

K:\COS\_Civil\190106001\_Winsome Filing No. 3\CADD\PlanSheets\Early Grading Package\EG\_CV.dwg Kofford, Kevin 1/9/2023 10:35 AM

# WINSOME FILING NO. 3

## PRE DEVELOPMENT GRADING AND EROSION CONTROL PLAN

A PORTION OF SECTIONS 13 AND 24, TOWNSHIP 11 SOUTH, RANGE 65 SOUTH, AND  
A PORTION OF THE WEST HALF SECTON 19, TOWNSHIP 11 SOUTH, RANGE 64 WEST OF THE 6TH P.M  
COUNTY OF EL PASO, STATE OF COLORADO

### CONTACTS:

**DEVELOPER:**  
WINSOME, LLC  
1864 WOODMOOR DRIVE, SUITE 100  
MONUMENT, CO 80132  
TEL: (719) 476-0800  
CONTACT: JOSEPH DESJARDIN

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619 N CASCADE AVENUE, SUITE 200  
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CONTACT: ANDREA BARLOW

**ENGINEER:**  
KIMLEY-HORN AND ASSOCIATES, INC.  
2 NORTH NEVADA, SUITE 300  
COLORADO SPRINGS, CO 80903  
(719) 453-0180  
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KEVIN.KOFFORD@KIMLEY-HORN.COM  
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EDWARD JAMES SURVEYING, INC.  
926 ELKTON DRIVE  
COLORADO SPRINGS, CO 80907  
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CONTACT: JONATHAN TESSIN

EL PASO COUNTY PLANNING  
DEPARTMENT  
2880 INTERNATIONAL CIRCLE, SUITE  
110  
COLORADO SPRINGS, CO 80910

**PLANNING REVIEWER:**  
RYAN HOWSER  
TEL: (719) 520-6442  
EMAIL: RYANHOWSER@ELPASOCO.COM

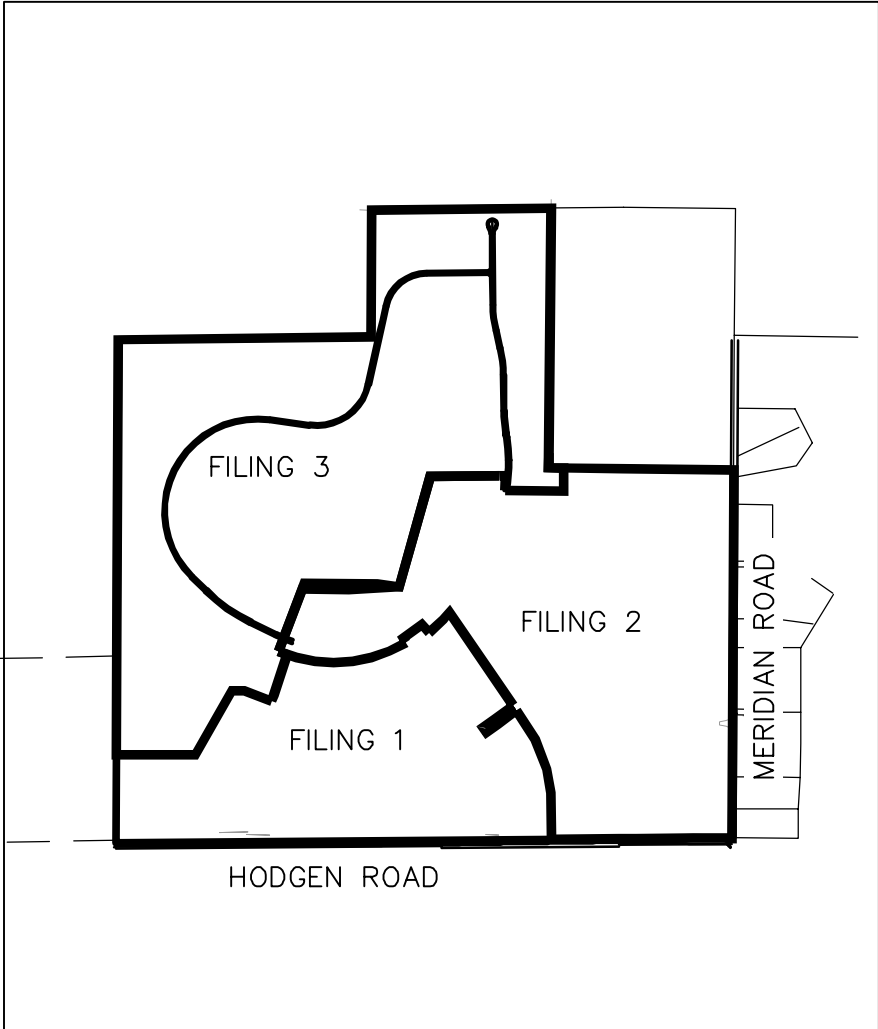
**ENGINEERING REVIEWER:**  
GILBERT LAFORCE  
TEL: (719) 520-7945  
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GILBERTLAFORCE@ELPASOCO.COM

**EPC DPW STORMWATER TEAM:**  
CHRISTINA FURCHAK  
(719) 433-4863  
EMAIL:  
CHRISTINAFURCHAK@ELPASOCO.COM

**EPC PCD INSPECTIONS SUPERVISOR:**  
TEM: BRAD WALTERS  
(719) 520-6819  
EMAIL: BRADWALTERS@ELPASOCO.COM

**FALCON FIRE DEPARTMENT:**  
AREA: FAL D2  
FIRE CHIEF T. HARWIG  
7030 OLD MERIDIAN ROAD  
PAYTON, CO 80831  
TEL: (719) 495-4050  
EMAIL:  
FALCONFIRE@FALCONFIREPD.ORG

**COLORADO DEPARTMENT OF PUBLIC  
HEALTH AND ENVIRONMENT:**  
WATER QUALITY CONTROL DIVISION  
4300 CHERRY CREEK DRIVE SOUTH  
DENVER, CO 80246  
TEL: (303) 692-3500



VICINITY MAP  
1"=2,000'

### BENCHMARK

A 2.5" ALUMINUM CAP BEING A 30 FOOT WITNESS CORNER NORTH OF THE SOUTHWEST CORNER OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN.

### BASIS OF BEARING

THE WEST LINE OF THE NORTHWEST QUARTER OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6 PRINCIPAL MERIDIAN MONUMENTED ON THE SOUTHERLY END BY A 2-1/2"ALUMINUM CAP STAMPED 'LS 28658"AND AT THE NORTHERLY END BY A 3-1/2"ALUMINUM CAP STAMPED 'LS 12103" BEING ASSUMED TO BEAR N00°14'25"E A DISTANCE OF 2636.99 FEET AS SHOWN IN LAND SURVEY PLAT RECORDED UNDER RECEPTION 218900072 RECORDS OF EL PASO COUNTY, COLORADO.

### LEGAL DESCRIPTION

TRACT OF LAND BEING A PORTION OF THE SOUTHEAST QUARTER OF SECTION 13, AND A PORTION OF SECTION 24, TOWNSHIP 11 SOUTH, RANGE 65 WEST OF THE 6TH PRINCIPAL MERIDIAN, COUNTY OF EL PASO, STATE OF COLORADO, BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

COMMENCING AT THE WEST QUARTER CORNER OF SAID SECTION 24, SAID POINT BEING THE POINT OF BEGINNING; THENCE N00°14'25"E ON THE WEST LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, SAID LINE ALSO BEING ON THE WEST BOUNDARY OF PARCEL 4, AS RECORDED UNDER RECEPTION NUMBER 218900072, A DISTANCE OF 2,636.99 FEET TO THE NORTHWEST CORNER OF SAID SECTION 24; THENCE N89°21'38"E ON THE NORTH LINE OF THE NORTHWEST QUARTER OF SAID SECTION 24, A DISTANCE OF 2,633.02 FEET TO THE NORTH QUARTER CORNER OF SAID SECTION 24; THENCE N00°10'29"E ON THE WEST LINE OF THE SOUTH HALF OF THE SOUTH EAST QUARTER OF SECTION 13, TOWNSHIP 11 SOUTH, RANGE 65 WEST, A DISTANCE OF 1,321.95 FEET TO THE NORTHWEST CORNER OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 13; THENCE N89°20'26"E ON THE NORTH LINE OF THE SOUTH HALF OF THE SOUTHEAST QUARTER OF SAID SECTION 13, A DISTANCE OF 1,873.37 FEET; THENCE S00°34'43"W, A DISTANCE OF 2,706.21 FEET; THENCE S89°15'17"E, A DISTANCE OF 155.82 FEET; THENCE S00°17'06"W, A DISTANCE OF 239.06 FEET; THENCE N89°42'54"W, A DISTANCE OF 609.60 FEET TO A POINT ON CURVE; THENCE ON THE ARC OF A CURVE TO THE LEFT, WHOSE CENTER BEARS N85°44'53"W, HAVING A DELTA OF 05°13'06", A RADIUS OF 1,710.00 FEET, A DISTANCE OF 155.74 FEET TO A POINT ON CURVE; THENCE S89°02'00"W, A DISTANCE OF 60.00 FEET; S89°29'13"W, A DISTANCE OF 722.44 FEET; THENCE S15°45'23"W, A DISTANCE OF 1,195.74 FEET; THENCE N82°21'05"W, A DISTANCE OF 229.91 FEET; THENCE N89°29'30"W, A DISTANCE OF 757.49 FEET; THENCE S20°46'13"W, A DISTANCE OF 758.90 FEET TO A POINT ON CURVE; THENCE ON THE ARC OF A CURVE TO THE LEFT, WHOSE CENTER BEARS N22°56'03"E, HAVING A DELTA OF 03°42'28", A RADIUS OF 1,470.00 FEET, A DISTANCE OF 95.13 FEET TO A POINT ON CURVE; THENCE S19°13'35"W, A DISTANCE OF 60.00 FEET; THENCE S18°06'10"W, A DISTANCE OF 383.72 FEET TO A POINT OF CURVE; THENCE ON THE ARC OF A CURVE TO THE RIGHT, HAVING A DELTA OF 02°06'44", A RADIUS OF 1,790.00 FEET, A DISTANCE OF 65.99 FEET TO A POINT ON CURVE; THENCE N69°47'06"W, A DISTANCE OF 306.30 FEET; THENCE N89°45'39"W, A DISTANCE OF 128.26 FEET; THENCE S29°41'56"W, A DISTANCE OF 768.98 FEET; THENCE N89°41'23"W, A DISTANCE OF 820.25 FEET TO A POINT ON THE WEST LINE OF THE SOUTHWEST QUARTER OF SAID SECTION 24; THENCE N00°14'17"E ON THE WEST LINE OF SOUTHWEST QUARTER OF SAID SECTION 24 A DISTANCE OF 1,684.27 FEET TO THE POINT OF BEGINNING.

CONTAINING A CALCULATED AREA OF 15,222,954 SQUARE FEET OR 349.471 ACRES.

### FLOODPLAIN NOTE

FEDERAL EMERGENCY MANAGEMENT AGENCY FLOOD INSURANCE RATE MAP, MAP NUMBER 08041C0350G, EFFECTIVE DECEMBER 7, 2018 INDICATES THE AREA IN THE VICINITY OF THIS PARCEL OF LAND TO BE IN ZONE X (AREA DETERMINED TO BE OUT OF THE 500 YEAR FLOODPLAIN). A CONDITIONAL LETTER OF MAP REVISION HAS BEEN PROCESSED AND APPROVED FOR THIS REACH OF WEST KIOWA CREEK (FEMA CASE NO: 19-08-0185R ).

### SOIL TYPE

THE SOIL ON SITE IS USGS HYDROLOGIC SOIL GROUP B.

### SITE INFORMATION

**TIMING:**  
ANTICIPATED STARTING AND COMPLETION TIME PERIOD OF SITE GRADING:  
START: SUMMER 2023  
END: SUMMER 2024  
EXPECTED DATE ON WHICH THE FINAL STABILIZATION WILL BE COMPLETE:  
FALL 2024

**AREAS:**  
TOTAL DISTURBED AREA: 32.00 ACRES

**RECEIVING WATERS:**  
NAME OF RECEIVING WATERS: WEST KIOWA CREEK

**DESCRIPTION OF EXISTING VEGETATION:**  
THE EXISTING SITE IS CURRENTLY UNDEVELOPED AND GROUND COVER CONSISTS OF 90% NATIVE GRASSES.

**DESCRIPTION OF PERMANENT BMPS:**  
THREE (3) FULL SPECTRUM EXTENDED DETENTION BASIN  
ONE (1) WATER QUALITY EXTENDED DETENTION BASIN  
ONE (1) PERMANENT SEDIMENT BASIN

### LIMITS OF CONSTRUCTION

ONSITE DISTURBANCE = ±32.00 ACRES

OFFSITE DISTURBANCE = ±0.00 ACRES

TOTAL = ±32.00 ACRES

### SHEET INDEX

SHEET NO.	SHEET TITLE
1.0	COVER SHEET
1.1	NOTES
1.2	CUT AND FILL PAN
1.3	GEC INITIAL PLAN
1.4	GEC INITIAL PLAN
1.5	GEC INITIAL PLAN
1.6	GEC INITIAL PLAN
1.7	GEC INTERIM PLAN
1.8	GEC INTERIM PLAN
1.9	GEC INTERIM PLAN
1.10	GEC INTERIM PLAN
1.11	CULVERT PLAN & PROFILE
1.12	CULVERT PLAN & PROFILE
1.13	DETAIL SHEET (1 OF 4)
1.14	DETAIL SHEET (2 OF 4)
1.15	DETAIL SHEET (3 OF 4)
1.16	DETAIL SHEET (4 OF 4)
1.17	HEADCUTTING EXHIBIT OVERALL
1.18	HEADCUTTING EXHIBIT REACH H1
1.19	HEADCUTTING EXHIBIT REACH H1
1.20	HEADCUTTING EXHIBIT REACH H5B
1.21	HEADCUTTING EXHIBIT REACH H3
1.22	HEADCUTTING EXHIBIT DETAILS

### GEC PLAN SIGNATURES:

#### DEVELOPER'S/OWNER'S SIGNATURE BLOCK

I, THE OWNER/DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS OF THE GRADING AND EROSION CONTROL PLAN AND ALL OF THE REQUIREMENTS SPECIFIED IN THESE DETAILED PLANS AND SPECIFICATIONS.

✓ *Joseph W. Desjardin*

01/10/2023

JOE DESJARDIN - WINSOME, LLC  
1864 WOODMOOR, CO 80132

DATE

#### ENGINEER'S SIGNATURE BLOCK

THESE DETAILED PLANS AND SPECIFICATIONS WERE PREPARED UNDER MY DIRECTION AND SUPERVISION. SAID PLANS AND SPECIFICATIONS HAVE BEEN PREPARED ACCORDING TO THE CRITERIA ESTABLISHED BY THE COUNTY FOR DETAILED ROADWAY, DRAINAGE, GRADING AND EROSION CONTROL PLANS AND SPECIFICATIONS, AND SAID PLANS AND SPECIFICATIONS ARE IN CONFORMITY WITH APPLICABLE MASTER DRAINAGE PLANS AND MASTER TRANSPORTATION PLANS. SAID PLANS AND SPECIFICATIONS MEET THE PURPOSES FOR WHICH THE PARTICULAR ROADWAY AND DRAINAGE FACILITIES ARE DESIGNED AND ARE CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. I ACCEPT RESPONSIBILITY FOR ANY LIABILITY CAUSED BY ANY NEGLIGENT ACTS, ERRORS OR OMISSIONS ON MY PART IN PREPARATION OF THESE DETAILED PLANS AND SPECIFICATIONS.



1/6/2023

KEVIN KOFFORD, P.E. 57234 - KIMLEY-HORN AND ASSOCIATES, INC.

DATE

#### EL PASO COUNTY

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

FILED IN ACCORDANCE WITH THE REQUIREMENTS OF THE EL PASO COUNTY LAND DEVELOPMENT CODE, DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND ENGINEERING CRITERIA MANUAL, AS AMENDED.

IN ACCORDANCE WITH ECM SECTION 1.12, THESE CONSTRUCTION DOCUMENTS WILL BE VALID FOR CONSTRUCTION FOR A PERIOD OF 2 YEARS FROM THE DATE SIGNED BY THE EL PASO COUNTY ENGINEER. IF CONSTRUCTION HAS NOT STARTED WITHIN THOSE 2 YEARS, THE PLANS WILL NEED TO BE RESUBMITTED FOR APPROVAL, INCLUDING PAYMENT OF REVIEW FEES AT THE PLANNING AND COMMUNITY DEVELOPMENT DIRECTOR'S DISCRETION.

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

DATE

**Kimley»Horn**

2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
COVER SHEET



PROJECT NO.  
196106001

SHEET

1.0



Know what's below.  
Call before you dig.



EL PASO COUNTY GRADING AND EROSION  
CONTROL PLAN NOTES

19. 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.
20. TRACKING OF SOILS AND CONSTRUCTION DEBRIS OFF-SITE SHALL BE MINIMIZED. MATERIALS TRACKED OFF-SITE SHALL BE CLEANED UP AND PROPERLY DISPOSED OF IMMEDIATELY.
21. 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.
22. 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 MANNER. EXCESS MATERIALS STORED ON-SITE SHALL BE STORED IN A NEAT, ORDERLY MANNER, IN THEIR ORIGINAL CONTAINERS, WITH ORIGINAL MANUFACTURER'S LABELS.
23. NO CHEMICAL(S) HAVING THE POTENTIAL TO BE RELEASED IN STORMWATER ARE TO BE STORED OR USED ON-SITE WITHOUT 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.
24. BULK STORAGE OF ALLOWED PETROLEUM PRODUCTS OR OTHER ALLOWED LIQUID CHEMICALS IN EXCESS OF 55 GALLONS SHALL REQUIRE ADEQUATE SECONDARY CONTAINMENT PROTECTION TO CONTAIN ALL SPILLS ON-SITE AND TO PREVENT ANY SPILLED MATERIALS FROM ENTERING STATE WATERS, ANY SURFACE OR SUBSURFACE STORM DRAINAGE SYSTEM OR OTHER FACILITIES.
25. NO PERSON SHALL CAUSE THE IMPEDIMENT OF STORMWATER FLOW IN THE CURB AND GUTTER OR DITCH EXCEPT WITH APPROVED SEDIMENT CONTROL MEASURES.
26. 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.
27. ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE ONLY AT APPROVED CONSTRUCTION ACCESS POINTS.
28. PRIOR TO CONSTRUCTION THE PERMITTEE SHALL VERIFY THE LOCATION OF EXISTING UTILITIES.
29. 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.
30. THE SOILS REPORT FOR THIS SITE HAS BEEN PREPARED BY ENTECH ENGINEERING, INC. DATED JANUARY 26, 2021 AND SHALL BE CONSIDERED A PART OF THESE PLANS.
31. 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 ACTIVITIES SHALL SUBMIT TO THE COLORADO DEPARTMENT OF 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:

10' PUBLIC IMPROVEMENT ESMT (PIE)

EX. ROW LINE

VARIES

10' PUBLIC UTILITY ESMT (PUE)

10'

2'

12' LANE

2' SHLDR

2.00%

2'

12' LANE

2'

2'

10'

VARIES

EX. ROW LINE

10' PUBLIC IMPROVEMENT ESMT (PIE)

10' PUBLIC UTILITY ESMT (PUE)

4:1

4:1

4:1

4:1

TYP. DITCH DEPTH 2.5' WITH SEEDING AND MULCHING

CL

RURAL LOCAL ROADWAY

NOTE: SUBGRADE UNDERCUT GRADING IS PERMITTED WITH THIS PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN. ASPHALT AND BASE COURSE SHALL NOT BE CONSTRUCTED WITH THE PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN.

UNDERCUT SURFACE (PRE DEVELOPMENT PERMIT GRADING TO THIS ELEVATION ONLY)

FINISHED ASPHALT SURFACE

Diagram illustrating the plan view of a ditch cross-section. The ditch is 6' wide at the bottom. The top width is 12.0' on the left, 6.0' in the center, and 12.0' on the right. The ditch is reinforced with EXCEL PP5-12 TURF REINFORCEMENT MAT (TRM) OR APPROVED EQUAL (BIODEGRADABLE) FOR DITCHES IDENTIFIED IN FDR WITH HIGH VELOCITIES. The ditch is labeled (E) 6' BOTTOM CHANNEL. The scale is NTS. The ditch is shown with a 4:1 slope on both sides, labeled '4:1 THE INFO EXISTING'.

4:1

3.0'

3:1

TO EXISTING

TO EXISTING

REINFORCE WITH EXCEL  
PP5-12 TURF  
REINFORCEMENT MAT (TRM)  
OR APPROVED EQUAL  
(BIODEGRADABLE) FOR  
DITCHES IDENTIFIED IN FDR  
WITH HIGH VELOCITIES

(F) 10' BOTTOM CHANNEL

SCALE: NTS

15' TRAIL

3:1 MAX

2%

CL

3:1 MAX

6" THICK -  $\frac{3}{4}$ " CRUSHED AGGREGATE OVER COMPACTED SUBGRADE

UNDERCUT SURFACE  
(PRE DEVELOPMENT  
PERMIT GRADING TO  
THIS ELEVATION ONLY)

MAINTENANCE ROAD

SCALE: NTS

NOTE: SUBGRADE UNDERCUT GRADING IS PERMITTED WITH THIS PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN. ASPHALT AND BASE COURSE SHALL NOT BE CONSTRUCTED WITH THE PRE-DEVELOPMENT GRADING AND EROSION CONTROL PLAN



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LEGEND

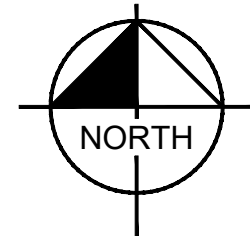


CUT AREA



FILL AREA

TOTAL CUT: 90,983 CY  
TOTAL FILL: 66,335 CY  
NET: 24,648 CY (CUT)\*  
\*NO FILL FACTOR APPLIED



GRAPHIC SCALE IN FEET  
0 125 250 500

NO.	REVISION	BY	DATE	APPR.
2	RESUBMITTAL #2	KRK	11/30/22	KRK
1	RESUBMITTAL #1	KRK	8/30/22	KRK

**Kimley»Horn**  
2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: A.J.L.  
CHECKED BY: KRK  
DATE: 12/10/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
CUT AND FILL PAN



PROJECT NO.  
196106001

SHEET  
1.2

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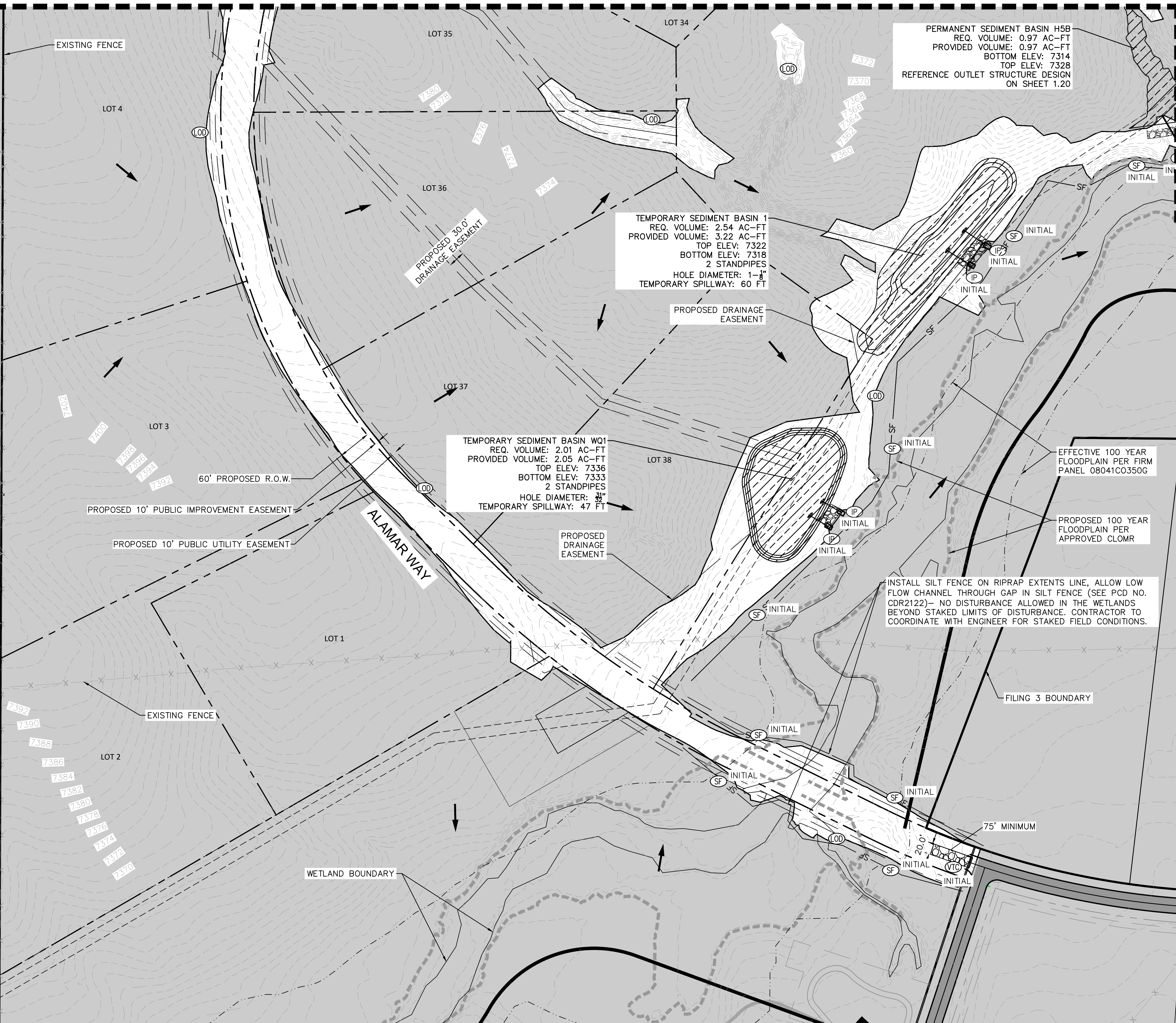
OWNER: RICHARDS  
VERNON A  
SCHEDULE NO.  
5123000012

OWNER: LOUDERMILK  
LIVING TRUST  
SCHEDULE NO.  
5123003001

OWNER: VAN  
BUSKIRK CARROLL C  
REVOC TRUST  
SCHEDULE NO.  
5123000019

OWNER:  
PENNY-WEBER  
MANDY A  
SCHEDULE NO.  
5123001015

MATCH LINE: SEE SHEET 1.4 FOR CONTINUATION



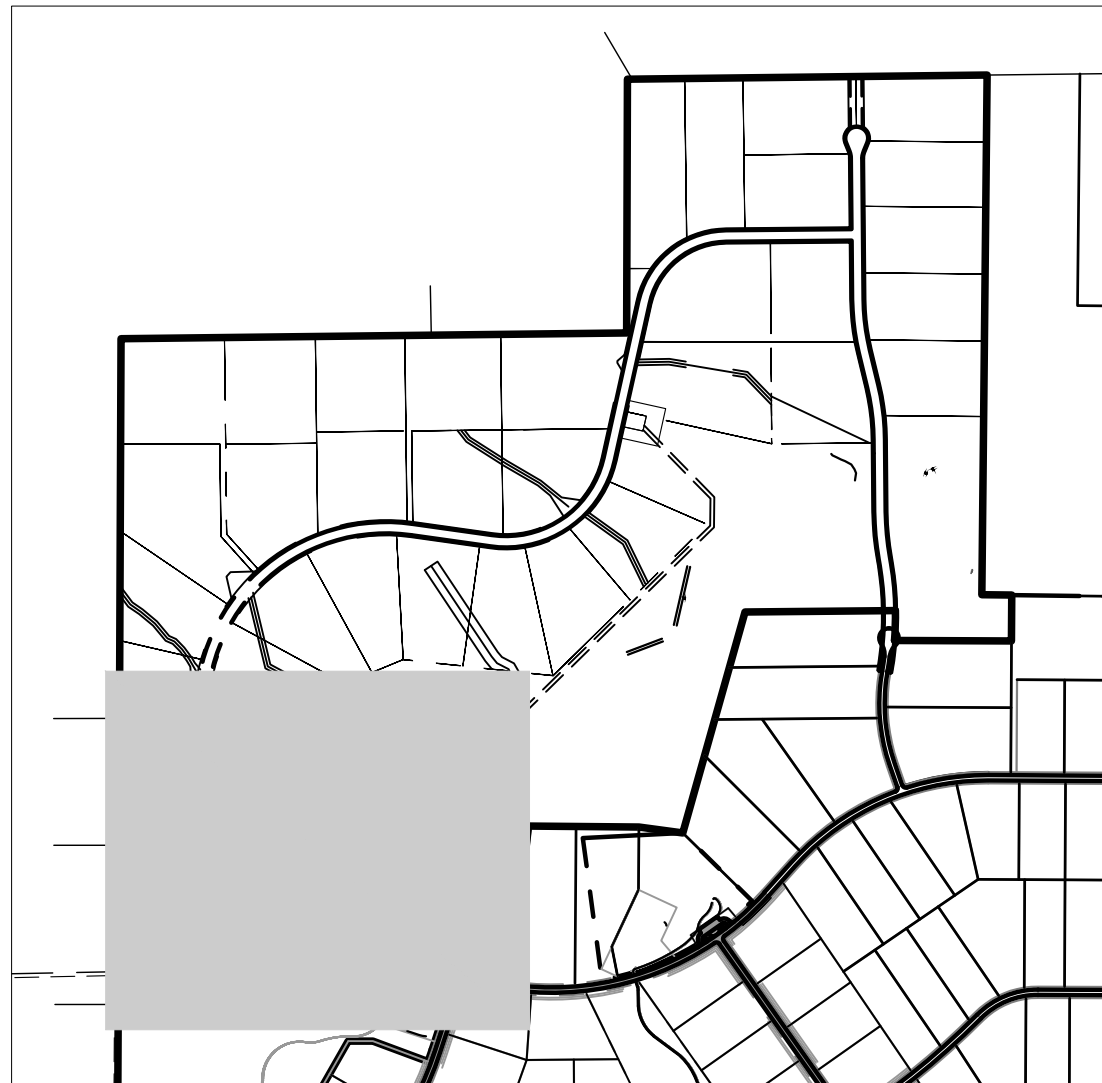
MATCH LINE: SEE SHEET 1.6 FOR CONTINUATION

#### LEGEND

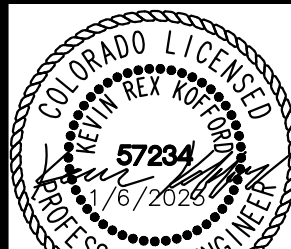
- LOT BOUNDARY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- LIMITS OF CONSTRUCTION/DISTURBANCE
- CONSTRUCTION FENCE
- SILT FENCE
- CUT/FILL DEMARCATION
- SOIL STOCKPILE
- STABILIZED STAGING AREA
- VEHICLE TRACKING CONTROL
- GRAVEL MAINTENANCE ROAD
- TEMPORARY SEDIMENT BASIN
- CONCRETE WASHOUT
- EXISTING FLOW DIRECTION ARROW
- INLET PROTECTION

#### NOTES

- THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
- ADJACENT STREETS SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS AT ALL TIMES.
- TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
- PERMANENT STABILIZATION (PS) MAY BE USED WITHIN AREAS OF TEMPORARY STABILIZATION (TS) AT THE CONTRACTOR'S DISCRETION. STABILIZATION SHALL BE APPLIED IN ACCORDANCE WITH APPLICABLE TEMPORARY STABILIZATION SEQUENCING REQUIREMENTS.
- CONTRACTOR SHALL UTILIZE ROLLED EROSION CONTROL PRODUCTS (STRAW-SINGLE NET EROSION CONTROL BLANKETS AND OPEN WEAVE TEXTILES) ON ALL SLOPES 3H:1V OR GREATER TO ACHIEVE REQUIRED STABILIZATION.
- CONTRACTOR SHALL MAINTAIN ACCEPTABLE EROSION CONTROL PRACTICES WITHIN THE ANTICIPATED LIMITS OF CONSTRUCTION IDENTIFIED HEREIN. BEST MANAGEMENT PRACTICES AND STABILIZATION SHALL BE COMPLETED AS IDENTIFIED HEREIN IN ACCORDANCE WITH OWNER REQUIREMENTS.
- SILT FENCE TO BE INSTALLED PRIOR TO COMMENCEMENT OF ONSITE GRADING AND CONSTRUCTION ACTIVITIES.
- DEMOLITION, REMOVAL, OVEREXCAVATION AND SOIL TREATMENT SHALL BE IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER RECOMMENDATIONS AS NOTED IN THE APPROVED PROJECT GEOTECHNICAL REPORT.
- VEGETATION COVER IS ABOUT 90% CONSISTING OF NATIVE GRASSES, TREES AND SHRUBS, BASED ON VISUAL INSPECTION
- NO ASPHALT OR CONCRETE BATCH PLANTS SHALL BE USED FOR THIS PROJECT.



WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INITIAL PLAN



PROJECT NO.  
196106001

SHEET

1.3

**Kimley»Horn**

2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

RESUBMITTAL #2

RESUBMITTAL #1

NO.

