

**EARLY STORMWATER MANAGEMENT PLAN
FOR
ESTATES AT CATHEDRAL PINES,
EL PASO COUNTY, COLORADO**

Prepared For (Applicant):

**Gregg & Elaine Cawfield
Villagree Development LLC**
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Prepared By:

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Contact: Ryan Burns

Qualified Stormwater Manager:

To Be Determined

Contractor:


To Be Determined

February, 2024

**El Paso County PCD File No.:
EGP232**

ENGINEER OF RECORD:

The Stormwater Management Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. Said Plan has been prepared according to the criteria established by the County and State for Stormwater Management Plans.



2/14/24

Ryan Burns, P.E.

Date

Registered Professional Engineer

State of Colorado No. 0054412

For and on behalf of JR Engineering, LLC.



REVIEW ENGINEER:

The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.

Review Engineer

Date

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1. Applicant / Contact Information

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SWMP Administrator: To Be Determined

Contractor: To Be Determined

2. Site Description and Location

The proposed Estates at Cathedral Pines development, hereby known as “the site”, is located within the southeast quarter of Section 2, Township 12 South, Range 66 West of the 6th Prime Meridian, El Paso County, Colorado. The proposed development is 35.09 acres containing approximately 8 – 2.7 to 4.1 acre single-family lots, 2.5 acres of open space, and associated infrastructure. The site is bounded on the east by Winslow Drive, by Cathedral Pines Subdivision Filing No. 1 to the east and north, properties at 13855 Highway 83 and 13580 Bridle Bit Road to the west, and by Falcon Forest Subdivision Filing No. 2 to the south. A vicinity map of the area is presented in Appendix A.

The site is currently covered by an existing forested area with a large portion that has suffered damage from a fire. There is an existing grove of trees in the middle of the property that are healthy with little to no fire damage. The proposed development will save as many healthy trees as possible. Multiple natural drainage channels run through the site and range from poorly-defined to well-defined. The existing ground cover is sparse vegetation and open space with slopes that range from 3% to 30% generally draining from east to west.

Site details:

- a. Estimated area to undergo disturbance: 5.9 acres
 - i. No off-site grading is proposed.
- b. Soil Type: Soils located within the site as shown on the USDA Natural Resources Conservation Service Soil Survey Map are kettle gravelly loamy sand. These soils

are characterized as Hydrologic Soil Group B, which have a moderate infiltration rate when thoroughly wet and have a moderate rate of water transmission. A soils map is included in Appendix A of this report.

- c. Soil erosion potential and potential impacts upon discharge:
 - i. Conduct land-disturbing activities in a manner that effectively reduces accelerated soil erosion and reduces sediment movement and deposition off site.
 - ii. Schedule construction activities to minimize the total amount of soil exposed at any given time.
 - iii. Establish temporary or permanent cover on areas that have been disturbed as soon as practical after grading is completed.
 - iv. Design and construct temporary or permanent facilities to limit the flow of water to non-erosive velocities for the conveyance of water around, through or from the disturbed area.
 - v. Remove sediment caused by accelerated soil erosion from surface runoff water before it leaves the site.
 - vi. Stabilize disturbed areas with permanent vegetative cover and provide permanent storm water quality control measures for the post-construction condition.
- d. Existing vegetation: Native meadow grasses and tree grove (approximately 60% coverage), determined using aerial inspection.
- e. Location and description of potential pollution sources: Potential sources of pollution include: Onsite waste management, portable toilets, onsite vehicle fueling, and outdoor storage, vehicle tracking pads, dust management, and temporary stock pile. The locations of these sources are shown in the GEC plans in Appendix C or will be determined by the contractor.
 - i. Non-industrial waste sources such as worker trash and portable toilets – Clean up litter and debris from the construction site daily and worker trash receptacles will be located by entrance/exit for easy removal/replace access. All portable toilets should be kept a minimum of 50 feet from a storm drain inlet or drainage course and secured to the ground. Toilets will be cleaned regularly and inspected daily for any spills or leaks. Waste disposal bins will be reasonably maintained at regular intervals to check for leaks and overflow capacity, and will be emptied routinely to prevent overflow.
 - ii. 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 notified.
 - iii. Vehicle, equipment maintenance, and fueling – all designated fueling and maintenance areas shall be located a minimum of 100 feet from any drainage course whenever possible. If the fueling area is located on a pervious surface, the area shall be covered with a non-pervious lining so as to prevent soil contamination by way of infiltration. Any spillage shall be cleaned up immediately.
 - iv. Raw materials, intermediate products, byproducts, process residuals,

Finished products, containers, and materials storage areas can be sources of pollutants such as metals, oils and grease, sediment and other contaminants. Where practical, conduct operations indoors. Where impractical, select an appropriate temporary or permanent covering to reduce exposure of materials to rainfall and runoff.

- v. Vehicle tracking controls (VTC) provide stabilized construction site access where vehicles exit the site onto paved public roads. An effective vehicle tracking control helps remove sediment (mud or dirt) from vehicles, reducing tracking onto the paved surface. With aggregate vehicle tracking controls, ensure rock and debris from this area do not enter the public right-of-way. Inspect the VTC for degradation and replace aggregate or material used for a stabilized entrance/exit as needed.
- vi. Wind erosion and dust control BMPs help to keep soil particles from entering the air as a result of land disturbing construction activities. Dust control measures should be used on any site where dust poses a problem to air quality. Dust control is important to control for the health of construction workers and surrounding waterbodies.
- vii. Stockpile management should be used when soils or other erodible materials are stored at the construction site. Special attention should be given to stockpiles in close proximity to natural or manmade storm systems. Soils stockpiled for an extended period (typically for more than 30 days) mulched with a temporary grass cover once the stockpile is placed (typically within 21 days). An area that will remain in an interim state for over 60 days must also be seeded. Use of mulch only or a soil binder is acceptable if the stockpile will be in place for a more limited time period (typically 30-60 days). Refer to DCM Vol 2 – Section 3.2- General principles - Basic Grading, Erosion and Stormwater Quality Requirements and General Prohibitions #16 for more information.
- f. Spill prevention and pollution controls for dedicated batch plants: Not applicable for this site since there will be no dedicated batch plants.
- g. Street sweeping or vacuuming should be conducted when there is noticeable sediment accumulation on roadways adjacent to the construction site. Typically, this will be concentrated at the entrance/exit to the construction site. Well-maintained stabilized construction entrances and vehicle tracking controls can help reduce the necessary frequency of street sweeping and vacuuming.
- h. Location and description of anticipated non-stormwater components of discharge: Another potential source of non-stormwater discharge could be the irrigation of temporary seeding (TS). Irrigation will be kept at a rate so as to not create runoff.
- i. Existing basin drainage patterns are generally from east to west by way of sheet flow.
- j. Receiving water: Runoff from the project will be treated and released through an outlet structure pipe that will direct the water into Black Squirrel Creek. The water will follow the historic path and continue flowing southwest.
- k. There are no streams that cross the project site.

3. Proposed Sequence of Major Activities

The project will follow standard construction sequences for construction, i.e., clearing and grubbing, over excavation, and over lot grading. 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 subcontractors as they see fit, but the ultimate responsibility for implementing these controls and their proposed function at each phase of the project remains with the contractor. The order of major activities (with estimated completion dates) will be as follows:

1. Install VTC and other perimeter soil erosion control measures (Winter 2023).
2. Clear and rough grade for improvements (Winter 2023).
3. Install rough cut street control (Winter 2023).
4. Place Seed and Mulch (Summer 2024).
5. Clean up and final stabilization (Summer 2024).

4. BMPs for Stormwater Pollution Prevention

See GEC plans in Appendix C for BMP locations and detail sheets.

a. Erosion and Sediment Controls

i. Structural BMPs:

1. Sediment basins (SB) to collect runoff before it enters receiving waters (initial, interim)
2. Silt fence (SF) along downstream limits of disturbed areas to filter sediment from runoff (initial, interim)
3. Stabilized staging area (SSA) near site entrance to consolidate construction equipment in a stabilized location (initial, interim)
4. Construction fence (CF) to identify limits of construction (LOC) where silt fence is not needed (initial, interim)
5. Vehicle tracking control (VTC) at site entrance to prevent sediment from leaving the site via vehicle tires (initial, interim)
6. Rough Cut Street Control (RCS) is material placed after a road has been cut and before base has been installed for paving (initial)
7. Temporary stock pile (TSP) to consolidate materials such as topsoil in a controlled area bounded by silt fence (interim)
8. Inlet protection (IP) around culvert entrances (interim, final)
9. Outlet protection (OP) at culvert outlets (interim, final)
10. Temporary Swale (TSW) to Convey runoff to sediment basins (initial, interim)
11. Check Dams (CD) in swales to slow and filter sediment from runoff (initial, interim)
12. Turf Reinforcement Mat (TRM) in swales for vegetation reinforcement from water or wind (initial)

ii. Non-structural BMPs:

1. Mulching (MU) to stabilize soils and promote seed growth (final)
 2. Temporary seeding (TS) to stabilize disturbed areas (final)
- b. Materials Handling and Spill Prevention
- i. General Materials Handling Practices:
 1. Potential pollutants shall be stored and used in a manner consistent with the manufacturer's instructions in a secure location. To the extent practical, material storage areas should not be located near storm drain inlets and should be equipped with covers, roofs, or secondary containment as required to prevent storm water from contacting stored materials. Chemicals that are not compatible shall be stored in segregated areas so that spilled materials cannot combine and react.
 2. Disposal of materials shall be in accordance with the manufacturer's instructions and applicable local, state, and federal regulations.
 3. Materials no longer required for construction shall be removed from the site as soon as possible.
 4. Adequate garbage, construction waste, and sanitary waste handling and disposal facilities shall be provided as necessary to keep the site clear of obstruction and BMPs clear and functional.
 - ii. Specific Materials Handling Practices
 1. All pollutants, including waste materials and demolition debris, that occur onsite during construction shall be handled in a way that does not contaminate storm water.
 2. All chemicals including liquid products, petroleum products, water treatment chemicals, and wastes stored onsite shall be covered and protected from vandalism.
 3. Maintenance, fueling, and repair of all equipment and vehicles involving oil changes, hydraulic system drain down, degreasing operations, fuel tank drain down and removal, and other activities which may result in the accidental release of contaminants, shall be conducted under cover during wet weather and on an impervious surface to prevent release of contaminants onto the ground. Materials spilled during maintenance operations shall be cleaned up immediately and properly disposed of.
 4. Wheel wash water shall be settled and discharged onsite by infiltration.
 5. Application of agricultural chemicals, including fertilizers and pesticides, shall be conducted in a manner and at application rates that will not result in loss of chemical to storm water runoff. Follow manufacturer's recommendations for application rates and procedures.
 6. pH-modifying sources shall be managed to prevent contamination of runoff and storm water collected onsite. The most common sources of pH-modifying materials are bulk cement, cement kiln dust (CKD), fly ash, new concrete washing and curing waters, waste streams generated from concrete grinding and sawing, exposed aggregate

processes, and concrete pumping and mixer washout waters.

iii. Spill Prevention and Response Procedures

1. The primary objective in responding to a spill is to quickly contain the material(s) and prevent or minimize their migration into storm water runoff and conveyance systems. If the release has impacted onsite storm water, it is critical to contain the released materials onsite and prevent their release into receiving waters.
2. Spill Response Procedures:
 - a. Notify site superintendent immediately when a spill, or the threat of a spill, is observed. The superintendent shall assess the situation and determine the appropriate response.
 - b. If spills represent an imminent threat of escaping onsite facilities and entering the receiving waters, site personnel shall respond immediately to contain the release and notify the superintendent after the situation has stabilized.
 - c. The site superintendent, or his/her designee, shall be responsible for completing a spill reporting form and for reporting the spill to the appropriate agency.
 - d. Spill response equipment shall be inspected and maintained as necessary to replace any materials used in spill response activities.
3. Spill kits shall be on-hand at all fueling sites. Spill kit location(s) shall be reported to the SWMP administrator.
4. Absorbent materials shall be on-hand at all fueling areas for use in containing inadvertent spills. Containers shall be on-hand at all fueling sites for disposal of used absorbents.
5. Recommended components of spill kits include the following:
 - a. Oil absorbent pads (one bale)
 - b. Oil absorbent booms (40 feet)
 - c. 55-gallon drums (2)
 - d. 9-mil plastic bags (10)
 - e. Personal protective equipment including gloves and goggles
6. Notification procedures:
 - a. In the event of an accident or spill, the SWMP administrator shall be notified.
 - b. Depending on the nature of the spill material involved, the Colorado Department of Public Health and Environment (24-hour spill reporting line: 887-518-5608), downstream water users, or other agencies may also need to be notified.
 - c. Any spill of oil which 1) violates water quality standards, 2) produces a "sheen" on a surface water, or 3) causes a sludge or emulsion, or any hazardous substance release, or hazardous waste release which exceeds the reportable quantity, must be reported immediately by telephone to the National Response Center Hotline at (800) 424-8802.

