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
- At intersections, all curb returns will have 20-foot radius unless otherwise noted.
- 6. 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
- 7. Approved plans, Engineering Criteria Manual, etc. is required to be on-site at all times during
- All necessary permits, such as SWMP, ESQCP, Fugitive Dust, Access, C.O.E. 404, etc. shall be obtained prior to construction.
- 9. All handicap ramps to be per El Paso County Standard SD_2-40.
- 10. 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.
- 11. 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.
- 15. All storm sewer bedding to be per CDoT Standards.16. All storm sewer pipe shall be Class III B Wall unless otherwise shown on the storm sewer plan and profile
- 17. 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.
- 18. 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.
- 19. Storm sewer manholes sizes as follows unless otherwise shown:
 - 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.
- 20. All horizontal stationing is based on the 'Face of Curb', unless otherwise shown.
- 21. All vertical design and top of curb are based on the design point shown in the typical cross section.
- 22. The curb line design point is located at the intersection of the face and top of curb for the Type III Standard 6-inch vertical curb. See typical street section for design point locations.
- 23. 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.
- 24. Cross pans to be per El Paso County Standard Detail SD_2-26.
 25. Curb returns shall be straight graded from CR to CR unless otherwise noted.
- 26. Inlets are Type 'R' inlets (CDOT STD M-604-12) unless otherwise noted.

BENCHMARI

THE TOP OF AN ALUMINUM SURVEYORS CAP, STAMPED "8953" NORTHING = 411416.273

EASTING = 235167.071

ELEVATION = 7023.42

THE TOP OF RED PLASTIC SURVEYORS CAP, ILLEGIBLE

NORTHING = 410095.404 EASTING = 235052.131

ELEVATION = 7000.40

THE TOP OF RED PLASTIC SURVEYORS CAP, STAMPED "38141"

NORTHING = 411399.962

EASTING = 233849.817 ELEVATION = 7030.82

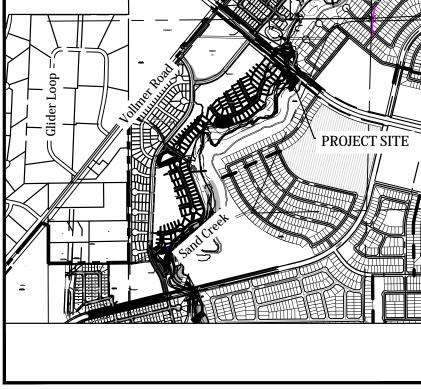
BASIS OF BEARING

THE SOUTH LINE OF THE SOUTHWEST QUARTER (SW 1_4) OF SECTION 34, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M. AS MONUMENTED AT THE SOUTHWEST CORNER OF SAID SOUTHWEST QUARTER (SW 1_4) BY A 2-1/2" ALUMINUM CAP STAMPED "LS 11624" AND AT THE SOUTHEAST CORNER OF SAID SOUTHWEST QUARTER (SW 1_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

Kiowa Project No. 19032 6/29/2022



SCALE: N.T.S.

VICINITY MAP

STATEMENTS

<u>Design Engineer's Statement:</u>

Owner/Developer'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 any liability caused by any negligent acts, error or omissions on my part in preparing this plan.

Date

Todd Cartwright, P.E. #33365
For and on behalf of Kiowa Engineering Corp.

33365

06/30/2022

l, the owner/developer have read and will comply with the requirements of the Brading and Erosion Control Plan.

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 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., County Engineer / ECM Administrator Date

EL PASO COUNTY STANDARD NOTES

- 1. 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.
- 2. 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).
- 3. 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:
- a. El Paso County Engineering Criteria Manual (ECM)
 b. City of Colorado Springs/El Paso County Drainage Criteria Manual, Volumes 1 and 2
- c. Colorado Department of Transportation (CDOT) Standard Specifications for Road and Bridge Construction
- d. CDOT M & S Standards
- 4. 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.
- 5. 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.
- 6. Contractor shall schedule a pre-construction meeting with El Paso County Planning and Community Development (PCD) Inspections, prior to starting construction.
- 7. 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.
- 8. Contractor shall not deviate from the plans without first obtaining written approval from the design engineer and PCD. Contractor shall notify the design engineer immediately upon discovery of any errors or inconsistencies.
- 9. All storm drain pipe shall be Class III RCP unless otherwise noted and approved by PCD.
- 10. Contractor shall coordinate geotechnical testing per ECM standards. Pavement design shall be approved by El Paso County PCD prior to placement of curb and gutter and pavement.
- 11. All construction traffic must enter/exit the site at approved construction access points.

property owner(s) prior to any off-site disturbance, grading, or construction.

