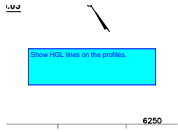


# Roadway Plans\_V1.pdf Markup Summary

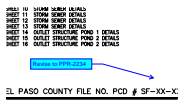
7/14/2022 1:25:26 PM (1)



**Subject:** Text Box  
**Page Label:** 8  
**Author:** lpackman  
**Date:** 7/14/2022 1:25:26 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Show HGL lines on the profiles.

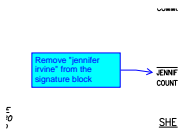
7/14/2022 11:59:44 AM (1)



**Subject:** Callout  
**Page Label:** 1  
**Author:** lpackman  
**Date:** 7/14/2022 11:59:44 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Revise to PPR-2234

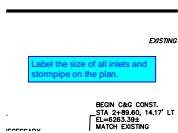
7/14/2022 12:00:12 PM (1)



**Subject:** Callout  
**Page Label:** 1  
**Author:** lpackman  
**Date:** 7/14/2022 12:00:12 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Remove "jennifer irvine" from the signature block

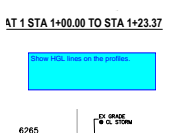
7/14/2022 12:04:10 PM (1)



**Subject:** Text Box  
**Page Label:** 4  
**Author:** lpackman  
**Date:** 7/14/2022 12:04:10 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Label the size of all inlets and stormpipe on the plan.

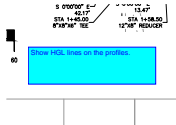
7/14/2022 12:46:57 PM (1)



**Subject:** Text Box  
**Page Label:** 6  
**Author:** lpackman  
**Date:** 7/14/2022 12:46:57 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Show HGL lines on the profiles.

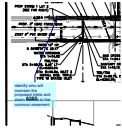
7/14/2022 12:52:00 PM (1)



**Subject:** Text Box  
**Page Label:** 7  
**Author:** lpackman  
**Date:** 7/14/2022 12:52:00 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Show HGL lines on the profiles.

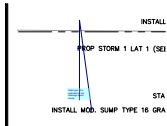
7/18/2022 8:44:27 PM (1)



**Subject:** Callout  
**Page Label:** 6  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:44:27 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

identify who will maintain the proposed inlets and storm sewers in the common easement

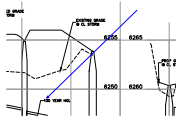
7/18/2022 8:47:01 PM (1)



**Subject:** Callout  
**Page Label:** 6  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:47:01 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

triple type 16 is indicated on the drainage report. revise.

7/18/2022 8:49:21 PM (1)



**Subject:** Arrow  
**Page Label:** 6  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:49:21 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

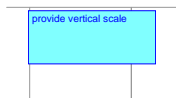
7/18/2022 8:50:09 PM (1)



**Subject:** Text Box  
**Page Label:** 6  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:50:09 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Typical at all storm profiles.

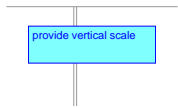
7/18/2022 8:51:57 PM (1)



**Subject:** Text Box  
**Page Label:** 6  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:51:57 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide vertical scale

7/18/2022 8:55:03 PM (1)



**Subject:** Text Box  
**Page Label:** 7  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:55:03 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide vertical scale

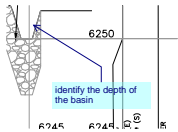
7/18/2022 8:56:50 PM (1)



**Subject:** Callout  
**Page Label:** 8  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:56:50 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

18" identified on the drainage plan. Revise accordingly.

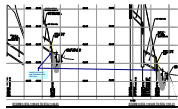
7/18/2022 8:58:14 PM (1)



**Subject:** Callout  
**Page Label:** 7  
**Author:** Daniel Torres  
**Date:** 7/18/2022 8:58:14 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

identify the depth of the basin

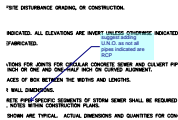
7/18/2022 9:00:41 PM (1)



**Subject:** Callout  
**Page Label:** 8  
**Author:** Daniel Torres  
**Date:** 7/18/2022 9:00:41 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

identify the cut-off wall indicated in the GEC plan

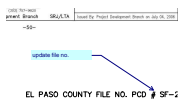
7/18/2022 9:03:31 PM (1)



**Subject:** Callout  
**Page Label:** 9  
**Author:** Daniel Torres  
**Date:** 7/18/2022 9:03:31 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

suggest adding U.N.O. as not all pipes indicated are RCP

7/18/2022 9:05:35 PM (1)



**Subject:** Callout  
**Page Label:** 10  
**Author:** Daniel Torres  
**Date:** 7/18/2022 9:05:35 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

update file no.

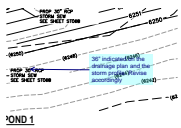
7/18/2022 9:06:09 PM (1)



**Subject:** Cloud+  
**Page Label:** 12  
**Author:** Daniel Torres  
**Date:** 7/18/2022 9:06:09 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

update

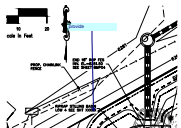
7/18/2022 9:09:33 PM (1)



**Subject:** Callout  
**Page Label:** 14  
**Author:** Daniel Torres  
**Date:** 7/18/2022 9:09:33 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

36" indicated on the drainage plan and the storm profile. Revise accordingly

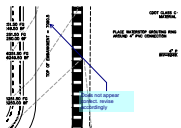
7/19/2022 6:02:25 AM (1)



**Subject:** Callout  
**Page Label:** 14  
**Author:** Daniel Torres  
**Date:** 7/19/2022 6:02:25 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide

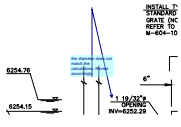
7/19/2022 6:05:44 AM (1)



**Subject:** Callout  
**Page Label:** 14  
**Author:** Daniel Torres  
**Date:** 7/19/2022 6:05:44 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

Does not appear correct. revise accordingly

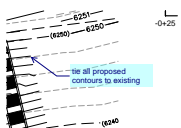
7/19/2022 6:43:53 AM (1)



**Subject:** Callout  
**Page Label:** 14  
**Author:** Daniel Torres  
**Date:** 7/19/2022 6:43:53 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

the diameter does not match the calculations. Revise accordingly.

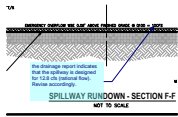
7/19/2022 6:46:45 AM (1)



**Subject:** Callout  
**Page Label:** 15  
**Author:** Daniel Torres  
**Date:** 7/19/2022 6:46:45 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

tie all proposed contours to existing

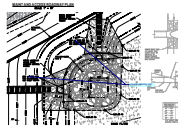
7/19/2022 6:50:10 AM (1)



**Subject:** Callout  
**Page Label:** 15  
**Author:** Daniel Torres  
**Date:** 7/19/2022 6:50:10 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

the drainage report indicates that the spillway is designed for 12.8 cfs (rational flow). Revise accordingly.

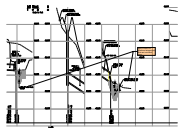
7/19/2022 6:53:18 AM (1)



**Subject:** Callout  
**Page Label:** 16  
**Author:** Daniel Torres  
**Date:** 7/19/2022 6:53:18 AM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide missing info

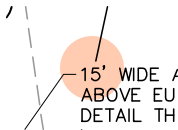
7/20/2022 2:52:05 PM (1)



**Subject:** Engineer  
**Page Label:** 8  
**Author:** dotprete  
**Date:** 7/20/2022 2:52:05 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

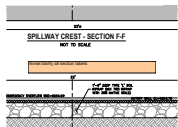
clarify if there is a difference between soil filled and void filled riprap

7/20/2022 2:58:19 PM (1)



**Subject:** Engineer  
**Page Label:** 16  
**Author:** dotprete  
**Date:** 7/20/2022 2:58:19 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

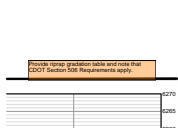
7/20/2022 3:01:09 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:01:09 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

revise/clarify all section labels

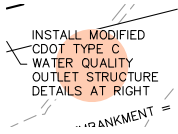
7/20/2022 3:03:58 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:03:58 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

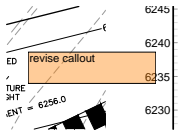
Provide riprap gradation table and note that CDOT Section 506 Requirements apply.

7/20/2022 3:04:23 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:04:23 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

7/20/2022 3:04:31 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:04:31 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

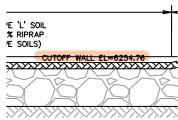
revise callout

7/20/2022 3:16:25 PM (1)



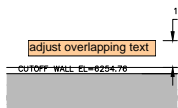
**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:16:25 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

7/20/2022 3:16:35 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:16:35 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

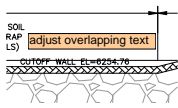
7/20/2022 3:16:54 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:16:54 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

adjust overlapping text

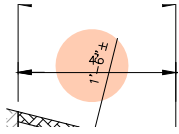
7/20/2022 3:16:59 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:16:59 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

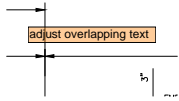
adjust overlapping text

7/20/2022 3:17:11 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:17:11 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

7/20/2022 3:17:16 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:17:16 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

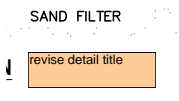
adjust overlapping text

7/20/2022 3:18:16 PM (1)



**Subject:** Engineer  
**Page Label:** 15  
**Author:** dotprete  
**Date:** 7/20/2022 3:18:16 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

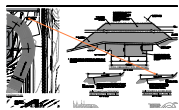
7/20/2022 3:23:45 PM (1)



**Subject:** Engineer  
**Page Label:** 16  
**Author:** dotprete  
**Date:** 7/20/2022 3:23:45 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

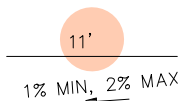
revise detail title

7/20/2022 3:24:00 PM (1)



**Subject:** Arrow  
**Page Label:** 16  
**Author:** dotprete  
**Date:** 7/20/2022 3:24:00 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

7/20/2022 3:24:02 PM (1)

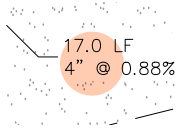


**Subject:** Engineer  
**Page Label:** 16  
**Author:** dotprete  
**Date:** 7/20/2022 3:24:02 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

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7/20/2022 3:25:17 PM (1)

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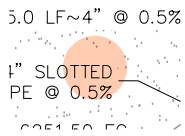


**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:25:17 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

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7/20/2022 3:25:23 PM (1)

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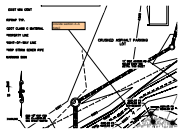


**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:25:23 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

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7/20/2022 3:26:59 PM (1)

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**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:26:59 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide section A-A detail

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7/20/2022 3:27:38 PM (1)

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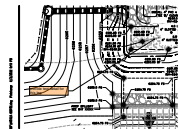
**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:27:38 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

adjust linetype to clearly identify slotted PVC pipe locations

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7/20/2022 3:28:44 PM (1)

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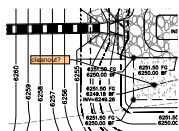
**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:28:44 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

provide text detail for this leg

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7/20/2022 3:32:51 PM (1)

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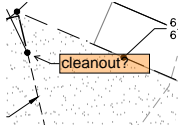


**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:32:51 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

cleanout?



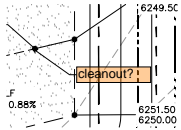
7/20/2022 3:33:02 PM (1)



**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:33:02 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

cleanout?

7/20/2022 3:33:08 PM (1)



**Subject:** Engineer  
**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:33:08 PM  
**Status:**  
**Color:** ■  
**Layer:**  
**Space:**

cleanout?

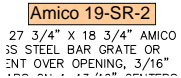
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**Page Label:** 14  
**Author:** dotprete  
**Date:** 7/20/2022 3:33:41 PM  
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90 degree cleanout is difficult for maintenance, consider moving cleanouts to end of pipes and installing 3 way tees here

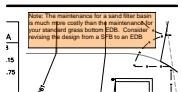
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Amico 19-SR-2

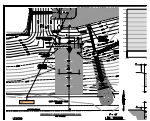
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**Date:** 7/20/2022 4:00:13 PM  
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**Space:**

Note: The maintenance for a sand filter basin is much more costly than the maintenance for your standard grass bottom EDB. Consider revising the design from a SFB to an EDB

7/20/2022 4:04:57 PM (1)



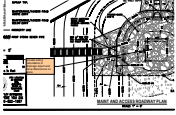
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include dimensions on plans

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7/20/2022 4:05:25 PM (1)

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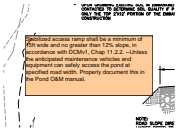
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**Space:**

provide sizing calculations in drainage report and show dimensions on plans

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7/20/2022 4:27:59 PM (1)

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**Subject:** Engineer  
**Page Label:** 16  
**Author:** dotprete  
**Date:** 7/20/2022 4:27:59 PM  
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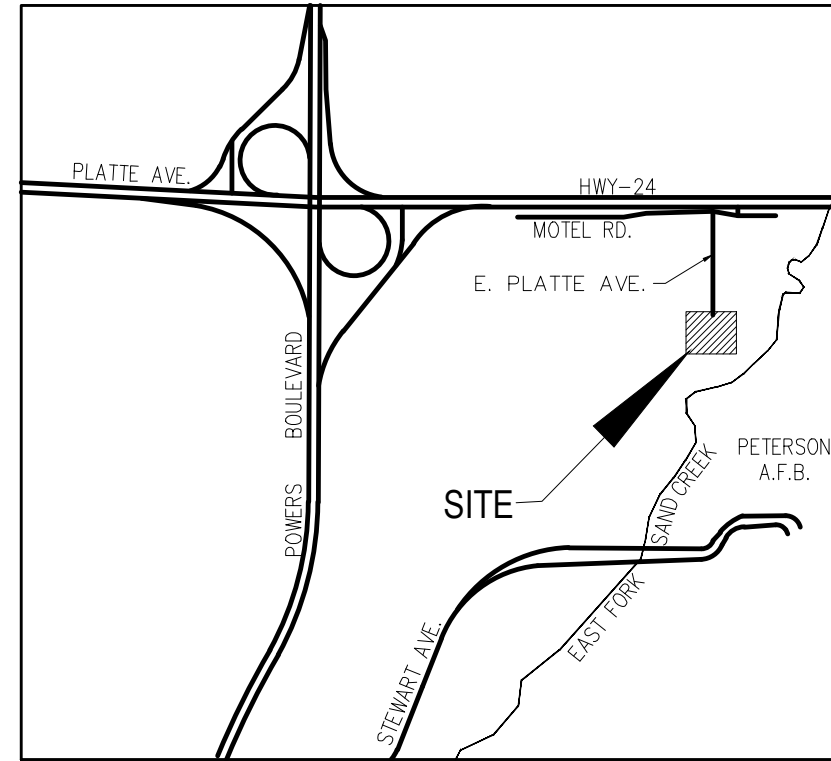
Stabilized access ramp shall be a minimum of 15ft wide and no greater than 12% slope, in accordance with DCMv1, Chap 11.2.2. --Unless the anticipated maintenance vehicles and equipment can safely access the pond at specified road width. Properly document this in the Pond O&M manual.

# CLEARWAY FILING NO. 2, LOT 5

## COUNTY OF EL PASO, STATE OF COLORADO

# CONSTRUCTION PLANS

JUNE 2022



VICINITY MAP  
N.T.S.

**AGENCIES:**

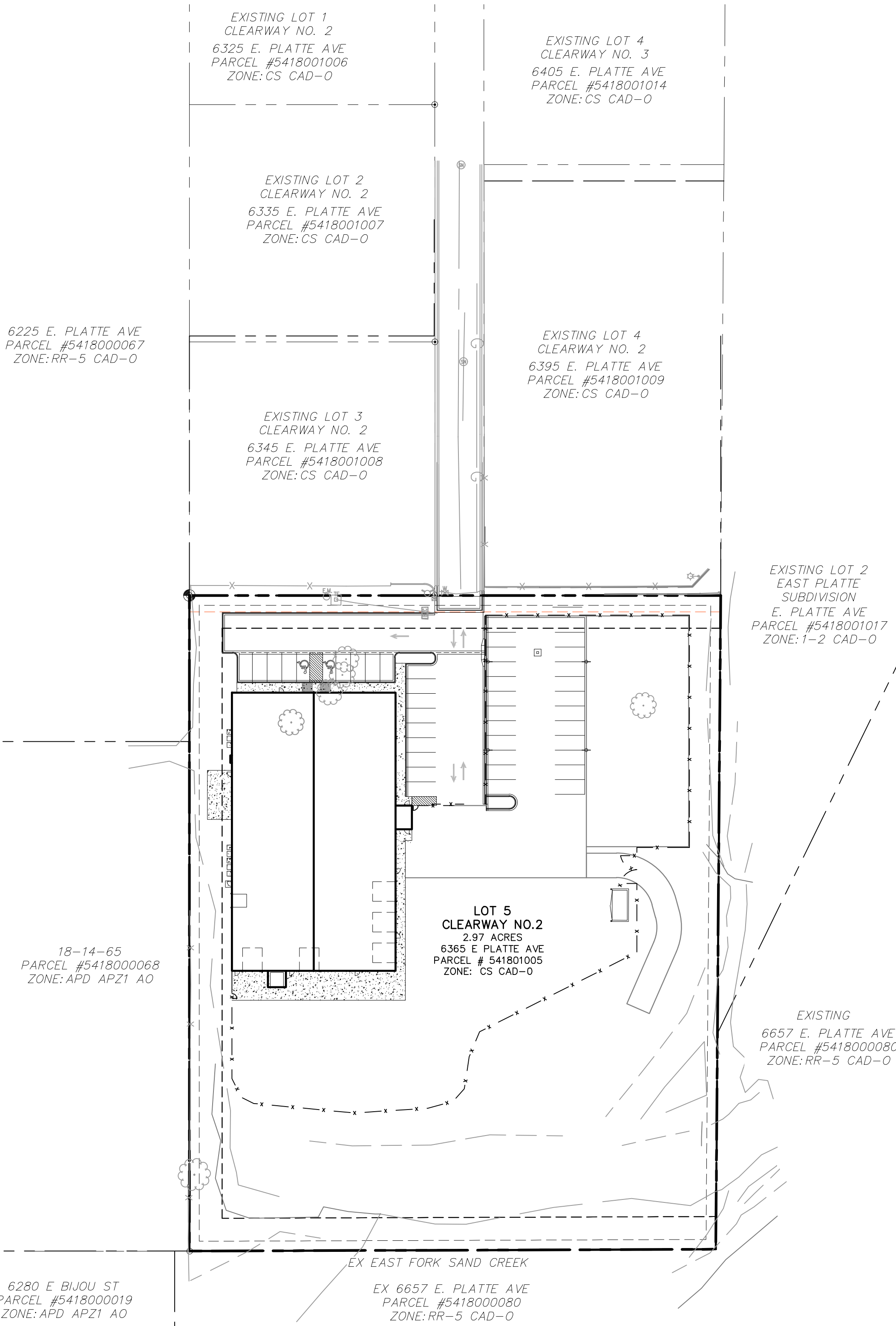
- OWNER:** WRENUT HOME SERVICES  
PO BOX 2245  
FORT COLLINS, CO 80522  
TRENT URBAN (719) 227-0500
- DEVELOPER:** HAMMERS CONSTRUCTION  
1411 WOOLSEY HEIGHTS  
COLORADO SPRINGS, CO 80915  
(719) 570-1599
- CIVIL ENGINEER:** M&S CIVIL CONSULTANTS, INC.  
212 N WAHSATCH AVENUE, SUITE 305  
COLORADO SPRINGS, CO 80903  
VIRGIL A. SANCHEZ P.E. (719) 955-5485
- COUNTY ENGINEERING:** EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT  
2880 INTERNATIONAL CIRCLE, SUITE 110  
COLORADO SPRINGS, CO 80910  
GILBERT LAFORCE, P.E. (719)-520-7945
- TRAFFIC ENGINEERING:** EL PASO COUNTY PUBLIC SERVICES & TRANS. DEPT.  
3275 AKERS DRIVE  
COLORADO SPRINGS, CO 80922  
JENNIFER IRVINE, P.E. (719) 520-6460
- FIRE DISTRICT:** OMMARRON HILLS FIRE DEPARTMENT  
1835 TUSKEGEE PLACE  
COLORADO SPRINGS, CO 80915  
(719) 591-0960
- WATER RESOURCES:** CHEROKEE METRO DISTRICT  
6250 PALMER PARK BLVD.  
COLORADO SPRINGS, CO 80915  
JEFF MUNGER (719) 597-5080
- GAS DEPARTMENT:** COLORADO SPRINGS UTILITIES  
7710 DURANT DR.  
COLORADO SPRINGS, CO 80947  
TIM WENDT (719) 668-3556
- ELECTRIC DEPARTMENT:** MOUNTAIN VIEW ELECTRIC  
11140 E. WOODMEN ROAD  
FALCON, CO 80831  
(719) 495-2283
- COMMUNICATIONS:** QWEST COMMUNICATIONS (U.N.C.C. LOCATORS) (800) 922-1987  
AT&T (LOCATORS) (719) 635-3674

**BENCHMARKS:**

- FIMS MONUMENT F81, LOCATED ON THE NORTH SIDE OF EAST PLAT AVE. 50' WEST OF FORD STREET. ELEV.=6275.86' (NAVD88)
- MUELLER BOLT ON HYDRANT FLANGE, HYDRANT LOCATED AT THE SW CORNER OF LOT 3. ELEV.=6265.48' (NAVD88)

**BASIS OF BEARINGS**

THE EASTERLY LINE OF LOTS 2 AND 3, OF "CLEARWAY NO 2" PLAT NO 10231 OF THE RECORDS OF EL PASO COUNTY, COLORADO, BEING MONUMENTED AT THE SOUTH END BY A 1.5" ALUMINUM CAP STAMPED PLS 38658, FROM WHICH A NAIL & WASHER, EL: 6267.44 BEARS N00°00'00"W, A DISTANCE OF 300.02 FEET.



SITE MAP  
N.T.S.

**DESIGN ENGINEER'S STATEMENT**

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.

VIRGIL A. SANCHEZ, COLORADO P.E. #37160  
FOR AND ON BEHALF OF M & S CIVIL CONSULTANTS, INC.

**OWNER/DEVELOPER'S STATEMENT:**

I, THE DEVELOPER HAVE READ AND WILL COMPLY WITH THE REQUIREMENTS IN THESE DETAILED PLANS AND SPECIFICATIONS.

HAMMERS CONSTRUCTION, INC. DATE

ADDRESS: 1411 WOOLSEY HEIGHTS, COLORADO SPRINGS, CO 80915

**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 DIRECTORS DISCRETION.

JENNIFER IRVINE, P.E. DATE  
COUNTY ENGINEER / ECM ADMINISTRATOR

**SHEET INDEX**

SHEET 1	TITLE SHEET
SHEET 2	CONSTRUCTION NOTES & DETAILS
SHEET 3	DEMOLITION PLAN
SHEET 4	STREET IMPROVEMENT PLAN
SHEET 5	STRIPING AND SIGNAGE PLAN
SHEET 6	STORM SEWER PLAN AND PROFILE (STM1, STM1LAT1, STM1LAT2)
SHEET 7	STORM SEWER PLAN AND PROFILE (STM2, STM3)
SHEET 8	STORM SEWER PLAN AND PROFILE (STM4, STM5, STM6)
SHEET 9	STORM SEWER NOTES AND DETAILS
SHEET 10	STORM SEWER DETAILS
SHEET 11	STORM SEWER DETAILS
SHEET 12	STORM SEWER DETAILS
SHEET 13	STORM SEWER DETAILS
SHEET 14	OUTLET STRUCTURE POND 1 DETAILS
SHEET 15	OUTLET STRUCTURE POND 2 DETAILS
SHEET 16	OUTLET STRUCTURE POND 2 DETAILS

Revise to PPR-2234

EL PASO COUNTY FILE NO. PCD # SF-XX-XXX

CLEARWAY FILING NO. 2, LOT 5		TITLE SHEET	
PROJECT NO. 44-042A		DATE: 06-02-2022	
DESIGNED BY: DIM		SCALE: HORIZONTAL: N/A	
DRAWN BY: CLP		VERTICAL: N/A	
CHECKED BY: DIM		SHEET 1 OF 15	
TS01			

**M&S CIVIL CONSULTANTS, INC.**

212 N. WAHSATCH AVE., STE 305  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.	VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160
--	--

REVISIONS:	DATE:
NO.	DATE
BY:	DESCRIPTION:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARE OF THESE PLANS.

CAUTION

File: 0:\44042A-Wre Nut\Hammers\Const\Draw\Street\44042A-S01.dwg Plotstamp: 6/3/2022 5:30 PM

**GENERAL CONSTRUCTION NOTES:**

- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE AND LOCATION OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK. THE OMISSION FROM OR THE INCLUSION OF UTILITY LOCATIONS ON THE PLANS IS NOT TO BE CONSIDERED AS THE NONEXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UNDERGROUND UTILITIES.
- THE CONTRACTOR WILL TAKE THE NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES FROM DAMAGE DUE TO THIS OPERATION. ANY DAMAGE TO THE UTILITIES WILL BE REPAIRED AT THE CONTRACTOR'S EXPENSE, AND ANY SERVICE DISRUPTION WILL BE SETTLED BY THE CONTRACTOR.
- ADDITIONAL EROSION CONTROL STRUCTURES MAY BE REQUIRED AT THE TIME OF CONSTRUCTION.
- ALL BACKFILL, SUB-BASE, AND/OR BASE COURSE (CLASS 6) MATERIAL SHALL BE COMPACTED PER THE SOILS ENGINEER'S RECOMMENDATIONS, AND APPROVED BY EL PASO COUNTY PCD.
- ALL STATIONING IS CENTERLINE OF IMPROVEMENTS UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE INDICATED AS TOP BACK OF CURB (TBC), ASPHALT (ASP), OR TOP OF INLET OR BOX (TOB).
- ALL DISTURBED PAVEMENT EDGES SHALL BE CUT TO NEAT LINES. REPAIR SHALL CONFORM TO EPC ECM APPENDIX K - 1.2C.
- ALL INTERSECTION ACCESSES TO BE CONSTRUCTED WITH A 25 FOOT SIGHT VISIBILITY TRIANGLES IS REQUIRED AND THERE SHALL BE NO OBSTRUCTIONS GREATER THAN 18" VERTICAL IN THIS AREA.
- ALL CULVERTS AND STORM DRAIN PIPES SHALL BE SMOOTH INTERIOR CORRUGATED POLYETHYLENE PIPE (HDPE), REINFORCED CONCRETE PIPE (RCP). ALL CULVERTS SHALL BE PLACED COMPLETE WITH FLARED END SECTIONS. ADEQUACY OF MATERIAL THICKNESS FOR ANY CSP INSTALLED SHALL BE VERIFIED BY OWNER'S GEOTECHNICAL ENGINEER TO SUPPORT MINIMUM 50 YEAR DESIGN LIFE. CULVERTS MUST CONFORM TO EPC ECM SECTION 3.32 - CULVERTS.
- ASPHALT THICKNESS AND BASE COURSE THICKNESS (COMPACTED) FOR ROADS SHALL BE PER DESIGN REPORT BY OWNER'S GEOTECHNICAL ENGINEER. OWNER'S GEOTECHNICAL ENGINEER TO BE ON SITE AT THE TIME OF ROAD CONSTRUCTION TO EVALUATE SOIL CONDITIONS AND DETERMINE IF ADDITIONAL MEASURES ARE NECESSARY TO ASSURE STABILITY OF THE NEW ROADS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO CONSTRUCTION.

**STANDARD NOTES FOR EL PASO COUNTY CONSTRUCTION PLANS**

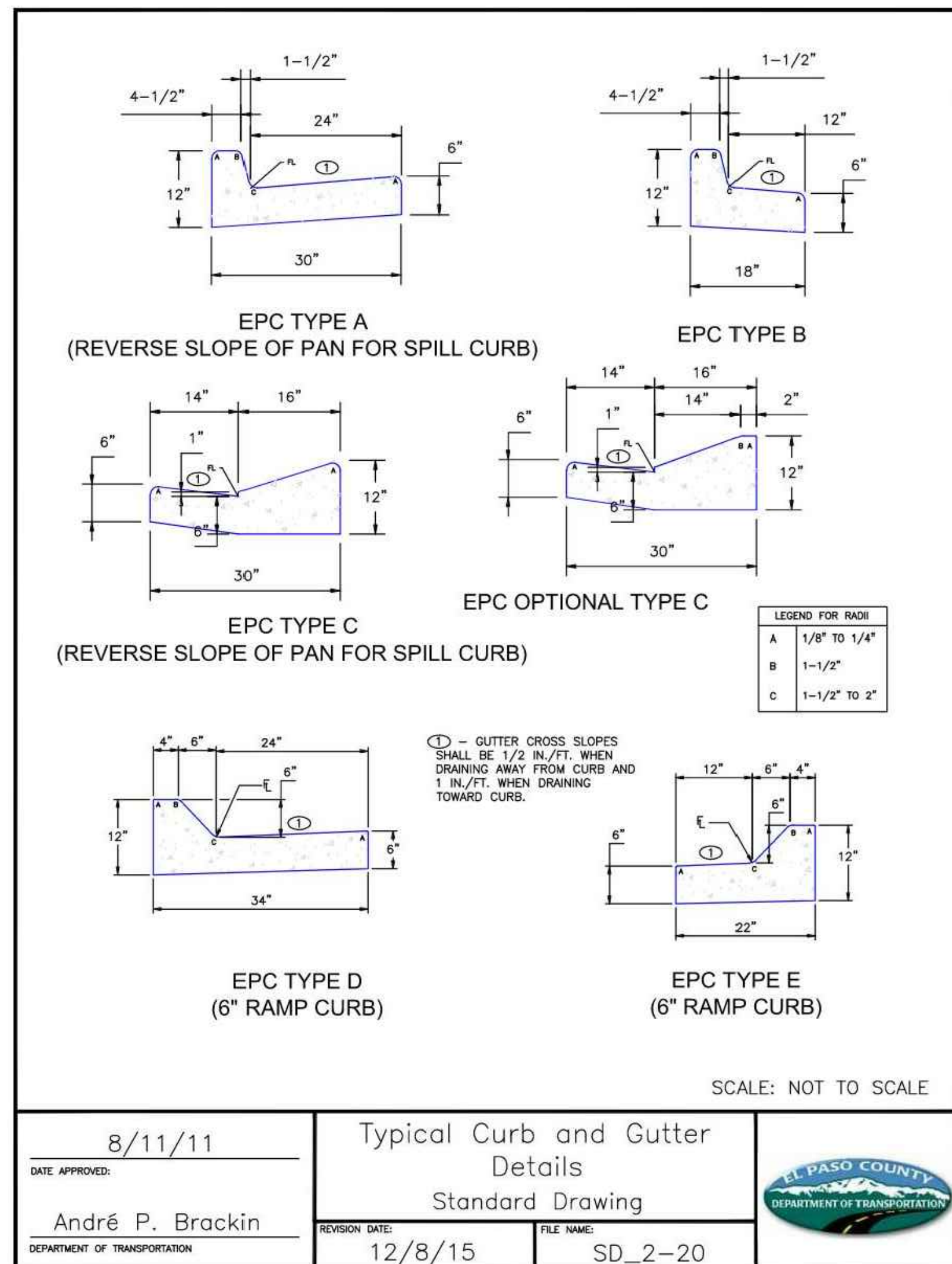
- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD NOTIFICATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT, AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIMES, INCLUDING THE FOLLOWING:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL, VOLUMES 1 AND 2
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
  - CDOT M & S STANDARDS
- NOTWITHSTANDING ANYTHING DEPICTED IN THESE PLANS IN WORDS OR GRAPHIC REPRESENTATION, ALL DESIGN AND CONSTRUCTION RELATED TO ROADS, STORM DRAINAGE AND EROSION CONTROL SHALL CONFORM TO THE STANDARDS AND REQUIREMENTS OF THE MOST RECENT VERSION OF THE RELEVANT ADOPTED EL PASO COUNTY STANDARDS, INCLUDING THE LAND DEVELOPMENT CODE, THE ENGINEERING CRITERIA MANUAL, THE DRAINAGE CRITERIA MANUAL, AND THE DRAINAGE CRITERIA MANUAL VOLUME 2. ANY DEVIATIONS FROM REGULATIONS AND STANDARDS MUST BE REQUESTED, AND APPROVED, IN WRITING. ANY MODIFICATIONS NECESSARY TO MEET CRITERIA AFTER-THE-FACT WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- IT IS THE DESIGN ENGINEER'S RESPONSIBILITY TO ACCURATELY SHOW EXISTING CONDITIONS, BOTH ONSITE AND OFFSITE, ON THE CONSTRUCTION PLANS. ANY MODIFICATIONS NECESSARY DUE TO CONFLICTS, OMISSIONS, OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPER'S RESPONSIBILITY TO RECTIFY.
- CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING WITH EL PASO COUNTY PCD - INSPECTIONS, PRIOR TO STARTING CONSTRUCTION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORMWATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, U.S. ARMY CORPS OF ENGINEERS-ISSUED 401 AND/OR 404 PERMITS, AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE DESIGN ENGINEER AND PCD. CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- ALL STORM DRAIN PIPE SHALL BE CLASS III RCP UNLESS OTHERWISE NOTED AND APPROVED BY PCD.
- CONTRACTOR SHALL COORDINATE GEOTECHNICAL TESTING PER ECM STANDARDS. PAVEMENT DESIGN SHALL BE APPROVED BY EL PASO COUNTY PCD PRIOR TO PLACEMENT OF CURB AND GUTTER AND PAVEMENT.
- ALL CONSTRUCTION TRAFFIC MUST ENTER/EXIT THE SITE AT APPROVED CONSTRUCTION ACCESS POINTS.
- SIGHT VISIBILITY TRIANGLES AS IDENTIFIED IN THE PLANS SHALL BE PROVIDED AT ALL INTERSECTIONS. OBSTRUCTIONS GREATER THAN 18 INCHES ABOVE FLOWLINE ARE NOT ALLOWED WITHIN SIGHT TRIANGLES.
- SIGNING AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DPW AND MUTCD CRITERIA. [IF APPLICABLE, ADDITIONAL SIGNING AND STRIPING NOTES WILL BE PROVIDED.]
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DPW, INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFF-SITE DISTURBANCE, GRADING, OR CONSTRUCTION.

**SIGNING AND STRIPING NOTES:**

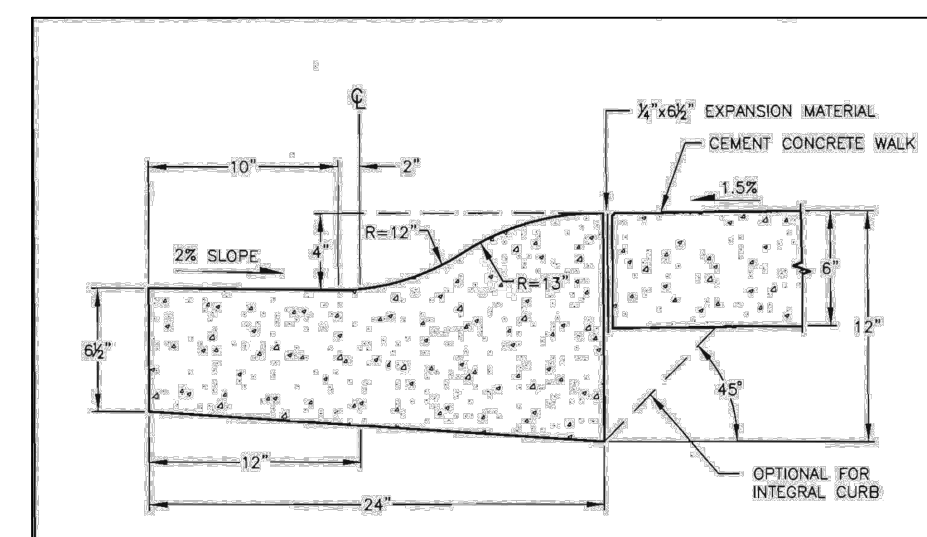
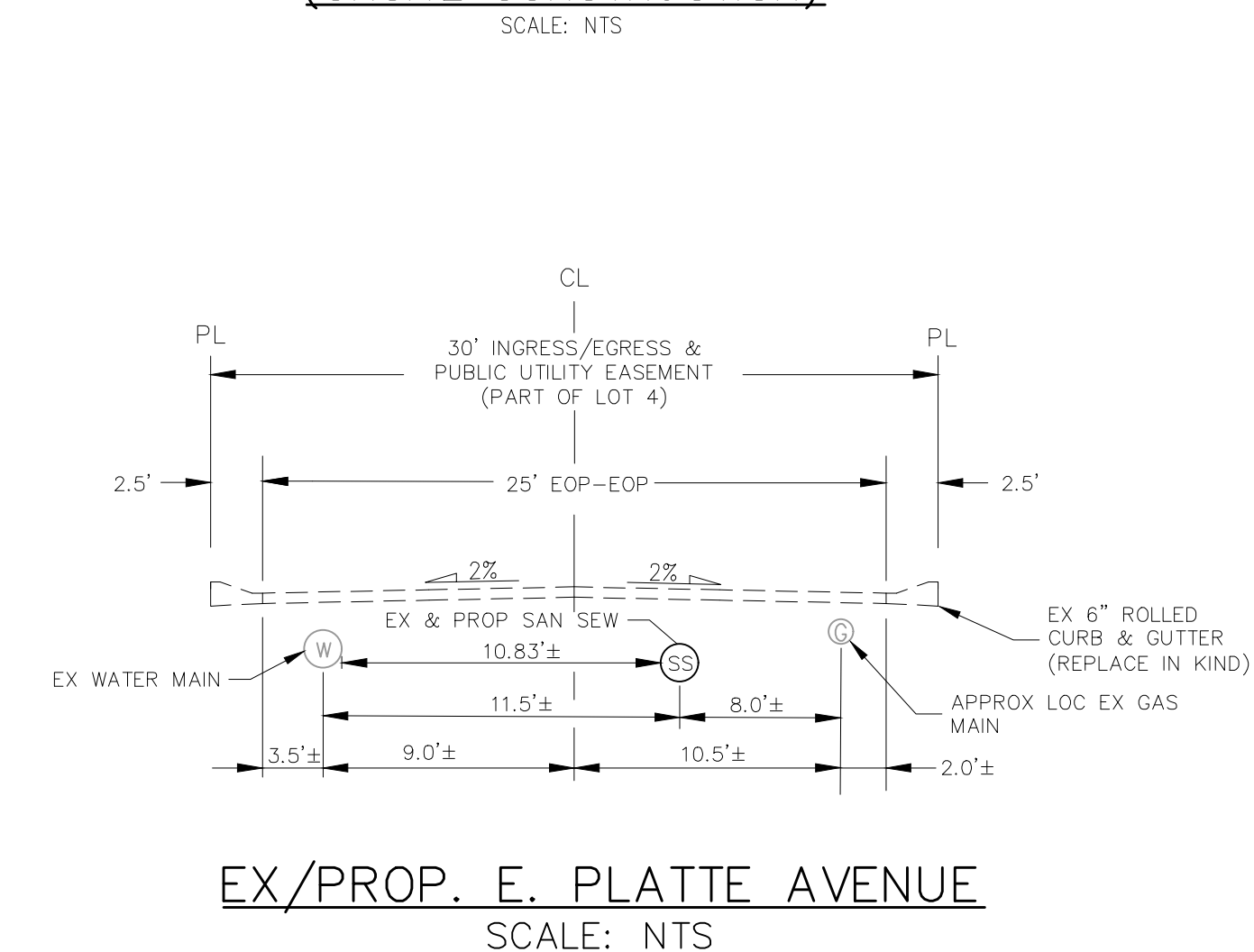
- ALL SIGNS AND PAVEMENT MARKINGS SHALL BE IN COMPLIANCE WITH THE CURRENT MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- REMOVAL OF EXISTING PAVEMENT MARKINGS SHALL BE ACCOMPLISHED BY A METHOD THAT DOES NOT MATERIALLY DAMAGE THE PAVEMENT. THE PAVEMENT MARKINGS SHALL BE REMOVED TO THE EXTENT THAT THEY WILL NOT BE VISIBLE UNDER DAY OR NIGHT CONDITIONS. AT NO TIME WILL IT BE ACCEPTABLE TO PAINT OVER EXISTING PAVEMENT MARKINGS.
- ANY DEVIATION FROM THE STRIPING AND SIGNING PLAN SHALL BE APPROVED BY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT.
- ALL SIGNS SHOWN ON THE SIGNING AND STRIPING PLAN SHALL BE NEW SIGNS. EXISTING SIGNS MAY REMAIN OR BE REUSED IF THEY MEET CURRENT EL PASO COUNTY AND MUTCD STANDARDS.
- STREET NAME AND REGULATORY STOP SIGNS SHALL BE ON THE SAME POST AT INTERSECTIONS.
- ALL REMOVED SIGNS SHALL BE DISPOSED OF IN A PROPER MANNER BY THE CONTRACTOR.
- ALL STREET NAME SIGNS SHALL HAVE "D" SERIES LETTERS, WITH LOCAL ROADWAY SIGNS BEING 4" UPPER-LOWER CASE LETTERING ON 8" BLANK AND NON-LOCAL ROADWAY SIGNS BEING 6" LETTERING, UPPER-LOWER CASE ON 12" BLANK, WITH A WHITE BORDER THAT IS NOT RECESSED. MULTI-LANE ROADWAYS WITH SPEED LIMITS OF 40 MPH OR HIGHER SHALL HAVE 8" UPPER-LOWER CASE LETTERING ON 18" BLANK WITH A WHITE BORDER THAT IS NOT RECESSED. THE WIDTH OF THE NON-RECESSED WHITE BORDERS SHALL MATCH PAGE 255 OF THE 2012 MUTCD "STANDARD HIGHWAY SIGNS"
- ALL TRAFFIC SIGNS SHALL HAVE A MINIMUM HIGH INTENSITY PRISMATIC GRADE SHEETING.
- ALL LOCAL RESIDENTIAL STREET SIGNS SHALL BE MOUNTED ON A 1.75" X 1.75" SQUARE TUBE SIGN POST AND STUB POST BASE. FOR OTHER APPLICATIONS, REFER TO THE CDOT STANDARD S-614-8 REGARDING USE OF THE P2 TUBULAR STEEL POST SLIPBASE DESIGN.
- ALL SIGNS SHALL BE SINGLE SHEET ALUMINUM WITH 0.100" MINIMUM THICKNESS.
- ALL LIMIT LINES/STOP LINES, CROSSWALK LINES, PAVEMENT LEGENDS, AND ARROWS SHALL BE A MINIMUM 125 MIL THICKNESS PREFORMED THERMOPLASTIC PAVEMENT MARKINGS WITH TAPERED LEADING EDGES PER CDOT STANDARD S-627-1. WORD AND SYMBOL MARKINGS SHALL BE THE NARROW TYPE. STOP BARS SHALL BE 24" IN WIDTH. CROSSWALKS LINES SHALL BE 12" WIDE AND 8' LONG PER CDOT S-627-1.
- ALL LONGITUDINAL LINES SHALL BE A MINIMUM 15MIL THICKNESS EPOXY PAINT. ALL NON-LOCAL RESIDENTIAL ROADWAYS SHALL INCLUDE BOTH RIGHT AND LEFT EDGE LINE STRIPING AND ANY ADDITIONAL STRIPING AS REQUIRED BY CDOT S-627-1.
- THE CONTRACTOR SHALL NOTIFY EL PASO COUNTY PLANNING AND COMMUNITY DEVELOPMENT (719) 520-6819 PRIOR TO AND UPON COMPLETION OF SIGNING AND STRIPING.
- THE CONTRACTOR SHALL OBTAIN A WORK IN THE RIGHT OF WAY PERMIT FROM THE EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS (DPW) PRIOR TO ANY SIGNAGE OR STRIPING WORK WITHIN AN EXISTING EL PASO COUNTY ROADWAY.

**SPECIAL NOTE:**

THE PARTIES RESPONSIBLE FOR THIS PLAN HAVE FAMILIARIZED THEMSELVES WITH ALL CURRENT ACCESSIBILITY CRITERIA AND SPECIFICATIONS AND THE PROPOSED PLAN REFLECTS ALL SITE ELEMENTS REQUIRED BY THE APPLICABLE ADA DESIGN STANDARDS AND GUIDELINES AS PUBLISHED BY THE UNITED STATES DEPARTMENT OF JUSTICE. APPROVAL OF THIS PLAN BY EL PASO COUNTY DOES NOT ASSURE COMPLIANCE WITH THE ADA OR ANY REGULATIONS OR GUIDELINES ENACTED OR PROMULGATED UNDER OR WITH RESPECT TO SUCH LAWS.



**TYPICAL CURB AND GUTTER DETAIL (SD 2-20C)  
(ONSITE CONSTRUCTION)**



**EX/PROP. ROLLED CURB AND GUTTER  
(MATCH IN KIND)  
SCALE: NTS**

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

CLEARWAY FILING NO. 2, LOT 5

CONSTRUCTION NOTES AND DETAILS

PROJECT NO. 44-042A DATE: 06-02-2022

SCALE: HORIZONTAL: N/A VERTICAL: N/A

DESIGNED BY: DLM DRAWN BY: CLP CHECKED BY: DLM

217 N. WAHATCH AVE., STE 305  
COLORADO SPRINGS CO 80903  
PHONE 719.555.5485

CIVIL CONSULTANTS, INC.

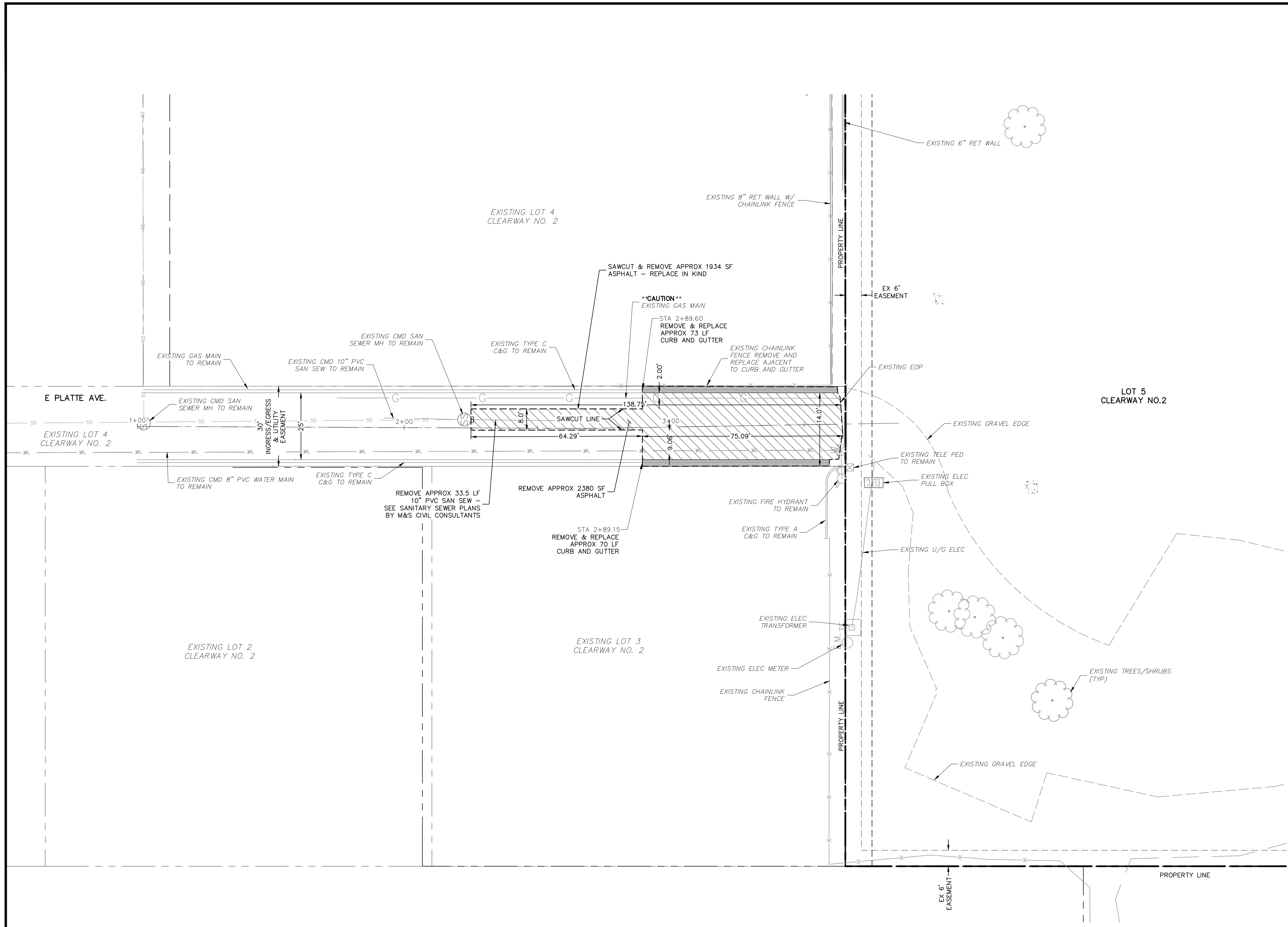
FOR AND ON BEHALF OF  
MKS CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO P.E. NO. 371160

DATE: APPROVED BY: DESCRIPTION: NO. DATE: BY: DESCRIPTION:

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARE OF THESE PLANS.

CAUTION



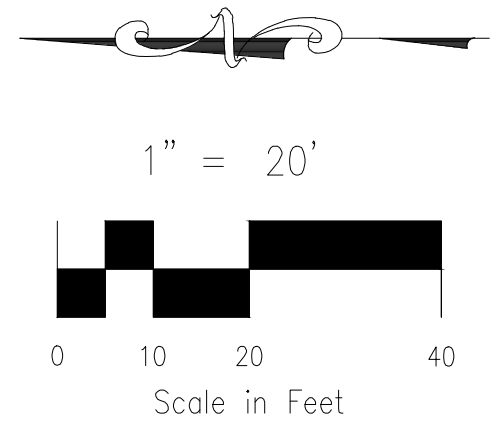
**EAST PLATTE AVE. DEMOLITION PLAN**

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOW POINT	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
HP	HIGH POINT	PVT	PRIVATE
PUB	PUBLIC	WV	WATER VALVE
C&G	CURB AND GUTTER	PED	PEDESTRIAN
CMD	CHEROKEE METRO DISTRICT		

**LEGEND**

SAWCUT LINE	---
SITE BOUNDARY	---
ADJACENT PROPERTY	---
EXIST STORM SEWER LINE	---
EX. UNDERGROUND ELECTRIC LINE	---
EX. SANITARY SEWER LINE	SS
EX. WATER LINE	WL
EX. GAS MAIN	G
EX. FENCE	X
EASEMENT	---
EX. STORM MH	ST
EX. SANITARY MANHOLE	SS
EX. WATER VALVE	WV
PAVEMENT DEMOLITION AREA	▨
C&G DEMOLITION AREA	■



<b>DEMOLITION PLAN</b>		DATE: 06-02-2022
PROJECT NO. 44-042A	DESIGNED BY: DLM	SCALE: HORIZONTAL: 1"=20'
DRAWN BY: CLP	CHECKED BY: DLM	VERTICAL: N/A
217 N. WASHCATCH AVE., STE 305 COLORADO SPRINGS, CO 80903 PHONE: 719.555.5465		
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.		
VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 37160		
NO.	DATE	DESCRIPTION
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.		
<b>CAUTION</b>		

CLEARWAY FILING NO. 2, LOT 5

DATE: 06-02-2022

PROJECT NO. 44-042A

DESIGNED BY: DLM

DRAWN BY: CLP

CHECKED BY: DLM

SCALE: HORIZONTAL: 1"=20'

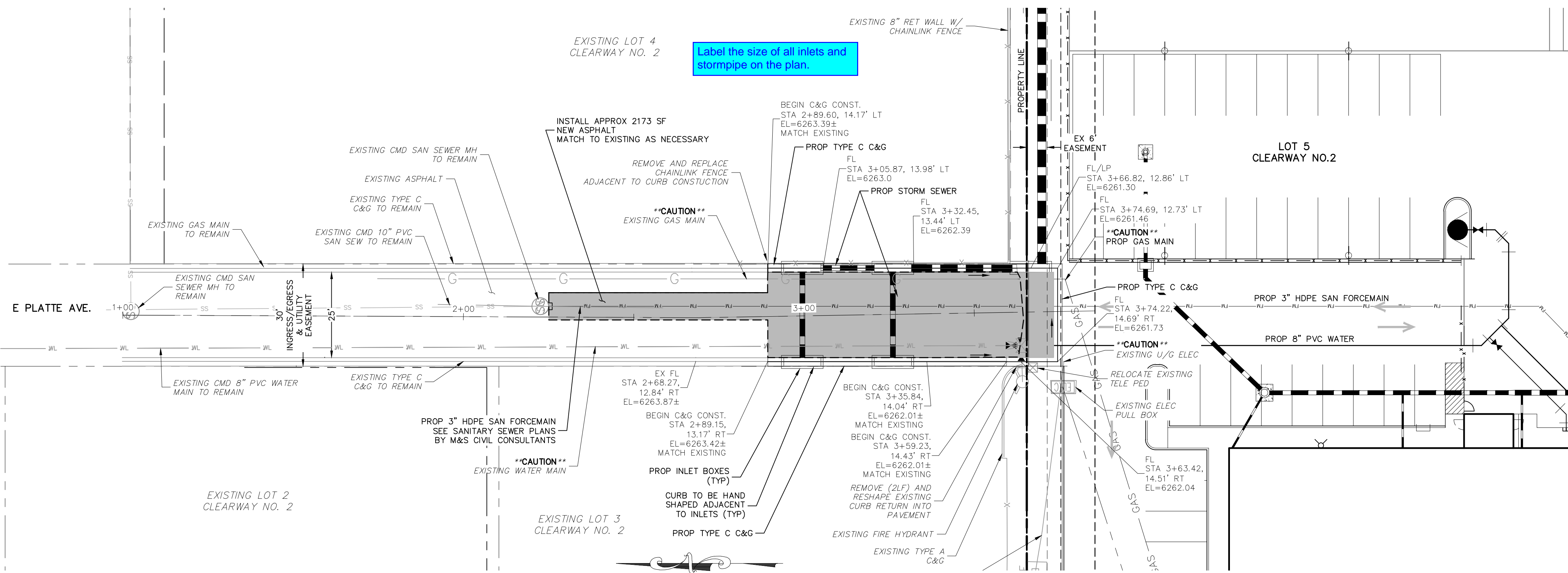
VERTICAL: N/A

DATE: 06-02-2022

CLEARWAY FILING NO. 2, LOT 5

SHEET 3 OF 15

SIO1



**EX EAST PLATTE AVE.  
STA 1+00.00 - 3+74.69**

**ABBREVIATION LEGEND**

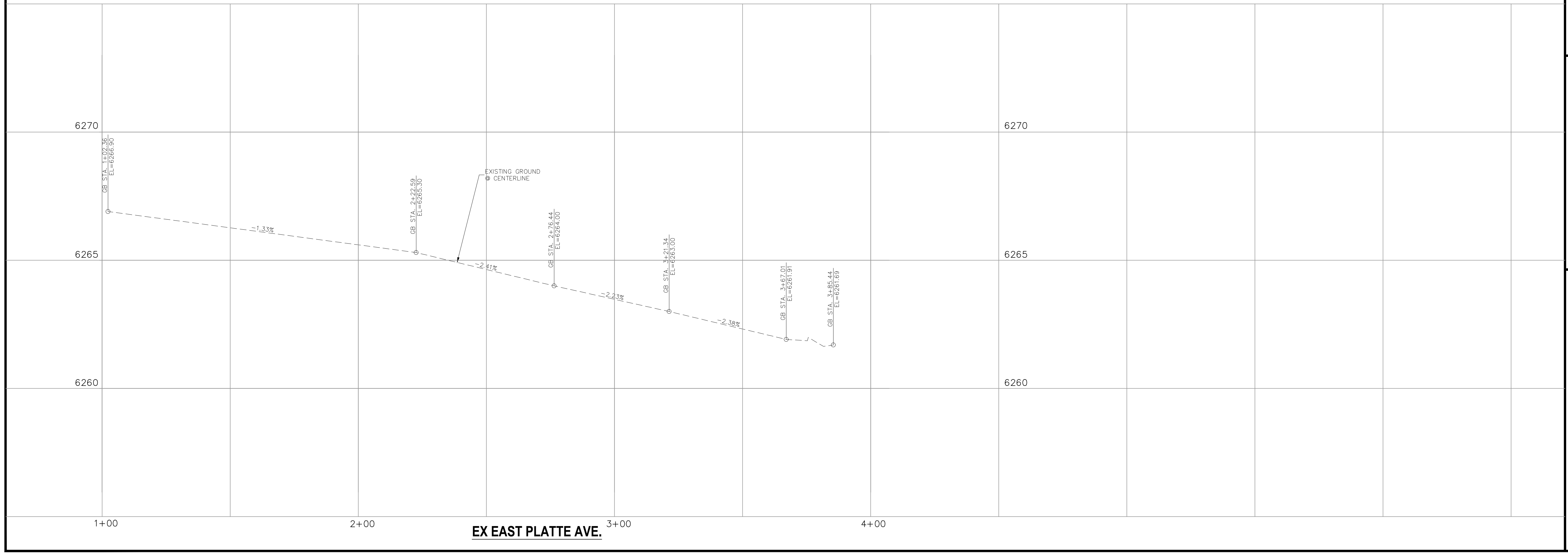
CL	CENTERLINE INTERSECTION	LT	LEFT
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOW POINT	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
HP	HIGH POINT	PVT	PRIVATE
PUB	PUBLIC	WV	WATER VALVE
C&G	CURB AND GUTTER	PED	PEDESTRIAN
CMD	CHEROKEE METRO DISTRICT		

**LEGEND**

SAWCUT LINE	---
SITE BOUNDARY	---
ADJACENT PROPERTY	---
EXIST STORM SEWER LINE	---
EX. UNDERGROUND ELECTRIC LINE	---
EX. SANITARY SEWER LINE	SS
EX. WATER LINE	WL
EX. GAS MAIN	G
EX. FENCE	X
EASEMENT	---
PROP C&G	---
EX. STORM MH	(SM)
EX. SANITARY MANHOLE	(SM)
EX. WATER VALVE	(V)
NEW ASPHALT - MATCH EXISTING	---

1" = 20'

0 10 20 40  
Scale in Feet



**CLEARWAY FILING NO. 2, LOT 5**

**STREET IMPROVEMENT PLAN**

PROJECT NO. 44-042A DATE: 06-02-2022

DESIGNED BY: DLM CLP  
DRAWN BY: CLP  
CHECKED BY: DLM

SCALE: HORIZONTAL: 1"=20'  
VERTICAL: 1"=2'

212 N. WABATCH AVE., STE 305  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5465

CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 37160

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

NO.	DATE	BY	DESCRIPTION	APPR'D. BY	DATE

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARED OF THESE PLANS.

**CAUTION**

**S102**

SHEET 4 OF 15

**ABBREVIATION LEGEND**

CL	CENTERLINE INTERSECTION	LT	LEFT
FL-FL	FLOWLINE INTERSECTION	RT	RIGHT
BT	BEGIN TRANSITION	FL	FLOWLINE
ET	END TRANSITION	TBC	TOP BACK OF CURB
PC	POINT OF CURVE	XPAN	CROSSSPAN
PCC	POINT OF COMPOUND CURVE	STD	STANDARD
PCR	POINT OF CURB RETURN	SHT	SHEET
PRC	POINT OF REVERSE CURVE	P&P	PLAN AND PROFILE
PT	POINT OF TANGENT	C&G	CURB AND GUTTER
EL	ELEVATION	W	WEST
CDS	CUL-DE-SAC	E	EAST
KN	KNUCKLE	ROW	RIGHT OF WAY
LP	LOW POINT	EOP	EDGE OF PAVEMENT
N	NORTH	WTR	WATER
S	SOUTH	SAN	SANITARY SEWER
HP	HIGH POINT	PVT	PRIVATE
PUB	PUBLIC	WV	WATER VALVE
C&G	CURB AND GUTTER	PED	PEDESTRIAN
CMD	CHEROKEE METRO DISTRICT		

**LEGEND**

SITE BOUNDARY	---
ADJACENT PROPERTY	---
EX. FENCE	-X-
EASEMENT	---
PROP C&G	====

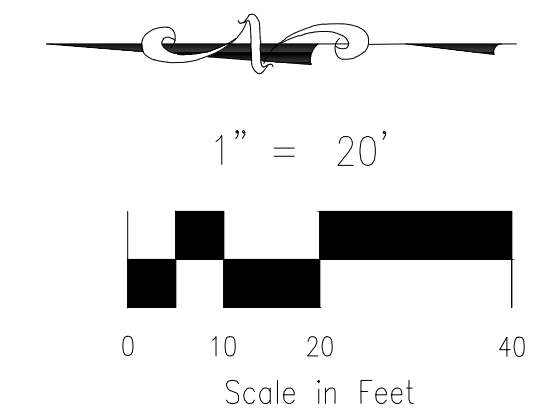
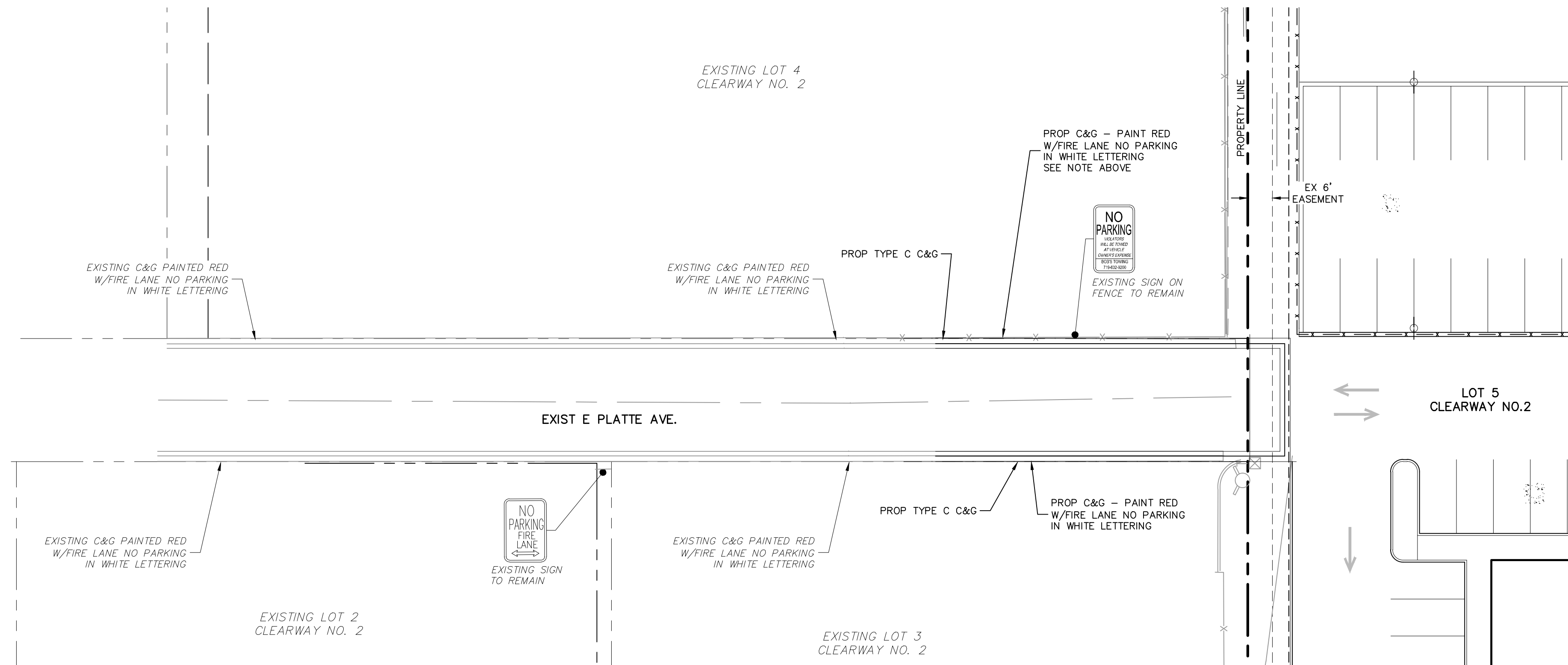
**NOTE TO CONTRACTOR:**

1. ALL SIGNAGE INSTALLATION IS TO BE IN COMPLIANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD)

**NOTE:**

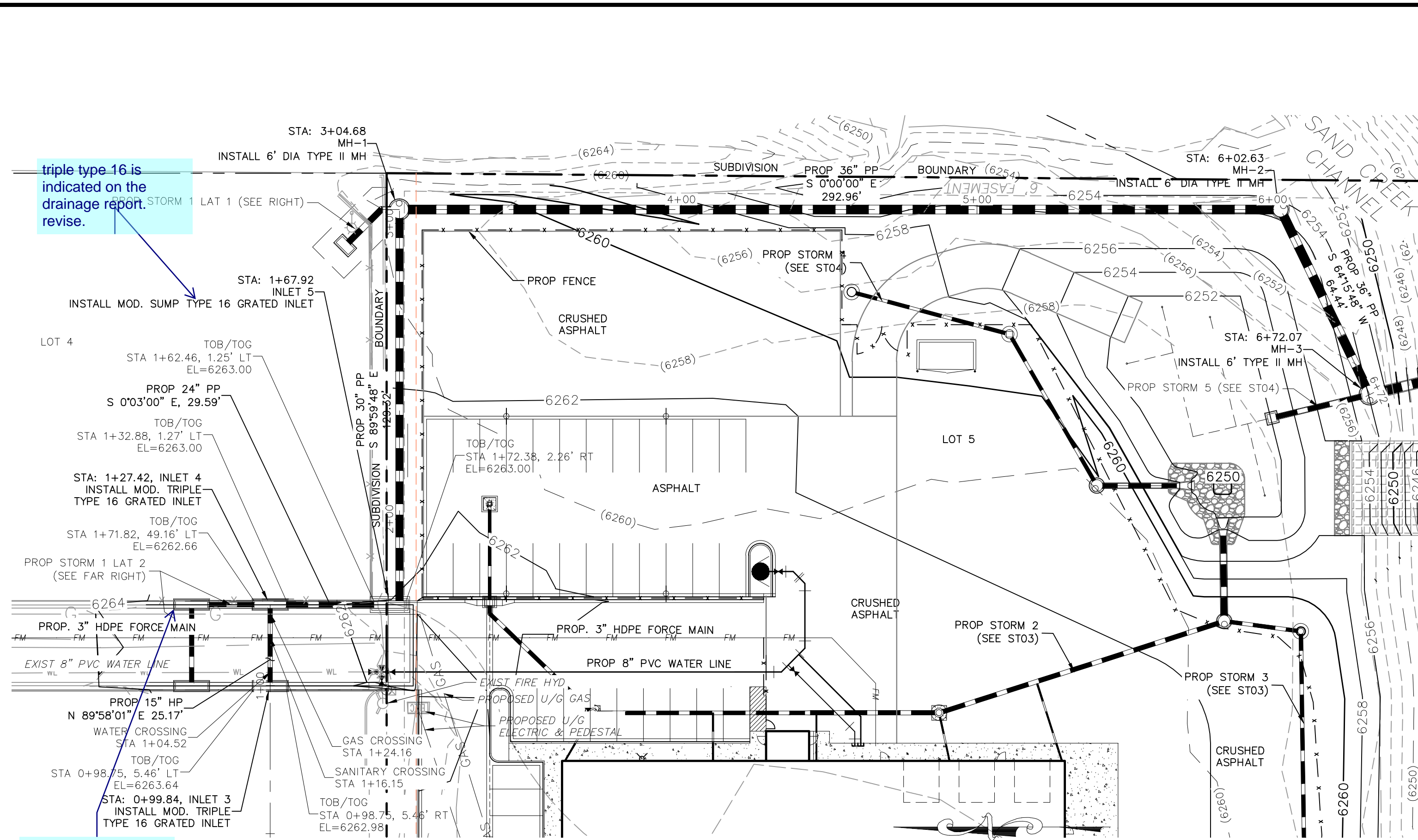
STRIPING ALONG CURB FACE AND TOP OF CURB SHALL BE:

1. 6" RED TRAFFIC PAINT STRIPE
2. 4" WHITE REFLECTIVE LETTERING/WORDING WITH 3/4" STROKE STATING NO PARKING FIRE LANE
3. LETTERING/WORDING SPACED EVERY 25'



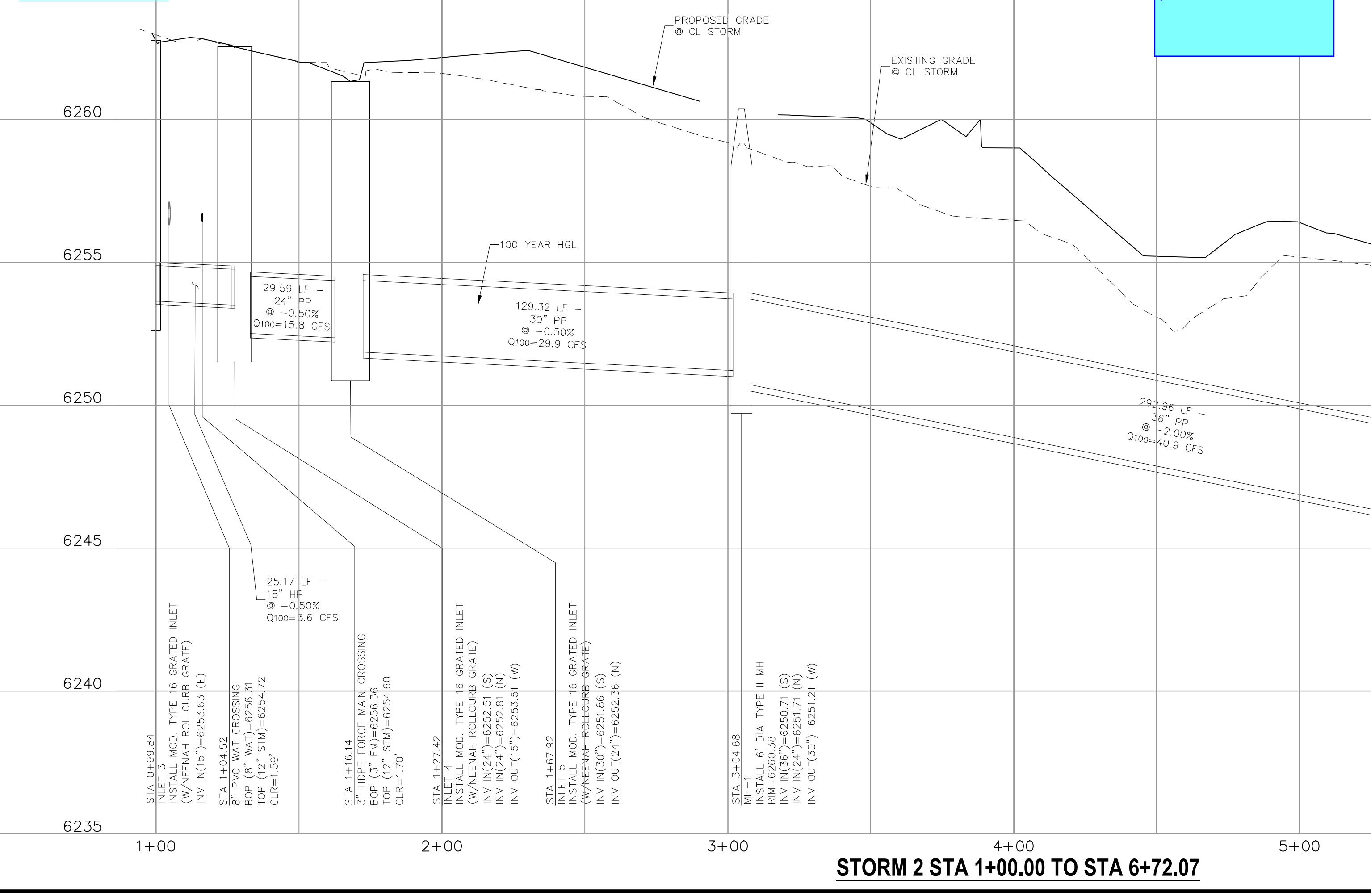
CLEARWAY FILING NO. 2, LOT 5		DATE: 06-02-2022
STRIPING AND SIGNAGE PLAN		SCALE: HORIZONTAL: 1" = 20' VERTICAL: 1" = 2'
PROJECT NO. 44-042A	DESIGNED BY: DLM	DRAWN BY: CLP
	CHECKED BY: DLM	SHEET 5 OF 15
212 N. WASHATCH AVE., STE 305 COLORADO SPRINGS, CO 80903 PHONE: 719.555.5865		
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.		
VIRGIL A. SANCHEZ, COLORADO P.E. NO. 37160	APPR'D. BY:	DATE:
BY: DESCRIPTION:	BY: DESCRIPTION:	DATE:
NO. DATE:	NO. DATE:	NO. DATE:
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.		
CAUTION		

File: C:\GMI-2022\06-02-19-00-31\44042A-Wre Nur\Hammers\DWG\Storm\44042A-ST02.dwg Plotstamp: 6/3/2022 6:46 PM



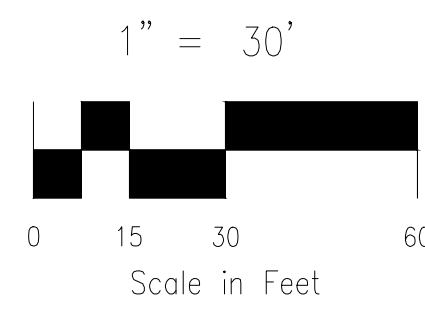
**STORM 1  
STA 1+00.00 TO STA 6+72.07**

identify who will maintain the proposed inlets and storm sewers in the common easement



provide vertical scale

**STORM 2 STA 1+00.00 TO STA 6+72.07**

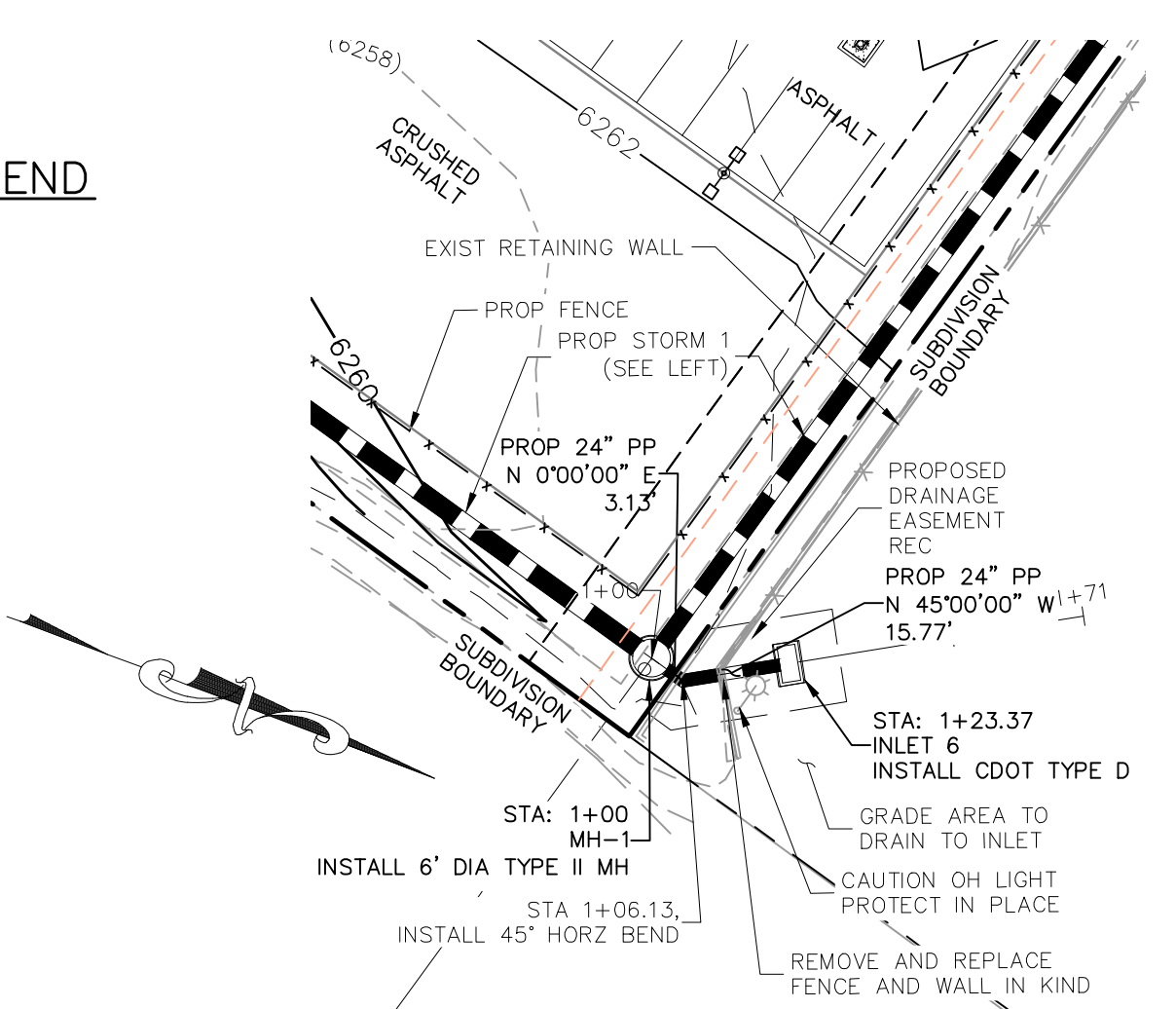


**ABBREVIATION LEGEND**

- C&G CURB AND GUTTER
- CL CENTERLINE
- CONST CONSTRUCTION
- EL ELEVATION
- EX EXISTING
- LT LEFT
- N NORTH
- NTS NOT TO SCALE
- PUB PUBLIC
- PVT PRIVATE
- PROP PROPOSED
- RT RIGHT
- S SOUTH
- SAN SANITARY SEWER
- SLV SLEEVE
- SRV SERVICE
- STA STATION
- STM STORM SEWER
- W WEST
- WTR WATER

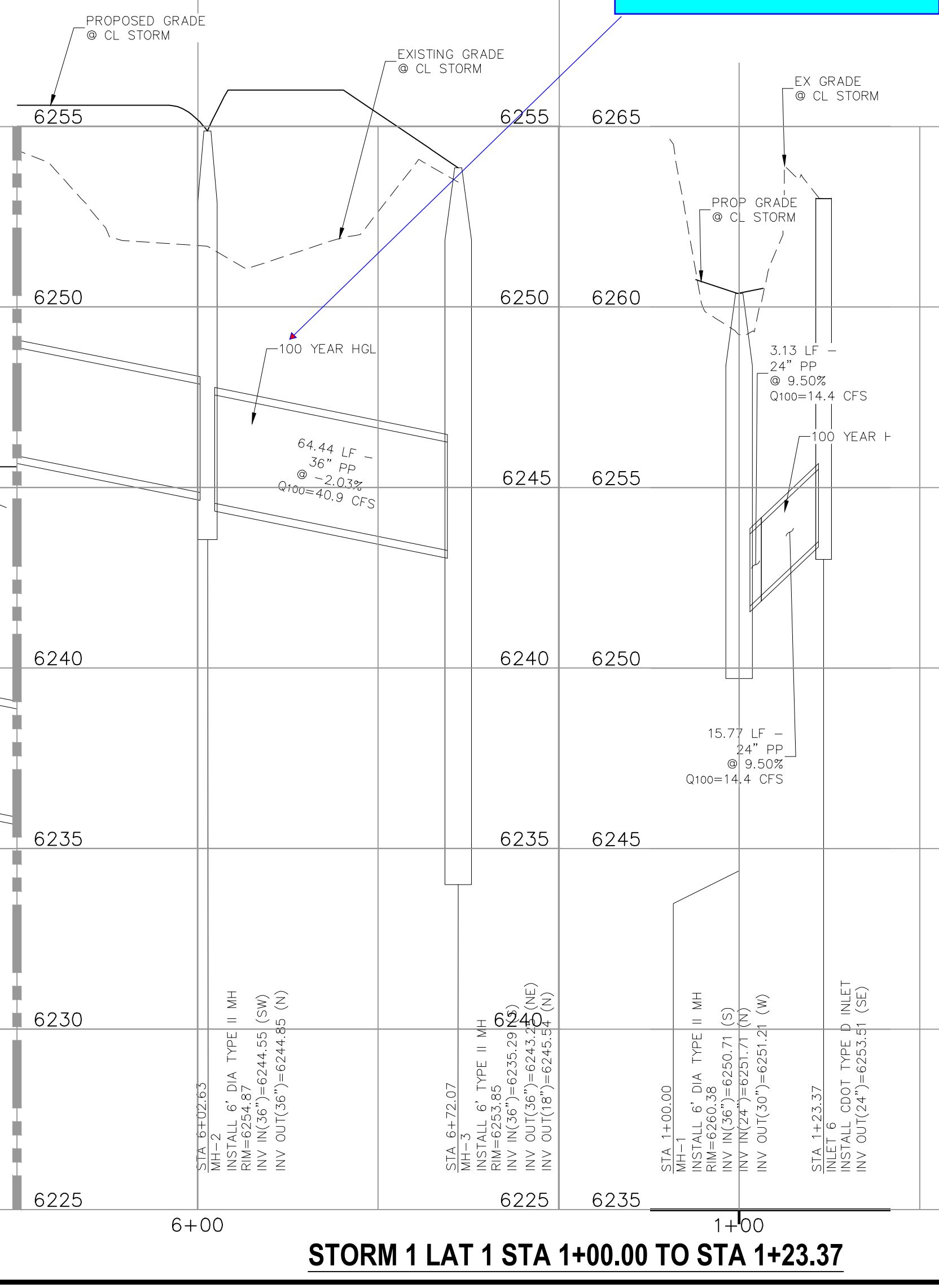
**NOTE:**

ALL STORM SEWER CONSTRUCTED WITH THESE PLANS SHALL BE CONSIDERED PRIVATE.  
GAS LINE NOT LOCATED, LOCATION TO BE DETERMINED BY CONTRACTOR

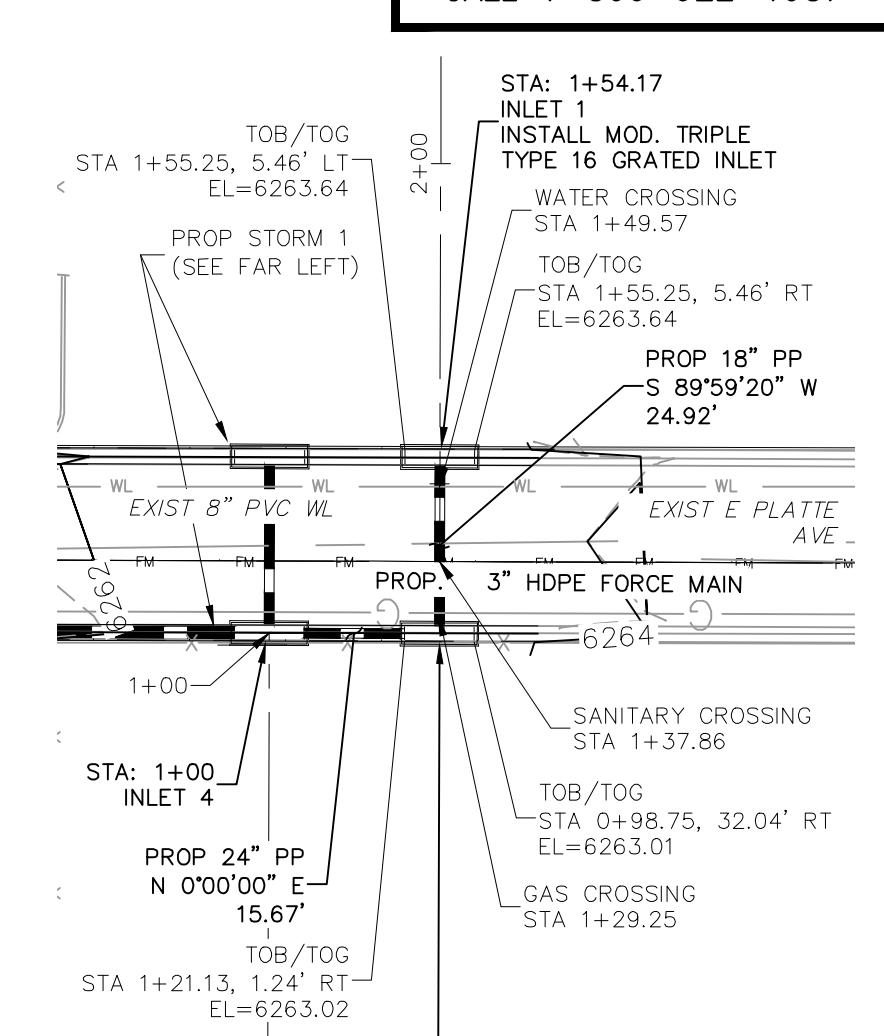


**STORM 1 LAT 1 STA 1+00.00 TO STA 1+23.37**

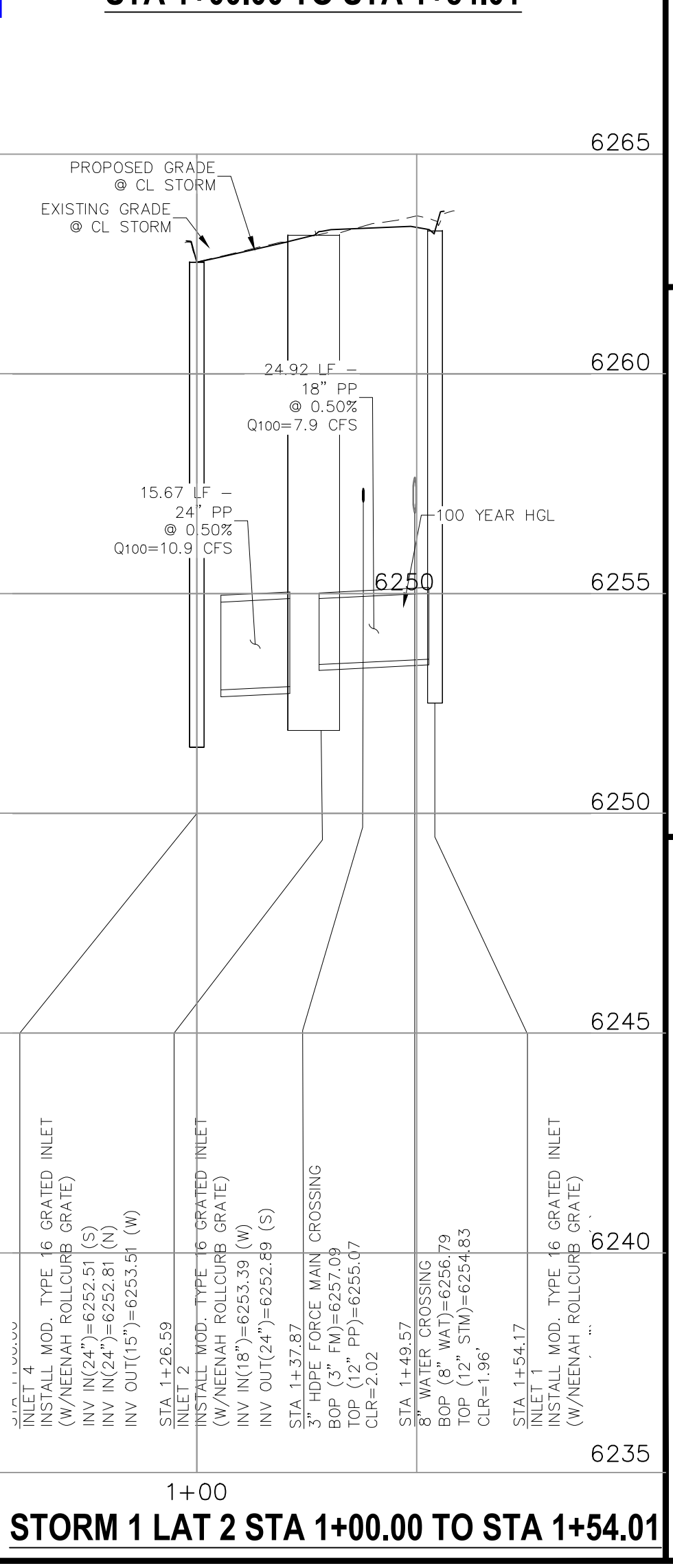
Show HGL lines on the profiles.  
Typical at all storm profiles.



**STORM 1 LAT 1 STA 1+00.00 TO STA 1+23.37**



**STORM 1 LAT 2  
STA 1+00.00 TO STA 1+54.01**



**STORM 1 LAT 2 STA 1+00.00 TO STA 1+54.01**



**CLEARWAY FILING NO. 2, LOT 5**

**STORM SEWER PLAN AND PROFILE**

PROJECT NO. 44-042 DATE: 05-20-2022

SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

DESIGNED BY: TAU DRAWN BY: TAU CHECKED BY: DLM

210 N. WAHATCH AVE., STE 305  
COLORADO SPRINGS, CO 80903  
PHONE 719.955.5485

**CIVIL CONSULTANTS, INC.**

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

FOR AND ON BEHALF OF MRS. CIVIL CONSULTANTS, INC.

NO. DATE: BY: DESCRIPTION: APPROV. BY: DATE:

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**CAUTION**

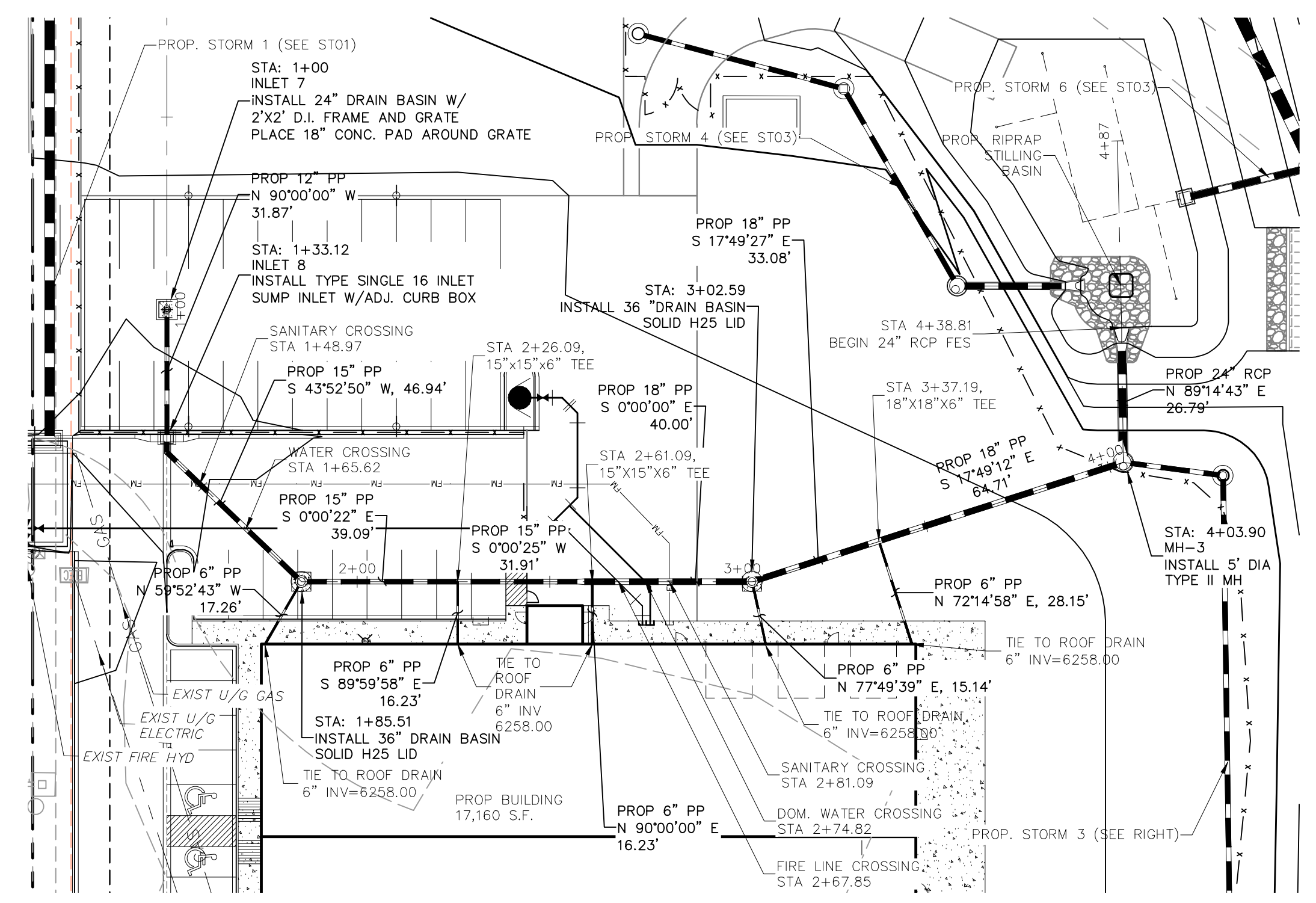




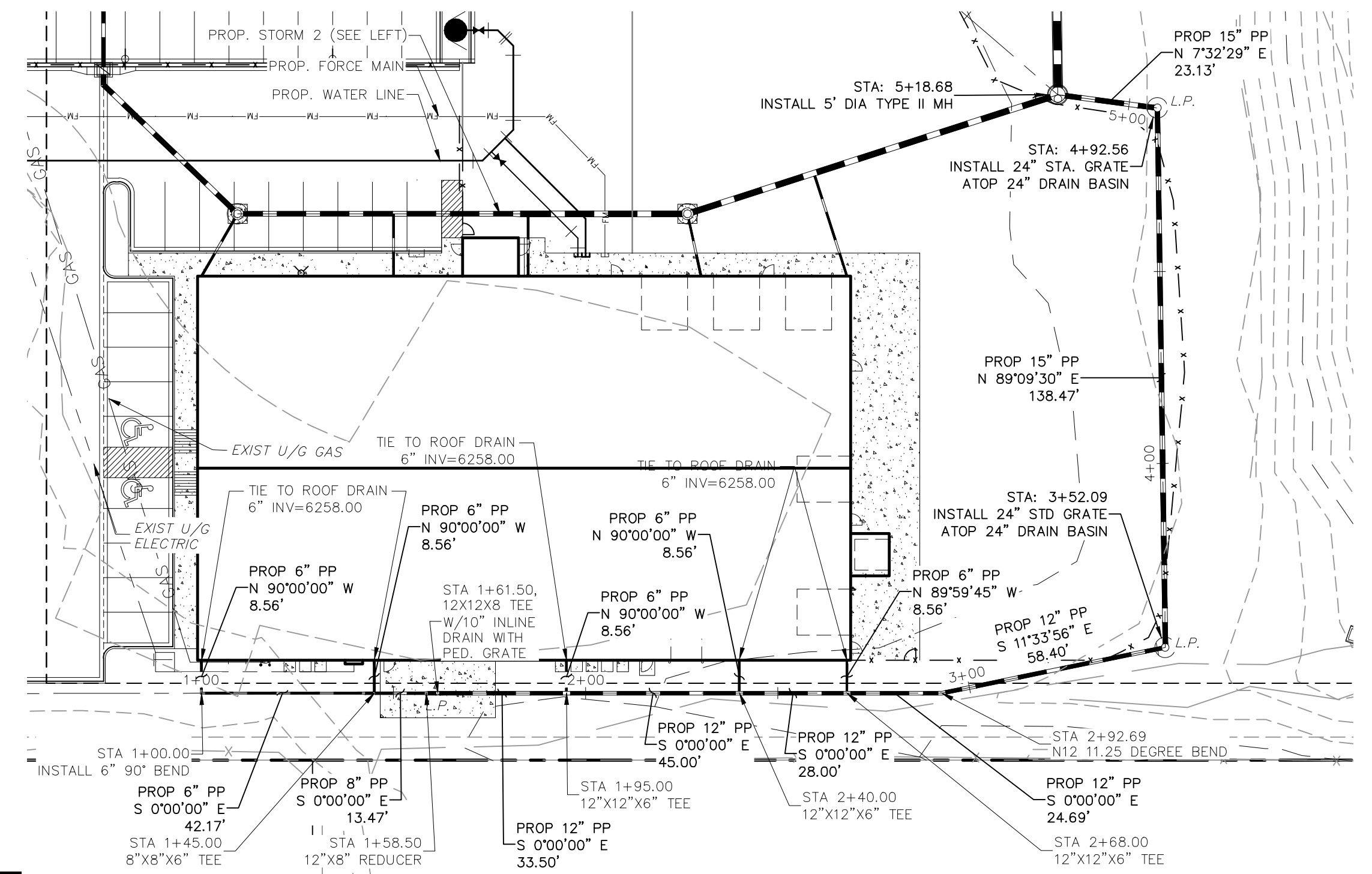
**ABBREVIATION LEGEND**

C&G	CURB AND GUTTER
CL	CENTERLINE
CONST	CONSTRUCTION
EL	ELEVATION
EX	EXISTING
LT	LEFT
N	NORTH
NTS	NOT TO SCALE
PUB	PUBLIC
PVT	PRIVATE
PROP	PROPOSED
RT	RIGHT
S	SOUTH
SAN	SANITARY SEWER
SLV	SLEEVE
SRV	SERVICE
STA	STATION
STM	STORM SEWER
W	WEST
WTR	WATER

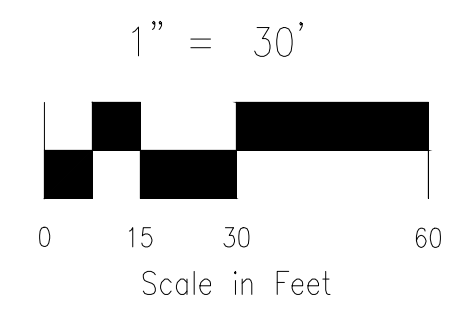
**NOTE:**  
ALL STORM SEWER TO BE PRIVATE.



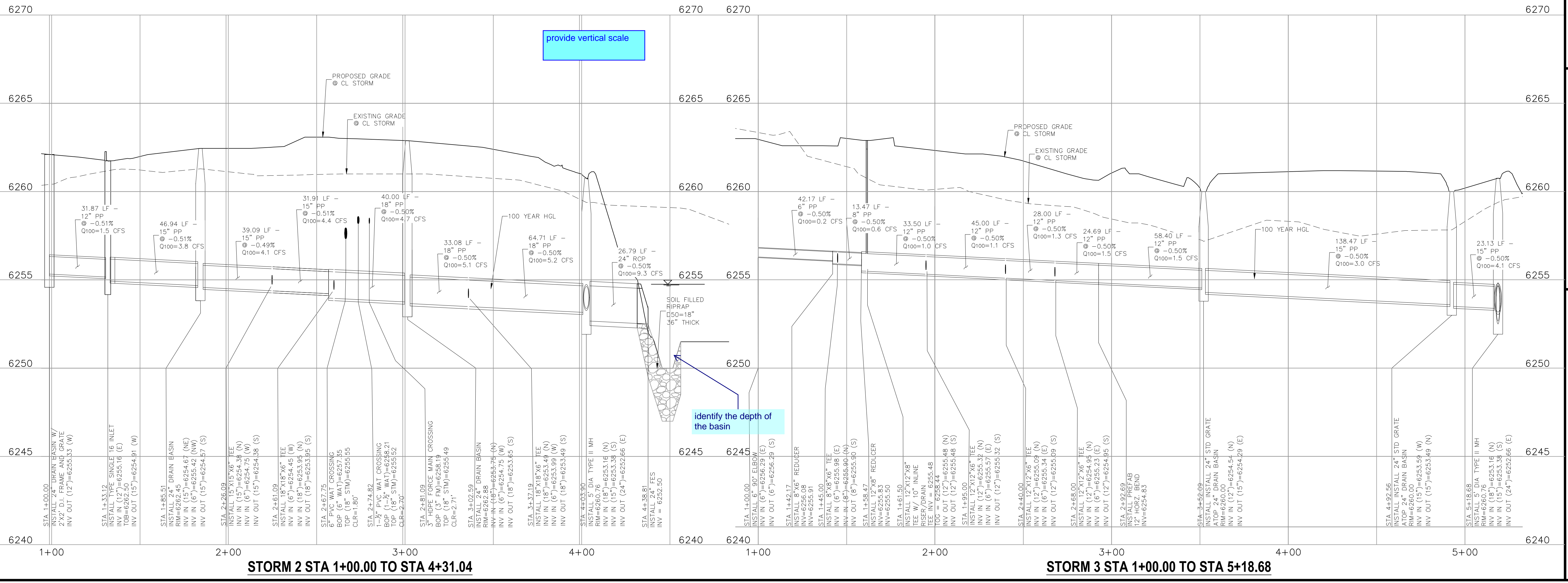
**STORM 2  
STA 1+00.00 TO STA 4+38.81**



**STORM 3  
STA 1+00.00 TO STA 5+18.68**



Show HGL lines on the profiles.



**STORM 2 STA 1+00.00 TO STA 4+31.04**

**STORM 3 STA 1+00.00 TO STA 5+18.68**

provide vertical scale

identify the depth of the basin

**CLEARWAY FILING NO. 2, LOT 5**

**STORM SEWER PLAN AND PROFILE**

PROJECT NO. 44-042A DATE: 06-02-2022

DESIGNED BY: DLM SCALE: HORIZONTAL: 1"=30' VERTICAL: 1"=3'

DRAWN BY: CLP SHEET 7 OF 15

CHECKED BY: DLM ST02

210 N. WAHATCH AVE, STE 305  
COLORADO SPRINGS CO 80903  
PHONE 719.555.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF MRS. CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

NO. DATE: BY: DESCRIPTION: APPROV. BY: DATE:

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**CAUTION**

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
 FOR BURIED UTILITY INFORMATION  
 48 HRS BEFORE YOU DIG  
 CALL 1-800-922-1987

**ABBREVIATION LEGEND**

C&G	CURB AND GUTTER
CL	CENTERLINE
CONST	CONSTRUCTION
EL	ELEVATION
EX	EXISTING
LT	LEFT
N	NORTH
NTS	NOT TO SCALE
PUB	PUBLIC
PVT	PRIVATE
PROP	PROPOSED
RT	RIGHT
S	SOUTH
SAN	SANITARY SEWER
SRV	SLEEVE
SRV	SERVICE
STA	STATION
STM	STORM SEWER
W	WEST
WTR	WATER

**NOTE:**  
 ALL STORM SEWER TO BE PRIVATE.

CLEARWAY FILING NO. 2, LOT 5	
STORM SEWER PLAN AND PROFILE	
PROJECT NO. 44-042A	DATE: 06-02-2022
DESIGNED BY: DLM	SCALE: HORIZONTAL: 1"=30'
DRAWN BY: CLP	VERTICAL: 1"=3'
CHECKED BY: DLM	
SHEET 8 OF 15	
ST03	

212 N. WASHCATCH AVE., STE 305  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.955.5485



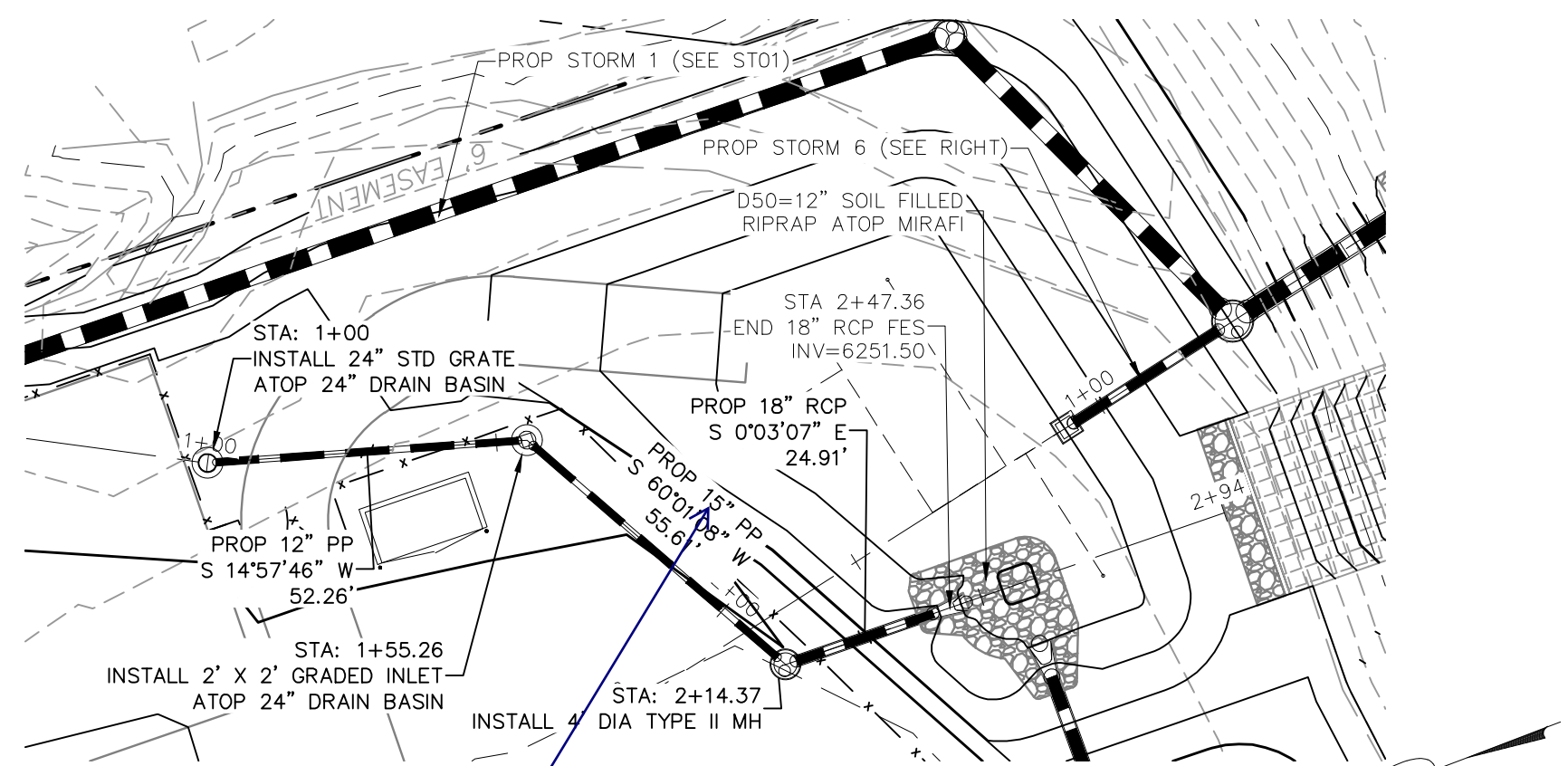
FOR AND ON BEHALF OF  
 MRS. CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

REVISIONS:	NO.	DATE:	DESCRIPTION:	APPROVED BY:	DATE:

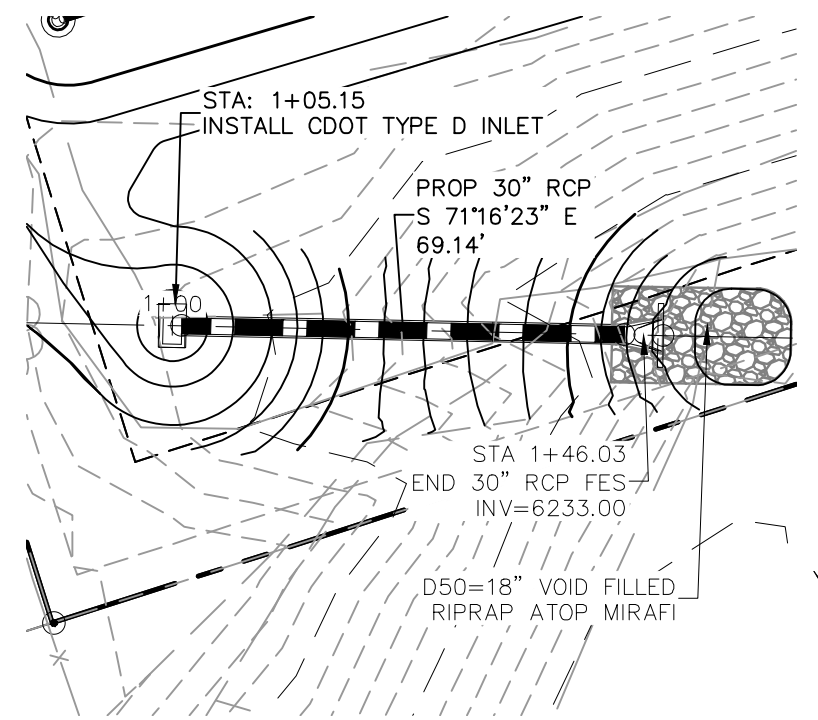
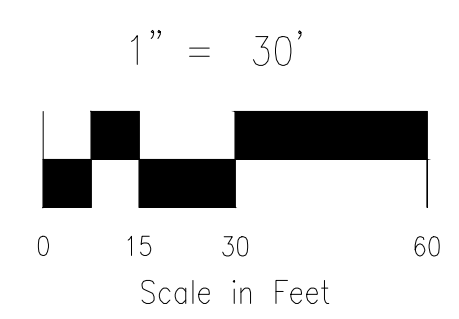
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CAUTION



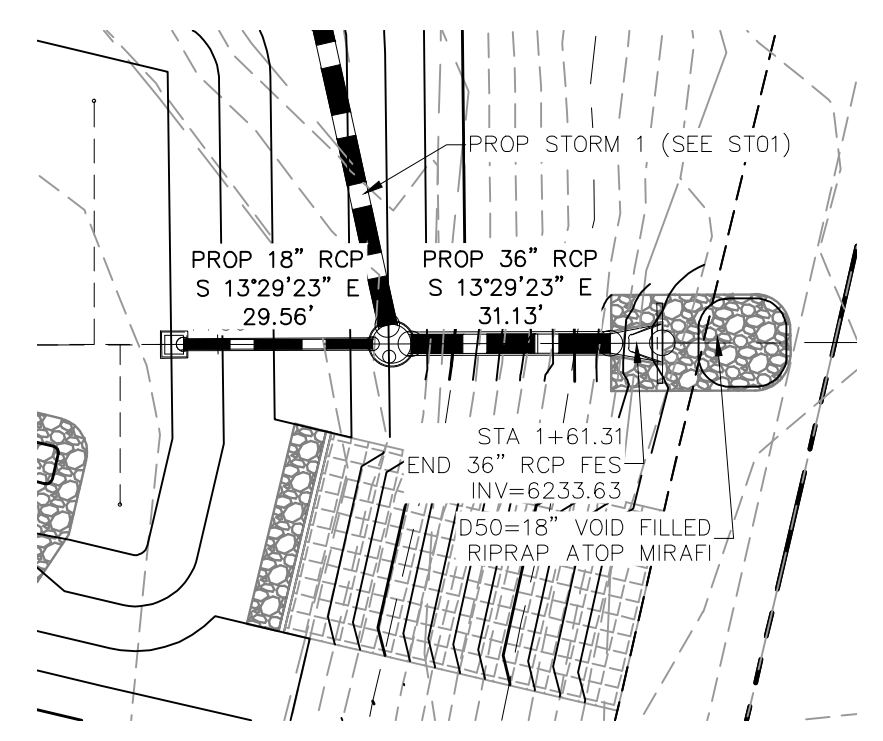
**STORM 4  
 STA 1+00.00 TO STA 2+47.36**

18" identified on the drainage plan. Revise accordingly.

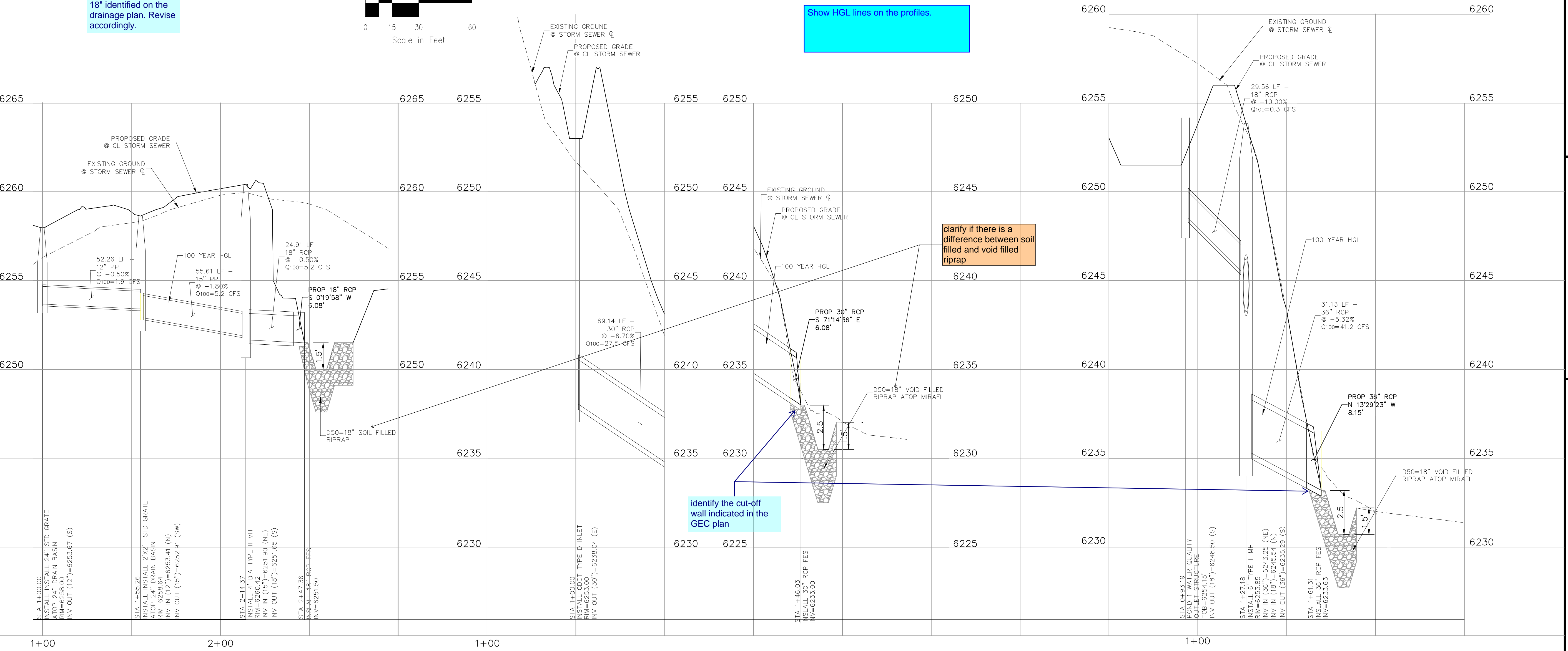


**STORM 5  
 STA 1+00.00 TO STA 1+46.03**

Show HGL lines on the profiles.



**STORM 6  
 STA 1+00.00 TO STA 1+61.31**



clarify if there is a difference between soil filled and void filled riprap

identify the cut-off wall indicated in the GEC plan

**STORM 4 STA 1+00.00 TO STA 2+47.36**

**STORM 5 STA 1+00.00 TO STA 1+46.03**

**STORM 6 STA 1+00.00 TO STA 1+61.31**

**STANDARD CONSTRUCTION NOTES:**

- ALL DRAINAGE AND ROADWAY CONSTRUCTION SHALL MEET THE STANDARDS AND SPECIFICATIONS OF THE CITY OF COLORADO SPRINGS/EL PASO COUNTY DRAINAGE CRITERIA MANUAL VOLUMES 1 AND 2, AND THE EL PASO COUNTY ENGINEERING CRITERIA MANUAL.
- CONTRACTOR SHALL BE RESPONSIBLE FOR THE NOTIFICATION AND FIELD LOCATION OF ALL EXISTING UTILITIES, WHETHER SHOWN ON THE PLANS OR NOT, BEFORE BEGINNING CONSTRUCTION. LOCATION OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION. CALL 811 TO CONTACT THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC).
- CONTRACTOR SHALL KEEP A COPY OF THESE APPROVED PLANS, THE GRADING AND EROSION CONTROL PLAN, THE STORMWATER MANAGEMENT PLAN (SWMP), THE SOILS AND GEOTECHNICAL REPORT AND THE APPROPRIATE DESIGN AND CONSTRUCTION STANDARDS AND SPECIFICATIONS AT THE JOB SITE AT ALL TIME INCLUDING THE FOLLOWING:
  - EL PASO COUNTY ENGINEERING CRITERIA MANUAL (ECM)
  - CITY OF COLORADO SPRINGS/EL PASO COUNTY ENGINEERING CRITERIA MANUAL VOLUMES 1 AND 2.
  - COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARDS SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION.
  - CDOT M&S STANDARDS.
- IT IS THE DESIGN ENGINEERS RESPONSIBILITY TO ACCURACY SHOW EXISTING CONDITION BOTH ONSITE AND OFFSITE ON THE CONSTRUCTION PLANS. ANY MODIFICATION NECESSARY DUE TO CONFLICT OMISSIONS OR CHANGED CONDITIONS WILL BE ENTIRELY THE DEVELOPERS RESPONSIBILITY TO RECTIFY.
- IT IS THE CONTRACTORS RESPONSIBILITY TO UNDERSTAND THE REQUIREMENTS OF ALL JURISDICTIONAL AGENCIES AND TO OBTAIN ALL REQUIRED PERMITS, INCLUDING BUT NOT LIMITED TO EL PASO COUNTY EROSION AND STORM WATER QUALITY CONTROL PERMIT (ESQCP), REGIONAL BUILDING FLOODPLAIN DEVELOPMENT PERMIT, US ARMY CORPS OF ENGINEER ISSUED 401 AND/OR 404 PERMITS AND COUNTY AND STATE FUGITIVE DUST PERMITS.
- ANY TEMPORARY SIGNAGE AND STRIPING SHALL COMPLY WITH EL PASO COUNTY DOW AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DOT INCLUDING WORK WITHIN THE RIGHT-OF-WAY AND SPECIAL TRANSPORT PERMITS.
- THE LIMITS OF CONSTRUCTION SHALL REMAIN WITHIN THE PROPERTY LINE UNLESS OTHERWISE NOTED. THE OWNER/DEVELOPER SHALL OBTAIN WRITTEN PERMISSION AND EASEMENTS, WHERE REQUIRED, FROM ADJOINING PROPERTY OWNER(S) PRIOR TO ANY OFFSITE DISTURBANCE GRADING, OR CONSTRUCTION.

**STORM SEWER GENERAL NOTES**

- ALL STATIONING IS ALONG STORM SEWER CENTERLINE UNLESS OTHERWISE INDICATED. ALL ELEVATIONS ARE INVERT UNLESS OTHERWISE INDICATED.
- ALL STORM SEWER BENDS AND WYES SHOWN ON THE PLAN SHALL BE PREFABRICATED.
- HORIZONTAL AND VERTICAL BENDS ARE INDICATED ON THE PLANS.
- JOINTS SHALL BE IN ACCORDANCE WITH ASTM C443 "STANDARD SPECIFICATIONS FOR JOINTS FOR CIRCULAR CONCRETE SEWER AND CULVERT PIPE USING RUBBER GASKET." IN NO CASE SHALL THE MAXIMUM JOINT OPENING FOR STRAIGHT ALIGNMENT EXCEED 1 INCH OR ONE AND ONE-HALF INCH ON CURVED ALIGNMENT.
- INLET DIMENSIONS SHOWN ON PLANS REFER TO DISTANCES FROM INSIDE FACES OF BOX BETWEEN THE WIDTHS AND LENGTHS.
- MANHOLE WIDTHS AND LENGTHS SHOWN ON PLAN REFER TO THE EXTERIOR WALL DIMENSIONS.
- ALL STORM SEWER SHALL BE A MINIMUM OF CLASS III REINFORCED CONCRETE PIPE. SPECIFIC SEGMENTS OF STORM SEWER SHALL BE REQUIRED TO BE CONSTRUCTED OF A MINIMUM OF 5000 PSI CONCRETE DUE TO EXCESSIVE VELOCITIES. REFER TO ADDITIONAL NOTES WITHIN CONSTRUCTION PLANS.
- SINCE ALL PIPE ENTRIES INTO THE BASE ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK.
- THE MH RING (FRAME) SHALL BE SET IN A BED OF GROUT. THE FRAME SHALL BE SURROUNDED WITH A GROUT IN UNPAVED AREA, OR A CONCRETE COLLAR IN PAVED AREA.
- PRECAST MANHOLES AND REINFORCEMENT SHALL CONFORM TO ASTM C 478 (AASHTO M 199).
- CAST IN PLACE MANHOLES SHALL BE CLASS B CONCRETE.
- STEPS SHALL BE REQUIRED WHEN THE MANHOLE DEPTH EXCEEDS 3'-6" AND SHALL BE IN ACCORDANCE WITH AASHTO M 199.
- ALL REINFORCING STEEL SHALL HAVE A MINIMUM YIELD STRENGTH OF 60,000 PSI. VERTICAL STEEL SHALL BE PLACED AT 1/4 OF WALL. ALL BARS SHALL HAVE A 2" MINIMUM CLEARANCE.
- FLOW CHANNELS AND INVERTS SHALL BE FORMED BY SHAPING WITH CLASS B CONCRETE OR APPROVED GROUT.
- STUB-OUTS SHALL EXTEND 4 FT MINIMUM BEYOND OUTSIDE WALL SURFACE OF MANHOLE AND BE SATISFACTORILY PLUGGED.
- CHECK WITH THE LOCAL GOVERNMENT AUTHORITY FOR ANY ADDITIONAL STORM SEWER SPECIFICATIONS, DETAILS, OR REGULATIONS.
- THE SLOPE OF THE MANHOLE COVER SHALL MATCH THE ROADWAY PROFILE AND CROSS SLOPE.
- THE CONTRACTOR SHALL PROVIDE SHOP DRAWINGS OF ALL PREFABRICATED STRUCTURES TO THE ENGINEER FOR REVIEW PRIOR TO INSTALLATION.

suggest adding U.N.O. as not all pipes indicated are RCP

**SOIL RIPRAP NOTES:**

- THE SOIL MATERIAL SHALL BE NATIVE OR TOPSOIL AND MIXED WITH SIXTY FIVE PERCENT (65%) RIPRAP AND THIRTY FIVE PERCENT (35%) SOIL BY VOLUME.
- SOIL RIPRAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIPRAP WITHOUT VOIDS.
- CONTRACTOR SHALL COOPERATE WITH ENGINEER IN OBTAINING AND PROVIDED SAMPLES OF ALL SPECIFIED MATERIALS.
- CONTRACTOR SHALL SUBMIT CERTIFIED LABORATORY TEST CERTIFICATES FOR ALL ITEMS REQUIRED FOR SOIL RIPRAP.
- RIPRAP USED SHALL BE THE TYPE DESIGNATED ON THE DRAWINGS AND SHALL CONFORM TO TABLE SHOWN TO THE RIGHT.
- THE RIPRAP DESIGNATION AND TOTAL THICKNESS OF RIPRAP SHALL BE AS SHOWN ON THE DRAWINGS. THE MAXIMUM STONE SIZE SHALL NOT LARGER THAN THE THICKNESS OF THE RIPRAP.
- NEITHER WIDTH NOR THICKNESS OF A SINGLE STONE OF RIPRAP SHALL BE LESS THAN ONE-THIRD (1/3) OF ITS LENGTH.
- THE SPECIFIC GRAVITY OF THE RIPRAP SHALL BE TWO AND ONE-HALF (2.5) OR GREATER.
- MINIMUM DENSITY FOR ACCEPTABLE RIPRAP SHALL BE ONE HUNDRED AND SIXTY FIVE (165) POUNDS PER CUBIC FOOT.
- RIPRAP SPECIFIC GRAVITY SHALL BE ACCORDING TO THE BULK-SATURATED, SURFACE-DRY BASIS, IN ACCORDANCE WITH AASHTO T85.
- BROKEN CONCRETE OR ASPHALT PAVEMENT SHALL NOT BE ACCEPTABLE FOR USE IN THE WORK.
- ROUNDED RIPRAP (RIVER ROCK) IS NOT ACCEPTABLE, UNLESS SPECIFICALLY DESIGNATED ON THE DRAWINGS.

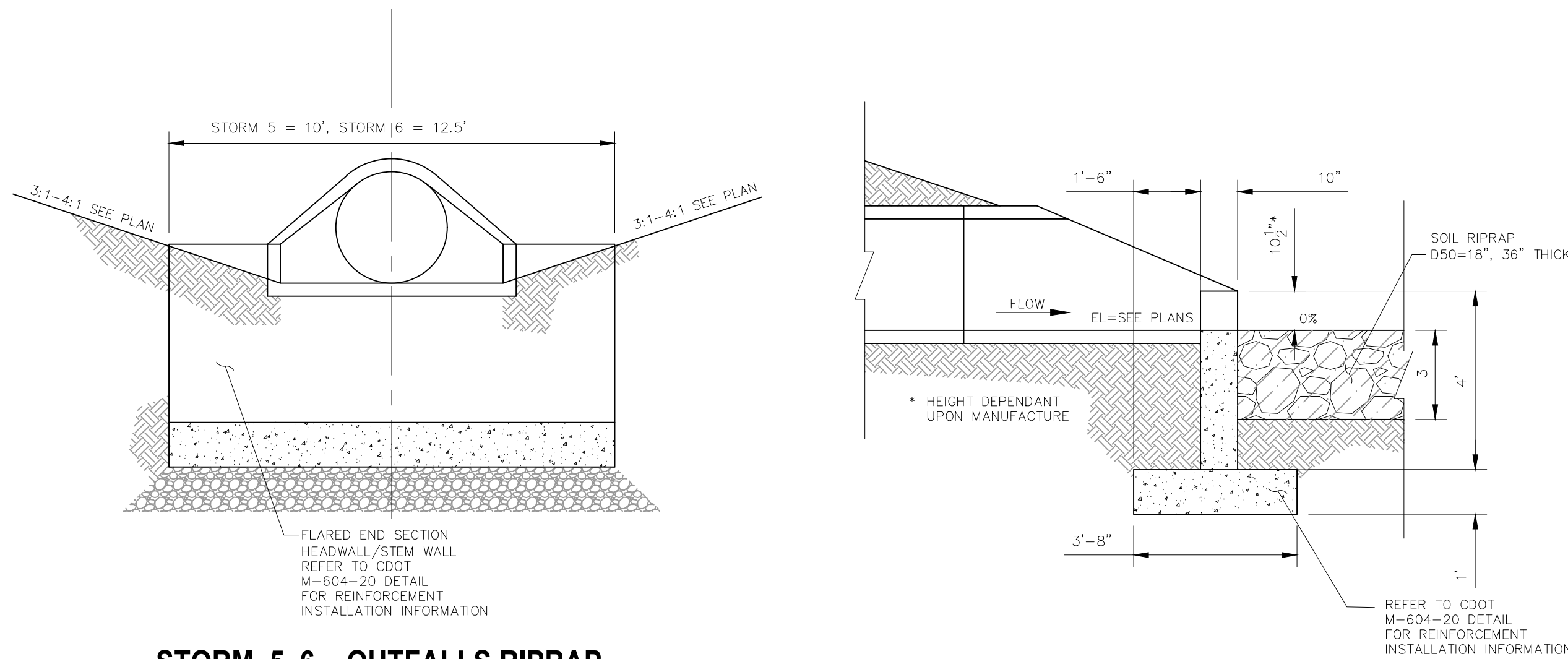
**STRUCTURAL CONCRETE NOTES:**

- ALL CONSTRUCTION INVOLVING THE PLACEMENT OF STRUCTURAL CONCRETE SHALL BE COMPLETED IN ACCORDANCE WITH STANDARD SPECIFICATIONS, AND AS SUPPLEMENTED BY THE COLORADO DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION.
- STEEL REINFORCING SHALL BE GRADE 60 FOR ALL REINFORCING STEEL GREATER THAN #4. SPlicing, LAP SPlicing SHALL BE MINIMUM IN THE FOLLOWING TABLE UNLESS OTHERWISE SPECIFIED:
 

BAR SIZE	#4	#5	#6	#7	#8
SPLICE LENGTH	1'-9"	2'-2"	2'-7"	3'-4"	4'-3"

 ALL REINFORCING SHALL HAVE A 2-INCH MINIMUM COVER UNLESS OTHERWISE SPECIFIED. ALL REINFORCED STEEL TO BE EPOXY COATED.
- CAST-IN-PLACE CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (fc) OF 4,000 PSI AT 28 DAYS. ALL CONCRETE PLACED AGAINST SOIL SHALL BE TYPE II PORTLAND CEMENT. ALL EXPOSED CORNERS SHALL BE FORMED WITH A 3/4" CHAMFER UNLESS OTHERWISE SPECIFIED.
- EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213.
- BACKFILL AGAINST STRUCTURES SHALL NOT COMMENCE UNTIL ALL SUPPORTING DIAPHRAGMS ARE IN PLACE AND CONCRETE HAS OBTAINED ITS FULL SEVEN DAY STRENGTH. BACKFILL SHALL BE PLACED EQUALLY ON EACH SIDE OF RETAINING WALL STRUCTURES AND CUTOFF WALLS UNTIL THE FINAL GRADE IS REACHED.
- FOOTING EXCAVATIONS SHALL BE EXAMINED BY THE GEOTECHNICAL ENGINEER WITH A 24-HOUR MINIMUM NOTIFICATION FOR SOIL AND/OR CONCRETE TESTING. PLACEMENT OF CONCRETE IN THE ABSENCE OF TESTING SHALL BE COMPLETED AT THE SOLE RISK OF THE CONTRACTOR.
- PRIOR TO THE PLACEMENT OF CONCRETE IN AREAS WHERE SOIL IS PRESENT, THE SOIL SHALL BE SCARIFIED TO A MINIMUM DEPTH OF 6-INCHES. THE MOISTURE CONTENT SHALL BE ADJUSTED TO WITHIN PLUS OR MINUS 2 PERCENT OF THE OPTIMUM MOISTURE CONTENT AND RECOMPACTED TO AT LEAST 95 PERCENT RELATIVE COMPACTION (AASHTO-T-180).

ABBREVIATIONS  
 EC --- EPOXY COATED    O.F. --- OUTSIDE FACE    E.F. --- EACH FACE    E.W. --- EACH WAY    I.F. --- INSIDE FACE    N.F. --- NEAR FACE  
 T.O.C. --- TOP OF CONCRETE    B.O.C. --- BOTTOM OF CONCRETE    CONT. --- CONTINUOUS



**STORM 5, 6 - OUTFALLS RIPRAP APRON W/HEADWALL ELEVATION (TYP.)**

NOT TO SCALE

**STORM 5,6 - OUTFALL RIPRAP APRON W/HEADWALL SECTION (TYP.)**

NOT TO SCALE

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION CALL 1-800-922-1987

CLEARWAY FILING NO. 2, LOT 5

STORM SEWER NOTES AND DETAILS

PROJECT NO. 44-042A  
 SCALE: HORIZONTAL: N/A VERTICAL: N/A  
 DESIGNED BY: DLM  
 DRAWN BY: CLP  
 CHECKED BY: DLM

DATE: 06-02-2022  
 SHEET 9 OF 15  
 ST04

217 N. WAHATCH AVE., STE 305  
 COLORADO SPRINGS CO 80903  
 PHONE 719.955.5485



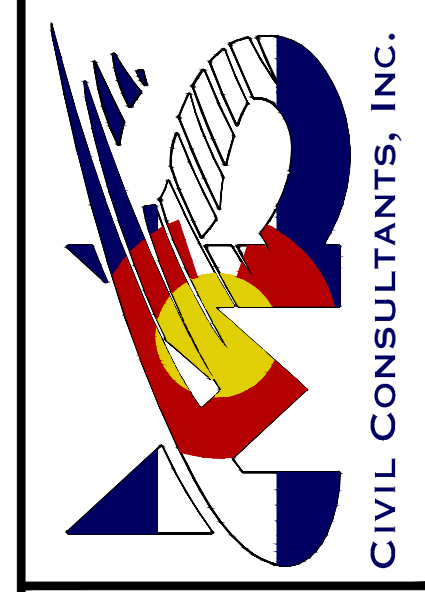
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 37160

NO.	DATE	BY	DESCRIPTION	APPROV'D. BY	DATE

THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE, OR LIABLE FOR, UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION



**STEEL GRATE QUANTITIES**

NO. PIECES	DESCRIPTION	LENGTH PER FT.	WEIGHT (LBS.)
4	54 x 7.7 BEAM	40"	7.70
2	3 1/2" x 1/4" FLAT	26 5/8"	2.88
2	3" x 1/4" FLAT	25 1/2"	2.52
TOTAL LBS. - 128			

**QUANTITIES FOR ONE INLET**

H	CONCRETE (CU. YDS.)	STEEL (LBS.)	STEPS REQ'D.
2'-0"	0.3	75	0
3'-0"	1.0	80	0
3'-6"	1.2	96	0
4'-0"	1.3	103	1
4'-6"	1.4	116	2
5'-0"	1.5	122	2
5'-6"	1.7	137	2
6'-0"	1.8	142	3
6'-6"	1.9	158	3
7'-0"	2.0	163	3
7'-6"	2.2	179	4
8'-0"	2.3	184	4
8'-6"	2.4	199	4
9'-0"	2.5	205	5
9'-6"	2.7	220	5
10'-0"	3.0	235	6
10'-6"	3.4	251	6

**GENERAL NOTES**

- INLET TYPE C IS NOT HS-20 RATED AND SHALL NOT BE PLACED IN PAVED ROADWAYS. THIS INLET SHALL BE USED ONLY OUTSIDE PAVED ROADWAYS.
- CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
- REINFORCING BARS SHALL BE EPOXY COATED AND REFORMED #4 AND SHALL HAVE A MINIMUM 2 IN. CLEARANCE OUT OR BEND AROUND PIPES AS REQUIRED.
- CONCRETE SLOPE AND DITCH PAVING SHALL BE IN ACCORDANCE WITH SECTION 507. REINFORCEMENT FOR CONCRETE SLOPE PAVING SHALL BE 6 X 6 - W4.4 X W4.4 OR 6 X 6 - W2.1 X W2.1.
- STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED, AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
- THE STANDARD INLET GRATES SHALL BE USED ON ALL TYPE C INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
- CLOSE MESH GRATES ARE RECOMMENDED WHERE FOOT TRAFFIC OR BICYCLE ROUTES ARE IN CLOSE PROXIMITY TO GRATE. THIS GRATE IS NOT ADA COMPLIANT OR BICYCLE FRIENDLY AND SHALL NOT BE PLACED DIRECTLY IN SIDEWAYS, CROSSWALKS OR BIKE PATHS.
- STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FT. - 6 IN., AND SHALL CONFORM TO AASHTO M 199.
- SEE STANDARD PLAN M-604-11 FOR REINFORCEMENT AROUND THE PIPE OPENING.
- ALL INLETS SHALL HAVE A 4 IN. DIA. METAL MEDALLION WITH A 1/2" DIMENSION TO STREAM MESSAGE ON IT. THE MEDALLION SHALL HAVE A FINISH SYMBOL WITH A BLUE BACKGROUND. IT SHALL BE FIRMLY ATTACHED TO THE TOP OF THE INLET WITH A PERMANENT FASTENER.

**BAR LIST FOR H = 2 FT. - 6 IN. AND BENDING DIAGRAM**

MARK	NO.	DESCRIPTION	LENGTH	WEIGHT
401	2	2" x 3" FLAT	7'-10"	7.10
402	6	2" x 3" FLAT	8'-2"	7.10
402	3	1 1/2" x 1/4" FLAT	15'-0"	2.88

**COMPUTER FILE INFORMATION**

Creation Date: 07/04/22 Initials: DD  
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 CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

**Colorado Department of Transportation**  
 4201 East Arkansas Avenue  
 Denver, Colorado 80222  
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 Fax: (303) 757-9820

**Project Development Branch DD/LTA**  
 Issued By: Project Development Branch July 4, 2022

**INLET, TYPE C STANDARD PLAN NO. M-604-10**  
 Sheet No. 1 of 1

**GENERAL NOTES**

- CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
- SEE PLANS FOR SIZE AND LOCATION OF PIPE.
- STRUCTURAL STEEL FOR GRATES AND GRATE INSTALLATION HARDWARE SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.
- STANDARD INLET GRATES SHALL BE USED ON ALL TYPE D INLETS UNLESS CLOSE MESH GRATES ARE SPECIFIED ON THE PLANS.
- STEPS SHALL BE PROVIDED WHEN INLET DIMENSION "H" IS EQUAL TO OR GREATER THAN 3 FT. - 6 IN. AND SHALL CONFORM WITH AASHTO M 199.
- REINFORCING BARS SHALL BE EPOXY COATED AND REFORMED #4 AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE OUT OR BEND AROUND PIPE AS REQUIRED.

**QUANTITIES FOR ONE INLET**

H	CONCRETE (CU. YDS.)	STEEL (LBS.)	CIRCULAR PIPE RANGE (INSIDE DIA. IN. - ")
3.0	1.5	127	18-24
3.5	1.7	149	18-24
4.0	1.9	157	18-30
4.5	2.0	179	18-36
5.0	2.2	187	18-42
5.5	2.4	208	18-42
6.0	2.6	215	18-42
6.5	2.8	238	18-42
7.0	2.9	243	18-42
7.5	3.1	264	18-42
8.0	3.3	271	18-42
8.5	3.5	292	18-42
9.0	3.6	299	18-42
9.5	3.8	320	18-42
10.0	4.0	327	18-42

**COMPUTER FILE INFORMATION**

Creation Date: 07/04/20 Initials: SRJ  
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**Project Development Branch SRJ/LTA**  
 Issued By: Project Development Branch on July 04, 2006

**INLET, TYPE D STANDARD PLAN NO. M-604-11**  
 Sheet No. 1 of 1

**GENERAL NOTES**

- CONCRETE SHALL BE CLASS B. INLET MAY BE CAST-IN-PLACE OR PRECAST.
- CONCRETE WALLS SHALL BE FORMED ON BOTH SIDES AND SHALL BE 8 IN. THICK.
- INLET STEPS SHALL BE IN CONFORMANCE WITH AASHTO M 199.
- CURB FACE ASSEMBLY SHALL BE GALVANIZED AFTER WELDING.
- EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 3/4" IN. CURB AND GUTTER CORNERS SHALL BE FINISHED TO MATCH THE EXISTING CURB AND GUTTER BEHIND THE TRANSITION GUTTER.
- REINFORCING BARS SHALL BE DEFORMED AND SHALL HAVE A 2 IN. MINIMUM CLEARANCE. ALL REINFORCING BARS SHALL BE EPOXY COATED.
- DIMENSIONS AND WEIGHTS OF TYPICAL MANHOLE RING AND COVER ARE NOMINAL.
- MATERIAL FOR MANHOLE RINGS AND COVERS SHALL BE GRAY OR DUCTILE CAST IRON IN ACCORDANCE WITH SUBSECTION 712.02.
- SINCE PIPE ENTRIES INTO THE INLET ARE VARIABLE, THE DIMENSIONS SHOWN ARE TYPICAL. ACTUAL DIMENSIONS AND QUANTITIES FOR CONCRETE AND REINFORCEMENT SHALL BE AS REQUIRED IN THE WORK. QUANTITIES INCLUDE VOLUMES OCCUPIED BY PIPES.
- STRUCTURAL STEEL SHALL BE GALVANIZED AND SHALL BE IN ACCORDANCE WITH SUBSECTION 712.06.

**TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"**

H	LENGTH	REGULAR		DROP BOX		L = 5 FT.		L = 10 FT.		L = 15 FT.	
		NO. REQ'D.	NO. REQ'D.	CONC.	STEEL	CONC.	STEEL	CONC.	STEEL	CONC.	STEEL
3'-0"	2'-8"	10	7	3.2	285	5.3	497	7.4	706		
3'-6"	3'-2"	10	7	3.4	305	5.7	528	7.9	747		
4'-0"	3'-6"	12	9	3.7	326	6.0	559	8.4	786		
4'-6"	4'-0"	12	9	3.9	344	6.4	591	8.8	833		
5'-0"	4'-8"	14	11	4.1	354	6.7	602	9.3	844		
5'-6"	5'-2"	16	13	4.4	375	7.0	607	7.4	850		
6'-0"	5'-6"	16	13	4.6	382	6.2	616	7.6	860		
6'-6"	6'-0"	18	15	4.8	402	6.4	637	7.8	880		
7'-0"	6'-6"	20	17	5.0	423	6.6	654	8.0	897		
7'-6"	7'-0"	20	17	5.3	430	6.9	664	8.3	907		
8'-0"	7'-8"	22	19	5.5	451	7.1	684	8.5	927		
8'-6"	8'-2"	24	21	5.7	471	7.3	702	8.7	944		
9'-0"	8'-6"	24	21	6.0	479	7.6	711	9.0	954		
9'-6"	9'-0"	26	23	6.2	499	7.8	732	9.2	974		
10'-0"	9'-6"	28	25	6.4	520	8.0	749	9.4	992		
10'-6"	10'-0"	28	25	6.7	527	8.3	759	9.7	1001		
11'-0"	10'-8"	30	27	6.9	547	8.5	779	9.9	1022		

**TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"**

REGULAR INLETS: TOTAL QUANTITIES NEEDED ARE OUTSIDE THE HEAVY BLACK LINE.  
 DROP BOX INLETS: TOTAL QUANTITIES NEEDED ARE INSIDE THE HEAVY BLACK LINE.  
 STEEL WEIGHTS DO NOT INCLUDE STRUCTURAL STEEL CHANNEL.

**COMPUTER FILE INFORMATION**

Creation Date: 07/04/20 Initials: SRJ  
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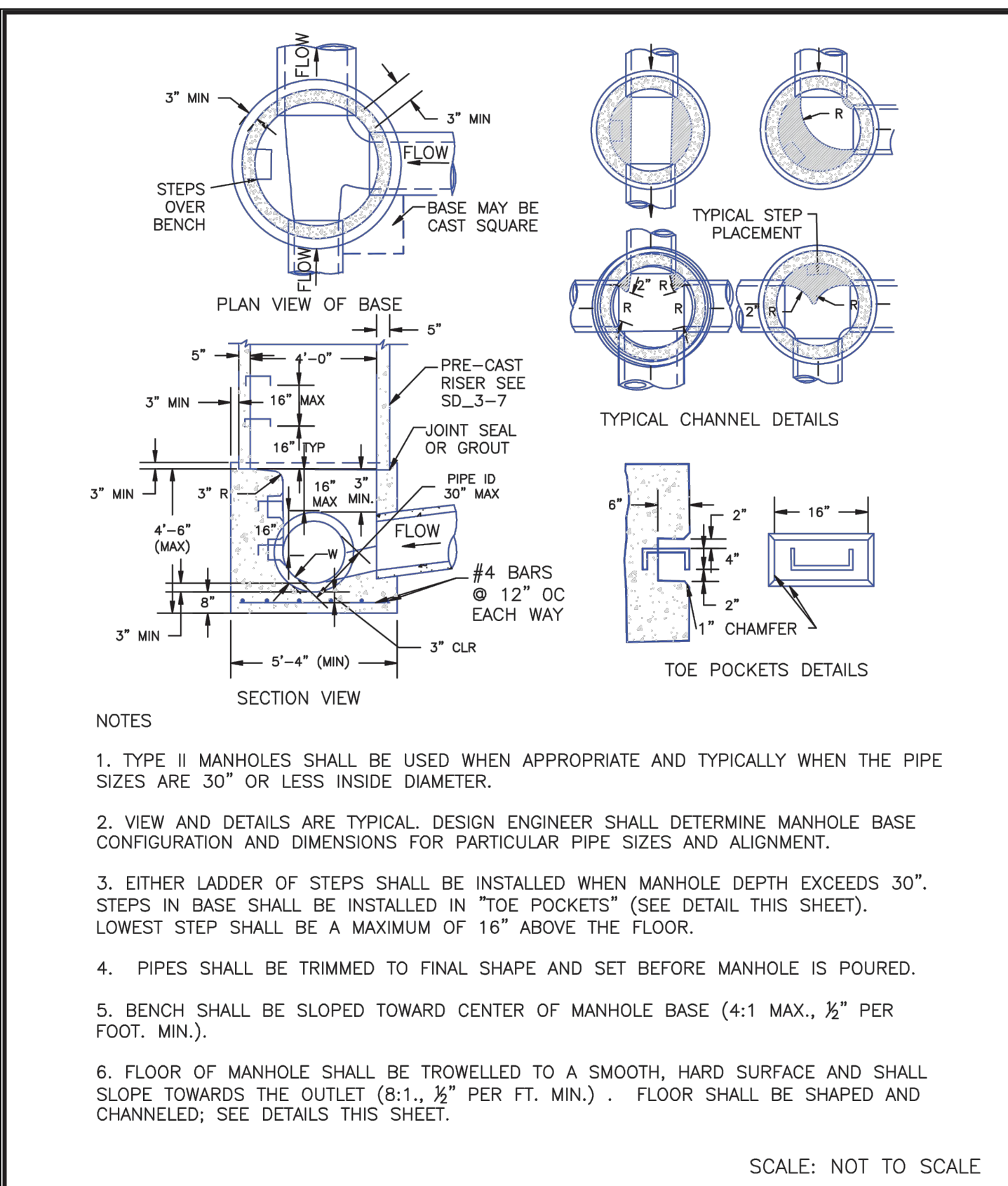
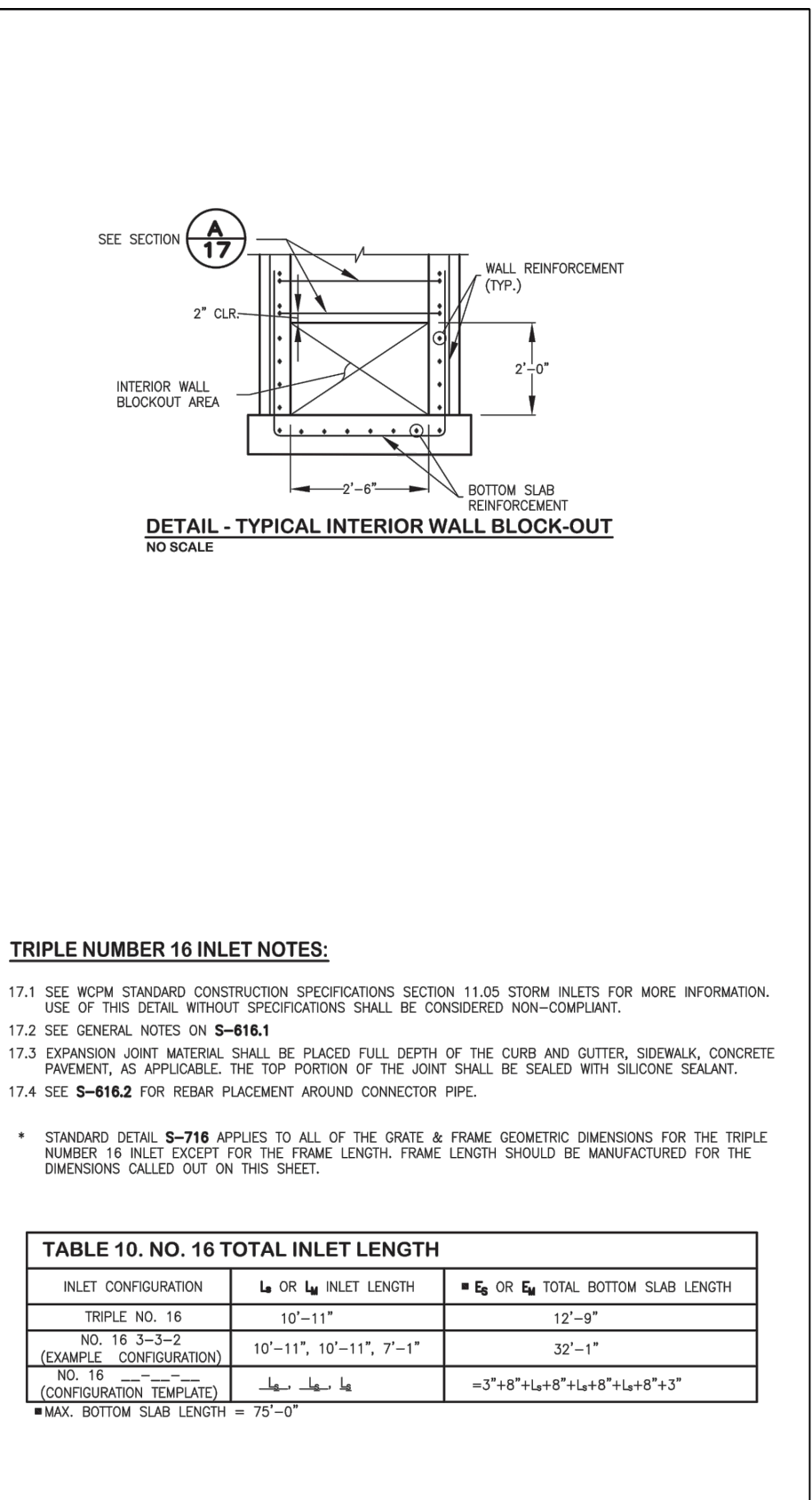
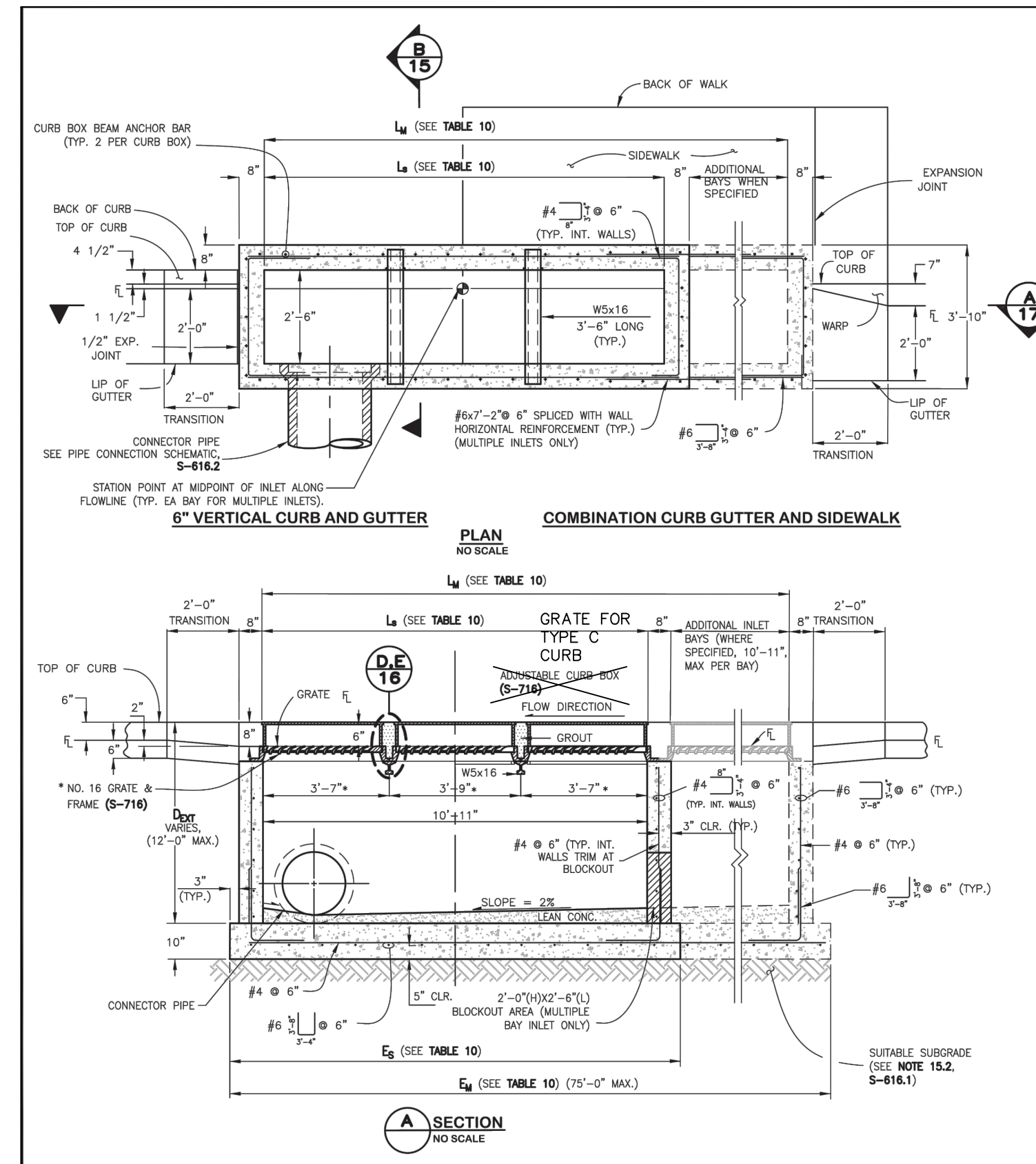
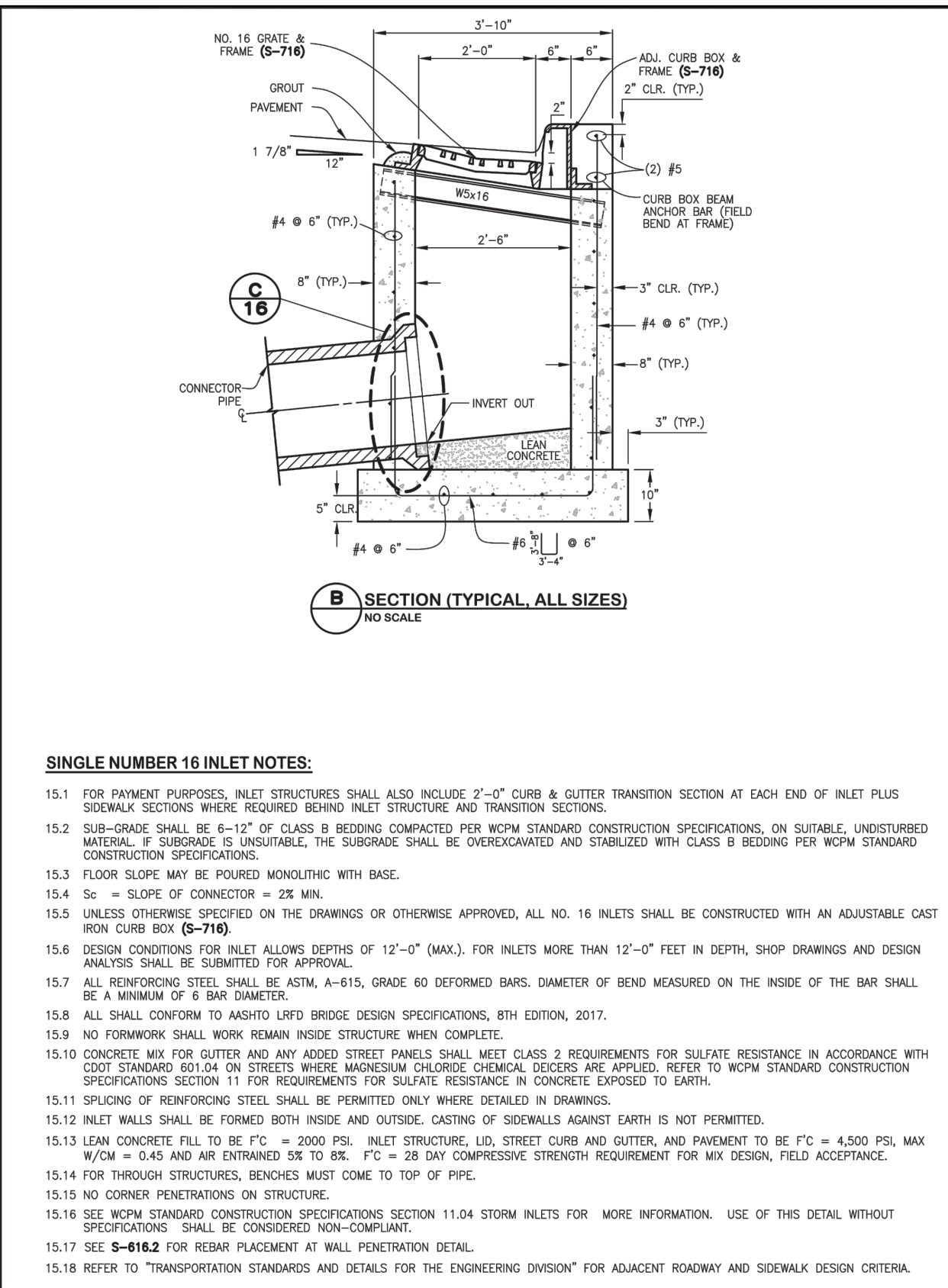
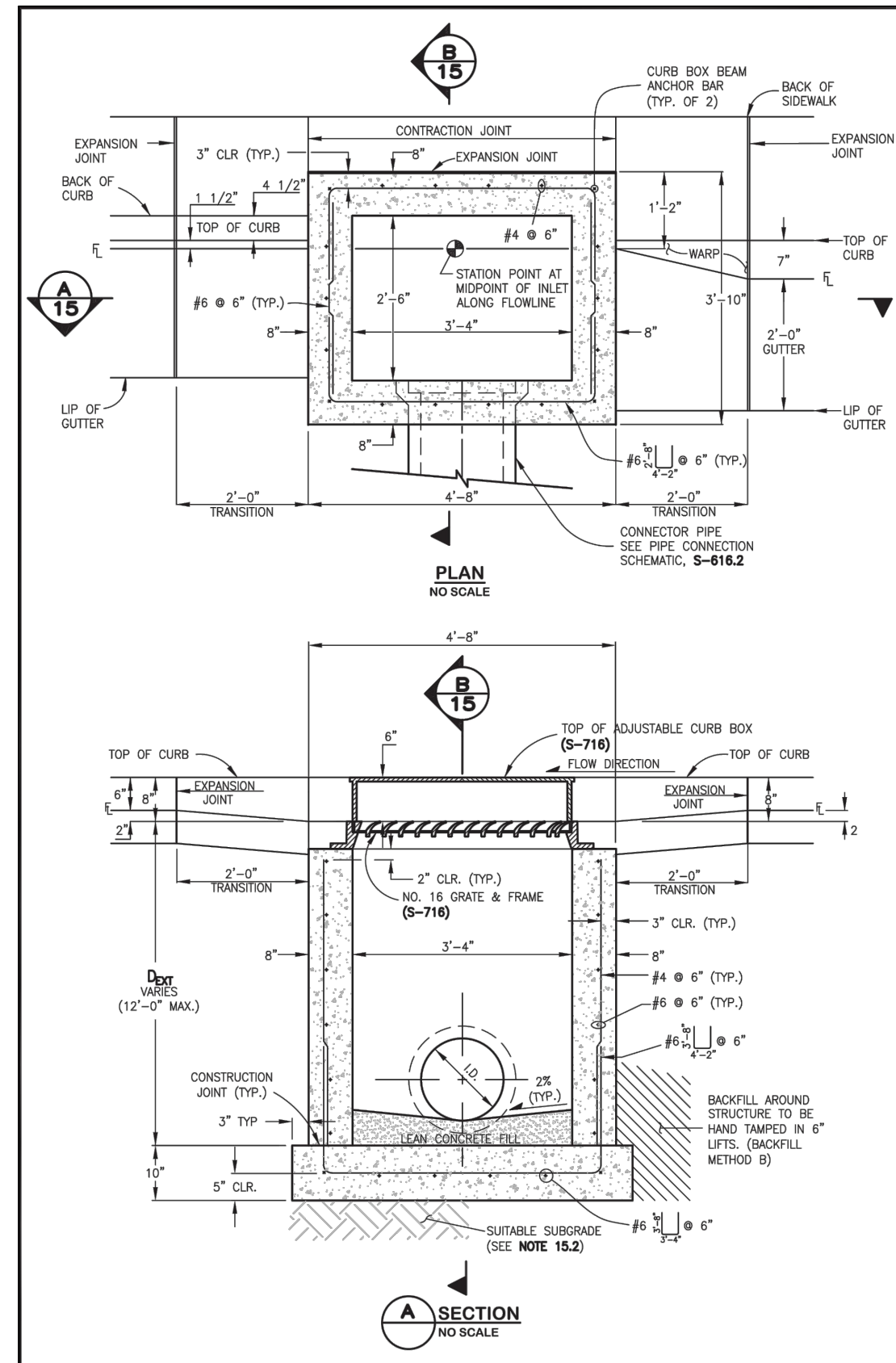
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 Issued By: Project Development Branch on July 04, 2006

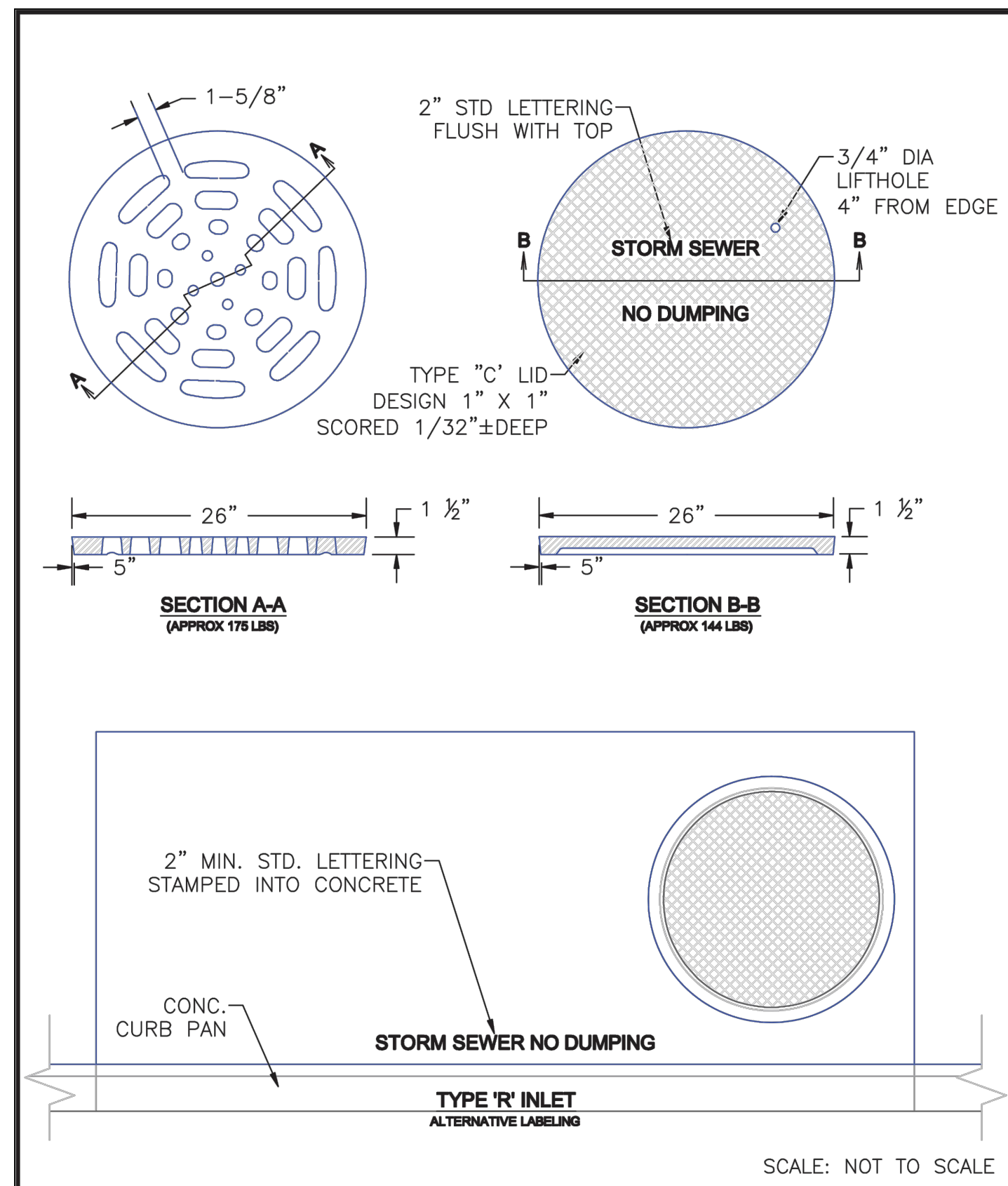
**CURB INLET TYPE R STANDARD PLAN NO. M-604-12**  
 Sheet No. 2 of 2

update file no.





**STORM SEWER MANHOLE DETAIL**  
**TYPE II SD 3-2**



**STORM SEWER MANHOLE L**  
**LID DETAILS SD 3-2**



FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

NO.	DATE	BY	DESCRIPTION

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

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CAUTION

File: C:\44042A-Wre Nut\Hammers\Wdg\Storm\44042A-ST08.dwg Plotstamp: 6/3/2022 9: 04 PM

### 3299CGSQSB

APPROX. GRATE DRAIN AREA = 551.25 SQ IN  
APPROX. WEIGHT WITH FRAME = 249.00 LBS

**TOP OF BASE PLATE TO TOP OF DRAIN BASIN**

12BASEG: 2.82
15BASEG: 2.82
18BASEG: 2.82
24BASEG: 2.82
30BASEG: .38

**\*WEIGHT DOES NOT INCLUDE DUCTILE IRON BASE PLATE**

12BASEG: APPROX. 109.00 LBS
15BASEG: APPROX. 88.00 LBS
18BASEG: APPROX. 85.00 LBS
24BASEG: APPROX. 93.00 LBS
30BASEG: APPROX. 82.00 LBS

DATE	03-28-03
REVISION	BY: CCA PROJECT NO./NAME
DATE	09-04-13
DWG SIZE	A SCALE 1:10 SHEET 1 OF 1
DWG NO.	7001-110-258 REV F

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### NYLOPLAST DRAIN BASIN WITH 2 FT X 2 FT STEEL BAR GRATE

(1) INTEGRATED DUCTILE IRON BASE PLATE TO MATCH BASIN O.D.

(2) STEEL BAR FRAME & GRATE

(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLANS/TAKE OFF)

(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:  
4" - 30" FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL, N-12 HP, PVC SEWER (EX. SDR 35), N-12 HP, & PVC SEWER (4" - 24")  
ADAPTERS CAN BE MOUNTED ON ANY ANGLE 0° TO 300° TO DETERMINE MINIMUM ANGLE BETWEEN ADAPTERS SEE DRAWING NO. 7001-110-012

(5) ADAPTER ANGLES VARIABLE 0° - 300° ACCORDING TO PLANS

TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

DATE	03-22-10
REVISION	BY: MNH PROJECT NO./NAME
DATE	03-16-16
DWG SIZE	A SCALE 1:40 SHEET 1 OF 1
DWG NO.	7001-110-334 REV D

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### NYLOPLAST 24" DRAIN BASIN: 2824AG \_\_X

(1, 2) INTEGRATED DUCTILE IRON FRAME & GRATE TO MATCH BASIN O.D.

(3) VARIABLE INVERT HEIGHTS AVAILABLE (ACCORDING TO PLANS/TAKE OFF)

(4) VARIOUS TYPES OF INLET & OUTLET ADAPTERS AVAILABLE:  
4" - 24" FOR CORRUGATED HDPE (ADS N-12/HANCOR DUAL WALL, ADS/HANCOR SINGLE WALL, N-12 HP, PVC SEWER (EX. SDR 35), PVC DWV (EX. SCH 40), PVC C900/C905, CORRUGATED & RIBBED PVC

(5) ADAPTER ANGLES VARIABLE 0° - 300° ACCORDING TO PLANS

TRAFFIC LOADS: CONCRETE SLAB DIMENSIONS ARE FOR GUIDELINE PURPOSES ONLY. ACTUAL CONCRETE SLAB MUST BE DESIGNED TAKING INTO CONSIDERATION LOCAL SOIL CONDITIONS, TRAFFIC LOADING, & OTHER APPLICABLE DESIGN FACTORS. SEE DRAWING NO. 7001-110-111 FOR NON TRAFFIC INSTALLATION.

THE BACKFILL MATERIAL SHALL BE CRUSHED STONE OR OTHER GRANULAR MATERIAL MEETING THE REQUIREMENTS OF CLASS I, CLASS II, OR CLASS III MATERIAL AS DEFINED IN ASTM D2321. BEDDING & BACKFILL FOR SURFACE DRAINAGE INLETS SHALL BE PLACED & COMPACTED UNIFORMLY IN ACCORDANCE WITH ASTM D2321.

GRATE OPTIONS	LOAD RATING	PART #	DRAWING #
STANDARD	MEETS F20	2824AG	7001-110-112
SOLID COVER	MEETS F20	2824GCS	7001-110-117
SCAFF	N/A	2824SCC	7001-110-116
DROP IN GRAVE	LIGHT DUTY	2824D	7001-110-075

DATE	04-03-06
REVISION	BY: MNH PROJECT NO./NAME
DATE	03-14-16
DWG SIZE	A SCALE 1:40 SHEET 1 OF 1
DWG NO.	7001-110-192 REV E

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### ALTERNATIVE FOR TYPE II 4' DIA MANHOLES

LIID & FRAME DESIGNED BY ENGINEER FOR ANTICIPATED LOADS. FRAME TO BE SUPPORTED BY CONCRETE COLLAR

ASPHALT OR TURF

NYLOPLAST 30" FRAME AND GRATE COVER

(2) CONCRETE COLLAR (BY OTHERS) REINFORCING AS SPECIFIED BY DESIGN ENGINEER

MIN. AS SPECIFIED BY OTHERS, BUT NOT LESS THAN 8" (200mm)

MIN. AS SPECIFIED BY OTHERS, BUT NOT LESS THAN 12" (400mm)

4" MIN TO TOP OF PIPE

(1) 10' MAXIMUM

HP PIPE STUB SPECIFY DIAMETER, LOCATION & CONNECTION TYPE

48" ADS TRIPLE WALL POLYPROPYLENE RISER

WIDTH OF BACKFILL 18" MINIMUM

CLASS II BACKFILL & BEDDING PER ASTM D2321. MATERIAL SHALL BE WELL PLACED UNIFORMLY AROUND STRUCTURE AND INLET CONNECTIONS AND COMPACTED IN MAX. LIFTS

VARIABLES 6" (150MM) MINIMUM

BEDDING THICKNESS MUST BE SPECIFIED BY DESIGN ENGINEER TO BE ADEQUATE SUPPORT FOR LOADING AND SOIL CONDITIONS, BUT NOT LESS THAN 6" (150MM)

DATE	10-07-17
REVISION	BY: MNH PROJECT NO./NAME
DATE	10-07-17
DWG SIZE	A SCALE 1:40 SHEET 1 OF 1
DWG NO.	7001-110-027 REV A

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ALTERNATIVE FOR TYPE II 4' DIA MANHOLES

CLEARWAY FILING NO. 2, LOT 5

STORM SEWER DETAILS

PROJECT NO. 44-042A SCALE: HORIZONTAL: DATE: 06-02-2022

DESIGNED BY: DLM DRAWN BY: CLP CHECKED BY: DLM

ST08

SHEET 13 OF 15

217 N. WAHATCH AVE, STE 305  
COLORADO SPRINGS, CO 80903  
PHONE 719.955.5485



VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

FOR AND ON BEHALF OF  
MKS CIVIL CONSULTANTS, INC.

REVISIONS: NO. DATE BY DESCRIPTION

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FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES

FOR BURIED UTILITY INFORMATION 48 HRS BEFORE YOU DIG CALL 1-800-922-1987

**LEGEND**

- EX EXISTING
- FUT FUTURE
- PROP PROPOSED
- PROF MAJ CONT
- PROF MIN CONT
- EXIST MAJ CONT
- EXIST MIN CONT

**POND 1 SAND FILTER DETENTION BASIN DATA**

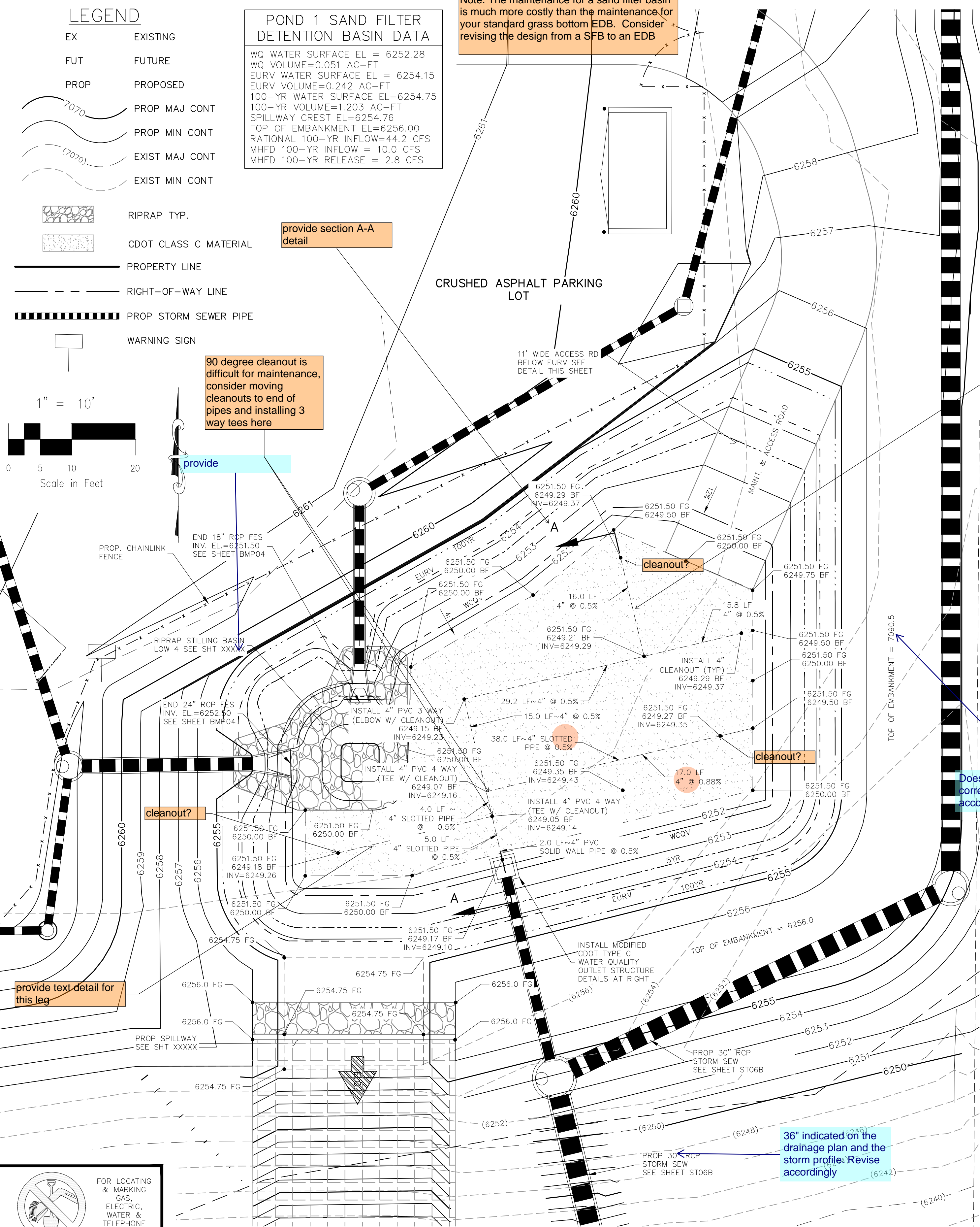
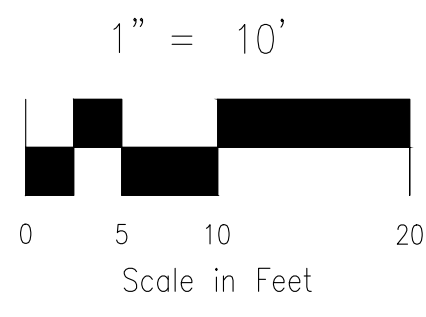
WQ WATER SURFACE EL = 6252.28
WQ VOLUME=0.051 AC-FT
EURV WATER SURFACE EL = 6254.15
EURV VOLUME=0.242 AC-FT
100-YR WATER SURFACE EL=6254.75
100-YR VOLUME=1.203 AC-FT
SPILLWAY CREST EL=6254.76
TOP OF EMBANKMENT EL=6256.00
RATIONAL 100-YR INFLOW=44.2 CFS
MHFD 100-YR INFLOW = 10.0 CFS
MHFD 100-YR RELEASE = 2.8 CFS

Note: The maintenance for a sand filter basin is much more costly than the maintenance for your standard grass bottom EDB. Consider revising the design from a SFB to an EDB

provide section A-A detail

90 degree cleanout is difficult for maintenance, consider moving cleanouts to end of pipes and installing 3 way tees here

provide

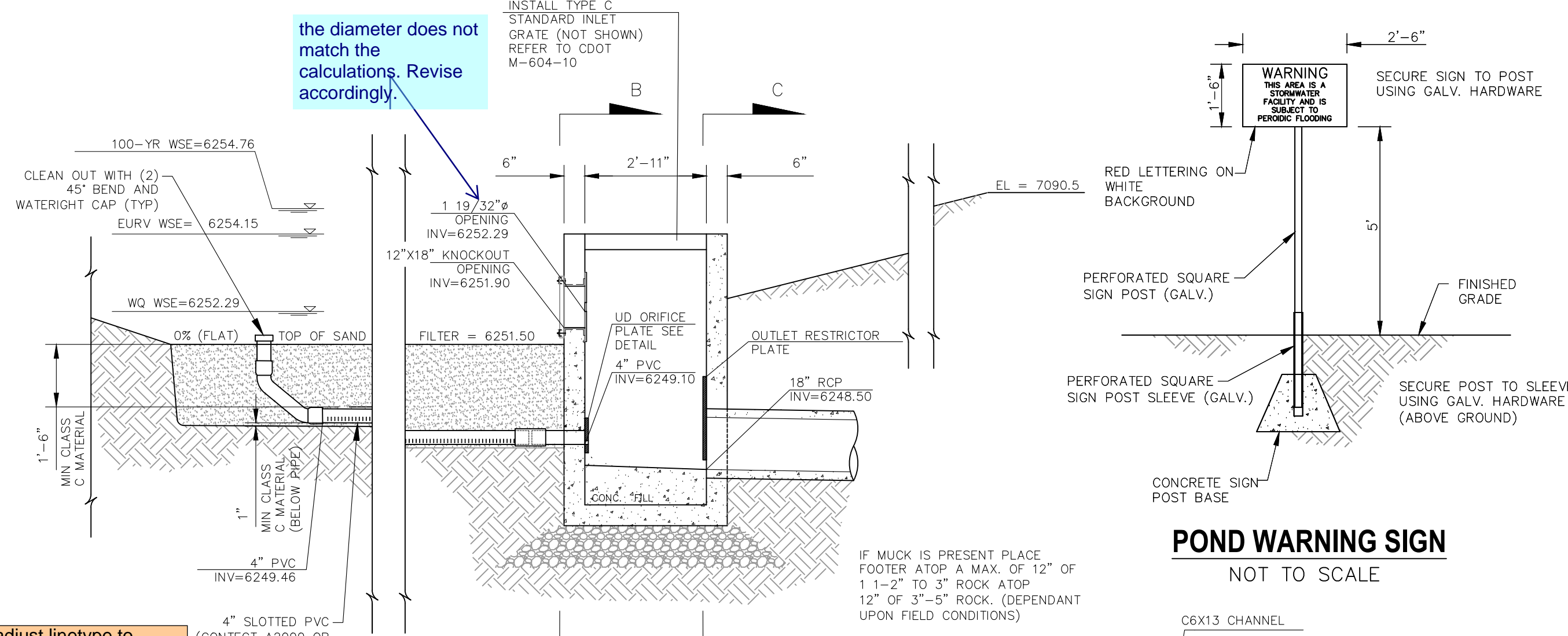


**FULL SPECTRUM DETENTION SAND FILTER POND 1 SITE PLAN**

SCALE 1"=10'

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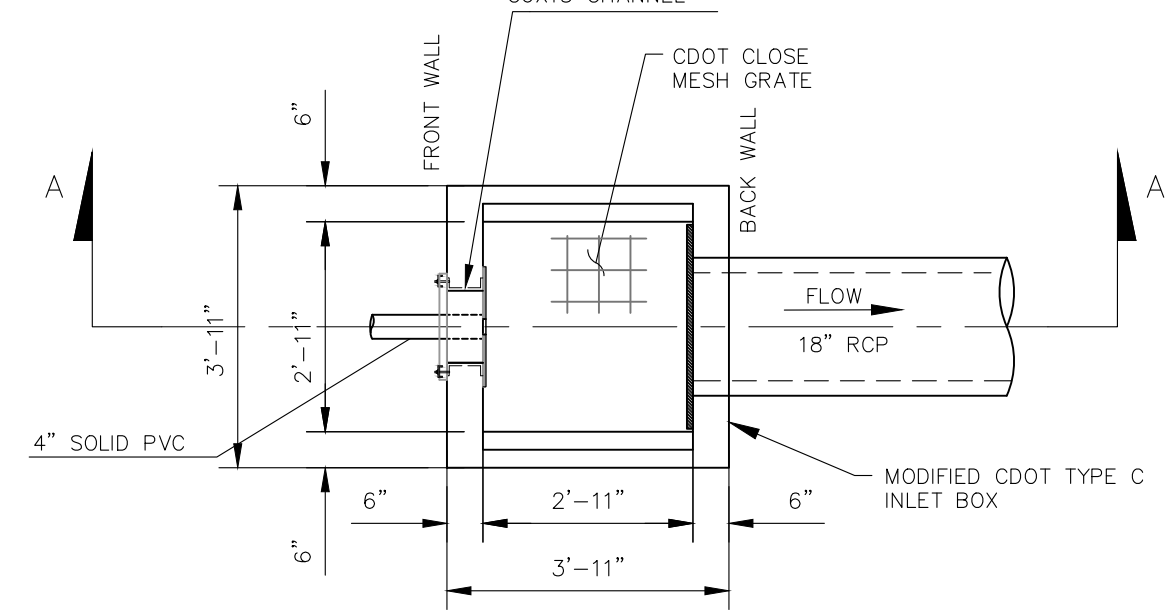


**MODIFIED CDOT TYPE C FULL SPECTRUM OUTLET BOX AND SAND FILTER SECTION A-A NOT TO SCALE**

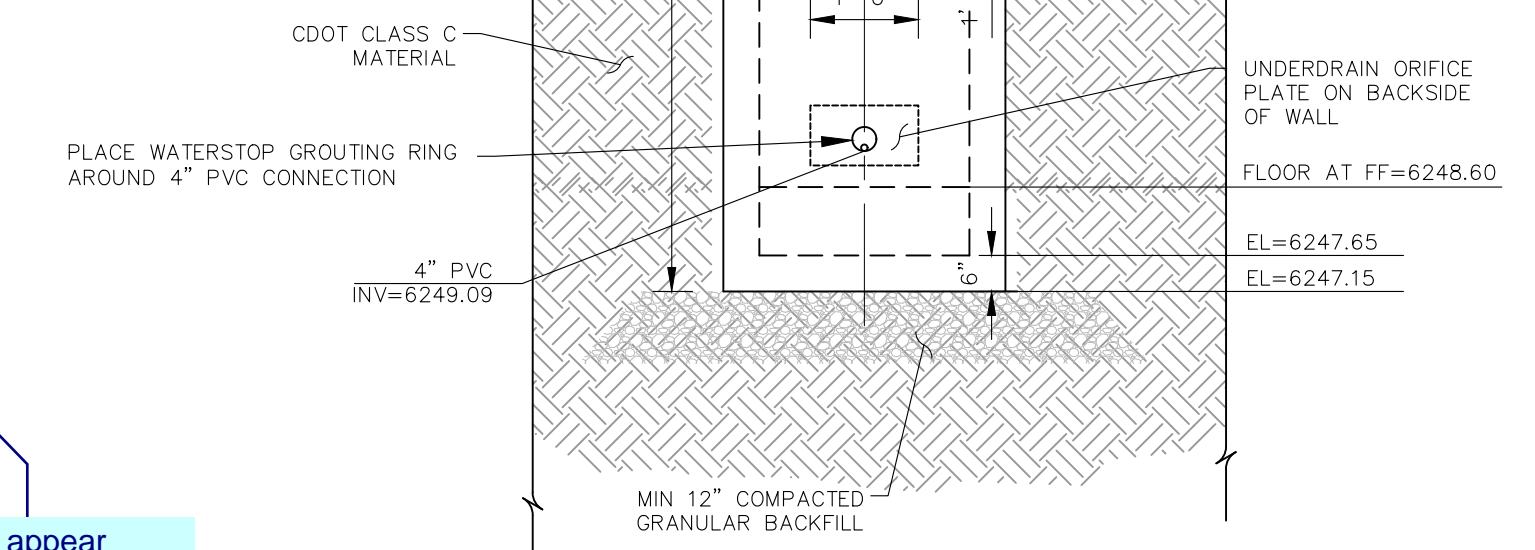
adjust linetype to clearly identify slotted PVC pipe locations

Amico 19-SR-2 INSTALL 27 3/4" X 18 3/4" AMICO STAINLESS STEEL BAR GRATE OR EQUIVALENT OVER OPENING, 3/16" WIDTH BARS ON 1-13/16" CENTERS CROSS RODS EVERY 2" ATOP 12"x18" OPENING IN CONCRETE

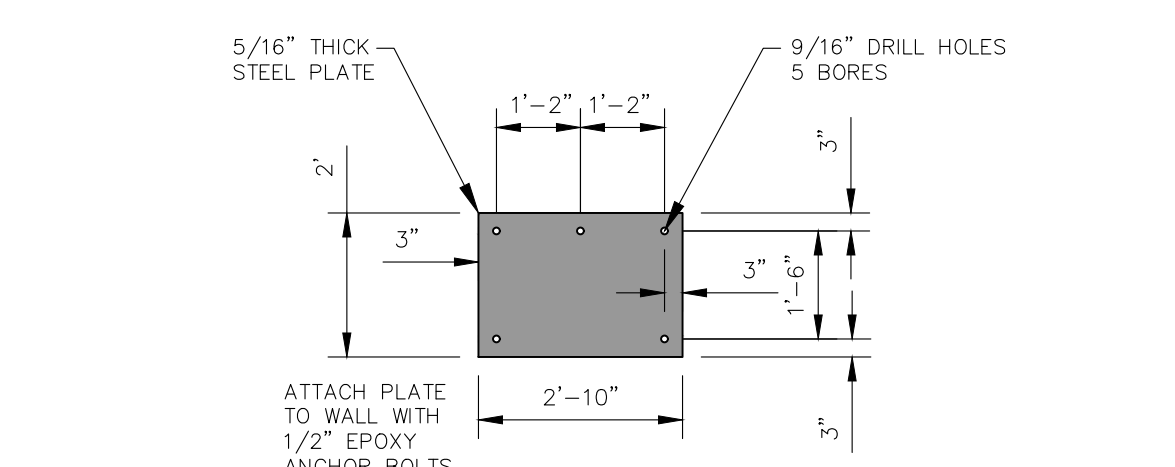
Does not appear correct, revise accordingly



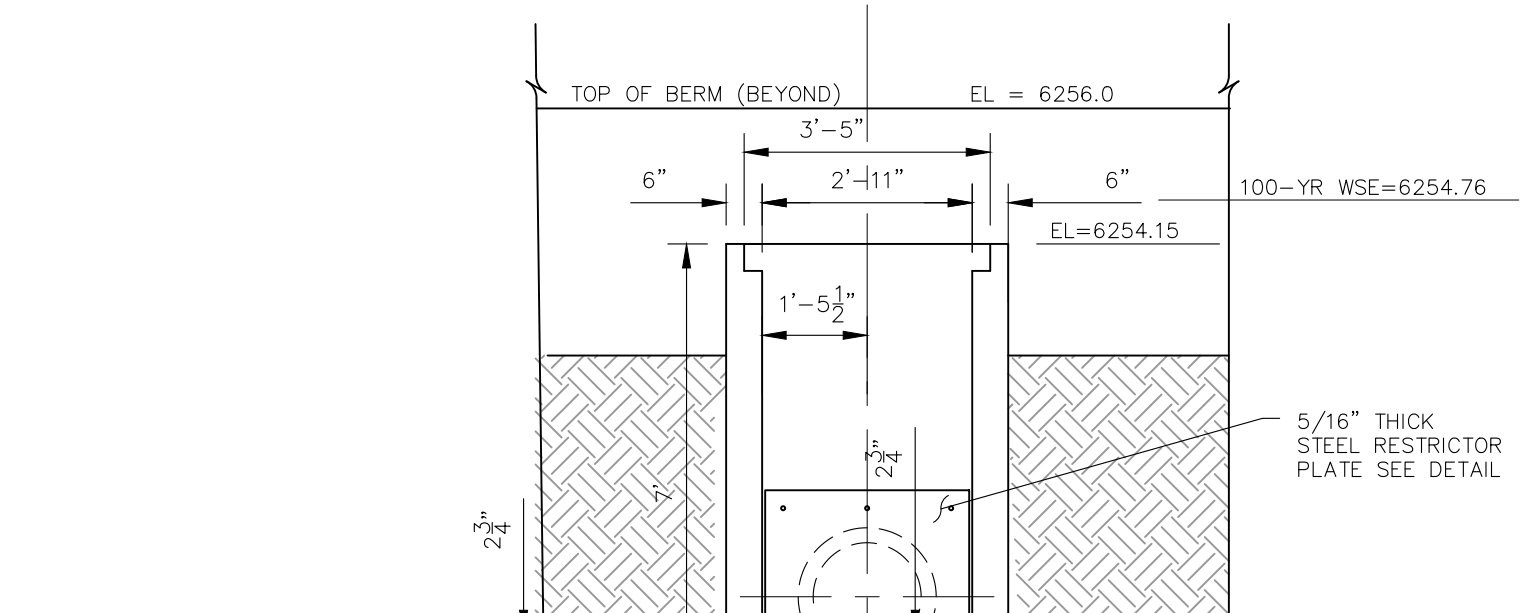
**MODIFIED CDOT TYPE C PLAN NOT TO SCALE**



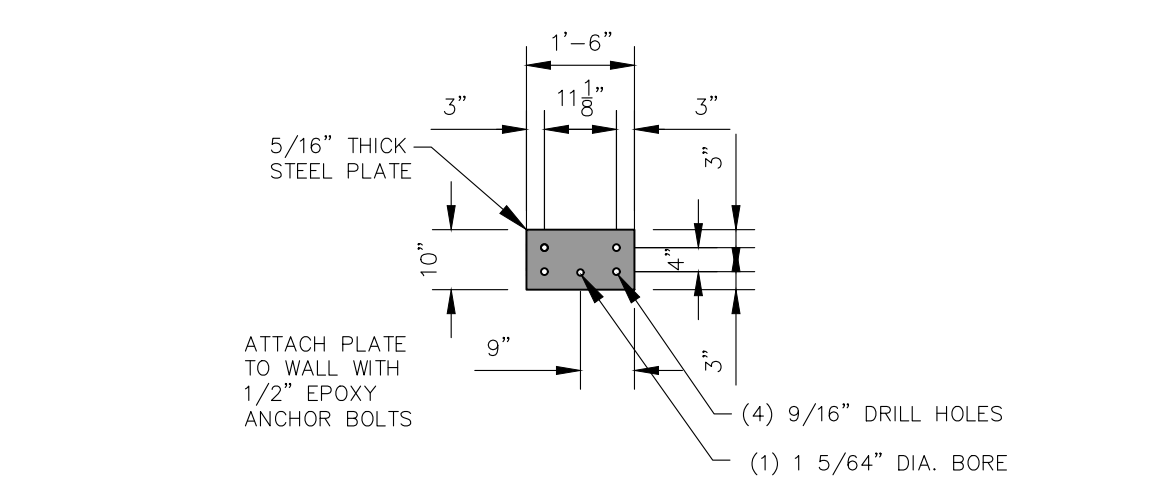
**OUTLET BOX FRONT WALL NOT TO SCALE**



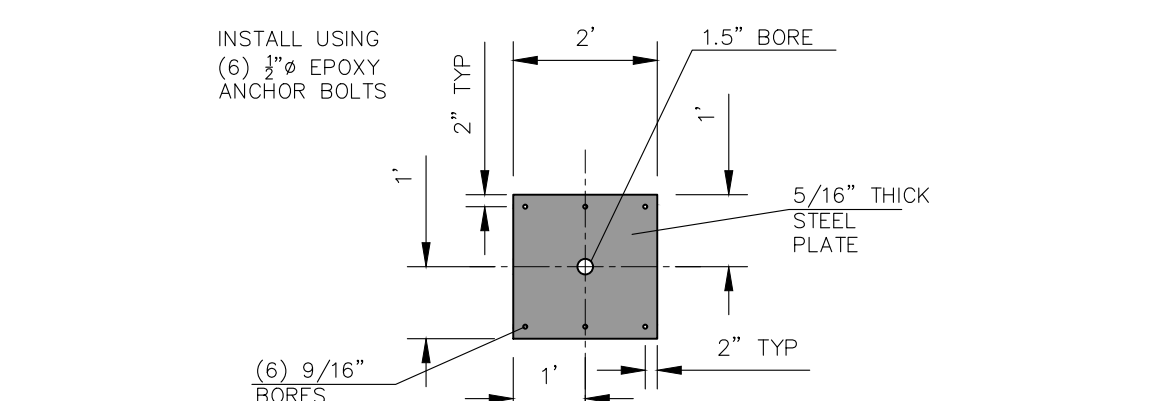
**RESTRICTOR PLATE FOR 18" RCP OUTLET NOT TO SCALE**



**OUTLET BOX REAR WALL NOT TO SCALE**



**UNDERDRAIN ORIFICE PLATE NOT TO SCALE**



**ORIFICE PLATE FOR 12"x18" OPENING NOT TO SCALE**

CLEARWAY FILING NO. 2, LOT 5

OUTLET STRUCTURE POND 1 DETAILS

PROJECT NO. 44-042A DATE: 06-02-2022

SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'

DESIGNED BY: CLP DRAWN BY: CLP CHECKED BY: DLM

217 N. WASHCATCH AVE, STE 305 COLORADO SPRINGS, CO 80903 PHONE: 719.555.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

REVISIONS: NO. DATE: BY: DESCRIPTION:

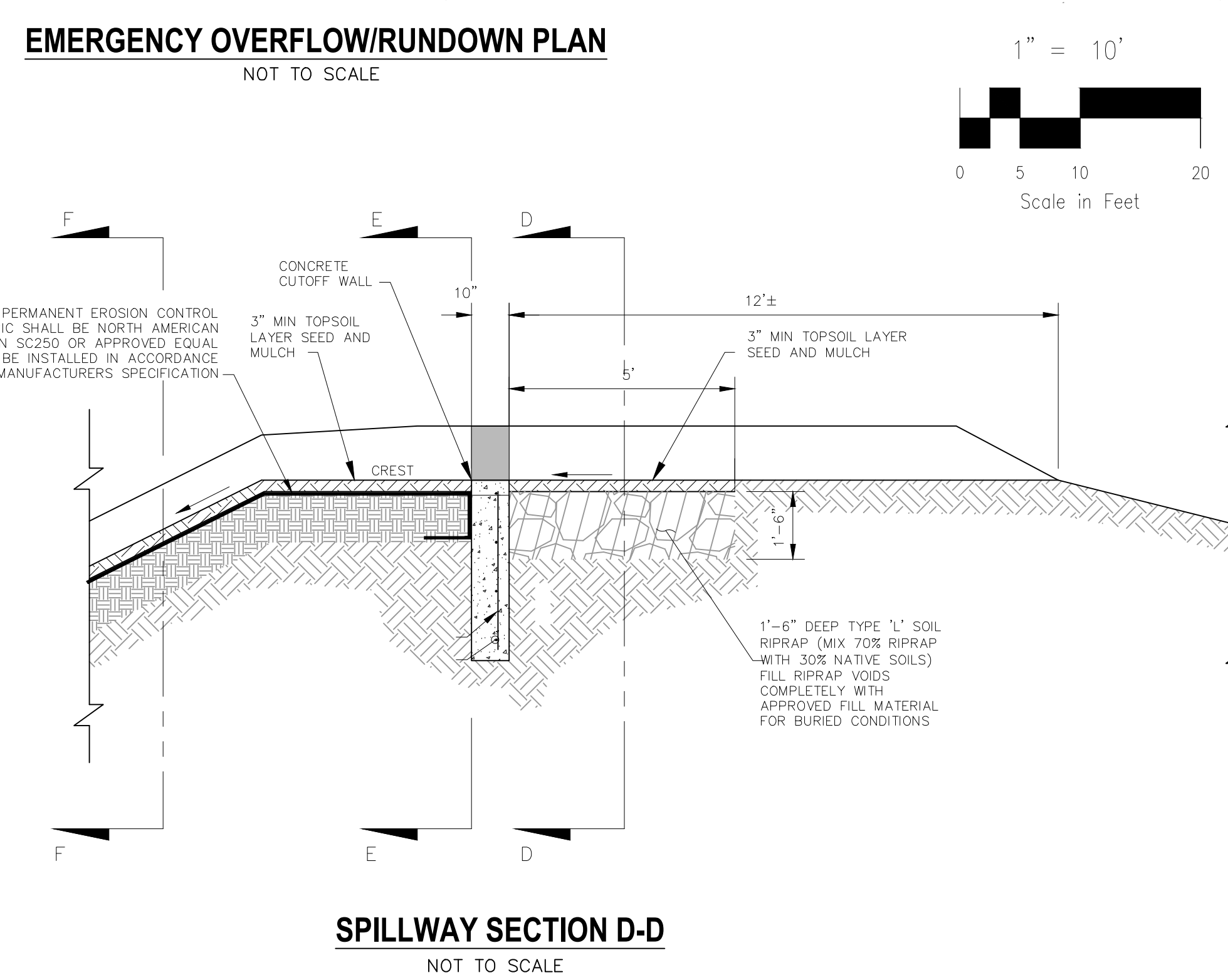
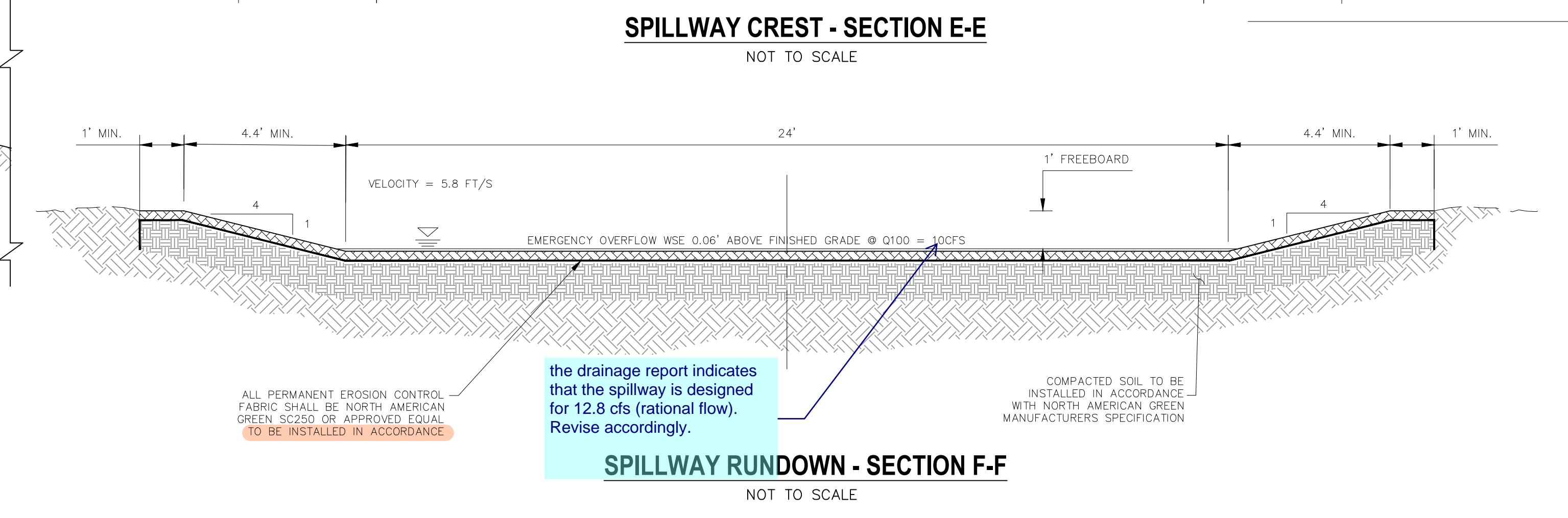
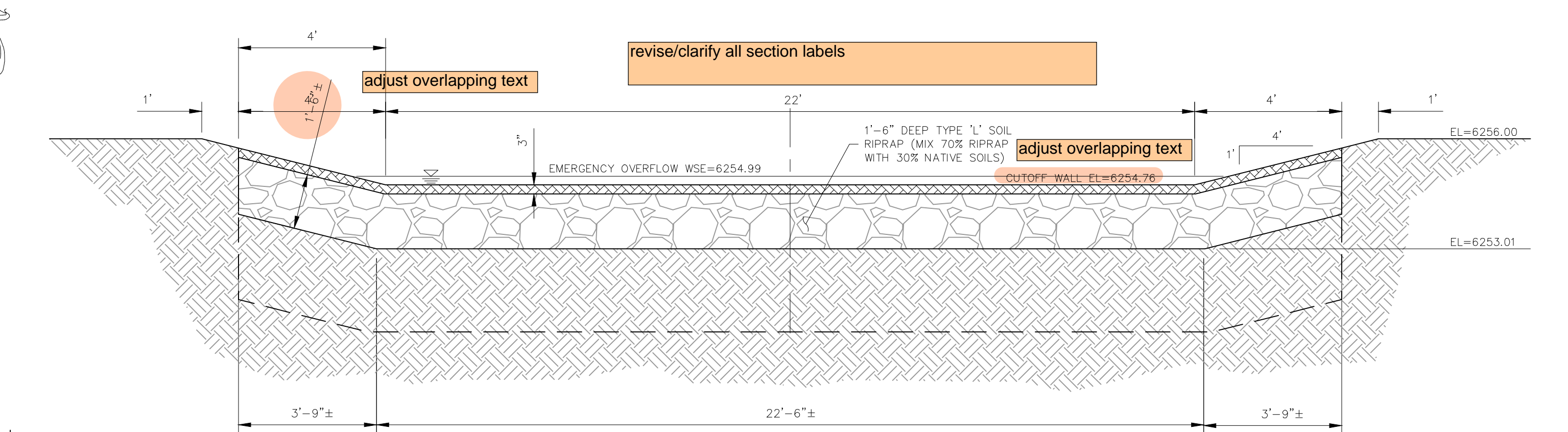
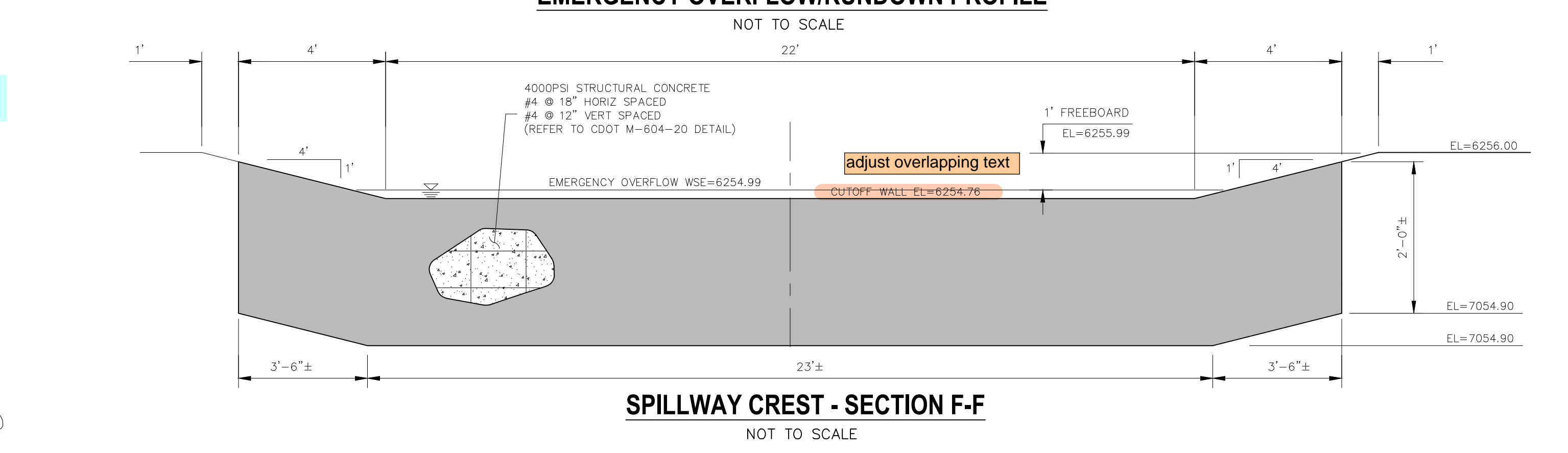
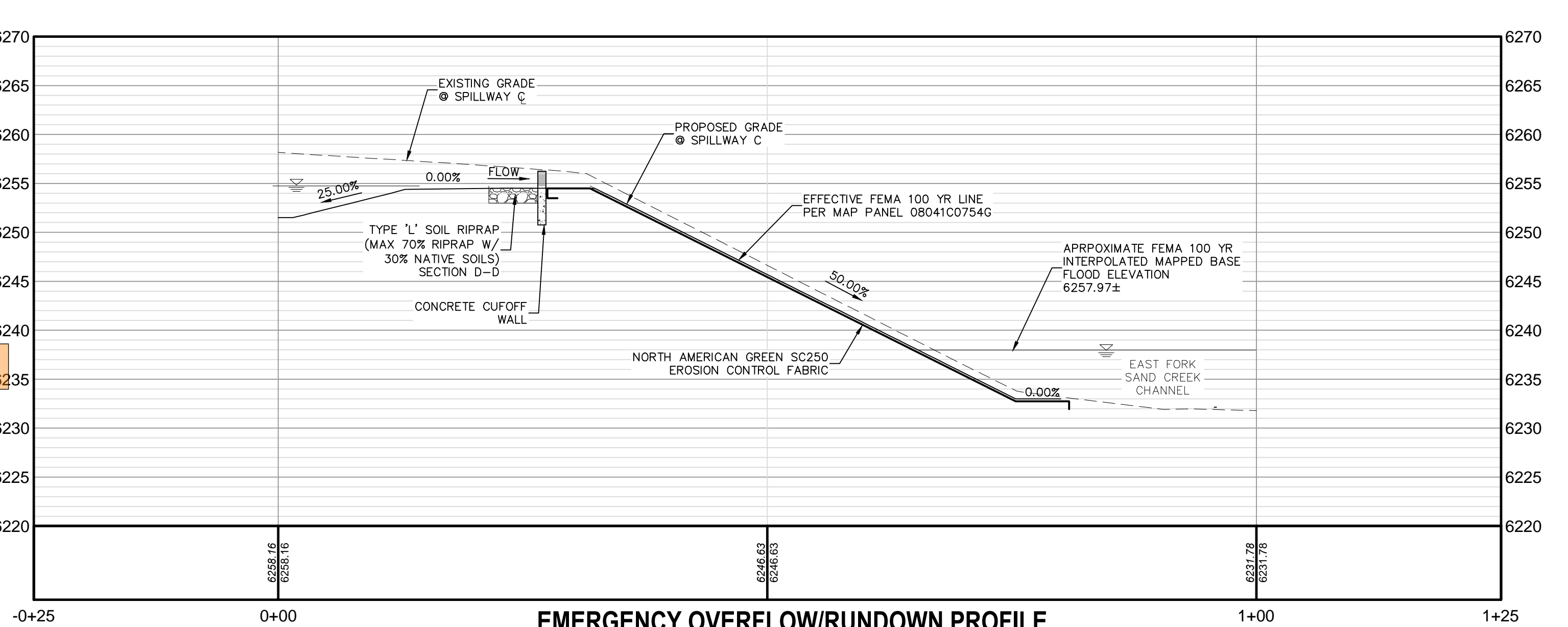
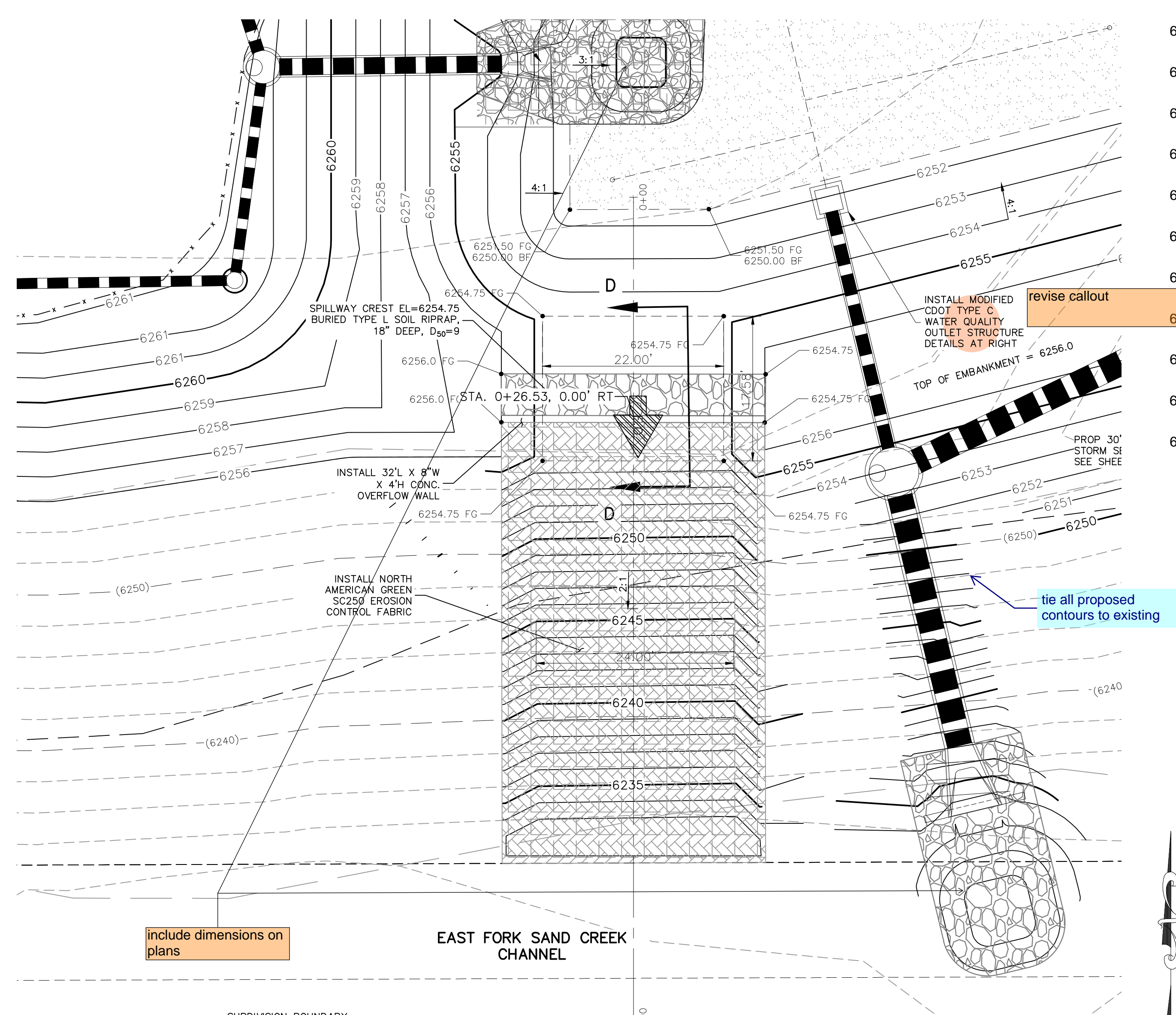
DATE: APPROV. BY:

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CAUTION

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**LEGEND**

EX EXISTING  
PROP PROPOSED

7070 PROP MAJ CONT  
7070 PROP MIN CONT  
7070 EXIST MAJ CONT  
7070 EXIST MIN CONT

RIPRAP TYP.  
CDOT CLASS C MATERIAL  
EROSION CONTROL FABRIC  
PROPERTY LINE  
PROP STORM SEWER PIPE  
WARNING SIGN

FOR LOCATING & MARKING GAS, ELECTRIC, WATER & TELEPHONE LINES  
FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987

1" = 10'  
Scale in Feet  
0 5 10 20

CLEARWAY FILING NO. 2, LOT 5  
OUTLET STURCTURE POND 1 DETAILS  
PROJECT NO. 44-042A  
DATE: 06-02-2022  
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
DESIGNED BY: DLM  
DRAWN BY: CLP  
CHECKED BY: DLM

102 E. PINE PEAK AVE., 5TH FLOOR  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

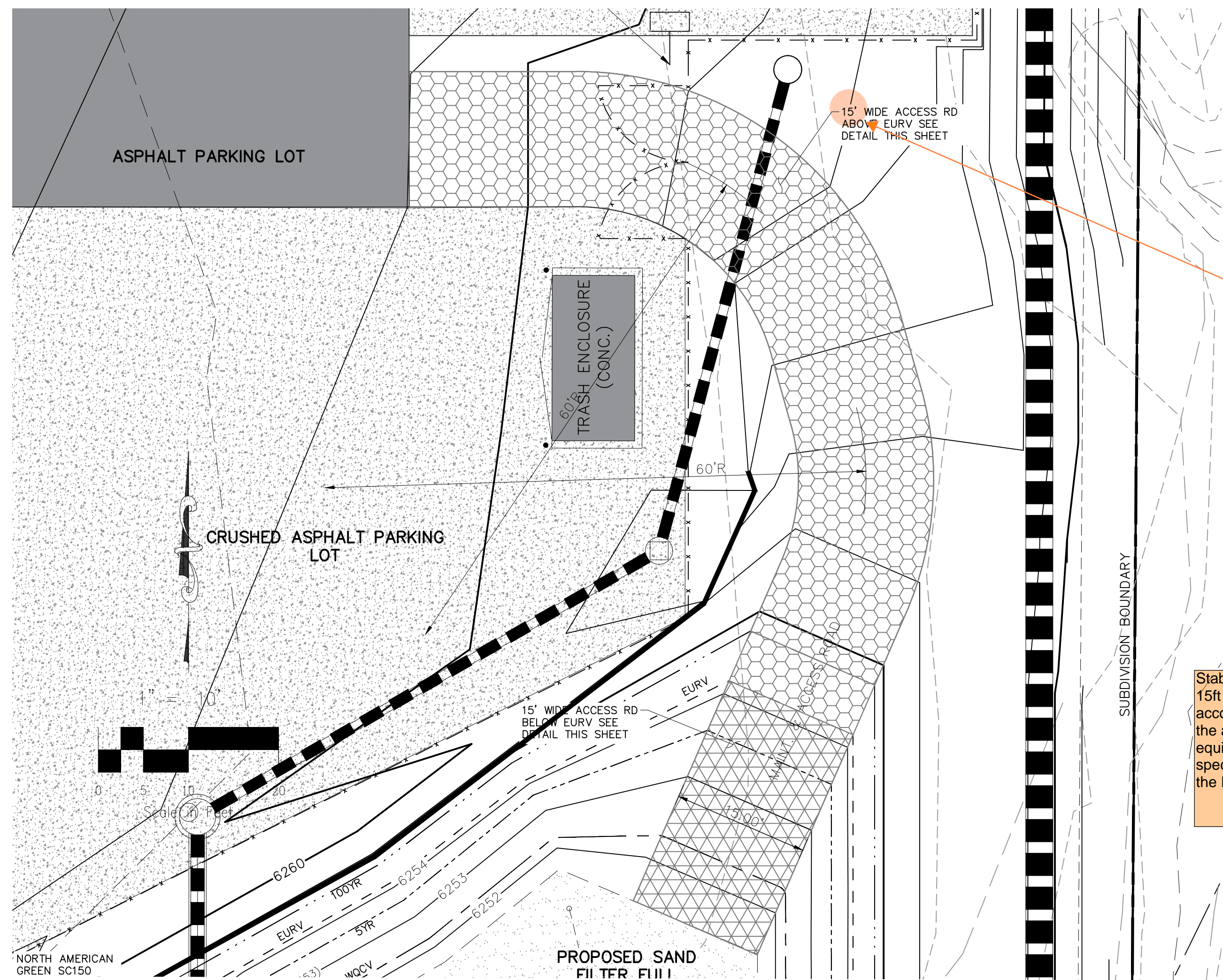
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

NO.	DATE	BY	DESCRIPTION

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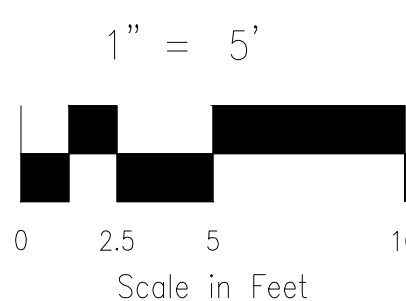
CAUTION



**MAINT AND ACCESS ROADWAY PLAN**  
SCALE: 1" = 10'

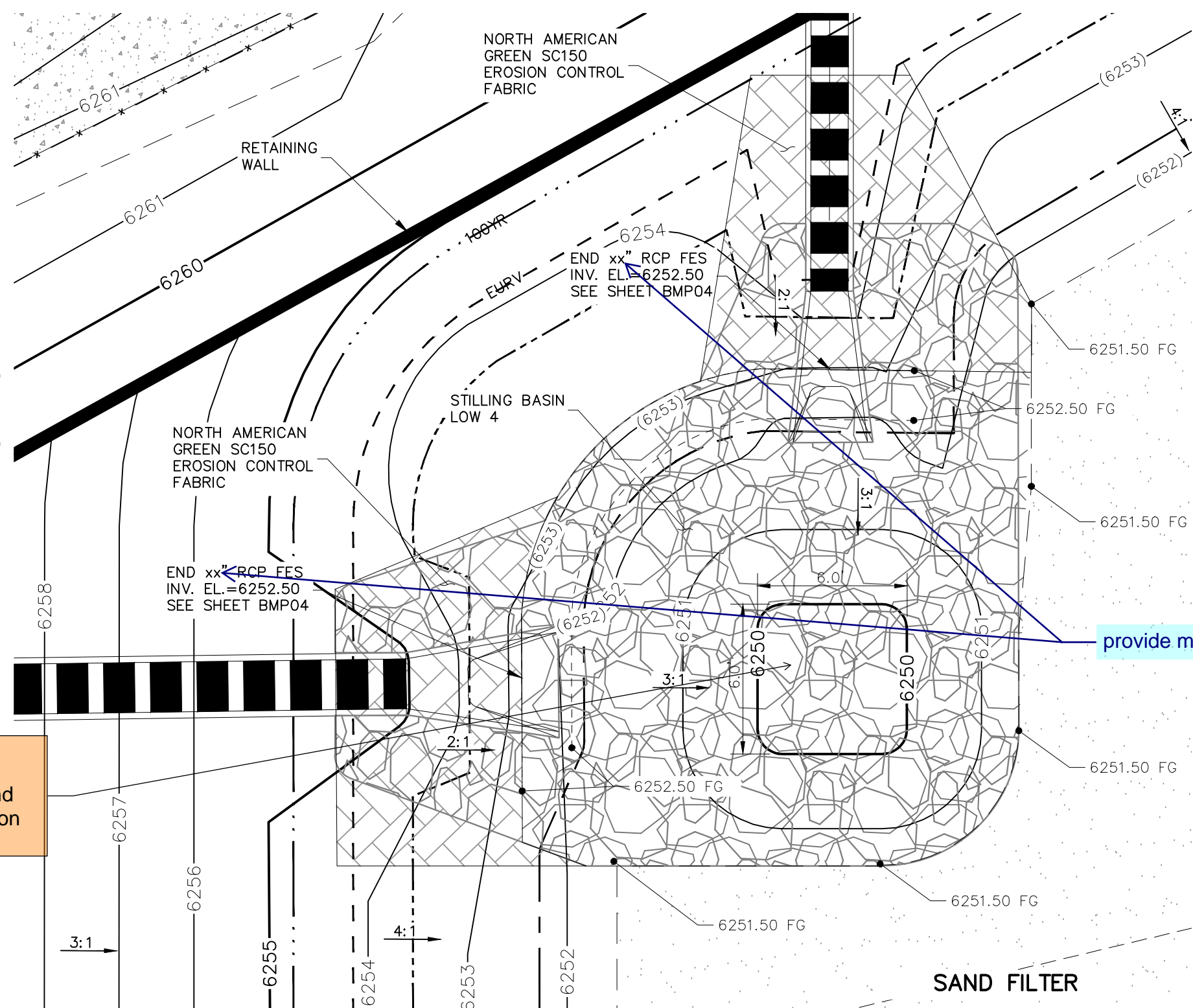
**LEGEND**

- EX EXISTING
- PROP PROPOSED
- 7070 PROP MAJ CONT
- (7070) PROP MIN CONT
- EXIST MAJ CONT
- EXIST MIN CONT
- RIPRAP TYP.
- MAINTENANCE/ACCESS ROAD ABOVE EURV
- MAINTENANCE/ACCESS ROAD BELOW EURV
- PROPERTY LINE
- PROP STORM SEWER PIPE



provide sizing calculations in drainage report and show dimensions on plans

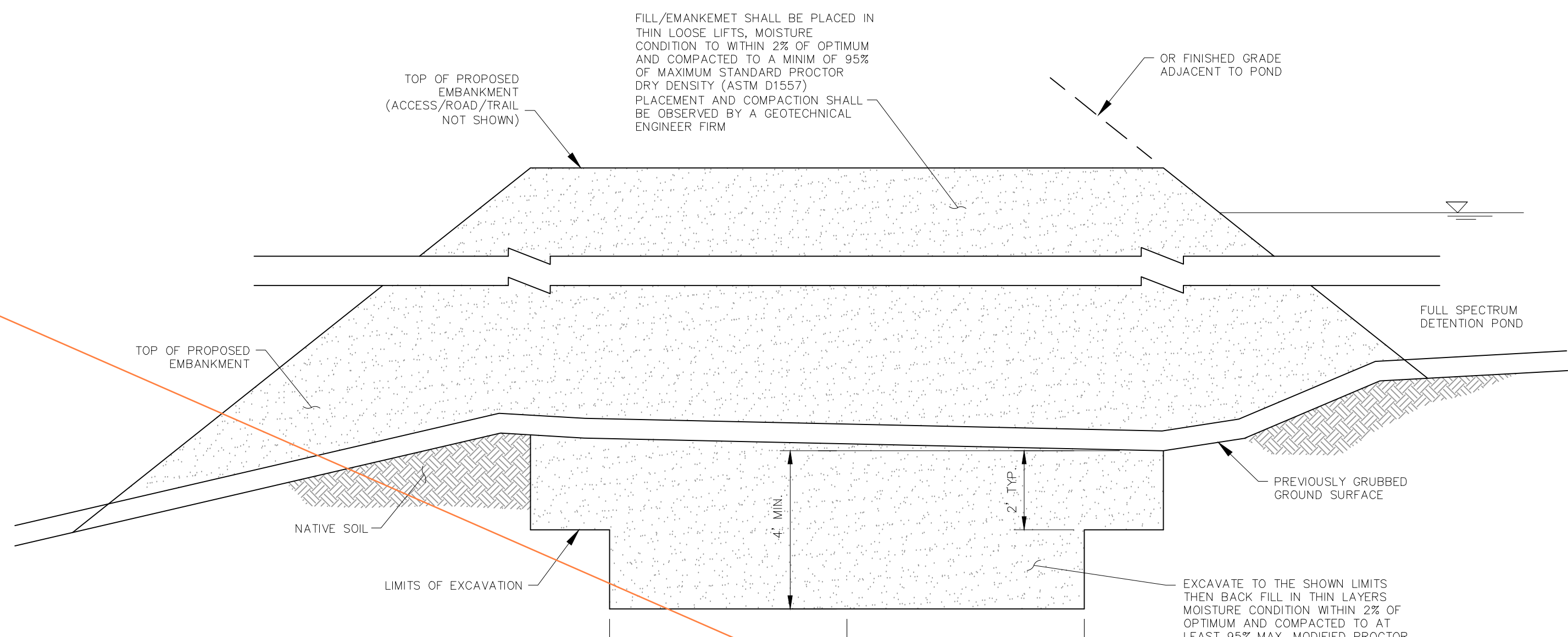
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FOR BURIED UTILITY INFORMATION  
48 HRS BEFORE YOU DIG  
CALL 1-800-922-1987



**MAINT AND ACCESS ROADWAY PLAN**  
SCALE: 1" = 5'

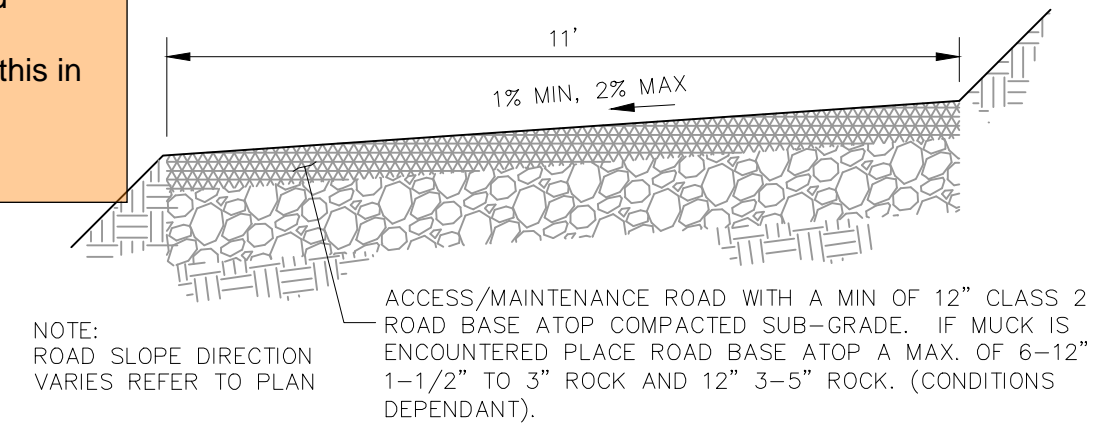
revise detail title

Stabilized access ramp shall be a minimum of 15ft wide and no greater than 12% slope, in accordance with DCMv1, Chap 11.2.2. --Unless the anticipated maintenance vehicles and equipment can safely access the pond at specified road width. Properly document this in the Pond O&M manual.

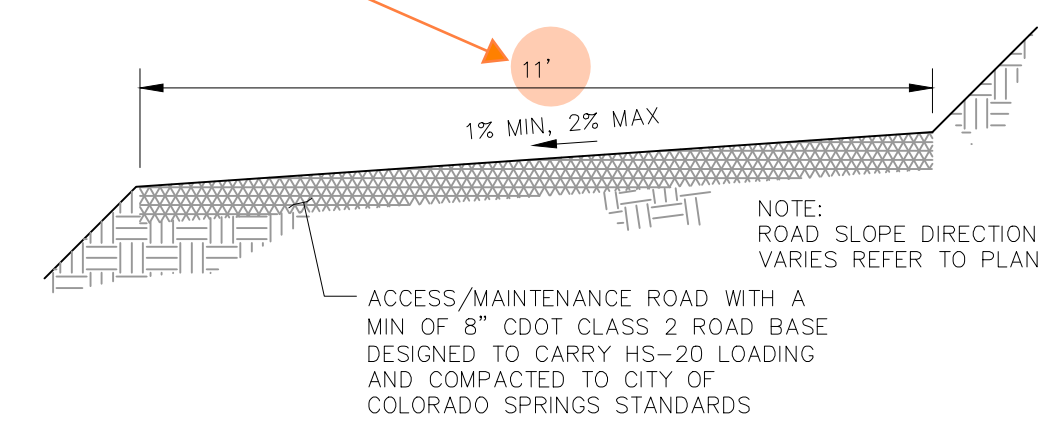


**TYPICAL EMBANKMENT WITH SOIL KEYWAY**  
NOT TO SCALE

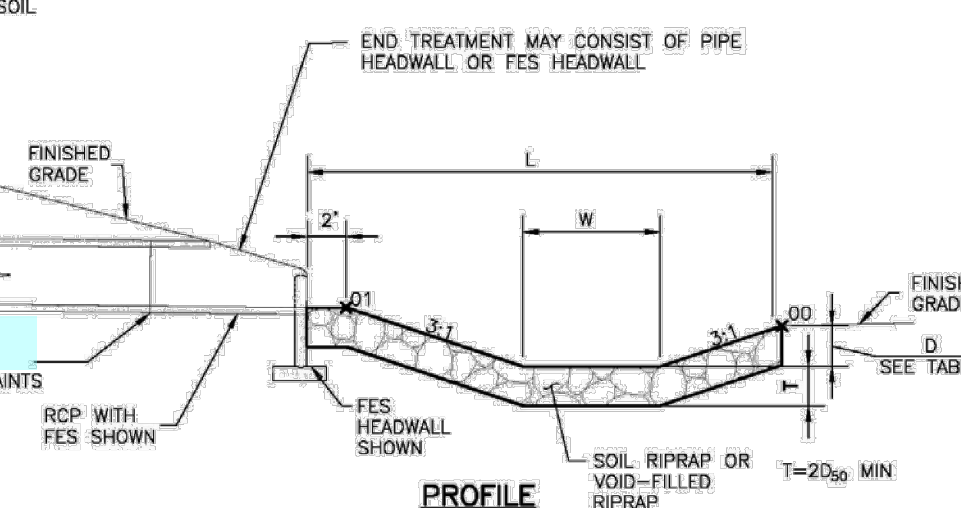
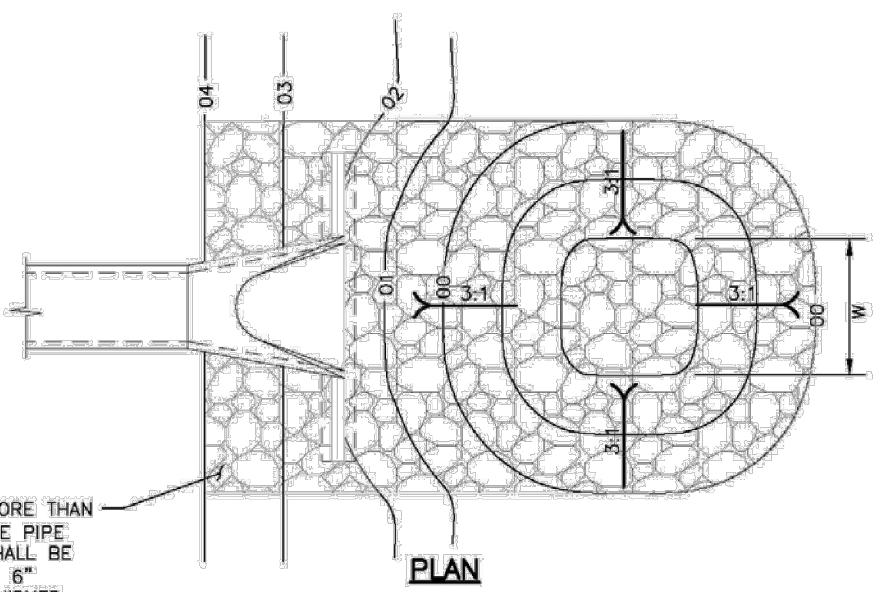
UPON GRUBBING EXISTING SOIL IN EMBANKMENT AREA, ENGINEER SHALL BE CONTACTED TO DETERMINE SOIL QUALITY IF POOR PERMEABILITY IS FOUND ONLY THE TOP 2'X12' PORTION OF THE EMBANKMENT KEY IS REQUIRED FOR CONSTRUCTION



**MAINTENANCE & ACCESS ROAD BELOW EURV TYPICAL SECTION**  
NOT TO SCALE



**MAINTENANCE & ACCESS ROAD ABOVE EURV TYPICAL SECTION**  
NOT TO SCALE



PIPE SIZE OR BOX HEIGHT	D	W	L
18" - 24"	1'-0"	4'	15'
30" - 36"	1'-6"	6'	20'
42" - 48"	2'-0"	7'	24'
54" - 60"	2'-6"	8'	28'
66" - 72"	3'-0"	9'	32'

\* IF OUTLET PIPE IS A BOX CULVERT WITH A WIDTH GREATER THAN W, THEN W = CULVERT WIDTH

Figure 9-37. Low tailwater riprap basin

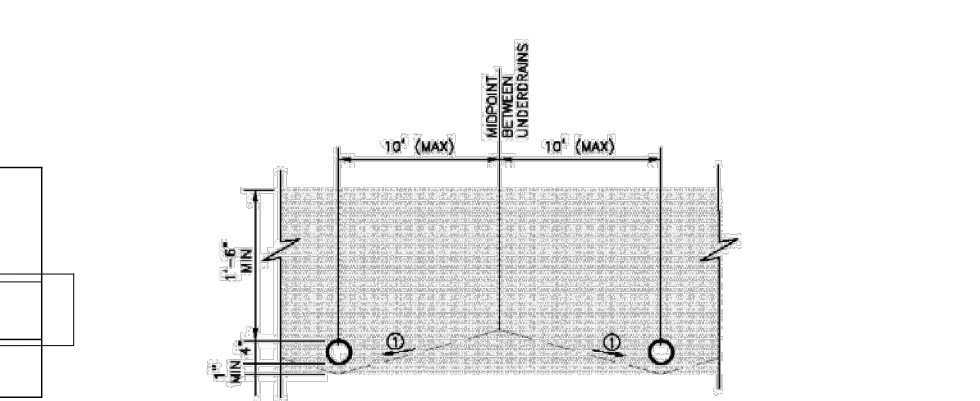
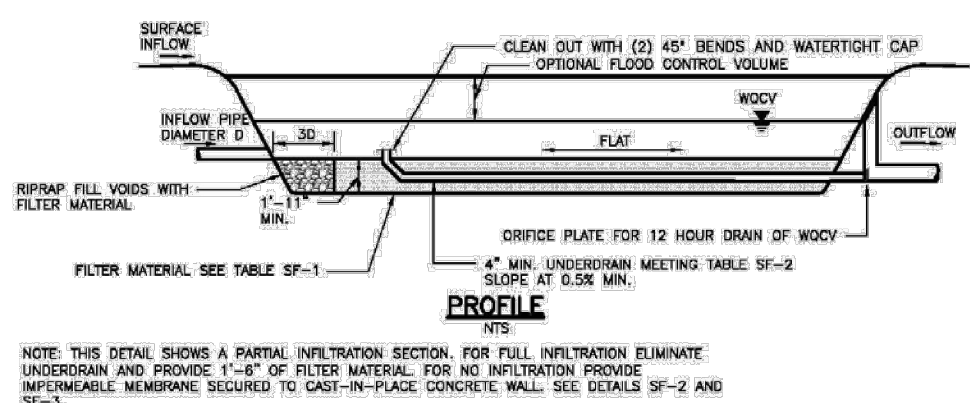
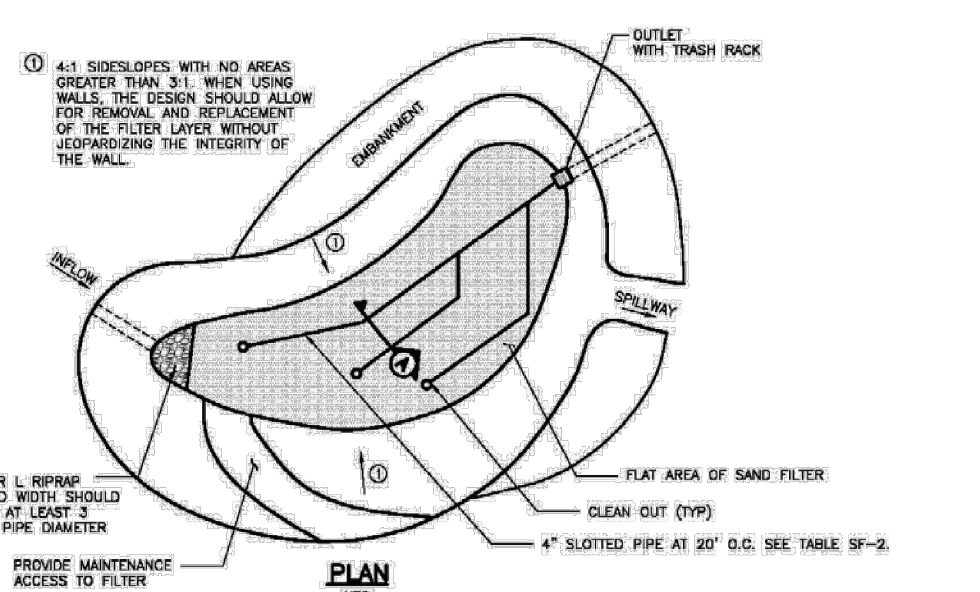
Table SF-1. Gradation Specifications for CDOT Class C Filter Material (Source: CDOT Table 703-7)

Sieve Size	Mass Percent Passing Square Mesh Sieves
19.0 mm (3/4")	100
4.75 mm (No. 4)	60 - 100
300 µm (No. 50)	10 - 30
150 µm (No. 100)	0 - 10
75 µm (No. 200)	0 - 3

Table SF-2. Dimensions for Slotted Pipe

Pipe Size	Slot Length <sup>1</sup>	Maximum Slot Width	Slot Centers <sup>1</sup>	Open Area <sup>1</sup> (per foot)
4"	1-1/16"	0.032"	0.413"	1.90 in <sup>2</sup>
6"	1-3/8"	0.032"	0.516"	1.98 in <sup>2</sup>

<sup>1</sup> Some variation in these values is acceptable and is expected from various pipe manufacturers. Be aware that both increased slot length and decreased slot centers will be beneficial to hydraulics but detrimental to the structure of the pipe.



CLEARWAY FILING NO. 2, LOT 5  
OUTLET STURCTURE POND 1 DETAILS  
PROJECT NO. 44-042A  
DATE: 06-02-2022  
SCALE: HORIZONTAL: 1"=50' VERTICAL: 1"=5'  
DESIGNED BY: DLM  
DRAWN BY: CLP  
CHECKED BY: DLM  
BMP03  
SHEET 16 OF 15

102 E. PINE PEAK AVE. 5TH FLOOR  
COLORADO SPRINGS, CO 80903  
PHONE: 719.955.5485

**CIVIL CONSULTANTS, INC.**

FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

VIRGIL A. SANCHEZ, COLORADO, P.E. NO. 371160

NO. DATE: BY: DESCRIPTION: APPROV. BY: DATE:

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CAUTION

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