

# HOMESTEAD NORTH AT STERLING RANCH

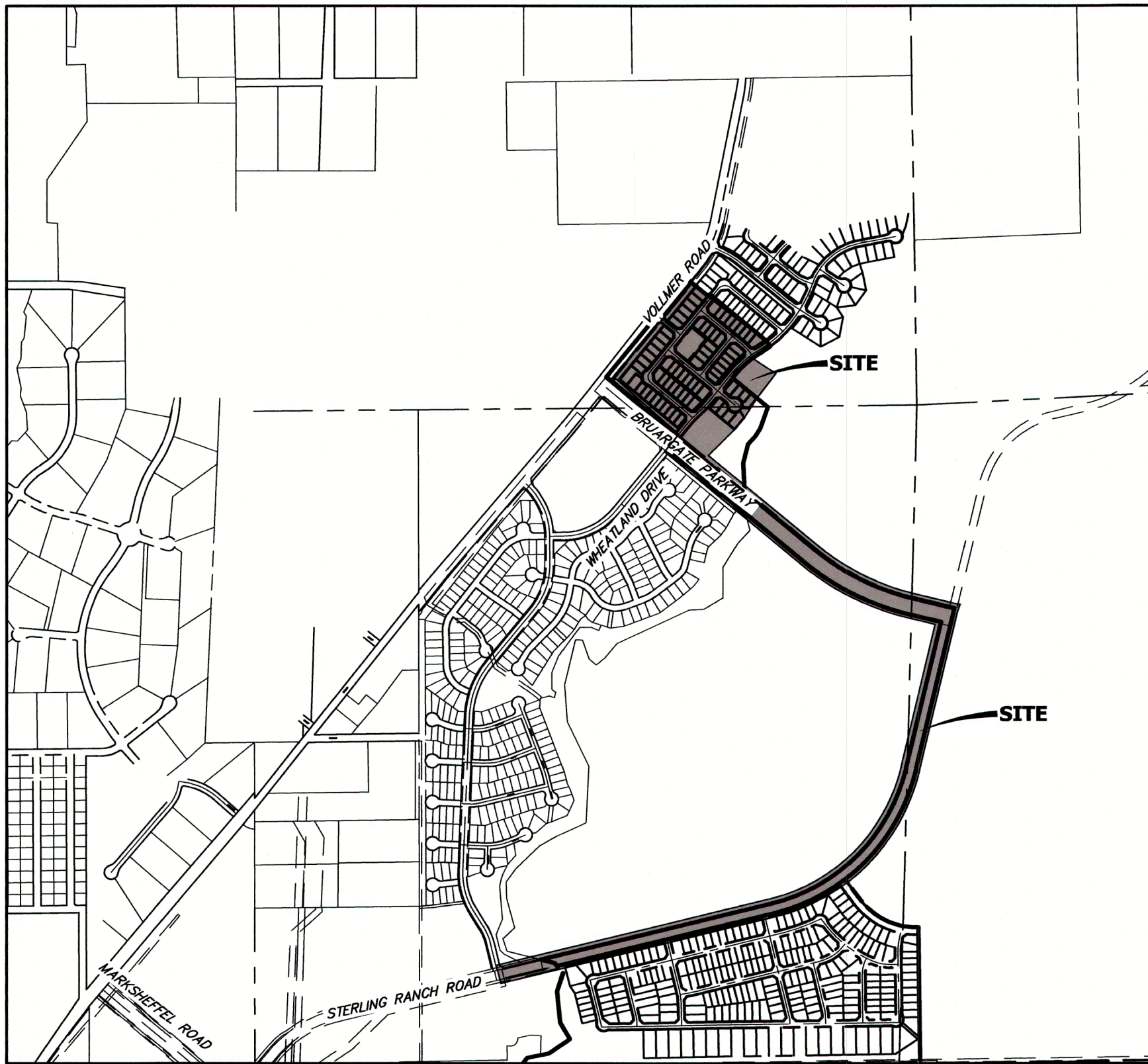
## COUNTY OF EL PASO, STATE OF COLORADO EARLY GRADING AND EROSION CONTROL PLANS JANUARY, 2022

PCD FILING NO.: SP-20-008

### GRADING AND EROSION CONTROL STANDARD NOTES

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 (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
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 STORMWATER MANAGEMENT PLAN.
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 LOOSENEED 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 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 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.
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 SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH (JULY 2020) AND SHALL BE CONSIDERED 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  
WOOD - PERMITS  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246-1530  
ATTN: PERMITS UNIT



VICINITY MAP  
SCALE: 1"=1,000'

### SHEET INDEX

- 1 COVER
- 2-7 GRADING PLAN
- 8-11 DETAIL SHEET

### STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS

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 SOIL AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - 3.1. EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - 3.2. CITY OF COLORADO SPRINGS/ EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - 3.3. COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS AND BRIDGE CONSTRUCTION
  - 3.4. 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 VERSIONS 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 INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
7. IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES 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. 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.
10. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
11. SIGHT VISIBILITY TRIANGLES ARE IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED IN SIGHT TRIANGLES.
12. SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
13. 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.
14. 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.

### AGENCIES

OWNER/DEVELOPER:	SR LAND, LLC 20 BOULDER CRESCENT, SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742
CIVIL ENGINEER:	JR ENGINEERING, LLC 5475 TECH CENTER DRIVE COLORADO SPRINGS, CO 80919 MIKE BRAMLETT P.E. (303) 267-6240
COUNTY ENGINEERING:	EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT 2880 INTERNATIONAL CIRCLE, SUITE 110 COLORADO SPRINGS, CO 80910 JEFF RICE, P.E. (719) 520-6300
TRAFFIC ENGINEERING:	EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 JENNIFER IRVINE, P.E. (719) 520-6460
WATER RESOURCES:	STERLING RANCH METRO DISTRICT ENGINEERS JDS-HYDRO CONSULTANTS 545 E. PIKES PEAK AVE., SUITE 300 COLORADO SPRINGS, CO 80903 JOHN MCGINN (719) 668-8769
FIRE DISTRICT:	BLACK FOREST FIRE PROTECTION DISTRICT 11445 TEACHOUT ROAD COLORADO SPRINGS, CO 80908 CHIEF BRYAN JACK (719) 495-4300
GAS DEPARTMENT:	COLORADO SPRINGS UTILITIES 7710 DURANT DR. COLORADO SPRINGS, CO 80947 TIM WENDT (719) 668-3556
ELECTRIC DEPARTMENT:	MOUNTAIN VIEW ELECTRIC 11140 E. WOODMEN ROAD FALCON, CO 80831 (719) 495-2283
COMMUNICATIONS:	QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987 AT&T (LOCATORS) (719) 635-3674

### EL PASO COUNTY STATEMENT

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.