- 12. 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.
- [If applicable, additional signing and striping notes will be provided.]

13. Signing and striping shall comply with El Paso County Department of Public Works and MUTCD criteria.

14. 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.15. 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

INDEX OF SHEETS

GECO GRADING & EROSION CONTROL COVER SHEET
GEC1 GRADING & EROSION CONTROL PLANS
GEC2 GEC NOTES AND SPECIFICATIONS
GEC3 GEC NOTES AND SPECIFICATIONS
GEC4 GEC NOTES AND SPECIFICATIONS

I.D. = INSIDE DIAMETER

LT = LEFT LF = LINEAR FEET

LP = LOW POINT

MAX = MAXIMUM

ASSY = ASSEMBLYMIN. = MINIMUM NTS = NOT TO SCALE BNDY = BOUNDARYBOP = BOTTOM OF PIPE OD = OUTSIDE DIAMETER PC = POINT OF HORIZONTAL CURVATURE CL = CENTERLINE CRA = CONCRETE REVERSE ANCHOR PP = PROPOSED PT = POINT OF HORIZONTAL TANGENCY CTRB = CONCRETE THRUST BLOCK PVC = POLY VINYL CHLORIDE PIPE PVC = POINT OF VERTICAL CURVATURE CR = POINT OF CURB RETURN DIP = DUCTILE IRON PIPE EL = ELEVATION PVI = POINT OF VERTICAL INTERSECTION ESMT = EASEMENTPVT = POINT OF VERTICAL TANGENCY EX. = EXISTINGRCB = REINFORCED CONCRETE BOX FC = FACE OF CURB RCP = REINFORCED CONCRETE PIPE FES = FLARED END SECTION ROW = RIGHT OF WAYFLG = FLANGERT = RIGHTFL = FLOWLINE SHT = SHEET GB = GRADE BREAK SS = SANITARY SEWER HP = HIGH POINT STA = STATIONSTD = STANDARD HORIZ = HORIZONTAL HYD = HYDRANTTA = TOP OF ASPHALT

TC = TOP OF CURB TOP = TOP OF PIPE

TOR = TOP OF ROCK

VC = VERTICAL CURVE

TYP = TYPICAL

VERT = VERTICAL

ABBREVIATIONS

Agineering Corporation

PL

BRIARGATE BOULEVARD BRIDGE GRADING & EROSION CONTROL

Project No.: 19032

Date: 6/29/2022

Design: TAC

Drawn: PAV

Check:

Revisions:

19032 Sand Creek at Sterling Ranch/drawings/Const dwg/1-BB/19032 BB GEC 01-04.dwg





LEGEND

VEHICLE TRACKING CONTROL

INLET PROTECTION

(IN FEET) 1 inch = 50 ft.

CONCRETE WASHOUT AREA

SEDIMENT CONTROL LOGS

STABILIZED STAGING AREA

SEED AND MULCH

TURF REINFORCEMENT MAT

EROSION CONTROL BLANKET

TOP OF SOIL/RIPRAP

LIMITS OF GRADING & CONSTRUCTION PROPOSED FEMA 100 YEAR FLOODPLAIN

EXISTING FEMA 100 YEAR FLOODPLAIN

— PROFILE CENTERLINE

— EX. & PROP. PROPERTY LINES

GROUTED BOULDER 36"-48"

TYPE M SOIL RIPRAP D50=12"

BANK LINING LEGEND

TURF REINFORCED MAT

WETLAND MITIGATION

FLOW DIRECTION

1. CONTRACTOR TO IDENTIFY MATERIAL AND SOIL STOCKPILES AREA ON THE SWMP PRIOR TO THE COMMENCEMENT OF MOBILIZATION AND PROVIDE PERIMETER CONTROL CONSTRUCTION FENCE. CONTRACTOR SHALL IDENTIFY STABILIZED STAGING AREA ON THE PLAN. THE LOCATION OF VEHICLE AND EQUIPMENT STORAGE AND MAINTENANCE, STORAGE AREAS FOR FERTILIZERS AND PESTICIDES, ON SITE WASTE MANAGEMENT MEASURES SUCH AS PORTOLETS, TRASH ROLL-OFF AND CONCRETE TRUCK AND EQUIPMENT WASHING AREA PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITIES.

2. CONTRACTOR TO IDENTIFY STABILIZED STAGING AREA PRIOR TO THE COMMENCEMENT OF MOBILIZATION.

3. CONSTRUCTION FENCING SHALL BE PROVIDED AT LIMITS OF GRADING/CONSTRUCTION AS PART OF THE INSTALLATION OF THE INITIAL BMPs.

