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# ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN

## 60% DESIGN GEC PLANS

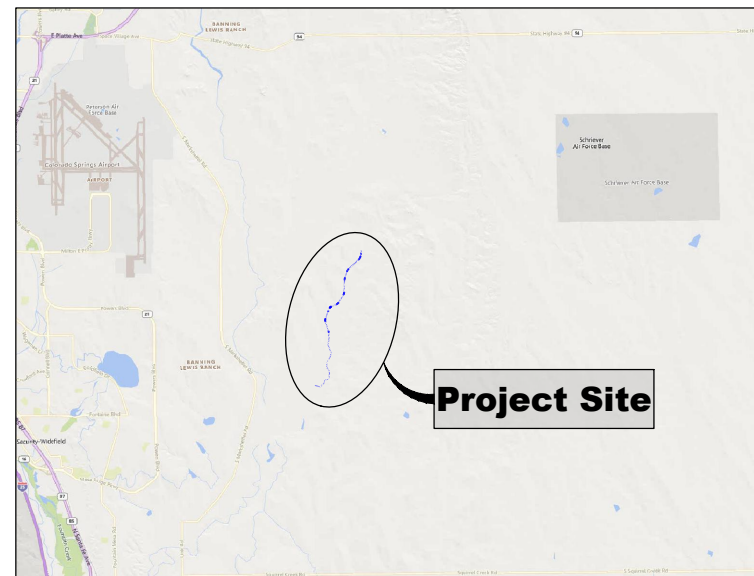
### THE LANDHUIS COMPANY

## MODIFICATION GRADING AND EROSION CONTROL PLAN JANUARY 2023

EPC STORMWATER REVIEW COMMENTS  
IN ORANGE BOXES WITH BLACK TEXT

PCD-ENGINEERING REVIEW COMMENTS  
IN BLUE BOXES WITH BLUE TEXT

MATRIX PROJECT No. 21.1129.009



VICINITY MAP

N.T.S.

VERTICAL DATUM: THE ELEVATIONS ON THIS PROJECT ARE REFERENCED TO THE NATIONAL GEODETIC VERTICAL DATUM OF 1929.

HORIZONTAL DATUM: THE COORDINATES FOR THIS PROJECT ARE NAD83/2011 COLORADO STATE PLANE CENTRAL ZONE GRID COORDINATES.

AERIAL PHOTO: PROVIDED BY AERIAL MAPPING SERVICES

BENCHMARK STATEMENT: THE BENCHMARK USED FOR THIS SURVEY IS FIMS MONUMENT NUMBER 202. A U.S. GEOLOGICAL SURVEY BRASS CAP STAMPED '11 HA 1947' IN A CONCRETE PAD, LOCATED ALONG DRENNAN ROAD, APPROXIMATELY 0.5 MILES EAST OF MARKSHEFFEL ROAD, APPROXIMATELY 200 FEET EAST OF A BRIDGE. THE MARK IS 32 FEET NORTH OF THE PAVEMENT, 23 FEET EAST OF A NORTH TO SOUTH FENCE LINE, AND 2 FEET NORTHEAST OF A POWER POLE."

PROPERTY INFORMATION: PARCEL LINES AND PROPERTY OWNERSHIP INFORMATION SHOWN WERE PROVIDED BY AN ALTA SURVEY.



LOCATION MAP

SCALE: 1" = 4,000'

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No.	DATE	DESCRIPTION REVISIONS	BY
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Dwg\GESQC Plans\1129.009-ECTS01.dwg			
CTB FILE: Matrix(black).ctb			
PLOT DATE: January 30, 2023 11:26:48 AM			
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.			

**60% DESIGN PLANS**

**NOTICE:**  
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SEAL

**PRELIMINARY**  
THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE

FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

THE LANDHUIS COMPANY			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
TITLE SHEET			
DESIGNED BY: TKM	SCALE: HORIZ 1" = 4,000'	DATE ISSUED: JANUARY 2023	DRAWING No.
DRAWN BY: EAL	VERT. N/A	SHEET 01 OF 44	TS01
CHECKED BY: AJS			



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**CITY OF COLORADO SPRINGS**

**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. IF SUCH WORK IS PERFORMED IN ACCORDANCE WITH THE GRADING AND EROSION CONTROL PLAN, THE WORK WILL NOT BECOME A HAZARD TO LIFE AND LIMB, ENDANGER PROPERTY, OR ADVERSELY AFFECT THE SAFETY, USE, OR STABILITY OF A PUBLIC WAY, DRAINAGE CHANNEL, OR OTHER PROPERTY.

PRINTED NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

SEAL

**OWNER'S STATEMENT**

THE OWNER WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN INCLUDING CONSTRUCTION CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS ACCORDING TO THE CITY OF COLORADO SPRINGS STORMWATER CONSTRUCTION MANUAL. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY

OWNER'S SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

NAME OF OWNER: \_\_\_\_\_ PHONE: \_\_\_\_\_

TITLE: \_\_\_\_\_ EMAIL: \_\_\_\_\_

**CONTRACTOR'S STATEMENT**

I WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN/CSWMP INCLUDING CONSTRUCTION CONTROL MEASURE INSPECTION REQUIREMENTS AND FINAL STABILIZATION REQUIREMENTS. I ACKNOWLEDGE THE RESPONSIBILITY TO DETERMINE WHETHER THE CONSTRUCTION ACTIVITIES ON THESE PLANS REQUIRE COLORADO DISCHARGE PERMIT SYSTEM (CDPS) PERMITTING FOR STORMWATER DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITY.

NAME OF CONTRACTOR: \_\_\_\_\_

AUTHORIZED SIGNATURE: \_\_\_\_\_ DATE: \_\_\_\_\_

TITLE: \_\_\_\_\_

PHONE NUMBER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

EMAIL ADDRESS: \_\_\_\_\_

**CITY OF COLORADO SPRINGS GRADING AND EROSION CONTROL REVIEW**

THIS GRADING AND EROSION CONTROL PLAN IS FILED IN ACCORDANCE WITH CITY CODE. THIS PLAN IS REVIEWED IN ACCORDANCE WITH THE STORMWATER CONSTRUCTION MANUAL; LATEST REVISIONS.

\_\_\_\_\_  
DATE: \_\_\_\_\_  
FOR THE SWENT MANAGER

NOTES: \_\_\_\_\_

**EL PASO COUNTY**

**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.

ENGINEER OF RECORD SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

**OWNER'S STATEMENT**

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 PROJECT ENGINEER SIGNATURE \_\_\_\_\_ DATE \_\_\_\_\_

Provide printed name, Business name and address

Change to :

Joshua Palmer, PE  
County Engineer / ECM Administrator

REFERENCE DRAWINGS	No.	DATE	DESCRIPTION REVISIONS	BY
Rolling Hills MDDP.spp X-1129-MDG22x34				

**COMPUTER FILE MANAGEMENT**

FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Dwg\GESQC Plans\1129.009-ECTS01.dwg  
 CTB FILE: Matrix(black).ctb  
 PLOT DATE: January 30, 2023 11:17:32 AM  
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**60% DESIGN PLANS**

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SEAL

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FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
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<b>THE LANDHUIS COMPANY</b>			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
<b>SIGNATURE PAGE</b>			
DESIGNED BY: TKM	SCALE: _____	DATE ISSUED: JANUARY 2023	DRAWING No. _____
DRAWN BY: EAL	HORIZ: N/A	SHEET 02 OF 44	TS02
CHECKED BY: AJS	VERT: N/A		





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STANDARD GEC PLAN NOTES - CITY OF COLORADO SPRINGS

- NO CLEARING, GRADING, EXCAVATION, OR OTHER LAND DISTURBING ACTIVITIES SHALL BE ALLOWED (EXCEPT FOR WORK DIRECTLY RELATED TO THE INSTALLATION OF INITIAL CONTROL MEASURES) UNTIL A CITY GEC PERMIT HAS BEEN ISSUED.
- ALL LAND DISTURBING ACTIVITIES MUST BE PERFORMED IN ACCORDANCE WITH AND THE APPROVED GEC PLAN AND CSWMP.
- INITIAL CONTROL MEASURES SHALL BE INSTALLED AND INSPECTED PRIOR TO ANY LAND DISTURBANCE ACTIVITIES TAKING PLACE. AN INITIAL SITE INSPECTION WILL NOT BE SCHEDULED UNTIL A CITY GEC PERMIT HAS BEEN "CONDITIONALLY APPROVED." CALL CITY STORMWATER INSPECTIONS, 385-5980, AT LEAST 48 HOURS PRIOR TO CONSTRUCTION TO SCHEDULE AN INITIAL INSPECTION AND OBTAIN FULL PERMIT APPROVAL.
- INDIVIDUALS SHALL COMPLY WITH THE "COLORADO WATER QUALITY CONTROL ACT" (TITLE 25, ARTICLE 8, CRS) AND THE "CLEAN WATER ACT" (33 USC 1344), INCLUDING REGULATIONS PROMULGATED AND CERTIFICATIONS OR PERMITS ISSUED, IN ADDITION TO THE REQUIREMENTS INCLUDED IN THE CITY'S MS4 PERMIT, STORMWATER CONSTRUCTION MANUAL. IN THE EVENT OF CONFLICTS BETWEEN THESE REQUIREMENTS AND WATER QUALITY CONTROL LAWS, RULES, OR REGULATIONS OF OTHER FEDERAL OR STATE AGENCIES, THE MORE RESTRICTIVE LAWS, RULES, OR REGULATIONS SHALL APPLY.
- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS.
- ALL CONSTRUCTION CONTROL MEASURES SHALL BE MAINTAINED UNTIL PERMANENT STABILIZATION MEASURES ARE IMPLEMENTED. TEMPORARY CONSTRUCTION CONTROL MEASURES MUST BE REMOVED PRIOR TO PERMIT CLOSEOUT.
- CONCRETE WASH WATER SHALL NOT BE DISCHARGED TO OR ALLOWED TO RUNOFF TO STATE WATERS OR ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES.
- BUILDING, CONSTRUCTION, EXCAVATION, OR OTHER 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. CONSTRUCTION CONTROL MEASURES MAY BE REQUIRED BY THE GEC INSPECTOR IF DEEMED NECESSARY BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES (E.G., ESTIMATED TIME OF EXPOSURE, SEASON OF THE YEAR, ETC.).
- ALL WASTES COMPOSED OF BUILDING MATERIALS MUST BE REMOVED FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- THE PERMITTEE SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, AND SAND THAT MAY ACCUMULATE IN THE STORM SEWER OR OTHER DRAINAGE CONVEYANCE SYSTEM AS A RESULT OF CONSTRUCTION ACTIVITIES.
- 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. MATERIALS SHALL NOT BE STORED IN A LOCATION WHERE THEY MAY BE CARRIED BY STORMWATER RUNOFF INTO THE STORM SEWER SYSTEM AT ANY TIME.
- SPILL PREVENTION AND CONTAINMENT MEASURES SHALL BE USED AT ALL STORAGE, EQUIPMENT FUELING, AND EQUIPMENT SERVICING AREAS SO AS TO CONTAIN ALL SPILLS AND PREVENT ANY SPILLED MATERIAL FROM ENTERING THE MS4, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITY. BULK STORAGE STRUCTURES FOR PETROLEUM PRODUCTS AND OTHER CHEMICALS SHALL HAVE SECONDARY CONTAINMENT OR EQUIVALENT ADEQUATE PROTECTION. ALL SPILLS SHALL BE CLEANED UP IMMEDIATELY AFTER DISCOVERY, OR CONTAINED UNTIL APPROPRIATE CLEANUP METHODS CAN BE EMPLOYED. MANUFACTURER'S RECOMMENDED METHODS FOR SPILL CLEANUP SHALL BE FOLLOWED, ALONG WITH PROPER DISPOSAL METHODS.
- SEDIMENT (MUD AND DIRT) TRANSPORTED ONTO A PUBLIC ROAD, REGARDLESS OF THE SIZE OF THE SITE, SHALL BE CLEANED AS SOON AS POSSIBLE AFTER DISCOVERY.
- NO CHEMICALS ARE TO BE ADDED TO THE DISCHARGE UNLESS PERMISSION FOR THE USE OF A SPECIFIC CHEMICAL IS GRANTED BY THE STATE. IN GRANTING THE USE OF SUCH CHEMICALS, SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- 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 LAND DISTURBANCE HAS BEEN COMPLETED. DISTURBED AREAS WHICH ARE NOT AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN FOURTEEN (14) DAYS SHALL BE ROUGHENED, MULCHED, TACKIFIED, OR STABILIZED WITH TARPS WITHIN FOURTEEN (14) DAYS AFTER INTERIM GRADING. AN AREA THAT IS GOING TO REMAIN IN AN INTERIM STATE FOR MORE THAN SIXTY (60) DAYS SHALL ALSO BE SEEDED, UNLESS AN ALTERNATIVE STABILIZATION MEASURE IS ACCEPTED AT THE INSPECTOR'S DISCRETION. ALL TEMPORARY CONSTRUCTION CONTROL MEASURES SHALL BE MAINTAINED UNTIL FINAL STABILIZATION IS ACHIEVED.
- THE GEC PLAN WILL BE SUBJECT TO RE-REVIEW AND RE-ACCEPTANCE BY THE STORMWATER ENTERPRISE SHOULD ANY OF THE FOLLOWING OCCUR: GRADING DOES NOT COMMENCE WITHIN TWELVE (12) MONTHS OF THE CITY'S ACCEPTANCE OF THE PLAN, THE CONSTRUCTION SITE IS IDLE FOR TWELVE (12) CONSECUTIVE MONTHS, A CHANGE IN PROPERTY OWNERSHIP OCCURS, THE PLANNED DEVELOPMENT CHANGES, OR ANY OTHER MAJOR MODIFICATIONS ARE PROPOSED AS DEFINED IN THE STORMWATER CONSTRUCTION MANUAL.
- IT IS NOT PERMISSIBLE FOR ANY PERSON TO MODIFY THE GRADE OF THE EARTH ON ANY UTILITY EASEMENT OR UTILITY RIGHT OF-WAY WITHOUT WRITTEN APPROVAL FROM THE UTILITY OWNER. CITY ACCEPTANCE OF THE GEC PLAN AND CSWMP DOES NOT SATISFY THIS REQUIREMENT. THE PLAN SHALL NOT INCREASE OR DIVERT WATER TOWARDS UTILITY FACILITIES. ANY CHANGES TO EXISTING UTILITY FACILITIES TO ACCOMMODATE THE PLAN MUST BE APPROVED BY THE AFFECTED UTILITY OWNER PRIOR TO IMPLEMENTING THE PLAN. THE COST TO RELOCATE OR PROTECT EXISTING UTILITIES OR TO PROVIDE INTERIM ACCESS SHALL BE AT THE APPLICANT'S EXPENSE.
- APPLICANT REPRESENTS AND WARRANTS THAT THEY HAVE THE LEGAL AUTHORITY TO GRADE AND/OR CONSTRUCT IMPROVEMENTS ON ADJACENT PROPERTY. THE CITY HAS NOT REVIEWED THE DEVELOPER'S AUTHORITY TO MODIFY ADJACENT PROPERTY. AN APPROVED GEC PERMIT DOES NOT PROVIDE APPROVAL FOR THE APPLICANT TO PERFORM WORK ON ADJACENT PROPERTY.

