Construction Activities Stormwater Management Plan (SWMP) Falcon Commerce Center Colorado Springs, Colorado

Latitude: 39.055057, Longitude: -104.854587

Owner/Developer:
Forest Lakes, LLC
1123 Emerson Ave, Suite 204
Evanston, Illinois 60201

Prepared by:



1604 South 21st Street Colorado Springs, Colorado 80904 Ph: (719)630-7342

Contact: Matthew Erichsen, P.E.

Kiowa Project No.19036

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STATE STORMWATER DISCHARGE PERMIT REQUIREMENTS

A stormwater management plan ("plan") shall be developed for each construction site covered by the Construction Stormwater Permit prior to commencement of construction activities (For public emergency related sites a plan shall be created no later than 14 days after the commencement of construction activities).

At least ten days prior to the anticipated start of construction activities (i.e. the initial disturbance of soils associated with clearing, grading, excavation activities, installation of structural Best Management Practices, or other activities), for projects that will disturb one (1.0) acre or more, the owner or operator of the construction activity must submit an application as provided by the Colorado Department of Public Health and Environment, Water Quality Control Division (Division). This form may be reproduced and is also available from the Division's web site. Applications received by the Division are processed and a permit certification and other relevant materials will be sent to the attention of the legally responsible person. The application contains certification of completion of a storm water management plan (SWMP). Do <u>not</u> include a copy of the Stormwater Management Plan, unless requested by the Division.

For information or application materials contact:

Colorado Department of Public Health and Environment
Water Quality Control Division
WQCD-P-B2
4300 Cherry Creek Drive South
Denver, Colorado 80246-1530
https://www.colorado.gov/pacific/cdphe/wq-construction-general-permits

Electronic Application – CDPHE website:

 $\underline{https://www.colorado.gov/pacific/cdphe/WQ\%20permits\%20construction\%20electronic\%20application}$

I. STORMWATER MANAGEMENT PLAN OBJECTIVES

The objective of the Stormwater Management Plan (SWMP) is "To identify possible pollutant sources at the construction site that may contribute pollutants to stormwater, and identify control measures that, when implemented in accordance with good engineering, hydrologic, and pollution control practices, will reduce or eliminate any possible water quality impacts. A stormwater management plan shall be developed for each construction site covered by the Construction Stormwater Permit. The stormwater management plan must be completed and implemented at the time the project breaks ground, and revised as construction proceeds, to accurately reflect the conditions and practices on site. *Colorado Discharge Permit System (CDPS) General Permit COR400000*. A general schedule or phasing of control measures will be determined by construction schedule and ground disturbances necessitating required erosion control methods/control measures. The SWMP shall be implemented until expiration or inactivation of permit coverage. Evaluations of and modifications to this plan may be necessary during the length of the construction project until the site is finally stabilized.

SWMP Plan Availability: A copy of the Stormwater Discharge Permit from the State of Colorado, SWMP Report, SWMP Site Map, SWMP Notes and Details; and inspection reports shall be kept on site by the Qualified Stormwater Manager at all times, as to be available for use by the operator/ Qualified Stormwater Manager and to be available for inspection by federal, state and local agencies. If an office location is not available at the site, the SWMP must be managed so that it is available at the site when construction activities are occurring (for example: by keeping the SWMP in the superintendent's vehicle). The permittee shall retain copies of the SWMP and all reports required by the Permit and records of all data used to complete the Permit application for three (3) years minimum after expiration or inactivation of permit coverage, unless the community requires a longer period.

This SWMP should be viewed as a "living document" that is continuously being reviewed and modified as a part of the overall process of evaluating and managing stormwater quality issues at the site. The Qualified Stormwater Manager shall amend the SWMP when there is a change in design, construction, operation or maintenance of the site which would require the implementation of new or revised control measures or if the SWMP proves ineffective in controlling pollutants in stormwater runoff in compliance with the permit conditions or when control measures are no longer necessary and are removed and corrective actions are taken onsite that result in a change to the plan.

For plan revisions made prior to or following a change(s) onsite, including revisions to sections addressing site conditions and control measures, a notation must be included in the plan that identifies:

- 1. The date of the site change, the control measure removed, or modified,
- 2. The location(s) of those control measures, and
- 3. Any changes to the control measure(s).

The permittee must ensure the site changes are reflected in the plan. The permittee is noncompliant with the Construction Stormwater Permit until the plan revisions have been made.

SWMP revisions must be made <u>prior to changes in the site conditions</u>, except for "Responsive SWMP Changes" as follows:

• SWMP revision must be made immediately after changes are made in the field to address control measure installation and/or implementation issues; or

- SWMP revisions must be made as soon as practicable, but in no case more than 72 hours, after change(s) in control measure installation and/or implementation occur at the site that require development of materials to modify the SWMP
 - A notation must be included in the SWMP prior to the site change(s) that includes the time and date of the change(s) in the field, and identification of the control measure(s) removed or added and the location(s) of the control measure(s). Modifications to the SWMP shall be submitted to the Town within seven days.

A Colorado Discharge Permit System (CDPS), Stormwater Discharge Associated with Construction Activities Permit from the Colorado Department of Public Health and Environment is required for this project. The general conditions associated with the permits must be followed through the duration of the land disturbing activities at the site. For additional details or more specific information on the CDPS permit, consult the CDPS General Permit No. COR400000.

A. State Permit Applicant

The State Permit applicant (also referred to as the Permittee) must be a legal entity that meets the definition of the owner and/or operator of the construction site, in order for this application to legally cover the activities occurring at the site. The applicant must have day-to-day supervision and control over activities at the site and implementation of the SWMP. Although it is acceptable for the applicant to meet this requirement through the actions of a contractor, as discussed in the examples below, the applicant remains liable for violations resulting from the actions of their contractor and/or subcontractors. Examples of acceptable applicants include:

<u>Owner or Developer</u> - An owner or developer who is operating as the site manager or otherwise has supervision and control over the site, either directly or through a contract with an entity such as those listed below.

<u>General Contractor or Subcontractor</u> - A contractor with contractual responsibility and operational control (including SWMP implementation) to address the impacts construction activities may have on stormwater quality.

<u>Other Designated Agents/Contractors</u> - Other agents, such as a consultant acting as construction manager under contract with the owner or developer, with contractual responsibility and operational control (including SWMP implementation) to address the impacts construction activities may have on stormwater quality.

Refer to the CDPHE, Stormwater Management Plan Preparation Guidance for additional information.

The Permittee shall be legally responsible for compliance with the State Permit.

B. SWMP Terms

<u>Control Measures:</u> Control measures encompass a wide range of erosion and sediment control practices, both structural and non-structural in nature, that are intended to reduce or eliminate any possible water quality impacts from stormwater leaving a construction site. The individual control measures appropriate for a particular construction site are largely dependent of the types of potential pollutant sources present, the nature of the construction activity, and specific-site conditions.

<u>Nonstructural Control Measures</u>, such as preserving natural vegetation, preventive maintenance and spill response procedures, schedules of activities, prohibition of specific practices, education, and other management practices are mainly operational or managerial techniques.

<u>Structural Control Measures</u> include treatment processes and practices ranging from diversion structures and silt fences, to retention ponds and inlet protection.

<u>Construction Start Date</u>: This is the day when ground disturbing activities are expected to begin, including grubbing, stockpiling, excavating, demolition, and grading activities.

<u>Disturbance Area Determination</u>: 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.

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 (refer to Final Stabilization Section). Permit coverage must be maintained until the site has reached Final Stabilization. Even if only one part of the project is being done, 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).

SWMP Drawings: Also known as the SWMP Site Map and Erosion Control Plans.

