

**GRADING, EROSION AND SEDIMENT CONTROL PLAN  
FOR  
RIDGEGATE SOUTHWEST VILLAGE FILING 1  
INFRASTRUCTURE**

**Prepared For:**

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This *Grading, Erosion and Sediment Control Plan* has been placed in the Lone Tree file for this project and appears to fulfill the applicable Douglas County *Grading, Erosion and Sediment Control*, 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.

**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 Ridgeway Southwest Village Filing 1 was prepared by me (or under my direct supervision) in accordance with the provisions of the *Douglas County Grading, Erosion and Sediment Control Manual* for the owners thereof.

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Aaron Clutter, P.E.

Date

State of Colorado No. 36742

For and on Behalf of JR Engineering, LLC

## **Introduction**

This report represents the Grading, Erosion and Sediment Control Plan for construction of Ridgeway Southwest Village Filing 1. It was prepared to meet the regulatory requirements of the Douglas County *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:

- Douglas County Grading, Erosion and Sediment Control Manual
- Drainage Report for the Ridgeway Southwest Village

Ridgeway Southwest Village Filing 1 is located in parts of Section 14, Section 22, Section 23, and Section 24, Township 6 South, Range 67 West of the Sixth Principal Meridian, Douglas County, Colorado. The site is located south of Ridgeway Parkway and north of the public service right-of-way. It lies east of Interstate Highway 25 (I-25) and is bisected by reaches of Happy Canyon Creek and Badger Gulch running adjacent to the site on the west and east. The site is approximately located at Latitude 39°31'13"N, Longitude 104°51'18" W. The site is shown on the Figure 1, Vicinity Map located within the Appendices. The total disturbance area created by the project is approximately 117.14 acres. The disturbance will be broken into four (4) phases so that no more than 70 acres will be disturbed at any one time. Each phase of disturbance is further described below.

## **Part 1– Site Description**

### **I-A. – Description of the Construction Activity**

The Ridgeway Southwest Village Filing 1 will include typical single family residential and multi-family residential construction including medium density residential lots, local streets, and utilities.

The site will be in both cut and fill. Curb and gutter, swales, and a storm sewer system will convey all the on-site storm water into proposed detention and water quality ponds located in the northwest portion of the site.

### **I-B. – Proposed Sequence of Major Activities**

The project will follow standard construction sequences for construction, i.e., clearing and grubbing, over excavation, overlot grading, utility installation, curb and gutter, and street paving.

The contractor will be responsible for implementing and maintaining the erosion and sediment control measures described in this document and the accompanying design drawings. The Contractor may designate these tasks to certain subcontracts as they see fit, but the ultimate responsibility for implementing these controls and their proposer function at each phase of the project remains with the Contractor. The order of major activities will be as follows:

1. Install VTC, silt fence and other perimeter and initial soil erosion control measures.
2. Excavate and install improvements including curb, underground piping and drainage structures.
3. Fine grading.
4. Install paving and concrete.
5. Install landscaping and final stabilization.
6. Clean up.

**All proposed improvements including grading will be completed in four (4) phases of construction:**

A phasing map has been included for reference in the Appendix as part of the GESCs Plans.

Phase 1A/1B (48.70 acres): All initial erosion control BMP's will be installed first. Once the initial BMP's are installed, final utility and roadway infrastructure installation will begin. Once completed, the site will be brought to final grade and stabilized.

Phase 1C (44.77 acres): All initial erosion control BMP's will be installed first. Once the initial BMP's are installed, final utility and roadway infrastructure installation will begin. Once completed, the site will be brought to final grade and stabilized.

Phase 1D (18.90 acres): All initial erosion control BMP's will be installed first. Once the initial BMP's are installed, final utility and roadway infrastructure installation will begin. Once completed, the site will be brought to final grade and stabilized.

Ridgegate Parkway Improvements (4.77 acres): The Ridgegate Parkway Improvements consist of construction of acceleration lanes, deceleration lanes, and sidewalk within Ridgegate Parkway. Initial BMP's (inlet protection, curb socks, silt fence, etc.) will be installed prior to commencing work. The Ridgegate Parkway Improvements scope of work is not anticipated to result in significant earthwork operations.

#### **1-C. – Estimated Total and Disturbance Areas of the Site**

The platted area of the Ridgegate Southwest Village Filing 1 is approximately 186 acres. The total disturbance area of the proposed construction activities associated with this report is 117.14 acres. The primary areas of disturbance outside of the platted area are covered by easements associated with drainage, water and sanitary infrastructure.

#### **1-D – Estimated Runoff Coefficient and Soil Classification**

The estimated 5-year and 100-year developed runoff coefficients are 0.45 and 0.69, respectively. The existing ground is currently undeveloped with a natural vegetative cover with slopes varying from 0-25%, with some areas up to and over 33%. Construction activities will take place south of Ridgegate Parkway and east of Havana Street. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) Community Panels No. 08035C0063H and 08035C0064G, both dated September 4, 2020, the majority of the site lies within Zone X which is the flood insurance rate zone that corresponds to areas outside the one percent annual chance floodplain. The site soils are mostly described as Fondis clay loam, Fondis-Kutch association, and hilly gravelly land by the NRCS soil survey. The majority of soil in the proposed development is classified by the

Natural Resource Conservation Service (NRCS) as Hydrologic Group C and D with small portions of the site consisting of Hydrologic Group B. Hydrologic Group B soils are described as “soils that have a moderate infiltration rate when thoroughly wetted and consists primarily of moderately deep to deep, moderately well to well drained soils with moderately fine to moderately coarse textures.” Hydrologic Group C soils are described as “soils that have low infiltration rates when thoroughly wetted and consist chiefly of soils with a layer that impedes downward movement of water and soils with moderately fine to fine structure.” Hydrologic Group D soils are described as “soils that have very low infiltration rates when thoroughly wetted and consist chiefly of clay soils with 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.”

#### **1-E. – Existing Vegetation**

The site will be overlot graded and overexcavated under the Overlot GESC Plans and Report under separate cover. It is assumed to the site will be temporarily stabilized with seeding and mulching.

#### **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.
- 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.

#### **1-G. – Non-stormwater Discharge**

Non-stormwater discharges such as construction dewatering are not allowed under the general State permit. If groundwater is encountered during construction, a construction dewatering permit will need to be obtained through CDPHE.

#### **1-H. – Receiving Waters**

In the current condition, storm runoff on the western half of the site drains to temporary sediment basins via sheet flow and temporary diversion ditches. These temporary sediment basins outfall into Happy Canyon Creek, or into the existing storm sewer located in Ridgegate Parkway. Storm runoff on the eastern half of the site drains to temporary sediment basins via sheet flow and temporary diversion ditches. These temporary sediment basins outfall into Badger Gulch. Both Happy Canyon Creek and Badger Gulch are left bank tributaries of Cherry Creek. The Badger Gulch drainage way is tributary to Happy Canyon Creek.

## **Part 2. – Site Map**

Refer to the erosion control drawing located within the map pockets for locations of best management practices (BMP).



### **Part 3. – Stormwater Management Controls**

#### **3-A. – Stormwater Management Plan (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.

#### **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+), as well as 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 shall 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 or the receptacle is not in use, 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 contain all 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.

### **3-C. – 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 (30 days or more)

- Construction access points
- On-site trailer parking/access
- A barrier between destabilized and stabilized areas

### 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
- As part of inlet 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, slow runoff, and allow sediment to settle out

Typical Applications:

- In channels and swales

### Temporary Slope Drain

Purpose:

- To convey runoff over steep slopes with minimal erosion potential

Typical Applications:

- Steep slopes prone to erosion

### Drainage Ditch

Purpose:

- To convey surface water to sediment basins

Typical Applications:

- Transport surface water
- Intercept surface water

### Stabilized Staging Area

Purpose:

- To provide a stabilized area for construction vehicles and equipment to minimize erosion

and disturbance areas

Typical Applications:

- Storage and stock pile location
- Vehicle parking and storage
- Staging area
- Construction trailer location

### Construction Fence

Purpose:

- To control vehicle and foot traffic by creating physical barriers

Typical Applications:

- Site boundary
- Sensitive area protection

### Surface Roughening

Purpose:

- To slow and limit erosion on destabilized areas

Typical Applications:

- Large destabilized areas that need temporary stabilization
- Sloped areas without established vegetation

## **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)
- To protect seed from drying and vermin

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 4:1
- In swales (on lots)
- Fine grade stabilization

### **3-C.3. – Phased BMP Implementation**

The site will be graded in four (4) phases. Plans for each phase have been created to stage the BMPs in order to aid the contractor in the implementation of BMPs as construction progresses.

### **3-C.4. – 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.

**3-C.5. – 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.

**3-C.6. – 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.

**3-C.7. – 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.

**3-C.8. – BMP Specifications**

The contractor shall reference the Douglas County *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 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 a storm inlet. Storm sewer will then carry water to the proposed detention and water quality ponds. It will detain sediment and improve water quality.

#### **Part 5. – Inspection & Maintenance**

Inspections of erosion & sediment control measures will occur every 7 days and within 24 hours of any wet weather event 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. The GESD plan shall also be updated to reflect current conditions, installed BMP’s, disturbed areas, and design changes.

All temporary and permanent erosion and sediment control facilities shall be maintained, repaired, and inspected as detailed in the Douglas County Grading, Erosion, and Sediment Control Manual. 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. Vehicle tracking pads will need to be maintained with fresh or cleaned aggregate on an as-need basis. Accumulated sediment at inlet protection, silt fence, rock socks, and check dams shall be removed

on an as needed basis. The result of each inspection will be recorded & be made available upon request.

#### **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 recommended inspection form has been included in the Appendices. A separate report shall be made to identify any incident of non-compliance.

