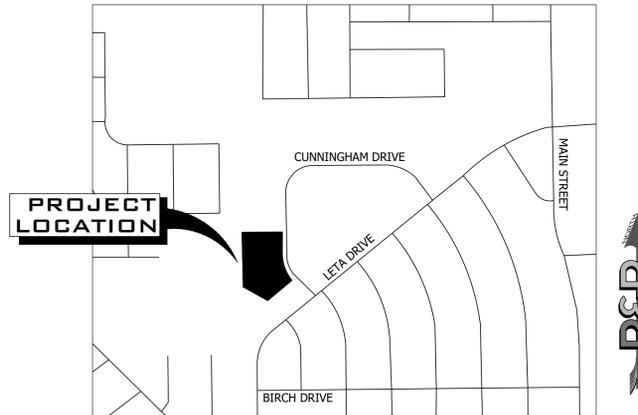


# GRADING AND EROSION CONTROL PLAN 208 CUNNINGHAM DRIVE

LOCATED IN LOT 4, BLOCK 5, 1 REFILL SECURITY, COLORADO ADDITION 4 WITHIN A PORTION OF  
THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE SIXTH  
P.M., COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO  
LOCATED AT: 208 CUNNINGHAM DR, COLORADO SPRINGS, CO 80911



Know what's below.  
Call before you dig.



**VICINITY MAP**  
SCALE 1" = 500'

Sheet List Table	
Sheet Number	Sheet Title
C1.0	COVER SHEET
C1.1	GENERAL NOTES
C2.0	INITIAL GRADING & EROSION CONTROL PLAN
C3.0	FINAL GRADING & EROSION CONTROL PLAN
C4.0	GEC DETAILS

CONTACT LIST		
OWNER	CIVIL ENGINEER	SURVEYOR
FOUNTAIN VALLEY SALVATION ARMY CORPS	R&R ENGINEERS-SURVEYORS, LLC	R&R ENGINEERS-SURVEYORS, LLC
208 CUNNINGHAM DRIVE COLORADO SPRINGS, CO 80911 (719) 382-1182 QUIJANA.VARGAS@USW.SALVATIONARMY. ORG	1635 WEST 13TH AVENUE, SUITE 310 DENVER, CO 80204 (303) 753-6730 TSTACKHOUSE@RRENGINEERS.COM	1635 WEST 13TH AVENUE, SUITE 310 DENVER, CO 80204 (720) 381-2439 KKUCHARCZYK@RRENGINEERS.COM
CONTACT: QUIJANA VARGAS	CONTACT: TIM STACKHOUSE, P.E.	CONTACT: KEVIN KUCHARCZYK

**BASIS OF BEARING**  
BEARINGS ARE BASED ON THE NORTH LINE OF LOT 6, BLOCK 1 OF REFILING OF SECURITY, COLORADO ADDITION NO. 4 AS MONUMENTED AT THE WEST END BY A FOUND 3/4" BAR AND AT THE EAST END BY A NO. 4 REBAR. SAID LINE IS ASSUMED TO BEAR N89°10'20"E.

**BENCHMARK**  
THE BENCHMARK FOR THIS SURVEY IS A NO. 4 REBAR LOCATED ALONG THE EASTERN BOUNDARY OF THE SUBJECT PARCEL (SEE SHEET 2). THE ELEVATION WAS DERIVED FROM GPS OBSERVATIONS USING AN OPUS DERIVED SOLUTION. ELEVATION: 5801.58 FEET (NAVD 1988 DATUM)

**LEGAL DESCRIPTION PER TITLE COMMITMENT**  
PARCEL 1:  
LOTS 4 AND 5, BLOCK 1, REFILING OF SECURITY, COLORADO ADDITION NO. 4, COUNTY OF EL PASO, STATE OF COLORADO.  
PARCEL 2:  
LOT 6, BLOCK 1, REFILING OF SECURITY, COLORADO ADDITION NO. 4, COUNTY OF EL PASO, STATE OF COLORADO

**Engineer's Statement (for standalone GEC Plan):**  
This Grading and Erosion Control Plan was prepared under my direction and supervision and is correct to the best of my knowledge and belief. Said Plan has been prepared according to the criteria established by the County for Grading and Erosion Control Plans. I accept responsibility for any liability caused by any negligent acts, errors or omissions on my part in preparing this plan.

Engineer of Record Signature \_\_\_\_\_ Date \_\_\_\_\_

**Owner's Statement (for standalone GEC Plan):**  
I, the owner/developer have read and will comply with the requirements of the Grading and Erosion Control Plan.

Owner Signature \_\_\_\_\_ 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 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 \_\_\_\_\_

NO.	REVISION	BY	DATE
1	COUNTY COMMENTS	JLH	9-10-24



ENGINEERS  
SURVEYORS

**R&R ENGINEERS-SURVEYORS, INC.**  
1635 WEST 13TH AVENUE, SUITE 310  
DENVER, COLORADO 80204  
PHONE: 303-753-6730

WWW.RRENGINEERS.COM

FOUNTAIN VALLEY SALVATION ARMY  
SITE ADDRESS: 208 CUNNINGHAM DRIVE  
COLORADO SPRINGS, CO 80911  
PREPARED FOR: FOUNTAIN VALLEY SALVATION ARMY  
208 CUNNINGHAM DR  
COLORADO SPRINGS, CO 80911

GRADING AND EROSION CONTROL PLAN			
JOB NO.	FV21181	ORG. SUBM. DATE	12/22/2023
DWN:	JMP	CHKD:	DW
NAME			

COVER SHEET

NO.  
**C1.0**

# GRADING AND EROSION CONTROL PLAN

## 208 CUNNINGHAM DRIVE

LOCATED IN LOT 4, BLOCK 5, 1 REFILL SECURITY, COLORADO ADDITION 4 WITHIN A PORTION OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE SIXTH P.M., COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO  
 LOCATED AT: 208 CUNNINGHAM DR, COLORADO SPRINGS, CO 80911



Know what's below.  
 Call before you dig.

