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Stormwater Manager
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El Paso County Department of Public Works

**EROSION CONTROL AND
STORMWATER MANAGEMENT PLAN
FOR
FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
PCD FILE NO. SF2236**

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Qualified Stormwater Manager:

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EROSION & STORMWATER QUALITY CONTROL PLAN FOR FOURSQUARE AT STERLING EAST RANCH FILING NO. 1

COLORADO DISCHARGE PERMIT SYSTEM STATEMENT (CDPS)/ EROSION AND STORMWATER QUALITY CONTROL PLAN (ESQCP)

Site Inspector

The following Erosion and Stormwater Quality Control Plan (ESQCP) is a detailed account of the requirements of the El Paso County Drainage Criteria Manual, Volume 2 – Stormwater Quality Policies, Procedures and Best Management Practices. The main objective of this plan is to help mitigate the increased soil erosion and subsequent deposition of sediment off-site and other potential stormwater quality impacts during the period of construction from start of earth disturbance until final landscaping and other potential permanent stormwater quality measures are effectively in place.

This document must be kept at the construction site at all times and be made available to the public and any representative of the Colorado Department of Health - Water Quality Control Division, if requested.

This report is also proposed to meet all requirements of the Colorado Discharge Permit System for Construction Activity. If any discrepancies between this report and Volume 2 exist, the El Paso County Manual will prevail.



**EROSION & STORMWATER QUALITY CONTROL PLAN FOR
FOURSQUARE AT STERLING EAST RANCH FILING NO. 1
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APPENDIX

VICINITY MAP
COPY OF GENERAL PERMIT APPLICATION
SYSTEM (CDPS) CHECKLIST
OPERATION & MAINTENANCE INSPECTION RECORD
STANDARD BMP DETAILS w/ INSTALLATION & MAINTENANCE REQUIREMENTS
SITE MAP / EROSION AND STORMWATER QUALITY CONTROL PLAN



SITE DESCRIPTION

The proposed FOURSQUARE AT STERLING RANCH EAST FILING NO. 1 development is located in portion of Section 33 & 34, Township 12 South, Range 65 west of the 6th p.m. in El Paso County, Colorado. The site is located on the east side of Sand Creek. The site is bounded on the north, east and west by proposed and future Sterling Ranch East residential development, west and south by the proposed extension of Briargate Pkwy.

No wetlands, springs, landscape irrigation return flows or construction dewatering is anticipated within the disturbance limits of this site. Should any of the above items occur unexpectedly, BMPs shall be implemented immediately. The local regulatory agency shall be notified for approval of the BMPs and methods.

- **RECEIVING WATERS**

Name of Receiving Water(s)	Sand Creek
Size/Type/Location of Outfall(s)	48" RCP Pond outfall from FSD Pond (permanent) into existing Sand Creek Channel
Discuss discharge connection to Municipal system (include system name, location, and ultimate receiving water(s):	Site runoff to be conveyed overland and via Proposed storm sewer facilities then ultimately discharged into Fountain Creek (via Sand Creek)

- **PROPOSED CONSTRUCTION ACTIVITY**

Proposed construction activities within this project include overlot grading, grading of proposed roadways, utility and storm facility installation, curb and gutter and pavement installation and sidewalk construction of the project site. No storage of building materials, soils or wastes is anticipated with the proposed site grading.

- **PROPOSED SEQUENCE OF ACTIVITY/CONSTRUCTION TIMING**

Proposed construction activities within this project include overlot grading and utility/road construction for the proposed residential subdivision. Sequence of activities will be based upon site contractor timing and scheduling. The contractor is to include sequence of activities schedule in the section provided in the Appendix of this report.

A standard sequence of events typically includes the following, as applicable:



Install perimeter, interior and exterior BMPs.

(Immediately upon plan approval/permitting – Spring 2023) – INITIAL PHASE

- 1) Clear and grub site for proposed lots and roadways.

(After installation of perimeter BMPs – Spring 2023) – INITIAL PHASE

- 2) Excavation & installation of utility and storm facility infrastructure.

Installation of inlet BMPs once storm facilities are constructed.

(Spring/Summer 2023) – INTERIM PHASE

- 3) Curb and Gutter, pavement and sidewalk installation. Installation of Sediment Control Log BMP's once Curb and Gutter and pavement constructed.

(Summer 2023) – INTERIM PHASE

- 4) Building construction. (Fall 2023 – Spring 2024) – FINAL PHASE

The anticipated start and completion time period for site grading operations is to start in Spring 2023 with final site stabilization by Spring 2024. This time schedule could vary depending on individual home sales and construction schedules.

- **EROSION AND SEDIMENT CONTROL**

Erosion control measures shall be implemented in a manner that will protect properties and public facilities from the adverse effects of erosion and sedimentation as a result of construction and earthwork activities. In order to prevent a net increase of sediment load, Best Management Practices will be implemented during the construction life of this project. A silt fence will be installed per the approved grading and erosion control plan in order to protect undisturbed areas. All roads will be inspected to ensure that sediment from on-site construction activity is not being discharged with the stormwater. Existing roadways shall be swept as needed for controlling tracking of mud onto public roadways. Vehicle tracking control pads will aid in minimizing soil tracking onto existing roadways. All disturbed areas, not sodded, will be reseeded with a native seed mix and watered until a mature stand is established. All areas disturbed will be protected with silt fence, diversion swales and temporary sediment traps (as needed basis only) until such time as the site has been re-vegetated. Vegetation and vegetated buffers shall be preserved as much as possible. Wherever feasible, vegetated buffers shall be maintained free from vehicle/equipment parking, storage, stockpiles, or other impacts.

- **DEVELOPMENT AREA/ AREAS AND VOLUME STATEMENT**

Total Platted Site Area	<u>36.647</u> Acres
Site area to be disturbed	<u>41.24</u> Acres
Percent disturbance	<u>100</u> %

The total volume of earthwork cut/fill operations is more than 500 CY.

- **SOILS INFORMATION**

The average soil condition reflects Hydrologic Group “A” (Type 8 – Blakeland Loamy Sand) and Hydrologic Group “A” (Type 19 – Columbine Gravelly Sandy Loam), as determined by the “Soil Survey of El Paso County Area,” prepared by the Soil Conservation Service. Based upon the current proposed development of this site, the following runoff coefficients would be realized:

Existing site runoff coefficient =	= <u>0.35</u>
Developed site runoff coefficient	= <u>0.47</u> (landscape / seeded areas)
Percent disturbance	= 0.90 (paved / hardscape areas)

- **EXISTING SITE CONDITIONS**

The site is located within the Sand Creek Drainage Basin. Stormwater drains to the southwest across this site and is conveyed within Sand Creek. The site was previously graded and all disturbance areas were previously stripped of vegetation. This Grading Plan and SWMP report is being completed for the overlot grading, roadway, utility, and home lot construction.

This site is currently 20% vegetated with native grasses and has existing slopes ranging from approximately 1% to 9% percent. The site was previously disturbed as mentioned, and based upon visual observation in the field, all recently previously disturbed acres are not re-vegetated at this time. Prior to the recent grading operations the site was 100% vegetated with native grasses.

There are no areas designated as wetlands within the grading development limits for this report. No known non-stormwater discharge (i.e., ground water, springs, irrigation, etc.) are known to exist on this site.



SITE MAP

Included in the appendix of this report is the overlot grading plan for the subject property which will serve as the SWMP site map. This document contains site specific grading and erosion control BMP measures as required and approved by the El Paso County Engineering division. Limits of disturbance, areas of cuts/fills, proposed stockpile areas, areas used for storage of materials, equipment, soil, or waste, minimum and maximum cut/fill slopes, existing limits of significant vegetation, locations of springs, streams, and/or wetlands, and existing facilities (including but not limited to: detention/drainage facilities, structures, retaining walls, gas main, water main, wastewater main, electric and telecom vaults, fences, sidewalks, trails, curbs and streets) will be represented on this plan as applicable. The site map will depict locations of specific interim stormwater management BMPs throughout the lifetime of the project. Erosion control cost assurances must be posted to El Paso County in the amount listed in the Financial Assurance Estimate of the overlot grading plan prior to grading activity. The site map/overlot grading plan shall be amended to include any additional interim or phased BMPs over and above measures included on the site map, as required by contractor's construction schedule. All construction BMP details will be included in the appendix of this report. Detail sheets include installation and maintenance requirements. Also, reference "Drainage Criteria Manual, Volume 2 Stormwater Quality Policies, Procedure, and Best Management Practices" for additional information and guidance regarding construction BMPs.

STORMWATER MANAGEMENT

- **SWMP ADMINISTRATOR**

The SWMP Administrator can be an individual(s), position, or title – this entity is responsible for developing, implementing, maintaining, and revising the SWMP. The Administrator is the contact for all SWMP related issues and is the entity responsible for its accuracy, completeness, and implementation. Therefore, the SWMP Administrator should be a person with authority to adequately manage and direct day to day stormwater quality management activities on the subject site. Reference the Appendix of this report for the SWMP permit application which names the individual/entity applying for the permit and naming the Administrator of the SWMP. The Qualified Stormwater Manager will be sufficiently qualified for the required duties per the ECM appendix 1.5.

- **POTENTIAL POLLUTANT SOURCES**

Potential pollutant sources which shall be evaluated for potential to contribute pollutants to stormwater discharge from the subject site may include the following:

- Disturbed and stored soils
- Vehicle tracking of sediments
- Management of contaminated soils
- Loading and unloading operations
- Outdoor storage activities (building materials, fertilizers, chemicals, etc.)
- Vehicle and equipment maintenance and fueling
- Significant dust or particulate generating processes
- Routine maintenance activities involving fertilizers, pesticides, detergents, fuels, solvents, oils, etc.
- On-site waste management practices (waste piles, liquid wastes, dumpsters)
- Concrete truck/equipment washing, including the concrete truck chute associated fixtures and equipment
- Dedicated asphalt and concrete batch plants (not applicable and will not be used on this site)
- Non-industrial waste sources such as worker trash and portable toilets
- Other areas or procedures where potential spills can occur

The location and description of these areas are shown on the attached SWMP Site Map, as applicable.

- **BMP'S FOR POLLUTANT PREVENTION**

The following are common practices to mitigate potential pollutants:

- Wind erosion shall be controlled by sprinkling site roadways and/or temporary stabilizing stockpiles. Each dump truck hauling material from the site will be required to be covered with a tarpaulin.
- Sanitary facilities shall be placed at a minimum of 10' from any curb line and 50' from any inlet. If not feasible for the project, use of a secondary containment shall be implemented. They will be secured at all four corners to prevent overturning and cleaned on a weekly basis. They will be inspected daily for spills.

- Equipment fueling and Maintenance Services – a designated fueling area will be established to contain any spill resulting from fueling, maintenance, or repair of equipment. Contractors will be responsible for containment, cleanup, and disposal of any leak or spill and any costs associated with the cleanup and disposal.
- Chemical products shall be protected from precipitation, free from ground contact, and stored properly to prevent damage from equipment or vehicles.
- Material stockpiles (soils, soil amendments, debris/trash piles) – All construction trash and debris will be deposited in the dumpster.
- Sediment and Migration of Sediment – Sweeping operations will take place as needed to keep roadways maintained (both on-site and adjacent streets). Street sweeping (non-structural control measure will take place throughout the site and community). The perimeter of the site will be evaluated for any potential impact resulting from trucking operations or sediment migration from the site. BMP devices will be placed to protect storm system inlets should any roadway tracking or sediment migration occur.
- Snow removal and/or stockpiling will be considered prior to placement at the site. Snow stockpiles must be kept away from any stormwater conveyance system (i.e., inlets, ponds, outfall locations, roadway surfaces, etc.).
- The Project does not rely on any BMP's owned or operated by another entity.

- **BMP SELECTION**

Selection of the appropriate BMP will limit the source of the pollutant. Guidance for the selection process can be found by referencing the El Paso County “Drainage Criteria Manual Volume 2”.

During grading and construction activity for the subject site, silt fence will be installed along the perimeter of the site as well as at the limits of grading within the project. Check dams will be installed along all permanent and temporary diversion swales to minimize erosion in areas of concentrated stormwater. Temporary diversion swales will be installed to a minimum of 1% slope to divert stormwater to several proposed sediment basins intended to collect stormwater and filter the sediment before conveyance into the proposed storm systems. Inlet protection will be installed at all proposed and adjacent inlets to ensure no downstream pollutants will enter storm sewer facilities. Vehicle tracking control pads will be installed at all access points to the property. Regular

maintenance and inspection of these facilities will be necessary throughout grading operations and until vegetation is reestablished to ensure proper function of the sediment basin temporary outlet structures.

- **MATERIAL HANDLING & SPILL PREVENTION**

Where materials can impact stormwater runoff, existing and planned practices that reduce the potential for pollution must be included in a spill prevention plan, to be provided by the contractor.

Spill prevention plans shall include

- Notification procedures to be used in the event of an accident
- Instruction for clean-up procedures, and identification of a spill kit location
- Provisions for absorbents to be made available for use in fuel areas, and for containers to be available for used absorbents
- 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 sewer system or stream.

- **CONCRETE/ASPHALT BATCH PLANTS**

Where applicable, the SWMP must be amended by the contractor to describe and locate on the Site Map all practices used to control stormwater pollution from dedicated asphalt or concrete batch plants. No concrete or asphalt placement is anticipated with this grading effort.

- **WASTE MANAGEMENT AND DISPOSAL INCLUDING CONCRETE WASHOUT**

Where applicable, the SWMP must be amended by the contractor to describe and locate on the Site Map all practices implemented at the site to control stormwater pollution from all construction site wastes (liquid and solid) including concrete washout activities. Waste disposal bins will be checked for leaks and overflowing capacity during each overall site inspection, and they will be emptied when refuse is within six inches from the top of the bin or more frequently.

- **DOCUMENTING SELECTED BMPS**

As discussed in the SITE MAP section of this report, documentation of the selected BMPs will be included on the site map / overlot grading plan included in this report. The site map/overlot grading

plan shall be amended to include any additional interim or phased BMPs over and above measures included on the site map, as required by contractor's construction schedule.

- **NON-STORMWATER DISCHARGES**

Except for emergency firefighting activities, landscape irrigation return flow, uncontaminated springs, construction dewatering and concrete washout water, the SWMP permit covers only discharges composed entirely of stormwater.

- **STORMWATER DEWATERING**

The discharge of pumped water, ONLY from excavations, ponds, depressions, etc., to surface waters or to a municipal separate storm-sewer system is allowed by the Stormwater Construction Permit as long as the dewatering activity and associated BMPs are identified in the SWMP (including location of activity), and the BMPs are implemented in accordance with the SWMP. Where applicable, all stormwater and groundwater dewatering practices implemented to control stormwater pollution for dewatering must be amended in the SWMP and Site Map by the contractor.

- **REVISING BMPs AND THE SWMP**

The implemented BMPs will need to be modified and maintained regularly to adapt to changing site conditions and to ensure that all potential stormwater pollutants are properly managed. The BMPs and pollutant sources must be reviewed on an ongoing basis by the Administrator as assigned by the Permit. With any construction project, special attention must be paid to construction phasing and therefore revisions to the SWMP to include any additional or modification to the BMPs and SWMP report. The SWMP must be modified or amended to accurately reflect the field conditions. Examples include - but are not limited to – removal of BMPs, identification of new potential pollutant procedures, and changes to information provided in the site map/overlot grading plan. SWMP revisions must be made prior to changes in site conditions. The SWMP should be viewed as a “living document” throughout the lifetime of the project.

FINAL STABILIZATION AND

LONG-TERM STORMWATER MANAGEMENT

Permanent stabilization of the site includes seeding and mulching the site. Seeding and mulching consists of loosening soil, applying topsoil (if permanent seeding) and drill seeding disturbed areas with grasses and crimping in straw mulch to provide immediate protection from raindrop and wind erosion. As the grass cover becomes established, provide long term stabilization of exposed soils.

Once the construction activity ceases permanently, the area will be stabilized with permanent seed and mulch. All areas that will not be impacted by construction of buildings will be seeded and landscaped as feasible. After seeding, each area will be mulched with straw. The straw mulch is to be tacked into place by a disc with blades set nearly straight. Topsoil stockpiles will be stabilized with temporary seed and mulch. Areas of the site that are to be paved will be temporarily stabilized until asphalt is applied.

The temporary perimeter controls (silt fence or equivalent) will not be removed until all construction activities at the site are complete and soils have been stabilized. Upon completion of construction activities, the site shall be inspected to ensure all equipment, waste materials, and debris have been removed. All other BMPs or other control practices and measure that are to remain after completion of construction will be inspected to ensure they are properly functioning. Final stabilization is reached when all soil disturbing activities at the site have been completed and uniform vegetative cover has been established with a density of at least 70% of pre-disturbance levels.

The contractor will be responsible for any re-excavation of sediment and debris that collects in the stormwater quality detention facility required to ensure that the stormwater quality detention facility meets the design grades following construction. The facility inlet and outlet storm lines shall also be cleaned and free of sediment once the site becomes stabilized.

INSPECTION AND MAINTENANCE PROCEDURES

All drainage facilities will be monitored using the enclosed "Monitoring and Maintenance Inspection Record" checklist (Appendix II).