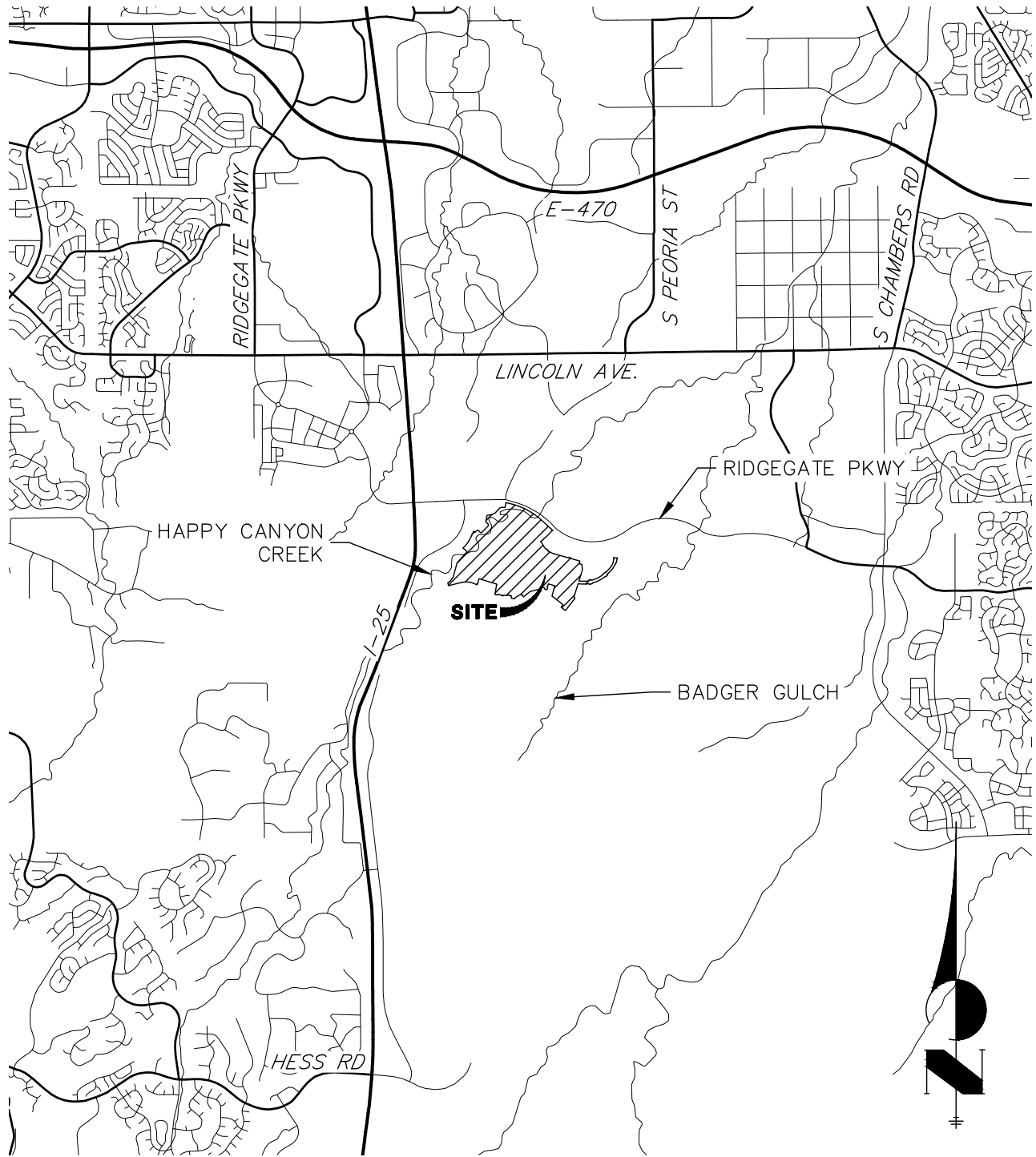
The General Contractor shall also be responsible for ensuring the required Douglas County Inspections and pre-construction meetings are scheduled and requirements are fulfilled.

The operator shall keep a record of inspections onsite or a designated alternative location. 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. – routine, spill event, post wet 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

## **Appendices & Figures**

**Figure 1 – Vicinity Map**



**VICINITY MAP**  
SCALE 1"=5000'

15950.01  
9/18/2020  
SHEET 1 OF 1

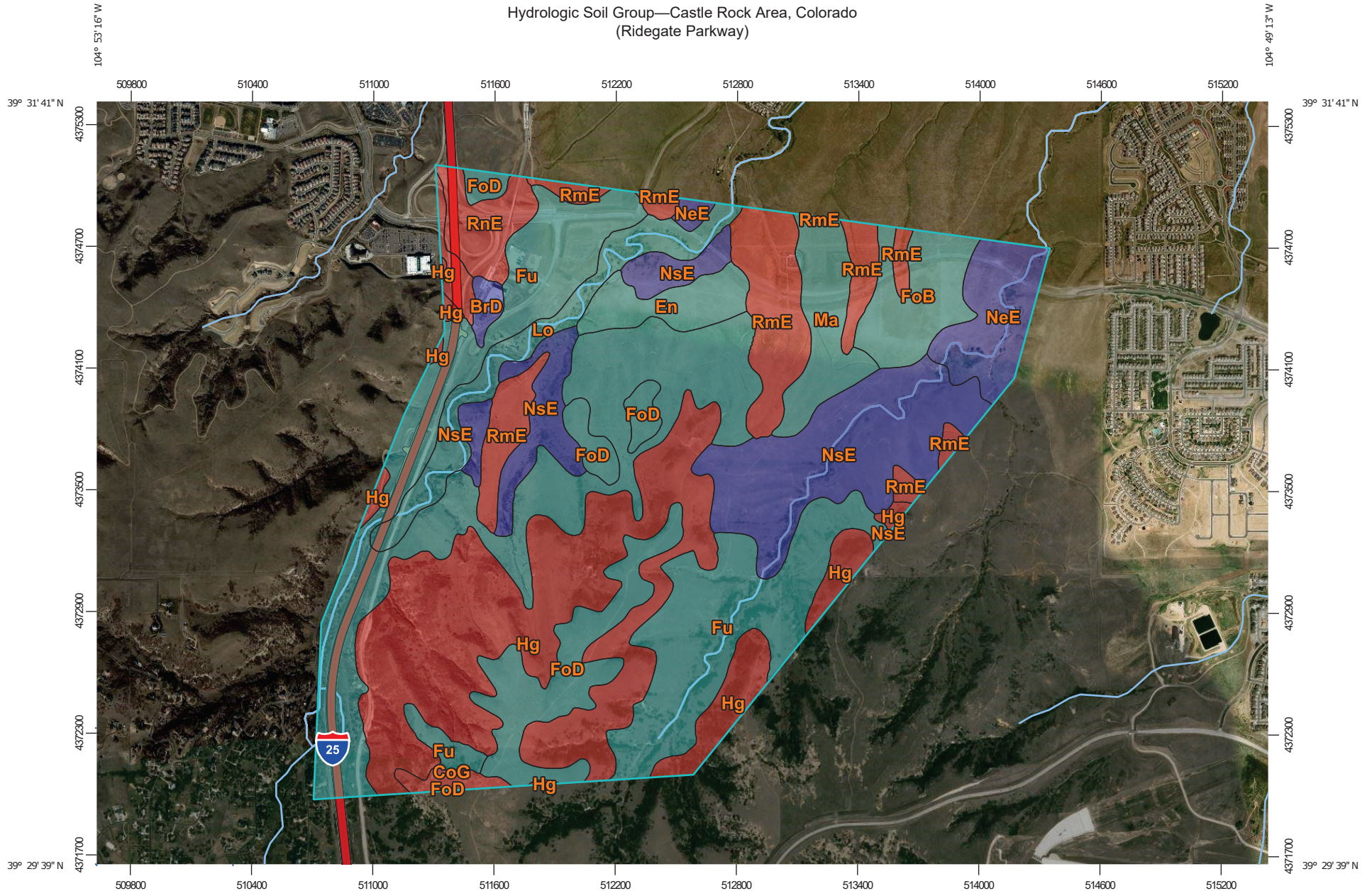


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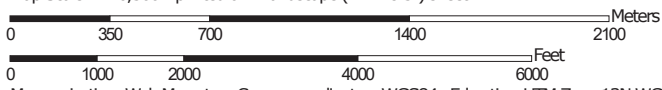
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**Figure 2 – Soils Map**

Hydrologic Soil Group—Castle Rock Area, Colorado  
(Ridegate Parkway)



Map Scale: 1:26,500 if printed on A landscape (11" x 8.5") sheet.




Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84





## MAP LEGEND

### Area of Interest (AOI)









 Area of Interest (AOI)

### Soils

#### Soil Rating Polygons





 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Lines


 A  
 A/D  
 B  
 B/D  
 C  
 C/D  
 D  
 Not rated or not available

#### Soil Rating Points






 A  
 A/D  
 B  
 B/D

 C  
 C/D  
 D  
 Not rated or not available


### Water Features

 Streams and Canals

### Transportation

 Rails  
 Interstate Highways  
 US Routes  
 Major Roads  
 Local Roads

### Background

 Aerial Photography

## MAP INFORMATION

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

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

Source of Map: Natural Resources Conservation Service  
 Web Soil Survey URL:  
 Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

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 11, Sep 10, 2018

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 16, 2012—Nov 19, 2018

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.

## Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
BrD	Bresser sandy loam, cool, 5 to 9 percent slopes	B	9.0	0.5%
CoG	Coni rocky loam, 3 to 100 percent slopes	D	11.1	0.6%
En	Englewood clay loam	C	42.5	2.3%
FoB	Fondis clay loam, 1 to 3 percent slopes	C	65.5	3.5%
FoD	Fondis clay loam, 3 to 9 percent slopes	C	122.1	6.6%
Fu	Fondis-Kutch association	C	541.8	29.2%
Hg	Hilly gravelly land	D	417.4	22.5%
Lo	Loamy alluvial land	C	78.0	4.2%
Ma	Manzanola clay loam	C	61.5	3.3%
NeE	Newlin gravelly sandy loam, 8 to 30 percent slopes	B	71.9	3.9%
NsE	Newlin-Satanta complex, 5 to 20 percent slopes	B	242.0	13.0%
RmE	Renohill-Buick complex, 5 to 25 percent slopes	D	154.8	8.3%
RnE	Renohill-Manzanola clay loams, 3 to 20 percent slopes	D	40.1	2.2%
<b>Totals for Area of Interest</b>			<b>1,857.6</b>	<b>100.0%</b>

## Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.

