



March 10, 2023

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

Attn.: Project Manager

RE: The Hills at Lorson Ranch Filing No. 1 (SF 21-010)  
Private Detention/Stormwater Quality Ponds C1, C2.1, C2.2, C2.3, C3, & C4  
As-built Certification

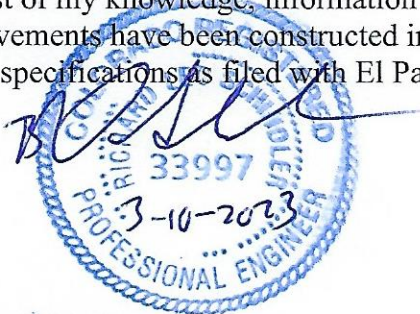
Dear Project Manager:

Per the approved construction drawings for The Hills at Lorson Ranch Filing No.1 (SF 21-010), improvements were made to construct six 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.

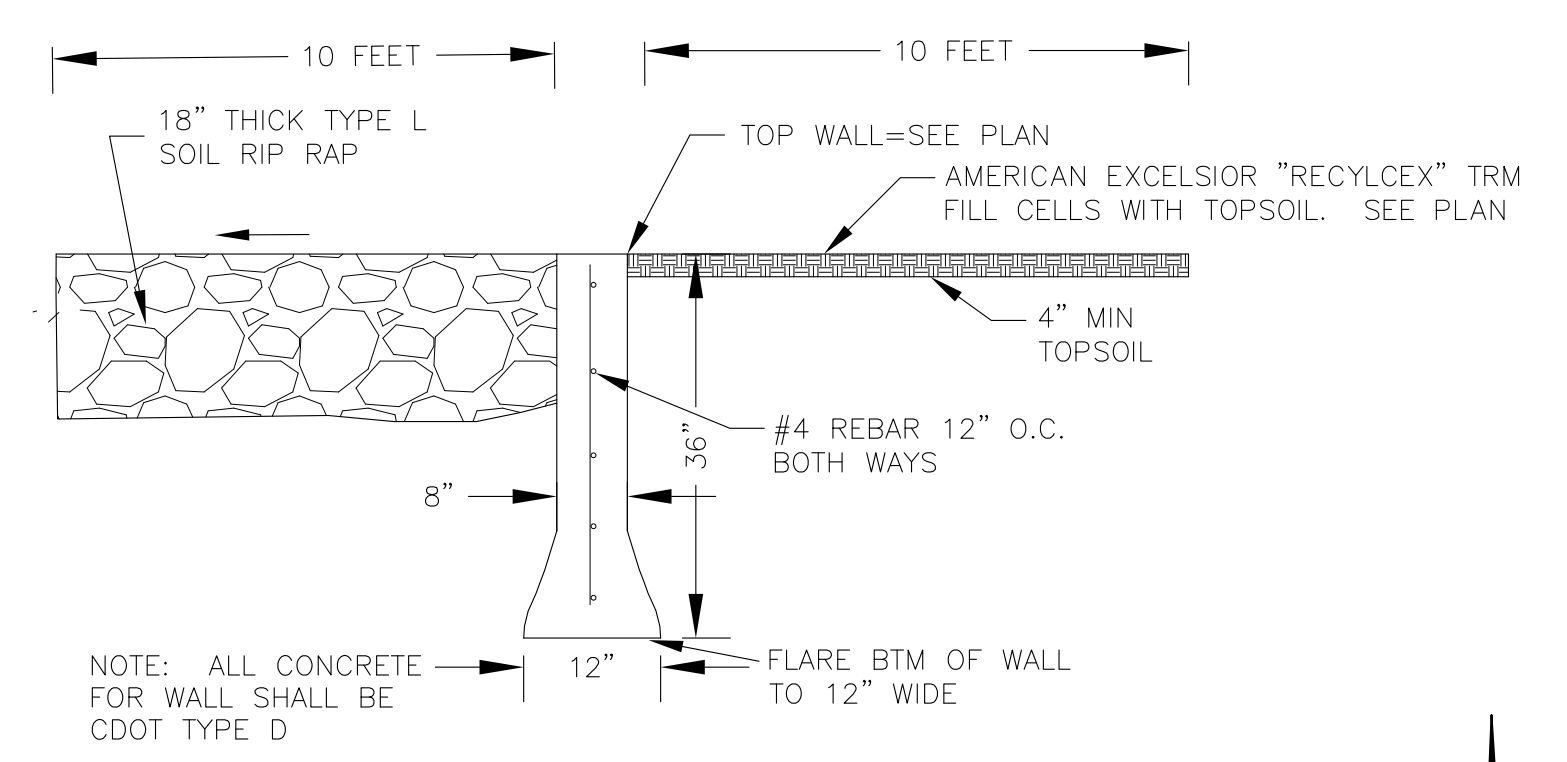
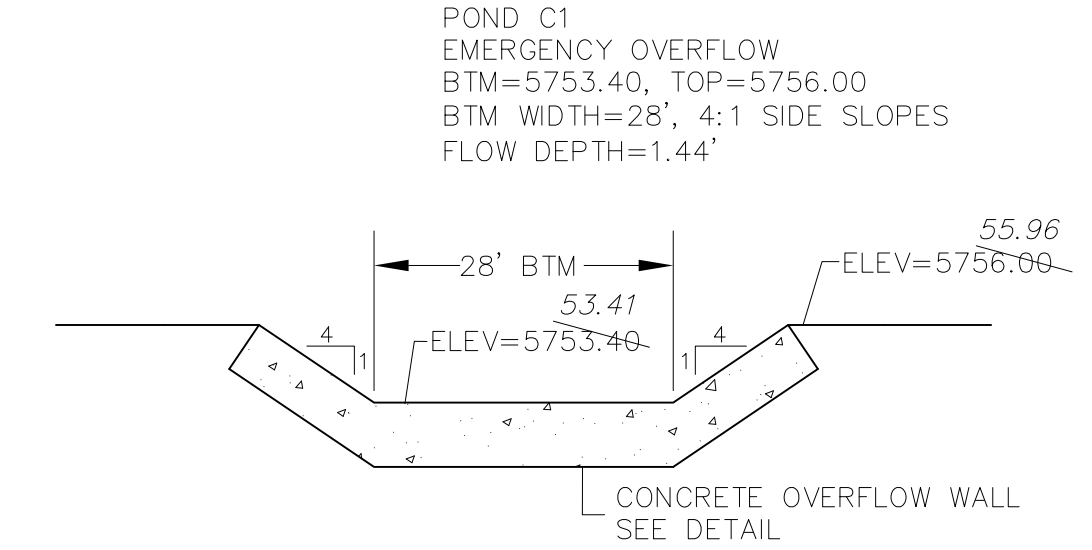
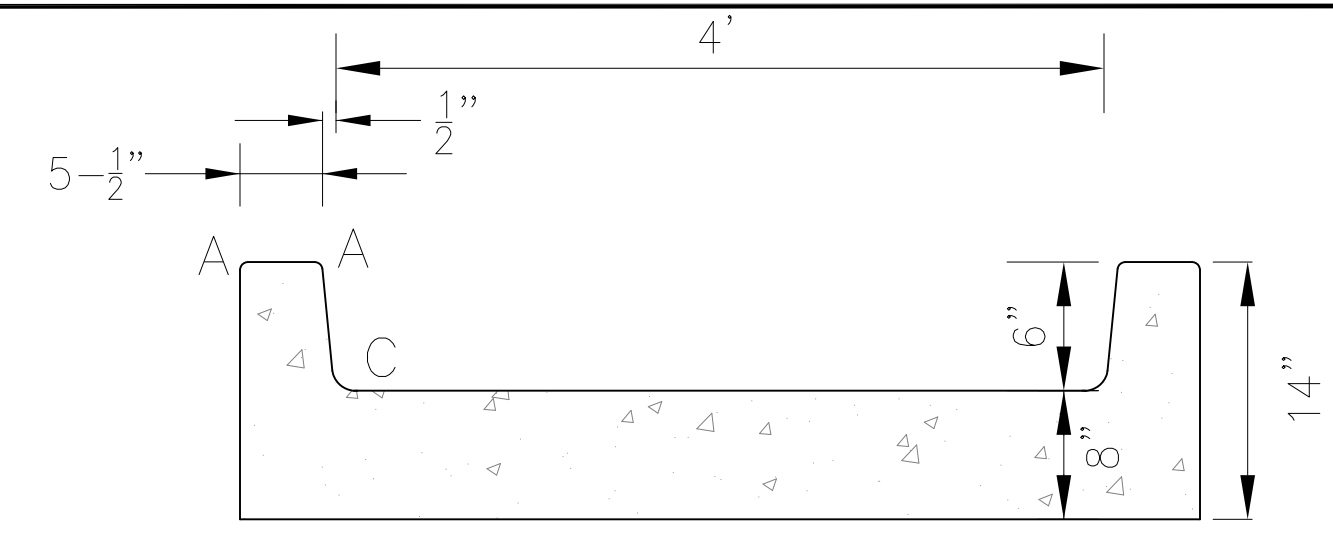
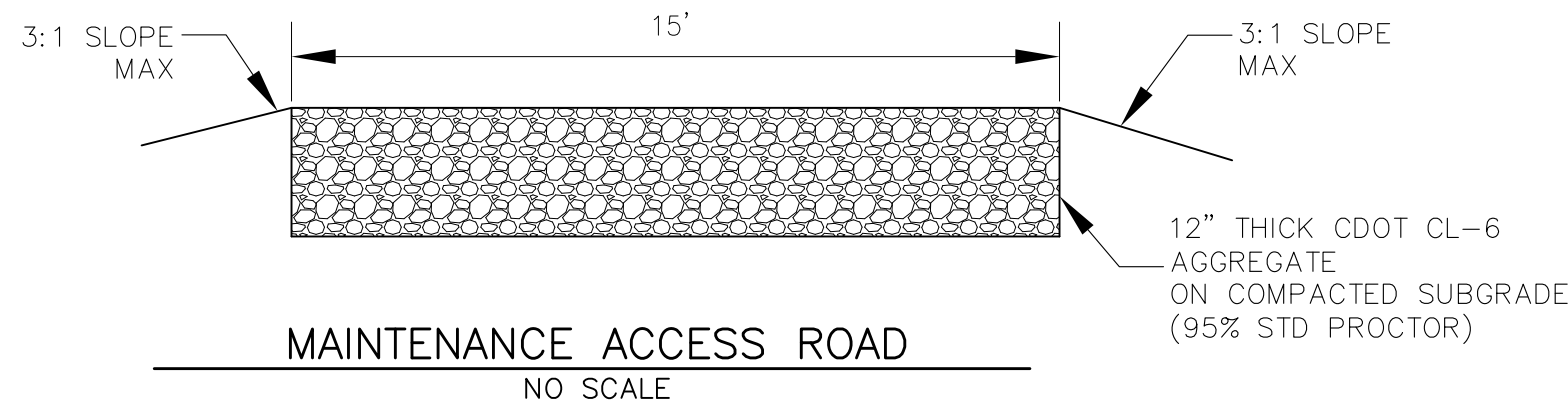
Statement Of Engineer of Record

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 E2 and J As-Built Drawings



**CORE ENGINEERING GROUP**  
19004 1ST AVENUE S.  
DENVER, CO 80202  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cegi.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_

PREPARED FOR:  
**THE HILLS COLLECTOR STREET CONSTRUCTION**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

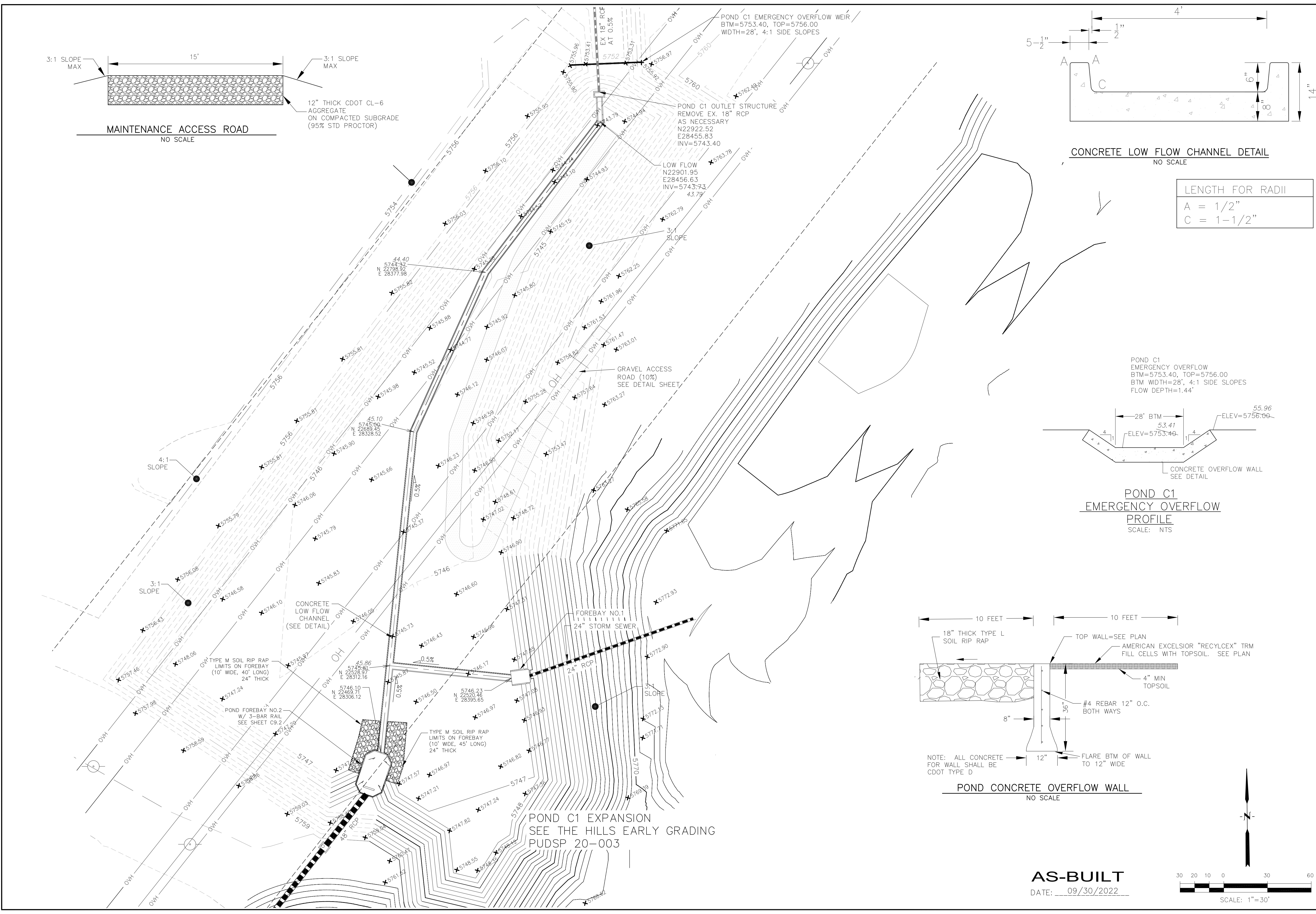
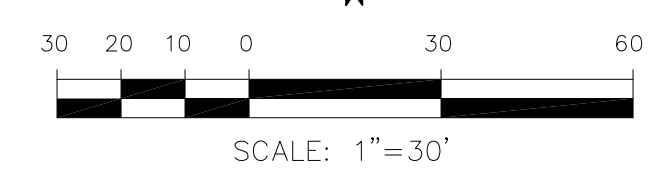
DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**POND C1 FOREBAY, LOW FLOW CHANNEL AND OUTLET STRUCTURE LAYOUT**



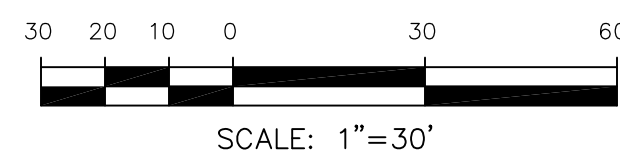
DATE: NOV 12, 2020  
PROJECT NO. 100.061  
SHEET NUMBER C9.1  
TOTAL SHEETS: 58

**AS-BUILT**  
DATE: 09/30/2022

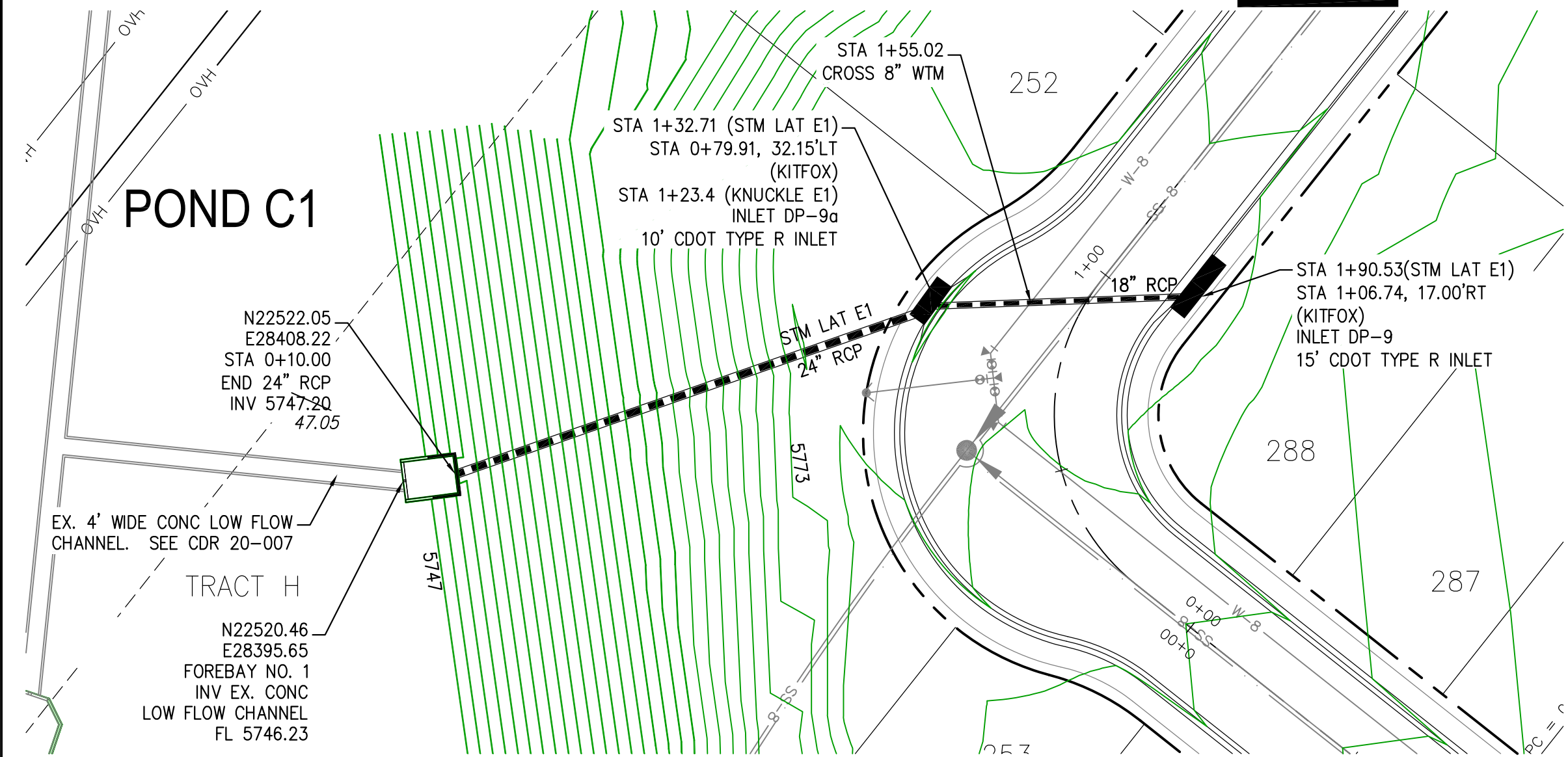


- NOTES**
- ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  - SEE GRADING PLAN FOR GRADING INFORMATION.
  - ALL STORM SEWER SHALL BE CLASS III RCP.
  - ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- ① CURVE DATA ID
- ② CURB TRANSITIONS
- ③ PEDESTRIAN RAMP, SEE SHEET C10.1

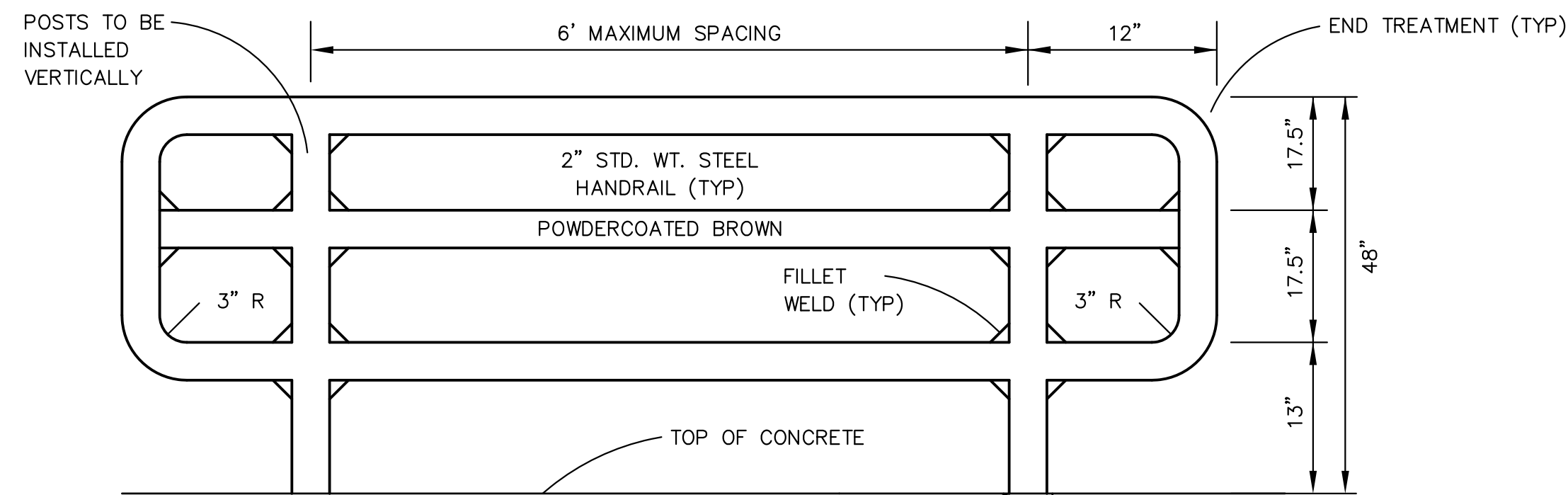


KITFOX CT  
SEE SHEET C6.13

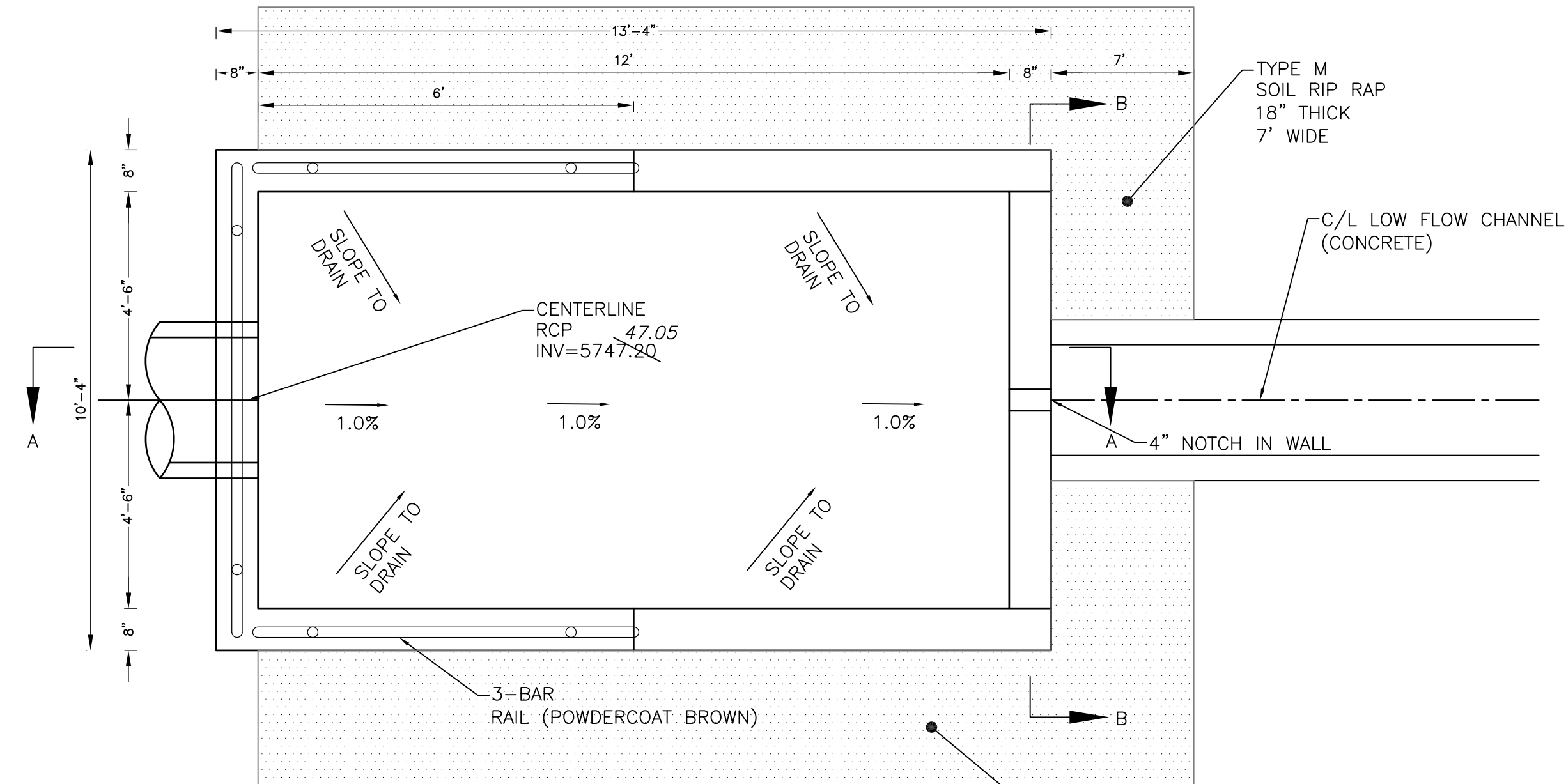


**STORM LATERAL E1**

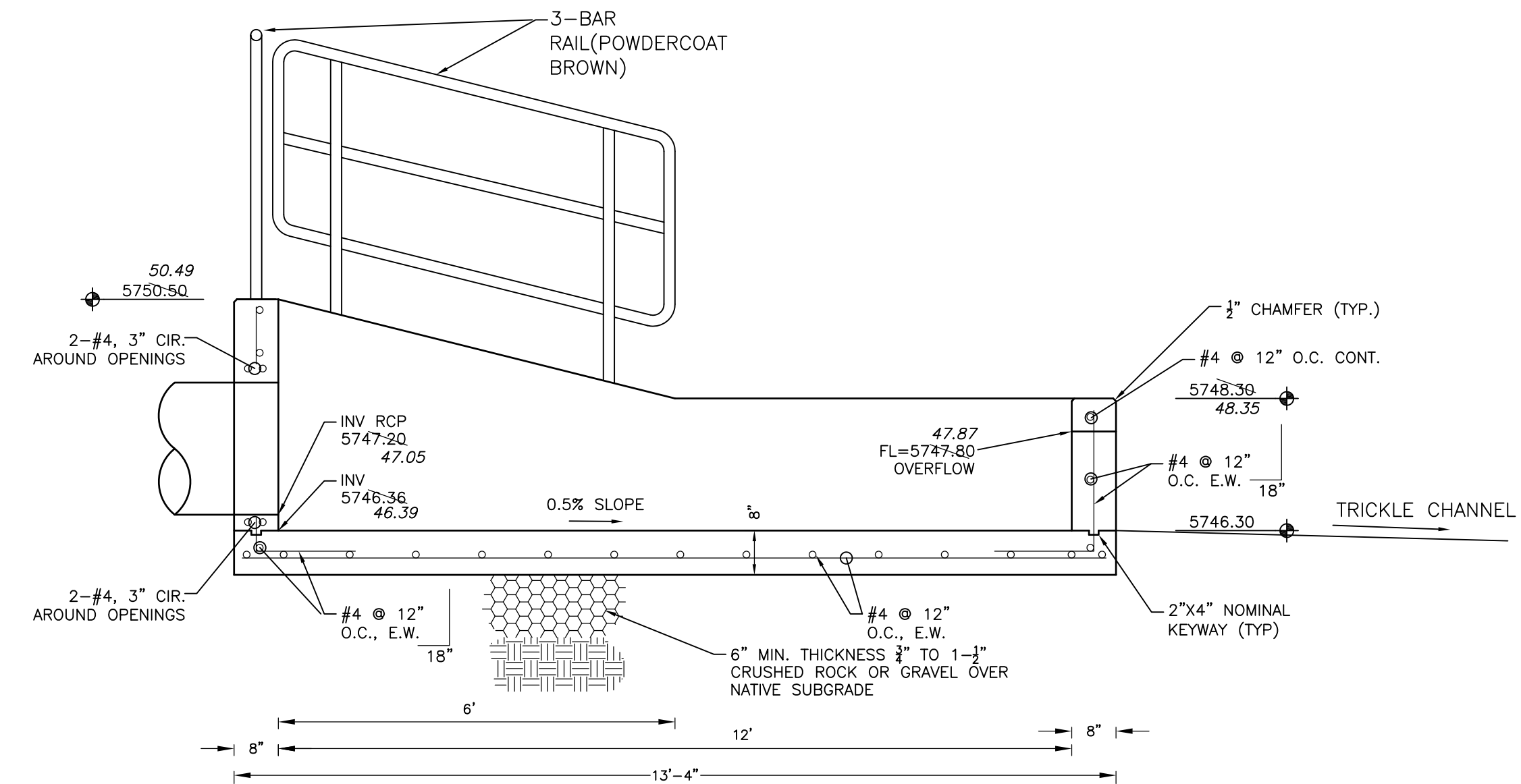
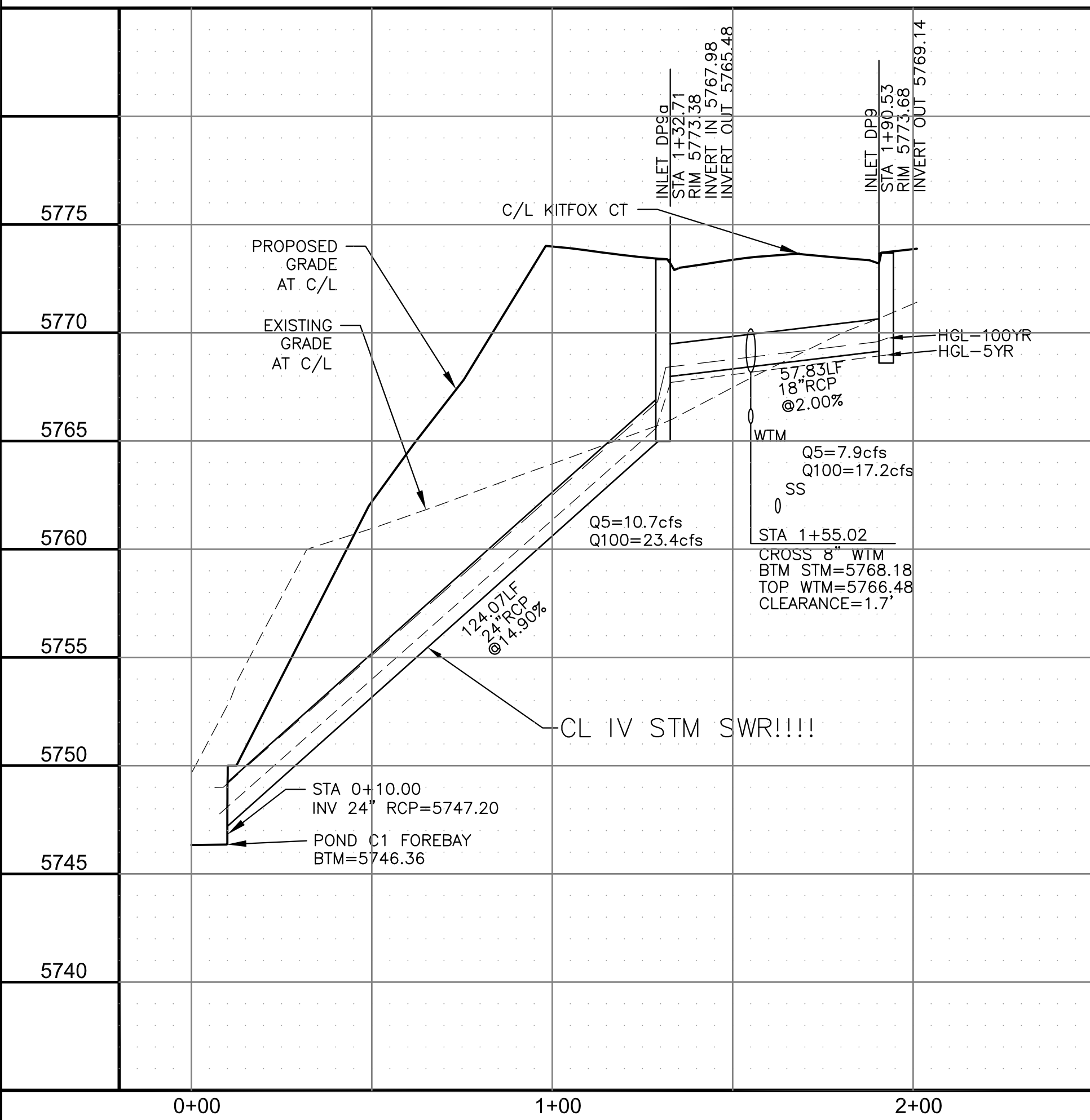
SHADBUSH LN  
SEE SHEET C6.17



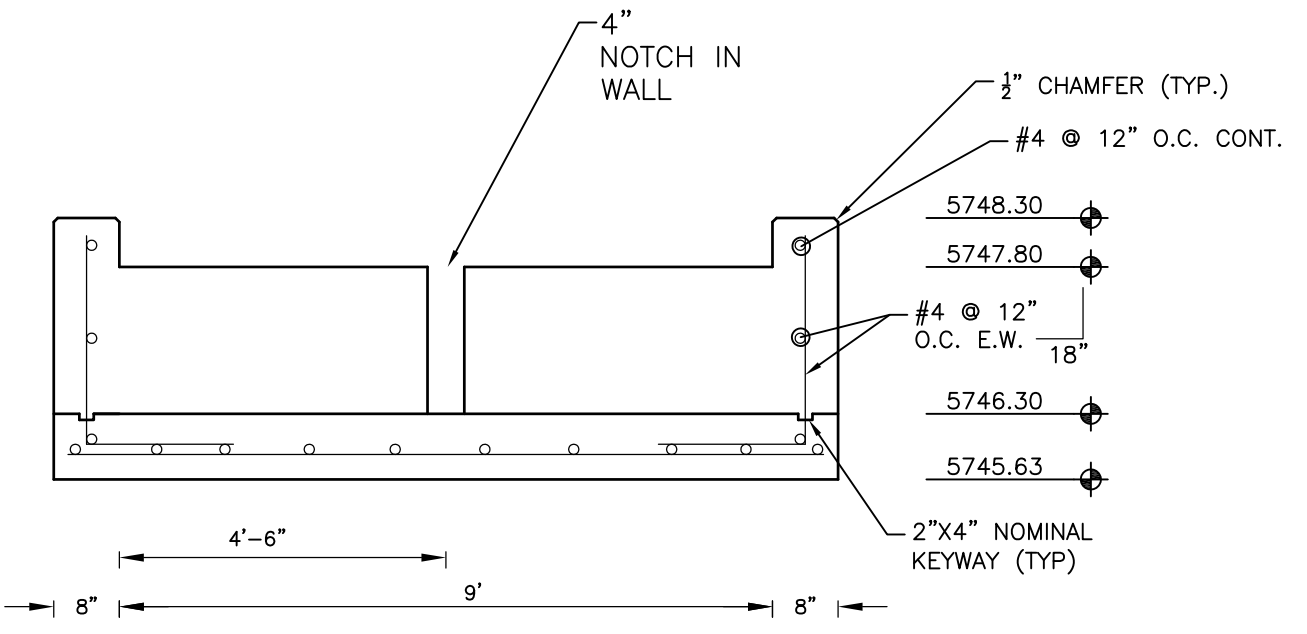
**3-BAR RAIL DETAIL**  
NO SCALE



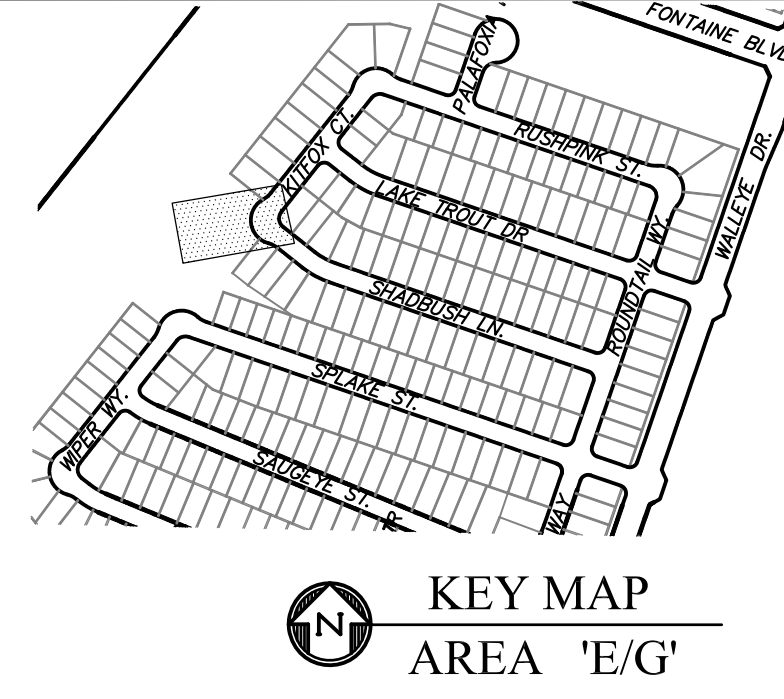
**FOREBAY NO. 1 DETAIL**  
NO SCALE



**FOREBAY NO. 1 SECTION A-A**  
NO SCALE



**FOREBAY NO. 1 SECTION B-B**  
NO SCALE



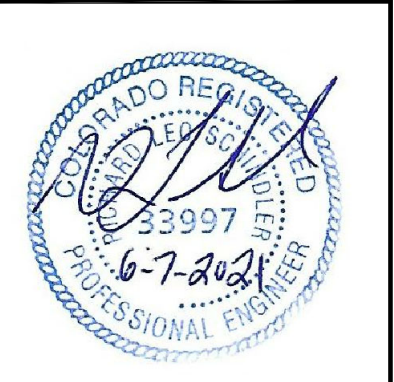
**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BURNING WOOD, CO 80906  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE: JAN 14, 2021  
DESCRIPTION: RAISE SITE BY 1' EAST OF POWERLINES  
NO. 1  
PROJECT: THE HILLS AT LORSON RANCH FILING NO. 1  
212 N. WAHSATCH AVE., SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

PREPARED FOR: LORSON, LLC  
212 N. WAHSATCH AVE., SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**STORM SEWER LATERAL - AREA 'E / G'**  
**STORM LATERAL E1**  
**STA 0+00 TO 1+90**



DATE: JUNE 7, 2021

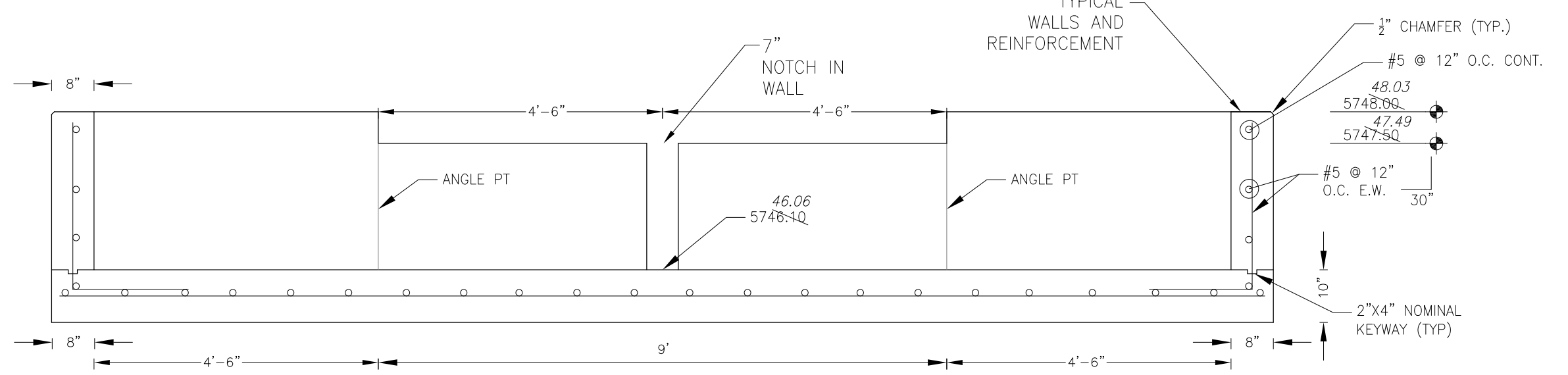
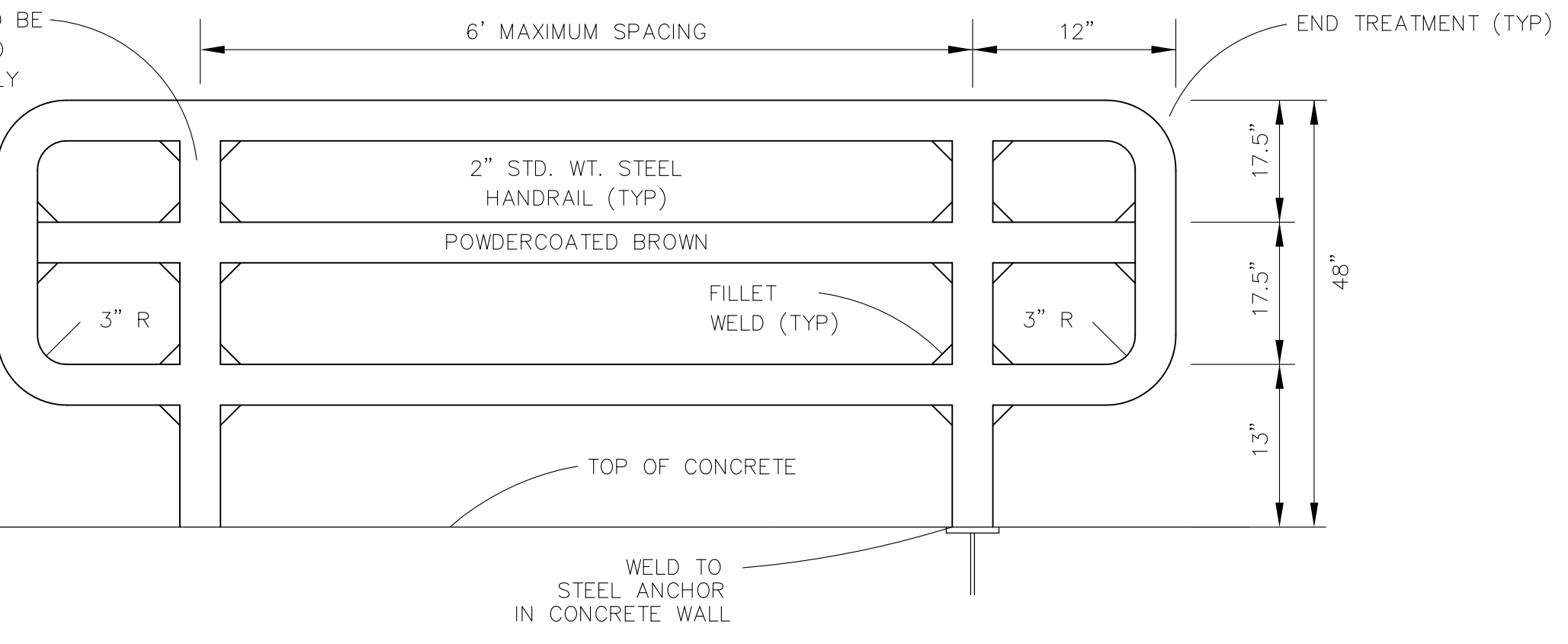
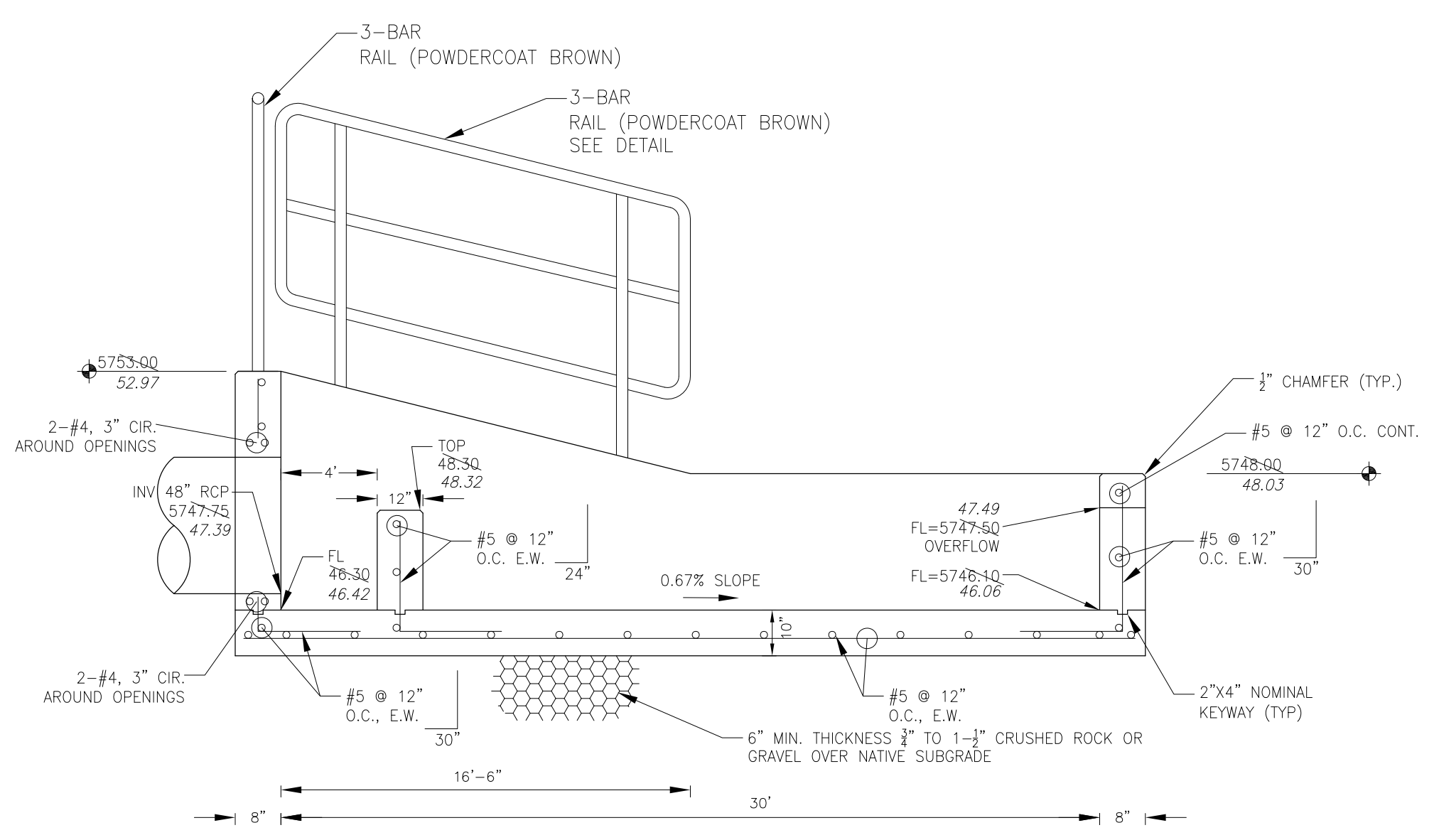
PROJECT NO. 100.062

SHEET NUMBER C7.1

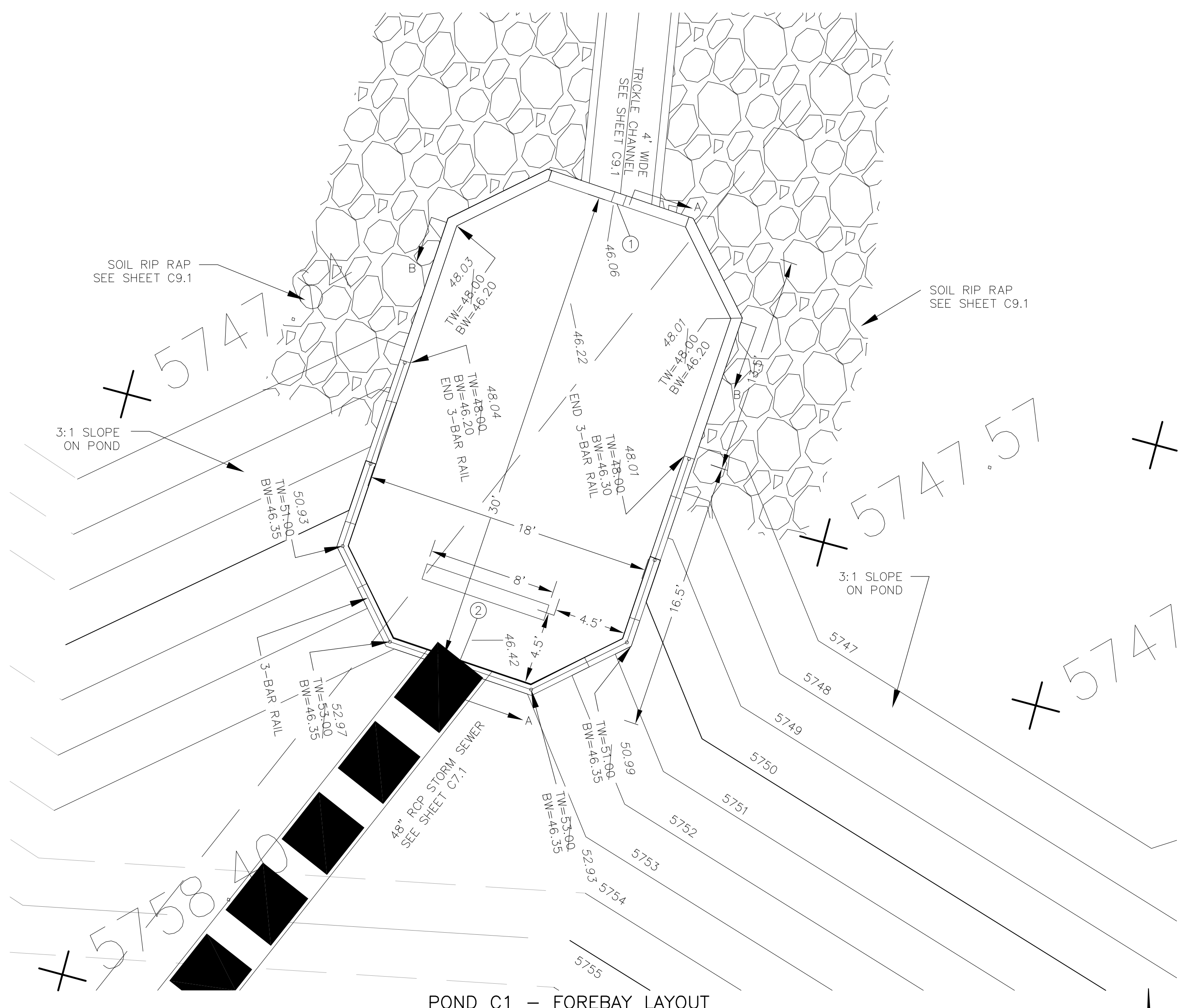
TOTAL SHEETS: 42

**AS-BUILT**  
DATE: 09/30/2022

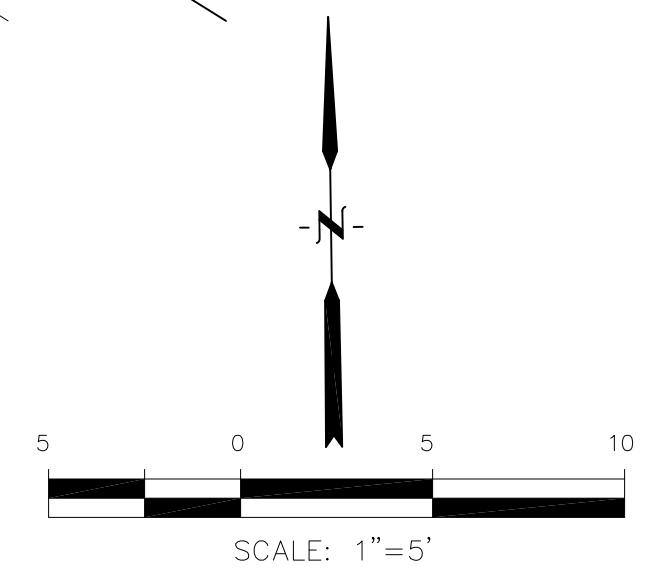
**POND C1  
 FOREBAY NO. 2  
 FOREBAY DETAILS**