### EL PASO COUNTY GRADING & EROSION CONTROL STANDARD 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 (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.
- 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 EFFECT 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 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.
- DURING DEWATERING OPERATIONS, UNCONTAMINATED GROUNDWATER 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 REGULATORY 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 NRCS, 8/21/2021 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  
 WQCD - PERMITS  
 4300 CHERRY CREEK DRIVE SOUTH  
 DENVER, CO 80246-1530  
 ATTN: PERMITS UNIT

## MASTER LEGEND

EXISTING	DESCRIPTION	PROPOSED
---	PROPERTY LINE	---
---	LOT LINE	---
---	RIGHT OF WAY	---
---	CENTERLINE	---
---	FLOOD PLAIN	---
---	LIMITS OF DISTURBANCE	LOD
---	SWALE / STREAM FLOWLINE	---
---	OVERFLOW RELIEF PATH	---
X	FENCE LINE	X
---	EASEMENT	---
---	EDGE OF PAVEMENT	---
---	VERTICAL CURB AND GUTTER	---
---	MOUNTABLE CURB AND GUTTER	---
---	SPILL GUTTER	---
---	TRANSITION GUTTER	---
---	CONCRETE SIDEWALK	---
---	HANDICAP PARKING	---
---	SIGHT TRIANGLE	---
---	SIGN(S)	---
---	PARKING COUNT INDICATOR	---
---	MAJOR CONTOUR	5825
---	MINOR CONTOUR	5822
---	GRADE BREAK	---
52 22 FG	SPOT ELEVATION	52 22 FG
---	RIP RAP	---
W	WATER LINE	W
---	WATER METER	---
---	WATER VALVE	---
---	WATER REDUCER	---
---	WATER FITTINGS	---
---	FIRE HYDRANT	---
SS	SANITARY LINE	SS
---	SANITARY MANHOLE	---
---	SANITARY CLEANOUT	---
---	STORM SEWER PIPE	---
---	STORM SEWER MANHOLE	---
---	STORM SEWER INLET	---
---	STORM SEWER FLARED END SECTION	---
---	STORM SEWER HEADWALL	---
---	UNDERGROUND ELECTRIC	---
---	OVERHEAD ELECTRIC	OHE
---	UTILITY POLE	---
---	STREET LIGHT	---
CATV	CABLE TV SERVICE	CATV
T	TELECOM SERVICE	T
FO	FIBER OPTIC SERVICE	FO
G	NATURAL GAS SERVICE	G
---	TREE	---
---	TREE LINE	---

### BMP LEGEND

---	CD	ROCK CHECK DAM
---	CB	COMPOST BLANKET
---	CFB	COMPOST FILTER BERM
---	CWA	CONCRETE WASHOUT AREA
---	CF	CONSTRUCTION FENCE
---	CM	CONSTRUCTION MARKERS
---	DW	DEWATERING
---	DD	DIVERSION DITCH
---	ECB	ROCK AND RIPRAP GRADATIONS
---	EROSION CONTROL BLANKET	
---	P	INLET PROTECTION
---	ICD	REINFORCED CHECK DAM
---	FRB	REINFORCED ROCK BERM
---	RRB	RRB FOR CULVERT PROTECTION
---	SBC	SEDIMENT BASIN
---	SCL	SEDIMENT CONTROL LOG
---	ST	SEDIMENT TRAP
---	SM	SEEDING AND MULCHING
---	SF	SILT FENCE
---	SSA	STABILIZED STAGING AREA
---	SR	SURFACE ROUGHENING
---	TRC	TEMPORARY ROAD CROSSING
---	TSD	TEMPORARY SLOPE DRAIN
---	TSC	TEMPORARY STREAM CROSSING
---	TER	TERRACING
---	VTC	VEHICLE TRACKING CONTROL
---	VW	VTC WITH WHEEL WASH
---	A	A LOT EROSION CONTROL
---	B	B LOT EROSION CONTROL
---	LOC	LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE
---	---	PROP. STORMWATER FLOW ARROWS
---	---	EX. STORMWATER FLOW ARROWS
---	---	PROP. CUT/FILL BOUNDARY
---	SP	PROP. STOCKPILE PROTECTION

### 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 (PCD) - 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 PCD. 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 PCD.
- 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.
- 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 DOT AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT, 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.
- EL PASO COUNTY DOES NOT OWN AND IS NOT RESPONSIBLE FOR THE UNDERDRAINS OR GROUNDWATER DISCHARGE SYSTEMS SHOWN ON THESE PLANS AND ASSUMES NO LIABILITY FOR WATER RIGHTS ADMINISTRATION BY APPROVING THESE PLANS. MAINTENANCE AND WATER RIGHTS ARE THE RESPONSIBILITY OF THE DEVELOPER AND PROPERTY OWNER'S.