- **SWMP OWNER/ADMINISTRATOR INSPECTION PROCEDURES & SCHEDULES**

The Owner/Administrator shall adhere to the following inspection procedures during the development of the site:

1. Make thorough inspection of the stormwater management system at least every 14 days.
2. Make thorough inspection of the stormwater management system within 24 hours of each precipitation event that creates runoff.
3. If any system deficiencies are noted, corrective actions must begin immediately. Documentation of inspection must be available if requested.
4. Records of the site inspections or facility replacement modifications must be kept at the site within this report.
5. 30-day inspections must take place on this site where construction activity is complete, but vegetative cover is still being established.

In this report's appendix, a site inspection form has been included for use by the Inspector. Upon completion of this form, the document is to be kept in the provided folder also in the rear of this report.

- **BMP MAINTENANCE / REPLACEMENT & FAILED BMPs**

The Stormwater Construction Permit requires that all erosion and sediment control practices and other protective measures identified in the SWMP be maintained in effective and operation condition. A preventative maintenance program should be in place to prevent BMP breakdowns and failures by proactively maintaining or replacing BMPs and equipment. The inspections process should also include procedures to ensure that BMPs are replaced or new BMPs added to adequately manage the pollutant sources at the site. This procedure is part of the ongoing process of revising the BMPs and SWMP as previously discussed, and any changes shall be recorded in the SWMP.

- **RECORD KEEPING AND DOCUMENTING INSPECTIONS**

The following items must be documented as part of the site inspections:

- Inspection date
- Name(s) and title(s) of personnel making inspection
- Location(s) of discharges of sediment or other pollutants from site
- Location(s) of BMPs that need to be maintained

- Location(s) of BMPs that fail to operate as designed or proved inadequate in a particular location
 - Location(s) where additional BMPs are needed that were not in place at time of inspection
 - Deviations from the minimum inspection schedule
 - Descriptions of corrective action for items above including dates and measures taken to prevent future violations
 - Signed statement of compliance added to the report after correction action has been taken
- **INFORMATION REGARDING ITEMS NOT ON CHECKLIST**

SECTION 1

- 5. There is no phasing for this project to install subdivision improvements.
- 12. As no batch plant is proposed within this subdivision, no spill prevention or pollution control measures are needed.
- 14. There is no known non-stormwater discharge within this subdivision.
- 17e. There are no known storage areas for building materials, soils or wastes within this subdivision associated with the infrastructure construction.
- 17f. No Dedicated asphalt/ concrete batch plant is proposed with this subdivision.
- 26. There are no stormwater control measures proposed for use by the project that are not under the direct contact of the owner, developer or contractor.

SECTION 2

- a.& b. Signed documents of each will be included in this report once approved by El Paso County.

EROSION CONTROL COST OPINION

	ITEM	JOB TOTAL	UNIT	UNIT PRICE	TOTAL
1	PERMANENT SEEDING	41.24	AC	\$ 886.00	\$ 36,538.64
2	PERMANENT MULCHING	41.24	AC	\$ 831.00	\$ 34,270.44
3	VEHICLE TRACHING CONTROL	1.00	EA	\$ 2,625.00	\$ 2,625.00
4	SILT FENCE	2,270.00	LF	\$ 3.00	\$ 6,810.00
5	TEMPORARY SEEDING	41.24	AC	\$ 695.00	\$ 28,661.80
6	TEMPORARY MULCH	41.24	AC	\$ 831.00	\$ 34,270.44
7	INLET PROTECTION	8.00	EA	\$ 185.00	\$ 1,480.00
8	EROSION CONTROL LOGS	18.00	EA	\$ 6.00	\$ 108.00
9	SEDIMENT BASIN	1.00	EA	\$ 1,952.00	\$ 1,952.00
10	CONCRETE WASHOUT	1.00	EA	\$ 997.00	\$ 997.00
				SUBTOTAL	\$ 147,713.32
9	MAINTENANCE & REPLACEMENT @ 35%		LS		\$ 51,699.66
				TOTAL	\$ 199,412.98

Classic Consulting Engineers & Surveyors cannot and does not guarantee that the construction cost will not vary from these opinions of probable construction costs. These opinions represent our best judgment as design professionals familiar with the construction industry and this development in particular.

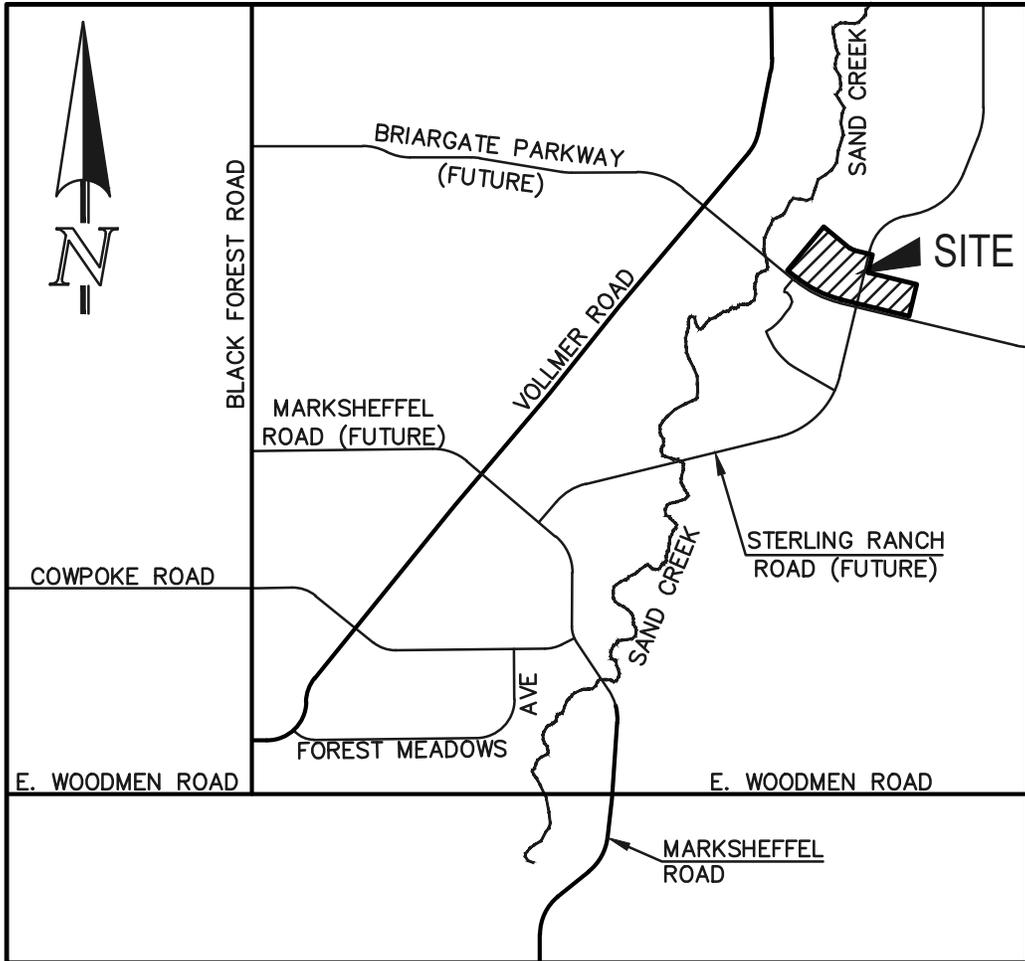
PREPARED BY:

Classic Consulting Engineers & Surveyors, LLC

David L Gibson, P.E.
Project Manager



VICINITY MAP



VICINITY MAP
NOT TO SCALE

COPY OF PERMIT APPLICATION

General permit application for stormwater discharges associated with construction activity.
(Prior permit for existing overall grading still applies)

SYSTEM (CDPS) CHECKLIST
Operation & Maintenance Inspection Record

The following inspection records are to be used at each bi-monthly stormwater management system inspection and after any precipitation or snowmelt event that causes surface runoff. As a result of these inspections, the SWMP may need to be revised. The inspection records and revised SWMP shall be made available to the division upon request. If the construction activity lasts more than 12 months, a copy of the inspection records and revised SWMP shall be sent to the division by May 1 of each year covering April 1 to March 31.

Action: _____ Project Type: _____ Zip Code: _____

Project Name: _____ Subdivision: _____

Address/Location: _____ Assigned Inspector: _____

Action Date: _____ Date Next Routine: _____ Date Next Follow-up: _____

Owner: _____ Owner Phone: _____ Stage of Construction: _____

Rep. Name: _____ Rep. Phone: _____ Inspected By: _____

	Items	Is Used	Maint. Required	Remarks / Actions Necessary
1	Check Dam ➤ Has accumulated sediment and debris been removed per maintenance requirements?	No	No	
2	Erosion Control Blanket ➤ Is the erosion control blanket fabric damaged, loose, or in need of repair?	No	No	
3	Inlet Protection ➤ Is the inlet protection damaged, ineffective or in need of repairs? ➤ Does sediment remain in inlets?	No	No No	
4	Mulching ➤ Uneven mulch distribution on disturbed areas? ➤ Is the mulch application rate inadequate? ➤ Any evidence of mulch being blown or washed away? ➤ Do areas require additional mulching?	No	No No No No	
5	Sediment / Basin Trap ➤ Is the sediment basin improperly constructed or inoperable? ➤ Is there sediment and/or debris in the basin?	No	No No	
6	Silt Fence ➤ Is the silt fence damaged, collapsed, un-trenched or ineffective? ➤ Is the excess sediment against the barrier? ➤ Is the silt fence improperly located?	No	No No No	
7	Slope Drain ➤ Is water bypassing or undercutting the inlet or pipe? ➤ Is there any evidence of erosion?	No	No No	
8	Straw Bale Barrier ➤ Are the straw bales damaged, ineffective or un-trenched? ➤ Is there excess sediment against the barrier? ➤ Are the bales installed and positioned incorrectly?	No	No No No	
9	Surface Roughening ➤ Is the surface roughening inconsistent on slopes? ➤ Is there any evidence of surface roughening erosion?	No	No No	
10	Seeding ➤ Are the seedbeds unprotected? ➤ Has any erosion occurred in the seeded area? ➤ Any evidence of vehicle tracking on seeded area?	No	No No No	
11	Temporary Swales ➤ Has any sediment or debris been deposited within the swales? ➤ Have the slopes of the swale eroded or has damage occurred to the lining? ➤ Are the swales improperly located?	No	No No No	
12	Vehicle Tracking ➤ Is gravel surface clogged with mud or sediment? ➤ Is the gravel surface sinking into the ground? ➤ Has sediment been tracked onto any roads? ➤ Is inlet protection missing around curb inlets near construction entrance?	No	No No No No	
13	Diversion Structure ➤ Has the structure been damaged or show signs of erosion? ➤ Is the structure properly located?	No	No No	

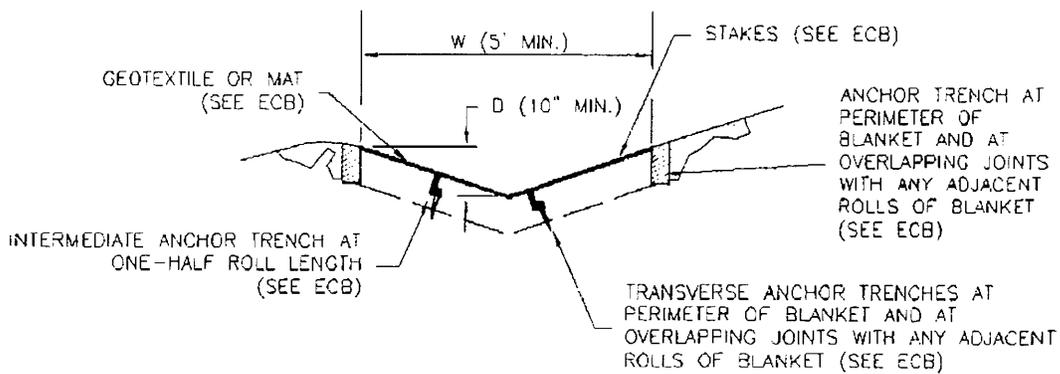
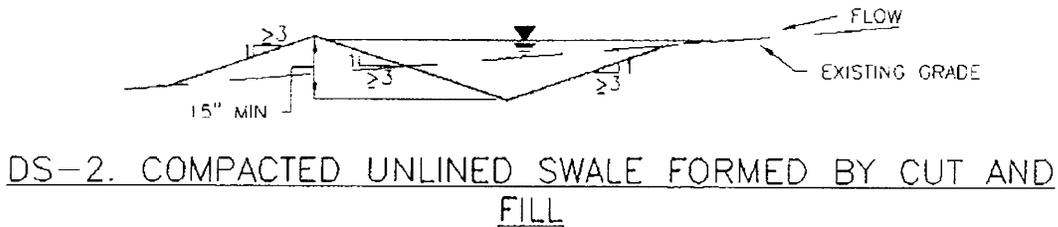
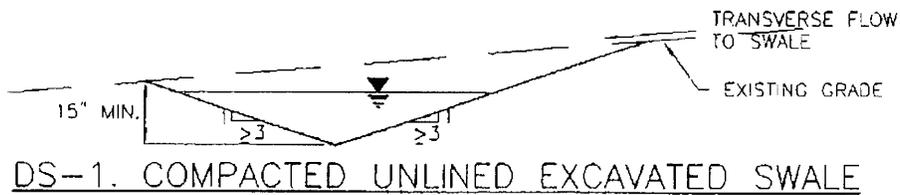
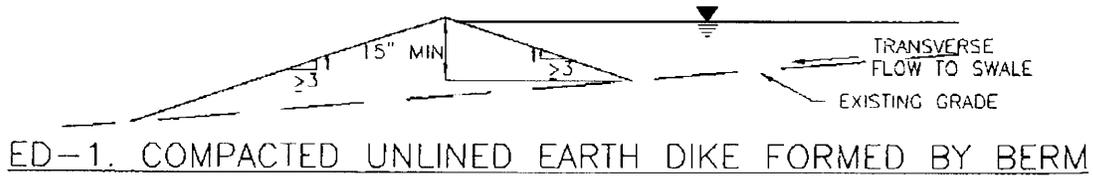
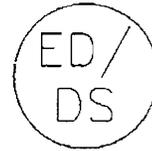
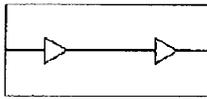
14	Outlet Protection ➤ Is erosion taking place?	No	No	
15	Rough-Cut Street Control ➤ Have structures been properly located and installed? ➤ Is there excess sediment against the structures?	No	No No	
16	Concrete Washout ➤ Has material been removed per maintenance requirements? ➤ Does structure have adequate signage? ➤ Is there adequate tracking-pad material for access, if necessary? ➤ Is there adequate protection around the structure?	No	No No No No	
17	Erosion Logs ➤ Are the erosion logs damaged, collapsed, or ineffective? ➤ Is there excess sediment against the barrier? ➤ Are the erosion logs improperly located?	No	No No No	
18	GEC Management ➤ Is the GEC notebook located on site? ➤ Are changes to the GEC documents noted and approved? ➤ Are the inspection reports retained on-site? ➤ Are corrective actions from the last inspection completed?	No	No No No No	
19	Materials and Pollution ➤ Are stockpiles being managed properly? ➤ Are materials being managed properly? ➤ Is solid waste and trash being managed properly? ➤ Is street sweeping being managed properly? ➤ Are the sanitary facilities being managed properly? ➤ Are the vehicles and equipment being managed properly? ➤ Are there other materials or pollution issues being properly maintained?	No	No No No No No No No	

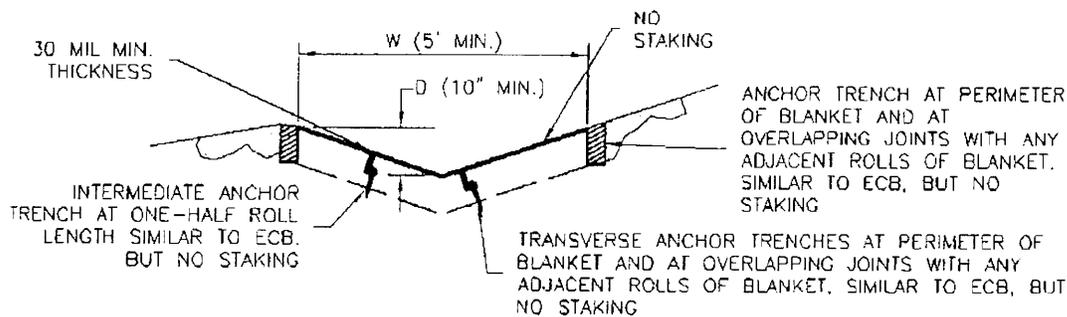
Project Status:[Click here to enter text.](#) Const. Start Date:[Click here to enter text.](#) Size of Disturbance (acres):[Click here to enter text.](#)

Additional Comments:

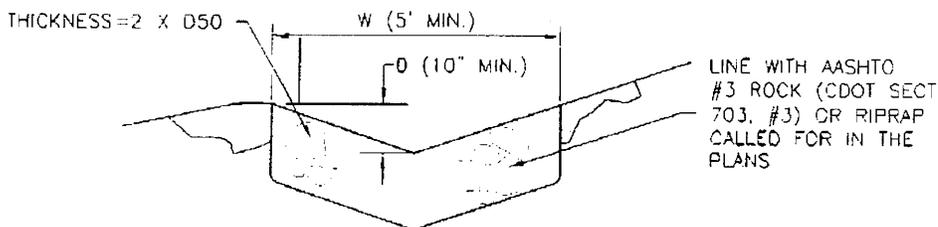
**COMPLETED OPERATION AND
MAINTENANCE INSPECTION RECORDS**

STANDARD BMP DETAILS
W/ INSTALLATION AND MAINTENANCE REQUIREMENTS





DS-4. SYNTHETIC LINED SWALE



DS-5. RIPRAP LINED SWALE

EARTH DIKE AND DRAINAGE SWALE INSTALLATION NOTES

1. SEE SITE PLAN FOR:
 - LOCATION OF DIVERSION SWALE
 - TYPE OF SWALE (UNLINED, COMPACTED AND/OR LINED).
 - LENGTH OF EACH SWALE.
 - DEPTH, D, AND WIDTH, W DIMENSIONS.
 - FOR ECB/TRM LINED DITCH, SEE ECB DETAIL.
 - FOR RIPRAP LINED DITCH, SIZE OF RIPRAP, D50.
2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES AND/OR DIVERSION SWALES EXCEEDING 2-YEAR FLOW RATE OR 10 CFS.
3. EARTH DIKES AND SWALES INDICATED ON SWMP PLAN SHALL BE INSTALLED PRIOR TO LAND-DISTURBING ACTIVITIES IN PROXIMITY.
4. EMBANKMENT IS TO BE COMPACTED TO 90% OF MAXIMUM DENSITY AND WITHIN 2% OF OPTIMUM MOISTURE CONTENT ACCORDING TO ASTM D698
5. SWALES ARE TO DRAIN TO A SEDIMENT CONTROL BMP.
6. FOR LINED DITCHES, INSTALLATION OF ECB/TRM SHALL CONFORM TO THE REQUIREMENTS OF THE ECB DETAIL.
7. WHEN CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION SWALE, INSTALL A TEMPORARY CULVERT WITH A MINIMUM DIAMETER OF 12 INCHES.

