



CORE
ENGINEERING GROUP

July 19, 2022

El Paso County
Planning & Community Development
2880 International Circle, Suite 110
Colorado Springs, CO 80910

Attn.: Project Manager

RE: Lorson Ranch East Filing No. 1 (SF 18-008)
Private Detention/Stormwater Quality Pond C5 and D2
As-built Certification

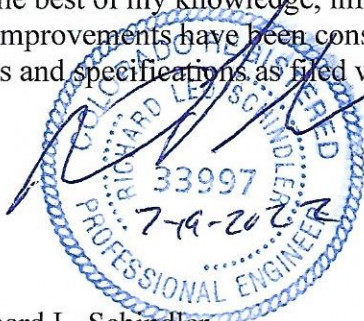
Dear Project Manager:

Per the approved construction drawings for Lorson Ranch East Filing No.1 (SF 18-008), improvements were made to construct two full spectrum detention ponds including water quality facility in compliance with the current El Paso County Drainage Criteria and the approved Final Drainage Report for this project.

Based upon this information and periodic site visits by field personnel to the project during significant/key phases of the stormwater BMP installation, Core Engineering Group, LLC is of the opinion that the detention and stormwater BMPs have been constructed in general compliance with the approved design plans and specifications as filed with El Paso County.

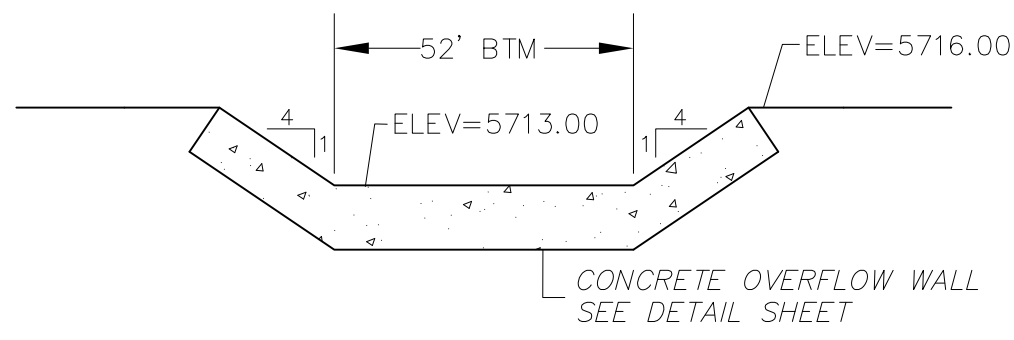
Statement Of Engineer of Record

To the best of my knowledge, information and belief, for the referenced project above, the improvements have been constructed in general compliance with the approved design plans and specifications as filed with El Paso County.



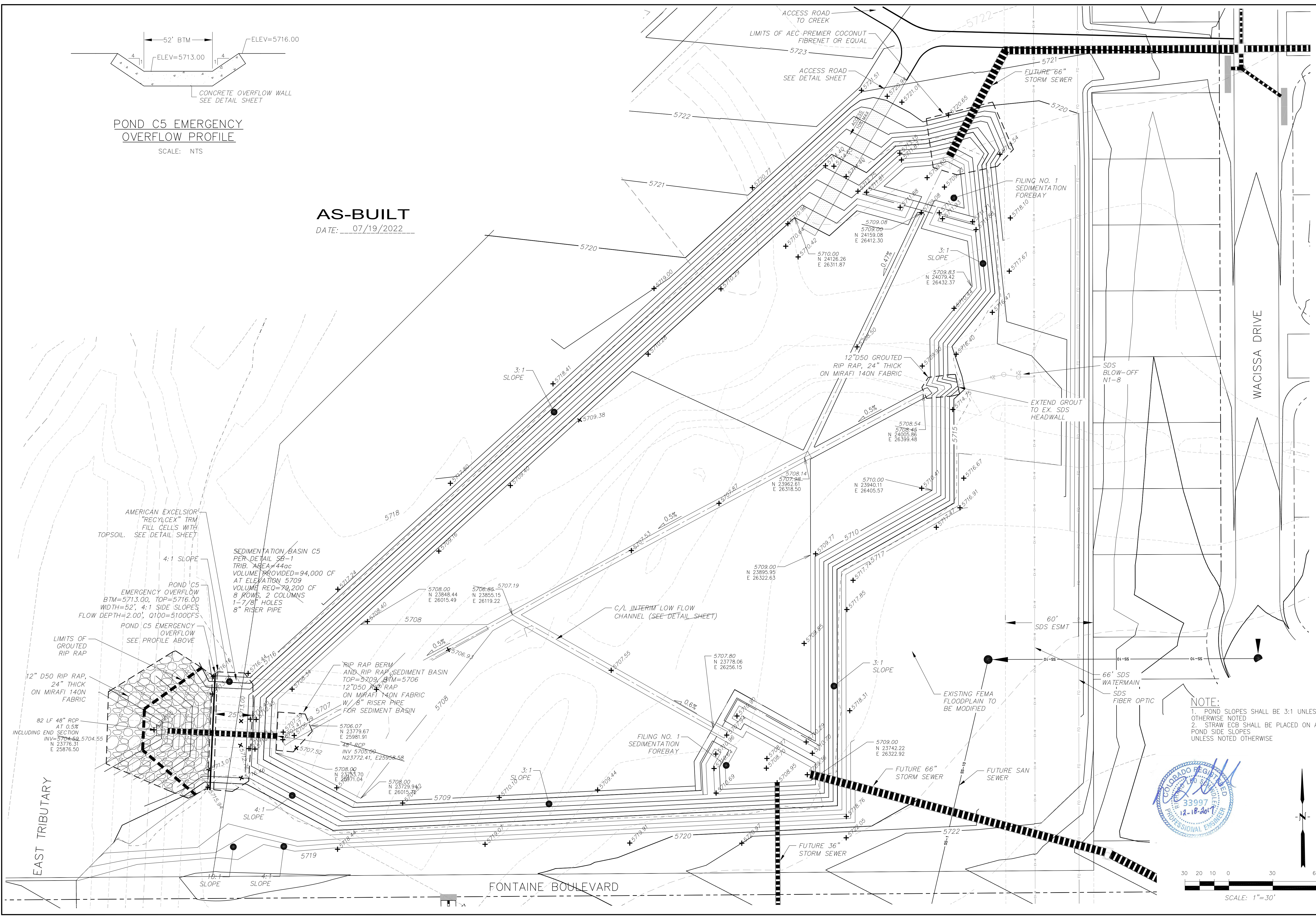
Richard L. Schindler
Colorado P.E. No.33997
For and on behalf of Core Engineering Group, LLC

Attachments: Pond C5 and D2 As-Built Drawings

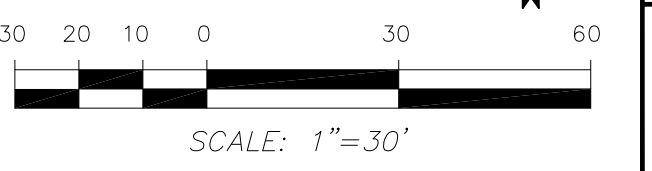


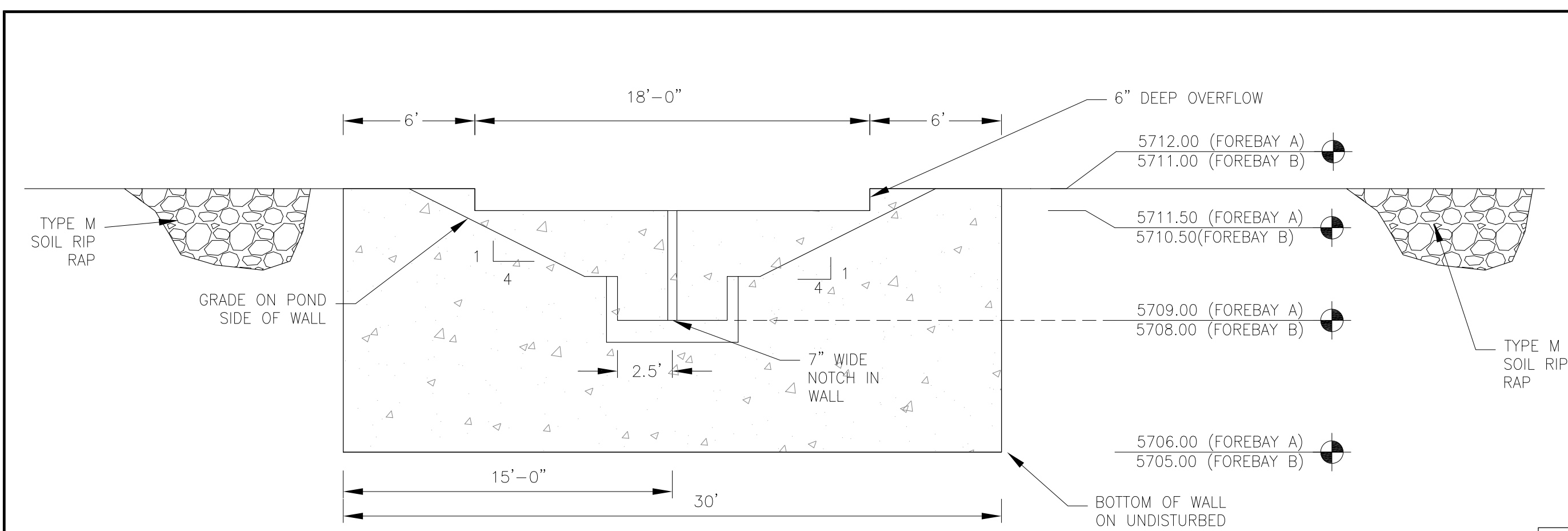
POND C5 EMERGENCY OVERFLOW PROFILE
 SCALE: NTS

AS-BUILT
 DATE: 07/19/2022

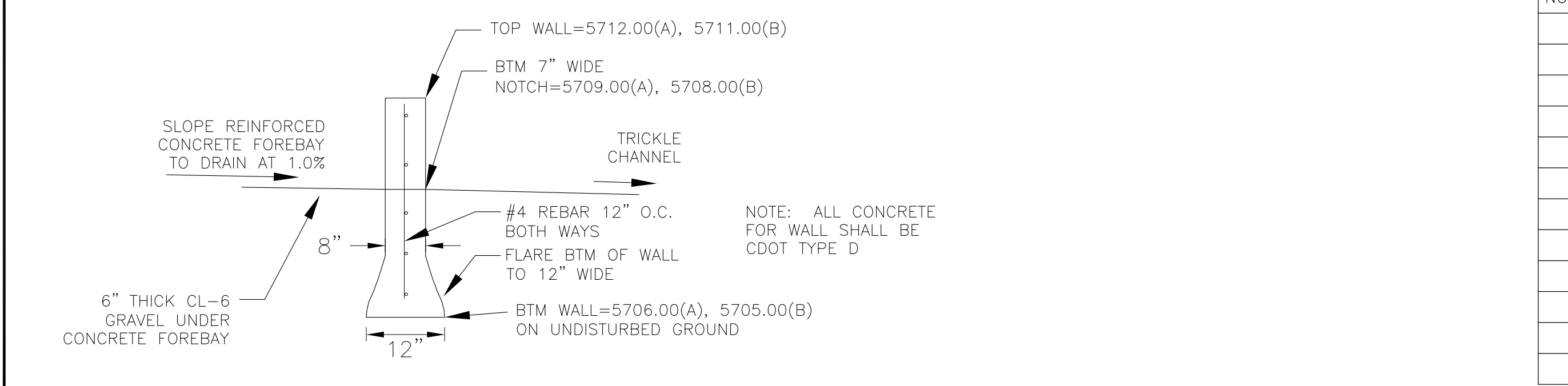


NOTE:
 1. POND SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED
 2. STRAW ECB SHALL BE PLACED ON ALL POND SIDE SLOPES UNLESS NOTED OTHERWISE

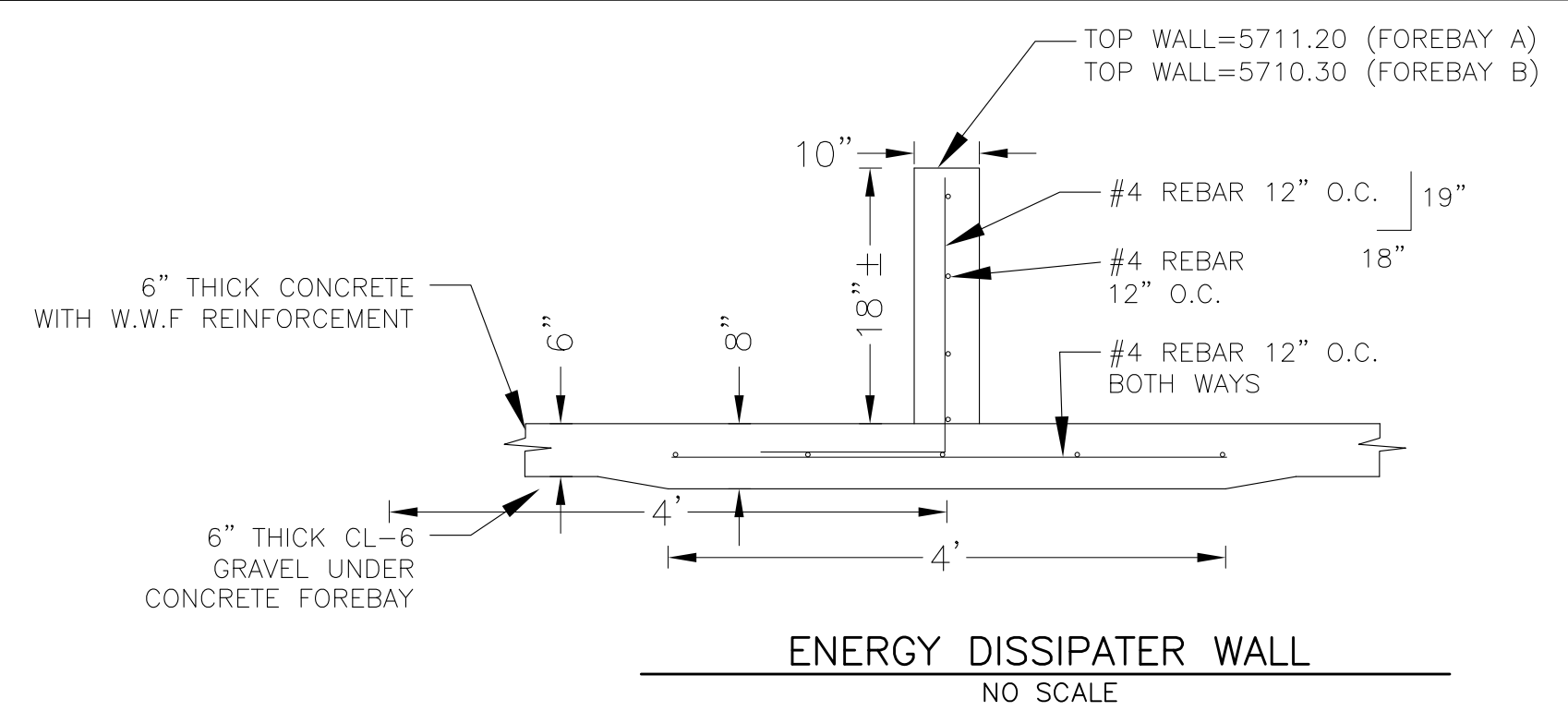




WALL SECTION A-A
1"=10'