5. Final Stabilization and Long-Term Stormwater Management

- a. Permanent seeding will be provided to achieve long-term stabilization of the site.
- b. Seed Mix: Sand dropseed, or approved equal.
- c. Seeding Application Rate: Drill seed 0.25" to 0.5" into the soil. In small areas not accessible to a drill, hand broadcast at double the rate and rake 0.25" to 0.5" into the soil. Apply seed at the following rates:
 - i. Dryland: 20-25 lbs/acre
 - ii. Irrigated: 40 lbs/acre
- d. Soil stabilization Practices:
 - i. Mulching Application: Apply 1-1/2 tons of certified weed free hay per acre mechanically crimped into the soil in combination with an organic mulch tackifier. On slopes and ditches requiring a blanket, the blanket shall be placed in lieu of much and mulch tackifier.
- e. Soil Conditioning and Fertilization Requirements:
 - i. Soil conditioner, organic amendment shall be applied to all seeded areas at 3 CY / 1000 SF.
 - ii. Fertilizer shall consist of 90% fungal biomass (mycelium) and 10% potassium-magnesia with a grade of 6-1-3 or approved equal. Fertilizer shall be applied as recommended by seed supplier.
- f. Final stabilization is reached when all soil-disturbing activities at the site have been completed, and uniform vegetative cover has been established with an individual plan density of at least 70 percent of pre-disturbance levels, or equivalent permanent, physical erosion reduction methods have been employed.
 - i. The overall project does not solely rely on another entity or control measures for final stabilization or permanent water quality or detention.
- g. Final Stabilization and Long-term Stormwater Quality:
 - i. After final stabilization occurs, Stormwater Quality of the site will be maintained via the use of full-spectrum ponds, all developed flows on site will be routed to the pond and treated.
 - 1. Mowing and Trimming shall occur on a regular basis in the pond and at the spillway.
 - ii. Onsite flows will also be treated via grass swales that route flows present in open spaces to the storm sewer system which eventually outfalls to the full-spectrum pond.

6. Inspection and Maintenance

- a. Inspection Schedules:
 - i. The contractor shall inspect BMPs once every 14 days at a minimum, and immediately (within 24 hours) after any precipitation or snowmelt event that causes surface erosion (i.e. that results in storm water running across the ground), to ensure that BMPs are maintained in effective operating condition.
 - ii. The contractor will be responsible for any re-excavation of sediment and debris that collects in the basin depression required to ensure that the basin

meets the design grades following construction. The storm lines shall also be cleaned and free of sediment once the site becomes stabilized.

b. Inspection Procedures:

i. Site Inspection / Observation Items:

1. Construction site perimeter and discharge points
2. All disturbed areas
3. Areas used for material / waste storage that are exposed to precipitation
4. Other areas having a significant potential for storm water pollution, such as demolition areas or concrete washout areas, or locations where vehicles enter or leave the site
5. Erosion and sediment control measures identified in the SWMP
6. Any other structural BMPs that may require maintenance, such as secondary containment around fuel tanks, or the conditions of spill response kits.

ii. Inspection Requirements:

1. Determine if there is any evidence of, or potential for, pollutants entering the receiving waters.
2. Review BMPs to determine if they still meet design and operational criteria in the SWMP, and if they continue to adequately control pollutants at the site.
3. Upgrade and/or revise any BMPs not operating in accordance with the SWMP and update the SWMP to reflect any revisions.
4. The 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 storm water quality issues at the site.
5. The QSM will be sufficiently qualified for the required duties per the ECM Appendix I.5.2.A.
6. The Qualified Storm water 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 BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity or when BMPs are no longer necessary and are removed.

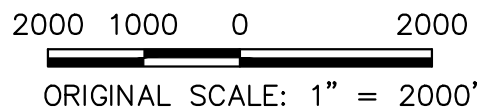
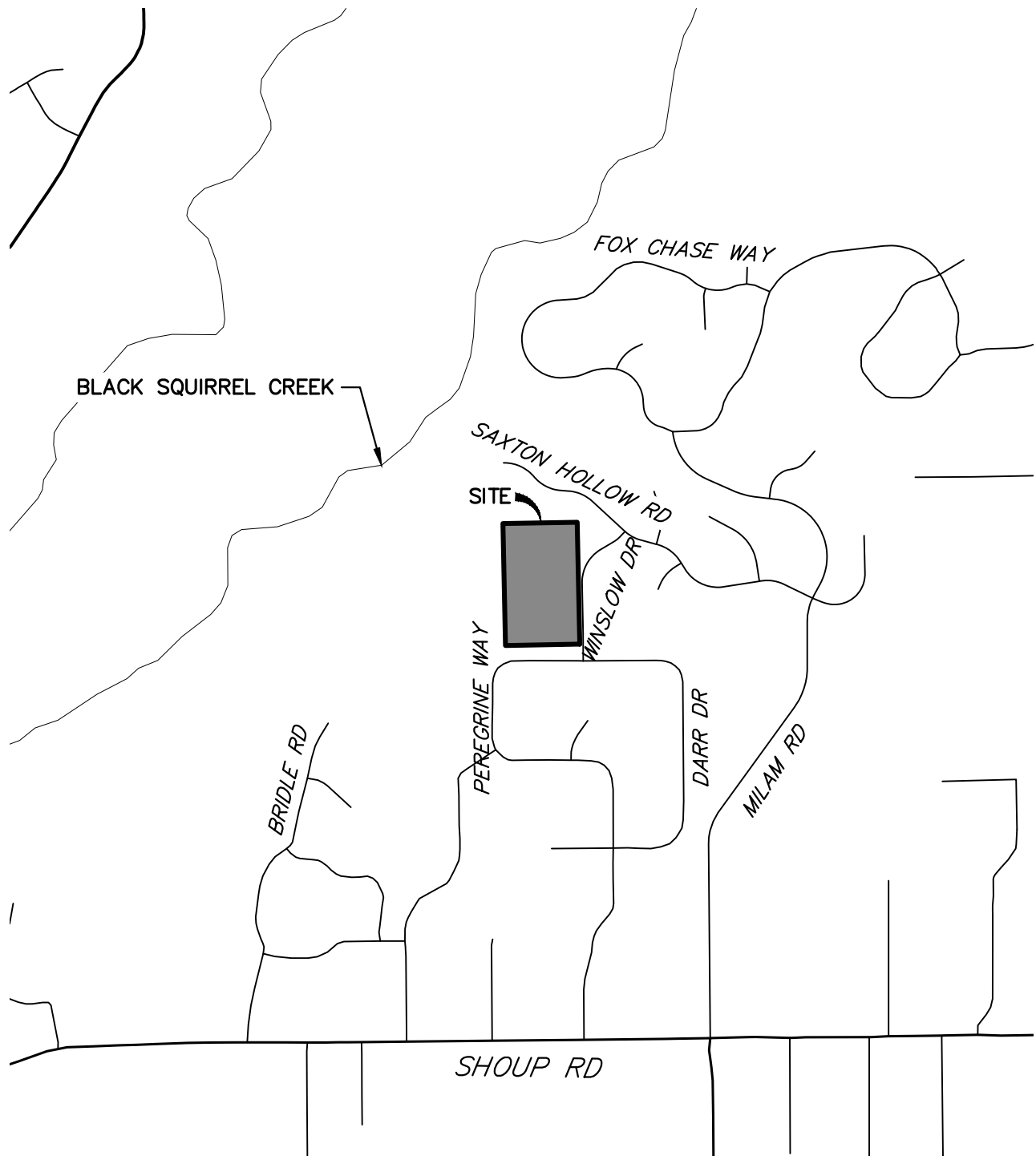
iii. BMP Maintenance / Replacement and Failed BMPs:

1. The contractor shall remove sediment that has been collected by perimeter controls, such as silt fence and inlet protection, on a regular basis to prevent failure of BMPs, and remove potential of sediment from being discharged from the site in the event of BMP failure.
2. Removed sediment must be moved to an appropriate location where it will not become an additional pollutant source, and should never be placed in ditches or streams.
3. The contractor shall update the GEC as required with any new

BMPs added during the construction period.

4. The 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 storm water quality issues at the site.
 5. The Qualified Storm water 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 BMPs or if the SWMP proves to be ineffective in achieving the general objectives of controlling pollutants in storm water discharges associated with construction activity or when BMPs are no longer necessary and are removed.
 6. The contractor shall address BMPs that have failed or have the potential to fail without maintenance or modifications, as soon as possible, immediately in most cases, to prevent discharge of pollutants.
- iv. Record Keeping and Documenting Inspections:
1. The contractor shall maintain records of all inspection reports, including signed inspection logs, at the project site.
 2. The permittee shall document inspection results and maintain a record of the results for a period of 3 years following expiration or inactivation of permit coverage.
 3. Site inspection records shall include the following:
 - a. Inspection date
 - b. Name and title of personnel making the inspection
 - c. Location of discharges of sediment or other pollutants from the site
 - d. Location(s) of BMPs in need of maintenance
 - e. Location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location
 - f. Location(s) where additional BMPs are needed that were not in place at the time of inspection
 - g. Deviations from the minimum inspection schedule

APPENDIX A – VICINITY MAP



CATHEDRAL PINES
VICINITY MAP
2000-5260.00
08-17-2022
SHEET 1 OF 1

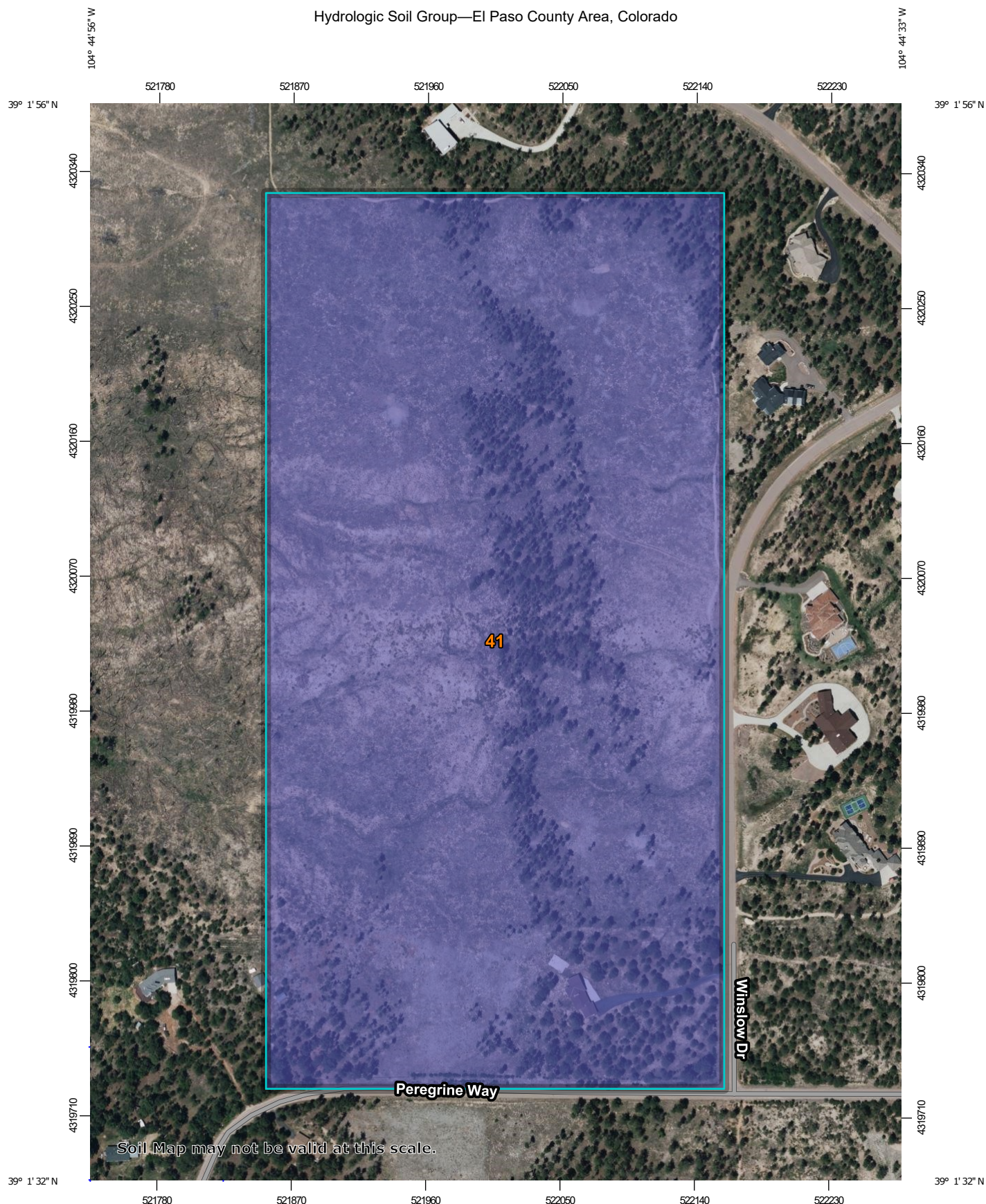


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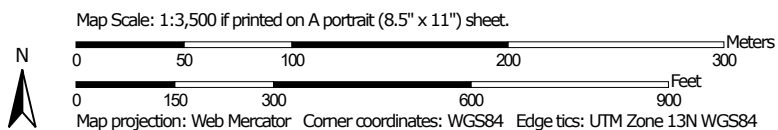
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APPENDIX B – SOILS MAP

Hydrologic Soil Group—El Paso County Area, Colorado



Soil Map may not be valid at this scale.




**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

8/17/2022
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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 1:24,000.