4. CONTRACTOR SHALL PROVIDE CONSTRUCTION FENCING AROUND AREAS TO REMAIN UNDISTURBED BUT WITHIN LIMITS OF GRADING.

5. VEHICLE TRACKING BMPs FOR THIS PROJECT WILL BE LOCATED OFFSITE FROM THE WORK SHOWN ON THESE PLANS. VEHICLE TRACKING OFFSITE FROM THE PROJECT SHALL BE MAINTAINED CONTINUOUSLY THROUGHOUT THE PERIOD OF CONSTRUCTION.

6. THERE WILL BE NO DEDICATED ASPHALT OR CONCRETE BATCH PLANS REQUIRED FOR THIS PROJECT.

7. EXISTING VEGETATION IS MAINLY GRASSES AND HERBS WITH SMALLER AMOUNTS OF SHRUBS. EXISTING VEGETATION IS ESTIMATED AT 80%, BUT CONTRACTOR SHALL FIELD VERIFY PRIOR TO CONSTRUCTION.

8. CONTRACTOR TO ESTABLISH CUT/FILL AREAS IN ACCORDANCE WITH PROPOSED GRADING IN PLANS.

Project No.: 19032 Date: 6/29/2022 Design: TAC Drawn: PAV Check: Revisions:

GEC 3

STERLING OULEVARD BR GRADING AN EL PA

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BRIARGATE

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PL WELOPMENT

NG & EROSION CONTROL P

ICATIONS

LORADO

E BOULEVARD BRIDGE GRAD NOTES AND SPEC BRIARGATE

Concrete Washout Area (CWA)

MM-1

CWA) CONCRETE WASHOUT AREA PLAN

CWA-1. CONCRETE WASHOUT AREA

8 X 8 MIN.

SECTION A

CWA INSTALLATION NOTES 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.

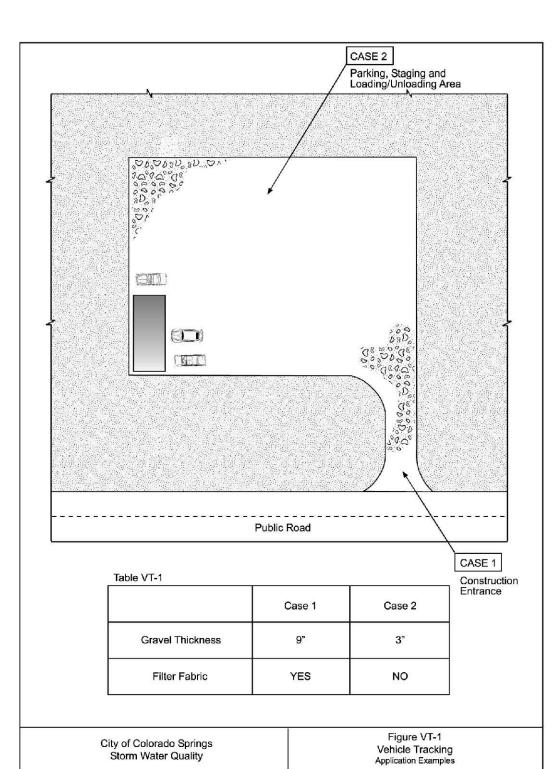
3. THE CWA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE. 4. CWA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8' BY 8' SLOPES LEADING OUT OF THE SUBSURFACE PIT SHALL BE 3:1 OR FLATTER THE PIT SHALL BE AT LEAST 3' DEEP.

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.

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.

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



DEN/M/153722.CS.CB/FigVT-1/9-99

Urban Storm Drainage Criteria Manual Volume 3 **SECTION** VEHICLE TRACKING **VEHICLE TRACKING NOTES** INSTALLATION REQUIREMENTS MAINTENANCE REQUIREMENTS 1. ALL ENTRANCES TO THE CONSTRUCTION SITE ARE TO BE STABILIZED PRIOR TO CONSTRUCTION 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. 4. STORM SEWER INLET PROTECTION IS TO BE IN PLACE, INSPECTED, AND CLEANED IF NECESSARY. . CONSTRUCTION ROADS, PARKING AREAS, CADING/UNI.CADING ZONES, STORAGE AREAS, AND TAGING AREAS ARE TO BE STABILIZED.

City of Colorado Springs Stormwater Quality

Figure VT-2 Vehicle Tracking

Urban Drainage and Flood Control District

MM-1

CWA MAINTENANCE NOTES

Concrete Washout Area (CWA)

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.

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)

 $\underline{\text{NOTE}};$ 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.