STANDARD GEC PLAN NOTES - EL PASO COUNTY

- 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 LOOSENED 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 [COMPANY NAME, DATE OF REPORT] 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

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No.	DATE	DESCRIPTION	BY	
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**60% DESIGN PLANS**

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LANDHUIS COMPANY				
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN				
GENERAL NOTES				
DESIGNED BY:	JDH	SCALE	DATE ISSUED:	JANUARY 2023
DRAWN BY:	TKM	HORIZ	N/A	
CHECKED BY:	AJS	VERT.	N/A	SHEET
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 21.1129.009				DRAWING No. GN01
				03 OF 22



Know what's below.  
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**NOTES ON WORKING IN WATERWAYS**

- CONSTRUCTION VEHICLES SHOULD BE KEPT OUT OF A WATERWAY TO THE MAXIMUM EXTENT PRACTICABLE.
- WHERE IN-CHANNEL WORK IS NECESSARY, STEPS SUCH AS TEMPORARY CHANNEL DIVERSIONS MUST BE TAKEN TO STABILIZE THE WORK AREA AND CONTROL EROSION DURING CONSTRUCTION.
- WHERE AN ACTIVELY-FLOWING WATERCOURSE MUST BE CROSSED REGULARLY BY CONSTRUCTION VEHICLES, A TEMPORARY CROSSING SHOULD BE PROVIDED. THREE PRIMARY METHODS ARE AVAILABLE: (1) A CULVERT CROSSING, (2) TEMPORARY BRIDGE, AND (3) A STREAM FORD. SEE THE TEMPORARY STREAM CROSSING FACT SHEETS.
- WHERE AN ACTIVELY-FLOWING WATERCOURSE MUST BE CROSSED REGULARLY BY CONSTRUCTION VEHICLES, A TEMPORARY CROSSING SHOULD BE PROVIDED. THREE PRIMARY METHODS ARE AVAILABLE: (1) A CULVERT CROSSING, (2) TEMPORARY BRIDGE, AND (3) A STREAM FORD. SEE THE TEMPORARY STREAM CROSSING FACT SHEETS.
- A PERMIT IS REQUIRED FOR PLACEMENT OF FILL IN A WATERWAY UNDER SECTION 404 OF THE CLEAN WATER ACT. THE LOCAL OFFICE OF THE USACE SHOULD BE CONTACTED CONCERNING THE REQUIREMENTS FOR OBTAINING A 404 PERMIT. IN ADDITION, A PERMIT FROM USFWS MAY BE NEEDED IF THREATENED OR ENDANGERED SPECIES ARE OF CONCERN IN THE WORK AREA. TYPICALLY, THE USFWS ISSUES ARE ADDRESSED IN CONJUNCTION WITH THE 404 PERMIT IF ONE IS REQUIRED. A FLOODPLAIN DEVELOPMENT PERMIT AND OTHER LOCAL PERMITS MAY ALSO BE REQUIRED.
- WHEN WORK TAKES PLACE WITHIN A CHANNEL, A TEMPORARY WATER DIVERSION TO BYPASS THE WORK AREA IS TYPICALLY REQUIRED. SEE THE DIVERSION CHANNEL/DITCH BMP FACT SHEET FOR CRITERIA AND DESIGN DETAILS.
- TO THE EXTENT PRACTICAL, CONSTRUCTION IN A WATERWAY SHOULD BE SEQUENCED TO BEGIN AT THE MOST DOWNSTREAM POINT AND WORK PROGRESSIVELY UPSTREAM INSTALLING REQUIRED CHANNEL AND GRADE CONTROL FACILITIES.
- COMPLETE WORK IN SMALL SEGMENTS, EXPOSING AS LITTLE OF THE CHANNEL AT A TIME AS PRACTICAL. KEEP EQUIPMENT OPERATORS CONTAINED IN IMMEDIATE WORK AREA AND AVOID EXCESSIVE COMPACTING OF THE SOIL SURFACE BECAUSE IT INHIBITS REVEGETATION.
- WHERE FEASIBLE, IT IS BEST TO PERFORM IN-CHANNEL WORK BETWEEN OCTOBER 1 AND MARCH 31 IN COLORADO. THIS IS THE PERIOD WHEN THE CHANCES OF FLASH FLOODS AND FLOWS HIGHER THAN THE 2-YEAR FLOOD PEAK FLOWS ARE LESS LIKELY.
- DURING THE PROCESS OF CUT AND FILL, AVOID LETTING SIDE-CAST OR WASTE MATERIAL ENTER WATERWAYS OR PLACING IT ON UNSTABLE AREAS. INSTEAD, EFFICIENTLY MOVE EXCAVATED MATERIAL TO AREAS NEEDING FILL OR TO A STOCKPILE. FOR STREAM RESTORATION/STABILIZATION PROJECTS, CONSULTING WITH A FLUVIAL GEOMORPHOLOGIST ON STREAM STABILITY ISSUES MAY BE PRUDENT.

**GRADING NOTES:**

- FINISH GRADES: FINISHED GRADE ELEVATION SHALL BE ESTABLISHED FROM THE PROPOSED CONTOURS SHOWN ON THE GRADING PLANS. DEPTHS AND DIMENSIONS SHOWN ON THE PLAN, SECTIONS, AND PROFILES SUPERSEDE PROPOSED CONTOURS SHOWN ON THE GRADING PLANS. ACCEPTABLE GRADING TOLERANCES ARE +/- 0.20 FEET OUTSIDE OF THE BANKFULL CHANNEL AND +/- 0.10 FEET WITHIN THE BANKFULL CHANNEL.
- FILL MATERIAL: MATERIALS USED FOR FILL OR EMBANKMENT CONSTRUCTION SHALL CONSIST OF APPROVED GRANULAR SOIL MATERIAL ACQUIRED FROM PROJECT EXCAVATIONS OR FROM OFF-SITE SOURCES. EXCAVATED WEATHERED AND UNWEATHERED BED ROCK MATERIALS SHALL NOT BE USED AS FILL MATERIAL UNLESS OTHERWISE APPROVED. FROZEN MATERIALS SHALL NOT BE USED IN CONSTRUCTION OF EMBANKMENTS. EXCESS EXCAVATED NATIVE SOILS WHICH ARE NOT USED AS EMBANKMENT OR BACKFILL SHALL BE STOCKPILED AS DIRECTED BY THE OWNER.
  - SUITABLE ON-SITE AND IMPORTED FILL MATERIAL SHALL MEET THE FOLLOWING GRADATION REQUIREMENTS:

Standard Sieve Size	Percent Passing	
	Embankment Fill Material	Channel Fill Material
3 inch	100	100
No. 200	5-20	5-20
Liquid Limit	30 or less	Not Plastic
Plasticity Index	10 or less	Not Plastic

- IN-PLACE MOISTURE DENSITY TESTS WILL BE PERFORMED TO ENSURE THAT FILL COMPLIES WITH CITY OF COLORADO SPRINGS STANDARDS.

**GENERAL GEC PLAN NOTES:**

- PROPERTY LINES, PARCEL NUMBERS, AND PROPERTY OWNERSHIP SHOWN IN DESIGN PLANS ON SHEET EX01-02
- EXISTING VEGETATION IS NO NOTABLE SPECIES (GRASSES AND WEEDS).
- PROPOSED REVEGETATION AND EROSION CONTROL FABRIC EXTENTS PROVIDED IN THE DESIGN PLANS.
- EXISTING AND PROPOSED FEMA 100-YEAR FLOODPLAINS ARE SHOWN ON EX01-02 AND DR01-02, RESPECTIVELY
- PROJECT STAGING WILL BE NOTED IN LATER DESIGN PLANS. FULL PROJECT BUILD OUT SHOWN FOR 60% SUBMITTAL.

**RECEIVING WATERS:**

EAST FORK JIMMY CAMP CREEK IS A TRIBUTARY OF JIMMY CAMP CREEK, PART OF THE LARGER FOUNTAIN CREEK WATERSHED.

THIS WORK IS NOT LOCATED WITHIN THE CITY OF COLORADO SPRINGS STREAMSIDE OR HILLSIDE OVERLAY.

EXISTING 100-YEAR FEMA FLOODPLAIN SHOWN IN THE DESIGN PLANS.

THE EROSION CONTROL PLAN PRESENTED IN THESE DRAWINGS SERVES AS A MINIMUM FOR THE REQUIREMENTS OF EROSION CONTROL DURING CONSTRUCTION. THE CONTRACTOR HAS THE ULTIMATE RESPONSIBILITY FOR DEVELOPING AN ADEQUATE EROSION CONTROL PLAN THAT IS COMPATIBLE WITH THEIR PLAN FOR EXECUTING THE WORK AND FOR PROVIDING ADEQUATE EROSION CONTROL AND WATER QUALITY THROUGHOUT THE DURATION OF THE PROJECT. THEREFORE, IF THE PROVIDED PLAN IS NOT WORKING SUFFICIENTLY TO PROTECT THE PROJECT AREAS, THEN THE CONTRACTOR SHALL PROVIDE ADDITIONAL MEASURES AS REQUIRED TO OBTAIN THE REQUIRED PROTECTION.

DEWATERING / FLOW DIVERSION IS NOT SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS REGARDING DEWATERING / FLOW DIVERSION MEANS AND METHODS.

TEMPORARY SEDIMENT PONDS NOT SHOWN. IF REQUIRED, IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO COMPLY WITH LOCAL, STATE, AND FEDERAL RULES AND REGULATIONS REGARDING SEDIMENT PONDS MEANS AND METHODS.

IF ADDITIONAL STAGING AREAS, STOCKPILES, OR CONCRETE WASHOUT AREAS ARE REQUIRED, THE CONTRACTOR MUST COMPLY WITH ALL APPLICABLE REGULATIONS. ADDITIONAL AREAS MUST NOT RESULT IN ADDITIONAL LAND DISTURBANCE.

- NON-STRUCTURAL CONTROL MEASURES INCLUDE:**
- SEASONAL PLANNING CONSIDERATIONS
  - LIMITING OF DISTURBED AREAS

TOTAL LIMITS OF DISTURBANCE: 159.2 AC.  
ANTICIPATED CONSTRUCTION: WINTER 2023  
ANTICIPATED FINAL STABILIZATION: 2024

**NOTE:**

- THE FOLLOWING ITEMS ARE NOT APPLICABLE TO THESE PLANS:
- NO BUILD AREAS
  - ASPHALT, CONCRETE BATCH PLANTS, AND/OR MASONRY MIX STATIONS
  - PRESERVATION EASEMENTS

**OPINION OF PROBABLE EROSION CONTROL COST**

1. VEHICLE TRACKING CONTROL (3) EACH AT \$1,325.00	\$ 3,975.00
2. EROSION CONTROL BLANKET, COCONUT (500,354) SY AT \$6.00	\$3,002,124.00
3. EROSION CONTROL BLANKET, KOIR (66,832) ST AT \$20.00	\$1,336,640.00
4. SILT FENCE (1,423) LF AT \$2.50	\$ 3,557.50
5. CONCRETE WASHOUT AREA (4) EACH AT \$1,535.00	\$ 6,140.00
6. CHECK DAM (3) EACH AT \$386.00	\$ 1,158.00
	<b>SUB TOTAL \$4,353,594.50</b>
MAINTENANCE CONTINGENCY (40%)	\$1,741,437.80
	<b>TOTAL \$6,095,032.30</b>

**STANDARD SYMBOLS**

- CENTER LINE
- EXISTING CONTOURS
- PROPOSED CONTOURS

**LEGEND**

- EXISTING PROPERTY LINE
- EXISTING WATER LINE
- EXISTING FENCE LINE
- EXISTING EASEMENT
- EXISTING OVERHEAD ELECTRIC LINE
- EXISTING GAS LINE
- PROPOSED SOIL RIPRAP
- PROPOSED SCULPTED CONCRETE DROP STRUCTURE
- FLOW DIRECTION

