

Madison, Wisconsin

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2-3	PLAN OVERVIEW
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# CITY OF MADISON

## CITY ENGINEERING DIVISION

### DEPARTMENT OF PUBLIC WORKS

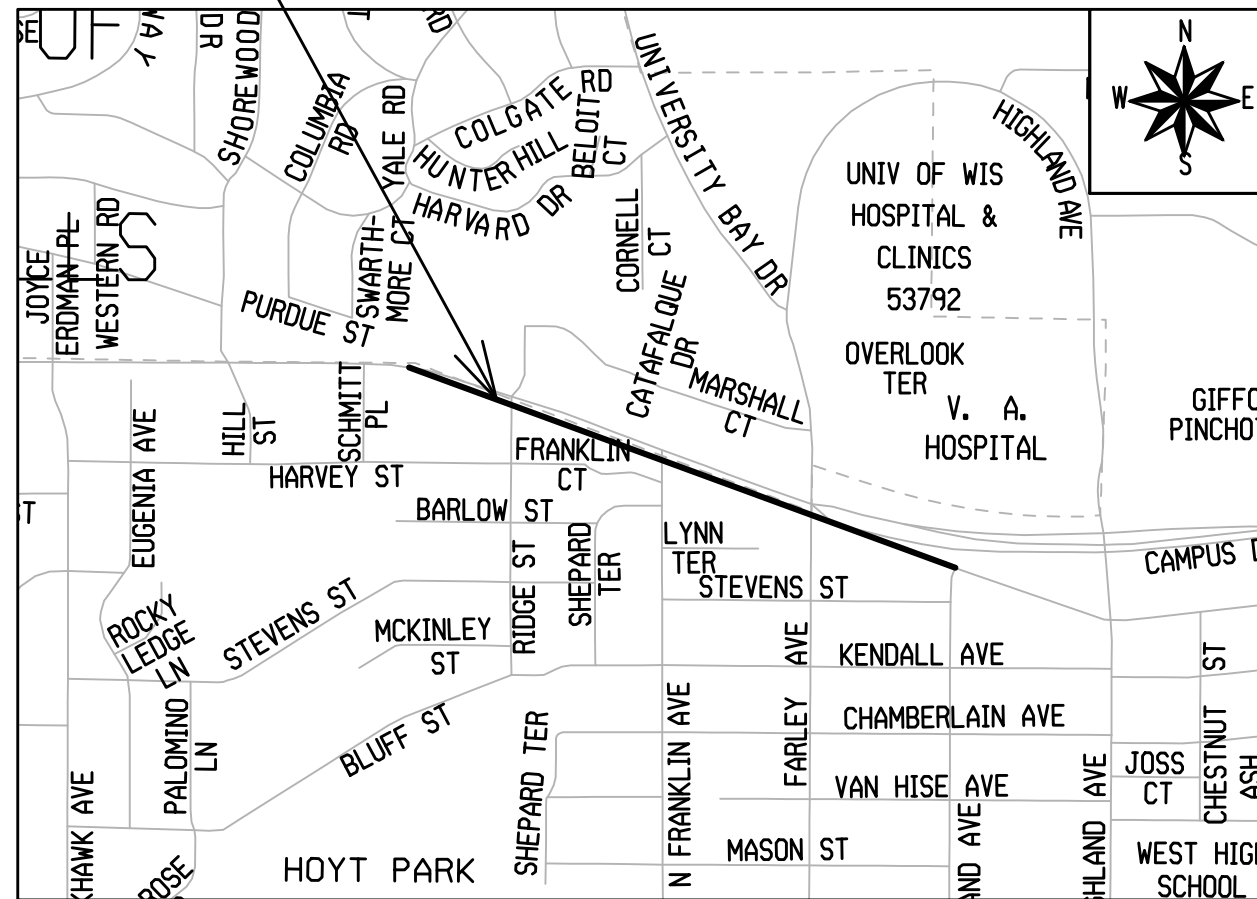
# PLAN OF PROPOSED IMPROVEMENT

## UNIVERSITY AVENUE BOX REPAIR - 2023

PROJECT  
LOCATION

CITY PROJECT NO. 11168  
CONTRACT NO. 9377

CONVENTIONAL SIGNS	
FIELD VERIFY ALL UTILITY LOCATIONS	
GAS	— G —
STORM SEWER	— ST —
SANITARY SEWER	— SAN —
WATER	— W —
BURIED ELECTRIC	— E —
OVERHEAD ELECTRIC	— OH —
POWER POLE	□
ADA COMPLIANT RAMP W/ DETECTABLE WARNING FIELD	▣
COMBUSTIBLE FLUIDS	☀



PUBLIC IMPROVEMENT PROJECT  
APPROVED

OCTOBER 17, 2023

BY THE COMMON COUNCIL  
OF MADISON, WISCONSIN

PUBLIC IMPROVEMENT DESIGN  
APPROVED BY:

*James Wolfe* 10/24/2023  
City Engineer Date

STORM SEWER  
DESIGNED BY:

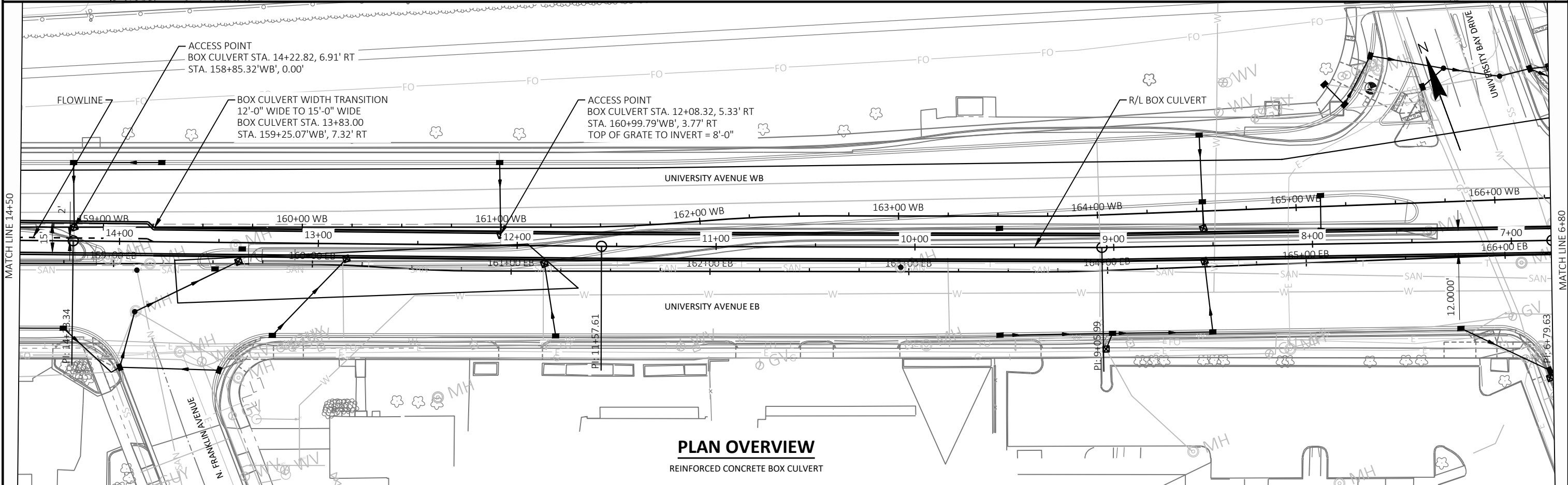
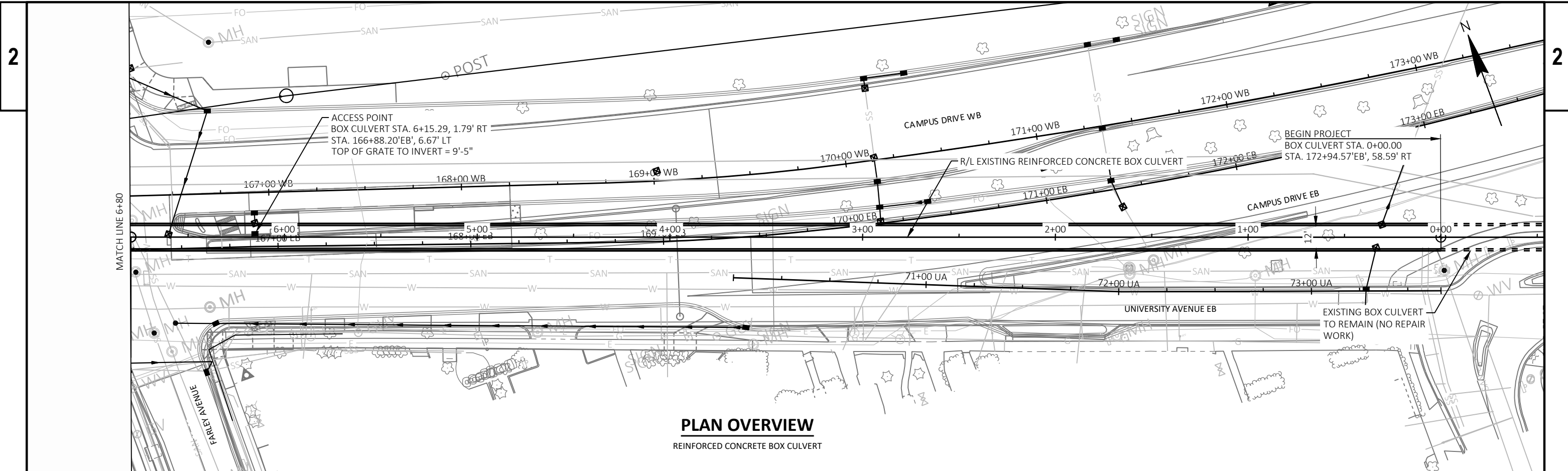


PLOT SCALE: 1 IN=1 FT\_XREF

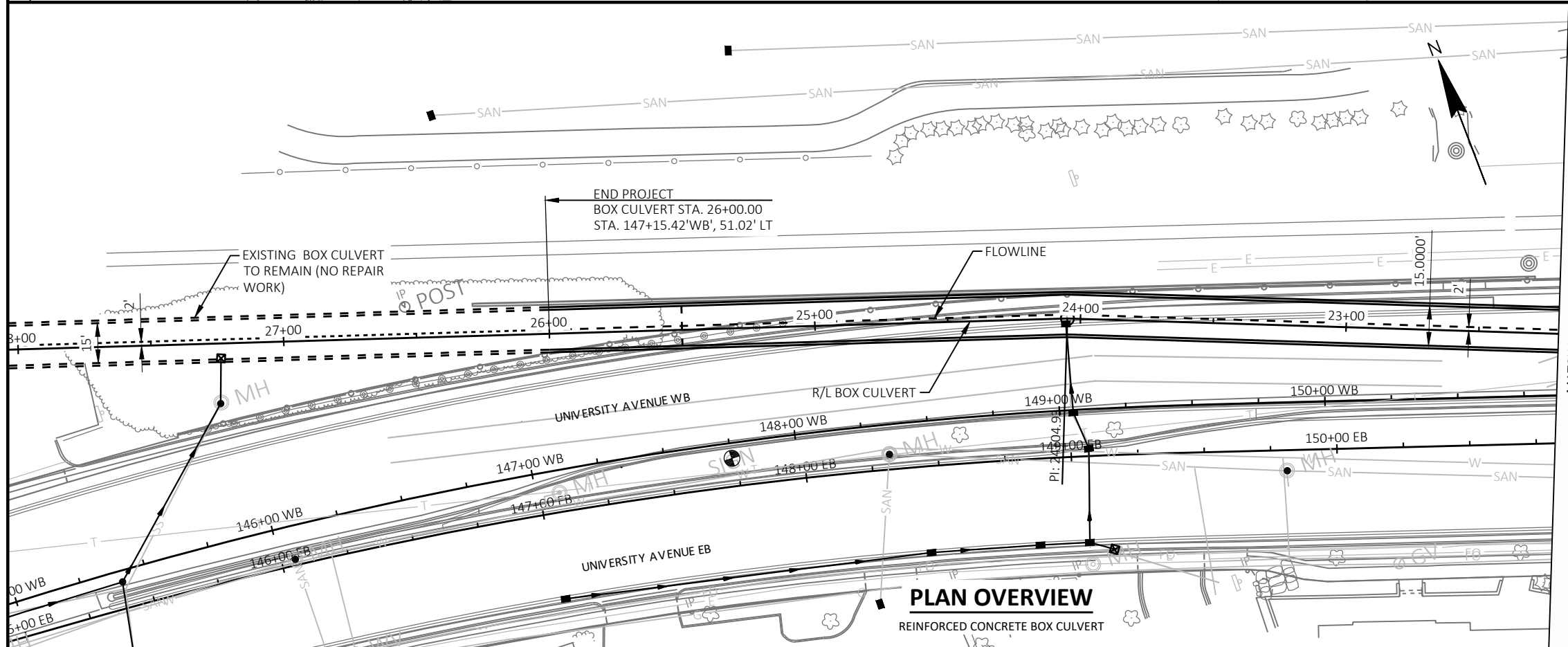
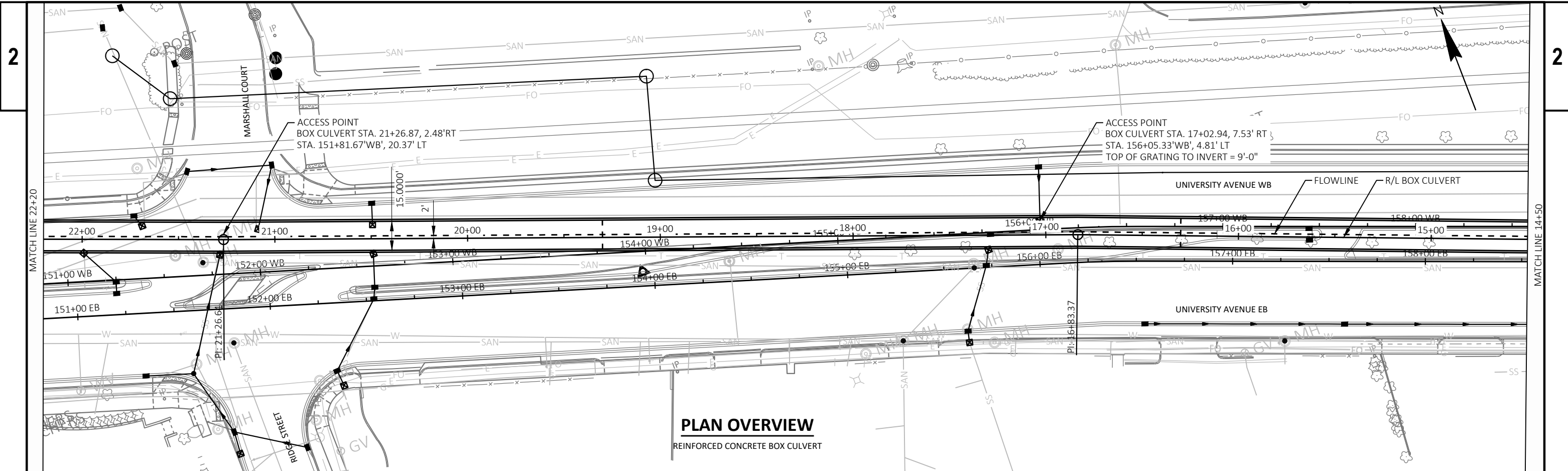
PLOT NAME: ---

