

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 DEPARTMENT OF PUBLIC WORKS AND MUTCD CRITERIA.
- CONTRACTOR SHALL OBTAIN ANY PERMITS REQUIRED BY EL PASO COUNTY DEPARTMENT OF PUBLIC WORKS 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.

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 (f_c) 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).

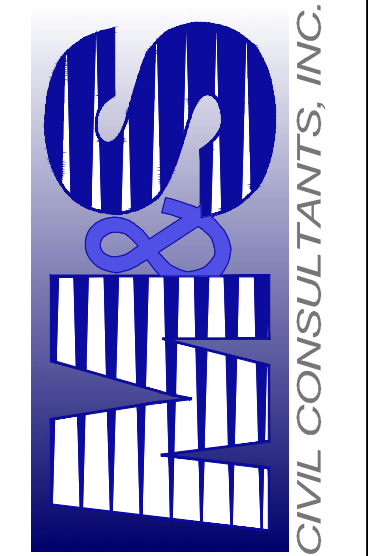
ABBREVIATIONS
 EC -- EPOXY COATED O.F. -- OUTSIDE FACE E.F. -- EACH FACE E.W. -- EACH WAY I.F. -- INSIDE FACE N.F. -- NEAR FACE
 T.O.C. -- TOP OF CONCRETE B.O.C. -- BOTTOM OF CONCRETE CONT. -- CONTINUOUS



HOMESTEAD AT STERLING RANCH FIL. NO. 2
 STORM SEWER NOTES & DETAILS

PROJECT NO. 09-007	DATE: 11/19/2019	SCALE: HORIZONTAL: N/A VERTICAL: N/A
DESIGNED BY: CMM	DRAWN BY: CMM	
CHECKED BY: VAS		SHEET 2 OF 14

102 E. PINE PEAK AVE., 5TH FLOOR
 COLORADO SPRINGS, CO 80903
 PHONE: 719.555.5485

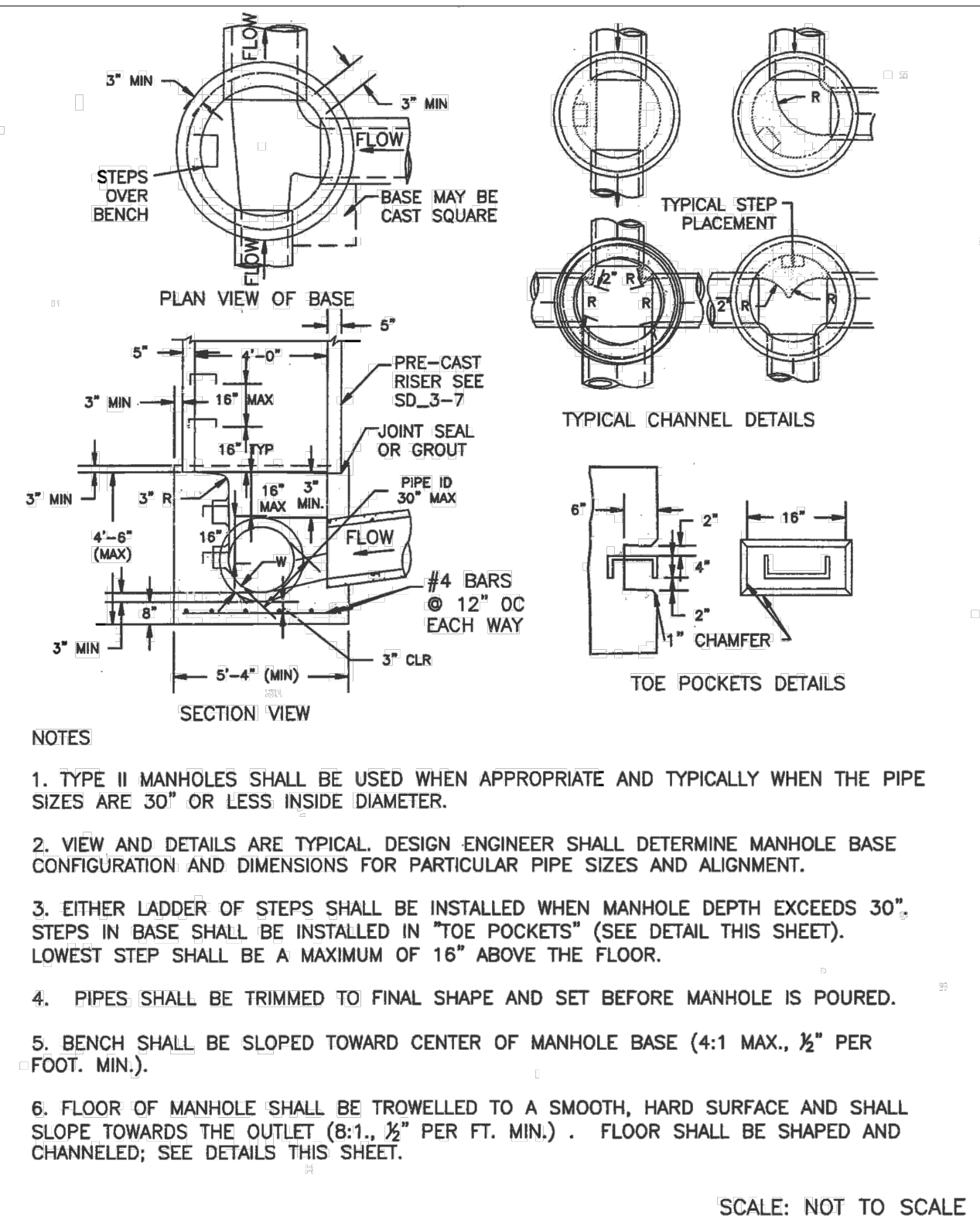


FOR AND ON BEHALF OF
 M&S CIVIL CONSULTANTS, INC.

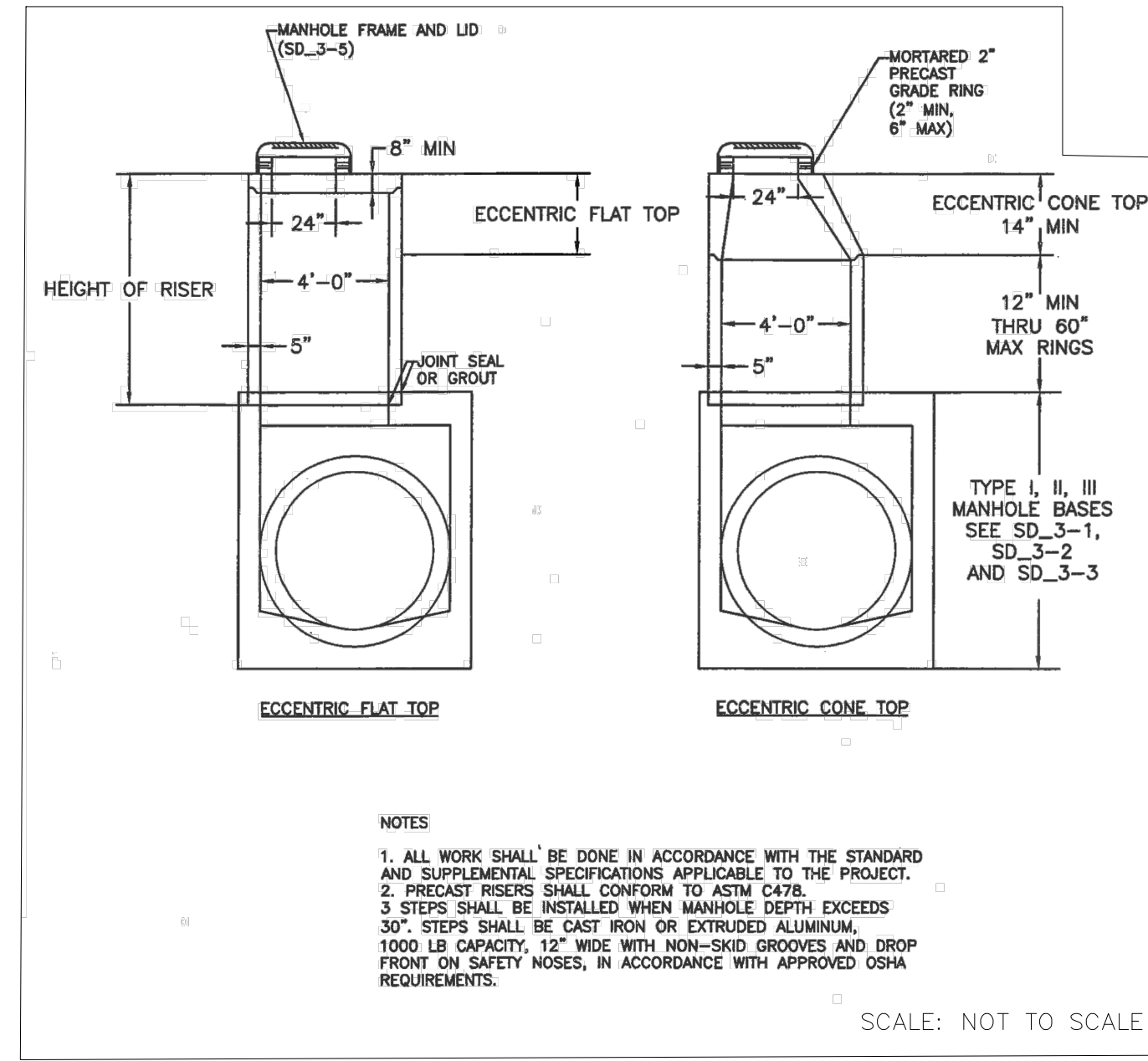


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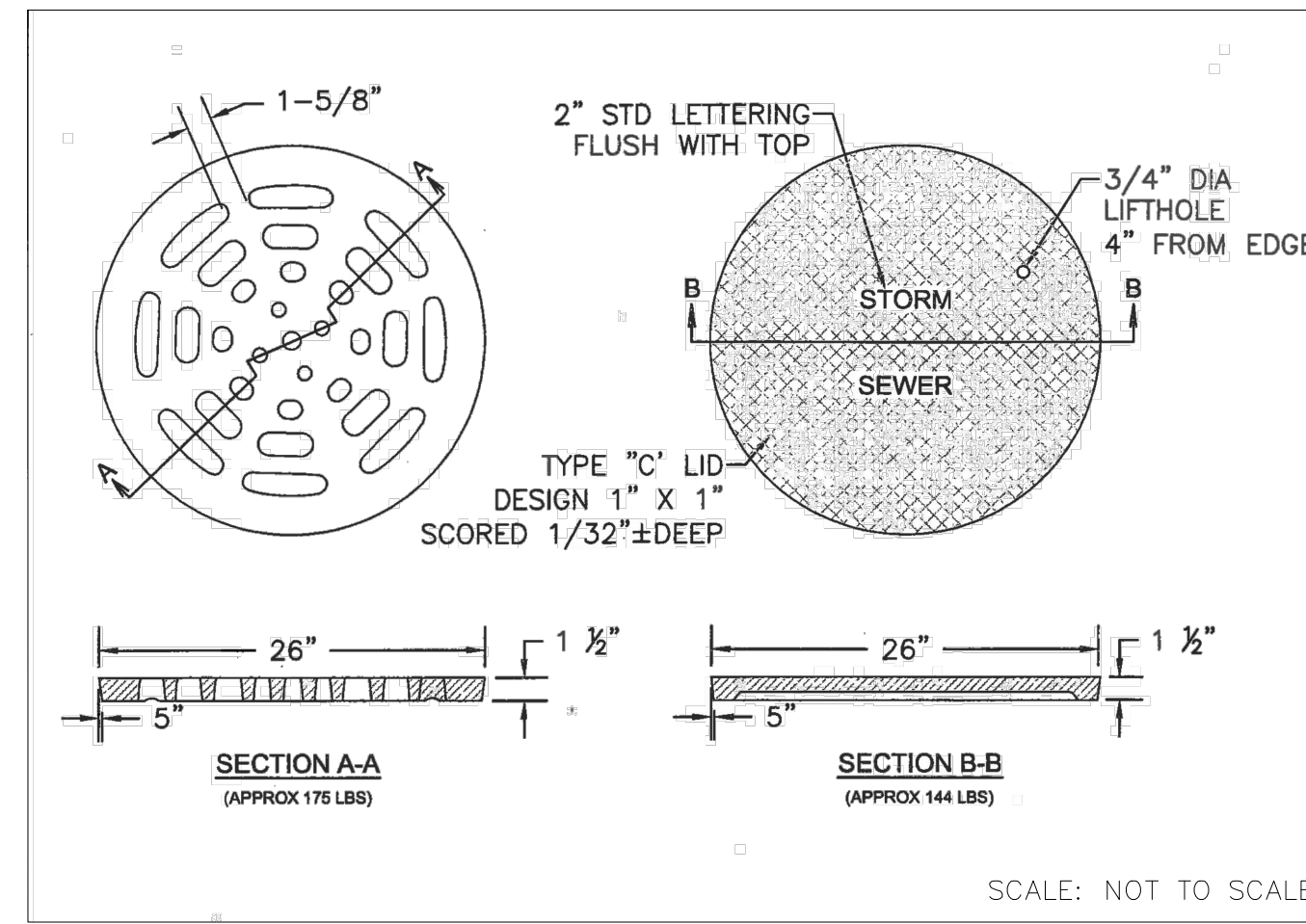
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.
 CAUTION



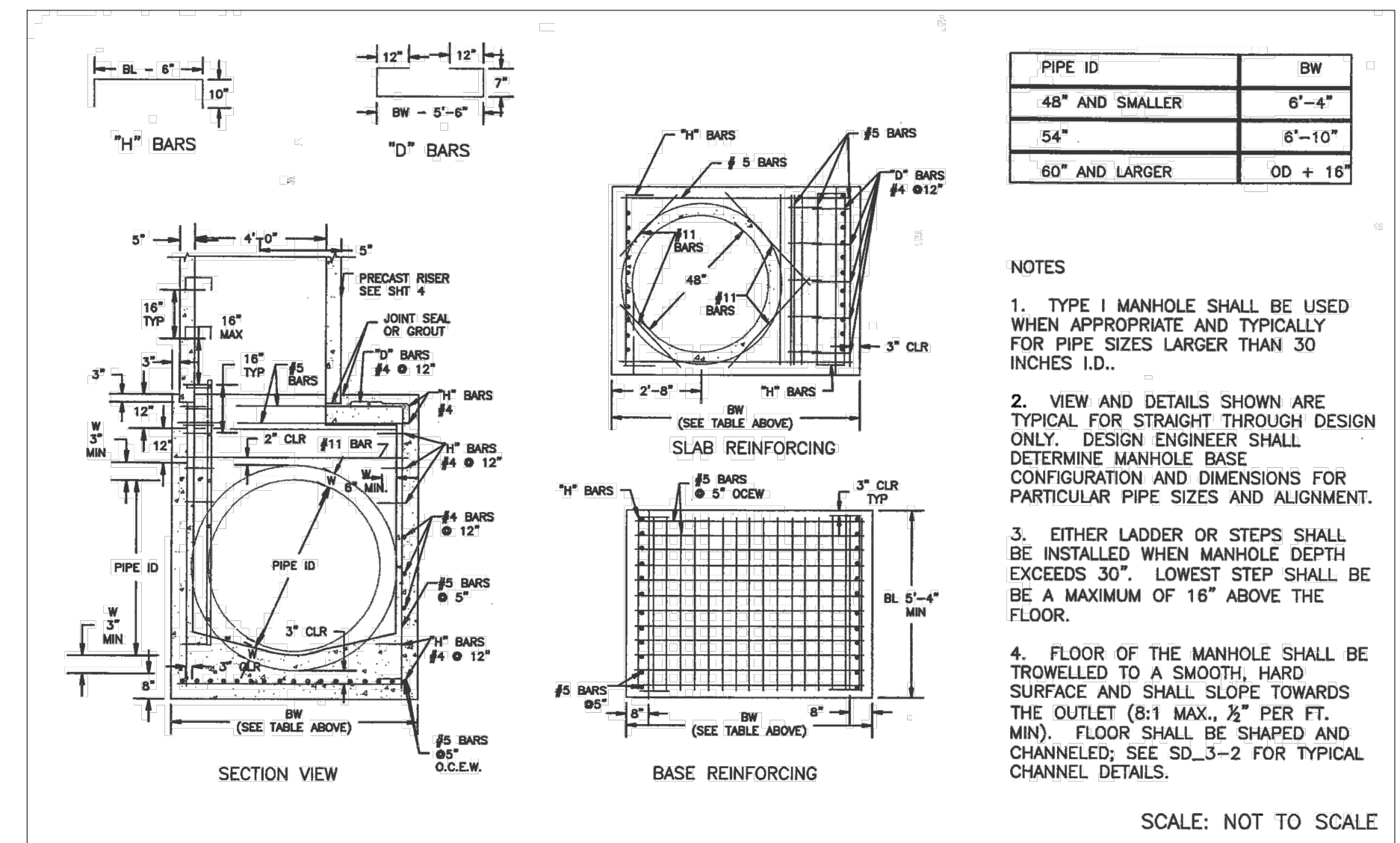
**STORM SEWER MANHOLE DETAIL
 TYPE II SD 3-2**



**STORM SEWER MANHOLE
 RISER AND COVER DETAIL
 TYPE SD 3-7**



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



**STORM SEWER MANHOLE DETAIL
 TYPE I SD 3-1**

URBAN LOCAL CROSS SECTION
 SCALE: NTS

EPC 3/5/2020

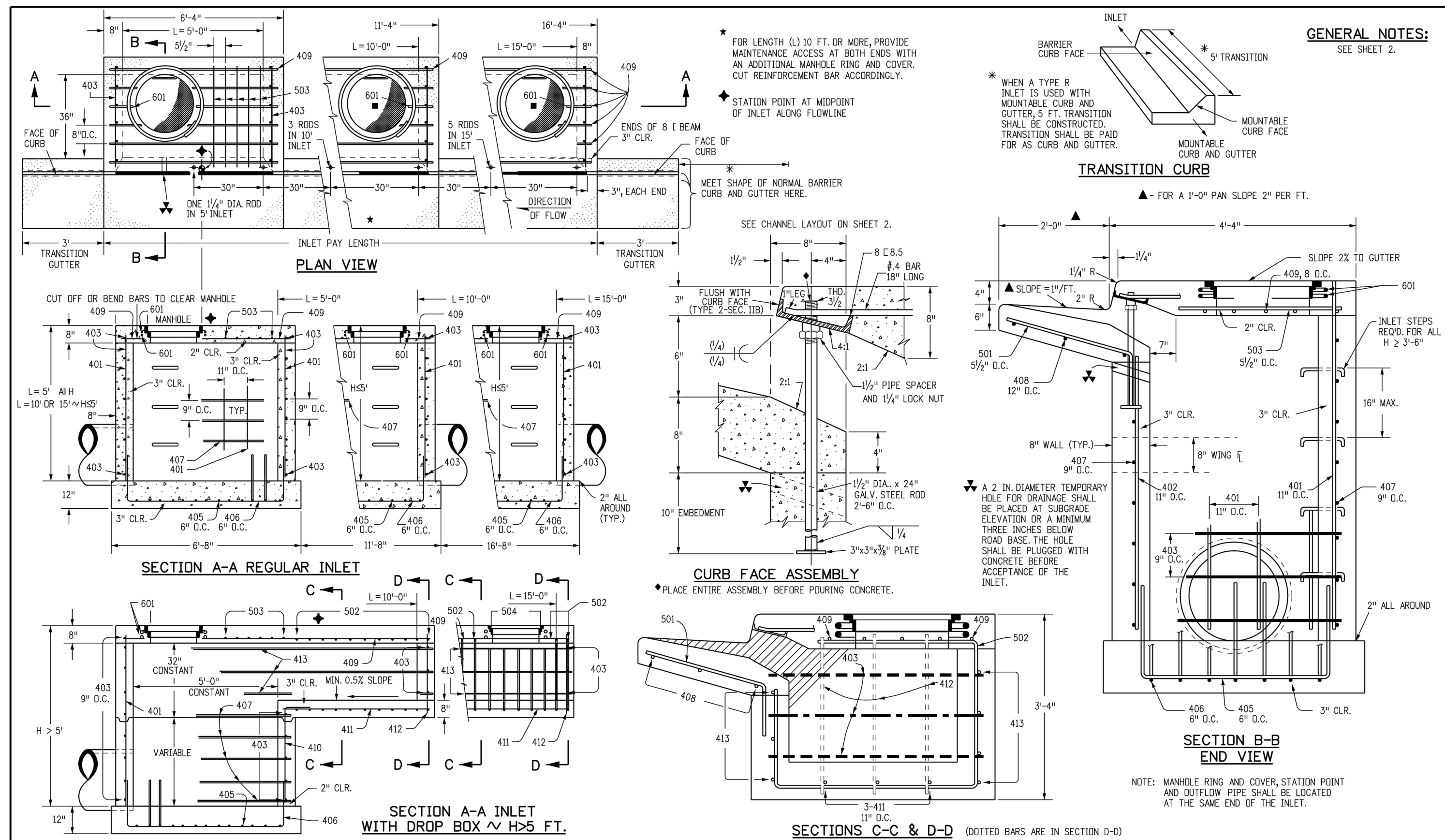
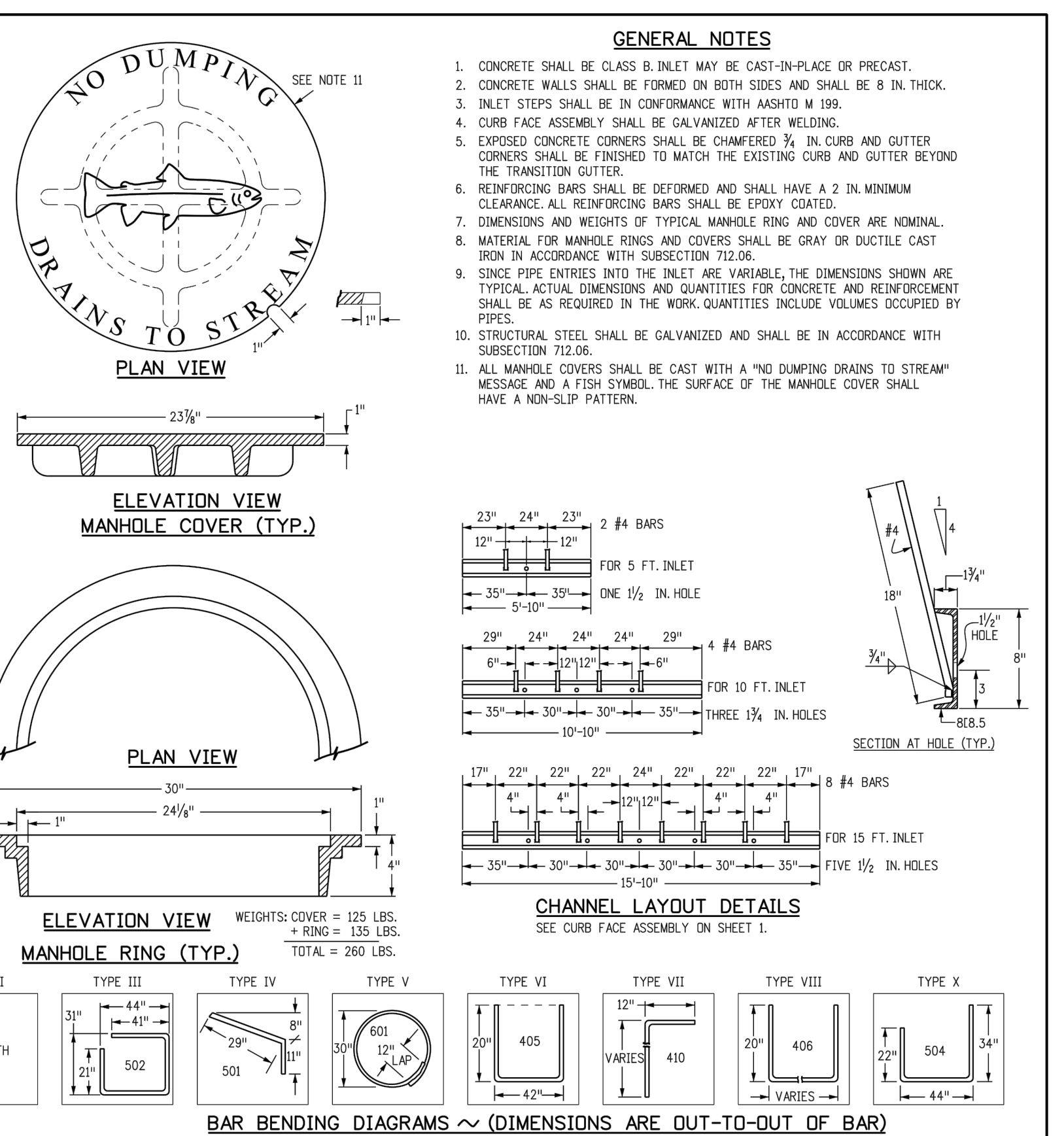