BY

DATE

APPR

REVISION

1

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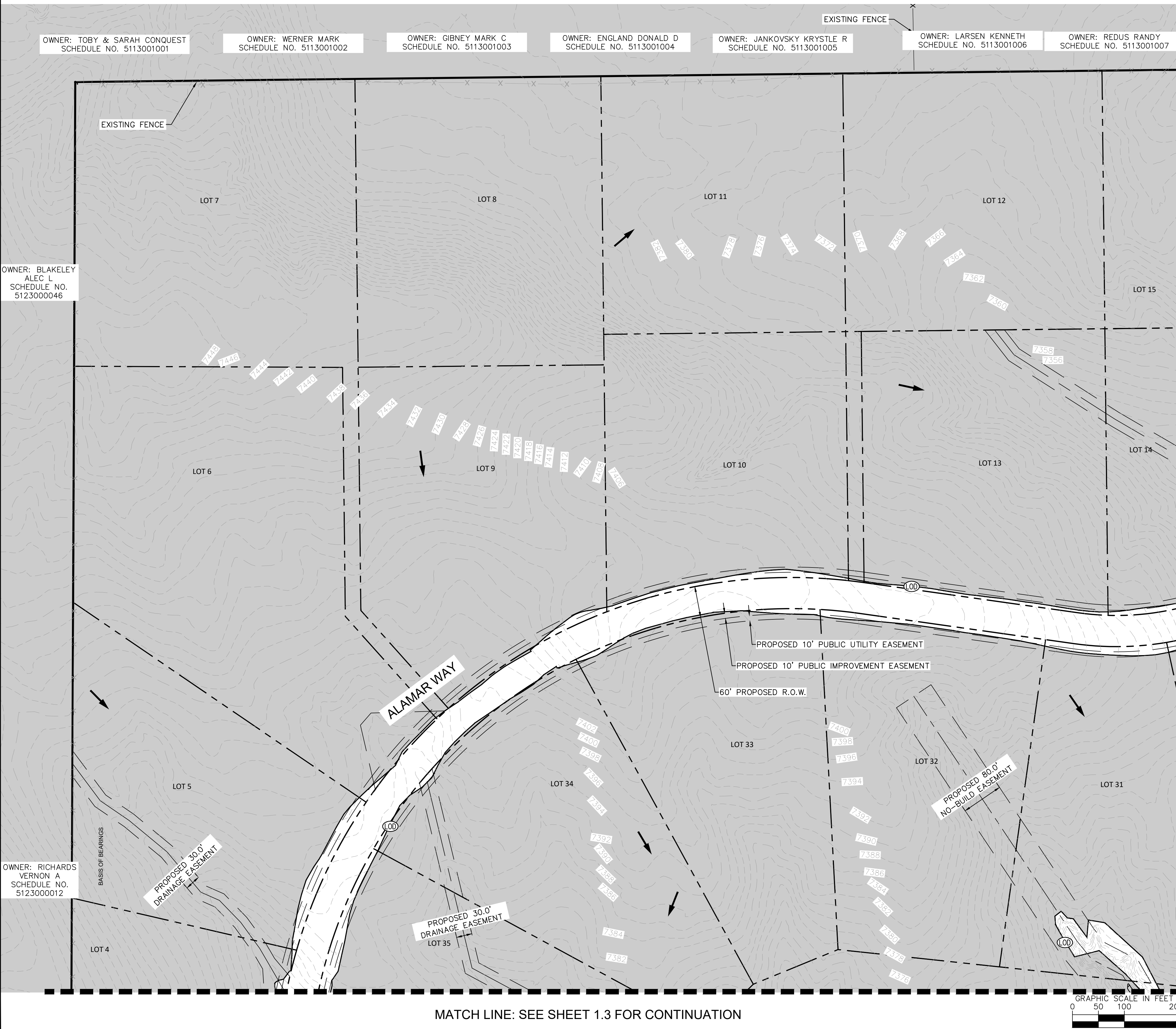
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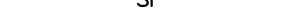


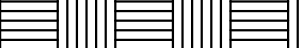

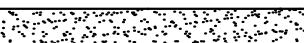
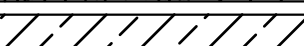
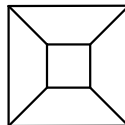


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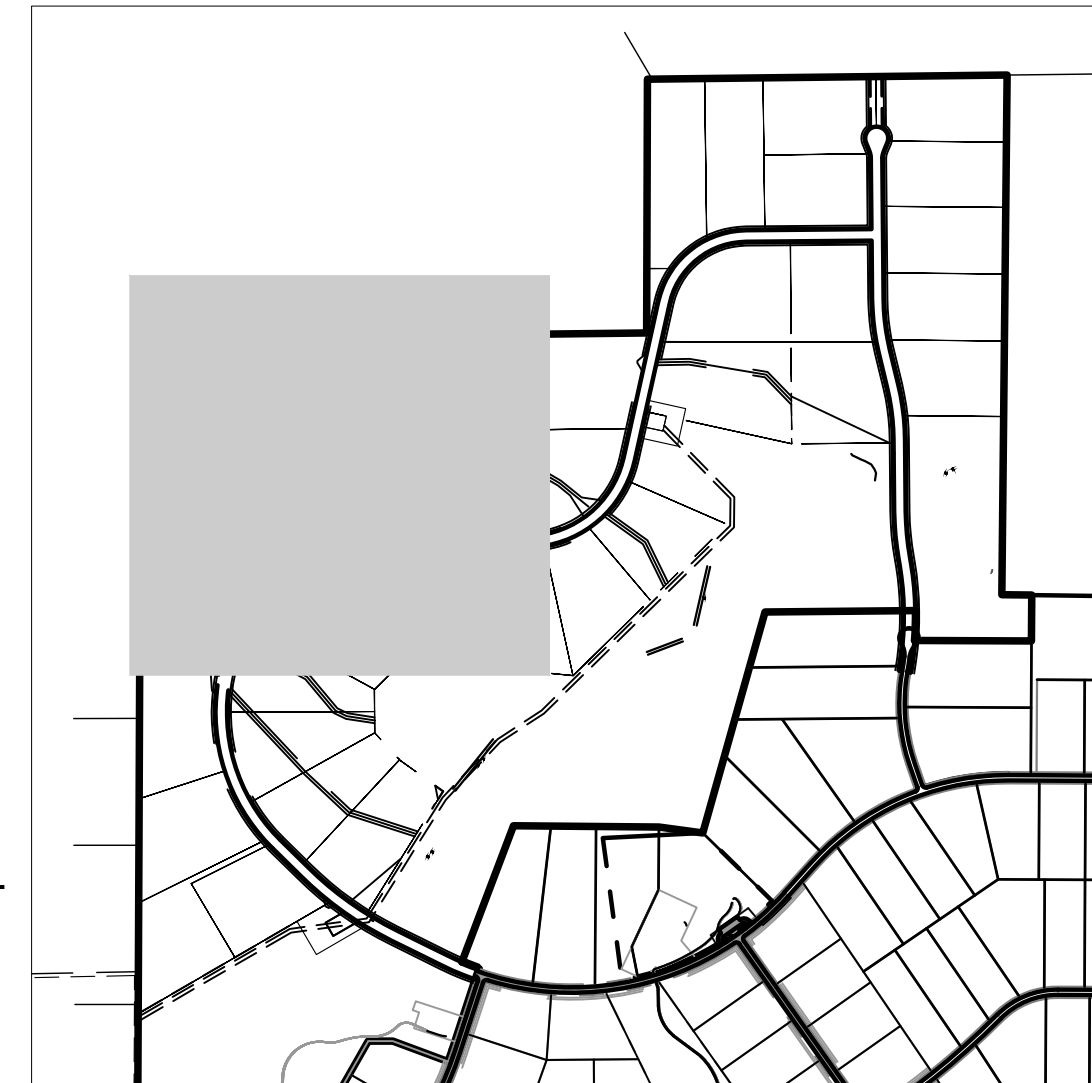
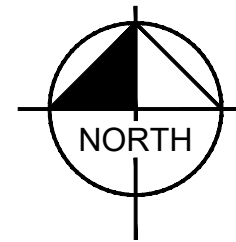


### LEGEND

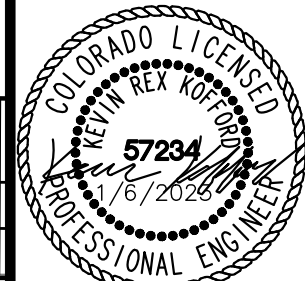
	LOT BOUNDARY LINE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	(LOD) LIMITS OF CONSTRUCTION/DISTURBANCE
	(CF) CONSTRUCTION FENCE
	(SF) SILT FENCE
	CUT/FILL DEMARCATION
	(SP) SOIL STOCKPILE
	(SSA) STABILIZED STAGING AREA
	(VTC) VEHICLE TRACKING CONTROL
	GRAVEL MAINTENANCE ROAD
	TEMPORARY SEDIMENT BASIN
	(CWA) CONCRETE WASHOUT
	EXISTING FLOW DIRECTION ARROW
	(IP) INLET PROTECTION

## NOTES

1. THE INTENT OF THIS PLAN IS TO IDENTIFY THE EROSION CONTROL PRACTICES RECOMMENDED. THE CONTRACTOR SHALL REFERENCE ADDITIONAL CONSTRUCTION PLANS FOR DEMOLITION OF EXISTING AND CONSTRUCTION OF PROPOSED IMPROVEMENTS.
2. ADJACENT STREETS SHALL BE KEPT CLEAN AND FREE OF SEDIMENT AND/OR DEBRIS ALL TIMES.
3. TEMPORARY STABILIZATION (TS) SHALL BE IMPLEMENTED WITHIN THE DISTURBED PORTIONS OF THE PROJECT SITE NO LATER THAN 14 DAYS FOLLOWING THE CEASE OF CONSTRUCTION ACTIVITIES WITHIN THE DISTURBED AREAS.
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9. VEGETATION COVER IS ABOUT 90% SENSITIVE OF NATIVE GRASSES, TREES AND SHRUBS, BASED ON VISUAL INSPECTION.
10. NO ASPHALT OR CONCRETE BATCH PLANTS SHALL BE USED FOR THIS PROJECT.



WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INITIAL PLAN

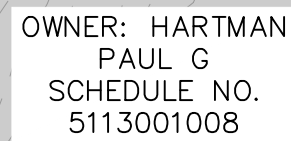
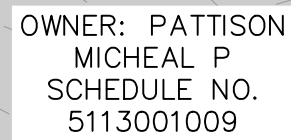


PROJECT NO.  
196106001

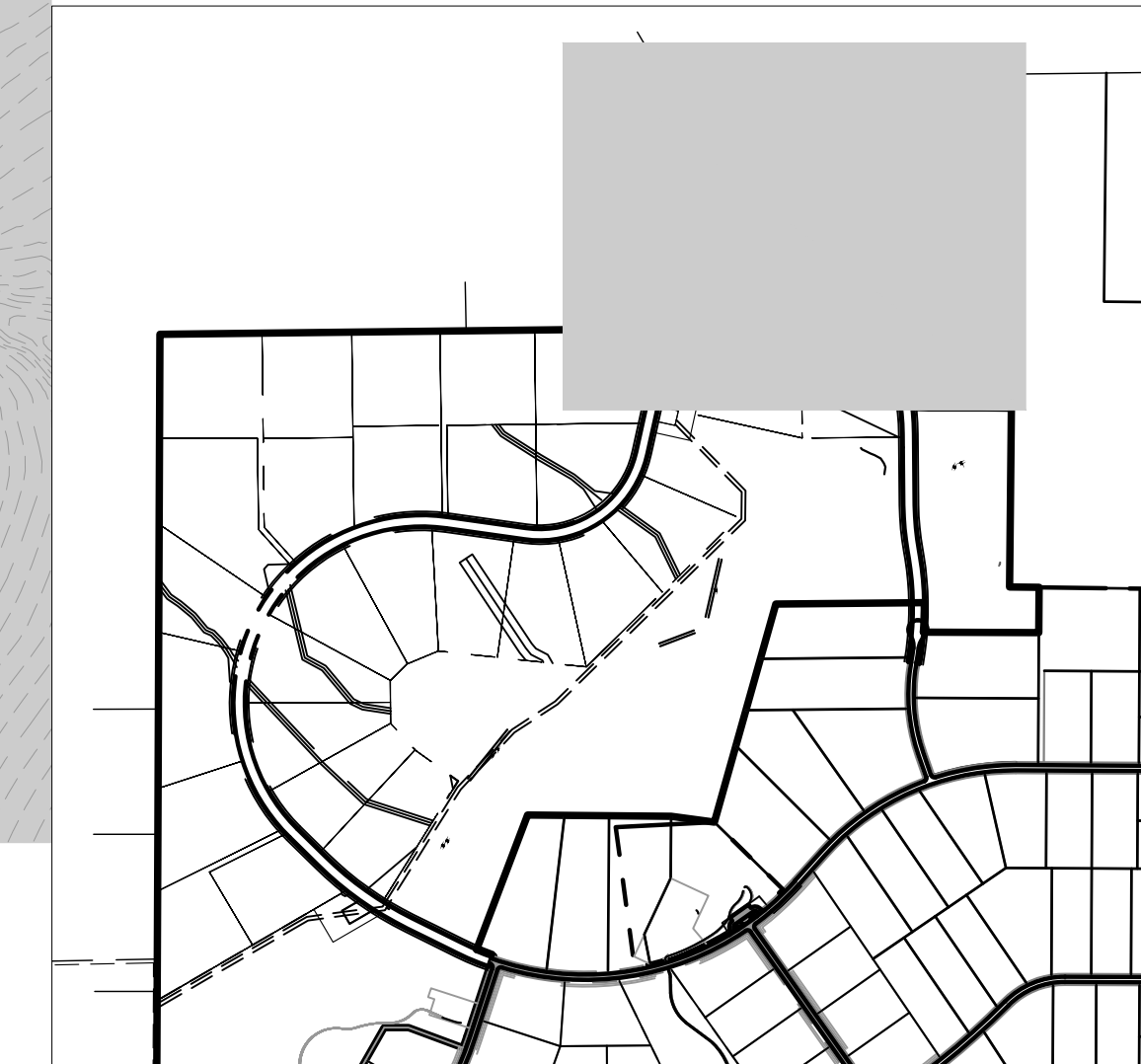
SHEET

## 1.4

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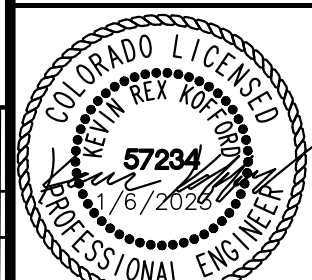
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[illegible]

**Kimley»»Horn**  
2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INITIAL PLAN



PROJECT NO.  
196106001

SHEET

# 1.5

LOT 15

LOT 14

LOT 28

LOT 25

LOT 29

LOT 30

LOT 31

PROPOSED 10' PUBLIC UTILITY EASEMENT

PROPOSED 10' PUBLIC IMPROVEMENT EASEMENT

60' PROPOSED R.O.W.

PROPOSED 30.0' DRAINAGE EASEMENT

TEMPORARY SEDIMENT BASIN 2  
REQ. VOLUME: 1.41 AC-FT  
PROVIDED VOLUME: 3.22 AC-FT  
TOP ELEV: 7310  
BOTTOM ELEV: 7302  
1 STANDPIPES  
HOLE DIAMETER: 1-1/2"  
TEMPORARY SPILLWAY: 60 FT

TEMPORARY SEDIMENT BASIN 4  
REQ. VOLUME: 2.44 AC-FT  
PROVIDED VOLUME: 4.76 AC-FT  
TOP ELEV: 7299  
BOTTOM ELEV: 7292  
2 STANDPIPES  
HOLE DIAMETER: 1-1/2"  
TEMPORARY SPILLWAY: 60 FT

INSTALL SILT FENCE ON RIPRAP EXTENTS LINE, ALLOW LOW FLOW CHANNEL THROUGH GAP IN SILT FENCE (SEE PCD NO. CDR2122)- NO DISTURBANCE ALLOWED IN THE WETLANDS BEYOND STAKED LIMITS OF DISTURBANCE. CONTRACTOR TO COORDINATE WITH ENGINEER FOR STAKED FIELD CONDITIONS.

INSTALL SILT FENCE ON WETLAND BOUNDARY- NO DISTURBANCE ALLOWED IN THE WETLANDS BEYOND STAKED LIMITS OF DISTURBANCE. CONTRACTOR TO COORDINATE WITH ENGINEER FOR STAKED FIELD CONDITIONS.

PROPOSED 100 YEAR FLOODPLAIN PER APPROVED CLOMR

EXISTING DRAINAGE WAY

EFFECTIVE 100 YEAR FLOODPLAIN PER FIRM PANEL 08041C0350G

WETLAND BOUNDARY

FILING 3 BOUNDARY

30.0' DRAINAGE EASEMENT

20'

75' MINIMUM

INITIAL

LOD

SF

IP

SS

CS

VC

7308

7310

7312

7314

7316

7318

7320

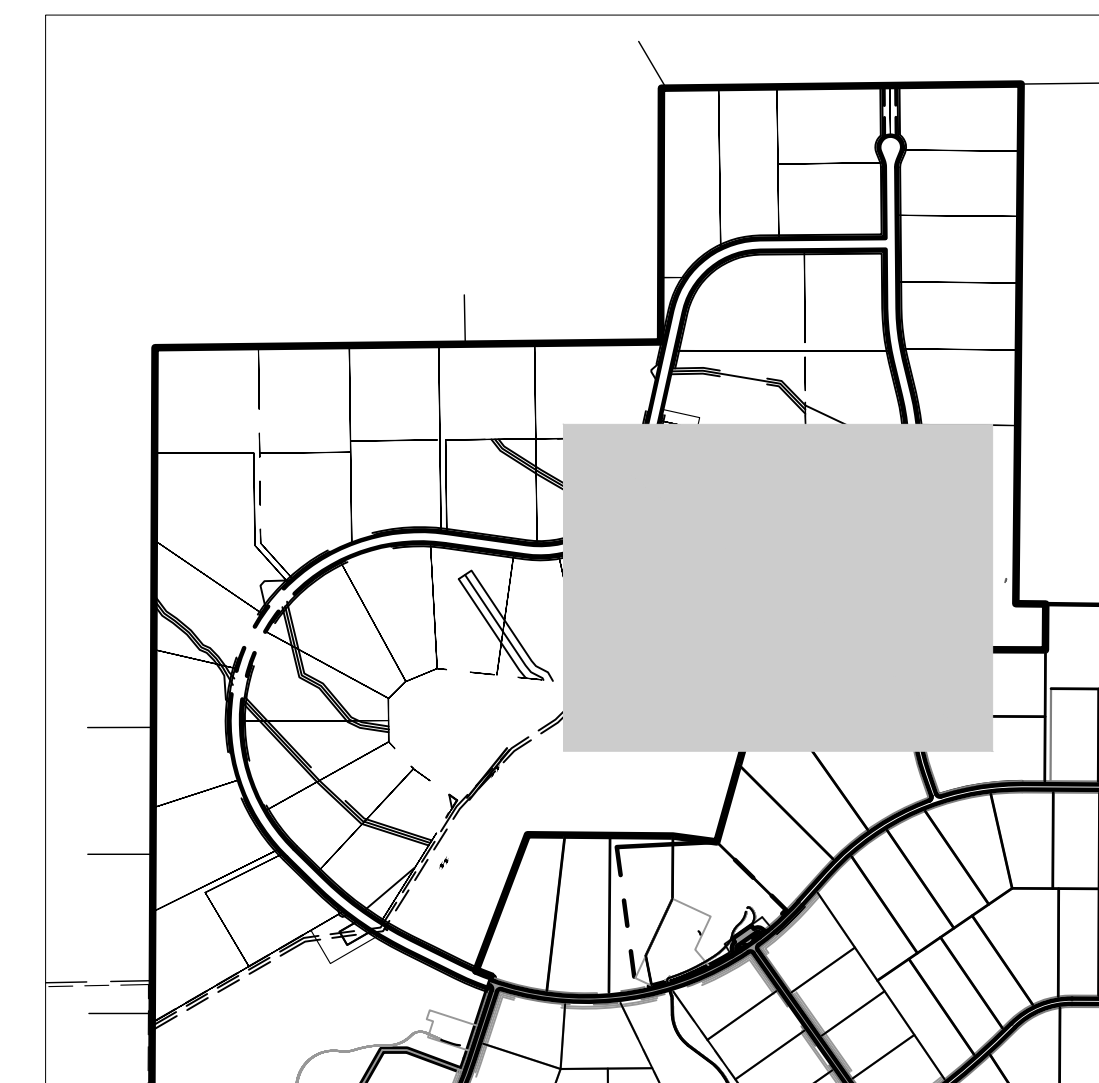
7322


7324

7326

7328

A north arrow pointing upwards, with the word "NORTH" written below it. To the right of the north arrow is a graphic scale bar labeled "GRAPHIC SCALE IN FEET". The scale bar has markings for 0, 50, 100, and 200 feet, with alternating black and white segments.



	PROJECT NO. 196106001	SHEET	1.6	WINSOME FILING NO. 3 EL PASO COUNTY, COLORADO PRE DEVELOPMENT GESC PLAN GEC INITIAL PLAN	DESIGNED BY: KRK DRAWN BY: AJL CHECKED BY: KRK DATE: 12/10/2021	<b>Kimley»Horn</b>  2022 KIMLEY-HORN AND ASSOCIATES, INC. 2 North Nevada Suite 300 Colorado Springs, Colorado 80903 (719) 453-0180	2	RESUBMITTAL #2	KKR	11/30/22	KKR
							1	RESUBMITTAL #1	KKR	8/30/22	KKR
							NO.	REVISION	BY	DATE	APPR.

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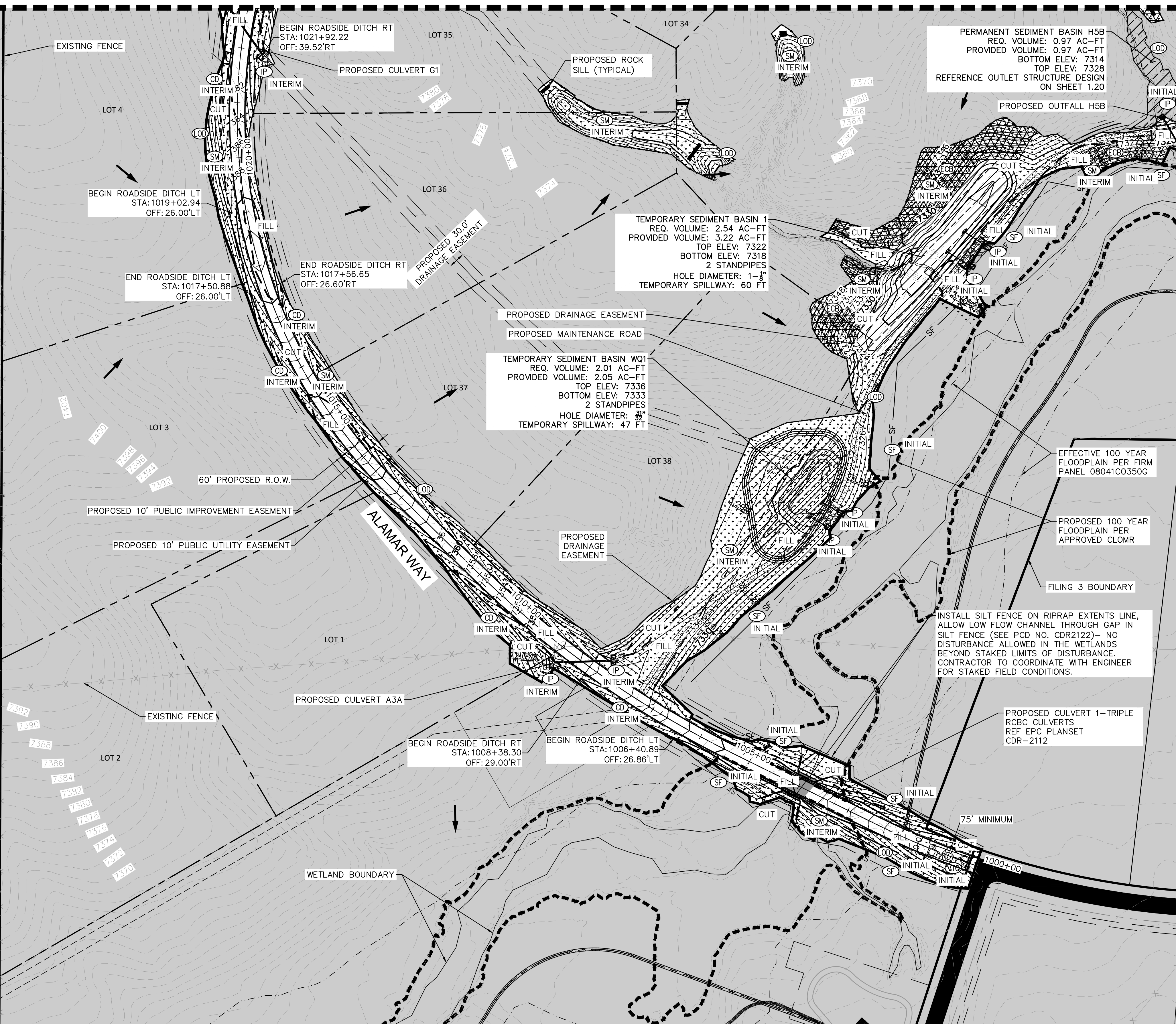
MATCH LINE: SEE SHEET 1.8 FOR CONTINUATION

OWNER: RICHARDS  
VERNON A  
SCHEDULE NO.  
5123000012

OWNER: LOUDERMILK  
LIVING TRUST  
SCHEDULE NO.  
5123003001

OWNER: VAN  
BUSKIRK CARROLL C  
REVOC TRUST  
SCHEDULE NO.  
5123000019

OWNER:  
PENNY-WEBER  
MANDY A  
SCHEDULE NO.  
5123001015



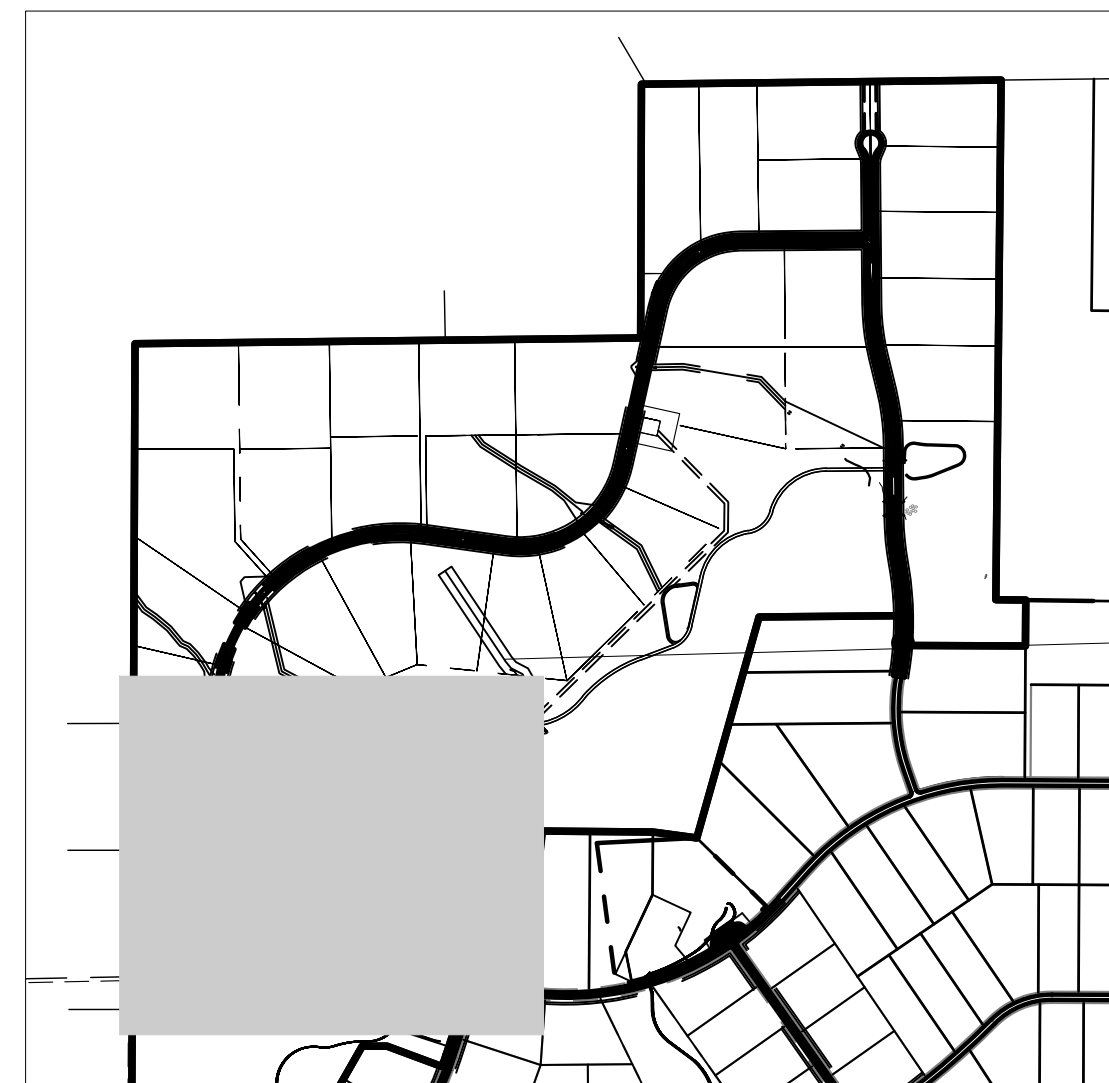
LEGEND

- LOT BOUNDARY LINE
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- LIMITS OF CONSTRUCTION/DISTURBANCE
- CONSTRUCTION FENCE
- SILT FENCE
- CUT/FILL DEMARCATION
- SOIL STOCKPILE
- STABILIZED STAGING AREA
- VEHICLE TRACKING CONTROL
- GRAVEL MAINTENANCE ROAD
- TEMPORARY SEDIMENT BASIN
- EROSION CONTROL BLANKET (SEE NOTE 4)
- SEEDING AND MULCHING
- CONCRETE WASHOUT
- EXISTING FLOW DIRECTION ARROW
- INLET PROTECTION
- CHECK DAMS (SEE NOTE 8)

NOTES

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SIZE OF SCL (STRAW WADDLE)	SPACING (PER VERTICAL FEET OF FALL)
9 INCH	1.5 FEET
12 INCH	2 FEET
16 INCH	2.67 FEET



Kimley»Horn

2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

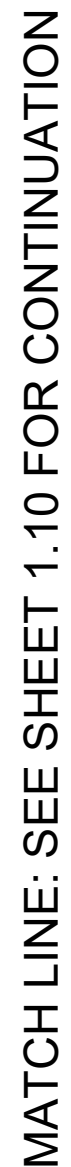
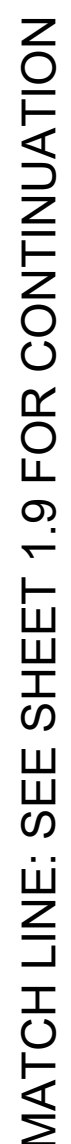
WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INTERIM PLAN



PROJECT NO.  
196106001

SHEET

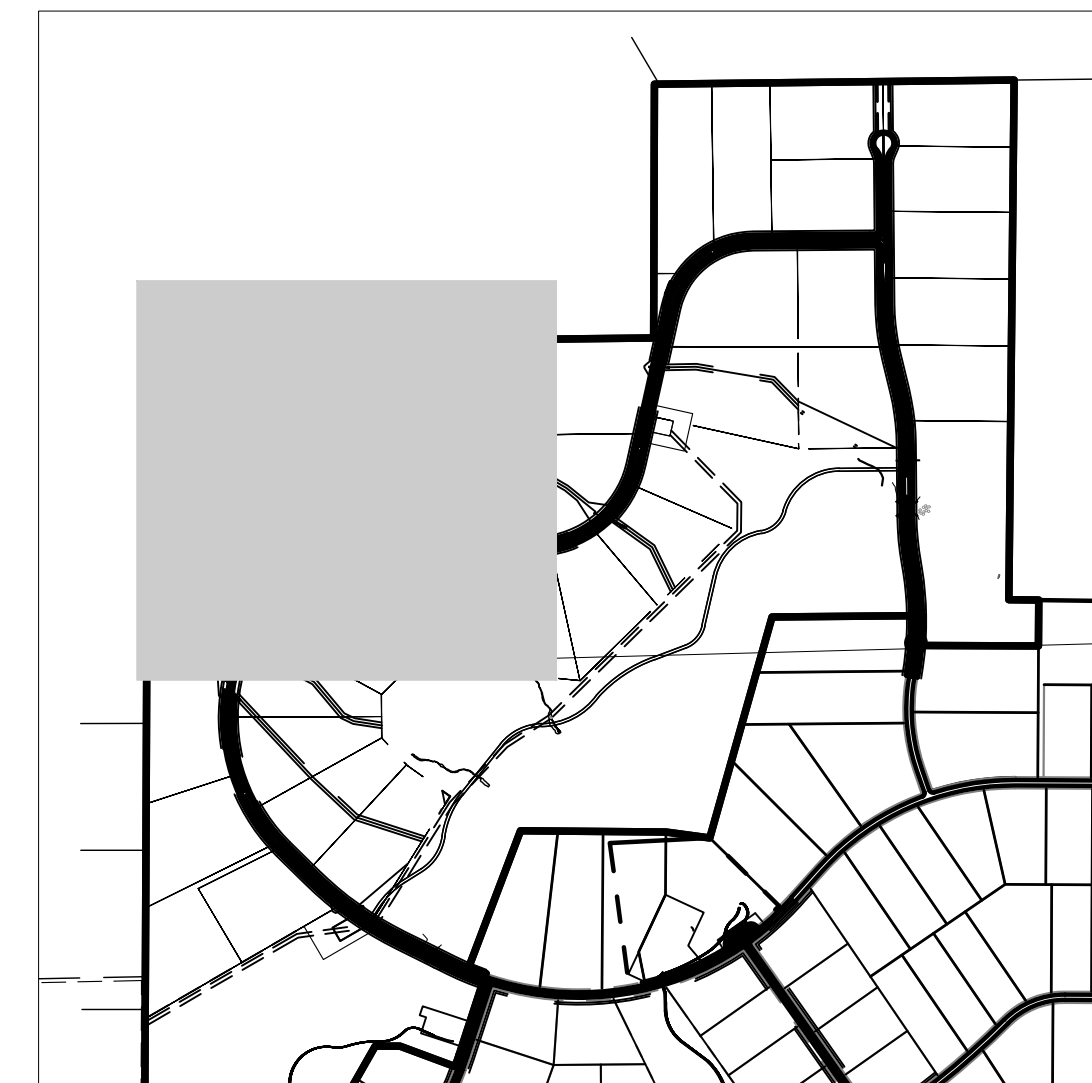
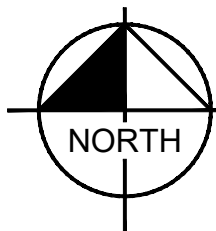
1.7



	LOT BOUNDARY LINE
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	(LOD) LIMITS OF CONSTRUCTION/DISTURBANCE
	(CF) CONSTRUCTION FENCE
	(SF) SILT FENCE
	CUT/FILL DEMARCATION
	(SP) SOIL STOCKPILE
	(SSA) STABILIZED STAGING AREA
	(VTC) VEHICLE TRACKING CONTROL
	GRAVEL MAINTENANCE ROAD
	TEMPORARY SEDIMENT BASIN
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	(SM) SEEDING AND MULCHING
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	EXISTING FLOW DIRECTION ARROW
	(IP) INLET PROTECTION
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9 INCH	1.5 FEET
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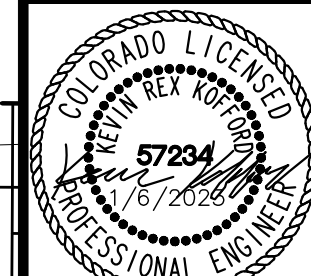
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**Kimley»Horn**

2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 451-1100

DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
UPPRE DEVELOPMENT GESC PLA  
GEC INTERIM PLAN



PROJECT NO  
196106001

SHEET

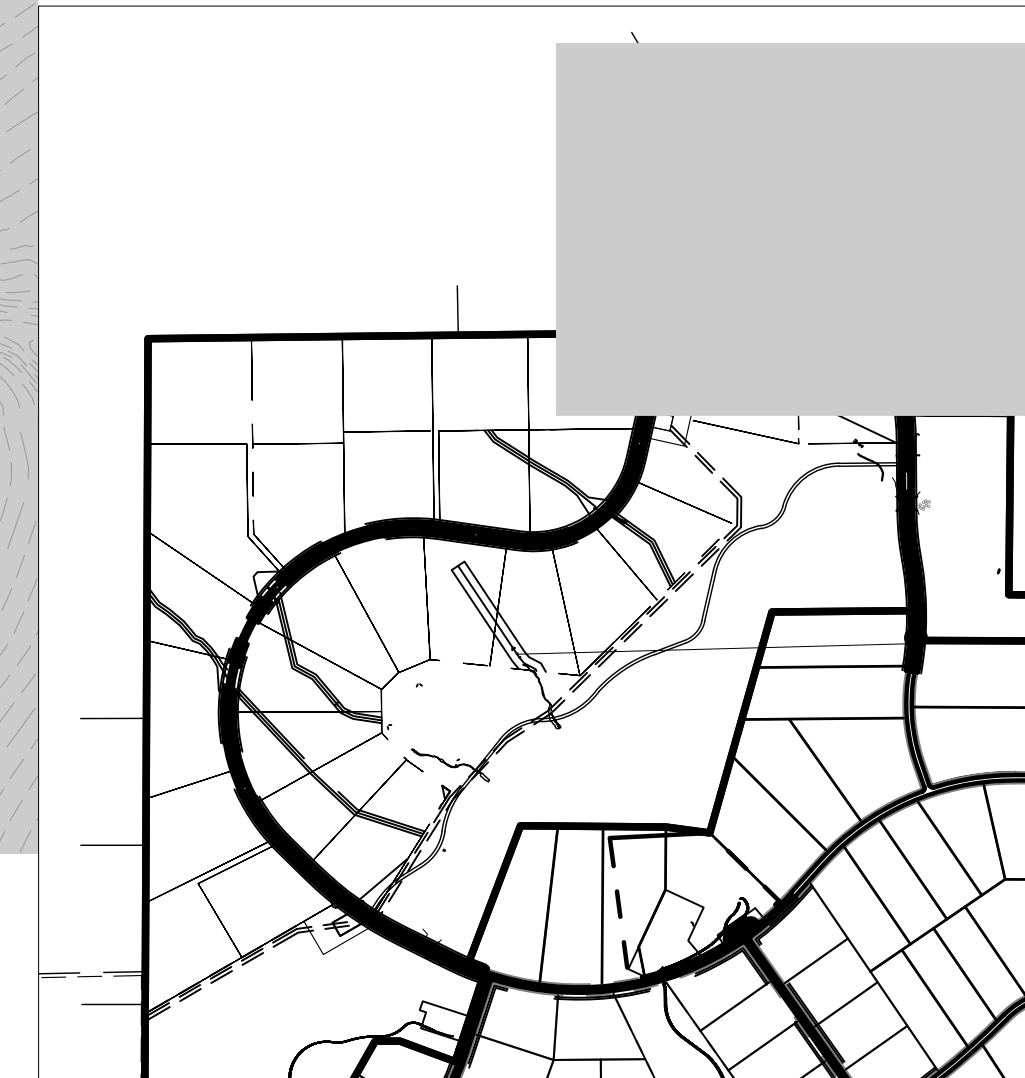
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MATCH LINE: SEE SHEET 1.8 FOR CONTINUATION

## NOTES

- | <u>SIZE OF SCL</u><br><u>(STRAW WADDLE)</u> | <u>SPACING (PER VERTICAL FEET</u><br><u>OF FALL)</u> |
|---|--|
| 9 INCH                                      | 1.5 FEET   |
| 12 INCH                                     | 2 FEET   |
| 16 INCH                                     | 2.67 FEET  |

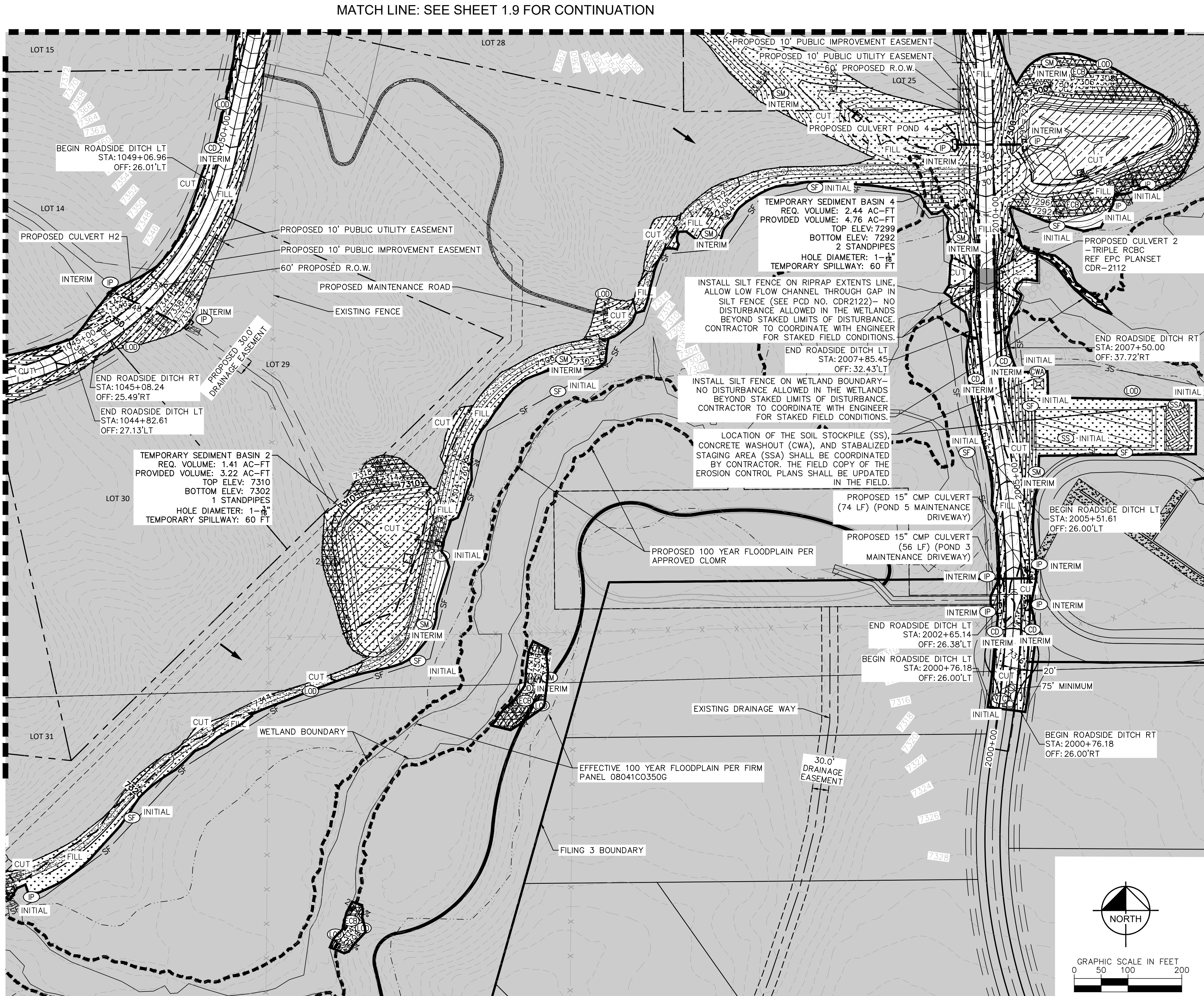


**Kimley»Horn**

SHEET

## 1.9

MATCH LINE: SEE SHEET 1.7 FOR CONTINUATION



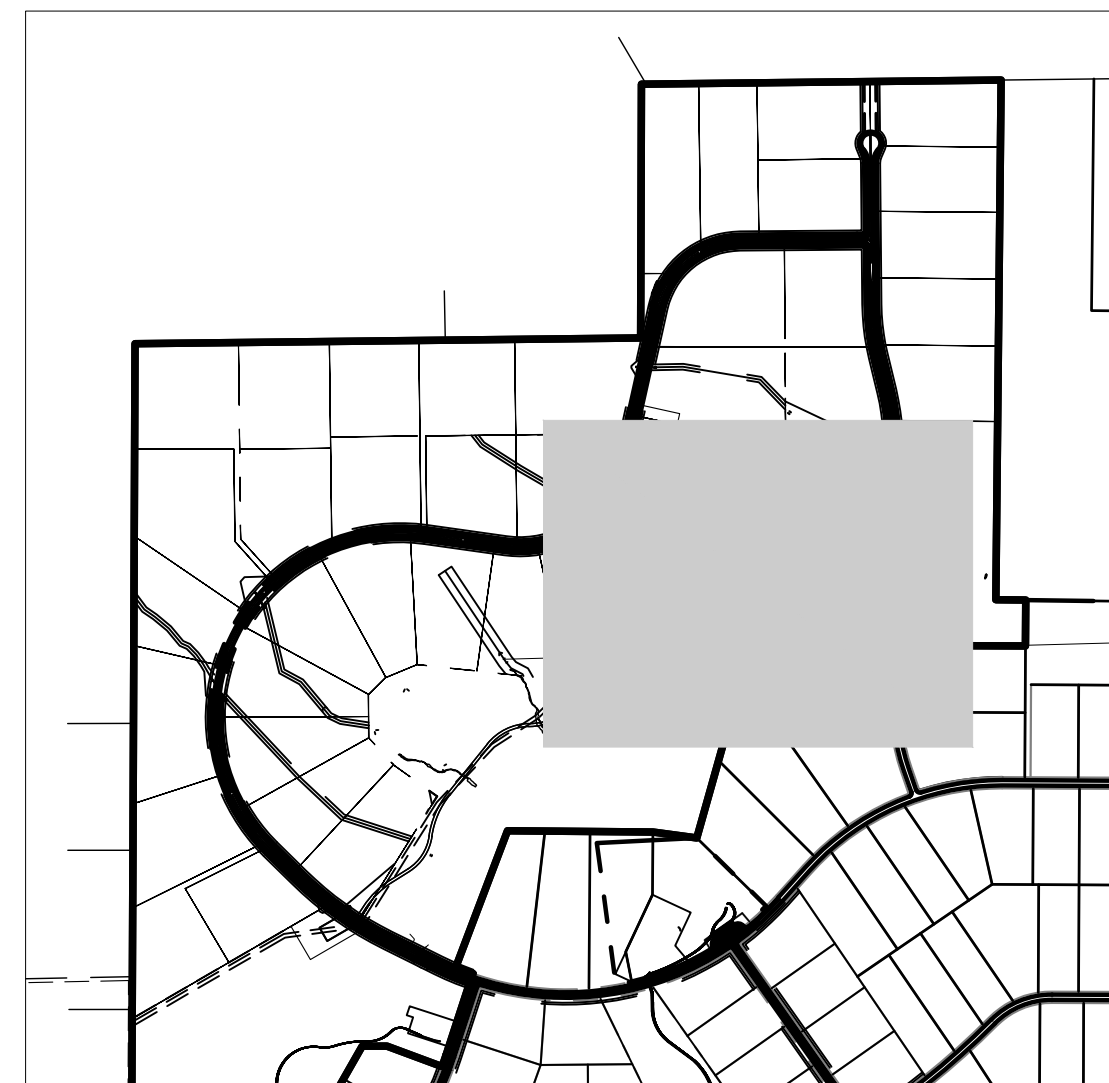
#### LEGEND

---	LOT BOUNDARY LINE
---XXXX---	EXISTING MAJOR CONTOUR
-----XXXX-----	EXISTING MINOR CONTOUR
---XXXX---	PROPOSED MAJOR CONTOUR
-----XXXX-----	PROPOSED MINOR CONTOUR
---	LOD LIMITS OF CONSTRUCTION/DISTURBANCE
---	CF CONSTRUCTION FENCE
---	SF SILT FENCE
---	CUT/FILL DEMARCATION
---	SF SOIL STOCKPILE
---	SSA STABILIZED STAGING AREA
---	UTC VEHICLE TRACKING CONTROL
---	GRAVEL MAINTENANCE ROAD
---	TEMPORARY SEDIMENT BASIN
---	ECB EROSION CONTROL BLANKET (SEE NOTE 4)
---	SM SEEDING AND MULCHING
---	CWA CONCRETE WASHOUT
---	EXISTING FLOW DIRECTION ARROW
---	IP INLET PROTECTION
---	CD CHECK DAMS (SEE NOTE 8)

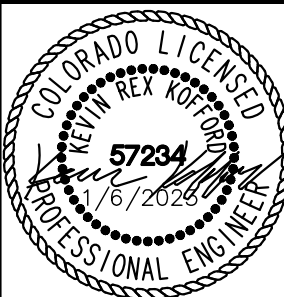
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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
GEC INTERIM PLAN



PROJECT NO.  
196106001

SHEET

1.10

**Kimley»Horn**

2022 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

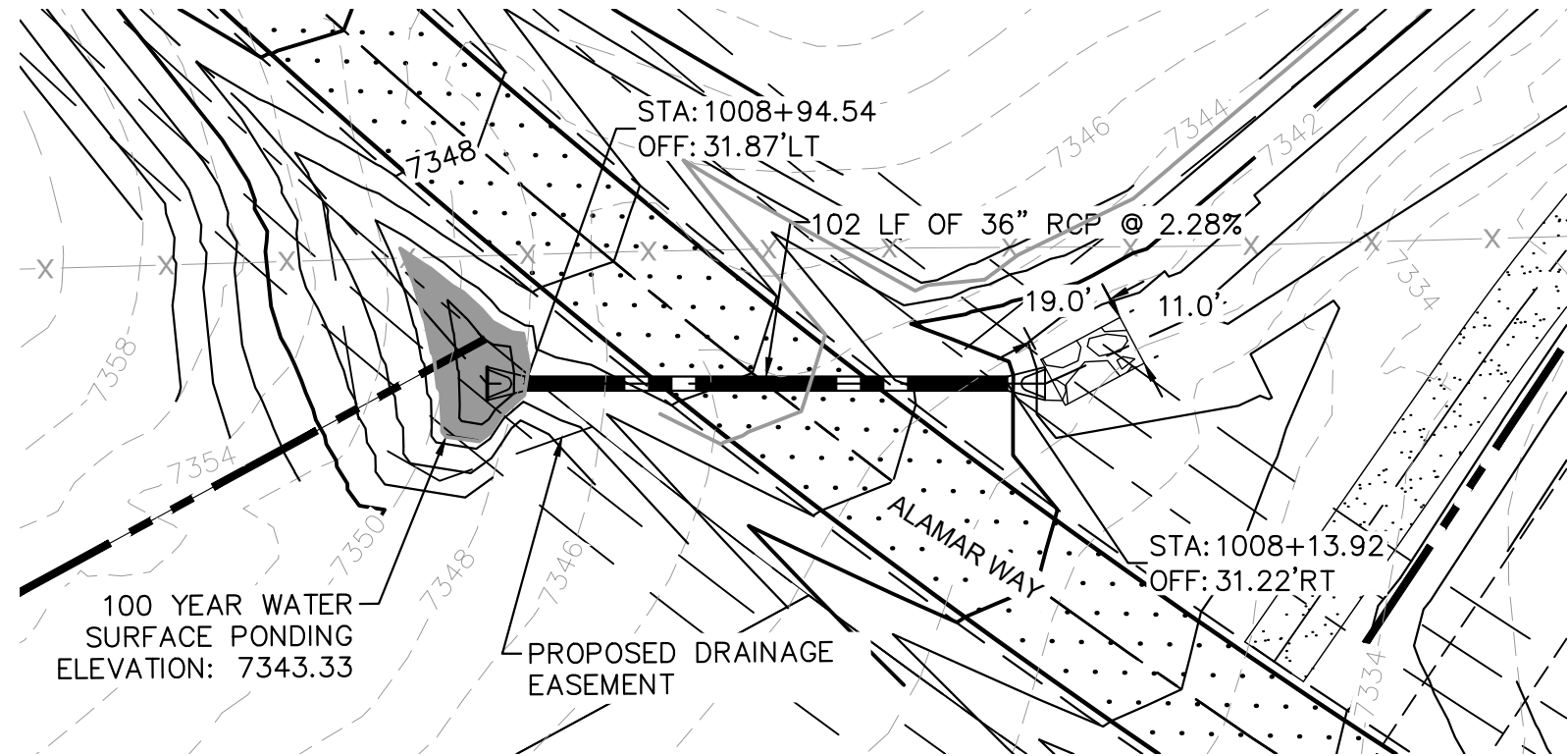
DESIGNED BY: KRK  
DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

NO.	REVISION	BY	DATE	APPR.
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1	RESUBMITTAL #1	KRK	8/30/22	KRK

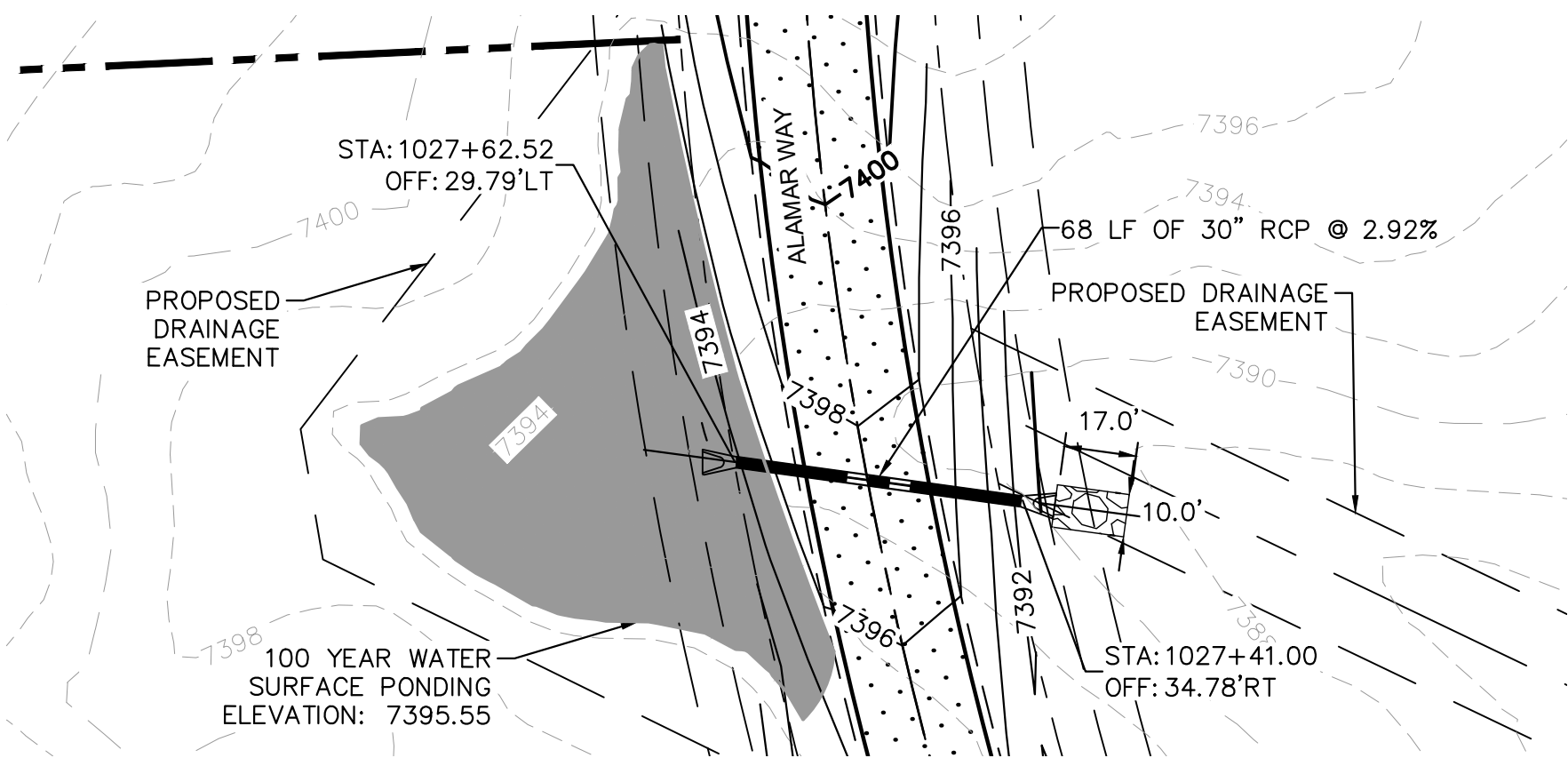
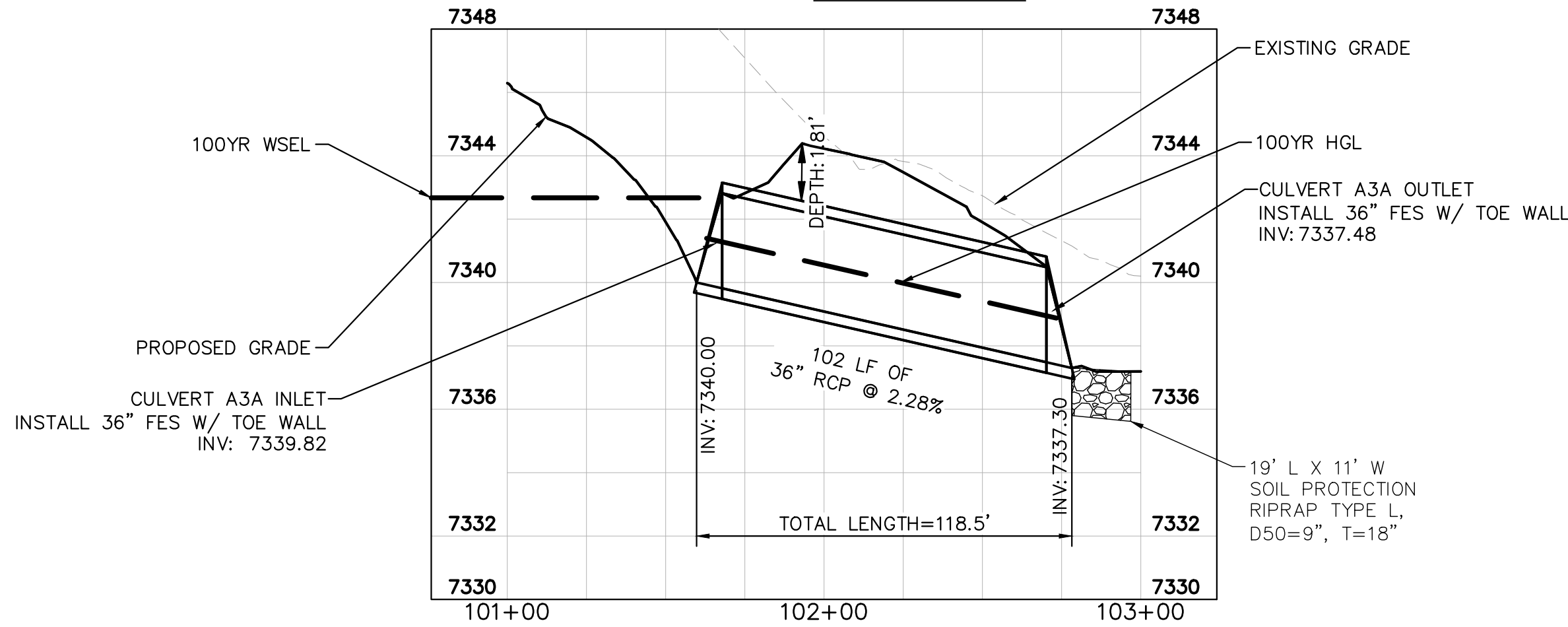
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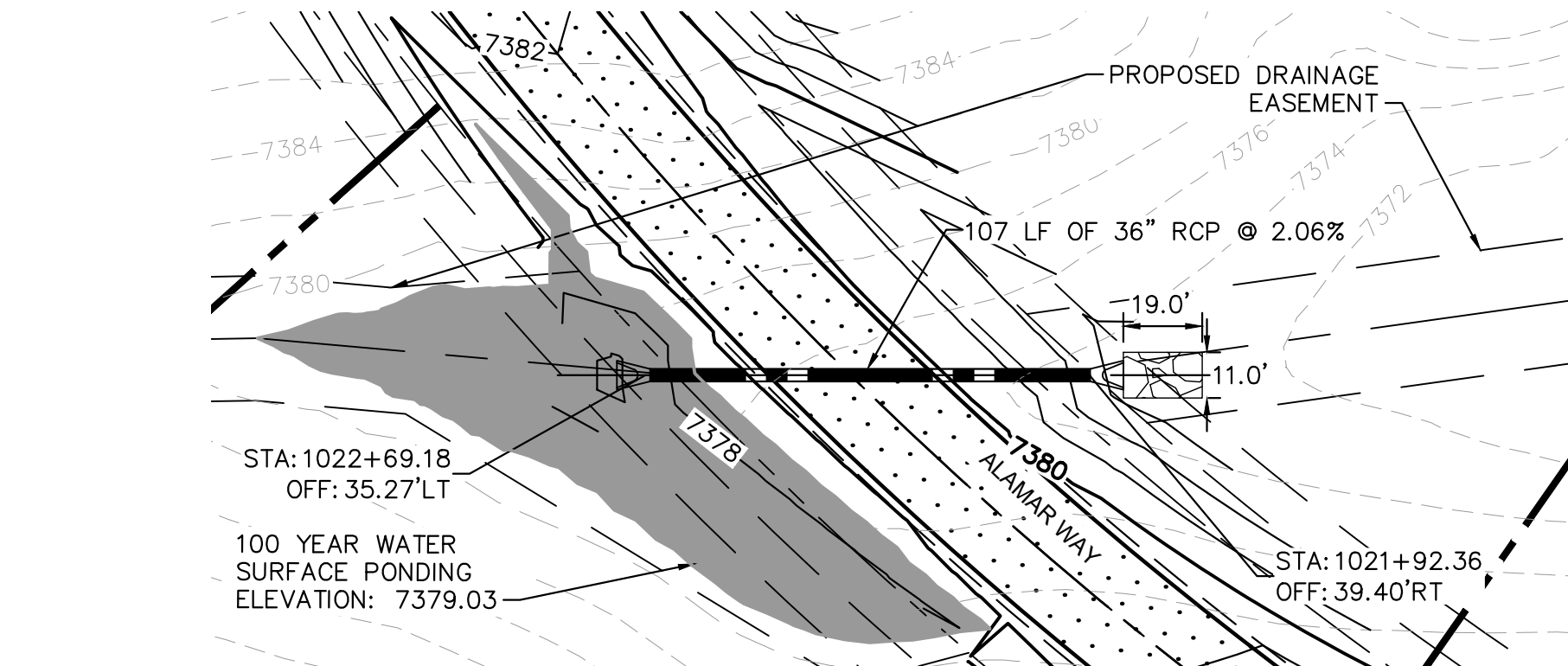
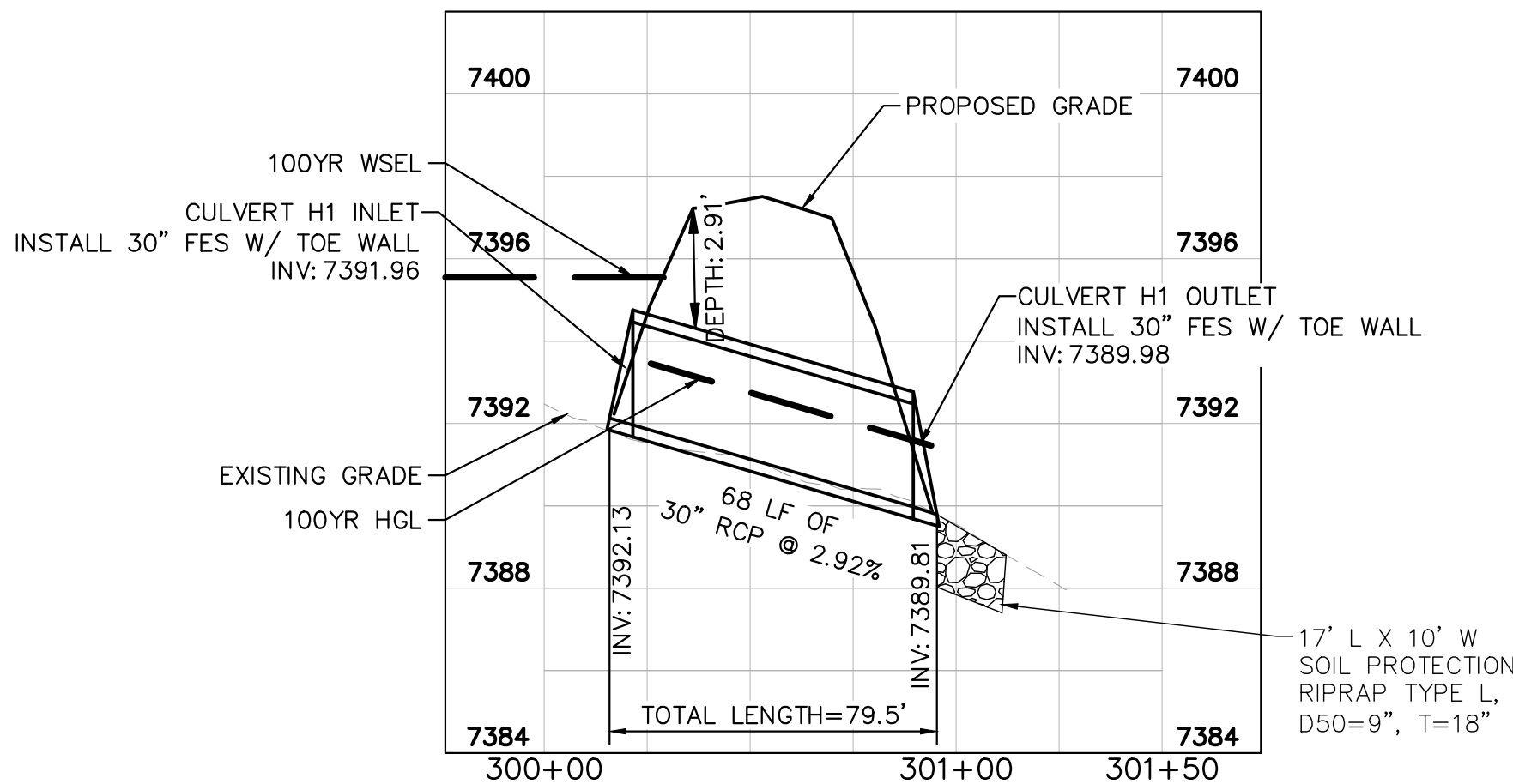
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2. ASSUMED FLARED END SECTIONS (FES) LENGTHS ARE THE FOLLOWING:  
6'-1": 18"-30" FES  
8'-1": 30" FES  
8'-2": 42"-48" FES



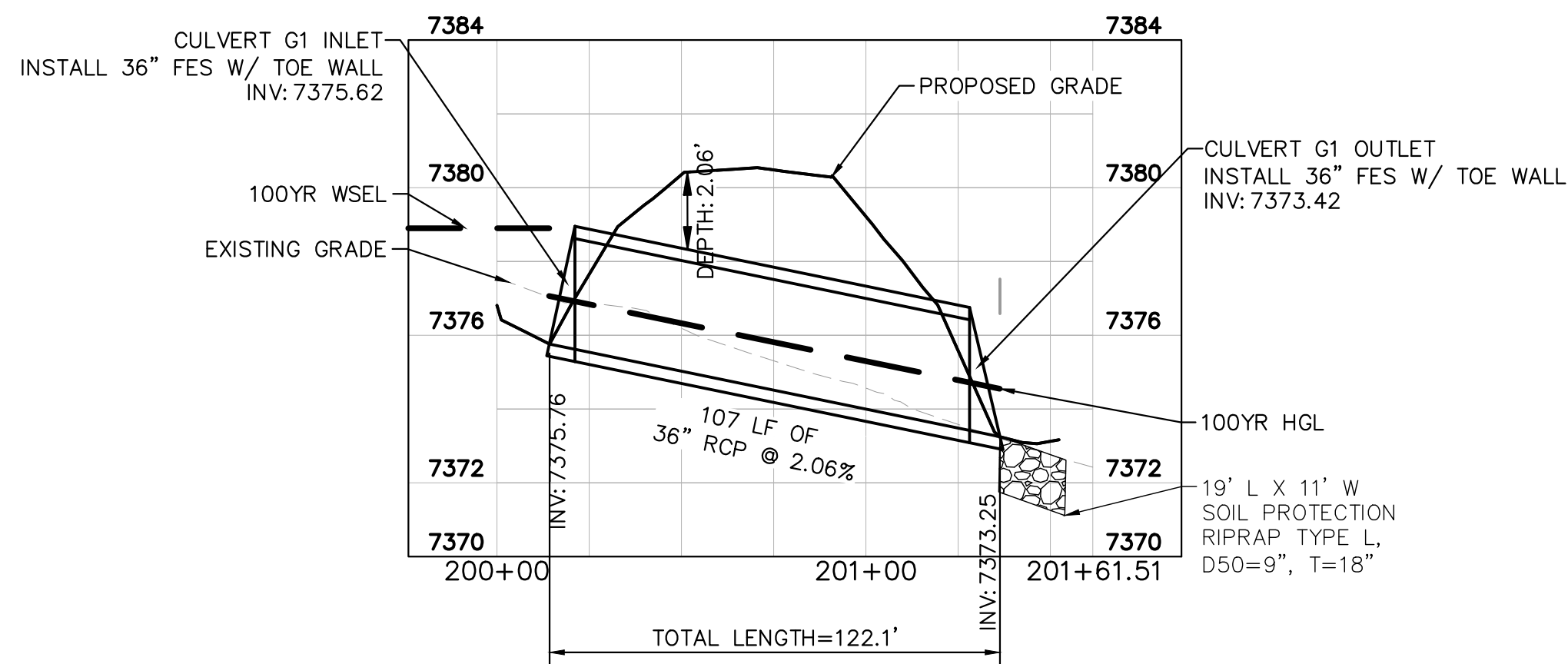
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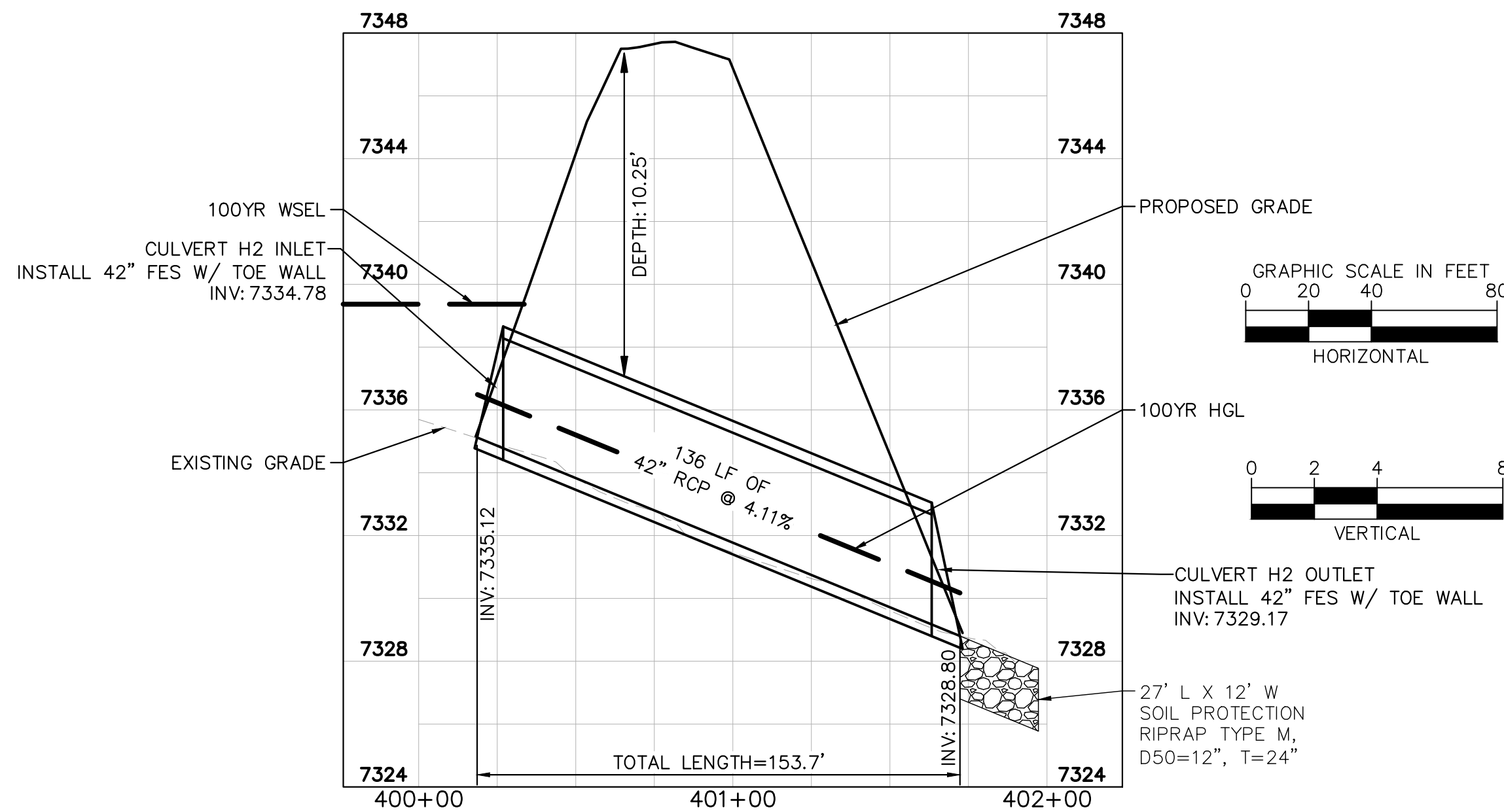
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CULVERT G1



CULVERT H2



NO.	DATE	BY	REVISION
2	11/30/22	KRK	RESUBMITTAL #2
1	8/30/22	KRK	RESUBMITTAL #1

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DRAWN BY: AJL  
CHECKED BY: KRK  
DATE: 12/10/2021

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PRE DEVELOPMENT GESC PLAN  
CULVERT PLAN & PROFILE



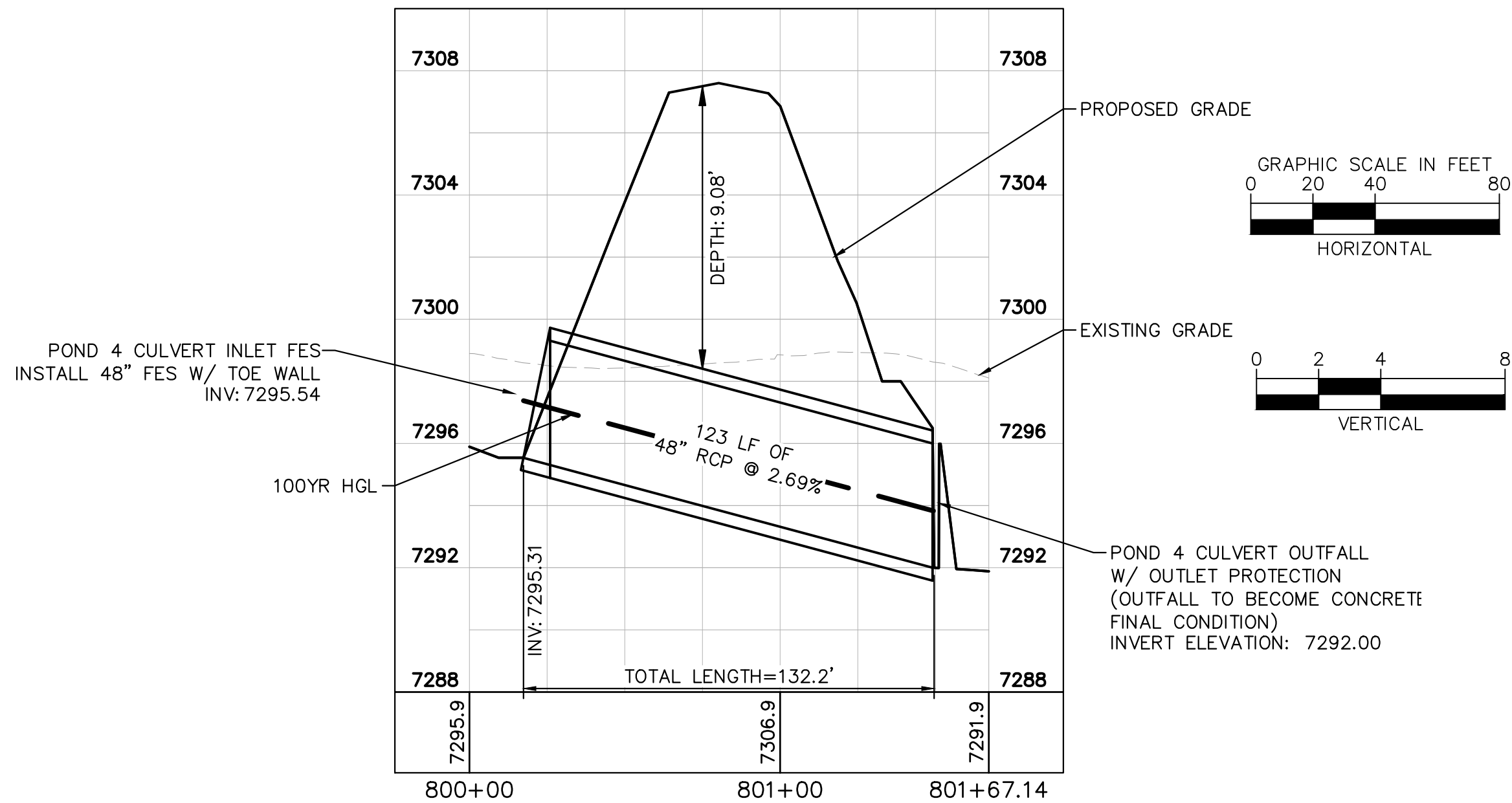
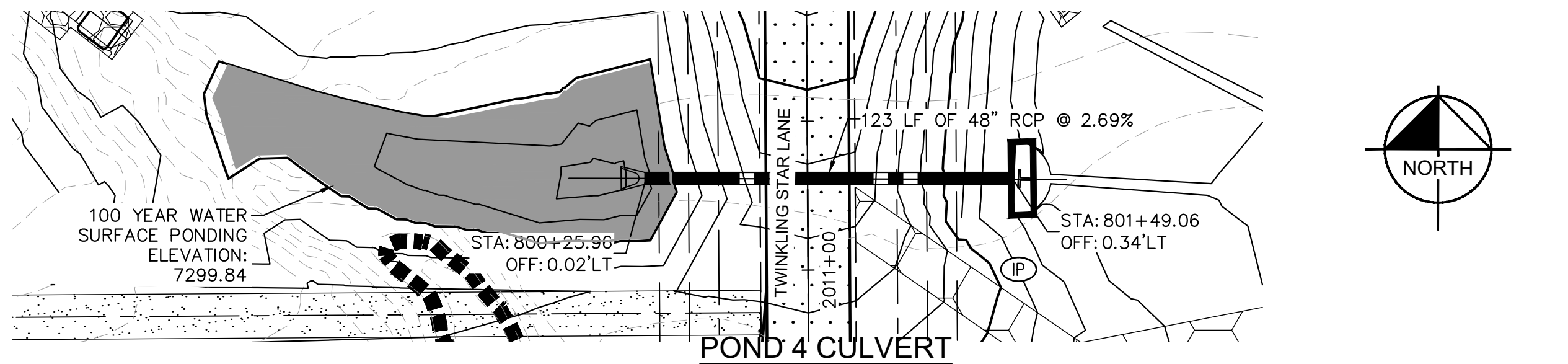
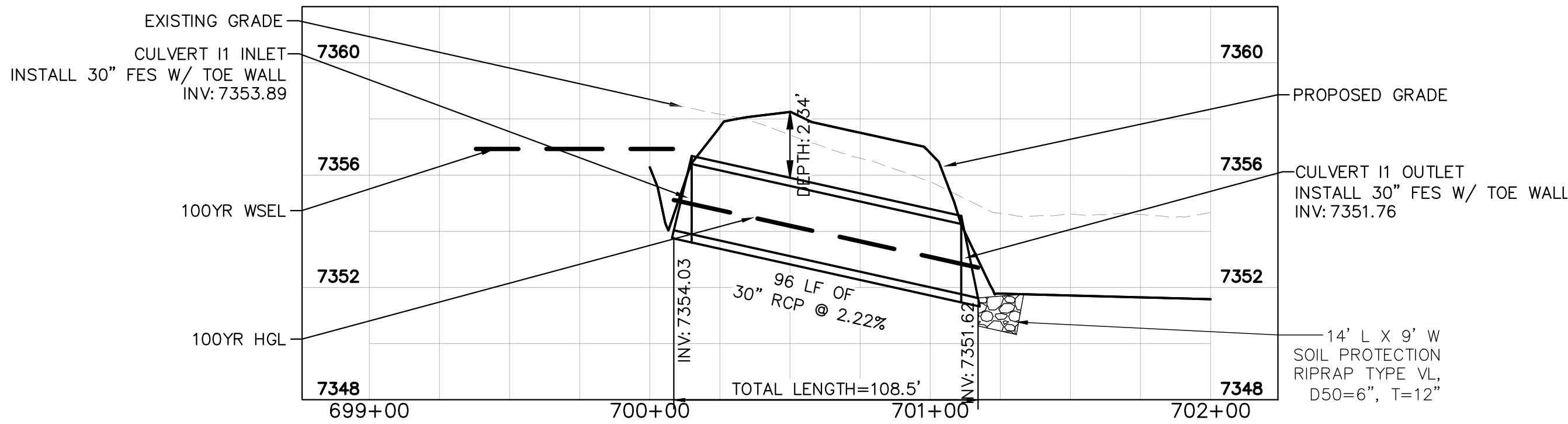
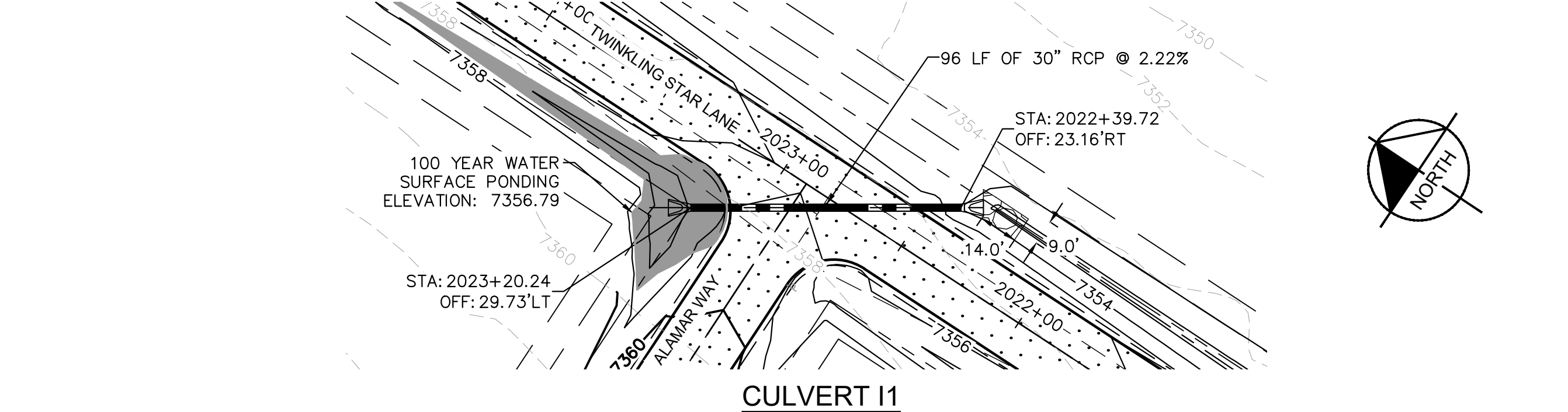
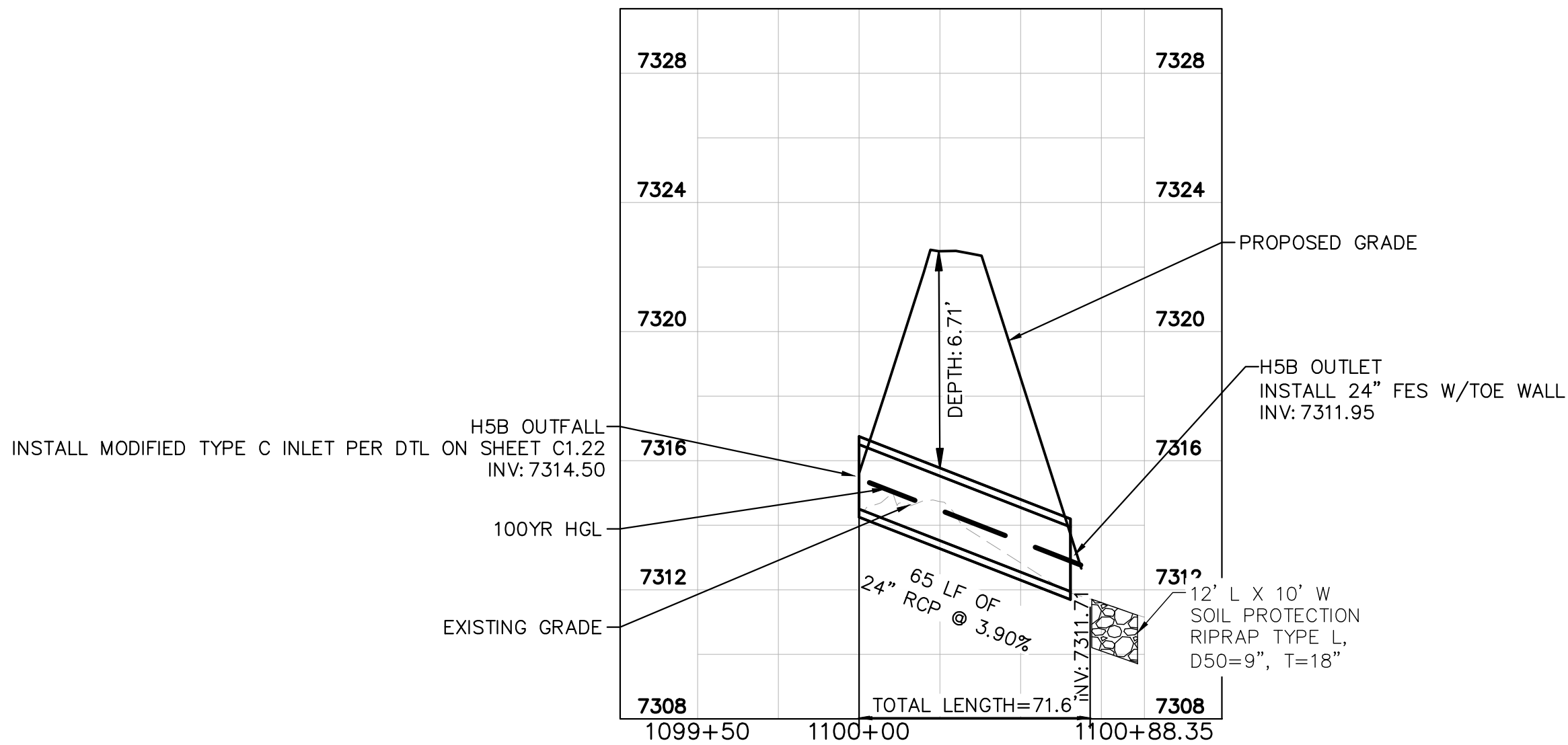
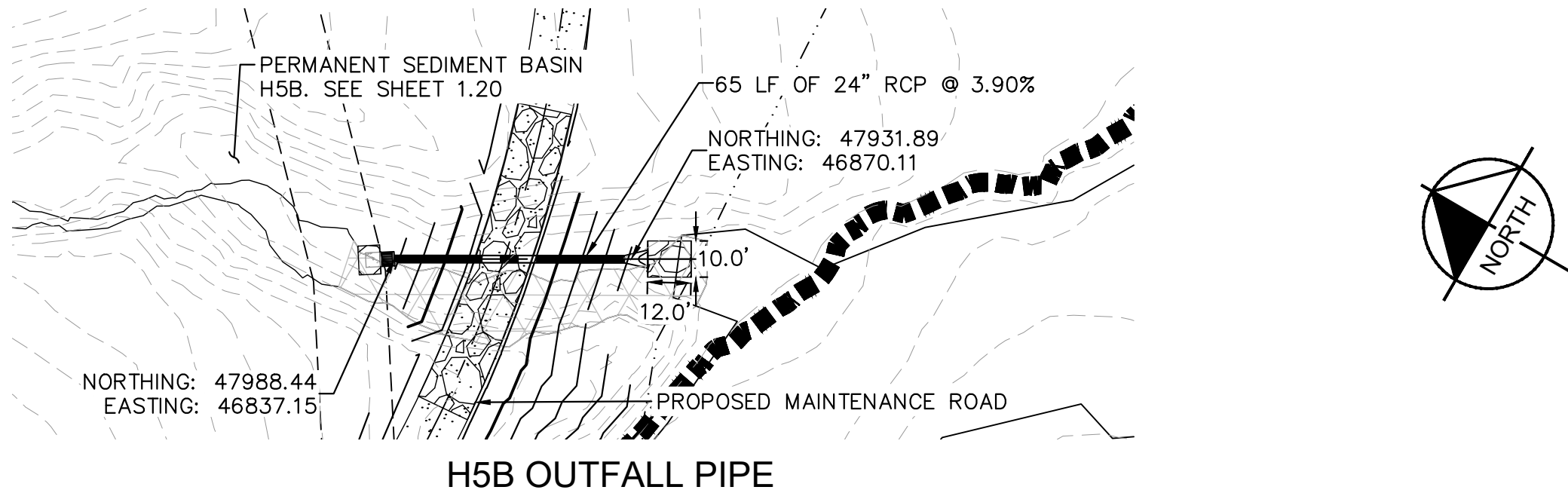
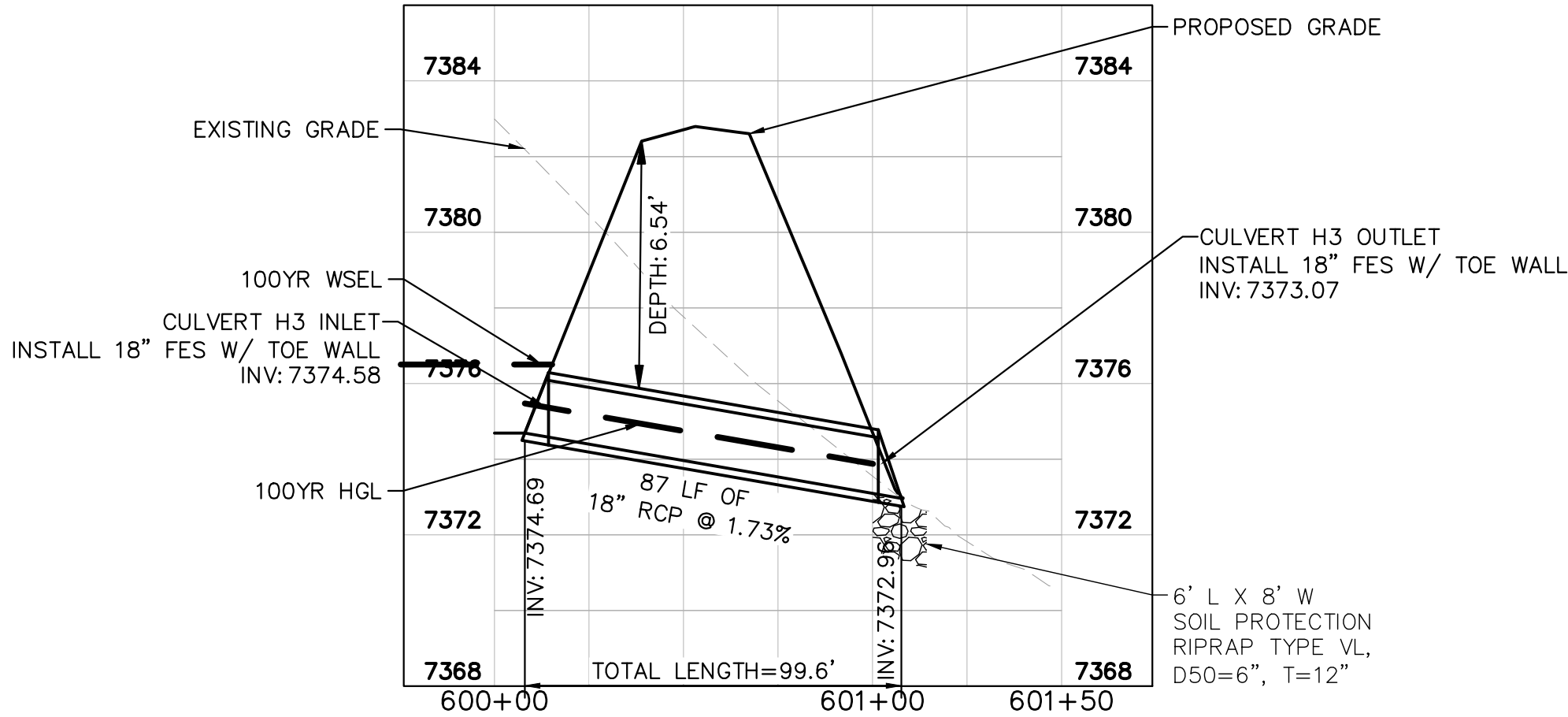
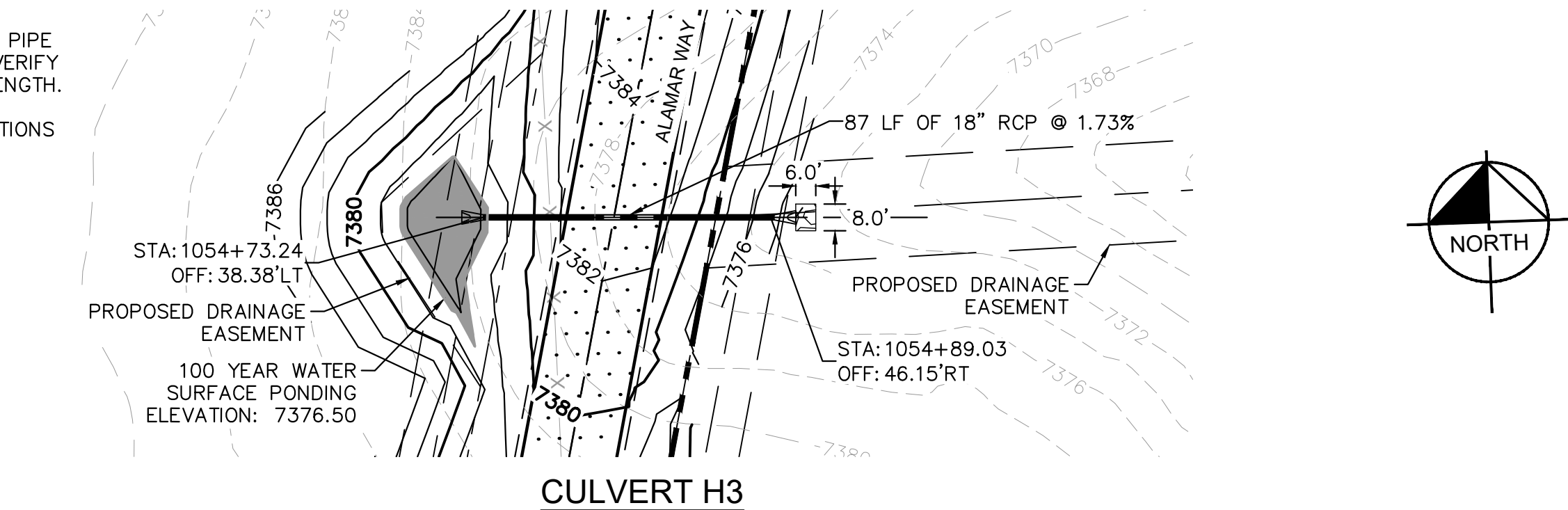
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1. PIPE LENGTH SHOWN IS 2D PIPE LENGTH. CONTRACTOR TO VERIFY QUANTITIES FOR ACTUAL LENGTH.
2. ASSUMED FLARED END SECTIONS (FES) LENGTHS ARE THE FOLLOWING:  
6'-1": 18"-30" FES  
8'-1": 30" FES  
8'-2": 42"-48" FES



NO.	DATE	BY	APPR.
2	KRK 11/30/22	KRK	
1	KRK 8/30/22	KRK	

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

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. If the area is irrigated, seeding may occur in summer months, as well. See Table TS/PS-3 for appropriate seeding dates.

Table TS/PS-1. Minimum Drill Seeding Rates for Various Temporary Annual Grasses

Species* (Common name)	Growth Season*	Pounds of Pure Live Seed (PLS)/acre <sup>c</sup>	Planting Depth (inches)
1. Oats	Cool	35 - 50	1 - 2
2. Spring wheat	Cool	25 - 35	1 - 2
3. Spring barley	Cool	25 - 35	1 - 2
4. Annual ryegrass	Cool	10 - 15	½
5. Millet	Warm	3 - 15	½ - ¾
6. Sudangrass	Warm	5 - 10	½ - ¾
7. Sorghum	Warm	5 - 10	½ - ¾
8. Winter wheat	Cool	20 - 35	1 - 2
9. Winter barley	Cool	20 - 35	1 - 2
10. Winter rye	Cool	20 - 35	1 - 2
11. Triticale	Cool	25 - 40	1 - 2

<sup>a</sup> Successful seeding of annual grass resulting in adequate plant growth will usually produce enough dead-plant residue to provide protection from wind and water erosion for an additional year. This assumes that the cover is not disturbed or mowed closer than 8 inches.

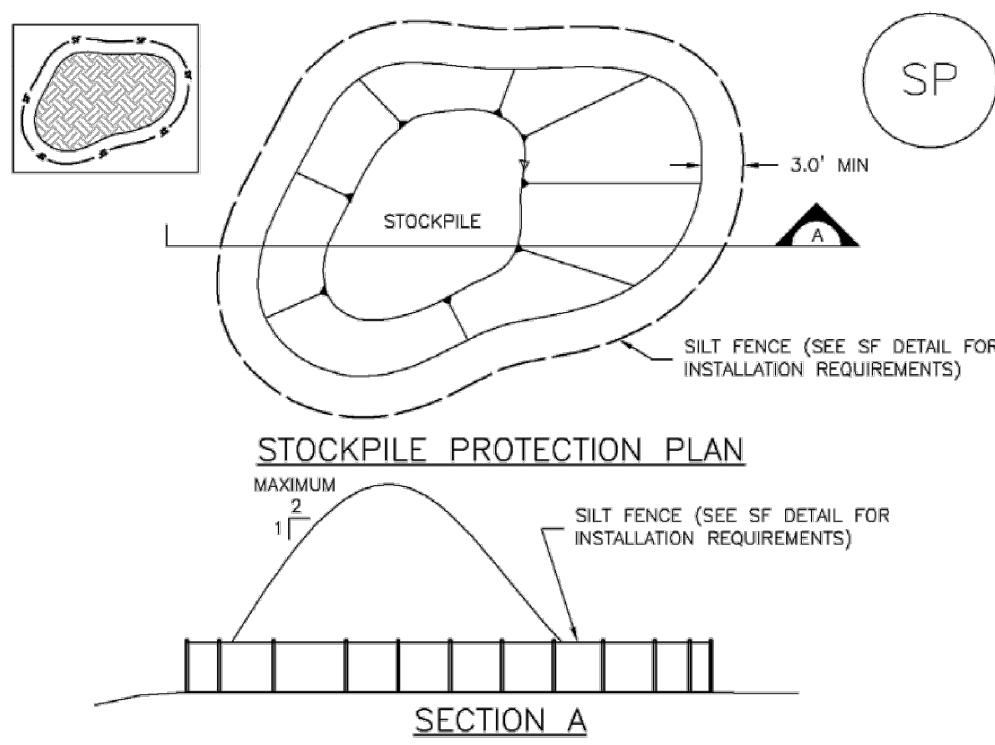
Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1 or where access limitations exist. When hydraulic seeding is used, hydraulic mulching should be applied as a separate operation, when practical, to prevent the seeds from being encapsulated in the mulch.

<sup>b</sup> See Table TS/PS-3 for seeding dates. Irrigation, if consistently applied, may extend the use of cool season species during the summer months.

<sup>c</sup> Seeding rates should be doubled if seed is broadcast, or increased by 50 percent if done using a Brillion Drill or by hydraulic seeding.

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Stockpile Management (SP) MM-2



STOCKPILE PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:  
- LOCATION OF STOCKPILES.  
- TYPE OF STOCKPILE PROTECTION.
- INSTALL PERIMETER CONTROLS IN ACCORDANCE WITH THEIR RESPECTIVE DESIGN DETAILS. SILT FENCE IS SHOWN IN THE STOCKPILE PROTECTION DETAILS; HOWEVER, OTHER TYPES OF PERIMETER CONTROLS INCLUDING SEDIMENT CONTROL LOGS OR ROCK SOCKS MAY BE SUITABLE IN SOME CIRCUMSTANCES. CONSIDERATIONS FOR DETERMINING THE APPROPRIATE TYPE OF PERIMETER CONTROL FOR A STOCKPILE INCLUDE: WHETHER THE STOCKPILE IS LOCATED ON A PERVIOUS OR IMPERVIOUS SURFACE; THE RELATIVE HEIGHTS OF THE PERIMETER CONTROL AND STOCKPILE; THE ABILITY OF THE PERIMETER CONTROL TO CONTAIN THE STOCKPILE WITHOUT FAILING IN THE EVENT THAT MATERIAL FROM THE STOCKPILE SHIFTS OR SLUMPS AGAINST THE PERIMETER, AND OTHER FACTORS.
- STABILIZE THE STOCKPILE SURFACE WITH SURFACE ROUGHENING, TEMPORARY SEEDING AND MULCHING. EROSION CONTROL BLANKETS, OR SOIL BINDERS, SOILS STOCKPILED FOR AN EXTENDED PERIOD (TYPICALLY FOR MORE THAN 60 DAYS) SHOULD BE SEEDED AND MULCHED WITH A TEMPORARY GRASS COVER ONCE THE STOCKPILE IS PLACED (TYPICALLY WITHIN 14 DAYS). USE OF MULCH ONLY OR A SOIL BINDER IS ACCEPTABLE IF THE STOCKPILE WILL BE IN PLACE FOR A MORE LIMITED TIME PERIOD (TYPICALLY 30-60 DAYS).
- FOR TEMPORARY STOCKPILES ON THE INTERIOR PORTION OF A CONSTRUCTION SITE, WHERE OTHER DOWNGRADE CONTROLS, INCLUDING PERIMETER CONTROL, ARE IN PLACE, STOCKPILE PERIMETER CONTROLS MAY NOT BE REQUIRED.

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

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

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses

Common* Name	Botanical Name	Growth Season*	Growth Form	Seeds/ Pound	Pounds of PLS/acre
<b>Alkali Soil Seed Mix</b>					
Alkali sacaton	<i>Sporobolus airoides</i>	Cool	Bunch	1,750,000	0.25
Basin wildrye	<i>Elymus cinereus</i>	Cool	Bunch	165,000	2.5
Sodar streambank wheatgrass	<i>Agropyron riparium 'Soda'</i>	Cool	Sod	170,000	2.5
Jose tall wheatgrass	<i>Agropyron elongatum 'Jose'</i>	Cool	Bunch	79,000	7.0
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	5.5
<b>Total</b>					<b>17.75</b>
<b>Fertile Loamy Soil Seed Mix</b>					
Ephrium crested wheatgrass	<i>Agropyron cristatum 'Ephrium'</i>	Cool	Sod	175,000	2.0
Dural hard fescue	<i>Festuca ovina 'duriuscula'</i>	Cool	Bunch	565,000	1.0
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Sodar streambank wheatgrass	<i>Agropyron riparium 'Soda'</i>	Cool	Sod	170,000	2.5
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	7.0
<b>Total</b>					<b>15.5</b>
<b>High Water Table Soil Seed Mix</b>					
Meadow foxtail	<i>Alopecurus pratensis</i>	Cool	Sod	900,000	0.5
Redtop	<i>Agrostis alba</i>	Warm	Open sod	5,000,000	0.25
Reed canarygrass	<i>Phalaris arundinacea</i>	Cool	Sod	68,000	0.5
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Pathfinder switchgrass	<i>Panicum virgatum 'Pathfinder'</i>	Warm	Sod	389,000	1.0
Altair tall wheatgrass	<i>Agropyron elongatum 'Altair'</i>	Cool	Bunch	79,000	5.5
<b>Total</b>					<b>10.75</b>
<b>Transition Turf Seed Mix*</b>					
Ruebena Canadian bluegrass	<i>Poa compressa 'Ruebena'</i>	Cool	Sod	2,500,000	0.5
Dural hard fescue	<i>Festuca ovina 'duriuscula'</i>	Cool	Bunch	565,000	1.0
Citation perennial ryegrass	<i>Lolium perenne 'Citation'</i>	Cool	Sod	247,000	3.0
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
<b>Total</b>					<b>7.5</b>

TS/PS-4 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3 June 2012

MM-2 Stockpile Management (SM)

STOCKPILE PROTECTION MAINTENANCE NOTES

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

STOCKPILE PROTECTION MAINTENANCE NOTES

- IF PERIMETER PROTECTION MUST BE MOVED TO ACCESS SOIL STOCKPILE, REPLACE PERIMETER CONTROLS BY THE END OF THE WORKDAY.
- STOCKPILE PERIMETER CONTROLS CAN BE REMOVED ONCE ALL THE MATERIAL FROM THE STOCKPILE HAS BEEN USED.

(DETAILS ADAPTED FROM PARKER, COLORADO, NOT AVAILABLE IN AUTOCAD)

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

SP-4 Urban Drainage and Flood Control District  
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Temporary and Permanent Seeding (TS/PS) EC-2

Table TS/PS-2. Minimum Drill Seeding Rates for Perennial Grasses (cont.)

Common Name	Botanical Name	Growth Season*	Growth Form	Seeds/ Pound	Pounds of PLS/acre
<b>Sandy Soil Seed Mix</b>					
Blue grama	<i>Bouteloua gracilis</i>	Warm	Sod-forming bunchgrass	825,000	0.5
Camper little bluestem	<i>Schizachyrium scoparium 'Camper'</i>	Warm	Bunch	240,000	1.0
Prairie sandreed	<i>Calamovilfa longifolia</i>	Warm	Open sod	274,000	1.0
Sand dropseed	<i>Sporobolus cryptandrus</i>	Cool	Bunch	5,298,000	0.25
Vaughn sidecoats grama	<i>Bouteloua curtipendula 'Vaughn'</i>	Warm	Sod	191,000	2.0
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	5.5
<b>Total</b>					<b>10.25</b>
<b>Heavy Clay, Rocky Foothill Seed Mix</b>					
Ephrium crested wheatgrass <sup>a</sup>	<i>Agropyron cristatum 'Ephrium'</i>	Cool	Sod	175,000	1.5
Oahu intermediate wheatgrass	<i>Agropyron intermedium 'Oahu'</i>	Cool	Sod	115,000	5.5
Vaughn sidecoats grama <sup>a</sup>	<i>Bouteloua curtipendula 'Vaughn'</i>	Warm	Sod	191,000	2.0
Lincoln smooth brome	<i>Bromus inermis leys 'Lincoln'</i>	Cool	Sod	130,000	3.0
Arriba western wheatgrass	<i>Agropyron smithii 'Arriba'</i>	Cool	Sod	110,000	5.5
<b>Total</b>					<b>17.5</b>

<sup>a</sup> All of the above seeding mixes and rates are based on drill seeding followed by crimped straw mulch. These rates should be doubled if seed is broadcast and should be increased by 50 percent if the seeding is done using a Brillion Drill or is applied through hydraulic seeding. Hydraulic seeding may be substituted for drilling only where slopes are steeper than 3:1. If hydraulic seeding is used, hydraulic mulching should be done as a separate operation.

<sup>b</sup> See Table TS/PS-3 for seeding dates.

<sup>c</sup> If site is to be irrigated, the transition turf seed rates should be doubled.

<sup>d</sup> Crested wheatgrass should not be used on slopes steeper than 6H to 1V.

<sup>e</sup> Can substitute 0.5 lbs PLS of blue grama for the 2.0 lbs PLS of Vaughn sidecoats grama.

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Rolled Erosion Control Products (RECP) EC-6

Table RECP-1. ECTC Standard Specification for Temporary Rolled Erosion Control Products (Adapted from Erosion Control Technology Council 2005)

Product Description	Slope Applications*		Channel Applications*	Minimum Tensile Strength <sup>1</sup>	Expected Longevity
	Maximum Gradient	C Factor <sup>2,5</sup>	Max. Shear Stress <sup>3,6</sup>		
Mulch Control Nets	5:1 (H:V)	≤0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	5 lbs/ft (0.073 kN/m)	Up to 12 months
Netless Rolled Erosion Control Blankets	4:1 (H:V)	≤0.10 @ 4:1	0.5 lbs/ft <sup>2</sup> (24 Pa)	5 lbs/ft (0.073 kN/m)	
Single-net Erosion Control Blankets & Open Weave Textiles	3:1 (H:V)	≤0.15 @ 3:1	1.5 lbs/ft <sup>2</sup> (72 Pa)	50 lbs/ft (0.73 kN/m)	
Double-net Erosion Control Blankets	2:1 (H:V)	≤0.20 @ 2:1	1.75 lbs/ft <sup>2</sup> (84 Pa)	75 lbs/ft (1.09 kN/m)	
Mulch Control Nets	5:1 (H:V)	≤0.10 @ 5:1	0.25 lbs/ft <sup>2</sup> (12 Pa)	25 lbs/ft (0.36 kN/m)	
Erosion Control Blankets & Open Weave Textiles (slowly degrading)	1.5:1 (H:V)	≤0.25 @ 1.5:1	2.00 lbs/ft <sup>2</sup> (96 Pa)	100 lbs/ft (1.45 kN/m)	24 months
Erosion Control Blankets & Open Weave Textiles	1:1 (H:V)	≤0.25 @ 1:1	2.25 lbs/ft <sup>2</sup> (108 Pa)	125 lbs/ft (1.82 kN/m)	36 months

\* C Factor and shear stress for mulch control nettings must be obtained with netting used in conjunction with pre-applied mulch material. (See Section 5.3 of Chapter 7 Construction BMPs for more information on the C Factor.)

<sup>1</sup> Minimum Average Roll Values, Machine direction using ECTC Mod. ASTM D 5035.

<sup>2</sup> C Factor calculated as ratio of soil loss from RECP protected slope (tested at specified or greater gradient, H:V) to ratio of soil loss from unprotected (control) plot in large-scale testing.

<sup>3</sup> Required minimum shear stress RECP (unvegetated) can sustain without physical damage or excess erosion (> 12.7 mm (0.5 in) soil loss) during a 30-minute flow event in large-scale testing.

<sup>4</sup> The permissible shear stress levels established for each performance category are based on historical experience with products characterized by Manning's roughness coefficients in the range of 0.01 - 0.05.

<sup>5</sup> Acceptable large-scale test methods may include ASTM D 6459, or other independent testing deemed acceptable by the engineer.

<sup>6</sup> Per the engineer's discretion. Recommended acceptable large-scale testing protocol may include ASTM D 6460, or other independent testing deemed acceptable by the engineer.

November 2010 Urban Drainage and Flood Control District  
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EC-2 Temporary and Permanent Seeding (TS/PS)

Table TS/PS-3. Seeding Dates for Annual and Perennial Grasses

Seeding Dates	Annual Grasses (Numbers in table reference species in Table TS/PS-1)		Perennial Grasses	
	Warm	Cool	Warm	Cool
January 1–March 15			✓	✓
March 16–April 30	4	1,2,3	✓	✓
May 1–May 15	4		✓	
May 16–June 30	4,5,6,7			
July 1–July 15	5,6,7			
July 16–August 31				
September 1–September 30		8,9,10,11		
October 1–December 31			✓	✓

Mulch

Cover seeded areas with mulch or an appropriate rolled erosion control product to promote establishment of vegetation. Anchor mulch by crimping, netting or use of a non-toxic tackifier. See the Mulching BMP Fact Sheet for additional guidance.

Maintenance and Removal

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

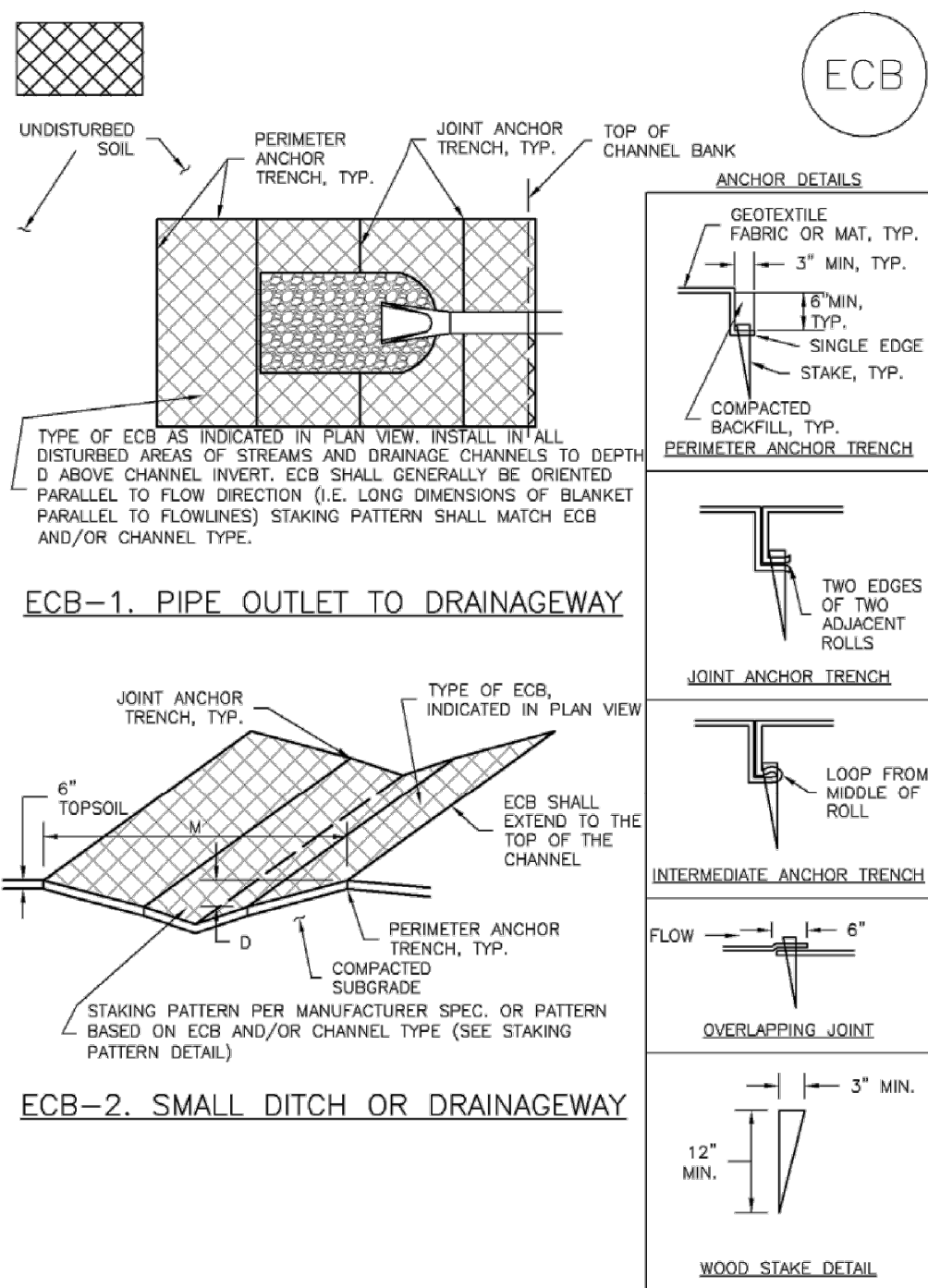
An area that has been permanently seeded should have a good stand of vegetation within one growing season if irrigated and within three growing seasons without irrigation in Colorado. Reseed portions of the site that fail to germinate or remain bare after the first growing season.

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

Protect seeded areas from construction equipment and vehicle access.

TS/PS-6 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3 June 2012

EC-6 Rolled Erosion Control Products (RECP)



RECP-6 Urban Drainage and Flood Control District  
Urban Storm Drainage Criteria Manual Volume 3 November 2010

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DATE: 12/10/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
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DETAIL SHEET (2 OF 4)



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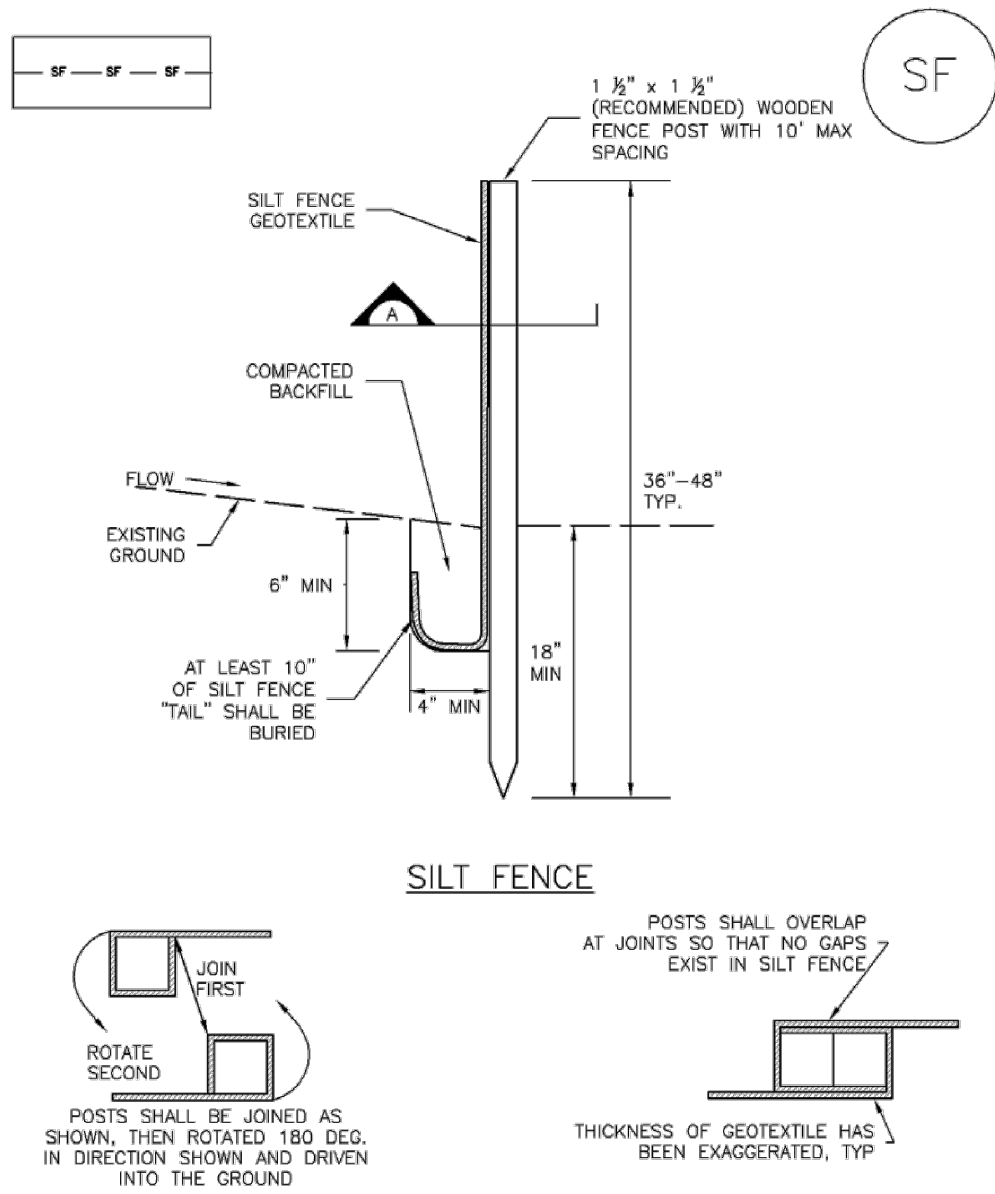
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Silt Fence (SF)

SC-1



SECTION A

SF-1. SILT FENCE

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

SC-1

Silt Fence (SF)

SILT FENCE INSTALLATION NOTES

1. SILT FENCE MUST BE PLACED AWAY FROM THE TOE OF THE SLOPE TO ALLOW FOR WATER PONDING. SILT FENCE AT THE TOE OF A SLOPE SHOULD BE INSTALLED IN A FLAT LOCATION AT LEAST SEVERAL FEET (2-5 FT) FROM THE TOE OF THE SLOPE TO ALLOW ROOM FOR PONDING AND DEPOSITION.
2. A UNIFORM 6" X 4" ANCHOR TRENCH SHALL BE EXCAVATED USING TRENCHER OR SILT FENCE INSTALLATION DEVICE. NO ROAD GRADERS, BACKHOES, OR SIMILAR EQUIPMENT SHALL BE USED.
3. COMPACT ANCHOR TRENCH BY HAND WITH A "JUMPING JACK" OR BY WHEEL ROLLING. COMPACTION SHALL BE SUCH THAT SILT FENCE RESISTS BEING PULLED OUT OF ANCHOR TRENCH BY HAND.
4. SILT FENCE SHALL BE PULLED TIGHT AS IT IS ANCHORED TO THE STAKES. THERE SHOULD BE NO NOTICEABLE SAG BETWEEN STAKES AFTER IT HAS BEEN ANCHORED TO THE STAKES.
5. SILT FENCE FABRIC SHALL BE ANCHORED TO THE STAKES USING 1" HEAVY DUTY STAPLES OR NAILS WITH 1" HEADS. STAPLES AND NAILS SHOULD BE PLACED 3' ALONG THE FABRIC DOWN THE STAKE.
6. AT THE END OF A RUN OF SILT FENCE ALONG A CONTOUR, THE SILT FENCE SHOULD BE TURNED PERPENDICULAR TO THE CONTOUR TO CREATE A "J-HOOK." THE "J-HOOK" EXTENDING PERPENDICULAR TO THE CONTOUR SHOULD BE OF SUFFICIENT LENGTH TO KEEP RUNOFF FROM FLOWING AROUND THE END OF THE SILT FENCE (TYPICALLY 10' - 20').
7. SILT FENCE SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.

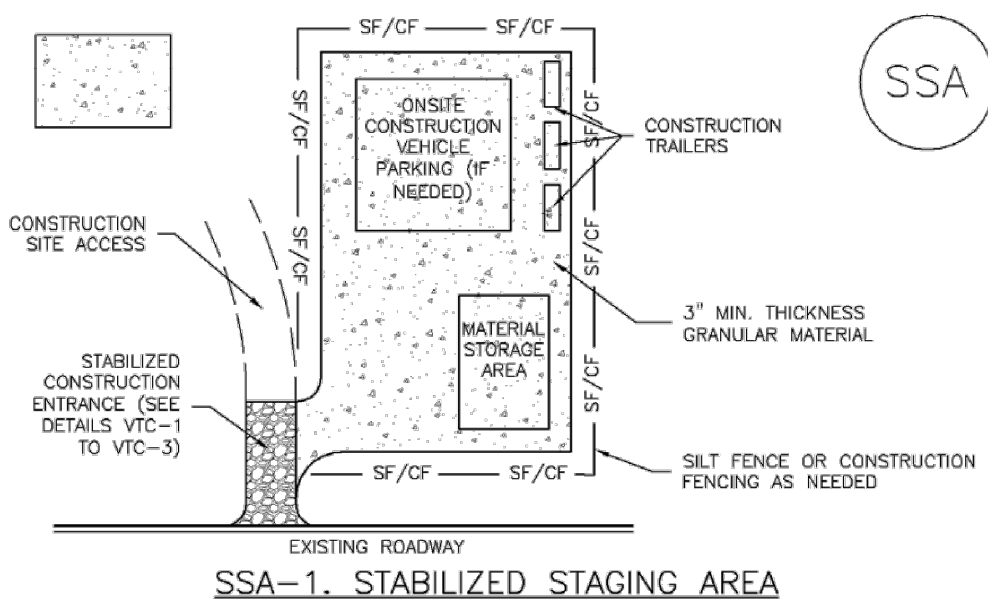
SILT FENCE MAINTENANCE NOTES

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. SEDIMENT ACCUMULATED UPSTREAM OF THE SILT FENCE SHALL BE REMOVED AS NEEDED TO MAINTAIN THE FUNCTIONALITY OF THE BMP, TYPICALLY WHEN DEPTH OF ACCUMULATED SEDIMENTS IS APPROXIMATELY 6".
  5. REPAIR OR REPLACE SILT FENCE WHEN THERE ARE SIGNS OF WEAR, SUCH AS SAGGING, TEARING, OR COLLAPSE.
  6. SILT FENCE IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION, OR IS REPLACED BY AN EQUIVALENT PERIMETER SEDIMENT CONTROL BMP.
  7. WHEN SILT FENCE IS REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEED, AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.
- (DETAIL ADAPTED FROM TOWN OF PUEBLO, COLORADO AND CITY OF AURORA, NOT AVAILABLE IN AUTOCAD)
- 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.

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Stabilized Staging Area (SSA)

SM-6



SSA-1. STABILIZED STAGING AREA

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, ASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.
6. ADDITIONAL PERIMETER BMPs MAY BE REQUIRED INCLUDING BUT NOT LIMITED TO SILT FENCE AND CONSTRUCTION FENCING AS NEEDED.

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.

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SM-6

Stabilized Staging Area (SSA)

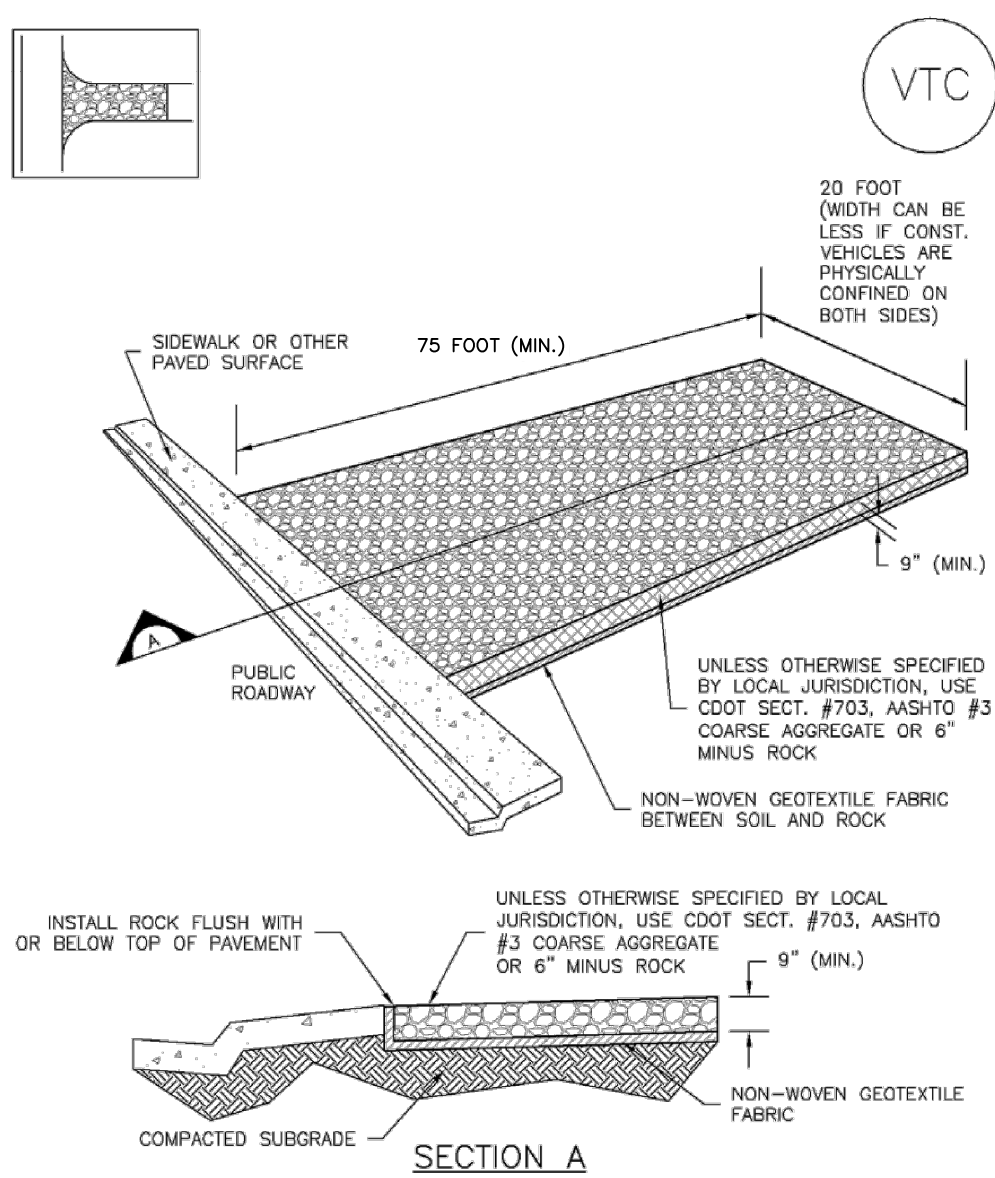
STABILIZED STAGING AREA MAINTENANCE NOTES

5. STABILIZED STAGING AREA SHALL BE ENLARGED IF NECESSARY TO CONTAIN PARKING, STORAGE, AND UNLOADING/LOADING OPERATIONS.
  6. THE STABILIZED STAGING AREA SHALL BE REMOVED AT THE END OF CONSTRUCTION. THE GRANULAR MATERIAL SHALL BE REMOVED OR, IF APPROVED BY THE LOCAL JURISDICTION, USED ON SITE, AND THE AREA COVERED WITH TOPSOIL, SEED, AND MULCHED OR OTHERWISE STABILIZED IN A MANNER APPROVED BY LOCAL JURISDICTION.
- NOTE: MANY MUNICIPALITIES PROHIBIT THE USE OF RECYCLED CONCRETE AS GRANULAR MATERIAL FOR STABILIZED STAGING AREAS DUE TO DIFFICULTIES WITH RE-ESTABLISHMENT OF VEGETATION IN AREAS WHERE RECYCLED CONCRETE WAS PLACED.
- NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.
- (DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Vehicle Tracking Control (VTC)

SM-4



SECTION A

VTC-1. AGGREGATE VEHICLE TRACKING CONTROL

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SM-4

Vehicle Tracking Control (VTC)

STABILIZED CONSTRUCTION ENTRANCE/EXIT INSTALLATION NOTES

1. SEE PLAN VIEW FOR  
-LOCATION OF CONSTRUCTION ENTRANCE(S)/EXIT(S).  
-TYPE OF CONSTRUCTION ENTRANCE(S)/EXIT(S) (WITH/WITHOUT WHEEL WASH, CONSTRUCTION MAT OR TRM).
2. CONSTRUCTION MAT OR TRM STABILIZED CONSTRUCTION ENTRANCES ARE ONLY TO BE USED ON SHORT DURATION PROJECTS (TYPICALLY RANGING FROM A WEEK TO A MONTH) WHERE THERE WILL BE LIMITED VEHICULAR ACCESS.
3. A STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE LOCATED AT ALL ACCESS POINTS WHERE VEHICLES ACCESS THE CONSTRUCTION SITE FROM PAVED RIGHT-OF-WAYS.
4. STABILIZED CONSTRUCTION ENTRANCE/EXIT SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES.
5. A NON-WOVEN GEOTEXTILE FABRIC SHALL BE PLACED UNDER THE STABILIZED CONSTRUCTION ENTRANCE/EXIT PRIOR TO THE PLACEMENT OF ROCK.
6. UNLESS OTHERWISE SPECIFIED BY LOCAL JURISDICTION, ROCK SHALL CONSIST OF DOT SECT. #703, ASHTO #3 COARSE AGGREGATE OR 6" (MINUS) ROCK.

STABILIZED CONSTRUCTION ENTRANCE/EXIT 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 TO THE STABILIZED ENTRANCE/EXIT TO MAINTAIN A CONSISTENT DEPTH.
5. SEDIMENT TRACKED ONTO PAVED ROADS IS TO BE REMOVED THROUGHOUT THE DAY AND AT THE END OF THE DAY BY SHOVELING OR SHEEPING. SEDIMENT MAY NOT BE WASHED DOWN STORM SEWER DRAINS.

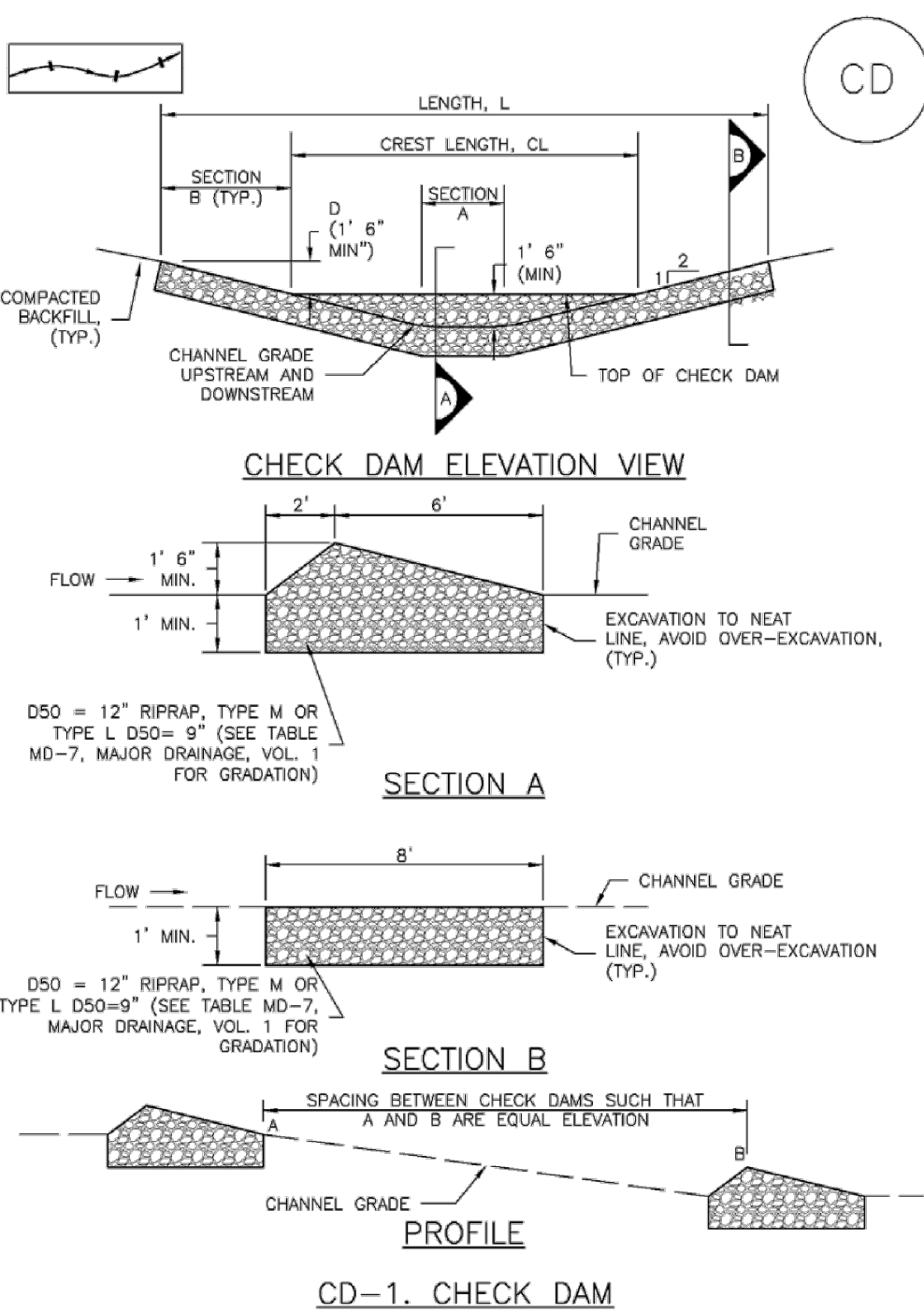
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

(DETAILS ADAPTED FROM CITY OF BROOMFIELD, COLORADO, NOT AVAILABLE IN AUTOCAD)

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Check Dams (CD)

EC-12



CHECK DAM ELEVATION VIEW

SECTION A

SECTION B

PROFILE

CD-1. CHECK DAM

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EC-12

Check Dams (CD)

CHECK DAM INSTALLATION NOTES

1. SEE PLAN VIEW FOR  
-LOCATION OF CHECK DAMS.  
-CHECK DAM TYPE (CHECK DAM OR REINFORCED CHECK DAM).  
-LENGTH (L), CREST LENGTH (CL), AND DEPTH (D).
2. CHECK DAMS INDICATED ON INITIAL SWMP SHALL BE INSTALLED AFTER CONSTRUCTION FENCE, BUT PRIOR TO ANY UPSTREAM LAND DISTURBING ACTIVITIES.
3. RIPRAP UTILIZED FOR CHECK DAMS SHOULD BE OF APPROPRIATE SIZE FOR THE APPLICATION. TYPICAL TYPES OF RIPRAP USED FOR CHECK DAMS ARE TYPE M (D50 1/2") OR TYPE L (D50 9").
4. RIPRAP PAD SHALL BE TRENCHED INTO THE GROUND A MINIMUM OF 1'.
5. THE ENDS OF THE CHECK DAM SHALL BE A MINIMUM OF 1' 6" HIGHER THAN THE CENTER OF THE CHECK DAM.

CHECK DAM 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. SEDIMENT ACCUMULATED UPSTREAM OF THE CHECK DAMS SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS WITHIN 1/2 OF THE HEIGHT OF THE CREST.
  5. CHECK DAMS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.
  6. WHEN CHECK DAMS ARE REMOVED, EXCAVATIONS SHALL BE FILLED WITH SUITABLE COMPACTED BACKFILL. DISTURBED AREA SHALL BE SEED, 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, NOT AVAILABLE IN AUTOCAD)

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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
DETAIL SHEET (3 OF 4)



PROJECT NO.  
196106001  
SHEET  
1.15

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### Sediment Basin (SB)

SC-7

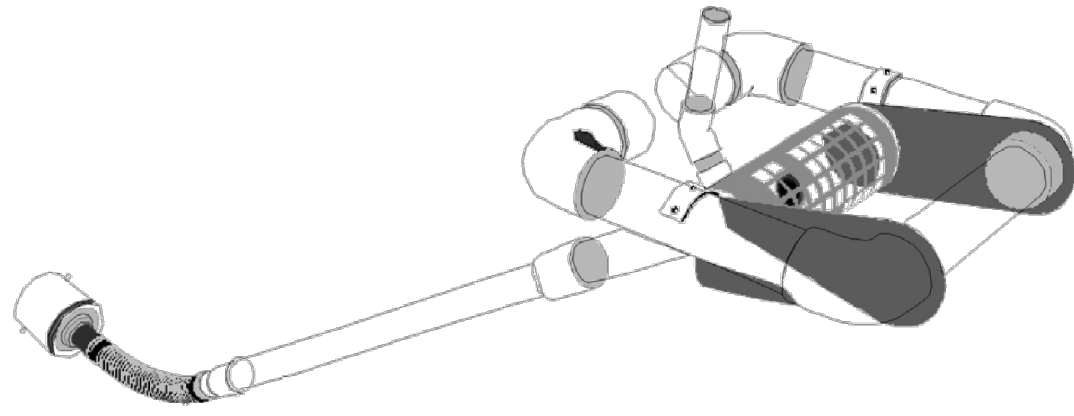


Illustration SB-1. Outlet structure for a temporary sediment basin - Faircloth Skimmer Floating Outlet. Illustration courtesy of J. W. Faircloth & Sons, Inc., FairclothSkimmer.com.

- Outlet Protection and Spillway:** Consider all flow paths for runoff leaving the basin, including protection at the typical point of discharge as well as overtopping.
  - Outlet Protection:** Outlet protection should be provided where the velocity of flow will exceed the maximum permissible velocity of the material of the waterway into which discharge occurs. This may require the use of a riprap apron at the outlet location and/or other measures to keep the waterway from eroding.
  - Emergency Spillway:** Provide a stabilized emergency overflow spillway for rainstorms that exceed the capacity of the sediment basin volume and its outlet. Protect basin embankments from erosion and overtopping. If the sediment basin will be converted to a permanent detention basin, design and construct the emergency spillway(s) as required for the permanent facility. If the sediment basin will not become a permanent detention basin, it may be possible to substitute a heavy polyvinyl membrane or properly bedded rock cover to line the spillway and downstream embankment, depending on the height, slope, and width of the embankments.

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### Sediment Basin (SB)

#### Maintenance and Removal

Maintenance activities include the following:

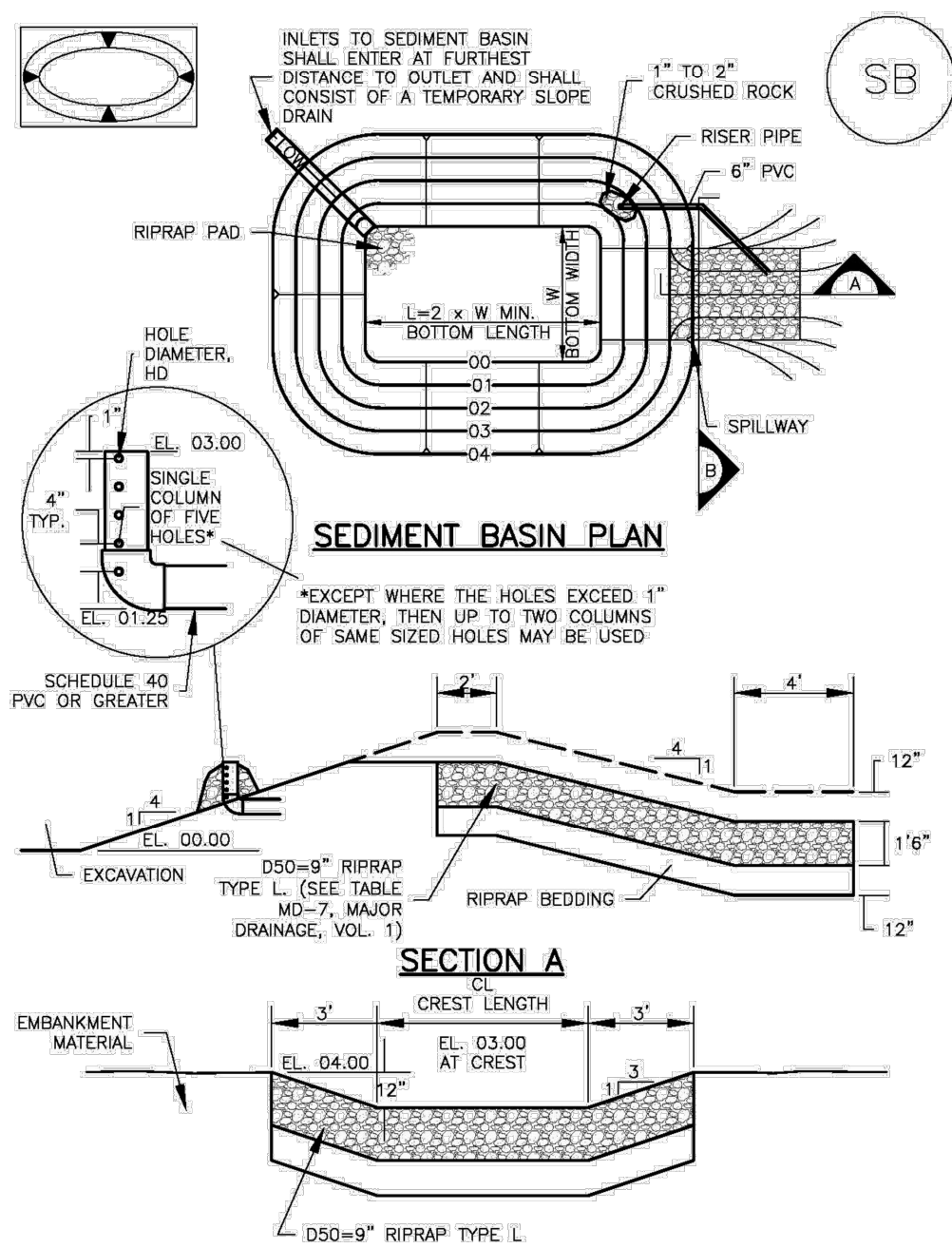
- Dredge sediment from the basin, as needed to maintain BMP effectiveness, typically when the design storage volume is no more than one-third filled with sediment.
- Inspect the sediment basin embankments for stability and seepage.
- Inspect the inlet and outlet of the basin, repair damage, and remove debris. Remove, clean and replace the gravel around the outlet on a regular basis to remove the accumulated sediment within it and keep the outlet functioning.
- Be aware that removal of a sediment basin may require dewatering and associated permit requirements.
- Do not remove a sediment basin until the upstream area has been stabilized with vegetation.

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 will be returned to grade. For basins being converted to permanent detention basins, remove accumulated sediment and reconfigure the basin and outlet to meet the requirements of the detention facility. If the sediment basin is not to be used as a permanent detention facility, fill the excavated area with soil and stabilize with vegetation.

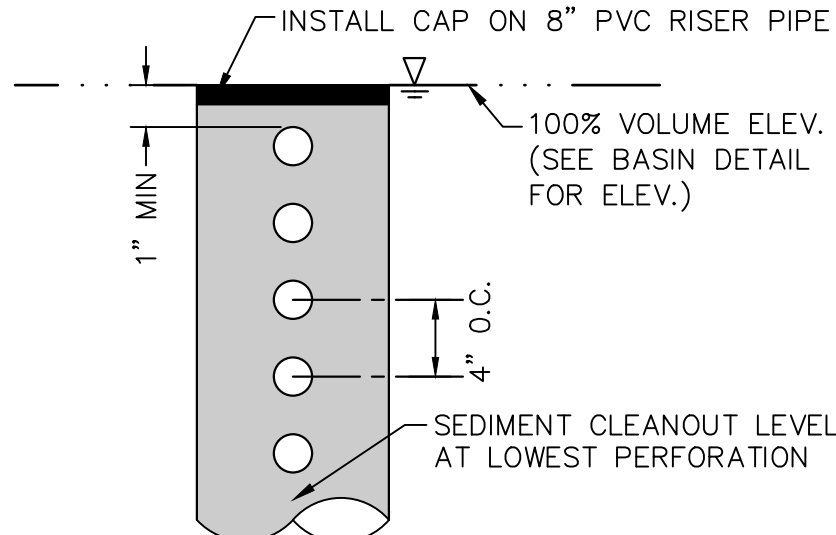
SB-4 Urban Drainage and Flood Control District  
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### Sediment Basin (SB)

SC-7



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RISER PIPE DETAIL  
N.T.S.

RISER PIPE	# OF STANDPIPES	# OF ROWS	HOLE DIAMETER	RISER PIPE ELEV.	WSEL
WQ1	2	5	31/32"	7335	7336
POND 1	2	5	1-1/8"	7321	7322
POND 2	1	5	1-3/16"	7305	7310
POND 4	2	5	1-1/16"	7295	7299

### SC-7

### Sediment Basin (SB)

TABLE SB-1. SIZING INFORMATION FOR STANDARD SEDIMENT BASIN				
Upstream Drainage Area (rounded to nearest acre), (ac)	Basin Bottom Width (W), (ft)	Spillway Crest Length (CL), (ft)	Hole Diameter (HD), (in)	
1	12 1/2	2	3/8	
2	21	3	1/2	
3	28	5	5/8	
4	33 1/2	6	3/4	
5	38 1/2	8	7/8	
6	43	9	1	
7	47 1/2	11	1 1/8	
8	51	12	1 1/4	
9	55	13	1 1/2	
10	58 1/2	15	1 5/8	
11	61	16	1 3/4	
12	64	18	1 7/8	
13	67 1/2	19	2	
14	70 1/2	21	2 1/8	
15	73 1/2	22	2 1/4	

REFERENCE RISER PIPE DETAIL ON THIS SHEET FOR BASINS LARGER THAN 15 AC

#### SEDIMENT BASIN INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF SEDIMENT BASIN.
  - TYPE OF BASIN (STANDARD BASIN OR NONSTANDARD BASIN).
  - FOR STANDARD BASIN, BOTTOM WIDTH W, CREST LENGTH CL, AND HOLE DIAMETER, HD.
  - FOR NONSTANDARD BASIN, SEE CONSTRUCTION DRAWINGS FOR DESIGN OF BASIN INCLUDING RISER HEIGHT H, NUMBER OF COLUMNS N, HOLE DIAMETER HD AND PIPE DIAMETER D.
- FOR STANDARD BASIN, BOTTOM DIMENSION MAY BE MODIFIED AS LONG AS BOTTOM AREA IS NOT REDUCED.
- SEDIMENT BASINS SHALL BE INSTALLED PRIOR TO ANY OTHER LAND-DISTURBING ACTIVITY THAT RELIES ON ON BASINS AS A STORMWATER CONTROL.
- EMBANKMENT MATERIAL SHALL CONSIST OF SOIL FREE OF DEBRIS, ORGANIC MATERIAL, AND ROCKS OR CONCRETE GREATER THAN 3 INCHES AND SHALL HAVE A MINIMUM OF 15 PERCENT BY WEIGHT PASSING THE NO. 200 SIEVE.
- EMBANKMENT MATERIAL SHALL BE COMPACTED TO AT LEAST 95 PERCENT OF MAXIMUM DENSITY IN ACCORDANCE WITH ASTM D698.
- PIPE SCH 40 OR GREATER SHALL BE USED.

7. THE DETAILS SHOWN ON THESE SHEETS PERTAIN TO STANDARD SEDIMENT BASIN(S) FOR DRAINAGE AREAS LESS THAN 15 ACRES. SEE CONSTRUCTION DRAWINGS FOR EMBANKMENT, STORAGE VOLUME, SPILLWAY, OUTLET, AND OUTLET PROTECTION DETAILS FOR ANY SEDIMENT BASIN(S) THAT HAVE BEEN INDIVIDUALLY DESIGNED FOR DRAINAGE AREAS LARGER THAN 15 ACRES.

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### Sediment Basin (SB)

SC-7

#### SEDIMENT BASIN MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED IN BASIN SHALL BE REMOVED AS NEEDED TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN SEDIMENT DEPTH REACHES ONE FOOT (I.E., TWO FEET BELOW THE SPILLWAY CREST).
- SEDIMENT BASINS ARE TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS STABILIZED AND GRASS COVER IS ACCEPTED BY THE LOCAL JURISDICTION.
- WHEN SEDIMENT BASINS ARE REMOVED, ALL DISTURBED AREAS SHALL BE COVERED WITH TOPSOIL, SEEDED AND MULCHED OR OTHERWISE STABILIZED AS APPROVED BY LOCAL JURISDICTION.

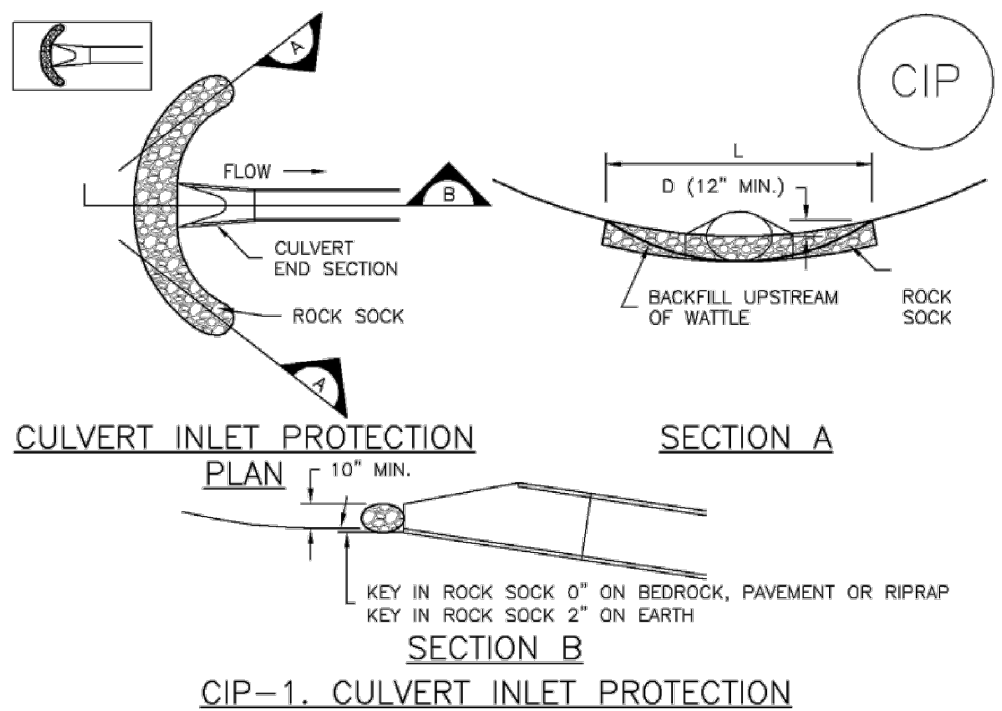
(DETAILS ADAPTED FROM DOUGLAS COUNTY, COLORADO)

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.

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### Inlet Protection (IP)

SC-6



CIP-1. CULVERT INLET PROTECTION

#### CULVERT INLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF CULVERT INLET PROTECTION.
- SEE ROCK SOCK DESIGN DETAIL FOR ROCK GRADATION REQUIREMENTS AND JOINTING DETAIL.

#### CULVERT INLET PROTECTION MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF THE CULVERT SHALL BE REMOVED WHEN THE SEDIMENT DEPTH IS 1/2 THE HEIGHT OF THE ROCK SOCK.
- CULVERT INLET PROTECTION SHALL REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED AND APPROVED BY THE LOCAL JURISDICTION.

(DETAILS ADAPTED FROM AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

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.

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### SC-6

### Inlet Protection (IP)

#### GENERAL INLET PROTECTION INSTALLATION NOTES

- SEE PLAN VIEW FOR:
  - LOCATION OF INLET PROTECTION.
  - TYPE OF INLET PROTECTION (P-1, P-2, IP-3, IP-4, IP-5, IP-6)
- INLET PROTECTION SHALL BE INSTALLED PROMPTLY AFTER INLET CONSTRUCTION OR PAVING IS COMPLETE (TYPICALLY WITHIN 48 HOURS). IF A RAINFALL/RUNOFF EVENT IS FORECAST, INSTALL INLET PROTECTION PRIOR TO ONSET OF EVENT.
- 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.

#### INLET PROTECTION MAINTENANCE NOTES

- INSPECT BMPs EACH WORKDAY, AND MAINTAIN THEM IN EFFECTIVE OPERATING CONDITION. MAINTENANCE OF BMPs SHOULD BE PROACTIVE, NOT REACTIVE. INSPECT BMPs AS SOON AS POSSIBLE (AND ALWAYS WITHIN 24 HOURS) FOLLOWING A STORM THAT CAUSES SURFACE EROSION, AND PERFORM NECESSARY MAINTENANCE.
- FREQUENT OBSERVATIONS AND MAINTENANCE ARE NECESSARY TO MAINTAIN BMPs IN EFFECTIVE OPERATING CONDITION. INSPECTIONS AND CORRECTIVE MEASURES SHOULD BE DOCUMENTED THOROUGHLY.
- WHERE BMPs HAVE FAILED, REPAIR OR REPLACEMENT SHOULD BE INITIATED UPON DISCOVERY OF THE FAILURE.
- SEDIMENT ACCUMULATED UPSTREAM OF INLET PROTECTION SHALL BE REMOVED AS NECESSARY TO MAINTAIN BMP EFFECTIVENESS, TYPICALLY WHEN STORAGE VOLUME REACHES 50% OF CAPACITY, A DEPTH OF 6" WHEN SILT FENCE IS USED, OR 1/4 OF THE HEIGHT FOR STRAW BALES.
- INLET PROTECTION IS TO REMAIN IN PLACE UNTIL THE UPSTREAM DISTURBED AREA IS PERMANENTLY STABILIZED, UNLESS THE LOCAL JURISDICTION APPROVES EARLIER REMOVAL OF INLET PROTECTION IN STREETS.
- WHEN INLET PROTECTION AT AREA INLETS IS REMOVED, THE DISTURBED AREA SHALL BE COVERED WITH TOP SOIL, SEEDED AND MULCHED, OR OTHERWISE STABILIZED IN A MANNER APPROVED BY THE LOCAL JURISDICTION.

(DETAIL ADAPTED FROM TOWN OF PARKER, COLORADO AND CITY OF AURORA, COLORADO, NOT AVAILABLE IN AUTOCAD)

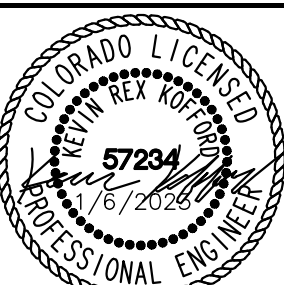
NOTE: MANY JURISDICTIONS HAVE BMP DETAILS THAT VARY FROM UDFCD STANDARD DETAILS. CONSULT WITH LOCAL JURISDICTIONS AS TO WHICH DETAIL SHOULD BE USED WHEN DIFFERENCES ARE NOTED.

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

NOTE: SOME MUNICIPALITIES DISCOURAGE OR PROHIBIT THE USE OF STRAW BALES FOR INLET PROTECTION. CHECK WITH LOCAL JURISDICTION TO DETERMINE IF STRAW BALE INLET PROTECTION IS ACCEPTABLE.

IP-8 Urban Drainage and Flood Control District  
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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
PRE DEVELOPMENT GESC PLAN  
DETAIL SHEET (4 OF 4)



PROJECT NO.  
196106001  
SHEET

1.16

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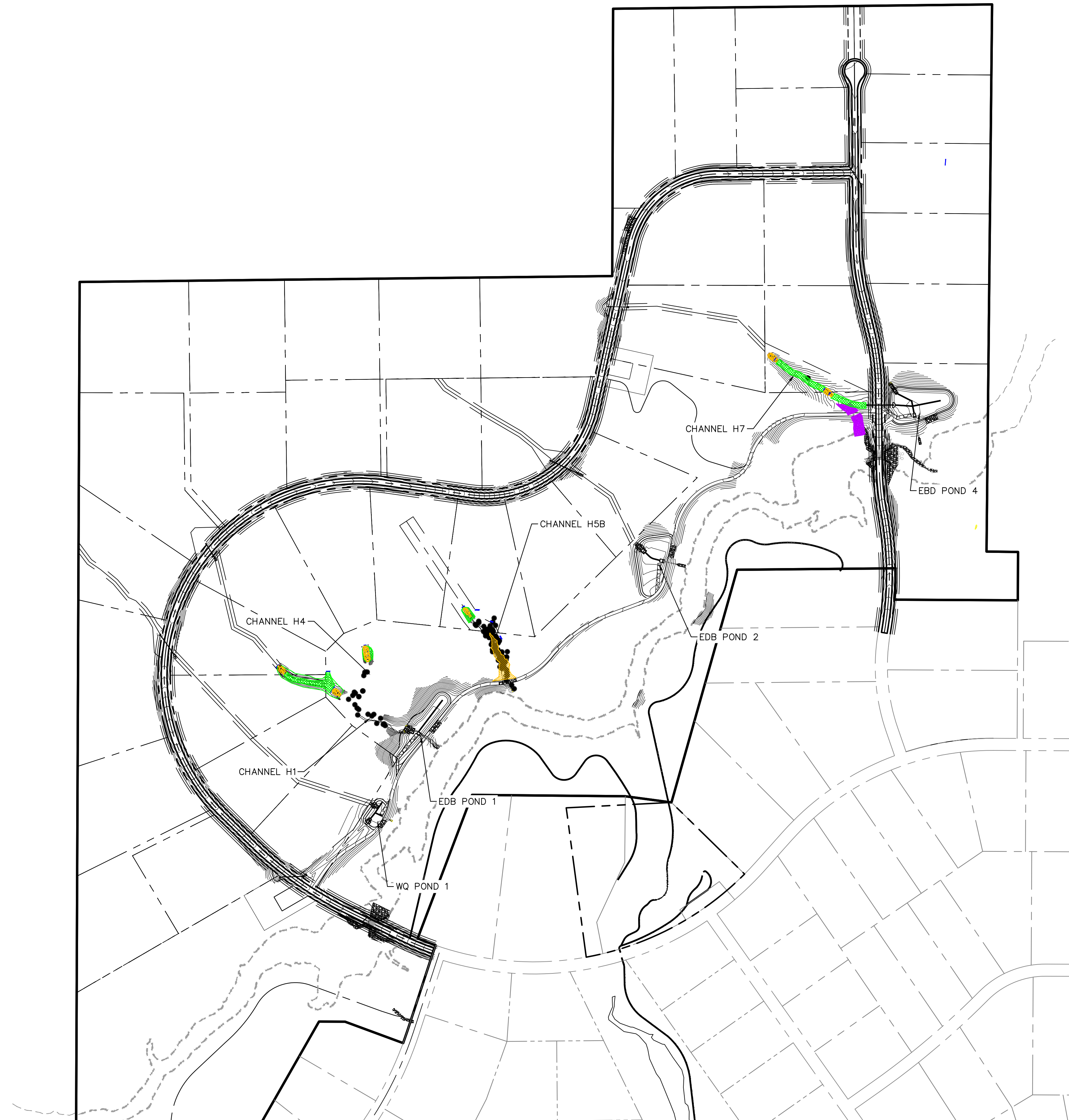
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2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: AUL  
CHECKED BY: KRK  
DATE: 12/10/2021

RESUBMITTAL #2  
RESUBMITTAL #1  
BY DATE  
KRK 11/30/22 KRK  
KRK 8/30/22 KRK  
NO. APPR.




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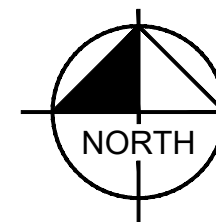


LEGEND


REGRADE AREA TO VEGETATED SWALE  
VEGETATION W/ EXCEL PP5-12 TURF REINFORCEMENT MAT  
(TRM) OR APPROVED EQUAL (BIODEGRADABLE)  
SEED MIX: TABLE A-4 RIPARIAN SEED MIX- LOAMY TO CLAY  
SOIL PER MILE HIGH FLOOD DISTRICT OR APPROVED EQUAL  
~2.0% SLOPES



ROCK CHUTE  
4:1 MAX SLOPES

 ROCK SILL CHANNEL PLUG/ BACKFILL  
ABANDONED CHANNEL

GRAPHIC SCALE IN FEET



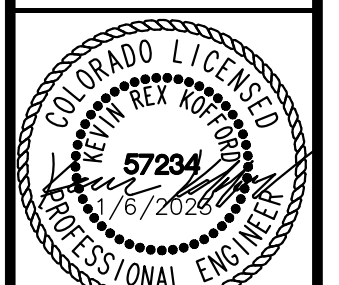
A horizontal scale bar with tick marks at 0, 150, 300, and 600 feet. The segments between 0 and 150, 150 and 300, and 300 and 600 are shaded black.

**Kimley»Horn**  
2021 KIMLEY-HORN AND ASSOCIATES, INC.

2021 KIMLEY-HORN AND ASSOCIATES, INC.  
2 North Nevada Avenue Suite 300  
Colorado Springs, Colorado 80903 (719) 453-0180

DESIGNED BY: KRK  
DRAWN BY: JRH  
CHECKED BY: KRK  
DATE: 9/3/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HEADCUTTING EXHIBIT OVERALL

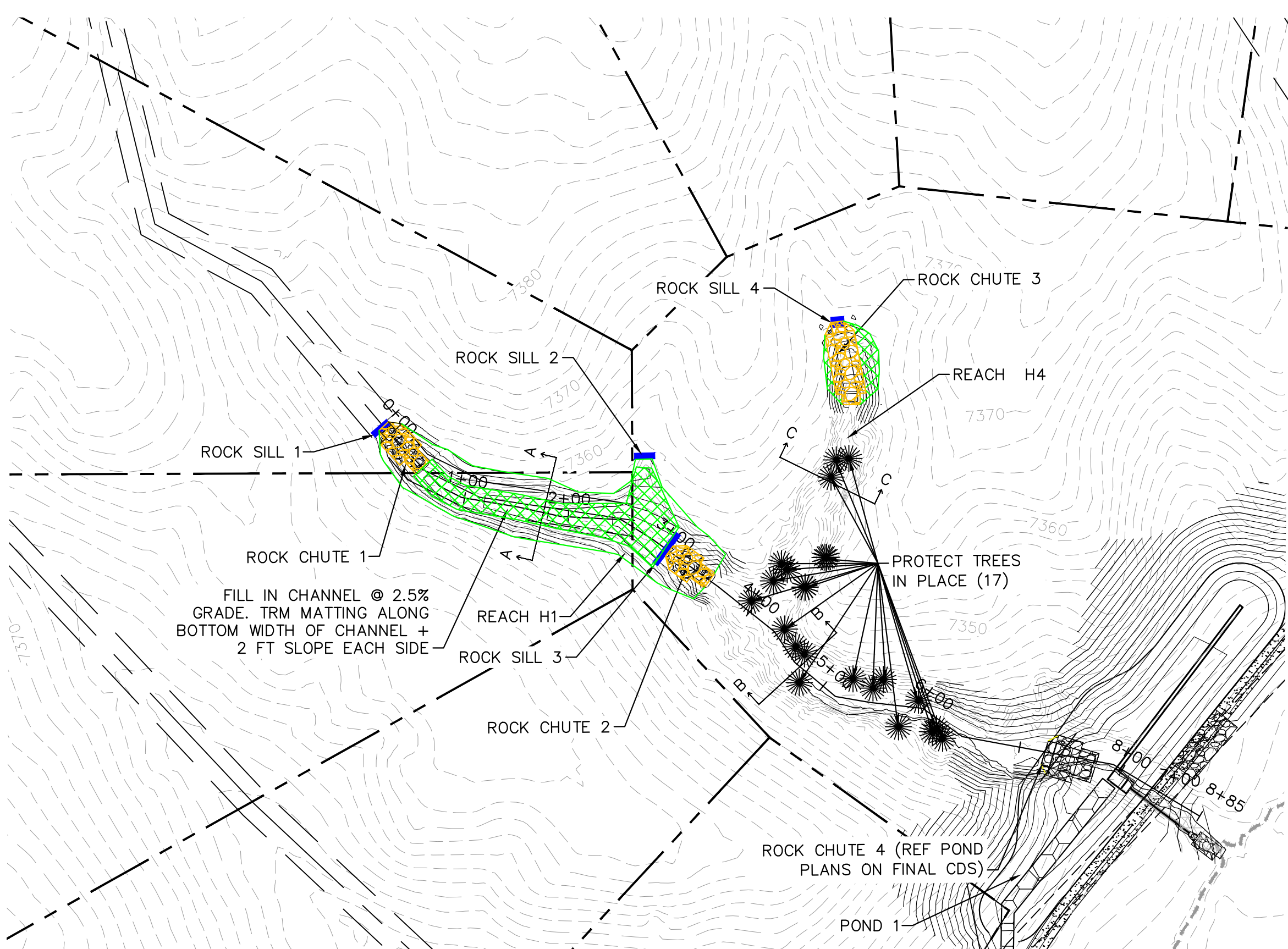


PROJECT NO.	196106001
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SHEET

1.17

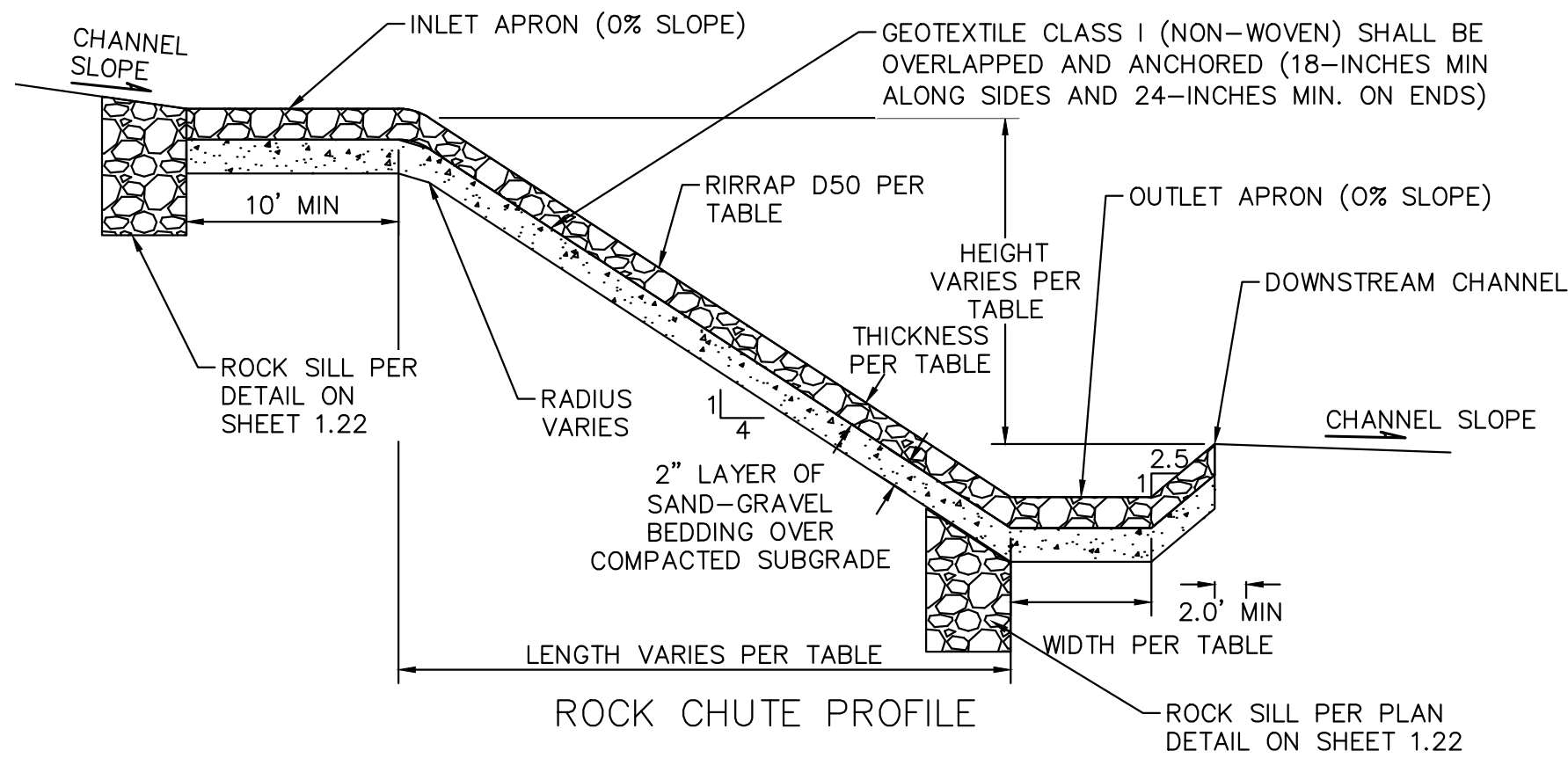
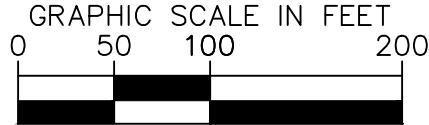
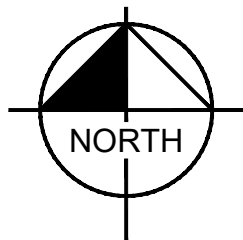
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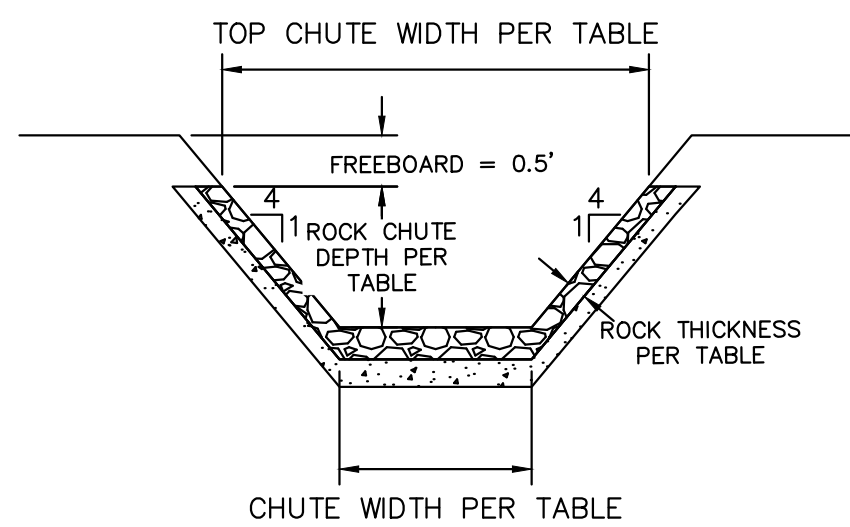
H1 HEADCUTTING MAIN CHANNEL

LEGEND

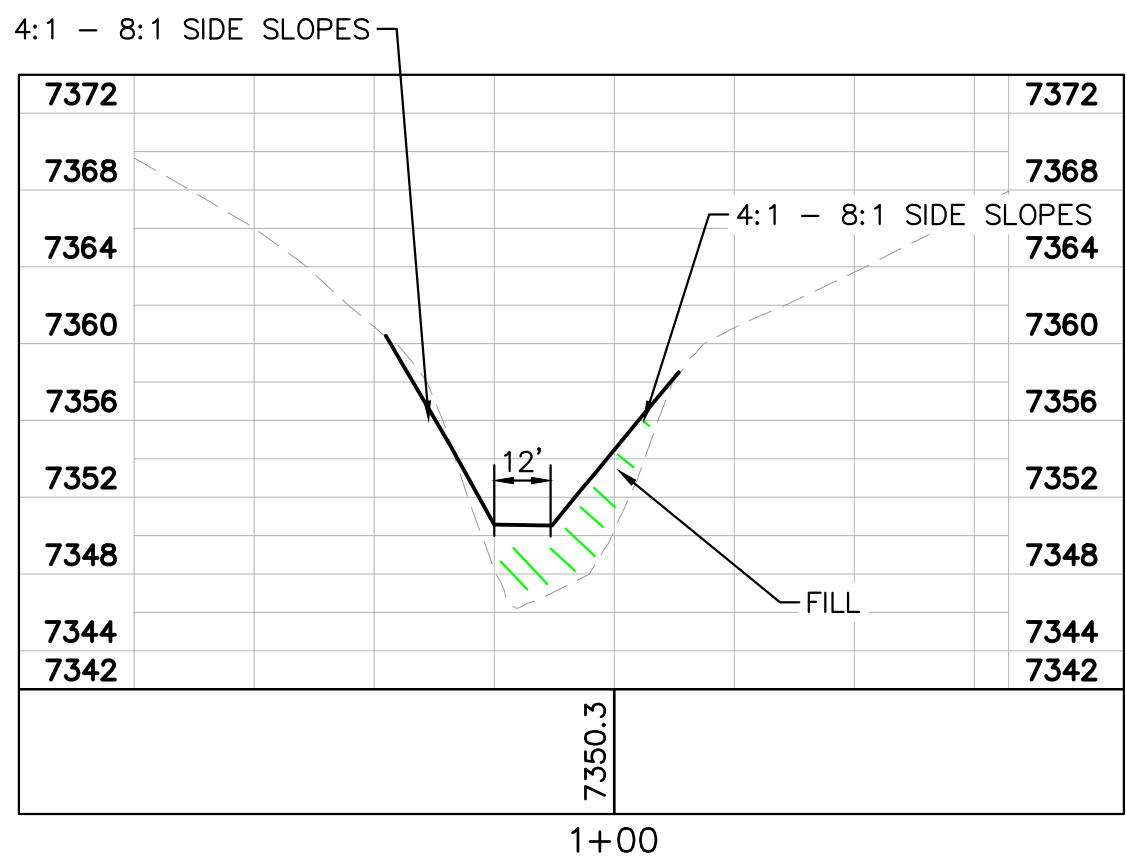
- REGRADE AREA TO VEGETATED SWALE  
VEGETATION W/ EXCEL PP5-12 TURF REINFORCEMENT MAT (TRM) OR APPROVED EQUAL (BIODEGRADABLE)  
SEED MIX: TABLE A-4 RIPARIAN SEED MIX- LOAMY TO CLAY  
SOIL PER MILE HIGH FLOOD DISTRICT OR APPROVED EQUAL  
~2.0% SLOPES
- ROCK CHUTE  
4:1 MAX SLOPES
- ROCK SILL



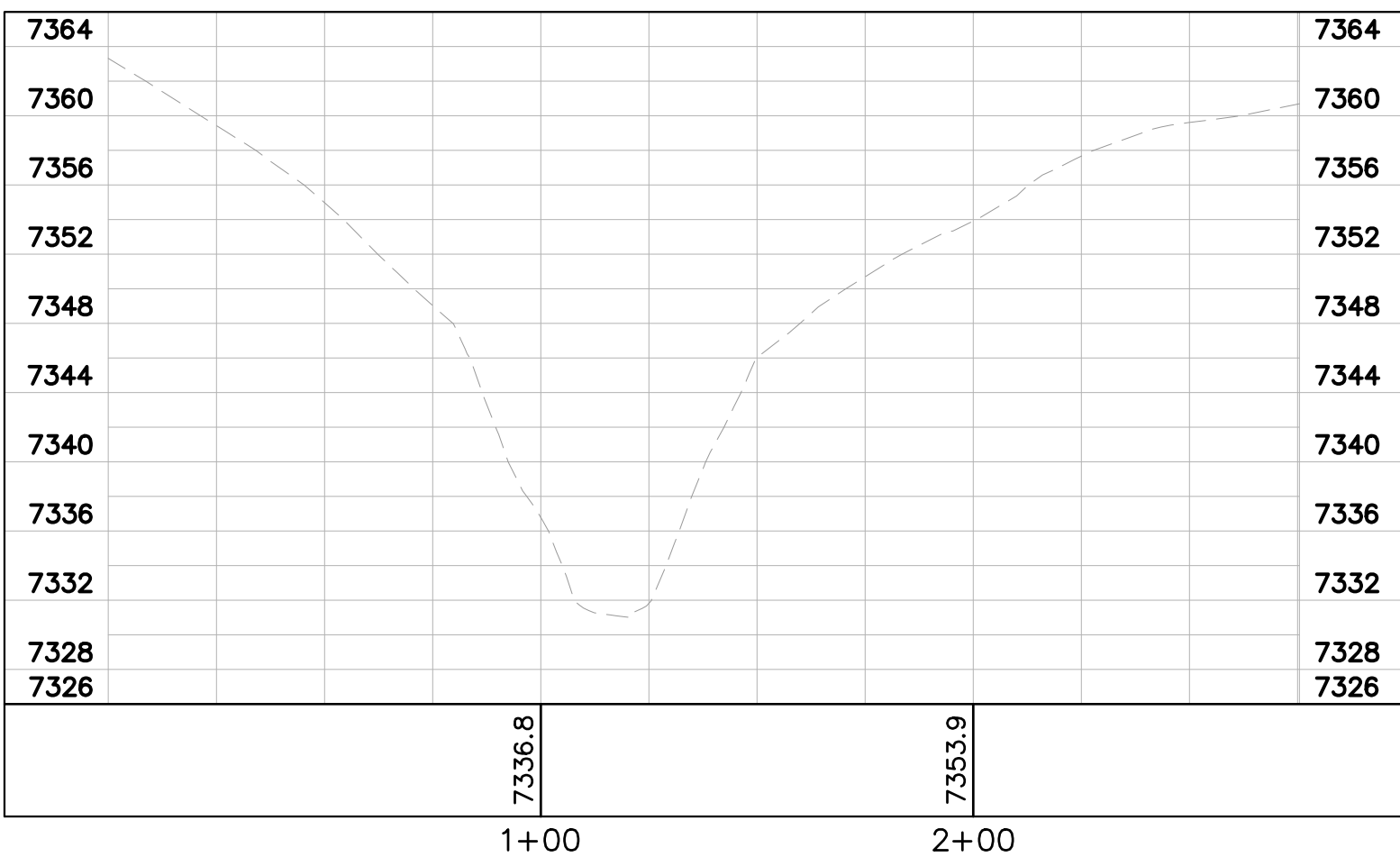
ROCK CHUTE PROFILE



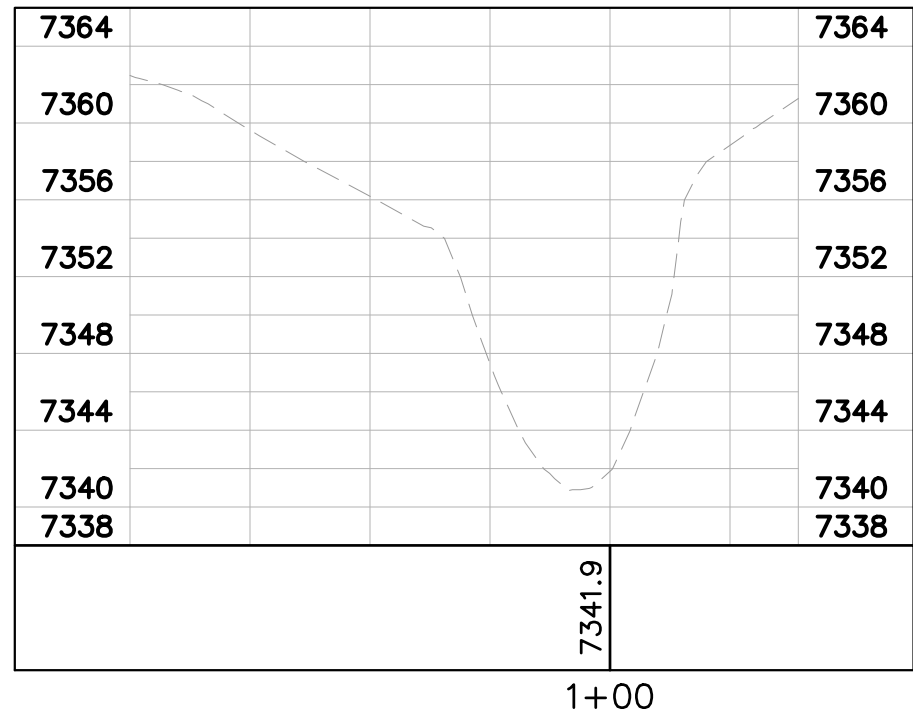
ROCK CHUTE CROSS SECTION



EX. CROSS SECTION A-A



EX CROSS SECTION B-B



EX CROSS SECTION C-C



Know what's below.  
Call before you dig.



Rock Chute ID	Channel Location	Flow (cfs)	Upstream Inlet Apron Length (ft)	Drop (ft) (Inlet Apron to Outlet Apron)	Chute Length (ft)	Downstream Outlet Apron Length (ft)	Chute Width (ft)	D50 (in)	Rock Chute Thickness (in)	Radius (ft)	Min Rock Chute Depth (ft)	Rock Chute Depth (ft)	Top Chute Width (ft)
1	H1	45	10	7	28	14	12	12	24	33	1.09	1.50	28
2	H1	45	10	7.5	35	14	12	12	24	33	1.09	1.50	28
3	H4	17	10	14.5	64	8	12	9	18	25	0.58	1.50	28
5	H5B	29	10	10	47	18	4	18	36	50	1.54	2.00	20
7	H3	58	10	6.5	31	15	12	18	36	50	1.27	1.50	28
8	H3	58	10	4.5	24	15	12	18	36	50	1.27	1.50	28

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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HEADCUTTING EXHIBIT REACH H1

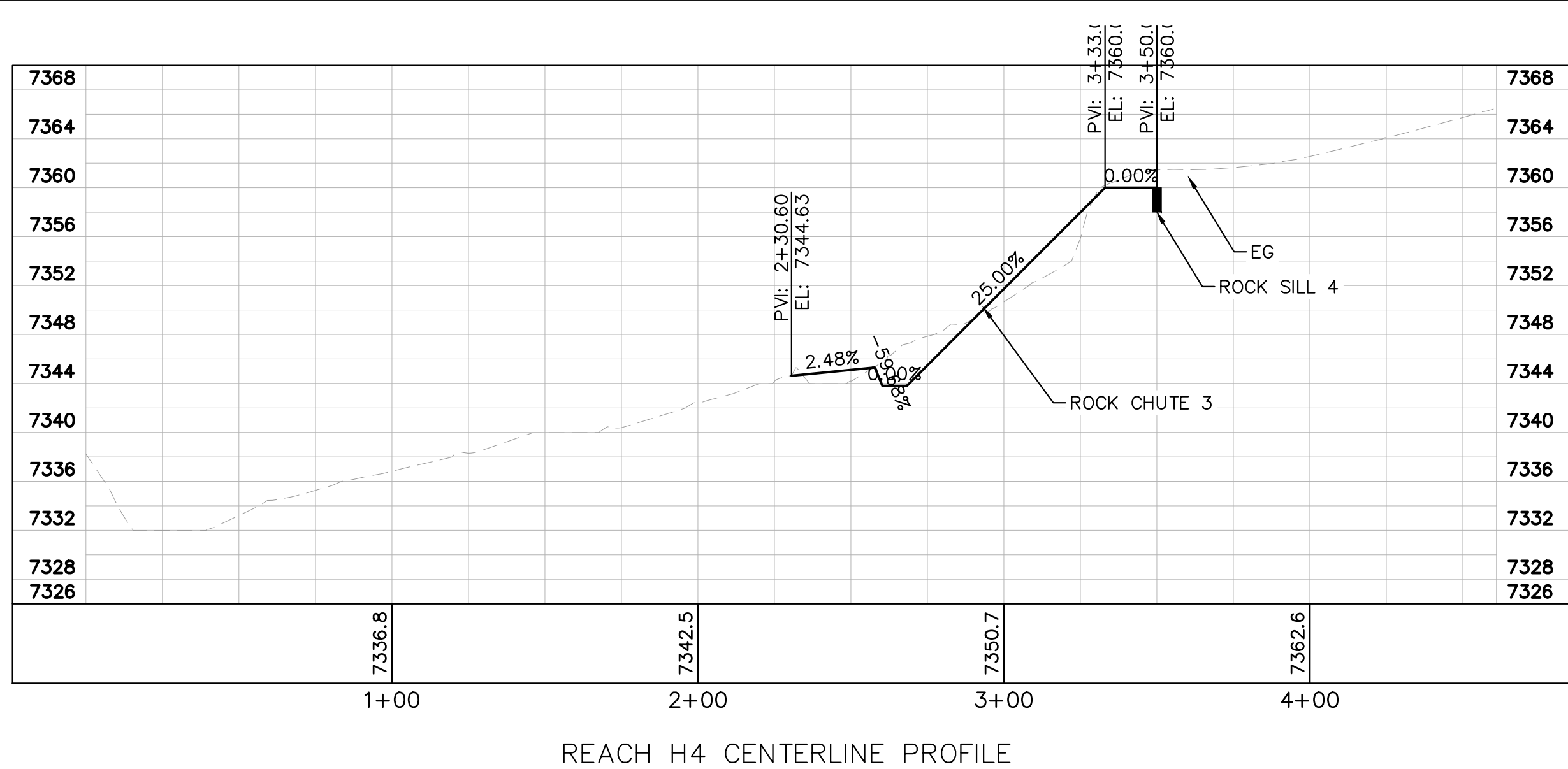
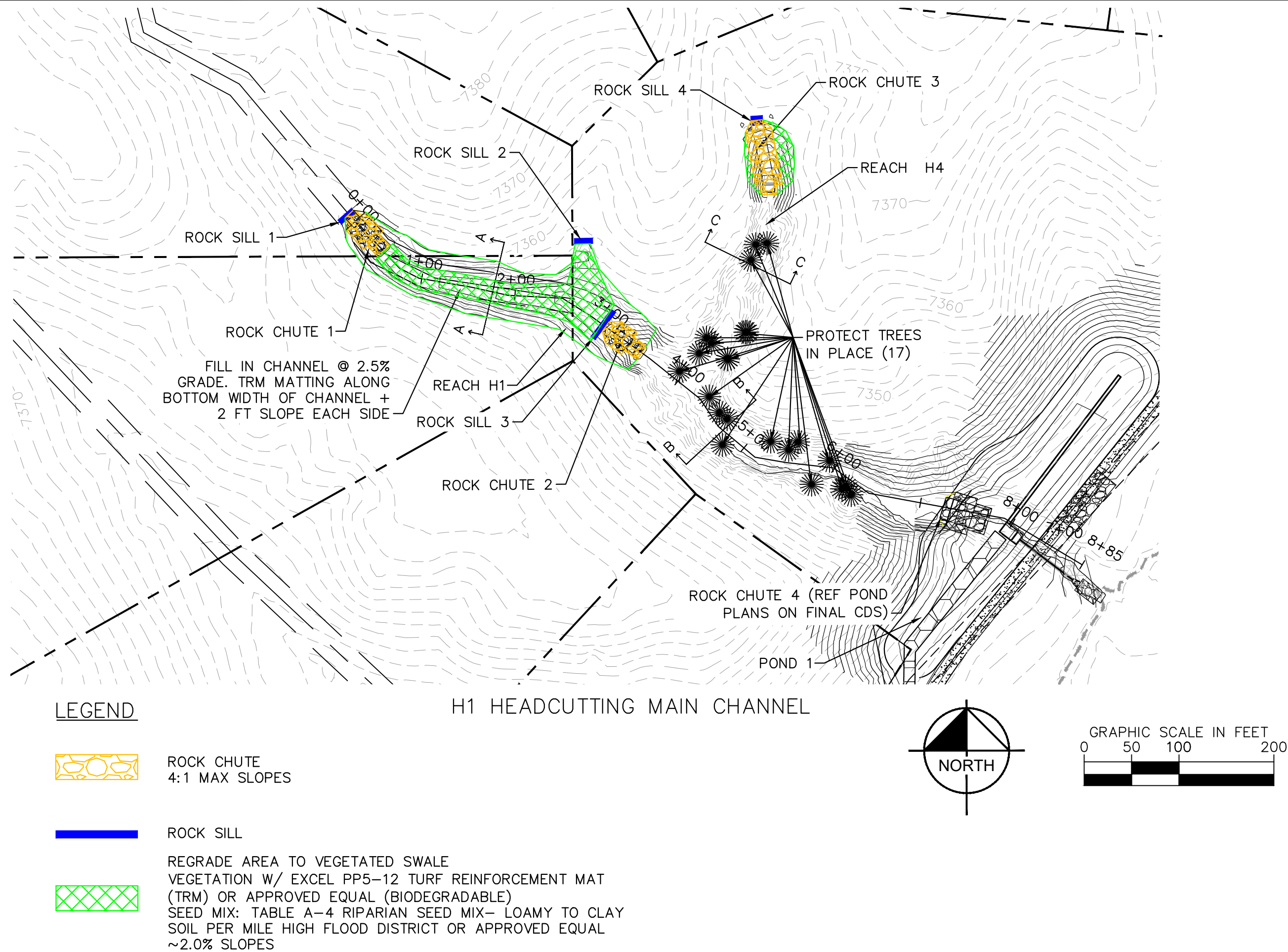


PROJECT NO.  
196106001

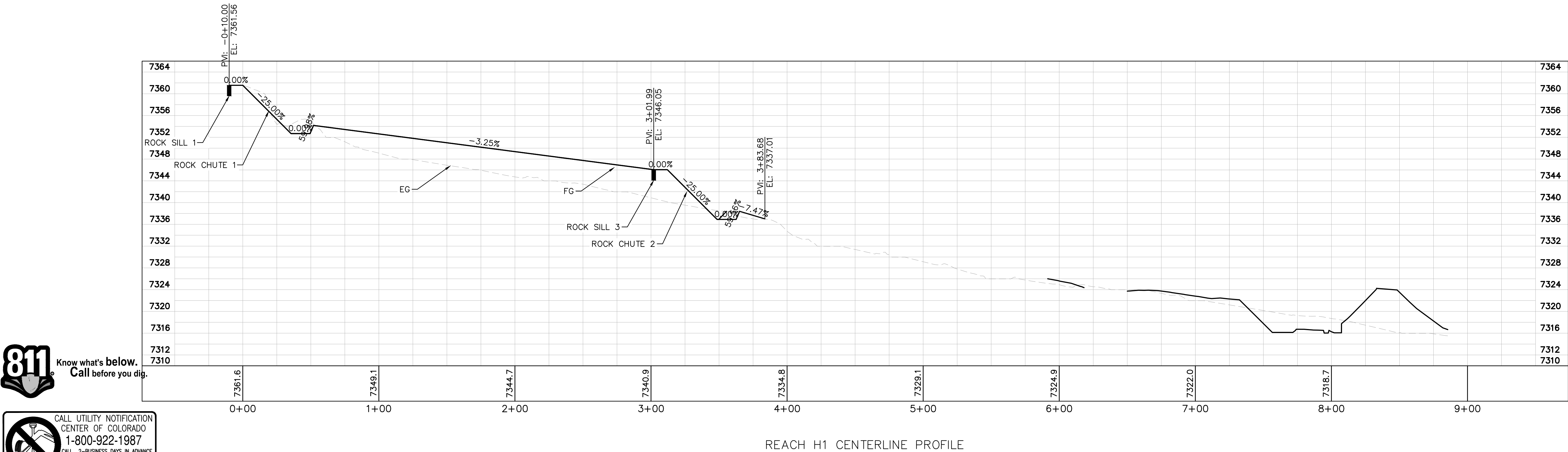
SHEET

1.18

K:\COS\_Civil\196106001\_Winsome Filing No. 3\CADD\PlanSheets\Early Grading Package\EG\_Headcutting\_Exhibit.dwg Kofford, Kevin 1/6/2023 1:30 PM



Rock Chute ID	Channel Location	Flow (cfs)	Upstream Inlet Apron Length (ft)	Drop (ft) (Inlet Apron to Outlet Apron)	Chute Length (ft)	Downstream Outlet Apron Length (ft)	Chute Width (ft)	DSO (in)	Rock Chute Thickness (in)	Radius (ft)	Min Rock Chute Depth (ft)	Rock Chute Depth (ft)	Top Chute Width (ft)
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2	H1	45	10	7.5	35	14	12	12	24	33	1.09	1.50	28
3	H4	17	10	14.5	64	8	12	9	18	25	0.58	1.50	28
5	H5B	29	10	10	47	18	4	18	36	50	1.54	2.00	20
7	H3	58	10	6.5	31	15	12	18	36	50	1.27	1.50	28
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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HEADCUTTING EXHIBIT REACH H1



PROJECT NO.  
196106001

SHEET

1.19

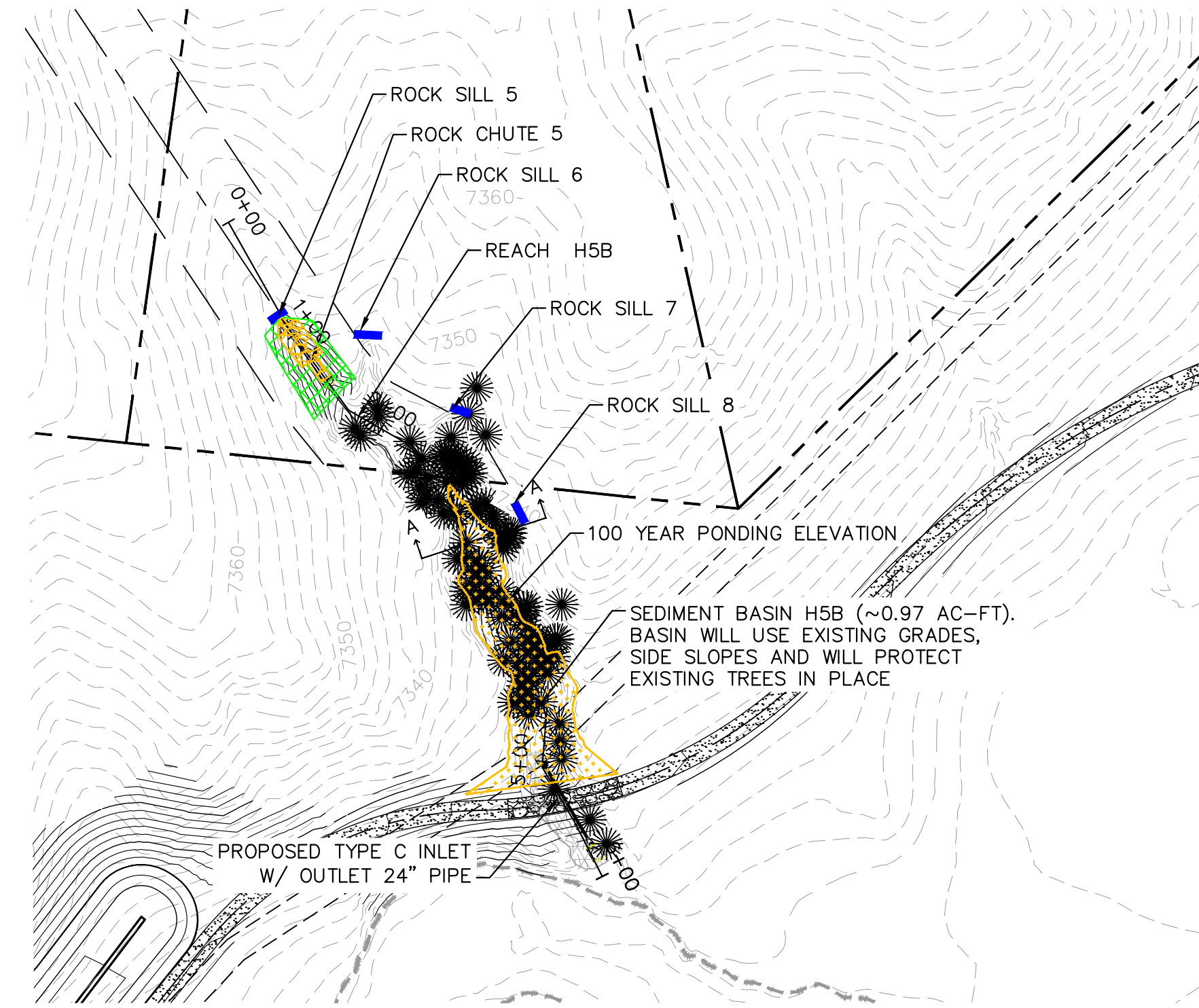
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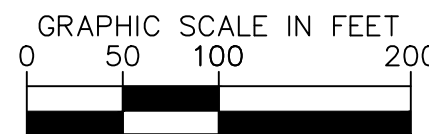
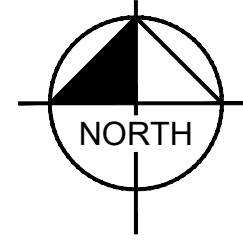
Know what's below.  
Call before you dig.



CALL UTILITY NOTIFICATION  
CENTER OF COLORADO  
1-800-922-1987  
CALL 2-BUSINESS DAYS IN ADVANCE  
BEFORE YOU DIG, GRADE, OR EXCAVATE  
FOR THE MARKING OF UNDERGROUND  
MEMBER UTILITIES

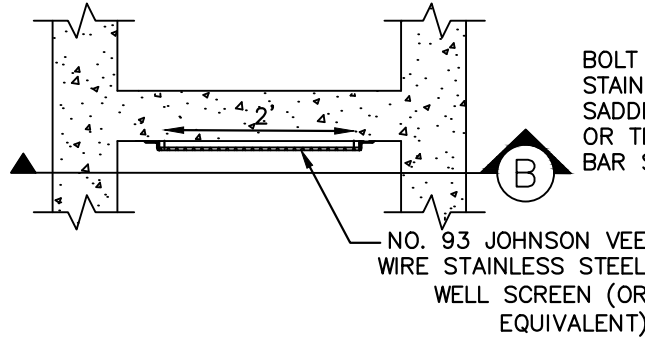


H5B HEADCUTTING MAIN CHANNEL

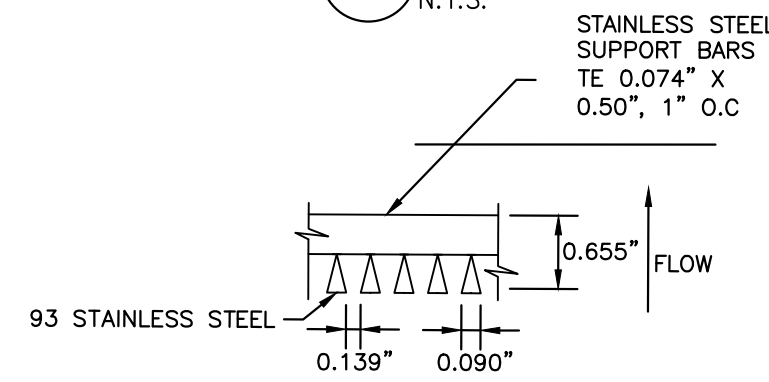


LEGEND

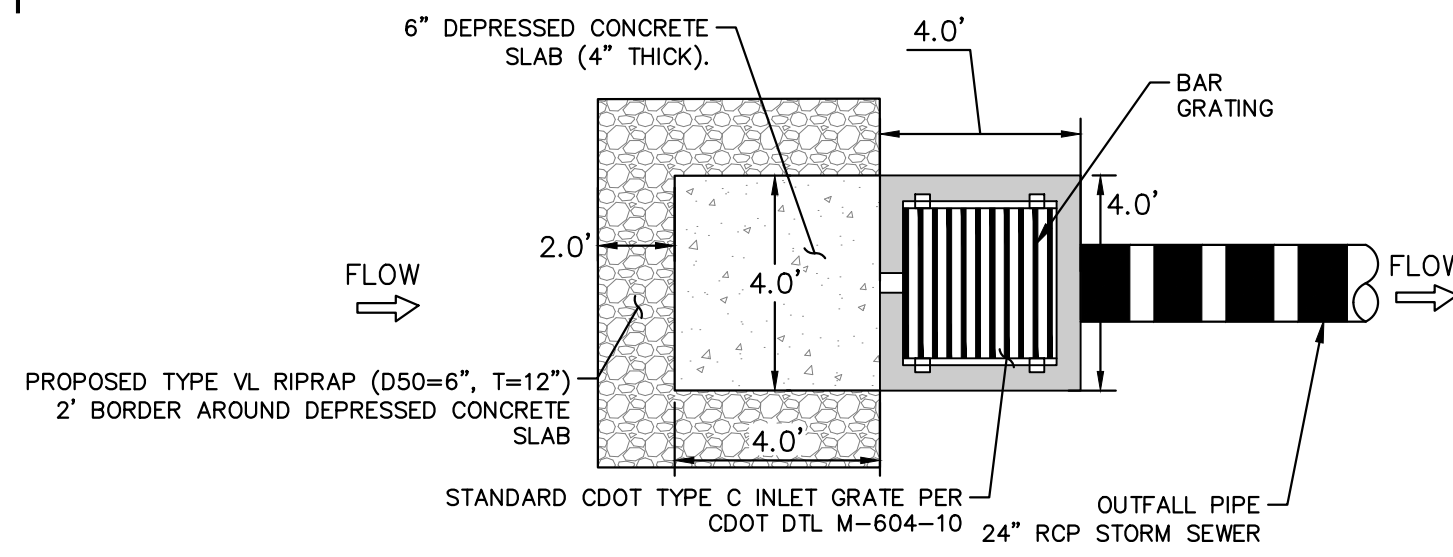
- ROCK CHUTE  
4:1 MAX SLOPES
- ROCK SILL



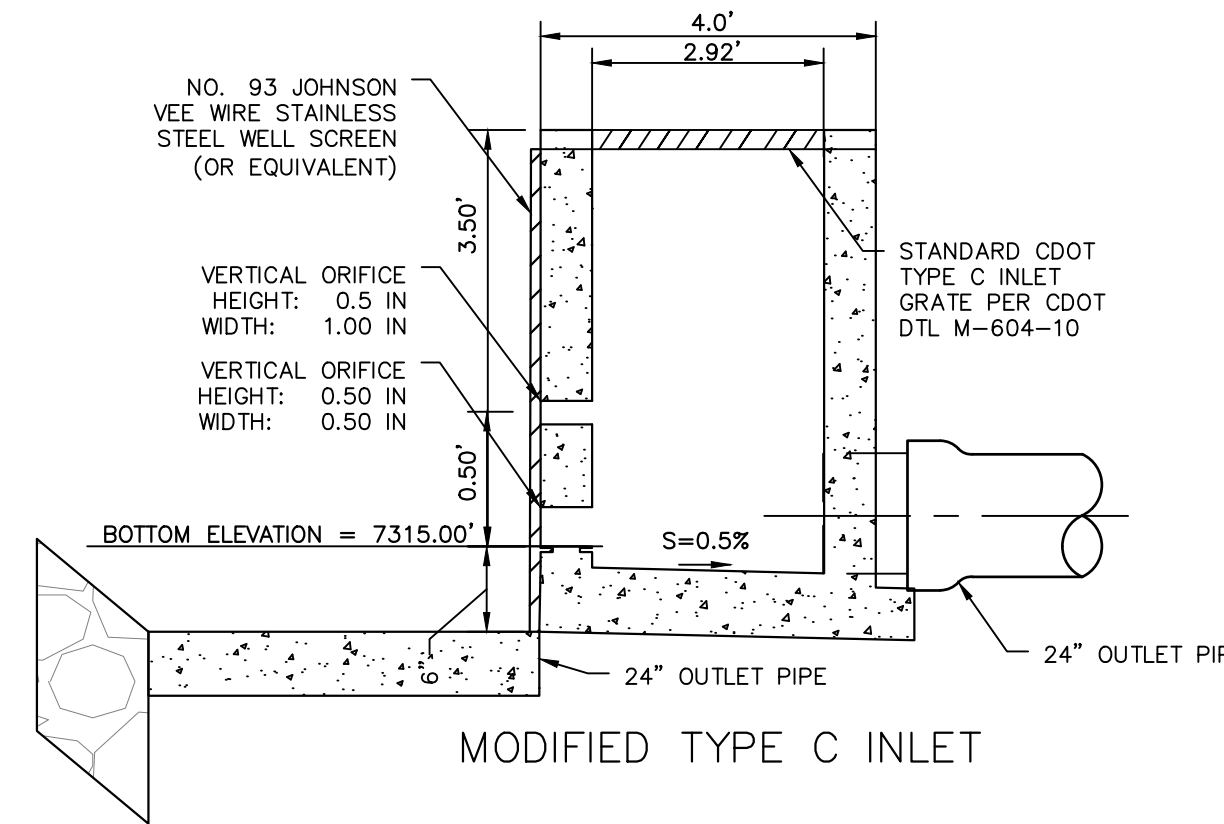
SECTION A  
N.T.S.



