

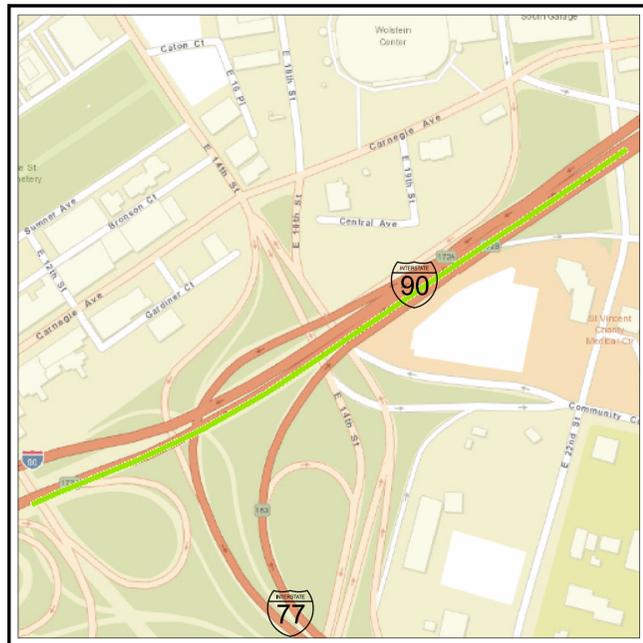
STATE OF OHIO DEPARTMENT OF TRANSPORTATION

CUY-90-16.28

INNERBELT CONTRACT GROUP 3A

CITY OF CLEVELAND

CUYAHOGA COUNTY



LOCATION MAP

LATITUDE: 41° 29' 40" LONGITUDE: -81° 40' 54"



PORTION TO BE IMPROVED	-----	=====
INTERSTATE HIGHWAY	-----	=====
FEDERAL ROUTES	-----	=====
STATE ROUTES	-----	=====
COUNTY & TOWNSHIP ROADS	-----	=====
OTHER ROADS	-----	=====

DESIGN DESIGNATION

SEE SHEET 4

DESIGN EXCEPTIONS

SEE SHEET 4

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES
Contact Two Working Days
Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non members must be called directly)

PLAN PREPARED BY:

**Michael Baker
INTERNATIONAL**



INDEX OF SHEETS:

SEE SHEET 2

STANDARD CONSTRUCTION DRAWINGS										CITY OF CLEVELAND STD. DRAWINGS	SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS		
BP-1.1	7/28/00	MGS-1.1	1/17/25	HL-10.11	7/21/23	MT-95.41	7/21/23	TC-21.50	1/17/25	A-503	7/8/08	800-2023	7/18/25	AIR KNIFE EXCAVATION
BP-2.1	1/21/22	MGS-2.1	1/17/25	HL-10.12	7/21/23	MT-95.50	7/21/17	TC-22.20	1/17/14	A-605	7/8/08	805	7/16/10	6/16/22
BP-2.2	1/15/21	MGS-3.1	1/19/18	HL-10.13	1/20/23	MT-95.60	4/19/19	TC-41.10	7/19/13	A-695	7/8/08	807	1/21/22	
BP-2.3	7/18/14	MGS-3.2	1/18/13	HL-10.31	7/15/22	MT-95.61	4/19/19	TC-41.20	10/18/13	MB-1C	7/8/08	809	7/21/23	CITY OF CLEVELAND CURB RAMPS
BP-2.4	7/19/13	MGS-4.2	1/17/25	HL-20.11	7/21/23	MT-95.70	7/21/23	TC-41.30	4/21/23	CONC-1	7/8/08	813	7/21/23	3/15/07
BP-2.5	7/19/24	MGS-4.3	1/18/13	HL-20.13	1/17/25	MT-95.71	7/21/23	TC-41.40	10/18/13	ASPH-1	7/8/08	821	4/20/12	
BP-3.1	1/19/24	MGS-5.2	7/15/16	HL-20.14	4/17/20	MT-95.72	7/19/24	TC-41.41	7/19/19	BP-1	4/14/08	829	1/20/17	CLEVELAND PLANTING
BP-3.2	1/18/19	MGS-6.1	1/19/18	HL-20.21	1/17/25	MT-95.73	7/19/24	TC-41.50	10/18/13	PR-1	4/14/08	831	4/21/23	8/22/24
BP-4.1	7/19/13			HL-30.11	7/21/23	MT-98.10	1/17/20	TC-42.10	10/18/13	CR-1	4/14/08	832	7/21/23	
BP-5.1	1/17/25	MH-1	7/15/22	HL-30.21	4/17/20	MT-98.11	1/17/20	TC-42.20	10/18/13	CD-1	4/14/08	836	1/19/18	CROSSHOLE SONIC LOGGING (CSL)
BP-6.1	7/19/13	MH-3	7/19/24	HL-30.22	1/17/25	MT-98.20	4/19/19	TC-51.11	1/15/16	146-ME	7/8/08	837	1/20/23	6/11/19
BP-9.1	1/18/19			HL-30.31	1/17/25	MT-98.21	7/21/23	TC-51.12	1/15/16	MH-1	7/8/08	839	7/16/21	
CB-1	7/19/24	RM-1.1	1/20/23	HL-30.41	1/17/25	MT-98.22	1/17/20	TC-52.10	10/18/13	CB-1	7/8/08	840	7/21/23	5200: DEMONSTRATION SHAFT AND BI-DIRECTIONAL STATIC LOAD TESTING
CB-2-2A, 2B, 2C	7/19/24	RM-3.1	7/20/18	HL-40.10	7/19/24	MT-98.28	1/17/20	TC-52.20	1/15/21			840	4/15/22	BRIDGE CUY-90-1696
CB-2-3, 2-4	7/19/24	RM-4.1	1/17/20	HL-40.20	1/17/25	MT-98.29	1/17/20	TC-61.10	4/21/23			846	4/17/15	3/25/25
CB-3	7/19/24	RM-4.3	7/15/22	HL-50.21	7/15/22	MT-98.30	7/16/21	TC-61.30	7/19/24			850	7/21/23	
CB-3A	7/19/24	RM-4.4	7/19/24	HL-60.11	7/21/17	MT-99.20	4/19/19	TC-64.10	7/21/23			855	4/20/18	
CB-6	7/19/24	RM-4.5	1/17/25	HL-60.12	7/21/23	MT-99.30	1/17/20	TC-65.10	1/17/14			863	10/21/22	
CB-8	7/19/24	RM-4.6	7/19/13	HL-60.21	7/20/18	MT-99.50	7/21/23	TC-65.11	1/17/25			866	4/21/17	5201: DEMONSTRATION SHAFT AND BI-DIRECTIONAL STATIC LOAD TESTING
DM-1.1	1/17/25	RM-5.1	7/18/14	HL-60.31	7/19/24	MT-99.60	7/19/24	TC-71.10	4/21/23			869	10/17/14	BRIDGE CUY-90-1587
DM-1.2	1/17/25	WQ-1.1	7/21/23	ITS-10.10	1/17/25	MT-100.00	1/19/24	TC-72.20	1/17/25			873	4/16/21	3/25/25
DM-2.1	1/18/13	WQ-1.2	1/15/16	ITS-10.11	1/17/25	MT-101.60	1/17/25	TC-73.20	1/17/25			878	1/21/22	
DM-4.1	7/17/20	ITS-12.10	1/17/25	ITS-12.11	1/17/25	MT-101.70	7/19/24	TC-74.10	7/21/23			894	4/16/21	
DM-4.2	7/20/12	ITS-12.10	1/17/25	ITS-13.10	7/19/24	MT-101.75	7/21/23	TC-81.22	1/17/25			895	4/18/14	
DM-4.3	1/15/16	AS-1-15	7/21/23	ITS-14.10	1/17/25	MT-101.80	1/17/20	TC-83.10	7/19/20			896	7/21/17	
DM-4.4	1/15/16	AS-2-15	7/21/23	ITS-14.11	1/17/25	MT-101.90	7/17/20	TC-83.20	7/19/24			899	1/20/23	HIGH-STRAIN DYNAMIC TESTING OF DRILLED SHAFTS
F-1.1	7/19/13	AS-2-15	1/18/19	ITS-14.11	1/17/25	MT-102.10	7/21/23	TC-84.20	1/19/24			902	7/19/19	
F-3.1	7/19/13	BR-2-15	7/19/24	ITS-14.20	1/17/25	MT-103.10	1/21/22	TC-84.21	10/18/13			903	7/20/12	
F-3.3	7/19/13	EXJ-2-81	7/15/22	ITS-14.50	1/17/25	MT-105.10	1/17/20	TC-85.10	1/19/24			909	7/21/23	LOW DENSITY CELLULAR CONCRETE FILL
I-3B, 3B1	1/17/25	EXJ-4-87	1/19/24	ITS-14.60	1/17/25	MT-110.10	7/19/13	TC-85.20	4/21/23			913	4/16/21	4/3/23
I-3C, 3C1	1/17/25	GSD-1-19	1/15/21	ITS-15.10	1/17/25	MT-120.00	7/19/24	TC-85.21	1/19/24			921	4/20/12	
I-3D	7/19/24	HW-2.1	7/15/22	ITS-18.00	7/16/21	TC-85.22	4/21/23					929	7/21/23	
LA-1.1	10/15/10	HW-2.2	7/20/18	ITS-50.10	7/15/22	TC-9.11	1/19/24					939	1/17/20	MODULAR EXPANSION JOINT
LA-1.2	1/17/25	PCB-91	7/17/20			TC-9.31	7/21/23					995	7/17/15	6/29/21
		SBR-1-20	7/19/24	MT-95.30	7/19/19	TC-12.31	4/15/22					996	7/21/23	
		SBR-2-20	7/21/23	MT-95.31	7/19/19	TC-15.116	1/19/24							TREE PROTECTION
		SICD-2-14	1/15/21	MT-95.32	4/19/19	TC-16.22	7/21/23							6/16/22
		VFP-1-90	7/21/23	MT-95.40	7/21/23	TC-21.11	7/16/21							
				MT-95.40	7/21/23	TC-21.21	1/20/23							

FEDERAL PROJECT NUMBER

E070 (586)

RAILROAD INVOLVEMENT

NONE

PROJECT DESCRIPTION

RECONSTRUCTION OF 0.73 MILES OF I.R. 90 BETWEEN EAST 9TH STREET AND PROSPECT AVENUE, REALIGNMENT AND RECONSTRUCTION OF SEVERAL RAMPS IN THE CENTRAL INTERCHANGE BETWEEN I.R. 90 AND I.R. 77, AND RECONSTRUCTION OF SEVERAL LOCAL STREETS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA: 69.0 ACRES *
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 1.0 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 70.0 ACRES

* 55.0 ACRES OF PROJECT EARTH DISTURBED AREA DRAINS TO CITY OF CLEVELAND COMBINED SEWERS. THE TOTAL POST CONSTRUCTION BMP EDA IS 14.0 ACRES.

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.

2023 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS, CHANGES LISTED IN THE PROPOSAL, AND THE SUPPLEMENTAL SPECIFICATION 800 VERSION INDICATED ON THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY EXCEPT AS NOTED ON SHEETS 153 - 184 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

John Picuri, P.E., P.S.
District 12 Deputy Director

Pamela Boratyn
Director, Department of Transportation

SIGNATURES AND SEALS

SEE SHEET 3

CUY-90-16.28 (CCG3A)

MODEL: Sheet PAPER/SIZE: 34x22 (in.) DATE: 10/22/2025 TIME: 3:23:50 PM USER: Victor.Nash
pvc:\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland_OH101_P\Projects\ODOT\District12\282382\400-Engineering\Roadway\Sheets\82382_GT0001.dgn

TITLE SHEET

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	KJM
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	TOTAL
1	2696

DRAINAGE (CONT.)

ITEM SPECIAL - MISCELLANEOUS METAL
EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

ITEM SPECIAL - MISCELLANEOUS METAL 10,000 LB

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS LABELED ON THE MAINTENANCE OF TRAFFIC PLAN ARE ITEMIZED ON THE MOT PLANS AND CARRIED TO THE GENERAL SUMMARY.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

MANUFACTURED WATER QUALITY STRUCTURE

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4.

EXTENDED DETENTION BASIN

THIS PLAN UTILIZES EXTENDED DETENTION BASIN(S) FOR FLOW RESTRICTION. DETENTION BASINS MAY BE USED AS SEDIMENT CONTROL DEVICES DURING CONSTRUCTION. FOLLOWING STABILIZATION OF THE TRIBUTARY AREA, FINAL GRADING OF THE DETENTION BASIN MUST MATCH THE PLANS. THE DETENTION BASIN OUTLET STRUCTURE FOR CONSTRUCTION SEDIMENT CONTROL MUST BE REMOVED AND THE OUTLET STRUCTURE MUST BE MADE TO MATCH THE DESIGN SHOWN IN THE PLANS.

SURFACE DRAINAGE CONTINGENCY

EVERY EFFORT HAS BEEN MADE TO PROVIDE FOR ADEQUATE CURB INLETS AND PIPE TO PROPERLY ACCOUNT FOR THE SURFACE DRAINAGE. IN THE EVENT THAT ISOLATED LOW AREAS DEVELOP DURING CONSTRUCTION OF THE PROJECT, THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER:

- ITEM 611 - 12" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12 2,000 FT**
- ITEM 611 - 15" CONDUIT, TYPE B, AS PER PLAN 2, 706.08 & 706.12 200 FT**
- ITEM 611 - CATCH BASIN, NO. 2-2B, AS PER PLAN 4 EACH**
- ITEM 611 - CATCH BASIN, NO. 3A, AS PER PLAN 4 EACH**
- ITEM 611 - MANHOLE, NO. 3, AS PER PLAN 4 EACH**

PAVEMENT

CONTRACTION AND/OR EXPANSION JOINTS

ALTHOUGH SPECIFIC LOCATIONS OF CERTAIN CONTRACTION AND EXPANSION JOINTS HAVE BEEN DETAILED ON THIS PLAN, NO WAIVER OF THE SPECIFICATIONS IS INTENDED. IN ALL CASES, THE PROVISION OF EXPANSION JOINTS AT ALL MAJOR STRUCTURES INCLUDING THE MAXIMUM SPACING BETWEEN CONTRACTION JOINTS IS IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2 AND THE SPECIFICATIONS.

CONTRACTION JOINTS IN CONCRETE PAVEMENT OR BASE WIDENING

WHERE NEW CONCRETE IS PLACED ADJACENT TO EXISTING CONCRETE, PROVIDE CONTRACTION JOINTS IN THE NEW CONCRETE TO FORM CONTINUOUS JOINTS WITH THOSE IN THE EXISTING CONCRETE.

THE MAXIMUM DISTANCE BETWEEN THE JOINTS IN THE NEW CONCRETE ARE IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING BP-2.2, IF NECESSARY, ADDITIONAL JOINTS MAY BE PROVIDED IN THE NEW CONCRETE AT APPROXIMATELY EQUAL INTERVALS BETWEEN EXISTING JOINTS THAT EXCEED THE MAXIMUM SPACING.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1. CONSTRUCT LONGITUDINAL JOINTS PER CMS 401.08(D).

MEDIAN AND/OR CURBING ON APPROACH SLABS

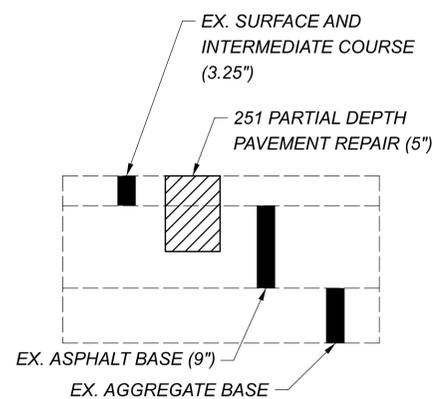
WITHIN THE LIMITS OF THE APPROACH SLAB, TRANSITION THE SHAPE OF THE MEDIAN AND/OR CURBING ON APPROACH SLABS FROM THE STANDARD SECTION ON THE APPROACHES TO THE SECTION USED ON THE BRIDGE.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442)

THE PLANS CALL FOR RESURFACING THE I.R. 90 PAVEMENT BETWEEN THE INNERBELT BRIDGES AND THE ONTARIO STREET BRIDGES AND BETWEEN THE ONTARIO STREET BRIDGES AND THE EAST 9TH STREET BRIDGES. QUANTITIES HAVE BEEN PROVIDED IN THE PAVEMENT SUBSUMMARY FOR THIS WORK.

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER TO REPAIR ANY PAVEMENT DEFICIENCIES IN THESE AREAS. SEE DETAIL BELOW FOR A TYPICAL PAVEMENT BUILDUP. THE QUANTITY IS BASED ON AN ASSUMED DEPTH OF FIVE (5) INCHES. FINAL DEPTH IS TO BE DETERMINED BY THE ENGINEER.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442) 180 CY



SEE FULL DETAIL ON SHEET 1432A

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B

THIS ITEM SHALL CONSIST OF REPLACING EXISTING PAVEMENT PER ITEM 255 AND THE NOTES BELOW AND DETAILS ON SHEET 1432A.

EXISTING CONCRETE PAVEMENT THICKNESS MAY VARY FROM THAT SHOWN ON THE TYPICAL SECTIONS BY PLUS TWO INCHES OR MINUS ONE INCH. NO ADJUSTMENT IN PAYMENT FOR THIS ITEM SHALL BE MADE PROVIDING THAT THE AVERAGE PAVEMENT THICKNESS IS WITHIN ONE INCH OF THE THICKNESS SHOWN ON THE TYPICAL SECTIONS. ADDITIONAL COMPENSATION SHALL BE MADE BY CHANGE ORDER FOR THE MATERIAL COST OF CONCRETE ONLY WHEN THE AVERAGE THICKNESS EXCEEDS THE ONE INCH MAXIMUM TOLERANCE ABOVE. THE VOLUME OF CONCRETE PAID FOR SHALL BE BASED UPON THE AMOUNT OF CONCRETE ADDITIONAL ABOVE THE ONE INCH TOLERANCE LIMIT.

THE CONTRACTOR SHALL SAW THROUGH THE REMAINING ASPHALT OVERLAY AFTER THE PAVEMENT PLANING OPERATION. THE CONTRACTOR SHALL REMOVE THE EXISTING OVERLAY AND RIGID PAVEMENT WITH CARE SO AS TO NOT DISTURB THE ADJACENT REMAINING CONCRETE PAVEMENT AND OVERLAY.

IF, AFTER REMOVAL OF THE RIGID PAVEMENT THE ENGINEER DETERMINES THAT THE SUBBASE OR SUBGRADE HAS FAILED OR IS PUMPING, THE ENGINEER WILL DIRECT THE CONTRACTOR TO EXCAVATE THE UNSUITABLE MATERIAL AND REPLACE IT WITH COMPACTED 304 AGGREGATE. QUANTITIES OF ITEM 203 - EXCAVATION AND ITEM 304 - AGGREGATE BASE HAVE BEEN PROVIDED TO REPAIR SAID FAILED SUBBASE OR SUBGRADE AREAS.

PAVEMENT REPAIR LESS THAN OR EQUAL TO TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN, A". PAVEMENT REPAIRS GREATER THAN TEN (10) FEET IN LENGTH SHALL BE PAID FOR UNDER "FULL DEPTH RIGID PAVEMENT REMOVAL AND REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B".

ITEM	UNIT	DESCRIPTION
255	SY	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A
255	SY	FULL DEPTH RIGID PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN B
255	FT	FULL DEPTH PAVEMENT SAWING
203	CY	EXCAVATION
304	CY	AGGREGATE BASE

FOR ESTIMATED QUANTITIES, SEE SHEET 87

ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN C

ALL REQUIREMENTS OF C&MS 255 SHALL APPLY EXCEPT THE DOWEL BARS, DEFORMED BARS, AND TIEBARS SHALL BE INSTALLED PER THE DETAILS SHOWN ON CITY OF CLEVELAND SCD CONC 1.

IN ADDITION TO THE REQUIREMENTS ABOVE, APPLY THE OTHER REQUIREMENTS FOR ITEM 255 - FULL DEPTH PAVEMENT REMOVAL AND RIGID REPLACEMENT, TYPE 1, CLASS QC1, AS PER PLAN A AND B.

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (442), AS PER PLAN

THIS ITEM IS INTENDED FOR USE AS DIRECTED BY THE ENGINEER FOR PARTIAL DEPTH PAVEMENT REPAIRS TO CITY STREETS. QUANTITIES WERE DEVELOPED BASED ON AN ASSUMED DEPTH OF THREE (3) INCHES. FINAL DEPTH IS TO BE DETERMINED BY THE ENGINEER.

PAVEMENT REPAIRS SHALL BE COMPLETED USING THE FOLLOWING ITEMS:
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M
ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

**ITEM 305 - 9" CONCRETE BASE, CLASS QC 1P, AS PER PLAN
ITEM 451 - 12" REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN
ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN**

ALL REQUIREMENTS OF C&MS 305, 451, AND 452 SHALL APPLY EXCEPT THE DOWEL BARS, DEFORMED BARS, AND TIEBARS SHALL BE INSTALLED PER THE DETAILS SHOWN ON CITY OF CLEVELAND SCD CONC 1.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG70-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL CONSIST OF A BLEND OF 60% MIN. AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE.

ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 1, (449), AS PER PLAN, PG64-22

PAVING BETWEEN THE MEDIAN BARRIERS SHALL BE COMPACTED USING EITHER HAND OR MECHANICAL METHODS. FINISHED SURFACES SHALL BE SMOOTH AND SLOPED TO DRAIN FROM THE HIGH SIDE BARRIER TO LOW SIDE BARRIER.

ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (446), AS PER PLAN, PG76-22M

THE COARSE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO A BLEND OF AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO AND LIMESTONE. THE CONTRACTOR SHALL USE A MINIMUM 60% OF ACBFS OR TRAP ROCK FROM ONTARIO WITH LIMESTONE COMPRISING THE REMAINING PERCENTAGE. AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO ACBFS OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

WHEN ACBFS IS USED FOR A FRACTION OF THE COARSE AGGREGATE, PROVIDE A TOTAL ASPHALT BINDER CONTENT GREATER THAN OR EQUAL TO 6.2 PERCENT. IF ACBFS MAKES UP 100% OF THE COARSE AGGREGATE, APPLY THE BINDER CONTENT REQUIREMENTS OF C&MS 442.

ITEM SPECIAL - PRESSURE RELIEF JOINT, TYPE B

THIS ITEM SHALL MEET ALL THE SPECIFICATIONS OF ITEM 451. SEE SCD AS-2-15 AND SCD BP-2.4 FOR DETAILS.

CITY STREET CONTINGENCY

THE FOLLOWING ESTIMATED QUANTITIES ARE PROVIDE FOR USED AS DIRECTED BY THE ENGINEER FOR ANY UNANTICIPATED WORK ALONG CITY STREETS:

ITEM 452 - 10" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC 1P, AS PER PLAN	775 SY
ITEM 608 - 6" CONCRETE WALK, AS PER PLAN	4,500 SF
ITEM 608 - CURB RAMP, AS PER PLAN	475 SF
ITEM 609 - CURB, TYPE 6	750 FT

DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	JTH
REVIEWER	KGJ 05/10/24
PROJECT ID	82382
SHEET	TOTAL
80	2696

MAINTENANCE OF TRAFFIC GENERAL NOTES (CONTINUED)

TEMPORARY MINIMUM VERTICAL CLEARANCE

THE TEMPORARY MINIMUM VERTICAL CLEARANCE OVER ROADWAYS AND SHOULDERS SHALL NOT BE LESS THAN 14'-6".

NOTIFICATION OF MINIMUM VERTICAL CLEARANCE REDUCTION

THE CONTRACTOR SHALL NOTIFY THE SPECIAL HAULING PERMITS SECTION OF THE OHIO DEPARTMENT OF TRANSPORTATION AT HAULING.PERMITS@DOT.OHIO.GOV AND THE ENGINEER OF ANY TEMPORARY REDUCTION OF VERTICAL CLEARANCE. THE NOTIFICATION SHALL BE GIVEN AT LEAST 14 DAYS PRIOR TO REDUCING THE VERTICAL CLEARANCE OF A BRIDGE AND SHALL INCLUDE THE FOLLOWING INFORMATION:

- STATE PROJECT NUMBER
- PID
- SFN
- BRIDGE NUMBER
- LOCATION MAP
- DIRECTION OF REDUCED VERTICAL CLEARANCE. FOR EXAMPLE:
 - BIDIRECTIONAL
 - CARDINAL (NORTH OF EAST)
 - NON-CARDINAL (SOUTH OR WEST)
- TEMPORARY VERTICAL CLEARANCE
- ESTIMATED / ACTUAL START AND END DATES OF THE REDUCTION
- CONTRACTOR'S CONTACT PERSON AND TELEPHONE NUMBER
- ANY OTHER INFORMATION REQUESTED BY THE SPECIAL HAULING PERMITS SECTION

THE CONTRACTOR SHALL INFORM THE SPECIAL HAULING PERMITS SECTION OF THE OHIO DEPARTMENT OF TRANSPORTATION AND THE ENGINEER WITHIN 14 DAYS AFTER RESTORING THE VERTICAL CLEARANCE OF A BRIDGE TO ITS ORIGINAL VERTICAL CLEARANCE.

THE ABOVE REQUIREMENTS SHALL BE CONSIDERED INCIDENTAL TO THE WORK THAT CAUSES THE REDUCTION IN THE VERTICAL CLEARANCE.

ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM

THIS WORK SHALL CONSIST OF FURNISHING, ERECTING, OPERATING, MAINTAINING AND REMOVING A WORK ZONE LIGHTING SYSTEM FOR A SINGLE CROSSOVER, OR OVERLAPPING A PAIR OF CROSSOVERS. THE SYSTEM SHALL BE AS SHOWN ON TRAFFIC SCD MT-100.00. THE CONTRACTOR SHALL ARRANGE FOR AND PAY FOR POWER. ALL MATERIALS AND CONSTRUCTION SHALL COMPLY WITH APPLICABLE PORTIONS OF 625 AND 725 EXCEPT: THE PERFORMANCE TEST OF 625.19F, AND CERTIFIED DRAWING REQUIREMENT OF 625.06, ARE WAIVED AND USED MATERIALS IN GOOD CONDITION ARE ACCEPTABLE.

POLES WHICH ARE NOT PROTECTED BY GUARDRAIL OR PORTABLE BARRIER SHALL BE LOCATED OUTSIDE THE CLEAR ZONE, AND SHOULD BE LOCATED AT LEAST 30 FEET (PREFERABLY 40 FEET) FROM THE EDGE OF PAVEMENT WHEN POSSIBLE. ADDITIONAL POLE LINES, CABLES AND APPURTENANCES NECESSARY TO FURNISH POWER TO THE LIGHTING SYSTEM SHALL BE INCLUDED IN THIS ITEM. SERVICE POLES SHALL BE POSITIONED WITH THE SAME CONSTRAINTS AS THE LIGHTING POLES AS A MINIMUM.

PAYMENT WILL BE MADE AT THE UNIT PRICE PER EACH FOR ITEM 614, WORK ZONE CROSSOVER LIGHTING SYSTEM THROUGHOUT ALL PHASES OF WORK WHEN THE CROSSOVER ROADWAYS ARE USED.

AN ESTIMATED QUANTITY OF 6 EACH HAS BEEN PROVIDED IN THE GENERAL SUMMARY.

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE WAY.

INCREASED BARRIER DELINEATION, AS SPECIFIED HEREIN, SHALL BE INSTALLED ON ALL PB AND PERMANENT CONCRETE BARRIER LOCATED WITHIN 5 FEET OF THE EDGE OF THE TRAVELED LANE UNDER EITHER OF THE FOLLOWING CONDITIONS: ALONG TAPERS AND TRANSITION AREAS; OR ALONG CURVES (OUTSIDE ONLY) WITH DEGREE OF CURVATURE GREATER THAN OR EQUAL TO 3 DEGREES.

THE INCREASED BARRIER DELINEATION SHALL CONSIST OF EITHER DELINEATION PANELS OR THE TRIPLE STACKING OF WORK ZONE BARRIER REFLECTORS.

DELINEATION PANELS SHALL CONSIST OF PANELS OF DELINEATION, APPROXIMATELY 34 INCHES LONG AND 6 INCHES WIDE AND SHALL BE "CRIMPED." PANELS SHALL BE INSTALLED AND SPACED PER TRAFFIC SCD MT-101.70.

TRIPLE-STACKED BARRIER REFLECTORS SHALL CONSIST OF ALIGNING THREE BARRIER REFLECTORS VERTICALLY, AT LOCATIONS WHERE A SINGLE BARRIER REFLECTOR WOULD BE OTHERWISE ATTACHED. THERE SHALL BE NO OPEN SPACE BETWEEN THE ADJACENT BARRIER REFLECTORS. THE TRIPLE-STACKED BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THEY SHALL BE SPACED AND ALIGNED PER TRAFFIC SCD MT-101.70.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE WAY)	1,256 EACH
ITEM 614, OBJECT MARKER, ONE WAY	1,113 EACH
ITEM 614, OBJECT MARKER, TWO WAY	42 EACH
ITEM 614, INCREASED BARRIER DELINEATION	10,555 FT

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

ALONG RUNS OF INCREASED BARRIER DELINEATION WHERE THIS ITEM IS PROVIDED, THE QUANTITY SHALL BE MEASURED AS THE ENTIRE LENGTH OF RUN OF THE INCREASED BARRIER DELINEATION, INCLUDING THE SPACES BETWEEN THE INDIVIDUAL DELINEATION PANELS OR STACKS OF BARRIER REFLECTORS.

ITEM 614, MAINTAINING TRAFFIC, MISC.: TEMPORARY TRAFFIC SIGNAL

THE CONTRACTOR SHALL INSTALL A TEMPORARY TRAFFIC SIGNAL AT THE INTERSECTION OF E. 14TH STREET & COMMUNITY COLLEGE AVENUE AS DETAILED ON SHEET 309. THIS TEMPORARY TRAFFIC SIGNAL SHALL PROVIDE THE SIGNAL OPERATION AS INDICATED IN THE PLANS, NO CHANGES TO THE SIGNAL PHASING OR TIMINGS SHALL BE MADE WITHOUT THE APPROVAL OF THE PROJECT ENGINEER AND THE CITY OF CLEVELAND TRAFFIC ENGINEER.

ALL TEMPORARY SIGNAL POLE CALCULATIONS SHALL BE PERFORMED BY THE CONTRACTOR IN ORDER TO DETERMINE THE FINAL LOCATION, TYPE OF WOOD POLE TO BE USED, AND TO DETERMINE IF ADDITIONAL WOOD POLES AND SIGNAL SPANS ARE NECESSARY. THE NUMBER, LOCATION, VISIBILITY AND HEIGHT OF ALL TRAFFIC SIGNAL HEADS AND SIGNS SHALL BE IN ACCORDANCE WITH THE PROVISIONS OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

ALL LABOR AND MATERIALS FOR THE IMPLEMENTATION OF THE TEMPORARY SIGNAL PLAN AND NOTES, INCLUDING BUT NOT LIMITED TO THE TEMPORARY SUPPORT POLES, TEMPORARY VEHICULAR SIGNAL HEADS, TEMPORARY WIRING, TEMPORARY MESSENGER WIRE, TEMPORARY DETECTION, TEMPORARY CONTROLLER CABINET, POWER SERVICE, AND TEMPORARY SIGNS AND HANGER ASSEMBLIES, ETC. SHALL BE INCLUDED IN THE UNIT BID PRICE FOR EACH ITEM 614, MAINTAINING TRAFFIC, MISC.: TEMPORARY TRAFFIC SIGNAL. A QUANTITY OF 1 EACH HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM OF WORK AT THE INTERSECTION NOTED ABOVE.

TEMPORARY DRAINAGE ITEMS

TEMPORARY DRAINAGE ITEMS ARE LABELED ON THE MAINTENANCE OF TRAFFIC PLANS AND ARE CARRIED TO THE GENERAL SUMMARY. FOR TEMPORARY DRAINAGE DETAILS AND THE TEMPORARY INLET AND MANHOLE SCHEDULE, SEE SHEET 126

RUMBLE STRIP REMOVAL AND REPLACEMENT

ALL EXISTING RUMBLE STRIPS ON THE I.R. 77 AND I.R. 90 INSIDE AND OUTSIDE SHOULDERS THAT ARE IN CONFLICT WITH THE PROPOSED MOVEMENT OF TRAFFIC DURING MOT OPERATIONS SHALL BE REMOVED BY PAVEMENT PLANING. THE REMOVED RUMBLE STRIP AREAS SHALL BE FILLED WITH ASPHALT SURFACE COURSE. THE RUMBLE STRIP REMOVAL AND REPLACEMENT AREA SHALL BE 2.5 FEET WIDE AND 1.5 INCHES DEEP, CENTERED ON THE RUMBLE STRIP. THE PAVEMENT PLANING AND PLACEMENT OF ASPHALT CONCRETE SURFACE COURSE SHOULD BE COMPLETED IN THE SAME OPERATION. THE ESTIMATED REMOVAL AND REPLACEMENT LENGTH IS 5,510 FEET AND THE PHASE AND LOCATION FOR EACH RUMBLE STRIP REMOVAL AND REPLACEMENT ARE LISTED BELOW:

PHASE AND LOCATION:

PHASE 1 - I.R. 77 NB INSIDE SHOULDER, @ EX. I.R. 77 STA. 74+00 TO @ EX. RAMP E STA. 55+00, 610 LF

PHASE 2 - I.R. 77 NB OUTSIDE SHOULDER, @ EX. I.R. 77 STA. 71+00 TO STA. 76+00, 500 LF

PHASE 3 - I.R. 90 EB INSIDE SHOULDER, @ EX. I.R. 90 STA. 95+50 TO STA. 101+00, 550 LF

PHASE 4 - I.R. 90 WB INSIDE SHOULDER, @ EX. I.R. 90 STA. 110+50 TO STA. 114+50, 400 LF

PHASE 4 - I.R. 90 EB INSIDE SHOULDER, @ EX. I.R. 90 STA. 98+80 TO STA. 105+50, 670 LF

PHASE 4 - I.R. 90 EB OUTSIDE SHOULDER, @ EX. I.R. 90 STA. 101+00 TO STA. 109+00, 800 LF

PHASE 5 - I.R. 90 EB INSIDE SHOULDER, @ EX. I.R. 90 STA. 58+95 TO STA. 65+15, 620 LF

PHASE 5 - I.R. 90 WB OUTSIDE SHOULDER, @ EX. I.R. 90 STA. 98+40 TO STA. 102+50, 410 LF

PHASE 7 - I.R. 90 EB OUTSIDE SHOULDER, @ EX. I.R. 90 STA. 62+50 TO STA. 72+00, 950 LF

IMMEDIATELY FOLLOWING COMPLETION OF MOT OPERATIONS AND RESTORING THE TRAFFIC TO ITS ORIGINAL POSITION, NEW RUMBLE STRIPS SHALL BE INSTALLED AT THE LOCATION WHERE THE EXISTING RUMBLE STRIPS WERE REMOVED.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE (1.5")	1,531 SY
ITEM 407 - NON-TRACKING TACK COAT	123 GAL
ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A, (449), AS PER PLAN, PG70-22M, 1-1/2"	64 CY
ITEM 618 - RUMBLE STRIPS, SHOULDER (ASPHALT CONCRETE)	1.05 MILE

ITEM 442, ASPHALT CONCRETE SURFACE COURSE, 12.5 MM, TYPE A (449), AS PER PLAN, PG70-22M

THE COARSE VIRGIN AGGREGATE AND AT LEAST 50% OF FINE VIRGIN AGGREGATE FOR THIS ITEM SHALL BE LIMITED TO AIR COOLED BLAST FURNACE SLAG (ACBFS) OR TRAP ROCK FROM ONTARIO.

TABLE 442.02-2 APPLIES EXCEPT NO. 4 SIEVE REQUIREMENTS ARE 52 TO 60 TOTAL PERCENT PASSING. FOR THE NO. 4 SIEVE DO NOT EXCEED 63 IN PRODUCTION.

IN ADDITION TO THE JOINT SEALING REQUIREMENTS SPECIFIED IN 401.17, THE CONTRACTOR SHALL SEAL THE PERIMETER OF ALL RUMBLE STRIP PAVEMENT REPLACEMENT AREAS. THE MATERIAL USED SHALL BE A CERTIFIED 702.01 PG BINDER. THE WIDTH OF THE SEALER SHALL BE 2-3 INCHES.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT REQUIRED TO PERFORM THE ABOVE WORK SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 442 - ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (449), AS PER PLAN, PG70-22M.



MAINTENANCE OF TRAFFIC PAVEMENT MARKINGS CONTINGENCY

THE FOLLOWING QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY AND ARE TO BE USED TO REPLACE WORN PAVEMENT MARKINGS AT THE DIRECTION OF THE ENGINEER:

ITEM 614 - WORK ZONE LANE LINE, CLASS 1, 4"	0.50 MILE
ITEM 614 - WORK ZONE LANE LINE, CLASS 1, 6"	2.50 MILE
ITEM 614 - WORK ZONE CENTER LINE, CLASS 1	0.50 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, 4" (WHITE)	0.50 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, 6" (WHITE)	2.50 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, 4" (YELLOW)	0.50 MILE
ITEM 614 - WORK ZONE EDGE LINE, CLASS 1, 6" (YELLOW)	2.00 MILE
ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS 1, 8"	650 FT
ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS 1, 12"	8750 FT
ITEM 614 - WORK ZONE DOTTED LINE, CLASS 1 (WHITE)	3650 FT
ITEM 614 - WORK ZONE TRANSVERSE LINE, CLASS 1 (YELLOW)	150 FT
ITEM 614 - WORK ZONE STOP LINE, CLASS 1	175 FT
ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS 1, 12"	175 FT
ITEM 614 - WORK ZONE ARROW, CLASS 1	25 EACH
ITEM 614 - WORK ZONE WORD ON PAVEMENT, 72", CLASS 1	1 EACH
ITEM 614 - WORK ZONE PAVEMENT MARKING MISC.: SHARED LANE MARKING	1 EACH

WORK ZONE QUEUE DETECTION WARNING SYSTEM

THE CONTRACTOR SHALL FURNISH, INSTALL, AND MAINTAIN AN APPROVED WORK ZONE QUEUE DETECTION WARNING SYSTEM (WZQDWS) AS PER SUPPLEMENTAL SPECIFICATION 896.

THE PROBABLE INITIAL LOCATIONS OF THE WZQDWS DEVICES ARE SHOWN ON SHEET 127 OF THE PLAN. IT IS EXPECTED THE LOCATIONS WILL VARY BASED ON PLANNED OR UNPLANNED PHASE AND TRAFFIC PATTERN CHANGES. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE DEVICES BY THE CONTRACTOR SHALL BE DIRECTED BY THE ENGINEER.