NO.	REVISION	BY	DATE
1	COUNTY COMMENTS	JLH	9-10-24

**R&R ENGINEERS-SURVEYORS, INC.**  
 1635 WEST 13TH AVENUE, SUITE 310  
 DENVER, COLORADO 80204  
 PHONE: 303-753-6730

WWW.RRENINEERS.COM

**FOUNTAIN VALLEY SALVATION ARMY**  
 208 CUNNINGHAM DRIVE  
 COLORADO SPRINGS, CO 80911

PREPARED FOR:  
 FOUNTAIN VALLEY SALVATION ARMY  
 208 CUNNINGHAM DR  
 COLORADO SPRINGS, CO 80911

JOB NO.	ORG. SUBM. DATE	DWN:	CHKD:
FV21181	12/22/2023	JMP	DW

GENERAL NOTES

NO. **C1.1**

PLAN: FV21181 - 208 CUNNINGHAM DR ENGINEERING & SURVEYING, P. BRANNINGS PLANS & DESIGN, CDR.DWG, PLOT DATE: 10/29/2024, 2:01:35 PM, BY: ESSCJA, HWY

# GRADING AND EROSION CONTROL PLAN 208 CUNNINGHAM DRIVE

LOCATED IN LOT 4, BLOCK 5, 1 REFILL SECURITY, COLORADO ADDITION 4 WITHIN A PORTION OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE SIXTH P.M., COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO  
LOCATED AT: 208 CUNNINGHAM DR, COLORADO SPRINGS, CO 80911



Know what's below.  
Call before you dig.

REVISION	BY	DATE
1	JLH	9-10-24



**R&R ENGINEERS-SURVEYORS, INC.**  
1635 WEST 13TH AVENUE, SUITE 310  
DENVER, COLORADO 80204  
PHONE: 303-753-6730

WWW.RRENGINEERS.COM

FOUNTAIN VALLEY SALVATION ARMY  
208 CUNNINGHAM DRIVE  
COLORADO SPRINGS, CO 80911

PREPARED FOR:  
FOUNTAIN VALLEY SALVATION ARMY  
208 CUNNINGHAM DR  
COLORADO SPRINGS, CO 80911

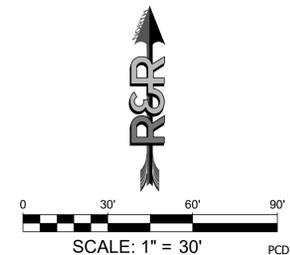
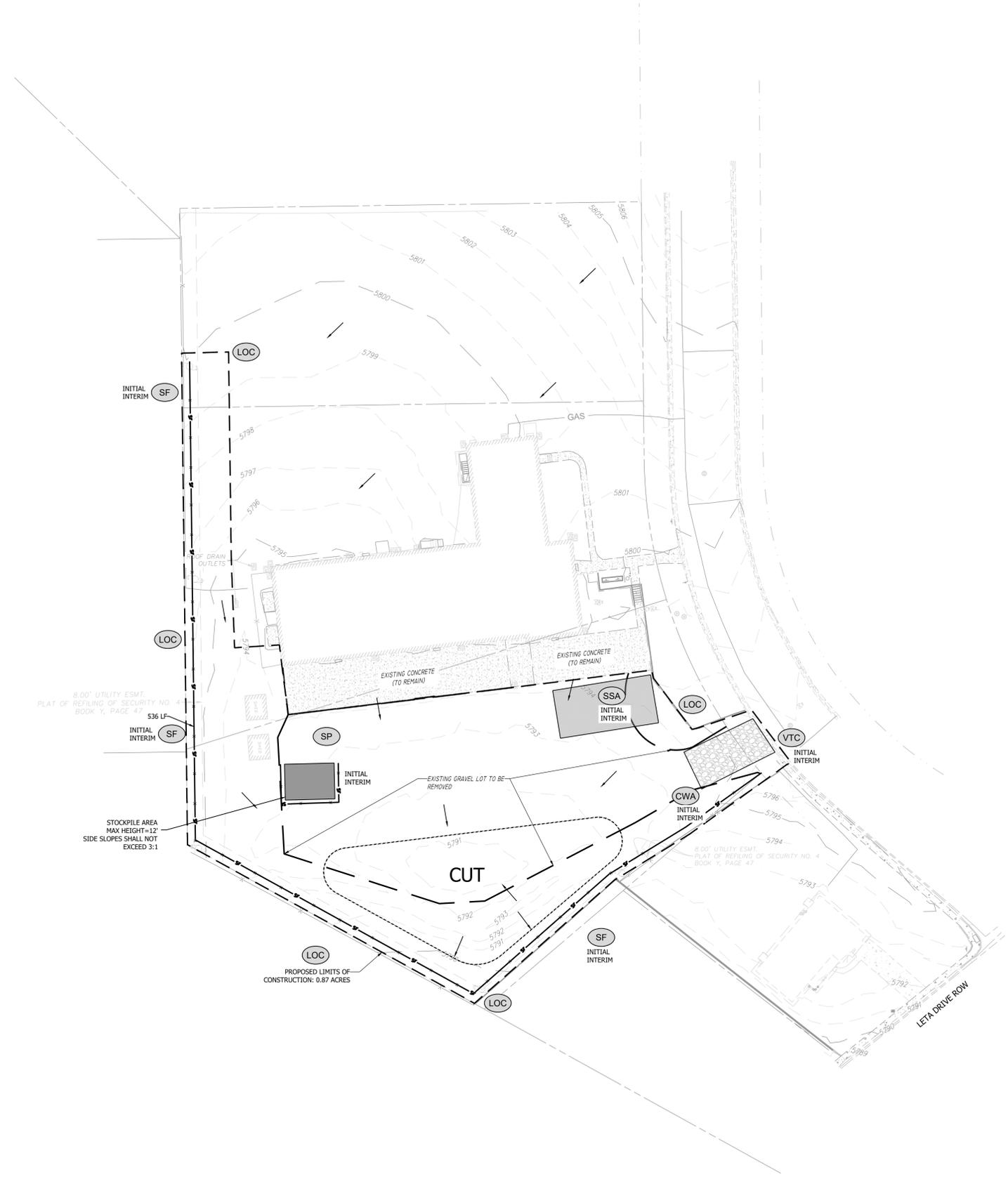
GRADING AND EROSION CONTROL PLAN  
JOB NO. FV21181  
ORG. SUBM. DATE 12/22/2023  
DWN: JMP CHKD: DW  
NAME

