	GENERAL NOTES
1.	Profile design lines are based on centerline, as shown, unless otherwise noted.
2.	All new construction to conform to the specifications of El Paso County Department of Public Works. Any asphalt removed is to be replaced to meet the specifications of the El Paso County Public Works Department.
3.	For pavement design, curb and gutter, and sidewalks see individual plan and profile sheets. Pavement design to be based on Resistance Value 'R' derived from Hveem tests and are to be approved by the Engineering Division of the El Paso County Planning and Community Development prior to work above subgrade.
4.	At intersections, all curb returns will have 20-foot radius unless otherwise noted.
5.	All existing utilities have been shown according to the best available information. The contractor is responsible for field location and verification prior to beginning work. If it appears that there could be a conflict with any utilities, whether indicated on the plans or not, the contractor is to notify the engineer and owner immediately. The contractor is responsible for the protection and repair (if necessary) of all utilities.
6. ~	A Pre-Construction meeting shall be held with the El Paso County Planning and Community Development prior to any construction.
7. o	Approved plans, Engineering Criteria Manual, etc. is required to be on-site at all times during construction
8.	All necessary permits, such as SWMP, ESQCP, Fugitive Dust, Access, C.O.E. 404, etc. shall be obtained prior to construction.
	All handicap ramps to be per El Paso County Standard SD_2-40. The contractor shall coordinate locations and layout with the El Paso County Planning and Community Development on the placement of any pedestrian ramps prior to construction of the curb. Where appropriate, neatly saw cut all existing concrete and asphalt. Repair/replace all disturbed existing items with like materials and thicknesses.
12.	All disturbed areas shall be revegetated with native grasses within 21 days of excavation per Erosion Control Plan.
13.	The prepared Erosion/Sediment Control Plan is to be considered a part of these plans and its requirements adhered to during the construction of this project.
14.	All storm and sanitary sewer pipe lengths and slopes are figured from center of manhole or bend. Pipe lengths are given as a horizontal length.
	All storm sewer bedding to be per CDoT Standards.
	All storm sewer pipe shall be Class III B Wall unless otherwise shown on the storm sewer plan and profile sheets.
	All wyes and bends used in construction of storm sewer facilities shall be factory fabricated, unless approved by the El Paso County Planning and Community Development.
	Construction and materials used in all storm and sanitary sewer manholes shall be per specifications. Storm sewer radial deflections to be grouted or installed per manufacturer's recommendations. Storm sewer manholes sizes as follows unless otherwise shown:
10.	18" thru 36" use 48" I.D. manhole 42" thru 48" use 60" I.D. manhole 54" thru 60" use 72" I.D. manhole
	NOTE: Manhole sizes tabulated here shall be increased, if necessary, to accommodate incoming laterals.
	All horizontal stationing is based on the 'Face of Curb', unless otherwise shown.
	All vertical design and top of curb are based on the design point shown in the typical cross section. The curb line design point is located at the intersection of the face and top of curb for the Type III
23.	Standard 6-inch vertical curb. See typical street section for design point locations Vertical curb to be used between curb returns (CR) and at curb inlets. Transitions from ramp to vertical curb shall be 10-feet unless otherwise approved by the El Paso County Department of Public Works. All other curb & gutter to be ramp curb & gutter.
24.	Cross pans to be per El Paso County Standard Detail SD_2-26.
25. 26.	Curb returns shall be straight graded from CR to CR unless otherwise noted. Inlets are Type 'R' inlets (CDOT STD M-604-12) unless otherwise noted.
	ICHMARK:
	E TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "8953" RTHING = 411416.273
	TING = 235167.071
	WATION = 7023.42
	E TOP OF RED PLASTIC SURVEYORS CAP, ILLEGIBLE RTHING = 410095.404
	TING = 235052.131
	VATION = 7000.40
	E TOP OF RED PLASTIC SURVEYORS CAP, STAMPED "38141" RTHING = 411399.962
EAS	TING = 233849.817 WATION = 7030.82
BAS	SIS OF BEARING
THI WE	E SOUTH LINE OF THE SOUTHWEST QUARTER (SW ¹ / ₄) OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 ST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER $^{1}/_{4}$) BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID
	4/ STAR TO THE METHING ON STANDED IN THE TOTAL METHICS CONVERSE OF SAID

SOUTHWEST QUARTER (SW¹/₄) BY A 2-1/2" ALUMINUM CAP STAMPED "LS11624", SAID LINE BEARS N 89°14'14" E, A DISTANCE OF 2,722.56 FEET.



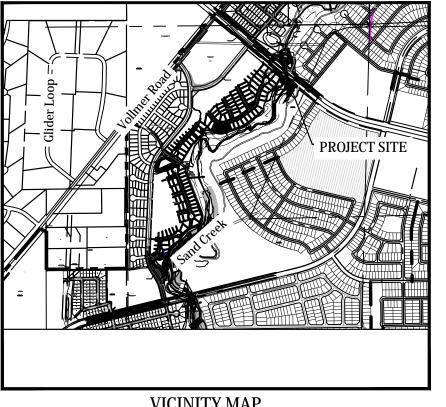
STERLING RANCH DEVELOPMENT BRIARGATE BOULEVARD BRIDGE GRADING & EROSION CONTROL PLANS EL PASO COUNTY, COLORADO

Thi bes Cour

For



Jen Cou Kiowa Project No. 19032 7/14/2022



VICINITY MAP SCALE: N.T.S.

