



JORDAN VALLEY WATER CONSERVANCY DISTRICT

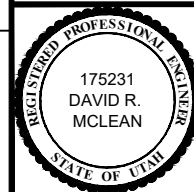
BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

PROJECT #4186

SHEET LIST		
1	G-1	COVER SHEET
2	L-1	PROJECT LOCATION
3	L-2	CANAL LOCATION
4	L-3	STRUCTURE LOCATION
5	C-1	FLUME PLAN
6	C-2	CIVIL PLAN
7	C-3	CIVIL SECTIONS
8	D-1	CHANNEL DETAILS
9	D-2	CHANNEL DETAILS
10	D-3	MEASUREMENT DETAILS
11	S-1	STRUCTURAL NOTES
12	S-2	STRUCTURAL PLAN
13	E-1	ELECTRICAL PLAN



Know what's below.
Call before you dig.



REVISIONS			
REV.	DESCRIPTION	BY	DATE



**JORDAN VALLEY WATER
CONSERVANCY DISTRICT**

8215 SOUTH 1300 WEST
WEST JORDAN, UTAH 84088-0070
PHONE (801) 565-4300

LINE IS 1/8" AT FULL SIZE (IF NOT 1" - SCALE ACCORDINGLY)	ORIGINAL SIZE B
SCALE: SCALE	
DESIGN: CT	
DRAWING: TMP	
PROJ. MGR: CT	
APPROVAL:	

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

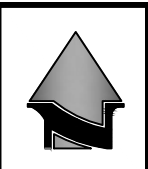
COVER

DATE
11/14/24

PROJECT NUMBER
4186

DRAWING NUMBER
G-1

SHEET NUMBER
1 OF 13



17.01M

- NOTES:**
1. GATE VALVE TO STREAMBED CAN BE CLOSED, BUT VALVES NOT 100% EFFECTIVE. CONTRACTOR MUST BE ABLE TO DIVERT WATER AROUND PROJECT AREA TO DOWNSTREAM.
 2. WORK MUST BE DONE AFTER PEAK FLOWS (MAY-JULY) AND BEFORE SNOW.
 3. CONTRACTOR MUST HAVE STORM CONTROL PLAN APPROVED BY SANDY CITY.
 4. DISTURB MINIMUM AMOUNT OF TREES AT PROJECT SITE.
 5. AFTER CONSTRUCTION, CONTRACTOR MUST CLEAN JOB SITE AND STABILIZE ALL DISTURBED AREAS TO MINIMIZE EROSION.
 6. ANY DISTURBED ARE MUST BE REPAIRED TO SANDY CITY REQUIREMENTS.
 7. FOOT TRAFFIC MUST BE ROUTED AROUND CONSTRUCTION AREAS. SEE SPECIFICATION 01 50 10

EXISTING ACCESS GATE

EXISTING ACCESS ROAD FROM GATE TO RESERVOIR

L2

EXISTING ACCESS ROAD FROM RESERVOIR TO STRUCTURE

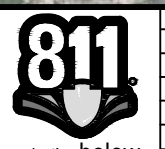
BELL CANYON RESERVOIR

L3

EXISTING DIVERSION STRUCTURE

NOTE:
INSTALL ROAD BASE ON ACCESS ROAD FROM RESERVOIR TO STRUCTURE (ABOUT 2,200 FEET)

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APPROVAL:

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE
PROJECT LOCATION

DATE	2/5/25
PROJECT NUMBER	4186
DRAWING NUMBER	L-1
SHEET NUMBER	2 OF 13

I:\WATER SUPPLY\4186 - SE COLL LINE\DRAWINGS\4186 AREA MAP.DWG



16.97M

CHANNEL TYPE C
(D-1)

PIPE UNDER ROAD,
SEE DETAIL A (D-2)

PIPE UNDER ROAD,
SEE DETAIL A (D-2)

CHANNEL TYPE B
(D1)

CHANNEL TYPE B

DIRECT WATER
OFF ROAD D2-B

CHANNEL TYPE A
(D-1)

NOTES:

1. A 7200 VOLT RMP CABLE IS BURIED BELOW ROAD FOR ENTIRE LENGTH OF ROAD. PROTECT CABLE.
2. CALL BLUE-STAKES BEFORE ANY DIGGING IN ROAD.



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APPROVAL:	