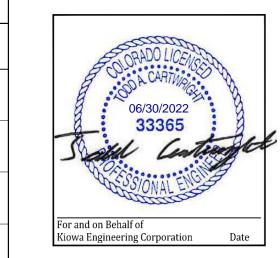
PROJECT SPECIFIC GRADING AND EROSION CONTROL NOTES

- 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).
- 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 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 expense. The cost of haulage and spoiling of excess excavated materials shall be paid for as documented in the
- 4. Water shall be used as a dust palliative as required and shall be included in the cost for earthwork item(s). No
- separate payment will be made for dust control associated with the site construction. 5. The road grades shall be cleared of vegetation and the topsoil stockpiled for later use.
- 6. All grading shall be in conformance with the Geotechnical Report for the area.
- 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
- 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 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
- established.
- 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
- End Construction: pending Total Site Area = 2 Acres (est.)
- 23. Area to be disturbed = 4.8 Acres. Existing 100-year runoff coefficient = 0.25
- Proposed 100-year runoff coefficient = 0.25 Existing Hydrologic Soil Groups: HSG A & B
- Site is currently undeveloped and covered with native grasses on mild to oderate to steep slopes (1%-4%).

24.	Site is located in the Sand Creek Drainage Basin.			

CLASSIFICATION AND GRADATION OF RIPRAP					
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**		

* d ₅₀ =Mean Particle Size (Intermediate Dimension) by weight.	
1 · d ₅₀ —medit Fulticle Size (intermediate billiension) by weight.	
** Mix VL, L AND M Riprap with 35% Topsoil (by Volume) and bury wit	h
4—6 Inches of Topsoil, all vibration compacted & revegetate.	
(Table MD-7: Classification and Gradation of Ordinary Riprap. UDFCD,	
Drainage Criteria Manual, Vol. 1)	



Project No.: 19032

Date: 6/29/2022

Design: TAC

Drawn: PAV

Check:

Revisions:

- TYPE OF SEED MIX ALL BRANDS FURNISHED SHALL BE FREE FROM SUCH NOXIOUS SEEDS AS RUSSIAN OR CANADIAN THISTLE, COARSE FESCUE, EUROPEAN BINDWEED, JOHNSON GRASS, KNAP WEED AND LEAFY SPURGE.

THE SEEDER SHALL FURNISH TO THE CONTRACTOR A SIGNED STATEMENT CERTIFYING THAT THE SEED FURNISHED IS FROM A LOT THAT HAS BEEN TESTED BY A RECOGNIZED LABORATORY. SEED WHICH HAS BECOME WET, MOLDY OR OTHERWISE DAMAGED IN TRANSIT OR IN STORAGE WILL NOT BE ACCEPTABLE. SEED TICKETS SHALL BE PROVIDED TO REGULATING AGENCY UPON REQUEST DRILL SEEDING MIX SHALL CONFORM TO THE TABLE ON THE RIGHT.

IF THE SEED AVAILABLE ON THE MARKET DOES NOT MEET THE MINIMUM PURITY AND GERMINATION PERCENTAGES SPECIFIED, THE SUBCONTRACTOR MUST COMPENSATE FOR A LESSER PERCENTAGE OF PURITY OR GERMINATION BY FURNISHING SUFFICIENT ADDITIONAL SEED TO EQUAL THE SPECIFIED PRODUCT. THE TAGS FROM THE SEED MIXES MUST BE SUPPLIED TO CONTRACTOR AND FORWARDED TO THE REGULATING AGENCY'S GESC INSPECTOR.

THE FORMULA USED FOR DETERMINING THE QUANTITY OF PURE LIVE SEED (PLS) SHALL BE (POUNDS OF SEED) X (PURITY) X (GERMINATION) = POUNDS OF PURE LIVE

PERMANENT SEED MIX SHALL BE USED UNLESS OTHERWISE APPROVED BY THE REGULATING AGENCY. ALL AREAS TO BE SEEDED AND MULCHED SHALL HAVE NATIVE TOPSOIL OR APPROVED SOIL AMENDMENTS SPREAD TO A DEPTH OF AT LEAST 6 INCHES (LOOSE

DEPTH). HAUL ROADS AND OTHER COMPACTED AREAS SHALL BE LOOSENED TO A DEPTH OF 6 INCHES PRIOR TO SPREADING TOPSOIL. SOIL IS TO BE THOROUGHLY LOOSENED (TILLED) TO A DEPTH OF AT LEAST 6 INCHES PRIOR TO SEEDING. THE TOP 6 INCHES OF THE SEED BED SHALL BE FREE OF ROCKS GREATER THAN 4 INCHES AND SOIL CLODS GREATER THAN 2 INCHES. SEEDING OVER ANY COMPACTED AREAS THAT HAVEN'T BEEN THOROUGHLY LOOSENED SHALL BE REJECTED