STATEMENTS
Design Engineer's Statement: This grading and erosion control plan was prepared under my direction and supervision and is correct tot he best of my knowledge and belief. Said plan has been prepared according to the criteria established by the Country for grading and erosion control plans. I accept responsibility for ane tablity caused by any negligent acts, error or omissions on my part in preparing this plan. Todd Cartwright, P.E. #33365 Date For and on behalf of Kiowa Engineering Corp. Date Owner/Developer's Statement: Date I, the owner/developer have read and will comply with of the requirement of the requirements specified in these detailed plans and specifications Date Jame Moriety Date Date Date Date Date Difference Date Date Date Date Date
<u>El Paso County:</u> 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 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 Directors discretion.
Jennifer Irvine, P.E., Date County Engineer / ECM Administrator

	EL PASO COUN
1.	All drainage and roadway construction shall Springs/El Paso County Drainage Criteria Ma Criteria Manual.
2.	Contractor shall be responsible for the notific shown on the plans or not, before beginning the contractor prior to construction. Call 811 (UNCC).
3.	 Contractor shall keep a copy of these approve Stormwater Management Plan (SWMP), the s construction standards and specifications at t a. El Paso County Engineering Criteria Manu b. City of Colorado Springs/El Paso County E c. Colorado Department of Transportation (Construction d. CDOT M & S Standards
4.	Notwithstanding anything depicted in these p construction related to roads, storm drainage requirements of the most recent version of the Land Development Code, the Engineering Crit Criteria Manual Volume 2. Any deviations fro approved, in writing. Any modifications nece developer's responsibility to rectify.
5.	It is the design engineer's responsibility to ac the construction plans. Any modifications ne will be entirely the developer's responsibility
6.	Contractor shall schedule a pre-construction Development (PCD) - Inspections, prior to sta
7.	It is the contractor's responsibility to underst obtain all required permits, including but not Control Permit (ESQCP), Regional Building Fl Engineers-issued 401 and/or 404 permits, an
8.	Contractor shall not deviate from the plans w engineer and PCD. Contractor shall notify the or inconsistencies.
9.	All storm drain pipe shall be Class III RCP unl
10	. Contractor shall coordinate geotechnical testi by El Paso County PCD prior to placement of o
11	. All construction traffic must enter/exit the side
12	. Sight visibility triangles as identified in the pl greater than 18 inches above flowline are not
	. Signing and striping shall comply with El Pase [If applicable, additional signing and striping]
13	
	. Contractor shall obtain any permits required Work Within the Right-of-Way and Special Tr

BNDY BOP CL CRA CR DIP EL SM FC FLS FLG FL GB HORIZ HORIZ HD. LT LF LP	ASSEMBLY BOUNDARY BOTTOM OF PIPE CENTERLINE CONCRETE REVERSE AN CONCRETE THRUST BLC POINT OF CURB RETUR DUCTILE IRON PIPE ELEVATION EASEMENT EXISTING FACE OF CURB FLARED END SECTION FLANGE FLOWLINE GRADE BREAK HIGH POINT HORIZONTAL HYDRANT INSIDE DIAMETER LEFT LINEAR FEET LOW POINT MAXIMUM MANHOLE

NTY STANDARD NOTES

l meet the standards and specifications of the City of Colorado anual, Volumes 1 and 2, and the El Paso County Engineering

cation and field notification of all existing utilities, whether construction. Location of existing utilities shall be verified by 1 to contact the Utility Notification Center of Colorado

ed plans, the Grading and Erosion Control Plan, the soils and geotechnical report, and the appropriate design and t the job site at all times, including the following: ual (ECM)

Drainage Criteria Manual, Volumes 1 and 2 (CDOT) Standard Specifications for Road and Bridge

plans in words or graphic representation, all design and ge and erosion control shall conform to the standards and the relevant adopted El Paso County standards, including the Criteria Manual, the Drainage Criteria Manual, and the Drainage from regulations and standards must be requested, and ecessary to meet criteria after-the-fact will be entirely the

ccurately show existing conditions, both onsite and offsite, on ecessary due to conflicts, omissions, or changed conditions y to rectify.

n meeting with El Paso County Planning and Community tarting construction.

rstand the requirements of all jurisdictional agencies and to tot limited to El Paso County Erosion and Stormwater Quality Floodplain Development Permit, U.S. Army Corps of and county and state fugitive dust permits.

without first obtaining written approval from the design e design engineer immediately upon discovery of any errors

lless otherwise noted and approved by PCD.

ting per ECM standards. Pavement design shall be approved curb and gutter and pavement.

ite at approved construction access points.

plans shall be provided at all intersections. Obstructions ot allowed within sight triangles.

so County Department of Public Works and MUTCD criteria. 3 notes will be provided.]

l by El Paso County Department of Public Works, including ransport permits.

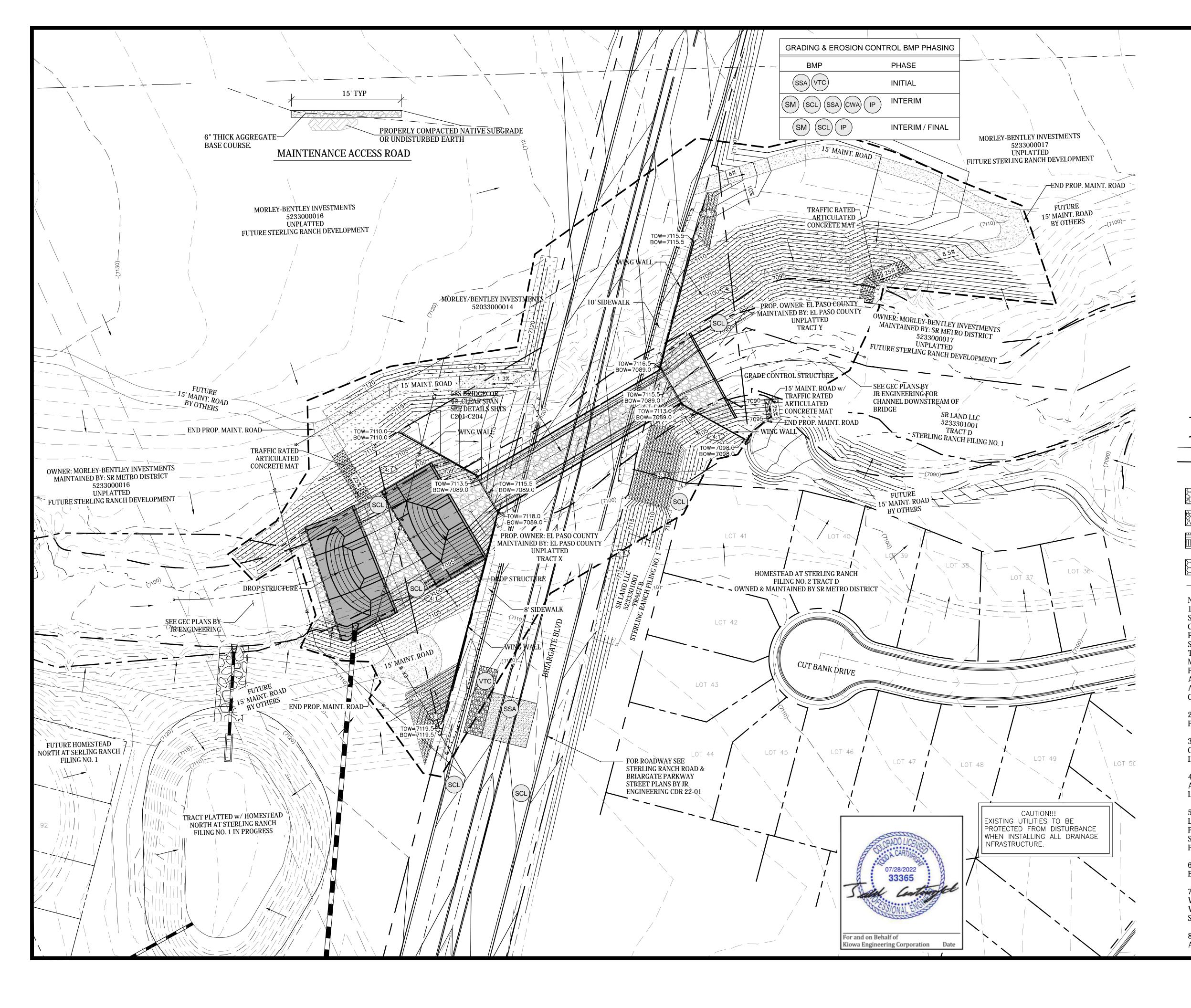
n the property line unless otherwise noted. The ssion and easements, where required, from adjoining rbance, grading, or construction.