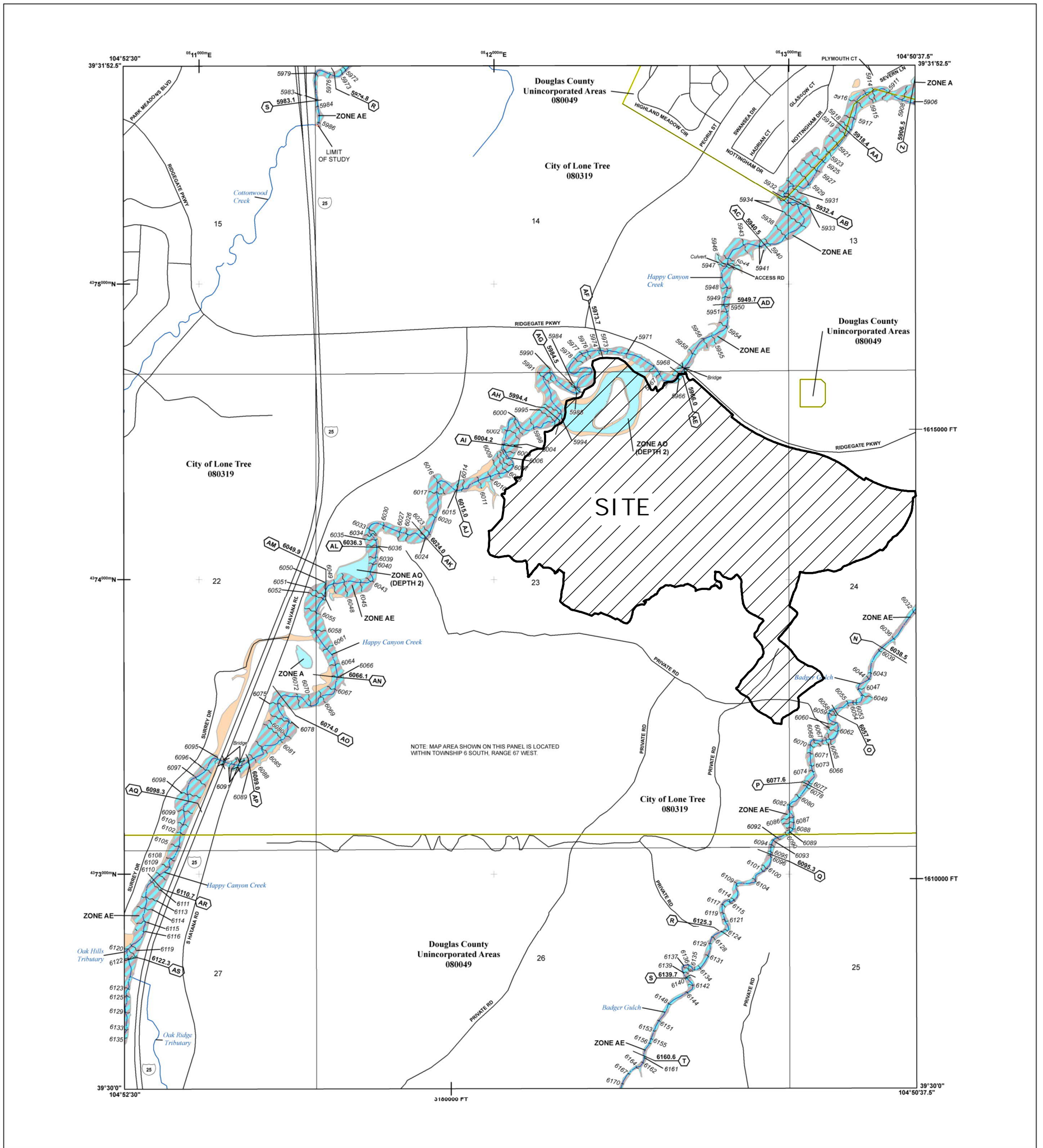
## Rating Options

*Aggregation Method:* Dominant Condition

*Component Percent Cutoff:* None Specified

*Tie-break Rule:* Higher

**Figure 3 – FIRM Map**



**FLOOD HAZARD INFORMATION**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT. THE INFORMATION DEPICTED ON THIS MAP AND SUPPORTING DOCUMENTATION ARE ALSO AVAILABLE IN DIGITAL FORMAT AT [HTTPS://MSC.FEMA.GOV](https://MSC.FEMA.GOV)

	Without Base Flood Elevation (BFE) Zone A, AS
	With BFE or Depth Zone AE, AO, AH, VE, AR
	Regulatory Floodway
	0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
	Future Conditions 1% Annual Chance Flood Hazard Zone X
	Area with Reduced Flood Risk due to Levee See Notes, Zone X
	NO SCREEN Areas of Minimal Flood Hazard Zone X
	Area of Undetermined Flood Hazard Zone D
	Channel, Culvert, or Storm Sewer Accredited or Provisionally Accredited
	Levee, Dike, or Floodwall
	Non-accredited Levee, Dike, or Floodwall
	Cross Sections with 1% Annual Chance Water Surface Elevation (BFE)
	Coastal Transect
	Coastal Transect Baseline
	Profile Baseline
	Hydrographic Feature
	Base Flood Elevation Line (BFE)
	Limit of Study
	Jurisdiction Boundary

**NOTES TO USERS**

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP), in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-358-2627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates refer to the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in the community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Base map information shown on this FIRM was provided by the Douglas County GIS Department and the Town of Castle Rock GIS Department. Additional input was provided by the City of Lone Tree and Town of Parker. These data are current as of 2010.

**SCALE**

Map Projection:  
 NAD83 UTM Zone 13N  
 Western Hemisphere, Vertical Datum: NAVD88

1 inch = 500 feet      1:6,000

**PANEL LOCATOR**



**FEMA**  
 National Flood Insurance Program

**NATIONAL FLOOD INSURANCE PROGRAM**  
 FLOOD INSURANCE RATE MAP

**DOUGLAS COUNTY, COLORADO**  
 And Incorporated Areas  
 PANEL 63 OF 495

Panel Contains:

COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	080049	0063	H
LONE TREE, CITY OF	080319	0063	H

VERSION NUMBER  
 2.3.3.2

MAP NUMBER  
 08035C0063H

MAP REVISED  
 SEPTEMBER 4, 2020

**NOTES TO USERS**

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The community map repository should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where Base Flood Elevations (BFEs) and/or floodway depths have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables shown on this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Boundaries of the floodways were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Floodway Data table shown on this FIRM.

The projection used in the preparation of this map was Universal Transverse Mercator (UTM) zone 13. The horizontal datum was NAD 83, GRS 1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same vertical datum. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at <http://www.ngs.noaa.gov> or contact the National Geodetic Survey at the following address:

NGS Information Services  
NOAA, NINGS12  
National Geodetic Survey  
SS4C-3, #5202  
1315 East-West Highway  
Silver Spring, Maryland 20910-3282  
(301) 713-3242

To obtain current elevation, description, and/or location information for bench marks shown on this map, please contact the Information Services Branch of the National Geodetic Survey at (301) 713-3242, or visit its website at <http://www.ngs.noaa.gov>.

Base map information shown on this FIRM was provided by the Douglas County GIS Department and the Town of Castle Rock GIS Department. Additional input was provided by the City of Lone Tree and Town of Parker. These data are current as of 2010.

Certain areas not in Special Flood Hazard Areas may be protected by flood control structures. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The profile baselines depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the profile baseline, in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

