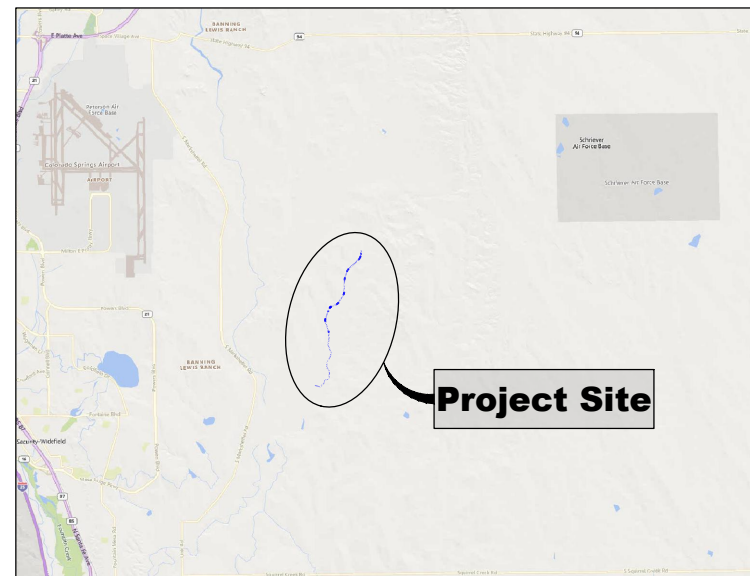




***ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN***  
***60% DESIGN GEC PLANS***  
***THE LANDHUIS COMPANY***  
***MODIFICATION GRADING AND EROSION CONTROL PLAN***  
***MARCH 2023***

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'

## SHEET INDEX

TS01	TITLE SHEET	01
TS02	SIGNATURE PAGE	02
GN01-02	GENERAL NOTES	03-04
EC01-18	GRADING AND EROSION CONTROL PLANS	05-22

[illegible]



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

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: \_\_\_\_\_

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: \_\_\_\_\_

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

\_\_\_\_\_

THE LANDHUIS COMPANY \_\_\_\_\_ DATE \_\_\_\_\_

212 N WAHSACH AVE, SUITE 301  
COLORADO SPRINGS, CO 80903

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

\_\_\_\_\_

JOSHUA PALMER, PE \_\_\_\_\_ DATE \_\_\_\_\_

COUNTY ENGINEER / ECM ADMINISTRATOR

REFERENCE DRAWINGS  <small>Rolling Hills MDDP topo X-1129-MDG22x34</small>						<b>60% DESIGN PLANS</b>  <b>NOTICE:</b> 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.
	No.	DATE	DESCRIPTION REVISIONS	BY		
<b>COMPUTER FILE MANAGEMENT</b>						
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: March 7, 2023 11:13:24 AM						
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.						

	PREPARED BY:  Excellence by Design	SEAL <div>PRELIMINARY THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE</div>	THE LANDHUIS COMPANY			
			ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
			SIGNATURE PAGE			
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	DATE ISSUED: MARCH 2023	DRAWING No. TS02		

DESIGNED BY:	JDH	SCALE		DATE ISSUED:	MARCH 2023	DRAWING No. <b>GNO</b>
DRAWN BY:	TKM	HORIZ.	N/A			
CHECKED BY:	AJS	VERT.	N/A	SHEET	03 OF 22	





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 MASONARY MIX STATIONS
- PRESERVATION EASEMENTS

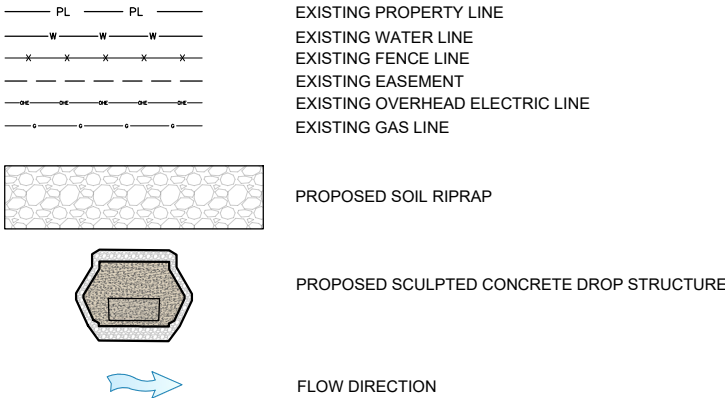
OPINION OF PROBABLE EROSION CONTROL COST

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
SUB TOTAL		\$4,353,594.50
MAINTENANCE CONTINGENCY (40%)		\$1,741,437.80
TOTAL		\$6,095,032.30

STANDARD SYMBOLS

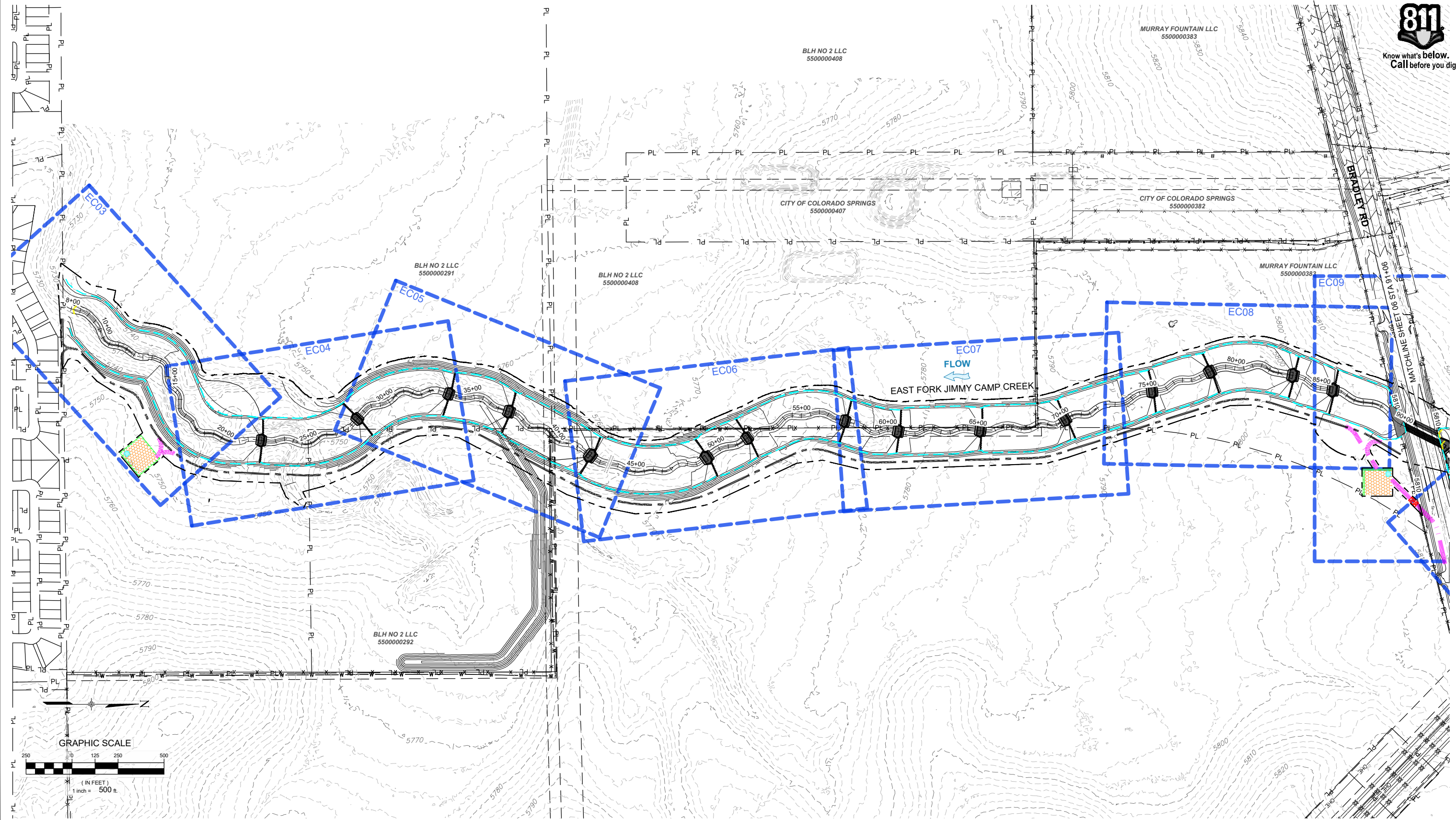


LEGEND



REFERENCE DRAWINGS																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
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REFERENCE DRAWINGS			
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No.	DATE	DESCRIPTION	BY
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FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Drawg\Xref\X-1129-PARCELS.dwg			
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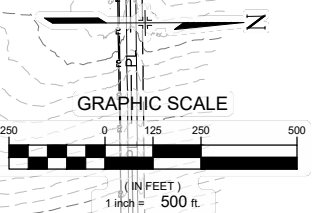
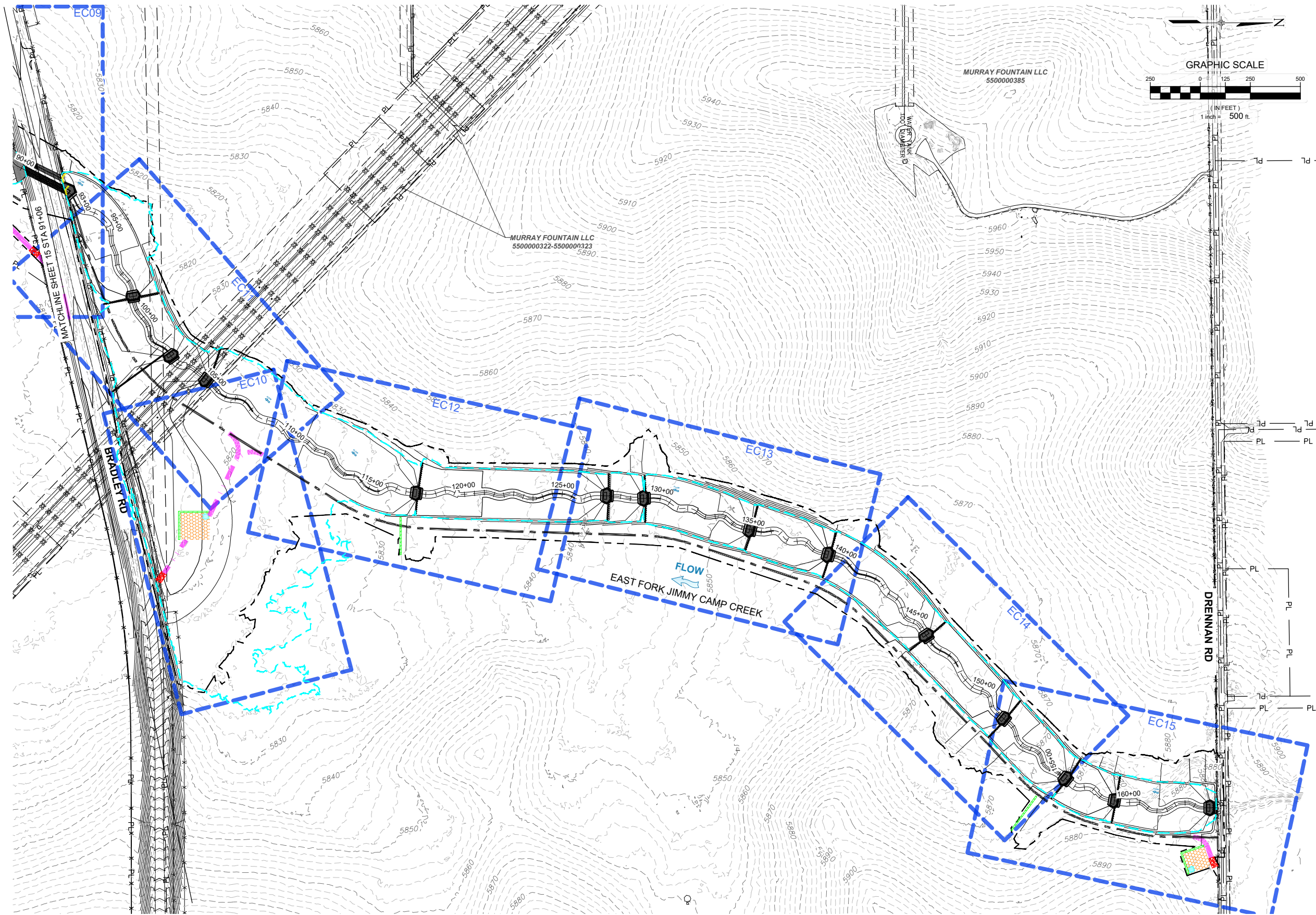
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MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