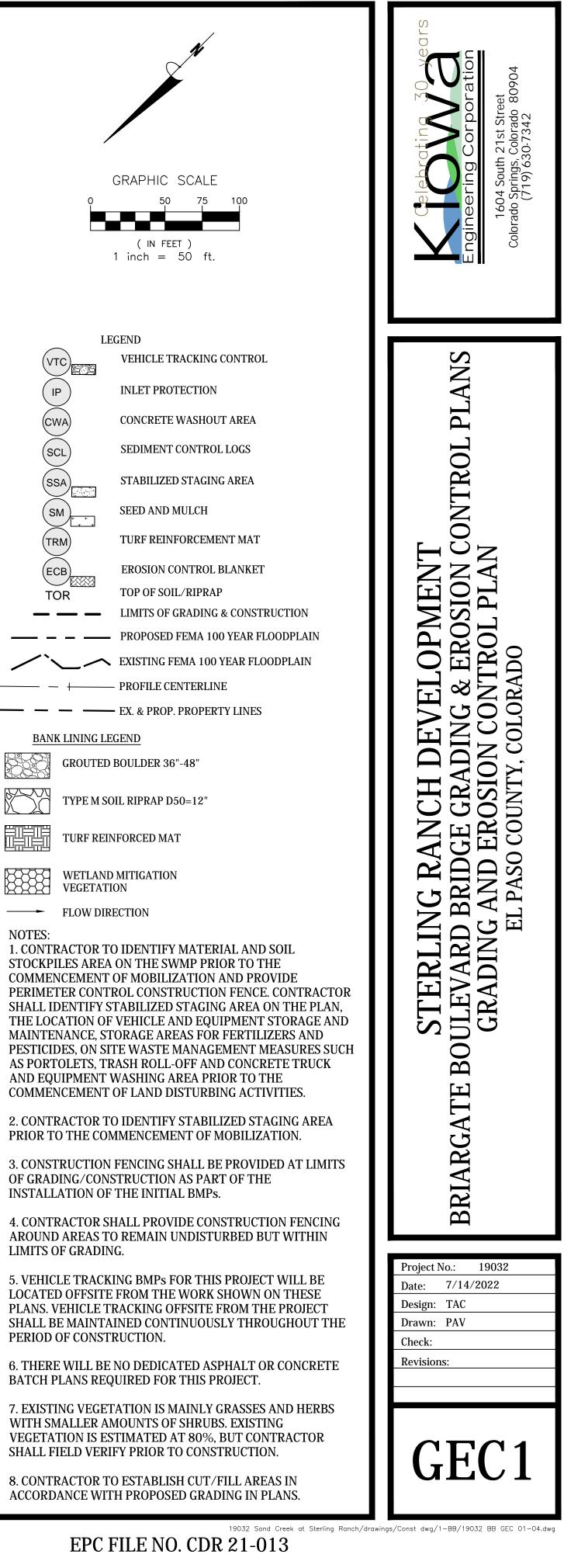
X OF SHEETS

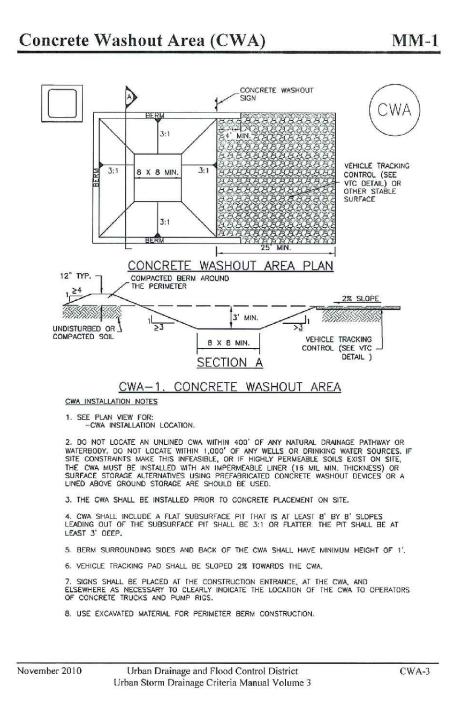
/ER SHEET NS

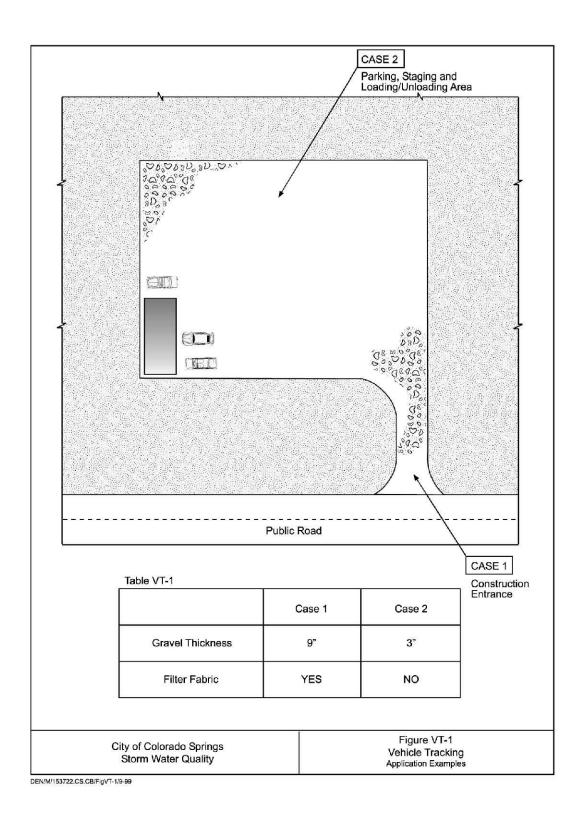
OCK PT = POINT OF HORIZONTAL TANGENCY	ABBREVIATIONS			
	NCHOR OCK RN	$\begin{array}{rrrr} \text{NTS} &= \\ \text{OD} &= \\ \text{PC} &= \\ \text{PP} &= \\ \text{PP} &= \\ \text{PVC} &= \\ \text{PVC} &= \\ \text{PVC} &= \\ \text{PVT} &= \\ \text{RCB} &= \\ \text{STA} &= \\ \text{STD} &= \\ \text{TC} &= \\ \text{TCOP} &= \\ \text{TOP} &= \\ \text{TOP} &= \\ \text{TVP} &= \\ \text{VC} &= \\ \end{array}$	NOT TO SCALE OUTSIDE DIAMETER POINT OF HORIZONTAL CURVATURE PROPOSED POINT OF HORIZONTAL TANGENCY POLY VINYL CHLORIDE PIPE POINT OF VERTICAL CURVATURE POINT OF VERTICAL INTERSECTION POINT OF VERTICAL INTERSECTION POINT OF VERTICAL TANGENCY REINFORCED CONCRETE BOX REINFORCED CONCRETE PIPE RIGHT OF WAY RIGHT SHEET SANITARY SEWER STATION STANDARD TOP OF ASPHALT TOP OF CURB TOP OF ROCK TYPICAL VERTICAL CURVE	

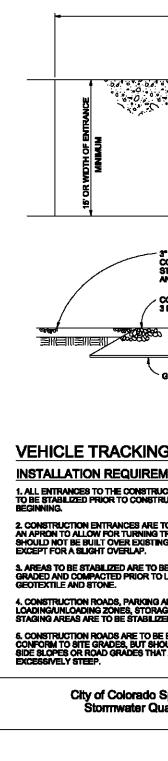
Engineering Corporation 1604 South 21st Street (719) 630-7342
STERLING RANCH DEVELOPMENT BRIARGATE BOULEVARD BRIDGE GRADING & EROSION CONTROL PLANS COVER SHEET EL PASO COUNTY, COLORADO
Project No.:19032Date:7/14/2022Design:TACDrawn:PAVCheck:Revisions:
GEC0











MM-1

CWA MAINTENANCE NOTES

CWA-4

75	F-0' MIN

- 3° MIN OF COURSE AGGREGA	ATE ON ALL
CONSTRUCTION ROADS, PAP STAGING AREA, LOADING/UN AND STORAGE AREAS.	RKING AREAS,