EARTH DIKE AND DRAINAGE SWALE 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.

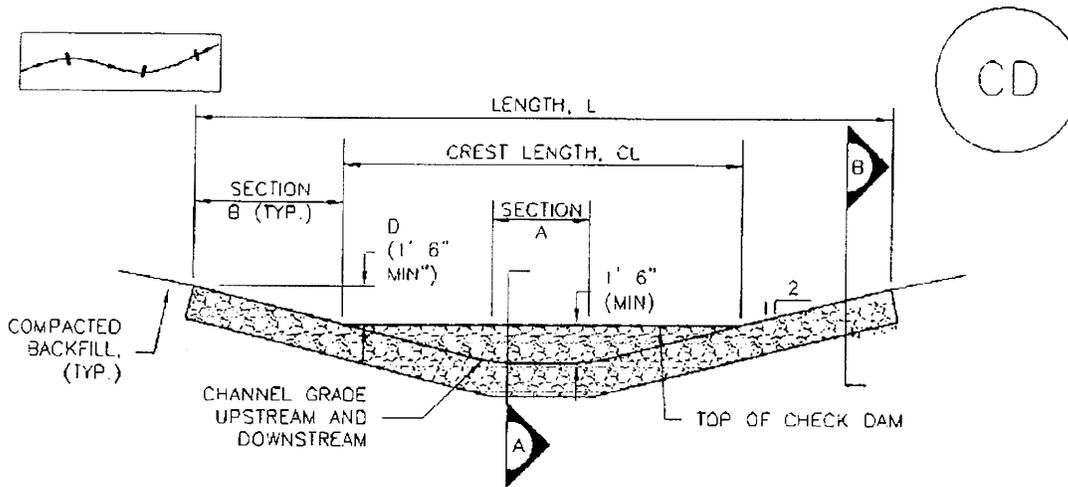
3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. SWALES SHALL REMAIN IN PLACE UNTIL THE END OF CONSTRUCTION. IF APPROVED BY LOCAL JURISDICTION, SWALES MAY BE LEFT IN PLACE.

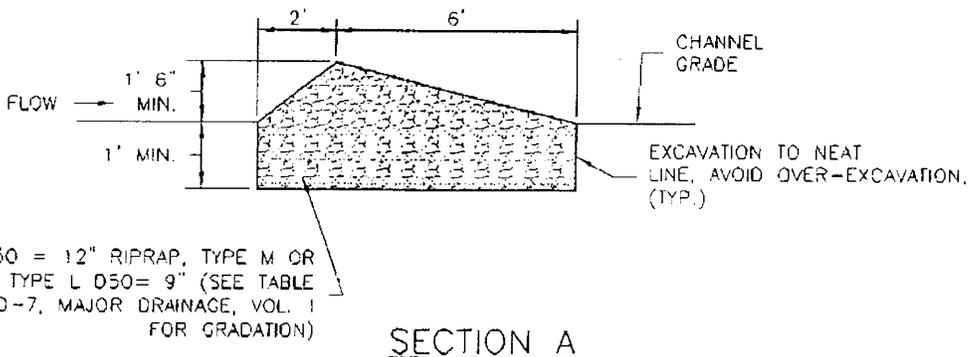
5. WHEN A SWALE IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF COLORADO SPRINGS, COLORADO. NOT AVAILABLE IN AUTOCAD)

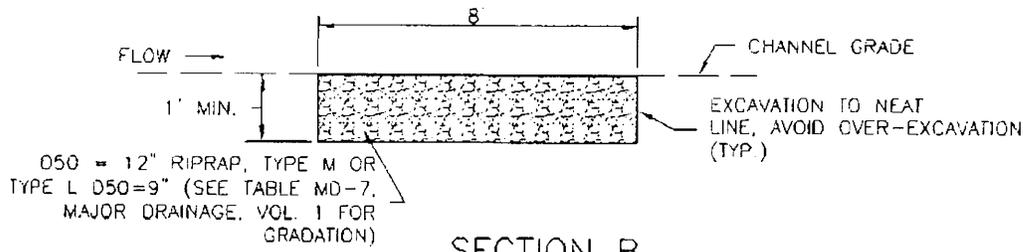
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



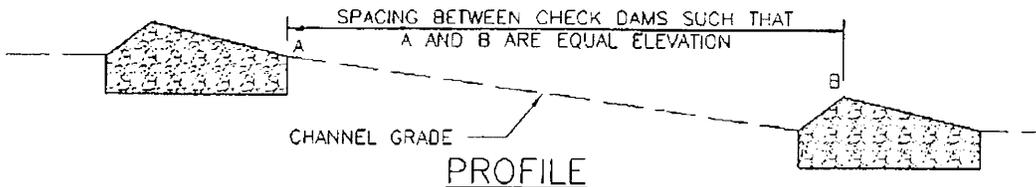
CHECK DAM ELEVATION VIEW



SECTION A



SECTION B



PROFILE

CD-1. CHECK DAM

CHECK DAM INSTALLATION NOTES

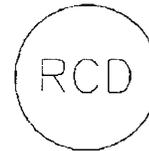
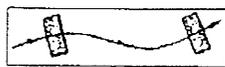
1. SEE PLAN VIEW FOR:
 - LOCATION OF CHECK DAMS.
 - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM)
 - LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
2. CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 12") OR TYPE L (D50 9").
4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.
5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM MAINTENANCE NOTES

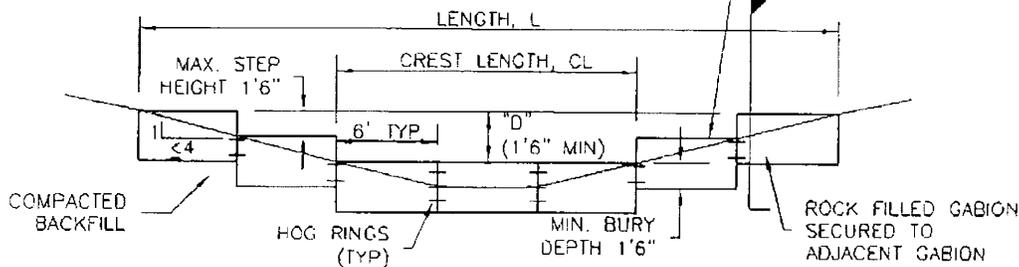
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS 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. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN $\frac{1}{2}$ OF THE HEIGHT OF THE CREST.
5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

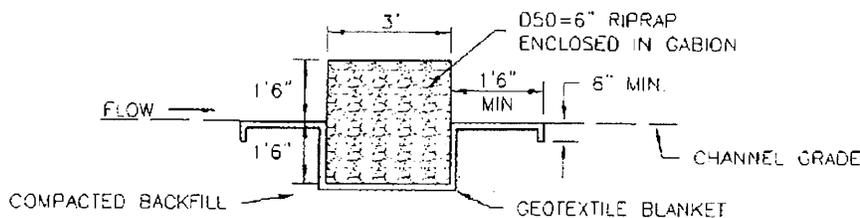
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ALTERNATIVE TO STEPS ON BANKS ABOVE CREST.
DEFORM GABIONS AS NECESSARY TO ALIGN TOP OF GABIONS
WITH GROUND SURFACE: AVOID GAPS BETWEEN GABIONS



REINFORCED CHECK DAM ELEVATION VIEW



SECTION A

REINFORCED CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATIONS OF CHECK DAMS
 - CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).
 - LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
2. CHECK DAMS INDICATED ON THE SWMP SHALL BE INSTALLED PRIOR TO AN UPSTREAM LAND-DISTURBING ACTIVITIES.
3. REINFORCED CHECK DAMS, GABIONS SHALL HAVE GALVANIZED TWISTED WIRE NETTING WITH A MAXIMUM OPENING DIMENSION OF 4½" AND A MINIMUM WIRE THICKNESS OF 0.10". WIRE "HOG RINGS" AT 4" SPACING OR OTHER APPROVED MEANS SHALL BE USED AT ALL GABION SEAMS AND TO SECURE THE GABION TO THE ADJACENT SECTION.
4. THE CHECK DAM SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1' 6".
5. GEOTEXTILE BLANKET SHALL BE PLACED IN THE REINFORCED CHECK DAM TRENCH EXTENDING A MINIMUM OF 1' 6" ON BOTH THE UPSTREAM AND DOWNSTREAM SIDES OF THE REINFORCED CHECK DAM.

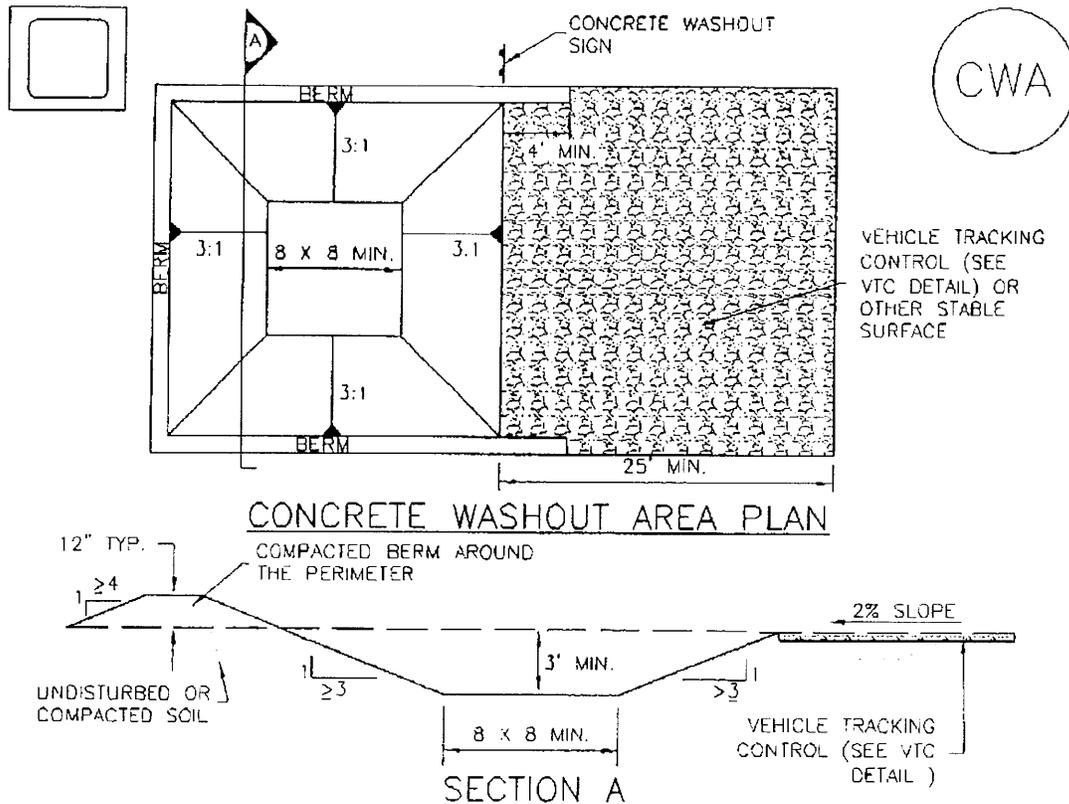
CD-2. REINFORCED CHECK DAM

REINFORCED CHECK DAM 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. SEDIMENT ACCUMULATED UPSTREAM OF REINFORCED CHECK DAMS SHALL BE REMOVED AS NEEDED TO MAINTAIN THE EFFECTIVENESS OF BMP, TYPICALLY WHEN THE UPSTREAM SEDIMENT DEPTH IS WITHIN $\frac{1}{2}$ THE HEIGHT OF THE CREST.
5. REPAIR OR REPLACE REINFORCED CHECK DAMS WHEN THERE ARE SIGNS OF DAMAGE SUCH AS HOLES IN THE GABION OR UNDERCUTTING.
6. REINFORCED CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN REINFORCED CHECK DAMS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED, AND COVERED WITH A GEOTEXTILE BLANKET, OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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CWA-1. CONCRETE WASHOUT AREA

CWA INSTALLATION NOTES

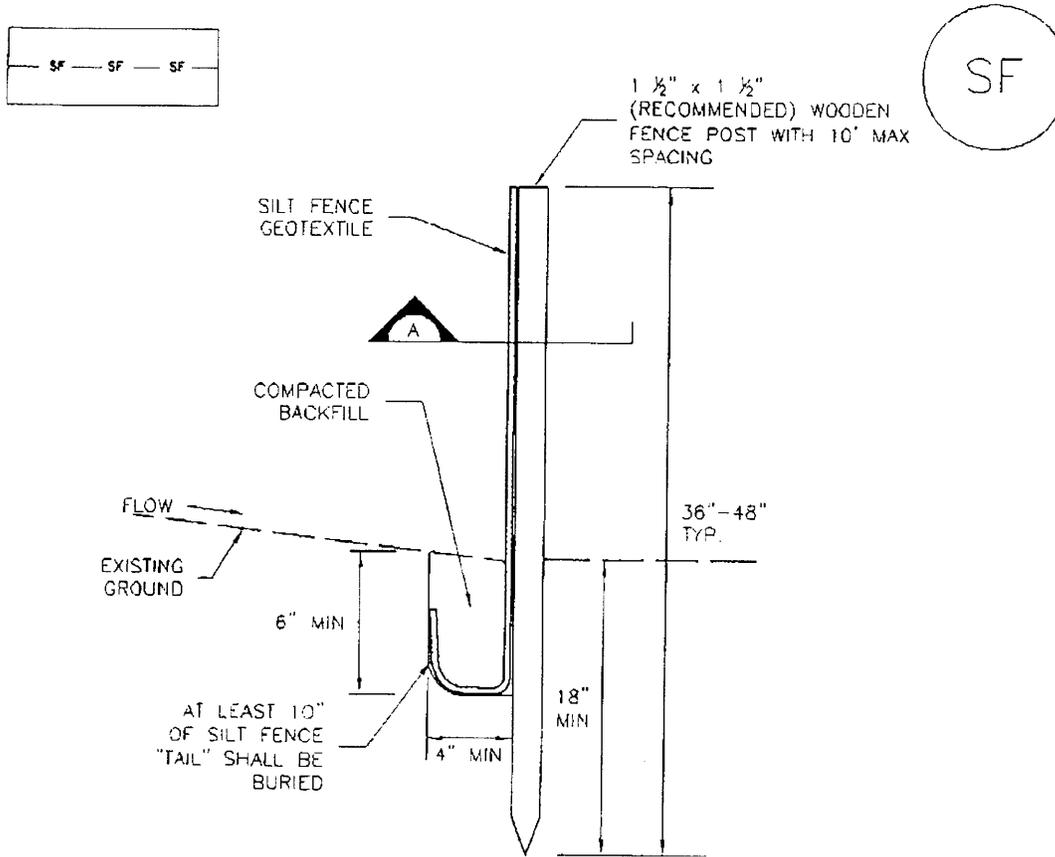
1. SEE PLAN VIEW FOR:
-CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY. DO NOT LOCATE WITHIN 1,000' OF ANY WELLS OR DRINKING WATER SOURCES. IF SITE CONSTRAINTS MAKE THIS INFEASIBLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (16 MIL MIN. THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINED ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER THE PIT SHALL BE AT LEAST 3' DEEP.
5. BERM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP RIGS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

CWA MAINTENANCE NOTES

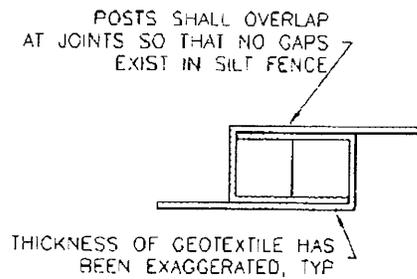
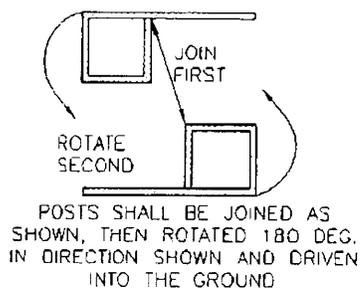
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE
2. FREQUENT OBSERVATIONS 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. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS, ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD).

