

EPC STORMWATER REVIEW COMMENTS  
IN ORANGE BOXES WITH BLACK TEXT

# GRADING AND EROSION CONTROL PLANS

## for NABULSI-ABUSHABAN SUBDIVISION FILING NO. 1 SE ONE-QUARTER OF THE SE ONE-QUARTER OF SECTION 19, TOWNSHIP 12 SOUTH, RANGE 65 WEST OF THE 6TH P.M., EL PASO COUNTY, COLORADO

### STANDARD EL PASO COUNTY GRADING & EROSION CONTROL PLAN NOTES

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SWMP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRE-CONSTRUCTION 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 OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL. IN ACCORDANCE WITH LOCAL AND STATE 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 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 6, C.R.S.), AND THE "CLEAN WATER ACT" (33 USC 1344), IN ADDITION TO THE REQUIREMENTS OF THE LAND DEVELOPMENT CODE, DCM VOLUME II AND THE ECM APPENDIX I. ALL APPROPRIATE PERMITS MUST BE OBTAINED BY THE CONTRACTOR PRIOR TO CONSTRUCTION (1041, NPDES, FLOODPLAIN, 404, FUGITIVE DUST, ETC.). IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND OTHER LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL, STATE, LOCAL, OR COUNTY AGENCIES, THE MOST RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
- PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
- A WATER SOURCE SHALL BE AVAILABLE ON SITE DURING EARTHWORK OPERATIONS AND SHALL BE UTILIZED AS REQUIRED TO MINIMIZE DUST FROM EARTHWORK EQUIPMENT AND WIND.
- THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC., ON SEPTEMBER 9, 2022 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
- AT LEAST TEN (10) DAYS PRIOR TO THE ANTICIPATED START OF CONSTRUCTION, FOR PROJECTS THAT WILL DISTURB ONE (1) ACRE OR MORE, THE OWNER OR OPERATOR OF CONSTRUCTION ACTIVITY SHALL SUBMIT A PERMIT APPLICATION FOR STORMWATER DISCHARGE TO THE COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT, WATER QUALITY DIVISION. THE APPLICATION CONTACT 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 80246-1630  
ATTN: PERMITS UNIT

### ABBREVIATIONS

EL	ELEVATION	ROW	RIGHT-OF-WAY
PC	POINT OF CURVATURE	R	RADIUS
PI	POINT OF INTERSECTION	T	TANGENT
PT	POINT OF TANGENCY	L	LENGTH
PCR	POINT OF CURVE RETURN	LF	LINEAR FEET
PRC	POINT OF REVERSE CURVATURE	CL	CENTERLINE
PVC	POINT OF VERTICAL CURVATURE	X, XX'	DIMENSION RIGHT OF CL
PVI	POINT OF VERTICAL INTERSECTION	X, XX' L	DIMENSION LEFT OF CL
PVT	POINT OF VERTICAL TANGENCY	PL	PROPERTY LINE
GB	GRADE BREAK	PVRC	POINT OF VERT REVERSE CURVATURE
CSP	CORRUGATED STEEL PIPE	VC	VERTICAL CURVE
RCP	REINFORCED CONCRETE PIPE	AP	ANGLE POINT
CBC	CONCRETE BOX CULVERT	STA	STATION
TBC	TOP BACK CURB	INV	INVERT
TC	TOP OF CURB	RG	RAIN GARDEN
BT	BEGIN TAPER	EN	END TAPER
ET	END TAPER	SFB	SAND FILTER BASIN
EC	EDGE OF CONCRETE		

### LEGEND

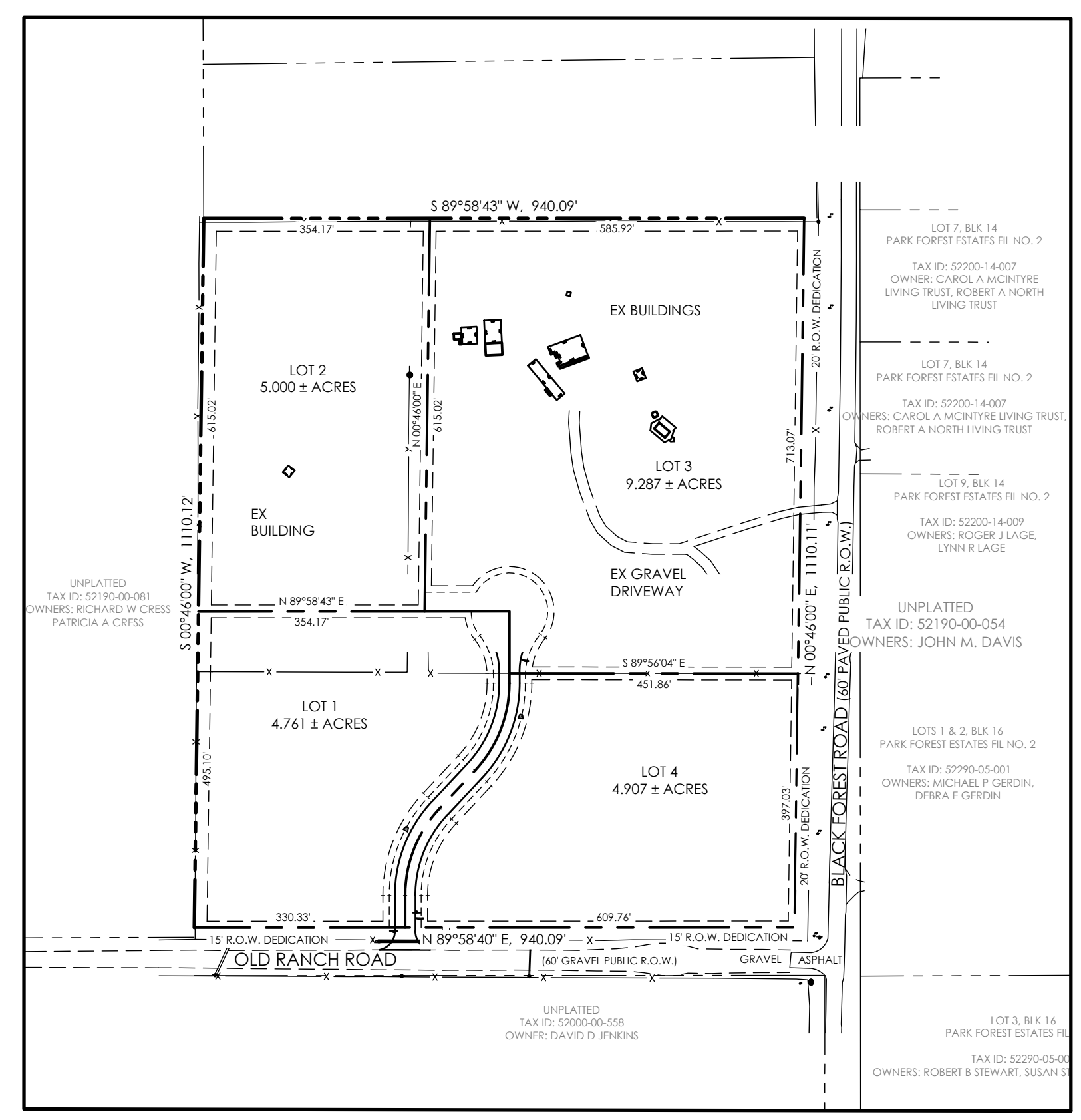
EXISTING	PROPOSED
BOUNDARY LINE	BOUNDARY LINE
ADJACENT BOUNDARY LINE	ADJACENT BOUNDARY LINE
ADJACENT LOT LINE	ADJACENT LOT LINE
EASEMENT LINE	EASEMENT LINE
INDEX CONTOUR	INDEX CONTOUR
INTERMEDIATE CONTOUR	INTERMEDIATE CONTOUR
TEST HOLE LOCATION	SLOPE / GRADE
CURB AND GUTTER	SPOT ELEVATION
SIGN	CONSTRUCTION BOUNDARY/LIMITS OF DISTURBANCE
FENCE	
LIGHT POLE	
MANHOLE	
UTILITY POLE	
MISC OBJECT	
PILE	
CULVERT	
ROCK	
MAILBOX	
TREE	
RIPRAP	
POLE-ANCHOR	

### GENERAL NOTES

- ALL NEW CONSTRUCTION IS TO CONFORM TO THE SPECIFICATIONS OF EL PASO COUNTY.
- UNDERGROUND FACILITIES, STRUCTURES AND UTILITIES HAVE BEEN DRAWN FROM AVAILABLE RECORDS AND/OR SURFACE EVIDENCE. THE LOCATION OF ALL UTILITIES MAY NOT BE SHOWN OR MAY NOT HAVE BEEN LOCATED. BELOW GROUND LOCATIONS HAVE NOT BEEN PERFORMED. THEREFORE, THE RELATIONSHIP BETWEEN PROPOSED WORK AND EXISTING FACILITIES, STRUCTURES AND UTILITIES MUST BE CONSIDERED APPROXIMATE. CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL SUBSURFACE UTILITY OWNERS PRIOR TO BEGINNING WORK TO DETERMINE LOCATION OF UTILITY FACILITIES. ALL UTILITIES SHALL BE LOCATED PRIOR TO ANY EARTH WORK OR DIGGING (1-800-922-1987). THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MAY BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UTILITIES.
- EXISTING CONDITIONS SHALL BE VERIFIED BY THE GENERAL CONTRACTOR. DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.
- SOIL PREPARATION, SEEDING, AND MULCHING FOR AN ESTIMATED 3.3 ACRES WILL BE REQUIRED ON ALL DISTURBED AREAS NOT SURFACED. THE FOLLOWING TYPES AND RATES SHALL BE USED:

GRASS	VARIETY	AMOUNT IN PLS LB. PER ACRE
WESTERN GRAMA	EL RENO	3.0 lbs.
SIDEHILL WHEATGRASS	BARTON	2.5 lbs.
SLENDER WHEATGRASS	NATIVE	2.0 lbs.
LITTLE BLUESTEM	PASTURA	2.0 lbs.
SAND DROPSIED	NATIVE	0.5 lbs.
SWITCH GRASS	NEBRASKA 28	3.0 lbs.
WEEDING LOVE GRASS	MORPHIA	1.0 lbs.
	TOTAL	14.0 lbs.