 COARSE AGGREGATE 3 INCHES (D₈₀) 	PAVEMENT
8. 1 b	
•	UIREMENTS IN APPENDIX B, TABLE MT-3) TION
VEHICLE TR	
EMENTS	MAINTENANCE REQUIREMENTS
RUCTION SITE ARE TRUCTION	1. REGULAR INSPECTIONS ARE TO BE MADE OF ALL STABILIZED AREAS, ESPECIALLY AFTER STORM EVENTS.
E TO BE BUILT WITH G TRAFFIC, BUT TING PAVEMENT	2. STONES ARE TO BE REAPPLIED PERIODICALLY AND WHEN REPAIR IS NECESSARY.
D BE PROPERLY TO LAYING DOWN	3. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED DAILY BY SHOVELING OR SWEEPING. SEDIMENT IS NOT TO BE WASHED DOWN STORM SEVER DRAINS.
G AREAS, RAGE AREAS, AND	4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY.
IZED. BE BUILT TO HOULD NOT HAVE HAT ARE	5. OTHER ASSOCIATED SEDIMENT CONTROL MEASURES ARE TO BE INSPECTED TO ENSURE GOOD WORKING CONDITION.
) Springs	Figure VT-2
Quality	Vehicle Tracking Application Examples
	1

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

 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 ERGSION, 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 ALLTOCAD). 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.

Concrete Washout Area (CWA)

ION AND GRADATION OF RIPRAP % Smaller Туре М * d₅₀=Mean Particle S ** Mix VL, L AND M Ri 4-6 Inches of Tops (Table MD-7: Classifica

Exi Site	posed 100-year ru sting Hydrologic So e is currently undev located in the Sand	oil Grou eloped
	CLASSIFI	CATIO
	Riprap Designation	% th Size
	Type VL	
	Type L	

End Construction: pending

established.