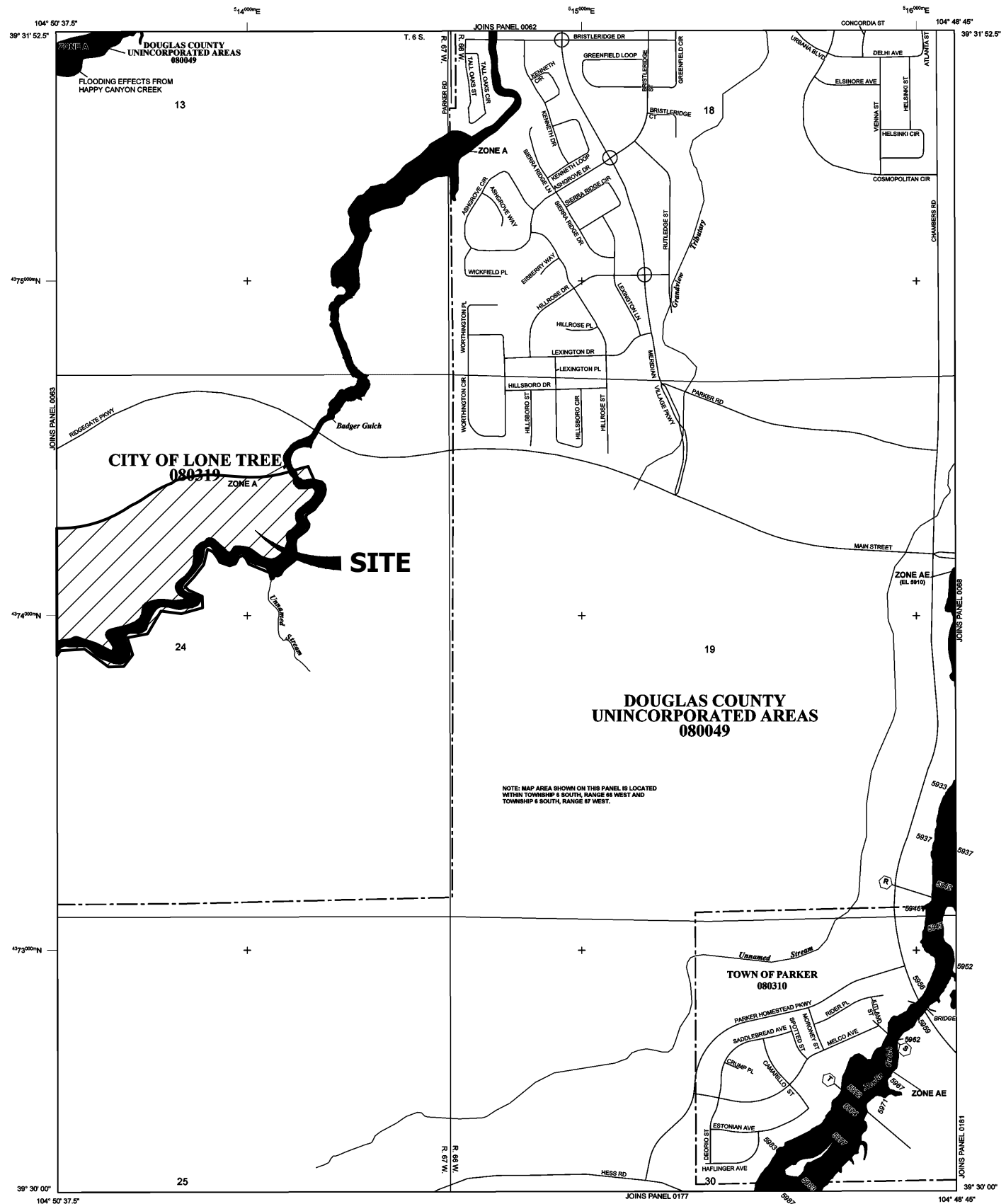
Based on updated topographic information, this map reflects more detailed and up-to-date stream channel configurations and floodplain delineations than those shown on the previous FIRM for this jurisdiction. As a result, the Flood Profiles and Floodway Data tables for multiple streams in the Flood Insurance Study Report (which contains authoritative hydraulic data) may reflect stream channel distances that differ from what is shown on the map. Also, the road to floodplain relationships for unreviewed streams may differ from what is shown on previous maps.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

Please refer to the separately printed Map Index for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

For information on available products associated with this FIRM visit the Map Service Center (MSC) website at <http://maps.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the MSC website.

If you have questions about this map, how to order products, or the National Flood Insurance Program in general, please call the FEMA Map Information eXchange (FMIX) at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA website at <http://www.fema.gov/business/firm>.



**LEGEND**

**SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD**  
The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, AV, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

- ZONE A** No Base Flood Elevations determined.
- ZONE AE** Base Flood Elevations determined.
- ZONE AH** Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.
- ZONE AO** Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.
- ZONE AR** Special Flood Hazard Areas formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AE indicates that the former flood control system is being retained to provide protection from the 1% annual chance or greater flood.
- ZONE AV** Area to be protected from 1% annual chance flood by a floodproofing protection system under construction; no Base Flood Elevations determined.
- ZONE V** Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.
- ZONE VE** Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

**FLOODWAY AREAS IN ZONE AE**  
The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

**OTHER FLOOD AREAS**  
**ZONE X** Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.  
**OTHER AREAS** Areas determined to be outside the 0.2% annual chance floodplain.  
**ZONE D** Areas in which flood hazards are undetermined, but possible.

**COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS**  
**OTHERWISE PROTECTED AREAS (OPAs)**  
CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

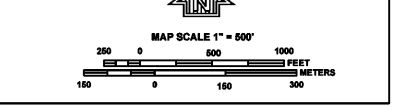
- 1% Annual Chance Floodplain Boundary
- 0.2% Annual Chance Floodplain Boundary
- Floodway boundary
- Zone D boundary
- CBRS and OPA boundary
- Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.
- Base Flood Elevation line and value; elevation in feet\* (EL 987)
- Base Flood Elevation value where uniform within zone; elevation in feet\*

- \*Referenced to the North American Vertical Datum of 1988
- Cross section line
- ⊖ Transect line
- 45° 02' 08", 93° 02' 12" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83) Western Hemisphere
- ⊕ 1000-meter Universal Transverse Mercator grid values, zone 13
- ⊗ BM5510 X Bench mark (see explanation in Notes to Users section of this FIRM panel)
- \* M1.5 River Mile

**MAP REPOSITORIES**  
Refer to Map Repositories list on Map Index.  
**EFFECTIVE DATE OF COUNTY-WIDE FLOOD INSURANCE RATE MAP**  
SEPTEMBER 30, 2005  
**EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL**

MARCH 16, 2016: to update corporate limits, to change base flood elevations, to add base flood elevations, to add special flood hazard areas, to update map format, to add roads and road names, to reflect updated topographic information, to incorporate previously issued letters of map revision.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.  
To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.



**NATIONAL FLOOD INSURANCE PROGRAM**

**PANEL 0064G**

**FIRM**  
FLOOD INSURANCE RATE MAP  
DOUGLAS COUNTY,  
COLORADO  
AND INCORPORATED AREAS

**PANEL 64 OF 495**  
(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

COMMUNITY	NUMBER	PANEL	SUFFIX
DOUGLAS COUNTY	08044	004	G
LONE TREE, CITY OF	08019	004	G
PARKER, TOWN OF	08016	004	G

Notice to User: The Map Number shown below should be used when placing map orders; the Community Number shown above should be used on insurance applications for the subject community.

**MAP NUMBER**  
08035C0064G  
**MAP REVISED**  
MARCH 16, 2016  
Federal Emergency Management Agency

X:\1590000.dwg\Drawings\Sheet Dwg\Drawings\FIRM Map.dwg, FIRM 2, 3/10/2020 10:57:12 AM, MiskellC

## **GESC Plans, Cost Estimate & Calculations**

# Ridgeway Southwest Village Filing 1 Infrastructure GESC Permit Cost Opinion Spreadsheet

Subdivision Name:

Phase 1A/1B

Project No.: 15950.01

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$24.00	0	\$0
2	Compost Blanket	CB	SF	\$0.36	0	\$0
3	Compost Filter Berm	CFB	LF	\$2.00	0	\$0
4	Concrete Washout Area	CWA	EA	\$100.00	0	\$0
5	Construction Fence	CF	LF	\$2.00	0	\$0
6	Construction Markers	CM	EA	\$0.20	29	\$6
7	Dewatering	DW	EA	\$600.00	0	\$0
8	Diversion Ditch	DD	LF	\$1.60	0	\$0
9	Erosion Control Blanket	ECB	SY	\$5.00	3,660	\$18,300
10	Inlet/Outlet Protection	IP	EA	\$20.00	38	\$760
11	Reinforced Check Dam	RCD	LF	\$36.00	0	\$0
12	Reinforced Rock Berm	RRB	LF	\$9.00	0	\$0
13	RRB for Culvert Protection	RRC	LF	\$9.00	0	\$0
14	Sediment Basin	SB	EA	\$10,000.00	0	\$0
15	Sediment Control Log	SCL	LF	\$2.00	0	\$0
16	Sediment Trap	ST	EA	\$600.00	0	\$0
17	Seeding and Mulching	SM	AC	\$1,000.00	22	\$22,130
18	Silt Fence	SF	LF	\$2.00	1,555	\$3,110
19	Stabilized Staging Area	SSA	SY	\$2.00	0	\$0
20	Surface Roughening	SR	AC	\$600.00	22	\$13,278
21	Temporary Slope Drain	TSD	LF	\$30.00	0	\$0
22	Temporary Stream Crossing	TSC	TSC	\$1,000.00	0	\$0
23	Vehicle Tracking Control	VTC	EA	\$1,000.00	0	\$0
24	Temporary Batch Plant		AC	\$5,000.00	0	\$0
25	Curb Socks	CS	EA	\$30.00	126	\$3,780
<b>Subtotal</b>						<b>\$61,364</b>
10% Contingency			LS		1	\$6,136
<b>Phase 1A/1B Total</b>						<b>\$67,500</b>

Estimate Prepared By:

JR Engineering  
Centennial, Colorado  
(303) 740-9393

Date: 2/10/2021

JR Engineering cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development.



# Ridgeway Southwest Village Filing 1 Infrastructure GESC Permit Cost Opinion Spreadsheet

Subdivision Name:

Phase 1C

Project No.: 15950.01

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$24.00	0	\$0
2	Compost Blanket	CB	SF	\$0.36	0	\$0
3	Compost Filter Berm	CFB	LF	\$2.00	0	\$0
4	Concrete Washout Area	CWA	EA	\$100.00	1	\$100
5	Construction Fence	CF	LF	\$2.00	0	\$0
6	Construction Markers	CM	EA	\$0.20	54	\$11
7	Dewatering	DW	EA	\$600.00	0	\$0
8	Diversion Ditch	DD	LF	\$1.60	0	\$0
9	Erosion Control Blanket	ECB	SY	\$5.00	0	\$0
10	Inlet/Outlet Protection	IP	EA	\$20.00	61	\$1,220
11	Reinforced Check Dam	RCD	LF	\$36.00	0	\$0
12	Reinforced Rock Berm	RRB	LF	\$9.00	0	\$0
13	RRB for Culvert Protection	RRC	LF	\$9.00	0	\$0
14	Sediment Basin	SB	EA	\$10,000.00	0	\$0
15	Sediment Control Log	SCL	LF	\$2.00	0	\$0
16	Sediment Trap	ST	EA	\$600.00	0	\$0
17	Seeding and Mulching	SM	AC	\$1,000.00	20	\$19,781
18	Silt Fence	SF	LF	\$2.00	2,287	\$4,574
19	Stabilized Staging Area	SSA	SY	\$2.00	673	\$1,346
20	Surface Roughening	SR	AC	\$600.00	20	\$11,868
21	Temporary Slope Drain	TSD	LF	\$30.00	0	\$0
22	Temporary Stream Crossing	TSC	TSC	\$1,000.00	0	\$0
23	Vehicle Tracking Control	VTC	EA	\$1,000.00	1	\$1,000
24	Temporary Batch Plant		AC	\$5,000.00	0	\$0
25	Curb Socks	CS	EA	\$30.00	63	\$1,890
<b>Subtotal</b>						<b>\$41,790</b>
10% Contingency			LS		1	\$4,179
<b>Phase 1C Total</b>						<b>\$45,969</b>

Estimate Prepared By:

JR Engineering  
Centennial, Colorado  
(303) 740-9393

Date: 2/10/2021

JR Engineering cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development.