- SEEDING APPLICATION: DRILLED TO A DEPTH OF .25" TO .50" INTO SOIL WHERE POSSIBLE. BROADCAST AND RAKED TO COVER ON STEEPER THAN 3:1 SLOPES WHERE ACCESS IS LIMITED OR UNSAFE FOR EQUIPMENT.
- MULCHING REQUIREMENT AND APPLICATION: 2.0 TONS PER ACRE NATIVE MAY MECHANICALLY CRIMPED INTO SOIL.
- ALL STORM DRAIN SHALL BE REINFORCED CONCRETE PIPE. ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ALL STORM DRAIN FITTINGS AND BENDS SHALL BE PRE-CAST. STORM DRAIN PIPE MAY ALSO BE CORRUGATED METAL OR HDPE, PLACED IN ACCORDANCE WITH EL PASO COUNTY SPECIFICATIONS.
- CONTRACTOR WILL BE RESPONSIBLE FOR SCHEDULING A PRE-CONSTRUCTION MEETING HELD PRIOR TO CONSTRUCTION WITH EPC-PCD, ENGINEER, AND CONTRACTOR IN ATTENDANCE.
- CONTRACTOR IS RESPONSIBLE FOR ALL OF HIS OPERATIONS ON THE SITE. CONTRACTOR SHALL OBSERVE ALL SAFETY AND OSHA REGULATIONS DURING CONSTRUCTION OPERATIONS. TRENCH WIDTHS AND SLOPE ANGLES SHALL BE DETERMINED BY THE CONTRACTOR IN THE FIELD AND ACCORDING TO SAFETY AND OSHA REGULATIONS.
- ALL NECESSARY PERMITS, SUCH AS SWMP, FUGITIVE DUST, ACCESS, C.O.E. 404, ESQCP, ETC. SHALL BE OBTAINED PRIOR TO CONSTRUCTION.



SITE MAP  
SCALE 1"=200'

### SHEET INDEX

PLAN SET SHEET NO.	SHEET INDEX	M.V.E. DRAWING NO.
C2.1 (1 OF 4)	COVER SHEET	61201-GEC-CS
C2.2 (2 OF 4)	GRADING & EROSION CONTROL PLAN	61201-GEC-EC
C2.3 (3 OF 4)	EROSION CONTROL DETAILS	61201-GEC-EC2
C2.4 (4 OF 4)	EROSION CONTROL DETAILS	61201-GEC-EC3

### COMPANIES AND AGENCIES

#### OWNER/DEVELOPER

MYPAD, INC.  
CASAS LIMITED PARTNERSHIP #4  
5390 N ACADEMY BLVD #300  
COLORADO SPRINGS, CO 80918  
(719) 359-1471

#### ENGINEER

M.V.E., INC.  
1903 LELARAY STREET, STE 200  
COLORADO SPRINGS, CO 80909  
(719) 635-5736

#### EL PASO COUNTY PLANNING

EPC PLANNING AND COMMUNITY DEVELOPMENT  
2880 INTERNATIONAL CIRCUIT, SUITE 110  
COLORADO SPRINGS, CO 80910  
(719) 520-6300

#### STREETS AND RIGHTS-OF-WAY

EL PASO COUNTY  
3275 AKERS DRIVE  
COLORADO SPRINGS, CO 80922  
(719) 520-6460

#### ELECTRIC

MOUNTAIN VIEW ELECTRIC ASSOCIATION  
11140 EAST WOODMEAD ROAD  
FALCON, CO 80831  
(719) 495-2283

#### TELEPHONE

CENTURYLINK  
555 TECH CENTER DRIVE SUITE 110  
COLORADO SPRINGS, CO 80919  
(866)-301-9889

#### NATURAL GAS

BLACK HILLS ENERGY  
18965 BASE CAMP RD, A-7  
MONUMENT, CO 80132  
(719)-488-0739

CALL BEFORE YOU DIG...  
48 HOURS BEFORE YOU DIG, CALL US FOR LOCATING AND MARKING GAS, ELECTRIC, WATER AND SEWER WATER.  
1-800-922-1987

### STANDARD EL PASO COUNTY CONSTRUCTION PLAN NOTES

- 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:  
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
- 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 DEPARTMENT (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 DSD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURBS 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.

### OWNERS STATEMENT

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

TAHER NABULSI  
CO-TRUSTEE, NABULSI ABUSHABAN FAMILY TRUST

*Taher Nabulsi*  
DATE: 8/23/2024

### DESIGN 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 PLAN.

DAVID R. GORMAN, P.E.  
COLORADO NO. 31672  
FOR AND ON BEHALF OF M.V.E., INC.



### EL PASO COUNTY

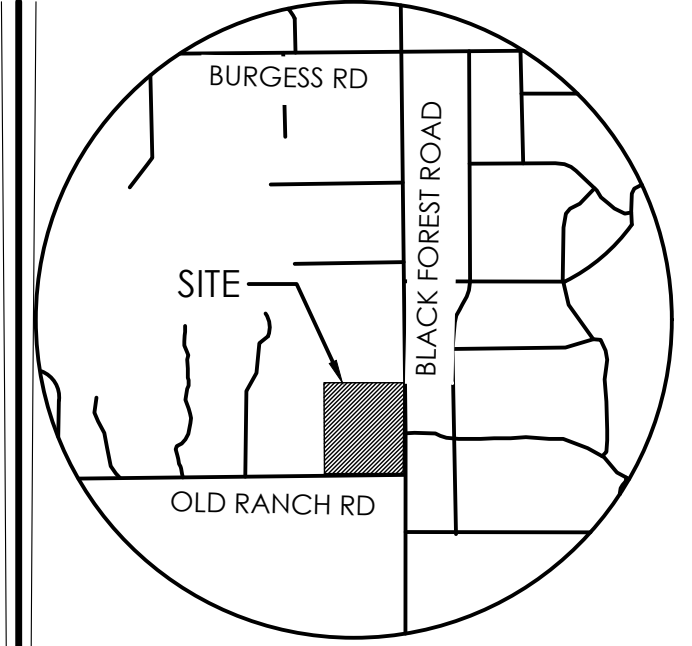
COUNTY PLAN REVIEW IS PROVIDED ONLY FOR GENERAL CONFORMANCE WITH COUNTY DESIGN CRITERIA. THE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY AND ADEQUACY OF THE DESIGN, DIMENSIONS, AND/OR ELEVATIONS WHICH SHALL BE CONFIRMED AT THE JOB SITE. THE COUNTY THROUGH THE APPROVAL OF THIS DOCUMENT ASSUMES NO RESPONSIBILITY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

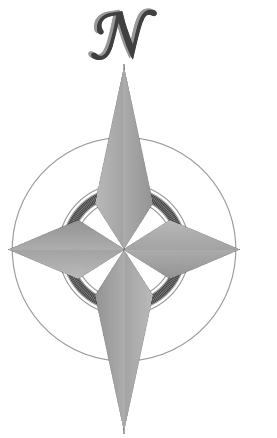
JOSHUA PALMER, P.E.  
INTERIM COUNTY ENGINEER / ECM ADMINISTRATOR

PCD FILE NO. : MS22-011



VICINITY MAP  
NOT TO SCALE

BENCHMARK THE BENCHMARK FOR THESE PLANS IS THE NO. 4 REBAR, LOCATED APPROX. 40' EAST OF THE PROPOSED ROADWAY & 10' NORTH OF EXISTING OLD RANCH ROAD EDGE OF GRAVEL. ELEVATION = 7273.40' (NAVD89).



50 0 100 200 400  
1" = 200' 1:2,400

MVE, INC.  
ENGINEERS & SURVEYORS

1903 Lelaray Street, Suite 200 Colorado Springs, CO 80909 719.635.5736

### REVISIONS

NO.	DESCRIPTION	DATE

## ASHUBAN-NABULSI SUBDIVISION

### GRADING & EROSION CONTROL PLAN COVER SHEET

C2.1 MVE PROJECT 61201  
MVE DRAWING GEC-CS

AUGUST 27, 2024  
SHEET 1 OF 4

HYDROLOGIC SOIL GROUP	
MAP UNIT NUMBER	DESCRIPTION
40	KETTLE GRAVELLY LOAMY SAND, HYDROLOGIC SOIL GROUP B, SLIGHT TO MODERATE HAZARD OF EROSION
41	KETTLE GRAVELLY LOAMY SAND, HYDROLOGIC SOIL GROUP B, SLIGHT TO MODERATE HAZARD OF EROSION
71	PRING COARSE SANDY LOAM, HYDROLOGIC SOIL GROUP B, MODERATE HAZARD OF EROSION

EROSION CONTROL DATA	
<b>TIMING</b>	
ANTICIPATED START & COMPLETION TIME PERIOD OF SITE GRADING	FALL 2023 TO FALL 2023
EXPECTED DATE ON WHICH FINAL STABILIZATION WILL BE COMPLETED	SPRING 2024
<b>AREAS</b>	
TOTAL AREA OF SITE	39.09 ACRES
AREA OF THE SITE TO BE CLEARED, EXCAVATED OR GRADED	1.44 ACRES
<b>RECEIVING WATERS</b>	
NAME OF RECEIVING WATERS	COTTONWOOD CREEK
<b>SOIL DATA</b>	
PRIMARY SOIL DESCRIPTION	71- PRING COARSE SANDY LOAM
PERMEABILITY	MODERATELY RAPID TO RAPID
SURFACE RUNOFF	SLOW
HAZARD OF EROSION	SLIGHT TO MODERATE
HYDROLOGIC SOIL GROUP	B
EXISTING PERCENT IMPERVIOUS	1.9%
DEVELOPED PERCENT IMPERVIOUS	5.0%

**BMP LEGEND**

MAP SYMBOL	KEY	DESCRIPTION
INITIAL BMPs		
	SP	STOCKPILE MANAGEMENT (Initial BMP)
	SSA	STABILIZED STAGING AREA (Initial BMP)
	TCB	TEMPORARY COMPACTED BERM (Initial BMP)
	VTC	VEHICLE TRACKING CONTROL (Initial BMP)
	SF	SILT FENCE (Initial BMP)
	IP	CULVERT INLET PROTECTION (Initial BMP)
INTERIM BMPs		
	ECB	EROSION CONTROL BLANKET (Interim BMP)
	SBB	STRAW BALE BARRIER AS CHECK DAM (Interim BMP)
	OP	OUTLET PROTECTION (RIP-RAP) (Interim BMP)
	DCS	DITCH CHECK STRUCTURE (INTERIM BMP)

**BMP LEGEND**

MAP SYMBOL	KEY	DESCRIPTION
FINAL BMPs		
	SR	SURFACE ROUGHENING (Final BMP)
	MU	MULCHING (Final BMP)
	PS	PERMANENT SEEDING (Final BMP)
		ROCK CHECK DAM (Final BMP)
	1.50%	SLOPE DIRECTION AND GRADE
		DRAINAGE FLOW ARROW
	40	LIMITS OF CONSTRUCTION/DISTURBANCE
	71	LIMITS OF SOIL TYPE
	CUT/FILL	CUT/FILL BOUNDARY
		RECEIVING PERVIOUS AREA (RPA)

- EROSION CONTROL NOTES**
- ALL DISTURBED AREAS SHALL BE REVEGETATED. SEE GENERAL NOTES FOR SEED MIX AND APPLICATION NOTES.
  - RIP-RAP APRONS WILL BE PLACED AT ALL CULVERT OUTLETS. (SEE DETAILS FOR RIP-RAP APRONS ON THIS SHEET.)
  - HAY BALES WILL BE PLACED UPSTREAM OF CULVERTS IN NEW ROADSIDE DITCHES AS DETERMINED IN THE FIELD BY THE ENGINEER.
  - ALL PERSONS ENGAGED IN EARTH DISTURBANCE SHALL IMPLEMENT AND MAINTAIN ACCEPTABLE SOIL EROSION AND SEDIMENT CONTROL MEASURES INCLUDING BMPs IN CONFORMANCE WITH THIS EROSION CONTROL PLAN AND THE BMP DETAILS SHOWN ON THIS PLAN.
  - THE INSTALLATION OF THE FIRST LEVEL OF TEMPORARY EROSION CONTROL FACILITIES AND BMPs SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBANCE OPERATIONS TAKING PLACE.
  - CONTRACTOR SHALL PROVIDE APPROPRIATE EROSION CONTROL MEASURES DURING EARTHWORK OPERATIONS TO CONTROL EROSION AND SEDIMENT TRANSFER TO ADJACENT PROPERTIES. EROSION CONTROL MEASURES ARE NOT LIMITED TO THOSE NOTED ON THIS PLAN.
  - SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO A PUBLIC ROAD, REGARDLESS OF THE SIZE OF THE SITE, SHALL BE CLEANED AT THE END OF EACH DAY.
  - SOIL EROSION CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, OR ANY DISTURBED LAND AREA SHALL BE COMPLETED WITHIN FOURTEEN (14) CALENDAR DAYS AFTER FINAL GRADING OR FINAL EARTH DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS AND STOCKPILES WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 30 DAYS SHALL ALSO BE MULCHED WITHIN 14 DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN 60 DAYS SHALL ALSO BE SEED. ALL TEMPORARY SOIL EROSION CONTROL MEASURES AND BMPs SHALL BE MAINTAINED UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED.

**GENERAL NOTES**

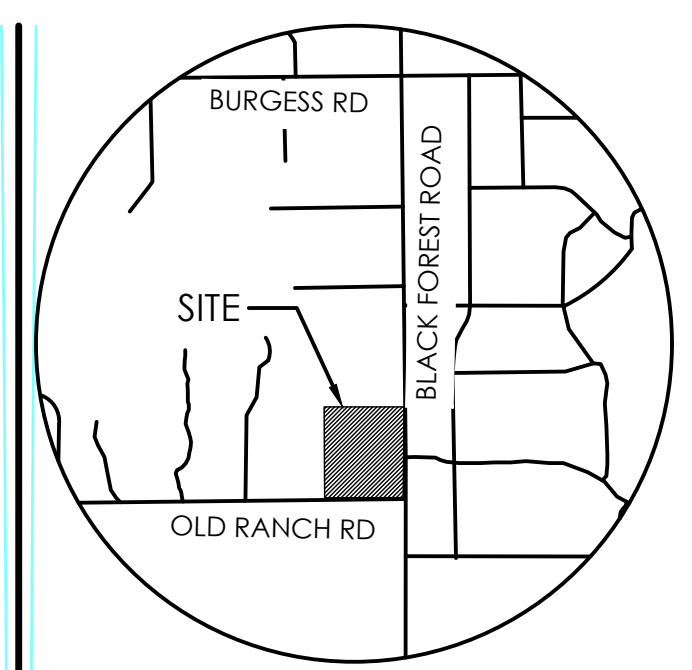
THERE ARE NO PROPOSED BATCH PLANTS ON SITE

THERE ARE NOT ANY NO-BUILD AREAS INDICATED ON THIS PLAN

**VEGETATION:**

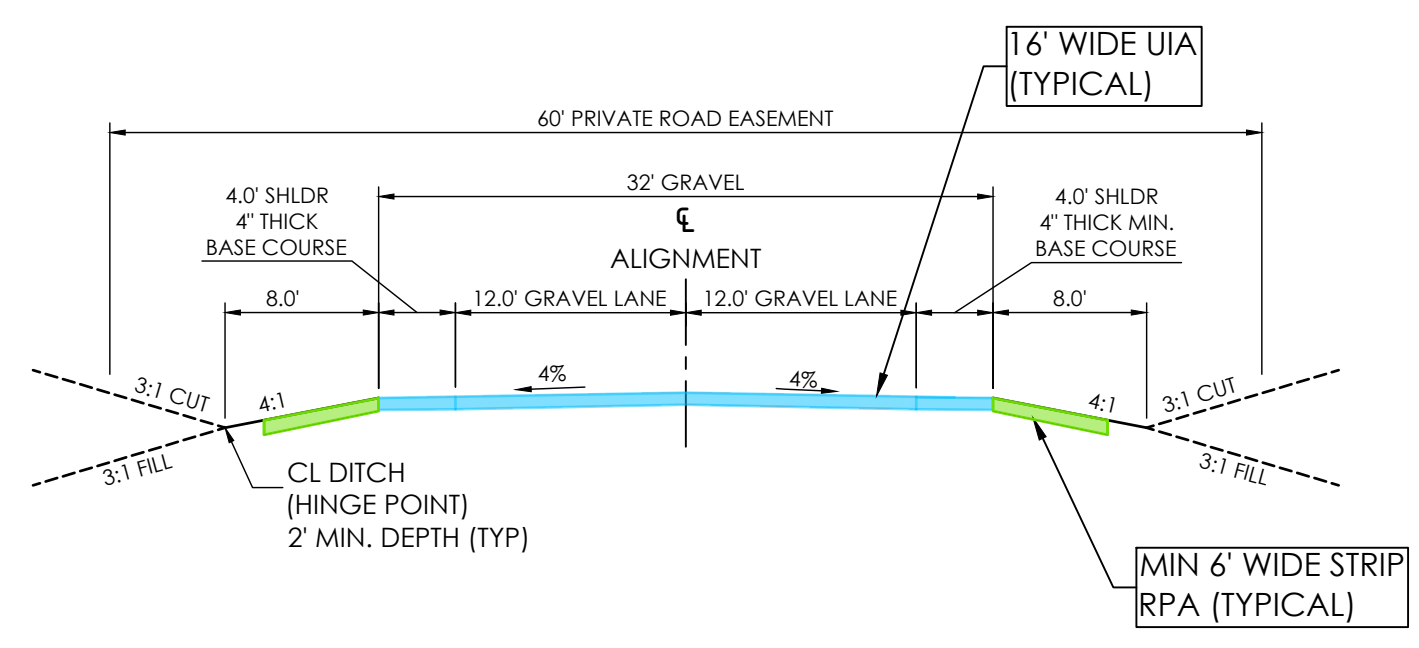
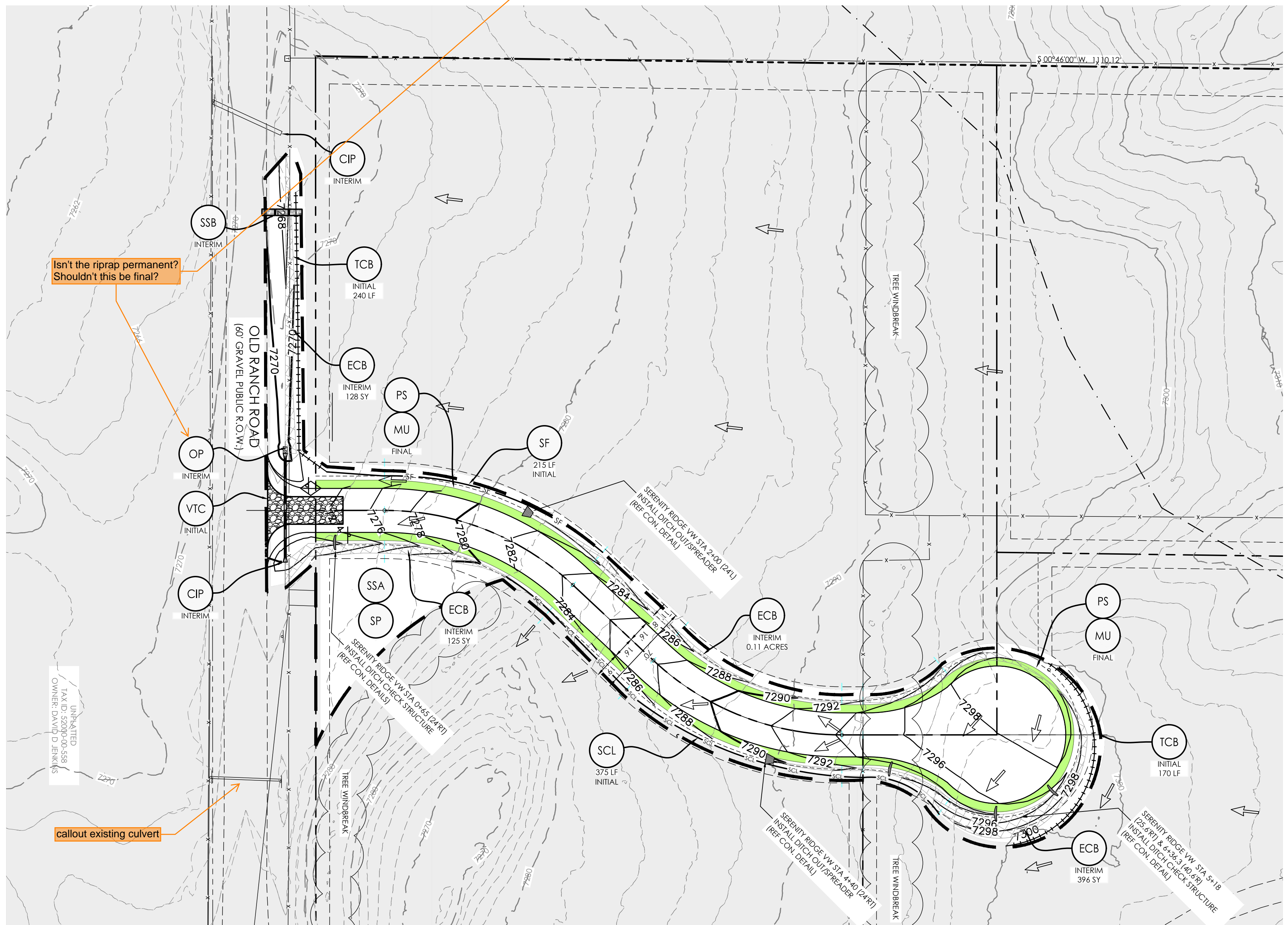
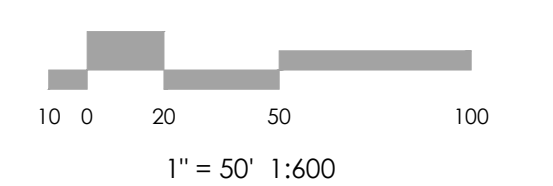
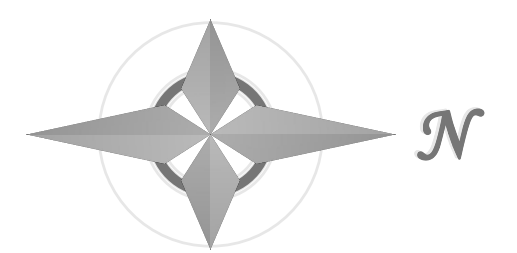
SITE CONSIST OF OPEN PRAIRIE WITH NATIVE GRASSES. THE NORTHERN HALF OF THE SITE CONTAINS DENSE TREE COVERAGE CONSISTING OF MATURE CONIFEROUS TREES.

