

**Grading, Erosion and Sediment Control Plan
for
Crystal Valley Ranch Filing No. 7**

Prepared For:

CRYSTAL VALLEY RANCH DEVELOPMENT COMPANY, LLC

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Wednesday, April 10, 2013

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This *Grading, Erosion and Sediment Control Plan* has been placed in the Town of Castle Rock file for this project and appears to fulfill the applicable Town of Castle Rock *Grading, Erosion and Sediment Control* criteria. Additional grading, erosion and sediment control measures may be required of the owner or his/her agents, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the land owner, or his/her designated representative(s) until such time as the plan is properly completed, modified or voided.

PROJECT OWNER/DEVELOPER SIGNATURE BLOCK

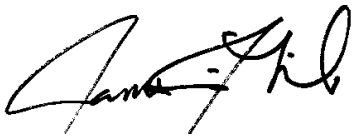
I have reviewed the information contained within this Grading, Erosion and Sediment Control Plan and accept responsibility for the requirements set forth.

Project Owner/Developer

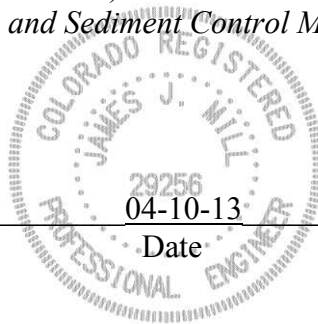
Date

PLAN PREPARE SIGNATURE BLOCK

I hereby certify that this Grading, Erosion and Sediment Control Plan for Crystal Valley Ranch Filing No. 7 was prepared by me (or under my direct supervision) in accordance with the provisions of the *Town of Castle Rock Grading, Erosion and Sediment Control Manual* for the owners thereof.



James J. Mill, P.E. (Colorado PE #29256)
For and on Behalf of Legacy Engineering, Inc.



Introduction

This report represents the Grading, Erosion and Sediment Control Plan for construction of Crystal Valley Ranch Filing No. 7. It was prepared to meet the regulatory requirements of the Town of Castle Rock *Grading, Erosion and Sediment Control Manual* as well as the Colorado Department of Health, Water Quality Control Division in compliance with the provisions of the Colorado Water Quality Control Act, and the Federal Water Pollution Control Act.

This plan serves as a consolidated document for information on water quality protection for the subject site and areas immediately adjacent. It should also be noted that **this plan is a living document that will need to be updated and maintained throughout the construction process.** The intent of this plan is to provide the contractor a tool to consolidate records, logs, permits, applications, etc. as well as guidance on water quality protection. The plan incorporates elements that can be found in the contract plans and specifications as well as the following:

- Town of Castle Rock Grading, Erosion and Sediment Control Manual

Crystal Valley Ranch Filing No. 7 is a portion of Section 24, Township 8 South, Range 67 West of the Sixth Principal Meridian, Douglas County, Colorado. The site is bound by Crystal Valley Parkway to the north, Crystal Valley Ranch No. 3 to the east, unplatted open space to the south, and Crystal Valley Ranch No. 1 to the west. The site is approximately located at Latitude 39.2014° N, Longitude 104.5041° W. The site is shown on the Vicinity Map located within the Appendix. The total disturbance area created by the project is approximately 39 acres.

Part I.C.1. – Site Description

I.C.1.a. – Description of the Construction Activity

Crystal Valley Ranch Filing No. 7 is a single family residential development. The site will be in both cut and fill. A 1.65 acre –ft temporary sediment basin will be created at the east side of the site. The construction activity onsite will be very typical of a single family development. Curb and gutter along with swales will be utilized with a storm sewer system to convey all the onsite storm water into the proposed storm water system. Water quality is provided off-site at regional facilities.

I.C.1.b. – Proposed Sequence of Major Activities

The project will follow standard construction sequences for a single family development, i.e., clearing and grubbing, overlot grading, utility installation, curb and gutter, and street paving. Minor grading will be required along Loop Road order to install the waterline loop for the site. The proposed improvements will be completed in a two phase, an initial and interim phase of construction based on the Town of Castle Rock criteria.

I.C.1.c. – Estimated Total and Disturbance Areas of the Site

The total disturbance area of the Crystal Valley Ranch Filing No. 7 site and adjacent overlot grading and utility installation will be approximately 39 acres. Approximately 375,992 cubic yards of useable material will be cut and 375,982 cubic yards of useable material will be fill. These values were calculated by comparing the existing grade versus the proposed overlot grade and do account for any bulking due to the over excavation (see Appendix for earthwork calculations).

I.C.1.d. – Estimated Runoff Coefficient and Soil Classification

The estimated 5-year and 100-year developed runoff coefficients are 0.27 and 0.56 respectively for the entirety of Filing 7. The existing ground is currently undeveloped with a natural vegetative cover with slopes generally varying from 3-33 percent. There are no irrigation ditches or facilities currently on the project site. The storm discharge from this site will have no discernable impact on irrigation facilities in the area. According to the Federal Emergency Management Agency Flood Insurance Rate Map Community Parcel Number 08035C0304F, dated September 30, 2005 no portion of the site lies within the floodplain. The site soils are described as Fondis-Kutch (Fu) and Peyton-Pring-Crowfoot (PpE) by the NRCS soil surveys. The soils are partly of Hydrologic Soil Group C & B. The Fondis-Kutch series soils are clayey sand subsoil underlain by calcareous older soil, shale, or sandstone. Similarly the Peyton-Pring-Crowfoot is composed of sandy loams with 5-25 percent slopes.

I.C.1.e. – Existing Vegetation

Currently, the site is undeveloped and is covered with native vegetation. There is no significant erosion associated with the Sellers Gulch outfall. The site shows no significant

erosion currently occurring. Temporary check dams will be installed within the existing swale protecting the existing drainageway north of the site. All natural channels within the site are being redesigned and replaced to a stable design eliminating any existing sediment loading contributing from the site.

I.C.1.f. – Other Potential Pollution

While vehicle fueling is expected on-site, there is no designated area for fueling at this time. It will be the responsibility of the contractor to designate a fueling area and take the appropriate actions to insure that no pollution of the storm water occurs. Fueling areas shall be located a minimum of 100 feet from all drainage courses whenever possible. A 12-inch high compacted earthen ridge capable of retaining potential spills shall enclose fueling areas. If the fueling area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. The following is a list of other possible potential pollution sources and prevention measures that may occur during construction.

- Portable Toilets – should be kept a minimum of 50 feet from a storm drain inlet and secured to the ground
- Latex Paint – empty/dried buckets may be disposed of in the dumpsters or emptied out in the concrete wash-out pit
- Lacquer/Stain (oil based products) – will not be disposed of anywhere on-site. These products may be stored on-site, but if they are no longer needed, they will be removed from the site and disposed of properly
- Drywall Products – gypsum may be disposed of in the dumpsters or the concrete wash-out pit, but drywall mud and it's residue from clean-up must be taken off-site and disposed of properly
- Landscaping Materials – may be stored in the street until work is completed on each lot (which is usually less than 48 hours). If topsoil, mulch, or similar material is to be kept in the street or gutter over-night, containment measures should be taken to minimize any pollution discharge potential. Landscape materials shall not be stored on 104th Avenue.
- Stockpiles – silt fence or similar barrier should be installed as needed around long-term

stockpiles (30 days+), as well as Vehicle Tracking Control should be installed at the access point to minimize sediment from leaving the area.

I.C.1.g. – Non-stormwater Discharge

There are no non-storm components anticipated for this project

I.C.1.h. – Receiving Waters

The receiving water for the site is Sellers Gulch.

Part I.C.2. – Site Map

Refer to the erosion control drawing located within the map pockets for locations of BMP's.

Part I.C.3. – Stormwater Management Controls.