INITIAL GRADING & EROSION CONTROL PLAN

NO. **C2.0**

BMP LEGEND	
	CHECK DAM
	COMPOST BLANKET
	COMPOST FILTER BERM
	CONCRETE WASHOUT AREA
	CONSTRUCTION FENCE
	CONSTRUCTION MARKERS
	DEWATERING
	DIVERSION DITCH
	EROSION CONTROL BLANKET
	INLET PROTECTION
	REINFORCED CHECK DAM
	REINFORCED ROCK BERM
	RRB FOR CULVERT PROTECTION
	SEDIMENT BASIN
	SEDIMENT CONTROL LOG
	SEDIMENT TRAP
	SEEDING AND MULCHING
	SILT FENCE
	STABILIZED STAGING AREA
	SURFACE ROUGHENING
	TEMPORARY ROAD CROSSING
	TEMPORARY SLOPE DRAIN
	TEMPORARY STREAM CROSSING
	TERRACING
	VEHICLE TRACKING CONTROL
	VTC WITH WHEEL WASH
	A LOT EROSION CONTROL
	B LOT EROSION CONTROL
	LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE
	PROP. STORMWATER FLOW ARROWS
	EX. STORMWATER FLOW ARROWS
	PROP. CUT/FILL BOUNDARY
	PROP. STOCKPILE PROTECTION

- GEC CHECKLIST NOTES:
- EXISTING VEGETATION CONSISTS OF SPARSE NATIVE GRASS
  - MINIMAL TREES AND SHRUBS EXIST ONSITE AND ARE NOT TO BE DISTURBED
  - AREAS OF CUT/FILL: THE LIMITS OF THE INFILTRATION POND IS NOTED ON THE PLAN SHEET

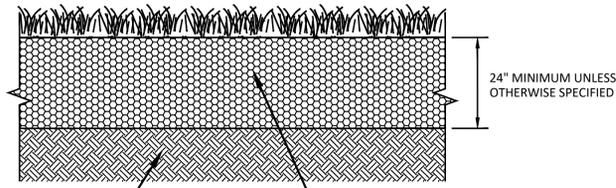


PCD FILE NO. CDR242

P:\11\1\21181\_208\_CUNNINGHAM\_DR\ENGINEERING\DRAWINGS\PLAN\GEC\FV21181\_GEC.DWG, PLOT DATE: 10/29/2024 2:01:53 PM, BY: ESSICA HENY

**SOIL MATRIX AMENDMENT**  
 CONTRACTOR REQUIRED TO REMOVE 2 FT OF NATIVE SOIL FROM THE LIMITS OF THE POND AND REPLACE WITH WELL GRADED GRAVELLY SANDS. CONTRACTOR REQUIRED TO PROVIDE A GRADATION OR SIEVE ANALYSIS AND PERMEABILITY RATES OF IMPORT SAND TO EOR FOR APPROVAL PRIOR TO PLACEMENT OF IMPORT SAND.

NOTE:  
 POROUS LANDSCAPE DETENTION SHOULD NOT BE INSTALLED UNTIL FINAL STABILIZATION OF THE SITE.