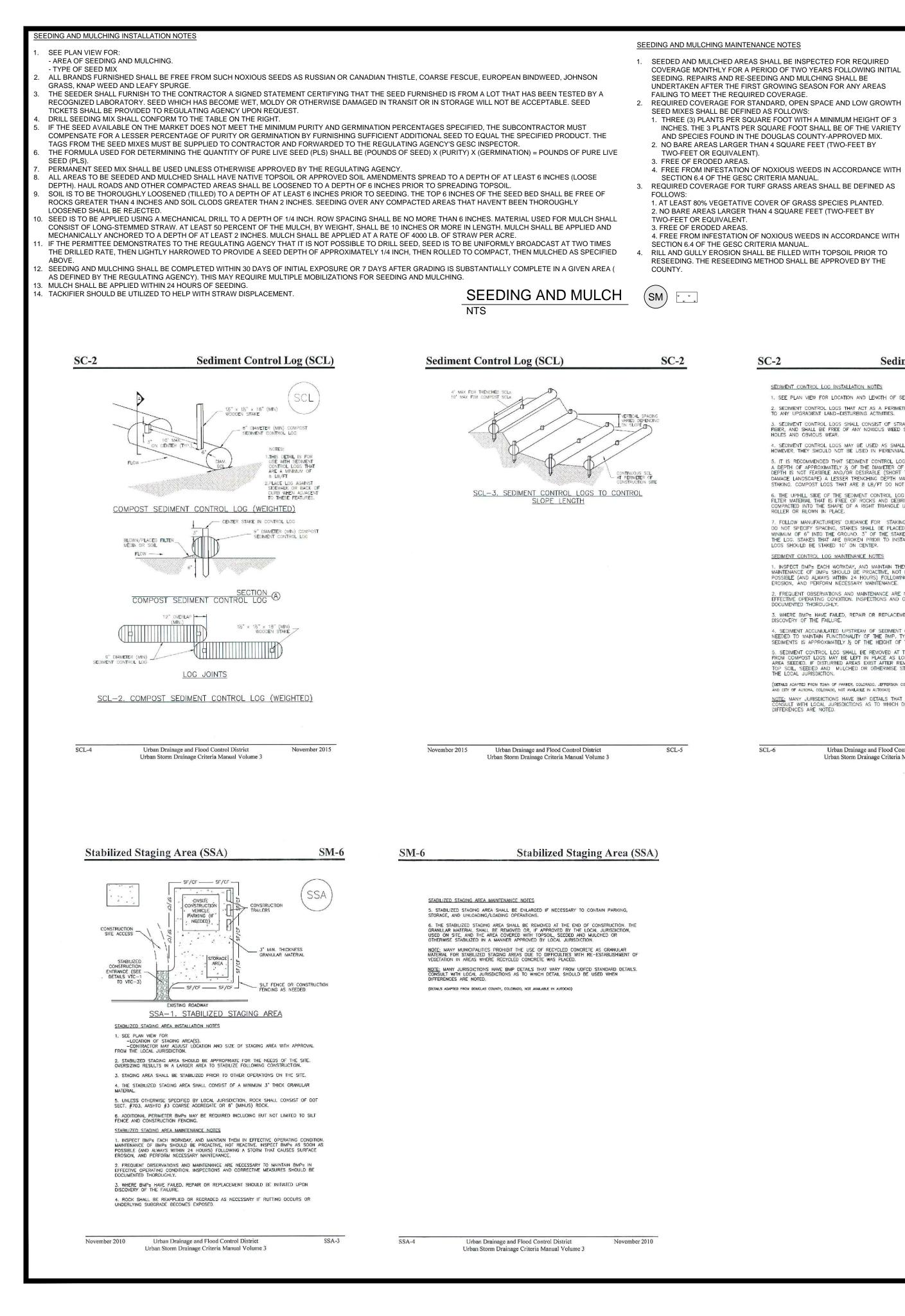
- maximum Standard Proctor Density (ASTM D698) at two (2) percent of optimum moisture content. 10. No rubble or debris shall be placed in the backfill under any of the proposed buildings, streets, curb & gutter, sidewalk and drainage structures or within five (5) feet of a building footprint. Properly graded rubble may be used
- 6. All grading shall be in conformance with the Geotechnical Report for the area. 7. Placement of fill for roadway embankments shall be completed in conformance with the Geotechnical Report. 8. Grading contours shown on this plan are to final grade. 9. Compaction under filled areas, including roadway and detention basin embankments, shall be 95 percent of the
- 5. The road grades shall be cleared of vegetation and the topsoil stockpiled for later use.
- separate payment will be made for dust control associated with the site construction.
- 4. Water shall be used as a dust palliative as required and shall be included in the cost for earthwork item(s). No
- Project Specifications.
- paid for as documented in the Project Specifications. 3. Excess excavation shall become the property of the Contractor and shall be disposed of at the Contractor's
- Rubbish including timber, concrete rubble, trees, brush, and asphalt shall not be backfilled adjacent to any of the structures or be in the placement of any unclassified fill. The Contractor shall be responsible for the removal and hauling of such materials to a suitable spoil area. Costs associated with the removal of such materials shall be expense. The cost of haulage and spoiling of excess excavated materials shall be paid for as documented in the
- All earthwork required of this construction shall be completed in accordance with all applicable sections of the Project Specifications and Soil Investigation Report (Geotechnical Report).

PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- in some locations as specified and verified by the Geotechnical Engineer. 11. Contractor is responsible for reviewing the site prior to bidding to verify site conditions.
- 12. Contractor is responsible for providing erosion control measures as approved by the El Paso County PCD
- Engineering Division and as may be required by the El Paso County Inspector. 13. All slopes equal to or greater than 3:1 shall require anchored soil retention blanket (SRB), Geocoir 700 or equal. 14. The Developer is responsible for maintaining erosion control measures until a mature stage of vegetation is
- 15. All soils used for fill must be approved by a representative of the Geotechnical Engineer.
- 16. All natural ground to receive fill must be properly scarified, watered and compacted prior to placing fill. 17. The Contractor is solely responsible for the design, maintenance and operation of any required dewatering system. The Contractor shall perform such independent investigation as he deems necessary to satisfy himself as to the subsurface groundwater conditions and unstable soil conditions to be encountered throughout the construction. Contractor shall coordinate the dewatering system with El Paso County when associated with public facilities. 18. No fill shall be placed, spread or rolled while it is frozen, thawing or during unfavorable weather conditions. When the work is interrupted by heavy rain, fill operations shall not be resumed until a representative of the Geotechnical Engineer indicates that the moisture content and density of the previously placed fill are as specified. Fill surfaces may be scarified and recompacted after rainfall if necessary, to obtain proper moisture density relation 19. Additional erosion control structures and/or grading may be required at the time of construction. 20. Sediment removal for erosion control facilities shall be performed continuously for proper function.
- 21. Base mapping was provided by MS Civil Engineers The date of the last survey update was 2019. 22. Proposed Construction Schedule:
 - Begin Construction: pending Total Site Area = 2 Acres (est.)
- 23. Area to be disturbed = 4.8 Acres.
 - Existing 100-year runoff coefficient = 0.25
 - efficient = 0.25
 - ups: HSG A & B ed and covered with native grasses on mild to oderate to steep slopes (1%-4%). ek Drainage Basin.