SEED IS TO BE APPLIED USING A MECHANICAL DRILL TO A DEPTH OF 1/4 INCH. ROW SPACING SHALL BE NO MORE THAN 6 INCHES. MATERIAL USED FOR MULCH SHALL CONSIST OF LONG-STEMMED STRAW. AT LEAST 50 PERCENT OF THE MULCH, BY WEIGHT, SHALL BE 10 INCHES OR MORE IN LENGTH. MULCH SHALL BE APPLIED AND MECHANICALLY ANCHORED TO A DEPTH OF AT LEAST 2 INCHES. MULCH SHALL BE APPLIED AT A RATE OF 4000 LB. OF STRAW PER ACRE IF THE PERMITTEE DEMONSTRATES TO THE REGULATING AGENCY THAT IT IS NOT POSSIBLE TO DRILL SEED, SEED IS TO BE UNIFORMLY BROADCAST AT TWO TIMES

THE DRILLED RATE, THEN LIGHTLY HARROWED TO PROVIDE A SEED DEPTH OF APPROXIMATELY 1/4 INCH, THEN ROLLED TO COMPACT, THEN MULCHED AS SPECIFIED

SEEDING AND MULCHING SHALL BE COMPLETED WITHIN 30 DAYS OF INITIAL EXPOSURE OR 7 DAYS AFTER GRADING IS SUBSTANTIALLY COMPLETE IN A GIVEN AREA (AS DEFINED BY THE REGULATING AGENCY). THIS MAY REQUIRE MULTIPLE MOBILIZATIONS FOR SEEDING AND MULCHING.

MULCH SHALL BE APPLIED WITHIN 24 HOURS OF SEEDING.

TACKIFIER SHOULD BE UTILIZED TO HELP WITH STRAW DISPLACEMENT

SC-2

SEEDING AND MULCHING MAINTENANCE NOTES

FAILING TO MEET THE REQUIRED COVERAGE.

1. SEEDED AND MULCHED AREAS SHALL BE INSPECTED FOR REQUIRED COVERAGE MONTHLY FOR A PERIOD OF TWO YEARS FOLLOWING INITIAL SEEDING. REPAIRS AND RE-SEEDING AND MULCHING SHALL BE UNDERTAKEN AFTER THE FIRST GROWING SEASON FOR ANY AREAS

REQUIRED COVERAGE FOR STANDARD, OPEN SPACE AND LOW GROWTH SEED MIXES SHALL BE DEFINED AS FOLLOWS: 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 TWO-FEET OR EQUIVALENT).

3. FREE OF ERODED AREAS. 4. FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH SECTION 6.4 OF THE GESC CRITERIA MANUAL.

REQUIRED COVERAGE FOR TURF GRASS AREAS SHALL BE DEFINED AS 1. AT LEAST 80% VEGETATIVE COVER OF GRASS SPECIES PLANTED. 2. NO BARE AREAS LARGER THAN 4 SQUARE FEET (TWO-FEET BY TWO-FEET OR EQUIVALENT 3. FREE OF ERODED AREAS

SECTION 6.4 OF THE GESC CRITERIA MANUAL RILL AND GULLY EROSION SHALL BE FILLED WITH TOPSOIL PRIOR TO RESEEDING. THE RESEEDING METHOD SHALL BE APPROVED BY THE

4. FREE FROM INFESTATION OF NOXIOUS WEEDS IN ACCORDANCE WITH

SEED MIX

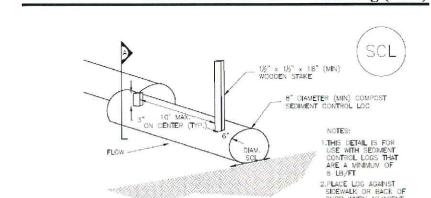
AREAS DISTURBED BY THE EARTHWORK SHALL BE PERMANENTLY REVEGETATED WITH NATIVE GRASSES. NATIVE SEED MIX FOR THIS PROJECT SHALL BE AS FOLLOWS:

pls/acre WESTERN WHEAT GRASS Pasopyrum smithii SIDEOATS GRAMA Bouteloua curtipendula SLENDER WHEAT GRASS Elymus trachycaulus LITTLE BLUESTEM Schizachyrium scoparium 2.0 BLUE GRAMA Bouteloua gracilis SWITCH GRASS Panicum virgatum JUNE GRASS Koeleria cristata Sporobolus cryptandrus 0.5 SAND DROPSEED 12.5 lbs

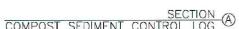
SEEDING APPLICATION: DRILL SEED 1/4" TO 1/2" INTO TOPSOIL IN AREAS INACCESSIBLE TO A DRILL, HAND BROADCAST AT DOUBI THE RATE AND RAKE 1/4" TO 1/2" INTO THE TOPSOIL. MULCHING APPLICATION: 1-1/2 TONS NATIVE HAY PER ACRE, MECHANICALLY CRIMPED INTO THE TOPSOIL OR HYDROMULCH.