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SILT FENCE



SECTION A

SF-1. SILT FENCE

SILT FENCE INSTALLATION NOTES

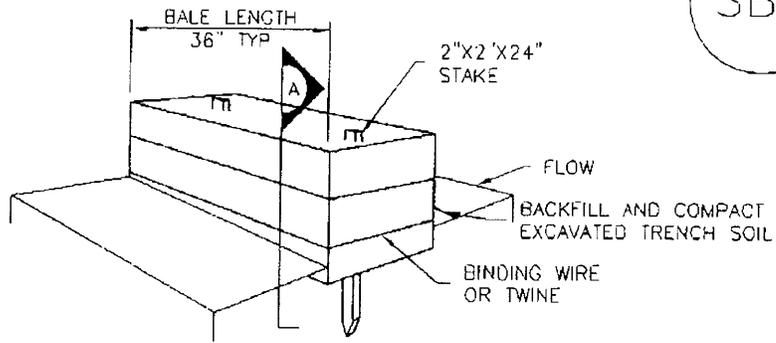
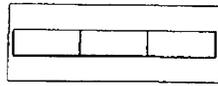
1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3" ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

SILT FENCE MAINTENANCE NOTES

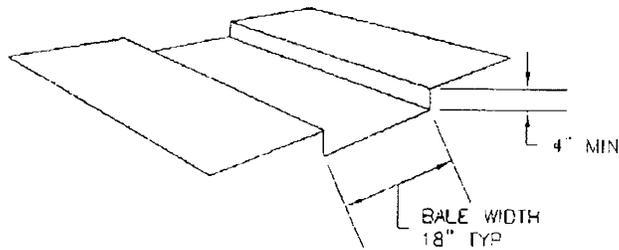
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS 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. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

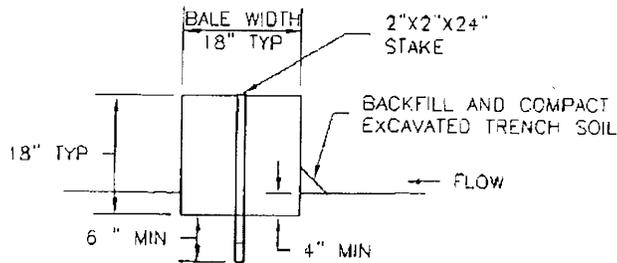
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



STRAW BALE



TRENCH FOR STRAW BALE



SECTION A

SBB-1. STRAW BALE

STRAW BALE INSTALLATION NOTES

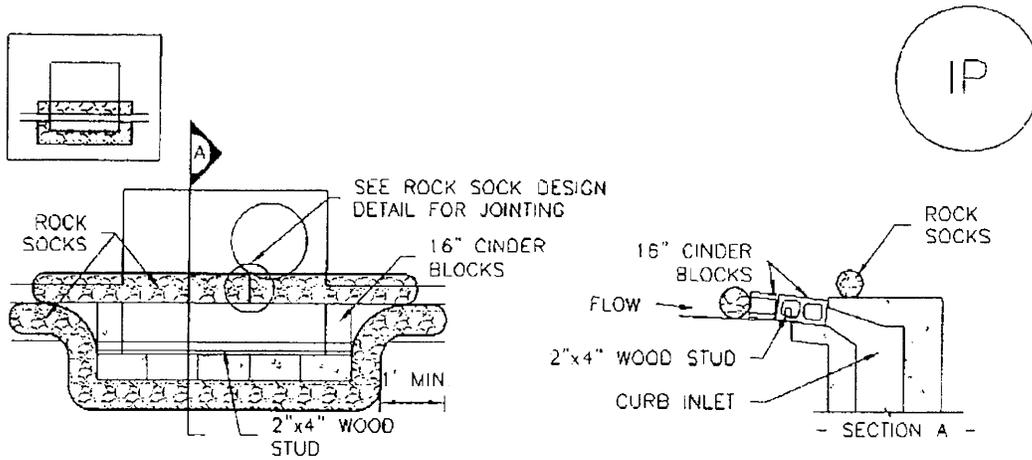
1. SEE PLAN VIEW FOR:
-LOCATION(S) OF STRAW BALES.
2. STRAW BALES SHALL CONSIST OF CERTIFIED WEED FREE STRAW OR HAY. LOCAL JURISDICTIONS MAY REQUIRE PROOF THAT BALES ARE WEED FREE.
3. STRAW BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF STRAW OR HAY AND WEIGH NOT LESS THAN 35 POUNDS.
4. WHEN STRAW BALES ARE USED IN SERIES AS A BARRIER, THE END OF EACH BALE SHALL BE TIGHTLY ABUTTING ONE ANOTHER.
5. STRAW BALE DIMENSIONS SHALL BE APPROXIMATELY 36"x18"x18".
6. A UNIFORM ANCHOR TRENCH SHALL BE EXCAVATED TO A DEPTH OF 4". STRAW BALES SHALL BE PLACED SO THAT BINDING TWINE IS ENCOMPASSING THE VERTICAL SIDES OF THE BALE(S). ALL EXCAVATED SOIL SHALL BE PLACED ON THE UPHILL SIDE OF THE STRAW BALE(S) AND COMPACTED.
7. TWO (2) WOODEN STAKES SHALL BE USED TO HOLD EACH BALE IN PLACE. WOODEN STAKES SHALL BE 2"x2"x24". WOODEN STAKES SHALL BE DRIVEN 6" INTO THE GROUND.

STRAW BALE 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. STRAW BALES SHALL BE REPLACED IF THEY BECOME HEAVILY SOILED, ROTTEN, OR DAMAGED BEYOND REPAIR.
5. SEDIMENT ACCUMULATED UPSTREAM OF STRAW BALE BARRIER SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 1/4 OF THE HEIGHT OF THE STRAW BALE BARRIER.
6. STRAW BALES ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
7. WHEN STRAW BALES ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

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

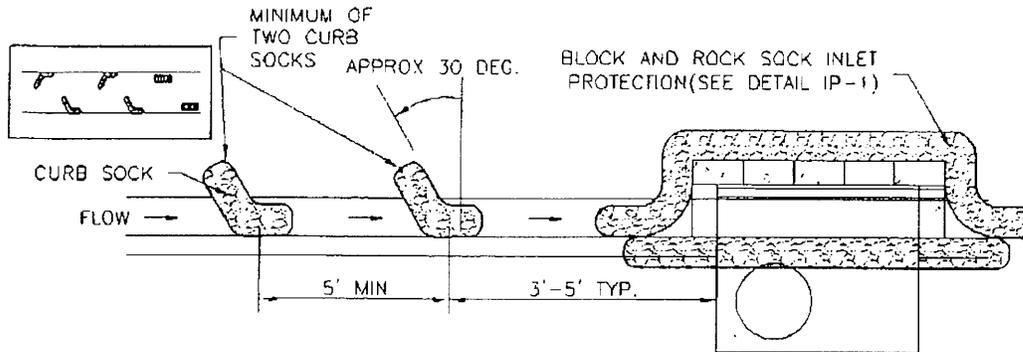
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION

BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

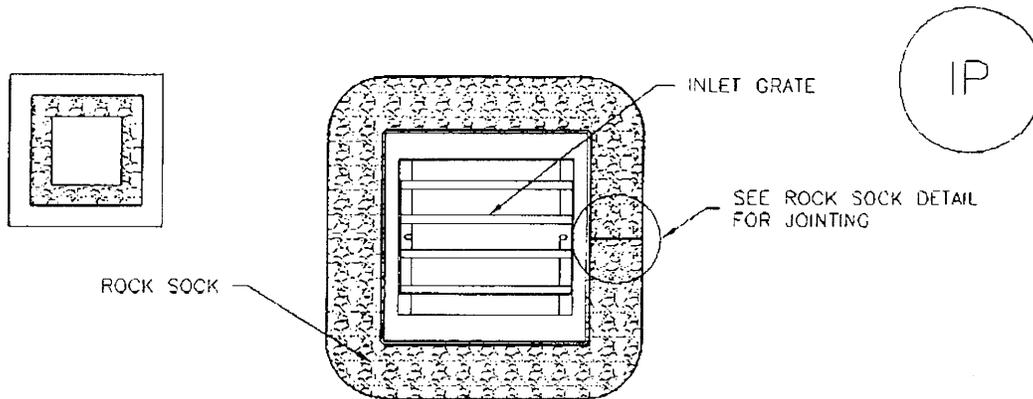
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "CINDER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINTED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.



IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

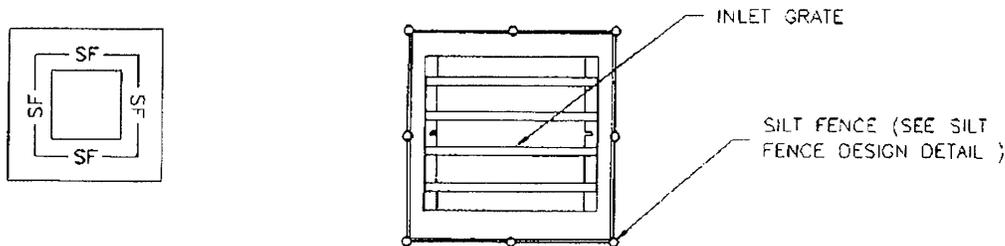
1. SEE ROCK SOCK DESIGN DETAIL INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION

ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

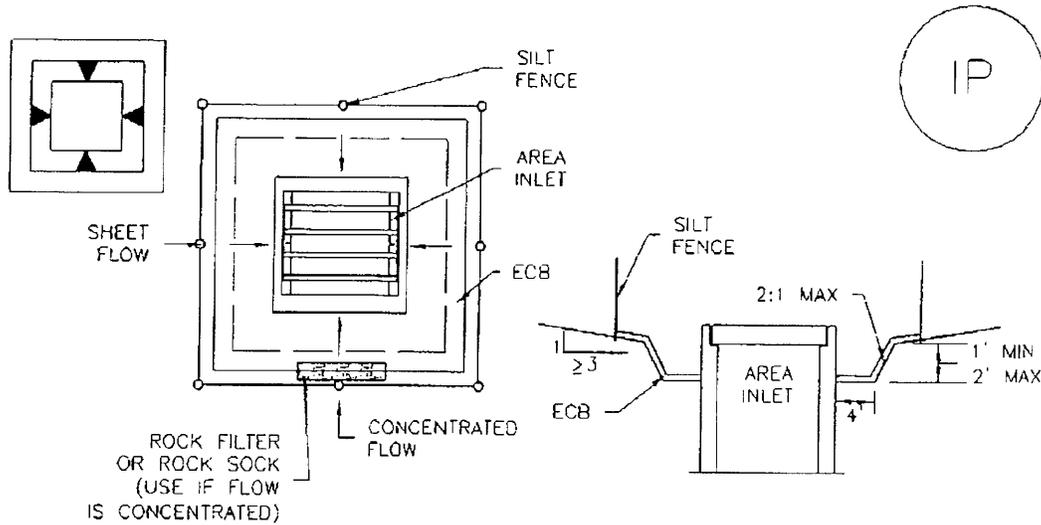
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SILT FENCE INLET PROTECTION INSTALLATION NOTES

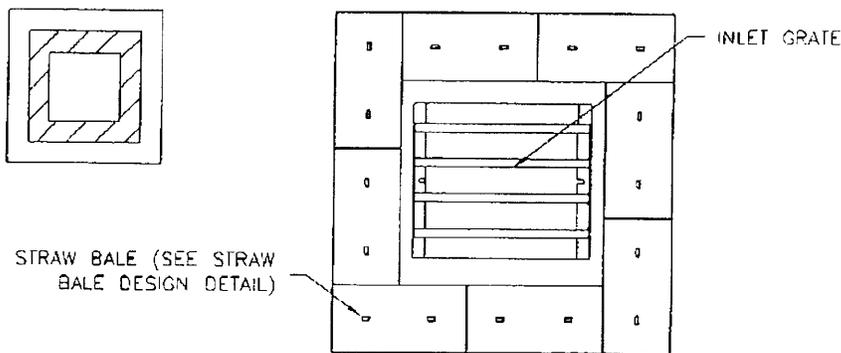
1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PERVIOUS AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.



IP-5. OVEREXCAVATION INLET PROTECTION

OVEREXCAVATION INLET PROTECTION INSTALLATION NOTES

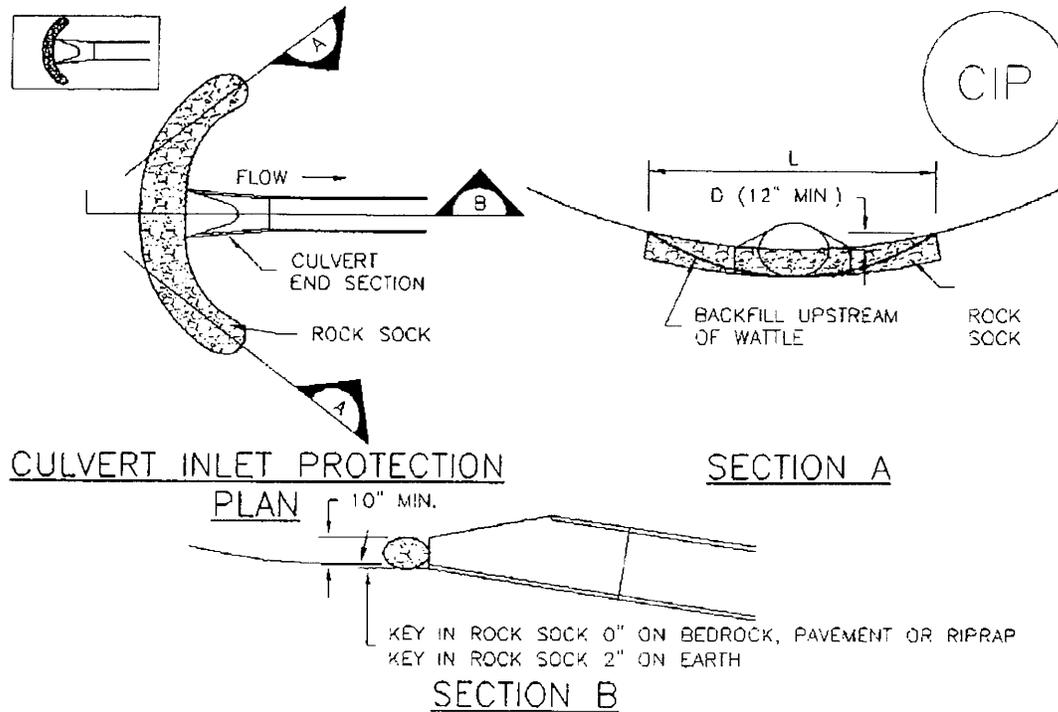
1. THIS FORM OF INLET PROTECTION IS PRIMARILY APPLICABLE FOR SITES THAT HAVE NOT YET REACHED FINAL GRADE AND SHOULD BE USED ONLY FOR INLETS WITH A RELATIVELY SMALL CONTRIBUTING DRAINAGE AREA.
2. WHEN USING FOR CONCENTRATED FLOWS, SHAPE BASIN IN 2:1 RATIO WITH LENGTH ORIENTED TOWARDS DIRECTION OF FLOW.
3. SEDIMENT MUST BE PERIODICALLY REMOVED FROM THE OVEREXCAVATED AREA.



IP-6. STRAW BALE FOR SUMP INLET PROTECTION

STRAW BALE BARRIER INLET PROTECTION INSTALLATION NOTES

1. SEE STRAW BALE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. BALES SHALL BE PLACED IN A SINGLE ROW AROUND THE INLET WITH ENDS OF BALES TIGHTLY ABUTTING ONE ANOTHER.



CIP-1. CULVERT INLET PROTECTION

CULVERT INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR
-LOCATION OF CULVERT INLET PROTECTION.
2. SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

CULVERT INLET 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.
4. SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS $\frac{1}{2}$ THE HEIGHT OF THE ROCK SOCK.
5. CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM 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.

GENERAL INLET PROTECTION INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
 - LOCATION OF INLET PROTECTION.
 - TYPE OF INLET PROTECTION (IP.1, IP.2, IP.3, IP.4, IP.5, IP.6)
2. INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
3. 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.