C. Contractor Required Items

dis	turbing activities:
	Add the Qualified Stormwater Manager and Alternate with phone numbers to this plan.
	Construction Dates – Verify the construction dates indicated in this report. Update as necessary to reflect the planned schedule.
	Material Handling and Spill Prevention procedures – See Section IV-4. Review and modify as necessary.
	Application - Insert Application for CDPS Stormwater Discharge Associated with Construction Activities Permit into Appendix.
	Permit - Insert Permit for CDPS Stormwater Discharge Associated with Construction

The Contractor shall include and/or provide the following items prior to beginning land

II. SITE DESCRIPTION

A. Nature of the Construction Activity

The site is planned to be developed with industrial, retail and mixed use commercial properties. The proposed development will include overlot grading of the of the portion of the property to the north of Jackson Creek, construction of a sub-regional detention area, construction of the first phase of improvements for the development including roadway extensions, driveways, sidewalks, installation of water, gas, electric, storm sewer mains and sanitary sewer connections.

i. Site Location

Activities into Appendix.

The Falcon Commerce Center site is located to the west of Interstate 25, south of Baptist Road, east of Woodcarver Road, Santa Fe Trail and the Union Pacific Railroad; and north of the United States Air Force Academy (USAFA). An existing gravel road

courses through the site from Woodcarver Road to the Upper Monument Creek Regional Wastewater Treatment Plant located to the west of the site on the west side of the existing railroad. The overall site is undeveloped, however the abandoned Old Denver Highway and old/abandoned railroad grade cross through the property from north to south. The property is located in the east half of Section 35 and the west half of Section 36, Township 11 South, Range 67 West of the Sixth Principal Meridian, El Paso County, Colorado. The location of the site is shown on the Vicinity Map (Figure 1).

ii. Adjacent Areas

The site is bounded on the north by Baptist Road, the Pilot Travel Center Filing No. 1 and undeveloped property; on the east by Interstate 25 and CDOT owned property; on the south by the USAFA and on the west by Woodcarver Road, property developed by Woodcarver Properties, the Union Pacific Railroad and undeveloped property.

<u>PMJM Habitat Buffer Area</u>: There is a Prebles Meadow Jumping Mouse (PMJM) habitat buffer area along the south side of the development adjacent to Jackson Creek. This area shall be protected during construction and shall not be disturbed other than as shown on the plans. Refer to the notes on the construction plans for additional requirements.

B. Sequence of Major Activities

The major construction activities associated with this project are shown in the table below along with an approximate timing of the sequence. In general, the Qualified Stormwater Manager and the Contractor will identify the precise schedule to be used during the term of this project and modify this schedule as needed. Minimal clearing and grubbing may be necessary to install the initial erosion control features.

<u>Approximate Sequence of Major Construction Activities:</u>

Installation of Initial Control Measures

Clearing, grubbing and demolition

Overlot Grading and Detention Basin Construction

Utility Construction and Fine Grading

Paving, curb & gutter and sidewalk construction

Seeding, Mulching and Landscaping

End Construction (refer to Final Stabilization... section)

October

November – February 2021

December – February 2021

March

March

May 2021

The temporary erosion control measures can be removed when Final Stabilization has occurred. Refer to the Final Stabilization section for a description of the requirements.

C. Estimate of Area and Volume Disturbed

The total site area associated with the overall Falcon Commerce Center development is 135.0 acres of which approximately 128.4 acres will be subject to disturbance. The estimated area of disturbance corresponds to that necessary to perform grading, install utilities and paving for the site. Locations of disturbed areas are as shown on the SWMP Site Map. All other areas are planned to remain undisturbed.

Earthwork cut and fill operations will be roughly 333,900 cubic yards of cut and 265,500 cubic yards of fill, using the Geotech recommended shrinkage factor of 1.15 the site nets 28,575 cubic yards cut.

D. Soil Data

Soils within the property are classified to be within Hydrologic Soils Group B based on the NRCS Soil Survey for the El Paso County area. Soils on the site are predominantly Pring coarse sandy loam and Peyton-Pring complex (Soil Group B). A small portion of Tomah-Crowfoot complex boarders Jackson Creek (Soil Group B) and a small portion of Kettle-Rock outcrop complex is present on the west side of the site (Soil Group B).

The pre-construction 100-year runoff coefficient for the site is 0.40 and the post-construction runoff coefficient is roughly 0.68.

E. Existing Vegetation and Ground Cover

The existing vegetative cover within the development is in fair condition with mostly native grasses and scattered trees throughout the site. The existing ground slopes within a majority of the property range from 2 to 8 percent. Steeper slopes occur near Jackson Creek that courses southwest through the site and steeper slopes are located along a depressed area near the north east portion of the site. The steepest slopes occur along the abandoned railroad embankment and Jackson Creek. The vegetative cover is estimated at about 60%. It is recommended that the contractor take pictures of the existing vegetative cover prior to construction and any calculations they feel necessary to make the Final Stabilization comparison (refer to Final Stabilization section for additional information). The contractor will be responsible for providing the documentation to make this comparison to the Town and the State of Colorado, Water Quality Control Division.

F. Potential Pollution Sources

The potential pollution sources for the site that may have an impact to stormwater include the following items:

- 1. Ground disturbing activities and grading Sediment
- 2. Demolition work Sediment, asphalt, concrete, aggregate
- 3. Off-site vehicle tracking Sediment
- 4. Vehicle maintenance or fueling Fuel, oil, chemicals
- 5. Storage of demolition and disposal items Sediment, asphalt, concrete
- 6. Soil, aggregate and sand stockpiling Sediment
- 7. Storage of fertilizers, materials or chemicals Chemicals
- 8. Concrete washouts Concrete, slurry
- 9. Concrete work Forms, form oil, curing compound
- 10. Paving operations Asphalt, concrete, forms
- 11. Haul routes Sediment, fuel, oil
- 12. Landscaping Fertilizers, sediment, over-watering, pesticides
- 13. Portolet Chemicals, human waste

G. Non-stormwater Discharges

In the existing condition there are no known non-stormwater discharges from the project site, such as springs and landscape irrigation return flows. During construction, the following non-stormwater discharges from the project site could occur.

Construction dewatering - Not anticipated, except for the work within the
detention basin. If dewatering is required during construction, the Qualified
Stormwater Manager shall update the SWMP and determine whether a CDPHE
construction dewatering permit is required prior to performing the dewatering
activities. A dewatering bag or other approved control measure shall be used if
dewatering is required.

- 2. Release of concrete washout water Not anticipated. The washout water should be contained within the concrete washout control measure.
- 3. Runoff from water used for dust control Not anticipated. The contractor should limit the amount of water used for dust control to an amount less than would result in runoff. Perimeter control measures are planned to filter water that may runoff

If any other non-stormwater discharges from the site become apparent during the term of construction, the occurrence and mitigation shall be addressed by the Qualified Stormwater Manager.

H. Receiving Waters

The majority of the project area will drain by sheet flow and temporary drainage swale to the sedimentation basin that will become the sub-regional detention basin once the storm sewer system is constructed. The flows released from the temporary sedimentation basin will use the detention basin outlet structure and flow into Jackson Creek via the Full Spectrum Detention (FSD)- outlet pipe. In the ultimate condition, the flows from this area will drain into a proposed storm sewer system which will convey the flows through the proposed Full Spectrum Detention (FSD) basin. The outlet pipe will discharge the flows to the existing grassed area to the south of the site within the PMJM habitat buffer. The flows will continue south to Jackson Creek.

Immediate Receiving water(s):	On-site storm sewer and sub-regional detention basin
Ultimate Receiving Water(s):	Jackson Creek

A portion of the subject property along Jackson Creek is located within a Zone A FEMA regulated floodplain based on Flood Insurance Rate Map 08041C0286 G (effective date of December 7, 2018). The area included in the Zone A floodplain is located within the Prebles Meadow Jumping Mouse habitat buffer area and will not be impacted as part of the Falcon Commerce Center development. The remainder of the property is located in an unshaded Zone X area which is described as "Areas determined to be outside 500-year floodplain".

III. SWMP SITE MAP CONTENTS

The SWMP Site Map and SWMP Drawings are considered a part of this plan. It identifies the following:

- 1. Construction site boundaries;
- 2. Flow arrows that depict stormwater flow directions on-site and runoff direction;
- 3. All areas of ground disturbance including areas of borrow and fill;
- 4. Areas used for storage of soil:
- 5. Locations of all waste accumulation areas, including areas for liquid, concrete, masonry, and asphalt;
- 6. Locations of dedicated asphalt and/or concrete batch plants and masonry mixing stations;
- 7. Locations of all structural control measures;
- 8. Locations of non-structural control measures;
- 9. Locations of springs, streams, wetlands and other state waters, including areas that require preexisting vegetation be maintained within 50 feet of a receiving water, where determined feasible and
- 10. Locations of all stream crossings located within the construction site boundary. detention basins, irrigation canals, roadside ditches and other surface waters.

The SWMP Site Map must be updated/red lined by the Qualified Stormwater Manager on a regular basis to reflect current conditions of the site at all times.

IV. STORMWATER MANAGEMENT CONTROLS

A. Qualified Stormwater Manager

The Permittee shall designate the Qualified Stormwater Manager. The Qualified Stormwater Manager is an individual knowledgeable in the principles and practices of erosion and sediment control and pollution prevention, and with the skills to assess conditions at construction sites that could impact stormwater quality and to assess the effectiveness of stormwater controls implemented to meet the requirements of this permit. The Qualified Stormwater Manager is typically the Contractor or his/her designated representative and is responsible for developing, implementing, maintaining and revising the SWMP. The Qualified Stormwater Manager is the contact person with the Town and State for all matter pertaining to the SWMP. The Qualified Stormwater Manager is the person responsible for the SWMP accuracy, completeness and implementation. Therefore the Qualified Stormwater Manager should be a person with authority to adequately manage and direct day to day stormwater quality management activities at the site. The Qualified Stormwater Manager shall have the authority to act on behalf of the Permittee(s) to ensure the site remains in compliance with the CDPS Stormwater Discharge Associated with Construction Activities Permit. An Alternate Qualified Stormwater Manager who is able to serve in the same capacity as the Qualified Stormwater Manager shall also be selected.

The Qualified Stormwater Manager shall be present at the project site a majority of the time and (along with the Alternate Qualified Stormwater Manager) shall provide the Town with a 24-hour emergency contact number.

If the Qualified Stormwater Manager or Alternate changes for any reason, it shall be noted/redlined on this Plan. The Town shall be notified in writing of any change.

Qualified Stormwater Manager:	
Phone:	
Alternate Qualified Stormwater Manager:	
Phone:	

B. Identification of Potential Pollutant Sources:

At a minimum, the following sources and activities shall be evaluated for the potential to contribute pollutants to stormwater discharges and identified in the SWMP if found to have such potential. The sources of any potential pollutants must be controlled through control measure selection and implementation. Each pollutant source recognized through this process as having the potential to contribute pollutants to stormwater, must be identified in the SWMP along with the specific stormwater management control measures that will be implemented to adequately control the source. (Note: the actual evaluation of the potential pollutant sources does NOT need to be included in the SWMP – just the resultant pollutant sources and their associated control measures.). The Qualified Stormwater Manager shall determine the need for and locations of each of the following potential pollutant sources during the course of the construction project.

Could it Contribute?	Potential Pollutant Source	Control Measures Implemented to Control Source
Yes	All disturbed and stored soils	Silt fence, sediment control logs, sediment basin, inlet protection, rock socks, seed and mulch, temporary slope drain
Yes	Vehicle tracking of sediments	Vehicle tracking control, street sweeping
No	Management of contaminated soils	
Yes	Loading and unloading operations	Stabilized staging area, vehicle tracking control, silt fence
Yes	Outdoor storage activities (erodible building materials, fertilizers, chemicals, etc.)	Stabilized staging area, silt fence
Yes	Vehicle and equipment maintenance and fueling	Stabilized staging area, silt fence
Not expected	Significant dust or particulate generating processes (e.g., saw cutting material, including dust)	Control by sprinkling with water and other appropriate means.
Yes	Routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc	Use as recommended by manufacturer and in areas specified, inlet protection
Yes	On-site waste management practices (waste piles, liquid wastes, dumpsters, etc)	Stabilized staging area, silt fence, inlet protection, sediment basin, non-structural control measures
Yes	Concrete truck/equipment washing, including the concrete truck chute and associated fixtures and equipment	Concrete washout area, stabilized staging area, vehicle tracking control, silt fence
No	Dedicated asphalt, concrete batch plants and masonry mixing stations	
Yes	Non-industrial waste sources such as worker trash and portable toilets	Stabilized staging area, construction fence, non-structural control measures
Yes	Other areas or procedures where potential spills can occur	Non-structural control measures, construction fence

C. Control Measures for Pollution Prevention

- 1. A list of some of the Structural Control Measures for erosion and sediment control that may be implemented on the site to minimize erosion and sediment are as follows. Refer to the SWMP drawings for installation and maintenance requirements for each structural control measure and refer to the SWMP drawings for the location of the control measures.
 - a) Concrete Washout Area (CWA): A shallow excavation with a small perimeter berm to isolate concrete truck washout operations.
 - b) Construction Fence (CF): Installed to delineate the perimeter of the site.
 - c) Dewatering (DW): Dewatering controls consist of a gravel filter provided on the suction end of a pump to reduce the pumping of sediment, a riprap pad at the discharge end of the pump for erosion protection and a sediment basin to provide for settling before the water is discharged into receiving waters.
 - d) Drainage Swales (DS): A small earth channel used to divert and convey runoff, generally to a sediment basin, check dam, or reinforced rock berm. Depending on slope, the diversion swale may need to be lined with erosion control blanket, plastic (for temporary installations only), or riprap.
 - e) Check Dam (CD): A small rock dam, designed to withstand overtopping, that is placed in a small stream or drainageway. The purpose of the check dam is to trap water-borne sediment in the backwater zone upstream of the check and to reduce flow velocities in a channel.
 - a) Erosion Control Blanket (ECB): A fibrous blanket of straw, jute, excelsior or coconut material trenched in and staked down over prepared, seeded soil. The matting reduces both wind and water erosion.
 - b) Inlet Protection (IP): Consists of a small reinforced rock berm and cinder block frame placed in front of (but not blocking) a curb inlet or around an area inlet to reduce sediment in runoff entering the storm sewer system.
 - c) Reinforced Sock (RS): Consists of a linear mass of gravel enclosed in wire mesh to form a porous filter, able to withstand overtopping.
 - d) Sediment Control Log (SCL): Consists of a cylindrical bundle of wood, coconut, compost, excelsior, or straw fiber designed to form a semi-porous filter able to withstand overtopping.
 - e) Seeding and Mulching (SM): Temporary seeding and mulching can be used to stabilize disturbed areas that will be inactive for an extended period of time. Permanent seeding should be used to stabilize areas at final grade that will not otherwise be stabilized.
 - f) Silt Fence (SF): A temporary sediment barrier constructed of woven fabric stretched across supporting posts.
 - g) Stabilized Staging Area (SSA): Consists of stripping topsoil and spreading a layer of granular material in the area to be used for a trailer, parking, storage, unloading and loading.
 - h) Temporary Stockpile Areas (SP): Temporary stockpiles of excess excavated material and stockpiles for imported materials shall be shown on the SWMP drawings. Slopes shall not be steeper than 3 to 1.
 - i) Temporary Slope Drain (TSD): A pipe or culvert used to convey water down a slope where there is a high potential for erosion. The discharge

- from the slope drain must be directed to a stabilized outlet, temporary or permanent channel, and/or sedimentation basin.
- j) Vehicle Tracking Control (VTC): Consists of a rock pad that is intended to help strip mud from tires prior to vehicles leaving the construction site. Installed at all entrance/exit points to the site. The number of access points shall be minimized.

Minimal clearing and grubbing may be necessary prior to installing the initial erosion control features.

No clearing, grading, excavation, filling or other land disturbing activities shall be permitted until approval of the Erosion Control Plan is received from the Town. Once approval is received, the erosion and sediment control measures must be installed before land-disturbing activities are initiated so that no adverse effect of site alteration will impact surrounding property.

1. Non-structural practices for erosion and sediment control to be used to minimize erosion and sediment transport are:

Seeding and mulching and landscape installation in areas that will not be hard surfaced. Minimize the amount of existing vegetation to be removed during construction, leaving native vegetation in place when possible. Only the existing vegetation that is specified or requiring removal shall be disturbed or removed. If possible, leave existing ground cover, including asphalt in place or remove just prior to grading to minimize the length of soil exposure.

2. Phased control measure Implementation:

The Qualified Stormwater Manager shall update the control measure Implementation if necessary to meet and/or address the Contractor's schedule. The SWMP shall be updated as necessary to reflect the control measures installed.

a) Installation of Initial control measures

This stage includes control measures that shall be installed at the outset of construction, prior to land-disturbing activities. These control measures are identified on the SWMP Plan as Initial. Prior to any construction activities, erosion control facilities shall be installed. Minimal demolition, clearing and grubbing may be necessary prior to installing the initial erosion control features. Refer to the Permit #1 Overlot Grading, Erosion and Stormwater Quality Control Plan for the location of erosion control measures.

Following is a list of the control measures included in this stage along with a description of their intended use:

- Construction Fence: To be installed along the PMJM perimeter, the boundary surrounding the detention outlet pipe and in areas where silt fence is not used as a perimeter control. No work or disturbance shall occur within the PMJM area other than what is shown on the plans and approved by US Fish and Wildlife. See the notes on the plans.
- Sediment Basins and Drainage Swales: To be installed prior to one acre or more of disturbance, including clearing and grubbing.

- Temporary Slope Drain: To be installed at the same time as Drainage Swales. Two locations leading into the detention basin noted on the SWMP drawings.
- Silt Fence: Placed around the downstream perimeter of the site, the boundary surrounding the detention outlet pipe and in some cases to delineate the construction area or protect areas from construction.
- Culvert Inlet Protection: Place around existing culverts west of the site.
- Stabilized Staging Area: Placed near construction access at the north side of the site.
- Vehicle Tracking Control: Placed at construction access point.

Designate areas for construction trailer (if used), trash container, portolets, vehicle and equipment parking and material storage. If these areas are not indicated on the plan, the contractor must "red line" the plan with the locations and obtain approval of the Town Erosion Control Inspector prior to proceeding. If not using a detail contained in the plans a detail will need to be included in the plans. Provide a confined area for maintenance and fueling of equipment from which runoff will be contained and filtered. Control Measure / Erosion Control facility waste shall be disposed of properly.

b) Clearing, grubbing and demolition (Site Clearing)

The measures included in the previous phase shall be maintained and continue. Removed soil, curb, concrete, utilities and demolished items shall be disposed of properly. If a soil stockpile area is needed, the area shall have perimeter control and no slopes greater than 3:1. Existing vegetation to remain and the PMJM Habitat area shall be protected. Existing vegetation should be left in place until it needs to be removed as part of the construction progress (to the extent possible); to minimize the disturbed area and erosion potential, see Item 2 above. Wind erosion shall be controlled on the site by sprinkling and other appropriate means.

c) Overlot Grading and Detention Basin Construction

The measures included in the previous phase (Initial Stage) shall be maintained and continue, unless noted below. Refer to the Permit #1 Overlot Grading, Erosion and Stormwater Quality Control Plan for the location of erosion control measures. Following is a list of the control measures included in this stage along with a description of their intended use:

- Concrete Washout Area: Install prior to any concrete work on the site. Located adjacent to VTC.
- Construction Fence: Maintain.
- Erosion Control Blanket: Place on disturbed slopes steeper than 4:1 after the work is completed on that slope.
- Check Dam: To be installed downstream of the Pilot Travel Center detention basin outlet pipe along the proposed swale.

- Culvert Inlet Protection: Maintain. Install around culvert under Squadron Drive once installed.
- Sediment Basins and Drainage Swales: Maintain.
- Sediment Control Log: To be installed downstream of the Pilot Travel Center detention basin along the proposed swale and top of slope behind proposed curb and gutter.
- Silt Fence: Maintain. Add silt fence as perimeter control for the stockpile area, perimeter control for storm sewer construction and along top of slopes for interim.
- Stabilized Staging Area: Maintain.
- Temporary Slope Drain: Maintain.
- Vehicle Tracking Control: Maintain.

Materials associated with detention basin construction shall be stored in the designated Stabilized Staging Areas delineated on the plan. If an area is not indicated on the plan, the contractor must "red line" the plan with the locations and obtain approval of the Town Erosion Control Inspector prior to proceeding. If not using a detail contained in the Plans, a detail will need to be included in the plans. Material waste from detention basin construction shall be disposed of properly. Off-site flows enter the site from the Pilot Travel Center detention basin outlet pipe and Terrazzo Drive by sheet and curb and gutter flow. Runoff from Terrazzo Drive sheet flows south west until it reaches an existing swale and continues to Jackson Creek. Flows from the PTC outlet pipe enter a swale that leads to an abandoned road roadside ditch that leads to Jackson Creek.

d) Utility Construction and Fine Grading

The measures included in the previous phase shall be maintained and continue, unless noted below. Following is a list of the control measures for this phase of construction along with a description of their intended use. Refer to the Permit #2 Civil Construction Plans for the location of control measures. The control measures shown on the Permit #1 Civil Construction Plans shall be maintained and continue unless otherwise noted.

- Concrete Washout Area: Maintain.
- Construction Fence: Maintain.
- Erosion Control Blanket: Place on disturbed slopes steeper than 4:1 after the work is completed on that slope.
- Check Dam: Maintain.
- Culvert Inlet Protection: Maintain.
- Sediment Basins and Drainage Swales: Maintain.
- Sediment Control Log: Maintain.
- Silt Fence: Maintain. Add perimeter control for storm sewer construction.
- Stabilized Staging Area: Maintain.
- Temporary Slope Drain: Maintain.
- Vehicle Tracking Control: Maintain.

Excess and removed concrete, asphalt millings or pavement shall be disposed of properly. Materials associated with utility construction shall be stored in the designated Stabilized Staging Areas delineated on the plan. If an area is not indicated on the plan, the contractor must "red line" the plan with the locations and obtain approval of the Town Erosion Control Inspector prior to proceeding. If not using a detail contained in the Plans, a detail will need to be included in the plans. Material waste from utility construction shall be disposed of properly. Solvents, paints and chemicals shall be stored and disposed properly. Off-site flows enter the site from the Pilot Travel Center (PTC) detention basin outlet pipe and Terrazzo Drive by sheet and curb and gutter flow. Runoff from Terrazzo Drive sheet flows south west until it reaches an existing swale and continues to Jackson Creek. Flows from the PTC outlet pipe enter a swale that leads to an abandoned road roadside ditch that leads to Jackson Creek.

e) Paving, curb & gutter and sidewalk construction

The measures included in the previous phase shall be maintained and continue, unless otherwise noted below. Refer to the Permit #2 Civil Construction Plans for the location of control measures.