SCARIFY SUBGRADE MIN. DEPTH OF 6". PROVIDE LIMITED COMPACTION  
 IMPORT CLEAN SANDS (CONTRACTOR TO PROVIDE SIEVE ANALYSIS AND PERMEABILITY TESTING TO EOR PRIOR TO PLACEMENT)

**BIORETENTION CROSS SECTION**  
 N.T.S.

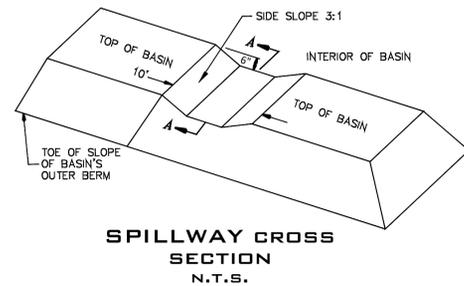
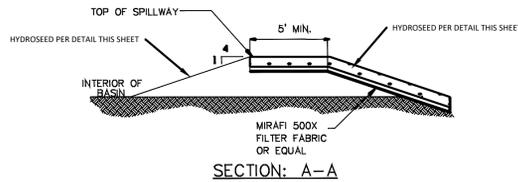
TABLE BR-3. BIORETENTION MEDIA PROPERTIES

SOIL PARAMETERS	TEST NAME	BIORETENTION MEDIA PROPERTIES
Texture/Gradation	ASTM D7928 Sedimentation (Hydrometer) Method	Particle Size Distribution: 70-80% Sand (0.05-2.0 mm diameter) 5-25% Silt (0.002-0.05 mm diameter) 5-15% Clay (<0.002 mm diameter) Notes: Sand, silt and clay percentages are by dry weight. Particle sizes are based on the USDA soil classification system. Distribution is measured after gravel > 2 mm is removed from sample. Media should have no more than 25% material > 2 mm. Equivalent sieve sizes for the upper and lower limit of sand are #10 and #240, respectively.
Organic Matter	ASTM D2974	1-5% by dry weight
pH	ASA/AASHTO	6.0 - 8.5
Salinity/Salts (EC) dS/m or mmhos/cm	Saturated Paste	<3
Nitrate Nitrogen (ppm)	ASA2 33-3	<30
Phosphorus (ppm)	Use Olsen when pH>6.2, otherwise use Mehlich-3	Olsen: <20 or Mehlich-3: <30

TABLE BR-4. NATIVE SEED MIX FOR BIORETENTION

COMMON NAME	SCIENTIFIC NAME	VARIETY	PURE LIVE SEED (PLS)	
			POUNDS/ACRE	OUNCES/ACRE
Sand bluestem	<i>Andropogon hallii</i>	Garden	3.5	
Sideoats grama	<i>Bouteloua curtipendula</i>	Butte	3	
Prairie sandreed	<i>Calamovilfa longifolia</i>	Goshen	3	
Indian ricegrass	<i>Oryzopsis hymenoides</i>	Paloma	3	
Switchgrass	<i>Panicum virgatum</i>	Blackwell	4	
Western wheatgrass	<i>Pascopyrum smithii</i>	Ariba	3	
Little bluestem	<i>Schizachyrium scoparium</i>	Patura	3	
Alkali sacaton	<i>Sporobolus airoides</i>		3	
Sand dropseed	<i>Sporobolus cryptandrus</i>		3	
Pasture sage <sup>1</sup>	<i>Artemisia frigida</i>			2
Blue aster <sup>1</sup>	<i>Aster laevis</i>			4
Blanket flower <sup>1</sup>	<i>Gaillardia aristata</i>			8
Prairie coneflower <sup>1</sup>	<i>Ratibida columnifera</i>			4
Purple Prairie Clover <sup>1</sup>	<i>Dalea (Petalostemum) purpurea</i>			4
Sub-Totals:			27.5	22
<b>Total pounds/acre</b>			<b>28.9</b>	

<sup>1</sup>Wildflower seed (optional) for a more diverse and natural look.



# GRADING AND EROSION CONTROL PLAN

## 208 CUNNINGHAM DRIVE

LOCATED IN LOT 4, BLOCK 5, 1 REFILL SECURITY, COLORADO ADDITION 4 WITHIN A PORTION OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE SIXTH P.M., COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO  
 LOCATED AT: 208 CUNNINGHAM DR, COLORADO SPRINGS, CO 80911