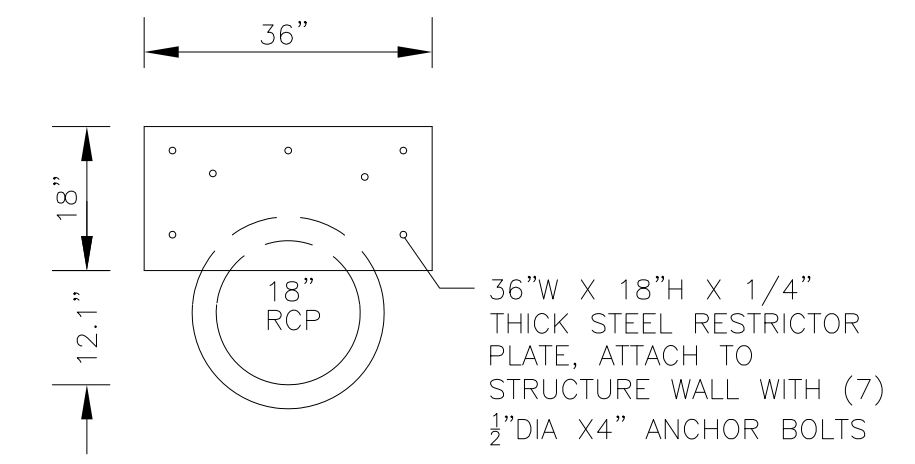
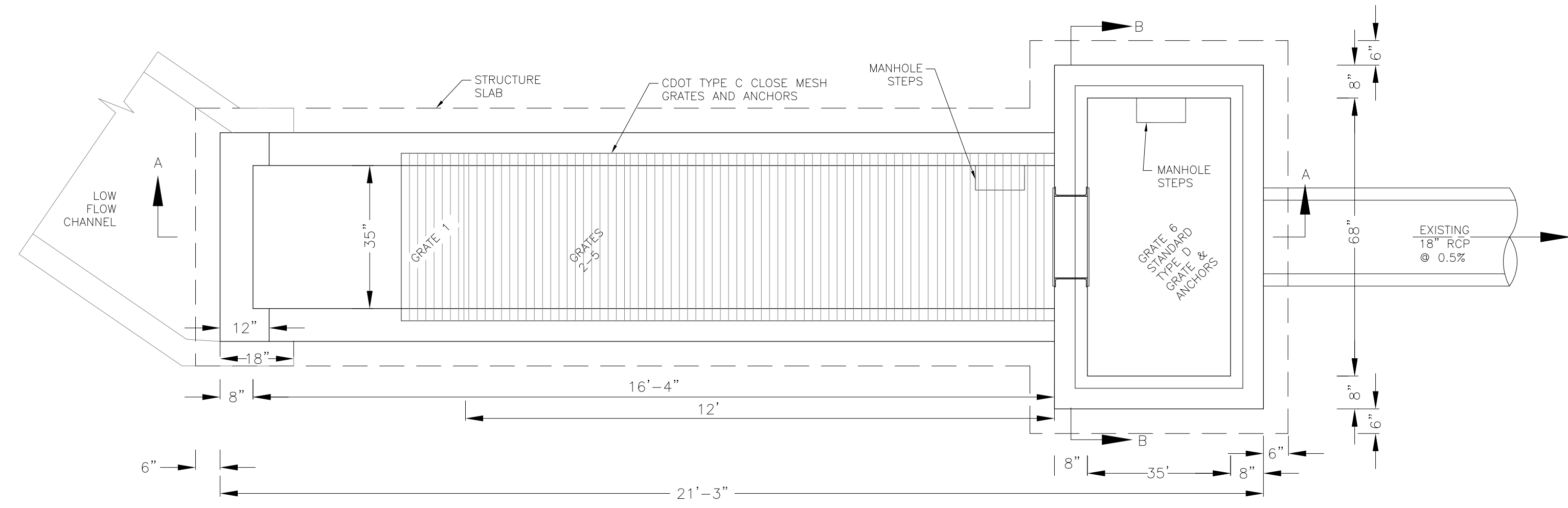
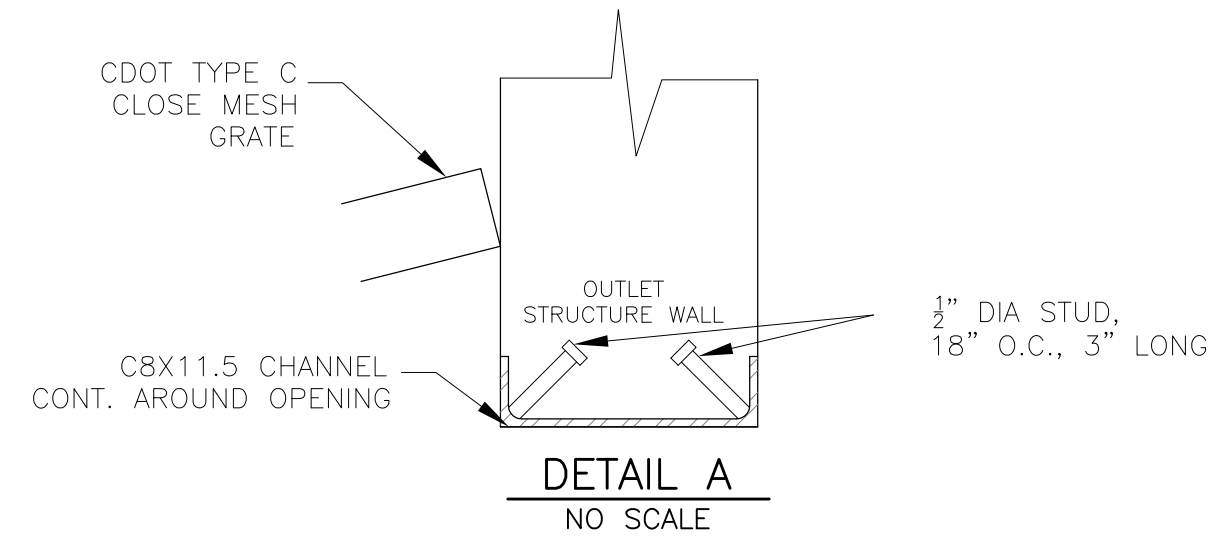
NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D



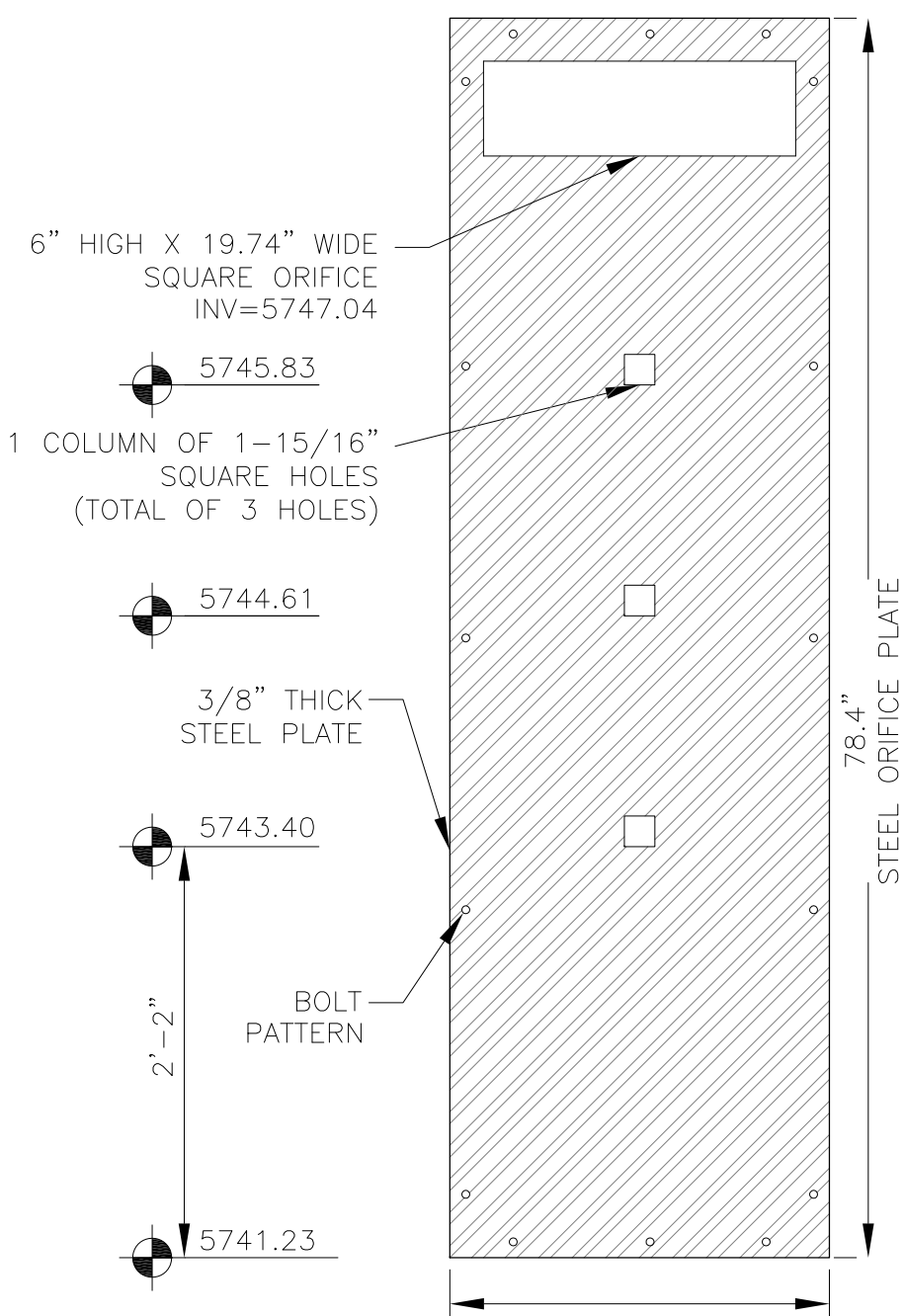
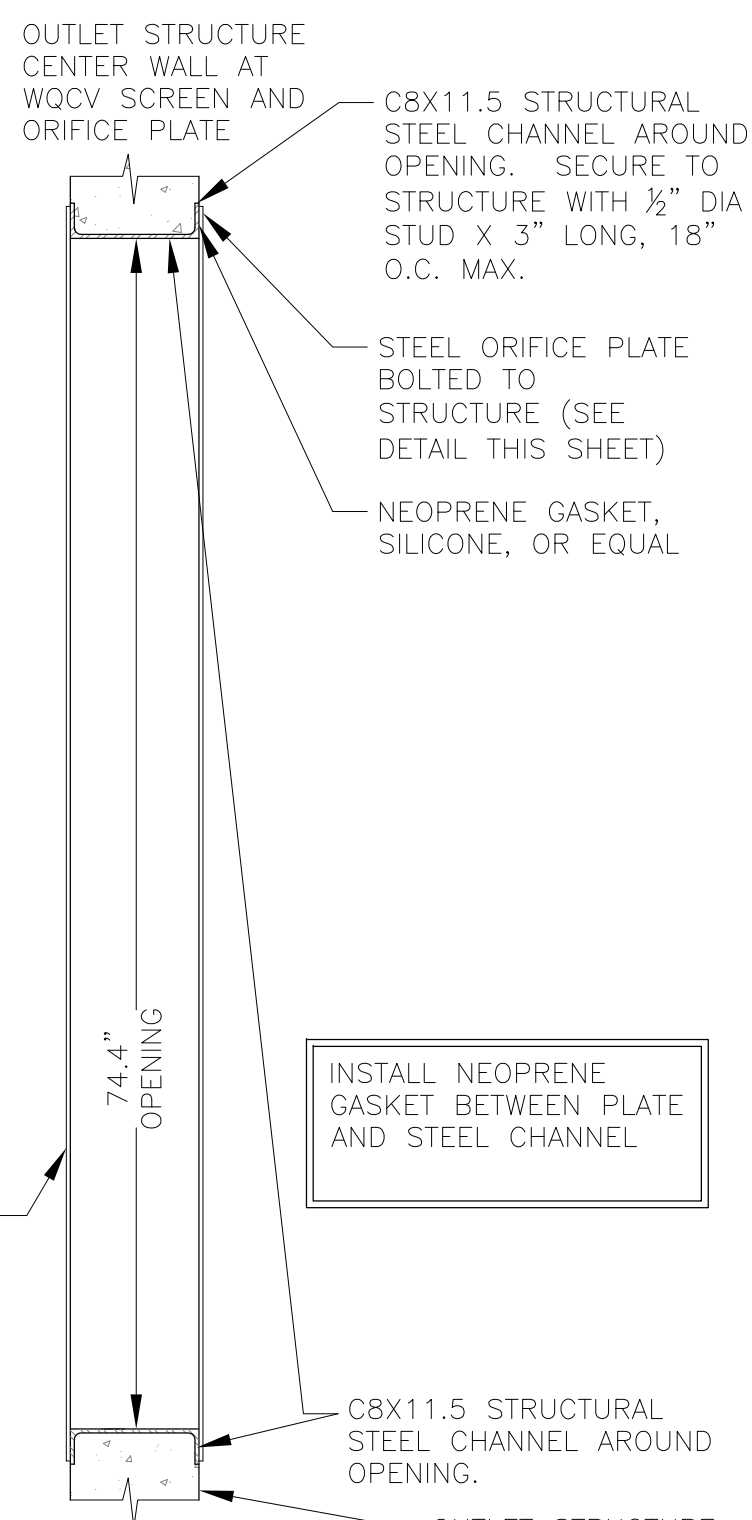
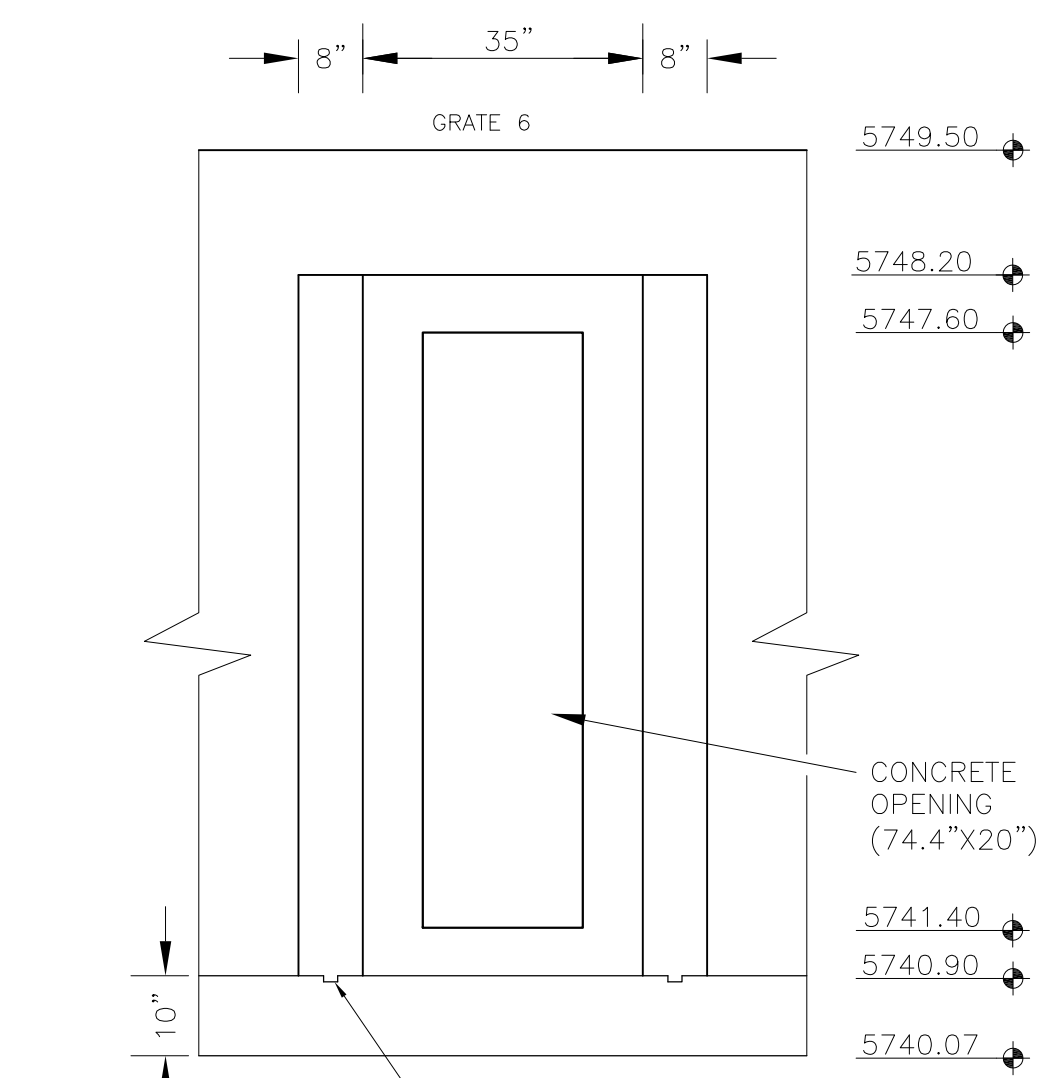
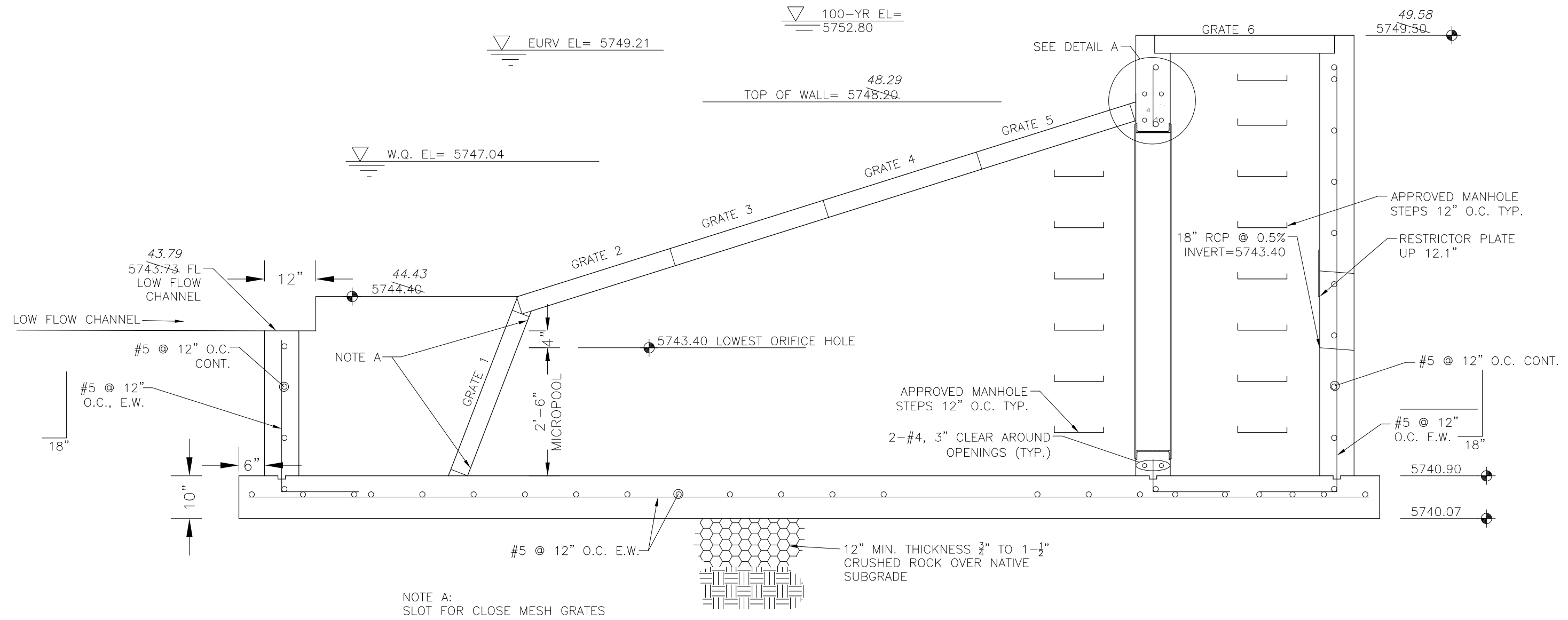
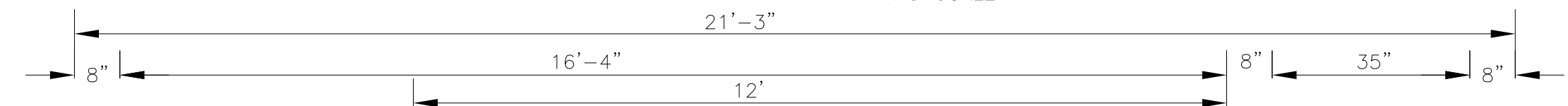
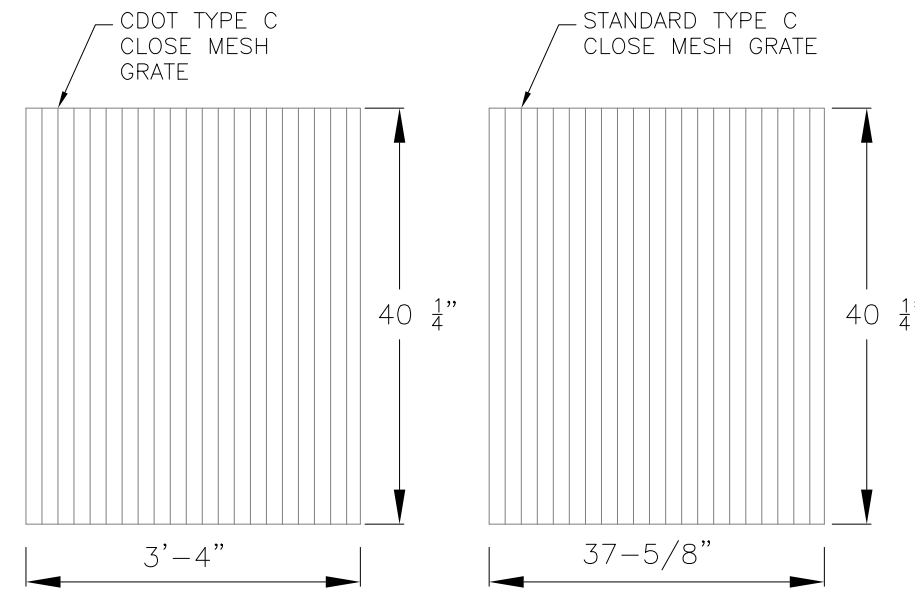
POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	22469.08	28305.90	5746.10	FOREBAY BOTTOM
2	22440.71	28296.15	5746.30	FOREBAY BOTTOM, INV 48"=5747.75



**AS-BUILT**  
 DATE: 09/30/2022



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

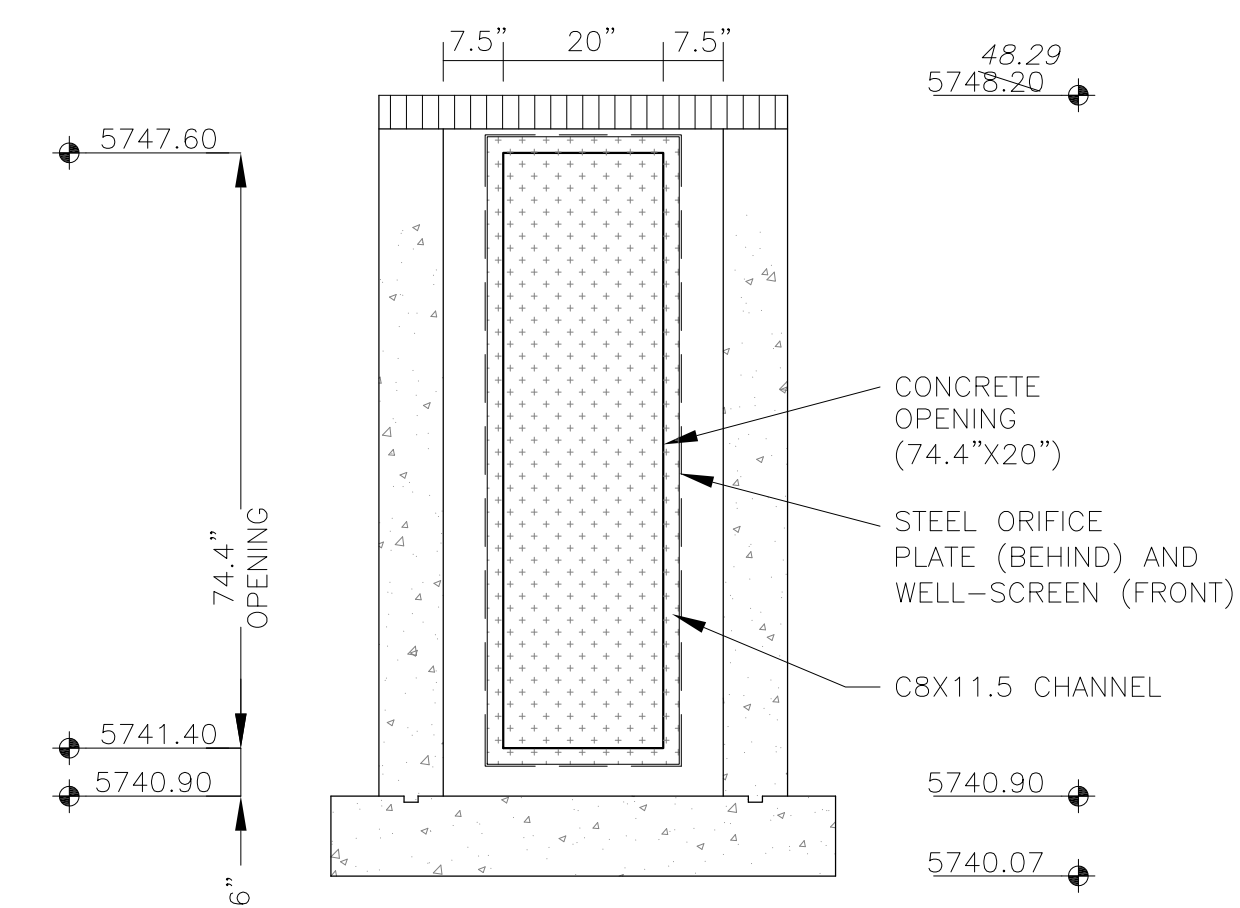


OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

- 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 POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
  - ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

- 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

**AS-BUILT**  
DATE: 09/30/2022



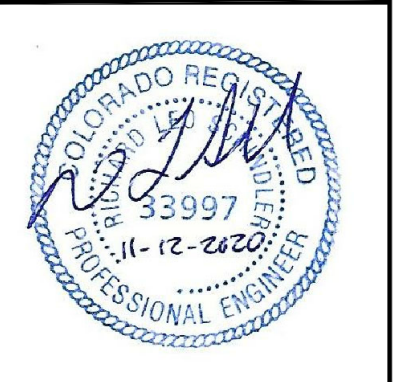
**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
PH: 719.570.5506  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cog1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
PREPARED FOR: **LORSON, LLC**  
212 N. WAHSATCH AVE. SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

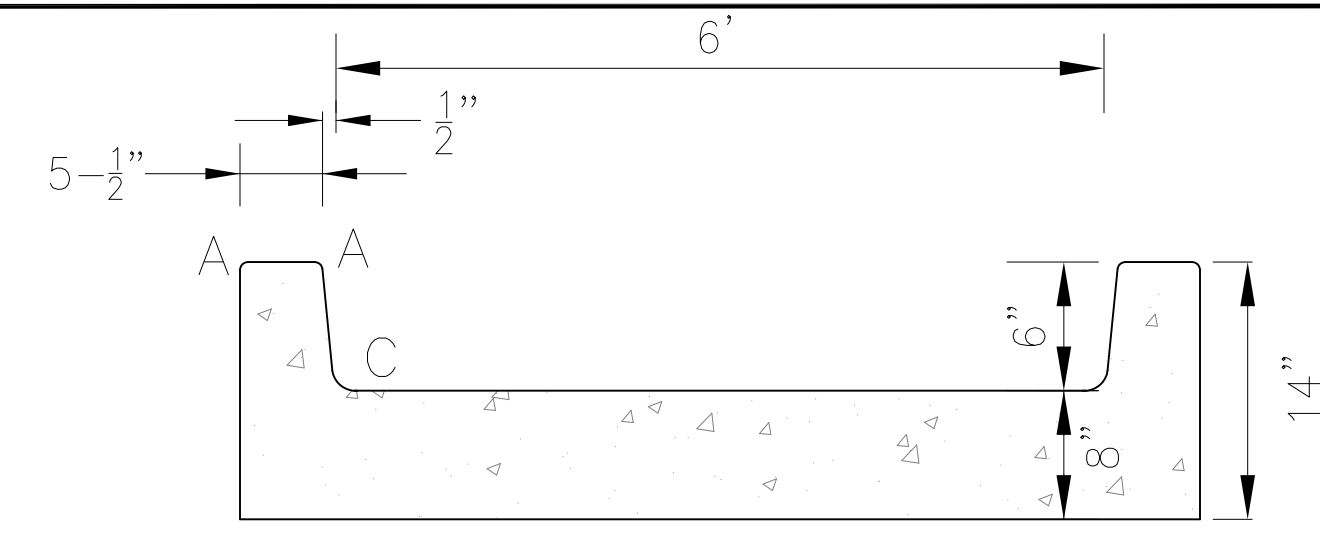
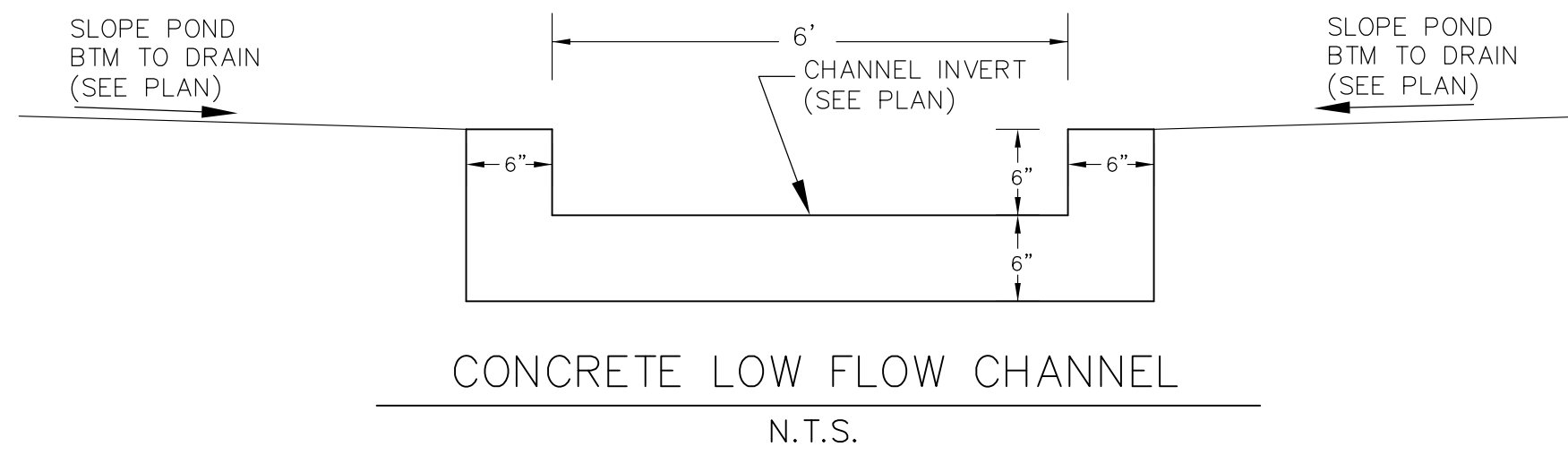
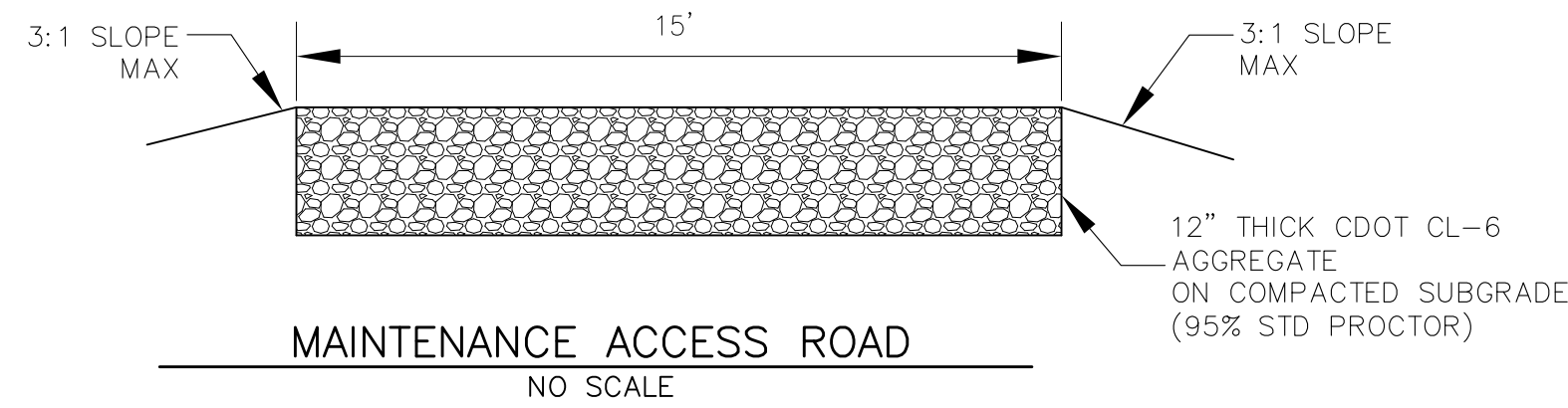
PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**POND C1**  
**FULL SPECTRUM**  
**OUTLET STRUCTURE DETAILS**



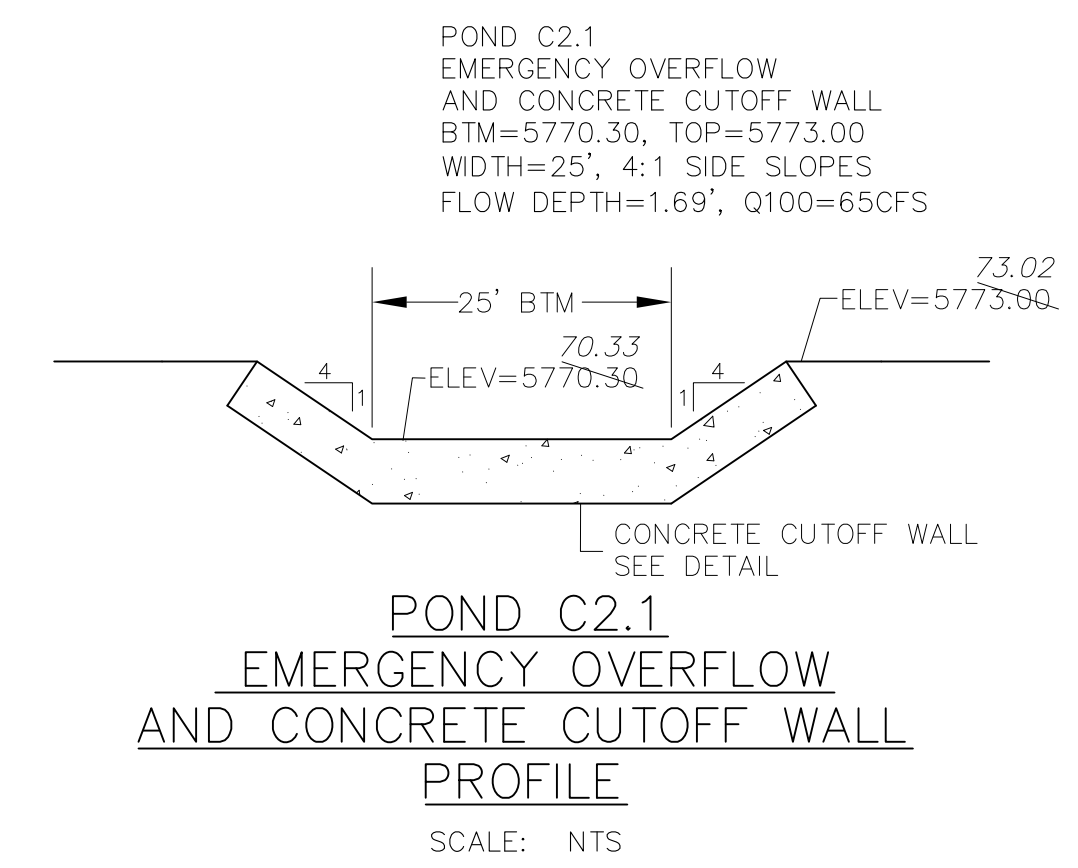
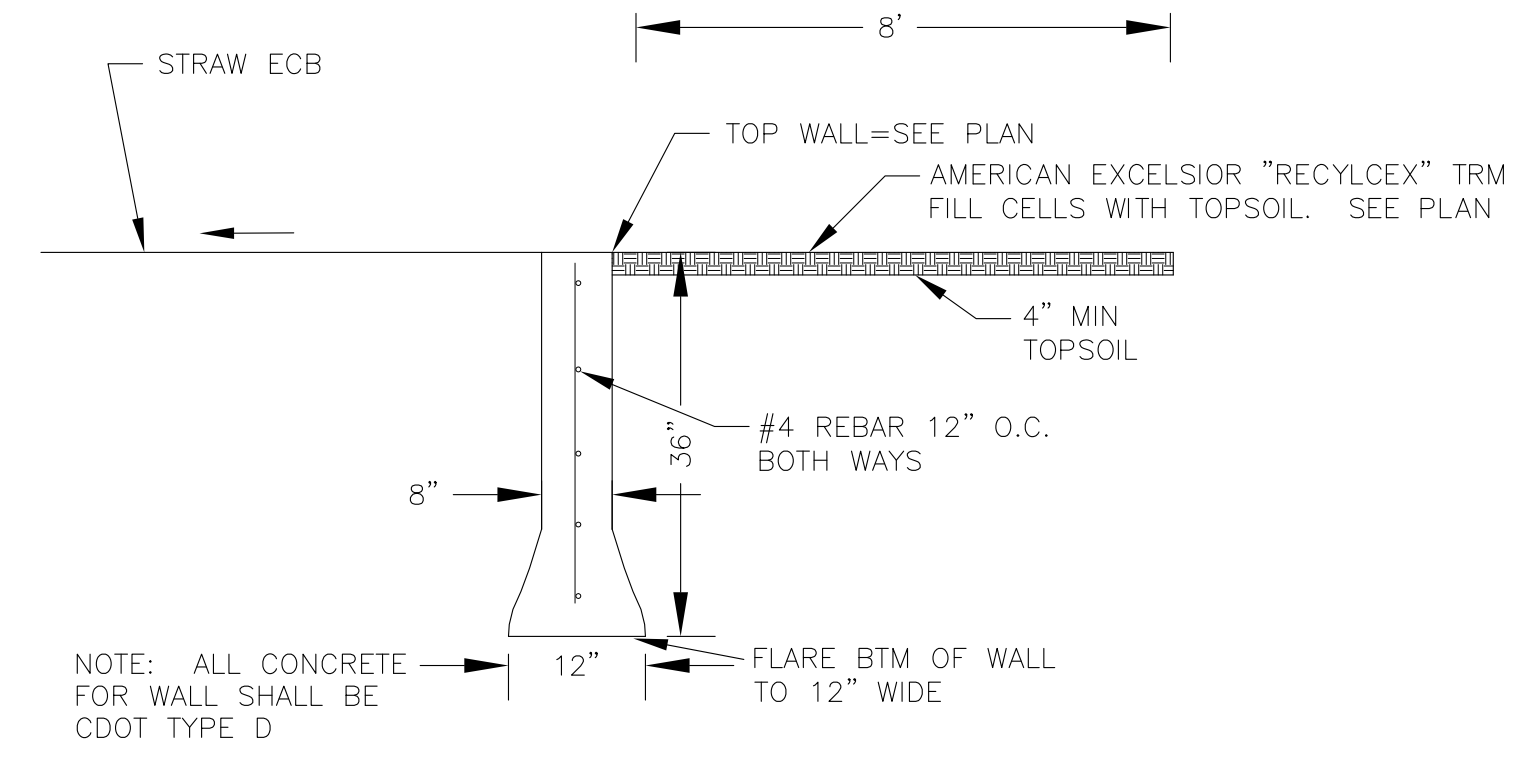
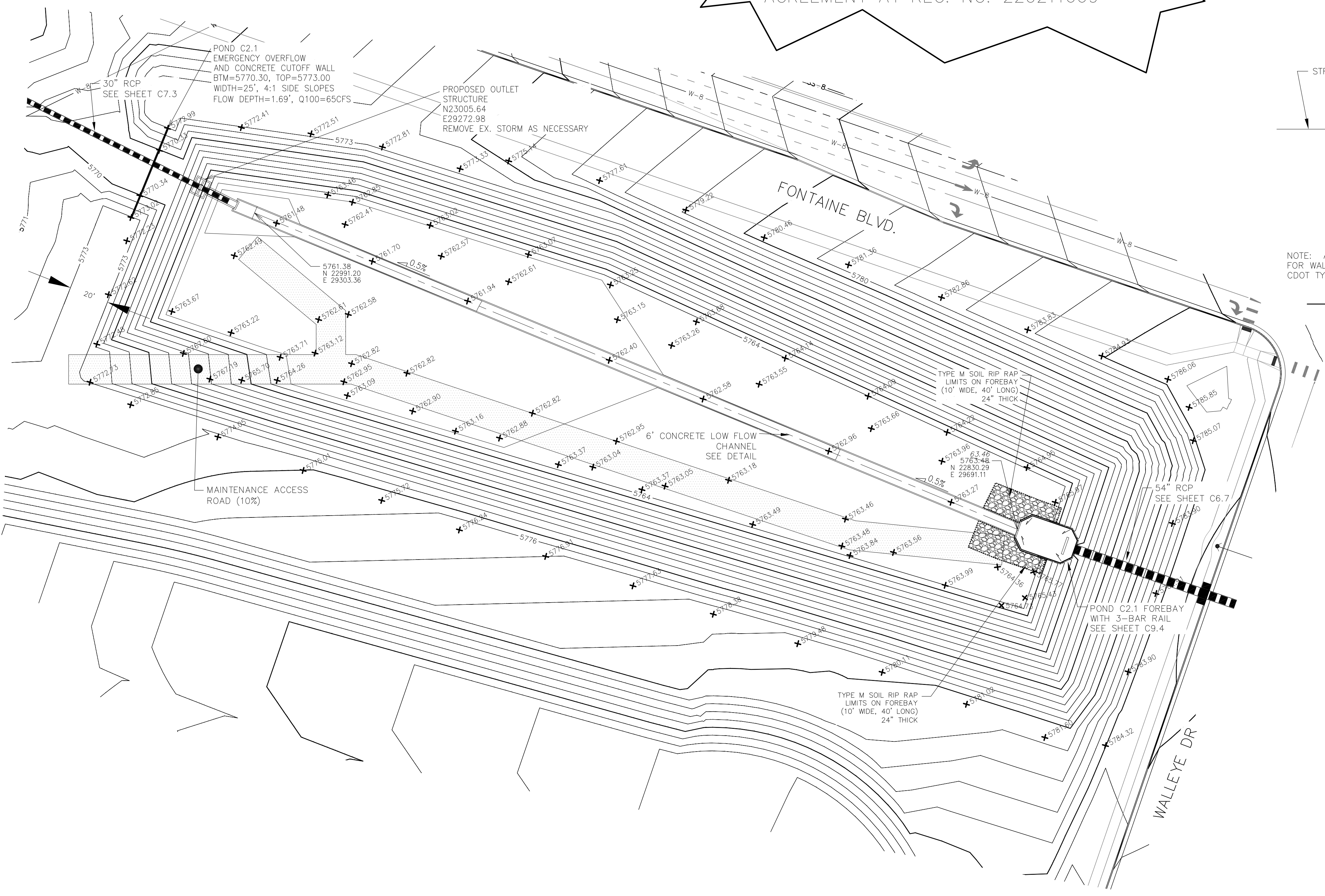
DATE: NOV 12, 2020  
PROJECT NO: 100.061  
SHEET NUMBER: C9.12  
TOTAL SHEETS: 58



LENGTH FOR RADII

A	= 1/2"
C	= 1-1/2"

POND C2.1 IS LOCATED IN TRACT G, THE HILLS AT LORSON RANCH FILING NO. 1. SEE MAINTENANCE AGREEMENT AT REC. NO. 220211669



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

DATE: JAN 12, 2021  
DESCRIPTION:  
NO. 1: RAISE SITE 1' EAST OF POWERLINES

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

PROJECT:  
**THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD - GRAYLING DR  
LORSON BLVD - WALLEVE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO

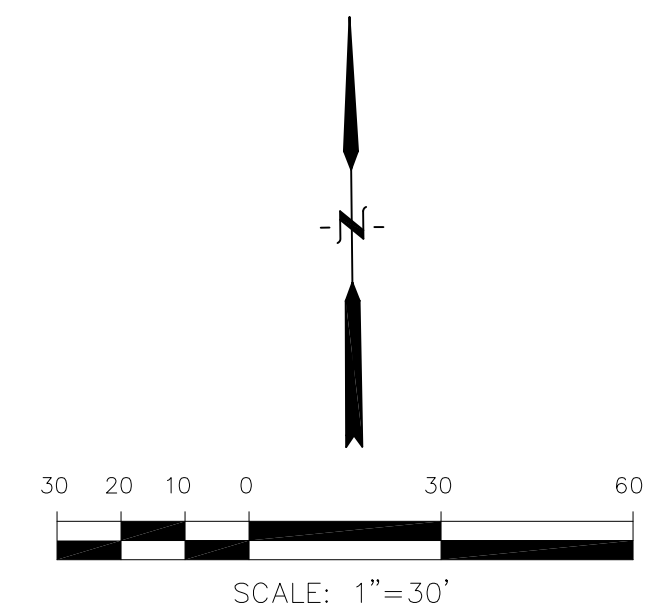
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DESIGNED: RLS  
CHECKED: RLS

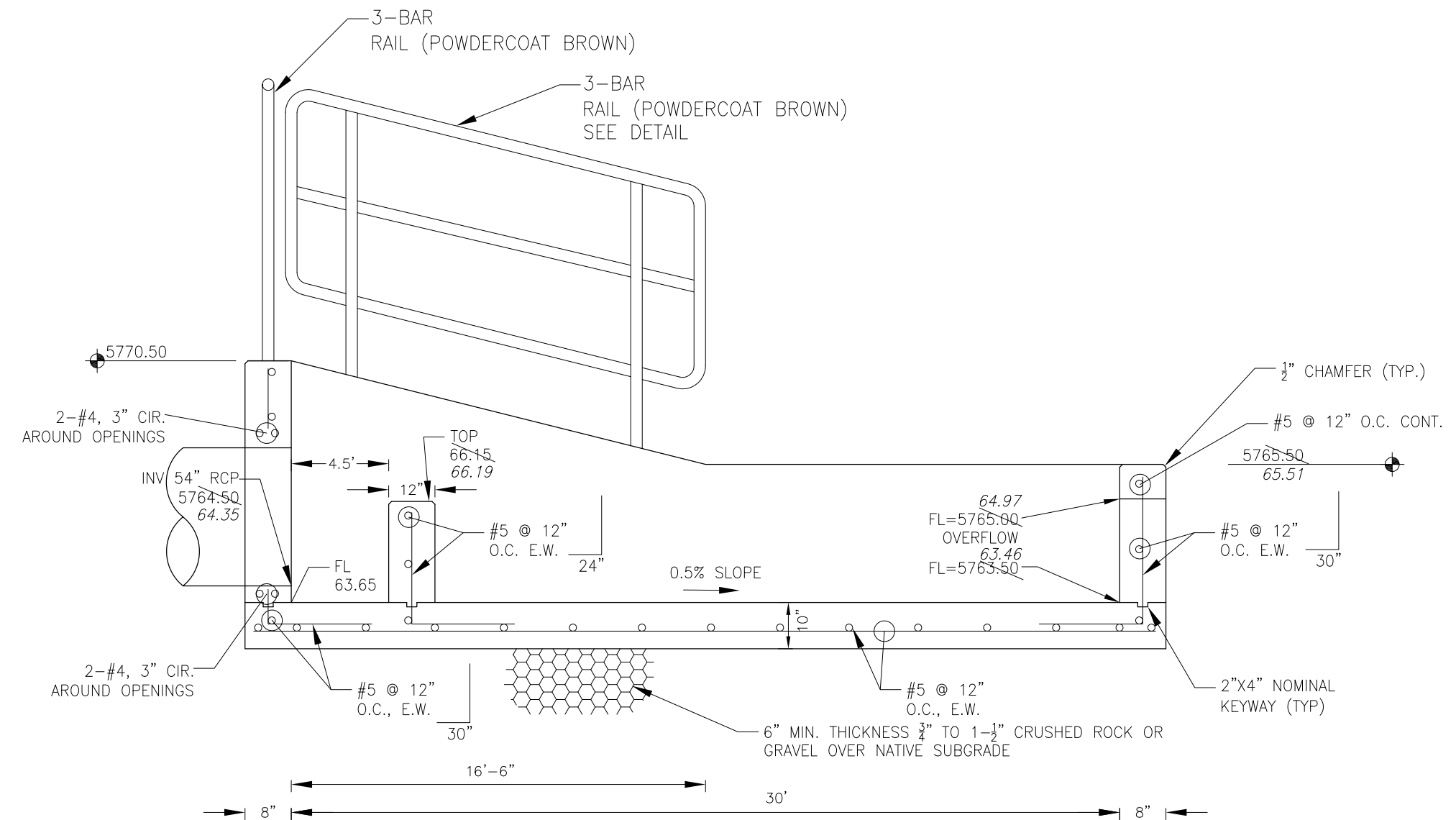
**POND C2.1 FOREBAY AND LOW FLOW CHANNEL LAYOUT**



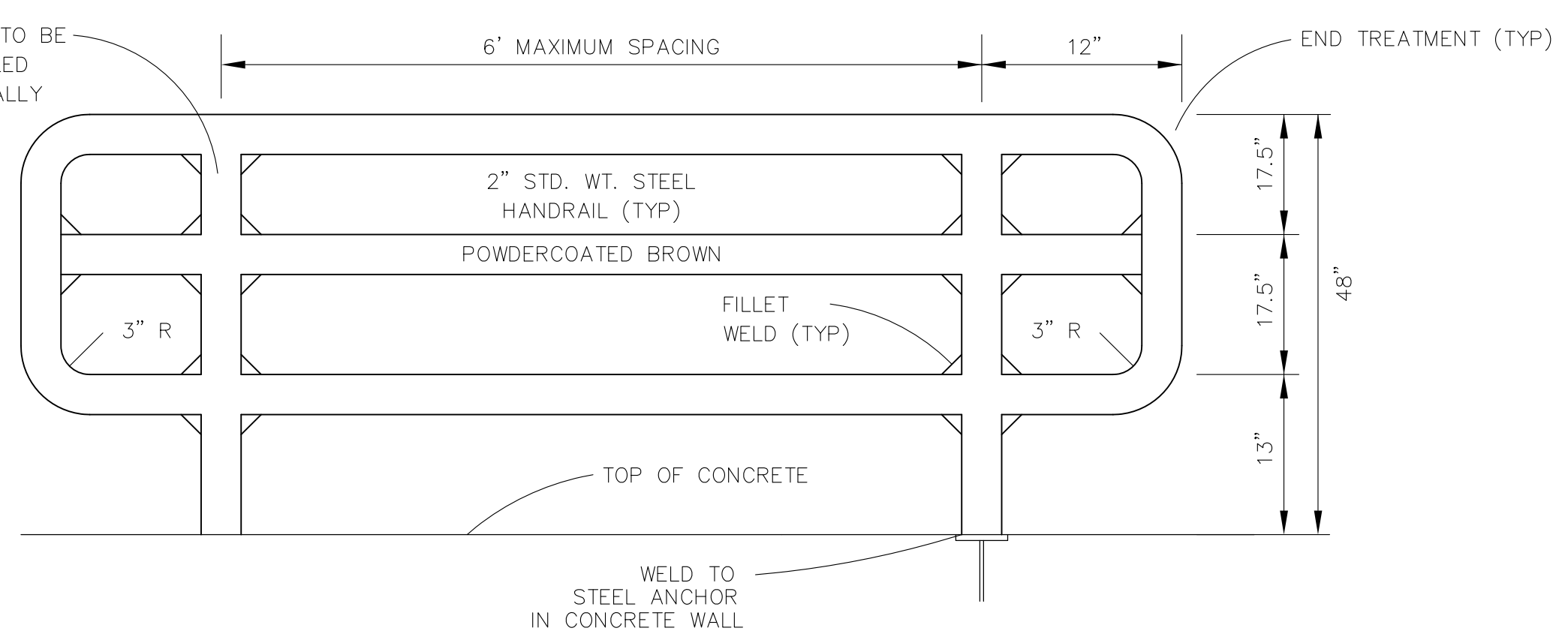
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PROJECT NO. 100.061  
SHEET NUMBER **C9.3**  
TOTAL SHEETS: 58

