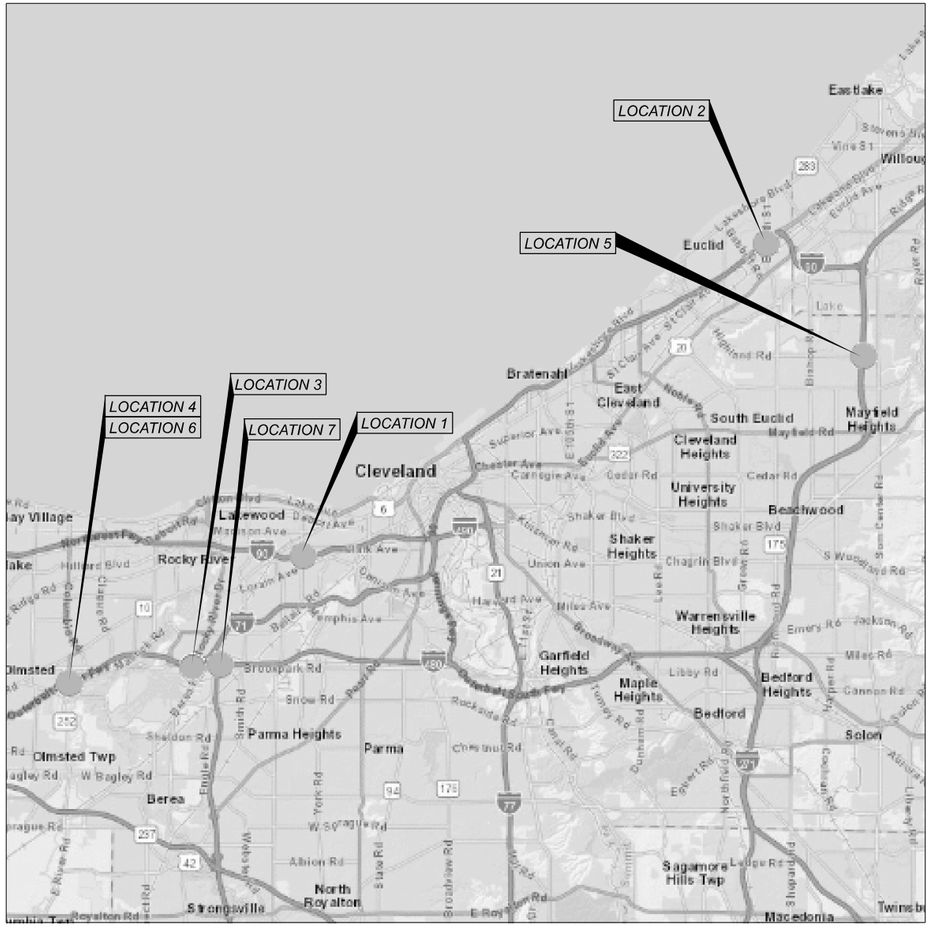

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

CUY-BH-FY2023 MISC.

LOCATION	BRIDGE NO.	SFN	CITY
1	CUY-090-1062	1808249	CITY OF CLEVELAND
2	CUY-090-2910	1809008	CITY OF EUCLID
3	CUY-237-0827	1810332	CITY OF CLEVELAND
4	CUY-252-0434	1810405	CITY OF NORTH OLMSTED
5	CUY-271-1543	1811851	CITY OF HIGHLAND HEIGHTS
6	CUY-480-0446	1814109	CITY OF NORTH OLMSTED
7	CUY-480-0870-ES	1814249	CITY OF CLEVELAND

INDEX OF SHEETS:

FEDERAL PROJECT NUMBER

FAN E200(055)

RAILROAD INVOLVEMENT

N/A

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF VARIOUS REPAIRS, INCLUDING ABUTMENT AND PIER PATCHING, PIER FIBER WRAP, CROSSFRAME REPLACEMENT, BEARING REPLACEMENT, APPROACH SLAB REPLACEMENT, PARAPET AND FENCE REPLACEMENT AND OTHER MISCELLANEOUS REPAIRS

EARTH DISTURBED AREAS

THIS IS A MAINTENANCE PROJECT.

PROJECT EARTH DISTURBED AREA: N/A ACRES

ESTIMATED CONTRACTOR EARTH DISTURBED AREA: N/A ACRES

NOTICE OF INTENT EARTH DISTURBED AREA: N/A ACRES

2019 SPECIFICATIONS

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

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 11-12, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____

DATE 1/3/23 *DISTRICT DEPUTY DIRECTOR*

APPROVED _____

DATE 2-22-2023 *DIRECTOR, DEPARTMENT OF TRANSPORTATION*

CONFORMED SET

LOCATION MAP

LATITUDE: 41° 24' 54" N *LONGITUDE: 81° 36' 54" W*

FOR COORDINATES PER LOCATION SEE SHEETS 2 & 3

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

PLAN PREPARED BY:

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborneng.com

NEAS
National Engineering & Architectural Services Inc.

ENGINEER'S SEAL:
FOR SHEETS: 13-23, 27-29, 39-53, 61-74
STATE OF OHIO · JAWDAT SIDDIQI · E-64891 · REGISTERED PROFESSIONAL ENGINEER
SIGNED: Jawdat Siddiqi
DATE: 09-22-2022

ENGINEER'S SEAL:
FOR SHEETS: 1-12, 24-26
STATE OF OHIO · DONALD R. PHIFER · E-61153 · REGISTERED PROFESSIONAL ENGINEER
SIGNED: _____
DATE: 09-26-2022

ENGINEER'S SEAL:
FOR SHEETS: 30-38, 54-60, 75-108
STATE OF OHIO · JEFFREY D. HORVATH · E-59383 · REGISTERED PROFESSIONAL ENGINEER
SIGNED: _____
DATE: 09-26-2022

STANDARD CONSTRUCTION DRAWINGS

MGS-3.1	1/19/18	BP-2.3	7/18/14					
MGS-4.2	7/19/13	HL-20.14	4/17/20					
		RM-4.5	7/21/17					
MT-95.30	7/19/19							
MT-95.31	7/19/19	AS-1-15	7/17/15					
MT-95.32	4/19/19	AS-2-15	1/18/19					
MT-97.10	4/19/19							
MT-98.10	1/17/20	BR-2-15	1/21/22					
MT-98.20	4/19/19	EXJ-4-87	7/15/22					
MT-98.29	1/17/20	GSD-1-19	1/15/21					
MT-101.60	1/17/20							
MT-101.70	1/17/20	PCB-91	7/17/20					
MT-101.90	7/17/20	RB-1-55	7/19/13					
MT-105.10	1/17/20	TVPF-1-18	7/20/18					
MT-110.10	7/19/13	VPF-1-90	7/20/18					

SUPPLEMENTAL SPECIFICATIONS		*SPECIAL PROVISIONS*
800-2019	SEE PROPOSAL	
821	4/20/12	
832	7/15/22	
844	4/20/18	
848	1/15/21	
921	4/20/12	

TITLE SHEET

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborneng.com

DESIGNER MJD
REVIEWER JDH 12-13-22
PROJECT ID 105909
SHEET 1 TOTAL 110

CUY-BH-FY2023 MISC.
MODEL: Sheet PAPERSIZE: 17X11 (In.) DATE: 3/27/2023 TIME: 12:57:04 PM USER: mdcruz
P:\ODOT\2020\0855.000 Dist 12 - VAR Bridge Rehabs\105909\400-Engineering\Roadway\Sheets\105909_GT001.dgn

CUY-90-10.62
SFN: 1808249

LOCATION MAP FOR LOCATION 1

LATITUDE: 41°27'58.77" N
LONGITUDE: 81°46'7.93" W

CUY-90-29.10
SFN: 1809008

LOCATION MAP FOR LOCATION 2

LATITUDE: 41°36'4.69" N
LONGITUDE: 81°30'10.94" W

CUY-237-08.27
SFN: 1810332

LOCATION MAP FOR LOCATION 3

LATITUDE: 41°25'9.46" N
LONGITUDE: 81°49'51.06" W

CUY-252-04.34
SFN: 1810405

LOCATION MAP FOR LOCATION 4

LATITUDE: 41°24'46.74" N
LONGITUDE: 81°54'7.20" W

LOCATION MAP - 1

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:12:54 PM USER: mdcruz
P:\ODOT\2020\0855.000 Dist 12 - VAR Bridge Rehabs\105909\400-Engineering\Roadway\Sheets\105909_GB001.dgn

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER
MJD

REVIEWER
JDH 12-13-22

PROJECT ID
105909

SHEET 2 TOTAL 110

CUY-271-15.43
SFN: 1811851

LOCATION MAP FOR LOCATION 5

LATITUDE: 41°33'8.79" N
LONGITUDE: 81°26'54.17" W

CUY-480-04.46
SFN: 1814109

LOCATION MAP FOR LOCATION 6

LATITUDE: 41°24'53.81" N
LONGITUDE: 81°53'36.97" W

CUY-480-08.70 ES
SFN: 1814249

LOCATION MAP FOR LOCATION 7

LATITUDE: 41°25'14.12" N
LONGITUDE: 81°48'57.42" W

LOCATION MAP - 2

CUY-BH-FY2023 MISC.

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:13:09 PM USER: mdcruz
P:\ODOT\2020\0855.000 Dist 12 - VAR Bridge Rehabs\105909\400-Engineering\Roadway\Sheets\105909_GB001.dgn

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER
MJD

REVIEWER
JDH 12-13-22

PROJECT ID
105909

SHEET 3 TOTAL 110

UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

AT&T - LOCAL
13630 LORAIN AVENUE – 2ND FLOOR
CLEVELAND, OHIO 44111
ATTN: JAMES JANIS | DESIGN MANAGER
PHONE: (216) 476-6142
FAX: (216) 476-6013
E-MAIL: PJ8191@ATT.COM
ATTN.: WENDY JACK
PHONE: (216) 476-6045
CELL: (216) 544-6459
E-MAIL:WB3152@ATT.COM

AT&T TRANSMISSION
155 COMMERCE PARK DR, SUITE 1
WESTERVILLE, OH 43082
ATTN.: JAMES T. SCHNEIDER
CELL: (440) 525-4322
EMAIL: JAMES.SCHNEIDER@MCGFIBER.COM

CITY OF EUCLID
585 EAST 222ND STREET
EUCLID, OHIO 44123
ATTN: DANIEL KNECHT, DIRECTOR OF PUBLIC SERVICE
PHONE: (216) 289-2701
CELL: (216) 701-3878
EMAIL: DKNECHT@CITYOFEUCLID.COM

EUCLID CITY SCHOOLS
711 EAST 222ND STREET
EUCLID, OHIO 44123
ATTN: JAMES YANE, DIR. OF TECHNOLOGY
PHONE: (216) 797-2964
EMAIL: JYANE@EUCLIDSCHOOLS.ORG

CITY OF HIGHLAND HEIGHTS
5827 HIGHLAND ROAD
HIGHLAND HEIGHTS, OH 44143
ATTN.: DALE R. GRABFELDER
PHONE: (440) 442-7403, EXT. 157
EMAIL: DGRABFELDER@HIGHLANDHTS.COM

CITY OF NORTH OLMSTED
5200 DOVER CENTER ROAD
NORTH OLMSTED, OHIO 44070
ATTN: KEVIN KEARNY | DIRECTOR OF PUBLIC SERVICES
PHONE: (440) 716-4151
EMAIL: KEARNYK@NORTH-OLMSTED.COM

CEI FIRST ENERGY (CEI)
6896 MILLER ROAD, SUITE 101
BRECKSVILLE, OHIO 44141
ATTN: JOHN ZASSICK
OFFICE: (440) 546-8706
CELL: (216) 538-1580
E-MAIL: JMZASSICK@FIRSTENERGYCORP.COM
ATTN: MATTHEW HESS
OFFICE: (440) 387-6232
EMAIL: MHESS@FIRSTENERGYCORP.COM

CROWN CASTLE/FIBERTECH
15565 NEO PKWY
GARFIELD HEIGHTS, OHIO 44128
ATTN: JON TARNOWSKI
CELL: (614) 940-2462
EMAIL: JON.TARNOWSKI@CROWNCASTLE.COM
ATTN: ERIC LACOURSE
EMAIL: ERIC.LACOURSE@CROWNCASTLE.COM

CHARTER COMMUNICATIONS
LOCATIONS 1 & 6:
8179 DOW CIRCLE
STRONGSVILLE, OHIO 44136
ATTN: DAN McCAFFERTY
PHONE: (216) 575-8016
CELL: (216) 701-5980
EMAIL: DANIEL.MCCAFFERTY@CHARTER.COM
ATTN: RON STACK | CONSTRUCTION COORDINATOR
PHONE: (440) 653-6919
EMAIL: RON.STACK@CHARTER.COM

LOCATIONS 2 & 5
7820 DIVISION DRIVE
MENTOR, OHIO 44606
ATTN: EMIL SYMISTER
PHONE: (216) 575-8016
CELL: (440) 343-1530
EMAIL: EMIL.SYMISTER@CHARTER.COM

CITY OF CLEVELAND
DIVISION OF CLEVELAND PUBLIC POWER (CPP)
1300 LAKESIDE AVENUE, ROOM 152
CLEVELAND, OH 44114-1135
ATTN.: CHRISTOPHER HIRZEL, P.E., P.S.
DIRECT PHONE: (216) 563-7212
PHONE: (216) 664-3922, EXT 76115
EMAIL: CHIRZEL@CPP.ORG

CITY OF CLEVELAND
DIVISION OF CLEVELAND PUBLIC POWER (CPP)
BUREAU OF STREETLIGHTING
1300 LAKESIDE AVENUE, ROOM 234
CLEVELAND, OHIO 44114-1135
ATTN.: BRYAN SHEPHERD
DIRECT PHONE: (216) 563-7289
PHONE: (216) 664-3922, EXT 76183
EMAIL: BSHEPHERD@CPP.ORG

CITY OF CLEVELAND
DIVISION OF TRAFFIC ENGINEERING
601 LAKESIDE AVENUE, RM 25
CLEVELAND, OH 44114
ATTN.: ANDREW CROSS | TRAFFIC ENGINEER
PHONE: (216) 664-3197
EMAIL: ACROSS@CITY.CLEVELAND.OH.US

CITY OF CLEVELAND
DIVISION OF WATER (CWD)
1201 LAKESIDE AVENUE
CLEVELAND, OHIO 44114
ATTN: FRED ROBERTS
PHONE: (216) 664-2444 X75590
E-MAIL: FRED_ROBERTS@CLEVELANDWATER.COM

DOMINION ENERGY OHIO (DEO)
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OHIO 44333
ATTN: AARON CONANT
PHONE: (330) 664-2451
E-MAIL: K.AARON.CONANT@DOMINIONENERGY.COM
E-MAIL (PLANS): RELOCATION@DOMINIONENERGY.COM

EVERSTREAM™
1228 EUCLID AVENUE, SUITE 250
CLEVELAND, OHIO 44115
ATTN: DAVID CHAPPELL
CELL: (330) 461-1083
EMAIL: DCHAPPELL@EVERSTREAM.NET
PERMITS@EVERSTREAM.NET
ATTN: JOSEPH GIRDLESTONE
CELL: (234) 521-2999
EMAIL: JGIRDLSTONE@EVERSTREAM.NET

LUMEN LOCAL/NATIONAL
(LEVEL 3 COMMUNICATIONS, LLC)
4000 CHESTER AVENUE
CLEVELAND, OH 44103
ATTN.: DOUG HOLLOWAY | OSP ENGINEER
PHONE: (216) 906-6284
EMAIL: DOUG.HOLLOWAY@CENTURYLINK.COM

NORTHEAST OHIO REGIONAL SEWER DISTRICT (NEORSD)
3900 EUCLID AVENUE
CLEVELAND, OH 44115-2504
ATTN.: ROBERT STOERKEL
PHONE: (216) 881-6600, EXT. 6802
EMAIL: STOERKELR@NEORSD.ORG

BREEZELINE (WOW)
105 BLAZE INDUSTRIAL PARKWAY
BEREA, OHIO 44017
ATTN: LARRY BURRUEL | CONSTRUCTION COORDINATOR - EAST SIDE
CELL: (440) 915-9256
EMAIL: LBURRUEL@BREEZELINE.COM
ATTN: JOSE DIAZ | CONSTRUCTION COORDINATOR - WEST SIDE
CELL: (216) 385-3901
EMAIL: JDIAZ@BREEZELINE.COM

VERIZON (MCI)
120 RAVINE STREET
AKRON, OHIO 44303
ATTN.: AL GUEST | OSP ENGINEER
PHONE: (330) 622-5967
CELL: (330) 329-5495
E-MAIL: ALLAN.GUEST@VERIZON.COM

VILLAGE OF MAYFIELD
TWO MERIT DRIVE
RICHMOND HEIGHTS, OHIO 44143
ATTN: TOM CAPPELLO, P.E., P.S., CPESC, CPSWQ
PHONE: (216) 731-6255
EMAIL: TCAPPELLO@HOVANCSEK.COM

ZAYO FIBER SOLUTIONS
305 E. WIGGIN STREET
GAMBIER, OH 43022
ATTN.: JOHN P. BRUCE | OSP ENGINEERING
CELL: (769) 216-8095
EMAIL: JOHN.BRUCE@ZAYO.COM
ATTN.: DAVE GALUSKA
PHONE: (234) 281-0025
CELL: (216) 533-5039
E-MAIL: DAVE.GALUSKA@ZAYO.COM

WINDSTREAM
560 TERNES AVENUE
ELYRIA, OHIO 44035
ATTN: GEOFFREY HAMM
PHONE: (440) 329-4245
CELL: (330) 256-6133
EMAIL: GEOFFREY.P.HAMM@WINDSTREAM.COM
ATTN: LEON TAYLOR
PHONE: (937) 725-5358
EMAIL: LEON.TAYLOR@WINDSTREAM.COM
ATTN: BRIAN CONKLIN
PHONE: (330) 203-6477

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT IS NOT ANTICIPATED TO AFFECT ANY KNOWN UTILITIES IN THE WORK AREAS.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE AND ADVERSE CONSTRUCTION NOISE IMPACTS, ANY POWER - OPERATED CONSTRUCTION-TYPE DEVICE SHALL NOT BE OPERATED DURING NON-WORKING HOURS AS APPROVED BY THE ENGINEER. IN ADDITION, ANY SUCH DEVICE SHALL NOT BE OPERATED AT ANY TIME IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

COOPERATION BETWEEN CONTRACTORS

THE CONTRACTOR SHALL COOPERATE AND COORDINATE HIS/HER OPERATIONS WITH THE CONTRACTORS ON OTHER PROJECTS THAT MAY BE IN FORCE DURING THE LIFE OF THE CONTRACT. NO WAIVER OF ANY PROVISIONS OF 105.08 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS IS INTENDED.

EXISTING DIMENSIONS

ALL DIMENSIONS ARE APPROXIMATE (±).

EQUIPMENT AND MATERIAL STORAGE

IN ORDER TO PROVIDE FOR THE SAFETY OF THE TRAVELING PUBLIC, THE CONTRACTOR'S ATTENTION IS DIRECTED TO 614.03. IN ADDITION, NO STORAGE OF EQUIPMENT, MATERIALS, AND VEHICLES WITHIN THE HIGHWAY RIGHT-OF-WAY WILL BE PERMITTED WITHOUT PRIOR APPROVAL FROM THE ENGINEER. ALL RESTORATION WILL BE AT NO COST TO THE STATE.

RIGHT OF WAY

ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT-OF-WAY OR EASEMENTS OR WITHIN STATE PROPERTY.

CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN

AN OHIO PROFESSIONAL SURVEYOR SHALL DETERMINE THE MINIMUM VERTICAL CLEARANCES OF ALL EXISTING BRIDGES WITHIN THE PROJECT LIMITS AFTER COMPLETION OF ALL THE WORK, BUT PRIOR TO FINAL ACCEPTANCE OF THE PROJECT. AT A MINIMUM, MEASUREMENTS SHALL BE TAKEN ALONG THE CENTERLINE OF EACH FASCIA BEAM AT THE EDGE OF THE SHOULDERS, EDGE LINES, LANE LINES, AND CROWN OF THE ROADWAY BELOW. THE MEASUREMENTS SHALL BE DOCUMENTED IN THE ODOT VERTICAL CLEARANCE SURVEY FORM. THE FORM SHALL BEAR THE STAMP OR SEAL OF THE OHIO PROFESSIONAL SURVEYOR WHO HAS TAKEN THE MEASUREMENTS. THE OHIO PROFESSIONAL SURVEYOR SHALL SUBMIT THE COMPLETED FORM TO THE PROJECT ENGINEER AND DISTRICT BRIDGE MAINTENANCE ENGINEER PRIOR TO FINAL ACCEPTANCE OF THE PROJECT.

LIMITATIONS OF OPERATIONS

THE CONTRACTOR'S ACTIVITIES AND WORK SCHEDULE SHALL BE CONSTRAINED BY THE FOLLOWING LIMITATIONS:

1. MAINTENANCE OF TRAFFIC RESTRICTIONS (REFER TO MAINTENANCE OF TRAFFIC NOTES SHEETS WITHIN THIS PLAN).

EXISTING PAVEMENT MARKINGS

ANY EXISTING PAVEMENT MARKINGS, INCLUDING RAISED PAVEMENT MARKINGS, THAT ARE AFFECTED BY THE PROPOSED WORK SHALL BE REPLACED IN-KIND.

CUY-BH-FY2023 MISC.
MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:13:20 PM USER: mdcruz
P:\ODOT\2020\0855.000 Dist 12 - VAR Bridge Rehabs\105909\400-Engineering\Roadway\Sheets\105909_GN001.dgn

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SHEET 4 TOTAL 110

AIRWAY HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PUBLIC USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT AT MAXIMUM OPERATING HEIGHT SHALL EXCEED A HEIGHT OF:

LOCATION 1 - 44 FT
LOCATION 2 - 18 FT
LOCATION 3 - 45 FT
LOCATION 4 - 48 FT
LOCATION 5 - 47 FT
LOCATION 6 - 45 FT
LOCATION 7 - 55 FT

IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, FURTHER COORDINATION WITH THE FEDERAL AVIATION ADMINISTRATION (FAA), AND ODOT OFFICE OF AVIATION, WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. THE CONTRACTOR WILL BE REQUIRED TO SUBMIT FORM 7460-1 TO THE FAA. NOTIFY THE ODOT OFFICE OF AVIATION WHEN SUBMITTING FAA FORM 7460-1.

NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL A COPY OF THE FAA APPROVAL AND THE ODOT OFFICE OF AVIATION PERMIT HAS BEEN FURNISHED TO THE PROJECT ENGINEER.

FEDERAL AVIATION ADMINISTRATION
SOUTHWEST REGIONAL OFFICE
OBSTRUCTION EVALUATION GROUP
10101 HILLWOOD PARKWAY
FORTH WORTH, TX 76177
FAX: (817) 222-5920
HTTP://CEAAA.FAA.GOV

OHIO DEPARTMENT OF TRANSPORTATION
OFFICE OF AVIATION
2829 WEST DUBLIN-GRANVILLE ROAD
COLUMBUS, OH 43235
OHIO.AIRPORT.PROTECTION@DOT.OHIO.GOV

ITEM 625 – REMOVAL OF LUMINAIRE AND REERECTION, AS PER PLAN
FOR LOCATIONS: 2 (CUY-090-2910), 4 (CUY-252-0434)

THE UNDERPASS LUMINAIRES LOCATED ON THE ABOVE STRUCTURES SHALL BE REMOVED OR TEMPORARILY SUPPORTED DURING THE FIBER WRAP AND URETHANE COATING OPERATIONS. THE LUMINAIRES SHALL BE REERECTED OR PUT BACK INTO PLACE AFTER ALL OPERATIONS AND WORK IS COMPLETED.

THIS ITEM SHALL INCLUDE ALL LUMINAIRES ATTACHED TO THE SUBSTRUCTURE, ASSOCIATED CONDUITS, ANY ADJACENT JUNCTION BOXES, SUPPORTS, CLAMPS AND ALL APPURTENANCES ASSOCIATED WITH THE LUMINAIRES. ANY OF THE ABOVE ITEMS THAT ARE DAMAGED DURING THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE.

PAYMENT FOR ALL WORK NOTED ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 625 – REMOVAL OF LUMINAIRE AND REERECTION, AS PER PLAN.

ITEM 631 – REMOVAL, MISC.: SIGNAL FLASHER ASSEMBLY
FOR LOCATION: 2 (CUY-090-2910)

THE SIGNAL FLASHER ASSEMBLIES LOCATED ON THE ABOVE STRUCTURE SHALL BE REMOVED OR TEMPORARILY SUPPORTED DURING THE FIBER WRAP AND URETHANE COATING OPERATIONS. THE ASSEMBLIES SHALL BE REERECTED OR PUT BACK INTO PLACE AFTER ALL OPERATIONS AND WORK IS COMPLETED.

THERE ARE A TOTAL OF TWO (2) ASSEMBLIES ON THE BRIDGE FOR WARNING OR OBSTRUCTION HAZARD SIGNALS. THEY ARE LOCATED AT THE NORTH END AND SOUTH END OF PIER 3, MOUNTED TO THE OUTSIDE FACES OF THE EXTERIOR COLUMNS.

THIS ITEM SHALL INCLUDE ALL SIGNAL FLASHER ASSEMBLIES ATTACHED TO THE SUBSTRUCTURE, ASSOCIATED CONDUITS, ANY ADJACENT JUNCTION BOXES, SUPPORTS, CLAMPS AND ALL APPURTENANCES ASSOCIATED WITH THE SIGNAL FLASHER ASSEMBLIES. ANY OF THE ABOVE ITEMS THAT ARE DAMAGED DURING THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED OR REPAIRED TO THE SATISFACTION OF THE ENGINEER. NO ADDITIONAL PAYMENT WILL BE MADE.

PAYMENT FOR ALL WORK NOTED ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 631 – REMOVAL, MISC.: SIGNAL FLASHER ASSEMBLY.

ITEM 625 - LUMINAIRE, UNDERPASS, SOLID STATE (LED)
FOR LOCATION: 2 (CUY-090-2910)

THE EXISTING UNDERPASS LUMINAIRES ARE THE RESPONSIBILITY OF THE CITY OF EUCLID. CORRESPONDENCE WITH CITY PERSONNEL HAS REVEALED (5-2022) THAT 12 LIGHTS ARE CURRENTLY NOT WORKING. AS PART OF THIS CONTRACT, ODOT WILL REPAIR THESE LUMINAIRES IN KIND.

ITEM 625 – CONDUIT, 2", 725.051, AS PER PLAN
FOR LOCATIONS: 4 (CUY-252-0434) AND 6 (CUY-480-0446)

THE LIGHT POLES ARE TO BE REMOVED AND REUSED ON THE ABOVE STRUCTURES. THE LIGHT POLES SHALL BE REERECTED OR PUT BACK INTO PLACE AFTER ALL OPERATIONS AND WORK IS COMPLETED TO REBUILD THE PARAPETS OR RAILS (PAID UNDER SEPARATE ITEM). IN CONJUNCTION WITH THE SERVICE AND POWER TO THESE POLES, 2" CONDUIT IS TO BE PLACED AS REQUIRED WITHIN THE PARAPET AND AS SHOWN ON THE DETAILED DRAWINGS.

AT LOCATION 4 (CUY-252-0434):
THIS ITEM SHALL INCLUDE ALL CONDUIT WITHIN THE NEW CONCRETE PARAPET, EXTENDED LENGTHS BEYOND THE ENDS OF THE WINGWALLS FOR TIE-INS TO THE EXISTING BURIED CONDUIT, ANY EXPANSION SLEEVES REQUIRED AT EXPANSION JOINTS, TIE-INS AT JUNCTION BOXES AND ALL APPURTENANCES ASSOCIATED WITH THE PROPER LENGTH OF CONDUIT REQUIRED TO EACH OF THE NEWLY ERECTED LIGHT POLES ON THE BRIDGE IN ORDER TO COMPLETE THE SYSTEM.

AT LOCATION 6 (CUY-480-0446):
THE EXISTING 2" CONDUIT ON THIS STRUCTURE LIES WITHIN THE SIDEWALK JUST BELOW THE LIMITS OF THE REMOVAL AND REPLACEMENT OF THE NEW CONCRETE PARAPET. CARE SHALL BE TAKEN WHEN REMOVING THE CONCRETE AND JUNCTION BOXES IN THE VICINITY OF THE EXISTING LIGHT POLES SO AS NOT TO DAMAGE THE CONDUIT PROTRUDING FROM THE TOP FACE OF THE SIDEWALK. IT IS THE INTENT OF THE DESIGN TO ATTACH NEW CONDUIT TO THE EXISTING CONDUIT PROTRUDING FROM THE TOP FACE OF THE WALK. ENOUGH EXISTING WIRE SHALL BE LEFT IN PLACE AND PROTECTED DURING CONSTRUCTION OPERATIONS TO MAKE THE CONNECTION TO EACH OF THE LIGHT POLES AT THE NEW BLISTERS ON THE BRIDGE. IF ANY ADDITIONAL WIRE IS NEEDED FOR THE TIE-IN AT THE POLES, A CONTINGENCY QUANTITY OF 20 LF (10 LF AT EACH POLE) HAS BEEN PROVIDED FOR THIS USE.

THIS ITEM IS A CONTINGENCY QUANTITY FOR ALL CONDUIT WITHIN THE NEW CONCRETE PARAPET REQUIRED TO TIE IN THE NEW CONDUIT TO THE EXISTING AND ANY NEEDED FOR JUNCTION BOX OR LIGHT POLE TIE-INS. IF THE EXISTING CONDUIT (AT THE WALK LEVEL) IS DAMAGED OR CRACKED DURING REMOVAL OPERATIONS, THIS ITEM SHALL BE USED FOR REPAIRS AND SLEEVE SECTIONS NEEDED TO PROPERLY COMPLETE THE INSTALLATION OF THE CONDUIT TO THE SATISFACTION OF THE ENGINEER AND WITH THE PROPER LENGTH OF CONDUIT REQUIRED TO EACH OF THE NEWLY ERECTED LIGHT POLES ON THE BRIDGE IN ORDER TO COMPLETE THE SYSTEM.

PAYMENT FOR ALL WORK NOTED ABOVE WILL BE MADE AT THE CONTRACT BID PRICE FOR ITEM 625 – CONDUIT, 2", 725.051, AS PER PLAN.

MODEL: Sheet2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:13:22 PM USER: mdcruz
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DRP 12-13-22

PROJECT ID
105909

SHEET 5 TOTAL 110

UTILITY MATRIX

LOCATION	SFN	ODOT BRIDGE	DESCRIPTION OF WORK	UTILITY	CONFLICT	EXISTING FACILITIES	REMARKS / ACTIONS
1	1808249	CUY-090-1062 W 117TH OVER I-90	PATCH CONCRETE PARAPETS, REPLACE MEDIAN CURBS & REPLACE APPROACH SLABS	CEI FIRST ENERGY (CEI)	NO	(6) 5" CONDUITS SUPPORTED BY BRIDGE BEAMS IN BAY K-L	NO CONFLICT ANTICIPATED.
				CITY OF CLEVELAND - DIVISION CLEVELAND PUBLIC POWER (CPP)	YES	- LIGHTING CONDUIT IN SIDEWALK - (6) 4" ELECTRICAL CONDUITS SUPPORTED ON BRIDGE GIRDERS C & D	LIGHTING CONDUIT AND ELECTRICAL CONDUITS TO REMAIN
				CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	12" WATER LINE SUPPORTED ON BEAMS BETWEEN GIRDERS H & J AND CONTINUES UNDERGROUND OFF THE BRIDGE	EXISTING LINE IS TO REMAIN. CONTRACTOR TO TAKE CARE NOT TO DAMAGE THE EXISTING WATER LINE
				DOMINION ENERGY OHIO (DEO)	YES	8" GAS LINE SUPPORTED ON BRIDGE BEAMS IN EAST FASCIA BAY	DEO WILL WORK WITH THE CONTRACTOR TO RELOCATE GAS FACILITIES THROUGH THE APPROACH SLABS
				ODOT DISTRICT 12	YES	2" CONDUIT FOR TRAFFIC CAMERA IN SIDEWALK	EXISTING CONDUIT TO REMAIN
				ZAYO FIBER SOLUTIONS	YES	FIBER OPTICS CABLE IN CEI OWNED CONDUIT SUPPORTED ON THE BRIDGE	NO CONFLICT. COORDINATION ONLY REQUIRED IF CEI RELOCATES THEIR CONDUITS
				OWNER UNKNOWN	YES	(2) 3" CONDUITS CONDUITS IN SIDEWALKS	EXISTING CONDUITS TO REMAIN
2	1809008	CUY-090-2910 I-90 OVER EAST 260TH ST	PATCH CONCRETE PARAPETS, REPLACE CROSSFRAME MEMBERS, REPLACE, REFURBISH OR RESET BEARINGS, PATCH ABUTMENTS & PIERS AND FIBER WRAP PIER COLUMNS AND CAPS	AT&T TRANSMISSION	NO	FACILITIES ARE LOCATED SOUTH OF BRIDGE ALONG LAKELAND BLVD IN AT&T OHIO/OHIO BELL OWNED CONDUIT. ALL FACILITIES ARE OUTSIDE OF THE PROJECT LIMITS	
				CEI FIRST ENERGY (CEI)	YES	CEI OWNED POLES WITHIN THE PROJECT AREA	COORDINATION REQUIRED FOR LIGHT REPAIRS ALONG PIER 1. LIGHTS ARE NOT OWNED BY CEI
				CHARTER COMMUNICATIONS	NO	AERIAL FIBER AND COAX LINES UNDER THE BRIDGE ON EAST SIDE OF E 260TH ST	NO CONFLICT ANTICIPATED. FIBER AND COAX LINES HAVE BEEN RELOCATED AWAY FROM PIER 4 AS OF 08-18-2022.
				CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	10" WATER MAIN UNDERGROUND	
				CITY OF EUCLID	YES	- STREET LIGHTING ALONG E. 260TH, ATTACHED TO PIERS - UNDERGROUND INTERCONNECT CABLE	- LIGHTS ARE TO BE REPAIRED/REPLACED IN-KIND WITH THE PROJECT. CONTRACTOR WILL BE RESPONSIBLE FOR ANY TEMPORARY OR PERMANENT RELOCATION NEEDED TO PERFORM PIER PATCHING/REPAIR - NO CONFLICT WITH INTERCONNECT CABLE
				DOMINION ENERGY OHIO (DEO)	NO	ALL GAS LINES IN THE AREA ARE BURIED BELOW SUBSTRUCTURES AND/OR OUT OF WORK LIMITS	
				EUCLID CITY SCHOOLS	YES	AERIAL CABLE PASSING UNDER I-90 ON EAST SIDE OF E 260TH ST ATTACHED TO PIER 4 (ABANDONED)	ABANDONED AERIAL CABLE WILL BE REMOVED PRIOR TO CONSTRUCTION
				VERIZON (MCI)	YES	AERIAL LINE UNDER I-90 ON EAST SIDE OF E 260TH ST	VERIZON WILL RELOCATE THE CABLE 5-FT MINIMUM AWAY FROM THE PIER. WILL COORDINATE RELOCATION WITH THE BRIDGE CONTRACTOR DURING CONSTRUCTION
				ZAYO FIBER SOLUTIONS	NO	FIBER CABLE IN CEI CONDUITS ALONG LAKELAND BLVD.	NO CONFLICT ANTICIPATED
3	1810332	CUY-237-0827 ROCKY RIVER OVER I-480 RAMP	REMOVE/REPLACE APPROACH SLABS, REPLACE END CROSSFRAME MEMBERS, AND REPLACE, REFURBISH OR RESET BEARINGS	AT&T LOCAL	YES	(1) 3" CONDUIT SUPPORTED IN BAY 1-2 (20) 4" CONDUITS SUPPORTED IN BAY 2-3 (1) 3" CONDUIT SUPPORTED IN BAY 7-8	ALL EXISTING CONDUITS ARE TO REMAIN. AT&T CONTRACTOR WILL PROVIDE TEMPORARY SUPPORT DURING CONSTRUCTION
				CEI FIRST ENERGY (CEI)	YES	(3) 4" TRANSITE CONDUITS SUPPORTED ON BRIDGE BEAMS IN BAY 6-7.	CEI CONTRACTOR SHALL REPLACE CONDUIT EXPANSION JOINTS AT THE ABUTMENT AS NEEDED. CEI CONTRACTOR WILL TEMPORARILY SUPPORT CONDUIT DUCTS DURING CONSTRUCTION. NOTIFY CEI 3-4 MONTHS PRIOR TO STARTING WORK AT THIS LOCATION.
				CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	EXISTING 30" WATER MAIN RUNS UNDER I-480 RAMP	
				DOMINION ENERGY OHIO (DEO)	YES	6" GAS LINE SUPPORTED ON BRIDGE BEAMS IN BAY 1-2.	GAS LINE IS TO REMAIN. DEO WILL PROTECT AND SUPPORT THE PIPE DURING CONSTRUCTION
				LUMEN LOCAL/NATIONAL	YES	FIBER LOCATED ALONG THE EAST SIDE OF ROCKY RIVER DR	LEASE FIBER FROM ANOTHER CARRIER. LUMEN NOT RESPONSIBLE FOR ANY RELOCATION
				NEORSD	NO	66" RCP SEWER, GRAYTON RD CONNECTOR, LOCATED APPROXIMATELY 170-FT NORTH OF BROOKPARK RD.	
				ZAYO FIBER SOLUTION	YES	FIBER OPTICS CABLE IN CEI OWNED CONDUIT SUPPORTED ON THE BRIDGE	CEI RESPONSIBLE FOR THE CONDUIT SUPPORT. COORDINATION ONLY REQUIRED IF CEI RELOCATES CONDUITS
				OWNER UNKNOWN	NO	LIGHTING CONDUIT IN SIDEWALKS	
				OWNER UNKNOWN	YES	AERIAL ELECTRIC LINE (STRAIN POLE TO LIGHT POLE ON BR)	MAINTAIN OSHA CLEARANCES DURING CONSTRUCTION
4	1810405	CUY-252-0434 GREAT NORTHERN BLVD OVER I-480	REPLACE PARAPETS AND FENCING, REPLACE CROSSFRAME MEMBERS, REPLACE, REFURBISH OR RESET BEARINGS, AND PATCH ABUTMENT & PIERS	CEI FIRST ENERGY (CEI)	YES	(6) 5" CONDUITS SUPPORTED BY BRIDGE BEAMS IN BAY 9-10 EXISTING LIGHT POLES ON BRIDGE	- CEI CONTRACTOR WILL REMOVE STITCH WELDS ON RACKS PRIOR TO CROSSFRAME REPLACEMENT - CEI CONTRACTOR SHALL REPLACE CONDUIT DUCT SUPPORT RACKS WHERE BRIDGE CONTRACTOR IS REPLACING THE LOWER LEG CROSSFRAME SUPPORTS. - CEI CONTRACTOR SHALL TEMPORARILY SUPPORT CONDUIT DUCTS DURING CONSTRUCTION - EXISTING LIGHT POLES ARE TO BE REMOVED/RE-ERECTED WITH THE PROJECT. - NOTIFY CEI 3-4 MONTHS PRIOR TO STARTING WORK AT THIS LOCATION.
				CITY OF NORTH OLMSTED	YES	LIGHTING CONDUIT IN PARAPET	EXISTING LIGHTING CONDUITS TO BE REPLACED IN NEW PARAPETS
				CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	UNDERGROUND WATERMAIN EAST OF BRIDGE THAT TIES INTO MAIN BEYOND BRIDGE APPROACHES	
5	1811851	CUY-271-1543 HIGHLAND ROAD OVER I-271	REPLACE FENCING, REPLACE, REFURBISH OR RESET BEARINGS, AND PATCH PIER COLUMNS & CAPS	CEI FIRST ENERGY (CEI)	YES	AERIAL POWER LINES ALONG SOUTH SIDE OF HIGHLAND RD	MAINTAIN OSHA CLEARANCES DURING CONSTRUCTION
				CHARTER COMMUNICATIONS	YES	(3) AERIAL FIBERS IN A SINGLE BUNDLE ALONG THE SOUTH SIDE OF HIGHLAND ROAD	MAINTAIN OSHA CLEARANCES DURING CONSTRUCTION
				CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	16" WATERMAIN UNDERGROUND NORTH OF THE BRIDGE AND UNDER I-271	
				DOMINION ENERGY OHIO (DEO)	YES	4" GAS LINE SUPPORTED BY BRIDGE BEAMS IN BAY A-B	GAS LINE IS TO REMAIN. DEO WILL PROTECT AND SUPPORT THE PIPE DURING CONSTRUCTION
				EVERSTREAM™	YES	AERIAL LINE ON SOUTH SIDE OF BRIDGE	MAINTAIN OSHA CLEARANCES DURING CONSTRUCTION
				LUMEN LOCAL/NATIONAL	YES	48CT CABLE ON POLES SOUTH OF THE BRIDGE	LEASE FIBER FROM ANOTHER CARRIER. LUMEN NOT RESPONSIBLE FOR ANY RELOCATION
				VERIZON (MCI)	YES	AERIAL CABLE ALONG THE SOUTH SIDE OF HIGHLAND RD	NO CONFLICT. CONTRACTOR SHALL MAINTAIN 24-INCH CLEARANCE DURING CONSTRUCTION
				ZAYO FIBER SOLUTIONS	YES	-AERIAL FIBER OPTIC CABLE ON SOUTH SIDE OF HIGHLAND RD, CROSSING I-271 -UNDERGROUND PATH IN THE ELECTIC TRANSMISSION ROW ALONG THE EAST SIDE OF I-271 FROM HIGHLAND TO PROGRESSIVE INSURANCE	MAINTAIN OSHA CLEARANCES DURING CONSTRUCTION
6	1814109	CUY-480-0446 COLUMBIA RD OVER I-480	REPLACE WEARING SURFACE, REPLACE PARAPET, REPLACE CROSSFRAME MEMBERS, AND REPLACE, REFURBISH OR RESET BEARINGS	AT&T LOCAL	YES	(6) 4" CONDUITS SUPPORTED IN BAY 1 (6) 4" CONDUITS SUPPORTED IN BAY 2	ALL EXISTING CONDUITS ARE TO REMAIN. AT&T CONTRACTOR WILL PROVIDE TEMPORARY SUPPORT DURING CONSTRUCTION
				BREEZELINE (WOW)	YES	(3) AERIAL CABLES (2 COAX, 1 FIBER) CROSSING OVER I-480 ALONG THE EAST SIDE OF THE BRIDGE	- LOWEST ATTACHMENT ON THE POLES. AERIAL LINES TO REMAIN. - BREEZLINE CONTRACTOR WILL MOVE LINES UP AFTER OTHER UTILITIES ARE MOVED UP
				CEI FIRST ENERGY (CEI)	YES	- (3) 5" TRANSITE CONDUITS SUPPORTED BY BRIDGE BEAMS IN BAY 3 - OVERHEAD ELECTRIC ALONG THE EAST SIDE OF COLUMBIA ROAD - LIGHT POLES ON THE BRIDGE	- CEI CONTRACTOR SHALL TEMPORARILY SUPPORT CONDUIT DUCTS DURING CONSTRUCTION - NO CONFLICT WITH OVERHEAD LINES. MAINTAIN OSHA CLEARANCES DURING CONSTRUCTION. - EXISTING LIGHT POLES ARE TO BE REMOVED/RE-ERECTED WITH THE PROJECT - NOTIFY CEI 3-4 MONTHS PRIOR TO STARTING WORK AT THIS LOCATION.
				CHARTER COMMUNICATIONS	YES	EXISTING AERIAL FIBER CROSSING OVER I-480 ALONG THE EAST SIDE OF THE BRIDGE. CHARTER IS THE 2ND AND 3RD ATTACHMENT THE BOTTOM	CHARTER WILL RAISE THEIR LINES AFTER THE OTHER UTILITIES MOVE THEIR LINES UP
				CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	UNDERGROUND WATERMAIN WEST OF THE BRIDGE THAT TIES IN BEYOND THE BRIDGE APPROACH SLABS	
				CITY OF NORTH OLMSTED	NO	BURIED 8" SANITARY SEWER ON E SIDE OF COLUMBIA RD AT ELEVATION 746.5' (NORTH) TO 747.5' (SOUTH)	
				DOMINION ENERGY OHIO (DEO)	YES	- 4" GAS LINE SUPPORTED BY BEAMS IN BAY 1 (WEST SIDE) - 6" GAS LINE SUPPORTED BY BEAMS IN BAY 6 (EAST SIDE)	GAS LINES ARE TO REMAIN. DEO WILL PROTECT AND SUPPORT THE PIPES DURING CONSTRUCTION
				EVERSTREAM™	YES	IRU FIBER LEASE AGREEMENT WITH WINDSTREAM	EVERSTREAM DOES NOT OWN THE CABLE. RELOCATION THE RESPONSIBILITY OF WINDSTREAM
				OWNER UNKNOWN	YES	LIGHTING CONDUIT IN EAST SIDEWALK	EXISTING LIGHTING CONDUIT TO REMAIN. TIE-INS FOR NEW PARAPET AND JUNCTION BOXES WILL BE REQUIRED PER THE PLANS
				CROWN CASTLE/FIBERTECH	YES	BLACK INNDERDUCT (W/ FIBER CABLE) AERIAL ALONG EAST SIDE OF THE BRIDGE. CROWN CASTLE IS THE 5TH ATTACHMENT FROM THE BOTTOM	CROWN CASTLE WILL MOVE THE ATTACHMENT UP ON THE POLE.
				WINDSTREAM OSP OHIO	YES	AERIAL CABLE (144F CABLE) ALONG EAST SIDE	WINDSTREAM IS THE 4TH ATTACHMENT FROM THE BOTTOM. WINDSTREAM WILL MOVE ATTACHMENT UP ONCE OTHER UTILITIES MOVE UP.
7	1814249	CUY-480-0870 ES I-480 WB RAMP TO I-71 SB	PATCHING CONCRETE PARAPET	CITY OF CLEVELAND - DIVISION OF WATER (CWD)	NO	ALL WATER LINES ARE UNDER I-480	
				OWNER UNKNOWN	YES	LIGHTING CONDUITS IN WEST PARAPET	LIGHTING CONDUITS ARE TO REMAIN UNDISTURBED

CUY-BH-FY2023 MISC.

MODEL: Sheet3 PAPERSIZE: 17x11 (h.) DATE: 4/5/2023 TIME: 7:13:22 PM USER: mdcruz
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PROJECT ID
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SHEET 6 TOTAL 110

ITEM 614, MAINTAINING TRAFFIC

THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AS TO MAKE PROPOSED REPAIRS WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT. IN ADDITION TO THE CONSTRUCTION AND MATERIAL SPECIFICATIONS, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS NEW YEAR'S MEMORIAL DAY
FOURTH OF JULY LABOR DAY THANKSGIVING
TOTAL SOLAR ECLIPSE - APRIL 8, 2024
PAN-AMERICAN MASTER GAMES - JULY 12-24, 2024
DOWNTOWN PROFESSIONAL SPORTING EVENTS & CONCERTS
(2 HOURS BEFORE / 2 HOURS AFTER EVENT)
(OTHER HOLIDAY OR EVENT)

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00 AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY (THANKSGIVING ONLY)	6:00AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE PER THE LANE VALUE CONTRACT (PN 127).

I. NOTIFICATION

SINCE FUNCTIONAL TRAFFIC CONTROL IS A MAJOR CONCERN ON THIS PROJECT, IT IS ESSENTIAL THAT THE MOTORING PUBLIC BE ADEQUATELY FOREWARNED OF FUTURE LANE CLOSURES AND TRAFFIC CONSTRICTIONS. THEREFORE, THE CONTRACTOR MUST SUBMIT A WRITTEN SCHEDULE TO THE ODOT PUBLIC INFORMATION OFFICE (216-584-2006 OR D12.PUBLICINFORMATION@DOT.OHIO.GOV) INDICATING THE LOCATION AND DATES OF THE LANE CLOSURES AT LEAST 14 DAYS PRIOR TO THE IMPLEMENTATION OF ANY SUCH CLOSURES. ALSO, NOTIFY THE ENGINEER, RESPONSIBLE LAW ENFORCEMENT AGENCIES AND EMERGENCY SERVICES, AND LOCAL MUNICIPALITIES OF LANE CLOSURES OR OTHER RESTRICTION AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

USE PORTABLE CHANGEABLE MESSAGE SIGNS TO ALERT MOTORISTS 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY CHANGES SUCH AS LANE CLOSURES OR OTHER RESTRICTIONS.

NOTIFICATION OF TRAFFIC RESTRICTIONS		
ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>=2 WEEKS	21 CALENDAR DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	<= 12 HOURS	4 CALENDAR DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDAR DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDAR DAYS PRIOR TO IMPLEMENTATION

II. LANE CLOSURE RESTRICTIONS

1. LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST WHICH IS LOCATED ON THE ODOT WEB SITE: HTTPS://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAY MANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX

   THE LATEST REVISION AT 14 DAYS PRIOR TO THE BID DATE SHALL BE IN EFFECT FOR THIS PROJECT. ALL NOTES ON THE PERMITTED LANE CLOSURE TIMES SHALL BE PART OF THIS PROJECT.

2. ANY ROADWAY NOT LISTED IN THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" SHALL NOT HAVE ANY WEEKDAY CLOSURES FROM 6:00AM - 9.00AM OR 3:00PM - 6:00 PM, UNLESS PERMITTED OTHERWISE IN THE PLANS.

3. UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.

4. NO LANE OR SHOULDER CLOSURES SHALL BE IN PLACE WHEN NO WORK IS BEING PERFORMED.

5. MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (OMUTCD).

6. PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT ALL TIMES AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.

<u>LOCATION 1 (CUY-90-1062)</u>

PHASE 1 (SHEETS 16-17)

THE SIDEWALK ALONG THE EAST SIDE OF THE BRIDGE, THE OUTER NORTHBOUND LANE, AND THE INNER SOUTHBOUND LANE OF WEST 117TH STREET SHALL BE CLOSED PRIOR TO THE BRIDGE. THE TWO REMAINING NORTHBOUND LANES SHALL BE SHIFTED TO THE WEST. THE INNER NORTHBOUND LANE SHALL CROSS THE MEDIAN AND SHALL OCCUPY THE PATH OF THE EXISTING INNER SOUTHBOUND LANE. PORTIONS OF THE MEDIAN SHALL BE REMOVED PRIOR THE BRIDGE TO ACCOMMODATE THIS. PORTABLE BARRIERS SHALL BE USED ALONG THE OUTSIDE OF THE NORTHBOUND TRAFFIC TO PROTECT THE WORK AREA WHILE PERFORMING THE REHABILITATION.

PHASE 2 (SHEETS 18-19)

THE MIDDLE NORTHBOUND LANE AND THE INNER SOUTHBOUND LANE OF WEST 117TH STREET SHALL BE CLOSED PRIOR TO THE BRIDGE. THE INNER NORTHBOUND LANE SHALL BE SHIFTED TO THE WEST. THE INNER NORTHBOUND LANE SHALL CROSS THE MEDIAN AND SHALL OCCUPY THE PATH OF THE EXISTING INNER SOUTHBOUND LANE. THE SIDEWALK ALONG THE EAST SIDE OF THE BRIDGE SHALL REOPEN, AND THE OUTER NORTHBOUND LANE SHALL RETURN TO THE EXISTING CONFIGURATION, USING THE NEWLY REHABILITATED APPROACH SLAB AND BRIDGE DECK. PORTABLE BARRIERS SHALL BE USED ALONG THE OUTSIDE OF THE INNER NORTHBOUND LANE AND THE INSIDE OF THE OUTER NORTHBOUND LANE TO PROTECT THE WORK AREA WHILE PERFORMING THE REHABILITATION.

PHASE 3 (SHEETS 20-21)

THE MIDDLE SOUTHBOUND LANE AND THE INNER NORTHBOUND LANE OF WEST 117TH STREET SHALL BE CLOSED PRIOR TO THE BRIDGE. THE INNER SOUTHBOUND LANE SHALL BE SHIFTED TO THE EAST. THE INNER SOUTHBOUND LANE SHALL CROSS THE MEDIAN AND SHALL OCCUPY THE PATH OF THE EXISTING INNER NORTHBOUND LANE. THE SIDEWALK ALONG THE WEST SIDE OF THE BRIDGE SHALL REOPEN, AND THE OUTER SOUTHBOUND LANE SHALL RETURN TO THE EXISTING CONFIGURATION, USING THE NEWLY REHABILITATED APPROACH SLAB AND BRIDGE DECK. PORTABLE BARRIERS SHALL BE USED ALONG THE OUTSIDE OF THE INNER SOUTHBOUND LANE TO PROTECT THE WORK AREA WHILE PERFORMING THE REHABILITATION.

PHASE 4 (SHEETS 22-23)

THE SIDEWALK ALONG THE WEST SIDE OF THE BRIDGE, THE OUTER SOUTHBOUND LANE, AND THE INNER NORTHBOUND LANE OF WEST 117TH STREET SHALL BE CLOSED PRIOR TO THE BRIDGE. THE TWO REMAINING SOUTHBOUND LANES SHALL BE SHIFTED TO THE EAST. THE INNER SOUTHBOUND LANE SHALL CROSS THE MEDIAN AND SHALL OCCUPY THE PATH OF THE EXISTING INNER NORTHBOUND LANE. PORTIONS OF THE MEDIAN SHALL BE REMOVED PRIOR TO THE BRIDGE TO ACCOMMODATE THIS. PORTABLE BARRIERS SHALL BE USED ALONG THE OUTSIDE OF THE SOUTHBOUND TRAFFIC TO PROTECT THE WORK AREA WHILE PERFORMING THE REHABILITATION.

<u>LOCATION 2 (CUY-090-2910)</u>

PROPOSED DECK PATCHING AND EXPANSION JOINT REPAIRS ARE TO BE PERFORMED IN ACCORDANCE WITH THE DISTRICT 12 PERMITTED LANE CLOSURE (PLC) CHART. EXPANSION JOINT REPAIR AT THE FORWARD ABUTMENT OF THE WESTBOUND LANES WILL REQUIRE CLOSING IR-90 WB LANES 2 AND 3 WHILE MAINTAINING TRAFFIC IN LANES 1 AND 4. IT IS ANTICIPATED THAT THIS CLOSURE WILL BE DONE BY CLOSING BOTH THE RIGHT LANE OF IR-90 WB AND THE LEFT LANE OF SR-2 WB WITHIN THE IR-90 / SR 2 INTERCHANGE DURING OFF-PEAK HOURS.

PROPOSED PATCHING OF THE FASCIA BRIDGE PARAPETS IS TO BE PERFORMED IN ACCORDANCE WITH THE DISTRICT 12 PERMITTED LANE CLOSURE (PLC) CHART AND STANDARD CONSTRUCTION DRAWINGS MT-095.40. WORK ON THE SOUTH SIDE OUTER DECK MAY REQUIRE THE NEED TO USE THE 'EARLY MERGE' DETAIL OF SCD MT-98.10 TO MERGE TRAFFIC ENTERING IR-90 FROM THE EASTBOUND SOUTH LAKELAND BOULEVARD ENTRANCE RAMP.

IN ACCORDANCE WITH SP 123-001, LANE CLOSURES ON I-90 OR SR-2 THAT VIOLATE THE PLCS AND THE ALLOWABLE QUEUE THRESHOLD WILL REQUIRE AN EXCEPTION REQUEST TO BE APPROVED BY THE DISTRICT DEPUTY DIRECTOR OR THE MOTEC.

THE CONTRACTOR SHALL PERFORM PIER REPAIR WORK BY CLOSING THE SHOULDER AND LEFT TURN LANES OF EAST 260TH STREET WHERE APPLICABLE, AND MAINTAINING TRAFFIC USING OMUTCD TYPICAL APPLICATION TA-3 AND TA-23 RESPECTIVELY AS SHOWN ON SHEETS 24-26. DURING FIBER WRAPPING AND SEALING OPERATIONS, THE OUTSIDE SHOULDER AND THROUGH TRAVEL LANE WILL BE CLOSED USING OMUTCD TYPICAL APPLICATION TA-22 AND TA-23, AND SCD MT-95.31 AND MT-95.32.

WHENEVER WORK CLOSES EITHER THE THROUGH LANE OR THE LEFT TURN LANE OF EAST 260TH STREET, ADJUSTMENT OF THE TRAFFIC SIGNALS AT NORTH LAKELAND BOULEVARD AND SOUTH LAKELAND BOULEVARD (TIMING, PHASING, DETECTION, ETC.) WILL BE REQUIRED. THIS TASK WILL REQUIRE COORDINATION WITH THE CITY OF EUCLID.

WHEN ANY WORK IS BEING PERFORMED ADJACENT TO OR OVER THE MARGINAL CONNECTOR THAT WILL IMPACT TRAFFIC, THE ROAD MAY BE CLOSED. MARGINAL CONNECTOR TRAFFIC SHALL BE DETOURED FROM EASTBOUND SOUTH LAKELAND BOULEVARD TO EAST 260TH STREET TO WESTBOUND SOUTH LAKELAND BOULEVARD.

DURING ALL TIMES, THE SIDEWALK ON AT LEAST ONE SIDE OF EAST 260TH MUST REMAIN OPEN AND PEDESTRIAN TRAFFIC WILL BE MAINTAINED USING SCD MT-110.10.

<u>LOCATION 3 (CUY-237-0827)</u>

PHASE 1 (SHEET 28)

THE NORTHBOUND LANE OF ROCKY RIVER DRIVE SHALL BE SHIFTED TO THE EAST. THE OUTSIDE SOUTHBOUND LANE OF ROCKY RIVER DRIVE SHALL BE CLOSED PRIOR TO THE BRIDGE. THE INSIDE SOUTHBOUND LANE OF ROCKY RIVER DRIVE SHALL BE SHIFTED TO THE EAST, ACROSS THE EXISTING CENTERLINE, AND SHALL OCCUPY A PORTION OF THE EXISTING NORTHBOUND LANE. PORTABLE BARRIERS SHALL BE USED ALONG THE OUTSIDE OF THE SOUTHBOUND TRAFFIC TO PROTECT THE WORK AREA WHILE PERFORMING THE REHABILITATION.

PHASE 2 (SHEET 29)

THE NORTHBOUND LANE OF ROCKY RIVER DRIVE SHALL BE SHIFTED TO THE WEST, ACROSS THE EXISTING CENTERLINE, AND SHALL OCCUPY A PORTION OF THE EXISTING SOUTHBOUND LANE. THE INSIDE SOUTHBOUND LANE SHALL BE CLOSED PRIOR TO THE BRIDGE. PORTABLE BARRIERS SHALL BE USED ALONG THE OUTSIDE OF THE NORTHBOUND TRAFFIC TO PROTECT THE WORK AREA WHILE PERFORMING THE REHABILITATION.

<u>LOCATION 4 (CUY-252-0434)</u>

THE CONTRACTOR SHALL PERFORM TOP OF DECK WORK BY CLOSING LANES IN ACCORDANCE WITH SCD MT-95.30. WHEN WORK IS BEING PERFORMED IN OR ADJACENT TO THE AUXILIARY LANE, TRAFFIC SHALL BE MAINTAINED BY CLOSING THAT LANE WITHIN THE WORK AREA AND RAMP "D" DURING CONSTRUCTION. RAMP CLOSURE AND DETOUR MAY ONLY BE IMPLEMENTED FROM 7:00 PM FRIDAY TO 6:30 AM MONDAY. RAMP "D" MAY NOT BE CLOSED IF THE DETOUR FOR LOCATION 6 IS IN EFFECT. THE RECOMMENDED DETOUR FOR THIS RAMP IS SHOWN ON SHEET 11.

THE CONTRACTOR SHALL PERFORM UNDERSIDE STEEL AND SUBSTRUCTURE WORK BY CLOSING LANES DURING PERMITTED LANE CLOSURE TIMES UNLESS OTHERWISE NOTED. DURING WORK THAT WILL OCCUR OFF THE TRAVEL LANES AND OVER THE ADJACENT TRAVEL LANE, TRAFFIC WILL BE MAINTAINED IN ACCORDANCE WITH SCD MT-95.31. DUE TO THE PROXIMITY OF THE I-480 WESTBOUND EXIT RAMP TO SOUTHBOUND SR 252 (RAMP "D"), THE CLOSURE OF THE WESTBOUND TRAVEL LANE AND SHOULDER WILL REQUIRE THE CLOSURE OF THE EXIT RAMP.

THIS WORK SHOULD COINCIDE WITH THE RAMP "D" WEEKEND CLOSURE NOTED ABOVE. WHEN WORK IS BEING PERFORMED ON THE EASTBOUND OUTSIDE COLUMNS AND OVER THE OUTSIDE TRAVEL LANE, THE "MERGING TRAFFIC" DETAIL OF SCD MT-98.20 SHALL BE USED TO MERGE TRAFFIC ENTERING EASTBOUND I-480 FROM "RAMP C". DURING WORK OCCURRING ADJACENT TO OR OVER THE INSIDE OF I-480, PART-WIDTH TRAFFIC WILL BE MAINTAINED IN ACCORDANCE WITH STANDARD CONSTRUCTION DRAWING MT-95.32.

DUE TO THE PROXIMITY TO GREAT NORTHERN MALL AND ADJACENT STRIP CENTERS, NO CLOSURES SHALL TAKE PLACE ON EITHER SR 252 OR THE I-480 RAMPS BETWEEN THANKSGIVING AND THE END OF THE YEAR.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SHEET 7 TOTAL 110

CUY-BH-FY2023 MISC.

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LOCATION 5 (CUY-271-1543)

THE CONTRACTOR SHALL PERFORM TOP OF DECK WORK ON HIGHLAND ROAD BY CLOSING ONE LANE USING FLAGGERS IN ACCORDANCE WITH SCD MT-97.10 DURING PERMITTED LANE CLOSURE TIMES. THE CONTRACTOR SHALL PERFORM UNDERSIDE STEEL AND SUBSTRUCTURE WORK BY CLOSING LANES ON I-271 IN ACCORDANCE WITH SCD MT-95.31 AND MT-95.32 DURING PERMITTED LANE CLOSURE TIMES.

LOCATION 6 (CUY-480-0446)

THE CONTRACTOR SHALL PERFORM TOP OF DECK WORK BY CLOSING THE ROAD AT THE BRIDGE AND PROVIDING A DETOUR SHOWN ON SHEET 12. UNDERSIDE STEEL ELEMENT WORK SHALL BE PERFORMED BY CLOSING ONE LANE IN ACCORDANCE WITH SCD MT-95.31 AND MT-95.32.

LOCATION 7 (CUY-480-0870-ES)

THE CONTRACTOR SHALL PERFORM TOP OF DECK WORK BY CLOSING LANES IN ACCORDANCE WITH SCD MT-95.31 AND MT-95.32 DURING PERMITTED LANE CLOSURE TIMES. DURING SUBSTRUCTURE WORK, THE CONTRACTOR SHALL CLOSE LANES IN ACCORDANCE WITH SCD MT-95.31 AND MT-95.32 DURING PERMITTED LANE CLOSURE TIMES. WORK OCCURRING ON THE OUTSIDE OF I-480 PART-WIDTH TRAFFIC MAY REQUIRE THE NEED TO USE THE "EARLY MERGE" DETAIL OF SCD MT-98.10 TO MERGE TRAFFIC ENTERING I-480 FROM THE NORTHBOUND I-71 ENTRANCE RAMP.

III. MAINTENANCE OF TRAFFIC SYSTEMS

1. WHEN REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS BEING WORKED UPON OR IS OTHERWISE NOT SUITABLE FOR SAFE AND CONVENIENT USE BY VEHICLES, TRAFFIC CONTROL DEVICES SUFFICIENT TO PROTECT SUCH AREAS TO ASSURE THE SAFE AND CONVENIENT PASSAGE OF VEHICULAR TRAFFIC SHALL BE INSTALLED AND MAINTAINED. SUCH TRAFFIC CONTROL DEVICES AND THE MANNER IN WHICH THEY ARE USED SHALL BE CONSISTENT WITH THESE PLANS AND THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, HEREINAFTER REFERRED TO AS THE "MANUAL". THE TRAFFIC CONTROL DEVICE SYSTEM SHALL CONSTITUTE THE MINIMUM PROVISIONS FOR TRAFFIC CONTROL FOR EACH PARTICULAR SITUATION. WHENEVER THE ENGINEER DEEMS IT NECESSARY ESPECIALLY WHERE A GRADE, CURVE, OR MERGE CONDITION EXISTS, THEY MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

2. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, FLAGGERS, SIGNING, BARRICADES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED IN THE "MANUAL" OR AS SHOWN IN THE STANDARD DRAWINGS.

3. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERECTED BEFORE ANY SUCH RESTRICTION IS PUT INTO EFFECT. ALL SUCH SIGNS SHALL BE COVERED OR REMOVED FROM THE VIEW OF TRAFFIC WHENEVER THEY ARE NOT APPLICABLE.

4. FLAGGERS

AT LEAST TWO (2) FLAGGERS ARE REQUIRED FOR EACH CLOSURE. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

III. MAINTENANCE OF TRAFFIC SYSTEMS (CONT.)

5. PROTECTION OF PUBLIC

PERSONAL CARS SHALL NOT BE PARKED WITHIN THE RIGHT OF WAY.

6. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH PROVISIONS FOR TRAFFIC CONTROL SET OUT IN THESE PLANS AND NOTES, OR WITH THE PROVISIONS OF THE "MANUAL", THE HIGHWAY IN THE VICINITY OF THE WORK AREA SHALL NOT BE CONSIDERED IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC. ANY FAILURE TO KEEP THE HIGHWAY, IN THE VICINITY OF THE WORK AREA, IN A CONDITION FOR THE SAFE AND CONVENIENT USE BY THE TRAVELING PUBLIC SHALL BE CONSIDERED A BREACH OF THIS CONTRACT. WORK SHALL BE SUSPENDED UNTIL THE CONTRACTOR COMPLIES WITH THE PROVISIONS OF THE AFOREMENTIONED ITEMS.

IV. MAINTENANCE OF TRAFFIC MATERIALS

1. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES ARE TO BE AS PROVIDED IN THE "MANUAL", OR IN DESIGN DRAWINGS PROVIDED BY THE DEPARTMENT OF TRANSPORTATION. THE SIGNS SHALL BE SUBJECT TO APPROVAL OF THE ENGINEER PRIOR TO THE START OF THE PROJECT.

2. SIGN SUPPORT

SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND MASS AS TO SUPPORT THE SIGNS AT THE APPROPRIATE HEIGHT. SUPPORTS SHALL BE AS SHOWN ON THE STANDARD DRAWINGS.

3. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW PANEL FOR EACH LANE CLOSED. THE CONTRACTOR SHALL REFER TO SUPPLEMENTAL SPECIFICATION 821, 921, AND THE PROVISIONS SET FORTH IN THE "MANUAL" FOR ALL INFORMATION REGARDING FURNISHING, MAINTAINING, AND USE OF FLASHING ARROW PANELS. PAYMENT FOR THE ABOVE MENTIONED ITEMS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

4. DRUMS

DRUMS SHALL BE IN ACCORDANCE WITH PERTINENT SECTIONS OF THE "MANUAL". ALL COSTS FOR INSTALLING, MAINTAINING, AND SUBSEQUENT REMOVAL OF SAID DRUMS IS TO BE INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

5. CONES

CONES, IF UTILIZED, ARE TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

6. BARRIER

PORTABLE CONCRETE BARRIER IF NECESSARY IS TO BE LOCATED AS SHOWN IN THE "MANUAL" AND THE STANDARD DRAWINGS.

IV. MAINTENANCE OF TRAFFIC MATERIALS (CONT.)

7. FLASHERS

FLASHERS SHALL BE 12 VOLT BATTERY-OPERATED MODELS WITH 7 INCH DIAMETER YELLOW LENSES ILLUMINATED BY RAPID INTERMITTENT FLASHERS OF SHORT DURATION AND ARE TO BE PLACED ON ALL SIGNS AT ALL TIMES AS REQUIRED BY THE "MANUAL" AND THE STANDARD CONSTRUCTION DRAWING.

8. FLOODLIGHTING

FLOODLIGHTING OF THE WORKSITE FOR OPERATIONS CONDUCTED DURING THE NIGHTTIME PERIODS SHALL BE ACCOMPLISHED SO THAT THE LIGHTS DO NOT CAUSE GLARE TO THE DRIVERS ON THE ROADWAY. TO ENSURE ADEQUACY OF THE FLOODLIGHT PLACEMENT, THE CONTRACTOR AND ENGINEER SHALL DRIVE THROUGH THE WORKSITE EACH NIGHT WHEN THE LIGHTING IS IN PLACE AND OPERATIVE PRIOR TO COMMENCING ANY WORK. IF GLARE IS DETECTED, THE LIGHT PLACEMENT AND SHIELDING SHALL BE ADJUSTED TO THE SATISFACTION OF THE ENGINEER BEFORE WORK PROCEEDS.

PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

9. WORK VEHICLES

ALL WORK VEHICLES LICENSED TO OPERATE ON THE HIGHWAY, SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT AND SHALL BE OPERATED WITH LIGHTED HEAD AND TAIL LAMPS. THE AMBER LIGHT SHALL BE IN OPERATION AT ALL TIMES WITHIN THE WORK ZONE AND WHILE TRAVELING TO AND FROM THE WORK ZONE WHENEVER THE VEHICLE SPEED IS BELOW THE POSTED LEGAL LIMIT. VEHICLE HAZARD LIGHTS DO NOT SATISFY THIS REQUIREMENT. ALL OTHER EQUIPMENT SHALL BE EQUIPPED WITH A FLASHING, ROTATING, OR OSCILLATING AMBER LIGHT VISIBLE TO ALL DIRECTIONS OF TRAFFIC FOR A MINIMUM OF ONE-QUARTER MILE IN BRIGHT SUNLIGHT. THE AMBER LIGHT SHALL BE IN OPERATION WHILE THE EQUIPMENT IS WITHIN THE WORK ZONE.

IV. PAYMENT

UNLESS STATED OTHERWISE, PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING TEMPORARY MAINTENANCE OF TRAFFIC CONTROL DEVICES INCLUDING DETOURS AND INTERSTATE LANE CLOSURES/SHIFTS SHALL BE MADE UNDER THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

DETOUR SIGNING

ADVANCE TRAFFIC SIGNING AND SUPPORTS, INCLUDING DETOUR SIGNING, CONSTRUCTION WORK ZONE APPROACH SIGNING, BARRICADES, AND SIGNS ON BARRICADES SHOWN ON THE PLANS BEYOND THE WORK LIMITS SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR, AND ALL ASSOCIATED COST SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, DETOUR SIGNING.

WORK ZONE SIGNS

FOR LOCATIONS: 1 (CUY-90-1062), 2 (CUY-90-2910) AND 3 (CUY-237-0827)

THE CONTRACTOR SHALL PROVIDE, ERECT, AND MAINTAIN SIGNS AND SIGN SUPPORTS, AS DETAILED IN THE OMUTCD, AND TYPE III BARRICADES OF THE TYPE AND LOCATION AS FOLLOWS:

LOCATION 1 (BRIDGE CUY-90-1062)	
CODE	STATION
G20-2-36	STA. 38+91
	STA. 57+81
	STA. 38+91
	STA. 57+91
	STA. 38+91
	STA. 57+81
	STA. 38+91
	STA. 57+81
R11-2-48	STA. 43+72
	STA. 53+39
	STA. 44+43
	STA. 52+85
R2-1-30	STA. 38+91
	STA. 58+07
	STA. 38+91
	STA. 58+07
	STA. 38+91
	STA. 58+07
	STA. 38+91
	STA. 58+07
R3-7-36	STA. 56+20
R9-9-30	STA. 42+81
	STA. 54+69
	STA. 43+25
	STA. 53+35
W20-1-36	STA. 38+91
	STA. 58+07
	STA. 38+91
	STA. 58+07
	STA. 38+91
	STA. 58+07
	STA. 38+91
	STA. 58+07
W24-1aL-36	STA. 45+24
	STA. 52+97
W24-1L-36	STA. 45+02
W9-2R-36	STA. 55+57
	STA. 56+57
	STA. 41+34
	STA. 52+18
	STA. 53+18
	STA. 45+27
	STA. 46+27
W9-H3b-48	STA. 44+02
	STA. 45+37
	STA. 53+06
	STA. 54+43

LOCATION 2 (BRIDGE CUY-90-2910)	
CODE	QUANTITY
WEST PIER CONSTRUCTION	
G20-2-36	1
W21-5-36	1
EAST PIER CONSTRUCTION	
G20-2-36	1
W21-5-36	3
MIDDLE PIER CONSTRUCTION	
G20-2-36	2
R3-H8ba-30	2
W1-4L-36	1
W1-4R-36	1
W4-2L-36	1
W9-3L-36	1
W13-1P-24	1
W20-1-36	4

LOCATION 3 (BRIDGE CUY-237-0827)	
CODE	STATION
G20-2-36	STA. 54+16
	STA. 52+98
R2-1-30	STA. 48+46
	STA. 54+19
	STA. 48+29
	STA. 52+96
R3-H8bh-36	STA. 47+82
	STA. 49+34
W1-4R-36	STA. 50+66
W20-1-36	STA. 54+19
	STA. 48+29
	STA. 52+96
W24-1L-36	STA. 51+90
W9-2L-36	STA. 53+21
	STA. 54+19
W9-2R-36	STA. 51+88

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OMUTCD. PAYMENT FOR ALL LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614, MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SHEET 8 TOTAL 110

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CONSTRUCTION TRAFFIC

ALL CONSTRUCTION TRAFFIC SHALL USE ACCEPTABLE TRUCK ROUTES TO ACCESS THE CONSTRUCTION AREA. USE OF LOCAL RESIDENTIAL STREETS IS STRICTLY PROHIBITED UNLESS ALLOWED IN WRITING BY THE LOCAL ENFORCEMENT AUTHORITY.

CONTINUOUS ACCESS

THE CONTRACTOR SHALL MAINTAIN SAFE AND ADEQUATE DRIVEWAYS AND WALKWAYS IN ORDER TO PROVIDE CONTINUOUS ACCESS FOR PEDESTRIANS, PASSENGER VEHICLES, TRUCKS, AND SAFETY EQUIPMENT TO ALL ADJOINING PROPERTIES. THE COST FOR ALL MATERIALS, EQUIPMENT AND LABOR NECESSARY TO PROVIDE CONTINUOUS ACCESS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

DELINEATION OF PORTABLE AND PERMANENT BARRIER
FOR LOCATIONS: 1 (CUY-90-1062) AND 3 (CUY-237-0827)

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.

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

ITEM 614, BARRIER REFLECTOR, TYPE 1 (ONE-WAY) 28 EACH

ITEM 614, OBJECT MARKER, ONE WAY 28 EACH

ITEM 614, BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL) 20 EACH

ITEM 614, OBJECT MARKER TWO WAY 20 EACH

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

MAINTENANCE OF TRAFFIC CONTROL ZONES

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUM AND TEMPORARY PAVEMENT MARKINGS AT THE LOCATIONS DETAILED IN THE PLANS OR SPECIFIED IN THE STANDARD DRAWINGS. WHEN THE CONTRACTOR IS NOTIFIED OF DEFICIENCIES HE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

MAINTENANCE OF TRAFFIC SCHEME

THE CONTRACTOR SHALL DEVISE A SIMPLE MAINTENANCE OF TRAFFIC SCHEME FOR EACH LOCATION, WHICH SHALL BE STAMPED BY A PROFESSIONAL ENGINEER (SCHEME MAY BE A HAND SKETCH) AND PRESENT IT TO THE DISTRICT WORK ZONE SAFETY ENGINEER AND PROJECT ENGINEER FOR ACCEPTANCE AT LEAST TWO WEEKS PRIOR TO IMPLEMENTATION. IN GENERAL, THE METHODS FOR MAINTAINING TRAFFIC THAT THE CONTRACTOR PROPOSES TO USE FOR CONDUCTING THE REQUIRED WORK IN A SAFE AND EFFICIENT MANNER SUPPORTED BY HAND SKETCHES AS NECESSARY. THE MAINTENANCE OF TRAFFIC SCHEME SHALL BE IN CONFORMANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST REVISION, THE REFERENCED STANDARD CONSTRUCTION DRAWINGS, THE ATTACHED MAINTENANCE OF TRAFFIC SHEETS, AND THE SPECIFICATIONS. THE CONTRACTOR SHALL NOT COMMENCE WORK UNTIL THE MAINTENANCE OF TRAFFIC SCHEME HAS BEEN ACCEPTED.