# Ridgeway Southwest Village Filing 1 Infrastructure GESC Permit Cost Opinion Spreadsheet

Subdivision Name:

Phase 1D

Project No.: 15950.01

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$24.00	0	\$0
2	Compost Blanket	CB	SF	\$0.36	0	\$0
3	Compost Filter Berm	CFB	LF	\$2.00	0	\$0
4	Concrete Washout Area	CWA	EA	\$100.00	1	\$100
5	Construction Fence	CF	LF	\$2.00	0	\$0
6	Construction Markers	CM	EA	\$0.20	21	\$4
7	Dewatering	DW	EA	\$600.00	0	\$0
8	Diversion Ditch	DD	LF	\$1.60	0	\$0
9	Erosion Control Blanket	ECB	SY	\$5.00	0	\$0
10	Inlet/Outlet Protection	IP	EA	\$20.00	10	\$200
11	Reinforced Check Dam	RCD	LF	\$36.00	0	\$0
12	Reinforced Rock Berm	RRB	LF	\$9.00	0	\$0
13	RRB for Culvert Protection	RRC	LF	\$9.00	0	\$0
14	Sediment Basin	SB	EA	\$10,000.00	0	\$0
15	Sediment Control Log	SCL	LF	\$2.00	0	\$0
16	Sediment Trap	ST	EA	\$600.00	0	\$0
17	Seeding and Mulching	SM	AC	\$1,000.00	5	\$5,489
18	Silt Fence	SF	LF	\$2.00	243	\$486
19	Stabilized Staging Area	SSA	SY	\$2.00	1,011	\$2,022
20	Surface Roughening	SR	AC	\$600.00	5	\$3,293
21	Temporary Slope Drain	TSD	LF	\$30.00	0	\$0
22	Temporary Stream Crossing	TSC	TSC	\$1,000.00	0	\$0
23	Vehicle Tracking Control	VTC	EA	\$1,000.00	1	\$1,000
24	Temporary Batch Plant		AC	\$5,000.00	0	\$0
25	Curb Socks	CS	EA	\$30.00	28	\$840
<b>Subtotal</b>						<b>\$13,434</b>
10% Contingency			LS		1	\$1,343
<b>Phase 1D Total</b>						<b>\$14,777</b>

**Estimate Prepared By:**

JR Engineering  
Centennial, Colorado  
(303) 740-9393

Date: 2/10/2021

JR Engineering cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development.

# Ridgegate Southwest Village Filing 1 Infrastructure GESC Permit Cost Opinion Spreadsheet

Subdivision Name:

Ridgegate Parkway Phase

Project No.: 15950.01

BMP No.	BMP	ID	Unit	Installation Unit Cost	Quantity	Cost
1	Check Dam	CD	LF	\$24.00	0	\$0
2	Compost Blanket	CB	SF	\$0.36	0	\$0
3	Compost Filter Berm	CFB	LF	\$2.00	0	\$0
4	Concrete Washout Area	CWA	EA	\$100.00	0	\$0
5	Construction Fence	CF	LF	\$2.00	74	\$148
6	Construction Markers	CM	EA	\$0.20	0	\$0
7	Dewatering	DW	EA	\$600.00	0	\$0
8	Diversion Ditch	DD	LF	\$1.60	0	\$0
9	Erosion Control Blanket	ECB	SY	\$5.00	0	\$0
10	Inlet/Outlet Protection	IP	EA	\$20.00	7	\$140
11	Reinforced Check Dam	RCD	LF	\$36.00	0	\$0
12	Reinforced Rock Berm	RRB	LF	\$9.00	0	\$0
13	RRB for Culvert Protection	RRC	LF	\$9.00	0	\$0
14	Sediment Basin	SB	EA	\$10,000.00	0	\$0
15	Sediment Control Log	SCL	LF	\$2.00	0	\$0
16	Sediment Trap	ST	EA	\$600.00	0	\$0
17	Seeding and Mulching	SM	AC	\$1,000.00	0	\$0
18	Silt Fence	SF	LF	\$2.00	3,491	\$6,982
19	Stabilized Staging Area	SSA	SY	\$2.00	0	\$0
20	Surface Roughening	SR	AC	\$600.00	0	\$0
21	Temporary Slope Drain	TSD	LF	\$30.00	0	\$0
22	Temporary Stream Crossing	TSC	TSC	\$1,000.00	0	\$0
23	Vehicle Tracking Control	VTC	EA	\$1,000.00	0	\$0
24	Temporary Batch Plant		AC	\$5,000.00	0	\$0
25	Curb Socks	CS	EA	\$30.00	0	\$0
<b>Subtotal</b>						<b>\$7,270</b>
10% Contingency			LS		1	\$727
<b>Ridgegate Parkway Phase Total</b>						<b>\$7,997</b>

Estimate Prepared By:

JR Engineering  
Centennial, Colorado  
(303) 740-9393

Date: 2/10/2021

JR Engineering cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development.

Ridgegate

Required Sediment Pond Volumes

1/20/2021

Sediment Basin #1

Developed Area = 15.00 acres  
 Undeveloped Area = 0.00 acres  
 Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
 = 27,000 ft<sup>3</sup>  
 0.620 AC-FT  
 0.310 1/2 VOLUME  
 L=2xW 134 L  
 67 W  
 9,000 pond bottom min (3' depth assumed)

Sediment Basin #2

Developed Area = 32.00 acres  
 Undeveloped Area = 16.80 acres  
 Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
 = 66,000 ft<sup>3</sup>  
 1.515 AC-FT  
 0.758 1/2 VOLUME  
 L=2xW 210 L  
 105 W  
 22,000 pond bottom min (3' depth assumed)

Sediment Basin #3

Developed Area = 24.00 acres  
 Undeveloped Area = 15.00 acres  
 Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
 = 50,700 ft<sup>3</sup>  
 1.164 AC-FT  
 0.582 1/2 VOLUME  
 L=2xW 184 L  
 92 W  
 16,900 pond bottom min (3' depth assumed)

Sediment Basin #4

Developed Area = 16.00 acres  
 Undeveloped Area = 13.50 acres  
 Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
 = 35,550 ft<sup>3</sup>  
 0.816 AC-FT  
 0.408 1/2 VOLUME  
 L=2xW 154 L  
 77 W  
 11,850 pond bottom min (3' depth assumed)

Sediment Basin #5

Developed Area = 9.00 acres  
 Undeveloped Area = 13.00 acres  
 Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
 = 22,700 ft<sup>3</sup>  
 0.521 AC-FT  
 0.261 1/2 VOLUME  
 L=2xW 123 L  
 62 W  
 7,567 pond bottom min (3' depth assumed)

Sediment Basin #6

Developed Area = 4.50 acres  
Undeveloped Area = 8.50 acres  
Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
= 12,350 ft<sup>3</sup>  
0.284 AC-FT  
0.142 1/2 VOLUME  
L=2xW 91 L  
45 W  
4,117 pond bottom min (3' depth assumed)

Sediment Basin #7

Developed Area = 13.00 acres  
Undeveloped Area = 13.00 acres  
Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
= 29,900 ft<sup>3</sup>  
0.686 AC-FT  
0.343 1/2 VOLUME  
L=2xW 141 L  
71 W  
9,967 pond bottom min (3' depth assumed)

Sediment Basin #8

Developed Area = 9.00 acres  
Undeveloped Area = 5.00 acres  
Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
= 18,700 ft<sup>3</sup>  
0.429 AC-FT  
0.215 1/2 VOLUME  
L=2xW 112 L  
56 W  
6,233 pond bottom min (3' depth assumed)

Sediment Basin #9

Developed Area = 13.00 acres  
Undeveloped Area = 24.00 acres  
Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
= 35,400 ft<sup>3</sup>  
0.813 AC-FT  
0.406 1/2 VOLUME  
L=2xW 154 L  
77 W  
11,800 pond bottom min (3' depth assumed)

Sediment Basin #10

Developed Area = 23.00 acres  
Undeveloped Area = 46.00 acres  
Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
= 64,400 ft<sup>3</sup>  
1.478 AC-FT  
0.739 1/2 VOLUME  
L=2xW 207 L  
104 W  
21,467 pond bottom min (3' depth assumed)

Sediment Basin #11

Developed Area = 17.00 acres  
Undeveloped Area = 28.00 acres  
Required Volume = (Dev. Area \* 1800 ft<sup>3</sup>/ac) + (Undev. Area \* 500 ft<sup>3</sup>/ac)  
= 44,600 ft<sup>3</sup>  
1.024 AC-FT  
0.512 1/2 VOLUME  
L=2xW 172 L  
86 W  
14,867 pond bottom min (3' depth assumed)

Ridgegate (15950.01)  
Orifice Sizing

Sediment Basin #1			
Basin Total Volume:	1.812	ac-ft	
Top 1/2	0.906	ac-ft	
	39465	cf	
Drain Time 40 hrs	0.2741	cfs	over 40 hrs
	Assuming	4	holes
	0.0685	cfs	per hole
Equates to a	2.75	diam. hole (in)	
Equates to a	5.94	sq. in. hole	
Solution	4	1 Column - 4 holes	
	2.75	Inch diameter holes	