\*NOTE: CONTRACTOR MAY NEED EPC WORK IN THE ROW PERMIT FOR THE CONNECTION TO THE EXISTING ROAD.



**VICINITY MAP**  
NOT TO SCALE

BENCHMARK  
THE BENCHMARK FOR THESE PLANS IS THE NO. 4 REBAR, LOCATED APPROX. 40' EAST OF THE PROPOSED ROADWAY & 10' NORTH OF EXISTING OLD RANCH ROAD EDGE OF GRAVEL. ELEVATION = 7273.40' (NAVD89).



**RURAL GRAVEL LOCAL (PRIVATE) ROADWAY**  
SCALE: 1" = 10'

- RPA REQUIREMENTS:**
- 6' OF RPA MINIMUM ALONG EACH SIDE OF THE ENTIRE LENGTH OF ACCESS EASEMENT TRAVEL WAY.
  - 6' OF RPA MINIMUM AROUND PERIMETER OF CUL-DE-SAC BULB GRADING.
  - NO DROP AT THE UIA / RPA INTERFACE FOR SAFETY.
  - RPA SHALL VEGETATED AND HAVE A UNIFORM DENSITY OF AT LEAST 80%.
  - RPA'S SHALL BE MAINTAINED PER THE APPROVED O&M MANUAL AND ADMINISTERED PER THE PCM MAINTENANCE AGREEMENT.



**MVE, INC.**  
ENGINEERS / SURVEYORS

1903 Library Street, Suite 200 Colorado Springs CO 80909 719.635.5736

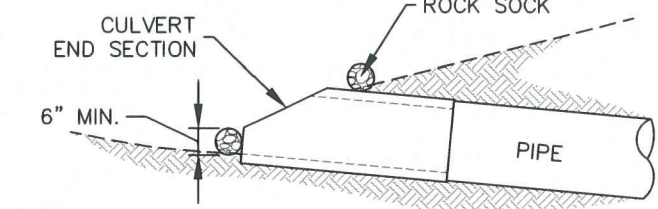
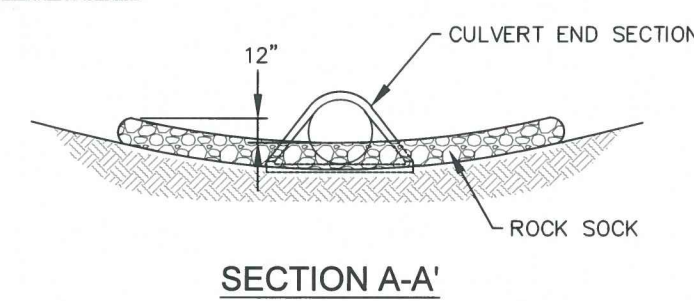
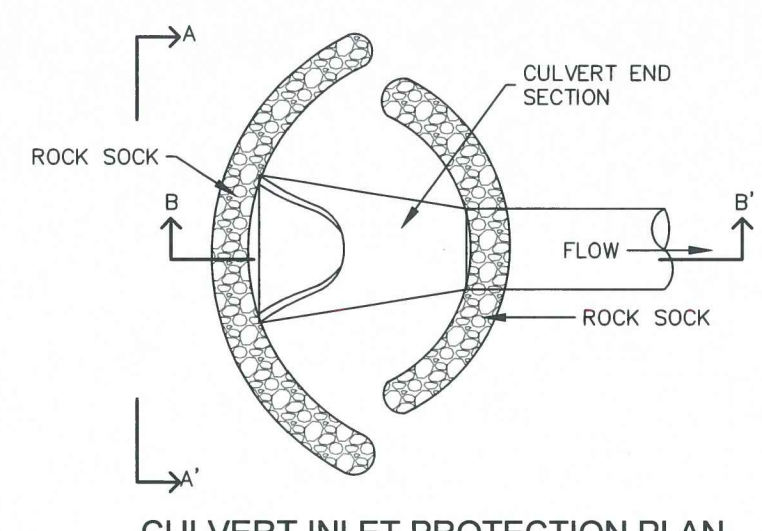
DESIGNED BY \_\_\_\_\_  
DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
AS-BUILTS BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_

**NABULSI-ABUSHABAN SUBDIVISION**

**GRADING & EROSION CONTROL PLAN PLAN SHEET**

**C2.2** MVE PROJECT 61201  
MVE DRAWING GEC-EC

AUGUST 27, 2024  
SHEET 2 OF 4



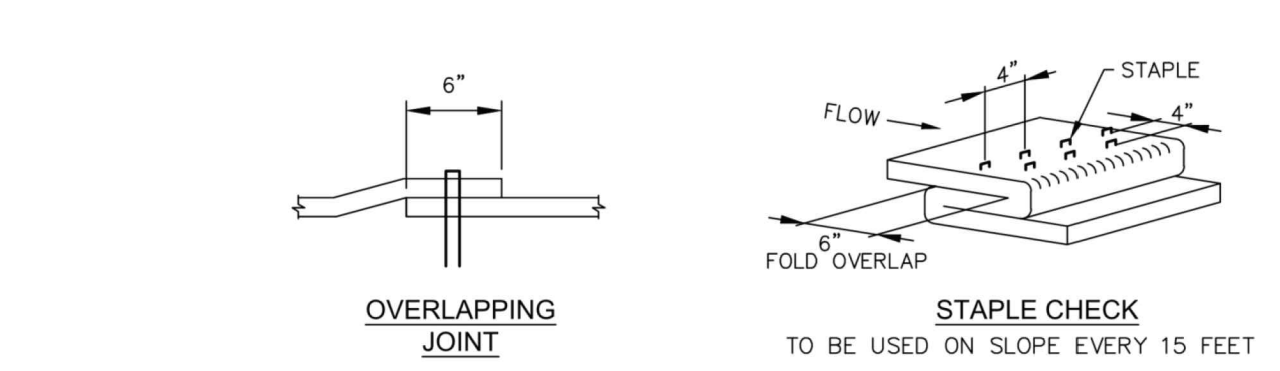
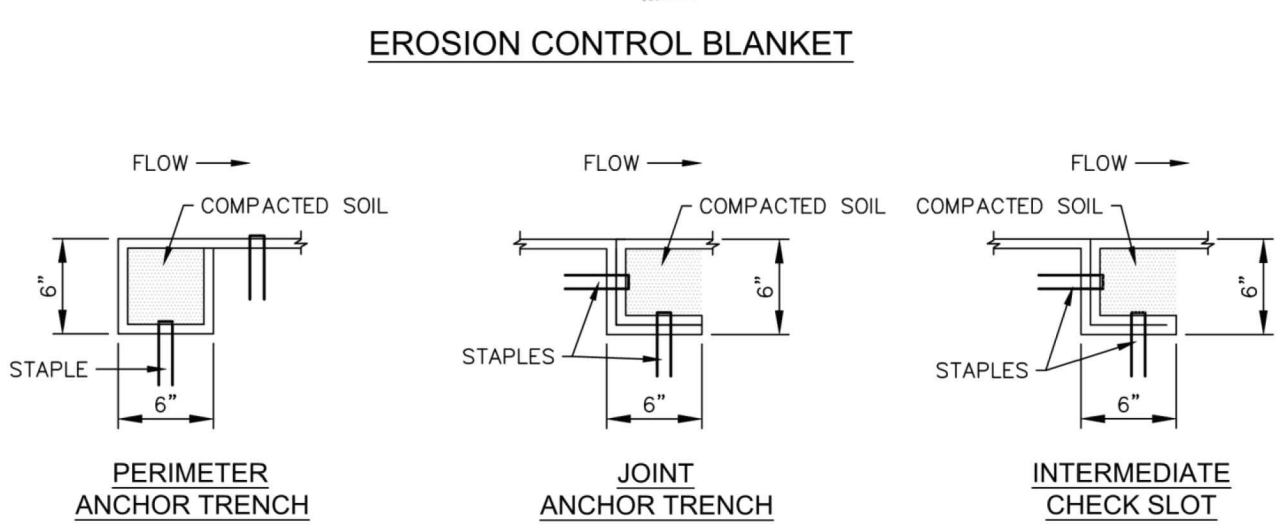
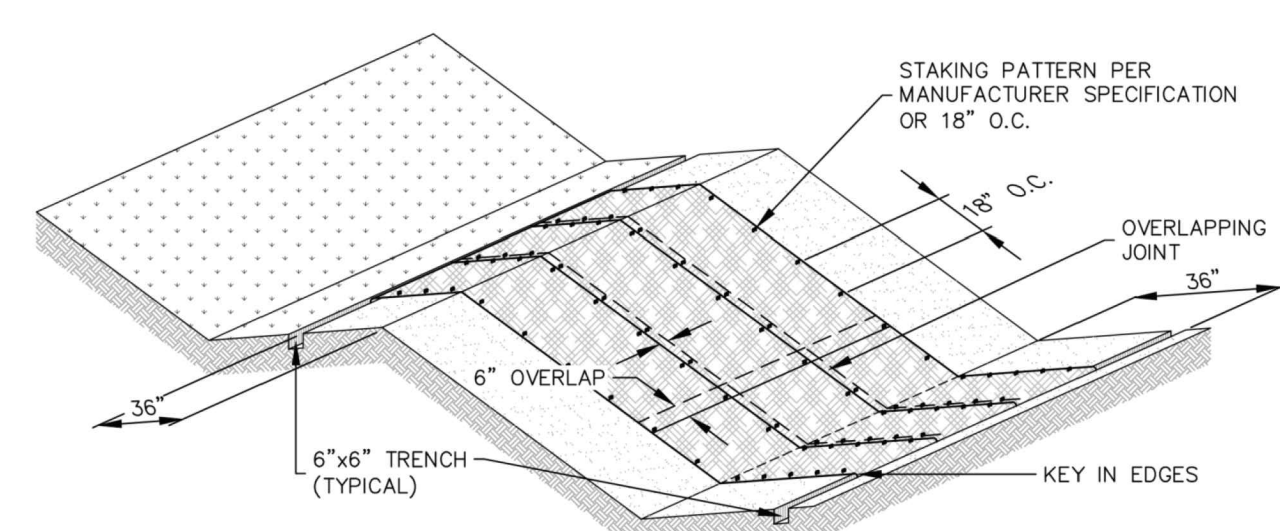
INSTALLATION NOTES