**AS-BUILT**  
DATE: 09/30/2022

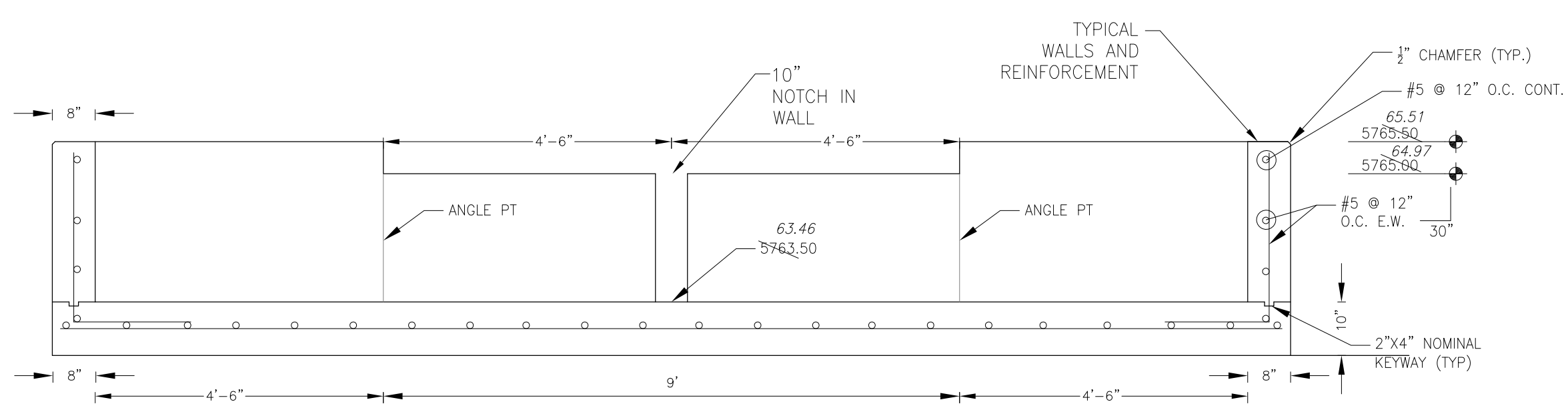




**FOREBAY SECTION A-A**  
NO SCALE

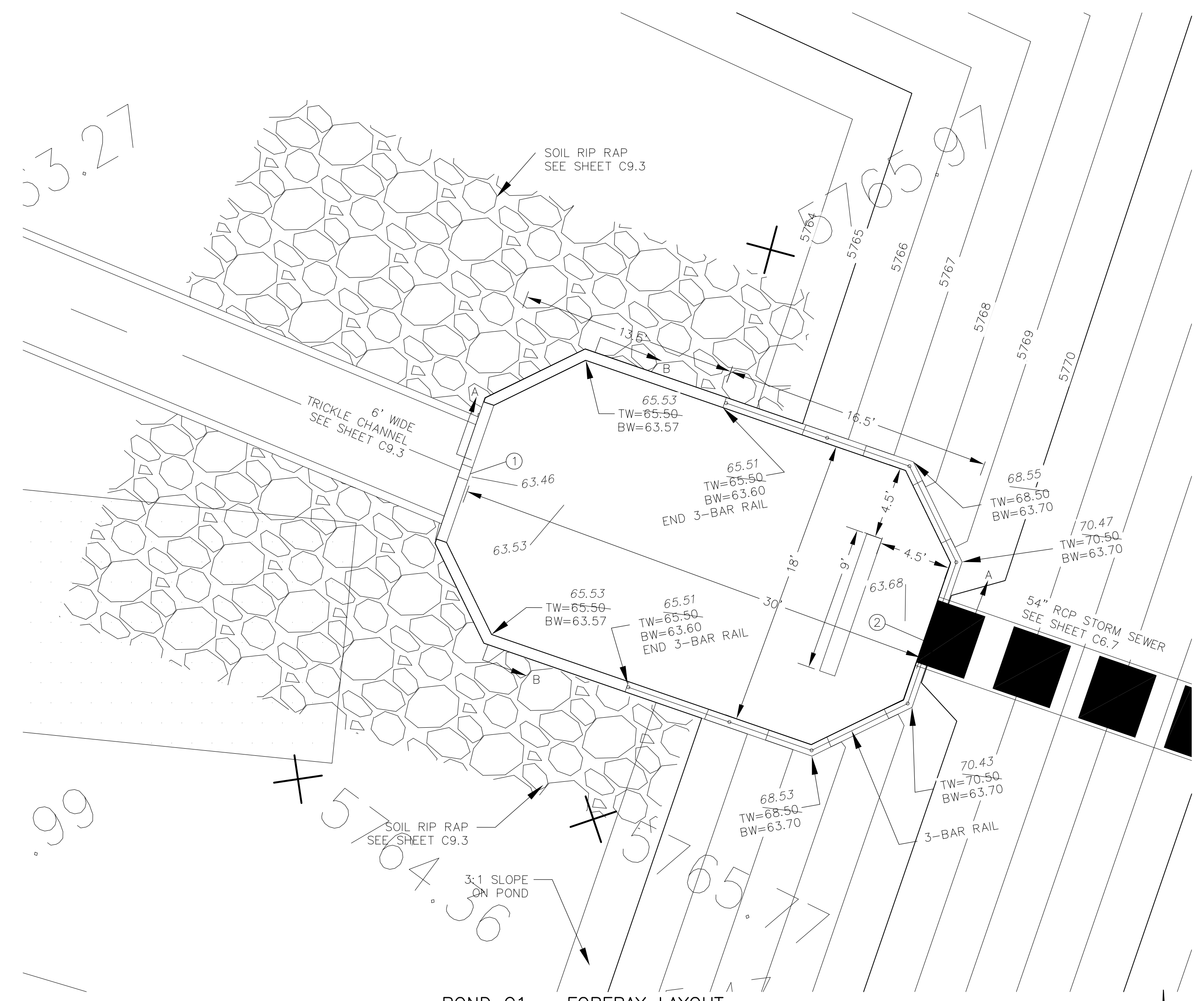


**3-BAR RAIL DETAIL**  
NO SCALE



**FOREBAY SECTION B-B**  
NO SCALE

NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D



**POND C1 - FOREBAY LAYOUT**  
SCALE: 1"=5'

POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	22830.08	29691.75	5763.50	FOREBAY BOTTOM
2	22820.31	29720.11	5763.65	FOREBAY BOTTOM, INV 54"=5764.50

**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: JAN 12, 2021  
DESCRIPTION: RAISE SITE 1' EAST OF POWERLINES  
NO. 1  
PROJECT: THE HILLS COLLECTOR STREET CONSTRUCTION  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

PREPARED FOR: LORSON, LLC  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**POND C2.1**  
**FOREBAY DETAILS**



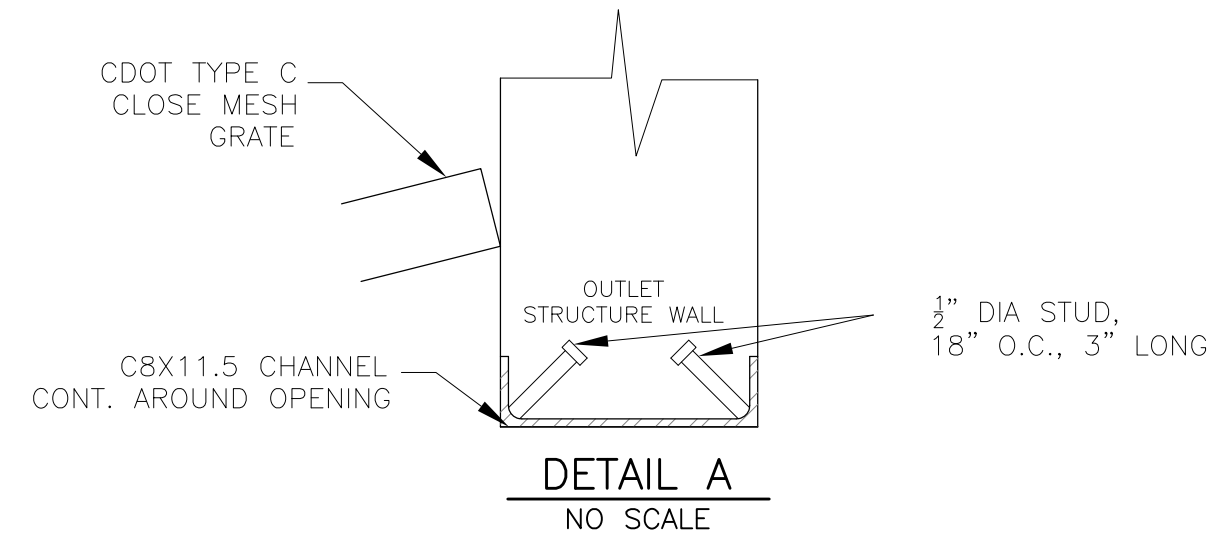
DATE: NOV 12, 2020

PROJECT NO. 100.061

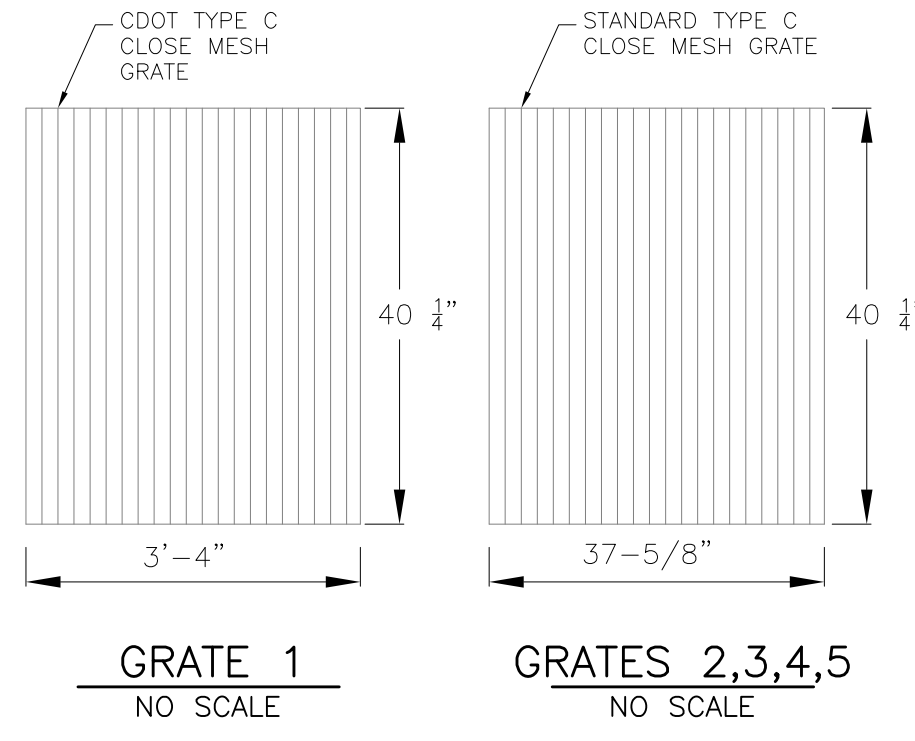
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TOTAL SHEETS: 58

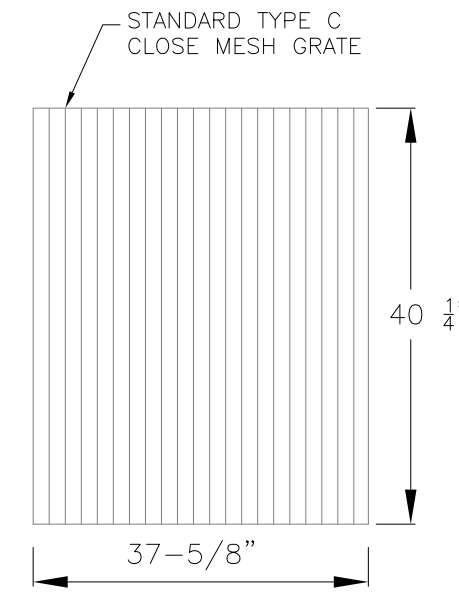
**AS-BUILT**  
DATE: 09/30/2022



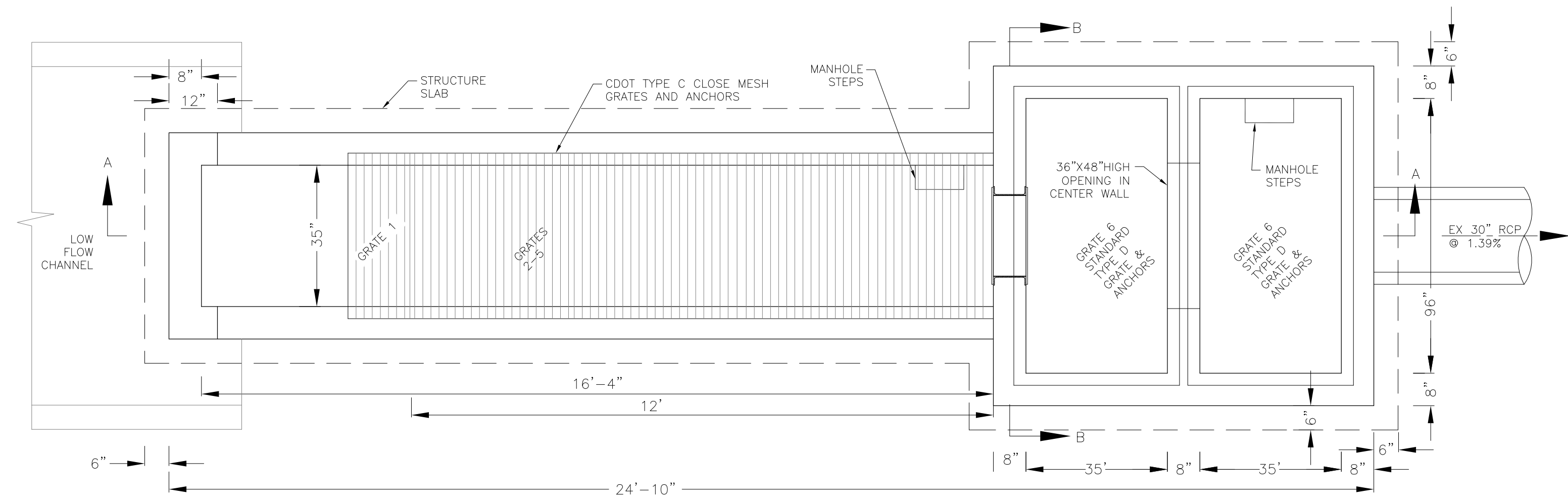
NOTE:  
AFTER CONCRETE STRUCTURE HAS BEEN POURED  
ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED  
PRIOR TO GRATE CONSTRUCTION



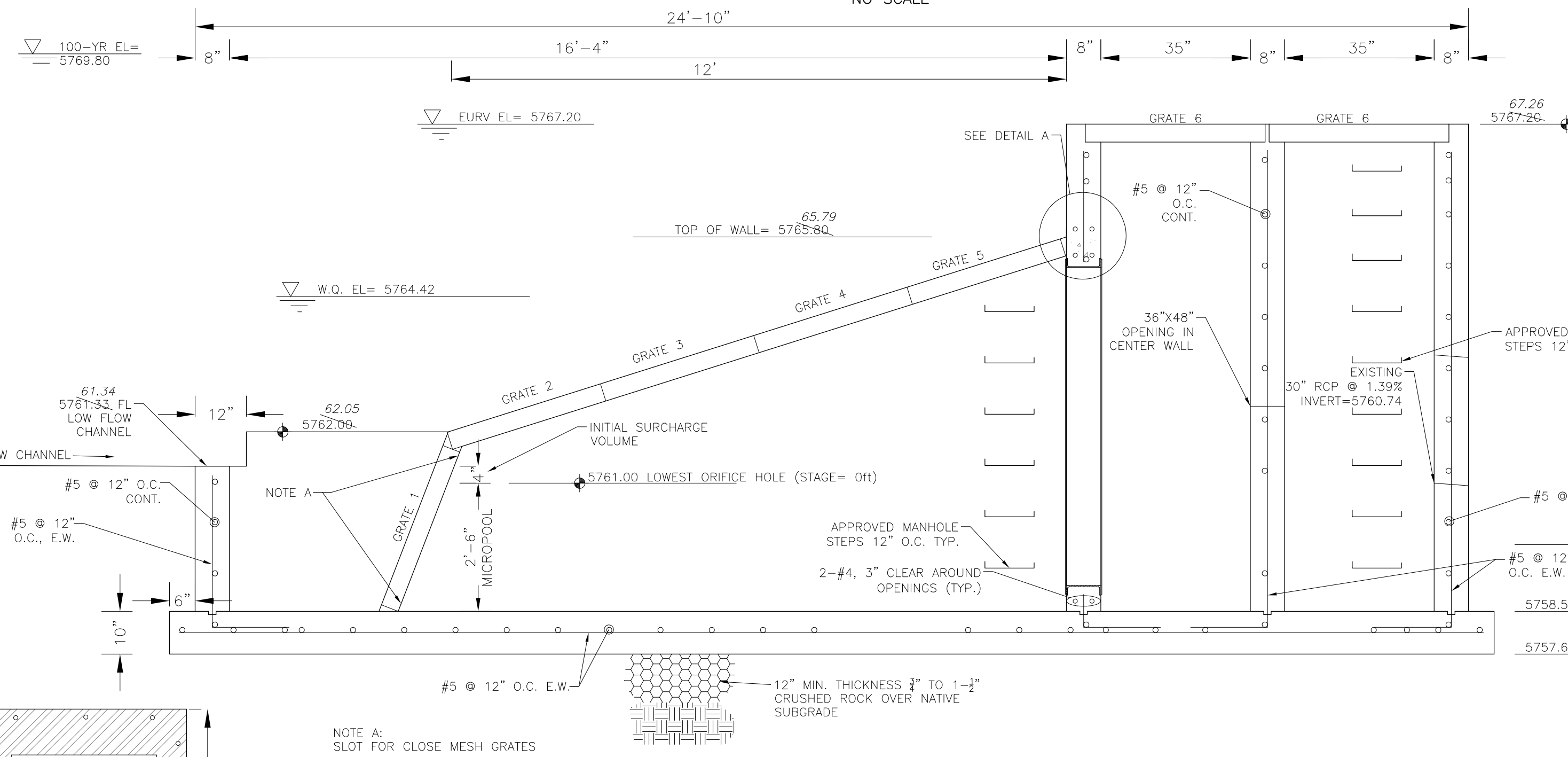
GRATE 1  
NO SCALE



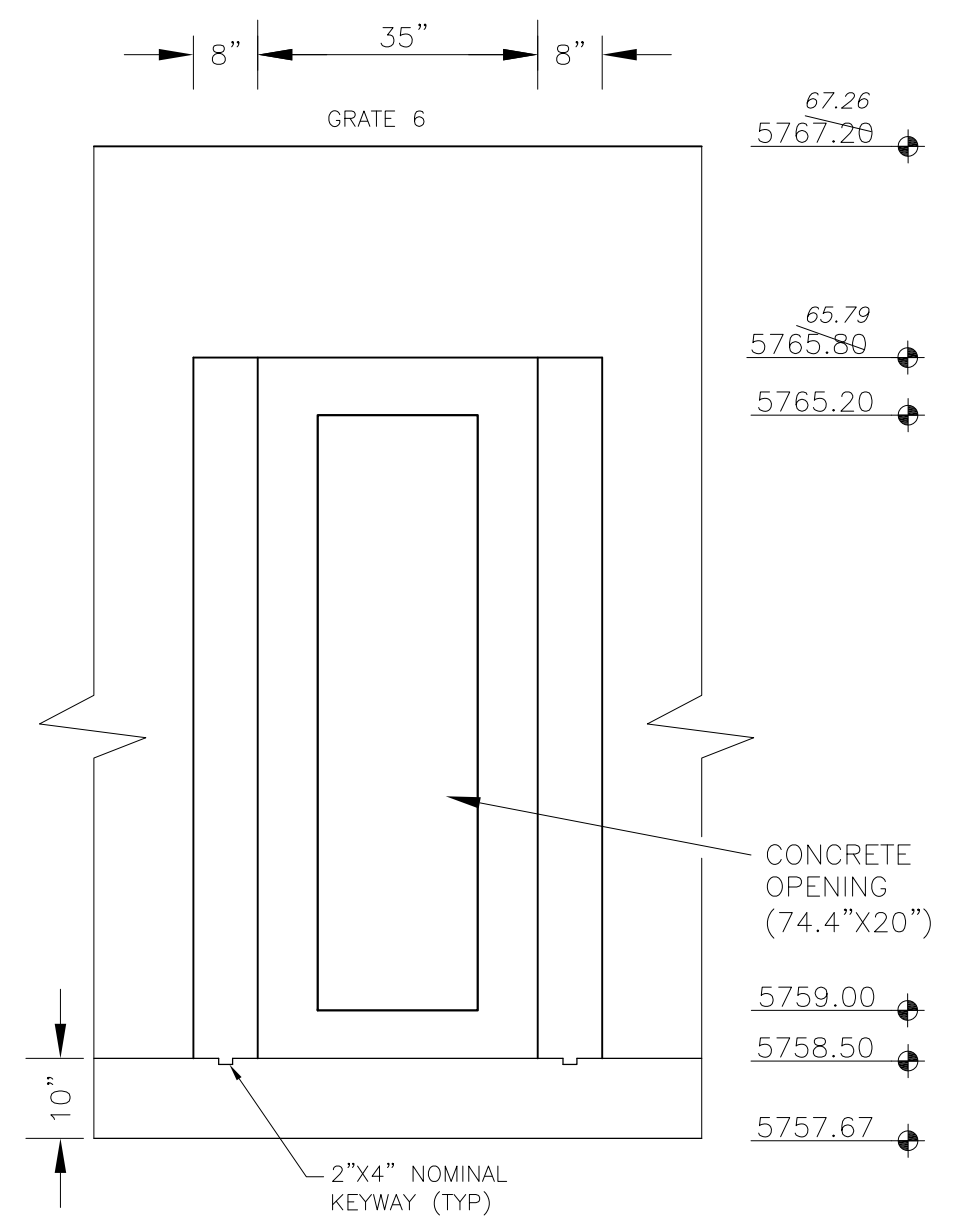
GRATES 2,3,4,5  
NO SCALE



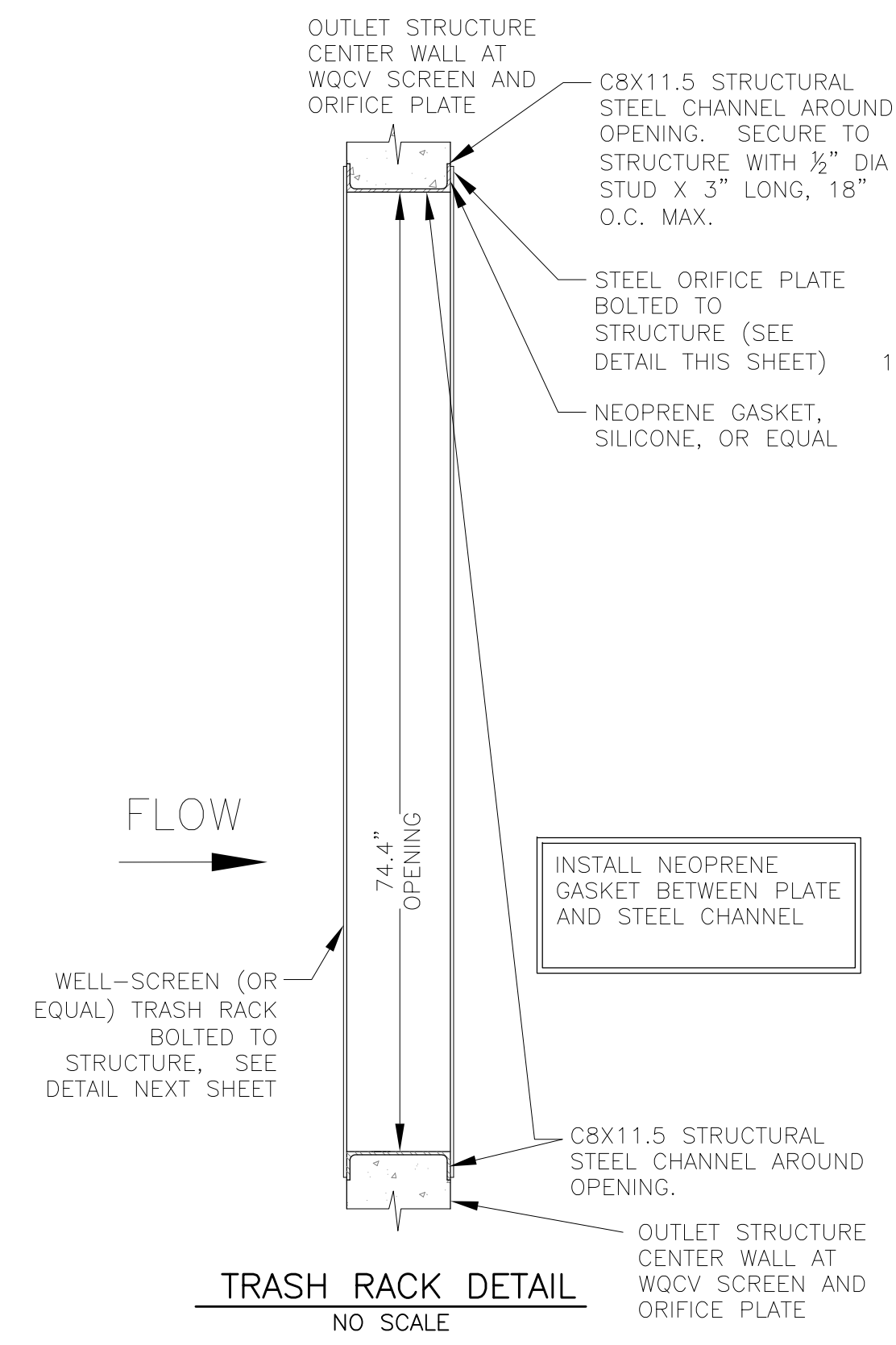
OUTLET STRUCTURE DETAIL - PLAN VIEW  
NO SCALE



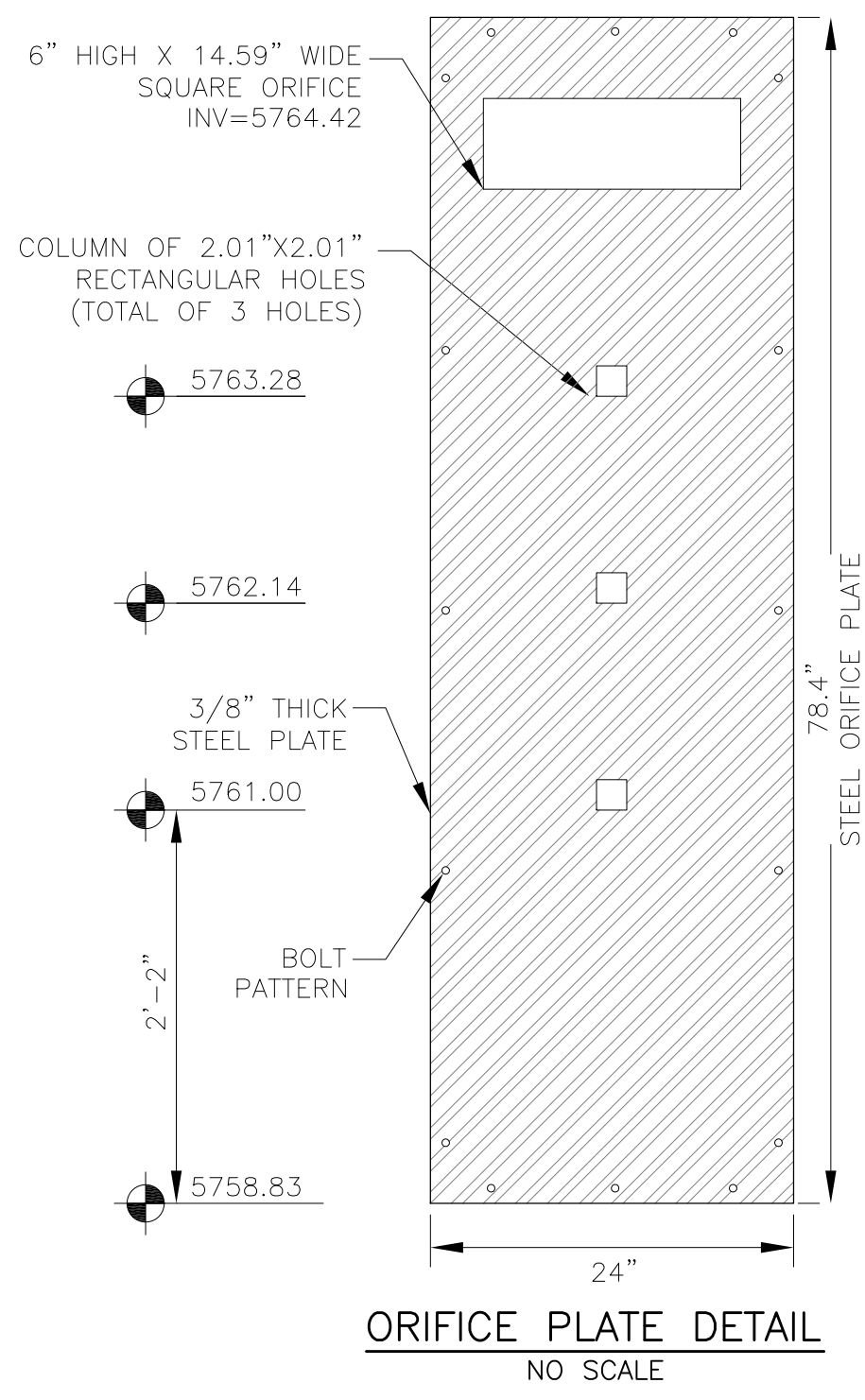
OUTLET STRUCTURE DETAIL - SECTION A-A  
NO SCALE



OUTLET STRUCTURE DETAIL - SECTION B-B  
NO SCALE



TRASH RACK DETAIL  
NO SCALE



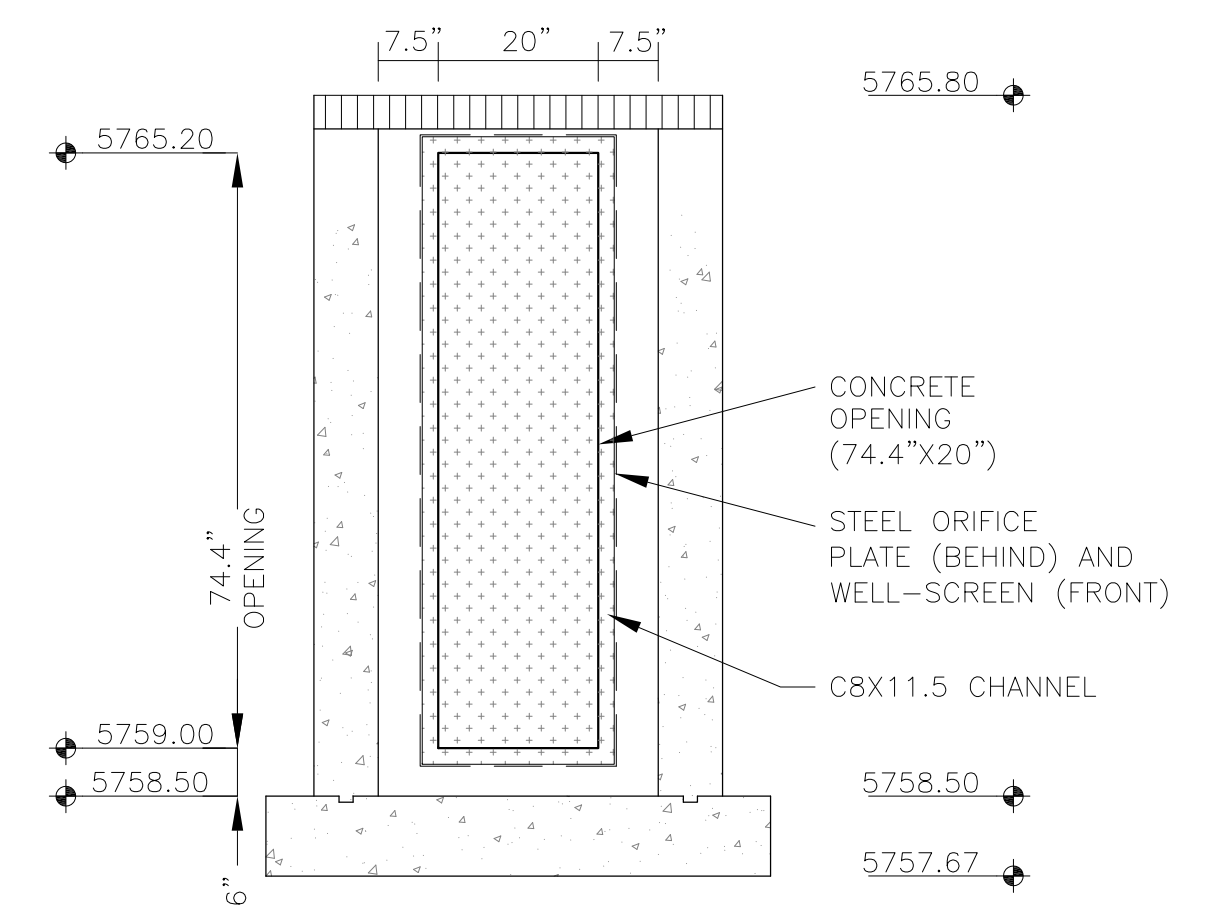
ORIFICE PLATE DETAIL  
NO SCALE

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 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 POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
  - ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

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



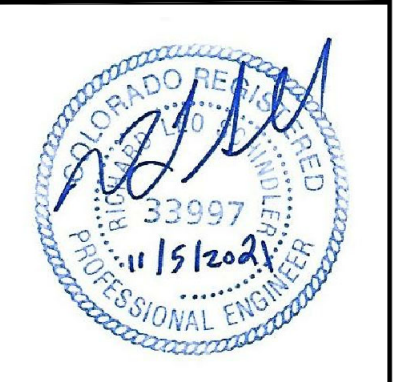
OUTLET STRUCTURE DETAIL - SECTION B-B  
NO SCALE

**CORE**  
**ENGINEERING GROUP**  
15004 1ST AVENUE S.  
DENVER, CO 80206  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cegi.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
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

**POND C2.1**  
**FULL SPECTRUM**  
**OUTLET STRUCTURE DETAILS**



DATE:  
NOV 5, 2021

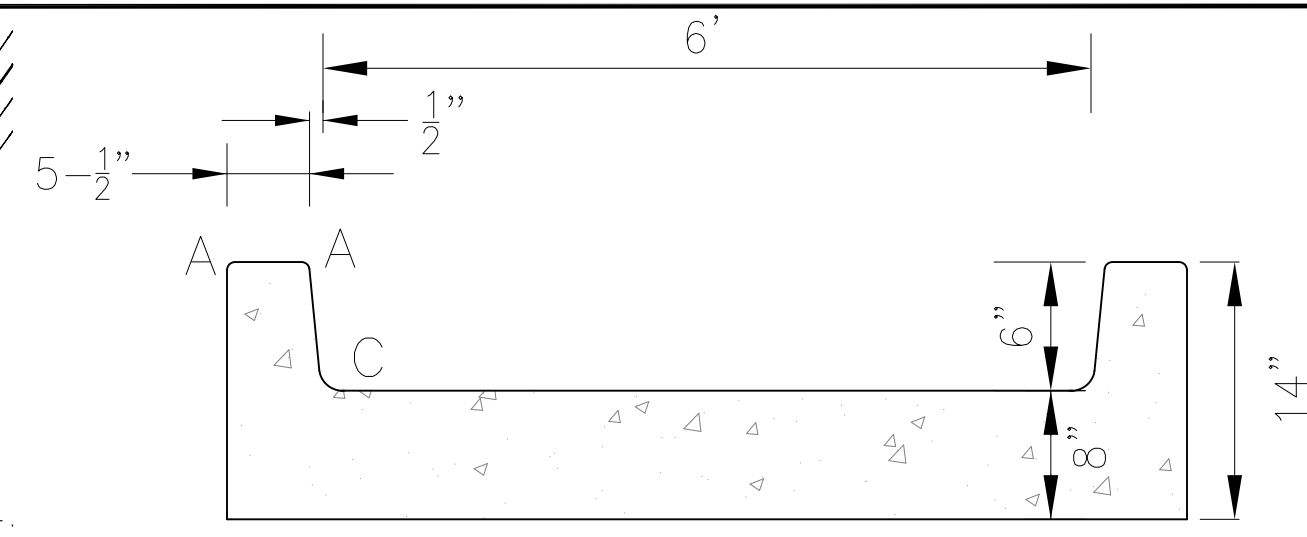
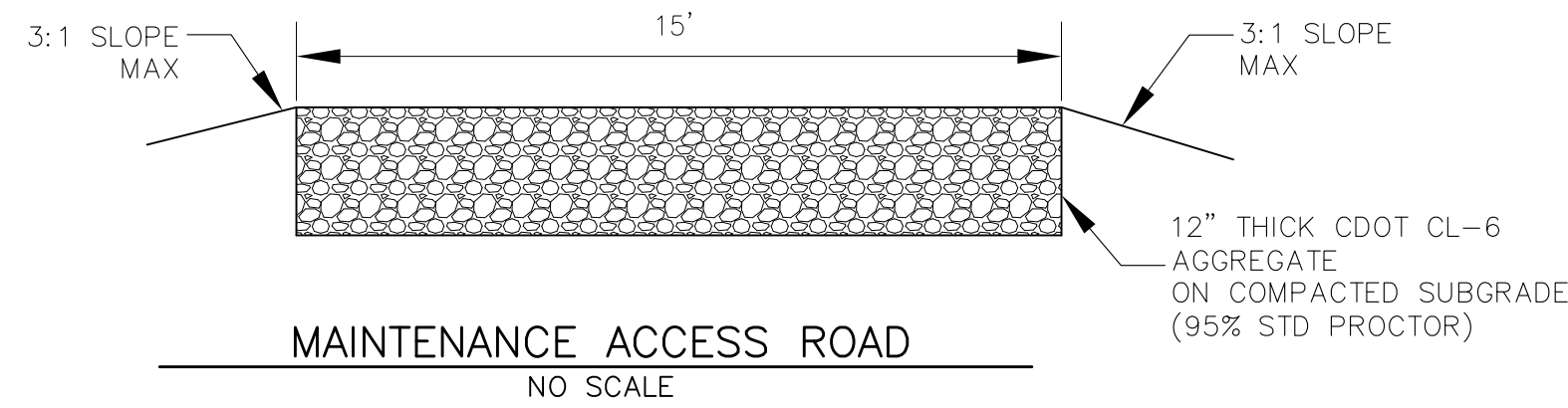
PROJECT NO.  
100.064

SHEET NUMBER  
**C9.4**

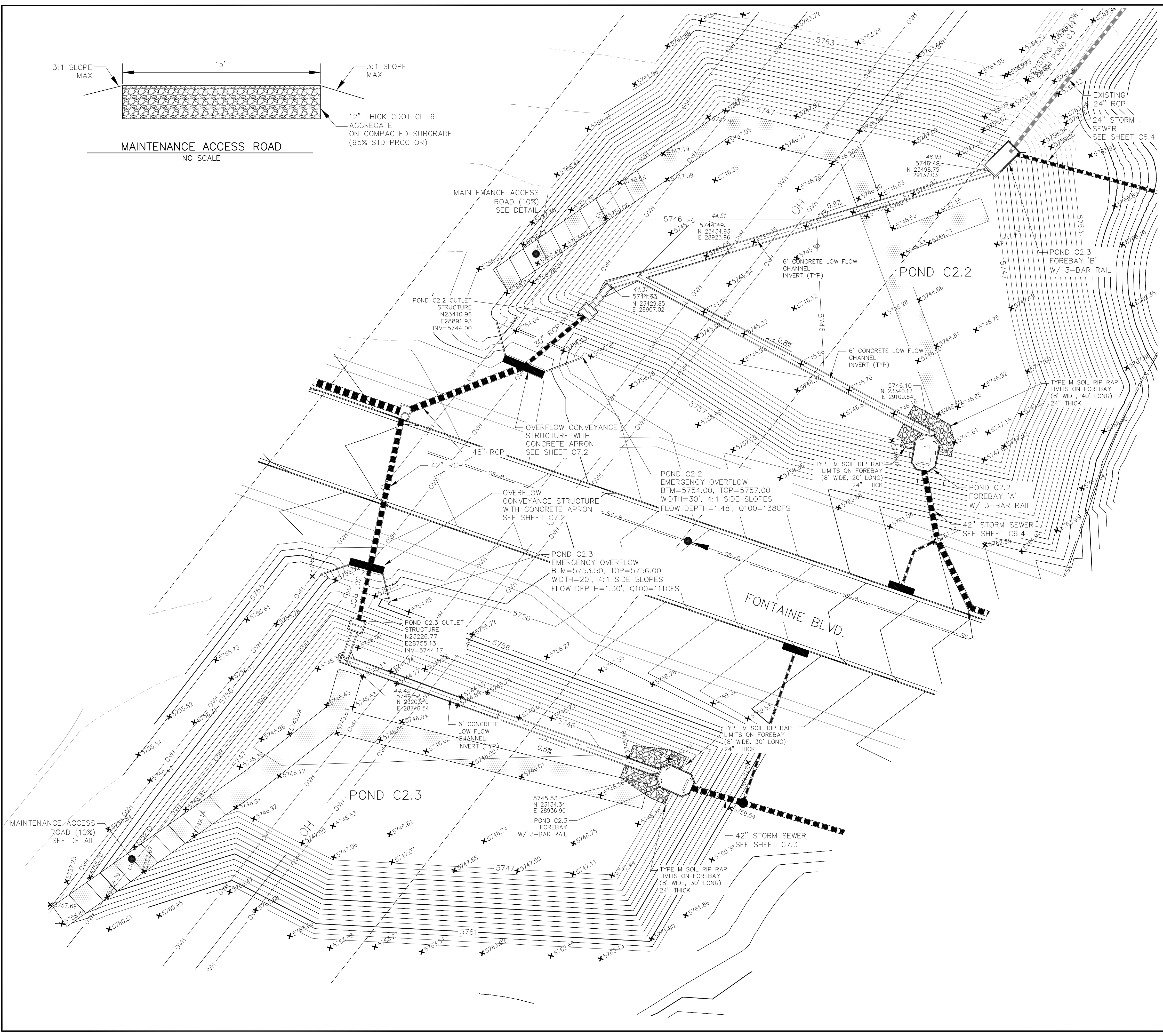
TOTAL SHEETS: 23

**AS-BUILT**  
DATE: 09/30/2022





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

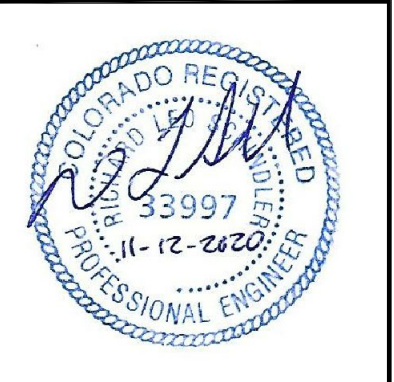


**CORE ENGINEERING GROUP**  
 15004 1ST AVE. SUITE 300  
 COLORADO SPRINGS, CO 80903  
 PH: 719.570.1100  
 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
 DESCRIPTION: \_\_\_\_\_  
 NO: \_\_\_\_\_  
 PREPARED FOR: **LORSON, LLC**  
 212 N. WAHSATCH AVE, SUITE 301  
 COLORADO SPRINGS, COLORADO 80903  
 (719) 635-3200  
 CONTACT: JEFF MARK

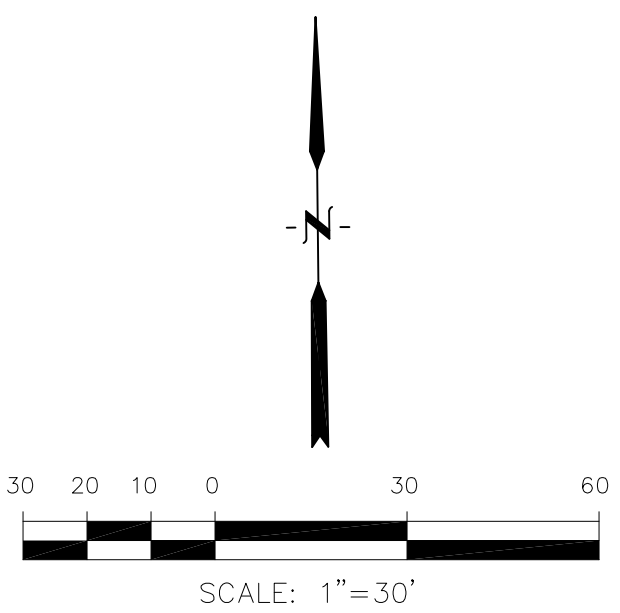
DRAWN: RLS  
 DESIGNED: RLS  
 CHECKED: RLS

**POND C2.2 & C2.3  
 FOREBAY, LOW FLOW CHANNEL  
 AND OUTLET STRUCTURE LAYOUT**

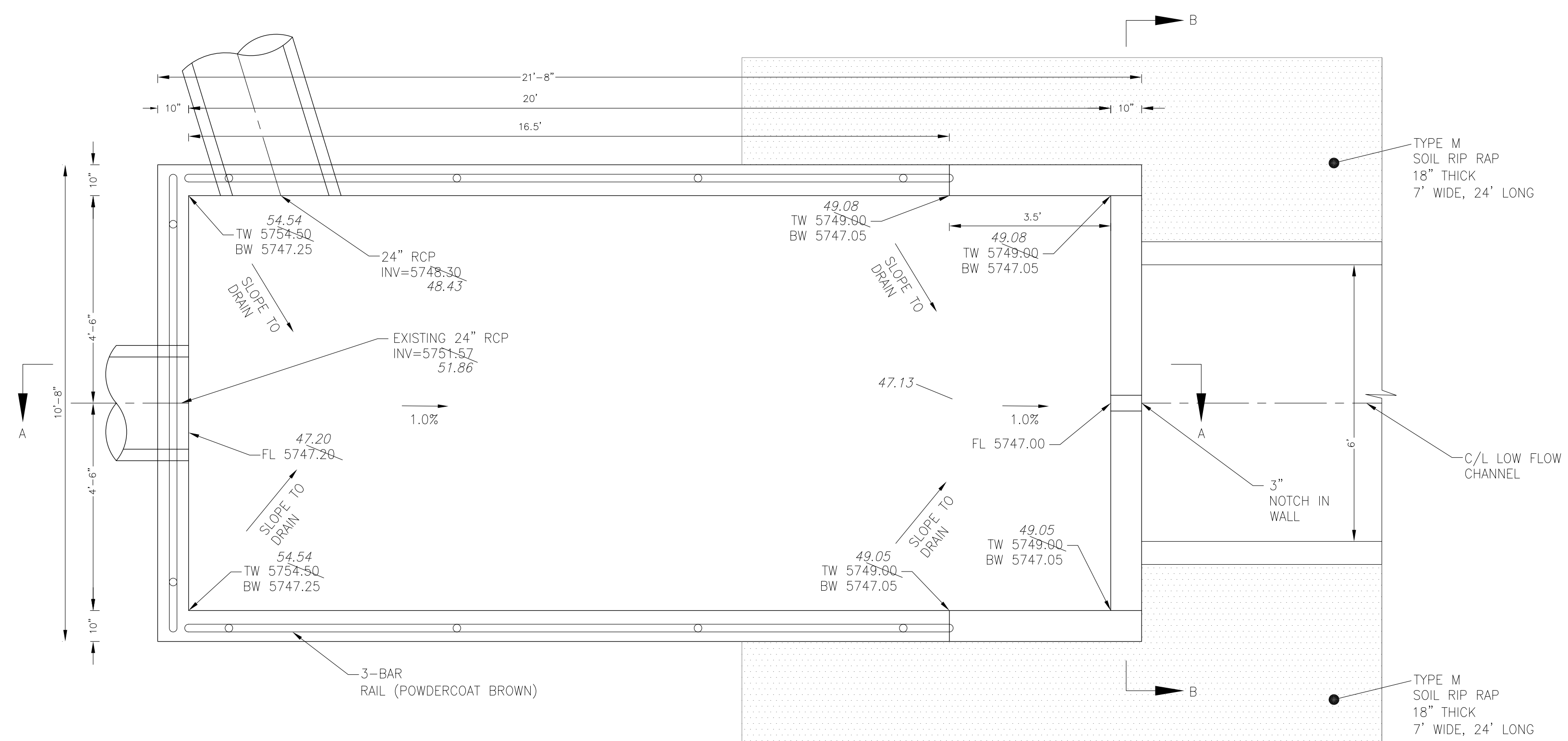
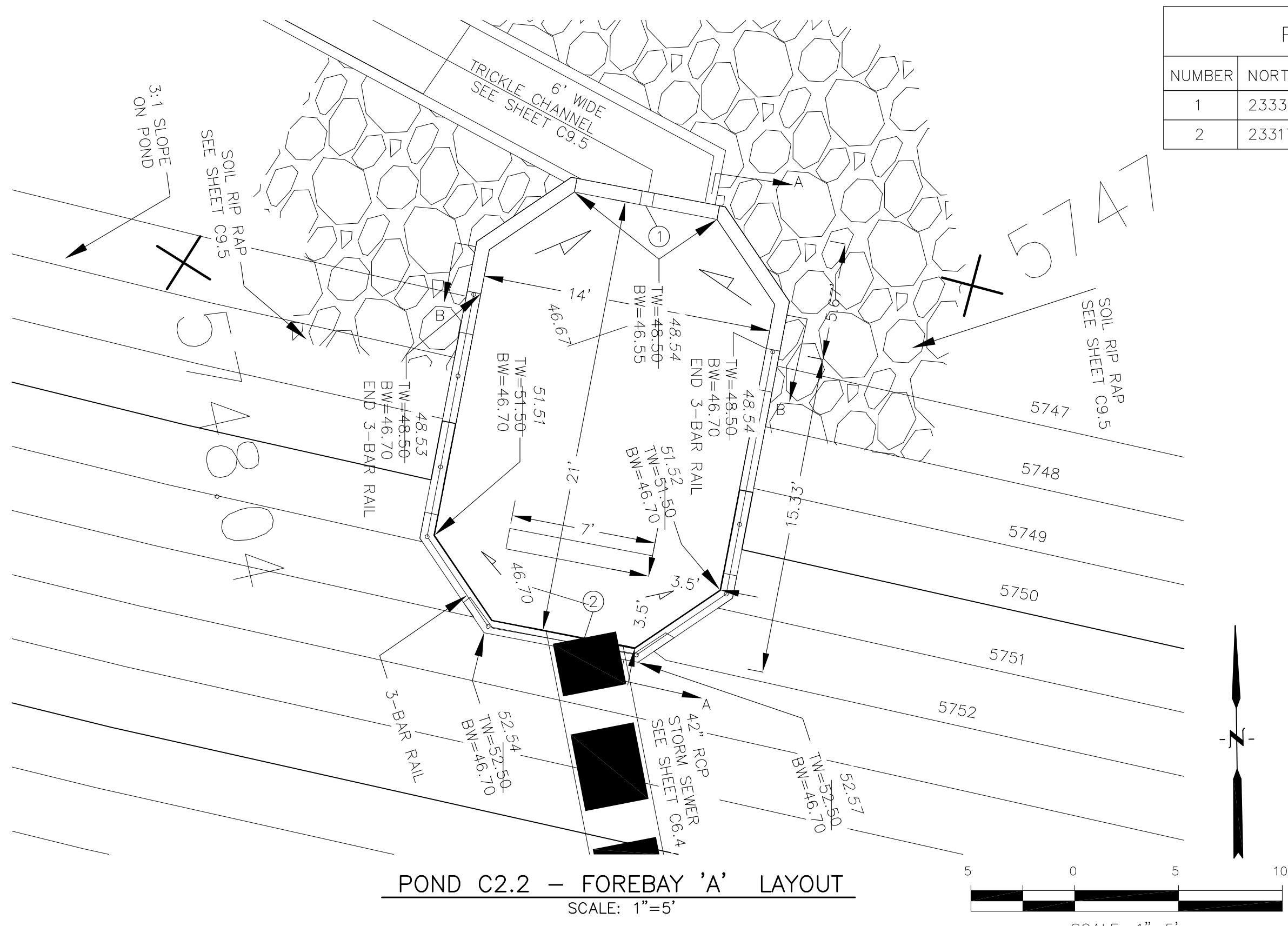


DATE: NOV 12, 2020  
 PROJECT NO. 100.061  
 SHEET NUMBER **C9.5**  
 TOTAL SHEETS: 58

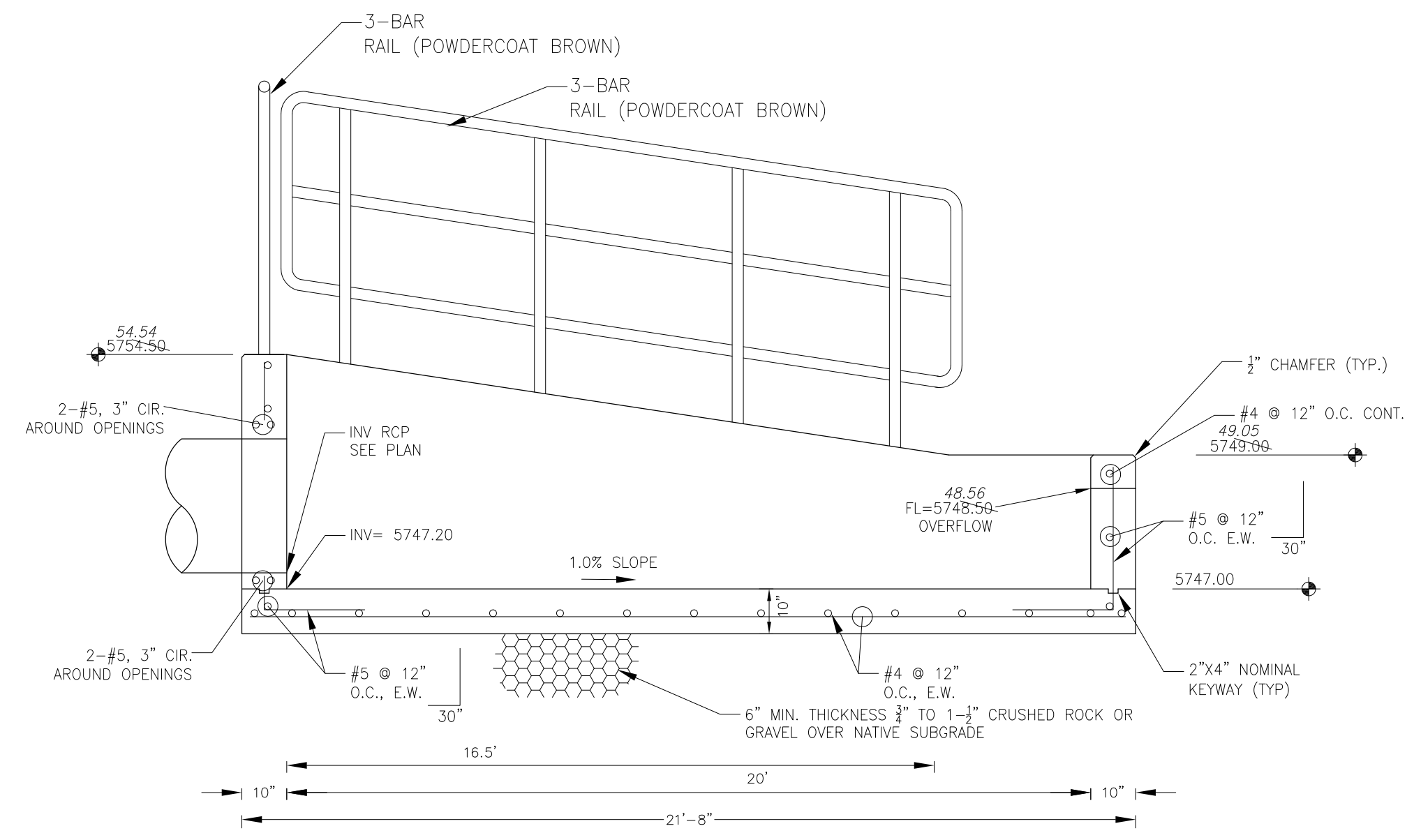
**AS-BUILT**  
 DATE: 09/30/2022



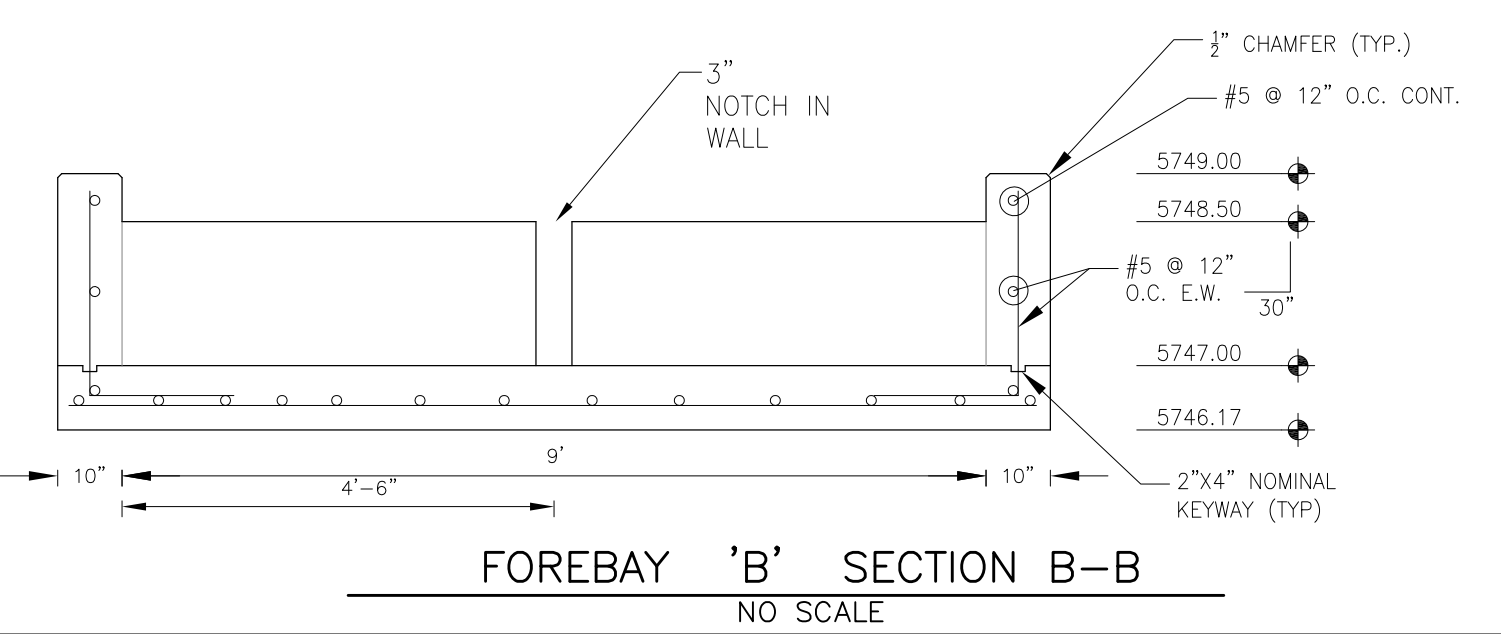
POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	23338.41	29100.32	5746.50	FOREBAY BOTTOM
2	23317.59	29097.36	5746.62	FOREBAY BOTTOM, INV 42"=5747.70



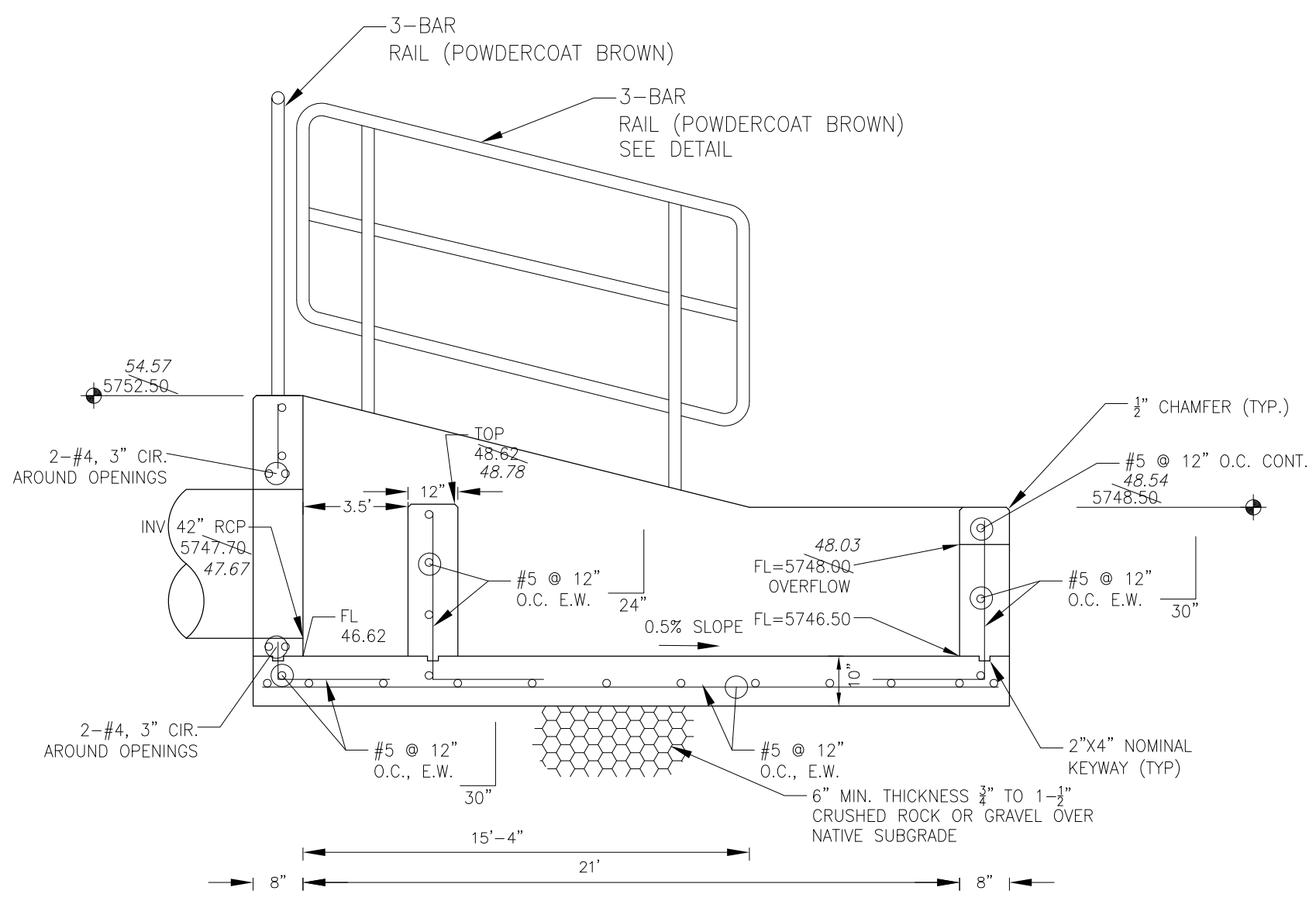
POND C2.2 - FOREBAY 'B' LAYOUT  
NO SCALE



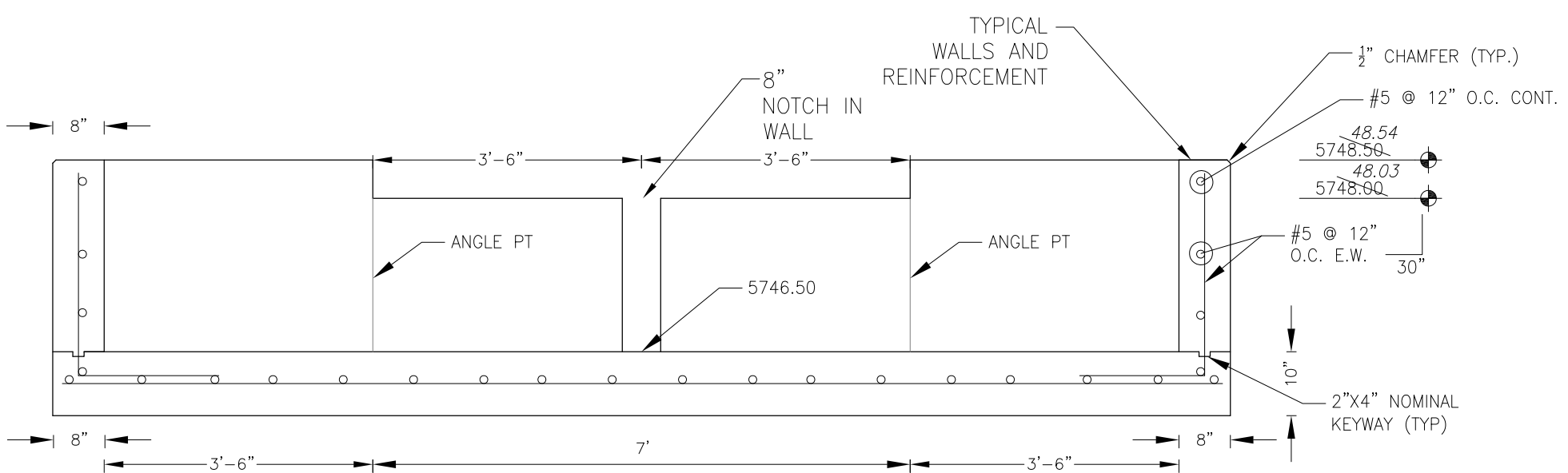
FOREBAY 'B' SECTION A-A  
NO SCALE



FOREBAY 'B' SECTION B-B  
NO SCALE



FOREBAY 'A' SECTION A-A  
NO SCALE



FOREBAY 'A' SECTION B-B  
NO SCALE

NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D

**CORE ENGINEERING GROUP**  
15004 151<sup>ST</sup> AVENUE, S.  
DENVER, CO 80232  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cegi.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
PREPARED FOR: **LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

POND C2.2  
FOREBAY DETAILS

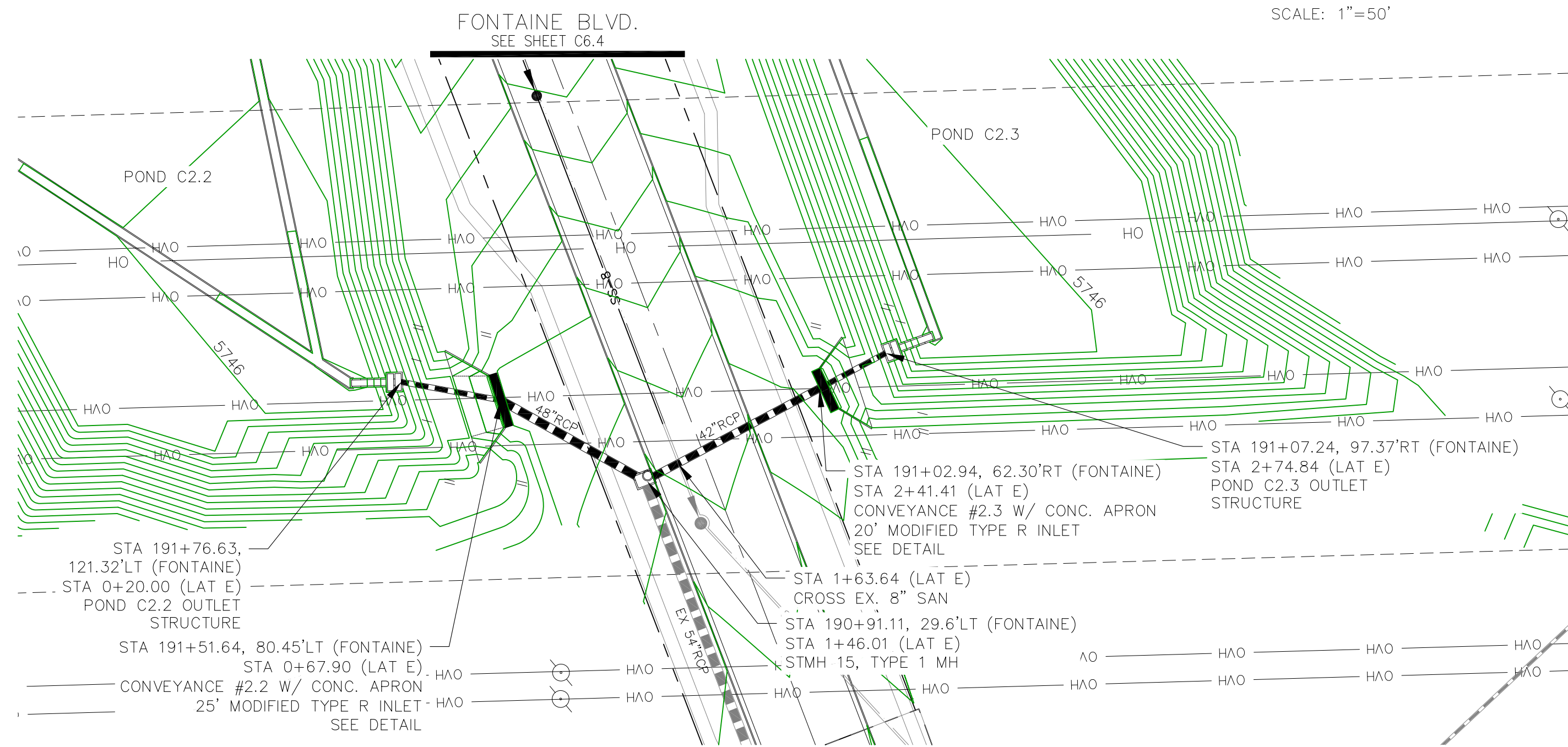
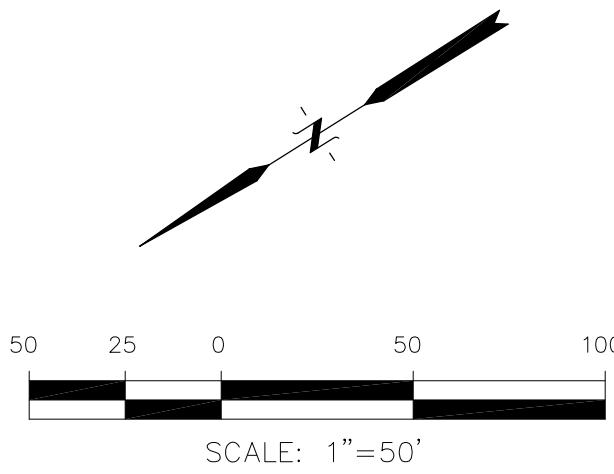


DATE: NOV 12, 2020  
PROJECT NO: 100.061  
SHEET NUMBER: C9.6  
TOTAL SHEETS: 58

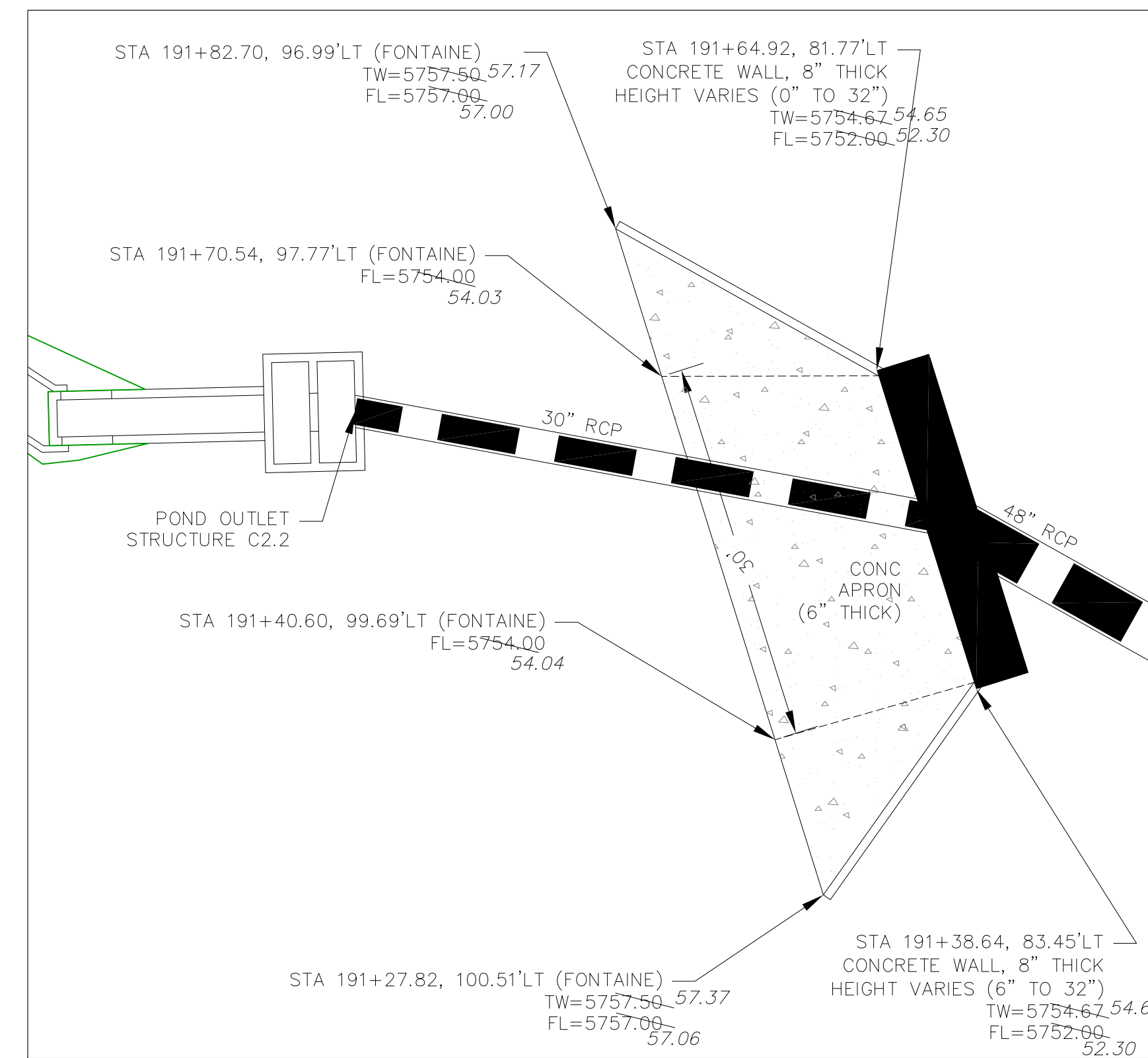
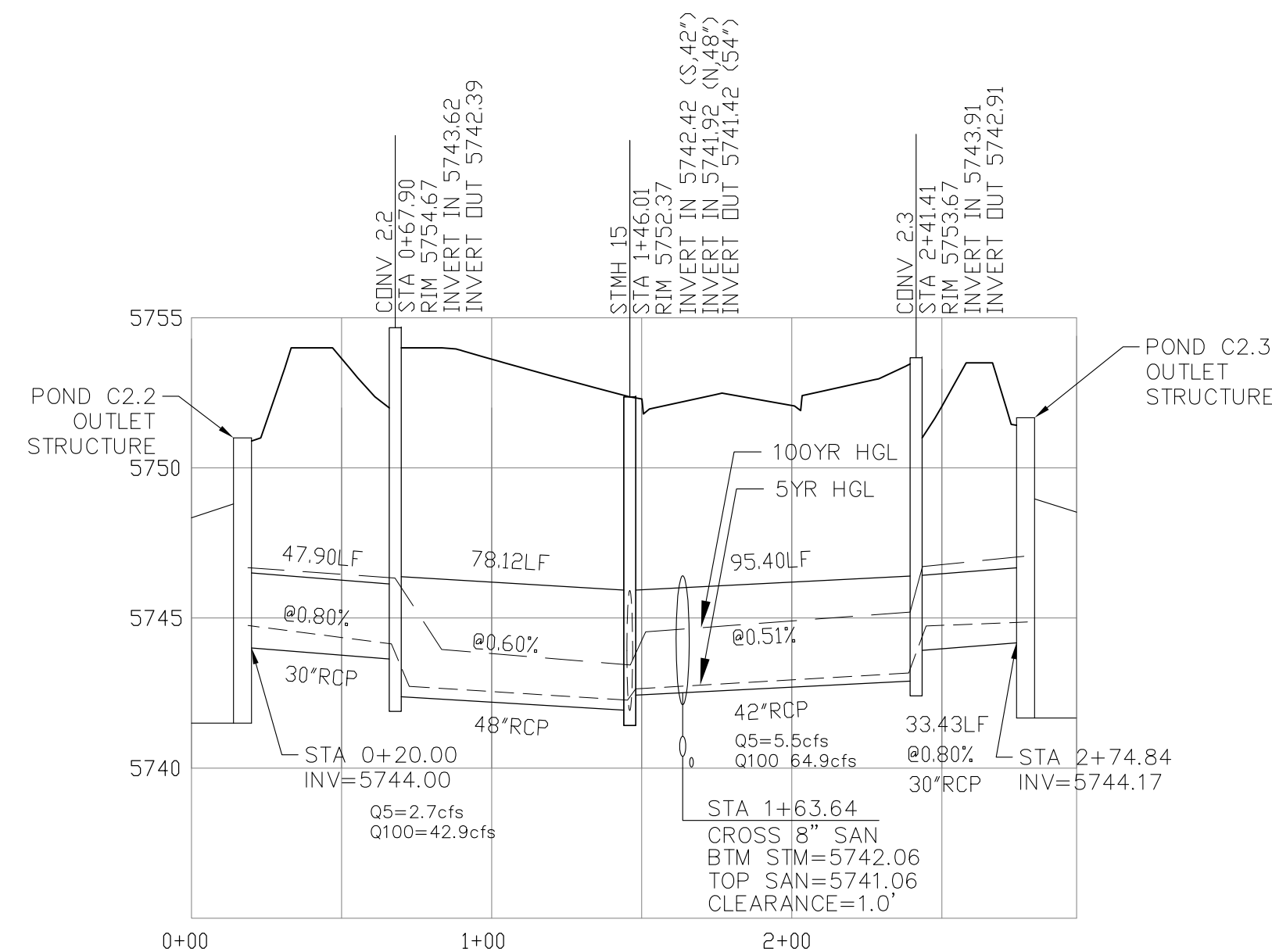
**AS-BUILT**  
DATE: 09/30/2022

- NOTES**
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
  3. ALL STORM SEWER SHALL BE CLASS III RCP.
  4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- 1 CURVE DATA ID
- 2 PEDESTRIAN RAMP, SEE SHEET C10.1
- 3 CURB/GUTTER FLOW LINE POINTS

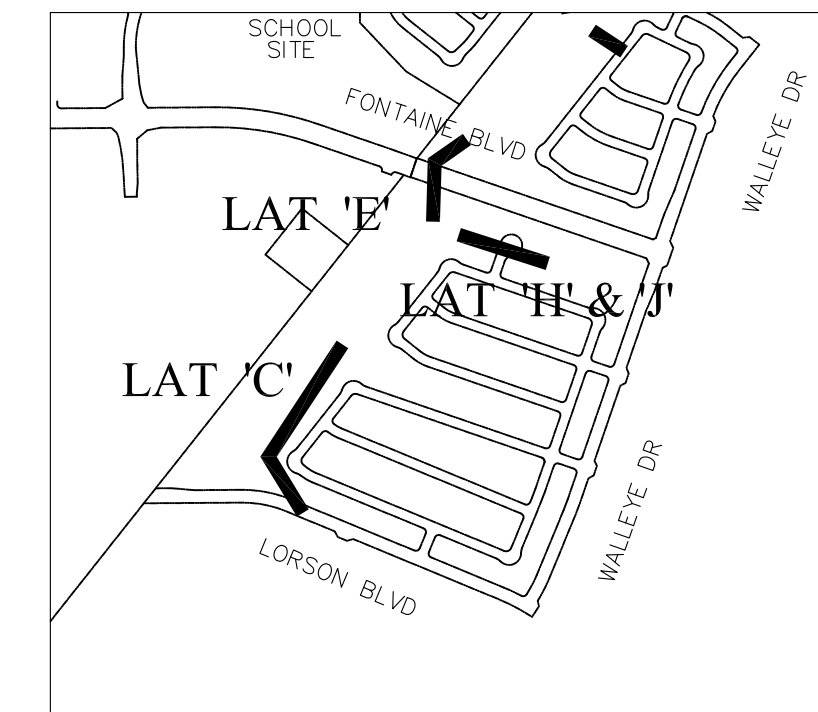


**STORM LATERAL 'E'**



**CONVEYANCE STRUCTURE #2.2**

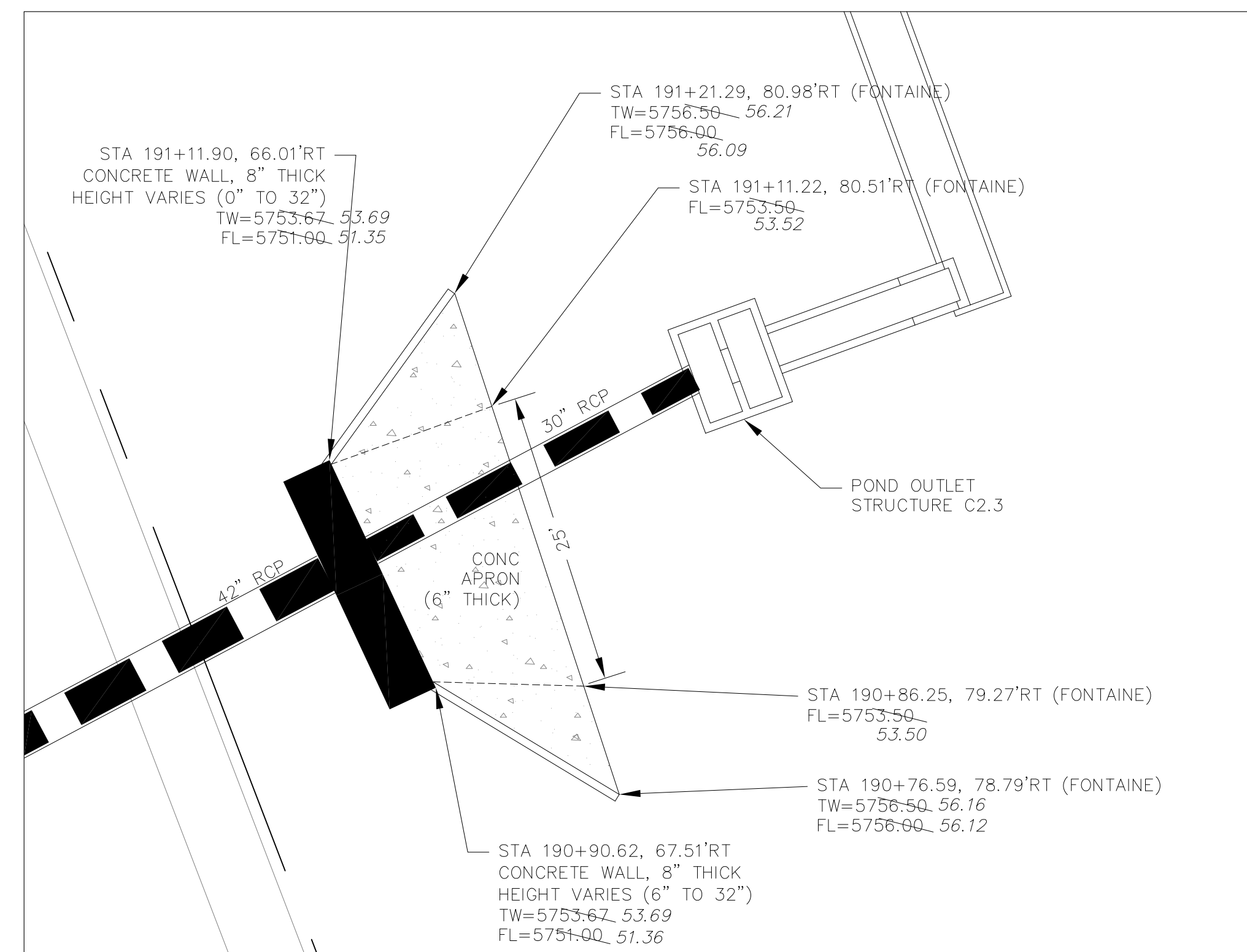
SCALE: 1"=10'



**KEY MAP**

**CONVEYANCE STRUCTURE #2.2 NOTES:**

1. 25' CDOT TYPE R INLET WITH MODIFIED THROAT OPENING
2. THROAT OPENING = 24"
3. EXTEND 1.25" GALVANIZED STEEL ROD SUPPORTS (TYPE R INLET) TO ACCOMMODATE 24" THROAT OPENING
4. CONCRETE APRON TO BE REINFORCED WITH NO. 4 REBAR, 24" O.C. BOTH WAYS. REBAR TO EXTEND INTO CONCRETE WALL W/ NO. 4 "L" BARS, 18" O.C.
5. CONCRETE WALLS SHALL HAVE A MINIMUM OF TWO HORIZONTAL NO. 4 BARS
6. 24" THROAT OPENING TO INCLUDE SAFETY GRATE.



**CONVEYANCE STRUCTURE #2.3**

SCALE: 1"=10'

**CONVEYANCE STRUCTURE #2.3 NOTES:**

1. 20' CDOT TYPE R INLET WITH MODIFIED THROAT OPENING
2. THROAT OPENING = 24"
3. EXTEND 1.25" GALVANIZED STEEL ROD SUPPORTS (TYPE R INLET) TO ACCOMMODATE 24" THROAT OPENING
4. CONCRETE APRON TO BE REINFORCED WITH NO. 4 REBAR, 24" O.C. BOTH WAYS. REBAR TO EXTEND INTO CONCRETE WALL W/ NO. 4 "L" BARS.
5. CONCRETE WALLS SHALL HAVE A MINIMUM OF TWO HORIZONTAL NO. 4 BARS
6. 24" THROAT OPENING TO INCLUDE SAFETY GRATE.

**AS-BUILT**  
DATE: 09/30/2022

**CORE ENGINEERING GROUP**  
15004 151<sup>ST</sup> AVENUE, SUITE 300  
DENVER, CO 80202  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cge1.com

DATE: JAN 12, 2021

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

PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD - GRAYLING DR  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**STREET & STORM SEWER PLAN/PROFILE**  
**STORM LATERAL 'E'**  
**CONVEYANCE #2.2 & #2.3**

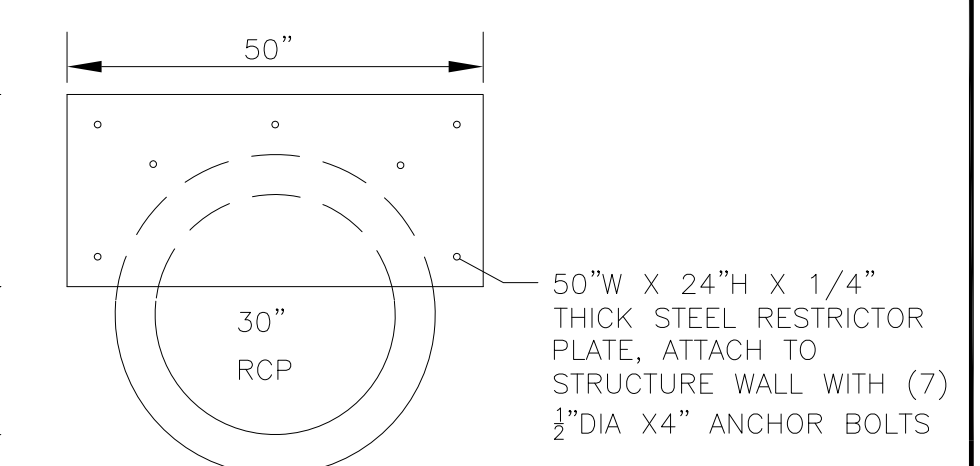
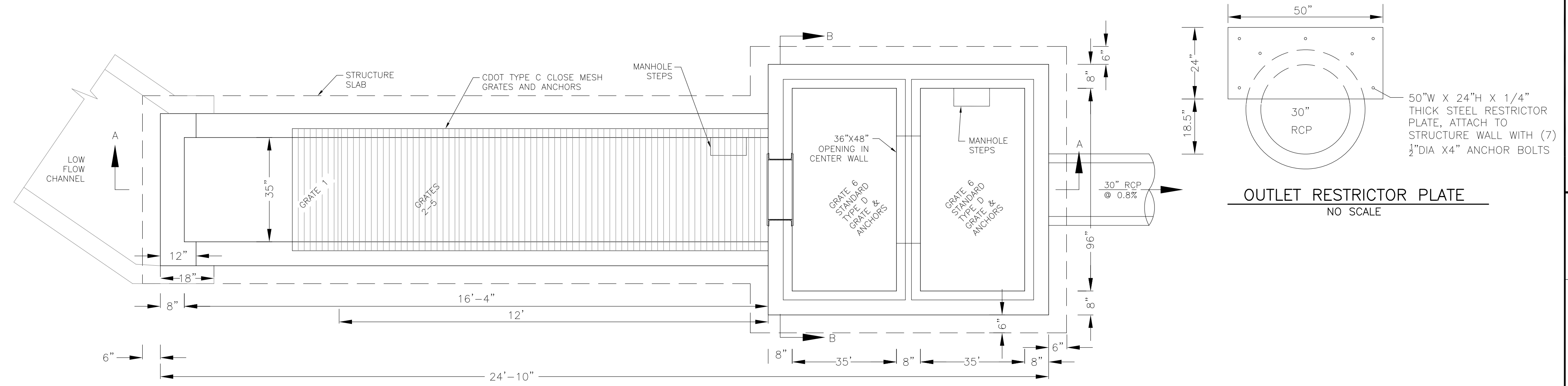
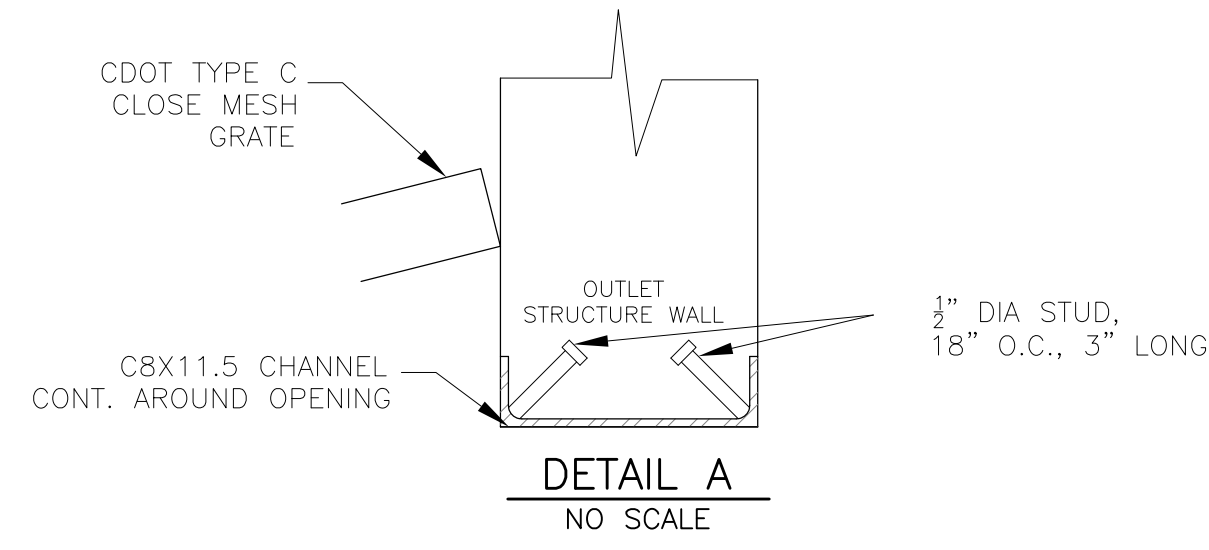


DATE: NOV 12, 2020

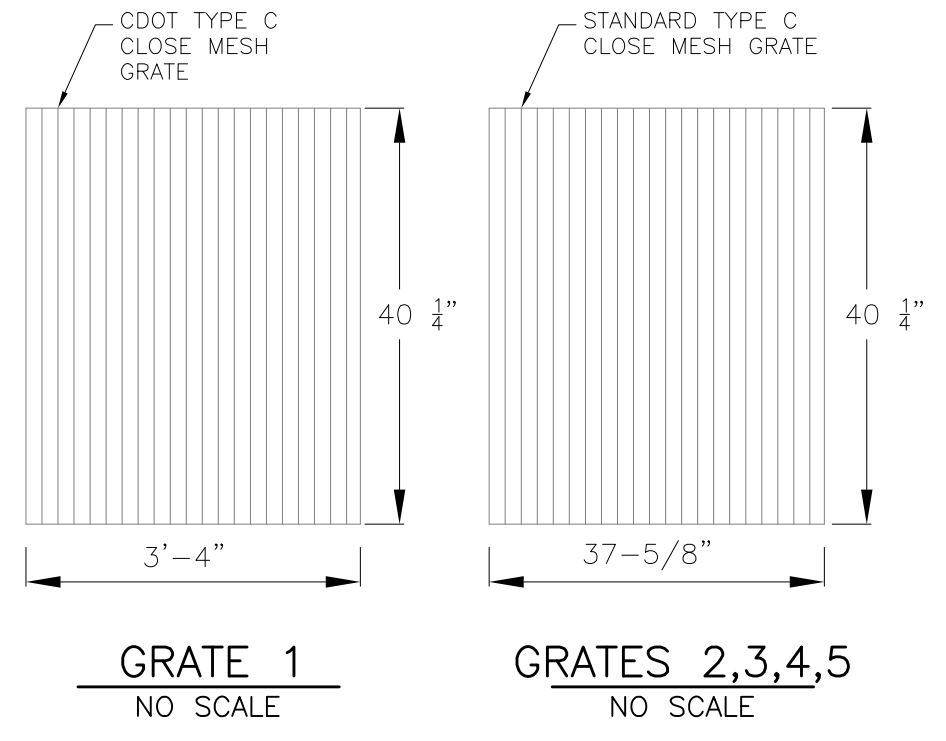
PROJECT NO. 100.061

SHEET NUMBER **C7.2**

TOTAL SHEETS: 58



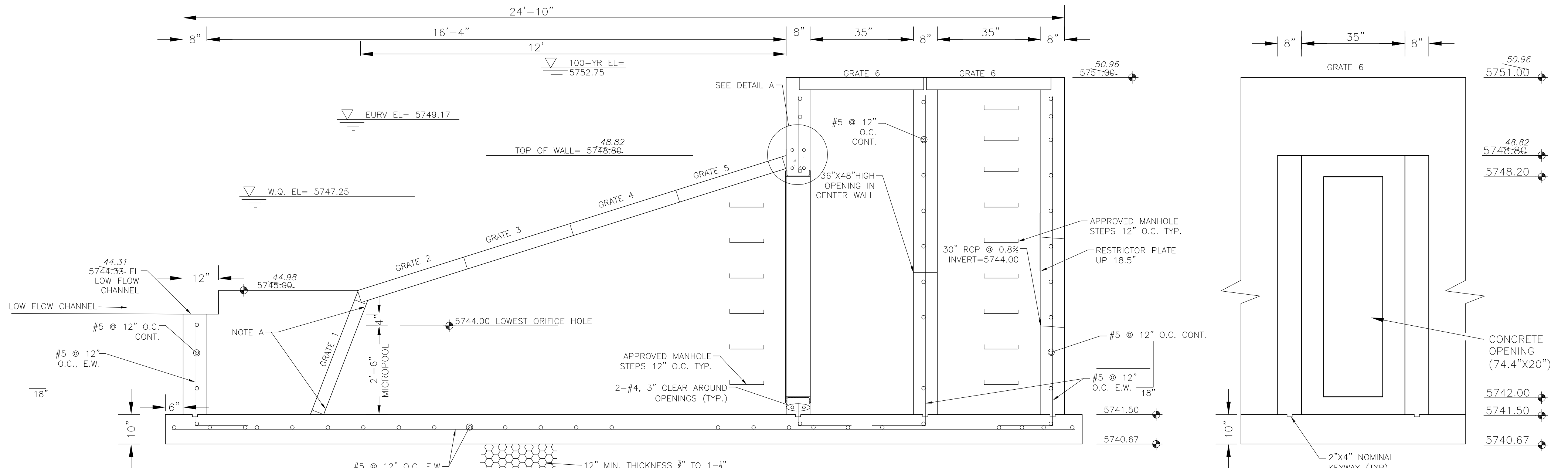
NOTE:  
AFTER CONCRETE STRUCTURE HAS BEEN POURED  
ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED  
PRIOR TO GRATE CONSTRUCTION



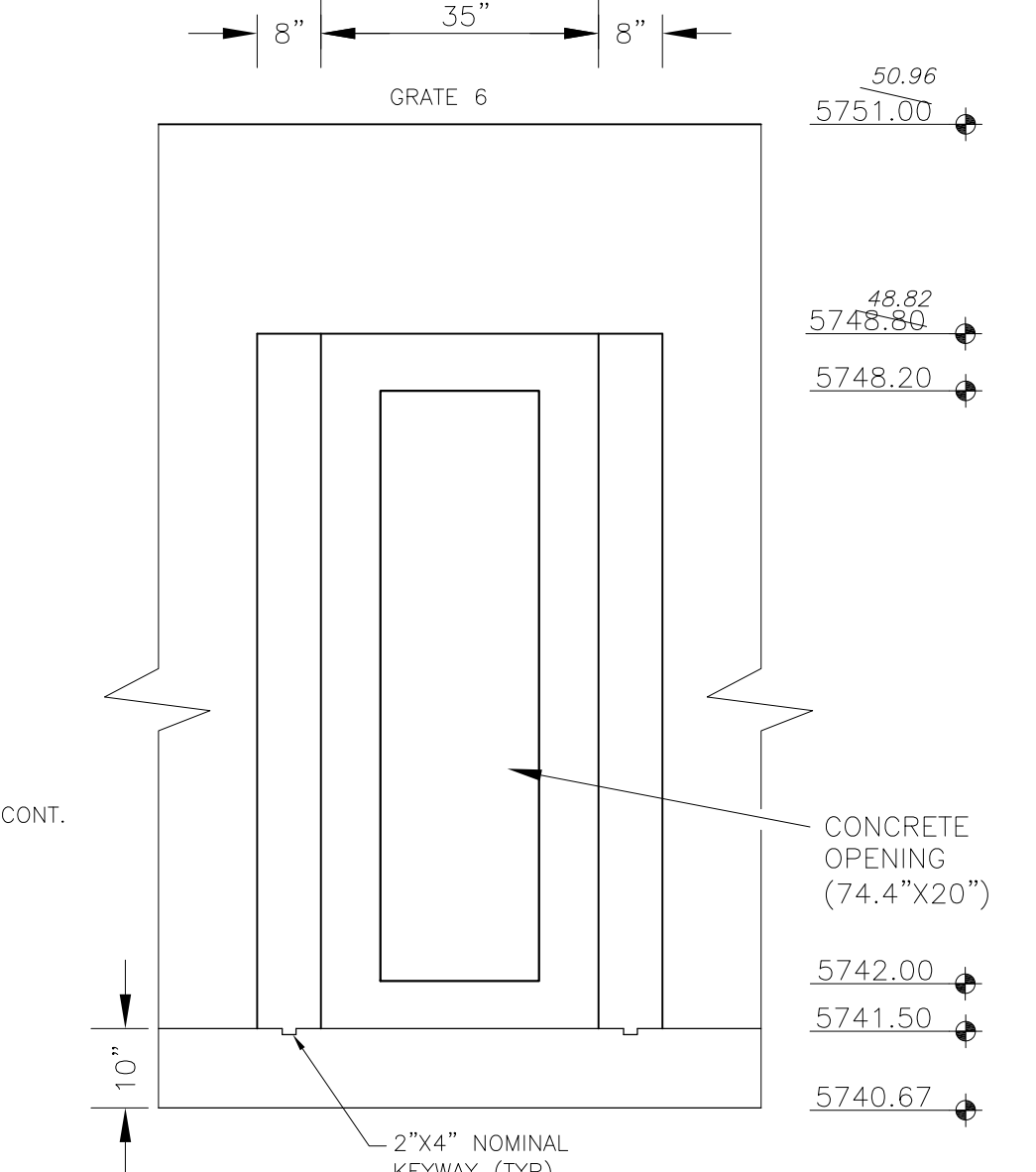
GRATE 1  
NO SCALE



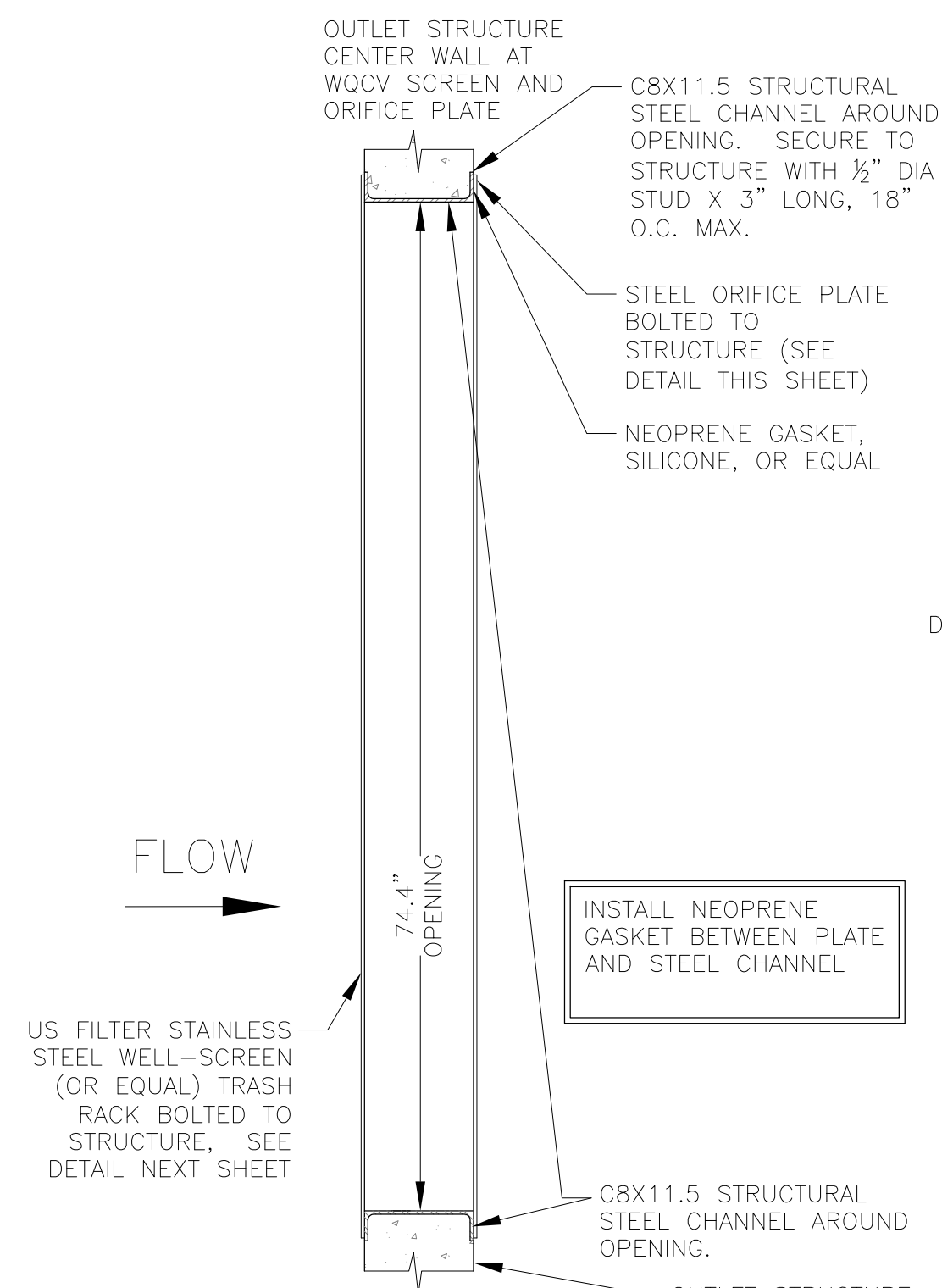
GRATES 2,3,4,5  
NO SCALE



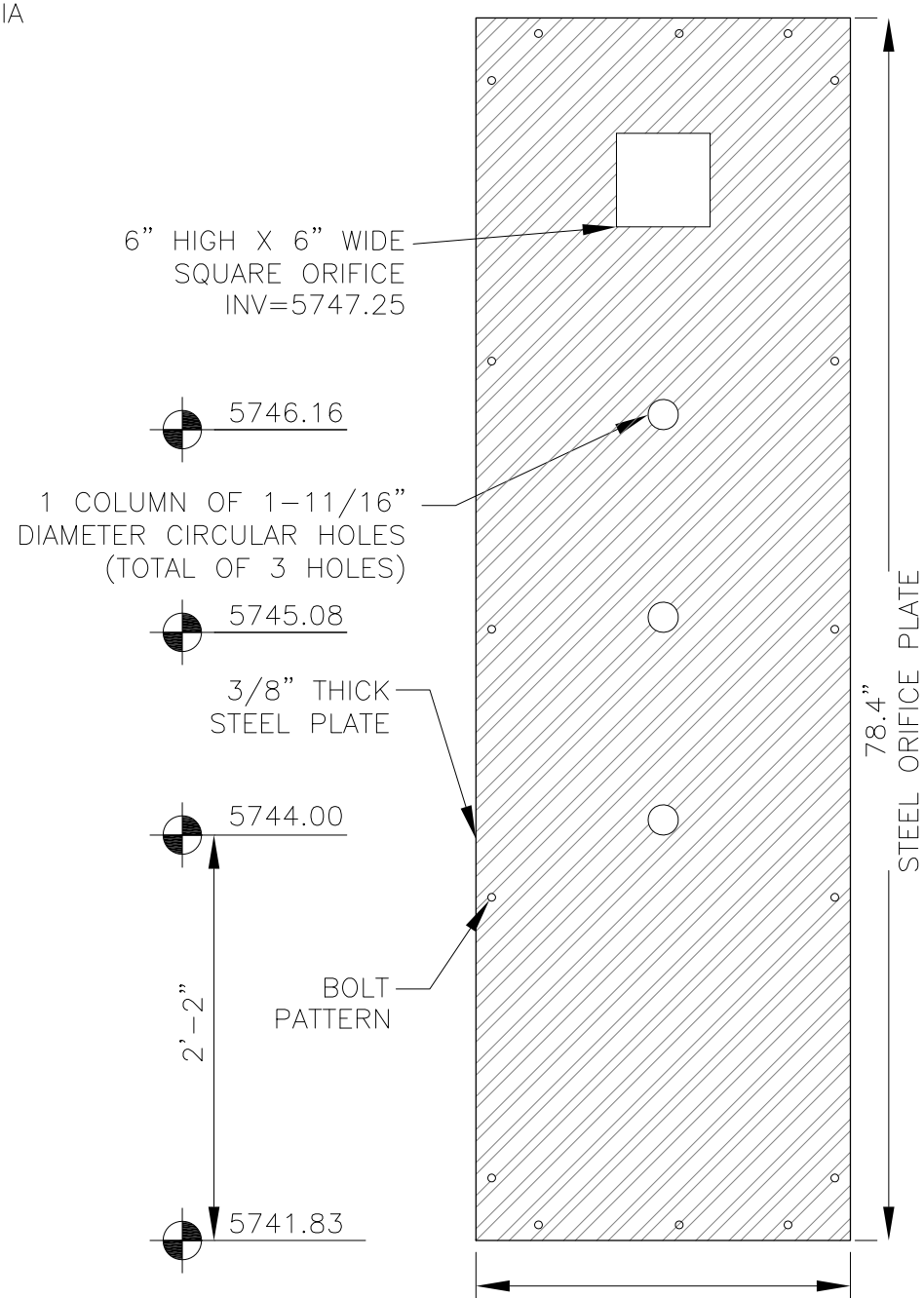
OUTLET STRUCTURE DETAIL - SECTION A-A  
NO SCALE



OUTLET STRUCTURE DETAIL - SECTION B-B  
NO SCALE



TRASH RACK DETAIL  
NO SCALE



ORIFICE PLATE DETAIL  
NO SCALE

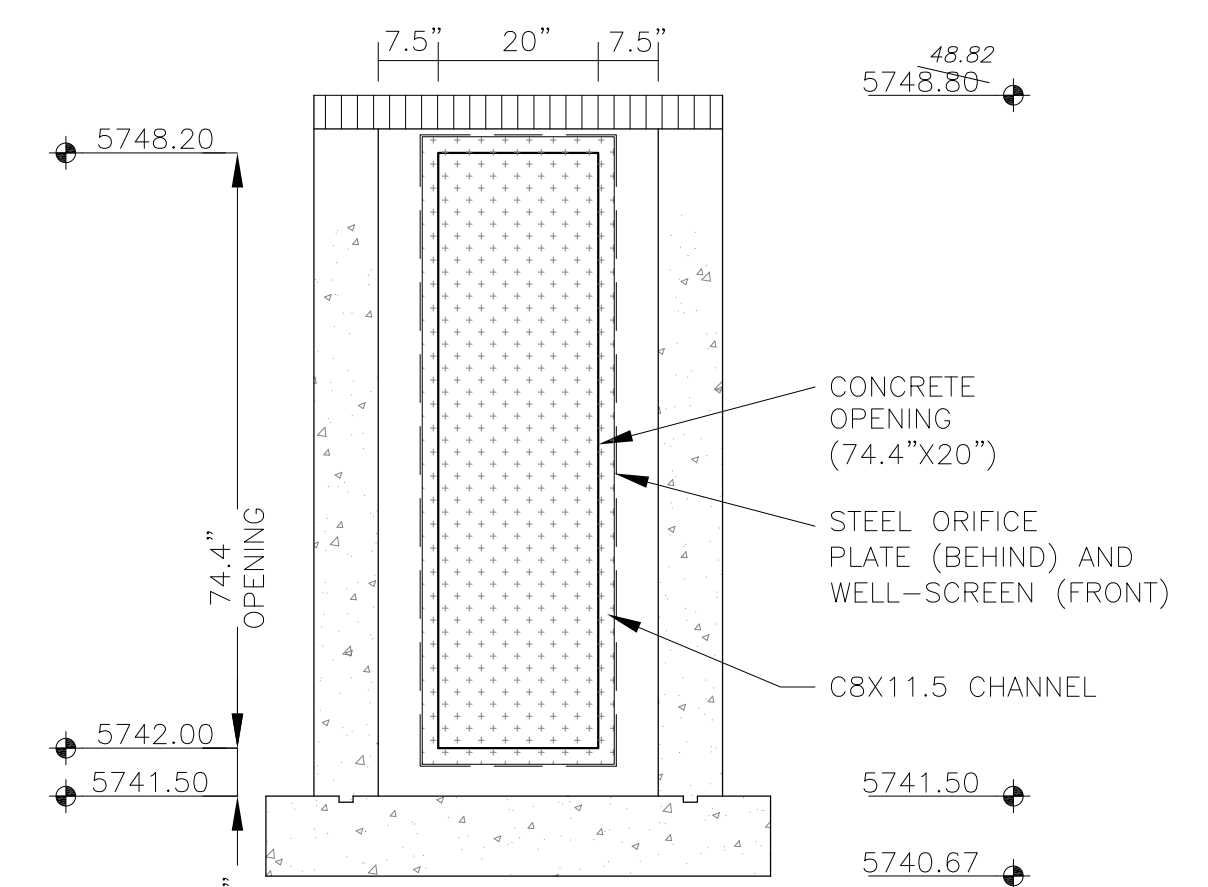
OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

- 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.
- 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 POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
- ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

BAR SIZE	#4	#5	#6
MIN. SPLICE LENGTH	1'-3"	1'-7"	2'-0"

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

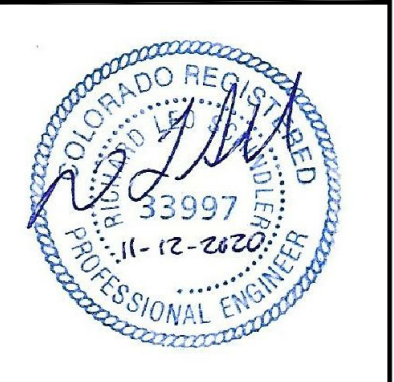
**CORE**  
**ENGINEERING GROUP**  
15004 1ST AVENUE S.  
PH: 719.570.5506  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cgei.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
PREPARED FOR: **LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**POND C2.2**  
**FULL SPECTRUM**  
**OUTLET STRUCTURE DETAILS**