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" = 500'	DATE ISSUED: MARCH 2023	DRAWING No. EC01
CHECKED BY: AJS	VERT. N/A	SHEET 05 OF 22	





REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-MDS22A04 X-1129-PARCELS			
No.	DATE	DESCRIPTION	BY
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FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Drawg\Xref\X-1129-PARCELS.dwg			
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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			
EROSION CONTROL OVERVIEW SHEET 2			
DESIGNED BY:	TKM	SCALE	DATE ISSUED:
DRAWN BY:	EAL	HORIZ 1" = 500'	MARCH 2023
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06 OF 22			DRAWING No. EC02





FOR CITY OF COLORADO SPRINGS REVIEW

SSA

SF

VTC

CD

CWA

STABILIZED STAGING AREA

SILT FENCE

VEHICLE TRACKING CONTROL

CHECK DAM

CONCRETE WASHOUT AREA

LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION

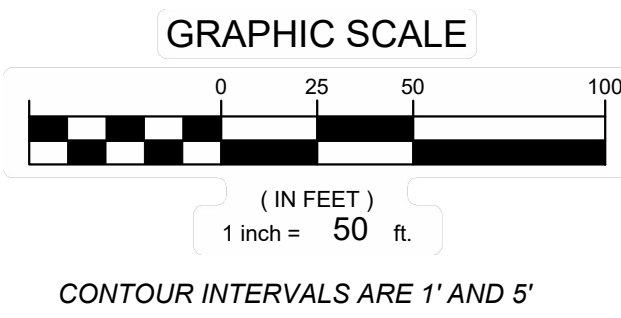
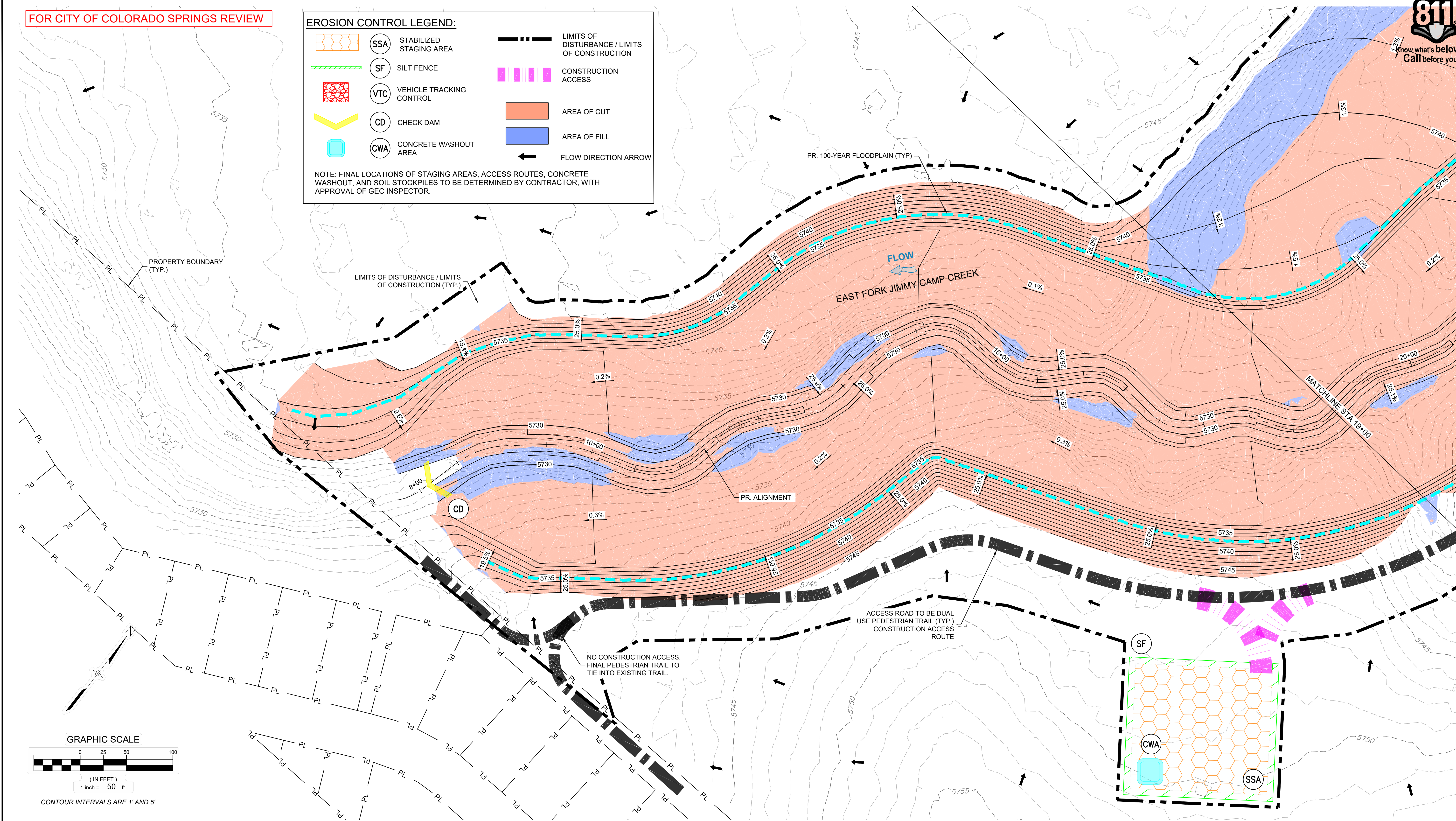
CONSTRUCTION ACCESS

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.



REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-MDS22a04 X-1129-PARCELS			
No.	DATE	DESCRIPTION	BY
COMPUTER FILE MANAGEMENT			
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THE LANDHUIS COMPANY

PREPARED BY:

Excellence by Design

SEAL

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LANDHUIS COMPANY

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

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

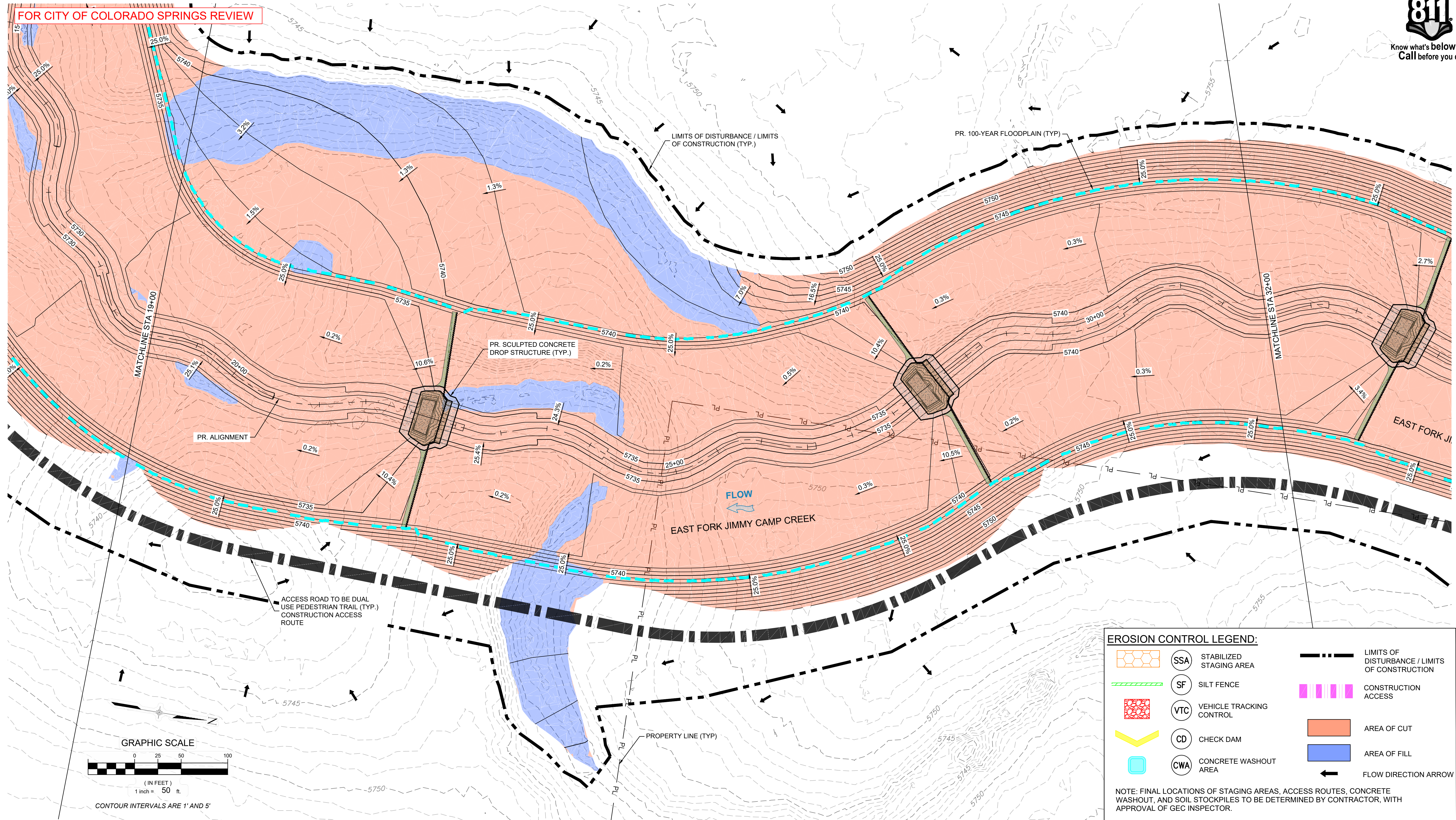
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FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009





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.

REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD222x34			
No.	DATE	DESCRIPTION	BY
REVISIONS			
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Drawings\GESQC Plans\1129.009-EC01.dwg			
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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. 19+00 - 32+00**

DESIGNED BY:	TKM	SCALE	DATE ISSUED:	MARCH 2023	DRAWING No.
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Call before you dig.