MAINTENANCE NOTES

**CULVERT INLET PROTECTION**

APPROVED: [Signature]

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-0P



**EROSION CONTROL BLANKET**

APPROVED: [Signature]

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-ECB-1

- INSTALLATION NOTES**
- 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.
  - IN AREAS WHERE EROSION CONTROL BLANKETS ARE SHOWN ON THE PLANS, THE PERMITEE SHALL PLACE TOPSOIL AND PERFORM FINAL GRADING, SURFACE PREPARATION AND SEEDING AND MULCHING. SUBGRADE SHALL BE SMOOTH AND MOIST PRIOR TO EROSION CONTROL BLANKET INSTALLATION, AND THE EROSION CONTROL BLANKET SHALL BE IN FULL CONTACT WITH THE SUBGRADE. NO GAPS OR VOIDS SHALL EXIST UNDER THE BLANKET.
  - PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.
  - JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.
  - INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.
  - OVERLAPPING JOINT DETAIL SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER FOR EROSION CONTROL BLANKETS ON SLOPES.
  - MATERIAL SPECIFICATIONS OF EROSION CONTROL BLANKETS SHALL CONFORM TO TABLE ECB-1.
  - ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.
  - STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITH STREAMS AND DRAINAGE CHANNELS.
  - COMPACT ALL TRENCHES.

- MAINTENANCE NOTES**
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  - EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE GEC INSPECTOR.
  - ANY EROSION CONTROL BLANKET PULLED OUT, TORN, OR OTHERWISE DAMAGED SHALL BE REPAIRED OR REINSTALLED. ANY SUBGRADE AREAS BELOW GEOTEXTILE THAT HAVE ERODED TO CREATE A VOID UNDER THE BLANKET, OR THAT REMAIN DEVOID OF GRASS SHALL BE REPAIRED, RESEEDED AND MULCHED AND THE EROSION CONTROL BLANKET REINSTALLED.

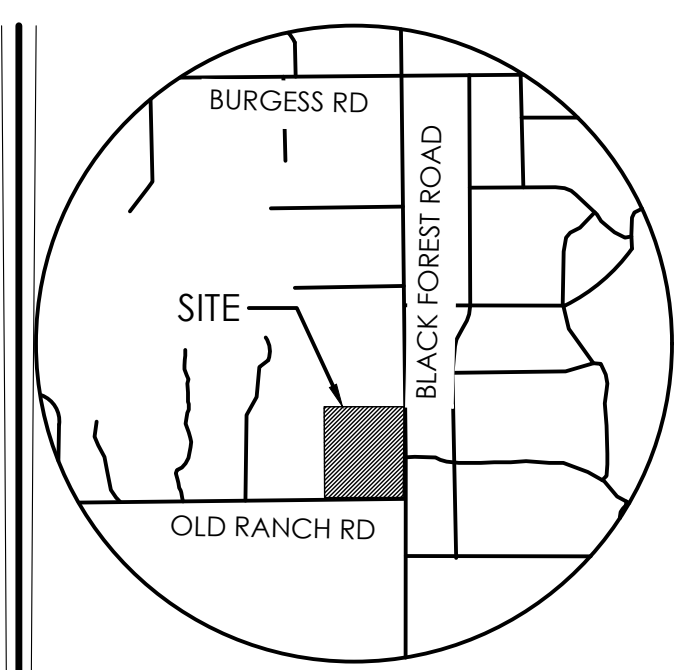
**TABLE ECB-1, EROSION CONTROL BLANKET MATERIAL SPECIFICATIONS**

TYPE	COCONUT CONTENT	STRAW CONTENT	EXCELSIOR CONTENT	RECOMMENDED NETTING
STRAW	-	100%	-	DOUBLE/NATURAL
STRAW-COCONUT	30% MIN.	70% MAX.	-	DOUBLE/NATURAL
COCONUT	100%	-	-	DOUBLE/NATURAL
EXCELSIOR	-	-	100%	DOUBLE/NATURAL

**EROSION CONTROL BLANKET**

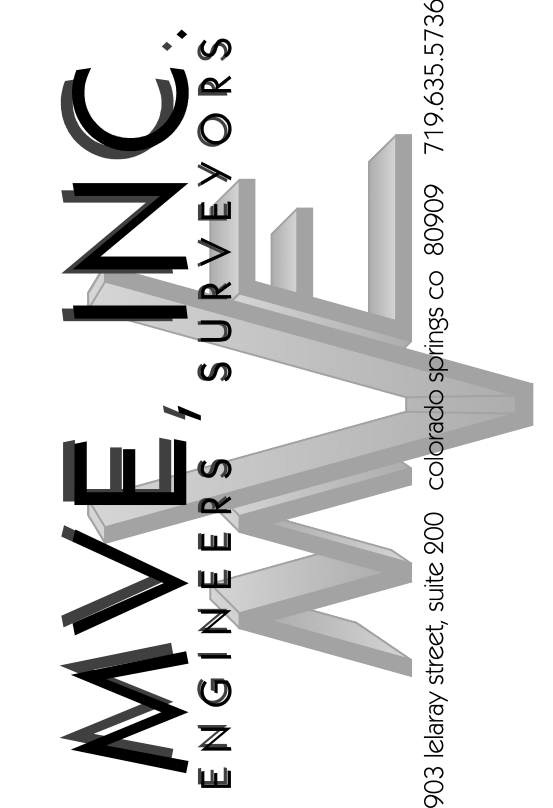
APPROVED: [Signature]

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-ECB-2



VICINITY MAP  
NOT TO SCALE

BENCHMARK



1903 Ikenary street, suite 200 Colorado Springs CO 80909 719.635.5726

**MULCHING NOTES**

**INSTALLATION REQUIREMENTS**

- ALL DISTURBED AREAS MUST BE MULCHED WITHIN 21 DAYS AFTER FINAL GRADE AND SEEDING AREAS ARE TO BE MULCHED WITHIN 24 HOURS AFTER SEEDING.
- MATERIAL USED FOR MULCH CAN BE CERTIFIED CLEAN, WEED- AND SEED-FREE LONG STEMMED FIELD OR MARSH HAY, OR STRAW OF OATS, BARLEY, WHEAT, RYE, OR TRITICALE CERTIFIED BY THE COLORADO DEPARTMENT OF AGRICULTURE WEED FREE FORAGE CERTIFICATION PROGRAM.
- HYDRAULIC MULCHING MATERIAL SHALL CONSIST OF VIRGIN WOOD FIBER MANUFACTURED FROM CLEAN WHOLE WOOD CHIPS. WOOD CHIPS CANNOT CONTAIN ANY GROWTH OR GERMINATION INHIBITORS OR BE PRODUCED FROM RECYCLED MATERIAL. GRAVEL CAN ALSO BE USED.
- MULCH IS TO BE APPLIED EVENLY AT A RATE OF 2 TONS PER ACRE.
- MULCH IS TO BE ANCHORED EITHER BY CRIMPING (TUCKING MULCH FIBERS 4 INCHES INTO THE SOIL), USING NETTING (USED ON SMALL AREAS WITH STEEP SLOPES), OR WITH A TACKIFIER.
- HYDRAULIC MULCHING AND TACKIFIERS ARE NOT TO BE USED IN THE PRESENCE OF FRESH SURFACE WATER.

**MAINTENANCE REQUIREMENTS**

- REGULAR INSPECTIONS ARE TO BE MADE OF ALL MULCHED AREAS.
- MULCH IS TO BE REPLACED IMMEDIATELY IN THOSE AREAS IT HAS BEEN REMOVED, AND IF NECESSARY THE AREA SHOULD BE RESEEDED.