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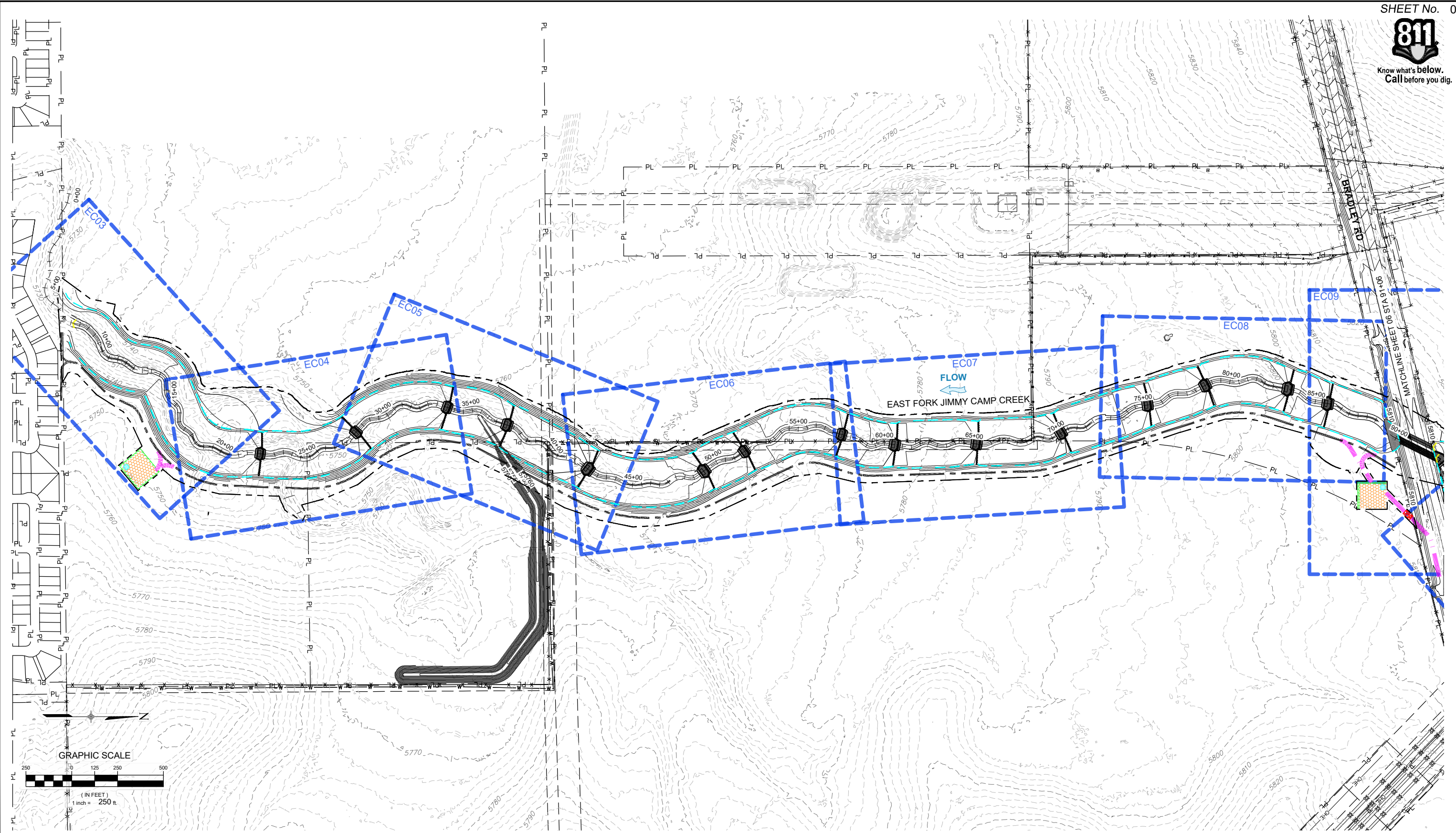
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<b>LANDHUIS COMPANY</b>			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
<b>GENERAL NOTES</b>			
DESIGNED BY: JDM	SCALE: N/A	DATE ISSUED: JANUARY 2023	DRAWING No. GN01
DRAWN BY: TKM	HORIZ: N/A	SHEET: 04 OF 22	
CHECKED BY: AJS	VERT: N/A		





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**LANDHUIS COMPANY**

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

**EROSION CONTROL OVERVIEW SHEET 1**

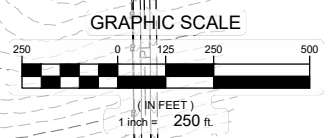
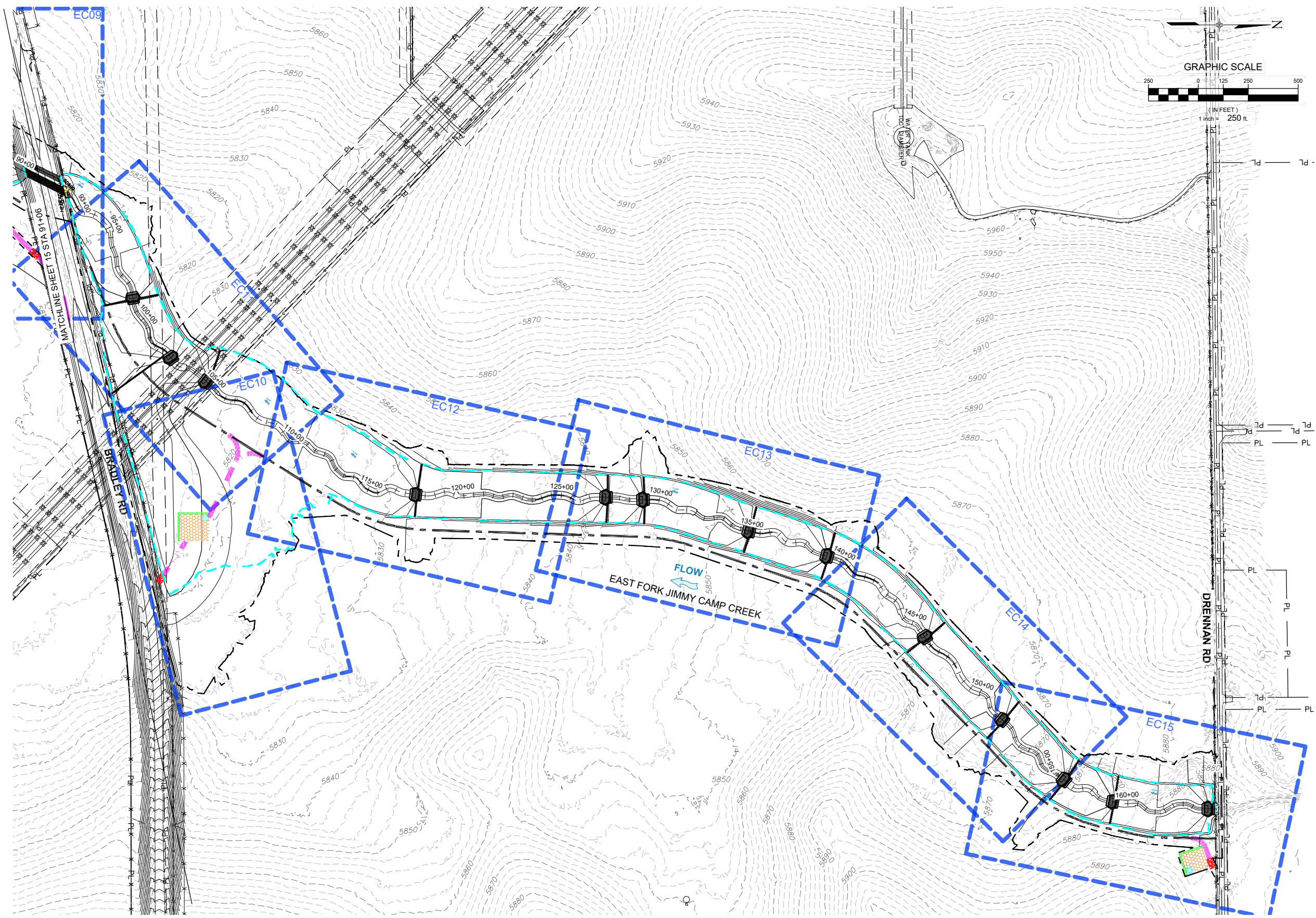
DESIGNED BY: TKM	SCALE: HORIZ 1" = 250'	DATE ISSUED: JANUARY 2023	DRAWING No. EC01
CHECKED BY: AJS	VERT. N/A	SHEET 05 OF 22	

FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 21.1129.009





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LANDHUIS COMPANY			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
EROSION CONTROL OVERVIEW SHEET 2			
DESIGNED BY: TKM	SCALE: 1" = 250'	DATE ISSUED: JANUARY 2023	DRAWING No. EC02
DRAWN BY: EAL	HORIZ: 1" = 250'	SHEET 06 OF 18	
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FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 21.1129.009





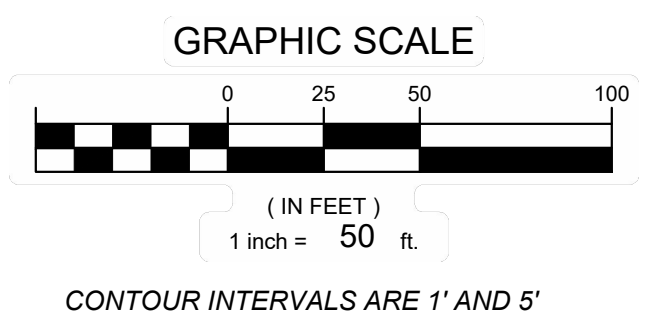
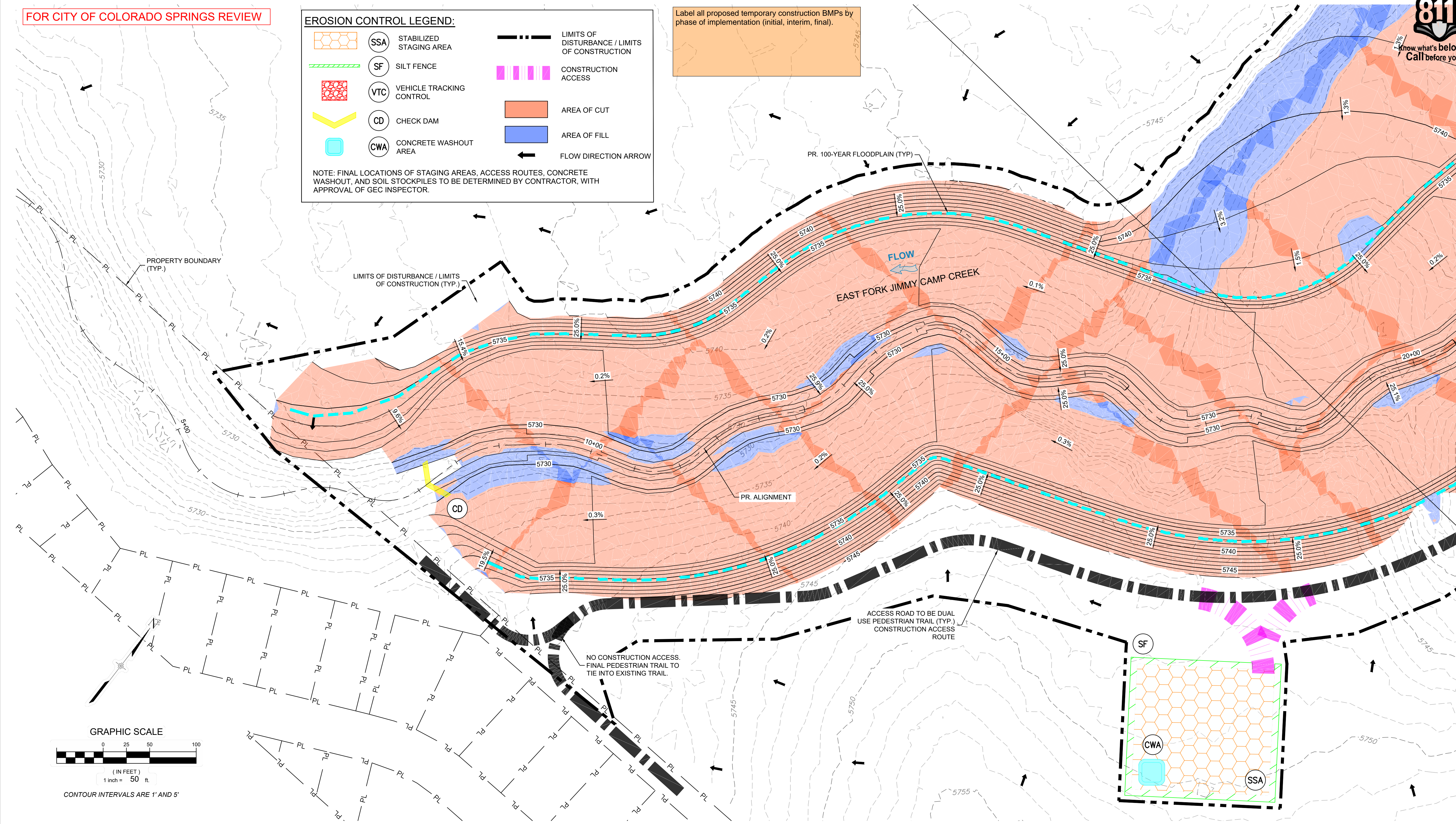
FOR CITY OF COLORADO SPRINGS REVIEW

**EROSION CONTROL LEGEND:**

	SSA	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	SF	SILT FENCE		CONSTRUCTION ACCESS
	VTC	VEHICLE TRACKING CONTROL		AREA OF CUT
	CD	CHECK DAM		AREA OF FILL
	CWA	CONCRETE WASHOUT AREA		FLOW DIRECTION ARROW

NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.

Label all proposed temporary construction BMPs by phase of implementation (initial, interim, final).



REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MD322x34			
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PREPARED BY:

Excellence by Design

LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE STA. 7+00 - 19+00

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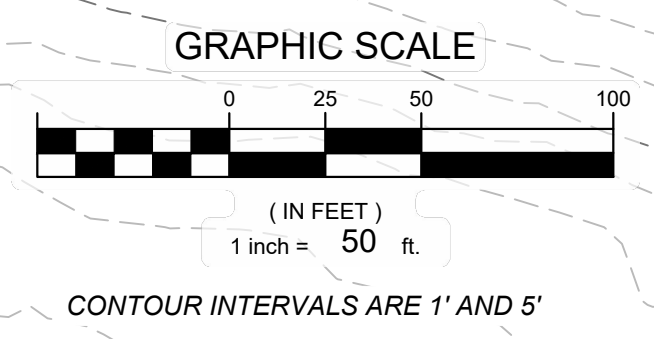
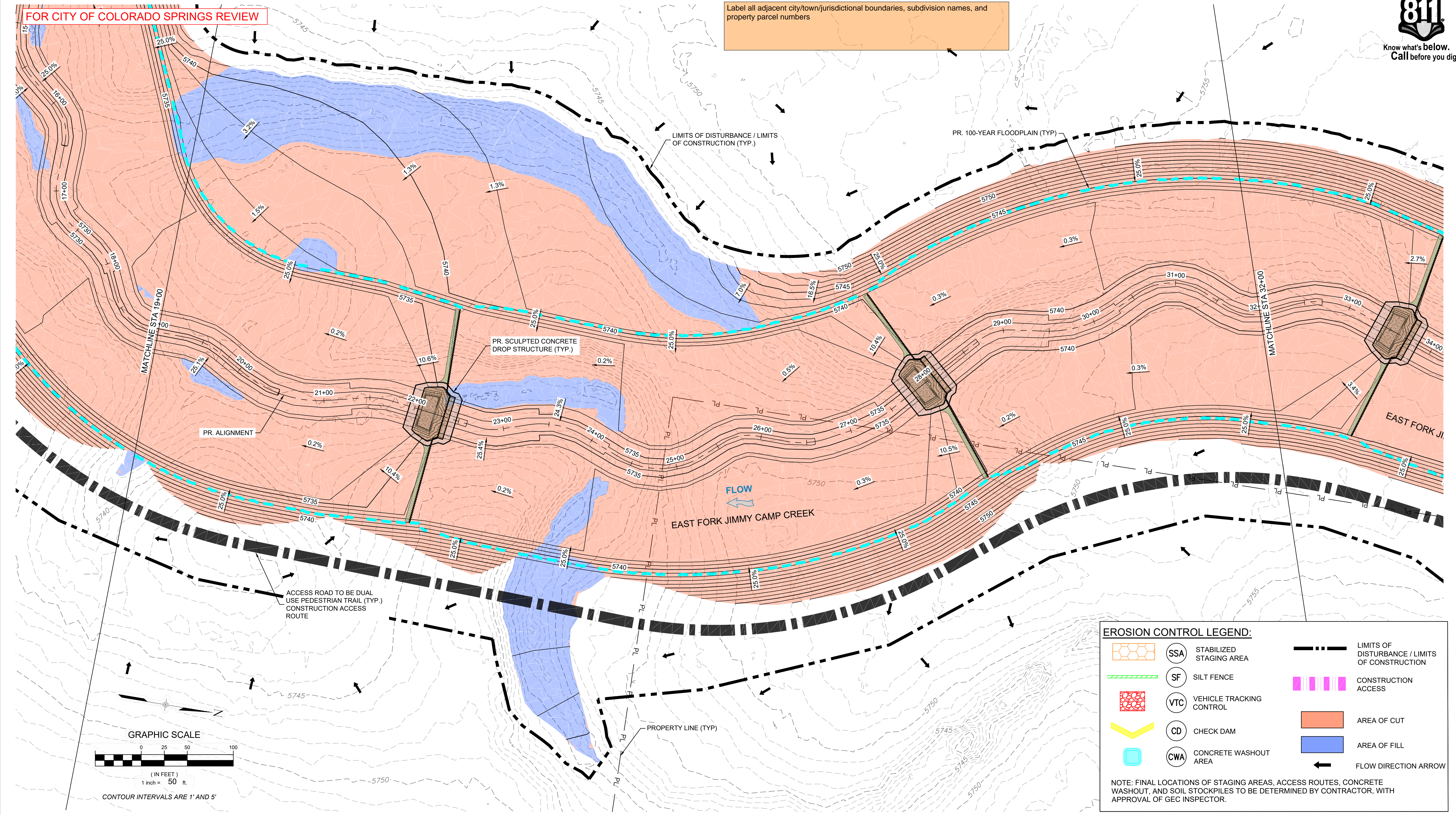