I.C.3.a. – SWMP Administrator

The SWMP administrator shall also be known as the erosion and sediment control manager (ESC manager). The ESC manager shall henceforth be the contractor to be named upon completion of the bidding process. The ESC manager shall be the individual(s), position, or title who is responsible for developing, implementing, maintaining, and revising the erosion and sediment control plans. The activities and responsibilities of the administrator shall address all aspects of the facility's SWMP.

I.C.3.b. – Identification of Potential Pollutant Sources

Potential pollution sources include; debris, emissions from construction vehicles, possible refueling incidents and accidental materials or chemical spills. Specific pollution components and their solutions are listed below:

- All exposed and stored soils – all exposed soils will be seeded and mulched upon completion of construction within the vicinity. Silt fence will be utilized to contain sediment deposited by runoff until seeding can take. Silt fence or similar barrier should be installed as needed around long-term stockpiles (30 days+). Vehicle Tracking

Control should be installed at access points to minimize sediment from leaving the area.

- Vehicle tracking of sediments – if sediment is tracked onto the street, a reasonable attempt will be made to clean up any large deposits as soon as possible and if necessary, a street sweeper may be used.
- Management of contaminated soils – appropriate measures will be taken to cleanup the cause of the contaminated soil. All contaminated soils must be disposed of in an appropriate manner off-site.
- Loading and unloading operations – should a spill occur during a loading or unloading operation it shall be cleaned up immediately and the on-site personnel should be contacted.
- Outdoor storage activities – materials with potential for contamination of stormwater runoff will be stored so as to prevent/minimize the presence of toxic materials, and designated accordingly. The areas on the construction site used for material storage that are exposed to precipitation shall be inspected for evidence of, or the potential for, pollutants entering the drainage system.
- Vehicle and equipment maintenance and fueling – all designated fueling and maintenance areas shall be located a minimum of 100 feet from all drainage courses whenever possible. If the fueling area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination and any spillage shall be cleaned up immediately.
- Significant dust or particulate generating processes – dust-reducing measures will be taken during construction until appropriate seeding and mulching can be placed.
- Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc. – oil, grease, coolants, etc. that leak onto the soil or impervious surface should be cleaned up as soon as possible and on-site personnel should be contacted as well.
- On-site waste management practices (waste piles, liquid wastes, dumpsters, etc.) – dumpsters will be utilized as needed to remove trash from the site. Any waste material found on-site or generated by construction will be disposed of in a manner as to not cause pollutants in storm water discharges. In the event that waste is to be stored on-

site, it shall be in an area located a minimum of 100 feet from all drainage courses whenever possible. Whenever waste is not stored in a non-porous container, it shall be in an area enclosed by a 12-inch high compacted earthen ridge. If the enclosed waste area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. Whenever precipitation is predicted, the waste shall be covered with a non-porous cover, anchored on all sides to prevent its removal by wind, in order to prevent precipitation from leaching out potential pollutants from the waste.

- Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment – concrete truck/equipment washing will take place in the designated concrete wash-out area which shall be placed a minimum of 100’ from any drainage/water sources. The area shall limit the travel of wash water from the area. The area shall be cleaned up of all washed cement on an “as necessary” basis.
- Dedicated asphalt and concrete batch plants – It is assumed a batch plant will not be utilized. If at such time a batch plant is used it will be the responsibility of the contractor to update the GESC report and plans in addition to receiving/obtaining all necessary permits.
- Non-industrial waste sources such as worker trash and portable toilets – all portable toilets should be kept a minimum of 50 feet from a storm drain inlet and secured to the ground.
- Other areas or procedures where potential spills can occur – no other areas have been identified at this time.
- General litter/construction debris – dumpsters will be utilized as needed to remove trash from the site. Any waste material found on-site or generated by construction will be disposed of in a manner as to not cause pollutants in storm water discharges. In the event that waste is to be stored on-site, it shall be in an area located a minimum of 100 feet from all drainage courses whenever possible. Whenever waste is not stored in a non-porous container, it shall be in an area enclosed by a 12-inch high compacted earthen ridge. If the enclosed waste area is located on porous soil, the area shall be covered with a non-porous lining to prevent soil contamination. Whenever precipitation is predicted, the waste shall be covered with a non-porous cover, anchored

on all sides to prevent its removal by wind, in order to prevent precipitation from leaching out potential pollutants from the waste.

I.C.3.c.1. – Structural Practices

Silt Fence

Purpose:

- To act as a barrier to interrupt runoff to allow sediment to settle out

Typical Applications:

- Perimeter control on lots or tracts
- Around dirt stockpiles

Vehicle Tracking Control

Purpose:

- To reduce the amount of sediment leaving an area via vehicle's tires

Typical Applications:

- Long-term stockpiles (30days+)
- Construction access points
- On-site trailer parking/access

Inlet Protection

Purpose:

- To collect sediment in front of inlet before it enters the storm sewer system

Typical Applications:

- Placed around inlets as depicted on erosion control plan

Sediment Logs, Reinforced Rock Bag

Purpose:

- To act as a barrier to interrupt runoff and allow sediment to settle out

Typical Applications:

- In channels and swales

- Perimeter control on lots, tracts, and medians
- Slope protection

Temporary Sediment Basin

Purpose:

- To pond water and collect the sediment that falls out before being discharged into the storm system

Typical Applications:

- During overlot grading before onsite storm system is in place
- Located typically by outfall for the site

Check Dam, Reinforced Check Dam

Purpose:

- To act as a barrier to interrupt runoff and allow sediment to settle out

Typical Applications:

- In channels and swales

I.C.3.c.2. – Non-Structural Practices

Temporary/Permanent Seeding

Purpose:

- To provide stabilization of disturbed soil

Typical Applications:

- Any disturbed areas
- Stockpiles
- Slopes

Mulch

Purpose:

- To reduce erosion from rain & wind

- To reduce raindrop impact (soil displacement)

Typical Applications:

- Any disturbed areas
- Stockpiles
- Slopes

Erosion Control Blanket

Purpose:

- To prevent erosion of the soil surface
- To promote seed germination & vegetation establishment
- To minimize rain drop impact

Typical Applications:

- Slopes greater than 3:1
- In swales (on lots)
- Fine grade stabilization

I.C.3.c.3. – Materials Handling and Spill Prevention

There will be a designated individual on-site who will receive training on what to do when a hazardous spill occurs. There will be a small spill kit on-site containing clean-up supplies, emergency contact information, and report(s) to document occurrences. Spills must be cleaned up as soon as possible and contaminated soil/materials must be properly disposed of off-site.

I.C.3.c.4. – Dedicated Concrete or Asphalt Batch Plant

A dedicated asphalt or concrete batch plant will not be utilized. If at such time a batch plant is used it will be the responsibility of the contractor to update the GESC report and plans in addition to receiving/obtaining all necessary permits.

I.C.3.c.5. – Vehicle Tracking Control

The contractor will be responsible for placement of vehicle tracking control measures at the locations of major site entrances. Vehicle tracking control measures include, but are not

limited to: minimizing site access; street sweeping or scraping; tracking pads; graveled parking areas; wash racks; and contractor education. As well, if sediment is tracked onto the street, a reasonable attempt will be made to clean up any large deposits as soon as possible and if necessary, a street sweeper may be used.

I.C.3.c.6. – Waste Management and Disposal

The contractor will be responsible for placement of concrete washout areas. They will be placed such that concrete washout activities do not result in the discharge of materials, or contribute pollutants to stormwater runoff.

I.C.3.c.7. – BMP Specifications

The contractor shall reference the Town of Castle Rock *Grading, Erosion and Sediment Control Manual* for information regarding the installation and implementation for each BMP identified in the erosion and sediment control plans.

Part I.C.4. – Final Stabilization & Long-term Stormwater Management

Final Stabilization will be reached when construction activities have ceased and the site has reached 70% vegetative cover in comparison to pre-disturbance levels, or equivalent permanent erosion control measures have been used (pavement, concrete, etc.).