#### APPROVED Engineering Department

05/16/2022 2:51:40 PM  
J.F. Morley

EPC Planning & Community  
Development Department

JENNIFER IRVINE, P.E.

DATE

COUNTY ENGINEER/ECM ADMINISTRATOR

### OWNER/DEVELOPER STATEMENT

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN.

JAMES F. MORLEY

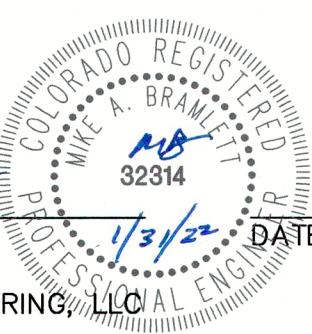
1/31/2022

SR LAND, LLC  
20 BOULDER CRESCENT, SUITE 201  
COLORADO SPRINGS, CO 80903

### ENGINEER'S STATEMENT

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 PLANS.

MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING, LLC



UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE ENGINEERING AGENCY, THEY ARE ONLY FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.

PREPARED FOR  
SR LAND, LLC  
20 BOULDER CRESCENT  
SUITE 201  
COLORADO SPRINGS, CO 80903  
JAMES F. MORLEY  
(719) 471-1742

J-R ENGINEERING  
A Western Company



Central 303-740-9883 • Colorado Springs 719-589-2683  
Fort Collins 970-491-9888 • www.jrengineering.com

BY DATE



SEE SHEET # 3

50' SITE VISIBILITY & PUBLIC IMPROVEMENT EASEMENT REC. NO. 218714151

PERMANENT EROSION CONTROL BLANKET V MAX SC250 OR EQUIVALENT

20' ELECTRIC EASEMENT REC. NO. 218054783

25' PUBLIC IMPROVEMENT EASEMENT REC. NO. 218054783 SR COMMERCIAL LLC

WHEATLAND DRIVE

BRIARGATE PARKWAY

WHEATLAND DR.

15'X30' RIPRAP PAD

PROPOSED SEDIMENT BASIN 1

6" PVC RISER PIPE W/ 1 1/2" HOLES SEE DETAIL SHEET #

SAND CREEK 100 YR FLOODPLAIN

SPILLWAY TYPE M RIPRAP C/L

TYPE M RIPRAP

PERMANENT EROSION CONTROL BLANKET V MAX SC250 OR EQUIVALENT

STERLING RANCH FILING NO. 1

TRACT A

TRACT B

TRACT C

RANCH FILING NO. 1 NO. 218714151

JOB NO. 25188.00

Centennial 303-740-9393 • Colorado Springs 719-593-2593  
Fort Collins 970-491-9888 • [www.jengineering.com](http://www.jengineering.com)





SEE SHEET # 2

**CONSTRUCTION NOTES:**

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

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

ALL TEMPORARY RIPRAP SHOWN ON THE PLANS SHALL BE TYPE 'M'. RIPRAP SHALL BE PLACED IN THE LOCATIONS INDICATED BY THE PLAN OR IN AREAS AS THE CONTRACTOR SEES FIT TO CONTROL EROSION. ALL RIPRAP SHALL BE PLACED AT A MINIMUM THICKNESS OF 1.5' DEEP.

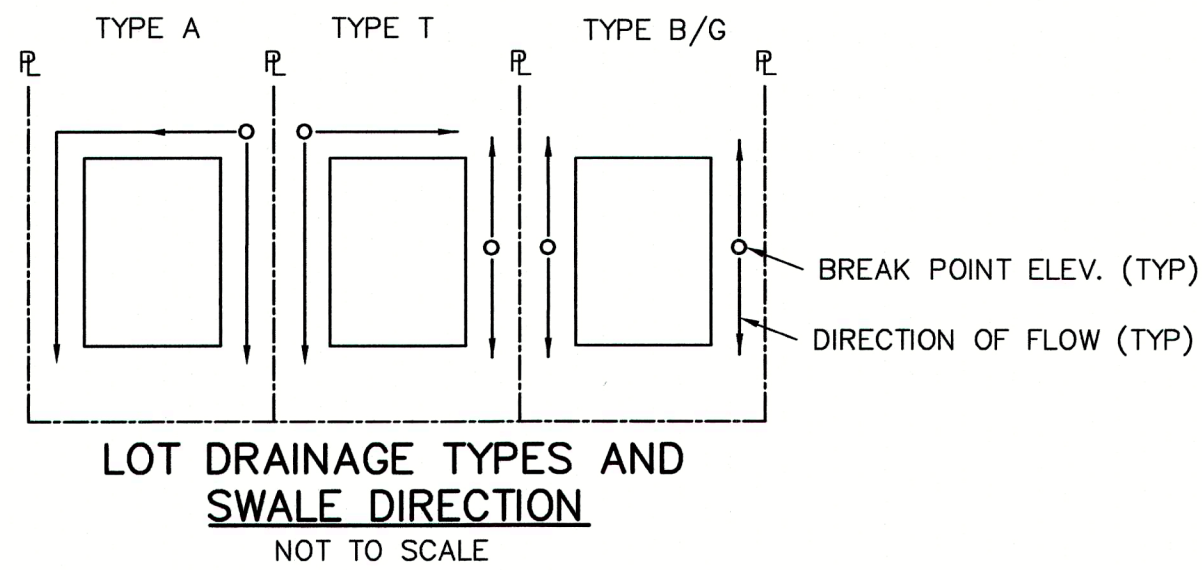
ALL TEMPORARY STORM SEWER SHOWN ON PLANS SHALL BE 24" DIA. HP POLYPROPYLENE BY ADS OR APPROVED EQUAL. ALL PIPE SHALL BE LAID TO ACHIEVE A MIN. SLOPE OF 0.5%.