- Concrete Washout Area: Maintain. Remove at end of paving and building construction phases.
- Construction Fence: Maintain.
- Check Dam: Maintain.
- Erosion Control Blanket: Place on disturbed slopes steeper than 4:1 after the work is completed on that slope.
- Inlet Protection: Maintain. Add around new inlets as they are constructed.
- Culvert Inlet Protection: Maintain.
- Sediment Basins: Maintain. Remove once the detention basin is operable.
- Drainage Swale: Maintain. Remove westernmost drainage swale once its tributary area has reached full stabilization. Remove drainage swales along the top of the detention basin once their tributary area is fully developed.
- Sediment Control Log: Maintain. Install as a check dam on the southern end of disturbance along the Woodcarver Road roadside ditch.
- Silt Fence: Maintain. Remove along top of slope in areas where curb and gutter is installed and the upstream area has reached final stabilization.
- Stabilized Staging Area: Maintain. Remove at end of construction.
- Surface Roughening: Roughen surfaces to receive seeding and mulch.
- Temporary Slope Drain: Maintain.
- Vehicle Tracking Control: Maintain.

Excess and removed concrete or asphalt shall be disposed of properly. Concrete sawcutting slurry shall not be allowed to enter the storm sewer system. Material waste from pavement shall be disposed of properly.

f) Seeding, Mulching and Landscaping

The measures included in the previous phase shall be maintained and continue, unless noted below or the work requiring the measure is completed. Removal of control measures shall not occur without the approval of the Town Erosion Control Inspector.

- Construction Fence: Maintain.
- Erosion Control Blanket: Place on disturbed slopes steeper than 4:1 after the work is completed on that slope.
- Inlet protection: Maintain.
- Culvert Inlet Protection: Maintain.
- Check Dam: Maintain.
- Reinforced rock berms: Maintain.
- Sediment control log: Maintain.
- Surface roughening: Roughen surfaces to receive seeding and mulch.
- Seeding and mulching: Install. Avoid excess watering and placing of fertilizers and chemicals.
- Silt fence: Adjust if necessary and maintain.
- Temporary Slope Drain: Maintain.
- Vehicle tracking control: Remove, if not removed in Paving phase.

g) Final Stabilization

The following erosion control measures from the previous stages shall be maintained and continue until Final Stabilization is reached. At that time, with the approval of the Town Erosion Control Inspector these control measures may be removed. Refer to Final Stabilization section for requirements.

- Inlet protection
- Check dams
- Drainage Swale: This measure shall be maintained along the top of embankment at the detention basin to minimize the chance of stormwater runoff flowing down the detention basin slope.
- Sediment control log
- Silt fence
- Temporary Slope Drain: This measure shall be maintained until the upstream areas are developed and concentrated flows are otherwise conveyed to the bottom of the detention basin.

The site is planned to be permanently stabilized with either pavement, buildings, permanent landscaping, seed & mulch and sod in areas.

The Qualified Stormwater Manager shall amend the SWMP if necessary and as required, refer to Section I.

3. Materials handling and spill prevention:

The Qualified Stormwater Manager will inspect daily to ensure proper use and disposal of materials on-site including exposed building materials, paints, solvents, fertilizers, chemicals, sanitary waste material, trash and equipment maintenance or fueling procedures. All materials stored on-site will be stored in a neat and orderly manner in the original containers with the original manufacturer's label, and if possible under a roof or other enclosure to prevent contact with stormwater. Chemicals should be stored within berms or other secondary containment devices to prevent leaks and spills from contacting stormwater runoff. Before disposing of the container, all of a product will be used up whenever possible and manufacture's recommendations for proper disposal will be followed according to state and local regulations.

Material and equipment necessary for spill cleanup will be kept in the material storage area on-site. Manufacturer's recommendations for spill cleanup will be posted and site personnel will be made aware of the procedures along with the location of the information and cleanup supplies.

The contractor shall have spill prevention and response procedures that include the following:

- a) Notification procedures to be used in the event of an accident. At the very least, the Qualified Stormwater Manager should be notified. Depending on the nature of the spill and the material involved, the Colorado Department of Public Health and Environment (24-hour number for environmental hazards and chemical spills and releases is 1-877-518-5608.), downstream water users or other agencies may also need to be notified.
- b) Instructions for clean-up procedures and identification of spill kit location(s).
- c) Provisions for absorbents to be made available for use in fuel areas and for containers to be available for used absorbents
- d) Procedures for properly washing out concrete truck chutes and other equipment in a manner and location so that the materials and wash water cannot discharge from the site and never into a storm drain system or stream.
- 4. Dedicated concrete or asphalt batch plants:

No dedicated concrete or asphalt batch plants will be used.

5. Vehicle tracking control:

Off-site vehicle tracking of sediment shall be minimized and is as shown on the SWMP Site Map. Vehicle Tracking Control shall be installed at the construction access points. The contractor shall minimize the number of construction access points to reduce the amount of sediment tracked from the site. Streets shall be kept clean and free of mud, soil and construction waste. Street sweeping or other acceptable methods shall be used to prevent sediment from being washed from the project site. Streets shall not be washed down with water. Street cleaning operations shall occur if necessary or as directed by the Town.

6. Waste management and disposal including concrete washout:

A concrete washout area is specified on the SWMP. Concrete wash water shall not be discharged to state waters, to storm sewer systems or from the site as surface runoff.

The washout area shall be a shallow excavation with a small perimeter berm to isolate concrete truck washout operations. At the end of construction, all concrete shall be removed from the site and disposed of at an approved waste site. Signs shall be placed at the washout to clearly indicate the concrete washout area to operators of concrete trucks and pump rigs. Refer to the standard detail for requirements.

All construction site waste both liquid and solid must be contained in approved waste containers and disposed of off-site according to state and local regulations. Portable sanitary facilities shall be provided at the site throughout the construction phase and must comply with state and local sanitary or septic system.

7. Groundwater and stormwater dewatering:

Groundwater dewatering is not anticipated on the site. Stormwater dewatering may be required on the site during construction of structure foundations. If groundwater or stormwater dewatering is required, locations and practices to be implemented to control stormwater pollution from excavations, etc. must be noted on the SWMP. A separate CDPHE construction discharge (dewatering) permit may be required for groundwater dewatering and shall be obtained by the Qualified Stormwater Manager. Construction dewatering water cannot be discharged to surface water or to storm sewer systems without separate permit coverage. The discharge of Construction Dewatering water to the ground, under specific conditions, may be allowed by the Stormwater Construction Permit when appropriate control measures are implemented. Refer to USDCM Volume III (MHFD) for Town acceptable means of dewatering.

V. FINAL STABILIZATION AND LONG TERM STORMWATER MANAGEMENT

"Final stabilization is reached when all ground surface disturbing activities at the site have been completed and uniform vegetative cover has been established with an individual plant density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed." When vegetation is used to achieve final stabilization, the 70% vegetation requirement applies to a uniform plant density, which means that all areas of the site that rely on a vegetative cover to achieve stabilization must be uniformly vegetated. The contractor will be responsible for providing the documentation to make this comparison to the Town and the State of Colorado, Water Quality Control Division. The stormwater permit allows the permittee to use alternatives to vegetation to achieve final stabilization. All alternatives to vegetation must meet specific criteria to be considered equivalent to vegetation, specifically: stabilization must be permanent, all disturbed areas must be stabilized and alternatives must follow good practices.

Temporary seeding for the project site shall include seeding and mulching. For the application methods, soil preparation and seeding and mulching requirements, refer to SWMP Drawings.

Management of storm water after completion of construction will be accomplished by utilizing the practices listed below.

- Upon completion of construction, the site shall be inspected to ensure that all equipment, waste materials and debris have been removed.
- The site will be inspected to make certain that all graded surfaces have been paved, landscaped or seeded with an appropriate ground cover.
- All silt fence, inlet protection, sediment logs, rock socks, drainage swales, slope drains, etc. and
 all other control practices and measures that are to remain after completion of construction will
 be inspected to ensure their proper functioning.
- The contractor shall remove erosion control measures that are not required to remain.

After all construction activities are completed on the site, but final stabilization has not been achieved, the contractor shall make a thorough inspection of the stormwater management system at least once every month.

The contractor shall be responsible for maintaining the control measures and stormwater controls in good working order and shall also be responsible for the costs incurred until such time as final stabilization is reached. Once final stabilization has been achieved the contractor shall be responsible for removal of the erosion control measures.

Should any of the erosion control measures become in disrepair prior to the establishment of the native or natural erosion control measures, the Contractor is responsible for the cost of such maintenance. The Contractor is also responsible for the clean-up of offsite areas affected by any sediment that may leave the site. Control of erosion from areas disturbed by utility or building construction will be the responsibility of the respective contractor. All erosion control measures shown on the plan shall be installed and maintained in accordance with Best Management Practices.

Inactivation of permit coverage: Coverage under the Stormwater Construction Permit may be inactivated by the permittee when the site has attained final stabilization, <u>all temporary erosion and sediment control measures have been removed</u>, and all components of the SWMP are complete.

VI. RECOMMENDED INSPECTION AND MAINTENANCE PROCEDURES

A. Person Responsible for Conducting Inspections

The person(s) inspecting the site may be on the permittee's staff or a third party hired to conduct stormwater inspections under the direction of the permittee(s). The permittee is responsible for ensuring that the inspector is a qualified stormwater manager.

B. Inspection Frequency

Permittees must conduct the first site inspection within seven calendar days of the commencement of construction activities on site. Permittees must conduct site inspections in accordance with one of the following minimum frequencies:

- a) After installation of the control measure.
- b) At least one inspection every 7 calendar days.
- c) At least one inspection every 14 calendar days, if post-storm event inspections are conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosion. Post-storm inspections may be used to fulfill the 14-day routine inspection requirement.
- d) When site conditions make the schedule required in this section impractical, the permittee may petition the Division to grant an alternate inspection schedule. The alternative inspection schedule may not be implemented prior to written approval by the division and incorporation into the SWMP.
- e) A more frequent inspection schedule may be necessary to ensure that control measures continue to operate as needed to comply with the permit.
- Permittees may conduct inspections on either the 7 day or 14 day schedule, and may switch between these schedules as appropriate for the site. The inspection schedule must be noted on the inspection reports, as noted below.
- When site conditions make the required schedule impractical, the permittee may petition the division to grant an alternate inspection schedule. The alternative

inspection schedule may not be implemented prior to written approval by the division and incorporation into the plan.

- Permittees must conduct site inspections at least once every 7 calendar days for sites that discharge to a water body designated as an Outstanding Water by the Water Quality Control Commission.
 - 1. Consult State Permit No. COR-400000 for alternate inspection requirements at temporarily idle sites, at completed sites or for winter conditions.
 - 8. Refer to the Control Measure Details for the maintenance procedures associated with each control measure. The details may indicate a more frequent inspection schedule

C. Inspection Procedures.

Inspect the following areas for evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system, or discharging to state waters:

- a) Construction site perimeter;
- b) All disturbed areas;
- c) Designated haul routes;
- d) Material and waste storage areas exposed to precipitation;
- e) Locations where stormwater has the potential to discharge offsite; and
- f) Locations where vehicles exit the site.
- 1. Inspections must include the following requirements:
 - a) Visually verify whether all implemented control measures are in effective operational condition and are working as designed in their specifications to minimize pollutant discharges.
 - b) Determine if there are new potential sources of pollutants.
 - c) Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges.
 - d) Identify all areas of non-compliance with the Construction Stormwater Permit requirements and, if necessary, implement corrective action as described below.
- 9. <u>Inspection Checklist/Report</u>. The Permittee must document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage. These records must be made available to CDPHE, the Town or EPA upon request. The Qualified Stormwater Manager should record the inspection results on a site-specific standardized inspection report to be maintained and kept on the construction site. The CDPHE Construction Stormwater Site Inspection Report form is provided in the Appendix. Descriptions of corrective actions for any item, date(s) of corrective actions taken, and measures taken to prevent future violations, including requisite changes to the SWMP, as necessary.

D. Control Measure Operation and Maintenance

The Qualified Stormwater Manager is responsible for operation and maintenance of construction control measures. The Qualified Stormwater Manager will inspect the site per inspection and monitoring protocol outlined above and in the control measure details and

will make any necessary repairs to construction control measures immediately after a defect or other need for repair is discovered. The project site and the adjacent streets impacted by the construction shall be kept neat, clean and free of debris. The erosion control measures and facilities will be maintained in good working order until final stabilization. Any items that are not functioning properly or are inadequate will be promptly repaired or upgraded. Records of inspections must be kept and be available for review by the State of Colorado Water Quality Control Division or the Town.

E. Corrective Actions

The permittee must assess the adequacy of control measures at the site, and the need for changes to those control measures, to ensure continued effective performance. When an inadequate control measure is identified (i.e., new or replacement control measures become necessary), the following corrective action requirements apply. The permittee is in noncompliance with the Construction Stormwater Permit until the inadequate control measure is replaced or corrected and returned to effective operating condition.

- The permittee must take all necessary steps to minimize or prevent the discharge of pollutants, until a control measure is implemented and made operational and/or an inadequate control measure is replaced or corrected and returned to effective operating condition. If it is infeasible to install or repair of control measure immediately after discovering the deficiency, the following information must be documented and kept on record:
 - o Describe why it is infeasible to initiate the installation or repair immediately; and
 - o Provide a schedule for installing or repairing the control measure and returning it to an effective operating condition as soon as possible.
- If applicable, the permittee must remove and properly dispose of any unauthorized release or discharge (e.g., discharge of non-stormwater, spill, or leak not authorized by the Construction Stormwater Permit). The permittee must also clean up any contaminated surfaces to minimize discharges of the material in subsequent storm events.

F. Other Required Noncompliance Notifications

The permittee shall report the following circumstances or ally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances:

- Circumstances leading to any noncompliance which may endanger health or the
 environment regardless of the cause of the incident (these types of circumstances
 would primarily result from the discharge of pollutants in violation of the
 Construction Stormwater Permit);
- Circumstances leading to any unanticipated bypass which exceeds any effluent limitations in the Construction Stormwater Permit;
- Circumstances leading to any upset which causes an exceedance of any effluent limitation in the Construction Stormwater Permit;
- Daily maximum violations for any of the pollutants limited by Part I of the CDPS General Permit Stormwater Discharges Associated with Construction Activity. This includes any toxic pollutant or hazardous substance or any pollutant specifically

identified as the method to control any toxic pollutant or hazardous substance (these types of circumstances would primarily result from an exceedance of a numeric effluent).