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

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

Please rely on the bar scale on each map sheet for 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: El Paso County Area, Colorado
 Survey Area Data: Version 19, Aug 31, 2021

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

Date(s) aerial images were photographed: Jun 9, 2021—Jun 12, 2021

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
41	Kettle gravelly loamy sand, 8 to 40 percent slopes	B	45.5	100.0%
Totals for Area of Interest			45.5	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

APPENDIX C – GEC PLANS AND DETAILS

LAYER LINETYPE LEGEND

	EXISTING	PROPOSED
PHASE LINE		
MATCH LINE		
SECTION LINE		
BOUNDARY LINE		
PROPERTY LINE		
EASEMENT LINE		
RIGHT OF WAY		
R.O.W. A LINE		
CENTERLINE		
CITY LIMITS		
WIRE FENCE		
CHAIN LINK FENCE		
WOOD FENCE		
MASONRY FENCE		
GUARDRAIL		
CONC. BARRIER		
CABLE TV		
ELECTRIC		
FIBER OPTIC		
GAS MAIN		
IRRIGATION MAIN		
OIL/PETRO. MAIN		
OVERHEAD UTILITY		
SANITARY SEWER		
STORM DRAIN		
TELEPHONE		
WATER MAIN		
RAW WATER LINE		
SWALE/WATERWAY FLOWLINE		
DIVERSION DITCH		
DIVERSION CHANNEL		
MAJOR DRAINAGE BASIN		
MINOR DRAINAGE BASIN		
TOP OF SLOPE		
TOE OF SLOPE		
EDGE OF WATER		
INDEX CONTOUR		
INTERMEDIATE CONTOUR		
DEPRESSION CONT. (INDEX)		
DEPRESSION CONT. (INTER)		
TOP OF CUTS		
TOE OF FILLS		
CUT AND FILL LINE		
SILT FENCE		
100 YEAR FLOODPLAIN		
500 YEAR FLOODPLAIN		
FLOODWAY		
BASE FLOOD ELEVATION		
EDGE OF WETLANDS		
STONE WALL		

LANDSCAPE LEGEND

	EXISTING	PROPOSED
TREE - CONIFEROUS		
TREE - DECIDUOUS		
SHRUB/BUSH		
SHRUBS AND BUSHES		
IRRIGATION BOX		
IRRIGATION SPRINKLER		
IRRIGATION VALVE		
BOLLARD		
FLAGPOLE		

UTILITIES LEGEND

	EXISTING	PROPOSED
STORM SEWER		
MANHOLE		
STORM INLET		
AREA INLET - SQUARE		
AREA INLET - ROUND		
FLARED END SECTION		
RIPRAP		
SANITARY SEWER		
LINE MARKER		
SERVICE MARKER		
CLEAN-OUT		
MANHOLE W/ DIRECTIONAL FLOW ARROW		
WATER LINE		
LINE MARKER		
SERVICE MARKER		
FIRE HYDRANT		
FIRE CONNECTION		
MANHOLE		
BEND		
BLOW-OFF VALVE		
WELL		
METER		
VALVE		
REDUCER		
THRUST BLOCK		
CROSS		
PLUG W/ THRUST BLOCK		
TEE		
REVERSE ANCHOR		
ANODE		
AIR & VACUUM VALVE ASSEMBLY		
TRANSMISSION BLOW-OFF ASSEMBLY		
GAS LINE		
MARKER		
SERVICE MARKER		
METER		
VALVE		
PLUG		
TEE		
DRY UTILITIES		
CABLE TV MARKER		
CABLE TELEVISION PEDESTAL		
ELECTRIC MARKER		
ELECTRIC SERVICE MARKER		
ELECTRICAL PEDESTAL		
ELECTRICAL METER		
ELECTRICAL MANHOLE		
FIBER-OPTIC MARKER		
IRRIGATION PEDESTAL		
TELEPHONE MARKER		
TELEPHONE PEDESTAL		
TELEPHONE MANHOLE		
UTILITY POLE		
GUY ANCHOR		
GUY POLE		
MISC. UTILITIES		
VENT PIPE		
TEST HOLE DESIGNATOR		

MONUMENTATION LEGEND

ALUMINUM CAP - FOUND	
BRASS CAP - FOUND	
BENCHMARK - FOUND	
CROSS - FOUND	
MONUMENT - SET	
MONUMENT - FOUND (DEFAULT)	
MONUMENT - FOUND (ALTERNATE 1)	
MONUMENT - FOUND (ALTERNATE 2)	
MONUMENT - FOUND (ALTERNATE 3)	
MONUMENT - FOUND (ALTERNATE 4)	
MONUMENT - FOUND (ALTERNATE 5)	
MONUMENT - FOUND (ALTERNATE 6)	
MONUMENT - FOUND (ALTERNATE 7)	
NAIL & WASHER - FOUND	
PANEL - FOUND	
PK NAIL - FOUND	
ROW MONUMENT - FOUND	
ROW MARKER - FOUND	
SECTION CORNER - FOUND	
SECTION CORNER - SET	
QUARTER-SECTION CORNER - FOUND	
QUARTER-SECTION CORNER - SET	
SECTION CENTER - FOUND	
SECTION CENTER - FOUND	
CONTROL/TRVERSE POINT - SET	

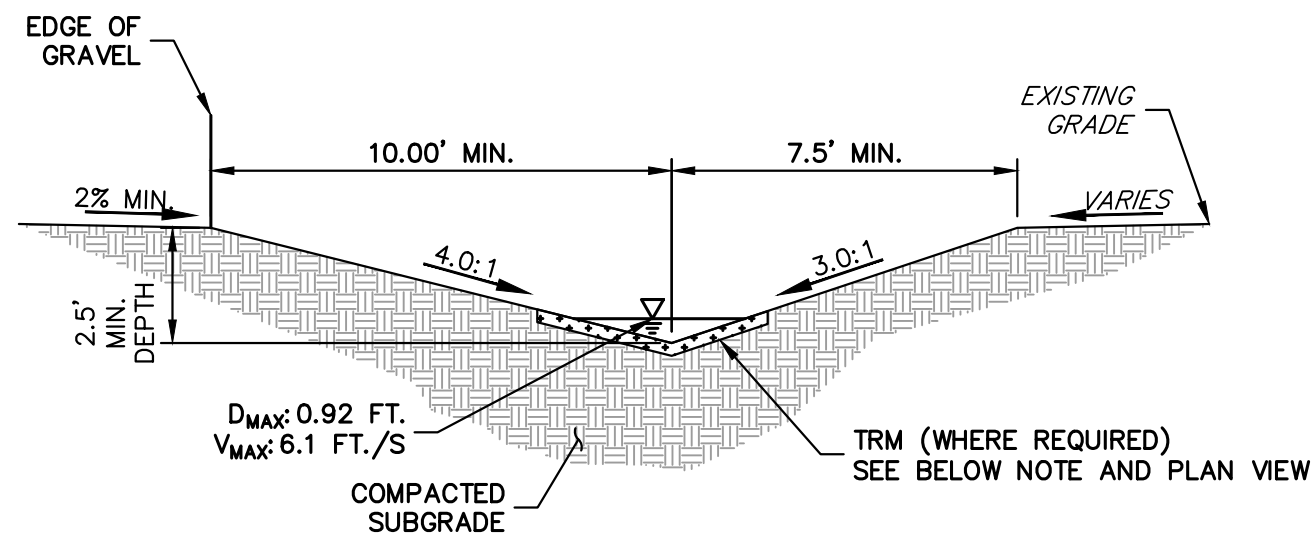
LEGEND

SILT FENCE		PROPOSED FLOW PATH	
CUT/FILL BOUNDARY		EXISTING FLOW PATH	
STABILIZED STAGING AREA		LIMITS OF CONSTRUCTION/DISTURBANCE	
VEHICLE TRACKING CONTROL		TEMPORARY SEEDING AND MULCHING	
SURFACE ROUGHENING		TEMPORARY CHECK DAM	
TEMP. SWALE		OUTLET PROTECTION	
INLET PROTECTION		STOCK PILE	
TEMPORARY SEDIMENT BASIN		TURF REINFORCEMENT MAT	
CONSTRUCTION FENCE		TEMPORARY SLOPE DRAIN	
TEMPORARY OUTLET PROTECTION		SEDIMENT CONTROL LOG	

ABBREVIATIONS

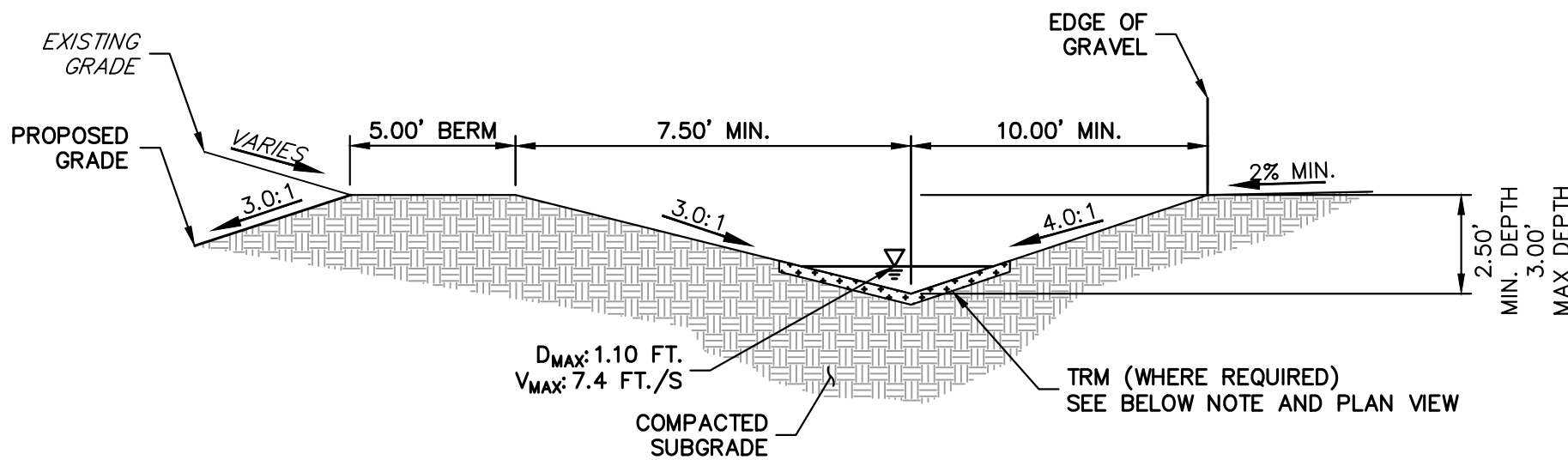
AC	ACRE	INT	INTERSECTION
AD	ALGEBRAIC DIFFERENCE	INV	INVERT
AH	AHEAD	IRR	IRRIGATION
ARCH	ARCHITECT	KB	KICK (THRUST) BLOCK
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS	LB	POUND
ASSY	ASSEMBLY	LE	LANDSCAPE EASEMENT
AVE	AVENUE	LF	LINEAR FOOT
BB	BOX BASE	LN	LANE
BK	BACK	LOMR	LETTER OF MAP REVISION
BNDR	BOUNDARY	LP	LOW POINT
BOP	BOTTOM OF PIPE	LS	LUMP SUM
BOV	BLOW OFF VALVE	LT	LEFT
BFV	BUTTERFLY VALVE	MAX	MAXIMUM
BLVD	BOULEVARD	M/D	MOISTURE DENSITY
BW	BOTTOM OF WALL	MDDP	MASTER DEVELOPMENT DRAINAGE PLAN
C&G	CURB & GUTTER	MANHOLE	MANHOLE
CATV	CABLE TELEVISION	MH	MINIMUM
CB	CATCH BASIN	MS	MOUNTABLE SIDEWALK
CBC	CONCRETE BOX CULVERT	N	NORTH
CDOT	COLORADO DEPARTMENT OF TRANSPORTATION	NRCP	NON-REINFORCED CONCRETE PIPE
CDS	CUL-DE-SAC	ODP	OFFICIAL DEVELOPMENT PLAN
CF	CUBIC FOOT	OHE	OVERHEAD ELECTRIC
CFS	CUBIC FEET PER SECOND	OHU	OVERHEAD UTILITY
CIP	COMPLETE IN PLACE	PC	POINT OF CURVATURE
CL	CENTER LINE	PCC	POINT OF COMPOUND CURVATURE
CLOMR	CONDITIONAL LETTER OF MAP REVISION	PCR	POINT OF CURB RETURN
CLR	CLEAR	PDP	PRELIMINARY DEVELOPMENT PLAN
CMP	CORRUGATED METAL PIPE	PE	PROFESSIONAL ENGINEER
CO	CLEAN OUT	PI	POINT OF INTERSECTION
COCs	CITY OF COLORADO SPRINGS CONCRETE	PKWY	PARKWAY
CR	CIRCLE	PL	PROPERTY LINE
CSP	CORRUGATED STEEL PIPE	PR	PROPOSED
CSU	COLORADO SPRINGS UTILITIES COURT	PRC	POINT OF REVERSE CURVATURE
CTRB	CONCRETE THRUST REDUCER BLOCK	PT	POINT OF TANGENCY
CY	CUBIC YARD	PV	PLUG VALVE
DBPS	DRAINAGE BASIN PLANNING STUDY	PVC	POLYVINYL CHLORIDE
DE	DRAINAGE EASEMENT	R	RADIUS
DIA	DIAMETER	RCBC	REINFORCED CONCRETE BOX CULVERT
DIP	DUCTILE IRON PIPE	RCP	REINFORCED CONCRETE PIPE
DR	DRIVE	RD	ROAD
DRC	DESIGN REVIEW COMMITTEE	ROW	RIGHT OF WAY
DU	DWELLING UNITS	RT	RIGHT
DY	DAY	S	SOUTH
E	EAST	STE	STEEL
EA	EACH	SAN	SANITARY SEWER
EGL	ENERGY GRADE LINE	SF	SQUARE FOOT
EL	ELEVATION	ST	STREET
ELEC	ELECTRIC	STA	STATION
EOA	EDGE OF ASPHALT	STM	STORM SEWER
EPC	EL PASO COUNTY	SY	SQUARE YARD
ERCP	ELLIPTICAL RCP	SY-IN	SQUARE YARD INCH
ESMT	EASEMENT	TB	THRUST BLOCK
EST	ESTIMATE	TBC	TOP BACK OF CURB
EX	EXISTING	TBW	TOP BACK OF WALK
FDP	FINAL DEVELOPMENT PLAN	TEL	TELEPHONE
FDR	FINAL DRAINAGE REPORT	TN	TON
FES	FLARED END SECTION	TOA	TOP OF ASPHALT
FF	FINISHED FLOOR ELEVATION	TOB	TOP OF BOX
FG	FINISHED GRADE	TOC	TOP OF CURB OR CONCRETE
FH	FIRE HYDRANT	TOF	TOP OF FOUNDATION
FL	FLOWLINE	TOP	TOP OF PIPE
FIL	FILING	TW	TOP OF WALL
FO	FIBER OPTIC CABLE	TYP	TYPICAL
GB	GRADE BREAK	UDFCD	URBAN DRAINAGE AND FLOOD CONTROL DISTRICT
GB	GRADE BREAK	UE	UTILITY EASEMENT
GE	GAS EASEMENT	U&DE	UTILITY & DRAINAGE EASEMENT
GIS	GEOGRAPHIC INFORMATION SYSTEM	UGE	UNDERGROUND ELECTRIC
GL	GAS LINE	VCP	VITRIFIED CLAY PIPE
GPS	GLOBAL POSITIONING SYSTEM	VPC	VERTICAL POINT OF CURVATURE
GV	GATE VALVE	VPI	VERTICAL POINT OF INTERSECTION
HBP	HOT BITUMINOUS PAVEMENT	VPT	VERTICAL POINT OF TANGENCY
HC	HANDICAP	VTC	VEHICLE TRACKING CONTROL
HDC	HIGH DEFLECTION COUPLING	W	WEST
HDPE	HIGH DENSITY POLYETHYLENE	WL	WATER LINE
HGL	HYDRAULIC GRADE LINE	WM	WATER MAIN
HMA	HOT MIX ASPHALT	WRD	WATER RESOURCES DEPARTMENT
HOA	HOME OWNERS ASSOCIATION	WS	WATER SURFACE
HP	HIGH POINT	WSE	WATER SURFACE ELEVATION
HR	HOUR	WTR	WATER
I	INLET	YR	YEAR
IE	IRRIGATION EASEMENT		