**ADDITIONAL NOTES:**

EXISTING VEGETATION: AN AERIAL SURVEY WAS USED TO DETERMINE A 30% COVER OF NATIVE GRASSES.

STAGING AREA & STOCKPILE LOCATION TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.

THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.



**LEGEND**

EXISTING STORM SEWER

STORM SEWER PROPOSED

PROPOSED R.O.W.

PROPOSED PROPERTY LINE

PROPOSED SIDEWALK

EXISTING PROPERTY LINE

ROW EXISTING

FL EXISTING

SIDEWALK EXISTING

DRAINAGE ACCESS & MAINTENANCE EASEMENT

SILT FENCE

LIMITS OF CONSTRUCTION/ DISTURBANCE

EXISTING WETLAND BOUNDARY

EXISTING 100 YEAR FLOODPLAIN

CUT/ FILL

TEMPORARY DITCH

EXISTING

CHECK DAM

PROPOSED

(2.0)%

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

L.P./H.P.

(2.0)%

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

CUT/ FILL

TEMPORARY DITCH

EXISTING

CHECK DAM

INLET

LOW POINT/HIGH POINT

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

CUT/ FILL

TEMPORARY DITCH

EXISTING

CHECK DAM

ROCK SOCK

(2.0)%

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

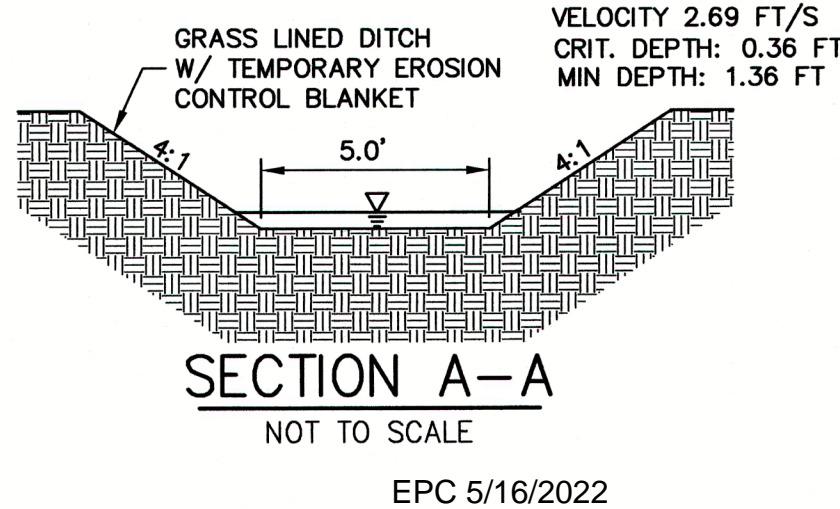
EROSION CONTROL BLANKET

CUT/ FILL

TEMPORARY DITCH

EXISTING

CHECK DAM



**SECTION A-A**

NOT TO SCALE

EPC 5/16/2022

**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

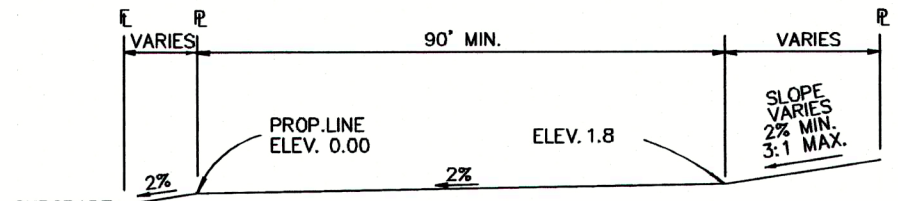
MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING

DATE 1/31/22



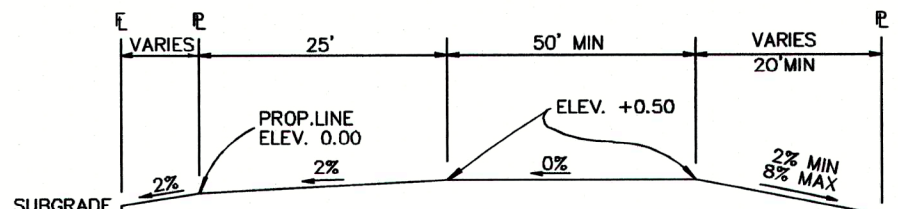
**KEY MAP**

SCALE: NTS



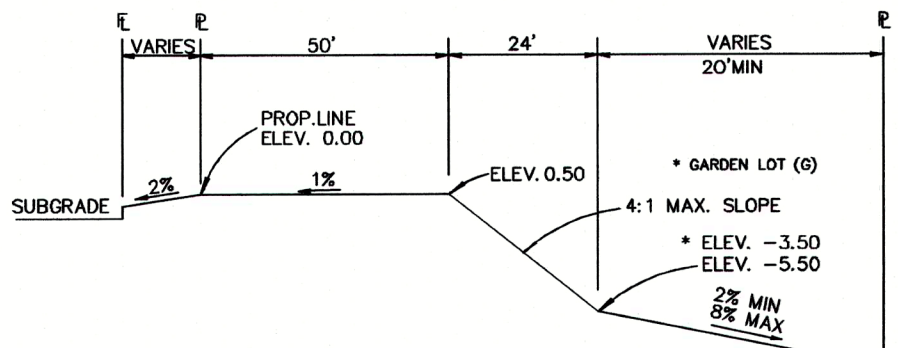
**TYPICAL A LOT**

NOT TO SCALE



**TYPICAL B LOT**

NOT TO SCALE



**TYPICAL WALKOUT LOT (W/O) OR GARDEN (G)**

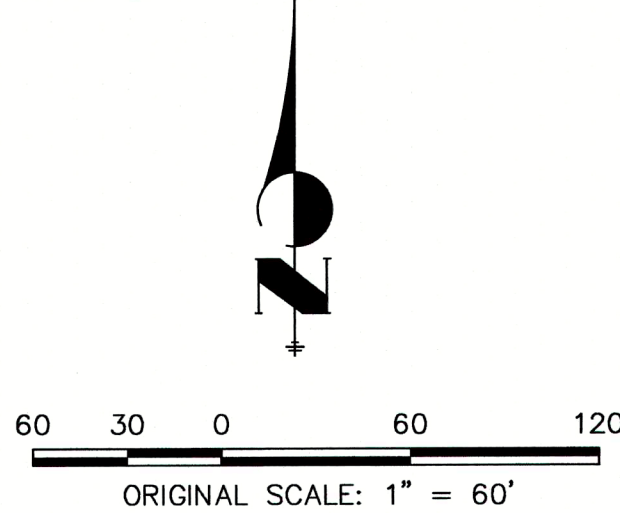
NOT TO SCALE

**NOTE:**

"T" LOTS OR "TRANSITION" LOTS OCCUR IN PLACES WHERE BOTH PROPERTY LINES CANNOT BE GRADED AS THE TYPICAL STANDARD LOT TEMPLATES SHOWN. THESE LOTS WILL STILL BE GRADED TO CREATE POSITIVE DRAINAGE FROM THE STRUCTURE.