SECTION B  
N.T.S.

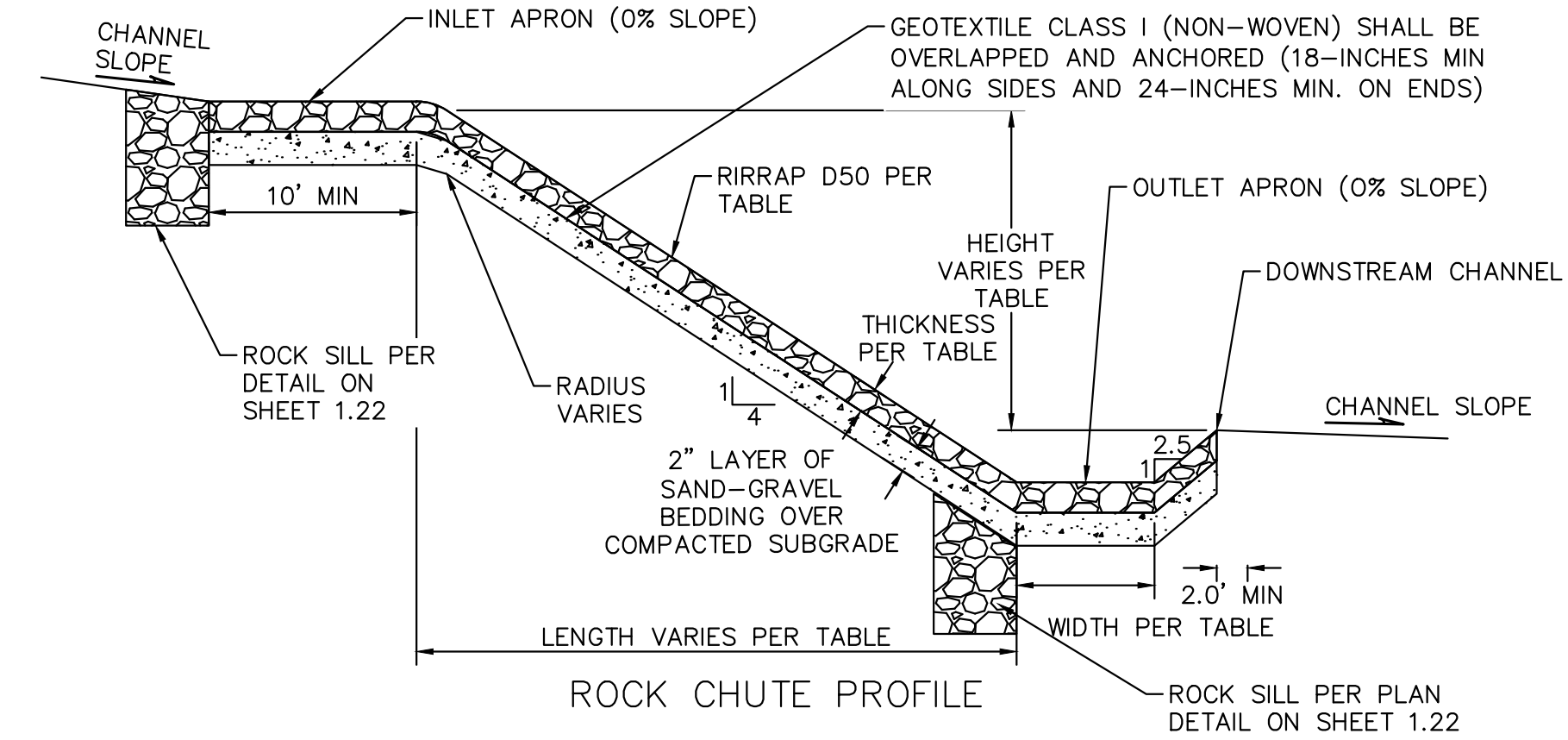


MODIFIED TYPE C INLET- PLAN VIEW

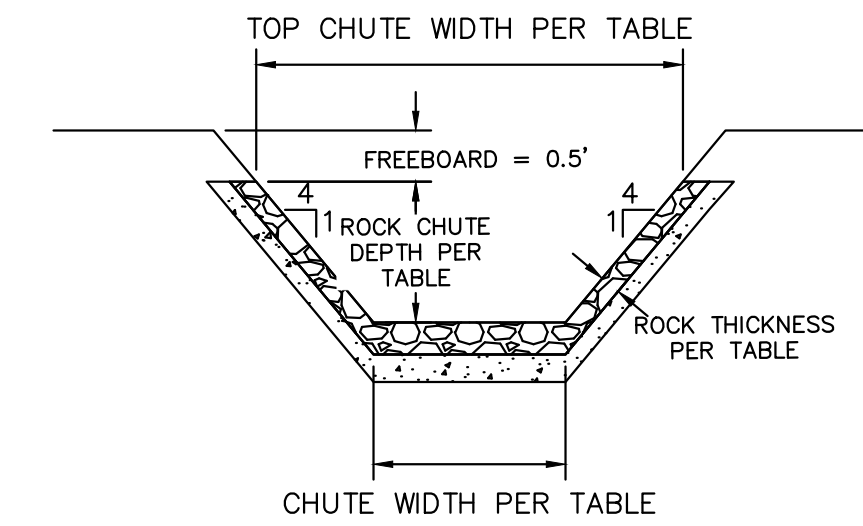


MODIFIED TYPE C INLET

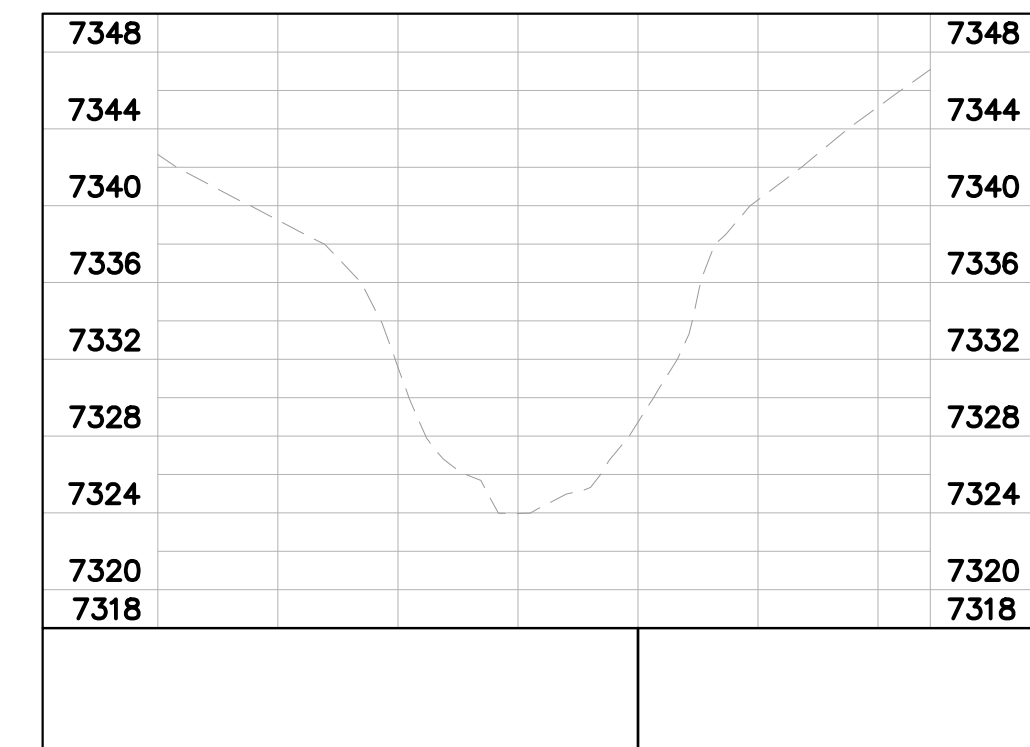
Rock Chute ID	Channel Location	Flow (cfs)	Upstream Inlet Apron Length (ft)	Drop (ft) (Inlet Apron to Outlet Apron)	Chute Length (ft)	Downstream Outlet Apron Length (ft)	Chute Width (ft)	D50 (in)	Rock Chute Thickness (in)	Radius (ft)	Min Rock Chute Depth (ft)	Rock Chute Depth (ft)	Top Chute Width (ft)
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2	H1	45	10	7.5	35	14	12	12	24	33	1.09	1.50	28
3	H4	17	10	14.5	64	8	12	9	18	25	0.58	1.50	28
5	H5B	29	10	10	47	18	4	18	36	50	1.54	2.00	20
7	H3	58	10	6.5	31	15	12	18	36	50	1.27	1.50	28
8	H3	58	10	4.5	24	15	12	18	36	50	1.27	1.50	28



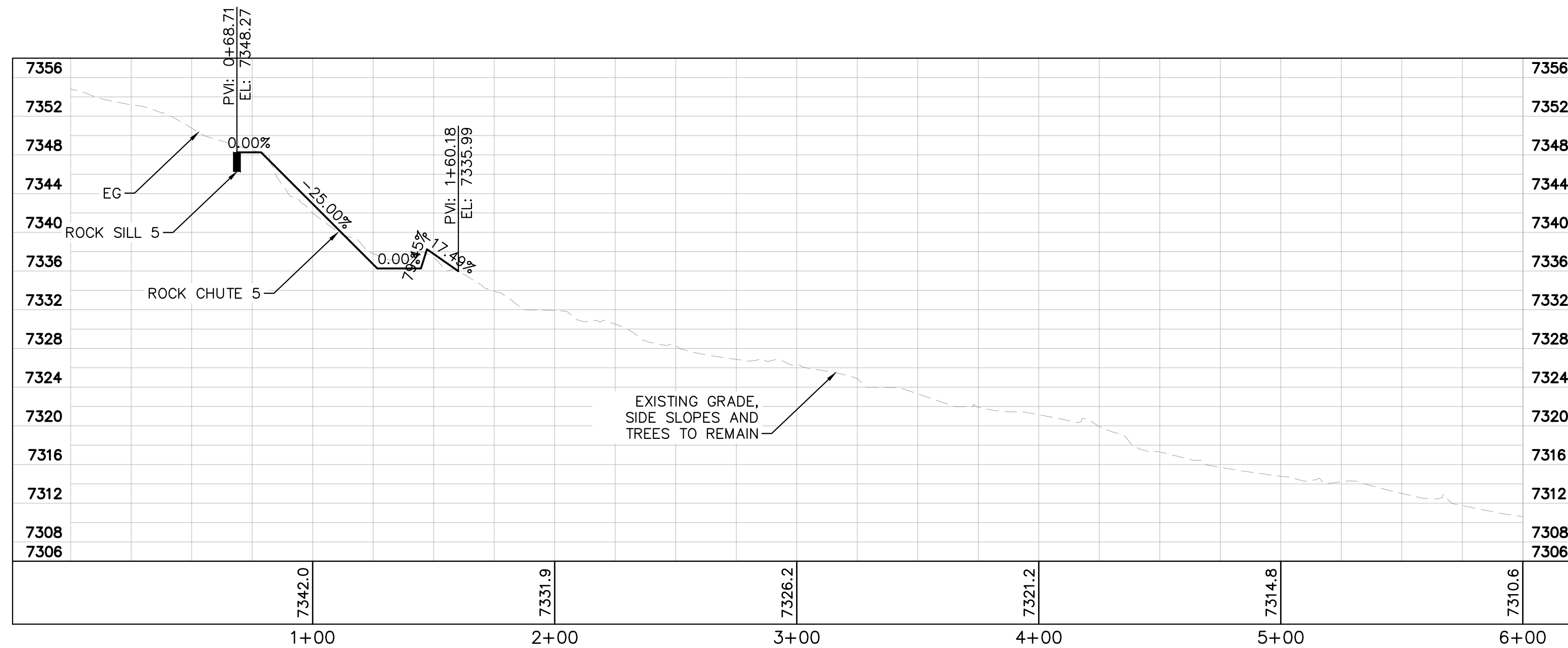
ROCK CHUTE PROFILE



ROCK CHUTE CROSS SECTION



CROSS SECTION A-A



REACH H5B CENTERLINE PROFILE

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DATE: 9/3/2021

WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HEADCUTTING EXHIBIT REACH H5B

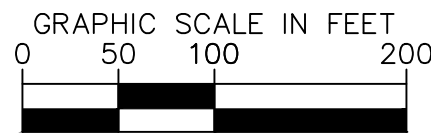
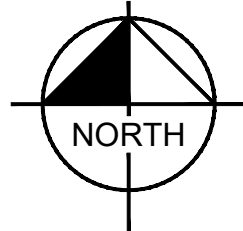
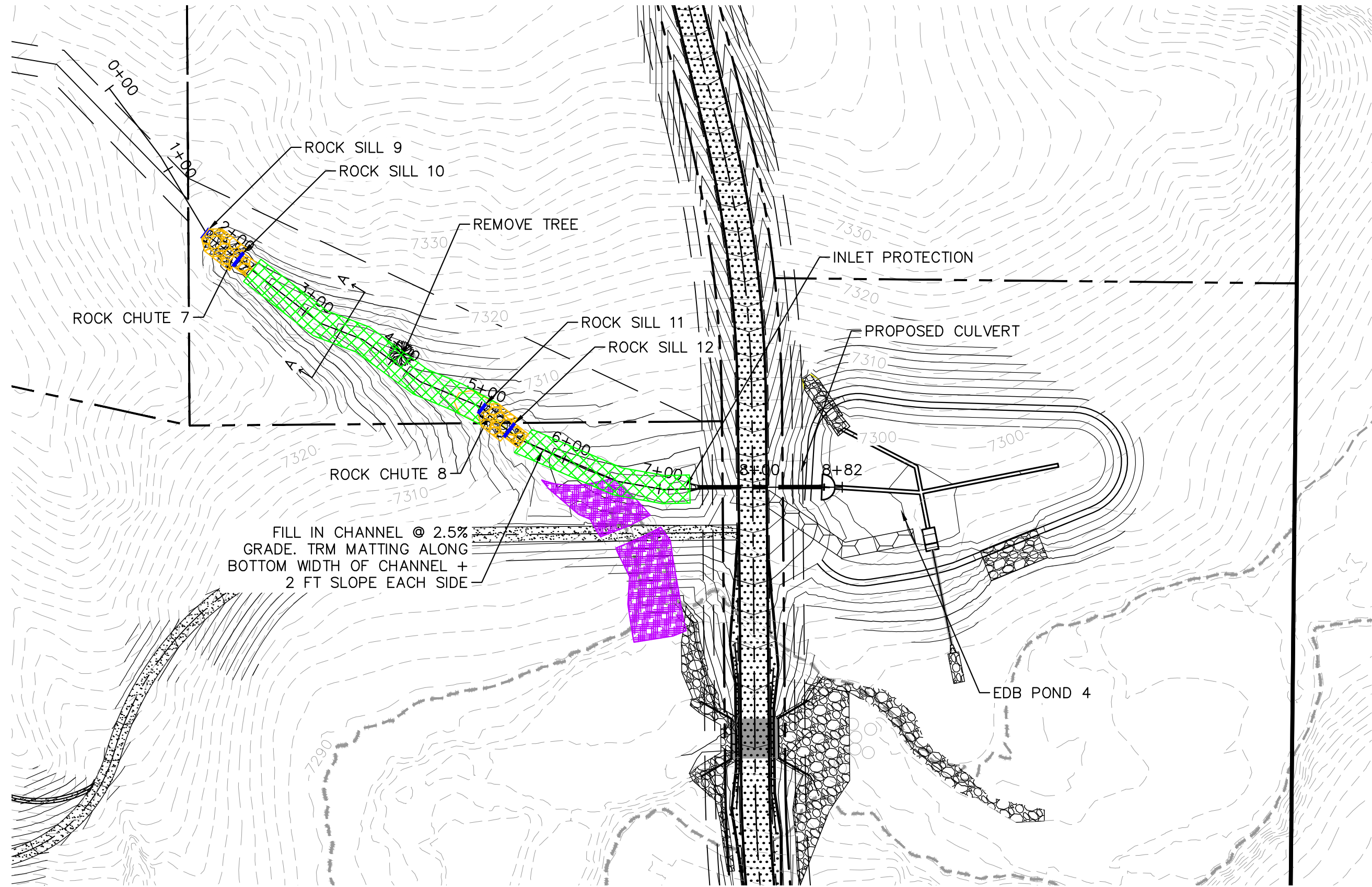


PROJECT NO.  
196106001

SHEET

1.20

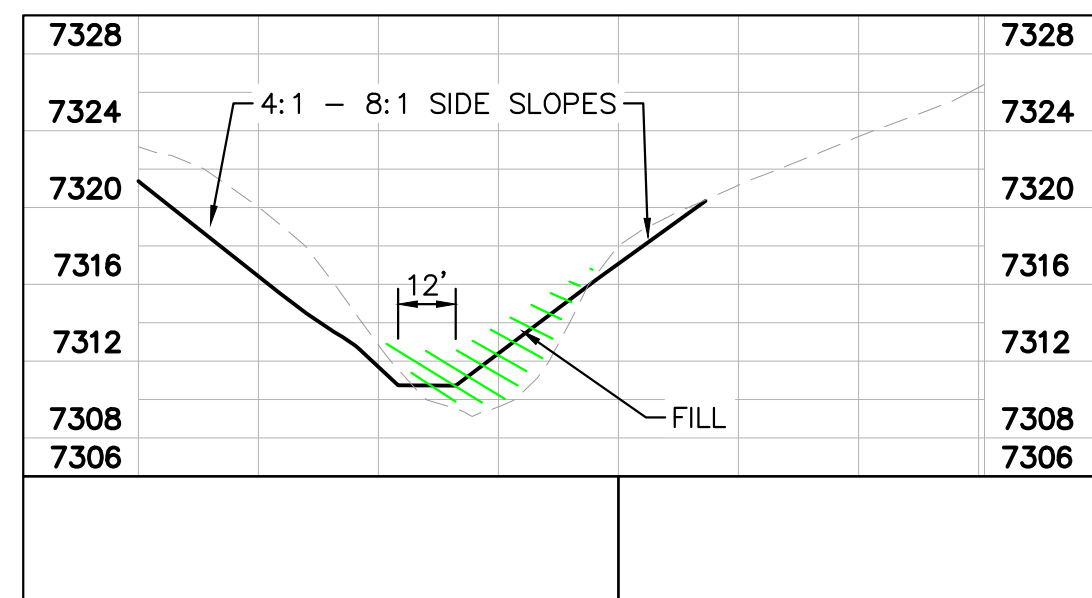
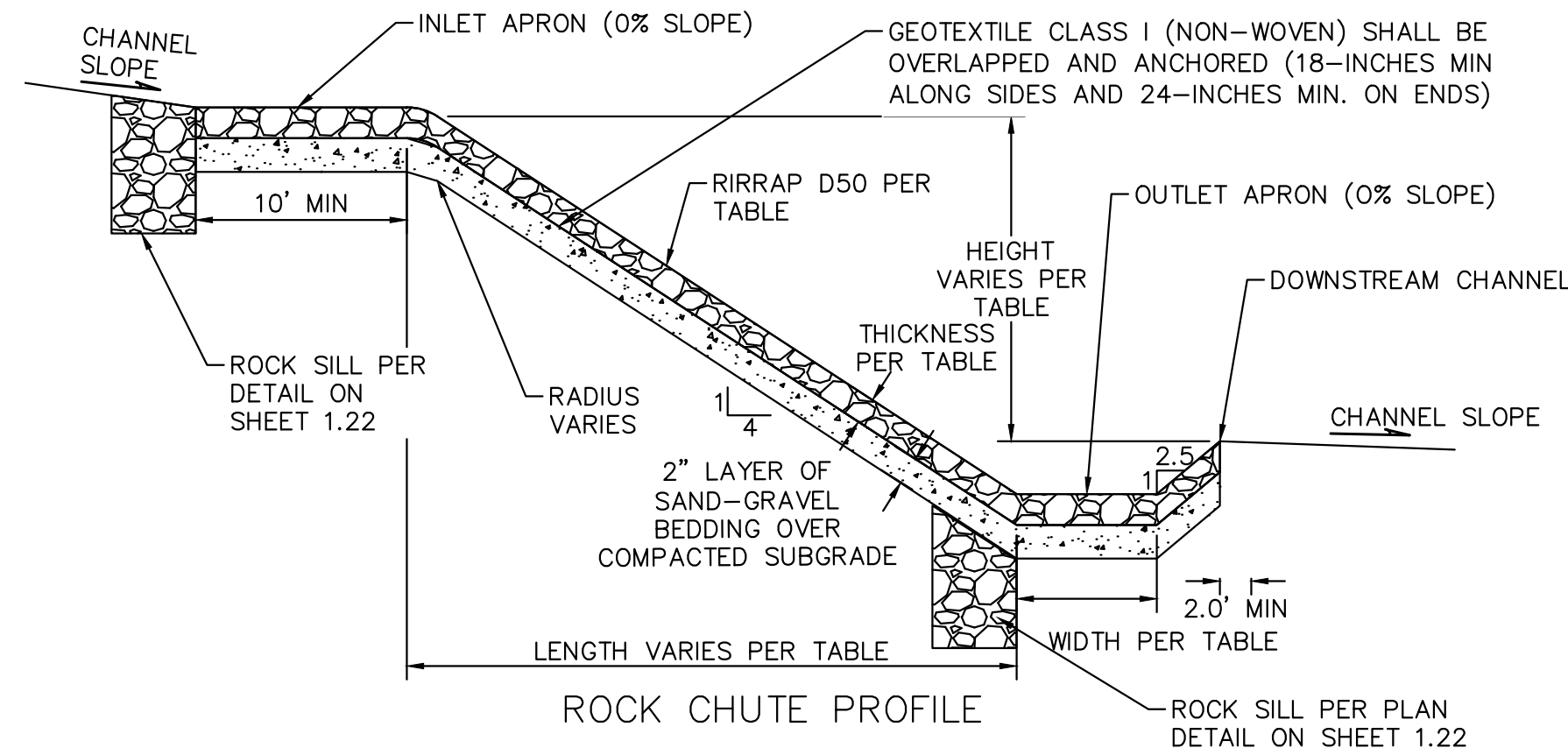
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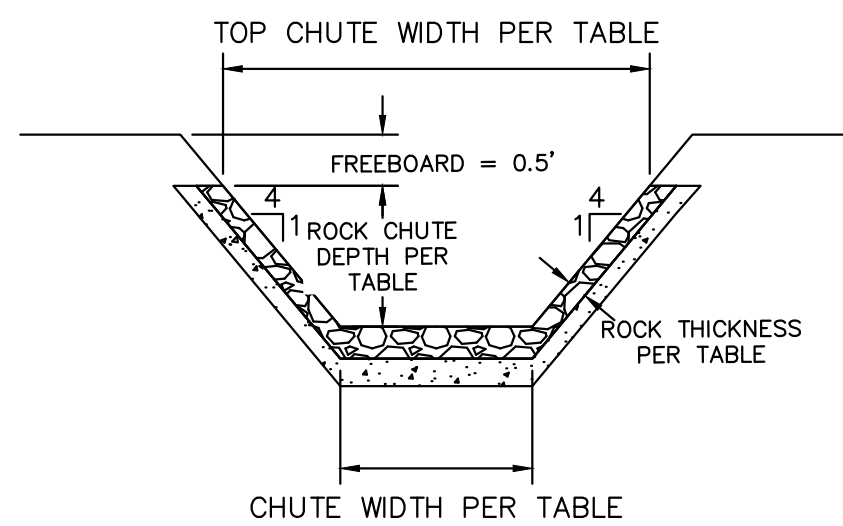
H3 HEADCUTTING MAIN CHANNEL

LEGEND

- REGRADE AREA TO VEGETATED SWALE VEGETATION W/ EXCEL PP5-12 TURF REINFORCEMENT MAT (TRM) OR APPROVED EQUAL (BIODEGRADABLE) ~2.0% SLOPES
- ROCK CHUTE 4:1 MAX SLOPES
- ROCK SILL
- CHANNEL PLUG/ BACKFILL ABANDONED CHANNEL

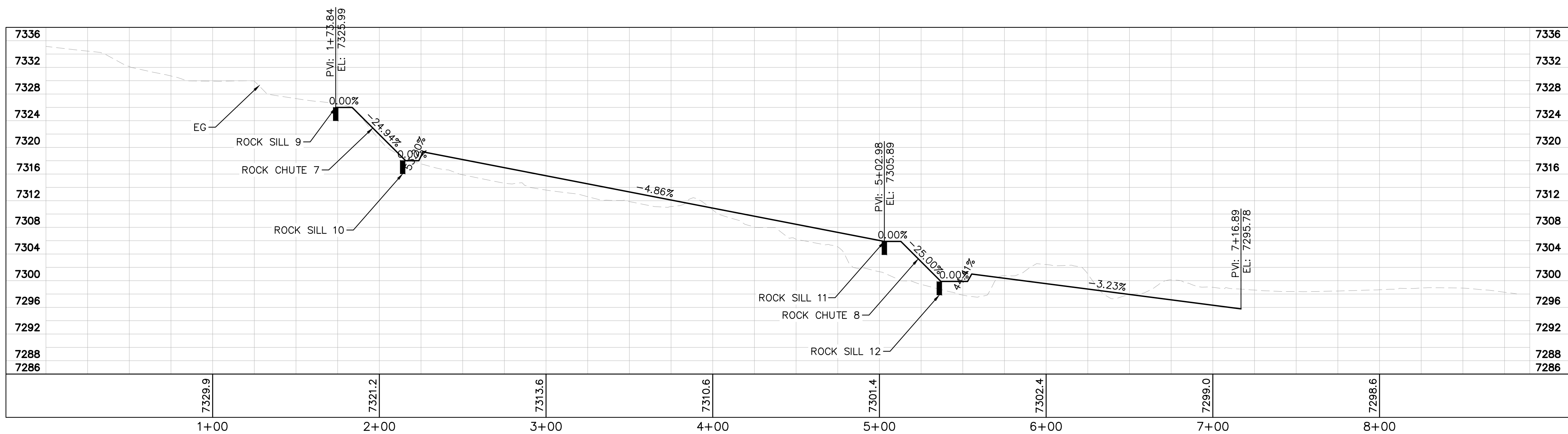


CROSS SECTION A-A



ROCK CHUTE CROSS SECTION

Rock Chute ID	Channel Location	Flow (cfs)	Upstream Inlet Apron Length (ft)	Drop (ft) (Inlet Apron to Outlet Apron)	Chute Length (ft)	Downstream Outlet Apron Length (ft)	Chute Width (ft)	D50 (in)	Rock Chute Thickness (in)	Radius (ft)	Min Rock Chute Depth (ft)	Rock Chute Depth (ft)	Top Chute Width (ft)
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2	H1	45	10	7.5	35	14	12	12	24	33	1.09	1.50	28
3	H4	17	10	14.5	64	8	12	9	18	25	0.58	1.50	28
5	HSB	29	10	10	47	18	4	18	36	50	1.54	2.00	20
7	H3	58	10	6.5	31	15	12	18	36	50	1.27	1.50	28
8	H3	58	10	4.5	24	15	12	18	36	50	1.27	1.50	28



REACH H3 CENTERLINE PROFILE



Know what's below.  
Call before you dig.



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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HEADCUTTING EXHIBIT REACH H3



PROJECT NO.  
196106001

SHEET

1.21

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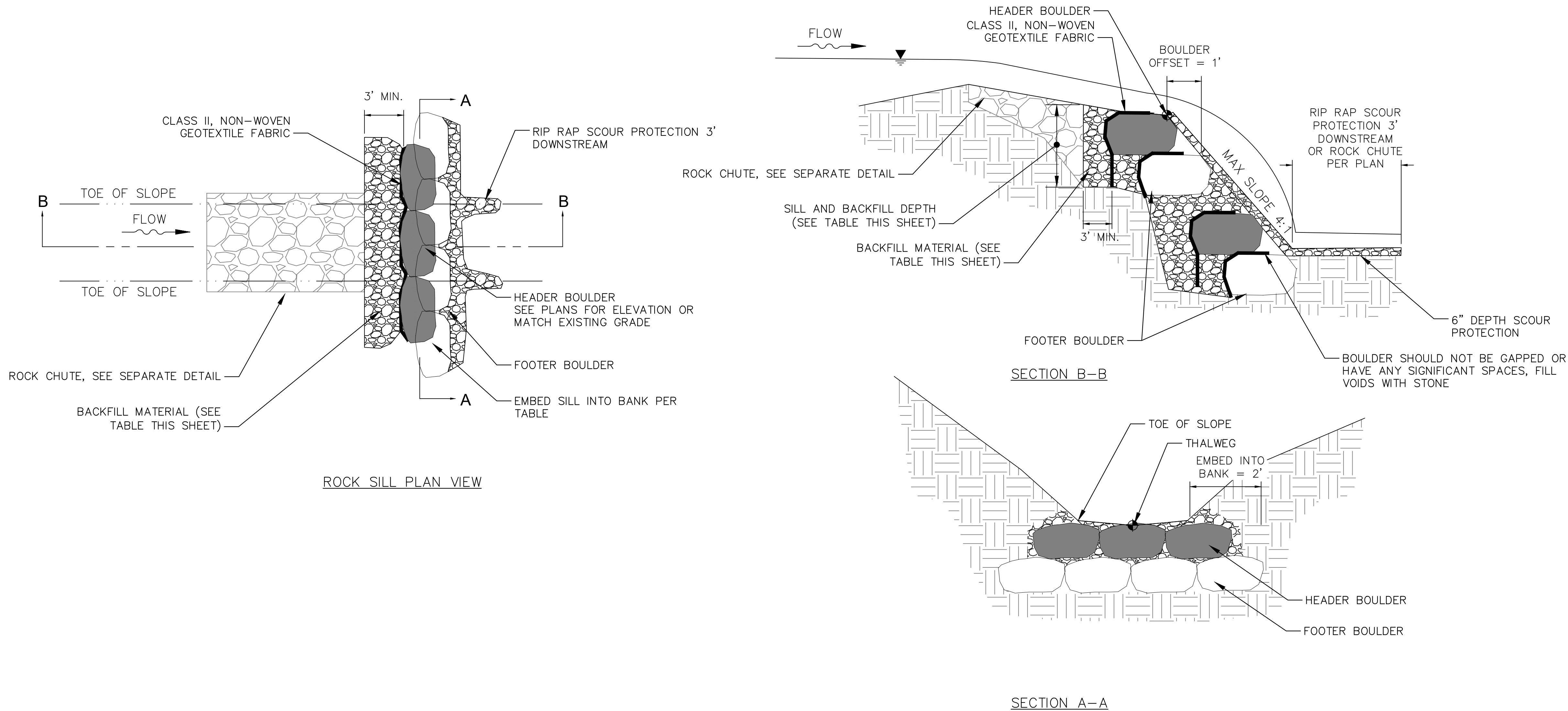


**NOTES:**

1. A BOULDER SILL MAY BE USED ALONE OR IN COMBINATION WITH A ROCK CHUTE.
2. NO PART OF THE SILL SHALL BE PLACED ABOVE THE ELEVATION OF THE UPSTREAM AND/OR ADJACENT CHANNEL BED.
3. A FOOTER BOULDER IS NOT REQUIRED IF THE HEADER BOULDER DEPTH EXCEEDS SPECIFIED SILL DEPTH.
4. THE ROCK SILL IS GENERALLY CONSTRUCTED AS FOLLOWS:
  - A. OVER-EXCAVATE CHANNEL BED TO A DEPTH EQUAL TO THE TOTAL THICKNESS OF THE HEADER AND FOOTER BOULDERS.
  - B. PLACE FOOTER BOULDERS. THERE SHALL BE NO GAPS BETWEEN BOULDERS.
  - C. INSTALL FILTER FABRIC.
  - D. PLACE BACKFILL MATERIAL BEHIND THE FOOTER BOULDERS.
  - E. INSTALL HEADER BOULDERS ON TOP OF AND SET SLIGHTLY BACK FROM THE FOOTER BOULDERS (SUCH THAT PART OF THE HEADER BOULDER IS RESTING ON THE BACKFILL MATERIAL). HEADER BOULDERS SHALL SPAN THE SEAMS OF THE FOOTER BOULDERS. THERE SHALL NOT BE A SEAM IN THE CENTER OF THE STREAM BED (AT THE THALWEG). THERE SHALL BE NO GAPS BETWEEN BOULDERS OR THALWEG SEAM BETWEEN HEADERS.
  - F. PLACE BACKFILL MATERIAL BEHIND HEADER BOULDERS ENSURING THAT ANY VOIDS BETWEEN THE BOULDERS ARE FILLED.

DESIGN VARIABLES	
BOULDER DIMENSIONS	24" MIN
BACKFILL MATERIAL <sup>1</sup>	D50 = 9"
SILL AND BACKFILL DEPTH	5'
EMBEDDED LENGTH INTO BANK	2'

<sup>1</sup> WELL MIXED GRADATION, 80% STONE, AND 20% EARTH) OF THE SPECIFIED MATERIALS:  
D50 = 9", D\_MAX = 18", D\_MIN = 2".



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WINSOME FILING NO. 3  
EL PASO COUNTY, COLORADO  
CONSTRUCTION DOCUMENTS  
HEADCUTTING EXHIBIT DETAILS



PROJECT NO.  
196106001

SHEET  
1.22