VII. REFERENCES

- 1) <u>CDPS General Permit: Stormwater Discharges Associated with Construction Activity Permit No. COR-400000</u>. Colorado Department of Public Health and Environment.
- 2) <u>CDPHE, Stormwater Discharges Associated with Construction Activity, Stormwater Management Plan Preparation Guidance</u>, prepared by CDPHE.
- 3) <u>Volume 1 and 2, City of Colorado Springs, Drainage Criteria Manual</u>, by City of Colorado Springs, current edition.
- 4) <u>Volume 3, Urban Storm Drainage Criteria Manual</u>, by Urban Drainage and Flood Control District, current edition.

APPENDIX TABLE OF CONTENTS

APPENDIX A

Vicinity Map

FIRM Panel

NRCS Soils Map

APPENDIX B

**Permittee Provided: Application for CDPS Stormwater Discharge Associated with Construction Activities Permit

APPENDIX C

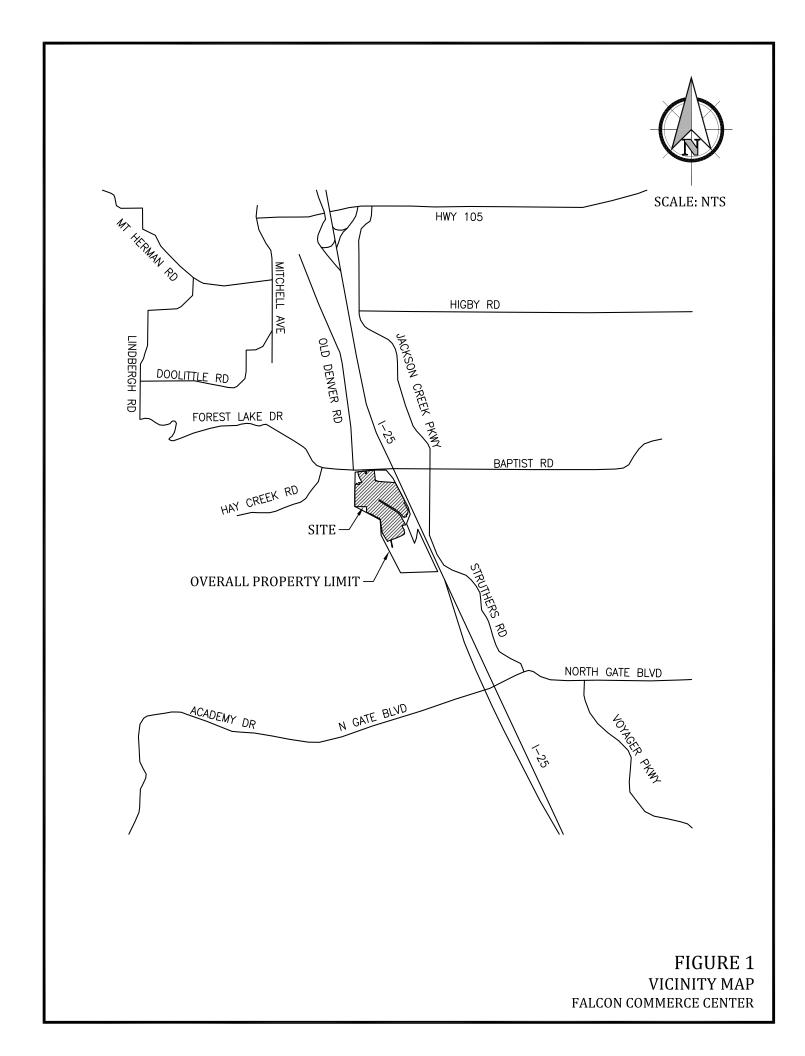
 $\frac{**Permittee\ Provided}{*}: CDPS\ Stormwater\ Discharge\ Associated\ with\ Construction\ Activities\ Permit$

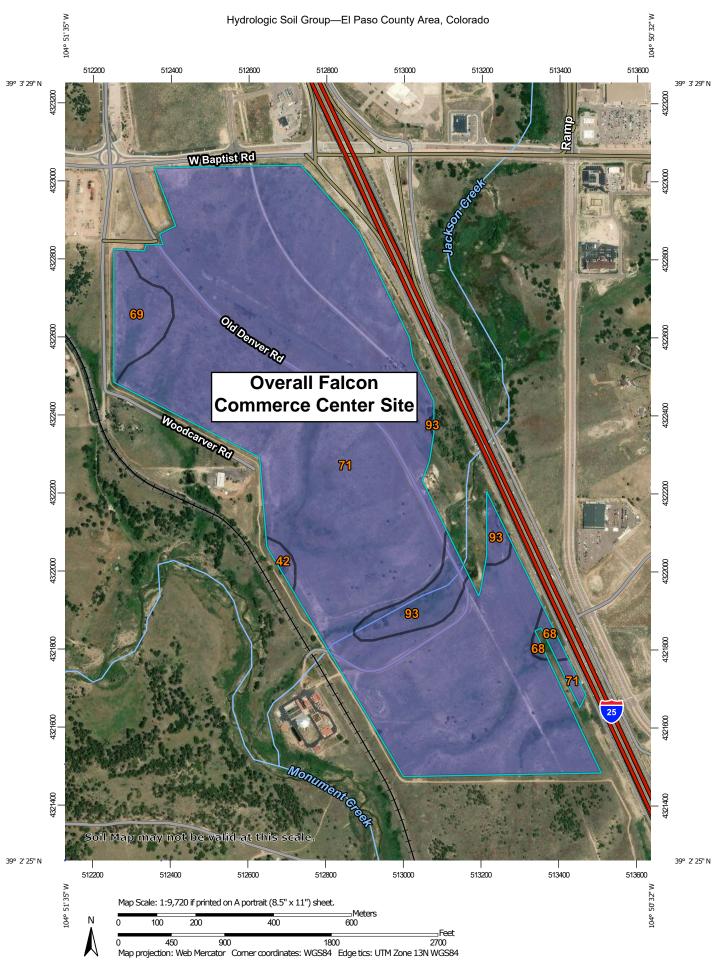
APPENDIX D

CDPHE Construction Stormwater Site Inspection Report

APPENDIX A

Vicinity Map FIRM Panel NRCS Soils Map





MAP LEGEND MAP INFORMATION The soil surveys that comprise your AOI were mapped at Area of Interest (AOI) С 1:24.000. Area of Interest (AOI) C/D Soils Warning: Soil Map may not be valid at this scale. D Soil Rating Polygons Enlargement of maps beyond the scale of mapping can cause Not rated or not available Α misunderstanding of the detail of mapping and accuracy of soil **Water Features** line placement. The maps do not show the small areas of A/D contrasting soils that could have been shown at a more detailed Streams and Canals Transportation B/D Rails ---Please rely on the bar scale on each map sheet for map measurements. Interstate Highways C/D Source of Map: Natural Resources Conservation Service **US Routes** Web Soil Survey URL: D Major Roads Coordinate System: Web Mercator (EPSG:3857) Not rated or not available -Local Roads Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts Soil Rating Lines Background distance and area. A projection that preserves area, such as the Aerial Photography 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: El Paso County Area, Colorado Survey Area Data: Version 16, Sep 10, 2018 Soil map units are labeled (as space allows) for map scales 1:50.000 or larger. Not rated or not available Date(s) aerial images were photographed: Jul 4, 2010—Oct 16, 2017 **Soil Rating Points** The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background A/D imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident. B/D

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
42	Kettle-Rock outcrop complex	В	1.1	0.5%
68	Peyton-Pring complex, 3 to 8 percent slopes	В	1.3	0.6%
69	Peyton-Pring complex, 8 to 15 percent slopes	В	7.8	3.5%
71	Pring coarse sandy loam, 3 to 8 percent slopes	В	205.4	91.5%
93	Tomah-Crowfoot complex, 8 to 15 percent slopes	В	8.7	3.9%
Totals for Area of Inter	est		224.4	100.0%