REV. DATE: 10/4/2023 12:28 PM

ORIGINATOR: CITY\_OF\_MADISON



PROJECT NO: 11168	HWY: UNIVERSITY AVENUE	COUNTY: DANE	PLAN OVERVIEW: EXISTING BOX CULVERT REPAIRS	SHEET 2	E
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PROJECT NO: 11168

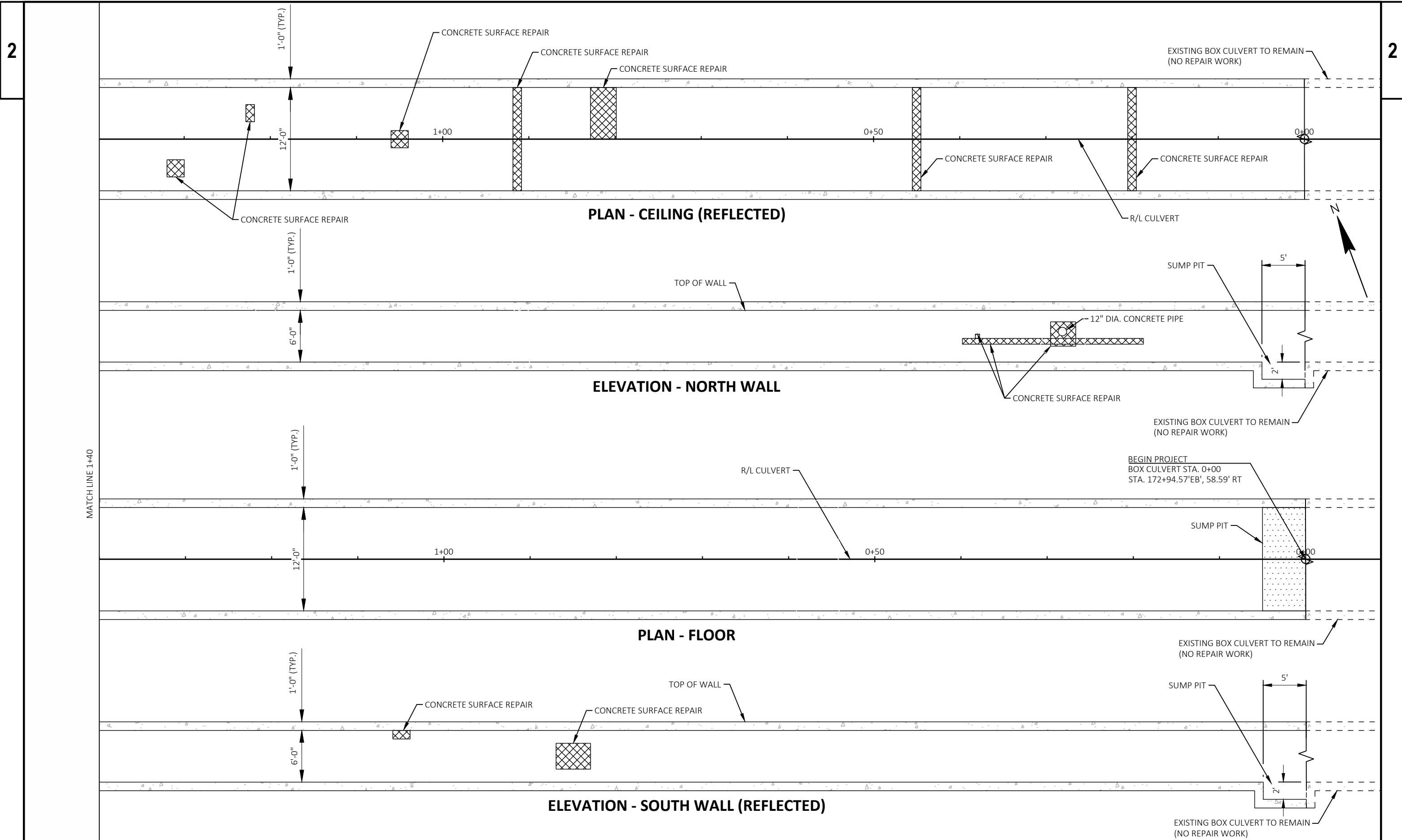
HWY: UNIVERSITY AVENUE

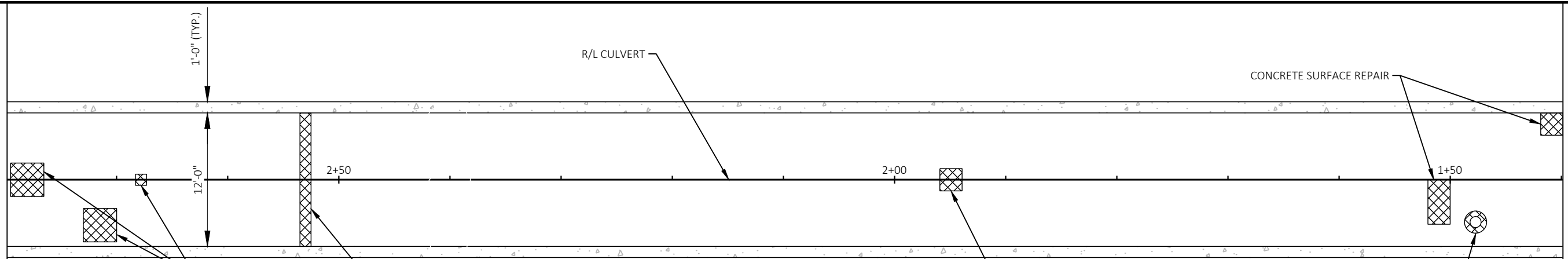
COUNTY: DANE

PLAN OVERVIEW

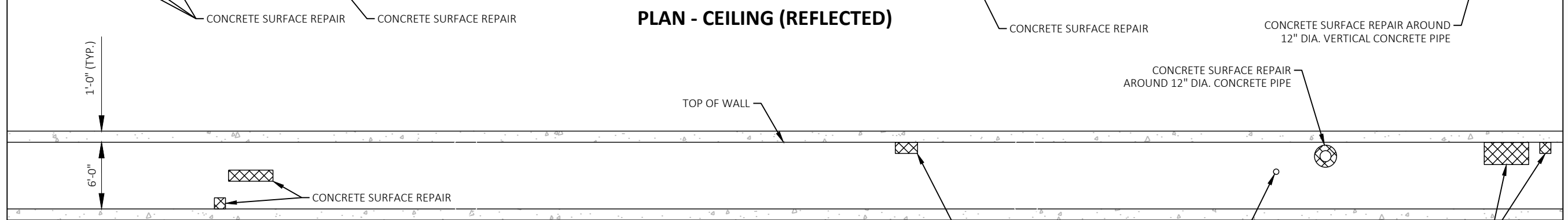
SHEET 3

E

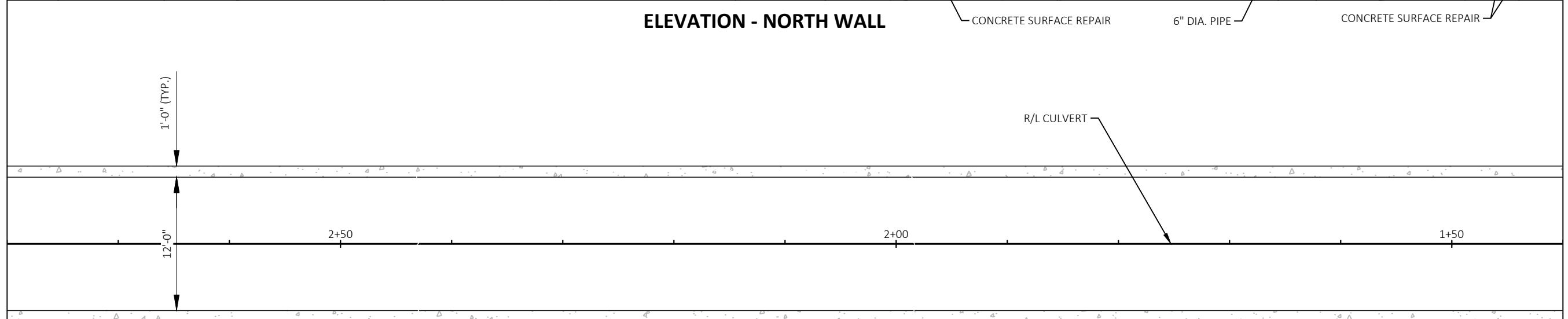




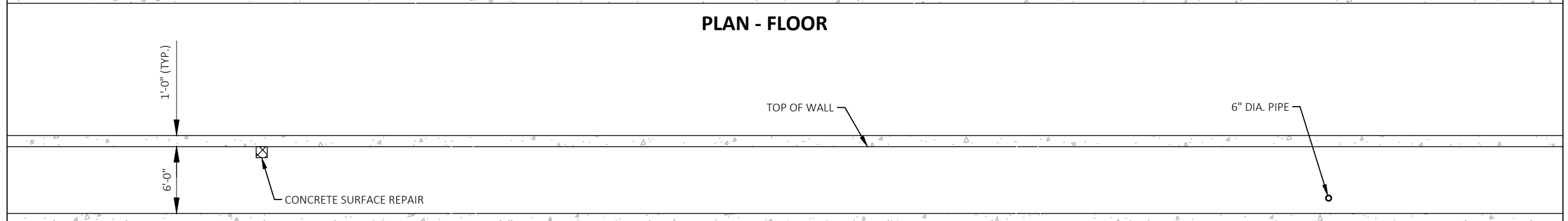
**PLAN - CEILING (REFLECTED)**



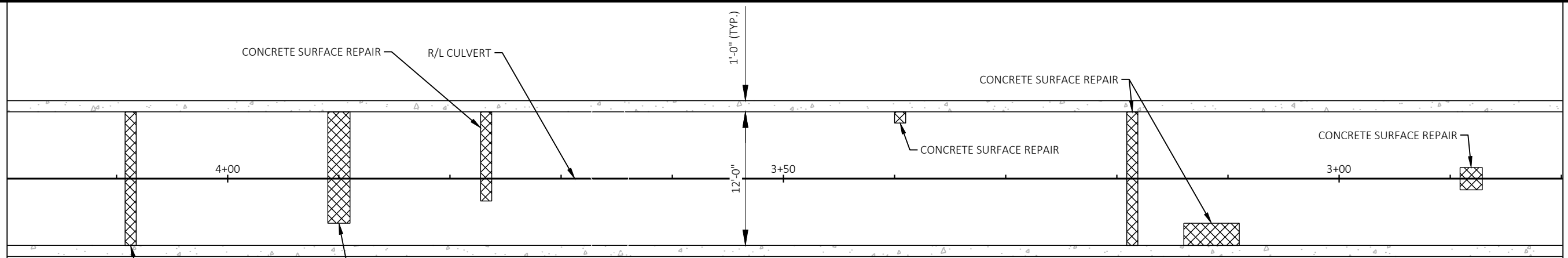
**ELEVATION - NORTH WALL**



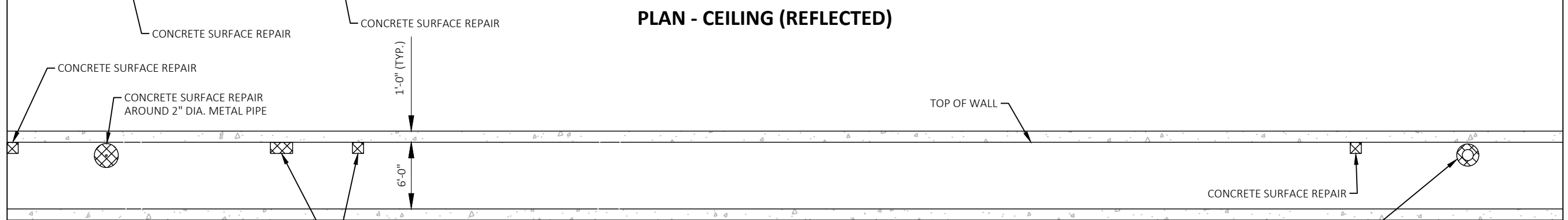
**PLAN - FLOOR**



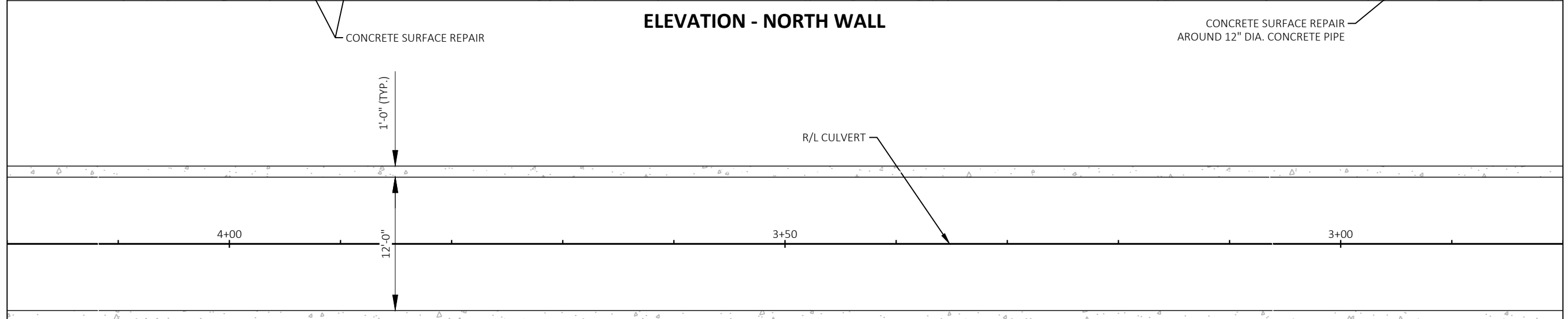
**ELEVATION - SOUTH WALL (REFLECTED)**



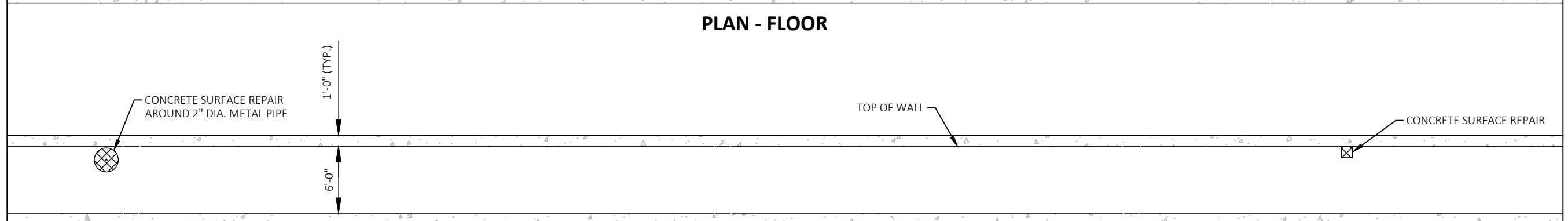
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**ELEVATION - NORTH WALL**



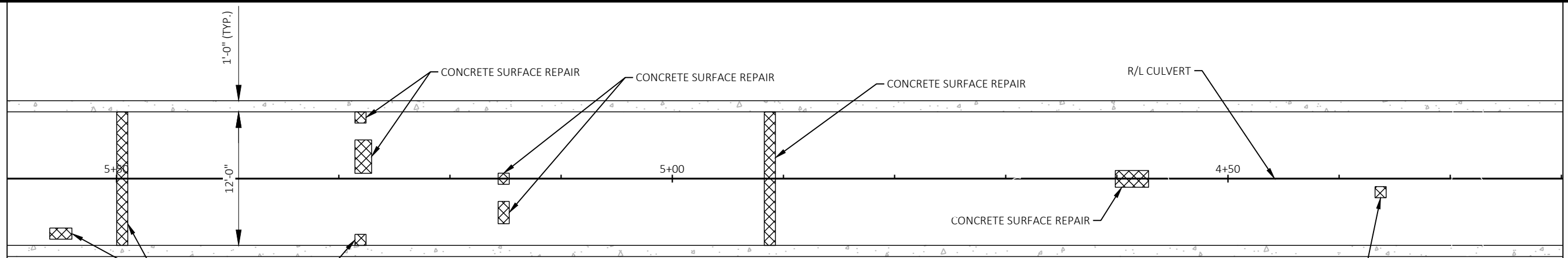
**PLAN - FLOOR**



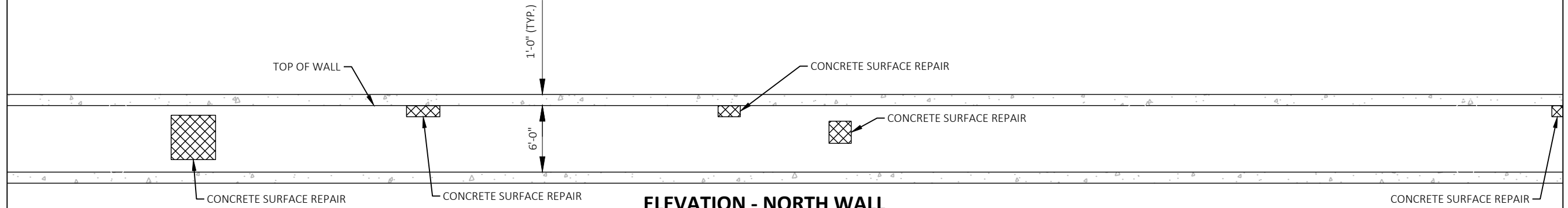
**ELEVATION - SOUTH WALL (REFLECTED)**

MATCH LINE 4+20

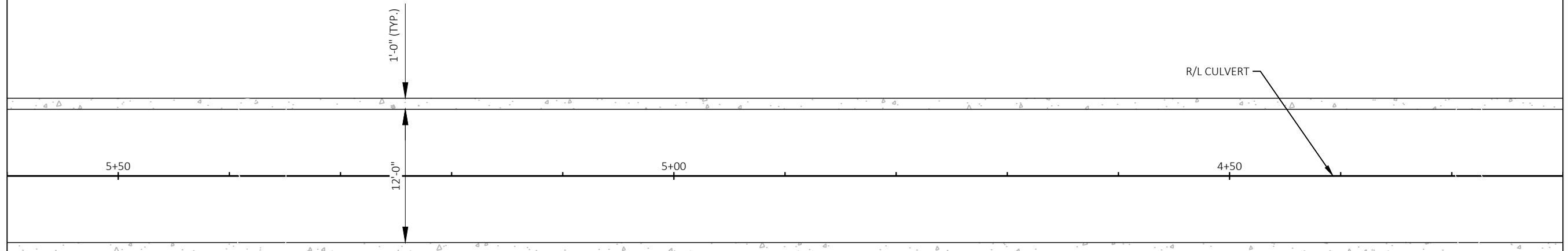
MATCH LINE 2+80



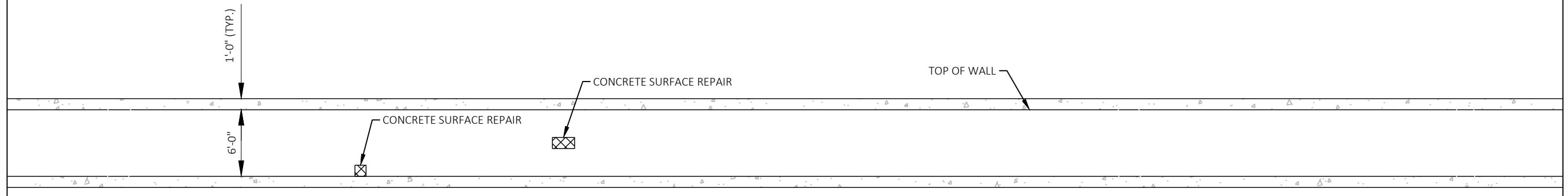
PLAN - CEILING (REFLECTED)



ELEVATION - NORTH WALL



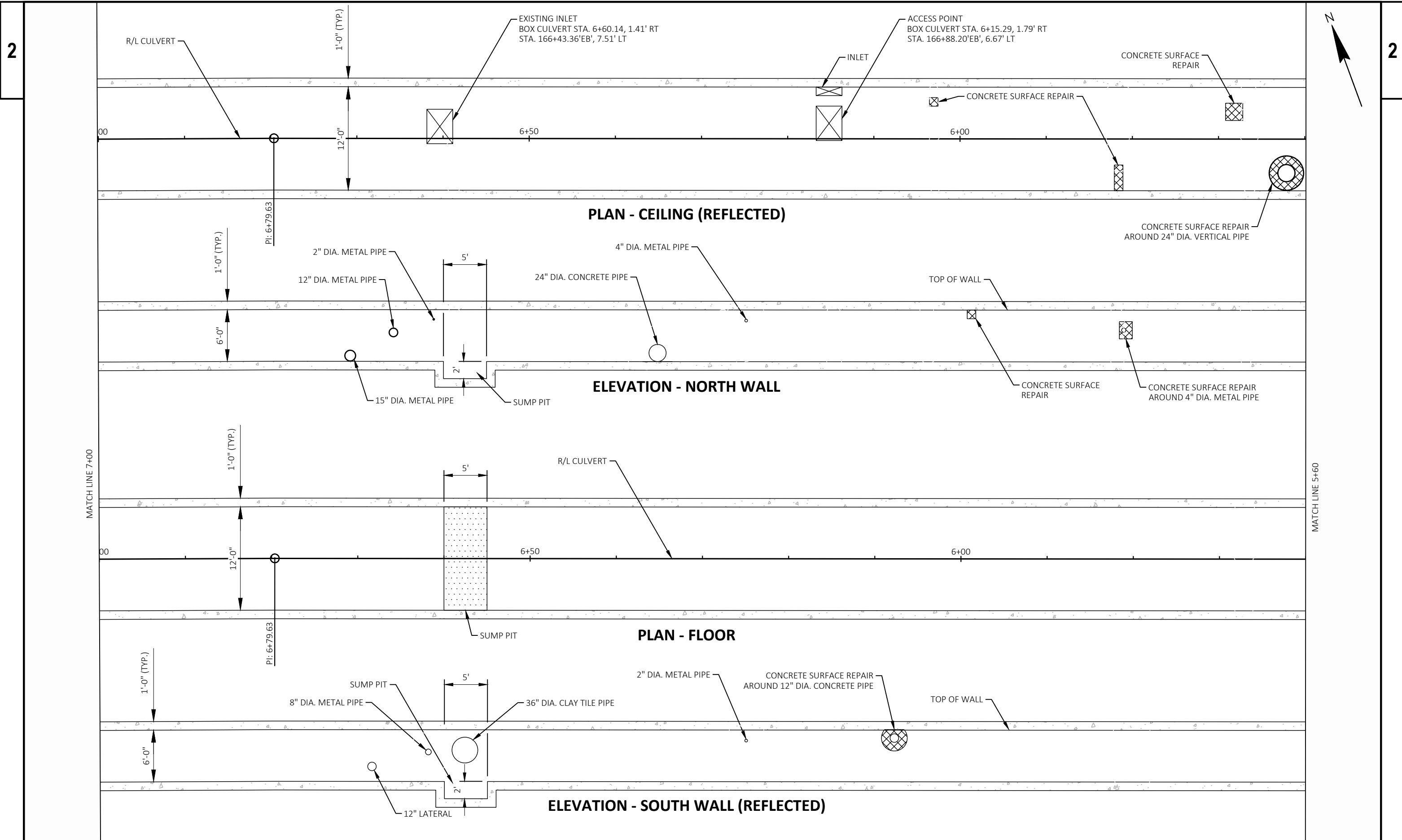
PLAN - FLOOR



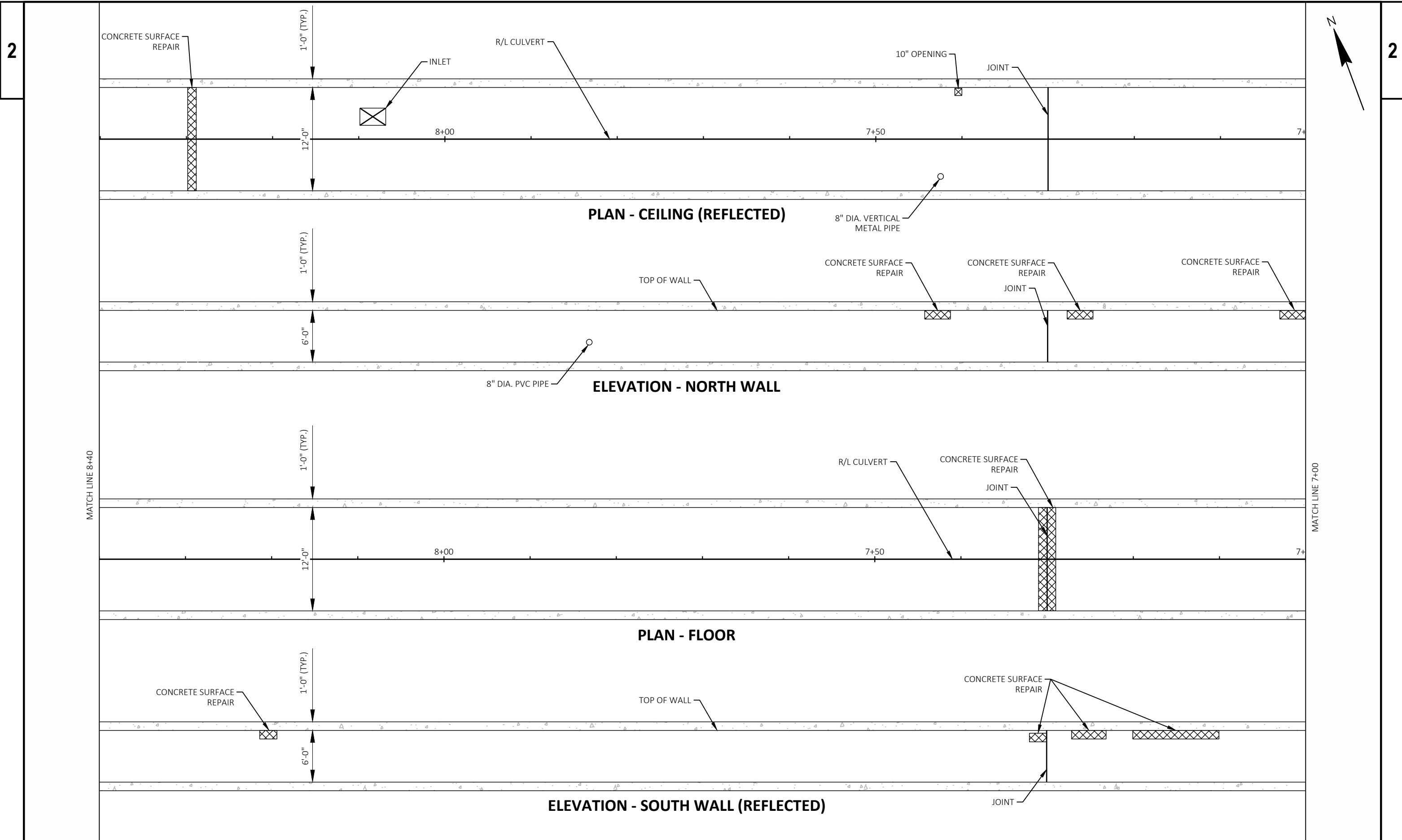
ELEVATION - SOUTH WALL (REFLECTED)

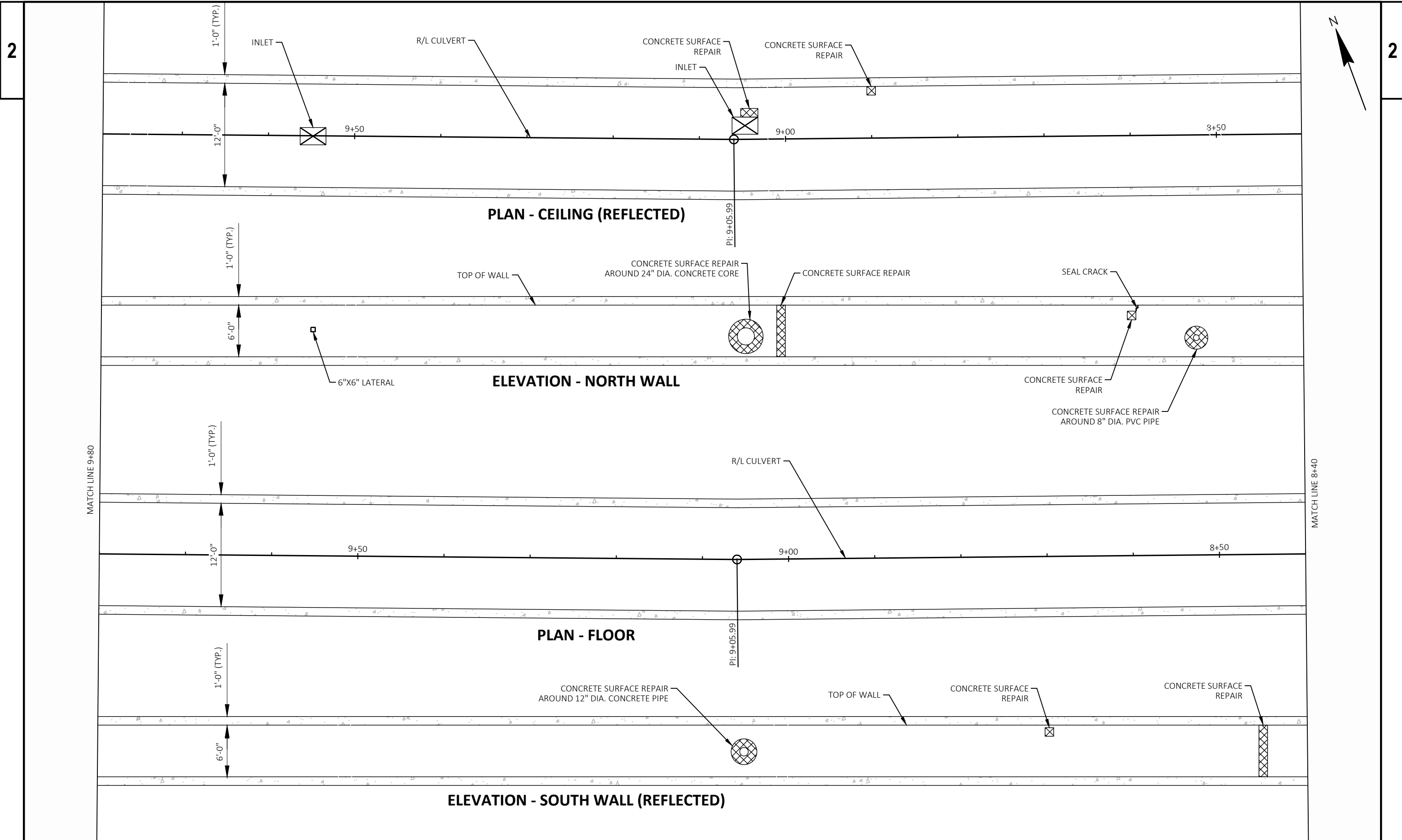
MATCH LINE 5+60

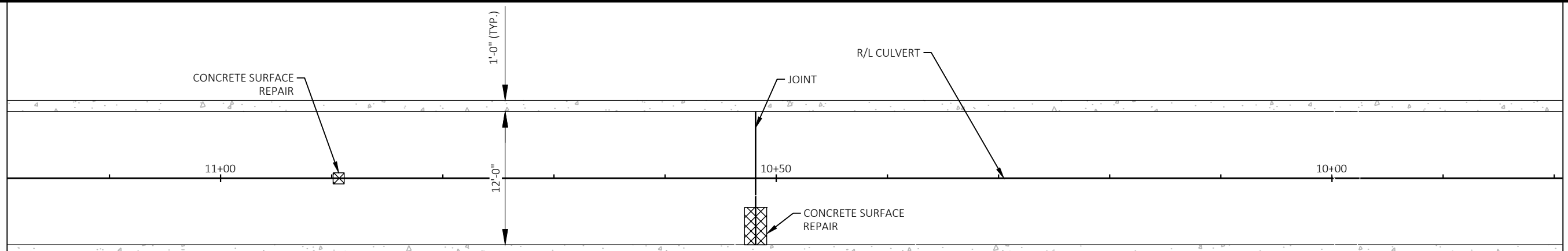
MATCH LINE 4+20



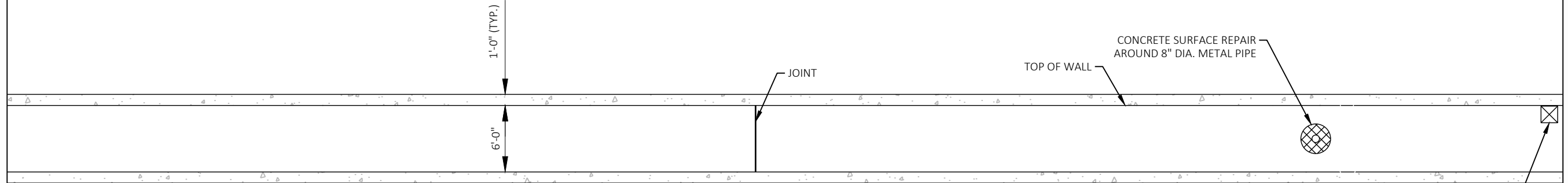




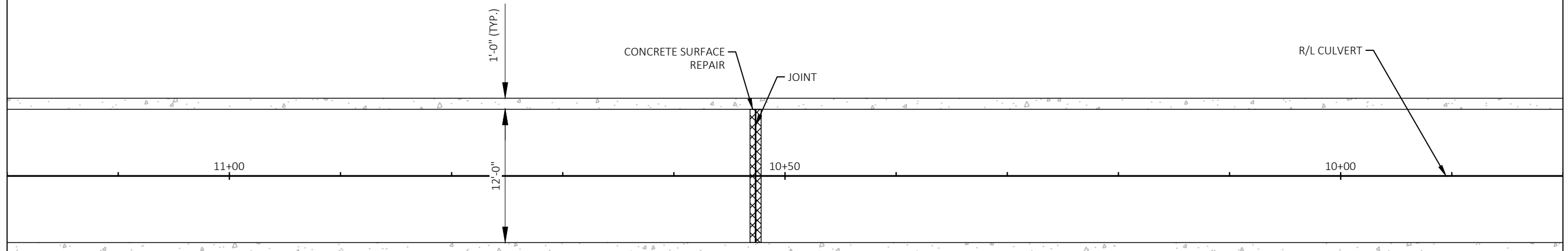




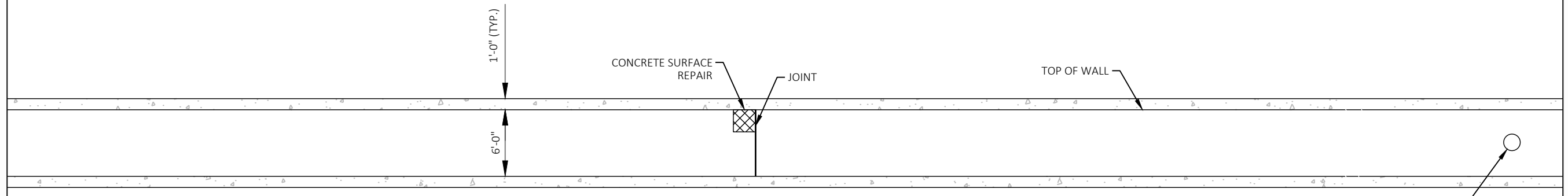
PLAN - CEILING (REFLECTED)



ELEVATION - NORTH WALL



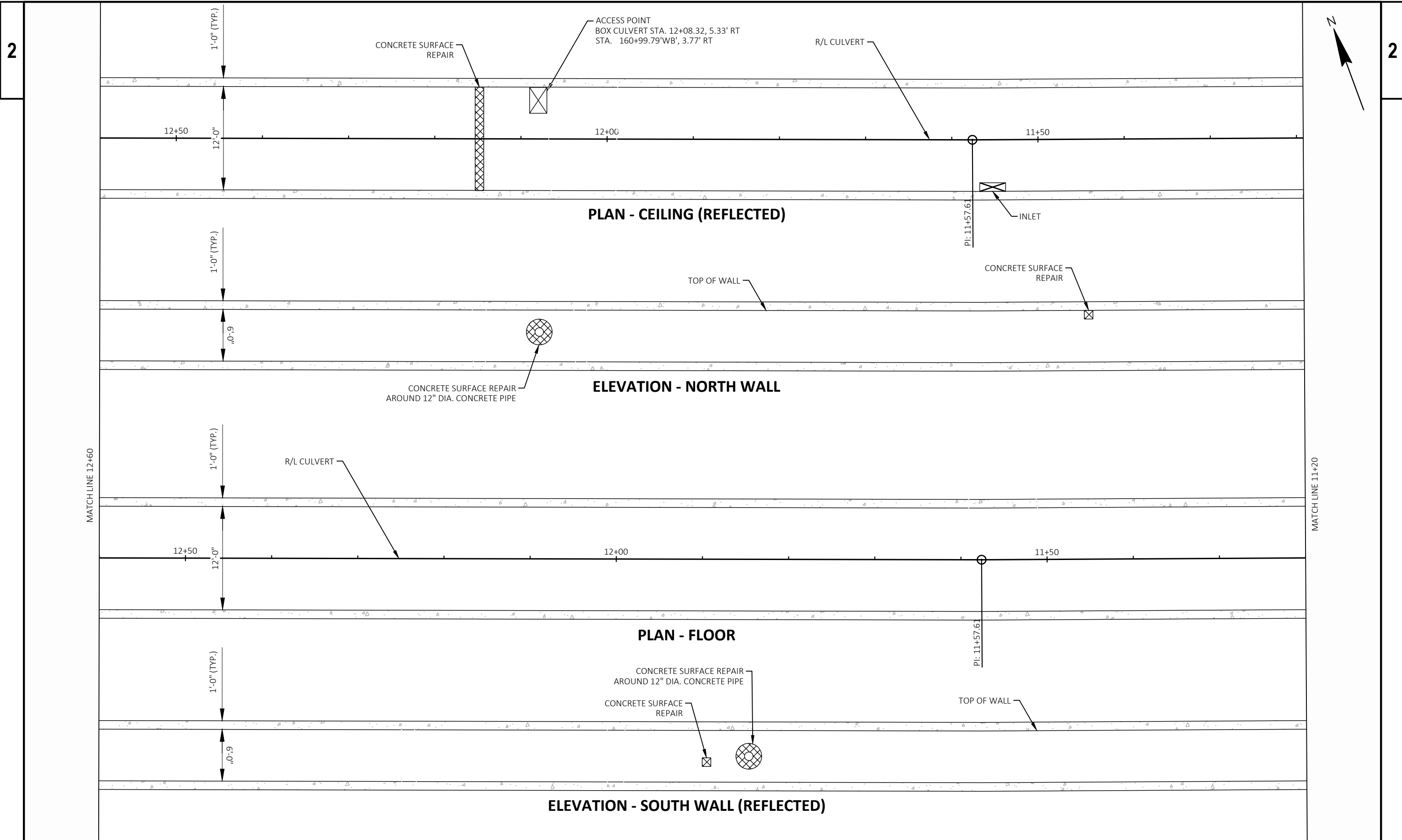
PLAN - FLOOR

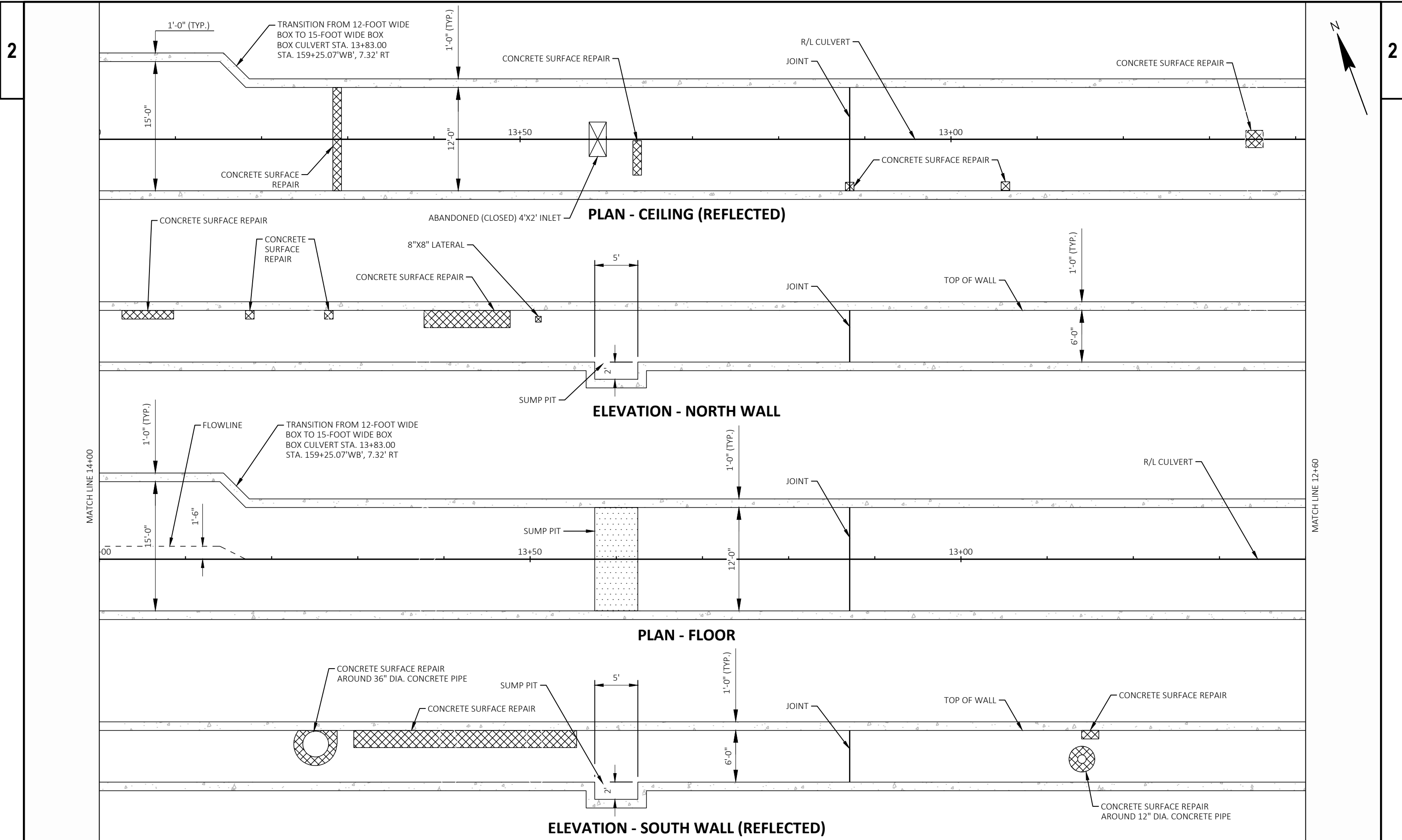


ELEVATION - SOUTH WALL (REFLECTED)

MATCH LINE 11+20

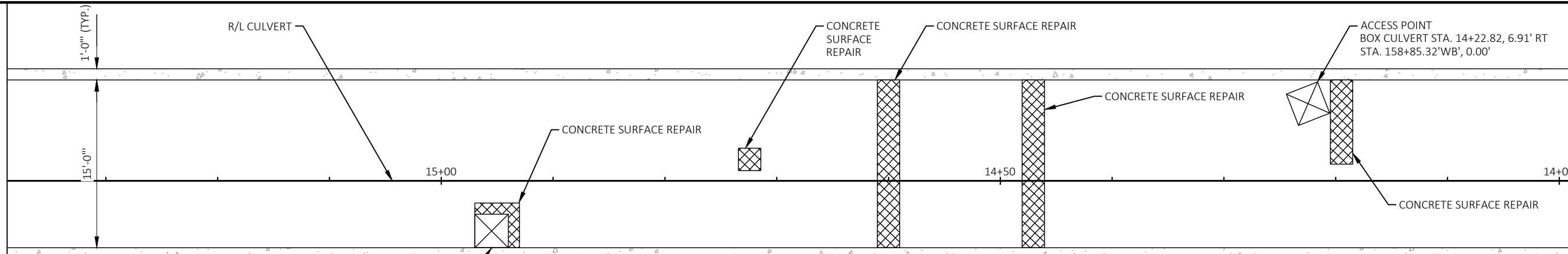
MATCH LINE 9+80



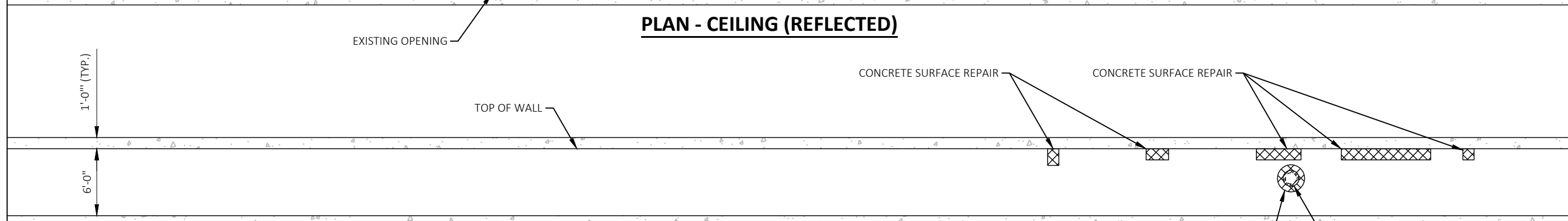


MATCH LINE 14+00

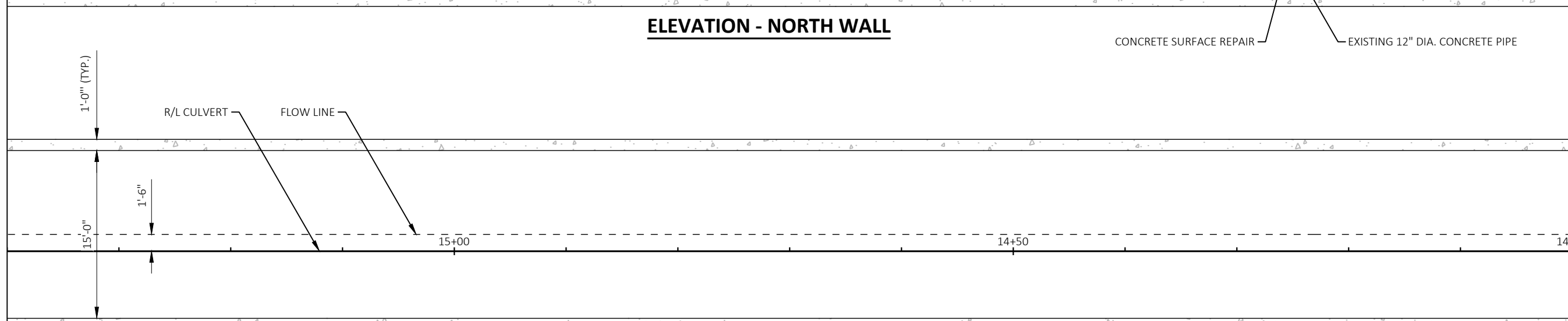
MATCH LINE 12+60



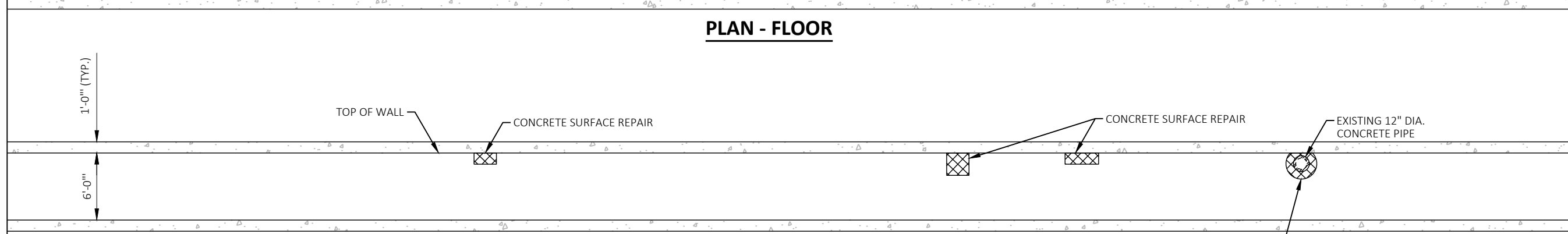
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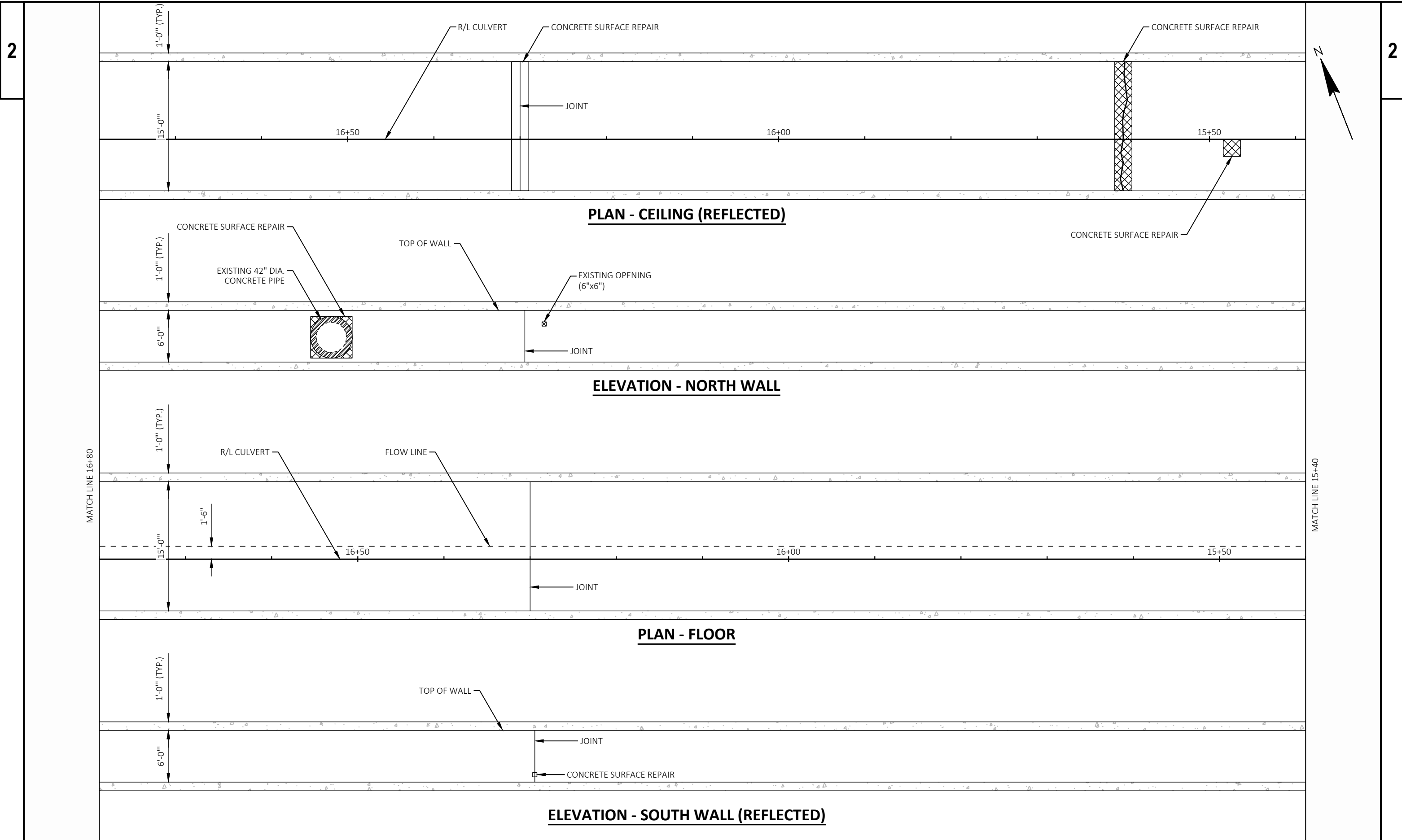
**ELEVATION - NORTH WALL**

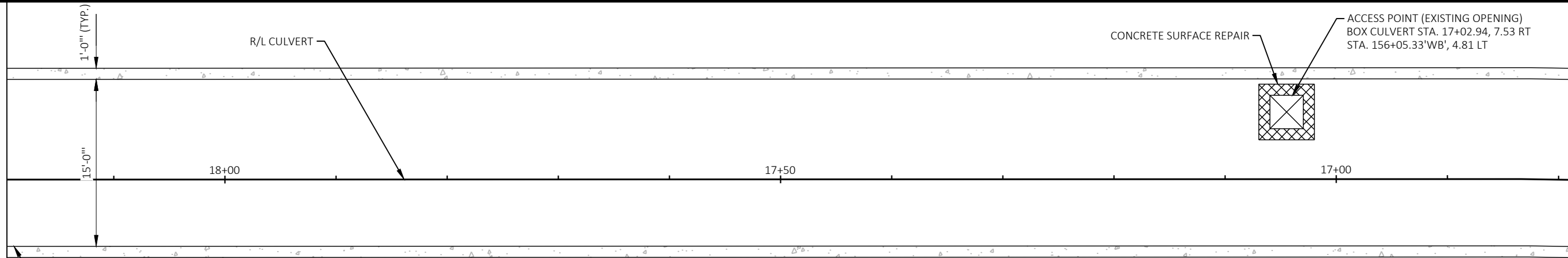


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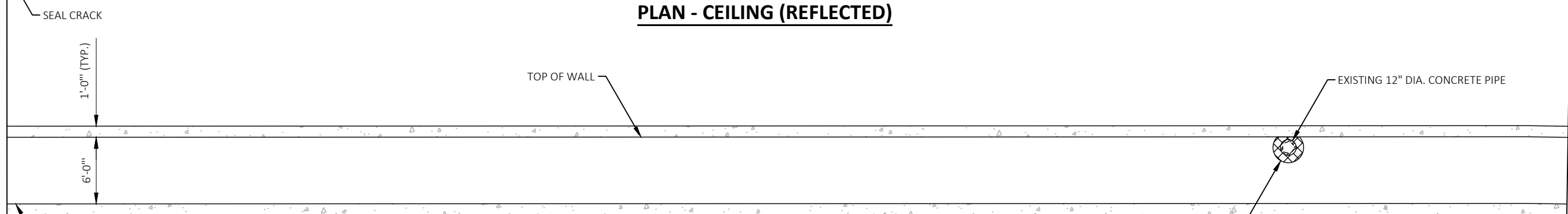


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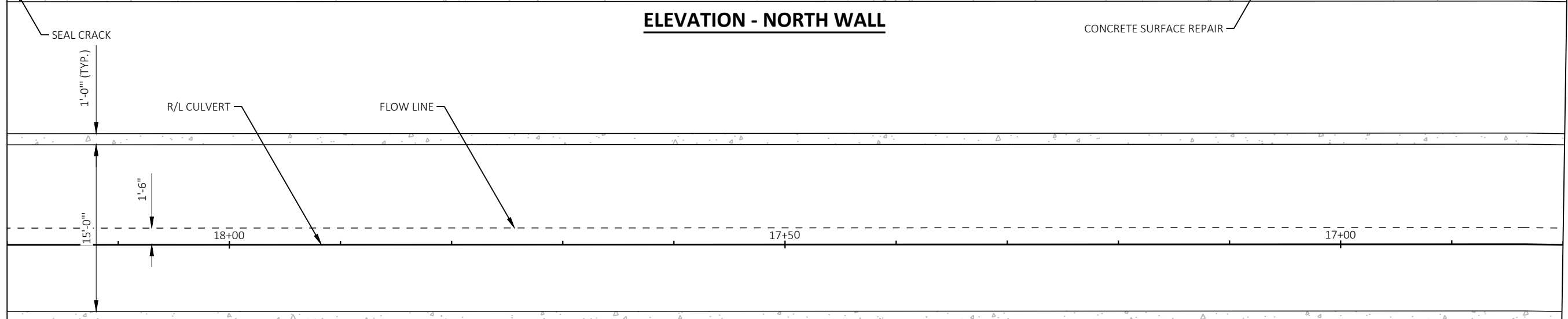




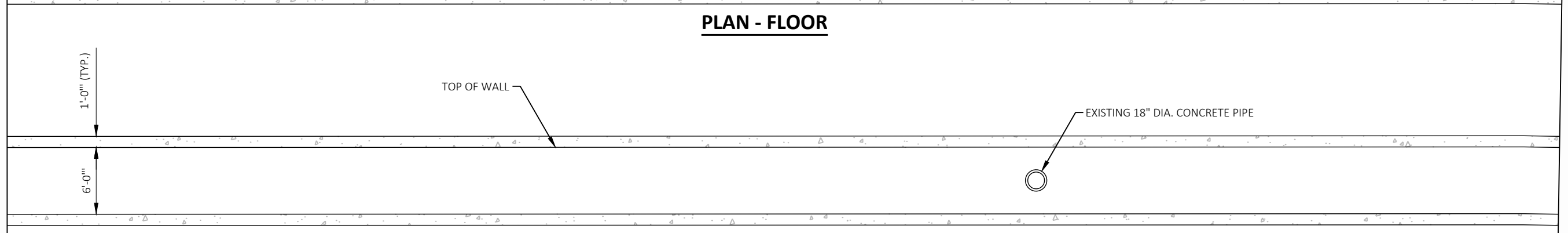
**PLAN - CEILING (REFLECTED)**



**ELEVATION - NORTH WALL**

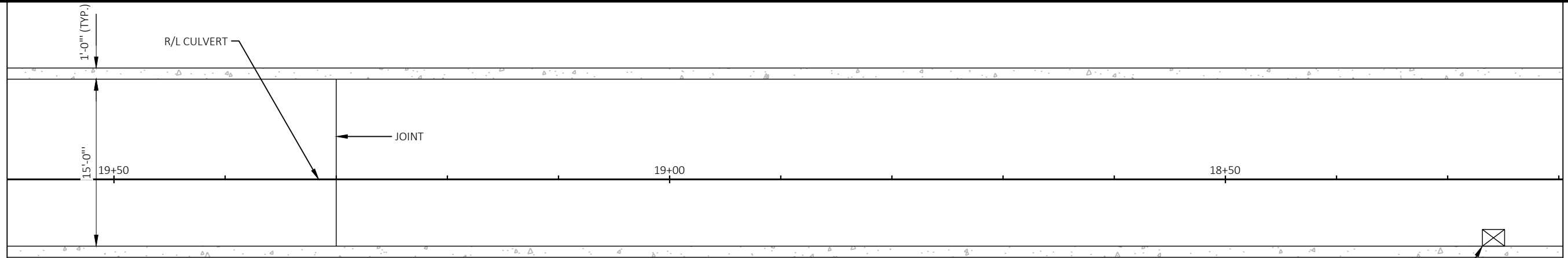


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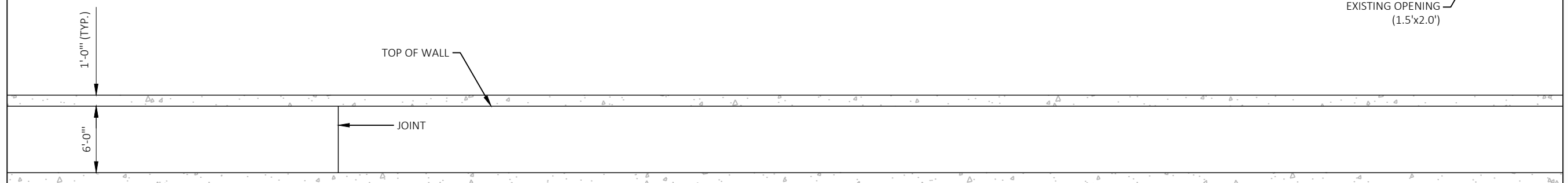


**ELEVATION - SOUTH WALL (REFLECTED)**

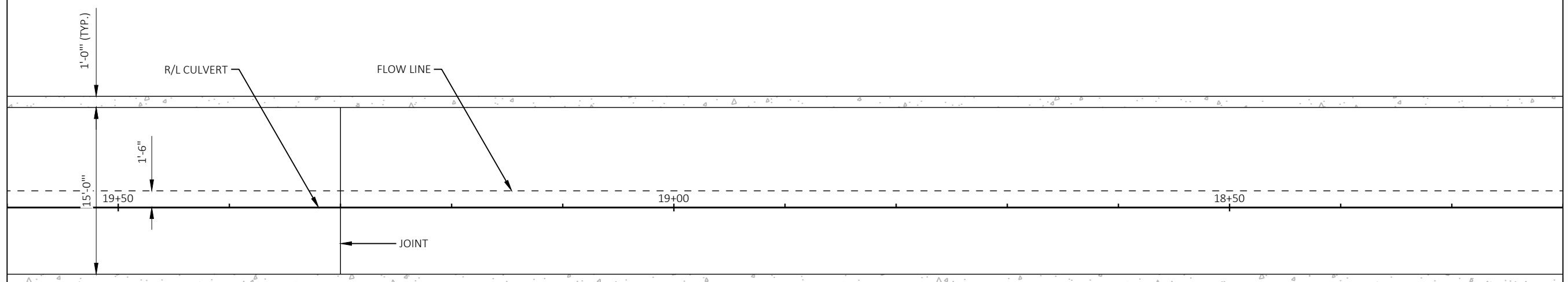




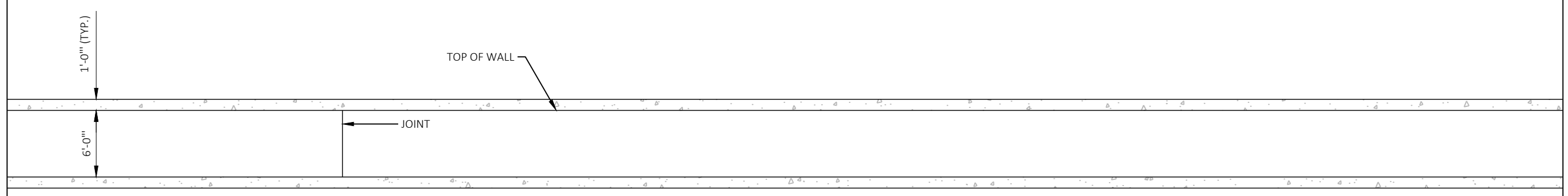
**PLAN - CEILING (REFLECTED)**



**ELEVATION - NORTH WALL**



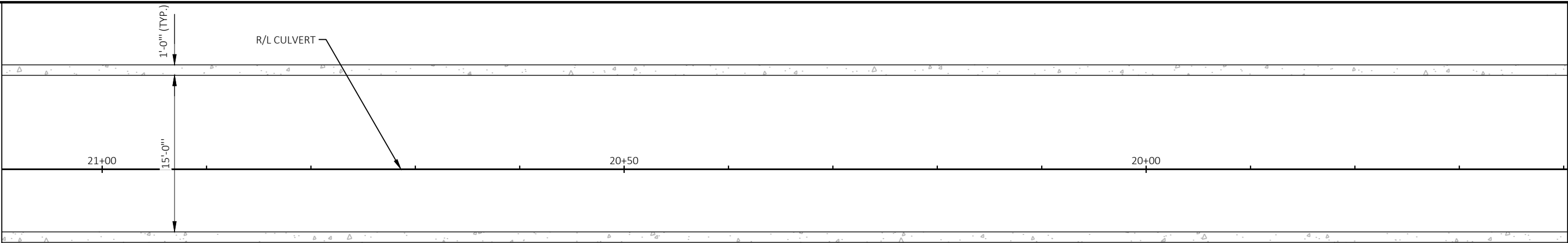
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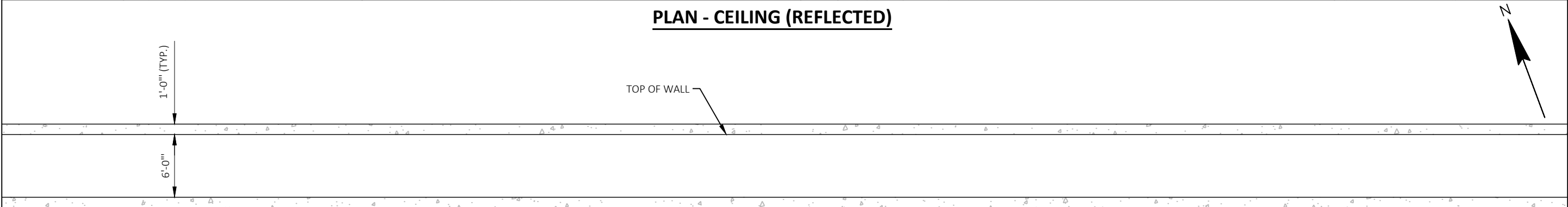
**ELEVATION - SOUTH WALL (REFLECTED)**

2

2

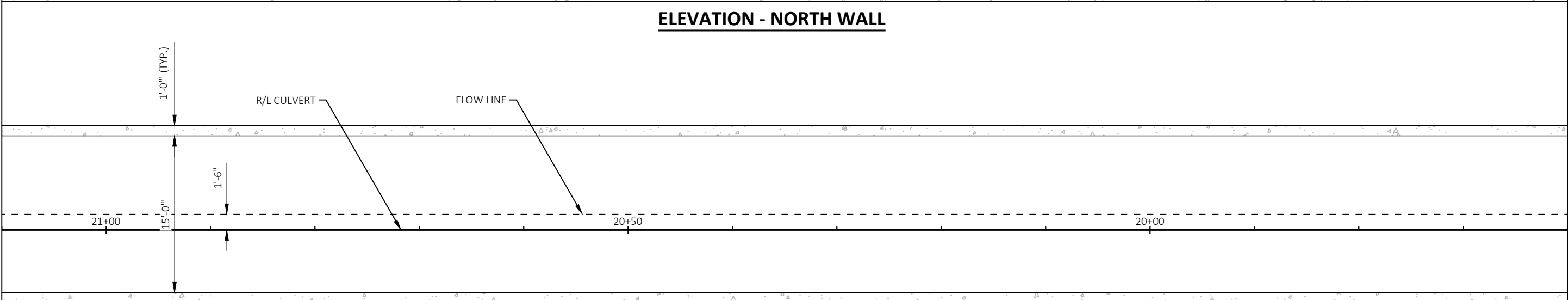


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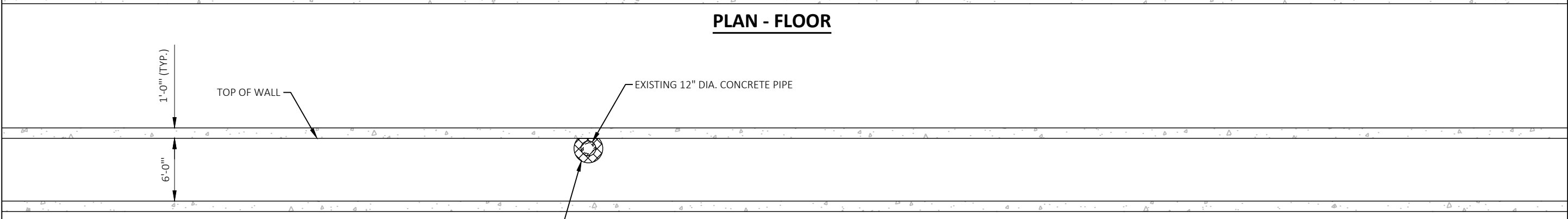
**ELEVATION - NORTH WALL**

MATCH LINE 21+10

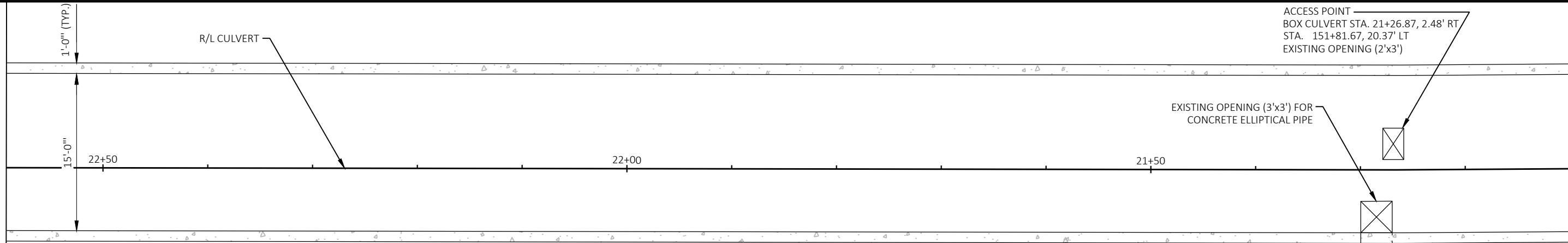


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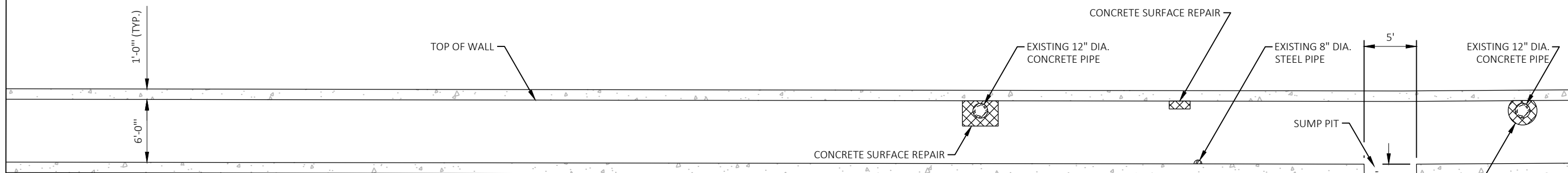
MATCH LINE 19+60



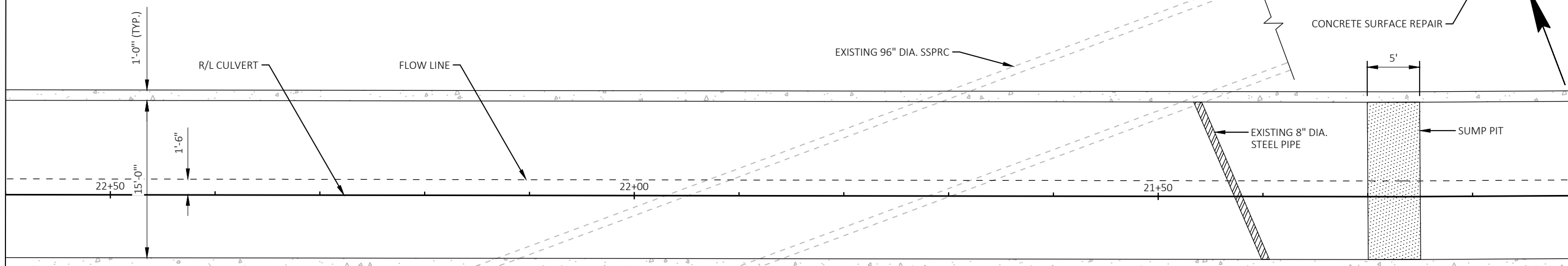
**ELEVATION - SOUTH WALL (REFLECTED)**



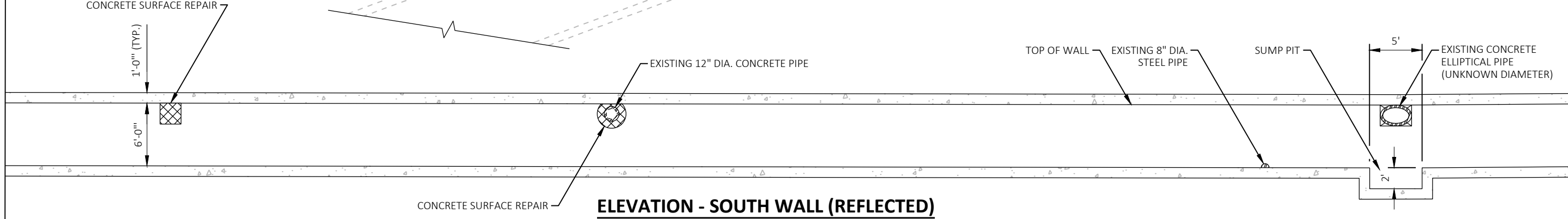
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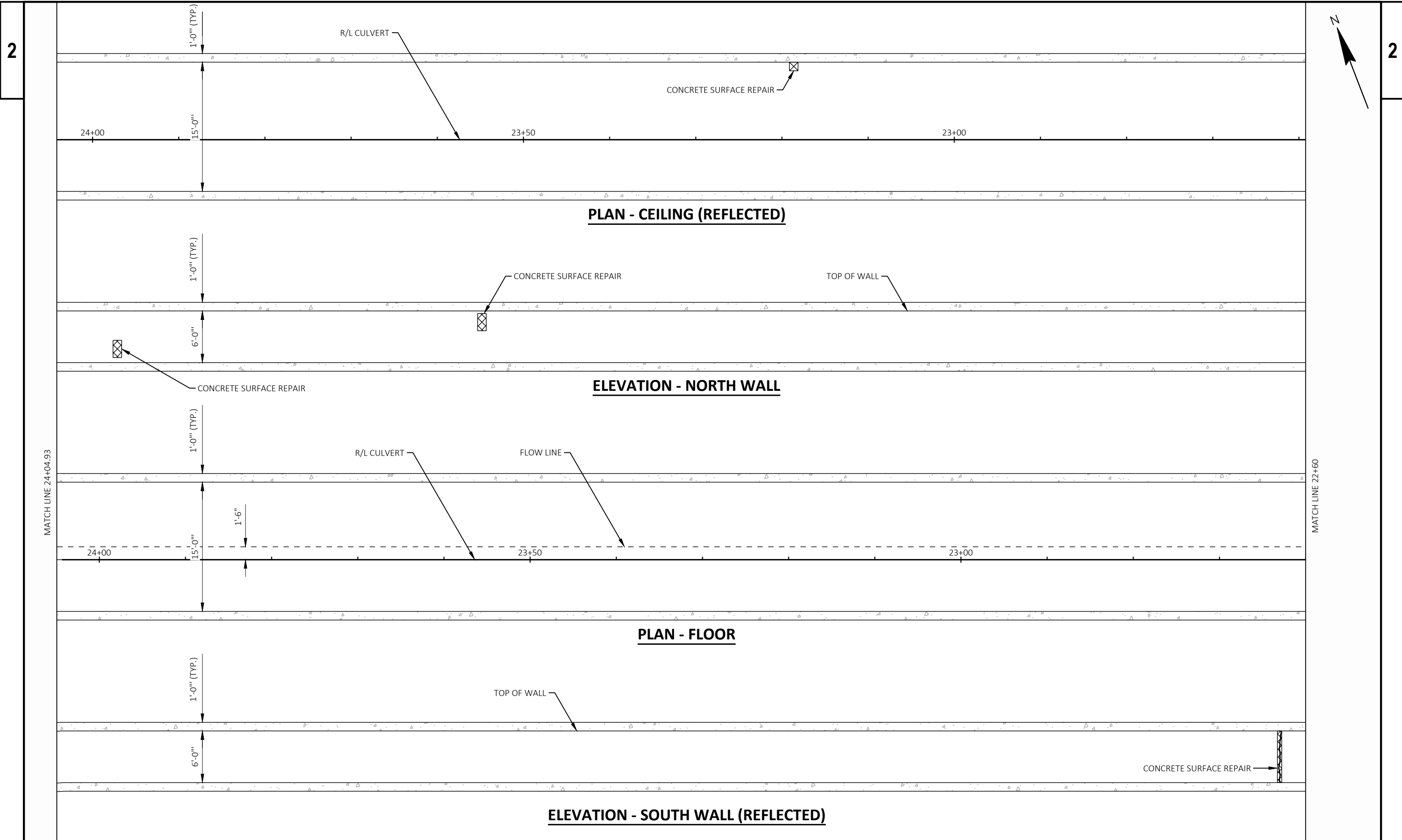
**ELEVATION - NORTH WALL**

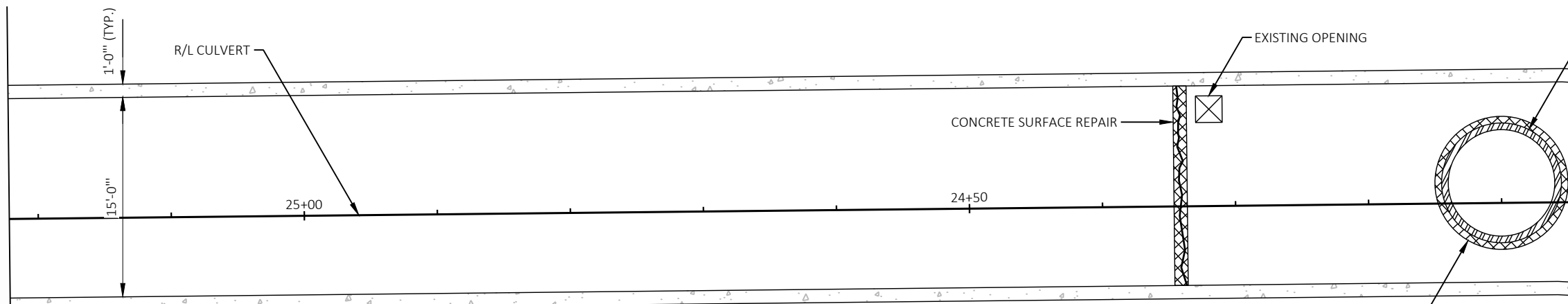


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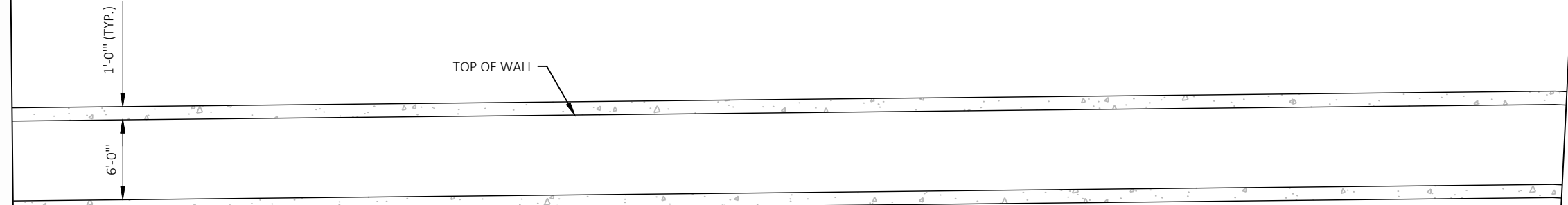


**ELEVATION - SOUTH WALL (REFLECTED)**

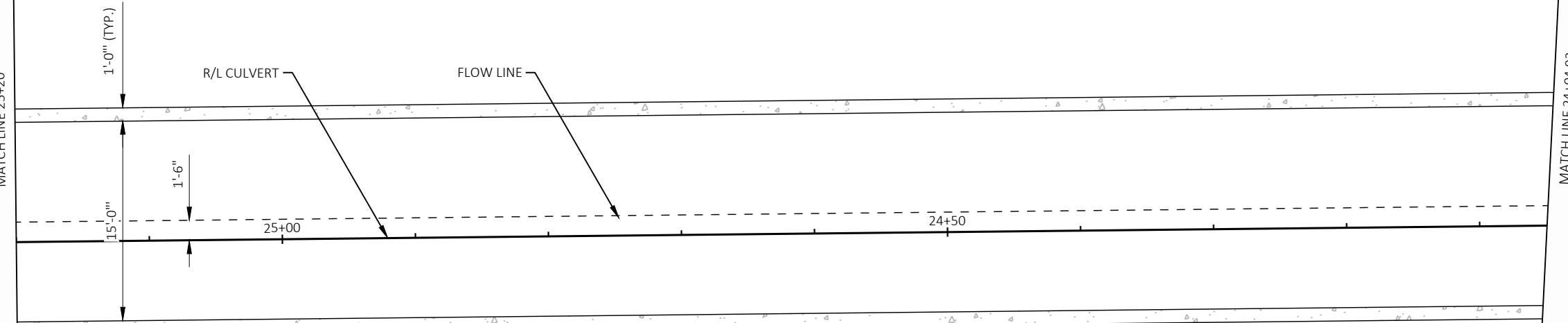




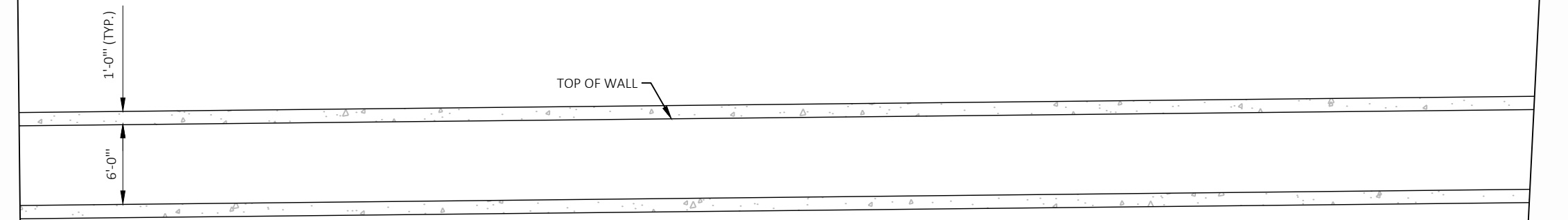
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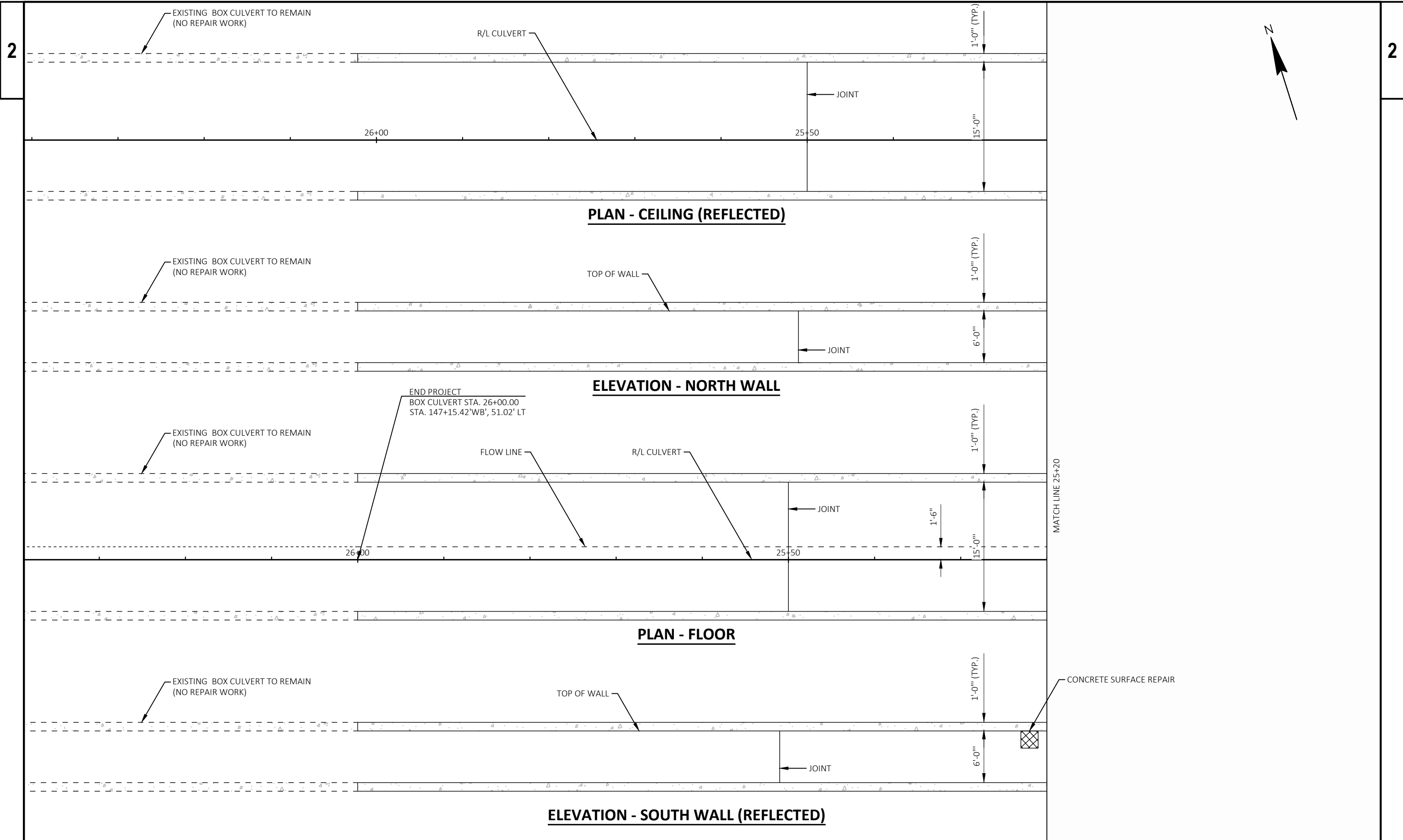
**ELEVATION - NORTH WALL**

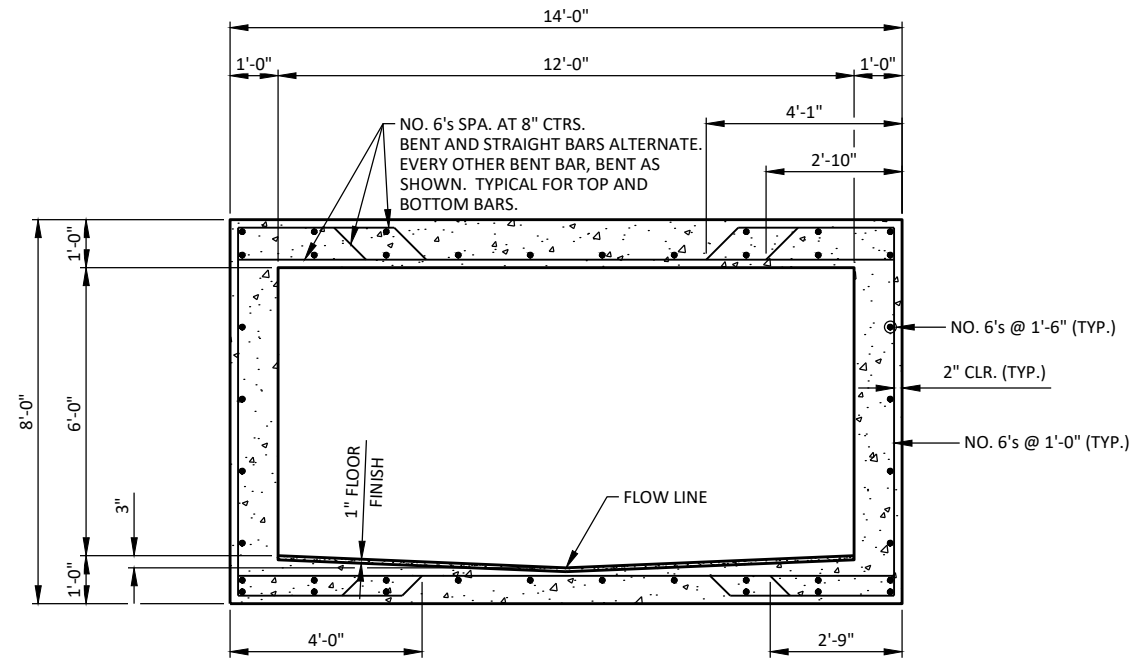


**PLAN - FLOOR**

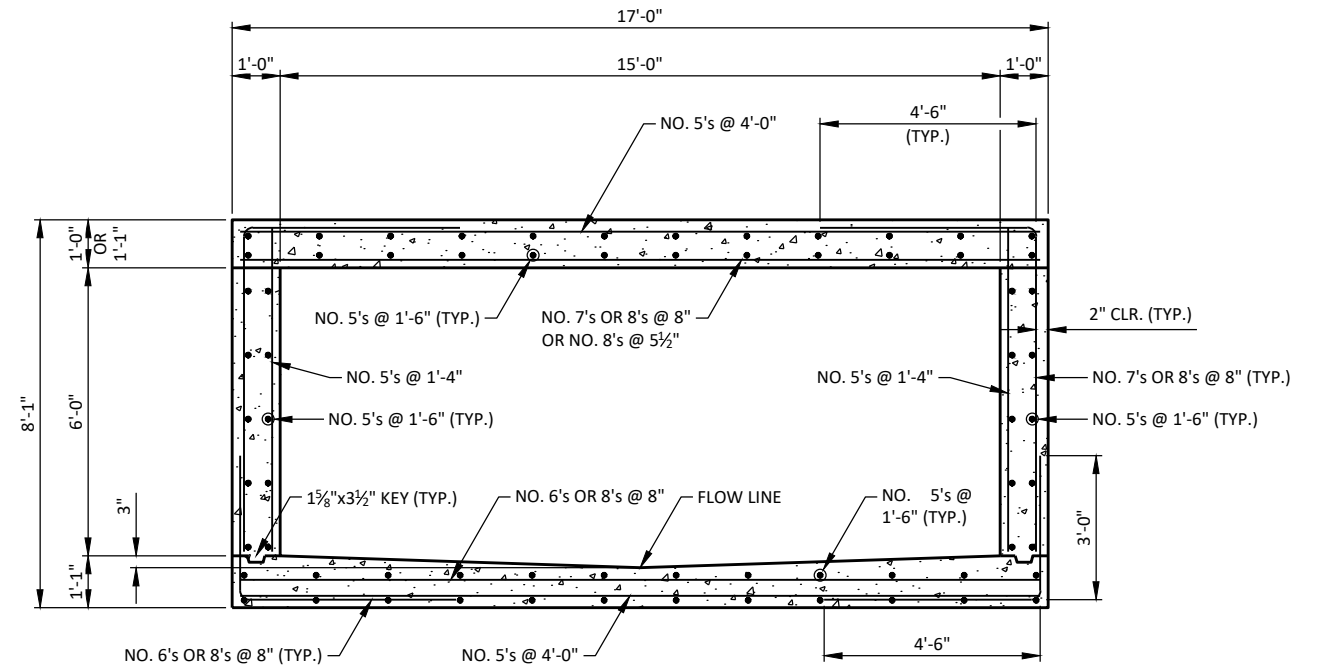


**ELEVATION - SOUTH WALL (REFLECTED)**





**TYPICAL EXISTING SECTION**  
STA. 0+00 TO 13+83



**TYPICAL EXISTING SECTION**  
STA. 13+83 TO 26+00

**GENERAL NOTES**

DRAWINGS SHALL NOT BE SCALED.  
DIMENSIONS SHOWN ARE BASED ON THE ORIGINAL STRUCTURE PLANS.  
THE CONCRETE REPAIRS SHALL BE PERFORMED PER CURRENT EDITION OF THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS.  
REPAIR AREAS SHOWN ARE CONCEPTUAL AND FOR REFERENCE ONLY. ACTUAL REPAIR AREAS SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD. PROVIDE ADEQUATE ACCESS FOR THE REPAIR AREA DETERMINATION AND INSPECTION.  
ALL REPAIR AREAS SHALL BE DEFINED BY A 1/2" SAW CUT. SAW CUTTING IS INCIDENTAL TO THE BID ITEM "CONCRETE SURFACE REPAIR."  
ALL EXPOSED AND CORRODED REINFORCEMENT IS TO BE ABRASIVE BLAST CLEANED PRIOR TO PLACING CONCRETE FOR THE REPAIRS. REMOVE SECTIONS OF CORRODED REINFORCEMENT EXHIBITING A REDUCTION IN BAR DIAMETER GREATER THAN 1/8" ±. REPLACE REMOVED SECTION WITH NEW BAR. USE BARS AND ANCHORS FROM THE BILL OF BARS SHOWN ON THIS SHEET. BARS MAY BE BENT OR CUT IN THE FIELD TO FIT IF NECESSARY.

REINFORCING BARS ARE TO HAVE 2" MIN. CLEAR COVER UNLESS OTHERWISE SHOWN. REMOVAL OF SOUND CONCRETE MAY BE REQUIRED TO FACILITATE INSTALLATION OF SUPPLEMENTAL REINFORCEMENT.

SUPPLEMENTAL BAR REINFORCEMENT IS PAID FOR UNDER BID ITEM "BAR STEEL REINFORCEMENT HS COATED STRUCTURES." ADHESIVE ANCHORS ARE PAID FOR UNDER THE BID ITEM "ADHESIVE ANCHORS NO. 4 BAR."

ANY EXCAVATION NECESSARY TO COMPLETE THE CONCRETE SURFACE REPAIRS IS TO BE CONSIDERED INCIDENTAL TO THE BID ITEM "CONCRETE SURFACE REPAIR."

**DESIGN DATA**

**MATERIAL PROPERTIES:**  
CONCRETE:  
CONCRETE SURFACE REPAIR  $f'_c = 3,500$  PSI  
BAR STEEL REINFORCEMENT  
GRADE 60  $f_y = 60,000$  PSI

**TOTAL ESTIMATED QUANTITIES**

BID ITEM NUMBER	BID ITEMS	UNIT	TOTALS
502.4204	ADHESIVE ANCHORS NO. 4 BAR	EACH	50
505.0600	BAR STEEL REINFORCEMENT HS COATED STRUCTURES	LB	490
509.1500	CONCRETE SURFACE REPAIR	SF	950
	NON-BID ITEMS		
	PREFORMED FILLER	1/2", 1"	

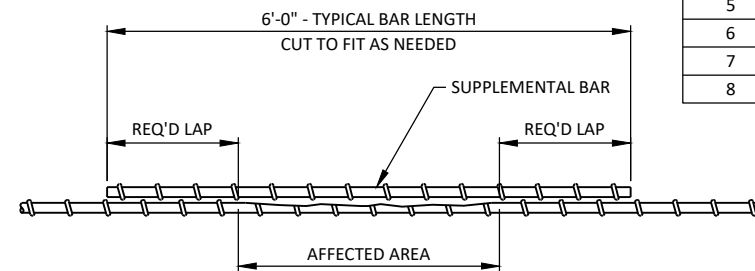
ALL ITEMS ARE CATEGORY 0040

**BILL OF BARS**

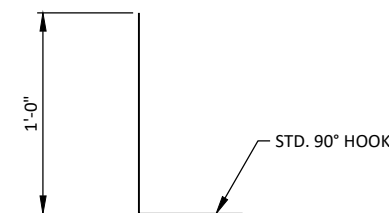
THE FIRST OR FIRST TWO DIGITS OF THE BAR MARK SIGNIFIES THE BAR SIZE.  
ALL BAR STEEL REINFORCEMENT IS EPOXY COATED.

BAR MARK	NO. REQ'D.	LENGTH	BENT	LOCATION
C501	15	4'-0"		CONCRETE SURFACE REPAIR - SUPPLEMENTAL BAR
C602	15	4'-0"		CONCRETE SURFACE REPAIR - SUPPLEMENTAL BAR
C703	10	6'-0"		CONCRETE SURFACE REPAIR - SUPPLEMENTAL BAR
C804	8	7'-6"		CONCRETE SURFACE REPAIR - SUPPLEMENTAL BAR
C405	50	1'-7"	X	REPAIR AT UTILITY PENETRATION - ADHESIVE ANCHOR NO. 4 BAR

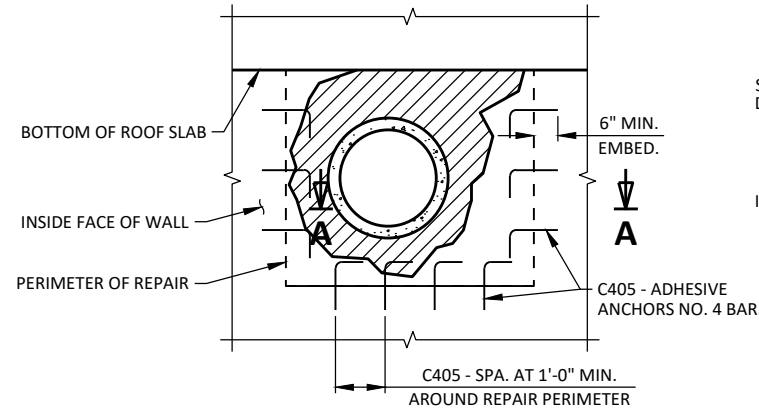
TOTAL WEIGHT = 490 LBS.



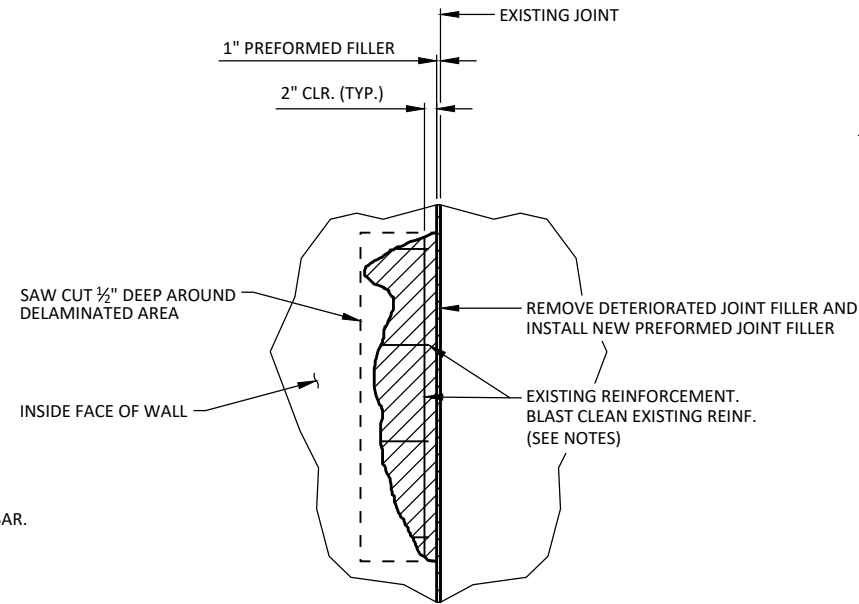
**SUPPLEMENTAL REINFORCEMENT DETAIL**



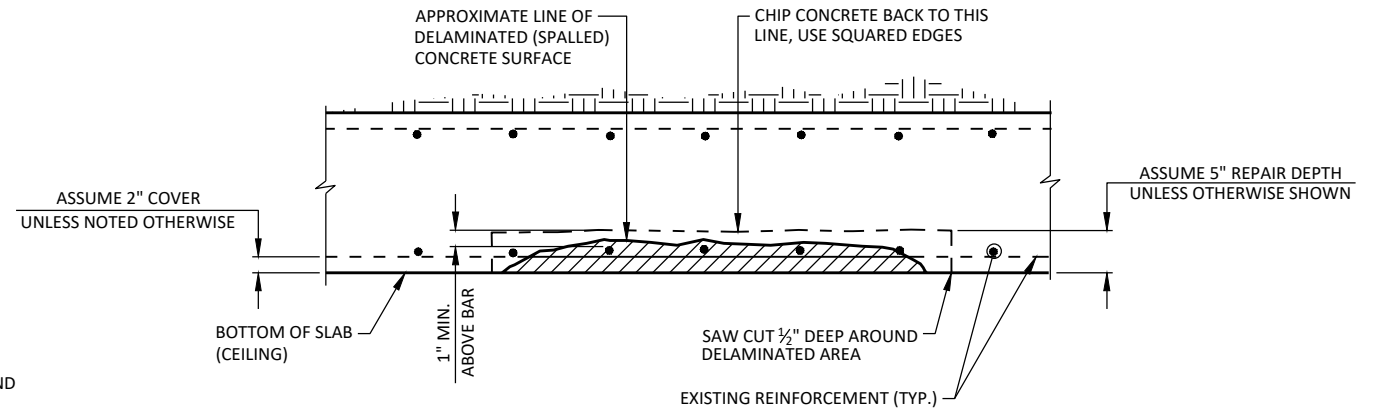
**C405**



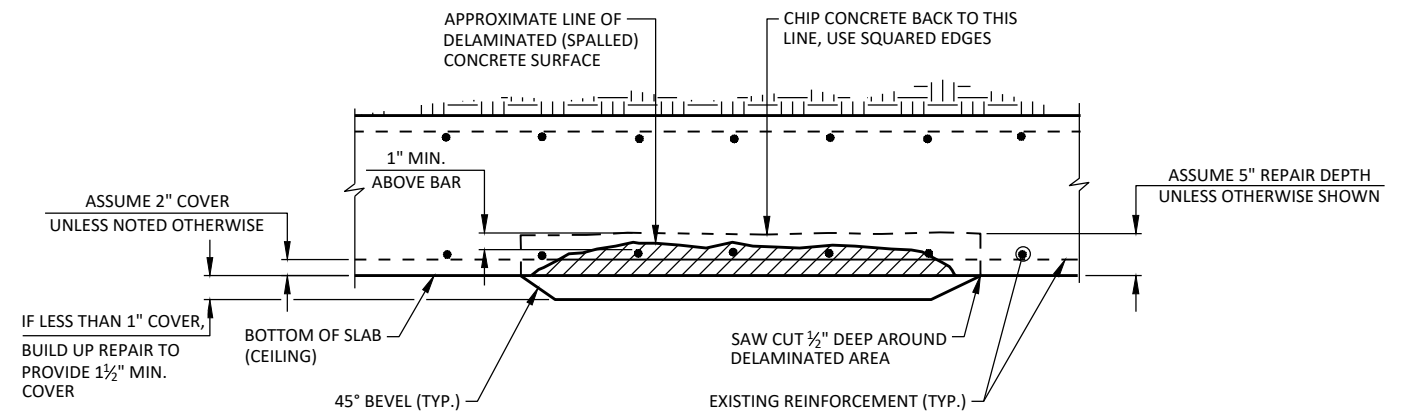
**REPAIR TO DELAMINATION AT UTILITY PENETRATION**



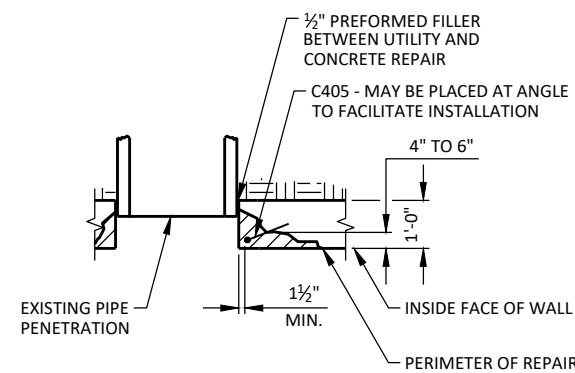
**REPAIR TO DELAMINATION AT WALL JOINT**



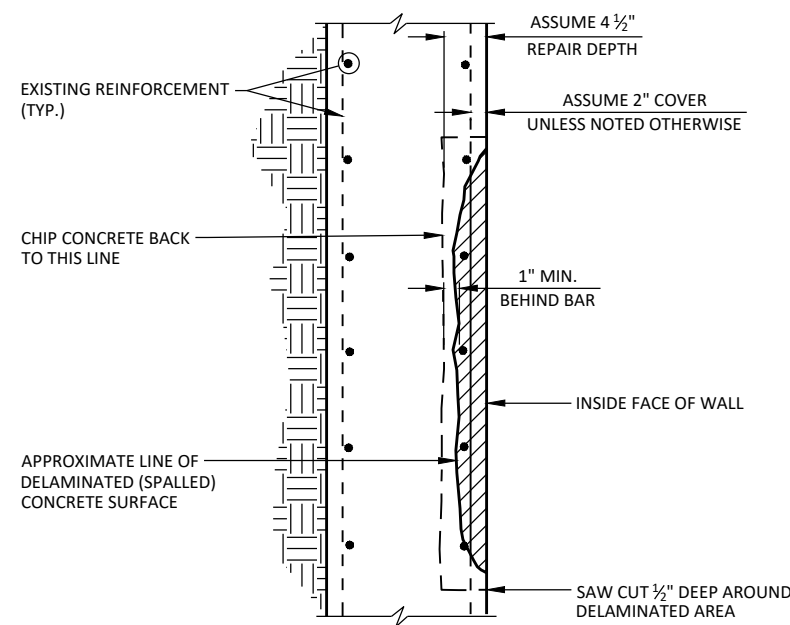
**REPAIR TYPE 1 TO DELAMINATION AT BOTTOM SURFACE OF STRUCTURAL SLAB**



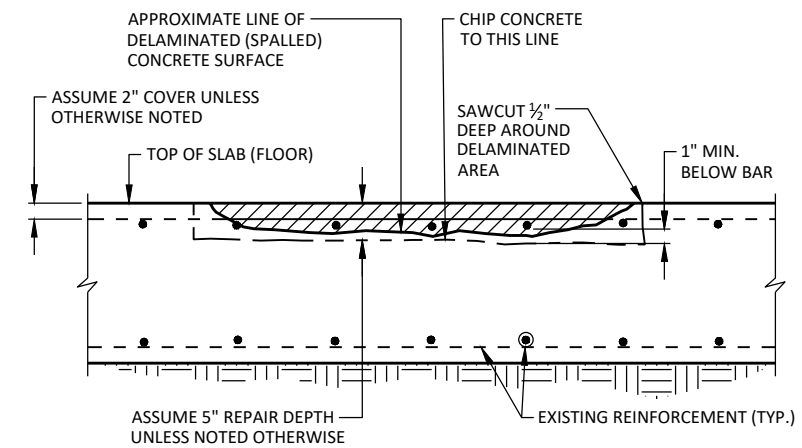
**REPAIR TYPE 2 TO DELAMINATION AT BOTTOM SURFACE OF STRUCTURAL SLAB**



**SECTION A-A**



**REPAIR TO DELAMINATION AT WALL**



**REPAIR TO DELAMINATION AT TOP SURFACE OF STRUCTURAL SLAB**