IF DURING THE PROJECT THE ENGINEER DETERMINES THAT THE APPROVED MAINTENANCE OF TRAFFIC PLAN IS NOT PERFORMING AS DESIRED, THE WORK SHALL BE SUSPENDED UNTIL THE PROBLEM IS RESOLVED TO THE SATISFACTION OF THE ENGINEER AND THE MAINTENANCE OF TRAFFIC PLAN IS REVISED ACCORDINGLY. ANY COSTS OR DELAYS INCURRED AS A RESULT OF THE FAILURE OF THE CONTRACTOR TO ADJUST THE MAINTENANCE OF TRAFFIC SCHEME TO THE SATISFACTION OF THE ENGINEER SHALL BE THE FULL RESPONSIBILITY OF THE CONTRACTOR. DURING NON-WORKING HOURS, ALL LANES SHALL BE IN FULL OPERATION WITH ALL TRAFFIC CONTROL SIGNS, EXCEPT OW-124 (ROAD CONSTRUCTION AHEAD) SIGNS, REMOVED OR COVERED AND ALL CHANNELIZING DEVICES REMOVED FROM THE PAVEMENT SURFACES. CHANNELIZING DEVICES MAY BE STORED OR DEPLOYED TEMPORARILY ADJACENT TO THE SHOULDER TO MINIMIZE THE NIGHTLY TRAFFIC CONTROL SET-UP TIME. PAYMENT FOR ALL THE ITEMS REQUIRED TO MAINTAIN TRAFFIC IN ACCORDANCE WITH THESE REQUIREMENTS IS INCLUDED IN THE LUMP SUM BID PRICE FOR ITEM 614 - MAINTAINING TRAFFIC.

CONCRETE MEDIAN REPLACEMENT
FOR LOCATIONS: 1 (CUY-90-1062) AND 3 (CUY-237-0827)

REMOVING AND INSTALLING THE CONCRETE MEDIAN SHALL AT ALL TIMES BE SUBJECT TO THE APPROVAL OF THE ENGINEER. THE ENGINEER SHALL BE SATISFIED THAT ALL INSTALLATIONS WILL AFFORD MAXIMUM PROTECTION FOR TRAFFIC.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE
FOR LOCATIONS: 1 (CUY-090-1062), 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 5 (CUY-271-1543), 6 (CUY-480-0446), AND 7 (CUY-480-0870 ES)

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED. IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- *DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.*
- *DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).*

IN ADDITION TO THE REQUIREMENT OF CMS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) MAY BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS DETERMINED AND PRE-APPROVED BY THE ENGINEER. ANY LEO HOURS WHICH ARE NOT PRE-APPROVED FOR THE FOLLOWING PURPOSES SHALL NOT BE COMPENSABLE:

- *FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP). IN GENERAL, LEOS SHOULD BE POSITIONED AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH INTERSECTIONS IN WORK ZONES.*
- *WHEN CONSTRUCTION VEHICLES ARE ENTERING/EXITING THE ZONE DIRECTLY FROM/INTO AN OPEN LANE OF TRAFFIC. IF A LANE HAS BEEN CLOSED TO PROVIDE AN ACCELERATION/DECELERATION LANE FOR THE VEHICLE, THE LEO WILL NOT BE REQUIRED.*

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS' DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

ITEM 614 , LAW ENFORCEMENT OFFICE WITH PATROL CAR FOR ASSISTANCE (CONT.)

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS WITH PATROL CAR REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 288 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COST (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SHEET 9 TOTAL 110

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WORKSITE TRAFFIC SUPERVISOR

SUBJECT TO APPROVAL OF THE ENGINEER, THE CONTRACTOR SHALL EMPLOY AND IDENTIFY (SOMEONE OTHER THAN THE SUPERINTENDENT) A PREQUALIFIED WORKSITE TRAFFIC SUPERVISOR (WTS) BEFORE STARTING WORK IN THE FIELD. THE WTS SHALL BE TRAINED IN ACCORDANCE WITH CMS 614.03, SHALL HAVE SUCCESSFULLY COMPLETED ODOT ADMINISTERED WTS TESTING (AND RE-TESTING WHEN APPLICABLE) AND BE LISTED ON THE ODOT PREQUALIFIED WTS ROSTER. PREQUALIFICATION EXPIRES EVERY 5 YEARS. RE-TESTING SHALL BE SUCCESSFULLY REPEATED EVERY 5 YEARS TO REMAIN PREQUALIFIED.

THE NAME OF THE PREQUALIFIED WTS AND RELATED 24-HOUR CONTACT INFORMATION SHALL BE PROVIDED TO THE ENGINEER AT THE PRECONSTRUCTION CONFERENCE. IF THE DESIGNATED WTS WILL NOT BE AVAILABLE FULL TIME (24/7), THE CONTRACTOR MAY DESIGNATE AN ALTERNATE (SECONDARY) WTS TO BE AVAILABLE WHEN THE PRIMARY IS OFF DUTY; HOWEVER, THE PRIMARY WTS SHALL REMAIN THE POINT OF CONTACT AT ALL TIMES. ANY ALTERNATE (SECONDARY) WTS IS SUBJECT TO THE SAME TRAINING, PREQUALIFICATION AND OTHER REQUIREMENTS OUTLINED WITHIN THIS PLAN NOTE. AT ALL TIMES THE ENGINEER, OR ENGINEER'S REPRESENTATIVES, MUST BE INFORMED OF WHO THE PRIMARY WTS (AND SECONDARY WTS, IF APPLICABLE) IS AT THE CURRENT TIME.

THE WTS POSITION HAS THE PRIMARY RESPONSIBILITY OF IMPLEMENTING THE TRAFFIC MANAGEMENT PLAN (TMP), MONITORING THE SAFETY AND MOBILITY OF THE ENTIRE WORK ZONE, AND CORRECTING TEMPORARY TRAFFIC CONTROL (TTC) DEFICIENCIES FOR THE ENTIRE WORK ZONE. THE WTS, AND ALTERNATE WTS WHEN ON DUTY, SHALL HAVE SUFFICIENT AUTHORITY TO EFFECTIVELY CARRY OUT THE IDENTIFIED WTS RESPONSIBILITIES AND DUTIES. THE DUTIES OF THE WTS ARE AS FOLLOWS:

1. BE AVAILABLE ON A 24-HOUR PER DAY BASIS.
2. BE ON SITE FOR ALL EMERGENCY TTC NEEDS WITHIN ONE HOUR OF NOTIFICATION BY POLICE OR PROJECT STAFF, AND EFFECT CORRECTIVE MEASURES IMMEDIATELY ON EXISTING WORK ZONE TTC DEVICES.
3. ATTEND PRECONSTRUCTION MEETING AND ALL PROJECT MEETINGS WHERE TTC MANAGEMENT IS DISCUSSED.
4. BE AVAILABLE ON SITE FOR OTHER MEETINGS OR DISCUSSIONS WITH THE ENGINEER UPON REQUEST.
5. BE AWARE OF ALL EXISTING AND PROPOSED TTC OPERATIONS OF THE CONTRACTOR, SUBCONTRACTORS AND SUPPLIERS, AND ENSURE COORDINATION OCCURS BETWEEN THEM TO ELIMINATE CONFLICTING TEMPORARY AND/OR PERMANENT TRAFFIC CONTROL.
6. COORDINATE PROJECT ACTIVITIES WITH ALL LAW ENFORCEMENT OFFICERS (LEOS). THE WTS SHALL ALSO BE THE MAIN CONTACT PERSON WITH THE LEOS WHILE LEOS ARE ON THE PROJECT.
7. COORDINATE AND FACILITATE MEETINGS WITH ODOT PERSONNEL, LEOS AND OTHER APPLICABLE ENTITIES BEFORE EACH PLAN PHASE SWITCH TO DISCUSS THE WORK ZONE TTC FOR IMPLEMENTING THE PHASE SWITCH. SUBMIT A WRITTEN DETAIL OF MOT OPERATIONS AND SCHEDULE OF EVENTS TO IMPLEMENT THE SWITCH BETWEEN PHASE PLANS TO THE ENGINEER 5 CALENDAR DAYS PRIOR TO THIS MEETING.

WORKSITE TRAFFIC SUPERVISOR (CONT.)

8. BE PRESENT, ON SITE FOR, AND INVOLVED WITH, EACH TTC SET UP/TAKE DOWN AND EACH PHASE CHANGE IN ACCORDANCE WITH CMS 614.03.
9. ON A CONTINUAL BASIS ENSURE THAT THE TTC ZONE AND ALL RELATED DEVICES ARE INSTALLED, MAINTAINED AND REMOVED IN COMPLIANCE WITH THE CONTRACT DOCUMENTS.
10. ON A CONTINUAL BASIS FACILITATE CORRECTIVE ACTION(S) NECESSARY TO BRING DEFICIENT TTC ZONES AND ALL RELATED DEVICES INTO COMPLIANCE WITH CONTRACT DOCUMENTS IN THE TIMEFRAME DETERMINED BY THE ENGINEER.
11. INSPECT, EVALUATE, PROPOSE NECESSARY MODIFICATIONS TO, AND DOCUMENT THE EFFECTIVENESS OF, THE TTC DEVICES AND TRAFFIC OPERATIONS ON A DAILY BASIS (7 DAYS A WEEK). IN ADDITION, PERFORM ONE WEEKLY NIGHT INSPECTION OF THE WORK ZONE SETUP FOR DAYTIME WORK OPERATIONS; AND ONE DAYTIME INSPECTION PER WEEK FOR NIGHTTIME PROJECTS. THIS SHALL INCLUDE (BUT NOT BE LIMITED TO) DOCUMENTATION ON THE FOLLOWING PROJECT EVENTS:

   A. INITIAL TTC SETUP (DAY AND NIGHT REVIEW).

   B. DAILY TTC SETUP AND REMOVAL.

   C. WHEN CONSTRUCTION STAGING CAUSES A CHANGE IN THE TTC SETUP.

   D. CRASH OCCURRENCES WITHIN THE CONSTRUCTION AREA AND WITHIN THE INFLUENCE AREA(S) APPROACHING THE WORK ZONE.

   E. REMOVAL OF TTC DEVICES AT THE END OF A PHASE OR PROJECT.

   F. ALL OTHER EMERGENCY TTC NEEDS.

12. COMPLETE THE DEPARTMENT APPROVED LONG TERM INSPECTION FORM (CA-D-8) AFTER EACH INSPECTION AS REQUIRED IN # 11 AND SUBMIT IT TO THE ENGINEER THE FOLLOWING WORKDAY. THESE REPORTS SHALL INCLUDE A CHECKLIST OF ALL TTC MAINTENANCE ITEMS TO BE REVIEWED. A COPY OF THE FORM WILL BE PROVIDED AT THE PRE-CONSTRUCTION MEETING. ANY DEFICIENCIES OBSERVED SHALL BE NOTED, ALONG WITH RECOMMENDED OR COMPLETED CORRECTIVE ACTIONS AND THE DATES BY WHICH SUCH CORRECTIONS WERE, OR WILL BE, COMPLETED. A COPY OF THE CURRENT CA-D-8 DOCUMENT CAN BE FOUND ON THE OFFICE OF CONSTRUCTION ADMINISTRATION'S INSPECTION FORMS WEBSITE.
13. HAVE COPIES OF THE ODOT TEMPORARY TRAFFIC CONTROL MANUAL AND CONTRACT DOCUMENTS AVAILABLE AT ALL TIMES ON THE PROJECT.

THE DEPARTMENT WILL DEDUCT:

A. THE PRORATED DAILY AMOUNT OF ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY IN WHICH THE WTS FAILS TO PERFORM THE DUTIES SET FORTH ABOVE. THE PRORATED DAILY AMOUNT WILL BE EQUAL TO THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC DIVIDED BY THE DIFFERENCE BETWEEN THE ORIGINAL COMPLETION DATE AND THE FIRST DAY OF WORK, IN CALENDAR DAYS.

WORKSITE TRAFFIC SUPERVISOR (CONT.)

B. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A TTC ISSUE IS IDENTIFIED IN THE FIELD AND IS NOT CORRECTED IN THE GIVEN TIMEFRAME PER THE ENGINEER. DEDUCTION B SHALL NOT APPLY TO SITUATIONS COVERED BY DEDUCTION C.

C. 1% OF THE ORIGINAL BID AMOUNT FOR ITEM 614 MAINTAINING TRAFFIC FOR ANY DAY THAT A LANE OR RAMP IS BLOCKED (FULLY OR PARTIALLY) WITHOUT TTC, AS DETERMINED BY THE ENGINEER. THIS DEDUCTION SHALL BE IN ADDITION TO ANY OTHER DISINCENTIVES ESTABLISHED FOR UNAUTHORIZED LANE USE.

FOR DAYS IN WHICH MORE THAN ONE DEDUCTION LISTED ABOVE OCCUR, THE HIGHEST DEDUCTION AMOUNT WILL APPLY.

IF THREE OR MORE TOTAL DAYS RESULT IN TTC ISSUES DESCRIBED IN DEDUCTION B OR C ABOVE, THE PRIMARY WTS SHALL BE IMMEDIATELY REMOVED FROM THE WORK IN ACCORDANCE WITH C&MS 108.05. UPON REMOVAL THE ENGINEER SHALL NOTIFY ODOT CENTRAL OFFICE (WTSPREQUALIFICATION@DOT.OHIO.GOV) TO REGISTER A REMOVAL AGAINST THE STATEWIDE PREQUALIFICATION FOR THE PRIMARY WTS. THREE REMOVALS SHALL CAUSE STATEWIDE DISQUALIFICATION FOR ANY PREVIOUSLY PREQUALIFIED WTS.

PAYMENT FOR THE ABOVE REQUIREMENTS, RESPONSIBILITIES AND DUTIES SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614, MAINTAINING TRAFFIC.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
FOR LOCATION 4 (CUY-252-0434)

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A CHANGEABLE MESSAGE SIGN. THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCES OF 800 FEET AND 650 FEET, RESPECTIVELY.

EACH SIGN SHALL BE TRAILER-MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM, TO DIM THE SIGN DURING DARKNESS, AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. THE PCMS SHALL BE DELINEATED IN ACCORDANCE WITH C&MS 614.03.

THE PROBABLE PCMS LOCATIONS AND WORK LIMITS FOR THOSE LOCATIONS ARE SHOWN ON SHEET 11 OF THE PLAN. PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED OFF. ADDITIONALLY, WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED AWAY FROM ALL TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (CONT.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE-LINE PRESENTATION FORMATS WITH UP TO SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF C&MS 614.07. THE CONTRACTOR SHALL, PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS, WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS, TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS, INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC, ACCRUED BY THE DEPARTMENT DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
ASSUMING ONE (1) PCMS SIGN(S)
FOR ONE (1) MONTH(S) 1 SIGN MONTH

MAINTENANCE OF TRAFFIC GENERAL NOTES

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SHEET 10 TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet4 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:13:30 PM USER: mdcruz
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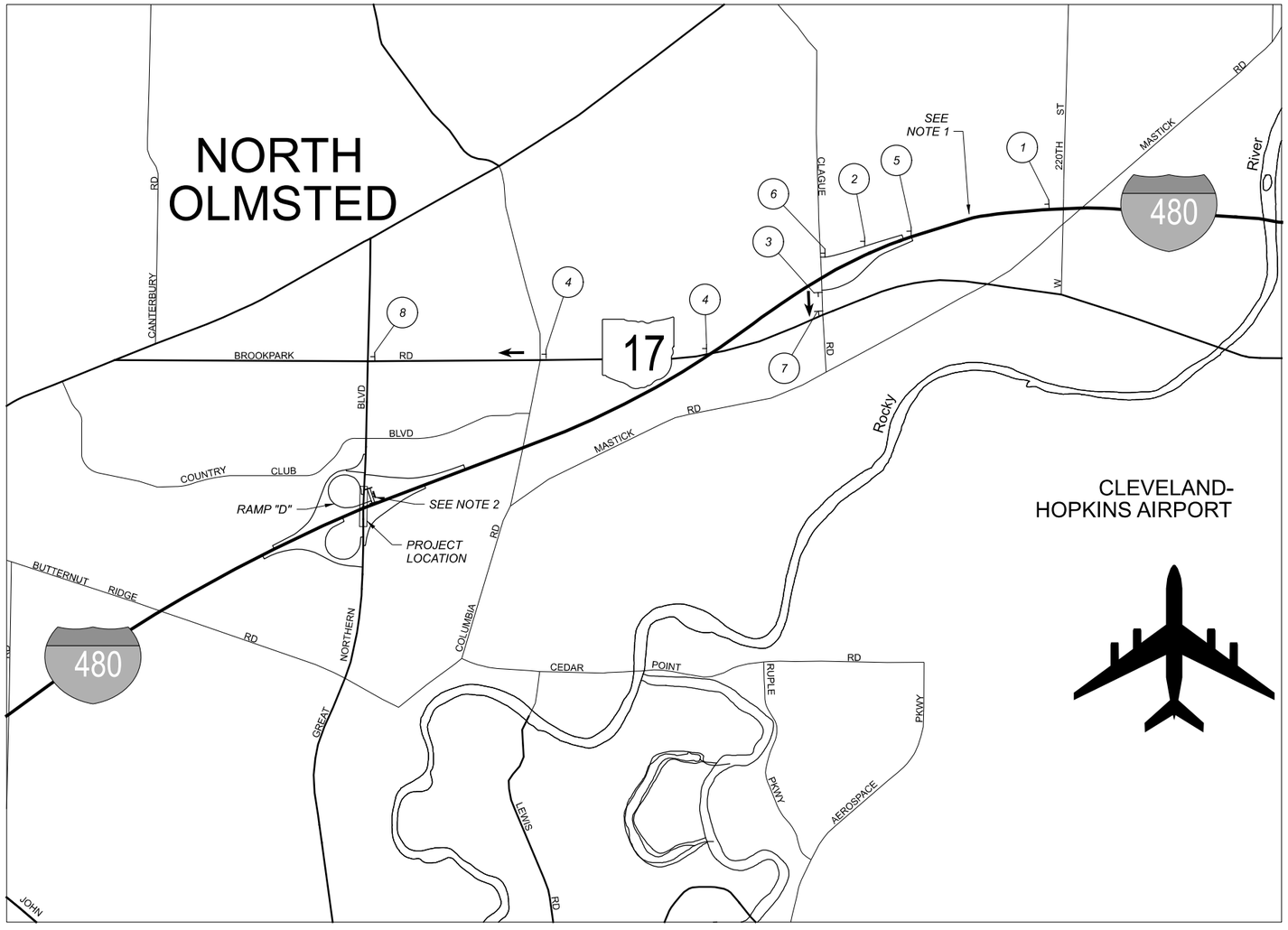


LEGEND

DETOUR ROUTE

DETOUR MAP

NOT TO SCALE

1

M4-8-12
M3-3-24
M1-5-24-3
W20-2-48

2

M4-8-12
M3-3-24
M1-5-24-3
M5-1-12

3

M4-8-12
M3-3-24
M1-5-24-3
M5-1-12

4

M4-8-12
M3-3-24
M1-5-24-3
M6-3-12

5

M4-8-12
M3-3-24
M1-5-24-3
M6-2-12

6

M4-8-12
M3-3-24
M1-5-24-3
M6-1-12

7

M4-8-12
M3-3-24
M1-5-24-3
M6-1-12

8

M4-8a-12
M1-5-24-3

NOTES

1. *DURING THE TIME THAT RAMP "D" IS CLOSED, CONTRACTOR IS TO PLACE PCMS IN ADVANCE OF WESTBOUND I-480 EXIT TO CLAGUE ROAD. PCMS TO READ "EXIT TO SOUTH 252 CLOSED", "USE CLAGUE ROAD EXIT".*
2. *THE CLOSURE OF I-480 EXIT RAMP "D" SHALL FOLLOW SCD MT-98.29.*
3. *CONTRACTOR TO REMOVE OR COVER DETOUR SIGNS WHEN DETOUR IS NOT IN EFFECT.*

DETOUR PLAN
LOCATION 4 (CUY-252-0434)

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:13:33 PM USER: mdcruz
P:\ODOT\J20200855.000 Dist 12 - VAR Bridge Rehabs\105909\400-Engineering\MOT\Sheets\105909_MD001.dgn

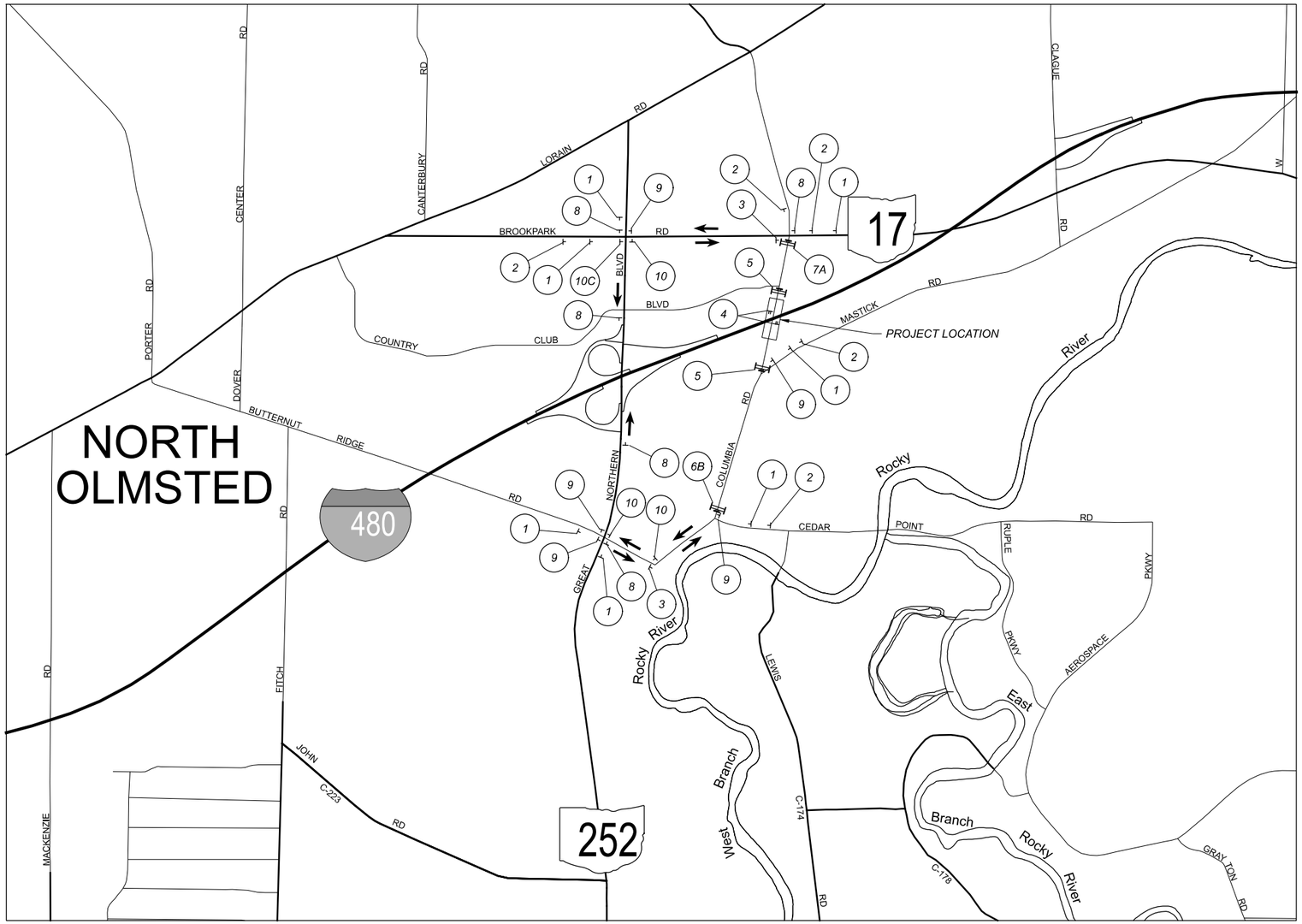
DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER
JMB

REVIEWER
DRP 12-13-22

PROJECT ID
105909

SHEET 11 | TOTAL 110



LEGEND

DETOUR ROUTE

DETOUR MAP

NOT TO SCALE

NOTES

1. *ROAD CLOSURE USING TYPE III BARRICADES, IN CONFORMANCE WITH ODOT STANDARD CONSTRUCTIONDRAWING MT-101.60.*
2. *CONTRACTOR TO MAINTAIN ACCESS TO ADJACENT PROPERTIES AT ALL TIMES DURING CONSTRUCTION.*

(1) DETOUR AHEAD — *W20-2-36*

(2) ROAD CLOSED AHEAD — *W20-3-36*

(3) COLUMBIA RD / END DETOUR — *D3-1-54 M4-8a-12*

(4) BRIDGE WILL BE CLOSED * FOR * DAYS INFO: * — *W20-H13-60*

* = TO BE INSERTED BY CONTRACTOR (NOT TO EXCEED 70 CONSECUTIVE CALENDAR DAYS)

(5) ROAD CLOSED / LOCAL TRAFFIC ONLY — *R11-3-66*

(6) ROAD CLOSED 1/2 MILES AHEAD / LOCAL TRAFFIC ONLY — *R11-3a-60*

(7) ROAD CLOSED 1/4 MILES AHEAD / LOCAL TRAFFIC ONLY — *R11-3a-60*

(8) COLUMBIA RD / DETOUR ↑ — *D3-1-54 M4-9c-30*

(9) COLUMBIA RD / DETOUR ← — *D3-1-54 M4-9L-30*

(10) COLUMBIA RD / DETOUR → — *D3-1-54 M4-9R-30*

(A) DETOUR → — *M4-10R-48*

(B) ← DETOUR — *M4-10L-48*

(C) SOUTH — *M3-3-24*

DETOUR PLAN
LOCATION 6 (CUY-480-0446)

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 4/5/2023 TIME: 7:13:36 PM USER: mdcruz
P:\ODOT\J2020855.000 Dist 12 - VAR Bridge Rehabs\105909\400-Engineering\MOT\Sheets\105909_MD002.dgn

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER	JMB
REVIEWER	DRP 12-13-22
PROJECT ID	105909
SHEET	12
TOTAL	110

REF. NO.	PHASE	LOCATION	STATION FROM	STATION TO	SIDE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 MAINTAINING TRAFFIC, MISC.: REMOVE AND RECONSTRUCT MEDIAN FOR CROSSOVER	614 WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	614 WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	614 WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE ARROW, CLASS I, 740.06, TYPE I	622 PORTABLE BARRIER, UNANCHORED	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	614 BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	614 OBJECT MARKER, ONE WAY	614 OBJECT MARKER, TWO WAY	620 DELINEATOR, POST SURFACE MOUNTED	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	615 ROADS FOR MAINTAINING TRAFFIC
						EACH	SF	MILE	MILE	MILE	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH	SY	LS
BU201	1	W 117TH ST	47+55	50+95	RT									340	7		7				
CH201	1	W 117TH ST	43+14	43+59	RT						51										
CH202	1	W 117TH ST	46+27	47+52	LT/RT						127										
CH203	1	W 117TH ST	46+27	47+52	RT						126										
CH204	1	W 117TH ST	46+27	47+52	RT						126										
CH205	1	W 117TH ST	50+93	52+18	LT/RT						127										
CH206	1	W 117TH ST	50+93	52+18	RT						126										
CH207	1	W 117TH ST	50+93	52+18	RT						126										
CL201	1	W 117TH ST	46+27	53+43	LT				0.14												
CL202	1	W 117TH ST	46+27	47+52	LT/RT				0.02												
CL203	1	W 117TH ST	50+93	52+18	LT/RT				0.02												
DL201	1	W 117TH ST	43+75	44+47	LT/RT							113									
DL202	1	W 117TH ST	43+87	44+47	LT/RT							97									
DL203	1	W 117TH ST	53+43	54+11	LT/RT							117									
DL204	1	W 117TH ST	53+43	53+99	LT/RT							98									
EW201	1	W 117TH ST	43+14	46+27	RT					0.06											
EW202	1	W 117TH ST	47+52	50+93	LT					0.06											
EW203	1	W 117TH ST	47+52	50+93	LT					0.06											
EW204	1	W 117TH ST	47+52	50+93	RT					0.06											
EW205	1	W 117TH ST	47+52	50+93	RT					0.06											
EW206	1	W 117TH ST	52+18	52+73	RT					0.01											
FD201	1	W 117TH ST	47+63	50+81	CL														16		
IA201	1	W 117TH ST	47+55		RT	1															
IA202	1	W 117TH ST	50+95		RT	1															
LL201	1	W 117TH ST	46+27	52+18	LT			0.11													
MT201	1	W 117TH ST	46+20	47+63	CL		574													64	LS
MT202	1	W 117TH ST	50+81	52+22	CL		532													60	LS
TOTALS CARRIED TO GENERAL SUMMARY						2	1106	0.11	0.18	0.33	807	426	0	340	7	0	7	0	16	124	LS

MAINTENANCE OF TRAFFIC SUBSUMMARY
LOCATION 1 (CUY-90-1062)

DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER MWJ
REVIEWER JS 06-08-22
PROJECT ID 105909
SUBSET 1 TOTAL 11
SHEET 13 TOTAL 110

CUY BH-FY2023 Misc

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REF. NO.	PHASE	LOCATION	STATION FROM	STATION TO	SIDE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 MAINTAINING TRAFFIC, MISC.; REMOVE AND RECONSTRUCT MEDIAN FOR CROSSOVER	614 WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	614 WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	614 WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE ARROW, CLASS I, 740.06, TYPE I	622 PORTABLE BARRIER, UNANCHORED	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	614 BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	614 OBJECT MARKER, ONE WAY	614 OBJECT MARKER, TWO WAY	620 DELINEATOR, POST SURFACE MOUNTED
						EACH	SF	MILE	MILE	MILE	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH
BU301	2	W 117TH ST	47+52	50+92	LT									340		7		7	
BU302	2	W 117TH ST	47+56	50+96	RT									340	7		7		
CH301	2	W 117TH ST	45+02	46+27	RT						126								
CH302	2	W 117TH ST	46+27	47+52	LT/RT						127								
CH303	2	W 117TH ST	50+93	53+18	LT/RT						227								
CL301	2	W 117TH ST	46+27	52+18	LT				0.11										
CL302	2	W 117TH ST	46+27	47+52	LT/RT				0.02										
CL303	2	W 117TH ST	50+93	52+18	LT/RT				0.02										
EW301	2	W 117TH ST	45+02	46+27	RT					0.02									
EW302	2	W 117TH ST	46+27	53+18	LT					0.13									
EW303	2	W 117TH ST	47+52	50+93	LT					0.06									
IA301	2	W 117TH ST	47+52		LT	1													
IA302	2	W 117TH ST	47+56		RT	1													
IA303	2	W 117TH ST	50+92		LT	1													
IA304	2	W 117TH ST	50+96		RT	1													
LL301	2	W 117TH ST	46+27	52+18	LT			0.11											
BU401	3	W 117TH ST	47+49	50+89	LT									340	7		7		
BU402	3	W 117TH ST	47+53	50+93	RT									340		7		7	
CH401	3	W 117TH ST	45+02	47+52	LT/RT						252								
CH402	3	W 117TH ST			LT/RT						127								
CH403	3	W 117TH ST	52+18	53+43	LT						126								
CL401	3	W 117TH ST	46+27	47+52	LT				0.02										
CL402	3	W 117TH ST	46+27	52+18	LT/RT				0.11										
CL403	3	W 117TH ST	50+93	52+18	LT/RT				0.02										
DL401	3	W 117TH ST	53+51	54+11	LT/RT							101							
DL402	3	W 117TH ST	53+50	53+98	LT/RT							83							
EW401	3	W 117TH ST	45+02	52+18	LT					0.14									
EW402	3	W 117TH ST	47+52	50+93	LT					0.06									
EW403	3	W 117TH ST	52+18	53+43	LT					0.02									
IA401	3	W 117TH ST	47+49		LT	1													
IA402	3	W 117TH ST	47+53		RT	1													
IA403	3	W 117TH ST	50+89		LT	1													
IA404	3	W 117TH ST	50+93		RT	1													
LL401	3	W 117TH ST	46+27	52+18	RT			0.11											
TOTALS CARRIED TO GENERAL SUMMARY						8	0	0.22	0.32	0.44	984	184	0	1360	14	14	14	14	0

CUY BH-FY2023 Misc

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MAINTENANCE OF TRAFFIC SUBSUMMARY
LOCATION 1 (CUY-90-1062)

DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER MWJ
REVIEWER JS 06-08-22
PROJECT ID 105909
SUBSET 2 TOTAL 11
SHEET 14 TOTAL 110

REF. NO.	PHASE	LOCATION	STATION FROM	STATION TO	SIDE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 MAINTAINING TRAFFIC, MISC.; REMOVE AND RECONSTRUCT MEDIAN FOR CROSSOVER	614 WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	614 WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	614 WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE ARROW, CLASS I, 740.06, TYPE I	622 PORTABLE BARRIER, UNANCHORED	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	614 BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	614 OBJECT MARKER, ONE WAY	614 OBJECT MARKER, TWO WAY	620 DELINEATOR, POST SURFACE MOUNTED
						EACH	SF	MILE	MILE	MILE	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH
AR501	4	W 117TH ST	54+77		LT								1						
AR502	4	W 117TH ST	55+27		LT								1						
AR503	4	W 117TH ST	55+77		LT								1						
BU501	4	W 117TH ST	47+49	50+89	LT									340	7		7		
CH501	4	W 117TH ST	46+27	47+52	LT						125								
CH502	4	W 117TH ST	46+27	47+52	LT						125								
CH503	4	W 117TH ST	46+27	47+52	LT/RT						126								
CH504	4	W 117TH ST	50+93	52+18	LT						126								
CH505	4	W 117TH ST	50+93	52+18	LT						126								
CH506	4	W 117TH ST	50+93	52+18	LT/RT						127								
CH507	4	W 117TH ST	52+85	53+48	LT						66								
CL501	4	W 117TH ST	44+40	52+18	RT				0.15										
CL502	4	W 117TH ST	46+27	47+52	LT/RT				0.02										
CL503	4	W 117TH ST	50+93	52+18	LT/RT				0.02										
DL501	4	W 117TH ST	43+75	44+40	LT/RT							122							
DL502	4	W 117TH ST	43+87	44+40	LT/RT							102							
DL503	4	W 117TH ST	53+51	54+11	LT/RT							101							
DL504	4	W 117TH ST	53+50	53+98	LT/RT							83							
EW501	4	W 117TH ST	45+39	46+27	LT					0.02									
EW502	4	W 117TH ST	47+52	50+93	LT					0.06									
EW503	4	W 117TH ST	47+52	50+93	LT					0.06									
EW504	4	W 117TH ST	47+52	50+93	RT					0.06									
EW505	4	W 117TH ST	47+52	52+18	RT					0.09									
EW506	4	W 117TH ST	52+18	53+48	LT					0.02									
FD501	4	W 117TH ST	47+63	50+81	CL														16
IA501	4	W 117TH ST	47+49		LT	1													
IA502	4	W 117TH ST	50+89		LT	1													
LL501	4	W 117TH ST	44+40	52+18	RT			0.15											
TOTALS CARRIED TO GENERAL SUMMARY						2	0	0.15	0.20	0.32	821	408	3	340	7	0	7	0	16

MAINTENANCE OF TRAFFIC SUBSUMMARY
LOCATION 1 (CUY-90-1062)

CUY BH-FY2023 Misc

MODEL: Shee PAPERSIZE: 17x11 (in.) DATE: 12/12/2022 TIME: 1:11:01 PM USER: akhall
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DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER MWJ
REVIEWER JS 06-08-22
PROJECT ID 105909
SUBSET 3 TOTAL 11
SHEET 15 TOTAL 110

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/7/2023 TIME: 2:34:50 PM USER: Auneeb.Siddiqi
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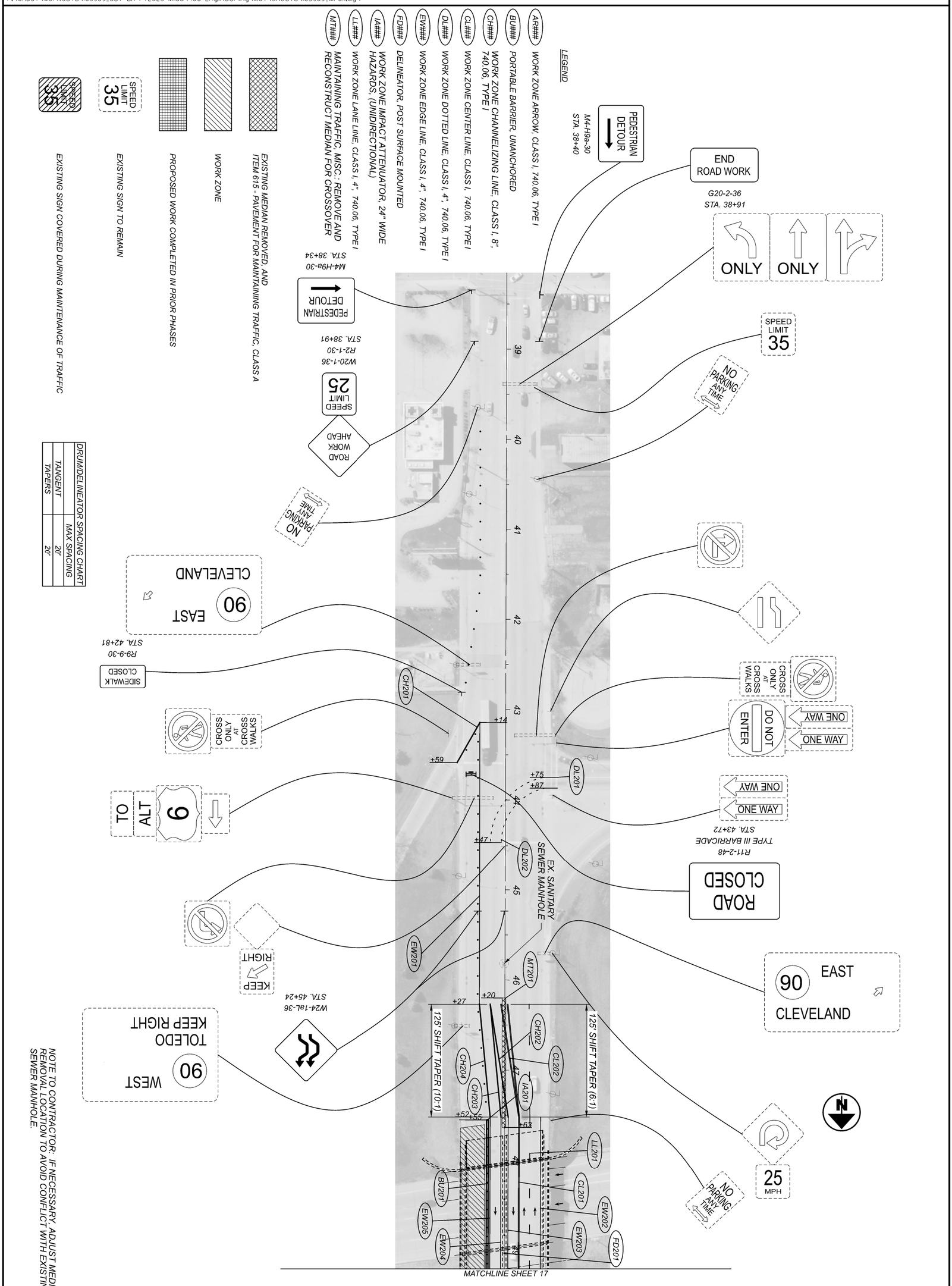


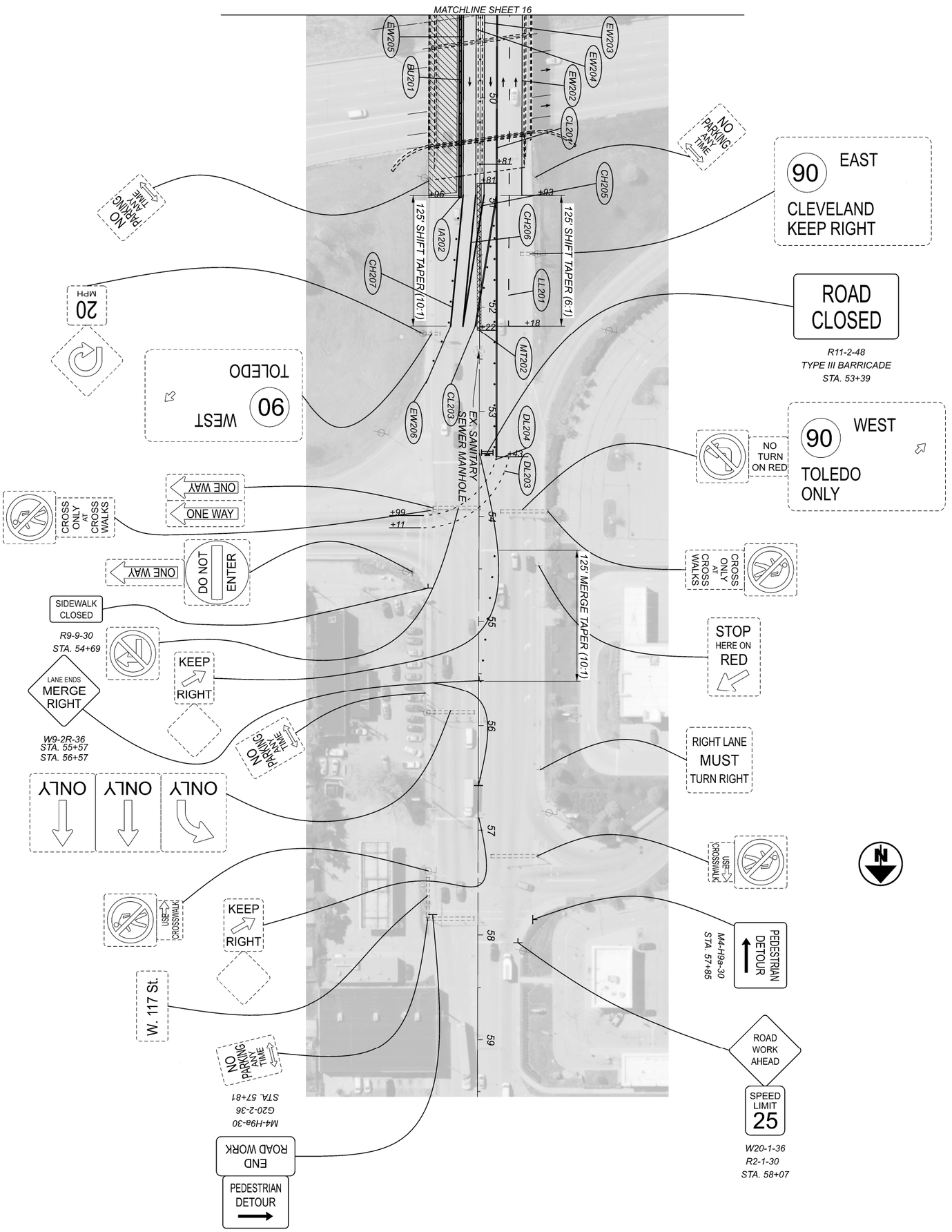
NOTE TO CONTRACTOR: IF NECESSARY, ADJUST MEDIAN CROSSOVER REMOVAL LOCATION TO AVOID CONFLICT WITH EXISTING SANITARY SEWER MANHOLE.

DESIGN AGENCY: EAS
2800 CORPORATE EXCHANGE DR. SUITE 240 COLUMBUS, OH. 43231 TEL: 614.714.0299 WWW.NEASINC.COM
DESIGNER: MWJ
REVIEWER: JS
06-08-22
PROJECT ID: 105909
SUBSET: 4 TOTAL: 11
SHEET: 16 TOTAL: 110

MAINTENANCE OF TRAFFIC - PHASE 1 SOUTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100

NOTE TO CONTRACTOR: IF NECESSARY, ADJUST MEDIAN CROSSOVER REMOVAL LOCATION TO AVOID CONFLICT WITH EXISTING SANITARY SEWER MANHOLE.



SHEET	TOTAL
17	110

SUBSET	TOTAL
5	11

PROJECT ID: 105909

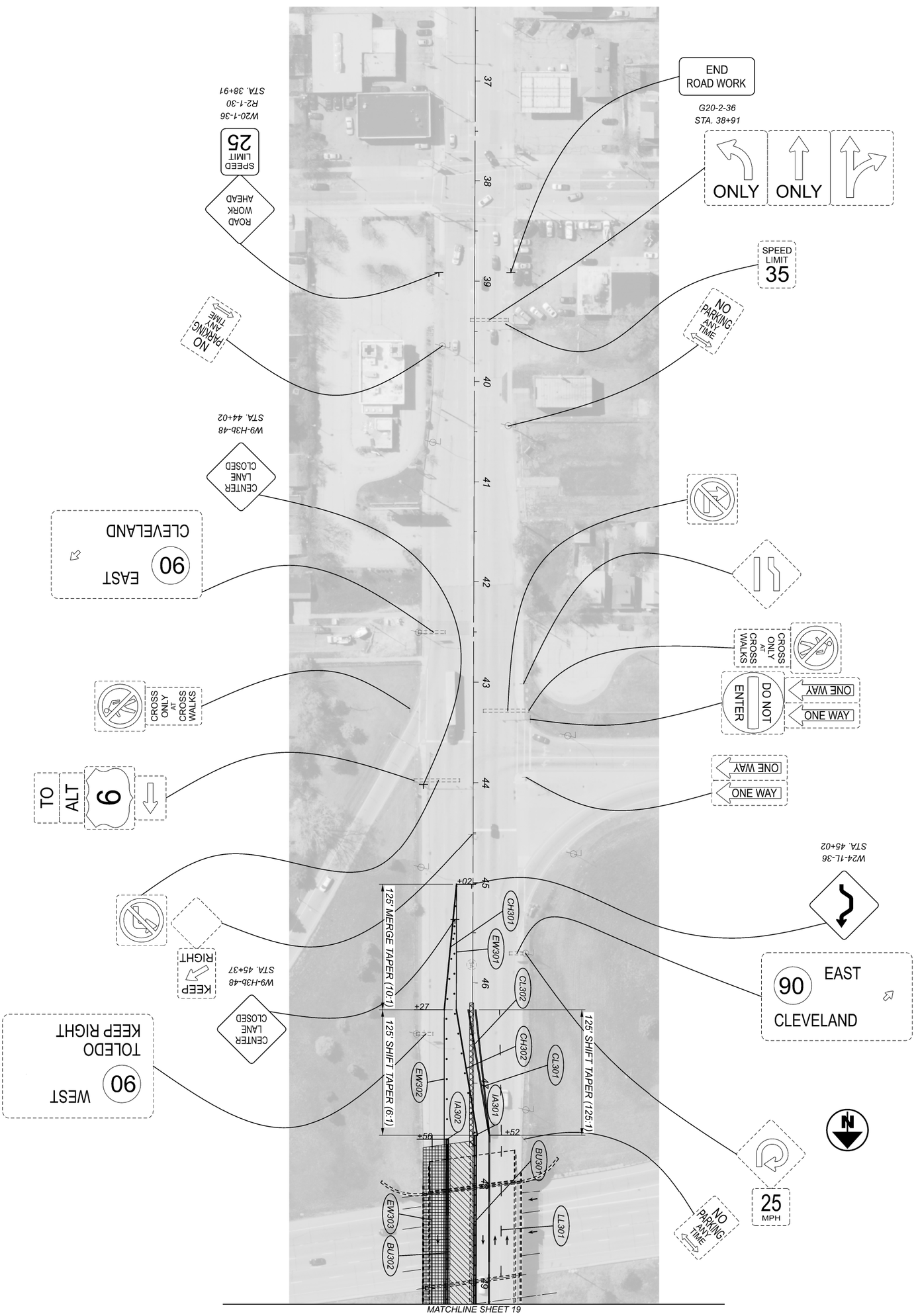
REVIEWER: JS 06-08-22

DESIGNER: MWJ

DESIGN AGENCY
AEAS
2800 CORPORATE EXCHANGE DR.
SUITE 240
COLUMBUS, OH. 43231
TEL: 614.714.0299
WWW.AEASINC.COM

MAINTENANCE OF TRAFFIC - PHASE 1 NORTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100

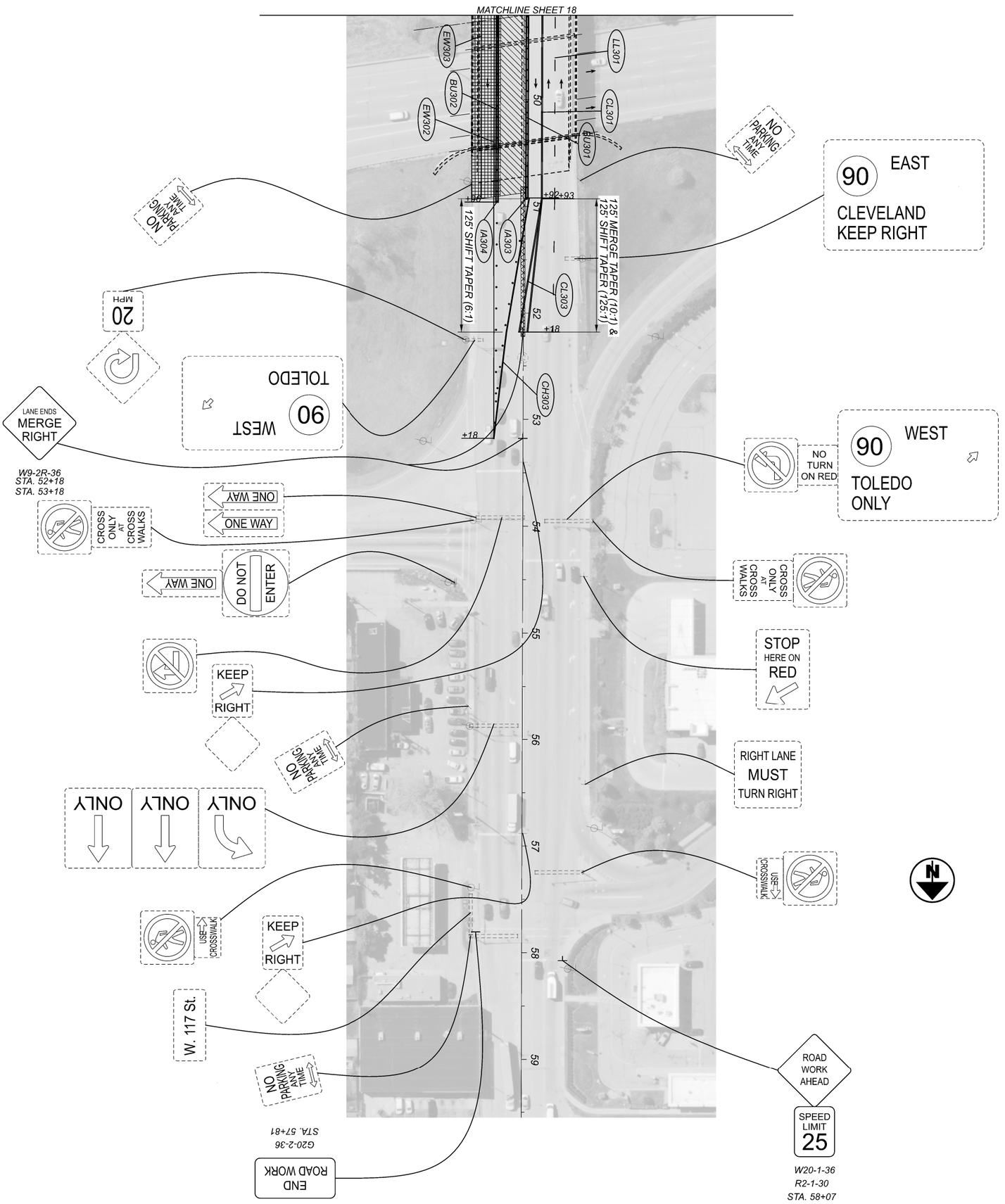


MAINTENANCE OF TRAFFIC - PHASE 2 SOUTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100

SHEET	18
TOTAL	110
SUBSET	6
TOTAL	11
PROJECT ID	105909
REVIEWER	JS 06-08-22
DESIGNER	MWJ

DESIGN AGENCY
2800 CORPORATE EXCHANGE DR. SUITE 240
COLUMBUS, OH. 43231
TEL: 614.714.0299
WWW.KEASINC.COM



SHEET	TOTAL
19	110

SUBSET	TOTAL
7	11

PROJECT ID: 105909

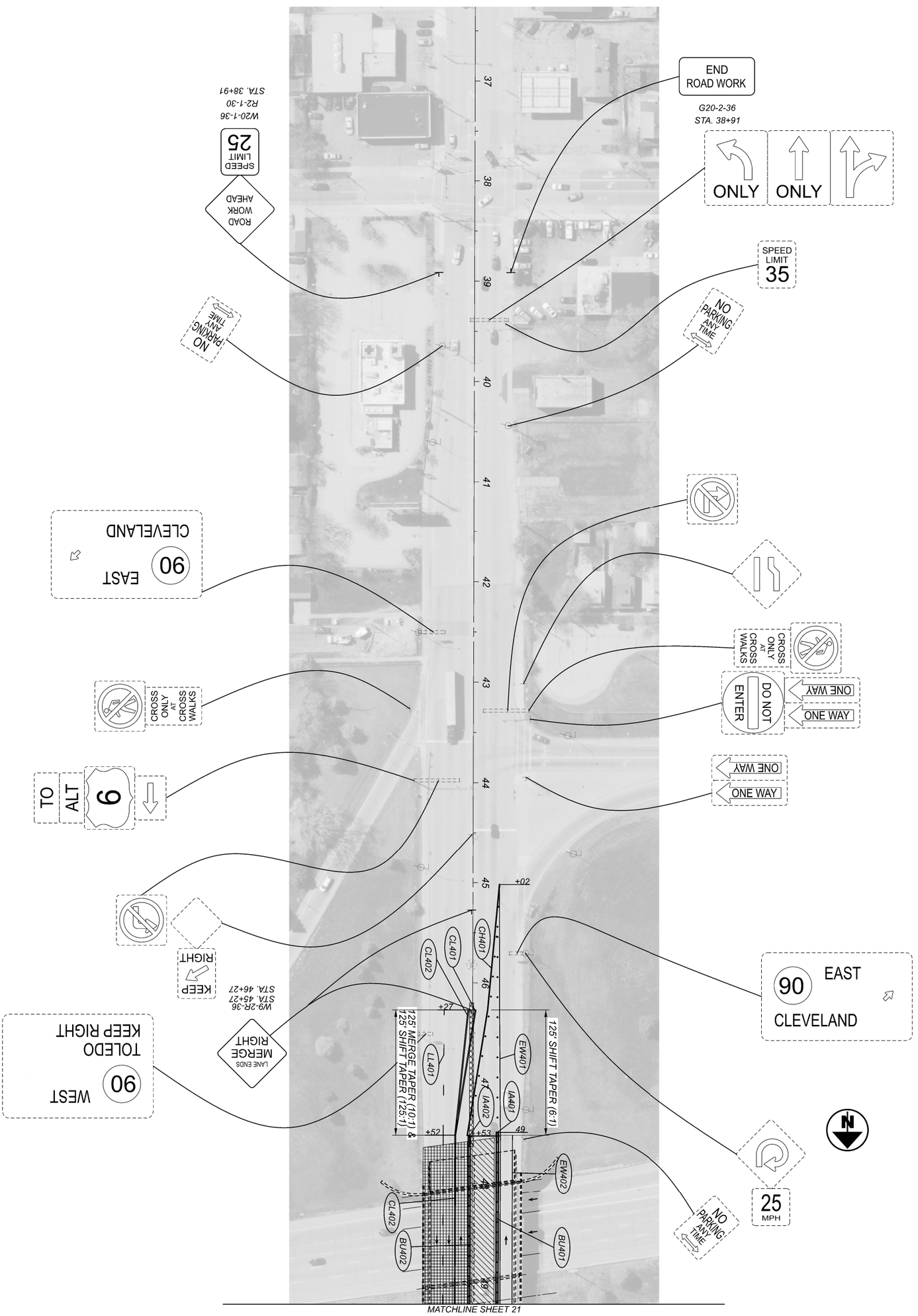
REVIEWER: JS 06-08-22

DESIGNER: MWJ

DESIGN AGENCY
AECOM
2800 CORPORATE EXCHANGE DR. SUITE 400
COLUMBUS, OH. 43231
TEL: 614.714.0299
WWW.AECOM.COM

MAINTENANCE OF TRAFFIC - PHASE 2 NORTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100

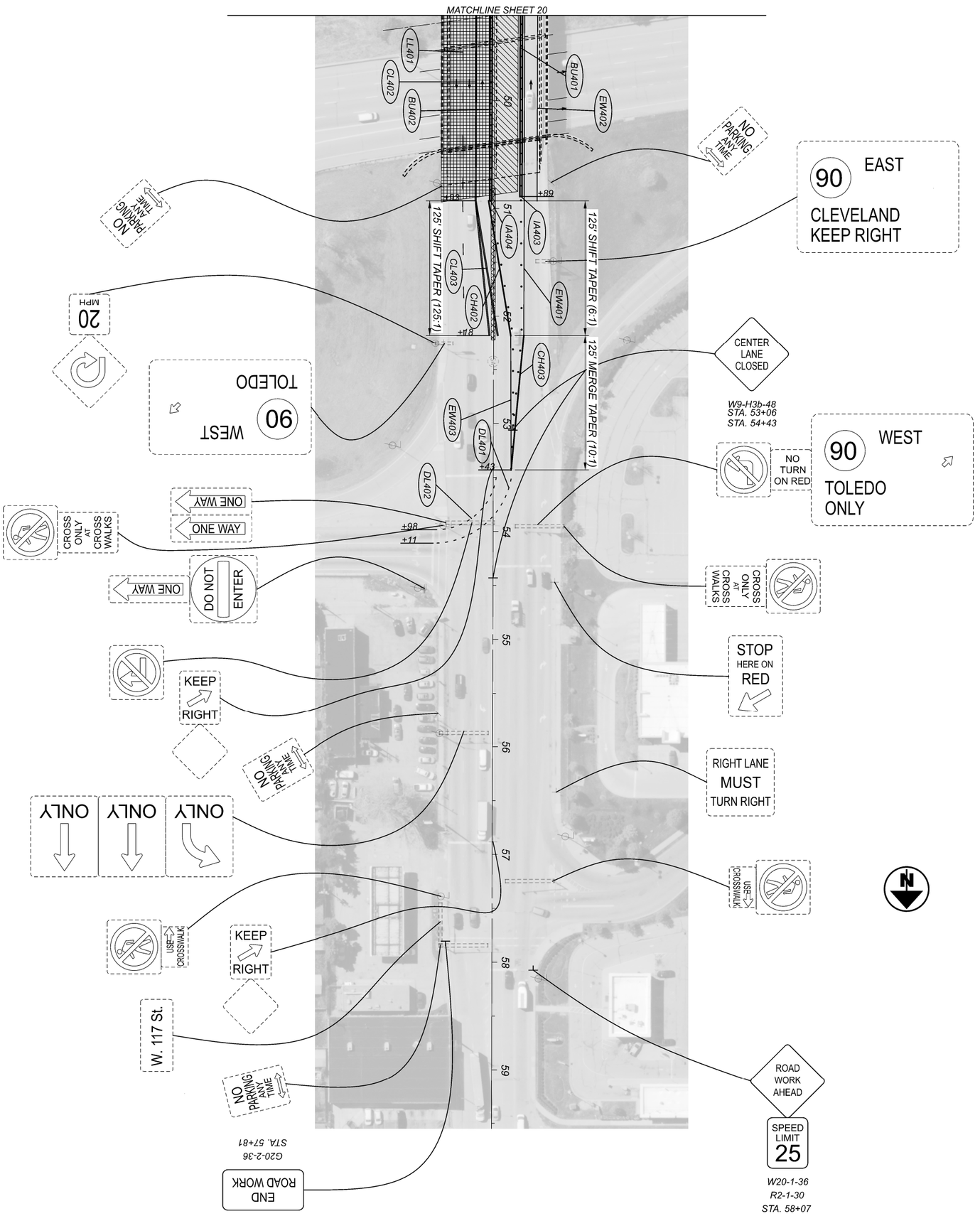


MAINTENANCE OF TRAFFIC - PHASE 3 SOUTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100

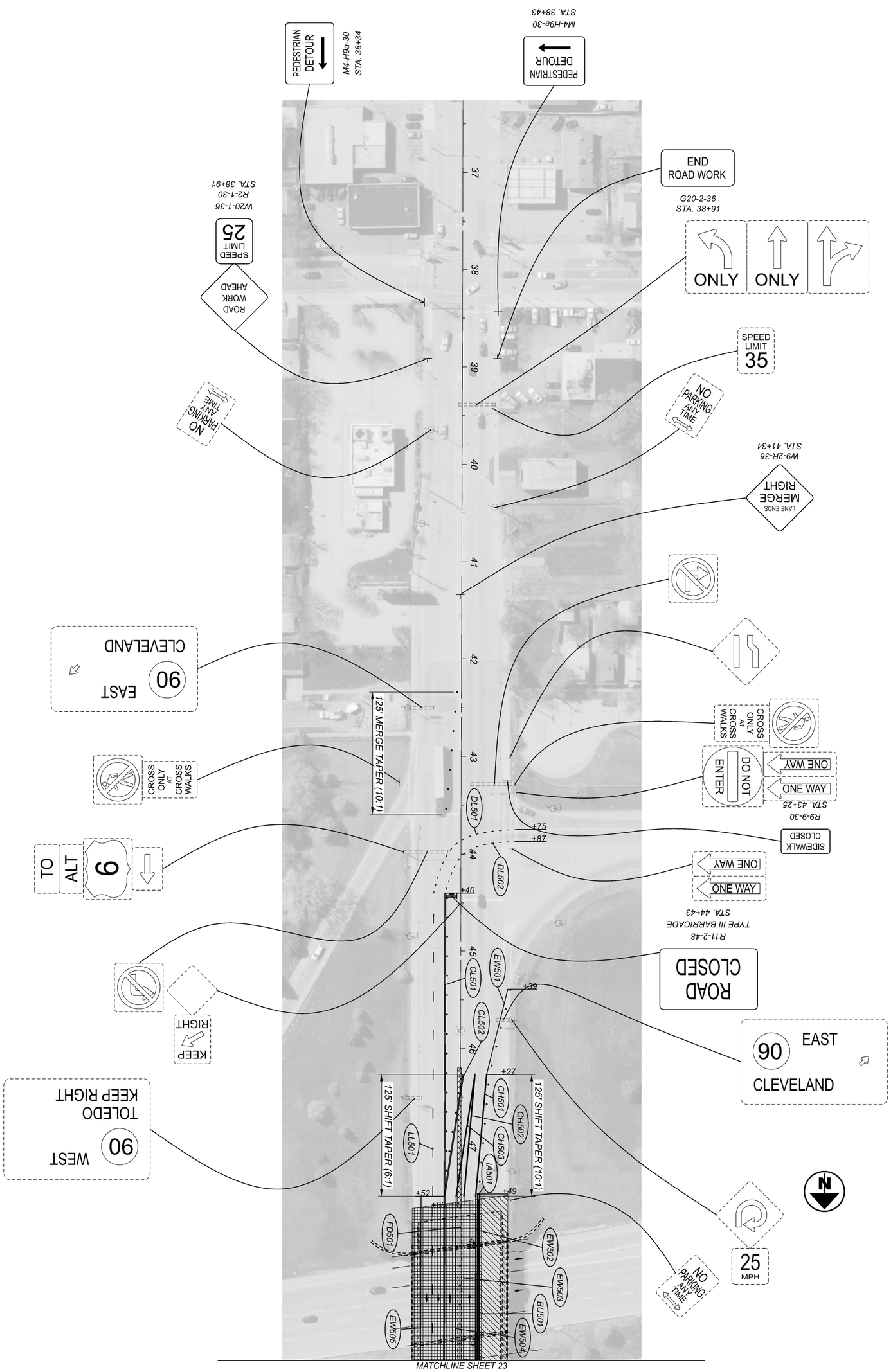
SHEET	20
TOTAL	110
SUBSET	8
TOTAL	11
PROJECT ID	105909
REVIEWER	JS 06-08-22
DESIGNER	MWJ

DESIGN AGENCY
REAS
2800 CORPORATE EXCHANGE DR. SUITE 240
COLUMBUS, OH. 43231
TEL: 614.714.0299
WWW.REASINC.COM



MAINTENANCE OF TRAFFIC - PHASE 3 NORTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100



SHEET 22	SUBSET 10	PROJECT ID 105909	REVIEWER JS 06-08-22	DESIGNER MWJ	DESIGN AGENCY
TOTAL 110	TOTAL 11				2800 CORPORATE EXCHANGE DR. SUITE 460 COLUMBUS, OH. 43231 TEL: 614.714.0299 WWW.AEASINC.COM

MAINTENANCE OF TRAFFIC - PHASE 4 SOUTHERN SECTION
LOCATION 1 (CUY-90-1062)

HORIZONTAL SCALE IN FEET
0 50
25 100

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 12/12/2022 TIME: 1:24:24 PM USER: akhall
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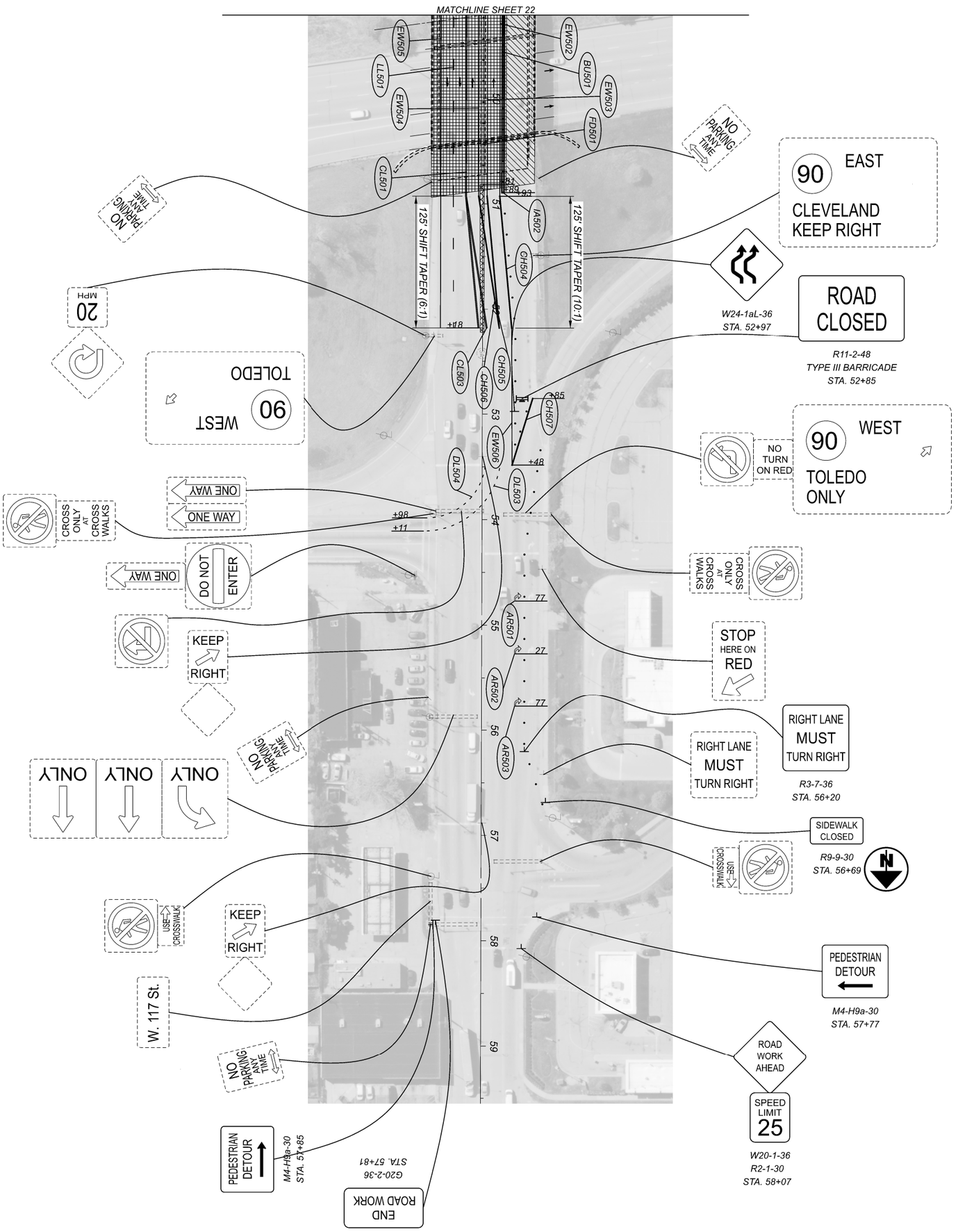


DESIGN AGENCY
2800 CORPORATE EXCHANGE DR. SUITE 240
COLUMBUS, OH. 43231
TEL: 614.714.0299
WWW.MEASINC.COM

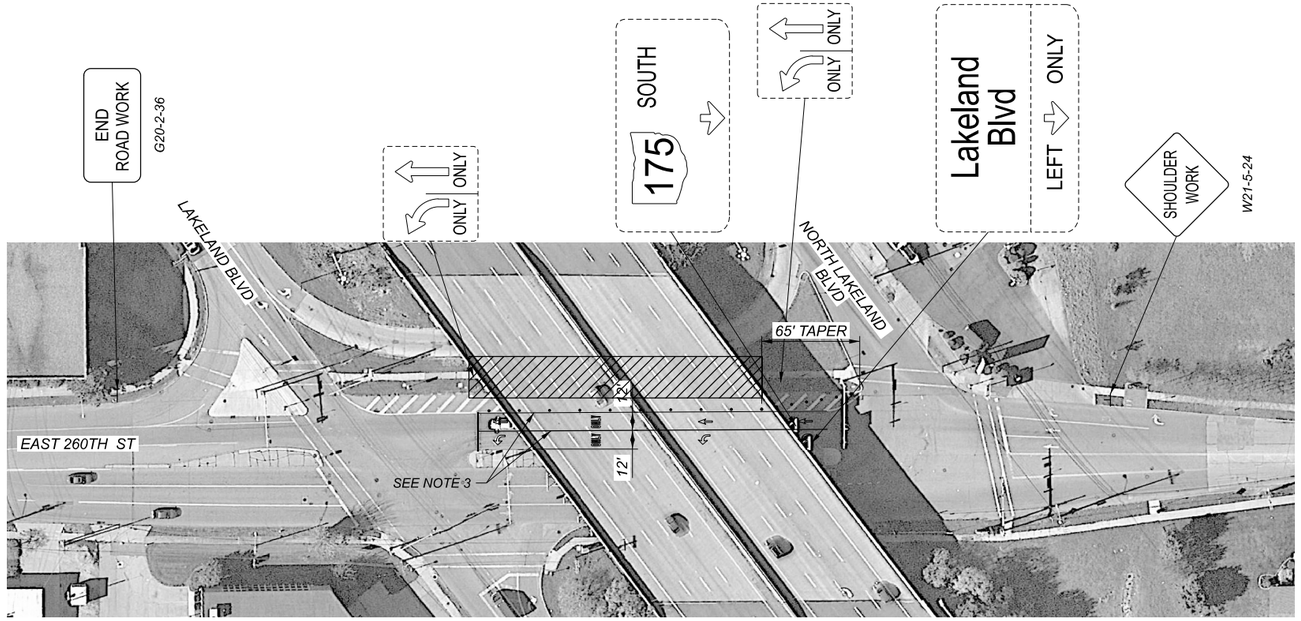
DESIGNER MWJ
REVIEWER JS
06-08-22
PROJECT ID 105909
SUBSET 11 TOTAL 11
SHEET 23 TOTAL 110

MAINTENANCE OF TRAFFIC - PHASE 4 NORTHERN SECTION
LOCATION 1 (CUY-90-1062)

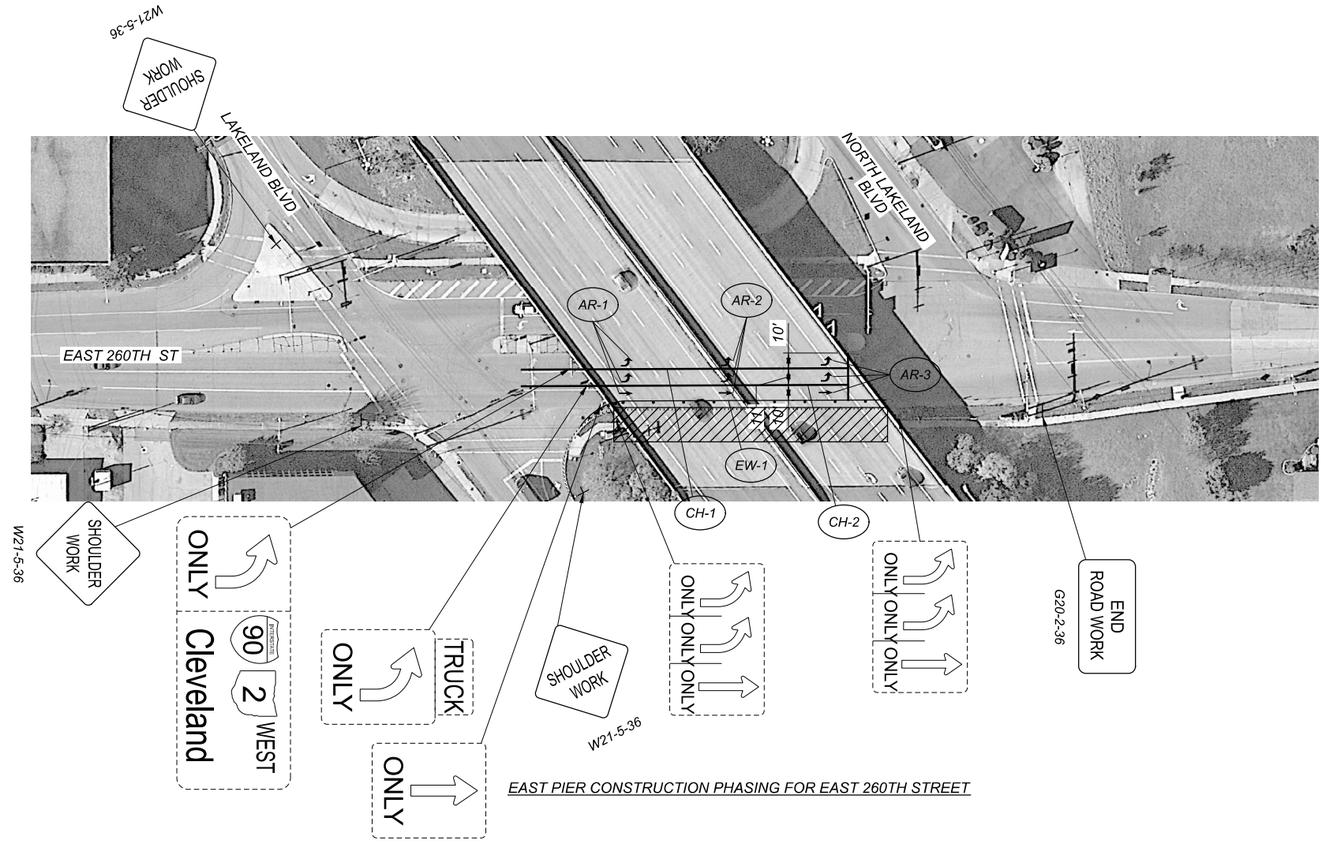
HORIZONTAL SCALE IN FEET
0 50
25 100

LEGEND

- CH — WORK ZONE CHANNELIZING LINE
- EW — WORK ZONE EDGE LINE
- AR — WORK ZONE ARROW
- DL — WORK ZONE DOTTED LINE
- • • • • — DRUMS
- WORK ZONE
- EXISING SIGN TO REMAIN
- EXISING SIGN COVERED DURING MAINTENANCE OF TRAFFIC



WEST PIER CONSTRUCTION PHASING FOR EAST 260TH STREET



EAST PIER CONSTRUCTION PHASING FOR EAST 260TH STREET

NOTES

1. FOR ADDITIONAL DETAILS, SEE OMUTCD TYPICAL APPLICATION TA-3
2. ALL CONFLICTING PAVEMENT MARKINGS FOR EACH MOT PHASE SHALL BE REMOVED AS PER ITEM 614.11G
3. WEST PIER CONSTRUCTION PHASING SHALL MAINTAIN EXISTING LANE CONFIGURATION AND PAVEMENT MARKINGS DURING CONSTRUCTION.