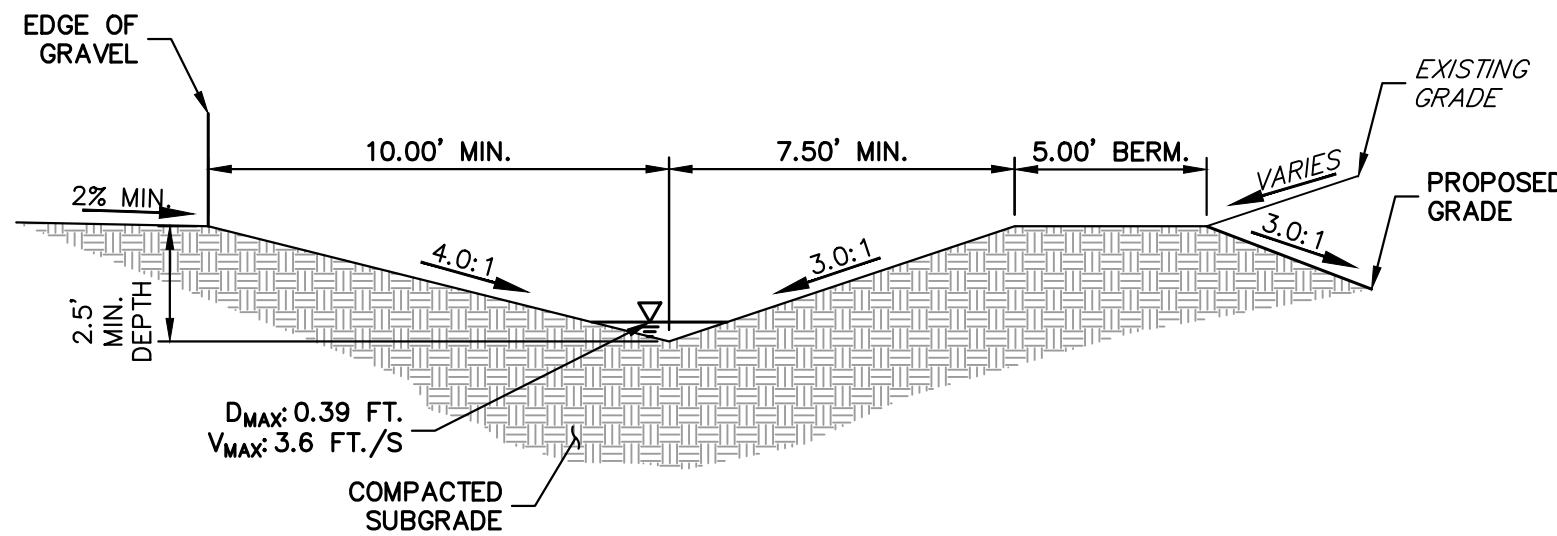
SWALE SECTION BASIN D
N.T.S.

SC250 VMAX (OR APPROVED EQUIVALENT) PERMANENT TURF REINFORCEMENT MAT (TRM) IS REQUIRED TO BE INSTALLED 70' NORTH OF THE ROAD HIGH POINT AND CONTINUE FOR 400' (SEE GEC PLAN FOR LOCATIONS)

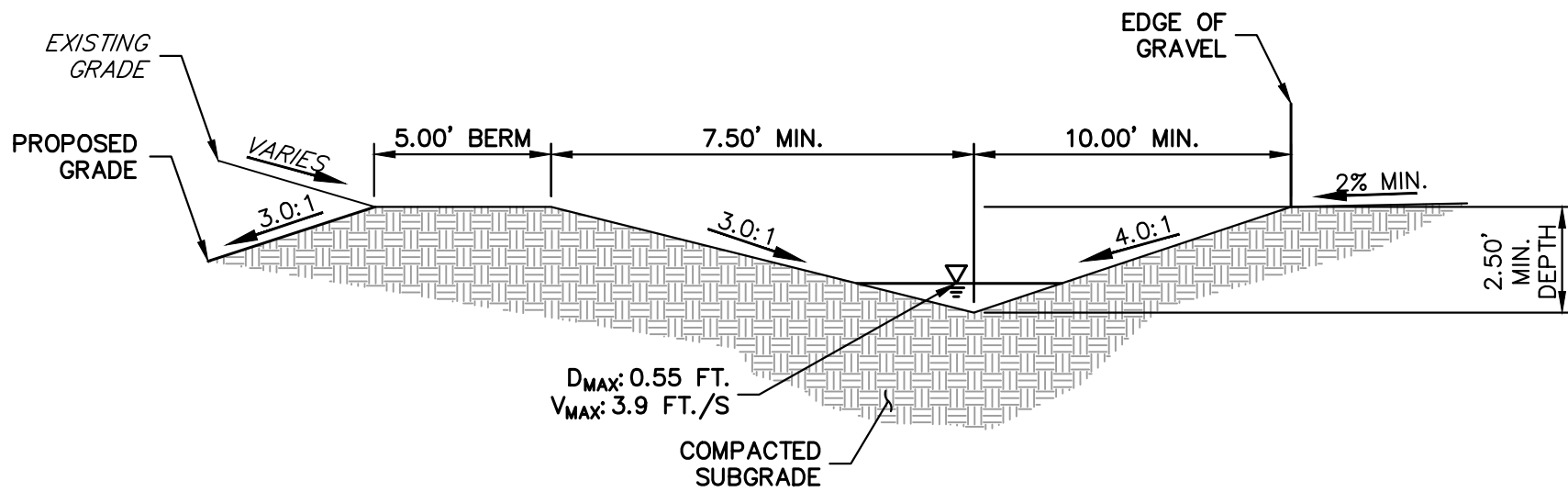


SWALE SECTION BASIN L
N.T.S.

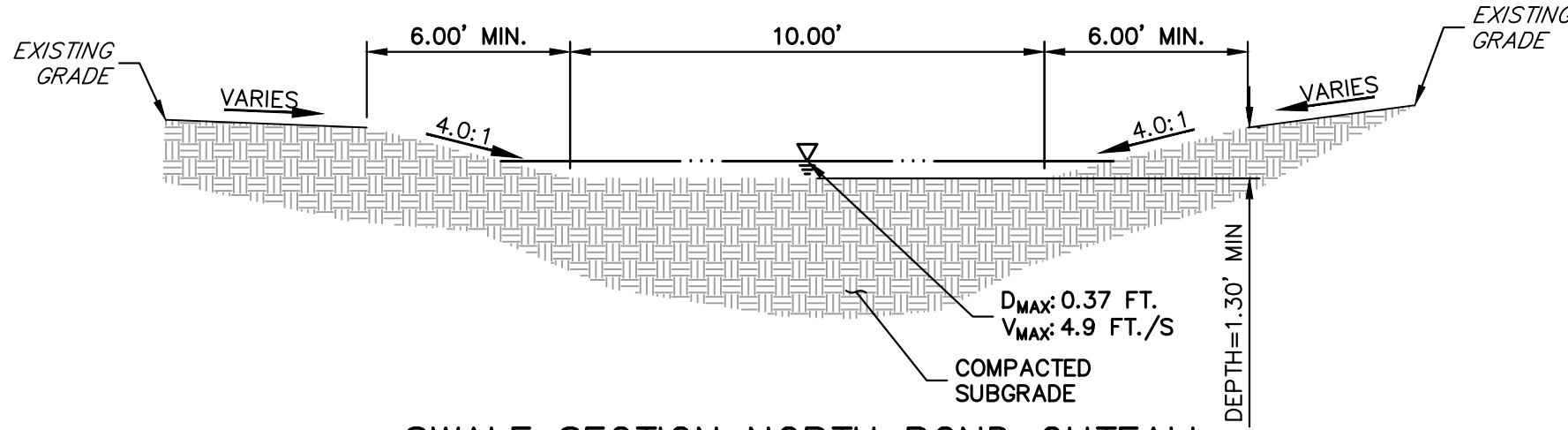
SC250 VMAX (OR APPROVED EQUIVALENT) PERMANENT TURF REINFORCEMENT MAT (TRM) IS REQUIRED TO BE INSTALLED 60' SOUTH OF THE ROAD HIGH POINT AND CONTINUE FOR 280' (SEE GEC PLAN FOR LOCATIONS)



SWALE SECTION BASIN M
N.T.S.



SWALE SECTION BASIN E
N.T.S.



SWALE SECTION NORTH POND OUTFALL
SCALE: N.T.S.

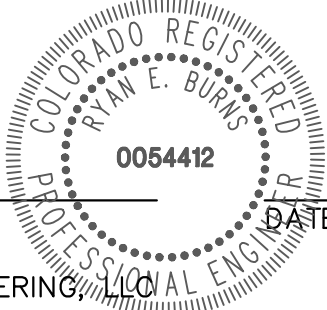


Know what's below.
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ENGINEER'S STATEMENT

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[Signature]



RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF JR ENGINEERING

2/14/24

ESTATES AT CATHEDRAL PINES

TYPICAL SECTIONS

SHEET 3 OF 11

JOB NO. 25260.00

NO.	REVISION	BY	DATE

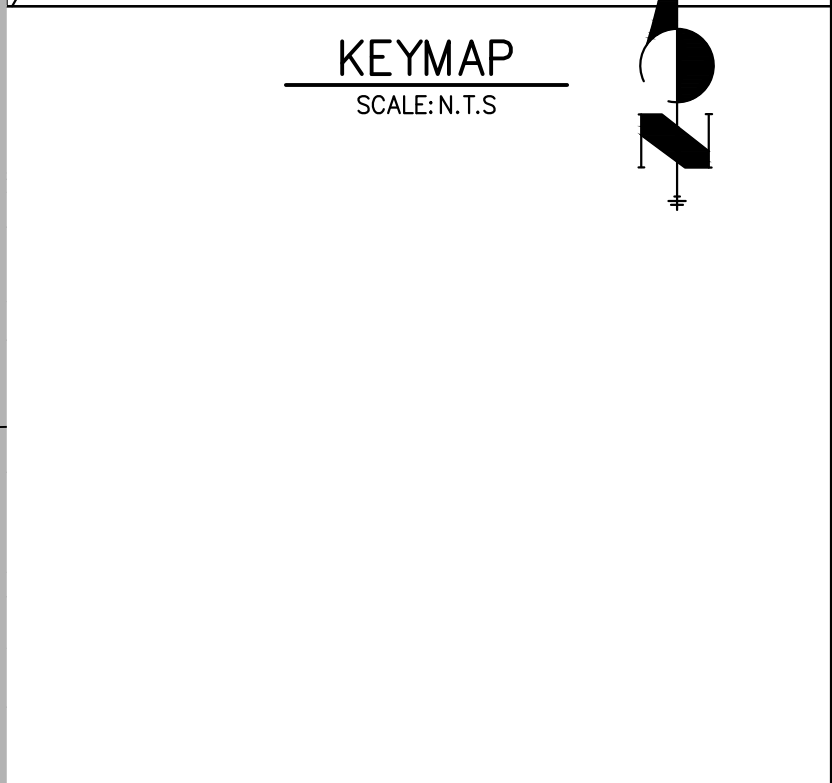
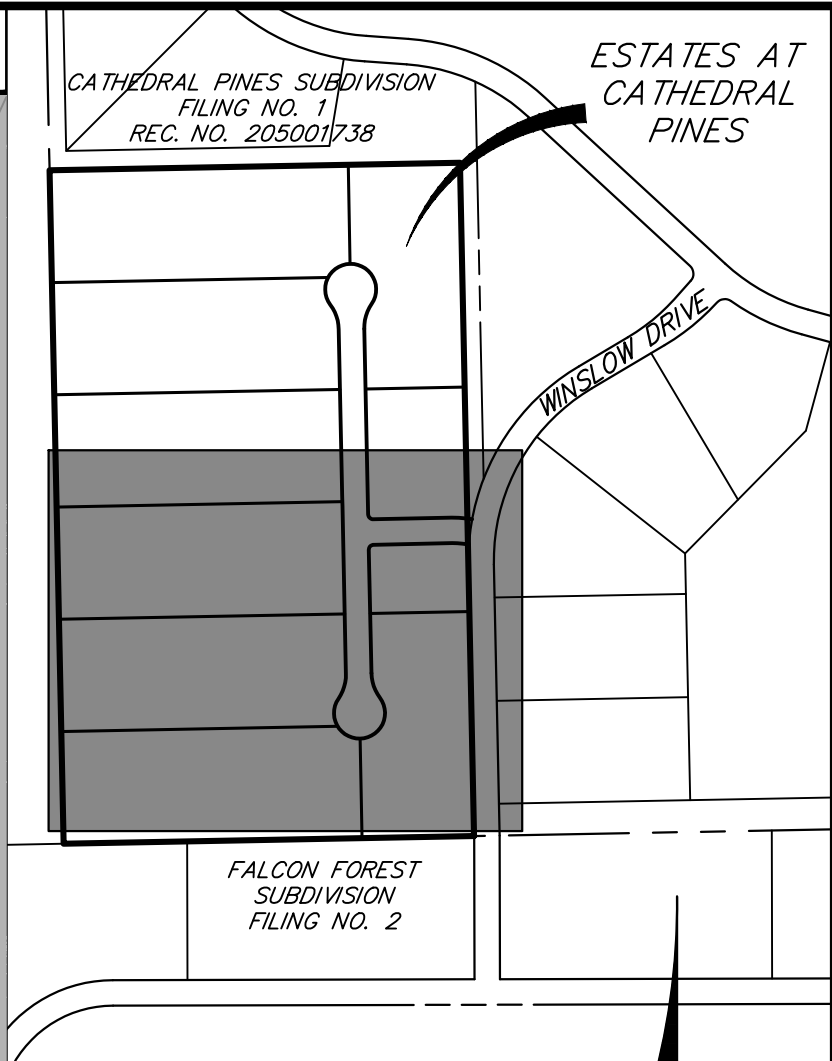
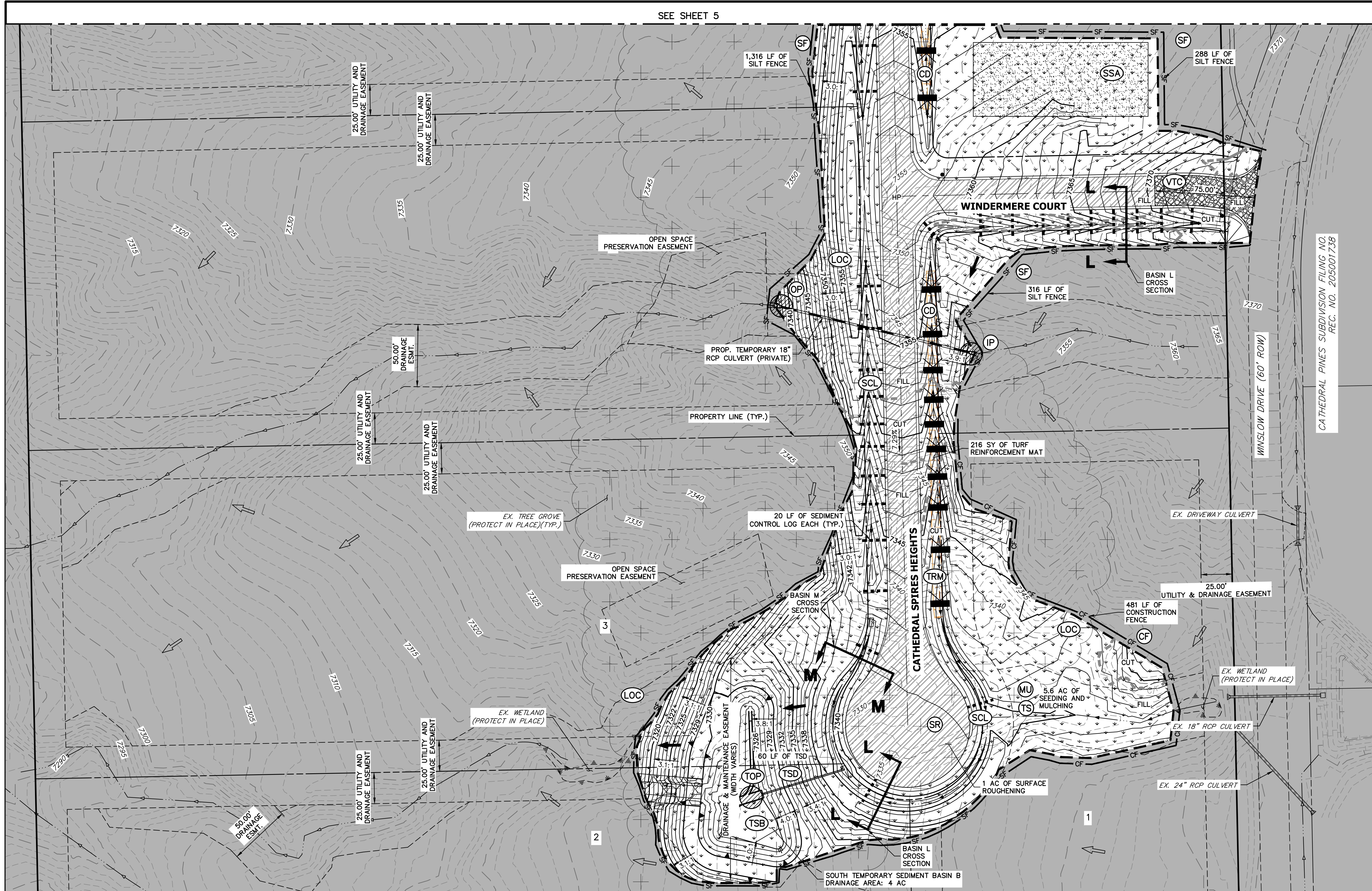


J.R. ENGINEERING
A Westman Company

Central 303-740-9888 • Colorado Springs 719-583-2583
Fort Collins 970-491-9888 • www.jrengineering.com

PREPARED FOR
VILLAGREE DEVELOPMENT LLC
5710 VESSEY RD
COLORADO SPRINGS, CO 80908
GREGG & ELAINE CAWLFIELD
(719) 413-6900

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APPROVES THEIR USE,
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DESIGNATED BY WRITTEN
AUTHORIZATION.



LEGEND

SILT FENCE	SF	PROPOSED FLOW PATH	→
CUT/FILL BOUNDARY	---	EXISTING FLOW PATH	→
STABILIZED STAGING AREA	SSA	LIMITS OF CONSTRUCTION/ DISTURBANCE	LOC
VEHICLE TRACKING CONTROL	VTC	TEMPORARY SEEDING AND MULCHING	SM
SURFACE ROUGHENING	SR	TEMPORARY CHECK DAM	CD
TEMP. SWALE	TSW	OUTLET PROTECTION	OP
INLET PROTECTION	IP	STOCK PILE	SP
TEMPORARY SEDIMENT BASIN	TSB	TURF REINFORCEMENT MAT	TRM
CONSTRUCTION FENCE	CF	TEMPORARY SLOPE DRAIN	TSD
TEMPORARY OUTLET PROTECTION	TOP	SEDIMENT CONTROL LOG	SCL

BMP PHASING

INITIAL	INTERIM	FINAL
1. INSTALL VTC	1. MAINTAIN ALL BMP'S	1. INSTALL MULCH AND TEMPORARY SEEDING
2. INSTALL SILT FENCE	2. LOCATE/INSTALL TEMPORARY STOCK PILE	2. IN ALL DISTURBED AREA
3. INSTALL SEDIMENT BASINS	3. REMOVE ALL TEMPORARY BMP'S AFTER 70% VEGETATION HAS BEEN ACHIEVED	
	4. INSTALL INLET AND OUTLET PROTECTION	
	5. ESTABLISH SSA	
	6. INSTALL CONSTRUCTION FENCE	
	7. INSTALL SR	
	8. INSTALL TEMPORARY SWALE	
	9. INSTALL CHECK DAMS	

NOTE:
FUTURE ANTICIPATED LOTS AND EASEMENTS SHOWN FOR INFORMATION ONLY.
EARLY GRADING REQUEST IS FOR THE EXISTING 35 ACRE PARCEL.

CONSTRUCTION NOTES:

EXISTING VEGETATION ON THE PROJECT SITE CONSISTS OF SPARSE GRASS AND TREES.

NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS GRADING PLAN.

THERE ARE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANTS PROPOSED AS PART OF THIS PROJECT.

DEWATERING OPERATIONS ARE NOT ANTICIPATED FOR THIS PROJECT.

NO EARLY GRADING IS TO OCCUR WITHIN THE 100 YEAR FLOODPLAIN.

ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS OF 2.0' DEEP.

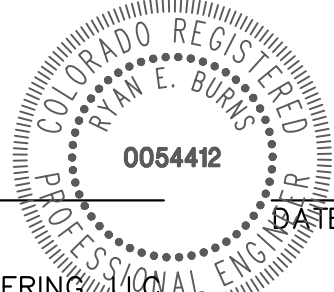


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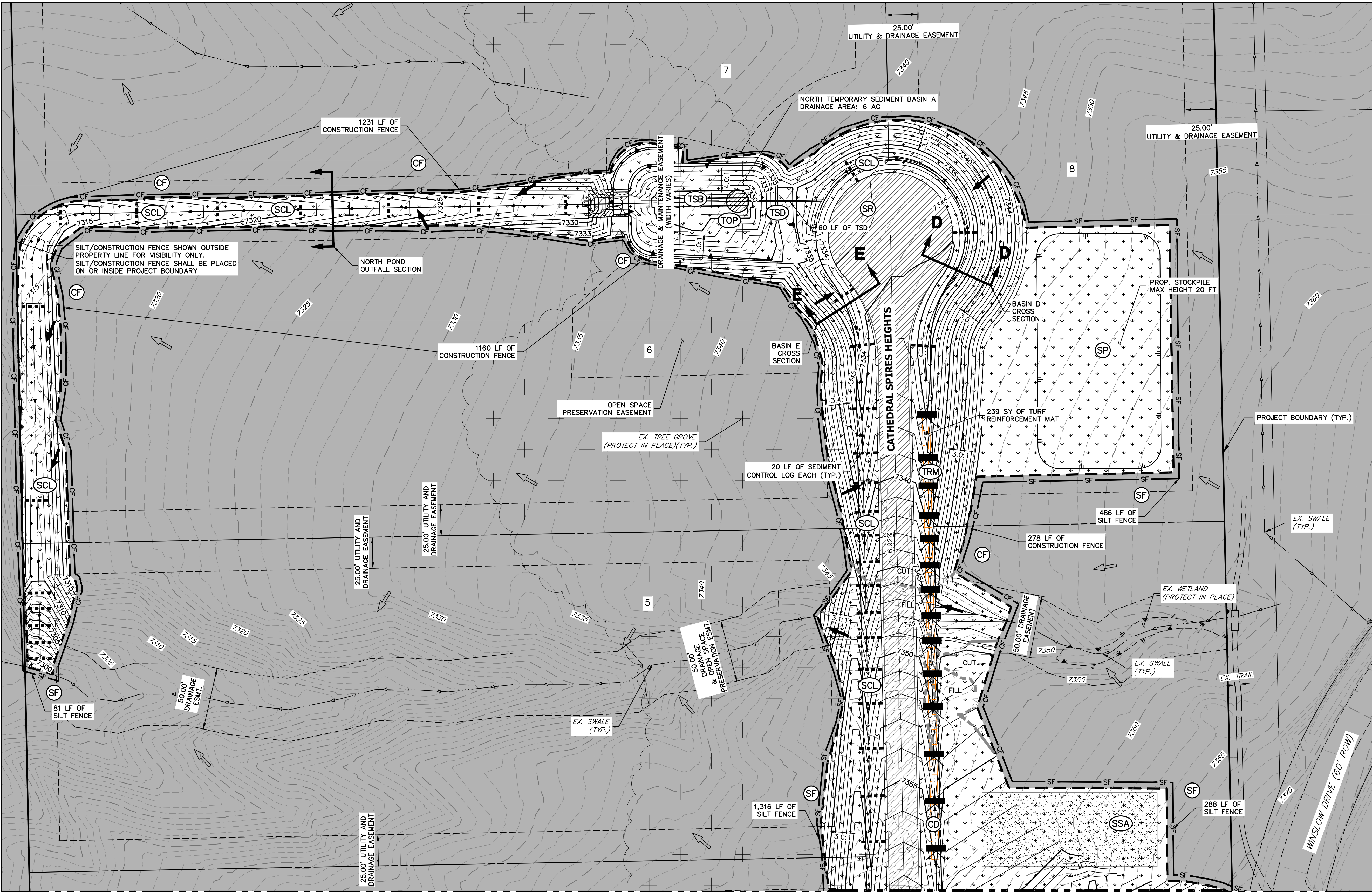
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RYAN E. BURNS, P.E.
COLORADO P.E. 0054412



ESTATES AT CATHEDRAL PINES	PREPARED FOR		VILLAGREE DEVELOPMENT LLC 5710 VESSEY RD COLORADO SPRINGS, CO 80908 GREGG & ELAINE CAULFIELD (719) 413-6900	
	BY		DATE	
	REVISION		DATE	
	H-SCALE		V-SCALE	
GRADING & EROSION CONTROL PLAN	DESIGNED BY		PAL	
	DRAWN BY		PAL	
	CHECKED BY		DATE	
	SHEET 4 OF 11		JOB NO. 25260.00	



SEE SHEET 4

LEGEND			
SILT FENCE	SF	PROPOSED FLOW PATH	→
CUT/FILL BOUNDARY	C/F	EXISTING FLOW PATH	⇄
STABILIZED STAGING AREA	SSA	LIMITS OF CONSTRUCTION/DISTURBANCE	LOC
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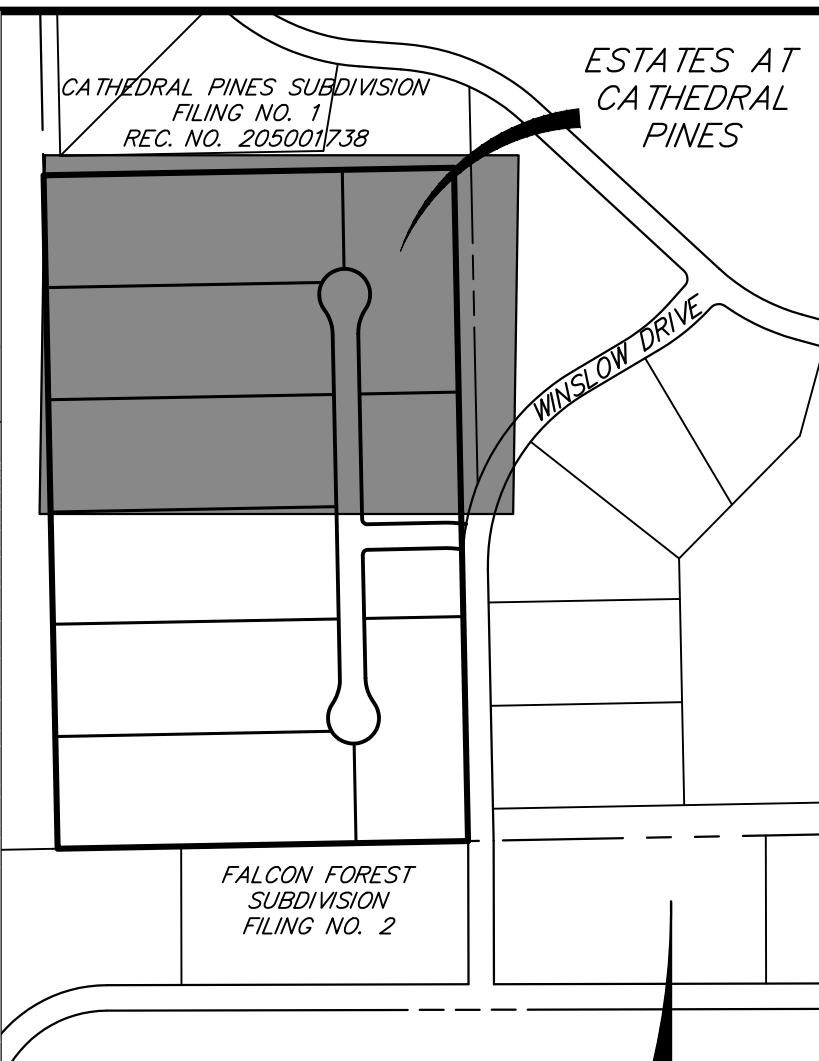
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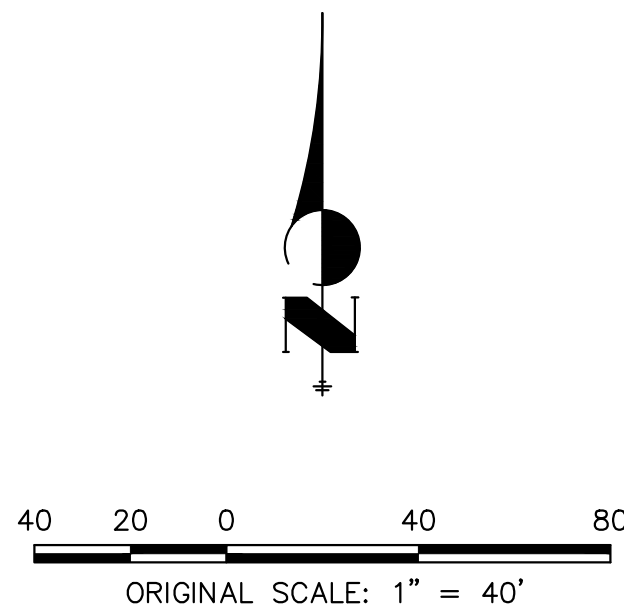
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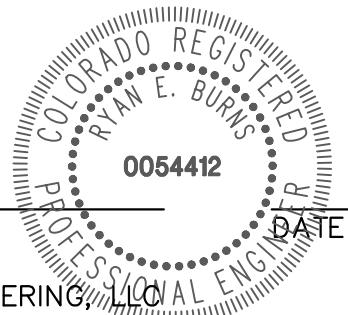
KEYMAP
SCALE: N.T.S.




ENGINEER'S STATEMENT

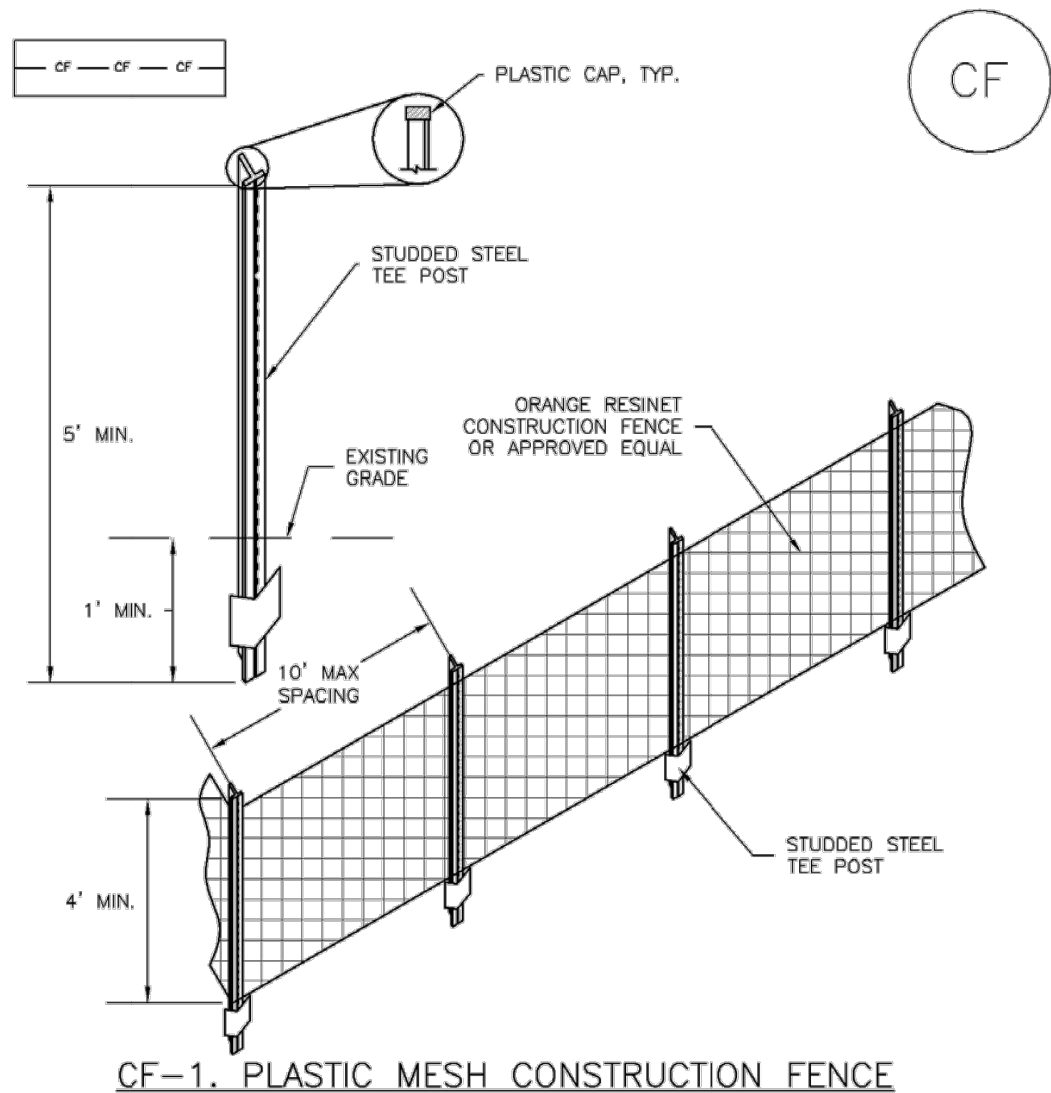
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[Signature]
RYAN E. BURNS, P.E.
COLORADO P.E. 0054412



FOR AND ON BEHALF OF JR ENGINEERING

ESTATES AT CATHEDRAL PINES		H-SCALE		1"=40'		No.		REVISION		BY		DATE		<div><div>J-R ENGINEERING A Western Company</div><div>Central 303-740-9383 • Colorado Springs 719-595-2593 For Collins 970-491-9888 • www.jrengineering.com</div></div>		<div>PREPARED FOR</div> <div>VILLAGREE DEVELOPMENT LLC</div> <div>5710 VESSEY RD</div> <div>COLORADO SPRINGS, CO 80908</div> <div>GREGG & ELAINE CAWLFIELD</div> <div>(719) 413-6900</div>		<div>UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, THESE DRAWINGS ARE NOT TO BE USED FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.</div>	
GRADING & EROSION CONTROL PLAN		V-SCALE		N/A															
		DATE		2/14/24															
		DESIGNED BY		PAL															
		DRAWN BY		PAL															
		CHECKED BY																	
SHEET 5 OF 11		JOB NO.		25260.00															



CONSTRUCTION FENCE INSTALLATION NOTES

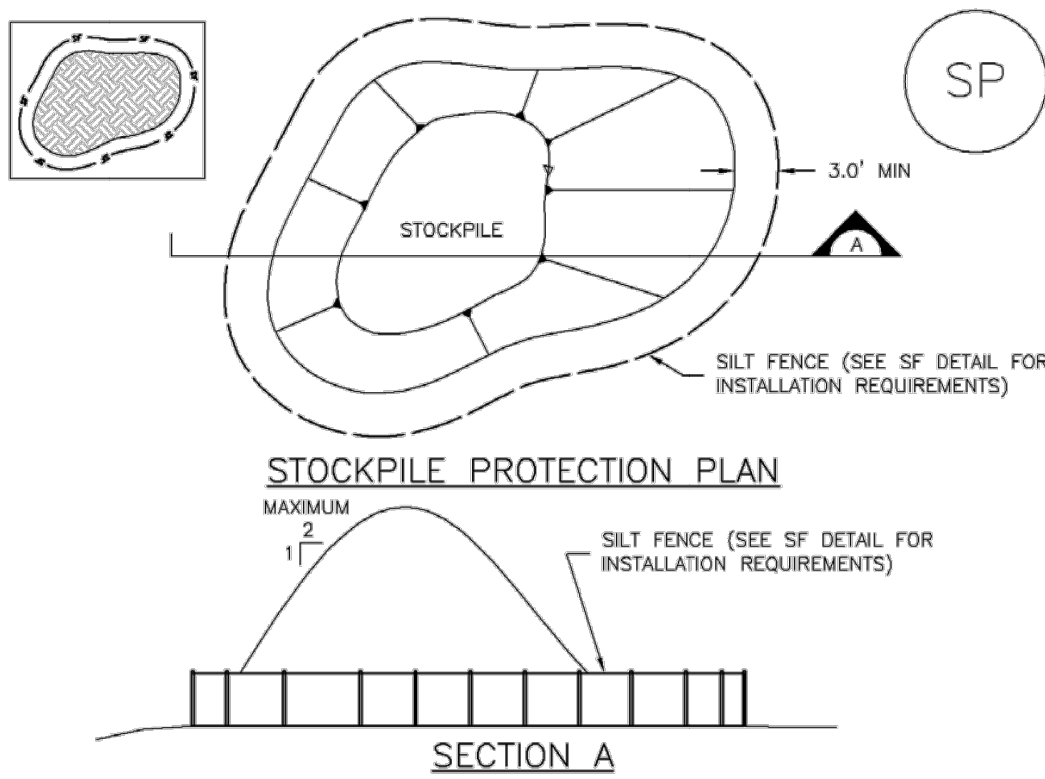
1. SEE PLAN VIEW FOR: -LOCATION OF CONSTRUCTION FENCE.
2. CONSTRUCTION FENCE SHOWN SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. CONSTRUCTION FENCE SHALL BE COMPOSED OF ORANGE, CONTRACTOR-GRADE MATERIAL THAT IS AT LEAST 4" HIGH. METAL POSTS SHOULD HAVE A PLASTIC CAP FOR SAFETY.
4. STUDDED STEEL TEE POSTS SHALL BE UTILIZED TO SUPPORT THE CONSTRUCTION FENCE. MAXIMUM SPACING FOR STEEL TEE POSTS SHALL BE 10'.
5. CONSTRUCTION FENCE SHALL BE SECURELY FASTENED TO THE TOP, MIDDLE, AND BOTTOM OF EACH POST.

CONSTRUCTION FENCE MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. CONSTRUCTION FENCE SHALL BE REPAIRED OR REPLACED WHEN THERE ARE SIGNS OF DAMAGE SUCH AS RIPS OR SAGS. CONSTRUCTION FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
5. WHEN CONSTRUCTION FENCES ARE REMOVED, ALL DISTURBED AREAS ASSOCIATED WITH THE INSTALLATION, MAINTENANCE, AND/OR REMOVAL OF THE FENCE SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)



SP-1. STOCKPILE PROTECTION

STOCKPILE PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION OF STOCKPILES. -TYPE OF STOCKPILE PROTECTION.
2. INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE, THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE, THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
3. STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING, EROSION CONTROL, BLANKETS, OR SOIL BINDERS. SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
4. FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADEMENT CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

STOCKPILE PROTECTION MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

STOCKPILE PROTECTION MAINTENANCE NOTES

4. IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
 5. STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.
- (DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

Description

Outlet protection helps to reduce erosion immediately downstream of a pipe, culvert, slope drain, rundown or other conveyance with concentrated, high-velocity flows. Typical outlet protection consists of riprap or rock aprons at the conveyance outlet.



Photograph TOP-1. Riprap outlet protection.

Appropriate Uses

Outlet protection should be used when a conveyance discharges onto a disturbed area where there is potential for accelerated erosion due to concentrated flow. Outlet protection should be provided where the velocity at the culvert outlet exceeds the maximum permissible velocity of the material in the receiving channel.

Note: This Fact Sheet and detail are for temporary outlet protection, outlets that are intended to be used for less than 2 years. For permanent, long-term outlet protection, see the *Major Drainage* chapter of Volume 1.

Design and Installation

Design outlet protection to handle runoff from the largest drainage area that may be contributing runoff during construction (the drainage area may change as a result of grading). Key in rock, around the entire perimeter of the apron, to a minimum depth of 6 inches for stability. Extend riprap to the height of the culvert or the normal flow depth of the downstream channel, whichever is less. Additional erosion control measures such as vegetative lining, turf reinforcement mat and/or other channel lining methods may be required downstream of the outlet protection if the channel is susceptible to erosion. See Design Detail OP-1 for additional information.

Maintenance and Removal

Inspect apron for damage and displaced rocks. If rocks are missing or significantly displaced, repair or replace as necessary. If rocks are continuously missing or displaced, consider increasing the size of the riprap or deeper keying of the perimeter.

Remove sediment accumulated at the outlet before the outlet protection becomes buried and ineffective. When sediment accumulation is noted, check that upgradient BMPs, including inlet protection, are in effective operating condition.

Outlet Protection	
Functions	
Erosion Control	Yes
Sediment Control	Moderate
Site/Material Management	No

Outlet protection may be removed once the pipe is no longer draining an upstream area, or once the downstream area has been sufficiently stabilized. If the drainage pipe is permanent, outlet protection can be left in place; however, permanent outlet protection should be designed and constructed in accordance with the requirements of the *Major Drainage* chapter of Volume 2.

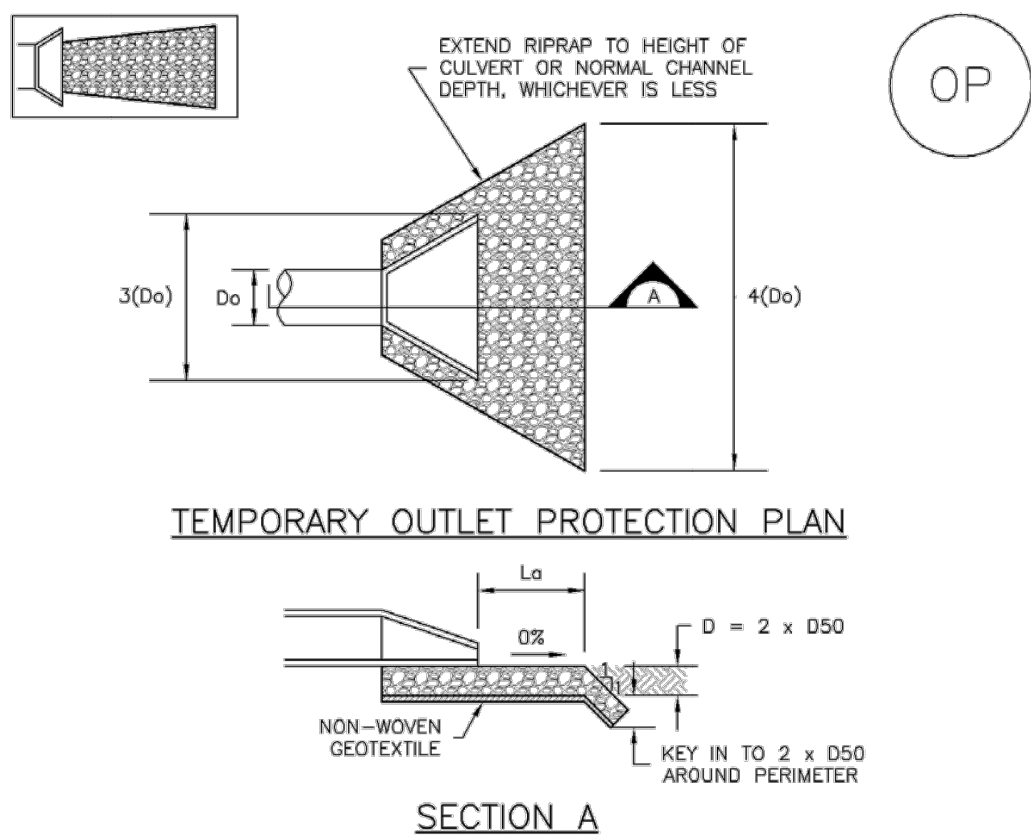


TABLE OP-1. TEMPORARY OUTLET PROTECTION SIZING TABLE				
PIPE DIAMETER, Do (INCHES)	DISCHARGE, Q (CFS)	APRON LENGTH, La (FT)	RIPRAP D50 DIAMETER MIN (INCHES)	
8	2.5	5	4	6
	5	10	4	6
12	5	10	4	6
	10	13	6	6
18	10	10	6	9
	20	16	9	12
	30	23	12	16
	40	26	12	16
24	30	16	9	9
	40	26	9	9
	60	30	16	16

OP-1. TEMPORARY OUTLET PROTECTION

ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

[Signature]

RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF JR ENGINEERING

0054412
2/14/24
DATE

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE AGENCIES, OR ENGINEERING APPROVES THEIR USE, THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

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BY	DATE	REVISION	No.	N/A	N/A	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
						2/14/24	PAL	PAL	
ESTATES AT CATHEDRAL PINES									
DETAIL SHEET									
SHEET 6 OF 11									
JOB NO. 25260.00									

Sediment Control Log (SCL)

SC-2

Description

A sediment control log is a linear roll made of natural materials such as straw, coconut fiber, or compost. The most common type of sediment control log has straw filling and is often referred to as a "straw wattle." All sediment control logs are used as a sediment barrier to intercept sheet flow runoff from disturbed areas.



Appropriate Uses

Sediment control logs can be used in the following applications to trap sediment:

- As perimeter control for stockpiles and the site.
- As part of inlet protection designs.
- As check dams in small drainage ditches. (Sediment control logs are not intended for use in channels with high flow velocities.)
- On disturbed slopes to shorten flow lengths (as an erosion control).
- As part of multi-layered perimeter control along a receiving water such as a stream, pond or wetland.

Sediment control logs work well in combination with other layers of erosion and sediment controls.

Design and Installation

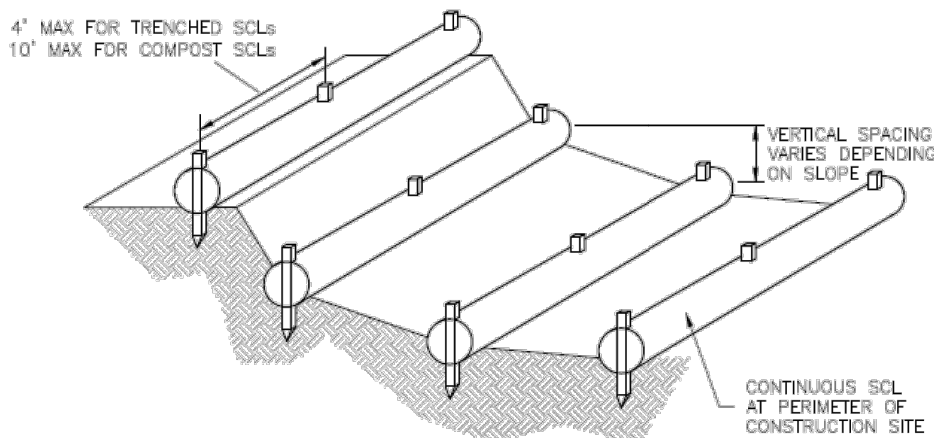
Sediment control logs should be installed along the contour to avoid concentrating flows. The maximum allowable tributary drainage area per 100 linear feet of sediment control log, installed along the contour, is approximately 0.25 acres with a disturbed slope length of up to 150 feet and a tributary slope gradient no steeper than 3:1. Longer and steeper slopes require additional measures. This recommendation only applies to sediment control logs installed along the contour. When installed for other uses, such as perimeter control, it should be installed in a way that will not produce concentrated flows. For example, a "J-hook" installation may be appropriate to force runoff to pond and evaporate or infiltrate in multiple areas rather than concentrate and cause erosive conditions parallel to the BMP.

Sediment Control Log		
Functions		
Erosion Control		Moderate
Sediment Control		Yes
Site/Material Management		No

November 2015	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SCL-1
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Sediment Control Log (SCL)

SC-2



SCL-3. SEDIMENT CONTROL LOGS TO CONTROL SLOPE LENGTH

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SC-2

Sediment Control Log (SCL)

Although sediment control logs initially allow runoff to flow through the BMP, they can quickly become a barrier and should be installed as if they are impermeable.

Design details and notes for sediment control logs are provided in the following details. Sediment logs must be properly installed per the detail to prevent undercutting, bypassing and displacement. When installed on slopes, sediment control logs should be installed along the contours (i.e., perpendicular to flow).

Improper installation can lead to poor performance. Be sure that sediment control logs are properly trenched (if lighter than 8 lb/foot), anchored and tightly jointed.

Maintenance and Removal

Be aware that sediment control logs will eventually degrade. Remove accumulated sediment before the depth is one-half the height of the sediment log and repair damage to the sediment log, typically by replacing the damaged section.

Once the upstream area is stabilized, remove and properly dispose of the logs. Areas disturbed beneath the logs may need to be seeded and mulched. Sediment control logs that are biodegradable may occasionally be left in place (e.g., when logs are used in conjunction with erosion control blankets as permanent slope breaks). However, removal of sediment control logs after final stabilization is typically appropriate when used in perimeter control, inlet protection and check dam applications. Compost from compost sediment control logs may be spread over the area and seeded as long as this does not cover newly established vegetation.

SCL-2	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2015
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SC-2

Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

- SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS.
- SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.
- SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.
- SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS.
- IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY 1/2 OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED.
- THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TIGHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.
- FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER.

SEDIMENT CONTROL LOG MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP. TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/2 OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.
- SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

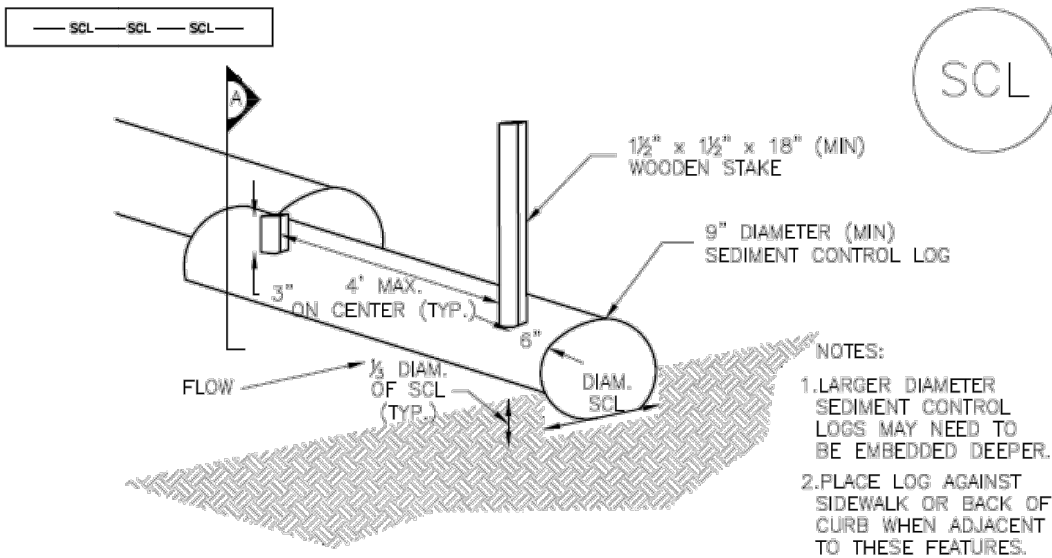
(DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO, AND CITY OF AURORA, COLORADO; NOT AVAILABLE IN AUTOCAD)

NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

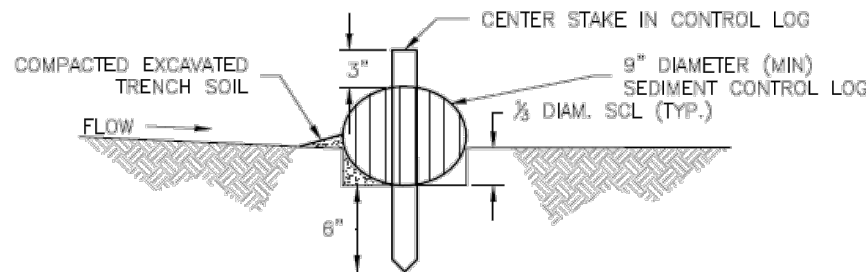
SCL-6	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2015
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Sediment Control Log (SCL)