Riprap Designation	% Smaller than Given Size by Weight	Intermediate Rock Dimension (Inches)	d ₅₀ * (Inches)
Type VL	70-100 50-70 35-50 2-10	12 9 6 2	6**
Type L	70–100 50–70 35–50 2–10	15 12 9 3	9**
Туре М	70–100 50–70 35–50 2–10	21 18 12 4	12**
 * d₅₀=Mean Particle Size (Intermediate Dimension) by weight. ** Mix VL, L AND M Riprap with 35% Topsoil (by Volume) and bury with 4-6 Inches of Topsoil, all vibration compacted & revegetate. (Table MD-7: Classification and Gradation of Ordinary Riprap. UDFCD, Drainage Criteria Manual, Vol. 1) 			





SHALL BE INSPECTED FOR REQUIRED
RIOD OF TWO YEARS FOLLOWING INITIAL
DING AND MULCHING SHALL BE
GROWING SEASON FOR ANY AREAS
D COVERAGE.

1. THREE (3) PLANTS PER SQUARE FOOT WITH A MINIMUM HEIGHT OF 3 INCHES. THE 3 PLANTS PER SQUARE FOOT SHALL BE OF THE VARIETY AND SPECIES FOUND IN THE DOUGLAS COUNTY-APPROVED MIX. 2. NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY

4. FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH

4. FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO

S	SEED MIX		
	EARTHWORK SHALL BE PERMANENTLY GRASSES. NATIVE SEED MIX FOR THIS LOWS:		
SPECIES WESTERN WHEAT GRASS SIDEOATS GRAMA SLENDER WHEAT GRASS LITTLE BLUESTEM BLUE GRAMA SWITCH GRASS JUNE GRASS SAND DROPSEED	pis/acre Pasopyrum smithii 3.0 Bouteloua curtipendula 2.0 Elymus trachycaulus 2.0 Schizachyrium scoparium 2.0 Bouteloua gracilis 0.5 Panicum virgatum 2.0 Koeleria cristata 0.5 Sporobolus cryptandrus 0.5 12.5 lbs		
IN AREAS INACCESSIBLE TO THE RATE AND RAKE 1/4" <u>MULCHING APPLICATION</u> : 1-	LL SEED 1/4" TO 1/2" INTO TOPSOIL. A DRILL, HAND BROADCAST AT DOUBLE		

Revised 7/02/19

- Stormwater Management Plan.

- discharge of sediment off site.

- sediment control measures.

- dust from earthwork equipment and wind.
- Water Quality Control Division WQCD - Permits 4300 Cherry Creek Drive South Denver, CO 80246-1530 Attn: Permits Unit

Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

SC-2

SCL-6

1. SEE PLAN VIEW FOR LOCATION AND LENGTH OF SEDIMENT CONTROL LOGS. 2. SEDIMENT CONTROL LOGS THAT ACT AS A PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY UPGRADIENT LAND-DISTURBING ACTIVITIES.

3. SEDIMENT CONTROL LOGS SHALL CONSIST OF STRAW, COMPOST, EXCELSIOR OR COCONUT FIBER, AND SHALL BE FREE OF ANY NOXIOUS WEED SEEDS OR DEFECTS INCLUDING RIPS, HOLES AND OBVIOUS WEAR.

4. SEDIMENT CONTROL LOGS MAY BE USED AS SMALL CHECK DAMS IN DITCHES AND SWALES. HOWEVER, THEY SHOULD NOT BE USED IN PERENNIAL STREAMS. 5. IT IS RECOMMENDED THAT SEDIMENT CONTROL LOGS BE TRENCHED INTO THE GROUND TO A DEPTH OF APPROXIMATELY ½ OF THE DIAMETER OF THE LOG. IF TRENCHING TO THIS DEPTH IS NOT FEASIBLE AND/OR DESIRABLE (SHORT TERM INSTALLATION WITH DESIRE NOT TO DAMAGE LANDSCAPE) A LESSER TRENCHING DEPTH MAY BE ACCEPTABLE WITH MORE ROBUST

STAKING. COMPOST LOGS THAT ARE 8 LB/FT DO NOT NEED TO BE TRENCHED. 6. THE UPHILL SIDE OF THE SEDIMENT CONTROL LOG SHALL BE BACKFILLED WITH SOIL OR FILTER MATERIAL THAT IS FREE OF ROCKS AND DEBRIS. THE SOIL SHALL BE TICHTLY COMPACTED INTO THE SHAPE OF A RIGHT TRIANGLE USING A SHOVEL OR WEIGHTED LAWN ROLLER OR BLOWN IN PLACE.

7. FOLLOW MANUFACTURERS' GUIDANCE FOR STAKING. IF MANUFACTURERS' INSTRUCTIONS DO NOT SPECIFY SPACING, STAKES SHALL BE PLACED ON 4' CENTERS AND EMBEDDED A MINIMUM OF 6" INTO THE GROUND. 3" OF THE STAKE SHALL PROTRUDE FROM THE TOP OF THE LOG. STAKES THAT ARE BROKEN PRIOR TO INSTALLATION SHALL BE REPLACED. COMPOST LOGS SHOULD BE STAKED 10' ON CENTER SEDIMENT CONTROL LOG MAINTENANCE NOTES

INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON A 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 ${\sf BMPs}$ 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 SEDIMENT CONTROL LOG SHALL BE REMOVED AS NEEDED TO MAINTAIN FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY $\rlap/_2$ OF THE HEIGHT OF THE SEDIMENT CONTROL LOG.

5. SEDIMENT CONTROL LOG SHALL BE REMOVED AT THE END OF CONSTRUCTION.COMPOST FROM COMPOST LOGS MAY BE LEFT IN PLACE AS LONG AS BAGS ARE REMOVED AND THE AREA SEEDED. IF DISTURBED AREAS EXIST AFTER REMOVAL, THEY SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION. (DETAILS ADAPTED FROM TOWN OF PARKER, COLORADO, JEFFERSON COUNTY, COLORADO, DOUGLAS COUNTY, COLORADO ND 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.

November 2015

Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3



Standard Notes for El Paso County Grading and Erosion Control Plans

1. 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.

2. 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.

3. A separate Stormwater Management Plan (SMWP) 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.

4. 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.

5. 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.

6. 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

7. 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.

8. 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.

9. 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.

10. 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.

11. 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 loosened prior to installation of the control measure(s).

12. 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

13. Concrete wash water shall be contained and disposed of in accordance with the SWMP. No wash water shall be discharged to or allowed to enter 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.

14. 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.