**NOTE:**

SIDE LOT SWALES WILL BE PROVIDED WHEN APPROPRIATE.



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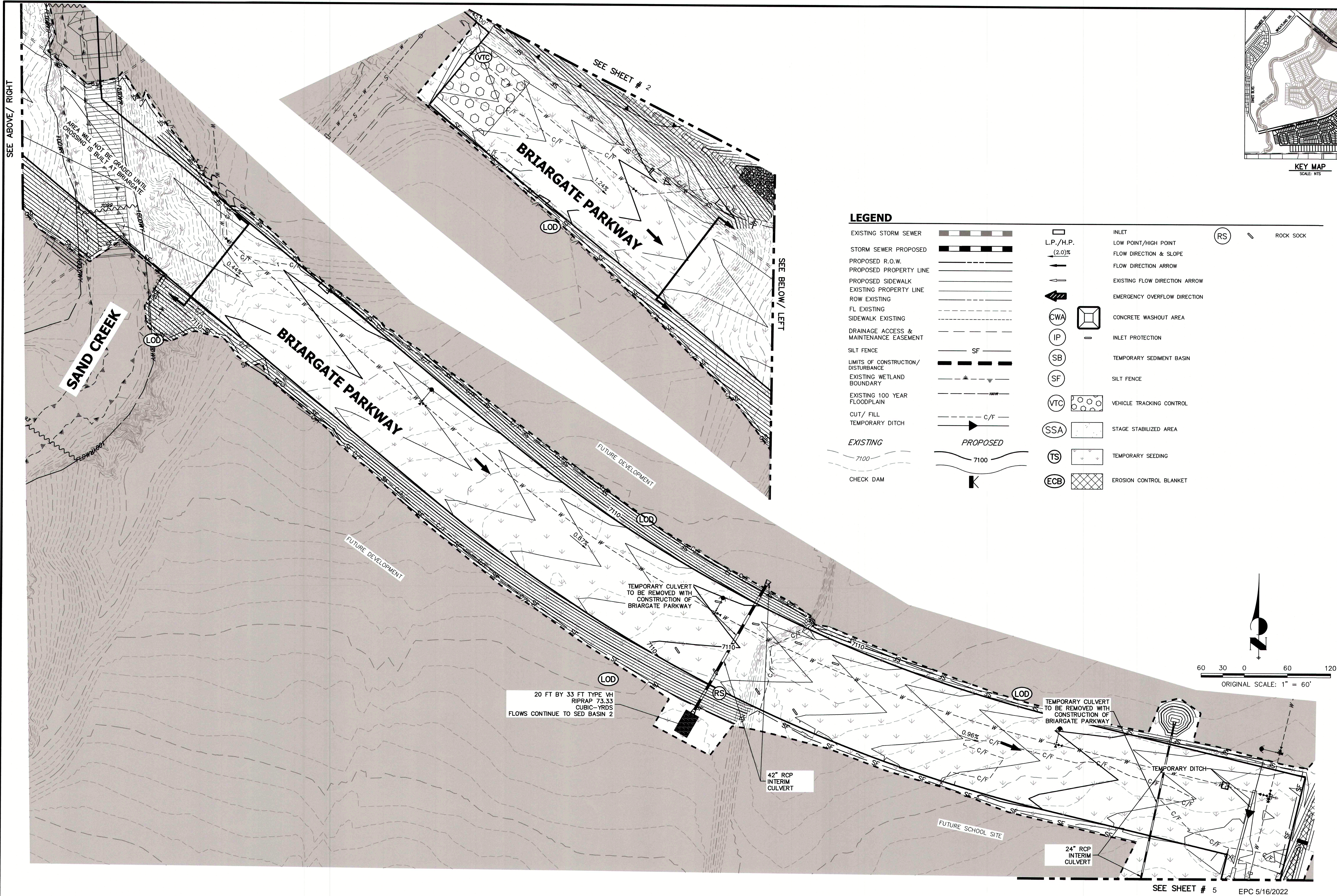
PREPARED FOR  
**SR LAND, LLC**  
20 BOULDER CRESCENT  
SUITE 201  
COLORADO SPRINGS, CO 80903  
JAMES F. MORLEY  
(719) 471-1742

**J.R. ENGINEERING**  
A Western Company  
Central 303-740-8888 • Colorado Springs 719-580-2580  
Fort Collins 970-491-9888 • www.jrengineering.com

11-SCALE	1 = 500'				
V-SCALE	N/A				
DATE	01/10/22				
DESIGNED BY	BAB				
DRAWN BY	ARJ				
CHECKED BY					

HOMESTEAD NORTH AT  
STERLING RANCH  
EARLY GRADING & EROSION  
CONTROL PLAN  
SHEET 3 OF 11  
JOB NO. 25188.00





LEGEND

- EXISTING STORM SEWER  
STORM SEWER PROPOSED  
PROPOSED R.O.W.  
PROPOSED PROPERTY LINE  
PROPOSED SIDEWALK  
EXISTING PROPERTY LINE  
ROW EXISTING  
FL EXISTING  
SIDEWALK EXISTING  
DRAINAGE ACCESS & MAINTENANCE EASEMENT  
SILT FENCE  
LIMITS OF CONSTRUCTION / DISTURBANCE  
EXISTING WETLAND BOUNDARY  
EXISTING 100 YEAR FLOODPLAIN  
CUT / FILL  
TEMPORARY DITCH
- EXISTING  
7100  
CHECK DAM
- PROPOSED  
7100  
K
- INLET  
LOW POINT/HIGH POINT  
FLOW DIRECTION & SLOPE  
FLOW DIRECTION ARROW  
EXISTING FLOW DIRECTION ARROW  
EMERGENCY OVERFLOW DIRECTION
- CWA  
IP  
SB  
SF  
VTC  
SSA  
TS  
ECB
- CONCRETE WASHOUT AREA  
INLET PROTECTION  
TEMPORARY SEDIMENT BASIN  
SILT FENCE  
VEHICLE TRACKING CONTROL  
STAGE STABILIZED AREA  
TEMPORARY SEEDING  
EROSION CONTROL BLANKET
- RS  
ROCK SOCK

CONSTRUCTION NOTES

NO WETLANDS ARE TO BE PERMANENTLY DISTURBED PER THIS GRADING PLAN.  
NO EARLY GRADING IS TO OCCUR WITHIN THE 100 YEAR FLOODPLAIN.