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

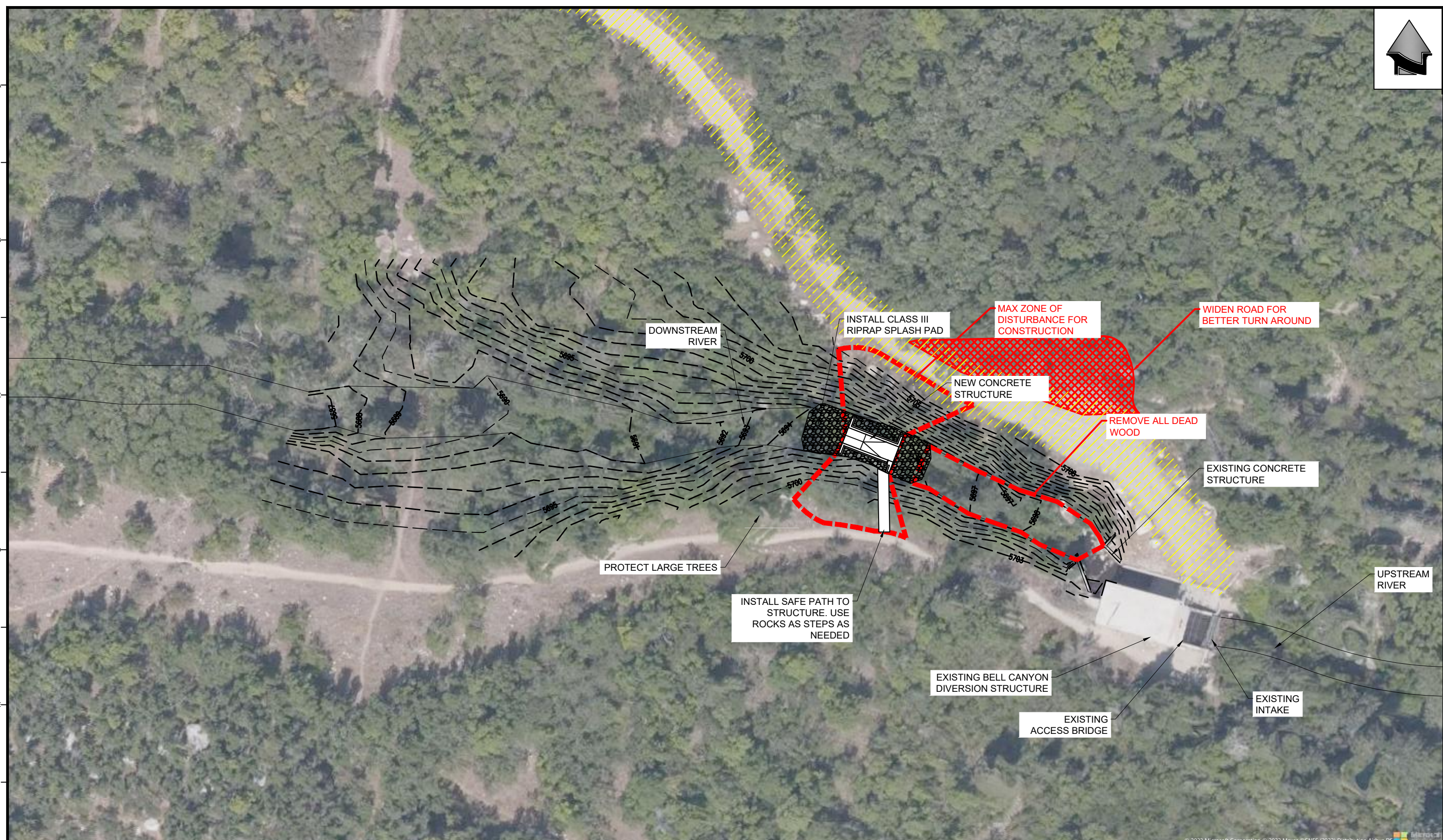
ROAD DRAINAGE CANALS LOCATION

DATE	11/14/24
PROJECT NUMBER	4186
DRAWING NUMBER	L-2
SHEET NUMBER	3 OF 13

I:\WATER SUPPLY\4186 - SE COLL LINE\DRAWINGS\4186 AREA MAP.DWG



17.01M



REVISIONS			
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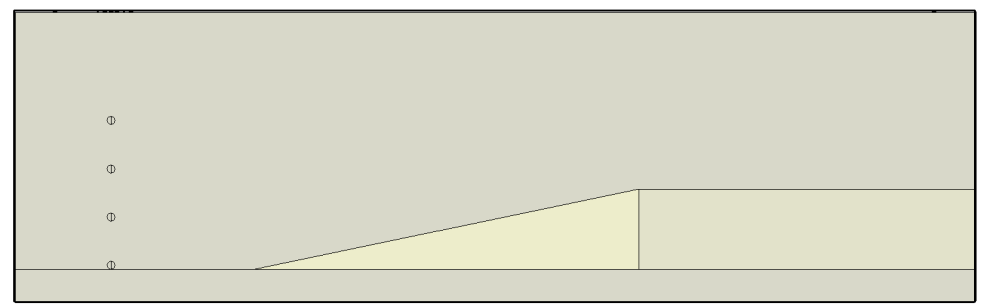
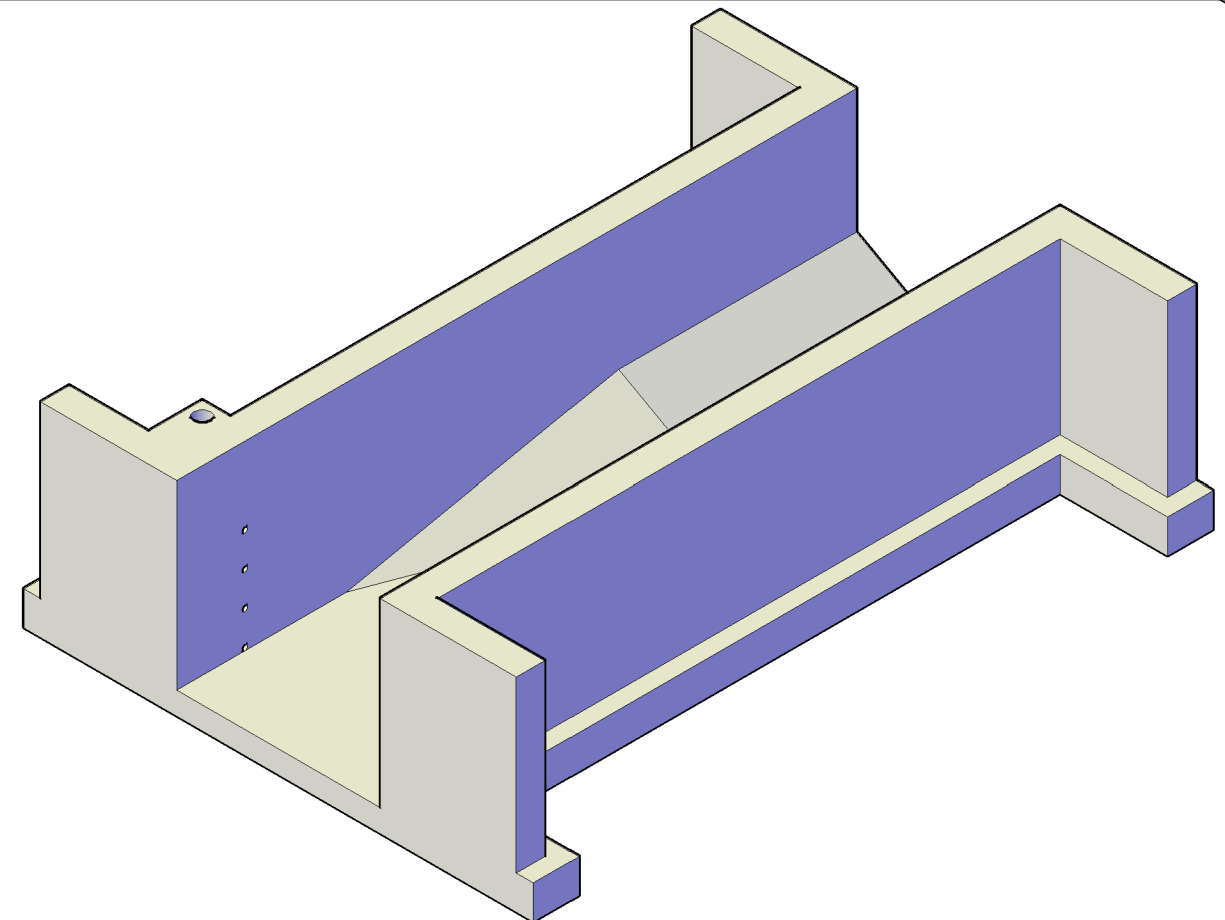
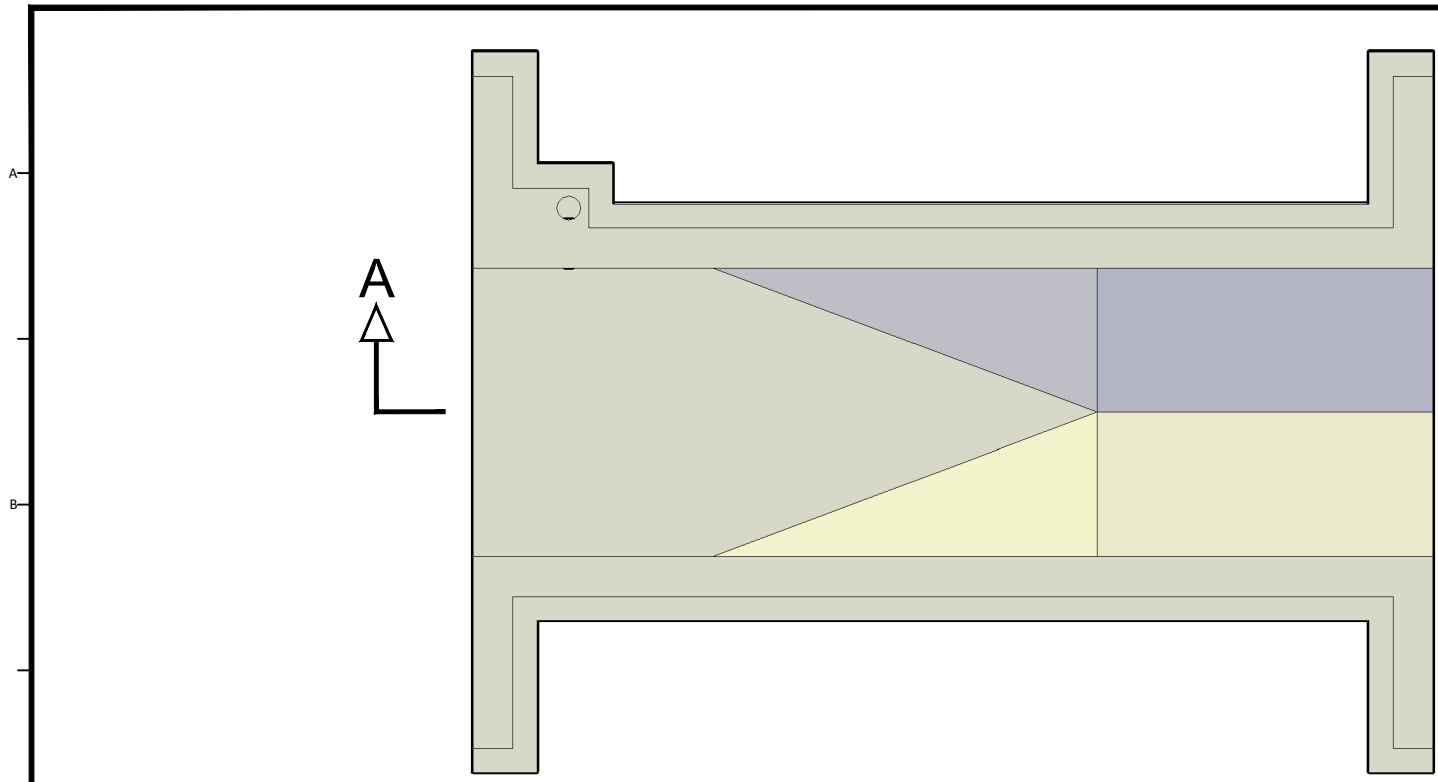
JORDAN VALLEY WATER
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DRAWING: TMP	
PROJ. MGR: CT	
APPROVAL: _____	

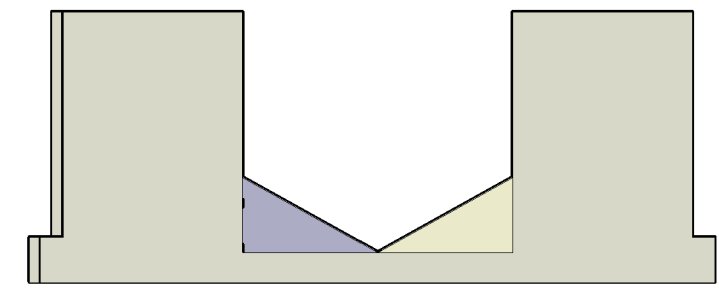
BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE	
DIVERSION STRUCTURE SITE PLAN AERIAL STRUCTURE LOCATION	

DATE	2/5/25
PROJECT NUMBER	4186
DRAWING NUMBER	L-3
SHEET NUMBER	4 OF 13

I:\WATER SUPPLY\4186 - SE COLL LINE\DRAWINGS\4186 AREA MAP.DWG



SECTION A-A



REVISIONS			
REV.	DESCRIPTION	BY	DATE

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ORIGINAL SIZE **B**

SCALE: SCALE

DESIGN: CT

DRAWING: TMP

PROJ. MGR: CT

APPROVAL:

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

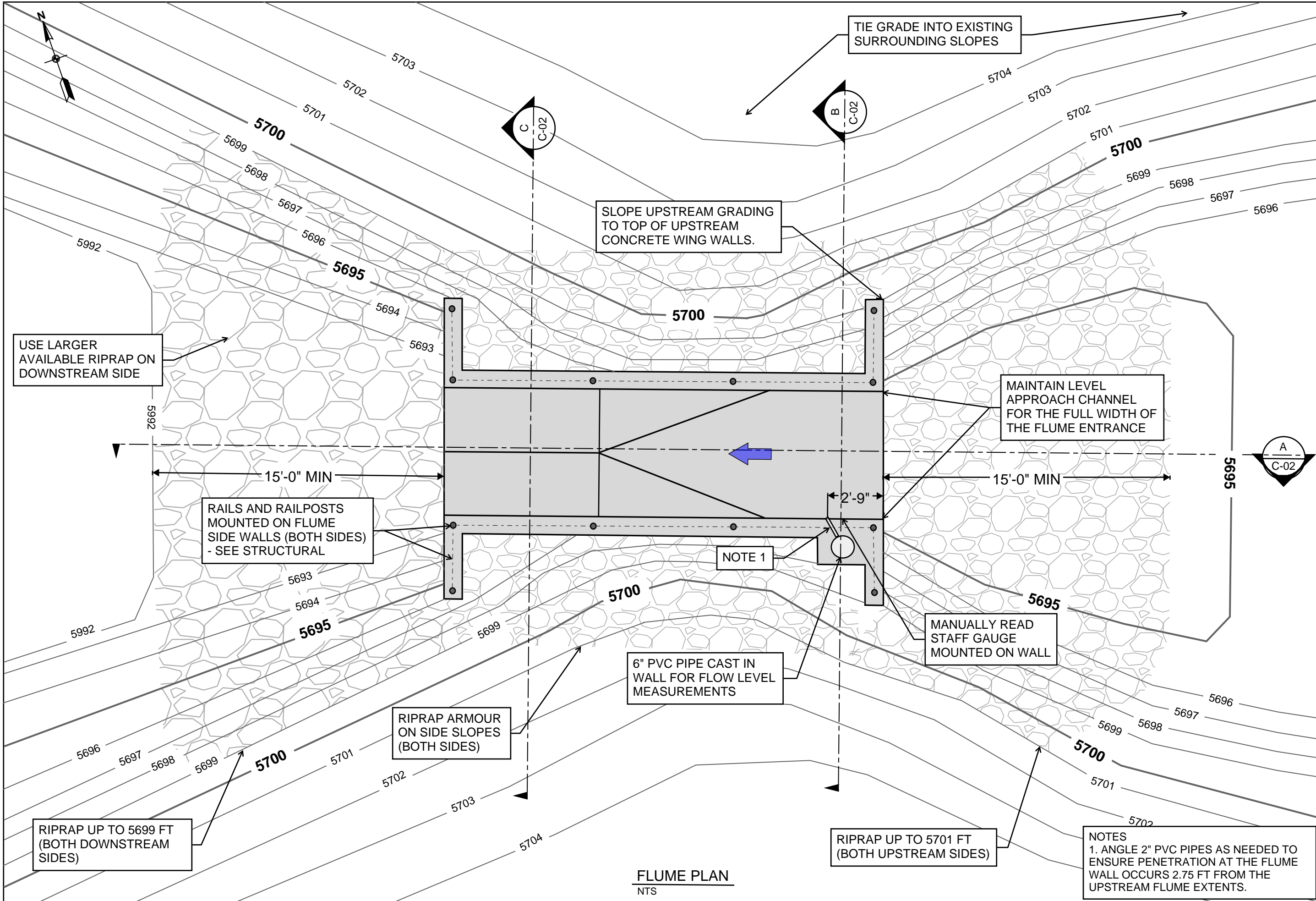
FLUME PLANE

DATE: 9/27/24

PROJECT NUMBER: 4186

DRAWING NUMBER: C-1

SHEET NUMBER: 5 OF 13



USE LARGER AVAILABLE RIPRAP ON DOWNSTREAM SIDE

RAILS AND RAILPOSTS MOUNTED ON FLUME SIDE WALLS (BOTH SIDES) - SEE STRUCTURAL

RIPRAP UP TO 5699 FT (BOTH DOWNSTREAM SIDES)

RIPRAP ARMOUR ON SIDE SLOPES (BOTH SIDES)

SLOPE UPSTREAM GRADING TO TOP OF UPSTREAM CONCRETE WING WALLS.

TIE GRADE INTO EXISTING SURROUNDING SLOPES

MAINTAIN LEVEL APPROACH CHANNEL FOR THE FULL WIDTH OF THE FLUME ENTRANCE

NOTE 1

6" PVC PIPE CAST IN WALL FOR FLOW LEVEL MEASUREMENTS

MANUALLY READ STAFF GAUGE MOUNTED ON WALL

RIPRAP UP TO 5701 FT (BOTH UPSTREAM SIDES)

NOTES
1. ANGLE 2" PVC PIPES AS NEEDED TO ENSURE PENETRATION AT THE FLUME WALL OCCURS 2.75 FT FROM THE UPSTREAM FLUME EXTENTS.

FLUME PLAN
NTS

NO.	DATE	REV. BY	DESCRIPTION

BELL CANYON FLUME

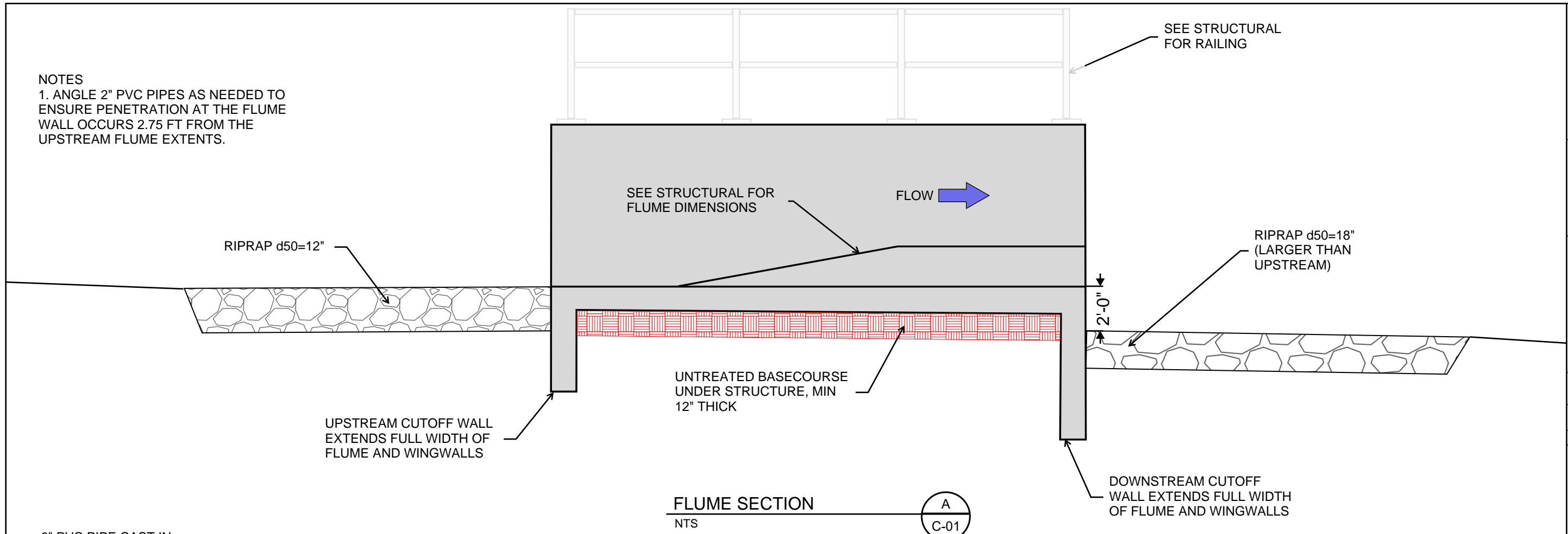
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CHECKED: TC
APPROVED: TC

REVIEW: TC

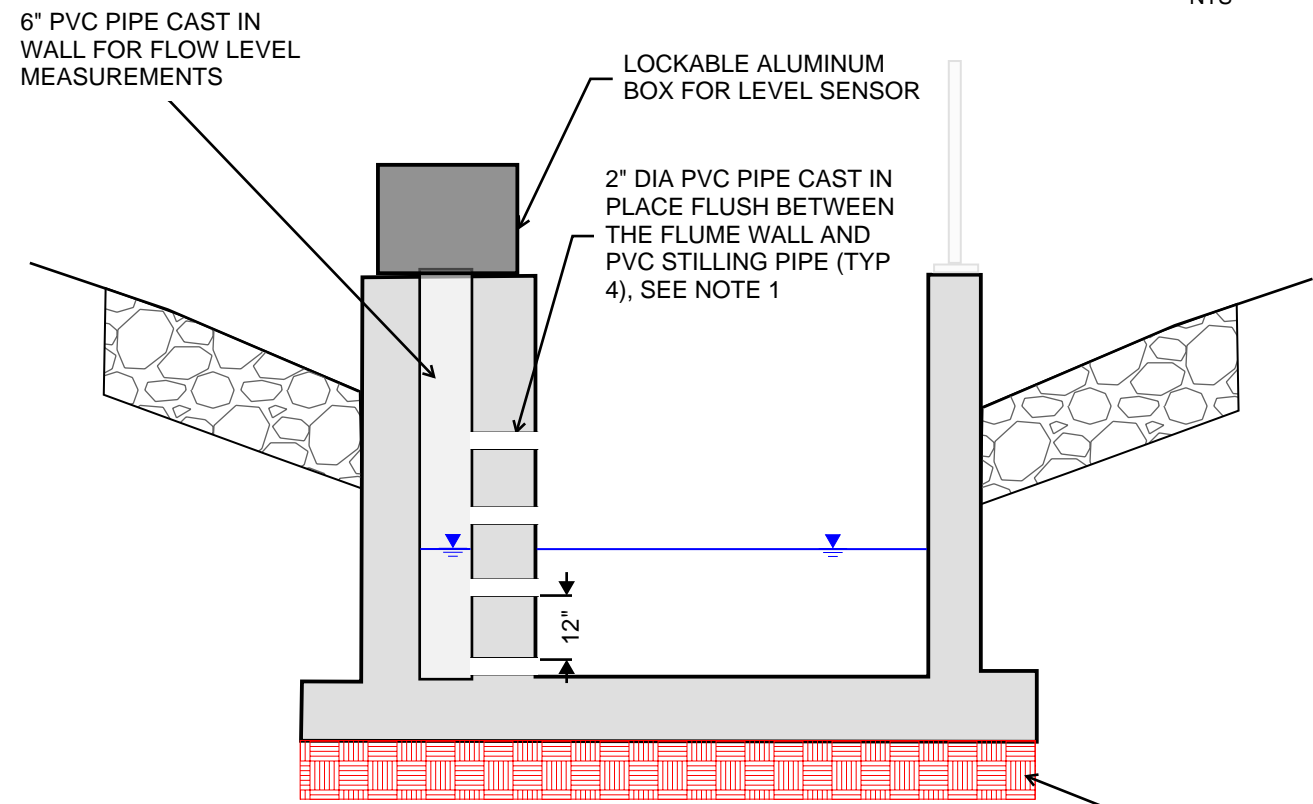
PROJECT NUMBER: 010-24-02

DATE: DEC 2024

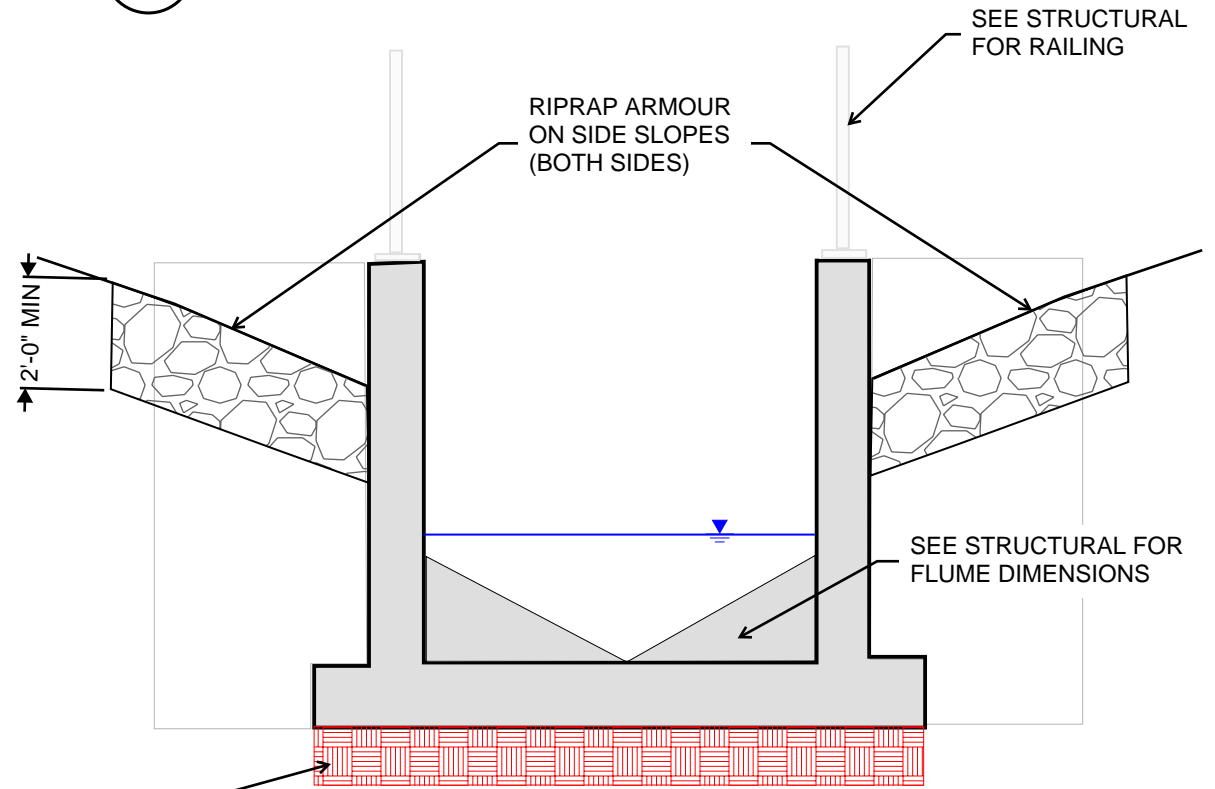
NOTES
 1. ANGLE 2" PVC PIPES AS NEEDED TO ENSURE PENETRATION AT THE FLUME WALL OCCURS 2.75 FT FROM THE UPSTREAM FLUME EXTENTS.



FLUME SECTION
 NTS A
 C-01



FLUME SECTION
 NTS B
 C-01



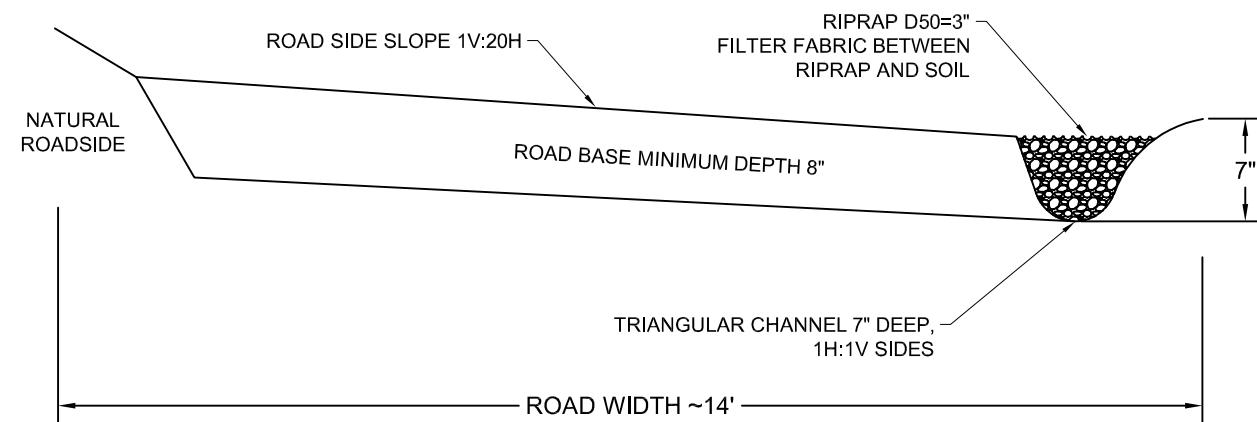
FLUME SECTION
 NTS C
 C-01

NO.	DATE	REV. BY	DESCRIPTION

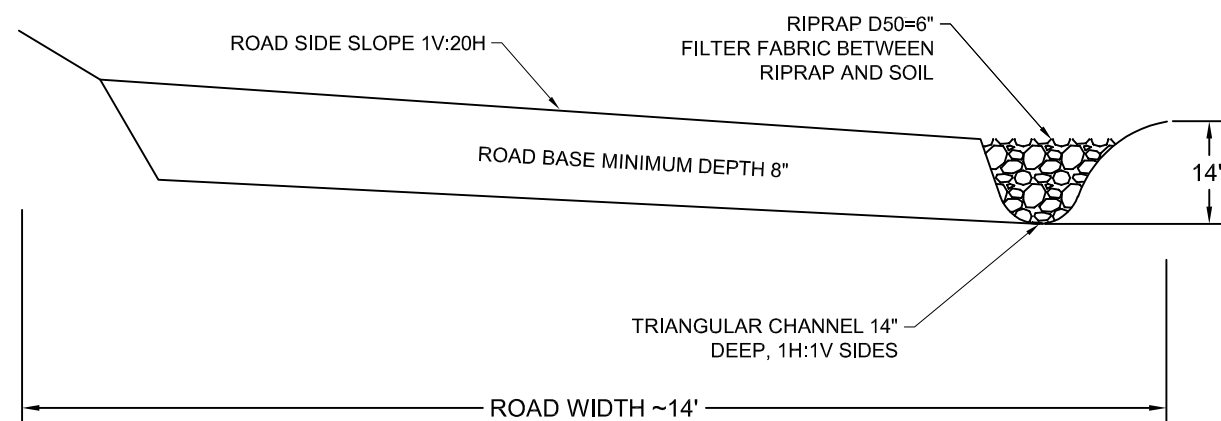
BELL CANYON FLUME	VERIFY	SCALE	BAR IS ONE INCH ON ORIGINAL DRAWING
	DESIGN	TC	
	REVIEW	TC	
	APPROVED	TC	

CIVIL SECTIONS - FLUME	PROJECT NUMBER:	010-24-02
	DATE:	DEC 2024

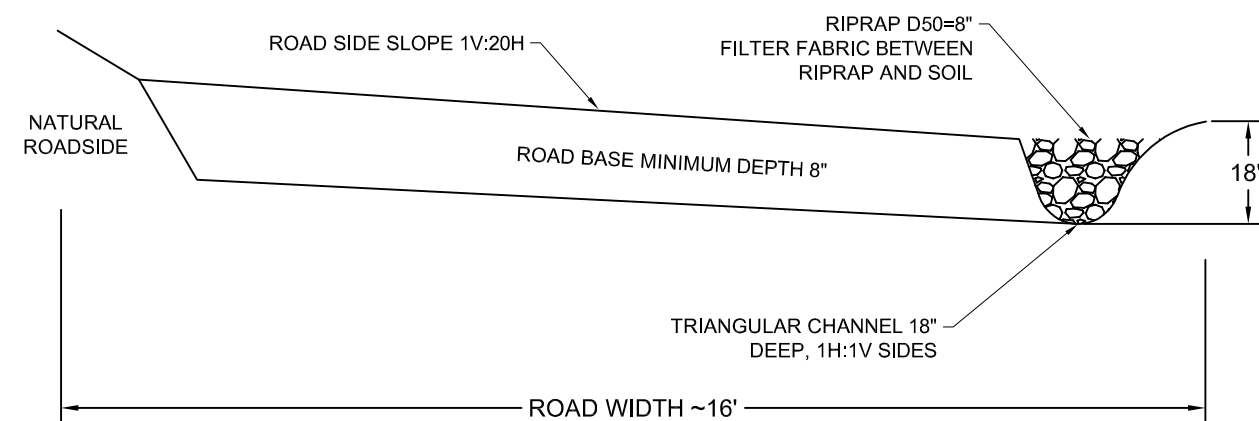
CHANNEL TYPE A CROSS SECTION



CHANNEL TYPE B CROSS SECTION



CHANNEL TYPE C CROSS SECTION



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APPROVAL:	

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

DRAINAGE CHANNEL DETAILS

DATE
11/14/24

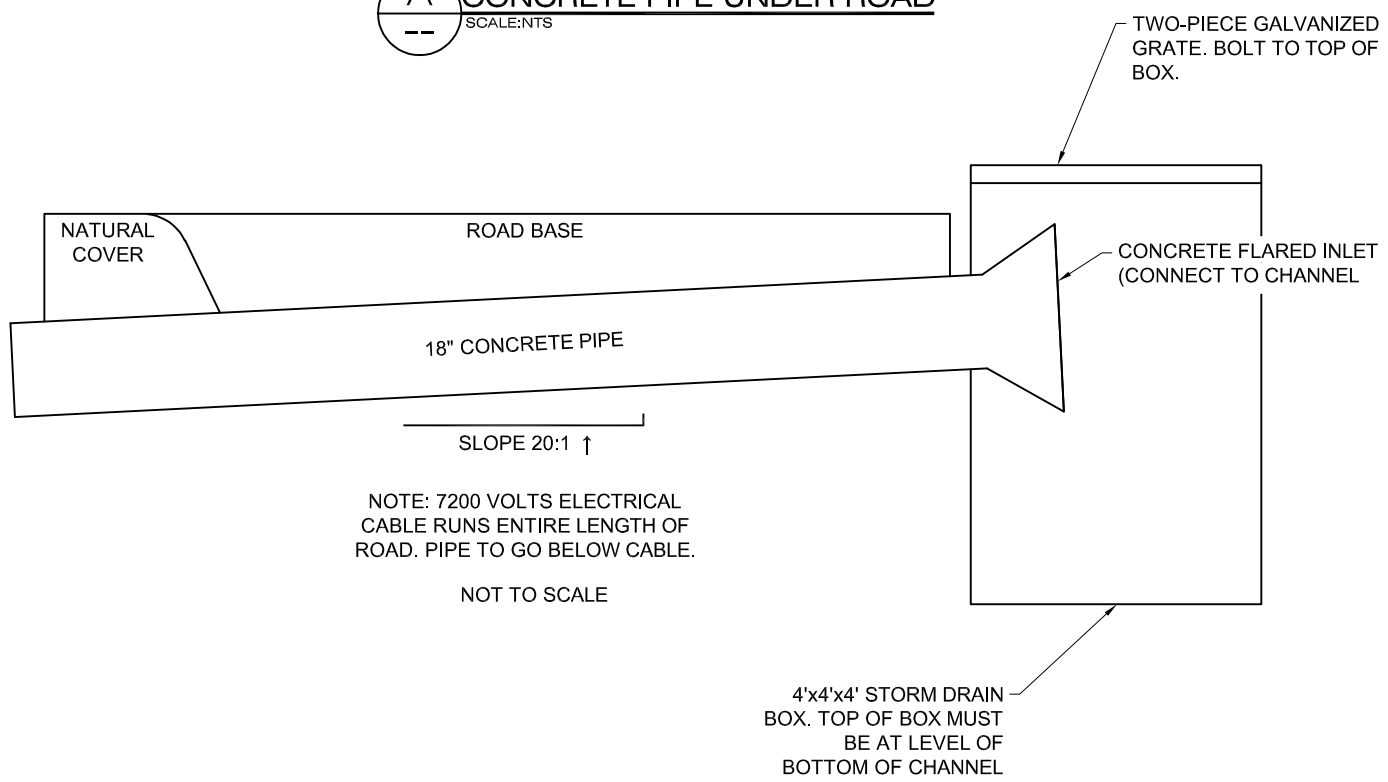
PROJECT NUMBER
4186

DRAWING NUMBER
D-1

SHEET NUMBER
8 OF 13

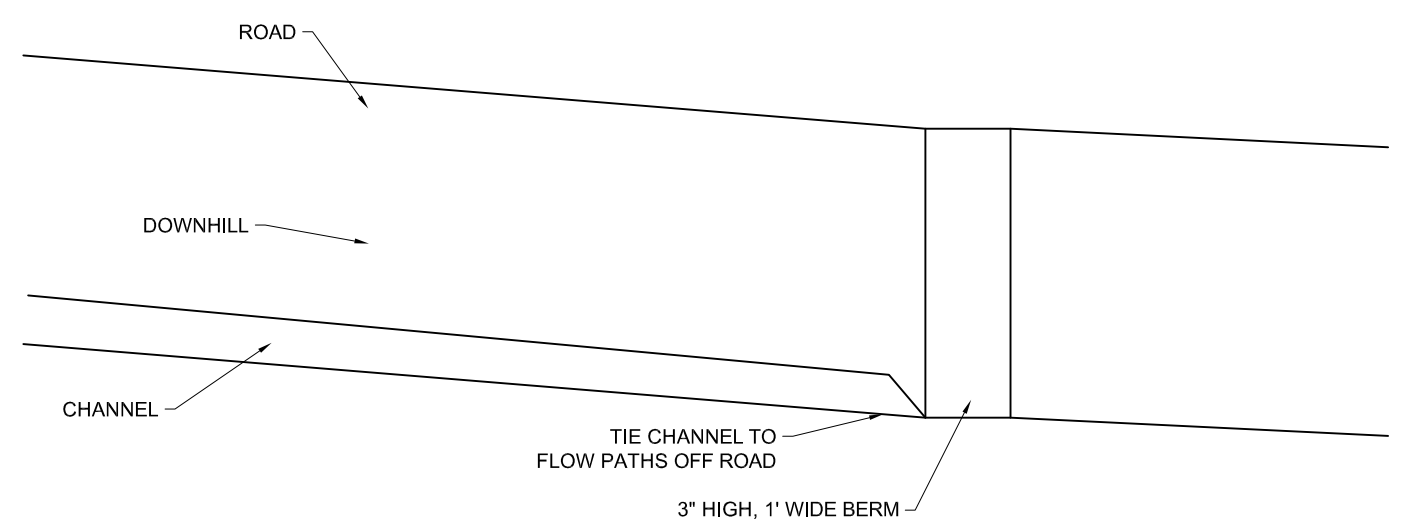
A CONCRETE PIPE UNDER ROAD

SCALE: NTS



B DIRECT WATER OFF ROAD PLAN VIEW

SCALE: NTS



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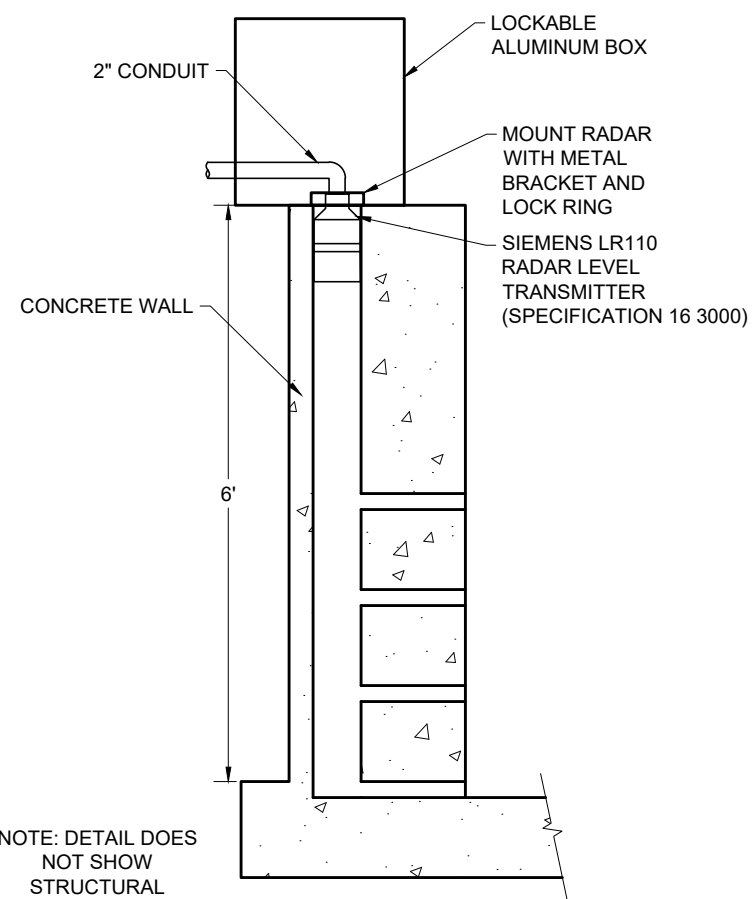
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PROJ. MGR:	CT
APPROVAL:	

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

DRAINAGE CHANNEL DETAILS

DATE	2/5/25
PROJECT NUMBER	4186
DRAWING NUMBER	D-2
SHEET NUMBER	9 OF 13



NOTE: DETAIL DOES NOT SHOW STRUCTURAL REINFORCEMENT. SEE DETAIL SECTION C ON S-01

STILLING WELL DETAIL

STAFF GAGE MARKINGS	
Discharge (cfs)	Depth at Gage (ft)
0	0
.5	.432
1	.563
1.5	.658
2	.735
2.5	.801
3	.86
3.5	.912
4	.961
4.5	1.005
5	1.047
5.5	1.085
6	1.122
6.5	1.157
7	1.19
8	1.253
9	1.31
10	1.364
11	1.414
12	1.461
13	1.506
14	1.548
16	1.627
18	1.7
20	1.767
22	1.83
24	1.89
26	1.948
28	2.004
30	2.059
35	2.19
40	2.314
45	2.432

50	2.545
55	2.653
60	2.758
65	2.859
70	2.957
75	3.053
80	3.146
85	3.237
90	3.326
95	3.413
100	3.498
105	3.582
110	3.664
115	3.744
120	3.823
125	3.901
130	3.978
135	4.053
140	4.127
145	4.201
150	4.273

REVISIONS			
REV.	DESCRIPTION	BY	DATE

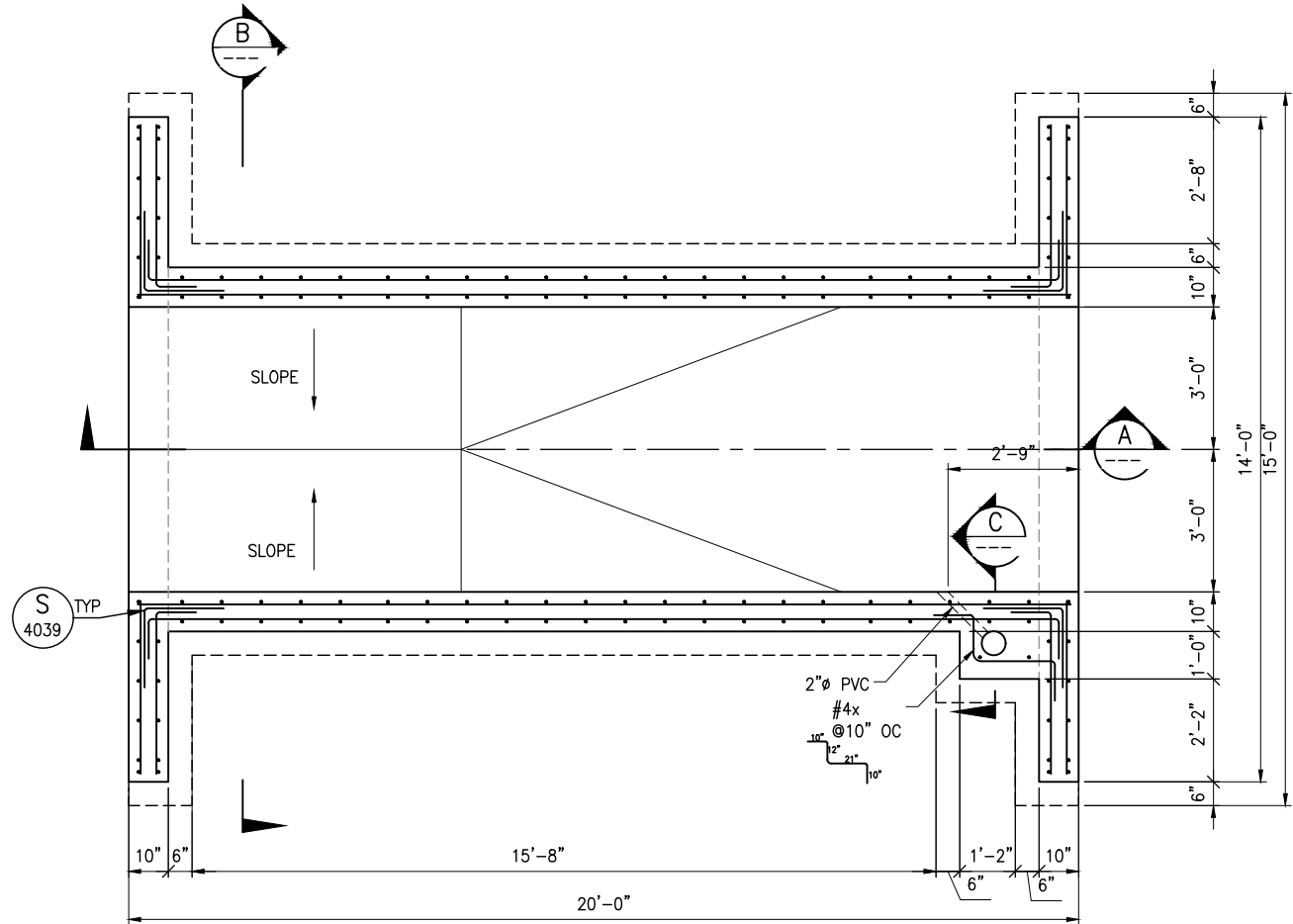
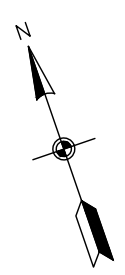
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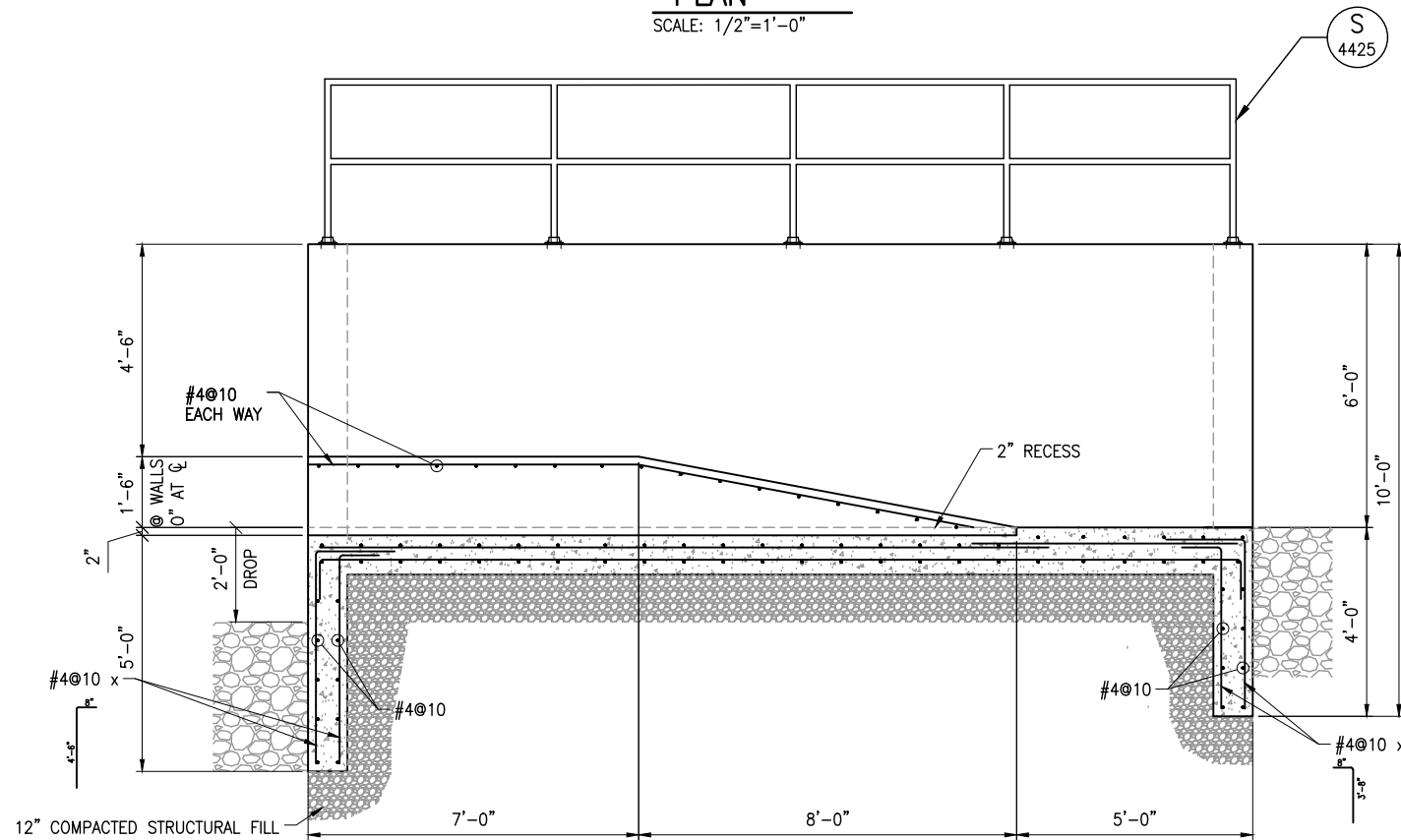
BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE

FLOW MEASUREMENT DETAILS

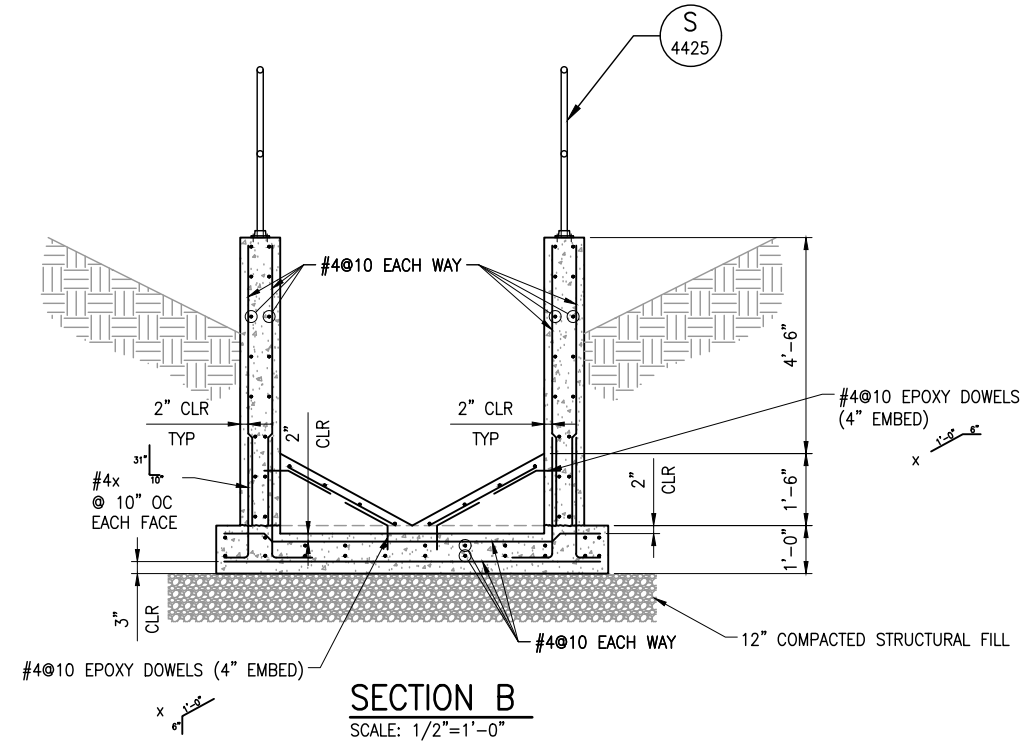
DATE	2/5/25
PROJECT NUMBER	4186
DRAWING NUMBER	D-3
SHEET NUMBER	10 OF 13



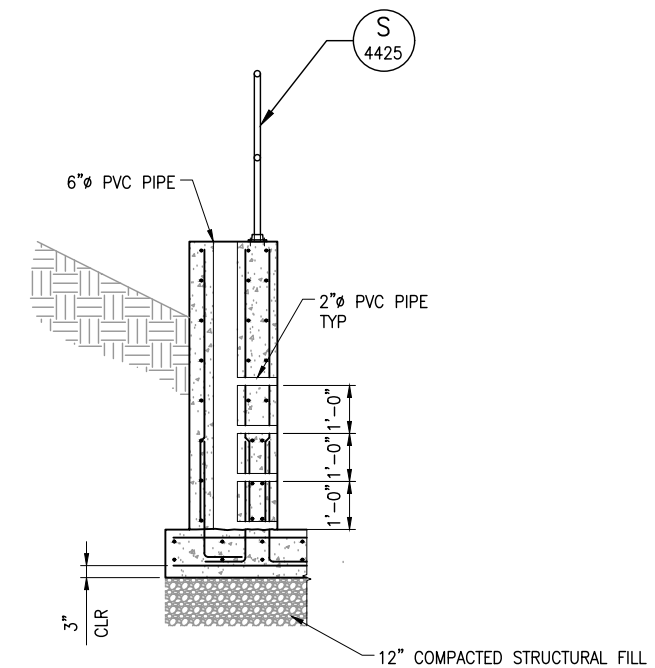
PLAN
SCALE: 1/2"=1'-0"



SECTION A
SCALE: 1/2"=1'-0"



SECTION B
SCALE: 1/2"=1'-0"



SECTION C
SCALE: 1/2"=1'-0"

NO.	DATE	REV. BY	DESCRIPTION

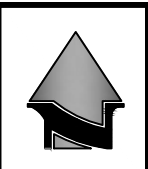
BELL CANYON FLUME

DESIGN: S. PUGH
DRAWN: S. PUGH
CHECKED: S. COHEN
APPROVED: S. COHEN

REVIEW: S. COHEN

FLUME PLAN AND SECTIONS

DATE: DECEMBER 2024
PROJECT NUMBER: 010-24-02
DRAWING NO. S-01



17.01M



- NOTES:**
- (A) BURIED 2" CONDUIT FROM NEW TRANSMITTER TO EXISTING STRUCTURE. PLUS ADDITIONAL 2" SPARE.
 - (B) MOUNT TRANSMITTER DISPLAY IN DIVERSION STRUCTURE. RUN IN CONDUIT TO TRANSMITTER.
 - C. CONTRACTOR TO HOOKUP DISPLAY & TRANSMITTER FOR FULLY FUNCTIONING UNIT.
 - D. CONTRACTOR TO RUN CONTROL WIRE TO JWCD CABINET. JWCD STAFF WILL LAND WIRES.
 - E. ANY JUNCTION BOXES MUST BE CONCRETE LINED.
 - (F) ATTACH POLE TO SIDE OF BUILDING. ON TOP OF POLL, 8' ABOVE ROOF MOUNT CAMERA (PROVIDED BY DISTRICT) AND LIGHT.
 - G. LIGHT SHALL BE DOWNWARD FACING LED WITH PHOTOCCELL. PROTECT WITH CAGE. EXTEND POWER FROM PREVIOUS LIGHT ON BUILDING.

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APPROVAL: _____	

BELL CANYON DIVERSION FLOW MEASUREMENT STRUCTURE	
ELECTRICAL PLAN	

DATE	2/5/25
PROJECT NUMBER	4186
DRAWING NUMBER	E-1
SHEET NUMBER	13 OF 13

I:\WATER SUPPLY\4186 - SE COLL LINE\DRAWINGS\4186 AREA MAP.DWG