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

EROSION CONTROL LEGEND:

- SSA

STABILIZED STAGING AREA
- SF

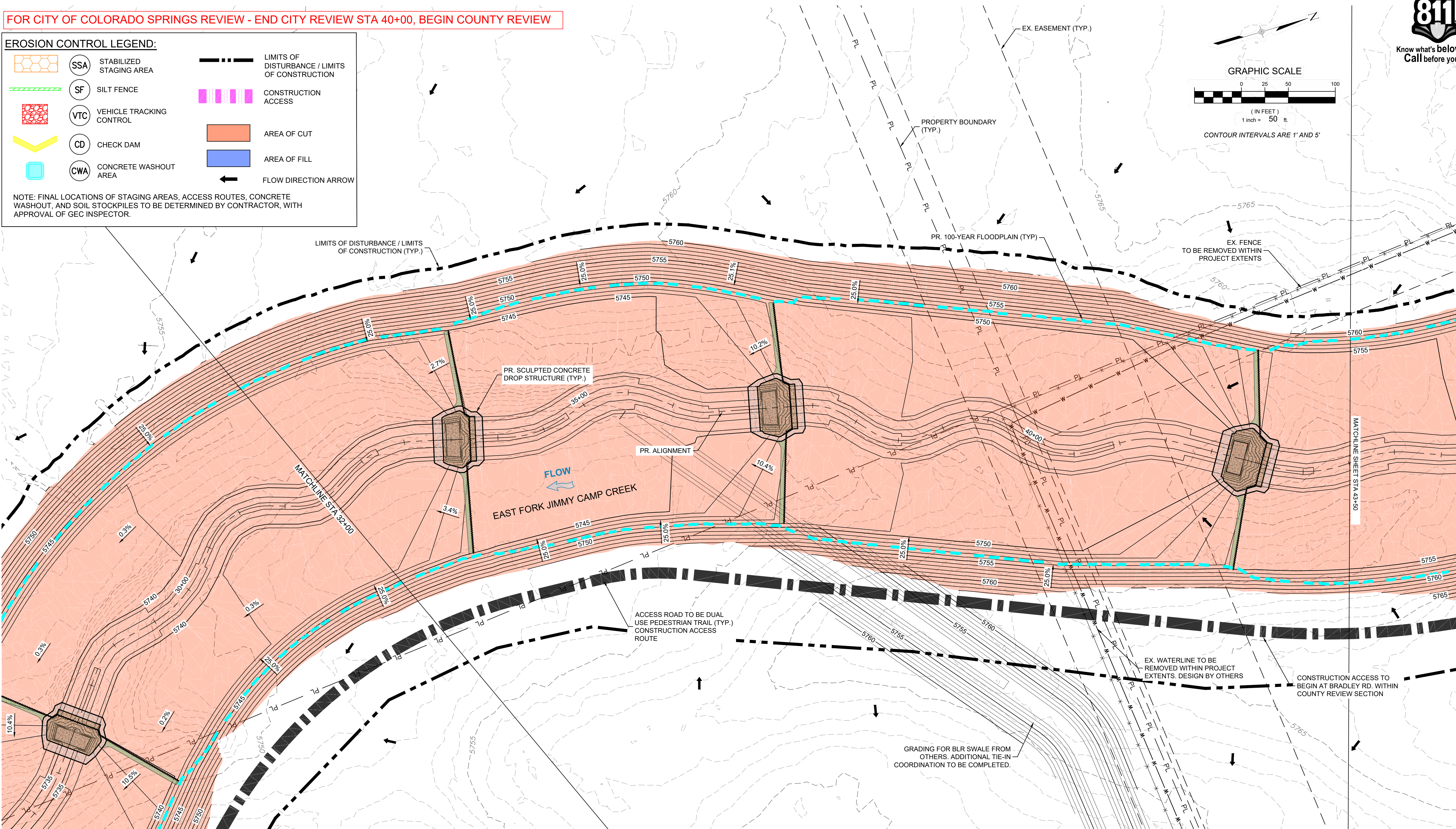
SILT FENCE
- VTC

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.



REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD222x34			
No.	DATE	DESCRIPTION	BY
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Dwg\GESQC Plans\1129.009-EC01.dwg			
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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

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





FOR EL PASO COUNTY REVIEW

SSA

STABILIZED STAGING AREA

SF

SILT FENCE

VTC

VEHICLE TRACKING CONTROL

CD

CHECK DAM

CWA

CONCRETE WASHOUT AREA

LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION

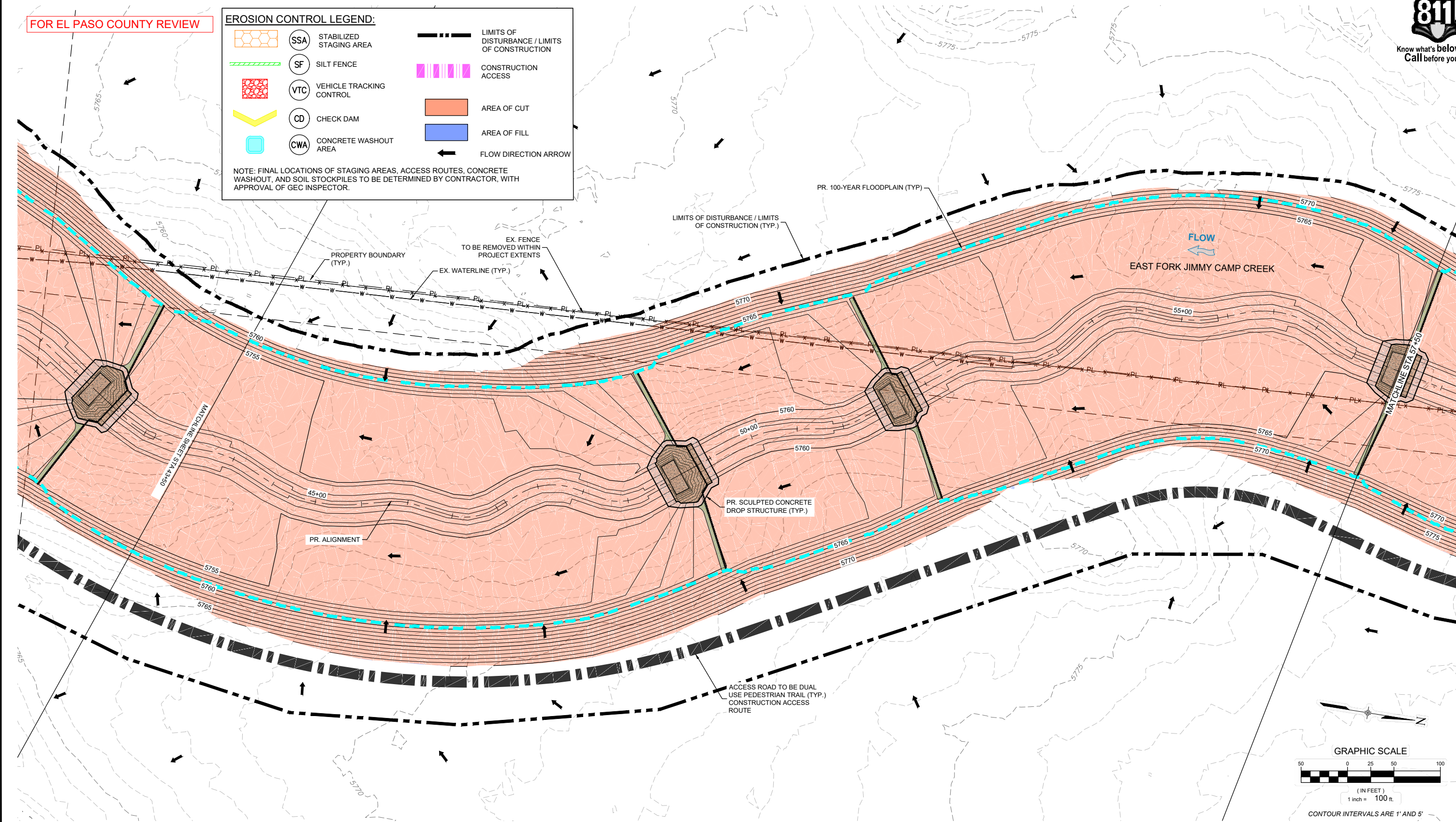
CONSTRUCTION ACCESS

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.



REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD222x34			
No.	DATE	DESCRIPTION	BY
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Drawings\GESQC Plans\1129.009-EC01.dwg			
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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. 43+50 - 57+50			
DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: MARCH 2023	DRAWING No. EC06
CHECKED BY: AJS	VERT. N/A	SHEET 10 OF 22	



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

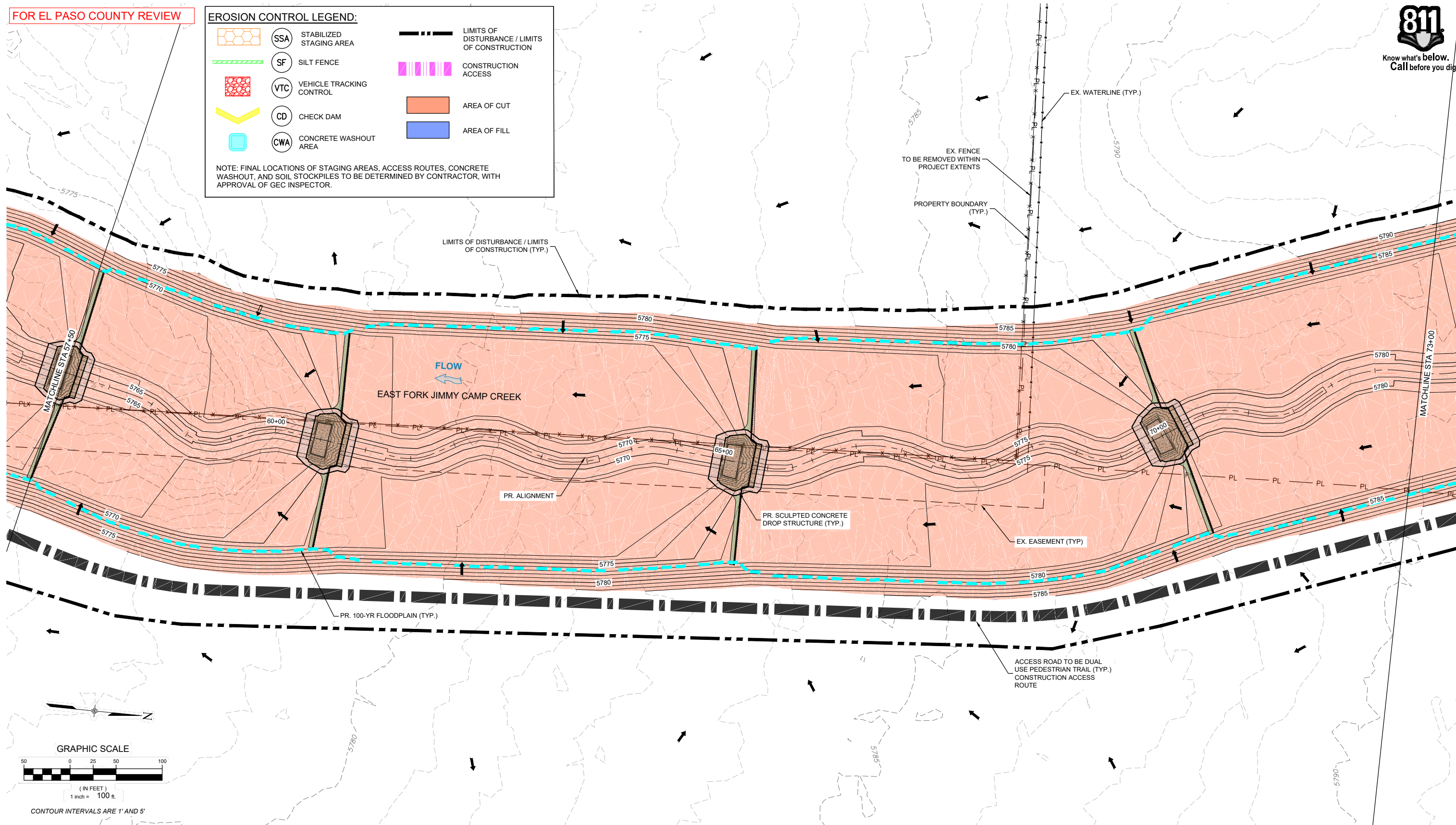


AREA OF FILL

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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X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD22x34			
No.	DATE	DESCRIPTION REVISIONS	BY
COMPUTER FILE MANAGEMENT			
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MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

LANDHUIS COMPANY

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

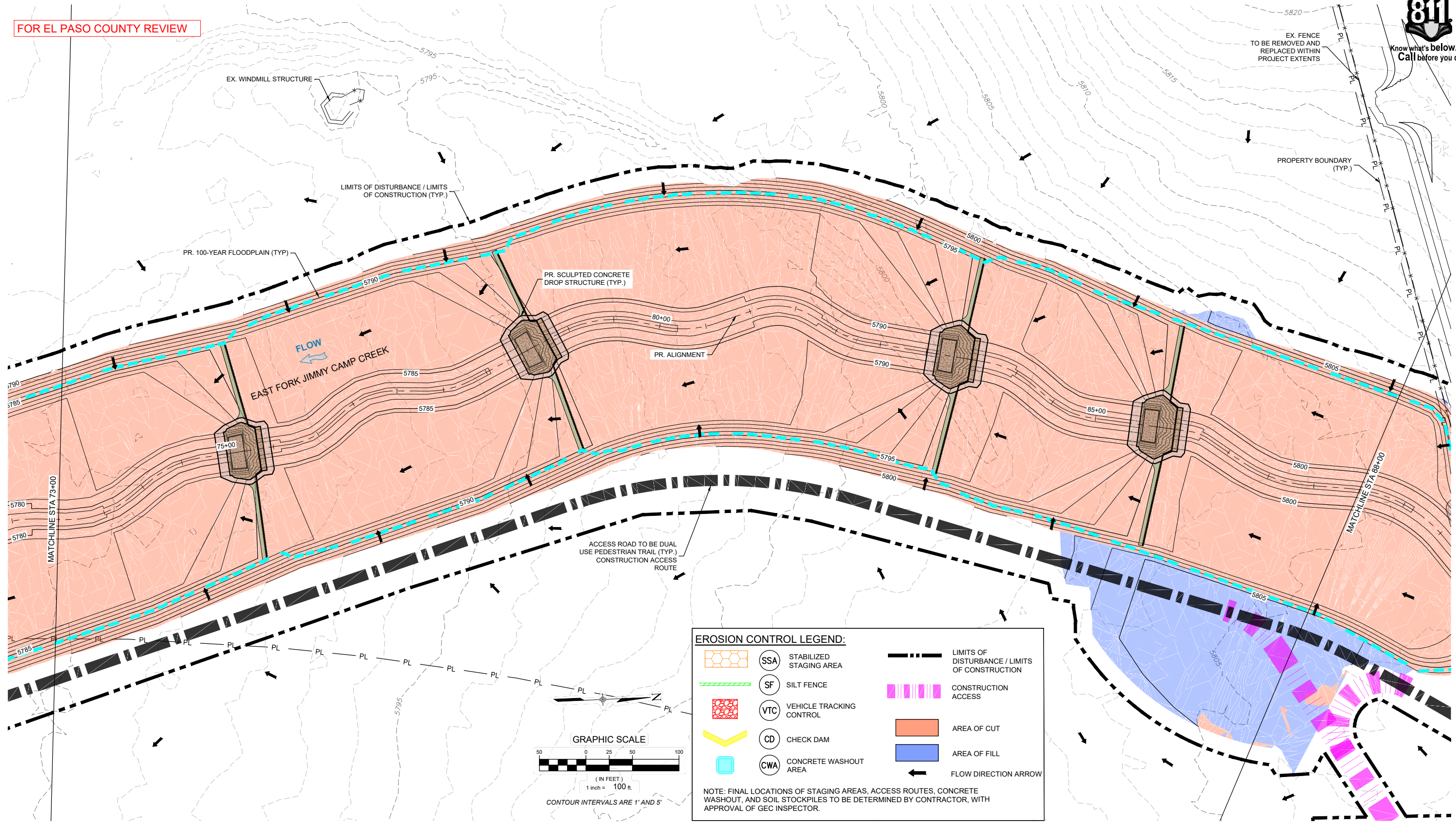
PLAN AND PROFILE  
STA. 57+50 - 73+00

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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

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

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. 73+02 - 88+26**

DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: MARCH 2023	DRAWING No. EC08
CHECKED BY: AJS	VERT. N/A	SHEET 12 OF 22	





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

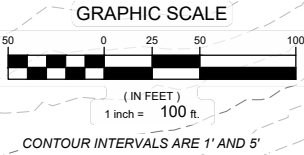
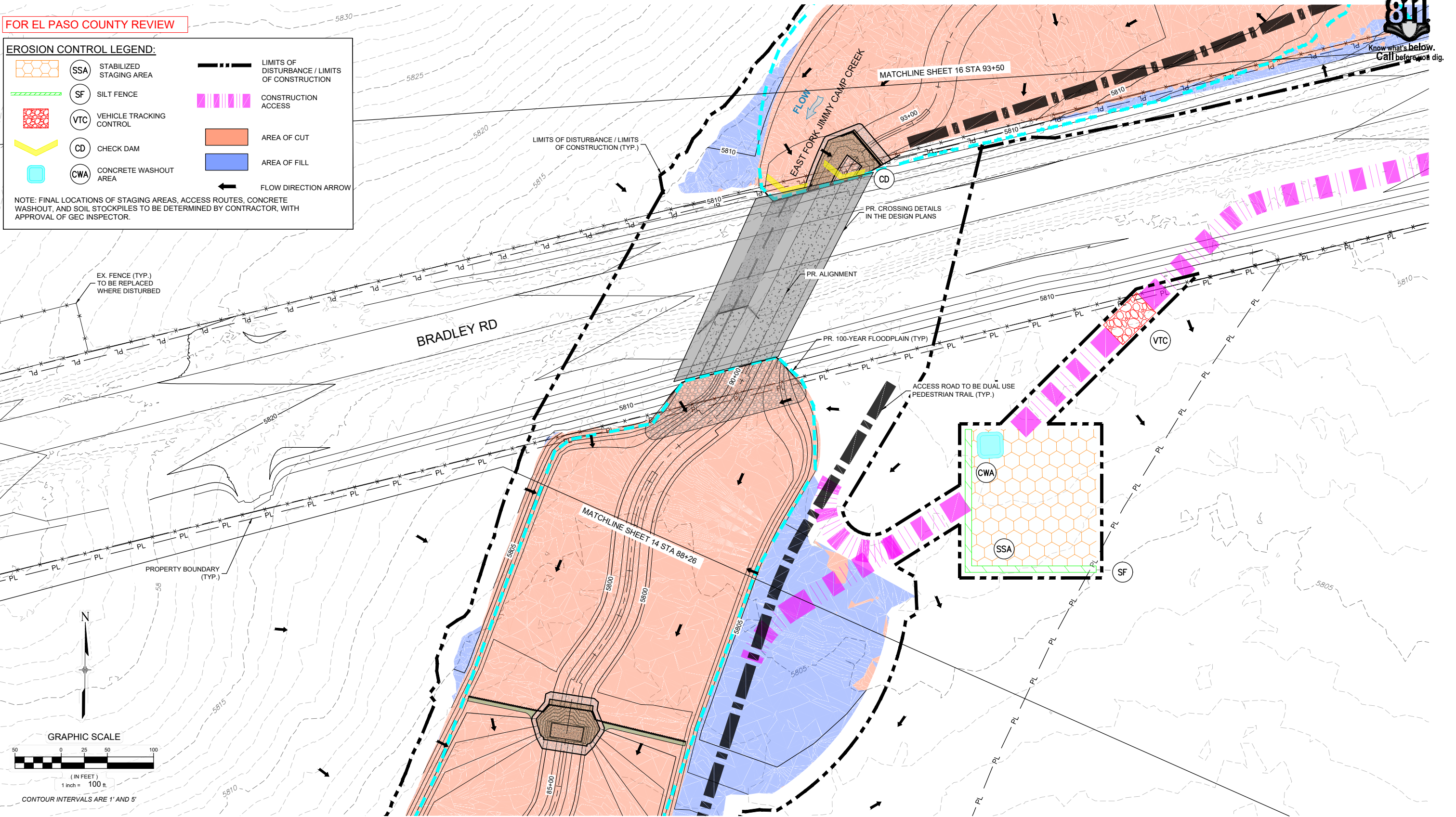
CONSTRUCTION ACCESS

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.



REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MD0223-34			
No.	DATE	DESCRIPTION	BY
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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			
DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: MARCH 2023	DRAWING No. EC09
CHECKED BY: AJS	VERT. N/A	SHEET 13 OF 22	





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

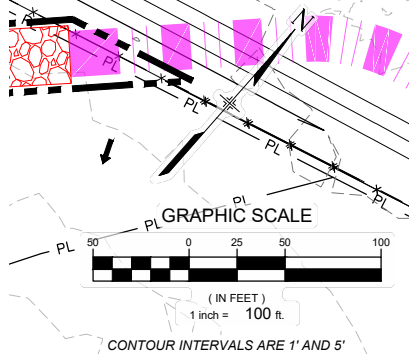
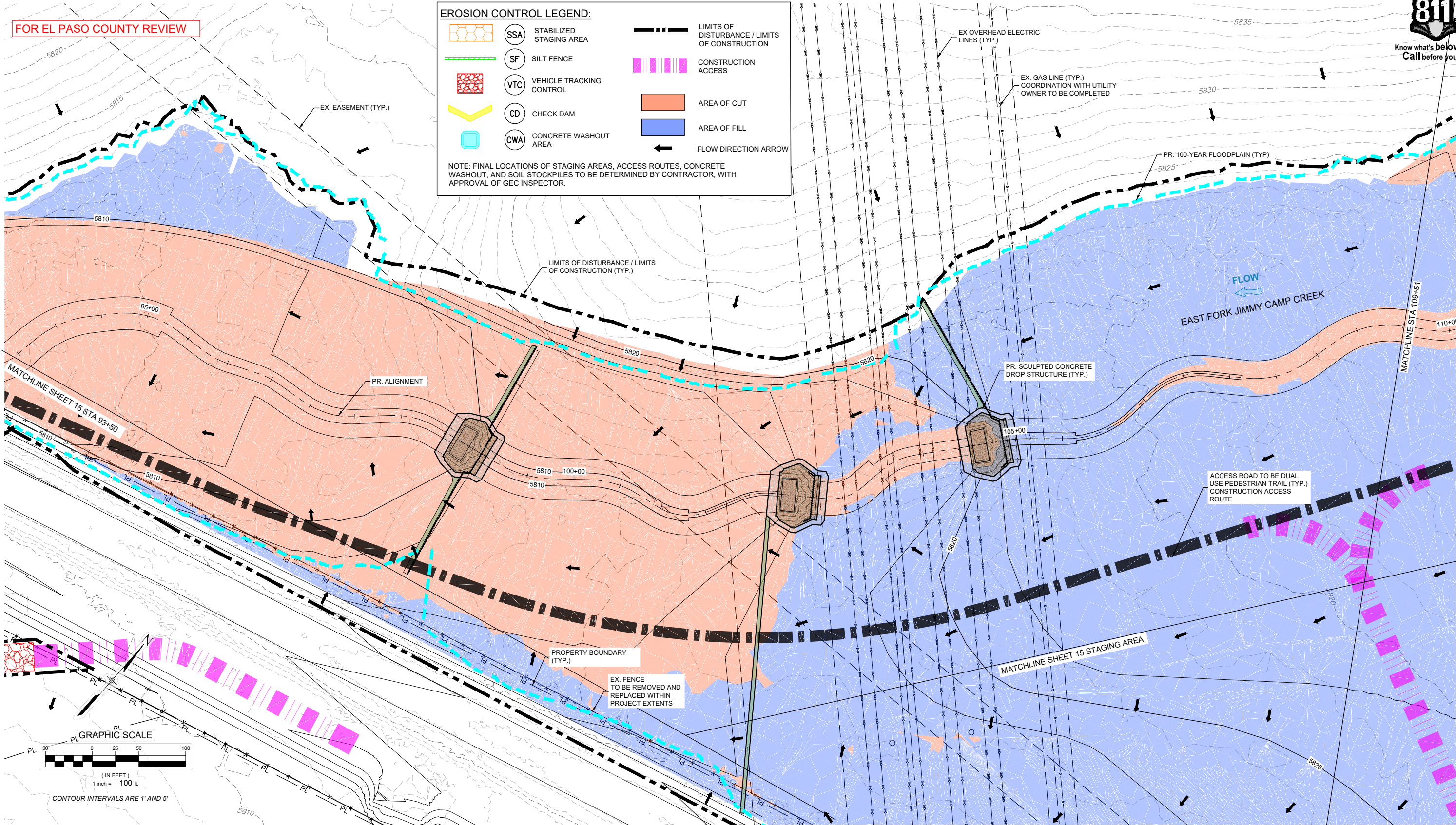
CONSTRUCTION ACCESS

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.



REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD322x34			
No.	DATE	DESCRIPTION REVISIONS	BY
COMPUTER FILE MANAGEMENT			
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THE LANDHUIS COMPANY

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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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FOR EL PASO COUNTY REVIEW

EROSION CONTROL LEGEND:

- SSA

STABILIZED STAGING AREA
- SF

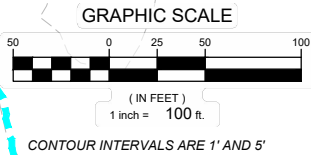
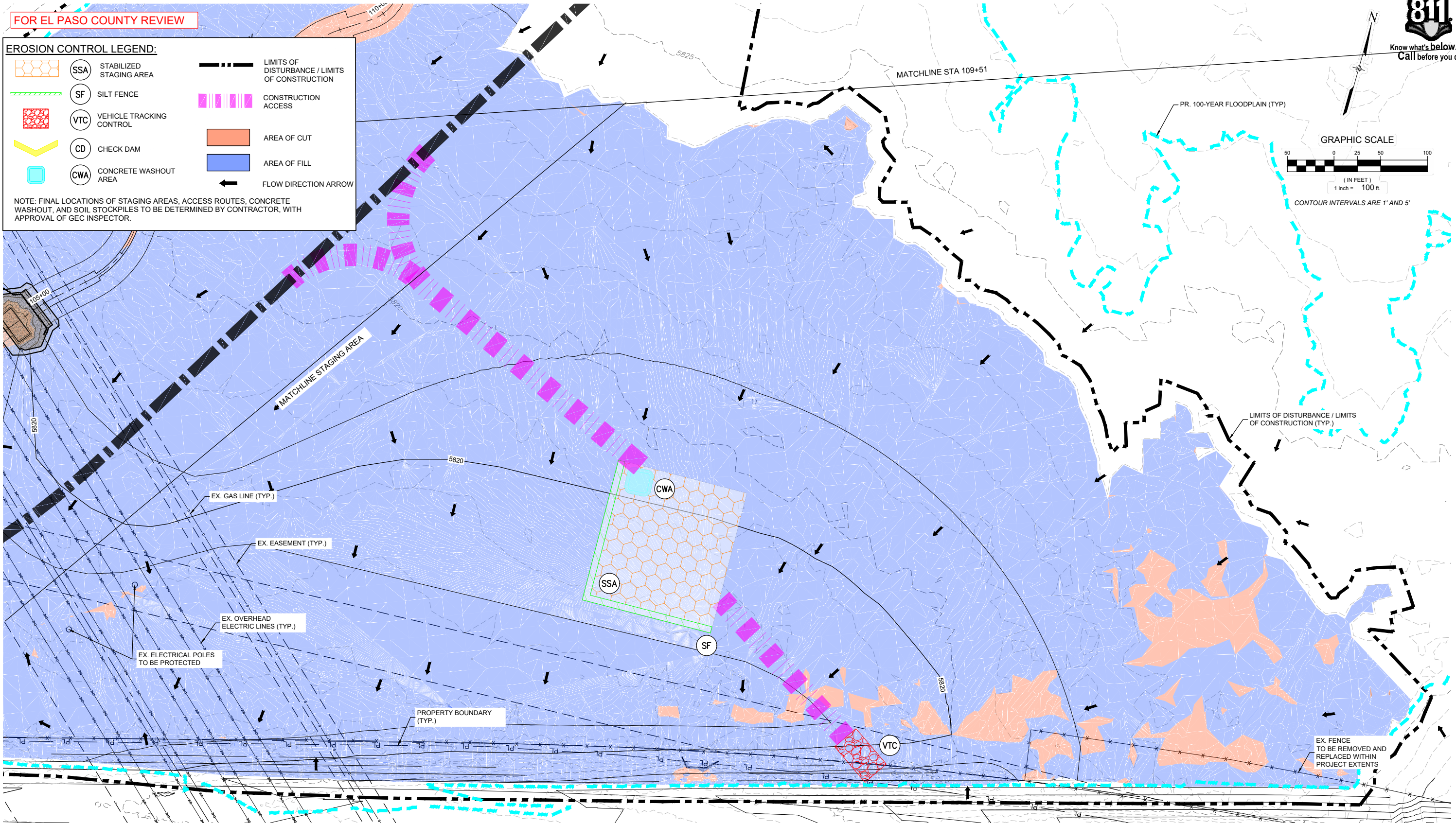
SILT FENCE
- VTC

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.



REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD322x34			
No.	DATE	DESCRIPTION REVISIONS	BY
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Drawings\GESQC Plans\1129.009-EC01.dwg			
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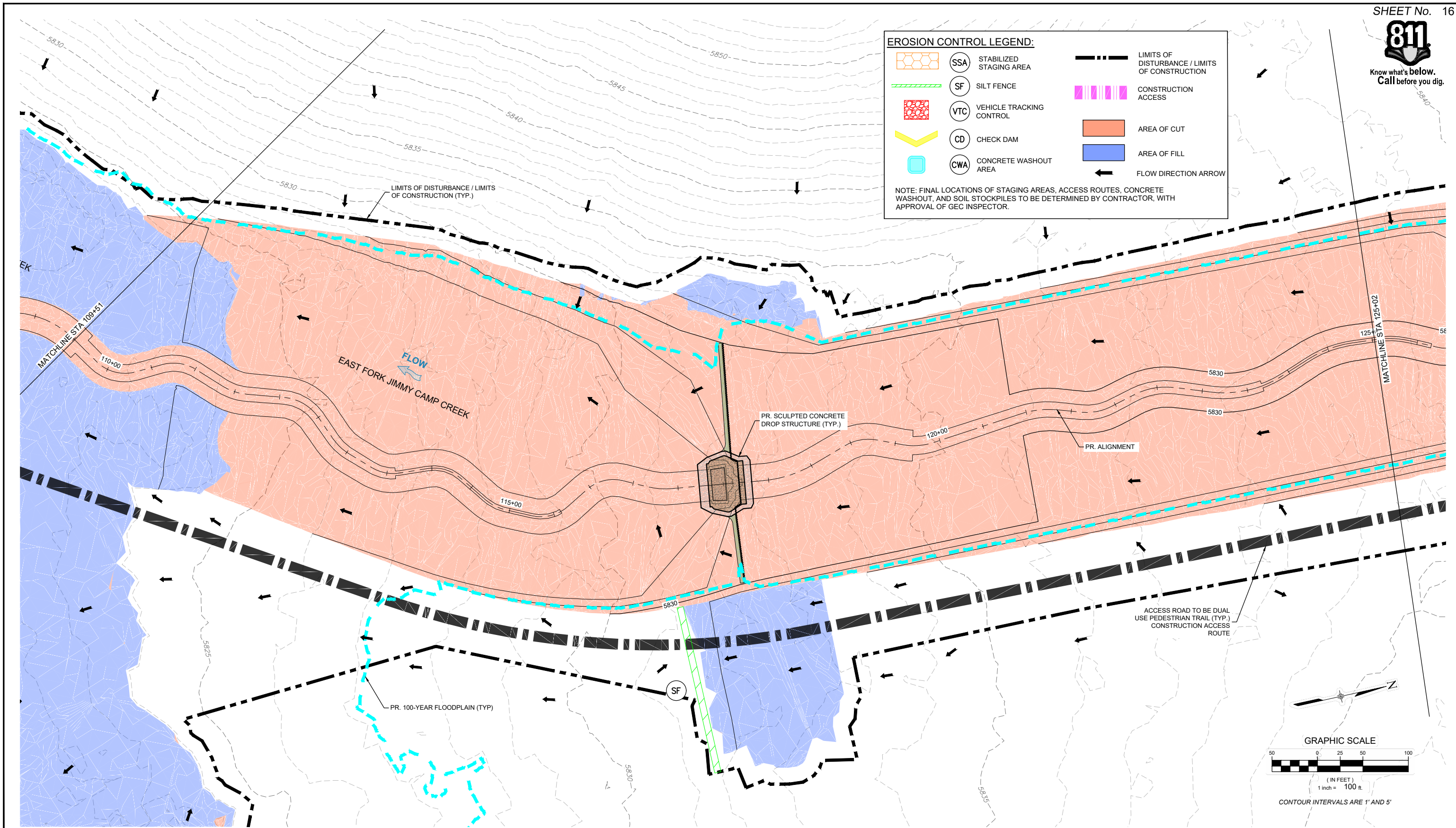
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FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

LANDHUIS COMPANY			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
PLAN AND PROFILE STAGING AREA			
DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: MARCH 2023	DRAWING No. EC11
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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
	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			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MD222x34			
No.	DATE	DESCRIPTION	BY
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CTB FILE: Matrix(black).ctb			
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Excellence by Design

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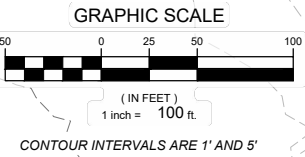
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MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

LANDHUIS COMPANY			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
PLAN AND PROFILE STA. 109+51 - 125+02			
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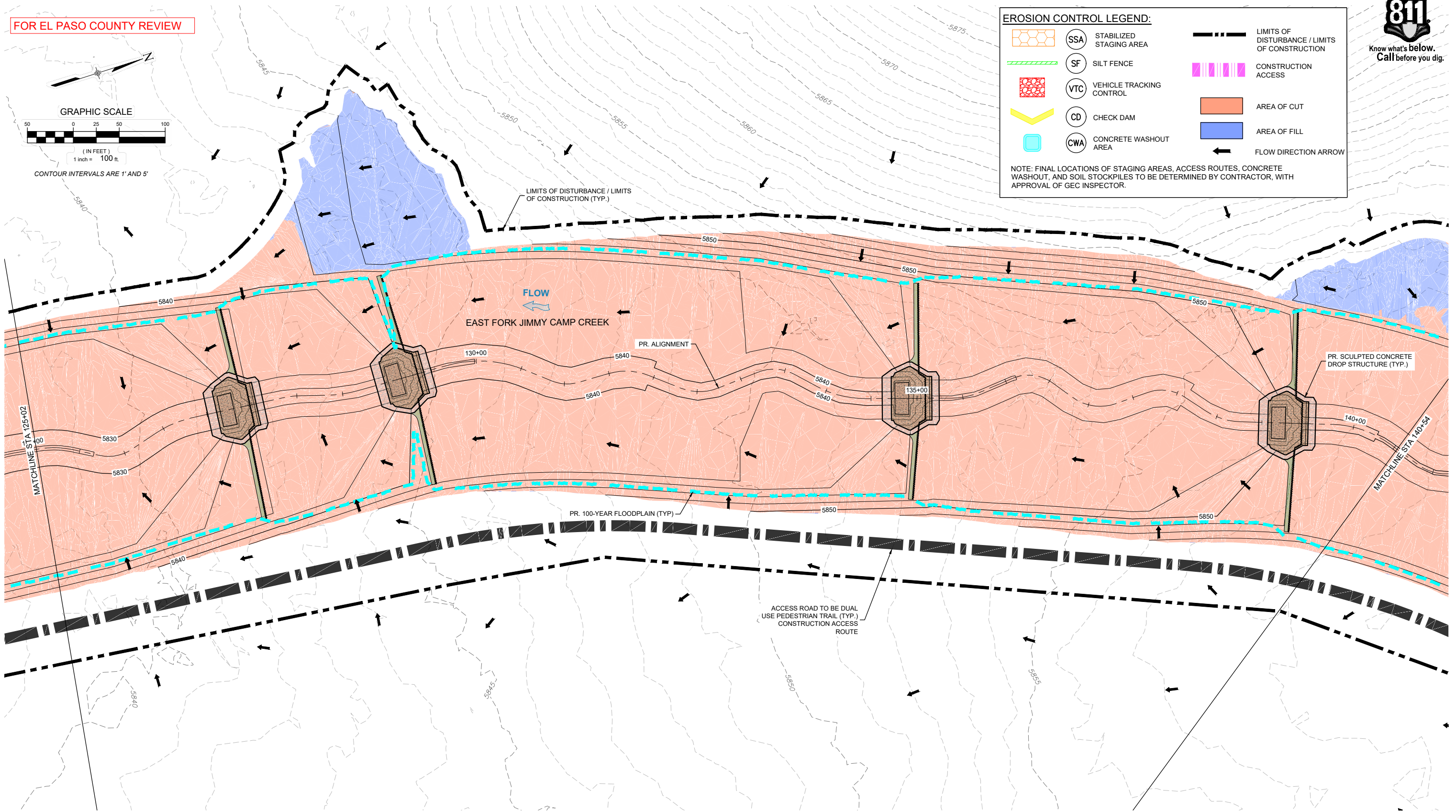
FOR EL PASO COUNTY REVIEW



**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.



REFERENCE DRAWINGS			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD222x34			
No.	DATE	DESCRIPTION REVISIONS	BY
COMPUTER FILE MANAGEMENT			
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PROJECT No. 21.1129.009

LANDHUIS COMPANY			
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN MODIFICATION GRADING AND EROSION CONTROL PLAN			
PLAN AND PROFILE STA. 125+02 - 140+54			
DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: MARCH 2023	DRAWING No. EC13
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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.

MATCHLINE STA 140+54

PR. ALIGNMENT

PR. 100-YEAR FLOODPLAIN (TYP.)

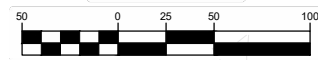
LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION (TYP.)

PR. SCULPTED CONCRETE DROP STRUCTURE (TYP.)

MATCHLINE STA 156+05

ACCESS ROAD TO BE DUAL USE PEDESTRIAN TRAIL (TYP.)  
CONSTRUCTION ACCESS ROUTE

GRAPHIC SCALE



(IN FEET)  
1 inch = 100 ft.

CONTOUR INTERVALS ARE 1' AND 5'

REFERENCE DRAWINGS			
X-1129-UTILITIES			
X-1129-PR STRUCT			
X-1129-PARCELS			
X-1129-MD322x34			
No.	DATE	DESCRIPTION	BY
REVISIONS			
COMPUTER FILE MANAGEMENT			
FILE NAME: S:\21.1129.009 Rolling Hills Floodplain and Permitting\Drawings\GESQC Plans\1129.009-EC01.dwg			
CTB FILE: Matrix(black).ctb			
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 **Matrix**  
Excellence by Design

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DESIGNED BY: TKM	SCALE: HORIZ 1" = 100'	DATE ISSUED: MARCH 2023	DRAWING No. EC14
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LANDHUIS COMPANY

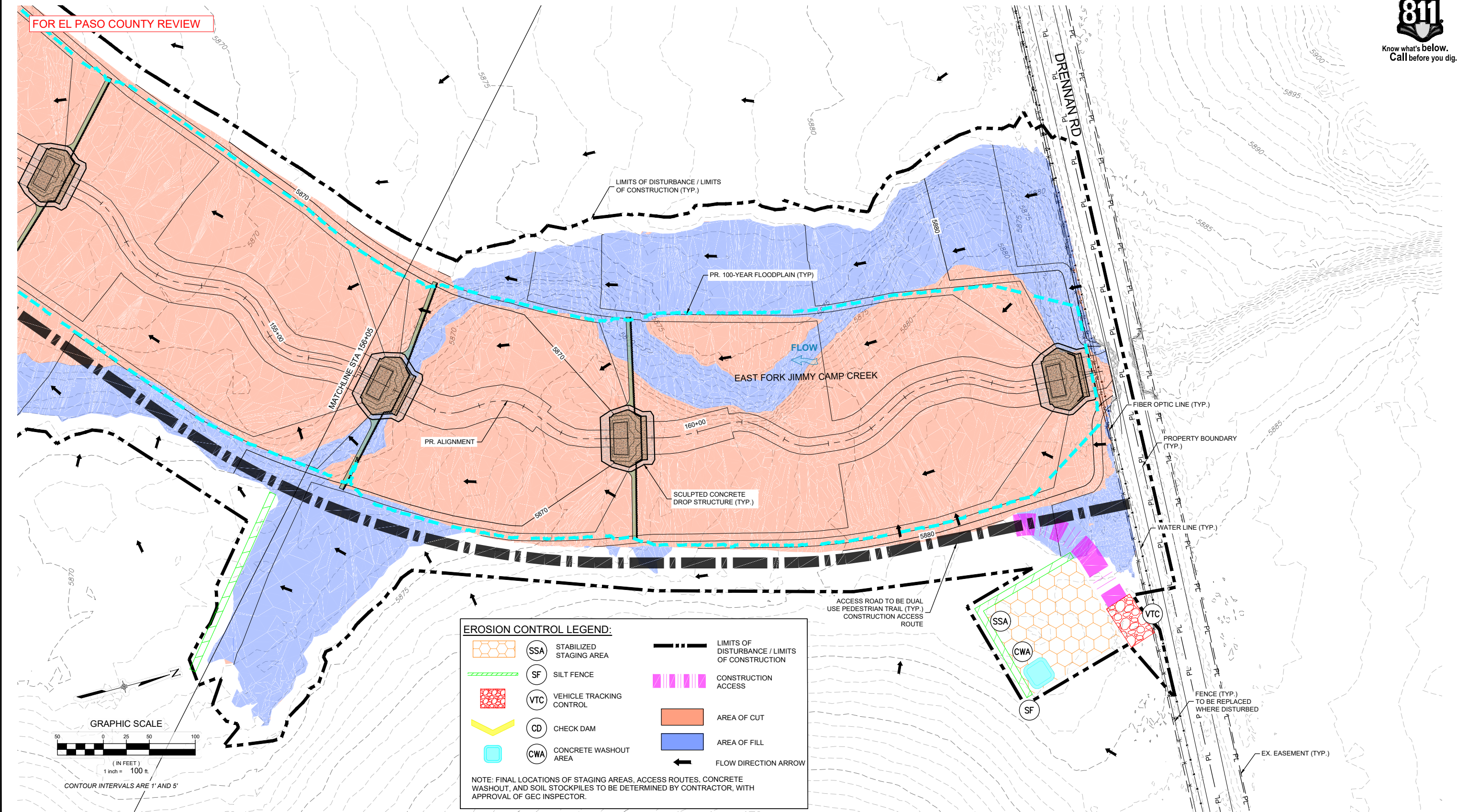
ROLLING MEADOWS-BULL HILL CHANNEL & FLOODPLAIN  
MODIFICATION GRADING AND EROSION CONTROL PLAN

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





Know what's below.  
Call before you dig.



**EROSION CONTROL LEGEND:**

	<b>SSA</b>	STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / LIMITS OF CONSTRUCTION
	<b>SF</b>	SILT FENCE		CONSTRUCTION ACCESS
	<b>VTC</b>	VEHICLE TRACKING CONTROL		AREA OF CUT
	<b>CD</b>	CHECK DAM		AREA OF FILL
	<b>CWA</b>	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			
X-1129-UTILITIES X-1129-PR STRUCT X-1129-PARCELS X-1129-MD322x34			
No.	DATE	DESCRIPTION REVISIONS	BY
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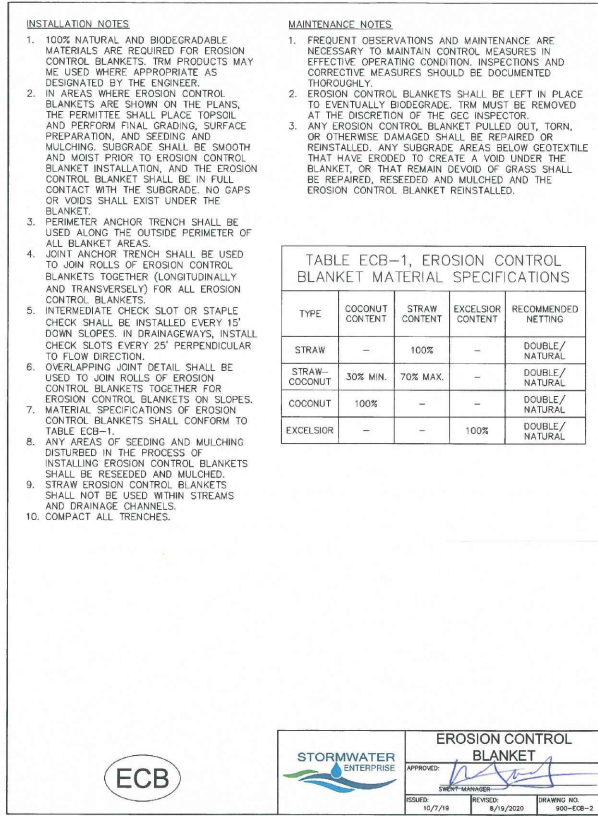
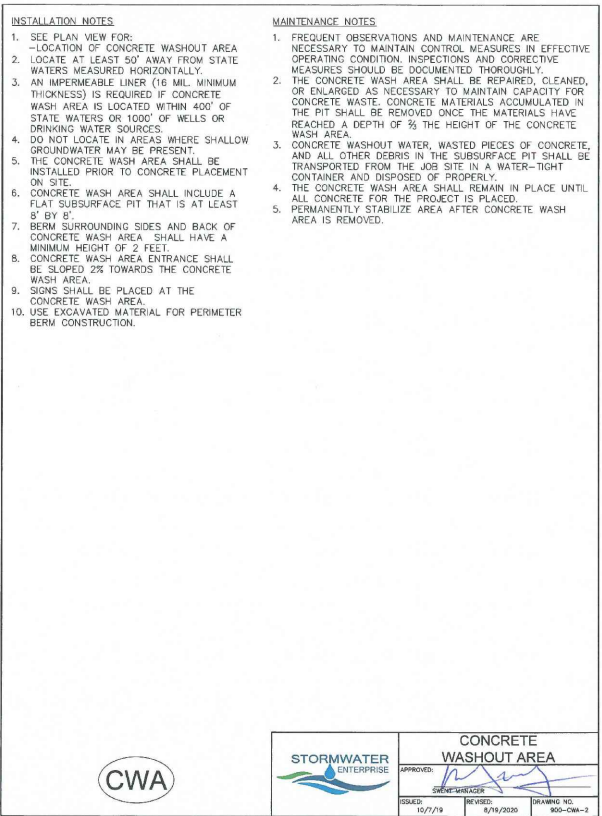
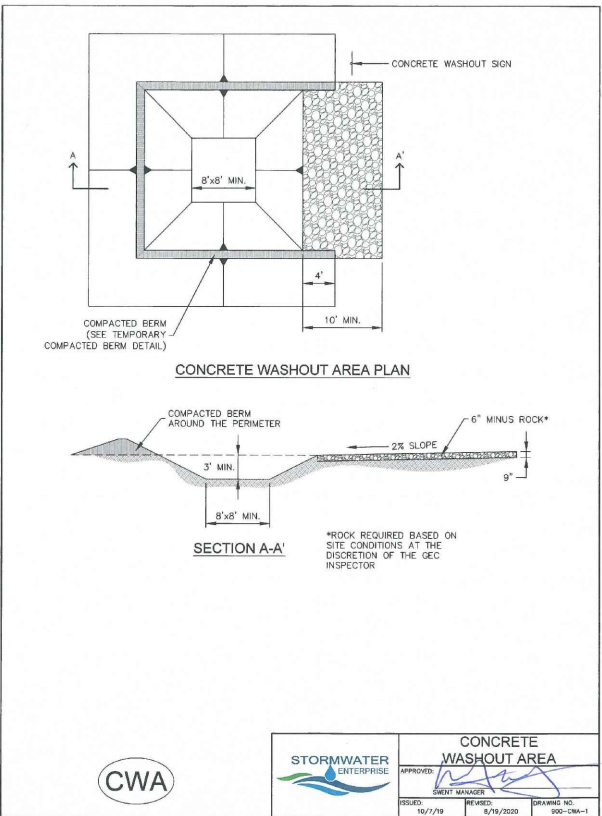
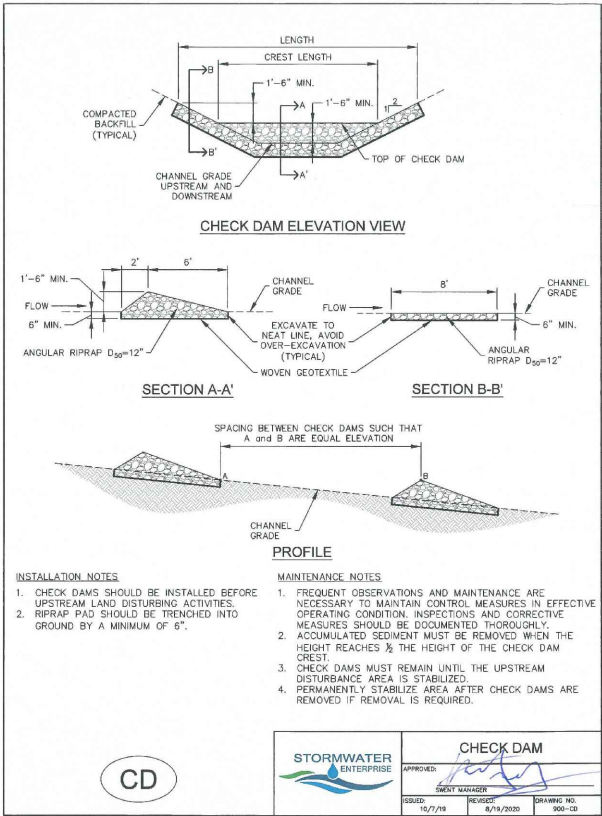
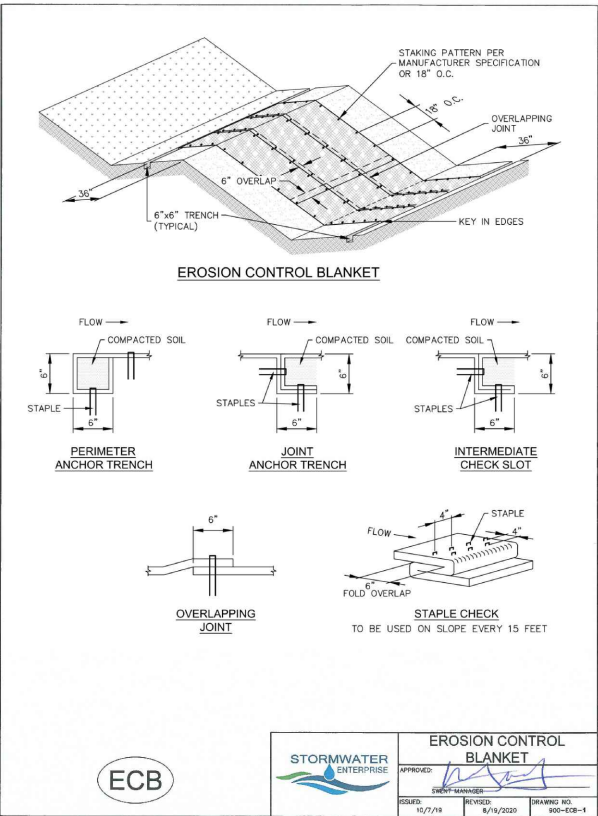
FOR AND ON BEHALF OF  
MATRIX DESIGN GROUP, INC.  
PROJECT No. 21.1129.009

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: MARCH 2023	DRAWING No. EC15
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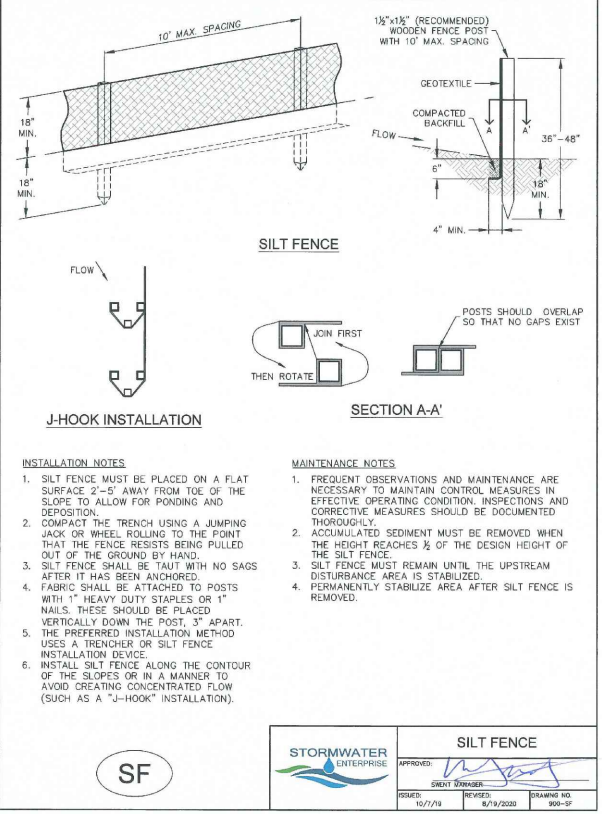
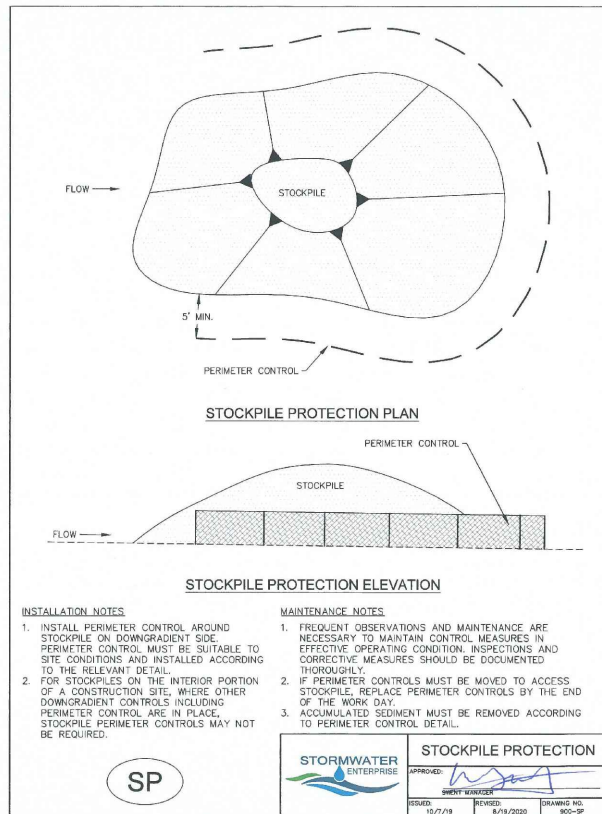




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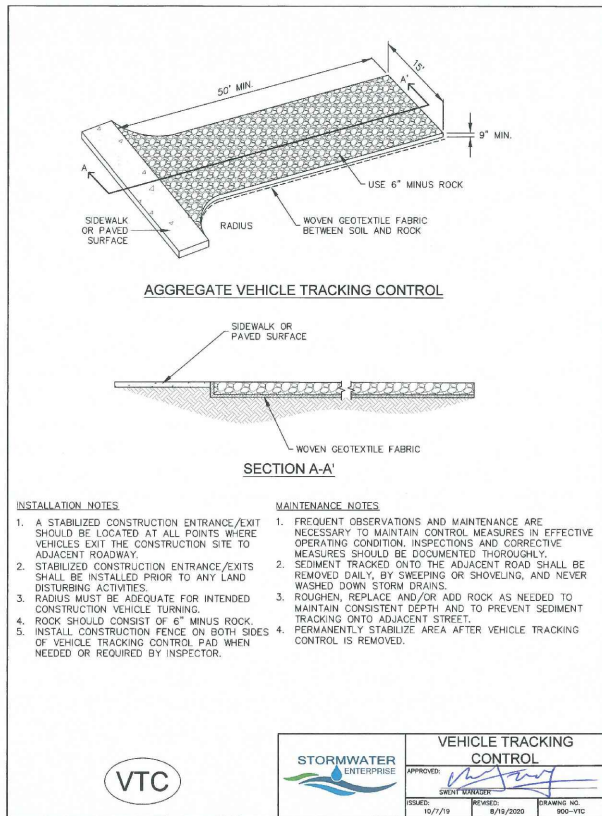
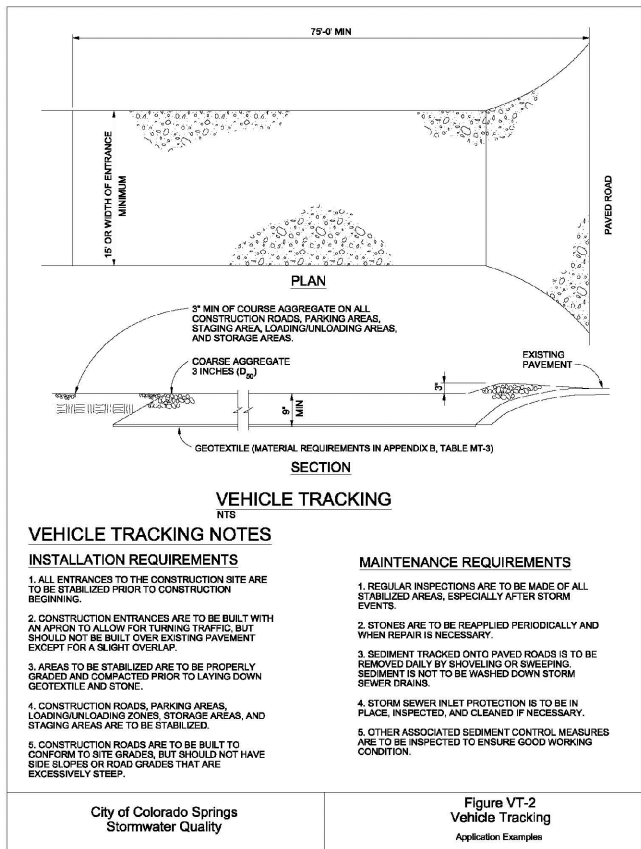


EROSION CONTROL BLANKET NOT FOR USE  
IN CREEK INVERT.



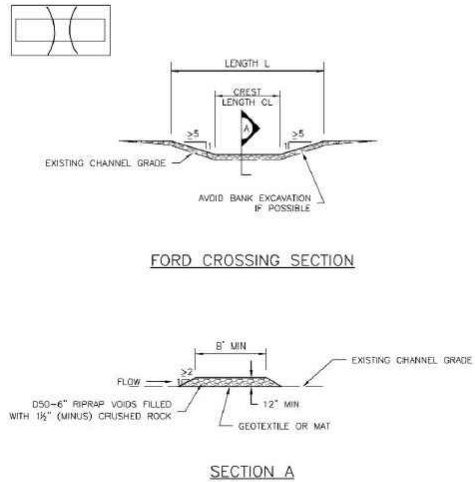
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Know what's below.  
Call before you dig.

## SM-10

## Temporary Stream Crossing (TSC)



TSC-2. FORD CROSSING

TSC-4

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

June 2012

## SM-10

## Temporary Stream Crossing (TSC)

## TEMPORARY STREAM CROSSING INSTALLATION NOTES

1. 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.

2. TEMPORARY STREAM CROSSING DIMENSIONS, D50, 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.

3. SEE MAJOR DRAINAGE CHAPTER FOR RIPRAP GRADATIONS.

4. 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

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. REMOVE SEDIMENT ACCUMULATED UPSTREAM OF CROSSING AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE CROSSING.
5. STREAM CROSSINGS ARE TO REMAIN IN PLACE UNTIL NO LONGER NEEDED AND SHALL BE REMOVED PRIOR TO THE END OF CONSTRUCTION.

6. 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.

(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO AND CITY OF AURORA, COLORADO (SILT FENCE, NOT AVAILABLE IN AUTOCAD))

TSC-6

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

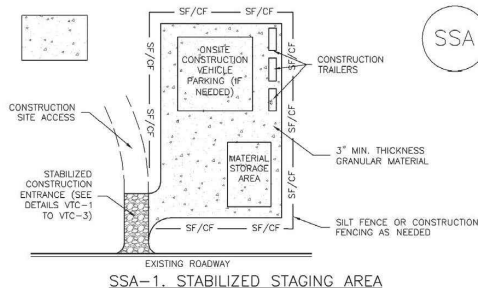
June 2012

## Stabilized Staging Area (SSA)

## SM-6

## SM-6

## Stabilized Staging Area (SSA)



## STABILIZED STAGING AREA INSTALLATION NOTES

1. SEE PLAN VIEW FOR:
  - LOCATION OF STAGING AREA(S).
  - CONTRACTOR MAY ADJUST LOCATION AND SIZE OF STAGING AREA WITH APPROVAL FROM THE LOCAL JURISDICTION.

2. STABILIZED STAGING AREA SHOULD BE APPROPRIATE FOR THE NEEDS OF THE SITE. OVERSIZING RESULTS IN A LARGER AREA TO STABILIZE FOLLOWING CONSTRUCTION.

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

4. THE STABILIZED STAGING AREA SHALL CONSIST OF A MINIMUM 3" THICK GRANULAR MATERIAL.

5. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, AASHTO #3 COARSE AGGREGATE, OR 6" (MINUS) ROCK.

6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING.

## STABILIZED STAGING AREA MAINTENANCE NOTES

1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.

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

3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.

4. ROCK SHALL BE REAPPLIED OR REGRADED AS NECESSARY IF RUTTING OCCURS OR UNDERLYING SUBGRADE BECOMES EXPOSED.

November 2010

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

SSA-3

SSA-4

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

November 2010

REFERENCE DRAWINGS  X-1129-MDG22x34 X-069-EX-TOPO					
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## 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.



PREPARED BY:



SEAL

LANDHUIS COMPANY

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

TYPICAL EROSION CONTROL DETAILS

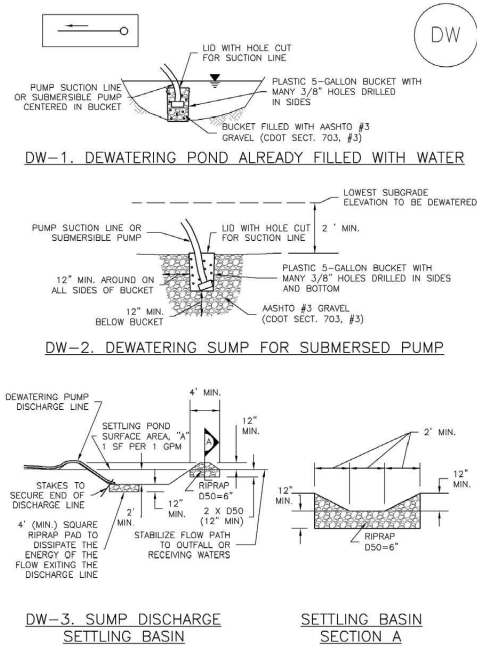
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Dewatering Operations (DW)

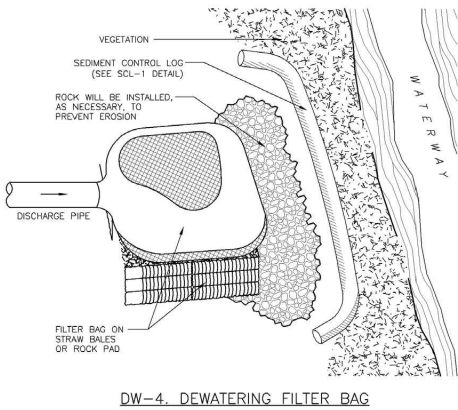
SM-9



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

SM-9

Dewatering Operations (DW)



- DW-4. DEWATERING FILTER BAG**
- DEWATERING INSTALLATION NOTES**
1. SEE PLAN VIEW FOR:
    - LOCATION OF DEWATERING EQUIPMENT.
    - TYPE OF DEWATERING OPERATION (DW-1 TO DW-4).
  2. THE OWNER OR CONTRACTOR SHALL OBTAIN A CONSTRUCTION DISCHARGE (DEWATERING) PERMIT FROM THE STATE PRIOR TO ANY DEWATERING OPERATIONS DISCHARGING FROM THE SITE. ALL DEWATERING SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PERMIT.
  3. THE OWNER OR OPERATOR SHALL PROVIDE, OPERATE, AND MAINTAIN DEWATERING SYSTEMS OF SUFFICIENT SIZE AND CAPACITY TO PERMIT EXCAVATION AND SUBSEQUENT CONSTRUCTION IN DRY CONDITIONS AND TO LOWER AND MAINTAIN THE GROUNDWATER LEVEL A MINIMUM OF 2-FEET BELOW THE LOWEST POINT OF EXCAVATION AND CONTINUOUSLY MAINTAIN EXCAVATIONS FREE OF WATER UNTIL BACK-FILLED TO FINAL GRADE.

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

Dewatering Operations (DW)

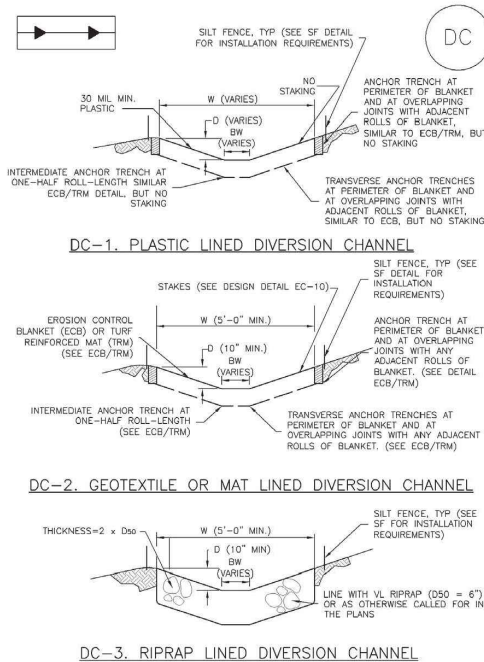
SM-9

- 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**
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  4. DEWATERING BMPs ARE REQUIRED IN ADDITION TO ALL OTHER PERMIT REQUIREMENTS.
  5. 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)

November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 DW-5

SM-8

Temporary Diversion Methods (TDM)



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

Temporary Diversion Methods (TDM)

SM-8

- CHANNEL DIVERSION INSTALLATION NOTES**
1. 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.
  2. SEE DRAINAGE PLANS FOR DETAILS OF PERMANENT CONVEYANCE FACILITIES.
  3. DIVERSION CHANNELS INDICATED ON THE SHMP PLAN SHALL BE INSTALLED PRIOR TO WORK IN DOWNGRADIENT AREAS OR NATURAL CHANNELS.
  4. 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.
  5. 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**
1. INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
  2. FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
  3. WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
  4. 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.
  5. 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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