TABLE ONE ~ BAR LIST FOR CURB INLETS, TYPE "R"

MARK	BAR #	SIZE	O.C. SPACING	TYPE	ALL INLETS			INLETS: H ≤ 5 FT.			INLETS: H > 5 FT.		
					L = 5 FT.	L = 10 FT.	L = 15 FT.	L = 5 FT.	L = 10 FT.	L = 15 FT.	L = 5 FT.	L = 10 FT.	L = 15 FT.
401	4	11"	II	15	21	26	15	21	26	11	17	21	
402	4	11"	II	7	13	18	7	13	18	7	13	18	
403	4	9"	II	7	13	18	7	13	18	7	13	18	
405	4	9"	VI	11	17	21	11	17	21	11	17	21	
406	4	6"	VIII	7	13	18	7	13	18	7	13	18	
407	4	9"	II	7	13	18	7	13	18	7	13	18	
408	4	12"	II	3	6	9	3	6	9	3	6	9	
409	4	8"	II	6	10	14	6	10	14	6	10	14	
410	4	11"	VII	11	17	21	11	17	21	11	17	21	
411	4	11"	II	3	6	9	3	6	9	3	6	9	
412	4	11"	II	3	6	9	3	6	9	3	6	9	
413	4	9"	II	3	6	9	3	6	9	3	6	9	
501	5	5/8"	IV	11	17	21	11	17	21	11	17	21	
502	5	5/8"	III	7	13	18	7	13	18	7	13	18	
503	5	5/8"	II	5	8	11	5	8	11	5	8	11	
504	5	5/8"	IX	11	17	21	11	17	21	11	17	21	
601	6	2 1/2"	V	2	3	4	2	3	4	2	3	4	
602	6	2 1/2"	IV	2	3	4	2	3	4	2	3	4	
603	6	2 1/2"	III	2	3	4	2	3	4	2	3	4	
604	6	2 1/2"	II	2	3	4	2	3	4	2	3	4	
605	6	2 1/2"	I	2	3	4	2	3	4	2	3	4	

TABLE TWO ~ BARS AND QUANTITIES VARIABLE WITH "H"

"H"	LENGTH	NO. REQ'D.	REGULAR	DROP BOX	L = 5 FT.		L = 10 FT.		L = 15 FT.	
					CONC. U.S. YDS.	STEEL LBS.	CONC. U.S. YDS.	STEEL LBS.	CONC. U.S. YDS.	STEEL LBS.
3'-0"	2'-8"	1-8"	10	7	3.2	285	5.3	497	7.4	706
3'-6"	3'-2"	2'-2"	10	7	3.4	305	5.7	528	7.9	747
4'-0"	3'-6"	2'-6"	12	9	3.7	326	6.0	559	8.4	786
4'-6"	4'-2"	3'-2"	12	9	3.9	346	6.4	571	8.8	803
5'-0"	4'-6"	3'-6"	14	11	4.1	354	6.7	602	9.3	844
5'-6"	5'-2"	4'-2"	16	13	4.4	375	6.9	607	7.4	850
6'-0"	5'-6"	4'-6"	16	13	4.6	382	6.2	616	7.6	860
6'-6"	6'-2"	5'-2"	18	15	4.8	402	6.4	637	7.8	880
7'-0"	6'-6"	5'-6"	20	17	5.0	423	6.6	654	8.0	897
7'-6"	7'-2"	6'-2"	20	17	5.3	430	6.9	664	8.3	907
8'-0"	7'-6"	6'-6"	22	19	5.5	451	7.1	684	8.5	927
8'-6"	8'-2"	7'-2"	24	21	5.7	471	7.3	702	8.7	944
9'-0"	8'-6"	7'-6"	24	21	6.0	479	7.6	711	9.0	954
9'-6"	9'-2"	8'-2"	26	23	6.2	499	7.8	732	9.2	974
10'-0"	9'-6"	8'-6"	28	25	27	18	6.4	520	8.0	749
10'-6"	10'-2"	9'-2"	28	25	28	18	6.7	527	8.3	759
11'-0"	10'-6"	9'-6"	30	27	30	20	6.9	547	8.5	779



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 CAD Ver: MicroStation V8 Scale: Not to Scale Units: English

Sheet Revisions
 Date: Comments

Colorado Department of Transportation
 4201 East Arkansas Avenue
 Denver, Colorado 80222
 Phone: (303) 757-9083
 Fax: (303) 757-9820

Project Development Branch DD/LTA

STANDARD PLAN NO. M-604-12
CURB INLET TYPE R
 Sheet No. 1 of 2

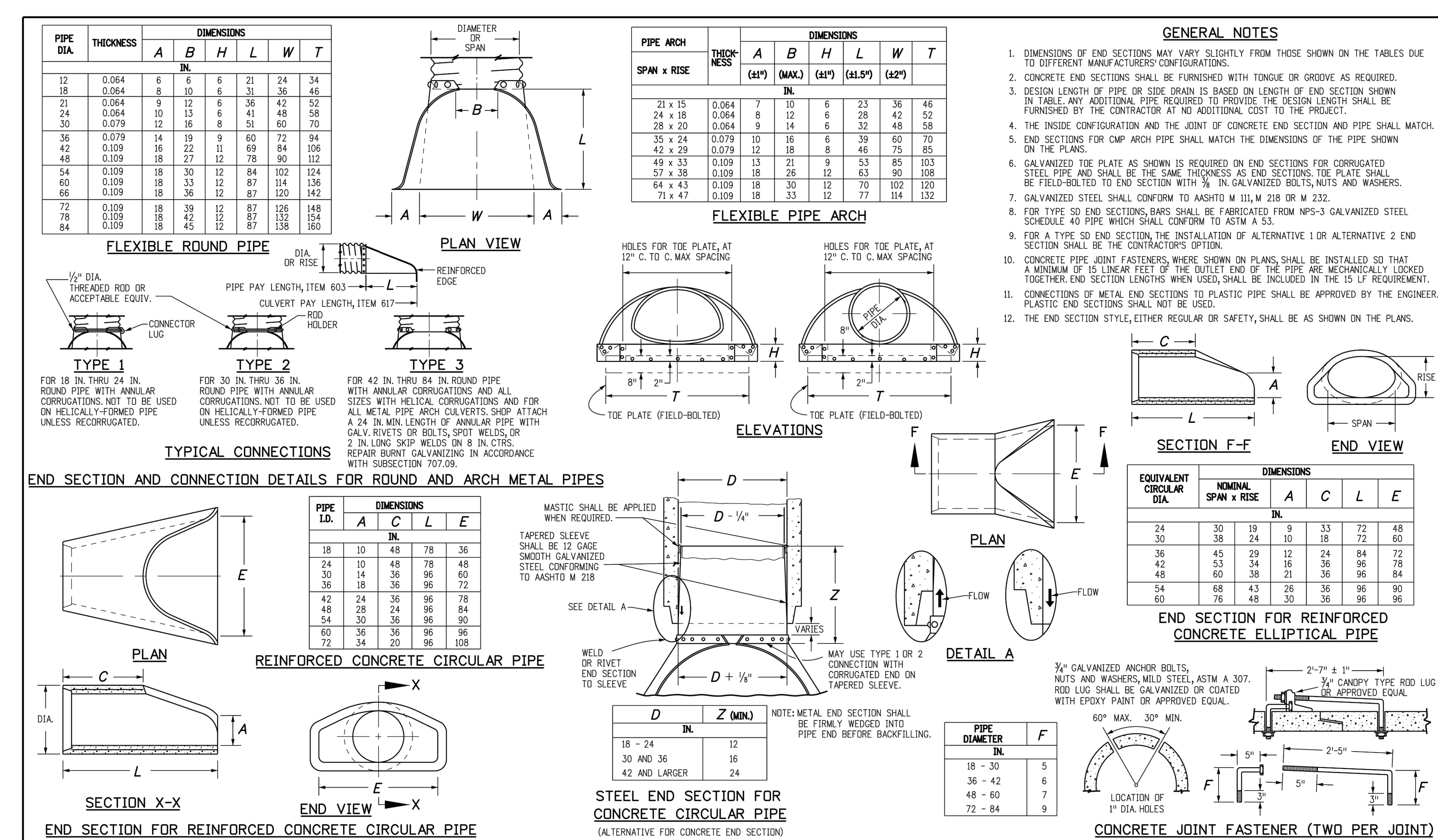
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Project Development Branch DD/LTA

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



Computer File Information
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Sheet Revisions
 Date: Comments

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 Fax: (303) 757-9820

Project Development Branch DD/LTA

STANDARD PLAN NO. M-603-10
CONCRETE AND METAL END SECTIONS
 Sheet No. 1 of 2

HOMESTEAD AT STERLING RANCH FIL. NO. 2
STORM SEWER NOTES & DETAILS
 PROJECT NO. 09-007 DATE: 11/19/2019
 SCALE: N/A
 HORIZONTAL: C/MN
 VERTICAL: VAS
 DESIGNED BY: C/MN
 DRAWN BY: VAS
 CHECKED BY: VAS
 SHEET 3 OF 14
 ST03

102 E. PEEKS PEAK AVE., 5TH FLOOR
 COLORADO SPRINGS, CO 80903
 PHONE: 719.555.4485

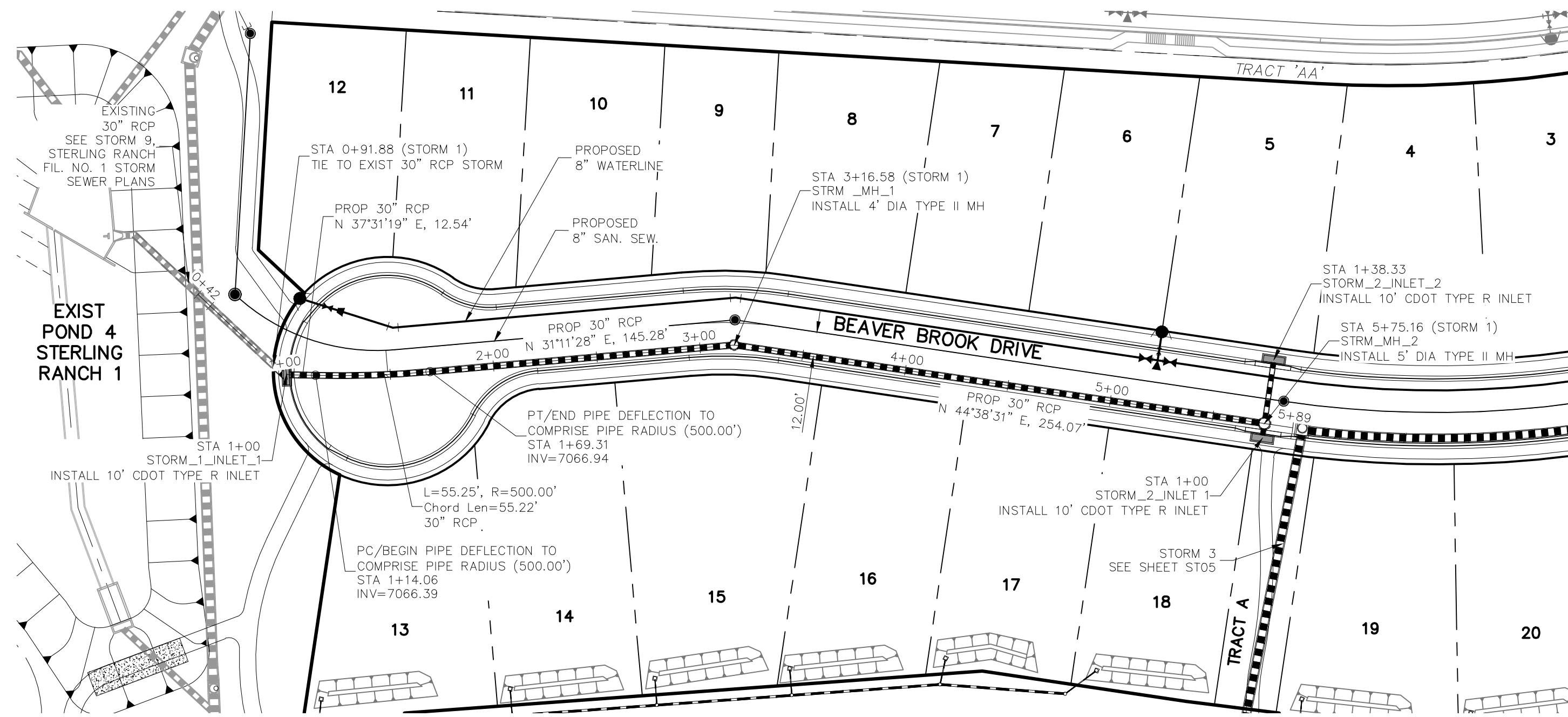
CIVIL CONSULTANTS, INC.
 FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

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

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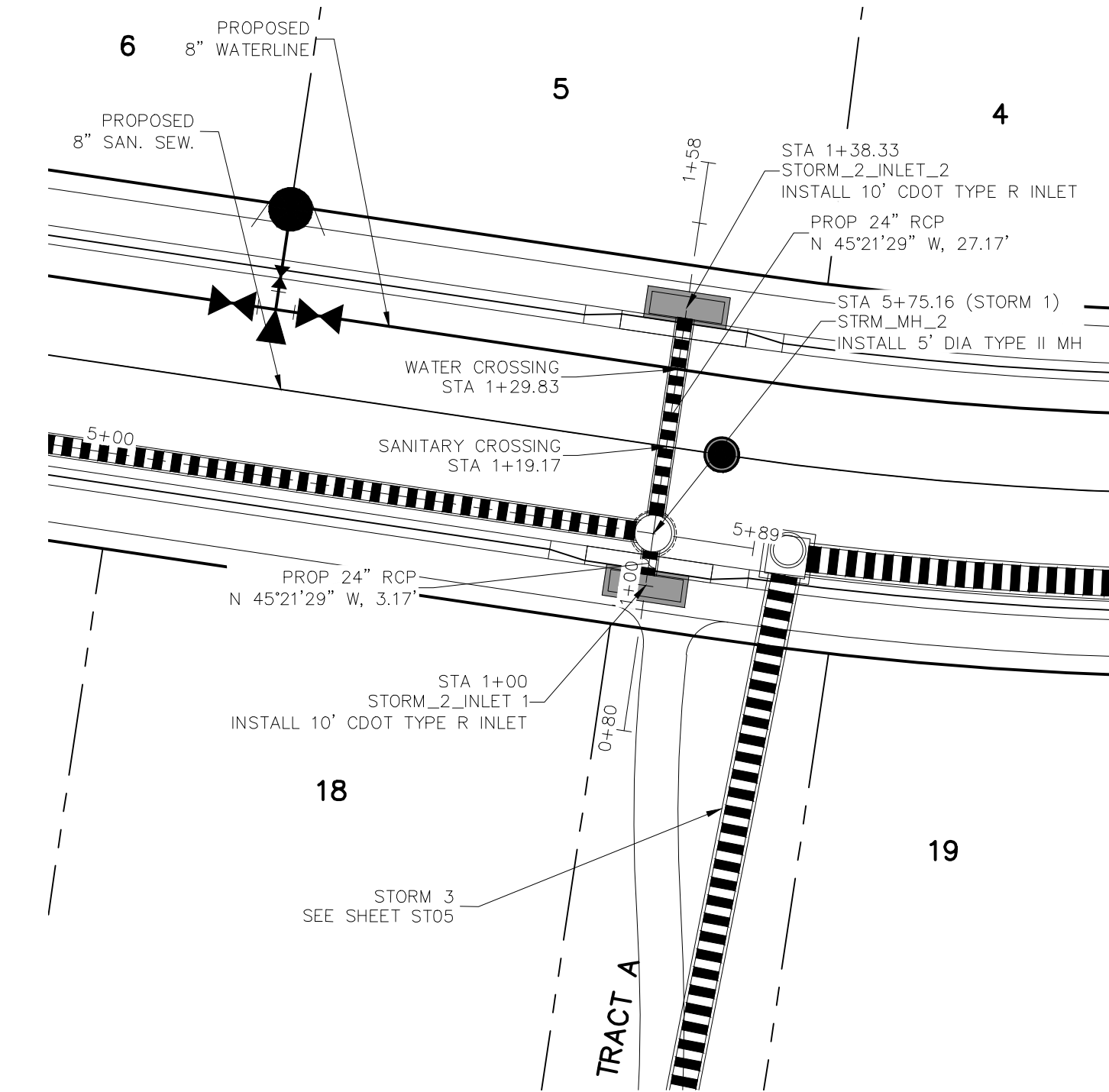
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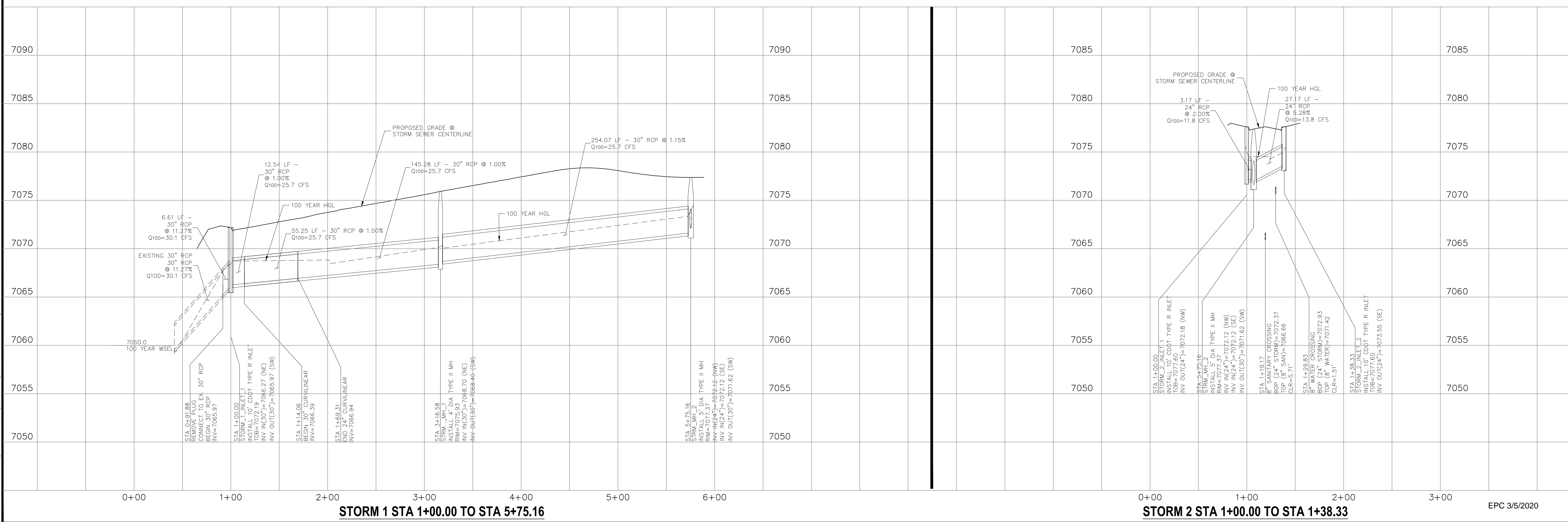
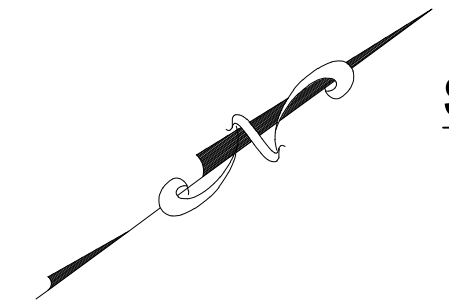
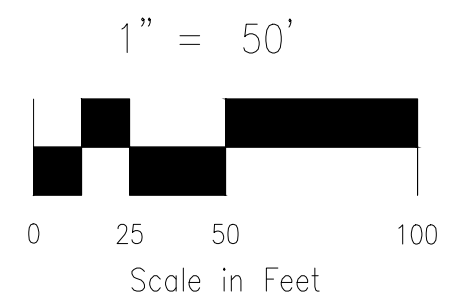


STORM 1 (PUBLIC)
STA 1+00.00 TO STA 5+75.16

**SEE HOMESTEAD F2 REPLAT AS BUILT SET
 COUNTY FILE NO: VR 234**



STORM 2 (PUBLIC)
STA 1+00.00 TO STA 1+38.33
 SCALE: 1"=20'



STORM 1 STA 1+00.00 TO STA 5+75.16

STORM 2 STA 1+00.00 TO STA 1+38.33

EPC 3/5/2020

HOMESTEAD AT STERLING RANCH FIL. NO. 2

STORM SEWER PLANS

PROJECT NO. 09-007 FILE: \Lang\Const\Eng\Street & Storm Plans\ST04.dwg DATE: 11/19/2019

DESIGNED BY: CMN SCALE: _____

DRAWN BY: CMN HORIZ.: 1"=50'

CHECKED BY: VAS VERT.: 1"=5'

102 E. Pikes Peak Ave., 5th Floor
 Colorado Springs, CO 80903
 PHONE: 719.555.4485

CIVIL CONSULTANTS, INC.