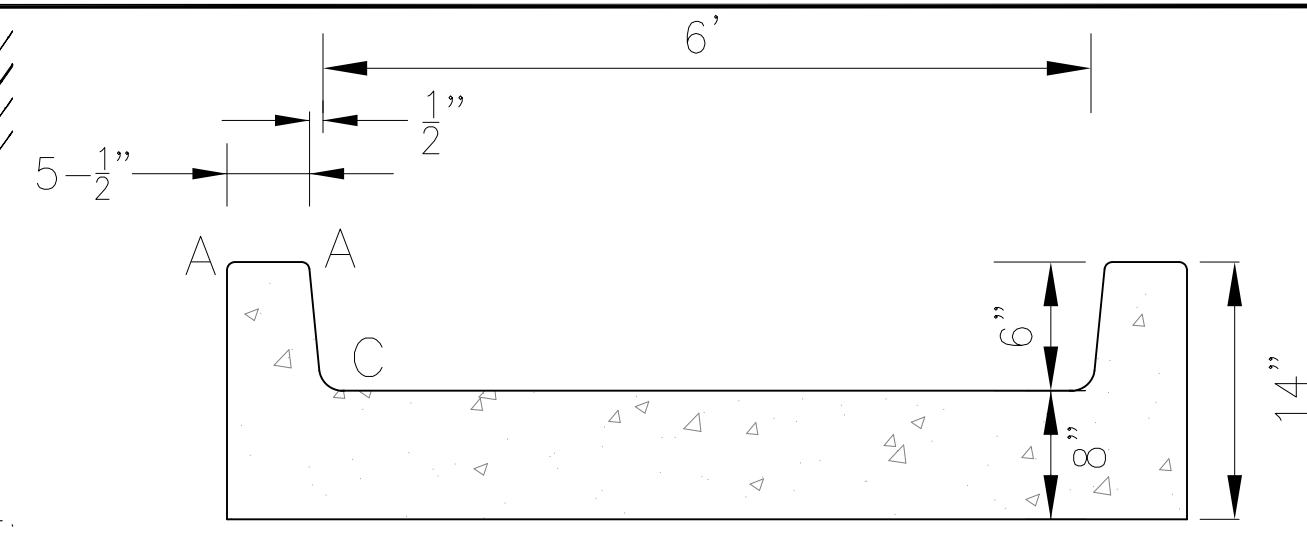
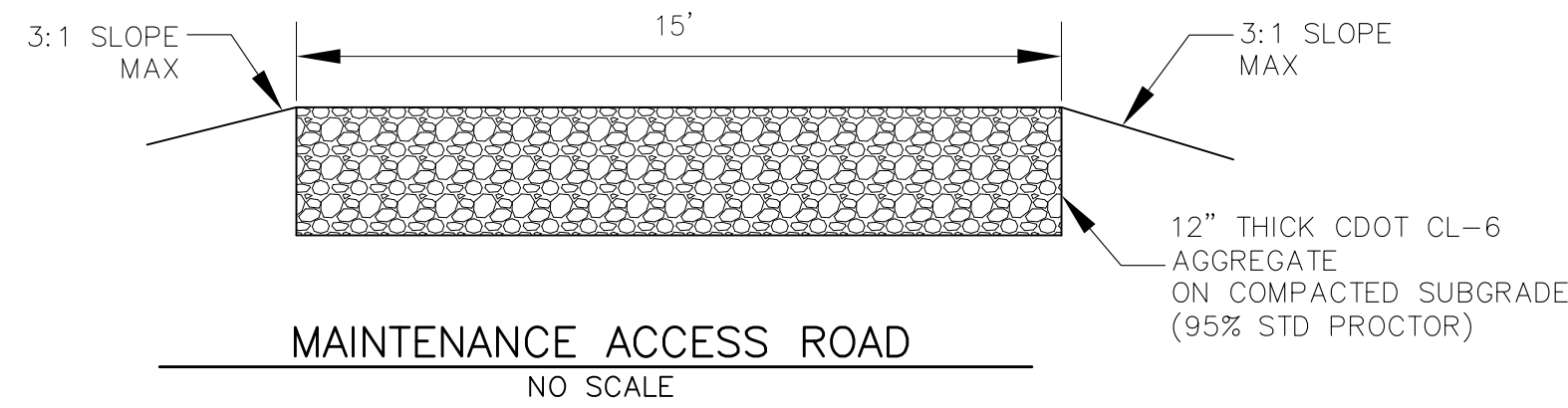
DATE:  
NOV 12, 2020

PROJECT NO.  
100.061

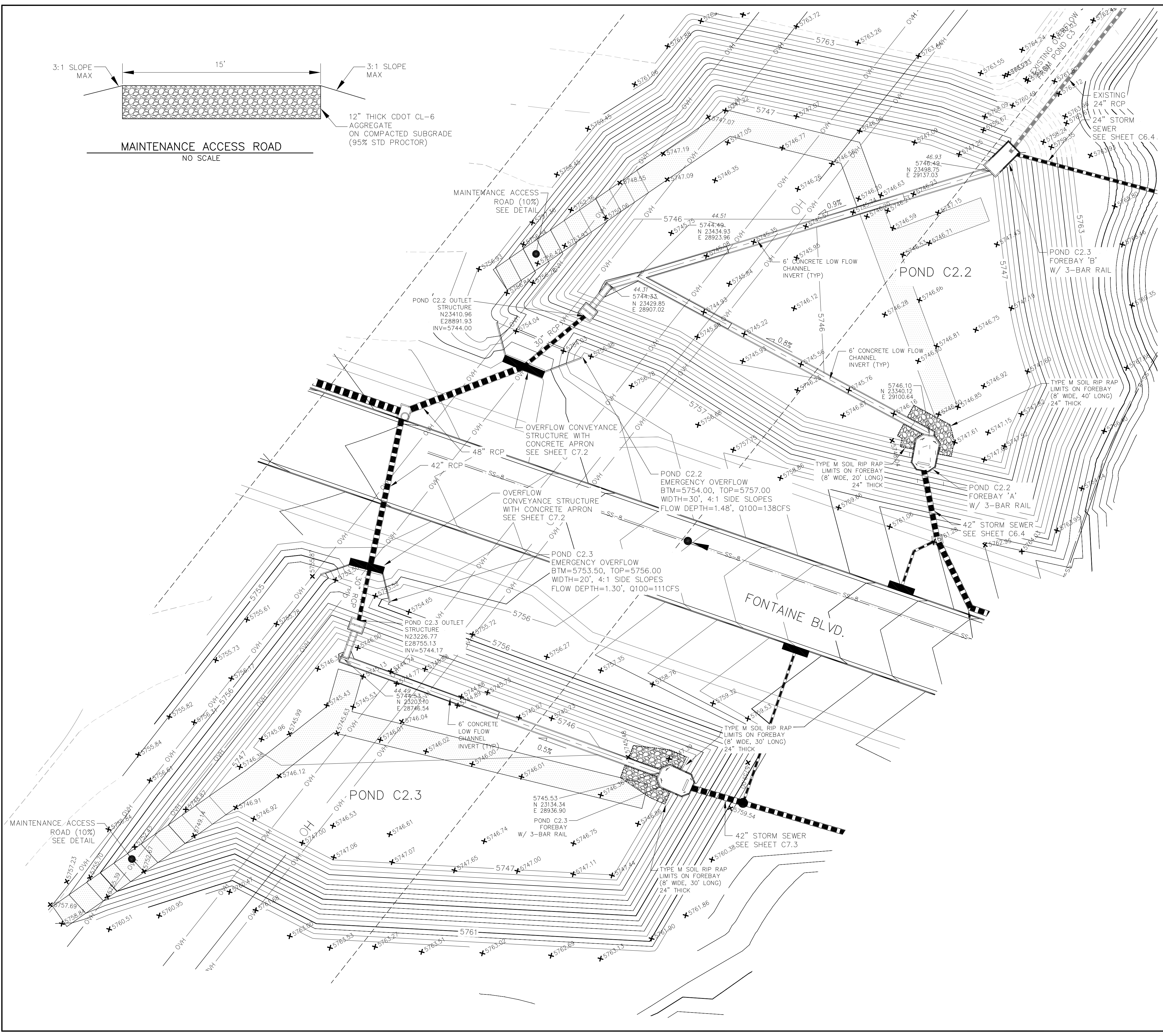
SHEET NUMBER  
**C9.13**

TOTAL SHEETS: 58

**AS-BUILT**  
DATE: 09/30/2022

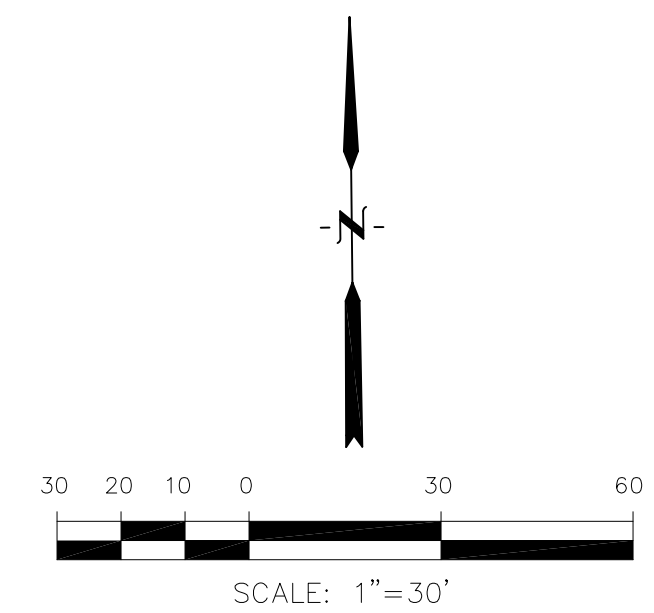


LENGTH FOR RADII	
A	= 1/2"
C	= 1-1/2"



AS-BUILT

DATE: 09/30/2022



**CORE ENGINEERING GROUP**

15004 1ST AVE. SUITE 300  
 COLORADO SPRINGS, CO 80903  
 PHONE: 719.570.1100  
 CONTACT: RICHARD L. SCHINDLER, P.E.  
 EMAIL: Rich@cegi.com

DATE: \_\_\_\_\_

DESCRIPTION: \_\_\_\_\_

NO: \_\_\_\_\_

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

PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
 FONTAINE BLVD. - GRAYLING DR  
 LORSON BLVD - WALLEYE DR - LAMPREY DR  
 COLORADO SPRINGS, COLORADO

DRAWN: RLS  
 DESIGNED: RLS  
 CHECKED: RLS

**POND C2.2 & C2.3 FOREBAY, LOW FLOW CHANNEL AND OUTLET STRUCTURE LAYOUT**

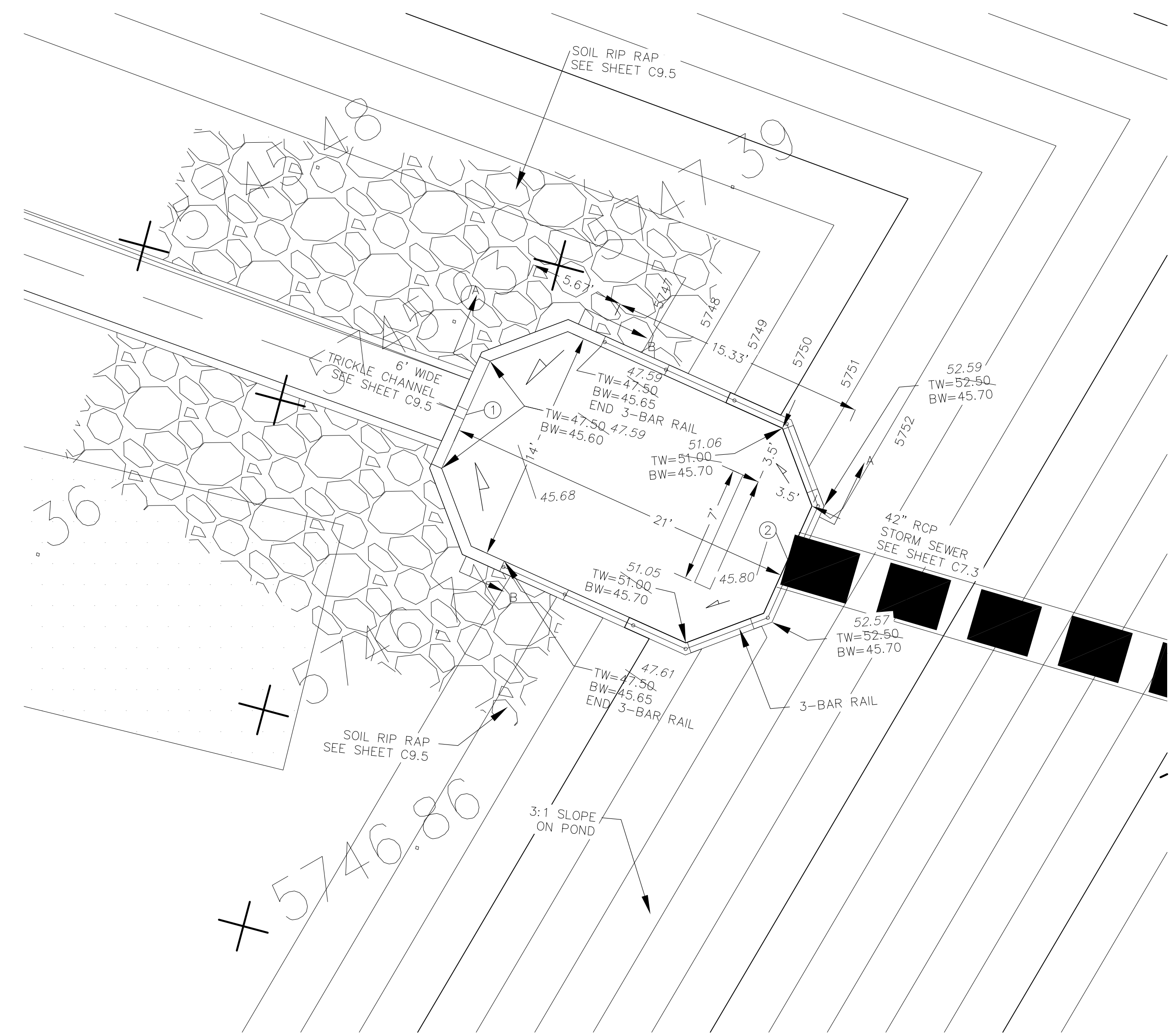
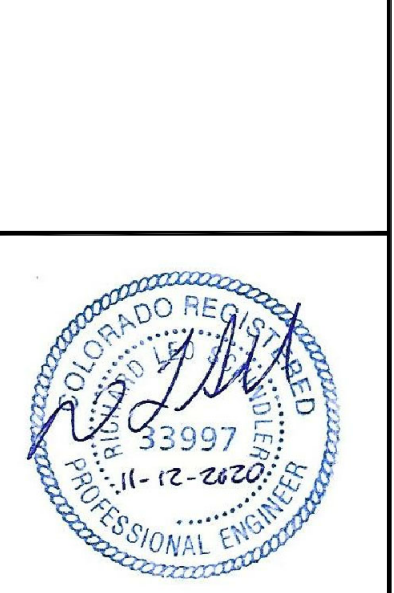


DATE: NOV 12, 2020

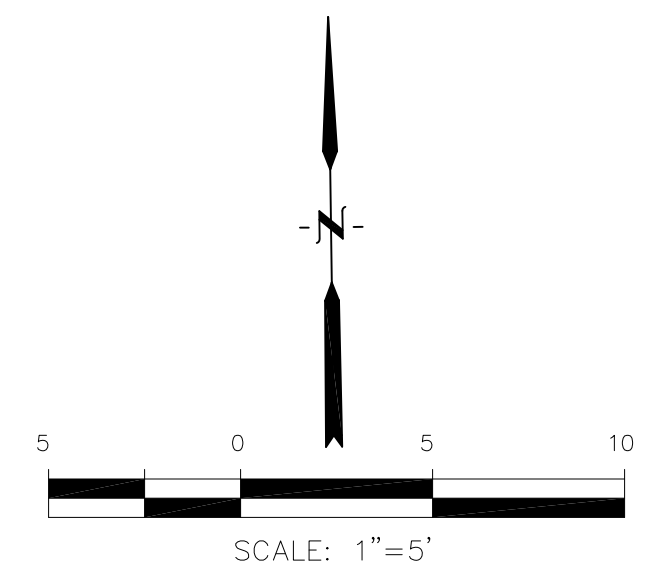
PROJECT NO. 100.061

SHEET NUMBER **C9.5**

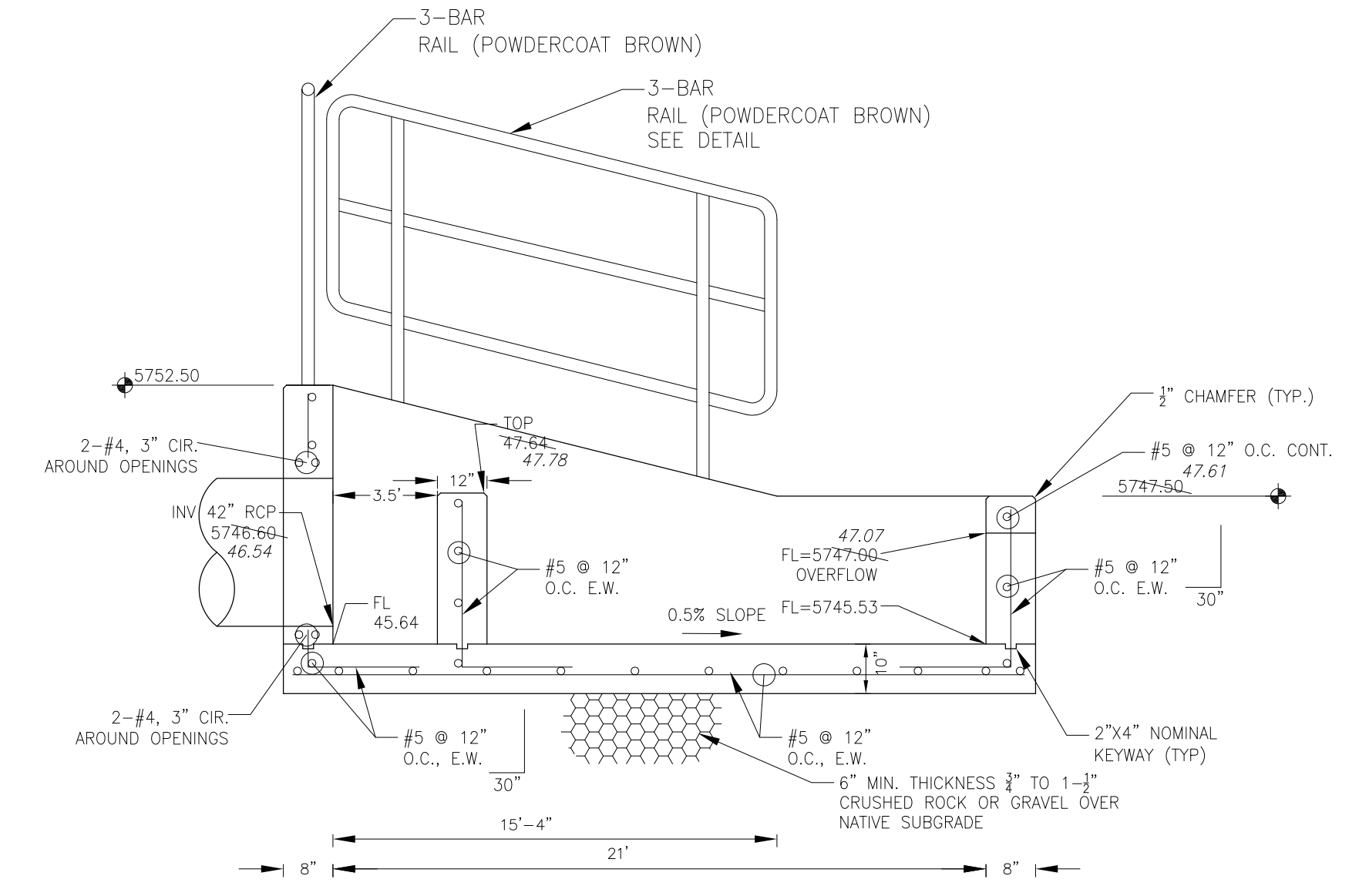
TOTAL SHEETS: 58



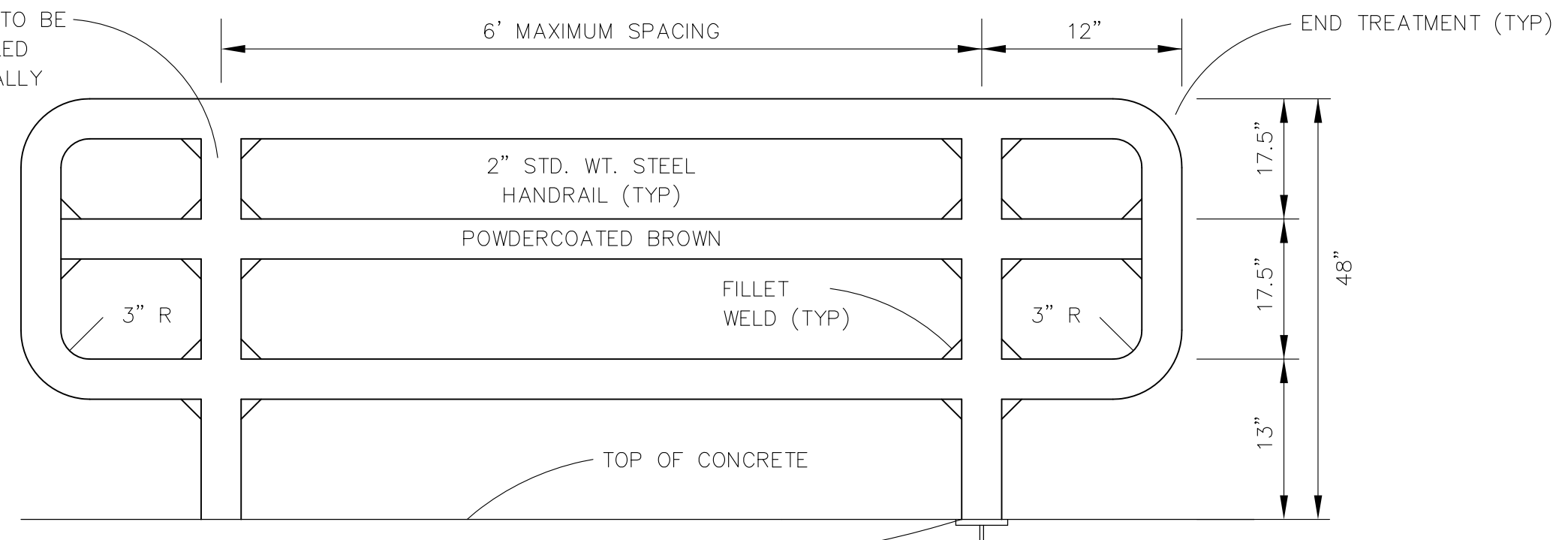
**POND C2.3 - FOREBAY LAYOUT**  
 SCALE: 1"=5'



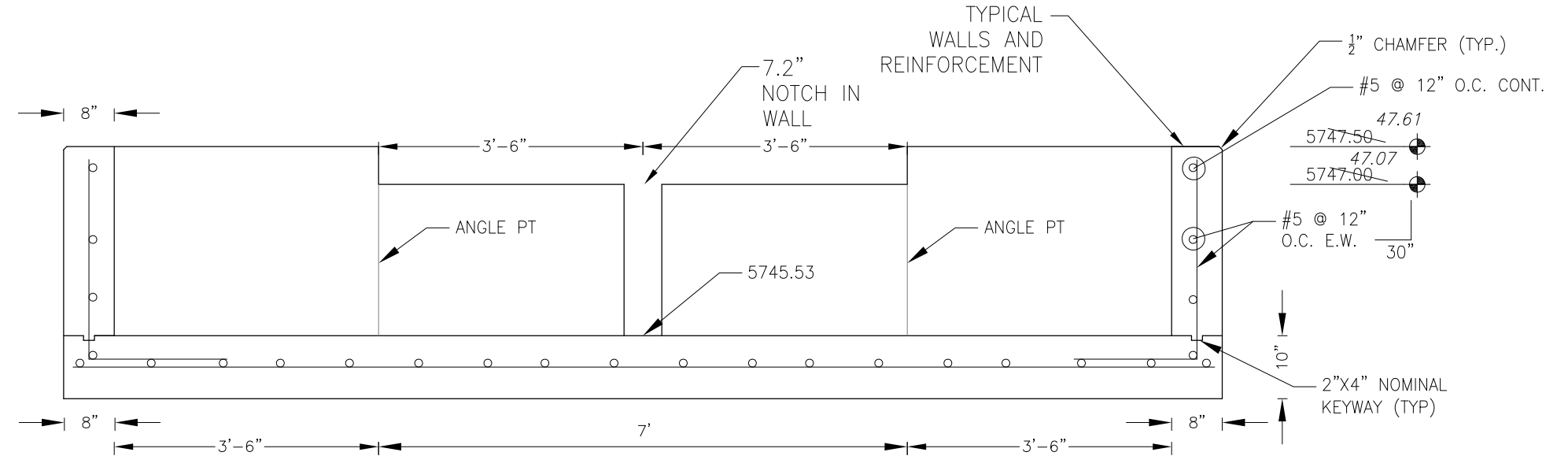
POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	23134.06	28937.51	5745.53	FOREBAY BOTTOM
2	23125.44	28956.66	5745.64	FOREBAY BOTTOM, INV 42"=5746.50



**FOREBAY SECTION A-A**  
 NO SCALE



**3-BAR RAIL DETAIL**  
 NO SCALE



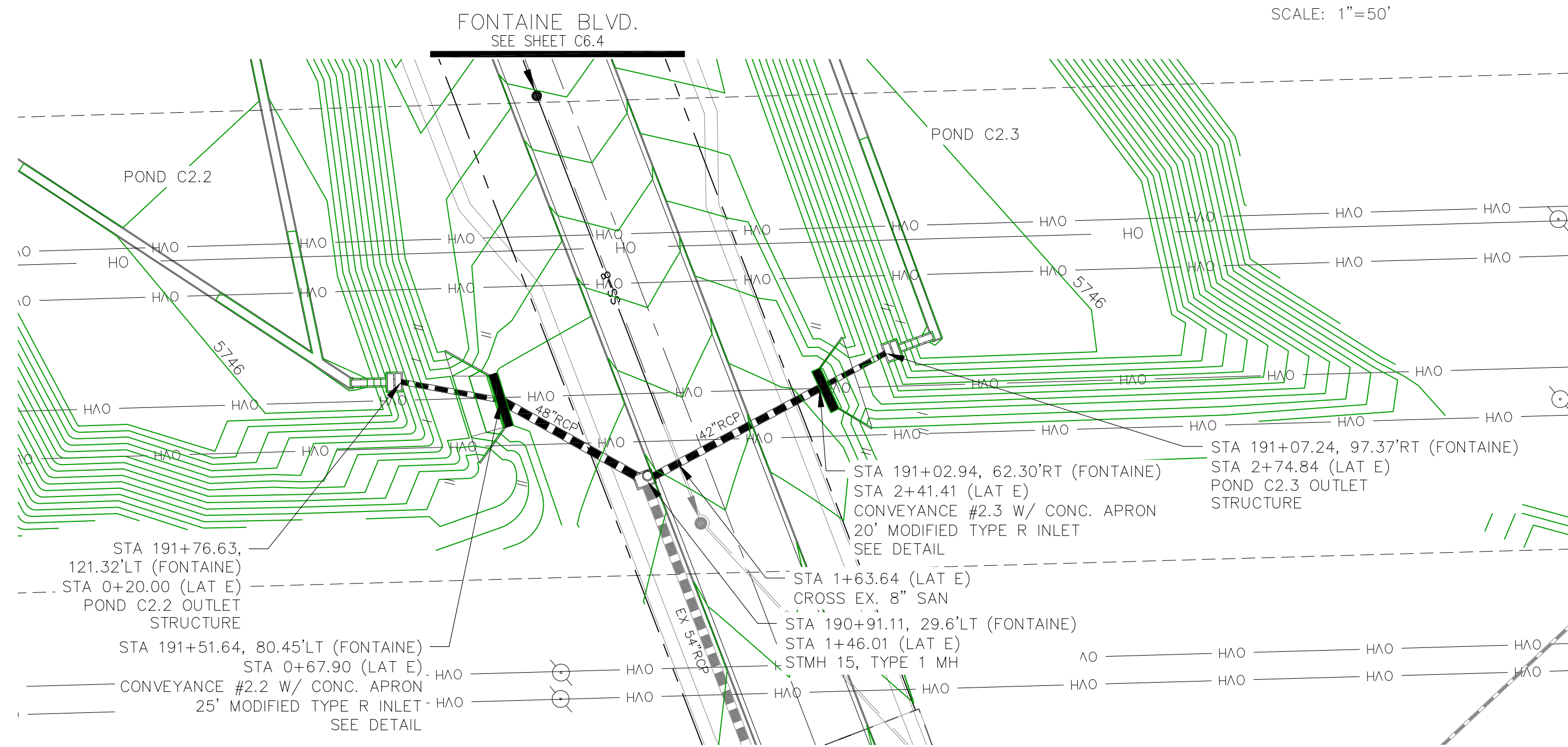
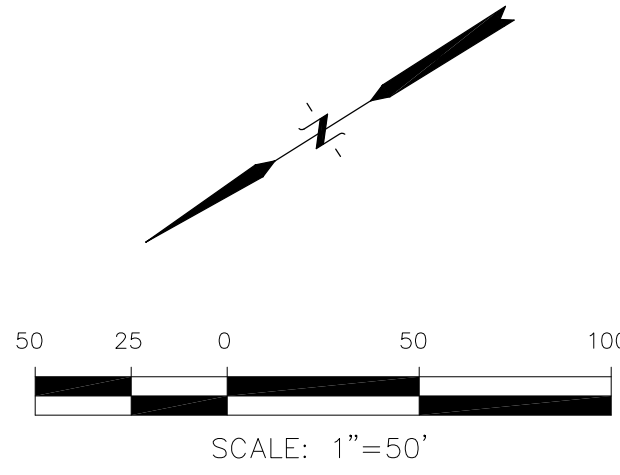
**FOREBAY SECTION B-B**  
 NO SCALE

NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D

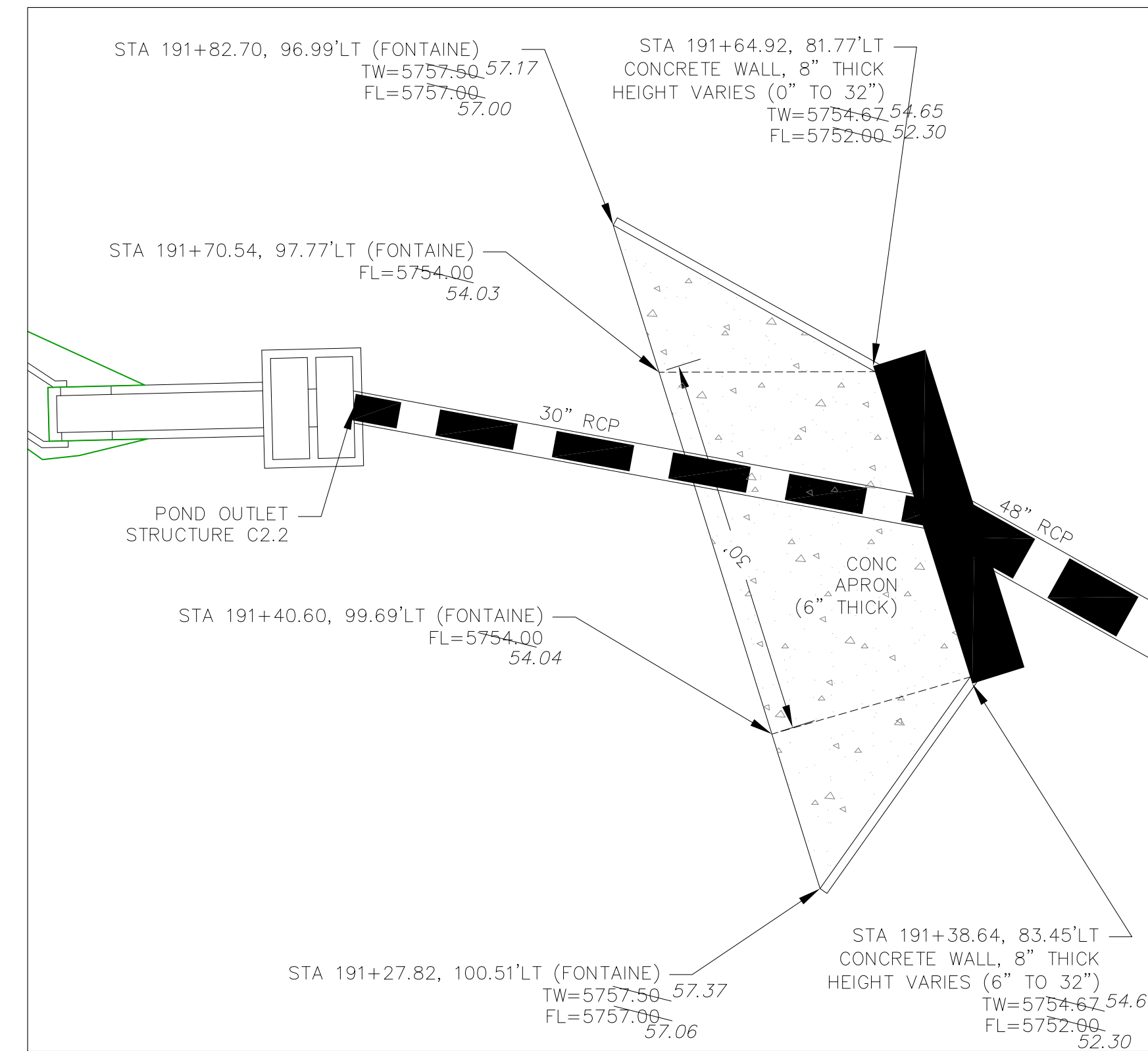
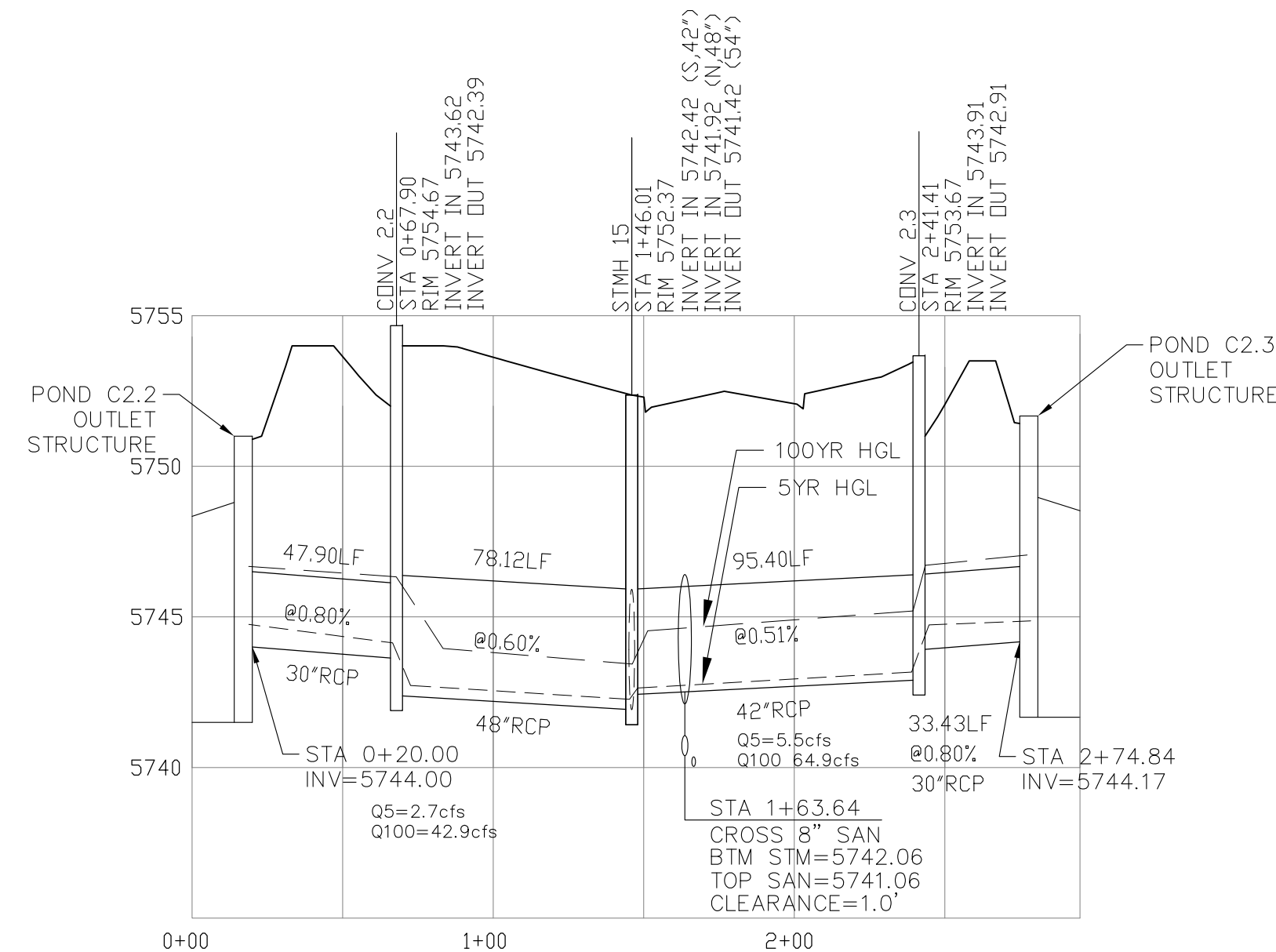
**AS-BUILT**  
 DATE: 09/30/2022

- NOTES**
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE EARLY GRADING PLAN FOR GRADING INFORMATION.
  3. ALL STORM SEWER SHALL BE CLASS III RCP.
  4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- 1 CURVE DATA ID
- 2 PEDESTRIAN RAMP, SEE SHEET C10.1
- 3 CURB/GUTTER FLOW LINE POINTS

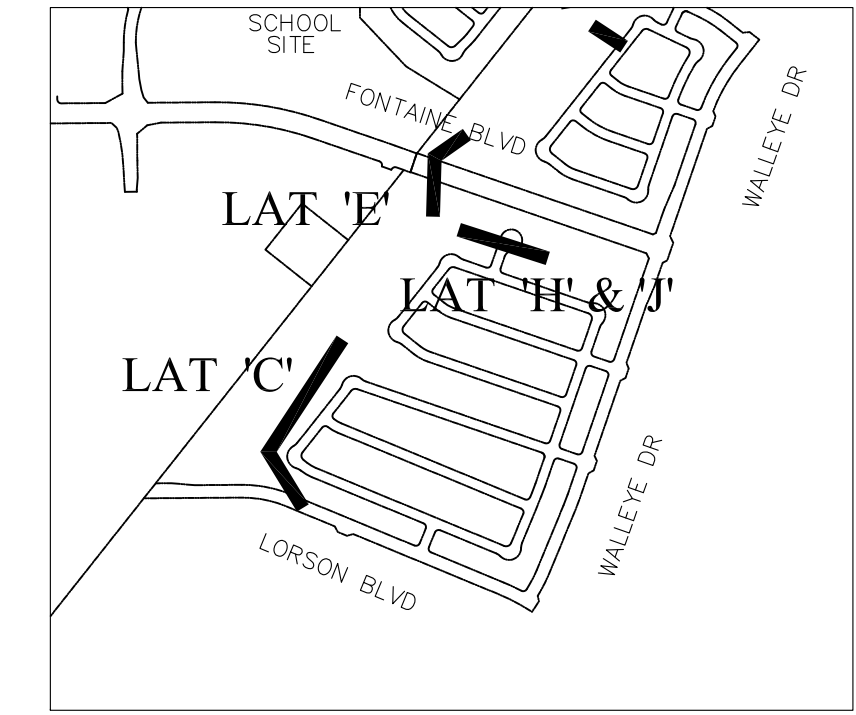


**STORM LATERAL 'E'**



**CONVEYANCE STRUCTURE #2.2**

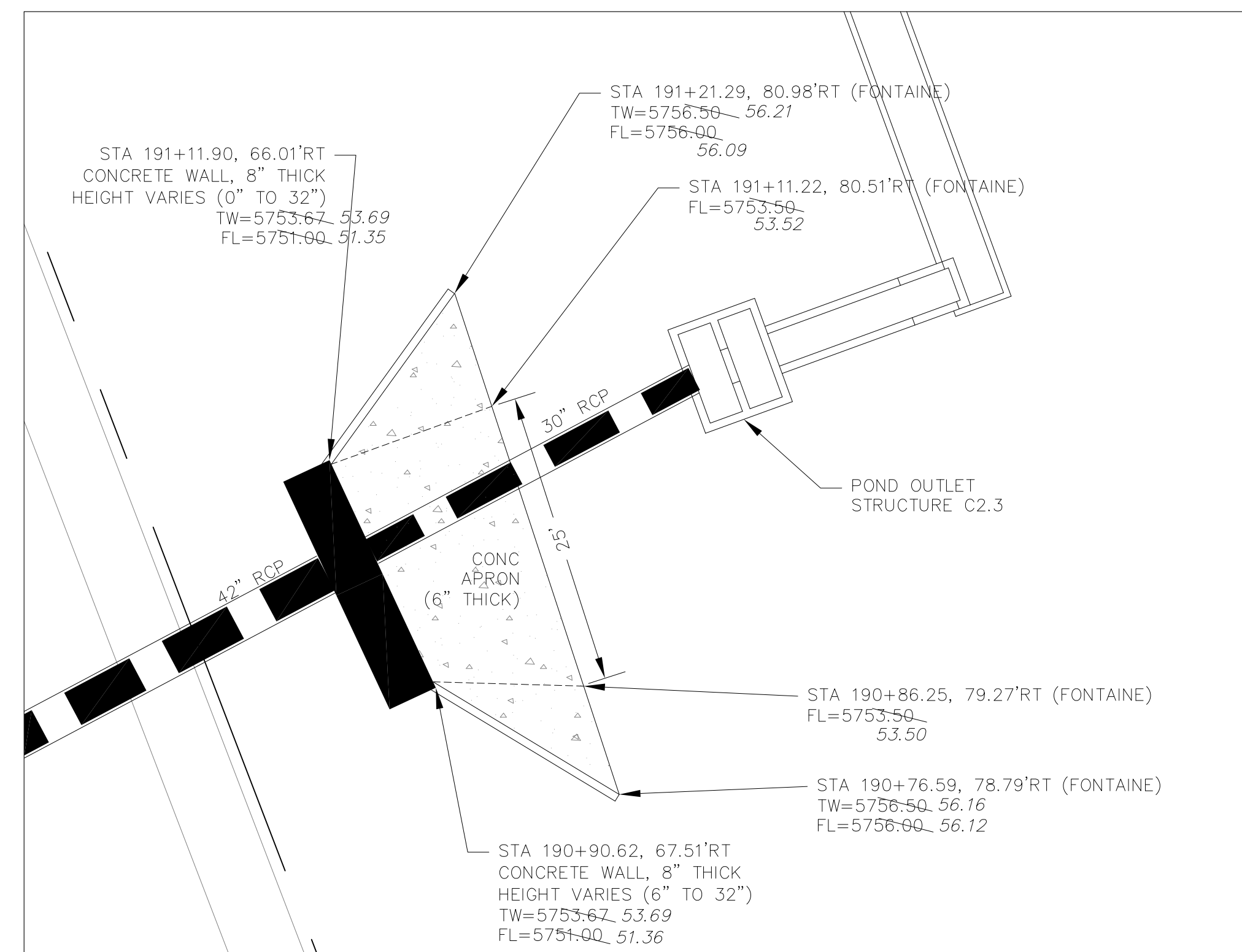
SCALE: 1"=10'



**KEY MAP**

**CONVEYANCE STRUCTURE #2.2 NOTES:**

1. 25' CDOT TYPE R INLET WITH MODIFIED THROAT OPENING
2. THROAT OPENING = 24"
3. EXTEND 1.25" GALVANIZED STEEL ROD SUPPORTS (TYPE R INLET) TO ACCOMMODATE 24" THROAT OPENING
4. CONCRETE APRON TO BE REINFORCED WITH NO. 4 REBAR, 24" O.C. BOTH WAYS. REBAR TO EXTEND INTO CONCRETE WALL W/ NO. 4 "L" BARS, 18" O.C.
5. CONCRETE WALLS SHALL HAVE A MINIMUM OF TWO HORIZONTAL NO. 4 BARS
6. 24" THROAT OPENING TO INCLUDE SAFETY GRATE.



**CONVEYANCE STRUCTURE #2.3**

SCALE: 1"=10'

**CONVEYANCE STRUCTURE #2.3 NOTES:**

1. 20' CDOT TYPE R INLET WITH MODIFIED THROAT OPENING
2. THROAT OPENING = 24"
3. EXTEND 1.25" GALVANIZED STEEL ROD SUPPORTS (TYPE R INLET) TO ACCOMMODATE 24" THROAT OPENING
4. CONCRETE APRON TO BE REINFORCED WITH NO. 4 REBAR, 24" O.C. BOTH WAYS. REBAR TO EXTEND INTO CONCRETE WALL W/ NO. 4 "L" BARS.
5. CONCRETE WALLS SHALL HAVE A MINIMUM OF TWO HORIZONTAL NO. 4 BARS
6. 24" THROAT OPENING TO INCLUDE SAFETY GRATE.

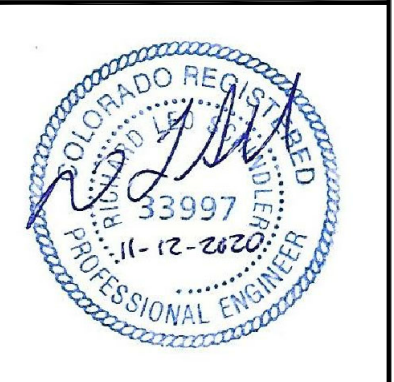
**AS-BUILT**  
DATE: 09/30/2022

**CORE ENGINEERING GROUP**  
15004 151<sup>ST</sup> AVENUE, SUITE 300  
DENVER, CO 80202  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cge1.com

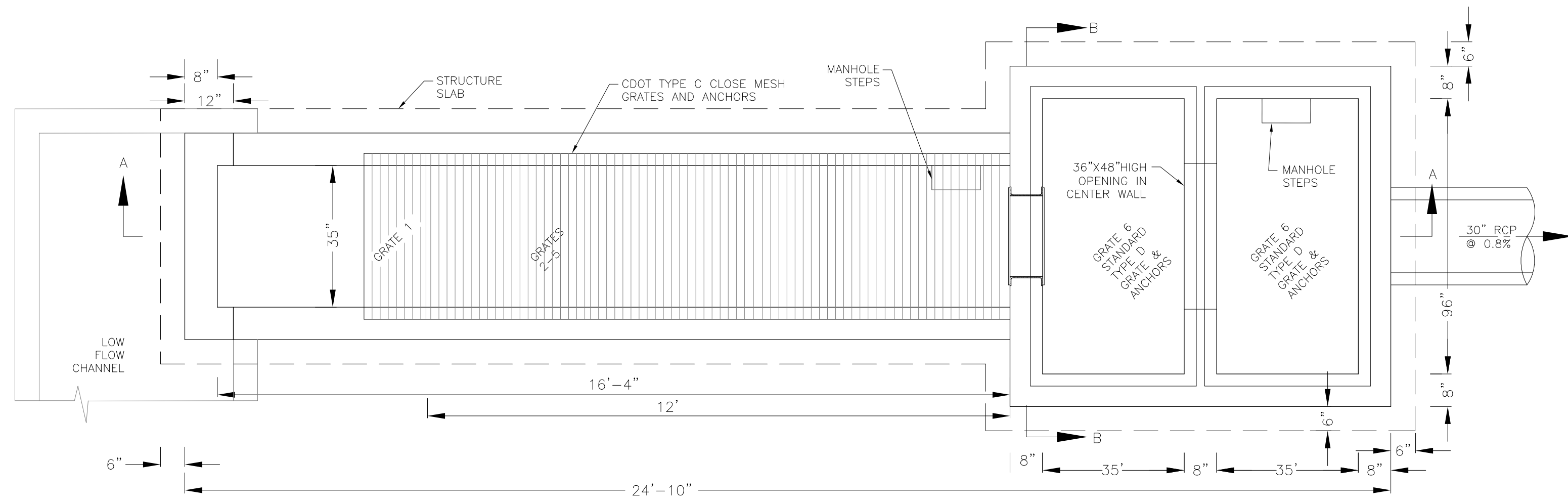
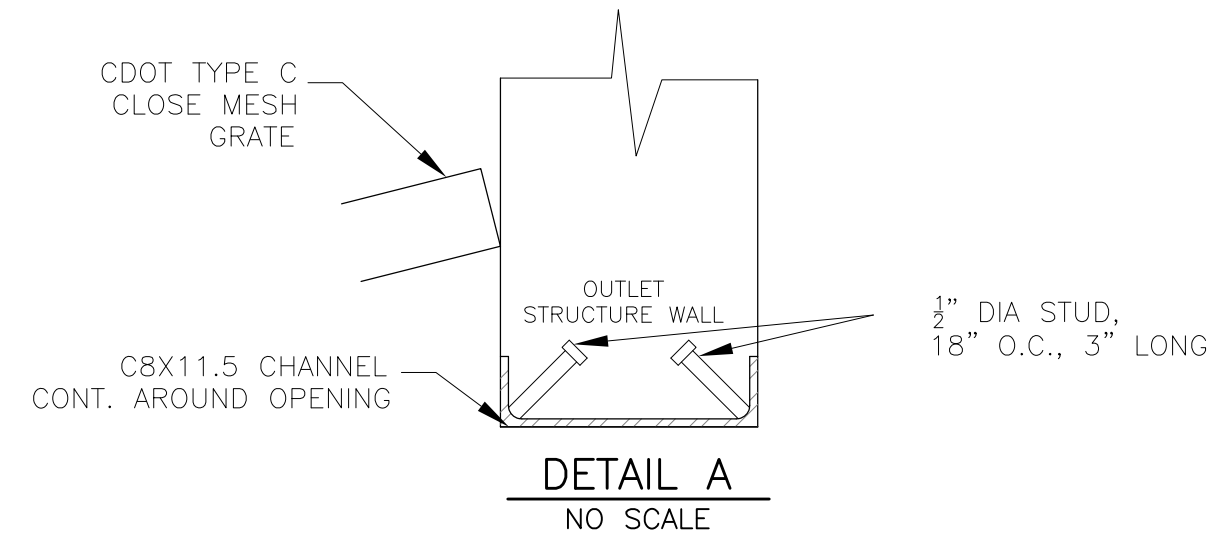
DATE: JAN 12, 2021  
DESCRIPTION: RAISE SITE 1' EAST OF POWERLINES  
NO. 1  
PROJECT: THE HILLS COLLECTOR STREET CONSTRUCTION  
FOR: LORSON, LLC  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

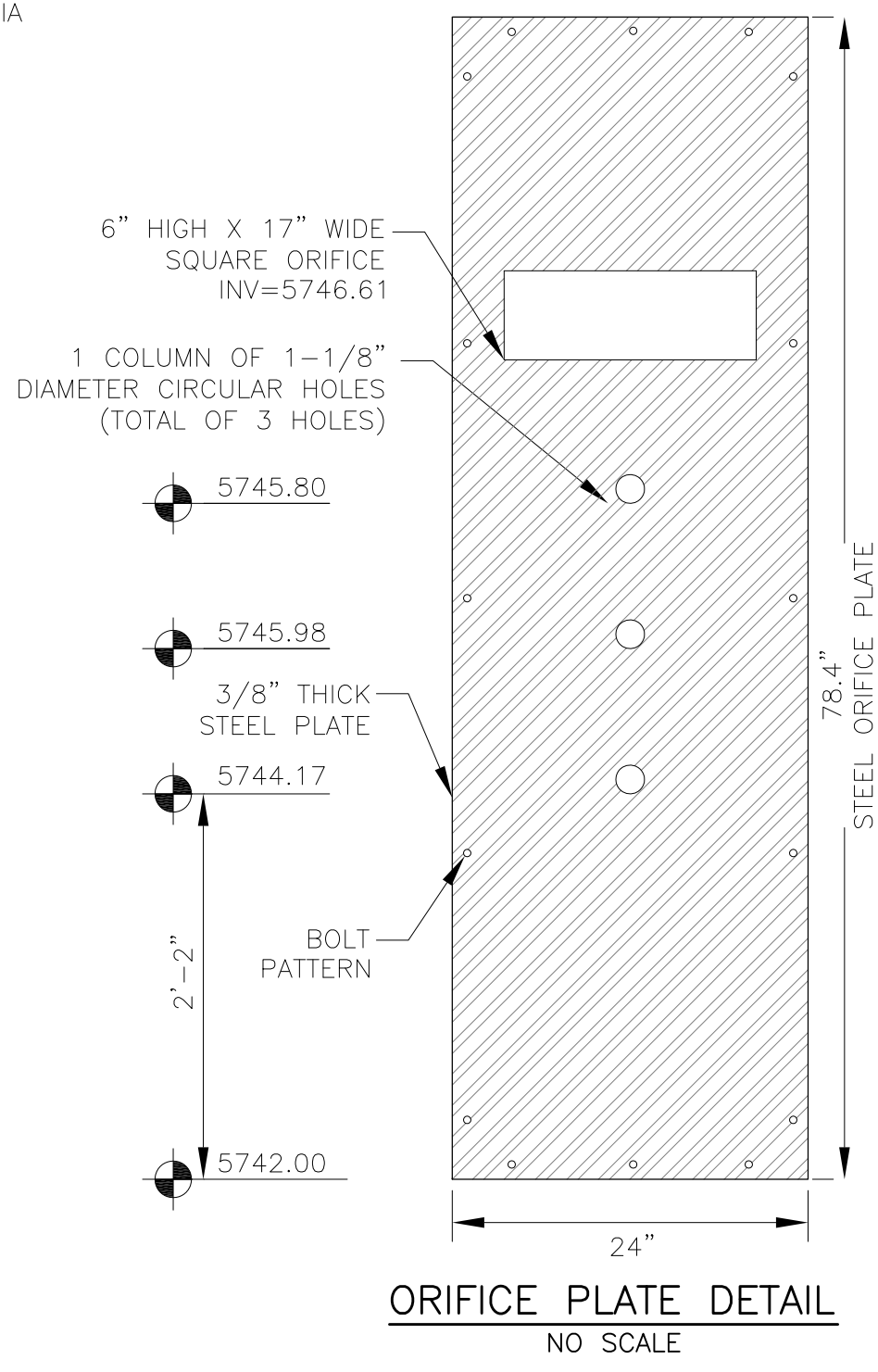
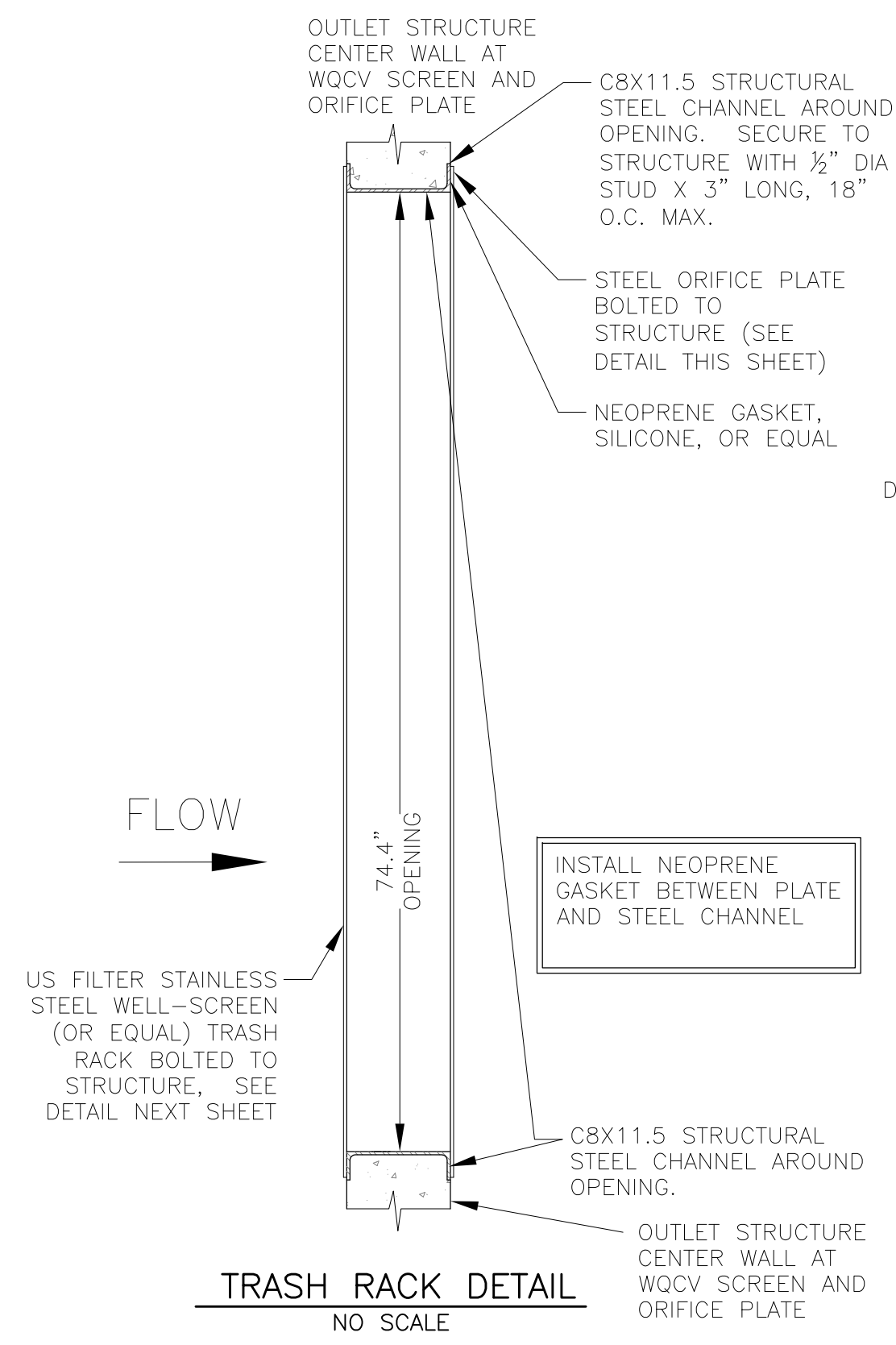
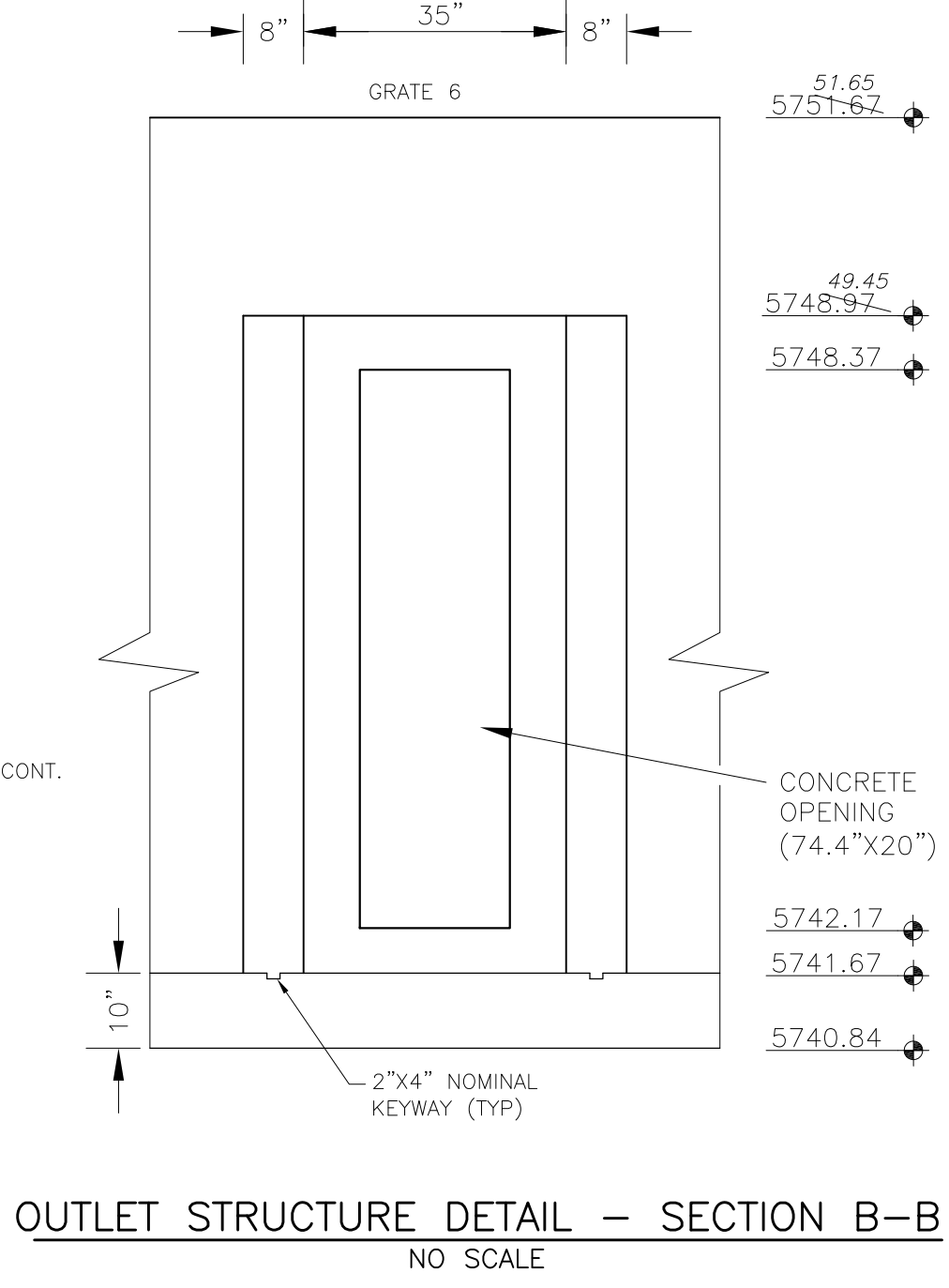
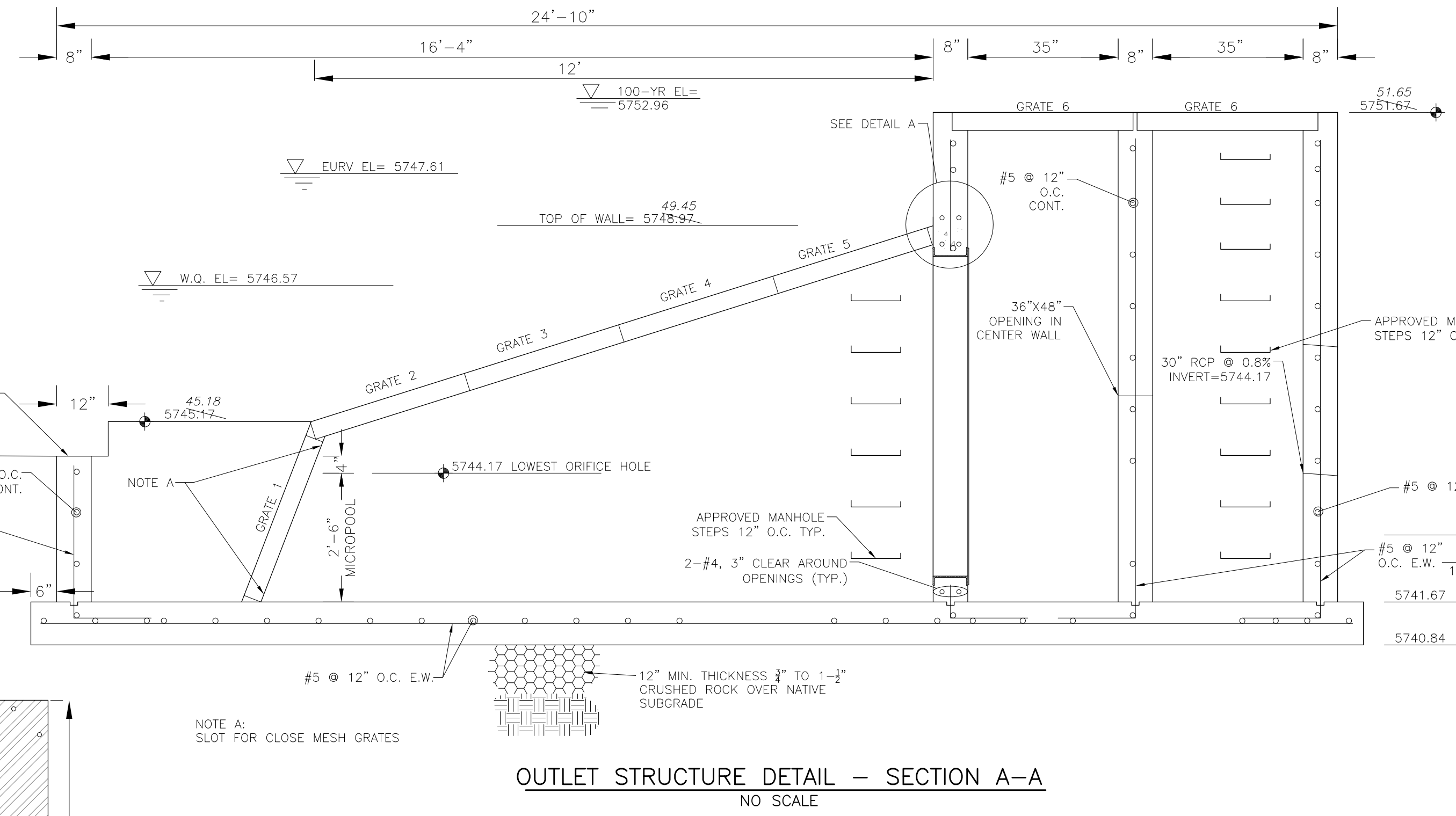
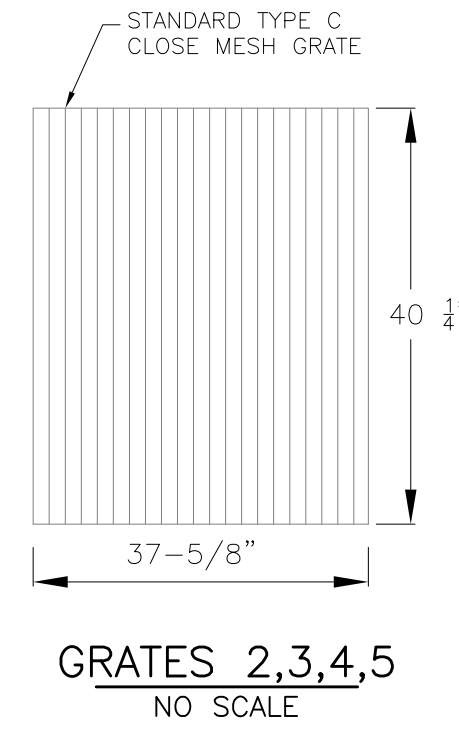
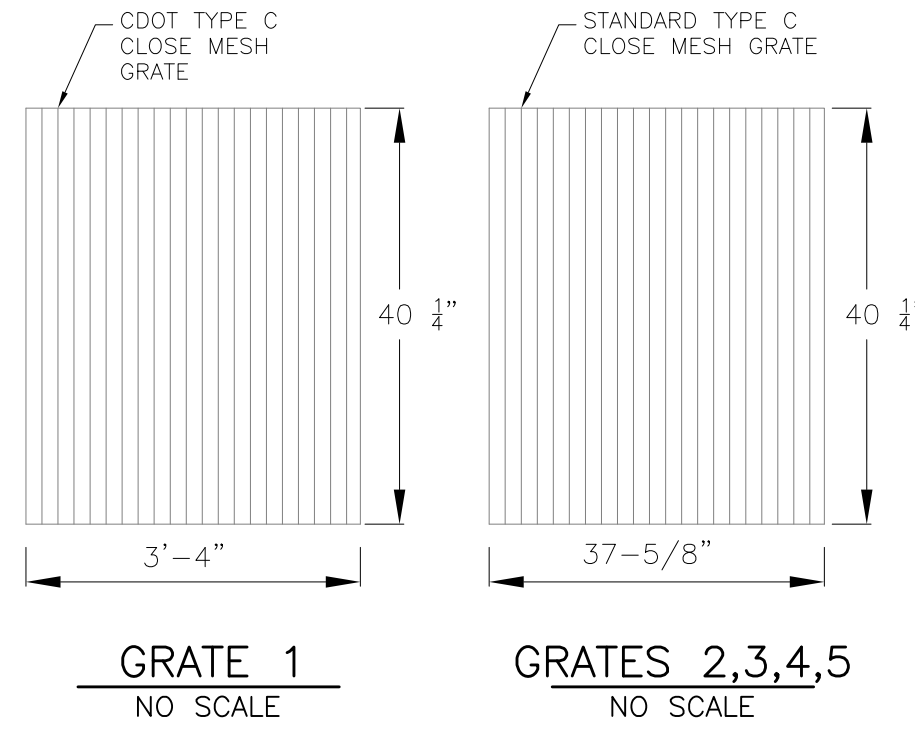
**STREET & STORM SEWER PLAN/PROFILE**  
**STORM LATERAL 'E'**  
**CONVEYANCE #2.2 & #2.3**



DATE: NOV 12, 2020  
PROJECT NO. 100.061  
SHEET NUMBER C7.2  
TOTAL SHEETS: 58



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



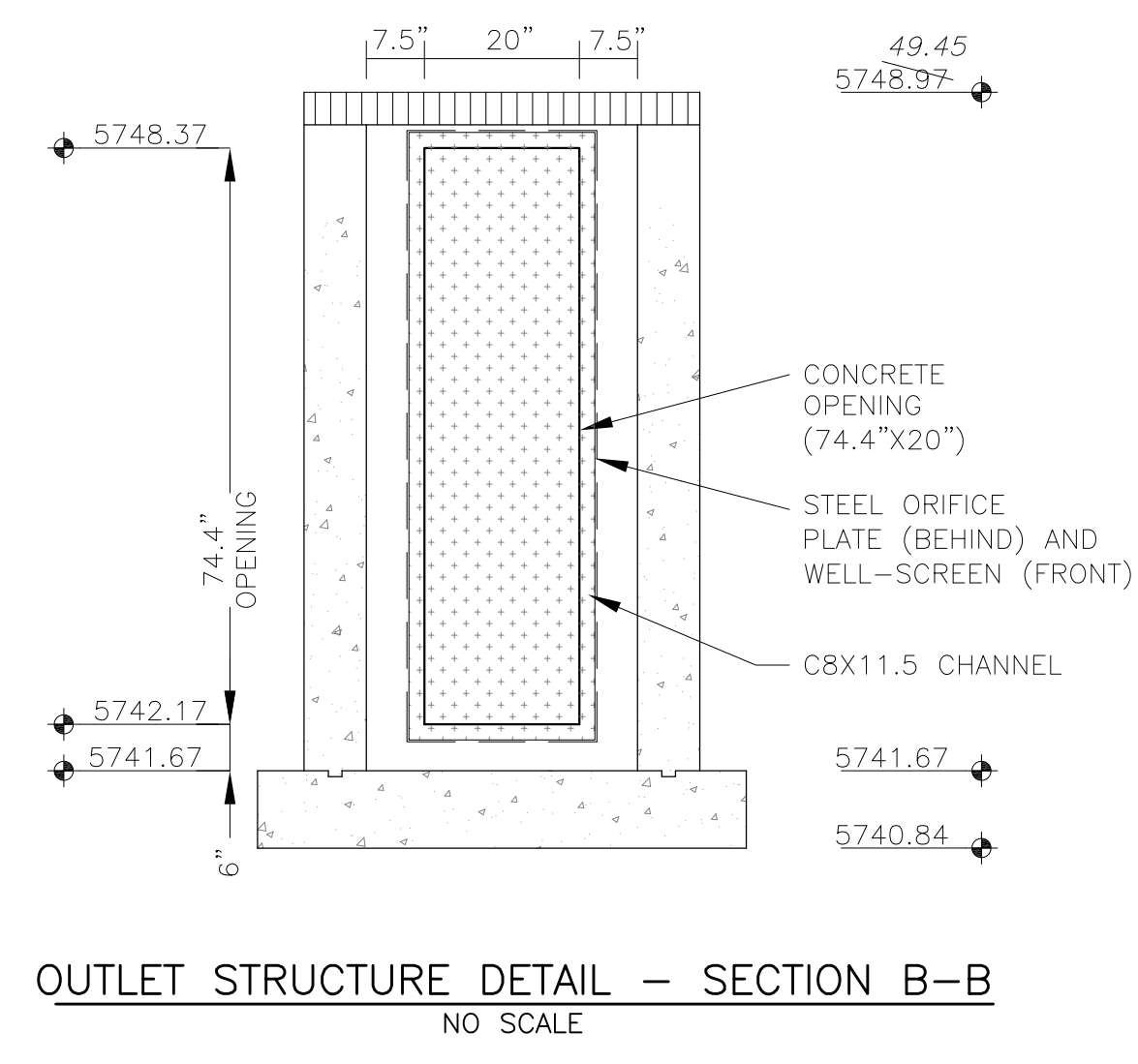
**OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:**

- 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.
- 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 POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
- ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

BAR SIZE	#4	#5	#6
MIN. SPLICE LENGTH	1'-3"	1'-7"	2'-0"

**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



**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
DENVER, CO 80232  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cog1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_

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

**POND C2.3**  
**FULL SPECTRUM**  
**OUTLET STRUCTURE DETAILS**



DATE:  
NOV 12, 2020

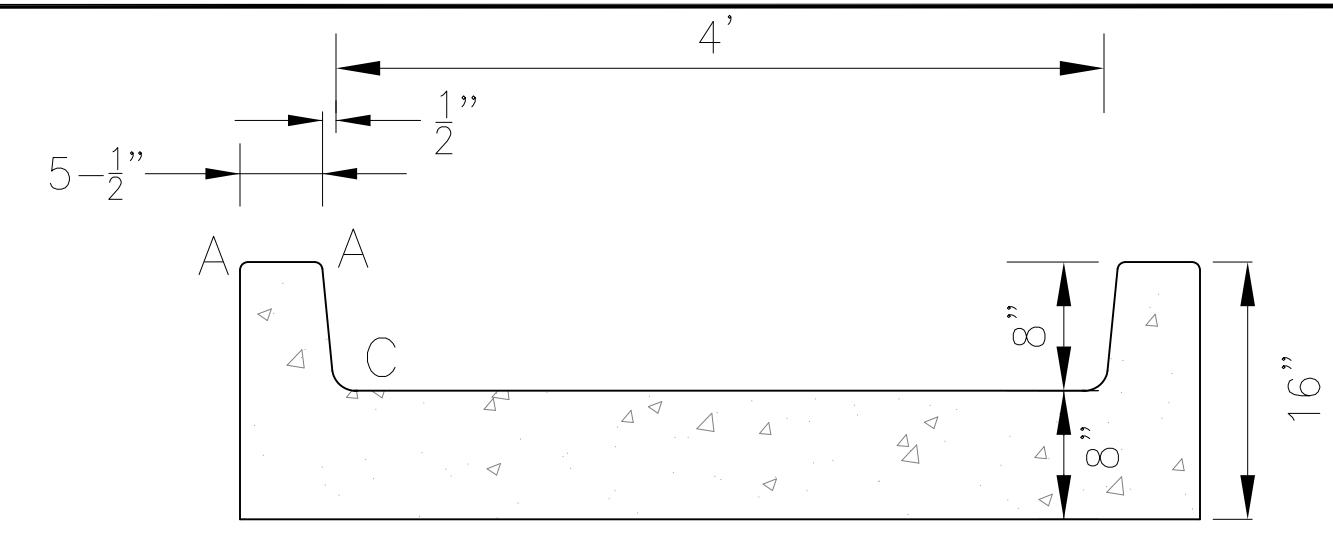
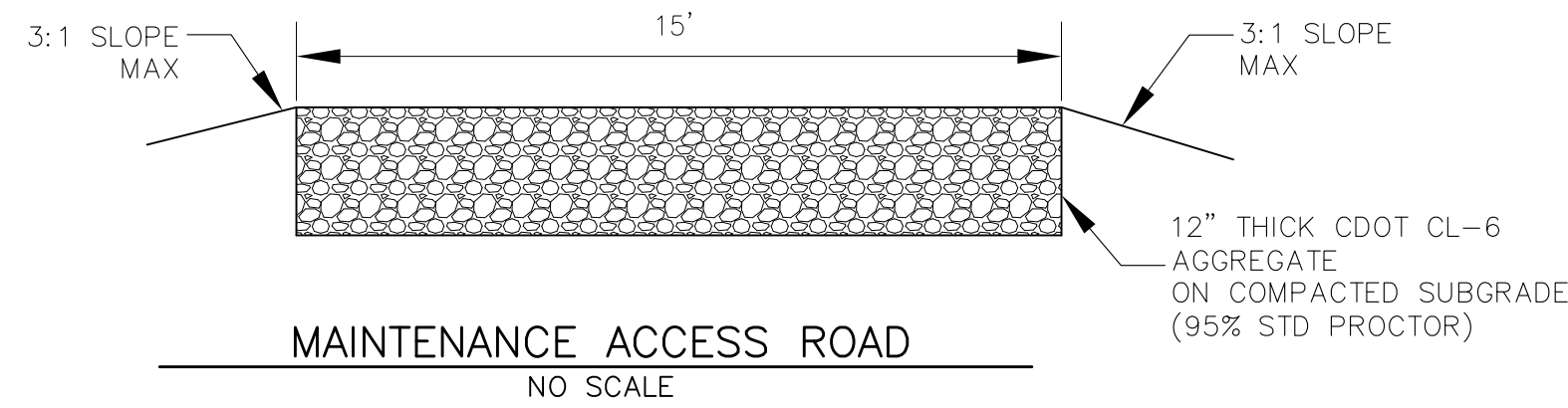
PROJECT NO.  
100.061

SHEET NUMBER  
C9.14

TOTAL SHEETS: 58

**AS-BUILT**  
DATE: 09/30/2022

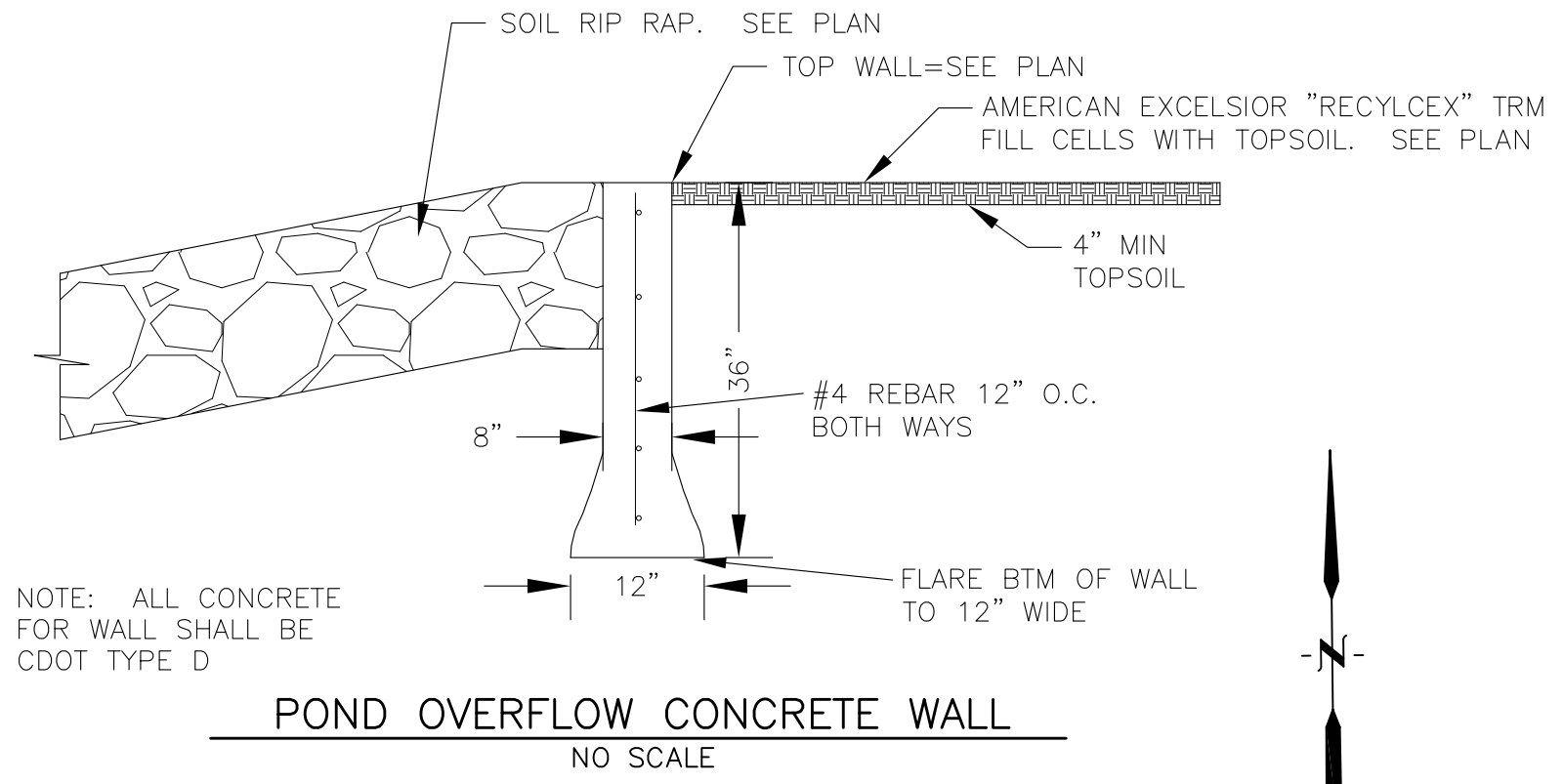
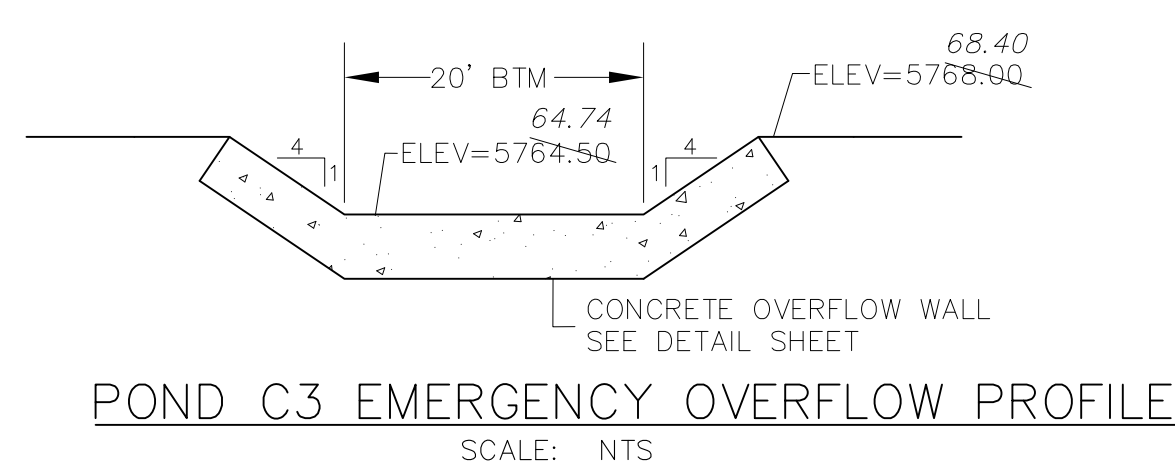
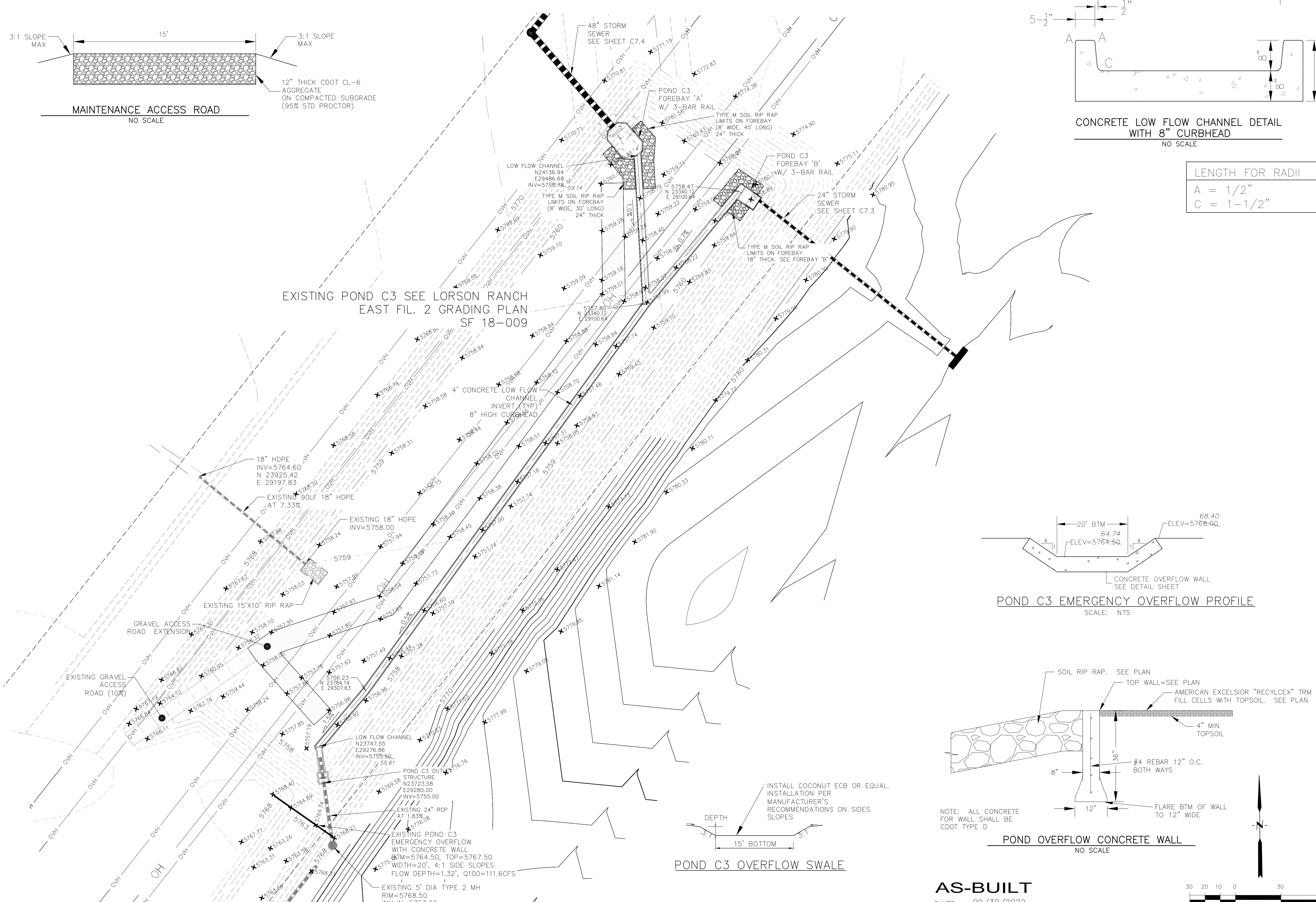




LENGTH FOR RADII

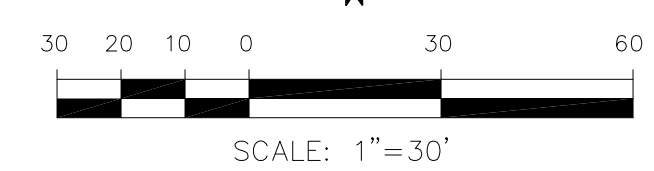
A	= 1/2"
C	= 1-1/2"

EXISTING POND C3 SEE LORSON RANCH EAST FIL. 2 GRADING PLAN SF 18-009



NOTE: ALL CONCRETE FOR WALL SHALL BE CDOT TYPE D

AS-BUILT  
DATE: 09/30/2022



**CORE ENGINEERING GROUP**  
19004 1ST AVE. SUITE 100  
DENVER, CO 80202  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cegi.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_

PREPARED FOR: **LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

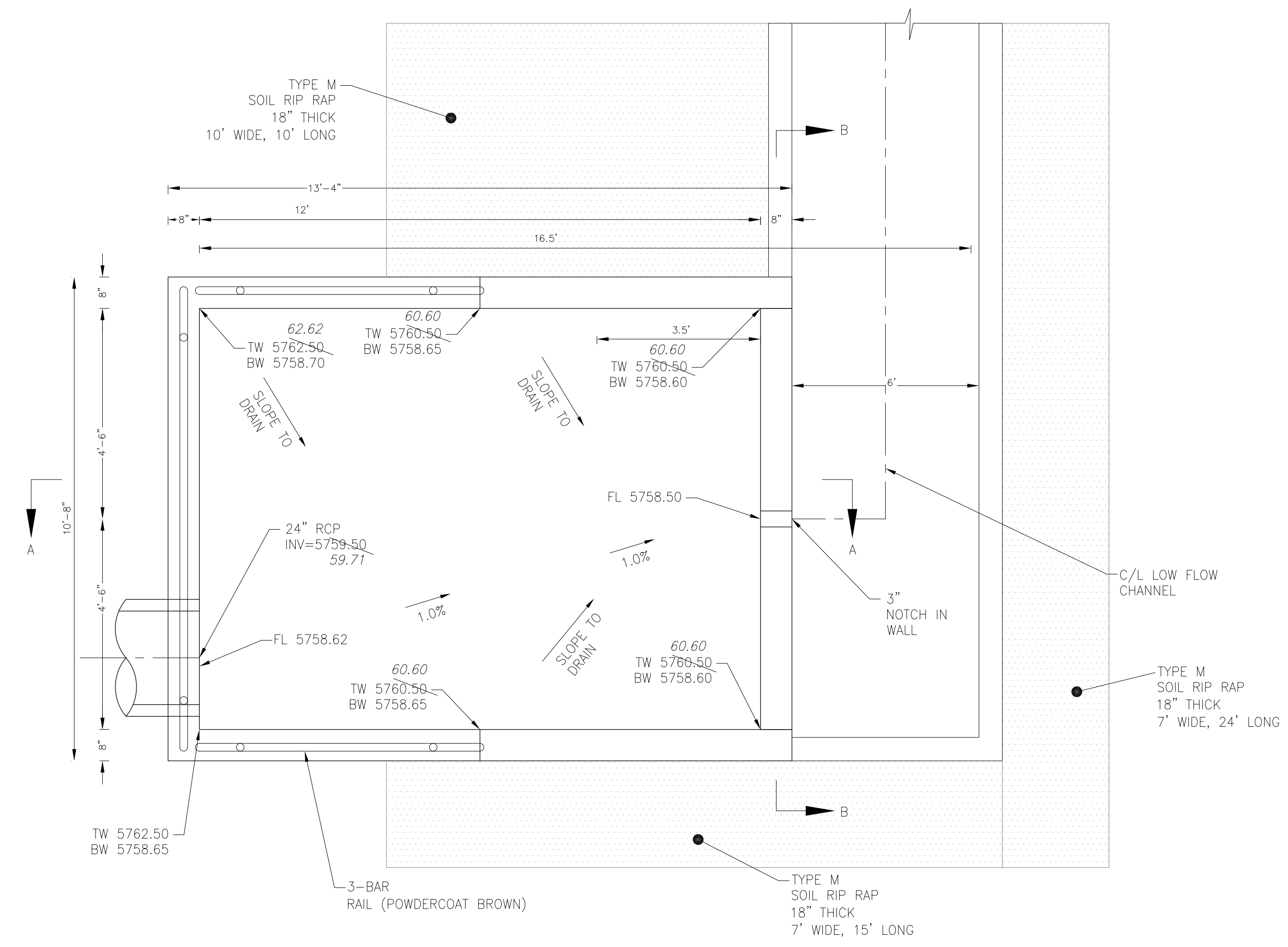
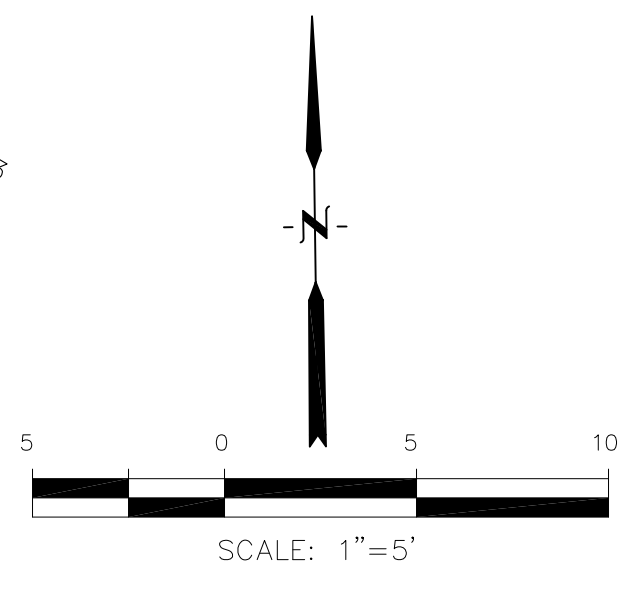
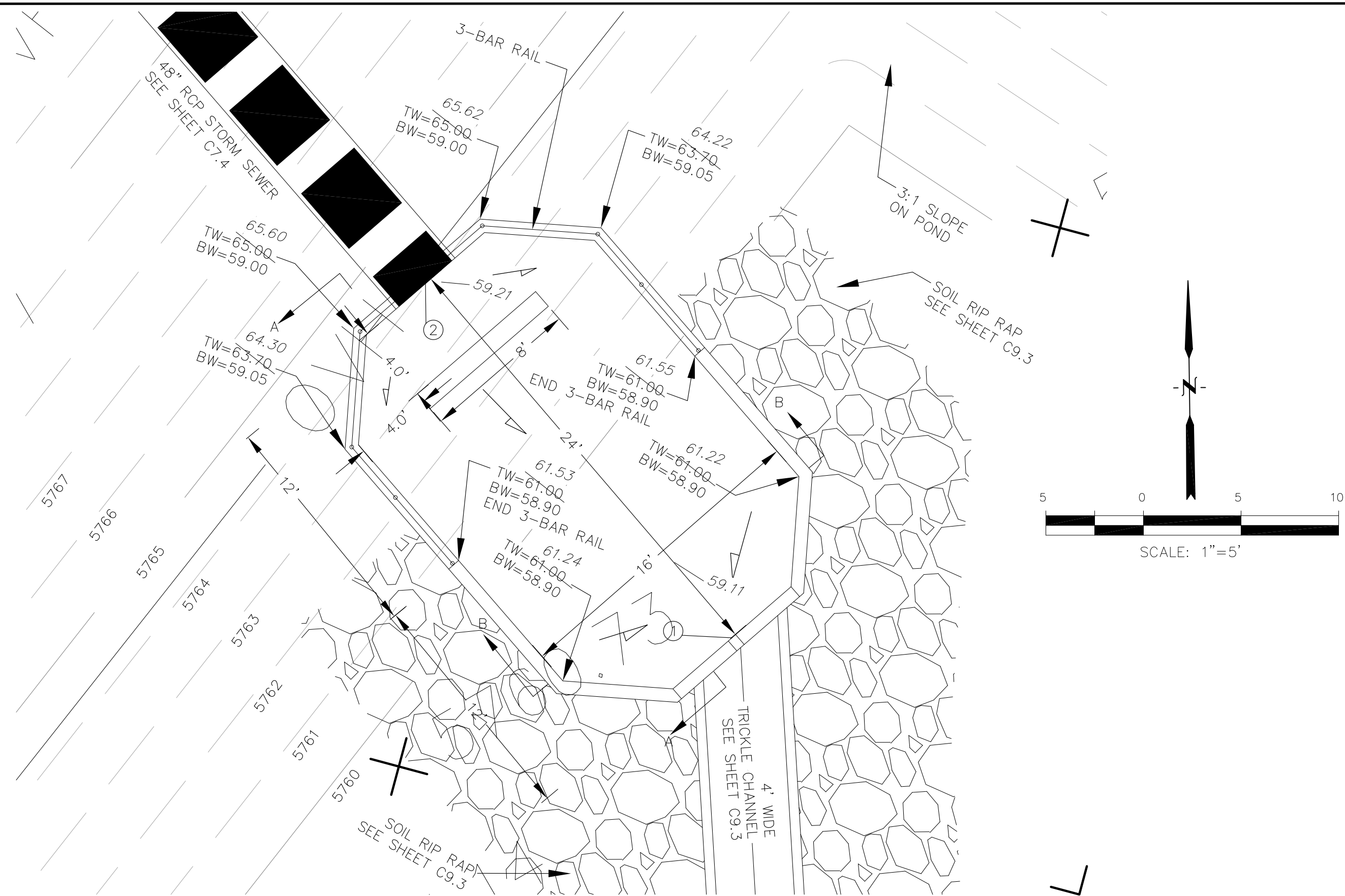
PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD-WALLEYE DR-LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

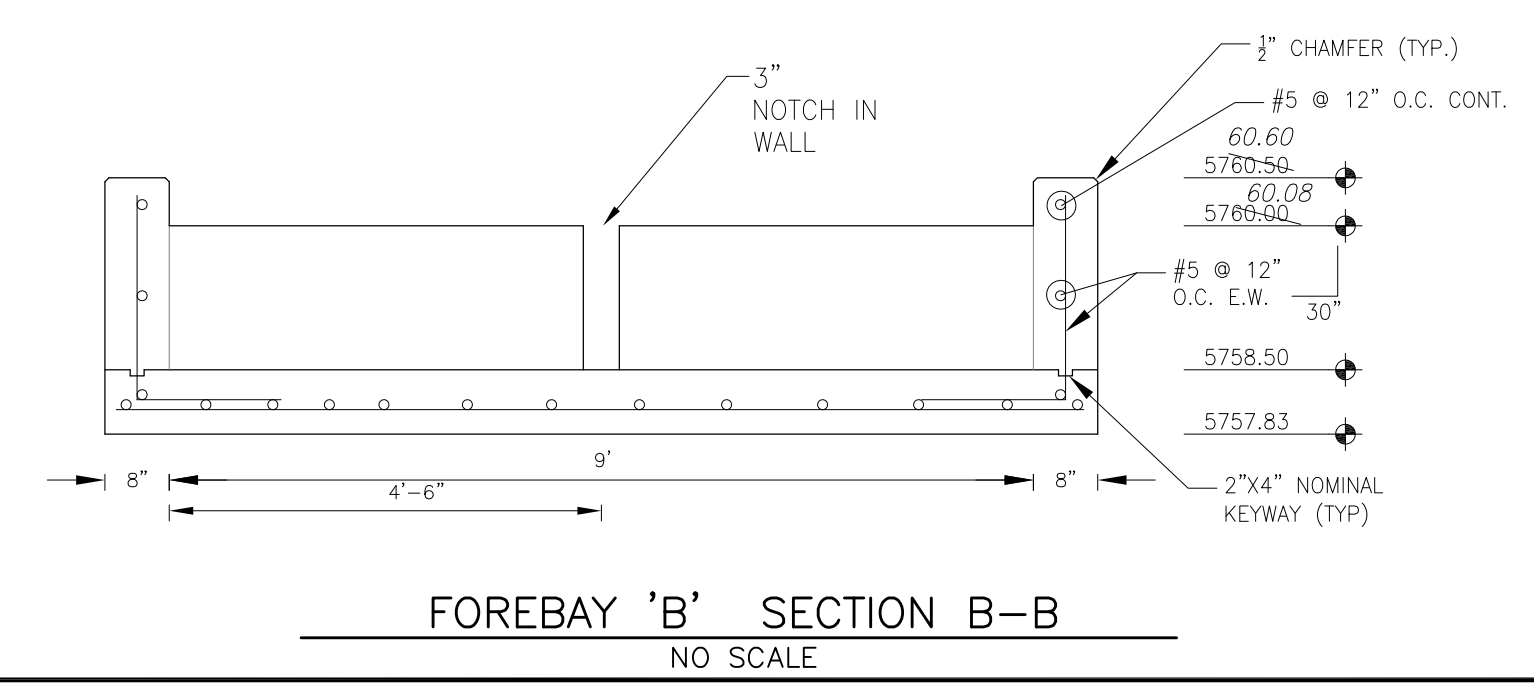
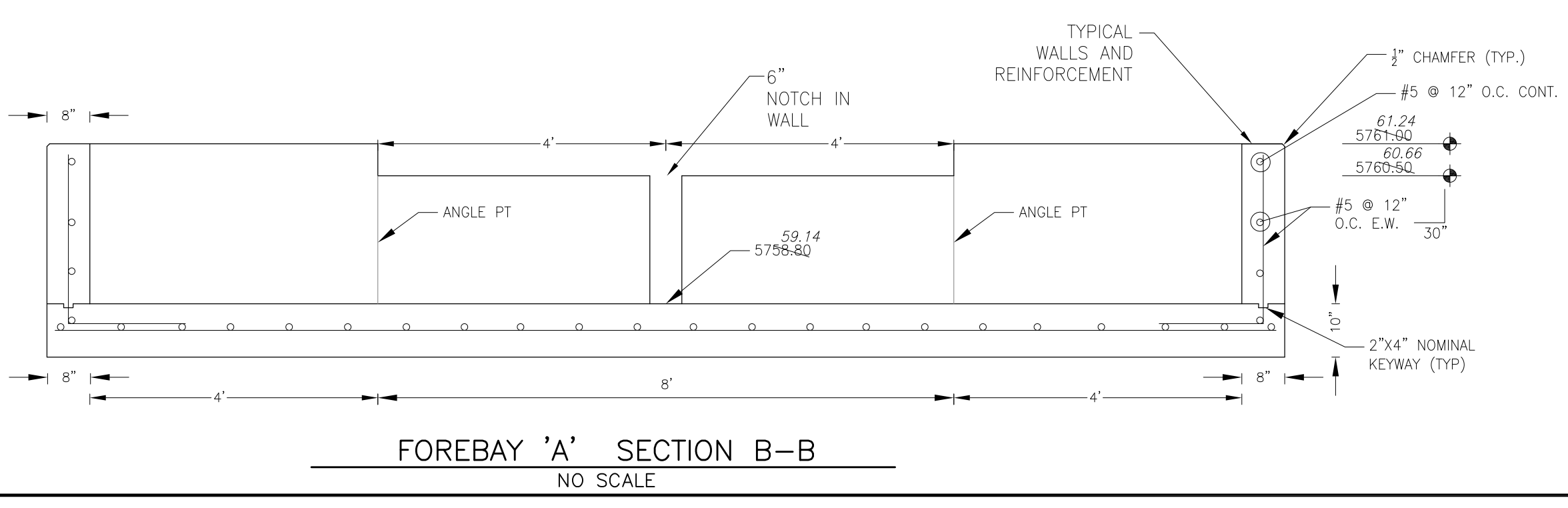
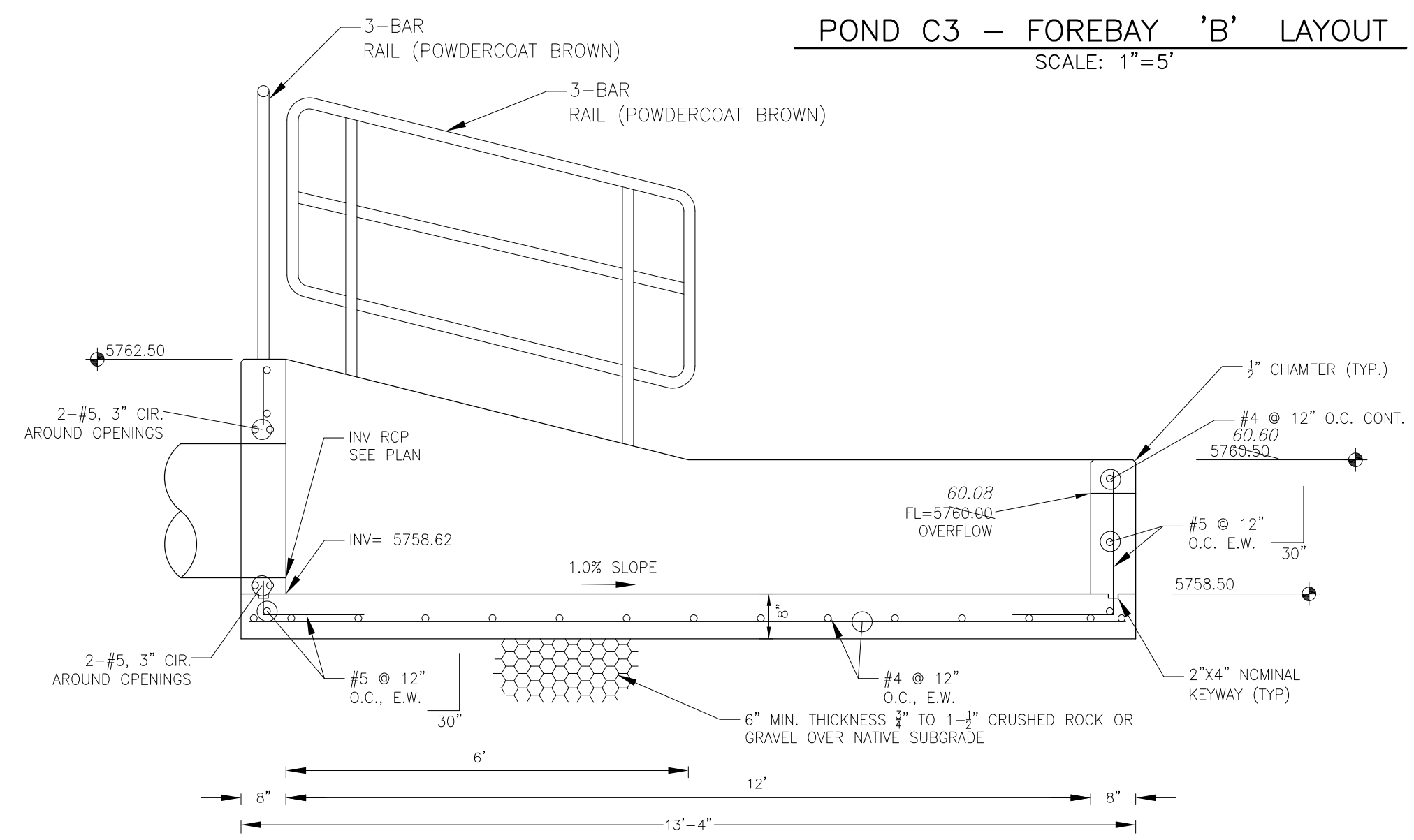
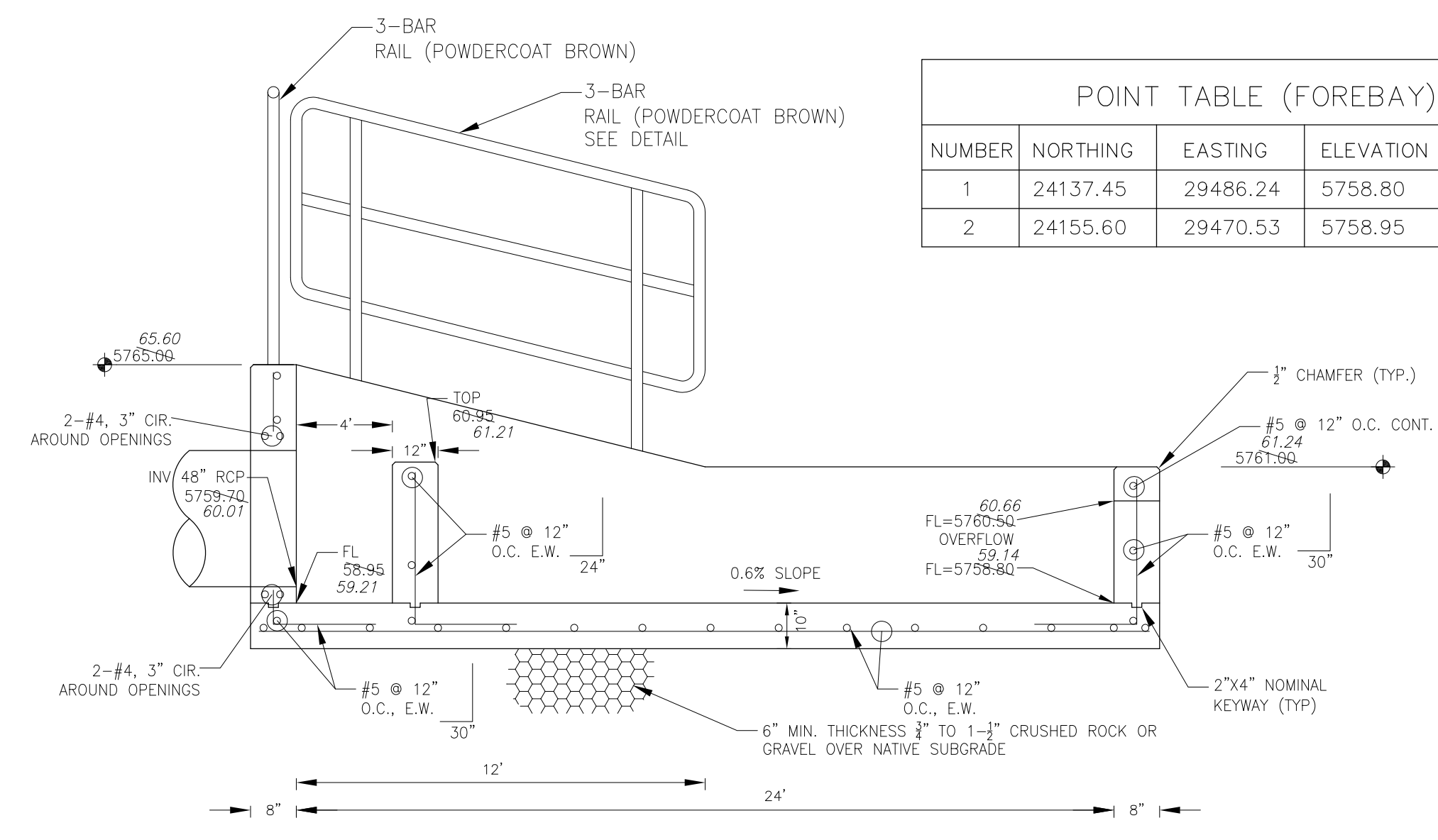
**POND C3 FOREBAY, LOW FLOW CHANNEL AND OUTLET STRUCTURE LAYOUT**



DATE: NOV 12, 2020  
PROJECT NO. 100.061  
SHEET NUMBER **C9.8**  
TOTAL SHEETS: 58



POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	24137.45	29486.24	5758.80	FOREBAY BOTTOM
2	24155.60	29470.53	5758.95	FOREBAY BOTTOM, INV 48"=5759.70



NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D

AS-BUILT  
DATE: 09/30/2022

**CORE ENGINEERING GROUP**  
19004 15TH AVENUE S.  
DENVER, CO 80202  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

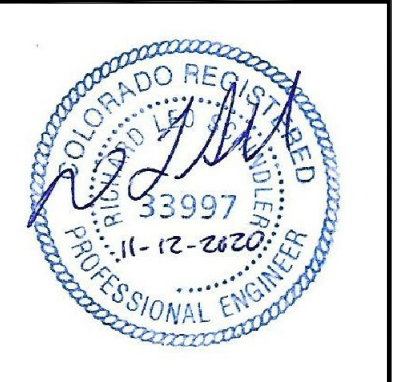
DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

PREPARED FOR:  
**LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

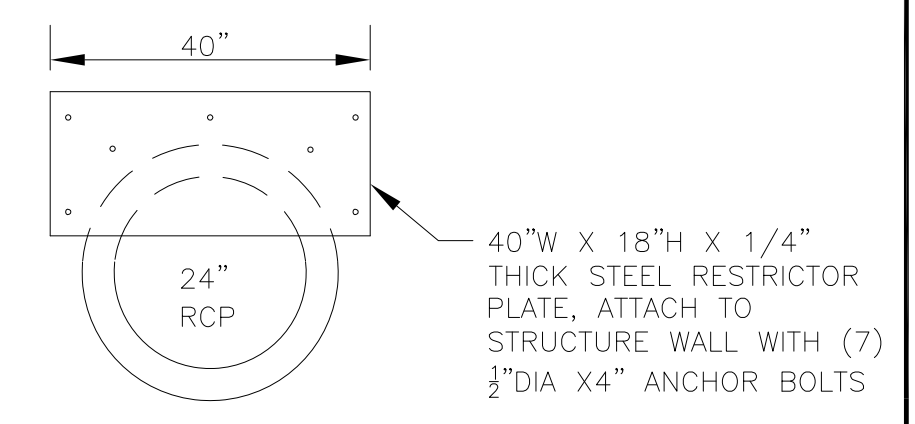
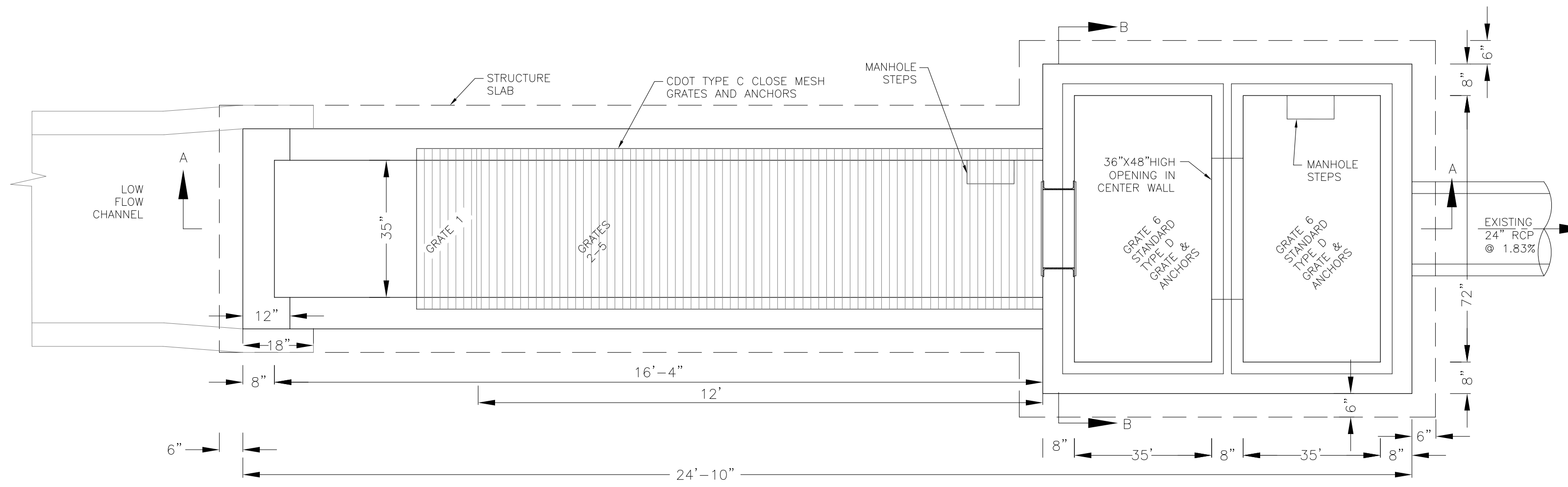
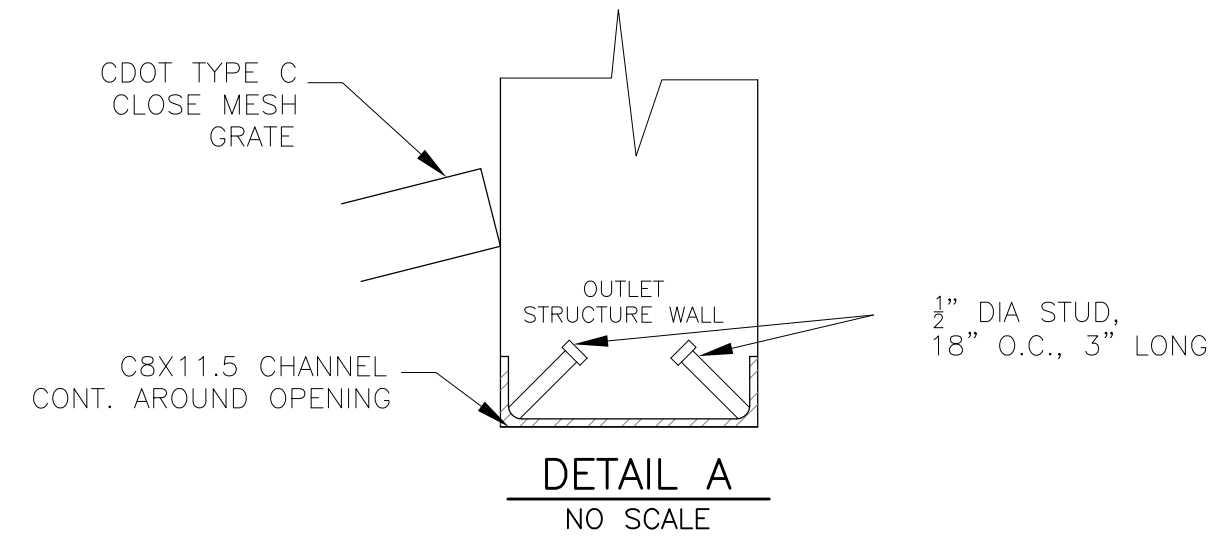
PROJECT:  
**THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_

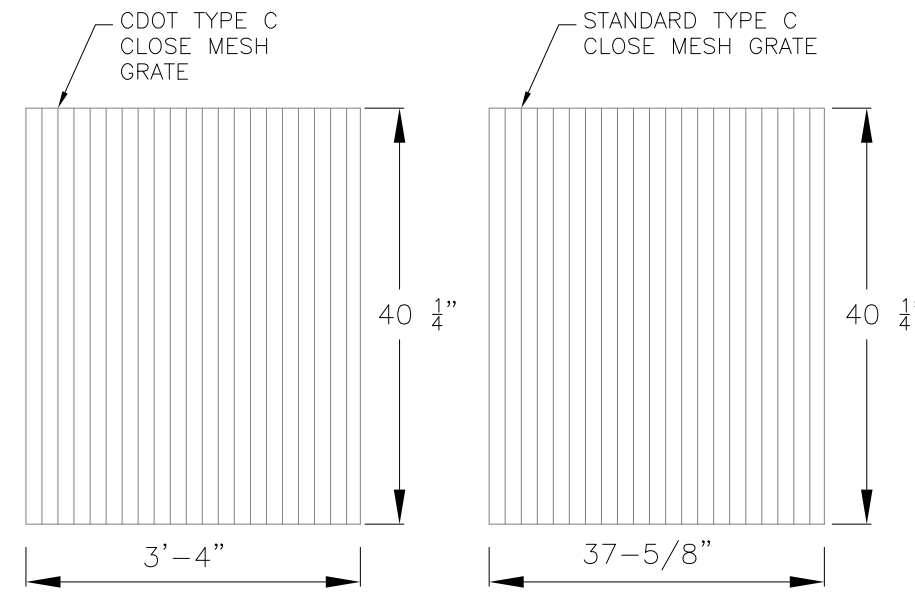
POND C3  
FOREBAY DETAILS



DATE: NOV 12, 2020  
PROJECT NO. 100.061  
SHEET NUMBER C9.9  
TOTAL SHEETS: 58



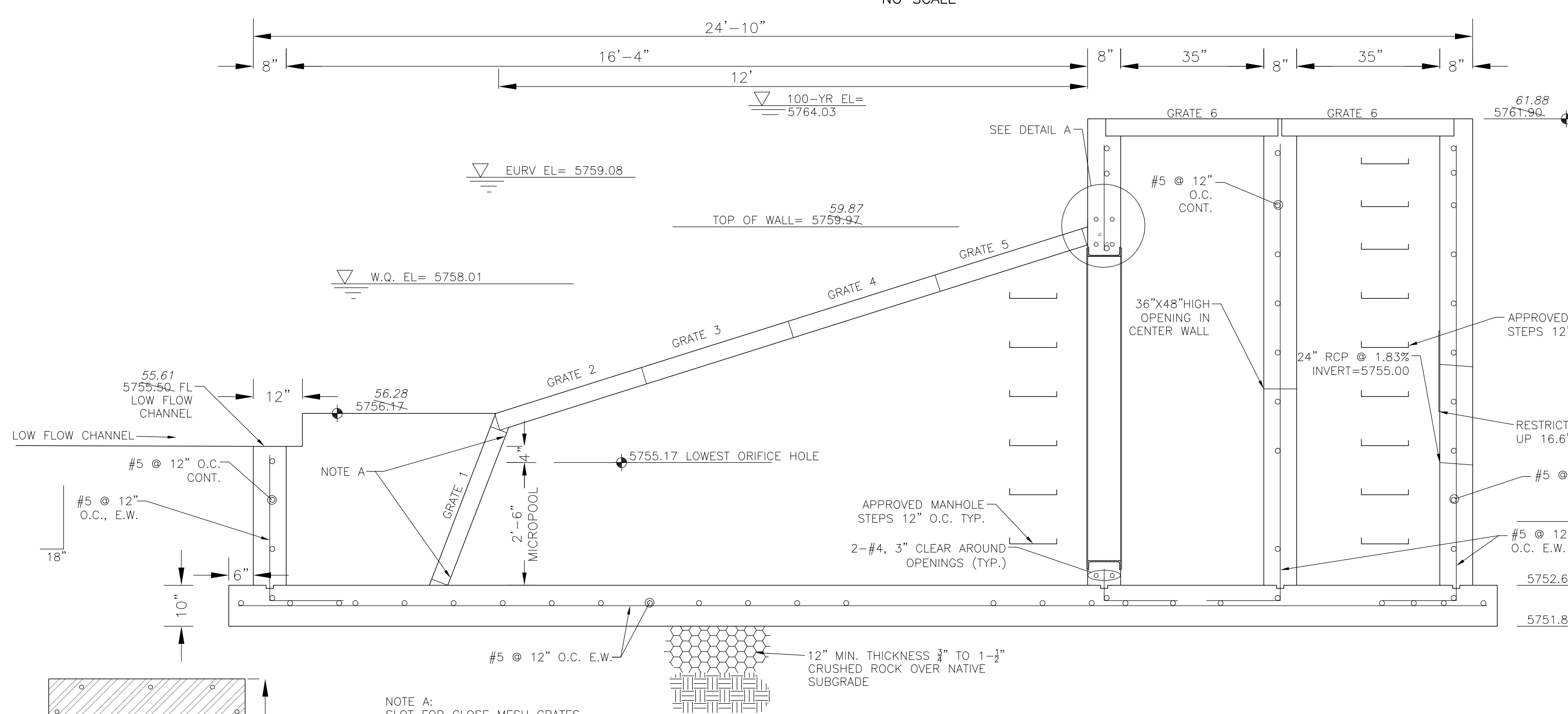
NOTE:  
AFTER CONCRETE STRUCTURE HAS BEEN POURED  
ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED  
PRIOR TO GRATE CONSTRUCTION



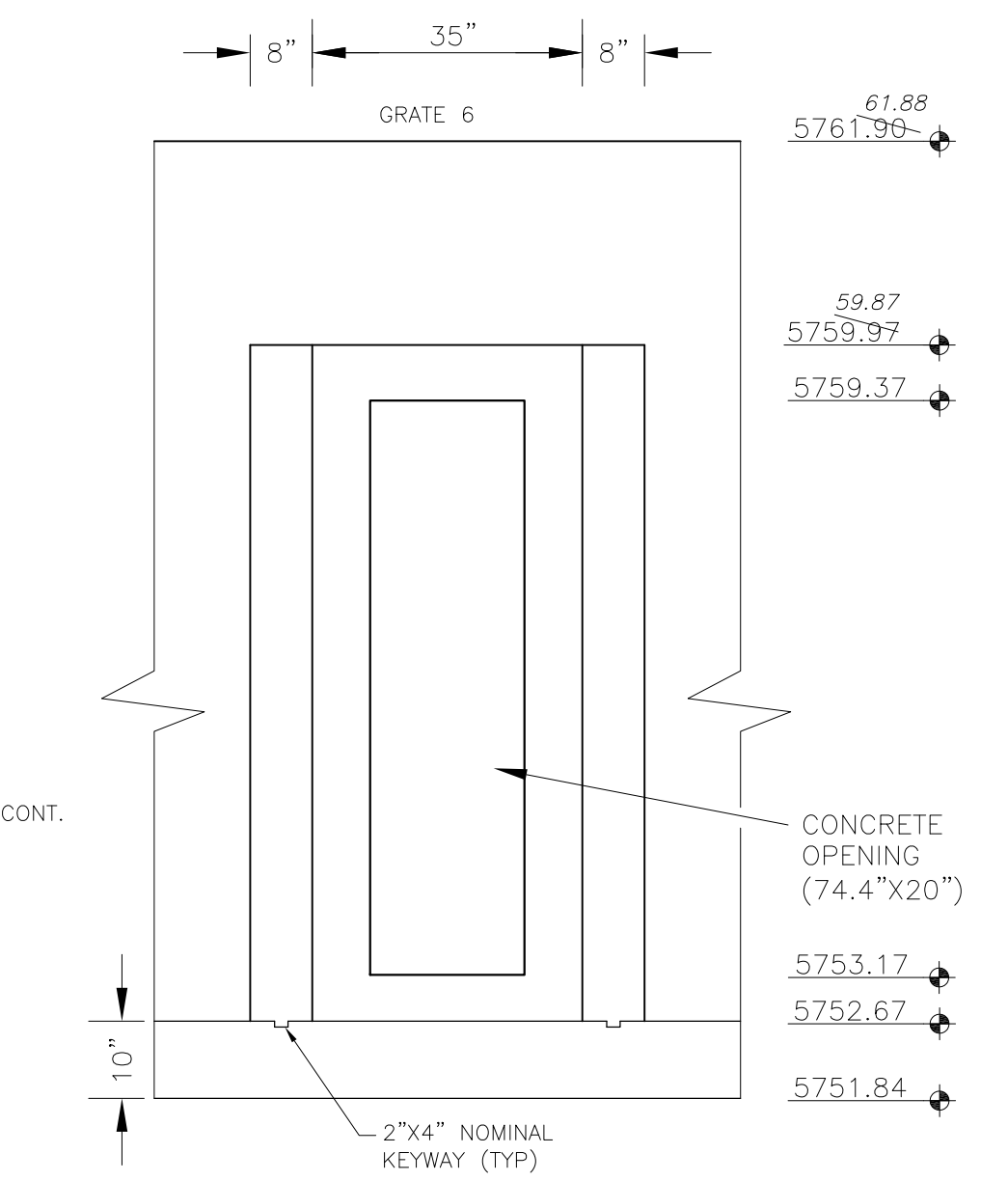
GRATE 1  
NO SCALE



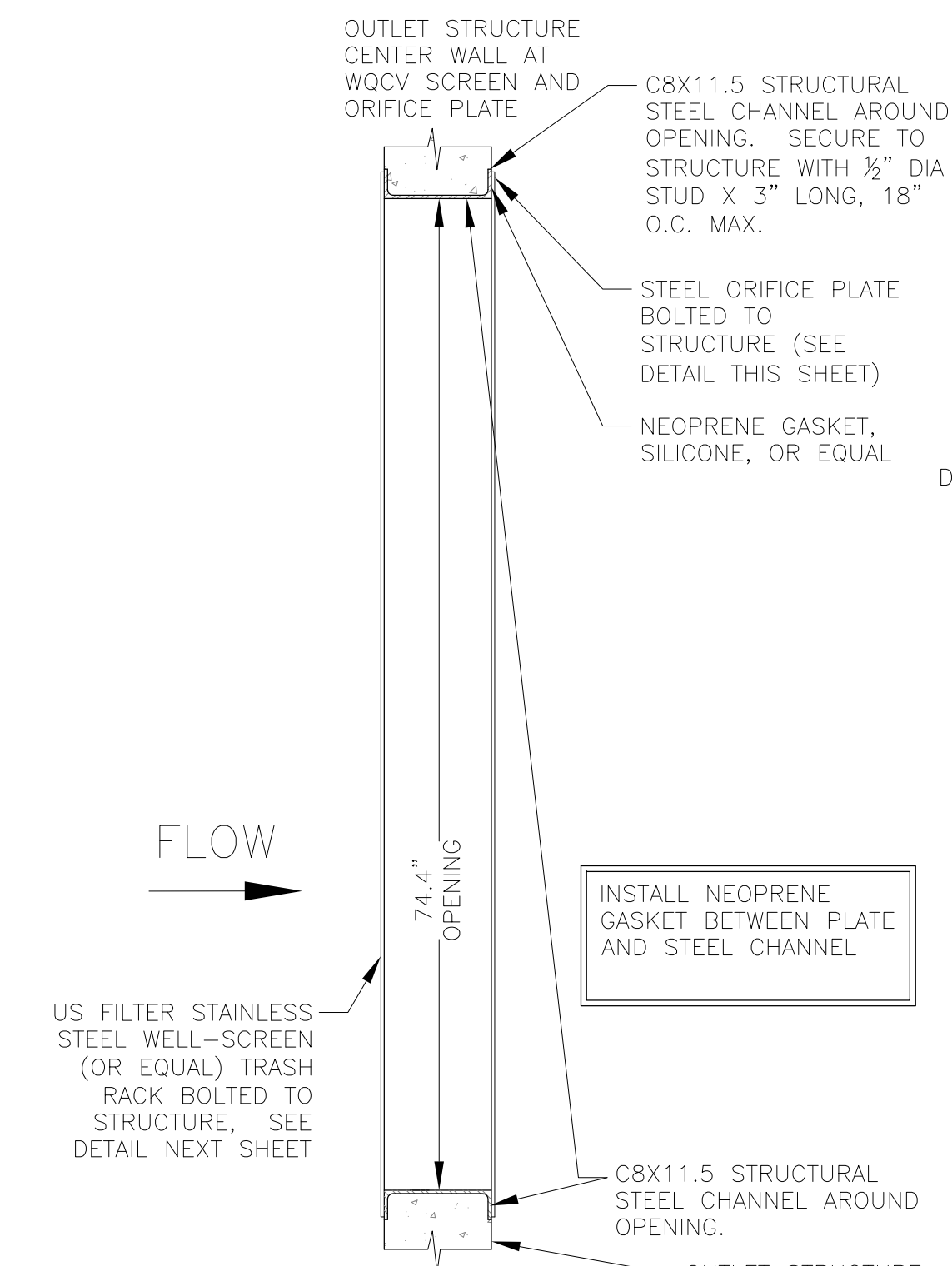
GRATES 2,3,4,5  
NO SCALE



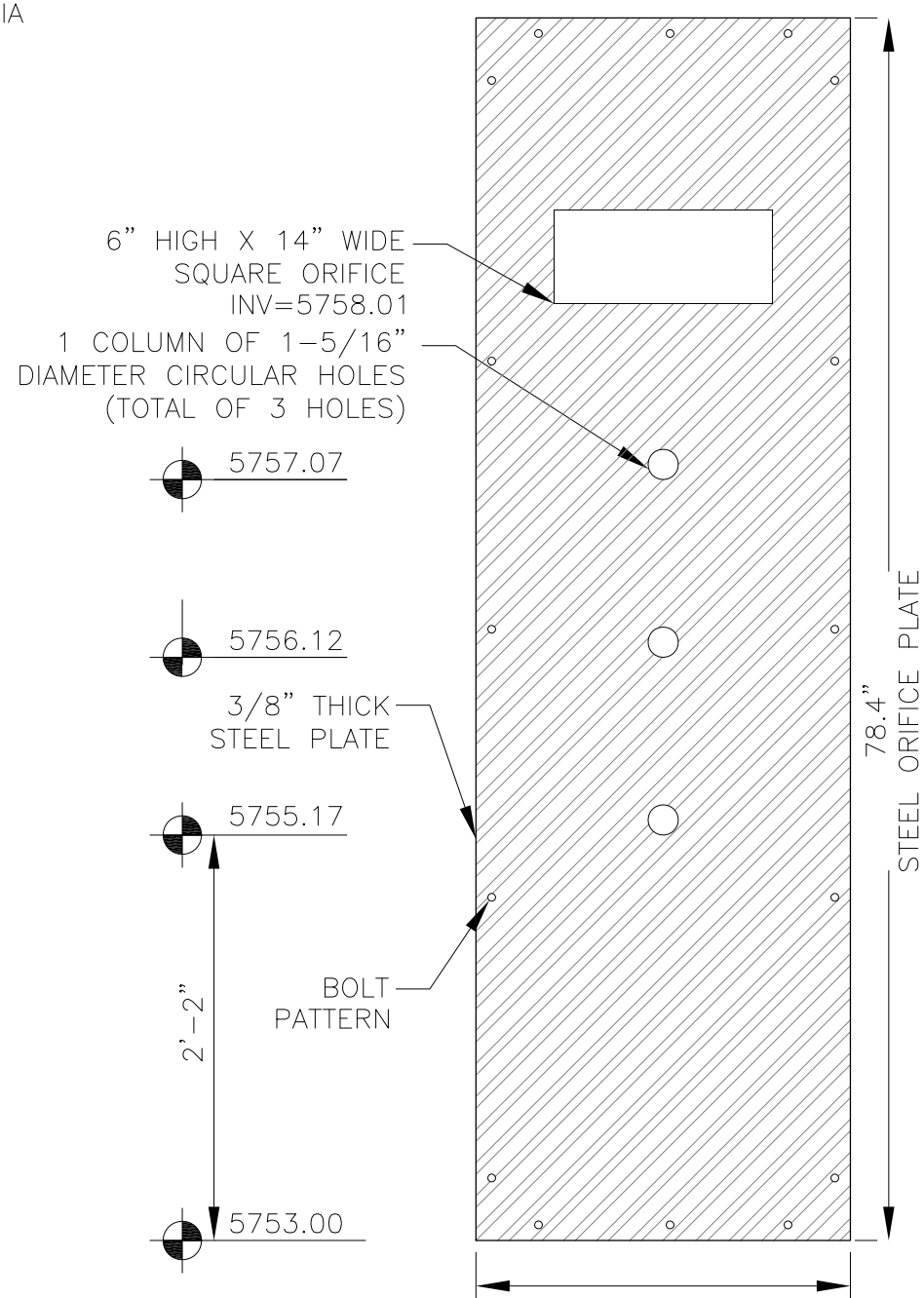
OUTLET STRUCTURE DETAIL - SECTION A-A  
NO SCALE



OUTLET STRUCTURE DETAIL - SECTION B-B  
NO SCALE



TRASH RACK DETAIL  
NO SCALE



ORIFICE PLATE DETAIL  
NO SCALE

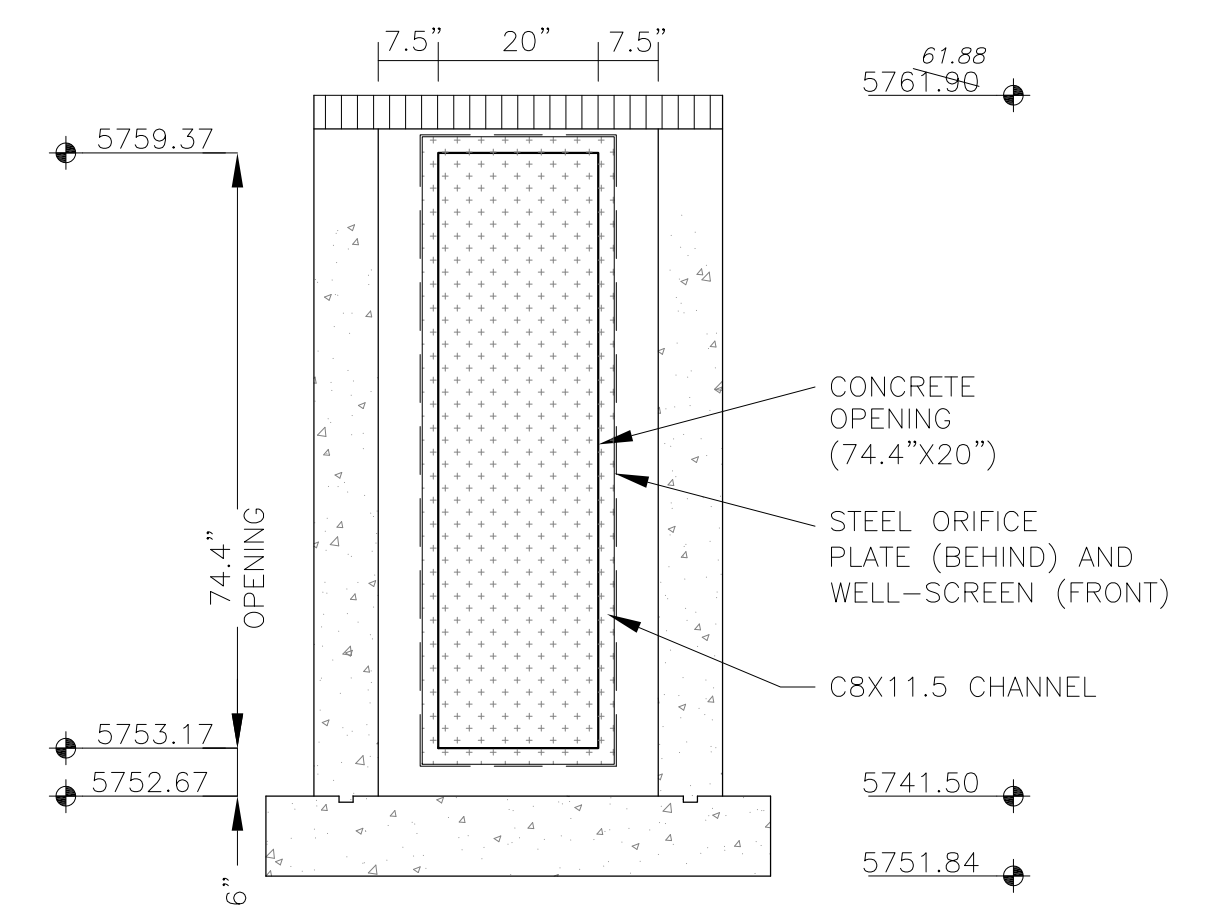
OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

- 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.
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- SUBGRADE TO BE 12" THICK CLEAN FILL COMPACTED TO 95% STANDARD PROCTOR DENSITY PER ASTM M698 UNDER STRUCTURE.
- REFER TO POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
- ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

BAR SIZE	#4	#5	#6
MIN. SPLICE LENGTH	1'-3"	1'-7"	2'-0"

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

**AS-BUILT**  
DATE: 09/30/2022

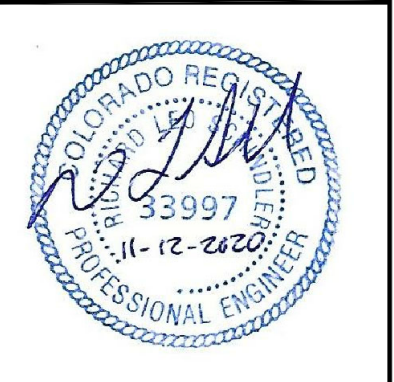
**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
PH: 719.570.5506  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cgei.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
PREPARED FOR: **LORSON, LLC**  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
CONTACT: JEFF MARK

PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**POND C3**  
**FULL SPECTRUM**  
**OUTLET STRUCTURE DETAILS**

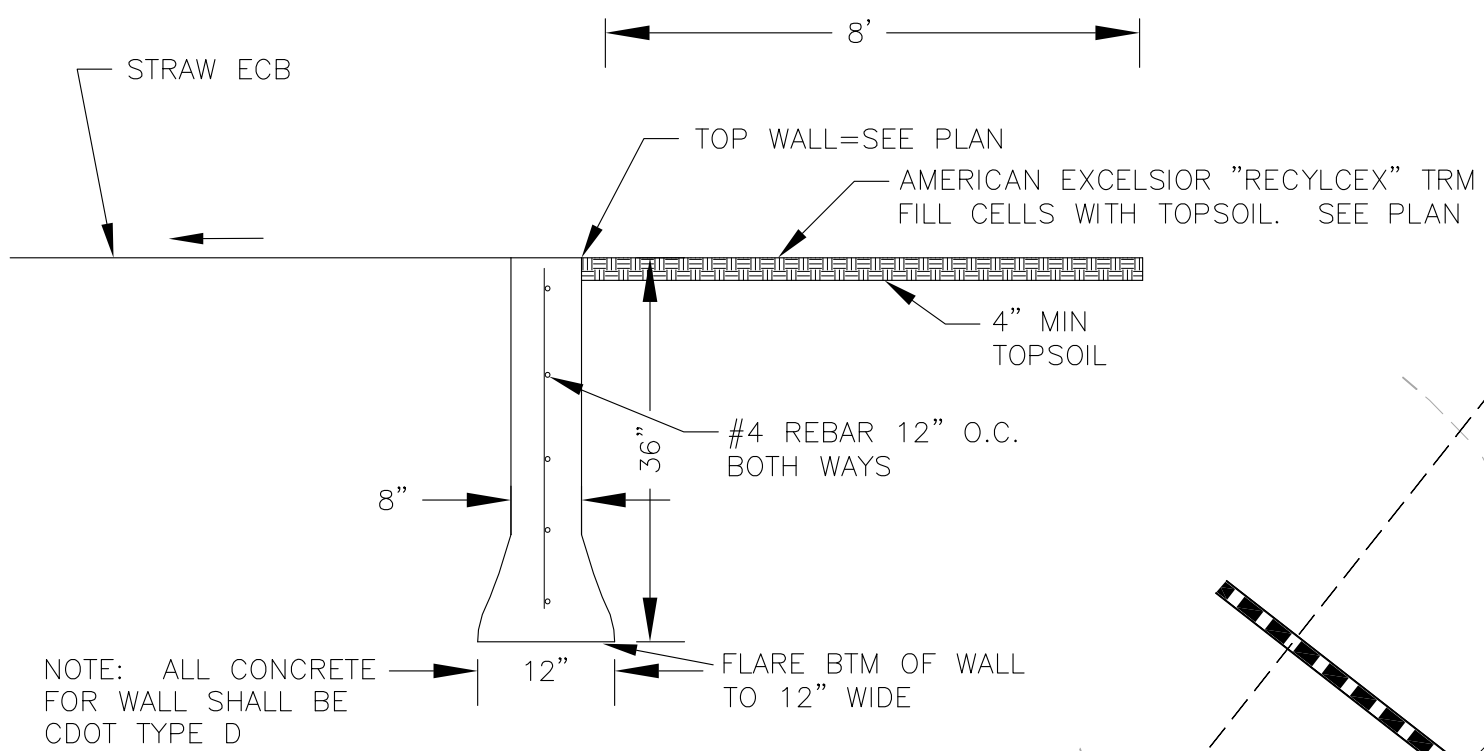
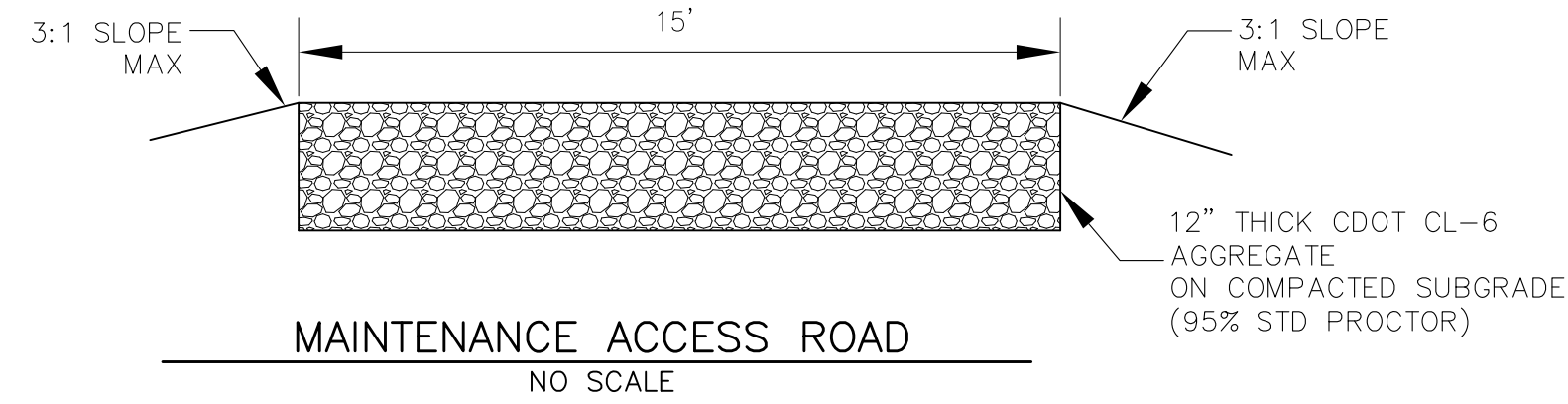


DATE:  
NOV 12, 2020

PROJECT NO.  
100.061

SHEET NUMBER  
**C9.15**

TOTAL SHEETS: 58



**POND CONCRETE CUTOFF WALL**  
NO SCALE

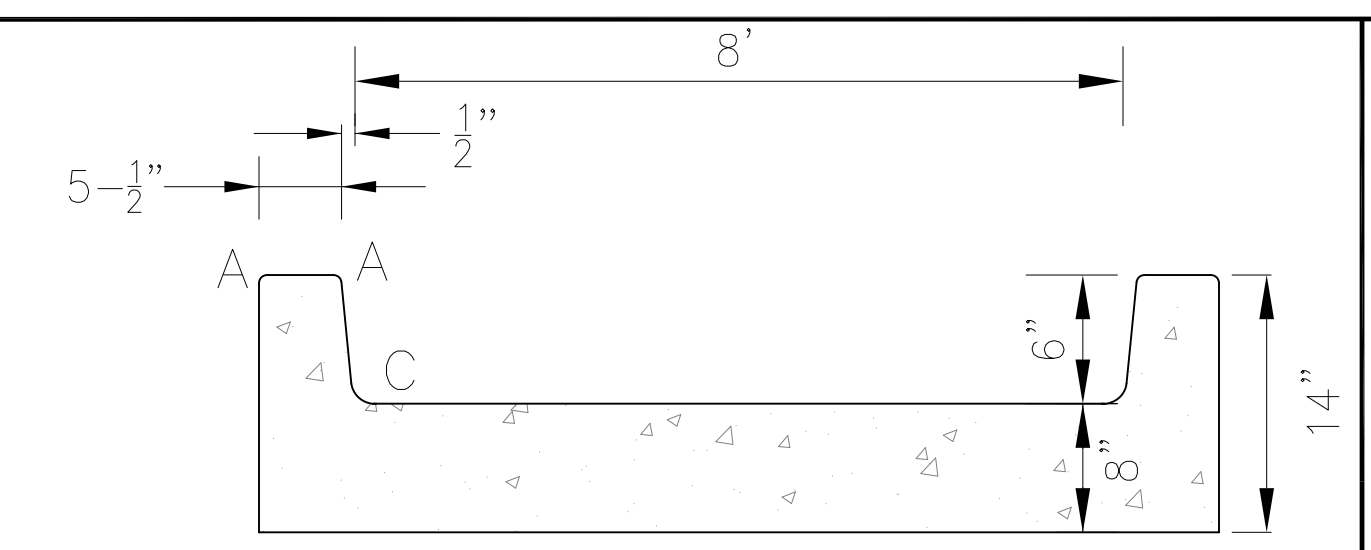
POND C4 EMERGENCY OVERFLOW AND CONCRETE CUTOFF WALL  
BTM=5775.00, TOP=5778.00  
WIDTH=30', 4:1 SIDE SLOPES  
FLOW DEPTH=1.87', Q100=138CFS

MAINTENANCE ACCESS ROAD (10%)  
SEE DETAIL

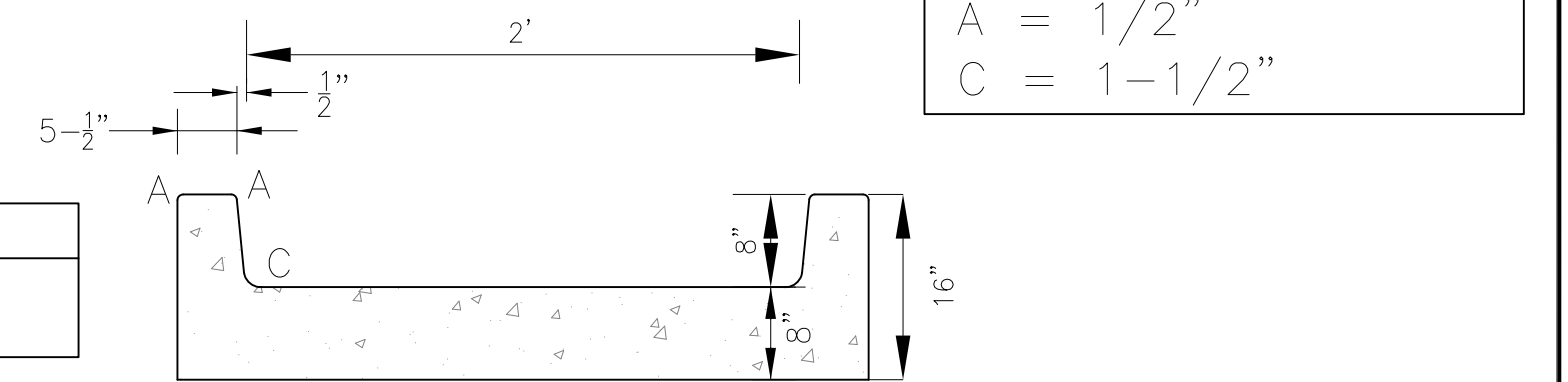
TYPE M SOIL RIP RAP LIMITS ON FOREBAY (10' WIDE, 40' LONG) 24" THICK

POND C4 FOREBAY W/ 3-BAR RAIL

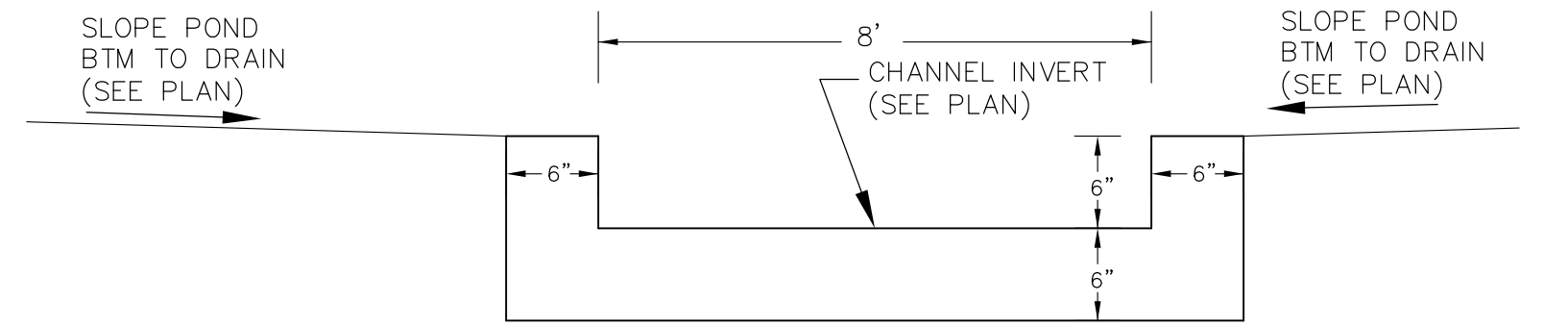
48" STORM SEWER  
SEE SHEET C6.9



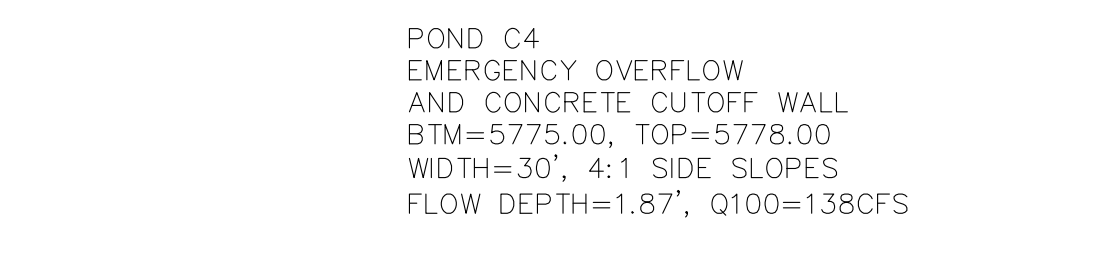
**CONCRETE LOW FLOW CHANNEL DETAIL**  
NO SCALE



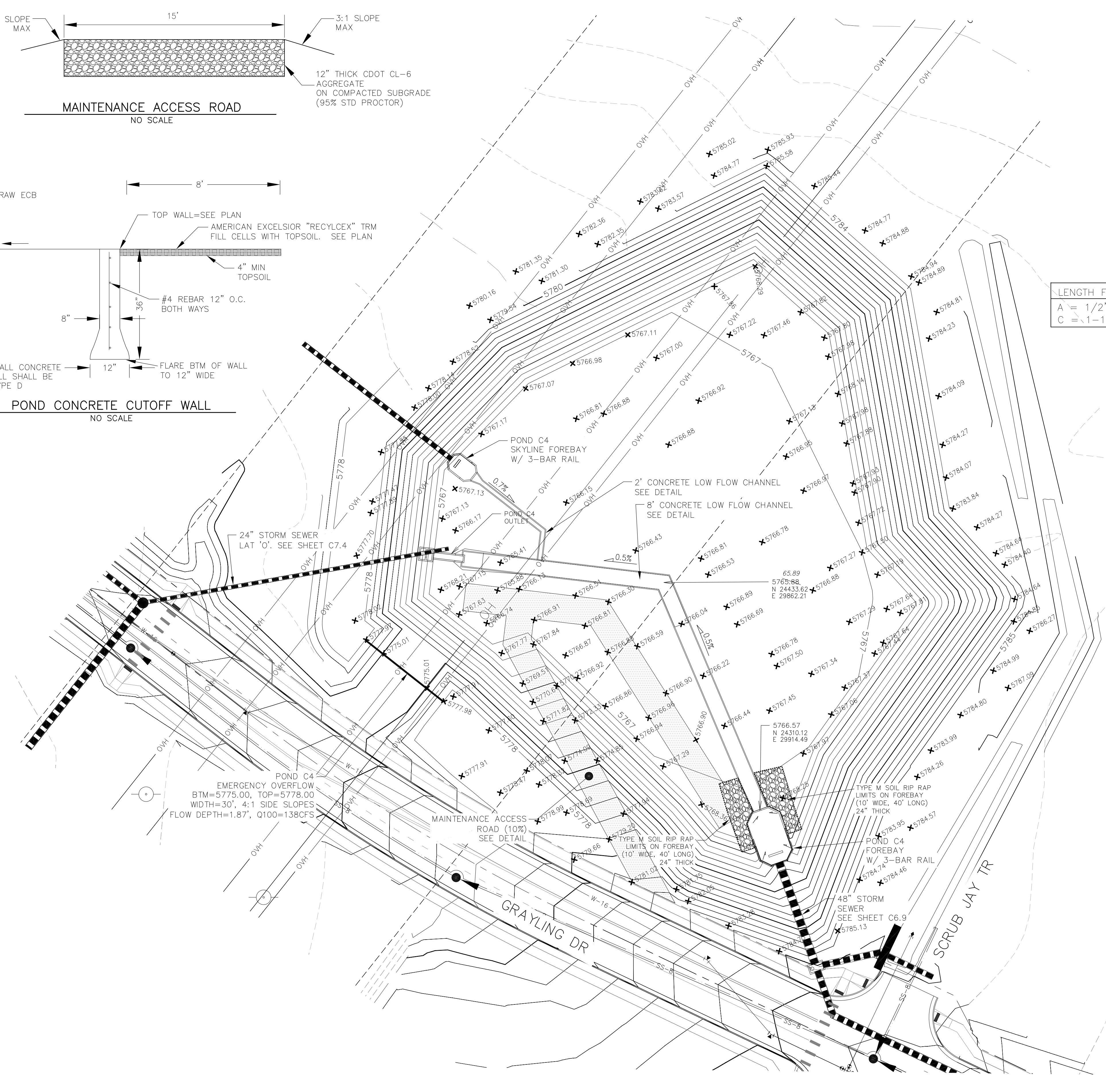
**CONCRETE LOW FLOW CHANNEL DETAIL WITH 8" CURBHEAD**  
NO SCALE



**CONCRETE LOW FLOW CHANNEL**  
N.T.S.



**POND C4 EMERGENCY OVERFLOW AND CONCRETE CUTOFF WALL PROFILE**  
SCALE: NTS



**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
DENVER, CO 80232  
PHONE: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cegi.com

DATE: JAN 12, 2021

DESCRIPTION: RAISE SITE 1' EAST OF POWERLINES

NO. 1

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

PROJECT: **THE HILLS COLLECTOR STREET CONSTRUCTION**  
FONTAINE BLVD. - GRAYLING DR  
LORSON BLVD. - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

**POND C4 FOREBAY & LOW FLOW CHANNEL LAYOUT**



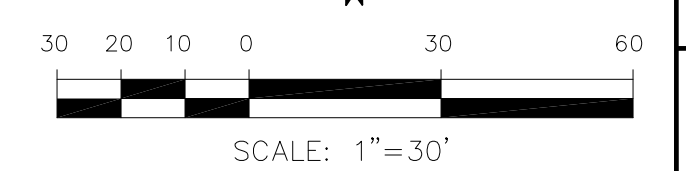
DATE: NOV 12, 2020

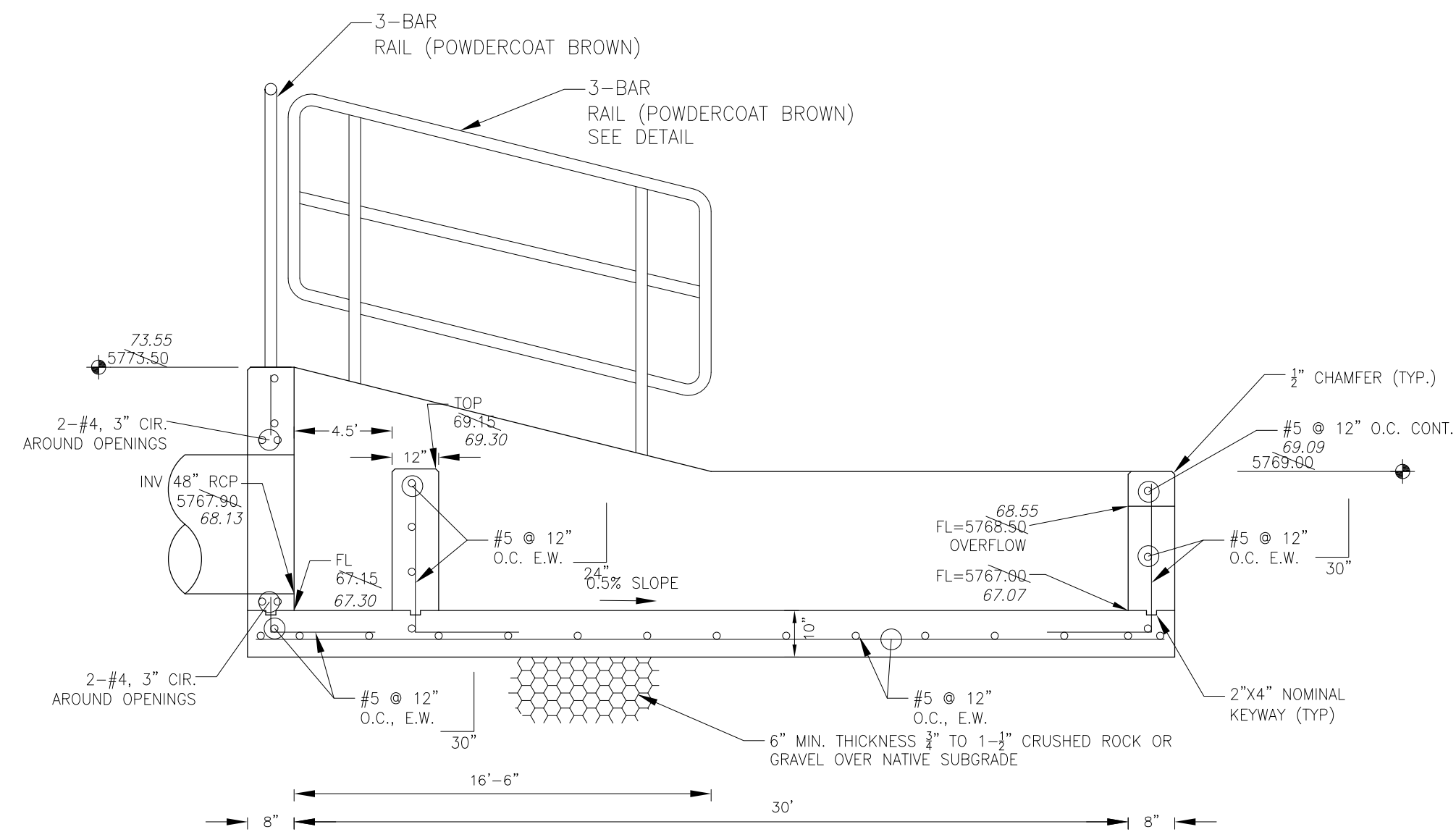
PROJECT NO. 100.061

SHEET NUMBER C9.10

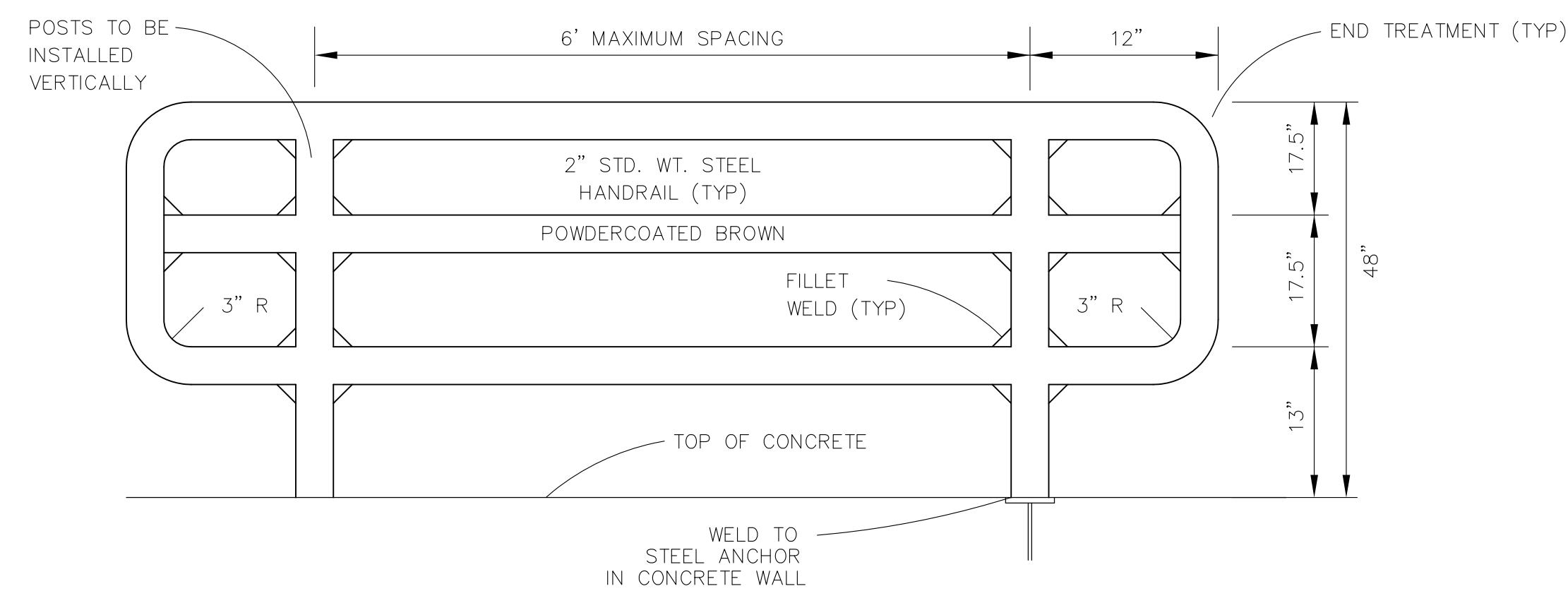
TOTAL SHEETS: 58

**AS-BUILT**  
DATE: 09/30/2022

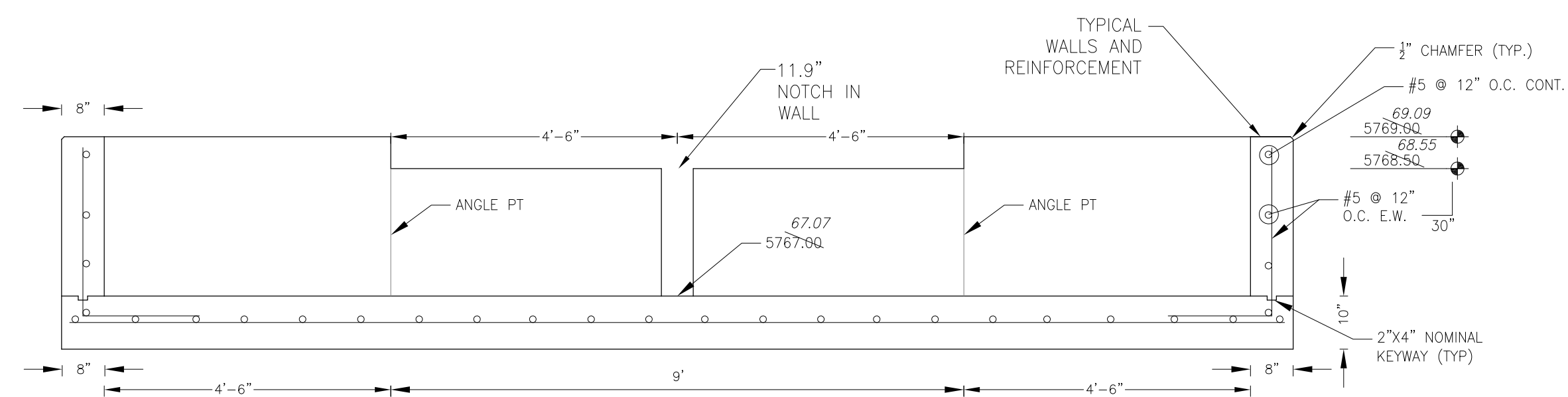




FOREBAY SECTION A-A  
NO SCALE

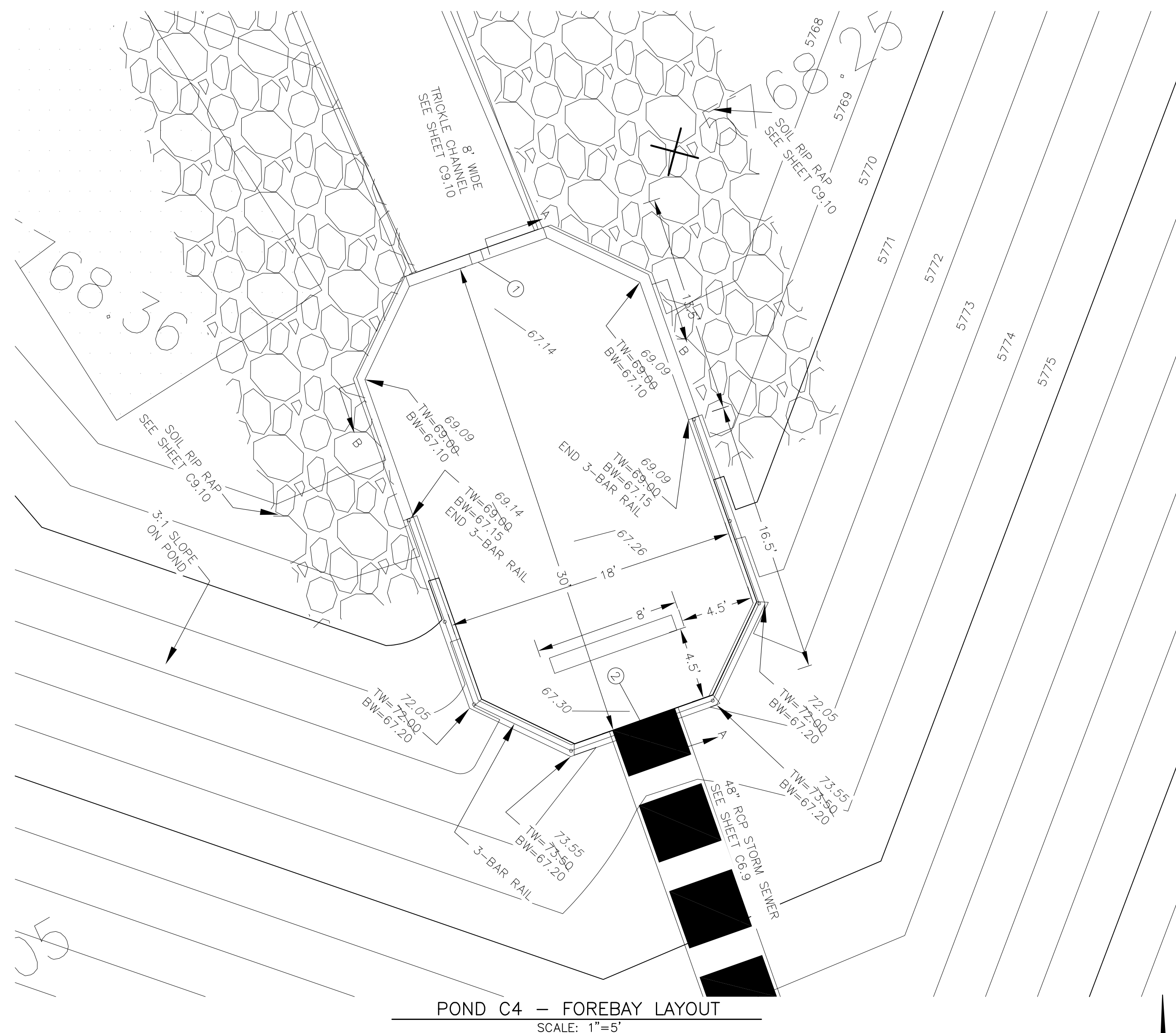


3-BAR RAIL DETAIL  
NO SCALE

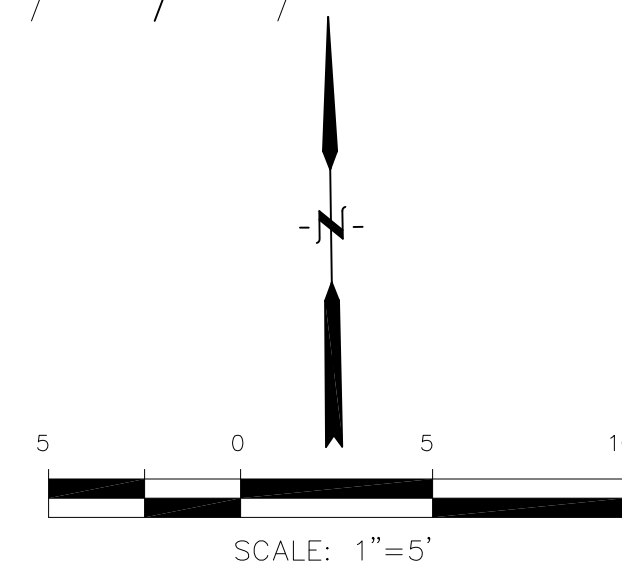


FOREBAY SECTION B-B  
NO SCALE

NOTE: ALL CONCRETE FOR FOREBAY SHALL BE CDOT TYPE D



POND C4 - FOREBAY LAYOUT  
SCALE: 1"=5'



POINT TABLE (FOREBAY)				
NUMBER	NORTHING	EASTING	ELEVATION	NOTES
1	24309.51	29914.77	5767.00	FOREBAY BOTTOM
2	24281.30	29924.99	5767.15	FOREBAY BOTTOM, INV 48"=5767.90

**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: JAN 12, 2021  
DESCRIPTION: RAISE SITE 1' EAST OF POWERLINES  
NO. 1  
PROJECT: THE HILLS COLLECTOR STREET CONSTRUCTION  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
LORSON, LLC  
LORSON BLVD - WALLEYE DR - LAMPREY DR  
COLORADO SPRINGS, COLORADO  
CONTACT: JEFF MARK

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

POND C4  
FOREBAY DETAILS

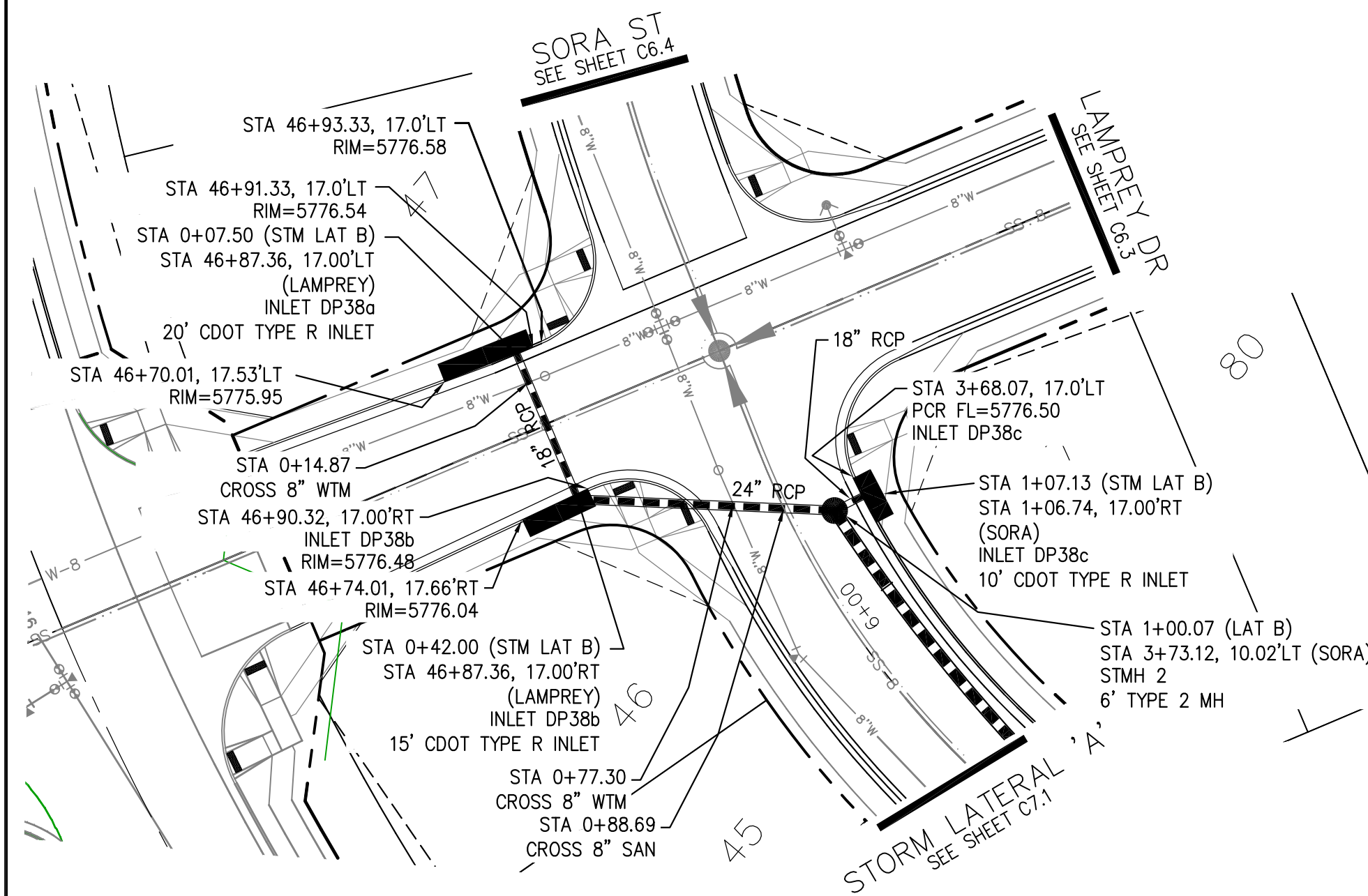
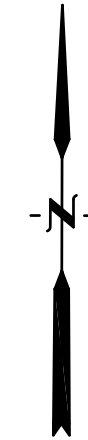
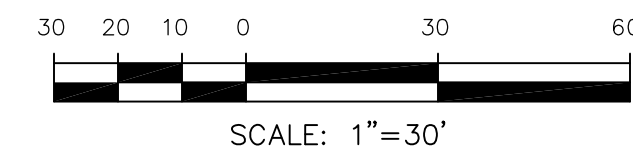


DATE: NOV 12, 2020  
PROJECT NO. 100.061  
SHEET NUMBER C9.11  
TOTAL SHEETS: 58

**AS-BUILT**  
DATE: 09/30/2022

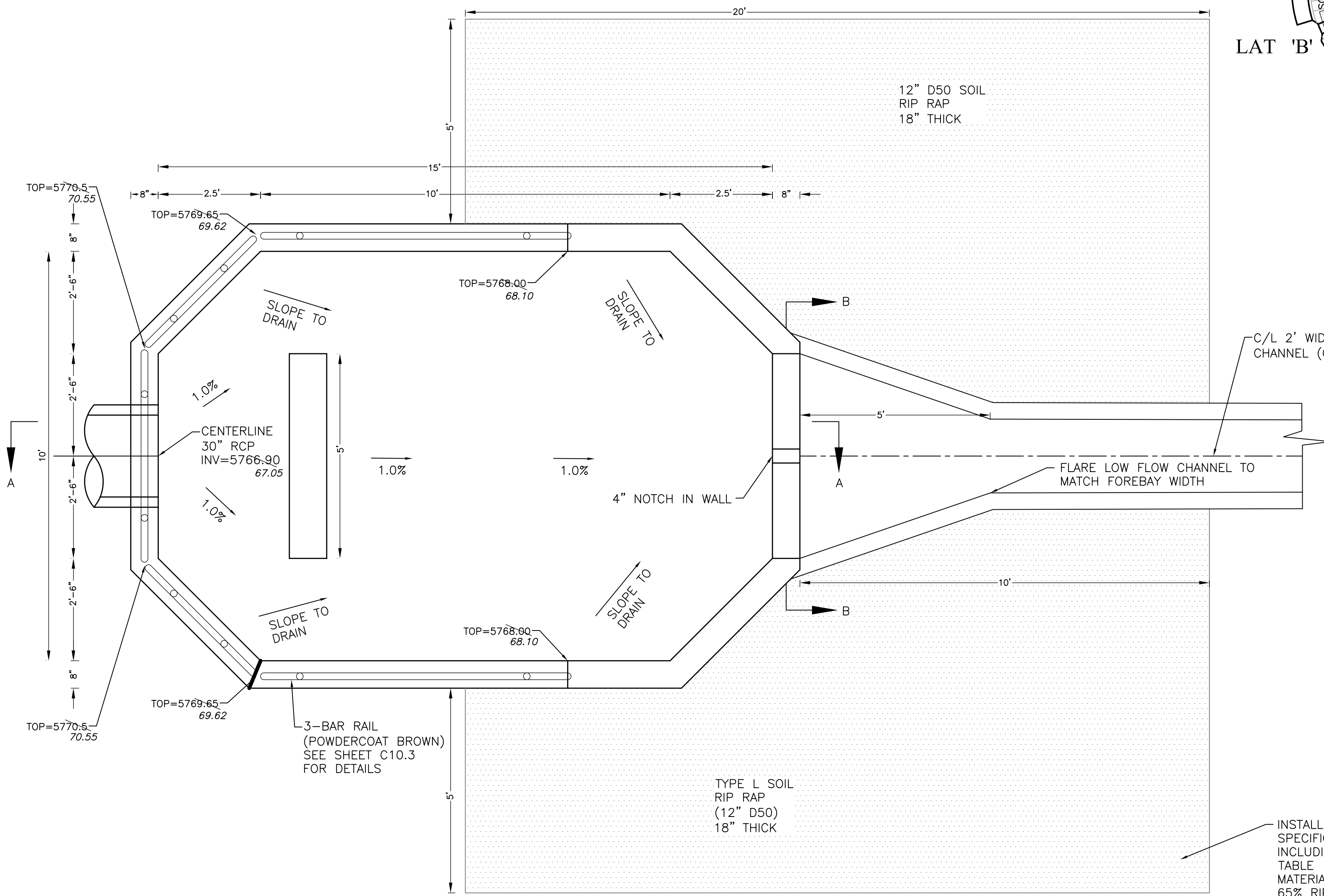
- NOTES
1. ALL SPOT ELEVATIONS ARE FLOW LINE UNLESS OTHERWISE NOTED.
  2. SEE GRADING PLAN FOR GRADING INFORMATION.
  3. ALL STORM SEWER SHALL BE CLASS III RCP.
  4. ALL MHS SHALL BE TYPE 1 UNLESS OTHERWISE NOTED.

- 1 CURVE DATA ID
- 2 CURB TRANSITIONS
- 3 PEDESTRIAN RAMP, SEE SHEET C10.1

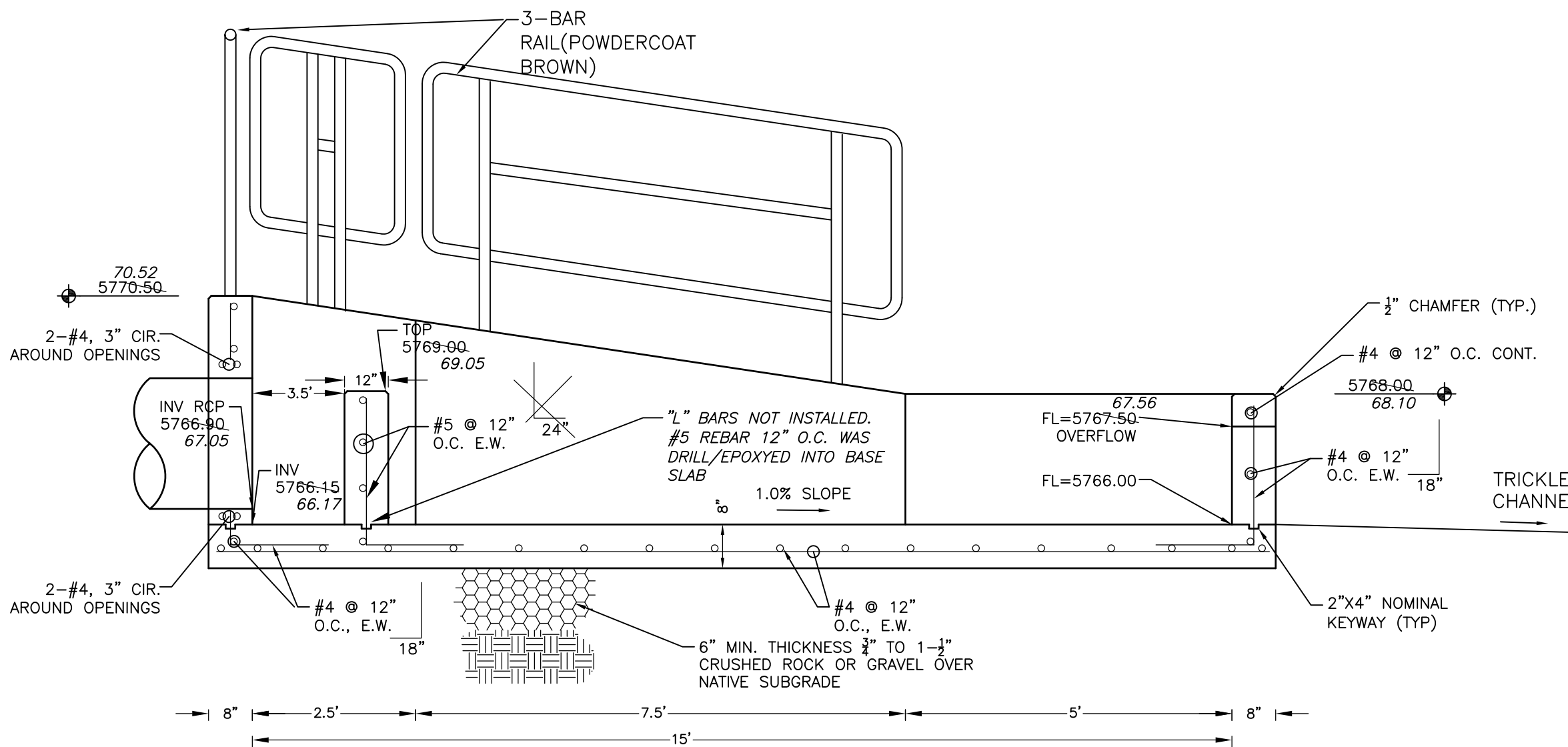


**STORM LATERAL 'B' (PUBLIC)**

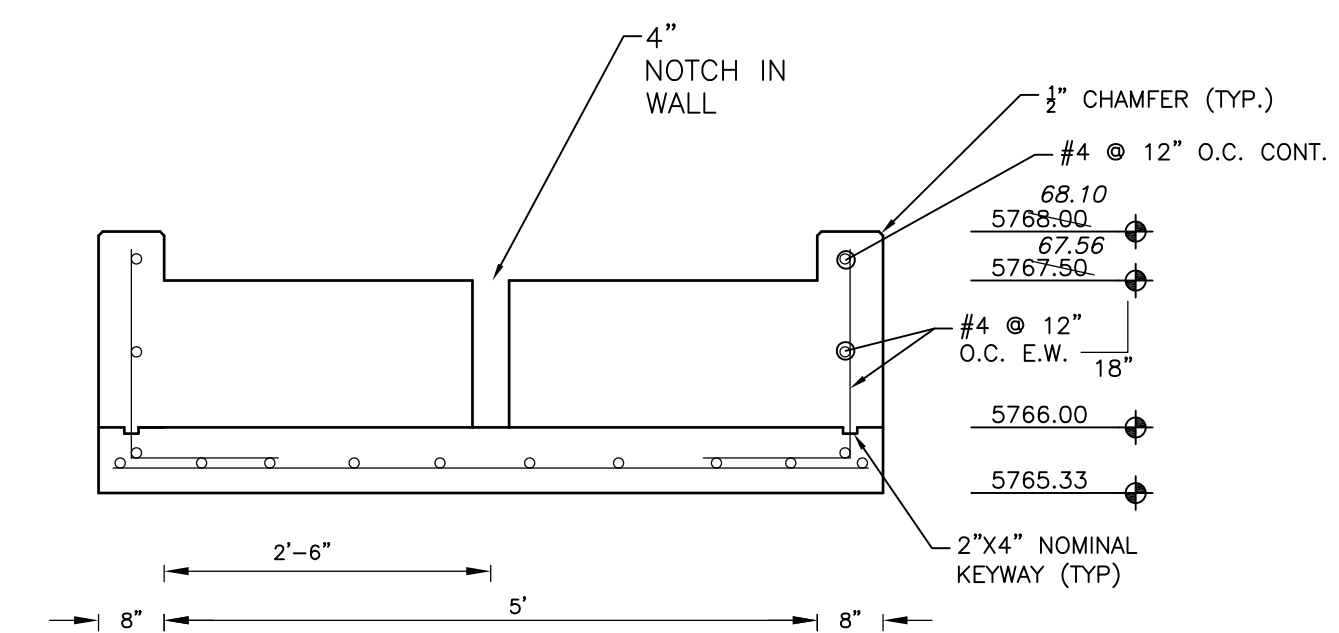
Station	Description	Flow
5795		
5790		
5785		
5780		
5775		
5770		
5765		
0+00	Q5=7.4cfs Q100=15.2cfs	
1+00	Q5=10.2cfs Q100=21.4cfs	
2+00		



**FOREBAY DETAIL**  
NO SCALE

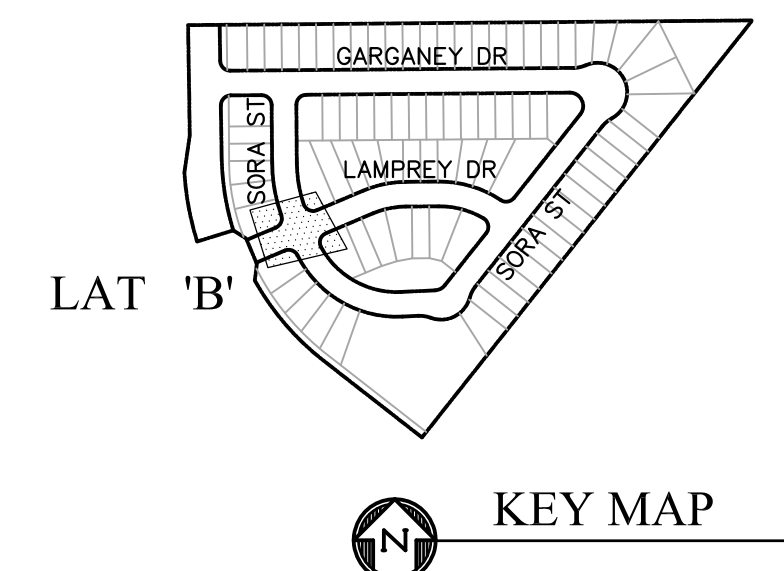


**FOREBAY SECTION A-A**  
NO SCALE



**FOREBAY SECTION B-B**  
NO SCALE

INSTALL SOIL RIP RAP PER MHFD SPECIFICATION SECTION 31-37-00 INCLUDING RIP RAP SPECIFICATIONS IN TABLE 1 OF SAID SPECIFICATIONS SOIL MATERIAL SHALL BE TOPSOIL MIXED WITH 65% RIP RAP AND 35% TOPSOIL BY VOLUME. ALL SOIL RIP RAP SHALL CONSIST OF A UNIFORM MIXTURE OF SOIL AND RIP RAP WITHOUT VOIDS.



**CORE ENGINEERING GROUP**  
15004 1ST AVENUE S.  
BIRCH CREEK, CO 80150  
PHONE: 303.470.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@ceg1.com

DATE: \_\_\_\_\_  
DESCRIPTION: \_\_\_\_\_  
NO: \_\_\_\_\_  
DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

PROJECT: SKYLINE AT LORSON RANCH  
212 N. WAHSATCH AVE. SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
(719) 635-3200  
CONTACT: JEFF MARK

**STORM SEWER LATERAL 'B'**  
**STORM LATERAL 'B'**  
**AND SKYLINE POND C4 FOREBAY**



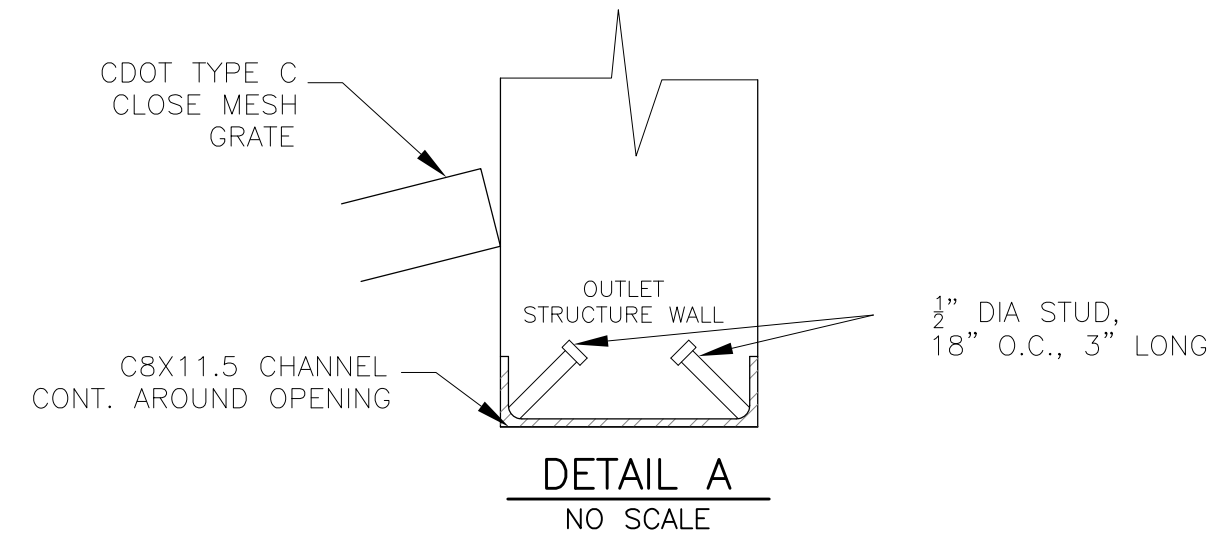
DATE: MAY 2, 2022

PROJECT NO. 100.063

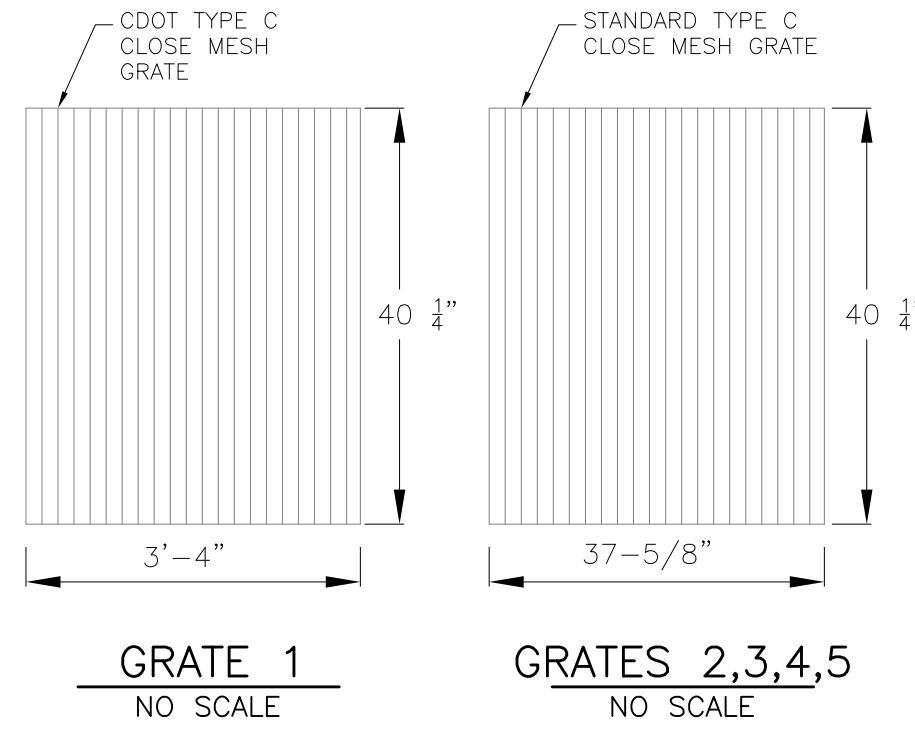
SHEET NUMBER C7.2

TOTAL SHEETS: 17

**AS-BUILT**  
DATE: 11/03/2022



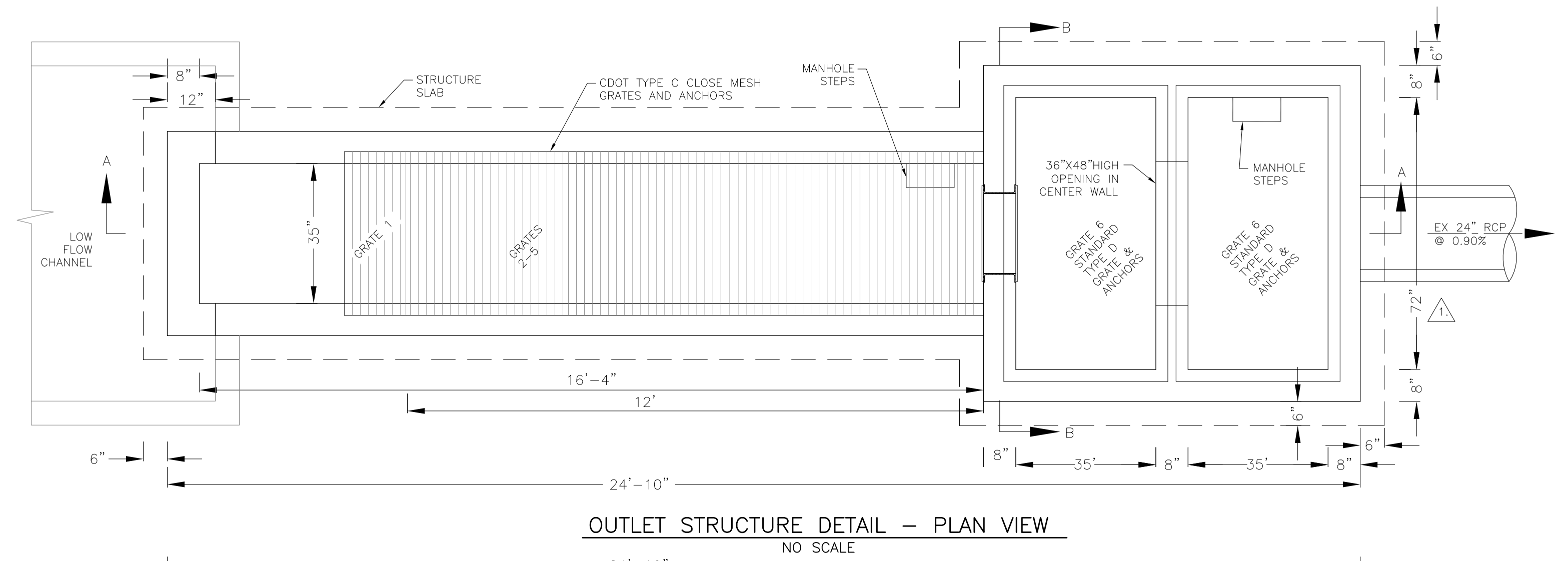
NOTE:  
AFTER CONCRETE STRUCTURE HAS BEEN POURED  
ALL GRATE DIMENSIONS SHALL BE FIELD VERIFIED  
PRIOR TO GRATE CONSTRUCTION



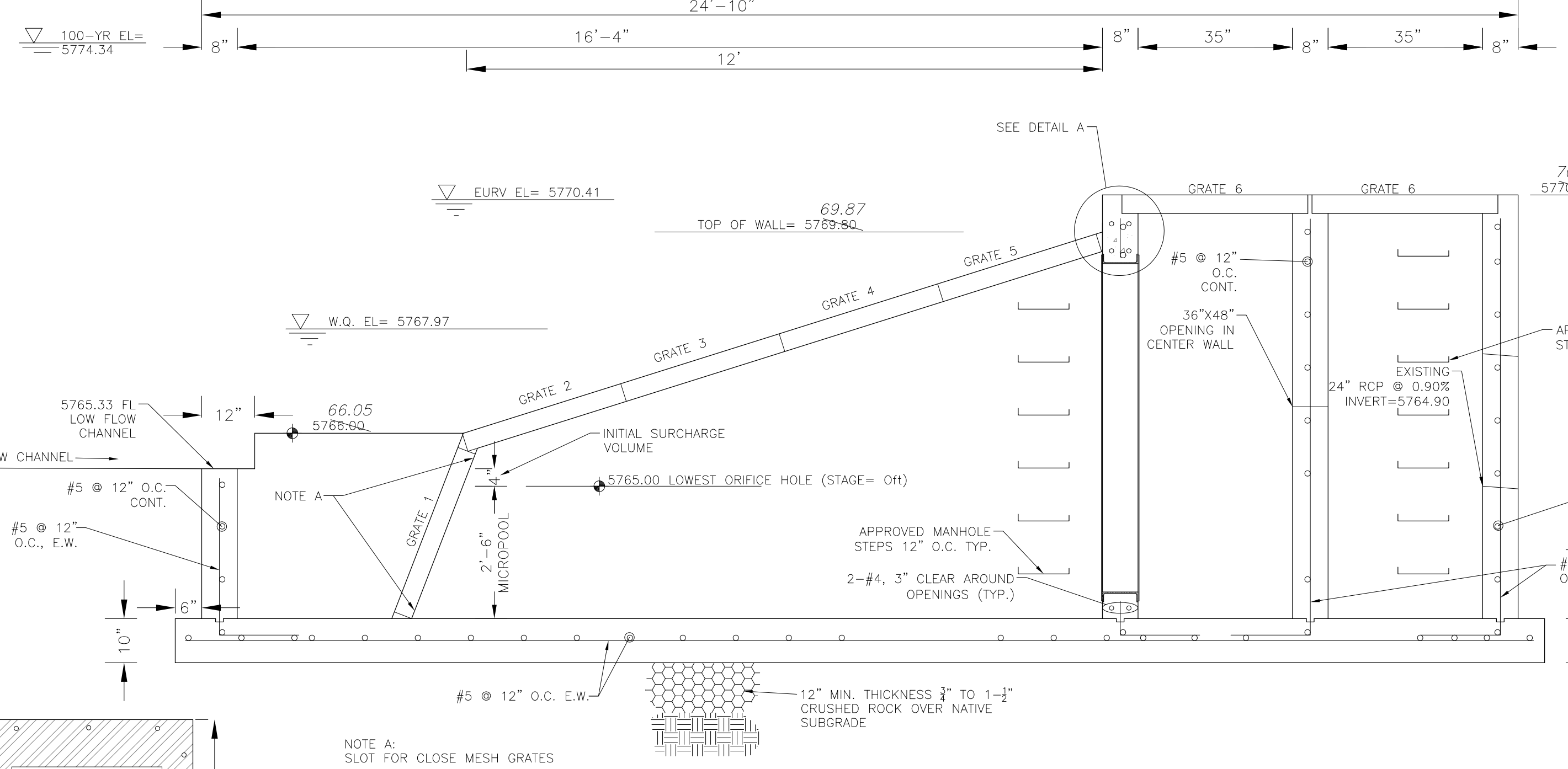
GRATE 1  
NO SCALE



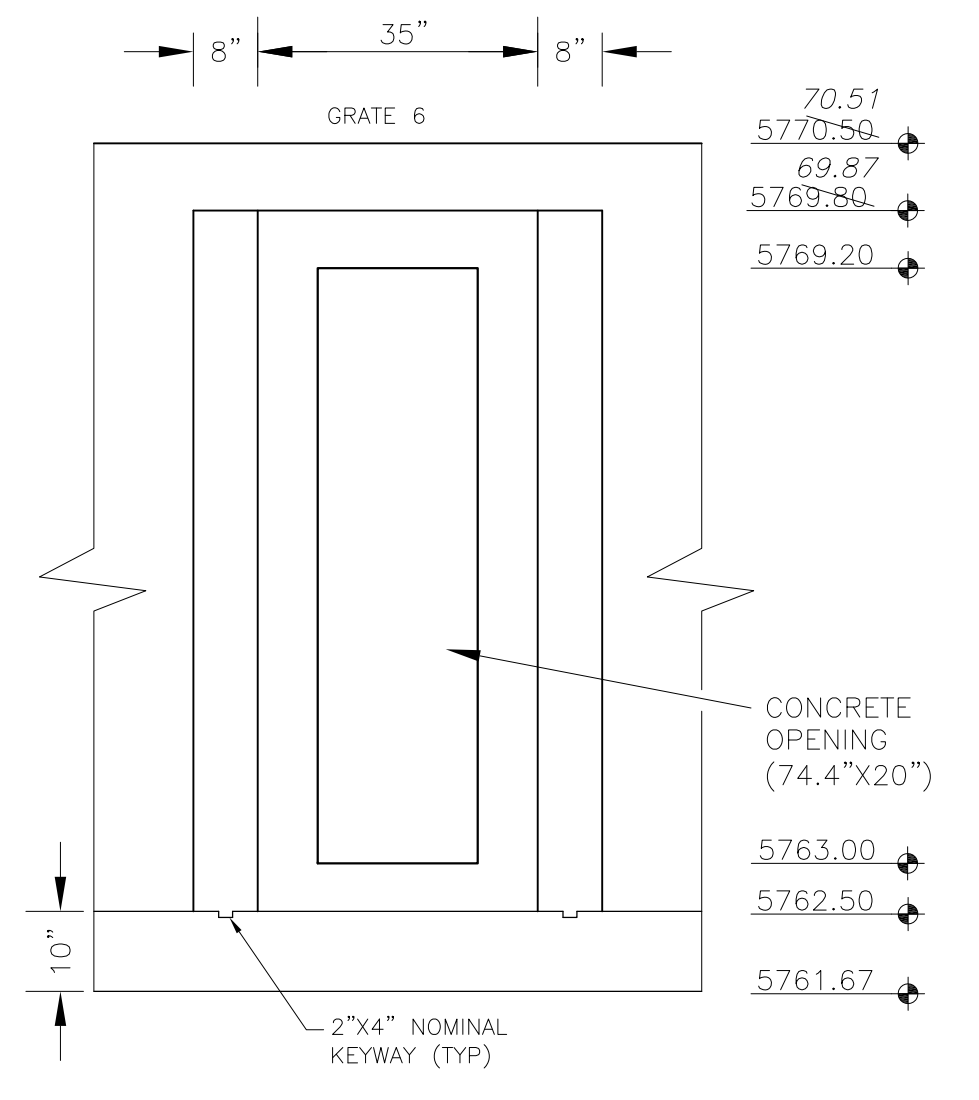
GRATES 2,3,4,5  
NO SCALE



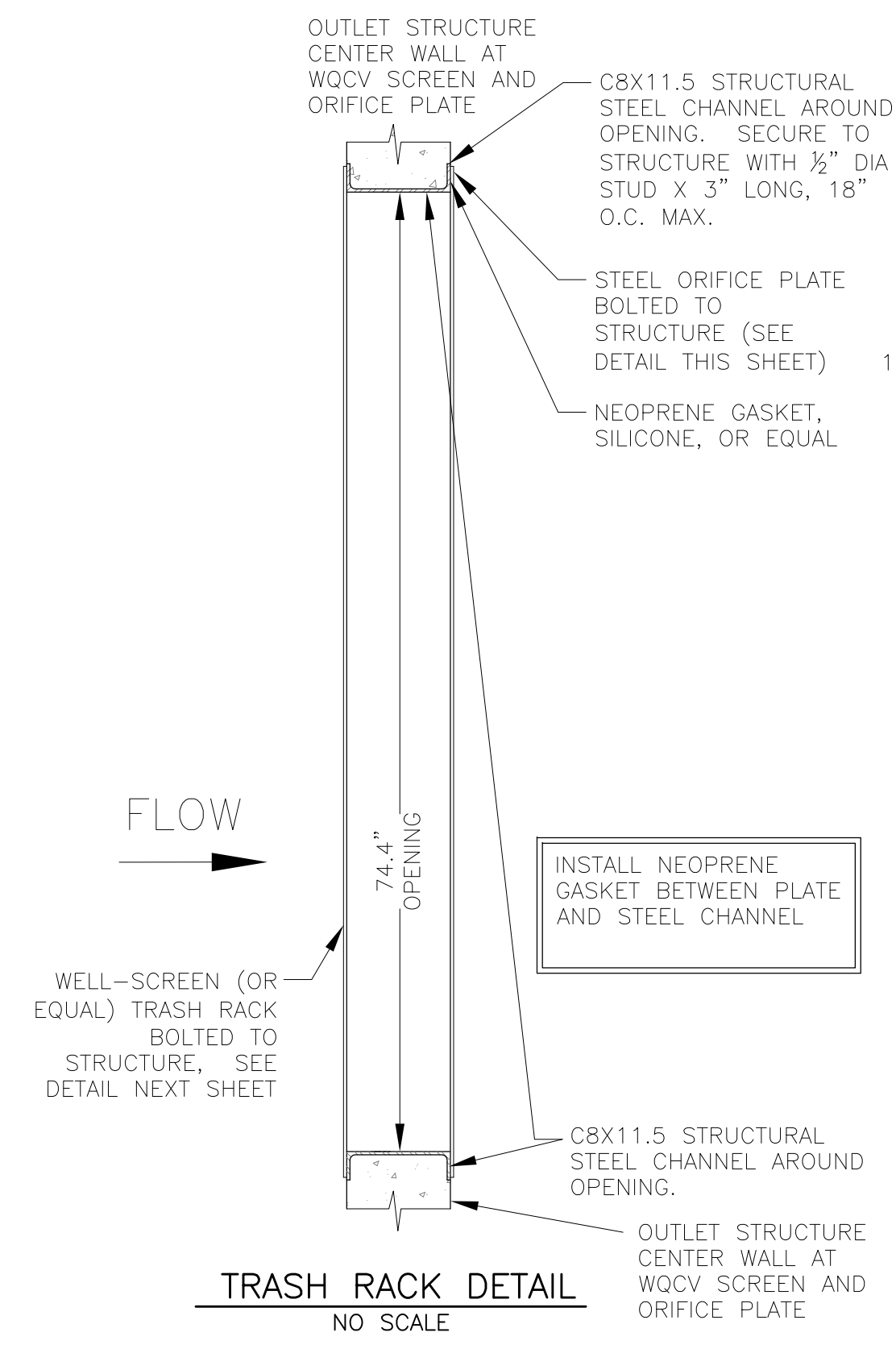
OUTLET STRUCTURE DETAIL - PLAN VIEW  
NO SCALE



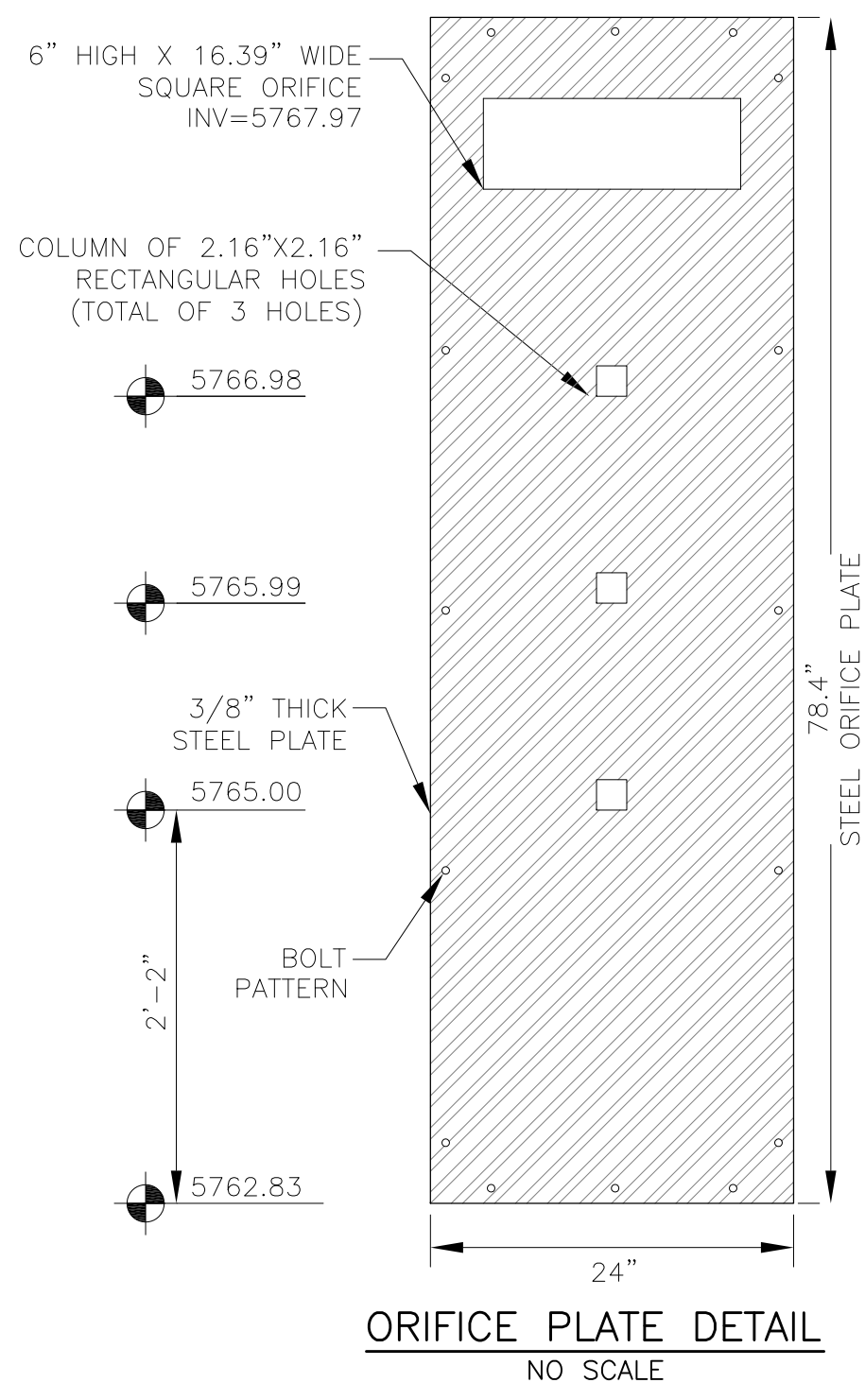
OUTLET STRUCTURE DETAIL - SECTION A-A  
NO SCALE



OUTLET STRUCTURE DETAIL - SECTION B-B  
NO SCALE



TRASH RACK DETAIL  
NO SCALE



ORIFICE PLATE DETAIL  
NO SCALE

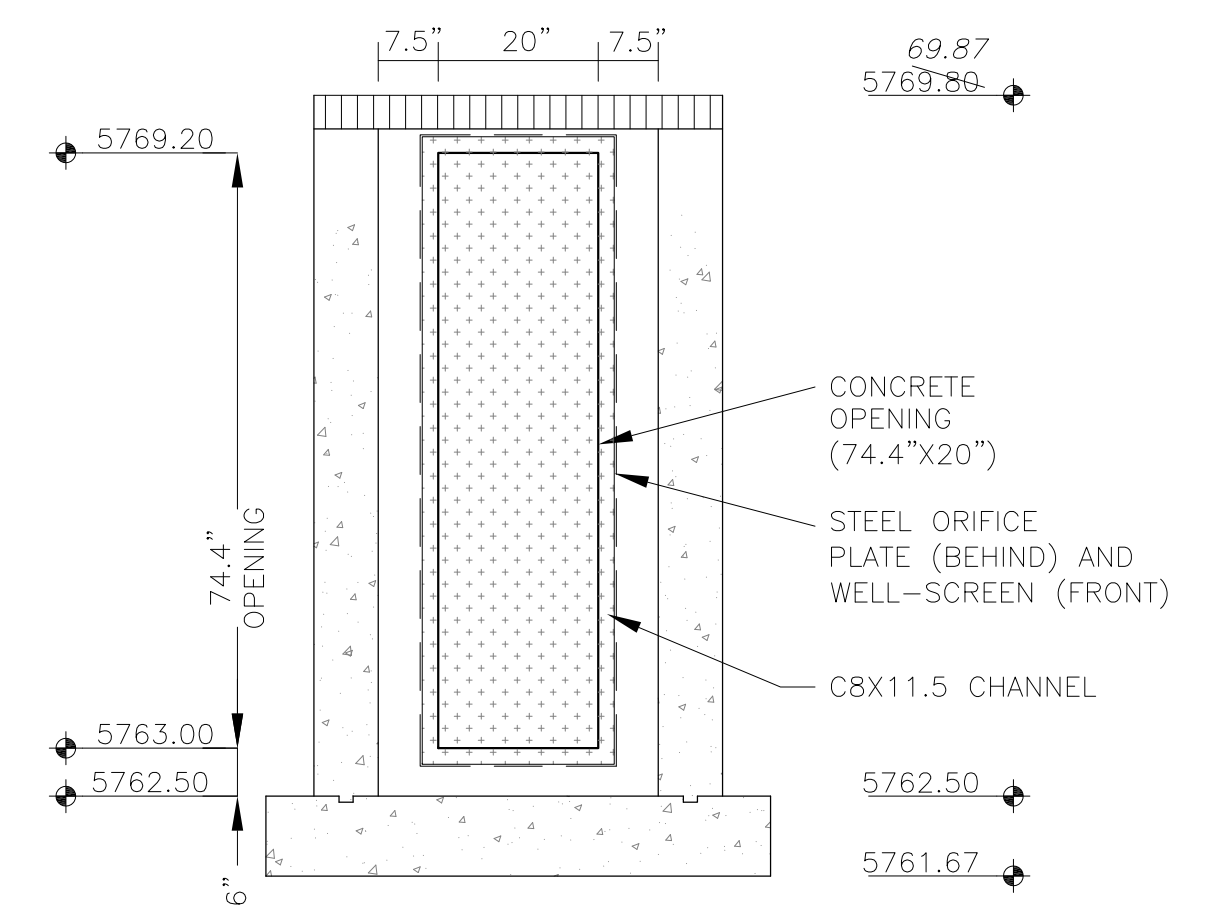
OUTLET STRUCTURE, FOREBAY, AND DRAIN CHANNEL NOTES:

- 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.
- 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\"/>
- ALL EXPOSED CONCRETE CORNERS SHALL HAVE A 3/8\"/>
- SUBGRADE TO BE 12\"/>
- REFER TO POND DETAILS FOR PRESEDIMENTATION/FOREBAY DESIGN.
- ENGINEER SHALL BE NOTIFIED PRIOR TO BEGINNING CONSTRUCTION OF OUTLET STRUCTURE TO SCHEDULE OBSERVATION VISITS FOR STRUCTURES.

BAR SIZE	#4	#5	#6
MIN. SPLICE LENGTH	1'-3"	1'-7"	2'-0"

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

**CORE**  
**ENGINEERING GROUP**  
15004 1ST AVENUE S,  
DENVER, CO 80202  
PH: 719.570.1100  
CONTACT: RICHARD L. SCHINDLER, P.E.  
EMAIL: Rich@cog1.com

DATE: 3/70/2022  
DESCRIPTION: STRUCTURE WIDTH REVISED TO 72"  
PREPARED FOR: LORSON, LLC  
212 N. WAHSATCH AVE, SUITE 301  
COLORADO SPRINGS, COLORADO 80903  
(719) 635-3200  
CONTACT: JEFF MARK

PROJECT: THE RIDGE AT LORSON RANCH  
FONTAINE BLVD. - WALLEYE DR  
COLORADO SPRINGS, COLORADO

DRAWN: RLS  
DESIGNED: RLS  
CHECKED: RLS

POND C4  
FULL SPECTRUM  
OUTLET STRUCTURE DETAILS



DATE: NOV 5, 2021

PROJECT NO. 100.064

SHEET NUMBER C9.5

TOTAL SHEETS: 23

**AS-BUILT**  
DATE: 09/30/2022