WALL SECTION B-B
NO SCALE



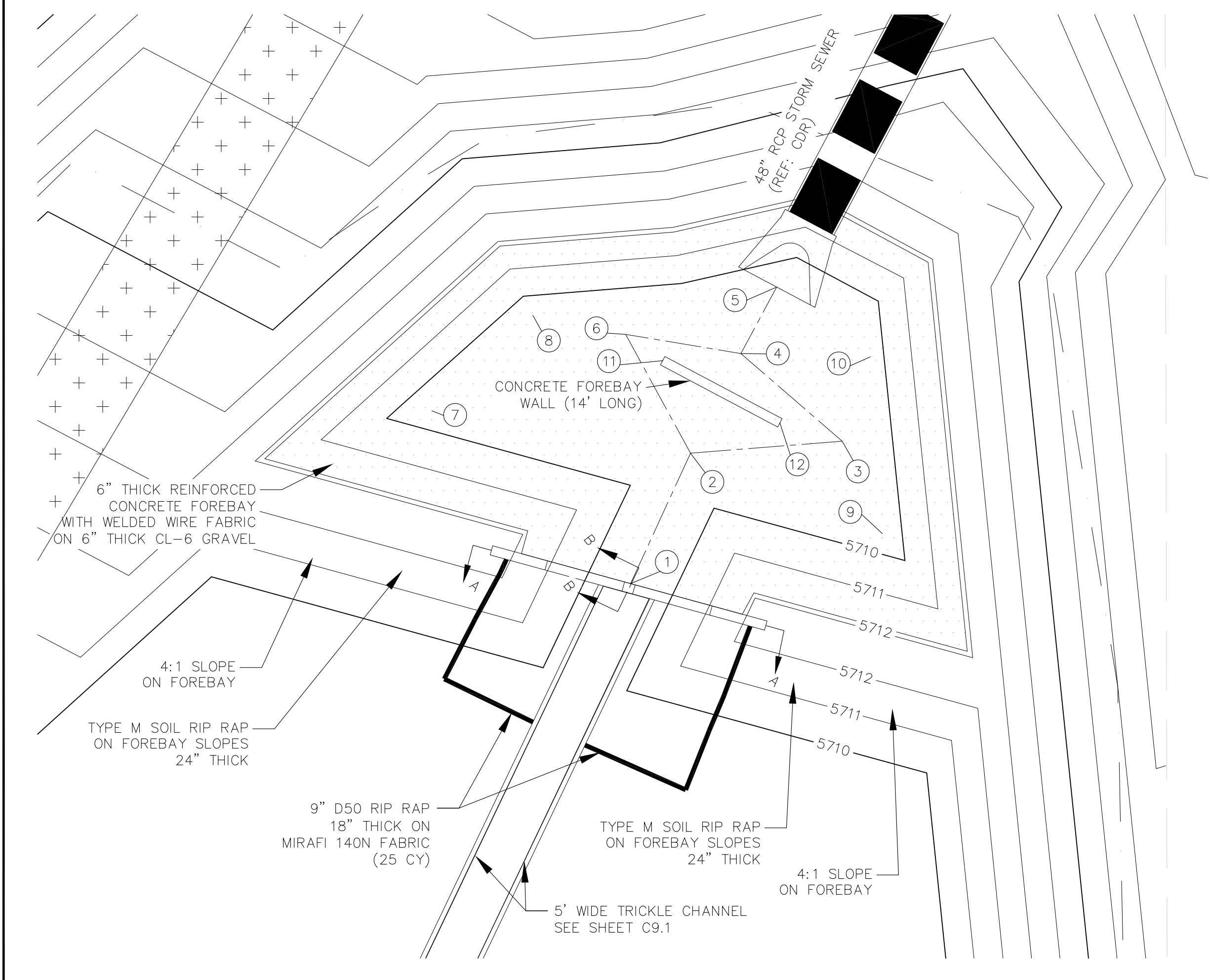
NOTE: ALL CONCRETE FOR WALL SHALL BE CDOT TYPE D

POINT TABLE (FOREBAY A)

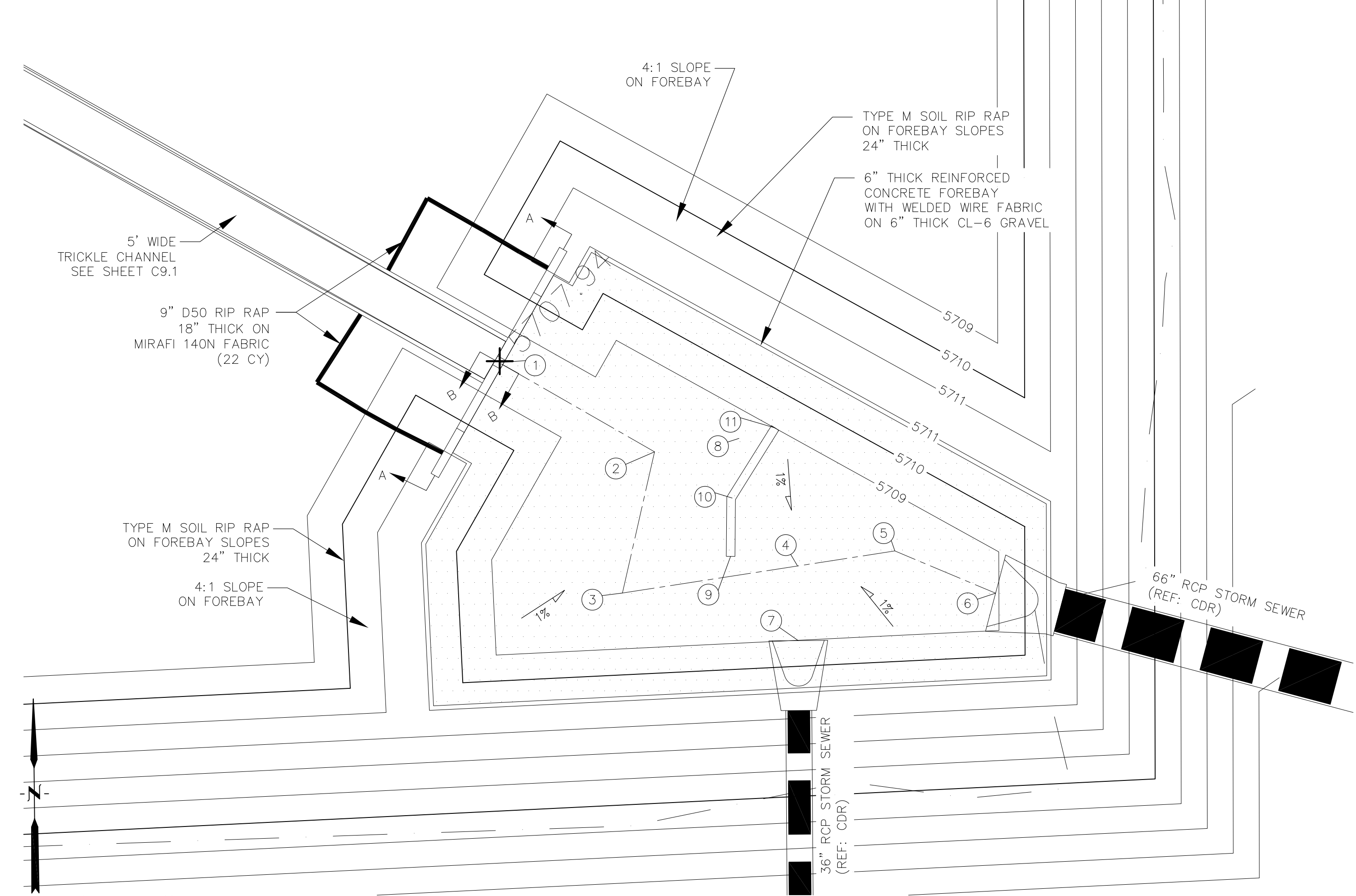
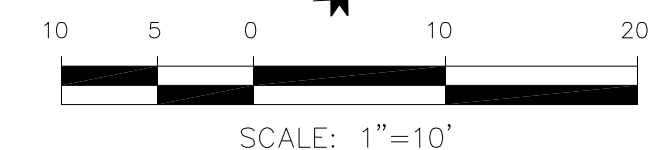
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	24130.17	26398.49	5709.10	FOREBAY BOTTOM
2	24143.93	26404.81	5709.25	FOREBAY BOTTOM
3	24145.19	26420.81	5709.41	FOREBAY BOTTOM
4	24154.44	26410.13	5709.55	FOREBAY BOTTOM
5	24161.46	26413.90	5709.70	FOREBAY BOTTOM
6	24156.46	26397.97	5709.41	FOREBAY BOTTOM
7	24148.40	26377.53	5709.60	FOREBAY BOTTOM
8	24158.47	26388.19	5709.55	FOREBAY BOTTOM
9	24135.44	26425.04	5709.60	FOREBAY BOTTOM
10	24154.10	26423.78	5709.70	FOREBAY BOTTOM
11	24153.68	26401.87	5709.70	ENERGY DISSIPATER WALL
12	24147.13	26414.24	5709.70	ENERGY DISSIPATER WALL

POINT TABLE (FOREBAY B)

NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	23772.63	26265.75	5708.10	FOREBAY BOTTOM
2	23762.58	26283.27	5708.30	FOREBAY BOTTOM
3	23746.29	26279.56	5708.50	FOREBAY BOTTOM
4	23749.41	26299.77	5708.70	FOREBAY BOTTOM
5	23751.14	26310.99	5708.70	FOREBAY BOTTOM
6	23746.27	26322.62	5708.95	FOREBAY BOTTOM
7	23740.80	26299.85	5708.80	FOREBAY BOTTOM
8	23765.15	26295.04	5708.40	FOREBAY BOTTOM
9	23750.52	26292.05	5708.80	ENERGY DISSIPATER WALL
10	23757.25	26292.22		ENERGY DISSIPATER WALL
11	23765.34	26297.18		ENERGY DISSIPATER WALL



POND C5 - FOREBAY 'A' LAYOUT
SCALE 1"=10'



POND C5 - FOREBAY 'B' LAYOUT
SCALE 1"=10'

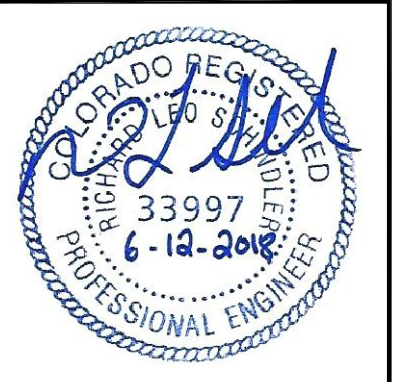
AS-BUILT
DATE: 07/19/2022

CORE ENGINEERING GROUP
15004 1ST AVENUE S.
DENVER, CO 80202
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cegi.com

DATE: _____
DESCRIPTION: _____
NO: _____
PROJECT: **LORSON RANCH EAST**
FILING NO. 1
PREPARED FOR: **LORSON, LLC**
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: RICHARD L. SCHINDLER, P.E.
FONTAINE BLODGETT, CLD, GLORY, DR
COLORADO SPRINGS, COLORADO
(719) 635-3200
CONTACT: JEFF MARK