INLET PROTECTION MAINTENANCE NOTES

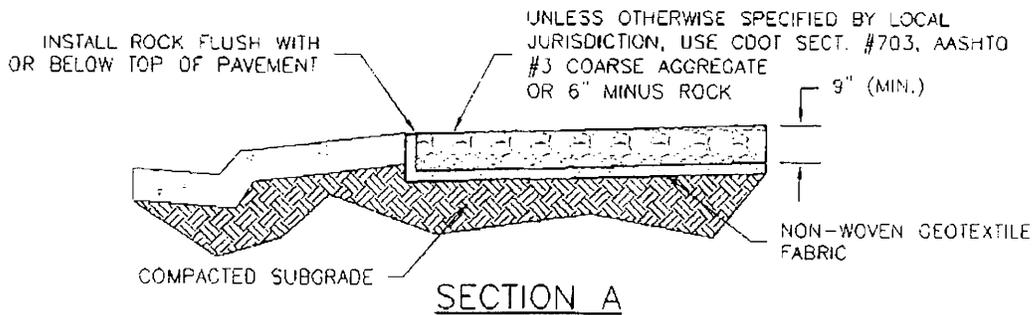
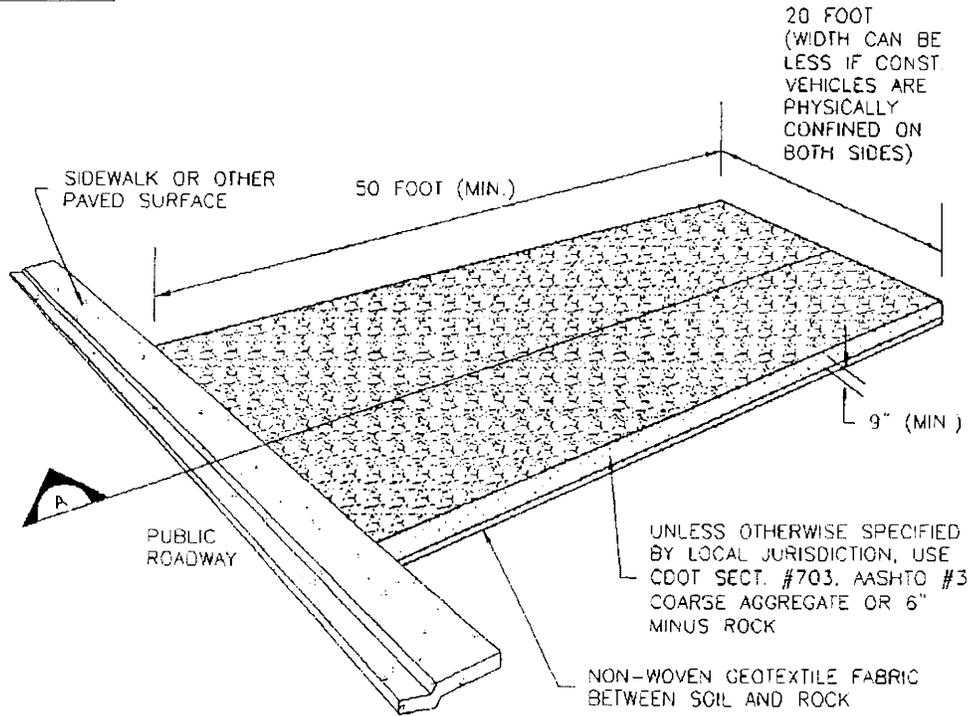
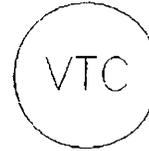
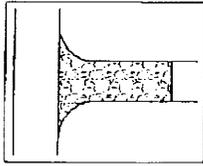
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS 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.
4. SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR ¼ OF THE HEIGHT FOR STRAW BALES.
5. INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
6. WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

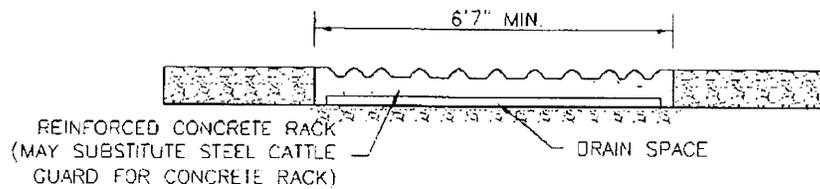
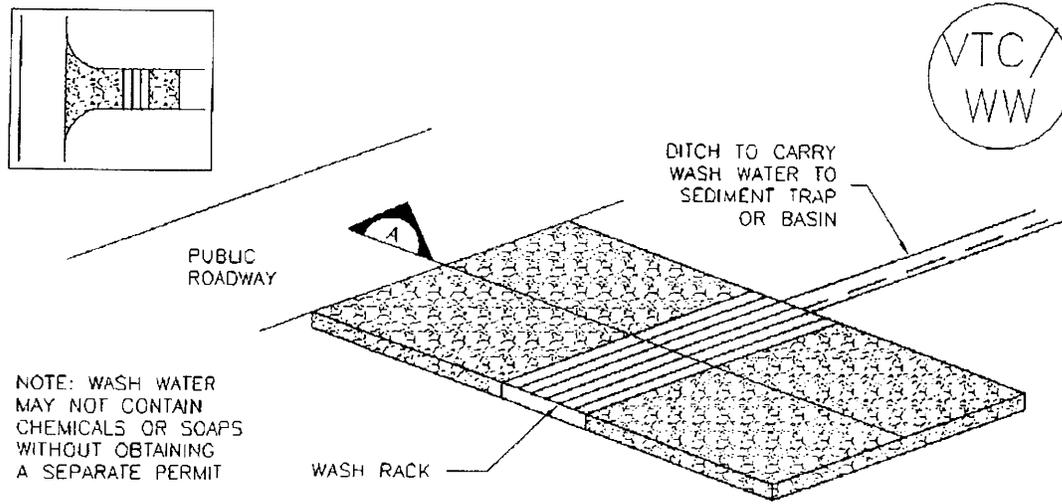
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

NOTE: THE DETAILS INCLUDED WITH THIS FACT SHEET SHOW COMMONLY USED, CONVENTIONAL METHODS OF INLET PROTECTION IN THE DENVER METROPOLITAN AREA. THERE ARE MANY PROPRIETARY INLET PROTECTION METHODS ON THE MARKET. UDFCD NEITHER ENDORSES NOR DISCOURAGES USE OF PROPRIETARY INLET PROTECTION; HOWEVER, IN THE EVENT PROPRIETARY METHODS ARE USED, THE APPROPRIATE DETAIL FROM THE MANUFACTURER MUST BE INCLUDED IN THE SWMP AND THE BMP MUST BE INSTALLED AND MAINTAINED AS SHOWN IN THE MANUFACTURER'S DETAILS.

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

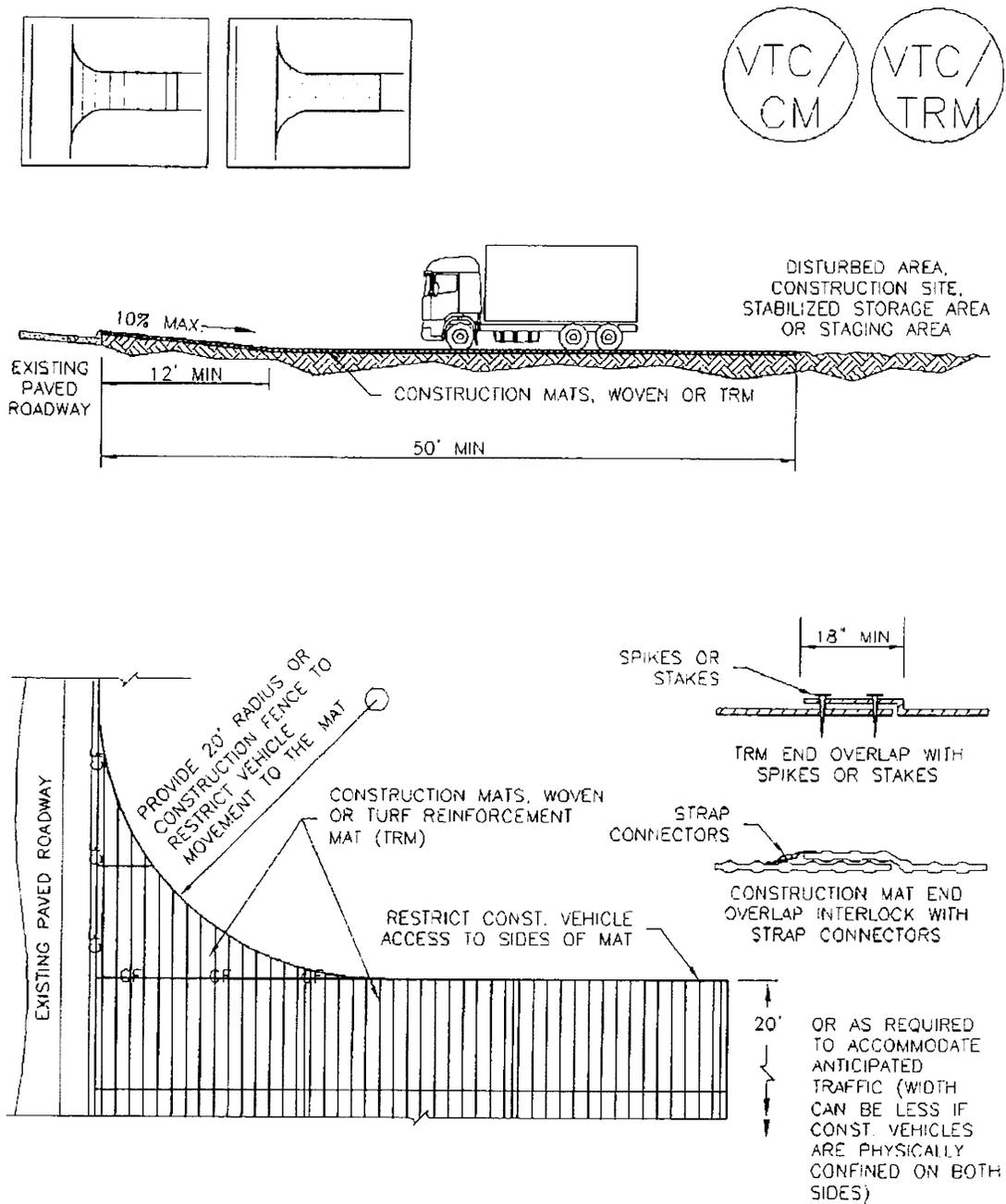


VTC-1. AGGREGATE VEHICLE TRACKING CONTROL



SECTION A

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK



VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR
 - LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).
 - TYPE OF CONSTRUCTION ENTRANCE(S)/EXITS(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703. AASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT 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. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SWEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

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.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

**SITE MAP/ EROSION AND STORMWATER
QUALITY CONTROL PLAN**

FOURSQUARE AT STERLING RANCH EAST FILING NO. 1

COUNTY OF EL PASO, STATE OF COLORADO

CONSTRUCTION PLANS

NOVEMBER 2022

(SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST)

GENERAL CONSTRUCTION NOTES:

- THE LOCATION OF EXISTING UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND MAY NOT INCLUDE ALL UTILITIES. THE EXCAVATION CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- BEFORE COMMENCING ANY EXCAVATION, CALL 1-800-922-1987 FOR EXISTING UTILITY LOCATIONS.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- ALL BACKFILL, SUB-BASE AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED TO THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (PCD).
- ALL STATIONING IS CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE CENTERLINE UNLESS OTHERWISE INDICATED.
- THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS AS SOON AS POSSIBLE AND EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
- ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO THE EPC ECM APPENDIX K - 1.2C.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- BUILDING CONTRACTORS WILL BE RESPONSIBLE FOR CONSTRUCTING POSITIVE DRAINAGE AWAY FROM ALL STRUCTURES.
- ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY PLANNING AND COMMUNITY DEVELOPMENT PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL REVEGETATE ALL DISTURBED AREAS WITHIN 21 DAYS OF SUBSTANTIAL GRADING COMPLETION. EROSION CONTROL SHALL BE INSTALLED AND MAINTAINED IN A FUNCTIONAL MANNER AT ALL TIMES. DEVELOPER IS RESPONSIBLE FOR MAINTAINING DISTURBED AREAS UNTIL REVEGETATION IS COMPLETE.
- TYPE M RIP-RAP WITH 4" OF TYPE II GRANULAR BEDDING AND MIRAFI 180N OR EQUAL MAY BE SUBSTITUTED WHERE TYPE L RIP-RAP WITH MIRAFI FW 700 OR EQUAL IS SPECIFIED
- ALL MATERIALS AND INSTALLATION PROCEDURES SHALL BE IN COMPLIANCE WITH ANY AND ALL APPLICABLE EL PASO COUNTY STANDARDS.
- LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS:

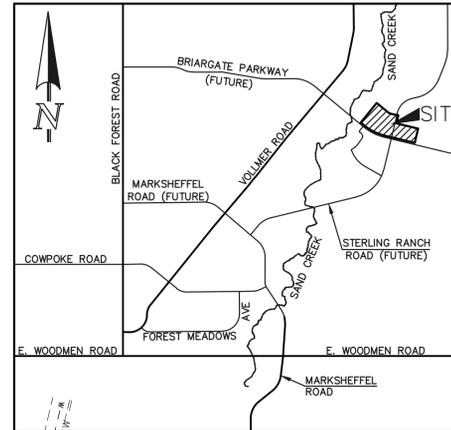
- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
 - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
 - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
 - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
 - CDOT M & S STANDARDS
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND DPW. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY DPW.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY DPW PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.
- SIDEWALK TO BE 6" AT DRIVEWAY LOCATIONS.

SIGNING AND STRIPING NOTES:

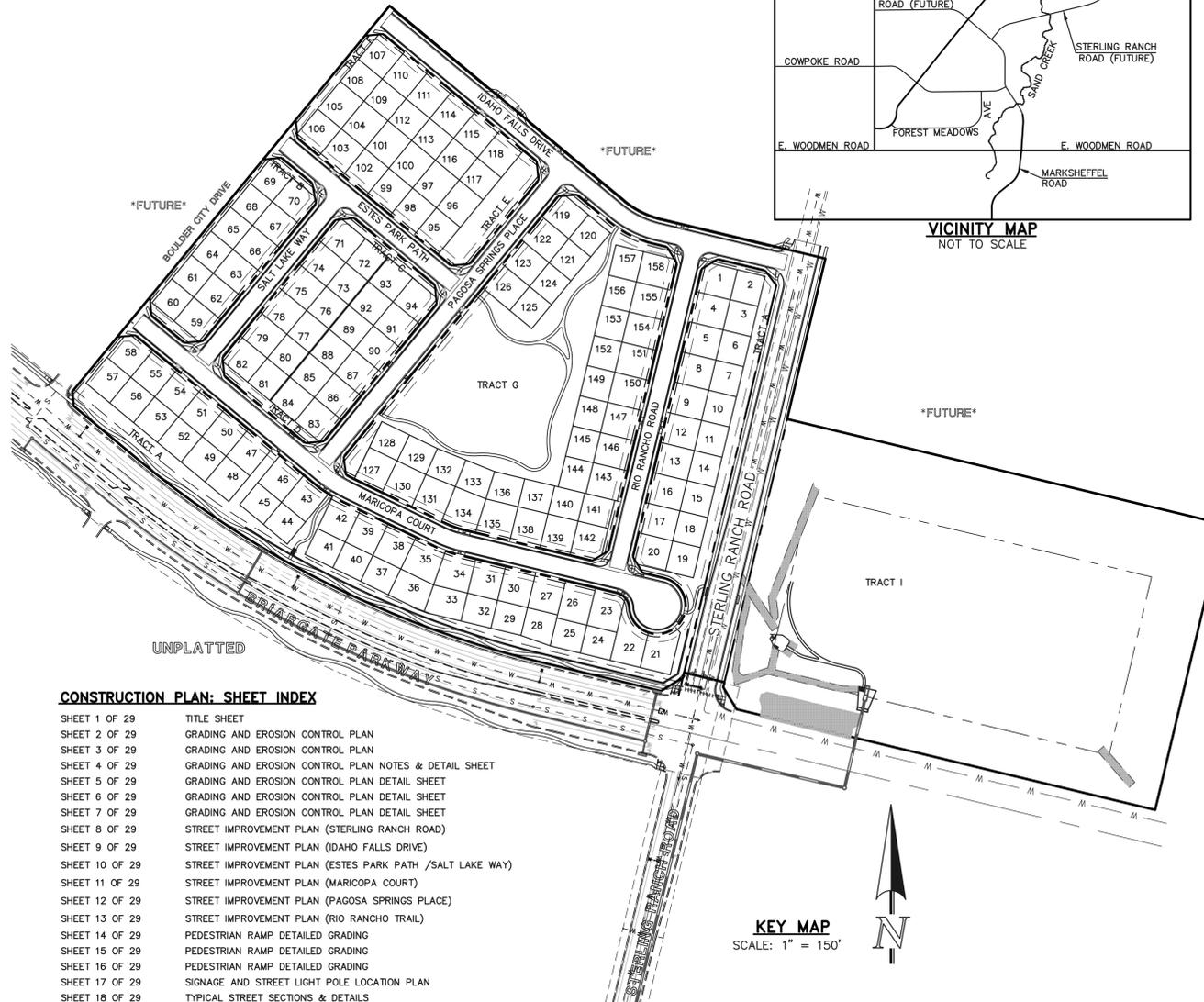
- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- ANY DEVIATION FROM THE SIGNING AND STRIPING PLAN SHALL BE APPROVED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS.
- ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS".
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
- ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALK LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
- THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