ADDITIONAL NOTES

STAGING AREA TO BE DETERMINED BY CONTRACTOR IN THE FIELD. THE LOCATIONS SHALL BE DELINEATED ON THIS PLAN BY THE CONTRACTOR.  
THE EROSION CONTROL DELINEATED ON THIS PLAN SHALL BE REGULARLY UPDATED BY THE CONTRACTOR.

EARTHWORK NOTES

VOLUME FILL: 149,891 yd<sup>3</sup>  
VOLUME CUT: 251,794 yd<sup>3</sup>

ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING  
Mike A. Bramlett, P.E.  
COLORADO P.E. 32314  
FOR AND ON BEHALF OF JR ENGINEERING, LLC

HOMESTEAD NORTH AT STERLING RANCH  
EARLY GRADING & EROSION CONTROL PLAN

SHEET 4 OF 11  
JOB NO. 25188.00

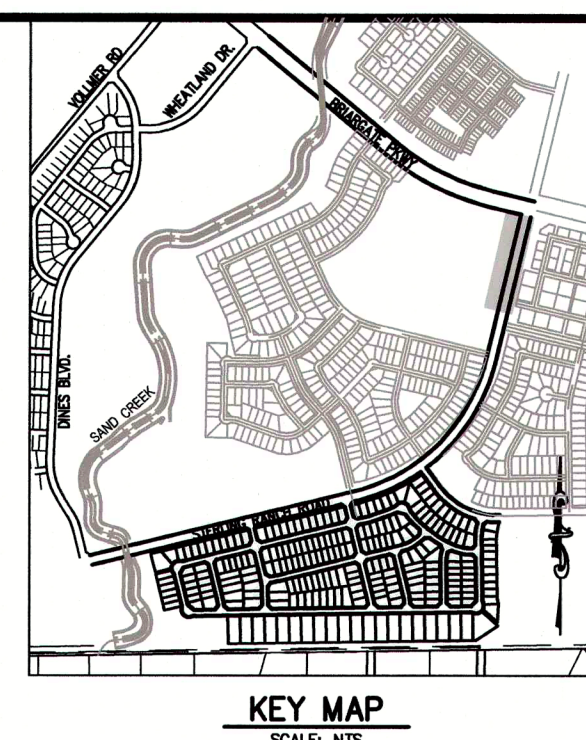
BY	DATE	REVISION	No.	1"=60'	H-SCALE	V-SCALE	DATE	DESIGNED BY	DRAWN BY	CHECKED BY
				N/A			01/10/22	RAB	CGV	

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Fort Collins 970-491-8888 • www.jrengineering.com

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V-SCALE	N/A				
DATE	01/10/22				
DESIGNED BY	RAB				
DRAWN BY	CGV				
CHECKED BY					

HOMESTEAD NORTH AT STERLING RANCH	
EARLY GRADING & EROSION CONTROL PLAN	
SHEET 5	OF 11
JOB NO.	25188.00

**ENGINEER'S STATEMENT**

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR  
ENGINEERING

*Mike Bramlett*

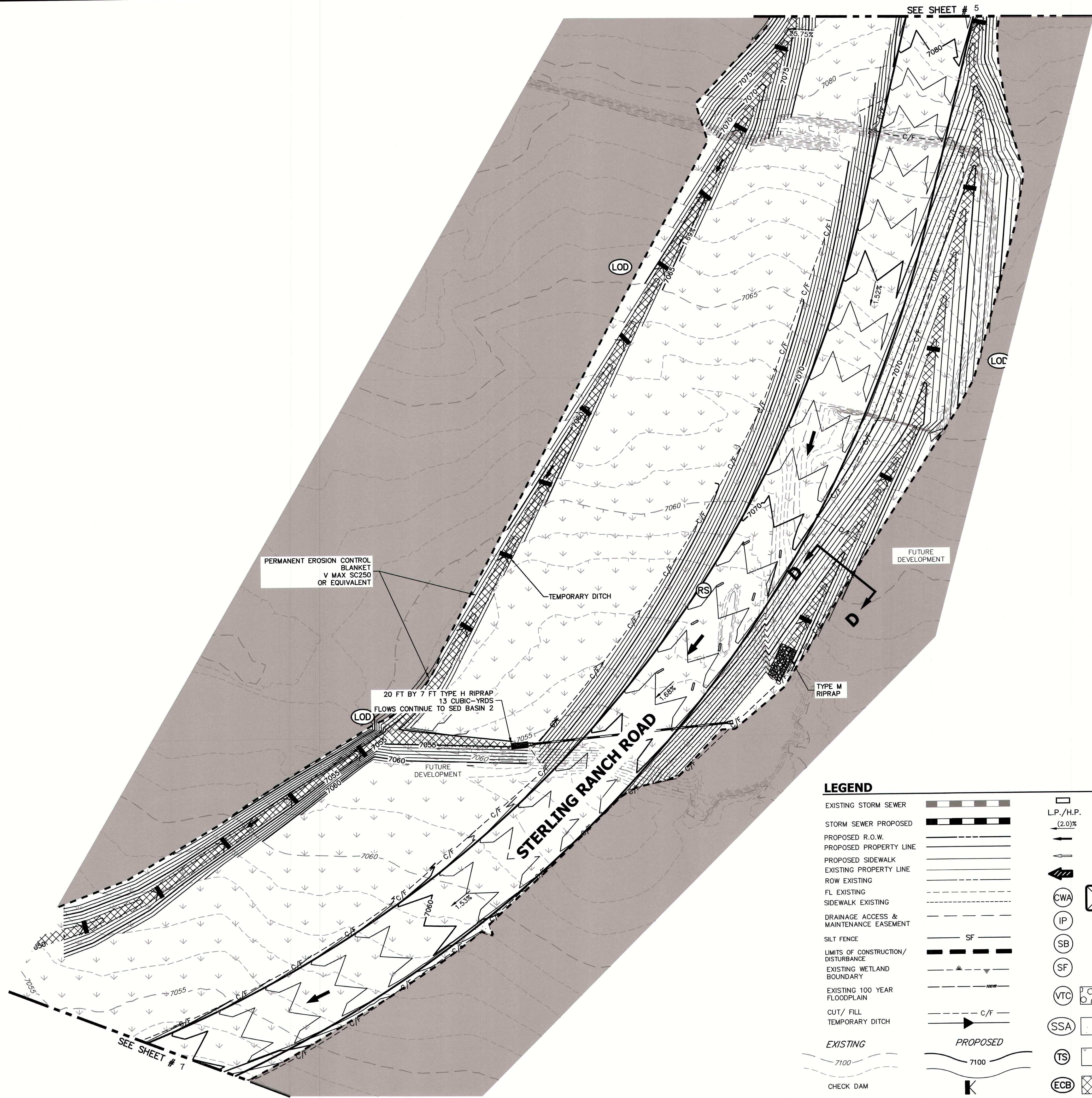
MIKE A. BRAMLETT, P.E.  
COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING, LLC

1/3/22

DATE 1/3/22





SEE SHEET # 5

SEE SHEET # 7

### LEGEND

EXISTING STORM SEWER

STORM SEWER PROPOSED

PROPOSED R.O.W.

PROPOSED PROPERTY LINE

PROPOSED SIDEWALK

EXISTING PROPERTY LINE

ROW EXISTING

FL EXISTING

SIDEWALK EXISTING

DRAINAGE ACCESS & MAINTENANCE EASEMENT

SILT FENCE

LIMITS OF CONSTRUCTION/DISTURBANCE

EXISTING WETLAND BOUNDARY

EXISTING 100 YEAR FLOODPLAIN

CUT / FILL

TEMPORARY DITCH

EXISTING

PROPOSED

CHECK DAM

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

7100

L.P./H.P.

(2.0%)

FLOW DIRECTION & SLOPE

FLOW DIRECTION ARROW

EXISTING FLOW DIRECTION ARROW

EMERGENCY OVERFLOW DIRECTION

CONCRETE WASHOUT AREA

INLET PROTECTION

TEMPORARY SEDIMENT BASIN

SILT FENCE

VEHICLE TRACKING CONTROL

STAGE STABILIZED AREA

TEMPORARY SEEDING

EROSION CONTROL BLANKET

GRASS LINED DITCH  
W/ PERMANENT  
V MAX SC250 EROSION  
CONTROL BLANKET OR  
EQUIVALENT

VELOCITY 5.26 FT/S  
CRIT. DEPTH: 1.55 FT  
MIN DEPTH: 2.55 FT

SECTION D-D

NOT TO SCALE

NOTE: ADD  
PERMANENT EROSION  
CONTROL BLANKET  
TO CHANNEL UP TO  
MIN DEPTH

KEY MAP

SCALE: NTS

50 25 0 50 100  
ORIGINAL SCALE: 1" = 50'  
EPC 5/16/2022

### ENGINEER'S STATEMENT

PREPARED UNDER MY DIRECT SUPERVISION AND ON BEHALF OF JR ENGINEERING

MIKE A. BRAMLETT, P.E.

COLORADO P.E. 32314

FOR AND ON BEHALF OF JR ENGINEERING, LLC

DATE 1/31/22

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NO.	REVISION	BY	DATE
1			
2			
3			
4			
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H-SCALE	1"=60'	DESIGNED BY	RAB	CHECKED BY	
V-SCALE	N/A	DRAWN BY	CCV		
DATE	01/10/22				

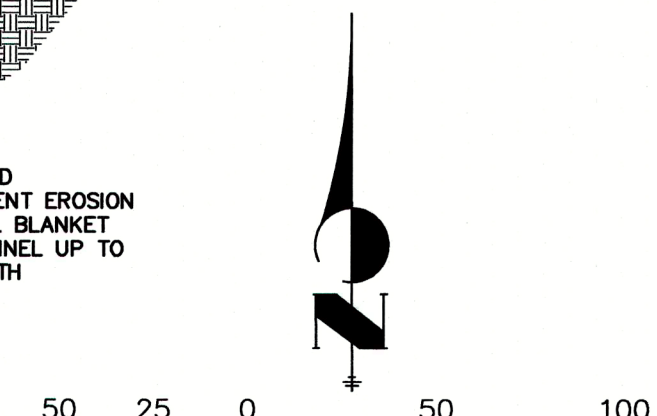
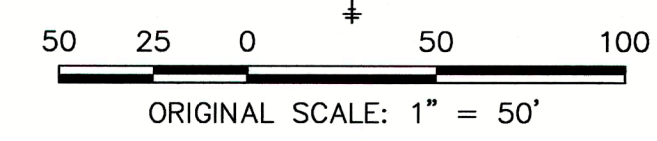
HOMESTEAD NORTH AT  
STERLING RANCH


EARLY GRADING & EROSION  
CONTROL PLAN

SHEET # OF 11

JOB NO. 25188.00





SHEET 7 OF 11		HOMESTEAD NORTH AT STERLING RANCH		H-SCALE V-SCALE DATE DESIGNED BY DRAWN BY CHECKED BY	1"=60' N/A 3/25/22 RAB CGV	No. REVISION	BY DATE	 <b>J-R ENGINEERING</b> A Western Company Centennial 303-740-5938 • Colorado Springs 719-552-2593 Fort Collins 970-491-9888 • <a href="http://www.jrengineering.com">www.jrengineering.com</a>		PREPARED FOR <b>SR LAND, LLC</b> 20 BOULDER CRESCENT SUITE 201 COLORADO SPRINGS, CO 80903 JAMES F. MORLEY (719) 471-1742	UNTIL SUCH TIME AS THESE DRAWINGS ARE APPROVED BY THE APPROPRIATE REVIEWING AGENCIES, JR ENGINEERING APPROVES THEIR USE FOR THE PURPOSES DESIGNATED BY WRITTEN AUTHORIZATION.
JOB NO. 25188.00											