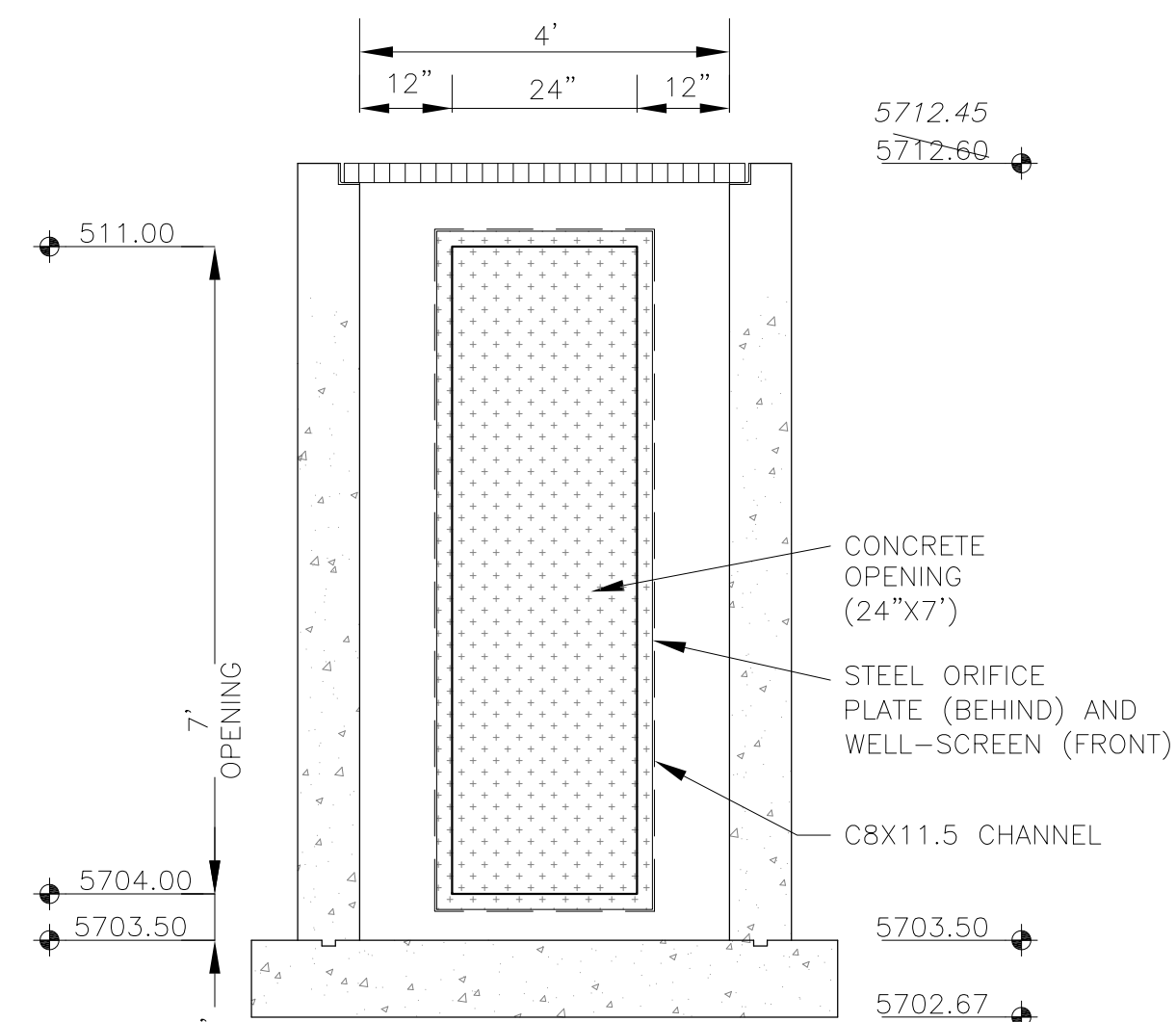
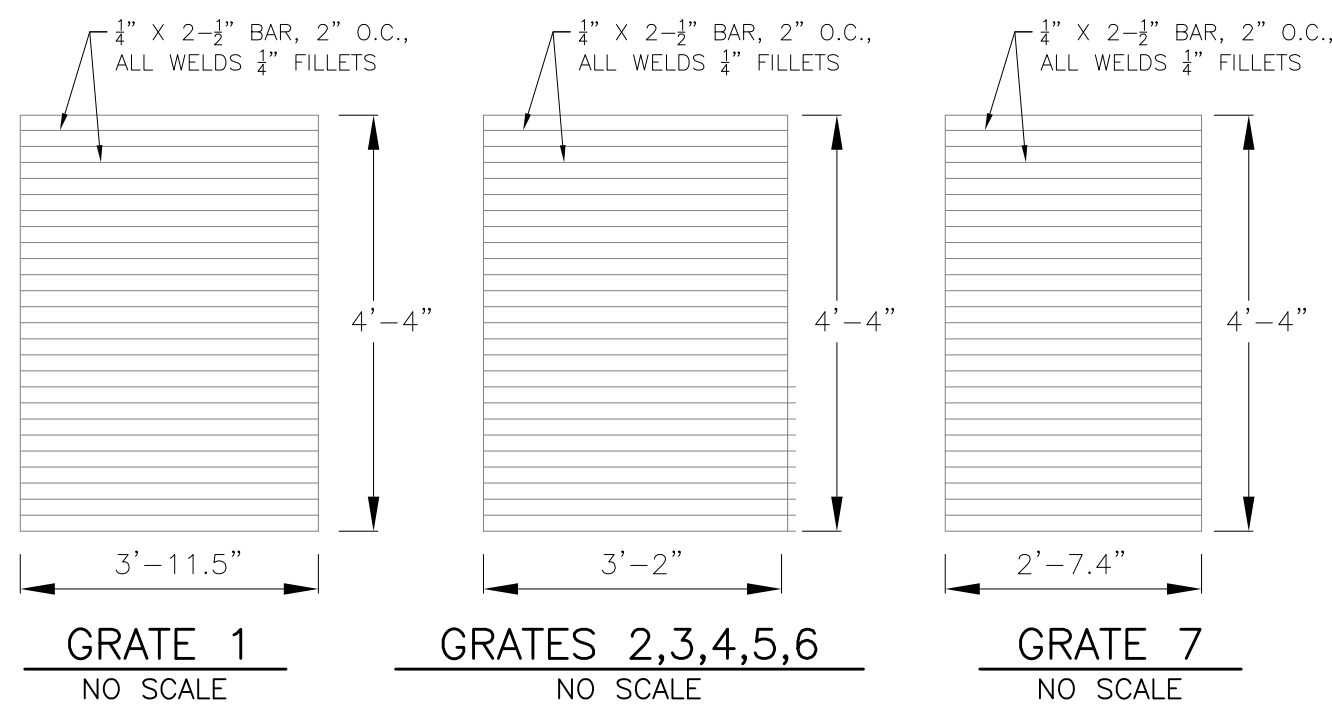
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

**POND C5
FOREBAY 'A' AND 'B'
LAYOUT AND DETAILS**



DATE: JUNE 12, 2018
PROJECT NO. 100.042
SHEET NUMBER **C9.2**
TOTAL SHEETS: 45

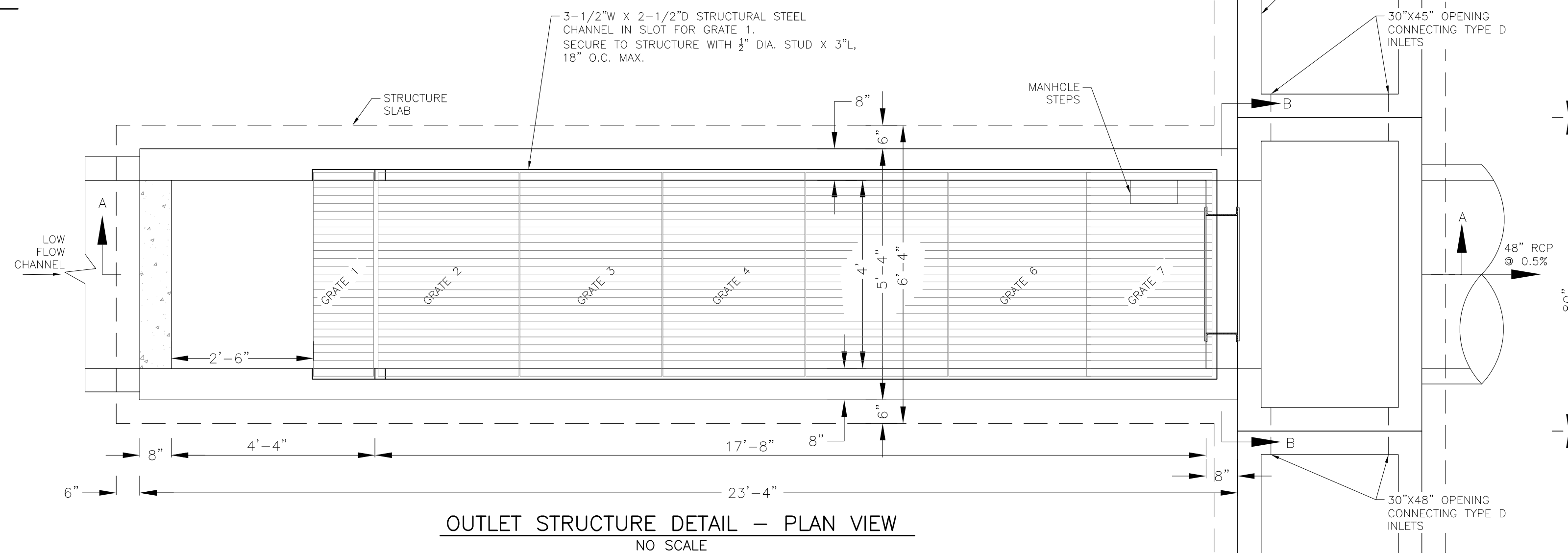
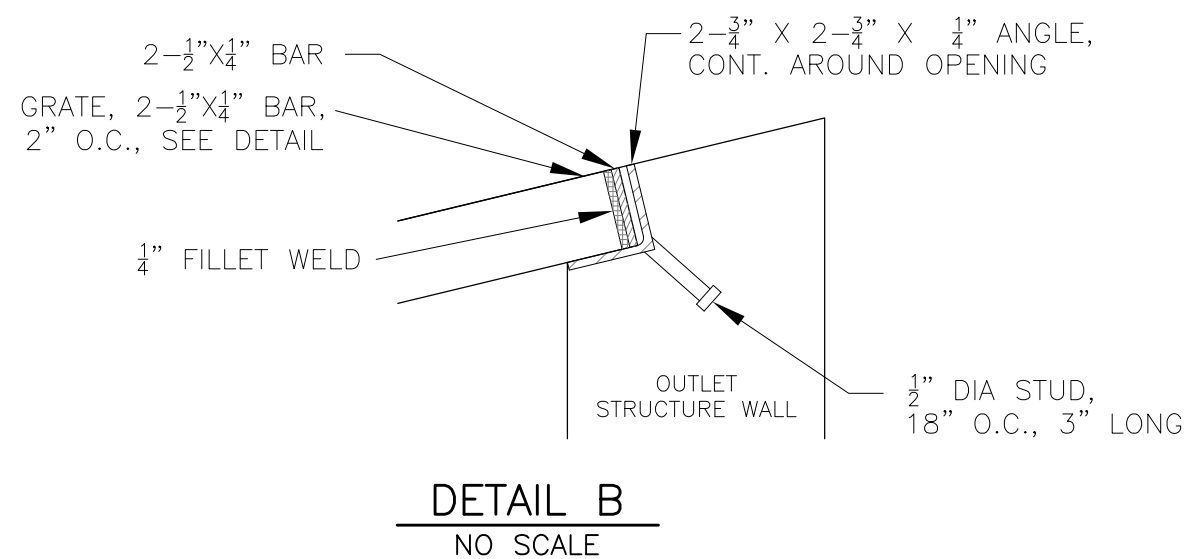
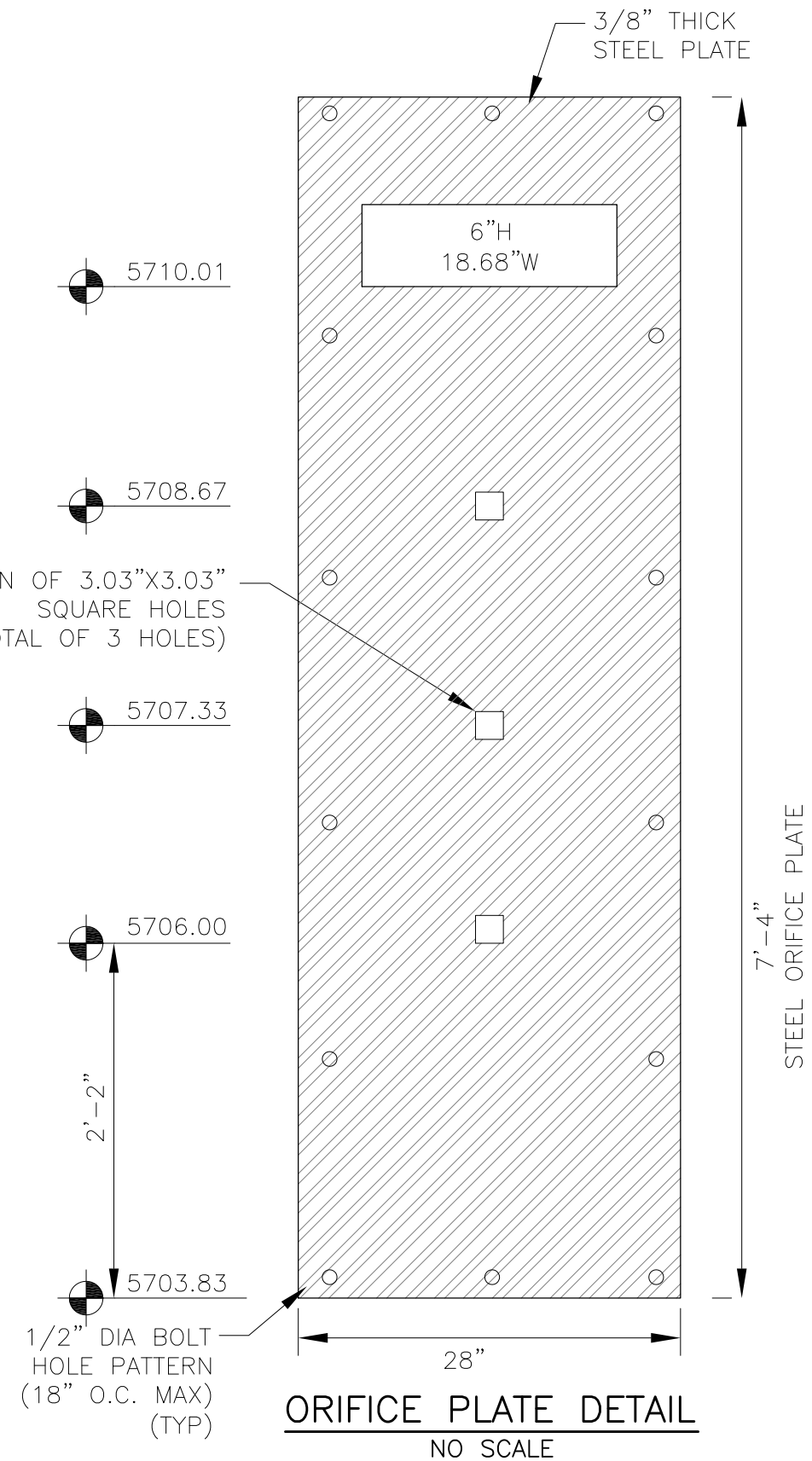
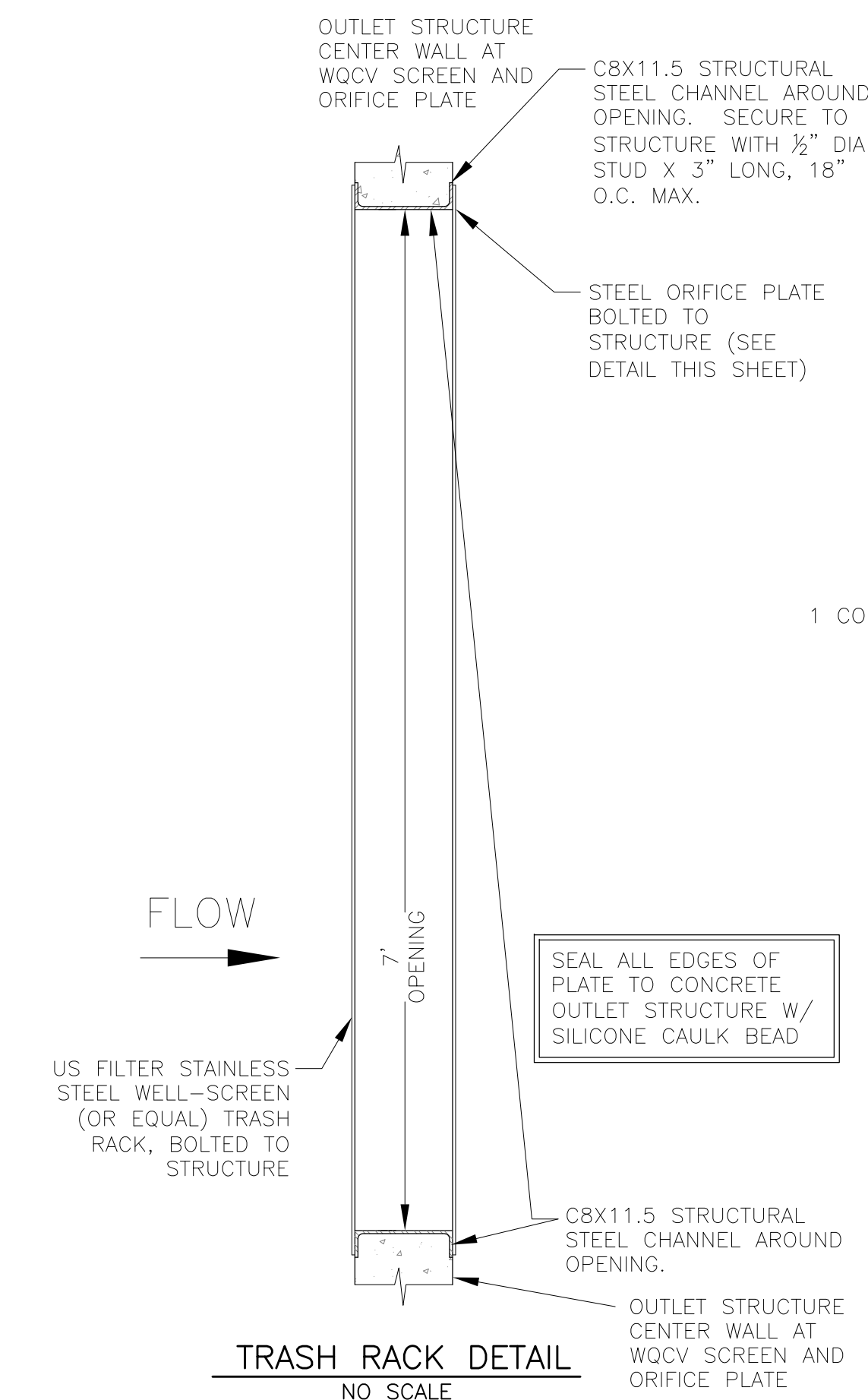
NOTE:
AFTER CONCRETE STRUCTURE HAS BEEN POURED
ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED
PRIOR TO GRATE CONSTRUCTION



WQCV WELL-SCREEN NOTES:

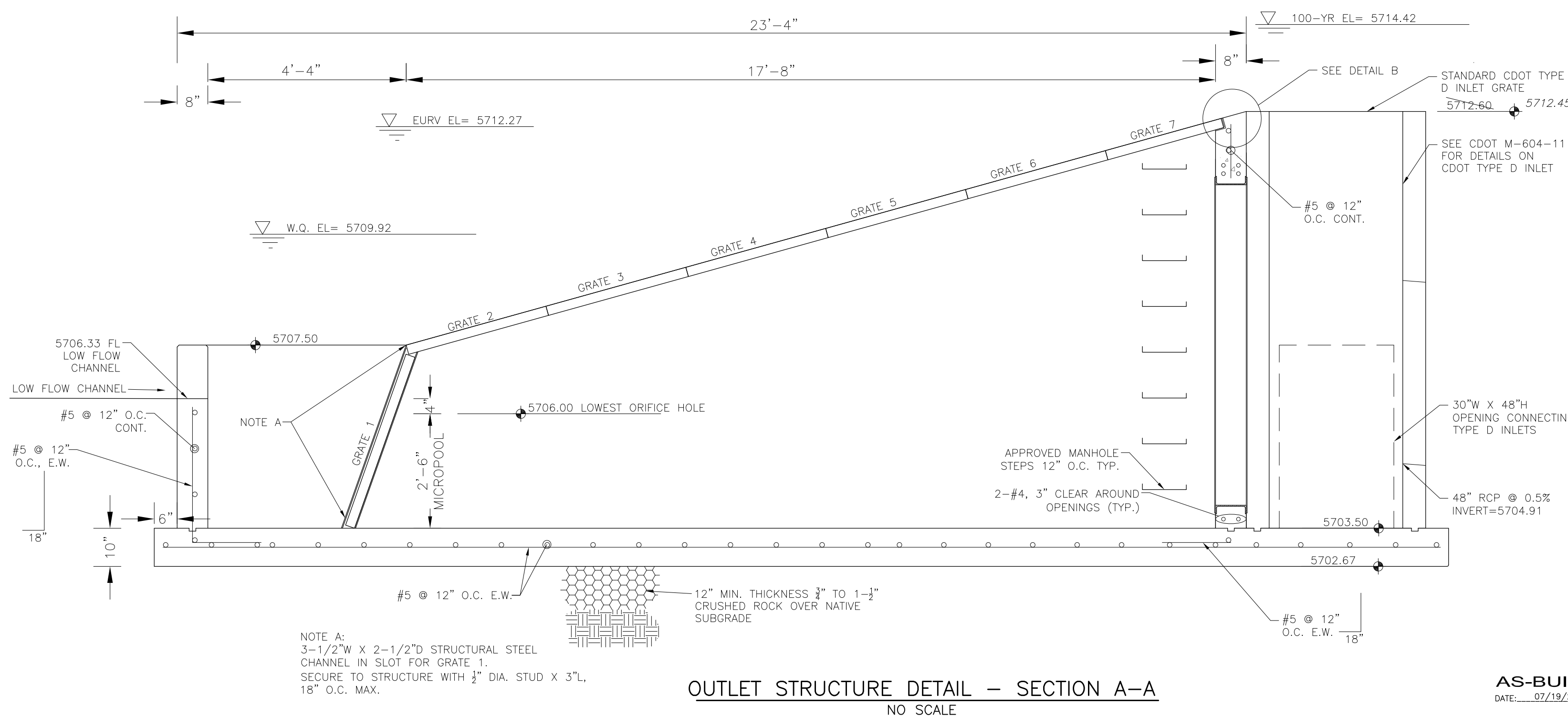
- Well-Screen shall be stainless steel and attached by stainless steel bolts along edge of the mounting frame.
- WQCV Well Screen
 - Type of Screen: Stainless steel #93 Vee Wire (Johnson Vee Wire (tm) Stainless Steel Screen or equivalent with 60% open area)
 - Screen slot opening dimension: 0.139" (Screen #93 Vee Wire Slot Opening)
 - Type and Size of Support Rod: TE 0.074"X0.50"
 - Spacing of Support Rod (O.C.): 1.0 Inch
 - Total Screen Thickness: 0.655"
 - Carbon Steel Holding Frame Type: 3/4" x 1.0" angle

OUTLET STRUCTURE DETAIL - SECTION B-B
NO SCALE



OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
 - GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.
- | BAR SIZE | #4 | #5 | #6 |
|--------------------|-------|-------|-------|
| MIN. SPLICE LENGTH | 1'-3" | 1'-7" | 2'-0" |
- CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.
 - CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE
 - EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE 3/4" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
 - ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/8" CHAMFER UNLESS OTHERWISE NOTED.
 - SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
 - REFER TO SHEET C9.2 FOR PRESEDIMENTATION/FOREBAY DESIGN.
 - ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.



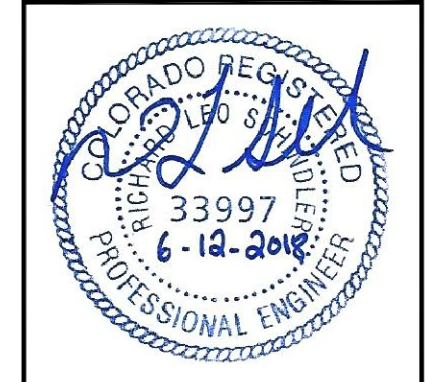
NOTE A:
3-1/2"W X 2-1/2"D STRUCTURAL STEEL CHANNEL IN SLOT FOR GRATE 1. SECURE TO STRUCTURE WITH 1/2" DIA. STUD X 3"L, 18" O.C. MAX.

CORE ENGINEERING GROUP
15004 1ST AVENUE, S.
DENVER, CO 80202
PHONE: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cge1.com

DATE: _____
DESCRIPTION: _____
NO: _____
PROJECT: **LORSON RANCH EAST**
FILING NO. 1
FONTAINE BLVD.-OLD GLORY DR
COLORADO SPRINGS, COLORADO
PREPARED FOR: **LORSON, LLC**
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: JEFF MARK

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

LORSON RANCH EAST FILING NO. 1
FULL SPECTRUM POND C5
OUTLET STRUCTURE

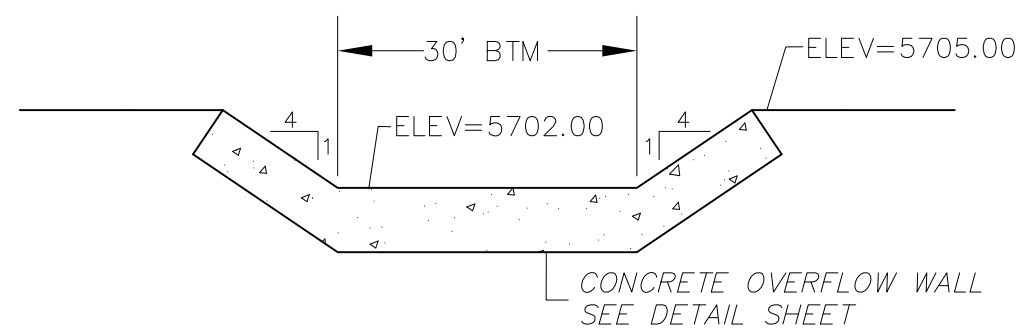


DATE: JUNE 12, 2018
PROJECT NO: 100.042
SHEET NUMBER: **C9.3**
TOTAL SHEETS: 45

AS-BUILT
DATE: 07/19/2022

AS-BUILT

DATE: 07/19/2022

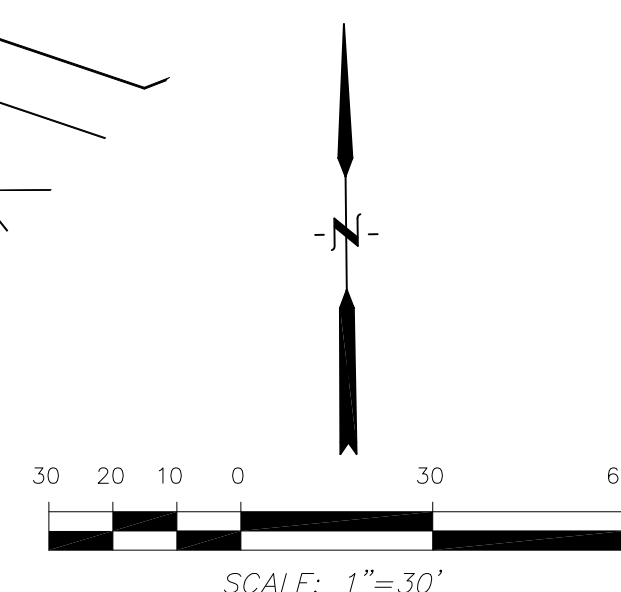
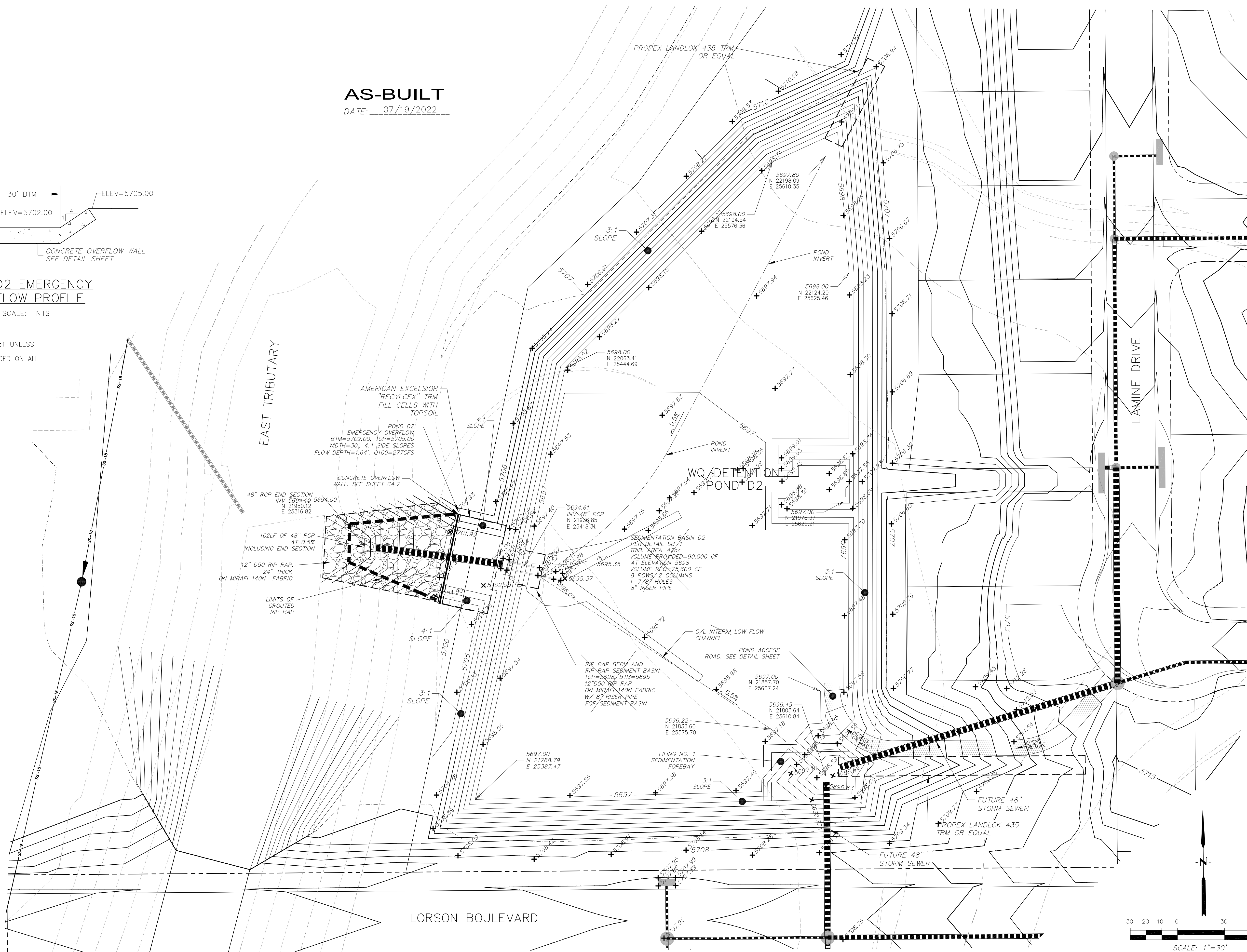