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Label all adjacent city/town/jurisdictional boundaries, subdivision names, and property parcel numbers

FOR CITY OF COLORADO SPRINGS REVIEW



**EROSION CONTROL LEGEND:**

	SSA	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	SF	SILT FENCE		CONSTRUCTION ACCESS
	VTC	VEHICLE TRACKING CONTROL		AREA OF CUT
	CD	CHECK DAM		AREA OF FILL
	CWA	CONCRETE WASHOUT AREA		FLOW DIRECTION ARROW

NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.

REFERENCE DRAWINGS			
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LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
STA. 19+00 - 32+00

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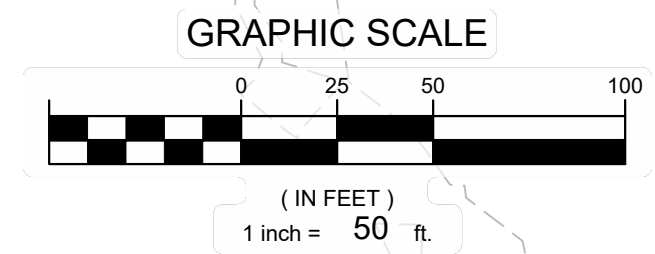
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FOR CITY OF COLORADO SPRINGS REVIEW - END CITY REVIEW STA 40+00, BEGIN COUNTY REVIEW

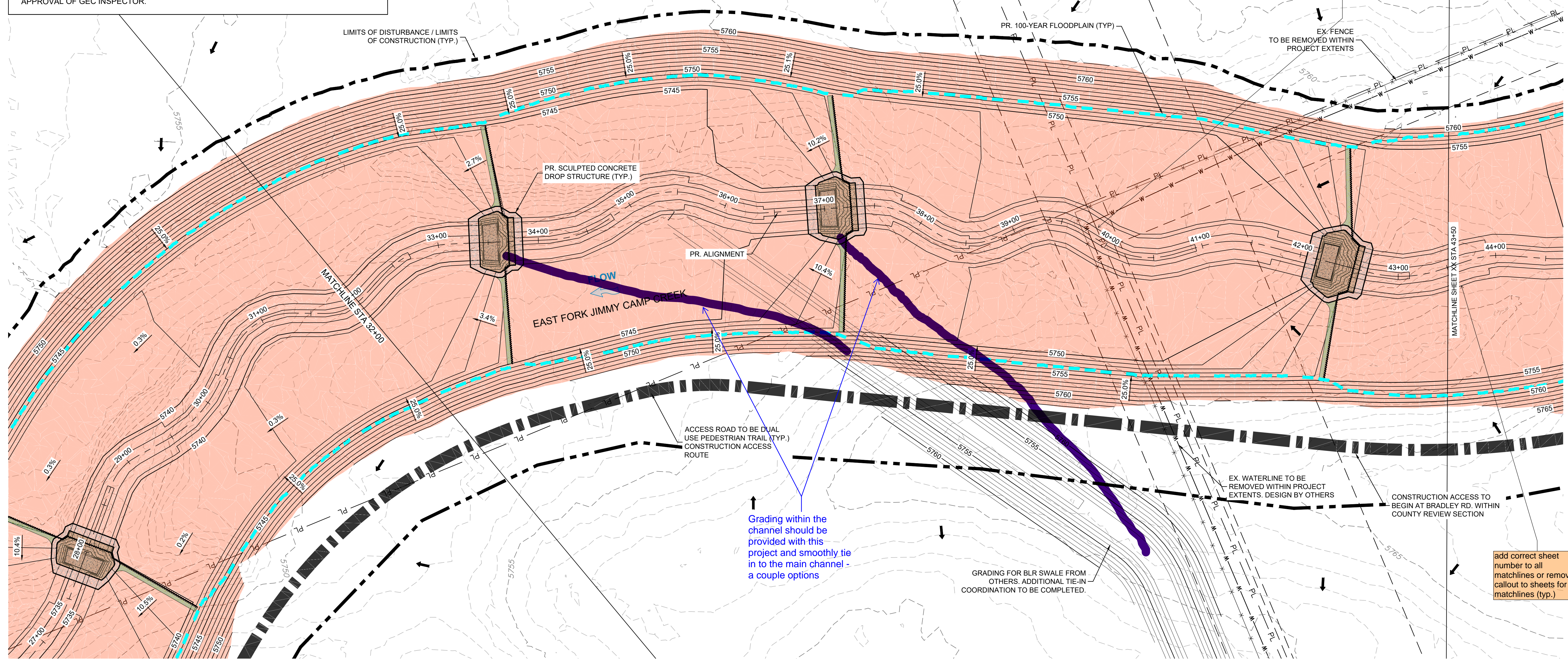
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NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.



Install Temporary Sediment Basin. Provide details of temporary sediment basin including riser pipe diameter and perforation sizing, number of rows of holes, required volume, location of outlet pipe and spillway, and tributary area to the sediment basin. And provide contours for sediment basin.



Grading within the channel should be provided with this project and smoothly tie in to the main channel - a couple options

GRADING FOR BLR SWALE FROM OTHERS. ADDITIONAL TIE-IN COORDINATION TO BE COMPLETED.

add correct sheet number to all matchlines or remove callout to sheets for all matchlines (typ.)

REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MDG22x34			
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PREPARED BY:

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LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
STA. 32+00 - 43+50

DESIGNED BY: TKM	SCALE: HORIZ 1" = 50'	DATE ISSUED: JANUARY 2023	DRAWING No. EC05
CHECKED BY: AJS	VERT. 1" = 20'	SHEET 09 OF 22	





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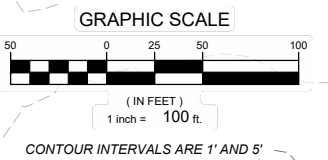
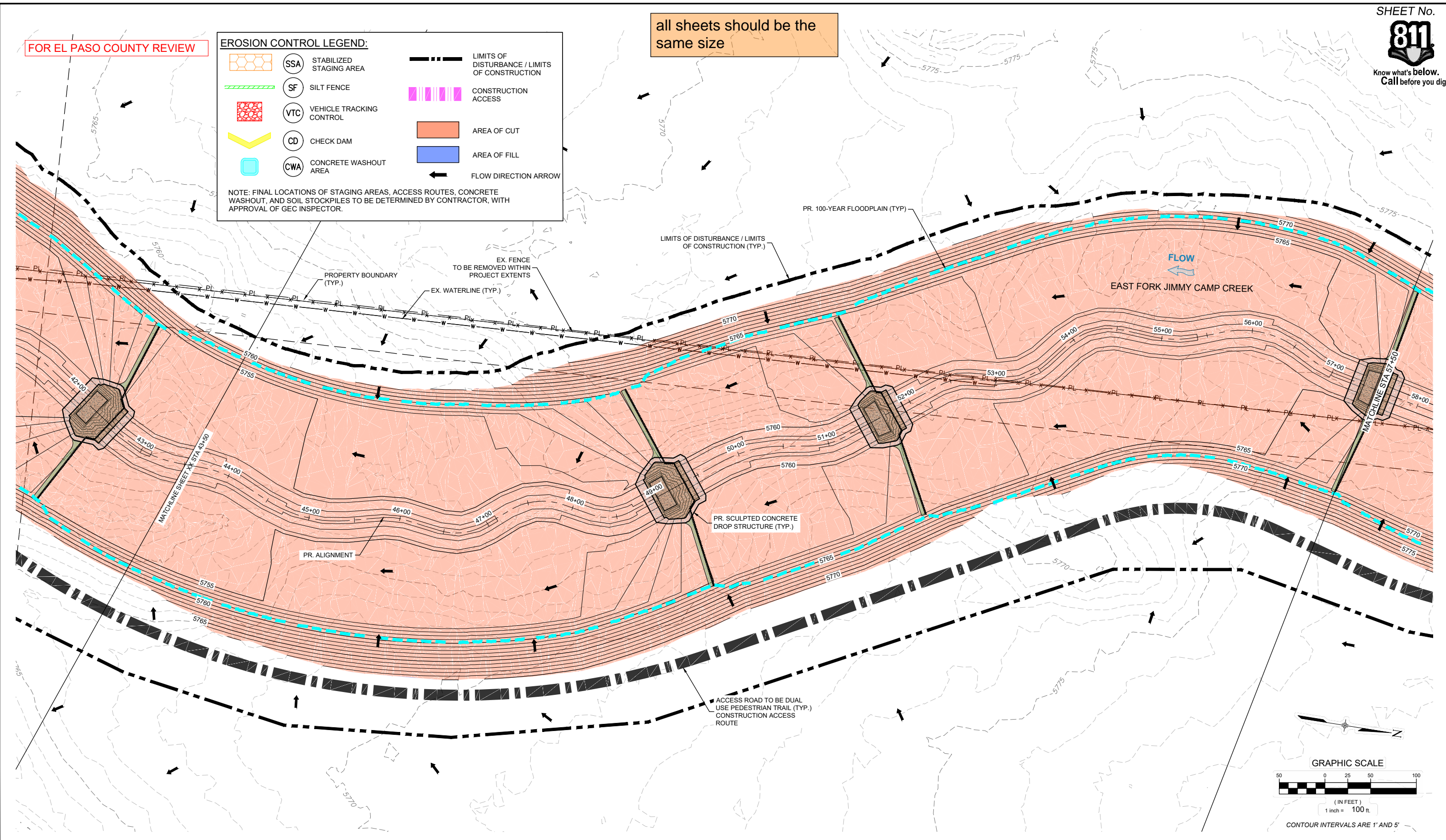
FOR EL PASO COUNTY REVIEW

**EROSION CONTROL LEGEND:**

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	SF	SILT FENCE		CONSTRUCTION ACCESS
	VTC	VEHICLE TRACKING CONTROL		AREA OF CUT
	CD	CHECK DAM		AREA OF FILL
	CWA	CONCRETE WASHOUT AREA		FLOW DIRECTION ARROW

NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.

all sheets should be the same size



REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MDQ22x34			
No.	DATE	DESCRIPTION REVISIONS	BY
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LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
STA. 43+50 - 57+50

DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: JANUARY 2023	DRAWING No. EC06
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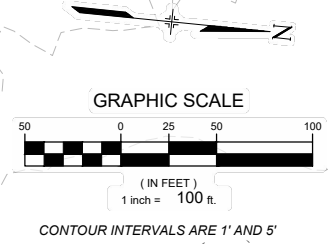
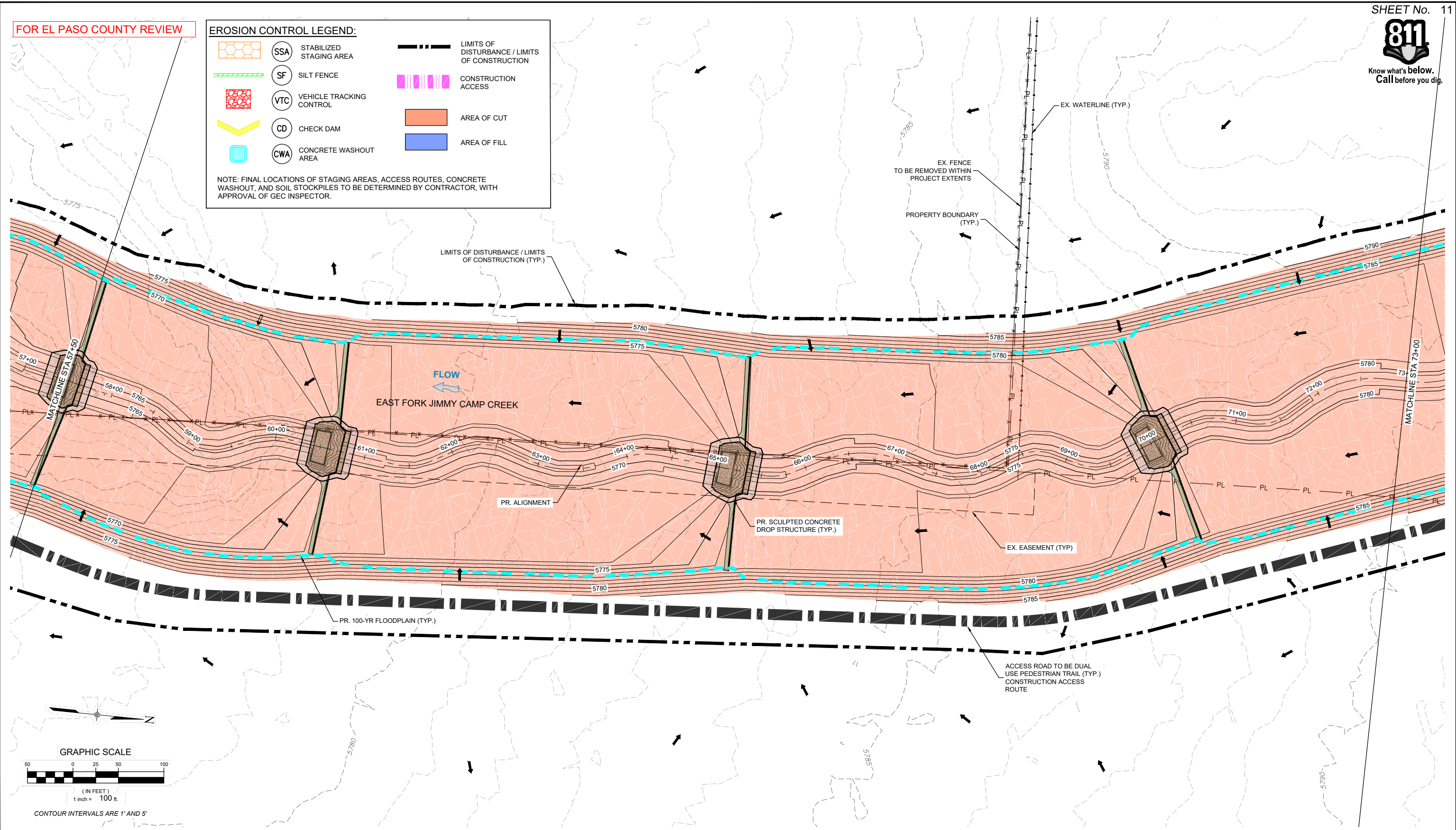
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FOR EL PASO COUNTY REVIEW