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

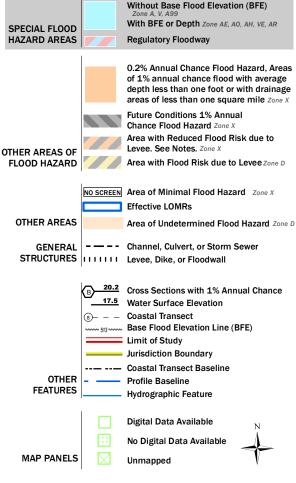
Tie-break Rule: Higher

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT



9

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/18/2019 at 11:07:10 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



National Flood Hazard Layer FIRMette Legend **FEMA** SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT Without Base Flood Elevation (BFE) With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD **HAZARD AREAS** 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 **Overall Falcon** Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D **Commerce Center Site** NO SCREEN Area of Minimal Flood Hazard Zone X Effective LOMRs OTHER AREAS Area of Undetermined Flood Hazard Zone D **GENERAL** - -- - Channel, Culvert, or Storm Sewer STRUCTURES | LILLIL Levee, Dike, or Floodwall TOWNOF MONUMENT ARE NOT MINIMAL FLOOD HAZARD Cross Sections with 1% Annual Chance 080064 Water Surface Elevation **Coastal Transect** Base Flood Elevation Line (BFE) Limit of Study 11S R67W S035 T1 5 R67W S036 Jurisdiction Boundary **Coastal Transect Baseline** OTHER **Profile Baseline** 08041 C0286 G **FEATURES** Hydrographic Feature eff. 12/7/2018 Digital Data Available No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards FLOGSWAY The flood hazard information is derived directly from the EL & SOCOUNTY authoritative NFHL web services provided by FEMA. This map was exported on 7/18/2019 at 11:10:36 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

USGS The National Map: Orthoimagery. Data refreshed April, 2019.

1:6,000

Feet

2,000

250

500

1,000

1,500

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for

regulatory purposes.





APPENDIX D CDPHE Construction Stormwater Site Inspection Report

CONSTRUCTION STORMWATER SITE INSPECTION REPORT

Facility Name			Permittee			
Date of Inspection			Weather Conditions			
Permit Certification #			Disturbed Acreage			
Phase of Construction			Inspector Title			
Inspector Name						
Is the above inspector a qualified storm					YES	NO
(permittee is responsible for ensuring t	hat the ir	spector	is a qualified stormwater r	nanager)		
INSPECTION FREQUENCY						
Check the box that describes the minim	num inspe	ection fre	equency utilized when cond	ducting each insp	ection	
At least one inspection every 7 calenda	•					
At least one inspection every 14 calendary					Г	7
24 hours after the end of any precipitat	tion or sn	owmelt	event that causes surface e	erosions	L	_
 This is this a post-storm event i 	nspection	n. Event	Date:			
Reduced inspection frequency - Include	site cond	ditions t	hat warrant reduced inspec	ction frequency	Г	
Post-storm inspections at temporary	orarily idl	e sites			F	<u>-</u>
 Inspections at completed sites/ 						<u>-</u>
Winter conditions exclusion	area					
Have there been any deviations from the	ne minimu	ım inspe	ection schedule?		YES	NO
If yes, describe below.					Ш	
INSPECTION REQUIREMENTS*						
 i. Visually verify all implemented co designed in the specifications 	ontrol me	asures a	re in effective operational	condition and ar	e working	as
ii. Determine if there are new poter	itial sourc	es of no	Hutants			
iii. Assess the adequacy of control materials				a new or modifie	d control	measures
to minimize pollutant discharges	cusui es u	t the site	e to identify dreas requiring	g new or mounte	a control	measures
iv. Identify all areas of non-complian	ce with t	he perm	it requirements, and if neo	essary, impleme	nt correct	ive action
*Use the attached Control Measures		•				
Corrective Action forms to document re				-		-
To the second se		1113 4336.	sometic that this en entire in	inamice or c		300.01.3
AREAS TO BE INSPECTED						
Is there evidence of, or the potential f				ooundaries, ente	ring the st	tormwater
drainage system or discharging to state	waters a	t the fol				
			If "YES" describe discharç			
	NO	YES	Document related mainte			
			and corrective actions	•	Control	Measures
Construction site perimeter			Requiring Corrective Act	tion form		
All disturbed areas						
Designated haul routes						
<u> </u>		Ш				
Material and waste storage areas exposed to precipitation						
Locations where stormwater has the						
potential to discharge offsite						
Locations where vehicles exit the site						
Other:		1 Ш				

CONTROL MEASURES REQUIRING ROUTINE MAINTENANCE

Definition: Any control measure that is still operating in accordance with its design and the requirements of the permit, but requires maintenance to prevent a breach of the control measure. These items are not subject to the corrective action requirements as specified in Part I.B.1.c of the permit.

Are there control measures requiring maintenance?	NO	YES	
Are there control measures requiring maintenance?			If "YES" document below

Date Observed	Location	Control Measure	Maintenance Required	Date Completed

INADEQUATE CONTROL MEASURES REQUIRING CORRECTIVE ACTION

Definition: Any control measure that is not designed or implemented in accordance with the requirements of the permit and/or any control measure that is not implemented to operate in accordance with its design. This includes control measures that have not been implemented for pollutant sources. If it is infeasible to install or repair the control measure immediately after discovering the deficiency the reason must be documented and a schedule included to return the control measure to effective operating condition as possible.

Are there inadequate control measures requiring corrective action?		YES	
			If "YES" document below
Are there additional control measures needed that were not in place at the time of inspection?	NO	YES	
Are there additional control measures needed that were not in place at the time of inspections			If "YES" document below

Date Discovered	Location	Description of Inadequate Control Measure	Description of Corrective Action	Was deficiency corrected when discovered? YES/NO if "NO" provide reason and schedule to correct	Date Corrected

REPORTING REQUIREMENTS

The permittee shall report the following circumstances or ally within twenty-four (24) hours from the time the permittee becomes aware of the circumstances, and shall mail to the division a written report containing the information requested within five (5) working days after becoming aware of the following circumstances. The division may waive the written report required if the oral report has been received within 24 hours.

All Noncompliance Requiring 24-Hour Notification per Part II.L.6 of the Permit				
a. Endangerment to Health or the Environment				
Circumstances leading to any noncompliance which may endanger health or the environment regardle	ess of the ca	use of th	ne incident (See Part II.L.6.a	
of the Permit)				
This category would primarily result from the discharge of pollutants in violation of the permit				
 b. Numeric Effluent Limit Violations Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part Daily maximum violations (See Part II.L.6.d of the Permit) Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This numeric effluent limits are included in a permit certification. 	rt II.L.6.c of	the Per	mit)	
Use there have an incident of nancompliance requiring 24 hour notification?				
Has there been an incident of noncompliance requiring 24-hour notification?				

					res document below
Date and		Т	T	Date and Time of	<u> </u>
Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	24 Hour Oral Notification	Date of 5 Day Writter Notification *

^{*}Attach copy of 5 day written notification to report. Indicate if written notification was waived, including the name of the division personnel who granted waiver.

After adequate corrective action(s) and maintenance have been taken, or where a report does not identify any incidents requiring corrective action or maintenance, the individual(s) designated as the Qualified Stormwater Manager, shall sign and certify the below statement:							
"I verify that, to the best of my knowledge and belief, all corrective action and maintenance items identified during the inspection are complete, and the site is currently in compliance with the permit."							
Name of Qualified Stormwater Manager	Title of Qualified Stormwater Manager						
Signature of Qualified Stormwater Manager	Date						
Notes/Comments							