15. Erosion control blanketing or other protective covering shall be used on slopes steeper than 3:1.

16. Contractor shall be responsible for the removal of all wastes from the construction site for disposal in accordance with local and State regulatory requirements. No construction debris, tree slash, building material wastes or unused building materials shall be buried, dumped, or discharged at the site.

17. 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.

18. Tracking of soils and construction debris off-site shall be minimized. Materials tracked off-site shall be cleaned up and properly disposed of immediately.

19. 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.

20. 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.

21. No chemical(s) having the potential to be released in stormwater are to be stored or used onsite 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.

22. 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 onsite and to prevent any spilled materials from entering State Waters, any surface or subsurface storm drainage system or other facilities.

23. No person shall cause the impediment of stormwater flow in the curb and gutter or ditch except with approved

24. 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.

25. All construction traffic must enter/exit the site only at approved construction access points.

26. Prior to construction the permittee shall verify the location of existing utilities.

27. A water source shall be available on site during earthwork operations and shall be utilized as required to minimize

28. The Sub-Surface Soil INvestigation, Sterling Ranch Bridges prepared by Entech Engineering shall be considered a part a part of these plans.

29. 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

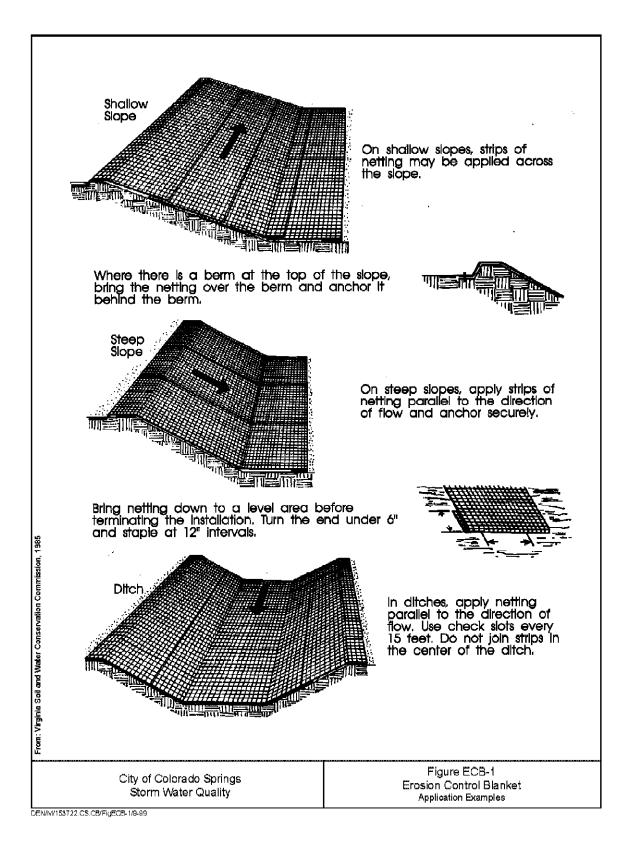


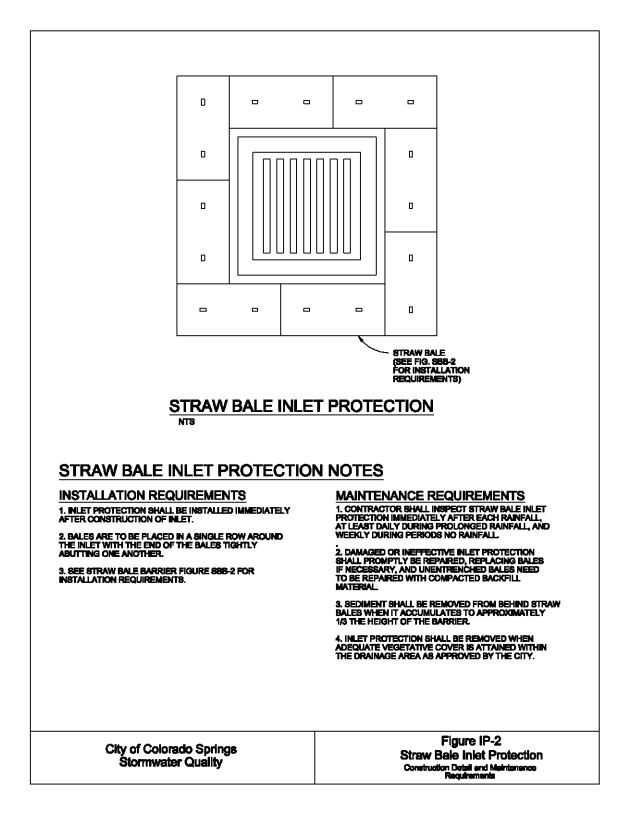
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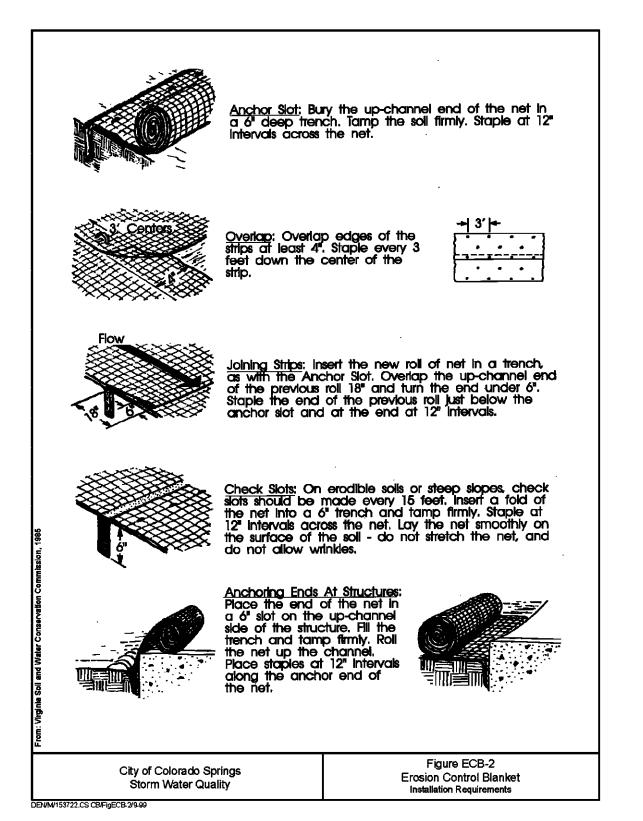