Figure MU-1  
Mulching  
Construction Detail and Maintenance  
Requirements

**SEEDING & MULCHING**

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

**SOIL PREPARATION**

- IN AREAS TO BE SEEDDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRIABLE CONDITION. LESS THAN 85% STANDARD PROCTOR DENSITY IS ACCEPTABLE. AREAS OF COMPACTION 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.
- AREAS TO BE PLANTED SHALL HAVE AT LEAST 4 INCHES OF TOPSOIL SUITABLE TO SUPPORT PLANT GROWTH.
- 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.
- TOPSOIL SHALL BE PROTECTED DURING THE CONSTRUCTION PERIOD TO RETAIN ITS STRUCTURE AVOID COMPACTION, 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**

- 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.
- SEED SHOULD BE DRILL-SEEDED WHENEVER POSSIBLE.
- SEED DEPTH MUST BE 1/4 TO 1/2 INCHES WHEN DRILL-SEEDED IS USED.
- BROADCAST SEEDING OR HYDRO-SEEDED WITH TACKIFIER MAY BE SUBSTITUTED ON SLOPES STEEPER THAN 3:1 OR ON OTHER AREAS NOT PRACTICAL TO DRILL SEED.
- SEEDING RATES MUST BE DOUBLED FOR BROADCAST SEEDING OR INCREASED BY 50% IF USING A BRILLIANT DRILL OR HYDRO-SEEDED.
- BROADCAST SEEDING MUST BE LIGHTLY HAND-RAKED INTO THE SOIL.

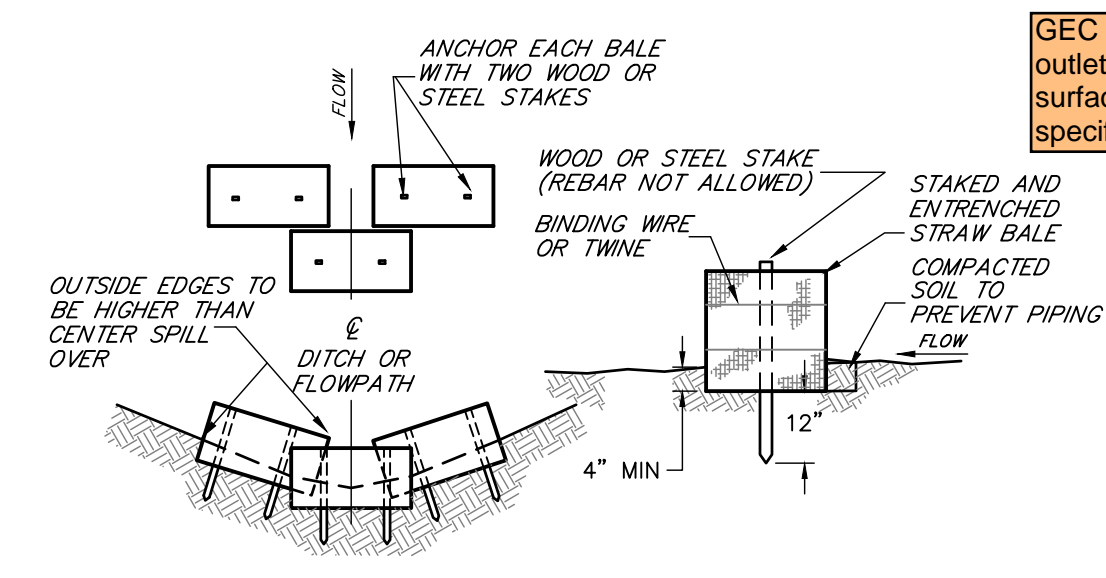
**MULCHING**

- MULCHING SHOULD BE COMPLETED AS SOON AS PRACTICABLE AFTER SEEDING, HOWEVER PLANTED AREAS MUST BE MULCHED NO LATER THAN 14 DAYS AFTER PLANTING.
- 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.
  - HYDRAULIC MULCHING
    - HYDRAULIC MULCHING IS AN OPTION ON STEEP SLOPES OR WHERE ACCESS IS LIMITED.
    - IF HYDRO-SEEDED 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.
- EROSION CONTROL BLANKET
  - EROSION CONTROL BLANKET MAY BE USED IN PLACE OF TRADITIONAL MULCHING METHODS.

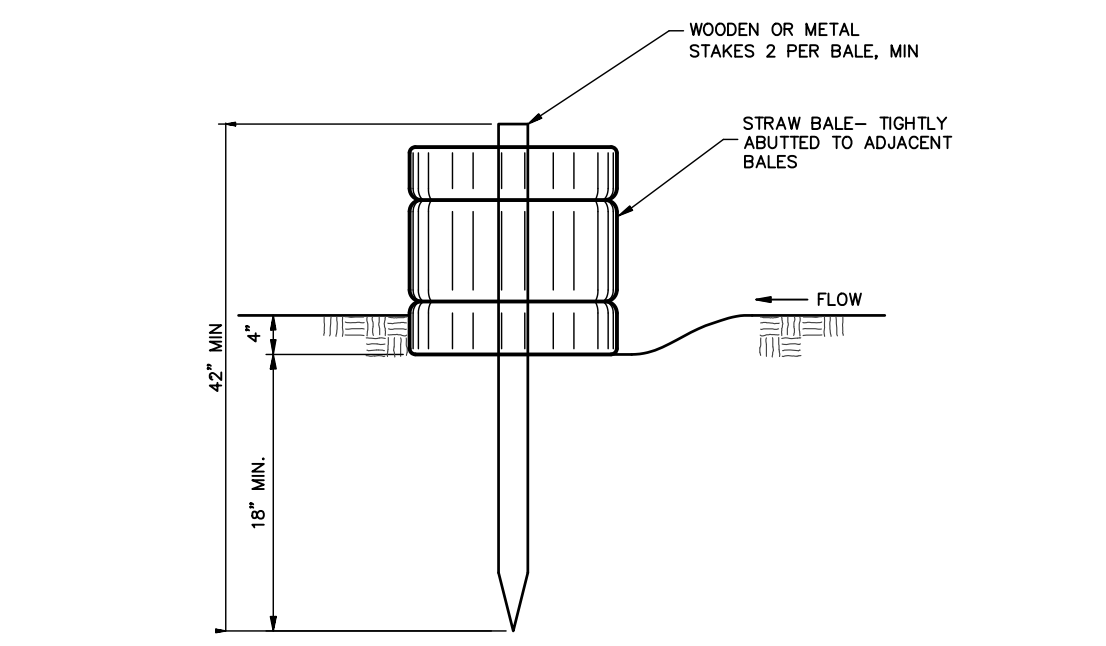
**SEEDING & MULCHING**

APPROVED: [Signature]

ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-0M



STRAW BALE EROSION CONTROL  
NOT TO SCALE



- INSTALLATION REQUIREMENTS**
- STRAW BALE BARRIERS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
  - BALES SHALL CONSIST OF APPROXIMATELY 5 CUBIC FEET OF CERTIFIED WEED FREE HAY OR STRAW AND WEIGH NOT LESS THAN 35 POUNDS.
  - BALES ARE TO BE PLACED IN A SINGLE ROW WITH THE END OF THE BALES TIGHTLY ADJUTING ONE ANOTHER.
  - EACH BALE IS TO BE SECURELY ANCHORED WITH AT LEAST TWO STAKES AND THE FIRST STAKE IS TO BE DRIVEN TOWARD THE PREVIOUSLY LAD BALE TO FORCE THE BALES TOGETHER.
  - STAKES ARE TO BE A MINIMUM OF 42 INCHES LONG.
  - METAL STAKES SHALL BE STANDARD 1" OR 1 1/2" TYPE WITH MINIMUM WEIGHT OF 1.33 POUNDS PER LINEAR FOOT. WOOD STAKES SHALL HAVE A MINIMUM DIAMETER OR CROSS SECTION DIMENSION OF 2 INCHES.
  - BALES ARE TO BE BOUND WITH EITHER WIRE OR STRING AND ORIENTED SUCH THAT THE BINDINGS ARE AROUND THE SIDES AND NOT ALONG THE TOPS AND BOTTOMS OF THE BALE.
  - GAPS BETWEEN BALES ARE TO BE CHINKED (FILLED BY WEDGONS) WITH STRAW OR THE SAME MATERIAL OF THE BALE.
  - END BALES ARE TO EXTEND UPSTREAM SO THE TRAPPED RUNOFF CANNOT FLOW AROUND THE ENDS OF THE BARRIER.
- MAINTENANCE REQUIREMENTS**
- CONTRACTOR SHALL INSPECT STRAW BALE BARRIERS IMMEDIATELY AFTER EACH RAINFALL AT LEAST DAILY DURING PROLONGED RAINFALL AND WEEKLY DURING PERIODS NO RAINFALL.
  - DAMAGED OR INEFFECTIVE BARRIERS SHALL PROMPTLY BE REPAIRED, REPLACING BALES IF NECESSARY, AND UNREINFORCED BALES NEED TO BE REPAIRED WITH COMPACTED BACKFILL MATERIAL.
  - SEDIMENT SHALL BE REMOVED FROM BEHIND STRAW BALE BARRIERS WHEN IT ACCUMULATES TO APPROXIMATELY 1/2 THE HEIGHT OF THE BARRIER.
  - STRAW BALE BARRIERS SHALL BE REMOVED WHEN ADEQUATE VEGETATIVE COVER IS ATTAINED AS APPROVED BY THE CITY.

**STRAW BALE BARRIER DETAIL & MAINTENANCE REQUIREMENTS**

NOT TO SCALE

GEC Checklist Item z - Provide details for: silt fence, permanent outlet protection (see previous comment), ditch check structure, surface roughening, rock check dam permanent, and seeding mix specification.