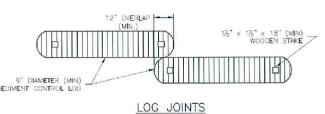
SEEDING AND MULCH

Sediment Control Log (SCL)



COMPOST SEDIMENT CONTROL LOG (WEIGHTED) CENTER STAKE IN CONTROL LOG BLOWN/PLACED FILTER_ MEDIA OR SOIL

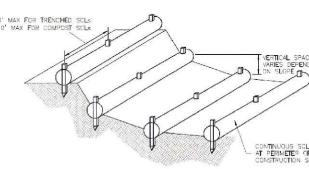




SCL-2. COMPOST SEDIMENT CONTROL LOG (WEIGHTED)

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Sediment Control Log (SCL)



SCL-3. SEDIMENT CONTROL LOGS TO CONTROL

Urban Drainage and Flood Control District

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.

6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. TH GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USEO ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

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

Stabilized Staging Area (SSA)

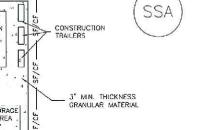
SCL-5

Stabilized Staging Area (SSA)

SM-6



SM-6



EXISTING ROADWAY SSA-1. STABILIZED STAGING AREA

— SF/CF —— SF/CF

STABILIZED STAGING AREA INSTALLATION NOTES -LOCATION OF STAGING AREA(S).
-CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

3. STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL. 5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE OR 6° (MINUS) ROCK. 6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

STABILIZED STAGING AREA MAINTENANCE NOTES

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THORROUGHLY. 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 IF RUTTING OCCURS OR LINDERLYING SURGRADE RECOMES EXPOSED.

Urban Drainage and Flood Control Distric

Urban Storm Drainage Criteria Manual Volume 3

Urban Drainage and Flood Control District

Urban Storm Drainage Criteria Manual Volume 3

STABILIZED STAGING AREA MAINTENANCE NOTES

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

November 2010

Sediment Control Log (SCL)

SEDIMENT CONTROL LOG INSTALLATION NOTES

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

SEDIMENT CONTROL LOG MAINTENANCE NOTES

2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE \mbox{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 $\frac{1}{2}$ 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

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.

Urban Drainage and Flood Control District

06/30/2022

r and on Behalf o

owa Engineering Corporation

Standard Notes for El Paso County Grading and Erosion Control Plans

Revised 7/02/19

- 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 discharge of sediment off site.
- 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
- 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 sediment control measures.
- 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.

the use of such chemical(s), special conditions and monitoring may be required.

- 27. 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.
- 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 Water Quality Control Division WQCD - Permits 4300 Cherry Creek Drive South Denver, CO 80246-1530 Attn: Permits Unit