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

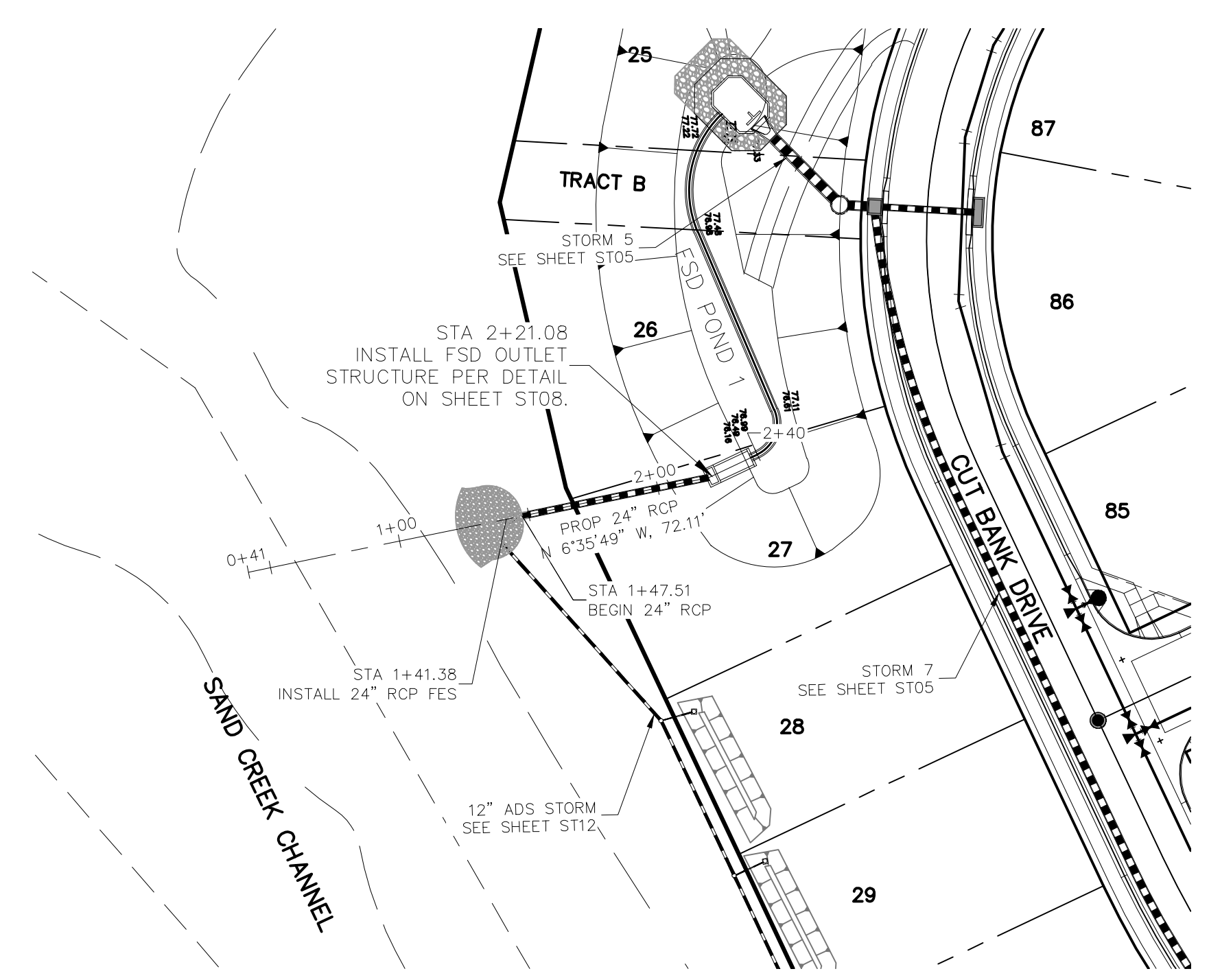
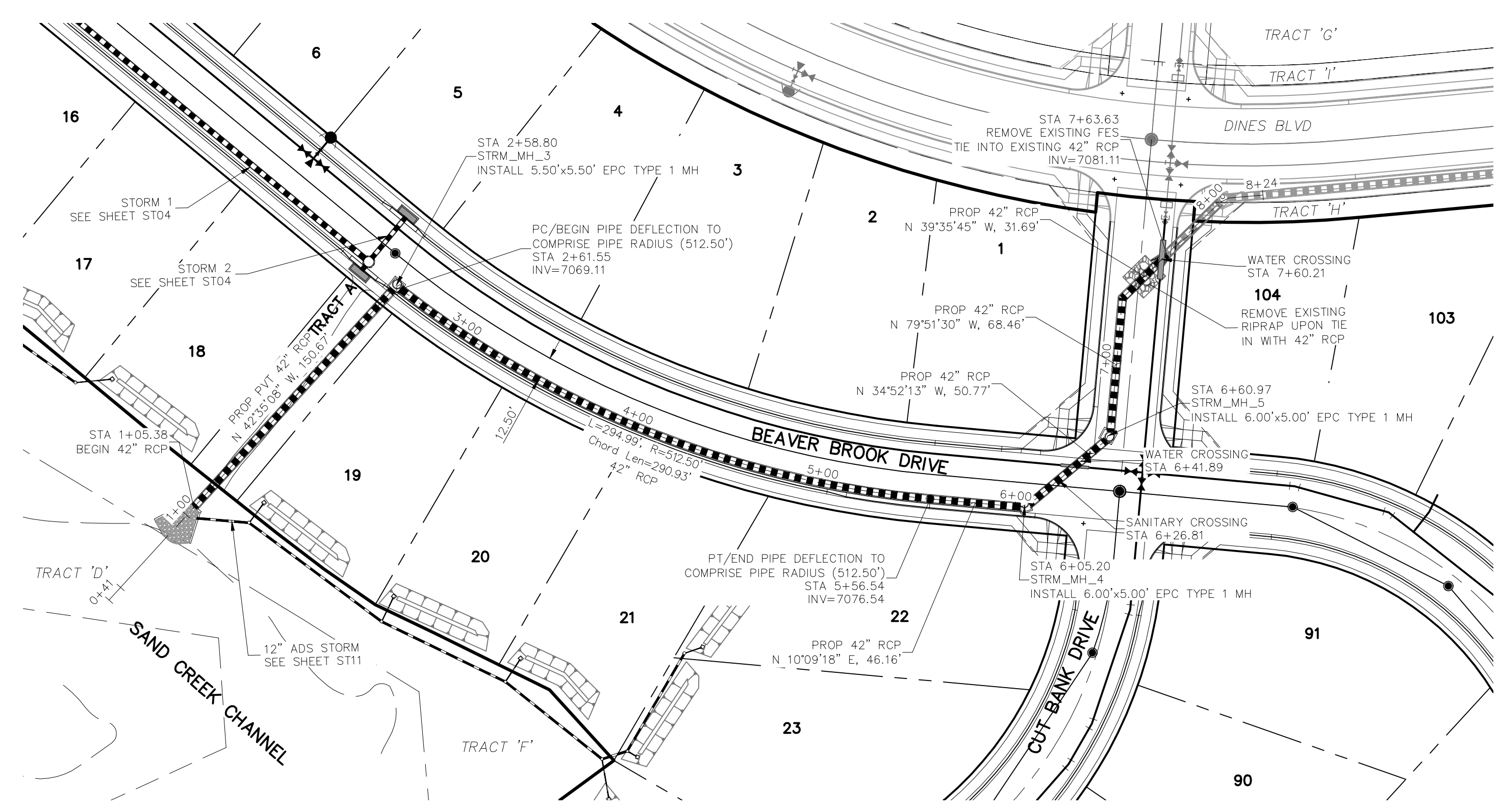
Virgil A. Sanchez, Colorado P.E. No. 37160

NO.	DATE	BY	DESCRIPTION	APPROV. BY	DATE

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CAUTION

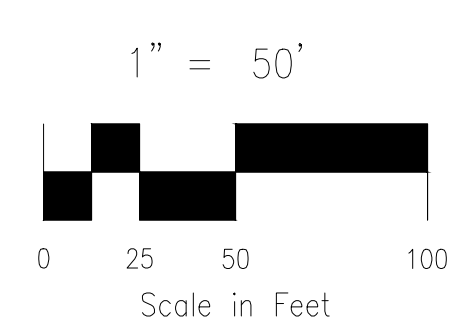
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STORM 3 (PUBLIC & PRIVATE)
STA 1+00.00 TO STA 7+63.63

STORM 4 (PRIVATE)
STA 1+00.00 TO STA 2+44.39

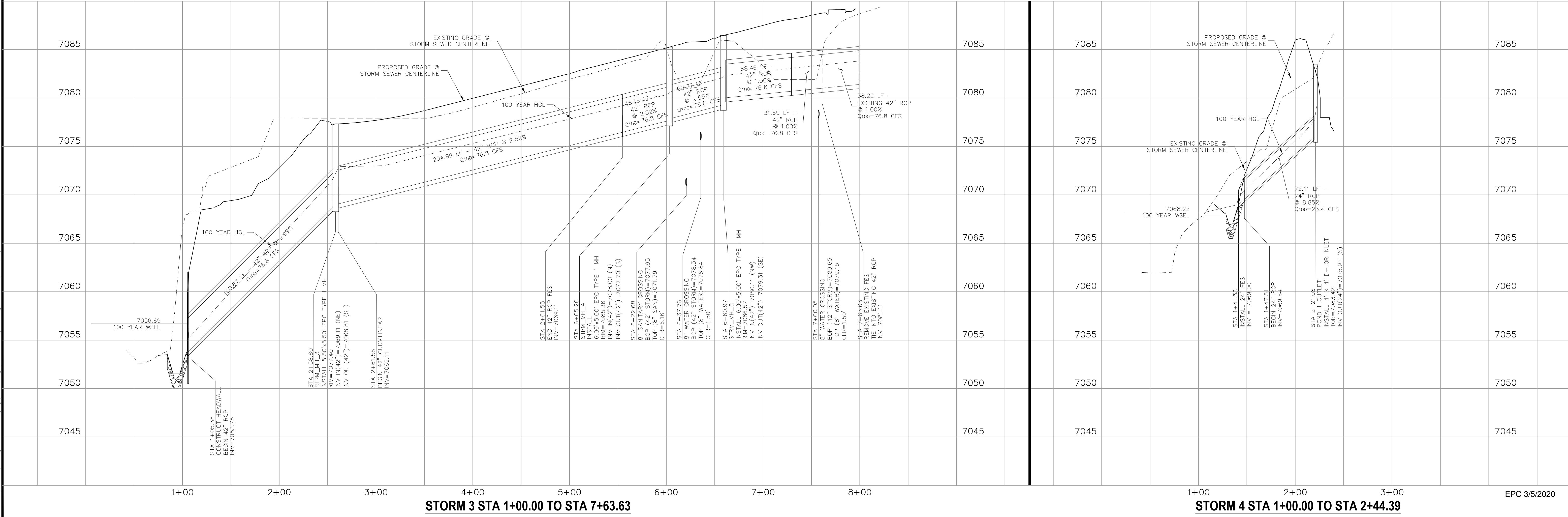
SEE HOMESTEAD F2 REPLAT AS BUILT SET
 COUNTY FILE NO: VR 234



NOTES:
 STA 1+05.58 TO STA 1+29.58
 (NEXT FULL JOINT) TIE PIPE
 SEGMENTS TOGETHER W/4" X
 CANOPY TYPE ROD LUG JOINT
 FASTENERS.

REINFORCED CONCRETE PIPE INSTALLED
 BETWEEN STA 1+05.58 AND STA 2+58.80
 SHALL BE FABRICATED USING A CONCRETE
 MIX DESIGN THAT RESULTS IN A MIN. 5000 PSI
 COMPRESSIVE STRENGTH.

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STORM 3 STA 1+00.00 TO STA 7+63.63

STORM 4 STA 1+00.00 TO STA 2+44.39

EPC 3/5/2020

HOMESTEAD AT STERLING RANCH FIL. NO. 2	
STORM SEWER PLANS & PROFILES	
PROJECT NO. 09-007	FILE: \Map\Const\Map\Storm Plans\ST03.dwg
DESIGNED BY: CMN	SCALE: DATE: 11/19/2019
DRAWN BY: CMN	HORIZ: 1"=50'
CHECKED BY: VAS	VERT: 1"=5'
SHEET 5 OF 14	
ST05	

M&S CIVIL CONSULTANTS, INC.

102 E. Pikes Peak Ave., 5th Floor
 Colorado Springs, CO 80903
 PHONE: 719.555.5485

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

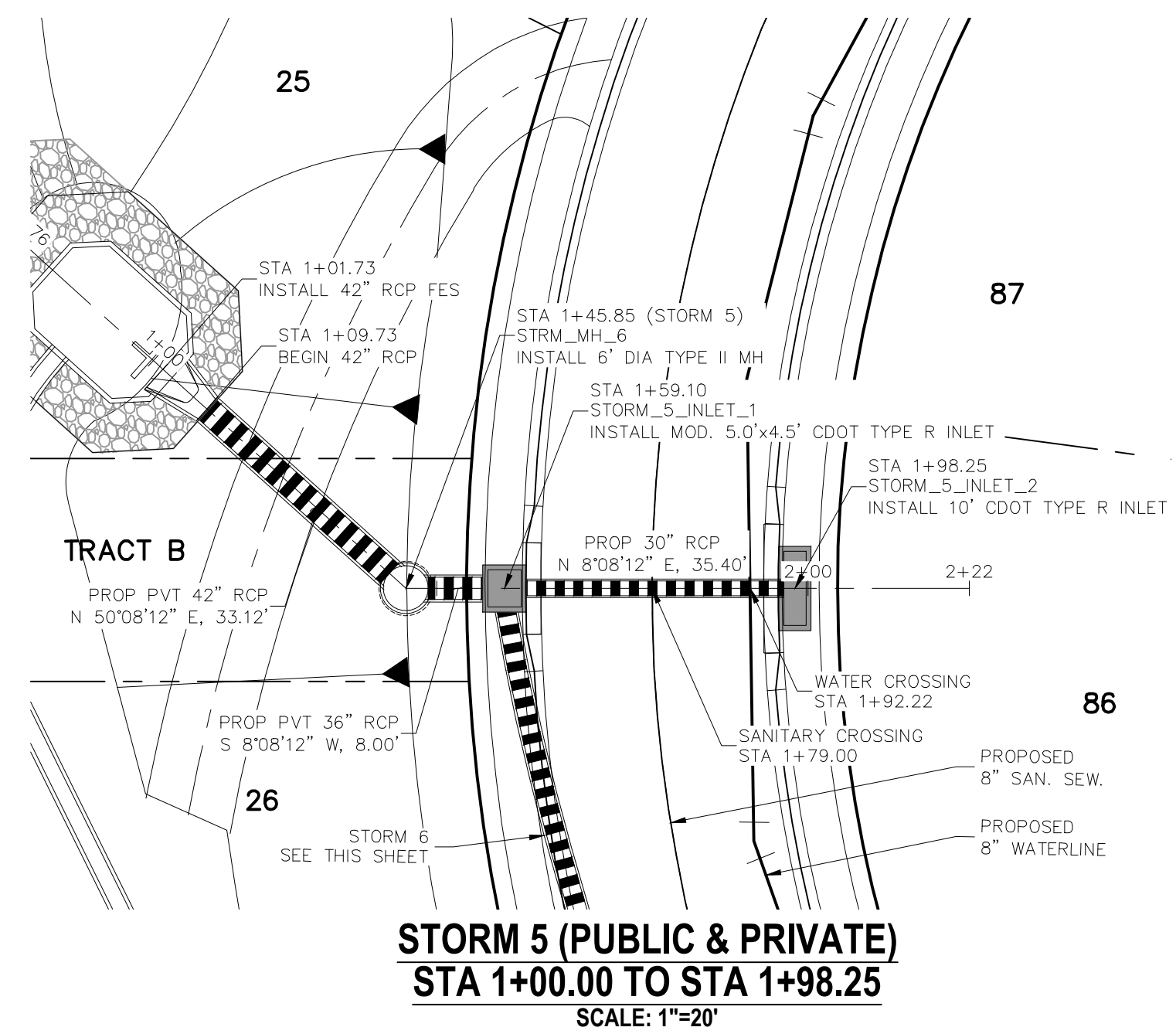
Virgil A. Sanchez, Colorado P.E. No. 37160

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

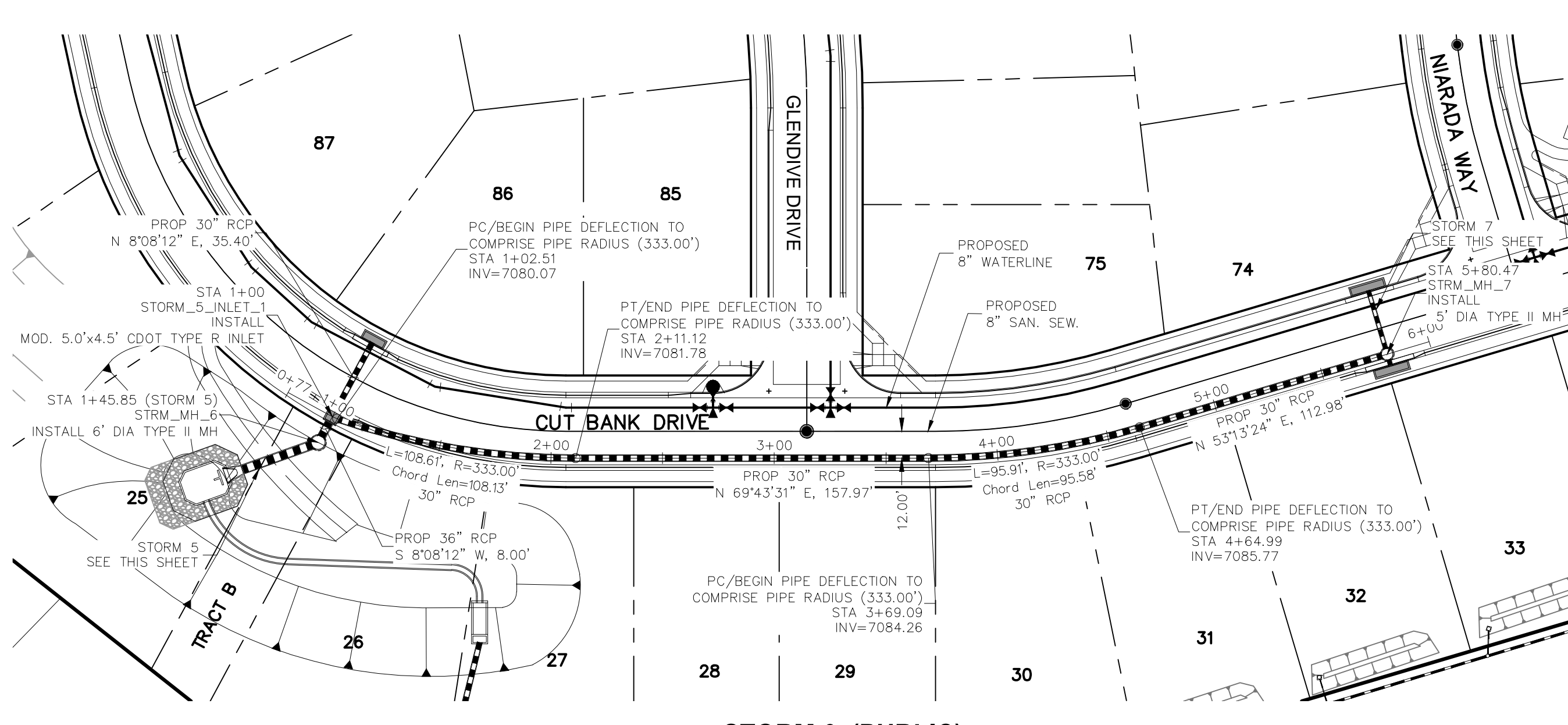
THE ENGINEER PREPARING THESE PLANS WILL NOT BE RESPONSIBLE OR LIABLE FOR UNAUTHORIZED CHANGES TO OR USES OF THESE PLANS. ALL CHANGES TO THE PLANS MUST BE IN WRITING AND MUST BE APPROVED BY THE PREPARER OF THESE PLANS.