REVISIONS

DESIGNED BY \_\_\_\_\_  
DRAWN BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_  
AS-BUILTS BY \_\_\_\_\_  
CHECKED BY \_\_\_\_\_

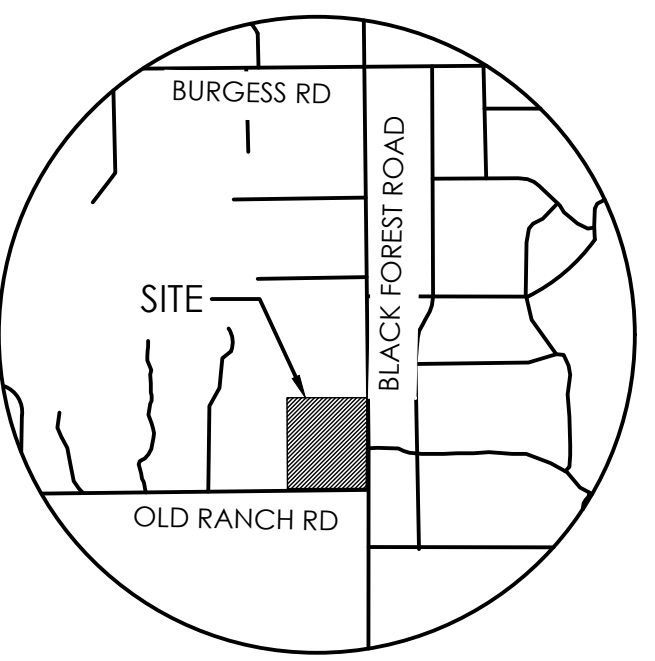
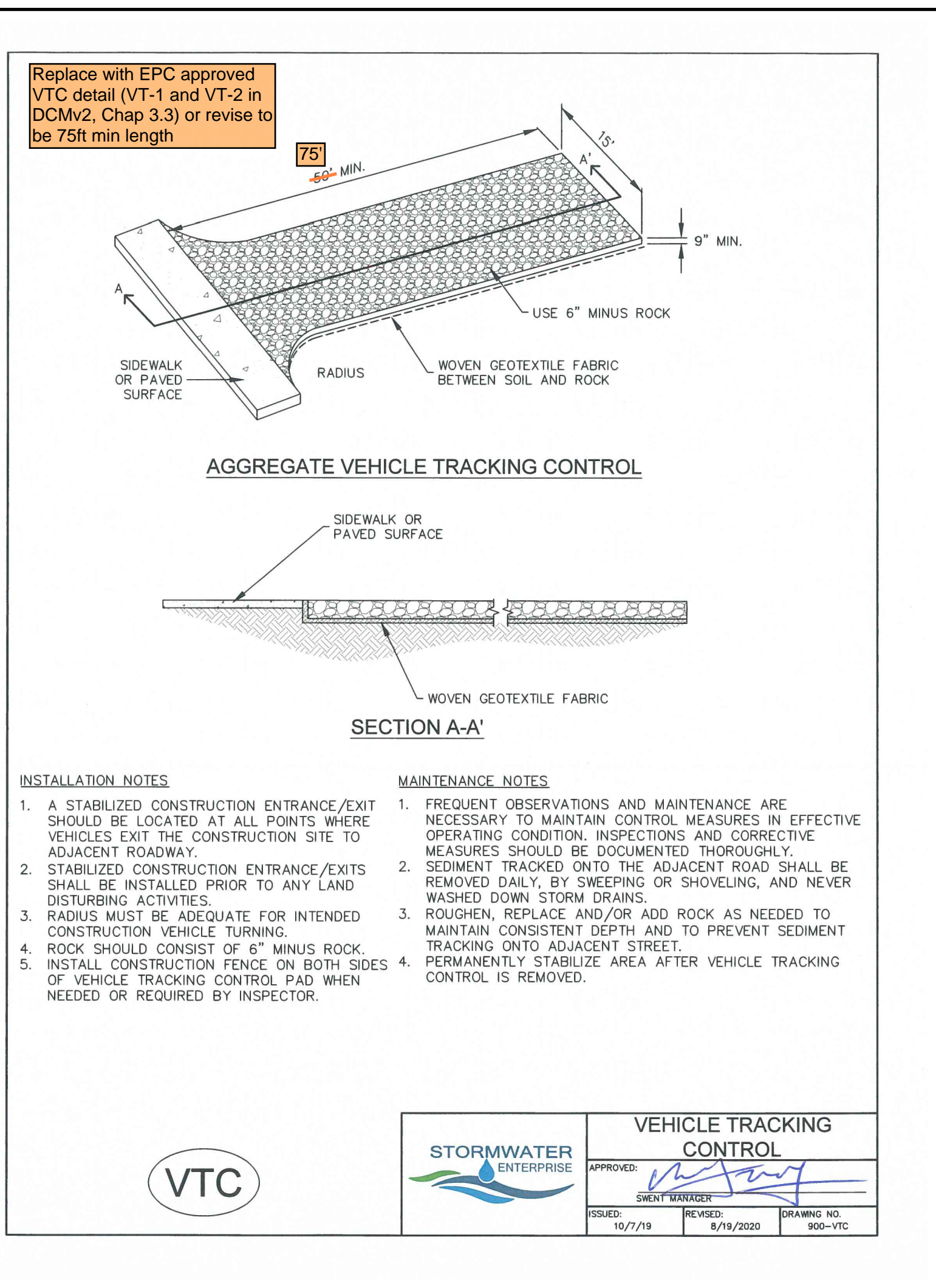
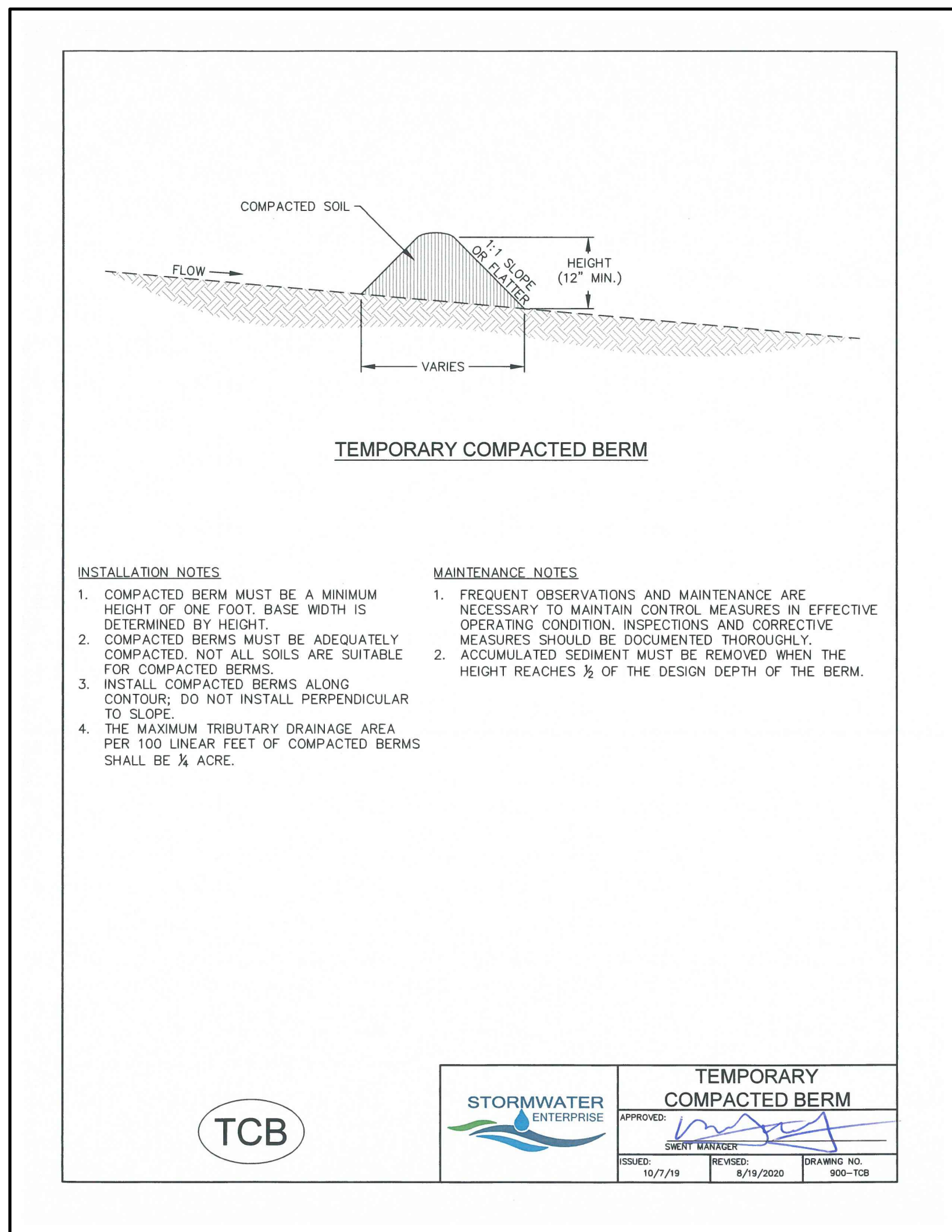
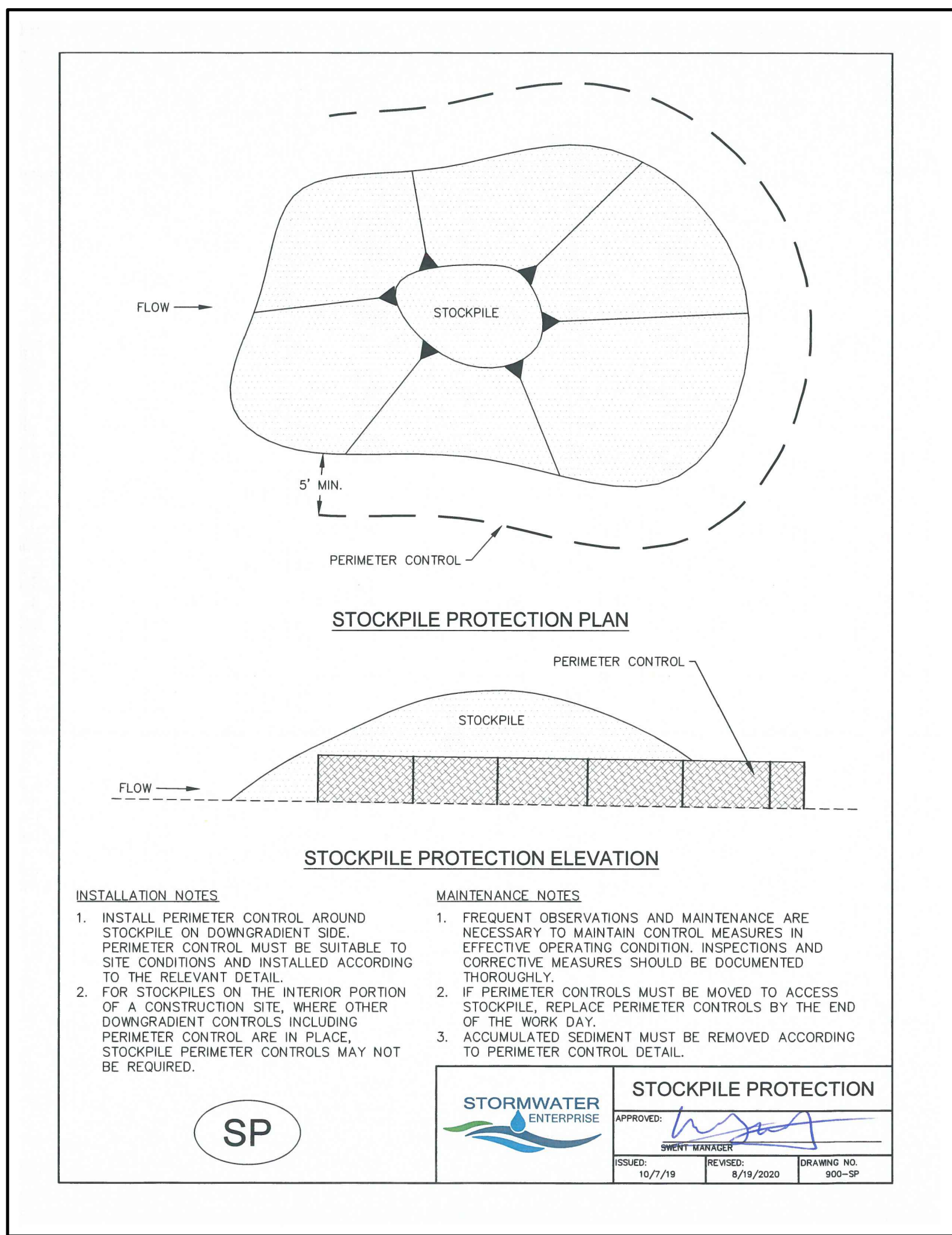
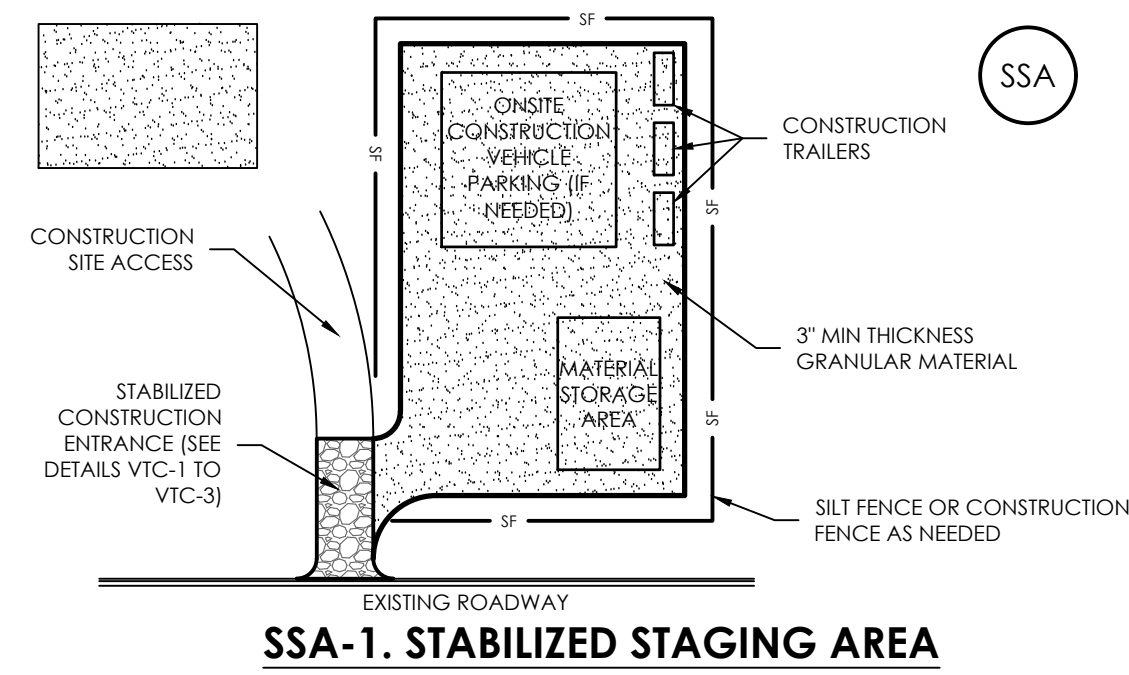
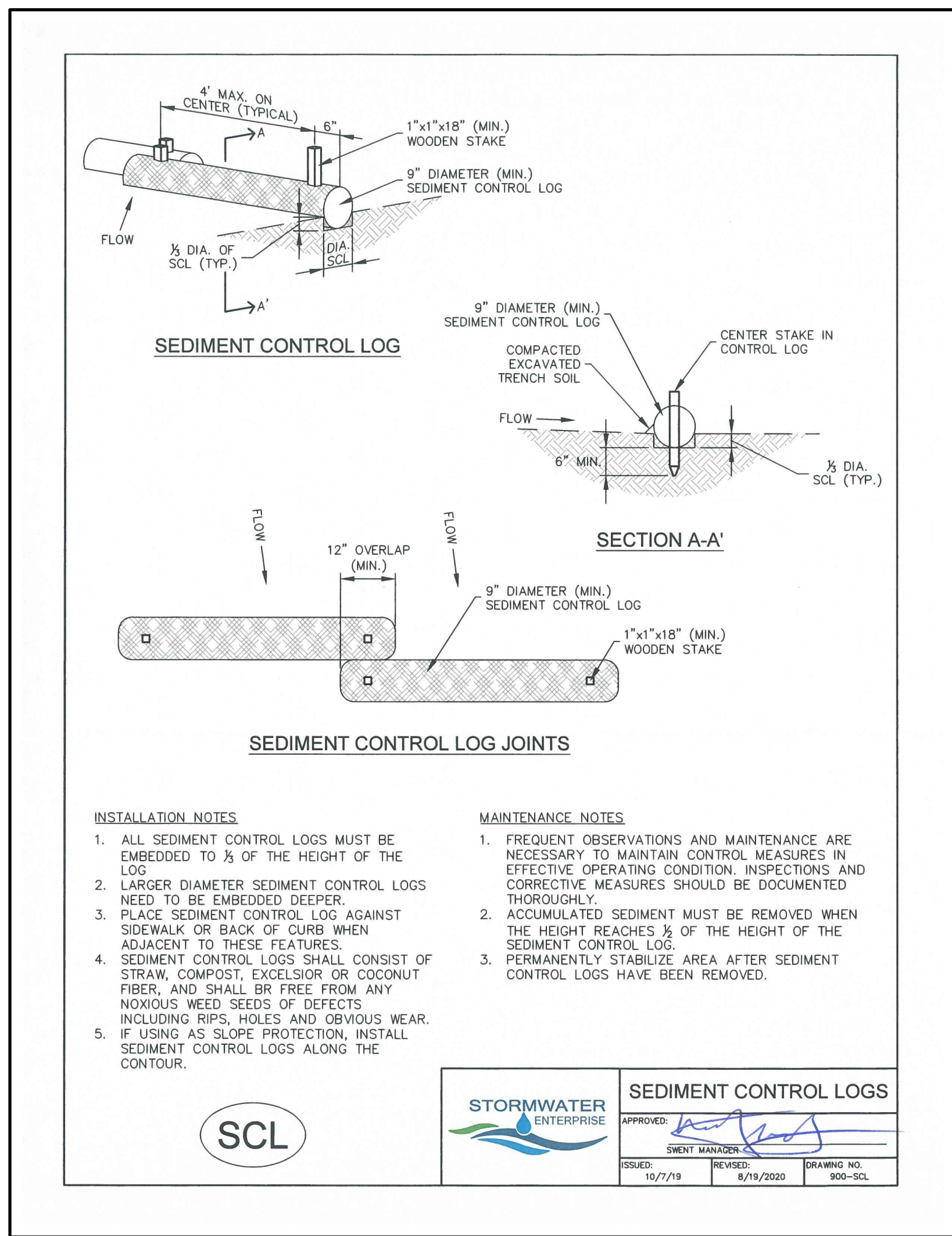
**ASHUBAN-NABULSI SUBDIVISION**