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Project No.: 19032

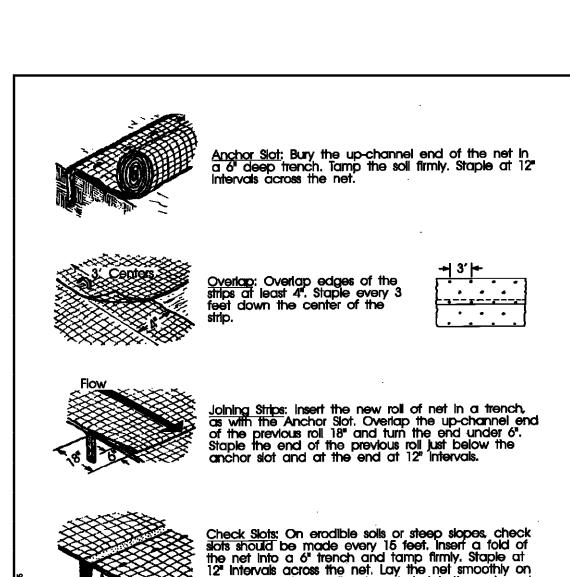
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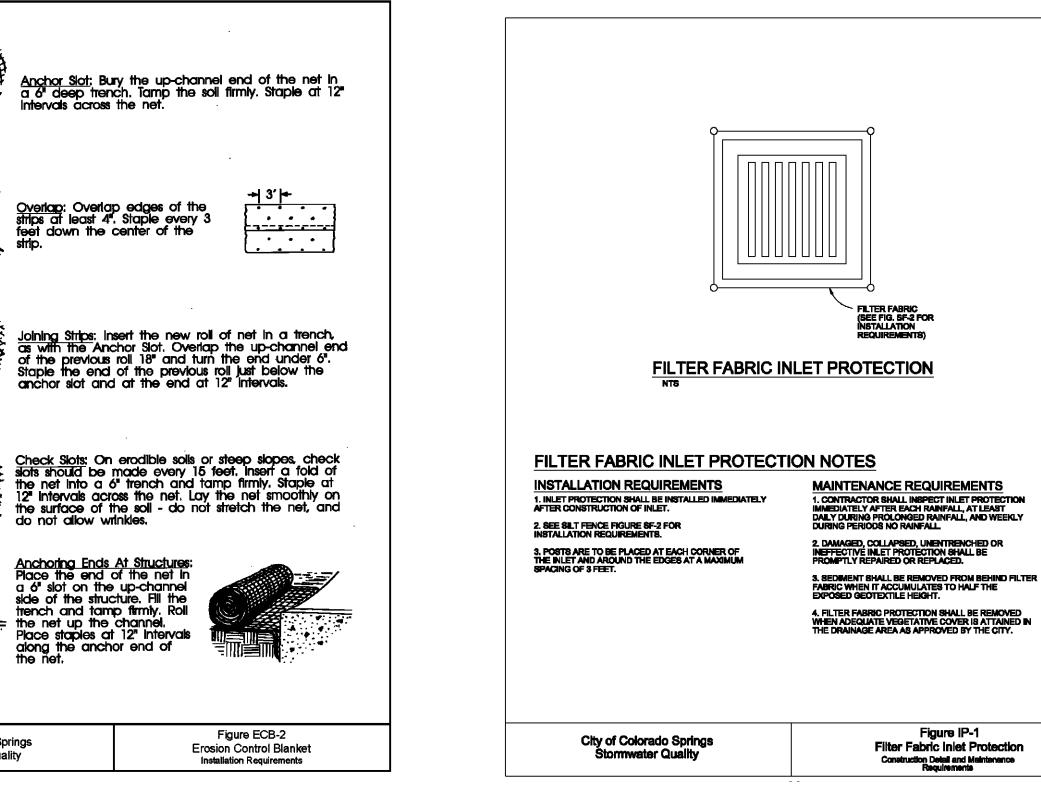
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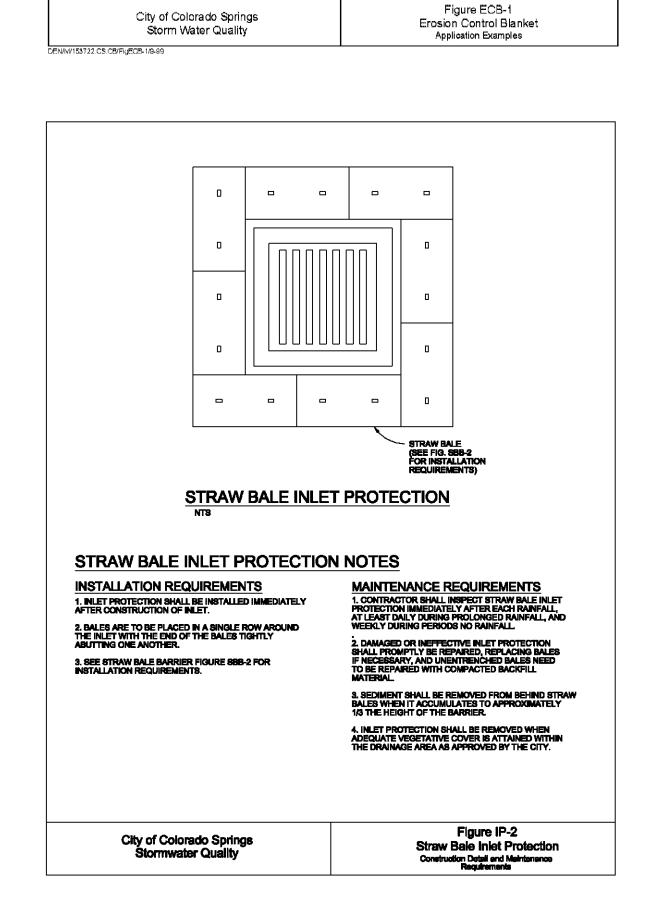
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Check:

Revisions:







On shallow slopes, strips of netting may be applied across the slope.