THE FOLLOWING TRAFFIC SENSOR THRESHOLDS AND PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS) MESSAGES SHALL BE USED:

- GREATER THAN OR EQUAL TO 50 MPH - USE FOUR CORNER FLASHING CAUTION MODE.
- BETWEEN 50 MPH AND 25 MPH - TRAFFIC AHEAD XX MPH / SLOW DOWN.
- BELOW OR EQUAL TO 25 MPH - TRAFFIC AHEAD XX MPH / PREPARE TO STOP

FOUR CORNER FLASHING CAUTION MODE SHALL CONSIST OF THE USE OF ONE ASTERISK IN EACH CORNER OF THE PCMS DISPLAY (4 TOTAL ASTERISKS).

XX SHALL BE ROUNDED UP TO THE NEAREST MULTIPLE OF 5 MPH MINUS 1. OCCUPANCY MAY BE DIRECTED TO BE USED BASED ON CERTAIN TRAFFIC CONDITIONS AND SCENARIOS. ODOT WILL DIRECT THE CONTRACTOR OF THE THRESHOLDS TO BE USED FOR THOSE AREAS WHERE OCCUPANCY IS DIRECTED TO BE USED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 896 - PORTABLE NON-INTRUSIVE TRAFFIC SENSOR, CLASS 1	648 SMNT
ASSUMING 9 SENSORS FOR 72 MONTHS	
ITEM 896 - PORTABLE CHANGEABLE MESSAGE SIGN	216 SMNT
ASSUMING 3 PCMS SIGNS FOR 72 MONTHS	

4

MAINTENANCE OF TRAFFIC GENERAL NOTES (CONTINUED)
LANE VALUE CONTRACT WITH PRORATES

THE CONTRACTOR SHALL BE ASSESSED DISINCENTIVES AS DESIGNATED IN THE LANE VALUE CONTRACT TABLE FOR EACH UNIT OF TIME THE DESCRIBED CRITICAL LANE/RAMP IS RESTRICTED FROM FULL USE BY THE TRAVELING PUBLIC WITHIN THE RESTRICTED TIME PERIOD. THE LANE VALUE CONTRACT TABLE IS LOCATED BELOW. THE DISINCENTIVES WILL BE ASSESSED FOR ALL RESTRICTIONS OF THE CRITICAL WORK.

CRITICAL WORK IS SHOWN IN THE CRITICAL WORK TABLE.

CRITICAL WORK IS DEFINED AS HAVING THE DESIGNATED SECTIONS OPEN TO UNRESTRICTED TRAFFIC AS SHOWN IN THE TABLE, OR THE ENTIRE PROJECT IF NOT OTHERWISE LISTED.

UNRESTRICTED TRAFFIC IS DEFINED AS ALL TRAFFIC LANES BEING AVAILABLE FOR USE WITH SPECIFIED STRIPING AND SAFETY FEATURES IN PLACE.

DISINCENTIVES WITHIN THE FIRST HOUR AFTER THE LANE VALUE CONTRACT TABLE'S RESTRICTED TIME PERIOD WILL BE PRORATED. THOSE PRORATES WILL BE AS FOLLOWS:

MINUTES AFTER RESTRICTED TIME PERIOD, T*	PRORATE APPLIED TO MAXIMUM DISINCENTIVE, P*
0 - 30	0.25
31-60	0.75
61+	1.00

*THE MAXIMUM DISINCENTIVE IS DETERMINED BY THE LANE VALUE CONTRACT TABLE LOCATED IN THE PLAN GENERAL NOTES. ONLY ONE PRORATE WILL BE APPLIED PER EVENT. FOR ANY CONTRACTOR RESTRICTIONS PRIOR TO THE LANE VALUE CONTRACT TABLE'S RESTRICTED TIME PERIOD, THE CONTRACTOR WILL BE ASSESSED THE MAXIMUM DISINCENTIVES. FOR A SINGLE EVENT, THE TOTAL DISINCENTIVE WILL BE CALCULATED AS SUCH:

$$TD = P \times T \times LV \times L$$

WHERE:

TD = TOTAL DISINCENTIVE, \$
 T = TIME EXCEEDING RESTRICTED TIME PERIOD, MIN
 LV = LANE VALUE MAXIMUM DISINCENTIVE, \$/MIN/LANE
 L = NUMBER OF LANES RESTRICTED, LANE

DISINCENTIVES WILL NOT BE ASSESSED FOR DELAYS OUTSIDE THE CONTRACTOR'S CONTROL OR RESPONSIBILITY, SUCH AS PRIVATE MOTORIST ACCIDENTS, EQUIPMENT BREAKDOWNS, CIVIL DISTURBANCES, OR ENGINEER-ORDERED REVISIONS TO THE WORK. THE DEPARTMENT RESERVES THE RIGHT TO ASSESS THE MAXIMUM DISINCENTIVE WITHOUT PRORATION IF THERE HAVE BEEN THREE OR MORE EVENTS ON THE PROJECT INCLUDING, BUT NOT LIMITED TO, THREE OR MORE EQUIPMENT BREAKDOWNS OR OTHER INCIDENTS WHICH THE CONTRACTOR'S INACTIONS/ACTIONS CONTRIBUTED TO THE EVENT.

PRIOR TO ASSESSING ANY SINGLE DISINCENTIVE AMOUNT EXCEEDING \$50,000, THE RESTRICTION EVENT AND THE PROPOSED DISINCENTIVE WILL BE EVALUATED BY THE MAINTENANCE OF TRAFFIC EXECUTIVE COMMITTEE (MOTEC) TO CONFIRM APPLICABILITY, CALCULATION, AND JUSTIFICATION OF THE ASSESSMENT.

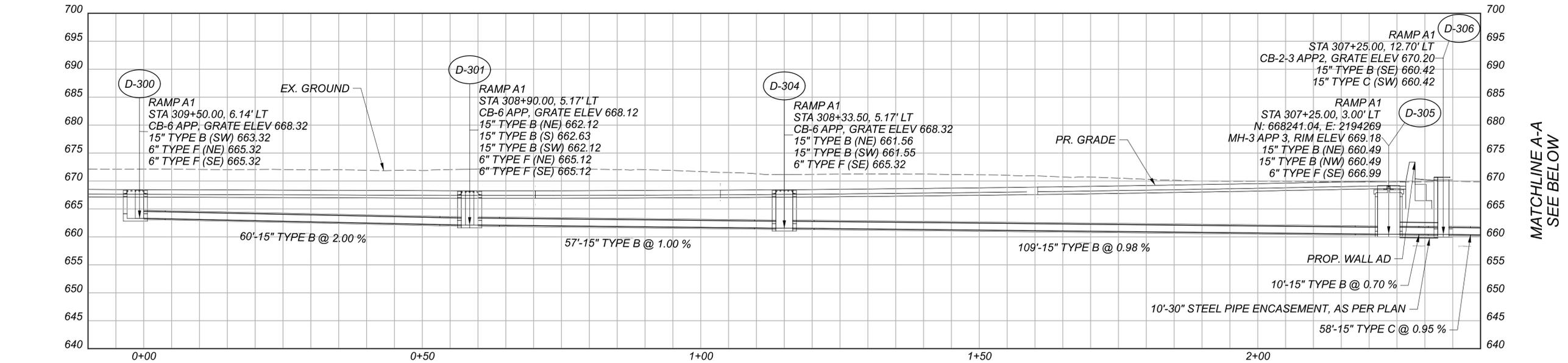
LANE VALUE CONTRACT TABLE

LOCATION	DIRECTION	LANES	1 LANE CLOSED	2 LANES CLOSED	DISINCENTIVE AMOUNTS PER MINUTE PER LANE
I.R. 90					
I.R. 77 TO INNERBELT CURVE	EB/WB	4	8:00 AM MON TO 2:00 PM MON	7:00 PM MON TO 6:00 AM TUE	\$365
			5:30 PM MON TO 7:00 AM TUE		
			8:00 AM TUE TO 2:00 PM TUE	7:00 PM TUE TO 6:00 AM WED	
			5:30 PM TUE TO 7:00 AM WED		
			8:00 AM WED TO 2:00 PM WED	7:30 PM WED TO 6:00 AM THU	
			5:30 PM WED TO 7:00 AM THU		
			8:00 AM THU TO 2:00 PM THU	7:30 PM THU TO 6:00 AM FRI	
			5:30 PM THU TO 7:00 AM FRI		
			8:00 AM FRI TO 2:00 PM FRI	7:30 PM SAT TO 10:30 AM SUN	
			5:30 PM FRI TO 7:00 AM MON		
I.R. 77					
SR-422 UNDERPASS TO I.R. 90 EB	NB	2	10:00 AM MON TO 2:30 PM MON	NA	\$295
			6:00 PM MON TO 6:00 AM TUE		
			10:00 AM TUE TO 2:30 PM TUE		
			6:00 PM TUE TO 6:00 AM WED		
			10:00 AM WED TO 2:30 PM WED		
			6:00 PM WED TO 6:00 AM THU		
			10:00 AM THU TO 2:30 PM THU		
			6:00 PM THU TO 6:00 AM FRI		
			10:00 AM FRI TO 2:30 PM FRI		
			6:00 PM FRI TO 3:30 PM SAT		
			6:00 PM SAT TO 6:00 AM MON		
			8:30 AM MON TO 1:00 PM MON		
			6:30 PM MON TO 7:00 AM TUE		
			8:30 AM TUE TO 1:00 PM TUE		
6:30 PM TUE TO 7:00 AM WED					
8:30 AM WED TO 1:00 PM WED					
6:30 PM WED TO 7:00 AM THU					
8:30 AM THU TO 1:00 PM THU					
6:30 PM THU TO 7:00 AM FRI					
8:30 AM FRI TO 1:00 PM FRI					
6:30 PM FRI TO 7:00 AM MON					

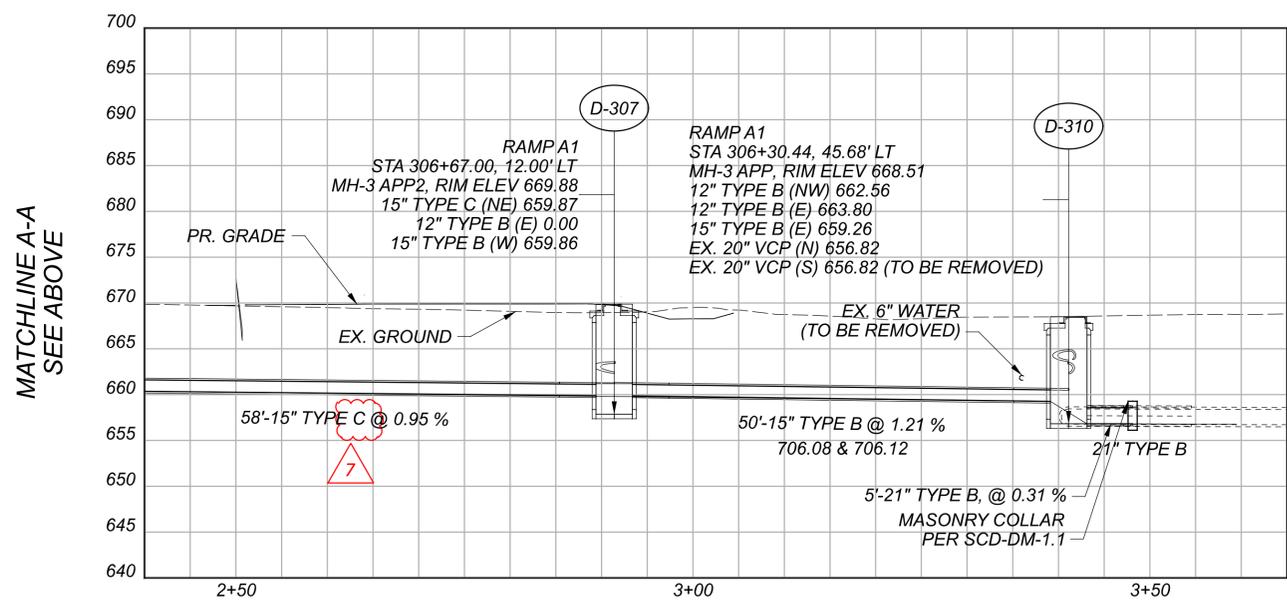
CRITICAL WORK TABLE

DESCRIPTION OF CRITICAL LANE/RAMP TO BE MAINTAINED	PHASE	RESTRICTED TIME PERIOD	TIME UNIT	AADT	DISINCENTIVE \$ PER TIME UNIT
I.R. 90 EB & WB (CONCURRENTLY) (BETWEEN E. 22ND ST. AND CARNEGIE AVE.)	2, 4, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	138,000	\$25,100.00
I.R. 90 WB (BETWEEN E. 22ND ST. AND CARNEGIE AVE.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	71,760	\$13,052.00
I.R. 90 EB (BETWEEN E. 22ND ST. AND CARNEGIE AVE.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	66,240	\$12,048.00
E. 14TH ST. (BETWEEN COMMUNITY COLLEGE AVE. AND CARNEGIE AVE.)	1	90 DAYS	PER HOUR	17,200	\$625.00
E. 14TH ST. (BETWEEN ORANGE AVE. AND COMMUNITY COLLEGE AVE.)	1	150 DAYS	PER HOUR	17,200	\$625.00
COMMUNITY COLLEGE AVE. (BETWEEN E. 14TH ST. AND E. 22ND ST.)	1	90 DAYS	PER HOUR	17,200	\$625.00
I.R. 77 NB TO E. 14TH ST. / E. 22ND ST. EXIT RAMP (EXIT RAMP 162B)	1	150 DAYS	PER HOUR	5,215	\$315.00
E. 22ND ST. (BETWEEN CARNEGIE AVE. AND CENTRAL AVE.)	1 & 2	365 DAYS	PER HOUR	13,400	\$732.00
CEDAR AVE. (BETWEEN E. 28TH ST. AND E. 22ND ST.)	1 & 2	365 DAYS	PER HOUR	8,300	\$732.00
I.R. 90 EB TO E. 9TH ST. EXIT RAMP (EXIT RAMP 172A)	2	120 DAYS	PER HOUR	10,357	\$188.00
CARNEGIE AVE. (BETWEEN E. 22ND ST. AND E. 28TH ST.)	2 - 8	1,200 DAYS	PER HOUR	25,700	\$535.00
PROSPECT AVE. TO I.R. 90 EB RAMP	3 - 8	1,200 DAYS	PER HOUR	3,392	\$68.00
PROSPECT AVE. TO I.R. 90 WB ENTRANCE RAMP	3 - 8	1,200 DAYS	PER HOUR	7,308	\$291.00
E. 21ST ST. TO I.R. 77 SB ENTRANCE RAMP	3 & 4	420 DAYS	PER HOUR	5,600	\$606.00
I.R. 90 EB (BETWEEN E. 9TH ST. AND E. 14TH ST.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	66,240	\$1,500.00
I.R. 90 WB (BETWEEN E. 9TH ST. AND E. 14TH ST.)	1, 2, & 7	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	71,760	\$3,251.00
E. 14TH ST. (BETWEEN COMMUNITY COLLEGE AVE. AND CARNEGIE AVE.)	4, 5, 7, & 8	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	17,200	\$625.00
I.R. 77 NB TO E. 22ND ST. EXIT RAMP (EXIT RAMP 162B)	6	60 DAYS	PER HOUR	3,700	\$57.00
I.R. 90 EB TO E. 9TH ST. NB EXIT RAMP (EXIT RAMP 172A)	8	30 DAYS	PER HOUR	7,600	\$156.00
I.R. 77 NB TO I.R. 90 EB INTERCHANGE RAMP	9	WEEKEND CLOSURES (8:00PM FRIDAY UNTIL 6:00AM MONDAY)	PER HOUR	18,014	\$1000

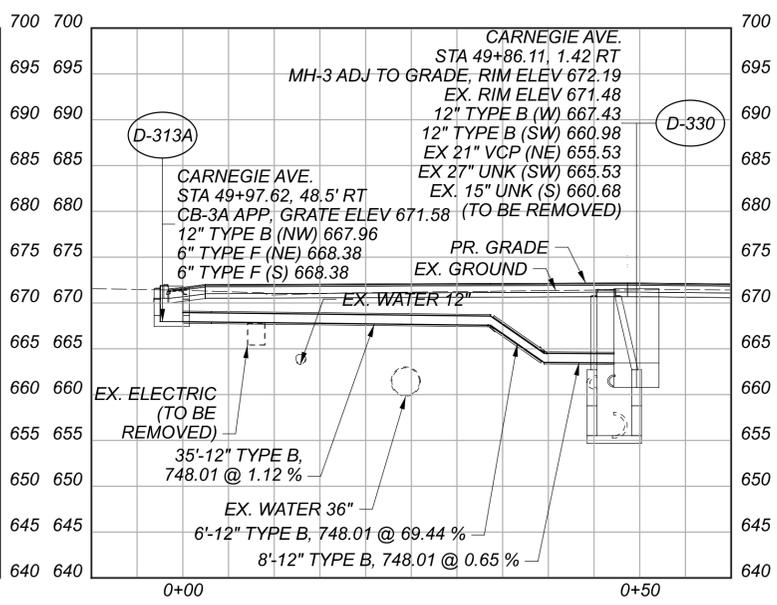
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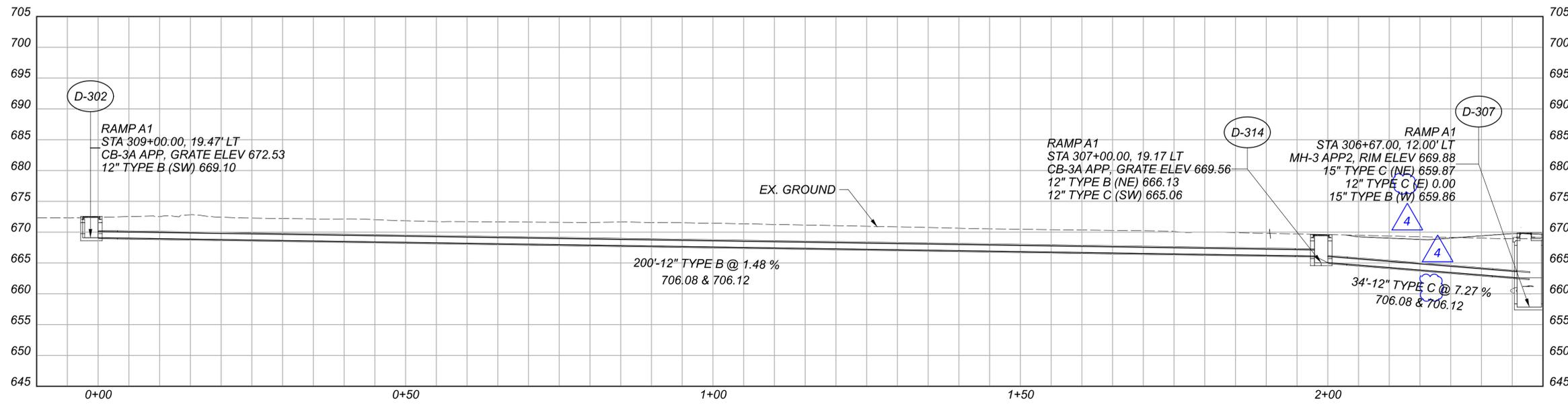
MATCHLINE A-A
SEE BELOW



MATCHLINE A-A
SEE ABOVE



CROSS REFERENCES	
STRUCTURE	SHEET
D-300	1103
D-301	1103
D-302	1103
D-304	1103
D-305	1103
D-306	1103
D-307	1103
D-307	1103
D-310	1103
D-313A	1104
D-314	1103



STORM SEWER PROFILES
RAMP A1 & CARNEGIE AVE.

DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	BJT
REVIEWER	KGJ 05/22/24
PROJECT ID	82382
SHEET	TOTAL
1130	2696

ITEM 638 - 30" STEEL PIPE ENCASMENT, OPEN CUT, AS PER PLAN

FURNISH AND INSTALL A 30" STEEL CASING PIPE WITH A 15" INTERIOR CONDUIT ACCORDING TO ITEMS 638 AND 611 THROUGH AND EXTENDING 10' BEYOND MSE WALL SELECT GRANULAR FILL.

STEEL CASING PIPE SHALL BE ACCORDING TO 748.06. CONDUIT MATERIAL MUST BE REINFORCED CONCRETE PIPE PER 706.02. PROVIDE PREMIUM JOINTS PER 706.11 AND WRAP THE PIPE JOINTS IN GEOTEXTILE FABRIC, TYPE A, PER 712.09.

FOR A VISUAL REFERENCE OF THE CASING DETAIL, SEE "CASING DETAIL NO. 2 END OF CASING AND CASING CHOCK DETAIL" ON SHEET 1418.

INSTALL TWO CASING SPACERS/CHOCKS PER 8 FOOT LENGTH OF PIPE. A SET OF SPACERS/CHOCKS SHALL BE PLACED NOT MORE THAN 2.5 FEET FROM EACH PIPE JOINT, ONE BEHIND THE BELL AND ONE AT THE SPIGOT END. CASING SPACERS ARE TO BE HARDWOOD BLOCKING OR STAINLESS STEEL CHOCKS.

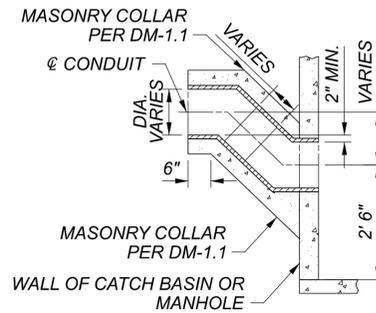
CLOSE BOTH ENDS OF THE CASING WITH MORTARED 4 INCH BRICKS OR A CONCRETE BULKHEAD. SPACE BETWEEN THE STEEL CASING PIPE AND INTERIOR CONDUIT TO BE FILLED WITH SAND PER 703.06.



PAYMENT FOR REINFORCED CONCRETE PIPE, PREMIUM JOINTS, GEOTEXTILE FABRIC, STEEL CASING, HARDWOOD BLOCKING OR STAINLESS STEEL CHOCKS, BULKHEAD, SAND, EXCAVATION AND ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 638 - 30" STEEL PIPE ENCASMENT, OPEN CUT, AS PER PLAN.

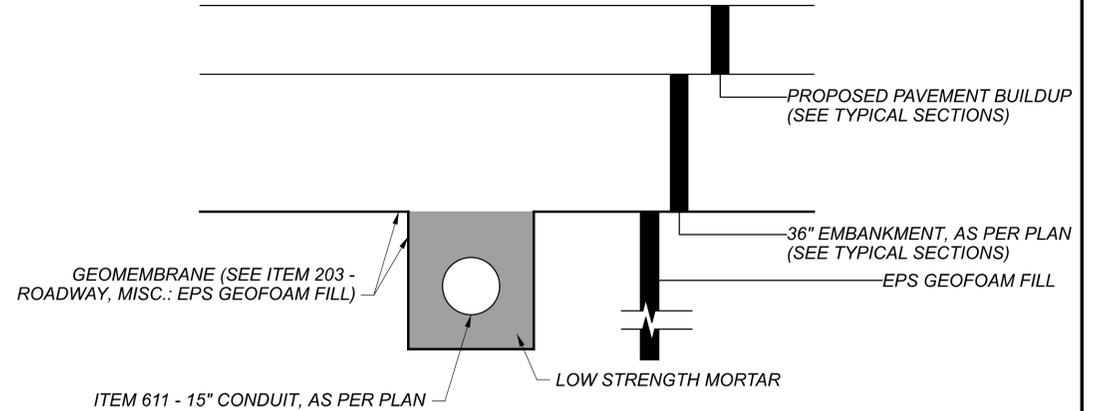
ITEM 611 - MANHOLE, AS PER PLAN 2
ITEM 611 - CATCH BASIN, AS PER PLAN 2
ITEM 611 - INLET, NO. 3 FOR SINGLE SLOPE BARRIER, TYPE D, AS PER PLAN 2

CONSTRUCT MANHOLES, CATCH BASINS AND INLETS AS PER PLAN 2 PER CMS 611 AND APPLICABLE STANDARD CONSTRUCTION DRAWINGS EXCEPT THAT A SUMP AND TRAP SHALL BE PROVIDED AS SHOWN HEREIN. TRAPS SHALL BE CONSTRUCTED OF TWO PREFABRICATED 45 DEGREE BENDS OR TWO PAIRS OF 22.5 DEGREE CUT CONDUIT TO FORM A 45 DEGREE BEND. IF RIGID PIPE IS USED, THERE SHALL BE SUFFICIENT LENGTH OF CONDUIT BETWEEN THE BENDS TO ENSURE THAT THE CROWN OF THE OUTLET PIPE AT THE STRUCTURE IS AT LEAST 2 INCHES LOWER THAN THE FLOWLINE ELEVATION OF THE OUTLET PIPE AT ITS PLAN INDICATED ELEVATION. INSTALL MASONRY COLLARS AT EACH BEND PER SCD DM-1.1.



ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN

RECONSTRUCT MANHOLE PER CMS 611 EXCEPT THAT THE COVER SHALL BE ONE THAT CAN BE AND IS BOLTED CLOSED PER THE MANUFACTURER'S INSTRUCTIONS.



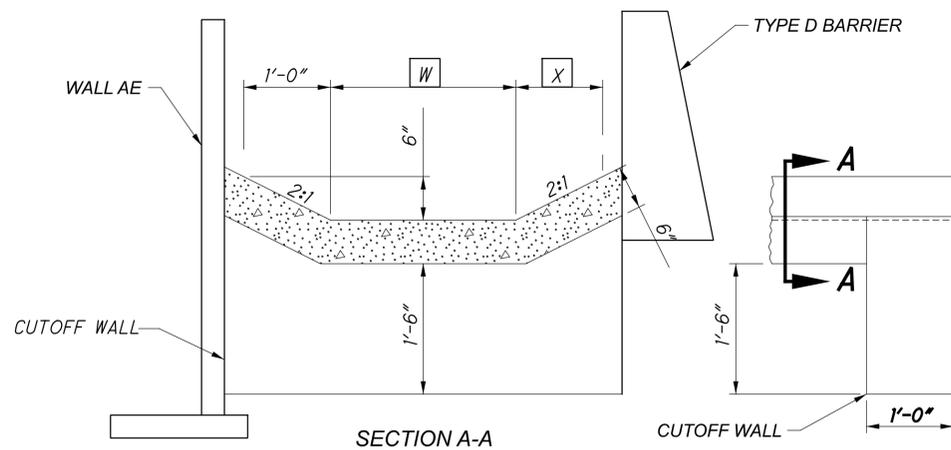
ITEM 611 - 15" CONDUIT, AS PER PLAN

ITEM 611 - 15" CONDUIT, AS PER PLAN

CONSTRUCT CONDUIT ACCORDING TO CMS 611 THROUGH THE LIMITS OF AND EXTENDING 10' BEYOND THE EPS GEOFOAM FILL EXCEPT THAT THE CONDUIT MATERIAL MUST BE REINFORCED CONCRETE PIPE PER 706.02 WITH PREMIUM JOINTS PER 706.11.

LINE THE TRENCH THROUGH THE EPS GEOFOAM FILL WITH GEOMEMBRANE PER ITEM 203 - ROADWAY, MISC.: EPS GEOFOAM FILL. THE BEDDING AND BACKFILL SHALL BE LOW STRENGTH MORTAR PER 613 PER THE DETAIL ON THIS SHEET, UP TO THE TOP OF THE EPS GEOFOAM FILL.

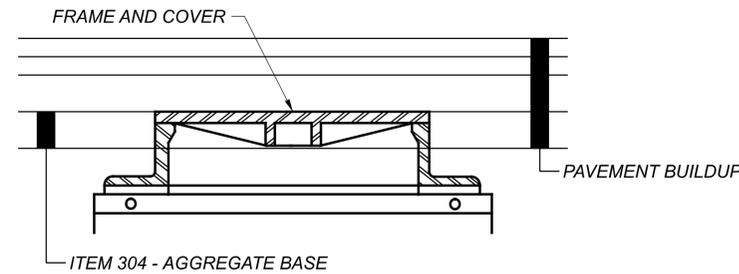
PAYMENT FOR THE PIPE, PREMIUM JOINTS, LOW STRENGTH MORTAR, EXCAVATION AND ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 611 - 15" CONDUIT, AS PER PLAN. GEOMEMBRANE AND EPS GEOFOAM FILL SHALL BE PAID FOR UNDER ITEM 203 - ROADWAY, MISC.: EPS GEOFOAM FILL.



- W** VARIES 0' TO 2' STA. 437+52 TO STA. 437+89
2' STA. 437+89 TO 438+17
- X** 1' STA. 437+52 TO STA. 437+89
VARIES 1' TO 2.8' STA. 437+89 TO STA. 438+17

ITEM 601 - PAVED GUTTER, TYPE 1-2, AS PER PLAN

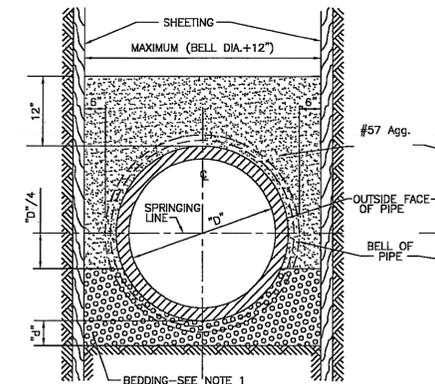
CONSTRUCT PAVED GUTTER PER SCD DM-2.1 EXCEPT THAT THE DIMENSIONS SHALL FOLLOW THE DETAIL ABOVE.



ITEM 611 - MANHOLE, NO. 3, AS PER PLAN 3 &
 ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2

ITEM 611 - MANHOLE, NO. 3, AS PER PLAN 3
ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2

CONSTRUCT/RECONSTRUCT MANHOLE PER CMS 611 EXCEPT THAT THE FRAME AND COVER SHALL BE BURIED BENEATH THE PAVEMENT LAYERS WITH THE TOP OF THE FRAME AND COVER FLUSH WITH THE TOP OF THE ITEM 304 AGGREGATE BASE AND THE COVER SHALL BE SOLID.



TYPICAL SECTION
 PIPE SEWERS IN
 ORDINARY EARTH BEDDING

ITEM 611 - XX" CONDUIT, AS PER PLAN 2

CONSTRUCT CONDUIT ACCORDING TO CMS 611 EXCEPT THAT TRENCH BACKFILL IN PAVED AREAS SHALL BE CLEVELAND 50 LSM AND BEDDING MATERIAL SHALL BE COARSE NATURAL AGGREGATE COMPLYING WITH 703.01 WITH THE FOLLOWING PROVISIONS:

- A. 4" BEDDING DEPTH "d" OF NO. 57 GRANULAR MATERIAL FOR 8" TO 24" PIPE
- B. 6" BEDDING DEPTH "d" OF NO. 5 GRANULAR MATERIAL FOR 27" TO 60" PIPE
- C. 8" BEDDING DEPTH "d" OF NO. 4 GRANULAR MATERIAL FOR PIPE SIZES GREATER THAN 60". THE MINIMUM DEPTH OF THE BEDDING SHALL BE 2" BELOW THE PIPE BELLS, IF ANY, BUT IN NO CASE SHALL THE BEDDING BE LESS THAN 8".
- D. SERVICE CONNECTIONS SHALL HAVE A 3" MINIMUM BEDDING DEPTH OF NO. 57 GRANULAR MATERIAL

DESIGN AGENCY

Michael Baker
 INTERNATIONAL

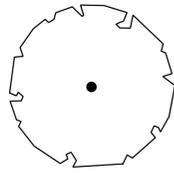
DESIGNER
 JAR

REVIEWER
 KGJ 05/22/24

PROJECT ID
 82382

SHEET TOTAL
 1163 2696

LEGEND



ITEM 661 - DECIDUOUS TREE



ITEM 661 - DECIDUOUS TREE (FLOWERING)



ITEM 661 - EVERGREEN TREE



ITEM 661 - DECIDUOUS SHRUBS



ITEM 659 - CLASS 1 SEEDING (LAWN MIXTURE)



ITEM 659 - CLASS 2 (ROADSIDE MIXTURE)

TYP 30' OFFSET OF PAVEMENT EDGES



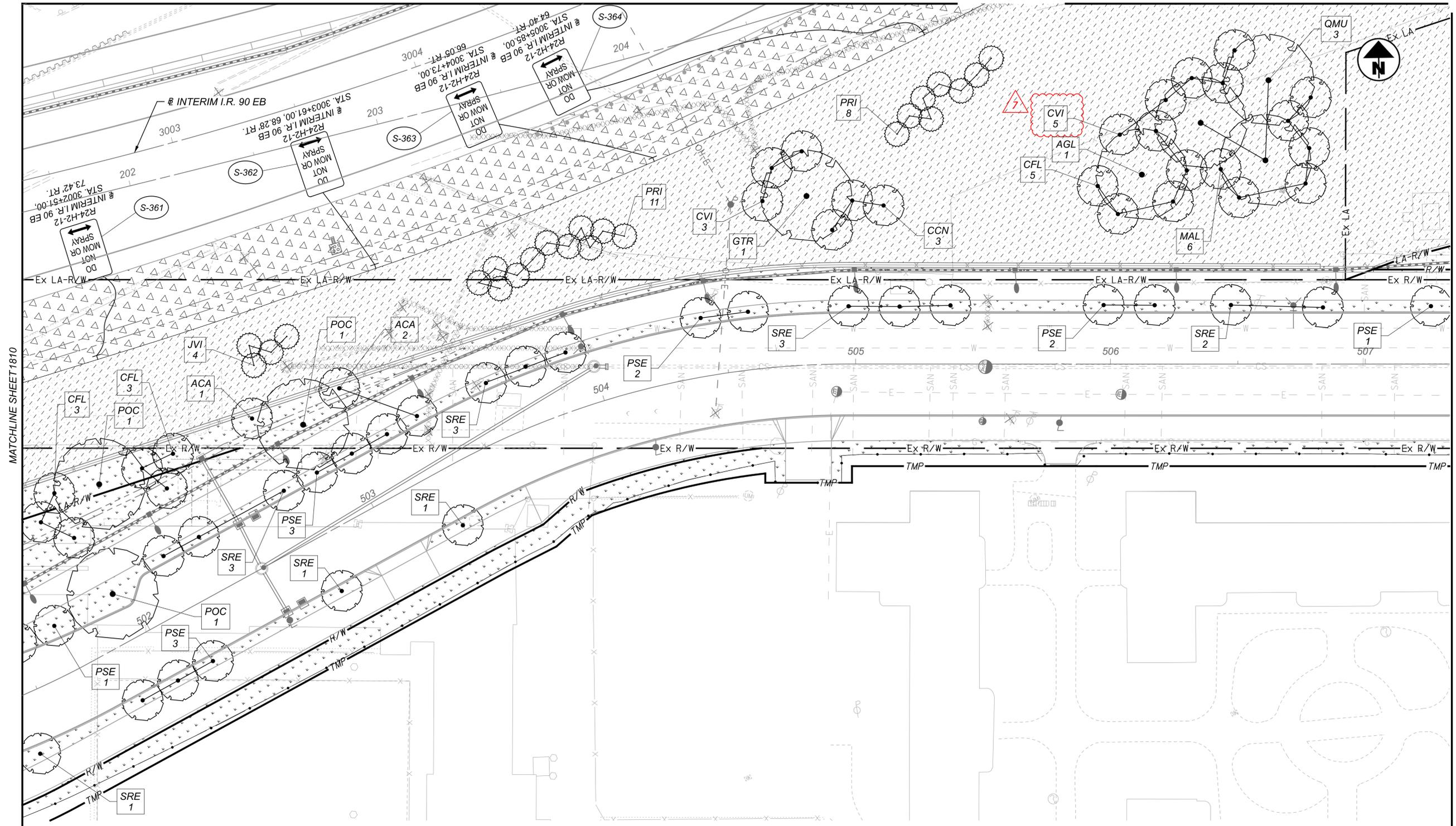
ITEM 659 - CLASS 5B SEEDING (NATIVE WILDFLOWER MIX)

NOTES:

- 1. FOR STREETSCAPES: TREES SHALL BE PLANTED A MINIMUM OF 4'-0" FROM BACK OF CURB

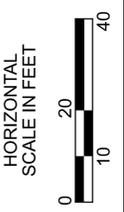
MATCHLINE SHEET 1809

MATCHLINE SHEET 1812



MATCHLINE SHEET 1810

MATCHLINE SHEET 1815



PLANTING PLAN
SHEET 07

CUY-90-16.28 (CCG3A)

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DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	BDC
REVIEWER	JCF 01/10/24
PROJECT ID	82382
SHEET TOTAL	1814 2696

LEGEND



ITEM 661 - DECIDUOUS TREE



ITEM 661 - DECIDUOUS TREE (FLOWERING)



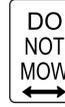
ITEM 661 - EVERGREEN TREE



ITEM 661 - DECIDUOUS SHRUB



"SIGN R"



"SIGN D"



"SIGN L"



ITEM 659 - CLASS 1 SEEDING (LAWN MIXTURE)



ITEM 659 - CLASS 2 (ROADSIDE MIXTURE)

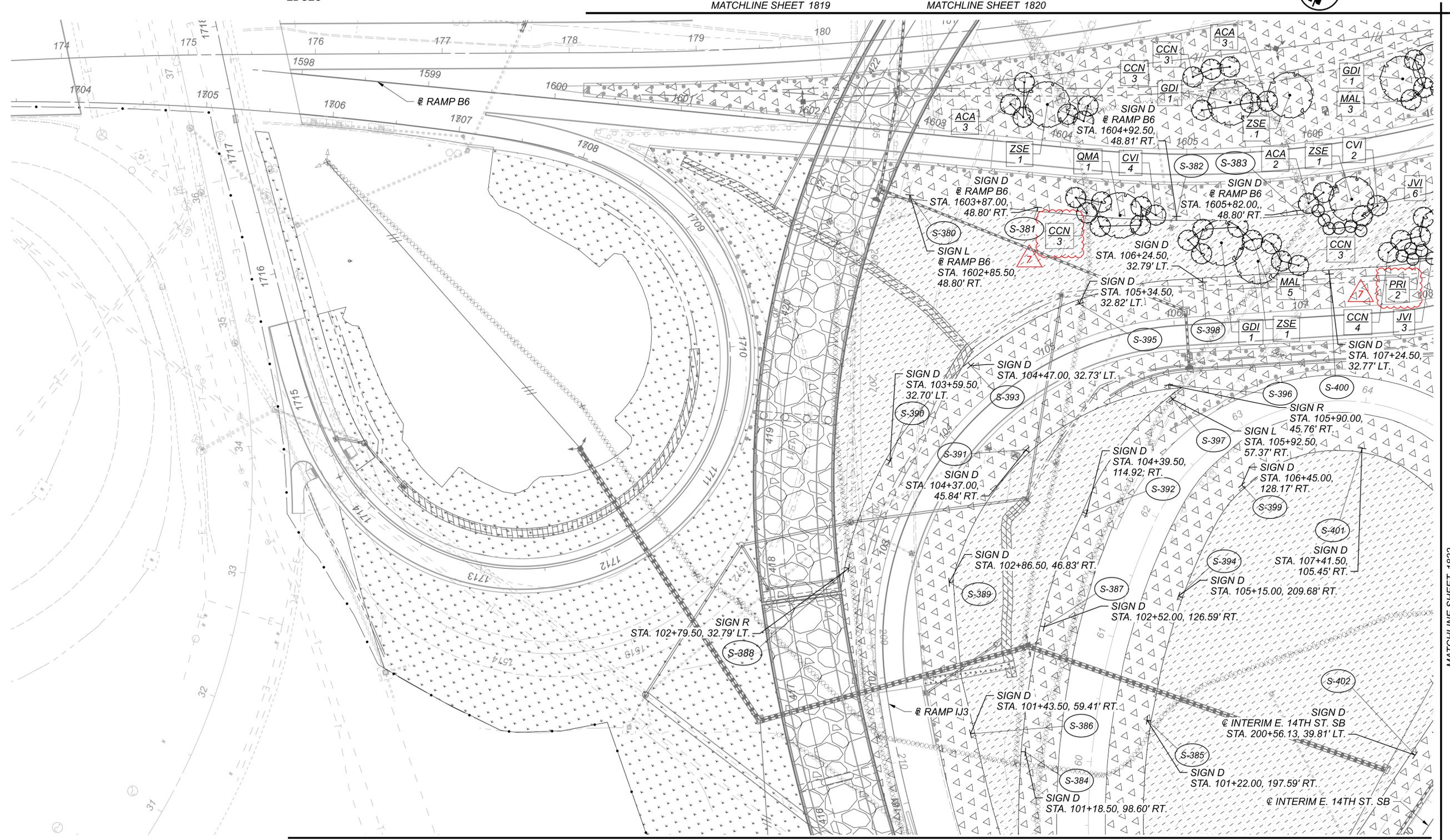
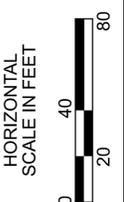


ITEM 659 - CLASS 5B SEEDING (NATIVE WILDFLOWER MIX)

TYP 30' OFFSET OF PAVEMENT EDGES

NOTES:

- 1. FOR LIMITED ACCESS FACILITIES: TREES SHALL BE PLANTED MIN. 30'-0" BACK FROM EDGE OF PAVEMENT WHEN GUARDRAIL IS NOT PRESENT
- 2. ALL STA. CALL-OUTS DIMENSIONED OFF @ RAMP IJ3 UNLESS OTHERWISE NOTED.



PLANTING PLAN SHEET 14

DESIGN AGENCY

Michael Baker INTERNATIONAL

DESIGNER

BDC

REVIEWER

JCF 01/10/24

PROJECT ID

82382

SHEET TOTAL

1821 2696

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS:

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:

AS-1-15	REVISED	07-17-15
AS-2-15	REVISED	01-18-19
SBR-1-20	REVISED	07-19-24

AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	SEE TITLE SHEET
840	DATED	04-15-22
855	DATED	04-20-18
866	DATED	04-21-17
869	DATED	10-17-14
894	DATED	04-16-21

DESIGN SPECIFICATIONS:

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

SPECIAL DESIGN SPECIFICATIONS:

THIS BRIDGE REQUIRED THE USE OF A THREE DIMENSIONAL FINITE ELEMENT MODEL TO ANALYZE THE STRUCTURE, IN WHICH ALL STRUCTURAL COMPONENTS ARE EXPLICITLY MODELED (GIRDERS, DECK, AND ALL CROSSFRAME MEMBERS). THE COMPUTER PROGRAM USED FOR THE STRUCTURAL ANALYSIS WAS LARSA 4D (VERSION 8.00.R9021). THE BRIDGE COMPONENT FORCES WERE DETERMINED BY THIS METHOD AND THE LOAD DISTRIBUTION WAS DETERMINED AS FOLLOWS:

DEAD LOAD DISTRIBUTION: STRUCTURAL STEEL SELF-WEIGHT (NON-COMPOSITE) INCLUDES A 5% INCREASE OF STEEL DENSITY TO ACCOUNT FOR MISCELLANEOUS STEEL DETAILS. THE WEIGHT OF THE CONCRETE DECK SLAB (NON-COMPOSITE) IS PLACED AS A UNIFORMLY DISTRIBUTED LOAD, AND IS DETERMINED BY TRIBUTARY WIDTH TO EACH GIRDER. THE WEIGHT OF THE CONCRETE HAUNCH (NON-COMPOSITE) IS PLACED AS A UNIFORMLY DISTRIBUTED LOAD ALONG EACH GIRDER. EDGE RAILING LOADS (COMPOSITE) WERE PLACED AS UNIFORM SURFACE LOAD TO THE OVERHANG DECK PLATES, AND THE FUTURE WEARING SURFACE LOAD OF 60 PSF (COMPOSITE) WAS PLACED ON THE CONCRETE DECK AS A UNIFORM SURFACE LOAD IN THE THREE DIMENSIONAL FINITE ELEMENT MODEL.

LIVE LOAD DISTRIBUTION: A LIVE LOAD INFLUENCE SURFACE, IN CONJUNCTION WITH THE THREE DIMENSIONAL FINITE ELEMENT MODEL, WAS USED FOR LIVE LOAD ANALYSIS. INFLUENCE ORDINATES ARE DETERMINED WITHIN THE FINITE ELEMENT PROGRAM BY APPLYING A VERTICAL UNIT LOAD AT LONGITUDINAL AND TRANSVERSE POSITIONS AT DEFINED INCREMENTS ON THE CONCRETE DECK. LIVE LOADS ARE THEN PLACED ON THE INFLUENCE SURFACE AT CRITICAL LOCATIONS TO DETERMINE THE MAXIMUM/MINIMUM STRUCTURAL COMPONENT FORCE EFFECT BASED ON THE LONGITUDINAL AND TRANSVERSE STIFFNESS. THE LIVE LOAD DISTRIBUTION FACTORS VARY ALONG THE WIDTH AND LENGTH OF THE STRUCTURE.

OPERATIONAL IMPORTANCE:

A LOAD MODIFIER OF 1.0 HAS BEEN ASSUMED FOR THE DESIGN OF THIS STRUCTURE IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.5 AND THE ODOT BRIDGE DESIGN MANUAL.

REDUNDANCY:

THE FOLLOWING ITEMS WERE CONSIDERED NON-REDUNDANT FOR DESIGN AND INCLUDED A LOAD MODIFIER EQUAL TO 1.05 IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS, ARTICLE 1.3.4: PIER 8 CAP AND COLUMNS

DESIGN LOADING:

HL-93
 FUTURE WEARING SURFACE (FWS) OF 0.060 KIPS/SQ.FT.

DESIGN DATA:

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)
 CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4.0 KSI (SUBSTRUCTURE)
 CONCRETE CLASS QC4 - COMPRESSIVE STRENGTH 4.0 KSI (MASS CONCRETE)
 CONCRETE CLASS QC4 - COMPRESSIVE STRENGTH 6.0 KSI (MASS CONCRETE) PIER 8 CAP
 CONCRETE CLASS QC5, WITH 3/8-IN. MAX. AGGREGATE SIZE: COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT) AT PIER 3
 CONCRETE CLASS QC4, WITH 3/8-IN. MAX. AGGREGATE SIZE: COMPRESSIVE STRENGTH 4.5 KSI (DRILLED SHAFT) AT PIER 7

CONCRETE REINFORCEMENT:

EPOXY COATED STEEL REINFORCEMENT - MINIMUM YIELD STRENGTH 60 KSI
 (DECK SLABS, RAILING, ABUTMENTS, PIERS
 AND APPROACH SLABS)
 GFRP REINFORCEMENT - C&MS 705.28 (MODULUS = 8700 KSI)(RAILING)

STRUCTURAL STEEL - ASTM A709 GRADE 50 - YIELD STRENGTH 50 KSI

SHEET PILING - ASTM A572 GRADE 50 - YIELD STRENGTH 50 KSI

CAST-IN PLACE STEEL PIPE PILES - ASTM A252, STEEL PIPE GRADE 3
 MINIMUM YIELD STRENGTH 45 KSI

POST-TENSIONING DESIGN DATA:

A. POST-TENSIONING STRANDS SHALL BE IN ACCORDANCE WITH ASTM A416, GRADE 270, LOW RELAXATION.

B. THE DESIGN IS BASED UPON THE FOLLOWING INITIAL TENDON STRESSES AND TENDON CHARACTERISTICS:

DIAMETER: 0.6 INCHES
 WOBBLE COEFFICIENT: 0.0002
 FRICTION COEFFICIENT: 0.23
 ANCHOR SET: 0.25 INCHES
 MAXIMUM JACKING STRESS: 195 KSI
 MAXIMUM STRESS AT ANCHORAGE AFTER SEATING: 187 KSI
 MAXIMUM STRESS OTHER LOCATIONS AFTER SEATING: 187 KSI
 APPARENT MODULUS OF ELASTICITY: 28,500 KSI

C. A MINIMUM COMPRESSIVE STRENGTH OF 5,000 PSI SHALL BE OBTAINED PRIOR TO STRESSING OF POST-TENSIONING TENDONS.

MONOLITHIC WEARING SURFACE:

MONOLITHIC WEARING SURFACE IS ASSUMED, FOR DESIGN PURPOSES, TO BE 1" THICK.

REAR ABUTMENT PILE DRIVING CONSTRAINTS:

PRIOR TO DRIVING ABUTMENT PILES TO THE ULTIMATE BEARING VALUE (UBV), CONSTRUCT THE MSE WALL AND THE BRIDGE APPROACH EMBANKMENT BEHIND THE ABUTMENT UP TO THE BOTTOM OF THE FOOTING FOR A MINIMUM DISTANCE OF 200 FEET BEHIND THE REAR ABUTMENT. THE CONTRACTOR MAY PRE-DRIVE ABUTMENT PILES BEFORE CONSTRUCTING MSE WALLS. PRE-DRIVING CONSISTS OF INSTALLING THE ABUTMENT PILES INTO THE SOIL ONLY AS FAR AS NECESSARY SO THAT THE PILE WILL REMAIN VERTICAL DURING MSE WALL CONSTRUCTION. IF PRE-DRIVING PILES, INSTALL PILE SLEEVES AROUND PILES BEFORE CONSTRUCTING THE MSE WALL. PROVIDE AT LEAST 3-FT OF PILE ABOVE THE TOP OF THE PILE SLEEVE TO MEET THE REQUIREMENTS OF C&MS 507.09 REGARDING SPLICES.

IF NOT PRE-DRIVING ABUTMENT PILES, INSTALL THE ABUTMENT PILES THROUGH PILE SLEEVES AFTER THE ABOVE REQUIRED MSE WALL AND EMBANKMENT HAVE BEEN CONSTRUCTED.

ITEM 203 EMBANKMENT, AS PER PLAN:

PLACE AND COMPACT EMBANKMENT MATERIAL IN 6 INCH LIFTS FOR THE CONSTRUCTION OF THE APPROACH EMBANKMENT BETWEEN STATIONS 409+67.00 TO 431+97.00.

REAR ABUTMENT PROPRIETARY RETAINING WALL DATA:

THE PROPRIETARY WALL SUPPLIER SHALL DESIGN THE INTERNAL STABILITY OF A MECHANICALLY STABILIZED EARTH (MSE) WALL IN ACCORDANCE WITH SS840 TO SUPPORT THE ABUTMENT. THE DESIGN FOR INTERNAL STABILITY SHALL INCLUDE A NOMINAL (I.E. UNFACTORED) HORIZONTAL STRIP LOAD DUE TO FRICTION (FR) FROM THE SUPERSTRUCTURE OF 1.85 K/FT AT THE REAR ABUTMENT (WALL N) APPLIED PERPENDICULAR TO THE FACE OF WALL AT THE BASE OF THE CONCRETE FOOTING. THIS STRIP LOAD DOES NOT INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL. HOWEVER, THE PROPRIETARY WALL SUPPLIER SHALL INCLUDE EARTH PRESSURE LOADS FROM THE ABUTMENT BACKFILL IN THE DESIGN CALCULATIONS.

FRICTION DRILLED SHAFTS:

THE MAXIMUM FACTORED LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT IS 2038.9 KIPS AT PIER 3 AND 2534.0 KIPS AT PIER 7. THIS LOAD IS RESISTED BY FRICTIONAL SIDE RESISTANCE ALONG THE LENGTH OF THE DRILLED SHAFT AND BY TIP RESISTANCE. AT PIER 3, THE FACTORED SIDE RESISTANCE IS 1707.3 KIPS, ASSUMED TO ACT ALONG THE ENTIRE LENGTH OF THE DRILLED SHAFT, AND THE FACTORED TIP RESISTANCE IS 334.0 KIPS. AT PIER 7, THE FACTORED SIDE RESISTANCE IS 2115.3 KIPS, ASSUMED TO ACT ALONG THE BOTTOM 83 FEET OF THE DRILLED SHAFT, AND THE FACTORED TIP RESISTANCE IS 424.6 KIPS.

ITEM 524 - DRILLED SHAFTS, 90" DIAMETER, ABOVE BEDROCK, AS PER PLAN:

INSTALLATION OF DRILLED SHAFTS AT PIER 7 MAY CONFLICT WITH EXISTING FOUNDATIONS, SPECIALIZED EQUIPMENT, MATERIAL, AND ALL NECESSARY LABOR TO PERFORM THIS WORK WILL BE CONSIDERED INCIDENTAL AND INCLUDED WITH PAY ITEM 524-DRILLED SHAFTS, 90" DIAMETER, ABOVE BEDROCK, AS PER PLAN. REFER TO FOUNDATION PLANS FOR APPROXIMATE LOCATIONS OF EXISTING PILES.

LATERALLY LOADED DRILLED SHAFTS:

THE MAXIMUM FACTORED LATERAL LOAD TO BE SUPPORTED BY EACH DRILLED SHAFT AT PIER 3 IS 58.5 KIPS. THIS LOAD PRODUCES A MAXIMUM FACTORED BENDING MOMENT OF 934 KIP-FEET, AND A MAXIMUM FACTORED SHEAR OF 58.5 KIPS, WITHIN THE DRILLED SHAFT.

THE MAXIMUM FACTORED LATERAL LOAD AND BENDING MOMENT TO BE SUPPORTED BY EACH DRILLED SHAFT AT PIER 7 ARE 100 KIPS AND 3739 KIP-FEET, RESPECTIVELY. THESE LOADS PRODUCE A MAXIMUM FACTORED BENDING MOMENT OF 5108 KIP-FEET, AND A MAXIMUM FACTORED SHEAR OF 133 KIPS, WITHIN THE DRILLED SHAFT.

ITEM 524 - DRILLED SHAFTS, MISC.: 90" DIAMETER DEMONSTRATION DRILLED SHAFT

PART 1: DESCRIPTION

THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO CONSTRUCT A DEMONSTRATION DRILLED SHAFT FOR TESTING AND EVALUATION TO VERIFY THE PROPOSED CONSTRUCTION METHODS FOR THE PRODUCTION DRILLED SHAFTS.

5 COMPLETE THE INSTALLATION OF THE DEMONSTRATION DRILLED SHAFT A MINIMUM OF 30 DAYS PRIOR TO THE START OF CONSTRUCTION OF THE PRODUCTION DRILLED SHAFTS. THE DEPARTMENT WILL CONSIDER THE DEMONSTRATION DRILLED SHAFT INSTALLATION COMPLETE AFTER RECEIVING WRITTEN ACCEPTANCE FROM THE ENGINEER.

PART 2: MATERIALS

THE DEMONSTRATION DRILLED SHAFT SHALL USE THE SAME CONCRETE MIX DESIGN AND STEEL REINFORCEMENT AS THE PRODUCTION DRILLED SHAFTS.

PART 3: EXECUTION

SUBMIT A DRILLED SHAFT INSTALLATION PLAN TO THE ENGINEER FOR ACCEPTANCE IN ACCORDANCE WITH THE REQUIREMENTS OF C&MS 524.03. CONSTRUCT AT LEAST ONE DEMONSTRATION DRILLED SHAFT IN THE AREA SHOWN IN THE PLANS AND IN ACCORDANCE WITH THE ACCEPTED WRITTEN INSTALLATION. UPON CONSTRUCTION OF THE DEMONSTRATION DRILLED SHAFT, AND RECEIPT OF TESTING AND EVALUATION RESULTS CONFIRMING THE DEMONSTRATION DRILLED SHAFT HAS BEEN INSTALLED IN ACCORDANCE WITH CONTRACT DOCUMENTS, THE ENGINEER WILL ISSUE A LETTER ACCEPTING THE INSTALLATION PLAN FOR THE CONSTRUCTION OF THE SUBSEQUENT PRODUCTION DRILLED SHAFTS.

5 IF ANY MODIFICATIONS TO THE INSTALLATION PLAN ARE MADE, WHETHER DUE TO TESTING AND EVALUATION RESULTS OR FOR ANY OTHER REASON, THE DEPARTMENT WILL NOT REQUIRE CONSTRUCTION OF AN ADDITIONAL DEMONSTRATION SHAFT UNLESS REQUIRED BY THE ENGINEER. IF AN ADDITIONAL DEMONSTRATION DRILLED SHAFT IS REQUIRED BY THE ENGINEER IT WILL BE PAID FOR UNDER THE PAY ITEMS FOR DEMONSTRATION DRILLED SHAFT AND TESTING, AS LONG AS THE INSTALLATION AND TESTING ARE SUCCESSFUL, OTHERWISE IT WILL BE AT NO ADDITIONAL COST TO THE DEPARTMENT.

7 THE DIAMETER, REINFORCING, INSTALLATIONS METHODS, AND OTHER MISCELLANEOUS DETAILS OF THE DEMONSTRATION SHAFT SHALL BE THE SAME AS THE PRODUCTION DRILLED SHAFTS.

SUBMIT THE LOCATION OF THE DEMONSTRATION SHAFT TO THE ENGINEER FOR ACCEPTANCE. LOCATE THE DEMONSTRATION DRILLED SHAFT SUCH THAT NO INTERFERENCE OCCURS WITH THE FOUNDATIONS OF EXISTING OR PROPOSED STRUCTURES, THE PROPOSED MAINTENANCE OF TRAFFIC, OR EXISTING OR PROPOSED UTILITIES.

TEST THE DEMONSTRATION SHAFT BY THERMAL INTEGRITY PROFILING (TIP) ACCORDING TO ASTM D7949, METHOD B; BY CROSSHOLE SONIC LOGGING (CSL) ACCORDING TO ASTM D6760; BY HIGH-STRAIN DYNAMIC TESTING ACCORDING TO ASTM D4945; AND BY BI-DIRECTIONAL STATIC AXIAL COMPRESSIVE LOAD TESTING ACCORDING TO ASTM D8169.

PART 4: MEASUREMENT AND PAYMENT

THE DEPARTMENT WILL MEASURE DEMONSTRATION DRILLED SHAFT BY THE NUMBER OF FEET, MEASURED ALONG THE AXIS OF THE DRILLED SHAFT FROM THE REQUIRED BOTTOM ELEVATION OF THE SHAFT TO THE PROPOSED TOP PLAN ELEVATION.

IN ADDITION TO THE PROVISIONS OF C&MS 524.17, THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF DEMONSTRATION DRILLED SHAFT AFTER INSTALLATION OF THE DEMONSTRATION SHAFT AND AFTER BEING PROVIDED WITH WRITTEN TESTING AND EVALUATION RESULTS ACCEPTABLE TO THE ENGINEER.

THE CONTRACT PRICE IS FULL COMPENSATION FOR FURNISHING AND INSTALLING DRILLED SHAFTS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS, INCLUDING MOBILIZATION, SITE ACCESS, AND FINAL REMOVAL OF THE SHAFT TO A DEPTH OF AT LEAST 2 FOOT BELOW THE BOTTOM OF THE PROPOSED LIGHTWEIGHT FILL.

THE DEPARTMENT WILL PAY FOR TESTING AND EVALUATION OF THE ACCEPTED DEMONSTRATION SHAFT SEPARATELY. THE DEPARTMENT WILL NOT PAY FOR TESTING AND EVALUATION OF ADDITIONAL DEMONSTRATION DRILLED SHAFTS.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS:

ITEM 524 – DRILLED SHAFTS, MISC.: 90" DIAMETER DEMONSTRATION DRILLED SHAFT

SFN	1806910
DESIGN AGENCY	
	
DESIGNER	TJE
CHECKER	BTA
REVIEWER	
DWW	01/11/24
PROJECT ID	82382
SUBSET	TOTAL
12	167
SHEET	TOTAL
1880	2696

CUY-90-16.28 (CCG3A)

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ESTIMATED QUANTITIES

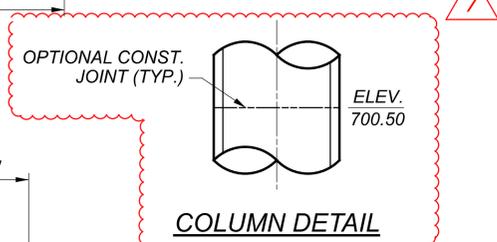
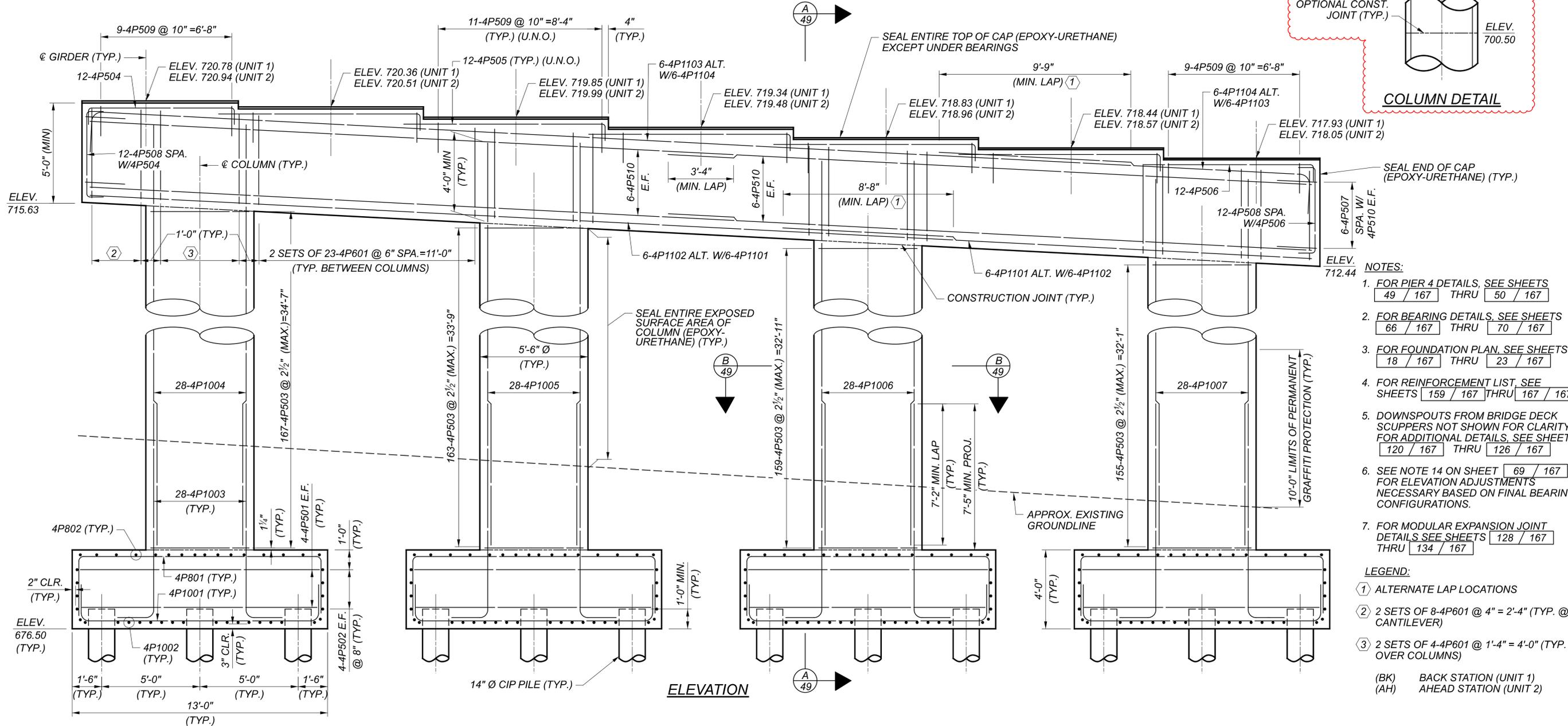
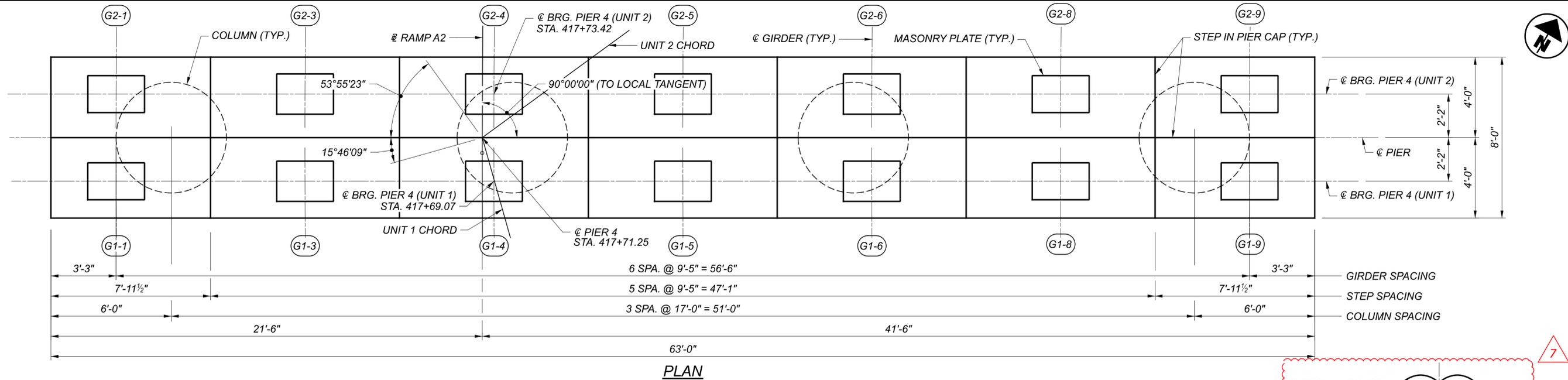
CALCULATED BY: NJH/JML DATE: May-2024
 CHECKED BY: DGJ DATE: May-2024

PARTICIPATION	ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPERSTR.	GENERAL	SHEET REF.
03/IMS/08	503	11101	LS		COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN				LS	14 / 167
03/IMS/08	503	21100	5173	CY	UNCLASSIFIED EXCAVATION	225	4948			
03/IMS/08	505	11100	LS		PILE DRIVING EQUIPMENT MOBILIZATION				LS	
03/IMS/08	507	00500	6435	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN	6435				
03/IMS/08	507	00550	6735	FT	12" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED	6735				
03/IMS/08	507	00600	13760	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		13760			
03/IMS/08	507	00650	14760	FT	14" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		14760			
03/IMS/08	507	00700	16690	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, DRIVEN		16690			
03/IMS/08	507	00750	17760	FT	16" CAST-IN-PLACE REINFORCED CONCRETE PILES, FURNISHED		17760			
03/IMS/08	507	92201	446	FT	PREBORED HOLES, AS PER PLAN	446				13 / 167
03/IMS/08	509	10000	2309681	LB	EPOXY COATED STEEL REINFORCEMENT	68448	930999	1310234		
03/IMS/08	509	30020	63147	FT	NO. 4 GFRP DEFORMED BARS			63147		
03/IMS/08	511	34446	3826	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK			3826		
03/IMS/08	511	34450	626	CY	CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET)			626		
03/IMS/08	511	41012	342	CY	CLASS QC1 CONCRETE WITH QC/QA, PIER ABOVE FOOTINGS		342			
03/IMS/08	511	44112	437	CY	CLASS QC1 CONCRETE WITH QC/QA, ABUTMENT NOT INCLUDING FOOTING	437				
03/IMS/08	511	45602	1908	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA (4 KSI)		1908			
03/IMS/08	511	45602	187	CY	CLASS QC4 MASS CONCRETE, SUBSTRUCTURE WITH QC/QA (6 KSI)		187			
03/IMS/08	511	46512	1460	CY	CLASS QC1 CONCRETE WITH QC/QA, FOOTING	179	1281			
03/IMS/08	512	10001	622	SY	SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)	51	571			15 / 167
03/IMS/08	512	10100	8194	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE)	432	3426	4336		
03/IMS/08	512	33000	56	SY	TYPE 2 WATERPROOFING	56				
03/IMS/08	513	10301	7547000	LB	STRUCTURAL STEEL MEMBERS, LEVEL 5, AS PER PLAN			7547000		
03/IMS/08	513	20000	32600	EACH	WELDED STUD SHEAR CONNECTORS			32600		
03/IMS/08	514	00060	391000	SF	FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT			391000		
03/IMS/08	514	00066	391000	SF	FIELD PAINTING STRUCTURAL STEEL, FINISH COAT			391000		
03/IMS/08	516	10010	149	FT	ARMORLESS PREFORMED JOINT SEAL				149	
03/IMS/08	516	13900	168	SF	2" PREFORMED EXPANSION JOINT FILLER	146		22		
03/IMS/08	SPECIAL	51612400	209	FT	MODULAR EXPANSION JOINT			209		14 / 167
03/IMS/08	518	12301	16	EACH	SCUPPERS, INCLUDING SUPPORTS, AS PER PLAN			16		120 / 167
03/IMS/08	518	21200	81	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC	81				
03/IMS/08	518	40000	214	FT	6" PERFORATED CORRUGATED PLASTIC PIPE	214				
03/IMS/08	518	51101	460	FT	8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN	226	234			120 / 167 AND 123 / 167
03/IMS/08	523	20001	10	EACH	DYNAMIC LOAD TESTING, AS PER PLAN	2	8			13 / 167
03/IMS/08	523	20501	10	EACH	RESTRIKE, AS PER PLAN	2	8			13 / 167
03/IMS/08	524	94946	471	FT	DRILLED SHAFTS, 72" DIAMETER, ABOVE BEDROCK		471			
03/IMS/08	524	94989	440	FT	DRILLED SHAFTS, 90" DIAMETER, ABOVE BEDROCK, AS PER PLAN		440			12 / 167
03/IMS/08	524	95000	88	FT	DRILLED SHAFTS, MISC.: 90" DIAMETER DEMONSTRATION DRILLED SHAFT		88			12 / 167
03/IMS/08	524	95100	6	EACH	DRILLED SHAFTS, MISC.: CSL TESTING, 90" DIA. SHAFT		6			12 / 167 AND 13 / 167
03/IMS/08	524	95100	12	EACH	DRILLED SHAFTS, MISC.: HIGH-STRAIN DYNAMIC TESTING OF DRILLED SHAFTS		12			12 / 167 AND 13 / 167
03/IMS/08	524	95100	1	EACH	DRILLED SHAFTS, MISC.: BI-DIRECTIONAL TESTING OF DRILLED SHAFTS		1			13 / 167
03/IMS/08	526	30010	483	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")				483	
03/IMS/08	526	90030	149	FT	TYPE C INSTALLATION				149	
03/IMS/08	SPECIAL	53000200	LS		SPECIAL - STRUCTURES MISC.: VIBRATION MONITORING				LS	13 / 167
03/IMS/08	SPECIAL	53000200	LS		SPECIAL - STRUCTURES MISC.: PRECONSTRUCTION CONDITION SURVEY				LS	13 / 167
03/IMS/08	601	21001	18	SY	CONCRETE SLOPE PROTECTION, AS PER PLAN	18				35 / 167
03/IMS/08	855	00010	12136	LB	POST-TENSIONING STRAND TENDON		12136			
03/IMS/08	869	00101	100	EACH	HIGH LOAD MULTI-ROTATIONAL (HLMR) BEARINGS, AS PER PLAN			100		68 / 167 TO 70 / 167
03/IMS/08	894	10000	12	EACH	THERMAL INTEGRITY PROFILING (TIP) TEST		12			12 / 167 AND 13 / 167

ESTIMATED QUANTITIES
 CUY-77-1587 (BRIDGE 9)
 I.R. 77 SB OVER I.R. 90 AND CR-721 (E. 14TH ST.)

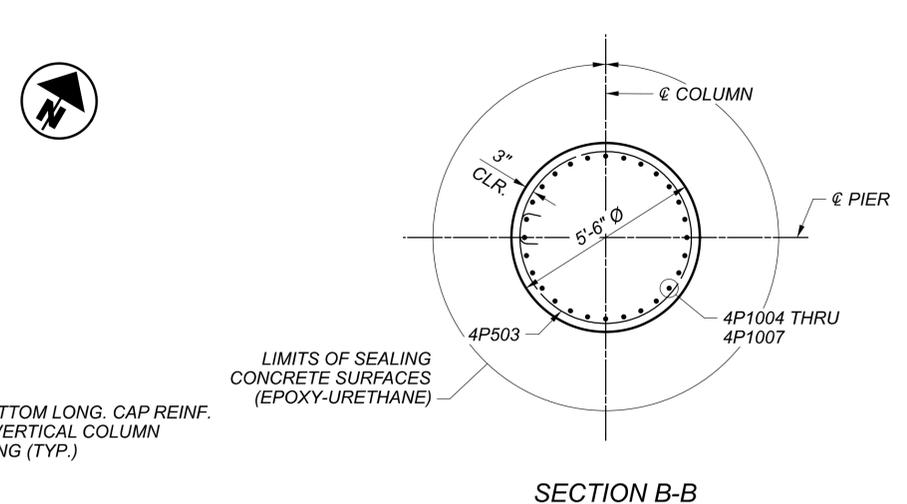
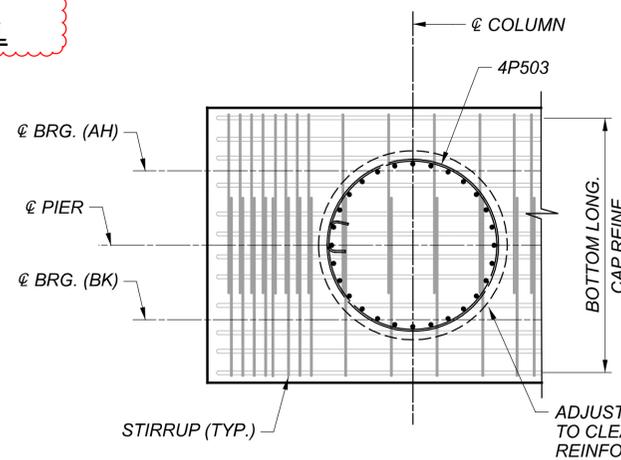
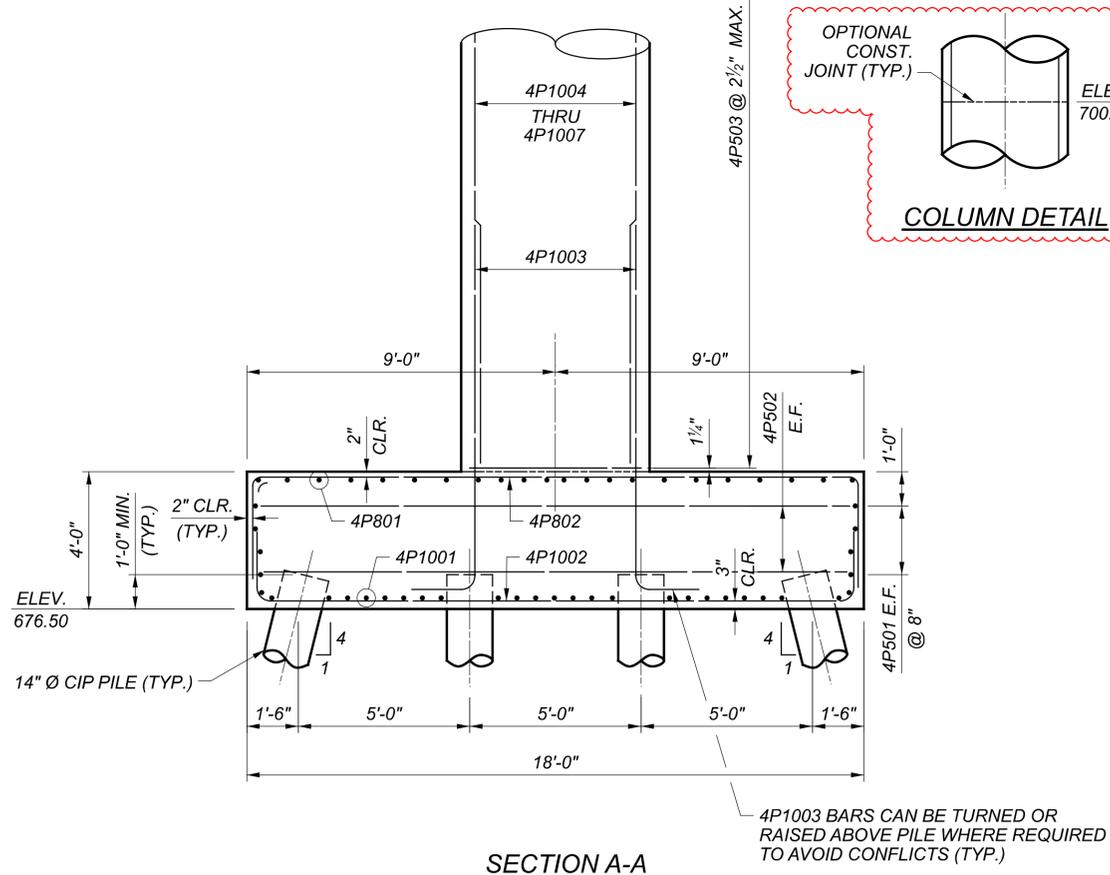
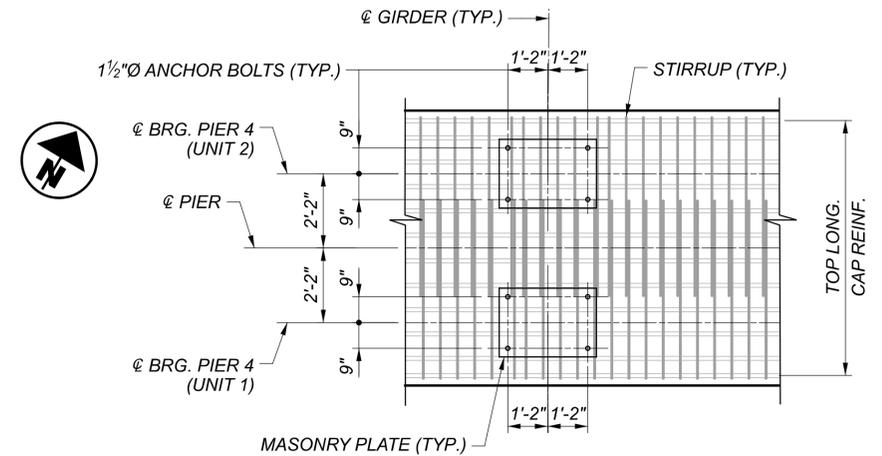
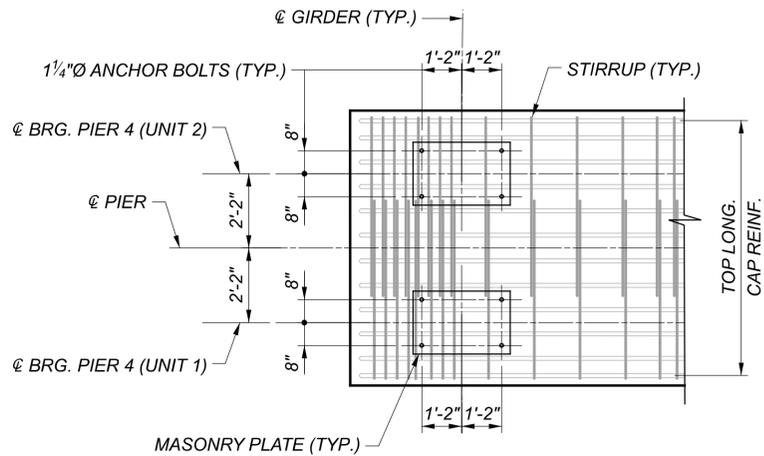
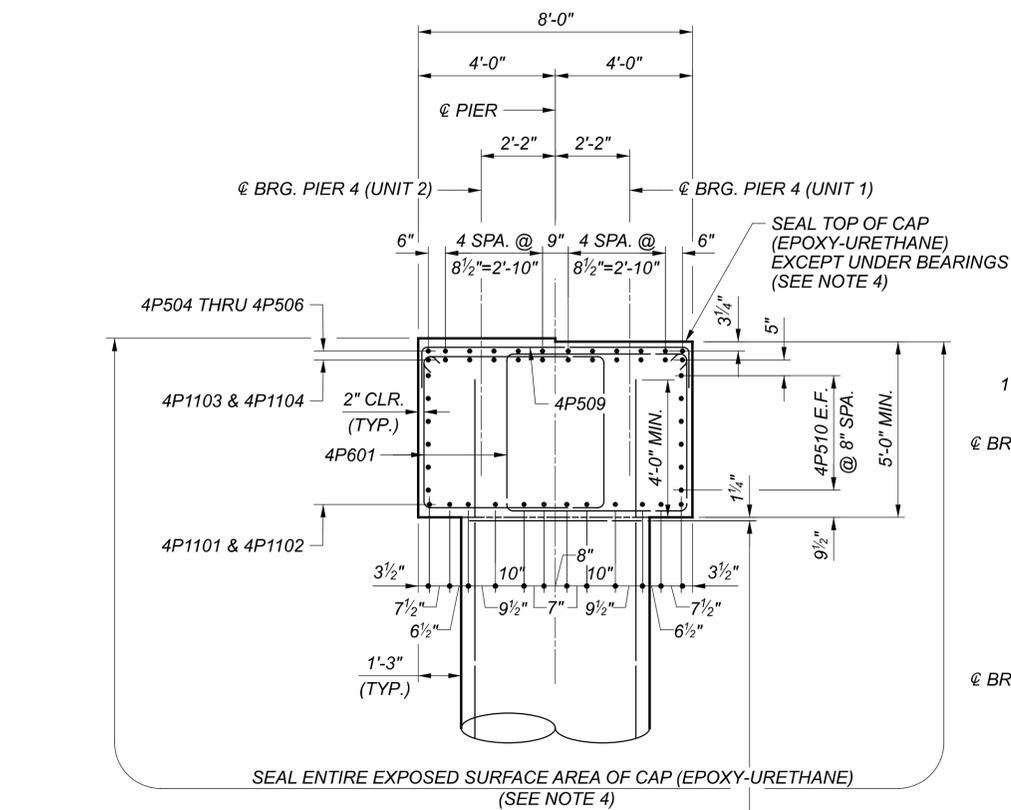
SFN	1806910
DESIGN AGENCY	
DESIGNER	BTA
CHECKER	JS
REVIEWER	DWW
DATE	01/11/24
PROJECT ID	82382
SUBSET	16
TOTAL	167
SHEET	1884
TOTAL	2696