GRADING & EROSION  
CONTROL PLAN  
EROSION DETAILS

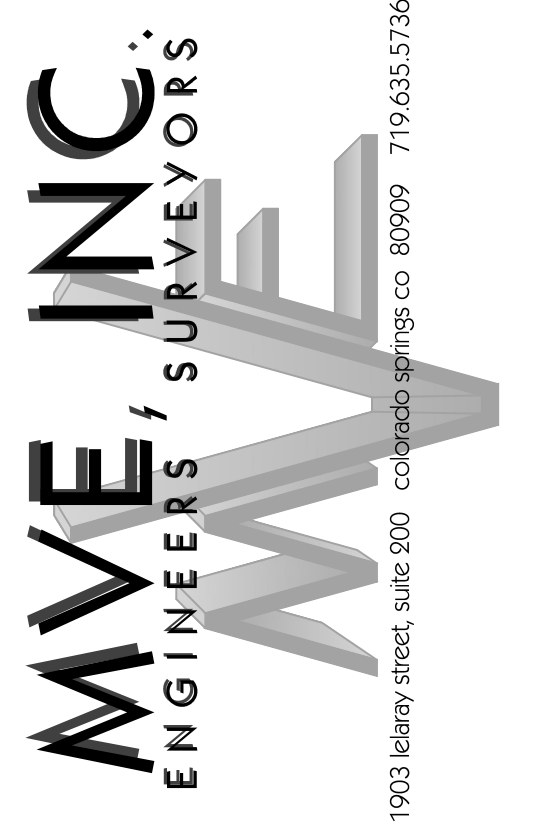
**C2.3** MVE PROJECT 61201  
MVE DRAWING GEC-ED1

AUGUST 27, 2024  
SHEET 3 OF 4





BENCHMARK



DESIGNED BY \_\_\_\_\_  
 DRAWN BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_  
 AS-BUILT BY \_\_\_\_\_  
 CHECKED BY \_\_\_\_\_

**ASHUBAN-NABULSI**  
**SUBDIVISION**



GRADING & EROSION  
 CONTROL PLAN  
 EROSION DETAILS 2

**C2.4** MVE PROJECT 61201  
 MVE DRAWING GEC-ED2

AUGUST 27, 2024  
 SHEET 4 OF 4