CAUTION

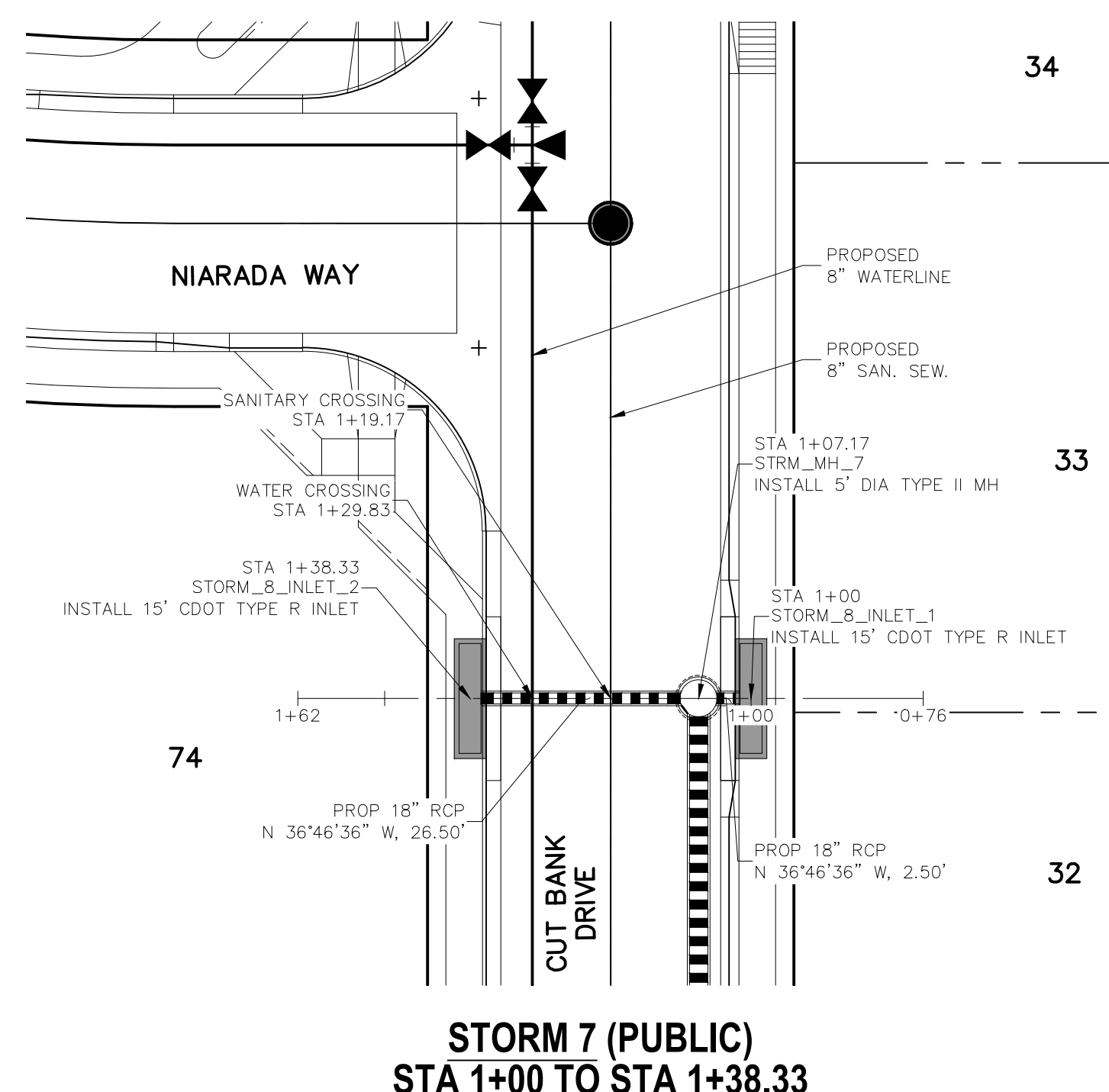
File: c:\09007A\Sterling Ranch No. 6\Map\Const\DWG\Storm Plans\ST06.dwg Plotstamp: 11/19/2019 9:36 AM



STORM 5 (PUBLIC & PRIVATE)
STA 1+00.00 TO STA 1+98.25
 SCALE: 1"=20'

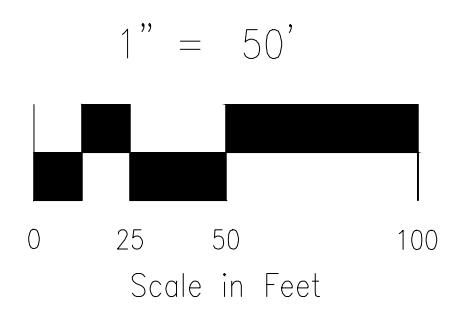


STORM 6 (PUBLIC)
STA 1+00.00 TO STA 5+80.47



STORM 7 (PUBLIC)
STA 1+00 TO STA 1+38.33
 SCALE: 1"=20'

SEE HOMESTEAD F2 REPLAT AS BUILT SET
 COUNTY FILE NO: VR 234



STATION	DESCRIPTION	ELEVATION
7090	EXISTING GRADE @ STORM SEWER CENTERLINE	7090
7085	PROPOSED GRADE @ STORM SEWER CENTERLINE	7085
7080	100 YEAR HGL	7080
7075	PROPOSED GRADE @ STORM SEWER CENTERLINE	7075
7070	100 YEAR HGL	7070
7065	PROPOSED GRADE @ STORM SEWER CENTERLINE	7065
7095	EXISTING GRADE @ STORM SEWER CENTERLINE	7095
7090	PROPOSED GRADE @ STORM SEWER CENTERLINE	7090
7085	100 YEAR HGL	7085
7080	PROPOSED GRADE @ STORM SEWER CENTERLINE	7080
7075	100 YEAR HGL	7075
7070	PROPOSED GRADE @ STORM SEWER CENTERLINE	7070
7065	100 YEAR HGL	7065
7095	EXISTING GRADE @ STORM SEWER CENTERLINE	7095
7090	PROPOSED GRADE @ STORM SEWER CENTERLINE	7090
7085	100 YEAR HGL	7085
7080	PROPOSED GRADE @ STORM SEWER CENTERLINE	7080
7075	100 YEAR HGL	7075
7070	PROPOSED GRADE @ STORM SEWER CENTERLINE	7070
7065	100 YEAR HGL	7065

STORM 5 STA 1+00.00 TO STA 1+98.25

STORM 6 STA 1+00.00 TO STA 5+80.47

STORM 7 STA 1+00.00 TO STA 1+38.33

EPC 3/5/2020

HOMESTEAD AT STERLING RANCH FIL. NO. 2

STORM SEWER PLANS & PROFILES

PROJECT NO. 09-007 FILE: \Lang\Const\DWG\Storm Plans\ST06.dwg DATE: 11/19/2019

DESIGNED BY: CMN SCALE: 1"=50'

DRAWN BY: CMN HORIZ: 1"=50'

CHECKED BY: VAS VERT: 1"=5'

ST06

102 E. Pikes Peak Ave., 5th Floor
 Colorado Springs, CO 80903
 PHONE: 719.555.4485

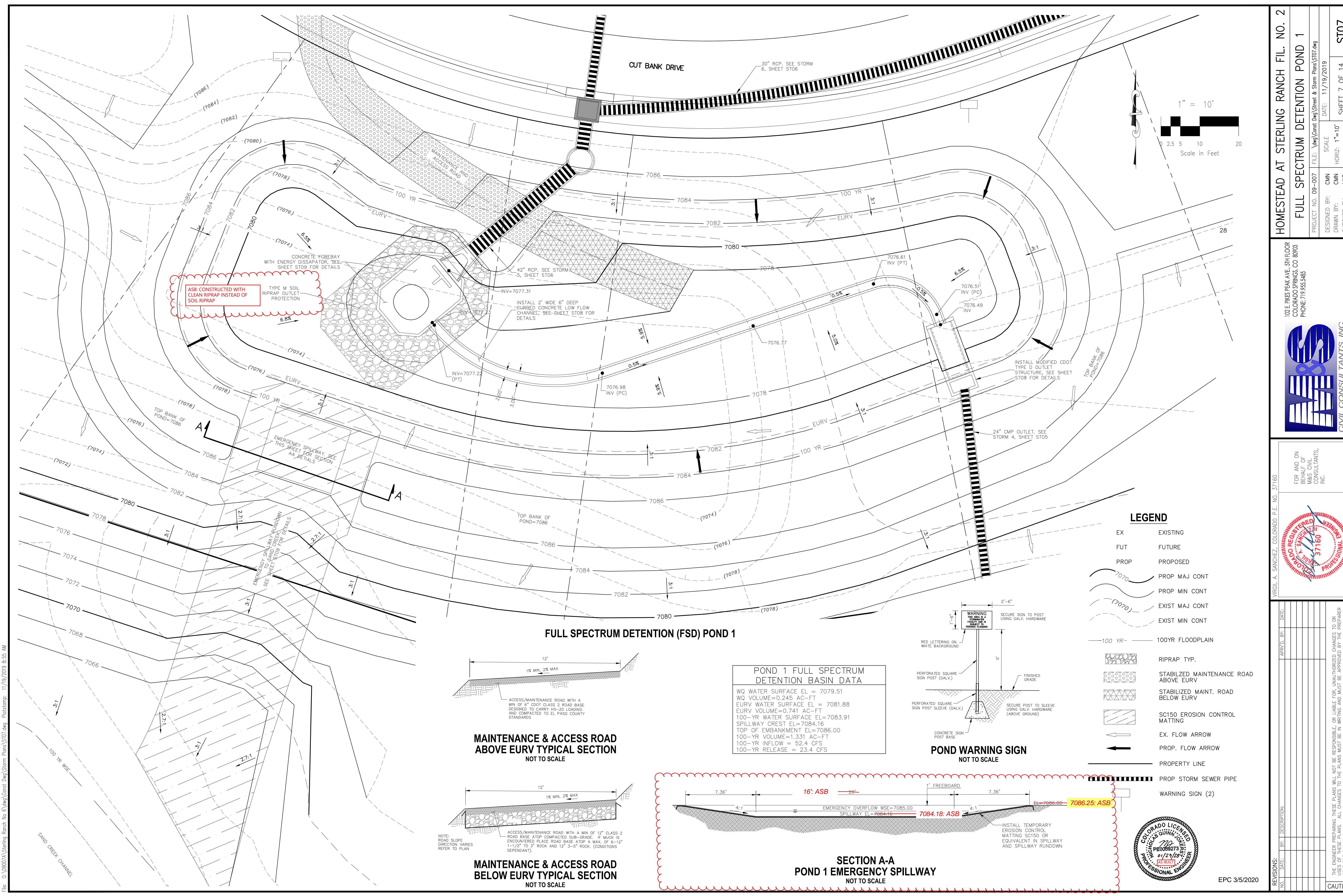
CIVIL CONSULTANTS, INC.

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

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

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CAUTION

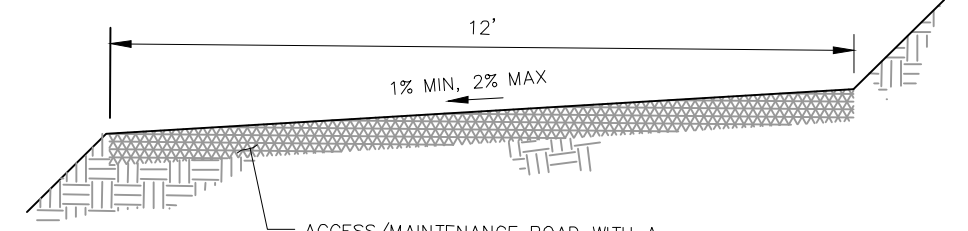


ASB: CONSTRUCTED WITH CLEAN RIPRAP INSTEAD OF SOIL RIPRAP

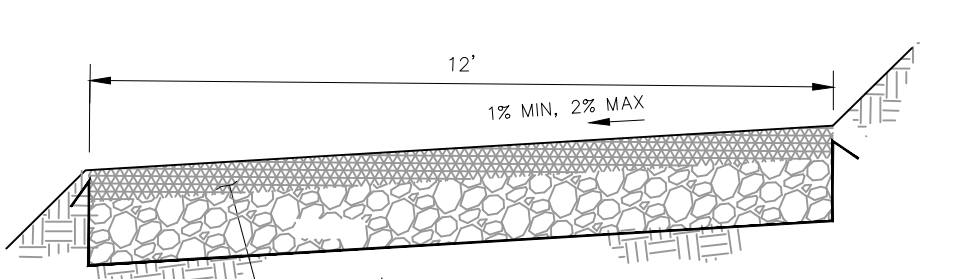
TYPE M SOIL RIPRAP OUTLET PROTECTION

FULL SPECTRUM DETENTION (FSD) POND 1

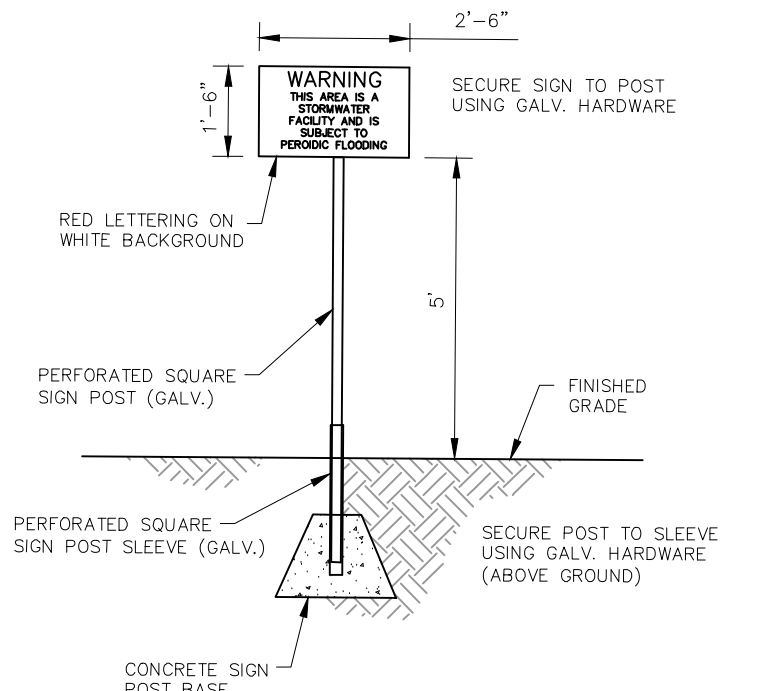
POND 1 FULL SPECTRUM DETENTION BASIN DATA	
WQ WATER SURFACE EL =	7079.51
WQ VOLUME=	0.245 AC-FT
EURV WATER SURFACE EL =	7081.88
EURV VOLUME=	0.741 AC-FT
100-YR WATER SURFACE EL=	7083.91
SPILLWAY CREST EL=	7084.16
TOP OF EMBANKMENT EL=	7086.00
100-YR VOLUME=	1,331 AC-FT
100-YR INFLOW =	52.4 CFS
100-YR RELEASE =	23.4 CFS



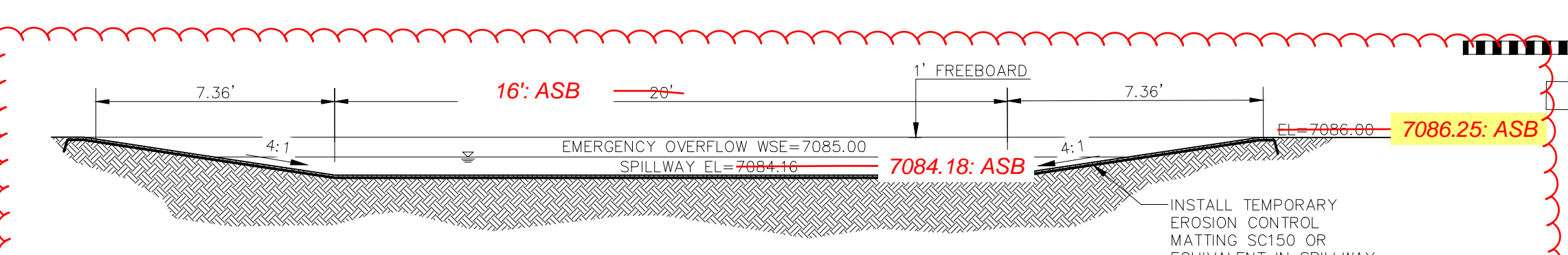
MAINTENANCE & ACCESS ROAD ABOVE EURV TYPICAL SECTION
NOT TO SCALE



MAINTENANCE & ACCESS ROAD BELOW EURV TYPICAL SECTION
NOT TO SCALE



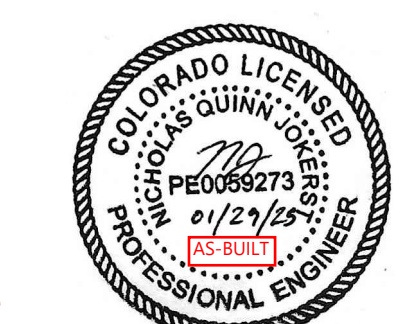
POND WARNING SIGN
NOT TO SCALE



SECTION A-A POND 1 EMERGENCY SPILLWAY
NOT TO SCALE

LEGEND

- EX EXISTING
- FUT FUTURE
- PROP PROPOSED
- 7070 PROP MAJ CONT
- 7070 PROP MIN CONT
- 7070 EXIST MAJ CONT
- 7070 EXIST MIN CONT
- 100 YR 100YR FLOODPLAIN
- RIPRAP TYP.
- STABILIZED MAINTENANCE ROAD ABOVE EURV
- STABILIZED MAINT. ROAD BELOW EURV
- SC150 EROSION CONTROL MATTING
- EX. FLOW ARROW
- PROP. FLOW ARROW
- PROPERTY LINE
- PROP STORM SEWER PIPE
- WARNING SIGN (2)



EPC 3/5/2020

HOMESTEAD AT STERLING RANCH FIL. NO. 2
FULL SPECTRUM DETENTION POND 1

PROJECT NO. 09-007 FILE: \Eng\Const\Draw\Sheet & Storm Plans\ST07.dwg DATE: 11/19/2019
 DESIGNED BY: CMN SCALE: N/A
 DRAWN BY: CMN HORIZ: 1"=10'
 CHECKED BY: VAS VERT: N/A SHEET 7 OF 14 ST07

102 E. Pikes Peak Ave., 3rd Floor
 Colorado Springs, CO 80903
 PHONE: 719.555.5485

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

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

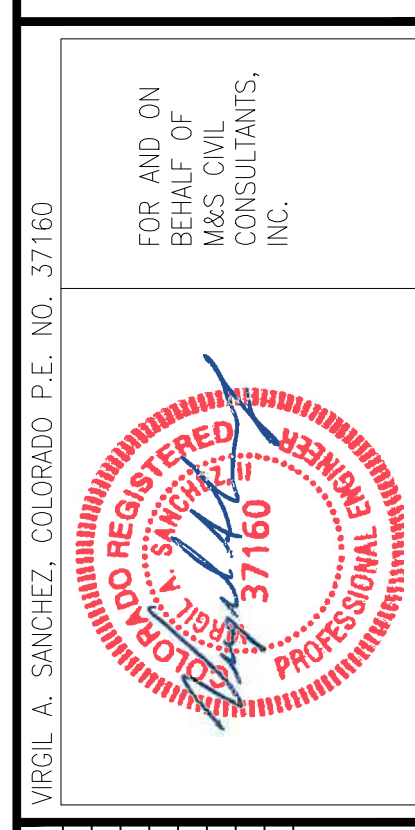
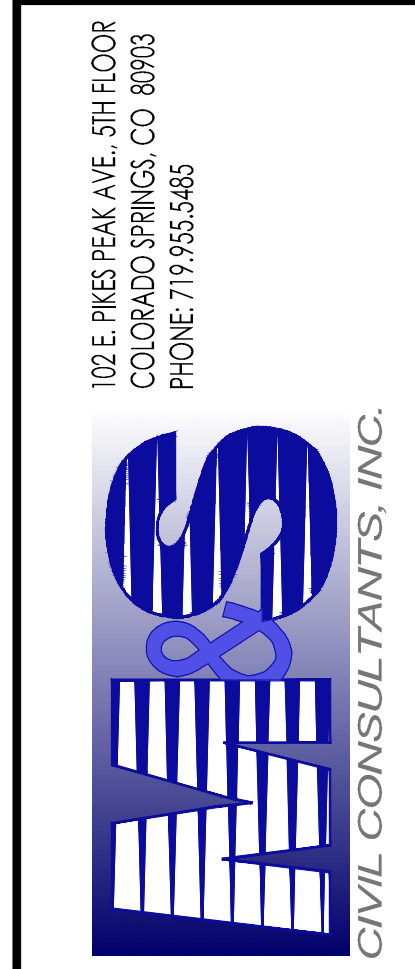
REVISIONS:

NO.	DATE	BY	DESCRIPTION

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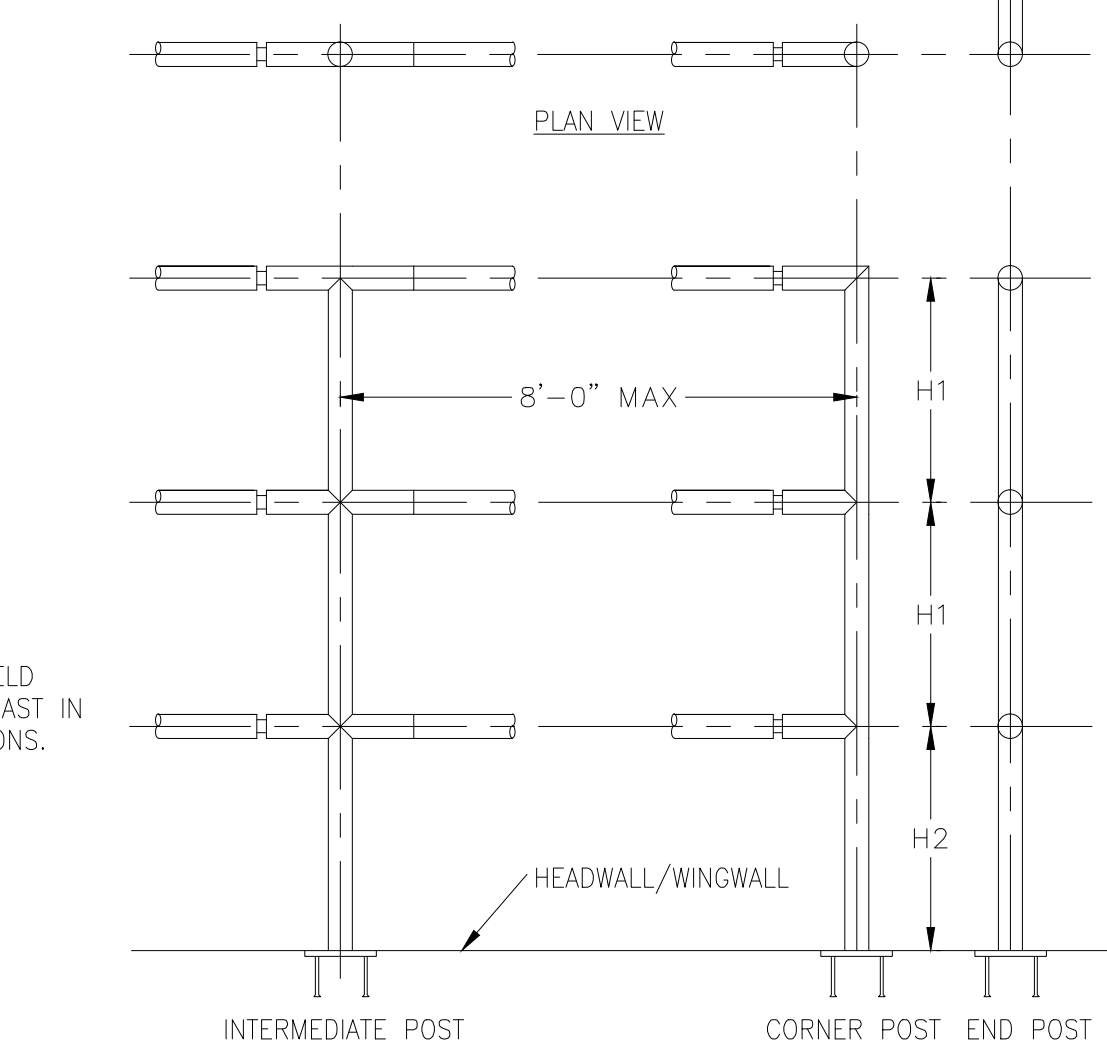
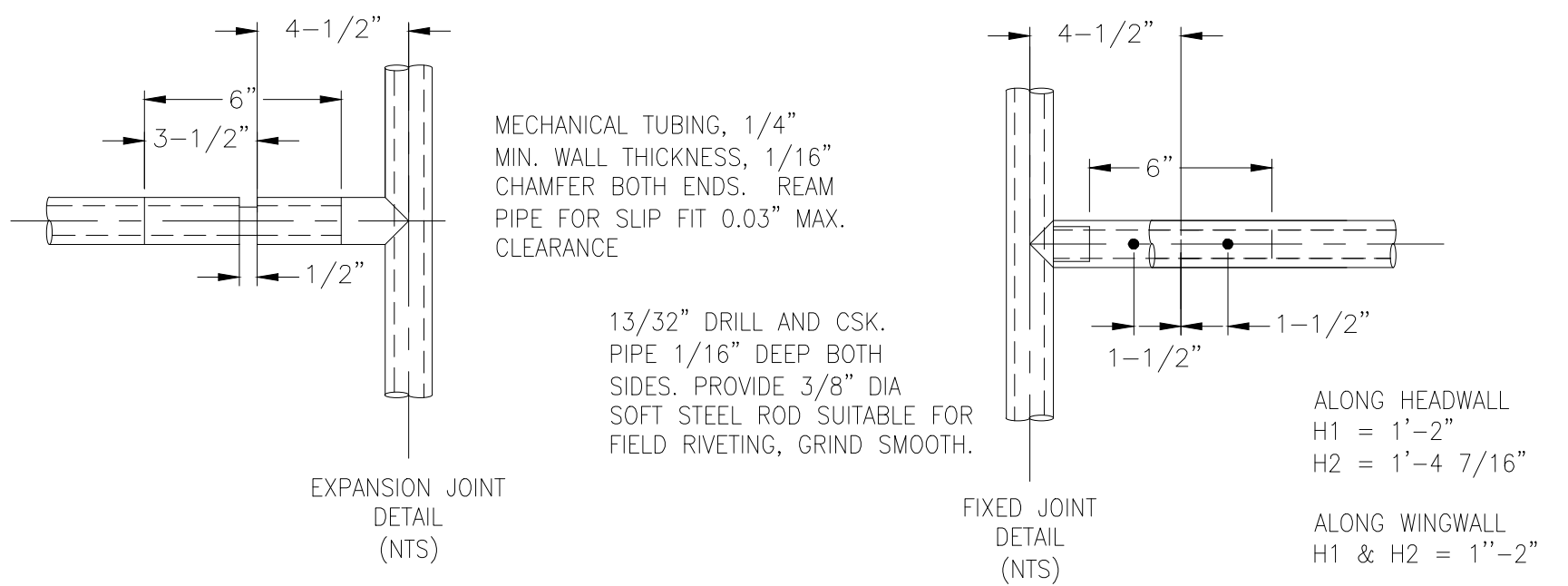
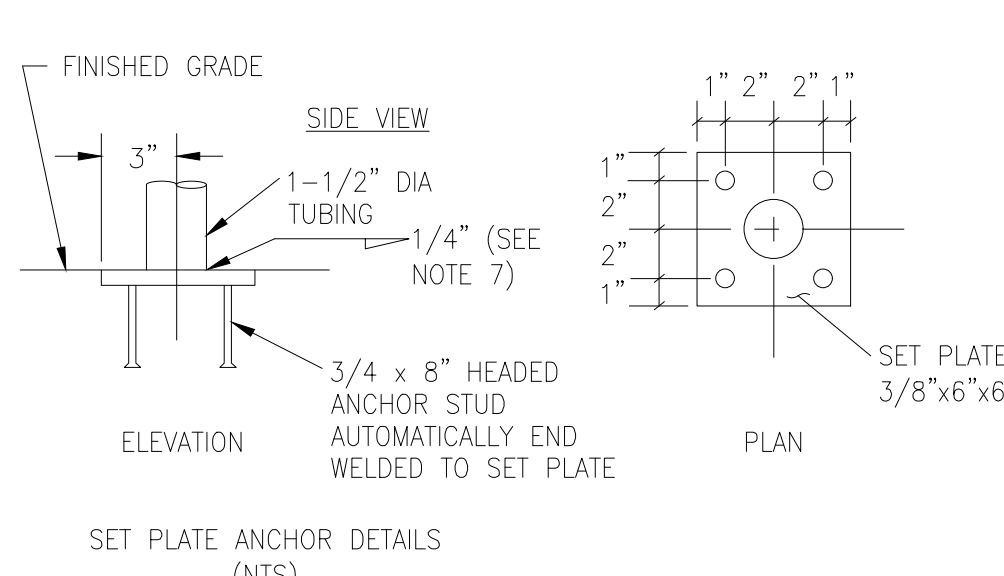
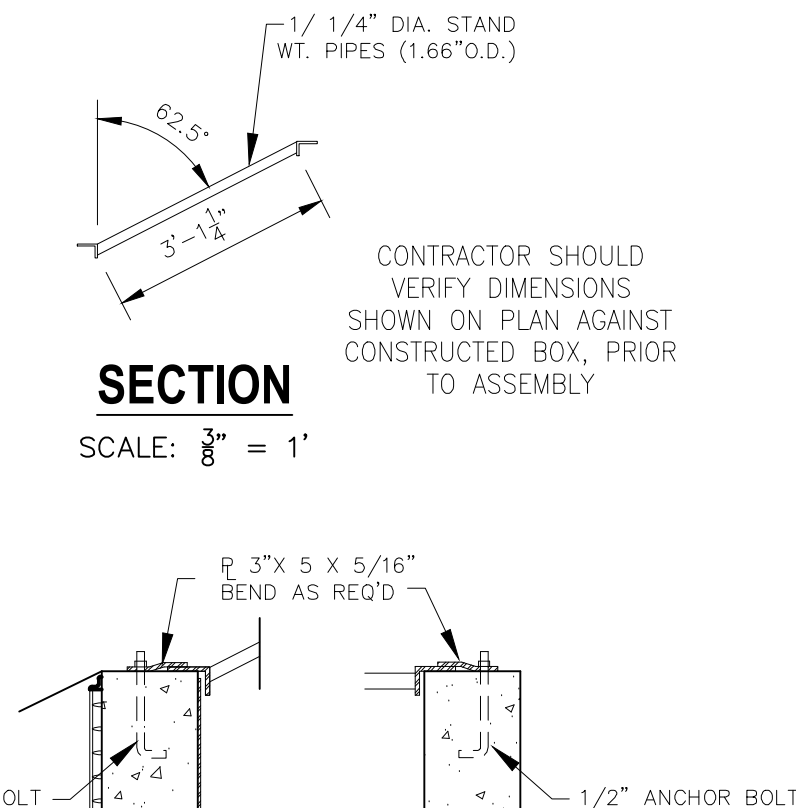
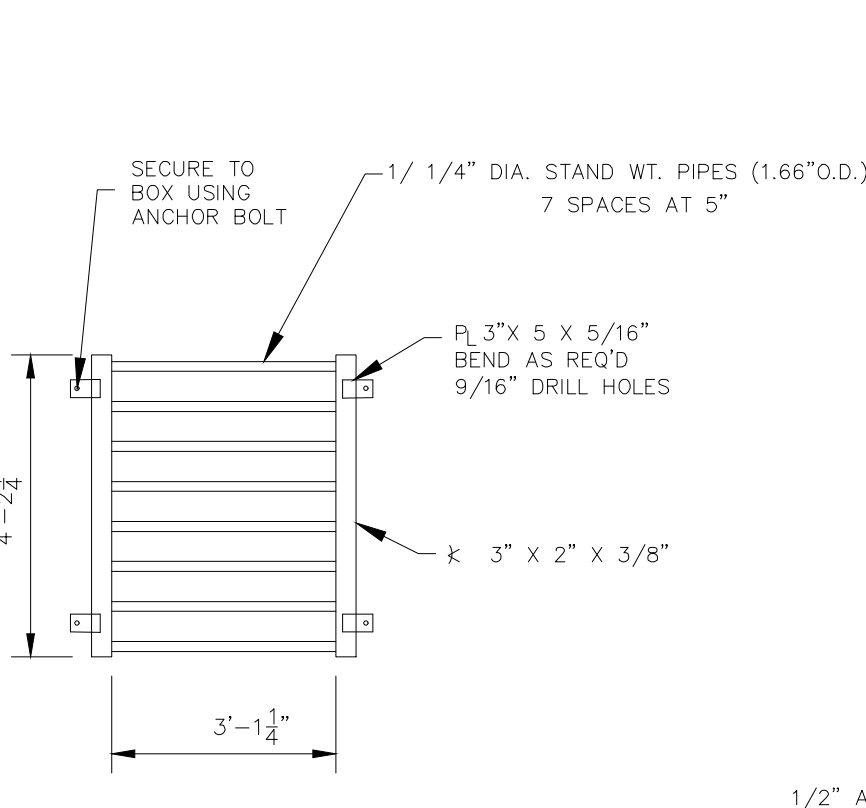
CAUTION

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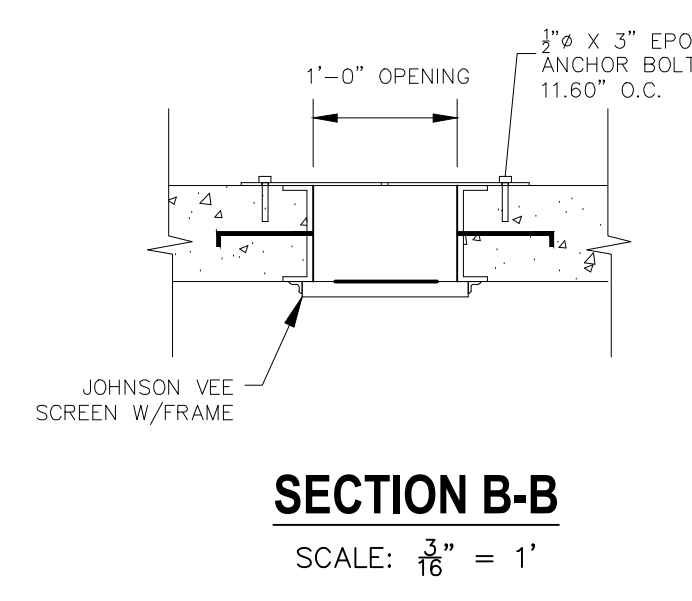
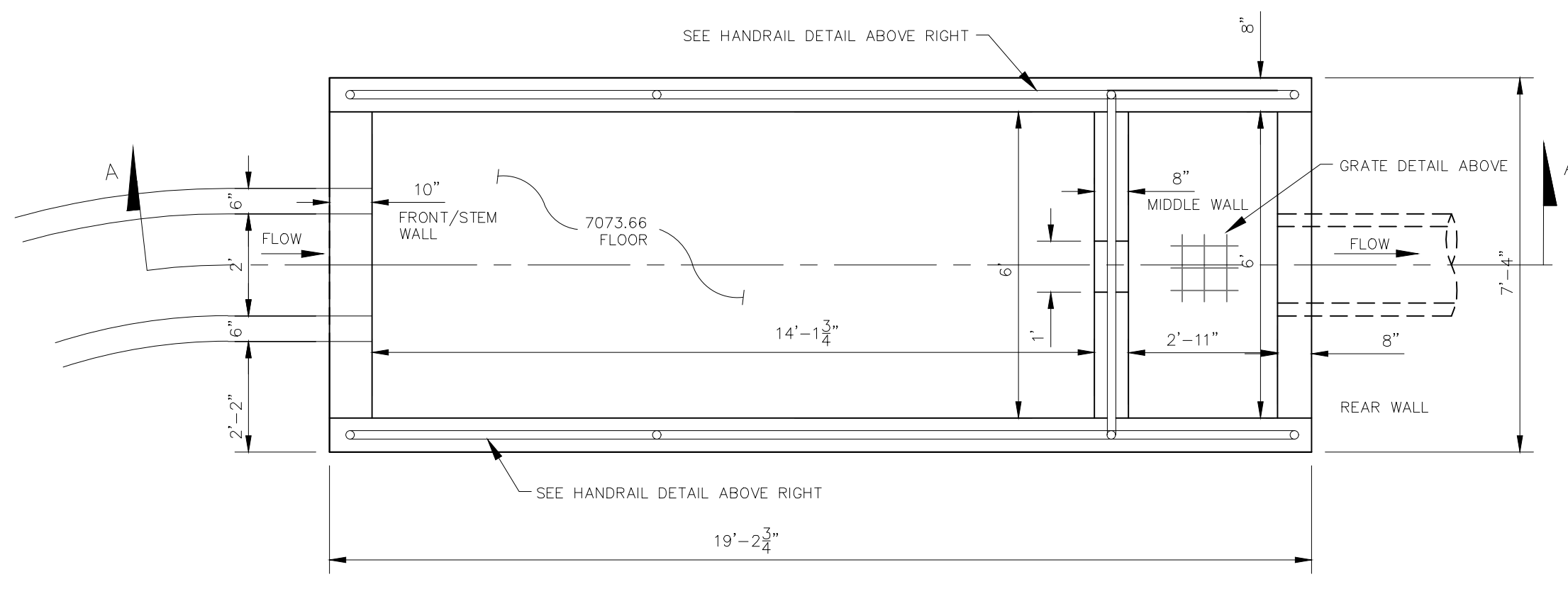
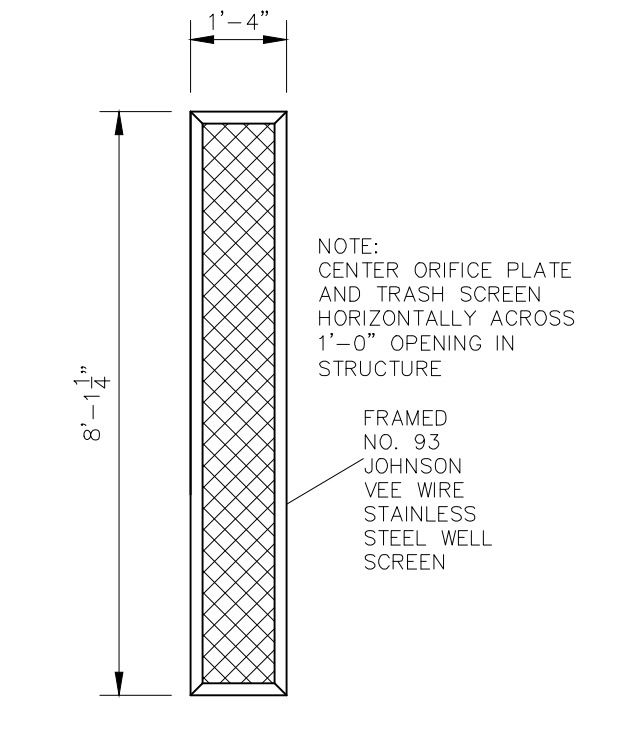
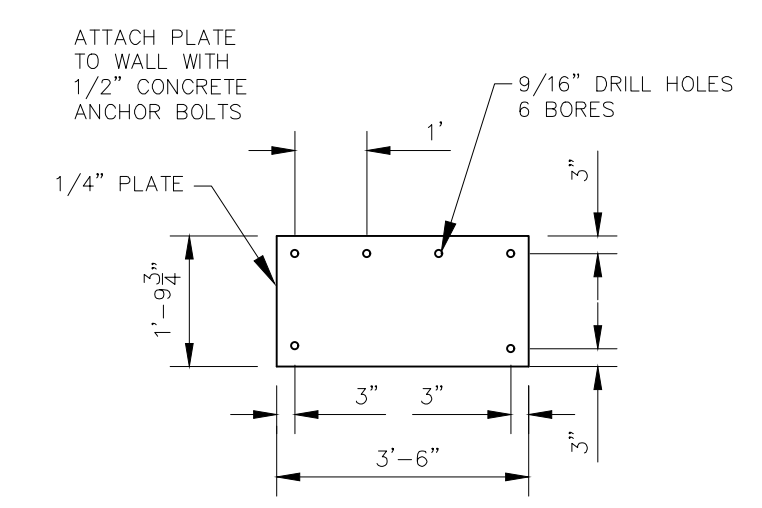
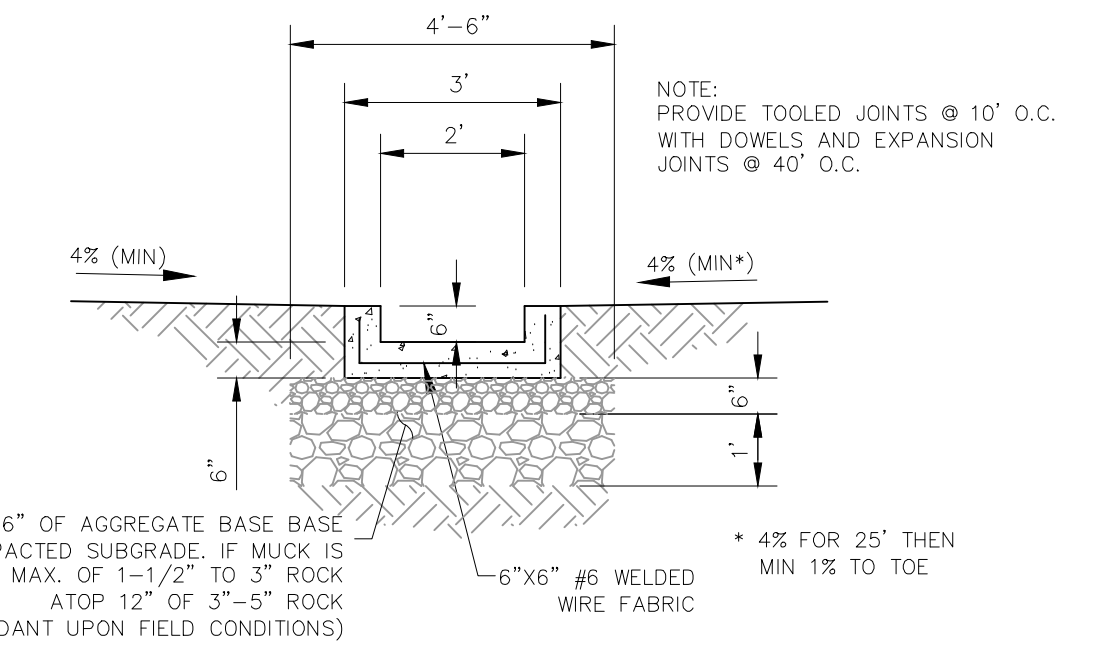
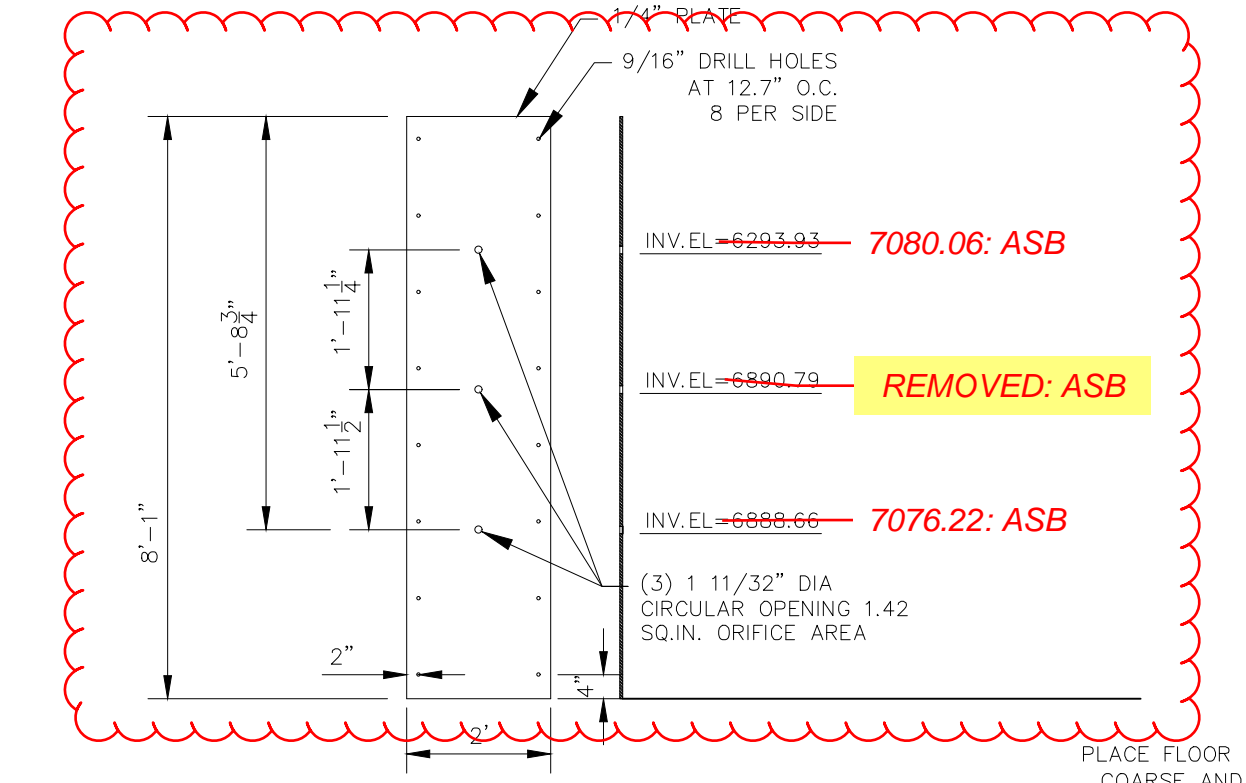
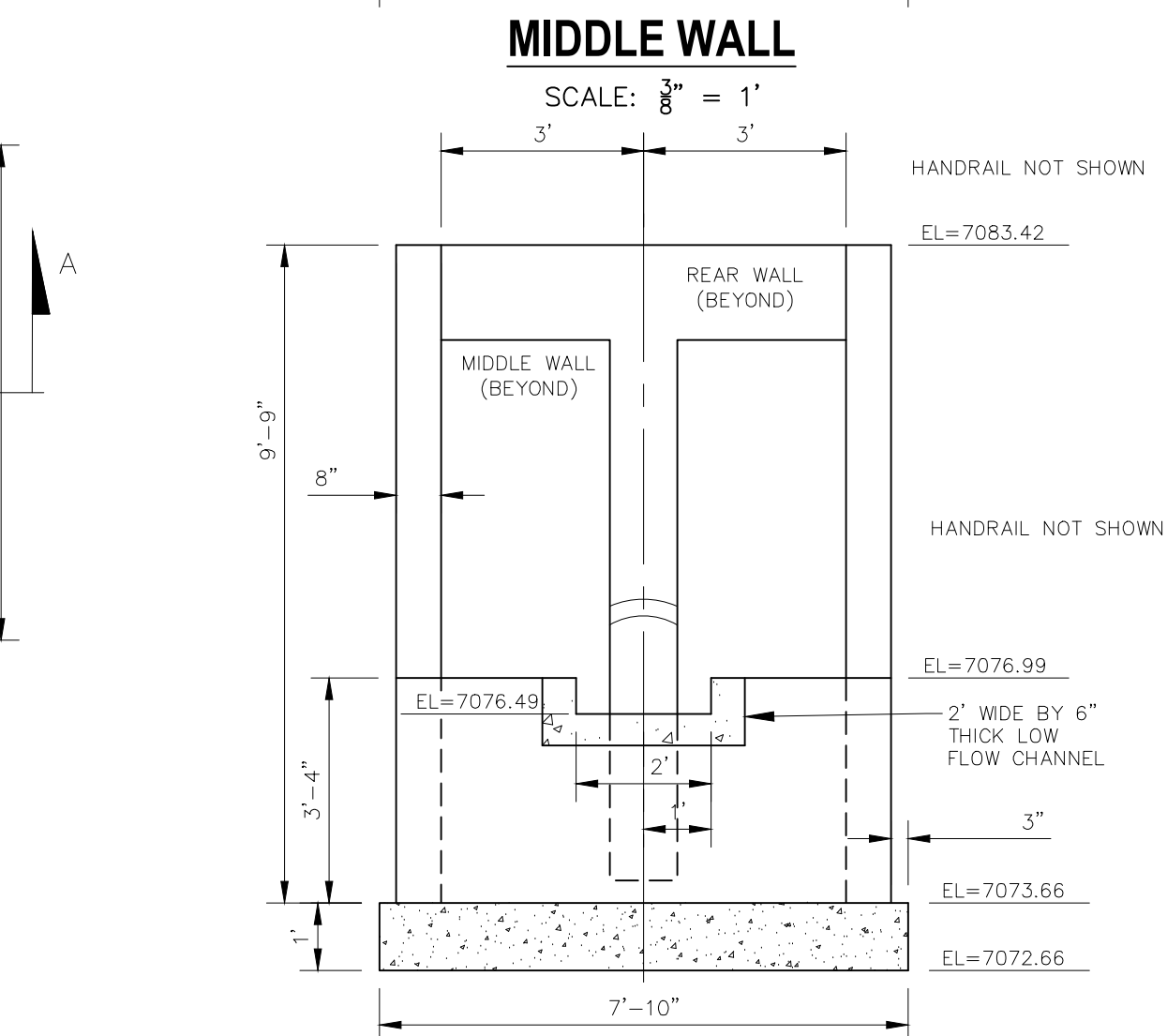
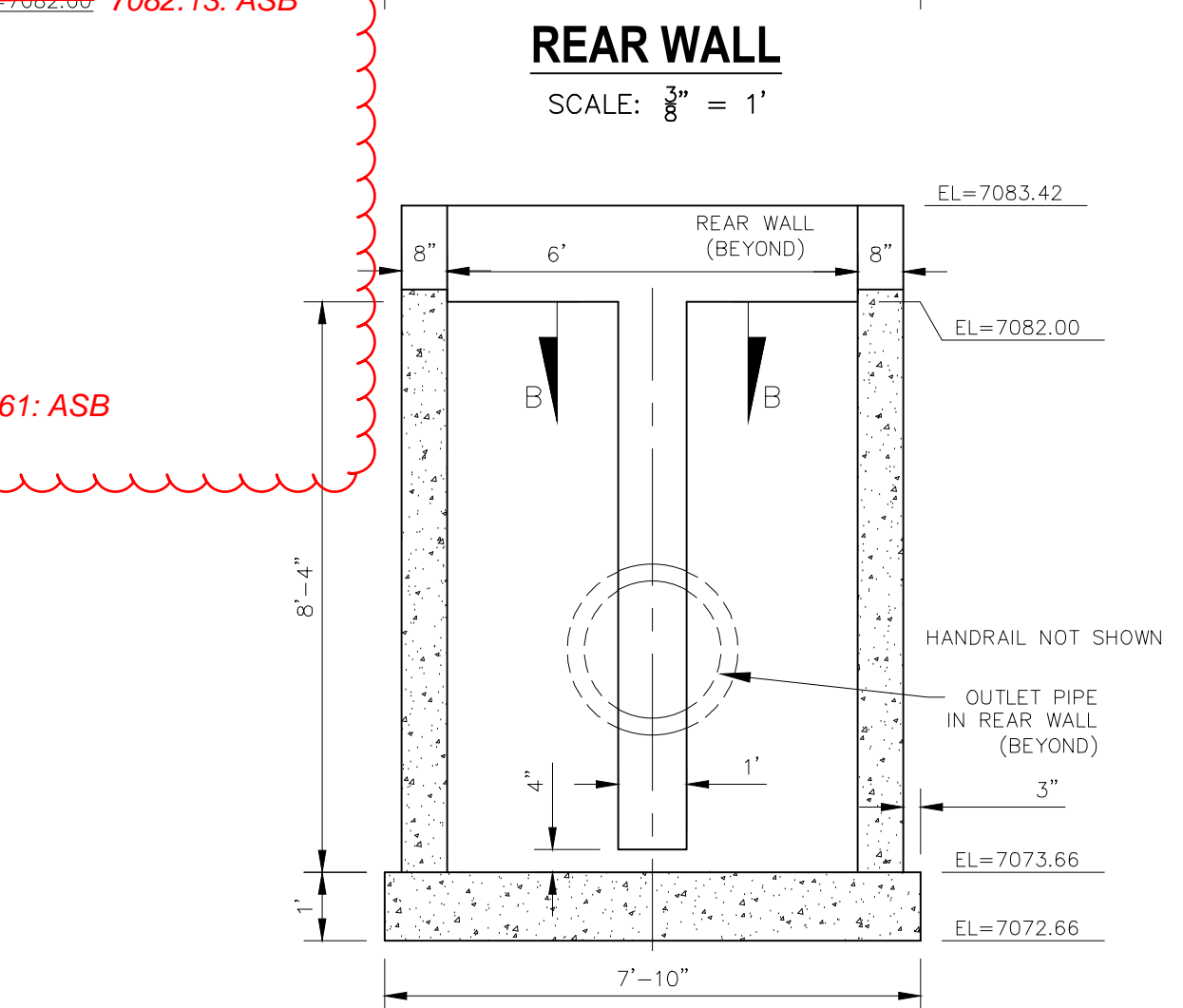
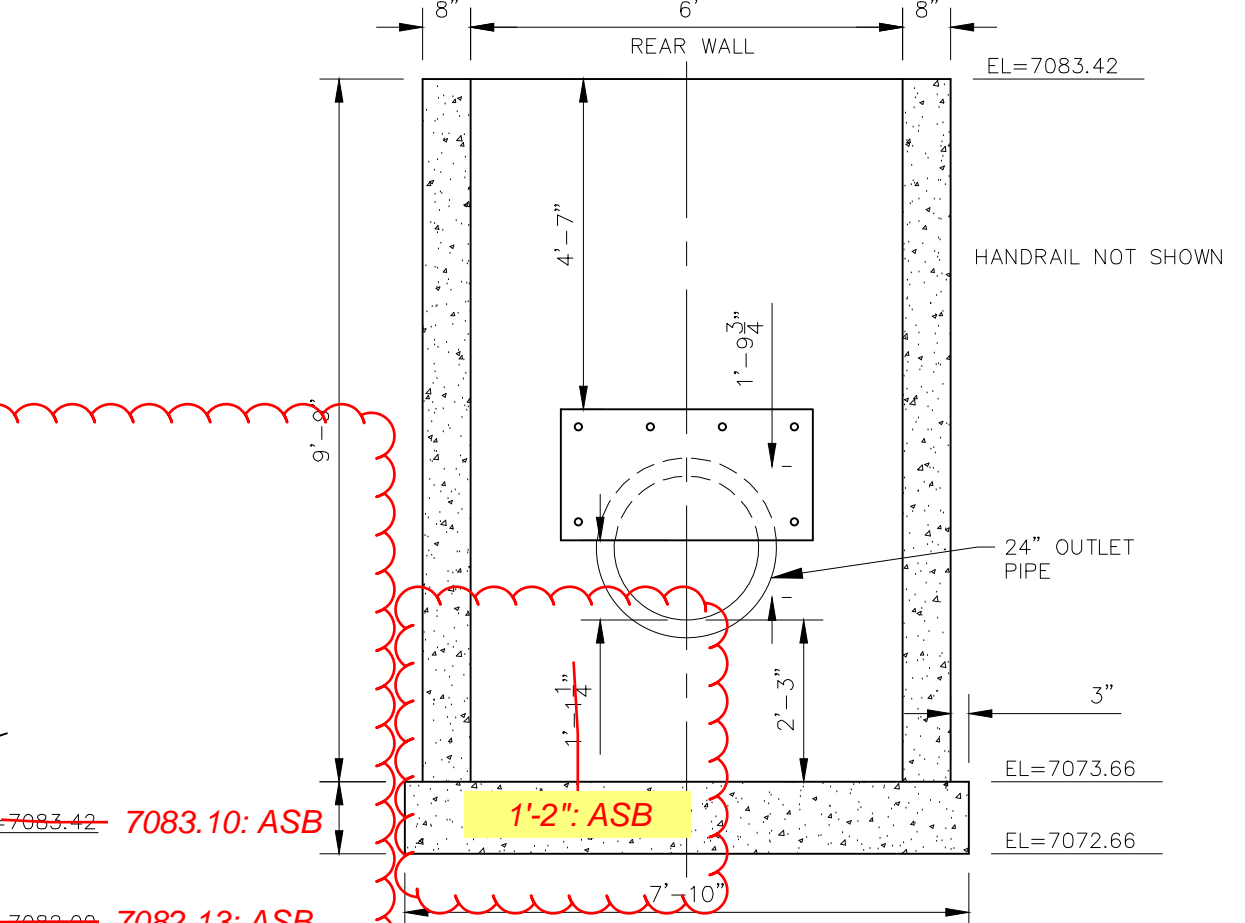
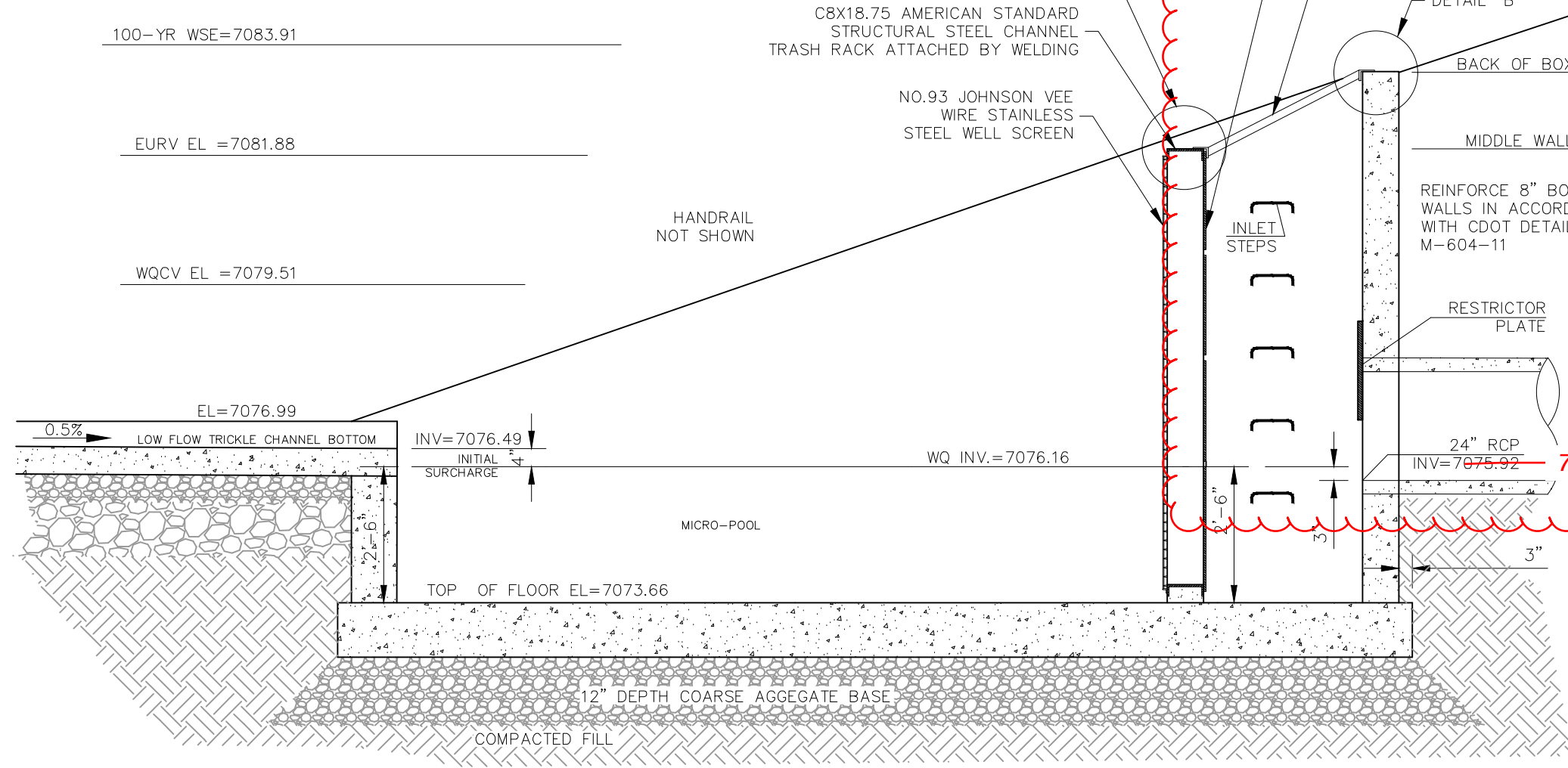


NO.	DATE	BY	DESCRIPTION

APPROVED BY: _____ DATE: _____
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CAUTION



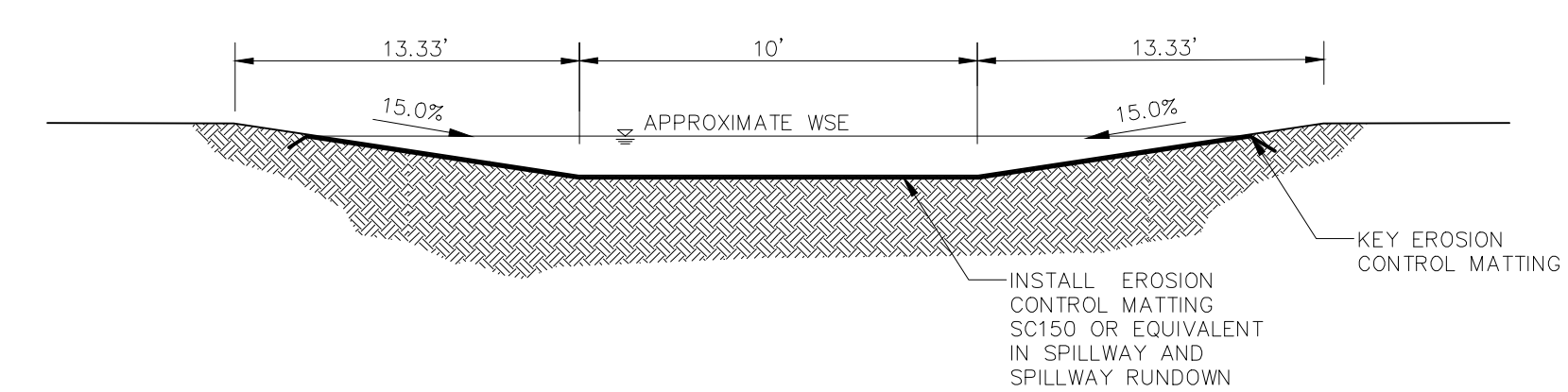
NOTE:
 ALL GRATES, SCREENS, IMBEDS AND FASTENERS SHALL BE FABRICATED USING GALVANIZED STEEL, UNLESS OTHERWISE NOTED.
 ALL GRATE DIMENSIONS TO BE FIELD VERIFIED PRIOR TO FABRICATION. ALL GRATE MATERIAL SHALL BE GALVANIZED.



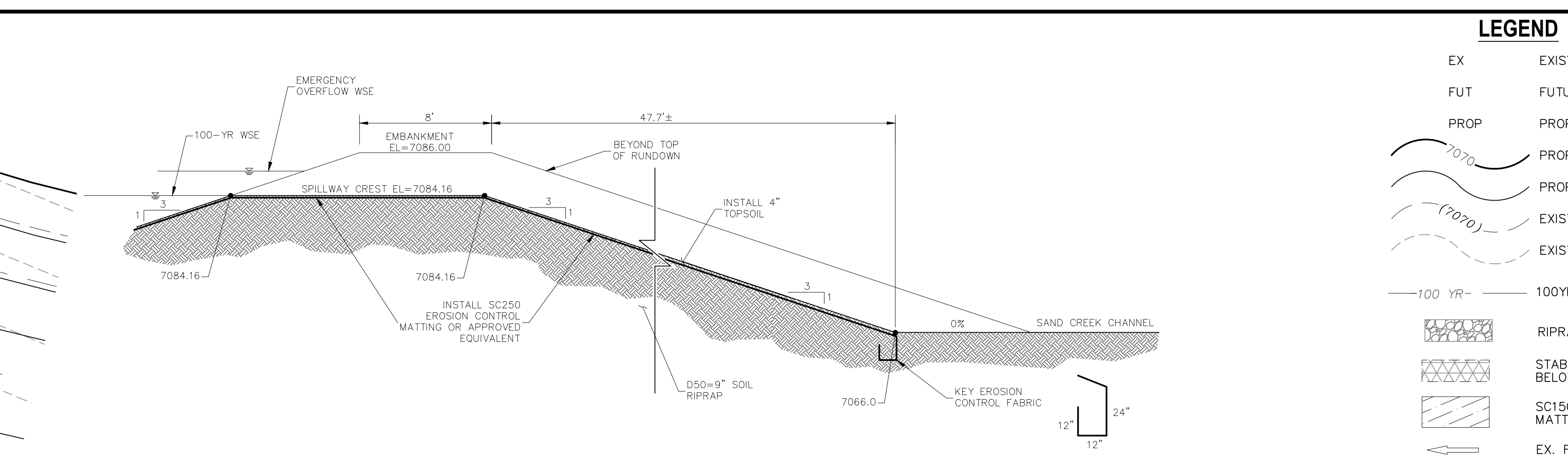
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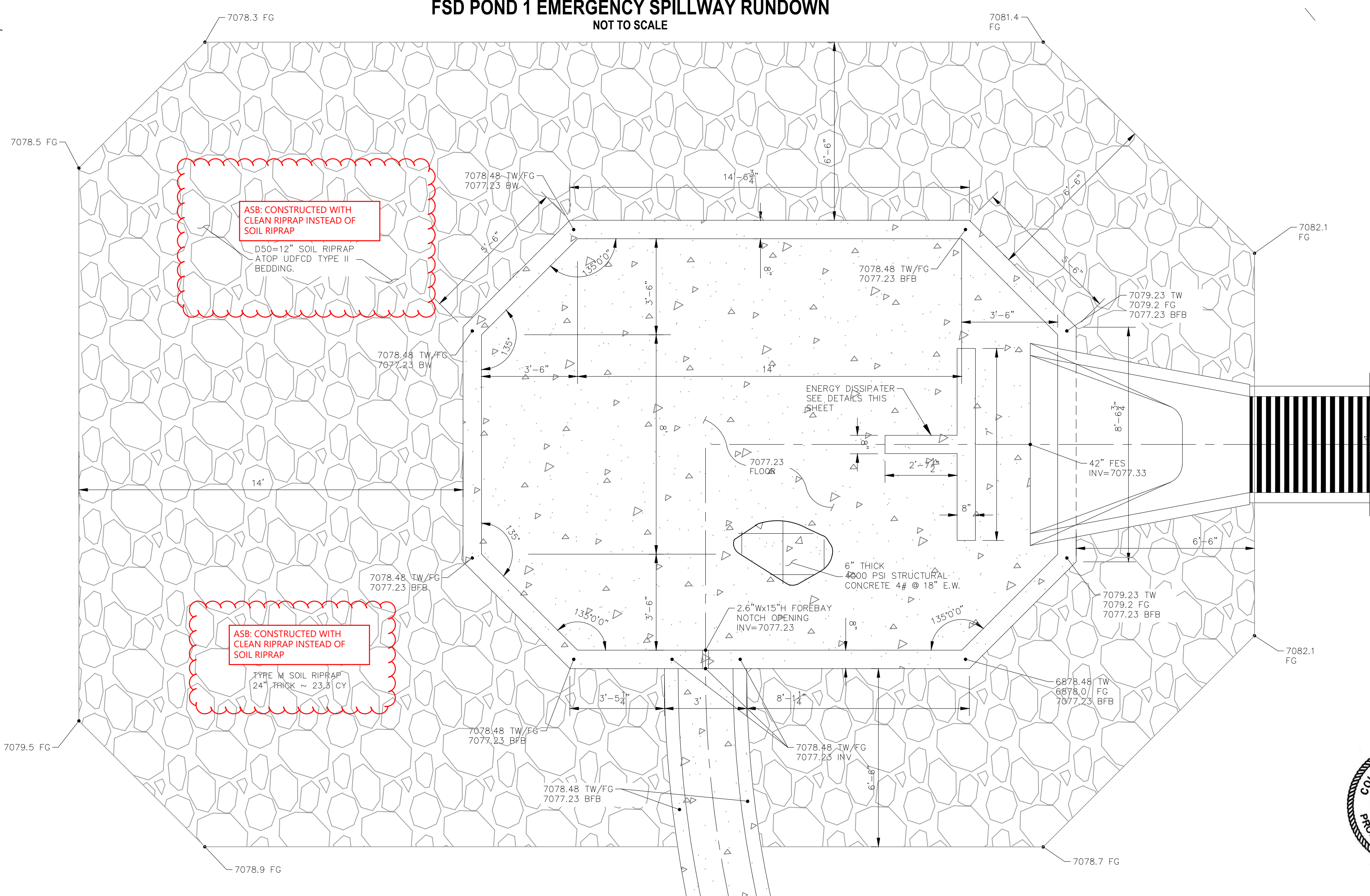
FDS POND 1 EMERGENCY SPILLWAY AND RUNDOWN TO SAND CREEK CHANNEL
1"=10'



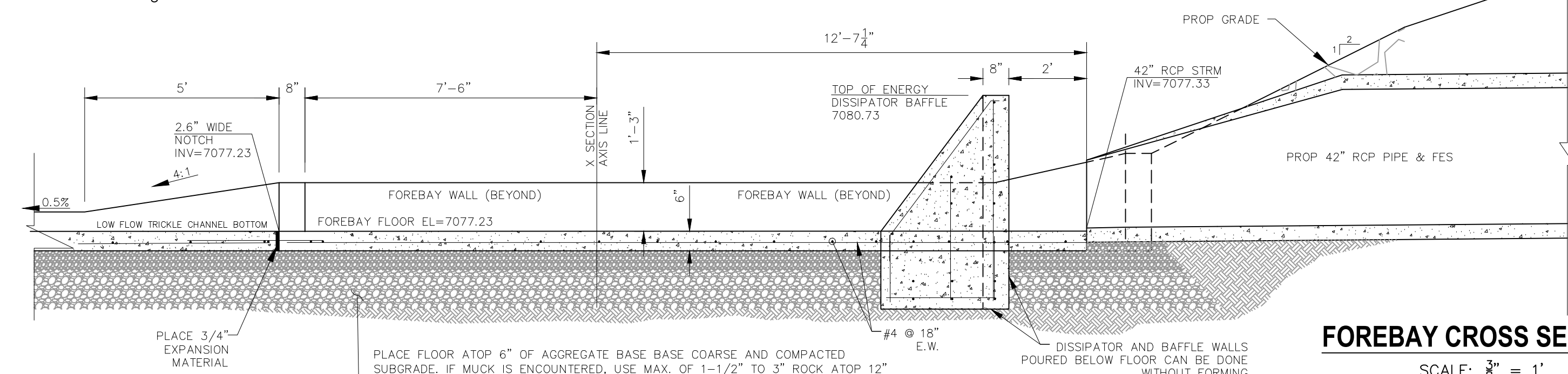
SECTION D-D
FDS POND 1 EMERGENCY SPILLWAY RUNDOWN
NOT TO SCALE



SECTION C-C
FSD POND 1 EMERGENCY SPILLWAY RUNDOWN
NOT TO SCALE



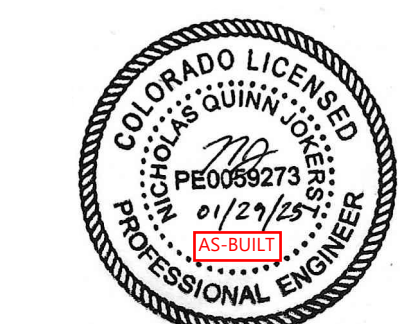
FOREBAY PLAN
SCALE: 3/8" = 1'



FOREBAY CROSS SECTION
SCALE: 3/8" = 1'

LEGEND

- EX EXISTING
- FUT FUTURE
- PROP PROPOSED
- 7070 PROP MAJ CONT
- (7070) PROP MIN CONT
- 7070 EXIST MAJ CONT
- (7070) EXIST MIN CONT
- 100 YR 100YR FLOODPLAIN
- RIPRAP TYP.
- STABILIZED MAINT. ROAD BELOW EURV
- SC150 EROSION CONTROL MATTING
- EX. FLOW ARROW
- PROP. FLOW ARROW



HOMESTEAD AT STERLING RANCH FIL. NO. 2

SPILLWAY RUNDOWN & FOREBAY DETAIL

PROJECT NO. 09-007 FILE: \Map\Const\Draw\Storm Plans\ST09.dwg DATE: 11/19/2019

DESIGNED BY: CMN SCALE: N/A

DRAWN BY: CMN HORIZ: 1"=10'

CHECKED BY: VAS VERT: N/A

102 E. Pikes Peak Ave., 3rd Floor
Colorado Springs, CO 80903
PHONE: 719.555.4485

MA&S
CIVIL CONSULTANTS, INC.

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

PROFESSIONAL REGISTERED ENGINEER
NO. 37160
EXPIRES 12/31/2021

APPROVED BY: DATE:

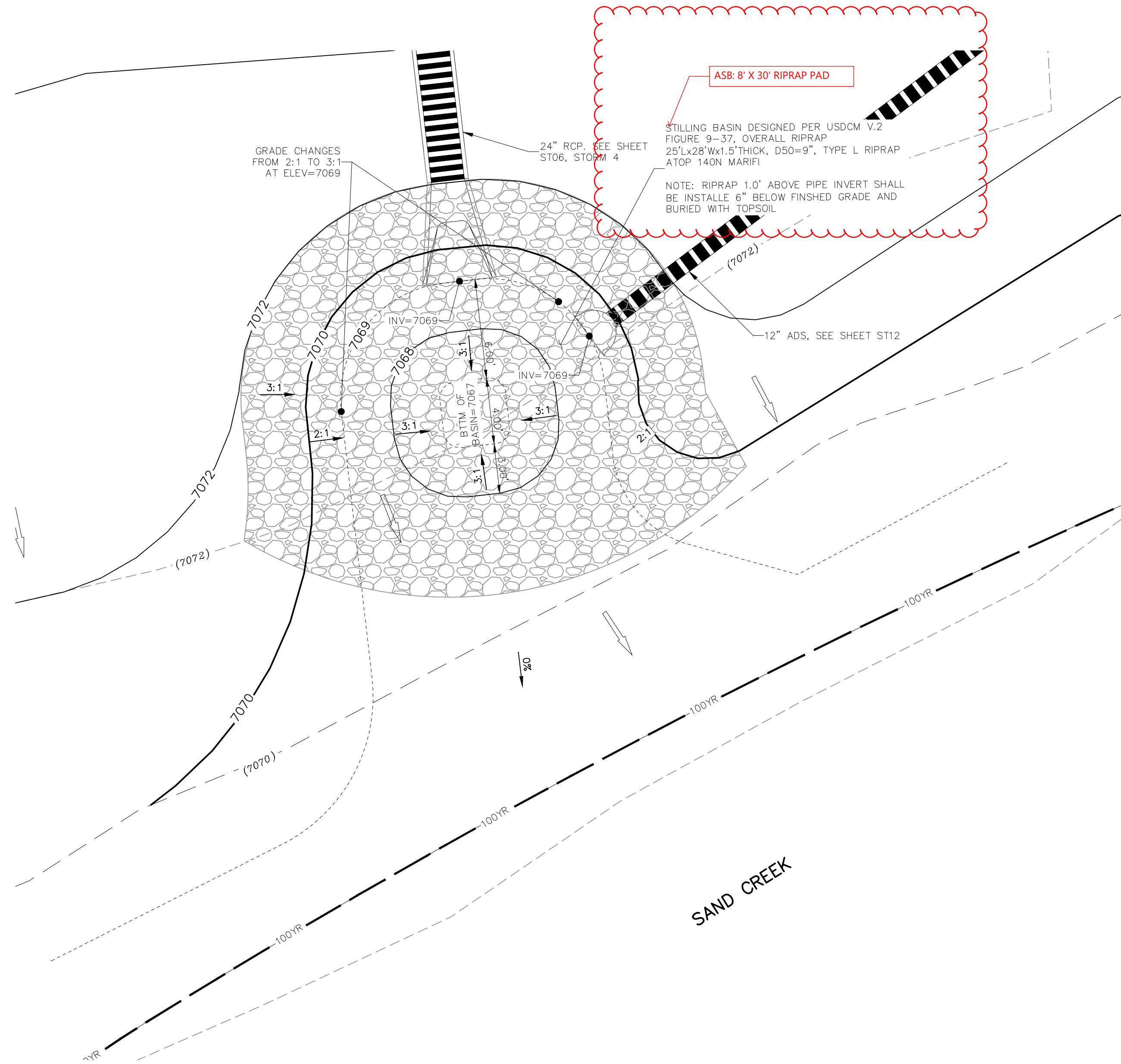
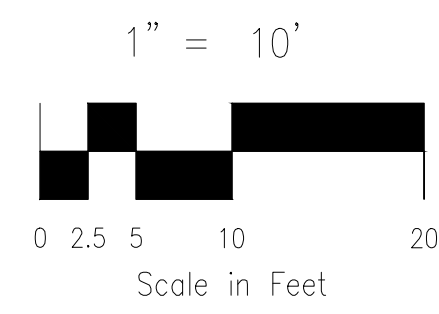
REVISIONS:

NO.	DATE:	BY:	DESCRIPTION:

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CAUTION

EPC 3/5/2020



24" OUTFALL INTO SAND CREEK
1"=5'

LEGEND

- EX EXISTING
- FUT FUTURE
- PROP PROPOSED
- 7070 PROP MAJ CONT
- 7069 PROP MIN CONT
- (7070) EXIST MAJ CONT
- (7069) EXIST MIN CONT
- 100 YR 100YR FLOODPLAIN
- RIPRAP TYP. RIPRAP TYP.
- EX. FLOW ARROW EX. FLOW ARROW
- PROP. FLOW ARROW PROP. FLOW ARROW
- PROPERTY LINE
- PROP STORM SEWER PIPE

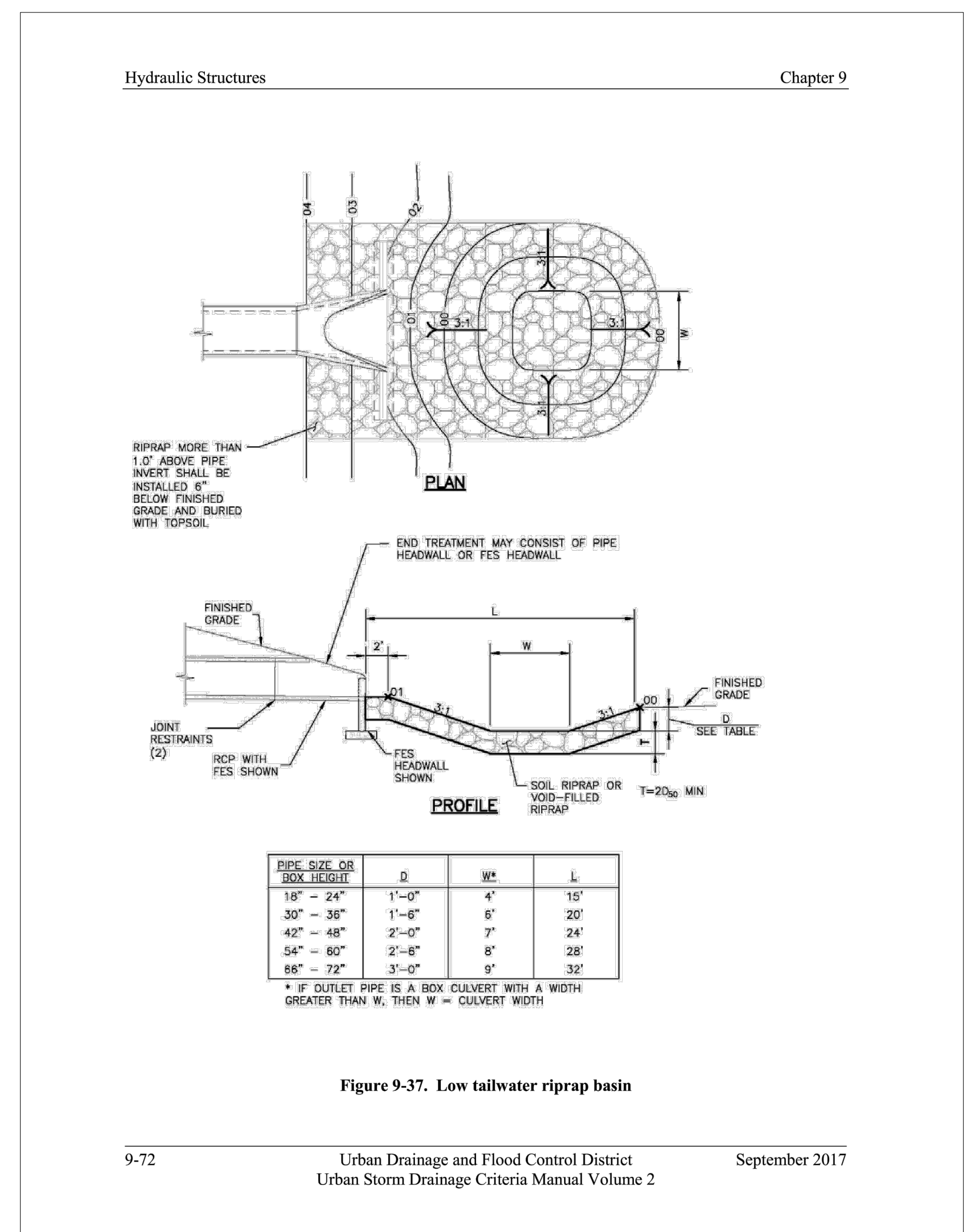
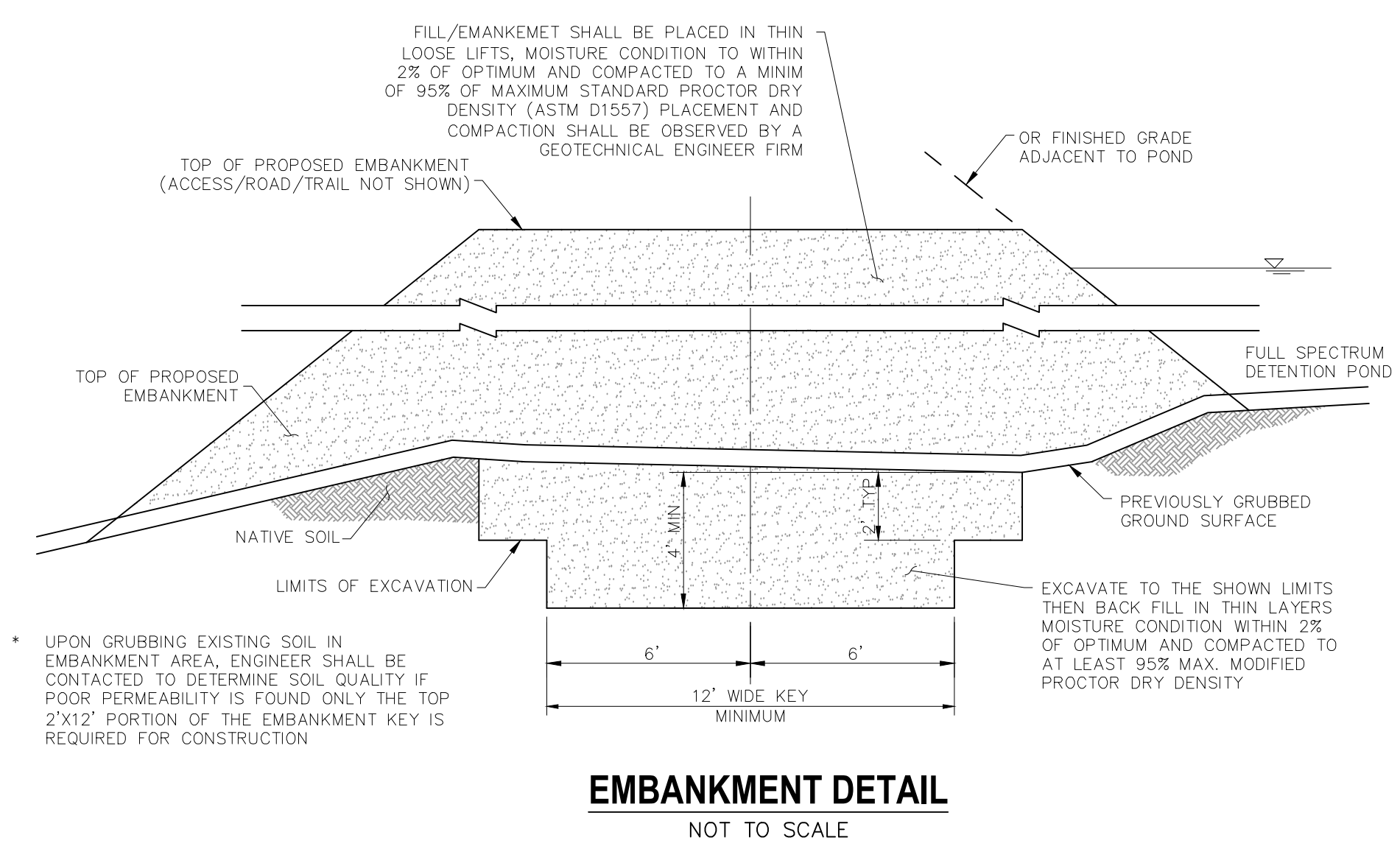


Figure 9-37. Low tailwater riprap basin

9-72 Urban Drainage and Flood Control District September 2017
Urban Storm Drainage Criteria Manual Volume 2

UDFCD V.2 FIGURE 9-37
NTS



EMBANKMENT DETAIL
NOT TO SCALE



EPC 3/5/2020

HOMESTEAD AT STERLING RANCH FIL. NO. 2
24" OUTFALL DETAIL & BERM KEY

PROJECT NO. 09-007 FILE: \Lang\Const\Eng\Street & Storm Plans\ST10.dwg
DESIGNED BY: CMM SCALE: DATE: 11/19/2019
DRAWN BY: CMM HORIZ: 1"=10'
CHECKED BY: VAS VERT: N/A SHEET 10 OF 14 **ST10**

102 E. Pikes Peak Ave., 5th Floor
Colorado Springs, CO 80903
PHONE: 719.555.5485

CIVIL CONSULTANTS, INC.