**EROSION CONTROL LEGEND:**

	SSA	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	SF	SILT FENCE		CONSTRUCTION ACCESS
	VTC	VEHICLE TRACKING CONTROL		AREA OF CUT
	CD	CHECK DAM		AREA OF FILL
	CWA	CONCRETE WASHOUT AREA		

NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.



REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MDG22x34			
No.	DATE	DESCRIPTION REVISIONS	BY
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Excellence by Design

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LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
STA. 57+50 - 73+00

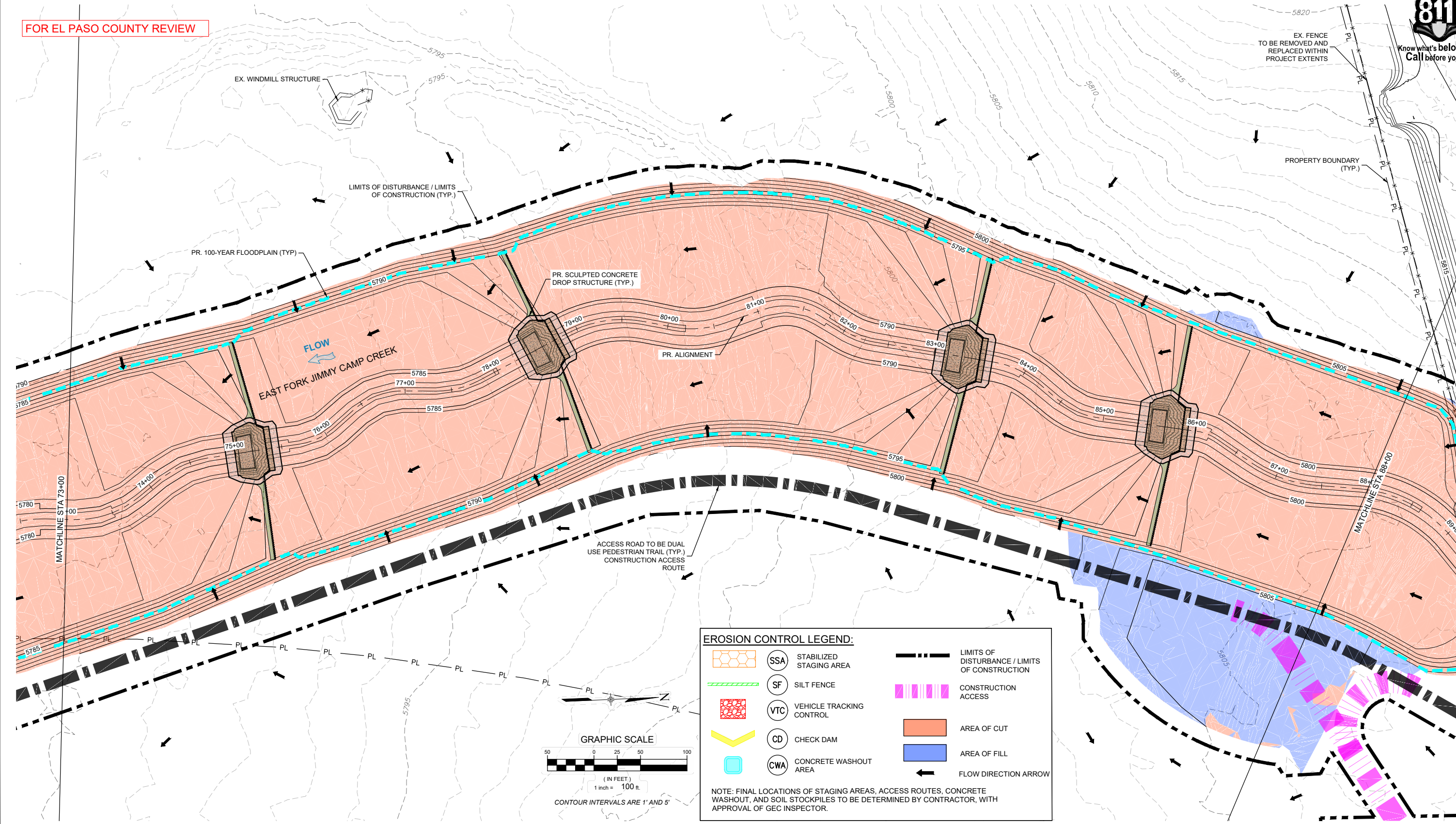
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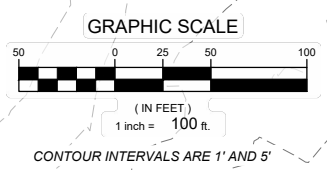
FOR EL PASO COUNTY REVIEW



**EROSION CONTROL LEGEND:**

	SSA	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	SF	SILT FENCE		CONSTRUCTION ACCESS
	VTC	VEHICLE TRACKING CONTROL		AREA OF CUT
	CD	CHECK DAM		AREA OF FILL
	CWA	CONCRETE WASHOUT AREA		FLOW DIRECTION ARROW

NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.



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FOR AND ON BEHALF OF  
 MATRIX DESIGN GROUP, INC.  
 PROJECT No. 21.1129.009

LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
 STA. 73+02 - 88+26

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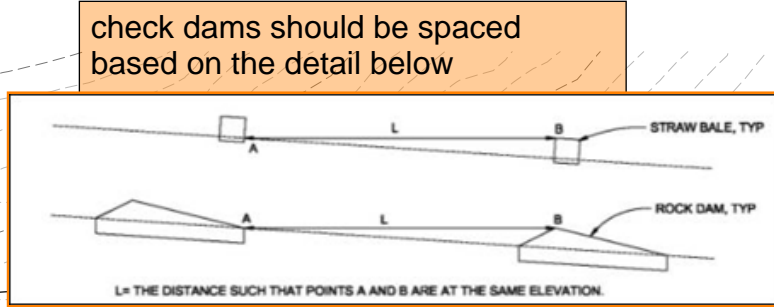


FOR EL PASO COUNTY REVIEW

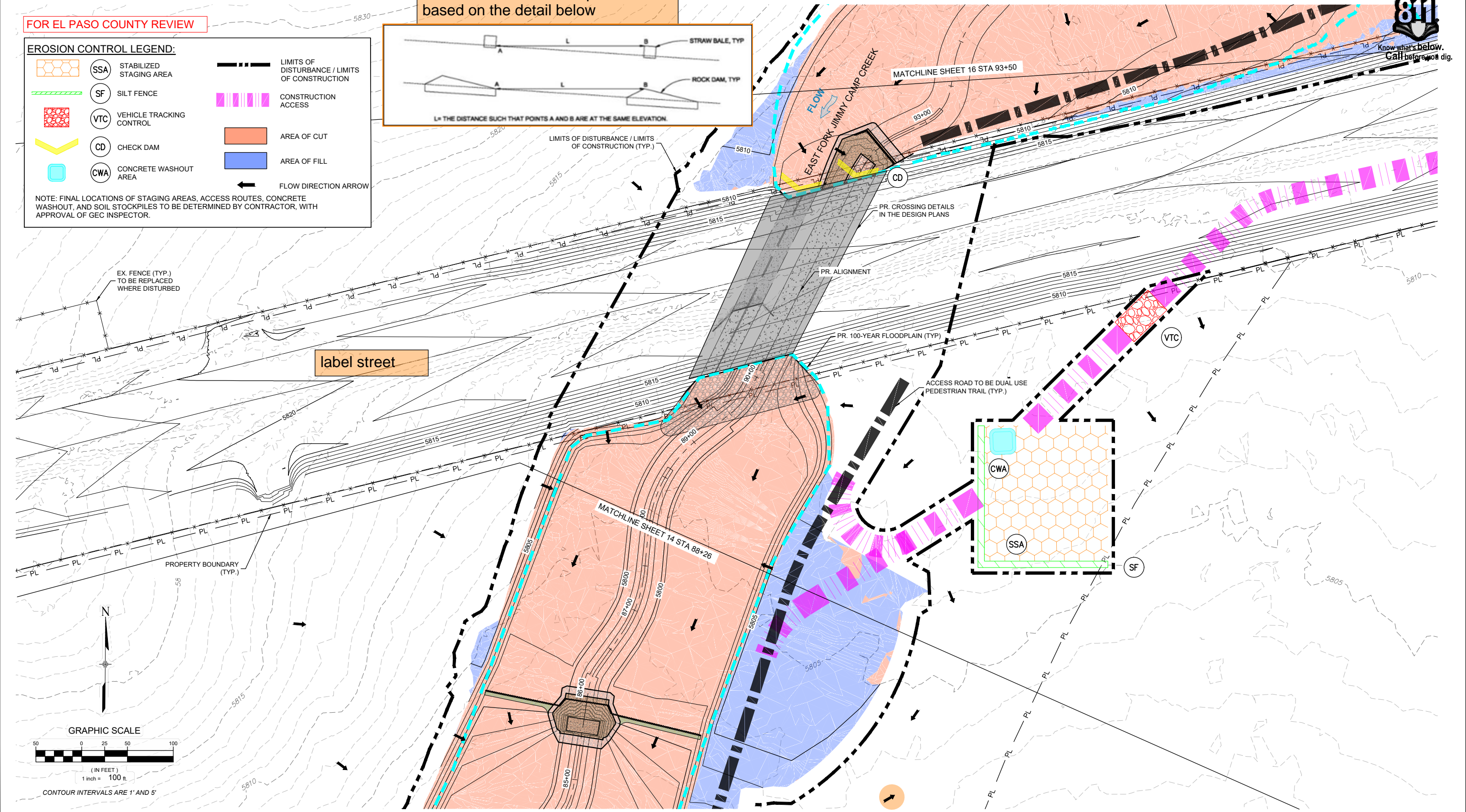
**EROSION CONTROL LEGEND:**

- SSA STABILIZED STAGING AREA
- SF SILT FENCE
- VTC VEHICLE TRACKING CONTROL
- CD CHECK DAM
- CWA CONCRETE WASHOUT AREA
- LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
- CONSTRUCTION ACCESS
- AREA OF CUT
- AREA OF FILL
- FLOW DIRECTION ARROW

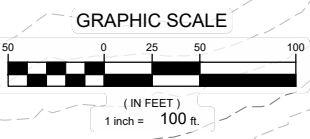
NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.



check dams should be spaced based on the detail below



label street



CONTOUR INTERVALS ARE 1' AND 5'

REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MDG22x34			
No.	DATE	DESCRIPTION REVISIONS	BY
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FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 21.1129.009

LANDHUIS COMPANY			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
PLAN AND PROFILE STA. 88+26 - 93+50			
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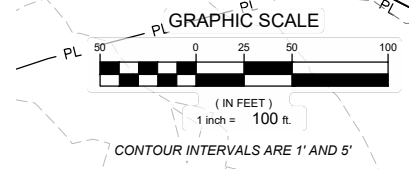
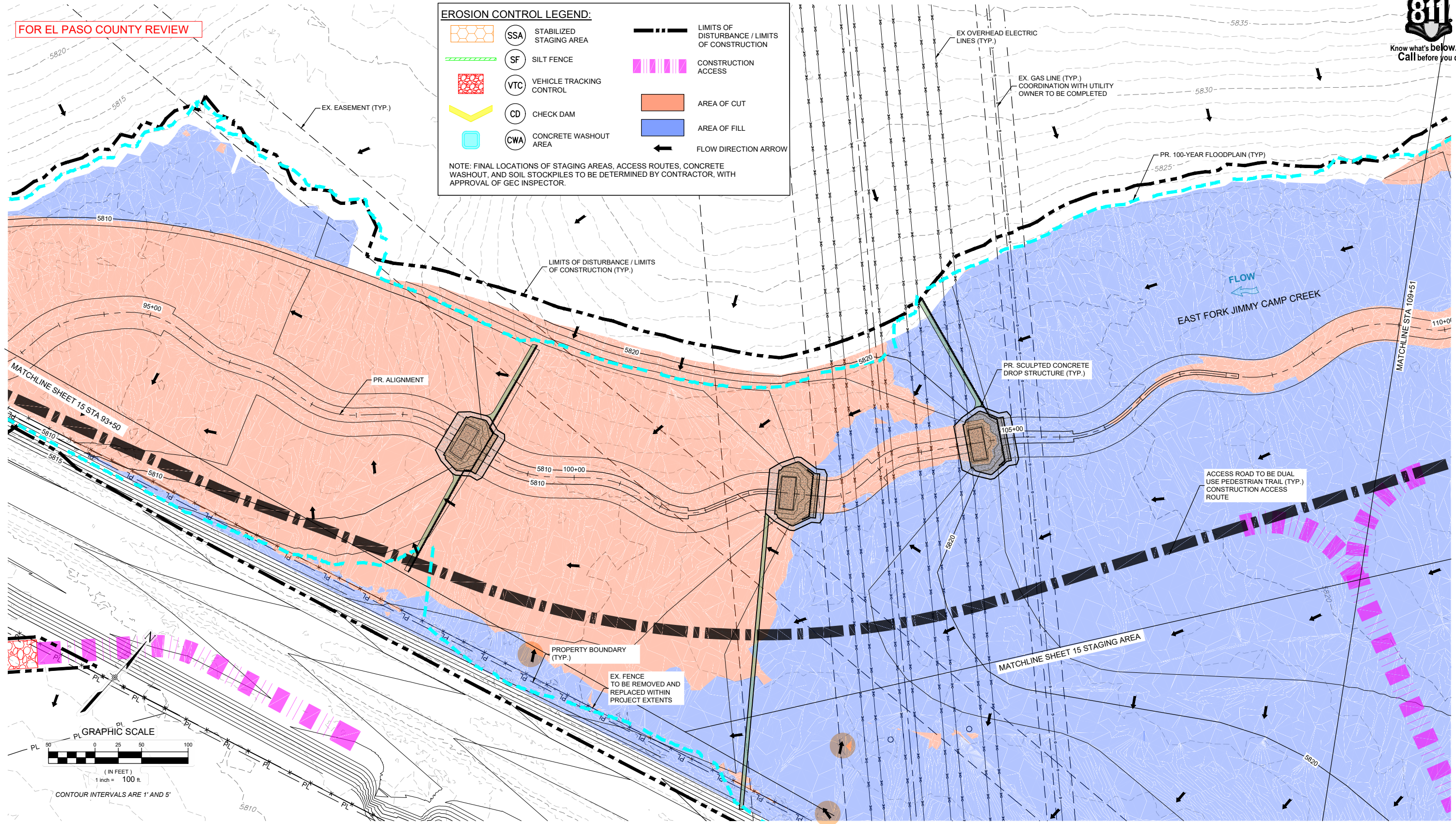
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FOR EL PASO COUNTY REVIEW