On steep slopes, apply strips of netting parallel to the direction

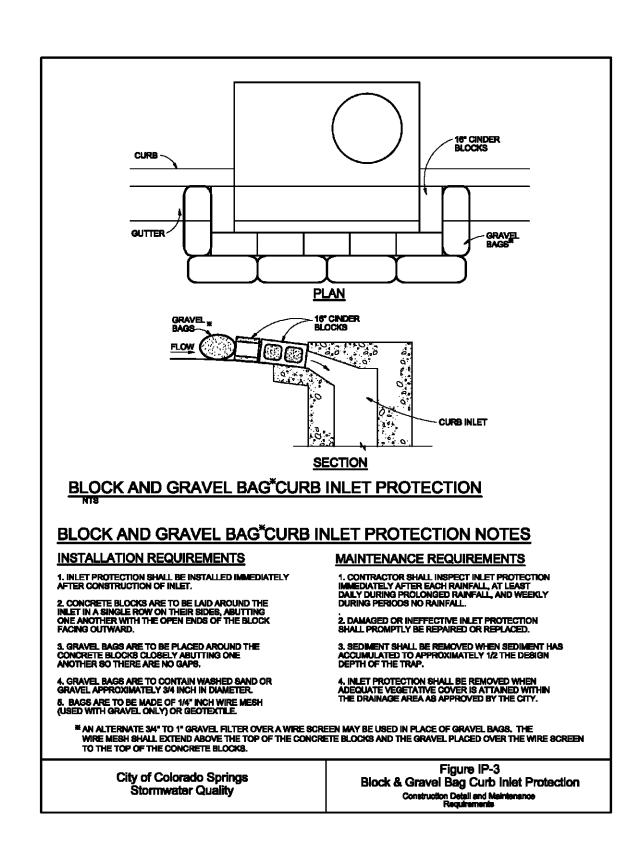
in ditches, apply netting parallel to the direction of

flow. Use check slots every 15 feet. Do not join strips in the center of the ditch.

of flow and anchor securely.

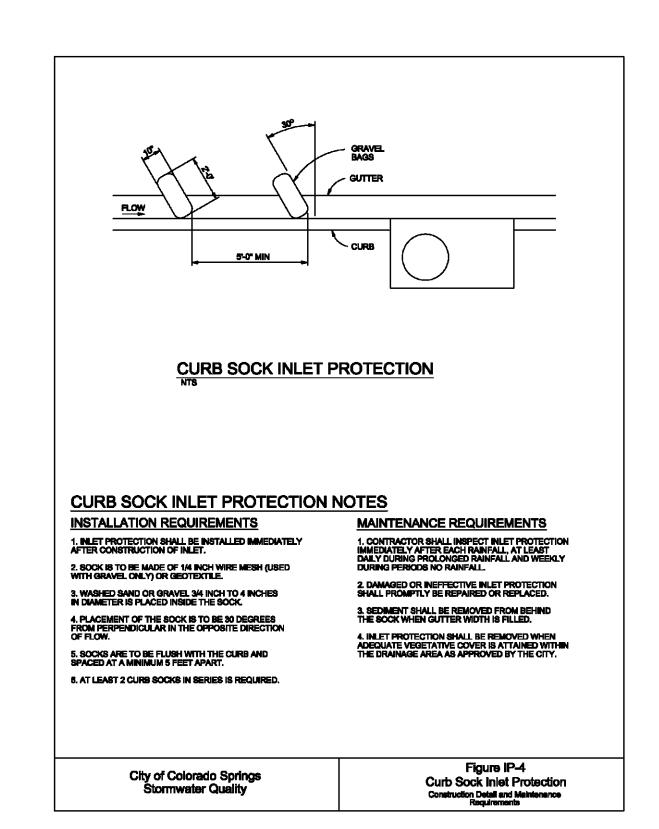
Where there is a berm at the top of the slope, bring the netting over the berm and anchor it behind the berm.

Bring netting down to a level area before terminating the installation. Turn the end under 6" and staple at 12" intervals.

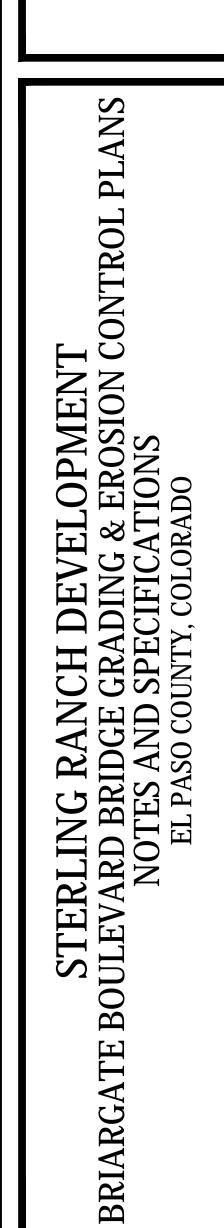


City of Colorado Springs

Storm Water Quality







Project No.: 19032

Date: 6/29/2022

Design: TAC

Drawn: PAV

Check:

Revisions: