



Know what's below.
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HAY CREEK VALLEY

EL PASO COUNTY, COLORADO

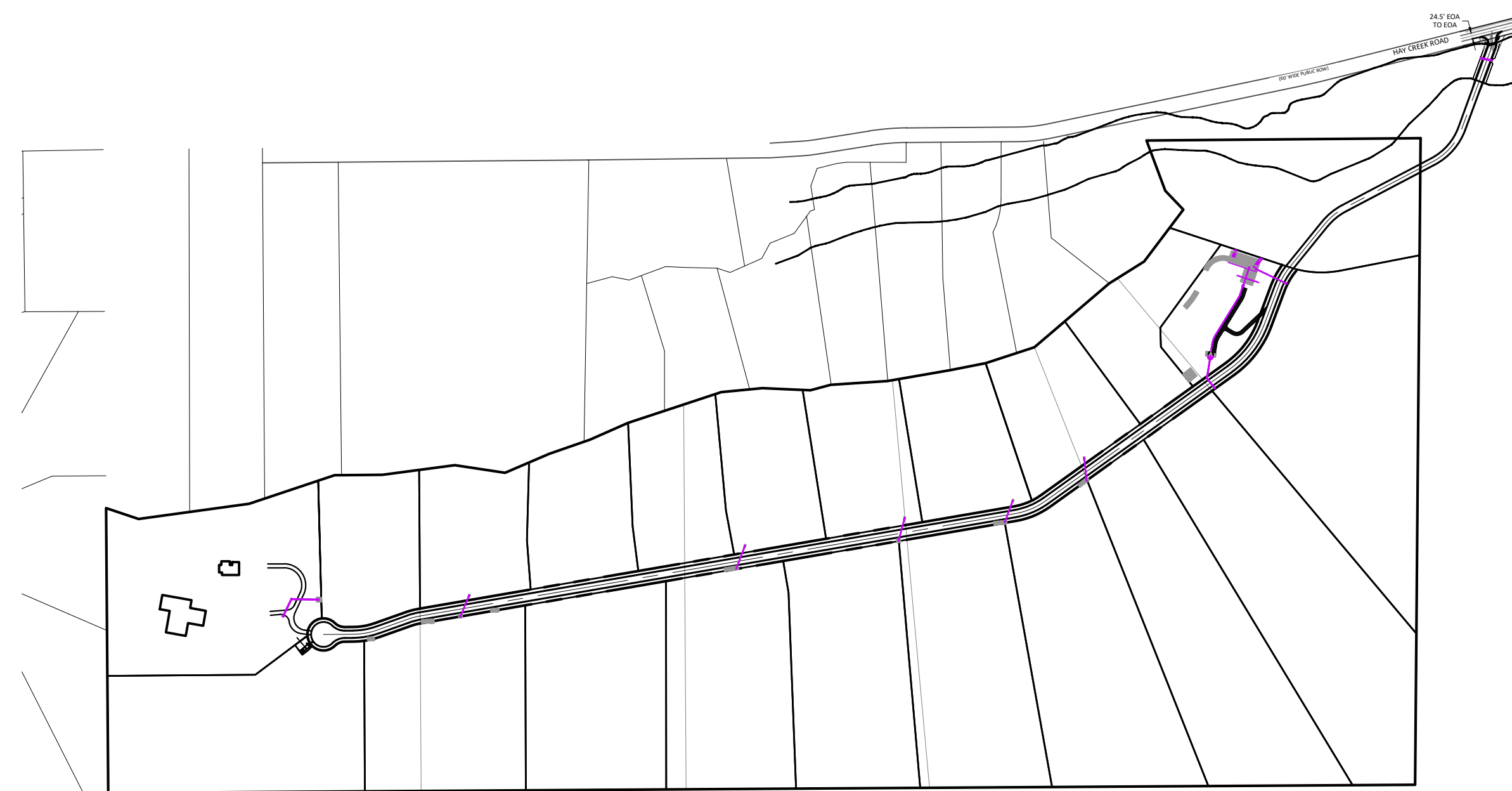
FINAL GRADING & EROSION CONTROL PLANS

JANUARY 2024

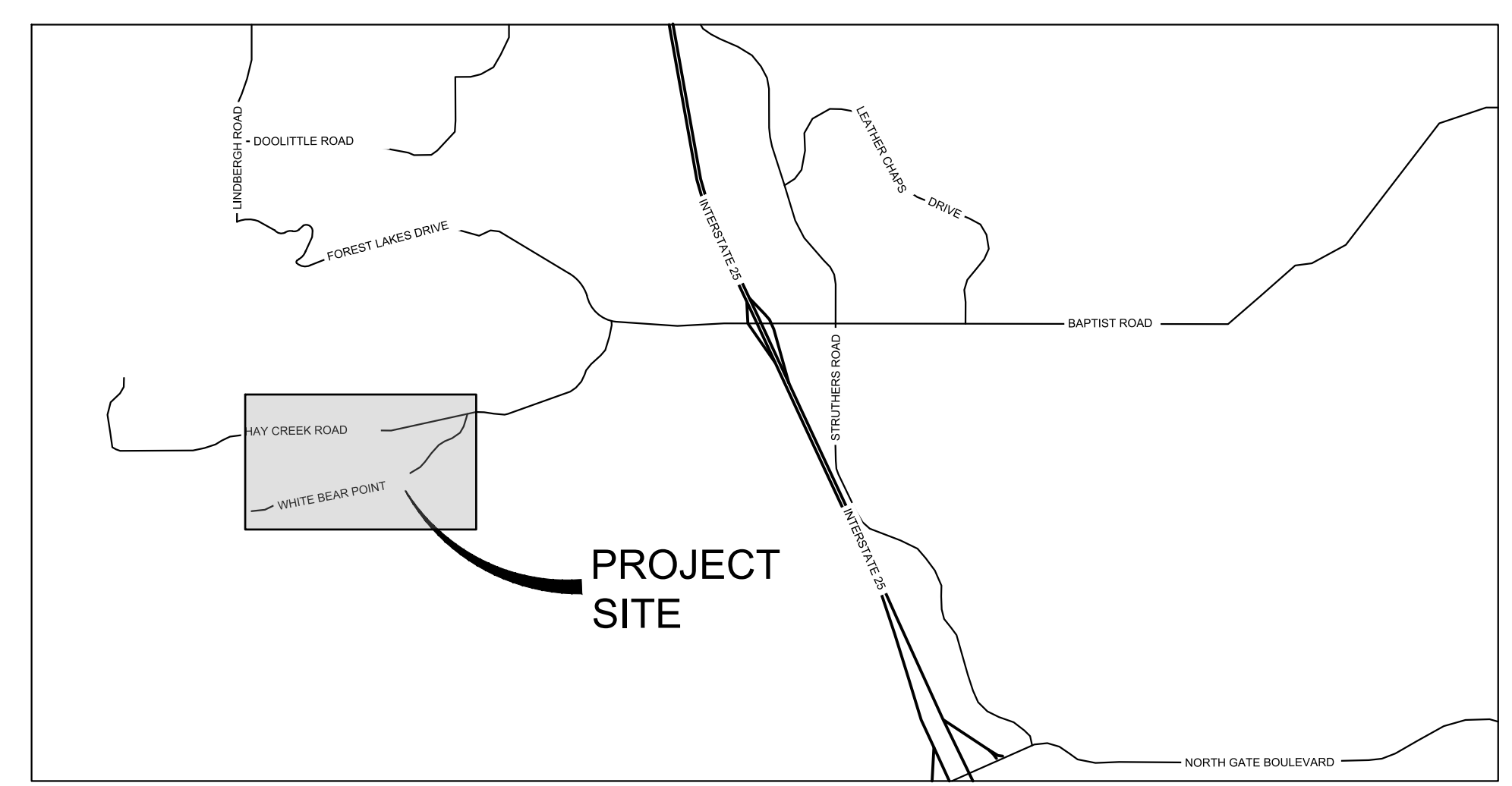
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ECN01-ECN03	DETAILS	10-12

AGENCY CONTACT INFO

OWNER/DEVELOPER	VIEW HOMES, INC. 555 MIDDLE CREEK PARKWAY, SUITE 500 COLORADO SPRINGS, CO 80921 TIM BUSCHAR, (719)-382-9433
CIVIL ENGINEER	MATRIX DESIGN GROUP 2435 RESEARCH PARKWAY, SUITE 300 COLORADO SPRINGS, CO 80920 (719)-575-0100
ELECTRIC	MOUNTAIN VIEW ELECTRIC ASSOCIATION 15706 JACKSON CREEK PARKWAY, SUITE 100 MONUMENT, CO 80132 GINA PERRY, (719) 494-2636
GAS	BLACK HILLS ENERGY 105 S VICTORIA AVENUE PUEBLO, CO 81003 (800) 303-0752
ENGINEERING	EL PASO COUNTY PUBLIC WORKS DEPARTMENT 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6460
TRAFFIC	EL PASO COUNTY PUBLIC WORKS DEPARTMENT 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6460
DRAINAGE	EL PASO COUNTY PUBLIC WORKS DEPARTMENT 3275 AKERS DRIVE COLORADO SPRINGS, CO 80922 (719) 520-6460
FIRE DEPARTMENT	MONUMENT FIRE DISTRICT 16055 OLD FOREST POINT, SUITE 102 MONUMENT, CO 80132 (719)-484-0911



SITE MAP
1" = 500'



VICINITY MAP
N.T.S.

OWNER/DEVELOPER'S STATEMENT:

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

NAME _____ DATE _____

TIM BUSCHAR, (719)-382-9433
VIEW HOMES, INC.
555 MIDDLE CREEK PARKWAY, SUITE 500
COLORADO SPRINGS, CO 80921

DESIGN ENGINEER'S STATEMENT:

THIS GRADING AND EROSION CONTROL PLAN WAS PREPARED UNDER MY DIRECTION AND SUPERVISION AND IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. SAID PLAN HAS BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR GRADING AND EROSION CONTROL PLANS. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARING THIS PLAN.

BY: _____ DATE: _____

JEFFREY A. ODOR, PE #39265
FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC.

EL PASO COUNTY:

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

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL 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, P.E. _____ DATE _____
COUNTY ENGINEER / ECM ADMINISTRATOR

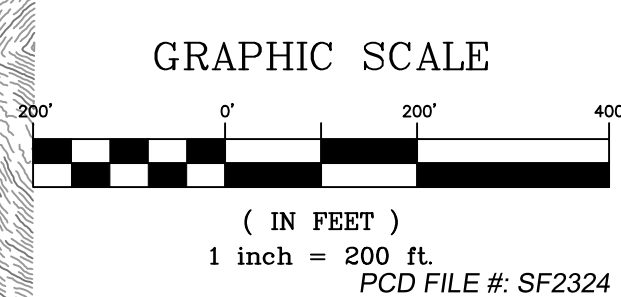
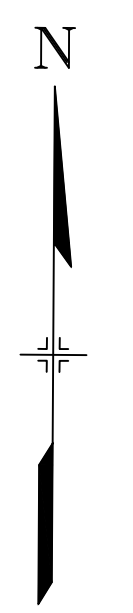
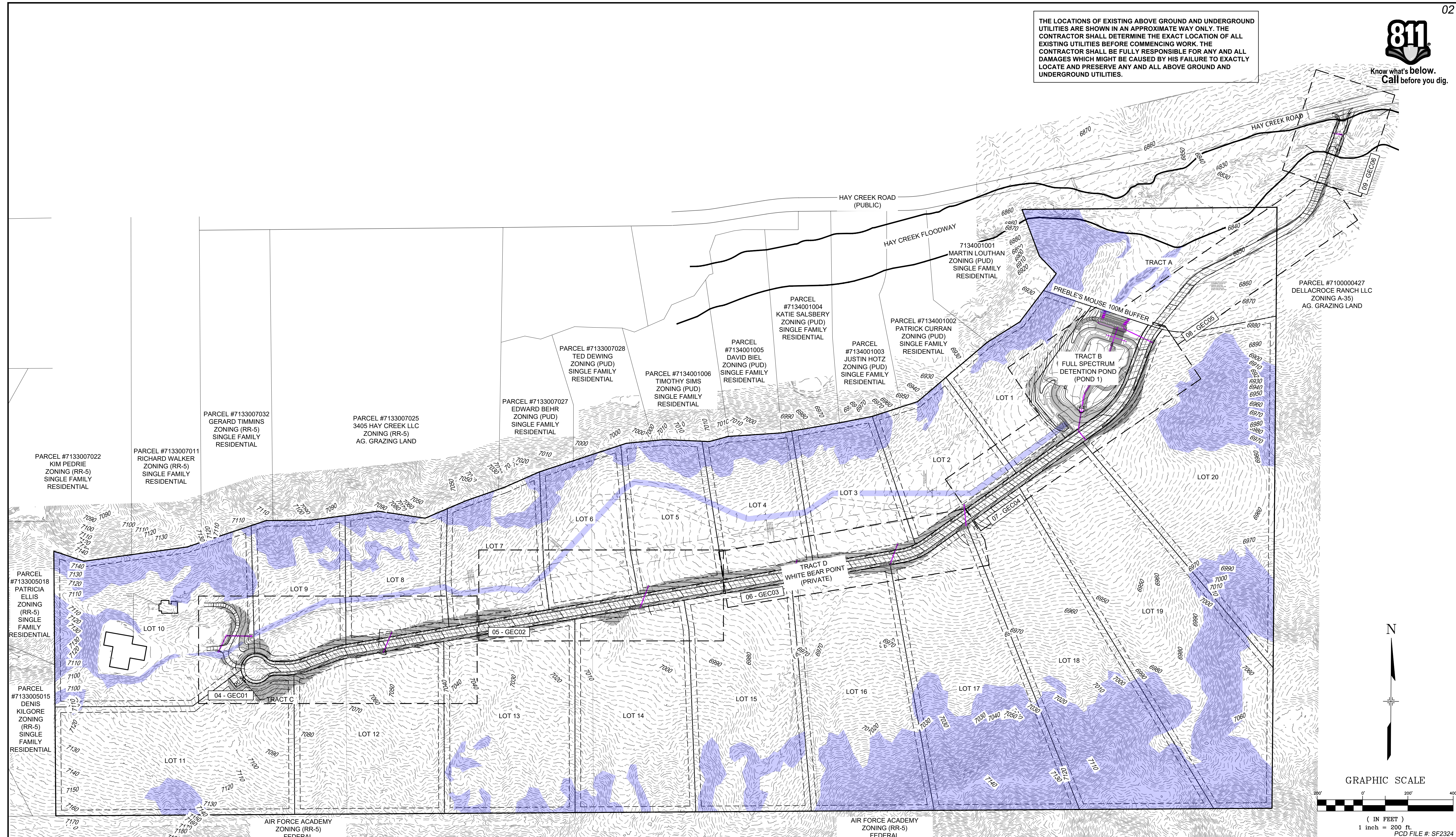
PCD FILE #: SF2324

REFERENCE DRAWINGS	NO.	DATE	DESCRIPTION	BY	SHEET KEY	BENCHMARK	PREPARED BY:	SEAL	HAY CREEK VALLEY			
X-TITLE-CD X-886-PR-SITE FE51A.X3 X-886-066-EX-MAP-1 164022-01 Hay Creek Road BNDY X-886-ALTA-SURVEY Hay Creek BFEs						PROJECT ELEVATIONS ARE NAVD 88 ELEVATIONS BASED ON AN OPUS DERIVED ELEVATION ON CONTROL POINT 10, A NO. 5 REBAR HAVING AN ELEVATION OF 5769.92.	MATRIX Excellence by Design	PRELIMINARY THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE	EL PASO COUNTY, COLORADO FINAL GRADING & EROSION CONTROL PLANS			
COMPUTER FILE MANAGEMENT									TITLE SHEET			
FILE NAME: S:\22.886.076 Hay Creek-Forest Manor-O'Leary Properties\500 CADD\504 Plan Sets\Construction Plans\GEC Plan\TS01.dwg									DESIGNED BY: CVW	SCALE	DATE ISSUED: JANUARY 2024	DRAWING No.
CTB FILE: Matrix.ctb									DRAWN BY: CVW	HORIZ. N/A		
PLOT DATE: 1/26/2024 3:01 PM									CHECKED BY: JAO	VERT. N/A	SHEET 01 OF 12	TS01
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.									FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 22.886.076			

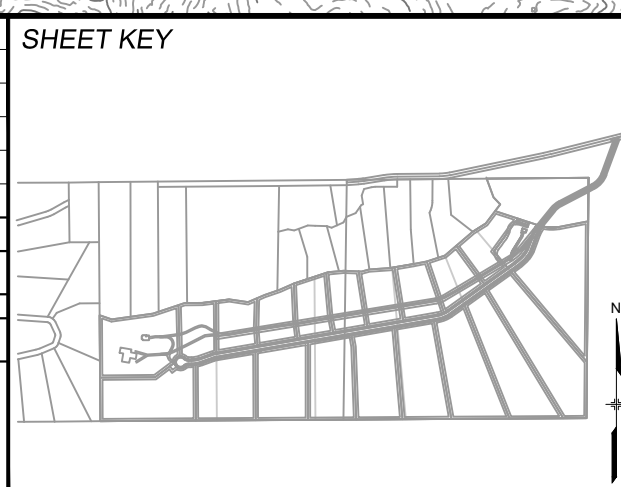


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COMPUTER FILE MANAGEMENT				
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BASIS OF BEARING
THE SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED ON THE EASTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "NOLTE PLS25955 C1/4 S22 T16S, R65W 1999, "AND THE WESTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "SSS PLS 16154 1/4 S21 S22 T15S, R65W 2000, "BEING ASSUMED TO BEAR S89°54'42"W, A DISTANCE OF 2,627.78 FEET.

PREPARED BY:

Excellence by Design

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. 22.886.076

HAY CREEK VALLEY
EL PASO COUNTY, COLORADO
FINAL GRADING & EROSION CONTROL PLANS

KEY MAP

DESIGNED BY: CVW	SCALE: 1"=200'	DATE ISSUED: JANUARY 2024	DRAWING No. GN01
DRAWN BY: CVW	HORIZ. N/A	SHEET 02 OF 12	
CHECKED BY: JAO	VERT. N/A		



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GENERAL CONSTRUCTION NOTES:

- STORMWATER DISCHARGES FROM CONSTRUCTION SITES SHALL NOT CAUSE OR THREATEN TO CAUSE POLLUTION, CONTAMINATION, OR DEGRADATION OF STATE WATERS. ALL WORK AND EARTH DISTURBANCE SHALL BE DONE IN A MANNER THAT MINIMIZES POLLUTION OF ANY ON-SITE OR OFF-SITE WATERS, INCLUDING WETLANDS.
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING.
- A SEPARATE STORMWATER MANAGEMENT PLAN (SMWP) FOR THIS PROJECT SHALL BE COMPLETED AND AN EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP) ISSUED PRIOR TO COMMENCING CONSTRUCTION. MANAGEMENT OF THE SWMP DURING CONSTRUCTION IS THE RESPONSIBILITY OF THE DESIGNATED QUALIFIED STORMWATER MANAGER OR CERTIFIED EROSION CONTROL INSPECTOR. THE SWMP SHALL BE LOCATED ON SITE AT ALL TIMES DURING CONSTRUCTION AND SHALL BE KEPT UP TO DATE WITH WORK PROGRESS AND CHANGES IN THE FIELD.
- ONCE THE ESQCP IS APPROVED AND A "NOTICE TO PROCEED" HAS BEEN ISSUED, THE CONTRACTOR MAY INSTALL THE INITIAL STAGE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THE APPROVED GEC. A PRECONSTRUCTION MEETING BETWEEN THE CONTRACTOR, ENGINEER, AND EL PASO COUNTY WILL BE HELD PRIOR TO ANY CONSTRUCTION. IT IS THE RESPONSIBILITY OF THE APPLICANT TO COORDINATE THE MEETING TIME AND PLACE WITH COUNTY STAFF.
- CONTROL MEASURES MUST BE INSTALLED PRIOR TO COMMENCEMENT OF ACTIVITIES THAT COULD CONTRIBUTE POLLUTANTS TO STORMWATER. CONTROL MEASURES FOR ALL SLOPES, CHANNELS, DITCHES, AND DISTURBED LAND AREAS SHALL BE INSTALLED IMMEDIATELY UPON COMPLETION OF THE DISTURBANCE.
- ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE MAINTAINED AND REMAIN IN EFFECTIVE OPERATING CONDITION UNTIL PERMANENT SOIL EROSION CONTROL MEASURES ARE IMPLEMENTED AND FINAL STABILIZATION IS ESTABLISHED. ALL PERSONS ENGAGED IN LAND DISTURBANCE ACTIVITIES SHALL ASSESS THE ADEQUACY OF CONTROL MEASURES AT THE SITE AND IDENTIFY IF CHANGES TO THOSE CONTROL MEASURES ARE NEEDED TO ENSURE THE CONTINUED EFFECTIVE PERFORMANCE OF THE CONTROL MEASURES. ALL CHANGES TO TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES MUST BE INCORPORATED INTO THE STORMWATER MANAGEMENT PLAN.
- TEMPORARY STABILIZATION SHALL BE IMPLEMENTED ON DISTURBED AREAS AND STOCKPILES WHERE GROUND DISTURBING CONSTRUCTION ACTIVITY HAS PERMANENTLY CEASED OR TEMPORARILY CEASED FOR LONGER THAN 14 DAYS.
- FINAL STABILIZATION MUST BE IMPLEMENTED AT ALL APPLICABLE CONSTRUCTION SITES. FINAL STABILIZATION IS ACHIEVED WHEN ALL GROUND DISTURBING ACTIVITIES ARE COMPLETE AND ALL DISTURBED AREAS EITHER HAVE A UNIFORM VEGETATIVE COVER WITH INDIVIDUAL PLANT DENSITY OF 70 PERCENT OF PRE-DISTURBANCE LEVELS ESTABLISHED OR EQUIVALENT PERMANENT ALTERNATIVE STABILIZATION METHOD IS IMPLEMENTED. ALL TEMPORARY SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED UPON FINAL STABILIZATION AND BEFORE PERMIT CLOSURE.
- ALL PERMANENT STORMWATER MANAGEMENT FACILITIES SHALL BE INSTALLED AS DESIGNED IN THE APPROVED PLANS. ANY PROPOSED CHANGES THAT EFFECT THE DESIGN OR FUNCTION OF PERMANENT STORMWATER MANAGEMENT STRUCTURES MUST BE APPROVED BY THE ECM ADMINISTRATOR PRIOR TO IMPLEMENTATION.
- EARTH DISTURBANCES SHALL BE CONDUCTED IN SUCH A MANNER SO AS TO EFFECTIVELY MINIMIZE ACCELERATED SOIL EROSION AND RESULTING SEDIMENTATION. ALL DISTURBANCES SHALL BE DESIGNED, CONSTRUCTED, AND COMPLETED SO THAT THE EXPOSED AREA OF ANY DISTURBED LAND SHALL BE LIMITED TO THE SHORTEST PRACTICAL PERIOD OF TIME. PRE-EXISTING VEGETATION SHALL BE PROTECTED AND MAINTAINED WITHIN 50 HORIZONTAL FEET OF A WATERS OF THE STATE UNLESS SHOWN TO BE INFEASIBLE AND SPECIFICALLY REQUESTED AND APPROVED.
- COMPACTION OF SOIL MUST BE PREVENTED IN AREAS DESIGNATED FOR INFILTRATION CONTROL MEASURES OR WHERE FINAL STABILIZATION WILL BE ACHIEVED BY VEGETATIVE COVER. AREAS

- DESIGNATED FOR INFILTRATION CONTROL MEASURES SHALL ALSO BE PROTECTED FROM SEDIMENTATION DURING CONSTRUCTION UNTIL FINAL STABILIZATION IS ACHIEVED. IF COMPACTION PREVENTION IS NOT FEASIBLE DUE TO SITE CONSTRAINTS, ALL AREAS DESIGNATED FOR INFILTRATION AND VEGETATION CONTROL MEASURES MUST BE LOOSENEED PRIOR TO INSTALLATION OF THE CONTROL MEASURE(S).
- ANY TEMPORARY OR PERMANENT FACILITY DESIGNED AND CONSTRUCTED FOR THE CONVEYANCE OF STORMWATER AROUND, THROUGH, OR FROM THE EARTH DISTURBANCE AREA SHALL BE A STABILIZED CONVEYANCE DESIGNED TO MINIMIZE EROSION AND THE DISCHARGE OF SEDIMENT OFF SITE.
- CONCRETE WASH WATER SHALL BE CONTAINED AND DISPOSED OF IN ACCORDANCE WITH THE SWMP. NO WASH WATER SHALL BE DISCHARGED TO OR ALLOWED TO ENTER STATE WATERS, INCLUDING ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR FACILITIES. CONCRETE WASHOUTS SHALL NOT BE LOCATED IN AN AREA WHERE SHALLOW GROUNDWATER MAY BE PRESENT, OR WITHIN 50 FEET OF A SURFACE WATER BODY, CREEK OR STREAM.
- DURING DEWATERING OPERATIONS OF UNCONTAMINATED GROUND WATER MAY BE DISCHARGED ON SITE, BUT SHALL NOT LEAVE THE SITE IN THE FORM OF SURFACE RUNOFF UNLESS AN APPROVED STATE DEWATERING PERMIT IS IN PLACE.
- EROSION CONTROL BLANKETING OR OTHER PROTECTIVE COVERING SHALL BE USED ON SLOPES STEEPER THAN 3:1.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL WASTES FROM THE CONSTRUCTION SITE FOR DISPOSAL IN ACCORDANCE WITH LOCAL AND STATE REGULATORY REQUIREMENTS. NO CONSTRUCTION DEBRIS, TREE SLASH, BUILDING MATERIAL WASTES OR UNUSED BUILDING MATERIALS SHALL BE BURIED, DUMPED, OR DISCHARGED AT THE SITE.
- WASTE MATERIALS SHALL NOT BE TEMPORARILY PLACED OR STORED IN THE STREET, ALLEY, OR OTHER PUBLIC WAY, UNLESS IN ACCORDANCE WITH AN APPROVED TRAFFIC CONTROL PLAN. CONTROL MEASURES MAY BE REQUIRED BY EL PASO COUNTY ENGINEERING IF DEEMED NECESSARY, BASED ON SPECIFIC CONDITIONS AND CIRCUMSTANCES.
- TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
- THE OWNER/DEVELOPER SHALL BE RESPONSIBLE FOR THE REMOVAL OF ALL CONSTRUCTION DEBRIS, DIRT, TRASH, ROCK, SEDIMENT, SOIL, AND SAND THAT MAY ACCUMULATE IN ROADS, STORM DRAINS AND OTHER DRAINAGE CONVEYANCE SYSTEMS AND STORMWATER APPURTENANCES AS A RESULT OF SITE DEVELOPMENT.
- THE QUANTITY OF MATERIALS STORED ON THE PROJECT SITE SHALL BE LIMITED, AS MUCH AS PRACTICAL, TO THAT QUANTITY REQUIRED TO PERFORM THE WORK IN AN ORDERLY SEQUENCE. ALL MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
- NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ONSITE UNLESS PERMISSION FOR THE USE OF SUCH CHEMICAL(S) IS GRANTED IN WRITING BY THE ECM ADMINISTRATOR. IN GRANTING APPROVAL FOR THE USE OF SUCH CHEMICAL(S), SPECIAL CONDITIONS AND MONITORING MAY BE REQUIRED.
- BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ONSITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
- 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 CTL THOMPSON, DATED SEPTEMBER 19, 2023, 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

NRCS SOIL SURVEY FOR EL PASO COUNTY

SOIL ID NO.	SOIL TYPE	HYDROLOGIC CLASSIFICATION
38	JARRE-TECOLOTE COMPLEX (8%-65% SLOPES)	B
71	PRING COARSE SANDY LOAM (3%-8% SLOPES)	B
93	TOMAH-CROWFOOT COMPLEX (8%-15% SLOPES)	B

TIMING

ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING:
 WINTER 2024 THRU FALL 2024

EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETED:
 FALL 2024

AREAS

TOTAL DISTURBED AREA: 17.28 ACRES

RECEIVING WATERS

NAME OF RECEIVING WATERS
 HAY CREEK (ULTIMATE)

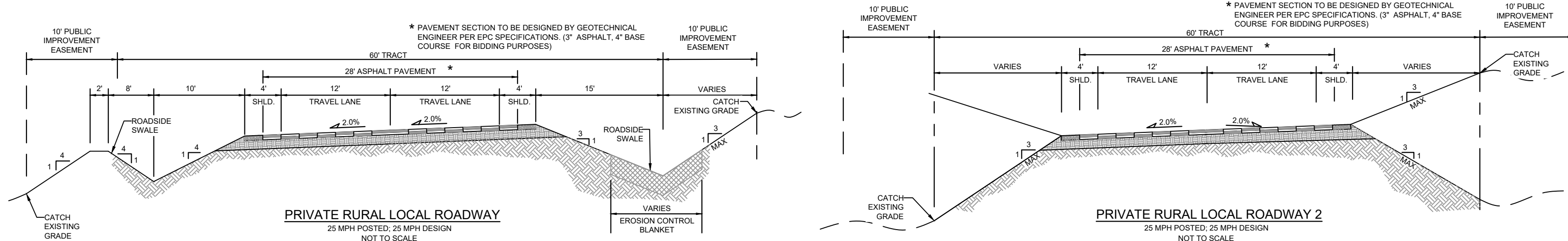
ENGINEER'S NOTES:

THE EXISTING VEGETATION CONSISTS OF MODERATELY DENSE NATIVE GRASSES AND SHRUBS. BASED ON SITE VISITS AND A REVIEW OF AERIAL PHOTOGRAPHY, THE VEGETATIVE COVER AT HAY CREEK VALLEY IS APPROXIMATELY 80%.

ABBREVIATIONS

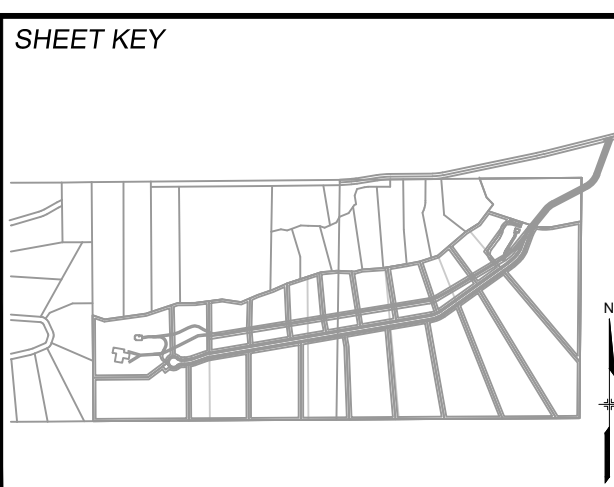
BOW	BOTTOM OF WALL	PL	PROPERTY LINE
EL	ELEVATION	PSI	POUNDS PER SQUARE INCH
EX	EXISTING	RCP	REINFORCED CONCRETE PIPE
HORIZ	HORIZONTAL	SHLDR	SHOULDER
INV	INVERT	TOW	TOP OF WALL
MIN	MINIMUM	TYP	TYPICAL
N,S,E,W	NORTH,SOUTH,EAST,WEST		

TYPICAL ROADWAY CROSS SECTIONS



PCD FILE #: SF2324

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PREPARED BY:

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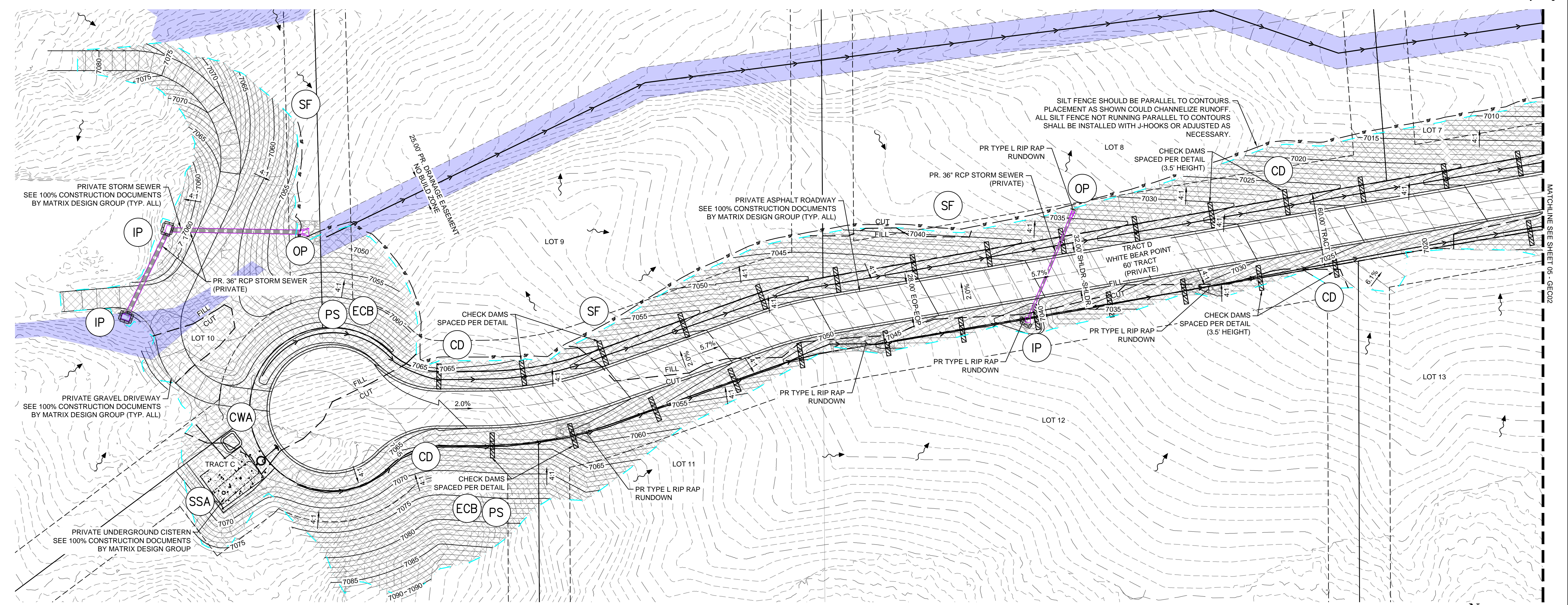
HAY CREEK VALLEY
 EL PASO COUNTY, COLORADO
 FINAL GRADING & EROSION CONTROL PLANS

GENERAL NOTES

DESIGNED BY: CVW	SCALE	DATE ISSUED: JANUARY 2024	DRAWING No. GN02
DRAWN BY: CVW	HORIZ N/A		
CHECKED BY: JAO	VERT. N/A	SHEET 03 OF 12	



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SILT FENCE SHOULD BE PARALLEL TO CONTOURS. PLACEMENT AS SHOWN COULD CHANNELIZE RUNOFF. ALL SILT FENCE NOT RUNNING PARALLEL TO CONTOURS SHALL BE INSTALLED WITH J-HOOKS OR ADJUSTED AS NECESSARY.

PRIVATE STORM SEWER SEE 100% CONSTRUCTION DOCUMENTS BY MATRIX DESIGN GROUP (TYP. ALL)

PRIVATE ASPHALT ROADWAY SEE 100% CONSTRUCTION DOCUMENTS BY MATRIX DESIGN GROUP (TYP. ALL)

PRIVATE GRAVEL DRIVEWAY SEE 100% CONSTRUCTION DOCUMENTS BY MATRIX DESIGN GROUP (TYP. ALL)

PRIVATE UNDERGROUND CISTERN SEE 100% CONSTRUCTION DOCUMENTS BY MATRIX DESIGN GROUP

BMP SEQUENCING	
INITIAL	SILT FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS
INTERIM	CHECK DAMS, CONCRETE WASHOUT, INLET/OUTLET PROTECTION, STOCKPILES, STAGING, ROUGH CUT STREET CONTROL
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING, PERMANENT CONTROL MEASURE(S)

NOTES:
 1. SEE CHECK DAM (CD) DETAIL EC-12 ON SHEET ECN01 FOR SPACING.
 2. ALL EROSION CONTROL BLANKET SHALL BE INSPECTED 24-MONTHS AFTER INSTALLATION. EROSION CONTROL BLANKET MAY BE REQUIRED TO BE RE-INSTALLED PER MANUFACTURER SPECIFICATIONS.

EROSION CONTROL LEGEND

PS PERMANENT SEEDING	MULCHING	EXISTING CONTOURS
SF SILT FENCE	TEMPORARY SEDIMENT BASIN	DRAINAGE SWALE
ECB EROSION CONTROL BLANKET	CONCRETE WASHOUT	OVERLAND FLOW
OP OUTLET PROTECTION	STOCKPILE MANAGEMENT / STABILIZED STAGING AREA	LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY
IP INLET PROTECTION	HIGH POINT / LOW POINT	PROJECT BOUNDARY LINE
VTC VEHICLE TRACKING CONTROL	PROPOSED CONTOURS	OVERFLOW ROUTE
PROPOSED RIP RAP	EXISTING FENCE	CUT/FILL LINE
CD CHECK DAM	PROPOSED STORM DRAIN	100 YEAR FLOODPLAIN BOUNDARY
	NO BUILD ZONE (SLOPE GREATER THAN 29.99%)	MATCHLINE
		PROPOSED LOT/TRACT LINE
		EASEMENT
		PROPOSED BUILDING SETBACK

GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft. PCD FILE #: SF2324

<p>REFERENCE DRAWINGS</p> <p>X-TITLE-CD X-886-PR-SITE X-FEMA-FS X-886-068-EX-MAP-1 164022-01 Hay Creek Road BNDY X-886-ALTA-SURVEY Hay Creek BFEs 2023-02-28 TOPO 164022-01</p>	<table border="1"> <thead> <tr> <th>No.</th> <th>DATE</th> <th>DESCRIPTION</th> <th>BY</th> </tr> </thead> <tbody> <tr> <td colspan="4" style="text-align: center;">REVISIONS</td> </tr> </tbody> </table>	No.	DATE	DESCRIPTION	BY	REVISIONS				<p>SHEET KEY</p>	<p>BENCHMARK PROJECT ELEVATIONS ARE NAVD 88 ELEVATIONS BASED ON AN OPUS DERIVED ELEVATION ON CONTROL POINT 10, A NO. 5 REBAR HAVING AN ELEVATION OF 5769.92.</p> <p>BASIS OF BEARING THE SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED ON THE EASTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "NOLTE PLS25985 C1/4 S22 T15S, R65W 1999," AND THE WESTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "SSS PLS 16154 1/4 S21 S22 T15S, R65W 2000," BEING ASSUMED TO BEAR S89°54'42"W, A DISTANCE OF 2,627.78 FEET.</p>	<p>SEAL</p> <div style="border: 1px solid black; padding: 5px; text-align: center;"> <p>PRELIMINARY THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE</p> </div> <p>FOR AND ON BEHALF OF MATRIX DESIGN GROUP, INC. PROJECT No. 22.886.076</p>	<p style="text-align: center;">HAY CREEK VALLEY</p> <p style="text-align: center;">EL PASO COUNTY, COLORADO FINAL GRADING & EROSION CONTROL PLANS</p> <p style="text-align: center;">GRADING & EROSION CONTROL PLAN</p> <table border="1" style="width: 100%; font-size: small;"> <tr> <td>DESIGNED BY: CVW</td> <td>SCALE: 1" = 40'</td> <td>DATE ISSUED: JANUARY 2024</td> <td>DRAWING No. GEC01</td> </tr> <tr> <td>DRAWN BY: CVW</td> <td>HORIZ: 1" = 40'</td> <td>SHEET 04 OF 12</td> <td></td> </tr> <tr> <td>CHECKED BY: JAO</td> <td>VERT: N/A</td> <td></td> <td></td> </tr> </table>	DESIGNED BY: CVW	SCALE: 1" = 40'	DATE ISSUED: JANUARY 2024	DRAWING No. GEC01	DRAWN BY: CVW	HORIZ: 1" = 40'	SHEET 04 OF 12		CHECKED BY: JAO	VERT: N/A		
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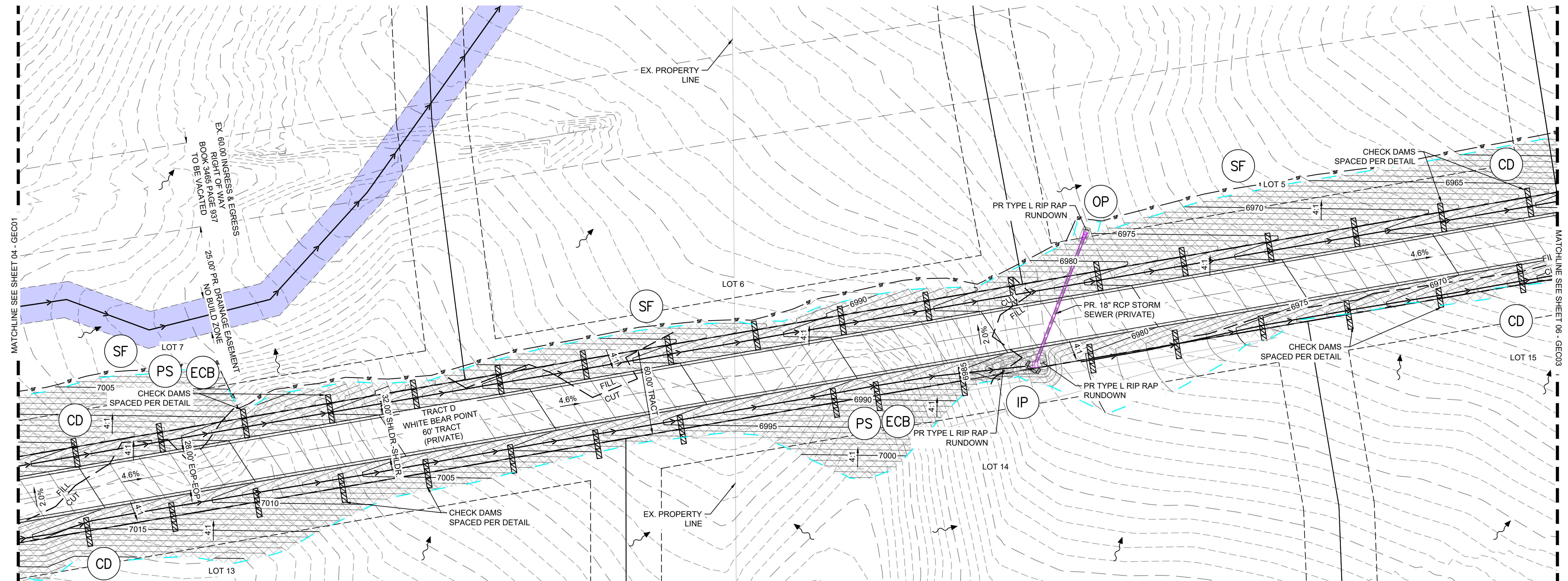
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Know what's below.
Call before you dig.

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BMP SEQUENCING	
INITIAL	SILT FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS
INTERIM	CHECK DAMS, CONCRETE WASHOUT, INLET/OUTLET PROTECTION, STOCKPILES, STAGING, ROUGH CUT STREET CONTROL
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING, PERMANENT CONTROL MEASURE(S)

NOTES:
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EROSION CONTROL LEGEND

(PS)	PERMANENT SEEDING	(MU)	MULCHING
(SF)	SILT FENCE	(TSB)	TEMPORARY SEDIMENT BASIN
(ECB)	EROSION CONTROL BLANKET	(CWA)	CONCRETE WASHOUT
(OP)	OUTLET PROTECTION	(SSA)	STOCKPILE MANAGEMENT / STABILIZED STAGING AREA
(IP)	INLET PROTECTION	(HP)	HIGH POINT / LOW POINT
(VTC)	VEHICLE TRACKING CONTROL	(LP)	LOW POINT
(RIP)	PROPOSED RIP RAP	(7050)	PROPOSED CONTOURS
(CD)	CHECK DAM	(X)	EXISTING FENCE
		(---)	EXISTING STORM DRAIN
		(---)	PROPOSED STORM DRAIN
		(---)	NO BUILD ZONE (SLOPE GREATER THAN 29.99%)

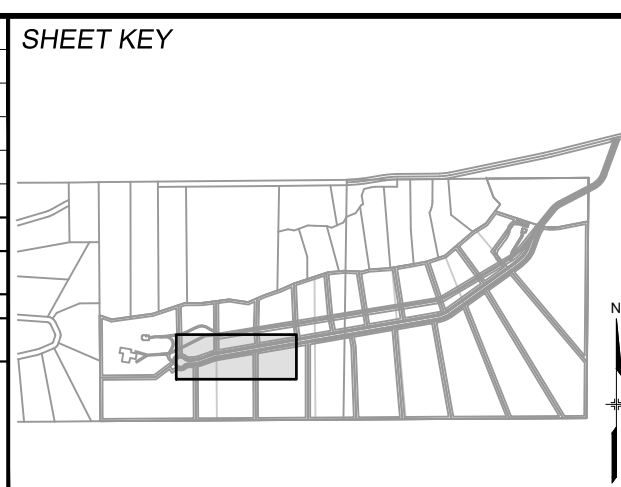
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GRAPHIC SCALE
(IN FEET)
1 inch = 40 ft.

(---)	EXISTING CONTOURS
(---)	DRAINAGE SWALE
(---)	SLOPE LABEL
(---)	OVERLAND FLOW
(---)	LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY
(---)	PROJECT BOUNDARY LINE
(---)	OVERFLOW ROUTE
(---)	CUT/FILL LINE
(---)	100 YEAR FLOODPLAIN BOUNDARY
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(---)	PROPOSED LOT/TRACT LINE
(---)	EASEMENT
(---)	PROPOSED BUILDING SETBACK

No.	DATE	DESCRIPTION	BY
REVISIONS			

COMPUTER FILE MANAGEMENT
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 CTB FILE: Matrix.ctb
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BENCHMARK
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PREPARED BY:

Matrix
Excellence by Design

SEAL

PRELIMINARY
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FOR AND ON BEHALF OF
 MATRIX DESIGN GROUP, INC.
 PROJECT No. 22.886.076

HAY CREEK VALLEY

EL PASO COUNTY, COLORADO
 FINAL GRADING & EROSION CONTROL PLANS

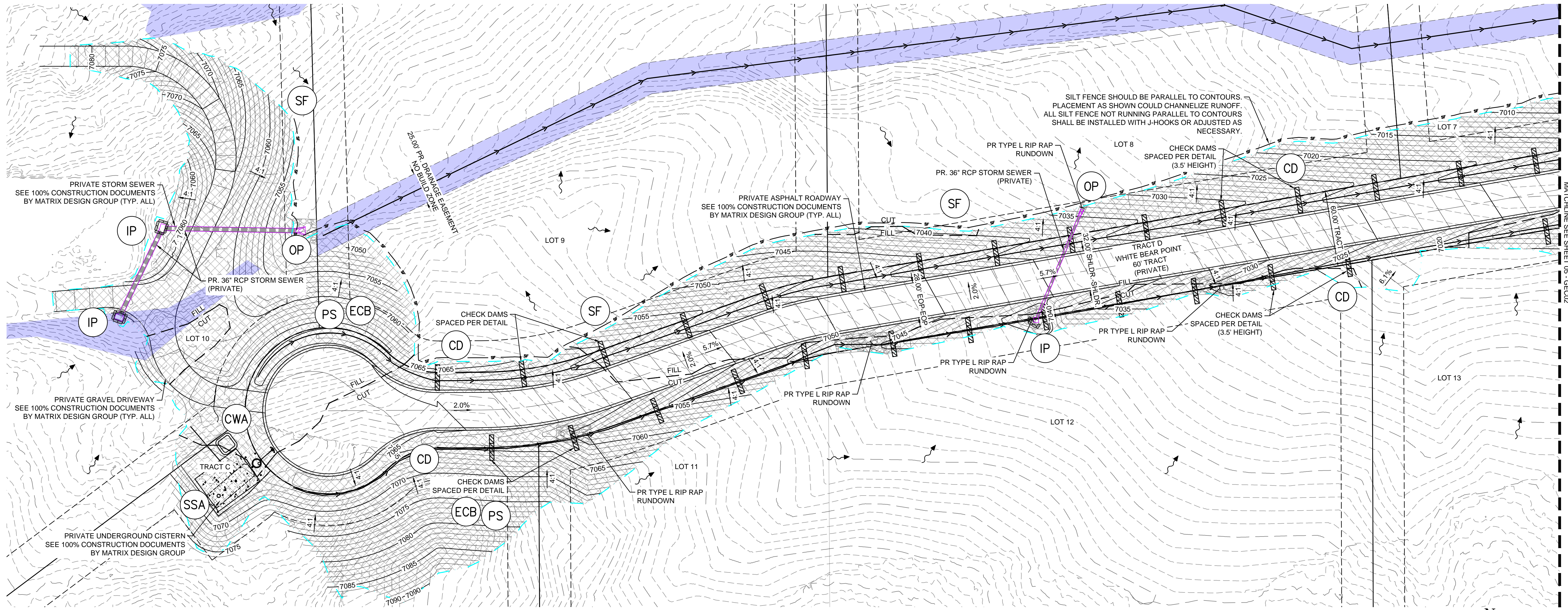
GRADING & EROSION CONTROL PLAN

DESIGNED BY: CVW	SCALE: HORIZ 1"=40'	DATE ISSUED: JANUARY 2024	DRAWING No. GEC02
DRAWN BY: CVW	VERT. N/A	SHEET 05 OF 12	
CHECKED BY: JAO			



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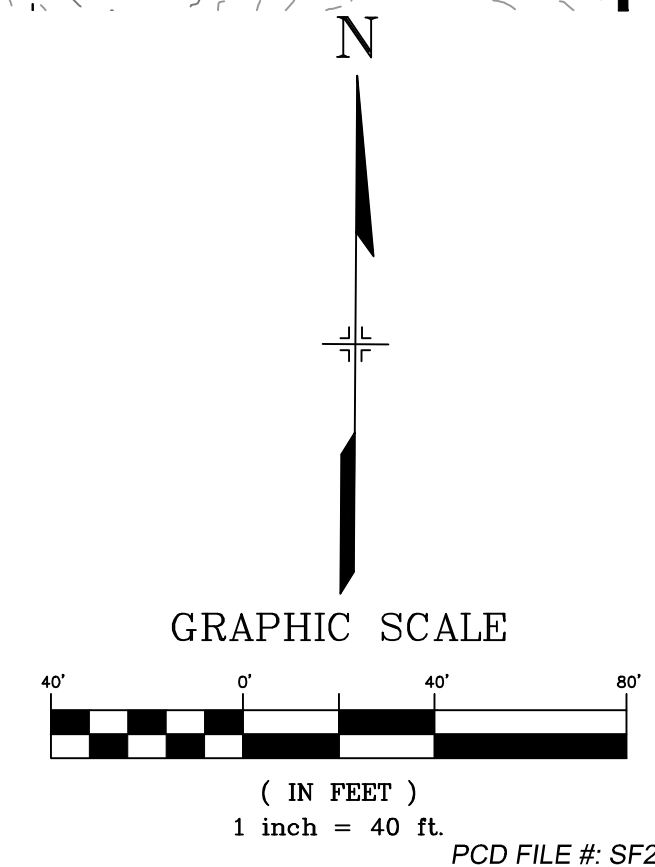
EROSION CONTROL LEGEND

BMP SEQUENCING	
INITIAL	SILT FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS
INTERIM	CHECK DAMS, CONCRETE WASHOUT, INLET/OUTLET PROTECTION, STOCKPILES, STAGING, ROUGH CUT STREET CONTROL
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING, PERMANENT CONTROL MEASURE(S)

- PS** PERMANENT SEEDING
- SF** SILT FENCE
- ECB** EROSION CONTROL BLANKET
- OP** OUTLET PROTECTION
- IP** INLET PROTECTION
- VTC** VEHICLE TRACKING CONTROL
- CD** CHECK DAM
- MU** MULCHING
- TSB** TEMPORARY SEDIMENT BASIN
- CWA** CONCRETE WASHOUT
- SSA** STOCKPILE MANAGEMENT / STABILIZED STAGING AREA
- HP** HIGH POINT / LOW POINT
- LP** LOW POINT / HIGH POINT
- PROPOSED CONTOURS**
- EXISTING CONTOURS**
- EXISTING FENCE**
- EXISTING STORM DRAIN**
- PROPOSED STORM DRAIN**
- NO BUILD ZONE (SLOPE GREATER THAN 29.99%)**

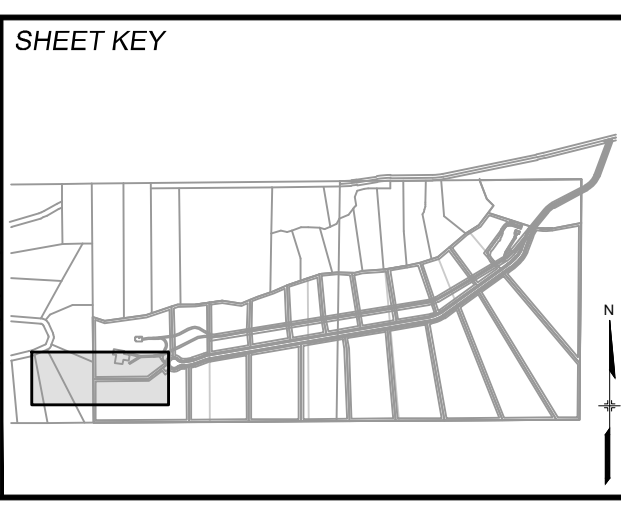
- EXISTING CONTOURS**
- DRAINAGE SWALE**
- SLOPE LABEL**
- OVERLAND FLOW**
- LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY**
- PROJECT BOUNDARY LINE**
- OVERFLOW ROUTE**
- CUT/FILL LINE**
- 100 YEAR FLOODPLAIN BOUNDARY**
- MATCHLINE**
- PROPOSED LOT/TRACT LINE**
- EASEMENT**
- PROPOSED BUILDING SETBACK**

NOTES:
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No.	DATE	DESCRIPTION REVISIONS	BY

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PREPARED BY:
Matrix
 Excellence by Design

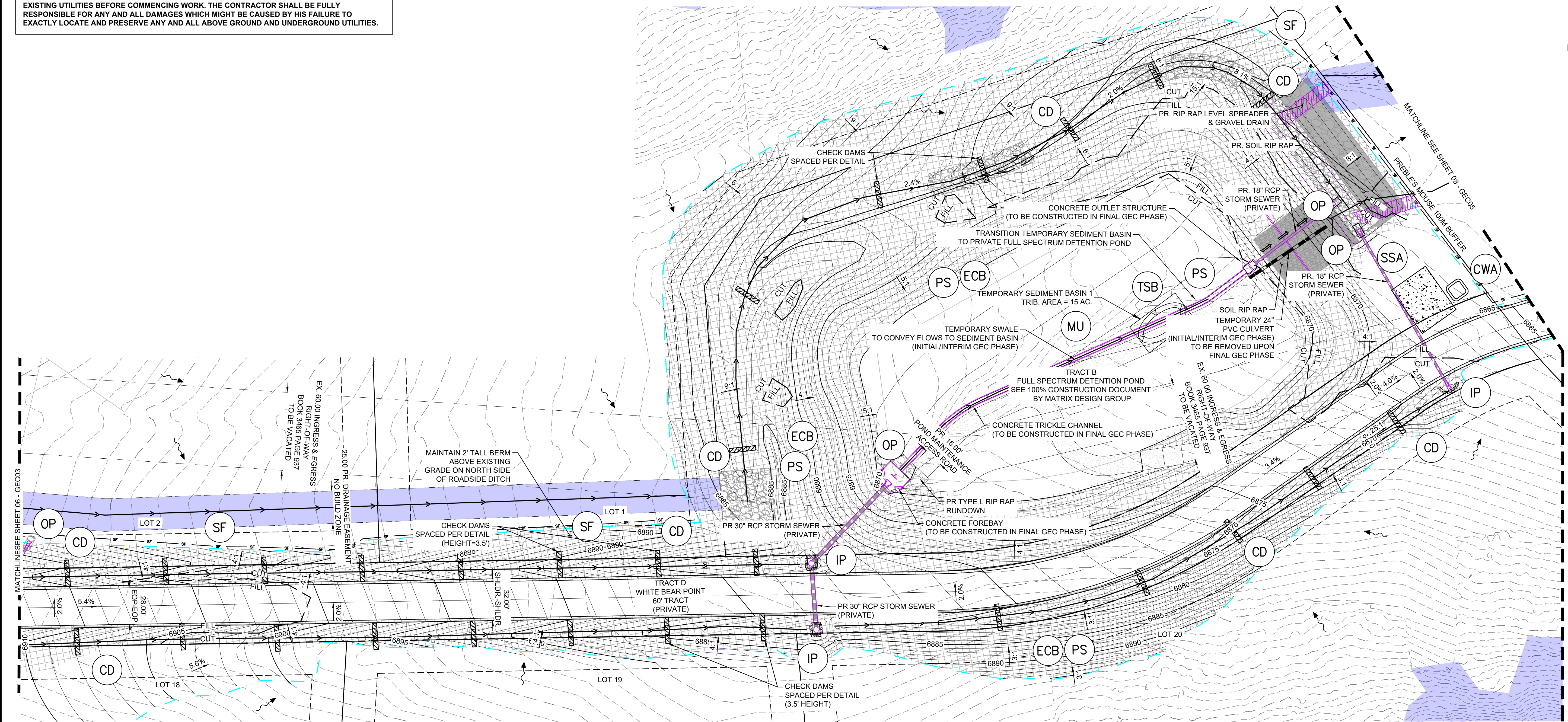
SEAL
PRELIMINARY
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FOR AND ON BEHALF OF
 MATRIX DESIGN GROUP, INC.
 PROJECT No. 22.886.076

HAY CREEK VALLEY			
EL PASO COUNTY, COLORADO			
FINAL GRADING & EROSION CONTROL PLANS			
GRADING & EROSION CONTROL PLAN			
DESIGNED BY: CWW	SCALE: 1" = 40'	DATE ISSUED: JANUARY 2024	DRAWING No. GEC01
DRAWN BY: CWW	HORIZ: N/A	SHEET 04 OF 12	
CHECKED BY: JAO	VERT: N/A		



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TEMPORARY SEDIMENT BASIN SUMMARY					
ID	BASIN BOTTOM WIDTH (FT)	SPILLWAY CREST LENGTH (FT)	HOLE DIAMETER (IN)	# ROWS OF HOLES	REQUIRED VOLUME (CF)
1	73.25	22	1 3/16	5	41,070

BMP SEQUENCING	
INITIAL	SILT FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS
INTERIM	CHECK DAMS, CONCRETE WASHOUT, INLET/OUTLET PROTECTION, STOCKPILES, STAGING, ROUGH CUT STREET CONTROL
FINAL	EROSION CONTROL BLANKETS, SEEDING & MULCHING, PERMANENT CONTROL MEASURE(S)

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EROSION CONTROL LEGEND

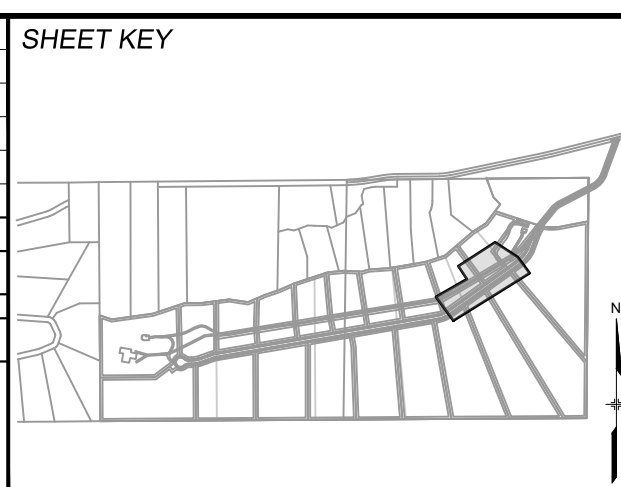
SF	PERMANENT SEEDING	MU	MULCHING
TSB	SILT FENCE	TSB	TEMPORARY SEDIMENT BASIN
ECB	EROSION CONTROL BLANKET	CWA	CONCRETE WASHOUT
OP	OUTLET PROTECTION	SSA	STOCKPILE MANAGEMENT / STABILIZED STAGING AREA
IP	INLET PROTECTION	HP	HIGH POINT / LOW POINT
VTC	VEHICLE TRACKING CONTROL	LP	PROPOSED CONTOURS
CD	CHECK DAM		EXISTING FENCE
			EXISTING STORM DRAIN
			PROPOSED STORM DRAIN
			NO BUILD ZONE (SLOPE GREATER THAN 29.99%)

	EXISTING CONTOURS
	DRAINAGE SWALE
	SLOPE LABEL
	OVERLAND FLOW
	LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY
	PROJECT BOUNDARY LINE
	OVERFLOW ROUTE
	CUT/FILL LINE
	100 YEAR FLOODPLAIN BOUNDARY
	MATCHLINE
	PROPOSED LOT/TRACT LINE
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	PROPOSED BUILDING SETBACK

GRAPHIC SCALE
 (IN FEET)
 1 inch = 40 ft.

PCD FILE #: SF2324

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FOR AND ON BEHALF OF
 MATRIX DESIGN GROUP, INC.
 PROJECT No. 22.886.076

PREPARED BY:
Matrix
 Excellence by Design

HAY CREEK VALLEY
 EL PASO COUNTY, COLORADO
 FINAL GRADING & EROSION CONTROL PLANS

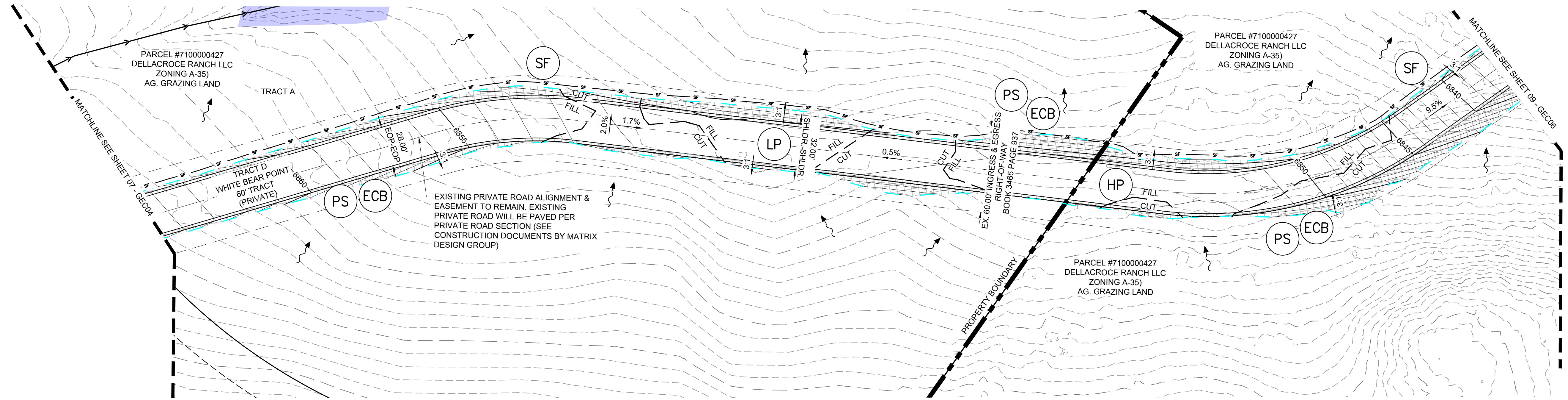
GRADING & EROSION CONTROL PLAN

DESIGNED BY:	CWV	SCALE	DATE ISSUED:	JANUARY 2024	DRAWING No.
DRAWN BY:	CWV	HORIZ 1"=40'	SHEET	07 OF 12	GEC04
CHECKED BY:	JAO	VERT. N/A			



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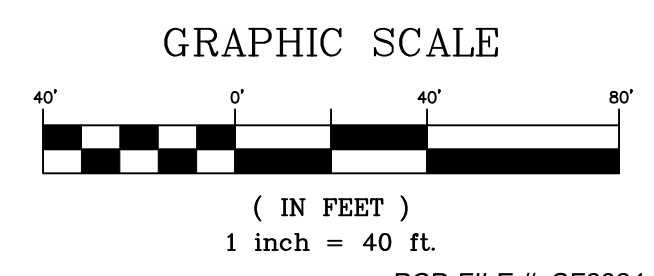


BMP SEQUENCING	
INITIAL	SILT FENCE, VEHICLE TRACKING, TEMP SEDIMENT BASINS
INTERIM	CHECK DAMS, CONCRETE WASHOUT, INLET/OUTLET PROTECTION, STOCKPILES, STAGING, ROUGH CUT STREET CONTROL
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EROSION CONTROL LEGEND

PS PERMANENT SEEDING	MULCHING	EXISTING CONTOURS
SF SILT FENCE	TEMPORARY SEDIMENT BASIN	DRAINAGE SWALE
ECB EROSION CONTROL BLANKET	CONCRETE WASHOUT	SLOPE LABEL
OP OUTLET PROTECTION	STOCKPILE MANAGEMENT / STABILIZED STAGING AREA	OVERLAND FLOW
IP INLET PROTECTION	HIGH POINT / LOW POINT	LIMITS OF DISTURBANCE/ CONSTRUCTION SITE BOUNDARY
VTC VEHICLE TRACKING CONTROL	PROPOSED CONTOURS	PROJECT BOUNDARY LINE
PROPOSED RIP RAP	EXISTING FENCE	OVERFLOW ROUTE
CD CHECK DAM	EXISTING STORM DRAIN	CUT/FILL LINE
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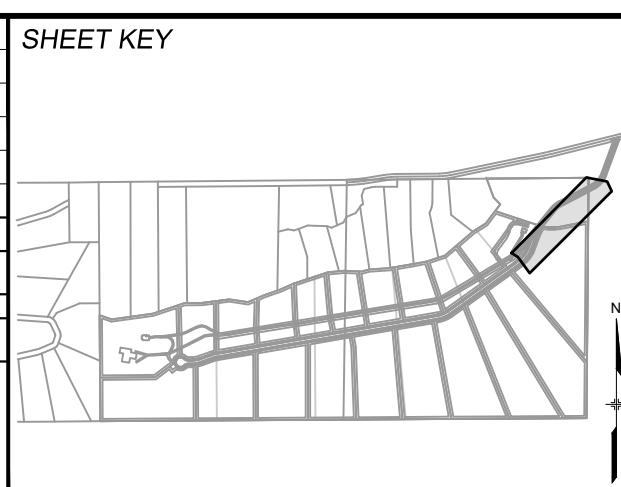


PCD FILE #: SF2324

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REVISIONS			

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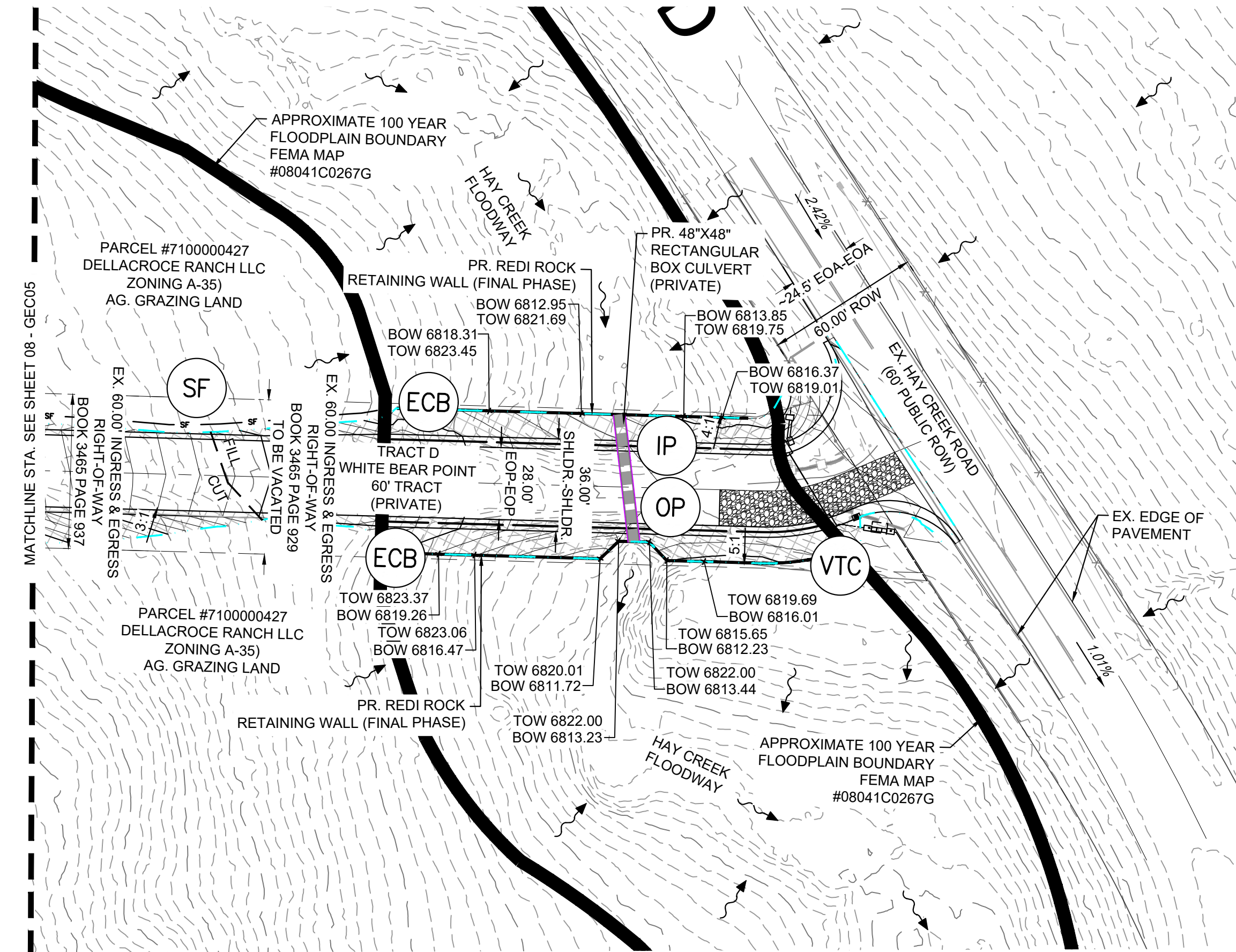
GRADING & EROSION CONTROL PLAN

DESIGNED BY: CVW	SCALE: 1" = 40'	DATE ISSUED: JANUARY 2024	DRAWING No. GEC05
DRAWN BY: CVW	HORIZ. N/A	SHEET 08 OF 12	
CHECKED BY: JAO	VERT. N/A		



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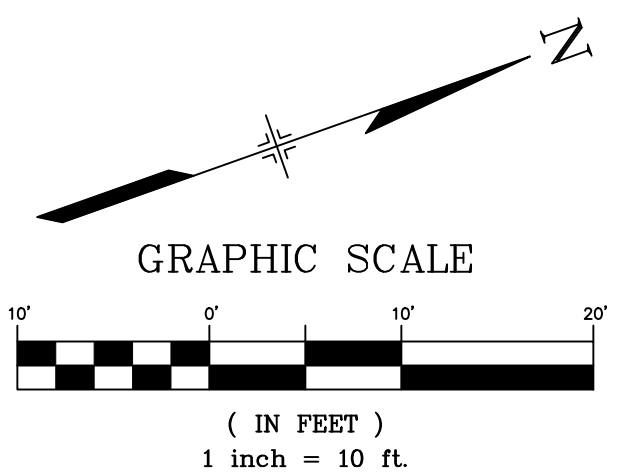


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EROSION CONTROL LEGEND

SF	SILT FENCE	PS	PERMANENT SEEDING	MU	MULCHING	5975	EXISTING CONTOURS
ECB	EROSION CONTROL BLANKET	IP	INLET PROTECTION	TSB	TEMPORARY SEDIMENT BASIN	4:1	DRAINAGE SWALE
OP	OUTLET PROTECTION	VTC	VEHICLE TRACKING CONTROL	CWA	CONCRETE WASHOUT		SLOPE LABEL
IP	INLET PROTECTION	CD	CHECK DAM	SSA	STOCKPILE MANAGEMENT / STABILIZED STAGING AREA		OVERLAND FLOW
	PROPOSED RIP RAP	HP	HIGH POINT / LOW POINT	SSA	STOCKPILE MANAGEMENT / STABILIZED STAGING AREA		LIMITS OF DISTURBANCE / CONSTRUCTION SITE BOUNDARY
	PROPOSED CONTOURS	LP	LOW POINT / HIGH POINT	HP	HIGH POINT / LOW POINT		PROJECT BOUNDARY LINE
	EXISTING FENCE		PROPOSED CONTOURS		PROPOSED CONTOURS		OVERFLOW ROUTE
	PROPOSED STORM DRAIN		EXISTING FENCE		EXISTING CONTOURS		CUT/FILL LINE
	NO BUILD ZONE (SLOPE GREATER THAN 29.99 %)		PROPOSED STORM DRAIN		EXISTING CONTOURS		100 YEAR FLOODPLAIN BOUNDARY
	MATCHLINE		PROPOSED STORM DRAIN		PROPOSED CONTOURS		MATCHLINE
	PROPOSED LOT/TRACT LINE		PROPOSED STORM DRAIN		PROPOSED CONTOURS		PROPOSED LOT/TRACT LINE
	EASEMENT		PROPOSED STORM DRAIN		PROPOSED CONTOURS		EASEMENT
	PROPOSED BUILDING SETBACK		PROPOSED STORM DRAIN		PROPOSED CONTOURS		PROPOSED BUILDING SETBACK

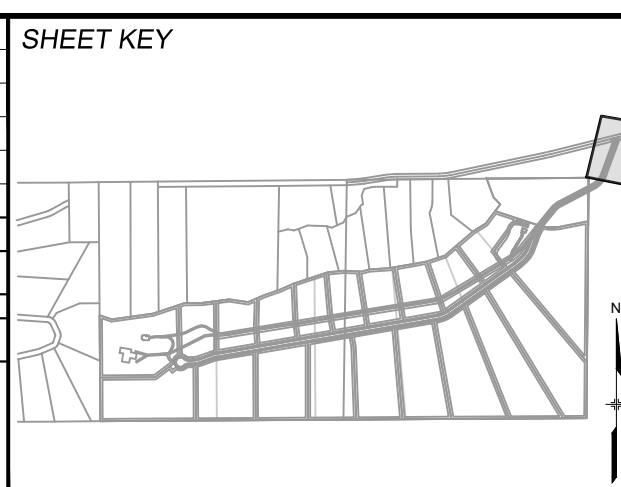


PCD FILE #: SF2324

REFERENCE DRAWINGS	
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X-886-PR-SITE	
FEMA_X3	
X-886-066-EX-MAP-1	
164022-01 Hay Creek Road BNDY	
X-886-ALTA-SURVEY	
Hay Creek BFEs	
2023-02-28 TOPO 164022-01	

No.	DATE	DESCRIPTION	BY
REVISIONS			

COMPUTER FILE MANAGEMENT	
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CTB FILE:	Matrix.ctb
PLOT DATE:	1/26/2024 3:09 PM
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.	



BENCHMARK
 PROJECT ELEVATIONS ARE NAVD 88 ELEVATIONS BASED ON AN OPUS DERIVED ELEVATION ON CONTROL POINT 10, A NO. 5 REBAR HAVING AN ELEVATION OF 5769.92.

BASIS OF BEARING
 THE SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 15 SOUTH, RANGE 66 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED ON THE EASTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "NOLTE PLS25955 C1/4 S22 T15S, R65W 1999, "AND THE WESTERLY END BY A2-1/2" ALUMINUM CAP STAMPED "SSS PLS 16154 1/4 S21 S22 T15S, R65W 2000, "BEING ASSUMED TO BEAR S89°54'42"W, A DISTANCE OF 2,627.78 FEET.

PREPARED BY:

Excellence by Design

SEAL

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

HAY CREEK VALLEY

EL PASO COUNTY, COLORADO
 FINAL GRADING & EROSION CONTROL PLANS

GRADING & EROSION CONTROL PLAN

DESIGNED BY:	CWW	SCALE:	HORIZ 1" = 40'	DATE ISSUED:	JANUARY 2024	DRAWING No.	GEC06
DRAWN BY:	CWW	VERT:	N/A	SHEET:	09 OF 12		
CHECKED BY:	JAO						



Know what's below. Call before you dig.

Rolled Erosion Control Products (RECP) EC-6

Staking patterns are also provided in the design details according to these factors:

- ECB type
Slope or channel type

For other types of RECPs including TRMs, these design details are intended to serve as general guidelines for design and installation; however, engineers should adhere to manufacturer's installation recommendations.

Maintenance and Removal

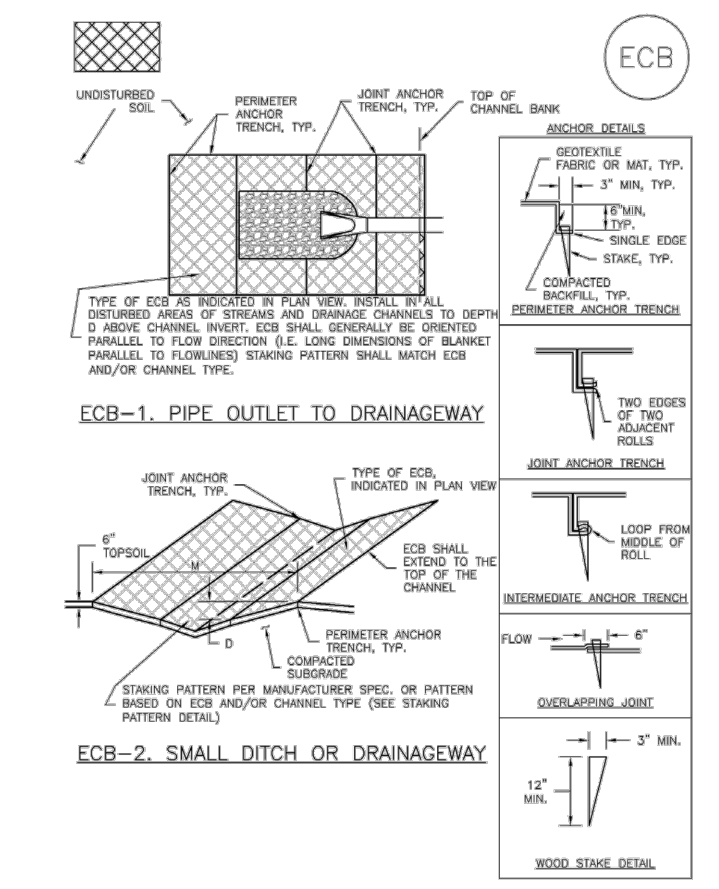
- Check for general signs of erosion, including voids beneath the mat. If voids are apparent, fill the void with suitable soil and replace the erosion control blanket, following the appropriate staking pattern.
Check for damaged or loose stakes and secure loose portions of the blanket.

Erosion control blankets and other RECPs that are biodegradable typically do not need to be removed after construction. If they must be removed, then an alternate soil stabilization method should be installed promptly following removal.

Turf reinforcement mats, although generally resistant to biodegradation, are typically left in place as a dense vegetated cover grows through the turf matrix. The turf reinforcement mat provides long-term stability and helps the established vegetation resist erosion forces.

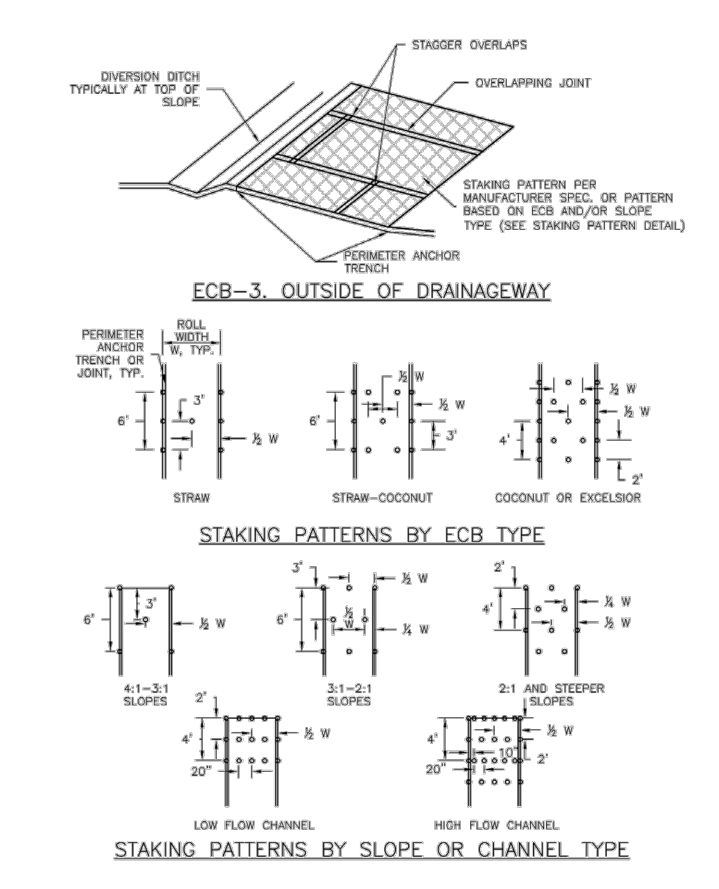
November 2010 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3 RECP-5

EC-6 Rolled Erosion Control Products (RECP)



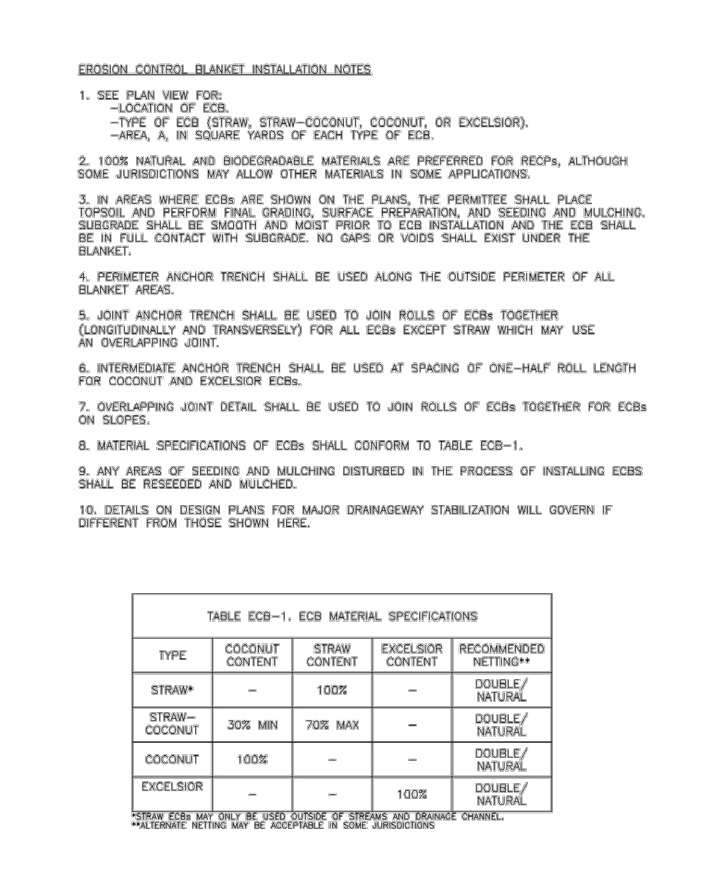
RECP-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Rolled Erosion Control Products (RECP) EC-6



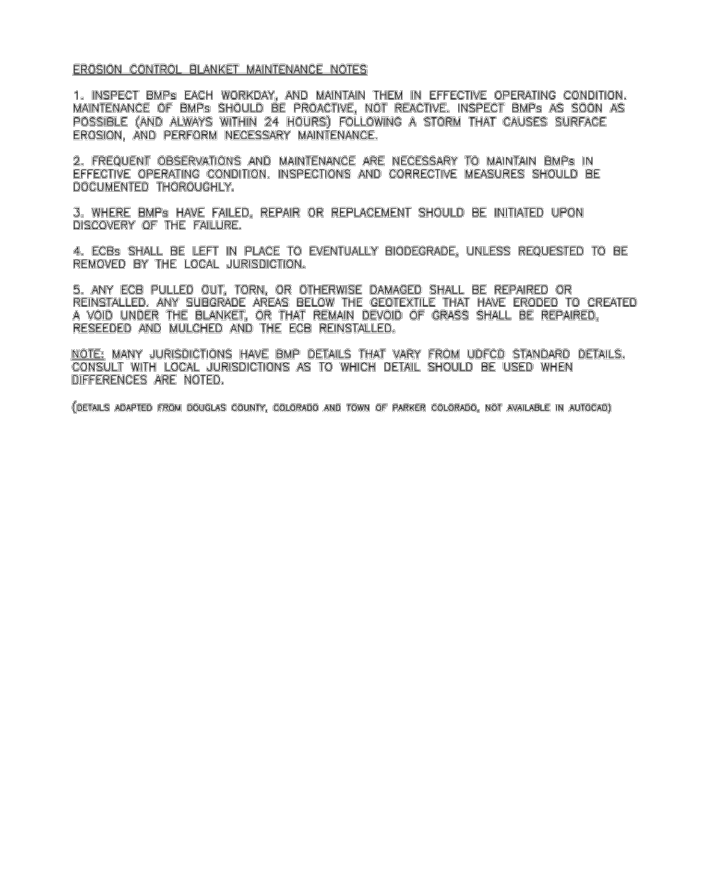
RECP-7 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

EC-6 Rolled Erosion Control Products (RECP)



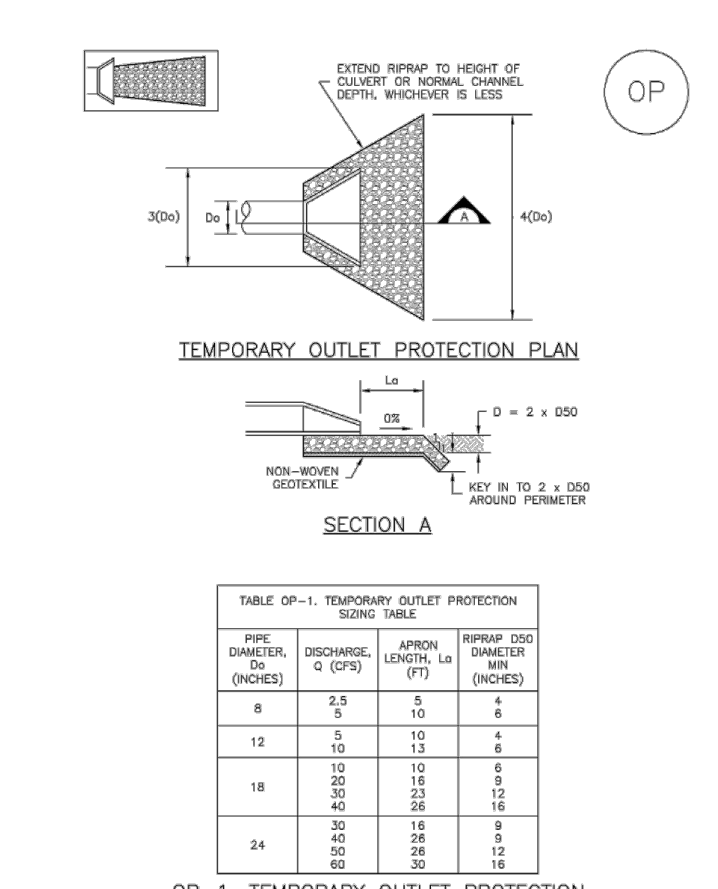
RECP-8 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Rolled Erosion Control Products (RECP) EC-6



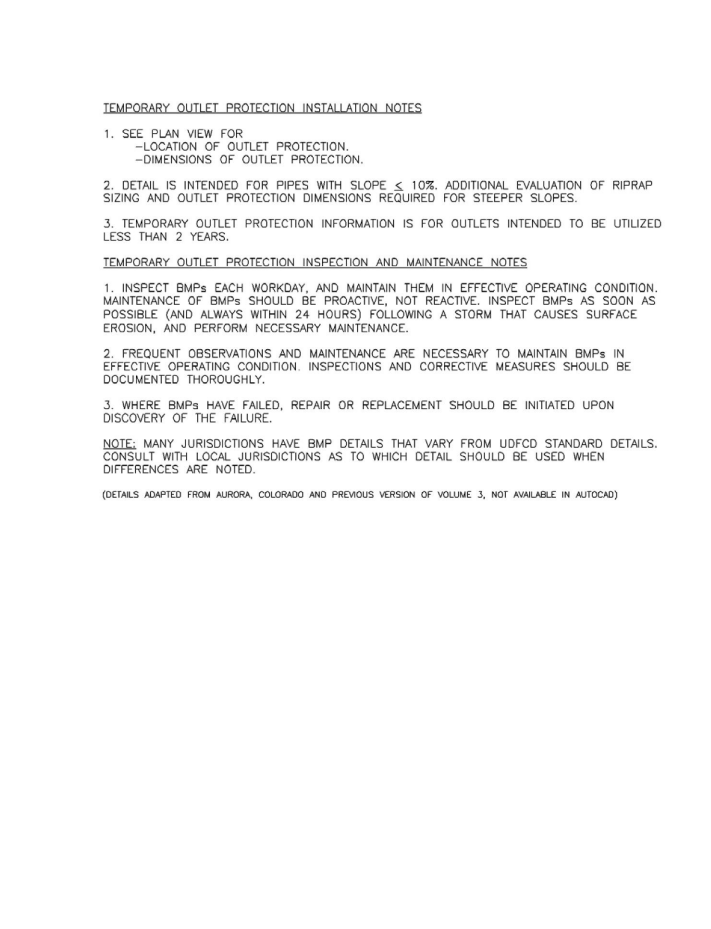
RECP-9 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

EC-8 Temporary Outlet Protection (TOP)



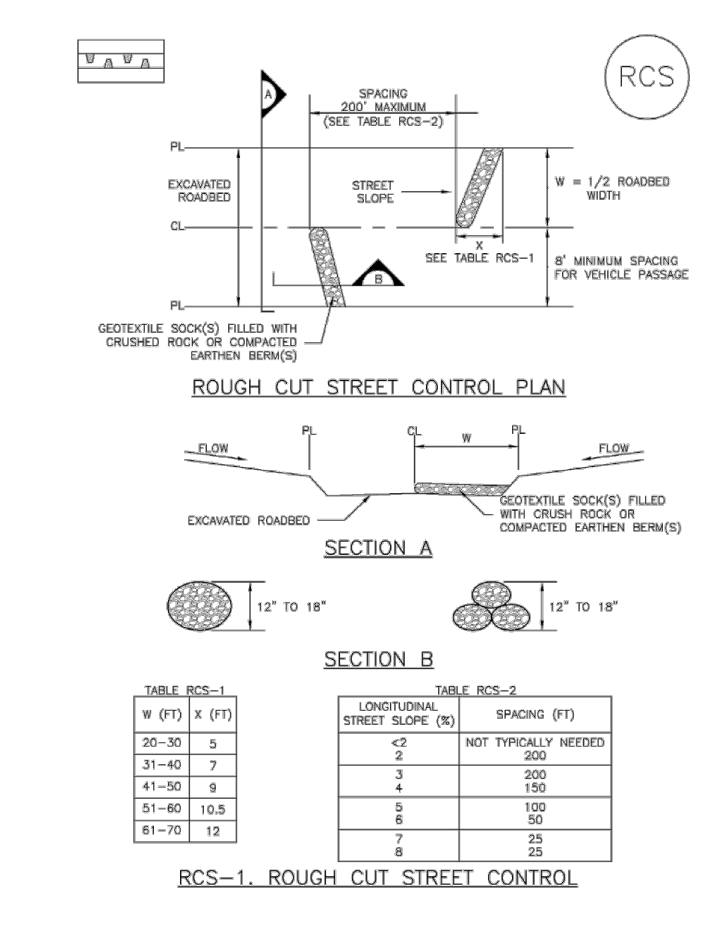
TOP-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Temporary Outlet Protection (TOP) EC-8



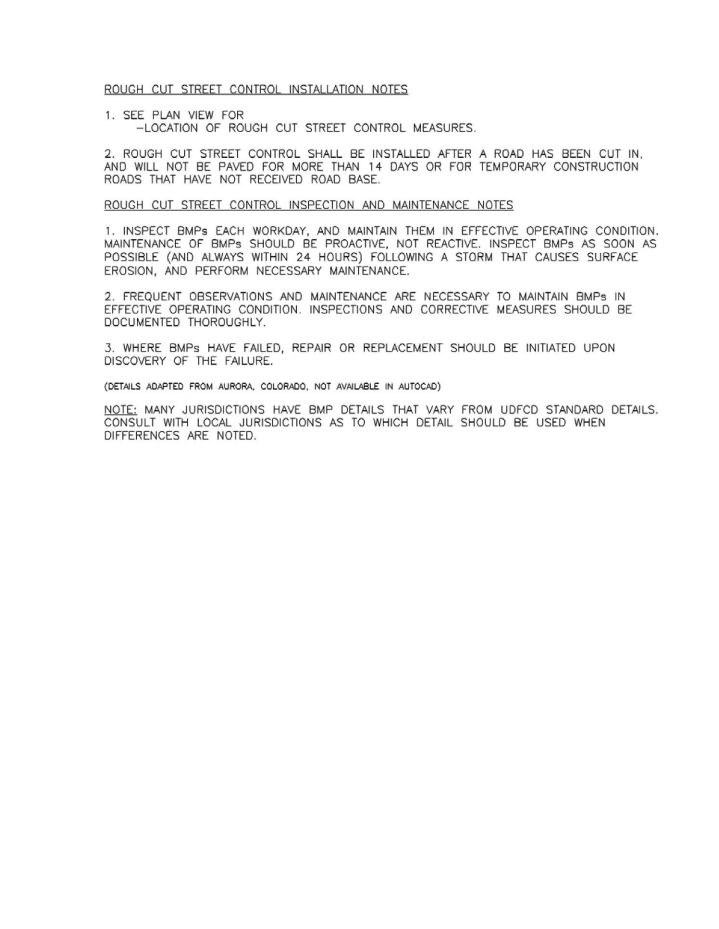
TOP-3 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

EC-9 Rough Cut Street Control (RCS)



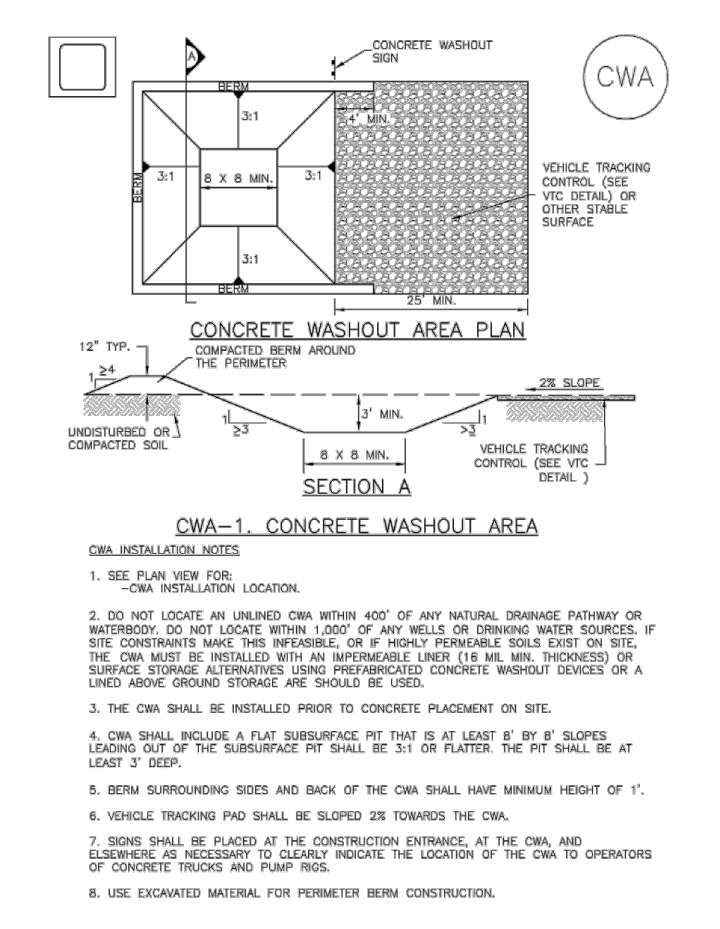
RCS-2 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Rough Cut Street Control (RCS) EC-9



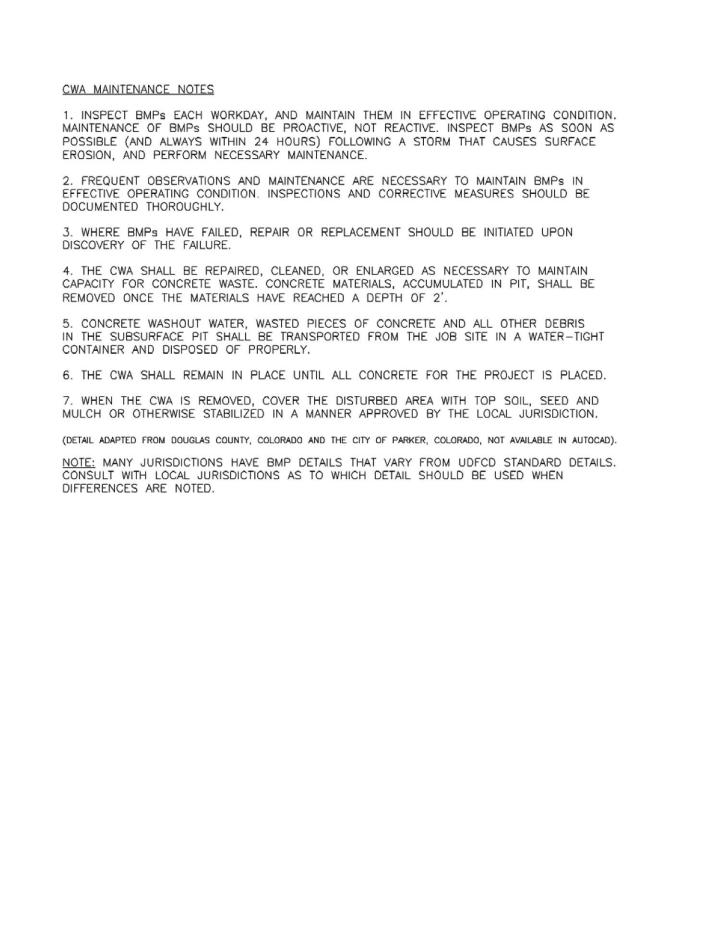
RCS-3 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Concrete Washout Area (CWA) MM-1



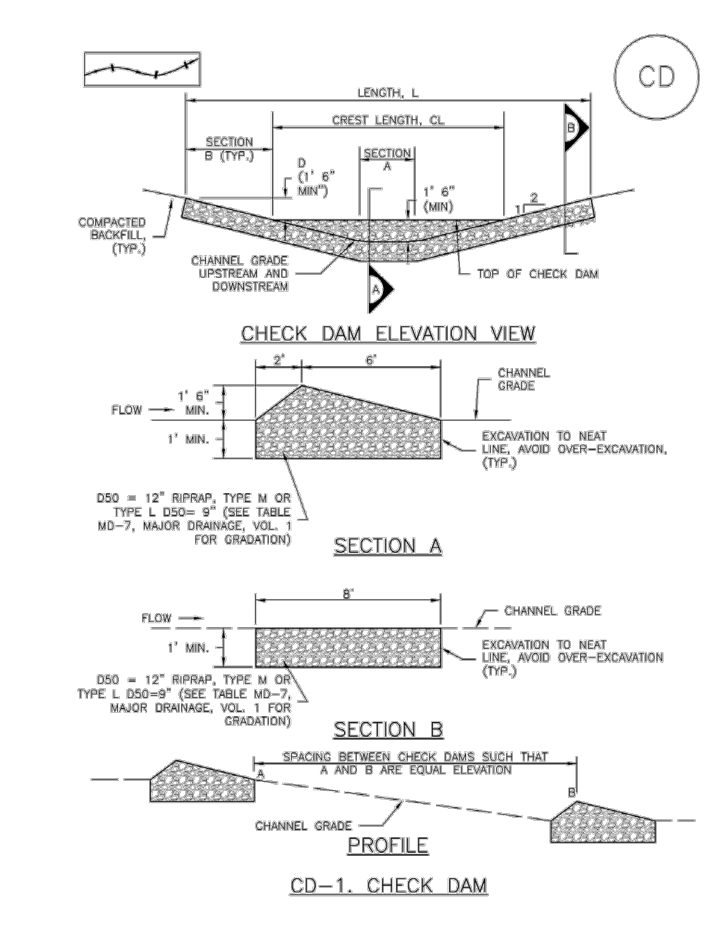
CWA-3 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

MM-1 Concrete Washout Area (CWA)



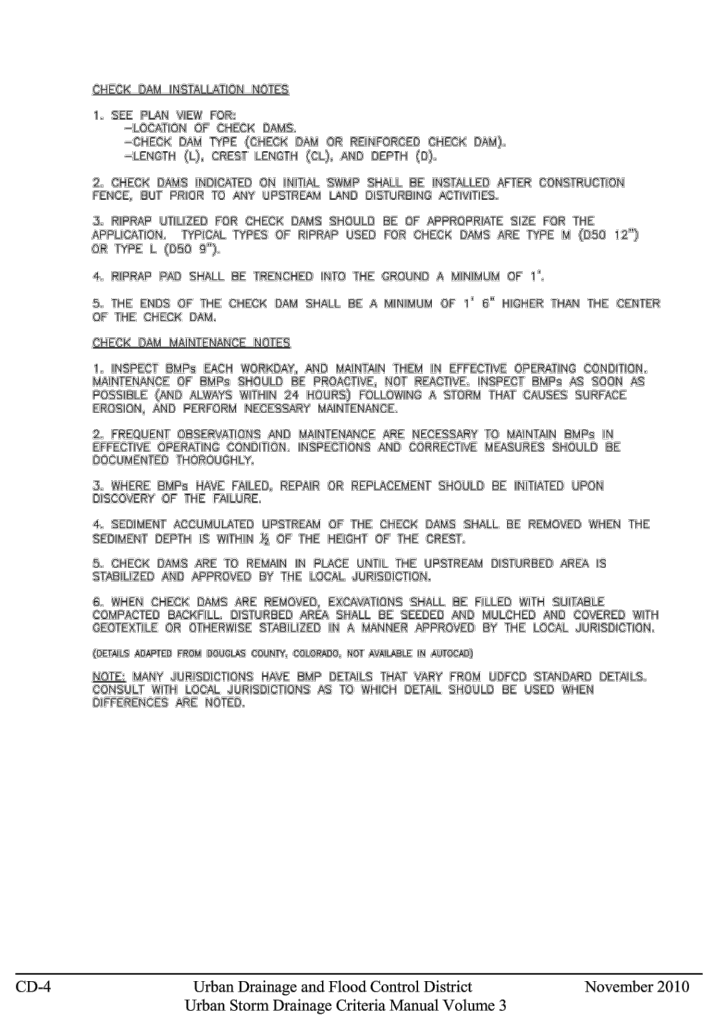
CWA-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Check Dams (CD) EC-12



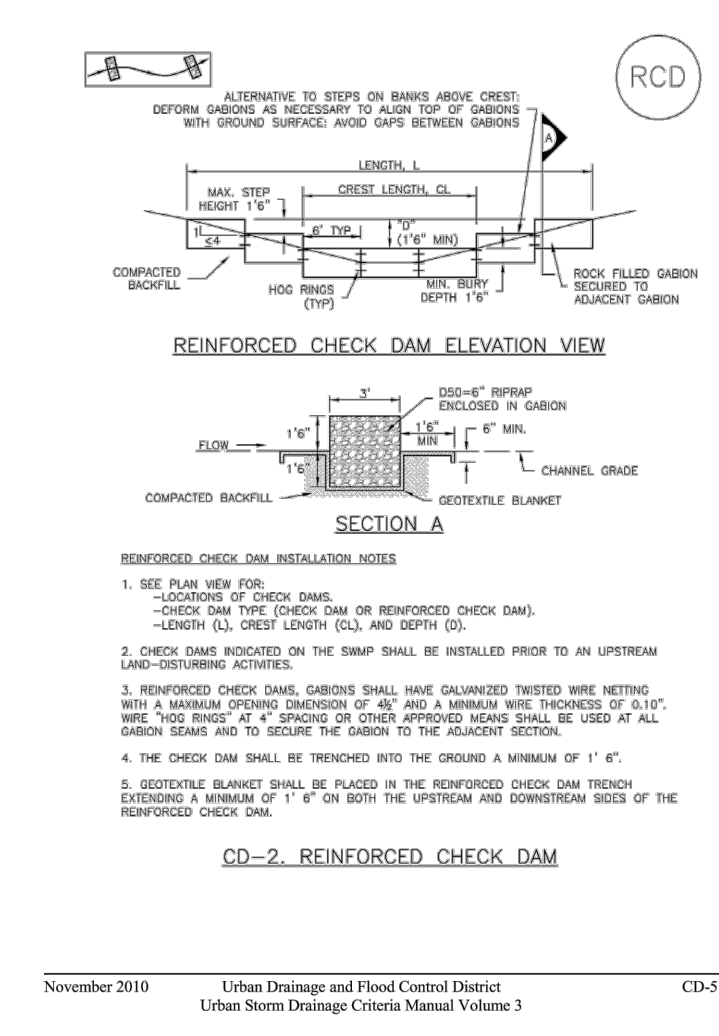
CD-3 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

EC-12 Check Dams (CD)



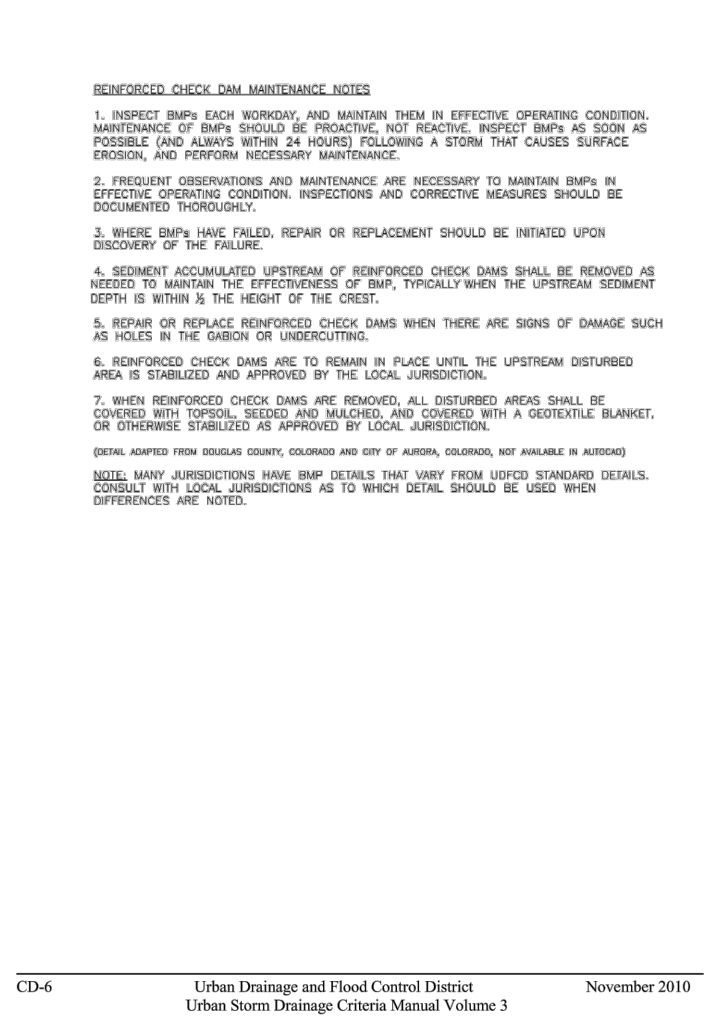
CD-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Check Dams (CD) EC-12



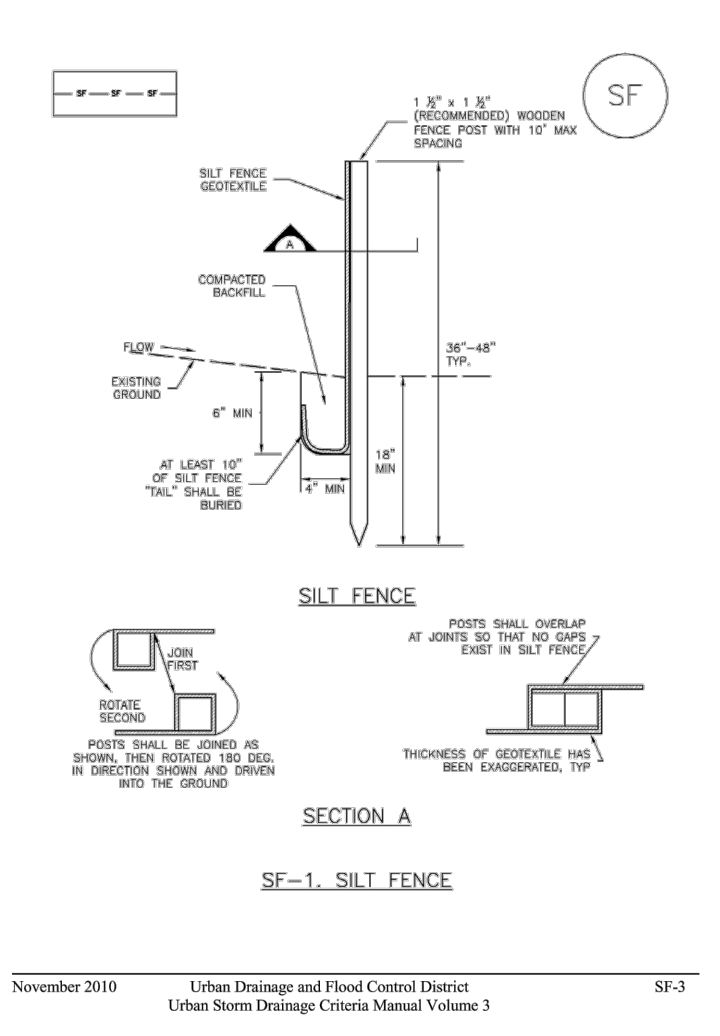
CD-5 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

EC-12 Check Dams (CD)



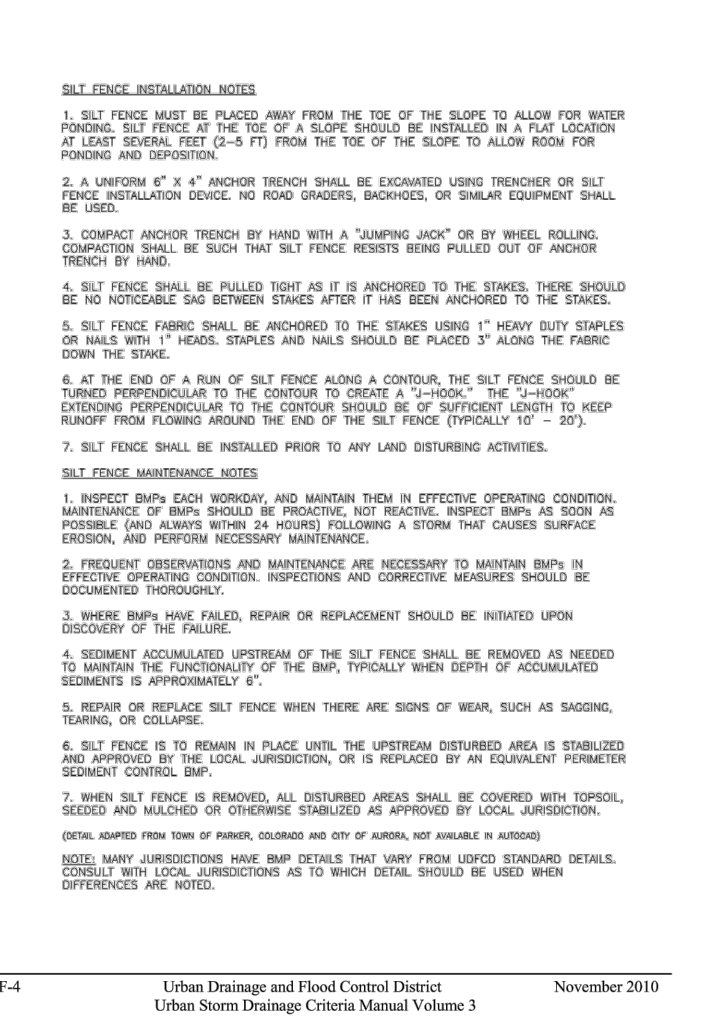
CD-6 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

Silt Fence (SF) SC-1



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

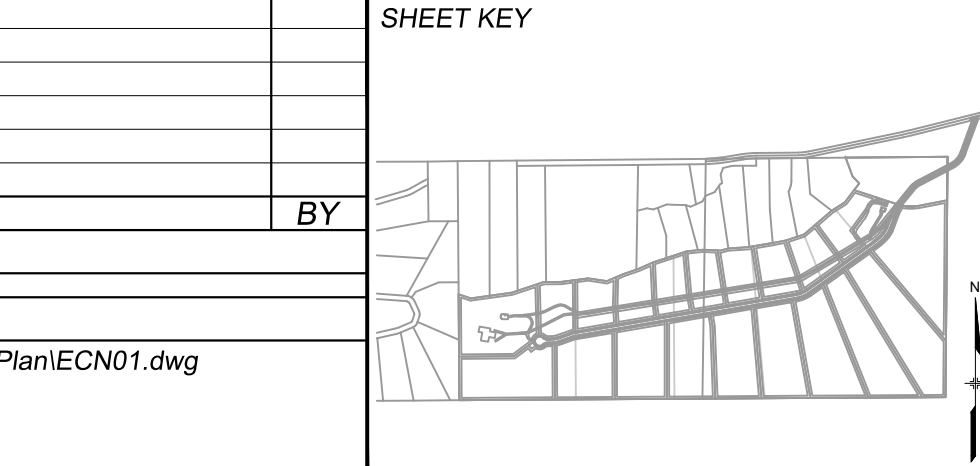
SC-1 Silt Fence (SF)



SF-4 Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3

REFERENCE DRAWINGS table with columns for No., DATE, and DESCRIPTION/REVISIONS.

COMPUTER FILE MANAGEMENT table with columns for FILE NAME, CTB FILE, PLOT DATE, and THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.



BENCHMARK PROJECT ELEVATIONS ARE NAVD 88 ELEVATIONS BASED ON AN OPUS DERIVED ELEVATION ON CONTROL POINT 10, A NO. 5 REBAR HAVING AN ELEVATION OF 5769.92. BASIS OF BEARING THE SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED ON THE EASTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "NOLTE PL252955 C1/4 S22 T165, R65W 1999, AND THE WESTERLY END BY A2-1/2" ALUMINUM CAP STAMPED "SSS PLS 16154 1/4 S21 S22 T165, R65W 2000, BEING ASSUMED TO BEAR S89°54'42" W, A DISTANCE OF 2,627.78 FEET.

PREPARED BY: Matrix Excellence by Design

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. 22.886.076

HAY CREEK VALLEY EL PASO COUNTY, COLORADO FINAL GRADING & EROSION CONTROL PLANS DETAILS. Includes a table for SCALE, DATE ISSUED, and DRAWING No.



Know what's below. Call before you dig.

SC-6 Inlet Protection (IP)

- IP-3. Rock Sock Inlet Protection for Sump/Area Inlet
IP-4. Silt Fence Inlet Protection for Sump/Area Inlet
IP-5. Over-excavation Inlet Protection
IP-6. Straw Bale Inlet Protection for Sump/Area Inlet
CIP-1. Culvert Inlet Protection

Proprietary inlet protection devices should be installed in accordance with manufacturer specifications.
More information is provided below on selecting inlet protection for sump and on-grade locations.

Inlets Located in a Sump
When applying inlet protection in sump conditions, it is important that the inlet continue to function during larger runoff events.

- Maintenance and Removal
Inspect for tears that can result in sediment directly entering the inlet, as well as result in the contents of the BMP (e.g., gravel) washing into the inlet.

Table with 3 columns: Item ID, Title, Date

Inlet Protection (IP) SC-6

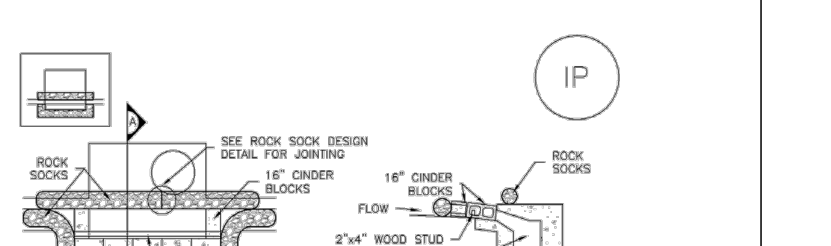
- Remove sediment accumulation from the area upstream of the inlet protection, as needed to maintain BMP effectiveness.
Proprietary inlet protection devices should be inspected and maintained in accordance with manufacturer specifications.

Inlets Located on a Sump
For curb and gutter inlets on paved roadway, block and rock sock inlet protection is recommended in conjunction with curb socks in the gutter leading to the inlet.

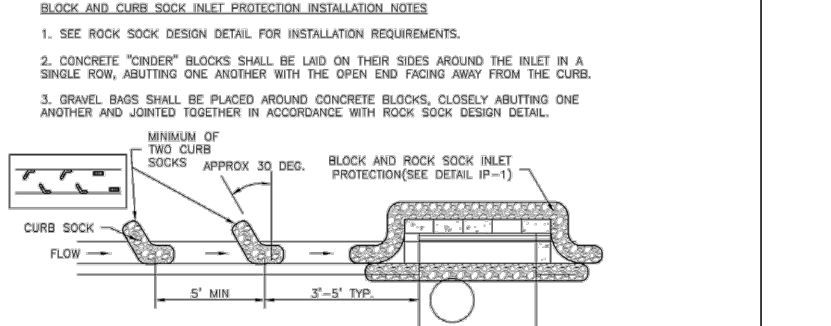
Maintenance and Removal
Inspect for tears that can result in sediment directly entering the inlet, as well as result in the contents of the BMP (e.g., gravel) washing into the inlet.

Table with 3 columns: Item ID, Title, Date

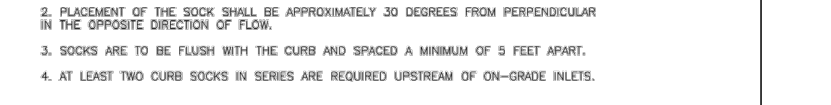
SC-6 Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION



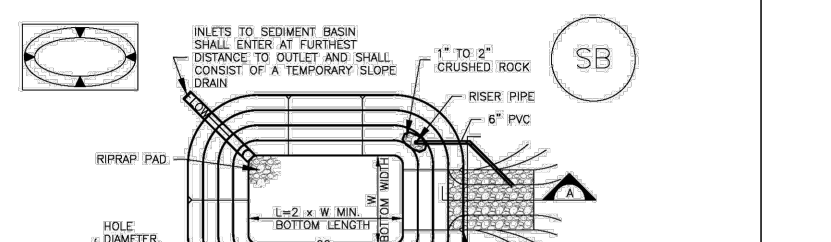
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION



IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION



SC-6 Inlet Protection (IP)



IP-5. OVER-EXCAVATION INLET PROTECTION



CIP-1. CULVERT INLET PROTECTION

IP-6. STRAW BALE FOR SUMP INLET PROTECTION

IP-4. SILT FENCE FOR SUMP INLET PROTECTION

SC-7 Sediment Basin (SB)

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.

Final disposition of the sediment basin depends on whether the basin will be converted to a permanent post-construction stormwater basin or whether the basin area is returned to grade.



SECTION A

SECTION B

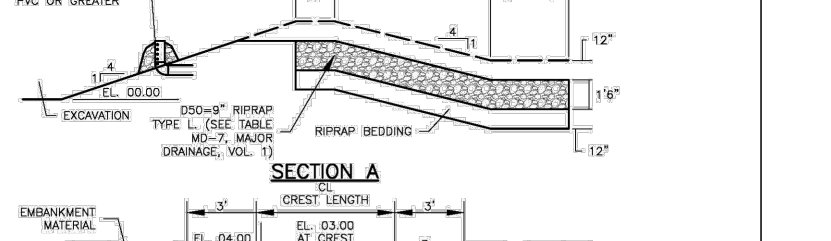
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Sediment Basin (SB) SC-7

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.

Final disposition of the sediment basin depends on whether the basin will be converted to a permanent post-construction stormwater basin or whether the basin area is returned to grade.

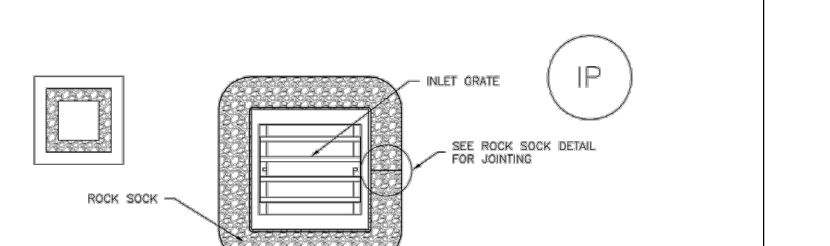


SECTION A

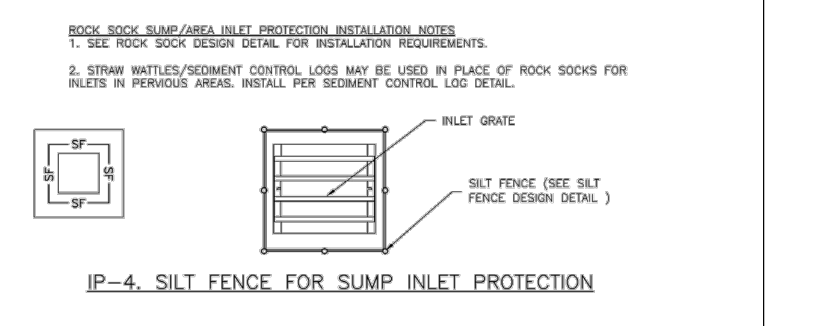
SECTION B

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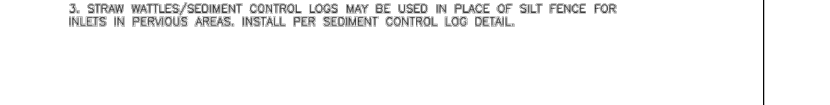
Inlet Protection (IP) SC-6



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION



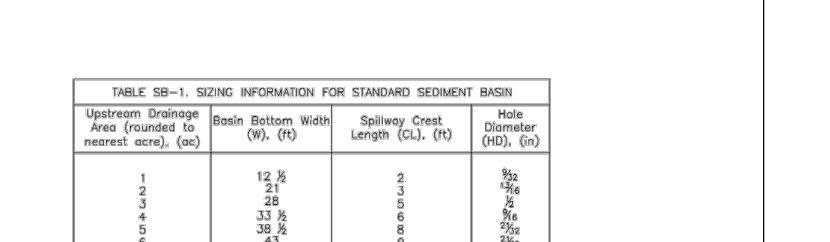
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION



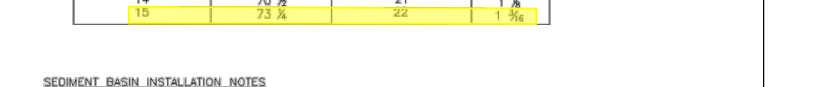
IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION



Inlet Protection (IP) SC-6



IP-5. OVER-EXCAVATION INLET PROTECTION



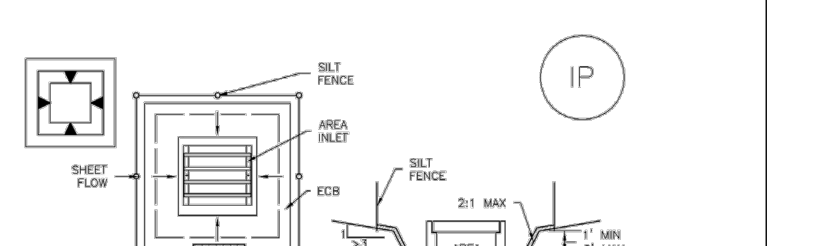
CIP-1. CULVERT INLET PROTECTION

IP-6. STRAW BALE FOR SUMP INLET PROTECTION

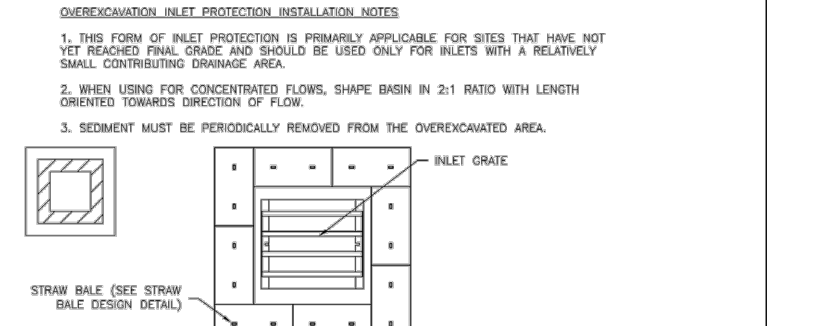
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

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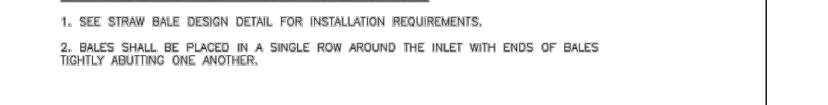
SC-6 Inlet Protection (IP)



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION



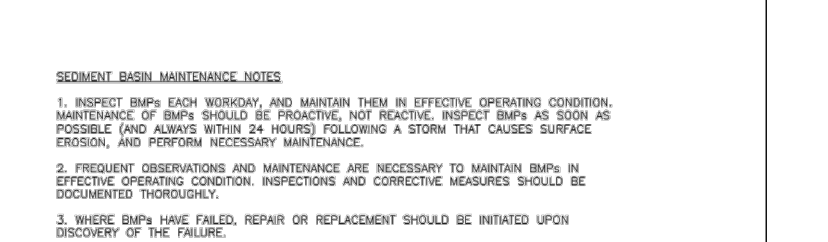
IP-2. CURB ROCK SOCKS UPSTREAM OF INLET PROTECTION



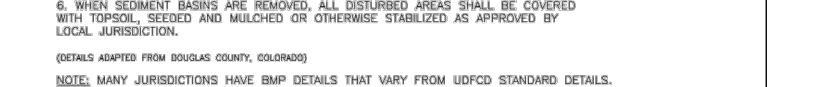
IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION



SC-6 Inlet Protection (IP)



IP-5. OVER-EXCAVATION INLET PROTECTION



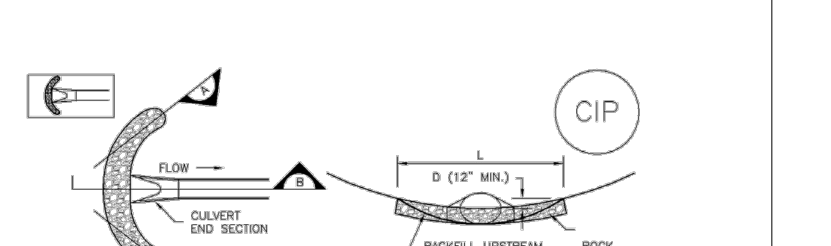
CIP-1. CULVERT INLET PROTECTION

IP-6. STRAW BALE FOR SUMP INLET PROTECTION

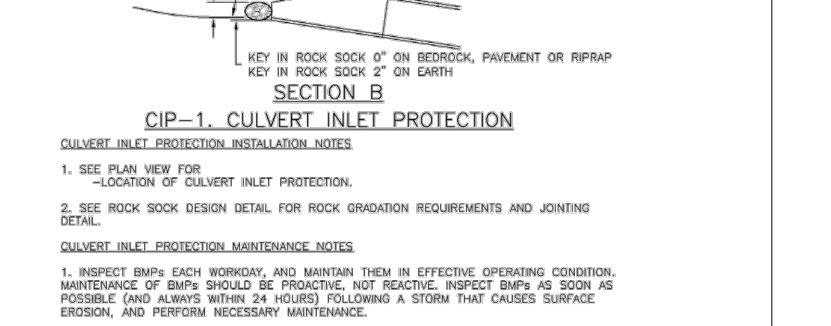
IP-4. SILT FENCE FOR SUMP INLET PROTECTION

Table with 3 columns: Item ID, Title, Date

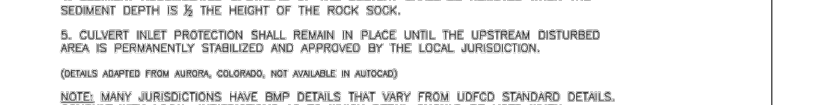
Inlet Protection (IP) SC-6



IP-1. BLOCK AND ROCK SOCK SUMP OR ON GRADE INLET PROTECTION



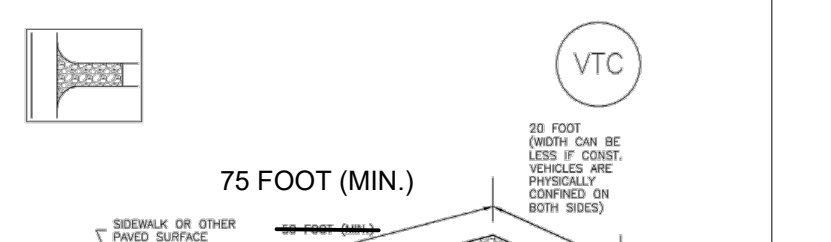
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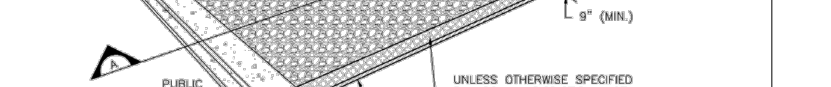
IP-3. ROCK SOCK SUMP/AREA INLET PROTECTION



Inlet Protection (IP) SC-6



IP-5. OVER-EXCAVATION INLET PROTECTION



CIP-1. CULVERT INLET PROTECTION

IP-6. STRAW BALE FOR SUMP INLET PROTECTION

IP-4. SILT FENCE FOR SUMP INLET PROTECTION

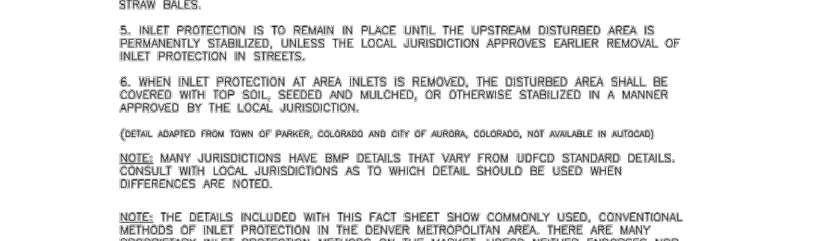
Table with 3 columns: Item ID, Title, Date

SC-6 Inlet Protection (IP)

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.

Final disposition of the sediment basin depends on whether the basin will be converted to a permanent post-construction stormwater basin or whether the basin area is returned to grade.



SECTION A

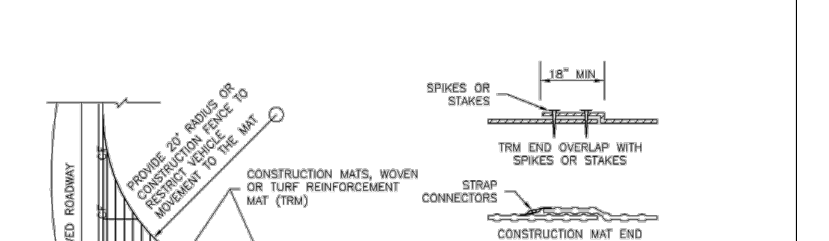
SECTION B

Table with 3 columns: Item ID, Title, Date

SC-7 Vehicle Tracking Control (VTC)

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.



SECTION A

SECTION B

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

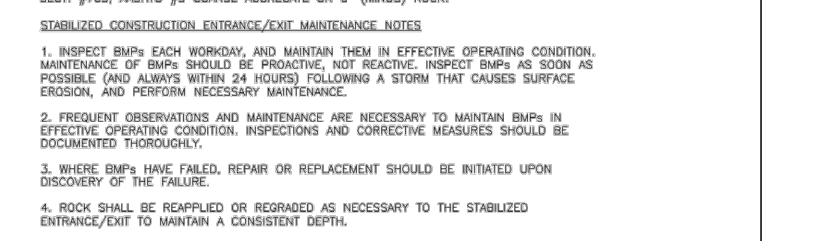
VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

Table with 3 columns: Item ID, Title, Date

SM-4 Vehicle Tracking Control (VTC)

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.



SECTION A

SECTION B

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

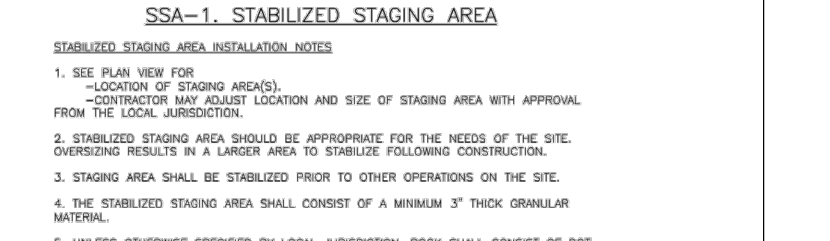
VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

Table with 3 columns: Item ID, Title, Date

SC-7 Sediment Basin (SB)

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.



SECTION A

SECTION B

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

Table with 3 columns: Item ID, Title, Date

Sediment Basin (SB) SC-7

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.



SECTION A

SECTION B

VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

Table with 3 columns: Item ID, Title, Date

Vehicle Tracking Control (VTC) SM-4

Maintenance and Removal
Drudge sediment from the basin, as needed to maintain BMP effectiveness.

- Inspect the sediment basin construction for stability and seepage.
Inspect the inlet and outlet of the basin, repair damage, and remove debris.



SECTION A

SECTION B

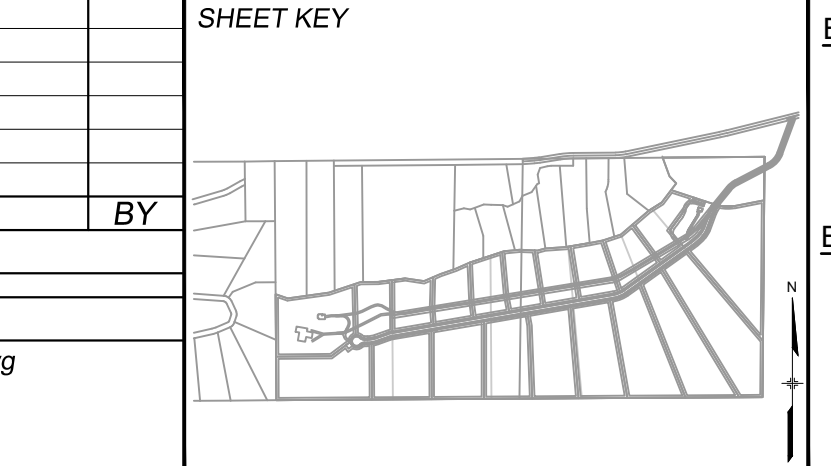
VTC-2. AGGREGATE VEHICLE TRACKING CONTROL WITH WASH RACK

VTC-3. VEHICLE TRACKING CONTROL W/ CONSTRUCTION MAT OR TURF REINFORCEMENT MAT (TRM)

Table with 3 columns: Item ID, Title, Date

REFERENCE DRAWINGS table with columns: No., DATE, DESCRIPTION, REVISIONS

COMPUTER FILE MANAGEMENT table with columns: FILE NAME, CTB FILE, PLOT DATE



BENCHMARK
PROJECT ELEVATIONS ARE NAVD 88 ELEVATIONS BASED ON AN OPUS DERIVED ELEVATION ON CONTROL POINT 10, A NO. 5 REBAR HAVING AN ELEVATION OF 5769.92.

BASIS OF BEARING
THE SOUTH LINE OF THE NORTHWEST QUARTER OF SECTION 22, TOWNSHIP 15 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MONUMENTED ON THE EASTERLY END BY A 2-1/2" ALUMINUM CAP STAMPED "NOLTE PL252955 C1/4 S22 T165, R65W 1999, "AND THE WESTERLY END BY A2-1/2" ALUMINUM CAP STAMPED "SSS PLS 16154 1/4 S21 S22 T165, R65W 2000, "BEING ASSUMED TO BEAR S89°54'42"W, A DISTANCE OF 2,627.78 FEET.

HAY CREEK VALLEY EL PASO COUNTY, COLORADO FINAL GRADING & EROSION CONTROL PLANS PRELIMINARY THIS DRAWING HAS NOT BEEN APPROVED BY GOVERNING AGENCIES AND IS SUBJECT TO CHANGE

Table with columns: DESIGNED BY, DRAWN BY, CHECKED BY, SCALE, DATE ISSUED, SHEET



Know what's below. Call before you dig.

Temporary and Permanent Seeding (TS/PS) EC-2

Description
Temporary seeding can be used to stabilize disturbed areas that will be inactive for an extended period. Permanent seeding should be used to stabilize areas at final grade that will not be otherwise stabilized.



Appropriate Uses
When the soil surface is disturbed and will remain inactive for an extended period (typically determined by local government requirements), proactive stabilization measures, including planting a temporary seed mix, should be implemented.

Design and Installation

Effective seeding requires proper seedbed preparation, selecting an appropriate seed mixture, using appropriate seeding equipment to ensure proper coverage and density, and protecting seeded areas with mulch or fabric until plants are established.

The USDCM Volume 2 Revegetation Chapter contains detailed seed mixes, soil preparation practices, and seeding and mulching recommendations that should be referenced to supplement this sheet.

Temporary and Permanent Seeding

Table with 2 columns: Functions (Erosion Control, Sediment Control, Soil/Material Management) and Yes/No/Modest/No.

Table with 3 columns: Date (January 2021), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (TS-PS-1).

EC-2 Temporary and Permanent Seeding (TS/PS)

here low nutrient value, little organic matter content, few soil microorganisms, rooting restrictions, and conditions less conducive to infiltration of precipitation. As a result, it is typically necessary to provide stockpiled topsoil, compost, or other soil amendments and notify them into the soil to a depth of 6 inches or more.

Where topsoil is not available, subsoils should be amended to provide an appropriate plant-growth medium. Organic matter, such as well-digested compost, can be added to improve soil characteristics conducive to plant growth.

Temporary Vegetation

To provide temporary vegetative cover on disturbed areas which will not be paved, built upon, or fully landscaped or worked for an extended period (typically 30 days or more), plant an annual grass appropriate for the time of planting and match the planted areas.

Prior to seeding, the soil surface should be rough and the seedbed should be firm, but not too loose nor compacted. The upper layer of soil should be in a condition suitable for seeding in the proper depth and orientation.

Table with 3 columns: Date (January 2021), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (TS-PS-2).

Temporary and Permanent Seeding (TS/PS) EC-2

recommendations when specific design guidance for a particular site is not available. Local governments typically specify seed mixes appropriate for their jurisdiction.

If desired for wildlife habitat or landscape diversity, shrubs such as rubber rabbitbrush (Chrysothamnus nauseosus), forsythia (Forsythia), and shrubland sumac (Rhus trilobata) could be added to the upland seed mixes.

Timing of seeding is an important aspect of the revegetation process. For upland and riparian areas on the Colorado Front Range, the suitable timing for seeding is from October through May.

Seeding dates for the highest success probability of perennial species along the Front Range are generally in the spring from April through early May and in the fall after the first of September until the ground freezes.

Temporary Vegetation

To provide temporary vegetative cover on disturbed areas which will not be paved, built upon, or fully landscaped or worked for an extended period (typically 30 days or more), plant an annual grass appropriate for the time of planting and match the planted areas.

Prior to seeding, the soil surface should be rough and the seedbed should be firm, but not too loose nor compacted. The upper layer of soil should be in a condition suitable for seeding in the proper depth and orientation.

Table with 3 columns: Date (January 2021), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (TS-PS-3).

EC-2 Temporary and Permanent Seeding (TS/PS)

Table TS-PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses. Columns: Species (Common name), Growth Season, Pounds of Pure Live Seed (PLS)/acre, Planting Depth (inches).

Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation.

See Table TS-PS-2 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

Table with 3 columns: Date (January 2021), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (TS-PS-4).

Temporary and Permanent Seeding (TS/PS) EC-2

Table TS-PS-2. Seeding Dates for Annual and Perennial Grasses. Columns: Seeding Dates, Annual Grasses (Warm/Cool), Perennial Grasses (Warm/Cool).

Monitor and observe seeded areas to identify areas of poor growth or areas that fail to germinate. Re-seed and mulch these areas, as needed.

Maintenance and Removal

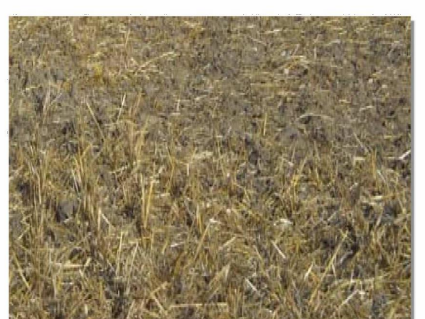
If a temporary annual seed was planted, the area should be reseeded with the desired perennial mix when there will be no further work in the area. To minimize competition between annual and perennial species, the annual mix needs time to mature and die before seeding the perennial mix.

Seeded areas may require irrigation, particularly during extended dry periods. Targeted weed control may also be necessary.

Table with 3 columns: Date (January 2021), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (TS-PS-5).

Mulching (MU) EC-4

Description
Mulching consists of evenly applying straw, hay, shredded wood mulch, rock, bark or compost to disturbed soils and securing the mulch by crimping, netting, or other measures.



Mulch can be applied either using standard mechanical dry application methods or using hydroseeding equipment that hydraulically applies a slurry of water, wood fiber mulch, and often a tackifier.

Appropriate Uses

Use mulch in conjunction with seeding to help protect the seedbed and stabilize the soil. Mulch can also be used as a temporary cover on low to mild slopes to help temporarily stabilize disturbed areas.

Standard dry mulching is encouraged in most jurisdictions; however, hydroseeding may not be allowed in certain jurisdictions or may not be allowed near waterways.

Design and Installation

Prior to mulching, surface roughen areas by rolling with a crimping or punching type roller or by track walking. Track walking should only be used where other methods are impractical because track walking with heavy equipment typically compacts the soil.

Mulch

Table with 2 columns: Functions (Erosion Control, Sediment Control, Soil/Material Management) and Yes/Modest/No.

Table with 3 columns: Date (June 2012), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (MU-1).

EC-4 Mulching (MU)

Clean, weed-free and seed-free cereal grain straw should be applied evenly at a rate of 2 tons per acre and must be tacked or fastened by a method suitable for the condition of the site. Straw mulch must be anchored (and not merely placed) on the surface.

Grass hay may be used in place of straw; however, because hay is comprised of the entire plant including seed, mulching with hay may seed the site with non-native grass species which might in turn out-compete the native seed.

On small areas sheltered from the wind and heavy runoff, spraying a tackifier on the mulch is satisfactory for holding it in place. For steep slopes and special situations where greater control is needed, erosion control blankets anchored with stakes should be used instead of mulch.

Hydraulic mulching consists of wood cellulose fibers mixed with water and a tackifying agent and should be applied at a rate of no less than 1,500 pounds per acre (1,425 lbs of fibers mixed with at least 75 lbs of tackifier) with a hydraulic mulcher.

Erosion control mats, blankets, or nets are recommended to help stabilize steep slopes (generally 3:1 and steeper) and waterways. Depending on the product, these may be used alone or in conjunction with grass or straw mulch.

Rock can also be used as mulch. It provides protection of exposed soils to wind and water erosion and allows infiltration of precipitation. An aggregate base course can be spread on disturbed areas for temporary or permanent stabilization.

Maintenance and Removal

After mulching, the bare ground surface should not be more than 10 percent exposed. Reapply mulch, as needed, to cover bare areas.

Table with 3 columns: Date (June 2012), Title (Urban Drainage and Flood Control District Urban Storm Drainage Criteria Manual Volume 3), and Reference (MU-2).

SHEET KEY



BENCHMARK

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SEAL

PRELIMINARY
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HAY CREEK VALLEY
EL PASO COUNTY, COLORADO
FINAL GRADING & EROSION CONTROL PLANS

DETAILS

Table with 4 columns: DESIGNED BY (CJV), DRAWN BY (CJV), CHECKED BY (JAO), SCALE (HORIZ N/A, VERT N/A), DATE ISSUED (JANUARY 2024), SHEET (12 OF 12), DRAWING No. (ECN03).

REFERENCE DRAWINGS table with columns: No., DATE, DESCRIPTION, BY.

COMPUTER FILE MANAGEMENT
FILE NAME: S:\22.886.076 Hay Creek-Forest Manor-O'Leary Properties\500 CADD\504 Plan Sets\Construction Plans\GEC Plan\ECN01.dwg
CTB FILE: Matrix.ctb
PLOT DATE: 1/26/2024 3:13 PM
THIS DRAWING IS CURRENT AS OF PLOT DATE AND MAY BE SUBJECT TO CHANGE.