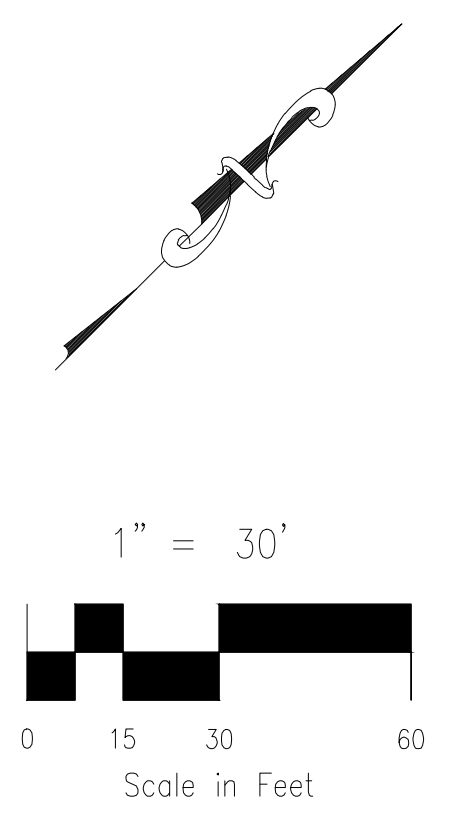
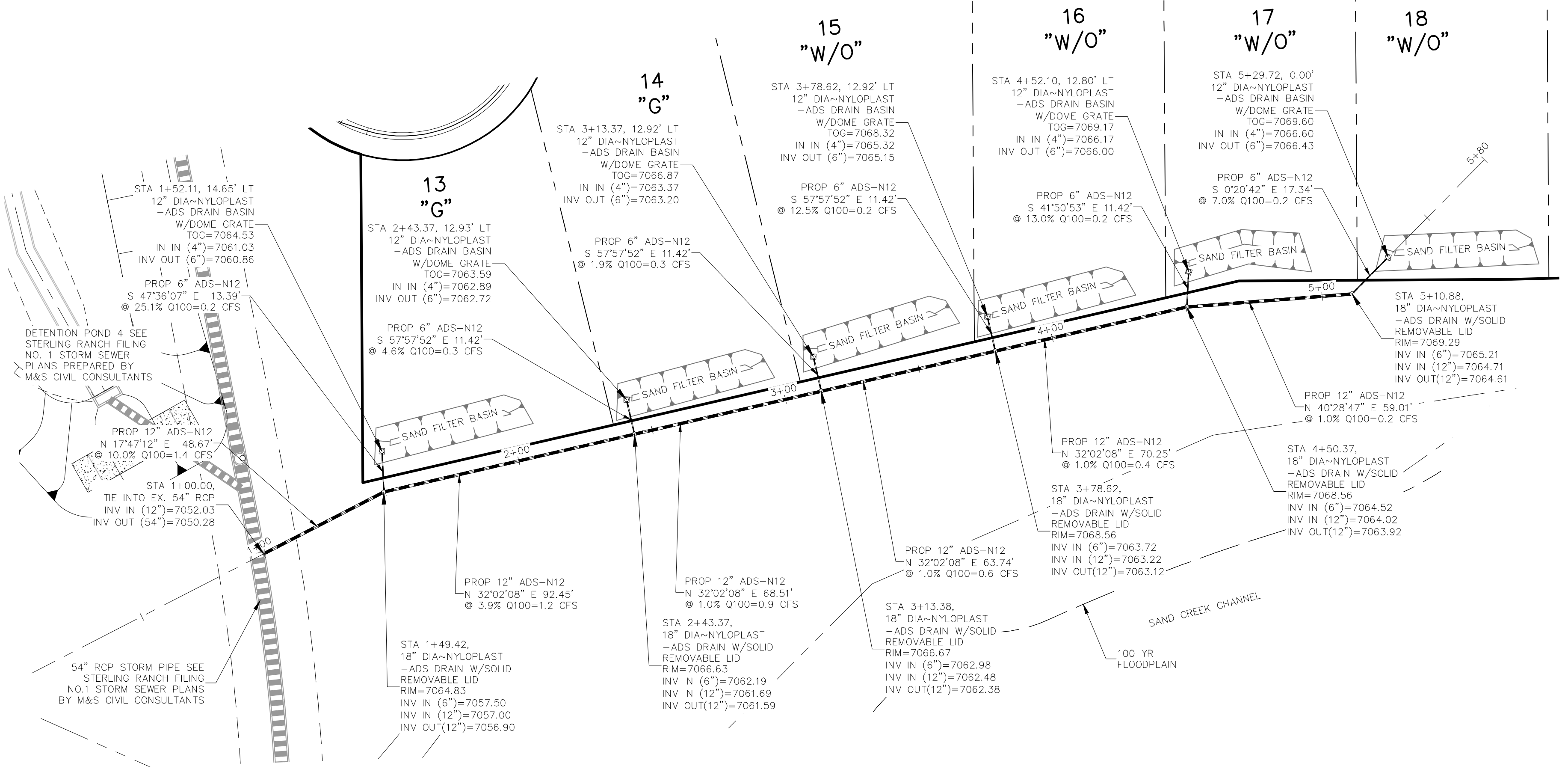
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

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

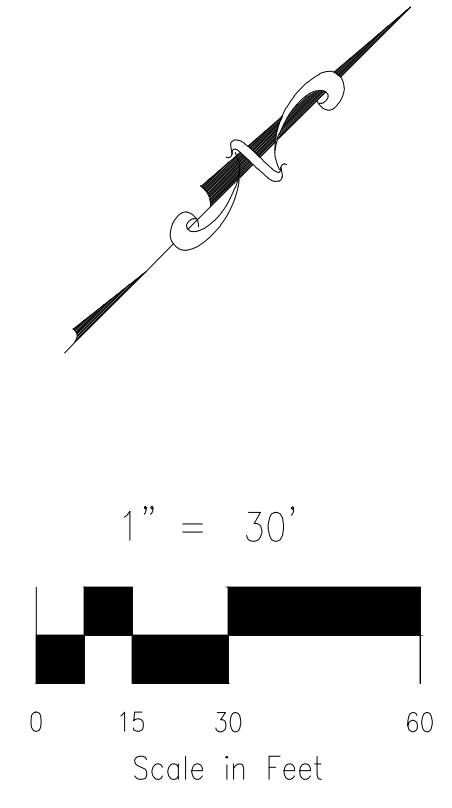
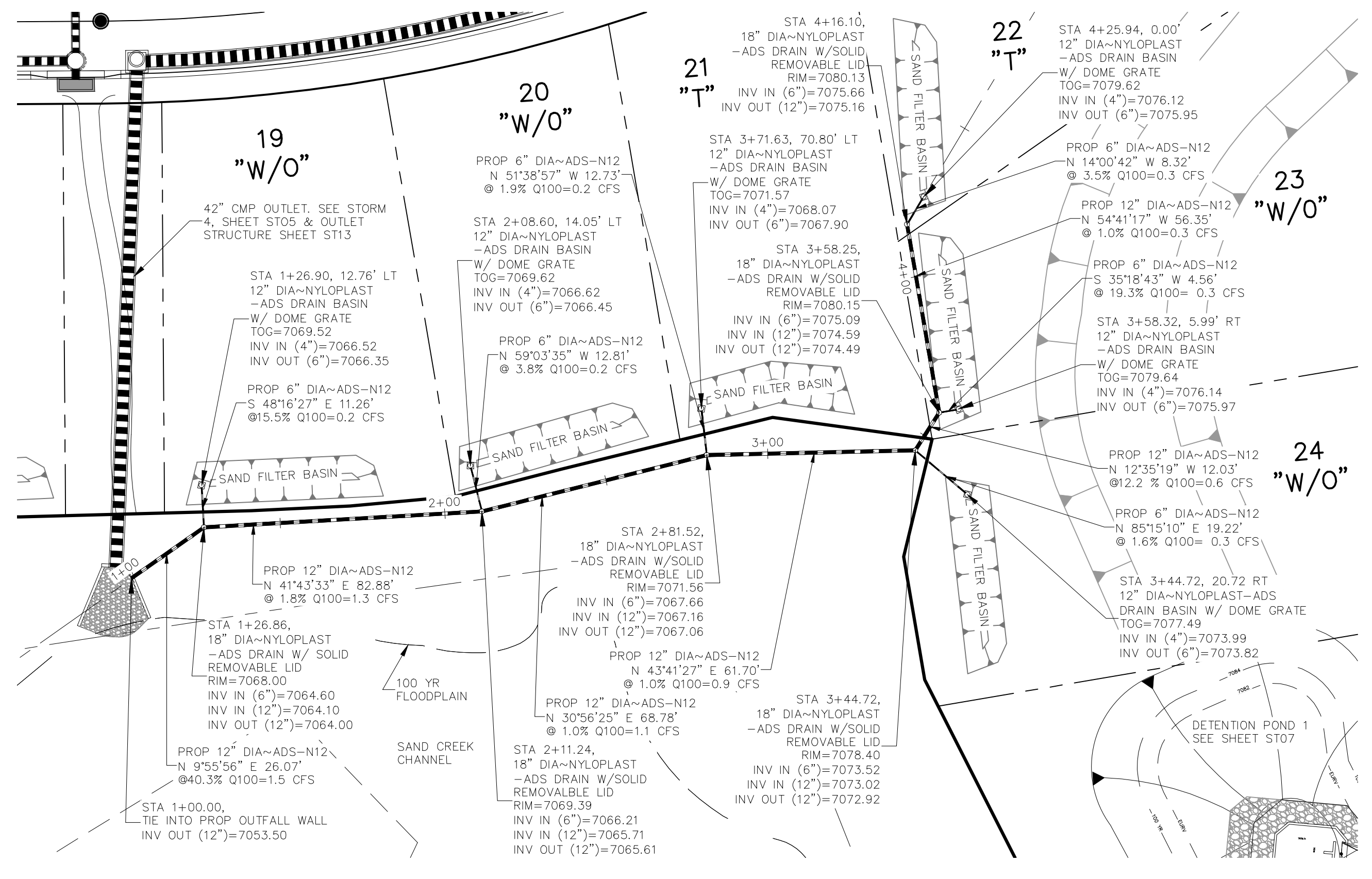
NO.	DATE	BY	DESCRIPTION	APPROVED BY	DATE

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CAUTION



SEE HOMESTEAD F2 REPLAT AS BUILT SET
COUNTY FILE NO: VR 234



LOTS 19-24 STORM SEWER (PRIVATE)
SCALE 1"=30'

File: c:\09007A\Sterling Ranch No. 6\Map\Const\Eng\Storm Plans\ST11.dwg Plotstamp: 11/19/2019 9:44 AM

HOMESTEAD AT STERLING RANCH FIL. NO. 2	
SAND FILTER PONDS LOTS 13-24	
PROJECT NO. 09-007	FILE: \eng\Const\Eng\Storm Plans\ST11.dwg
DESIGNED BY: CMM	SCALE: N/A
DRAWN BY: CMM	HORIZ: 1"=10'
CHECKED BY: VAS	VERT: N/A
DATE: 11/19/2019	
SHEET 11 OF 14	
ST11	

102 E. Pikes Peak Ave., 3rd Floor
Colorado Springs, CO 80903
PHONE: 719.555.5485

CIVIL CONSULTANTS, INC.

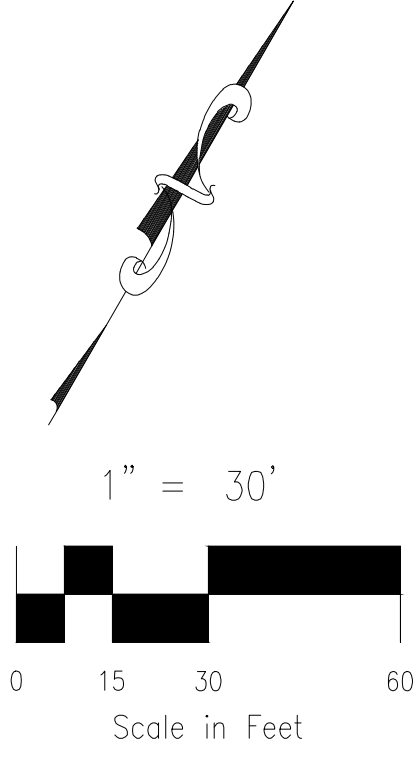
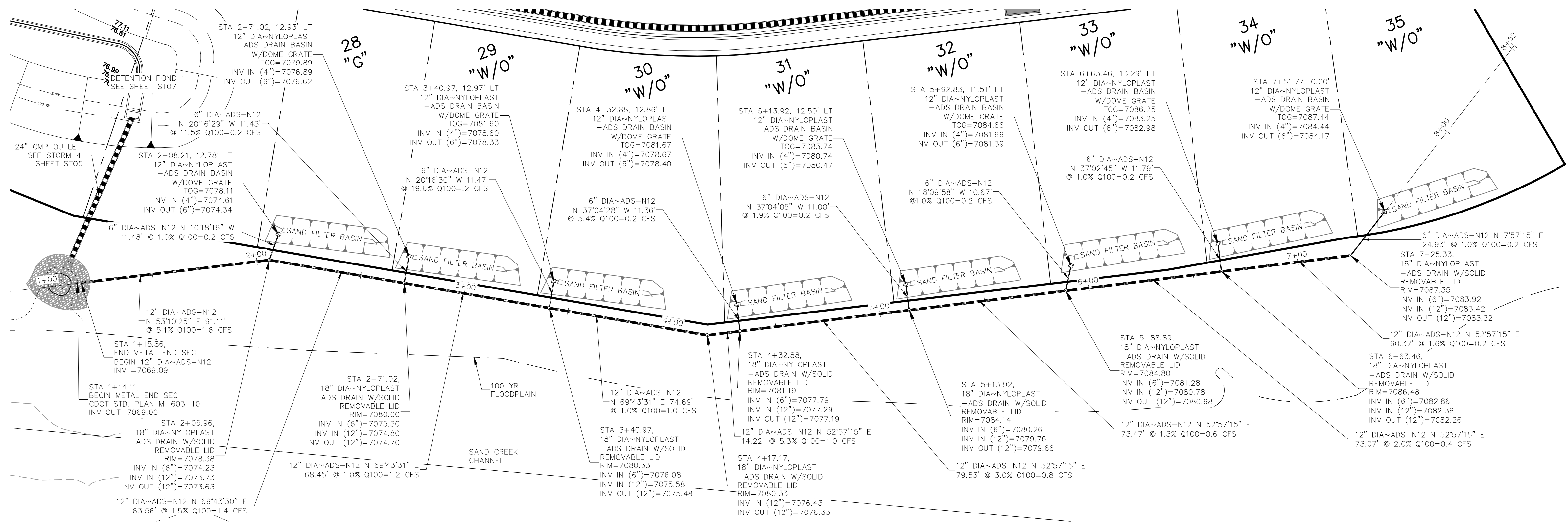
FOR AND ON BEHALF OF M&S CIVIL CONSULTANTS, INC.

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

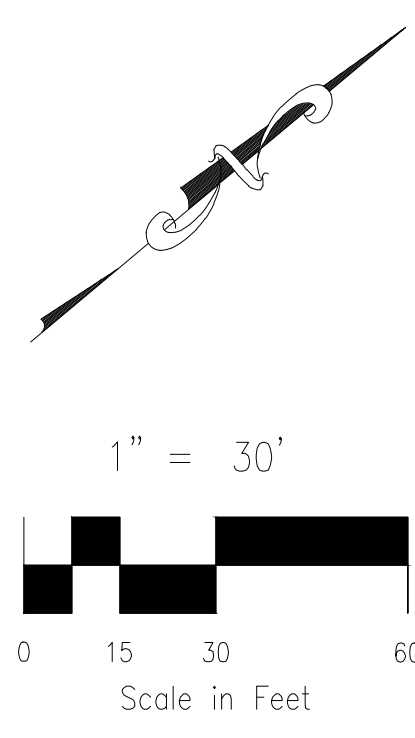
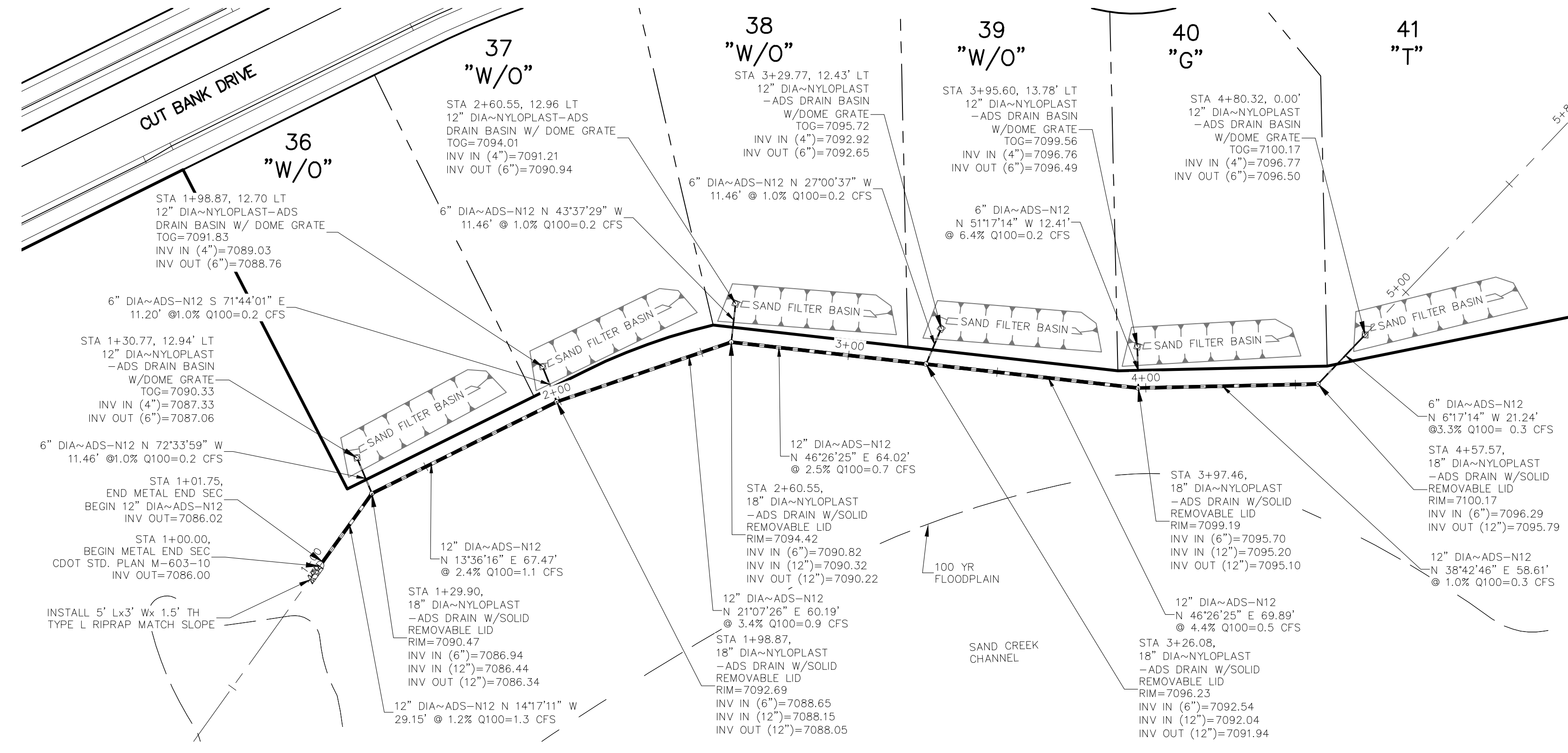
NO.	DESCRIPTION	DATE

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CAUTION



SEE HOMESTEAD F2 REPLAT AS BUILT SET
COUNTY FILE NO: VR 234



LOTS 36-41 STORM SEWER (PRIVATE)
SCALE 1"=30'

File: c:\09007A\Sterling Ranch No. 6\Map\Const\Map\Storm Plans\ST12.dwg Plotstamp: 11/19/2019 9:51 AM

HOMESTEAD AT STERLING RANCH FIL. NO. 2	
SAND FILTER PONDS LOTS 28-41	
PROJECT NO. 09-007	FILE: Map\Const\Map\Storm Plans\ST12.dwg
DESIGNED BY: CMM	SCALE: DATE: 11/19/2019
DRAWN BY: CMM	HORIZ: 1"=10'
CHECKED BY: VAS	VERT: N/A
SHEET 12 OF 14	
ST12	

102 E. PINE PEAK AVE., 3RD FLOOR
COLORADO SPRINGS, CO 80903
PHONE: 719.555.4485

CIVIL CONSULTANTS, INC.

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

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

NO.	DATE	DESCRIPTION

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CAUTION