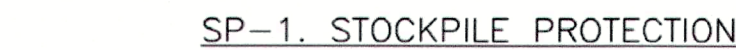
## SC-1

**SM-4 Vehicle Tracking Control (VTC)**

VTC-6	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2010
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### Silt Fence (SF)

## Stockpile Management (SP) MM-2



November 2010	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	SP-3
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### Stockpile Management (SM)

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SP-4	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2010
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## SM-6



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

SA-4	Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3	November 2010
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The diagram consists of several technical drawings and text blocks:

- Top Left:** A small square detail showing a cross-hatched pattern labeled "UNDISTURBED SOIL".
- Top Right:** A circular logo with the text "ECB" inside.
- Center:** A large plan view of a drainage channel. It shows a central channel with a "PERIMETER ANCHOR TRENCH, TYP." on either side. A "JOINT ANCHOR TRENCH, TYP." is shown at the end of the channel. The channel is filled with a cross-hatched pattern. Labels include "TOP OF CHANNEL BANK" and "ANCHOR DETAILS".
- Right Side (Anchor Details):** A detailed view of the anchor trench. It shows a "GEOTEXTILE FABRIC OR MAT, TYP." with a "3' MIN. TYP." width. A "18" MIN. TYP." single edge stake is shown. The trench is filled with "COMPACTED BACKFILL, TYP." and labeled "PERIMETER ANCHOR TRENCH".
- Bottom Left:** A side view of a pipe outlet. It shows a "6" TOPSOIL" layer. A "JOINT ANCHOR TRENCH, TYP." is shown. The pipe is labeled "TYPE OF ECB, INDICATED IN PLAN VIEW". The ECB is shown extending to the top of the channel. Labels include "M", "D", "PERIMETER ANCHOR TRENCH, TYP.", and "COMPACTED SUBGRADE".
- Bottom Right:** A side view of a ditch. It shows a "6" TOPSOIL" layer. A "JOINT ANCHOR TRENCH, TYP." is shown. The ditch is labeled "TYPE OF ECB, INDICATED IN PLAN VIEW". The ECB is shown extending to the top of the channel. Labels include "M", "D", "PERIMETER ANCHOR TRENCH, TYP.", and "COMPACTED SUBGRADE".
- Bottom Center:** A side view of a ditch. It shows a "6" TOPSOIL" layer. A "JOINT ANCHOR TRENCH, TYP." is shown. The ditch is labeled "TYPE OF ECB, INDICATED IN PLAN VIEW". The ECB is shown extending to the top of the channel. Labels include "M", "D", "PERIMETER ANCHOR TRENCH, TYP.", and "COMPACTED SUBGRADE".
- Bottom Right:** A side view of a ditch. It shows a "6" TOPSOIL" layer. A "JOINT ANCHOR TRENCH, TYP." is shown. The ditch is labeled "TYPE OF ECB, INDICATED IN PLAN VIEW". The ECB is shown extending to the top of the channel. Labels include "M", "D", "PERIMETER ANCHOR TRENCH, TYP.", and "COMPACTED SUBGRADE".

**ECB-1. PIPE OUTLET TO DRAINAGEWAY**

**ECB-2. SMALL DITCH OR DRAINAGEWAY**

**ANCHOR DETAILS**

GEOTEXTILE FABRIC OR MAT, TYP.  
3' MIN. TYP.  
18" MIN. TYP.  
SINGLE EDGE STAKE, TYP.  
COMPACTED BACKFILL, TYP.  
PERIMETER ANCHOR TRENCH

**JOINT ANCHOR TRENCH**

TWO EDGES OF TWO ADJACENT ROLLS

**INTERMEDIATE ANCHOR TRENCH**

LOOP FROM MIDDLE OF ROLL

**OVERLAPPING JOINT**

3' MIN.

12" MIN.

**WOOD STAKE DETAIL**

6" TOPSOIL

JOINT ANCHOR TRENCH, TYP.

TYPE OF ECB, INDICATED IN PLAN VIEW

ECB SHALL EXTEND TO THE TOP OF THE CHANNEL

PERIMETER ANCHOR TRENCH, TYP.

COMPACTED SUBGRADE

STAKING PATTERN PER MANUFACTURER SPEC. OR PATTERN BASED ON ECB AND/OR CHANNEL TYPE (SEE STAKING PATTERN DETAIL)

Rock Sock (RS) SC-5

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

RS-3

DIVERSION DITCH TYPICALLY AT TOP OF SLOPE

STAGGER OVERLAPS

OVERLAPPING JOINT

PERIMETER ANCHOR TRENCH

STAKING PATTERN PER MANUFACTURER SPEC. OR PATTERN BASED ON ECB AND/OR SLOPE TYPE (SEE STAKING PATTERN DETAIL)

**ECB-3. OUTSIDE OF DRAINAGEWAY**

PERIMETER ANCHOR TRENCH OR JOINT, TYP.

ROLL WIDTH W, TYP.

6' 3' 1/2 W

STRAW

6' 3' 1/2 W

STRAW-COCONUT

4' 1/2 W 1/2 W 3' 1/2 W

COCONUT OR EXCelsior

**STAKING PATTERNS BY ECB TYPE**

6' 3' 1/2 W

4:1-3:1 SLOPES

2' 1/2 W

3:1-2:1 SLOPES

2' 1/2 W

2:1 AND STEEPER SLOPES

4' 1/2 W 1/2 W 2' 1/2 W

20' 10' 2'

LOW FLOW CHANNEL

HIGH FLOW CHANNEL

**STAKING PATTERNS BY SLOPE OR CHANNEL TYPE**

## EC-9 Rough Cut Street Control (RCS)

RCS

**ROUGH CUT STREET CONTROL PLAN**

**SECTION A**

12" to 18"

12" to 18"

**SECTION B**

W (FT)	X (FT)
20-30	5
31-40	7
41-50	9
51-60	10.5
61-70	12

LONGITUDINAL STREET SLOPE (%)	SPACING (FT)
<2	NOT TYPICALLY NEEDED
2	200
3	200
4	150
5	100
6	50
7	25
8	25

November 2010

## Rough Cut Street Control (RCS) EC-9

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.