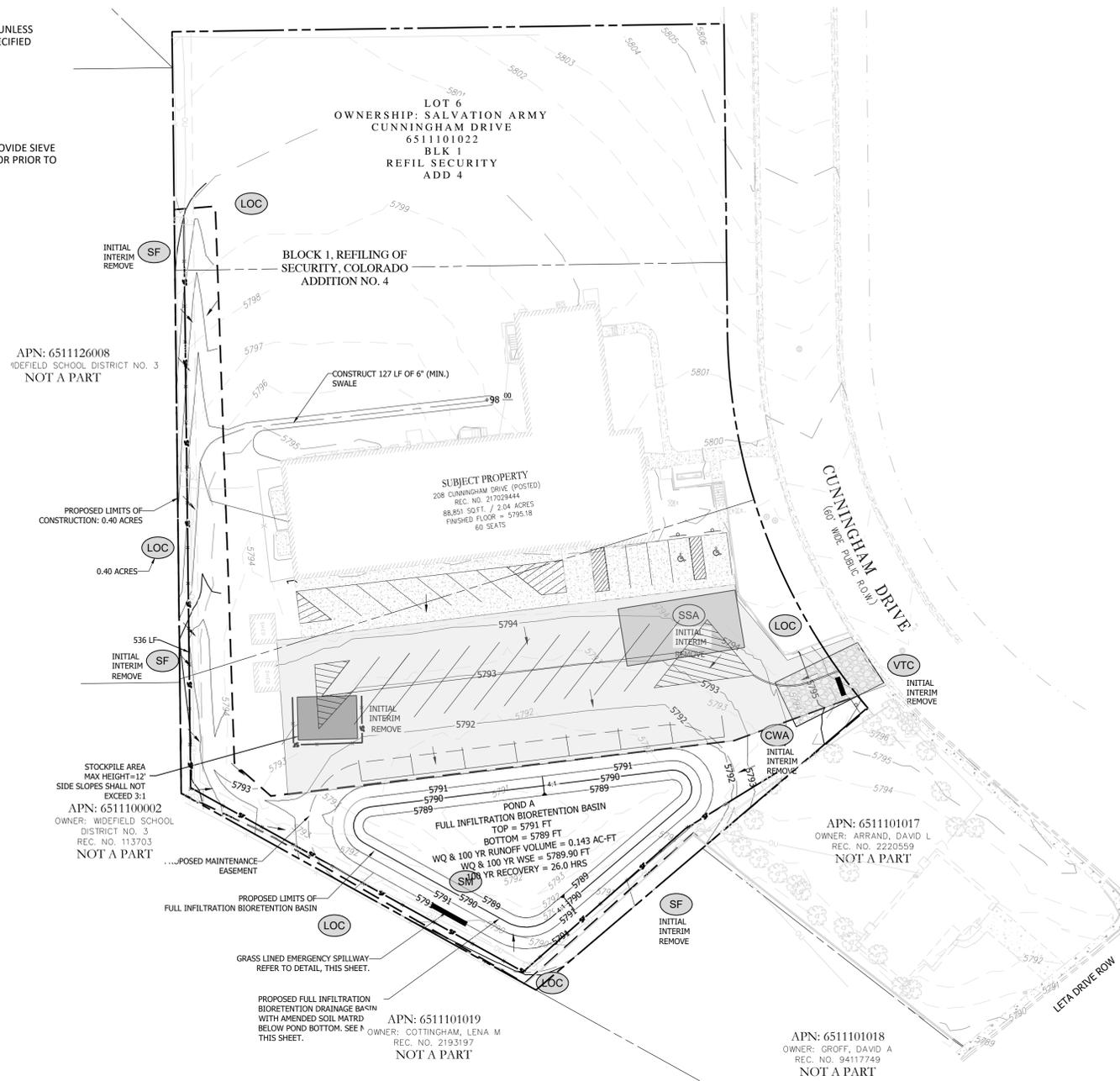


Know what's below.  
 Call before you dig.

**BMP LEGEND**

- CHECK DAM
- COMPOST BLANKET
- COMPOST FILTER BERM
- CONCRETE WASHOUT AREA
- CONSTRUCTION FENCE
- CONSTRUCTION MARKERS
- DEWATERING
- DIVERSION DITCH
- ROCK AND RIPRAP GRADATIONS
- EROSION CONTROL BLANKET
- INLET PROTECTION
- REINFORCED CHECK DAM
- REINFORCED ROCK BERM
- RRB FOR CULVERT PROTECTION
- SEDIMENT BASIN
- SEDIMENT CONTROL LOG
- SEDIMENT TRAP
- SEEDING AND MULCHING
- SILT FENCE
- STABILIZED STAGING AREA
- SURFACE ROUGHENING
- TEMPORARY ROAD CROSSING
- TEMPORARY SLOPE DRAIN
- TEMPORARY STREAM CROSSING
- TERRACING
- VEHICLE TRACKING CONTROL
- VTC WITH WHEEL WASH
- A LOT EROSION CONTROL
- B LOT EROSION CONTROL

--- LOC LIMITS OF CONSTRUCTION/LIMITS OF DISTURBANCE  
 --- PROP. STORMWATER FLOW ARROWS  
 --- EX. STORMWATER FLOW ARROWS  
 --- PROP. CUT/FILL BOUNDARY  
 --- SF PROP. STOCKPILE PROTECTION



DATE: 9-10-24  
 BY: JH  
 REVISION: COUNTY COMMENTS  
 NO. 1

**R&R ENGINEERS-SURVEYORS, INC.**  
 1635 WEST 13TH AVENUE, SUITE 310  
 DENVER, COLORADO 80204  
 PHONE: 303-753-6730

WWW.RRENGINEERS.COM

**FOUNTAIN VALLEY SALVATION ARMY**  
 208 CUNNINGHAM DRIVE  
 COLORADO SPRINGS, CO 80911

PREPARED FOR:  
 FOUNTAIN VALLEY SALVATION ARMY  
 208 CUNNINGHAM DR  
 COLORADO SPRINGS, CO 80911

GRADING AND EROSION CONTROL PLAN  
 JOB NO. FV21181  
 ORG. SUBM. DATE 12/22/2023  
 DWN: JMP CHD: DW  
 NAME

**FINAL GRADING & EROSION CONTROL PLAN**  
 NO. **C3.0**

PCD FILE NO. CDR242

# GRADING AND EROSION CONTROL PLAN

## 208 CUNNINGHAM DRIVE

LOCATED IN LOT 4, BLOCK 5, 1 REFILL SECURITY, COLORADO ADDITION 4 WITHIN A PORTION OF THE NORTHEAST QUARTER OF SECTION 11, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE SIXTH P.M., COLORADO SPRINGS, EL PASO COUNTY, STATE OF COLORADO  
LOCATED AT: 208 CUNNINGHAM DR, COLORADO SPRINGS, CO 80911



Know what's below.  
Call before you dig.