BENCHMARKS:

- ELEV. = 7
- ELEV. = 7



VICINITY MAP
NOT TO SCALE



CONSTRUCTION PLAN: SHEET INDEX

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SHEET 3 OF 29	GRADING AND EROSION CONTROL PLAN
SHEET 4 OF 29	GRADING AND EROSION CONTROL PLAN NOTES & DETAIL SHEET
SHEET 5 OF 29	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 6 OF 29	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 7 OF 29	GRADING AND EROSION CONTROL PLAN DETAIL SHEET
SHEET 8 OF 29	STREET IMPROVEMENT PLAN (STERLING RANCH ROAD)
SHEET 9 OF 29	STREET IMPROVEMENT PLAN (IDAHO FALLS DRIVE)
SHEET 10 OF 29	STREET IMPROVEMENT PLAN (ESTES PARK PATH /SALT LAKE WAY)
SHEET 11 OF 29	STREET IMPROVEMENT PLAN (MARIKOOPA COURT)
SHEET 12 OF 29	STREET IMPROVEMENT PLAN (PAGOSA SPRINGS PLACE)
SHEET 13 OF 29	STREET IMPROVEMENT PLAN (RIO RANCHO TRAIL)
SHEET 14 OF 29	PEDESTRIAN RAMP DETAILED GRADING
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SHEET 17 OF 29	SIGNAGE AND STREET LIGHT POLE LOCATION PLAN
SHEET 18 OF 29	TYPICAL STREET SECTIONS & DETAILS
SHEET 19 OF 29	TYPICAL STREET SECTIONS & DETAILS
SHEET 20 OF 29	STORM SEWER PLAN & PROFILE (MAIN 1)
SHEET 21 OF 29	STORM SEWER PLAN & PROFILE (MAIN 2)
SHEET 22 OF 29	STORM SEWER PLAN & PROFILE (MAIN 1 LATERALS)
SHEET 23 OF 29	PRIVATE EXTENDED DETENTION BASIN PLAN SET
SHEET 24 OF 29	FOREBAY DETAILS
SHEET 25 OF 29	OUTLET BOX DETAILS
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UTILITY CONSTRUCTION PLAN: SHEET INDEX

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SANITARY SEWER PLAN - PAGOSA SPRINGS PLACE / IDAHO FALLS DRIVE	SHEET 5 OF 11
SANITARY SEWER PLAN - SALT LAKE WAY	SHEET 6 OF 11
SANITARY SEWER PLAN - ESTES PARK PATH	SHEET 7 OF 11
PUBLIC 8" PVC WATER SYSTEM PLAN	SHEETS 8-9 OF 11
UTILITY SERVICE PLAN	SHEETS 10-11 OF 11

KEY MAP

SCALE: 1" = 150'

AGENCIES:

DEVELOPER:	CLASSIC SRJ LAND, LLC 2138 FLYING HORSE CLUB DR. COLORADO SPRINGS, CO 80921 MR. LOREN J. MORELAND (719) 592-9333
CIVIL ENGINEER:	CLASSIC CONSULTING ENGINEERS & SURVEYORS 619 N. CASCADE AVENUE, SUITE 200 COLORADO SPRINGS, CO 80903 MR. KYLE R. CAMPBELL, P.E. (719) 785-2800
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 MR. JEFF RICE, (719) 520-7877
WATER & SANITATION DISTRICT:	STERLING RANCH METROPOLITAN DISTRICT
FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK, (719) 495-4300
GAS COMPANY:	BLACK HILLS ENERGY 37 WIDEFIELD BOULEVARD WIDEFIELD, COLORADO 80911 MR. GEORGE M. PETERSON, (719) 392-3491
ELECTRIC COMPANY:	MOUNTAIN VIEW ELECTRIC P.O. BOX 1600 LIMON, COLORADO 80828 MR. LES ULFERS, (719) 495-2283
TELEPHONE COMPANY:	CENTURY LINK COMMUNICATIONS (LOCATORS) (800)-922-1987 A.T.&T. (LOCATORS) (719) 635-3674

APPROVALS:

DESIGN ENGINEER'S STATEMENT:

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY DIRECTLY CAUSED BY THE NEGLIGENT ACTS, ERRORS, OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.

DAVID L GIBSON, COLORADO P.E. #46477

FOR AND ON THE BEHALF OF CLASSIC CONSULTING ENGINEERS & SURVEYORS

DATE

OWNER/DEVELOPER'S STATEMENT:

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE EROSION CONTROL PLAN AND AS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

LOREN J. MORELAND
CLASSIC SRJ LAND, LLC
2138 FLYING HORSE CLUB DR.
COLORADO SPRINGS, CO 80921

DATE

EL PASO COUNTY:

COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY FOR COMPLETENESS AND/OR ACCURACY OF THIS DOCUMENT.

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2 AND ENGINEERING CRITERIA MANUAL, AS AMENDED.

IN ACCORDANCE WITH WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

COUNTY ENGINEER / ECM ADMINISTRATOR

DATE

EDARP FILING # SF2236

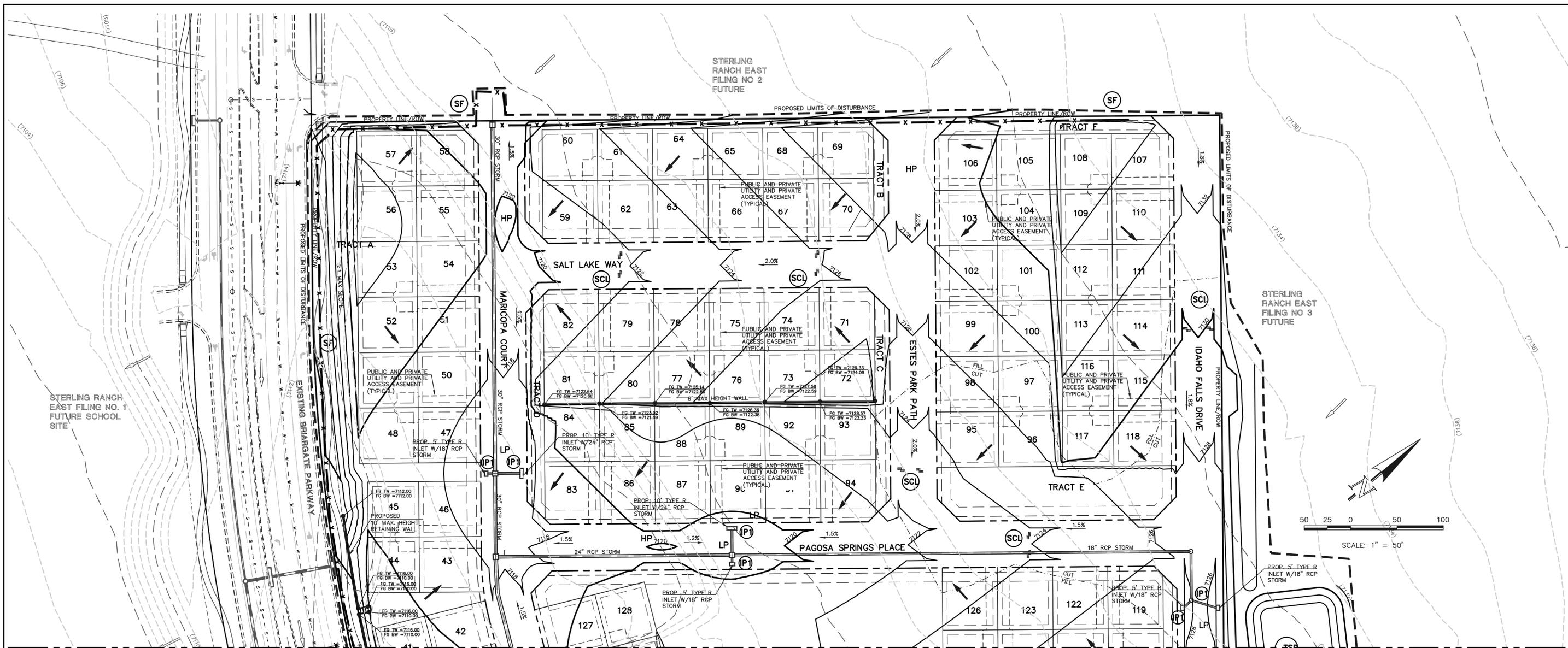
48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	NO. REVISION	DATE	REVIEW:
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.			PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
			DAVID L GIBSON, COLORADO P.E. #46477
			DATE



FOURSQUARE AT STERLING RANCH EAST
FILING NO. 1
CONSTRUCTION PLANS
TITLE SHEET

DESIGNED BY	JRH	SCALE	DATE	09/19/22
DRAWN BY	JRH	(H) 1"= N/A	SHEET	1 OF 29
CHECKED BY		(V) 1"= N/A	JOB NO.	1183.23





LEGEND

- (7700) EXISTING CONTOUR
- 7700 PROPOSED CONTOUR
- PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
- BOUNDARY/R.O.W. LINE
- EXISTING FLOW DIRECTION
- PROPOSED FLOW
- PROPOSED INLET
- PROPOSED STORM SEWER PIPE
- HP PROPOSED HIGH POINT
- LP PROPOSED LOW POINT

- (TSB) TEMPORARY SEDIMENT BASIN (INSTALL DURING INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM PHASE)
- (SF) SILT FENCE (INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- (SCL) SEDIMENT CONTROL LOG (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
- (IP) INLET PROTECTION (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (VTC) VEHICLE TRACKING CONTROL (INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE THROUGH INTERIM, VERTICAL PHASE OR SITE PAVING)
- (ECB) EROSION CONTROL BLANKET (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (MU) MULCHING (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (TS) TEMPORARY SEEDING (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (CWA) CONCRETE WASHOUT AREA (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (SP) STOCKPILE MANAGEMENT (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)
- (SSA) STABILIZED STAGING AREA (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

- (RS) ROCK SOCK (INSTALL DURING INTERIM PHASE WITH CONTINUED MAINTENANCE THROUGH VERTICAL PHASE)

CONCRETE WASHOUT AREA, MULCHING, SEEDING, STABILIZED STAGING AREA, AND STOCKPILE MANAGEMENT TO BE DETERMINED BY THE CONTRACTOR

NOTES:
THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

NOTES:
THE SITE HAS BEEN PREVIOUSLY DISTURBED WITH MASS GRADING OPERATIONS AND VEGETATION IS SPARSE AND OF NATURAL GRASSLAND CONSISTENCY (NO TREES OR SHRUBS).

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

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NO.	REVISION	DATE

REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE



**FOURSQUARE AT STERLING RANCH EAST
FILING NO. 1
GRADING AND EROSION CONTROL PLAN**

DESIGNED BY	DLG	SCALE	DATE	11-30-22
DRAWN BY	DLG	(H) 1"=	SHEET	2 OF 29
CHECKED BY	(V) 1"=	JOB NO.	1183.23	

MATCHLINE (SEE SHEET 2)

TEMPORARY SEDIMENT BASIN DESIGN INFO

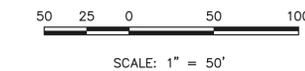
TEMPORARY SEDIMENT BASIN (15 CONTRIBUTING ACRES)
 BOTTOM BASIN MINIMUM WIDTH 73.25' LENGTH 146.50'
 OUTLET = 8" STANDPIPE PER DETAIL TSB
 TOP 4.0' ABOVE BOTTOM
 SPILLWAY 3.0' FROM BOTTOM 22' CREST LENGTH
 5 HOLES SPACED 4" APART
 1 3/16" DIA. HOLES, 1 COLUMN
 EXACT LOCATION OF TSB TO BE
 DETERMINED BY CONTRACTOR AND
 MARKED ON CSWMP/GEC

TSB 1

STERLING RANCH EAST FILING NO. 3 FUTURE

LEGEND

- (7700) EXISTING CONTOUR
- 7700 PROPOSED CONTOUR
- PROPOSED LIMITS OF GRADING/ CONSTRUCTION SITE BOUNDARY
- BOUNDARY/R.O.W. LINE
- EXISTING FLOW DIRECTION
- PROPOSED FLOW
- PROPOSED INLET
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CCM PHASING

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NOTES:
 THERE WILL BE NO ASPHALT, CONCRETE BATCH PLANTS AND MASONRY MIX STATIONS ON THIS SITE.

NOTES:
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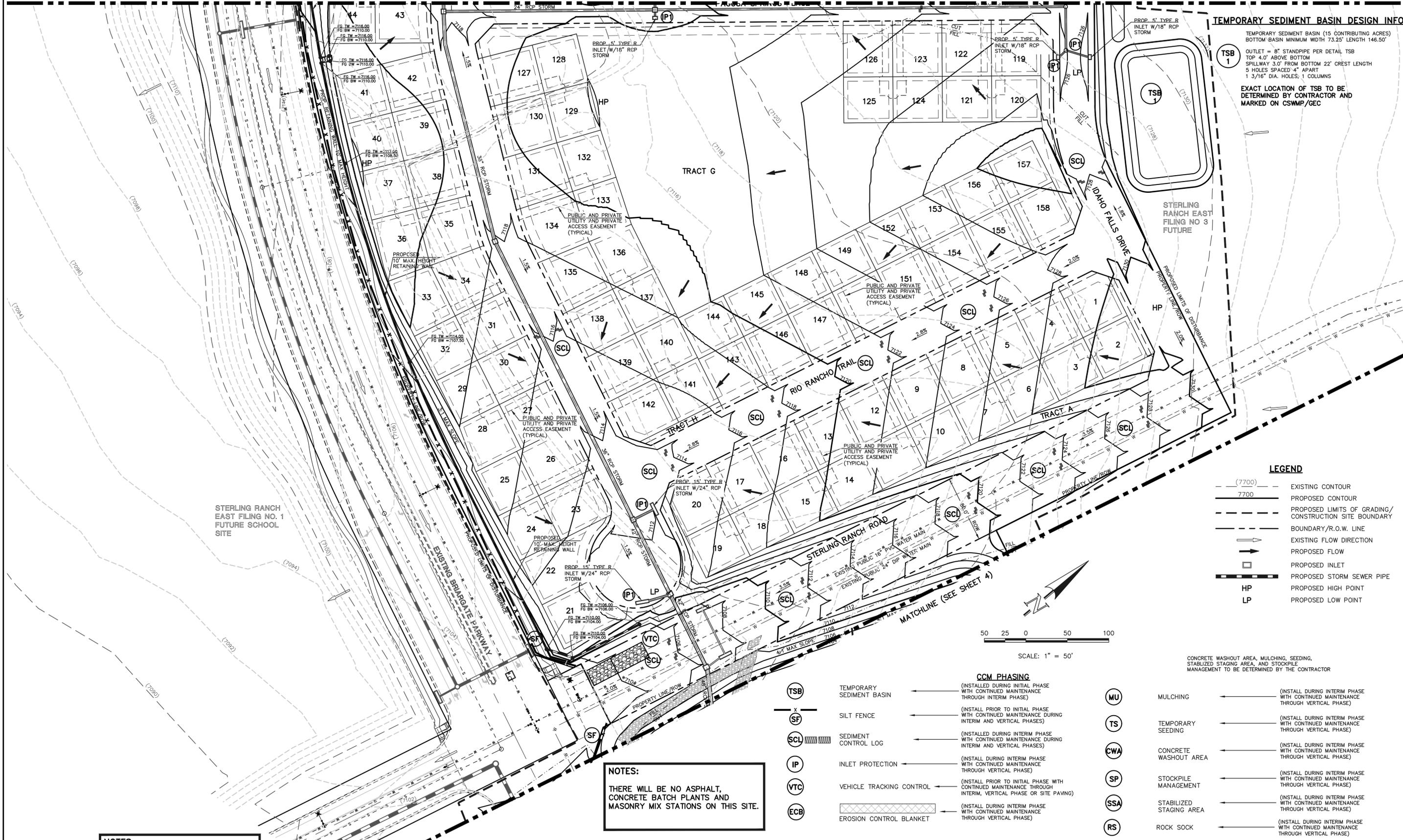
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NO.	REVISION	DATE	REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC
 DAVID L GIBSON, COLORADO P.E. #46477 DATE



FOURSQUARE AT STERLING RANCH EAST FILING NO. 1
 GRADING AND EROSION CONTROL PLAN
 DESIGNED BY DLG SCALE DATE 03-10-23
 DRAWN BY DLG (H) 1"= SHEET 3 OF 29
 CHECKED BY (V) 1"= JOB NO. 1183.23



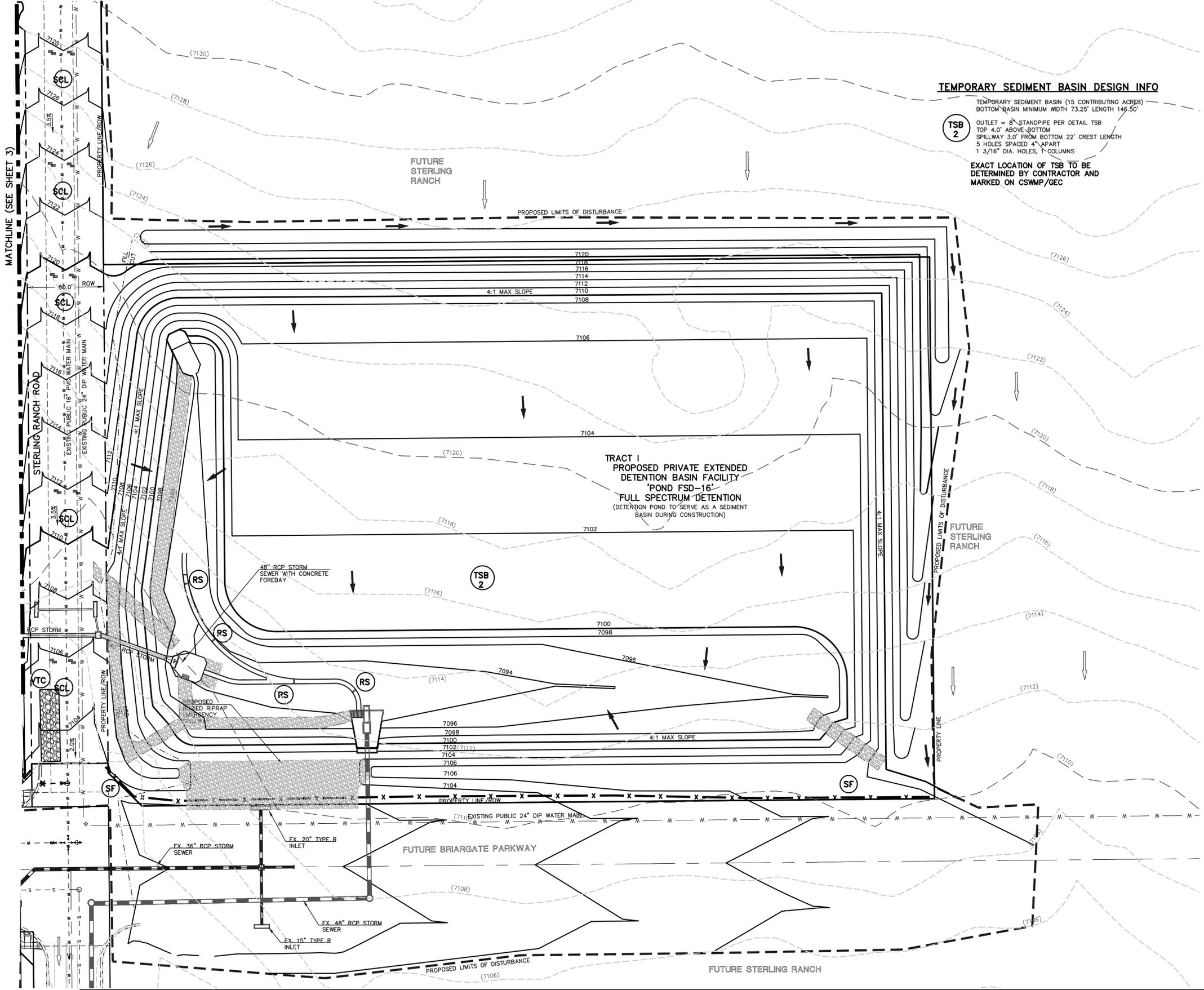
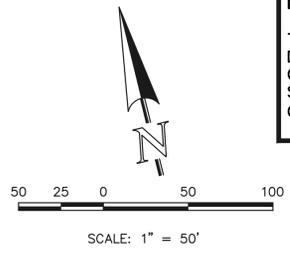
LEGEND

- (---) (7700) --- EXISTING CONTOUR
- (---) 7700 --- PROPOSED CONTOUR
- (---) --- PROPOSED LIMITS OF GRADING/
CONSTRUCTION SITE BOUNDARY
- (---) --- BOUNDARY/R.O.W. LINE
- (---) --- EXISTING FLOW DIRECTION
- (---) --- PROPOSED FLOW
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(INSTALL PRIOR TO INITIAL PHASE WITH CONTINUED MAINTENANCE DURING INTERIM AND VERTICAL PHASES)
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TEMPORARY SEDIMENT BASIN DESIGN INFO

TEMPORARY SEDIMENT BASIN (15 CONTRIBUTING ACRES)
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1 3/16" DIA. HOLES, 1" COLUMNS

EXACT LOCATION OF TSB TO BE DETERMINED BY CONTRACTOR AND MARKED ON CSWMP/CEC

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REVIEW:
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L GIBSON, COLORADO P.E. #46477 DATE



FOURSQUARE AT STERLING RANCH EAST FILING NO. 1 GRADING AND EROSION CONTROL PLAN			
DESIGNED BY	DLG	SCALE	DATE 11-30-22
DRAWN BY	DLG	(H) 1"=	SHEET 4 OF 29
CHECKED BY		(V) 1"=	JOB NO. 1183.23

CLASSIC CONSULTING

EL PASO COUNTY GRADING AND EROSION CONTROL NOTES:

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A NOTICE TO PROCEED HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS, ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT AFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR INCLUDED IN ANY STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
- OWNER/DEVELOPER AND THEIR AGENTS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. DATED APRIL 19, 2022 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT
WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

CONSTRUCTION CONTROL MEASURES NOTES:

- CONTRACTOR TO DETERMINE AREAS USED FOR STAGING, STORAGE OF MATERIALS, SOILS (STOCKPILES) OR WASTES AND SHALL MARK ON THE SITE SWMP AT ALL TIMES. THE USE OF CONSTRUCTION OFFICE TRAILERS REQUIRES PCD PERMITTING.
- THE PROPOSED GRADING/EROSION CONTROL PLAN (SHEETS 2-7) SHOW AND CALL-OUT THE 'INITIAL' AND 'INTERIM' STAGE OF CONSTRUCTION CONTROL MEASURES.
- 'FINAL' CONSTRUCTION CONTROL MEASURES ARE STABILIZED/DEVELOPED LOTS, CONSTRUCTED ROADS, RE-SEEDDED OPEN SPACE, AND CONSTRUCTED DETENTION PONDS. A PLAN IS NOT NEEDED FOR THE FINAL STAGE.

EROSION CONTROL CRITERIA:

EROSION CONTROL MEASURES SHALL BE IMPLEMENTED IN A MANNER THAT WILL PROTECT PROPERTIES AND PUBLIC FACILITIES FROM THE ADVERSE EFFECTS OF EROSION AND SEDIMENTATION AS A RESULT OF CONSTRUCTION AND EARTHWORK ACTIVITIES WITHIN THE PROJECT SITE.

- THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- DURING GRADING OPERATIONS, LOCATE AND SET THE STRAW BALE CHECK DAMS AND SILT FENCES AS SHOWN ON THE EROSION CONTROL PLAN. AT THIS TIME RESEED ALL DISTURBED AREAS WITH AN EL PASO COUNTY APPROVED SEED MIX.
- SEEDING APPLICATION: DRILLED TO A DEPTH OF .25" TO .50" INTO SOIL WHERE POSSIBLE. BROADCAST AND RAKED TO COVER ON STEEPER THAN 3:1 SLOPES WHERE ACCESS IS LIMITED OR UNSAFE FOR EQUIPMENT.
- MULCHING REQUIREMENT AND APPLICATION: 1.5 TONS PER ACRE NATIVE HAY MECHANICALLY CRIMPED INTO SOIL.
- THE STRAW BALE CHECK DAMS AND SILT FENCES SHALL BE KEPT IN PLACE AND MAINTAINED UNTIL EROSION AND SEDIMENTATION POTENTIAL IS MITIGATED. REMOVAL OF SILT AND SEDIMENT COLLECTED BY THE STRAW BALES IS REQUIRED ONCE IT REACHES HALF THE HEIGHT OF THE STRAW BALES OR SILT FENCE.
- SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN TWENTY-ONE (21) CALENDAR DAYS AFTER FINAL GRADING, OR FINAL EARTH DISTURBANCE, HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 21 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEEDDED, ON A CASE-BY-CASE BASIS. THE M54 PERMITTEE MAY ALLOW ANOTHER APPROPRIATE BMP TO BE IN PLACE THAT PREVENTS SEDIMENT FROM LEAVING THE SITE. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMP'S SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.
- ALL FACILITIES, VEGETATION AND OTHER ITEMS REQUIRED BY THE APPROVED FINAL GRADING, EROSION CONTROL AND RECLAMATION PLAN SHALL BE PROPERLY MAINTAINED BY THE OWNERS OF THE PROPERTY. SUCH MAINTENANCE SHALL INCLUDE, BUT NOT BE LIMITED TO KEEPING ALL EROSION CONTROL FACILITIES IN GOOD ORDER AND FUNCTIONAL, REPAIRING ANY EROSION DAMAGE THAT OCCURS, KEEPING ALL VEGETATION HEALTHY AND IN GROWING CONDITION AND REPLACING ANY DEAD VEGETATION AS SOON AS PRACTICABLE.
- ALL SILT FENCES ARE TO BE REGULARLY INSPECTED AND REPAIRED AS NEEDED.
- THE CONTRACTOR SHALL PROVIDE VEHICLE TRACKING CONTROL FACILITIES FOR EACH ENTRANCE/EXIT TO THE SITE. THE CONTRACTOR SHALL SUBMIT A PLAN WHICH WILL ASSURE USAGE OF THIS FACILITY BY ALL VEHICLES LEAVING THE SITE.
- EROSION CONTROL MEASURES SHALL BE CHECKED AFTER EACH STORM EVENT AND REPAIRED WHEN NECESSARY.
- CONTRACTOR SHALL MAINTAIN ALL TEMPORARY EROSION CONTROL FACILITIES IN GOOD WORKING ORDER UNTIL SUCH TIME AS PERMANENT FACILITIES ARE IN PLACE AND THE CONSTRUCTION MANAGER HAS APPROVED THEIR REMOVAL.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- THE EROSION CONTROL MEASURES OUTLINED ON THE PLAN ARE THE RESPONSIBILITY OF THE DEVELOPER TO MONITOR AND REPLACE, REGRADE AND REBUILD AS NECESSARY UNTIL VEGETATION IS ESTABLISHED.
- MAXIMUM ACREAGE OPEN AT ANY GIVEN TIME IS TO BE 30 ACRES.

SEEDING GUIDELINES:

- SEEDBED PREPARATION**
THE SEEDBED SHOULD BE WELL-SETTLED AND FIRM, BUT FRIABLE ENOUGH THAT THE SEED CAN BE PLACED AT THE SPECIFIED DEPTHS. COMPETITIVE STANDS OF WEEDS THAT ARE PRESENT BEFORE SEEDING MUST BE CONTROLLED BY SHALLOW TILLAGE OR BY APPLICATION OF HERBICIDES. SOILS THAT HAVE BEEN OVER-COMPACTED BY TRAFFIC OR EQUIPMENT, ESPECIALLY WHEN WET, SHOULD BE TILLED TO BREAK UP ROOTING-RESTRICTIVE LAYERS, THAN HARROWED, ROLLED, OR PACKED TO PREPARE THE REQUIRED FIRM SEEDBED.
- FERTILIZER**
FERTILIZER SHOULD BE APPLIED AT A RATE OF 50 POUNDS OF AVAIL-ABLE NITROGEN PER ACRE AND 40 POUNDS OF AVAILABLE PHOSPHATE PER ACRE. THE TIME OF APPLICATION SHOULD BE IMMEDIATELY PRIOR TO SEEDING, AT THE TIME OF SEEDING, OR IMMEDIATELY FOL-LOWING SEEDING, DEPENDING ON THE KIND OF FERTILIZER AND TYPE OF EQUIPMENT USED.
- SEEDING**
SEED SHOULD BE PLANTED WITH A GRASS DRILL ON ALL SLOPES OF 33% (3:1) OR FLATTER. SEED MAY BE BROADCAST BY HAND, BY MECHANICAL SPREADER, OR BY HYDRAULIC EQUIPMENT ON AREAS THAT ARE SMALL, TOO STEEP, OR NOT ACCESSIBLE FOR SEED DRILL OPERATIONS. SEED PLANTED WITH A DRILL SHOULD BE COVERED WITH SOIL TO A DEPTH OF 1/4 TO 3/4 INCH. SEED PLANTED BY THE BROADCAST METHOD SHALL BE INCORPORATED INTO THE SOIL SURFACE, NOT TO EXCEED A DEPTH OF 3/4 INCH, BY RAKING, HARROWING, OR OTHER PROVEN METHOD. THE TIME OF SEEDING IS FROM OCTOBER 15TH - MAY 31ST. SEED PLANTED IN THE LATE FALL WILL REMAIN DORMANT UNTIL SPRING, WHEN IT WILL GERMINATE.
- MULCHING**
SEEDDED AREAS SHOULD BE MULCHED TO CONSERVE MOISTURE; PREVENT SURFACE COMPACTION OR CRUSTING; REDUCE RUNOFF AND EROSION; CONTROL INSECTS; AND HELP ESTABLISH PLANT COVER.
NATIVE HAY OR STRAW SHOULD BE APPLIED AT A RATE OF 4,000 POUNDS PER ACRE AND CRIMPED INTO THE GROUND. ON SLOPES GREATER THAN 3:1, AN AGRONOMY BLANKET SHOULD BE USED.
- SUPPLEMENTAL WATER**
IN LOW RAINFALL AREAS, WHERE WATER IS AVAILABLE AND WHERE RAPID ESTABLISHMENT IS NEEDED, IRRIGATION OF NEW SEEDING SHOULD BE PERFORMED DURING THE FIRST GROWING SEASON. WATER SHOULD BE APPLIED AT APPROXIMATELY ONE WEEK INTERVALS, AT A RATE OF 3/4 TO 1 INCH PER APPLICATION, WHEN RAINFALL IS DEFICIENT FOR PLANT DEVELOPMENT.

NOTES:

AT LEAST TEN DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB 1 ACRE OR MORE, THE OWNER OR OPERATOR OF THE CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTAINS CERTIFICATION OF COMPLETION OF A STORMWATER MANAGEMENT PLAN (SWMP), OF WHICH THIS GRADING AND EROSION CONTROL PLAN MAY BE A PART. FOR INFORMATION OR APPLICATION MATERIALS CONTACT:

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WATER QUALITY CONTROL DIVISION
WOOD - PERMITS
4300 CHERRY CREEK DRIVE SOUTH
DENVER, CO 80246-1530
ATTN: PERMITS UNIT

NO PORTIONS OF THE FOURSQUARE AT STERLING RANCH FILING NO. 1 ARE LOCATED WITHIN A FLOODPLAIN AS DETERMINED BY THE FLOOD INSURANCE RATE MAPS (F.I.R.M.) MAP NUMBERS 08041C 0535G, EFFECTIVE DATE, DECEMBER 7, 2018

THE AVERAGE SOIL CONDITION REFLECTS HYDROLOGIC SOIL GROUP "A", BLAKELAND LOAMY SAND AND COLUMBINE GRAVELLY SANDY LOAM AS DETERMINED BY THE "SOIL SURVEY OF EL PASO COUNTY AREA" PREPARED BY THE U.S. SOIL CONSERVATION SERVICE.

EXISTING VEGETATION CONSISTS OF NATIVE GRASSES.

EMERGENCY OVERFLOW SWALES FOR INLETS IN THE INTERIM UNTIL CURB AND ASPHALT IS INSTALLED WILL BE THE LOTS, FINAL WILL BE TO OVERTOP THE HIGH POINT IN ROADWAY TO THE NEXT AVAILABLE INLET OR TO PROPOSED POND.

STOCKPILE LOCATIONS FOR HOMEBUILDING TO BE ON EACH INDIVIDUAL LOT THAT IS BEING BUILT UPON.

LIMITS OF DISTURBANCE FOR THIS PLAN INCLUDE UTILITY INSTALLATION AND ROADWAY CONSTRUCTION WITHIN THE R.O.W., AND OVERLOT GRADING FOR DEVELOPMENT THEN INDIVIDUAL LOTS FOR HOMEBUILDING ONCE CONSTRUCTION OF THE HOME BEGINS.

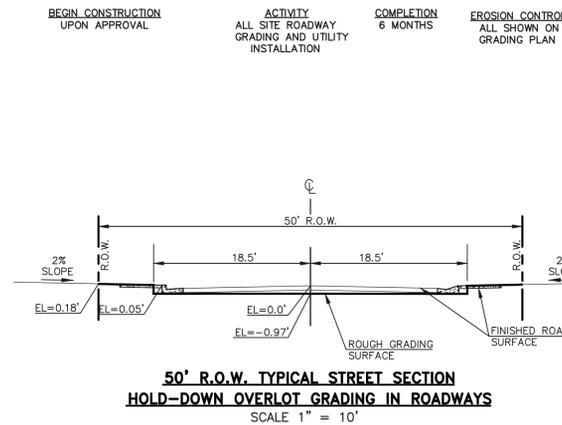
GRADING WITHIN THIS PHASE WILL BE FULLY DEVELOPED WITH HOME BUILDING OPERATIONS.

LOCATION OF THE CONCRETE WASHOUT, STORAGE FOR MAINTENANCE EQUIPMENT AND TEMPORARY DISPOSAL AREAS WILL BE ADDED TO THIS PLAN BY SWMP ADMINISTRATOR UPON COORDINATION WITH SELECTED CONTRACTOR.

RESEED ALL AREAS AS NEEDED TO PREVENT EROSION AND SEDIMENT RUNOFF ONTO CONSTRUCTION ACTIVITIES.

SCHEDULE OF ANTICIPATED CONSTRUCTION ACTIVITY:

- INSTALL INITIAL BMP'S BY COUNTY STAFF
- INSPECTION OF INTIAL BMP'S BY COUNTY STAFF
- PRECONSTRUCTION MEETING WITH COUNTY STAFF



PCD FILE #

48 HOURS BEFORE YOU DIG, CALL UTILITY LOCATORS 811 UTILITY NOTIFICATION CENTER OF COLORADO IT'S THE LAW	NO. REVISION	DATE
THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.		

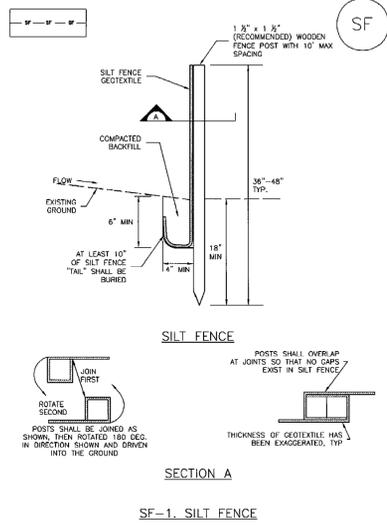
REVIEW:	
PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC	
DAVID L GIBSON, COLORADO P.E. #46477	DATE

CLASSIC CONSULTING logo with a fleur-de-lis symbol above the text.

FOURSQUARE AT STERLING RANCH EAST			
FILING NO. 1			
GRADING AND EROSION CONTROL PLAN			
NOTES & DETAIL SHEET			
DESIGNED BY	MES	SCALE	DATE 11-30-22
DRAWN BY	MES	(H) 1" = N/A	SHEET 5 OF 29
CHECKED BY		(V) 1" = N/A	JOB NO. 1183.23

CLASSIC CONSULTING

Silt Fence (SF) SC-1



November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SF-3

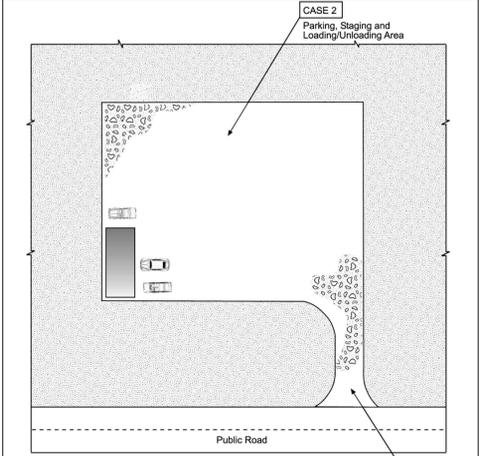
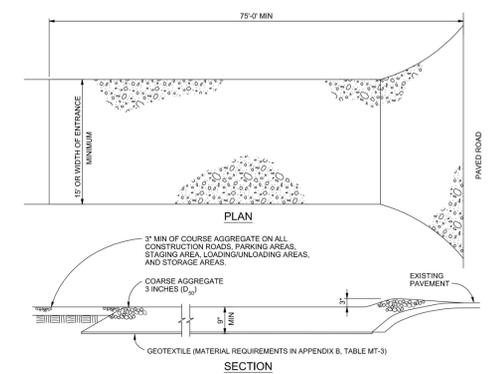


Table VT-1

	Case 1	Case 2
Gravel Thickness	9"	3"
Filter Fabric	YES	NO

City of Colorado Springs Stormwater Quality Figure VT-1 Vehicle Tracking Application Examples 3-3



VEHICLE TRACKING NOTES

INSTALLATION REQUIREMENTS

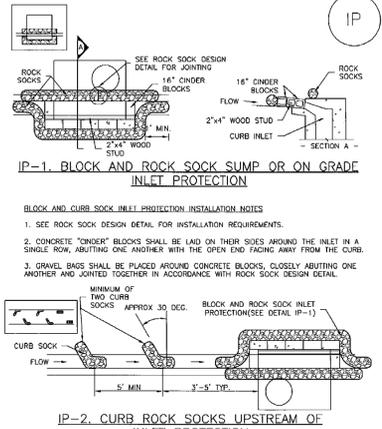
1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION BEGINNING.
2. CONSTRUCTION ENTRANCES ARE TO BE BUILT WITH AN APRON TO ALLOW FOR TURNING TRAFFIC, BUT SHOULD NOT BE BUILT OVER EXISTING PAVEMENT EXCEPT FOR A SLIGHT OVERLAP.
3. AREAS TO BE STABILIZED ARE TO BE PROPERLY GRADED AND COMPACTED PRIOR TO LAYING DOWN GEOTEXTILE AND STONE.
4. CONSTRUCTION ROADS, PARKING AREAS, LOADING/UNLOADING ZONES, STORAGE AREAS, AND STAGING AREAS ARE TO BE STABILIZED.
5. CONSTRUCTION ROADS ARE TO BE BUILT TO CONFORM TO SITE GRADES, BUT SHOULD NOT HAVE SIDE SLOPES OR ROAD GRADERS THAT ARE EXCESSIVELY STEEP.

MAINTENANCE REQUIREMENTS

1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
2. STONES ARE TO BE REPLACED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEWER DRAINS.
4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.

City of Colorado Springs Stormwater Quality Figure VT-2 Vehicle Tracking Application Examples 3-4

SC-6 Inlet Protection (IP)



BLOCK AND CURB SOCK INLET PROTECTION INSTALLATION NOTES

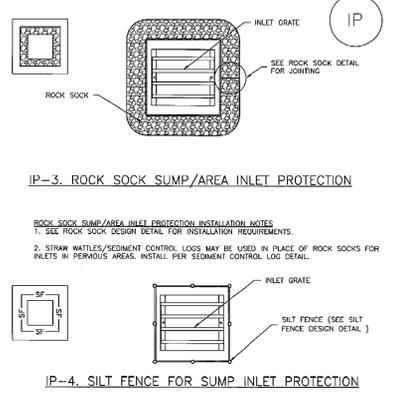
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. CONCRETE "TONGER" BLOCKS SHALL BE LAID ON THEIR SIDES AROUND THE INLET IN A SINGLE ROW, ABUTTING ONE ANOTHER WITH THE OPEN END FACING AWAY FROM THE CURB.
3. GRAVEL BAGS SHALL BE PLACED AROUND CONCRETE BLOCKS, CLOSELY ABUTTING ONE ANOTHER AND JOINED TOGETHER IN ACCORDANCE WITH ROCK SOCK DESIGN DETAIL.

CURB ROCK SOCK INLET PROTECTION INSTALLATION NOTES

1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. PLACEMENT OF THE SOCK SHALL BE APPROXIMATELY 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION OF FLOW.
3. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED A MINIMUM OF 5 FEET APART.
4. AT LEAST TWO CURB SOCKS IN SERIES ARE REQUIRED UPSTREAM OF ON-GRADE INLETS.

IP-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 August 2013

Inlet Protection (IP) SC-6



ROCK SOCK SUMP/AREA INLET PROTECTION INSTALLATION NOTES

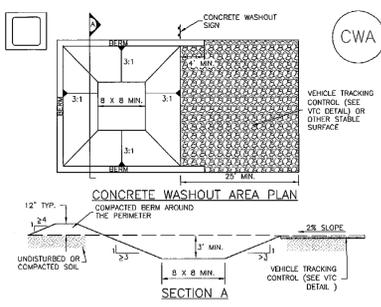
1. SEE ROCK SOCK DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF ROCK SOCKS FOR INLETS IN PAVED AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

SILT FENCE INLET PROTECTION INSTALLATION NOTES

1. SEE SILT FENCE DESIGN DETAIL FOR INSTALLATION REQUIREMENTS.
2. POSTS SHALL BE PLACED AT EACH CORNER OF THE INLET AND AROUND THE EDGES AT A MAXIMUM SPACING OF 3 FEET.
3. STRAW WATTLES/SEDIMENT CONTROL LOGS MAY BE USED IN PLACE OF SILT FENCE FOR INLETS IN PAVED AREAS. INSTALL PER SEDIMENT CONTROL LOG DETAIL.

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 IP-5

Concrete Washout Area (CWA) MM-1



CWA INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -CWA INSTALLATION LOCATION.
2. DO NOT LOCATE AN UNLINED CWA WITHIN 400' OF ANY NATURAL DRAINAGE PATHWAY OR WATERBODY, 50' OF ANY WELLS OR DRINKING WATER SOURCES, IF SITE CONSTRAINTS MAKE THIS UNDESIRABLE, OR IF HIGHLY PERMEABLE SOILS EXIST ON SITE, THE CWA MUST BE INSTALLED WITH AN IMPERMEABLE LINER (1.8 MIL THICKNESS) OR SURFACE STORAGE ALTERNATIVES USING PREFABRICATED CONCRETE WASHOUT DEVICES OR A LINER ABOVE GROUND STORAGE ARE SHOULD BE USED.
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8" SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER. THE PIT SHALL BE AT LEAST 3' DEEP.
5. SOUM SURROUNDING SIDES AND BACK OF THE CWA SHALL HAVE MINIMUM HEIGHT OF 1'.
6. VEHICLE TRACKING PAD SHALL BE SLOPED 2% TOWARDS THE CWA.
7. SIGNS SHALL BE PLACED AT THE CONSTRUCTION ENTRANCE, AT THE CWA, AND ELSEWHERE AS NECESSARY TO CLEARLY INDICATE THE LOCATION OF THE CWA TO OPERATORS OF CONCRETE TRUCKS AND PUMP TRUCKS.
8. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 CWA-3

Mulching (MU) EC-4

Description

Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, tackifiers, netting or other measures. Mulching helps reduce erosion by protecting bare soil from rainfall impact, increasing infiltration, and reducing runoff. Although often applied in conjunction with temporary or permanent seeding, it can also be used for temporary stabilization of areas that cannot be reseeded due to seasonal constraints.

Mulch can be applied either using standard mechanical dry application methods or using hydromulching equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.



Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas where growing season constraints prevent effective reseeded. Disturbed areas should be properly mulched and tacked, or seeded, mulched and tacked promptly after final grade is reached (typically within no longer than 14 days) on portions of the site not otherwise permanently stabilized.

Standard dry mulching is encouraged in most jurisdictions; however, hydromulching may not be allowed in certain jurisdictions or may not be allowed near waterways.

Do not apply mulch during windy conditions.

Design and Installation

Prior to mulching, surface-grading by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

A variety of mulches can be used effectively at construction sites. Consider the following:

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

June 2012 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 MU-1

Temporary and Permanent Seeding (TS/PS) EC-2

Description

Temporary seeding can be used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding should be used to stabilize areas that will not be otherwise stabilized. Effective seeding includes preparation of a seedbed, selection of an appropriate seed mixture, proper planting techniques, and protection of the seeded area with mulch, geotextiles, or other appropriate measures.

Appropriate Uses

When the soil surface is disturbed and will remain inactive for an extended period (typically 30 days or longer), proactive stabilization measures should be implemented. If the inactive period is short-lived (on the order of two weeks), techniques such as surface roughening may be appropriate. For longer periods of inactivity, temporary seeding and mulching can provide effective erosion control. Permanent seeding should be used on finished areas that have not been otherwise stabilized.

Typically, local governments have their own seed mixes and timelines for seeding. Check jurisdictional requirements for seeding and temporary stabilization.



Design and Installation

Effective seeding requires proper seedbed preparation, selection of an appropriate seed mixture, use of appropriate seeding equipment to ensure proper coverage and density, and protection with mulch or fabric until plants are established.

The USDCM Volume 2 Revegetation Chapter contains detailed seed mix, soil preparations, and seeding and mulching recommendations that may be referenced to supplement this Fact Sheet.

Drill seeding is the preferred seeding method. Hydroseding is not recommended except in areas where steep slopes prevent use of drill seeding equipment, and even in these instances it is preferable to hand seed and mulch. Some jurisdictions do not allow hydroseding or hydromulching.

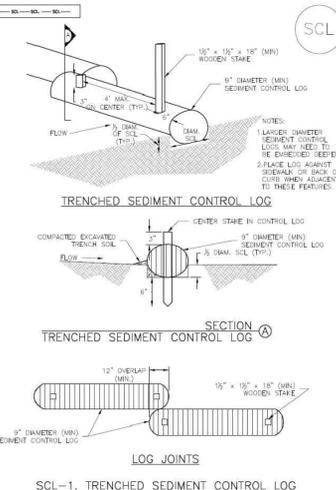
Seedbed Preparation

Prior to seeding, ensure that areas to be revegetated have soil conditions capable of supporting vegetation. Overcut grading can result in loss of topsoil, resulting in poor quality subsoils at the ground surface that have low nutrient value, little organic matter content, few soil microorganisms, rooting restrictions, and conditions less conducive to infiltration of precipitation. As a result, it is typically necessary to provide stockpiled topsoil, compost, or other

Temporary and Permanent Seeding	
Functions	
Erosion Control	Yes
Sediment Control	No
Site/Material Management	No

June 2012 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 TS/PS-1

SC-2 Sediment Control Log (SCL)

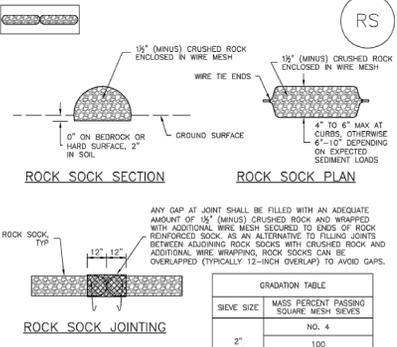


NOTES:

1. LARGER DIAMETER SEDIMENT CONTROL LOGS MAY NEED TO BE EXERCISED. REFER TO THE LOG MANUFACTURER'S INSTRUCTIONS.
2. PLACE LOGS AGAINST SIDEWALK OR CURB OF CURB WHEN ADJACENT TO THESE FEATURES.

November 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 SCL-3

SC-5 Rock Sock (RS)



GRANULATION TABLE

NO. 4	MASS PERCENT PASSING SQUARE MESH SIEVES
2"	100
1 1/2"	80 - 100
1"	20 - 50
3/4"	0 - 15
3/8"	0 - 5

ROCK SOCK INSTALLATION NOTES

1. SEE PLAN VIEW FOR: -LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRANULATION SHOWN ON THIS SHEET (1/2" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 1/2" GAGE POLYESTER MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 3/4", RECOMMENDED MINIMUM ROLL WIDTH OF 48".
4. WIRE MESH SHALL BE SECURED USING "HOG RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2' CENTERS ON ENDS OF SOCKS.
5. SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLOSURE.

RS-1. ROCK SOCK PERIMETER CONTROL

August 2013 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 November 2010

MM-1 Concrete Washout Area (CWA)

CWA MAINTENANCE NOTES

1. INSPECT BUMPS EACH WORKDAY AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BUMPS SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BUMPS 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 BUMPS IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
3. WHERE BUMPS HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
4. THE CWA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN PIT, SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 2'.
5. CONCRETE WASHOUT WATER, WASTED PIECES OF CONCRETE AND ALL OTHER DEBRIS IN THE SUBSURFACE PIT SHALL BE TRANSPORTED FROM THE JOB SITE IN A WATER-TIGHT CONTAINER AND DISPOSED OF PROPERLY.
6. THE CWA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
7. WHEN THE CWA IS REMOVED, COVER THE DISTURBED AREA WITH TOP SOIL, SEED AND MULCH OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND THE CITY OF PARKER, COLORADO, NOT AVAILABLE IN WORDS)

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

48 HOURS BEFORE YOU DIG,
CALL UTILITY LOCATORS
811
UTILITY NOTIFICATION CENTER OF COLORADO
IT'S THE LAW

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE CAUSED BY HIS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NO.	REVISION	DATE

REVIEW:

PREPARED UNDER MY DIRECT SUPERVISION FOR AND ON BEHALF OF CLASSIC CONSULTING ENGINEERS AND SURVEYORS, LLC

DAVID L. GIBSON, COLORADO P.E. #46477 DATE



FOURSQUARE AT STERLING RANCH EAST

FLING NO. 1

EROSION AND EROSION CONTROL PLAN

DETAIL SHEET

DESIGNED BY DLG SCALE DATE 02-24-23

DRAWN BY DLG (H) 1"= N/A SHEET 6 OF 29

CHECKED BY (V) 1"= N/A JOB NO. 1183.30