**EROSION CONTROL LEGEND:**

	SSA STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	SF SILT FENCE		CONSTRUCTION ACCESS
	VTC VEHICLE TRACKING CONTROL		AREA OF CUT
	CD CHECK DAM		AREA OF FILL
	CWA CONCRETE WASHOUT AREA		FLOW DIRECTION ARROW

NOTE: FINAL LOCATIONS OF STAGING AREAS, ACCESS ROUTES, CONCRETE WASHOUT, AND SOIL STOCKPILES TO BE DETERMINED BY CONTRACTOR, WITH APPROVAL OF GEC INSPECTOR.



No.	DATE	DESCRIPTION REVISIONS	BY

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THE LANDHUIS COMPANY

PREPARED BY:

Matrix  
Excellence by Design

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FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
STA. 93+50 - 109+51

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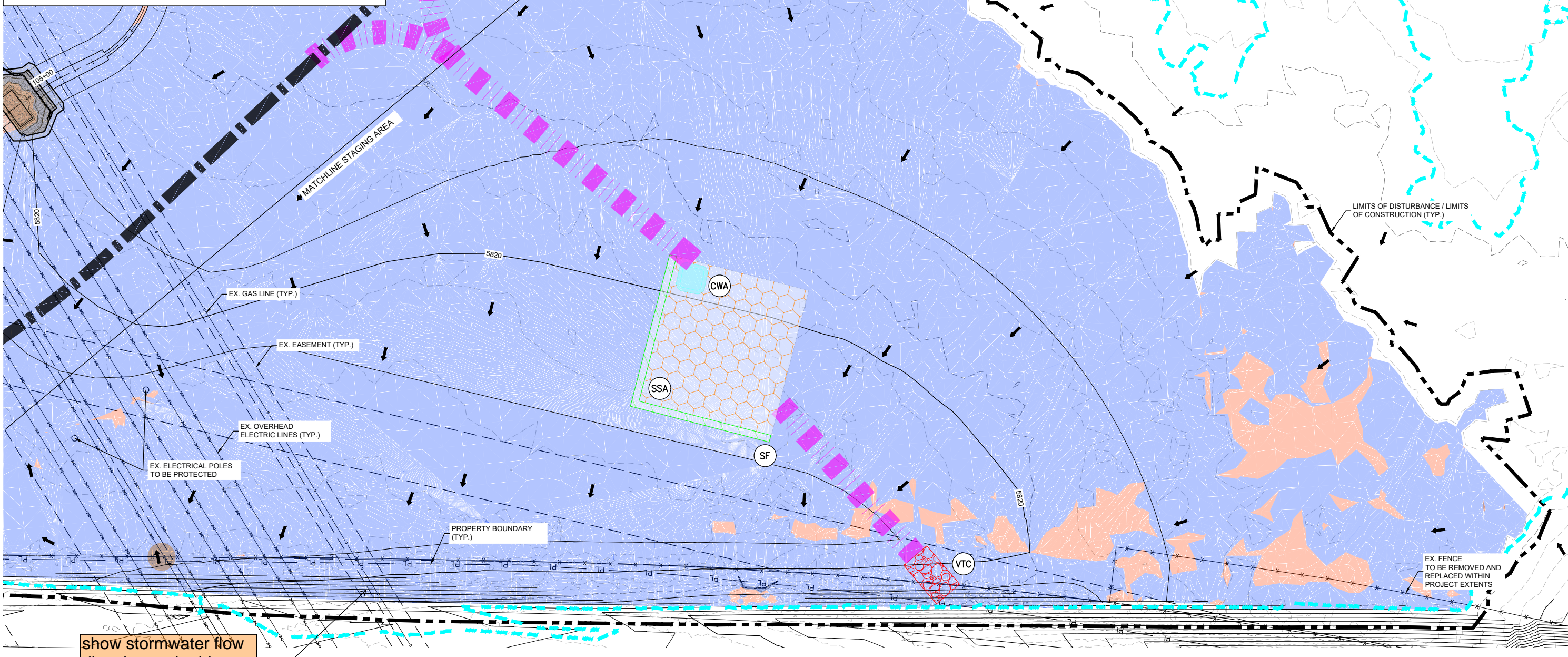
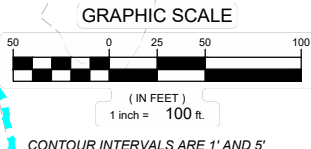
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FOR EL PASO COUNTY REVIEW

**EROSION CONTROL LEGEND:**

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	VTC VEHICLE TRACKING CONTROL		AREA OF CUT
	CD CHECK DAM		AREA OF FILL
	CWA CONCRETE WASHOUT AREA		FLOW DIRECTION ARROW

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show stormwater flow direction and add BMPs if flowing offsite to the south

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ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE STAGING AREA

DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: JANUARY 2023	DRAWING No. EC11
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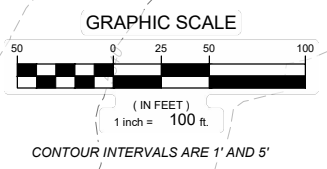
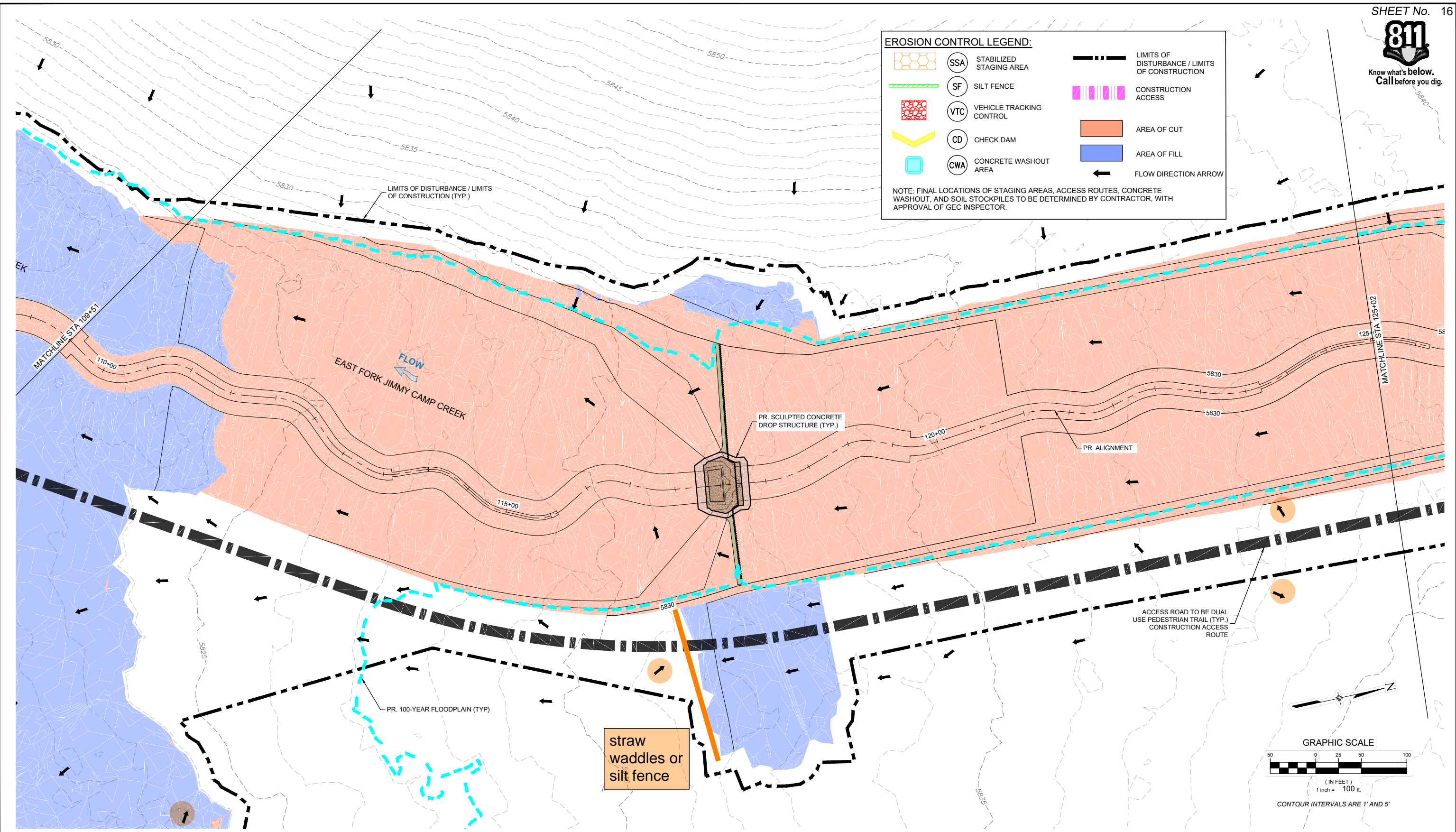


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**EROSION CONTROL LEGEND:**

	SSA	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	SF	SILT FENCE		CONSTRUCTION ACCESS
	VTC	VEHICLE TRACKING CONTROL		AREA OF CUT
	CD	CHECK DAM		AREA OF FILL
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No.	DATE	DESCRIPTION REVISIONS	BY

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THE LANDHUIS COMPANY

PREPARED BY:

Matrix  
 Excellence by Design

LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
 STA. 109+51 - 125+02

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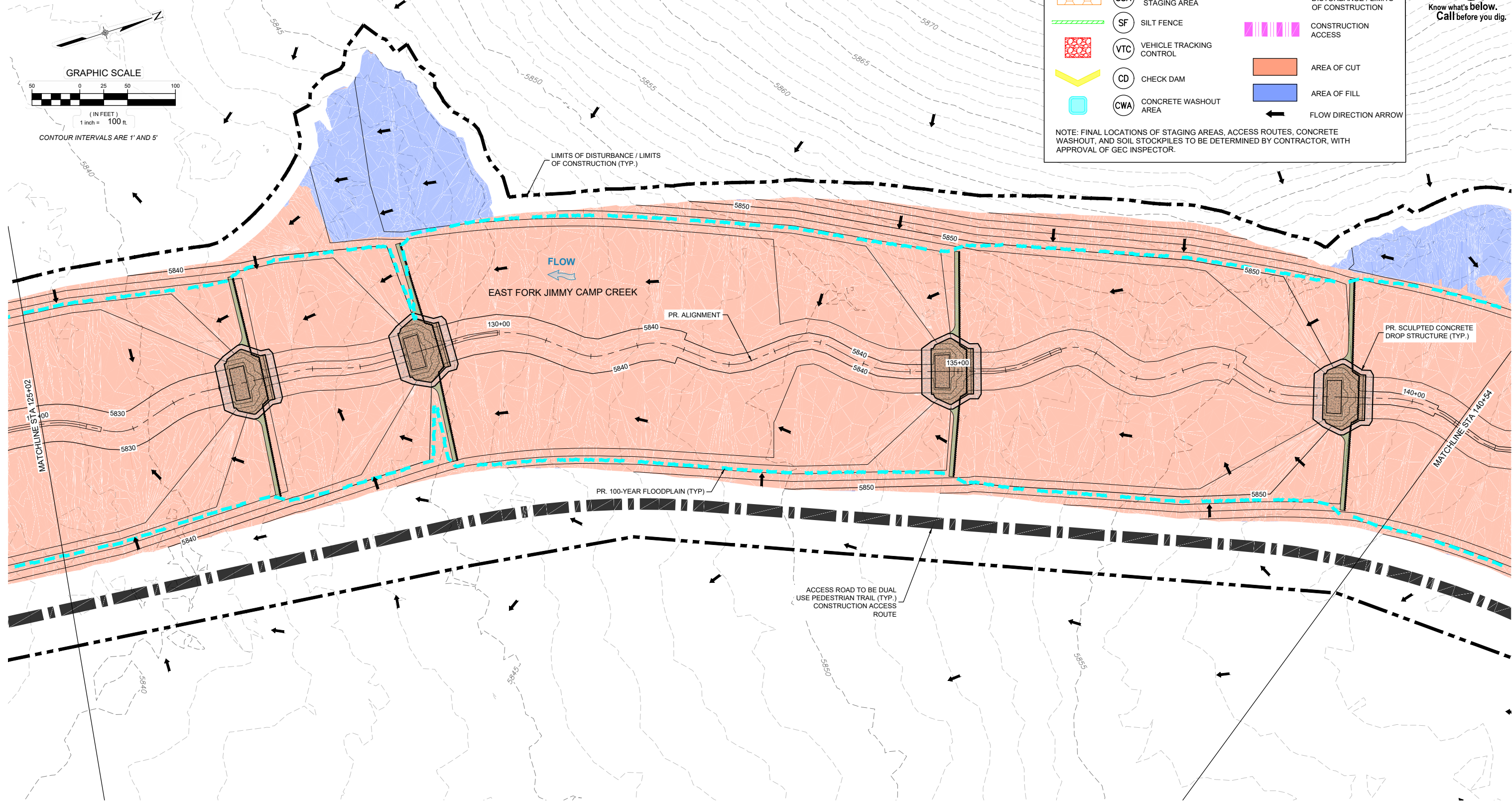
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FOR EL PASO COUNTY REVIEW