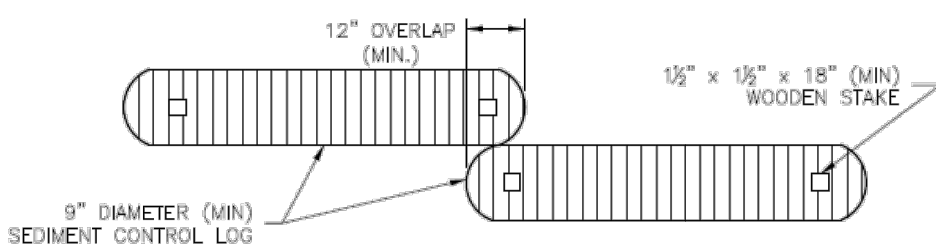
SC-2



TRENCHED SEDIMENT CONTROL LOG



SECTION A
TRENCHED SEDIMENT CONTROL LOG



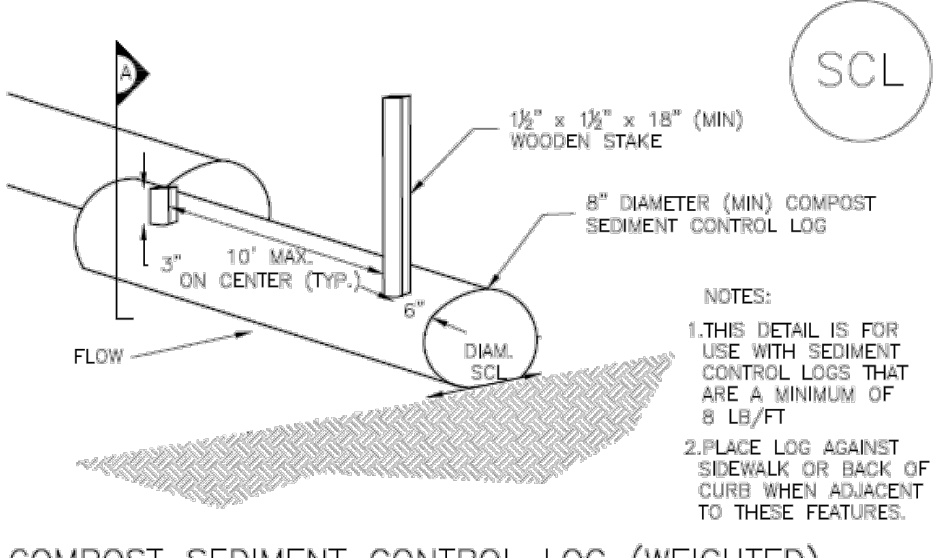
LOG JOINTS

SCL-1. TRENCHED SEDIMENT CONTROL LOG

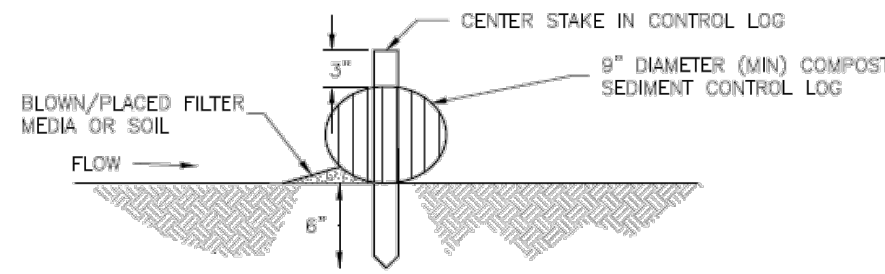
November 2015	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SCL-3
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SC-2

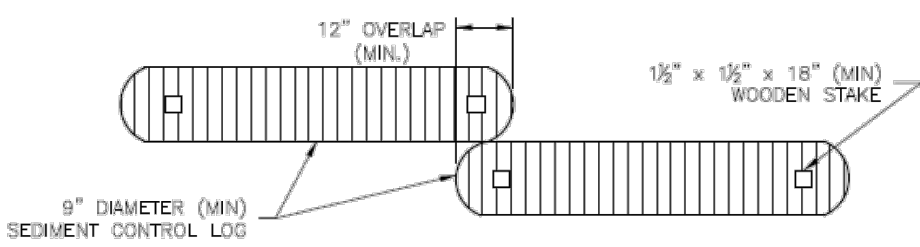
Sediment Control Log (SCL)



COMPOST SEDIMENT CONTROL LOG (WEIGHTED)



SECTION A
COMPOST SEDIMENT CONTROL LOG



LOG JOINTS

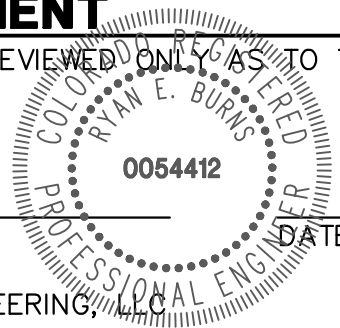
SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

SCL-4	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2015
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ENGINEER'S STATEMENT

STANDARD DETAILS SHOWN WERE REVIEWED ONLY AS TO THEIR APPLICATION ON THIS PROJECT

RYAN E. BURNS, P.E.
COLORADO P.E. 0054412
FOR AND ON BEHALF OF JR ENGINEERING



2/14/24

ESTATES AT CATHEDRAL PINES

DETAIL SHEET

SHEET 11 OF 11

JOB NO. 25260.00

UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, OR ENGINEER APPROVES THEIR USE. THESE DRAWINGS ARE DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR

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DATE

BY

No. REVISION

N/A

N/A

2/14/24

DESIGNED BY

DRAWN BY

CHECKED BY

PAL

PAL

PAL

APPENDIX D – SWMP CHECKLIST



3275 Akers Drive
Colorado Springs, CO 80922
Phone 719-520-6460
Fax 719-520-6879
www.elpasoco.com

EL PASO COUNTY STORMWATER MANAGEMENT PLAN CHECKLIST

EPC Project Number:

Revised: October 2021

		Applicant	EPC
1. STORMWATER MANAGEMENT PLAN (in the "Applicant" column specify the page number for each item)			
1	Applicant (owner/designated operator), SWMP Preparer, Qualified Stormwater Manager, and Contractor Information. (On cover/title sheet)		
2	Table of Contents		
3	Site description and location to include: vicinity map with nearest street/crossroads description		
4	Narrative description of construction activities proposed (e.g., may include clearing and grubbing, temporary stabilization, road grading, utility / storm installation, final grading, final stabilization, and removal of temporary control measures)		
5	Phasing plan – may require separate drawings indicating initial, interim, and final site phases for larger projects. Provide "living maps" that can be revised in the field as conditions dictate		
6	Proposed sequence for major activities: Provide a construction schedule of anticipated starting and completion dates for each stage of land-disturbing activity depicting conservation measures anticipated, including the expected date on which the final stabilization will be completed		
7	Estimates of the total site area and area to undergo disturbance; current area of disturbance must be updated on the SWMP as changes occur		
8	Soil erosion potential and impacts on discharge that includes a summary of the data used to determine soil erosion potential		
9	A description of existing vegetation at the site and percent ground cover and method used to determine ground cover		
10	Location and description of all potential pollution sources including but not limited to: disturbed and stored soils; vehicle tracking; management of contaminated soils; loading and unloading operations; outdoor storage of materials; vehicle and equipment maintenance and fueling; significant dust generating process; routine maintenance activities involving fertilizers, pesticides, herbicides, detergents, fuels, solvents, oils, etc.; on-site waste management; concrete truck/equipment washing; dedicated asphalt, concrete batch plants and masonry mixing stations; non-industrial waste such as trash and portable toilets		
11	Material handling to include spill prevention and response plan and procedures		
12	Spill prevention and pollution controls for dedicated batch plants		
13	Other SW pollutant control measures to include waste disposal and off-site soil tracking		
14	Location and description of any anticipated allowable non-stormwater discharge (ground water, springs, irrigation, discharge covered by CDPHE Low Risk Guidance, etc.)		
15	Name(s) of ultimate receiving waters; size, type and location of stormwater outfall or storm sewer system discharge		
16	Description of all stream crossings located within the project area or statement that no streams cross the project area		



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EL PASO COUNTY STORMWATER MANAGEMENT PLAN CHECKLIST

EPC Project Number:

Revised: October 2021

		Applicant	EPC
17	SWMP Map to include:		
17a	construction site boundaries		
17b	flow arrows to depict stormwater flow directions		
17c	all areas of disturbance		
17d	areas of cut and fill		
17e	areas used for storage of building materials, soils (stockpiles) or wastes		
17f	location of any dedicated asphalt / concrete batch plants		
17g	location of all structural control measures		
17h	location of all non-structural control measures		
17i	springs, streams, wetlands and other surface waters, including areas that require maintenance of pre-existing vegetation within 50 feet of a receiving water		
18	Narrative description of all structural control measures to be used. Modifications to EPC standard control measures must meet or exceed County-approved details		
19	Description of all non-structural control measures to be used including seeding, mulching, protection of existing vegetation, site watering, sod placement, etc.		
20	Technical drawing details for all control measure installation and maintenance; custom or other jurisdiction's details used must meet or exceed EPC standards		
21	Procedure describing how the SWMP is to be revised		
22	Description of Final Stabilization and Long-term Stormwater Quality (describe nonstructural and structural measures to control SW pollutants after construction operations have been completed, including detention, water quality control measure etc.)		
23	Specification that final vegetative cover density is to be 70% of pre-disturbed levels		
24	Outline of permit holder inspection procedures to install, maintain, and effectively operate control measures to manage erosion and sediment		
25	Record keeping procedures identified to include signature on inspection logs and location of SWMP records on-site		
26	If this project relies on control measures owned or operated by another entity, a documented agreement must be included in the SWMP that identifies location, installation and design specifications, and maintenance requirements and responsibility of the control measure(s)		
	Please note: all items above must be addressed. If not applicable, explain why, simply identifying "not applicable" will not satisfy CDPHE requirement of explanation.		
2. ADDITIONAL REPORTS/PERMITS/DOCUMENTS			
a	Grading and Erosion Control Plan (signed)		
b	Erosion and Stormwater Quality Control Permit (ESQCP) (signed)		



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EL PASO COUNTY STORMWATER MANAGEMENT PLAN CHECKLIST

EPC Project Number:

Revised: October 2021

Applicant	EPC
-----------	-----

3. APPLICANT COMMENTS

a			
b			
c			

4. CHECKLIST REVIEW CERTIFICATIONS

a	<p>Applicant: The Stormwater Management Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. Said Plan has been prepared according to the criteria established by the County and State for Stormwater Management Plans.</p> <p>_____ Engineer of Record and/or Qualified Stormwater Manager Signature</p> <p>_____ Date</p>		
b	<p>Review Engineer: The Stormwater Management Plan was reviewed and found to meet the checklist requirements except where otherwise noted or allowed by an approved deviation request.</p> <p>_____ Review Engineer</p> <p>_____ Date</p>		

APPENDIX E – INSPECTION REPORT TEMPLETE

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 stormwater manager? (permittee is responsible for ensuring that the inspector is a qualified stormwater manager)			<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO						
<input type="checkbox"/>	<input type="checkbox"/>						

INSPECTION FREQUENCY					
Check the box that describes the minimum inspection frequency utilized when conducting each inspection					
At least one inspection every 7 calendar days	<input type="checkbox"/>				
At least one inspection every 14 calendar days, with post-storm event inspections conducted within 24 hours after the end of any precipitation or snowmelt event that causes surface erosions	<input type="checkbox"/>				
<ul style="list-style-type: none"> This is this a post-storm event inspection. Event Date: _____ 	<input type="checkbox"/>				
Reduced inspection frequency - Include site conditions that warrant reduced inspection frequency	<input type="checkbox"/>				
<ul style="list-style-type: none"> Post-storm inspections at temporarily idle sites 	<input type="checkbox"/>				
<ul style="list-style-type: none"> Inspections at completed sites/area 	<input type="checkbox"/>				
<ul style="list-style-type: none"> Winter conditions exclusion 	<input type="checkbox"/>				
Have there been any deviations from the minimum inspection schedule? If yes, describe below.	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; text-align: center;">YES</td> <td style="width: 50%; text-align: center;">NO</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td style="text-align: center;"><input type="checkbox"/></td> </tr> </table>	YES	NO	<input type="checkbox"/>	<input type="checkbox"/>
YES	NO				
<input type="checkbox"/>	<input type="checkbox"/>				

INSPECTION REQUIREMENTS*
i. Visually verify all implemented control measures are in effective operational condition and are working as designed in the specifications
ii. Determine if there are new potential sources of pollutants
iii. Assess the adequacy of control measures at the site to identify areas requiring new or modified control measures to minimize pollutant discharges
iv. Identify all areas of non-compliance with the permit requirements, and if necessary, implement corrective action
*Use the attached Control Measures Requiring Routine Maintenance and Inadequate Control Measures Requiring Corrective Action forms to document results of this assessment that trigger either maintenance or corrective actions

AREAS TO BE INSPECTED			
Is there evidence of, or the potential for, pollutants leaving the construction site boundaries, entering the stormwater drainage system or discharging to state waters at the following locations?			
	NO	YES	If "YES" describe discharge or potential for discharge below. Document related maintenance, inadequate control measures and corrective actions Inadequate Control Measures Requiring Corrective Action form
Construction site perimeter	<input type="checkbox"/>	<input type="checkbox"/>	
All disturbed areas	<input type="checkbox"/>	<input type="checkbox"/>	
Designated haul routes	<input type="checkbox"/>	<input type="checkbox"/>	
Material and waste storage areas exposed to precipitation	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where stormwater has the potential to discharge offsite	<input type="checkbox"/>	<input type="checkbox"/>	
Locations where vehicles exit the site	<input type="checkbox"/>	<input type="checkbox"/>	
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>	

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	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

[illegible]

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?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

Are there additional control measures needed that were not in place at the time of inspection?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

[illegible]

REPORTING REQUIREMENTS

The permittee shall report the following circumstances orally 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 regardless of the cause of the incident (See Part II.L.6.a of the Permit) <i>This category would primarily result from the discharge of pollutants in violation of the permit</i>			
b. Numeric Effluent Limit Violations <ul style="list-style-type: none"> ○ Circumstances leading to any unanticipated bypass which exceeds any effluent limitations (See Part II.L.6.b of the Permit) ○ Circumstances leading to any upset which causes an exceedance of any effluent limitation (See Part II.L.6.c of the Permit) ○ Daily maximum violations (See Part II.L.6.d of the Permit) <i>Numeric effluent limits are very uncommon in certifications under the COR400000 general permit. This category of noncompliance only applies if numeric effluent limits are included in a permit certification.</i>			

Has there been an incident of noncompliance requiring 24-hour notification?	NO	YES	
	<input type="checkbox"/>	<input type="checkbox"/>	If "YES" document below

Date and Time of Incident	Location	Description of Noncompliance	Description of Corrective Action	Date and Time of 24 Hour Oral Notification	Date of 5 Day Written 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