=	

	B	Describe sequence for implementation		CGP 3.4.A				$250.00	=	
	C	Detail operator(s) responsible for implementation		CGP 3.4.A				$250.00	=	
10		SWPPP does not describe interim stabilization practices		CGP 3.4.B				$250.00	=	
11		SWPPP does not describe permanent stabilization practices		CGP 3.4.B				$250.00	=	
12		SWPPP does not describe a schedule to implement stabilization practices		CGP 3.4.B				$250.00	=	
13		Following dates are not recorded: major grading activities; construction temporarily or permanently ceased; stabilization measures initiated (count each omission under 13 as 1 violation)		CGP 3.4.C.1-3			X	$250.00	=	
14		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				$500.00	=	
15		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				$500.00	=	
16		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				$500.00	=	
17		SWPPP does not describe measures to minimize off-site vehicle tracking and generation of dust		CGP 3.4.G				$500.00	=	
18		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				$250.00	=	
19		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				$500.00	=	
20		SWPPP does not identify allowable sources of non-storm water discharges listed in subpart 1.3.B of the CGP		CGP 3.5				$500.00	=	
21		SWPPP does not identify/ensure implementation of pollution prevention measures for non-storm water discharges		CGP 3.5				$500.00	=	
22		Endangered Species Act documentation is not in SWPPP		CGP 3.7				$500.00	=	
23		Historic Properties (Reserved)								
24		Copy of permit and/or NOI not in SWPPP (count each omission under 24 as 1 violation)		CGP 3.8			X	$250.00	=	
25		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				$750.00	=	
26		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				$250.00	=	
27		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				$500.00	=	
28		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 under 28 as 1 violation)		CGP 3.11.C			X	$50.00	=	
29		Copy of SWPPP not retained on site		CGP 3.12.A				$500.00	=	
		A SWPPP not made available upon request		CGP 3.12.C				$500.00	=	
30		SWPPP not signed/certified		CGP 3.12.D				$500.00	=	
								Subtotal SWPPP Deficiencies		$0

		INSPECTIONS								
31		Inspections not performed and documented 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) (Count each failure to inspect and document as one violation).		CGP 3.10.A, 3.10.B			X	$250.00	=	
		No inspections conducted and documented (if True, then leave elements 32-39 blank)						True or False		
		Number of Inspections expected if performed every 7 days:	0							
		Number of Inspections expected if performed bi-weekly:	0							
		If known, number of days of rainfall of >0.5"								
32		Inspections not conducted by qualified personnel		CGP 3.10.D				$50.00	=	
33		All areas disturbed by construction activity or used for storage of materials and which exposed to precipitation not inspected		CGP 3.10.E.				$50.00	=	
34		All pollution control measures not inspected to ensure proper operation		CGP 3.10.E.				$50.00	=	
35		Discharge locations are not observed and inspected		CGP 3.10.E.				$50.00	=	
36		For discharge locations that are not accessible, nearby locations are not inspected		CGP 3.10.E.				$50.00	=	
37		Entrance/exit not inspected for off-site tracking		CGP 3.10.E.				$50.00	=	
38		Site inspection report does not include: date, name and qualifications of inspector, weather information, location of sediment/pollutant discharge, BMP(s) requiring maintenance, BMP(s) that have failed, BMP(s) that are needed, corrective action required including changes/updates to SWPPP and schedule/dates (count each omission under 38 as 1 violation)		CGP 3.10.G			X	$50.00	=	
39		Inspection reports not properly signed/certified (count each failure to to sign/certify as 1 violation)		CGP 3.10.G			X	$50.00	=	
						Subtotal Inspections Deficiencies				$0
		AVAILABILITY OF RECORDS								
40		Sign/notice not posted		CGP 3.12.B				$250.00	=	
	A	Does not contain copy of complete NOI		CGP 3.12.B				$50.00	=	
	B	Location of SWPPP or contact person for scheduling viewing times where on-site location for SWPPP unavailable not noted on sign		CGP 3.12.B				$50.00	=	
						Subtotal Records Deficiencies				$0
		BEST MANAGEMENT PRACTICES								
41		No velocity dissipation devices located at discharge locations or outfall channels to ensure non-erosive flow to receiving water		CGP 3.13.F				$500.00	=	
42		Control measures are not properly:								
	A	Selected, installed and maintained		CGP 3.13.A				$500.00	=	
	B	Maintenance not performed prior to next anticipated storm event		CGP 3.6.B				$250.00	=	
		(count each failure to select, install, maintain each BMP as one violation								
43		When sediment escapes the site, it is not removed at a frequency necessary to minimize off-site impacts		CGP 3.13.B				$500.00	=	
44		Litter, construction debris, and construction chemicals exposed to storm water are not prevented from becoming a pollutant source (e.g. screening outfalls, pickup daily, etc.)		CGP 3.13.C				$500.00	=	

45		Stabilization measures are not initiated as soon as practible on portions of the site where construction activities have temporarily or permanently ceased within 14 days after such cessation		CGP 3.13.D				$500.00	=	
		*Exceptions:								
		(a) Snow or frozen ground conditions								
		(b) Activities will be resumed within 14 days								
		(c) Arid or Semi-arid areas (<20 inches per								
46		Common Drainage of 10+ acres does not have a sedimentation basin for the 2 year, 24 hour storm, or 3600 cubic ft. storage per acre drained		CGP 3.13.E.1				$1,000.00	=	
	A	Where sedimentation basin not attainable, smaller sediment basins, sediment traps, or erosion controls not implemented for downslope		CGP 3.13.E.2				$1,000.00	=	
	B	Sediment not removed from sediment basin or traps when design capacity reduced by 50% or more		CGP 3.6.C				$500.00	=	
47		Common Drainage less than 10 acres does not have sediment traps, silt fences, vegetative buffer strips, or equivalent sediment controls for all down slope boundaries (not required if sediment sediment basin meeting criteria in 46 above)		CGP 3.13.E.3				$500.00	=	
	A	Sediment not removed from sediment trap when design capacity reduced by 50% or more		CGP 3.6.C			X	$500.00	=	
								Subtotal BMP Deficiencies		$0

SMALL BUSINESS EVALUATION

48		Is the Owner/Operator a Small Business?								
		A *small business* is defined by EPA's Small Business Compliance Policy as: "a person, corporation, partnership, or other entity that employs 100 or fewer indiviudals (across all facilities and operations owned by the small business)." The number of employees should be considered as full-time equivalents on an annual basis, including contract employees (see 40 CFR 372.3). A full time employee unit is 2000 hours worked per year.								
								Total Expedited Settlement:		**$0**

* **R**equires **C**orrective **A**ction

** NPDES General Permit, 68 FR 39087, issued by EPA on July 1, 2003, http://cfpub.epa.gov/npdes/stormwater/cgp.cfm