



LATITUDE: N 41° 03' 43" LONGITUDE: W 81° 30' 17"



PORTION TO BE IMPROVED.....	_____
INTERSTATE HIGHWAY.....	_____
FEDERAL ROUTES.....	_____
STATE ROUTES.....	_____
COUNTY & TOWNSHIP ROADS.....	_____
OTHER ROADS.....	_____

DESIGN DESIGNATION

MAINTENANCE OF TRAFFIC PLANS:
SEE BU-2A, BU-2B & BU-7
ROADWAY PLANS:
SEE BU-28B AND BU-29

DESIGN EXCEPTIONS

N/A

UNDERGROUND UTILITIES Contact Two Working Days Before You Dig	
 OHIO811.org Before You Dig	
OHIO811, 8-1-1, or 1-800-362-2764 (Non-members must be called directly)	

PLAN PREPARED BY:



ENGINEERS SEAL:



SIGNED: Kelly D. [Signature]
DATE: 10-25-2021

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SUM - 76 - 8.24
SUM - 77 - 9.74
SUM - 8 - 0.00

SUMMIT COUNTY
CITY OF AKRON

INDEX OF SHEETS:

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RECORD DRAWING PLANS

BU-18 - SR-8 TO WB-76 (LANE S) RETAINING WALL "A"

The undersigned hereby confirms that, to the best of their knowledge, all known field modifications made after the Released for Construction plans were sealed by the Designer are included in these drawings.

RSS JV

Signed: [Signature] Assistant Project Manager Date: 7/8/2026

The undersigned hereby confirms that, to the best of their knowledge, all presented field changes have been included in the Record Drawings and the Designer concurs that the changes meet the design intent of the Contract.

Parsons Transportation Group, Inc.

Signed:  *Fernando Rodriguez*
Design Project Manager Date: *July 12, 2026*

[illegible]

PROJECT DESCRIPTION

THE AKRON CENTRAL INTERCHANGE PROJECT (PID 102329) INCLUDES RECONSTRUCTION OF IR-76 EB/WB PAVEMENT FROM SLM 11.05 (IR-76) TO SLM (IR-76) FOR APPROX. 1.16 MILES OF MAINLINE WORK. THIS PROJECT ALSO INCLUDES REPLACEMENT OF TWO FREEWAY STRUCTURES (RAMP N AND RAMP Q) ON NEW ALIGNMENTS, WIDENING OF TWO EXISTING BRIDGES (IR-76 EB OVER BROWN STREET AND IR-76 WB OVER INMAN STREET), CONSTRUCTION OF A NEW PEDESTRIAN/MULTI-USE OVERPASS SPANNING SR-8, AND CONSTRUCTION OF NOISE BARRIERS AT THE PERIMETER OF THE INTERCHANGE. PORTIONS OF SR-8, LANE O AND LANE S ARE TO BE RESURFACED. THE EXISTING IR-76 WB TO INMAN STREET AND IR-77 SB TO LOVERS LANE WILL BE REMOVED PERMANENTLY, AS WELL AS THE EXISTING LAFOLLETTE STREET BRIDGE OVER SR-8 (SUM-77-1184).

BUILDABLE UNIT 18 DESCRIPTION

THIS BUILDABLE UNIT INCLUDES THE INSTALLATION OF
A SOLDIER PILE RETAINING WALL (WALL A) ALONG
RAMP S.

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.



BU-18

RETAINING WALL

WALL A ALONG RAMP S

RFC PLANS
OCTOBER 25, 2021

ISSUE RECORD			DESCRIPTION
NO.	DATE		
1	12/07/21		DELETED QA/QC REQUIREMENT

STANDARD DRAWINGS:

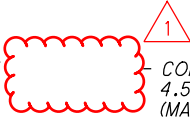
REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

NONE

DESIGN SPECIFICATIONS:

THIS STRUCTURE CONFORMS TO THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 9TH EDITION, 2020, AND THE ODOT BRIDGE DESIGN MANUAL, 2020, EXCEPT AS NOTED ELSEWHERE IN THE PLANS.

DESIGN DATA:

CONCRETE CLASS QC5  COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFTS) (MAXIMUM AGGREGATE SIZE = 1" OR 3/8" NOMINAL)

CONCRETE CLASS QC MISC. - COMPRESSIVE STRENGTH 4.0 KSI (PRECAST LAGGING PANELS & LEVELING PAD)

STRUCTURAL STEEL - MINIMUM YIELD STRENGTH 50 KSI

EPOXY COATED REINFORCING STEEL - MINIMUM YIELD STRENGTH 60 KSI

LATERALLY LOADED DRILLED SHAFTS:

THE MAXIMUM FACTORED LATERAL LOAD AND BENDING MOMENT TO BE SUPPORTED BY EACH DRILLED SHAFT ARE 77.18 KIPS, AND 1578.26 KIP-FEET, RESPECTIVELY. THESE LOADS PRODUCE A MAXIMUM FACTORED BENDING MOMENT OF 1095.33 KIP-FEET, AND A MAXIMUM FACTORED SHEAR OF 286.06 KIPS, WITHIN THE DRILLED SHAFT.

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL PILES INTO DRILLED HOLES. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572, GRADE 50. DO NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES.

ITEM 524 - DRILLED SHAFTS INTO BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE AND LAGGING WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFT. FURNISH AND INSTALL THE DRILLED SHAFTS IN ACCORDANCE WITH C&MS 524 EXCEPT AS MODIFIED AND SUPPLEMENTED BELOW.

EXCAVATE THE HOLE FOR THE DRILLED SHAFT WITHIN 3 INCHES OF THE PLAN LOCATION. PLACE THE SOLDIER PILE WITHIN THE HOLE SO IT IS VERTICAL AND NOT INCLINED MORE THAN 1 INCH BETWEEN TOP TO BOTTOM. PLACE THE SOLDIER PILE SO THAT THE FLANGES ARE PARALLEL TO THE CENTERLINE OF THE ROW OF DRILLED SHAFTS. DO NOT ALLOW THE ORIENTATION OF THE FLANGES TO VARY BY MORE THAN 10 DEGREES. SUPPORT THE SOLDIER PILE SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

USE CLASS QC 5 CONCRETE ACCORDING TO C&MS 511. PLACE CONCRETE TO THE ELEVATION FOR THE TOP OF THE DRILLED SHAFT. THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDED THE DEPTH OF WATER IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO MEET THE ABOVE TOLERANCES.

PLACE LAGGING SO THAT THE SOLDIER PILE FLANGE OVERLAPS THE END OF THE LAGGING BY AT LEAST 3 INCHES AT BOTH ENDS OF THE LAGGING. WAIT AT LEAST 12 HOURS AFTER PLACING CONCRETE BEFORE PLACING LAGGING.

PROTECTION OF UNATTENDED OPEN SHAFTS: CARE SHALL BE EXERCISED AS TO COVER UNATTENDED OPEN SHAFTS. TEMPORARY COVERS SHALL BE OF ADEQUATE STRENGTH TO PREVENT A PERSON OR ANIMAL FROM FALLING IN.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS AND PLACE LAGGING.

ITEM 610 - SPECIAL - RETAINING WALL. MISC.: PRECAST REINFORCED CONCRETE LAGGING PANEL

THIS WORK CONSISTS OF FURNISHING AND PLACING PRECAST REINFORCED CONCRETE PANELS BETWEEN THE SOLDIER PILES TO FUNCTION AS LAGGING FOR THE RETAINING WALL. PROVIDE PRECAST CONCRETE LAGGING FROM A PRECAST CONCRETE MANUFACTURER CERTIFIED UNDER SUPPLEMENT 1073. PROVIDE CLASS QC 1 CONCRETE ACCORDING TO CMS 499. PROVIDE EPOXY COATED REINFORCING STEEL ACCORDING TO CMS 709.00. IN LIEU OF EPOXY COATING, A CORROSION INHIBITING CONCRETE ADMIXTURE MAY BE USED AT THE SPECIFIED DOSAGE RATE. A QUALIFIED PRODUCT LIST OF CORROSION INHIBITING ADMIXTURES IS ON FILE AT THE LABORATORY. MANUFACTURERS SHOULD RECOGNIZE THAT THE CORROSION INHIBITOR MAY AFFECT THE STRENGTH, ENTRAINED AIR CONTENT, WORKABILITY, ETC. OF THEIR CONCRETE MIXES. THE MANUFACTURER'S CHOICE TO USE ONE OF THESE CORROSION INHIBITORS DOES NOT ALLEVIATE MEETING ALL DESIGN REQUIREMENTS. DO NOT ALLOW THE DIMENSIONS OF THE REINFORCING STEEL TO VARY BY MORE THAN 1/4".

REJECT PANELS HAVING ANY OF THE FOLLOWING:

- DEFECTS THAT INDICATE HONEYCOMBED OR OPEN TEXTURE CONCRETE
- DEFECTS IN THE PHYSICAL CHARACTERISTICS OF THE CONCRETE
- CONCRETE CHIPS OR SPALLS THAT EXCEED 4 INCHES WIDE AND 2 INCHES DEEP (**REPAIR ALL CHIPS AND SPALLS OF ANY DIMENSION)
- SIGNS OF AGGREGATE SEGREGATION
- CRACKS WIDER THAN 0.01 INCHES, PENETRATING MORE THAN AN INCH OR LONGER THAN 12 INCHES. (REPAIR ALL CRACKS OF ANY DIMENSION)
- FACE PANELS THAT DO NOT MEET SPECIFIED TOLERANCES
- EXPOSED REINFORCING STEEL
- INSUFFICIENT CONCRETE COMPRESSIVE STRENGTH

NOTE: ** THE MANUFACTURER SHALL SUBMIT REPAIR METHODS TO THE ENGINEER

PERMANENTLY MARK EACH PANEL TO INDICATE THE FACE TO BE PLACED AGAINST THE SOIL. PLACE THE PANEL BETWEEN THE FLANGES OF THE SOLDIER PILES AND BEARING AGAINST THE FLANGES ON THE EXPOSED SIDE OF THE WALL.

DO NOT SHIP PANELS UNTIL CONCRETE HAS ATTAINED A 3000 PSI COMPRESSIVE STRENGTH.

SUBMIT SHIPPING DOCUMENTATION TO THE ENGINEER AS THE FACING PANELS ARE DELIVERED TO THE PROJECT. REQUIRED DOCUMENTATION SHALL INCLUDE THE PRECASTER'S RECORD OF FINAL INSPECTION OF ALL PRECAST COMPONENTS, THE MEASUREMENTS OF TOLERANCES, STRENGTH, DIMENSIONS, AND THE TE-24 SHIPPING DOCUMENT.

PANELS DAMAGED BY IMPROPER HANDLING, STORING, TRANSPORTATION OR ERECTION SHALL BE REPAIRED OR REPLACED AT THE DISCRETION OF THE ENGINEER

WHEN INSTALLING THE PRECAST CONCRETE LAGGING PANELS, PLACE WOOD SPACERS AND WEDGES NEAR THE TOP AND BOTTOM ON EACH SIDE TO HOLD THE LAGGING PANELS AGAINST THE FRONT INSIDE FLANGE OF THE STEEL PILES.

BOTTOM ROWS OF PANELS SHALL BY UNIFORMLY SUPPORTED ON LEVEL GROUND. GRANULAR MATERIAL MAY BE USED TO LEVEL SURFACE.

SEE SHEET 3/3 FOR DETAILS AND DIMENSIONS OF PRECAST LAGGING PANELS.

ABBREVIATIONS:

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED THROUGHOUT THESE PLANS TO INDICATE THE DESIGNATIONS CONTAINED IN THE LEGEND BELOW:

BOT. - BOTTOM
BRGS. - BEARINGS
CL - CENTERLINE
CB - CATCH BASIN
C/C - CENTER TO CENTER
CIP - CAST-IN-PLACE
C.J. - CONSTRUCTION JOINT
CLR. - CLEARANCE
CMS - CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONST. - CONSTRUCTION
CU YD - CUBIC YARD
DIA. - DIAMETER
E.F. - EACH FACE
ELEV., EL. - ELEVATION
EQ. - EQUAL
EX. - EXISTING
EXP. - EXPANSION
F.F. - FAR FACE
F.S. - FIELD SPLICE
FT/FT - FOOT PER FOOT
FTG. - FOOTING
LT. - LEFT
MAX. - MAXIMUM
MGS - MIDWEST GUARDRAIL SYSTEM
MIN. - MINIMUM
MISC. - MISCELLANEOUS
MOT - MAINTENANCE OF TRAFFIC
N.F. - NEAR FACE
NPCPP - NON-PERFORATED CORRUGATED PLASTIC PIPE
NO./# - NUMBER
O/O - OUT TO OUT
OVHD - OVERHEAD
PCPP - PERFORATED CORRUGATED PLASTIC PIPE
PEJF - PREFORMED EXPANSION JOINT FILLER
PG - PROFILE GRADE
PGL - PROFILE GRADE LINE
PROP. - PROPOSED
PT - POINT OF TANGENCY
PVC - POINT OF VERTICAL CURVATURE
PVI - POINT OF VERTICAL INTERSECTION
PVT - POINT OF VERTICAL TANGENCY
R. - RADIUS
RCP - ROCK CHANNEL PROTECTION
RT. - RIGHT
R/W - RIGHT OF WAY
SAN. - SANITARY
SER. - SERIES
SHT. - SHEET
S.O. - SERIES OF
SPA. - SPACES OR SPACING
SR - STATE ROUTE
STA. - STATION
STD. - STANDARD
TBR - TO BE REMOVED
T/C - TOP OF COPING
TEMP. - TEMPORARY
T.O.S. - TOE OF SLOPE
T&B- TOP AND BOTTOM
T/PARAPET - TOE OF PARAPET
T/T - TOE TO TOE
TYP. - TYPICAL
U.N.O. - UNLESS NOTED OTHERWISE
VAR. - VARIES
VC - VERTICAL CURVE
VERT. - VERTICAL
W/ - WITH
W/O - WITHOUT

1 / 3

2 / 4

SUM-76/77/8-8.24/9.74/0.00

PID No. 102329

RETAINING WALL GENERAL NOTES

WALL A

SOLDIER PILE RETAINING WALL ALONG RAMP S

DESIGN AGENCY

PRIME

STATE HIGHWAY FILES

Columbus Ohio 43231

DATE

9/28/21

REVIEWED

SAN

STRUCTURE FILE NUMBER

DRAWN

KDC

REVIS

DESIGNED

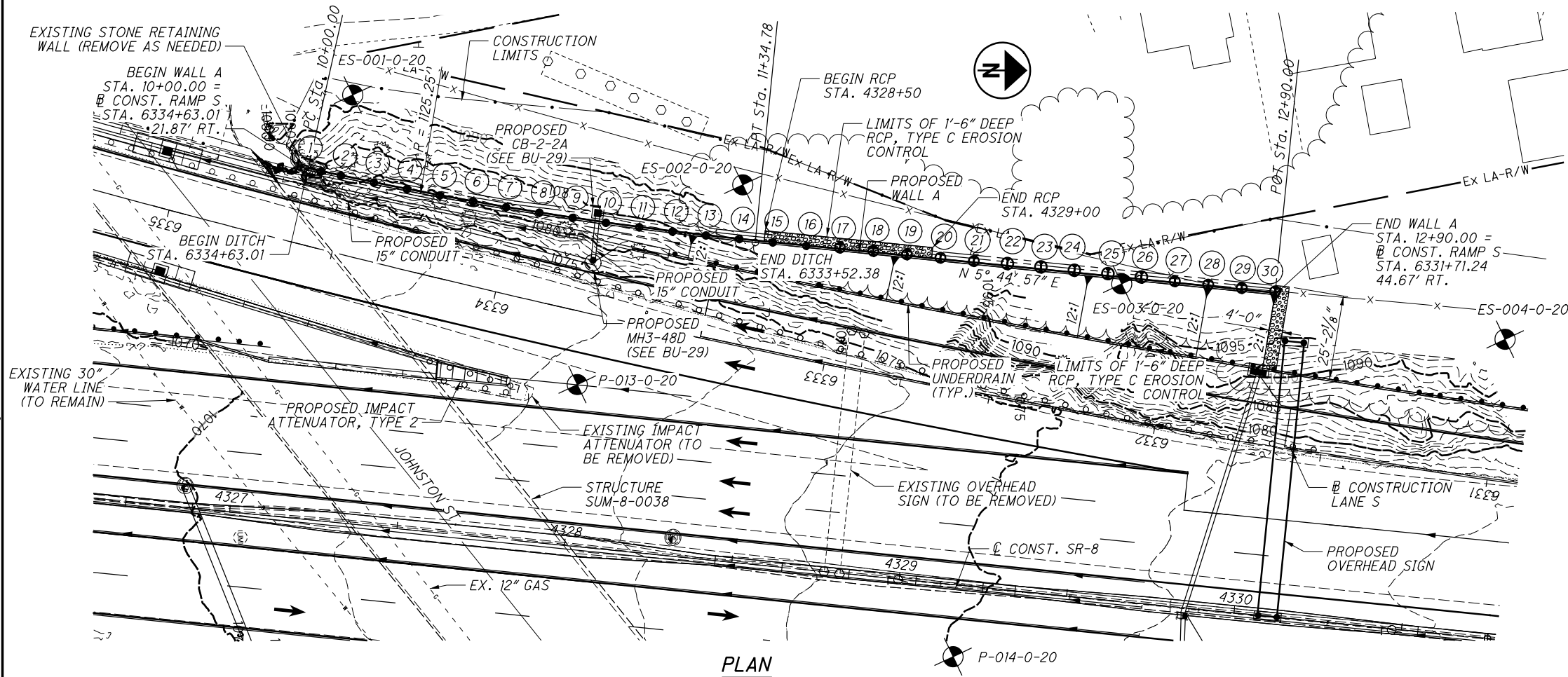
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CHECKED

JAT

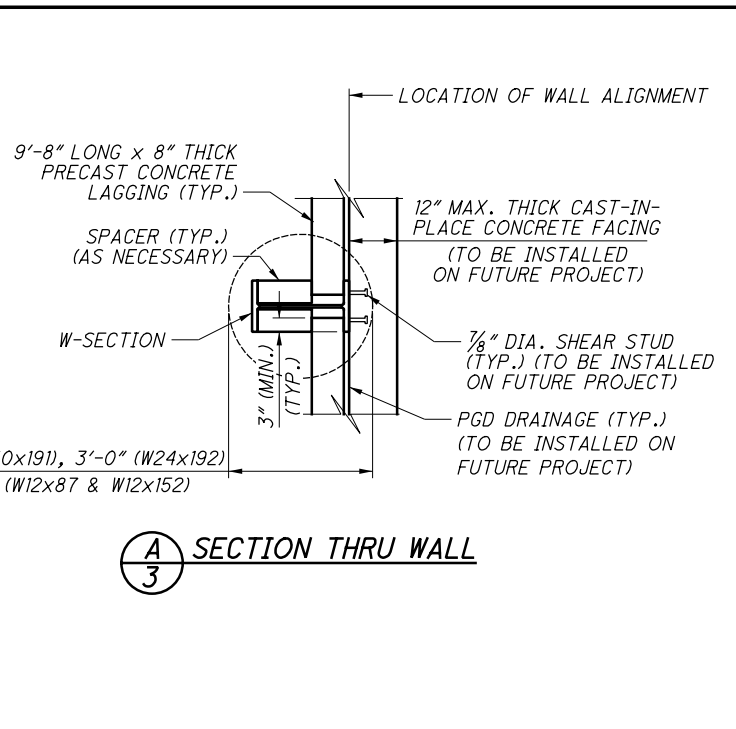
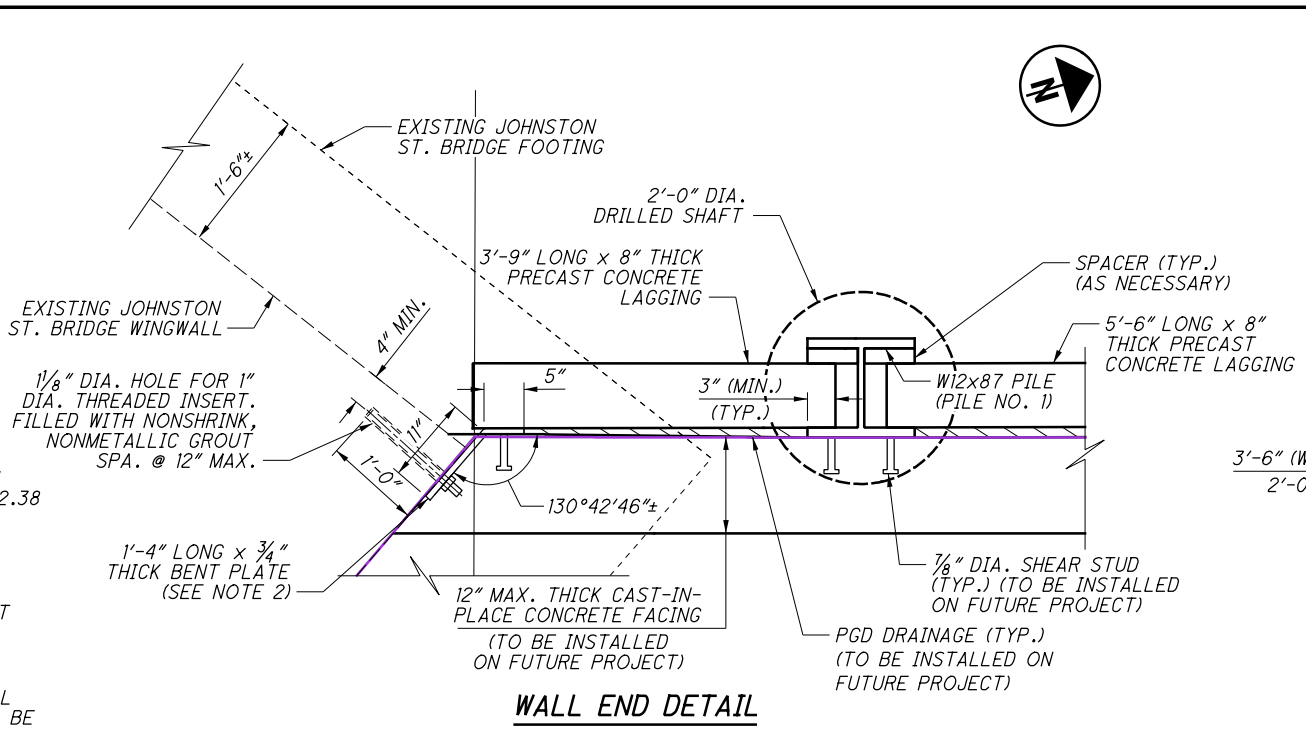
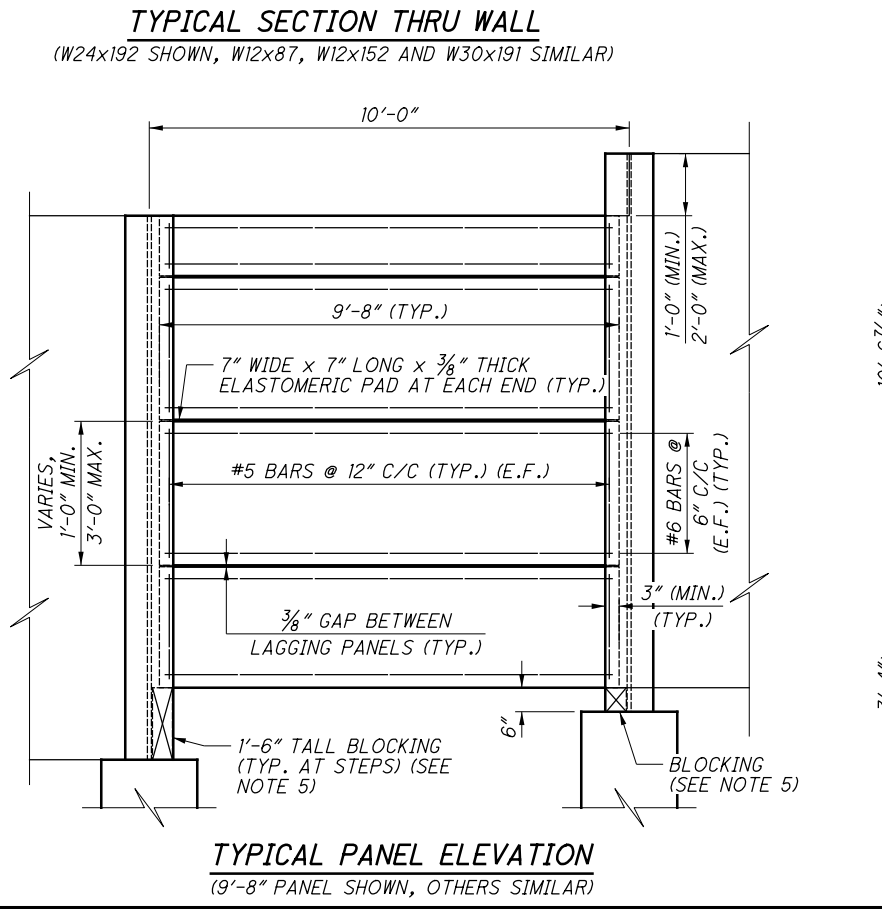
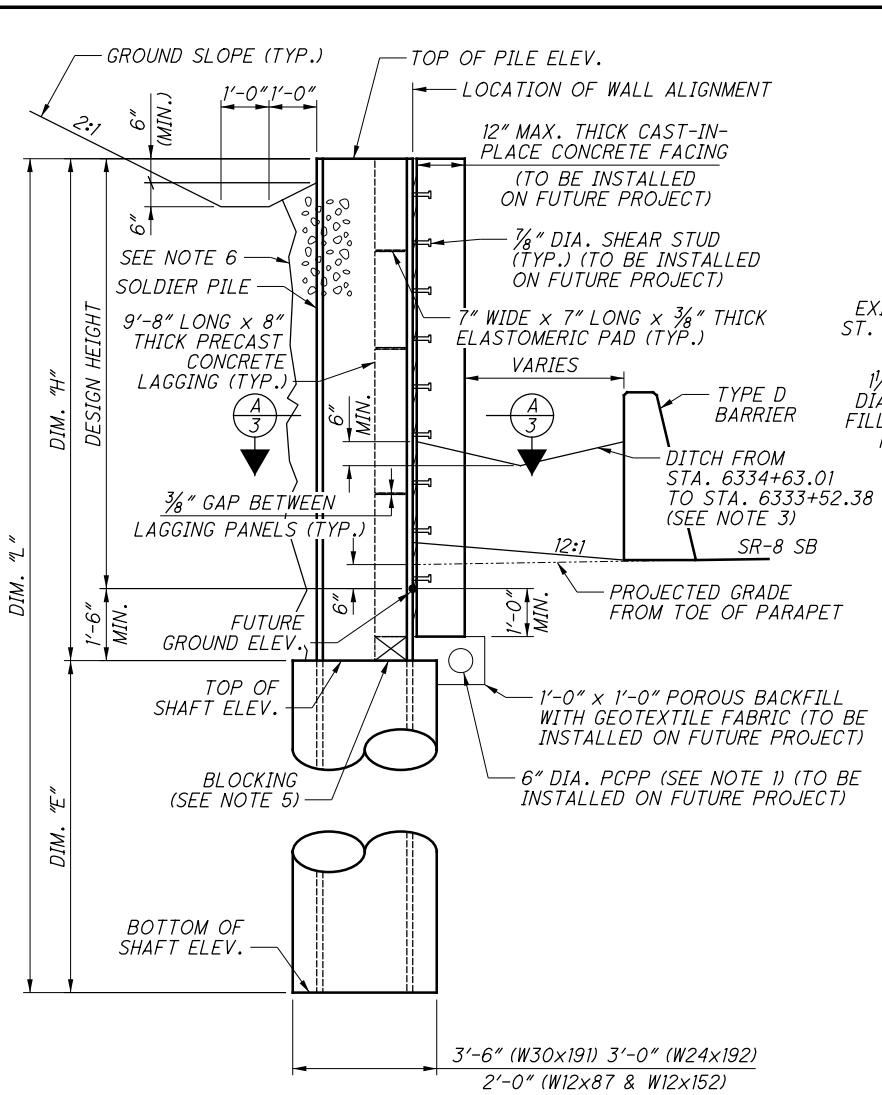
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ISSUE RECORD:			DESCRIPTION
NO.	DATE		Revised Shaft Table
1	11/8/21		

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PILE INFORMATION							
PILE NO.	TOP OF PILE ELEV.	FUTURE GROUND ELEV.	TOP OF SHAFT ELEV.	BOTTOM OF SHAFT ELEV.	DIM. "H" (FT.)	DIM. "E" (FT.)	DIM. "L" (FT.)
1	1079.91	1068.91	1067.41	1057.41	12.50	10.00	22.50
2	1079.91	1069.01	1067.41	1057.41	12.50	10.00	22.50
3	1079.91	1069.12	1067.41	1057.41	12.50	10.00	22.50
4	1079.91	1069.24	1067.41	1057.41	12.50	10.00	22.50
5	1079.91	1069.35	1067.41	1057.41	12.50	10.00	22.50
6	1079.91	1069.40	1067.41	1057.41	12.50	10.00	22.50
7	1079.91	1069.65	1067.41	1057.41	12.50	10.00	22.50
8	1079.91	1069.87	1067.41	1057.41	12.50	10.00	22.50
9	1079.91	1070.04	1068.41	1058.41	11.50	10.00	21.50
10	1079.91	1070.22	1068.41	1058.41	11.50	10.00	21.50
11	1080.91	1070.39	1068.41	1058.41	12.50	10.00	22.50
12	1081.91	1070.57	1068.41	1058.41	13.50	10.00	23.50
13	1081.91	1070.76	1068.41	1058.41	13.50	10.00	23.50
14	1082.91	1070.92	1068.41	1058.41	14.50	10.00	24.50
15	1084.91	1071.08	1069.41	1059.41	15.50	10.00	25.50
16	1085.91	1071.24	1069.41	1059.41	16.50	10.00	26.50
17	1087.91	1071.39	1069.41	1055.41	18.50	14.00	32.50
18	1088.91	1071.54	1069.41	1055.41	19.50	14.00	33.50
19	1089.91	1071.70	1070.41	1056.41	19.50	14.00	33.50
20	1090.91	1071.86	1070.41	1056.41	20.50	14.00	34.50
21	1091.91	1072.00	1070.41	1056.41	21.50	14.00	35.50
22	1091.91	1072.14	1070.41	1056.41	21.50	14.00	35.50
23	1092.91	1072.25	1070.41	1056.41	22.50	14.00	36.50
24	1092.91	1072.35	1070.41	1056.41	22.50	14.00	36.50
25	1092.91	1072.45	1070.41	1056.41	22.50	14.00	36.50
26	1092.91	1072.56	1070.41	1056.41	22.50	14.00	36.50
27	1091.91	1072.67	1071.41	1057.41	20.50	14.00	34.50
28	1090.91	1072.78	1071.41	1057.41	19.50	14.00	33.50
29	1089.91	1072.89	1071.41	1057.41	18.50	14.00	32.50
30	1088.91	1073.37	1071.41	1057.41	17.50	14.00	31.50

- NOTES:**
- PLACE PERFORATED, CORRUGATED, POLYETHYLENE PIPE TO BE INSTALLED ON FUTURE PROJECT INSIDE POROUS BACKFILL AND SHALL SLOPE A MINIMUM OF 1.00% TOWARDS THE OUTLET TO THE UNDERDRAIN.
 - STEEL PLATE SHALL EXTEND THE HEIGHT OF THE PRECAST LAGGIN WALL AT THE EXISTING ABUTMENT WINGWALL.
 - FOR LIMITS OF DITCH, SEE SHEET 2/3.
 - FOR CROSS SECTIONS, SEE BU-28B AND BU-29 PLANS.
 - PLACE TIMBER BLOCKING AS NECESSARY TO ACHIEVE BOTTOM OF PANEL ELEVATIONS. GRANULAR MATERIAL MAY BE USED IN LIEU OF TIMBER BLOCK TO LEVEL SURFACE.
 - BACKFILL EXCAVATED AREA BETWEEN IN-SITU BEDROCK AND PRECAST PANEL LAGGING WITH #8 OR #9 GRAVEL.