DATE	BY	REVISION	COUNTY COMMENTS
9-10-24	JH		
		NO. 1	



ENGINEERS SURVEYORS

**R&R ENGINEERS-SURVEYORS, INC.**  
1635 WEST 13TH AVENUE, SUITE 310  
DENVER, COLORADO 80204  
PHONE: 303-753-6730

WWW.RRENGINEERS.COM

**FOUNTAIN VALLEY SALVATION ARMY**  
208 CUNNINGHAM DRIVE  
COLORADO SPRINGS, CO 80911  
PREPARED FOR:  
FOUNTAIN VALLEY SALVATION ARMY  
208 CUNNINGHAM DR  
COLORADO SPRINGS, CO 80911

**SILT FENCE**

**J-HOOK INSTALLATION**

**SECTION A-A**

**INSTALLATION NOTES**

1. SILT FENCE MUST BE PLACED ON A FLAT SURFACE 2'-5' AWAY FROM TOE OF THE SLOPE TO ALLOW FOR PONDING AND DEPOSITION.
2. COMPACT THE TRENCH USING A JUMPING JACK OR WHEEL ROLLING TO THE POINT THAT THE FENCE RESISTS BEING PULLED OUT OF THE GROUND BY HAND.
3. SILT FENCE SHALL BE TAUT WITH NO SAGS AFTER IT HAS BEEN ANCHORED.
4. FABRIC SHALL BE ATTACHED TO POSTS WITH 1" HEAVY DUTY STAPLES OR 1" NAILS. THESE SHOULD BE PLACED VERTICALLY DOWN THE POST, 3" APART. THE PREFERRED INSTALLATION METHOD USES A TRENCH OR SILT FENCE INSTALLATION DEVICE.
5. INSTALL SILT FENCE ALONG THE CONTOUR OF THE SLOPES OR IN A MANNER TO AVOID CREATING CONCENTRATED FLOW (SUCH AS A "J-HOOK" INSTALLATION).

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. ACCUMULATED SEDIMENT MUST BE REMOVED WHEN THE HEIGHT REACHES 1/2 OF THE DESIGN HEIGHT OF THE SILT FENCE.
3. SILT FENCE MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.
4. PERMANENTLY STABILIZE AREA AFTER SILT FENCE IS REMOVED.

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-SF

**CONCRETE WASHOUT AREA PLAN**

**SECTION A-A**

**INSTALLATION NOTES**

1. SEE PLAN VIEW FOR LOCATION OF CONCRETE WASHOUT AREA.
2. LOCATE AT LEAST 50' AWAY FROM STATE WATERS MEASURED HORIZONTALLY.
3. AN IMPERMEABLE LINER (16 MIL. MINIMUM THICKNESS) IS REQUIRED IF CONCRETE WASH AREA IS LOCATED WITHIN 400' OF STATE WATERS OR 1000' OF WELLS OR DRINKING WATER SOURCES.
4. DO NOT LOCATE IN AREAS WHERE SHALLOW GROUNDWATER MAY BE PRESENT.
5. THE CONCRETE WASH AREA SHALL BE INSTALLED PRIOR TO CONCRETE PLACEMENT ON SITE.
6. CONCRETE WASH AREA SHALL INCLUDE A FLAT SUBSURFACE PIT THAT IS AT LEAST 8" BY 8".
7. BERM SURROUNDING SIDES AND BACK OF CONCRETE WASH AREA SHALL HAVE A MINIMUM HEIGHT OF 2 FEET.
8. CONCRETE WASH AREA ENTRANCE SHALL BE SLOPED 2% TOWARDS THE CONCRETE WASH AREA.
9. SIGNS SHALL BE PLACED AT THE CONCRETE WASH AREA.
10. USE EXCAVATED MATERIAL FOR PERIMETER BERM CONSTRUCTION.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. THE CONCRETE WASH AREA SHALL BE REPAIRED, CLEANED, OR ENLARGED AS NECESSARY TO MAINTAIN CAPACITY FOR CONCRETE WASTE. CONCRETE MATERIALS ACCUMULATED IN THE PIT SHALL BE REMOVED ONCE THE MATERIALS HAVE REACHED A DEPTH OF 3/4 THE HEIGHT OF THE CONCRETE WASH AREA.
3. 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.
4. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.
5. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-CWA-1

**STOCKPILE PROTECTION PLAN**

**STOCKPILE PROTECTION ELEVATION**

**INSTALLATION NOTES**

1. INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNGRADIENT SIDE.
2. PERIMETER CONTROL MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.
3. FOR STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADIENT CONTROLS INCLUDING PERIMETER CONTROL ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. IF PERIMETER CONTROLS MUST BE MOVED TO ACCESS STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORK DAY.
3. ACCUMULATED SEDIMENT MUST BE REMOVED ACCORDING TO PERIMETER CONTROL DETAIL.

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-SPA-1

**SEEDING & MULCHING**

ALL SOIL TESTING, SOILS AMENDMENT AND FERTILIZER DOCUMENTATION, AND SEED LOAD AND BAG TICKETS MUST BE ADDED TO THE CSWMP.

**SOIL PREPARATION**

1. IN AREAS TO BE SEEDDED, THE UPPER 6" INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE CONDITION. LESS THAN BEST STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTED OR GENERAL CONSTRUCTION ACTIVITY MUST BE SCARIFIED TO A DEPTH OF 6" TO 12" INCHES PRIOR TO SPREADING TOPSOIL TO BREAK UP COMPACTED LAYERS AND PROVIDE A BLENDING ZONE BETWEEN DIFFERENT SOIL LAYERS.
2. AREAS TO BE PLANTED SHALL HAVE AT LEAST 4" INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
3. THE CITY RECOMMENDS THAT EXISTING AND/OR IMPORTED TOPSOIL BE TESTED TO IDENTIFY SOIL DEFICIENCIES AND ANY SOIL AMENDMENTS NECESSARY TO ADDRESS THESE DEFICIENCIES. SOIL AMENDMENTS AND/OR FERTILIZERS SHOULD BE ADDED TO CORRECT TOPSOIL DEFICIENCIES BASED ON SOIL TESTING RESULTS.
4. TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTED, AND TO PREVENT EROSION AND CONTAMINATION. STRIPPED TOPSOIL MUST BE STORED IN AN AREA AWAY FROM MACHINERY AND CONSTRUCTION OPERATIONS, AND CARE MUST BE TAKEN TO PROTECT THE TOPSOIL AS A VALUABLE COMMODITY. TOPSOIL MUST NOT BE STRIPPED DURING UNDESIRABLE WORKING CONDITIONS (E.G. DURING WET WEATHER OR WHEN SOILS ARE SATURATED). TOPSOIL SHALL NOT BE STORED IN SWALES OR IN AREAS WITH POOR DRAINAGE.

**SEEDING**

1. ALLOWABLE SEED MIXES ARE INCLUDED IN THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. ALTERNATIVE SEED MIXES ARE ACCEPTABLE IF INCLUDED IN AN APPROVED LANDSCAPING PLAN.
2. SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
3. BROADCAST SEEDING OR HYDRO-SEEDING WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
4. SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLIANT DRILL OR HYDRO-SEEDING.
5. BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

**MULCHING**

1. MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
2. MULCHING REQUIREMENTS INCLUDE:
  - HAY OR STRAW MULCH
  - ONLY CERTIFIED WEED-FREE AND CERTIFIED SEED-FREE MULCH MAY BE USED. MULCH MUST BE APPLIED AT 2 TONS/ACRE AND ADEQUATELY SECURED BY CRIMPING AND/OR TACKIFIER.
  - CRIMPING MUST NOT BE USED ON SLOPES GREATER THAN 3:1 AND MULCH FIBERS MUST BE TUCKED INTO THE SOIL TO A DEPTH OF 3" TO 4" INCHES.
  - TACKIFIER MUST BE USED IN PLACE OF CRIMPING ON SLOPES STEEPER THAN 3:1.
3. HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
  - IF HYDRO-SEEDING IS USED, MULCHING MUST BE APPLIED AS A SEPARATE SECOND OPERATION.
  - WOOD CELLULOSE FIBERS MIXED WITH WATER MUST BE APPLIED AT A RATE OF 2,000 TO 2,500 POUNDS/ACRE, AND TACKIFIER MUST BE APPLIED AT A RATE OF 100 POUNDS/ACRE.
4. EROSION CONTROL BLANKET
  - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-SM

**AGGREGATE VEHICLE TRACKING CONTROL**

**SECTION A-A**

**INSTALLATION NOTES**

1. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHOULD BE LOCATED AT ALL POINTS WHERE VEHICLES EXIT THE CONSTRUCTION SITE TO ADJACENT ROADWAY.
2. STABILIZED CONSTRUCTION ENTRANCE/EXITS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
3. RADIUS MUST BE ADEQUATE FOR INTENDED CONSTRUCTION VEHICLE TURNING.
4. ROCK SHOULD CONSIST OF 6" MINUS ROCK.
5. INSTALL CONSTRUCTION FENCE ON BOTH SIDES OF VEHICLE TRACKING CONTROL PAD WHEN NEEDED OR REQUIRED BY INSPECTOR.

**MAINTENANCE NOTES**

1. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
2. SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
3. RADIUS MUST BE MAINTAINED TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREETS.
4. PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-VTC

**Stabilized Staging Area (SSA) SM-6**

**SSA-1. STABILIZED STAGING AREA**

**STABILIZED STAGING AREA INSTALLATION NOTES**

1. SEE PLAN VIEW FOR LOCATION OF STAGING AREA(S).
2. 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 5" 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.

**STABILIZED STAGING AREA MAINTENANCE NOTES**

1. INSPECT BMPs EACH MORNING, 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 IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-SSA-1

**SM-6 Stabilized Staging Area (SSA)**

**STABILIZED STAGING AREA MAINTENANCE NOTES**

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. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFERENCES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.

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

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

**STORMWATER ENTERPRISE**

APPROVED: [Signature]

DATE: 10/7/19

REVISION: 8/19/2020

DRAWING NO. 900-SP

NOVEMBER 2010

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

SSA-3

NOVEMBER 2010

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

SSA-4

NOVEMBER 2010

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

SSA-4

NOVEMBER 2010

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

SSA-4

GRADING AND EROSION CONTROL PLAN

JOB NO. FV21181

ORG. SUBM. DATE 12/22/2023

DWN: JMP CHK: DW

NAME

DETAILS

NO. C4.0