After construction, several stormwater management systems will be in place. As water moves from a high point of a lot, it will run first over grass, which will serve as a buffer strip. Here, solid materials from the water will be drained into the soil. The water will run off the grass, over the curb and gutter, and into the storm inlet. With a large portion being undeveloped there are large buffer strips and shallow swales allowing solids to fall out prior to discharging into the storm drain system. There are existing water quality detention ponds associated with the Sellers Gulch outfall from the site. They have been sized to adequately provide water quality for the site. They will detain sediment and improve water quality.

Part I.C.5. – Inspection & Maintenance

Inspections of erosion & sediment control measures will occur every 7 days and within 24

hours of any precipitation or snowmelt ‘event’ that incurs erosion. The operator shall keep a record of inspections. Uncontrolled releases of mud or muddy water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measure taken to clean up the sediment that has left the site. Any items in need of correction will occur within 7 days of the inspection.

Based on the results of the inspection, the description of potential pollutant sources, and the pollution prevention and control measures shall be revised and modified as appropriate as soon as practicable after such inspection.

All temporary and permanent erosion and sediment control facilities shall be maintained and repaired as needed to assure continued performance of their intended function. Silt fences will require periodic replacement. Sediment traps and sediment basins shall be cleaned when accumulated sediments equal approximately one-half of trap storage capacity.

A rain gauge will be used on-site to track ‘events’ and a daily log may also be used to enter activities that occur between scheduled inspections.

Results of each inspection and rain gauge log will be recorded & be made available upon request.

I.C.5.a. – Inspection Reports

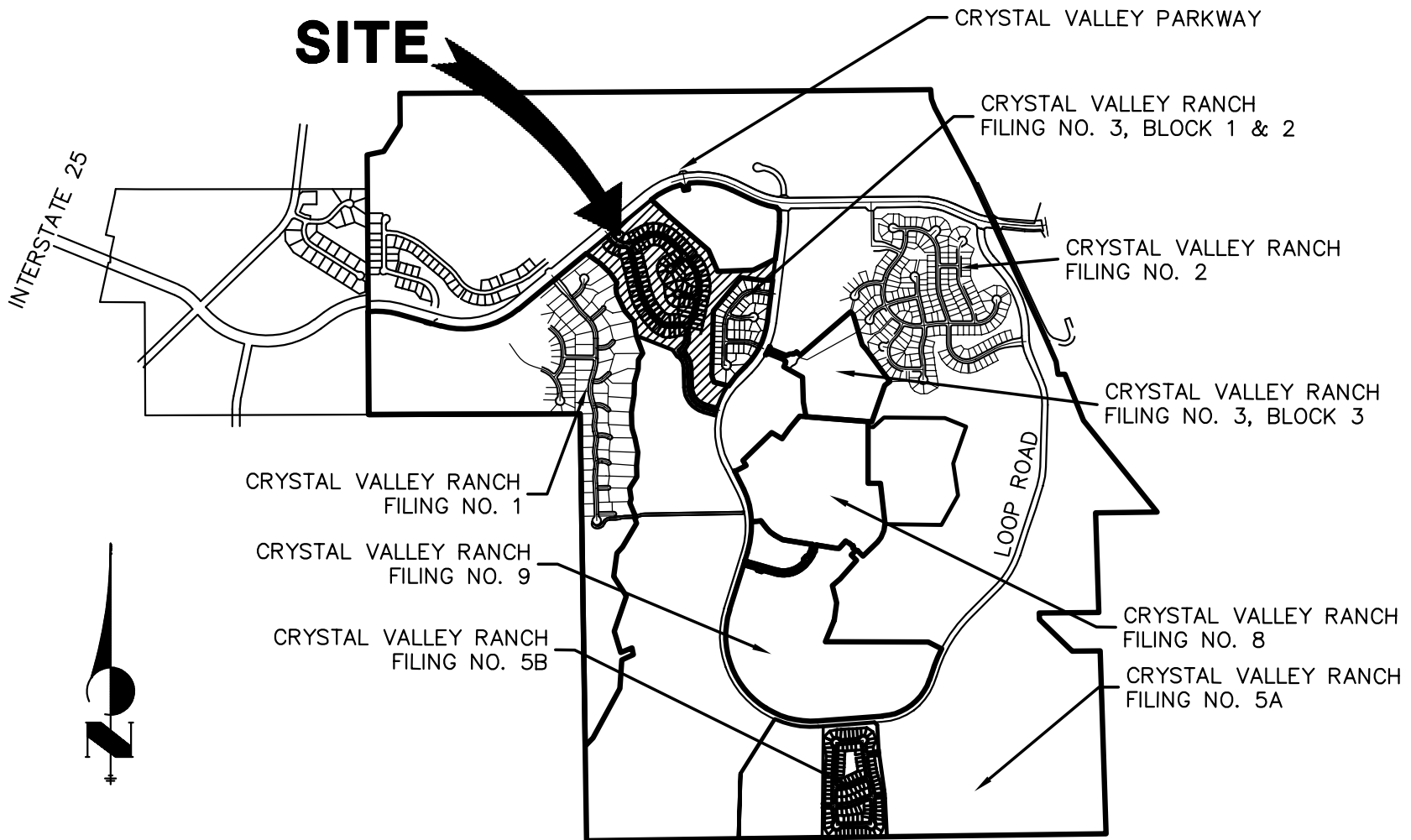
The General Contractor shall be responsible for the reporting of all BMP inspections. A report summarizing the scope of each inspection, the qualification of personnel performing the inspection, the date(s) of the inspection, major observation relating to the implementation of the GESC and action taken shall be made and retained at the site or be readily available at a designated alternate location until the Inactivation Notice has been submitted. All inspection reports shall be submitted to the owner when the Inactivation Notice is filed. A recommendation inspection form has been included in the Appendixes. A separate report shall be made to identify and incident of non-compliance.

The operator shall keep a record of inspections onsite. Uncontrolled releases of mud or muddy water or measurable quantities of sediment found off the site shall be recorded with a brief explanation as to the measures taken to prevent future releases as well as any measure taken to clean up the sediment that has left the site. This record shall also include the following information:

- ❑ Dates
- ❑ Names of inspectors
- ❑ Purpose of inspection i.e. – spill event, leakage of hazardous materials, inclement weather, etc.
- ❑ An assessment of the entire property as related to erosion and sediment control issues
- ❑ An evaluation of onsite BMPs
- ❑ Action items needed to assure the site continually complies with the GESC guidelines
- ❑ Documentation of any suggested changes to the plan due to field conditions
- ❑ Training events
- ❑ All record related to this plan including inspection logs shall be maintained by the administrator for a minimum of 3 years from the date that the site is finally stabilized
- ❑ Uncontrolled releases of mud or muddy water or measurable quantities of sediment found off the site shall be recorded on the Inspection Report with a brief explanation as to the measures taken to prevent future releases as well as any measure taken to clean up the sediment that has left the site.

Appendix

Figure 1 – Vicinity Map

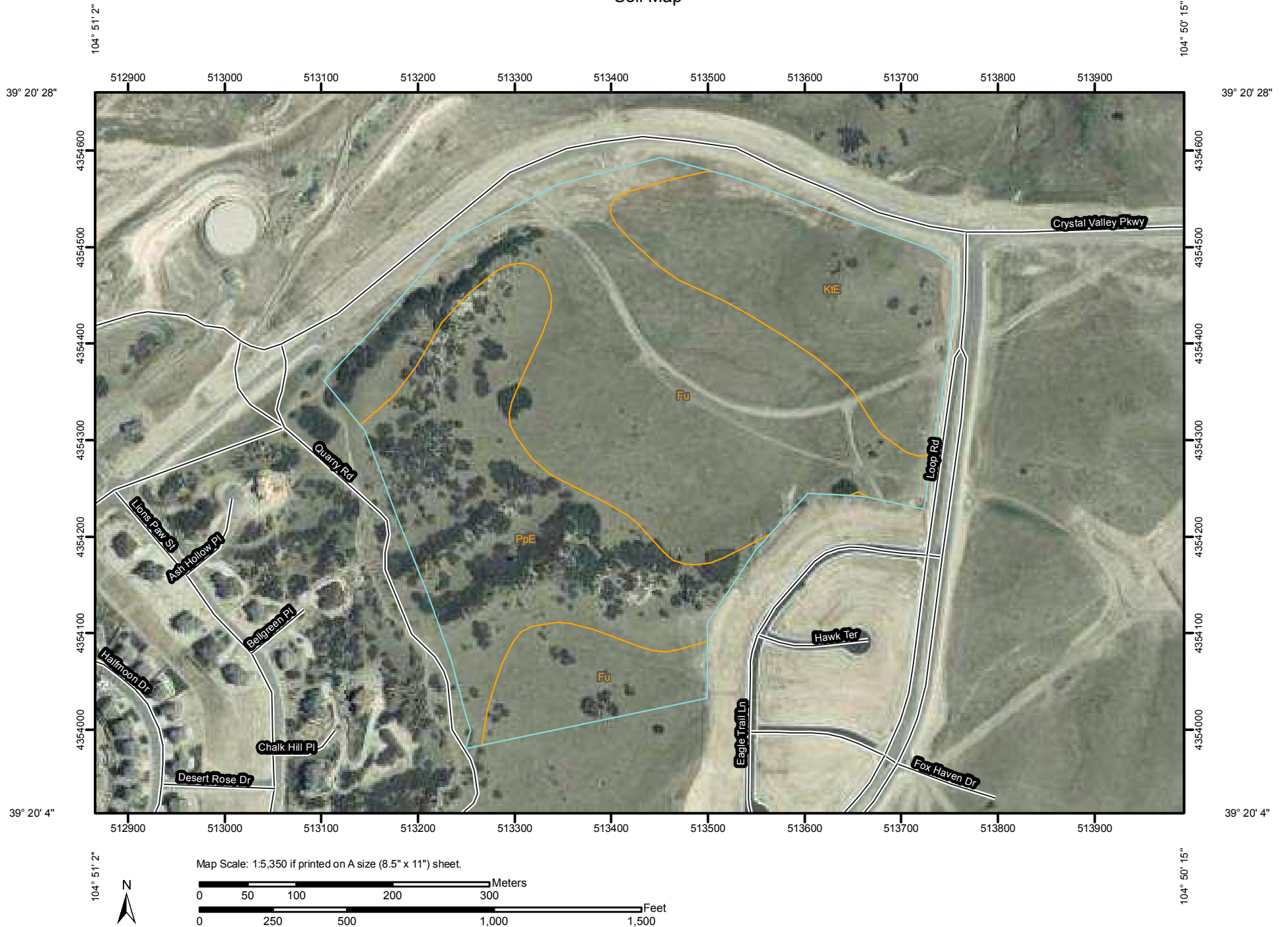


VICINITY MAP

1"=2000'

Figure 2 – Soils Map and Information


Custom Soil Resource Report Soil Map



Custom Soil Resource Report

MAP LEGEND






















Area of Interest (AOI)




 Area of Interest (AOI)

Soils




 Soil Map Units

Special Point Features

-  Blowout
-  Borrow Pit
-  Clay Spot
-  Closed Depression
-  Gravel Pit
-  Gravelly Spot
-  Landfill
-  Lava Flow
-  Marsh or swamp
-  Mine or Quarry
-  Miscellaneous Water
-  Perennial Water
-  Rock Outcrop
-  Saline Spot
-  Sandy Spot
-  Severely Eroded Spot
-  Sinkhole
-  Slide or Slip
-  Sodic Spot
-  Spoil Area
-  Stony Spot

-  Very Stony Spot
-  Wet Spot
-  Other

Special Line Features

-  Gully
-  Short Steep Slope
-  Other






Political Features

-  Cities

Water Features

-  Streams and Canals

Transportation

-  Rails
-  Interstate Highways
-  US Routes
-  Major Roads
-  Local Roads

MAP INFORMATION

Map Scale: 1:5,350 if printed on A size (8.5" × 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
 Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
 Coordinate System: UTM Zone 13N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Castle Rock Area, Colorado
 Survey Area Data: Version 6, May 4, 2009

Date(s) aerial images were photographed: 7/30/2005

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Castle Rock Area, Colorado (CO622)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
Fu	Fondis-Kutch association	31.0	50.0%
KtE	Kutch sandy loam, 5 to 20 percent slopes	12.4	20.0%
PpE	Peyton-Pring-Crowfoot sandy loams, 5 to 25 percent slopes	18.6	30.0%
Totals for Area of Interest		62.0	100.0%

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If

Custom Soil Resource Report

intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

GESC Cost Estimate

Town of Castle Rock
 GESC Permit - Cost Opinion Spreadsheet
 Project # GES _____ - _____
 CVR - 7

BMP NO.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$ 24.00	0	\$ -
2	Compost Blanket	CB	SF	\$ 0.36	0	\$ -
3	Compost Filter Berm	CFB	LF	\$ 2.00	0	\$ -
4	Concrete Washout Area	CWA	EA	\$ 100.00	1	\$ 100.00
5	Construction Fence	CF	LF	\$ 2.00	0	\$ -
6	Construction Markers	CM	LF	\$ 0.20	0	\$ -
7	Dewatering	DW	EA	\$ 600.00	0	\$ -
8	Diversion Ditch	DD	LF	\$ 1.60	0	\$ -
9	Erosion Control Blanket	ECB	SY	\$ 5.00	17000	\$ 85,000.00
10	Inlet Protection	IP	LF	\$ 20.00	12	\$ 240.00
11	Reinforced Check Dam	RCD	LF	\$ 36.00	5	\$ 180.00
12	Reinforced Rock Berm	RRB	LF	\$ 9.00	0	\$ -
13	RRB for Culvert Protection	RRC	LF	\$ 9.00	0	\$ -
14	Sediment Basin	SB	AC	\$ 1,100.00	0	\$ -
15	Sediment Control Log	SCL	LF	\$ 2.00	0	\$ -
16	Sediment Trap	ST	EA	\$ 600.00	0	\$ -
17	Seeding and Mulching	SM	AC	\$ 2,500.00	35	\$ 87,500.00
18	Silt Fence	SF	LF	\$ 2.00	6000	\$ 12,000.00
19	Stabilized Staging Area	SSA	SY	\$ 2.00	0	\$ -
20	Surface Roughening	SR	AC	\$ 600.00	0	\$ -
21	Temporary Slope Drain	TSD	LF	\$ 30.00		\$ -
22	Temporary Stream Crossing	TSC	EA	\$ 1,000.00	0	\$ -
23	Terracing	TER		N/A	0	\$ -
24	Vehicle Tracking Control	VTC	EA	\$ 1,000.00	2	\$ 2,000.00
25	VTC with Wheel Wash	WW		N/A	0	\$ -
26	Temporary Batch Plant Restoration		AC	\$ 5,000.00	0	\$ -

Total BMP Cost	\$ 187,020.00
10% Contingency	\$ 18,702.00
Total Cost	\$ 205,722.00

GESC Drawing and Report Checklist

Appendix G

**GESC Drawing and
Report Checklist**

DRAWINGS AND REPORT CHECKLIST FOR STANDARD GESC PERMITS

A. DRAWINGS

I. COVER SHEET

Yes No
Yes No N/A
Yes No
Yes No
Yes No
Yes No
Yes No

1. Project name.
2. Project address (if applicable).
3. Owner address.
4. Design firm's name and address.
5. Plan sheet index.
6. Designer's Signature Block.
7. The following note:

THE **GRADING, EROSION AND SEDIMENT CONTROL PLAN** INCLUDED HEREIN IS ON FILE AT THE TOWN OF CASTLE ROCK AND APPEARS TO FULFILL APPLICABLE TOWN OF CASTLE ROCK GRADING, EROSION AND SEDIMENT CONTROL CRITERIA, AS AMENDED. ADDITIONAL GRADING, EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED OF THE PERMITTEES DUE TO UNFORESEEN EROSION PROBLEMS OR IF THE SUBMITTED PLAN DOES NOT FUNCTION AS INTENDED. THE REQUIREMENTS OF THIS PLAN SHALL RUN WITH THE LAND AND BE THE OBLIGATION OF THE PERMITTEES, UNTIL SUCH TIME AS THE PLAN IS PROPERLY COMPLETED, MODIFIED OR VOIDED.

Yes No

8. GESC Plan Designer's signature block with name, date, and Professional Engineer registration number. Signature block shall include the following note:

THE **GRADING, EROSION AND SEDIMENT CONTROL PLAN** INCLUDED HEREIN HAS BEEN PREPARED UNDER MY DIRECT SUPERVISION IN ACCORDANCE WITH THE REQUIREMENTS OF THE GRADING, EROSION, AND SEDIMENT CONTROL (GESC) MANUAL OF THE TOWN OF CASTLE ROCK AS AMENDED.

Yes No
Yes No

9. Town Acceptance Block.
10. General Location Map at a Scale of 1-inch to 1000- feet to 8000-feet indicating:
 - general vicinity of the site location.
 - major roadway names.
 - north arrow and scale.

II. GESC DRAWING INDEX SHEET

For projects that require multiple plan-view sheets to adequately show the project area (based on the specified scale ranges), a single plan-view sheet shall be provided at a scale appropriate to show the entire site on one sheet. Areas of coverage of the multiple blow-up sheets are to be indicated as rectangles on the index sheet.

III. INITIAL GESC PLAN

This plan sheet shall provide grading, erosion and sediment controls for the initial clearing, grubbing and grading of a project. At a minimum, it shall contain:

- | | |
|---|--|
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 1. Property Lines. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 2. Existing and proposed easements. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 3. Existing topography at one- or two-foot contour intervals, extending a minimum of 100 feet beyond the property line. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 4. Location of any existing structures or hydrologic features within the mapping limits. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 5. USGS Benchmark used for project and note that NAVD88 Datum was used. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 6. Limits of construction encompassing all areas of work, access points, storage and staging areas, borrow areas, stockpiles, and utility tie-in locations in on-site and off-site locations. Stream corridors and other resource areas to be preserved and all other areas outside the limits of construction shall be lightly shaded to clearly show area not to be disturbed. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 7. Location of stockpiles, including topsoil, imported aggregates, and excess material. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 8. Location of storage and staging areas for equipment, fuel, lubricant, chemical (and other materials) and waste storage. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 9. Location of borrow or disposal areas. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 10. Location of temporary roads. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 11. Location, map symbol, and letter callouts of all initial erosion and sediment control BMPs. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 12. Information to be specified for each BMP, such as type and dimensions, as called for in the Standard Notes and Details. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 13. The following note:
SEE COVER SHEET FOR THE TOWN OF CASTLE ROCK STANDARD NOTES AND DETAILS FOR LEGEND OF BMP NAMES AND SYMBOLS. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 14. Town of Castle Rock approval block. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 15. Other information as may be reasonably required by the Town of Castle Rock. |

IV. INTERIM GESC PLAN

This plan sheet shows BMPs to control grading, erosion and sediment during the initial overlot grading, site construction and site revegetation process. At a minimum, it shall contain the following information:

- The Interim GESC Plan shall show all the information included on the Initial GESC Plan, as noted below:
- | | |
|---|---|
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 1. Existing topography at one- or two-foot contour intervals extending a minimum of 100 feet beyond the property line, as shown on Initial GESC Plan. These contours shall be screened. |
| Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | 2. Location of all existing erosion and sediment control measures on site, as shown on the Initial GESC Plan Sheet. These control measures shall be screened. Dimension information for initial stage BMPs shall not |

Yes No

- be shown.**
- Items 1, 2, and 4 through 10 from the Initial GESC Plan (see Section 3.17.3).

Yes No

- In addition, the Interim GESC Plan shall include the following:
- Proposed topography at one- or two-foot contour intervals, showing elevations, dimensions, locations, and slope of all proposed grading.

Yes No
Yes No

- Outlines of cut and fill areas.
- Location of all interim erosion and sediment controls, designed in conjunction with the proposed site topography, but also considering the controls designed for the existing topography.

Yes No

- Locations of all buildings, drainage features and facilities, paved areas, retaining walls, cribbing, water quality facilities, or other permanent features to be constructed in connection with, or as a part of, the proposed work, per approved plat, FPDSP, or other improvement plan.

Yes No

- The following notes:
 - SEE COVER SHEET OF THE TOWN OF CASTLE ROCK STANDARD NOTES AND DETAILS FOR LEGEND OF BMP NAMES AND SYMBOLS.
 - SHADED BMPs WERE INSTALLED IN INITIAL STAGE AND SHALL BE LEFT IN PLACE IN INTERIM STAGE.
 - ALL INTERIM BMPs MUST BE COMPLETED PRIOR TO ISSUANCE OF ANY PUBLIC WORKS PERMITS.
 - SEE PUBLIC IMPROVEMENT CONSTRUCTION PLANS FOR DETAILS OF PERMANENT DRAINAGE FACILITIES SUCH AS DETENTION FACILITIES, WATER QUALITY FACILITIES, CULVERTS, AND STORM DRAINS.

Yes No

- Summary of cut and fill volumes.

Yes No

- Town of Castle Rock acceptance block.

Yes No

- Other information or data as may be reasonably required by the Town of Castle Rock.

V. Final GESC Plan.

This plan sheet shows controls for final completion of the site. At a minimum, this plan sheet shall contain the indicated information.

The Final GESC Plan shall include all information shown on the Initial and Interim Plans, as noted below:

Yes No

- Existing topography in areas of proposed contours need not be shown.

Yes No

- Existing Initial and Interim BMPs shall be shown, (**screened**). Dimension information shall not be shown.

Yes No

In addition, the following information shall be shown:

Yes No

- Directional flow arrows on all drainage features.
- Any Initial or Interim BMPs that are to be removed and any resulting disturbed area to be stabilized.

Yes No

- Location of all Final erosion and sediment control

B. REPORT

I. REPORT REQUIREMENTS FOR STANDARD GESC PERMITS

The narrative report shall contain the following information:

- Yes No
1. Name, address, and telephone number of the applicants – The name, address, and telephone number of the Professional Engineer preparing (or supervising the preparation of) the GESC Plan shall also be included, if different from the Applicants.
- Yes No
2. Project description – A brief description of the nature and purpose of the land-disturbing activity, the total area of the site, the area of disturbance involved, and project location including township, range, section and quarter-section, or the latitude and longitude, of the approximate center of the project.
- Yes No
3. Existing site conditions – A description of the existing topography, vegetation, and drainage; a description of any wetlands on the site; and any other unique features of the property.
- Yes No
4. Adjacent areas – A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.
- Yes No
5. Soils – A brief description of the soils on the site including information on soil type and names, mapping unit, erodibility, permeability, hydrologic soil group, depth, texture, and soil structure (this information may be obtained from the soil report for the site, for adjacent sites if acceptable to the Town, or the applicable Soil Survey prepared by the Natural Resources Conservation Service).
- Yes No
6. Areas and Volumes – An estimate of the quantity (in cubic yards) of excavation and fill involved (indicating a balance onsite), and the surface area (in acres) of the proposed disturbance.
- Yes No
7. Erosion and sediment control measures – A description of the methods presented in the GESC Manual that will be used to control erosion and sediment on the site.
- Yes No
8. Timing/Phasing schedule – A schedule indicating the anticipated starting and completion time periods of the site grading and/or construction sequence, including the installation and removal of erosion and sediment control BMPs. Indicate the anticipated starting and completion time periods of individual project phases.
- Yes No
9. Permanent stabilization – A brief description, including applicable specifications, of how the site will be stabilized after construction is completed.
- Yes No
10. Stormwater management considerations – Explain how stormwater runoff from and through the site will be handled during construction.
- Yes No
11. Maintenance – Any special maintenance requirements over and above what is identified in the standard notes and details.
- Yes No
12. Opinion of probable cost for installation and maintenance of controls – An opinion of probable costs for erosion and sediment control, including anticipated maintenance

during the construction phase, shall be submitted with the GESC Plan. This will be reviewed by Town staff and used as a basis for fiscal security. A copy of a spreadsheet to be used for preparing the opinion of probable costs for erosion and sediment control is included in Appendix I of the GESC Manual. An electronic copy of the spreadsheet is available from the Town of Castle Rock Utilities Department OR THE Plan Review Engineer. Unit costs used to develop probable erosion and sediment control costs shall be those shown in the spreadsheet.

Yes No

Yes No

Yes No

Yes No

13. Calculations – Any calculations made for the design of such items as sediment basins or erosion control blanket selection.
14. Other information or data – As may be reasonably required by the Town of Castle Rock.
15. The following note – “This *Grading, Erosion and Sediment Control Plan* is on file at the Town of Castle Rock and appears to fulfill the applicable Town of Castle Rock *Grading, Erosion and Sediment Control Criteria*, as amended. I understand that additional grading, erosion and sediment control measures may be required of the Permittees, due to unforeseen erosion problems or if the submitted plan does not function as intended. The requirements of this plan shall run with the land and be the obligation of the Permittees until such time as the plan is properly completed, modified or voided.”
16. Signature Page For Permittees acknowledging the review and acceptance of responsibility, and a statement by the Professional Engineer acknowledging responsibility for the preparation of the GESC Plan.

GESC Permit Application



GRADING, EROSION AND SEDIMENT CONTROL (GESC) PERMIT APPLICATION

PERMIT NO. GSC-_____

Paid Date _____
Amount _____
Check _____
Check # _____
Cash _____

Each question must be fully and accurately answered. No action can be taken on this application until all questions have been answered. PLEASE PRINT, except for signature.

PROPERTY OWNER	CONTRACTOR
Name: _____	Name: _____
Address: _____	Address: _____
Contact Name: _____ Phone: _____	Contact Name: _____ Phone: _____
Fax: _____ Email Address: _____	Fax: _____ Email Address: _____
Acres (Including grading/excavation/fill): _____	Estimated material volume _____ cu yard(s)
Project Name: _____	Start Date: _____ End Date: _____ (24 months)
Location: _____ Section _____, T _____, S _____, R _____, W _____	

By signing below, both applicants hereby apply for a Town of Castle Rock GESC Permit for the aforementioned property and certify as follows:

1. To the best of my/our knowledge, the information provided herein is correct;
2. A GESC Plan for the disturbed area on this site was prepared and submitted in accordance with the GESC Manual, as amended; and
3. I certify I am legally authorized to sign on behalf of and bind the above-listed entity. The GESC Permit is granted with the explicit understanding that it is the Permittees' responsibility to:
 - Allow the Town unrestricted access to the site to conduct regular site inspections;
 - Comply with all requirements of the GESC Manual, accepted GESC Plan, and GESC Permit;
 - Immediately cease land-disturbing activities upon receipt of a written Stop Work Order from an authorized representative of the Town of Castle Rock. A Stop Work Order shall be issued and this Permit revoked if the Permittees are not in compliance with the GESC Permit, GESC Plan and/or GESC Criteria Manual, or the Permittees fail to take corrective action within the time specified on the written notification of such non-compliance;
 - Understand that in addition to other remedies, a violation of this GESC Permit shall constitute a violation of Section 15.12 of the Town of Castle Rock Municipal Code; and
 - Understand any approval obtained from the Town does not obviate your need to comply with the requirements of Sections 7 and 9 of the Endangered Species Act of 1973, 16 U.S.C. 1531, et seq., as amended, or with any other applicable federal, state or local laws or regulations.

Property Owner: _____ **Date:** _____ **Contractor:** _____ **Date:** _____

Signature: _____ **Signature:** _____

Print Name: _____ **Title:** _____ **Print Name:** _____ **Title:** _____

Permit Approval (for Town Use Only)

Engineer's Estimate for Grading, Erosion and Sediment Control (GESC) \$ _____	Review Fee \$ _____ Use Tax \$ _____ Inspection Fee: \$ _____ Total GESC Fee: \$ _____	Renewal <input type="checkbox"/> \$ _____ Transfer <input type="checkbox"/> \$ _____
Engineer's GESC Estimate \$ _____ (x 1.15) Total Fiscal Security \$ _____ Expires _____ (26 months) Surety # _____		Fiscal Security Received <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> SIA
		Date GESC Plan Accepted: _____

STAFF APPROVALS

Preliminary Plat/Phase II Drainage Report Approved <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Development Services: _____ Date: _____	GESC Inspector: _____ Telephone: _____
---	---

CDPS Permit Application

STATE OF COLORADO

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado
<http://www.cdph.state.co.us>



Colorado Department
of Public Health
and Environment

For Agency Use Only

Permit Number Assigned

COR03- _____

Date Received ____/____/____
Month Day Year

COLORADO DISCHARGE PERMIT SYSTEM (CDPS) STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION **PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.**

Please print or type. Original signatures are required. All items must be completed accurately and in their entirety for the application to be deemed complete. Incomplete applications will not be processed until all information is received which will ultimately delay the issuance of a permit. If more space is required to answer any question, please attach additional sheets to the application form. Applications must be submitted by mail or hand delivered to:

**Colorado Department of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Drive South
WQCD-P-B2
Denver, Colorado 80246-1530**

Any additional information that you would like the Division to consider in developing the permit should be provided with the application. Examples include effluent data and/or modeling and planned pollutant removal strategies.

PERMIT INFORMATION

Reason for Application: NEW CERT
 RENEW CERT EXISTING CERT # _____

Applicant is: Property Owner Contractor/Operator

A. CONTACT INFORMATION - NOT ALL CONTACT TYPES MAY APPLY * indicates required

***PERMITTEE (If more than one please add additional pages)**

***ORGANIZATION FORMAL NAME:** _____

1) ***PERMITTEE** the person **authorized to sign and certify** the permit application. This person receives all permit correspondences and is **legally responsible** for compliance with the permit.

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

email address _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

This form must be signed by the Permittee (listed in item 1) to be considered complete.

Per Regulation 61 In all cases, it shall be signed as follows:

- In the case of corporations, by a responsible corporate officer. For the purposes of this section, the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the application originates.
- In the case of a partnership, by a general partner.
- In the case of a sole proprietorship, by the proprietor.
- In the case of a municipal, state, or other public facility, by either a principal executive officer or ranking elected official

- 2) **DMR COGNIZANT OFFICIAL (i.e. authorized agent)** the person or position authorized to **sign and certify reports required by the Division** including Discharge Monitoring Reports *DMR's, Annual Reports, Compliance Schedule submittals, and other information requested by the Division. The Division will transmit pre-printed reports (ie. DMR's) to this person. If more than one, please add additional pages. Same As 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

email address _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

Per Regulation 61 : All reports required by permits, and other information requested by the Division shall be signed by the permittee or by a duly authorized representative of that person. A person is a duly authorized representative only if:

(i) The authorization is made in writing by the permittee

(ii) The authorization specifies either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company. (A duly authorized representative may thus be either a **named individual** or any individual occupying a **named position**); and

(iii) The written authorization is submitted to the Division

- 3) ***SITE CONTACT** local contact for questions relating to the facility & discharge authorized by this permit for the facility.

Same As 1) Permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

email address _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

- 4) *** BILLING CONTACT** if different than the permittee

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

email address _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

5) OTHER CONTACT TYPES (check below) Add pages if necessary:

Responsible Position (Title): _____

Currently Held By (Person): _____

Telephone No: _____

email address _____

Organization: _____

Mailing Address: _____

City: _____ State: _____ Zip: _____

- Pretreatment Coordinator
- Environmental Contact
- Biosolids Responsible Party
- Property Owner
- Inspection Facility Contact
- Consultant
- Compliance Contact
- Stormwater MS4 Responsible Person
- Stormwater Authorized Representative
- Other _____

B. Permitted Project/Facility Information

Project/Facility Name _____

Street Address or cross streets _____

(e.g., "S. of Park St. between 5th Ave. and 10th Ave.", or "W. side of C.R. 21, 3.25 miles N. of Hwy 10"; A street name without an address, intersection, mile marker, or other identifying information describing the location of the project is not adequate. For **linear projects**, the route of the project should be described as best as possible with the location more accurately indicated by a map.)

City, _____ Zip Code _____ County _____

Facility Latitude/Longitude— (approximate center of site to nearest 15 seconds using one of following formats

001A Latitude _____ . _____ Longitude _____ . _____ (e.g., 39.703°, 104.933°)
degrees (to 3 decimal places) degrees (to 3 decimal places)

or

001A Latitude _____ ° _____ ' _____ " Longitude _____ ° _____ ' _____ " (e.g., 39°46'11"N, 104°53'11"W)
degrees minutes seconds degrees minutes seconds

For the approximate center point of the property, to the nearest 15 seconds. The latitude and longitude must be provided as either degrees, minutes, and seconds, or in decimal degrees with three decimal places. This information may be obtained from a variety of sources, including:

- Surveyors or engineers for the project should have, or be able to calculate, this information.
- EPA maintains a **web-based siting tool** as part of their Toxic Release Inventory program that uses interactive maps and aerial photography to help users get latitude and longitude. The siting tool can be accessed at www.epa.gov/tri/report/siting_tool/index.htm
- U.S. Geological Survey **topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.

Note: the latitude/longitude required above is not the directional degrees, minutes, and seconds provided on a site legal description to define property boundaries.

C. MAP (Attachment) If no map is submitted, the permit will not be issued.

Map: Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. Maps must be **no larger** than 11x17 inches.

D. LEGAL DESCRIPTION

Legal description: If subdivided, provide the legal description below, or indicate that it is not applicable (**do not** supply Township/Range/Section or metes and bounds description of site)

Subdivision(s): _____ Lot(s): _____ Block(s): _____

OR

- Not applicable (site has not been subdivided)

E. AREA OF CONSTRUCTION SITE

Total area of project site (acres): _____ Area of project site to undergo disturbance (acres): _____

Note: aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover

Total disturbed area of Larger Common Plan of Development or Sale, if applicable: _____
(i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres. **Note:** aside from clearing, grading and excavation activities, disturbed areas also include areas receiving overburden (e.g., stockpiles), demolition areas, and areas with heavy equipment/vehicle traffic and storage that disturb existing vegetative cover (see construction activity description under the APPLICABILITY section on page 1).

If the project is part of a **larger common plan of development or sale** (see the definition under the APPLICABILITY section on page 1), the disturbed area of the total plan must also be included.

F. NATURE OF CONSTRUCTION ACTIVITY

Check the appropriate box(s) or provide a brief description that indicates the general nature of the construction activities. (The full description of activities must be included in the Stormwater Management Plan.)

- Single Family Residential Development
- Multi-Family Residential Development
- Commercial Development
- Oil and Gas Production and/or Exploration (including pad sites and associated infrastructure)
- Highway/Road Development (not including roadways associated with commercial or residential development)
- Other – Description: _____

G. ANTICIPATED CONSTRUCTION SCHEDULE

Construction Start Date: _____ Final Stabilization Date: _____

- *Construction Start Date* - This is the day you expect to begin ground disturbing activities, including grubbing, stockpiling, excavating, demolition, and grading activities.
- *Final Stabilization Date* - in terms of permit coverage, this is when the site is finally stabilized. This means that all ground surface disturbing activities at the site have been completed, and all disturbed areas have been either built on, paved, or a uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels. **Permit coverage must be maintained until the site is finally stabilized. Even if you are only doing one part of the project, the estimated final stabilization date must be for the overall project.** If permit coverage is still required once your part is completed, the permit certification may be transferred or reassigned to a new responsible entity(s).

H. RECEIVING WATERS (If discharge is to a ditch or storm sewer, include the name of the ultimate receiving waters)

Immediate Receiving Water(s): _____

Ultimate Receiving Water(s): _____

Identify the receiving water of the stormwater from your site. Receiving waters are any waters of the State of Colorado. This includes all water courses, even if they are usually dry. If stormwater from the construction site enters a ditch or storm sewer system, identify that system and indicate the ultimate receiving water for the ditch or storm sewer. **Note:** a stormwater discharge permit does not allow a discharge into a ditch or storm sewer system without the approval of the owner/operator of that system.

I. REQUIRED SIGNATURES (Both parts i. and ii. must be signed)

Signature of Applicant: The applicant must be either the owner and/or operator of the construction site. Refer to Part B of the instructions for additional information.

The application must be signed by the applicant to be considered complete. In all cases, it shall be signed as follows: (Regulation 61.4 (1ei)

- a) In the case of corporations, by the responsible corporate officer is responsible for the overall operation of the facility from which the discharge described in the form originates
- b) In the case of a partnership, by a general partner.
- c) In the case of a sole proprietorship, by the proprietor.
- d) In the case of a municipal, state, or other public facility, by either a principal executive officer, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

STOP!: A Stormwater Management Plan must be completed prior to signing the following certifications!

i. STORMWATER MANAGEMENT PLAN CERTIFICATION

"I certify under penalty of law that a complete Stormwater Management Plan, has been prepared for my activity. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the Stormwater Management Plan is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for falsely certifying the completion of said SWMP, including the possibility of fine and imprisonment for knowing violations."

XX

Signature of Legally Responsible Person or Authorized Agent (submission must include original signature)	Date Signed
--	-------------

Name (printed)	Title
----------------	-------

ii. SIGNATURE OF PERMIT LEGAL CONTACT

"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."

"I understand that submittal of this application is for coverage under the State of Colorado General Permit for Stormwater Discharges Associated with Construction Activity **for the entirety of the construction site/project described and applied for, until such time as the application is amended or the certification is transferred, inactivated, or expired.**"

XX

Signature of Legally Responsible Person (submission must include original signature)	Date Signed
--	-------------

Name (printed)	Title
----------------	-------

**DO NOT INCLUDE A COPY OF THE STORMWATER MANAGEMENT PLAN
DO NOT INCLUDE PAYMENT – AN INVOICE WILL BE SENT AFTER THE CERTIFICATION IS ISSUED.**

Inactivation Form

STATE OF COLORADO

Dedicated to protecting and improving the health and environment of the people of Colorado

4300 Cherry Creek Dr. S.
Denver, Colorado 80246-1530
Phone (303) 692-2000
TDD Line (303) 691-7700
Located in Glendale, Colorado
<http://www.cdphe.state.co.us>



Colorado Department
of Public Health
and Environment

Colorado Water Quality Control Division Notice of Termination Construction Stormwater Inactivation Notice www.coloradowaterpermits.com

Print or type all information. All items must be filled out completely and correctly. If the form is not complete, it will be returned. All permit terminations dates are effective on the date approved by the Division.

MAIL ORIGINAL FORM WITH INK SIGNATURES TO THE FOLLOWING ADDRESS:

Colorado Dept of Public Health and Environment
Water Quality Control Division
4300 Cherry Creek Dr South, WQCD-P-B2
Denver, CO 80246-1530

FAXED OR EMAILED FORMS WILL NOT BE ACCEPTED.

- **PART A. IDENTIFICATION OF PERMIT** Please write the permit certification number to be terminated

Permit Certification Number (four digits, not "0000"): **COR03** _ _ _ _

- **PART B. PERMITTEE INFORMATION**

Company Name _____

Mailing Address _____

City _____ State _____ Zip code _____

Legal Contact Name _____ Phone number _____

Title _____ Email _____

- **PART C. FACILITY/PROJECT INFORMATION**

Facility/Project Name _____

Location (address) _____

City _____ County _____ Zip code _____

Local Contact Name _____ Phone number _____

Title _____ Email _____

● **PART D. TERMINATION VALIDATION CRITERIA**

One of the criteria (1,2, or 3) below must be met, the appropriate box checked, and the required additional information provided. Part E includes a certification that the criteria indicated has been met.

- 1: FINALLY STABILIZED OR CONSTRUCTION NOT STARTED** - The permitted activities covered under the certification listed in Part A meet the requirements for **FINAL STABILIZATION in accordance with the permit, the Stormwater Management Plan, and as described below.** This criterion should also be selected if construction was never started and no land was disturbed, and an explanation of this condition provided in the description below.

Final stabilization is reached when: all ground surface disturbing activities at the site have been completed including removal of all temporary erosion and sediment control measure, and uniform vegetative cover has been established with an individual plant density of at least 70 percent of predisturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.

REQUIRED - Describe the methods used to meet the final stabilization c described above (include additional pages if necessary)

- 2: ALTERNATIVE PERMIT COVERAGE OR FULL REASSIGNMENT** - All ongoing construction activities, including all disturbed areas, covered under the permit certification listed in Part A have coverage under a separate CDPS stormwater construction permit, including the permit certification issued when Division’s Reassignment Form was used by the permittee to reassign all areas/activities.

REQUIRED – Provide the permit certification number covering the ongoing activities: **COR03** __ __ __ __

- 3: PERMITTEE IS NO LONGER THE OWNER/OPERATOR** of the site and all efforts have been made to transfer the permit to appropriate parties. Please attach copies of registered mail receipt, letters, etc.

STOP! One of the three criteria above **MUST BE CHECKED** and the required information for that criterion provided, or this form will not be processed and the permit will remain active.

● **PART E. CERTIFICATION SIGNATURE (Required for all Termination Requests)**

I understand that by submitting this notice of inactivation, I am no longer authorized to discharge stormwater associated with construction activity by the general permit. I understand that discharging pollutants in stormwater associated with construction activities to the waters of the State of Colorado, where such discharges are not authorized by a CDPS permit, is unlawful under the Colorado Water Quality Control Act and the Clean Water Act.

I certify under penalty of law that I have personally examined and am familiar with the information submitted herein, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (See 18 U.S.C 1001 and 33 U.S.C. 1319.)

I also certify that I am a duly authorized representative of the permittee named in Part B.

Signature of Legally Responsible Party

Date Signed

Name (printed)

Title

Signatory requirements: This form shall be signed, dated, and certified for accuracy by the permittee in accordance with the following criteria:

1. In the case of a corporation, by a principal executive officer of at least the level of vice-president, or his or her duly authorized representative, if such representative is responsible for the overall operation of the operation from which the discharge described herein originates;
2. In the case of a partnership, by a general partner;
3. In the case of a sole proprietorship, by the proprietor;
4. In the case of a municipal, state, or other public operation, by wither a principal executive officer, ranking elected official, or other duly authorized employee.

Inspection Form

Stormwater Construction Site Inspection Report

General Information			
Project Name			
County SWQ Permit No.		Location	
State Stormwater Permit No.		Start/ End Time	
Date of Inspection			
Inspector's Name(s)			
Inspector's Title(s)			
Inspector's Contact Information			
Describe present phase of construction			
Type of Inspection:			
<input type="checkbox"/> Regular <input type="checkbox"/> Pre-storm event <input type="checkbox"/> During storm event <input type="checkbox"/> Post-storm event			
Weather Information			
Has there been a storm event since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, provide:			
Storm Start Date & Time:	Storm Duration (hrs):	Approximate Amount of Precipitation (in):	
Weather at time of this inspection?			
<input type="checkbox"/> Clear <input type="checkbox"/> Cloudy <input type="checkbox"/> Rain <input type="checkbox"/> Sleet <input type="checkbox"/> Fog <input type="checkbox"/> Snowing <input type="checkbox"/> High Winds			
<input type="checkbox"/> Other: _____ Temperature: _____			
Have any discharges occurred since the last inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, describe:			
Are there any discharges at the time of inspection? <input type="checkbox"/> Yes <input type="checkbox"/> No			
If yes, describe:			

Appendix B of the Stormwater Regulation Guide

A. Site-specific BMPs

- Number the structural and non-structural BMPs identified in your ESC Plan on your site drawings and list them below (add as many BMPs as necessary). Carry a copy of the numbered site map with you during your inspections. This list will ensure that you are inspecting all required BMPs at your site.
- Describe corrective actions initiated, date completed, and note the person that completed the work in the Corrective Action Log.

	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
1.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
4.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
11.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
13.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
14.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
15.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
16.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
17.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
18.		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

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	BMP	BMP Installed?	BMP Maintenance Required?	Corrective Action Needed and Notes
19		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
20		<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

B. Overall Site Issues

Below are some general site issues that should be assessed during inspections. Customize this list as needed for conditions at your site.

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1.	Are all slopes and disturbed areas not actively being worked properly stabilized?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
2.	Are natural resource areas (e.g., streams, wetlands, mature trees, etc.) protected with barriers or similar BMPs?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
3.	Are perimeter controls and sediment barriers adequately installed (keyed into substrate) and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Appendix B of the Stormwater Regulation Guide

	BMP/ activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
4	Are discharge points and receiving waters free of any sediment deposits?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
5	Are storm drain inlets properly protected?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
6	Is the construction exit preventing sediment from being tracked into the street?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
7	Is trash/ litter from work areas collected and placed in covered dumpsters?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
8	Are washout facilities (e.g., paint, stucco, concrete) available, clearly marked, and maintained?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Are vehicle and equipment fueling, cleaning, and maintenance areas free of spills, leaks, or any other deleterious material?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10	Are materials that are potential stormwater contaminants stored inside or under cover?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Appendix B of the Stormwater Regulation Guide

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
11	Are non-stormwater discharges (e.g., wash water, dewatering) properly controlled?	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	
12	(Other)	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes <input type="checkbox"/> No	

Non-Compliance

Describe any incidents of non-compliance not described above:

CERTIFICATION STATEMENT

“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 gathered and evaluated 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.”

Print Name and Title: _____

Date: _____

Signature: _____

Appendix I – ESC Plan Corrective Action Log

Project Name: _____

ESC PLAN Contact: _____

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Appendix K – ESC Plan Amendment Log

Project Name: _____

ESC PLAN Contact: _____

Amendment No.	Description of the Amendment	Date of Amendment	Amendment Prepared by [Name(s) and Title]

Calculations

Temporary Sediment Basin Design

Sediment Storage Factor	1800 ft ³ /acre	
Tributary Acreage	40 acres	
Total Required Volume	$\frac{72000 \text{ ft}^3}{40} =$	1.65 acre-ft

Emergency Spillway Design

Q ₁₀₀	110.00 cfs	$Q_{WEIR} = CLH^{3/2}$
C	3.00	
H	1.00 ft	
L	36.67 ft	
Required Length of Spillway		

Riser Pipe Sizing

Pond Depth D _{wq}	5.00 ft	
Required Area per Row 1	1.62 in ²	From Fig. EDB-3 Structural BMP's
Required Area per Row 2	3.24 in ²	
Use	1.50 in. Diameter Holes	From Fig. 5-WQCV Outlets Orifice Perforation Sizing