Sediment Basin #2			
Basin Total Volume:	1.515	ac-ft	
Top 1/2	0.7575	ac-ft	
	32997	cf	
Drain Time 40 hrs	0.2291	cfs	over 40 hrs
	Assuming	4	holes
	0.0573	cfs	per hole
Equates to a	2.5	diam. hole (in)	
Equates to a	4.91	sq. in. hole	
Solution	4	1 Column - 4 holes	
	2.50	Inch diameter holes	

Sediment Basin #3			
Basin Total Volume:	1.164	ac-ft	
Top 1/2	0.582	ac-ft	
	25352	cf	
Drain Time 40 hrs	0.1761	cfs	over 40 hrs
	Assuming	4	holes
	0.0440	cfs	per hole
Equates to a	2.25	diam. hole (in)	
Equates to a	3.97	sq. in. hole	
Solution	4	1 Column - 4 holes	
	2.25	Inch diameter holes	

Sediment Basin #4

Basin Total Volume:	0.816	ac-ft	
Top 1/2	0.408	ac-ft	
	17772	cf	
Drain Time 40 hrs	0.1234	cfs	over 40 hrs
	Assuming	4	holes
	0.0309	cfs	per hole
Equates to a	2	diam. hole (in)	
Equates to a	3.14	sq. in. hole	
Solution	4	1 Column - 4 holes	
	2.00	Inch diameter holes	

Sediment Basin #5

Basin Total Volume:	0.521	ac-ft	
Top 1/2	0.261	ac-ft	
	11347	cf	
Drain Time 40 hrs	0.0788	cfs	over 40 hrs
	Assuming	4	holes
	0.0197	cfs	per hole
Equates to a	1.625	diam. hole (in)	
Equates to a	2.07	sq. in. hole	
Solution	4	1 Column - 4 holes	
	1.63	Inch diameter holes	

Sediment Basin #6

Basin Total Volume:	0.284	ac-ft	
Top 1/2	0.142	ac-ft	
	6186	cf	
Drain Time 40 hrs	0.0430	cfs	over 40 hrs
	Assuming	4	holes
	0.0107	cfs	per hole
Equates to a	1.5	diam. hole (in)	
Equates to a	1.77	sq. in. hole	
Solution	4	1 Column - 4 holes	
	1.50	Inch diameter holes	

Sediment Basin #7

Basin Total Volume:	0.686	ac-ft	
Top 1/2	0.343	ac-ft	
	14941	cf	
Drain Time 40 hrs	0.1038	cfs	over 40 hrs
	Assuming	4	holes
	0.0259	cfs	per hole
Equates to a	2	diam. hole (in)	
Equates to a	3.14	sq. in. hole	
Solution	4	1 Column - 4 holes	
	2.00	Inch diameter holes	

## Sediment Basin #8

Basin Total Volume:	0.429	ac-ft	
Top 1/2	0.215	ac-ft	
	9344	cf	
Drain Time 40 hrs	0.0649	cfs	over 40 hrs
	Assuming	4	holes
	0.0162	cfs	per hole
Equates to a	1.5	diam. hole (in)	
Equates to a	1.77	sq. in. hole	

Solution	4	1 Column - 4 holes
	1.50	Inch diameter holes

## Sediment Basin #9

Basin Total Volume:	0.813	ac-ft	
Top 1/2	0.407	ac-ft	
	17707	cf	
Drain Time 40 hrs	0.1230	cfs	over 40 hrs
	Assuming	4	holes
	0.0307	cfs	per hole
Equates to a	2	diam. hole (in)	
Equates to a	3.14	sq. in. hole	

Solution	4	1 Column - 4 holes
	2.00	Inch diameter holes

## Sediment Basin #10

Basin Total Volume:	1.478	ac-ft	
Top 1/2	0.739	ac-ft	
	32191	cf	
Drain Time 40 hrs	0.2235	cfs	over 40 hrs
	Assuming	4	holes
	0.0559	cfs	per hole
Equates to a	2.5	diam. hole (in)	
Equates to a	4.91	sq. in. hole	

Solution	4	1 Column - 4 holes
	2.50	Inch diameter holes

## Sediment Basin #11

Basin Total Volume:	1.024	ac-ft	
Top 1/2	0.512	ac-ft	
	22303	cf	
Drain Time 40 hrs	0.1549	cfs	over 40 hrs
	Assuming	4	holes
	0.0387	cfs	per hole
Equates to a	2.25	diam. hole (in)	
Equates to a	3.97	sq. in. hole	

Solution	4	1 Column - 4 holes
	2.25	Inch diameter holes



## **CDPS Permit Application**



# COLORADO

Department of Public Health & Environment

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

ASSIGNED PERMIT NUMBER

Date Received \_\_\_\_/\_\_\_\_/\_\_\_\_  
MM DD YYYY  
Revised: 3-2016

## STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITIES APPLICATION COLORADO DISCHARGE PERMIT SYSTEM (CDPS)

**PHOTO COPIES, FAXED COPIES, PDF COPIES OR EMAILS WILL NOT BE ACCEPTED.**

**For Applications submitted on paper - 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 or signature pages for the application may be submitted by mail or hand delivered to:

Colorado Department of Public Health and Environment, 4300 Cherry Creek Drive South, WQCD-P-B2, Denver, CO 80246-1530

**For Applications submitted electronically**

Please note that you can ONLY complete the feedback form by downloading it to a PC or Mac/Apple computer and opening the Application with Adobe Reader or a similar PDF reader. The form will NOT work with web browsers, Google preview, Mac preview software or on mobile devices using iOS or Android operating systems.

If application is submitted electronically, processing of the application will begin at that time and not be delayed for receipt of the signed document.

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.

**Beginning July 1, 2016, invoices will be based on acres disturbed.**

**DO NOT PAY THE FEES NOW - Invoices will be sent after the receipt of the application.**

Disturbed Acreage for this application (see page 4)

- Less than 1 acre (\$83 initial fee, \$165 annual fee)
- 1-30 acres (\$175 initial fee, \$350 annual fee)
- Greater than 30 acres (\$270 initial fee, \$540 annual fee)

### PERMIT INFORMATION

Reason for Application:  NEW CERT  RENEW CERT EXISTING CERT# \_\_\_\_\_

Applicant is:  Property Owner  Contractor/Operator

### A. CONTACT INFORMATION - \*indicates required

\* PERMITTED ORGANIZATION FORMAL NAME: \_\_\_\_\_

1) \* PERMIT OPERATOR - the party that has operational control over day to day activities - may be the same as owner.

Responsible Person (Title): \_\_\_\_\_

Currently Held By (Person): FirstName: \_\_\_\_\_ LastName: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email Address: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**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

2) **OWNER - party has ownership or long term lease of property - may be the same as the operator.**

Same as 1) Permit Operator

Responsible Person (Title): \_\_\_\_\_

Currently Held By (Person): FirstName: \_\_\_\_\_ LastName: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email Address: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**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) Permit Operator

Responsible Person (Title): \_\_\_\_\_

Currently Held By (Person): FirstName: \_\_\_\_\_ LastName: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email Address: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

4) **\*BILLING CONTACT** if different than the permittee.

Same as 1) Permit Operator

Responsible Person (Title): \_\_\_\_\_

Currently Held By (Person): FirstName: \_\_\_\_\_ LastName: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email Address: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

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

Responsible Person (Title): \_\_\_\_\_

Currently Held By (Person): FirstName: \_\_\_\_\_ LastName: \_\_\_\_\_

Telephone: \_\_\_\_\_ Email Address: \_\_\_\_\_

Organization: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Environmental Contact

Consultant

Stormwater MS4 Responsible Person

Inspection Facility Contact

Compliance Contact

Stormwater Authorized Representative

**B) PERMITTED PROJECT/FACILITY INFORMATION**

Project/Facility Name \_\_\_\_\_

Street Address or Cross Streets \_\_\_\_\_

(e.g., Park St and 5 Ave; CR 21 and Hwy 10; 44 Ave and Clear Creek) ; 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 using the starting point for the address and latitude and longitude - more clearly defined in the required map )

City: \_\_\_\_\_ County: \_\_\_\_\_ Zip Code: \_\_\_\_\_

**Facility Latitude/Longitude** - List the latitude and longitude of the excavation(s) resulting in the discharge(s). If the exact soil disturbing location(s) are not known, list the latitude and longitude of the center point of the construction project. If using the center point, be sure to specify that it is the center point of construction activity. The preferred method is GPS and Decimal Degrees.

Latitude \_\_\_\_\_ . \_\_\_\_\_ Longitude \_\_\_\_\_ . \_\_\_\_\_ (e.g., 39.70312°, 104.93348°)  
Decimal Degrees (to 5 decimal places)                      Decimal Degrees (to 5 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.
- **U.S. Geological Survey topographical map(s)**, available at area map stores.
- Using a **Global Positioning System (GPS) unit** to obtain a direct reading.
- **Google** - enter address in search engine, select the map, right click on location, and select "what's here".

*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 application cannot be submitted.**

**Map:** Attach a map that indicates the site location and that CLEARLY shows the boundaries of the area that will be disturbed. A vicinity map is not adequate for this purpose.

**D) LEGAL DESCRIPTION - only for Subdivisions**

**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 - SEE PAGE 1 - WILL DETERMINE FEE**

Provide both the total area of the construction site, and the area that will undergo disturbance, in acres.

Total area of project disturbance site (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.

Part of Larger Common Plan of Development or Sale, (i.e., total, including all phases, filings, lots, and infrastructure not covered by this application)

**F) NATURE OF CONSTRUCTION ACTIVITY**

Check the appropriate box(es) 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.)

Commercial Development

Residential Development

Highway and Transportation Development

Pipeline and Utilities (including natural gas, electricity, water, and communications)

Oil and Gas Exploration and Well Pad Development

Non-structural and other development (i.e. parks, trails, stream realignment, bank stabilization, demolition, etc.)