**EROSION CONTROL LEGEND:**

	SSA	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
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No.	DATE	DESCRIPTION REVISIONS	BY

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LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
 STA. 125+02 - 140+54

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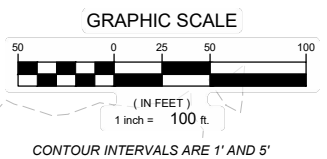
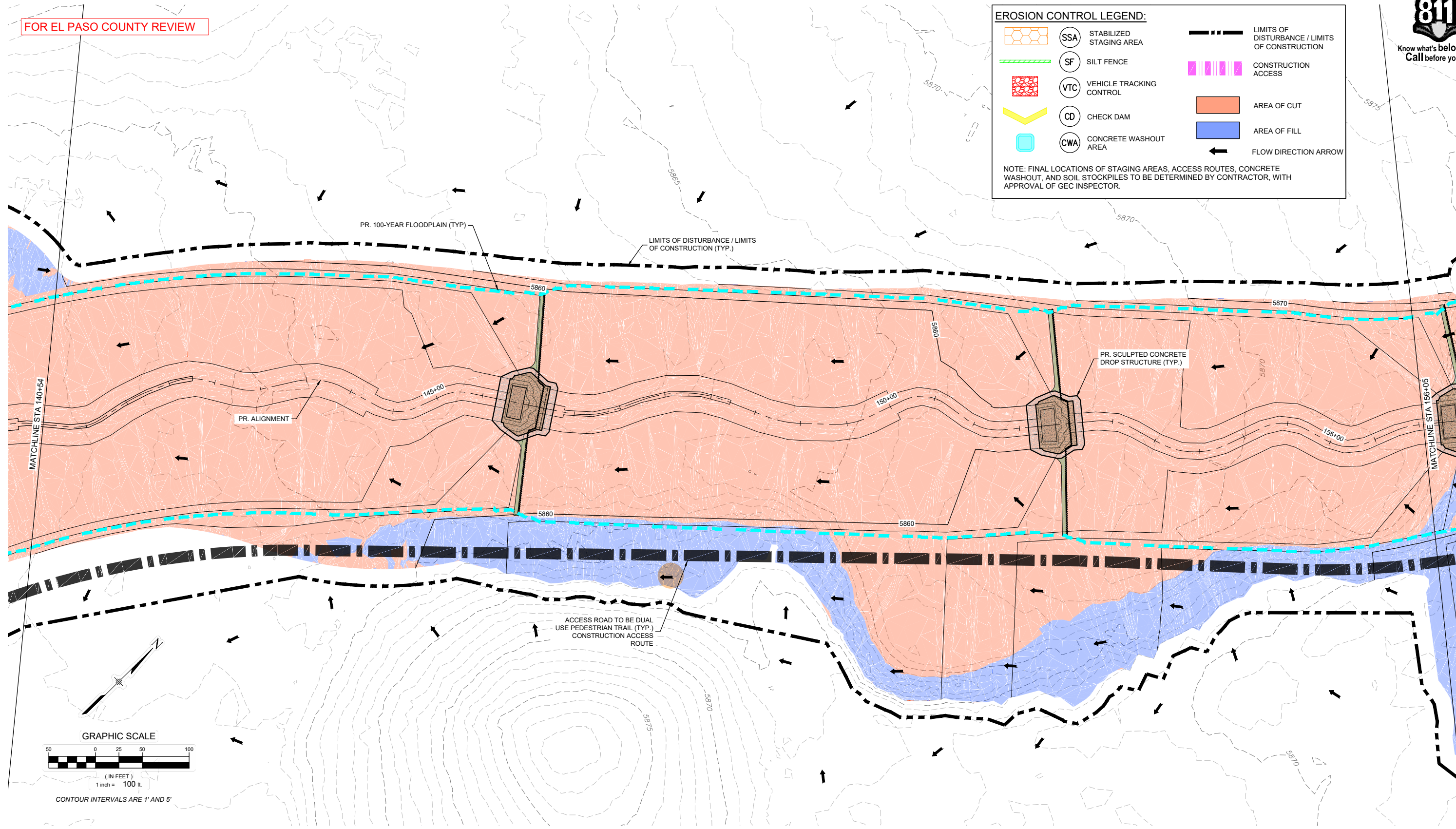
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**EROSION CONTROL LEGEND:**

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REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MDQ22x34			
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ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

**PLAN AND PROFILE**  
STA. 140+54 - 156+05

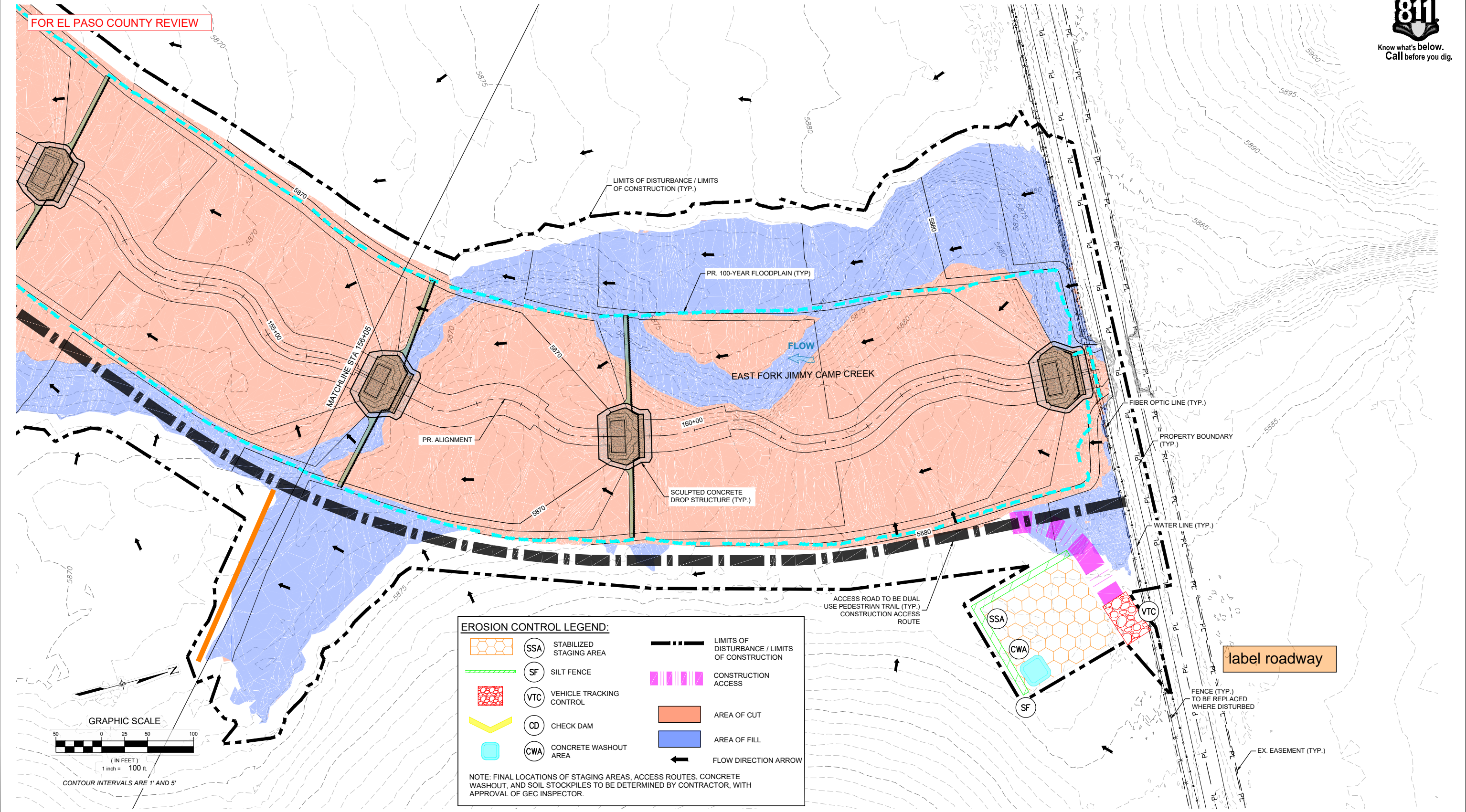
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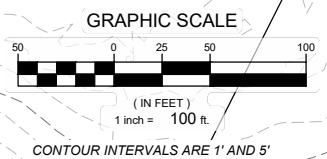
FOR EL PASO COUNTY REVIEW



**EROSION CONTROL LEGEND:**

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REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MDG22x34			
No.	DATE	DESCRIPTION REVISIONS	BY
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FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN

PLAN AND PROFILE  
STA. 156+05 - 164+73

DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: JANUARY 2023	DRAWING No. EC15
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Now what's below.  
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**EROSION CONTROL BLANKET**

STAKING PATTERN PER MANUFACTURER SPECIFICATION OR 18" O.C.  
OVERLAPPING JOINT  
6" OVERLAP  
6"x6" TRENCH (TYPICAL)  
KEY IN EDGES

PERIMETER ANCHOR TRENCH  
JOINT ANCHOR TRENCH  
INTERMEDIATE CHECK SLOT  
OVERLAPPING JOINT  
STAPLE CHECK TO BE USED ON SLOPE EVERY 15 FEET

INSTALLATION NOTES:  
1. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.  
2. 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.  
3. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.  
4. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.  
5. INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.  
6. 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.  
7. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.  
8. STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.  
9. COMPACT ALL TRENCHES.

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. EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE DEC INSPECTOR.  
3. 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.

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

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

**CHECK DAM ELEVATION VIEW**

LENGTH  
CREST LENGTH  
1'-6" MIN.  
1'-6" MIN.  
TOP OF CHECK DAM  
CHANNEL GRADE UPSTREAM AND DOWNSTREAM  
COMPACTED BACKFILL (TYPICAL)

**SECTION A-A'**  
1'-6" MIN.  
6" MIN.  
CHANNEL GRADE  
FLOW  
EXCAVATE TO HEAT LINE, AVOID OVER-EXCAVATION (TYPICAL)  
WOVEN GEOTEXTILE  
ANGULAR RIPRAP D<sub>50</sub>=12"

**SECTION B-B'**  
8" MIN.  
CHANNEL GRADE  
ANGULAR RIPRAP D<sub>50</sub>=12"

**PROFILE**  
SPACING BETWEEN CHECK DAMS SUCH THAT A AND B ARE EQUAL ELEVATION  
CHANNEL GRADE

INSTALLATION NOTES:  
1. CHECK DAMS SHOULD BE INSTALLED BEFORE UPSTREAM LAND DISTURBING ACTIVITIES.  
2. RIPRAP PAD SHOULD BE TRENCHED INTO GROUND BY A MINIMUM OF 6".

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 THE HEIGHT OF THE CHECK DAM CREST.  
3. CHECK DAMS MUST REMAIN UNTIL THE UPSTREAM DISTURBANCE AREA IS STABILIZED.  
4. PERMANENTLY STABILIZE AREA AFTER CHECK DAMS ARE REMOVED IF REMOVAL IS REQUIRED.

STORMWATER ENTERPRISE  
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-CD

**CONCRETE WASHOUT AREA PLAN**

CONCRETE WASHOUT SIGN  
8'x8' MIN.  
10' MIN.  
COMPACTED BERM (SEE TEMPORARY COMPACTED BERM DETAIL)

**SECTION A-A'**  
3' MIN.  
8'x8' MIN.  
2% SLOPE  
6" MINUS ROCK\*  
9"

\*ROCK REQUIRED BASED ON SITE CONDITIONS AT THE DISCRETION OF THE DEC INSPECTOR

STORMWATER ENTERPRISE  
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-CWA-1

**CONCRETE WASHOUT AREA**

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 (15 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 1/2 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. THE CONCRETE WASH AREA SHALL REMAIN IN PLACE UNTIL ALL CONCRETE FOR THE PROJECT IS PLACED.  
4. PERMANENTLY STABILIZE AREA AFTER CONCRETE WASH AREA IS REMOVED.

STORMWATER ENTERPRISE  
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-CWA-2

**EROSION CONTROL BLANKET**

INSTALLATION NOTES:  
1. 100% NATURAL AND BIODEGRADABLE MATERIALS ARE REQUIRED FOR EROSION CONTROL BLANKETS. TRM PRODUCTS MAY BE USED WHERE APPROPRIATE AS DESIGNATED BY THE ENGINEER.  
2. 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.  
3. PERIMETER ANCHOR TRENCH SHALL BE USED ALONG THE OUTSIDE PERIMETER OF ALL BLANKET AREAS.  
4. JOINT ANCHOR TRENCH SHALL BE USED TO JOIN ROLLS OF EROSION CONTROL BLANKETS TOGETHER (LONGITUDINALLY AND TRANSVERSELY) FOR ALL EROSION CONTROL BLANKETS.  
5. INTERMEDIATE CHECK SLOT OR STAPLE CHECK SHALL BE INSTALLED EVERY 15' DOWN SLOPES. IN DRAINAGEWAYS, INSTALL CHECK SLOTS EVERY 25' PERPENDICULAR TO FLOW DIRECTION.  
6. 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.  
7. ANY AREAS OF SEEDING AND MULCHING DISTURBED IN THE PROCESS OF INSTALLING EROSION CONTROL BLANKETS SHALL BE RESEEDED AND MULCHED.  
8. STRAW EROSION CONTROL BLANKETS SHALL NOT BE USED WITHIN STREAMS AND DRAINAGE CHANNELS.  
9. COMPACT ALL TRENCHES.

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. EROSION CONTROL BLANKETS SHALL BE LEFT IN PLACE TO EVENTUALLY BIODEGRADE. TRM MUST BE REMOVED AT THE DISCRETION OF THE DEC INSPECTOR.  
3. 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.

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

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

**EROSION CONTROL BLANKET NOT FOR USE IN CREEK INVERT.**

**STOCKPILE PROTECTION PLAN**

FLOW  
5' MIN.  
PERIMETER CONTROL

**STOCKPILE PROTECTION ELEVATION**

FLOW  
PERIMETER CONTROL  
STOCKPILE

INSTALLATION NOTES:  
1. INSTALL PERIMETER CONTROL AROUND STOCKPILE ON DOWNGRADIENT SIDE. PERIMETER CONTROL MUST BE SUITABLE TO SITE CONDITIONS AND INSTALLED ACCORDING TO THE RELEVANT DETAIL.  
2. 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  
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-SP

**SILT FENCE**

10' MAX. SPACING  
1 1/2" x 1 1/2" (RECOMMENDED) WOODEN FENCE POST WITH 10' MAX. SPACING  
18" MIN.  
18" MIN.  
35°-48°  
6" MIN.  
4" MIN.  
FLOW  
POSTS SHOULD OVERLAP SO THAT NO GAPS EXIST

**J-HOOK INSTALLATION**

JOIN FIRST  
THEN ROTATE

**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.  
5. THE PREFERRED INSTALLATION METHOD USES A TRENCHER OR SILT FENCE INSTALLATION DEVICE.  
6. 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  
ISSUED: 10/7/19 REVISED: 8/19/2020 DRAWING NO. 900-SF

No.	DATE	DESCRIPTION REVISIONS	BY
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Dwg\GESQC Plans\1129.009-ECDT01.dwg			
CTB FILE: Matrix(black).ctb			
PLOT DATE: 1/30/2023 11:16 AM			
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.			

**60% DESIGN PLANS**

NOTICE: THIS DOCUMENT IS RELEASED FOR THE PURPOSE OF INTERIM REVIEW UNDER THE AUTHORITY OF AARON SUTHERLIN, PE. IT IS NOT TO BE USED FOR CONSTRUCTION, BIDDING OR PERMIT PURPOSES.

THE LANDHUIS COMPANY

PREPARED BY: Matrix  
Excellence by Design

FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

DESIGNED BY: TKM  
DRAWN BY: EAL  
CHECKED BY: AJS

SCALE: HORIZ N/A  
VERT. N/A SHEET

DATE ISSUED: JANUARY 2023  
20 OF 22

DRAWING No. EC16

LANDHUIS COMPANY

ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN  
60% - MODIFICATION GRADING AND EROSION CONTROL PLAN

TYPICAL EROSION CONTROL DETAILS





Know what's below.  
Call before you dig.

Provide a copy of County VTC detail as it is different than City's.

### SM-10 Temporary Stream Crossing (TSC)

**AGGREGATE VEHICLE TRACKING CONTROL**

**SECTION A-A'**

**FORD CROSSING SECTION**

**SECTION A**

**TSC-2. FORD CROSSING**

**INSTALLATION NOTES**

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

**MAINTENANCE NOTES**

- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN CONTROL MEASURES IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- SEDIMENT TRACKED ONTO THE ADJACENT ROAD SHALL BE REMOVED DAILY, BY SWEEPING OR SHOVELING, AND NEVER WASHED DOWN STORM DRAINS.
- ROUGHEN, REPLACE AND/OR ADD ROCK AS NEEDED TO MAINTAIN CONSISTENT DEPTH AND TO PREVENT SEDIMENT TRACKING ONTO ADJACENT STREET.
- PERMANENTLY STABILIZE AREA AFTER VEHICLE TRACKING CONTROL IS REMOVED.

**STORMWATER ENTERPRISE VEHICLE TRACKING CONTROL**

ISSUED: 10/7/19 REVISED: 6/19/2020 DRAWING NO: 900-VTC

### SM-10 Temporary Stream Crossing (TSC)

**STABILIZED STAGING AREA**

**SSA-1. STABILIZED STAGING AREA**

**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #3, AKSHIT #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

**STORMWATER ENTERPRISE SEEDING & MULCHING**

ISSUED: 10/7/19 REVISED: 6/19/2020 DRAWING NO: 900-SM

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

**TEMPORARY STREAM CROSSING INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATIONS OF TEMPORARY STREAM CROSSINGS.
  - STREAM CROSSING TYPE (FORD, CULVERT, OR FLUME).
  - FOR FORD CROSSING: LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
  - FOR CULVERT CROSSING: LENGTH (L), CREST LENGTH (CL), CROSSING HEIGHT (H), DEPTH (D), CULVERT DIAMETER (CD), AND NUMBER, TYPE AND CLASS OR GAUGE OF CULVERTS.
- TEMPORARY STREAM CROSSING DIMENSIONS, DSO, AND NUMBER OF CULVERTS INDICATED (FOR CULVERT CROSSING) SHALL BE CONSIDERED MINIMUM DIMENSIONS. ENGINEER MAY ELECT TO INSTALL LARGER FACILITIES. ANY DAMAGE TO STREAM CROSSING OR EXISTING STREAM CHANNEL DURING BASEFLOW OR FLOOD EVENTS SHALL BE PROMPTLY REPAIRED.
- SEE MAJOR DRAINAGE CHAPTER FOR RIPRAP GRADATIONS.
- WHERE FAILURE OF A STREAM CROSSING CAN RESULT IN SIGNIFICANT DAMAGE OR HARM IT MUST BE DESIGNED BY A STRUCTURAL ENGINEER.

**TEMPORARY STREAM CROSSING MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- REMOVE SEDIMENT ACCUMULATED UPSTREAM OF CROSSING AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE CROSSING.
- STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED AND SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.
- WHEN STREAM CROSSINGS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED AND COVERED WITH GEOTEXTILE OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

**DETAIL ADAPTED FROM DOUGLAS COUNTY, COLORADO AND CITY OF AURORA, COLORADO (AS SHOWN, NOT AVAILABLE IN AUTOCAD)**

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
- 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 DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.**

**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.**

**DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD**

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

**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 SEEDED, THE UPPER 6 INCHES OF THE SOIL MUST NOT BE HEAVILY COMPACTED, AND SHOULD BE IN FRABLE CONDITION. LESS THAN 65% 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 SPRICING 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 3/8 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 BRILLION 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.

**STORMWATER ENTERPRISE SEEDING & MULCHING**

ISSUED: 10/7/19 REVISED: 6/19/2020 DRAWING NO: 900-SM

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

**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #3, AKSHIT #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

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

**STABILIZED STAGING AREA INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.
- STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.
- STAGING AREA SHALL BE STABILIZED PRIOR TO OTHER OPERATIONS ON THE SITE.
- THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.
- UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #3, AKSHIT #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
- ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

**STABILIZED STAGING AREA MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

REFERENCE DRAWINGS	No.	DATE	DESCRIPTION REVISIONS	BY
X-1129-MDG22v34 X-089-EX-TOPO				
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**60% DESIGN PLANS**

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PREPARED BY:  
**Matrix**  
Excellence by Design

FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

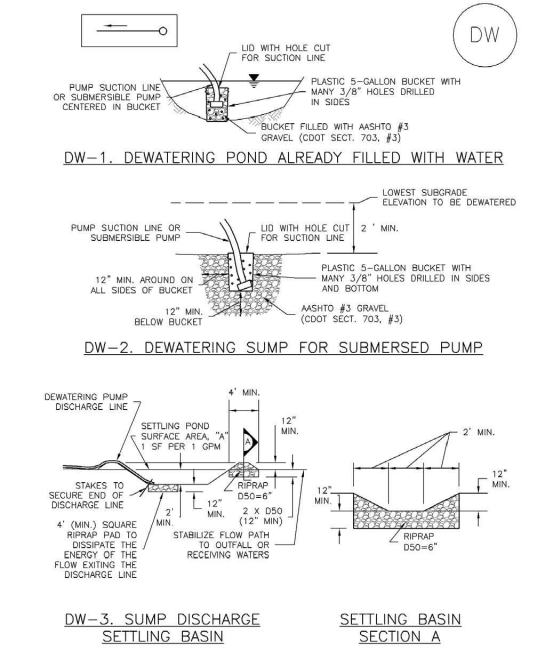
<b>LANDHUIS COMPANY</b>				
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN 60% - MODIFICATION GRADING AND EROSION CONTROL PLAN				
TYPICAL EROSION CONTROL DETAILS				
DESIGNED BY:	TKM	SCALE:	DATE ISSUED:	JANUARY 2023
DRAWN BY:	EAL	HORIZ:	N/A	DRAWING No.
CHECKED BY:	AJS	VERT:	N/A	21 OF 22
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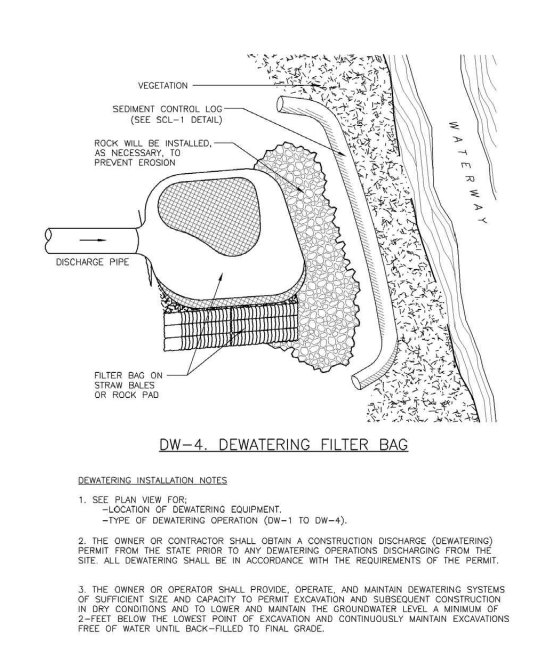
Know what's below.  
Call before you dig.

**Dewatering Operations (DW)** SM-9



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

**SM-9 Dewatering Operations (DW)**



November 2010 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3 DW-4

**Dewatering Operations (DW)** SM-9

**DEWATERING INSTALLATION NOTES**

4. DEWATERING OPERATIONS SHALL USE ONE OR MORE OF THE DEWATERING SUMPS SHOWN ABOVE, WELL POINTS, OR OTHER MEANS APPROVED BY THE LOCAL JURISDICTION TO REDUCE THE PUMPING OF SEDIMENT, AND SHALL PROVIDE A TEMPORARY SEDIMENT BASIN OR FILTRATION BMP TO REDUCE SEDIMENT TO ALLOWABLE LEVELS PRIOR TO RELEASE OFF SITE OR TO A RECEIVING WATER. A SEDIMENT BASIN MAY BE USED IN LIEU OF SUMP DISCHARGE SETTLING BASIN SHOWN ABOVE IF A 4-FOOT-SQUARE RIPRAP PAD IS PLACED AT THE DISCHARGE POINT AND THE DISCHARGE END OF THE LINE IS STAKED IN PLACE TO PREVENT MOVEMENT OF THE LINE.

**DEWATERING MAINTENANCE NOTES**

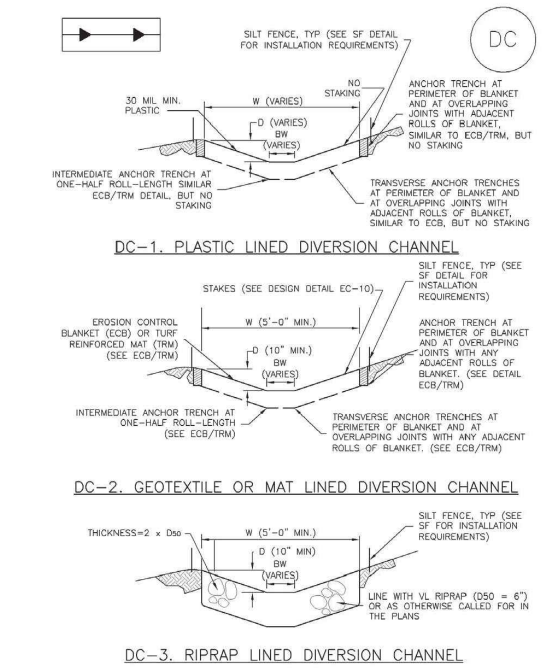
- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- DEWATERING BMPs ARE REQUIRED IN ADDITION TO ALL OTHER PERMIT REQUIREMENTS.
- TEMPORARY SETTLING BASINS SHALL BE REMOVED WHEN NO LONGER NEEDED FOR DEWATERING OPERATIONS. ANY DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

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

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

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Urban Storm Drainage Criteria Manual Volume 3 DW-5

**SM-8 Temporary Diversion Methods (TDM)**



June 2012 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3 TDM-12

**Temporary Diversion Methods (TDM)** SM-8

**CHANNEL DIVERSION INSTALLATION NOTES**

- SEE PLAN VIEW FOR:
  - LOCATION OF DIVERSION CHANNEL.
  - TYPE OF CHANNEL (UNLINED, GEOTEXTILE OR MAT LINED, PLASTIC LINE, OR RIPRAP LINED).
  - LENGTH OF EACH TYPE OF CHANNEL.
  - DEPTH, D, WIDTH, W, AND BOTTOM WIDTH, BW.
  - FOR RIPRAP LINED CHANNEL, SIZE OF RIPRAP, D50, SHALL BE SHOWN ON PLANS.
- SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES.
- DIVERSION CHANNELS INDICATED ON THE SWMP PLAN SHALL BE INSTALLED PRIOR TO WORK IN DOWNGRADIENT AREAS OR NATURAL CHANNELS.
- FOR GEOTEXTILE OR MAT LINED CHANNELS, INSTALLATION OF GEOTEXTILE OR MAT SHALL CONFORM TO THE REQUIREMENTS OF DETAIL ECB. FOR PLASTIC LINED CHANNELS, INSTALLATION OF ANCHOR TRENCHES SHALL CONFORM TO THE REQUIREMENTS OF DETAIL ECB.
- WHERE CONSTRUCTION TRAFFIC MUST CROSS A DIVERSION CHANNEL, THE PERMITTEE SHALL INSTALL A TEMPORARY STREAM CROSSING CONFORMING TO THE REQUIREMENTS OF DETAIL TSC.

**DIVERSION CHANNEL MAINTENANCE NOTES**

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- DIVERSION CHANNELS ARE TO REMAIN IN PLACE UNTIL WORK IN THE DOWNGRADIENT AREA OR NATURAL CHANNEL IS NO LONGER REQUIRED. IF APPROVED BY LOCAL JURISDICTION DIVERSION CHANNEL MAY BE LEFT IN PLACE.
- IF DIVERSION CHANNELS ARE REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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

June 2012 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3 TDM-13

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CHECKED BY: AJS	VERT: N/A		