- NOTES:**
- FOR PIER 4 DETAILS, SEE SHEETS 49 / 167 THRU 50 / 167
 - FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
 - FOR FOUNDATION PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
 - FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
 - DOWNSPOUTS FROM BRIDGE DECK SCUPPERS NOT SHOWN FOR CLARITY. FOR ADDITIONAL DETAILS, SEE SHEETS 120 / 167 THRU 126 / 167
 - SEE NOTE 14 ON SHEET 69 / 167 FOR ELEVATION ADJUSTMENTS NECESSARY BASED ON FINAL BEARING CONFIGURATIONS.
 - FOR MODULAR EXPANSION JOINT DETAILS, SEE SHEETS 128 / 167 THRU 134 / 167

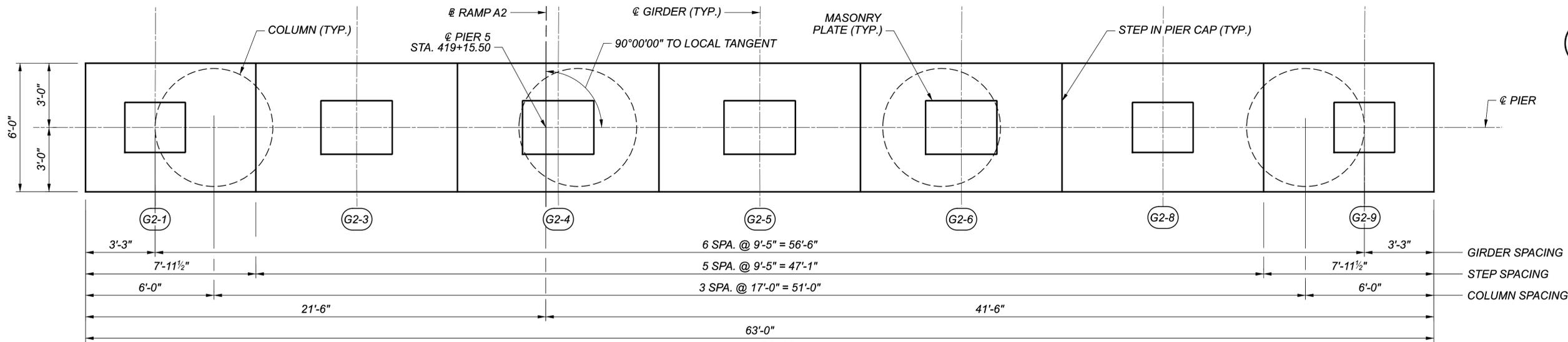
- LEGEND:**
- ① ALTERNATE LAP LOCATIONS
 - ② 2 SETS OF 8-4P601 @ 4" = 2'-4" (TYP. @ CANTILEVER)
 - ③ 2 SETS OF 4-4P601 @ 1'-4" = 4'-0" (TYP. OVER COLUMNS)
- (BK) BACK STATION (UNIT 1)
 (AH) AHEAD STATION (UNIT 2)



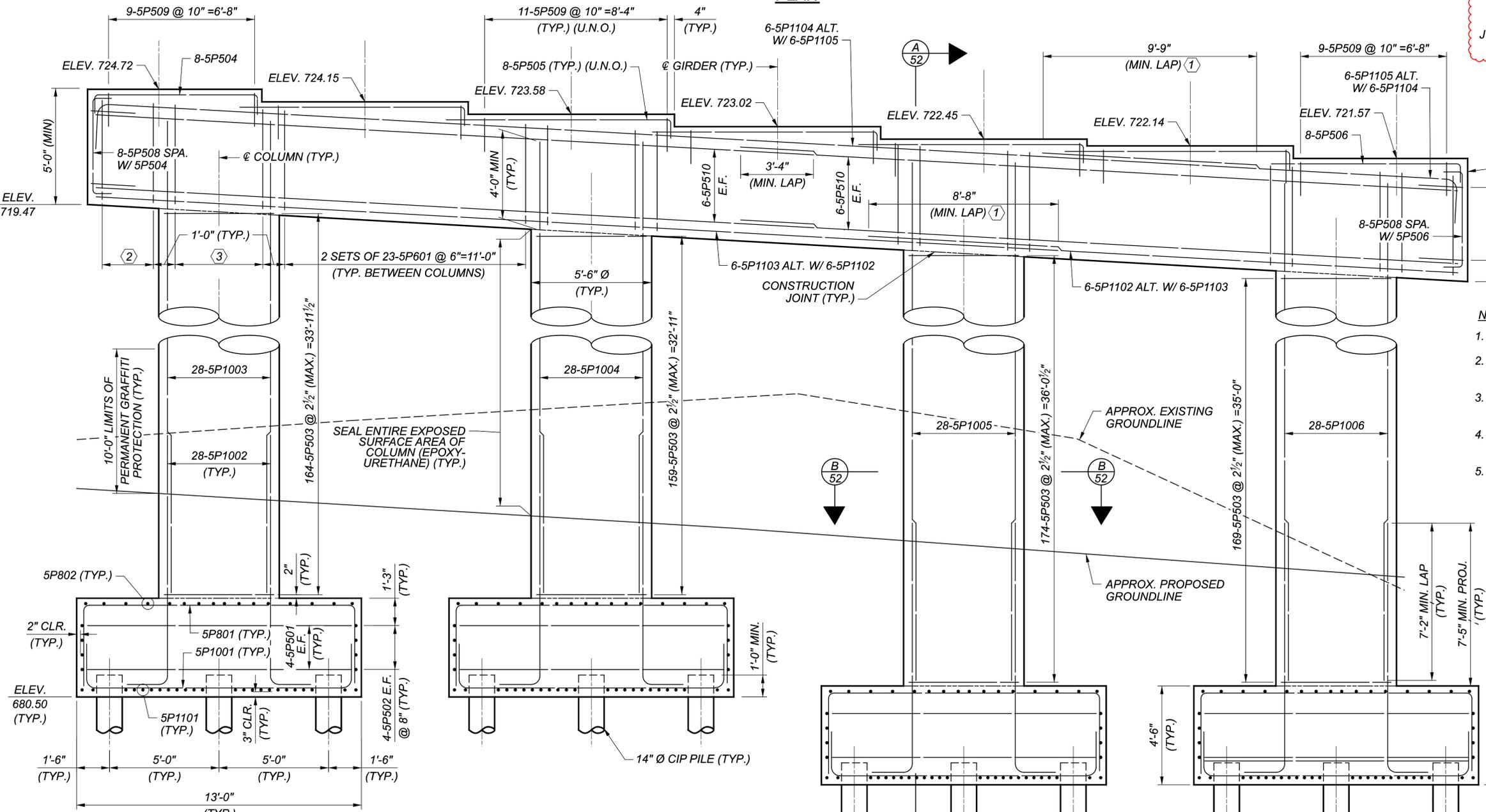
- NOTES:
- FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
 - FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
 - ACCURATELY PLACE CONCRETE REINFORCEMENT IN THE VICINITY OF THE BRIDGE SEAT TO AVOID THE PRESETTING OF BEARING ANCHORS. SET THE BEARING ANCHORS PRIOR TO POURING CONCRETE.
 - DO NOT APPLY SEALER TO THE CONCRETE SURFACES UNDER THE PROPOSED BEARING LOCATIONS. IF THESE LOCATIONS ARE SEALED, REMOVE THE SEALER TO THE SATISFACTION OF THE ENGINEER PRIOR TO SETTING THE BEARINGS. THE DEPARTMENT WILL NOT PAY FOR THIS REMOVAL.

SFN	1806910
DESIGN AGENCY	
DESIGNER	PJC
CHECKER	RBK
REVIEWER	DWW
PROJECT ID	82382
SUBSET	49
TOTAL	167
SHEET	1917
TOTAL	2696

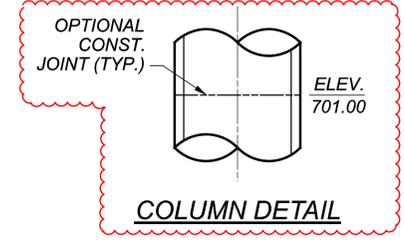




PLAN



ELEVATION



COLUMN DETAIL

NOTES:

1. FOR PIER 5 DETAILS, SEE SHEET 52 / 167
2. FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
3. FOR FOUNDATION PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
4. FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
5. SEE NOTE 14 ON SHEET 69 / 167 FOR ELEVATION ADJUSTMENTS NECESSARY BASED ON FINAL BEARING CONFIGURATIONS.

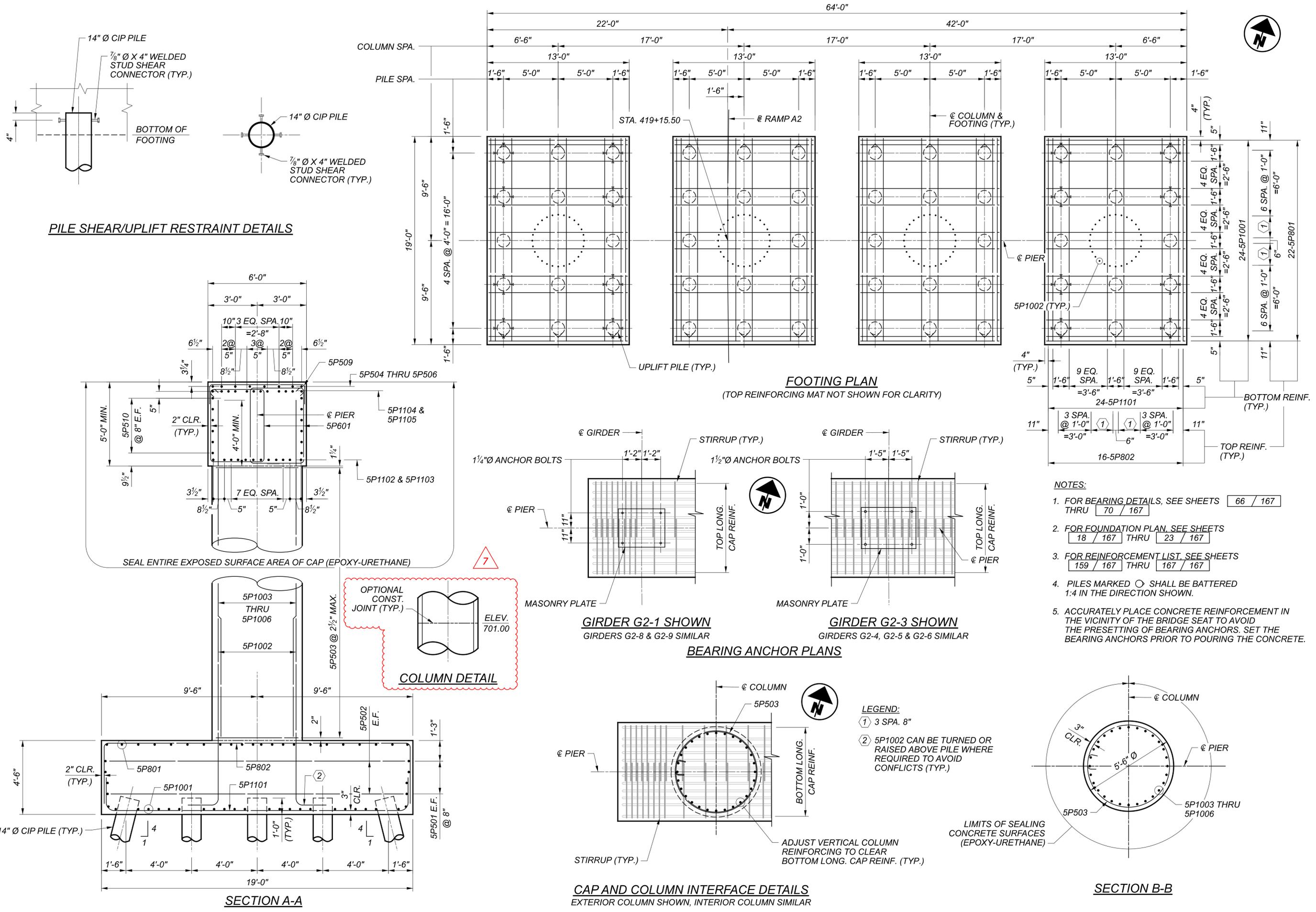
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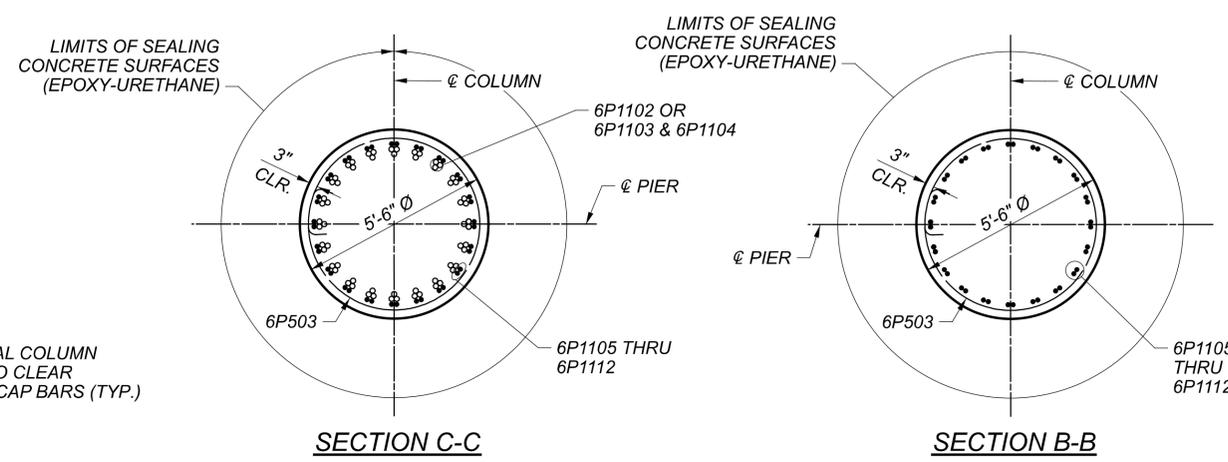
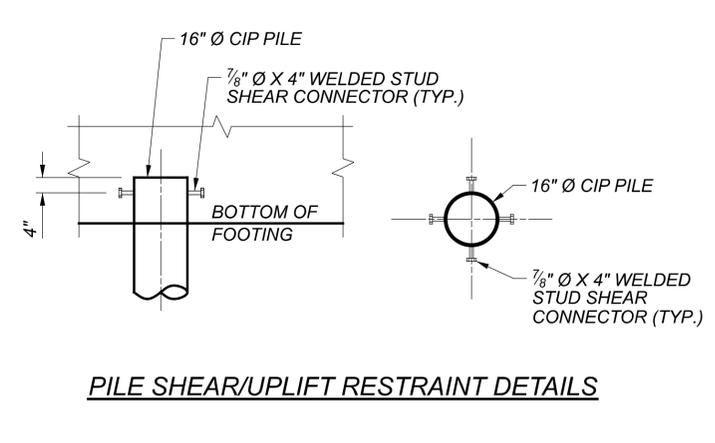
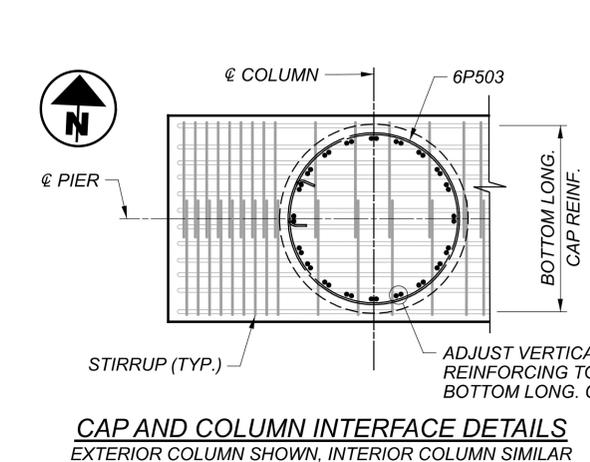
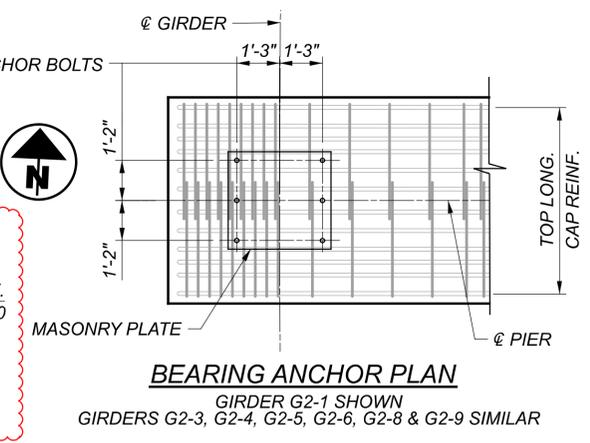
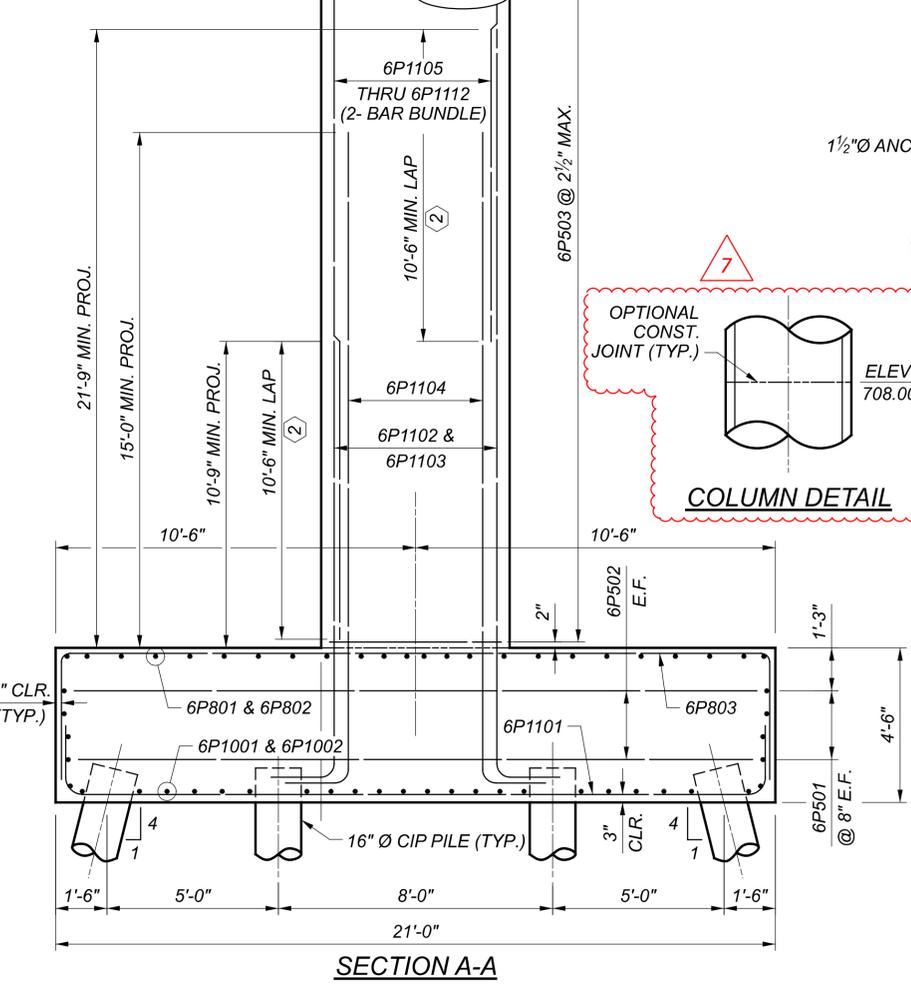
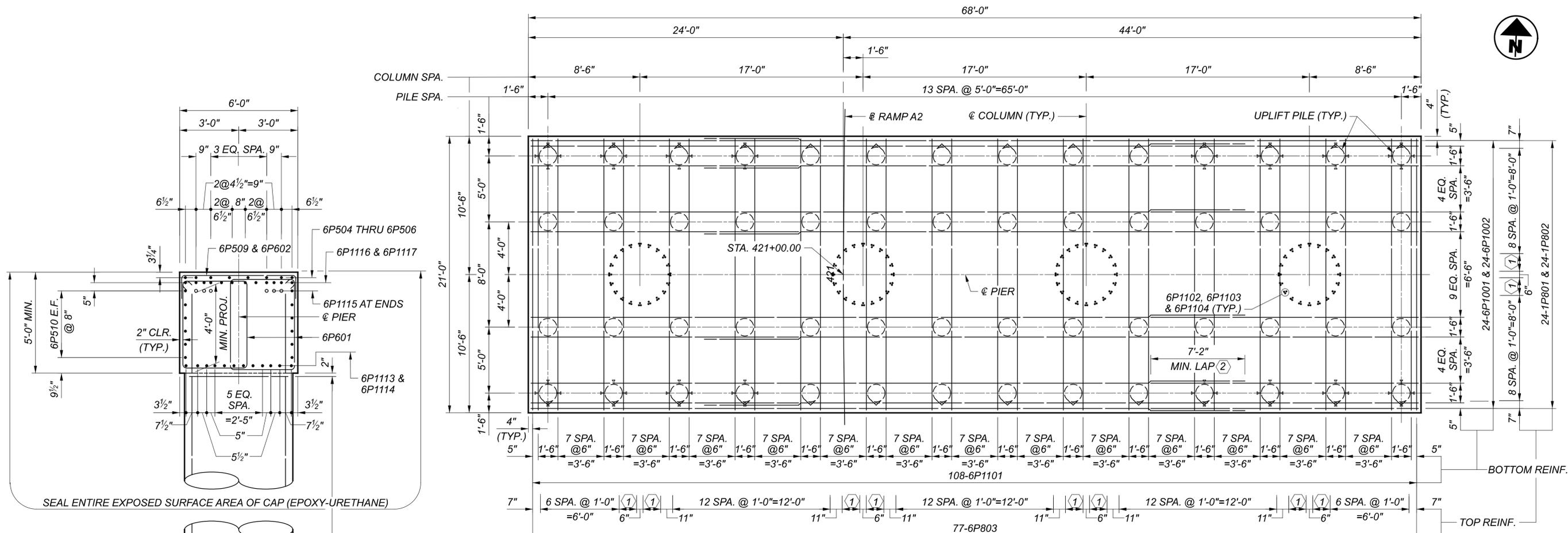
- ① ALTERNATE LAP LOCATIONS
- ② 2 SETS OF 8-5P601 @ 4" = 2'-4" (TYP. @ CANTILEVER)
- ③ 2 SETS OF 4-5P601 @ 1'-4" = 4'-0" (TYP. OVER COLUMNS)

PIER 5 PLAN AND ELEVATION
 CUY-77-1587 (BRIDGE 9)
 I.R. 77 SB OVER I.R. 90 AND CR-721 (E. 14TH ST.)

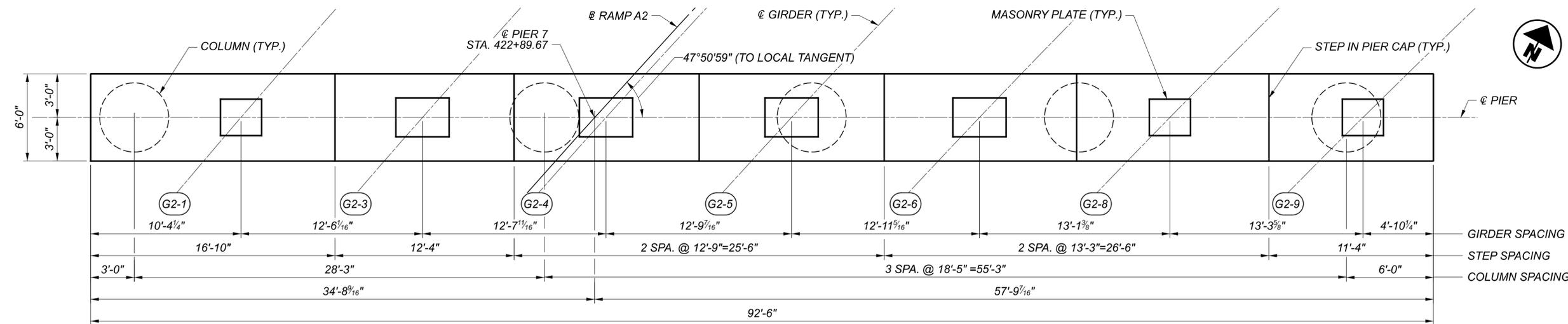
SFN	1806910
DESIGN AGENCY	
DESIGNER	PJC
CHECKER	RBK
REVIEWER	
PROJECT ID	DWW 01/11/24
	82382
SUBSET	51
TOTAL	167
SHEET	1919
TOTAL	2696



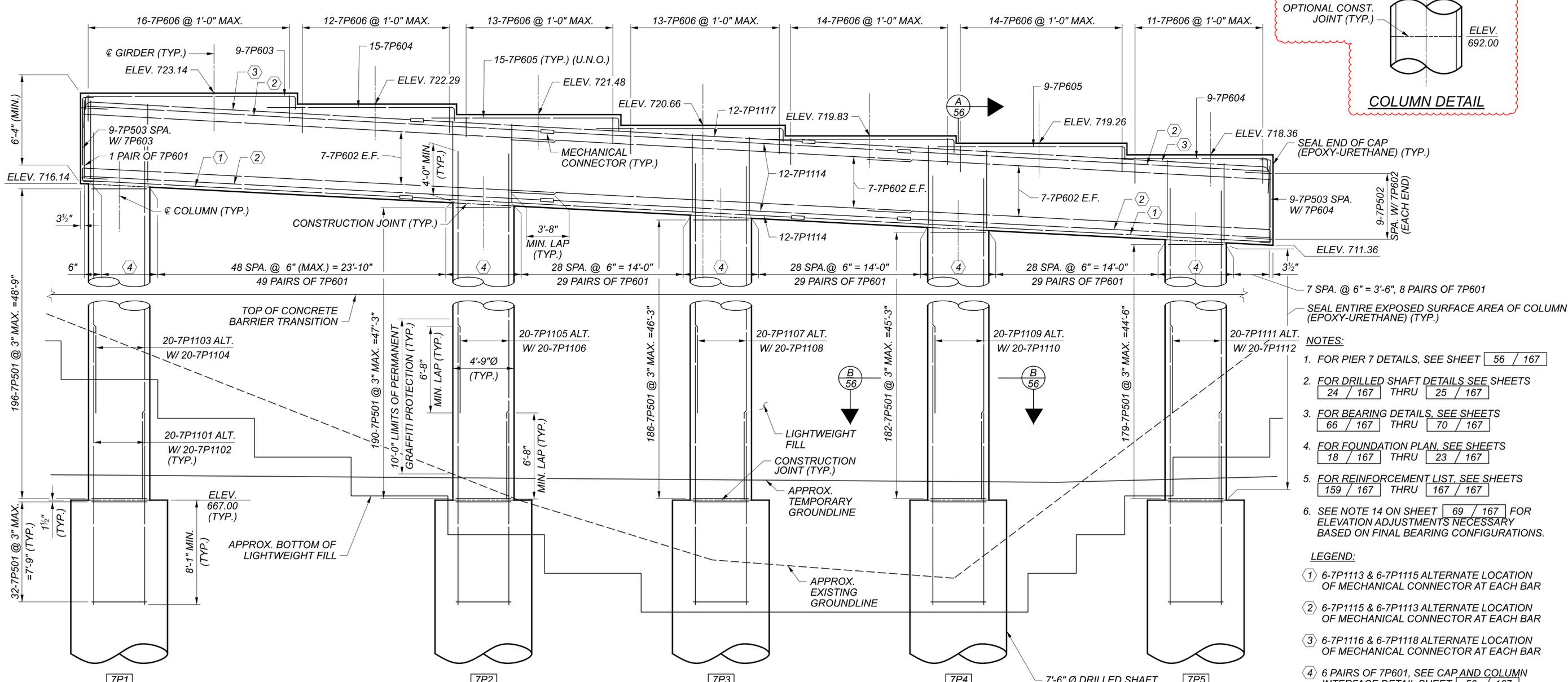




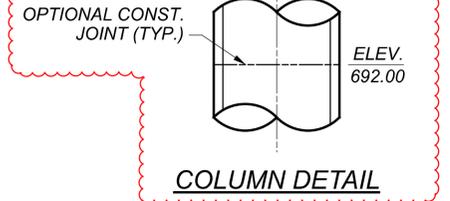
- NOTES:**
- FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
 - FOR FOUNDATION PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
 - FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
 - PILES MARKED \odot SHALL BE BATTERED 1:4 IN THE DIRECTION SHOWN.
 - ACCURATELY PLACE CONCRETE REINFORCEMENT IN THE VICINITY OF THE BRIDGE SEAT TO AVOID THE PRESETTING OF BEARING ANCHORS. SET THE BEARING ANCHORS PRIOR TO POURING THE CONCRETE.
- LEGEND:**
- (1) 2 SPA. @ 8"=1'-4"
 - (2) ALTERNATE LAP LOCATIONS



PLAN



ELEVATION



SEAL END OF CAP (EPOXY-URETHANE) (TYP.)
 9-7P502 SPA. W/ 7P602 (EACH END)
 ELEV. 718.36
 9-7P604
 ELEV. 719.26
 9-7P605
 ELEV. 719.83
 12-7P1117
 ELEV. 720.66
 15-7P605 (TYP.) (U.N.O.)
 ELEV. 721.48
 15-7P604
 ELEV. 722.29
 9-7P603
 ELEV. 723.14
 @ GIRDER (TYP.)
 16-7P606 @ 1'-0" MAX.
 12-7P606 @ 1'-0" MAX.
 13-7P606 @ 1'-0" MAX.
 13-7P606 @ 1'-0" MAX.
 14-7P606 @ 1'-0" MAX.
 14-7P606 @ 1'-0" MAX.
 11-7P606 @ 1'-0" MAX.

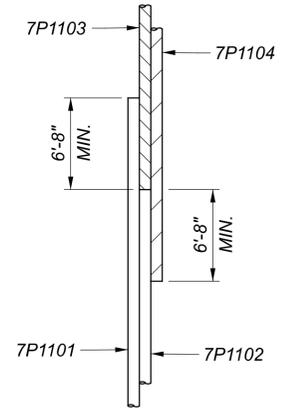
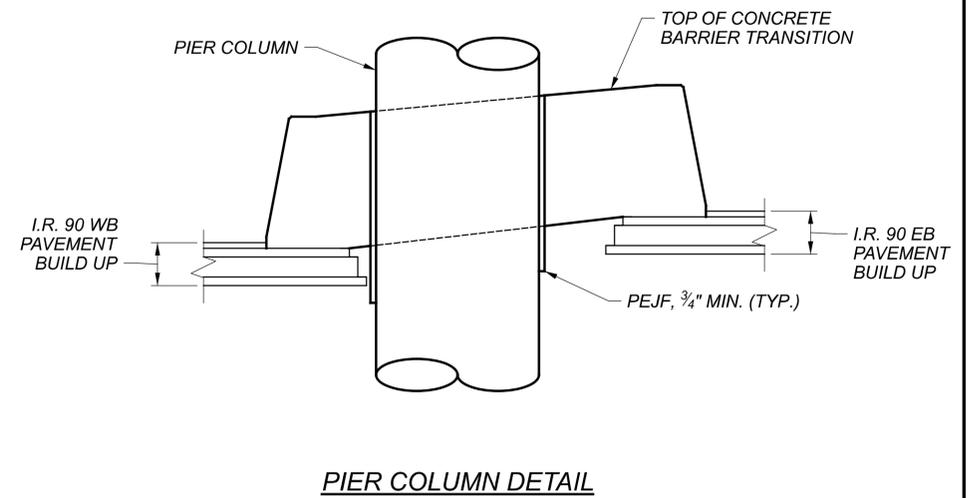
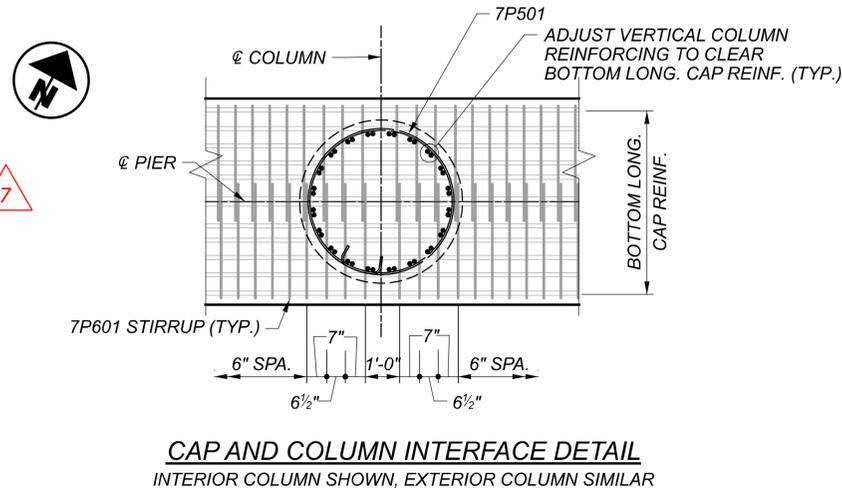
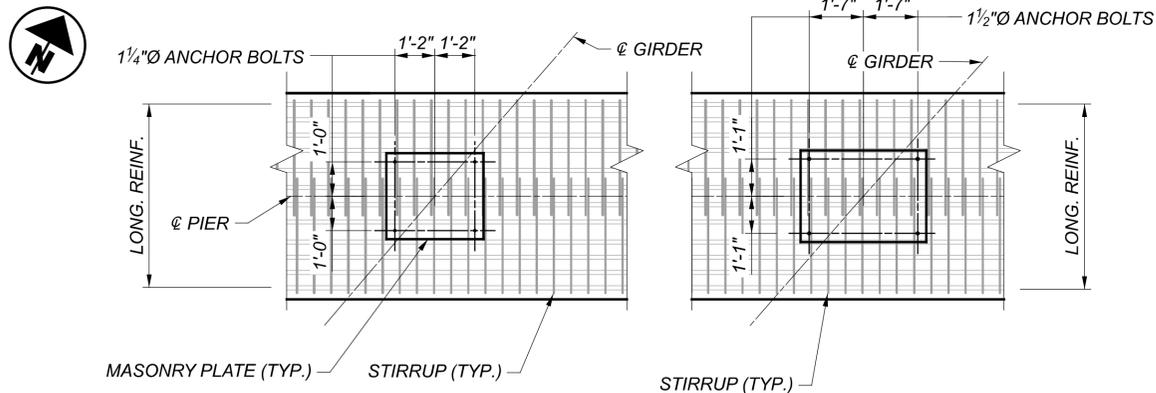
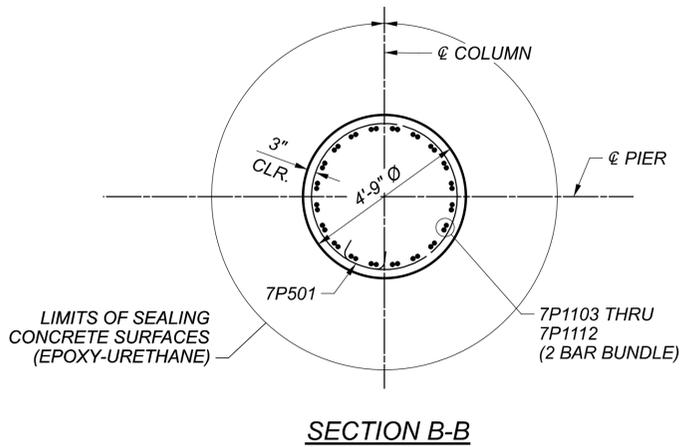
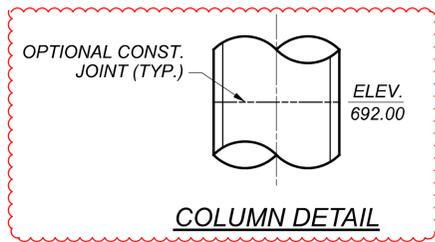
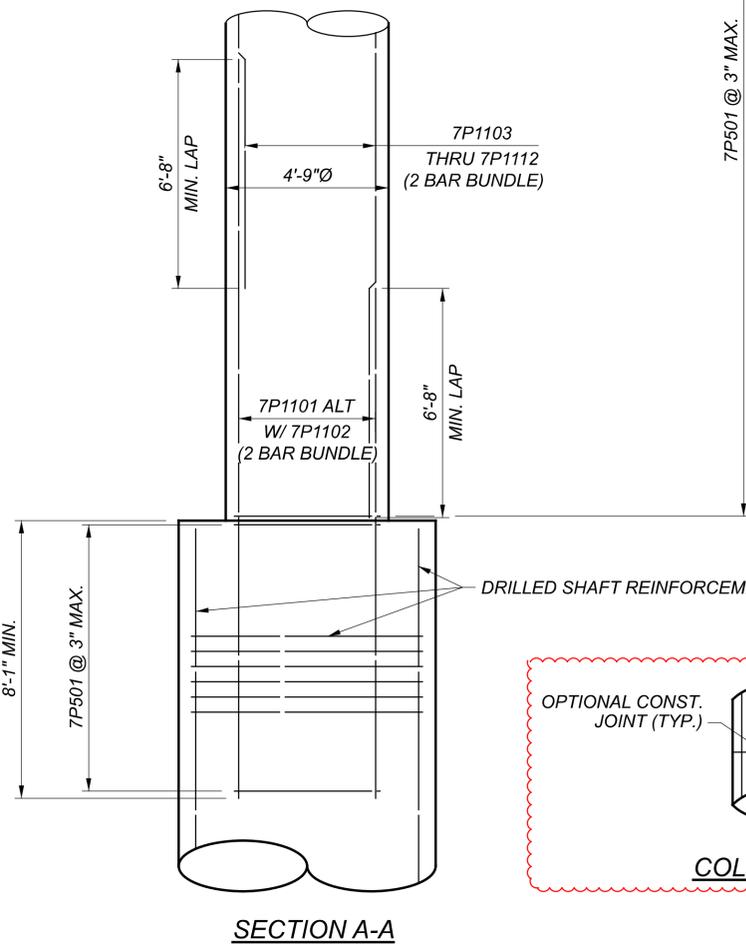
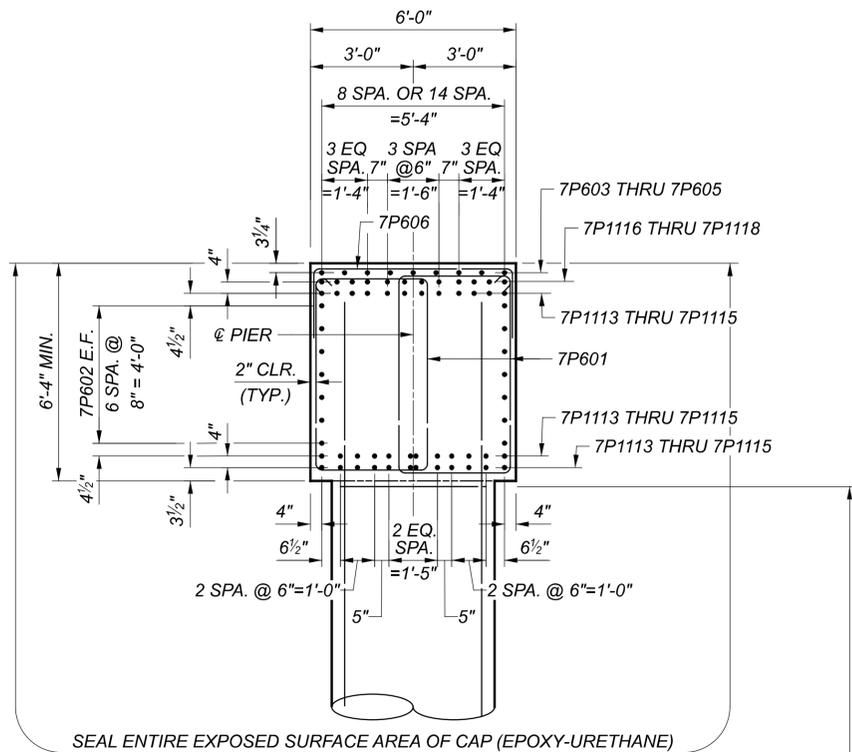
- NOTES:
1. FOR PIER 7 DETAILS, SEE SHEET 56 / 167
 2. FOR DRILLED SHAFT DETAILS SEE SHEETS 24 / 167 THRU 25 / 167
 3. FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
 4. FOR FOUNDATION PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
 5. FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
 6. SEE NOTE 14 ON SHEET 69 / 167 FOR ELEVATION ADJUSTMENTS NECESSARY BASED ON FINAL BEARING CONFIGURATIONS.

- LEGEND:
- ① 6-7P1113 & 6-7P1115 ALTERNATE LOCATION OF MECHANICAL CONNECTOR AT EACH BAR
 - ② 6-7P1115 & 6-7P1113 ALTERNATE LOCATION OF MECHANICAL CONNECTOR AT EACH BAR
 - ③ 6-7P1116 & 6-7P1118 ALTERNATE LOCATION OF MECHANICAL CONNECTOR AT EACH BAR
 - ④ 6 PAIRS OF 7P601, SEE CAP AND COLUMN INTERFACE DETAIL SHEET 56 / 167
 - # DRILLED SHAFT NUMBER

PIER 7 PLAN AND ELEVATION
 CUY-77-1587 (BRIDGE 9)
 I.R. 77 SB OVER I.R. 90 AND CR-721 (E. 14TH ST.)

SFN	1806910
DESIGN AGENCY	
DESIGNER	NJH
CHECKER	RBK
REVIEWER	
DWW	01/11/24
PROJECT ID	82382
SUBSET	55 / 167
SHEET	1923 / 2696

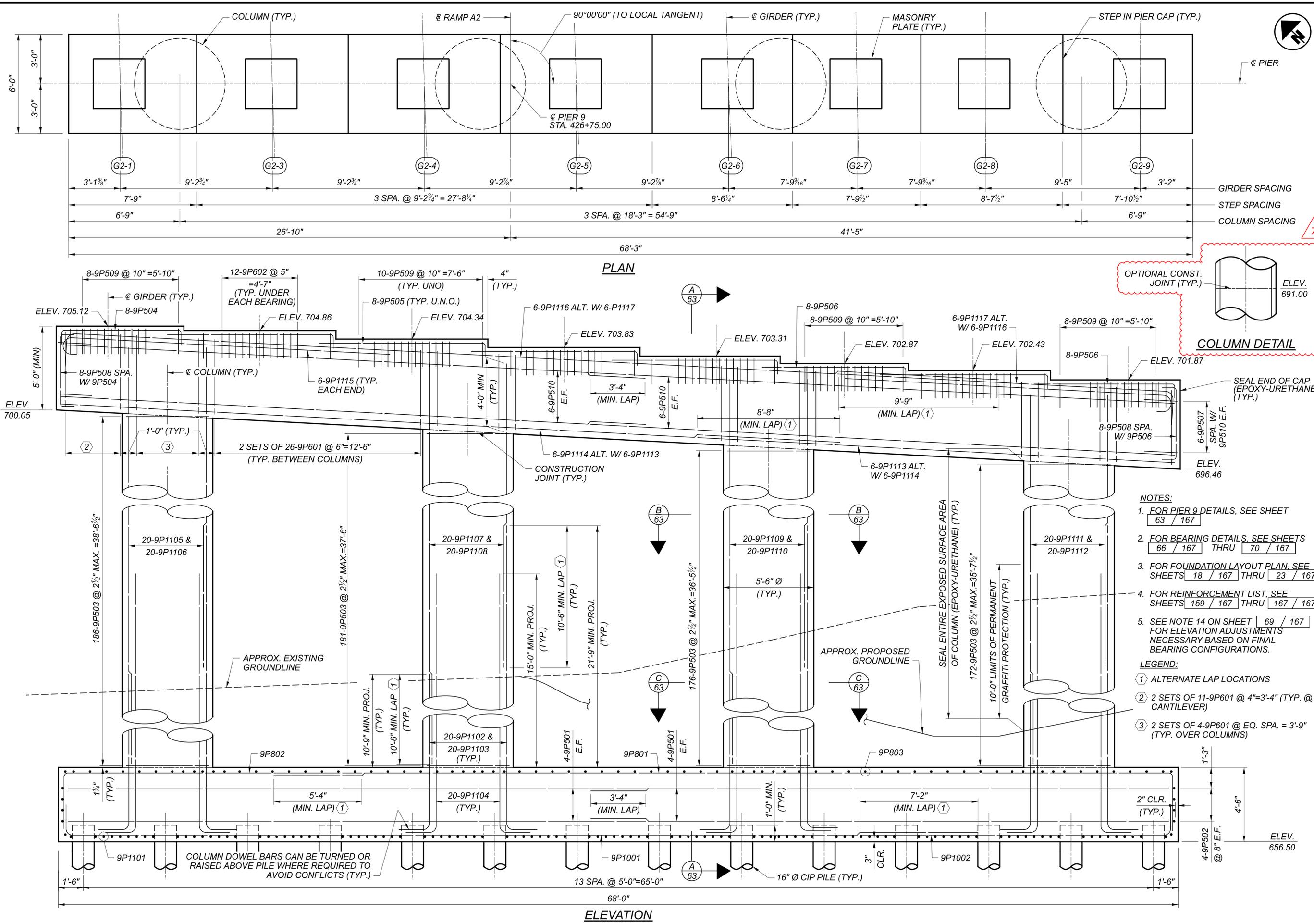




COLUMN BUNDLE LAP DETAIL
 COLUMN ABOVE DRILLED SHAFT 7P1 SHOWN, OTHERS SIMILAR

- NOTES:**
- FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
 - FOR FOUNDATION PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
 - FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
 - ACCURATELY PLACE CONCRETE REINFORCEMENT IN THE VICINITY OF THE BRIDGE SEAT TO AVOID THE PRESETTING OF BEARING ANCHORS. SET THE BEARING ANCHORS PRIOR TO POURING THE CONCRETE.
 - FOR DRILLED SHAFT DETAILS, SEE SHEETS 24 / 167 THRU 25 / 167

SFN	1806910
DESIGN AGENCY	
HR	
DESIGNER	CHECKER
NJH	RBK
REVIEWER	
DWW	01/11/24
PROJECT ID	82382
SUBSET	TOTAL
56	167
SHEET	TOTAL
1924	2696



PIER 9 PLAN AND ELEVATION
 CUY-77-1587 (BRIDGE 9)
 I.R. 77 SB OVER I.R. 90 AND CR-721 (E. 14TH ST.)

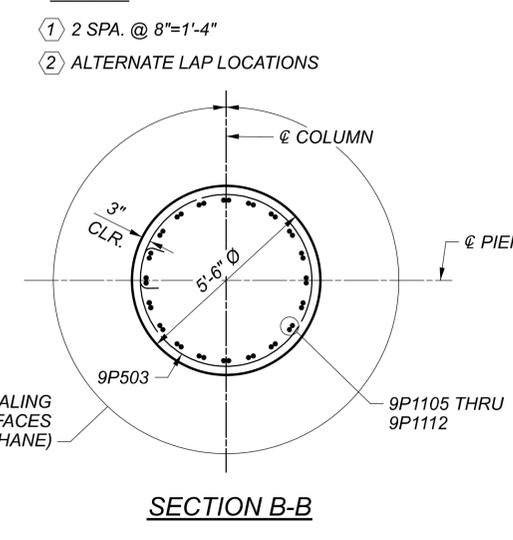
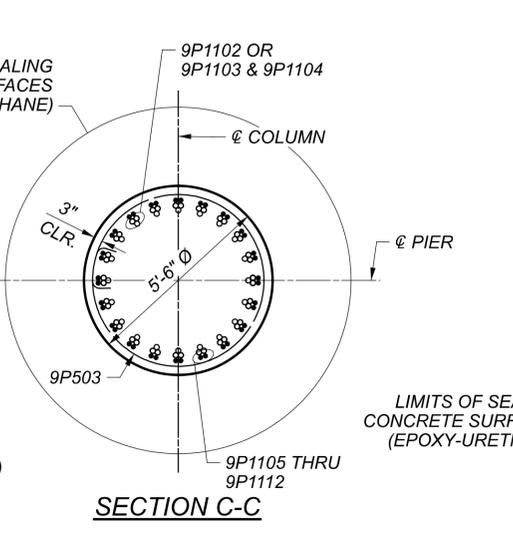
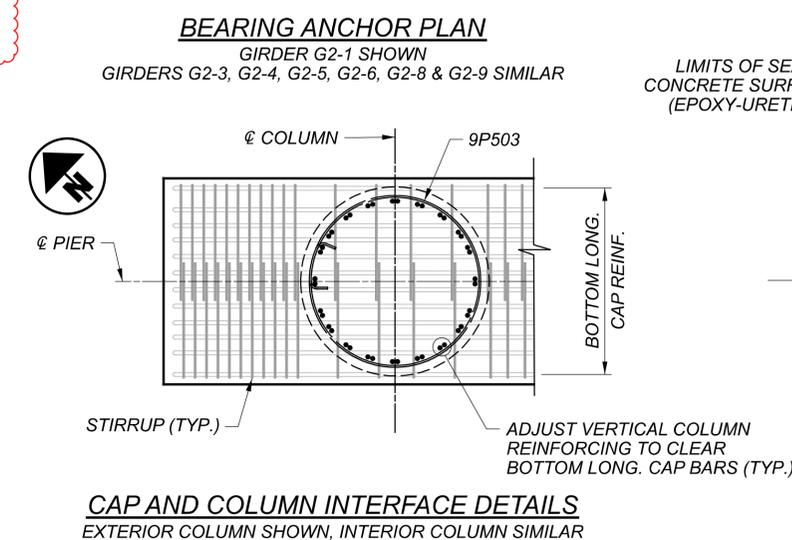
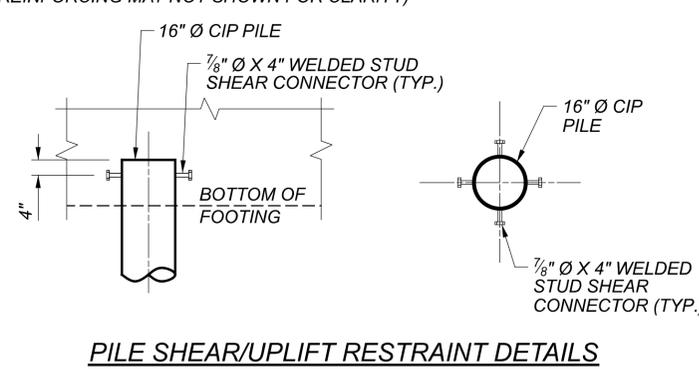
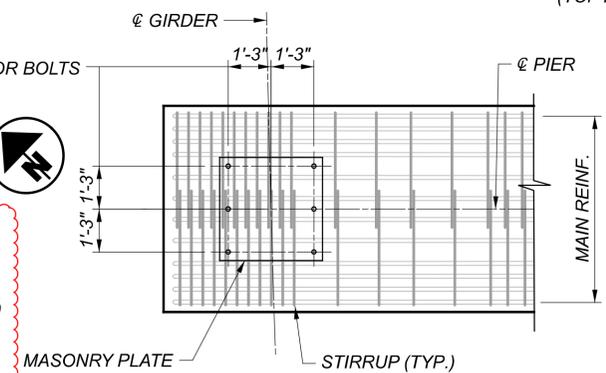
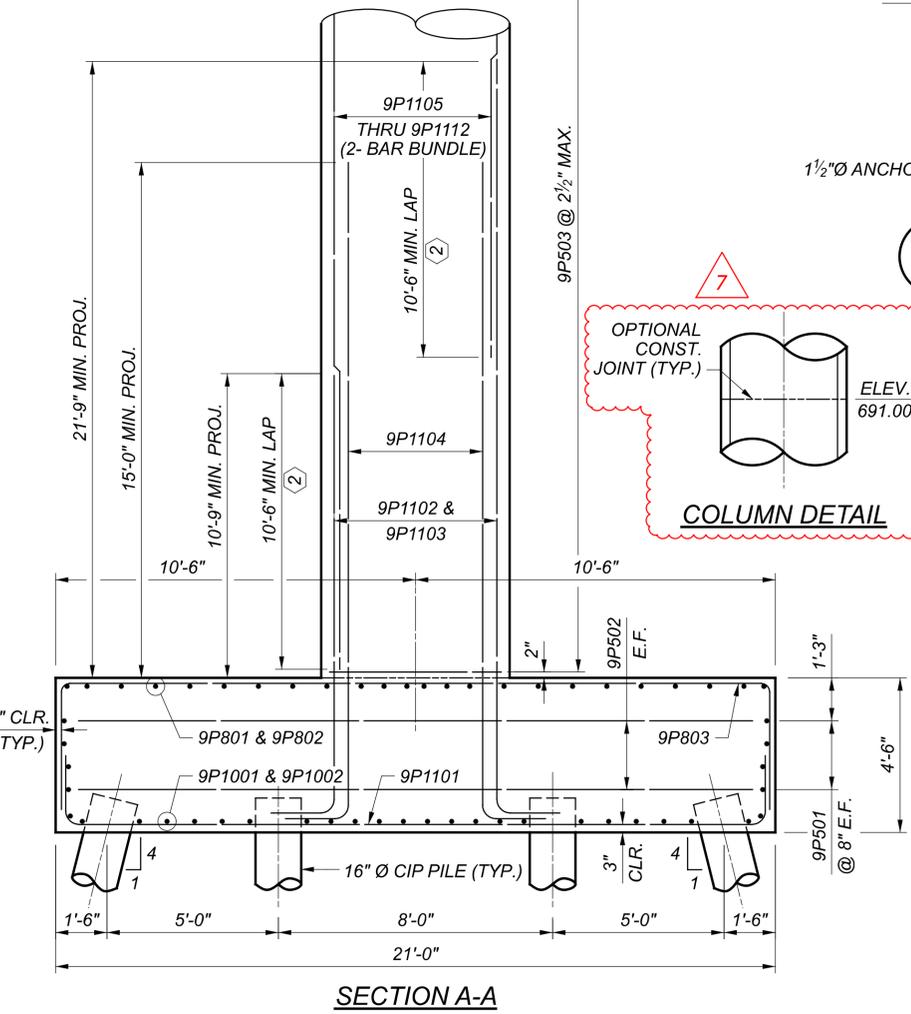
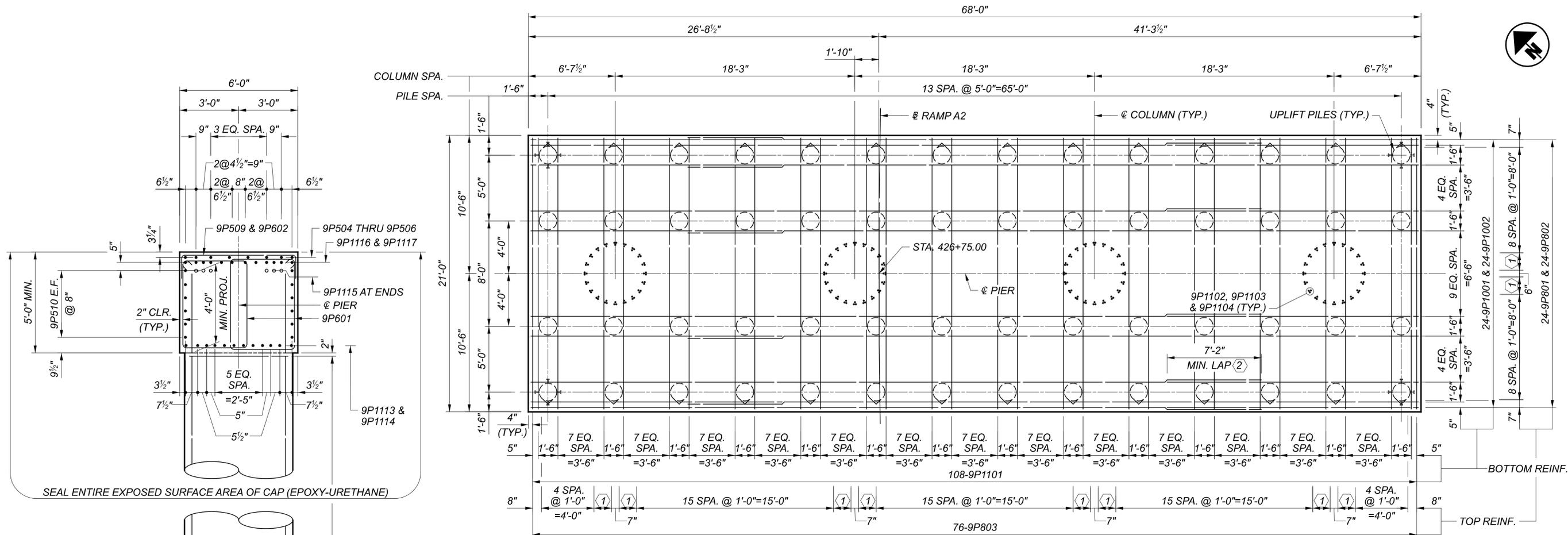
NOTES:

- FOR PIER 9 DETAILS, SEE SHEET 63 / 167
- FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
- FOR FOUNDATION LAYOUT PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
- FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
- SEE NOTE 14 ON SHEET 69 / 167 FOR ELEVATION ADJUSTMENTS NECESSARY BASED ON FINAL BEARING CONFIGURATIONS.

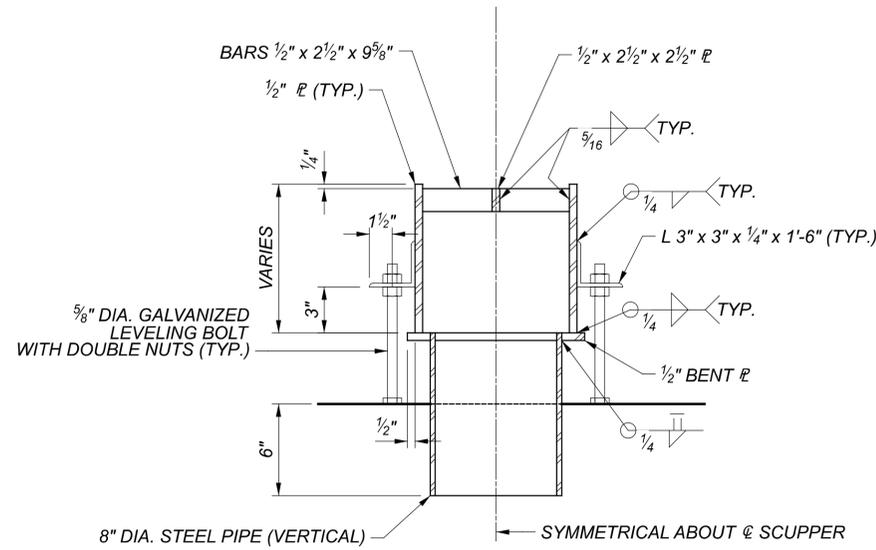
LEGEND:

- ALTERNATE LAP LOCATIONS
- 2 SETS OF 11-9P601 @ 4"=3'-4" (TYP. @ CANTILEVER)
- 2 SETS OF 4-9P601 @ EQ. SPA. = 3'-9" (TYP. OVER COLUMNS)

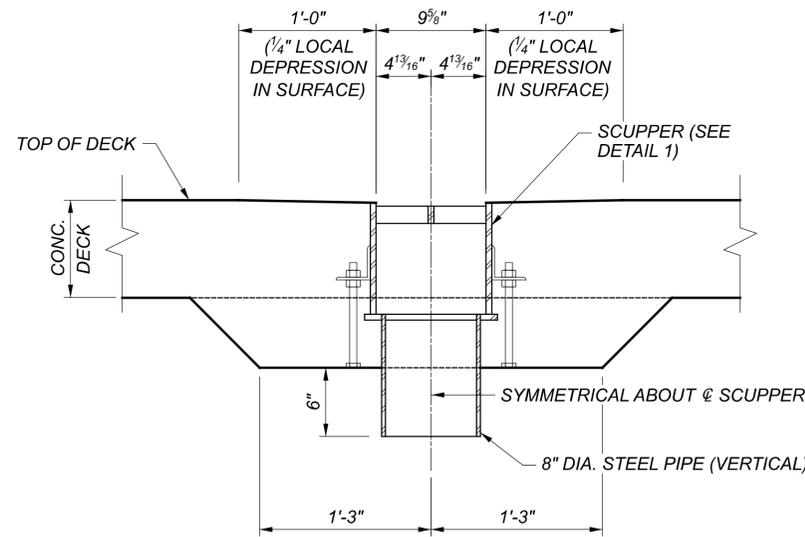
DESIGNER PJC **CHECKER** RBK
REVIEWER DWW 01/11/24
PROJECT ID 82382
SUBSET 62 **TOTAL** 167
SHEET 1930 **TOTAL** 2696



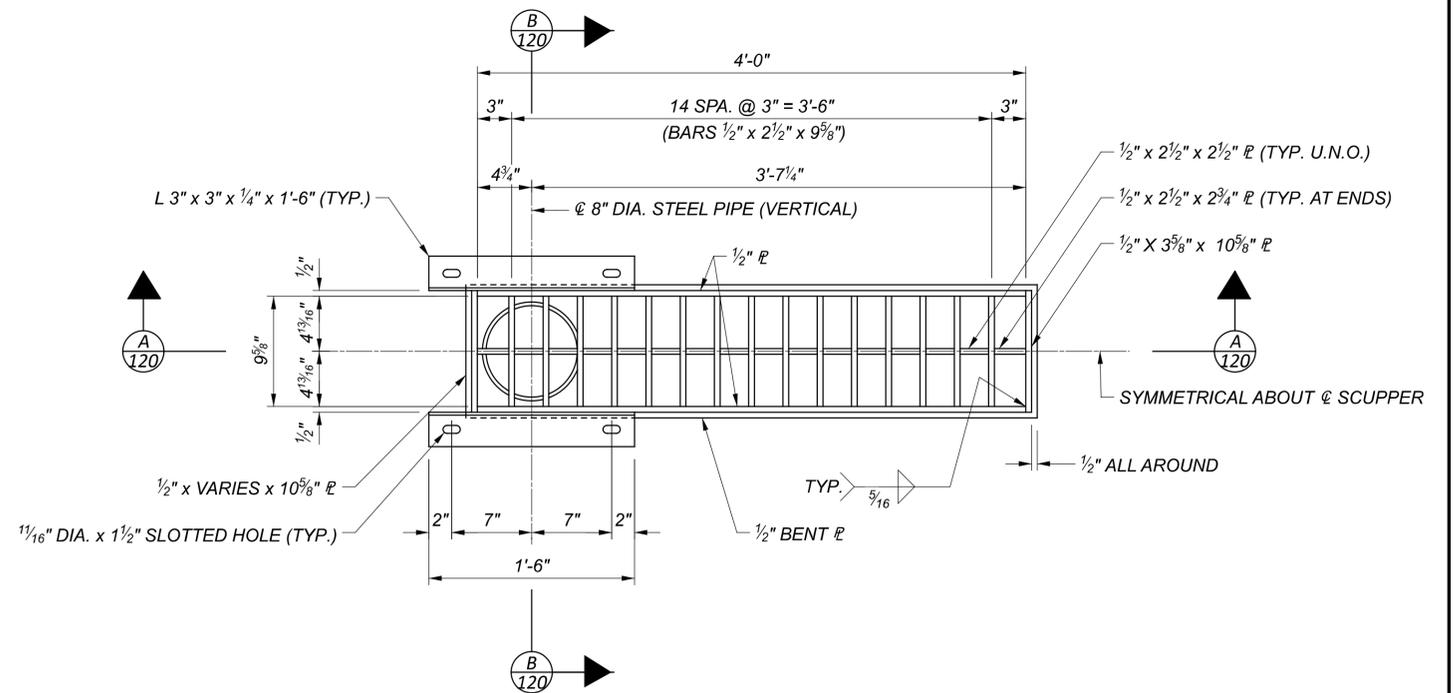
- NOTES:**
- FOR BEARING DETAILS, SEE SHEETS 66 / 167 THRU 70 / 167
 - FOR FOUNDATION PLAN, SEE SHEETS 18 / 167 THRU 23 / 167
 - FOR REINFORCEMENT LIST, SEE SHEETS 159 / 167 THRU 167 / 167
 - PILES MARKED \odot SHALL BE BATTERED 1:4 IN THE DIRECTION SHOWN.
 - ACCURATELY PLACE CONCRETE REINFORCEMENT IN THE VICINITY OF THE BRIDGE SEAT TO AVOID THE PRESETTING OF BEARING ANCHORS. SET THE BEARING ANCHORS PRIOR TO POURING THE CONCRETE.
- LEGEND:**
- (1) 2 SPA. @ 8"=1'-4"
 - (2) ALTERNATE LAP LOCATIONS



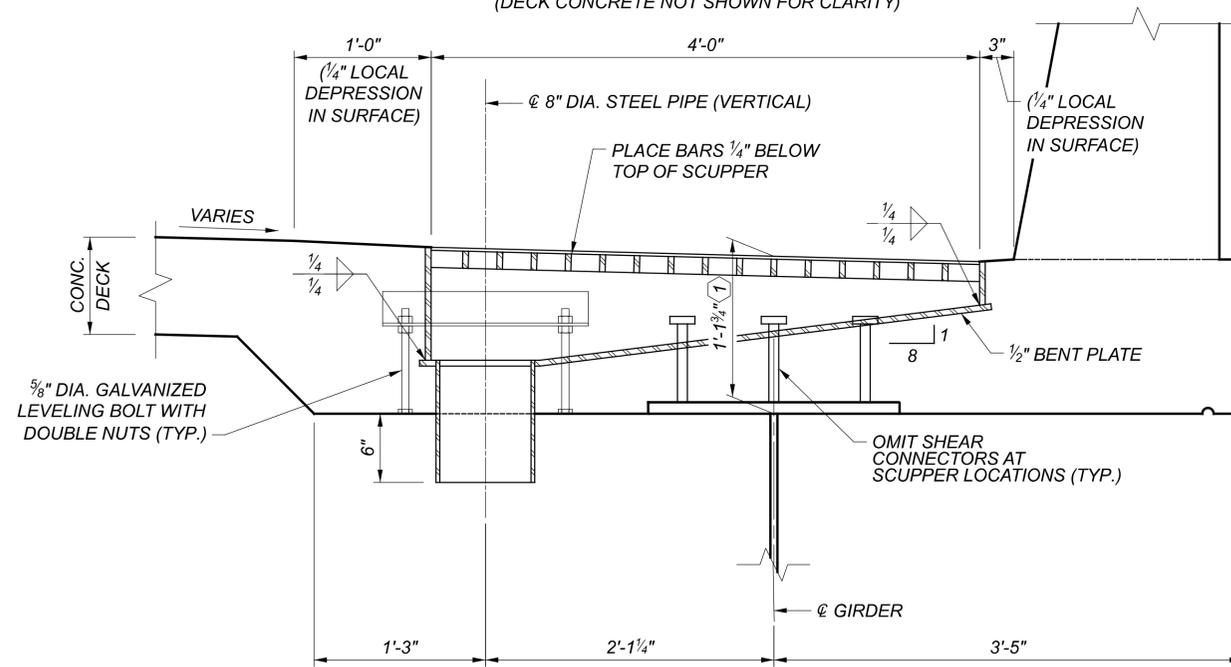
DETAIL 1



SECTION B-B
(CONCRETE DECK REINFORCING NOT SHOWN)



SCUPPER PLAN
(DECK CONCRETE NOT SHOWN FOR CLARITY)



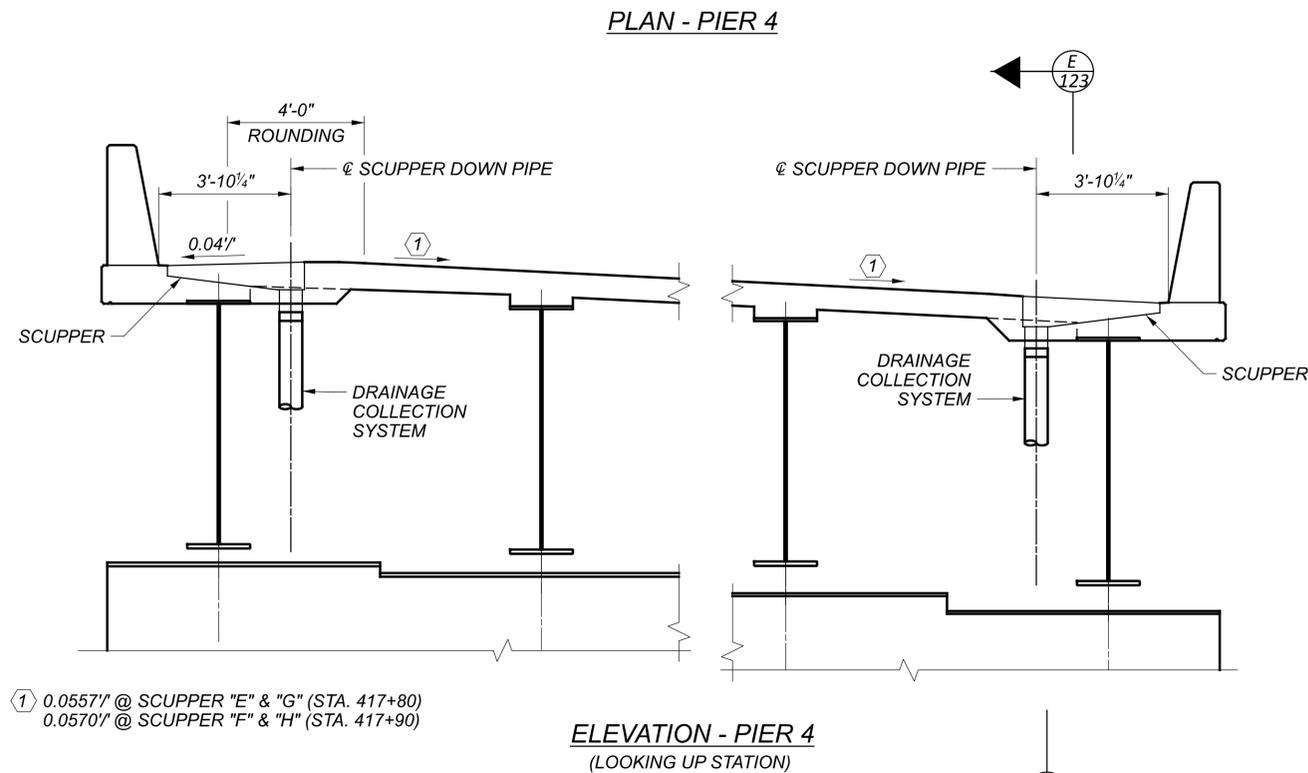
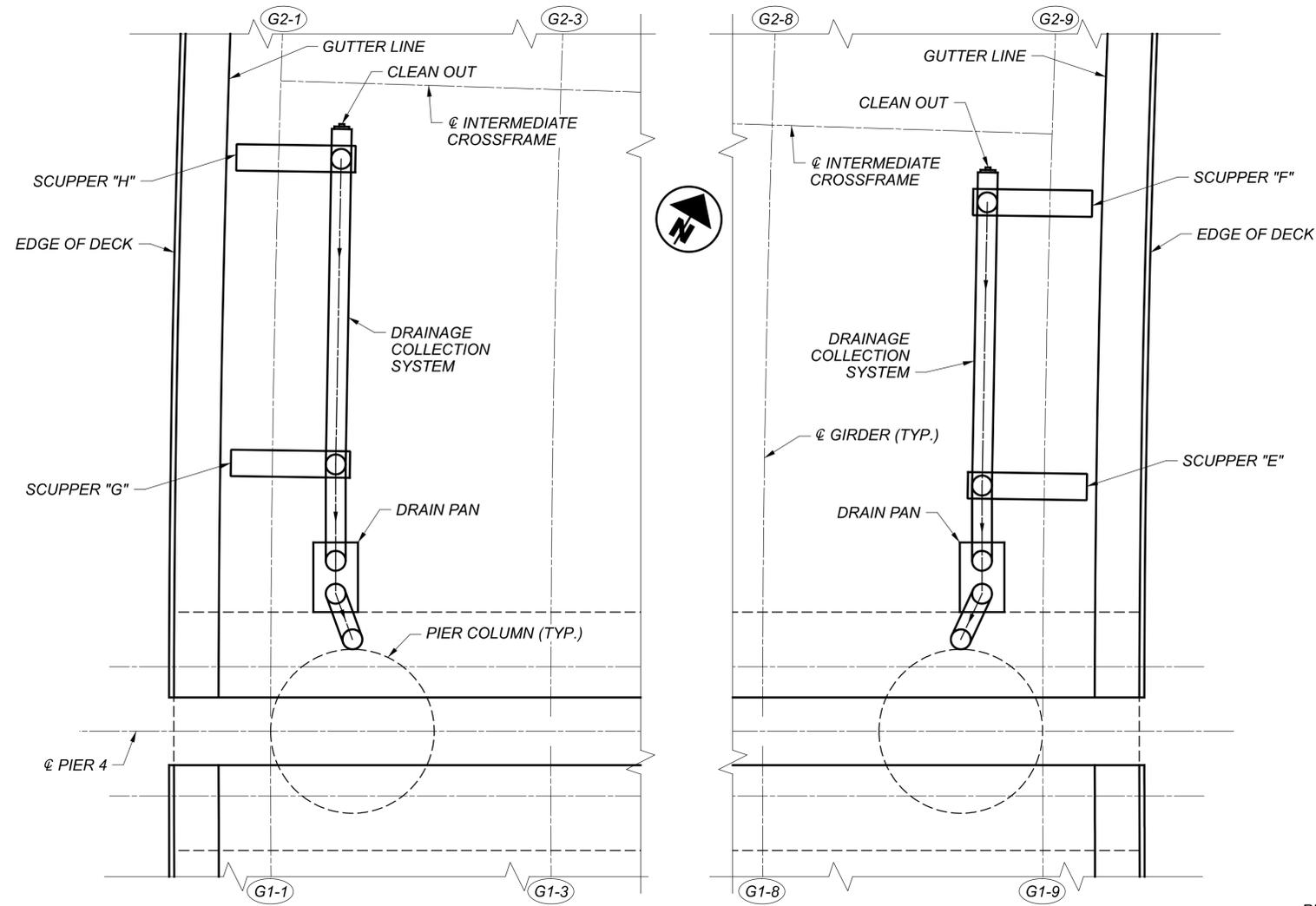
SECTION A-A
(RIGHT SIDE SHOWN, LEFT SIDE SIMILAR)

① MEASURED FROM TOP OF WEB TO TOP OF BAR.

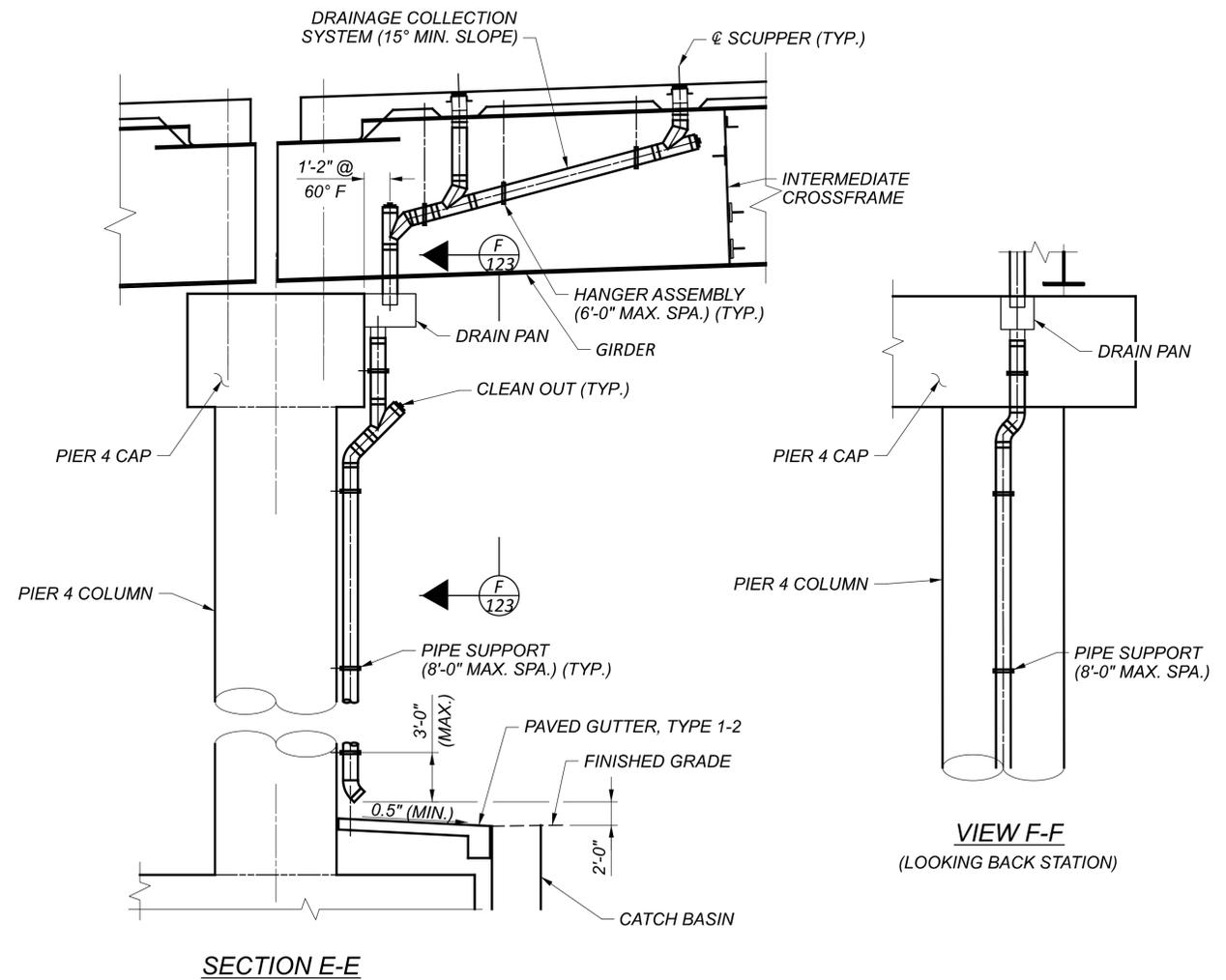
NOTES:

- FOR SCUPPER LOCATIONS, SEE SHEET 121 / 167.
- ALL STRUCTURAL STEEL FOR SCUPPERS SHALL BE ASTM A709, GRADE 36, EXCEPT AS NOTED.
- SCUPPER PIPE SHALL BE ASTM A53, SCHEDULE 40.
- SCUPPERS SHALL BE GALVANIZED IN ACCORDANCE WITH CMS 711.02.
- FOR DOWNSPOUT PIPE DETAILS, SEE SHEETS 122 / 167 THRU 126 / 167.
- SCUPPERS SHALL CONFORM TO CMS 518, EXCEPT AS NOTED.
- FOR DETAILS OF ADDITIONAL DECK REINFORCEMENT AT SCUPPERS, SEE SHEET 105 / 167.
- DRAINAGE PIPE, HANGER ASSEMBLIES, DRAIN PANS, SUPPORT BRACKETS AND ALL INCIDENTALS TO FURNISH AND INSTALL THE DRAINAGE COLLECTION SYSTEM SHALL BE INCLUDED WITH PAYMENT FOR ITEM 518 - 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.





① 0.0557" @ SCUPPER "E" & "G" (STA. 417+80)
 0.0570" @ SCUPPER "F" & "H" (STA. 417+90)



NOTES:

- FOR ADDITIONAL NOTES, SEE SHEET 120 / 167.
- FOR ADDITIONAL NOTES AND DETAILS ON PAVED GUTTER, SEE ODOT SCD DM-2.1. INCLUDE WITH PAYMENT FOR ITEM 518 - 8" PIPE DOWNSPOUT, INCLUDING SPECIALS, AS PER PLAN.

BRIDGE DRAINAGE DETAILS - (4 OF 7)
 CUY-77-1587 (BRIDGE 9)
 I.R. 77 SB OVER I.R. 90 AND CR-721 (E. 14TH ST.)

SFN	1806910
DESIGN AGENCY	
DESIGNER	RBK
CHECKER	BTA
REVIEWER	DWW 01/11/24
PROJECT ID	82382
SUBSET	123
TOTAL	167
SHEET	1991
TOTAL	2696



ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT APPROXIMATELY 150 LINEAR FEET OF ASBESTOS IS PRESENT ON THE EXISTING E. 22ND STREET BRIDGE STRUCTURE WITHIN EXISTING AT&T DUCTS. THE CONTRACTOR SHALL VERIFY THE LENGTH OF DUCTS TO BE REMOVED SEE SHEET 1777 OF 2696 FOR ADDITIONAL INFORMATION. NO ASBESTOS WAS IDENTIFIED ON THE CEDAR AVENUE STRUCTURE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM
OHIO EPA, DAPC
50 W. TOWN ST., SUITE 700
COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE PER SHEET 77 OF THE ENVIRONMENTAL GENERAL NOTES.

MAINTENANCE OF TRAFFIC

MAINTENANCE OF TRAFFIC FOR THE STRUCTURE WORK SHALL BE COORDINATED WITH THE OVERALL PROJECT. REFER TO MAINTENANCE OF TRAFFIC NOTES AND DETAILS ELSEWHERE IN PLANS.

UTILITY LINES

THE PRIVATE UTILITIES SHALL BEAR ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER PARTY WILL BE HELD TO A MINIMUM. ANTICIPATED PRIVATE UTILITIES INCLUDE CEI, ENBRIDGE AND AT&T.

STRUCTURE GROUNDING

STRUCTURE TO BE GROUNDED AS PER LIGHTING GENERAL NOTES SHEET 1684. QUANTITY CARRIED TO LIGHTING SUBSUMMARY.

NOTIFICATION OF MINIMUM VERTICAL CLEARANCE REDUCTION

SEE MAINTENANCE OF TRAFFIC NOTES FOR INFORMATION REGARDING TEMPORARY REDUCTION OF THE VERTICAL CLEARANCE AT THIS STRUCTURE LOCATION.

EXISTING STRUCTURE VERIFICATION

DETAILS AND DIMENSIONS SHOWN ON THESE PLANS PERTAINING TO THE EXISTING STRUCTURE HAVE BEEN OBTAINED FROM PLANS OF THE EXISTING STRUCTURE AND FROM FIELD OBSERVATIONS AND MEASUREMENTS. CONSEQUENTLY, THEY ARE INDICATIVE OF THE EXISTING STRUCTURE AND THE PROPOSED WORK BUT THEY SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE. THE CONTRACTOR IS REFERRED TO C&MS, SECTIONS 102.05, 105.02, AND 513.04. BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

GROUND WATER

GROUNDWATER LEVELS FLUCTUATE SEASONALLY AS A FUNCTION OF THE PRECIPITATION AND OTHER HYDROLOGICAL FACTORS. THEREFORE, THERE MAY BE CONSIDERABLE CHANGE IN THE WATER TABLE OR THE OCCURRENCE OF WATER WHERE NOT PREVIOUSLY ENCOUNTERED. SHEET PILE CONNECTIONS FOR TEMPORARY EARTH RETENTION SYSTEMS SHALL BE AS WATER-TIGHT AS PRACTICAL. CARE SHOULD BE TAKEN AT ALL TIMES TO MITIGATE THE LOSS OF NATIVE SOIL THROUGH SHORING WALL JOINTS AND/OR OPENINGS. THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS AS NECESSARY TO PERFORM THE PROPOSED WORK.

SCREENWALL NOTES:

THE ENTIRE SYSTEM OF PANELS, HARDWARE, LIGHTING, AND STRUCTURAL STEEL FRAME SHALL BE ENGINEERED AND FABRICATED BY A SINGLE ENTITY.

THE ENTIRE SYSTEM IS TO BE ANALYZED AND DESIGNED FOR STRUCTURAL STABILITY, INCLUDING MINIMIZING DEFLECTION IN THE PANELS, THE HARDWARE CONNECTIONS AND SCREEN WALL, AND THE CONNECTIONS TO THE PARAPET. CONTRACTOR SHALL USE AN OHIO REGISTERED PROFESSIONAL ENGINEER TO PREPARE, SIGN, SEAL AND DATE THE CALCULATIONS. THE CONTRACTOR SHALL SUBMIT TO ODOT FOR A SECOND OHIO REGISTERED PROFESSIONAL ENGINEER TO CHECK AND DATE THE CALCULATIONS. CONTRACTOR SHALL SUBMIT THE BASE PLATE, THREADED ANCHOR AND CONCRETE ANCHORAGE DESIGN CALCULATIONS AND SUPPLEMENTAL DRAWINGS TO ODOT 90 DAYS PRIOR TO FABRICATING MOCK-UP. ODOT WILL REVIEW THE CALCULATIONS AND RETURN COMMENTS WITHIN 15 WORKING DAYS. ACCEPTANCE OF FINAL CALCULATIONS IS NOT REQUIRED TO BEGIN FABRICATION OF SCREENWALL MOCK UP.

THE THREADED ROD FOR ADHESIVE ANCHORS SHALL BE ASTM F1554, GRADE 36, WITH ASTM A563 NUTS AND ASTM F436 WASHERS. MECHANICALLY GALVANIZE ALL ANCHOR HARDWARE ACCORDING TO ASTM B695, CLASS 65.

THE CONTRACTOR SHALL SUPPLY DOCUMENTATION SEALED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER ENSURING THAT THE ADHESIVE ANCHOR/DOWEL SYSTEM SPECIFIED BY THE CONTRACTOR PROVIDES SUFFICIENT CAPACITY FOR THIS APPLICATION IN ACCORDANCE WITH AASHTO LRFD SECTION 5.13. THE ADHESIVE ANCHOR/DOWEL SYSTEM SHALL MEET THE ACCEPTANCE CRITERIA OF ICC ES AC308. POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS. INSTALL THE ANCHORS ACCORDING TO THE MANUFACTURER'S INSTALLATION INSTRUCTIONS PUBLISHED IN THE ICC-ES REPORT.

THE HOLES FOR THE ADHESIVE ANCHORS SHALL BE DRILLED WITH A HAMMER DRILL AND CARBIDE PRIOR TO THE INSTALLATION OF THE ANCHORS, CLEAN AND DRY THE HOLES IN A MANNER CONSISTENT WITH THE MANUFACTURE'S REQUIREMENTS FOR DRY CONCRETE.

HTTPS://ICC-ES.ORG/EVALUATION-REPORT-PROGRAM/REPORTS-DIRECTORY/

THE CONTRACTOR MAY USE A SUBSTITUTE ADHESIVE ANCHOR/DOWEL SYSTEM THAT MEETS THE ACCEPTANCE CRITERIA OF ICC ES AC308. POST-INSTALLED ADHESIVE ANCHORS IN CONCRETE ELEMENTS. THE SUBSTITUTE ANCHORS SHALL MEET OR EXCEED THE CAPACITY REQUIRED PER THE CONTRACTOR'S ACCEPTED ANCHOR DESIGN.

ADHESIVE ANCHORS/DOWELS SHALL NOT BE SUBSTITUTED WITH MECHANICAL ANCHORS.

EXPOSED CONCRETE ANCHORS SHALL BE PAINTED TO MATCH ADJACENT POWDERCOAT COLORS.

MAX PERMISSIBLE DEAD LOAD = 75 LBS/FT FOR SCREEN WALL SYSTEM. DESIGN SCREENWALL FOR WIND AND PEDESTRIAN LOADS APPLIED PER BDM 309.5.5.2 AND LRFD 3.8.

ALL CONNECTIONS FROM THE PANELS TO THE STRUCTURE TO BE GASKETED TO PROTECT THE MATERIAL AND MINIMIZE LIGHT LEAKAGE AND PROVIDE MINIMAL GRADATION IN THE PANELS.

A FULL SIZE MOCKUP OF ONE COMPLETE PANEL IS REQUIRED DUE TO COMPLEXITY OF HARDWARE AND PANEL SYSTEMS. FOR SCREENWALL MOCKUP DETAILS, SEE HARDSCAPE SHEET 1847 / 2696

PAYMENT AND ADDITIONAL REQUIREMENTS FOR SCREENWALL SYSTEM IS INCLUDED IN THE HARDSCAPE PLANS.

SEQUENCE OF CONSTRUCTION

REMOVE EXISTING STRUCTURES AND CONSTRUCT BRIDGE 13 DURING MOT PHASE 2.

SEE THE ROADWAY PLANS FOR MAINTENANCE OF TRAFFIC REQUIREMENTS AND FOR ADDITIONAL PHASES AND INFORMATION.

PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP

THE ULTIMATE BEARING VALUE (UBV) IS 214 KIPS PER PILE FOR THE 14" DIA. REAR ABUTMENT PILES, 330 KIPS PER PILE FOR THE 16" DIA. PIER 1A PILES, 431 KIPS PER PILE FOR THE 16" DIA. PIER 1B PILES AND 221 KIPS PER PILE FOR THE 14" DIA. FORWARD ABUTMENT PILES. PART OF THE UBV WILL BE ACHIEVED THROUGH PILE/SOIL SETUP, WHICH IS A TIME DEPENDENT INCREASE IN RESISTANCE THAT OCCURS IN SOME SOILS.

NOTIFY THE ENGINEER AT LEAST 5 DAYS BEFORE DRIVING PILES SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

DRIVE THE FIRST TWO PILES AT EACH SUBSTRUCTURE UNIT TO THE FULL ESTIMATED LENGTH SHOWN ON THE SITE PLAN. PERFORM DYNAMIC LOAD TESTING ON BOTH PILES WHILE DRIVING. AFTER DRIVING AND TESTING THE FIRST TWO PILES, DRIVE THE REMAINING PILES IN THE SUBSTRUCTURE TO THE SAME DEPTH AS THE FIRST TWO PILES. AFTER DRIVING ALL PILES TO THE ESTIMATED LENGTH, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A PERIOD OF 14 DAYS. INCLUDE THE WAITING PERIOD AS A SEPARATE ACTIVITY IN THE PROGRESS SCHEDULE. AFTER THE WAITING PERIOD, PERFORM PILE RESTRIKES ON BOTH OF THE FIRST TWO PILES (ONE RESTRIKE ITEM).

SUBMIT ALL TEST RESULTS TO THE ENGINEER. IF THE RESTRIKE TEST RESULTS INDICATE THAT BOTH PILES ACHIEVED THE REQUIRED UBV, ALL PILES IN THE SUBSTRUCTURE MAY BE ACCEPTED BY THE ENGINEER.

IF THE RESTRIKE TEST RESULTS INDICATE THAT EITHER OF THE TWO PILES DID NOT ACHIEVE THE REQUIRED UBV, IMMEDIATELY NOTIFY THE ENGINEER SO THAT THE ENGINEER CAN NOTIFY THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING. THE ENGINEER WILL REVIEW THE TEST RESULTS AND ESTABLISH ADDITIONAL RESTRIKE TESTING OR DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE WITH THE ASSISTANCE OF THE DISTRICT GEOTECHNICAL ENGINEER, THE OFFICE OF CONSTRUCTION ADMINISTRATION, AND THE OFFICE OF GEOTECHNICAL ENGINEERING.

IF DIRECTED BY THE ENGINEER, PERFORM ADDITIONAL RESTRIKE TESTING OR DRIVE ALL PILES IN THE SUBSTRUCTURE TO THE ESTABLISHED DRIVING CRITERIA. THE DEPARTMENT WILL PAY FOR SPLICING OF THE PILES BEYOND THE ESTIMATED LENGTH PROVIDED IN THE PLANS UNDER C&MS 109.05 WITH A NEGOTIATED PRICE PER SPLICE.

THIS PLAN NOTE INCLUDES A QUANTITY OF ONE EACH ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND A QUANTITY OF ONE EACH ITEM 523 RESTRIKE, AS PER PLAN PER EACH SUBSTRUCTURE UNIT

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. LIMITS OF REMOVAL SHALL BE AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER. ITEMS TO BE REMOVED INCLUDE MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. SUBMIT WORKING DRAWINGS AND CALCULATIONS IN ACCORDANCE WITH CMS 501.55.

ALL CONCRETE, REINFORCING STEEL, ASPHALT, ETC. REMOVED FROM THE STRUCTURE AND NOT REUSED SHALL, UNLESS OTHERWISE SPECIFIED, BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM/HER FROM THE SITE. THE MATERIALS SHALL NOT BE PERMITTED TO REMAIN ON SITE, WITHIN THE RIGHT-OF-WAY OR ELSEWHERE UNLESS SPECIFIED BY THE ENGINEER.

THE USE OF EXPLOSIVES AND HEADACHE BALLS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER.

A LUMP SUM QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

ITEM 503 - COFFERDAMS AND EXCAVATION BRACING, AS PER PLAN

THE DESIGN SHOWN ON THE PLANS FOR TEMPORARY SUPPORT OF EXCAVATION IS ONE REPRESENTATIVE DESIGN THAT MAY BE USED TO CONSTRUCT THE PROJECT. THE CONTRACTOR MAY CONSTRUCT THE DESIGN SHOWN ON THE PLANS OR PREPARE AN ALTERNATE DESIGN TO SUPPORT THE SIDES OF EXCAVATION. IF CONSTRUCTING AN

ALTERNATE DESIGN FOR TEMPORARY SUPPORT OF EXCAVATION, PREPARE AND PROVIDE PLANS IN ACCORDANCE WITH C&MS 501.05. THE DEPARTMENT WILL PAY FOR THE TEMPORARY SUPPORT OF EXCAVATION AT THE CONTRACT LUMP SUM PRICE FOR COFFERDAMS AND EXCAVATION BRACING. THE DEPARTMENT WILL NOT MAKE ADDITIONAL PAYMENT FOR PROVIDING AN ALTERNATE DESIGN.

ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN

THE CONTRACTOR SHALL EXCAVATE TEMPORARY SLOPES PER THE FOLLOWING:

TEMPORARY SLOPES SHALL BE NO STEEPER THAN 2.5H:1V DURING CONSTRUCTION AT THE REAR ABUTMENT AND WINGWALL.

TEMPORARY SLOPES SHALL BE NO STEEPER THAN 2.75H:1V DURING CONSTRUCTION AT THE FORWARD ABUTMENT AND WINGWALLS.

THE CONTRACTOR SHALL DEWATER ALL EXCAVATIONS AS NECESSARY TO PERFORM THE PROPOSED WORK.

GENERAL NOTES (2 OF 4)
CUY-90-1678 (BRIDGE 13)
CR-710 (E. 22ND ST.) OVER I.R. 90

SFN	1807839
DESIGN AGENCY	
Michael Baker	INTERNATIONAL
DESIGNER	CHECKER
ZES	KAG
REVIEWER	
CDC	05/10/24
PROJECT ID	82382
SUBSET	TOTAL
4	99
SHEET	TOTAL
2185	2696

ITEM 524 - DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT

PART 1: DESCRIPTION

THIS WORK CONSISTS OF ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO CONSTRUCT A DEMONSTRATION DRILLED SHAFT FOR TESTING AND EVALUATION TO VERIFY THE PROPOSED CONSTRUCTION METHODS FOR THE PRODUCTION DRILLED SHAFTS.

COMPLETE THE INSTALLATION OF THE DEMONSTRATION DRILLED SHAFT A MINIMUM OF 30 DAYS PRIOR TO THE START OF CONSTRUCTION OF THE PRODUCTION DRILLED SHAFTS. THE DEPARTMENT WILL CONSIDER THE DEMONSTRATION DRILLED SHAFT INSTALLATION COMPLETE AFTER RECEIVING WRITTEN ACCEPTANCE FROM THE ENGINEER.

IF THE VERTICAL DEFLECTION OF THE DEMONSTRATION DRILLED SHAFT DURING LOAD TESTING IS LESS THAN 5% OF THE DRILLED SHAFT NOMINAL DIAMETER, IT MAY BE REUSED AS A PRODUCTION DRILLED SHAFT.

PART 2: MATERIALS

THE DEMONSTRATION DRILLED SHAFT SHALL USE THE SAME CONCRETE MIX DESIGN AND STEEL REINFORCEMENT AS THE PRODUCTION DRILLED SHAFTS.

PART 3: EXECUTION

SUBMIT A DRILLED SHAFT INSTALLATION PLAN TO THE ENGINEER FOR ACCEPTANCE IN ACCORDANCE WITH THE REQUIREMENTS OF C&MS 524.03. CONSTRUCT AT LEAST ONE DEMONSTRATION DRILLED SHAFT WHERE DESIGNATED ON THE PLANS AND IN ACCORDANCE WITH THE ACCEPTED WRITTEN INSTALLATION. UPON CONSTRUCTION OF THE DEMONSTRATION DRILLED SHAFT, AND RECEIPT OF TESTING AND EVALUATION RESULTS CONFIRMING THE DEMONSTRATION DRILLED SHAFT HAS BEEN INSTALLED IN ACCORDANCE WITH CONTRACT DOCUMENTS, THE ENGINEER WILL ISSUE A LETTER ACCEPTING THE INSTALLATION PLAN FOR THE CONSTRUCTION OF THE SUBSEQUENT PRODUCTION DRILLED SHAFTS.

IF ANY MODIFICATIONS TO THE INSTALLATION PLAN ARE MADE, WHETHER DUE TO TESTING AND EVALUATION RESULTS OR FOR ANY OTHER REASON, THE DEPARTMENT WILL NOT REQUIRE CONSTRUCTION OF AN ADDITIONAL DEMONSTRATION SHAFT UNLESS REQUIRED BY THE ENGINEER. IF AN ADDITIONAL DEMONSTRATION DRILLED SHAFT IS REQUIRED BY THE ENGINEER IT WILL BE PAID FOR UNDER THE PAY ITEMS FOR DEMONSTRATION DRILLED SHAFT AND TESTING, AS LONG AS THE INSTALLATION AND TESTING ARE SUCCESSFUL, OTHERWISE IT WILL BE AT NO ADDITIONAL COST TO THE DEPARTMENT.

THE DIAMETER, REINFORCING, INSTALLATION METHODS, AND OTHER MISCELLANEOUS DETAILS OF THE DEMONSTRATION SHAFT SHALL BE THE SAME AS THE PRODUCTION DRILLED SHAFTS.

SUBMIT THE LOCATION OF THE DEMONSTRATION SHAFT TO THE ENGINEER FOR ACCEPTANCE. A PRODUCTION DRILLED SHAFT SHALL BE USED AS THE DEMONSTRATION SHAFT.

LOCATE THE DEMONSTRATION DRILLED SHAFT SO THAT TESTING DOES NOT DAMAGE THE WALKER WEEKS BUILDING.

TEST THE DEMONSTRATION DRILLED SHAFT; BY CROSSHOLE SONIC LOGGING (CSL) ACCORDING TO ASTM D6760, BY HIGH-STRAIN DYNAMIC TESTING ACCORDING TO ASTM D4945, AND BY BI-DIRECTIONAL STATIC AXIAL COMPRESSIVE LOAD TESTING ACCORDING TO ASTM D8169.

PART 4: MEASUREMENT AND PAYMENT

THE DEPARTMENT WILL MEASURE DEMONSTRATION DRILLED SHAFT BY THE ACTUAL NUMBER COMPLETED AND ACCEPTED.

ITEM 524 - DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT, CONTINUED

IN ADDITION TO THE PROVISIONS OF C&MS 524.17, THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES OF DEMONSTRATION DRILLED SHAFT AFTER INSTALLATION OF THE DEMONSTRATION SHAFT AND AFTER BEING PROVIDED WITH WRITTEN TESTING AND EVALUATION RESULTS ACCEPTABLE TO THE ENGINEER.

THE CONTRACT PRICE IS FULL COMPENSATION FOR FURNISHING AND INSTALLING DRILLED SHAFTS IN ACCORDANCE WITH THE ABOVE REQUIREMENTS, INCLUDING MOBILIZATION AND SITE ACCESS.

THE DEPARTMENT WILL PAY FOR TESTING AND EVALUATION OF THE ACCEPTED DEMONSTRATION SHAFT SEPARATELY.

THE DEPARTMENT WILL NOT PAY FOR TESTING AND EVALUATION FOR ADDITIONAL DEMONSTRATION DRILLED SHAFTS.

THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES AT THE CONTRACT PRICE AS FOLLOWS: ITEM 524 - DRILLED SHAFTS, MISC.: DEMONSTRATION DRILLED SHAFT.

ITEM 524 - DRILLED SHAFTS, MISC.: CSL TESTING, 48" DIA. SHAFT

PERFORM CROSSHOLE SONIC LOGGING TESTING ON THE DEMONSTRATION DRILLED SHAFT AT THE REAR ABUTMENT. PERFORM CROSSHOLE SONIC LOGGING PER PROJECT SPECIAL PROVISIONS.

ITEM 524 - DRILLED SHAFTS, MISC.: BI-DIRECTIONAL TESTING OF DRILLED SHAFTS

PERFORM FIELD VERIFICATION OF AXIAL RESISTANCE ON THE DEMONSTRATION DRILLED SHAFT AT THE REAR ABUTMENT BY BI-DIRECTIONAL STATIC AXIAL COMPRESSIVE LOAD TESTING. PERFORM BI-DIRECTIONAL STATIC AXIAL COMPRESSIVE LOAD TESTING PER ASTM D8169 AND THE PROJECT SPECIAL PROVISIONS.

ITEM 524 - DRILLED SHAFTS, MISC.: HIGH-STRAIN DYNAMIC TESTING OF DRILLED SHAFTS

PERFORM FIELD VERIFICATION OF NOMINAL AXIAL RESISTANCE ON 3 OF THE DRILLED SHAFTS AT THE REAR ABUTMENT BY HIGH-STRAIN DYNAMIC TESTING. PERFORM HIGH STRAIN DYNAMIC TESTING PER ASTM D4945, "STANDARD TEST METHOD FOR HIGH-STRAIN DYNAMIC TESTING OF DEEP FOUNDATIONS" AND THE PROJECT SPECIAL PROVISIONS. PERFORM HIGH-STRAIN DYNAMIC TEST ON THE DEMONSTRATION SHAFT AND TWO ADDITIONAL DRILLED SHAFTS PRIOR TO BEGINNING EXCAVATION AT ANY DRILLED SHAFT LOCATION. HIGH STRAIN DYNAMIC LOAD TESTING OF TWO (2) PRODUCTION REAR ABUTMENT DRILLED SHAFTS SHALL BE PERFORMED. THE PRODUCTION DRILLED SHAFTS TO BE TESTED SHALL BE FARTEST AWAY FROM THE BUILDING AND THE TEST SHAFTS SHALL BE A MINIMUM OF 48 FEET AWAY FROM EACH OTHER. WING WALL DRILLED SHAFTS (DS01-DS04) SHALL NOT BE TESTED.

ITEM 512 - SEALING OF CONCRETE SURFACES, AS PER PLAN (PERMANENT GRAFFITI PROTECTION)

APPLY A PERMANENT GRAFFITI COATING MEETING THE REQUIREMENTS OF SUPPLEMENT 1083. THE GRAFFITI COATING MUST BE COMPATIBLE WITH THE UNDERLYING CONCRETE SEALER. APPLY THE GRAFFITI COATING ACCORDING TO THE MANUFACTURE'S REQUIREMENTS. THE ADDITIONAL MATERIAL AND LABOR REQUIRED TO SEAL THE FORM LINER RELIEF SHALL BE INCLUDED IN THIS ITEM. TO ACCOUNT FOR THE SURFACE VARIATIONS DUE TO THE FORM LINERS, AN EXTRA 20 PERCENT HAS BEEN ADDED TO THE SEALING QUANTITIES FOR THE PURPOSE OF ESTIMATING. PROVIDE A COATING THAT MEETS THE REQUIREMENTS LISTED BELOW.

THE MATERIAL SHALL BE A SINGLE COMPONENT, RTV (ROOM TEMPERATURE VULCANIZED) NEUTRAL MOISTURE CURE, PERMANENT (NON-SACRIFICIAL), TYPE III (WATER CLEANABLE) POLYSILOXANE (SILICONE) ANTI-GRAFFITI COATING, FREE OF ANY WAXES, EPOXIES OR POLYURETHANE COMPONENTS.

THE COATING SHALL BE A ONE COAT SYSTEM (NO PRIMER) CAPABLE OF BEING SPRAY APPLIED TO A DRY FILM THICKNESS OF 15 MILS (375 MICRONS) WITHOUT RUNS OR SAGS (MULTIPLE COAT APPLICATION ACCEPTABLE FOR BRUSH/ROLLER USAGE AND PRIMER USAGE ACCEPTABLE FOR SPECIALTY SUBSTRATES SUCH AS GALVANIZED METAL).

THE COATING SHALL EMIT LESS THAN 300 G/L (2.5 POUNDS PER GALLON) OF VOLATILE ORGANIC COMPOUNDS (EPA METHOD 24).

THE COATING SHALL MEET THE FOLLOWING PERFORMANCE REQUIREMENTS:

CLEANABILITY LEVEL 1 (GRAFFITI COMPLETELY REMOVED WITH COLD WATER POWER WASH) AS PER ASTM D7089 WITH LOW PRESSURE (1200 PSI) COLD WATER WASH AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDANCE WITH ASTM D4587.

GRAFFITI RESISTANCE LESS THAN 7.5 AS PER ASTM D6578 AFTER 2000 HOURS ACCELERATED UV-CONDENSATION EXPOSURE IN ACCORDANCE WITH ASTM D4587.

NO SIGNS OF GRAFFITI OR GRAFFITI STAINING AND MUST BE INTACT AND EXHIBIT NO SIGNS OF STREAKING, CRACKING, PINHOLING, DISCOLORING OR OTHER VISIBLE COATING DEGRADATION UPON CASUAL OBSERVATION WHEN TESTED IN ACCORDANCE WITH TXDOT TEX 890-B, TYPE III METHOD.

BREATHABILITY OF 10 PERMS (+/- 3) PER ASTM D1653 USING "WET CUP METHOD".

ELONGATION AT BREAK GREATER THAN 100% AS PER ASTM D412 (USING DIE "D").

ADHESION RATING OF "8 - DIFFICULT TO REMOVE" AS PER ASTM D6677 (ADHESION BY KNIFE).

ITEM 518 - PREFABRICATED GEOCOMPOSITE DRAIN

THIS WORK CONSISTS OF FURNISHING AND PLACING PREFABRICATED GEOCOMPOSITE DRAIN (PGD) AGAINST THE TANGENT DRILLED SHAFTS.

FURNISH PGD CONSISTING OF A DRAINAGE CORE WITH A GEOTEXTILE FABRIC BONDED TO AT LEAST ONE SIDE. USE CORE MATERIAL THAT CONSISTS OF A STABLE, POLYMER PLASTIC MATERIAL WITH A CUSPATED OR GEONET STRUCTURE. THE CORE MATERIAL SHALL HAVE SUFFICIENT FLEXIBILITY TO WITHSTAND BENDING AND HANDLING DURING INSTALLATION WITHOUT DAMAGE. FURNISH GEOTEXTILE COMPOSED OF STRONG ROT-PROOF POLYMERIC FIBERS FORMED INTO A WOVEN OR NON-WOVEN FABRIC. FURNISH PGD CONFORMING TO THE FOLLOWING REQUIREMENTS. FURNISH MANUFACTURER'S CERTIFIED TEST DATA.

CORE	PROPERTY	TEST METHOD	VALUE
	THICKNESS	ASTM D5199	0.4 INCH
	COMPRESSIVE STRENGTH	ASTM D1621	13,650 PSF MIN.
	FLOW RATE	ASTM D4716	9 TO 25 GPM/FT.
FABRIC	APPARENT OPENING SIZE	ASTM D4751	0.3 MM MAX.
	FLOW RATE	ASTM D4491	40 GPM/SQ.FT. MIN.
	GRAB TENSILE STRENGTH	ASTM D4632	90 LBS MIN.
	CBR PUNCTURE	ASTM D6241	65 LBS MIN.

PLACE PGD BETWEEN THE DRILLED SHAFTS. PLACE THE SIDE FACED WITH THE GEOTEXTILE AGAINST THE DRILLED SHAFTS, FACING TOWARDS THE RETAINED GROUND, AND SECURE THE PGD TO THE SACRIFICIAL PLYWOOD FORMS BETWEEN THE DRILLED SHAFTS.

SPLICE ABUTTING SECTIONS TOGETHER BY OVERLAPPING THE GEOTEXTILE FLAP (IF PROVIDED) ON ONE SECTION WITH THE ADJACENT SECTION OF PGD. OVERLAP THE GEOTEXTILE IN A SHINGLED OVERLAP SO THAT THE UPPER GEOTEXTILE IS ON TOP OF THE LOWER GEOTEXTILE. IF A GEOTEXTILE FLAP IS NOT PROVIDED, COVER THE SEAM WITH A 12 INCH WIDE STRIP OF GEOTEXTILE FABRIC CENTERED OVER THE SEAM AND SECURED IN PLACE USING 3 INCH WIDE WATERPROOF PLASTIC TAPE.

SEAL ALL EXPOSED EDGES OF THE CORE MATERIAL TO PREVENT SOIL INTRUSION. SEAL EXPOSED EDGES BY FOLDING THE GEOTEXTILE FLAPS OVER AND AROUND THE PGD OR, IF A FLAP IS NOT PROVIDED, COVERING THE EXPOSED EDGE WITH A 12 INCH WIDE STRIP OF GEOTEXTILE FABRIC, TAPING THE STRIP TO THE PGD GEOTEXTILE 8 INCHES FROM THE EXPOSED EDGE, AND FOLDING THE REMAINING 4 INCHES OVER AND AROUND THE PGD. SECURE LOOSE EDGES OF THE GEOTEXTILE FABRIC WITH 3 INCH WIDE WATERPROOF PLASTIC TAPE.

REPAIR ANY DAMAGE TO THE GEOTEXTILE FABRIC BY COVERING WITH A PATCH WHICH OVERLAPS THE DAMAGED AREA AND EXTENDS AT LEAST 6 INCHES BEYOND THE EDGE OF THE DAMAGED AREA. TAPE THE EDGES OF THE PATCH IN PLACE USING 3 INCH WIDE WATERPROOF PLASTIC TAPE. IF THE CORE OF THE PGD IS DAMAGED, REPLACE IT WITH A NEW SECTION OF PGD AND SPLICE AS DESCRIBED ABOVE.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN (SOLDIER PILE STRUT AND WALER)

MISCELLANEOUS STRUCTURAL STEEL MEMBERS SHALL BE FABRICATED, DELIVERED AND INSTALLED IN ACCORDANCE WITH ALL PROVISIONS OF ODOT C&MS ITEM 513.

FURNISH STEEL MEMBERS THAT MEET THE REQUIREMENTS AND CONFORM TO ASTM A572, GRADE 50 IN ACCORDANCE WITH C&MS 711.01. GALVANIZE STEEL MEMBERS AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH C&MS 711.02. THESE MISCELLANEOUS STRUCTURAL STEEL MEMBERS INCLUDE:

- WALER MEMBERS
- STRUT MEMBERS
- SHIM PLATES
- ALL MISCELLANEOUS METAL, REINFORCEMENT PLATES, CONNECTIONS, FABRICATIONS, BEARING PLATES, HYDRAULIC JACKS AND PUMPS, ETC. NECESSARY TO COMPLETE THE WALER AND STRUT INSTALLATION AND JACKING.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE CONTRACT UNIT PRICE PER POUND FOR ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN (SOLDIER PILE STRUT & WALER). PRICE SHALL CONSTITUTE FULL COMPENSATION FOR ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO FURNISH, DELIVER AND INSTALL THE PROPOSED STRUCTURAL STEEL MEMBERS AND COMPLETE THE JACKING TO THE SPECIFIED LOADS IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS.

ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES HP16x101

THIS WORK CONSISTS OF FURNISHING AND PLACING STEEL SOLDIER PILES INTO DRILLED HOLES AND INCLUDES MONITORING PLUMBNESS. FURNISH SOLDIER PILES CONSISTING OF STRUCTURAL STEEL MEMBERS THAT MEET THE PLAN REQUIREMENTS AND CONFORM TO ASTM A572 GRADE 50 IN ACCORDANCE WITH C&MS 711.01. GALVANIZE SOLDIER PILES AS SHOWN ON THE PLANS AND IN ACCORDANCE WITH C&MS 711.02. DO NOT FIELD WELD OR SPLICE STEEL SOLDIER PILES. THE ANCHOR DETAIL WHERE THE TIE BACK ANCHOR PASSES THROUGH THE FLANGES AND WEB SHALL BE SHOP FABRICATED AND NOT BE WELDED ON SITE.

MEASUREMENT FOR PAYMENT WILL BE THE DISTANCE FROM THE TOP OF THE PILE TO THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER. PAYMENT IS FULL COMPENSATION FOR FURNISHING AND PLACING THE SOLDIER PILES AND MONITORING THEIR PLUMBNESS UNTIL BACKFILL IN FRONT OF THE SOLDIER PILE WALL IS COMPLETE. THE DEPARTMENT WILL PAY FOR SOLDIER PILES AT THE CONTRACT UNIT PRICE PER FOOT OF ITEM 507 - STEEL PILES, MISC.: SOLDIER PILES HP16x101.

ITEM SPECIAL - PERMANENT SHORING TIMBER LAGGING

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING UNTREATED HARDWOOD LAGGING TO SERVE AS TEMPORARY LAGGING FOR THE SOLDIER PILE WALL. THE LAGGING SHALL CONSIST OF HARDWOOD TIMBER WITH 3 INCH BY 8 INCH DIMENSIONS AND SHALL BE OF A GRADE AND TYPE WITH AN ALLOWABLE EXTREME FIBER STRESS IN BENDING OF A MINIMUM OF 1 KSI. THE TIMBER MATERIAL SHALL BE DOUGLASS FIR-LARCH DENSE NO. 1. SELECT STRUCTURAL OR DENSE SELECT STRUCTURAL. THE WOOD SHALL BE SEASONED, SOUND, AND FREE FROM DECAY AND INSECT ATTACK, WITH NO LOOSE AND/OR CLUSTER KNOTS. THE ENDS OF THE TIMBER SHALL BE SAWED SQUARE WITH THE AXIS OF THE TIMBER. THE TIMBER MEMBERS SHALL ALSO CONFORM TO C&MS 711.26. PROVIDE CERTIFICATION THAT THE TIMBER CONFORMS TO THE GRADE, SPECIES AND OTHER SPECIFIED REQUIREMENTS.

LAGGING SHALL BE PLACED IN A TOP-DOWN MANNER AS EXCAVATION PROCEEDS DOWNWARD. AT NO TIME SHOULD MORE THAN 3 FEET OF UNSUPPORTED EXCAVATION BE PERMITTED. REDUCE THE UNSUPPORTED HEIGHT AS NECESSARY TO PREVENT CAVING AND SLOUGHING OF THE SOIL BETWEEN THE SOLDIER PILES. PROVIDE WOOD SPACERS TO PROVIDE HORIZONTAL JOINT SPACING BETWEEN THE LAGGING BOARDS TO PERMIT DRAINAGE.

SFN	1807898
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	MKB
REVIEWER	
KAG	12/26/23
PROJECT ID	82382
SUBSET	TOTAL
7	90
SHEET	TOTAL
2287	2696

HARDWOOD SHIMMING SHALL BE USED AS NEEDED TO MAINTAIN THE POSITIONING OF THE TIMBER MEMBERS AGAINST THE FLANGE FACE OF THE SOLIDER PILE DURING CONSTRUCTION OF THE RETAINING WALL SYSTEM. NO SHIM SHALL EXTEND BEYOND THE FLANGE OF THE H-PILE MORE THAN 1/4 INCH AND NO SHIM SHALL EXTEND BEYOND THE TOP FACE OF THE TOP LAGGING.

THE DEPARTMENT WILL MEASURE THE TEMPORARY HARDWOOD LAGGING BY THE NUMBER OF SQUARE FEET. PAYMENT SHALL INCLUDE ALL LABOR, MATERIAL AND INCIDENTALS (INCLUDING HARDWOOD SHIMMING AND WOOD SPACERS) NECESSARY TO FURNISH AND INSTALL THE TEMPORARY HARDWOOD LAGGING.

ITEM 524 - DRILLED SHAFTS, 42" DIAMETER, ABOVE BEDROCK, AS PER PLAN

THIS WORK CONSISTS OF FURNISHING AND INSTALLING DRILLED SHAFTS FOR SOLDIER PILE WALLS. THE DRILLED SHAFTS ARE REINFORCED WITH SOLDIER PILES INSTEAD OF REINFORCING STEEL CAGES. THE SOLDIER PILES EXTEND ABOVE THE TOP OF THE DRILLED SHAFTS. FURNISH AND INSTALL THE DRILLED SHAFTS ACCORDING TO 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 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 PILES SO THAT IT DOES NOT MOVE DURING CONCRETE PLACEMENT.

USE CONCRETE CLASS QC SCC, WITH 3/8 IN MAX AGGREGATE SIZE ACCORDING TO C&MS 511 TO FILL THE HOLE TO THE TOP OF THE DRILLED SHAFT (ELEVATION "A"). THE CONTRACTOR MAY PLACE CONCRETE USING THE FREE FALL METHOD PROVIDING THE DEPTH OF WATER IN THE SHAFT IS LESS THAN 6 INCHES AND THE CONCRETE FALLS WITHOUT STRIKING THE SIDES OF THE HOLE. POURING THE CONCRETE ALONG THE WEB OF THE SOLDIER PILE IS ACCEPTABLE.

CHECK THE POSITION, THE VERTICAL ALIGNMENT AND THE ORIENTATION OF THE SOLDIER PILE IMMEDIATELY AFTER CONCRETE PLACEMENT. MAKE CORRECTIONS AS NECESSARY TO THE ABOVE TOLERANCES. FILL THE HOLE ABOVE THE CONCRETE TO THE EXISTING GROUND SURFACE WITH ITEM 613 LOW STRENGTH MORTAR BACKFILL (LSM).

REMOVE CONCRETE AND LSM AS NECESSARY FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE 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. NO DRILLED SHAFT EXCAVATION SHALL BE LEFT UN-POURED OVERNIGHT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE MEANS AND METHODS USED TO CONSTRUCT THE DRILLED SHAFTS AND PLACE LAGGING. ANY TEMPORARY GRADING, EXCAVATION, EMBANKMENT, AGGREGATE, DRAINAGE, SHEETING, ETC. NEEDED TO COMPLETE THE WORK SHALL BE INCLUDED IN THE BID PRICE FOR THE DRILLED SHAFTS. THE COST OF ANY EXCAVATION AND SUBSEQUENT REPLACEMENT OF EMBANKMENT (PER ITEM 203 EMBANKMENT) SHALL BE INCLUDED IN THE VARIOUS BID ITEMS FOR THE DRILLED SHAFTS AND LAGGING, UNLESS SEPARATELY ITEMIZED. NO SEPARATE PAYMENT WILL BE MADE.

METHOD OF MEASUREMENT: THE DEPARTMENT WILL MEASURE DRILLED SHAFTS ABOVE BEDROCK, AS PER PLAN, ALONG THE AXIS OF THE DRILLED SHAFT FROM THE EXISTING GROUND SURFACE TO THE BOTTOM OF THE DRILLED SHAFT, AS DETERMINED BY THE ENGINEER.

PAYMENT IS FULL COMPENSATION FOR CONSTRUCTING THE DRILLED SHAFTS, INCLUDING FURNISHING AND PLACING CONCRETE AND LSM, AND REMOVAL OF CONCRETE OR LSM FROM AROUND THE SOLDIER PILE IN ORDER TO PLACE LAGGING.

ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT APPROXIMATELY 225 LINEAR FEET OF ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURE WITHIN EXISTING AT&D DUCTS. THE CONTRACTOR SHALL VERIFY THE LENGTH OF DUCTS TO BE REMOVED SEE SHEET 1777 OF 2696 FOR ADDITIONAL INFORMATION.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE THE ADDRESSES BELOW AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION.

ASBESTOS PROGRAM
OHIO EPA, DAPC
P.O. BOX 1049
COLUMBUS, OH 43216-1049

OR

ASBESTOS PROGRAM
OHIO EPA, DAPC
50 W. TOWN ST., SUITE 700
COLUMBUS, OH 43215

THE CONTRACTOR SHALL PROVIDE A COPY OF THE COMPLETED FORM TO THE ENGINEER AT LEAST TEN (10) WORKING DAYS PRIOR TO THE START OF ANY DEMOLITION AND/OR RENOVATION. THE FORM SHALL INCLUDE: 1) THE CONTRACTORS NAME AND ADDRESS, 2) THE SCHEDULED DATES FOR THE START AND COMPLETION OF THE BRIDGE REMOVAL AND 3) A DESCRIPTION OF THE PLANNED DEMOLITION WORK AND THE METHOD(S) TO BE USED. COPIES OF THE OEPA FORM AND BRIDGE INSPECTION REPORT ARE AVAILABLE FOR REVIEW AT THE ODOT DISTRICT 12 OFFICE, 5500 TRANSPORTATION BOULEVARD, GARFIELD HEIGHTS, OHIO 44125.

BASIS FOR PAYMENT THE CONTRACTOR SHALL FURNISH ALL FEES, LABOR, AND MATERIAL NECESSARY TO COMPLETE AND SUBMIT THE OEPA NOTIFICATION FORM. PAYMENT FOR THIS WORK SHALL BE PER SHEET 77 OF THE ENVIRONMENTAL GENERAL NOTES.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK, AS PER PLAN

LOCATE THE LOWER CONTACT POINT OF THE OVERHANG FALSEWORK A MAXIMUM OF 18 INCHES ± 2 INCHES ABOVE THE TOP OF THE GIRDER'S BOTTOM FLANGE. THE BRACING CONTACT POINT REQUIREMENTS OF C&MS 508 DO NOT APPLY.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, SIDEWALK, AS PER PLAN

PLACE CONTROL JOINTS PER THE AESTHETIC ENHANCEMENT PLANS. PROVIDE PEJF AND SEALANT AROUND LUMINAIRES AT SIDEWALK PENETRATIONS AS SHOWN IN THESE PLANS.

ITEM 511 - CLASS QC2 CONCRETE WITH QC/QA, BRIDGE DECK (PARAPET), AS PER PLAN

ALL BRIDGE RAILINGS (PARAPETS) SHALL RECEIVE AN EPOXY-URETHANE SEALER AS SHOWN IN THE TRANSVERSE SECTION AND SIDEWALK PLANS AND DETAILS.

SEE SHEET 2358 (78/90) FOR BRIDGE RAILING ARCHITECTURAL TREATMENT.

ITEM 506 - STATIC LOAD TEST, AS PER PLAN

AT THE FORWARD ABUTMENT, PERFORM DYNAMIC TESTING ON THE FIRST TWO PRODUCTION PILES. PERFORM THE STATIC LOAD TEST ON EITHER PILE. ALSO PERFORM DYNAMIC TESTING ON TWO OTHER PILES, TO BE USED AS ANCHOR PILES. DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT (80 FEET), IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP." OTHER PRODUCTION PILES IN THE SAME SUBSTRUCTURE UNIT MAY BE USED AS ANCHOR PILES. THE STATIC LOAD TEST PILE AND ALL ANCHOR PILES SHALL NOT BE BATTERED. AFTER DRIVING ALL PILES TO THE FULL ESTIMATED LENGTH, CEASE ALL DRIVING OPERATIONS AT THE SUBSTRUCTURE FOR A MINIMUM OF 14 DAYS. AFTER THE WAITING PERIOD, PERFORM THE STATIC LOAD TEST, AND THEN PERFORM PILE RESTRIKES ON THE FOUR DYNAMIC LOAD TEST PILES (TWO RESTRIKE TEST ITEMS). PERFORM A CAPWAP ANALYSIS ON EACH PILE TESTED IN THE SAME SUBSTRUCTURE UNIT FOR EVERY DYNAMIC LOAD TEST AND EVERY RESTRIKE TEST. THE ENGINEER WILL REVIEW THE RESULTS OF THE PILE RESTRIKES AND ESTABLISH THE DRIVING CRITERIA FOR THE PILING IN THE SUBSTRUCTURE IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP." SUBMIT ALL TEST RESULTS TO THE OFFICE OF GEOTECHNICAL ENGINEERING.

IF THE RESTRIKE TEST RESULTS INDICATE THAT ANY OF THE PILES DID NOT ACHIEVE THE REQUIRED UBV, DRIVE THE PILE TO THE ESTABLISHED DRIVING CRITERIA IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP"

THE CONTRACTOR HAS THREE ALTERNATIVES TO PERFORM THE STATIC LOAD TEST, AS PER PLAN:

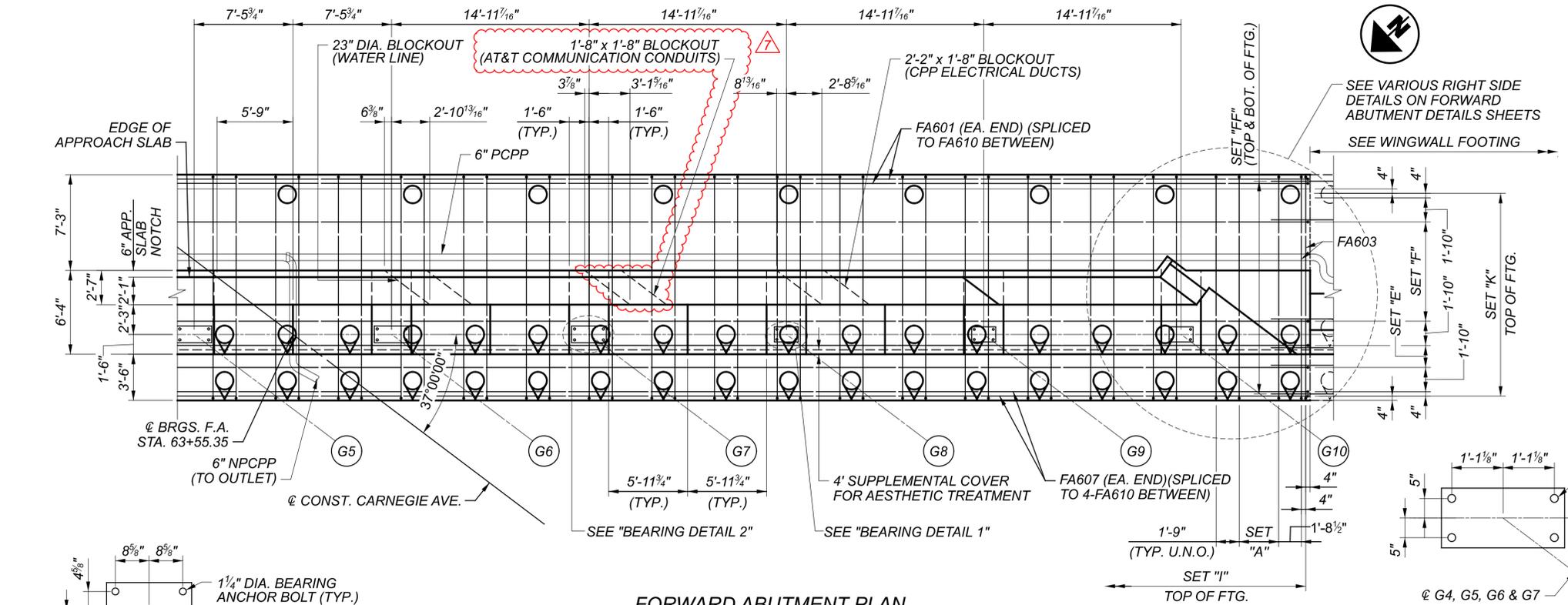
1. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE IN THE FORWARD ABUTMENT SUBSTRUCTURE UNIT AND USE OTHER PRODUCTION PILES IN THE SAME SUBSTRUCTURE UNIT AS ANCHOR PILES, PER THE NOTE ABOVE.
2. PERFORM THE STATIC LOAD TEST ON A PRODUCTION PILE IN THE FORWARD ABUTMENT SUBSTRUCTURE UNIT AND DRIVE SUPPLEMENTAL PILES FOR ANCHOR PILES. STILL DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT. IN THIS CASE, PERFORM DYNAMIC LOAD TESTING AND RESTRIKE TESTING ON THE STATIC LOAD TEST PILE, ONE OTHER PILE IN THE SAME SUBSTRUCTURE UNIT, AND ON TWO OF THE ANCHOR PILES.
3. PERFORM THE STATIC LOAD TEST OFFLINE, ON A SUPPLEMENTAL TEST PILE WITHIN 50 FEET OF THE FORWARD ABUTMENT AND DRIVE AN ARRAY OF SUPPLEMENTAL PILES AS ANCHOR PILES. STILL DRIVE ALL PILES TO THE FULL ESTIMATED LENGTH FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT. IN THIS CASE, PERFORM DYNAMIC LOAD TESTING AND RESTRIKE TESTING ON THE STATIC LOAD TEST PILE, ONE OF THE ANCHOR PILES, AND ON TWO PRODUCTION PILES IN THE FORWARD ABUTMENT SUBSTRUCTURE UNIT, IN ACCORDANCE WITH THE PLAN NOTE "PILES DRIVEN TO FULL ESTIMATED LENGTH WITH PILE/SOIL SETUP."

THIS PLAN NOTE INCLUDES AN ADDITIONAL QUANTITY OF ONE ITEM 523 DYNAMIC LOAD TESTING, AS PER PLAN AND ONE ITEM 523 RESTRIKE, AS PER PLAN FOR THE FORWARD ABUTMENT SUBSTRUCTURE UNIT. EACH OF THESE TESTING ON TWO PILES, IN ACCORDANCE WITH ITEM 523. ANY SUPPLEMENTAL PILES DRIVEN FOR THE STATIC LOAD TEST ARE INCIDENTAL TO ITEM 506 STATIC LOAD TEST, AS PER PLAN.

ITEM 526 - REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17"), AS PER PLAN

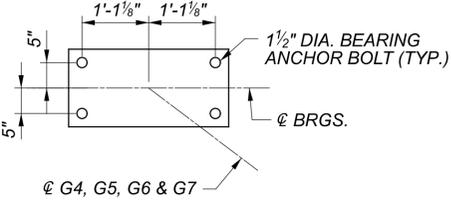
SIDEWALK AND PARAPET CONCRETE ABOVE APPROACH SLABS SHALL BE CONSIDERED INCIDENTAL TO THIS ITEM AND SHALL BE HELD TO THE SAME STANDARDS APPLIED TO SIDEWALK AND PARAPET CONCRETE WITHIN BRIDGE DECK LIMITS.

SFN	1807898
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER	CHECKER
ZES	MKB
REVIEWER	
KAG 12/26/23	
PROJECT ID	
82382	
SUBSET	TOTAL
8	90
SHEET	TOTAL
2288	2696



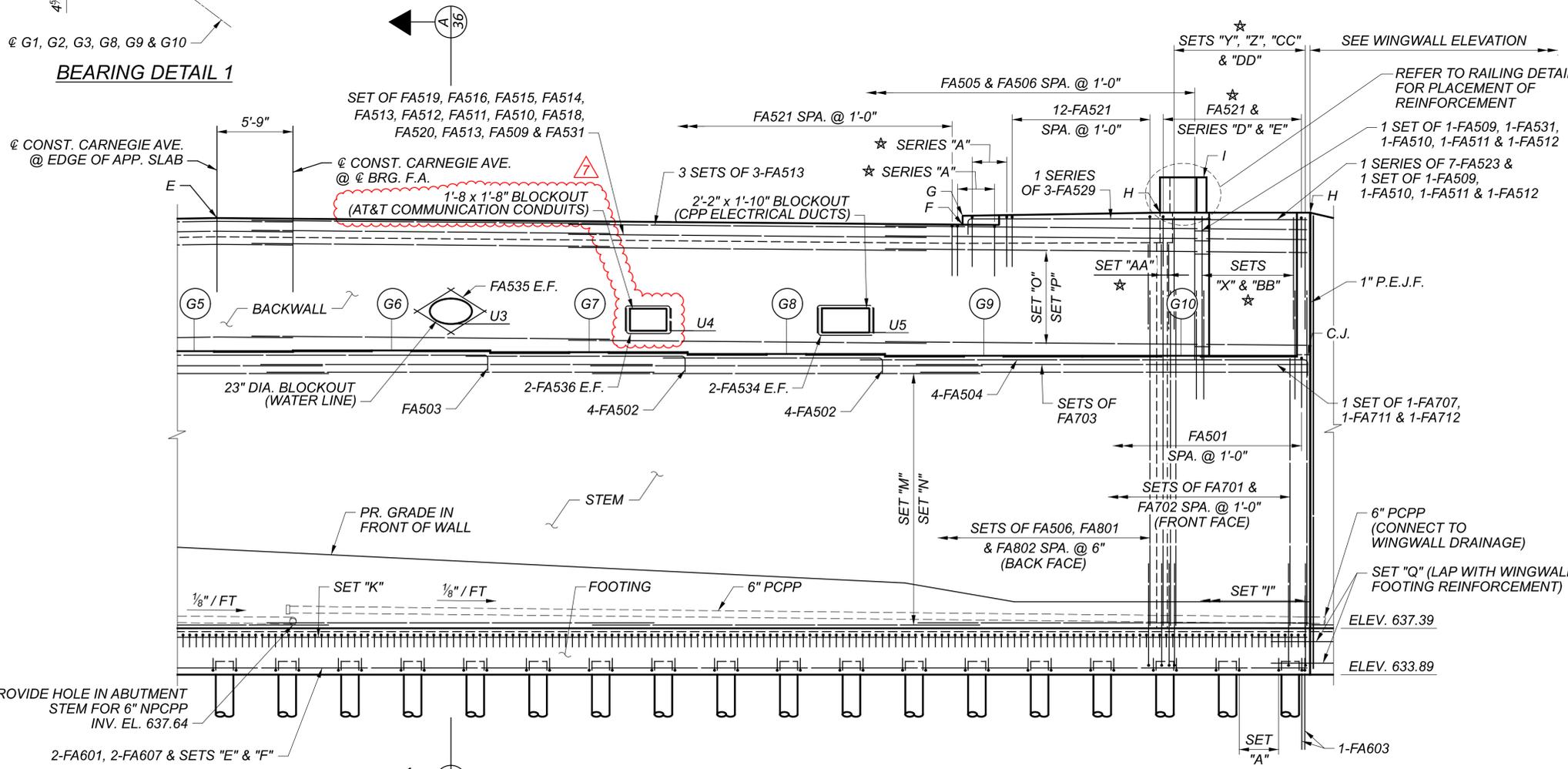
FORWARD ABUTMENT		UTILITIES	
POINT	ELEVATION	POINT	ELEVATION
E	668.39	U3	660.09
F	667.89	U4	659.87
G	668.56	U5	659.74
H	668.79		
I	671.46		
G5	658.33		
G6	658.38		
G7	658.25		
G8	658.12		
G9	657.98		
G10	657.98		

- BOTTOM OF FOOTING REINFORCEMENT SETS:**
- SET "A" = 7-FA603 SPA. @ 6" MAX. (TYP. BETWEEN PILES UNLESS NOTED OTHERWISE, 32 SETS TOTAL)
 - SET "B" = 6-FA605 SPA. @ 5 1/2" MAX.
 - SET "C" = 3-FA604 SPA. @ 4 1/2" MAX.
 - SET "D" = 5-FA603 SPA. @ 5 1/2" MAX.
 - SET "E" = 3 SETS OF 2-FA607 & 4-FA610 (FA607 PLACED AT ENDS) SPA. @ 10" MAX.
 - SET "F" = 13 SETS OF 2-FA606 & 4FA610 (FA606 PLACED AT ENDS) SPA. @ 10" MAX.
 - SET "G" = 3-FA602 SPA. @ 10" MAX.
 - SET "H" = 10-FA602 SPA. @ 10" MAX.
- TOP OF FOOTING REINFORCEMENT SETS:**
- SET "I" = 308-FA603 SPA. @ 6" MAX.
 - SET "J" = 19-FA603 SPA. @ 6" MAX.
 - SET "K" = 1 SET OF 19 RUNS (EA. RUN = FA608 EA. END SPLICED TO 4-FA610 BETWEEN) SPA. @ 11" MAX.
 - SET "L" = 19-FA609 SPA. @ 11" MAX.



FORWARD ABUTMENT PLAN
ONLY BOTTOM OF FOOTING REINFORCEMENT SHOWN FOR CLARITY.

BEARING DETAIL 2



- STEM REINFORCEMENT SETS:**
- SET "M" = 20 SETS OF 1-FA704, 1-FA705, 6-FA706 & 1-FA707 SPA. @ 1'-0" MAX. (SIDE & FRONT FACES OF STEM)
 - SET "N" = 20 SETS OF 1-FA708, 1-FA709, 6-FA710, 1-FA711 & 1-FA712 SPA. @ 1'-0" MAX. (BACK FACE OF STEM)
- BACKWALL REINFORCEMENT SETS:**
- SET "O" = 8 SETS OF 1-FA519, 1-FA516, 1-FA515, 1-FA514, 6-FA513, 1-FA512, 1-FA511 & 1-FA510 SPA. @ 1'-0" MAX. (SIDE & FRONT FACES OF BACKWALL)
 - SET "P" = 8 SETS OF 1-FA518, 1-FA520, 6-FA508 & 1-FA509 SPA. @ 1'-0" MAX. (BACK FACE OF BACKWALL)
- WINGWALL FOOTING INTERFACE REINFORCEMENT SETS:**
- SET "FF" = 18-FA611, LAP WITH FA608 (TOP OF FTG.) 19-FA611, LAP WITH FA601, FA606, OR FA607 (BOT. OF FTG.)

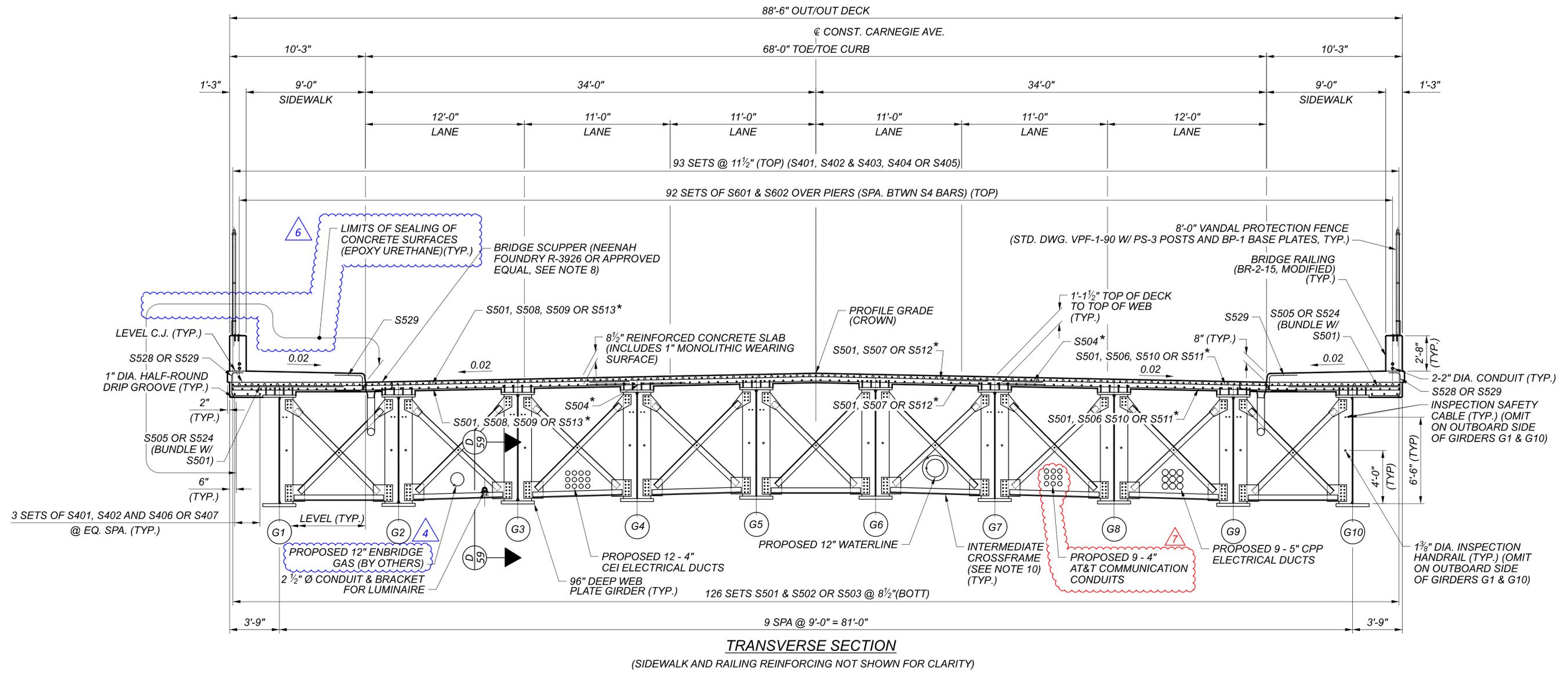
★ SEE REINFORCEMENT SETS AND SERIES ON FORWARD ABUTMENT DETAILS SHEET (2 OF 2)

- NOTES:**
- BRIDGE SEAT REINFORCEMENT, SEETING ANCHORS: ACCURATELY PLACE CONCRETE REINFORCEMENT IN THE VICINITY OF THE BRIDGE SEAT TO AVOID INTERFERENCE WITH THE DRILLING OF THE BEARING ANCHOR HOLES OR THE PRE-SETTING OF BEARING ANCHORS.

SFN	1807898
DESIGN AGENCY	
Michael Baker INTERNATIONAL	
DESIGNER/CHECKER	TMG/AHS
REVIEWER	LPC 06/23/22
PROJECT ID	82382
SUBSET	35
TOTAL	90
SHEET	2315
TOTAL	2696

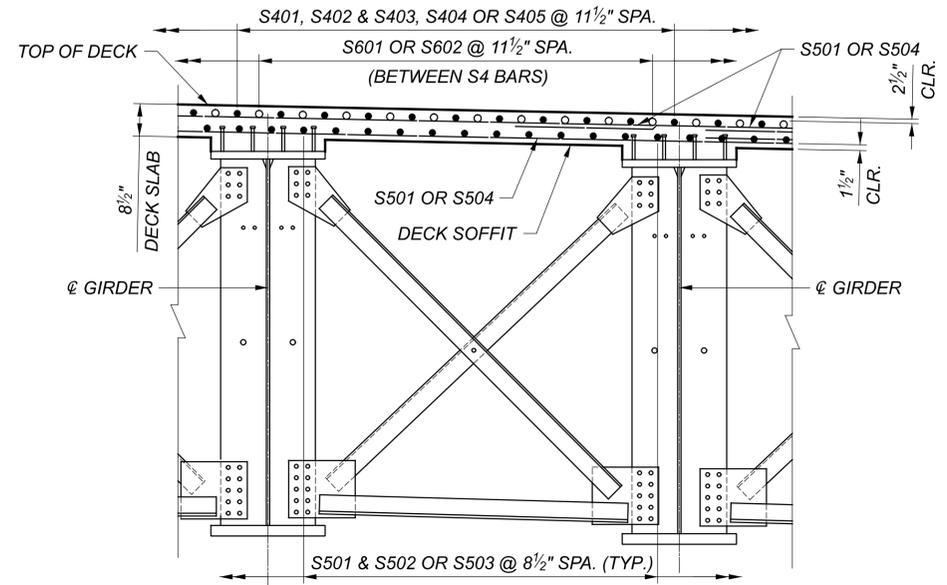
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MODEL: 82382_SFN_000014_ST001 PAPER SIZE: 34x42 (in.) DATE: 10/21/2025 TIME: 4:43:46 PM USER: Jace Creech
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TRANSVERSE SECTION

(SIDEWALK AND RAILING REINFORCING NOT SHOWN FOR CLARITY)



TYPICAL GIRDER BAY DETAIL

UTILITIES NOT SHOWN FOR CLARITY

MINIMUM LAP LENGTHS:

- NO. 4 BARS = 1'-11"
- NO. 5 BARS = 3'-0"
- NO. 6 BARS = 3'-7"

LEGEND:

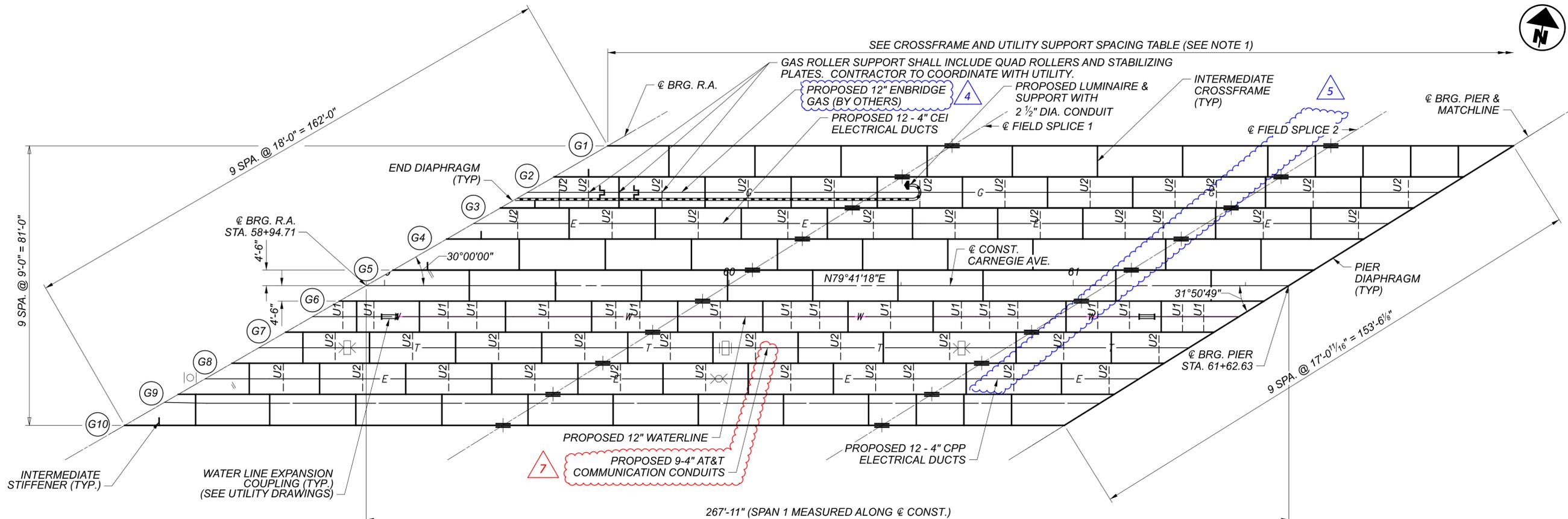
* ALTERNATE LOCATIONS OF S5XX IN TOP & BOTTOM MATS

NOTES:

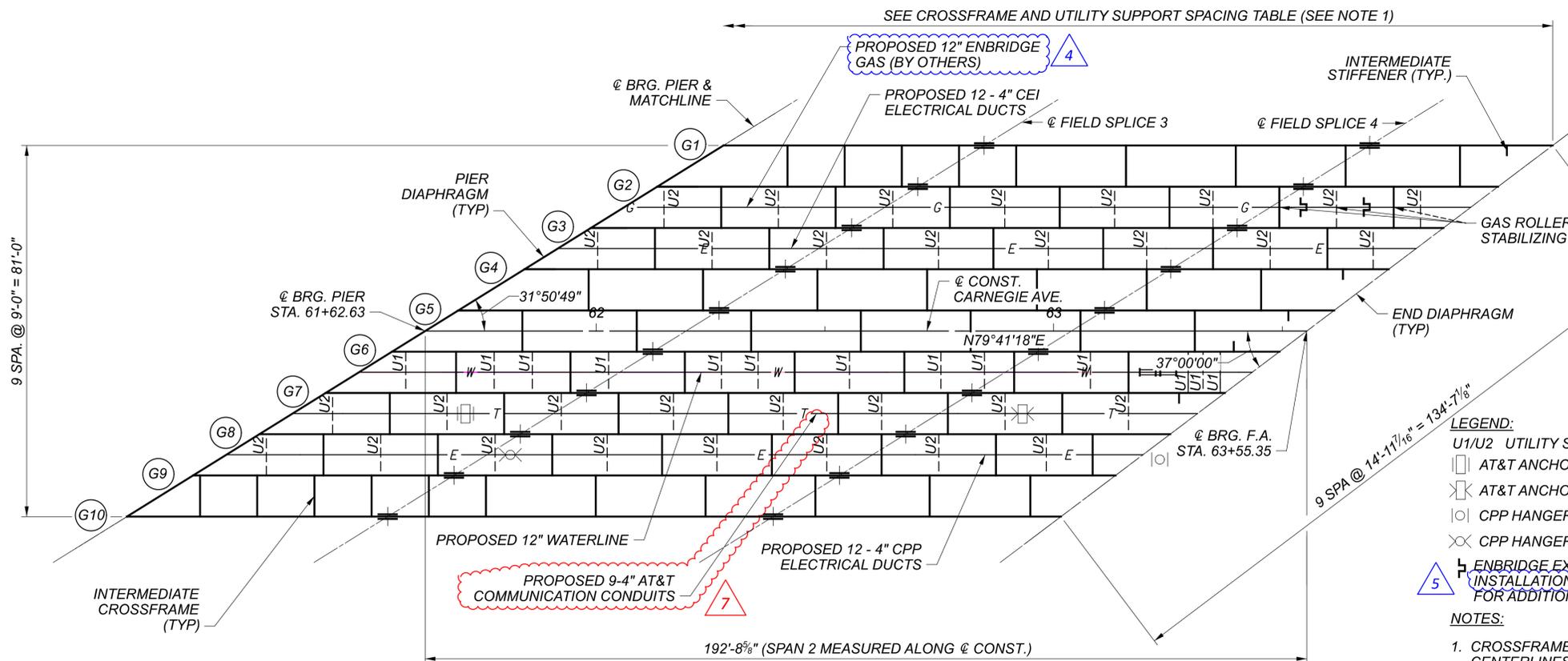
1. FOR DECK PLANS, SEE SHEETS 63 & 64 / 90.
2. FOR RAILING DETAILS, SEE SHEETS 73 - 76 / 90.
3. FOR FRAMING PLANS, SEE SHEETS 47 & 48 / 90.
4. REINFORCING MAY BE FIELD-BENT OR SHOP-BENT TO CONFORM TO DECK CROSS SLOPES. PAYMENT SHALL BE INCLUDED WITH ITEM 509, EPOXY COATED REINFORCING STEEL.
5. FOR GIRDER CAMBER DEFLECTION TABLES, SEE SHEETS 53-56 / 90.
6. FOR SIDEWALK DETAILS, SEE SHEETS 65 & 66 / 90.
7. FOR SCUPPER AND DOWNSPOUTING DETAILS, SEE SHEET 82 / 90.
8. ADJUST DECK REINFORCING TO CLEAR DECK SCUPPERS AND SHEAR STUDS. MAINTAIN A MINIMUM OF 2" CLEAR TO DECK OBSTRUCTIONS.
9. FOR ADDITIONAL DECK PLACEMENT NOTES, SEE GENERAL NOTES AND DECK PLANS.
10. INTERMEDIATE CROSSFRAME MEMBERS VARY BY GIRDER BAY. SEE CROSSFRAME AND UTILITY SUPPORT DETAILS ON SHEETS 57 - 60 / 90.
11. DECK SLAB CONCRETE QUANTITY: THE ESTIMATED QUANTITY OF DECK SLAB CONCRETE IS BASED ON THE CONSTANT DECK SLAB THICKNESS, AS SHOWN, PLUS THE QUANTITY OF CONCRETE THAT FORMS EACH GIRDER HAUNCH. THE ESTIMATE ASSUMES A CONSTANT HAUNCH THICKNESS OF 5 INCHES AND A HAUNCH WIDTH EQUAL TO THE TOP FLANGE WIDTH. DEVIATE FROM THIS HAUNCH THICKNESS AS NECESSARY TO PLACE THE DECK SURFACE AT THE FINISHED GRADE.
12. THE HAUNCH THICKNESS WAS MEASURED AT THE CENTERLINE OF THE GIRDER, FROM THE SURFACE OF THE DECK TO THE BOTTOM OF THE TOP FLANGE MINUS THE DECK SLAB THICKNESS. THE AREA OF ALL EMBEDDED STEEL PLATES HAS BEEN DEDUCTED FROM THE HAUNCH QUANTITY IN ACCORDANCE WITH 511.23.
13. PROVIDE GROUNDING PER STANDARD DRAWING HL-50.21. THE FOLLOWING BRIDGE COMPONENTS SHALL BE CONNECTED TO THE GROUNDING SYSTEM: STRUCTURAL STEEL AND LIGHT POLES.

TRANSVERSE SECTION
CUY-90-1696 (BRIDGE 14)
CR-722 (CARNEGIE AVE.) OVER I.R. 90

SFN	1807898
DESIGN AGENCY	
DESIGNER	Michael Baker INTERNATIONAL
CHECKER	
REVIEWER	
PROJECT ID	82382
SUBSET	46
TOTAL	90
SHEET	2326
TOTAL	2696



FRAMING PLAN SPAN 1

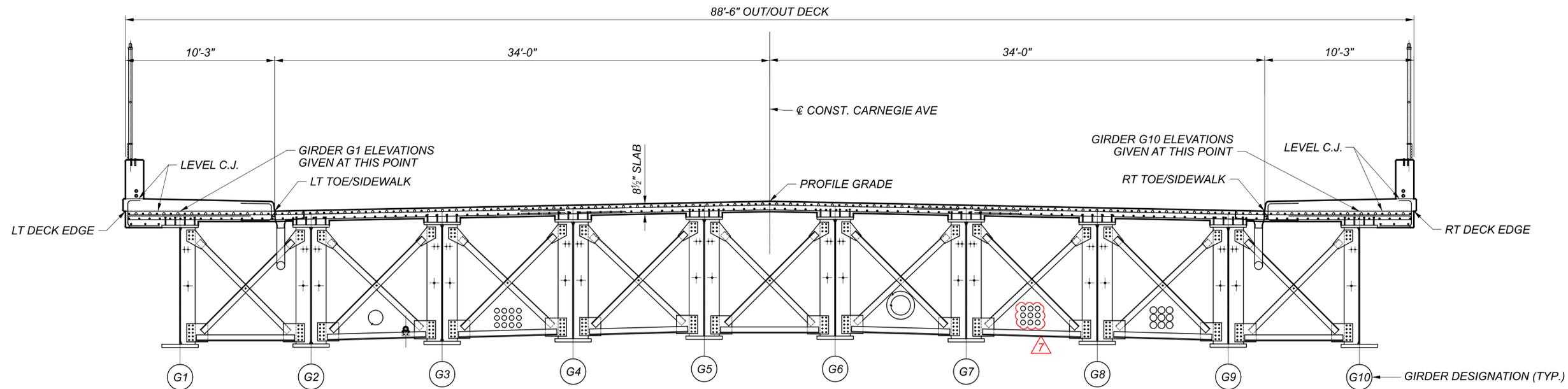


FRAMING PLAN SPAN 2

UTILITY HANGER TABLE			
UTILITY	HOLE DIA.	HOLE QTY.	HOLE SPA.
GAS	1"	2	16 1/8"
AT&T	1 3/16"	4	6 1/2"
CEI	1 3/16"	5	6 1/2"
CPP	1 3/16"	4	7 1/4"

- LEGEND:**
- U1/U2 UTILITY SUPPORT TYPE DESIGNATION
 - AT&T ANCHOR TYPE HANGER WITH STOP RINGS
 - ⊗ AT&T ANCHOR TYPE HANGER WITH O-RING EXPANSION JOINTS
 - CPP HANGER WITH FIXED END AT BACKWALL
 - ⊗ CPP HANGER WITH EXPANSION JOINT
 - △ ENBRIDGE EXPANSION LOOP, INCLUDED WITH 12" PIPE/CONDUIT (INSTALLATION) CONTRACTOR TO COORDINATE WITH UTILITY FOR ADDITIONAL INFORMATION.
- NOTES:**
- CROSSFRAME AND UTILITY SUPPORT SPACINGS GIVEN ALONG THE CENTERLINES OF EACH GIRDER. SPACINGS GIVEN ON THE RIGHT SIDE OF EACH GIRDER, LOOKING STATIONS AHEAD. SEE SHEET 48/90 FOR CROSSFRAME AND UTILITY SUPPORT SPACING TABLE.
 - SEE SHEETS 57 - 60/90 FOR CROSSFRAME AND UTILITY SUPPORT DETAILS.

SFN	1807898
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	ABC
CHECKER	BWC
REVIEWER	LPC
PROJECT ID	82382
SUBSET	47
TOTAL	90
SHEET	2327
TOTAL	2696



FINAL DECK ELEVATIONS, STATIONS, AND OFFSETS

	LT DECK EDGE		GIRDER G1		LT TOE/SIDEWALK		GIRDER G2		GIRDER G3		GIRDER G4		GIRDER G5		PROFILE GRADE	GIRDER G6		GIRDER G7		GIRDER G8		GIRDER G9		RT TOE/SIDEWALK		GIRDER G10		RT DECK EDGE	
C.L. BRG. R.A.	59+71.35	44.25' LT	59+64.86	40.50' LT	59+53.60	34.00' LT	59+49.27	31.50' LT	59+33.68	22.50' LT	59+18.09	13.50' LT	59+02.50	4.50' LT	58+94.71	58+86.92	4.50' RT	58+71.33	13.50' RT	58+55.74	22.50' RT	58+40.15	31.50' RT	58+35.82	34.00' RT	58+24.56	40.50' RT	58+18.07	44.25' RT
0.05 "B"	669.22	669.25	669.25	669.29	669.29	669.36	669.36	669.41	669.41	669.46	669.46	669.51	669.51	669.56	670.09	670.15	670.15	670.03	670.09	669.97	669.85	669.82	669.76	669.71	669.65	669.59	669.53	669.47	669.41
0.10 "B"	669.17	669.20	669.20	669.24	669.24	669.29	669.29	669.31	669.31	669.35	669.35	669.39	669.39	669.43	670.15	670.10	670.10	669.98	669.86	669.74	669.62	669.50	669.38	669.26	669.14	669.02	668.90	668.78	668.66
0.15 "B"	669.12	669.14	669.14	669.19	669.19	669.26	669.26	669.31	669.31	669.36	669.36	669.41	669.41	669.46	670.10	670.04	670.04	669.92	669.81	669.69	669.57	669.45	669.33	669.21	669.09	668.97	668.85	668.73	668.61
0.20 "B"	669.07	669.09	669.09	669.14	669.14	669.20	669.20	669.26	669.26	669.32	669.32	669.38	669.38	669.44	670.05	669.99	669.93	669.87	669.75	669.63	669.51	669.39	669.27	669.15	669.03	668.91	668.79	668.67	668.55
0.25 "B"	669.01	669.04	669.04	669.08	669.08	669.15	669.15	669.21	669.21	669.27	669.27	669.33	669.33	669.39	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.30 "B"	668.96	668.99	668.99	669.03	669.03	669.10	669.10	669.16	669.16	669.22	669.22	669.28	669.28	669.34	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.35 "B"	668.91	668.93	668.93	668.98	668.98	669.04	669.04	669.10	669.10	669.16	669.16	669.22	669.22	669.28	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.40 "B" F.S. 1	668.86	668.88	668.88	668.92	668.92	668.99	668.99	669.05	669.05	669.11	669.11	669.17	669.17	669.23	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.45 "B"	668.80	668.83	668.83	668.87	668.87	668.94	668.94	669.00	669.00	669.06	669.06	669.12	669.12	669.18	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.50 "B"	668.75	668.78	668.78	668.82	668.82	668.89	668.89	668.95	668.95	669.01	669.01	669.07	669.07	669.13	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.55 "B"	668.70	668.72	668.72	668.77	668.77	668.83	668.83	668.89	668.89	668.95	668.95	669.01	669.01	669.07	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.60 "B"	668.65	668.67	668.67	668.71	668.71	668.78	668.78	668.84	668.84	668.90	668.90	668.96	668.96	669.02	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.65 "B"	668.59	668.62	668.62	668.66	668.66	668.73	668.73	668.79	668.79	668.85	668.85	668.91	668.91	668.97	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.70 "B"	668.54	668.57	668.57	668.61	668.61	668.67	668.67	668.73	668.73	668.79	668.79	668.85	668.85	668.91	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.75 "B"	668.49	668.51	668.51	668.56	668.56	668.62	668.62	668.68	668.68	668.74	668.74	668.80	668.80	668.86	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.80 "B" F.S. 2	668.44	668.46	668.46	668.50	668.50	668.57	668.57	668.63	668.63	668.69	668.69	668.75	668.75	668.81	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.85 "B"	668.38	668.41	668.41	668.45	668.45	668.52	668.52	668.58	668.58	668.64	668.64	668.70	668.70	668.76	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.90 "B"	668.33	668.35	668.35	668.40	668.40	668.46	668.46	668.52	668.52	668.58	668.58	668.64	668.64	668.70	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
0.95 "B"	668.28	668.30	668.30	668.34	668.34	668.41	668.41	668.47	668.47	668.53	668.53	668.59	668.59	668.65	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50
C.L. PIER	668.23	668.25	668.25	668.29	668.29	668.36	668.36	668.42	668.42	668.48	668.48	668.54	668.54	668.60	669.99	669.93	669.87	669.82	669.70	669.58	669.46	669.34	669.22	669.10	668.98	668.86	668.74	668.62	668.50

LEGEND:

"B" LENGTH OF SPAN 1 MEASURED ALONG @ GIRDER OR DECK FEATURE

NOTES:

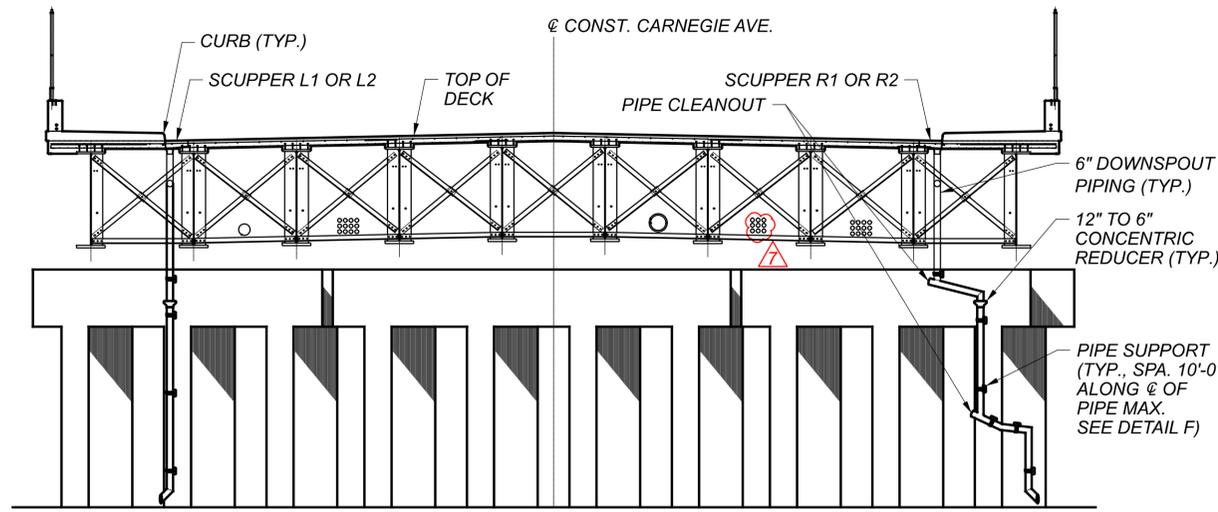
1. WORK THIS SHEET WITH SHEET 68/90.
2. SEE GIRDER ELEVATION SHEET 49/90 FOR GIRDER LENGTHS "B".
3. SEE SHEETS 65 & 66/90 FOR SIDEWALK DETAILS.
4. FINAL DECK SURFACE ELEVATIONS SHOWN REPRESENT THE DECK SURFACE LOCATION AFTER ALL ANTICIPATED DEAD LOAD DEFLECTIONS HAVE OCCURRED.

CUY-90-16.28 (CCG3A)

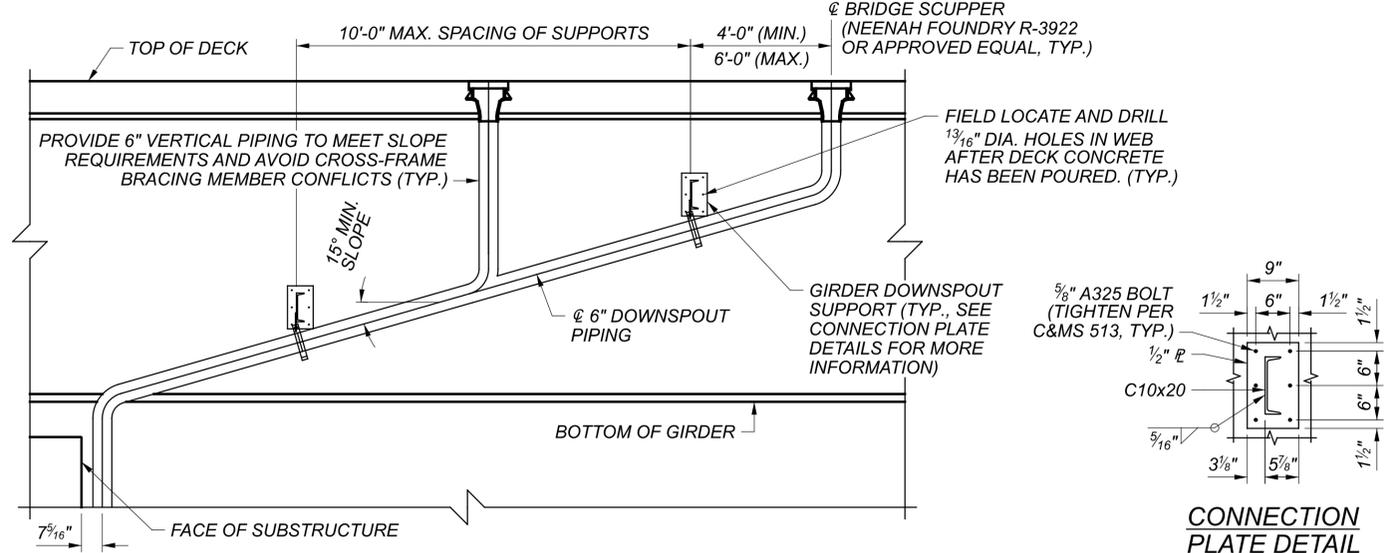
MODEL: final deck surface elev 1 PAPER SIZE: 34x42 (in.) DATE: 10/21/2025 TIME: 4:46:20 PM USER: Jace.Creech
 p:\mb-us-pw-bentley.com\mb-us-pw-03\Documents\Cleveland_OH101_P\Projects\ODOT\District12\28232400-Engineering\Structures\SFN_1807898_SFN_1807898_SD0003.dgn

FINAL DECK SURFACE ELEVATION TABLE (1 OF 2)
 CUY-90-1696 (BRIDGE 14)
 CR-722 (CARNEGIE AVE.) OVER I.R. 90

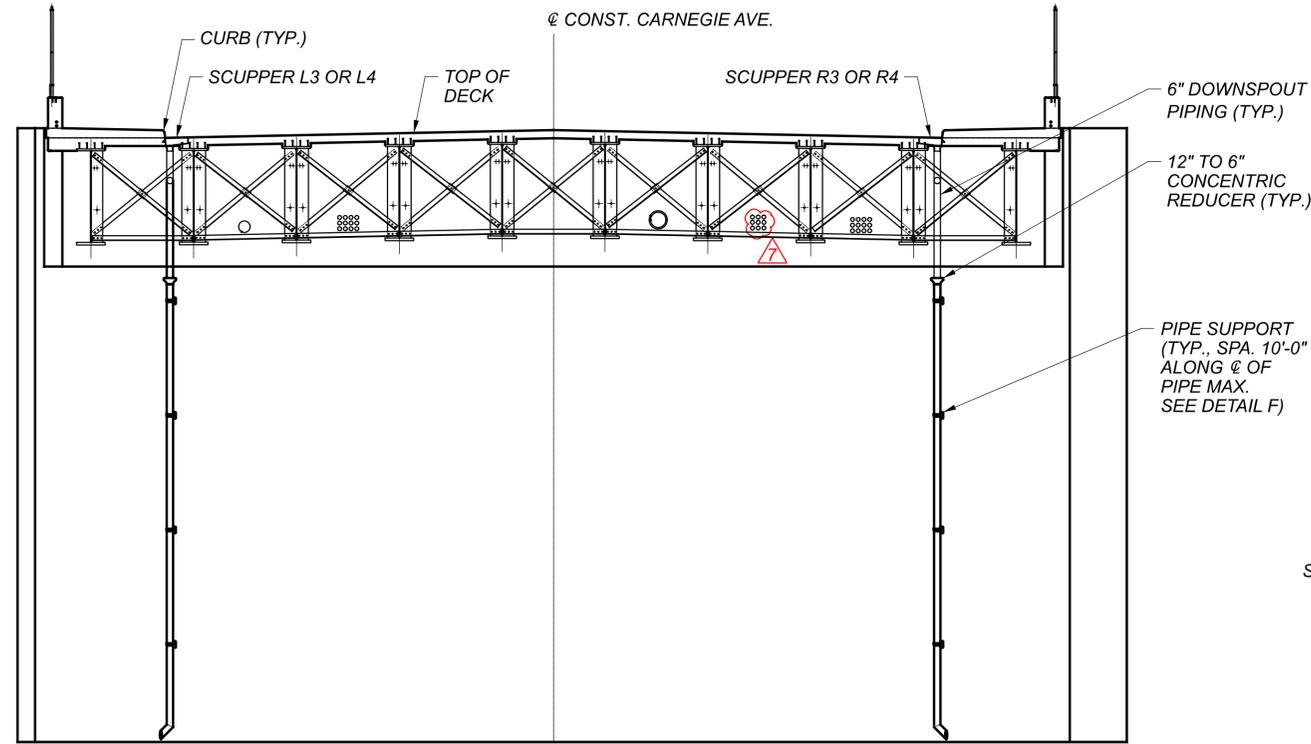
SFN	1807898
DESIGN AGENCY	Michael Baker INTERNATIONAL
DESIGNER	ABC
CHECKER	MEM
REVIEWER	LPC 06/23/22
PROJECT ID	82382
SUBSET	67
TOTAL	90
SHEET	2347
TOTAL	2696



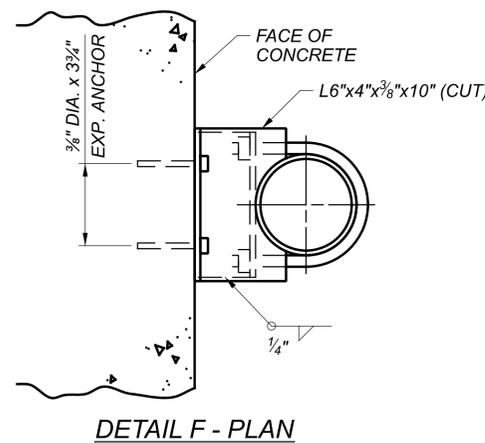
ELEVATION AT PIER
(LOOKING UPSTATION)



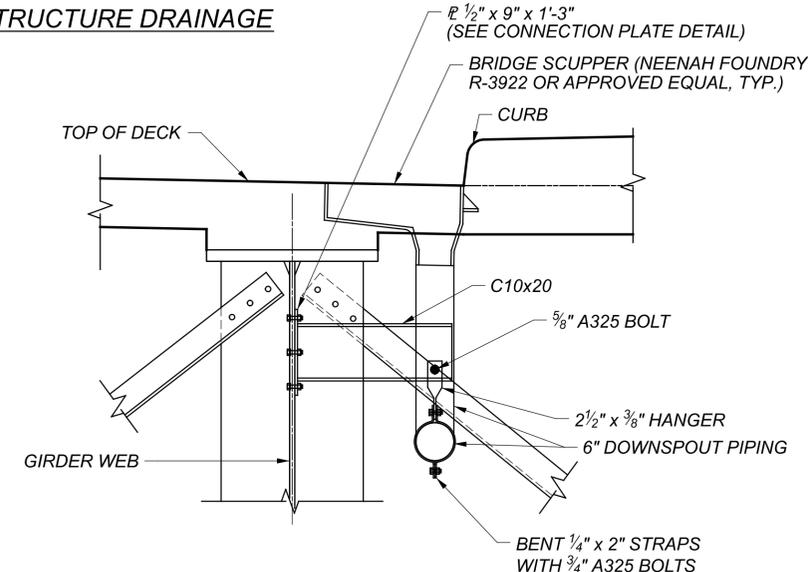
TYPICAL ELEVATION OF DECK TO SUBSTRUCTURE DRAINAGE
(LOOKING SOUTH)



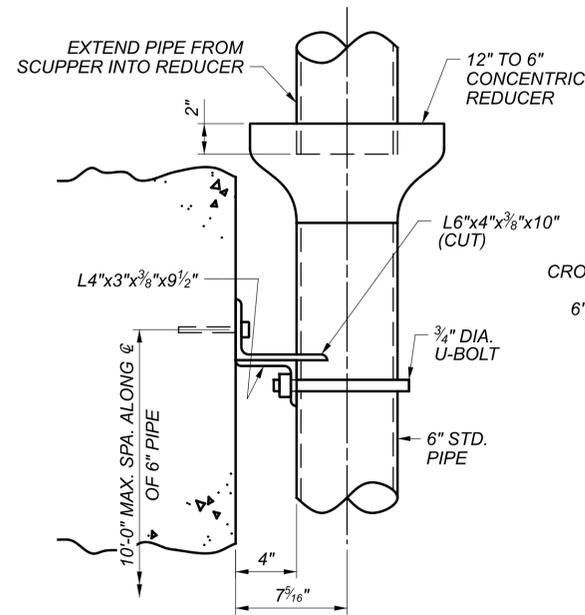
ELEVATION AT FORWARD ABUTMENT
(LOOKING UPSTATION)



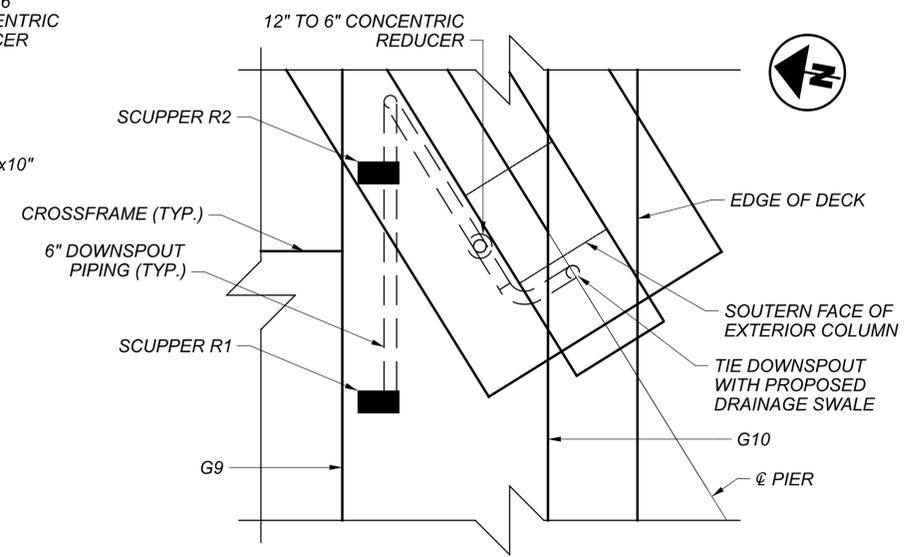
DETAIL F - PLAN



GIRDER DOWNSPOUT SUPPORT DETAIL



DETAIL F - ELEVATION



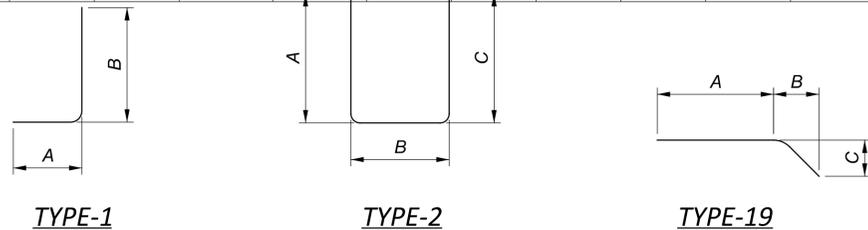
PLAN VIEW OF SCUPPER R1 AND R2 SYSTEM
(OTHER SCUPPER SYSTEMS ARE COLLINEAR IN SIMILAR PLAN VIEWS)

- NOTES:**
1. PROVIDE STRUCTURAL STEEL FOR DOWNSPOUT SUPPORTS CONFORMING TO ASTM A709 GRADE 36. GALVANIZE ALL MATERIAL AFTER FABRICATION ACCORDING TO ASTM A123.
 2. PROVIDE 6" DIAMETER DOWNSPOUT STEEL PIPE CONFORMING TO ASTM A53 WITH MECHANICAL FITTINGS RECOMMENDED BY THE SCUPPER AND DOWNSPOUT MANUFACTURER.
 3. PROVIDE FASTENERS CONFORMING TO ASTM F3125 GRADE A325 TYPE 1 GALVANIZED OF THE DIAMETERS NOTED.
 4. PROVIDE GIRDER- AND CONCRETE-MOUNTED DOWNSPOUT SUPPORT BRACKETS AT 10'-0" MAXIMUM CENTERS. INSTALL CONCRETE-MOUNTED DOWNSPOUT SUPPORTS USING 3/8" x 3 3/4" EXPANSION ANCHORS.
 5. TERMINATE DOWNSPOUT RUNS APPROXIMATELY 1'-0" ABOVE FINISHED GRADE USING A 45° ELBOW.
 6. SEE SHEET 63/90 FOR SCUPPER STATIONING AND OFFSETS.

SFN	1807898
DESIGN AGENCY	
DESIGNER	ZRS
CHECKER	ABC
REVIEWER	LPC
PROJECT ID	82382
SUBSET	82
TOTAL	90
SHEET	2362
TOTAL	2696

Michael Baker INTERNATIONAL

MARK	MAT'L TYPE	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
		REAR	FWD.	TOTAL				A	B	C	D	E	R	
FORWARD ABUTMENT (EPOXY COATED STEEL REINFORCEMENT-ECSR)														
FA501	ECSR		153	153	7'-1"	1130	2	0'-10"	5'-8"	0'-10"				
FA502	ECSR		20	20	17'-5"	363	1	0'-10"	16'-8"					
FA503	ECSR		4	4	30'-11"	129	2	0'-10"	29'-6"	0'-10"				
FA504	ECSR		4	4	34'-8"	145	1	0'-10"	33'-11"					
FA505	ECSR		158	158	4'-6"	742	STR.							
FA506	ECSR		501	501	8'-1"	4224	STR.							
FA507	ECSR	SER. OF	SER. OF	TO	54	1	0'-10"	15'-3"					1'-4"	
		3	3	18'-8"				17'-11"						
FA508	ECSR		48	48	28'-4"	1418	STR.							
FA509	ECSR		11	11	3'-11"	45	1	1'-9"	2'-3"					
FA510	ECSR		11	11	5'-8"	65	STR.							
FA511	ECSR		11	11	9'-2"	105	19	8'-1 1/8"	1'-0 1/4"	0'-5 5/8"				
FA512	ECSR		11	11	2'-0"	23	STR.							
FA513	ECSR		78	78	27'-1"	2203	STR.							
FA514	ECSR		11	11	2'-3"	26	STR.							
FA515	ECSR		10	10	3'-2"	33	19	2'-9 3/4"	0'-3 1/4"	0'-2 5/8"				
FA516	ECSR		11	11	10'-3"	118	19	8'-0 1/8"	1'-10"	1'-4"				
FA517	ECSR		1	1	16'-8"	17	2	3'-10"	9'-2 3/4"	3'-10"				
FA518	ECSR		10	10	4'-4"	45	STR.							
FA519	ECSR		11	11	1'-8"	19	STR.							
FA520	ECSR		11	11	2'-4"	27	STR.							
FA521	ECSR		135	135	9'-8"	1361	2	4'-1"	1'-9"	4'-1"				
			4	4	9'-4"				1'-11"					
FA522	ECSR	SER. OF	SER. OF	TO	185	2	3'-10"	TO	3'-10"				5'-5 3/4"	
		3	3	20'-3"				12'-10"						
		1	1	1'-5"										
FA523	ECSR	SER. OF	SER. OF	TO	36	STR.							1'-2 3/16"	
		7	7	8'-6"										
FA524	ECSR		4	4	9'-1"	38	2	3'-10"	1'-8"	3'-10"				
									3'-6 1/8"					
FA525	ECSR	SER. OF	SER. OF	TO	49	2	3'-10"	TO	3'-10"				7 3/16"	
		4	4	12'-9"					5'-3 5/8"					
		1	1	8'-1"					0'-7 3/4"					
FA526	ECSR	SER. OF	SER. OF	TO	27	2	3'-10"	TO	3'-10"				6 1/8"	
		3	3	9'-1"					1'-8"					
		1	1	8'-5"					0'-11 7/8"					
FA527	ECSR	SER. OF	SER. OF	TO	89	2	3'-10"	TO	3'-10"				7 3/4"	
		8	8	12'-11"					5'-6 1/8"					
		1	1	9'-10"					2'-5 1/4"					
FA528	ECSR	SER. OF	SER. OF	TO	21	2	3'-10"	TO	3'-10"				1"	
		2	2	9'-11"					2'-6 1/4"					
		1	1	16'-1"					15'-4"					
FA529	ECSR	SER. OF	SER. OF	TO	54	1	0'-10"	TO					1'-3"	
		3	3	18'-6"					17'-10"					
FA530														
FA531	ECSR		2	2	9'-4"	19	STR.							
FA532	ECSR		1	1	9'-11"	10	19	9'-7 1/4"	0'-3 1/4"	0'-2 5/8"				
FA533	ECSR		8	8	2'-6"	21	STR.							
FA534	ECSR		8	8	7'-10"	65	2	1'-11"	4'-3"	1'-11"				
FA535	ECSR		8	8	3'-7"	30	STR.							
FA536	ECSR		4	4	6'-0"	25	2	1'-11"	3'-5"	1'-11"				
FA601	ECSR		4	4	22'-11"	138	1	1'-0"	22'-1"					
FA602	ECSR		36	36	10'-7"	572	2	1'-0"	8'-11"	1'-0"				
FA603	ECSR		560	560	18'-5"	15491	2	1'-0"	16'-9"	1'-0"				
			1	1	6'-3"				4'-7"					
FA604	ECSR	SER. OF	SER. OF	TO	54	2	1'-0"	TO	1'-0"				5'-8 1/2"	
		3	3	17'-8"					16'-0"					
FA605	ECSR		6	6	17'-8"	159	2	1'-0"	16'-0"	1'-0"				
FA606	ECSR		26	26	23'-11"	934	1	1'-0"	23'-1"					
FA607	ECSR		10	10	25'-1"	377	1	1'-0"	24'-3"					
FA608	ECSR		38	38	27'-0"	1541	2	1'-0"	26'-4"					
FA609														
FA610	ECSR		156	156	30'-0"	7029	STR.							
FA611	ECSR		37	37	7'-4"	408	STR.							



MARK	MAT'L TYPE	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
		REAR	FWD.	TOTAL				A	B	C	D	E	R	
FORWARD ABUTMENT (EPOXY COATED STEEL REINFORCEMENT-ECSR)														
FA701	ECSR		171	171	9'-8"	3379	1	1'-2"	8'-8"					
FA702	ECSR		149	149	20'-0"	6091	STR.							
FA703	ECSR		42	42	29'-8"	2547	STR.							
FA704	ECSR		21	21	1'-8"	72	STR.							
FA705	ECSR		21	21	10'-4"	444	19	7'-11 7/8"	1'-11 1/2"	1'-4 7/8"				
FA706	ECSR		120	120	29'-4"	7195	STR.							
FA707	ECSR		21	21	5'-8"	243	STR.							
FA708	ECSR		21	21	3'-9"	161	STR.							
FA709	ECSR		21	21	2'-3"	97	STR.							
FA710	ECSR		120	120	27'-10"	6827	STR.							
FA711	ECSR		21	21	4'-0"		1	2'-5"	1'-9"					
FA712	ECSR		21	21	9'-5"	404	STR.							
FA713	ECSR		22	22	25'-0"	1124	STR.							
FA801	ECSR		321	321	9'-3"	7928	1	1'-4"	8'-1"					
FA802	ECSR		321	321	24'-10"	21284	STR.							
FORWARD ABUTMENT ECSR SUBTOTAL						97460	LBS.							

MARK	MAT'L TYPE	NUMBER			LENGTH	WEIGHT (LBS.)	TYPE	DIMENSIONS						SER INC.
		REAR	FWD.	TOTAL				A	B	C	D	E	R	
FORWARD ABUTMENT WINGWALL (EPOXY COATED STEEL REINFORCEMENT-ECSR)														
FA561	ECSR		2	2	42'-7"	89	1	0'-10"	41'-10"					
			1	1	39'-8"				38'-11 5/8"					
FA562	ECSR	SER. OF	SER. OF	TO	168	1	0'-10"	TO						
		4	4	41'-1"					40'-4 3/8"					
		1	1	32'-7"					31'-10"					
FA563	ECSR	SER. OF	SER. OF	TO	518	1	0'-10"	TO					5 1/4"	
		14	14	38'-3"					37'-6 3/4"					
FA564	ECSR		2	2	31'-3"	65	1	0'-10"	30'-6 1/2"					
			1	1	31'-1"				30'-4 3/4"					
FA565	ECSR	SER. OF	SER. OF	TO	999	1	0'-10"	TO					5 1/2"	
		26	26	42'-7"					41'-10"					
FA566	ECSR		2	2	16'-4"	34	1	0'-10"	15'-7 3/8"					
			1	1	15'-1"				14'-4 3/8"					
FA567	ECSR	SER. OF	SER. OF	TO	64	1	0'-10"	TO					2 7/16"	
		4	4	15'-8"					14'-11 5/8"					
		1	1	13'-0"					12'-3 1/4"					
FA568	ECSR	SER. OF	SER. OF	TO	129	1	0'-10"	TO					2 1/4"	
		9	9	14'-6"					13'-9 1/4"					
FA569	ECSR		2	2	12'-5"	26	1	0'-10"	11'-8 5/8"					
FA570	ECSR		4	4	8'-7"	36	1	0'-10"	7'-10"					
FA571	ECSR		4	4	8'-6"	35	19	7'-7 7/8"	0'-3"	0'-10"				
			1	1	9'-7"									
FA572	ECSR	SER. OF	SER. OF	TO	41	STR.							2 1/8"	
		4	4	10'-2"										
		1	1	9'-8"										
FA573	ECSR	SER. OF	SER. OF	TO	41	STR.							2 3/16"	
		4	4	10'-2"										
		2	2	1'-10"										
FA574	ECSR	SER. OF	SER. OF	TO	537	STR.							2'-11"	
		13	13	37'-9"										
		2	2	4'-6"										
FA575	ECSR	SER. OF	SER. OF	TO	115	STR.							3'-3 1/4"	
		5	5	17'-7"										
		2	2	5'-10"										
FA576	ECSR	SER. OF	SER. OF	TO	38	STR.							6'-7"	
		2	2	12'-5"										
		1	1	12'-4"										
FA577	ECSR	SER. OF	SER. OF	TO	329	1	0'-10"	TO	11'-7 3/8"				2 5/16"	
		22	22	16'-4"					15'-7 3/8"					
FA578	ECSR		2	2	11'-4"	24	1	0'-10"	10'-7 5/8"					
			1	1	10'-6"				9'-9 1/4"					
FA579	ECSR	SER. OF	SER. OF	TO	45	1	0'-10"	TO					1 11/16"	
		4	4	10'-11"					10'-2 1/4"					
		1	1	9'-5"					8'-8 7/8"					
FA580	ECSR	SER. OF	SER. OF	TO	61	1	0'-10"	TO					1 1/2"	