POND D2 EMERGENCY OVERFLOW PROFILE

SCALE: NTS

NOTE:

- 1. POND SLOPES SHALL BE 3:1 UNLESS OTHERWISE NOTED
- 2. STRAW ECB SHALL BE PLACED ON ALL POND SIDE SLOPES UNLESS NOTED OTHERWISE



CORE ENGINEERING GROUP
 19004 15th AVE. S. #5506
 BLDG 119 570 1100
 COLORADO SPRINGS, CO 80903
 CONTACT: RICHARD L. SCHINDLER, P.E.
 EMAIL: Rich@ceg1.com

NO.	DESCRIPTION	DATE

PREPARED FOR: **LORSON, LLC**
 212 N. WAHSATCH AVE., SUITE 301
 COLORADO SPRINGS, COLORADO 80903
 (719) 635-3200
 CONTACT: JEFF MARK

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

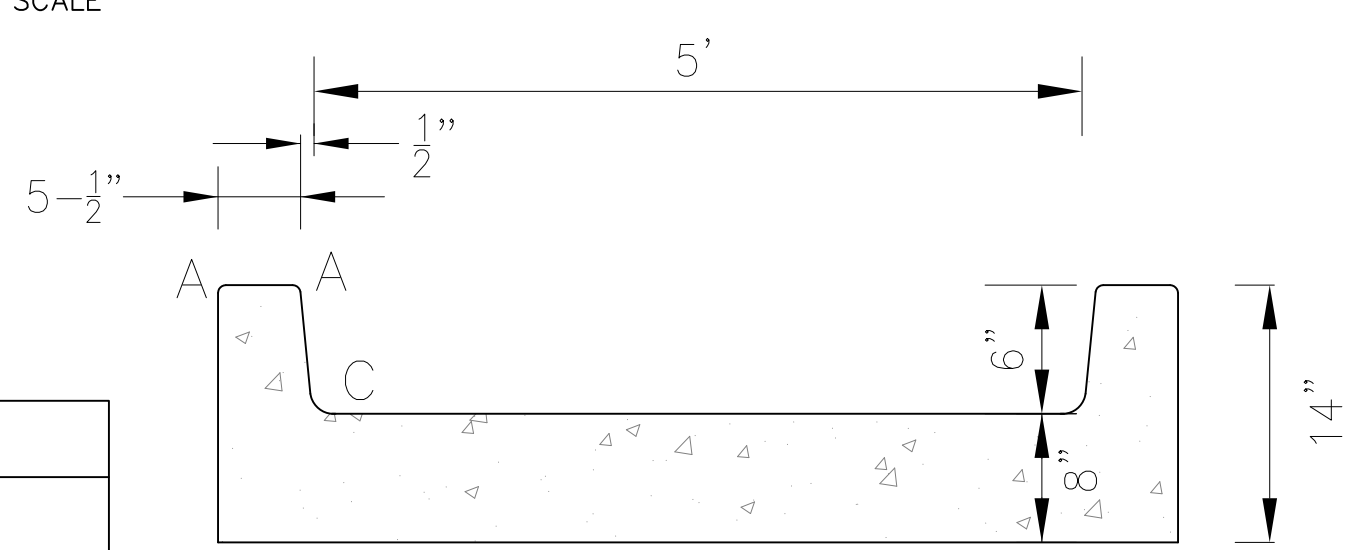
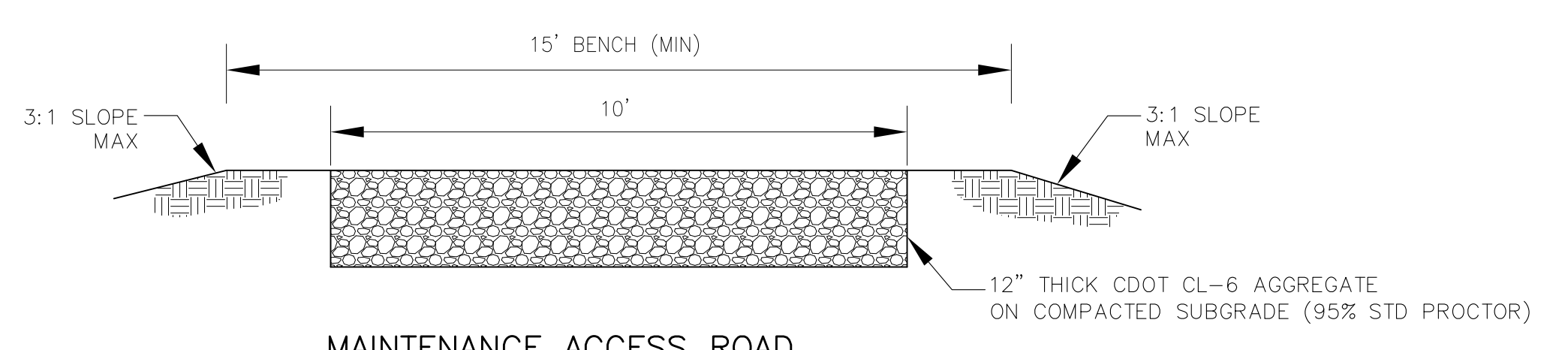
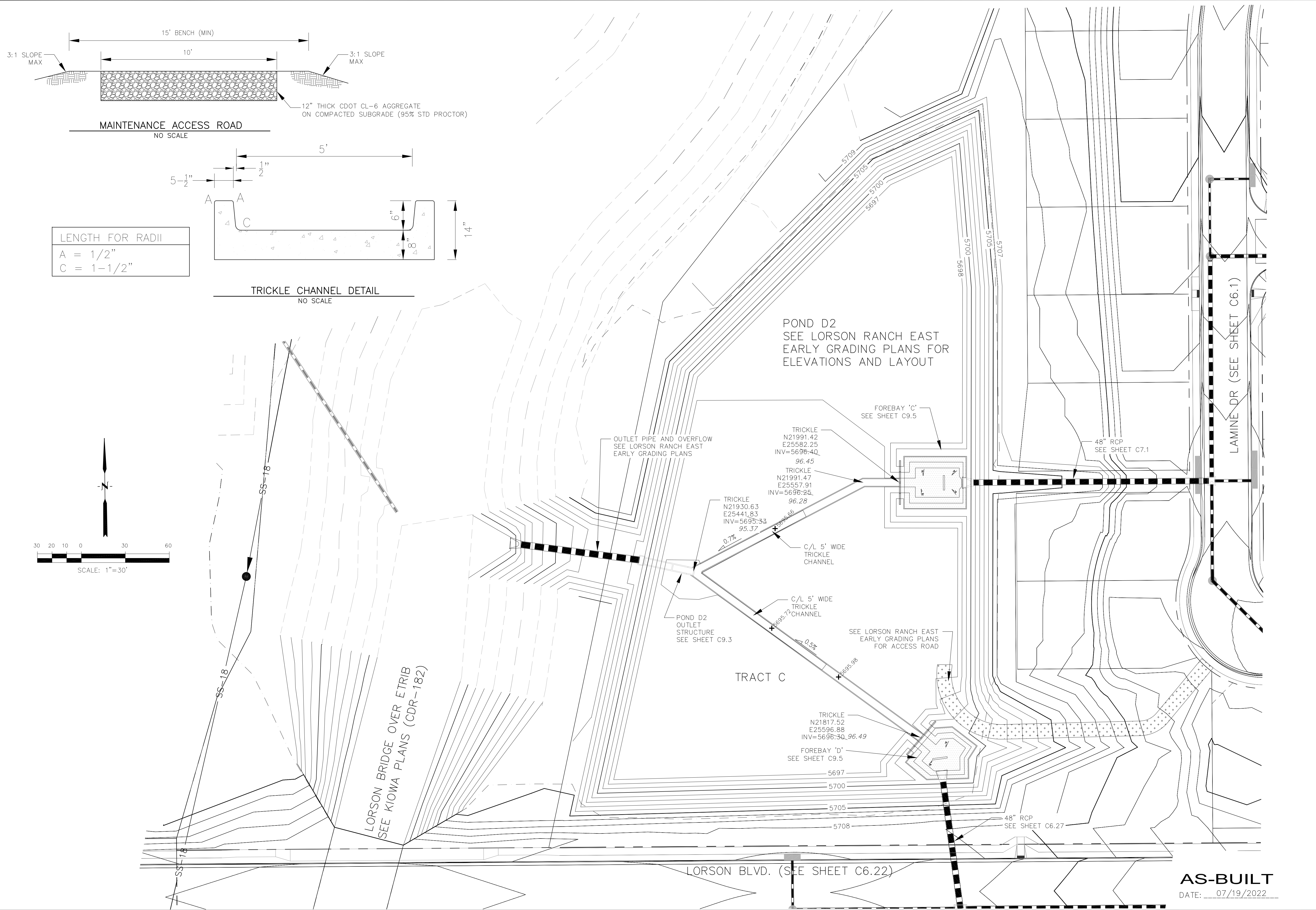
FULL SPECTRUM DETENTION POND D2
LORSON RANCH EAST

DATE: **DECEMBER 18, 2017**

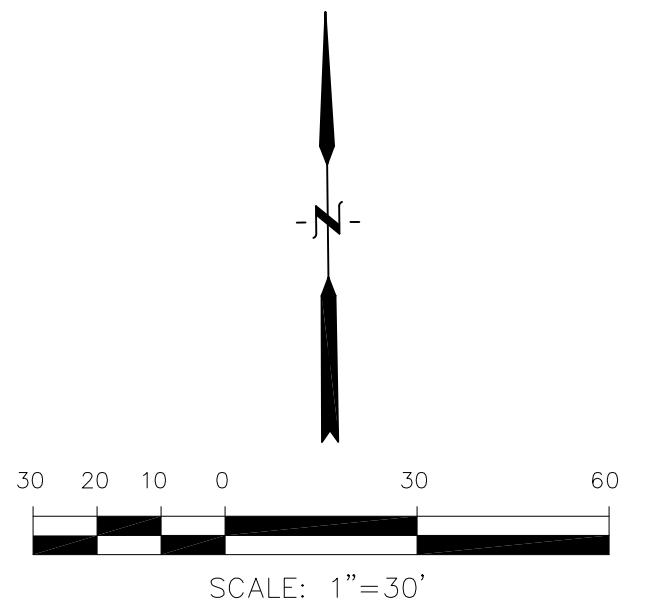
PROJECT NO.: **100.040**

SHEET NUMBER: **C4.10**

TOTAL SHEETS: **28**



LENGTH FOR RADII	
A	= 1/2"
C	= 1-1/2"



CORE ENGINEERING GROUP
15004 1ST AVENUE S.
DENVER, CO 80202
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@ceg1.com

DATE: _____
DESCRIPTION: _____
NO: _____
PREPARED FOR:
LORSON RANCH EAST
FILING NO. 1
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
FONTAINE BLDG.-OLD GLORY DR
COLORADO SPRINGS, COLORADO
CONTACT: JEFF MARK

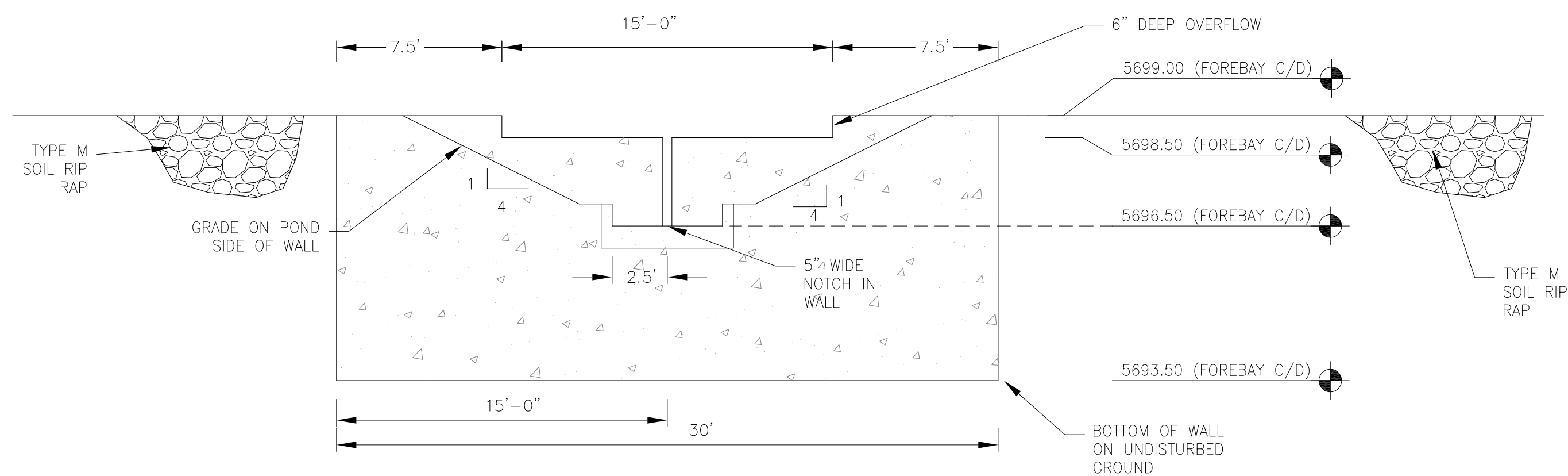
DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

POND D2
TRICKLE CHANNEL
LAYOUT AND DETAILS

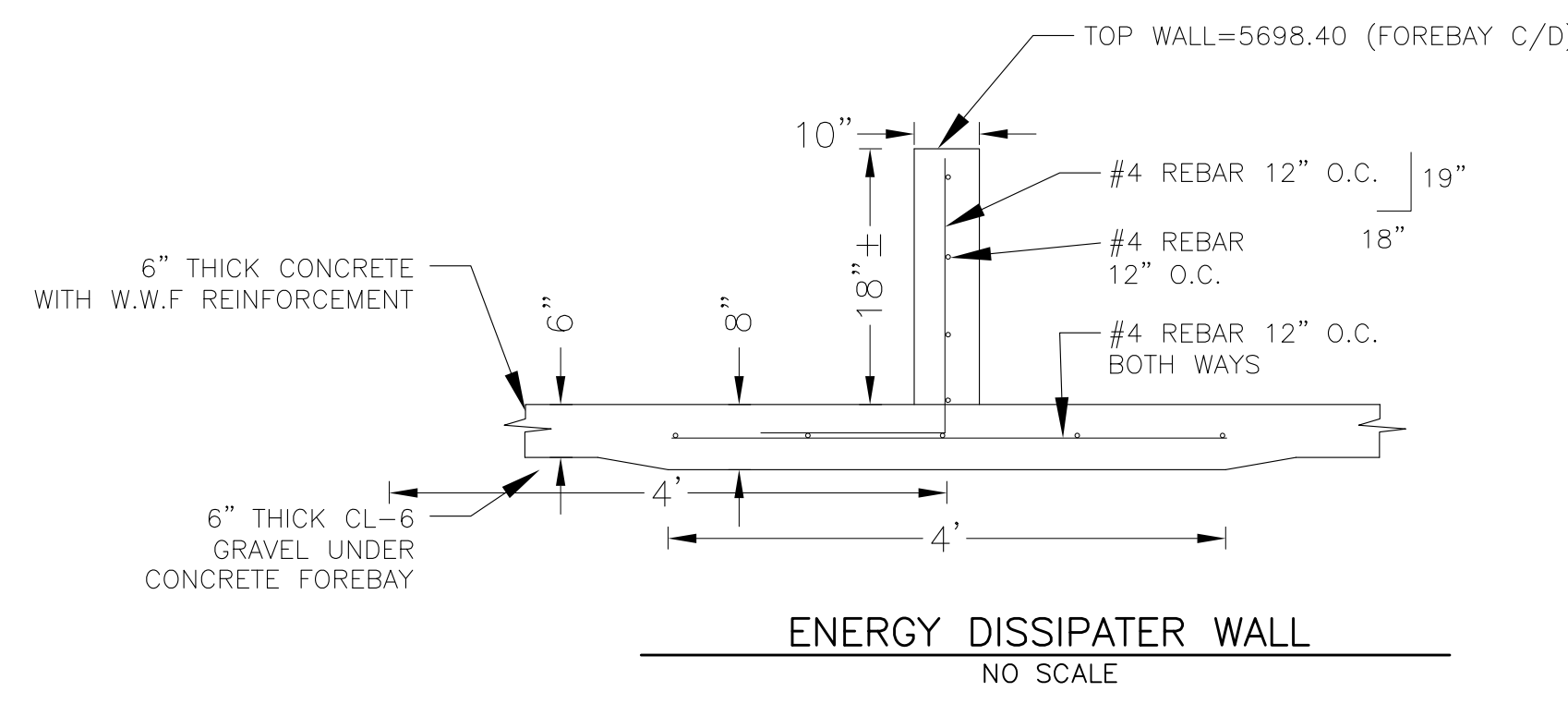


DATE: JUNE 12, 2018
PROJECT NO. 100.042
SHEET NUMBER **C9.4**
TOTAL SHEETS: 45

AS-BUILT
DATE: 07/19/2022

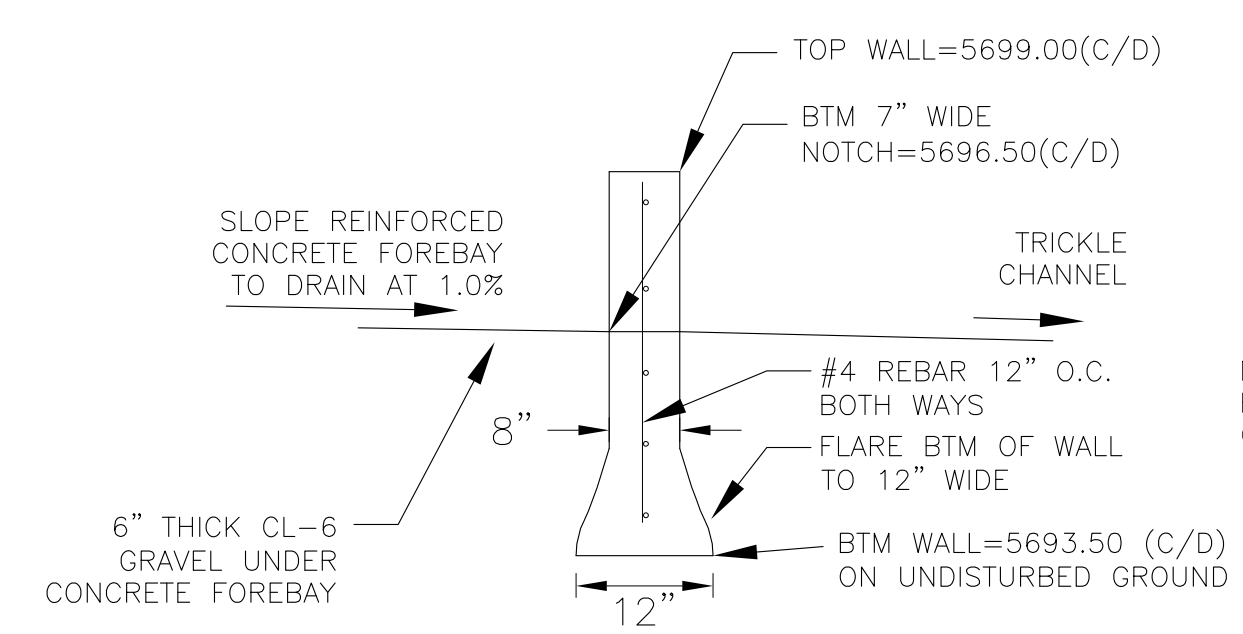


WALL SECTION A-A
1"=10'



ENERGY DISSIPATER WALL
NO SCALE

NOTE: ALL CONCRETE FOR WALL SHALL BE CDOT TYPE D

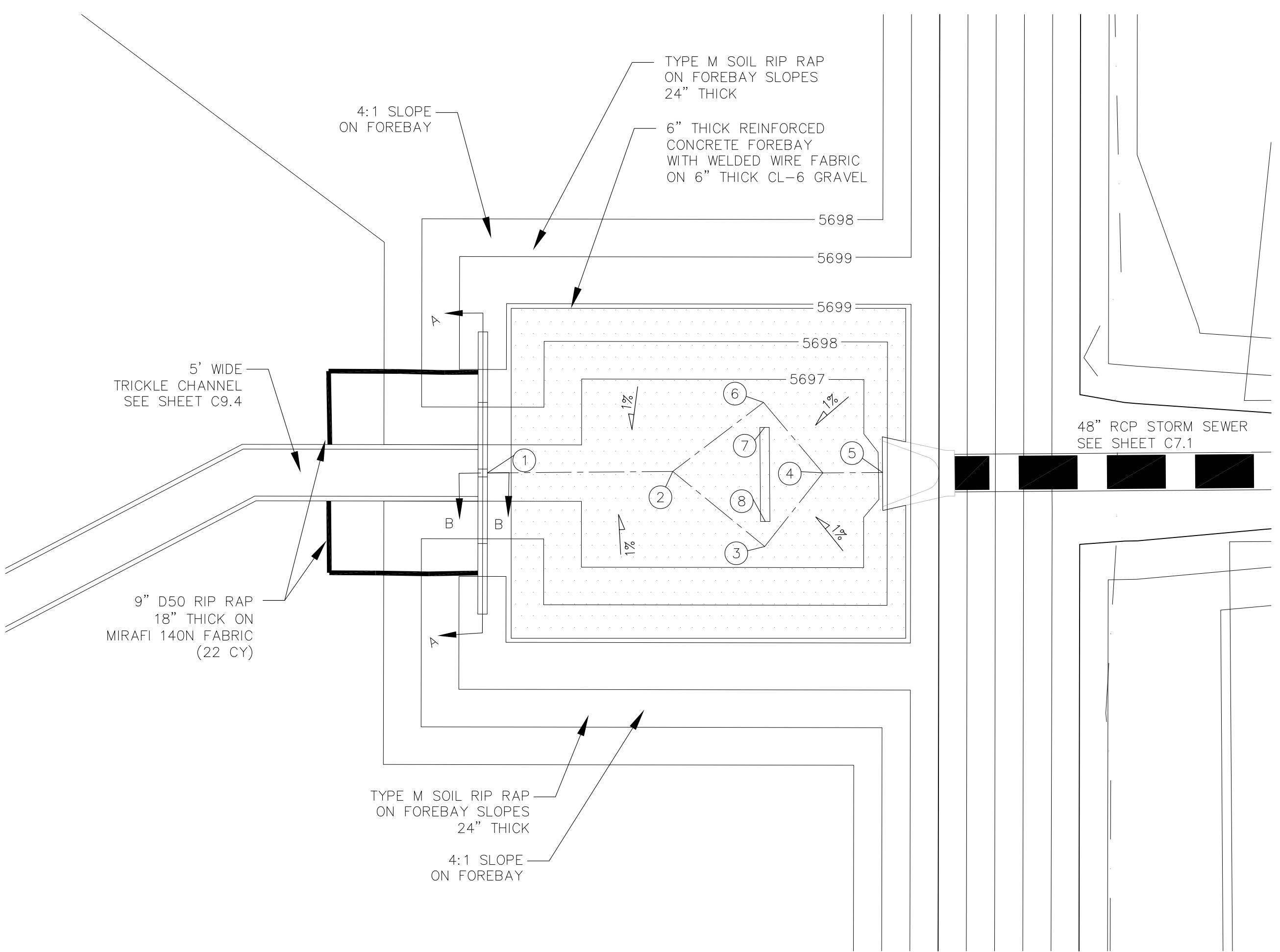


WALL SECTION B-B
NO SCALE

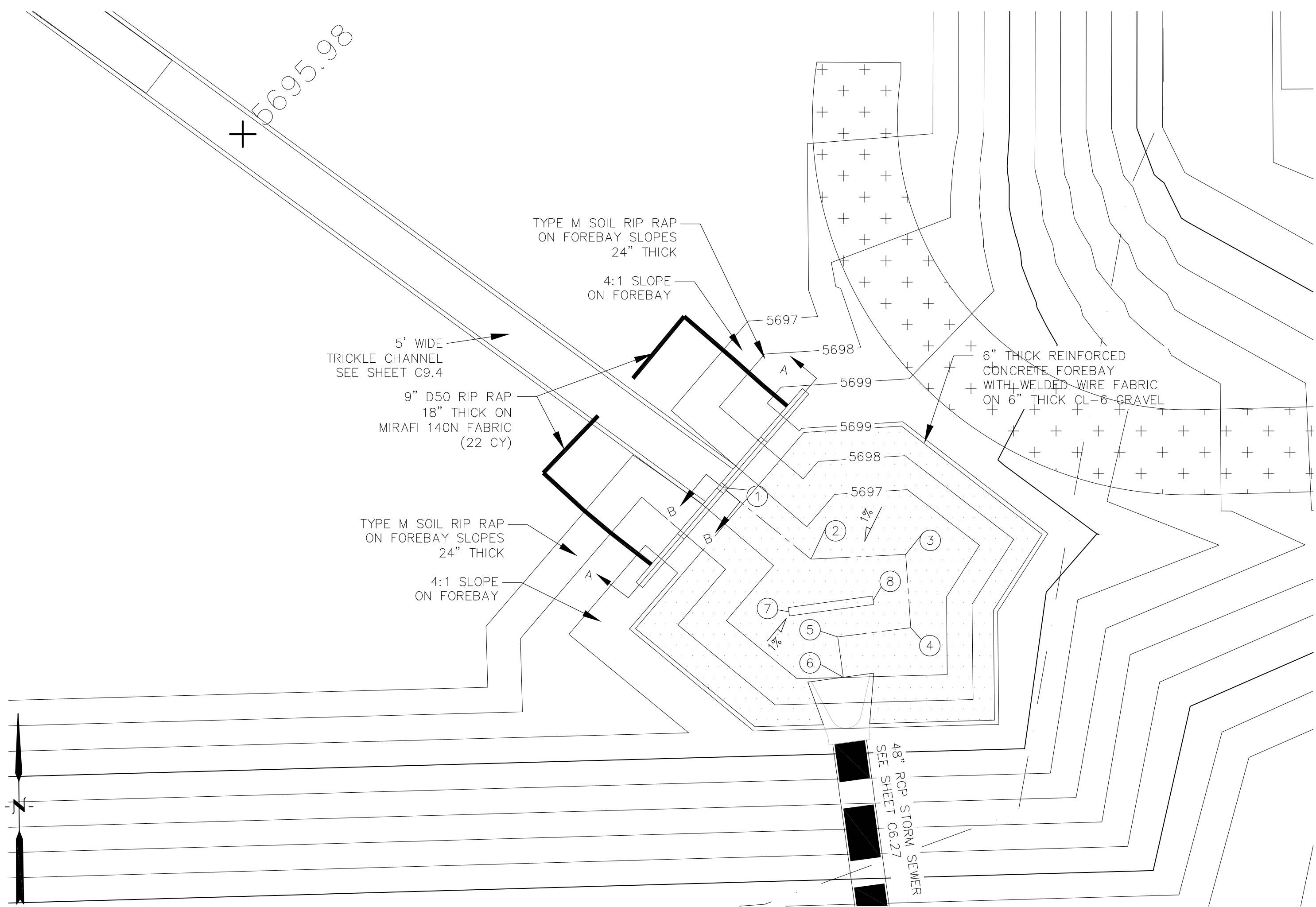
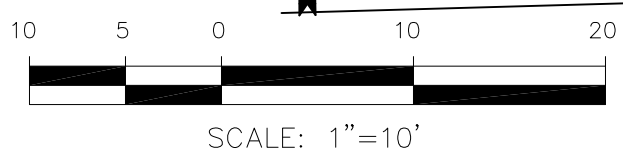
NOTE: ALL CONCRETE FOR WALL SHALL BE CDOT TYPE D

POINT TABLE (FOREBAY C)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	21991.42	25583.25	5696.50	FOREBAY BOTTOM
2	21991.58	25602.95	5696.70	FOREBAY BOTTOM
3	21983.61	25612.73	5696.80	FOREBAY BOTTOM
4	21991.43	25618.89	5696.90	FOREBAY BOTTOM
5	21991.47	25625.24	5696.99	FOREBAY BOTTOM
6	21998.92	25612.59	5696.80	FOREBAY BOTTOM
7	21996.26	25612.70	5696.90	ENERGY DISSIPATER WALL
8	21986.26	25612.77	5696.90	ENERGY DISSIPATER WALL

POINT TABLE (FOREBAY D)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	21816.93	25597.69	5696.50	FOREBAY BOTTOM
2	21808.83	25607.67	5696.60	FOREBAY BOTTOM
3	21809.40	25618.82	5696.70	FOREBAY BOTTOM
4	21800.77	25619.40	5696.80	FOREBAY BOTTOM
5	21799.69	25610.82	5696.90	FOREBAY BOTTOM
6	21794.95	25611.47	5697.00	FOREBAY BOTTOM
7	21802.65	25605.08	5708.80	ENERGY DISSIPATER WALL
8	21804.01	25614.99	5708.40	ENERGY DISSIPATER WALL



POND D2 - FOREBAY 'C' LAYOUT
SCALE 1"=10'



POND D2 - FOREBAY 'D' LAYOUT
SCALE: 1"=10'

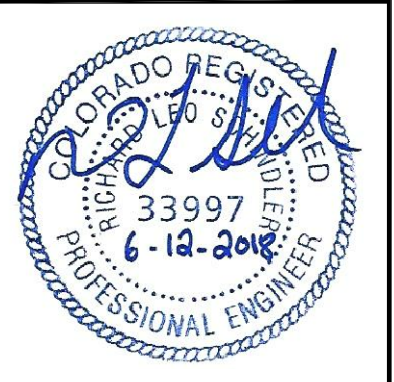
AS-BUILT
DATE: 07/19/2022

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DENVER, CO 80202
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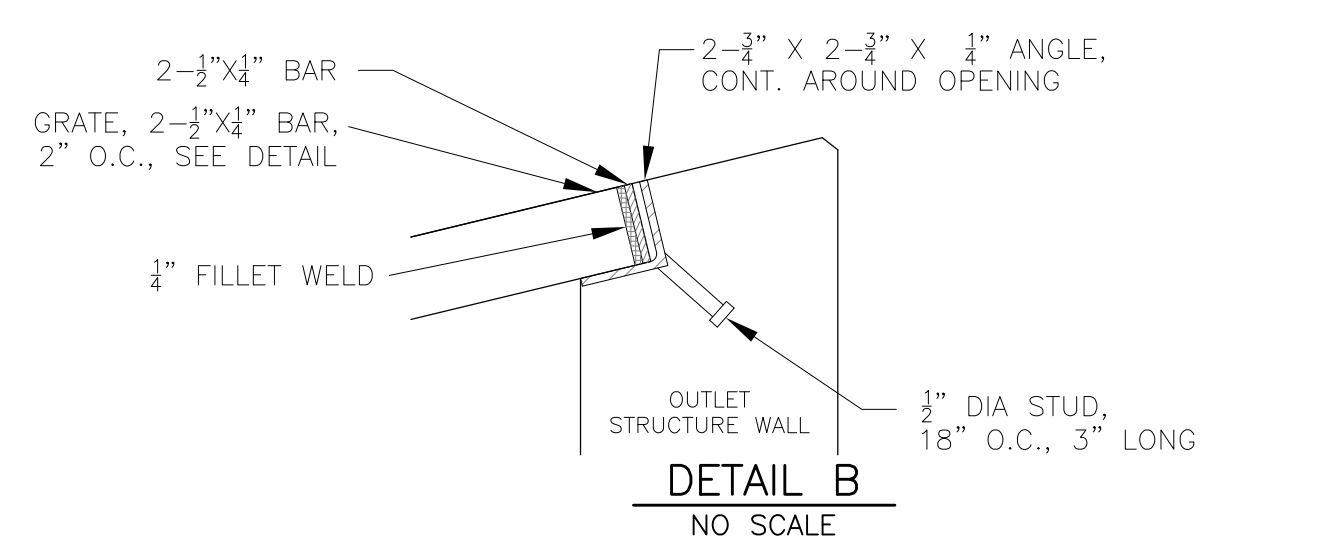
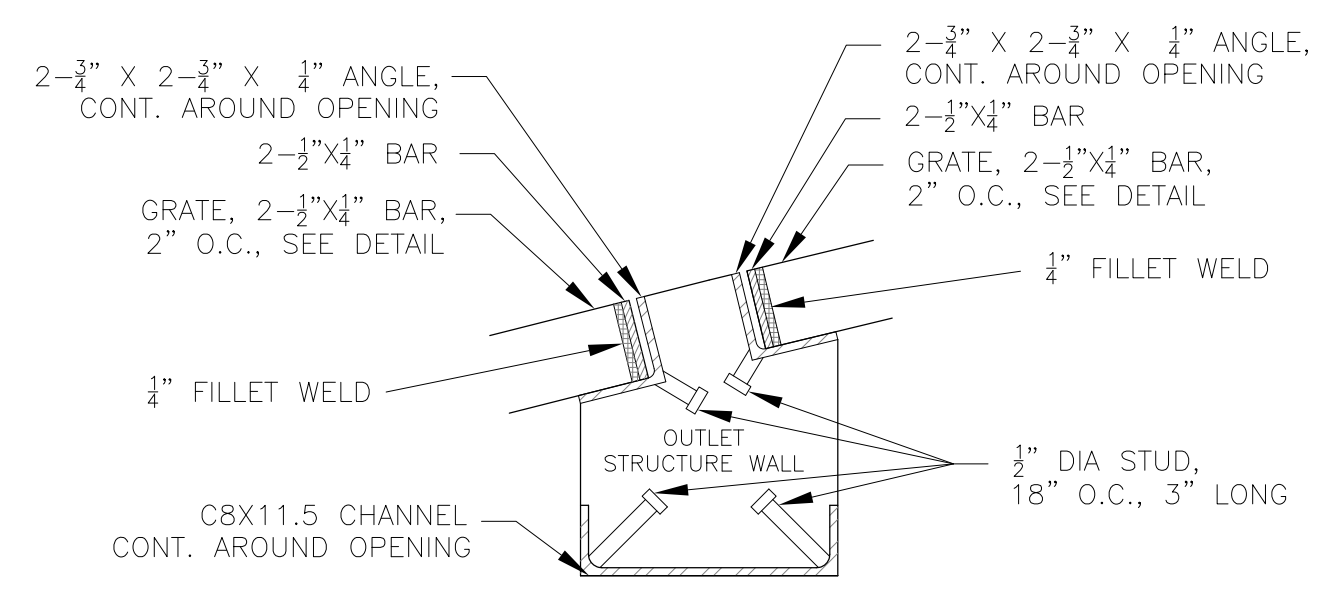
DATE: _____
DESCRIPTION: _____
NO: _____
PREPARED FOR: **LORSON, LLC**
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: JEFF MARK
PROJECT: **LORSON RANCH EAST**
FILING NO. 1
FONTAINE BLVD. - OLD GLORY DR
COLORADO SPRINGS, COLORADO

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

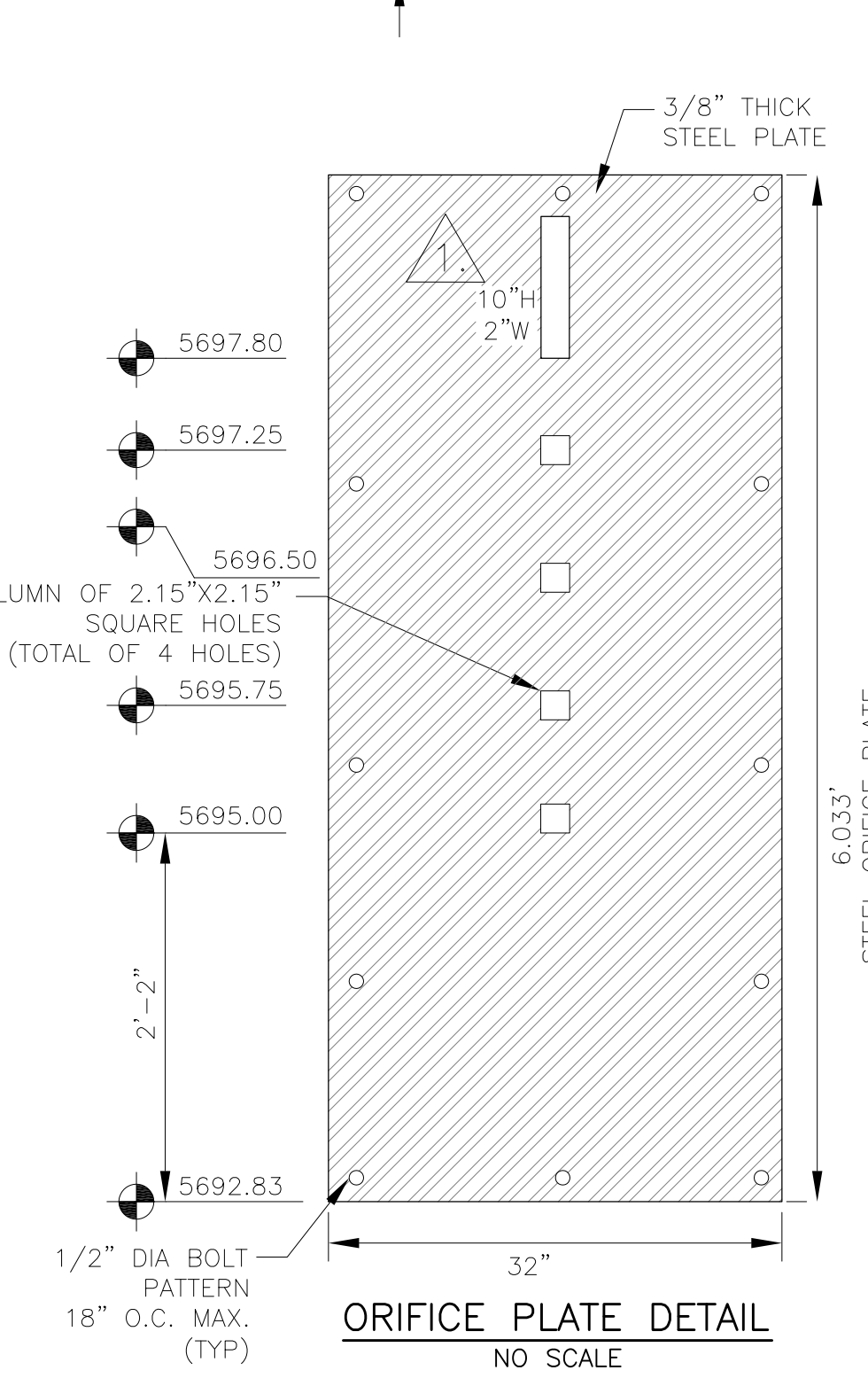
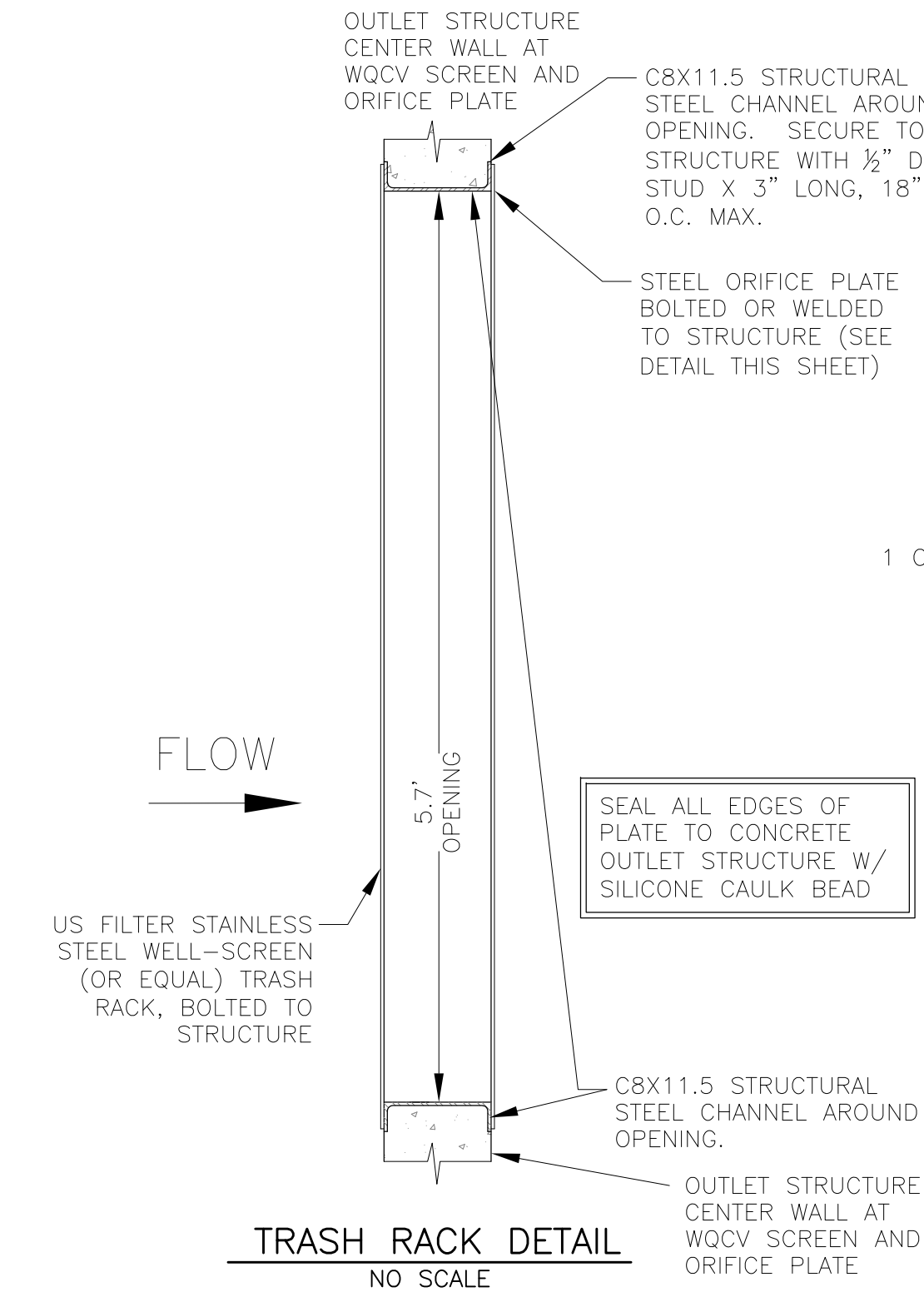
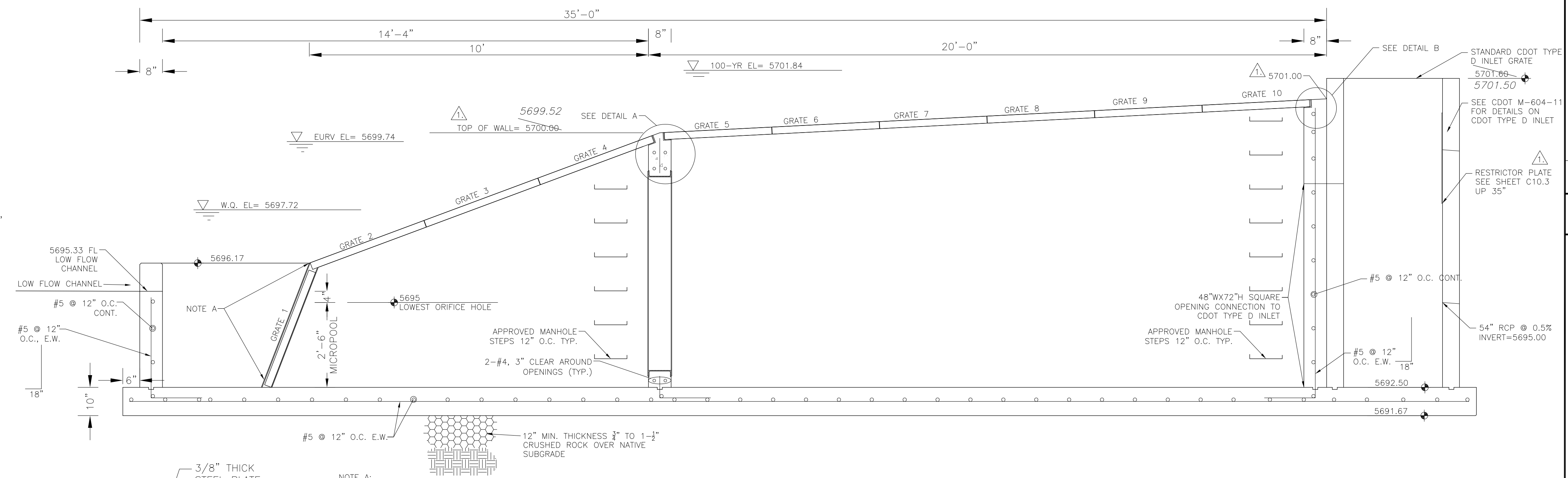
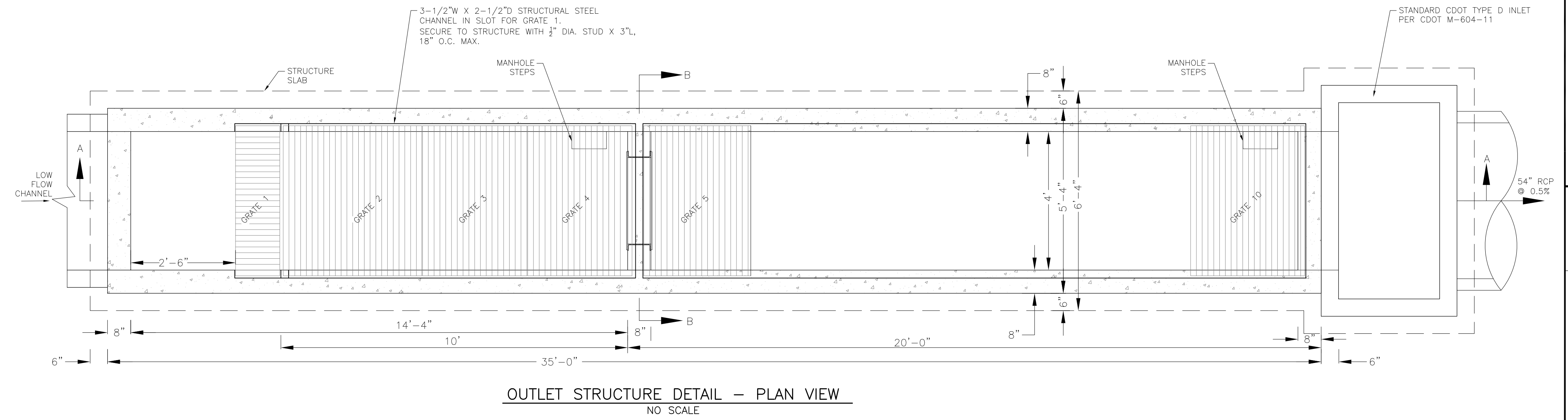
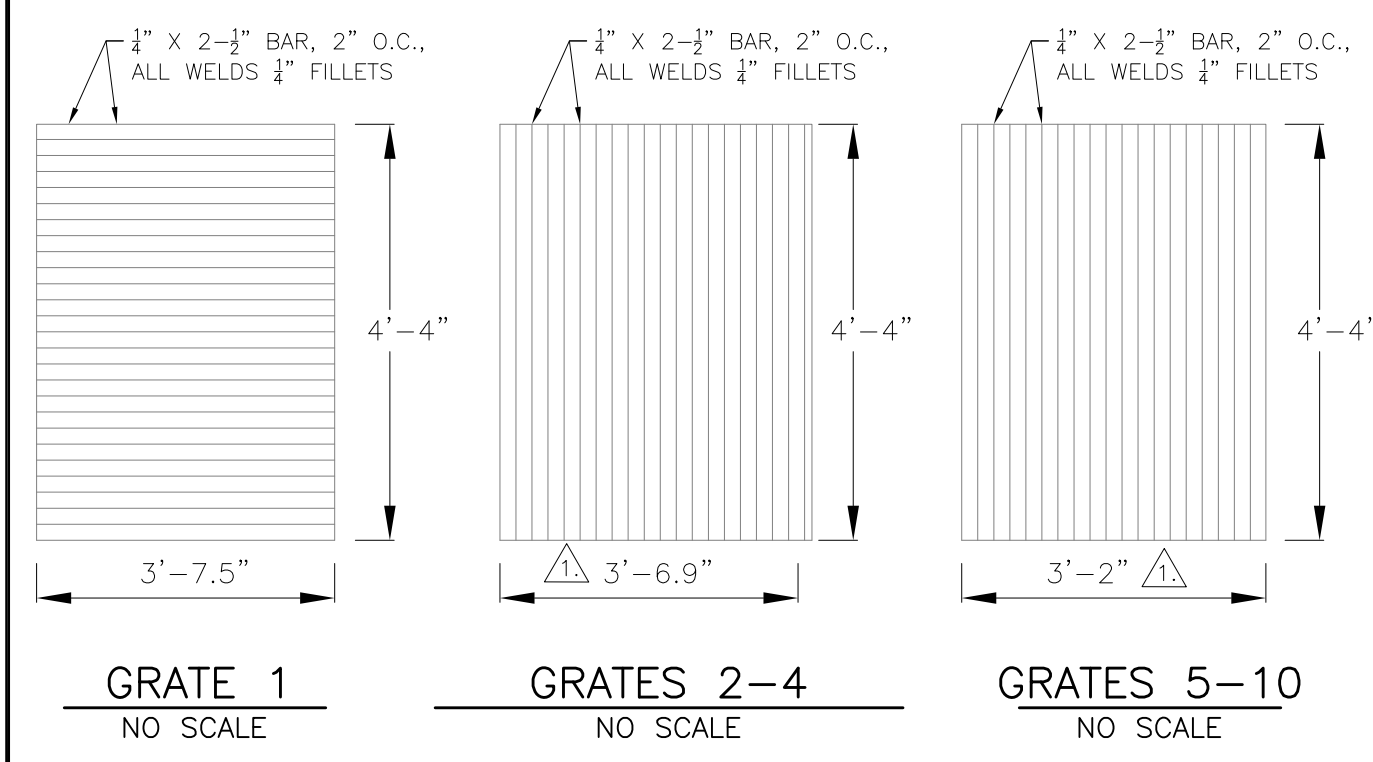
POND D2
FOREBAY 'C' AND 'D'
LAYOUT AND DETAILS



DATE: JUNE 12, 2018
PROJECT NO. 100.042
SHEET NUMBER **C9.5**
TOTAL SHEETS: 45



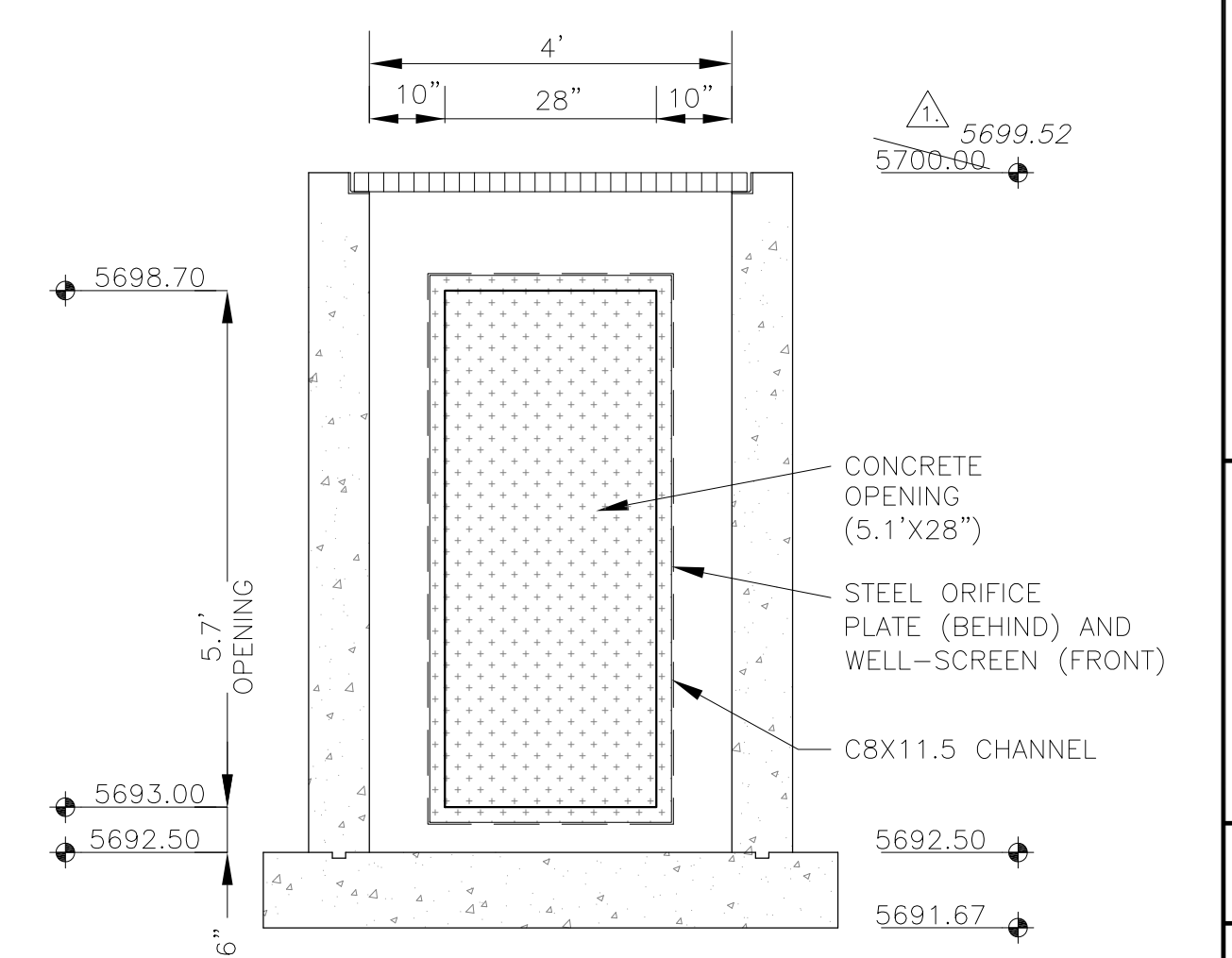
NOTE: AFTER CONCRETE STRUCTURE HAS BEEN POURED ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO GRATE CONSTRUCTION



OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

- PRIOR TO CONSTRUCTION, CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR ALL COMPONENTS OF THE OUTLET STRUCTURE.
 - GRADE 60 REINFORCING STEEL REQUIRED. SEE TABLE FOR THE MINIMUM LAP SPLICE LENGTH FOR REINFORCING BARS. ALL REINFORCING STEEL SHALL HAVE A TWO-INCH MINIMUM CLEARANCE FROM EDGE OF CONCRETE, UNLESS OTHERWISE NOTED.
- | BAR SIZE | #4 | #5 | #6 |
|--------------------|-------|-------|-------|
| MIN. SPLICE LENGTH | 1'-3" | 1'-7" | 2'-0" |
- CONCRETE FOR THE OUTLET STRUCTURE AND FOREBAY SHALL BE CDOT CLASS D CONCRETE.
 - CONCRETE FOR DRAIN CHANNELS SHALL BE CDOT CLASS B CONCRETE
 - EXPANSION JOINT MATERIAL SHALL MEET AASHTO SPECIFICATION M-213. EXPANSION JOINT MATERIAL SHALL BE 1/2" THICK, SHALL EXTEND THE FULL DEPTH OF CONTACT SURFACE AND THE JOINT SHALL BE SEALED, REFER TO DETAILS.
 - ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/8" CHAMFER UNLESS OTHERWISE NOTED.
 - SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
 - REFER TO SHEET C9.5 FOR PRESEDIMENTATION/FOREBAY DESIGN.
 - ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.
 - SEE SHEET C9.3 FOR WELL-SCREEN DESIGN NOTES

AS-BUILT
DATE: 07/19/2022



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DENVER, CO 80202
PH: 719.570.1100
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cog1.com

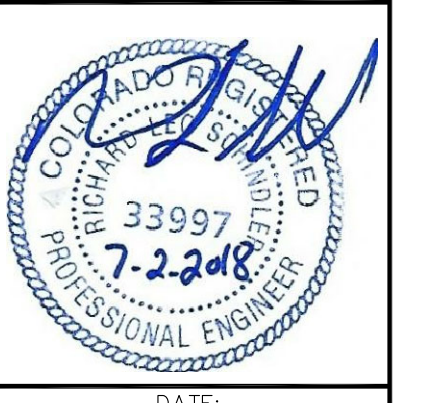
DATE: 7-2-2018
DESCRIPTION: MODIFY OUTLET CHANGE GRATE SIZES

PREPARED FOR: **LORSON, LLC**
212 N. WAHSATCH AVE, SUITE 301
COLORADO SPRINGS, COLORADO 80903
CONTACT: RICHARD L. SCHINDLER, P.E.
EMAIL: Rich@cog1.com

PROJECT: **LORSON RANCH EAST FILING NO. 1**
FONTAINE BLVD. - OLD GLORY DR
COLORADO SPRINGS, COLORADO
CONTACT: JEFF MARK

DRAWN: RLS
DESIGNED: RLS
CHECKED: RLS

**LORSON RANCH EAST FILING NO. 1
FULL SPECTRUM POND D2
OUTLET STRUCTURE**



DATE: JUNE 12, 2018
PROJECT NO: 100.042
SHEET NUMBER: **C9.6**
TOTAL SHEETS: 45