REF. NO.	LOCATION	SIDE	614 WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I (MILE)	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I (FT)	614 WORK ZONE ARROW, CLASS I, 740.06, TYPE I (EACH)
AR-1	EAST 260TH STREET	RT			3
AR-2	EAST 260TH STREET	RT			3
AR-3	EAST 260TH STREET	RT			3
CH-1	EAST 260TH STREET	LT		216.00	
CH-2	EAST 260TH STREET	RT		216.00	
EW-1	EAST 260TH STREET	RT	0.05		
SUBTOTALS			0.05	432.00	9
TOTALS CARRIED TO GENERAL SUMMARY			0.05	432.00	9

MAINTENANCE OF TRAFFIC
LOCATION 2 (CUY-090-2910)

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SUBSET 1 TOTAL 3
SHEET 24 TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 4/5/2023 TIME: 1:13:42 PM USER: mdcruz
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PIER BETWEEN TRAFFIC CONSTRUCTION PHASING FOR EAST 260TH STREET

REF. NO.	LOCATION	SIDE	614 WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I (MILE)	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I (FT)	614 WORK ZONE DOTTED LINE, CLASS I, 8", 740.06, TYPE I (FT)	614 WORK ZONE ARROW, CLASS I, 740.06, TYPE I (EACH)
AR-4	EAST 260TH STREET	LT				4
AR-5	EAST 260TH STREET	LT				4
AR-6	EAST 260TH STREET	RT				2
AR-7	EAST 260TH STREET	RT				4
AR-8	EAST 260TH STREET	RT				2
CH-3	EAST 260TH STREET	LT		292.00		
CH-4	EAST 260TH STREET	RT		220.00		
DL-1	EAST 260TH STREET	LT			81.00	
DL-2	EAST 260TH STREET	LT			90.00	
DL-3	EAST 260TH STREET	LT			118.00	
DL-4	EAST 260TH STREET	LT			127.00	
DL-5	EAST 260TH STREET	LT			129.00	
EW-2	EAST 260TH STREET	LT	0.05			
EW-3	EAST 260TH STREET	RT	0.05			
SUBTOTALS			0.10	512.00	545.00	16
TOTALS CARRIED TO GENERAL SUMMARY			0.10	512.00	545.00	16

NOTES

1. *FOR LEGEND, SEE SHEET 24*
2. *FOR ADDITIONAL DETAILS, SEE OMUTCD TYPICAL APPLICATION TA-23*
3. *ALL CONFLICTING PAVEMENT MARKINGS FOR EACH MOT PHASE SHALL BE REMOVED AS PER ITEM 614.11G.*

MAINTENANCE OF TRAFFIC
LOCATION 2 (CUY-090-2910)

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB

REVIEWER DRP 12-13-22

PROJECT ID 105909

SUBSET 2 | TOTAL 3

SHEET 25 | TOTAL 110

CUY-BH-FY2023 MISC.

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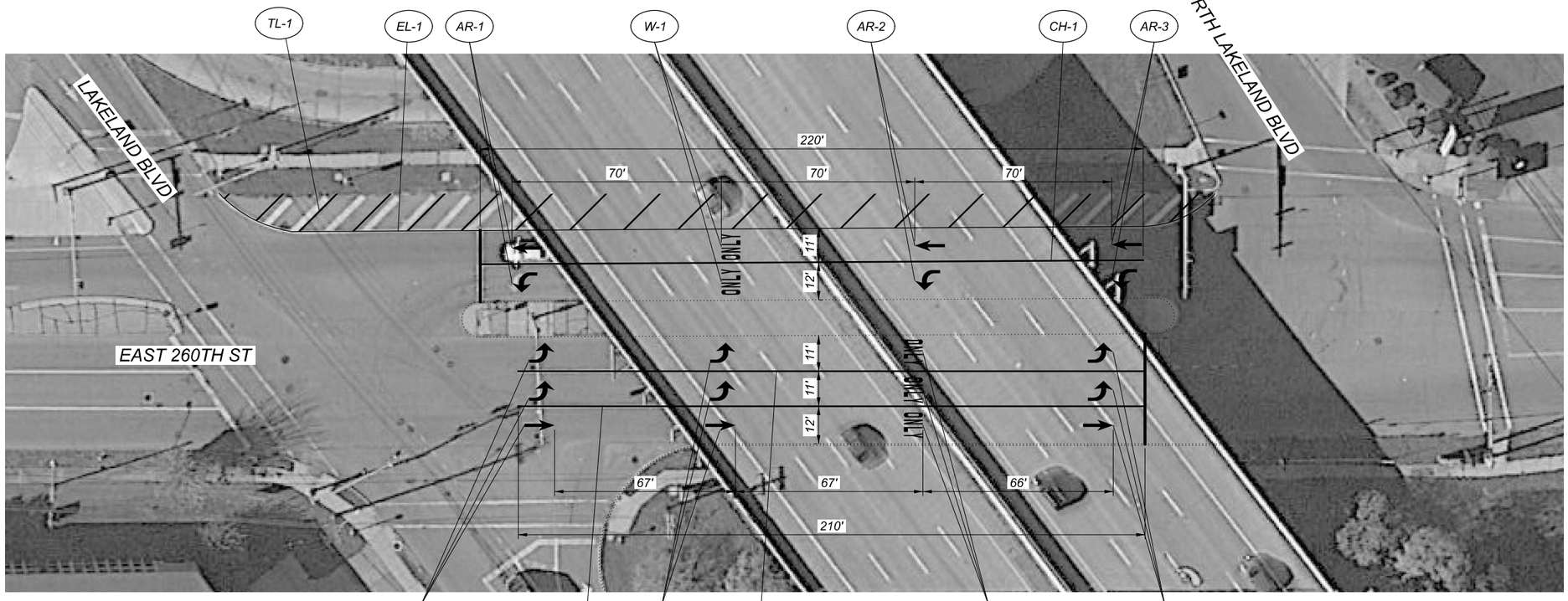

LEGEND

- EL — *EDGE LINE, 6"*
- CH — *CHANNELIZING LINE, 12"*
- AR — *LANE ARROW*
- TL — *TRANSVERSE/DIAGONAL LINE*
- W — *WORD ON PAVEMENT, 72"*

NOTES

1. *WORD AND SYMBOL PAVEMENT MARKINGS SHALL BE APPLIED ACCORDING TO SCD TC-71.10 UNLESS OTHERWISE SPECIFIED.*

REF. NO.	LOCATION		SIDE	644				
				EDGE LINE, 6"	CHANNELIZING LINE, 12"	TRANSVERSE/DIAGONAL LINE	LANE ARROW	WORD ON PAVEMENT, 72"
	FROM	TO		MILE	FT	FT	EACH	EACH
AR-1	LAKELAND BLVD	N. LAKELAND BLVD	LT				2	
AR-2	LAKELAND BLVD	N. LAKELAND BLVD	LT				2	
AR-3	LAKELAND BLVD	N. LAKELAND BLVD	LT				2	
AR-4	LAKELAND BLVD	N. LAKELAND BLVD	RT				3	
AR-5	LAKELAND BLVD	N. LAKELAND BLVD	RT				3	
AR-6	LAKELAND BLVD	N. LAKELAND BLVD	RT				3	
CH-1	LAKELAND BLVD	N. LAKELAND BLVD	LT		220.00			
CH-2	LAKELAND BLVD	N. LAKELAND BLVD	RT		210.00			
CH-3	LAKELAND BLVD	N. LAKELAND BLVD	RT		210.00			
EL-1	LAKELAND BLVD	N. LAKELAND BLVD	LT	0.07				
TL-1	LAKELAND BLVD	N. LAKELAND BLVD	LT			298.50		
W-1	LAKELAND BLVD	N. LAKELAND BLVD	LT					2
W-2	LAKELAND BLVD	N. LAKELAND BLVD	RT					3
SUBTOTALS				0.07	640.00	298.50	15	5
TOTALS CARRIED TO GENERAL SUMMARY				0.07	640.00	298.50	15	5

MAINTENANCE OF TRAFFIC
LOCATION 2 (CUY-090-2910)

DESIGN AGENCY
OSBORN ENGINEERING

DESIGNER JMB
REVIEWER DRP 12-13-22
PROJECT ID 105909
SUBSET 3 TOTAL 3
SHEET 26 TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:35:51 PM USER: mdcruz
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REF. NO.	PHASE	LOCATION	STATION FROM	STATION TO	SIDE	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	614 MAINTAINING TRAFFIC, MISC.; REMOVE AND RECONSTRUCT MEDIAN FOR CROSSOVER	614 WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	614 WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	614 WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I	614 WORK ZONE ARROW, CLASS I, 740.06, TYPE I	622 PORTABLE BARRIER, UNANCHORED	614 BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	614 BARRIER REFLECTOR, TYPE 1 (BIDIRECTIONAL)	614 OBJECT MARKER, ONE WAY	614 OBJECT MARKER, TWO WAY	620 DELINEATOR, POST SURFACE MOUNTED
						EACH	SF	MILE	MILE	MILE	FT	FT	EACH	FT	EACH	EACH	EACH	EACH	EACH
BU001	1	ROCKY RIVER DR	49+35	50+65	RT									130		3		3	
CH001	1	ROCKY RIVER DR	50+65	51+91	LT/RT						255								
CH002	1	ROCKY RIVER DR	48+76	49+26	LT/RT						58								
CH003	1	ROCKY RIVER DR	52+90	54+17	RT						128								
CL001	1	ROCKY RIVER DR	48+26	51+90	LT/RT				0.07										
EW001	1	ROCKY RIVER DR	49+26	49+35	RT					0.00									
EW002	1	ROCKY RIVER DR	51+91	52+90	LT/RT					0.02									
IA001	1	ROCKY RIVER DR	49+35		RT	1													
IA002	1	ROCKY RIVER DR	50+65		RT	1													
BU101	2	ROCKY RIVER DR	49+35	50+65	LT									130		3		3	
CH101	2	ROCKY RIVER DR	47+29	49+35	LT/RT						226								
CH102	2	ROCKY RIVER DR	50+67	51+65	LT/RT						100								
CL101	2	ROCKY RIVER DR	47+78	51+92	LT				0.08										
DL101	2	ROCKY RIVER DR	47+09	47+78	LT							93							
EW101	2	ROCKY RIVER DR	51+65	52+25	RT					0.01									
IA101	2	ROCKY RIVER DR	49+35		LT	1													
IA102	2	ROCKY RIVER DR	50+65		LT	1													
TOTALS CARRIED TO GENERAL SUMMARY						4	0	0.00	0.15	0.03	767	93	0	260	0	6	0	6	0

MAINTENANCE OF TRAFFIC SUBSUMMARY
LOCATION 3 (CUY 237-0827)

CUY BH-FY2023 Misc

MODEL: Shee PAPERSIZE: 17x11 (in.) DATE: 12/12/2022 TIME: 1:28:48 PM USER: akhall
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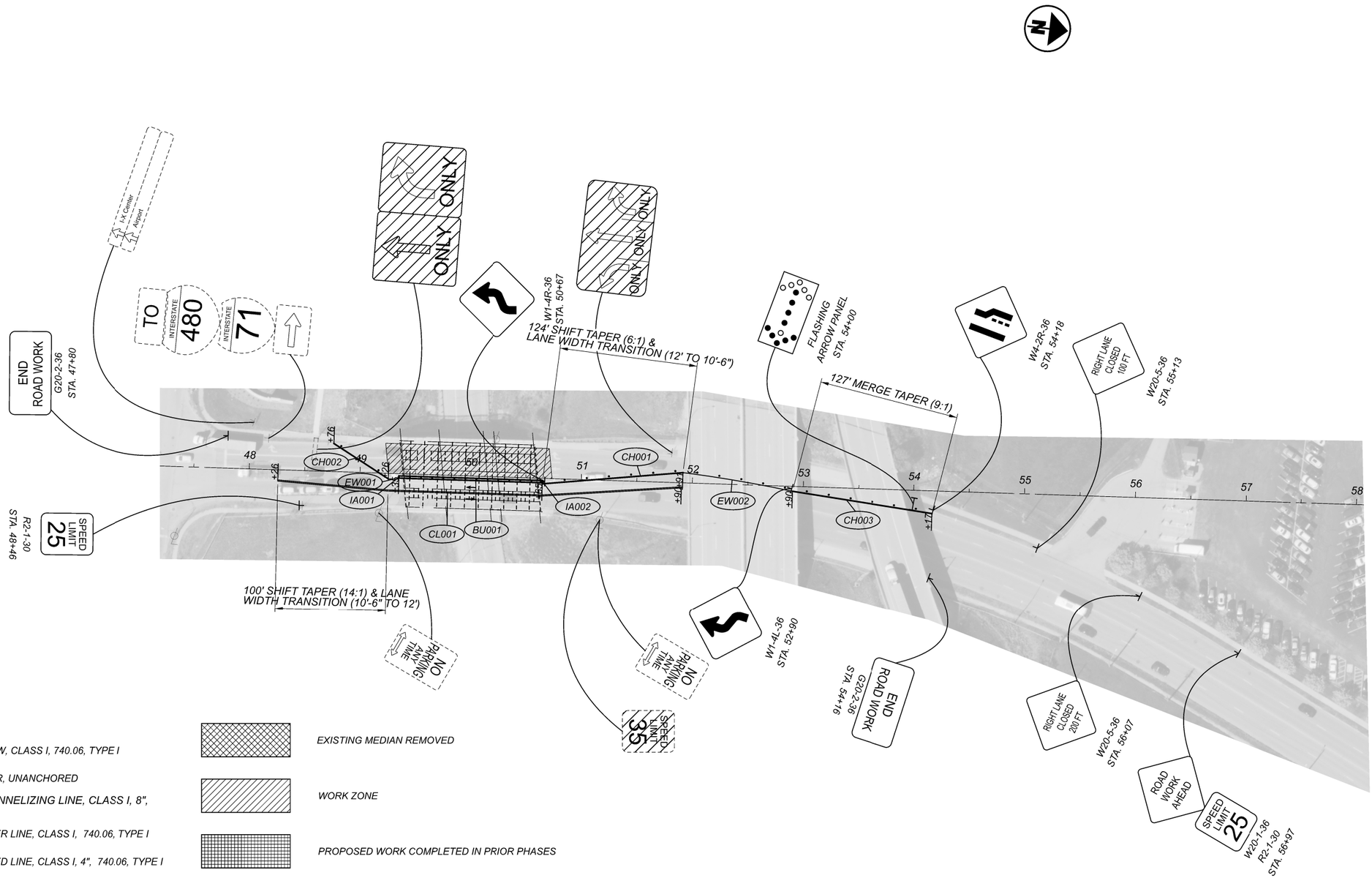
DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER MWJ
REVIEWER JS 06-08-22
PROJECT ID 105909
SUBSET 1 TOTAL 3
SHEET 27 TOTAL 110



LEGEND

AR###	*WORK ZONE ARROW, CLASS I, 740.06, TYPE I*
BU###	*PORTABLE BARRIER, UNANCHORED*
CH###	*WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I*
CL###	*WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I*
DL###	*WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I*
EW###	*WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I*
FD###	*DELINEATOR, POST SURFACE MOUNTED*
IA###	*WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)*
LL###	*WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I*
MT###	*MAINTAINING TRAFFIC, MISC.: REMOVE AND RECONSTRUCT MEDIAN FOR CROSSOVER*

EXISTING MEDIAN REMOVED

WORK ZONE

PROPOSED WORK COMPLETED IN PRIOR PHASES

SPEED LIMIT 35 — *EXISTING SIGN TO REMAIN*

SPEED LIMIT 35 — *EXISTING SIGN COVERED DURING MAINTENANCE OF TRAFFIC*

DRUM/DELINEATOR SPACING CHART	
	MAX SPACING
TANGENT	*20'*
TAPERS	*20'*

HORIZONTAL SCALE IN FEET
0 25 50 100

MAINTENANCE OF TRAFFIC - PHASE 1
LOCATION 3 (CUY-237-0827)

CUY BH FY2023 Misc

MODEL: Sheet PAPERSIZE: 17x11(in.) DATE: 12/12/2022 TIME: 12:26:24 PM USER: akholl
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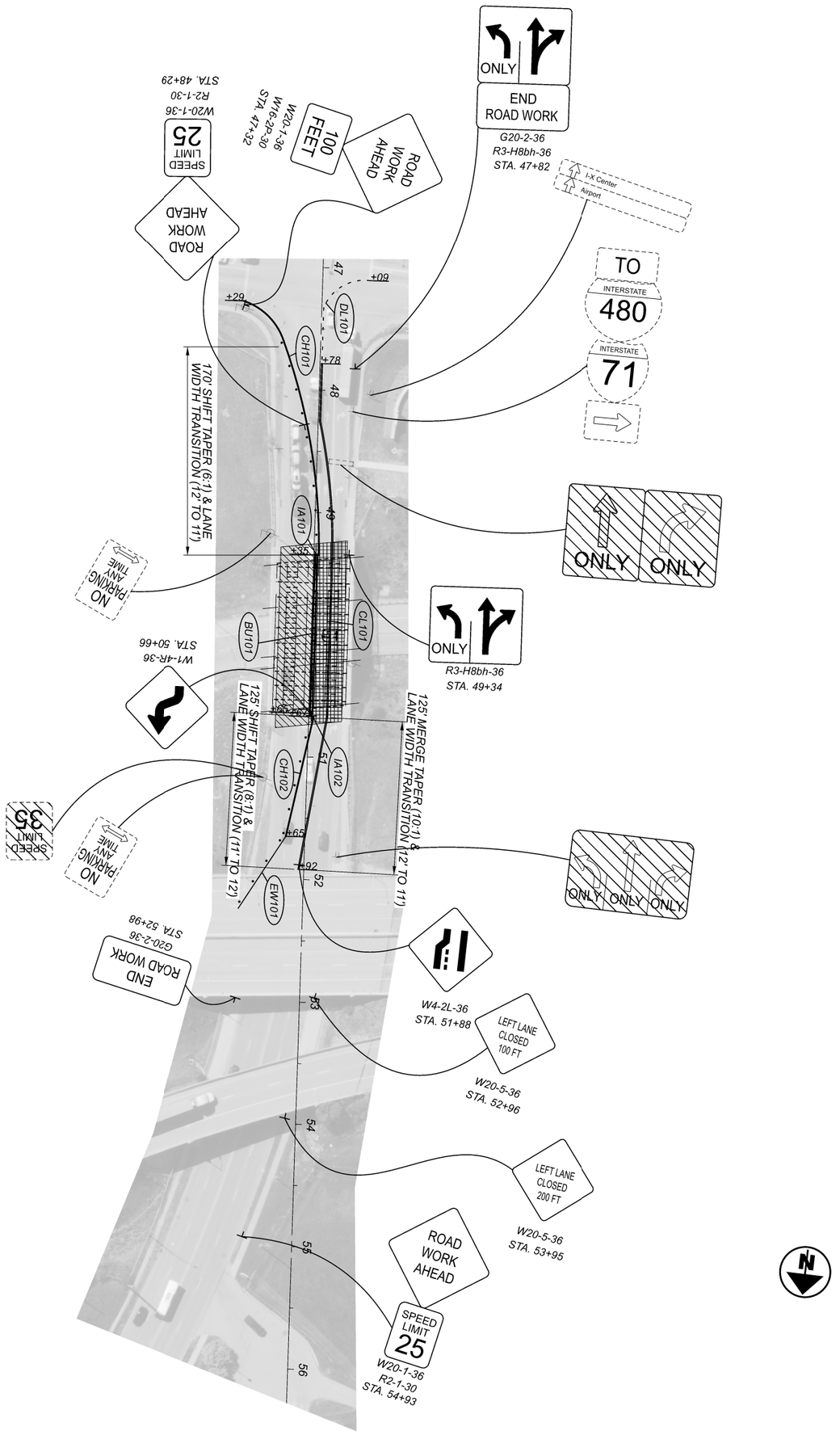
DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER	MWJ
REVIEWER	JS 06-08-22
PROJECT ID	105909
SUBSET	2
TOTAL	3
SHEET	28
TOTAL	110



MAINTENANCE OF TRAFFIC - PHASE 2
LOCATION 3 (CUY-237-0827)

HORIZONTAL SCALE IN FEET
0 50
25 100

SHEET	29
TOTAL	110
SUBSET	3
TOTAL	3
PROJECT ID	105909
REVIEWER	JS 06-08-22
DESIGNER	MWJ

DESIGN AGENCY
2800 CORPORATE EXCHANGE DR. SUITE 240
COLUMBUS, OH. 43231
TEL: 614.714.0299
WWW.MEASINC.COM

SHEET NUM.												PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
			40	54	62	76	91	97	104			01/IMS/47	(X)		EXT	TOTAL			
																		ROADWAY	
												LS		201	11000	LS		CLEARING AND GRUBBING	
				1		10			16			27		441	50300	27	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
						125						125		606	15050	125	FT	GUARDRAIL, TYPE MGS	
						2						2		606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
						2		4				6		606	26550	6	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
						4		3				7		606	35002	7	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
								1				1		606	35102	1	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
																		EROSION CONTROL	
												7,000		832	30000	7,000	EACH	EROSION CONTROL	
																		LIGHTING	
						3		2				5		625	00450	5	EACH	CONNECTION, FUSED PULL APART	
						3		2				5		625	00460	5	EACH	CONNECTION, UNFUSED PULL APART	
						3		2				5		625	00480	5	EACH	CONNECTION, UNFUSED PERMANENT	
						920		331				1,251		625	23200	1,251	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
						920		331				1,251		625	23302	1,251	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
						303		168				471		625	23400	471	FT	NO. 10 AWG POLE AND BRACKET CABLE	
						630		40				670		625	25409	670	FT	CONDUIT, 2", 725.051, AS PER PLAN	5
				12								12		625	27502	12	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED)	5
						3		2				5		625	27520	5	EACH	REMOVAL OF LUMINAIRE AND REERECTION	
				35		12						47		625	27521	47	EACH	REMOVAL OF LUMINAIRE AND REERECTION, AS PER PLAN	5
						3		2				5		625	29920	5	EACH	STRUCTURE JUNCTION BOX	
						1		1				2		625	33000	2	EACH	STRUCTURE GROUNDING SYSTEM	
						3		2				5		625	35011	5	EACH	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	82, 101
						1		1				2		625	39520	2	EACH	PULL BOX CLEANED	
						LS		LS				LS		SPECIAL	62540000	LS		MAINTAIN EXISTING LIGHTING	
						1		1				2		625	75800	2	EACH	DISCONNECT CIRCUIT	
				2								2		631	94490	2	EACH	REMOVAL, MISC.:SIGNAL FLASHER ASSEMBLY	5
																		STRUCTURE REPAIR (CUY-090-1062, SFN 1808249 - LOCATION 1)	
			LS									LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34,36,42-44
			567									567		202	22900	567	SY	APPROACH SLAB REMOVED	
			2,811									2,811		509	10001	2,811	LB	EPOXY COATED REINFORCING STEEL, AS PER PLAN	34, 46
			500									500		509	20001	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	34
			36									36		511	34411	36	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE, AS PER PLAN	44, 48
			15									15		511	45710	15	CY	CLASS QC1 CONCRETE, ABUTMENT	
			18									18		511	53010	18	CY	CLASS QC1 CONCRETE, MISC.: APPROACH SIDEWALKS, SAFETY BARRIER TRANSITIONS	49, 50
			294									294		512	10050	294	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
			602									602		512	10101	602	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
			70									70		512	10301	70	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN, AS PER PLAN	49
			235									235		516	10000	235	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL	
			193									193		516	11210	193	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	35
			90									90		516	13600	90	SF	1" PREFORMED EXPANSION JOINT FILLER	
			330									330		519	11101	330	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35, 45
			567									567		526	30010	567	SY	REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=17")	
			680									680		607	39994	680	FT	TEMPORARY VANDAL FENCE, TYPE B	
																		STRUCTURE REPAIR (CUY-090-2910, SFN 1809008 - LOCATION 2)	
				LS								LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 36
				680								680		510	10000	680	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
				230								230		512	10101	230	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34, 60
				1,012								1,012		SPECIAL	51271500	1,012	SY	URETHANE TOP COAT SEALER	
				1,338								1,338		513	10201	1,338	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
				355								355		516	10001	355	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN	34, 57
				LS								LS		516	14800	LS		STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT REPAIR	57
				13								13		516	45305	13	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	34
				9								9		516	46200	9	EACH	BEARING DEVICE, ROCKER	
				9								9		516	46700	9	EACH	RESET BEARING	
				LS								LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35

GENERAL SUMMARY - 1

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/17/2023 TIME: 11:12:08 AM USER: mdcruz
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DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER MJD
REVIEWER JDH 12-13-22
PROJECT ID 105909
SHEET 30 TOTAL 110

SHEET NUM.												PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
			40	54	62	76	91	97	104			01/IMS/47	(X)		EXT	TOTAL			
																		STRUCTURE REPAIR (CUY-090-2910, SFN 1809008 - LOCATION 2) CONT.	
				8,633								8,633		SPECIAL	51900100	8,633	SF	COMPOSITE FIBER WRAP SYSTEM	36, 38, 58
				212								212		SPECIAL	51900100	212	SF	COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36, 38, 58
				580								580		519	11101	580	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
				20								20		519	12300	20	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
				LS								LS		SPECIAL	53000200	LS		STRUCTURES: BRIDGE CLEANING	35
																		STRUCTURE REPAIR (CUY-237-0827, SFN 1810332 - LOCATION 3)	
					LS							LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34,36,64-68
					245							245		202	22900	245	SY	APPROACH SLAB REMOVED	
					306							306		202	75260	306	FT	VANDAL PROTECTION FENCE REMOVED	
					124							124		202	38001	124	FT	GUARDRAIL REMOVED, AS PER PLAN	61
					1,823							1,823		509	10000	1,823	LB	EPOXY COATED REINFORCING STEEL	
					500							500		509	20001	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	34, 66, 68
					16							16		511	34410	16	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
					9							9		511	45710	9	CY	CLASS QC1 CONCRETE, ABUTMENT	
					361							361		512	10050	361	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
					228							228		512	10101	228	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34, 71
					37							37		512	10300	37	SY	SEALING CONCRETE BRIDGE DECKS WITH HMWM RESIN	
					228							228		SPECIAL	51271500	228	SY	URETHANE TOP COAT SEALER	
					5,678							5,678		513	10201	5,678	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34, 67, 69
					LS							LS		514	00100	LS		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
					60							60		514	00504	60	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
					133							133		516	11210	133	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
					16							16		516	46200	16	EACH	BEARING DEVICE, ROCKER	
					LS							LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
					1,066							1,066		SPECIAL	51900100	1,066	SF	COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36, 38, 70
					480							480		519	11101	480	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35, 70
					245							245		526	98100	245	SY	APPROACH SLABS, MISC.: REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=14")	74
					306							306		607	39930	306	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC	
					164							164		607	39994	164	FT	TEMPORARY VANDAL FENCE, TYPE B	
					99							99		622	10161	99	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	61
					743							743		848	10200	743	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (3 ¼" THICK)	
					743							743		848	20000	743	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
					67							67		848	30200	67	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
					74							74		848	50000	74	SY	HAND CHIPPING	
					LS							LS		848	50100	LS		TEST SLAB	
					4							4		848	50200	4	CY	FULL-DEPTH REPAIR	
					743							743		848	50320	743	SY	EXISTING CONCRETE OVERLAY REMOVED 3" NOMINAL THICKNESS	
																		STRUCTURE REPAIR (CUY-252-0434, SFN 1810405 - LOCATION 4)	
						LS						LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 36, 83
						15,895						15,895		509	10000	15,736	LB	EPOXY COATED REINFORCING STEEL	
						1,966						1,966		510	10000	1,966	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
						14						14		511	34444	14	CY	CLASS QC2 CONCRETE, BRIDGE DECK	
						19						19		511	50210	19	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	
						940						940		512	10101	940	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34, 78, 79
						628						628		SPECIAL	51271500	628	SY	URETHANE TOP COAT SEALER	
						10,116						10,116		513	10201	10,116	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
						237						237		516	11210	237	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
						22						22		516	46200	22	EACH	BEARING DEVICE, ROCKER	
						1						1		516	46700	1	EACH	RESET BEARING	
						LS						LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
						4,072						4,072		SPECIAL	51900100	4,072	SF	COMPOSITE FIBER WRAP SYSTEM	36, 38
						963						963		SPECIAL	51900100	963	SF	COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36, 38
						1,352						1,352		519	11101	1,352	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35,77,78,79,81
						14						14		519	12300	14	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
						LS						LS		SPECIAL	53000200	LS		STRUCTURES: BRIDGE CLEANING	35
						17,861						17,861		SPECIAL	53000600	17,861	SF	STRUCTURES: TIMBER SUBDECK	35
						3,575						3,575		SPECIAL	53000600	3,575	SF	STRUCTURES: BOTTOM OF DECK SPALL REMOVAL	35

GENERAL SUMMARY - 2

CUY-BH-FY2023 MISC.

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 4/6/2023 TIME: 9:24:09 AM USER: mdcruz
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DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER MJD

REVIEWER JDH 12-13-22

PROJECT ID 105909

SHEET 31 TOTAL 110

SHEET NUM.												PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
9	10	13	14	15	26	27		76	91	97	104	01/IMS/47	(X)		EXT	TOTAL			
																		STRUCTURE REPAIR (CUY-252-0434, SFN 1810405 - LOCATION 4) CONT.	
																		CONCRETE PARAPET ALTERNATES	
								67				67	X	511	34449	67	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 1)	35
								89				89	X	511	34449	89	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 2)	84
																		FENCE ALTERNATES	
								670				670	X	607	39901	670	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN (ALTERNATE 1)	35
								681				681	X	607	98000	681	FT	FENCE, MISC.:DECORATIVE FENCE, (ALTERNATE 2)	84
																		STRUCTURE REPAIR (CUY-271-1543, SFN 1811851 - LOCATION 5)	
									LS			LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 36
									39			39		512	10101	39	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
									340			340		SPECIAL	51271500	340	SY	URETHANE TOP COAT SEALER	
									82			82		516	10001	82	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN	34, 95
									20			20		516	45305	20	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	34
									10			10		516	46200	10	EACH	BEARING DEVICE, ROCKER	
									LS			LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
									2,274			2,274		SPECIAL	51900100	2,274	SF	COMPOSITE FIBER WRAP SYSTEM	36
									569			569		SPECIAL	51900100	569	SF	COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36
									721			721		519	11101	721	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
									1,028			1,028		607	23101	1,028	FT	FENCE REBUILT, AS PER PLAN	90
																		STRUCTURE REPAIR (CUY-480-0446, SFN 1814109 - LOCATION 6)	
										LS		LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 36
										11,536		11,536		509	10000	11,536	LB	EPOXY COATED REINFORCING STEEL	
										900		900		509	20001	900	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	34
										59		59		511	34449	59	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	35
										471		471		512	10101	471	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
										2,349		2,349		513	10201	2,349	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
										9		9		516	45305	9	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	34
										1		1		516	46200	1	EACH	BEARING DEVICE, ROCKER	
										LS		LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
										265		265		519	11101	265	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
										LS		LS		SPECIAL	53000200	LS		STRUCTURES: BRIDGE CLEANING	35
										590		590		607	39901	590	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	35
										645		645		608	10000	645	SF	4" CONCRETE WALK	
										807		807		848	10200	807	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (T=1.75")	
										807		807		848	20000	807	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
										10		10		848	30200	10	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
										85		85		848	50000	85	SY	HAND CHIPPING	
										LS		LS		848	50100	LS		TEST SLAB	
										2		2		848	50200	2	CY	FULL-DEPTH REPAIR	
																		STRUCTURE REPAIR (CUY-480-0870-ES, SFN 1814249 - LOCATION 7)	
											LS	LS		202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 36
											820	820		512	10101	820	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
											350	350		SPECIAL	51271500	350	SY	URETHANE TOP COAT SEALER	
											3,746	3,746		513	10201	3,746	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
											10	10		516	45305	10	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	34
											LS	LS		516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
											3,145	3,145		SPECIAL	51900100	3,145	SF	COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36
											973	973		519	11101	973	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
											213	213		SPECIAL	51911600	213	SF	PATCHING CONCRETE STRUCTURE: APPROACH SLABS	
											3	3		519	12300	3	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
											484	484		844	10001	484	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	35
																		TRAFFIC CONTROL	
					0.07							0.07		644	00104	0.07	MILE	EDGE LINE, 6"	
					640							640		644	00404	640	FT	CHANNELIZING LINE, 12"	
					298,5							298,5		644	00700	298,5	FT	TRANSVERSE/DIAGONAL LINE	
					15							15		644	01300	15	EACH	LANE ARROW	
					5							5		644	01400	5	EACH	WORD ON PAVEMENT, 72"	

GENERAL SUMMARY - 3

CUY-BH-FY2023 MISC.

MODEL: Sheet 3 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:13:56 PM USER: mdcruz
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DESIGN AGENCY

OSBORN ENGINEERING

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DESIGNER MJD

REVIEWER JDH 12-13-22

PROJECT ID 105909

SHEET 32 TOTAL 110

SHEET NUM.												PART.	ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
9	10	13	14	15	24	25	26	27				01/IMS/47	(X)		EXT	TOTAL			
																		MAINTENANCE OF TRAFFIC	
288												288		614	11110	288	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
		2	8	2				4				16		614	12380	16	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	
												LS		614	12420	LS		DETOUR SIGNING	
		7	14	7								28		614	13310	28	EACH	BARRIER REFLECTOR, TYPE 1 (ONE-WAY)	
			14					6				20		614	13310	20	EACH	BARRIER REFLECTOR, TYPE 1 (BI-DIRECTIONAL)	
		7	14	7								28		614	13350	28	EACH	OBJECT MARKER, ONE WAY	
			14					6				20		614	13360	20	EACH	OBJECT MARKER, TWO WAY	
		1,106										1,106		614	18010	1,106	SF	MAINTAINING TRAFFIC, MISC.: REMOVE AND RECONSTRUCT MEDIAN FOR CROSSOVER	
	1											1		614	18601	1	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	10
		0.11	0.22	0.15								0.48		614	20200	0.48	MILE	WORK ZONE LANE LINE, CLASS I, 4", 740.06, TYPE I	
		0.18	0.32	0.2				0.15				0.85		614	21200	0.85	MILE	WORK ZONE CENTER LINE, CLASS I, 740.06, TYPE I	
		0.33	0.44	0.32				0.03				1.12		614	22200	1.12	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 740.06, TYPE I	
					0.05	0.1						0.15		614	22210	0.15	MILE	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	
		807	984	821	432	512		767				4,323		614	23400	4,323	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	
		426	184	408				93				1,111		614	24400	1,111	FT	WORK ZONE DOTTED LINE, CLASS I, 4", 740.06, TYPE I	
						545						545		614	24404	545	FT	WORK ZONE DOTTED LINE, CLASS I, 8", 740.06, TYPE I	
				3	9	16						28		614	30400	28	EACH	WORK ZONE ARROW, CLASS I, 740.06, TYPE I	
		LS										LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
		124										124		615	20000	124	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS A	
		16		16								32		620	60000	32	EACH	DELINEATOR, POST SURFACE MOUNTED	
		340	1,360	340				260				2,300		622	41100	2,300	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
												LS		614	11000	LS		MAINTAINING TRAFFIC	
												12		619	16010	12	MNTH	FIELD OFFICE, TYPE B	
												LS		623	10001	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING, AS PER PLAN	4
												LS		624	10000	LS		MOBILIZATION	

GENERAL SUMMARY - 4

CUY-BH-FY2023 MISC.

MODEL: Sheet 4 PAPERSIZE: 17x11 (in.) DATE: 4/7/2023 TIME: 3:32:07 PM USER: mdcruz
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DESIGN AGENCY

OSBORN ENGINEERING

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DESIGNER MJD

REVIEWER JDH 12-13-22

PROJECT ID 105909

SHEET 33 TOTAL 110

PROJECT DESCRIPTION
REFER TO THE STRUCTURE DATA TABLE ON SHEET 37.

STANDARD DRAWINGS AND SUPPLEMENTAL SPECIFICATIONS
REFER TO THE STANDARD BRIDGE DRAWINGS SHOWN ON THE TITLE SHEET, AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:

800	DATED	SEE PROPOSAL
844	DATED	04-20-2018
848	DATED	01-15-2021
1078	DATED	10-16-2020

DESIGN SPECIFICATIONS
THIS STRUCTURE CONFORMS TO THE NINTH EDITION OF THE "LRFD BRIDGE DESIGN SPECIFICATIONS" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, 2020, AND THE OHIO DEPARTMENT OF TRANSPORTATION (ODOT) BRIDGE DESIGN MANUAL, 2020.

DESIGN DATA
CLASS QC2 CONCRETE COMPREHENSIVE STRENGTH 4500 PSI

REINFORCING STEEL ASTM A615 OR A996 GRADE 60 MINIMUM YIELD STRENGTH 60,000 PSI

STRUCTURAL STEEL ASTM A709 GRADE 50 YIELD STRENGTH 50 KSI

RIGHT OF WAY
ALL WORK IS TO BE PERFORMED WITHIN THE EXISTING RIGHT OF WAY OR EASEMENTS, OR WITHIN STATE PROPERTY OR LIMITED ACCESS AREAS.

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.

SPECIFICATIONS
UNLESS OTHERWISE NOTED IN THE PLANS, REFERENCE SHALL BE MADE TO THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (CMS), 2019 EDITION, FOR ALL PERTINENT ITEMS WITHIN THESE PROJECT DOCUMENTS.

MAINTENANCE OF TRAFFIC
FOR MAINTENANCE OF TRAFFIC DETAILS AND PHASED CONSTRUCTION REFER TO THE MAINTENANCE OF TRAFFIC PLANS AND ASSOCIATED GENERAL NOTES.

FOR LOCATION 1 (CUY-090-1062): CONTRACTOR SHALL PREPARE AND SUBMIT TO THE DEPARTMENT FOR APPROVAL LANE CLOSURES, PARTIAL OR FULL RAMP CLOSURES MAINTENENANCE OF TRAFFIC PLANS ON MAINLINE I- 90 BASED UPON THE PROPOSED SEQUENCE OF CONSTRUCTION.

UTILITY LINES
THE UTILITY(IES) SHALL BORE ALL EXPENSE INVOLVED IN RELOCATING (INSTALLING) AND TEMPORARILY PROTECTING THE AFFECTED UTILITY LINES. THE CONTRACTOR AND UTILITY(IES) ARE TO COOPERATE BY ARRANGING THEIR WORK IN SUCH A MANNER THAT INCONVENIENCE TO EITHER WILL BE HELD TO A MINIMUM.

THE CONTRACTOR SHALL CONTACT OHIO UTILITY PROTECTION SERVICES (OUPS 811) PRIOR TO CONDUCTINGDEMOLITION WORK. ALL UTILITY LINES AND CONDUITS ARE TO REMAIN. ANY DAMAGE TO THE UTILITY LINES OR CONDUITS SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AT NO COST TO THE DEPARTMENT

VANDAL PROTECTION FENCING
INSTALL FENCING FOR EACH CONSTRUCTION PHASE PRIOR TO OPENING THAT PHASE TO VEHICULAR AND/OR PEDESTRAIN TRAFFIC

ITEM 202 – PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
FOR LOCATIONS: 1 (CUY-090-1062), 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 5 (CUY-271-1543), 6 (CUY-480-0446), AND 7 (CUY-480-0870 ES)

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT, EXCEPT FOR WEARING COURSE REMOVAL. ITEMS TO BE REMOVED INCLUDE ALL EXISTING MATERIALS BEING REPLACED BY NEW CONSTRUCTION AND MISCELLANEOUS ITEMS THAT ARE NOT SHOWN TO BE INCORPORATED INTO THE FINAL CONSTRUCTION AND ARE DIRECTED TO BE REMOVED BY THE ENGINEER. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE-RAMS WILL NOT BE PERMITTED. THE METHOD OF REMOVAL AND THE WEIGHT OF HAMMER SHALL BE APPROVED BY THE ENGINEER. PERFORM ALL WORK IN A MANNER THAT WILL NOT CUT, ELONGATE OR DAMAGE THE EXISTING REINFORCING STEEL TO BE PRESERVED. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 90-POUND CLASS. PNEUMATIC HAMMERS SHALL NOT BE PLACED IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

MAXIMUM REMOVAL LIMITS: SOUND THE CONCRETE TODETERMINE THE LIMITS OF THE CONCRETE TOBE REMOVED AND COMPARE THESE LIMITS TO THEAREAS SHOWN IN THE PLANS. IF NEW AREAS ARE DISCOVERED OR IF THE DIMENSIONS OF THE PLAN AREAS INCREASE BYMORE THAN 25% IN ANY DIRECTION, DOCUMENT THE AREAS AND NOTIFY THE ENGINEER FOR EVALUATION TWO WEEKS PRIOR TO REMOVAL. THE ENGINEER WILL DETERMINE IF PATCHING IN DISCRETE SECTIONS OR STAGES IS NEEDED OR IF THE INSTALLATION OF TEMPORARY FALSEWORK IS REQUIRED.

REMOVAL METHODS: THE CONTRACTOR MAY REMOVE CONCRETE BY CUTTING AND BY MEANS OF HAND OPERATED PNEUMATIC HAMMERS EMPLOYING POINTED OR BLUNTED CHISEL TYPE TOOLS. FOR REMOVALS OVER STRUCTURAL MEMBERS (PRESTRESSED BOX BEAM, I-BEAM, STEEL BEAM STEEL GIRDER, ETC.), THE CONTRACTOR MAY USE A HAMMER HEAVIER THAN 35 POUNDS BUTNOT TO EXCEED 90 POUNDS UNLESS APPROVED BY THE ENGINEER. REMOVAL METHODS OVER STRUCTURAL MEMBERS SHALL ENSURE ADEQUATE DEPTH CONTROL AND PREVENT NICKING OR GOUGING THE PRIMARY STRUCTURAL MEMBERS. DUE TO THE POSSIBLE PRESENCE OF ATTACHMENTS (E.G., FINISHING MACHINE, SCUPPERAND FORM SUPPORTS, ETC.) TO EXISTING STRUCTURAL MEMBERS, PERFORM WORK CAREFULLY DURING DECK REMOVAL TO AVOID DAMAGING STRUCTURAL MEMBERS THAT ARE TO REMAIN. REPLACE OR REPAIR STRUCTURAL MEMBERS DAMAGED BY THE REMOVAL OPERATIONS AT NO COST TO THE PROJECT. AT LEAST 7 DAYS BEFORE PERFORMING REPAIR WORK, SUBMIT A PROPOSED REPAIR PLAN, DEVELOPED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER TO THE ENGINEER. OBTAIN THE ENGINEER'S APPROVAL BEFORE PERFORMING REPAIR.

CUT LINE CONSTRUCTION JOINT PREPARATION: SAW CUT BOUNDARIES OF PROPOSED CONCRETE REMOVALS 1 INCH DEEP. REMOVE CONCRETE TO A ROUGH SURFACE. LEAVE THE EXISTING REINFORCING STEEL, IF REQUIRED IN THE PLANS, IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. PRIOR TO CONCRETE PLACEMENT ABRASIVELY CLEAN JOINT SURFACES AND EXISTING EXPOSED REINFORCEMENT TO REMOVE LOOSE AND DISINTEGRATED CONCRETE AND LOOSE RUST. THOROUGHLY CLEAN THE JOINT SURFACE AND EXPOSED REINFORCEMENT OF ALL DIRT, DUST, RUST OR OTHER FOREIGN MATERIAL BY THE USE OF WATER, AIR UNDER PRESSURE, OR OTHER METHODS THAT PRODUCE SATISFACTORY RESULTS. EXISTING REINFORCING STEEL DOES NOT HAVE TO HAVE A BRIGHT STEEL FINISH BUT REMOVE ALL PACK RUST AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

SUBSTRUCTURE CONCRETE REMOVAL: REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HYDRAULIC HOE-RAM TYPE HAMMERS WILL NOT BE PERMITTED. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS FOR REMOVAL WITHIN 18 INCHES OF PORTIONS TO BE PRESERVED. OUTSIDE THE 18 INCH LIMIT, THE CONTRACTOR MAY USE HAMMERS NOT EXCEEDING 90 POUNDS UPON THE APPROVAL OF THE ENGINEER. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH REINFORCING STEEL THAT IS TO BE RETAINED IN THE REBUILT STRUCTURE.

WIRING: (FOR LOCATION 4: CUY-252-0434): THE EXISTING WIRING ON THE NOTED BRIDGE SHALL BE REMOVED AND DISPOSED OF UNDER ITEM 202 – PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN. NEW WIRING SHALL BE INSTALLED BEGINNING FROM THE NEAREST PULL BOX ON EACH CORNER OF THE BRIDGE.

MEASUREMENT & PAYMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY OF REMOVALS ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES OF REMOVALS AT THE CONTRACT PRICE FOR ITEM 202 – PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN

ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN
FOR LOCATIONS: 1 (CUY-090-1062)

IN ADDITION TO THE PROVISIONS OF ITEM 509, FIELD BEND AND/OR FIELD CUT THE REINFORCING STEEL DESIGNATED IN THE PLANS, AS NECESSARY, IN ORDER TO MAINTAIN THE REQUIRED CLEARANCES AND BAR SPACINGS. REPAIR ALL DAMAGE TO THE EPOXY COATING, AS A RESULT OF THIS WORK, ACCORDING TO C&MS 709.00.

ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN
FOR LOCATIONS: 1 (CUY-090-1062), 3 (CUY-237-0827), AND 6 (CUY-480-0446).

REPLACE ALL EXISTING REINFORCING BARS DEEMED BY THE ENGINEER TO BE UNUSABLE BECAUSE OF CORROSION. THE DEPARTMENT WILL MEASURE THE REPLACEMENT REINFORCING STEEL BY THE NUMBER OF POUNDS ACCEPTED IN PLACE. REPLACE ALL EXISTING REINFORCING STEEL BARS WHICH ARE TO BE INCORPORATED INTO THE NEW WORK AND ARE DEEMED BY THE ENGINEER TO BE MADE UNUSABLE BY CONCRETE REMOVAL OPERATIONS WITH NEW REINFORCING STEEL OF THE SAME SIZE AND COATING AT NO COST TO THE DEPARTMENT.

MECHANICAL CONNECTORS
FOR LOCATIONS: 1 (CUY-090-1062), 3 (CUY-237-0827)

PROVIDE AN APPROVED TYPE OF MECHANICAL CONNECTOR FOR REINFORCING BARS. INSTALLATION OF CONNECTORS SHALL CONFORM TO MANUFACTURER'S RECOMMENDED PROCEDURES. MECHANICAL CONNECTORS USED WITH EPOXY COATED BARS SHALL BE EPOXY COATED. COATING FOR BOTH CONNECTORS AND BARS SHALL CONFORM TO THE SAME SPECIFICATIONS. COATING WHICH HAS BEEN DAMAGED OR WHICH OTHERWISE DO NOT MEET SPECIFICATIONS WITH RESPECT TO COLOR, CONTINUITY, AND UNIFORMITY SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER OR REPLACED WITH MATERIAL THAT MEETS THE SPECIFICATIONS. PAYMENT FOR MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 509 - EPOXY COATED REINFORCING STEEL, AS PER PLAN.

ITEM 512 - SEALING OF CONCRETE SURFACE (EPOXY-URETHANE), AS PER PLAN
FOR LOCATIONS: 1 (CUY-090-1062), 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 5 (CUY-271-1543), 6 (CUY-480-0446), AND 7 (CUY-480-0870 ES)

EXISTING SEALER SHALL BE REMOVED PRIOR TO APPLICATION OF NEW EPOXY-URETHANE SEALER. THE FINISH COAT COLOR SHALL MATCH EXISTING SEALER COLOR. SEE STRUCTURE DATA TABLE FOR FEDERAL COLOR NUMBERS.

ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN
FOR LOCATIONS: 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 6 (CUY-480-0446), AND 7 (CUY-480-0870 ES)

WORK UNDER THIS ITEM INCLUDES THE REMOVAL OF DETERIORATED CROSSFRAME MEMBERS THROUGHOUT THE SUPERSTRUCTURE AND INSTALLATION OF NEW CROSSFRAME MEMBERS. LOCATIONS OF THE DETERIORATED CROSSFRAME MEMBERS ARE DETAILED IN THE PLANS.

ALL REQUIREMENTS OF C&MS 513 APPLY TO SHOP FABRICATED MEMBERS. PERFORM WORK FOR FIELD FABRICATED MEMBERS ACCORDING TO ITEM 513, EXCEPT AS MODIFIED HEREIN. THE DEPARTMENT WILL NOT REQUIRE THE CONTRACTOR PERFORMING FIELD FABRICATION TO BE PRE-QUALIFIED AS SPECIFIED IN SUPPLEMENT 1078. SUBMIT A WRITTEN LETTER OF MATERIAL ACCEPTANCE IN ACCORDANCE WITH C&MS 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO C&MS 513.04 OR SUPPLY THE ENGINEER WITH "AS-BUILT" DRAWINGS MEETING 513.04 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH FINAL AS-BUILT CONDITION. IF NECESSARY, THE ENGINEER MAY CONTACT THE OFFICE OF STRUCTURAL ENGINEERING FOR TECHNICAL ASSISTANCE. IF THE ENGINEER IS SATISFIED WITH THE "AS-BUILT" DRAWINGS AND THE DELIVERED MATERIALS, SUPPLY A COPY OF THE DRAWINGS, STAMPED AND DATED, ALONG WITH MICROFILM, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES.

ALL STEEL SHALL BE CLEANED AND THE SURFACES PREPARED PER ITEM 514.11 AND SHALL HAVE A SHOP-APPLIED COATING OF PRIMER PER ITEM 514.15C.

PAYMENT FOR ALL LABOR, MATERIALS AND EQUIPMENT FOR REMOVAL AND INSTALLATION OF CROSSFRAME MEMBERS SHALL BE INCLUDED IN THE CONTRACT BID PRICE PER POUND OF NEW MATERIAL FOR ITEM 513 – STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN.

ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN
FOR LOCATIONS: 2 (CUY-090-2910) AND 5 (CUY-271-1543).

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY PLACE A WATER-TIGHT, EXTRUDED PREFORMED FLEXIBLE, CLOSED-CELL NEOPRENE EXPANDED FOAM RUBBER SEAL IN PLACE AT THE SPECIFIED LOCATIONS:
LOCATION 2: CUY-090-2910 JUNCTURE BETWEEN THE EXISTING ABUTMENT AND THE CONCRETE SLOPE PROTECTION. JOINTS ARE OF VARYING SIZES AND THEREFORE SHALL BE FIELD MEASURED PRIOR TO ORDERING ANY SEALS.
LOCATION 5: CUY-271-1543 ALONG TOPS OF WINGWALLS AND DOWN THE FACE OF THE CURTAIN WALLS LOCATED AT FOUR CORNERS. JOINT OPENINGS SHALL BE FIELD MEASURED PRIOR TO ORDERING ANY SEALS.

AT EACH LOCATION, THE JOINTS SHALL FIRST BE CLEANED OF ALL FOREIGN SUBSTANCES, DEBRIS, EXISTING JOINT SEAL MATERIAL AND ANY OTHER OBJECTS THAT MAY INHIBIT THE PLACEMENT OF THE PROPOSED SEAL. THE PREFORMED ELASTOMERIC SEAL SHALL BE OVERSIZED BY 25% AND PLACED UTILIZING AN EPOXY ADHESIVE. THE PROPERTIES OF THE ADHESIVE ARE SHOWN IN THE TABLE.

PHYSICAL PROPERTY	ASTM TEST METHOD	REQUIREMENTS
TENSILE STRENGTH	D 638	4000 PSI (27 MPA) MIN
AXIAL COMPRESSION	D 695	8000 PSI (55 MPA) MIN
POT LIFE	D 2471	40 MINUTES @ 77°F (25°C)
FLASH POINT	D 56	> 200°F (93°C)
INITIAL CURE	N/A	24 HOURS
FULL CURE	N/A	7 DAYS @ 77°F (25°C)

METHOD OF MEASUREMENT: THE PAYMENT FOR THIS ITEM SHALL BE LINEAR FEET IN PLACE AND
ACCEPTED. THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL.
PAYMENT SHALL BE MADE UNDER ITEM 516 PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN.

ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN
FOR LOCATIONS: 2 (CUY-090-2910), 5 (CUY-271-1543), 6 (CUY-480-0446), AND 7 (CUY-480-0870 ES).

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE THE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (C&MS 711.21), INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE UPPER BEARING PLATE BY REMOVING EXISTING WELDS AND REWELDING SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60° F, LUBRICATING SLIDING SURFACES, AND REASSEMBLY OF THE BEARINGS. ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING". AT NO ADDITIONAL COST TO THE STATE, THE CONTRACTOR MAY INSTALL NEW BEARINGS OF THE SAME TYPE AS THE EXISTING IN PLACE OF REFURBISHING THE BEARINGS. ALL WORK SHALL BE TO THE SATISFACTION OF THE ENGINEER. PAYMENT FOR ALL OF THE ABOVE DESCRIBED LABOR AND MATERIALS WILL BE MADE AT THE CONTRACT PRICE BID FOR ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN.

STRUCTURE GENERAL NOTES - 1

SFN
VARIOUS

DESIGN AGENCY
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DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
1	5

SHEET	TOTAL
34	110

CUY-BH-FY2023 MISC.

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ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN
FOR LOCATIONS: 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 5 (CUY-271-1543), 6 (CUY-480-0446), AND 7 (CUY-480-0807 ES).

THIS WORK CONSISTS OF RAISING OR RE-POSITIONING EXISTING STRUCTURES TO THE DIMENSIONS AND REQUIREMENTS DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05-B. IF, DURING JACKING OPERATIONS, CRACKING OF THE NEW CONCRETE SUPERSTRUCTURE, SEPARATION OF THE NEW CONCRETE DECK FROM THE STEEL GIRDERS, OR OTHER DAMAGE TO THE STRUCTURE IS VISUALLY OBSERVED, IMMEDIATELY CEASE THE JACKING OPERATION AND INSTALL SUPPORTS TO THE SATISFACTION OF THE ENGINEER. ANALYZE THE DAMAGE AND SUBMIT A METHOD OF CORRECTION TO THE ENGINEER FOR APPROVAL. EPOXY INJECT ALL BEAMS THAT SEPARATE FROM THE DECK FOR THE DISTANCE OF THE SEPARATION IN ACCORDNACE WITH CMS 512.07. THE DEPARTMENT WILL NOT PAY FOR THE COST OF THIS EPOXY INJECTION OR OTHER REQUIRED REPAIRS. THE BRIDGE BEARINGS SHALL BE FULLY SEATED AT ALL CONTACT AREAS. IF FULL SEATING IS NOT ATTAINED, SUBMIT A REPAIR PLAN TO THE ENGINEER. THE DEPARTMENT WILL NOT PAY FOR THE REPAIR COSTS TO ENSURE FULL SEATING ON BEARINGS.

THIS WORK INCLUDES RAISING AND SUPPORTING THE BEAMS/GIRDERS WHILE THE BEARINGS ARE REFURBISHED.

BRIDGE	DEAD LOAD (KIPS)	LIVE LOAD (KIPS)	TOTAL LOAD (KIPS)
Loc. 2 / CUY-090-2910	67.31	136.13	203.44
Loc. 3 / CUY-237-0827	76.91	117.41	194.32
Loc. 4 / CUY-252-0434	134.96	182.94	317.9
Loc. 5 / CUY-271-1543	118.7	139.8	258.5
Loc. 6 / CUY-480-0446	131.27	150.66	281.93
Loc. 7 / CUY-480-0870-ES	122.65	162.82	285.47

THE LOADS GIVEN ARE REACTIONS AT THE BEARINGS; THESE ARE NOT REQUIRED JACKING FORCES. THE CONTRACTOR IS LIMITED TO RAISING THE BEAMS/GIRDERS ¼".

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS.

THE DEPARTMENT WILL PAY FOR THE ACCPETED QUANTITIES AT THE CONTRACT BID PRICE FOR ITEM 516 JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION SEAL, (MEDIAN JOINT):
FOR LOCATION: 1 (CUY-090-1062)
INSTALL THE COMPRESSION SEAL ACCORDING TO MANUFACTURER'S SPECIFICATION. FURNISH SEAL IN A CONTINUOUS PIECE UNLESS APPROVED BY THE ENGINEER.
ACCEPTED MANUFACTURER'S ARE:
1. WATSON BOWMAN ACME CORP. (MODEL W PROFILE (W50))
2. AN APPROVED EQUIVALENT.

ITEM 519 – PATCHING CONCRETE STRUCTURE, AS PER PLAN
FOR LOCATIONS: 1 (CUY-090-1062), 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 5 (CUY-271-1543), 6 (CUY-480-0446), AND 7 (CUY-480-0870 ES)

THIS WORK CONSISTS OF PATCHING EXISTING STRUCTURES AT THE SPECIFIED LOCATIONS SHOWN. PRIOR TO THE SURFACE CLEANING SPECIFIED IN 519.04 AND WITHIN 24 HOURS OF PLACING PATCHING MATERIAL, BLAST CLEAN ALL SURFACES TO BE PATCHED, INCLUDING THE EXPOSED REINFORCING STEEL. ACCEPTABLE METHODS INCLUDE HIGH PRESSURE WATER BLASTING WITH OR WITHOUT ABRASIVES IN THE WATER, ABRASIVE BLASTING WITH CONTAINMENT, OR VACUUM ABRASIVE BLASTING. WHERE APPLICABLE, CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, BRIDGE RAIL OR ANY OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE PATCHING OPERATIONS.

SPECIFIC PATCHING LOCATIONS SHALL BE DETERMINED BY THE ENGINEER IN ACCORDANCE WITH ITEM 519 UNLESS IDENTIFIED IN THE PLANS. IF EXISTING UTILITIES ARE LOCATED WITHIN THE SPECIFIED PATCHING AREAS, THE COST FOR REMOVAL AND REINSTALLING THE UTILITIES SHALL BE INCLUDED IN THIS ITEM. ALL EQUIPMENT, LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO PERFORM THE ABOVE-DESCRIBED WORK SHALL BE INCLUDED FOR PAYMENT AT THE SQUARE FOOT CONTRACT PRICE FOR ITEM 519 – PATCHING CONCRETE STRUCTURE, AS PER PLAN.

FOR LOCATIONS: 5 (CUY-271-1543)

IF REMOVAL OF CONCRETE FOR ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN, AT PIERS 1 AND 5 WILL EXPOSE MORE THAN 50% OF THE PIER CAP BOTTOM REINFORCING STEEL FOR THE FULL CIRCUMFERENCE OF THE BARS UNDER BEAMS 2 AND 4, THE CONTRACTOR SHALL DESIGN, FURNISH AND INSTALL TEMPORARY SUPPORTS FOR THE BEAM AND PIER CAP. THE TEMPORARY SUPPORTS FOR THE BEAM MUST BE ABLE TO SUPPORT A LOAD OF 150 KIPS (COMBINED DEAD LOAD AND LIVE LOAD) AND BE PLACED ON THE SLOPE SIDE OF THE PIER WITH THE BEARING POINT WITHIN 4'-0" OF THE EXISTING PIER CENTERLINE OF BEARING. THE SHORING FOR THE PIER CAP MUST BE ABLE TO SUPPORT 18 KIPS (DEAD LOAD).
IF TEMPORARY SUPPORTS, JACKING OR ADDITIONAL WORK AND EQUIPMENT IS REQUIRED FOR THE ABOVE, IT SHALL BE PAID UNDER ITEM 516 – JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

ITEM SPECIAL - STRUCTURES, BOTTOM OF DECK SPALL REMOVAL
FOR LOCATION: 4 (CUY-252-0434)

THE CONTRACTOR SHALL PROVIDE ACCESS, SOUND AREAS WHERE DESIGNATED ON THE PLANS AND MARK AREAS OF DETERIORATED CONCRETE. UPON APPROVAL FROM THE ENGINEER, SUBSEQUENT REMOVAL OF MARKED AREAS AND DISPOSAL OF ALL DEBRIS SHALL BE PERFORMED. STANDARD DESCRIPTIONS OF CONCRETE AREAS SUBJECT TO REMOVAL INCLUDE, BUT ARE NOT LIMITED TO: SPALLED, DELAMINATED, MOTTLED, DAMP, HONEYCOMBED, EFFLORESCENCE AND ANY SUSPECTED DETERIORATED DECK CONCRETE. IT SHALL BE AT THE DISCRETION OF THE FIELD ENGINEER AS TO THE ENTIRETY OF THE DECK AREAS THAT ARE TO BE SOUNDED; HE/SHE SHALL ONLY HAVE THE CONTRACTOR SOUND THOSE AREAS THAT ARE DESCRIBED ABOVE. ANY CONCRETE THAT APPEARS INTACT AND STRUCTURALLY SOUND SHALL NOT BE INCLUDED IN THIS QUANTITY.

THE CONTRACTOR SHALL EXERCISE CAUTION WHEN WORKING IN PROXIMITY TO THE EXISTING UTILITY FACILITIES. SECTIONS 105.07 AND 107.16 OF THE CMS REQUIRE THAT THE CONTRACTOR COOPERATE WITH ALL UTILITIES LOCATED WITHIN THE LIMITS OF THE CONSTRUCTION PROJECT AND TAKE RESPONSIBILITY FOR THE PROTECTION OF THE UTILITY PROPERTY AND SERVICES.

THE CONTRACTOR SHALL MAKE PROVISION TO ENSURE PUBLIC SAFETY WHILE REMOVING THE LOOSE AND DELAMINATED CONCRETE. THE MATERIAL CAN BE REMOVED BEFORE OR AFTER THE TIMBER SUBDECK IS INSTALLED, ALTHOUGH ALL DEBRIS/CONCRETE MUST BE REMOVED FROM THE SUBDECKING BEFORE WORK IS CONSIDERED COMPLETE. THE REMOVED CONCRETE SHALL BE DISPOSED OF OFF SITE IN CONFORMANCE WITH LOCAL, STATE AND FEDERAL POLLUTION CONTROL LAWS.

REMOVE CONCRETE BY MEANS OF APPROVED PNEUMATIC HAMMERS EMPLOYING POINTED AND BLUNT CHISEL TOOLS. HAND HELD CONVENTIONAL HAMMERS MAY BE USED TO REMOVE MINOR SPALLS. HOWEVER, PNEUMATIC HAMMERS SHOULD ALSO BE EMPLOYED TO ENSURE COMPLETE REMOVAL OF ALL DELAMINATED CONCRETE. RE-SOUNDING OF THE DELAMINATED AREA TO ENSURE COMPLETE REMOVAL WILL BE REQUIRED AT NO ADDITIONAL COST. THE WEIGHT OF THE HAMMER SHALL NOT BE MORE THAN 35 POUNDS. DO NOT PLACE PNEUMATIC HAMMERS IN DIRECT CONTACT WITH EXISTING REINFORCING STEEL.

METHOD OF MEASUREMENT: THE PAYMENT FOR THIS ITEM SHALL BE SQUARE FOOTAGE OF DECK BOTTOM SOUNDED, MARKED, REMOVED AND ACCEPTED. THIS INCLUDES ALL EQUIPMENT, LABOR AND MATERIALS NECESSARY FOR ACCESS, SOUNDING OF ENTIRE AREA DESIGNATED IN THE PLANS, SPALL REMOVAL AND DEBRIS REMOVAL. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL – STRUCTURES: BOTTOM OF DECK SPALL REMOVAL.

ITEM SPECIAL - STRUCTURES: BRIDGE CLEANING
FOR LOCATIONS: 2 (CUY-090-2910), 4 (CUY-252-0434), 6 (CUY-480-0446)

THE WORK SHALL CONSIST OF THE REMOVAL OF DIRT, SAND, SOIL, PAPER, GLASS, CANS, AND OTHER DEBRIS FROM DRAINAGE SYSTEMS, SCUPPERS, AND EXPANSION JOINTS FROM THE ENDS OF APPROACH SLAB BARRIERS THROUGH THE DECK SECTION AND TO THE OPPOSITE END APPROACH SLAB BARRIER. THE BEAM ENDS (FOR AN APPROXIMATE 2 FOOT WIDTH), BEARINGS AND ABUTMENT SEATS SHALL BE CLEANED IN AREAS BELOW THE BRIDGE. ADDITIONALLY, AT LOCATION 2, THE OPEN JOINT SHOWN ON SHEET 57/110 SHALL BE CLEANED PRIOR TO PLACING ANY COMPRESSION SEALS. CONTRACTOR SHALL FOLLOW THE PLAN INSERT SHEET FOR BRIDGE CLEANING (BC) FOR ANY NOTES OR DIRECTION AND THE PLAN INSERT SHEET, BC, SHALL SUPERCEDE THESE NOTES IF ANY DISPUTE.

EQUIPMENT MAY CONSIST OF HAND TOOLS, MANUAL BROOMS, POWER BROOMS, AIR COMPRESSORS, WATER TANKS, AND WATER PUMPS WITH ASSOCIATED DELIVERY HARDWARE TO CLEAN, FLUSH, AND REMOVE DIRT AND DEBRIS. CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, LABOR AND INCIDENTAL ITEMS NECESSARY TO PROPERLY REMOVE AND DISPOSE OF ALL DEBRIS AND OTHER FOREIGN MATERIAL BY POWER SWEEPING, SHOVELING, SCRAPING, ETC. FOLLOWED BY INSTALLING BMP'S AS IDENTIFIED IN THE WORK PLAN FOR BRIDGE CLEANING, AND PRESSURE WASHING THE CURB LINES, SHOULDERS, JOINTS, SCUPPERS, DOWNSPOUTS, BEAM ENDS, BEARINGS AND THE BRIDGE SEATS.

WATER QUALITY PROTECTION:
THIS PROJECT IS SUBJECT TO THE CONDITIONS OF NPDES PERMIT OHZ000001. THE CONTRACTOR MUST SUBMIT A NOTICE OF INTENT AS A CO-PERMITTEE UNDER THIS PROJECT AND RECEIVE OEPA APPROVAL TO OPERATE UNDER THE PERMIT PRIOR TO UNDERTAKING ITEM SPECIAL – STRUCTURES: BRIDGE CLEANING. CONTRACTOR MUST COMPLETE THE "WORK PLAN FOR BRIDGE CLEANING" FOR EACH BRIDGE IN ACCORDANCE WITH THE NPDES PERMIT.

CONTRACTOR SHALL FURNISH ALL MATERIAL, EQUIPMENT, LABOR AND INCIDENTAL ITEMS NECESSARY TO PROPERLY REMOVE AND DISPOSE OF ALL DEBRIS AND OTHER FOREIGN MATERIAL BY POWER SWEEPING, SHOVELING, SCRAPING, ETC. FOLLOWED BY INSTALLING BMPS AS IDENTIFIED IN THE WORK PLAN FOR BRIDGE CLEANING, AND PRESSURE WASHING THE CURB LINES, SHOULDERS, JOINTS, SCUPPERS, DOWNSPOUTS, AND THE BRIDGE SEAT ALONG WITH THE END OF THE BEAMS.

THE FOLLOWING AREAS OF THE BRIDGE ARE TO BE CLEANED:
1. CLEANING JOINTS FOR THE FULL WIDTH OF THE BRIDGE:
   A. PREVENT ALL DIRT, DEBRIS, AND WASHWATER FROM ENTERING ANY DRAINAGE SYSTEM DURING THE CLEANING OPERATIONS.
   B. REMOVE AND COLLECT LOOSE DEBRIS FROM THE JOINTS PRIOR TO INTRODUCING WATER. CARE SHOULD BE TAKEN WHEN BREAKING UP DEBRIS IN THE JOINTS IN ORDER NOT TO DAMAGE THE ELASTOMERIC SEAL.
   C. SWEEP AND COLLECT SAND, DEBRIS AND SEDIMENT BY PRESSURE WASHING THE JOINTS OR COMPRESSED AIR.
2. BRIDGE SEATS:
   A. REMOVE WITH A SHOVEL, BROOM, HAND SCRAPER OR OTHER MECHANICAL MEANS, ALL GROSS SOLIDS FROM THE ENTIRE BEAM SEATS AND AROUND ALL AREAS SURROUNDING THE BEAM BEARINGS, TO THE MAXIMUM EXTENT PRACTICABLE PRIOR TO INTRODUCING WATERS.
   B. AFTER REMOVING ALL GROSS SOLIDS PRESSURE WASH THE ABUTMENTS, BACKWALLS, BEAM SEATS AND THE END OF THE BEAMS AS SHOWN ON THE PLANS.
3. CLEANING & PRESSURE-WASHING THE CURB LINES:
   A. WORK SHALL CONSIST OF THE REMOVAL OF DIRT, SAND, SOIL, PAPER, GLASS, CANS AND OTHER DEBRIS FROM DRAINAGE SYSTEMS, SCUPPERS, EXPANSION JOINTS AND SHOULDERS FROM THE ENDS OF THE APPROACH SLAB BARRIERS THROUGH THE BRIDGE DECK SECTION AND TO THE OPPOSITE ENDS OF THE APPROACH SLAB BARRIERS.
   B. THE CONTRACTOR IS RESPONSIBLE FOR CONTROL OF DUST AT ALL TIMES DURING SWEEPING OPERATIONS. DRY POWER BROOMING WILL NOT BE PERMITTED. THE CONTRACTOR SHALL USE VACUUMING, WET SWEEPING, REGENERATIVE AIR SWEEPING, OR WET POWER BROOM SWEEPING. THE USE OF COMPRESSED AIR WILL BE PERMITTED ONLY WITH ACCEPTABLE DUST CONTROLS IN PLACE.

PRESSURE WASHING STRUCTURE CONCRETE THE CONTRACTOR SHALL USE POTABLE WATER FOR THE CLEANING OPERATION. DISCHARGING TO OR COLLECTING WATER FROM STREAMS IS PROHIBITED. PRESSURE WASHER WATER PRESSURE SHALL BE CAPABLE OF 1,500 PSI. CONTRACTOR SHALL NOT PRESSURE WASH NEAR EXISTING UTILITIES OR BRIDGE ITEMS CONTAINING OR COATED WITH ASBESTOS OR TRANSITE. OPERATING PRESSURES SHALL BE SUFFICIENT TO REMOVE THE ACCUMULATED MATERIAL WITHOUT DAMAGING PAINT COVERAGE OF THE STRUCTURAL STEEL. PRESSURE WASH THE ABUTMENTS, BACKWALLS AND SCUPPERS AS SHOWN IN THE PLANS TO REMOVE DIRT AND DEBRIS.

PAYMENT FOR ALL OF THE ABOVE WILL BE MADE AT CONTRACT BID PRICE AS FOLLOWS:
ITEM SPECIAL - STRUCTURES: BRIDGE CLEANING

ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK
FOR LOCATION: 4 (CUY-252-0434)

DESCRIPTION: THIS ITEM SHALL CONSIST OF FURNISHING, CUTTING, FITTING, PLACING AND
ERECTING OF TIMBER, AND THE FURNISHING AND INSTALLING OF ALL NECESSARY HARDWARE AS SPECIFIED. SUBDECK AREAS ABOVE TRAVELED LANES, AS WELL AS PAVED SHOULDERS. TIMBER MUST BE COMPLETELY SECURED AS SHOWN IN THE PLANS BEFORE TRAFFIC IS ALLOWED UNDERNEATH.

MATERIALS: TIMBER BEAMS SHALL CONFORM TO CMS 711.26 AND SHALL BE DOUGLAS FIR LARCH, GRADE 2 OR BETTER.
PRESERVATIVE TREATMENT FOR TIMBER BEAMS SHALL CONFORM TO CMS 712.06.
THE TIMBER PLYWOOD SHEETING SHALL BE CDX - 3/4" THICK DOUGLAS FIR PLYWOOD OR BETTER. ALL TRANSVERSE EDGES OF THE PLYWOOD SHALL BE SUPPORTED BY THE TIMBER BEAMS. THE BOLTS SHALL BE ASTM A449 - TYPE 1 OR SAE J429 - GRADE 5, 3/8" DIAMETER GALVANIZED BOLTS WITH GALVANIZED
FENDER WASHERS AND LOCK NUTS. SPACING OF THE BOLTS SHALL BE A MAXIMUM
OF 2 FOOT SPACING. WOOD SCREWS SHALL BE GALVANIZED 3" LONG #10 FASTENERS SPACED AT 2 FOOT MAXIMUM, UNLESS OTHERWISE NOTED.

GENERAL: FIELD MEASUREMENTS SHALL BE TAKEN BEFORE ANY FABRICATION IS PERFORMED.

METHOD OF MEASUREMENT: THE PAYMENT FOR THIS ITEM SHALL BE SQUARE FOOTAGE IN PLACE AND
ACCEPTED. THIS ITEM SHALL INCLUDE ALL LABOR, MATERIAL, EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE TIMBER SUBDECKS.
PAYMENT SHALL BE MADE UNDER ITEM SPECIAL - STRUCTURES, TIMBER SUBDECK.

ITEM 511 – CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN
FOR LOCATIONS: 4 (CUY-252-0434) AND 6 (CUY-480-0446)

THIS ITEM SHALL INCLUDE THE CONCRETE LIGHT PILASTERS AS SHOWN IN STANDARD DRAWING HL-20.14. CONCRETE REQUIRED TO PLACE EACH OF THE PILASTERS SHALL BE INCLUDED ALONG WITH ALL ANCHOR BOLTS, REBAR AND ANY APPURTENANCES REQUIRED TO RE-INSTALL THE EXISTING LIGHT POLES PER THE PLAN DOCUMENTS. EXISTING PLAN DRAWINGS AND CURRENT ODOT STANDARD DRAWINGS SHALL BE USED. JUNCTION BOXES, CONDUIT, WIRING AND SERVICE TO THE LIGHT POLES WILL BE PAID FOR SEPARATELY UNDER THE SPECIFIC ITEM OF WHICH THEY ARE A PART.

ITEM 844 – CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN
FOR LOCATION: 7 (CUY-480-0870 ES)

ALL REPAIR WORK SHALL BE PER SUPPLEMENTAL SPECIFICATION 844. THE MINIMUM SPACING OF 100 GRAM ZINC ANODES SHALL BE 18" OR EQUIVALENT TOTAL ZINC CONTENT PER AREA.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL PAY FOR THIS ITEM PER SQUARE FOOT OF CONCRETE AREA PATCHED AND PROVIDED WITH ABOVE ZINC CONTENT. THIS WILL INCLUDE ALL CONCRETE PATCHING, PLACEMENT OF THE ZINC ANODES AS SPECIFIED AND LABOR, MATERIAL AND EQUIPMENT THAT MAY BE UTILIZED IN THE PREPARATION AND SUBSEQUENT WORK. ANY AREAS THAT ARE TO RECEIVE A FIBER WRAP SYSTEM WILL BE PAID SEPARATELY UNDER ITEM SPECIAL – STRUCTURES, COMPOSITE FIBER WRAP SYSTEM.

ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN
FOR LOCATIONS: 4 (CUY-252-0434) AND 6 (CUY-480-0446)

THIS ITEM SHALL BE AS PER THE DETAILS IN THE PLAN, THE APPLICABLE PORTIONS OF STANDARD DRAWING VPF-1-90, AND THE MANUFACTURER'S RECOMMENDATIONS.

THE ANCHORS SHALL BE CAST IN PLACE WITH A 7" MINIMUM EMBEDMENT LENGTH.

AT LOCATIONS WHERE THE EXISTING FENCE SPANS ACROSS THE EXPANSION JOINT, DO NOT INSTALL LINE RAILS AND EXPANSION JOINT SLEEVES; HOWEVER, THE FABRIC SHALL REMAIN CONTINUOUS ACROSS THE EXPANSION JOINT.

THE COLOR OF THE FENCE FABRIC, RAILS, POSTS, PLATES, TIE WIRES, AND ADDITIONAL VISUAL HARDWARE AND CAULK SHALL BE BLACK.

PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 607 - VANDAL PROTECTION FENCE 6' STRAIGHT, COATED FABRIC, AS PER PLAN WHICH SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK.

STRUCTURE GENERAL NOTES - 2

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DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
2	5

SHEET	TOTAL
35	110

CUY-BH-FY2023 MISC.

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:14:01 PM USER: mdcruz
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ITEM SPECIAL – COMPOSITE FIBER WRAP SYTEM
FOR LOCATIONS: 2 (CUY-090-2910), 3 (CUY-237-0827), 4 (CUY-252-0434), 5 (CUY-271-1543), AND 7 (CUY-480-0870 ES)

DESCRIPTION: THIS WORK SHALL CONSIST OF PROVIDING AND INSTALLING A FIBER WRAP SYSTEM INCLUDING PREPARATION, WRAPPING THE PIER OR PIER CAP, AND ALL INCIDENTALS NECESSARY TO COMPLETE THIS WORK. THE INSTALLATION SHALL BE PER THE MANUFACTURER'S REQUIREMENTS AND FOLLOW ODOT'S PROPOSAL NOTE 519 DATED 7-21-2017.

THE FABRIC FOR THE COMPOSITE CASING SHALL BE CONTINUOUS FILAMENT WOVEN FABRIC. THE EPOXY SHALL BE SUPPLIED BY THE MANUFACTURER TO MEET THE COMPOSITE STRENGTHS GIVEN BELOW IN THE TABLE.