RCS-3

RS

**ROCK SOCK SECTION**

**ROCK SOCK PLAN**

ANY GAP AT JOINT SHALL BE FILLED WITH AN ADEQUATE AMOUNT OF 1 1/2" (MINUS) CRUSHED ROCK AND WRAPPED WITH ADDITIONAL WIRE MESH SECURED TO ENDS OF ROCK REINFORCED SOCK, AS AN ALTERNATIVE TO FILLING JOINTS BETWEEN ADJOINING ROCK SOCKS WITH CRUSHED ROCK AND ADDITIONAL WIRE WRAPPING. ROCK SOCKS SHALL BE OVERLAPPED (TYPICALLY 12-INCH OVERLAP) TO AVOID GAPS.

**ROCK SOCK JOINTING**

GRADATION TABLE	
SIEVE SIZE	MASS PERCENT PASSING SQUARE MESH SIEVES
NO. 4	
2"	100
1 1/2"	80 - 100
3/4"	20 - 55
3/8"	0 - 15
3/16"	0 - 5

**ROCK SOCK INSTALLATION NOTES**

1. SEE PLAN VIEW FOR:
  - LOCATION(S) OF ROCK SOCKS.
2. CRUSHED ROCK SHALL BE 1 1/2" (MINUS) IN SIZE WITH A FRACTURED FACE (ALL SIDES) AND SHALL COMPLY WITH GRADATION SHOWN ON THIS SHEET (1 1/2" MINUS).
3. WIRE MESH SHALL BE FABRICATED OF 1 GAGE POULTRY MESH, OR EQUIVALENT, WITH A MAXIMUM OPENING OF 3/8". RECOMMENDED MINIMUM ROLL WIDTH OF 48"
4. WIRE MESH SHALL BE SECURED USING "MO RINGS" OR WIRE TIES AT 6" CENTERS ALONG ALL JOINTS AND AT 2" CENTERS ON ENDS OF SOCKS.

SOME MUNICIPALITIES MAY ALLOW THE USE OF FILTER FABRIC AS AN ALTERNATIVE TO WIRE MESH FOR THE ROCK ENCLASURE.

**RS-1. ROCK SOCK PERIMETER CONTROL**

0

JOB NO. 25188.00

EPC 5/16/2022





Specification Sheet  
VMax® SC250® Turf Reinforcement Mat

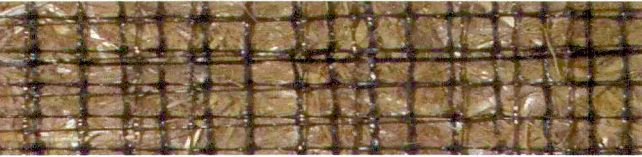
DESCRIPTION

The composite turf reinforcement mat (CTRM) shall be a machine-produced mat of 70% straw and 30% coconut fiber matrix incorporated into permanent three-dimensional turf reinforcement matting. The matrix shall be evenly distributed across the entire width of the matting and stitch bonded between a heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings, an ultra heavy UV stabilized, dramatically corrugated (crimped) intermediate netting with 0.5 x 0.5 inch (1.27 x 1.27 cm) openings, and covered by an heavy duty UV stabilized nettings with 0.50 x 0.50 inch (1.27 x 1.27 cm) openings. The middle corrugated netting shall form prominent closely spaced ridges across the entire width of the mat. The three nettings shall be stitched together on 1.50 inch (3.81cm) centers with UV stabilized polypropylene thread to form permanent three-dimensional turf reinforcement matting. All mats shall be manufactured with a colored thread stitched along both outer edges as an overlap guide for adjacent mats.

The SC250 shall meet Type 5A, 5B, and 5C specification requirements established by the Erosion Control Technology Council (ECTC) and Federal Highway Administration's (FHWA) FP-03 Section 713.18

Material Content		
Matrix	70% Straw Fiber	0.35 lb/sq yd (0.19 kg/sm)
	30% Coconut Fiber	0.15 lb/sq yd (0.08 kg/sm)
Netting	Top and Bottom, UV-Stabilized Polypropylene	5 lb/1000 sq ft (2.44 kg/100 sm)
	Middle, Corrugated UV-Stabilized Polypropylene	24 lb/1000 sf (11.7 kg/100 sm)
	Thread	Polypropylene, UV Stable

Standard Roll Sizes		
Width	6.5 ft (2.0 m)	8 ft (2.44m)
Length	55.5 ft (16.9 m)	90 ft (27.4 m)
Weight ± 10%	34 lbs (15.42 kg)	70 lbs (31.8 kg)
Area	40 sq yd (33.4 sm)	80 sq yd (66.8 sm)



Index Property	Test Method	Typical
Thickness	ASTM D6525	0.62 in. (15.75 mm)
Resiliency	ASTM 6524	95.2%
Density	ASTM D792	0.891 g/cm³
Mass/Unit Area	ASTM 6566	16.13 oz/sy (548 g/sm)
UV Stability	ASTM D4355/ 1000 HR	80%
Porosity	ECTC Guidelines	99%
Stiffness	ASTM D1388	222.65 oz-in.
Light Penetration	ASTM D6567	4.1%
Tensile Strength - MD	ASTM D6818	709 lbs/ft (10.51 kN/m)
Elongation - MD	ASTM D6818	23.9%
Tensile Strength - TD	ASTM D6818	712 lbs/ft (10.56 kN/m)
Elongation - TD	ASTM D6818	36.9%
Biomass Improvement	ASTM D7322	441%

Design Permissible Shear Stress		
	Short Duration	Long Duration
Phase 1: Unvegetated	3.0 psf (144 Pa)	2.5 psf (120 Pa)
Phase 2: Partially Veg.	8.0 psf (383 Pa)	8.0 psf (383 Pa)
Phase 3: Fully Veg.	10.0 psf (480 Pa)	8.0 psf (383 Pa)
Unvegetated Velocity	9.5 fps (2.9 m/s)	
Vegetated Velocity	15 fps (4.6 m/s)	



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EC\_RMx\_MPOS\_VMSC250\_1.19



HOMESTEAD NORTH AT  
STERLING RANCH

DETAIL

SHEET 11 OF 11

JOB NO. 25188.00

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