**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) SIGNATURE PAGE**

1. You may print and sign this document and mail the hard copy to the State along with required documents (address on page one).

**2. Electronic Submission Signature**

You may choose to submit your application electronically, along with required attachments. To do so, click the SUBMIT button below which will direct you, via e-mail, to sign the document electronically using the DocuSign Electronic Signature process. Once complete, you will receive via e-mail, an electronically stamped Adobe pdf of this application. Print the signature page from the electronically stamped pdf, sign it and mail it to the WQCD Permits Section to complete the application process (address is on page one of the application).

- The Division encourages use of the electronic submission of the application and electronic signature. This method meets signature requirements as required by the State of Colorado.
- The ink signed copy of the electronically stamped pdf signature page is also required to meet Federal EPA Requirements.
- Processing of the application will begin with the receipt of the valid electronic signature.

**STORMWATER MANAGEMENT PLAN CERTIFICATION**

By checking this box "I certify under penalty of law that a complete Stormwater Management Plan, as described in the stormwater management plan guidance, has been pre-pared 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."

"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." [Reg 61.4(1)(h)]

For DocuSign  
Electronic Signature \_\_\_\_\_ Ink Signature \_\_\_\_\_ Date: \_\_\_\_\_

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

\_\_\_\_\_  
Name (printed) Title

**Signature:** The applicant must be either the owner and 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 (1e))

- 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
- 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, ranking elected official, (a principal executive officer has responsibility for the overall operation of the facility from which the discharge originates).

**3rd Party Preparer:** If this form was prepared by an authorized agent on behalf of the Permittee, please complete the field below.

\_\_\_\_\_  
Preparer Name (printed) Email Address

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

<input type="text"/>	<b>Attach Map</b>
<input type="text"/>	<b>Attach File</b>
<input type="text"/>	<b>Attach File</b>
<input type="text"/>	<b>Attach File</b>
<input type="text"/>	<b>Attach File</b>

## **Inspection Form**

# COLORADO DEPARTMENT OF TRANSPORTATION STORMWATER FIELD INSPECTION REPORT - ACTIVE CONSTRUCTION

(1) Project Name: Lincoln Creek	(2) Project Contractor:	(3) Erosion Control Supervisor/SWMP Administrator:	
(4) CDOT Project Engineer/Representative: N/A	(5) Inspector(s) (Name and Title):	(6) CDOT Project Number: N/A	
(7) Project Code (Sub Account #): 1000-5916.00	(8) CDPS-SCP Certification#:	(9) CDOT Region:	(10) Date of Project Inspection:
(11) Weather at Time of Inspection:			

## (12) REASON FOR INSPECTION / EXCLUSION

- Routine Inspection: (minimum every 7 Calendar Days)
- Runoff Event: (Post-storm event inspections must be conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. If no construction activities will occur following a storm event, post-storm event inspections shall be conducted prior to re-commencing construction activities, but no later than 72 hours following the storm event. The occurrence of any such delayed inspection must be documented in the inspection record.) Routine inspections still must be conducted every 7 calendar days.  
 Storm Start Date: \_\_\_\_\_ Approximate End Time of Storm (hrs): \_\_\_\_\_
- Third Party Request:
- Winter Conditions Inspections Exclusion: Inspections are not required at sites where construction activities are temporarily halted, snow cover exists over the **entire site** for an extended period, and **melting conditions posing a risk of surface erosion do not exist**. This exception is applicable **only** during the period where **melting conditions do not exist**, and applies to the routine 7-day inspections, as well as the post-storm-event inspections. If **visual inspection** of the site verifies that all of these conditions are satisfied, document the conditions in section 18 (General Notes) and proceed to section 19 (Inspection Certification). Documentation must include: dates when snow cover occurred, date when construction activities ceased, and date when melting conditions began.
- Other:

## (13) SWMP MANAGEMENT

## (14) CURRENT CONSTRUCTION ACTIVITIES:

	Yes	No	NA	
(a) Is the SWMP notebook located on site?				Estimate of disturbed area at the time of the inspection: _____ Acres
(b) Are changes to the SWMP documents noted and approved?				
(c) Are the inspection reports retained in the SWMP notebook?				
(d) Are corrective actions from the last inspection completed?				
(e) Is a Spill Prevention Control and Countermeasure Plan retained at the project site?				
(f) Is a list of potential pollutants retained at the site?				

## (15) BMPs ON SITE AT TIME OF INSPECTION

\*See Inspection Report Instructions for more detail.

	In SWMP	Used	Not Needed at this time		In SWMP	Used	Not Needed at this time
<b>(a) EROSION CONTROL BMPs ON SITE</b>				<b>(b) SEDIMENT CONTROL BMPs ON SITE</b>			
Seeding	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stabilized Const. Entrance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mulching/Mulch Tackifier	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sediment Trap	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil Binder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Inlet Protection*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soil Retention Blankets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sediment Basin	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Embankment Protector*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Perimeter Control*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grading Techniques*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Berm/Diversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<b>(d) MATERIALS HANDLING, SPILL PREVENTION, WASTE MANAGEMENT AND GENERAL POLLUTION PREVENTION</b>			
Check Dams*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Stockpile Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outlet Protection*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Materials Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Concrete Waste Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>(c) BMPs FOR SPECIAL CONDITIONS</b>				Saw Water Management*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Dewatering Structure	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Solid Waste/Trash Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temp. Stream Crossing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Street Sweeping	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear Water Diversion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Sanitary Facility*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sensitive Area Fencing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Vehicle and Equip. Management	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>







## Stormwater Management Field Inspection Report Instructions

**State waters** are defined to be any and all surface and subsurface waters which are contained in or flow through the state, including, streams, rivers, lakes, drainage ditches, storm drains, ground water, and wetlands, but not including waters in sewage systems, waters in treatment works or disposal systems, waters in potable water distribution systems, and all water withdrawn for use until use and treatment have been completed. (Per subsection 107.25 and 25-8-103 (19) CRS)

**(3) Erosion Control Supervisor/SWMP Administrator:** Indicate the name of the individual responsible for implementing, maintaining and revising the SWMP.

**(4) CDOT Project Engineer/Representative:** Indicate the name of the CDOT representative performing the inspection with the ECS/SWMP Administrator. This person should be the Project Engineer or an authorized representative.

**(9) CDPS-SCP Certification #:** Indicate the Colorado Discharge Permit System (CDPS) Stormwater Construction Permit (SCP) (for Stormwater Discharges Associated with Construction Activities) certification number, issued by CDPHE, for the project which the report is being completed. Certification number can be found on the first page of the SCP.

**(12) Reason(s) for Inspection / Exclusion:** Indicate the purpose for the inspection or exclusion. These inspections are required to comply with the CDOT Specifications and the CDPS-SCP.

Routine Inspections. These inspections are required at least every 7 calendar days during active construction. Suspended projects require the 7 calendar day inspection unless snow cover exists over the entire site for an extended period of time, and melting conditions do not exist (see, Winter Conditions Inspections Exclusions).

Runoff Event Inspection for Active Sites. See page 1 for definition.

Third Party Request. Indicate the name of the third party requesting the inspection and, if known, the reason the request was made.

Winter Conditions Inspections Exclusions. See page 1 for definition. An inspection does not need to be completed, but use this form to document the conditions that meet the Exclusion.

Other. Specify any other reason(s) that resulted in the inspection.

**(13) SWMP Management:** Review the SWMP records and documents and use a ✓ to answer the question. To comply with CDOT Standard Specifications and the CDPS-SCP, all of the items identified must be adhered to. If No is checked, document the reason and indicate the necessary corrective action in section 16 (Construction Site Assessment & Corrective Actions). If NA is checked, indicate why in the space provided or indicate in section 18 (General Notes).

**(a)** Is the SWMP notebook located on site? A copy of the SWMP notebook must be retained on site, unless another location, specified by the permit, is approved by the Division.

**(b)** Are changes to the SWMP documents noted and approved? Indicate all changes that have been made to any portion of the SWMP notebook documents during construction. Changes shall be dated and signed at the time of occurrence. Amendments may include items listed in subsection 208.03(c).

**(c)** Are the inspection reports retained in the SWMP notebook? The ECS/Engineer shall keep a record of inspections. Inspection reports must identify any incidents of non-compliance with the terms and conditions of the CDOT specifications or the CDPS-SCP. Inspection records must be retained for three years from expiration or inactivation of permit coverage.

**(d)** Are corrective actions from the last inspection completed? Have corrective actions from the last inspection been addressed? Is a description of the corrective action(s), the date(s) of the corrective action(s), and the measure(s) taken to prevent future violations (including changes to the SWMP, as necessary) documented?

**(e)** Is a Spill Prevention Control and Countermeasure (SPCC) Plan retained in the SWMP notebook? Subsection 208.06(c) requires that a SPCC plan be developed and implemented to establish operating procedures and that the necessary employee training be provided to minimize accidental releases of pollutants that can contaminate stormwater runoff. Records of spills, leaks or overflows that result in the discharge of pollutants must be documented and maintained. Information that should be recorded for all occurrences include the time and date, weather conditions, reasons for spill, etc. Some spills may need to be reported to the Water Quality Control Division immediately.

**(f)** Is a list of potential pollutants retained at the site? Subsection 107.25(b)6 requires the Erosion Control Supervisor to identify and describe all potential pollutant sources, including materials and activities, and evaluate them for the potential to contribute pollutants to stormwater discharge.

**(14) Current Construction Activities:** Provide a short description of the current construction activities/phase at the project site; include summary of grading activities, installation of utilities, paving, excavation, landscaping, etc.

- Estimate the acres of disturbed area at the time of the inspection. Include clearing, grading, excavation activities, areas receiving overburden (e.g. stockpiles), demolition areas and areas with heavy equipment/vehicle traffic, installation of new or improved haul roads and access roads, staging areas, borrow areas and storage that will disturb existing vegetative cover.

**(15) BMPs On Site at Time of Inspection:** Indicate the BMPs that are installed on-site at the time of inspection. All BMP details (e.g., Standard Plan M-208-1) shall be included with the SWMP documents.

## Stormwater Management Field Inspection Report Instructions (continued)

BMPs In SWMP/Used/Not Needed at this Time. This section can be used as follows:

- If the BMP is required by the SWMP and implemented, indicate by placing a ✓ in both the “In SWMP” and “Used” columns.
- If the BMP is required by the SWMP, but not implemented, indicate by placing a ✓ in the “In SWMP” and “Not Needed at this Time” columns.

### (a) Erosion Control BMPs On Site

- Embankment Protector (e.g., temporary slope drains, open-chute drains, etc.)
- Grading Techniques (e.g., vertical tracking, scarifying, or disking the surface on the contour, etc.)
- Check Dams (e.g., rock check, erosion logs, erosion bales, silt berms, etc.)
- Outlet Protection (e.g., riprap, erosion log around top of headwall, etc.)

### (b) Sediment Control BMPs On Site

- Inlet Protection (e.g., erosion logs, erosion bales, sand bags, gravel bags, etc.)
- Perimeter Control (e.g., silt fence, erosion logs, berms, etc.)

### (d) Materials Handling, Spill Prevention, Waste Management and General Pollution Prevention

- Stockpile Management. Stockpiles shall be located away from sensitive areas. All erodible stockpiles (including topsoil) shall be contained by silt fence, berms or other sediment control devices throughout construction (also see subsection 208.07).
- Materials Management. Material that could contribute pollutants to stormwater shall have secondary containment or other equivalent protection (also see subsection 208.06(a)).
- Concrete Waste Management. All concrete residue shall be contained in a signed structure as designed per subsection 208.02(j) and subsection 208.05(n). It shall be located a minimum of 50 feet from state waters.
- Saw Water Containment (e.g., pick-up broom or vacuum). Street washing is *not* allowed.
- Sanitary Facility. Temporary sanitary facilities shall be located 50 feet away from drainage ways, inlets, receiving waters, and located away from areas of high traffic, and areas susceptible to flooding or damage by construction equipment.

**(16) Construction Site Assessment & Corrective Actions:** Inspect the construction site and indicate where BMP feature(s) identified in section 15 (BMPs On Site at Time of Inspection), require corrective action. Erosion and sediment control practices identified in the SWMP shall be evaluated to ensure that they are operating correctly.

- Location. Site location (e.g., project station number, mile marker, intersection quadrant, etc.).
- BMP. Indicate the type of BMP at this location that requires corrective action (e.g., silt fence, erosion logs, soil retention blankets, etc.).
- Condition. Identify the condition of the BMP, using more than one letter (identified in section 16) if necessary.
- Description of Corrective Action and Preventative Measure Taken. Provide the proposed corrective action needed to bring the area or BMP into compliance. Once corrective actions are completed, state the measures taken to prevent future violations and ensure that the BMPs are operating correctly, including the required changes made to the SWMP.
- Date Completed & Initials. Date and initial when the corrective action was completed and the preventative measure statement finished.

**(17) Construction Site Assessment:** Was there any off site discharge of sediment at this site since the last inspection?

**(a) Is there evidence of discharge of sediment or other pollutants from the site? Off site pollutant discharges are a violation of the permit.** The construction site perimeter, all disturbed areas, material and/or waste storage areas that are exposed to precipitation, discharge locations, and locations where vehicles access the site shall be inspected for evidence of, or the **potential** for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state water.

**(b) Has sediment or other pollutants discharging from the site reached state waters? Off site pollutant discharges are a violation of the permit.** If off site discharge has occurred, explain the discharge and the corrective actions in section 16 (Construction Site Assessment & Corrective Actions) or section 18 (General Notes).

**(18) General Notes:** Indicate any additional notes that add detail to the inspection; this may include positive practices noted on the project.

**(19) Inspection Certification:** In accordance with Part I, F.1.c of the CDPS-SCP, all reports for submittal shall be signed and certified for accuracy.

**(20) Compliance Certification:** In accordance with Part I, D.6.b.2.viii of the CDPS-SCP, compliance shall be certified through signature.

## **Inactivation Form**



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

Effective date \_\_\_\_\_

**COLORADO WATER QUALITY CONTROL DIVISION TERMINATION APPLICATION**

Print or type all information. Mail original form with ink signature to the following address. Emailed and Faxed forms will not be accepted. All items must be filled out completely and correctly. If the form is not complete, you will be asked to resubmit it.

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

**PART A. IDENTIFICATION OF PERMIT OR AUTHORIZATION** - Please limit submission to one permit, certification, or authorization per form. All permit termination dates are effective on the date approved by the division. Processing times vary by type of discharge. Some discharge types require onsite inspections to verify information in this application.

**PERMIT, CERTIFICATION, OR AUTHORIZATION NUMBER (DOES NOT END IN 0000)** \_\_\_\_\_

**PART B. PERMITTEE INFORMATION**

Company Name \_\_\_\_\_

Legal Contact First Name \_\_\_\_\_ Last Name \_\_\_\_\_

Title Permits\_SWConstruction

Mailing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Phone \_\_\_\_\_ Email address \_\_\_\_\_

**PART C. FACILITY OR PROJECT INFORMATION**

Facility/Project name \_\_\_\_\_

Location/Address \_\_\_\_\_

City \_\_\_\_\_ County \_\_\_\_\_

Local contact name \_\_\_\_\_ Title \_\_\_\_\_

Phone \_\_\_\_\_ Email address \_\_\_\_\_

**PART D. TERMINATION INFORMATION QUESTIONS** Provide information for Part D that applies to your facility and termination request. Not all questions need to be answered- only the part that applies to your facility.

Part D1 covers facilities no longer in operation.

Part D2 covers mining facilities no longer in operation

Part D3 covers facilities in operation but no longer discharging or needing permit coverage.

Part D4 covers Stormwater Construction facilities where construction is complete and the site is stabilized.

\*\*Please answer questions as completely as possible to assist in timely approval of this termination request.\*\*

**D1. FACILITY IS NO LONGER IN OPERATION AT THIS LOCATION**

All activities and discharges at the identified site have ceased; all potential pollutant sources have been removed; all industrial wastes have been disposed of properly; all DMR's, Annual Reports, and other reports have been submitted; and all elements of a Stormwater Management Plan have been completed (if this applies).

\*\*[FOR LAGOONS: please reference "information regarding Domestic Treatment Works Closure at Wastewater Treatment Facilities"](#)\*\*

**D2. MINING FACILITY IS NO LONGER IN OPERATION AT THIS LOCATION.**

Sand and Gravel, Coal or Hard Rock Mining

A. Mining operation is no longer discharging process/treated water. Bond has not been released by DRMS. A stormwater only permit is requested at this time. Attach application for Stormwater Only permit.

B. Reclamation of mining site is completed. Bond has been released by DRMS.  
 YES Attach a copy of the Bond release letter.  NO Explain below:

C. Reclamation of mining site is complete. Is there any continued mine drainage? Eg. Adits or unreclaimed waste piles?  YES , Please explain, attach additional pages as necessary.

**D3. FACILITY IS STILL IN OPERATION BUT IS NO LONGER DISCHARGING OR NO LONGER NEEDS A PERMIT**

A. Facility continues to operate, however the activity producing the discharge has ceased (including changes in SIC Code resulting in change in duty to apply).

B. Termination is based on alternate disposal of discharges (discharge is being disposed of in another way)  
a. Solid waste disposal unit (e.g. evaporative ponds)  
b. No Exposure Exclusion (for industrial stormwater facilities only.) NOX Number \_\_\_\_\_  
c. Combined with another authorized discharge. Permit Number \_\_\_\_\_  
d. Permit is not required (includes coverage by low risk policy, etc.) - please explain, attach additional pages if necessary

C. 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 receipts, letters, etc.

**D4. STORMWATER CONSTRUCTION FACILITIES WHERE CONSTRUCTION IS COMPLETE (Select A, B, or C)**

A. SITE IS FINALLY STABILIZED OR CONSTRUCTION WAS NOT STARTED  
a. The permitted activities meet the requirements for FINAL stabilization in accordance with the permit, the Stormwater Management Plan, and as described in item b. (explanation can be construction activities were not started).  
b. Describe the methods used to meet final stabilization. (Required)

\*Final Stabilization defined on page 3

**D4. STORMWATER CONSTRUCTION FACILITIES WHERE CONSTRUCTION IS COMPLETE (Continued)**

- B. ALTERNATIVE PERMIT COVERAGE OR FULL REASSIGNMENT
  - a. All ongoing construction activities including all disturbed areas, covered under the permit certification listed in Part B have coverage under a separate CDPS Stormwater Construction permit. The Division’s Reassignment form was used by the permittee to reassign all areas and activities.
  - b. Permit certification number covering the ongoing activities (Required)\_\_\_\_\_
  
- C. PERMITTEE IS NO LONGER THE OWNER OR OPERATOR OF THE FACILITY
  - All efforts have been made to transfer the permit to appropriate parties.
  - Please attach copies of registered mail receipt, letters, etc.

**\*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.

**PART E. CERTIFICATION SIGNATURE REQUIRED FOR ALL TERMINATION REQUESTS**

I certify under penalty of law that this document and all attachments were prepared under my direction and/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 individuals immediately 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. “ (See 18 USC 1001 and 33 USC 1319)

I certify that I am the legal representative of the above named company (PART B page 1).

- Applies to Stormwater Construction terminations:**  
I understand that by submitting this notice of termination, 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.

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Signature of Legally Responsible Party

Date Signed

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Name (printed)

Title

Signatory requirements: This termination request shall be signed, dated, and certified for accuracy by the permittee in accord 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 either a principal executive officer, ranking elected official, or other duly authorized employee.