BRIDGE	FACTORED CAPACITY INCREASE	LOCATION ON STRUCTURE	TYPE OF LOAD
LOCATION 2 CUY-090-2910	311 KIPS	TOP SEAT	FLEXURE
	15 KIPS	BOTTOM OF PIER CAP, ABOVE COLUMNS	SHEAR
LOCATION 3 CUY-237-0827			
LOCATION 4 CUY-252-0434	283 KIPS	TOP SEAT	FLEXURE
	194 KIPS	BOTTOM OF PIER CAP, ABOVE COLUMNS	SHEAR
	158 KIPS	THROUGH ENTIRE CAP (SHEAR)	SHEAR
LOCATION 5 CUY-271-1543	79 KIPS	ENTIRE BOTTOM OF PIER CAP	FLEXURE
	126 KIPS	THROUGH ENTIRE CAP (SHEAR)	SHEAR
LOCATION 7 CUY-480-0870ES	NA	ONLY COLUMNS ARE BEING WRAPPED WITH E-GLASS FOR PATCHING PER BDM C405.10	

POLYESTER RESIN SHALL NOT BE ALLOWED AS A SUBSTITUTE FOR EPOXY RESIN. THE COMPOSITE OF THE FIBER WRAPPED COLUMN CASING (E-GLASS SYSTEM) SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

PROPERTY	REQUIREMENTS	ASTM TEST METHOD
ULTIMATE TENSILE STRENGTH, PSI MIN. – IN PRIMARY FIBER DIRECTION	60,000 PSI	D3039, AVERAGE OF 7, 1" x 10" NORMALIZED TO 0.80" THICK; 0.01" PER MINUTE TEST SPEED
ULTIMATE TENSILE STRENGTH, PSI MIN. – IN ORTHOGONAL FIBER DIRECTION	3000 PSI	D3039, AVERAGE OF 7, 1" x 10" NORMALIZED TO 0.80" THICK; 0.01" PER MINUTE TEST SPEED
TENSILE STRENGTH (MIN AFTER TEST) – 1000 HOURS EXPOSURE TO 100% HUMIDITY	60,000 PSI	c581
TENSILE STRENGTH (MIN AFTER TEST) – 1000 HOURS EXPOSURE TO OZONE	60,000 PSI	d1149 EXCEPT NOT UNDER STRESS DURING OZONE EXPOSURE
TENSILE STRENGTH (MIN AFTER TEST) – 1000 HOURS EXPOSURE TO ALKALI	60,000 PSI	D3038 USING SOIL BURIAL – WATER CONTENT OF 73% ±3%
TENSILE STRENGTH (MIN AFTER TEST) – 1000 HOURS EXPOSURE TO SALT WATER	60,000 PSI	C581 AND D1141 OMITTING ADDITION OF HEAVY METAL REAGENTS
TENSILE STRENGTH (MIN AFTER TEST) – 1000 HOURS EXPOSURE @ 140° F	60,000 PSI	D3045
ELONGATION: PERCENT, MIN.:	1.70%	
ELONGATION: PERCENT, MAX.:	5.00%	
TENSILE MODULUS, PSI MIN. OF PRIMARY FIBERS	3,000,000	D3039
VISUAL EFFECTS	ACCEPTANCE LEVEL III	D2563
COEFF. OF THERMAL EXPANSION IN THE PRIMARY DIRECTION	4,300,000 PPM/ DEG. F (±15%)	D696

METHOD OF MEASUREMENT: THIS WORK WILL BE MEASURED BY THE NUMBER OF SQUARE FEET OF CONCRETE SURFACE WRAPPED.

ASBESTOS NOTIFICATION

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURES SCHEDULED FOR DEMOLTION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT ASBESTOS IS PRESENT ON THE BRIDGE STRUCTURES. THE QUANTITY OF ASBESTOS CONTAINING MATERIAL (ACM) ON EACH BRIDGE IS:

LOCATION	BRIDGE STRUCTURE	ASBESTOS NOTIFICATION FORM TITLE	ACM (LINEAR FT)
1	CUY-90-1062	CUY-90-10.620	3472 FEET
2	CUY-90-2910	CUY-90-29.070	640 FEET
3	CUY-237-0827	CUY-480-7.920	375 FEET
4	CUY-252-0434	CUY-252-4.370	1712 FEET
5	CUY-271-1543	CUY-271-15.410	0 FEET
6	CUY-480-0446	CUY-480-4.440	819 FEET
7	CUY-480-0870-ES	CUY-480-0.000	0 FEET
MOVED TO NEW PID	CUY-6-0.42	CUY-6-0.42	640 FEET

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORM, PARTIALLY COMPLETED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL COMPLETE THE FORM AND SUBMIT IT TO ONE OF 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 INCLUDED IN:

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

STRUCTURE GENERAL NOTES - 3

SFN
VARIOUS

DESIGN AGENCY
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DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
3	5

SHEET	TOTAL
36	110

CUY-BH-FY2023 MISC.

MODEL: Sheet 3 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:14:03 PM USER: mdcruz
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LOCATION	BRIDGE NUMBER	STRUCTURAL FILE NUMBER	STRUCTURE TYPE	STRUCTURE LIMITS (*)	BRIDGE WIDTH (OUT/OUT)	LANES ON	LANES UNDER	SEALER AND PAINT COLOR	PROPOSED WORK - THE WORK SHOWN IS REPRESENTATIVE AND DOES NOT INCLUDE ALL WORK
1	CUY-090-1062	1808249	3-SPAN CONTINUOUS WELDED STEEL GIRDER	299'	98.3'	6	8	MATCH EXISTING SEALER COLOR (FC# 595a-36492)	- PATCH CONCRETE PARAPETS - REPLACE EXPANSION JOINTS - REMOVE/REPLACE MEDIAN CURBS AND COMPRESSION SEAL - REPLACE APPROACH SLABS
2	CUY-090-2910	1809008	5-SPAN CONTINUOUS STEEL BEAM	316.3'	141' ±	8	6	MATCH EXISTING SEALER COLOR (FC# 595B-25630)	- PATCH CONCRETE PARAPETS - EXPANSION JOINT REPAIR - PATCH BACKWALLS & CHEEKWALLS - REPLACE CROSSFRAME MEMBERS AS NEEDED - REPLACE, REFURBISH OR RESET BEARINGS - PATCH ABUTMENTS & PIERS - FIBER WRAP PIER COLUMNS AND CAPS - REPAIR DELAMINATED DECK WEARING SURFACE - RESEAL TOPS OF CONCRETE SLOPE PROTECTION
3	CUY-237-0827	1810332	3-SPAN CONTINUOUS STEEL BEAM	175'	66.3'	4	2	MATCH EXISTING SEALER COLOR (FC# 27778 - Lt. Neutral)	- REPLACE WEARING SURFACE - REPLACE EXPANSION JOINTS - REMOVE/REPLACE APPROACH SLABS - REPLACE CROSSFRAME MEMBERS AS NEEDED - REPLACE, REFURBISH OR RESET BEARINGS - PATCH ABUTMENTS & PIERS - FIBER WRAP PIER COLUMNS AND CAPS - REPLACE VANDAL PROTECTION FENCE
4	CUY-252-0434	1810405	4-SPAN CONTINUOUS BUILT-UP STEEL GIRDER	336.94'	98'	5	8	MATCH EXISTING SEALER COLOR (FC# 27722)	- PATCH WEARING SURFACE - PATCH CURBS, WALKS & MEDIAN - REPLACE BRIDGE RAILING AND VPF (FORMLINER IF REQUESTED) - REPLACE CROSSFRAME MEMBERS AS NEEDED - REPLACE, REFURBISH OR RESET BEARINGS - PATCH BACKWALLS, CHEEKWALLS, ABUTMENTS & PIERS - FIBER WRAP PIER COLUMNS AND CAPS - INSTALL TIMBER SUB-DECKING OVER TRAVELED LANES - PATCH PRESSURE RELIEF JOINTS - INSTALL BRIDGE TERMINAL ASSEMBLIES AT CORNERS - REPLACE EXPANSION JOINT SEALS
5	CUY-271-1543	1811851	6-SPAN CONTINUOUS STEEL BEAM	437.18	40'	2	10	MATCH EXISTING SEALER COLOR (FC# 17778)	- PATCH PIER COLUMNS AND CAPS - FIBER WRAP PIER COLUMNS AND CAPS - REPLACE FENCE POSTS AND CLAMPS AS NEEDED - REPLACE, REFURBISH OR RESET BEARINGS - REPLACE 4'' BITUMEN-IMPREGNATED SEALS AT WINGWALLS
6	CUY-480-0446	1814109	4-SPAN CONTINUOUS STEEL BEAM	302.76'	40'	2	6	MATCH EXISTING SEALER COLOR (FC# 27722)	- REPLACE WEARING SURFACE - REPAIR CURBS AND WALKS - REPLACE THE PARAPET AND VPF - REPLACE CROSSFRAME MEMBERS AS NEEDED - REPLACE, REFURBISH OR RESET BEARINGS - CLEAN ABUTMENT SEATS, EXPANSION JOINTS AND ALL BEARING AREAS - INSTALL BRIDGE TERMINAL ASSEMBLIES AT CORNERS
7	CUY-480-0870ES	1814249	4-SPAN CONTINUOUS WELDED STEEL GIRDER	398.07'	36'	2	3	MATCH EXISTING SEALER COLOR (FC# 595b-37722)	- PATCH WEARING SURFACE & APPROACH SLABS - REPLACE ASPHALT IN PRESSURE RELIEF JOINTS - PATCH PARAPETS - PATCH BACKWALLS, ABUTMENTS AND PIERS - FIBER WRAP PIER COLUMNS AND CAPS - REFURBISH BEARINGS

(*) STRUCTURE LIMITS ARE FROM BEGIN APPROACH SLAB TO END APPROACH SLAB

STRUCTURE DATA TABLE

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17X11 (In.) DATE: 4/14/2023 TIME: 11:05:04 AM USER: mdcruz
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SFN
VARIOUS

DESIGN AGENCY

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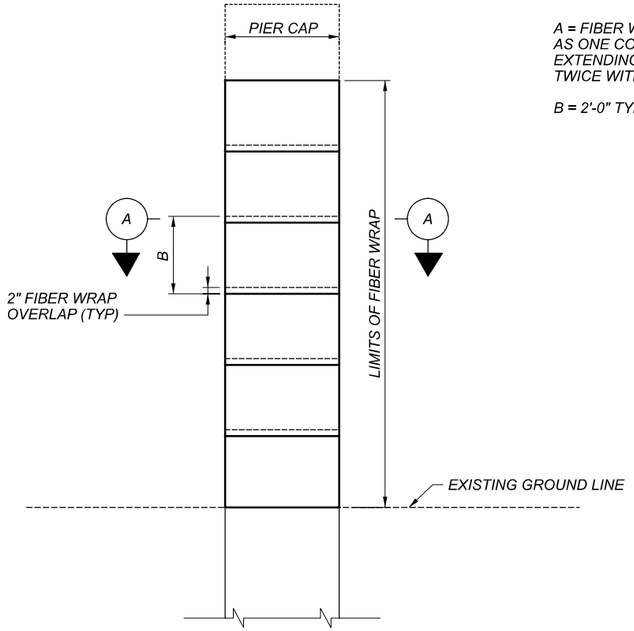
DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
4	5

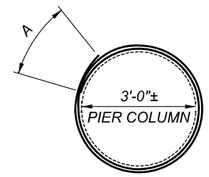
SHEET	TOTAL
37	110



PIER COLUMN FIBER WRAP DETAIL

A = FIBER WRAP SHALL BE INSTALLED AS ONE CONTINUOUS WRAP, EXTENDING AROUND THE COLUMN TWICE WITH A MINIMUM 1'-0" LAP

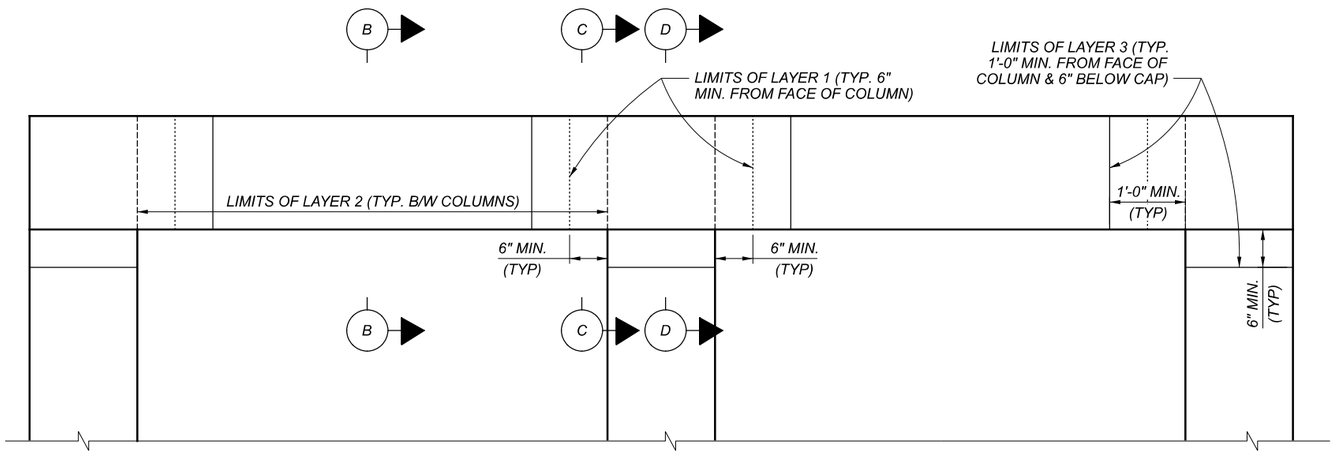
B = 2'-0" TYP. FABRIC WIDTH



SECTION A-A

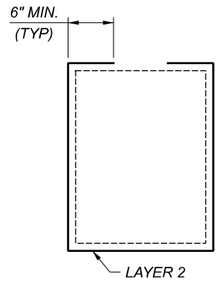
NOTES:

1. SEE BRIDGES SHEETS FOR LOCATIONS OF COMPOSITE FIBER WRAP.

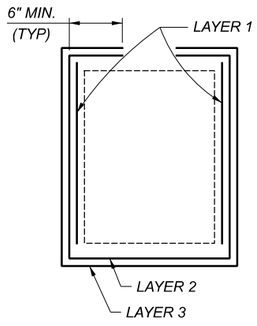


PIER CAP FIBER WRAP DETAIL

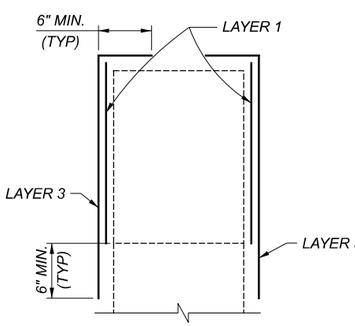
LIMITS SHOWN APPLY TO BOTH SIDES OF PIER CAP



SECTION B-B
TYP. BETWEEN COLUMNS



SECTION C-C
TYP. AT OVERLAP



SECTION D-D
TYP. AT COLUMNS

PIER FIBER WRAP DETAILS

SFN
VARIOUS

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
5	5

SHEET	TOTAL
38	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:14:07 PM USER: mdcruz
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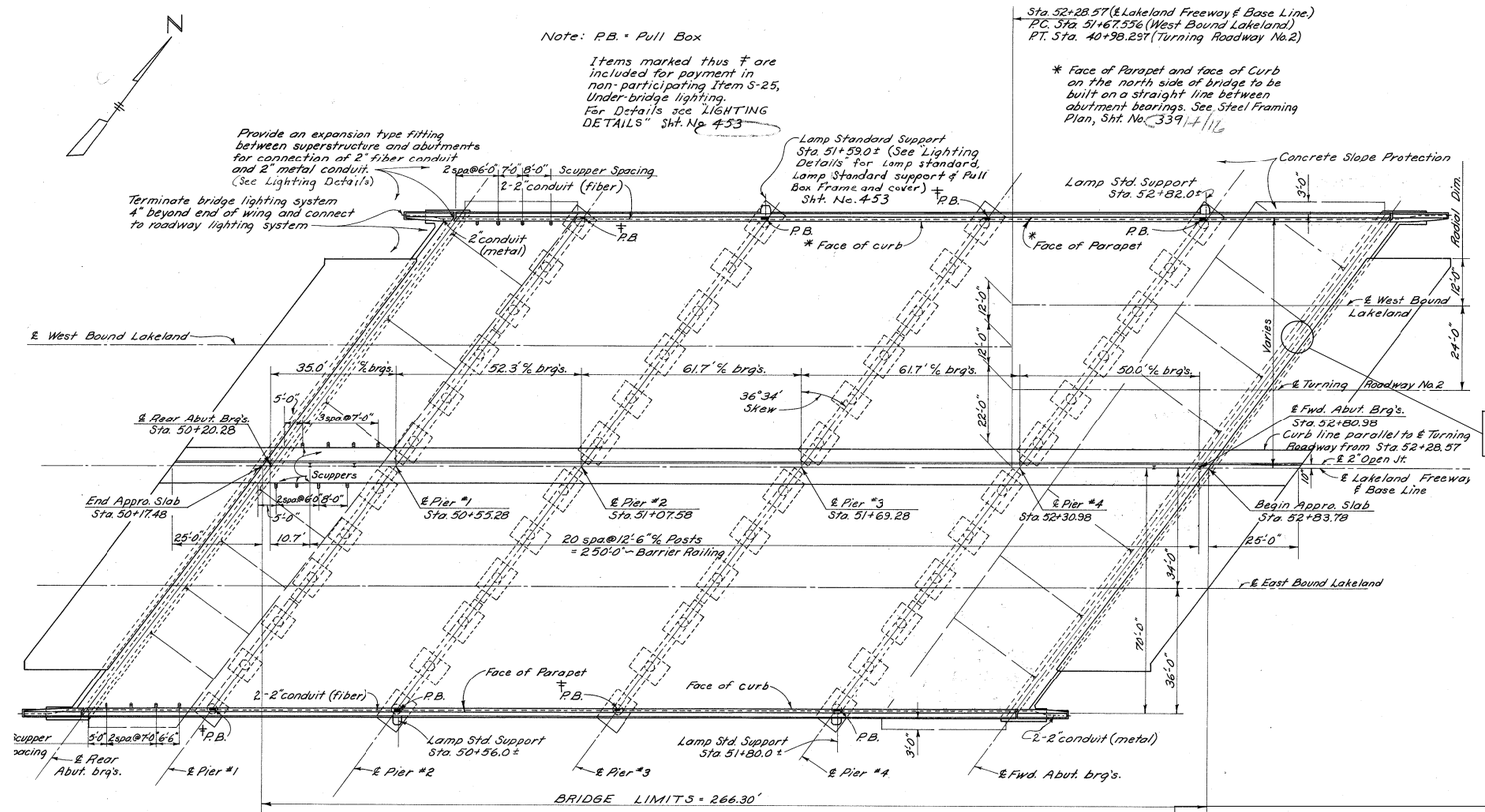
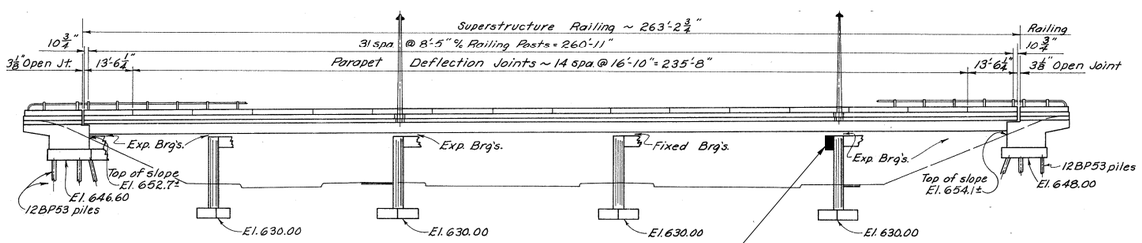


GENERAL PLAN



ELEVATION

LUMINARE REPLACEMENT AT PIER 4. REPAIR BROKEN WIRES AND LUMINARES.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE TABLE ON THIS SHEET.

PARTIAL EXPANSION JOINT REPAIR (SEE DETAILS ON SHEET 57)

ESTIMATED QUANTITIES

CALCULATED: JDH DATED: 06/22
CHECKED: MJD DATED: 06/22

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34
441	50301	1	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	57
510	10000	680	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
512	10101	230	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34, 60
SPECIAL	51271500	1012	SY	SPECIAL - URETHANE TOP COAT SEALER	
513	10201	1338	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
516	10001	355	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN	34, 57
516	14800	LS		STRUCTURAL JOINT OR JOINT SEALER MISC.: EXPANSION JOINT REPAIR	57
516	45305	13	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	34
516	46200	9	EACH	BEARING DEVICE, ROCKER	
516	46700	9	EACH	RESET BEARING	
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
SPECIAL	51900100	8633	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM	36, 38, 58
SPECIAL	51900100	212	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36, 38, 58
519	11101	580	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
519	12300	20	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
SPECIAL	53000200	LS		SPECIAL - STRUCTURES: BRIDGE CLEANING	35
625	27502	12	EACH	LUMINAIRE, UNDERPASS, SOLID STATE (LED)	5
625	27521	35	EACH	REMOVAL OF LUMINAIRE AND REERECTION, AS PER PLAN	5
631	94490	2	EACH	REMOVAL, MISC.: SIGNAL FLASHER ASSEMBLY	5

GENERAL PLAN - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

SFN 1809008

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
1	7

SHEET	TOTAL
54	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 34x22 (In.) DATE: 4/14/2023 TIME: 11:23:38 AM USER: mdcruz
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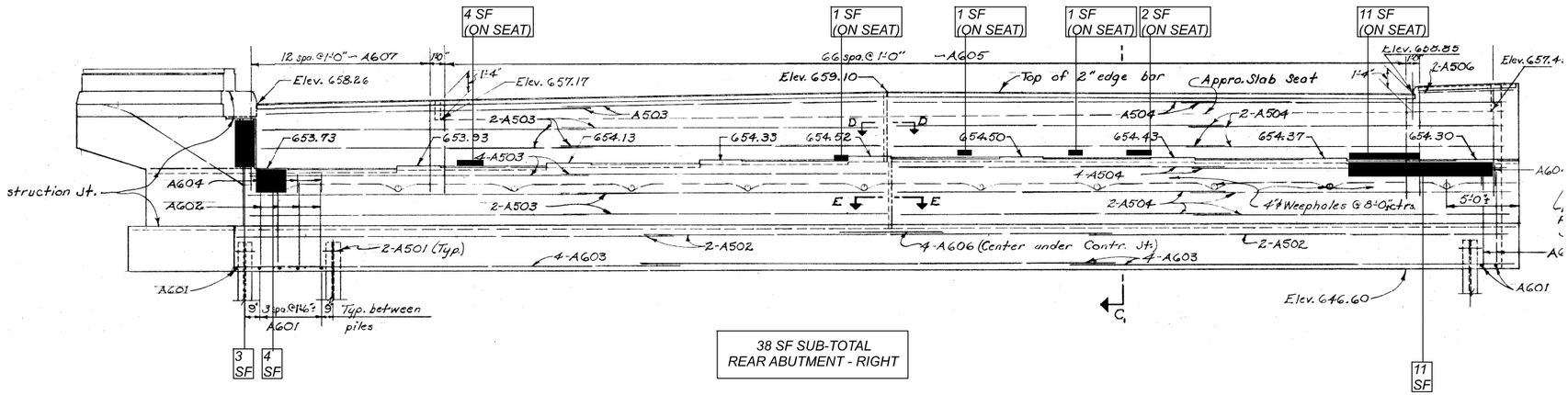
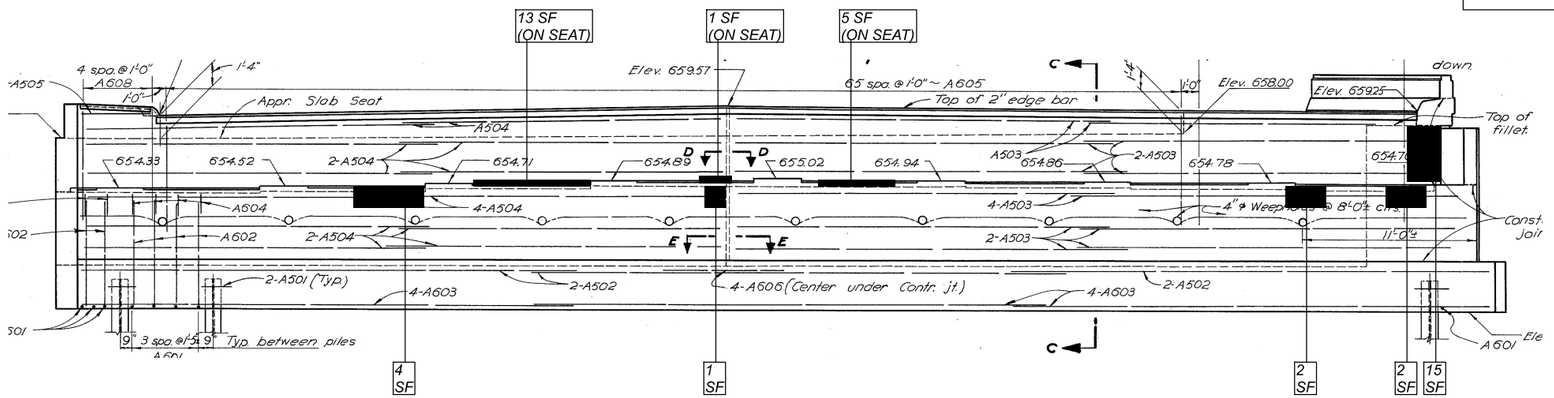


38 SF SUB-TOTAL
REAR ABUTMENT - RIGHT

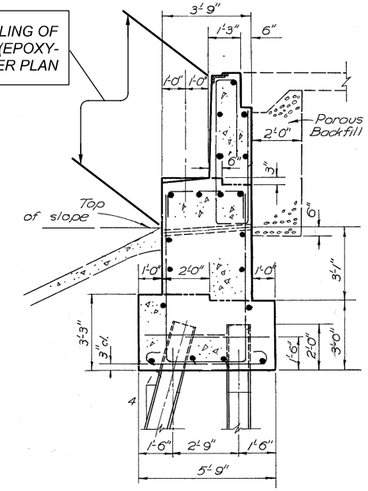
REAR ABUTMENT ELEVATION
LOOKING WEST



43 SF SUB-TOTAL
REAR ABUTMENT - LEFT

REAR ABUTMENT ELEVATION
LOOKING WEST

LIMITS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN



ABUTMENT SECTION
LIMITS OF SEALING

TYPICAL REAR AND FORWARD ABUTMENTS

LEGEND:

■ *INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.*

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
REAR ABUTMENT	81	102
FORWARD ABUTMENT	104	130
	TOTAL	**232**

NOTES:

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REAR ABUTMENT REPAIR DETAILS - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/6/2023 TIME: 7:14:24 PM USER: mdcruz
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SFN 1809008

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

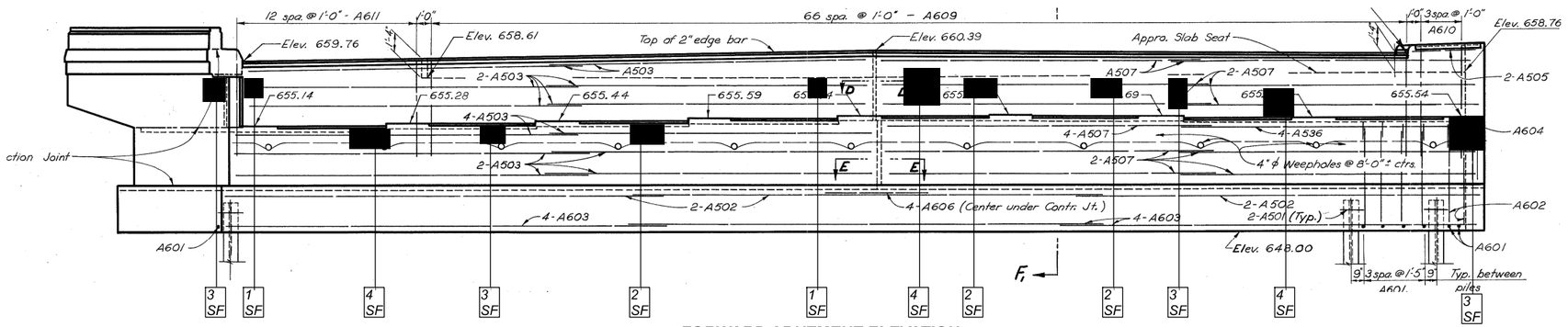
DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

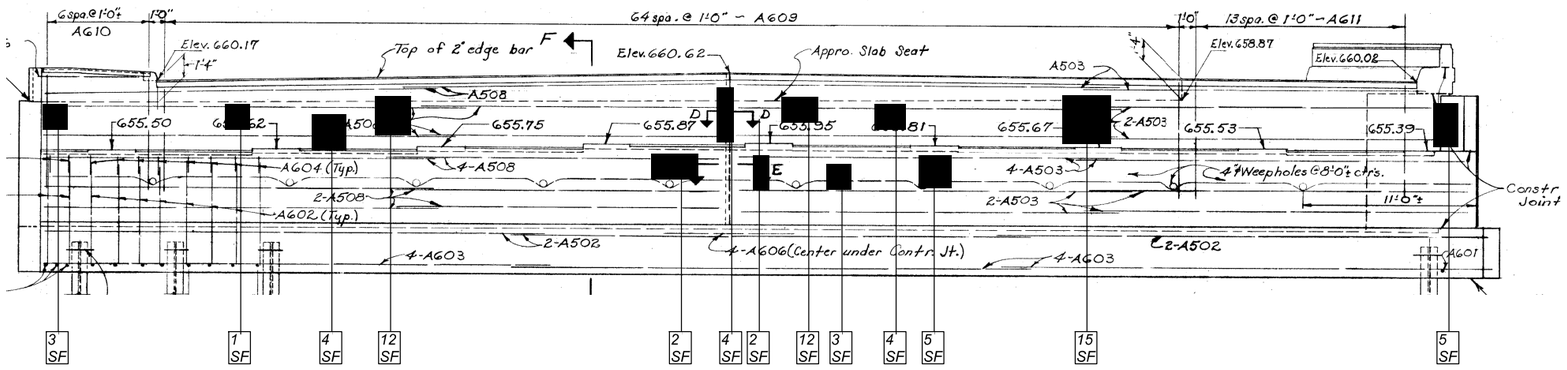
SUBSET	TOTAL
2	7

SHEET	TOTAL
55	110



FORWARD ABUTMENT ELEVATION
LOOKING EAST

32 SF SUB-TOTAL
FORWARD ABUTMENT - LEFT



FORWARD ABUTMENT ELEVATION
LOOKING EAST

72 SF SUB-TOTAL
FORWARD ABUTMENT - RIGHT

LEGEND:

■ *INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.*

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
REAR ABUTMENT	81	102
FORWARD ABUTMENT	104	130
	TOTAL	**232**

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

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FORWARD ABUTMENT REPAIR DETAILS - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

SFN 1809008

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborneng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
3	7

SHEET	TOTAL
56	110

CUY-BH-FY2023 MISC.

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:14:36 PM USER: mdcruz
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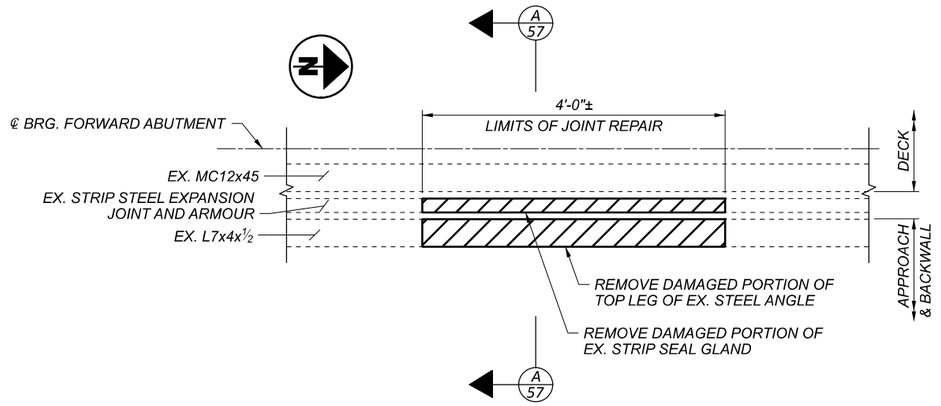
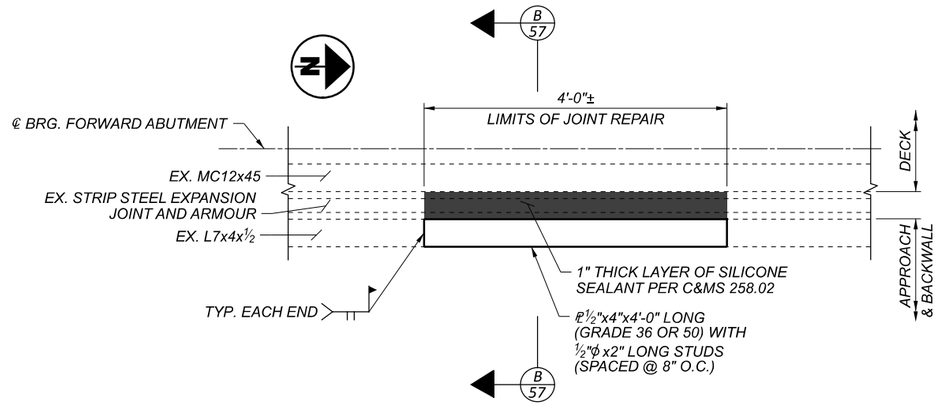
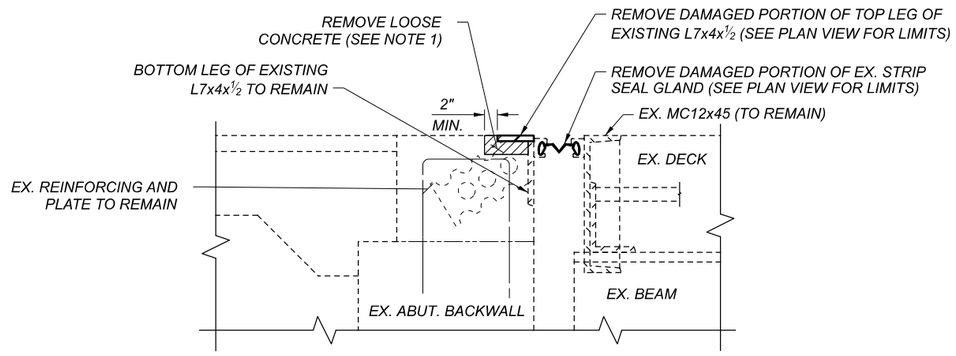


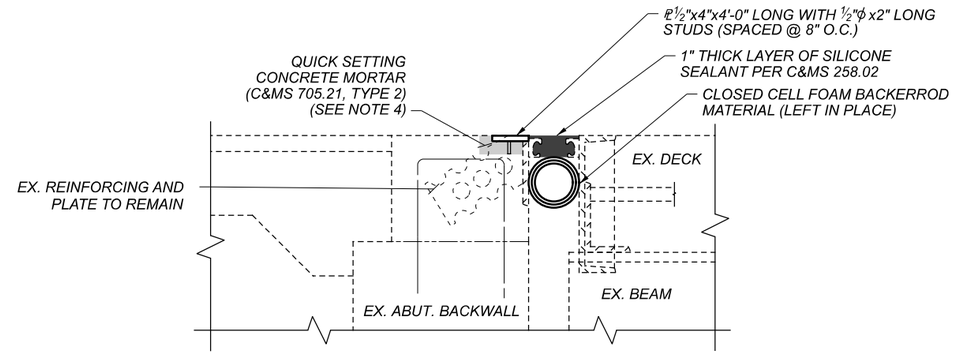
EXISTING EXPANSION JOINT



EXPANSION JOINT REPAIR



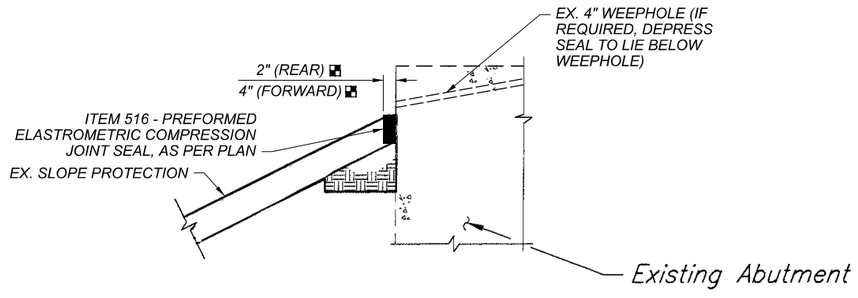
A 57 *EXISTING EXPANSION JOINT*



B 57 *EXPANSION JOINT REPAIR*

NOTES:

1. *REMOVE ALL LOOSE CONCRETE WITHIN LIMITS OF JOINT REPAIR. MINIMUM DEPTH OF REMOVAL IS 3".*
2. *CONTRACTOR SHALL FIELD VERIFY REMOVAL LENGTH PRIOR TO ORDERING ANY MATERIALS.*
3. *REMOVE DAMAGED PORTION OF EXISTING STRIP SEAL GLAND BY MAKING CLEAN CUTS PERPENDICULAR TO THE JOINT. REMOVE DAMAGED PORTION OF TOP LEG OF EXISTING STEEL JOINT ARMOR ANGLE BY SAW CUTTING, GRINDING, OR OTHER METHODS AS APPROVED BY THE ENGINEER. ALL FINAL CUTS FOR THE REPAIR SHALL BE PERPENDICULAR TO THE JOINT AND SQUARE TO THE SURFACE.*
4. *PLACE QUICK SETTING CONCRETE MORTAR TO FILL VOID BELOW THE STEEL PLATE AND REPAIR TOP OF THE ABUTMENT BACKWALL. MORTAR SHALL BE IN ACCORDANCE WITH ODOT C&MS 705.21, TYPE 2.*
5. *ALL WORK ASSOCIATED WITH REPAIR OF THE EXISTING JOINT, INCLUDING REMOVAL OF PORTION OF EXISTING STEEL ANGLE, STRIP SEAL GLAND, LOOSE CONCRETE, NEW STEEL PLATE WITH STUDS, BACKERROD, SILICONE SEALANT, QUICK SETTING MORTAR, NECESSARY FORMS, COLD PATCH ASPHALT NEEDED TO PROVIDE A SMOOTH TRANSITION TO BRIDGE DECK, AND ALL INCIDENTALS, SHALL BE INCLUDED WITH LUMP SUM ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: EXPANSION JOINT REPAIR FOR PAYMENT.*



TOP OF SLOPE PROTECTION

■ *DIMENSIONS WERE FIELD MEASURED. CONTRACTOR SHALL VERIFY OPENING PRIOR TO ORDERING SEAL.*

NOTE: ALL OPENINGS AND JOINTS SHALL BE CLEANED PRIOR TO PLACEMENT (ITEM SPECIAL - STRUCTURES: BRIDGE CLEANING).

CUY-BH-FY2023 MISC.

MODEL: Sheet 3 PAPERSIZE: 17x11 (in.) DATE: 4/19/2023 TIME: 9:14:24 AM USER: mdcruz
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EXPANSION JOINT AND SLOPE PROTECTION DETAILS - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

SFN 1809008

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborneng.com

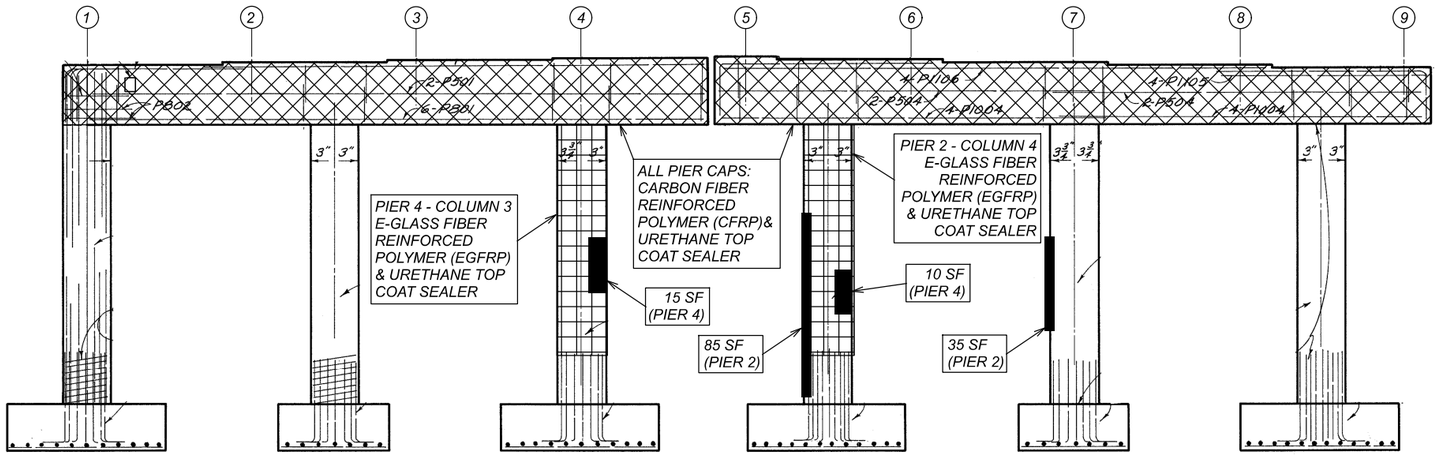
DESIGNER	CHECKER
MJD	JDH

REVIEWER SMK 12-13-22

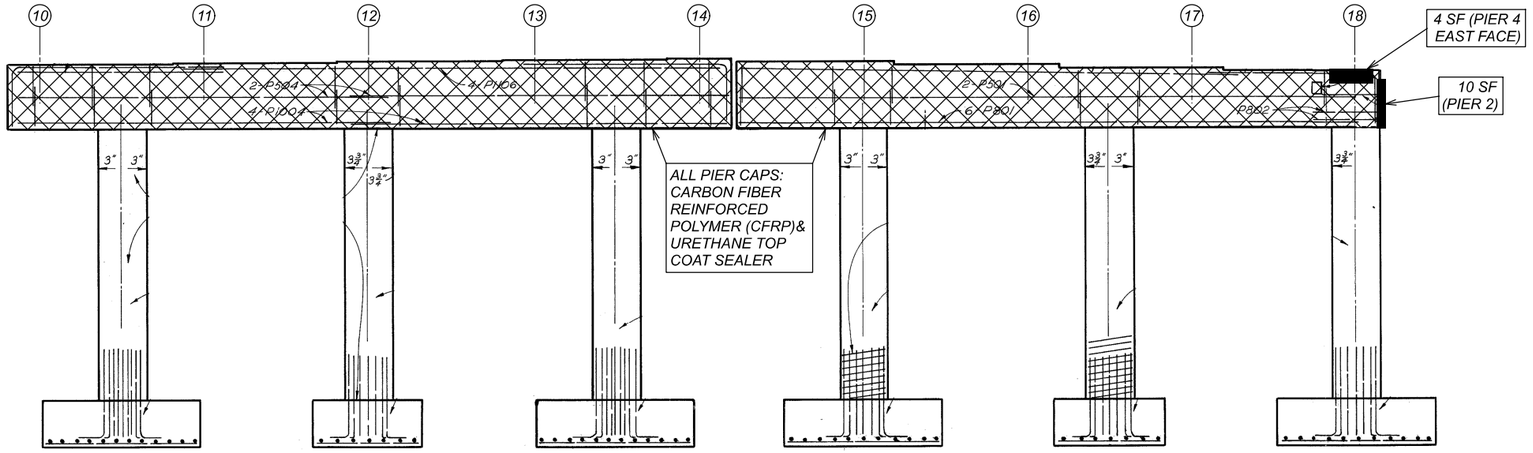
PROJECT ID 105909

SUBSET	TOTAL
4	7

SHEET	TOTAL
57	110



PIER ELEVATION - LOOKING EAST



PIER ELEVATION - LOOKING EAST

LEGEND:

(9) *BEAM NUMBER*

INDICATES APPROXIMATE AREAS OF CARBON FIBER REINFORCED POLYMER (CFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

PIER 1, PIER 2, PIER 3, PIER 4

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER (EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

PIER 2 - COLUMN 4
PIER 4 - COLUMN 3

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
PIER 1	0	-
PIER 2	130	163
PIER 3	0	-
PIER 4	29	37
	TOTAL	**200**

NOTES:

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2. *PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.*

3. *THE EXISTING LIGHTING CONDUITS AND LIGHTS ATTACHED TO THE PIER CAP FACES SHALL BE TEMPORARILY SUPPORTED OR OTHERWISE REMOVED AND REUSED DURING PLACEMENT OF THE CARBON FIBER WRAP. THIS WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM SPECIAL – COMPOSITE FIBER WRAP SYSTEM.*

PIER REPAIR DETAILS - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

SFN 1809008

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
5	7

SHEET	TOTAL
58	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17X11 (In.) DATE: 4/5/2023 TIME: 7:14:51 PM USER: mdcruz
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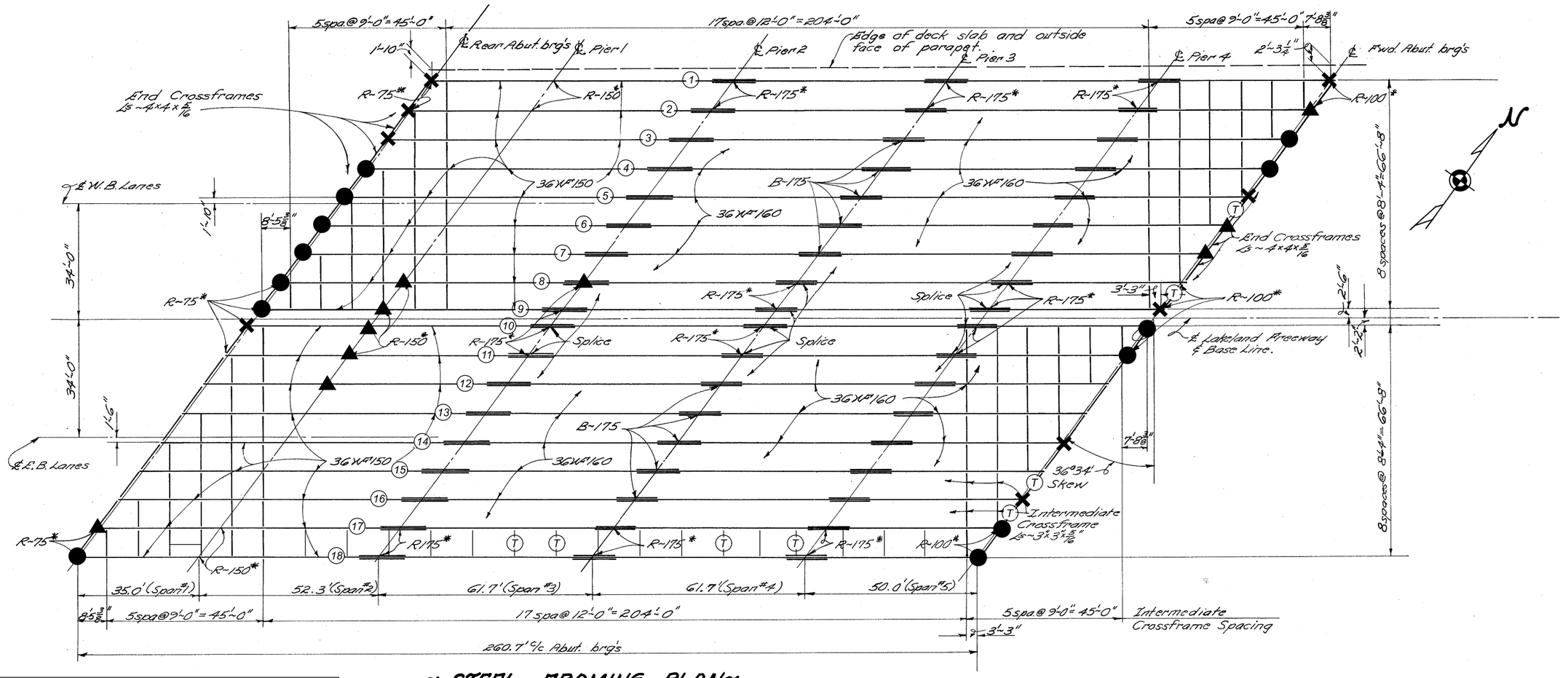

~ STEEL FRAMING PLAN ~

NOTES:

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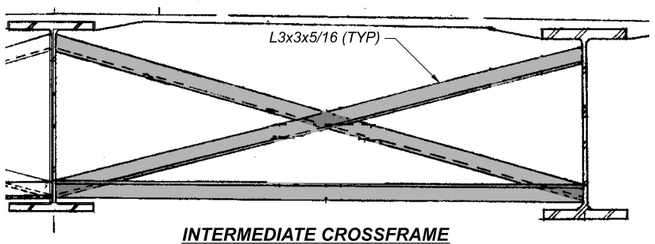
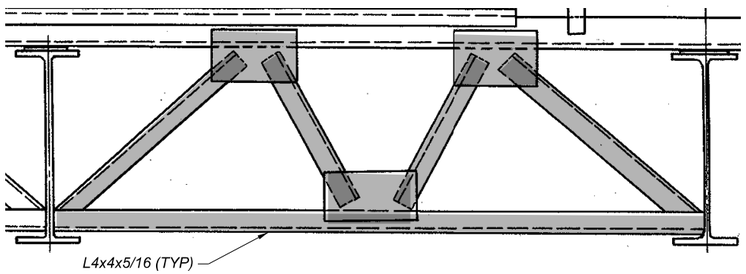
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

LEGEND:

- ✖ REPLACE BEARING (9 TOTAL); ITEM 516 - BEARING DEVICE, ROCKER
- ● REFURBISH BEARING (13 TOTAL); ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN
- ▲ RESET BEARING (9 TOTAL); ITEM 516 - RESET BEARING
- (T) TOTAL CROSSFRAME REPLACEMENT (8 TOTAL)
  - 4 END CROSSFRAMES
  - 4 INTERMEDIATE CROSSFRAMES
- ▬ INDICATES CROSSFRAME ANGLES TO BE REMOVED AND REPLACED PER ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN
- (1) EXISTING BEAM LINE NUMBER

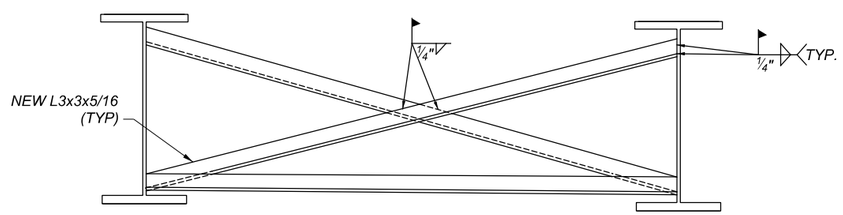


INTERMEDIATE CROSSFRAME



END CROSSFRAME

END CROSSFRAMES TO BE REPAIRED PER STANDARD DRAWING GSD-1-19



INTERMEDIATE CROSSFRAME REPAIR DETAIL

CUY-BH-FY2023 MISC.

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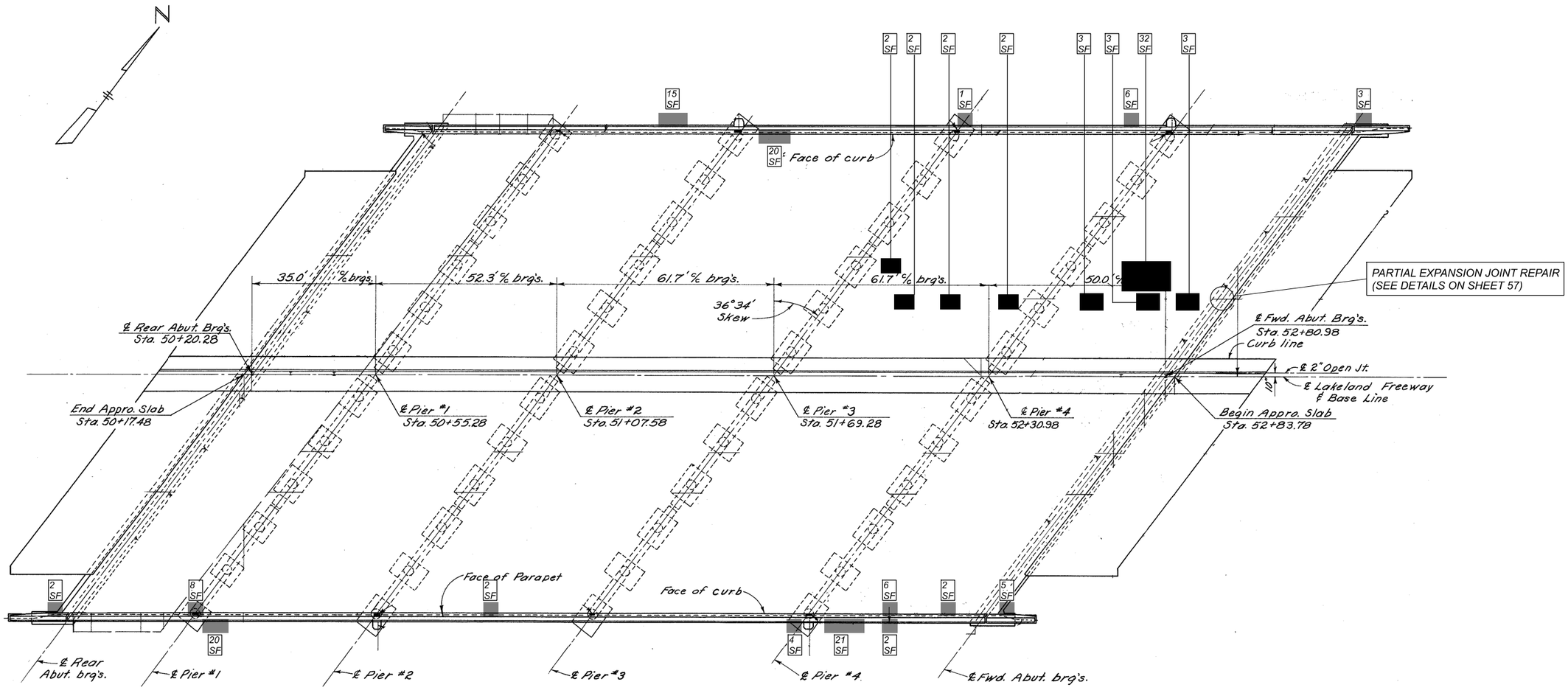
CROSSFRAME AND BEARING REPAIRS - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

SFN	1809008
DESIGN AGENCY	OSBORN ENGINEERING
	1100 Superior Avenue Suite 300 Cleveland, OH 44114 (216) 861-2020 www.osborn-eng.com
DESIGNER	MJD
CHECKER	JDH
REVIEWER	SMK 12-13-22
PROJECT ID	105909
SUBSET	6
TOTAL	7
SHEET	59
TOTAL	110



NOTES:

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LEGEND:

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B.

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)	ESTIMATED TOTAL (SY)
49	62	7
	TOTAL	**7**

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN & ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

		MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
NORTH PARAPET	OUTSIDE FACE	25	32
	INSIDE FACE	20	25
SOUTH PARAPET	OUTSIDE FACE	47	59
	INSIDE FACE	25	32
		TOTAL	**148**

DECK REPAIR PLAN - LOCATION 2
BRIDGE NO. CUY-90-2910
IR-90 OVER EAST 260TH STREET

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/19/2023 TIME: 3:42:26 PM USER: mdcruz
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SFN 1809008

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

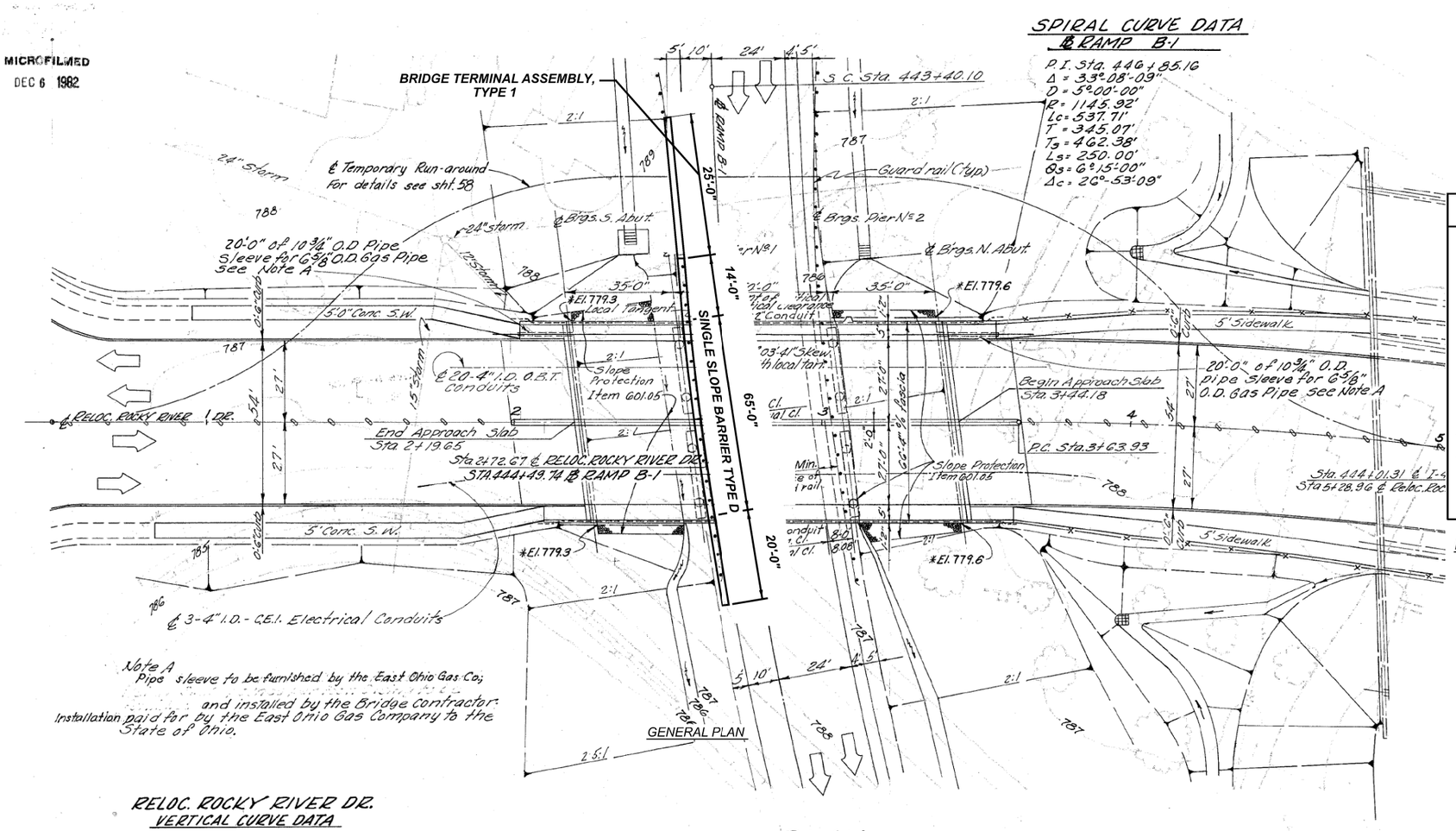
REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
7	7

SHEET	TOTAL
60	110

MICROFILMED
DEC 6 1982



GENERAL PLAN

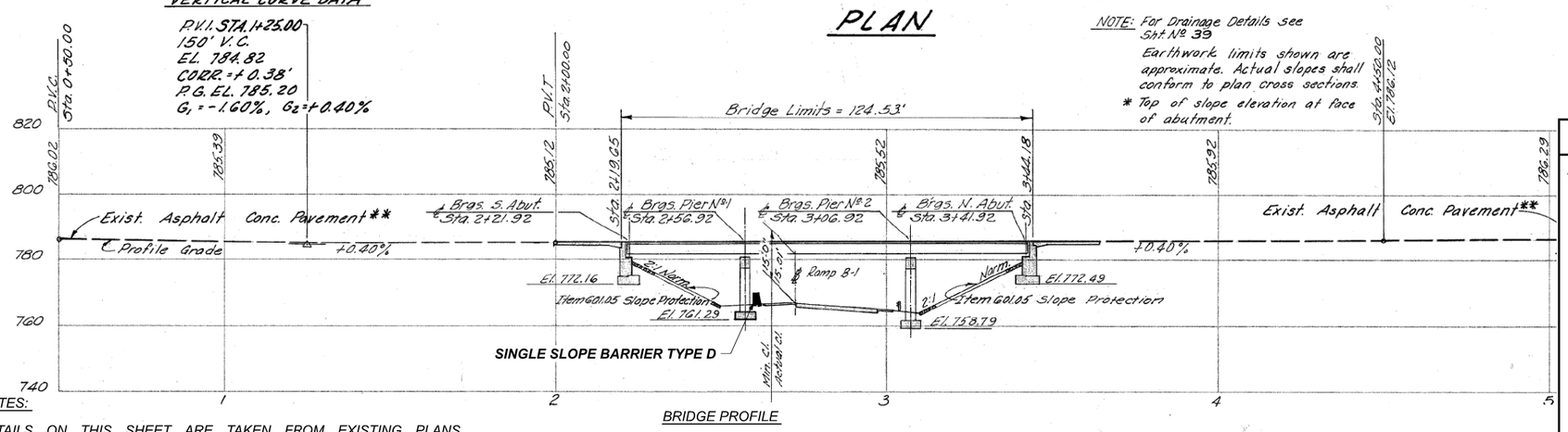
Note A
Pipe sleeve to be furnished by the East Ohio Gas Co.; and installed by the Bridge Contractor. Installation paid for by the East Ohio Gas Company to the State of Ohio.

SPIRAL CURVE DATA ℄ RAMP B-1

P.I. Sta. 446+85.16
Δ = 33°08'-09"
D = 5°00'-00"
R = 1145.92'
Lc = 537.71'
T = 345.07'
Ts = 462.38'
Ls = 250.00'
θs = 6°15'-00"
Δc = 20°-53'-09"

RELOC. ROCKY RIVER DR. VERTICAL CURVE DATA

P.V.I. STA. 1+25.00
150' V.C.
EL. 784.82
CORR. = +0.38'
P.G. EL. 785.20
$G_1 = -1.60\%$, $G_2 = +0.40\%$



BRIDGE PROFILE

PLAN

NOTE: For Drainage Details see Sht. N° 39
Earthwork limits shown are appreximate. Actual slopes shall conform to plan cross sections.
* Top of slope elevation at face of abutment.

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. FOR ADDITIONAL INFORMATION REFER TO STANDARD DRAWING RM-4.5 (SINGLE SLOPE BARRIER, TYPE D).
3. EXISTING GUARDRAIL SHALL BE CONNECTED TO THE SINGLE SLOPE TYPE D BARRIER BY UTILIZING BRIDGE TERMINAL ASSEMBLY, TYPE 1 PER THE STANDARD DRAWING MGS- 3.1. PAYMENT FOR THE BRIDGE TERMINAL ASSEMBLY TYPE 1 SHALL BE INCLUDED WITH ITEM 622. PAYMENT FOR PARTIAL REMOVAL OF THE EXISTING GUARDRAIL SHALL BE INCLUDED WITH ITEM 202.

PROFILE ALONG ℄ RELOC. ROCKY RIVER DR.

EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE

SPANS: 35'-0"±, 50'-0"±, 35'-0"± C/C BEARINGS
ROADWAY: 54'-0" ± T/T CURBS, WITH 5'-0" SIDEWALKS,
LOADING: CF - 2000 (1957)
SKEW: 7° 03' 41" R.F.
WEARING SURFACE: 2 3/4" MICRO SILICA CONCRETE OVERLAY
APPROACH SLABS: 20"-0"± Long (AS-1-72)
ALIGNMENT: TANGENT
STRUCTURE FILE NUMBER: 1810332
DATE BUILT: 1978

PROPOSED WORK:

1. REMOVE AND REPLACE EXISTING MSMC OVERLAY WITH NEW SUPERPLASTICIZED DENSE CONCRETE OVERLAY OVER THE BRIDGE DECK.
2. CONCRETE PATCHING OF PIER COLUMNS AND ABUTMENT BACKWALLS.
3. WRAPPING OF PIER COLUMNS WITH FIBER WRAP / E-GLASS.
4. REMOVE AND REPLACE EX. VANDAL PROTECTION FENCE.
5. REMOVE AND REPLACE EX. APPROACH SLABS WITH NEW 20'-0" APPROACH SLABS.
6. REMOVE AND REPLACE EX. EXPANSION JOINT WITH NEW STRIP SEAL EXP. JOINT.
7. REMOVE AND REPLACE EX. END CROSS FRAMES.
8. REMOVE AND REPLACE EX. REAR AND FORWARD ABUTMENT BEARING WITH NEW BEARINGS.
9. REMOVE THE EXISTING SOUTH GUARDRAIL TO THE LIMITS SHOWN ON THE SITE PLAN, AND REPLACE WITH BRIDGE TERMINAL ASSEMBLY TYPE 1 AND SINGLE SLOPE BARRIER TYPE D.

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND REINFORCED CONCRETE SUBSTRUCTURE

SPANS: 35'-0"±, 50'-0"±, 35'-0"± C/C BEARINGS
ROADWAY: 54'-0"± T/T CURBS, WITH 5'-0"± SIDEWALKS
LOADING: CF - 2000 (1957)
SKEW: 7° 03' 41" RIGHT FWD.
WEARING SURFACE: 3"± MICRO SILICA CONCRETE OVERLAY
APPROACH SLABS: 20'-0"± LONG (AS-1-15)
ALIGNMENT: TANGENT
SUPER ELEVATION: MATCH EXISTING
COORDINATES: LATITUDE 41° 25' 10" N
LONGITUDE 81° 49' 52" W
STRUCTURE FILE NUMBER: 1810332

HORIZONTAL SCALE IN FEET
0 0

SITE PLAN - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DR. OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER	CHECKER
AJS	JS

REVIEWER ZM 06-08-22
PROJECT ID 105909
SUBSET 1 TOTAL 14
SHEET 61 TOTAL 110

CUY-BH-FY2023 MISC

ABBREVIATION LIST:

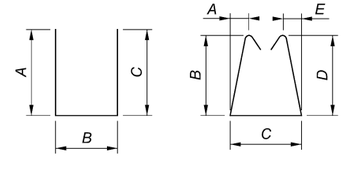
ABUT.	ABUTMENT.
ADT	AVERAGE DAILY TRAFFIC
ADTT	AVERAGE DAILY TRUCK TRAFFIC
APPR.	APPROACH SLAB
BRG.	BEARING
CL	CENTERLINE
C.J.	CONSTRUCTION JOINT
CLR.	CLEAR
CMS	CONSTRUCTION AND MATERIAL SPECIFICATIONS
CONR.	CONCRETE
DIA.	DIAMETER
DWG.	DRAWING
EB	EASTBOUND
EL.	ELEVATION
EX.	EXISTING
EXP.	EXPANSION
F.A.	FORWARD ABUTMENT
FT.	FOOT OR FEET
HMWM	HIGH MOLECULAR WEIGHT METHACRYLATE
O/O	OUT TO OUT
P.E.J.F.	PREFORMED EXPANSION JOINT FILLER
PROP.	PROPOSED
R.A.	REAR ABUTMENT
R.F.	RIGHT FORWARD
TEMP.	TEMPORARY
TYP.	TYPICAL
WB	WESTBOUND

ESTIMATED QUANTITIES

CALCULATED BY:	AJS	DATE: 05/25/2022
CHECKED BY:	JS	DATE: 06/08/2022

ITEM	EXTENSION	TOTAL	UNIT	DESCRIPTION	SHEET REFERENCE
202	11203	LUMP	LS	PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 36, 64, 65, 66, 67, 68
202	22900	245	SY	APPROACH SLAB REMOVED	
202	75260	306	FT	VANDAL PROTECTION FENCE REMOVED	
202	38001	124	FT	GUARDRAIL REMOVED, AS PER PLAN	61
509	10000	1823	LB	EPOXY COATED REINFORCING STEEL	
509	20001	500	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	34, 66, 68
511	34410	16	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	
511	45710	9	CY	CLASS QC1 CONCRETE, ABUTMENT	
512	10050	361	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	
512	10101	228	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34, 71
512	10300	37	SY	SEALING OF CONCRETE BRIDGE DECKS WITH HMWM RESIN	
SPECIAL	51271500	228	SY	SPECIAL - URETHANE TOP COAT SEALER	
513	10201	5678	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	
516	11210	133	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
516	46200	16	EACH	BEARING DEVICE, ROCKER	
516	47001	LUMP	LS	JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
SPECIAL	51900100	1066	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36, 38, 70
519	11101	480	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35, 70
526	98100	245	SY	APPROACH SLABS, MISC: REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=14")	74
607	39930	306	FT	VANDAL PROTECTION FENCE, 12' CURVED, COATED FABRIC	
607	39994	164	FT	TEMPORARY VANDAL FENCE, TYPE B	63, 64
622	10161	99	FT	CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN	61
514	00100	LUMP	LS	SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL	
514	00504	60	MNHR	GRINDING FINS, TEARS, SLIVERS ON EXISTING STRUCTURAL STEEL	
848	10200	743	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (3 1/4" THICK)	
848	20000	743	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30200	67	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
848	50000	74	SY	HAND CHIPPING	
848	50100	LUMP	LS	TEST SLAB	
848	50200	4	CY	FULL DEPTH REPAIR	
848	50320	743	SY	EXISTING CONCRETE OVERLAY REMOVED 3" NOMINAL THICKNESS	

MARK	TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS					
					A	B	C	D	R	INC
A501	4	31' - 6"	131	STR						
A502	4	32' - 11"	137	STR						
A503	4	4' - 6"	19	STR						
S501	8	2' - 2"	30	1	0' - 6"	1' - 5"	0' - 6"			
S502	8	2' - 4"	18	1	0' - 6"	1' - 7"	0' - 6"			
S503	8	6' - 9"	56	1	0' - 8"	5' - 8"	0' - 8"			
S504	8	7' - 5"	61	2	0' - 0 3/4"	3' - 0"	0' - 8"	3' - 0"	0' - 0 3/4"	
S601	6	31' - 6"	284	STR						
S602	6	32' - 11"	297	STR						
S701	6	31' - 6"	386	STR						
S702	6	32' - 11"	404	STR						
BRIDGE TOTAL (LBS):			1823							



ESTIMATED QUANTITIES - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DR. OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER	CHECKER
AJS	JS

REVIEWER ZM 06-08-22

PROJECT ID 105909

SUBSET	TOTAL
2	14

SHEET	TOTAL
62	110

CUY-BH-FY2023 MISC

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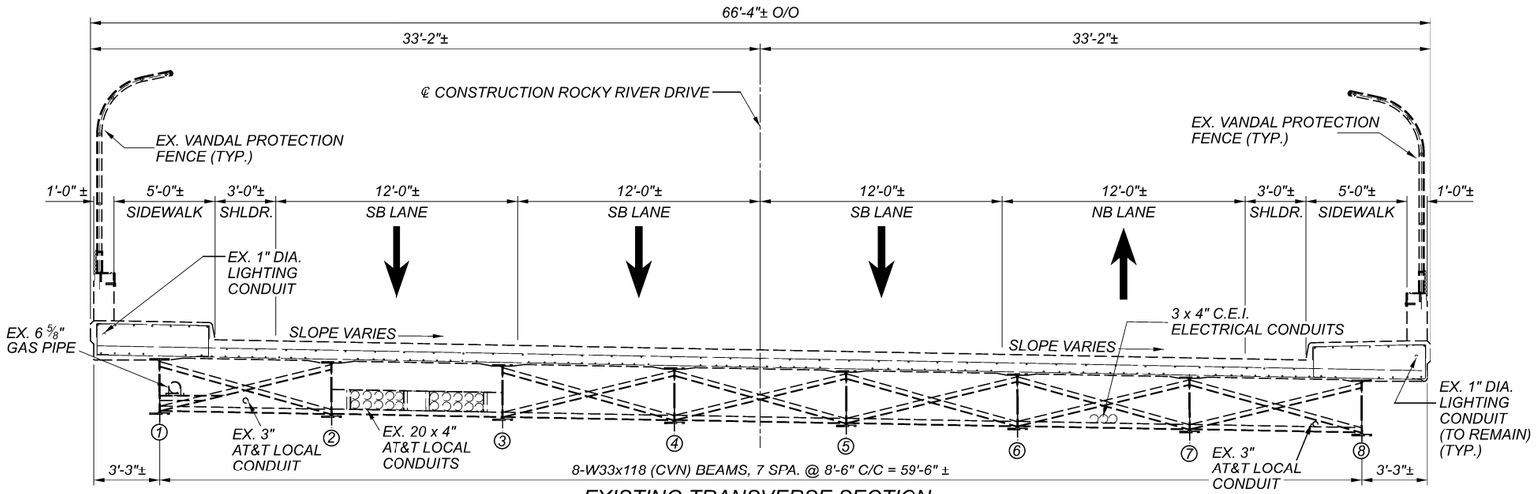

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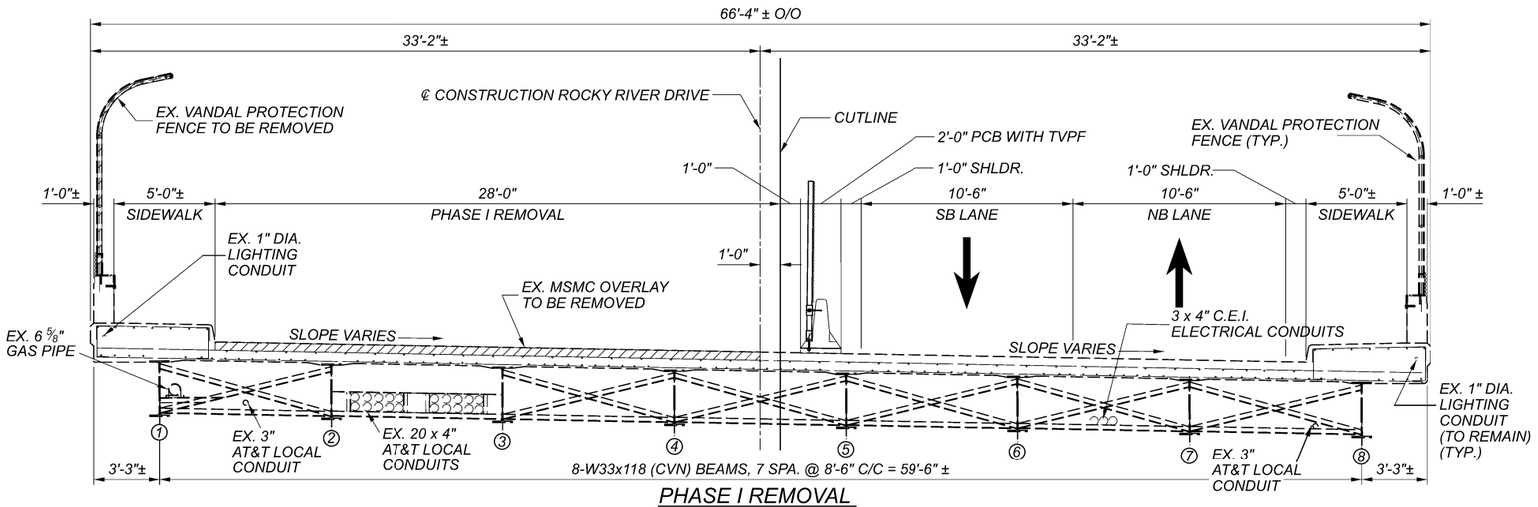
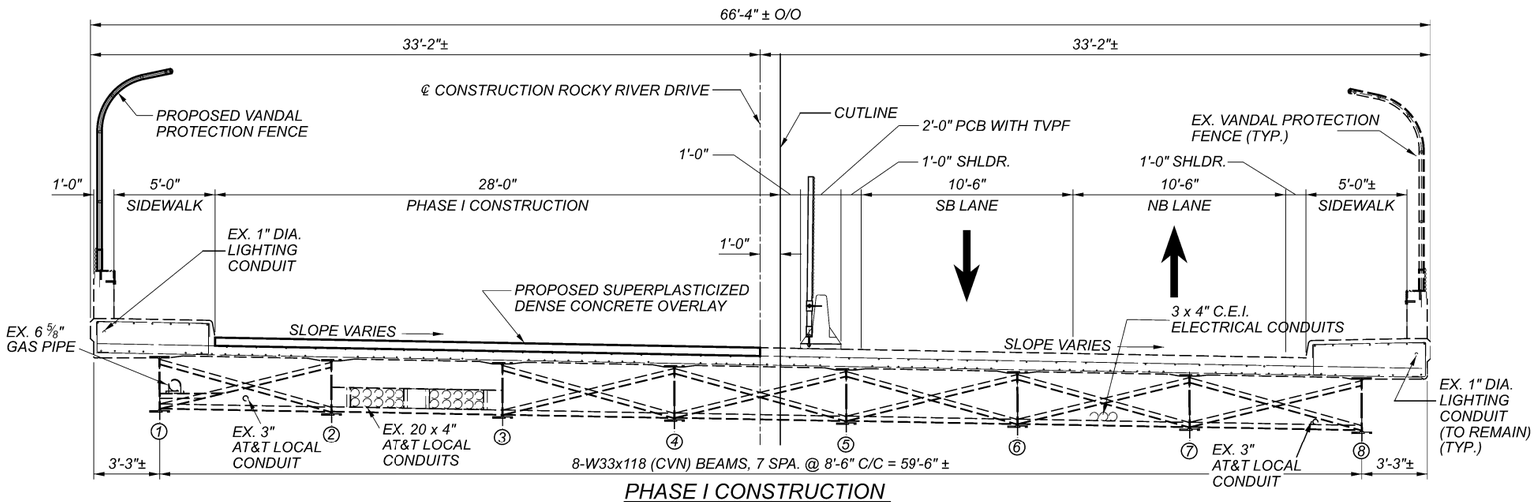


PHASE I REMOVAL



PHASE I CONSTRUCTION

PHASE I:

1. SHIFT TRAFFIC AND INSTALL PORTABLE CONCRETE BARRIER AS PER PLAN.
2. REMOVE PORTIONS OF DECK OVERLAY, APPROACH SLAB, EXPANSION JOINTS VANDAL PROTECTION FENCE, END CROSSFRAMES, ROCKERS, AND ABUTMENTS AS PER PHASE 1 REMOVAL.
3. INSTALL NEW PORTIONS OF DECK OVERLAY, APPROACH SLAB, EXPANSION JOINTS, VANDAL PROTECTION FENCE, END CROSSFRAMES, ROCKERS, AND ABUTMENTS AS PER PHASE 1 CONSTRUCTION.

NOTES:

1. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE. DO NOT DISTURB.

LEGEND:

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

(#) - BEAM DESIGNATION

PHASE CONSTRUCTION DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DR. OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
NEAS
Nelson Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER	CHECKER
AJS	JS

REVIEWER ZM 06-08-22

PROJECT ID 105909

SUBSET	TOTAL
3	14

SHEET	TOTAL
63	110

CUY - 237 - 0827

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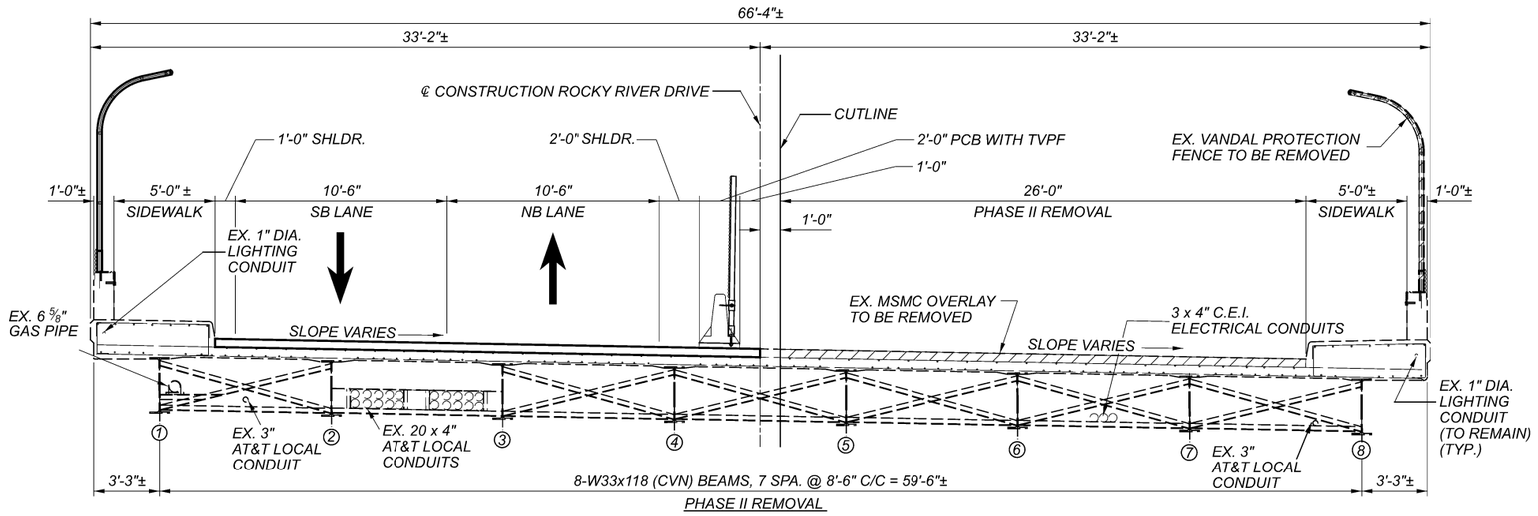
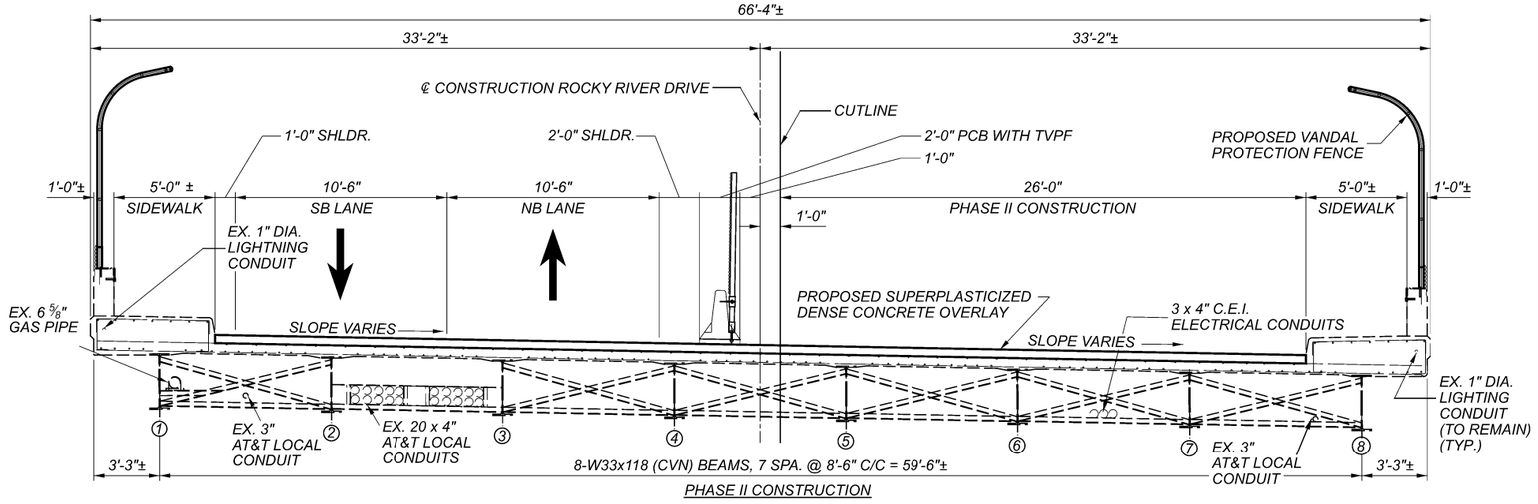
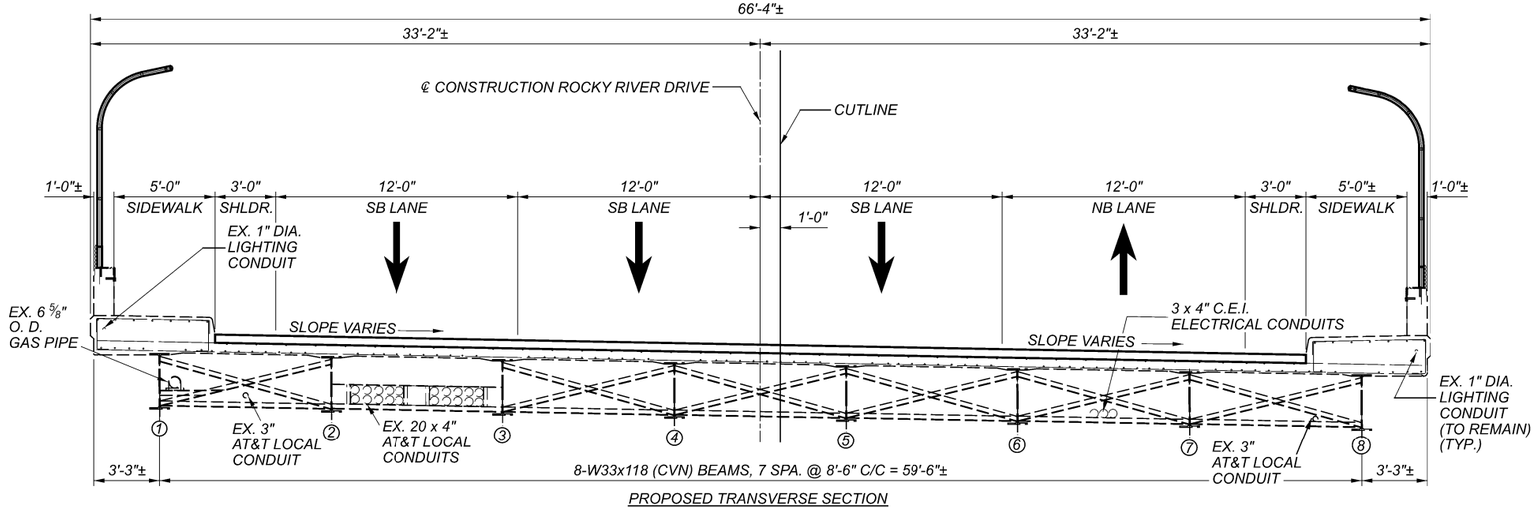


PHASE II REMOVAL



PHASE II CONSTRUCTION



PROPOSED TRANSVERSE SECTION

PHASE II:

1. SHIFT TRAFFIC AND INSTALL PORTABLE CONCRETE BARRIER AS PER PLAN.
2. REMOVE PORTIONS OF DECK OVERLAY, APPROACH SLAB, EXPANSION JOINTS VANDAL PROTECTION FENCE, END CROSSFRAMES, ROCKERS, AND ABUTMENTS AS PER PHASE 2 REMOVAL.
3. INSTALL NEW PORTIONS OF DECK OVERLAY, APPROACH SLAB, EXPANSION JOINTS, VANDAL PROTECTION FENCE, END CROSSFRAMES, ROCKERS, AND ABUTMENTS AS PER PHASE 2 CONSTRUCTION.

NOTES:

1. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE. DO NOT REMOVE.

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- (#) - BEAM DESIGNATION

PHASE CONSTRUCTION DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DR. OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
NEAS Network Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER	CHECKER
AJS	JS

REVIEWER: ZM 06-08-22

PROJECT ID: 105909

SUBSET	TOTAL
4	14

SHEET	TOTAL
64	110

CUY - 237 - 0827

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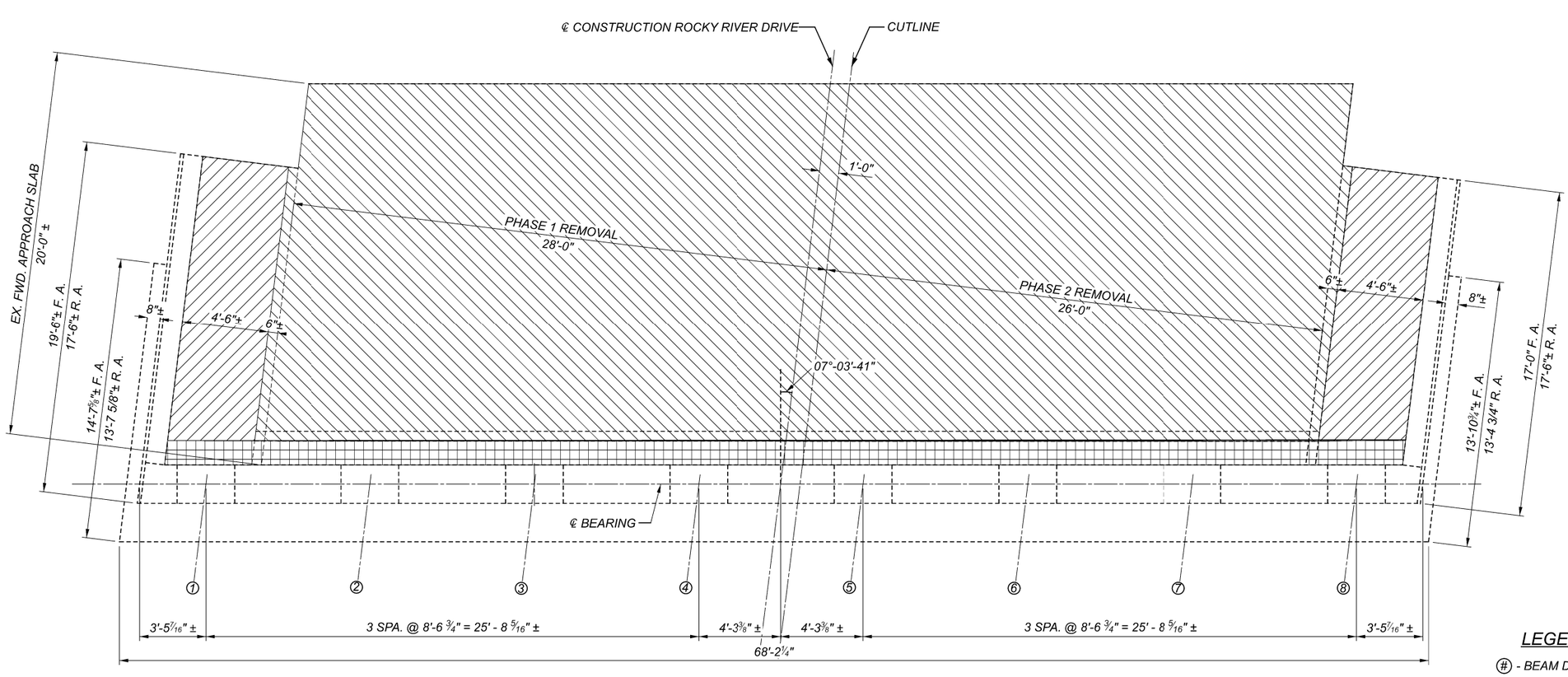
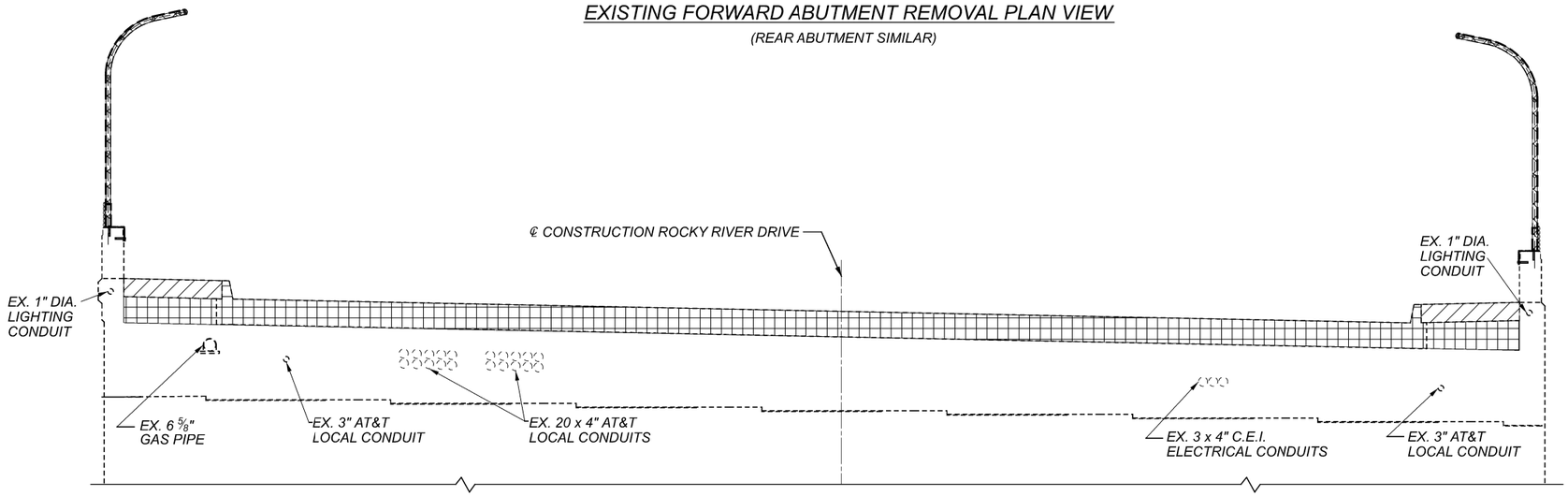


EXISTING FORWARD ABUTMENT REMOVAL PLAN VIEW

(REAR ABUTMENT SIMILAR)



EXISTING FORWARD ABUTMENT REMOVAL ELEVATION VIEW

(REAR ABUTMENT SIMILAR)

LEGEND:

Ⓝ - BEAM DESIGNATION

- INDICATES AREAS OF THE SIDEWALK TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES AREAS OF THE APPROACH SLAB TO BE REMOVED AS PER ITEM 202 - APPROACH SLAB REMOVED.
- INDICATES AREAS OF VANDAL PROTECTION FENCE TO BE REMOVED AS PER ITEM 202 - VANDAL PROTECTION FENCE REMOVED.
- INDICATES AREAS OF ABUTMENT TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. THE REMOVAL LIMITS SHOWN ARE THE MINIMUM AMOUNT NECESSARY TO PERFORM THE PROPOSED WORK, ANY ADDITIONAL REMOVAL PERFORMED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING REMOVAL. ALL ADDITIONAL REMOVAL SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE DEPARTMENT.
2. CUT ALL EXISTING REINFORCING AT REMOVAL LINES AS DIRECTED BY THE PLANS.
3. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE. DO NOT REMOVE.

ABUTMENT AND APPROACH SLAB REMOVAL DETAILS - LOCATION 3

BRIDGE NO. CUY-237-0827

ROCKY RIVER DRIVE OVER IR 480 EB RAMP

CTY-RTE-SECTION

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SFN	1810332
DESIGN AGENCY	NEAS

2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

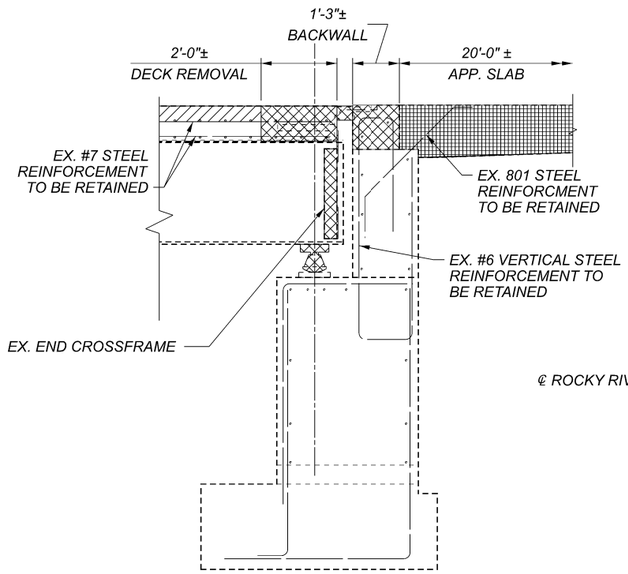
DESIGNER	CHECKER
AJS	JS

REVIEWER
ZM 06-08-22

PROJECT ID
105909

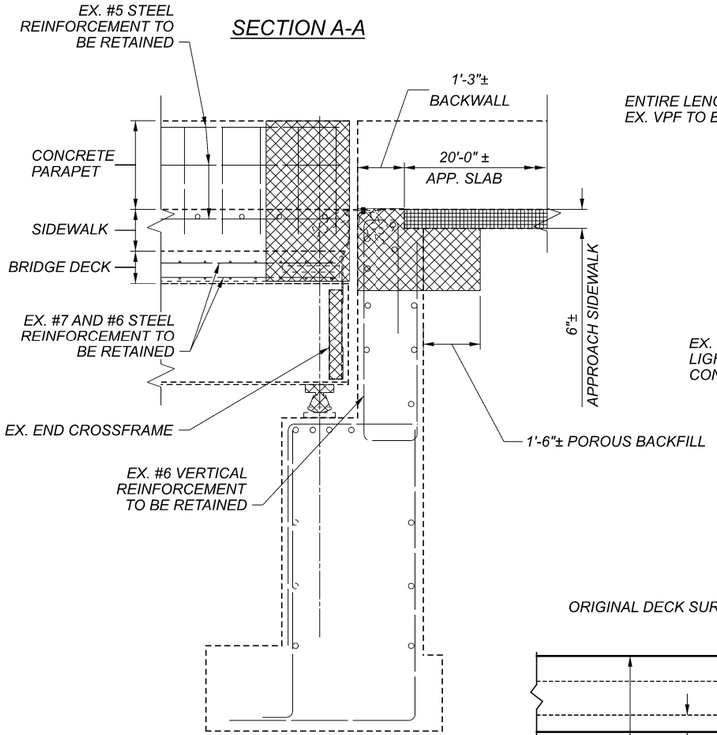
SUBSET	TOTAL
5	14

SHEET	TOTAL
65	110

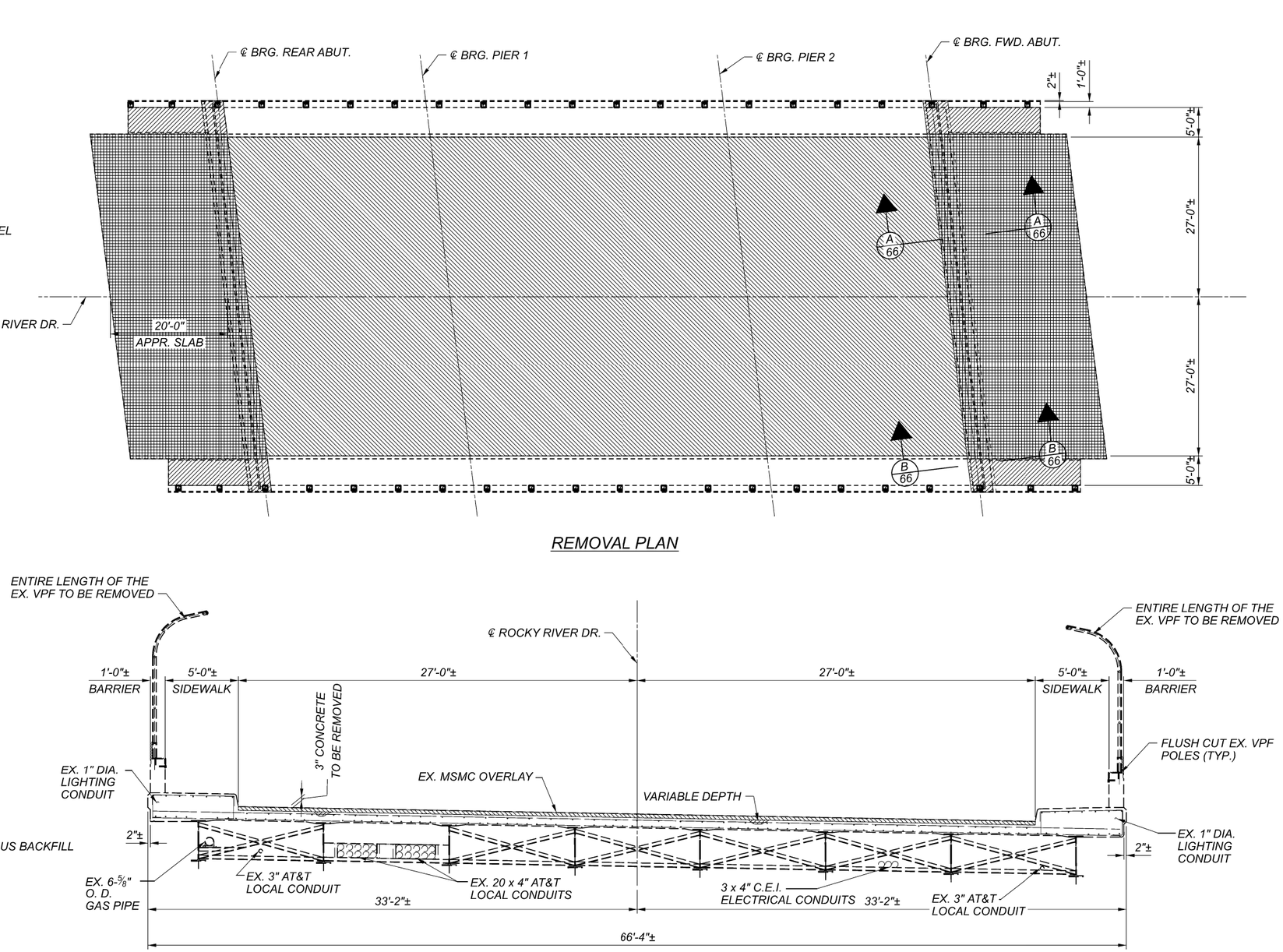


SECTION A-A

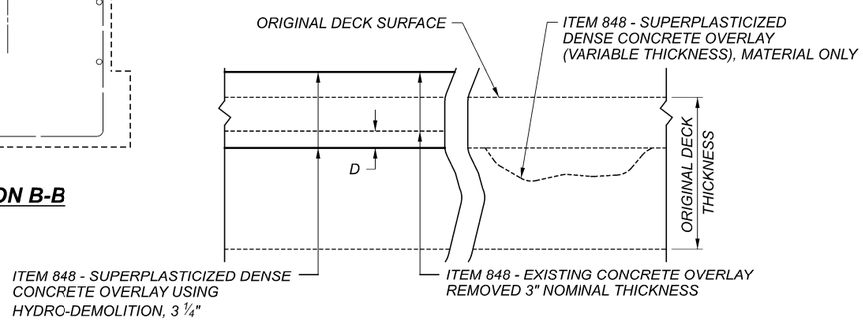
REMOVAL PLAN



SECTION B-B



TRANSVERSE SECTION REMOVAL



NOTES:

1. THE REMOVAL LIMITS SHOWN ARE THE MINIMUM AMOUNT NECESSARY TO PERFORM THE PROPOSED WORK. ANY ADDITIONAL REMOVAL PERFORMED BY THE CONTRACTOR SHALL BE APPROVED BY THE ENGINEER PRIOR TO STARTING REMOVAL. ALL ADDITIONAL REMOVAL SHALL BE REPLACED IN KIND AT NO ADDITIONAL COST TO THE DEPARTMENT.
2. ALL EXISTING UTILITIES ARE TO REMAIN IN PLACE. DO NOT REMOVE.
3. D = ITEM 848 SURFACE PREPARATION USING HYDRO DEMOLITION, ¼" THICKNESS.

LEGEND:

- APPROACH SLAB REMOVAL LIMITS PER ITEM 202 - APPROACH SLAB REMOVED.
- ITEM 848 - EXISTING CONCRETE OVERLAY REMOVED, 3" NOMINAL THICKNESS
- MISC. REMOVAL LIMITS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES AREAS OF THE SIDEWALK TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

REMOVAL DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DRIVE OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
NEAS
National Engineering & Architectural Services Inc.
2800 CORPORATE EXCHANGE DR, SUITE 240
COLUMBUS, OH, 43231
TEL:614.714.0299
WWW.NEASINC.COM

DESIGNER	CHECKER
AI	JS

REVIEWER: ZM 06-08-22

PROJECT ID: 105909

SUBSET	TOTAL
6	14

SHEET	TOTAL
66	110

CUY-BH-FY2023 MISC

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 12/12/2022 TIME: 1:20:05 PM USER: Auneeb.Siddiqi
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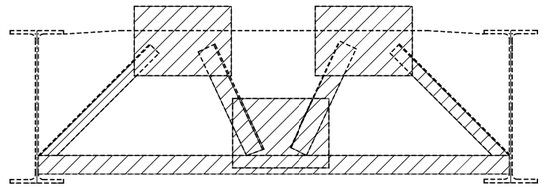
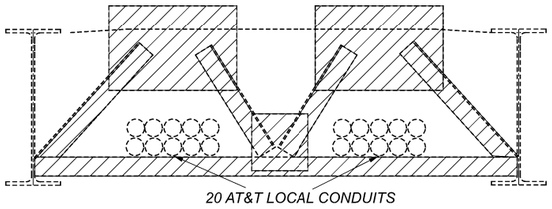
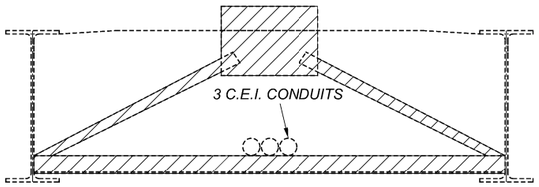


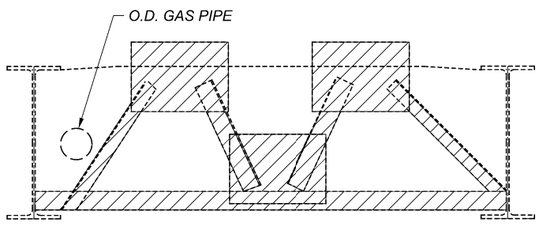
TYPICAL END CROSSFRAME



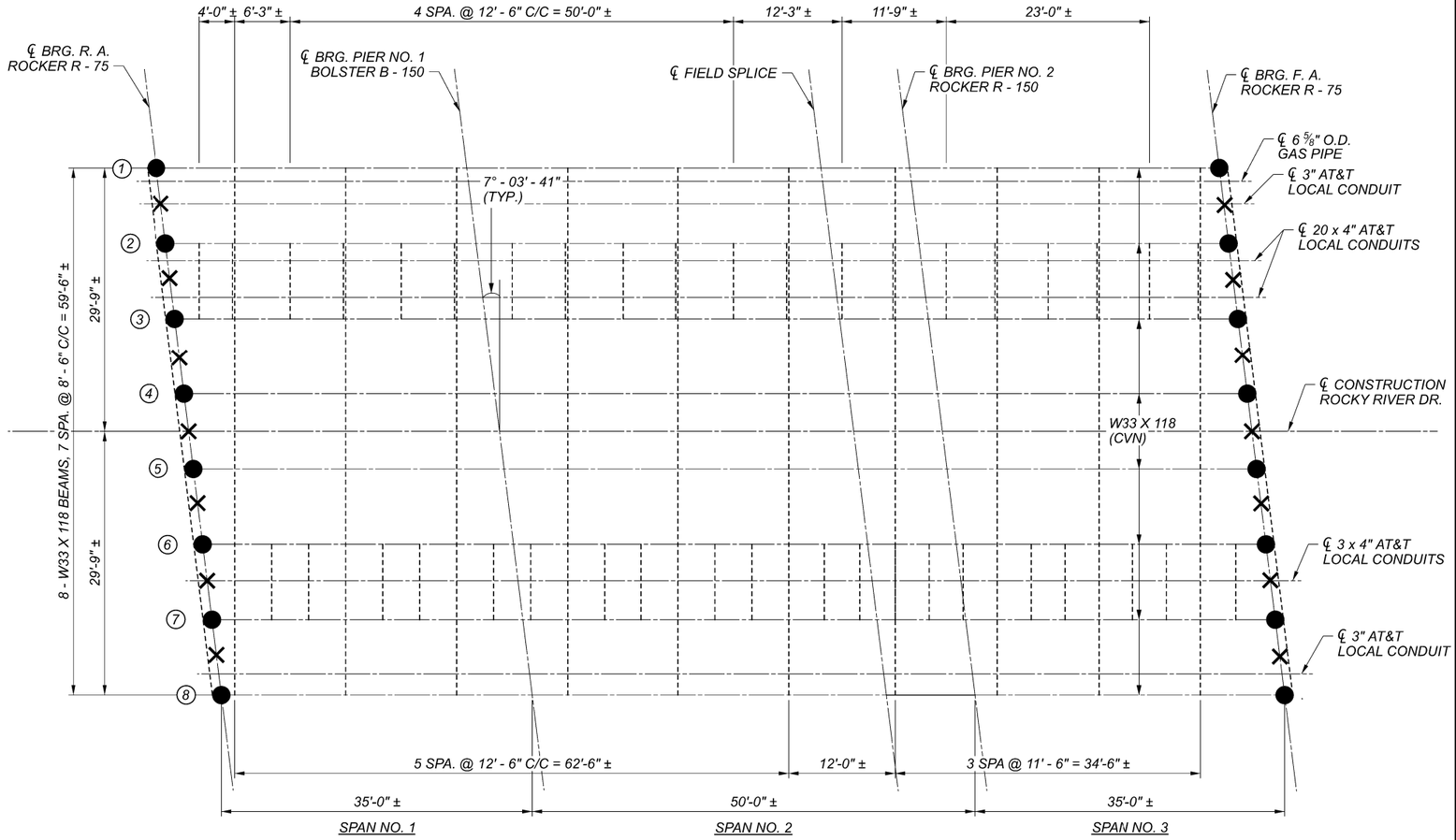
SPECIAL END CROSSFRAME FOR AT&T LOCAL CONDUITS



SPECIAL END CROSSFRAME FOR C.E.I. CONDUITS



SPECIAL END CROSSFRAME FOR O.D. GAS PIPE



FRAMING PLAN

LEGEND:

- ✕ - INDICATES TYPICAL END CROSSFRAMES AND SPECIAL END CROSSFRAMES TO BE REMOVED. WELDS SHALL BE REMOVED AND GROUND FLUSH DURING REMOVAL. PAYMENT INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- ● - INDICATES TYPICAL R-75 BEARINGS TO BE REMOVED AND REPLACED IN KIND. REMOVAL OF BEARINGS IS INCLUDED WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN. WELDS SHALL BE REMOVED AND GROUND FLUSH DURING REMOVAL. PAYMENT INCLUDED WITH ITEM 514 - GRINDING FINS, TAILS, SLIVERS ON EXISTING STRUCTURAL STEEL.
- (#) - BEAM DESIGNATION
- ▨ - INDICATES AREAS TO BE REMOVED AS PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.

NOTES:

1. AT&T LOCAL AND CEI FIRST ENERGY WILL TEMPORARILY SUPPORT THEIR CONDUITS AS NEEDED DURING CONSTRUCTION. THE CONTRACTOR SHALL COORDINATE WITH EACH UTILITY PRIOR TO BEGINNING WORK AT LOCATION 3.

FRAMING PLAN REMOVAL DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DRIVE OVER IR 480 EB RAMP

CTY-RTE-SECTION

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/11/2023 TIME: 3:02:42 PM USER: Auneeb.Siddiqi
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SFN 1810332

DESIGN AGENCY
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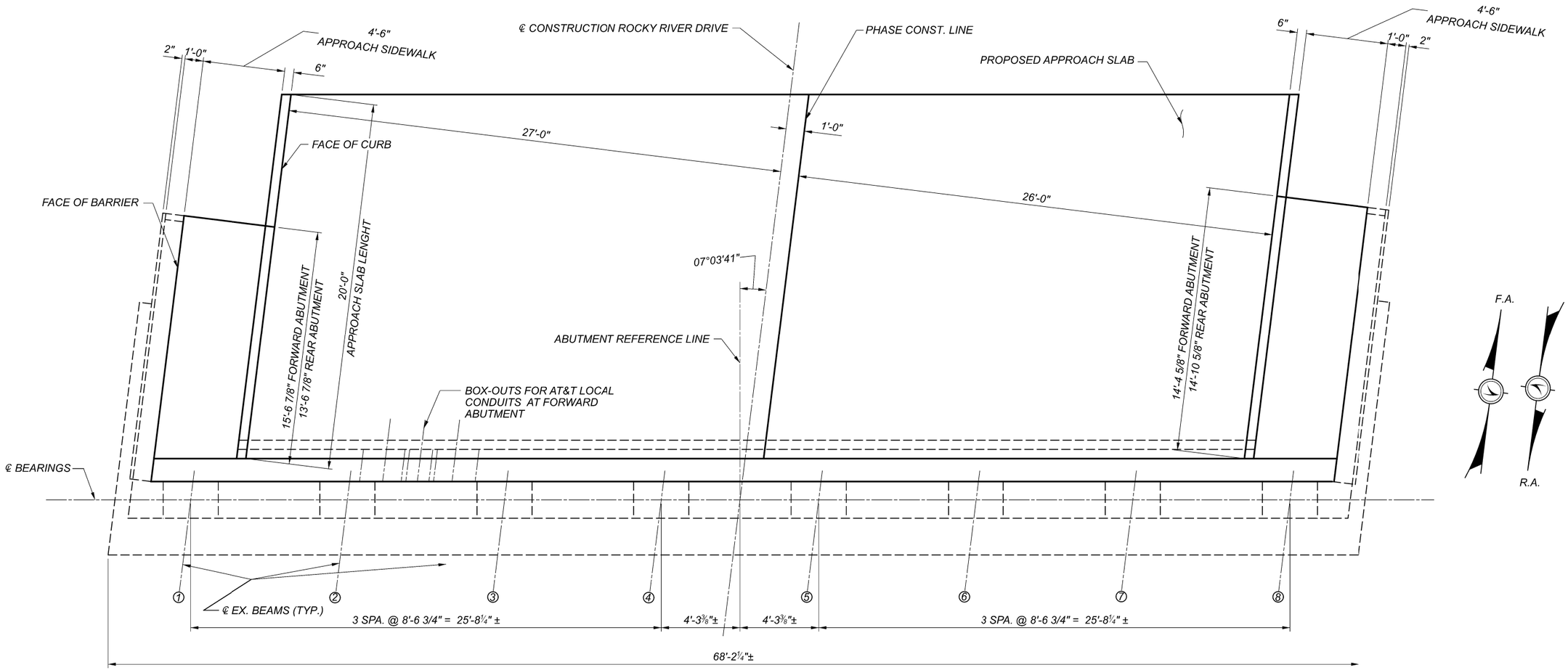
DESIGNER	CHECKER
AJS	JS

REVIEWER: ZM 06-08-22

PROJECT ID: 105909

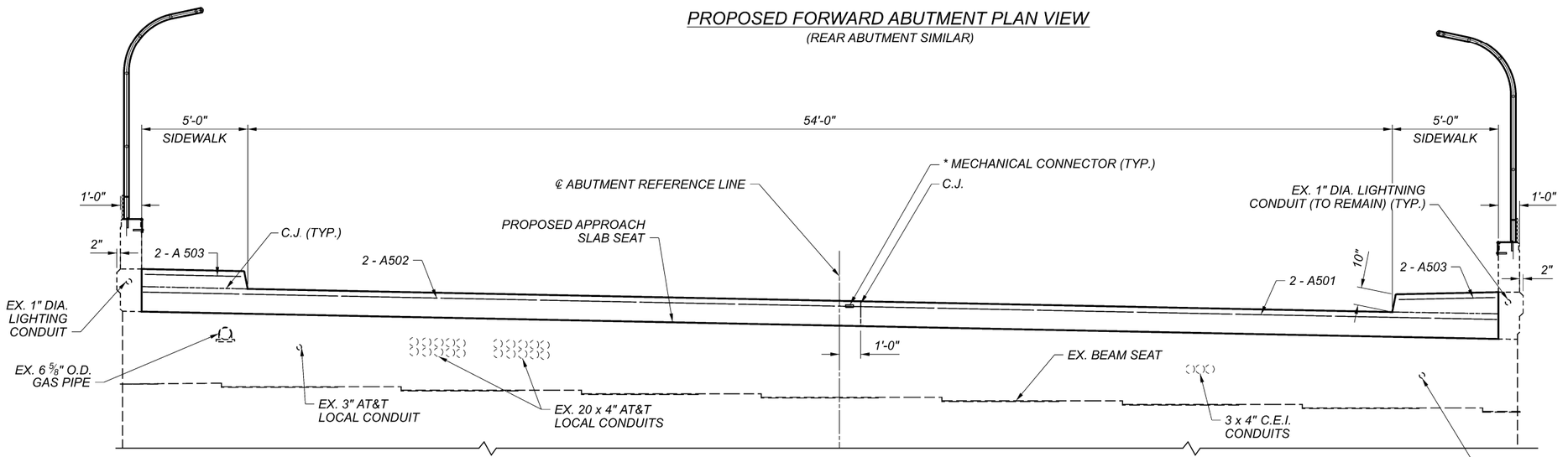
SUBSET	TOTAL
7	14

SHEET	TOTAL
67	110



PROPOSED FORWARD ABUTMENT PLAN VIEW

(REAR ABUTMENT SIMILAR)



PROPOSED FORWARD ABUTMENT ELEVATION VIEW

(REAR ABUTMENT SIMILAR)

NOTES:

1. ELEVATIONS AND CURBLINE LOCATION ARE TAKEN FROM EXISTING PLANS. CONTRACTOR SHALL VERIFY ELEVATIONS AND CURBLINE LOCATIONS PRIOR TO ANY REMOVAL. PROPOSED ELEVATIONS AND SIDEWALK LOCATIONS SHALL MATCH THE EXISTING.
2. ALL EXISTING UTILITES ARE TO REMAIN IN PLACE. DO NOT REMOVE.
3. MECHANICAL CONNECTORS SHALL BE INCLUDED WITH ITEM 509 EPOXY COATED REINFORCING STEEL, AS PER PLAN, FOR PAYMENT.
4. EXTEND ALL TRANSVERSE STEEL REINFORCEMENT MINIMUM OF 6" BEYOND THE CONSTRUCTION JOINT TO ACCOMMODATE CONNECTION USING A MECHANICAL CONNECTOR.

* PROPOSED REINFORCING BAR UTILIZES A MECHANICAL CONNECTOR. BAR LENGTH, ADJUSTMENT, AND / OR END PREPARATION MAY BE NECESSARY DEPENDING UPON THE TYPE OF CONNECTOR USED.

PROPOSED ABUTMENT - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DRIVE OVER IR 480 EB RAMP

SFN 1810332

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DESIGNER	CHECKER
AI	JS

REVIEWER ZM 06-08-22

PROJECT ID 105909

SUBSET	TOTAL
8	14

SHEET	TOTAL
68	110

CUY-BH-FY2023 MISC

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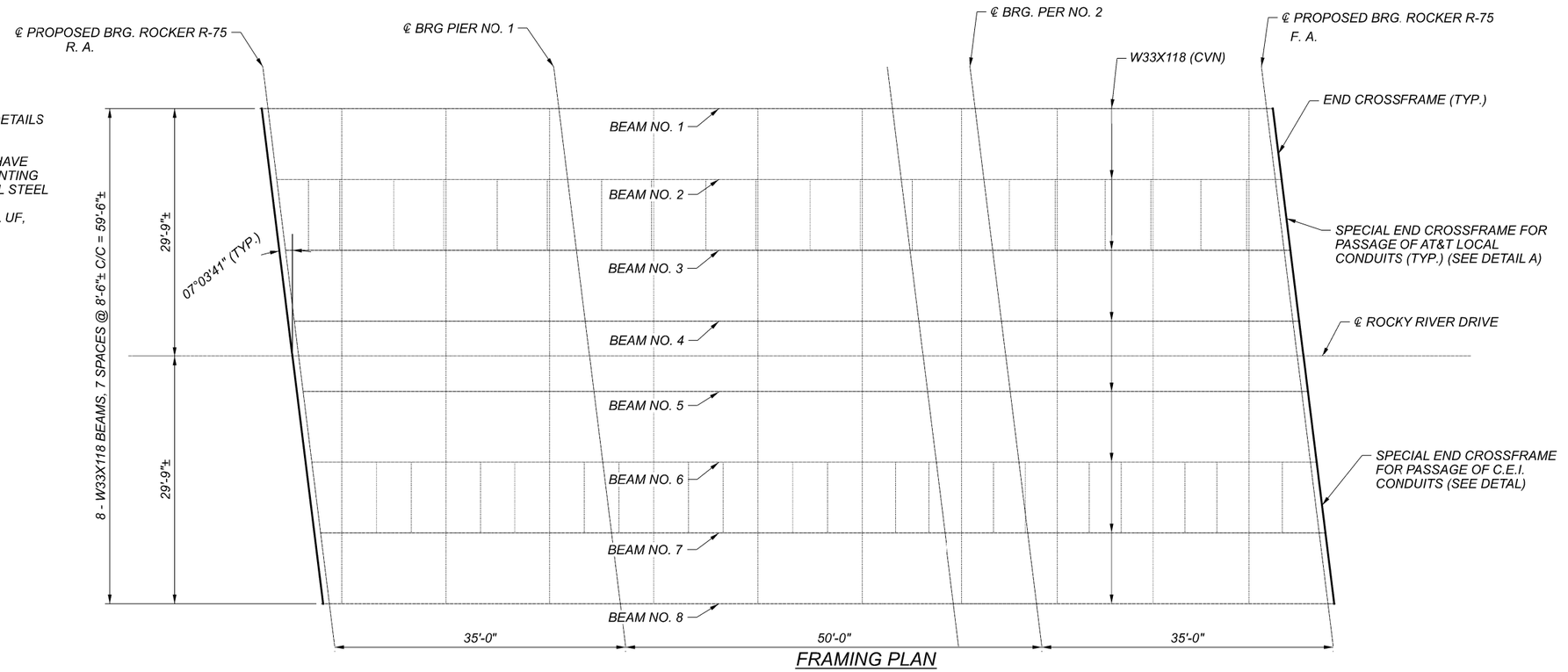
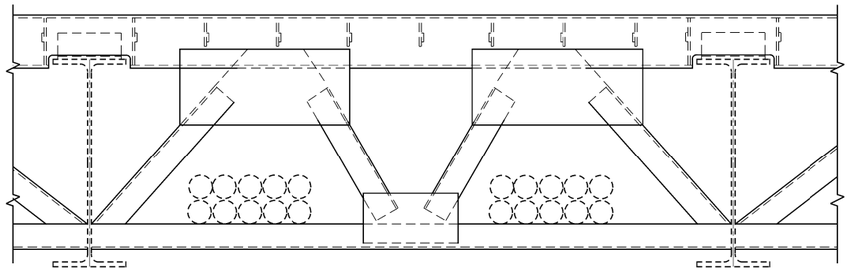
NOTES:

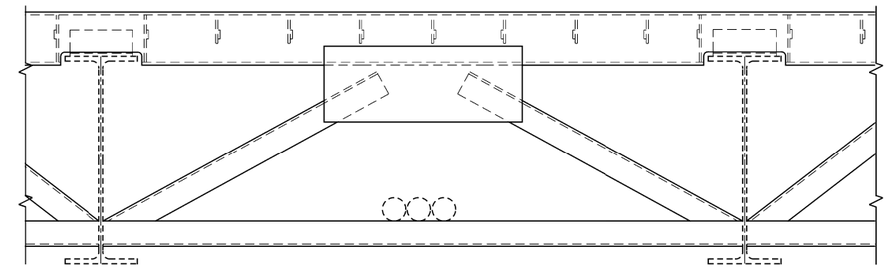
1. FOR ADDITIONAL END CROSSFRAME DETAILS REFER TO STD. DWG. GSD-1-19.
2. ALL NEW STRUCTURAL STEEL SHALL HAVE SHOP APPLIED PRIME COAT, SHOP PAINTING AND FIELD TOUCH-UP OF STRUCTURAL STEEL SHALL BE INCLUDED WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN, FOR PAYMENT.



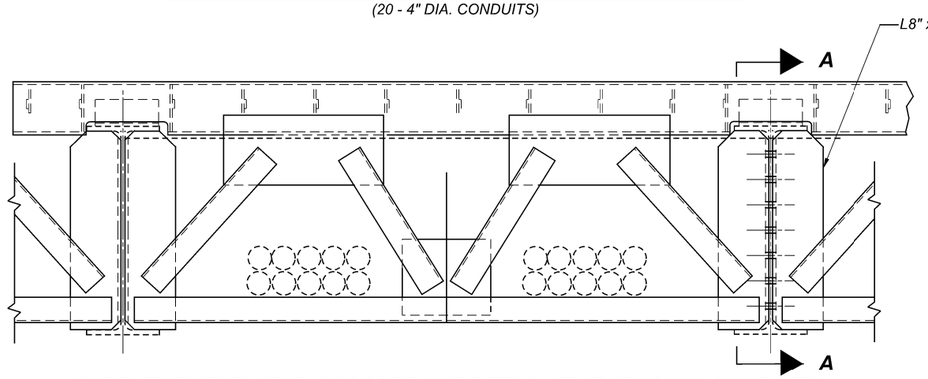
FRAMING PLAN



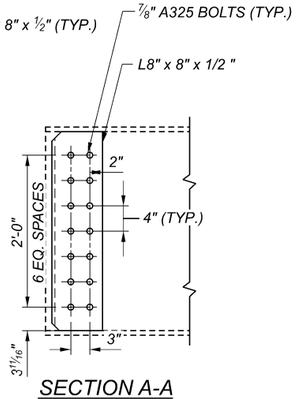
DETAIL A: END CROSSFRAME AT AT&T LOCAL CONDUITS
(20 - 4" DIA. CONDUITS)



END CROSSFRAME AT C.E.I. CONDUITS
(3 - 4" DIA. CONDUITS)



SUPPLEMENTARY END CROSSFRAME DETAIL AT AT&T LOCAL CONDUITS
(THIS DETAIL IS ONLY IF THERE IS NEED TO ATTACH AN ANGLE TO THE BEAM)



SECTION A-A

END CROSSFRAME DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DRIVE OVER IR 480 EB RAMP

SFN 1810332

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DESIGNER	CHECKER
AI/AS	JS

REVIEWER ZM 06-08-22

PROJECT ID 105909

SUBSET	TOTAL
9	14

SHEET	TOTAL
69	110

CUY-BH-FY2023 MISC

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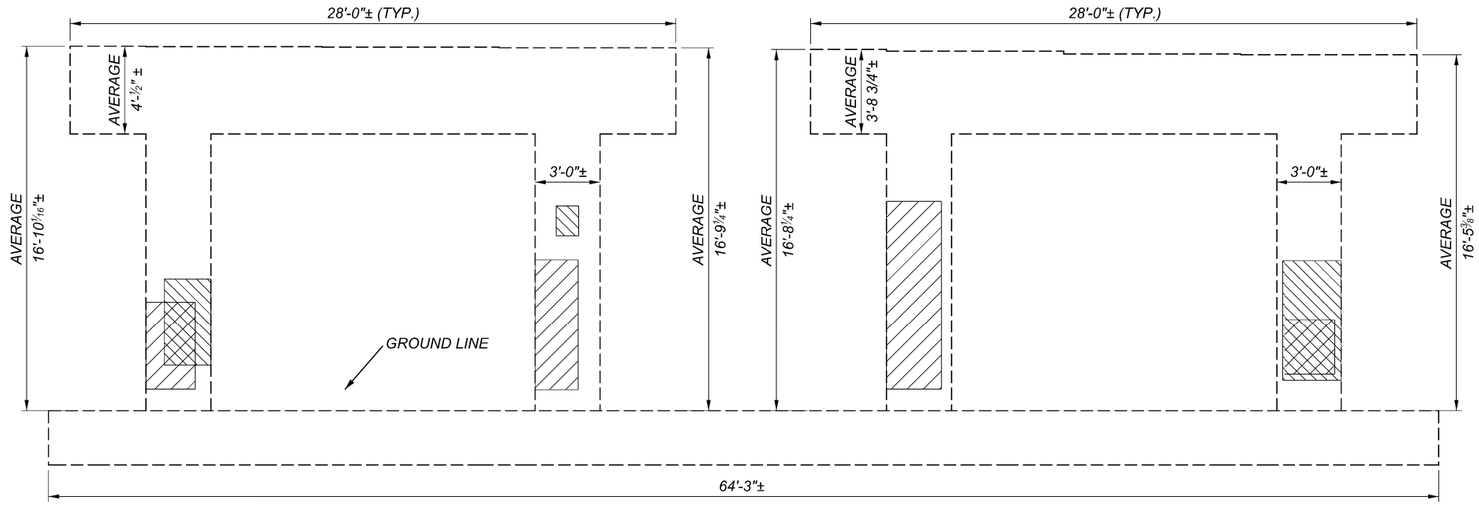
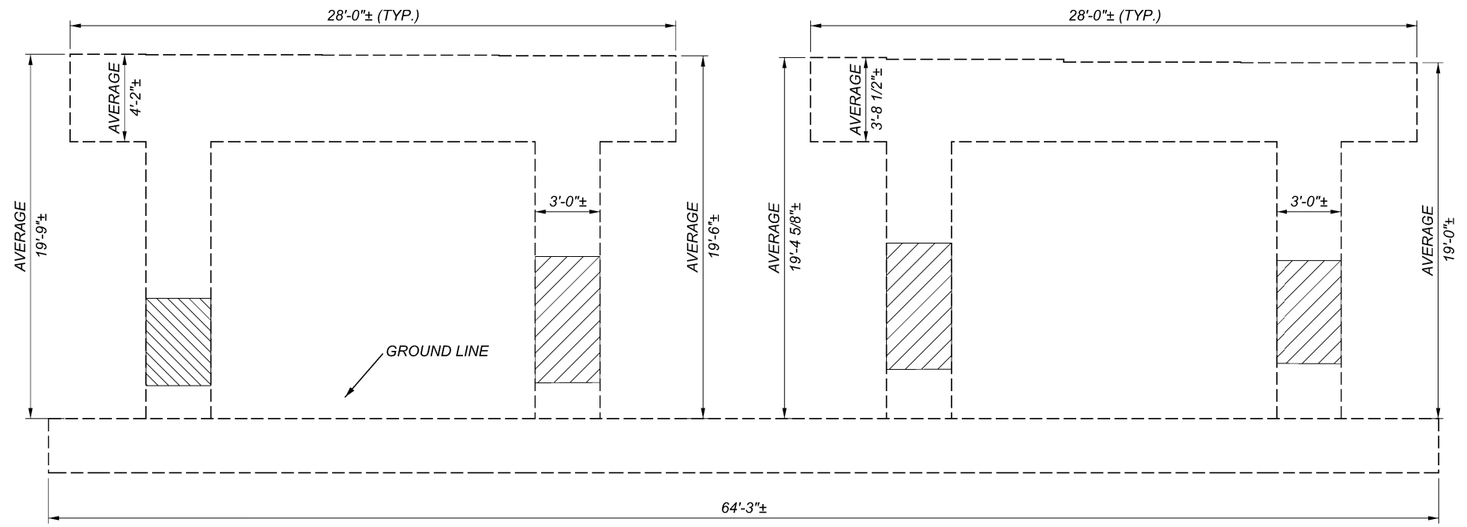
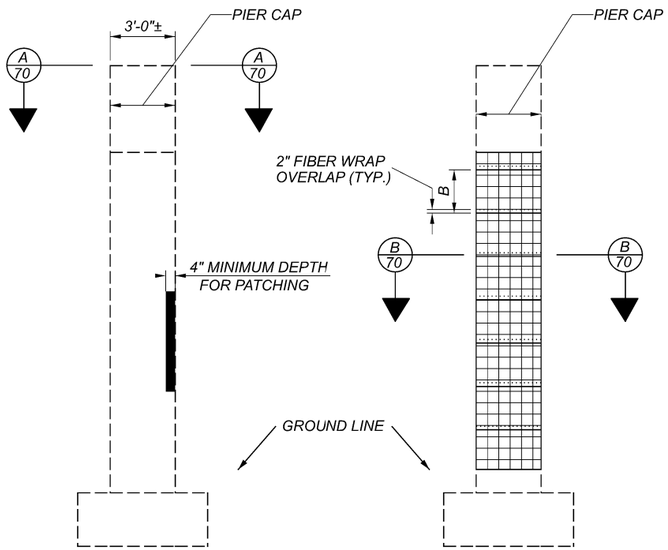


PIER 1 ELEVATION
LOOKING UPSTATION



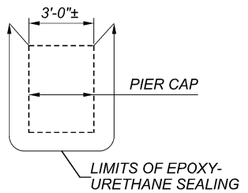
PIER 2 ELEVATION
LOOKING UPSTATION

PIER 1 SUMMARY OF PATCHING AREAS		PIER 2 SUMMARY OF PATCHING AREAS	
LOCATION	SQ. FT	LOCATION	SQ. FT
PIER 1 (SOUTH)	174	PIER 2 (SOUTH)	139
PIER 1 (NORTH)	57	PIER 2 (NORTH)	30
AS DIRECTED BY THE ENGINEER (20%)	46	AS DIRECTED BY THE ENGINEER (20%)	34
TOTAL	277	TOTAL	203

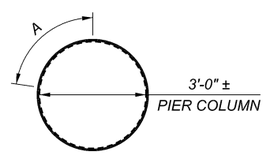


PIER COLUMN PATCHING DETAIL

PIER COLUMN FIBER WRAP DETAIL



SECTION A-A



SECTION B-B

LEGEND:

- ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN - NORTH FACE
- ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN - SOUTH FACE
- INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM; E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER).

NOTES:

1. AN ADDITIONAL 20% CONTINGENCY HAS BEEN ADDED TO THE FIELD MEASURED PATCHING AREAS TO ALLOW FOR ADDITIONAL AREAS OF DETERIORATION. THE FINAL DIMENSIONS AND LOCATION OF THE DETERIORATED AREAS TO BE PATCHED SHALL BE DETERMINED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER IN THE FIELD FOR FINAL PAYMENT.
2. FOR ADDITIONAL DIMENSIONS, SEE ORIGINAL CONSTRUCTION PLANS.
3. A = FIBER WRAP SHALL BE INSTALLED AS ONE CONTINUOUS WRAP, EXTENDING AROUND EACH COLUMN TWICE WITH A MINIMUM 1'-0" LAP.

   B = 2'-0" TYP. FABRIC WIDTH.
4. DURING THE REMOVAL OF CONCRETE FOR ITEM 519 - PATCHING CONCRETE STRUCTURES, AS PER PLAN, NO MORE THAN 50% OF THE MAIN VERTICAL REINFORCING STEEL IN THE COLUMNS SHALL BE EXPOSED FOR THE FULL CIRCUMFERENCE OF THE BARS WITHIN A SINGLE PATCHING AREA EXTENDING AROUND THE COLUMN AT ANY ONE TIME.

PIER REPAIR DETAILS - LOCATION 3

BRIDGE NO. CUY-237-08.27

ROCKY RIVER DRIVE OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
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AJS	JS

REVIEWER ZM 06-08-22

PROJECT ID 105909

SUBSET	TOTAL
10	14

SHEET	TOTAL
70	110

CTY-RTE-SECTION

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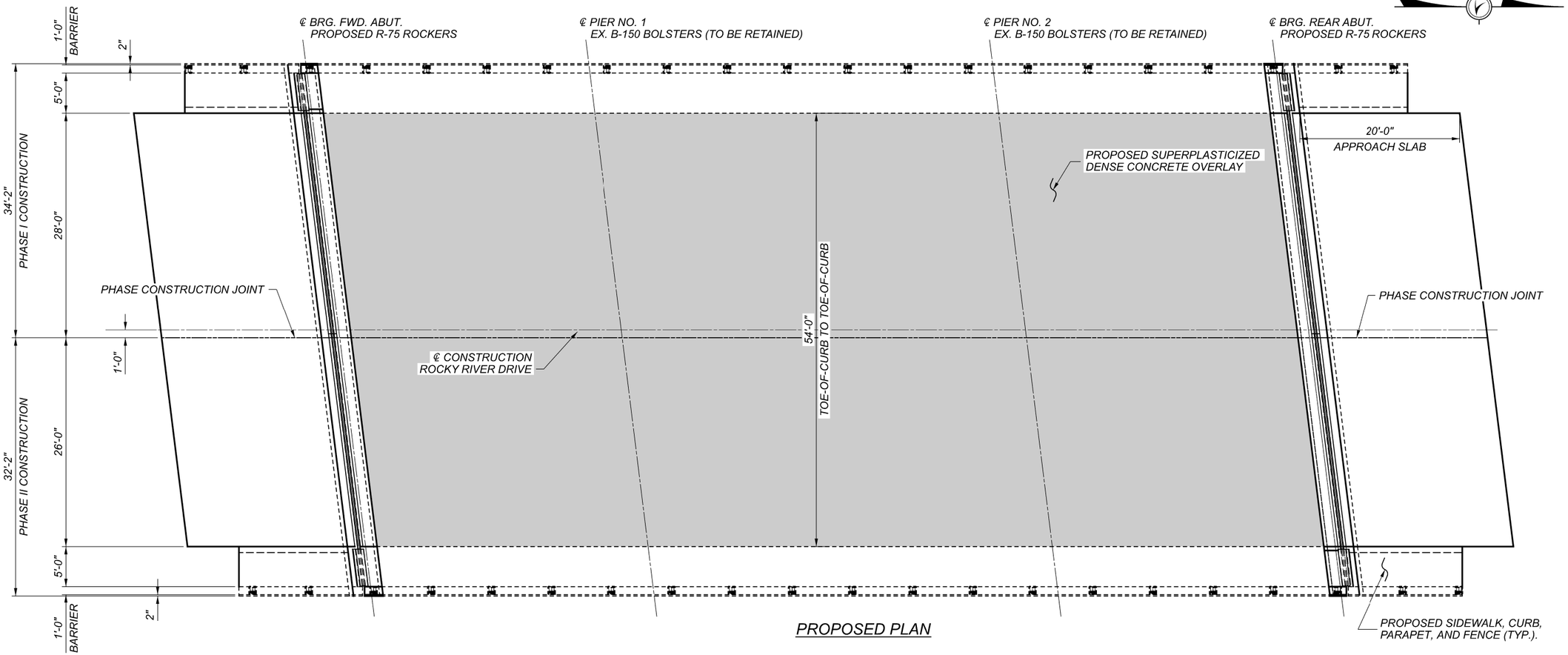
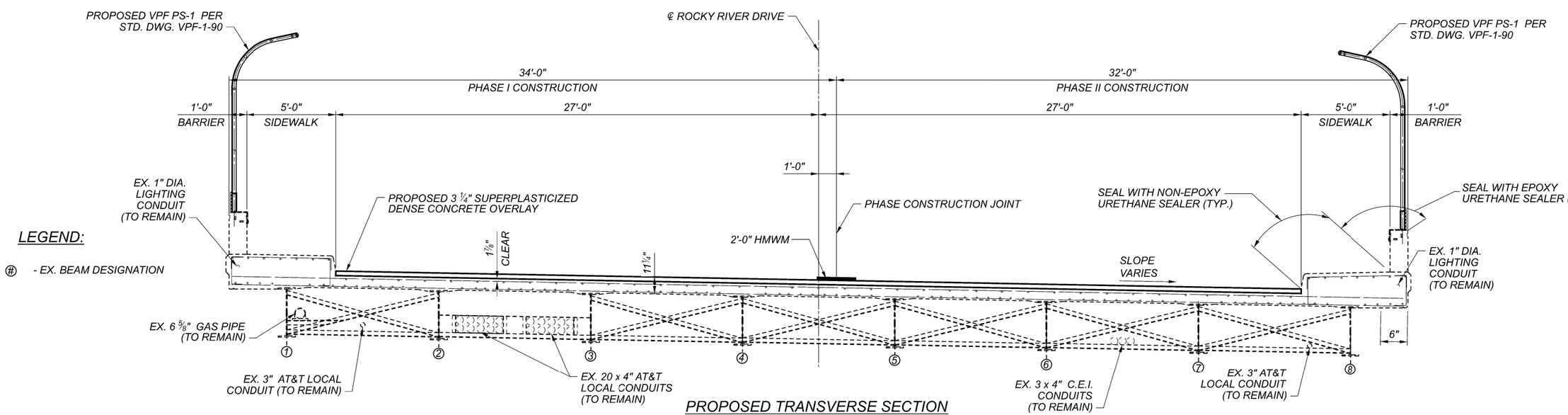


PROPOSED PLAN



PROPOSED TRANSVERSE SECTION

PROPOSED PLAN AND TRANSVERSE SECTION - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DRIVE OVER IR 480 EB RAMP

CUY-BH-FY2023 MISC

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SFN 1810332

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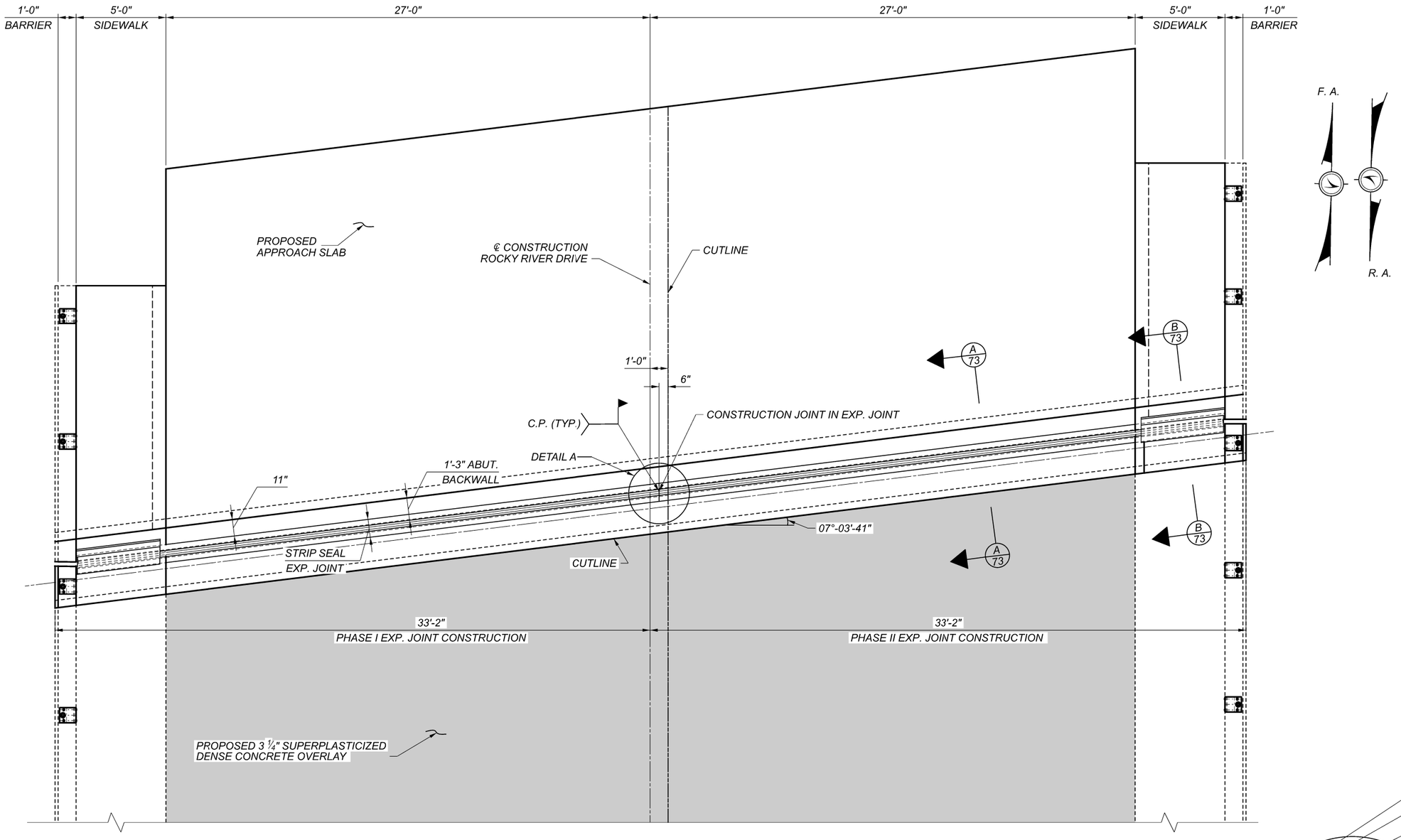
DESIGNER	CHECKER
AI	JS

REVIEWER
ZM 06-08-22

PROJECT ID
105909

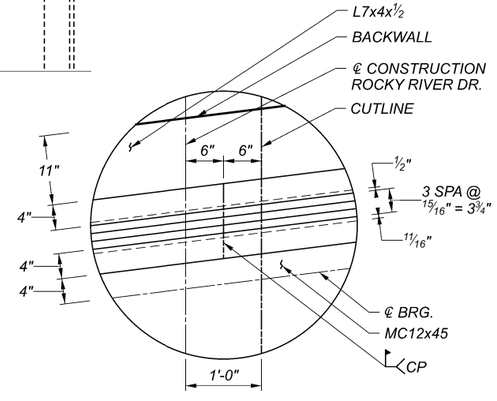
SUBSET	TOTAL
11	14

SHEET	TOTAL
71	110



EXPANSION JOINT CONSTRUCTION DETAILS

(FORWARD EXPANSION JOINT SHOWN, REAR EXPANSION JOINT SIMILAR. APPROACH GUARDRAIL AND PAVEMENT NOT SHOWN FOR CLARITY.)



DETAIL A

CUY-BH-FY2023 MISC

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ABUTMENT EXPANSION JOINT DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
OVER IR 480 EB RAMP

SFN 1810332

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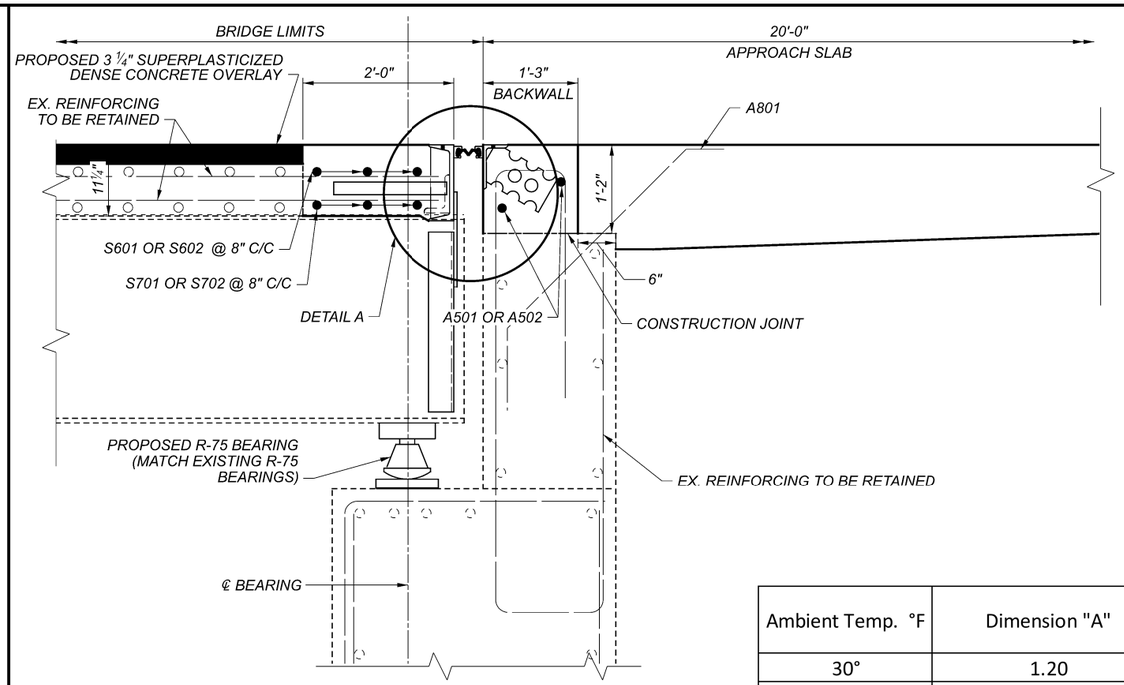
DESIGNER	CHECKER
AI	JS

REVIEWER: ZM 06-08-22

PROJECT ID: 105909

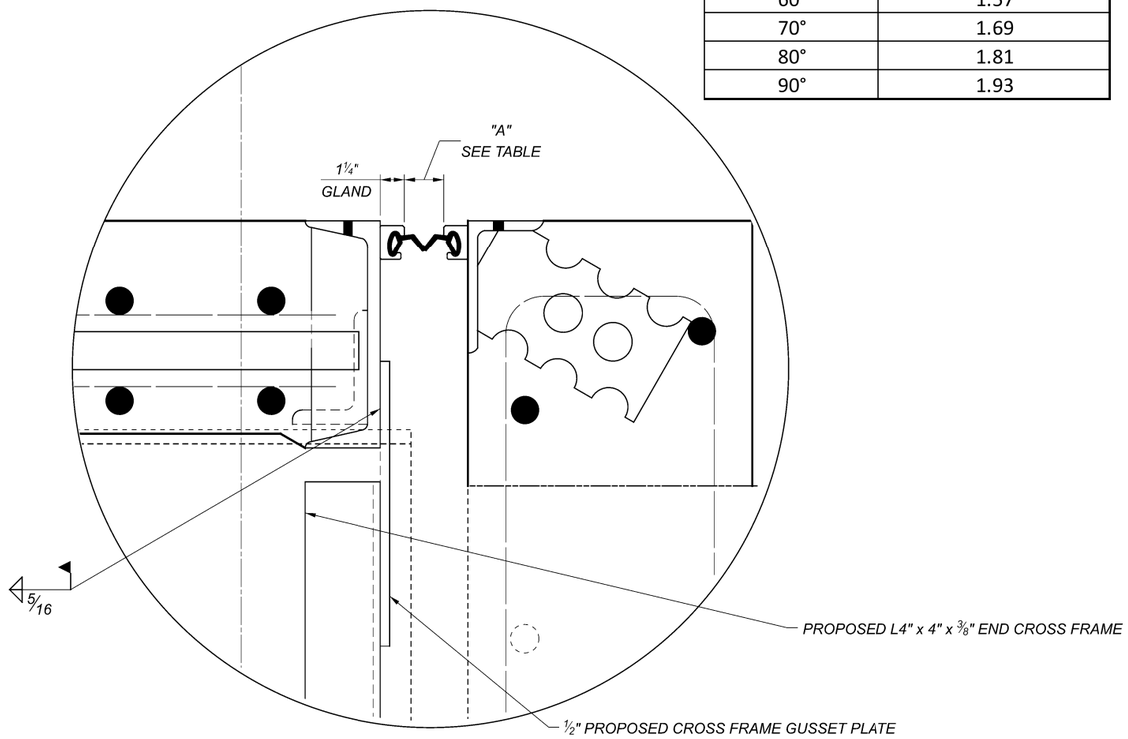
SUBSET	TOTAL
12	14

SHEET	TOTAL
72	110



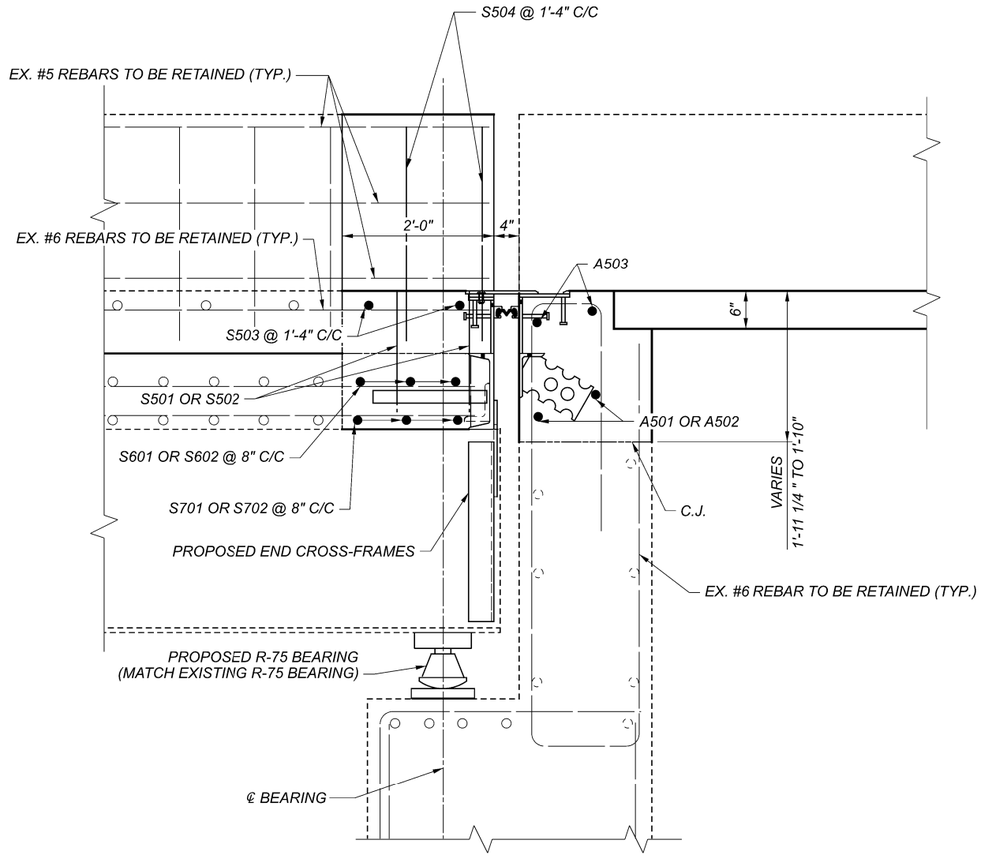
SECTION A-A

Ambient Temp. °F	Dimension "A"
30°	1.20
40°	1.32
50°	1.44
60°	1.57
70°	1.69
80°	1.81
90°	1.93



DETAIL "A"

(FOR ALL OTHER DETAILS, SEE STD. DWG. EXJ-4-87.)



SECTION B-B

CUY-BH-FY2023 MISC

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ABUTMENT EXPANSION JOINT DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY

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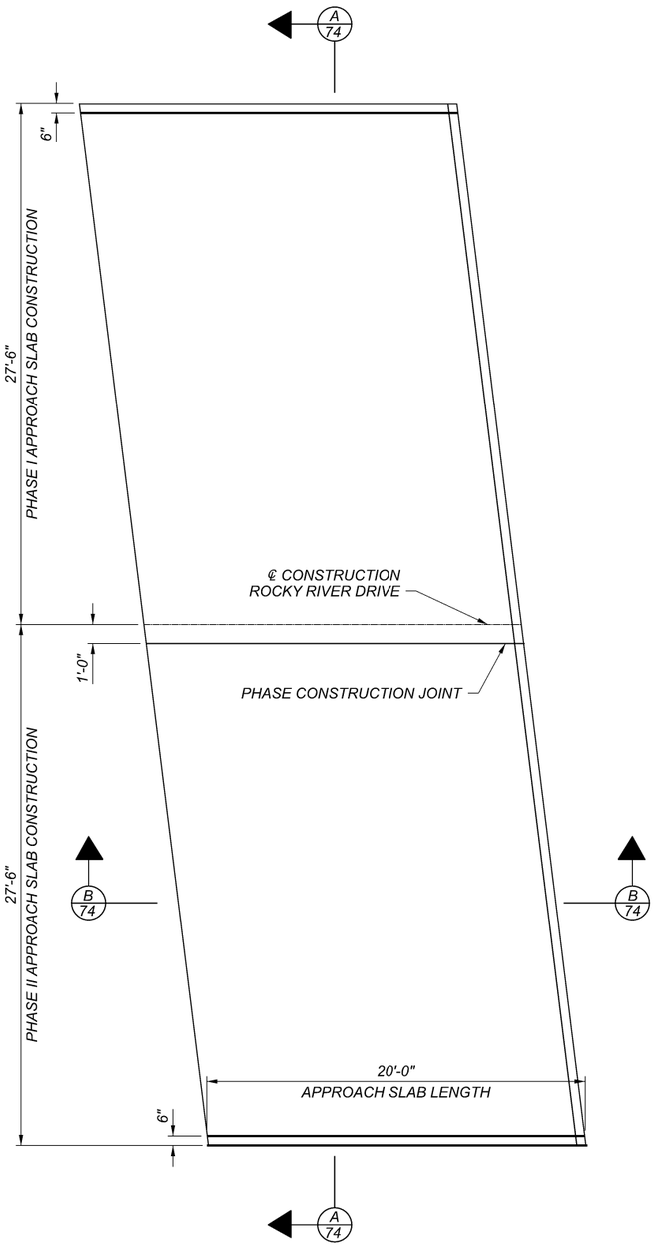
DESIGNER	CHECKER
AI	JS

REVIEWER: ZM 06-08-22

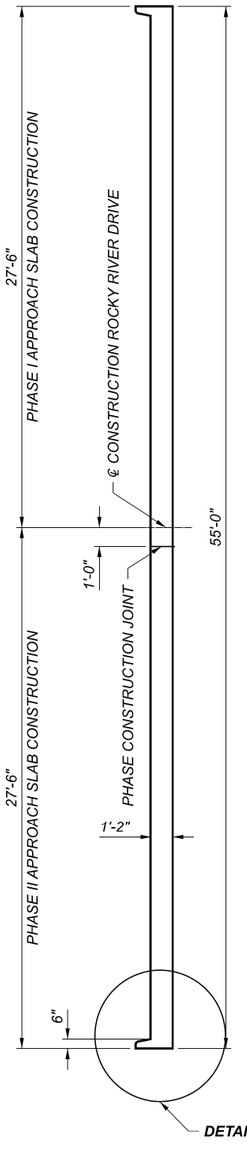
PROJECT ID: 105909

SUBSET	TOTAL
13	14

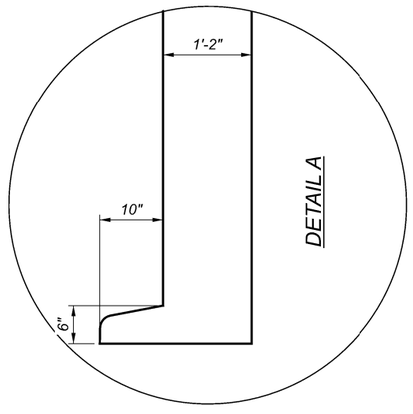
SHEET	TOTAL
73	110

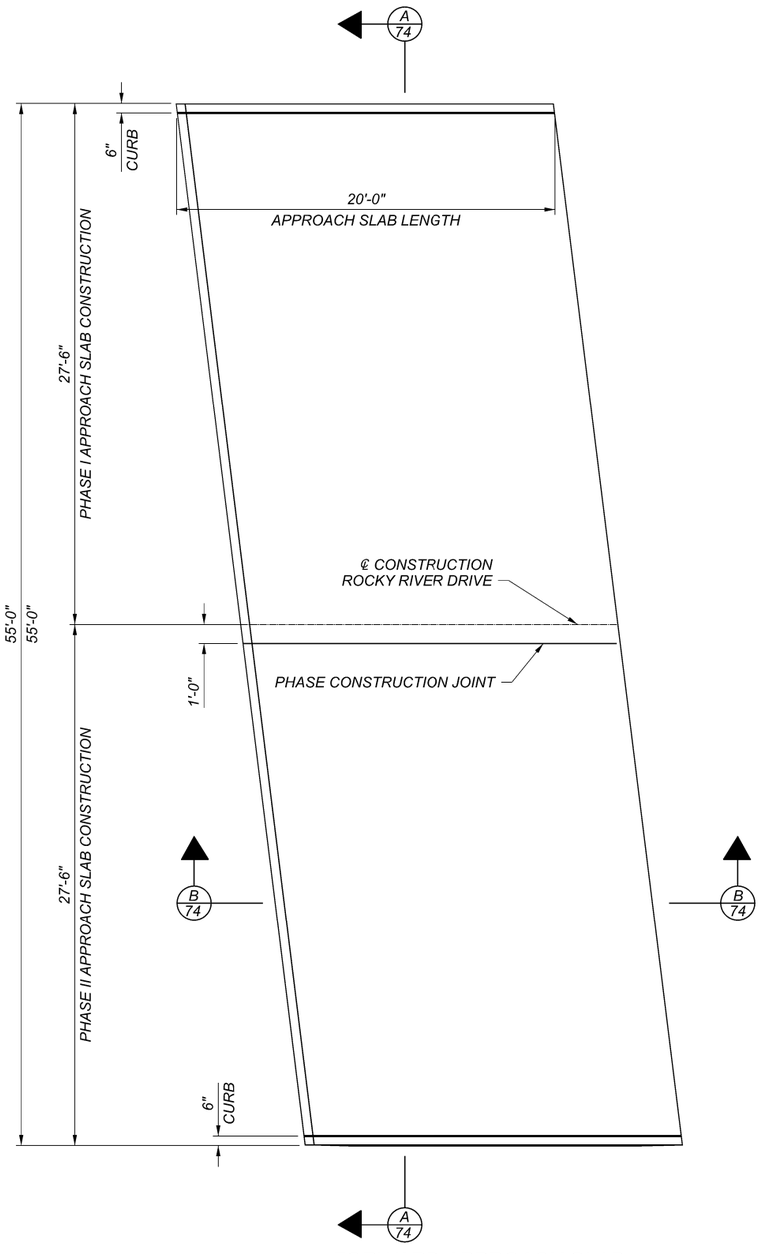


REAR APPROACH SLAB

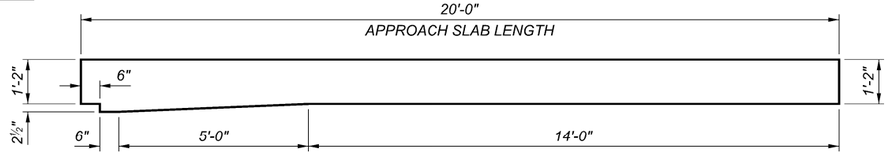


SECTION A-A





FORWARD APPROACH SLAB



SECTION B-B

NOTES:

1. THE APPROACH SLAB THICKNESS SHALL BE 14" FOR BOTH THE REAR AND FORWARD APPROACH SLABS. FOR ADDITIONAL APPROACH SLAB DETAILS, SEE ODOT STD. DWG. AS-1-15. ALL MATERIALS, LABOR, INCIDENTALS, ETC. TO INSTALL THE APPROACH SLABS SHALL BE INCLUDED WITH ITEM 526 - APPROACH SLABS, MISC.: REINFORCED CONCRETE APPROACH SLABS WITH QC/QA (T=14").

2. CONTRACTOR SHALL VERIFY ELEVATIONS AND CURBLINE LOCATIONS PRIOR TO ANY REMOVAL OPERATIONS. PROPOSED ELEVATIONS, CURBLINE LOCATIONS, AND SIDEWALK LOCATIONS SHALL MATCH THE EXISTING.

APPROACH SLAB DETAILS - LOCATION 3
BRIDGE NO. CUY-237-0827
ROCKY RIVER DRIVE OVER IR 480 EB RAMP

SFN 1810332

DESIGN AGENCY
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DESIGNER	CHECKER
AI	JS

REVIEWER ZM 06-08-22

PROJECT ID 105909

SUBSET	TOTAL
14	14

SHEET	TOTAL
74	110

CUY-BH-FY2023 MISC

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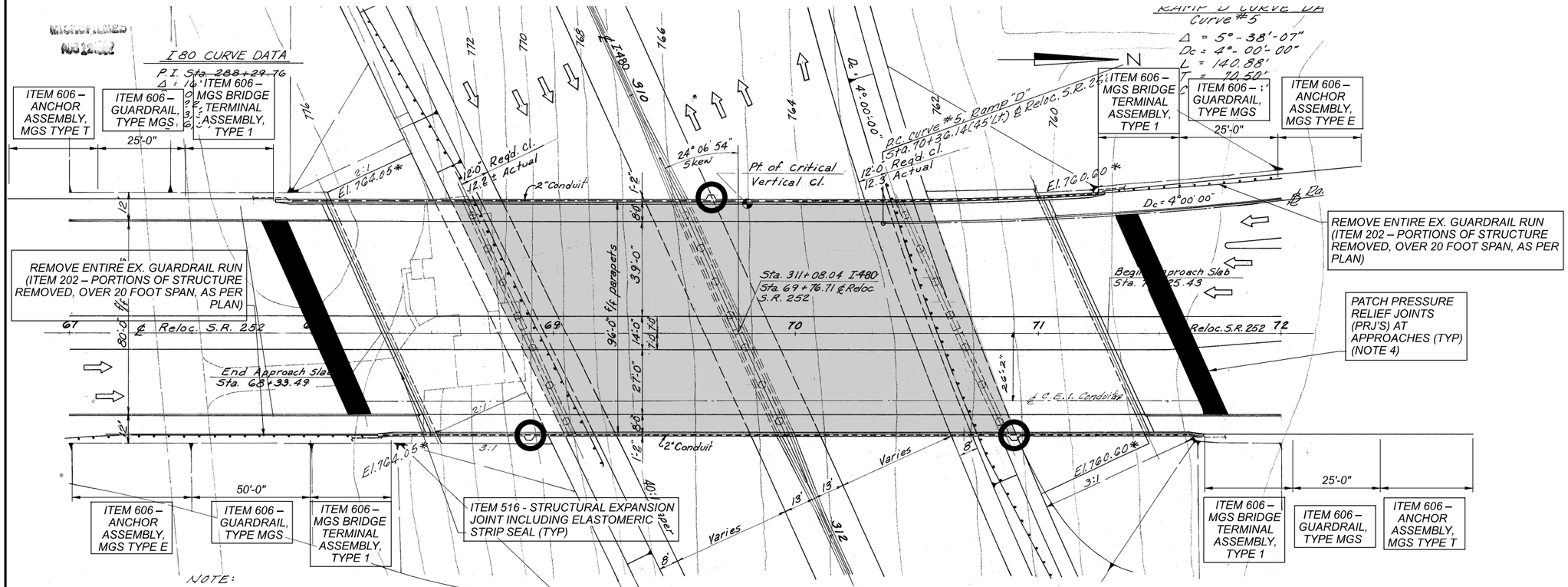


PLAN

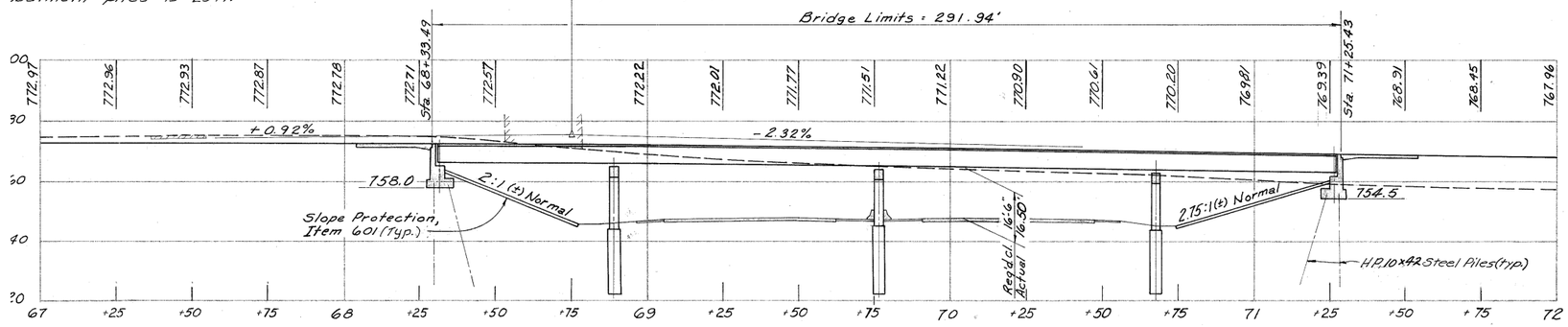
NOTE:

Earthwork limits as shown are schematic. actual slopes shall conform to plan cross sections.

Elevations shown thus are top of slope at face of abutment.

Estimated average pay length for abutment piles is 25 Ft.

The Vertical Curve Data does not apply to elevations on the bridge or in transition areas. Bridge elevations are ½ inch above the elevations obtained from the Vertical Curve Data A uniform transition shall be provided between the end of the bridge and the end of the Approach Slab.



LEGEND:

- INDICATES APPROXIMATE AREAS OF ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK AND ITEM SPECIAL - STRUCTURES: BOTTOM OF DECK SPALL REMOVAL. SEE SHEET 76 FOR TIMBER SUBDECK DETAILS
- ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)
- ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. FOR ESTIMATED QUANTITIES SEE SHEET 76
4. PRESSURE RELIEF JOINT TO BE PATCHED ACROSS THE FULL ROADWAY WIDTH FOR APPROXIMATELY 3" DEEP AND MATCH ODOT STANDARD DRAWING BP-2.3. FIELD ENGINEER TO MARK AND VERIFY AREAS FOR PATCHING. FINAL CONDITION OF THE PRESSURE RELIEF JOINT SHOULD BE IN NEW CONDITION PROVIDING A SMOOTH RIDING SURFACE.

GENERAL PLAN - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
1	15

SHEET	TOTAL
75	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:15:32 PM USER: mdcruz
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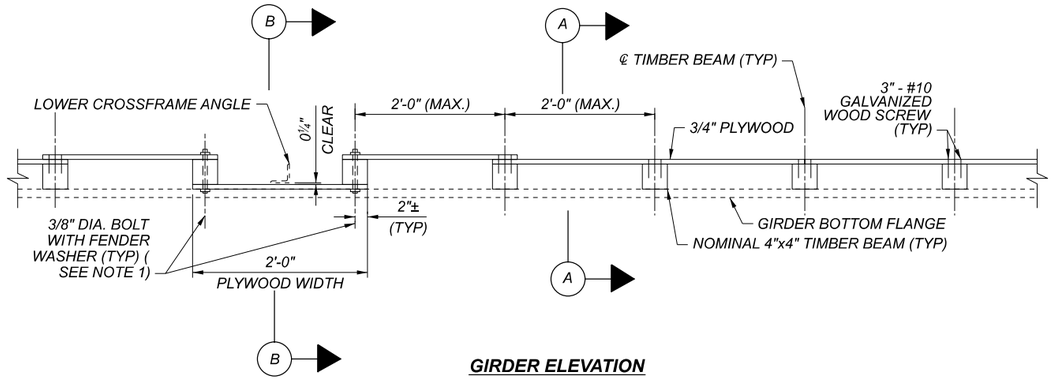
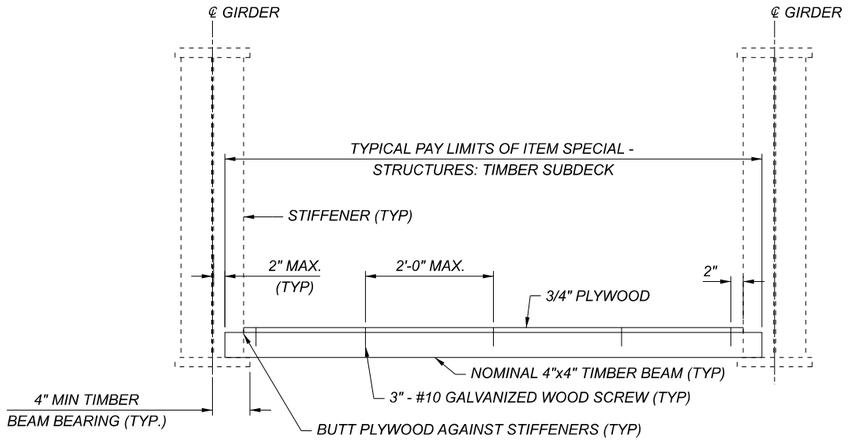
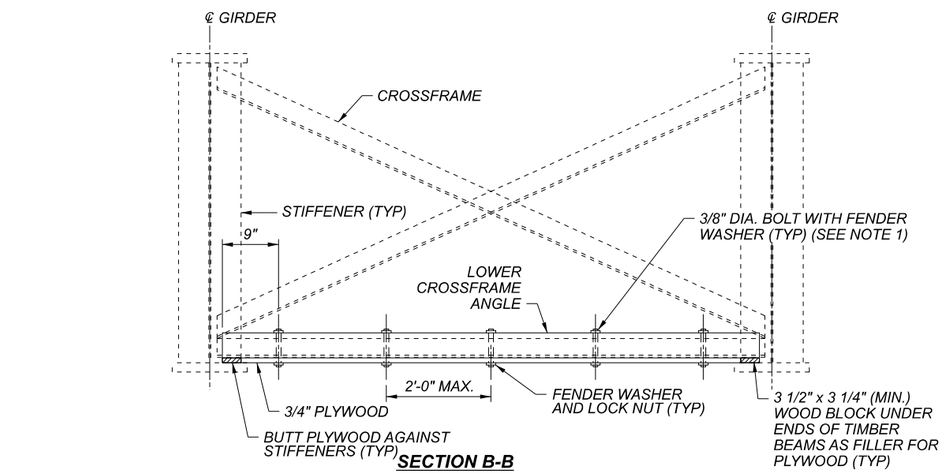


GIRDER ELEVATION



SECTION A-A



SECTION B-B

AT INTERMEDIATE CROSSFRAMES

NOTES

1. 3/8" DIA. BOLTS SHALL BE INSTALLED FACE DOWN, WITH HEAD ON THE UPPER SIDE OF THE PLYWOOD. BOLT SHALL NOT EXTEND MORE THAN 1" BELOW PLYWOOD.

ESTIMATED QUANTITIES

CALCULATED: JDH DATED: 06/22
CHECKED: MJD DATED: 06/22

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34, 83
441	50300	10	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
509	10000	15736	LB	EPOXY COATED REINFORCING STEEL	
510	10000	1966	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	
511	34444	14	CY	CLASS QC2 CONCRETE, BRIDGE DECK	
511	50210	19	CY	CLASS QC1 CONCRETE, SUBSTRUCTURE	
512	10101	940	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34, 78, 79
SPECIAL	51271500	628	SY	SPECIAL - URETHANE TOP COAT SEALER	
513	10201	10116	LB	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
516	11210	237	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	
516	46200	22	EACH	BEARING DEVICE, ROCKER	
516	46700	1	EACH	RESET BEARING	
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
SPECIAL	51900100	4072	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM	36, 38
SPECIAL	51900100	963	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36, 38
519	11101	1352	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35, 77, 78, 79, 81
519	12300	14	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
SPECIAL	53000200	LS		SPECIAL - STRUCTURES: BRIDGE CLEANING	35
SPECIAL	53000600	17861	SF	SPECIAL - STRUCTURES: TIMBER SUBDECK	35
SPECIAL	53000600	3575	SF	SPECIAL - STRUCTURES: BOTTOM OF DECK SPALL REMOVAL	35
606	15050	125	FT	GUARDRAIL, TYPE MGS	
606	26150	2	EACH	ANCHOR ASSEMBLY, MGS TYPE E (MASH 2016)	
606	26550	2	EACH	ANCHOR ASSEMBLY, MGS TYPE T	
606	35002	4	EACH	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
625	00450	3	EACH	CONNECTION, FUSED PULL APART	
625	00460	3	EACH	CONNECTION, UNFUSED PULL APART	
625	00480	3	EACH	CONNECTION, UNFUSED PERMANENT	
625	23200	920	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
625	23302	920	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
625	23400	303	FT	NO. 10 AWG POLE AND BRACKET CABLE	
625	25409	630	FT	CONDUIT, 2", 725.051, AS PER PLAN	5
625	27520	3	EACH	REMOVAL OF LUMINAIRE AND REERECTION	
625	27521	12	EACH	REMOVAL OF LUMINAIRE AND REERECTION, AS PER PLAN	5
625	29920	3	EACH	STRUCTURE JUNCTION BOX	
625	33000	1	EACH	STRUCTURE GROUNDING SYSTEM	
625	35011	3	EACH	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	82
625	39520	1	EACH	PULL BOX CLEANED	
SPECIAL	62540000	1	LS	SPECIAL - MAINTAIN EXISTING LIGHTING	
625	75800	1	EACH	DISCONNECT CIRCUIT	
				CONCRETE PARAPET ALTERNATES	
511	34449	67	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 1)	35
511	34449	89	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 2)	84
				FENCE ALTERNATES	
607	39901	670	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN (ALTERNATE 1)	35
607	98000	681	FT	FENCE, MISC.: DECORATIVE FENCE, (ALTERNATE 2)	84

ESTIMATED QUANTITIES & TIMBER SUBDECKING DETAILS - LOCATION 4
BRIDGE NO. CUY-252-0434
OVER GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER SMK 12-13-22

PROJECT ID 105909

SUBSET	TOTAL
2	15

SHEET	TOTAL
76	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/6/2023 TIME: 7:15:53 PM USER: mdcruz
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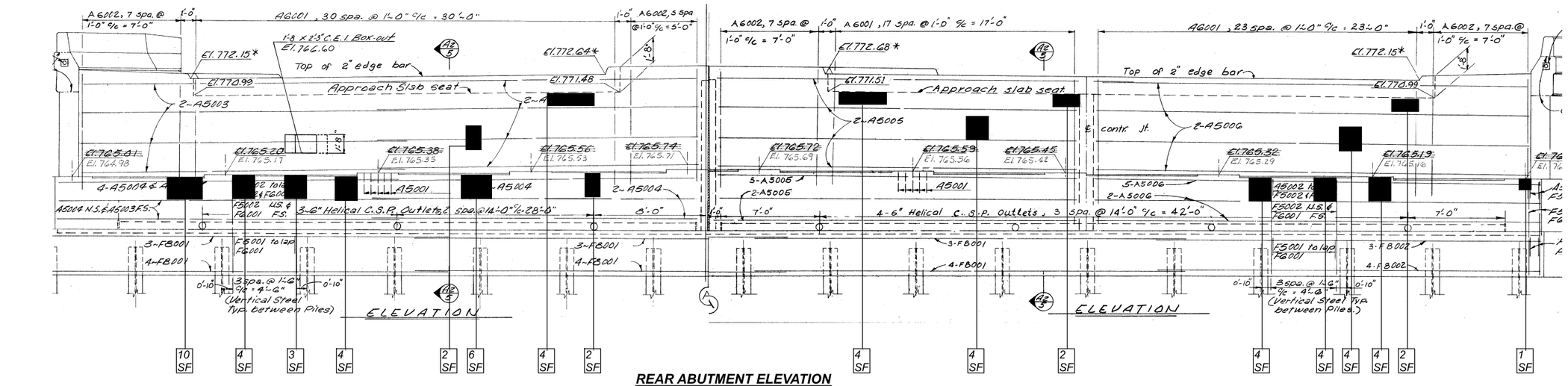
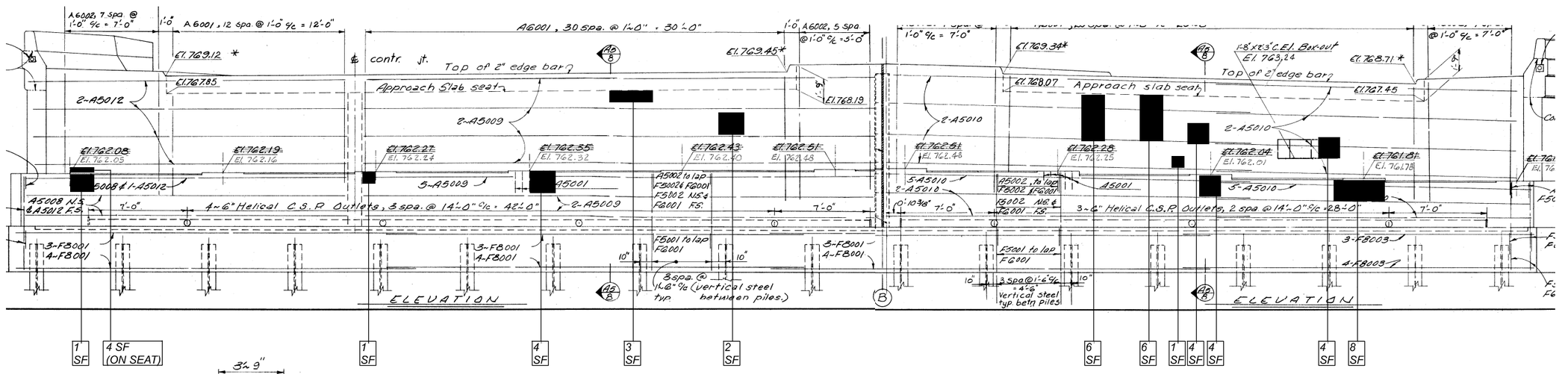
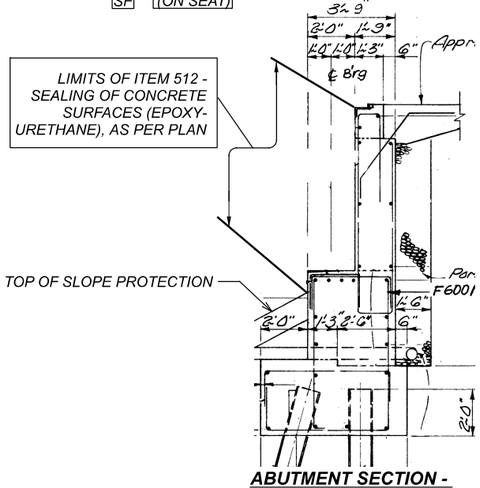


REAR ABUTMENT ELEVATION
LOOKING SOUTH



FORWARD ABUTMENT ELEVATION
LOOKING NORTH



ABUTMENT SECTION -
LIMITS OF SEALING

LEGEND:

■ *INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.*

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
REAR ABUTMENT	64	80
FORWARD ABUTMENT	48	60
	TOTAL	**140**

NOTES:

1. *DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.*

2. *PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.*

ABUTMENT REPAIR DETAILS - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

CUY-BH-FY2023 MISC.

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SFN 1810405

DESIGN AGENCY

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(216) 861-2020 www.osborn-eng.com

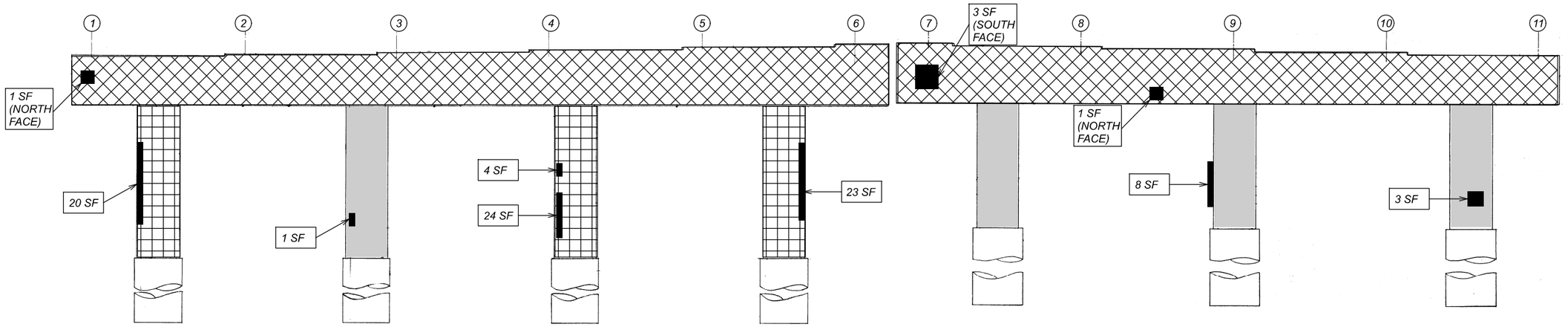
DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

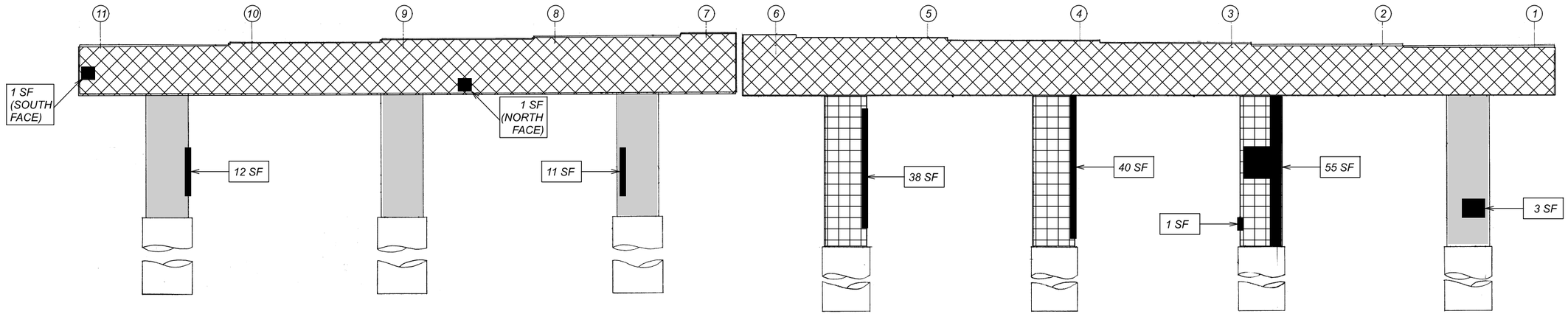
PROJECT ID: 105909

SUBSET	TOTAL
3	15

SHEET	TOTAL
77	110



PIER 1 ELEVATION
LOOKING NORTH AT SOUTH FACE
(LIGHTING ON NORTH FACE TO REMAIN)



PIER 3 ELEVATION
LOOKING SOUTH AT NORTH FACE
(LIGHTING ON SOUTH FACE TO REMAIN)

LEGEND:

(9) *BEAM NUMBER*

INDICATES APPROXIMATE AREAS OF CARBON FIBER REINFORCED POLYMER (CFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

	MEASURED TOTAL (SF)	*ESTIMATED TOTAL (SF)*
PIER 1	*88*	*110*
PIER 2	*148*	*185*
PIER 3	*162*	*203*
	TOTAL	***498***

INDICATES APPROXIMATE AREAS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

NOTES:

1. PIER 2 IS SHOWN ON SHEET 79

PIER REPAIR DETAILS - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
4	15

SHEET	TOTAL
78	110

CUY-BH-FY2023 MISC.

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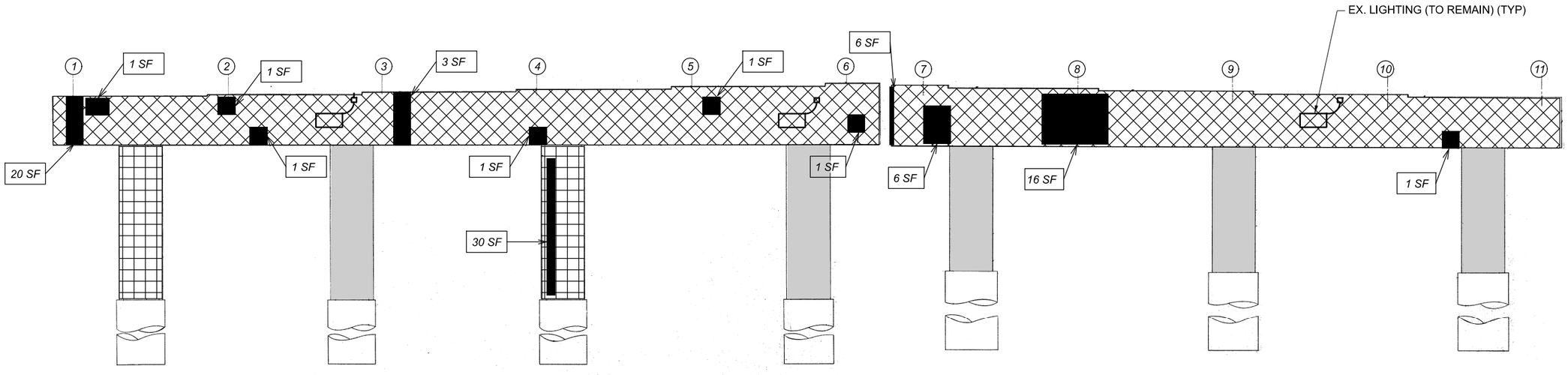
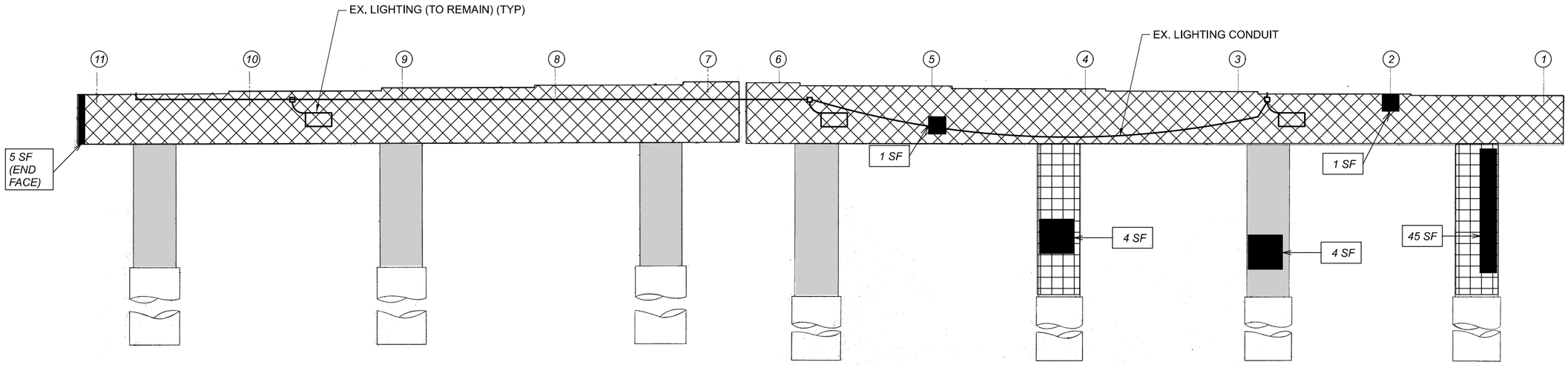


PIER 2 ELEVATION
LOOKING NORTH AT SOUTH FACE



PIER 2 ELEVATION
LOOKING SOUTH AT NORTH FACE

LEGEND:

- (9) *BEAM NUMBER*
- *INDICATES APPROXIMATE AREAS OF CARBON FIBER REINFORCED POLYMER (CFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)*
- *INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SSPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)*
- *INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.*
  SEE SHEET 78 FOR PATCHING QUANTITIES
- *INDICATES APPROXIMATE AREAS OF ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN*

NOTES:

1. *PIERS 1 & 3 ARE SHOWN ON SHEET 78*

PIER REPAIR DETAILS 2 - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
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1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
5	15

SHEET	TOTAL
79	110

CUY-BH-FY2023 MISC.

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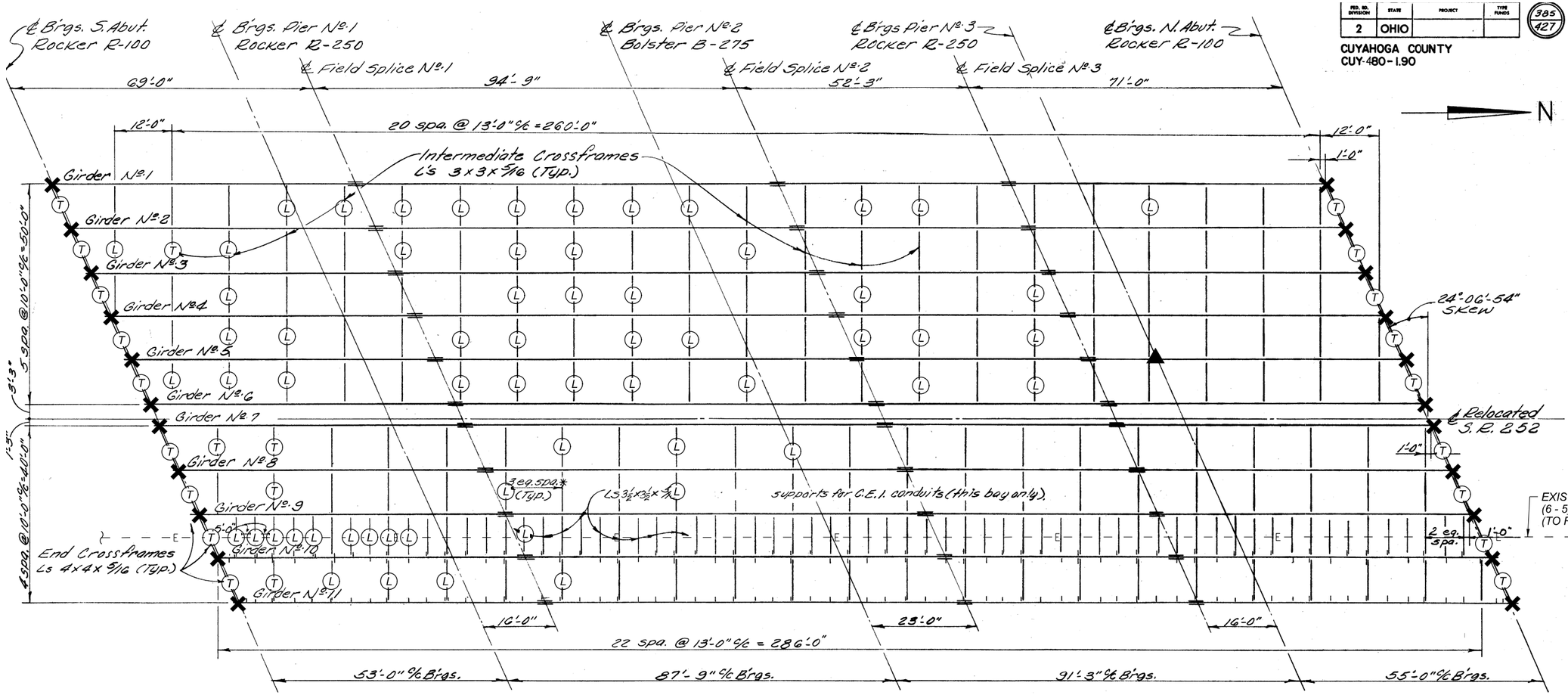


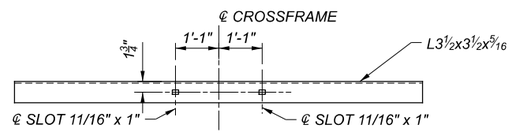
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

385
427

CUYAHOGA COUNTY
CUY-480-1.90

LEGEND:

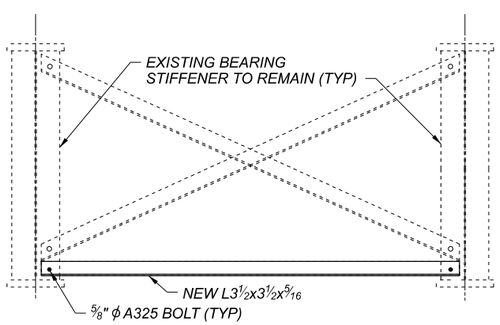
- ✖ REPLACE BEARING (22 TOTAL); ITEM 516 - BEARING DEVICE, ROCKER
- ▲ RESET BEARING (1 TOTAL); ITEM 516 - RESET BEARING
- (L) REPLACE CROSSFRAME LOWER LEG (61 TOTAL)
- (T) TOTAL CROSSFRAME REPLACEMENT (23 TOTAL)
  18 END CROSSFRAMES
  5 INTERMEDIATE CROSSFRAMES



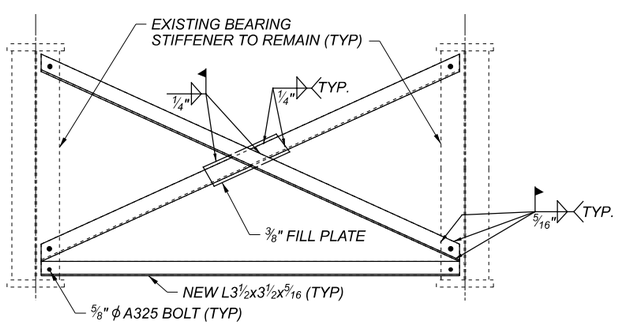
SLOTTED LOWER ANGLE AT CEI CONDUITS
(10 LOCATIONS)

NOTES:

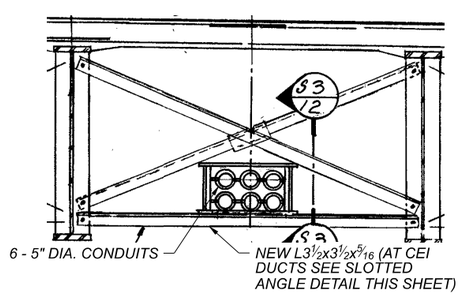
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. END CROSSFRAMES AS NOTED ON PLANS FOR REPLACEMENT SHALL BE PER STANDARD DRAWING GSD-1-19.
3. EXISTING CEI CONDUIT DUCTS ARE TO REMAIN. CEI WILL TEMPORARILY SUPPORT THEIR CONDUITS DURING CONSTRUCTION. THE STATE'S CONTRACTOR SHALL COORDINATE WITH CEI 3-4 MONTHS PRIOR TO STARTING WORK AT LOCATION 4.
4. CEI CONTRACTOR WILL GRIND THRU STITCH WELDS TO REMOVE EXISTING CEI CONDUIT RACK FROM CROSSFRAMES BEING REPLACED. CONTRACTOR SHALL COORDINATE THIS WORK WITH CEI AT THE START OF THE PROJECT.
5. THE LOWER LEG OF THE INTERMEDIATE CROSSFRAMES SUPPORTING THE CEI CONDUIT RACK ARE TO BE REPLACED AT 10 LOCATIONS. THE NEW ANGLE SHALL HAVE SLOTTED HOLES TO ACCOMMODATE THE RETROFITTED CEI CONDUIT RACKS AT THESE LOCATIONS. CEI WILL SUPPLY ALL OTHER MATERIAL FOR THE RACKS AND INSTALL THE CONDUIT RACKS AFTER THE NEW LOWER LEG HAS BEEN INSTALLED BY THE STATES CONTRACTOR.



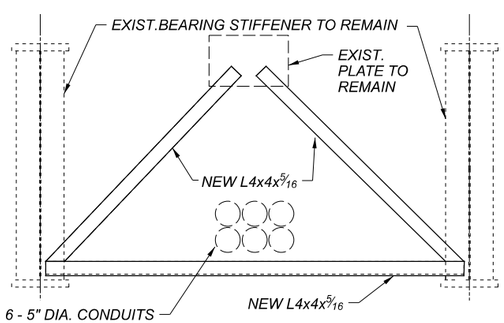
INTERMEDIATE CROSSFRAMES
REPLACE CROSSFRAME LOWER LEG



INTERMEDIATE CROSSFRAMES
REPLACE TOTAL CROSSFRAME



INTERMEDIATE CROSSFRAMES AT CEI CONDUITS
REPLACE CROSSFRAME LOWER LEG (10 LOCATIONS)
(SEE NOTES 4 & 5)



END CROSSFRAME AT CEI CONDUITS
REPLACE TOTAL CROSSFRAME

CROSSFRAME AND BEARING REPAIRS - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405
DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com
DESIGNER MJD | CHECKER JDH
REVIEWER SMK 12-13-22
PROJECT ID 105909
SUBSET 6 | TOTAL 15
SHEET 80 | TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:16:41 PM USER: mdcruz
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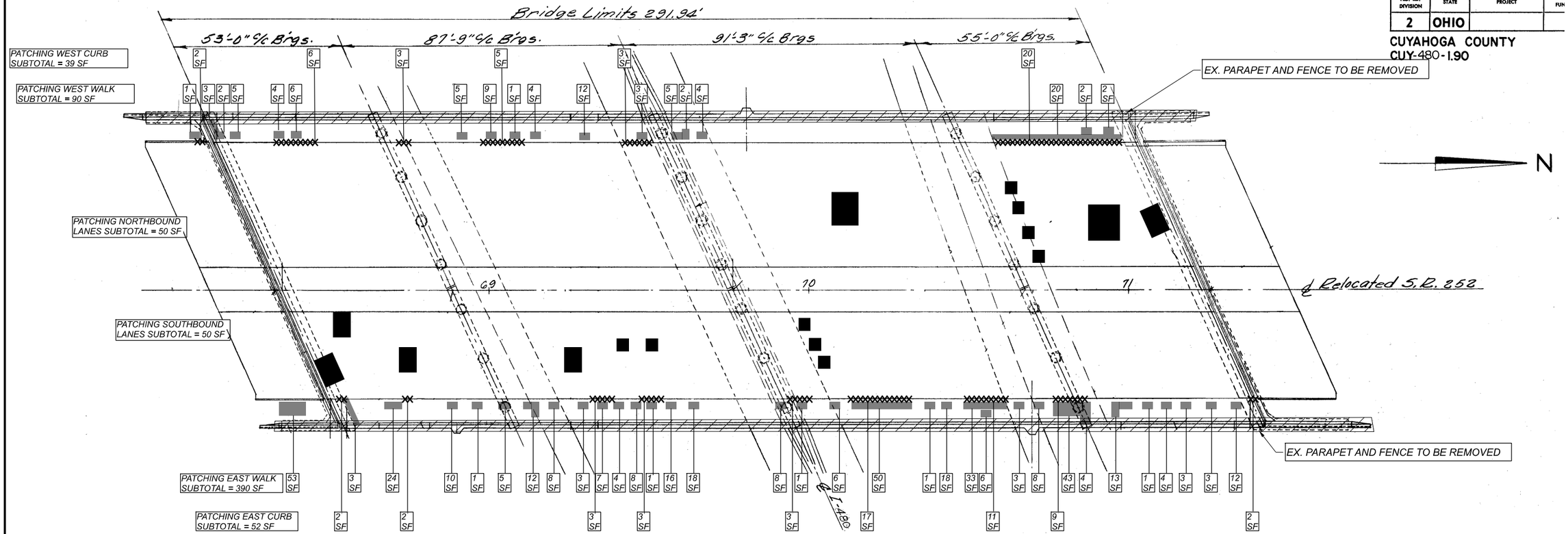
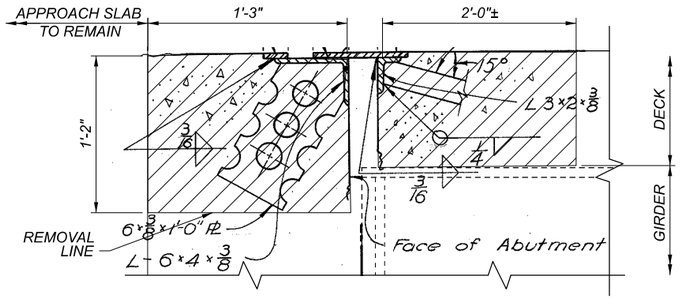
FED. RD. DIVISION	STATE	PROJECT	TYI FUN
2	OHIO		

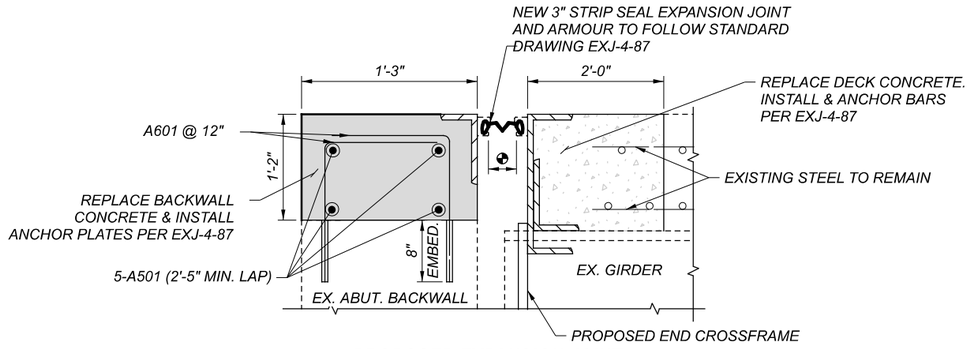
CUYAHOGA COUNTY
CUY-480-1.90



DECK REPAIR PLAN

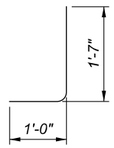


EXISTING EXPANSION JOINT REMOVAL



PROPOSED EXPANSION JOINT

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE
BACKWALLS				
A501	40	25'-0"	1043	ST
A601	424	2'-5"	1539	1



TYPE-1

AMBIENT TEMP.	DIM. "A" REAR	DIM. "A" FWD.
30 °F	1.93"	1.94"
40 °F	1.82"	1.83"
50 °F	1.71"	1.71"
60 °F	1.60"	1.60"
70 °F	1.49"	1.49"
80 °F	1.38"	1.38"
90 °F	1.27"	1.26"

LEGEND:

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B.

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)	ESTIMATED TOTAL (SY)
100	125	14
	TOTAL	**14**

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
480	600
TOTAL	**600**

INDICATES APPROXIMATE AREAS OF CURB TO BE PATCHED (6" WIDE) ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
91	114
TOTAL	**114**

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

ITEM 511 – CLASS QC1 CONCRETE, SUBSTRUCTURE

ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK

DECK REAPIR PLAN & EXPANSION JOINTS - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
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DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
7	15

SHEET	TOTAL
81	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:16:55 PM USER: mdcruz
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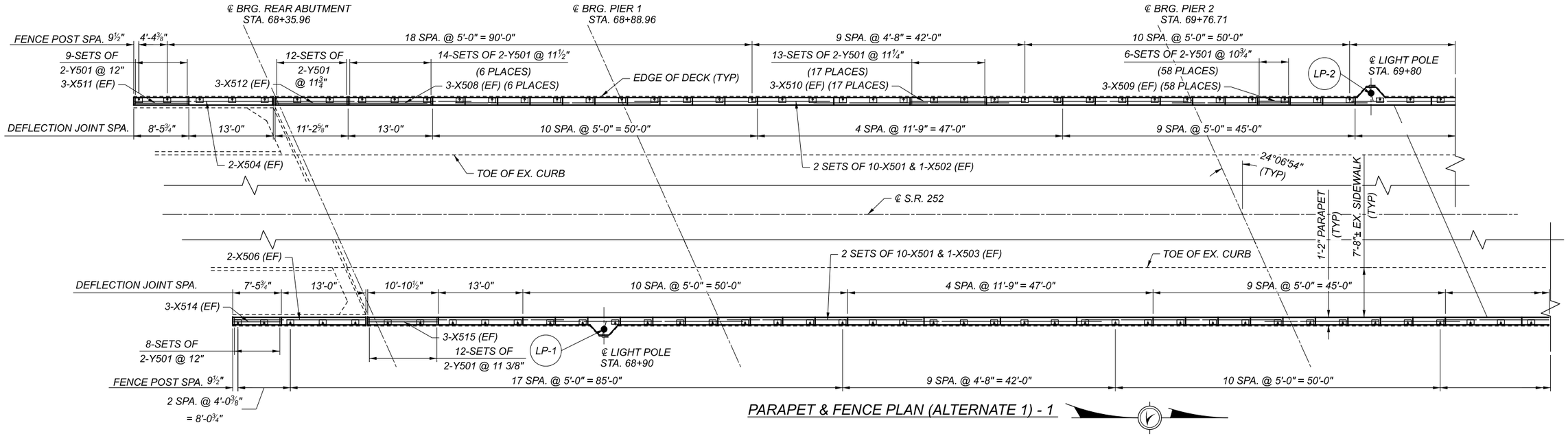
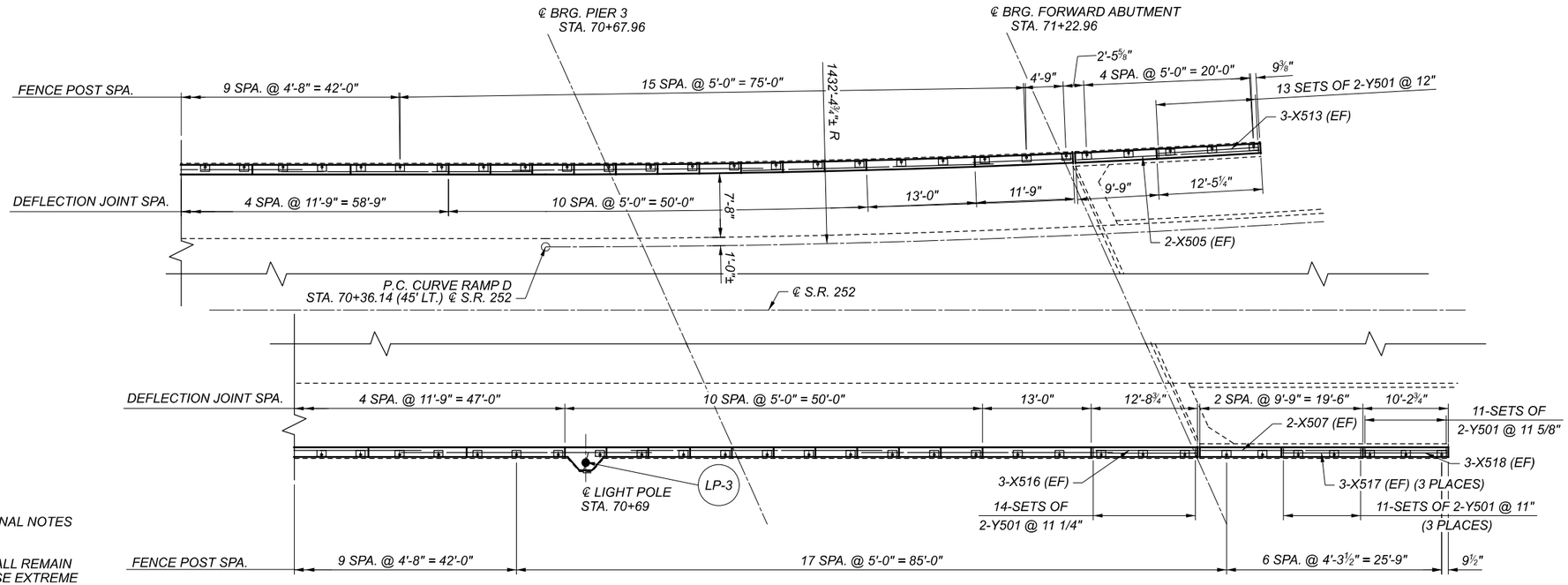


PARAPET & FENCE PLAN (ALTERNATE 1) - 1



PARAPET & FENCE PLAN (ALTERNATE 1) - 2

NOTES:

1. SEE SHEET 83 AND STD. DWGS BR-2-15 & VPF-1-90 FOR ADDITIONAL NOTES AND DETAILS.

2. EXISTING LIGHTING CONDUIT SYSTEM, WIRING, POWER, ETC. SHALL REMAIN IN SERVICE IN THE PROPOSED CONDITION. CONTRACTOR SHALL USE EXTREME CARE IN REMOVAL OF PARAPET AT EXISTING LIGHT POLE LOCATIONS. NEW JUNCTION BOXES SHALL BE INSTALLED PER STD. DWG HL-20.14 AND TIED INTO THE EXISTING CONDUIT SYSTEM.

3. FOR LIGHT POLE PILASTER, JUNCTION BOX, AND OTHER LIGHTING DETAILS AND NOTES, SEE ODOT STD. DWG HL-20.14.

4. EXISTING LIGHT POLES ARE TO BE REMOVED AND STORED CAREFULLY DURING PARAPET AND FENCE INSTALLATION. EXISTING LIGHT POLES TO BE REERECTED AND PAID FOR WITH ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN.

LEGEND:

EF - EACH FACE

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:17:09 PM USER: mdcruz
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PARAPET PLAN (ALTERNATE 1) - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

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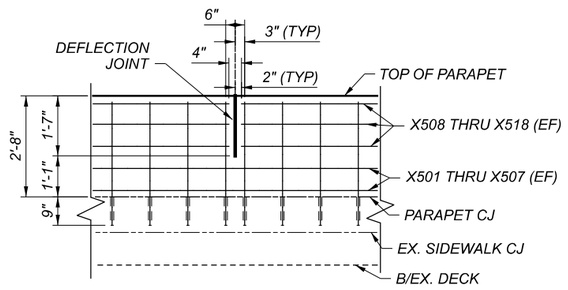
DESIGNER	CHECKER
EIW	JDH

REVIEWER SMK 12-13-22

PROJECT ID 105909

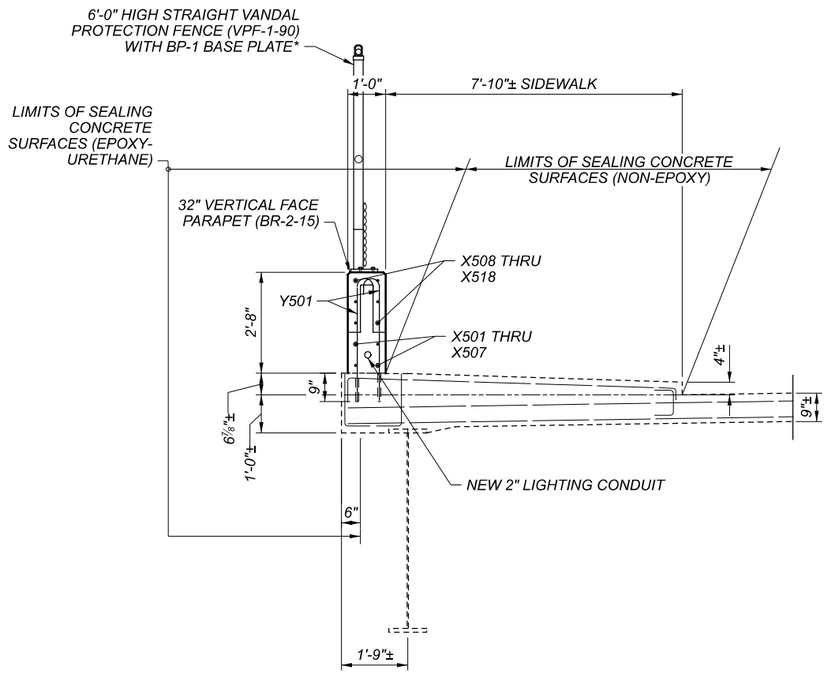
SUBSET	TOTAL
8	15

SHEET	TOTAL
82	110



TYPICAL PARAPET ELEVATION

FENCE NOT SHOWN



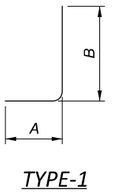
PARAPET SECTION (ALTERNATE 1)

BRIDGE DECK SHOWN, WINGWALL SECTION SIMILAR

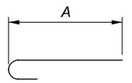
* FENCE POST ANCHORS SHALL BE CAST IN PLACE, SEE NOTE ON SHEET 35

NOTES:
1. SEE SHEET 81 FOR PARAPET PLAN INCLUDING CONTROL JOINT SPACING.
2. ALL REINFORCING SHALL BE EPOXY COATED.
3. ALL BAR DIMENSIONS ARE GIVEN OUT-TO-OUT UNLESS OTHERWISE INDICATED.
4. ALL BARS OF A GIVEN SERIES VARY BY A CONSTANT AMOUNT.
5. BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, X501 IS A #5 BAR.

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPETS (ALTERNATE 1)											
X501	80	30'-0"	2503	STR							
X502	4	11'-10"	49	STR							
X503	4	12'-6"	52	STR							
X504	4	21'-2"	88	STR							
X505	4	21'-10"	91	STR							
X506	4	20'-2"	84	STR							
X507	4	29'-5"	123	STR							
X508	36	12'-8"	476	STR							
X509	348	4'-8"	1694	STR							
X510	102	11'-5"	1215	STR							
X511	6	8'-2"	51	STR							
X512	6	10'-10"	68	STR							
X513	6	12'-1"	76	STR							
X514	6	7'-1"	44	STR							
X515	6	10'-6"	66	STR							
X516	6	12'-4"	77	STR							
X517	18	9'-5"	177	STR							
X518	6	9'-10"	62	STR							
Y501	1530	3'-10"	6117	16	3'-3"						
Y502	12	3'-3"	41	1	1'-5"	2'-0"					
SUB-TOTAL			13154								



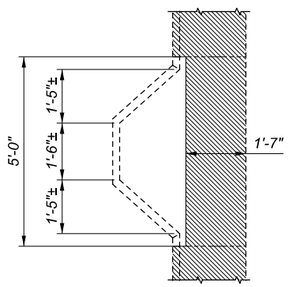
TYPE-1

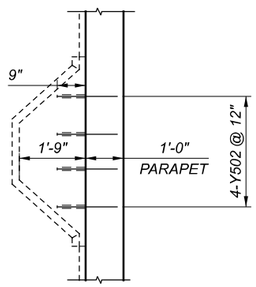


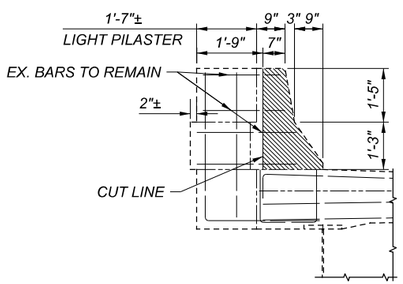
TYPE-16

LEGEND:

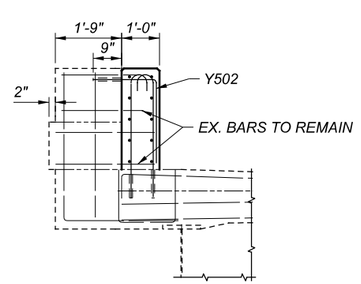
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN







EXISTING PARAPET REMOVAL AT LIGHT PILASTER



PROPOSED PARAPET AT LIGHT PILASTER

AT 3 LIGHT POLE PILASTER LOCATIONS

PARAPET DETAILS - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
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DESIGNER EIW | CHECKER JDH

REVIEWER SMK 12-13-22

PROJECT ID 105909

SUBSET 9 | TOTAL 15

SHEET 83 | TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:17:10 PM USER: mdcruz
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ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2)

THIS ITEM CONSISTS OF FURNISHING AND INSTALLING DECORATIVE FENCING ON NEW CONCRETE BRIDGE RAILING IN ACCORDANCE WITH C&MS 607 AND THE DETAILS SHOWN IN THE PLANS

DESIGN LOADING: FENCING WAS DESIGNED IN ACCORDANCE WITH THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

DEAD LOAD: ACTUAL MATERIAL WEIGHTS
WIND LOAD: V = 115 MPH
CATEGORY B, DESIGN WIND PRESSURE, Pz = 50.2 PSF

BASE PLATES: BASE PLATES SHALL BE ASTM A709 GRADE 36 OR 50 GALVANIZED ACCORDING TO C&MS 711.02. THE PROTECTIVE COATING SHALL BE POWDER COATED BLACK (FEDERAL STANDARD NO. 595B-17038) TO MATCH THE FABRIC.

LETTERS: ALUMINUM PLATES FOR LETTER FABRICATION SHALL BE PER C&MS 711.02 AND ASTM B 209, 6016-T6. THE PROTECTIVE COATING SHALL BE POWDER COATED WHITE (FEDERAL STANDARD NO. 595B-17925).

CONNECTIONS: THE THREADED ROD FOR ANCHOR BOLTS SHALL BE ASTM A193, GRADE B7, WITH ASTM A 563 NUTS AND ASTM F 436 WASHERS. MECHANICALLY GALVANIZE ALL ANCHOR HARDWARE ACCORDING TO ASTM B 695, CLASS 65. THE ANCHORS SHALL BE CAST-IN-PLACE WITH AN 8" MINIMUM EMBEDMENT DEPTH (18" AT END BASE PLATES). ALL HARDWARE PROTECTIVE COATINGS SHALL BE POWDER COATED COLOR LISTED BELOW:

LETTER CONNECTION:	½ INCH DIA. - WHITE
TYP. BASE PLATE:	⅝ INCH DIA. - BLACK
END BASE PLATE:	¾ INCH DIA. - BLACK
RAIL POST CONNECTION:	½ INCH DIA. - BLACK

TENSION BARS: TENSION BARS SHALL BE 3/16 INCH ½ INCH STEEL GALVANIZED ACCORDING TO C&MS 711.02. THE PROTECTIVE COATING SHALL BE POWDER COATED BLACK TO MATCH THE FABRIC.

TENSION BANDS: TENSION BANDS SHALL BE ⅛ INCH BY 1 INCH STEEL ASSEMBLED WITH ⅜ INCH DIAMETER BY 1 ¼ INCH GALVANIZED BOLTS. ONE TENSION BAND SHALL BE SUPPLIED FOR EACH FOOT OF FABRIC HEIGHT. BANDS SHALL BE GALVANIZED ACCORDING TO C&MS 711.02. THE PROTECTIVE COATING SHALL BE POWDER COATED BLACK TO MATCH THE FABRIC.

DOUBLE WRAP FABRIC TIES: DOUBLE WRAP FABRIC TIES SHALL BE 0.091 INCH CORE DIAMETER GALVANIZED PVC COATED STEEL WIRE 30 INCHES LONG. THE PVC COATING SHALL BE BLACK TO MATCH THE FABRIC. TO CONNECT THE FABRIC TO THE HORIZONTAL MEMBERS USE DOUBLE WRAP TIES 2-3 INCHES ON EACH SIDE OF THE POSTS AT SPACINGS NOT TO EXCEED 12 INCHES BETWEEN POSTS.

FABRIC: SHALL CONSIST OF A 1 INCH DIAMOND MESH USING 0.120 INCH DIA. (11 GAGE) WIRE CONFORMING TO ASTM F668 CLASS 2A OR 2B EXCEPT AS NOTED. THE PVC COATING SHALL BE BLACK IN COLOR CLOSELY APPROACHING FEDERAL STANDARD NO. 595B-17038. SELVAGES SHALL BE KNUCKLED AT BOTH ENDS. HANDLE ALL PVC COATED FABRIC WITH CARE. IF THE PVC COATING IS DAMAGED, REPLACE THE DAMAGED PORTION OF THE FABRIC AT NO COST TO THE DEPARTMENT. FENCE FABRICATOR SHALL ESTABLISH FURNISH AND INSTALL DETAILS FOR FENCE FABRIC CONNECTIONS AND SUBMIT SHOP DRAWINGS TO ENGINEER FOR APPROVAL

FILLET WELDS: FILLET WELDS SHALL CONFORM TO C&MS 513.

SHIM PLATES: SHIM PLATES SHALL BE MADE FROM ANY MULTI-POLYMER PLASTIC WITH A MINIMUM COMPRESSION STRENGTH OF 5,000 PSI. IN ORDER TO INSTALL POSTS PLUMB, ENDS OF POSTS AND SLEEVES MAY BE CUT ON A BIAS.

CAULKING: CAULKING COMPOUND SHALL CONFORM TO FEDERAL SPECIFICATION TT-S-00230 TYPE II, CLASS A, BLACK. WHEN APPLYING CAULK TO THE BASE PLATE, PROVIDE A 1 INCH OPENING THROUGH THE CAULKING ON LOW SIDE OF BASE PLATE.

EXPANSION SLEEVES: PROVIDE EXPANSION SLEEVES AT LEAST 6 INCHES LONG IN FENCE PANELS SPANNING STRUCTURAL EXPANSION JOINTS. EXPANSION SLEEVES SHALL BE OUTSIDE TYPE WITH INTERNAL HEAVY SPRING AND GALVANIZED ACCORDING TO C&MS 711.02. THE SLEEVES SHOULD BE CAPABLE OF ACCOMMODATING THE MAXIMUM EXPANSION AND CONTRACTION MOVEMENTS OF THE STRUCTURE.

FABRICATION: PRIOR TO POWDER COATING, ALL CORNERS OF THERMALLY CUT OR SHEARED EDGES SHALL HAVE A 1/16 INCH RADIUS OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE.

POWDER COATING SURFACES: REFER TO ASTM D7803 FOR SPECIFICATIONS REGARDING THE APPLICATION OF POWDER COATING OVER GALVANIZED SURFACES.

REFER TO AAMA 2605 FOR SPECIFICATIONS REGARDING APPLICATION OF POWDER COATING OVER ALUMINUM SURFACES.

ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2) (CONT'D)

SHOP DRAWINGS DETAILING FENCE FABRICATION: SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH 501.04 AND INCLUDE DETAILS THAT CLEARLY IDENTIFY ALL OF THE REQUIREMENTS LISTED HEREIN. PROVIDE CONNECTIONS CONSISTENT WITH THE CONCEPTS SHOWN ON THE DRAWINGS. INDICATE WELDS BY STANDARD AWS SYMBOLS, AND SHOW SIZE, LENGTH AND TYPE OF EACH WELD. IDENTIFY GRINDING FINISH AND PROFILE OF WELDS. INDICATE TYPE, SIZE AND FIELD BOLTS. IDENTIFY SLIP-CRITICAL DIRECT-TENSIONED SHEAR/BEARING CONNECTIONS. CLEARLY INDICATE WHICH SURFACES OR EDGES ARE EXPOSED AND WHAT CLASS OF TOLERANCES AND ERECTION REQUIREMENT AS NOTED ON THE DRAWINGS OR DEFINED HEREIN.

DELIVERY, STORAGE AND HANDLING: PACKAGING AND DELIVERY OF THE FENCE SECTIONS TO THE JOB SITE IS THE RESPONSIBILITY OF THE COATING APPLICATOR. USE PACKAGING OF A TYPE AND NATURE TO PREVENT DAMAGE TO THE FINISHED SURFACE, AND TO PREVENT DISTORTION OF THE MATERIAL. HANDLE AND STORE IN SUCH A MANNER AS TO MINIMIZE DAMAGE TO THE FINISHED SURFACE. UTILIZE NYLON SLINGS OR PADDED CABLES FOR HANDLING. REPAIR HANDLING DAMAGE WITH SUITABLE MATERIALS SUPPLIED BY THE FINISH COAT APPLICATOR FROM PRODUCTION LOTS OF COATING MATERIAL. THIS WORK SHALL BE PREFORMED BY QUALIFIED REPRESENTATIVES OF THE COATING APPLICATOR IN ACCORDANCE WITH THE COATING MANUFACTURER'S REQUIREMENTS.

REPAIR OF DAMAGED POWDER COATING OVER GALVANIZING: IF A PORTION OF THE FENCE THAT IS GALVANIZED AND POWDER COATED IS DAMAGED, THE EXTENT OF THE DAMAGE SHALL BE DETERMINED BY THE ENGINEER.

PREFORM REPAIRS IN ACCORDANCE WITH REQUIREMENTS OF C&MS 514.17 EXCEPT FOR SURFACE PREPARATION. PREFORM SURFACE PREPARATION IN ACCORDANCE WITH ASTM D7803.

FINAL FENCE INSTALLATION WILL NOT COMMENCE UNTIL ALL REPAIRS ARE ACCEPTED BY THE ENGINEER.

CONSTRUCTION PROCEDURE:

1. FENCE POST ANCHORS AND LUMINARE ANCHORS SHALL BE CAST-IN-PLACE WITH THE PROPOSED CONCRETE BRIDGE PARAPET
2. SEAL PARAPET WITH EPOXY-URETHANE SEALER
3. INSTALL BASE PLATES AND SHIMS WHERE REQUIRED.
4. CAULK EDGES OF BASE PLATES AND SHIMS.
5. COMPLETE INSTALLATION OF THE FENCE AND LUMINARES.

INSTALL FENCING FOR EACH CONSTRUCTION PHASE PRIOR TO OPENING THAT PHASE TO VEHICULAR AND/OR PEDESTRIAN TRAFFIC.

METHODS OF MEASUREMENT: THE DEPARTMENT WILL MEASURE THE QUANTITY BY THE FOOT FROM CENTER OF END POST TO THE END OF THE CANTILEVERED END PANEL.

BASIS OF PAYMENT: THE DEPARTMENT WILL MAKE PAYMENT FOR THE COMPLETED AND ACCEPTED QUANTITIES AT CONTRACT PRICE FOR ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2)

ITEM 511 – CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN (ALTERNATE 2)

THIS ITEM SHALL INCLUDE 1'-4" CONCRETE PARAPET WITH RUSTICATION GROOVES AS DETAILED IN THE PLANS AND THE CONCRETE LIGHT PILASTERS AS SHOWN IN STANDARD DRAWING HL-20.14. CONCRETE REQUIRED TO PLACE EACH OF THE LIGHT PILASTERS SHALL BE INCLUDED ALONG WITH ALL ANCHOR BOLTS, REBAR AND ANY APPURTENANCES REQUIRED TO RE-INSTALL THE EXISTING LIGHT POLES PER THE PLAN DOCUMENTS. EXISTING PLAN DRAWINGS AND CURRENT ODOT STANDARD DRAWINGS SHALL BE USED. JUNCTION BOXES, CONDUIT, WIRING AND SERVICE TO THE LIGHT POLES WILL BE PAID FOR SEPARATELY UNDER THE SPECIFIC ITEM OF WHICH THEY ARE A PART.

LIGHTING

CONDUIT EXPANSION AND DEFLECTION
EXPANSION FITTINGS SHALL BE OZ TYPE AX, CROUSE HINDS TYPE XJG, APPLETON TYPE AX, OR EQUAL APPROVED BY THE ENGINEER. EACH EXPANSION FITTING SHALL PROVIDE EITHER 4 OR 8 INCHES TOTAL MOVEMENT AS SPECIFIED BY THE PLAN DETAILS AND SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.
DEFLECTION COUPLINGS SHALL BE OZ TYPE DX, CROUSE HINDS TYPE XD, APPLETON TYPE DF, OR EQUAL APPROVED BY THE ENGINEER. EACH DEFLECTION COUPLING SHALL HAVE AN EXTERNAL COPPER BONDING JUMPER, UNLESS SPECIFIED OTHERWISE BY THE PLAN DETAILS.

SIGN LIGHTING SYSTEM
WORK UNDER THE VARIOUS ITEMS BELOW AS REQUIRED TO PROVIDE ELECTRICAL SERVICE FOR SIGN LIGHTING SYSTEM AS SHOWN ON THE PLANS AND SHALL INCLUDE ALL CONDUIT, EXCAVATION, BACKFILL, WIRING, TRANSFORMER DISCONNECT INCLUDING SUPPORT RACK. ALL ELECTRIC WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC).

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY EQUIPMENT, LABOR AND MATERIAL TO PROVIDE ELECTRICAL SERVICE FOR THE SIGN LIGHTING SYSTEM.

SIGN LIGHTING FIXTURES: SHALL BE HIGH-PERFORMANCE LINEAR LED LUMINAIRES DESIGNED FOR GRAZING. LUMINAIRES SHALL BE (5) 48" LENGTH ON EAST FENCE AND (1) 24" & (5) 48" LENGTH ON WEST FENCE, IP-66 WET LOCATION RATED, BLACK, 4000K CCT, ASYMMETRIC WALLWASH, 8.5WATT PER FOOT, 3G ANSI RATED FOR BRIDGE APPLICATIONS, CORROSION-RESISTANT COATING, 5-YEAR WARRANTY, ON/OFF, CRI 80, LOW COPPER CONTENT EXTRUDED ALUMINUM HOUSING, CLEAR TEMPERED GLASS LENS, STAINLESS STEEL HARDWARE, SILICONE GASKET MATERIAL, 120-277VAC, -40-DEG F TO 185-DEG F OPERATING TEMPERATURE, IK07 IMPACT RESISTANT.

SIGN LIGHTING CABLING: PROVIDE LEADER CABLE FROM JUNCTION BOX TO FIRST SIGN LIGHT, FIELD VERIFY LENGTH. PROVIDE JUMPER CABLE FROM SIGN LIGHT TO SIGN LIGHT, 18" UNLESS ADJUSTED FOR EXPANSION JOINT. PROVIDE SEALING END CAP AT LAST SIGN LIGHT.

SIGN LIGHTING JUNCTION BOX: PROVIDE 6"X6" NEMA 4X STAINLESS STEEL JUNCTION BOX WITH HINGED COVER, LOCKABLE, TOOL-TIGHT. CONNECT POWER CONDUCTORS TO SIGN LIGHTING CABLING. MOUNT TO PARAPET AT AN APPROPRIATE LOCATION.

PROVIDE SUITABLE CABLE CONNECTIONS FOR SIGN LIGHTING LEADER CABLE.

SIGN LIGHTING MOUNTING: PROVIDE UNIVERSAL ADJUSTABLE MOUNTING BRACKET ON BRIDGE PARAPET ATTACHMENT PLATE. PROVIDE STAINLESS STEEL HARDWARE FOR BRACKET CONNECTIONS.

SIGN LIGHTING AIMING: FIELD AIM SIGN LIGHT FIXTURES WITH SIGN LETTERS. PROVIDE ADDITIONAL SITE VISIT TO MAKE FIELD ADJUSTMENTS UPON REQUEST.

CONDUCTORS: THE MATERIAL USED FOR THE WIRING SYSTEM SHALL BE THE PRODUCTS OF A MANUFACTURER REGULARLY ENGAGED IN THE MANUFACTURING OF THE SPECIFIED MATERIAL.

WHERE A MANUFACTURER IS NAMED FOR A PARTICULAR MATERIAL, THE MATERIAL OF OTHER MANUFACTURERS WILL BE ACCEPTABLE PROVIDED THE MATERIAL MEETS REQUIREMENTS OF THE SPECIFICATIONS.

ALL WIRING SHALL BE IN ACCORDANCE WITH ODOT 625.17 AND 625.19

GENERAL: USE NO WIRE SMALLER THAN NO. 12 AWG, RATED AT 600 VOLTS, FOR POWER AND LIGHTING CIRCUITS. NO REDUCTION IN WIRE SIZES BASED ON CAPACITY OR OTHER REASON WILL BE PERMITTED.

a. TYPE THWN-2 - 90 DEGREE C RATING FOR LIGHTING, POWER AND CONTROL, NO. 10 AWG AND SMALLER. USE STRANDED WIRE.
b. TYPE XHHW-2 - 90 DEGREE C RATING FOR LIGHTING, POWER AND CONTROL, NO. 8 AWG AND LARGER UNLESS NOTED OTHERWISE ON THE DRAWINGS. USE STRANDED WIRE.

BASIS OF DESIGN OR APPROVED EQUAL: LUMENPULSE #LOG RO-120277V-48(UNO)-40K-WW(LF/RF)-UMAS-BK-NO-CRC-3GV+CABLING & JUNCTION BOX.

THE COST OF SIGN LIGHTING SYSTEM SHALL BE COMPLETE INCLUDING CONNECTIONS, JUNCTION BOX NEMA 4X, LEADER CABLE, JUMPER CABLES, SEALING END CAP, SIGN LIGHTING FIXTURES, SIGN LIGHTING FIXTURE MOUNTS AND ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO BRACKETS, HARDWARE, AIMING, ETC. PAYMENT TO BE INCLUDED WITH ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2)

TRANSFORMER DISCONNECT INCLUDING SUPPORT RACK
WORK UNDER THE VARIOUS ITEMS BELOW AS REQUIRED TO PROVIDE ELECTRICAL SERVICE FOR SIGN LIGHTING SYSTEM AS SHOWN ON THE PLANS AND SHALL INCLUDE ALL CONDUIT, EXCAVATION, BACKFILL, WIRING, TRANSFORMER DISCONNECT INCLUDING SUPPORT RACK. ALL ELECTRIC WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE NATIONAL ELECTRIC CODE (NEC).

THE CONTRACTOR SHALL FURNISH AND INSTALL ALL NECESSARY EQUIPMENT, LABOR AND MATERIAL TO PROVIDE ELECTRICAL SERVICE FOR THE SIGN LIGHTING SYSTEM.

TRANSFORMER DISCONNECT SHALL BE COMPLETE INCLUDING TRANSFORMER DISCONNECT, NEMA 4X ENCLOSURE, BACKPANEL, GALVANIZED STEEL PIPE, UNI-STRUT, FOUNDATION WITH SUPPORT RACK, FEEDER TO EXISTING PULL BOX, CONNECTIONS, FEEDER TO SIGN LIGHTING AND ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO PLASTIC CAUTION TAPE, GROUND CONDUCTORS, UNI-STRUT CLIPS, HARDWARE, GROUND RODS, ETC.

TRANSFORMER DISCONNECT UNIT: 1000VA, 480/240VAC PRIMARY, 120VAC SECONDARY, 60HZ, 100KAIC, UL LISTED, COPPER WINDINGS, NEMA 1 ENCLOSURE, EXTERNAL 600V DISCONNECT, LOCKABLE, FUSING ON PRIMARY, FUSING ON SECONDARY, TERMINAL STRIP, GROUND TERMINAL, MOUNTING TABS, ON RED WARNING PILOT LIGHT, 55-DEG C RISE, ELECTROSTATICALLY SHIELDED, ENCLOSURE GROUNDED WITH WIRE LEAD. BASIS OF DESIGN OR APPROVED EQUAL SQUARE D #9070-SK-1000-G3--D1-E23-P1

ENCLOSURE: STAINLESS STEEL, NEMA 4X, HINGED COVER, LOCKABLE, TOOL TIGHT, BACKPANEL, 24"X24"X12" (MINIMUM). BASIS OF DESIGN OR APPROVED EQUAL BY HOFFMAN ENCLOSURE.

SUPPORT RACK: PROVIDE 3" (MINIMUM) GALVANIZED STEEL PIPE, CAP, STAINLESS STEEL UNI-STRUT CLAMPS, STAINLESS STEEL UNI-STRUT CHANNEL, STAINLESS STEEL UNI-STRUT NUTS, SPRING NUTS,

UNDERGROUND CONDUITS: SHALL CONSIST OF THE CONSTRUCTION OF AN UNDERGROUND ELECTRIC CONDUIT SYSTEM FOR THE PROPOSED SIGN LIGHTING SYSTEM AS SHOWN ON THE PLANS AND SHALL CONFORM TO THE REQUIREMENTS OF ODOT ITEM 625. CONDUIT TO BE USED SHALL BE PVC EPC-40-PVC.

GROUND RODS: GROUND RODS SHALL BE COPPER ALLOY OR COPPER-CLAD STEEL TYPE. GROUNDING CONDUCTORS SHALL BE BASE MEDIUM SOFT-DRAWN COPPER OF THE SIZES SHOWN. THERMOWELD OR GROUND -LUG ALL CONNECTIONS TO GROUND RODS AND POLES.

PROVIDE TWO (2) GROUND RODS AND CONNECT TO TRANSFORMER DISCONNECT WITH SUPPORT RACK PAD AS SHOWN ON ELECTRICAL DETAILS.

SURFACE SPLICE CABINETS AND AUXILIARY GUTTERS: CONSTRUCTION, SIZES AND INSTALLATION OF SURFACE SPLICE CABINETS AND AUXILIARY GUTTERS SHALL COMPLY WITH NEC, ARTICLES 312 AND 366 RESPECTIVELY.

SURFACE SPLICE CABINETS FOR TERMINATING AND/OR SPLICING SERVICE LATERAL CONDUCTORS SHALL BE NEMA 4X STAINLESS STEEL WITH A FULLY REMOVABLE FACE PANEL, SECURED WITH STAINLESS STEEL SCREWS COMPLETE WITH SEAL/PADLOCKING PROVISIONS.

CONDUCTORS: THE MATERIAL USED FOR THE WIRING SYSTEM SHALL BE THE PRODUCTS OF A MANUFACTURER REGULARLY ENGAGED IN THE MANUFACTURING OF THE SPECIFIED MATERIAL.

WHERE A MANUFACTURER IS NAMED FOR A PARTICULAR MATERIAL, THE MATERIAL OF OTHER MANUFACTURERS WILL BE ACCEPTABLE PROVIDED THE MATERIAL MEETS REQUIREMENTS OF THE SPECIFICATIONS.

ALL WIRING SHALL BE IN ACCORDANCE WITH ODOT 625.17 AND 625.19

GENERAL: USE NO WIRE SMALLER THAN NO. 12 AWG, RATED AT 600 VOLTS, FOR POWER AND LIGHTING CIRCUITS. NO REDUCTION IN WIRE SIZES BASED ON CAPACITY OR OTHER REASON WILL BE PERMITTED.

a. TYPE THWN-2 - 90 DEGREE C RATING FOR LIGHTING, POWER AND CONTROL, NO. 10 AWG AND SMALLER. USE STRANDED WIRE.
b. TYPE XHHW-2 - 90 DEGREE C RATING FOR LIGHTING, POWER AND CONTROL, NO. 8 AWG AND LARGER UNLESS NOTED OTHERWISE ON THE DRAWINGS. USE STRANDED WIRE.

THE COST OF TRANSFORMER DISCONNECT SHALL BE COMPLETE INCLUDING TRANSFORMER DISCONNECT, NEMA 4X ENCLOSURE, BACKPANEL, GALVANIZED STEEL PIPE, UNI-STRUT, FOUNDATION WITH SUPPORT RACK, FEEDER TO EXISTING PULL BOX, CONNECTIONS, FEEDER TO SIGN LIGHTING AND ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO PLASTIC CAUTION TAPE, GROUND CONDUCTORS, UNI-STRUT CLIPS, HARDWARE, GROUND RODS, ETC.. PAYMENT TO BE INCLUDED ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2)

AESTHETIC PARAPET AND FENCE NOTES (ALTERNATE 2) - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
JDH	PJW

REVIEWER SMK 12-13-22

PROJECT ID 105909

SUBSET	TOTAL
10	15

SHEET	TOTAL
84	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:17:15 PM USER: mdcruz
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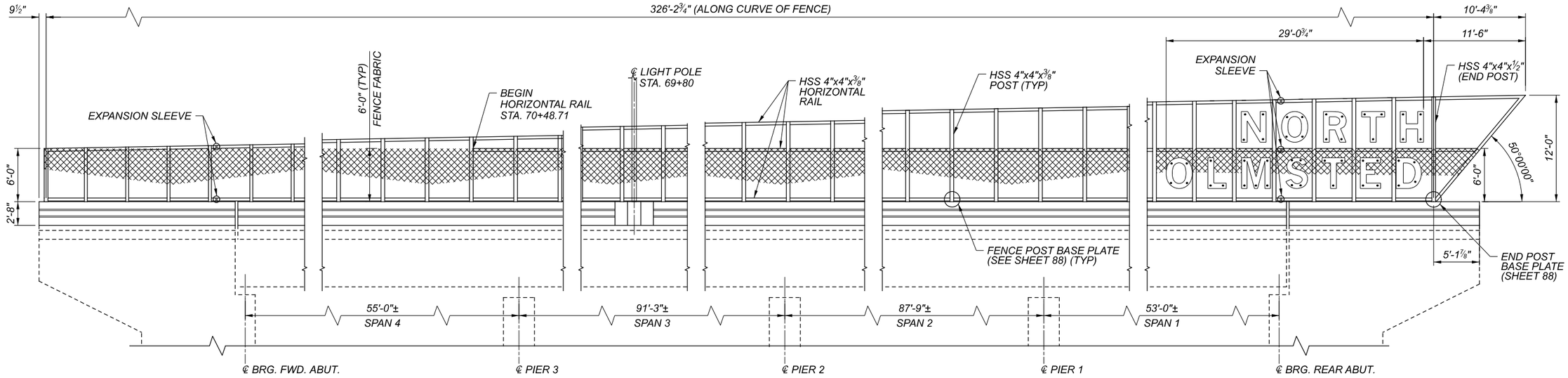
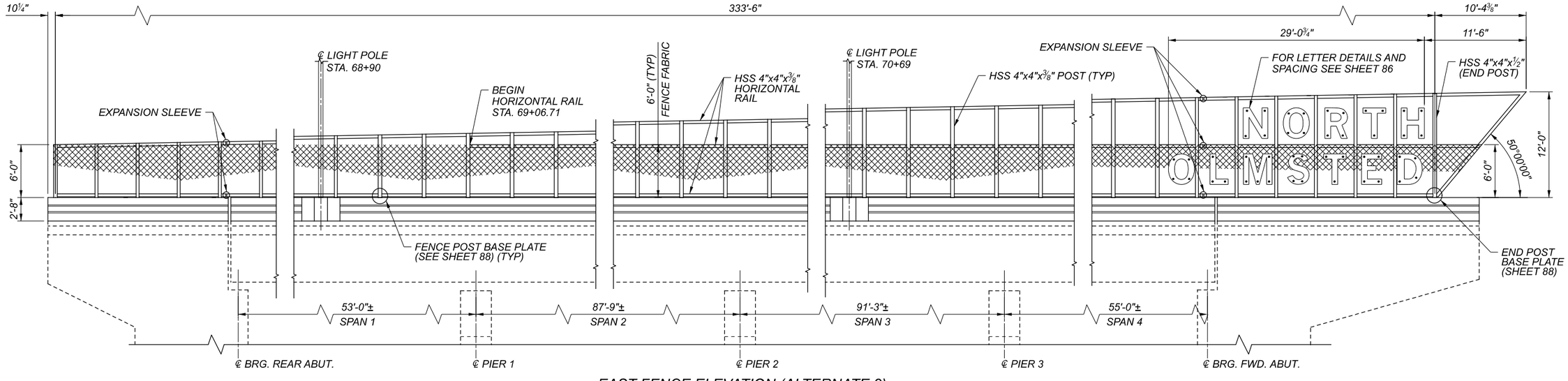


WEST FENCE ELEVATION (ALTERNATE 2)

(LOOKING EAST)
(VERTICAL LOUVERS NOT SHOWN FOR CLARITY)



EAST FENCE ELEVATION (ALTERNATE 2)

(LOOKING WEST)
(VERTICAL LOUVERS NOT SHOWN FOR CLARITY)

NOTES:

1. FENCE ALTERNATE 2 INCLUDES THE DECORATIVE CUSTOM FENCE AND LETTERING AS DETAILED ON SHEETS 84-88 AND SHALL BE INCLUDED WITH ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2) FOR PAYMENT.

   FENCE ALTERNATE 1 INCLUDES THE STANDARD 6' STRAIGHT VANDAL PROTECTION FENCE PER VPF-1-90 AND AS DETAILED ON SHEETS 82-83 AND SHALL BE INCLUDED WITH ITEM 607 - VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN (ALTERNATE 1) FOR PAYMENT.

2. FOR FENCE POST SPACING, PARAPET DEFLECTION JOINT SPACING, AND PARAPET REINFORCING SEE SHEET 86.

3. FOR REINFORCING LAYOUT AT LIGHT PILASTERS AND DEFLECTION JOINTS SEE SHEET 83.

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/6/2023 TIME: 7:17:20 PM USER: mdcruz
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DECORATIVE FENCE ELEVATION (ALTERNATE 2) - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

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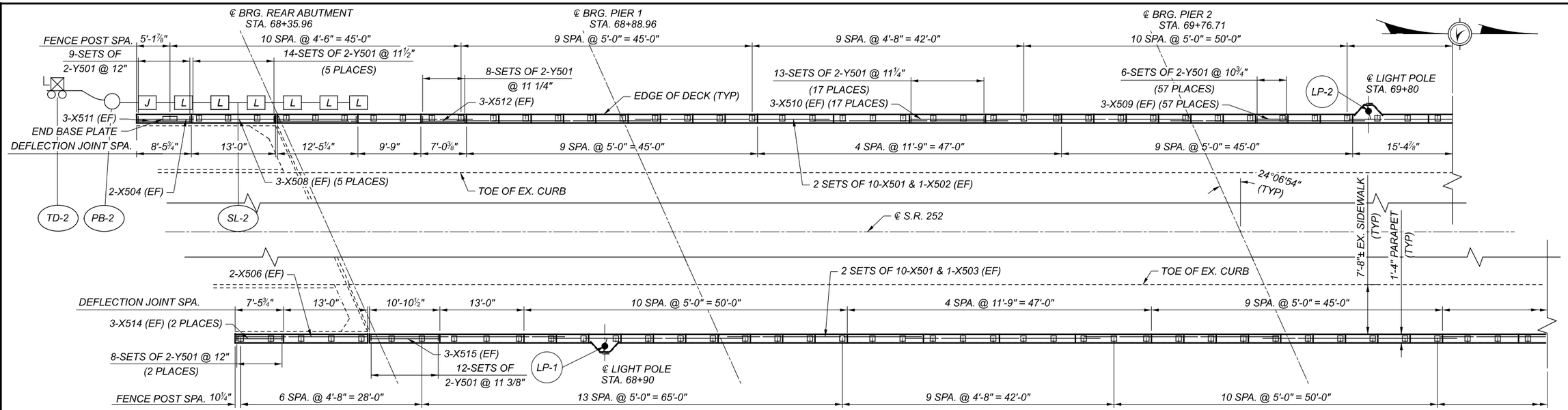
DESIGNER	CHECKER
JDH	PJW

REVIEWER: SMK 12-13-22

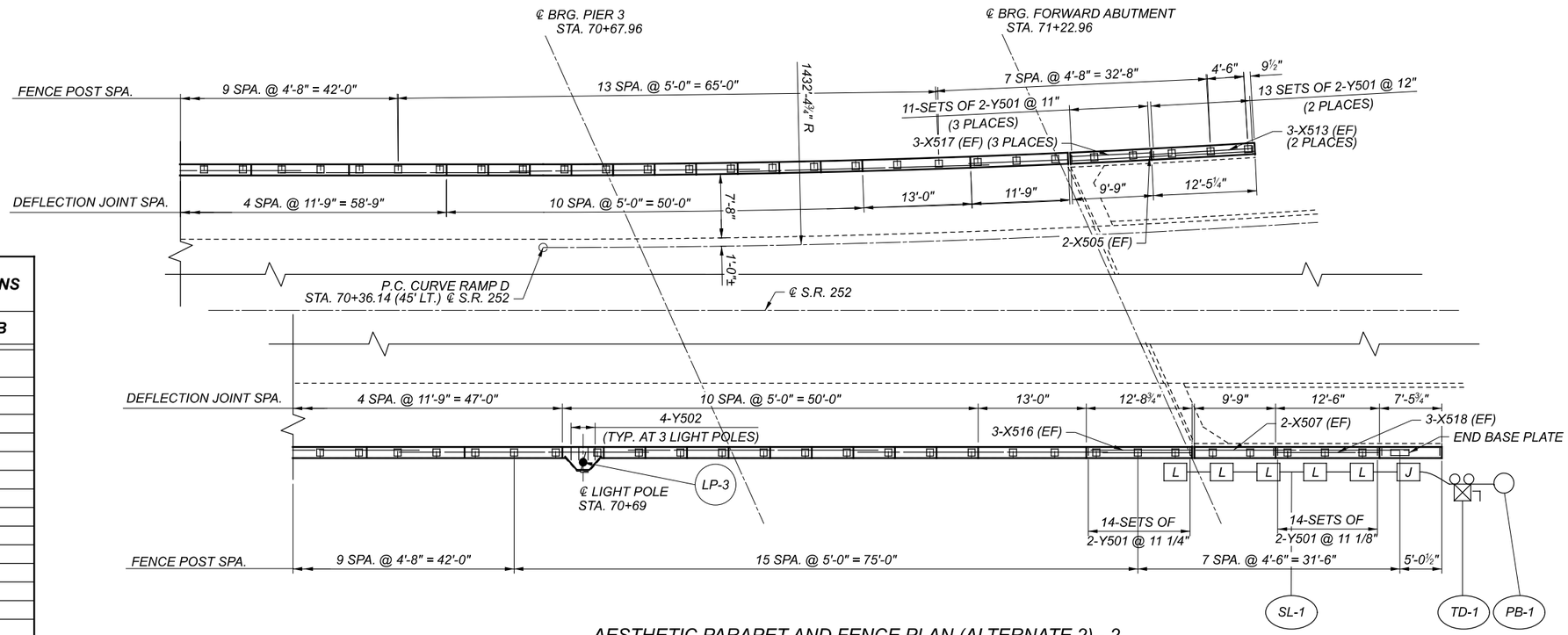
PROJECT ID: 105909

SUBSET	TOTAL
11	15

SHEET	TOTAL
85	110

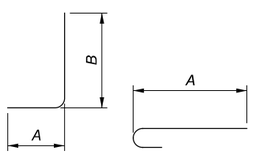


AESTHETIC PARAPET AND FENCE PLAN (ALTERNATE 2) - 1



AESTHETIC PARAPET AND FENCE PLAN (ALTERNATE 2) - 2

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	DIMENSIONS B
PARAPETS - ALTERNATE 2						
X501	80	30'-0"	2503	STR		
X502	4	11'-10"	49	STR		
X503	4	12'-6"	52	STR		
X504	4	21'-2"	88	STR		
X505	4	21'-10"	91	STR		
X506	4	20'-2"	84	STR		
X507	4	29'-5"	123	STR		
X508	30	12'-8"	397	STR		
X509	342	4'-8"	1665	STR		
X510	102	11'-5"	1215	STR		
X511	6	8'-2"	51	STR		
X512	6	6'-8"	42	STR		
X513	12	12'-1"	151	STR		
X514	12	7'-1"	89	STR		
X515	6	10'-6"	66	STR		
X516	6	12'-4"	77	STR		
X517	18	9'-5"	177	STR		
X518	6	12'-2"	76	STR		
Y501	1530	3'-10"	6117	16	3'-3"	
Y502	12	3'-3"	41	1	1'-5"	2'-0"
		SUB-TOTAL	13154			



TYPE-1

TYPE-16

NOTES:
1. SEE SHEET 82 FOR NOTES REGARDING THE EXISTING LIGHT POLES AND PROPOSED LIGHTING WORK.
2. FOR LIGHT PILASTER DETAILS SEE SHEET 83.
3. SEE SHEET 84 AND 89 FOR LIGHTING NOTES AND DETAILS
4. PROVIDE NEW CONDUIT AND CONDUCTORS IN NEW PARAPET ON BRIDGE TO EXISTING PULL BOXES

LEGEND:
- EF - EACH FACE
- L - LIGHT
- J - JUNCTION BOX
- SL-1 - SIGN LIGHTING SYSTEM
- TD-1 - TRANSFORMER DISCONNECT WITH SUPPORT RACK
- PB-1 - EXISTING PULL BOX

AESTHETIC PARAPET AND FENCE PLAN (ALTERNATE 2) - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY

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Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
JDH	PJW

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
12	15

SHEET	TOTAL
86	110

CUY-BH-FY2023 MISC.

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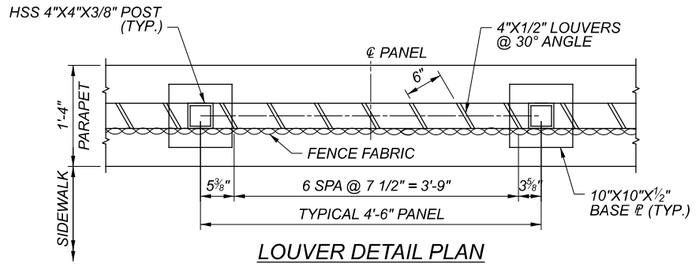
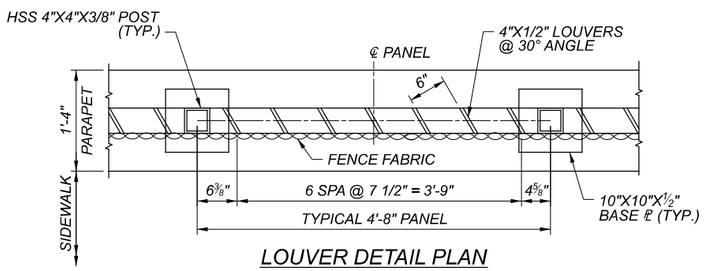
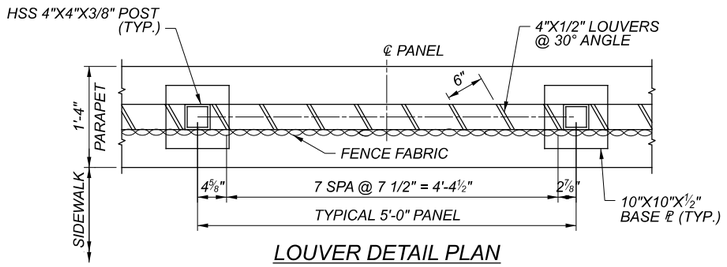


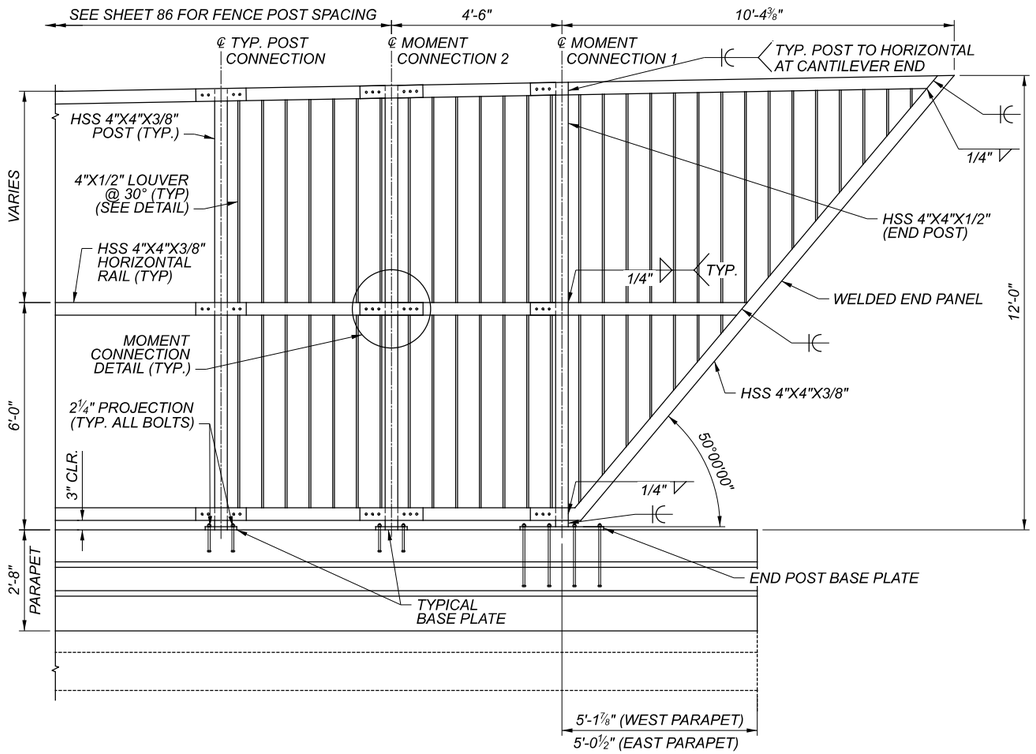
LOUVER DETAIL PLAN
4'-6" POST SPACING



LOUVER DETAIL PLAN
4'-8" POST SPACING



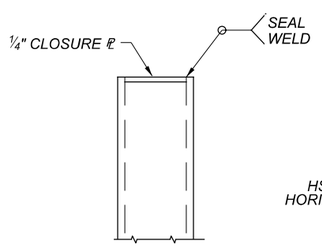
LOUVER DETAIL PLAN
5'-0" POST SPACING



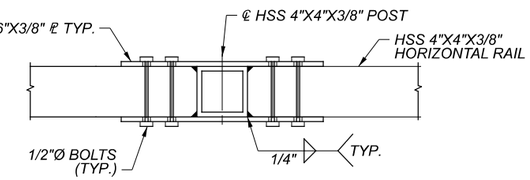
FENCE END ELEVATION (ALTERNATE 2)

OUTSIDE FACE SHOWN - INSIDE FACE SIMILAR
(FENCE FABRIC AND LETTERING NOT SHOWN FOR CLARITY)

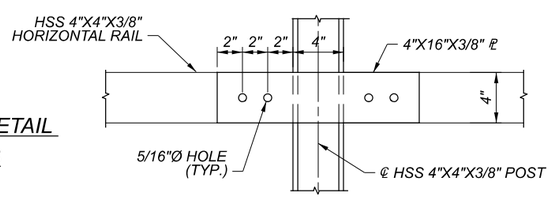
NOTES:
1. SEE SHEET 84 FOR AESTHETIC FENCE NOTES.



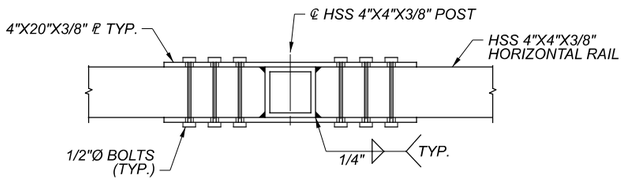
TYP. CLOSURE PLATE DETAIL
AT TOPS OF POSTS



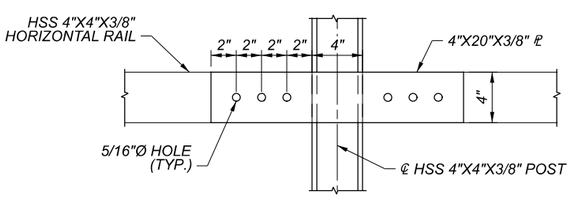
TYP. POST CONNECTION PLAN



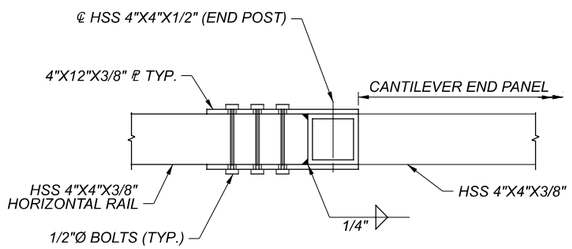
TYP. POST CONNECTION ELEVATION



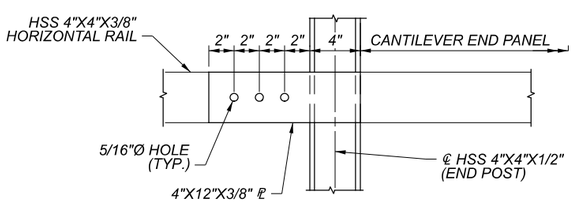
MOMENT CONNECTION 2 PLAN



MOMENT CONNECTION 2 ELEVATION



MOMENT CONNECTION 1 PLAN



MOMENT CONNECTION 1 ELEVATION

DECORATIVE FENCE DETAILS (ALTERNATE 2) - 1 - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN 1810405

DESIGN AGENCY
OSBORN ENGINEERING
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(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
JDH	PJW

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
13	15

SHEET	TOTAL
87	110

CUY-BH-FY2023 MISC.

MODEL: Sheet3 PAPERSIZE: 17x11 (in.) DATE: 4/6/2023 TIME: 7:17:29 PM USER: mdoruz
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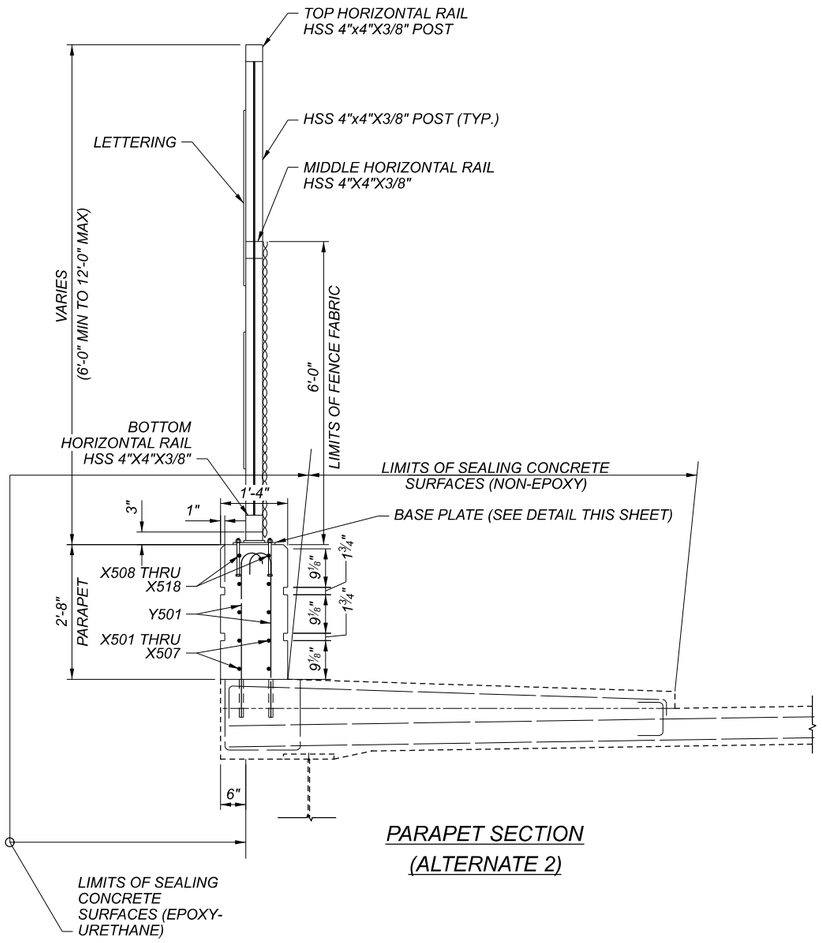
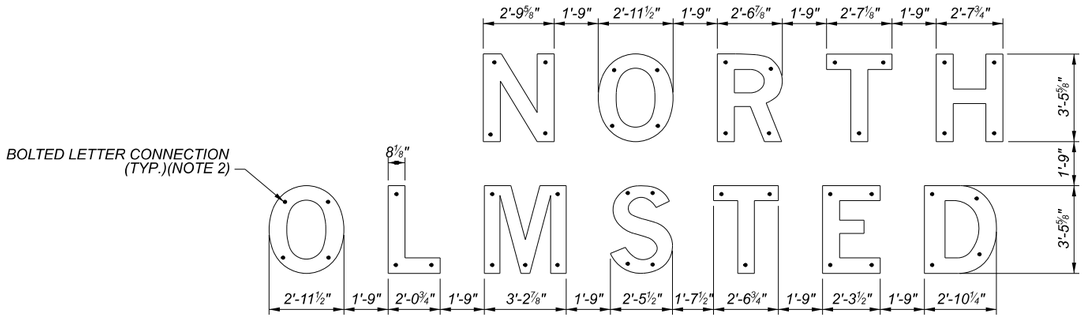
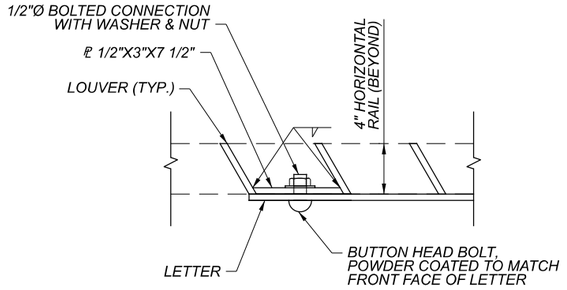


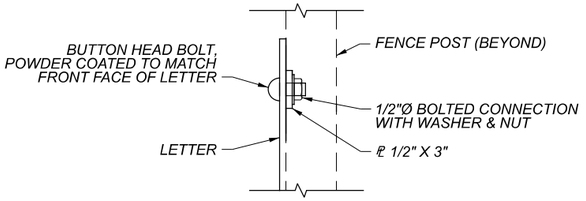
PARAPET SECTION
(ALTERNATE 2)



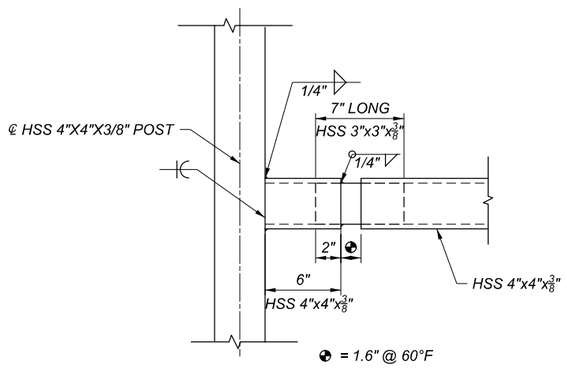
LETTERING DETAIL



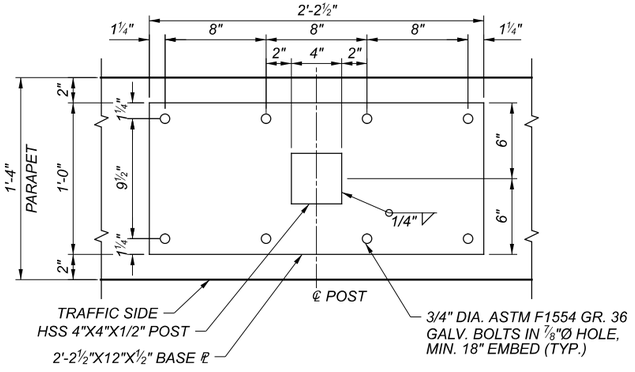
BOLTED LETTER CONNECTION PLAN



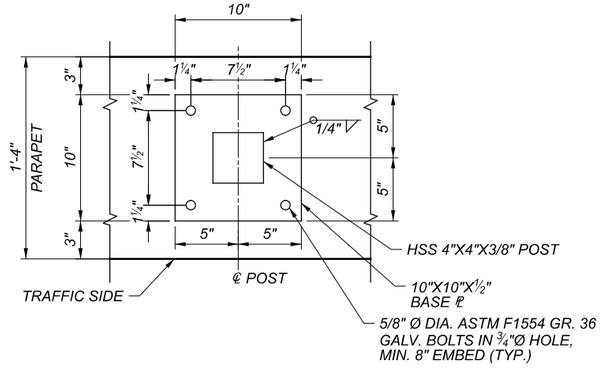
BOLTED LETTER CONNECTION SECTION



EXPANSION SLEEVE DETAIL



BASE PLATE - END POST



BASE PLATE - FENCE POST

NOTES:
1. THE LETTERS SHALL BE FURNISHED BY THE FENCE FABRICATOR.
2. LETTERS SHALL BE SUFFICIENTLY BOLTED AT MULTIPLE LOCATIONS TO RESIST DEFORMATION DUE TO WIND LOADS.
3. SEE SHEET 84 FOR ADDTIONAL NOTES.
4. LETTERING SHALL BE BOLTED ON THE OUTSIDE FACE OF THE FENCE

DECORATIVE FENCE DETAILS (ALTERNATE 2) - 2 - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

CUY-BH-FY2023 MISC.

MODEL: Sheet2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:17:30 PM USER: mdcruz
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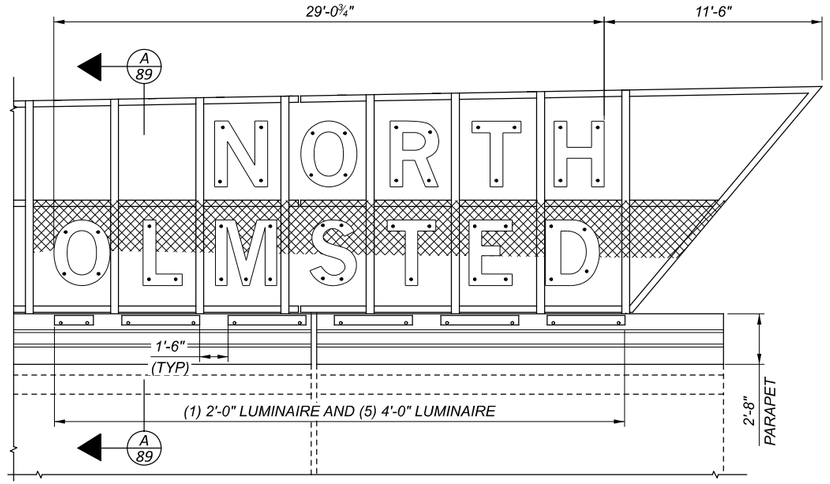
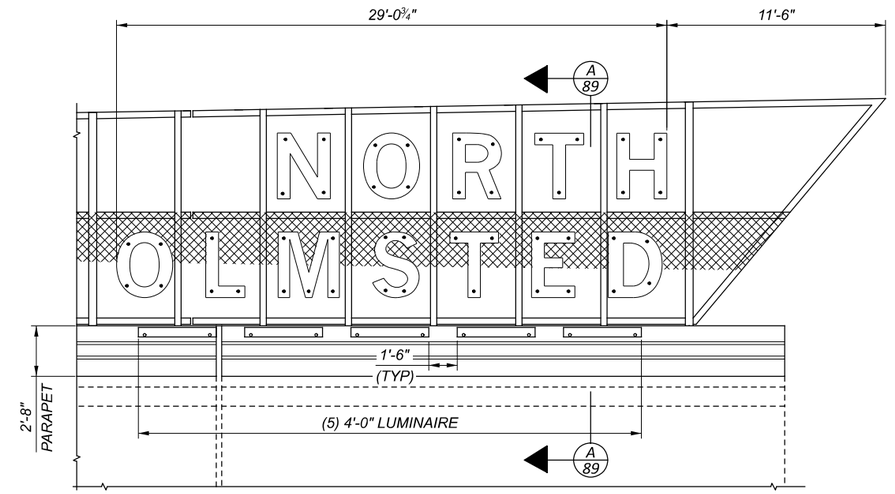
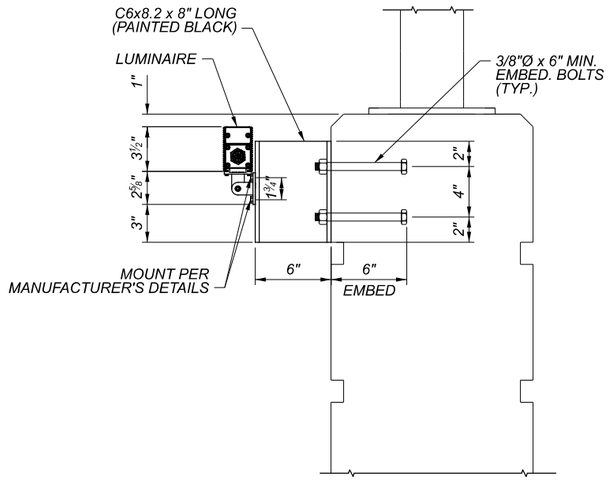
SFN 1810405
DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com
DESIGNER JDH | CHECKER PJW
REVIEWER SMK 12-13-22
PROJECT ID 105909
SUBSET 14 | TOTAL 15
SHEET 88 | TOTAL 110



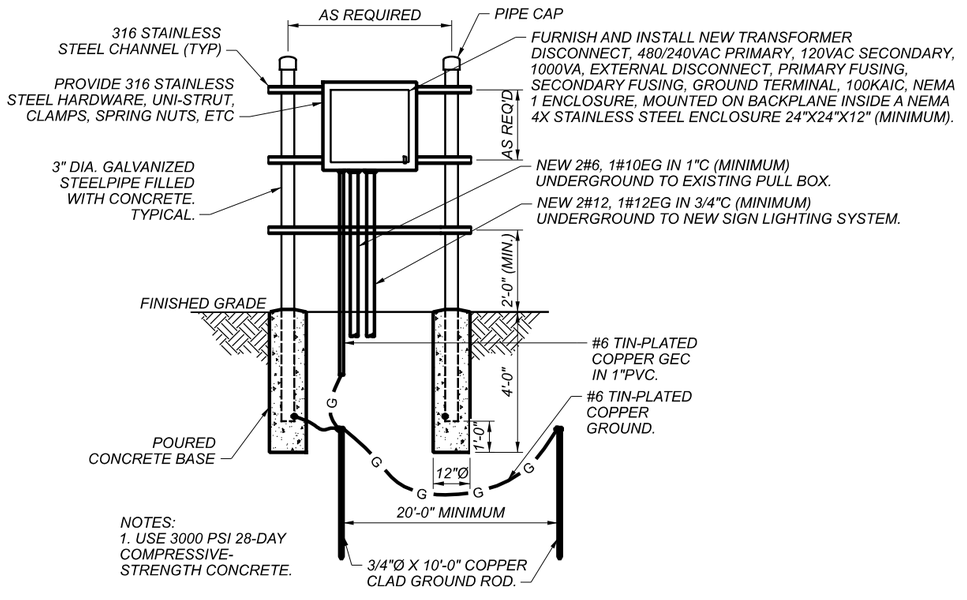
WEST FENCE ELEVATION (ALTERNATE 2)
(LOOKING EAST)
(VERTICAL LOUVERS NOT SHOWN FOR CLARITY)



EAST FENCE ELEVATION (ALTERNATE 2)
(LOOKING WEST)
(VERTICAL LOUVERS NOT SHOWN FOR CLARITY)



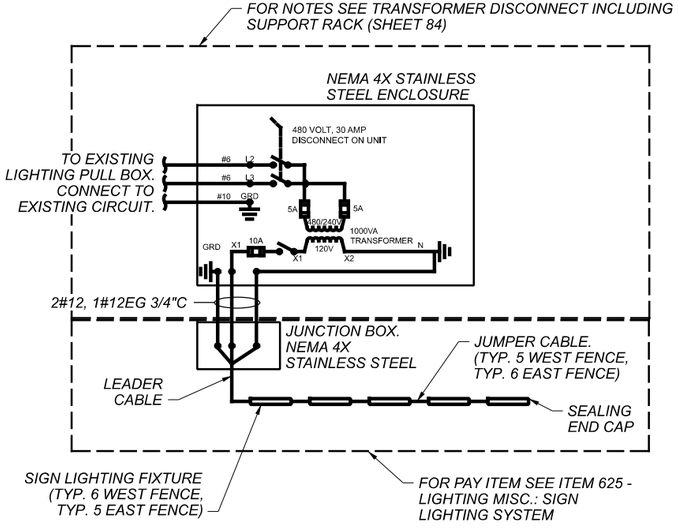
A/89 LUMINAIRE CONNECTION



NOTES:
1. USE 3000 PSI 28-DAY COMPRESSIVE-STRENGTH CONCRETE.

TRANSFORMER DISCONNECT INCLUDING SUPPORT RACK

NOTE: COST OF TRANSFORMER DISCONNECT SHALL BE COMPLETE INCLUDING TRANSFORMER DISCONNECT, NEMA 4X ENCLOSURE, BACKPANEL, GALVANIZED STEEL PIPE, UNI-STRUT, FOUNDATION WITH SUPPORT RACK, FEEDER TO EXISTING PULL BOX, CONNECTIONS, FEEDER TO SIGN LIGHTING AND ASSOCIATED ITEMS INCLUDING BUT NOT LIMITED TO PLASTIC CAUTION TAPE, GROUND CONDUCTORS, UNI-STRUT CLIPS, HARDWARE, GROUND RODS, ETC. PAYMENT SHALL BE INCLUDED WITH ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2).



TRANSFORMER DISCONNECT WIRING DIAGRAM

NOTE: ALL WORK SHALL BE IN ACCORDANCE WITH ODOT C&MS 625 AND AS INDICATED IN THE NOTES ON SHEET 84. PAYMENT TO BE INCLUDED WITH ITEM 607 - FENCE MISC.: DECORATIVE FENCE (ALTERNATE 2).

AESTHETIC PARAPET AND FENCE LIGHTING (ALTERNATE 2) - LOCATION 4
BRIDGE NO. CUY-252-0434
GREAT NORTHERN BOULEVARD OVER IR-480

SFN	1810405
DESIGN AGENCY	OSBORN ENGINEERING
	1100 Superior Avenue Suite 300, Cleveland, OH 44114, (216) 861-2020, www.osborn-eng.com
DESIGNER	JDH
CHECKER	PJW
REVIEWER	SMK 12-13-22
PROJECT ID	105909
SUBSET	11
TOTAL	15
SHEET	89
TOTAL	110

CUY-BH-FY2023 MISC.

MODEL: Sheet 2 PAPERSIZE: 17x11 (in.) DATE: 4/6/2023 TIME: 7:17:34 PM USER: mdcruz
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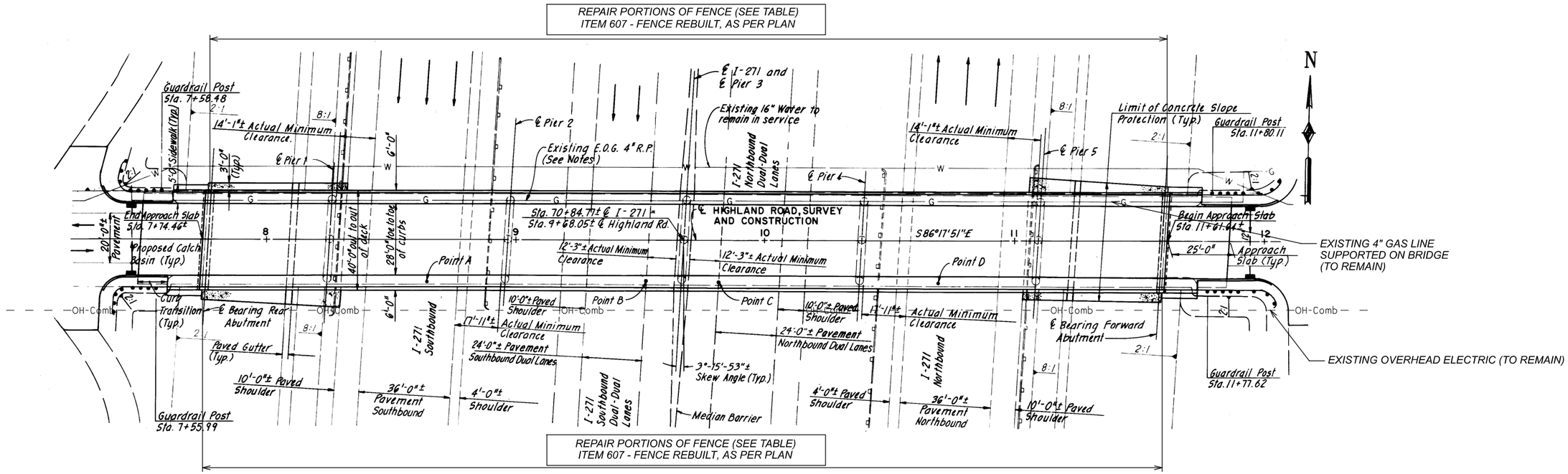
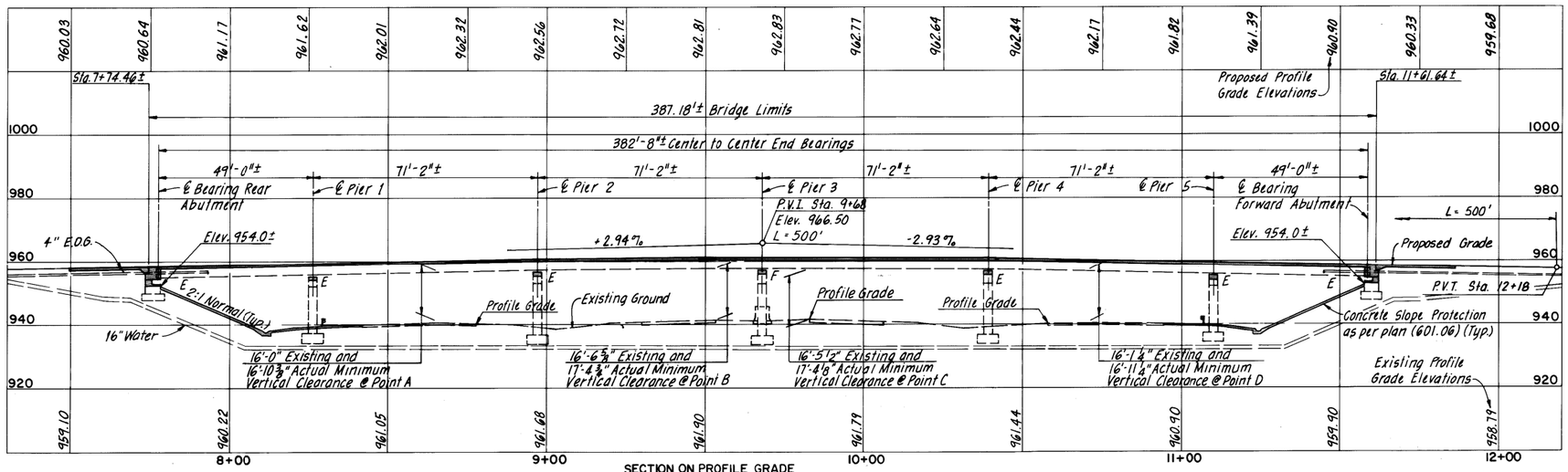
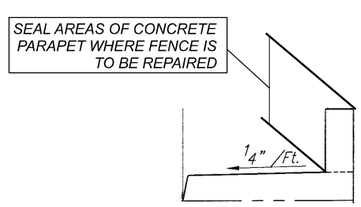




SECTION ON PROFILE GRADE

Location	Lower Rails (EA)	Lower Boulevards (EA)	Tension Bands (EA)	Middle Boulevards (EA)	Middle Rails (EA)
NORTH	46	45	8	10	12
SOUTH	46	45	8	15	18
Field Totals	92	90	16	25	30
ESTIMATED TOTAL	92	90	20	30	35

REPAIR PORTIONS OF FENCE
(SEE NOTE 4)



SEALING OF CONCRETE SURFACES
ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

NOTES:

1. *DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.*
2. *PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.*
3. *FOR ESTIMATED QUANTITIES SEE SHEET* 91
4. *THE FENCE WORK IS MEASURED BY LINEAR FEET OF RAILS (BOTTOM OR MIDDLE AS LISTED IN THE TABLE ON SHEET 90) AS REPLACED. THE BOULEVARDS, TENSION BANDS, COUPLERS, TIES AND ANY OTHER COMPONENTS NEEDED TO PLACE THE RAILS IS INCIDENTAL TO THE WORK. ALL WORK TO REPAIR, REBUILD AND REPLACE PORTIONS OF THE FENCE SHALL BE PAID UNDER ITEM 607 – FENCE REBUILT, AS PER PLAN.*

GENERAL PLAN - LOCATION 5
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
1	6

SHEET	TOTAL
90	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:17:38 PM USER: mdcruz
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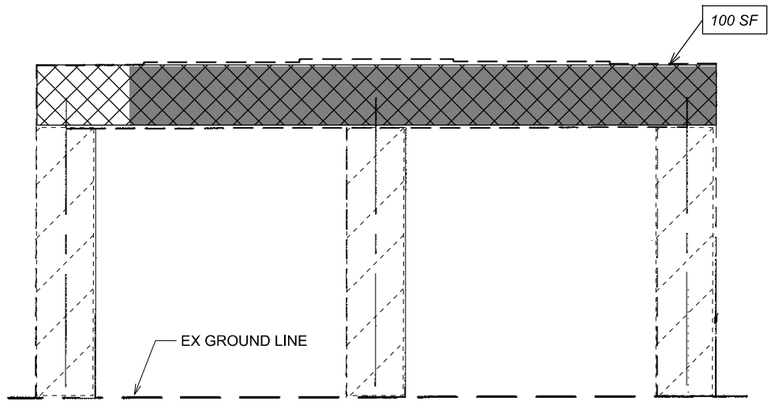
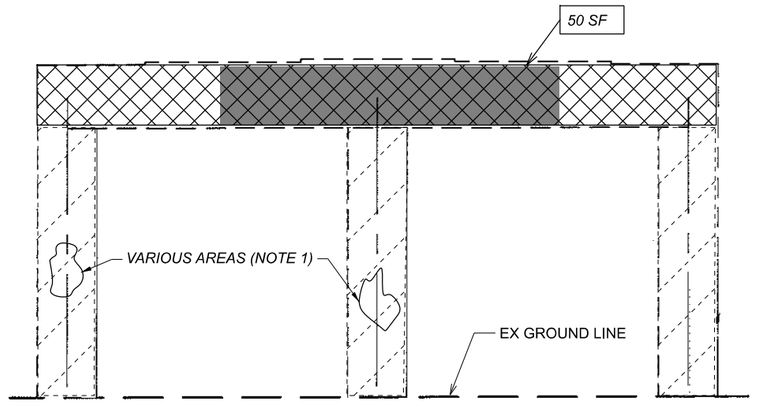


EAST ELEVATION



WEST ELEVATION

PIER 1 ELEVATION

LEGEND:

INDICATES APPROXIMATE AREAS OF CARBON FIBER REINFORCED POLYMER (CFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

EXISTING FIBER WRAP

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
PIER 1	150	188
PIER 2	17	22
PIER 3	79	99
PIER 4	138	173
PIER 5	191	239
	TOTAL	**721**

NOTES:

1. FOR AREAS OF EXISTING FIBER WRAP, WHERE DAMAGED, WITH DEFUNCT SIGN ATTACHMENTS, RIPPED, TORN OR NON-EXISTENT, THE CONTRACTOR SHALL REMOVE ANY STEEL OR DEFUNCT ATTACHMENTS AND REPAIR THESE AREAS WITH AN OVERLAP OF 6" MINIMUM TO THE SATISFACTION OF THE ENGINEER. TO BE PAID UNDER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP). AN ALLOWANCE OF 30 SF HAS BEEN INCLUDED FOR THESE AREAS.

2. SEE SHEETS 92 & 93 FOR PIERS 2, 3, 4 AND 5.

ESTIMATED QUANTITIES

CALCULATED: JDH DATED: 06/22
CHECKED: MJD DATED: 06/22

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34
512	10101	39	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
SPECIAL	51271500	340	SY	SPECIAL - URETHANE TOP COAT SEALER	
516	10001	82	FT	PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN	34, 95
516	45305	20	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	34
516	46200	10	EACH	BEARING DEVICE, ROCKER	
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
SPECIAL	51900100	2274	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM	36
SPECIAL	51900100	569	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36
519	11101	721	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
607	23101	1028	FT	FENCE REBUILT, AS PER PLAN	90

PIER REPAIR DETAILS - LOCATION 5
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER MJD | CHECKER JDH
REVIEWER SMK 12-13-22
PROJECT ID 105909
SUBSET 2 | TOTAL 6
SHEET 91 | TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:17:53 PM USER: mdcruz
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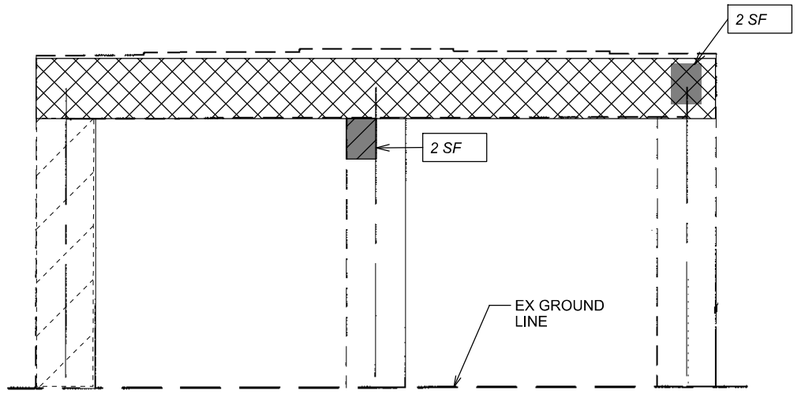
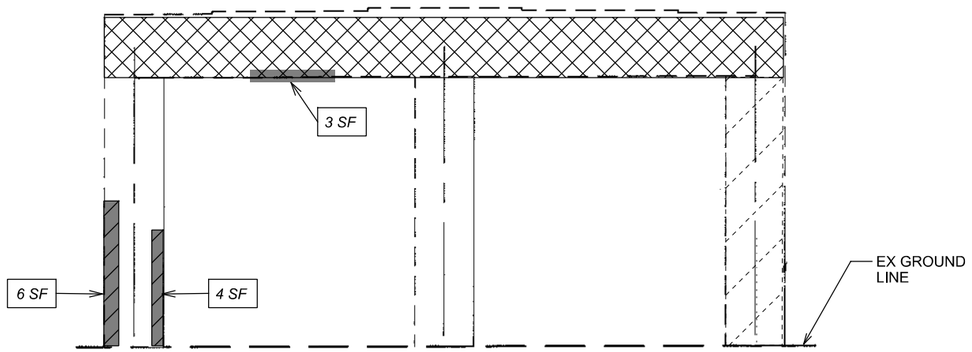
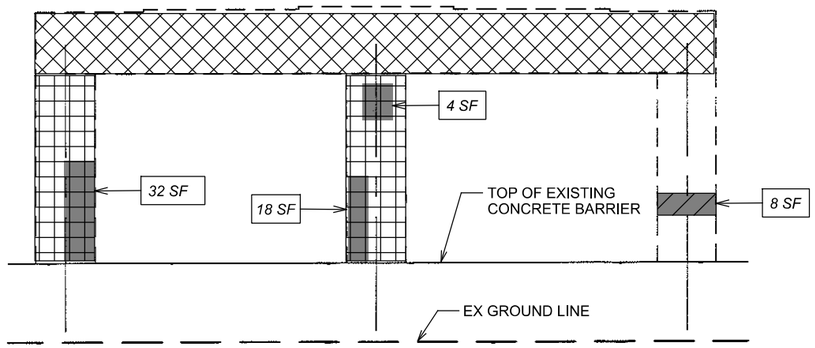


EAST ELEVATION

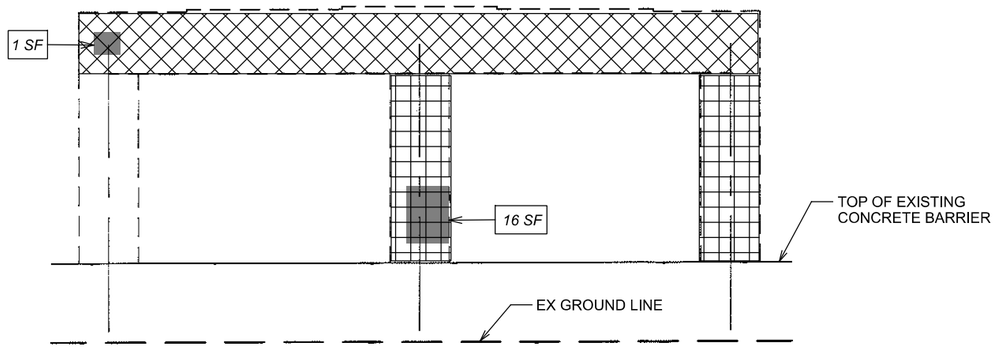


WEST ELEVATION

PIER 2 ELEVATION



EAST ELEVATION



WEST ELEVATION

PIER 3 ELEVATION

NOTES:

1. FOR AREAS OF EXISTING FIBER WRAP, WHERE DAMAGED, WITH DEFUNCT SIGN ATTACHMENTS, RIPPED, TORN OR NON-EXISTENT, THE CONTRACTOR SHALL REMOVE ANY STEEL OR DEFUNCT ATTACHMENTS AND REPAIR THESE AREAS WITH AN OVERLAP OF 6" MINIMUM TO THE SATISFACTION OF THE ENGINEER. PAID FOR UNDER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP).

2. SEE SHEETS 91 & 93 FOR PIERS 1, 4 AND 5.

LEGEND:

INDICATES APPROXIMATE AREAS OF CARBON FIBER REINFORCED POLYMER (CFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES CONCRETE PATCHES TO BE SEALED ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

SEE SHEET 91 FOR PATCHING QUANTITIES

EXISTING FIBER WRAP

PIER REPAIR DETAILS 2 - LOCATION 5
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
3	6

SHEET	TOTAL
92	110

CUY-BH-FY2023 MISC.

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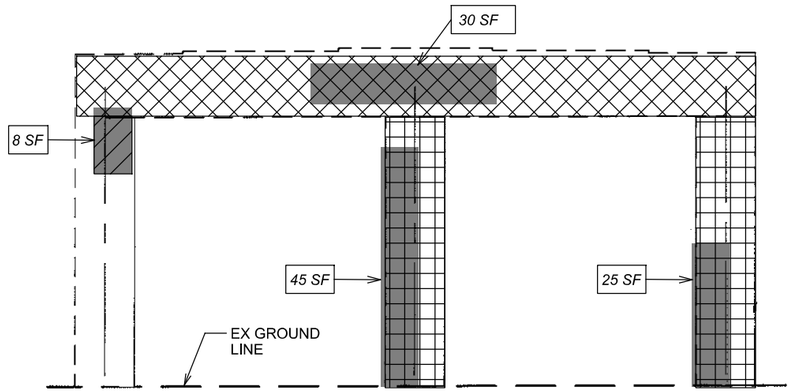
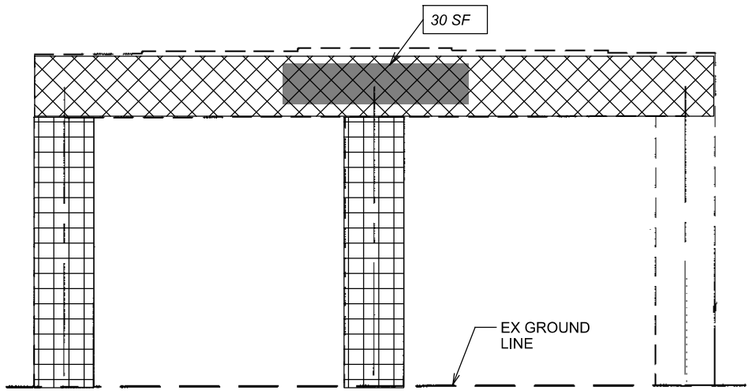
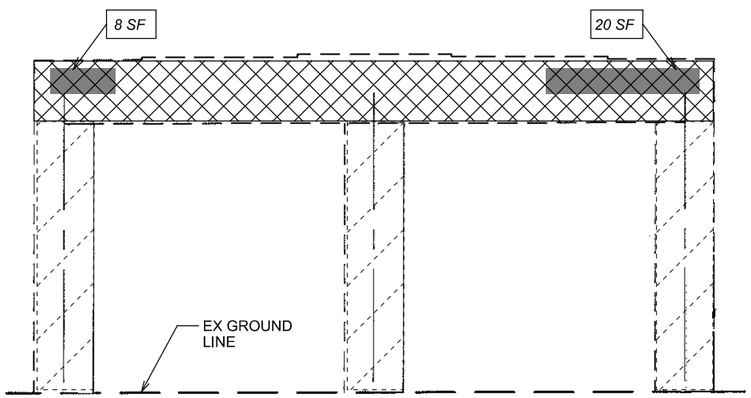


EAST ELEVATION

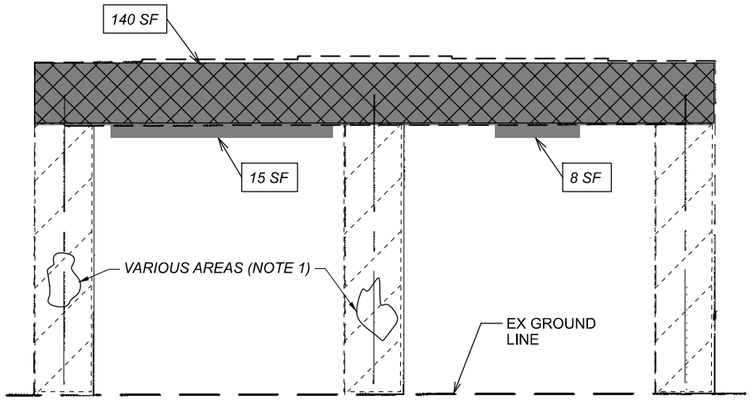


WEST ELEVATION

PIER 4 ELEVATION



EAST ELEVATION



WEST ELEVATION

PIER 5 ELEVATION

NOTES:

1. FOR AREAS OF EXISTING FIBER WRAP, WHERE DAMAGED, WITH DEFUNCT SIGN ATTACHMENTS, RIPPED, TORN OR NON-EXISTENT, THE CONTRACTOR SHALL REMOVE ANY STEEL OR DEFUNCT ATTACHMENTS AND REPAIR THESE AREAS WITH AN OVERLAP OF 6" MINIMUM TO THE SATISFACTION OF THE ENGINEER. PAID UNDER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP). AN ALLOWANCE OF 30 SF HAS BEEN INCLUDED FOR THESE AREAS.

2. SEE SHEETS 91 & 92 FOR PIERS 1, 2 AND 3.

LEGEND:

INDICATES APPROXIMATE AREAS OF CARBON FIBER REINFORCED POLYMER (CFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES CONCRETE PATCHES TO BE SEALED ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

SEE SHEET 91 FOR PATCHING QUANTITIES

EXISTING FIBER WRAP

PIER REPAIR DETAILS 3 - LOCATION 5
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
4	6

SHEET	TOTAL
93	110

CUY-BH-FY2023 MISC.

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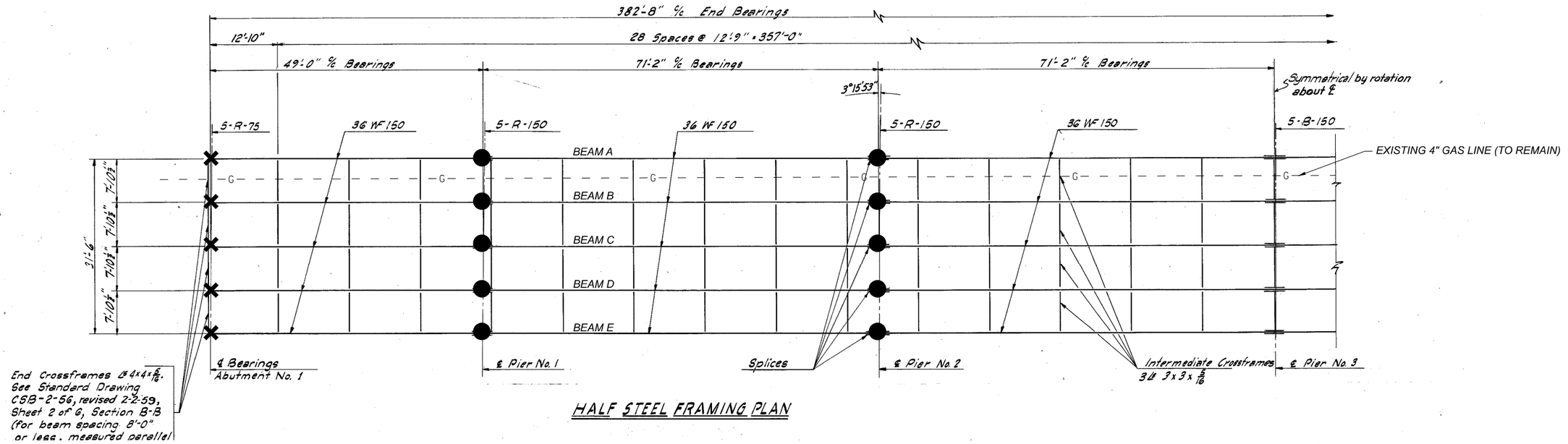
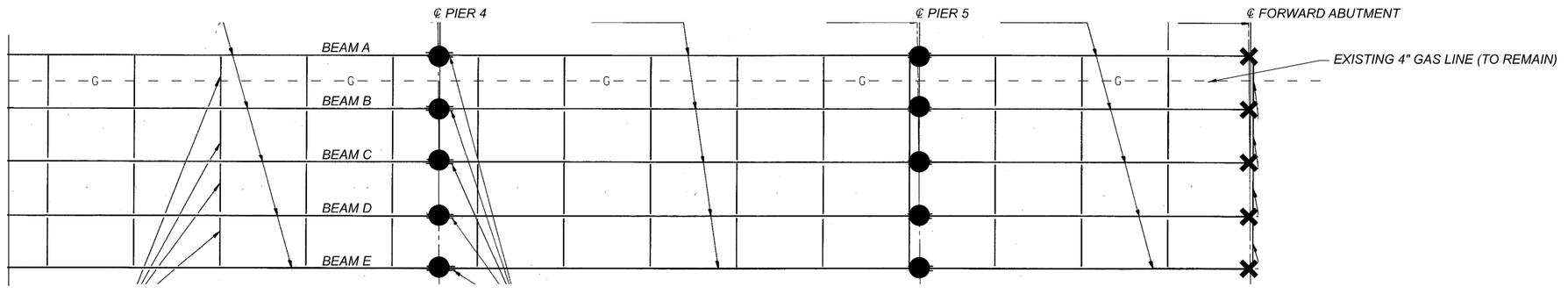


HALF STEEL FRAMING PLAN



LEGEND:

- ✖ *REPLACE BEARING (10 TOTAL) ITEM 516 - BEARING DEVICE, ROCKER*
- ● *REFURBISH BEARING (20 TOTAL) ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN*

NOTES:

1. *DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.*
2. *PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.*
3. *EXISTING 4" GAS LINE TO REMAIN DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH GAS COMPANY PRIOR TO PERFORMING ANY BEARING WORK OR JACKING OPERATIONS.*

BEARING REPAIRS - LOCATION 5
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
5	6

SHEET	TOTAL
94	110

CUY-BH-FY2023 MISC.

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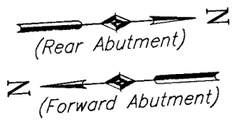
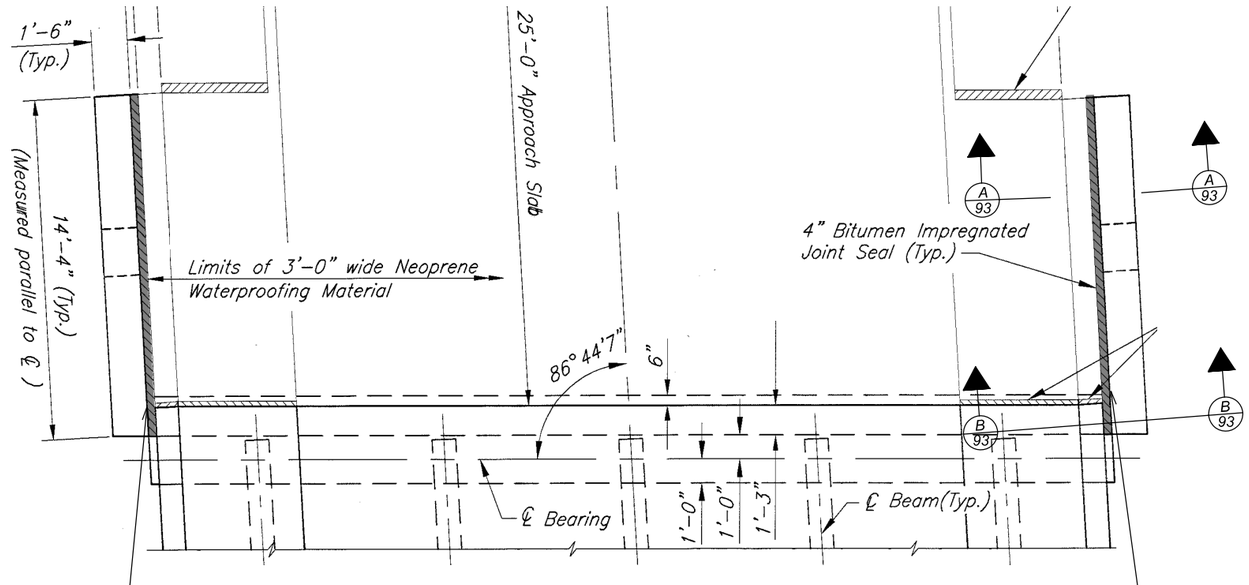
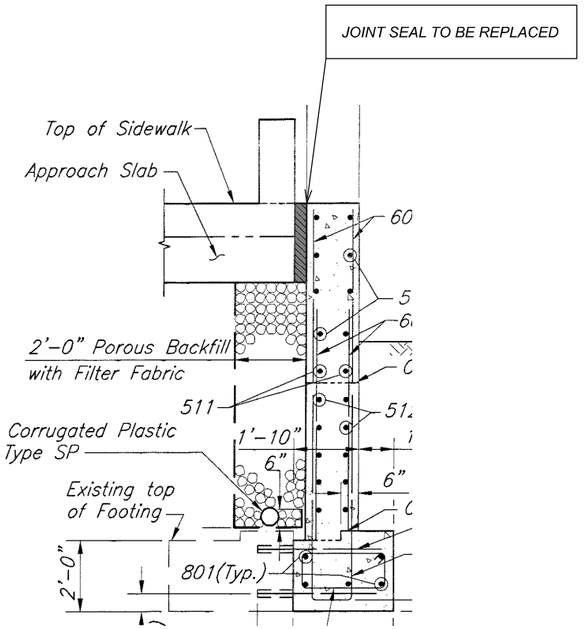




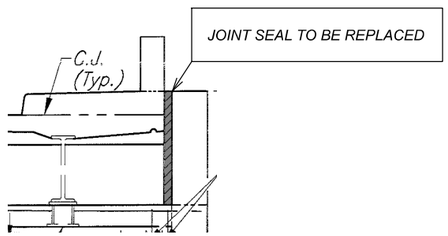
JOINT SEAL TO BE REMOVED AND REPLACED (ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN)

ABUTMENT PLAN



JOINT SEAL TO BE REMOVED AND REPLACED (ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION JOINT SEAL, AS PER PLAN)

SETION A-A



SETION B-B

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

LEGEND:

INDICATES APPROXIMATE AREAS OF ITEM 516 - PREFORMED ELASTOMERIC COMPRESSION SEAL, AS PER PLAN.

WINGWALL SEAL REPAIR DETAILS - LOCATION 5
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
6	6

SHEET	TOTAL
95	110

CUY-BH-FY2023 MISC.

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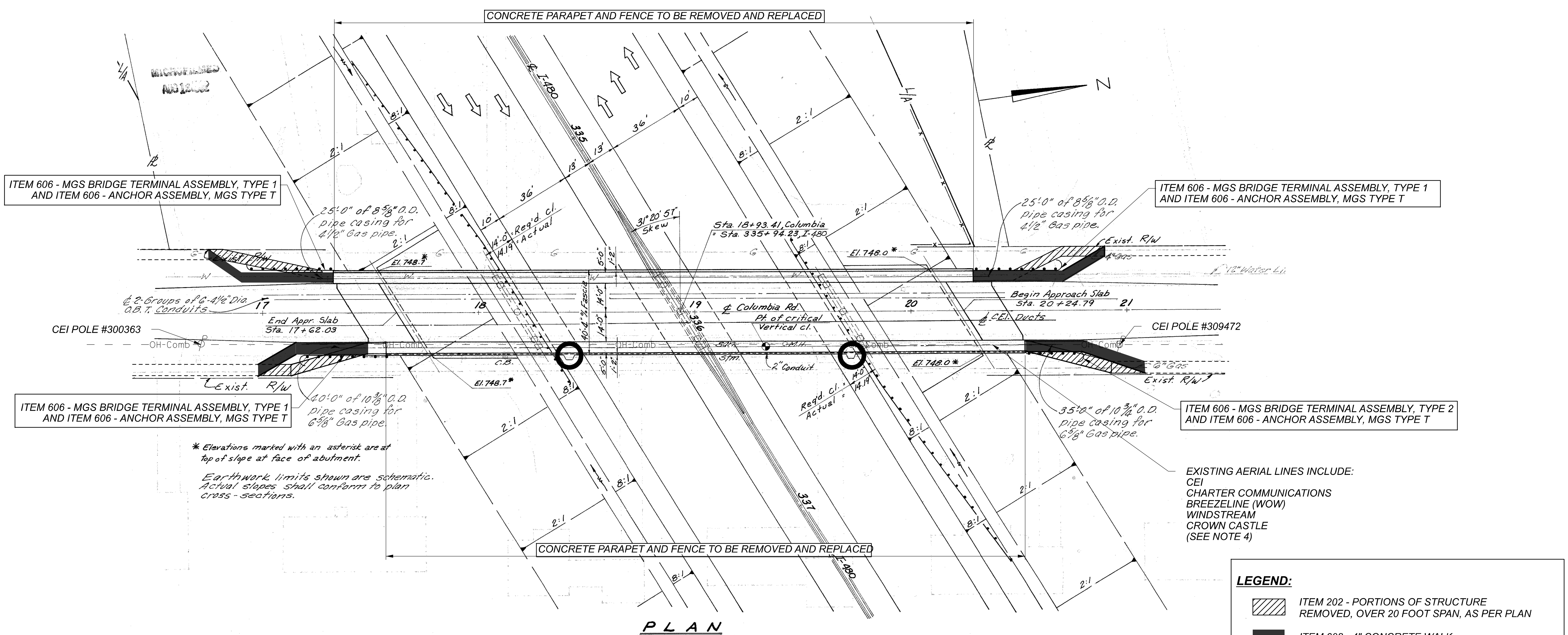
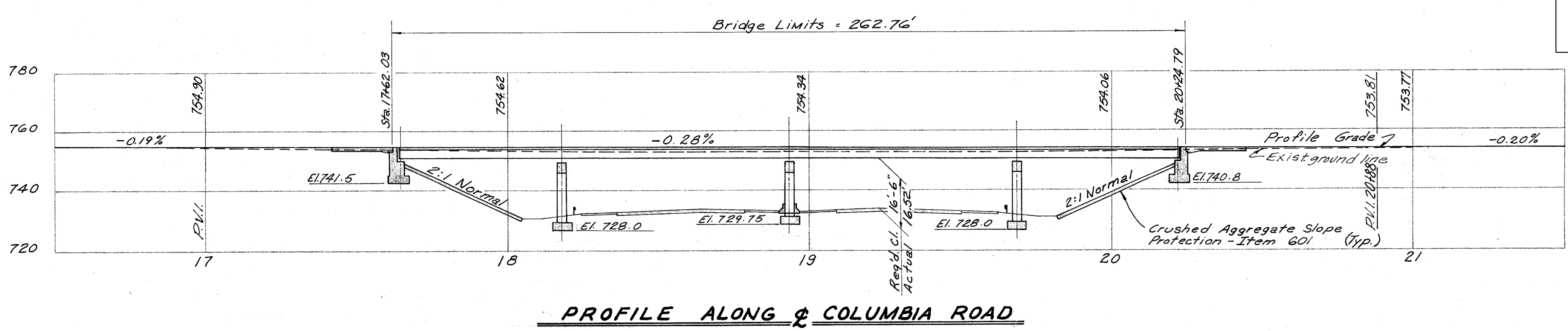
GENERAL PLAN - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480



CONCRETE PARAPET AND FENCE TO BE REMOVED AND REPLACED
ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 AND ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE T
ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 AND ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE T
CEI POLE #300363
CEI POLE #309472
ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 AND ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE T
ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2 AND ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE T
EXISTING AERIAL LINES INCLUDE:
CEI
CHARTER COMMUNICATIONS
BREEZELINE (WOW)
WINDSTREAM
CROWN CASTLE
(SEE NOTE 4)
CONCRETE PARAPET AND FENCE TO BE REMOVED AND REPLACED
Sta. 18+93.41, Columbia = Sta. 335+94.23, I-480
End Appr. Slab Sta. 17+62.03
Begin Approach Slab Sta. 20+24.79
* Elevations marked with an asterisk are at top of slope at face of abutment.
Earthwork limits shown are schematic. Actual slopes shall conform to plan cross-sections.

PLAN



PROFILE ALONG ℄ COLUMBIA ROAD

LEGEND:

- ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN
- ITEM 608 - 4" CONCRETE WALK
- ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

3. FOR ESTIMATED QUANTITIES SEE SHEET 97.

4. ALL AERIAL UTILITY LINES, EXCEPT CEI, ON THE EAST SIDE OF COLUMBIA ROAD WILL BE RAISED UP BY THE UTILITY OWNERS SO AS TO PROVIDE SUFFICIENT CLEARANCE FOR THE CONTRACTOR TO PERFORM THE PROPOSED WORK.

SFN	1814109
DESIGN AGENCY	OSBORN ENGINEERING, 1100 Superior Avenue Suite 300, Cleveland, OH 44114
DESIGNER	MJD
CHECKER	JDH
REVIEWER	SMK 12-13-22
PROJECT ID	105909
SUBSET / TOTAL	1 / 7
SHEET / TOTAL	96 / 110

CUY-BH-FY2023 MISC.

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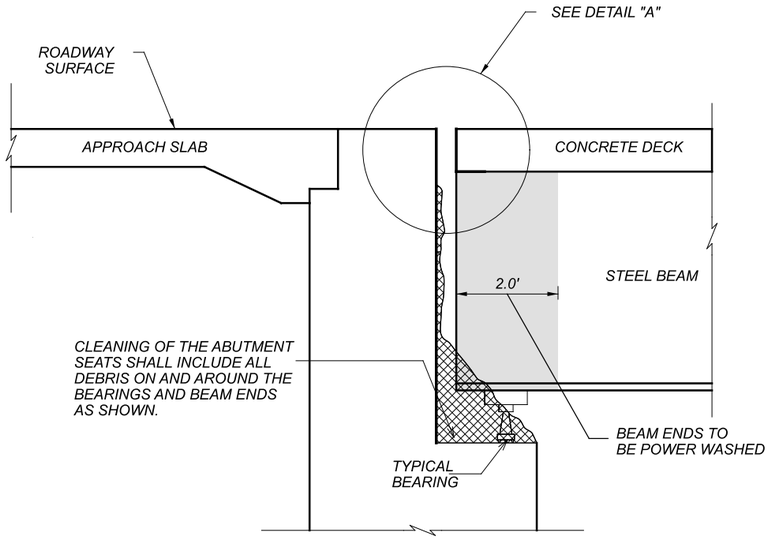
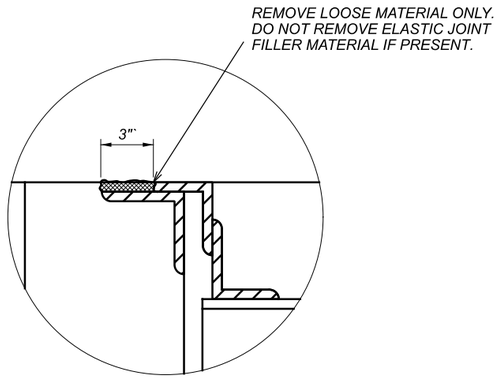


TYPICAL ABUTMENT DETAIL



DETAIL 'A'

(SLIDING PLATE)

LEGEND:

REMOVE DEBRIS AND OTHER FOREIGN MATERIALS, THEN PRESSURE WASH WITH PORTABLE WATER AS DESCRIBED IN THE GENERAL NOTES. (ITEM SPECIAL - STRUCTURES: BRIDGE CLEANING)

ESTIMATED QUANTITIES

CALCULATED: JDH DATED: 06/22
CHECKED: MJD DATED: 06/22

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34
509	10000	11536	LBS	EPOXY COATED REINFORCING STEEL	
509	20001	900	LBS	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN	34
511	34449	59	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	35
512	10101	471	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
513	10201	2349	LBS	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
516	45305	9	EA	REFURBISH BEARING DEVICE, AS PER PLAN	34
516	46200	1	EA	BEARING DEVICE, ROCKER	
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
519	11101	265	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
SPECIAL	53000200	LS		SPECIAL - STRUCTURES: BRIDGE CLEANING	35
606	26550	4	EA	ANCHOR ASSEMBLY, MGS TYPE T	
606	35002	3	EA	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1	
606	35102	1	EA	MGS BRIDGE TERMINAL ASSEMBLY, TYPE 2	
607	39901	590	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	35
608	10000	645	SF	4" CONCRETE WALK	
625	00450	2	EA	CONNECTION, FUSED PULL APART	
625	00460	2	EA	CONNECTION, UNFUSED PULL APART	
625	00480	2	EA	CONNECTION, UNFUSED PERMANENT	
625	23200	331	FT	NO. 4 AWG 2400 VOLT DISTRIBUTION CABLE	
625	23302	331	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
625	23400	168	FT	NO. 10 AWG POLE AND BRACKET CABLE	
625	25409	40	FT	CONDUIT, 2", 725.051, AS PER PLAN	5
625	27520	2	EA	REMOVAL OF LUMINAIRE AND REERECTION	
625	29920	2	EA	STRUCTURE JUNCTION BOX	
625	33000	1	EA	STRUCTURE GROUNDING SYSTEM	
625	35011	2	EA	REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN	101
625	39520	1	EA	PULL BOX CLEANED	
SPECIAL	62540000	1	LS	SPECIAL - MAINTAIN EXISTING LIGHTING	
625	75800	1	EA	DISCONNECT CIRCUIT	
848	10200	807	SY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (T=1.75")	
848	20000	807	SY	SURFACE PREPARATION USING HYDRODEMOLITION	
848	30200	10	CY	SUPERPLASTICIZED DENSE CONCRETE OVERLAY (VARIABLE THICKNESS), MATERIAL ONLY	
848	50000	85	SY	HAND CHIPPING	
848	50100	LS		TEST SLAB	

BRIDGE CLEANING - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480

SFN 1814109

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
2	7

SHEET	TOTAL
97	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 34x22 (In.) DATE: 4/6/2023 TIME: 8:51:54 AM USER: mdcruz
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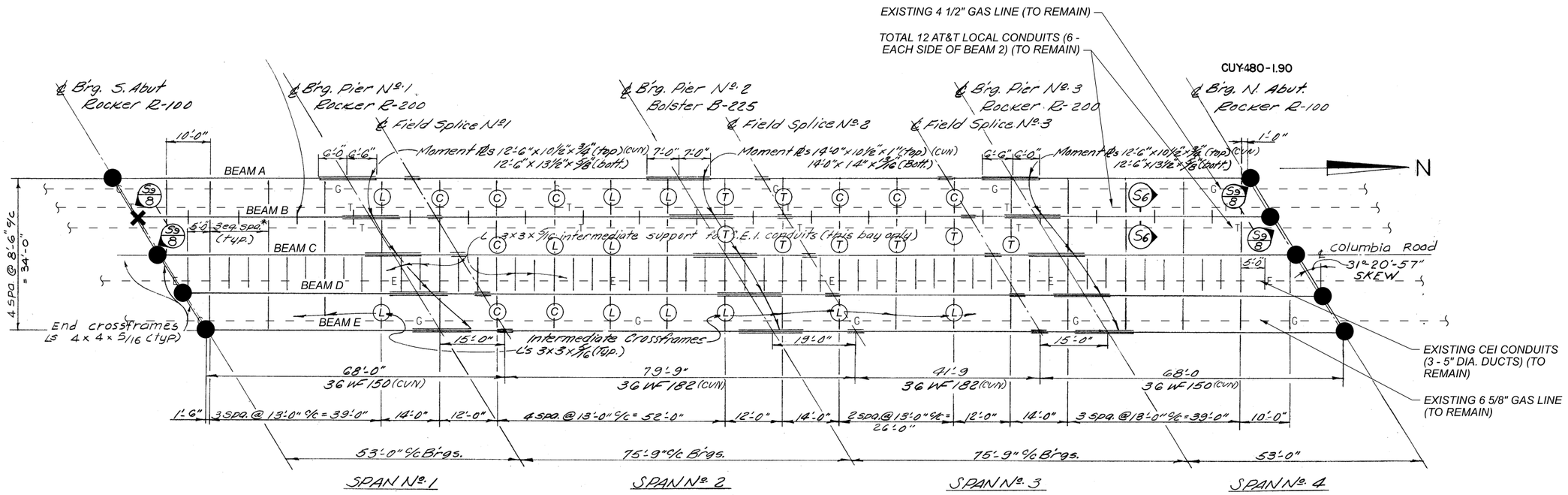
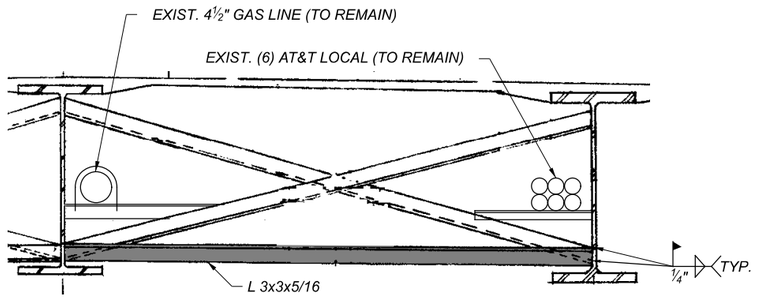
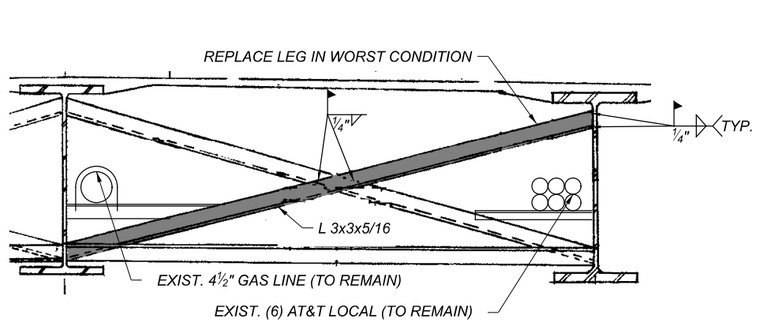


FRAMING PLAN



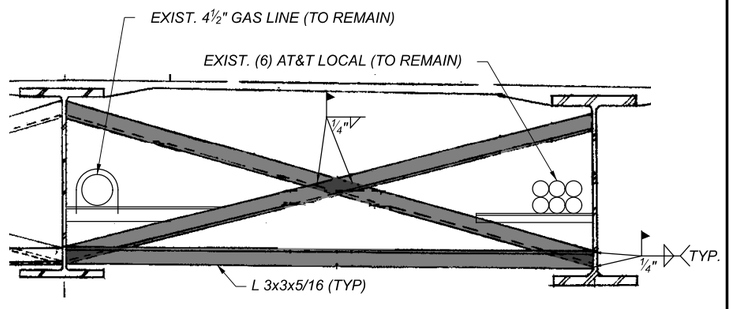
REPLACE LOWER LEG

BAY 1 UTILITIES SHOWN, SEE SHEET 99
FOR UTILITY SUPPORT INFORMATION



REPLACE ONE CROSS LEG

BAY 1 UTILITIES SHOWN, SEE SHEET 99
FOR UTILITY SUPPORT INFORMATION



TOTAL REPLACEMENT

BAY 1 UTILITIES SHOWN, SEE SHEET 99
FOR UTILITY SUPPORT INFORMATION

LEGEND:

- (L) REPLACE LOWER LEG (11 TOTAL)
- (C) REPLACE ONE CROSS LEG (9 TOTAL)
- (T) TOTAL CROSSFRAME REPLACEMENT (8 TOTAL)
- INDICATES CROSSFRAME ANGLES TO BE REMOVED AND REPLACED PER ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN
- ✖ REPLACE BEARING (1 TOTAL)
- ● REFURBISH BEARING (9 TOTAL)

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.
2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.
3. AT&T, DEO, AND CEI FIRST ENERGY WILL TEMPORARILY SUPPORT THEIR CONDUITS AS NEEDED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH EACH UTILITY PRIOR TO BEGINNING WORK AT LOCATION 6.

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:18:53 PM USER: mdcruz
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CROSSFRAME AND BEARING REPAIRS - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480

SFN 1814109

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

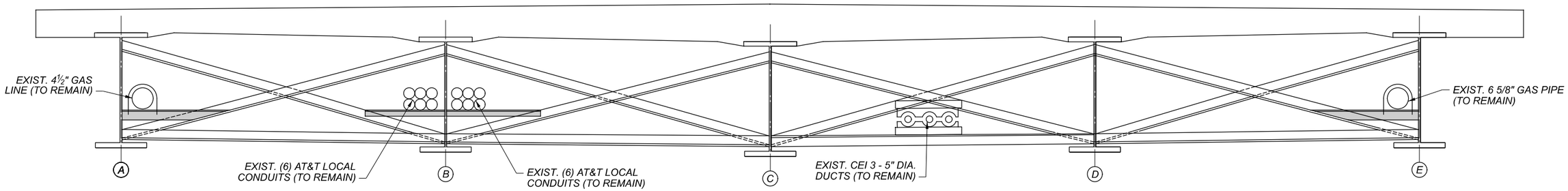
DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
3	7

SHEET	TOTAL
98	110



TRANSVERSE SECTION - UTILITY SUPPORTS

LEGEND:

INDICATES UTILITY SUPPORT ANGLES TO BE KEPT AND PROTECTED DURNING CROSSFRAME REPLACEMENT

(A) BEAM LINE DESIGNATION

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

3. AT&T, DEO, AND CEI FIRST ENERGY WILL TEMPORARILY SUPPORT THEIR CONDUITS AS NEEDED DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE WITH EACH UTILITY PRIOR TO BEGINNING WORK AT LOCATION 6.

CROSSFRAME AND BEARING REPAIRS - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480

SFN 1814109

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
4	7

SHEET	TOTAL
99	110

CUY-BH-FY2023 MISC.

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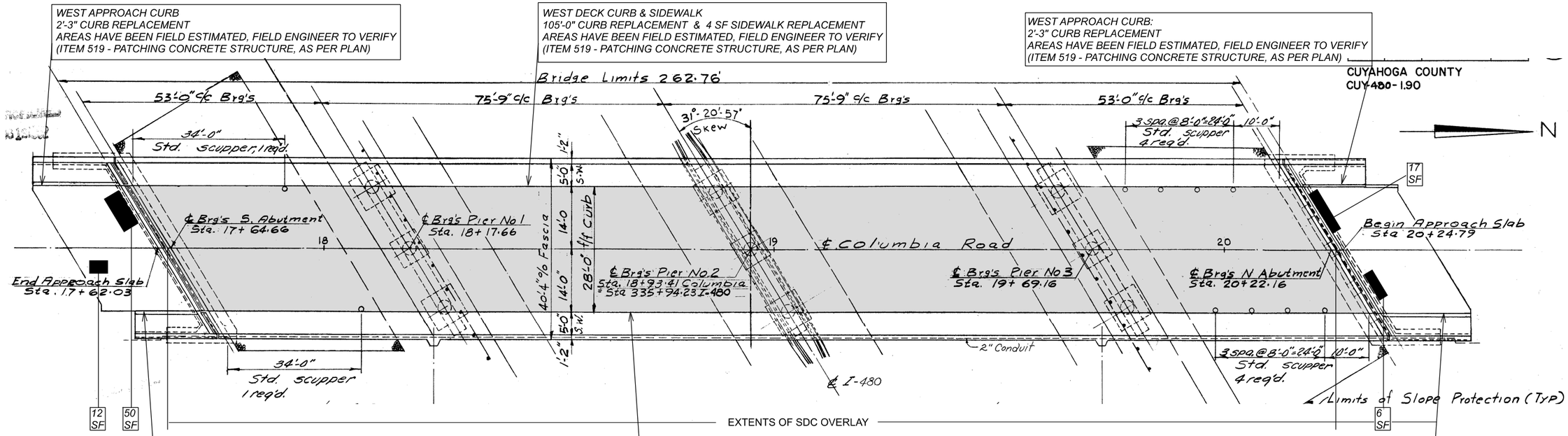
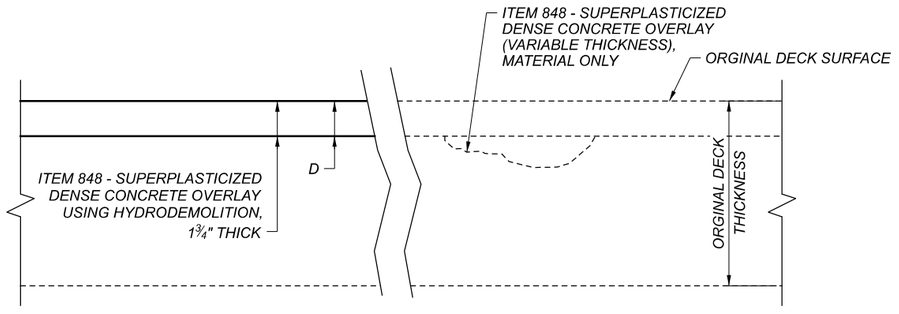


DECK REPAIR PLAN



OVERLAY DETAIL

D = ITEM 848 SURFACE PREPARATION USING HYDRODEMOLITION, 1¾" THICK

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

LEGEND:

INDICATES APPROXIMATE AREAS OF ITEM 848 – SUPERPLASTICIZED DENSE CONCRETE OVERLAY USING HYDRODEMOLITION (T=1.75")
(SEE ESTIMATED QUANTITIES TABLE FOR BREAKDOWN)

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
SIDEWALKS	14	18
CURBS	112	140
APPROACHES	85	107
TOTAL		**265**

DECK REAPIR PLAN - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480

SFN 1814109

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
5	7

SHEET	TOTAL
100	110

CUY-BH-FY2023 MISC.

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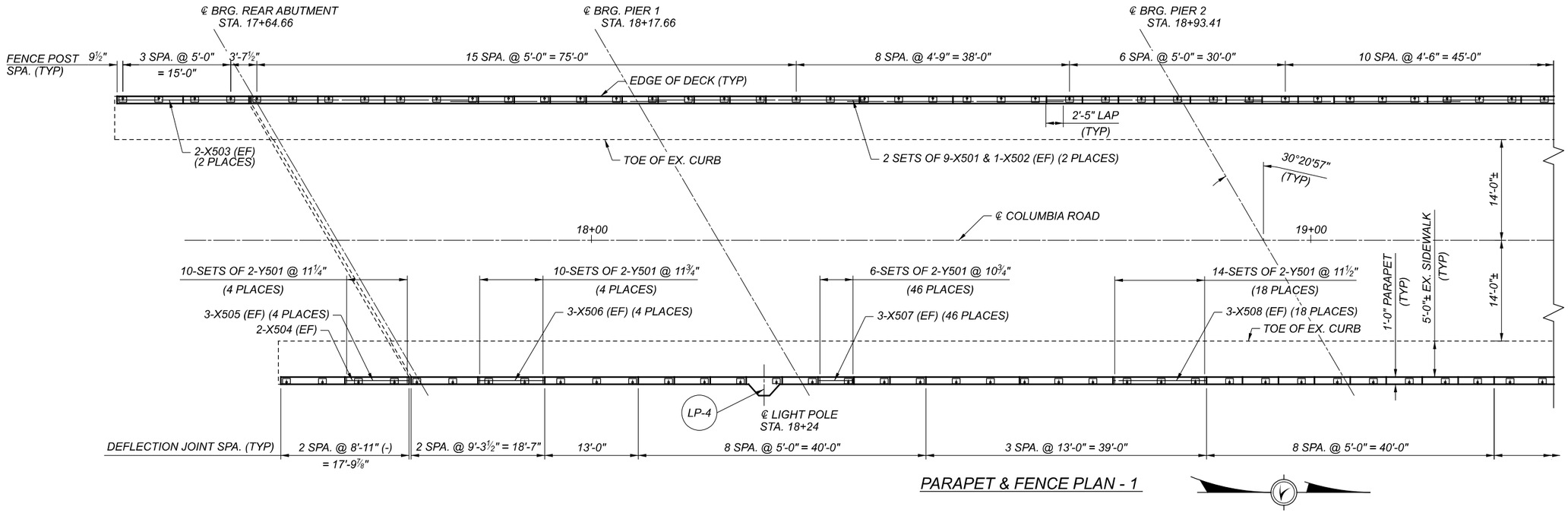


PARAPET & FENCE PLAN - 1

NOTES:

1. SEE SHEET 102 AND STD. DWGS BR-2-15 & VPF-1-90 FOR ADDITIONAL NOTES AND DETAILS.

2. EXISTING LIGHTING CONDUIT SYSTEM, WIRING, POWER, ETC. SHALL REMAIN IN SERVICE IN THE PROPOSED CONDITION. CONTRACTOR SHALL USE EXTREME CARE IN REMOVAL OF PARAPET AT EXISTING LIGHT POLE LOCATIONS. NEW JUNCTION BOXES SHALL BE INSTALLED PER STD. DWG HL-20.14 AND TIED INTO THE EXISTING CONDUIT SYSTEM.

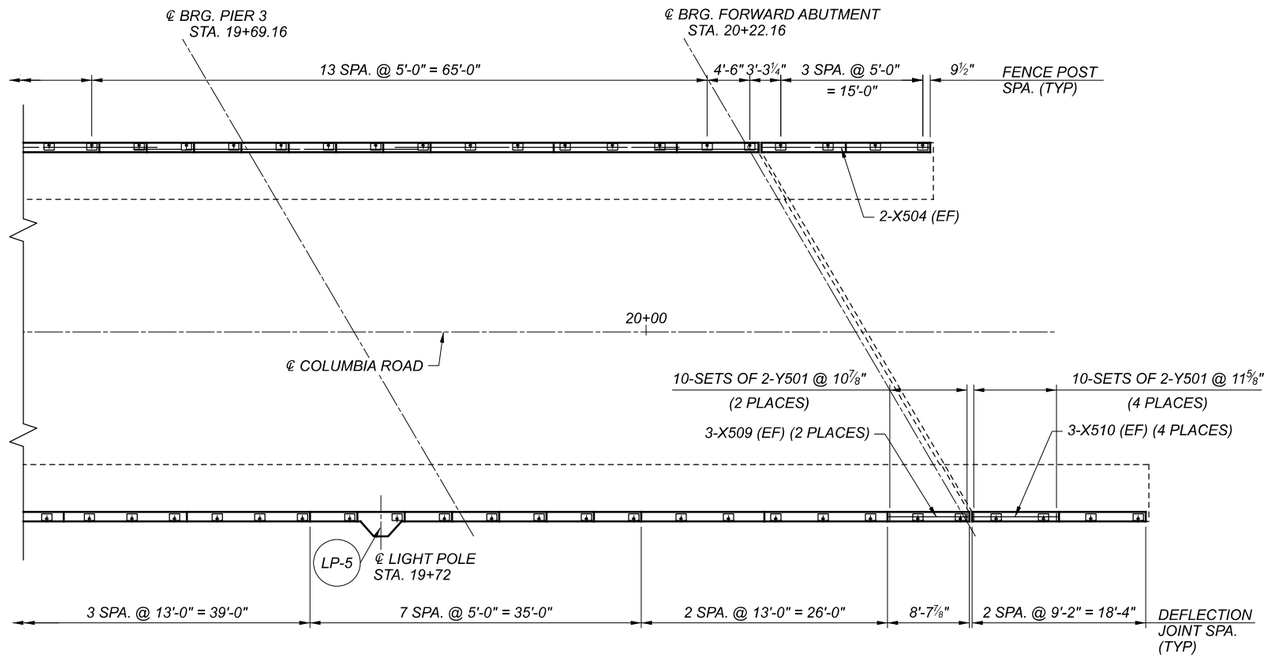
3. FOR LIGHT POLE PILASTER, JUNCTION BOX, AND OTHER LIGHTING DETAILS AND NOTES, SEE ODOT STD. DWG HL-20.14.

4. EXISTING LIGHT POLES ARE TO BE REMOVED AND STORED CAREFULLY DURING PARAPET AND FENCE INSTALLATION. EXISTING LIGHT POLES TO BE REERECTED AND PAID FOR WITH ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN.

5. LIGHT POLE PILASTER IS INCLUDED WITH ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN FOR PAYMENT

LEGEND:

EF - EACH FACE



PARAPET & FENCE PLAN - 2

PARAPET PLAN - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480

SFN 1814109

DESIGN AGENCY

OSBORN ENGINEERING

1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
JDH	EIW

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
6	7

SHEET	TOTAL
101	110

CUY-BH-FY2023 MISC.

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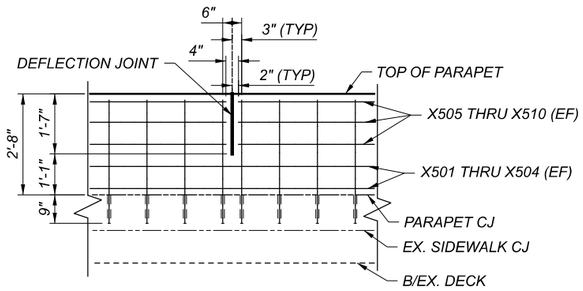


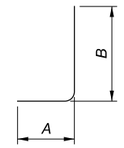
TYPICAL PARAPET ELEVATION

FENCE NOT SHOWN

NOTES:
1. SEE SHEET 101 FOR PARAPET PLAN INCLUDING CONTROL JOINT SPACING.
2. ALL REINFORCING SHALL BE EPOXY COATED.
3. ALL BAR DIMENSIONS ARE GIVEN OUT-TO-OUT UNLESS OTHERWISE INDICATED.
4. ALL BARS OF A GIVEN SERIES VARY BY A CONSTANT AMOUNT.
5. BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, X501 IS A #5 BAR.

MARK	NUMBER TOTAL	LENGTH	WEIGHT	TYPE	DIMENSIONS A	B	C	D	E	R	INC
PARAPETS (ALTERNATE 1)											
X501	72	30'-0"	2253	STR							
X502	8	10'-8"	89	STR							
X503	8	18'-0"	150	STR							
X504	8	17'-6"	146	STR							
X505	24	8'-7"	215	STR							
X506	24	8'-11"	223	STR							
X507	276	4'-8"	1343	STR							
X508	108	12'-8"	1427	STR							
X509	12	8'-3"	103	STR							
X510	24	8'-10"	221	STR							
Y501	1336	3'-10"	5342	16	3'-3"						
Y502	8	2'-11"	24	1	1'-5"	1'-8"					
		SUB-TOTAL	11536								

LEGEND:



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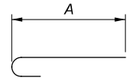

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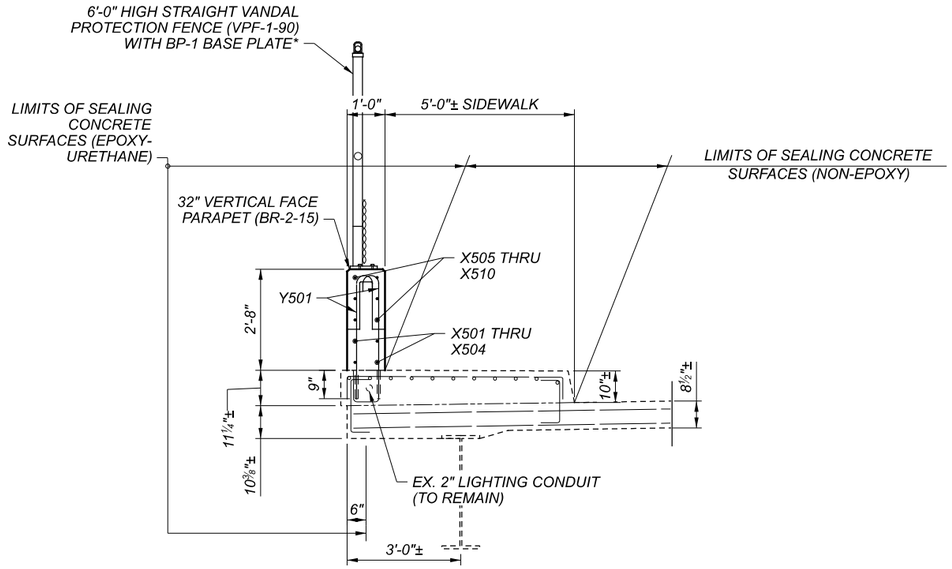


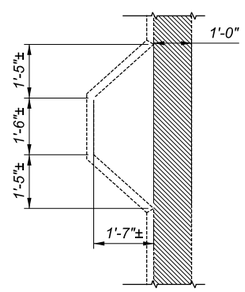
PARAPET SECTION (ALTERNATE 1)

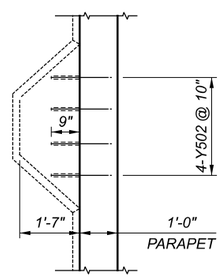
BRIDGE DECK SHOWN, WINGWALL SECTION SIMILAR

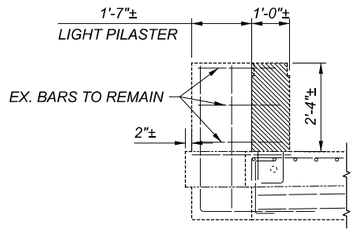
* FENCE POST ANCHORS SHALL BE CAST IN PLACE, SEE NOTE ON SHEET 35

LEGEND:

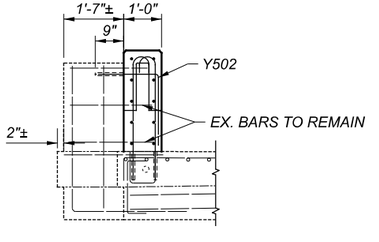
ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN







EXISTING PARAPET REMOVAL AT LIGHT PILASTER



PROPOSED PARAPET AT LIGHT PILASTER

AT 2 LIGHT POLE PILASTER LOCATIONS

PARAPET DETAILS & REINFORCING - LOCATION 6
BRIDGE NO. CUY-480-0446
COLUMBIA ROAD OVER IR-480

CUY-BH-FY2023 MISC.

MODEL: Sheet2 PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:19:18 PM USER: mdcruz
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SFN 1814109

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

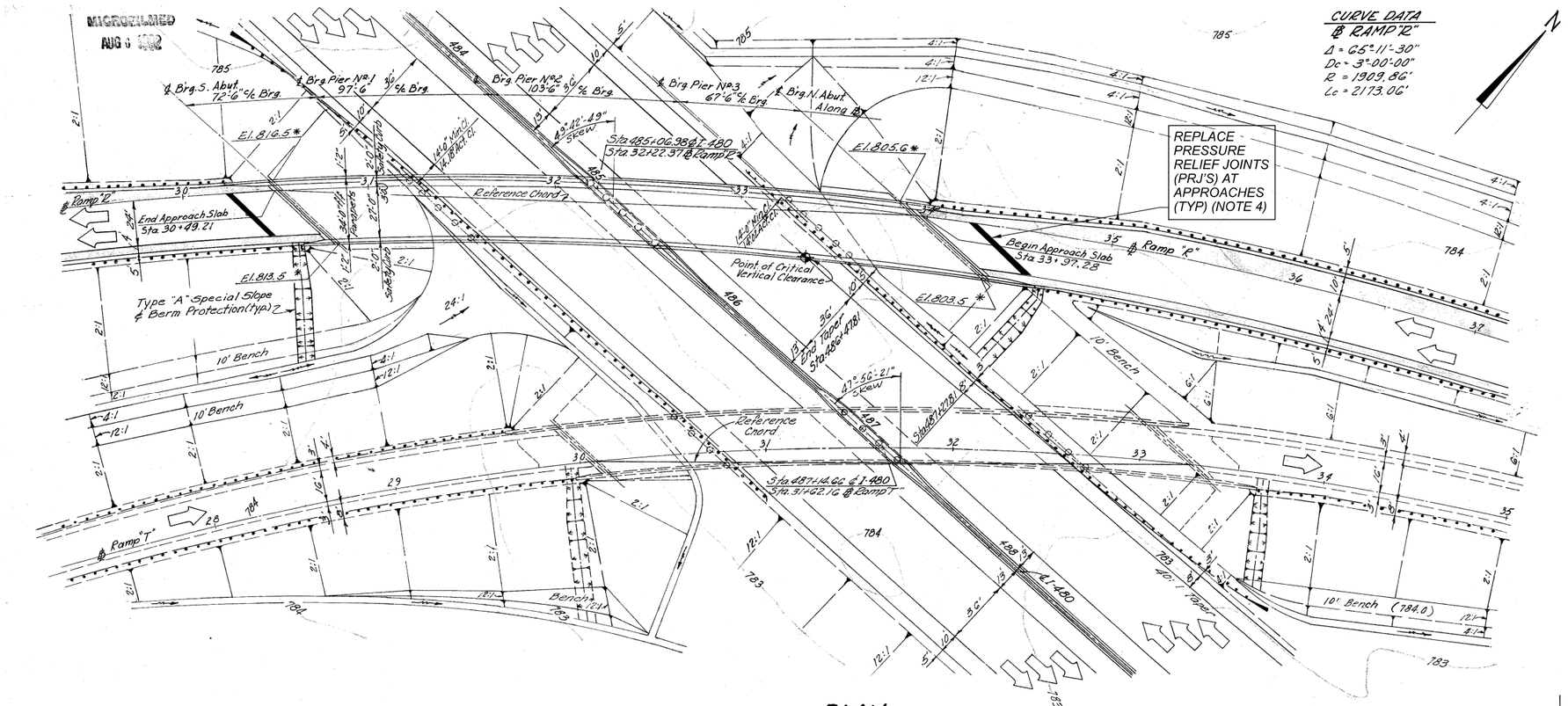
DESIGNER	CHECKER
JDH	EIW

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
7	7

SHEET	TOTAL
102	110



CURVE DATA
℄ RAMP "R"
Δ = 65°-11'-30"
Dc = 3°-00'-00"
R = 1909.86'
Lc = 2173.06'

PLAN

NOTE:

Reference chord is a line between intersections of ℄ Ramp "R" and ¢ Brg's. at abutments, Sta. 30+52.37 & Sta. 33+93.37.

Earthwork limits shown are schematic actual slopes shall conform to plan cross-sections.

* Elevations marked with an asterisk are at top of slope at face of abutment.

VERTICAL CURVE DATA
℄ RAMP "R"
P.V.I. Sta. 23+75
1200' V.C.
Elev. 844.64
Corr. = -10.50'
P.G. Elev. 834.14
G_1 = +4.00% G_2 = -3.00%

PROFILE ALONG ℄ RAMP "R"

LEGEND:

■	ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

3. FOR ESTIMATED QUANTITIES SEE SHEET 104

4. PRESSURE RELIEF JOINT TO BE REPLACED SHALL MATCH ODOT STANDARD DRAWING BP-2.3 AND PROVIDE A NEW, SMOOTH RIDING SURFACE.

GENERAL PLAN - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN
1814249

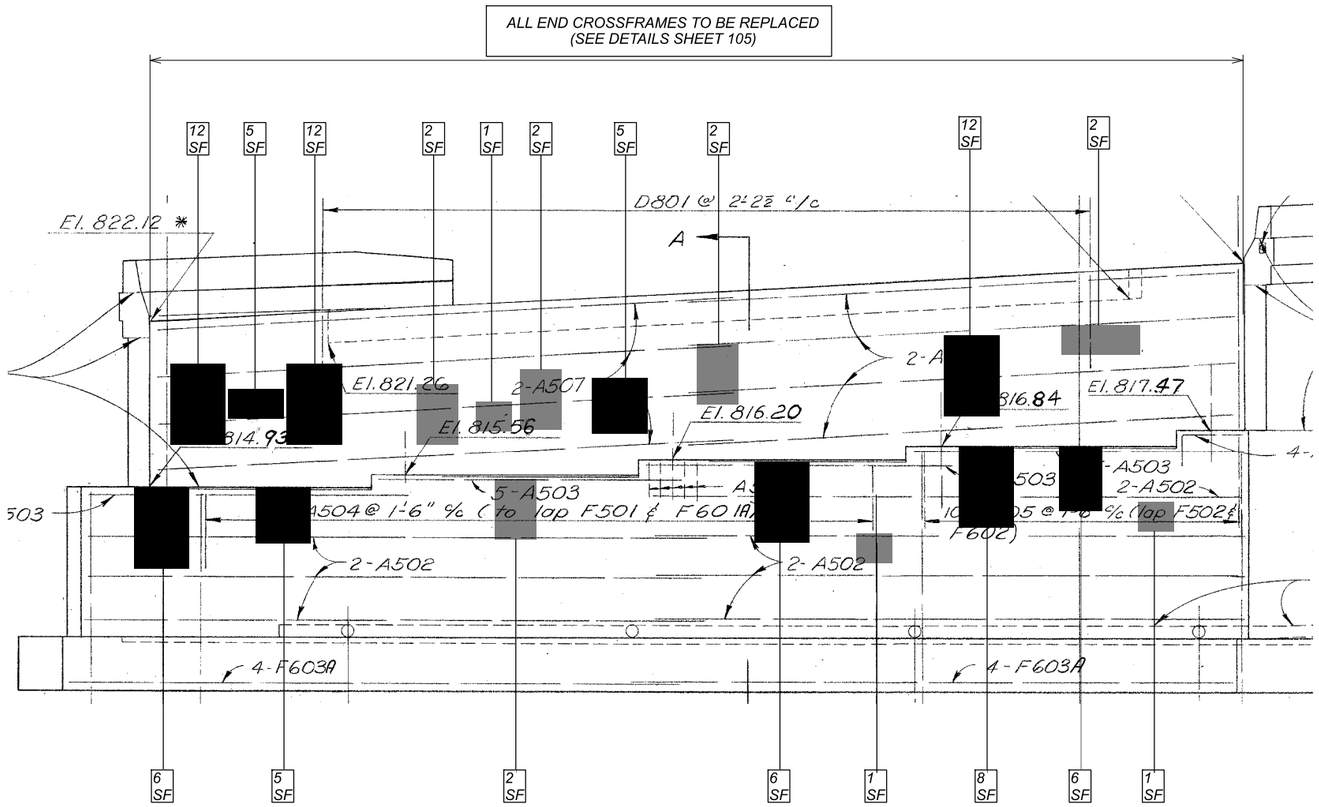
DESIGN AGENCY
OSBORN
ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
1	8



REAR ABUTMENT ELEVATION

LEGEND:

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
13	17
TOTAL	**17**

INDICATES APPROXIMATE AREAS OF ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN.

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
77	97
TOTAL	**97**

NOTES:

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2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

ESTIMATED QUANTITIES

CALCULATED: JDH DATED: 06/22
CHECKED: MJD DATED: 06/22

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	34
441	50300	16	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448)	
512	10101	820	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	34
SPECIAL	51271500	350	SY	SPECIAL - URETHANE TOP COAT SEALER	
513	10201	3746	LBS	STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN	34
516	45305	10	EA	REFURBISH BEARING DEVICE, AS PER PLAN	34
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	35
SPECIAL	51900100	3145	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP)	36
519	11101	973	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	35
SPECIAL	51911600	213	SF	SPECIAL - PATCHING CONCRETE STRUCTURE: APPROACH SLABS	
519	12300	3	SY	PATCHING CONCRETE BRIDGE DECK - TYPE B	
844	10001	484	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	35

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 34x22 (In.) DATE: 4/6/2023 TIME: 8:39:21 AM USER: mdcruz
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REAR ABUTMENT REPAIR DETAILS - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN 1814249

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

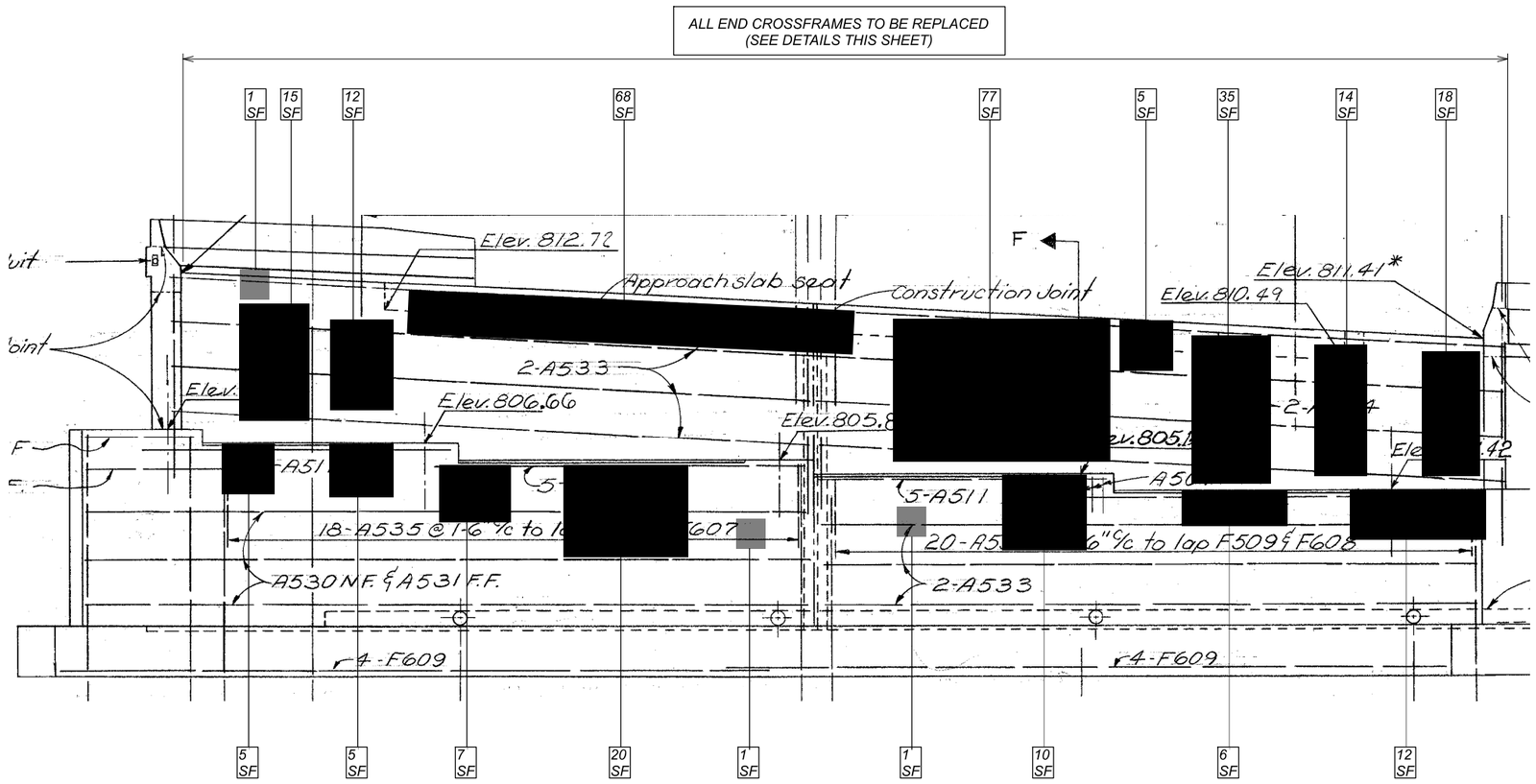
DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID 105909

SUBSET	TOTAL
2	8

SHEET	TOTAL
104	110



FORWARD ABUTMENT ELEVATION

NOTES:

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY.

2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

LEGEND:

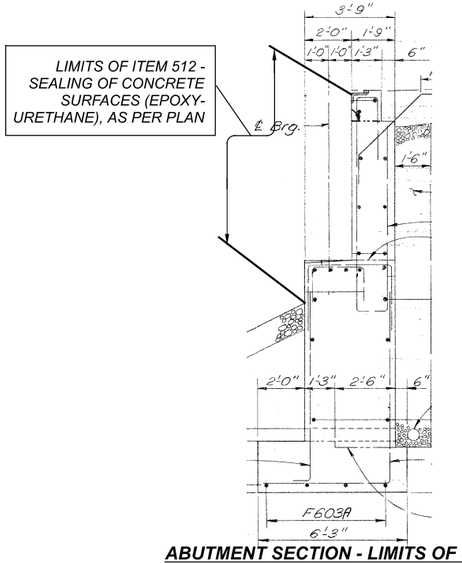
INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
3	4
TOTAL	**4**

INDICATES APPROXIMATE AREAS OF ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION.

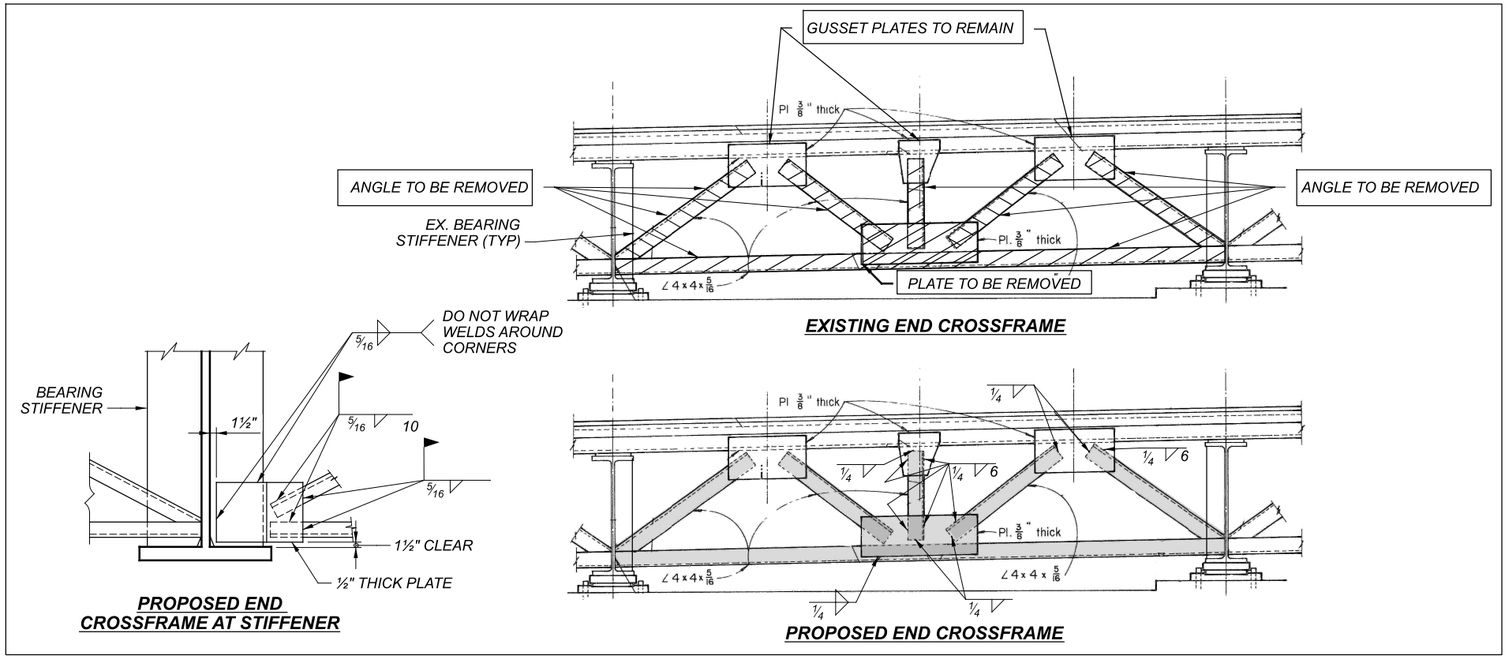
MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
309	387
TOTAL	**387**

INDICATES CROSSFRAME ANGLES TO BE REMOVED AND REPLACED PER ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN



ABUTMENT SECTION - LIMITS OF SEALING

TYPICAL REAR AND FORWARD ABUTMENTS



FORWARD ABUTMENT REPAIR DETAILS - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN 1814249

DESIGN AGENCY

OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborneng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER SMK 12-13-22

PROJECT ID 105909

SUBSET	TOTAL
3	8

SHEET	TOTAL
105	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 34x22 (in.) DATE: 4/6/2023 TIME: 8:40:11 AM USER: mdcruz
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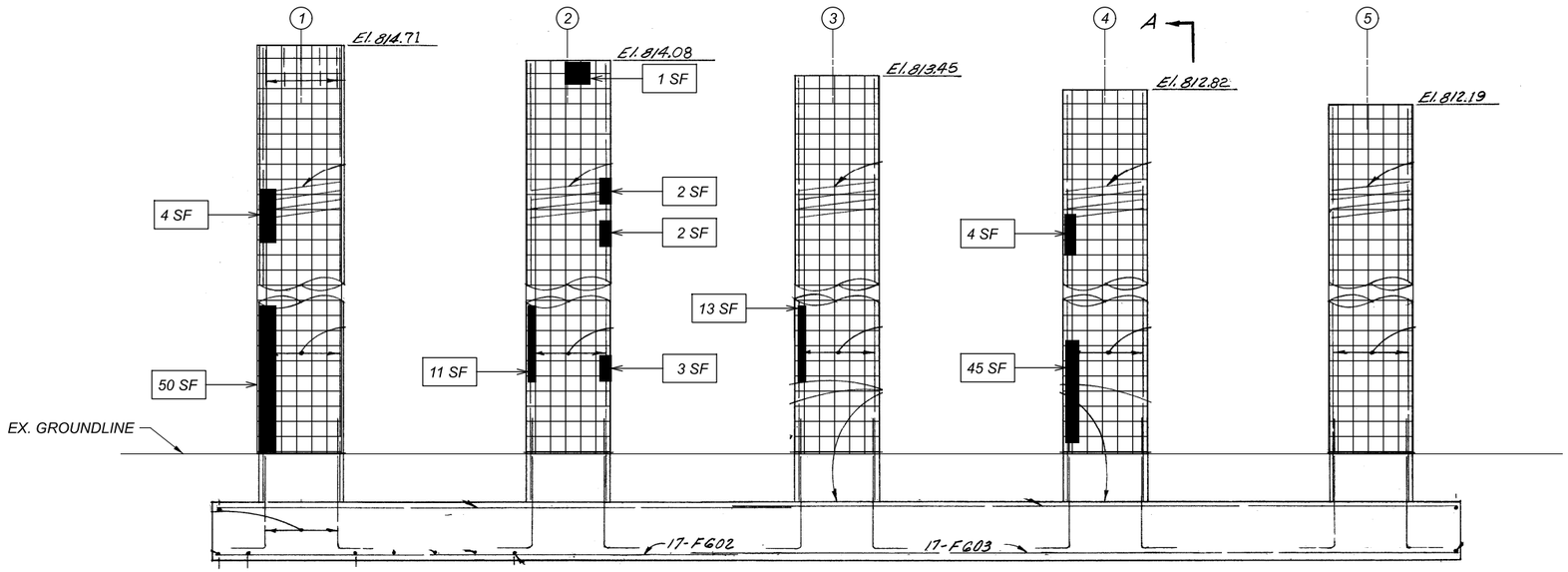
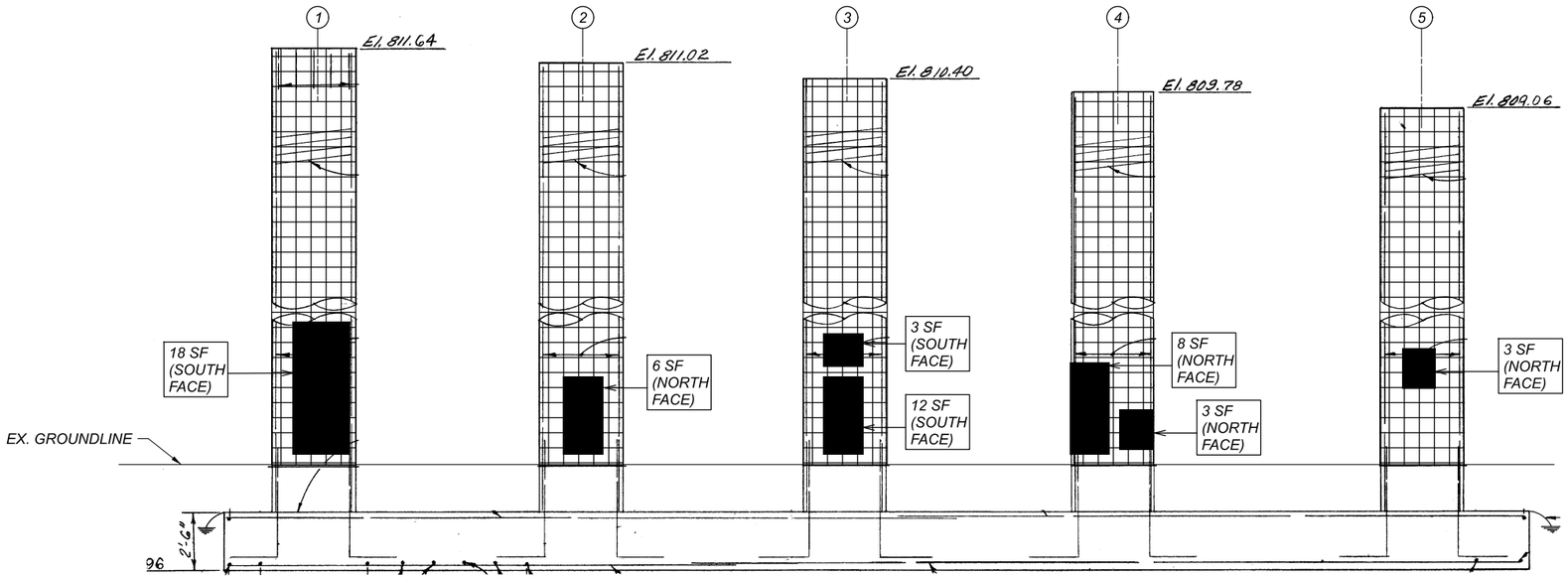


PIER 1 ELEVATION
LOOKING NORTH



PIER 2 ELEVATION
LOOKING NORTH

NOTES:

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2. PERFORM ONLY THE WORK AS INDICATED IN THE STRUCTURE DATA TABLE SHEET, FRAMED TEXT, AND/OR DESCRIBED IN THE GENERAL NOTES.

3. DUE TO THE NON-REDUNDANT NATURE OF THE PIER COLUMNS, ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN, WORK SHALL NOT BE PERFORMED ON ADJACENT COLUMNS AT THE SAME TIME.

LEGEND:

(2) BEAM NUMBER

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM: E-GLASS (EGFRP) AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

	MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
PIER 1	135	169
PIER 2	53	67
PIER 3	29	37
	TOTAL	**273**

PIER REPAIR DETAILS - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN 1814249

DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osbornveng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID
105909

SUBSET	TOTAL
4	8

SHEET	TOTAL
106	110

CUY-BH-FY2023 MISC.

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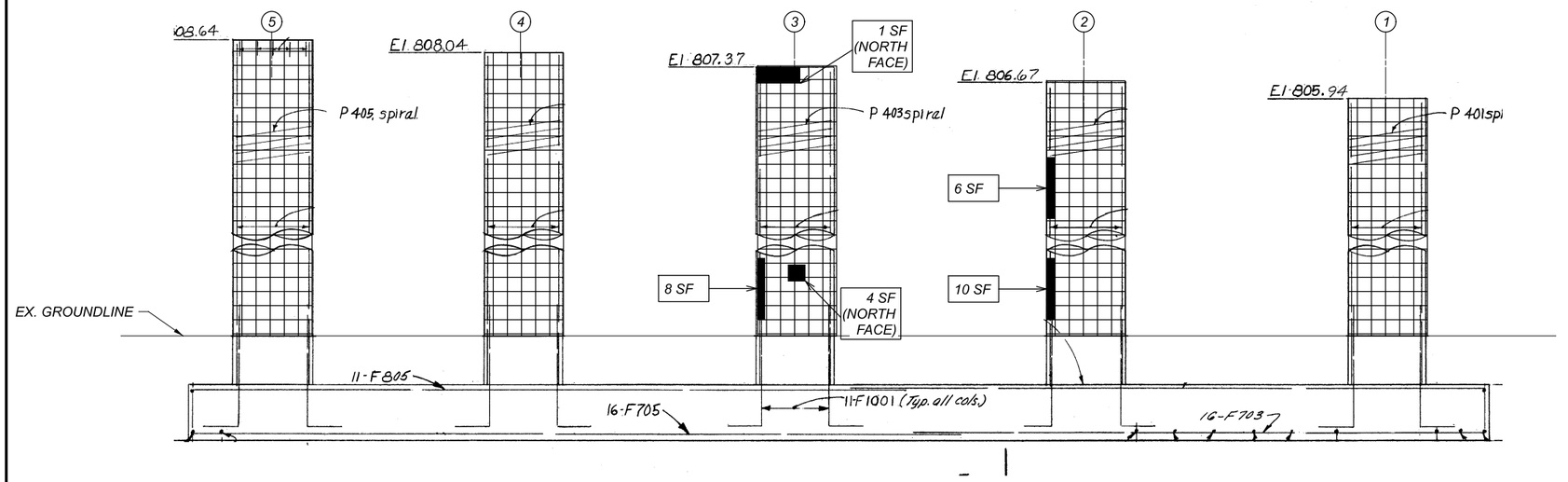

PIER 3 ELEVATION
LOOKING SOUTH

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3. DUE TO THE NON-REDUNDANT NATURE OF THE PIER COLUMNS, ITEM 519 PATCHING CONCRETE STRUCTURES, AS PER PLAN, WORK SHALL NOT BE PERFORMED ON ADJACENT COLUMNS AT THE SAME TIME.

LEGEND:

(2) *BEAM NUMBER*

INDICATES APPROXIMATE AREAS OF E-GLASS FIBER REINFORCED POLYMER ((EGFRP) & URETHANE TOP COAT SEALER (ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM AND ITEM SPECIAL - URETHANE TOP COAT SEALER)

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN.

SEE SHEET 106 FOR PATCHING QUANTITIES

PIER REPAIR DETAILS 2 - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN 1814249

DESIGN AGENCY

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1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborneng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
5	8

SHEET	TOTAL
107	110

CUY-BH-FY2023 MISC.

MODEL: Sheet 2 PAPERSIZE: 34x22 (In.) DATE: 4/6/2023 TIME: 8:54:08 AM USER: mdcruz
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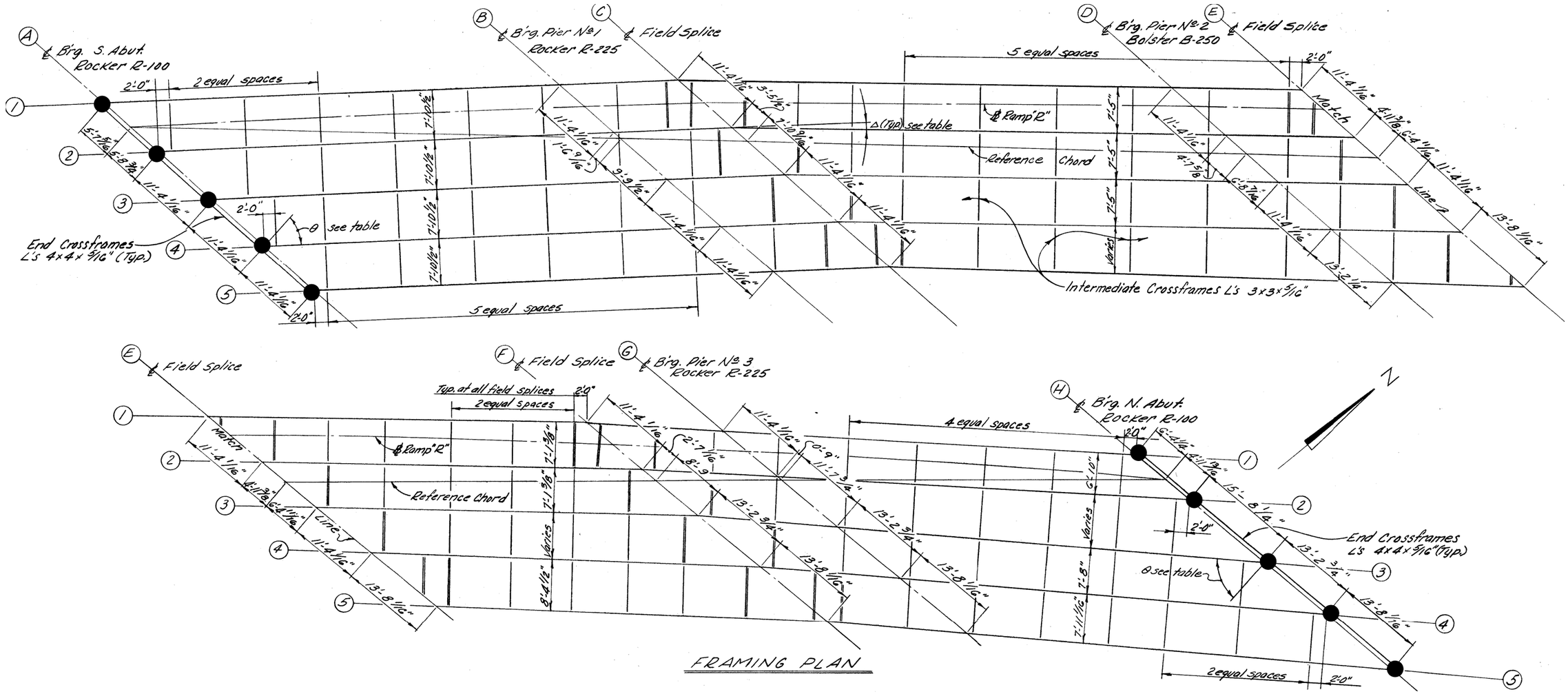

FRAMING PLAN

LEGEND:

● *REFURBISH BEARING (10 TOTAL) ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN*

NOTES:

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BEARING REPAIRS - LOCATION 7
BRIDGE NO. CUY-271-1543
HIGHLAND ROAD OVER IR-271 & IR-271X

SFN 1811851

DESIGN AGENCY

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1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com

DESIGNER	CHECKER
MJD	JDH

REVIEWER: SMK 12-13-22

PROJECT ID: 105909

SUBSET	TOTAL
6	8

SHEET	TOTAL
108	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:20:17 PM USER: mdcruz
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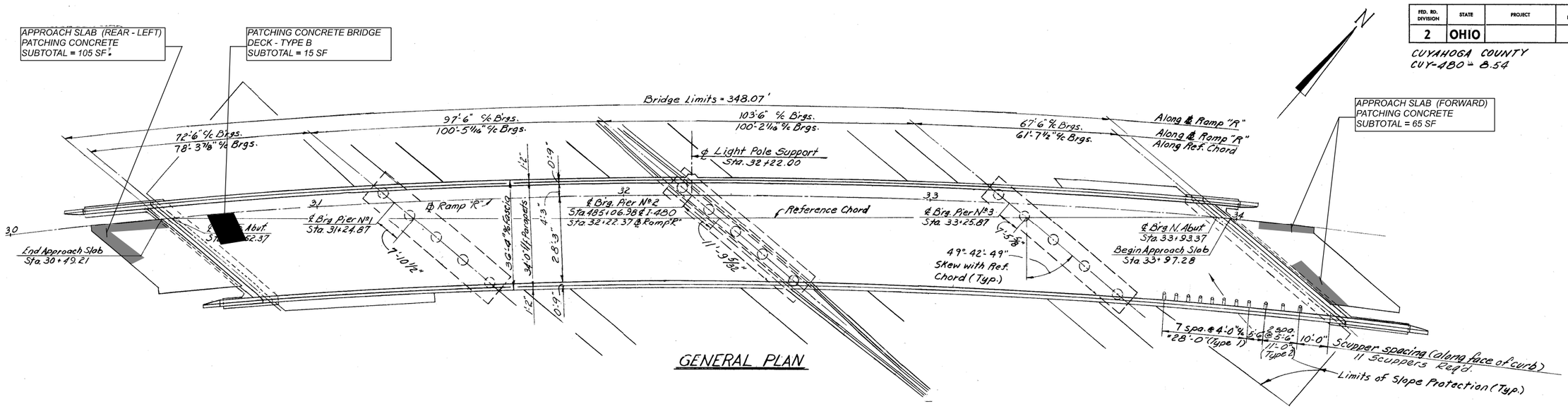
FED. RD. DIVISION	STATE	PROJECT	TYPE FUNDS
2	OHIO		

CUYAHOGA COUNTY
CUY-480 - 8.54



GENERAL PLAN

DECK AND APPROACH SLAB REPAIR PLAN

LEGEND:

INDICATES APPROXIMATE AREAS OF ITEM SPECIAL - PATCHING CONCRETE STRUCTURE: APPROACH SLABS

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)
170	213
TOTAL	**213**

INDICATES APPROXIMATE AREAS OF ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE B

MEASURED TOTAL (SF)	ESTIMATED TOTAL (SF)	ESTIMATED TOTAL (SY)
15	19	3
	TOTAL	**3**

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DECK REAPIR PLAN - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN 1814249

DESIGN AGENCY

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DESIGNER	CHECKER
MJD	JDH

REVIEWER
SMK 12-13-22

PROJECT ID 105909

SUBSET	TOTAL
7	8

SHEET	TOTAL
109	110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17x11 (in.) DATE: 4/5/2023 TIME: 7:20:33 PM USER: mdcruz
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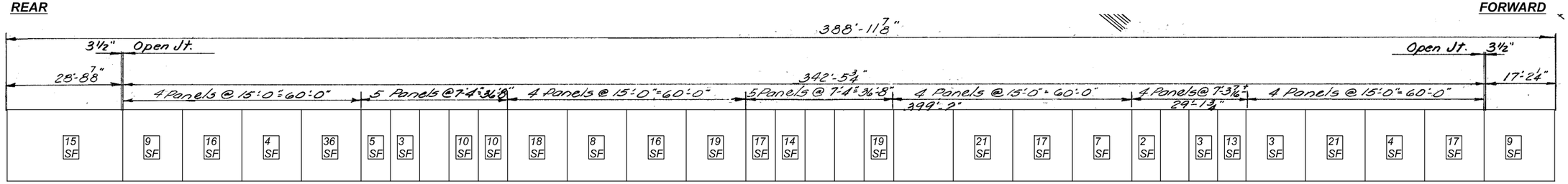
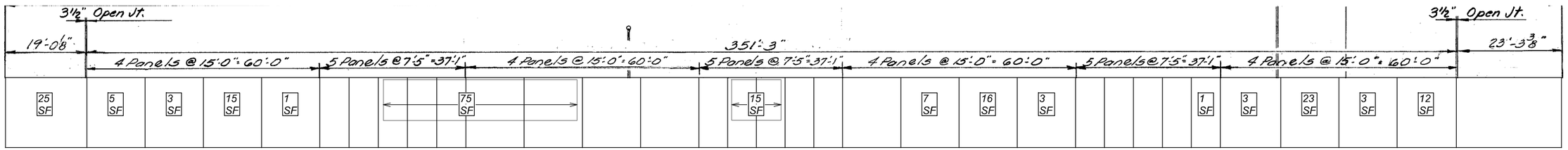
REAR **FORWARD**

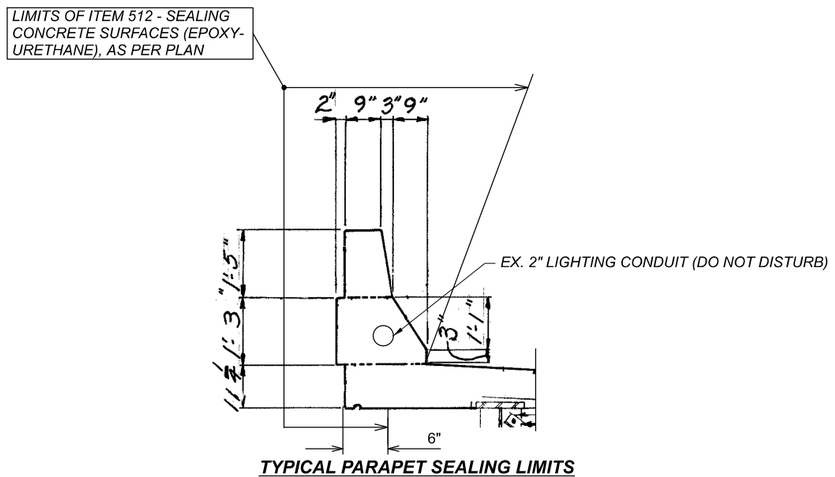


INSIDE PARAPET ELEVATION - LEFT
LOOKING WEST
(NOT TO SCALE)

FORWARD **REAR**



INSIDE PARAPET ELEVATION - RIGHT
LOOKING EAST
(NOT TO SCALE)



TYPICAL PARAPET SEALING LIMITS

LEGEND:

# SF	*INDICATES SQUARE FEET (SF) OF ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN PER INSIDE FACE OF PARAPET PANEL*

	MEASURED TOTAL (SF)	*ESTIMATED TOTAL (SF)*
LEFT PARAPET	*336*	*420*
RIGHT PARAPET	*207*	*259*
	TOTAL	**679**

PARAPET REPAIRS - LOCATION 7
BRIDGE NO. CUY-480-0870-ES
IR-480 WB RAMP TO SB IR-71 OVER IR-480

SFN 1814249
DESIGN AGENCY
OSBORN ENGINEERING
1100 Superior Avenue Suite 300
Cleveland, OH 44114
(216) 861-2020 www.osborn-eng.com
DESIGNER MJD | CHECKER JDH
REVIEWER SMK 12-13-22
PROJECT ID 105909
SUBSET 8 | TOTAL 8
SHEET 110 | TOTAL 110

CUY-BH-FY2023 MISC.

MODEL: Sheet PAPERSIZE: 17X11 (In.) DATE: 4/5/2023 TIME: 7:20:44 PM USER: mdcruz
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