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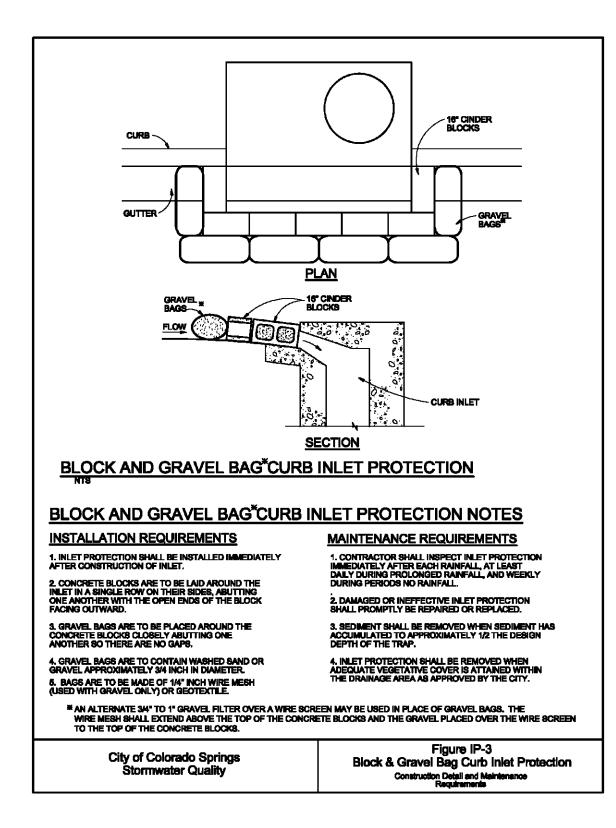
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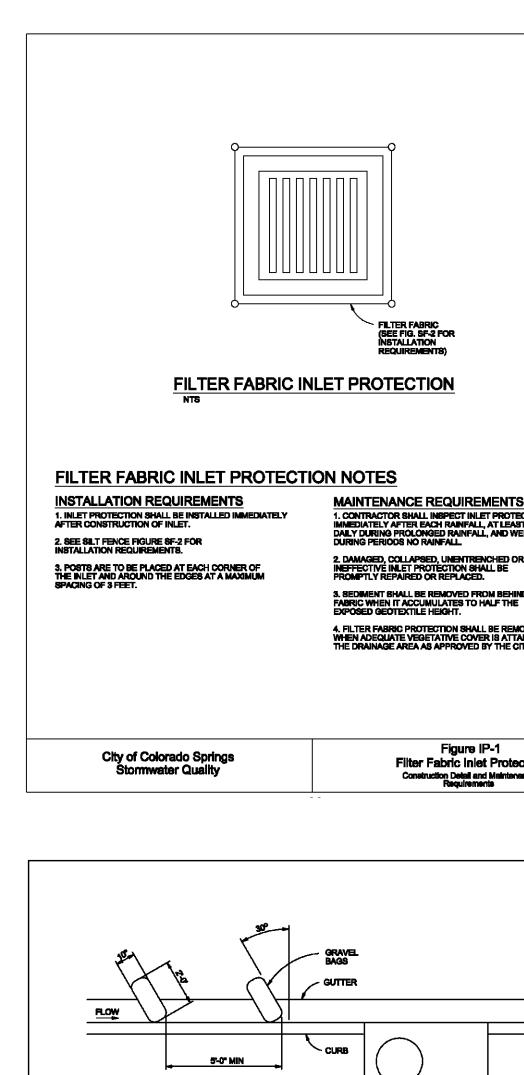
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Design:	TAC			
Drawn:	PAV			
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CURB SOCK INLET PROTECTION

I. INLET PROTECTION SHALL BE INSTALLED IMMEDIATELY AFTER CONSTRUCTION OF INLET. 2. SOCK IS TO BE MADE OF 1/4 INCH WIRE MESH (USED WITH GRAVEL ONLY) OR GEOTEXTILE. 3. WASHED SAND OR GRAVEL 3/4 INCH TO 4 INCHES N. DIAMETER IS PLACED INSIDE THE SOCK.	MAINTENANCE REQUIREME 1. CONTRACTOR SHALL INSPECT INLET (IMMEDIATELY AFTER EACH RAINFALL, A' DAILY DURING PROLONGED RAINFALL A' DURING PERIODS NO RAINFALL. 2. DAMAGED OR INEFFECTIVE INLET PRO SHALL PROMPTLY BE REPAIRED OR REP
N. DAWETER'S POLCED INSIDE THE SOCK 1. PLACEMENT OF THE SOCK IS TO BE 30 DEGREES FROM PERPENDICULAR IN THE OPPOSITE DIRECTION 5. FLOW. 5. SOCKS ARE TO BE FLUSH WITH THE CURB AND SPACED AT A MINIMUM 5 FEET APART. 3. AT LEAST 2 CURB SOCKS IN SERIES IS REQUIRED.	3. SEDIMENT SHALL BE REMOVED FROM THE SOCK WHEN GUTTER WIDTH IS FILL 4. INLET PROTECTION SHALL BE REMOVI ADEQUATE VEGETATIVE COVER IS ATTA THE DRAINAGE AREA AS APPROVED BY

		Engineering Colorado 80904 (719) 630-7342
AF FARINC FRG SAP FOR MAXIMON INCERTION SCTION STATE CALL INSPECT INLET PROTECTION THE LACK RAMFALL AT LEAST INCOMMED PRIMARAL, AND USELAY INTERE CALL RAMFACE AT LEAST INCOMMED PRIMARAL SECOND INTER CALL RAMFACE AT LEAST INTER CALL RAMFACE AT LEAST PROTECTION INTER CALL RAMFACE AT LEAST P		STERLING RANCH DEVELOPMENT BRIARGATE BOULEVARD BRIDGE GRADING & EROSION CONTROL PLANS NOTES AND SPECIFICATIONS EL PASO COUNTY, COLORADO
TION SHALL BE REMOVED WHEN TATIVE COVER IS ATTAINED WITHIN REA AS APPROVED BY THE CITY. Figure IP-4 Curb Sock Inlet Protection Construction Detail and Maintenance Requirements	For and on Behalf of Kiowa Engineering Corporation Date	Project No.: 19032 Date: 7/14/2022 Design: TAC Drawn: PAV Check: Revisions: