

STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION

**CUY-BH-FY2021(B) MISC**

FEDERAL PROJECT NO.  
**NON-FEDERAL**

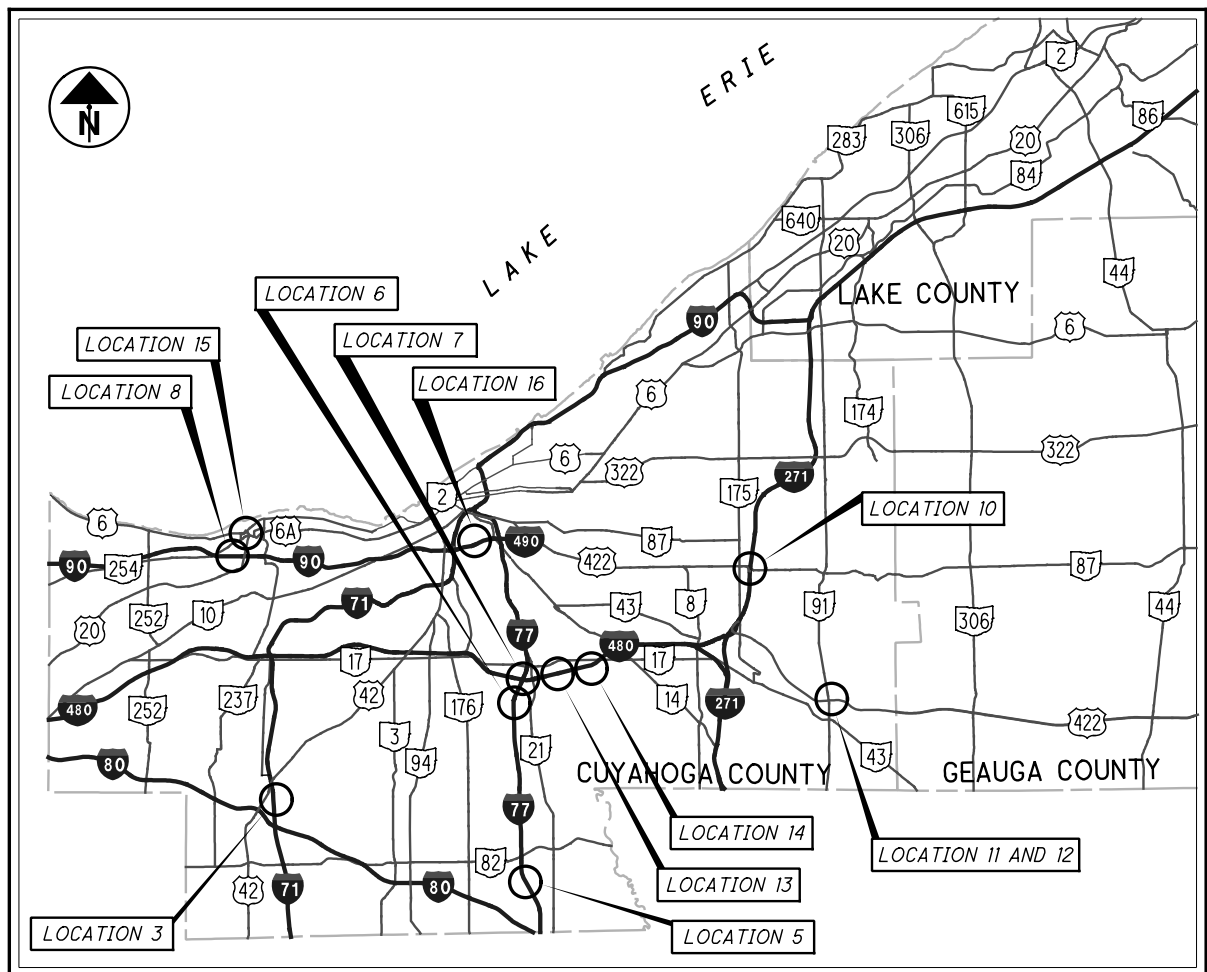
PID NO.  
**109131**

CONSTRUCTION PROJECT NO.

RAILROAD INVOLVEMENT  
**NONE**

**CUY-BH-FY2021(B) MISC**  
PID NO. 109131

1  
253



**LOCATION MAP**

LATITUDE: 41°24'54" N LONGITUDE: 81°36'54" W  
(NOTE: FOR COORDINATES PER LOCATION, SEE SHEETS 3-5)

**INDEX OF SHEETS:**

- TITLE
- LOCATION MAP
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- LOCATION 7 - CUY-77-0909
- LOCATION 8 - CUY-90-0683
- LOCATION 10 - CUY-422-1122
- LOCATION 11 & 12 - CUY-422-1827L&R
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- LOCATION 14 - CUY-480-2019
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16	6/21/21	REVISE SHEET NUMBERS, ADD SUPPLEMENTAL SPEC
17	6/16/21	ADD SUPPLEMENTAL SPEC

**PROJECT DESCRIPTION**

THIS PROJECT CONSISTS OF VARIOUS REPAIRS INCLUDING JOINT REPAIRS, APPROACH SLAB REPAIRS, BEARING REPAIRS, CONCRETE REPAIRS AND GIRDER FLANGE REPAIRS.

PROJECT EARTH DISTURBED AREA: 0.65 ACRES  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 0.25 ACRES  
NOTICE OF INTENT EARTH DISTURBED AREA: N/A (NOI NOT REQUIRED)\*  
\* ROUTINE MAINTENANCE PROJECT  
SEE SHEET 2-5 FOR ROADWAY BRIDGE LOCATION

**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 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED:   
DATE: 2/19/21 DISTRICT DEPUTY DIRECTOR

APPROVED:   
DATE: 4/14/21 DIRECTOR, DEPARTMENT OF TRANSPORTATION

STANDARD CONSTRUCTION DRAWINGS				SUPPLEMENTAL SPECIFICATIONS		SPECIAL PROVISIONS						
BP-3.1	1-17-20	TC-41.20	10-18-13	MT-95.30	7-19-19	MT-101.60	1-17-20	AS-1-15	7-17-15	800	1-15-21	
BP-5.1	1-18-19	TC-41.30	10-18-13	MT-95.31	7-19-19	MT-101.70	1-17-20	BR-1-13	1-17-14	821	4-20-12	
F-1.1	7-19-13	TC-42.20	10-18-13	MT-95.32	4-19-19	MT-102.10	1-17-20	BR-2-15	7-17-15	832	10-19-18	
MGS-2.1	1-19-18	TC-65.10	1-17-14	MT-95.40	1-17-20	MT-102.20	4-19-19	EXJ-4-87	1-19-18	844	4-20-18	
MGS-3.1	1-19-18	TC-65.11	7-21-17	MT-95.41	1-17-20	MT-110.10	7-19-13	GSD-1-19	1-15-21	847	1-15-21	
MGS-3.2	1-18-13	TC-71.10	1-19-18	MT-95.45	1-17-20			PCB-91	7-17-20	848	1-15-21	
MGS-4.1	1-20-17	HL-20.14	4-17-20	MT-95.50	7-21-17			RB-1-55	7-19-13	849	1-18-13	
MGS-4.2	7-19-13	HL-30.31	4-17-20	MT-96.11	4-17-20			TVPF-1-18	7-20-18	902	7-19-19	
MGS-4.3	1-18-13	HL-50.21	1-15-21	MT-96.20	7-15-16			VPF-1-90	7-20-18	921	4-20-12	
RM-4.2	4-17-20	HL-60.11	7-21-17	MT-97.10	4-19-19					961	4-17-20	
RM-4.3	7-18-14	HL-60.12	1-15-21	MT-97.20	4-19-19					987	1-16-09	
RM-4.5	7-21-17			MT-98.10	1-17-20							
RM-4.6	7-19-13			MT-98.11	1-17-20							
				MT-98.20	4-19-19							
				MT-98.29	1-17-20							
				MT-99.30	1-17-20							

**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:  
**RICHLAND ENGINEERING LIMITED**  
29 NORTH PARK STREET  
MANSFIELD OHIO 44902  
PHONE: (419) 524-0074 FAX: (419) 524-1812

ENGINEER'S SEAL: LOCATION: 3  SIGNED: Ryan P. Murphy DATE: 1-29-2021	ENGINEER'S SEAL: LOCATIONS: 5-8, 13-15  SIGNED: Patrick Schwab DATE: 1-29-2021
ENGINEER'S SEAL: LOCATIONS: 10-12  SIGNED: James A. O'Leary DATE: 1-29-2021	ENGINEER'S SEAL: LOCATION: 16  SIGNED: Matthew J. Lawler DATE: 01/29/2021

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**ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN**

PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 77 SHALL BE REMOVED TO PROVIDE ACCESS TO PIER 1 AND PIER 3 AT LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77); PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 480 RAMP SHALL BE REMOVED TO PROVIDE ACCESS TO PIER 1 AT LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP) AND PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 271 SHALL BE REMOVED TO PROVIDE ACCESS TO PIER 2 AND PIER 4 AT LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271).

IN ADDITION TO CMS ITEM 202, THIS ITEM SHALL INCLUDE SAWCUTTING THE EXISTING ASPHALT PAVEMENT AT A DISTANCE OF 4" FROM THE TOE OF THE EXISTING CONCRETE BARRIER; CAREFULLY REMOVING 4" OF THE ASPHALT PAVEMENT ADJACENT AND PARALLEL TO THE EXISTING CONCRETE BARRIER; AND SAWCUTTING THE EXISTING CONCRETE BARRIER TO BE REMOVED. THE EXISTING CONCRETE BARRIER SAWCUTS SHALL BE LOCATED AT THE EXISTING CONTRACTION JOINTS AROUND THE EXISTING REBAR AND CHIPPING THE CONCRETE AWAY LEAVING THE EXISTING REBAR IN PLACE. THE LENGTH OF EXISTING CONCRETE BARRIER TO BE REMOVED SHALL BE DETERMINED BASED ON THE DISTANCE REQUIRED TO PERFORM THE PIER REPAIRS. THE CONCRETE BARRIER END SECTIONS SHALL REMAIN AND SHALL NOT BE DISTURBED.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS WORK, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN FOR PAYMENT.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN 80 FT

LOCATION 6: CUY-77-0881 (IR-77 RAMP OVER IR 480 RAMP)

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN 54 FT

LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN 240 FT

**ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN (A)**

THE EXISTING CONCRETE BARRIER ALONG IR 71 SHALL BE REMOVED TO PROVIDE ACCESS TO PIER 1 AND PIER 3 AT LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71). IN ADDITION TO CMS ITEM 202, THIS ITEM SHALL INCLUDE SAWCUTTING THE EXISTING ASPHALT PAVEMENT AT A DISTANCE OF 4" FROM THE TOE OF THE EXISTING BARRIER AND CAREFULLY REMOVING THE EXISTING CONCRETE BARRIER AND THE 4" OF ASPHALT PAVEMENT.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS WORK, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN (A) FOR PAYMENT.

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

LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)

ITEM 202 - CONCRETE BARRIER REMOVED, AS PER PLAN (A) 110 FT

ITEM 202 - GUARDRAIL REMOVED 275 FT

**ITEM 204 - PROOF ROLLING**

THE FOLLOWING QUANTITY HAS BEEN INCLUDED IN THE CALCULATIONS AND CARRIED TO THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE PLAN SHEET 14 FOR ADDITIONAL INFORMATION.

ITEM 204 - PROOF ROLLING 1 HOUR

**ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS FOR TYPE MGS GUARDRAIL AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE FACE OF THE TYPE E IMPACT HEAD SHALL BE COVERED WITH A SHEET OF TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 31 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350), EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING ALL RELATED TRANSITIONS, REFLECTIVE SHEETING, HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**ITEM 609 - CURB, TYPE 6, AS PER PLAN**

PORTIONS OF THE EXISTING CURB ALONG RAMP B SHALL BE REPLACED ALONG THE APPROACH SLABS AT LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90), AND PORTIONS OF THE EXISTING CURB ALONG US 6A (DETROIT RD.) SHALL BE REPLACED AT THE REAR NW CORNER OFF THE APPROACH SLAB AT LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER).

IN ADDITION TO CMS 609, THIS ITEM SHALL MATCH THE EXISTING CURB HEIGHT OF THE BRIDGE AND SMOOTHLY TRANSITION DOWN TO MATCH TO THE HEIGHT OF THE EXISTING CURB.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS WORK TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 609 - CURB, TYPE 6, AS PER PLAN.

**ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN**

A TYPE B FIELD OFFICE IS REQUIRED FOR THIS PROJECT. THE FOLLOWING REVISIONS TO EQUIPMENT SUPPLIED WITH THE TYPE B FIELD OFFICE, AS SPECIFIED IN CMS TABLE 619.02-1, FIELD OFFICE, SHALL APPLY:

THE COPIER SUPPLIED MUST MEET THE REQUIREMENTS OF THE COPIER SUPPLIED WITH THE TYPE C FIELD OFFICE.

THE BROAD BAND INTERNET CONNECTION MUST MEET A MINIMUM DOWNLOAD SPEED OF 10MB PER SECOND AND A MINIMUM UPLOAD SPEED OF 5MB PER SECOND.

THE CONTRACTOR SHALL FURNISH, SET-UP AND MAINTAIN A WI-FI ROUTER MEETING THE REQUIREMENTS OF IEEE 802.11ac FOR THE EXCLUSIVE USE OF THE DEPARTMENT.

ALL OTHER FIELD OFFICE ITEMS SUPPLIED SHALL MEET THE REQUIREMENTS OF A TYPE B FIELD OFFICE.

ITEM 619 - FIELD OFFICE, TYPE B, AS PER PLAN

**ASPHALT PAVEMENT PATCHING**

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PATCHING ANY DETERIORATED ASPHALT FOLLOWING THE BACKWALL REPAIRS AT LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP), THE APPROACH SLAB REPLACEMENT AT LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90), AND THE JOINT REPAIRS AND CURB REPLACEMENT AT LOCATION 14: CUY-480-2019 (TURNNEY ROAD OVER IR 480) AND IS TO BE USED AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITY HAS BEEN PROVIDED IN THE GENERAL SUMMARY FOR THE ASPHALT PATCHING AT THE LOCATIONS PROVIDED ABOVE.:

ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441) 10 CY

THE ABOVE QUANTITY IS BASED ON A PAVEMENT WIDTH OF TWO FEET ALONG THE LENGTH OF THE ROADWAY AND AN ESTIMATED THICKNESS OF THREE INCHES.

THE COST OF ALL THE WORK DESCRIBED ABOVE INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THIS WORK TO THE SATISFACTION OF THE ENGINEER SHALL BE PAID FOR AT THE UNIT CONTRACT BID PRICE FOR ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR (441).

**ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN**

PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 77 SHALL BE REPLACED AT PIER 1 AND PIER 3 OF LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77); PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 480 RAMP SHALL BE REPLACED AT PIER 1 OF LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP); AND PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 271 SHALL BE REPLACED AT PIER 2 AND PIER 4 OF LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271).

IN ADDITION TO CMS 622, THIS ITEM SHALL INCLUDE CONSTRUCTING A SPREAD FOOTING THAT EXTENDS FROM THE BACK OF THE BARRIER TO 4" FROM THE TOE OF THE CONCRETE BARRIER. THE SPREAD FOOTING SHALL BE PER STANDARD DRAWING RM-4.6. THE CROSS-SLOPE OF THE CONCRETE FOOTING SURFACE SHALL MATCH THE CROSS-SLOPE OF THE EXISTING ASPHALT PAVEMENT ADJACENT TO THE BARRIER. THE ELEVATION OF THE CONCRETE FOOTING SURFACE SHALL MATCH INTO THE EXISTING ADJACENT ASPHALT SURFACE. FORM THE BARRIER AROUND THE EXISTING REBAR TO MATCH INTO THE EXISTING CONCRETE END SECTION.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN FOR PAYMENT.

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

LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN 52 FT

LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN 40 FT

LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN 198 FT

**ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN (A)**

THE EXISTING CONCRETE BARRIER ALONG IR 71 SHALL BE REPLACED AT PIER 1 AND PIER 3 OF LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71). IN ADDITION TO CMS ITEM 622, THIS ITEM SHALL INCLUDE CONSTRUCTING A SPREAD FOOTING THAT EXTENDS FROM THE BACK OF THE BARRIER TO 4" FROM THE TOE OF THE CONCRETE BARRIER. THE SPREAD FOOTING SHALL BE PER THE STANDARD DRAWING RM-4.6. THE CROSS-SLOPE OF THE CONCRETE FOOTING SURFACE SHALL MATCH THE CROSS-SLOPE OF THE EXISTING ASPHALT PAVEMENT ADJACENT TO THE BARRIER. THE ELEVATION OF THE CONCRETE FOOTING SURFACE SHALL MATCH INTO THE EXISTING ADJACENT ASPHALT SURFACE.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS WORK, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN (A) FOR PAYMENT.

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

LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)

ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN (A) 82 FT

ITEM 622 - CONCRETE BARRIER END SECTION, TYPE D 2 EACH

ITEM 606 - MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 2 EACH

ITEM 606 - GUARDRAIL, TYPE MGS 150 FT

ITEM 606 - ANCHOR ASSEMBLY, MGS TYPE E (NCHRP 350) 2 EACH

**ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN**

PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 77 SHALL BE REPLACED AT PIER 1 AND PIER 3 OF LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77); PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 480 RAMP SHALL BE REPLACED AT PIER 1 OF LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP); AND PORTIONS OF THE EXISTING CONCRETE BARRIER ALONG IR 271 SHALL BE REPLACED AT PIER 2 AND PIER 4 OF LOCATION 10: CUY-422-1122 (CHAGRIN BOULEVARD] OVER IR 271).

IN ADDITION TO CMS 622, THIS ITEM SHALL INCLUDE CONSTRUCTING A SPREAD FOOTING THAT EXTENDS FROM THE BACK OF THE BARRIER TO 4" FROM THE TOE OF THE CONCRETE BARRIER. THE SPREAD FOOTING SHALL BE PER STANDARD DRAWING RM-4.6. THE CROSS-SLOPE OF THE CONCRETE FOOTING SURFACE SHALL MATCH THE CROSS-SLOPE OF THE EXISTING ASPHALT PAVEMENT ADJACENT TO THE BARRIER. THE ELEVATION OF THE CONCRETE FOOTING SURFACE SHALL MATCH INTO THE EXISTING ADJACENT ASPHALT SURFACE.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 622 - CONCRETE BARRIER, SINGLE SLOPE, TYPE D, AS PER PLAN FOR PAYMENT.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE PLANS AND CARRIED TO THE GENERAL SUMMARY:

LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 1 EACH

LOCATION 6: CUY-77-0881 (IR-77 RAMP OVER IR 480 RAMP)

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 1 EACH

LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)

ITEM 622 - CONCRETE BARRIER, END ANCHORAGE, REINFORCED, TYPE D, AS PER PLAN 3 EACH

2	5/21/21	REVISE QUANTITIES
15	6/9/21	REVISE QUANTITY
17	6/16/21	REVISE NOTE

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**ITEM SPECIAL - MAINTAIN EXISTING LIGHTING**

EXISTING ROADWAYS WHICH ARE TO REMAIN OPEN TO TRAFFIC DURING CONSTRUCTION OF THIS PROJECT AND WHICH ARE LIGHTED SHALL HAVE THE LIGHTING MAINTAINED AS DESCRIBED HEREIN.

BEFORE ANY WORK IS STARTED IN THE IMMEDIATE VICINITY OF THE EXISTING LIGHTING CIRCUITS, REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR SHALL MAKE A VISUAL INSPECTION OF THE EXISTING ROADWAY LIGHTING CIRCUITS TO BE MAINTAINED. DURING THIS INSPECTION, A WRITTEN RECORD OF THE CONDITION OF EXISTING LIGHTING SHALL BE MADE BY ODOT'S REPRESENTATIVE. THIS WRITTEN REPORT SHALL NOTE INDIVIDUAL LUMINAIRES WHICH ARE NOT IN WORKING ORDER, INDIVIDUAL POLES WHICH ARE NOT STANDING, AND INDIVIDUAL CIRCUITS WHICH ARE NOT IN WORKING ORDER. THE COMPLETED REPORT SHALL BE SIGNED BY THE REPRESENTATIVES OF ODOT, THE MAINTAINING AGENCY AND THE CONTRACTOR.

IF, AS A RESULT OF THIS INSPECTION, IT IS DETERMINED THAT THE CONDITION OF THE EXISTING SYSTEM IS BELOW THAT REQUIRED FOR THE SAFETY OF THE TRAVELING PUBLIC, THEN THE MAINTAINING AGENCY SHALL MAKE THE REPAIRS NECESSARY TO RETURN THE SYSTEM TO AN ACCEPTABLE CONDITION. FOLLOWING THESE REPAIRS, THE SYSTEM SHALL AGAIN BE INSPECTED AND A REPORT SHALL BE MADE AND SIGNED AS OUTLINED HEREIN.

WHEN THE EXISTING SYSTEM IS IN AN ACCEPTABLE CONDITION, IT SHALL BE TURNED OVER TO THE CONTRACTOR WHO SHALL THEN BE REQUIRED TO MAINTAIN THE EXISTING LIGHTING TO THE CONDITION OUTLINED IN THIS REPORT WITH THE EXCEPTION OF KNOCKDOWNS DUE TO TRAFFIC ACCIDENTS.

REPLACEMENT OF KNOCKED DOWN UNITS SHALL BE DONE ONLY WHEN THE ENGINEER HAS DETERMINED THAT THE REPLACEMENT OF THE KNOCKED DOWN UNIT IS NECESSARY AND SHALL BE PAID SEPARATELY ON A UNIT BASIS.

BETTERMENTS SHALL BE COVERED IN ITEMS OF WORK PERTAINING TO THE CONSTRUCTION OF PERMANENT IMPROVEMENT.

WHEN THE SEQUENCE OF CONSTRUCTION ACTIVITIES REQUIRES, OR SHOULD THE CONTRACTOR DESIRE, THE REMOVAL OF THE EXISTING LIGHTING BEFORE THE NEW LIGHTING IS OPERATIONAL, THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING TEMPORARY LIGHTING OF THIS PORTION OF THE ROADWAY.

PRIOR TO INSTALLING SUCH LIGHTING, THE CONTRACTOR SHALL PREPARE AND SUBMIT FOUR SETS OF THE TEMPORARY LIGHTING PLAN TO THE ENGINEER FOR REVIEW AND APPROVAL.

THIS PLAN SHALL SHOW LOCATIONS OF POLES, LENGTHS OF BRACKET ARMS, STYLES OF LUMINAIRES, MOUNTING HEIGHTS, WIRING METHODS AND OTHER PERTINENT INFORMATION. THE TEMPORARY LIGHTING SHALL PROVIDE AN AVERAGE INITIAL INTENSITY OF 1.2 FOOTCANDLES WITH AN AVERAGE TO MINIMUM UNIFORMITY NOT TO EXCEED 3:1. MOUNTING HEIGHT OF TEMPORARY LUMINAIRES SHALL NOT BE LESS THAN 30 FEET, AND THE MINIMUM OVERHEAD CONDUCTOR CLEARANCE SHALL BE 20 FEET. TEMPORARY OVERHEAD CONSTRUCTION SHALL NOT BE LESS THAN GRADE "B" FOR STRENGTH REQUIREMENTS AS DEFINED BY THE NATIONAL ELECTRIC SAFETY CODE. WOOD POLES WITH OVERHEAD WIRING MAY BE USED. HOWEVER, TEMPORARY LIGHTING SHALL MEET FEDERAL AND STATE SAFETY CRITERIA. IF BREAKAWAY POLES ARE USED TO MEET THESE CRITERIA, THEN UNDERGROUND WIRING SHALL BE USED. RECONDITIONED OR USED MATERIALS MAY BE FURNISHED FOR TEMPORARY LIGHTING.

ALL MATERIALS NECESSARY TO COMPLETE THE TEMPORARY LIGHTING SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. WHEN NO LONGER NEEDED, THE TEMPORARY LIGHTING INSTALLATION SHALL BE REMOVED AND PROPERLY DISPOSED OF BY THE CONTRACTOR.

THE MAINTAINING AGENCY WILL PAY FOR ELECTRICAL ENERGY CONSUMED BY EXISTING POWER SERVICES AND BY PROPOSED PERMANENT POWER SERVICES AFTER ACCEPTANCE OF THE LIGHTING WORK. THE CONTRACTOR WILL PAY FOR ELECTRICAL ENERGY, INSTALLATION, REMOVAL AND MAINTENANCE OF ANY TEMPORARY POWER SERVICES.

THE LUMP SUM PRICE BID FOR ITEM SPECIAL - MAINTAIN EXISTING LIGHTING SHALL INCLUDE PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO MAINTAIN THE EXISTING LIGHTING AS SPECIFIED HEREIN.

THE UNIT PRICE BID FOR ITEM SPECIAL - REPLACEMENT OF EXISTING LIGHTING UNIT SHALL BE FULL PAYMENT FOR THE REPLACEMENT OF AN EXISTING LIGHTING UNIT WHICH HAS BEEN KNOCKED DOWN AFTER THE AFOREMENTIONED INSPECTION AND SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS NECESSARY TO PROVIDE A REPLACEMENT FOR SUCH UNIT.

**ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE. AS PER PLAN**

IN ADDITION TO CMS 625, THIS ITEM SHALL BE CLEANED, AND REPAIRS NEEDED FOR THE POLE TO BE IN GOOD SERVICEABLE CONDITION MADE. THE EXISTING POLE NUMBER DECAL SHALL BE REMOVED IF IT IS IN POOR CONDITION. A POLE NUMBER DECAL SHALL BE SUPPLIED AND APPLIED IF THE EXISTING DECAL IS REMOVED OR MISSING.

THE EXISTING ANCHOR BOLTS SHALL REMAIN TO BE REUSED. IF THE EXISTING ANCHOR BOLTS ARE DAMAGED OR IN POOR CONDITION NEW ANCHOR BOLTS SHALL BE FURNISHED AS PART OF THIS ITEM.

ANY BANNERS OR SIGNS ON THE EXISTING LIGHT POLES SHALL REMAIN ON THE LIGHT POLES AS THEY ARE REMOVED AND REERECTED. ANY DAMAGE TO THE EXISTING BANNERS, ARMS, BRACKETS, OR SIGNS SHALL BE REPLACED AT NO ADDITIONAL COST TO THE PROJECT.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO PERFORM THIS ITEM, TO THE SATISFACTION OF THE ENGINEER, SHALL BE INCLUDED WITH ITEM 625 - REMOVE AND REERECT EXISTING LIGHT POLE, AS PER PLAN.

**ITEM 832 - EROSION CONTROL**

THE FOLLOWING QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK SPECIFIED IN SUPPLEMENTAL SPECIFICATION 832:

ITEM 832 - EROSION CONTROL 25000 EACH

**FENCE REMOVED AND REPLACED**

PORTIONS OF THE CHAIN LINK FENCE AT LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480) SHALL BE REMOVED AT AN EXISTING POST.

THE FENCE SHALL BE REPLACED WITH A NEW CHAIN LINK FENCE AND TIE INTO THE EXISTING FENCE. ANY DAMAGE TO THE EXISTING FENCE THAT IS TO REMAIN SHALL BE REPLACED IN KIND AT THE EXPENSE OF THE CONTRACTOR. SEE SHEETS 78-79 FOR MORE LOCATIONS.

THE COST OF ALL WORK DESCRIBED ABOVE INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO PERFORM THESE ITEMS, TO THE SATISFACTION OF THE ENGINEER, SHALL BE PAID FOR AT THE UNIT PRICE PER FOOT FOR ITEM 202 - FENCE REMOVED AND ITEM 607 - FENCE, TYPE CL.

**FENCE LENGTH**

THE LENGTHS OF CHAIN LINK FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH CMS 607.

**ENVIRONMENTAL COMMITMENTS**

TO MINIMIZE IMPACTS TO THE KIRTLAND'S WARBLER DURING MIGRATION, TREES AND BRUSH LOCATED WITHIN 3-MILES OF LAKE ERIE SHORELINE WILL NOT BE REMOVED BETWEEN APRIL 22ND AND JUNE 1ST OR BETWEEN AUGUST 15TH AND OCTOBER 15TH. IF THIS SPECIES IS ENCOUNTERED WITHIN THE CONSTRUCTION LIMITS DURING CONSTRUCTION OPERATIONS, ALL CONSTRUCTION OPERATIONS WILL CEASE AND THE USFWS COLUMBUS FIELD OFFICE BE NOTIFIED IMMEDIATELY (614-416-8993). ACTIVITY WILL NOT RESUME UNTIL COORDINATION WITH USFWS HAS BEEN CONCLUDED.

THE FOLLOWING ENVIRONMENTAL COMMITMENTS SHALL BE IMPLEMENTED FOR THIS PROJECT:

1. ALL WORK TO BE WITHIN EXISTING RIGHT-OF-WAY.
2. NO WORK IN STREAMS AND WETLANDS.
3. NO TREE REMOVAL.

**ASBESTOS NOTIFICATION**

A CERTIFIED ASBESTOS HAZARD EVALUATION SPECIALIST SURVEYED THE BRIDGE STRUCTURE SCHEDULED FOR DEMOLITION AND/OR REHABILITATION; THE SURVEY DETERMINED THAT 1062 LINEAR FEET OF ASBESTOS IS PRESENT ON THE CUY-480-1955 BRIDGE.

ODOT SHALL PROVIDE A COPY OF THE OHIO ENVIRONMENTAL PROTECTION AGENCY (OEPA) NOTIFICATION OF DEMOLITION AND RENOVATION FORMS FOR EACH BRIDGE, PARTIALLY COMPLETED AND SIGNED BY THE BRIDGE OWNER, 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, OHIO 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 CONTRACTOR'S 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.

**ITEM SPECIAL: SITE ACCESS**

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROVIDE ACCESS TO EACH LOCATION FOR THE WORK PROVIDED IN THESE PLANS.

THIS ITEM SHALL INCLUDE, BUT IS NOT LIMITED TO, EARTHWORK, CLEARING AND GRUBBING, FENCE REMOVAL AND REERECTION, GUARDRAIL REMOVAL AND REERECTION, SIGN REMOVAL AND REERECTION, CRUSHED AGGREGATE SLOPE PROTECTION INSTALLATION, ETC. TEMPORARY EROSION CONTROL ITEMS SHALL BE PAID FOR PER SUPPLEMENTAL SPECIFICATION 832. THIS ITEM SHALL INCLUDE ALL RESTORATION WORK NECESSARY TO RESTORE ANY DISTURBED AREAS TO A CONDITION EQUAL TO THAT EXISTING PRIOR TO THE PROJECT PER CMS 104.04. WHEN ACCESSING THE SPECIFIC LOCATIONS, AND SLOPES 3:1 OR STEEPER ARE ENCOUNTERED, THE CONTRACTOR SHALL MAKE EVERY ATTEMPT TO PREVENT FUTURE EROSION PROBLEMS.

ALL DISTURBED SLOPES 3:1 OR STEEPER SHALL HAVE ITEM 670-SLOPE PROTECTION INSTALLED. ALL DISTURBED VEGETATED DITCHES SHALL HAVE ITEM 670-DITCH EROSION PROTECTION INSTALLED. ALL DISTURBED ROCK CHANNEL PROTECTION AND PAVED GUTTERS SHALL BE REPLACED PER THE CURRENT SPECIFICATIONS UNDER THIS ITEM, AT NO ADDITIONAL COST TO THE STATE.

THIS ITEM SHALL ALSO INCLUDE SEEDING, FERTILIZING, AND WATERING PER ITEM 659 FOR ALL DISTURBED AREAS. IT SHALL ALSO INCLUDE THE ADDITION OF 3 INCHES OF TOPSOIL FOR ALL DISTURBED AREAS. THE CONTRACTOR SHALL ENSURE A GOOD STAND OF GRASS AS DESCRIBED PER CMS 659.23. THE COST OF ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS AS APPROVED BY THE ENGINEER FOR THE SLOPE EROSION REPAIR AND DRAINAGE REPAIR LOCATIONS, SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM SPECIAL: SITE ACCESS.



	6/3/21	REVISE NOTE

CALCULATED  
TJF  
CHECKED  
JGW

GENERAL NOTES - 4

CUY-BH-FY2021(B) MISC  
PID NO. 109131

**ITEM 614 - MAINTAINING TRAFFIC**

GENERALLY THE CONTRACTOR SHALL CONDUCT THEIR OPERATIONS AS TO MAKE THE PROPOSED CONSTRUCTION WITH A MINIMUM HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY. MAINTENANCE OF TRAFFIC INCLUDES ALL LOCATIONS FOR THIS PROJECT. THIS ITEM SHALL CONSIST OF THE MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS, RAMPS AND SIDEWALKS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAY, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS, AND THE FOLLOWING:

**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 (PHONE: 216-584-2007 OR EMAIL: D12.PUBLIC.INFORMATION@DOT.OHIO.GOV) INDICATING THE LOCATIONS 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 RESTRICTIONS AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. USE PORTABLE CHANGEABLE MESSAGE SIGNS TO ALERT MOTORISTS 3 DAYS PRIOR TO THE IMPLEMENTATION OF ANY CHANGES SUCH AS LANE CLOSURES OR OTHER RESTRICTIONS.

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (EMAIL: Hauling.Permits@dot.ohio.gov) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

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, MINIMUM VERTICAL CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

**NOTIFICATION OF TRAFFIC RESTRICTIONS TIME TABLE**

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

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

THE CONTRACTOR SHALL NOTIFY THE LOCAL MUNICIPALITIES OF SIDEWALK CLOSURES, PEDESTRIAN SIGNAL MODIFICATION OR OTHER PEDESTRIAN RESTRICTIONS AT LEAST 2 WEEKS PRIOR TO IMPLEMENTATION. USE ADVANCED WARNING SIGNS TO ALERT PEDESTRIANS 3 DAYS PRIOR TO THE IMPLEMENTATION OF SIDEWALK CLOSURES, PEDESTRIAN SIGNAL MODIFICATION OR OTHER PEDESTRIAN RESTRICTIONS. FOR LOCATION 3, THE STRONGSVILLE CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 10, THE BEACHWOOD CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 13 AND LOCATION 14, THE GARFIELD HEIGHTS CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 15, THE ROCKY RIVER CITY ENGINEER AND THE LAKEWOOD CITY ENGINEER SHALL BE NOTIFIED.

THE CONTRACTOR SHALL FURNISH, ERECT, MAINTAIN, AND SUBSEQUENTLY REMOVE ALL FLAGS, BARRICADES, SIGNS, SIGN SUPPORTS AND FURNISH AND MAINTAIN ALL FLAGGERS, WATCHERS AND INCIDENTALS RELATED THERETO.

**II. LANE CLOSURE RESTRICTIONS**

- LANE CLOSURES MAY ONLY BE IMPLEMENTED AT THE TIMES PERMITTED BY THE "DISTRICT 12 PERMITTED LANE CLOSURE TIMES" LIST, UNLESS OTHERWISE DETAILED IN THESE PLANS, LOCATED ON THE ODOT WEB SITE:  
[HTTP://WWW.DOT.STATE.OH.US/DISTRICTS/D12/HIGHWAYMANAGEMENT/PAGES/PERMITTEDLANECLOSURES.ASPX](http://www.dot.state.oh.us/districts/d12/highwaymanagement/pages/permitteditlaneclosures.aspx) THE LATEST REVISION 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.
- UNLESS OTHERWISE NOTED, EXIT AND ENTRANCE RAMP LANES SHALL REMAIN OPEN AT ALL TIMES AND EXHIBIT A MINIMUM WIDTH OF ELEVEN (11) FEET.

- MAINTENANCE OF TRAFFIC SHALL FOLLOW THE INSTRUCTION OF THE STANDARD CONSTRUCTION DRAWINGS LISTED ON THE TITLE SHEET AND THE LATEST REVISION OF THE ODOTCD.
- PEDESTRIAN TRAFFIC SHALL BE PERMITTED AND ACCOMMODATED ON AT LEAST ONE SIDE AT ALL TIMES AT LOCATIONS WHERE PEDESTRIAN TRAFFIC IS CURRENTLY MAINTAINED.
- ALL DRIVES AND SIDE STREETS SHALL BE MAINTAINED AT ALL TIMES.

**LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)**

THE CONTRACTOR SHALL PERFORM THE PIER REPAIR, PIER PATCHING, PIER SEALING, AND SUPPLEMENTAL SLOPE PROTECTION IN PHASE ONE OF CONSTRUCTION FOR IR 71. THE WORK WILL REQUIRE THE REMOVAL AND REPLACEMENT OF THE TYPE D CONCRETE BARRIER LOCATED ADJACENT TO PIERS ONE AND THREE. THE CONTRACTOR SHALL REPAIR THE PIER ONE COLUMNS, PATCH THE PIER ONE CAP, SEAL THE PIER ONE CAP AND REPAIR THE PIER THREE COLUMNS DURING THE FIRST PHASE OF CONSTRUCTION. THE CONSTRUCTION PHASE WILL CLOSE THE OUTSIDE SHOULDERS ON IR 71 IN ACCORDANCE WITH MT-95.45 (CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY) WHILE MAINTAINING THREE TRAVEL LANES IN EACH DIRECTION.

THE CONTRACTOR WILL INSTALL THE TIMBER SUBDECK IN PHASE 2 OF CONSTRUCTION ON IR 71. THE WORK WILL REQUIRE MULTIPLE LANE CLOSURES TO INSTALL TIMBER SUBDECK BETWEEN THE GIRDERS IN ACCORDANCE WITH MT-98.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY USING DRUMS). LANE CLOSURES WILL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 71 AT THE BRIDGE LOCATION. MULTIPLE CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK.

THE CONTRACTOR WILL REMOVE THE EXISTING PARAPETS IN PHASE 3 OF CONSTRUCTION ON IR 71. THE WORK WILL REQUIRE MULTIPLE LANE CLOSURES TO REMOVE THE EXISTING PARAPETS IN ACCORDANCE WITH MT-98.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY USING DRUMS). LANE CLOSURES WILL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 71 AT THE BRIDGE LOCATION. MULTIPLE CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK. THE PHASING ON IR 71 SHALL OCCUR CONCURRENTLY WITH THE PHASING ON WHITNEY ROAD.

THE CONTRACTOR SHALL CONSTRUCT THE PARAPETS AND SIDEWALKS, AND INSTALL VANDAL PROTECTION FENCE WITH AESTHETIC SIGNING IN PHASE 4 OF CONSTRUCTION ON IR 71. THE WORK WILL REQUIRE MULTIPLE LANE CLOSURES TO CONSTRUCT THE PARAPETS AND SIDEWALK, AND INSTALL VANDAL PROTECTION FENCE WITH AESTHETIC SIGNING IN ACCORDANCE WITH MT-98.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY USING DRUMS). LANE CLOSURES WILL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 71 AT THE BRIDGE LOCATION. MULTIPLE CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK. THE PHASING ON IR 71 SHALL OCCUR CONCURRENTLY WITH THE PHASING ON WHITNEY ROAD. THE CONTRACTOR SHALL TAKE CARE TO INSTALL THE VANDAL PROTECTION FENCE WITH AESTHETIC SIGNING ON THE NORTH SIDE OF THE BRIDGE. THERE ARE UTILITY LINES JUST OUTSIDE THE BRIDGE FOOTPRINT ON THE NORTH SIDE THAT SHALL NOT BE DISTURBED DURING CONSTRUCTION.

THE CONTRACTOR WILL REPLACE THE PARAPETS AND SIDEWALKS, INSTALL VANDAL PROTECTION FENCE WITH AESTHETIC SIGNING, REPLACE THE EXPANSION JOINTS AND SEAL THE DECK IN TWO PHASES OF CONSTRUCTION ON WHITNEY ROAD IN ACCORDANCE WITH THE DETAILS FOR A SIGNALIZED LANE CLOSURE INCLUDED IN THE PLANS.

**LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)**

THE CONTRACTOR SHALL PERFORM THE PIER REPAIR, PIER PATCHING AND PIER SEALING IN ONE PHASE OF CONSTRUCTION FOR IR 77. THE WORK WILL REQUIRE THE REMOVAL AND REPLACEMENT OF PORTIONS OF THE TYPE D CONCRETE BARRIER LOCATED ADJACENT TO PIERS ONE AND THREE. THE CONTRACTOR SHALL REPAIR THE PIER ONE COLUMNS, PATCH THE PIER THREE CAP, SEAL THE PIER THREE CAP AND REPAIR THE PIER THREE COLUMNS DURING THE SINGLE PHASE OF CONSTRUCTION. THE CONSTRUCTION PHASE SHALL CLOSE THE IR 77 (SOUTHBOUND) OUTSIDE SHOULDER IN ACCORDANCE WITH MT-95.45 (CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY) WHILE MAINTAINING THE THREE SOUTHBOUND TRAVEL LANES. THE CONSTRUCTION PHASE SHALL ALSO CLOSE THE IR 77 (NORTHBOUND) OUTSIDE SHOULDER IN ACCORDANCE WITH MT-95.45 (CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY) WHILE MAINTAINING THE THREE NORTHBOUND TRAVEL LANES.

LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 77 AT THE BRIDGE LOCATION. MULTIPLE WEEKEND CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK.

**LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)**

THE CONTRACTOR SHALL PERFORM THE REPAIRS IN TWO PHASES OF CONSTRUCTION ON THE IR 77 RAMP BRIDGE. THE CONTRACTOR SHALL REPAIR THE ABUTMENT BACKWALLS, PATCH THE ABUTMENTS, SEAL PATCHED AREAS OF ABUTMENTS, REPAIR THE BRIDGE DECK AND PATCH THE PAVEMENT AT THE ABUTMENT JOINTS DURING PHASES ONE AND TWO ON THE IR 77 RAMP BRIDGE. THE FIRST PHASE SHALL CLOSE THE WEST HALF OF THE IR 77 RAMP BRIDGE AND SHIFT TRAFFIC TO THE EAST HALF OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE CONTRACTOR SHALL INSTALL TEMPORARY RUMBLE STRIPS PER MAINTENANCE OF TRAFFIC NOTE "ITEM SPECIAL - RUMBLE STRIPS". THE SECOND PHASE SHALL CLOSE THE EAST HALF OF THE IR 77 RAMP BRIDGE AND SHIFT TRAFFIC TO THE WEST HALF OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE CONTRACTOR SHALL INSTALL TEMPORARY RUMBLE STRIPS PER MAINTENANCE OF TRAFFIC NOTE "ITEM SPECIAL - RUMBLE STRIPS".

THE CONTRACTOR SHALL PERFORM THE WORK IN ONE PHASE OF CONSTRUCTION ON THE IR 480 RAMP. THE CONTRACTOR SHALL REPAIR THE PIER ONE COLUMNS DURING THE CONSTRUCTION PHASE ON IR 480. THE WORK WILL REQUIRE THE REMOVAL AND REPLACEMENT OF PORTIONS OF THE TYPE D CONCRETE BARRIER LOCATED ADJACENT TO PIER 1. THE CONTRACTOR SHALL REPAIR THE GIRDER FLANGE, REPLACE CROSSFRAMES, REPAIR STIFFENERS AND PAINT NEW STEEL DURING THE CONSTRUCTION PHASE ON IR 480. THE CONSTRUCTION PHASE SHALL CLOSE THE OUTSIDE LANE OF THE RAMP FROM IR 77 NORTHBOUND TO IR 480 EASTBOUND/WESTBOUND IN ACCORDANCE WITH MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) AND SHALL SHIFT THE ACCELERATION LANE WITH AN EARLY MERGE IN ACCORDANCE WITH MT-98.10 (LANE CLOSURE AT ENTRANCE RAMP) WHILE MAINTAINING ONE LANE OF TRAFFIC ON IR 480 AND THE ACCELERATION LANE. PORTABLE BARRIER SHALL BE PROVIDED AT PIER ONE IN ACCORDANCE WITH MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MUTLI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER). DURING THE CONSTRUCTION PHASE, A UNIFORMED LAW ENFORCEMENT OFFICER WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) AND A PORTABLE CHANGEABLE MESSAGE SIGN SHALL BE PROVIDED AT THE OUTSIDE LANE CLOSURE FROM IR 77 NORTHBOUND TO IR 480 EASTBOUND/WESTBOUND AND AT THE EARLY MERGE OF THE RAMP FROM ROCKSIDE ROAD TO IR 480 EASTBOUND/WESTBOUND.

LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS FOR THE IR 480 RAMP AT THE BRIDGE LOCATION. MULTIPLE OVERNIGHT CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK ON IR 480.

THE CONTRACTOR SHALL NOT PERFORM REPAIRS FOR LOCATION 6 (CUY-77-0881) AND LOCATION 7 (CUY-77-0909) CONCURRENTLY.

**LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)**

THE CONTRACTOR SHALL PERFORM THE WORK IN FIVE PHASES OF CONSTRUCTION ON THE IR 77 SOUTHBOUND BRIDGE. THE CONTRACTOR SHALL PERFORM THE FORWARD ABUTMENT JOINT REPLACEMENT, FORWARD ABUTMENT PATCHING AND SEALING OF PATCHED AREAS OF THE FORWARD ABUTMENT DURING PHASES ONE, TWO AND THREE FOR THE IR 77 SOUTHBOUND STRUCTURE. THE CONTRACTOR SHALL SHIM THE REAR ABUTMENT JOINT DURING PHASES FOUR AND FIVE FOR THE IR 77 SOUTHBOUND STRUCTURE. THE FIRST PHASE SHALL CLOSE THE WEST PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE INSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC. THE FIRST PHASE SHALL ALSO MAINTAIN THE EXIT RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.20 (LANE CLOSURE AT EXIT RAMP USING DRUMS). THE SECOND PHASE SHALL CLOSE THE OUTSIDE PORTION OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC TYPICAL SECTION, MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) AND MT-102.20 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING DRUMS) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE SECOND PHASE SHALL ALSO MAINTAIN THE EXIT RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.20 (LANE CLOSURE AT EXIT RAMP USING DRUMS). THE CONTRACTOR SHALL PERFORM THE WORK FOR PHASE TWO IN ONE WEEKEND WITH A SINGLE LANE CLOSURE. THE THIRD PHASE SHALL CLOSE THE EAST PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE OUTSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC. THE THIRD PHASE SHALL ALSO MAINTAIN THE EXIT RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.20 (LANE CLOSURE AT EXIT RAMP USING DRUMS). THE FOURTH PHASE SHALL CLOSE THE OUTSIDE TRAVEL LANE IN ACCORDANCE WITH MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE FOURTH PHASE SHALL ALSO MAINTAIN THE EXIT RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.20 (LANE CLOSURE AT EXIT RAMP USING DRUMS). THE FIFTH PHASE SHALL CLOSE THE INSIDE TRAVEL LANE IN ACCORDANCE WITH MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE FIFTH PHASE SHALL ALSO MAINTAIN THE EXIT RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.20 (LANE CLOSURE AT EXIT RAMP USING DRUMS).

(CONTINUED ON SHEET 13 )

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LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)

(CONTINUED FROM SHEET 12 )

THE CONTRACTOR SHALL PERFORM THE WORK IN FIVE PHASES OF CONSTRUCTION ON THE IR 77 NORTHBOUND BRIDGE. THE CONTRACTOR SHALL PERFORM THE REAR ABUTMENT JOINT REPLACEMENT, REAR ABUTMENT PATCHING AND SEALING OF PATCHED AREAS OF THE REAR ABUTMENT DURING PHASES ONE, TWO AND THREE FOR THE IR 77 NORTHBOUND STRUCTURE. THE CONTRACTOR SHALL SHIM THE FORWARD ABUTMENT JOINT DURING PHASES FOUR AND FIVE FOR THE IR 77 NORTHBOUND STRUCTURE. THE FIRST PHASE SHALL CLOSE THE EAST PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE INSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC. THE FIRST PHASE SHALL ALSO MAINTAIN THE ENTRANCE RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.10 (LANE CLOSURE AT ENTRANCE RAMP). THE SECOND PHASE SHALL CLOSE THE OUTSIDE PORTION OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC TYPICAL SECTION, MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) AND MT-102.20 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING DRUMS) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE SECOND PHASE SHALL ALSO MAINTAIN THE ENTRANCE RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.10 (LANE CLOSURE AT ENTRANCE RAMP). THE CONTRACTOR SHALL PERFORM THE WORK FOR PHASE TWO IN ONE WEEKEND CLOSURE. THE THIRD PHASE SHALL CLOSE THE WEST PORTION OF THE BRIDGE AND SHIFT TRAFFIC TO THE OUTSIDE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC. THE THIRD PHASE SHALL ALSO MAINTAIN THE ENTRANCE RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.10 (LANE CLOSURE AT ENTRANCE RAMP). THE FOURTH PHASE SHALL CLOSE THE OUTSIDE TRAVEL LANE IN ACCORDANCE WITH MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE FIFTH PHASE SHALL CLOSE THE INSIDE TRAVEL LANE IN ACCORDANCE WITH MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE LANE OF TRAFFIC. THE FIFTH PHASE SHALL ALSO MAINTAIN THE ENTRANCE RAMP TO THE SOUTH IN ACCORDANCE WITH MT-98.10 (LANE CLOSURE AT ENTRANCE RAMP).

LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 77 AT THE BRIDGE LOCATION.

THE CONTRACTOR SHALL NOT PERFORM REPAIRS FOR LOCATION 6 (CUY-77-0881) AND LOCATION 7 (CUY-77-0909) CONCURRENTLY.

LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)

THE CONTRACTOR SHALL PERFORM THE WORK IN TWO PHASES OF CONSTRUCTION ON RAMP B. THE CONTRACTOR SHALL PERFORM THE ABUTMENT JOINT REPLACEMENT, TRIMMING BEAM ENDS, PAINTING DAMAGED STEEL, APPROACH SLAB REPLACEMENT, FORWARD APPROACH CURB REPLACEMENT, GROUND MOUNTED SIGN REMOVAL AND REERECTION, RAILING PATCHING, RAILING SEALING, FORWARD ABUTMENT DOWNSPOUT MODIFICATION, AND GUARDRAIL REMOVAL AND REERECTION DURING PHASE ONE ON RAMP B. THE CONTRACTOR SHALL PERFORM THE ABUTMENT JOINT REPLACEMENT, TRIMMING BEAM ENDS, PAINTING DAMAGED STEEL, APPROACH SLAB REPLACEMENT, FORWARD APPROACH CURB REPLACEMENT, GROUND MOUNTED SIGN REMOVAL AND REERECTION, RAILING PATCHING, RAILING SEALING, AND GUARDRAIL REMOVAL AND REERECTION DURING PHASE TWO ON RAMP B. THE FIRST PHASE SHALL CLOSE THE INSIDE PORTION OF THE BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.40 (CLOSING RIGHT OR LEFT LANES OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER) AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC. THE FIRST PHASE SHALL ALSO CLOSE THE LEFT TURN LANE AT THE INTERSECTION WITH HILLIARD BOULEVARD. THE ADJACENT THRU LANE WILL BE MARKED WITH A THRU/LEFT TURN ARROW DURING PHASE ONE. LANE AND SIGNAL MODIFICATION WILL BE REQUIRED AT THE INTERSECTION WITH HILLIARD BOULEVARD DURING PHASE ONE. THE CONTRACTOR SHALL INSTALL TEMPORARY RUMBLE STRIPS PER MAINTENANCE OF TRAFFIC NOTE "ITEM SPECIAL - RUMBLE STRIPS". AN ALTERNATE ROUTE SHALL BE INSTALLED PRIOR TO PHASE ONE AND SHALL REMAIN THROUGH THE COMPLETION OF PHASE TWO. THE ALTERNATE ROUTE SHALL BE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS. SIGNAL MODIFICATION WILL BE REQUIRED AT THE INTERSECTIONS ALONG THE ALTERNATE ROUTE.

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THE CONTRACTOR SHALL PERFORM THE WORK IN TWO PHASES OF CONSTRUCTION ON IR 90. THE CONTRACTOR SHALL PERFORM THE PIER ONE REPAIRS, THE PIER THREE REPAIRS, ABUTMENT SEALING AND ABUTMENT PATCHING DURING PHASE ONE ON IR 90. THE CONTRACTOR SHALL PERFORM THE PIER TWO REPAIRS DURING PHASE TWO ON IR 90. THE FIRST PHASE SHALL CLOSE THE EASTBOUND OUTSIDE SHOULDER AND THE WESTBOUND OUTSIDE SHOULDER IN ACCORDANCE WITH ODOTCD FIGURE 6H-3 (WORK ON THE SHOULDERS - TYPICAL APPLICATION 3) WHILE MAINTAINING THREE LANES OF TRAFFIC IN EACH DIRECTION. THE SECOND PHASE SHALL CLOSE THE EASTBOUND INSIDE SHOULDER IN ACCORDANCE WITH ODOTCD FIGURE 6H-3 (WORK ON THE SHOULDERS - TYPICAL APPLICATION 3) AND SHALL CLOSE THE WESTBOUND INSIDE TRAVEL LANE IN ACCORDANCE WITH MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING THREE LANES OF TRAFFIC IN THE EASTBOUND DIRECTION AND TWO LANES OF TRAFFIC IN THE WESTBOUND DIRECTION. THE CONTRACTOR MAY CLOSE THE WESTBOUND INSIDE SHOULDER AND THE EASTBOUND INSIDE TRAVEL LANE AS AN ALTERNATIVE FOR PHASE TWO CONSTRUCTION ON IR 90.

LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 90 AT THE BRIDGE LOCATION.

MULTIPLE WEEKEND CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK ON IR 90.

LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)

THE CONTRACTOR SHALL PERFORM THE WORK IN FIVE PHASES OF CONSTRUCTION ON CHAGRIN BOULEVARD. THE CONTRACTOR SHALL REPLACE PORTIONS OF THE NORTH GIRDER, REPLACE PORTIONS OF THE NORTH DECK AND REPLACE PORTIONS OF THE NORTH SIDEWALK DURING PHASE ONE ON CHAGRIN BOULEVARD. THE CONTRACTOR SHALL REPLACE PORTIONS OF THE SOUTH GIRDER, REPLACE PORTIONS OF THE SOUTH DECK AND REPLACE PORTIONS OF THE SOUTH SIDEWALK DURING PHASE TWO ON CHAGRIN BOULEVARD. THE CONTRACTOR SHALL PATCH THE NORTH PARAPET AND SEAL THE NORTH PARAPET DURING PHASE THREE ON CHAGRIN BOULEVARD. THE CONTRACTOR SHALL REPLACE THE REAR STRIP SEAL DURING PHASE FOUR ON CHAGRIN BOULEVARD. THE CONTRACTOR SHALL PATCH THE SOUTH PARAPET AND SEAL THE SOUTH PARAPET DURING PHASE FIVE ON CHAGRIN BOULEVARD. THE FIRST PHASE SHALL SHIFT THE TRAVEL LANES TO THE SOUTH IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC IN THE WESTBOUND DIRECTION AND TWO LANES OF TRAFFIC IN THE EASTBOUND DIRECTION. SIGNAL MODIFICATION MAY BE REQUIRED AT THE INTERSECTIONS WITH THE IR 271 SOUTHBOUND RAMPS TO THE WEST OF THE BRIDGE AND AT THE INTERSECTION WITH THE IR 271 NORTHBOUND RAMPS TO THE EAST OF THE BRIDGE DURING PHASE ONE. PEDESTRIAN TRAFFIC SHALL BE DETOURED TO THE SOUTH SIDEWALK IN ACCORDANCE WITH MT-110.10 (PEDESTRIAN DETOUR METHODS) DURING PHASE ONE. THE RAMPS TO THE EAST AND TO THE WEST OF THE STRUCTURE SHALL REMAIN OPEN AT ALL TIMES DURING PHASE ONE. THE SECOND PHASE SHALL SHIFT THE TRAVEL LANES TO THE NORTH IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-102.10 (LANE SHIFT ON A MULTI-LANE HIGHWAY USING PORTABLE BARRIER) WHILE MAINTAINING TWO LANES OF TRAFFIC IN THE WESTBOUND DIRECTION AND TWO LANES OF TRAFFIC IN THE EASTBOUND DIRECTION. SIGNAL MODIFICATION MAY BE REQUIRED AT THE INTERSECTIONS WITH THE IR 271 SOUTHBOUND RAMPS TO THE WEST OF THE BRIDGE AND AT THE INTERSECTION WITH THE IR 271 NORTHBOUND RAMPS TO THE EAST OF THE BRIDGE DURING PHASE TWO. PEDESTRIAN TRAFFIC SHALL BE DETOURED TO THE NORTH SIDEWALK IN ACCORDANCE WITH MT-110.10 (PEDESTRIAN DETOUR METHODS) DURING PHASE TWO. THE RAMPS TO THE EAST OF THE STRUCTURE AND TO THE WEST OF THE STRUCTURE SHALL REMAIN OPEN AT ALL TIMES DURING PHASE TWO. THE THIRD PHASE SHALL CLOSE THE OUTSIDE WESTBOUND LANE IN ACCORDANCE WITH MT-95.31 (CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE WESTBOUND LANE OF TRAFFIC ON THE EXISTING INSIDE WESTBOUND LANE AND TWO EASTBOUND LANES OF TRAFFIC IN THE EXISTING EASTBOUND LANES. PEDESTRIAN TRAFFIC SHALL BE DETOURED TO THE SOUTH SIDEWALK IN ACCORDANCE WITH MT-110.10 (PEDESTRIAN DETOUR METHODS) DURING PHASE THREE. THE RAMPS TO THE EAST AND TO THE WEST OF THE STRUCTURE SHALL REMAIN OPEN AT ALL TIMES DURING PHASE THREE. PHASE THREE WILL REQUIRE MULTIPLE OVERNIGHT CLOSURES TO COMPLETE. LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS DURING PHASE THREE. THE FOURTH PHASE SHALL REQUIRE 3 SUBPHASES TO COMPLETE. THE FIRST SUBPHASE SHALL CLOSE THE OUTSIDE WESTBOUND LANE AS DESCRIBED FOR PHASE 3. THE SECOND SUBPHASE SHALL CLOSE THE INSIDE WESTBOUND LANE AND THE INSIDE EASTBOUND LANE IN ACCORDANCE MT-95.32 (CLOSING LEFT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE WESTBOUND LANE OF TRAFFIC ON THE EXISTING OUTSIDE WESTBOUND LANE AND ONE EASTBOUND LANE OF TRAFFIC ON THE EXISTING OUTSIDE EASTBOUND LANE. THE THIRD SUBPHASE SHALL CLOSE THE OUTSIDE EASTBOUND LANE AS DESCRIBED FOR PHASE 5. THE REAR STRIP SEAL SHALL BE INSTALLED IN ONE CONTINUOUS PIECE. PHASE THREE WILL REQUIRE ONE SINGLE OVERNIGHT CLOSURE TO COMPLETE. LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS DURING PHASE FOUR. THE FIFTH PHASE SHALL CLOSE THE OUTSIDE EASTBOUND LANE IN ACCORDANCE MT-95.31 (CLOSING RIGHT LANES OF A MULTI-LANE UNDIVIDED HIGHWAY WITH DRUMS) WHILE MAINTAINING ONE EASTBOUND LANE OF TRAFFIC ON THE EXISTING INSIDE EASTBOUND LANE AND TWO WESTBOUND LANES OF TRAFFIC IN THE EXISTING WESTBOUND LANES. PEDESTRIAN TRAFFIC SHALL BE DETOURED TO THE NORTH SIDEWALK IN ACCORDANCE WITH MT-110.10 (PEDESTRIAN DETOUR METHODS) DURING PHASE FIVE. THE RAMPS TO THE EAST OF THE STRUCTURE AND TO THE WEST OF THE STRUCTURE SHALL REMAIN OPEN AT ALL TIMES DURING PHASE FIVE. PHASE FIVE WILL REQUIRE MULTIPLE OVERNIGHT CLOSURES TO COMPLETE. LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS DURING PHASE FIVE.

THE CONTRACTOR SHALL PERFORM THE WORK IN FOUR PHASES OF CONSTRUCTION ON IR 271. THE CONTRACTOR SHALL REPAIR THE ABUTMENTS, REFURBISH THE BEARINGS, REPAIR PIER ONE AND REPAIR PIER FIVE DURING PHASE ONE ON IR 271. THE CONTRACTOR SHALL REPAIR PIER TWO AND REPAIR PIER FOUR DURING PHASE TWO ON IR 271. THE WORK WILL REQUIRE THE REMOVAL AND REPLACEMENT OF PORTIONS OF THE TYPE D CONCRETE BARRIER LOCATED ADJACENT TO PIERS TWO, FOUR AND FIVE DURING PHASE ONE AND TWO. THE CONTRACTOR SHALL REPAIR PIER THREE DURING PHASE THREE ON IR 271. THE CONTRACTOR SHALL PROVIDE A SHOULDER CLOSURE IN THE OUTSIDE NORTHBOUND LANE OF IR 271 DURING PHASE FOUR ON IR 271 IN ORDER TO REMOVE THE EXISTING SOUTH GIRDER, DECK AND SIDEWALK ON CHAGRIN BOULEVARD. THE FIRST PHASE SHALL CLOSE THE OUTSIDE SHOULDERS ON IR 271 NORTHBOUND IN ACCORDANCE WITH MT-95.45 (CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY) AND IR 271 SOUTHBOUND IN ACCORDANCE WITH ODOTCD FIGURE 6H-3 (WORK ON THE SHOULDERS - TYPICAL APPLICATION 3) WHILE MAINTAINING FOUR LANES OF TRAFFIC IN THE NORTHBOUND DIRECTION ON IR 271, ONE ENTRANCE RAMP ACCELERATION LANE IN THE SOUTHBOUND DIRECTION ON IR 271 AND ALL EXISTING IR 271 EXPRESS LANES. THE SECOND PHASE SHALL CLOSE THE NORTHBOUND INSIDE SHOULDER ON IR 271 AND THE SOUTHBOUND INSIDE SHOULDER ON IR 271 LANE IN ACCORDANCE WITH MT-95.45 (CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY) AND THE SECOND PHASE SHALL CLOSE THE NORTHBOUND OUTSIDE SHOULDER ON THE IR 271 EXPRESS AND THE SOUTHBOUND OUTSIDE SHOULDER ON IR 271 EXPRESS IN ACCORDANCE WITH ODOTCD FIGURE 6H-3 (WORK ON THE SHOULDERS - TYPICAL APPLICATION 3) WHILE MAINTAINING FOUR LANES OF TRAFFIC IN THE NORTHBOUND DIRECTION ON IR 271, ONE ENTRANCE RAMP ACCELERATION LANE IN THE SOUTHBOUND DIRECTION ON IR 271, THREE LANES OF TRAFFIC IN THE SOUTHBOUND DIRECTION ON IR 271 AND ALL EXISTING IR 271 EXPRESS LANES. THE THIRD PHASE SHALL CLOSE THE NORTHBOUND INSIDE LANE AND THE SOUTHBOUND INSIDE LANE ON IR 271 EXPRESS IN ACCORDANCE WITH ODOTCD FIGURE 6H-3 (WORK ON THE SHOULDERS - TYPICAL APPLICATION 3) WHILE MAINTAINING ALL LANES OF TRAFFIC ON IR 271 AND IR 271 EXPRESS. THE FOURTH PHASE SHALL CLOSE THE NORTHBOUND SHOULDER ON IR 271 IN ACCORDANCE WITH ODOTCD FIGURE 6H-3 (WORK ON THE SHOULDERS - TYPICAL APPLICATION 3) IN ORDER TO REMOVE THE EXISTING SOUTH GIRDER, DECK AND SIDEWALK ON CHAGRIN BOULEVARD. THE THIRD PHASE SHALL OCCUR CONCURRENTLY WITH PHASE TWO ON CHAGRIN BOULEVARD.

LANE CLOSURES SHALL ONLY BE PERMITTED DURING THE PLCM HOURS FOR IR 271 AT THE BRIDGE LOCATION. MULTIPLE OVERNIGHT/WEEKEND CLOSURES WILL BE REQUIRED TO COMPLETE THE WORK ON IR 271 DURING PHASE ONE, PHASE TWO AND PHASE THREE.

LOCATION 11: CUY-422-1827 L (US 422 WB OVER SOLON ROAD)

LOCATION 12: CUY-422-1827 R (US 422 EB OVER SOLON ROAD)

THE LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.

ALL TRAFFIC SHALL BE MAINTAINED AT ALL TIMES. THE CONTRACTOR IS ONLY PERMITTED TO RESTRICT TRAFFIC OR CLOSE LANES ON US 422 FOR WORK NOT ASSOCIATED WITH THE APPROACH SLAB REPLACEMENT PER THE ODOT DISTRICT 12 PERMITTED LANE CLOSURE TIMES PUBLISHED ON THE ODOT WEBSITE LISTED BELOW.

<http://www.dot.state.oh.us/districts/D12/HighwayManagement/Pages/PermittedLaneClosures.aspx>

THE REVISION APPLICABLE FOR THIS PROJECT SHALL BE THE MOST CURRENT REVISION PUBLISHED 30 DAYS PRIOR TO THE BID DATE.

NO RAMP CLOSURES TO OR FROM US 422 ARE PERMITTED AT ANY TIMES.

TRAFFIC ON SOLON ROAD SHALL BE MAINTAINED AT ALL TIMES. ONE LANE IS PERMITTED TO BE CLOSED WITH THE USE OF FLAGGERS. BOTH LANES SHALL BE MAINTAINED WEEKDAYS FROM 6:00 AM TO 9:00 AM AND 3:00 PM TO 6:00 PM.

THE CONTRACTOR SHALL PERFORM THE PARAPET PATCHING, PARAPET SEALING, AND SCUPPER CLEANING IN TWO PHASES OF CONSTRUCTION ON THE WESTBOUND US-422 BRIDGE. THE WORK WILL REQUIRE CLOSING THE SHOULDERS IN ACCORDANCE WITH SCD MT-95.45 (CLOSING SHOULDER OF A MULTI-LANE DIVIDED HIGHWAY), MT-98.20 LANE CLOSURE AT EXIT RAMP USING DRUMS) AND MT-95.30 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH DRUMS).

(CONTINUED ON SHEET 14 )

2	5/21/21	REVISE NOTE
5	6/3/21	REVISE NOTE

CALCULATED ALP CHECKED MES  
MAINTENANCE OF TRAFFIC NOTES - 2  
CUY-BH-FY2021(B) MISC  
PID NO. 109131  
13  
253

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**LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)**

TO ACCOMMODATE THE OPENING OF THE OPPORTUNITY CORRIDOR PROJECT, ALL WORK (DECK REPAIRS, PARAPET REPAIRS AND FENCE REPAIRS) ON BRIDGE NO. CUY-490-0100 (SFN 1811991) SHALL BE COMPLETED BY OCTOBER 15, 2021. LOCATION 16 SHALL BE PERFORMED PRIOR TO ANY OTHER LOCATION ON THIS CONTRACT.

THE CONTRACTOR SHALL PERFORM THE DECK PATCHING - MICROSILICA MODIFIED CONCRETE OVERLAY PER ITEM 519 AND FULL DEPTH DECK REPAIR PER ITEM 847.

ALL MOT SHALL BE COORDINATED WITH ODOT PRIOR TO SCHEDULING THE WORK.

NOTE 1 OF THE PLCM (SPECIAL EVENTS RESTRICTIONS) DOES NOT APPLY TO THIS LOCATION.

ALTHOUGH SHOWN ON THE PLANS, EASTBOUND AND WESTBOUND WORK DOES NOT HAVE TO BE DONE CONCURRENTLY.

IT IS ANTICIPATED THAT THE CONTRACTOR WILL PERFORM THE WORK IN FOUR PHASES OF CONSTRUCTION ON IR 490. THE FOLLOWING IS A CONCEPTUAL PHASE SUMMARY FOR REFERENCE.

**PHASE ONE**

THE CONTRACTOR SHALL REPLACE PORTIONS OF THE BRIDGE RAILINGS, PERFORM DECK PATCHING, AND PERFORM FULL DEPTH DECK REPAIR DURING PHASE ONE ON IR 490 EASTBOUND. PHASE ONE WOULD CLOSE THE EASTBOUND INSIDE SHOULDER AND INSIDE TWO LANES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-95.40 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER) WHILE MAINTAINING TWO EASTBOUND LANES OF IR 490 TRAFFIC, THE WEST 7TH STREET ENTRANCE RAMP, THE BROADWAY AVENUE EXIT RAMP, THE IR 77 SOUTHBOUND RAMP AND THE IR 77 NORTHBOUND RAMP. THIS WORK SHALL BE COMPLETED IN 14 CALENDAR DAYS.

**PHASE TWO**

THE CONTRACTOR SHALL REPLACE PORTIONS OF THE BRIDGE RAILINGS, PERFORM DECK PATCHING, AND PERFORM FULL DEPTH DECK REPAIR DURING PHASE TWO ON IR 490 WESTBOUND. PHASE TWO WOULD CLOSE THE WESTBOUND INSIDE SHOULDER AND INSIDE TWO LANES IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-95.40 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER) WHILE MAINTAINING TWO WESTBOUND LANES OF IR 490 TRAFFIC, THE IR 77 SOUTHBOUND RAMP AND THE IR 77 NORTHBOUND RAMP, THE ENTRANCE RAMP FROM ROCKFELLER AVENUE, AND THE EXIT RAMP TO W 7TH ST. THIS WORK SHALL BE COMPLETED IN 14 CALENDAR DAYS.

**PRE-PHASE THREE**

THE CONTRACTOR SHALL REPAIR OR REPLACE PORTIONS OF VANDAL PROTECTION FENCE, REPAIR PARAPETS, PERFORM FULL DEPTH DECK REPAIR AND PERFORM DECK PATCHING PRIOR TO PHASE THREE (PRE-PHASE THREE) FOR THE EASTBOUND BRIDGE. THE CONTRACTOR SHALL PERFORM THE REPAIRS BETWEEN THE BROADWAY AVENUE EXIT RAMP AND THE FORWARD ABUTMENT; AND SHALL SET UP THE PHASE THREE WORK ZONE DURING PRE-PHASE THREE OF THE EASTBOUND BRIDGE. PRE-PHASE THREE SHALL REQUIRE CLOSURES AND TRAFFIC DETOURS FOR IR 90 EASTBOUND TO IR 490 EASTBOUND, THE ENTRANCE RAMP FROM IR 71 NB TO IR 490 EASTBOUND, AND THE WEST 7TH STREET ENTRANCE RAMP TO IR 490 EASTBOUND. THE CLOSURE OF IR 90 EASTBOUND SHALL BE PER MT-99.50 (FREEWAY/EXPRESSWAY CLOSURE IN WORKZONE) AND THE RAMPS SHALL BE CLOSED USING GATES AND BARRICADES PER MT-101.60 (ROAD CLOSURE USING TYPE 3 BARRICADES). THIS WORK SHALL BE COMPLETED IN ONE WEEKEND CLOSURE DURING THE PLCM HOURS FOR IR 490 AT THE BRIDGE LOCATION.

**PHASE THREE**

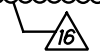
THE CONTRACTOR SHALL REPLACE PORTIONS OF THE BRIDGE RAILINGS, REPAIR OR REPLACE PORTIONS OF VANDAL PROTECTION FENCE, PERFORM DECK PATCHING, AND PERFORM FULL DEPTH DECK REPAIR DURING PHASE THREE ON IR 490 EASTBOUND. THE THIRD PHASE SHALL CLOSE THE TWO OUTSIDE LANES AND OUTSIDE SHOULDER OF THE EASTBOUND BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS, MT-95.40 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER), AND MT-98.29 (EXIT RAMP CLOSURE) WHILE MAINTAINING TWO EASTBOUND LANES OF IR 490 TRAFFIC, THE IR 77 SOUTHBOUND RAMP LANE AND THE IR 77 NORTHBOUND RAMP LANE. PHASE THREE ON IR 490 EASTBOUND SHALL REQUIRE CLOSURE OF THE ENTRANCE RAMP FROM WEST 7TH STREET AND THE BROADWAY AVENUE EXIT RAMP. THIS WORK SHALL BE COMPLETED IN 14 CALENDAR DAYS.

**PRE-PHASE FOUR**

THE CONTRACTOR SHALL REPAIR OR REPLACE PORTIONS OF VANDAL PROTECTION FENCE, REPAIR PARAPETS, PERFORM FULL DEPTH DECK REPAIR AND PERFORM DECK PATCHING PRIOR TO PHASE FOUR (PRE-PHASE FOUR) FOR THE WESTBOUND BRIDGE. THE CONTRACTOR SHALL PERFORM THE REPAIRS BETWEEN THE ROCKEFELLER ENTRANCE RAMP AND THE FORWARD ABUTMENT; AND SHALL SET UP THE PHASE FOUR WORK ZONE DURING PRE-PHASE FOUR OF THE WESTBOUND BRIDGE. PRE-PHASE FOUR SHALL REQUIRE CLOSURES AND TRAFFIC DETOURS FOR THE ENTRANCE RAMPS FROM IR 77 NB/IR 77 SB TO IR 490 WESTBOUND, AND THE ENTRANCE RAMP FROM ROCKEFELLER AVENUE TO IR 490 WESTBOUND. THE RAMPS SHALL BE CLOSED USING GATES AND BARRICADES PER MT-101.60 (ROAD CLOSURE USING TYPE 3 BARRICADES). THIS WORK SHALL BE COMPLETED IN ONE WEEKEND CLOSURE DURING THE PLCM HOURS FOR IR 490 AT THE BRIDGE LOCATION.

**PHASE FOUR**

THE CONTRACTOR SHALL REPLACE PORTIONS OF THE BRIDGE RAILINGS, REPAIR OR REPLACE PORTIONS OF VANDAL PROTECTION FENCE, PERFORM DECK PATCHING, AND PERFORM FULL DEPTH DECK REPAIR DURING PHASE FOUR ON IR 490 WESTBOUND. THE FOURTH PHASE SHALL CLOSE THE TWO OUTSIDE LANES AND OUTSIDE SHOULDER OF THE WESTBOUND BRIDGE IN ACCORDANCE WITH THE MAINTENANCE OF TRAFFIC PLANS AND MT-95.40 (CLOSING RIGHT OR LEFT LANE OF A MULTI-LANE DIVIDED HIGHWAY WITH PORTABLE BARRIER) AND MT-98.29 (EXIT RAMP CLOSURE) WHILE MAINTAINING TWO WESTBOUND LANES OF IR 490 TRAFFIC. PHASE FOUR ON IR 490 WESTBOUND SHALL REQUIRE CLOSURE OF THE ROCKEFELLER AVENUE ENTRANCE RAMP AND THE EXIT RAMP TO WEST 7TH STREET. THIS WORK SHALL BE COMPLETED IN 14 CALENDAR DAYS.



**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, THE ENGINEER 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 FLAGGERS ARE REQUIRED FOR EACH LANE CLOSURE REQUIRING FLAGGERS. THE CONTRACTOR SHALL FURNISH ADDITIONAL FLAGGERS AS DIRECTED BY THE ENGINEER.

**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 OF THE INTERSTATES 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 SPECIFICATIONS 821 AND 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.

**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 DRAWINGS.

**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, INCIDENTALS 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.

**V. ALTERNATE MAINTENANCE OF TRAFFIC PLANS**

IF THE CONTRACTOR SO ELECTS, HE/SHE MAY SUBMIT ALTERNATE METHODS FOR THE MAINTENANCE OF TRAFFIC, PROVIDED THE INTENT OF THE ABOVE PROVISIONS IS FOLLOWED AND NO ADDITIONAL INCONVENIENCE TO THE TRAVELING PUBLIC RESULTS THEREFROM. NO ALTERNATE PLANS SHALL BE PLACED IN EFFECT UNTIL APPROVAL HAS BEEN GRANTED IN WRITING BY THE ODOT DISTRICT CONSTRUCTION ENGINEER.

16	6/21/21	REVISE/ADD NOTE

**VI. PAYMENT**

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.

**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**

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

**MAINTENANCE OF TRAFFIC CONTROL ZONES**

THE CONTRACTOR SHALL BE RESPONSIBLE TO MAINTAIN THE SIGNS, DRUMS 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/SHE SHALL CORRECT THE DEFICIENCIES AS SOON AS POSSIBLE, PREFERABLY WITHIN 12 HOURS AND NO LATER THAN 24 HOURS.

**TRUCK TURNING RESTRICTION**

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

**LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)**

DUE TO THE PROXIMITY OF THE WORK SITE AND THE INTERSECTIONS TO THE WEST OF THE BRIDGE AND TO THE EAST OF THE BRIDGE, AND THE NECESSITY TO MAINTAIN TRAFFIC ON DETROIT ROAD IN A SINGLE NARROW LANE IN EACH DIRECTION, LARGE TRACTOR-TRAILER VEHICLES MAY NOT HAVE SUFFICIENT SPACE TO COMPLETE A RIGHT OR LEFT TURN FROM THE SIDE ROADS ONTO DETROIT ROAD WITHOUT TRACKING OVER THE ADJACENT OPPOSING LANE AND LARGE TRACTOR-TRAILER VEHICLES MAY NOT HAVE SUFFICIENT SPACE TO COMPLETE A RIGHT OR LEFT TURN FROM DETROIT ROAD TO THE SIDE ROADS WITHOUT TRACKING OVER THE ADJACENT OPPOSING LANE. FOR THE DURATION OF THE PROJECT, TRUCK TURNING MOVEMENTS FOR TRUCKS OVER 40' SHALL BE PROHIBITED DURING CONSTRUCTION. SEE MAINTENANCE OF TRAFFIC NOTE ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN AND THE TRUCK DETOUR MAP FOR DETAILS.

**OVERNIGHT JOINT TRENCH CLOSING**

THIS NOTE APPLIES TO THE FOLLOWING LOCATIONS:

**LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)**

**LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMPS)**

**LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)**

**LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)**

**LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)**

**LOCATION 12: CUY-422-1827 R (US 422 EB OVER SOLON ROAD)**

**LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)**

**LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)**

**LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)**

THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING A SAFE WORK SITE BY REDUCING THE RISK OF VEHICLES OR PEDESTRIANS FALLING INTO THE OPEN JOINT TRENCH DURING CONSTRUCTION. THE CONTRACTOR SHALL COVER UNFILLED JOINT REPAIR AREAS AT THE END OF EACH WORKDAY WITH A STEEL PLATE.

**ITEM 614 - DETOUR SIGNING**

THIS NOTE APPLIES TO THE FOLLOWING LOCATIONS:

**LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)**

**LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)**

THE CONTRACTOR SHALL ERECT, MAINTAIN, AND REMOVE ALL DETOUR SIGNING (LOCATION 15) AND ALTERNATE ROUTE SIGNING (LOCATION 8). THE TRUCK DETOUR PLANS FOR LOCATION 16 SHALL BE PROVIDED BY THE CONTRACTOR AND APPROVED BY ODOT PRIOR TO THE WORK. PAYMENT FOR ALL MATERIAL, LABOR, EQUIPMENT, AND INCIDENTALS REQUIRED TO INSTALL THE TRUCK DETOURS AND THE ALTERNATE ROUTE, INCLUDING SIGNS, SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - DETOUR SIGNING.

**ITEM 614 - LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS**

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 ODOT INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE ODOT, 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 ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD 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 ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE ODOT, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED AT LOCATION 8 FOR WORK ZONE MANAGEMENT.

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE AND SHOULD 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 CMS 614.03.

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. 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.

LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 72 HOUR

LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 4 HOUR

LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 72 HOUR

LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 96 HOUR

LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 88 HOUR

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE (WORK ZONE MANAGEMENT) 60 HOUR

LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 32 HOUR

LOCATION 11: CUY-422-1827 L (US 422 WB OVER SOLON ROAD)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE SEE STRUCTURE PLANS FOR QUANTITY

LOCATION 12: CUY-422-1827 R (US 422 EB OVER SOLON ROAD)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE SEE STRUCTURE PLANS FOR QUANTITY

LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 72 HOUR

LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 112 HOUR

LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 64 HOUR

LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE 104 HOUR

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

ANY ADDITIONAL COSTS (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.

5	6/3/21	REVISE NOTE
16	6/21/21	REVISE QUANTITY

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**DELINEATION OF PORTABLE AND PERMANENT BARRIER**

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

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

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

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

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

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

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARY AND CARRIED TO THE GENERAL SUMMARY:

LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>10</u> EACH
ITEM 614 - BARRIER REFLECTOR, TYPE 1, TWO WAY	<u>54</u> EACH
ITEM 614 - OBJECT MARKER, TWO WAY	<u>52</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>10</u> EACH
ITEM 614 - INCREASED BARRIER DELINEATION	<u>580</u> FT

LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>8</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>6</u> EACH

LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>39</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>34</u> EACH
ITEM 614 - INCREASED BARRIER DELINEATION	<u>229</u> FT

LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>49</u> EACH
ITEM 614 - BARRIER REFLECTOR, TYPE 1, TWO WAY	<u>70</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>43</u> EACH
ITEM 614 - OBJECT MARKER, TWO WAY	<u>69</u> EACH
ITEM 614 - INCREASED BARRIER DELINEATION	<u>2123</u> FT

LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>46</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>42</u> EACH
ITEM 614 - INCREASED BARRIER DELINEATION	<u>925</u> FT

LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>4</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>3</u> EACH

LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>13</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>12</u> EACH

LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>36</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>33</u> EACH

LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)

ITEM 614 - BARRIER REFLECTOR, TYPE 1, ONE WAY	<u>434</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>424</u> 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.

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

**ITEM SPECIAL - WORK ZONE TRAFFIC SIGNAL**

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

**LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)**

THIS ITEM SHALL CONSIST OF CONSTRUCTING AND MAINTAINING TRAFFIC SIGNALS TO BE USED AS WORK ZONE TRAFFIC SIGNALS. THIS ITEM SHALL CONFORM TO CMS 614.10. THE WORK ZONE TRAFFIC SIGNALS SHALL OPERATE IN COORDINATION TO MAINTAIN ONE LANE TWO WAY TRAFFIC OPERATION ACROSS THE WHITNEY ROAD STRUCTURE DURING CONSTRUCTION. THE PROPOSED PRELIMINARY MOT SIGNAL TIMING AND PHASING HAVE BEEN SHOWN ON THE MAINTENANCE OF TRAFFIC PLAN SHEETS. THE TIMING SHOWN IS A BASE TIMING THAT WILL NEED TO BE MONITORED AND ADJUSTED IN THE FIELD DUE TO CONDITIONS OCCURRING DURING CONSTRUCTION. PAYMENT FOR THE ADJUSTMENT OF SIGNAL TIMING SHALL BE INCLUDED IN THE UNIT BID COST FOR ITEM SPECIAL - WORK ZONE TRAFFIC SIGNAL. THIS ITEM SHALL INCLUDE ALL THE SIGNAL EQUIPMENT (POLES, MESSENGER WIRE, SIGNAL CABLE, VEHICULAR SIGNAL HEADS, DETECTOR LOOPS, SIGNAL CONTROLLER EQUIPMENT, ETC.), LABOR, MATERIALS AND INCIDENTALS NECESSARY TO CONSTRUCT AND MAINTAIN THE WORK ZONE SIGNAL INSTALLATIONS.

THIS ITEM SHALL ALSO INCLUDE THE REMOVAL OF THE WORK ZONE TRAFFIC SIGNAL EQUIPMENT AT THE COMPLETION OF THE PROJECT. ANY NECESSARY MAINTENANCE AND/OR REPAIRS TO THE SIGNAL INSTALLATION DURING THE PROJECT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR UNTIL FINAL ACCEPTANCE OF THE "UN-MODIFIED" SIGNAL HAS BEEN GIVEN TO THE CONTRACTOR IN WRITING FROM THE OHIO DEPARTMENT OF TRANSPORTATION DISTRICT 12.

PAYMENT FOR THIS ITEM SHALL BE MADE AT THE UNIT CONTRACT PRICE BID FOR ITEM SPECIAL-WORK ZONE TRAFFIC SIGNAL AND SHALL INCLUDE ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS NECESSARY TO PERFORM THIS ITEM OF WORK AS DETAILED IN THIS NOTE AND THE PLANS.

**DELINEATION OF TEMPORARY AND PERMANENT GUARDRAIL**

BARRIER REFLECTORS SHALL BE INSTALLED ON ALL TEMPORARY GUARDRAIL USED FOR TRAFFIC CONTROL; AND ON ALL PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. BARRIER REFLECTORS SHALL CONFORM TO CMS 626 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET.

OBJECT MARKERS SHALL BE INSTALLED ON ALL TEMPORARY AND PERMANENT GUARDRAIL LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE. GUARDRAIL-MOUNTING OF OBJECT MARKERS SHALL BE MADE BY INSTALLING THE OBJECT MARKERS ON THE EXTENSION BLOCKS RATHER THAN DIRECTLY ONTO THE GUARDRAIL ITSELF. OBJECT MARKERS SHALL CONFORM TO CMS 614.03 AND THE SPACING SHALL BE APPROXIMATELY 50 FEET WITH A 25 FOOT OFFSET FROM THE BARRIER REFLECTORS.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES AND CARRIED TO THE GENERAL SUMMARY:

LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)

ITEM 614 - BARRIER REFLECTOR, TYPE 2, ONE WAY	<u>40</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>32</u> EACH

LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)

ITEM 614 - BARRIER REFLECTOR, TYPE 2, ONE WAY	<u>40</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>36</u> EACH

LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)

ITEM 614 - BARRIER REFLECTOR, TYPE 2, ONE WAY	<u>9</u> EACH
ITEM 614 - OBJECT MARKER, ONE WAY	<u>7</u> EACH

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

**ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER**

RAISED PAVEMENT MARKERS IN WORK ZONES, SHALL BE ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER. WZRPMS ARE INTENDED FOR USE ONLY DURING THE NON-SNOW-PLOWING SEASON. WZRPMS SHALL NOT BE PROVIDED DURING THE SNOW-PLOWING SEASON.

THE SNOW-PLOWING SEASON SHALL RUN FROM OCTOBER 15 THROUGH APRIL 1.

THIS ITEM SHALL INCLUDE PURCHASE, INSTALLATION AND REMOVAL OF ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE MAINTENANCE OF TRAFFIC SUBSUMMARIES AND CARRIED TO THE GENERAL SUMMARY.

LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER	<u>1606</u> EACH
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LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER	<u>244</u> EACH
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LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)

ITEM 614 - WORK ZONE RAISED PAVEMENT MARKER	<u>651</u> EACH
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**ITEM SPECIAL - RUMBLE STRIPS**

THIS NOTE APPLIES TO THE FOLLOWING LOCATIONS:

**LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)**

**LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)**

THE RUMBLE STRIPS WILL BE PLACED AS DIRECTED BY THE ENGINEER. RUMBLE STRIPS WILL BE INSTALLED ON TOP OF THE PAVEMENT USING HEAT-FUSED PREFORMED PLASTIC MATERIAL.

HEAT-FUSED PREFORMED PLASTIC RUMBLE STRIPS WILL BE 4" WIDE AND 1/2" THICK IN PLACE. THE RUMBLE STRIPS WILL TRAVERSE THE TOTAL LANE WIDTH. THERE WILL BE TWO SECTIONS OF RUMBLE STRIPS. THE RUMBLE STRIPS MAY HAVE TO GO ACROSS TWO LANES OF TRAFFIC.

THE FIRST RUMBLE STRIP SECTION WILL BE PLACED AT THE BEGINNING OF THE WORK ZONE. THE CONTRACTOR SHALL PROVIDE 10 TRANSVERSE STRIPS SIX FEET APART. THE SECOND SECTION WILL BE PLACED A MINIMUM OF 250 FEET IN ADVANCE OF THE TRAFFIC CONDITION. THE CONTRACTOR SHALL PROVIDE 10 TRANSVERSE STRIPS FIVE FEET APART.

MATERIAL USED FOR THE RUMBLE STRIPS WILL BE CMS 740.08 HEAT-FUSED PREFORMED PLASTIC MATERIAL WITH 125 MILS MINIMUM THICKNESS. THE RUMBLE STRIPS SHALL BE ON THE ODOT APPROVED LIST. THE MANUFACTURER'S RECOMMENDATIONS MUST BE FOLLOWED FOR INSTALLATION.

RUMBLE STRIPS WILL BE REMOVED WHEN THEY ARE NO LONGER NEEDED AS DETERMINED BY THE ENGINEER.

A W8-H15a-48 SIGN (RUMBLE STRIPS) WILL BE DUAL MOUNTED APPROXIMATELY 500 FEET IN ADVANCE OF THE RUMBLE STRIP INSTALLATION. THE PROVISION, ERECTION, MAINTENANCE AND REMOVAL OF THE SIGNS AND SUPPORTS WILL BE INCLUDED IN THE COST OF THE RUMBLE STRIPS.

PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIAL, TOOLS, EQUIPMENT, AND INCIDENTALS NECESSARY FOR THE INSTALLATION, MAINTENANCE AND REMOVAL OF THE RUMBLE STRIPS.

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

LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)

ITEM SPECIAL - RUMBLE STRIPS	<u>400</u> FT
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LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)

ITEM SPECIAL - RUMBLE STRIPS	<u>800</u> FT
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5	6/3/21	REVISE QUANTITIES
16	6/21/21	ADD LOCATION 16 QUANTITIES

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**DUST CONTROL**

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES:

ITEM 616 - WATER 1 MGAL

**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 WORK IN A SAFE AND EFFICIENT MANNER SHALL BE 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.

**EXTRA ADVANCE WARNING SIGNS**

AN EXTRA ADVANCE WARNING SIGN GROUP CONSISTS OF TWO W20-1 (ROAD WORK AHEAD) SIGNS, TWO W20-5 (RIGHT/LEFT LANE CLOSED AHEAD) SIGNS WITH W16-3A DISTANCE PLATES, AND TWO W3-H7 (WATCH FOR STOPPED TRAFFIC) SIGNS AND REQUIRED WARNING LIGHTS.

THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND REMOVE EXTRA ADVANCE WARNING SIGN GROUPS AS SHOWN ON TRAFFIC SCD MT-95.50 AT THE FOLLOWING DISTANCES IN ADVANCE OF THE LANE TAPERS WITH THE APPROPRIATE W16-3A DISTANCE PLATES:

- 1) LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)  
LANE TAPER STATION 473+16±, PHASE 3 (IR 77 NORTHBOUND) ;  
PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.
- 2) LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)  
LANE TAPER STATION 496+15±, PHASE 3 (IR 77 SOUTHBOUND) ;  
PROVIDE SIGN GROUPS AT 2 MILES, 3 MILES, AND 4 MILES.

THE CONTRACTOR SHALL HAVE AN ADDITIONAL EXTRA ADVANCE WARNING SIGN GROUP (6 SIGNS AND 2 DISTANCE PLATES) AVAILABLE FOR USE WHEN DIRECTED BY THE ENGINEER. THE DISTANCE PLATES FOR THIS GROUP SHALL BE ABLE TO BE MODIFIED IN THE FIELD TO SHOW APPROPRIATE WHOLE MILES TO THE LANE TAPER.)

PAYMENT FOR PROVIDING, ERECTING, MAINTAINING AND REMOVING EXTRA ADVANCE WARNING SIGN GROUPS SHALL BE INCLUDED IN THE LUMP SUM BID FOR ITEM 614 - MAINTAINING TRAFFIC.

**ITEM 614 - WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE PREFORMED BLACKOUT TAPE**

THIS ITEM SHALL CONFORM TO CMS 614.11 WORK ZONE PAVEMENT MARKING REQUIREMENTS WITH THE EXCEPTION THAT THE MARKING MATERIAL SHALL BE BLACKOUT TAPE CONFORMING TO SUPPLEMENTAL SPECIFICATION 987. THE BLACKOUT TAPE SHALL BE MANUFACTURED BY A SUPPLIER ON ODOT'S QUALIFIED PRODUCTS LIST FOR THIS ITEM. PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER LINEAR FOOT FOR ITEM 614 - WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE PREFORMED BLACKOUT TAPE AND SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS NECESSARY TO FURNISH, INSTALL, MAINTAIN, AND REMOVE THIS ITEM.

THE CONTRACTOR SHALL INSTALL A SINGLE CONTINUOUS PIECE OF BLACKOUT TAPE TO COVER THE EXISTING EDGE LINES AND LANE LINES AS INDICATED IN THE PLANS.

**ITEM 621 - RAISED PAVEMENT MARKER REMOVED, AS PER PLAN**

THIS ITEM SHALL CONSIST OF REMOVING THE EXISTING RAISED PAVEMENT MARKER REFLECTORS FROM THE EXISTING RAISED PAVEMENT MARKERS PRIOR TO MAINTENANCE OF TRAFFIC PHASE 1 OF LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP), LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480) AND LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90).

ALL LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS REQUIRED TO REMOVE THE EXISTING RAISED PAVEMENT MARKER REFLECTORS SHALL BE INCLUDED WITH ITEM 621 - RAISED PAVEMENT MARKER REMOVED, AS PER PLAN.

**ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN**

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 CMS 614.03.

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.

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.

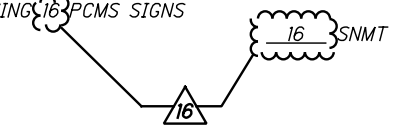
THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 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.

- LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 6 PCMS SIGNS FOR 1 MONTH) 6 SNMT
- LOCATION 5: CUY-77-0223 (OAKES ROAD OVER IR 77)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 2 PCMS SIGNS FOR 1 MONTH) 2 SNMT
- LOCATION 6: CUY-77-0881 (IR 77 RAMP OVER IR 480 RAMP)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 4 PCMS SIGNS FOR 1 MONTH) 4 SNMT
- LOCATION 7: CUY-77-0909 (IR 77 OVER IR 480)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 4 PCMS SIGNS FOR 1 MONTH) 4 SNMT
- LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 6 PCMS SIGNS FOR 1 MONTH) 6 SNMT
- LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 7 PCMS SIGNS FOR 1 MONTH) 7 SNMT
- LOCATION 11: CUY-422-1827 L (US 422 WB OVER SOLON ROAD)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 2 PCMS SIGNS FOR 1 MONTH) 2 SNMT
- LOCATION 12: CUY-422-1827 R (US 422 EB OVER SOLON ROAD)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 2 PCMS SIGNS FOR 1 MONTH) 2 SNMT
- LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 6 PCMS SIGNS FOR 1 MONTH) 6 SNMT
- LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 8 PCMS SIGNS FOR 1 MONTH) 8 SNMT
- LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING 12 PCMS SIGNS FOR 1 MONTH) 12 SNMT
- LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)  
ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN (ASSUMING ~~16~~ <sup>16</sup> PCMS SIGNS FOR 1 MONTH) 16 SNMT



16	6/21/21	REVISE LOCATION 16 QUANTITY

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**ITEM 614 - 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.
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 TIME FRAME 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.
- 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 OCCURS, 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 CMS 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 - WORK ZONE IMPACT ATTENUATOR. 24" WIDE HAZARDS. (UNIDIRECTIONAL)**

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

**ITEM 614 - MAINTAINING TRAFFIC (TIME LIMITATION ON A DETOUR)**

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)

THE 77 RAMPS AT IR 490 SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED ONE WEEKEND, WHEN TRAFFIC WILL BE DETOURED AS SHOWN ON SHEET 66J-66R. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$ 20,000 PER DAY FOR EACH CALENDAR DAY THE RAMPS REMAIN CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

**ITEM 614 - MAINTAINING TRAFFIC (TIME LIMITATION. 14-DAY PHASE CLOSURES)**

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)

A MINIMUM OF TWO LANES OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES DURING THE 14 DAY PHASE CLOSURES. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$ 30,000 PER DAY FOR EACH CALENDAR DAY THE LANE RESTRICTIONS REMAIN BEYOND THE ALLOWABLE 14 CALENDAR DAYS.

**ITEM 614 - MAINTAINING TRAFFIC (TIME LIMITATION. INTERIM COMPLETION)**

THIS NOTE APPLIES TO THE FOLLOWING LOCATION:

LOCATION 16: CUY-490-0100 (IR 490 OVER CUYAHOGA RIVER)

ALL WORK SHALL BE COMPLETED AND TRAFFIC OPENED AND BACK IN NORMAL TRAFFIC CONFIGURATION BY THE INTERIM COMPLETION DATE OF OCTOBER 15, 2021. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$ 60,000 PER DAY FOR EACH CALENDAR DAY THE WORK IS NOT DONE BEYOND THE SPECIFIED TIME.



	6/21/21	ADD NOTES

**DETECTION MAINTENANCE**

THIS NOTE APPLIES TO THE FOLLOWING LOCATIONS:

- LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)
- LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)
- LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)
- LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)
- LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)
- LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE APPROPRIATE CITY ENGINEER. FOR LOCATION 3, THE STRONGSVILLE CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 8, THE ROCKY RIVER CITY ENGINEER AND THE LAKEWOOD CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 10, THE BEACHWOOD CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 13 AND LOCATION 14, THE GARFIELD HEIGHTS CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 15, THE ROCKY RIVER CITY ENGINEER AND THE LAKEWOOD CITY ENGINEER SHALL BE NOTIFIED.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE APPROPRIATE CITY ENGINEER (AS LISTED ABOVE) SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NON-INTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL ENSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES, THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

**TRAFFIC SIGNAL MODIFICATIONS**

THIS NOTE APPLIES TO THE FOLLOWING LOCATIONS:

- LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)
- LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)
- LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)
- LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)
- LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)
- LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)

IN ADDITION TO THE REQUIREMENTS OF MAINTAINING TRAFFIC AT INTERSECTING ROADS AND DRIVES, AT ALL TIMES, THE CONTRACTOR SHALL BE REQUIRED TO MODIFY THE EXISTING SIGNAL INSTALLATIONS DURING CONSTRUCTION AND TO IMPROVE TRAFFIC OPERATIONS.

THE CONTRACTOR SHALL BE REQUIRED TO USE THE DESIGNATED CITY REPRESENTATIVES. NAMES AND NUMBERS SHALL BE FURNISHED BY EACH CITY. NO OTHER PERSON IS AUTHORIZED TO MODIFY THE SIGNAL. THE CONTRACTOR SHALL BE REQUIRED TO PAY ALL ASSOCIATED COSTS, BILLABLE DIRECTLY TO HIM, REQUIRED BY THE TEMPORARY SIGNAL MODIFICATIONS.

THE CONTRACTOR SHALL CONTACT THE APPROPRIATE CITY A MINIMUM OF 7 DAYS PRIOR TO THE REQUIRED MODIFICATIONS AND SHOULD EXPEDITE THE WORK IN THIS AREA TO LIMIT THE AMOUNT OF TIME THE EXISTING SIGNALS ARE MODIFIED FROM NORMAL OPERATIONS.

UPON COMPLETION OF CONSTRUCTION AND AS APPROVED BY THE APPROPRIATE CITY AND THE ENGINEER, THE CONTRACTOR SHALL RETURN TRAFFIC SIGNALS TO NORMAL OPERATIONS.

ALL COSTS ASSOCIATED WITH THIS WORK SHALL BE INCLUDED IN THE LUMP SUM FOR ITEM 614 - MAINTAINING TRAFFIC, EXCEPT FOR LAW ENFORCEMENT OFFICER WITH PATROL CAR.

**WORK INSPECTION**

THIS NOTE APPLIES TO THE FOLLOWING LOCATIONS:

- LOCATION 3: CUY-71-0467 (WHITNEY ROAD OVER IR 71)
- LOCATION 8: CUY-90-0683 (RAMP B OVER IR 90)
- LOCATION 10: CUY-422-1122 (US 422 [CHAGRIN BOULEVARD] OVER IR 271)
- LOCATION 13: CUY-480-1955 (TRANSPORTATION BOULEVARD OVER IR 480)
- LOCATION 14: CUY-480-2019 (TURNERY ROAD OVER IR 480)
- LOCATION 15: CUY-06A-0042 (US 6A [DETROIT ROAD] OVER ROCKY RIVER)

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND THE APPROPRIATE CITY ENGINEER WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED. FOR LOCATION 3, THE STRONGSVILLE CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 8, THE ROCKY RIVER CITY ENGINEER AND THE LAKEWOOD CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 10, THE BEACHWOOD CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 13 AND LOCATION 14, THE GARFIELD HEIGHTS CITY ENGINEER SHALL BE NOTIFIED. FOR LOCATION 15, THE ROCKY RIVER CITY ENGINEER AND THE LAKEWOOD CITY ENGINEER SHALL BE NOTIFIED.



MAINTENANCE OF TRAFFIC SUBSUMMARY								
LOCATION 5: CUY-77-0223								
STATION		SIDE	614			622		
			WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	PORTABLE BARRIER, UNANCHORED		
FROM	TO	EACH	EACH	EACH	FT			
LOCATION 5			2	8	6	160		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>			<b>2</b>	<b>8</b>	<b>6</b>	<b>160</b>		

5	6/3/21	REVISE NOTES, ADD NOTES

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**MAINTENANCE OF TRAFFIC NOTES - 10**

**CUY-BH-FY2021(B) MISC  
PID NO. 109131**

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STATION		SIDE	614							621		622		646					
			INCREASED BARRIER DELINEATION FT	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL) EACH	WORK ZONE RAISED PAVEMENT MARKER EACH	BARRIER REFLECTOR, TYPE 1, ONE WAY EACH	BARRIER REFLECTOR, TYPE 2, ONE WAY EACH	OBJECT MARKER, ONE WAY EACH	WORK ZONE EDGE LINE, CLASS 1, 6", 740.06, TYPE 1 YELLOW MILE	WORK ZONE CHANNELIZING LINE, CLASS 1, 8", 740.06, TYPE 1 WHITE MILE	WORK ZONE ARROW, CLASS 1, 740.06, TYPE 1 FT	WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE, PREFORMED BLACKOUT TAPE FT	RPM REFLECTOR EACH	RAISED PAVEMENT MARKER REMOVED, AS PER PLAN EACH	PORTABLE BARRIER, UNANCHORED FT	EDGE LINE, 6" YELLOW MILE	WHITE MILE	LANE LINE, 6" MILE	CHANNELIZING LINE, 12" FT
FROM	TO																		
<b>LOCATION 8: PHASE 1</b>																			
BLACKOUT TAPE																			
532+28.00	538+38.00	RT/LT																	
538+38.00	542+55.00	RT/LT																	
542+55.00	544+69.00	RT/LT																	
544+69.00	546+45.00	RT/LT																	
WORK ZONE PAVEMENT MARKING																			
531+06.95	532+28.00	RT/LT																	
532+28.00	546+45.00	RT/LT																	
546+45.00	549+45.00	RT/LT																	
RAISED PAVEMENT MARKERS																			
539+55.00	549+45.00	RT/LT			150														
BARRIER																			
533+08.00	539+50.00	RT		1		14			13										610.00
532+89.76	533+13.06	LT							1	1									
533+13.06	537+26.76	LT				9			8										
537+26.76	538+50.00	LT						3	2										
INCREASED BARRIER DELINEATION (BRIDGE PARAPET)																			
533+13.06	537+26.76	LT	414																
<b>LOCATION 8: PHASE 2</b>																			
BLACKOUT TAPE																			
537+88.55	543+24.00	RT																	140.00
WORK ZONE PAVEMENT MARKING																			
533+07.99	553+76.00	RT																	2068.01
RAISED PAVEMENT MARKERS																			
537+00.00	546+24.00	RT			94														
BARRIER																			
533+56.00	537+84.00	RT				10			9										
537+84.00	540+00.00	RT						5	4										
533+07.99	539+13.88	RT		1		13			12										574.00
INCREASED BARRIER DELINEATION (PORTABLE BARRIER)																			
533+07.99	539+13.88	RT	511																
<div style="display: flex; justify-content: space-between; align-items: center;"> <div style="border: 1px solid black; padding: 5px;">5</div> <div style="border: 1px solid black; padding: 5px;">5</div> </div>																			
<b>TOTALS CARRIED TO SHEET 28</b>			925	2	244	46	9	49	3581.01	3906.06	1934.00	1	1939.00						1184

5	6/3/21	REVISE QUANTITIES

**MAINTENANCE OF TRAFFIC SUBSUMMARY**  
**LOCATION 8: CUY-90-0683**

**CUY-BH-FY2021(B) MISC**  
**PID NO. 109131**

CALCULATED  
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STATION		SIDE	614						621		622		646								
			INCREASED BARRIER DELINEATION	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	BARRIER REFLECTOR, TYPE 2, ONE WAY	OBJECT MARKER, ONE WAY	WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 740.06, TYPE I	WORK ZONE ARROW, CLASS I, 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE, PREFORMED BLACKOUT TAPE	RPM REFLECTOR	RAISED PAVEMENT MARKER REMOVED, AS PER PLAN	PORTABLE BARRIER, UNANCHORED	EDGE LINE, 6"	LANE LINE, 6"	CHANNELIZING LINE, 12"	LANE ARROW		
FROM	TO		FT	EACH	EACH	EACH	EACH	EACH	YELLOW MILE	WHITE MILE	FT	EACH	FT	EACH	EACH	FT	YELLOW MILE	WHITE MILE	MILE	FT	EACH
PERMANENT PAVEMENT MARKING																					
531+06.95	532+50.00	RT/LT												16	16		143.05	143.05		377.00	8
532+50.00	533+24.56	RT/LT												4	4		74.56	74.56	149.12		
533+24.56	537+52.29	RT/LT												14	14		427.73	427.73	855.46		
537+52.29	542+77.00	RT/LT												14	14		524.71	524.71	524.71		
542+77.00	547+00.00	RT/LT												16	16			423.00		846.00	
547+00.00	553+76.00	RT/LT												8	8			676.0		676.00	
<div style="border: 1px solid black; padding: 5px; display: inline-block;"> <span style="border: 1px solid black; padding: 2px;">5</span> 6/3/21 REVISE QUANTITIES         </div>																					
SUBTOTAL FROM THIS SHEET			925	2	244	46	9	49	3581.01	3906.06	1934.00	1	1939.00	58	58	1184.00	1170.05	2269.05	1529.29	1899.00	8
SUBTOTAL FROM SHEET 27			925	2	244	46	9	49	3581.01	3906.06	1934.00	1	1939.00	58	58	1184.00	1170.05	2269.05	1529.29	1899.00	8
TOTALS			925	2	244	46	9	49	3581.01	3906.06	1934.00	1	1939.00	58	58	1184.00	1170.05	2269.05	1529.29	1899.00	8
CONVERT TO MILES									0.68	0.74							0.23	0.43	0.29		
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>			925	2	244	46	9	49	1.42		1934	1	1939	58	58	1184	0.66		0.29	1899	8

CALCULATED TJF  
 CHECKED MES  
**MAINTENANCE OF TRAFFIC SUBSUMMARY**  
**LOCATION 8: CUY-90-0683**  
**CUY-BH-FY2021(B) MISC**  
**PID NO. 109131**  
 28  
 253





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STATION	SIDE	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (UNIDIRECTIONAL)	WORK ZONE RAISED PAVEMENT MARKER	BARRIER REFLECTOR, TYPE 1, ONE WAY	OBJECT MARKER, ONE WAY	614 WORK ZONE EDGE LINE, CLASS I, 6", 740.06, TYPE I		WORK ZONE CHANNELIZING LINE, CLASS I, 12", 740.06, TYPE I	WORK ZONE DOTTED LINE, CLASS I, 6", 740.06, TYPE I	WORK ZONE PAVEMENT MARKING, MISC.: REMOVABLE, NON-REFLECTIVE, PREFORMED BLACKOUT TAPE	621 RPM REFLECTOR		622 RAISED PAVEMENT MARKER REMOVED, AS PER PLAN		646 PORTABLE BARRIER, UNANCHORED		EDGE LINE, 6"		LANE LINE, 6"	CHANNELIZING LINE, 12"	TRANSVERSE/DIAGONAL LINE	DOTTED LINE						
						YELLOW	WHITE				EACH	EACH	FT	FT	FT	FT	FT	FT									FT	FT
FROM	TO	EACH	EACH	EACH	EACH	MILE		FT	FT	FT	EACH	EACH	FT	MILE		MILE	FT	FT	FT	FT								
<b>LOCATION 16: PERMANENT PAVEMENT MARKING WESTBOUND BRIDGE</b>																												
<i>IR 490 MAINLINE</i>																												
980+25.70	985+65.00										15	15		539.30	539.30	1617.90												
985+65.00	990+12.00										15	15		447.00		1341.00	447.00											
990+12.00	994+54.00										15	15		442.00		1326.00												
994+54.00	1003+50.00										24	24		896.00	896.00	2688.00												
1003+50.00	1012+12.95										24	24		862.95		2588.85												
1012+12.95	1014+73.00										9	9		260.05		780.15	260.05											
1014+73.00	1022+16.17										14	14		743.17	743.17	1486.34	1486.34											
<i>W. 7TH ST. EXIT RAMP</i>																												
985+64.55	990+12.00										24	24				447.45		447.45										
990+12.00	991+36.00															124.00	124.00											
991+36.00	994+54.00															318.00								318.00				
<i>ROCKEFELLER AVE ENTRANCE RAMP</i>																												
1003+50.00	1012+12.95															862.95								862.95				
1012+12.95	1015+00.05										8	8				287.10		287.10										
<p style="text-align: right;">SUBTOTAL FROM THIS SHEET</p> <p style="text-align: right;">SUBTOTAL FROM SHEET <u>33A</u></p> <p style="text-align: right;">SUBTOTAL FROM SHEET <u>33B</u></p> <p style="text-align: right;">TOTALS</p> <p style="text-align: right;">CONVERT TO MILES</p>																												
<b>TOTALS CARRIED TO GENERAL SUMMARY</b>		<b>4</b>	<b>651</b>	<b>434</b>	<b>424</b>	<b>7.64</b>	<b>21703</b>	<b>4878</b>	<b>70</b>	<b>313</b>	<b>313</b>	<b>15235</b>	<b>3.40</b>	<b>4.31</b>	<b>6432</b>	<b>357</b>	<b>3959</b>											

16	6/11/21	NEW SHEET
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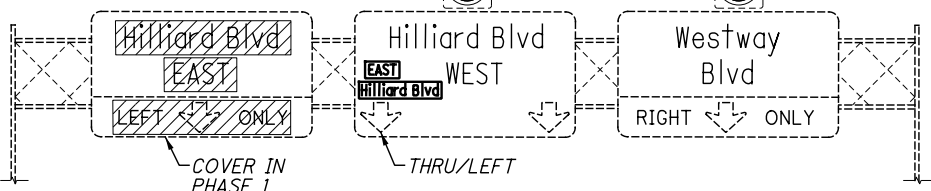
16

CALCULATED  
 TJF  
 CHECKED  
 ALP  
**MAINTENANCE OF TRAFFIC SUBSUMMARY**  
**LOCATION 16: CUY -490-0100**  
**CUY-BH-FY2021(B) MISC**  
**PID NO. 109131**  
 33C  
 253

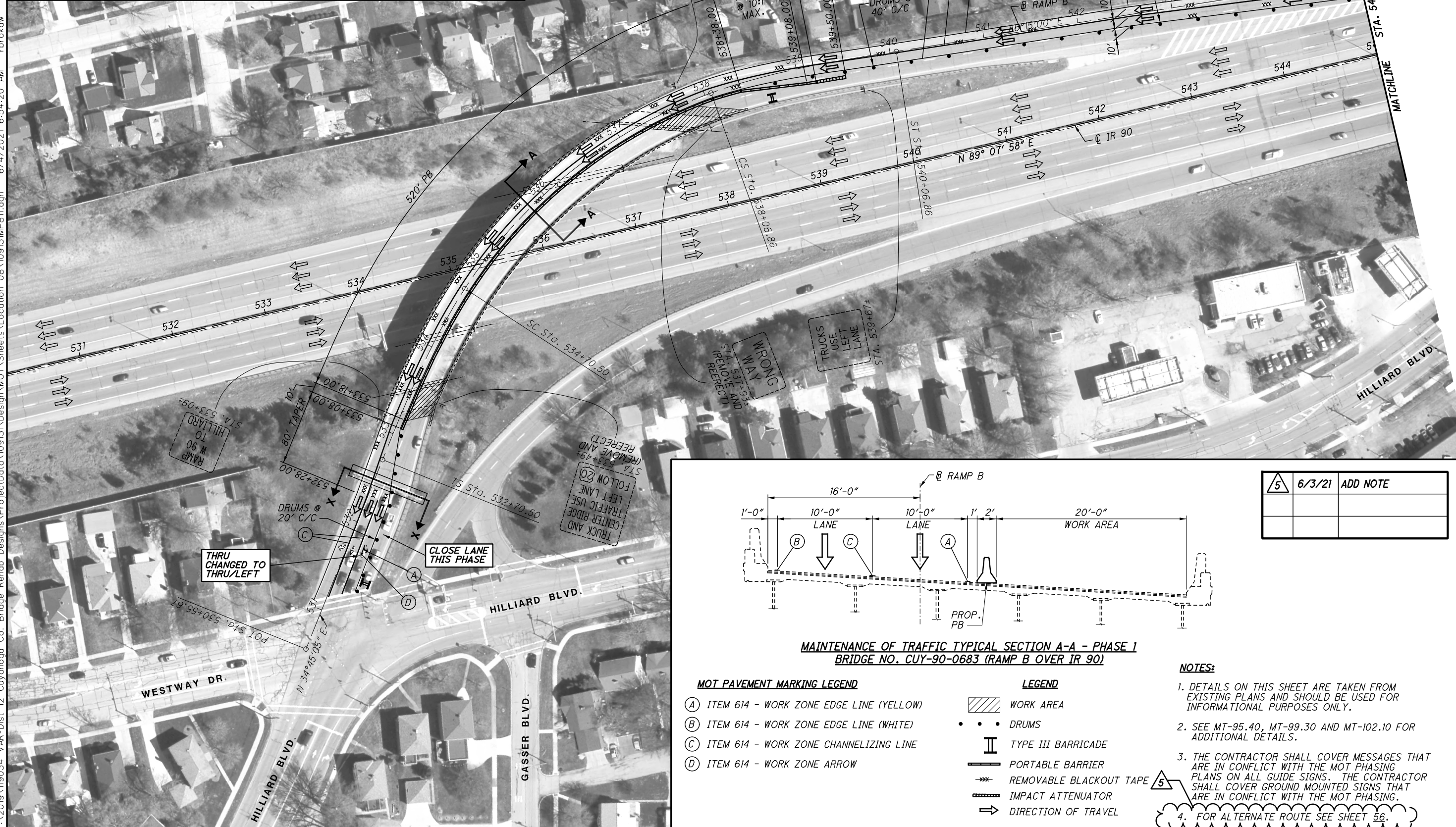


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SEE NOTE 3

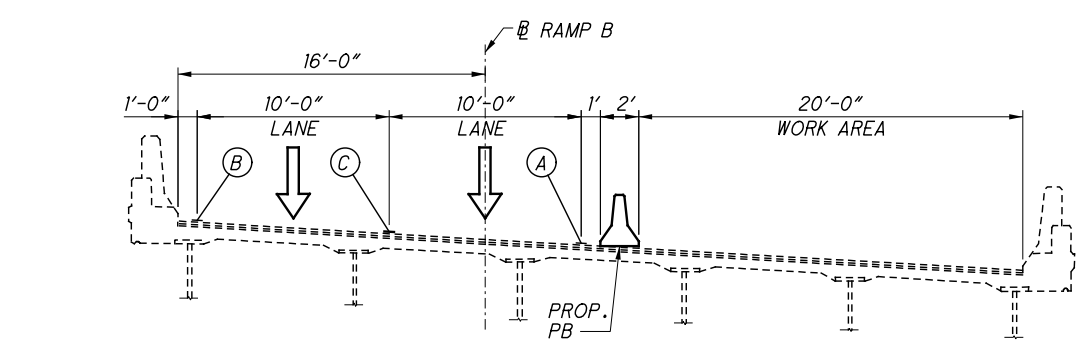


**MAINTENANCE OF TRAFFIC OVERHEAD SIGN SECTION X-X - PHASE 1  
BRIDGE NO. CUY-90-0683 (RAMP B OVER IR 90)**



**MAINTENANCE OF TRAFFIC PLAN  
LOCATION 8: CUY-90-0683 - PHASE 1**

CUY-BH-FY2021(B) MISC  
PID NO. 109131



**MAINTENANCE OF TRAFFIC TYPICAL SECTION A-A - PHASE 1  
BRIDGE NO. CUY-90-0683 (RAMP B OVER IR 90)**

- MOT PAVEMENT MARKING LEGEND**
- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
  - (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
  - (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
  - (D) ITEM 614 - WORK ZONE ARROW
- LEGEND**
- WORK AREA
  - DRUMS
  - TYPE III BARRICADE
  - PORTABLE BARRICADE
  - REMOVABLE BLACKOUT TAPE
  - IMPACT ATTENUATOR
  - DIRECTION OF TRAVEL

5	6/3/21	ADD NOTE

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
  2. SEE MT-95.40, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
  3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
  4. FOR ALTERNATE ROUTE SEE SHEET 56.

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**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVABLE BLACKOUT TAPE
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL

5	6/3/21	ADD NOTE

**NOTES:**

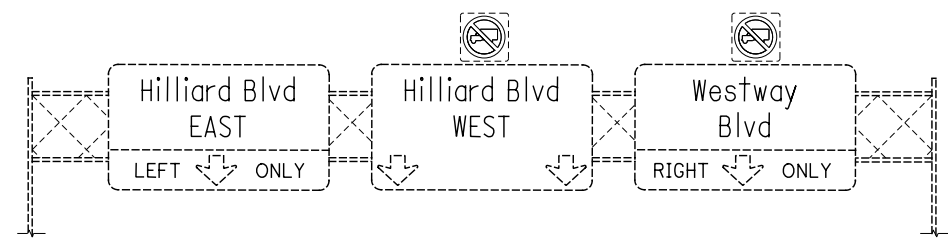
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.40, MT-99.30 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
4. FOR ALTERNATE ROUTE SEE SHEET 56.



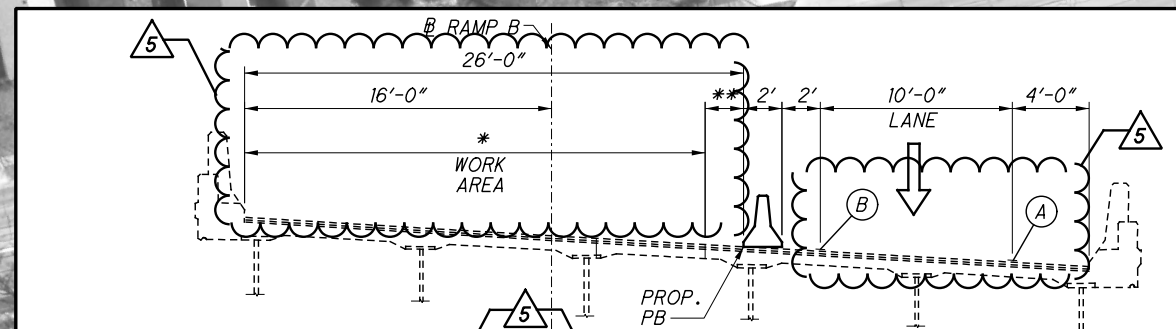
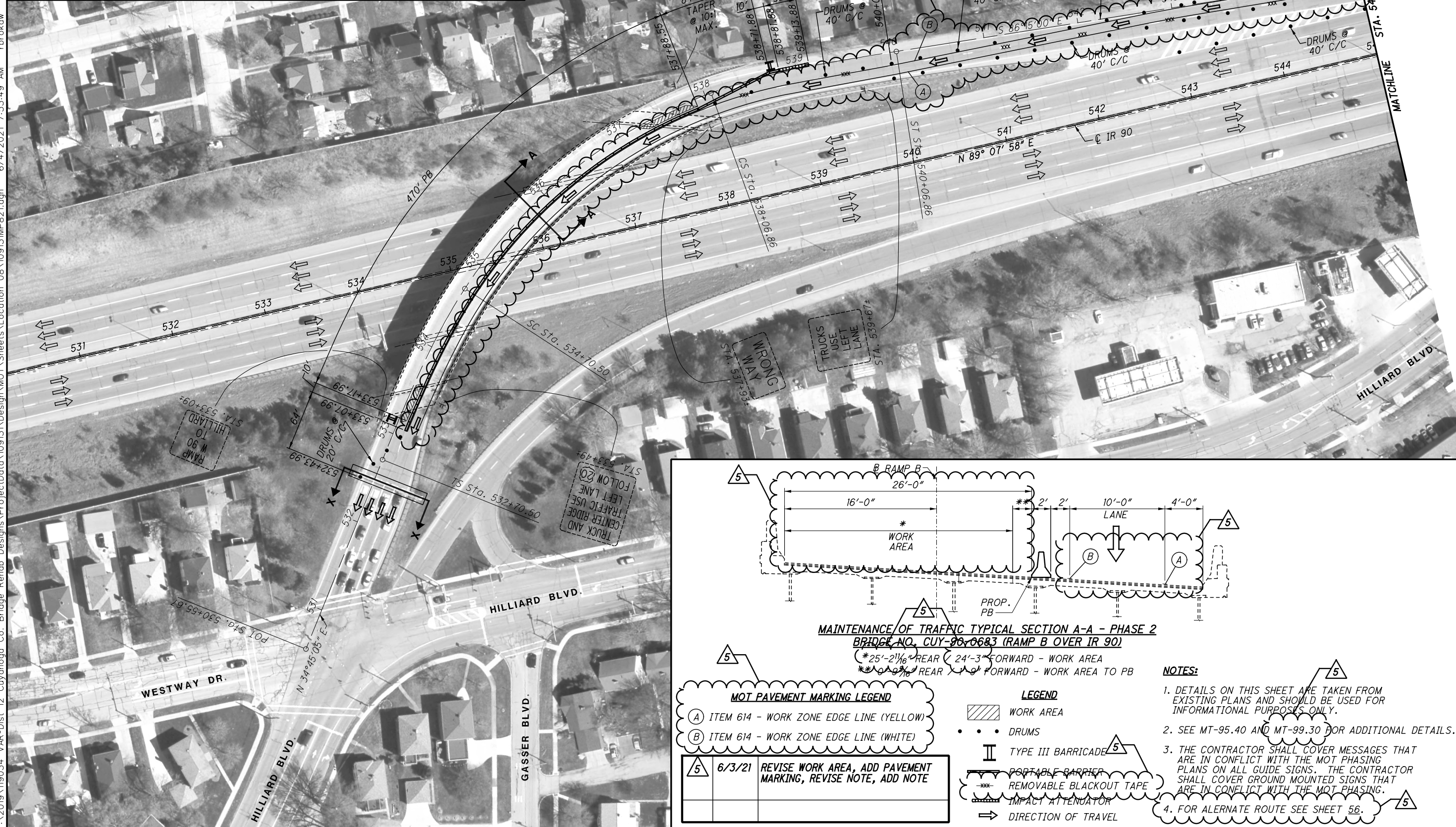
**MAINTENANCE OF TRAFFIC PLAN**  
**LOCATION 8: CUY-90-0683 - PHASE 1**

**CUY-BH-FY2021(B) MISC**  
**PID NO. 109131**

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**MAINTENANCE OF TRAFFIC OVERHEAD SIGN SECTION X-X - PHASE 2  
BRIDGE NO. CUY-90-0683 (RAMP B OVER IR 90)**



**MAINTENANCE OF TRAFFIC TYPICAL SECTION A-A - PHASE 2  
BRIDGE NO. CUY-90-0683 (RAMP B OVER IR 90)**

**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)

**LEGEND**

- WORK AREA
- DRUMS
- TYPE III BARRICADE
- PORTABLE BARRIER
- REMOVABLE BLACKOUT TAPE
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL

**NOTES:**

- DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
- SEE MT-95.40 AND MT-99.30 FOR ADDITIONAL DETAILS.
- THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
- FOR ALTERNATE ROUTE SEE SHEET 56.

**REVISIONS:**

5	6/3/21	REVISE WORK AREA, ADD PAVEMENT MARKING, REVISE NOTE, ADD NOTE
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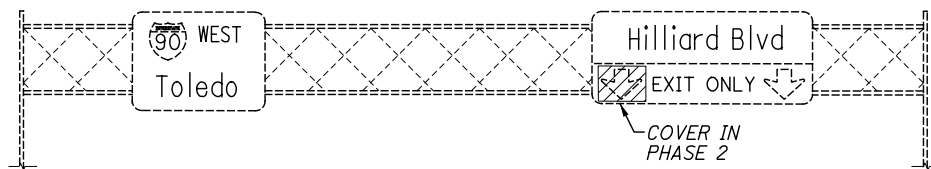


**MAINTENANCE OF TRAFFIC PLAN  
LOCATION 8: CUY-90-0683 - PHASE 2**

**CUY-BH-FY2021(B) MISC  
PID NO. 109131**

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SEE NOTE 3



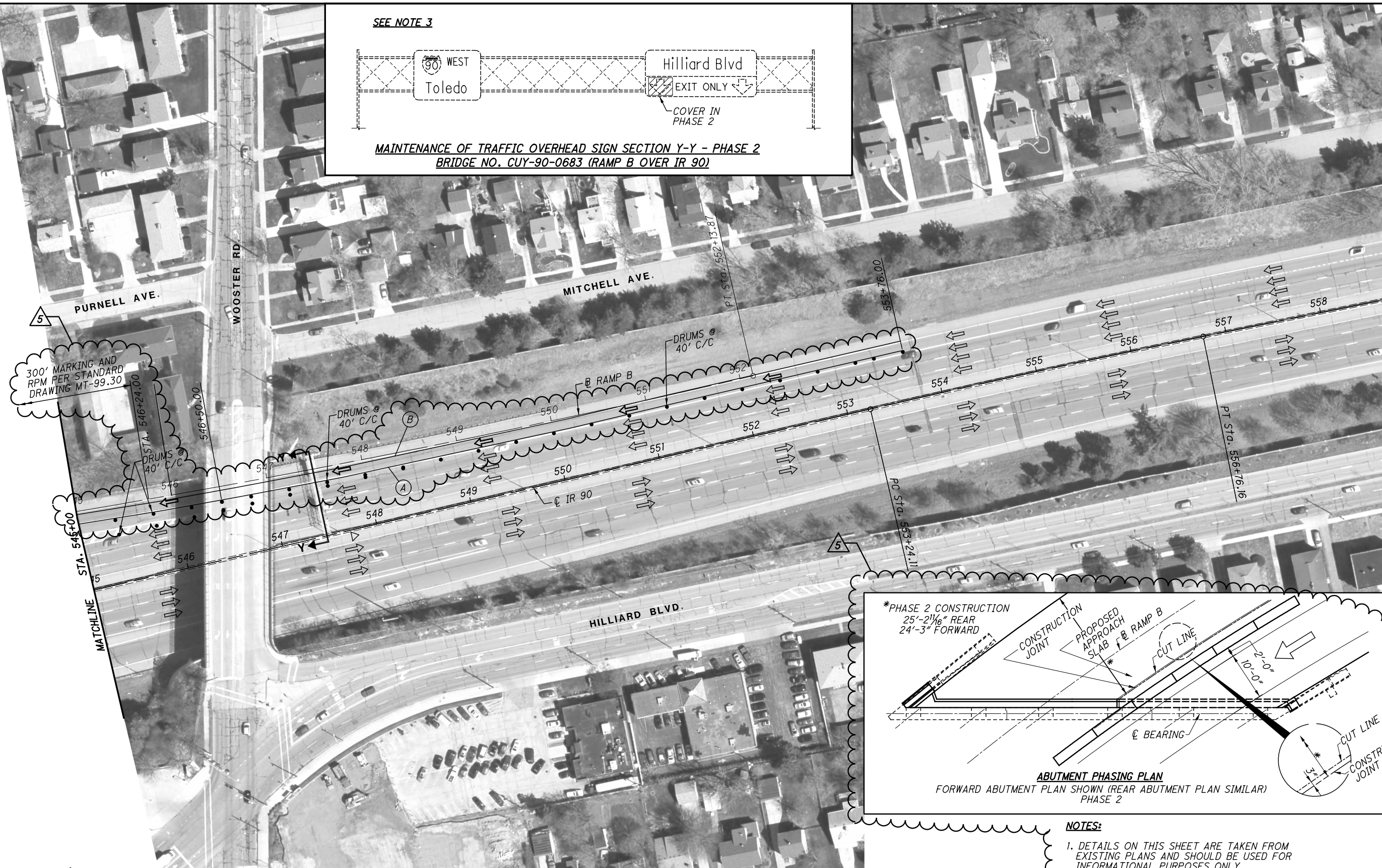
MAINTENANCE OF TRAFFIC OVERHEAD SIGN SECTION Y-Y - PHASE 2  
BRIDGE NO. CUY-90-0683 (RAMP B OVER IR 90)

CALCULATED ALP CHECKED MES

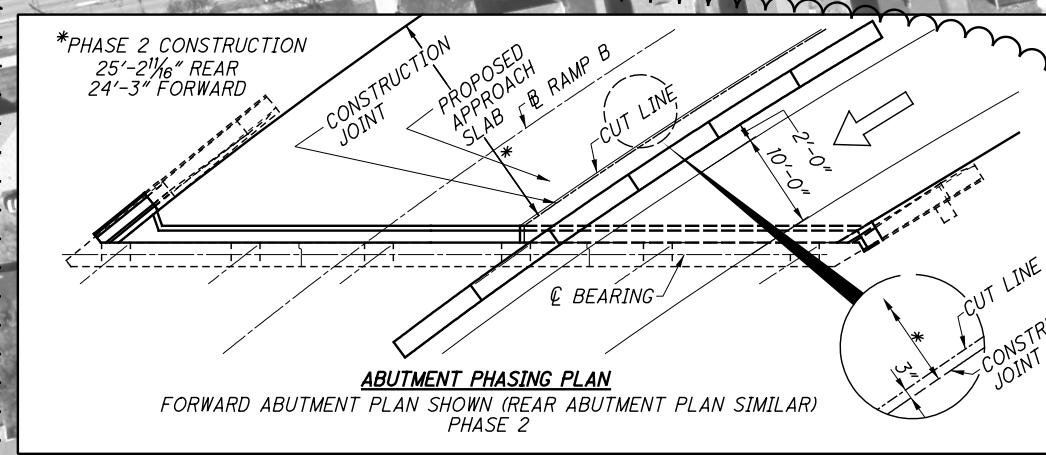
0 25 50 100  
HORIZONTAL SCALE IN FEET

MAINTENANCE OF TRAFFIC PLAN  
LOCATION 8: CUY-90-0683 - PHASE 2

CUY-BH-FY2021(B) MISC  
PID NO. 109131



300' MARKING AND RPM PER STANDARD DRAWING MT-99.30



- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
  2. SEE MT-95.40 AND MT-99.30 FOR ADDITIONAL DETAILS.
  3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS. THE CONTRACTOR SHALL COVER GROUND MOUNTED SIGNS THAT ARE IN CONFLICT WITH THE MOT PHASING.
  4. FOR ALTERNATE ROUTE SEE SHEET 56.
  5. USE PCMS PRIOR TO LANE CHANGES WITH THE FOLLOWING MESSAGE: "HILLIARD BLVD. EXIT RT. LANE ONLY" THE FINAL MESSAGE SHALL BE APPROVED BY THE ENGINEER.

**MOT PAVEMENT MARKING LEGEND**

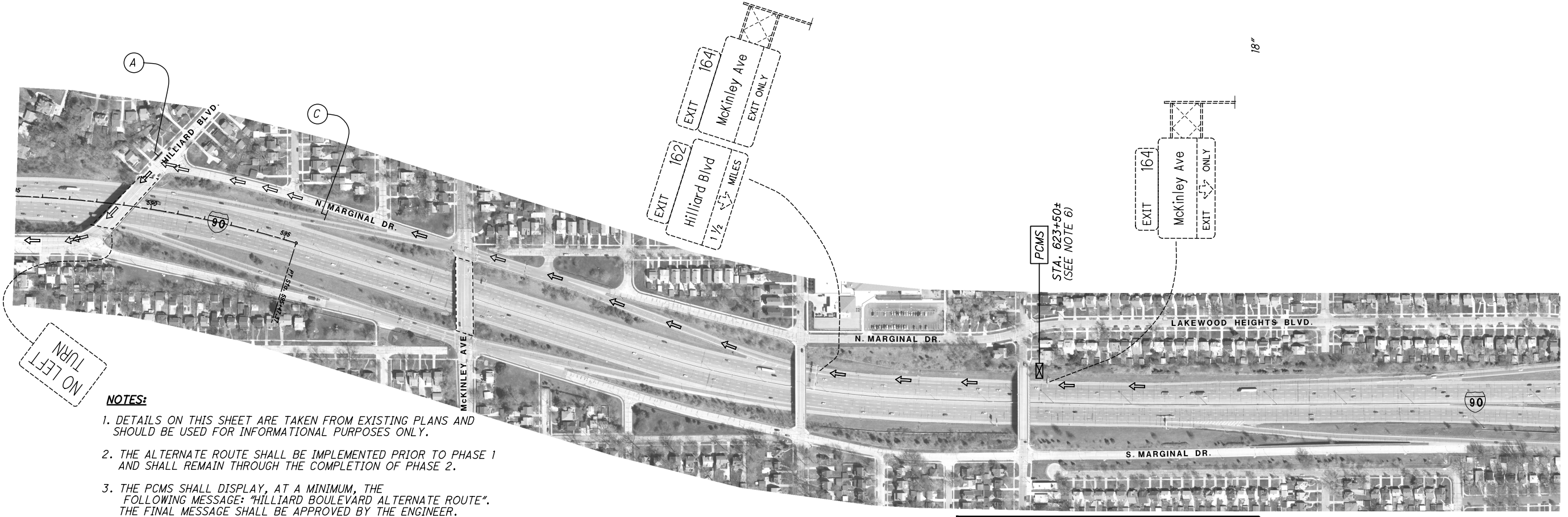
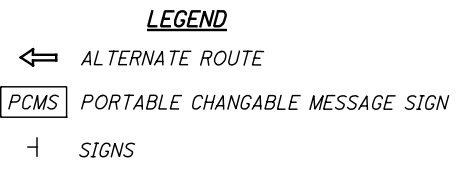
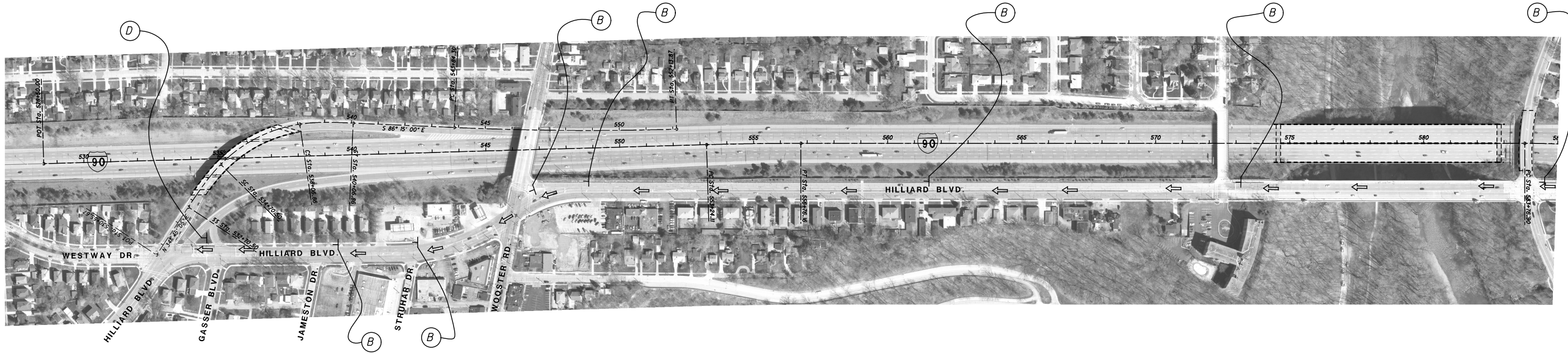
(A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)

(B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)

5	6/3/21	REVISE NOTE ADD PAVEMENT MARKING, REVISE NOTES, ADD NOTE
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- LEGEND**
- WORK AREA
  - DRUMS
  - PORTABLE BARRIER
  - IMPACT ATTENUATOR
  - DIRECTION OF TRAVEL

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- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
  2. THE ALTERNATE ROUTE SHALL BE IMPLEMENTED PRIOR TO PHASE 1 AND SHALL REMAIN THROUGH THE COMPLETION OF PHASE 2.
  3. THE PCMS SHALL DISPLAY, AT A MINIMUM, THE FOLLOWING MESSAGE: "HILLIARD BOULEVARD ALTERNATE ROUTE". THE FINAL MESSAGE SHALL BE APPROVED BY THE ENGINEER.
  4. FOR SIGN LEGEND SEE SHEET 57.
  5. FOR SIGN DETAIL SEE SHEET 57.
  6. THE LOCATION OF THE PCMS MAY BE FIELD ADJUSTED AS APPROVED BY THE ENGINEER.

5	6/2/21	NEW SHEET



CALCULATED ALP CHECKED

**MAINTENANCE OF TRAFFIC ALT. ROUTE PLAN**

**LOCATION 8 : CUY-90-0683**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

5 / 6

56  
253

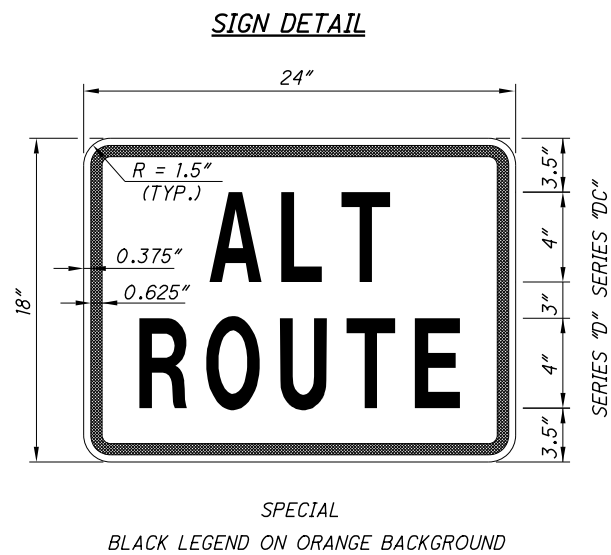
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**SIGN LEGEND**

(A)	(B)	(C)	(D)
 HILLIARD BLVD D3-1-VAR ALT ROUTE SPECIAL (SEE SIGN DETAIL) M6-1L-30	 HILLIARD BLVD D3-1-VAR ALT ROUTE SPECIAL (SEE SIGN DETAIL) M6-3-30	 HILLIARD BLVD D3-1-VAR ALT ROUTE SPECIAL (SEE SIGN DETAIL) M5-1L-30	 END M4-8b-24 ALT ROUTE SPECIAL (SEE SIGN DETAIL)

**ITEM 614 - DETOUR SIGNING**

PHASE 1	LUMP
PHASE 2	LUMP
<b>TOTAL CARRIED TO GENERAL SUMMARY</b>	<b>LUMP</b>

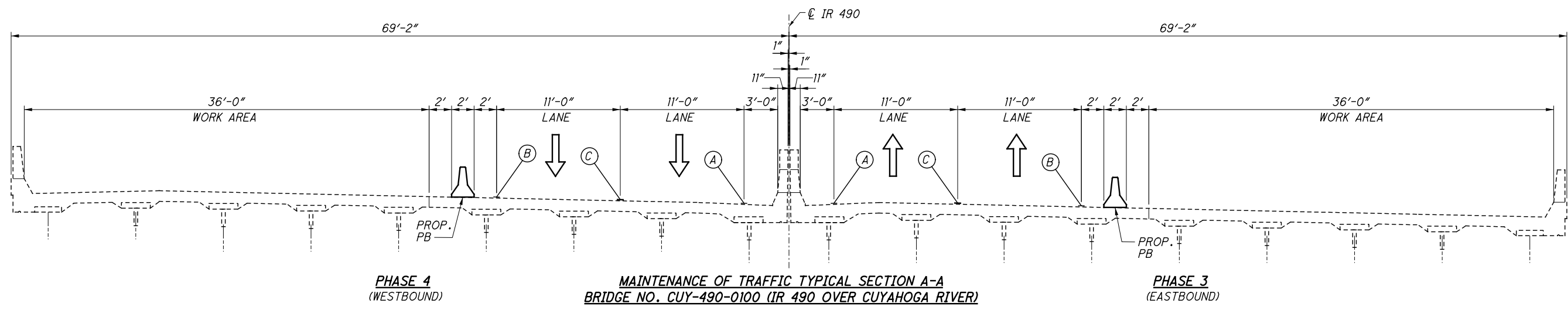
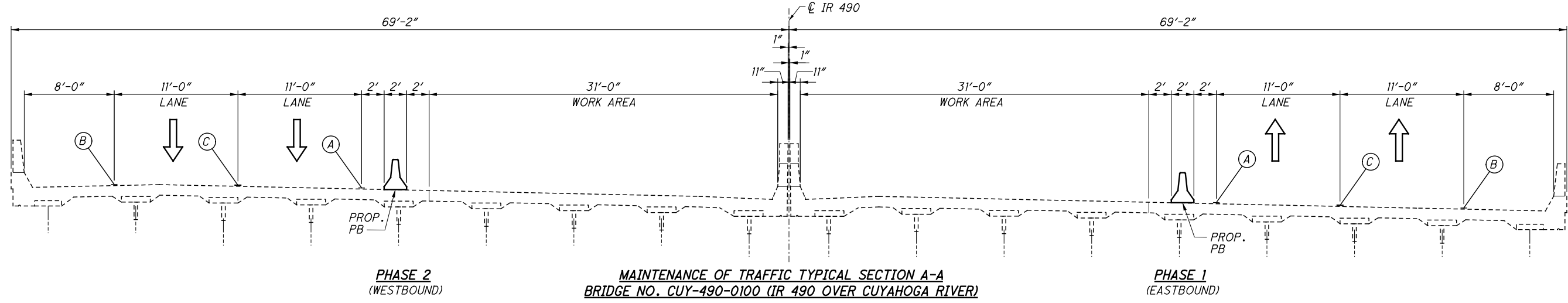


5

5	6/2/21	NEW SHEET

 0 100 200 400 HORIZONTAL SCALE IN FEET	CALCULATED ALP CHECKED
<b>MAINTENANCE OF TRAFFIC ALT. ROUTE PLAN</b> <b>LOCATION 8: CUY-90-0683</b>	
CUY-BH-FY2021(B) MISC PID NO. 109131	6 / 6 57 253

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- MOT PAVEMENT MARKING LEGEND**
- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
  - (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
  - (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
  - (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**  
 ⇨ DIRECTION OF TRAVEL

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

16	6/21/21	NEW SHEET

16

**MAINTENANCE OF TRAFFIC TYPICAL SECTION**  
**LOCATION 16: CUY-490-0100 - PHASES 1 THRU 4**

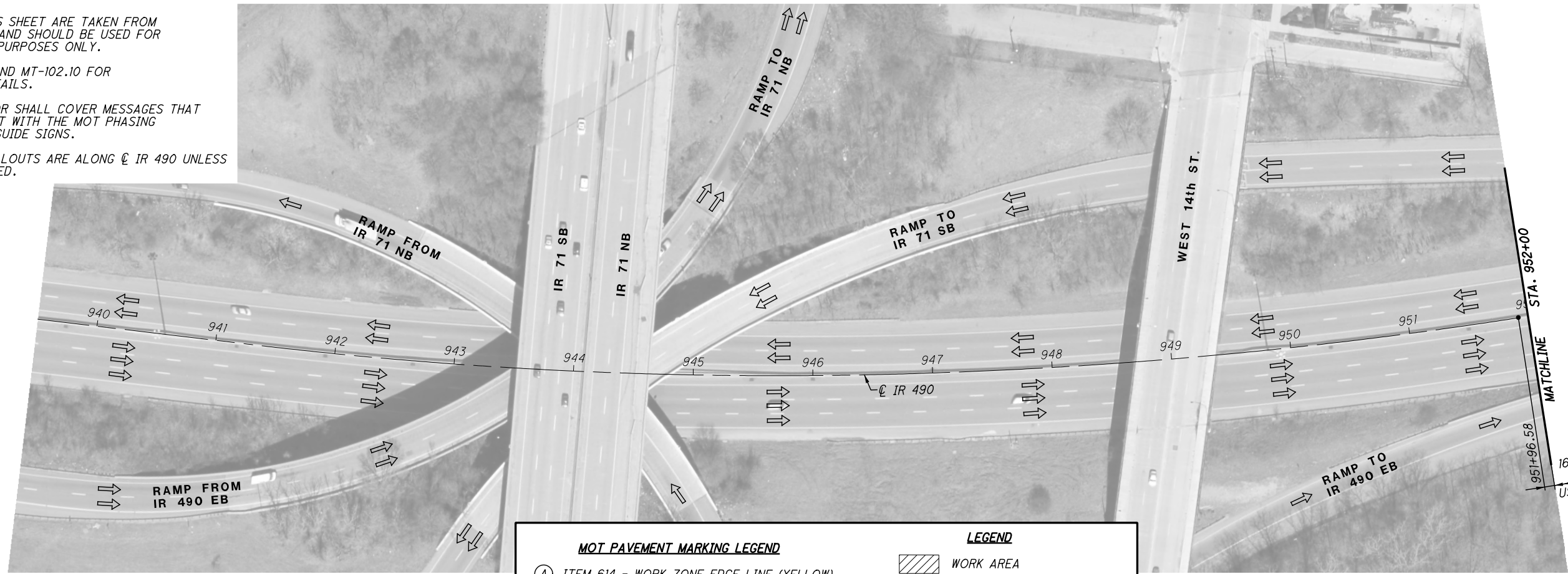
**CUY-BH-FY2021(B) MISC**  
**PID NO. 109131**

1 / 18

66A  
253

**NOTES:**

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.40 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG  $\varnothing$  IR 490 UNLESS OTHERWISE NOTED.

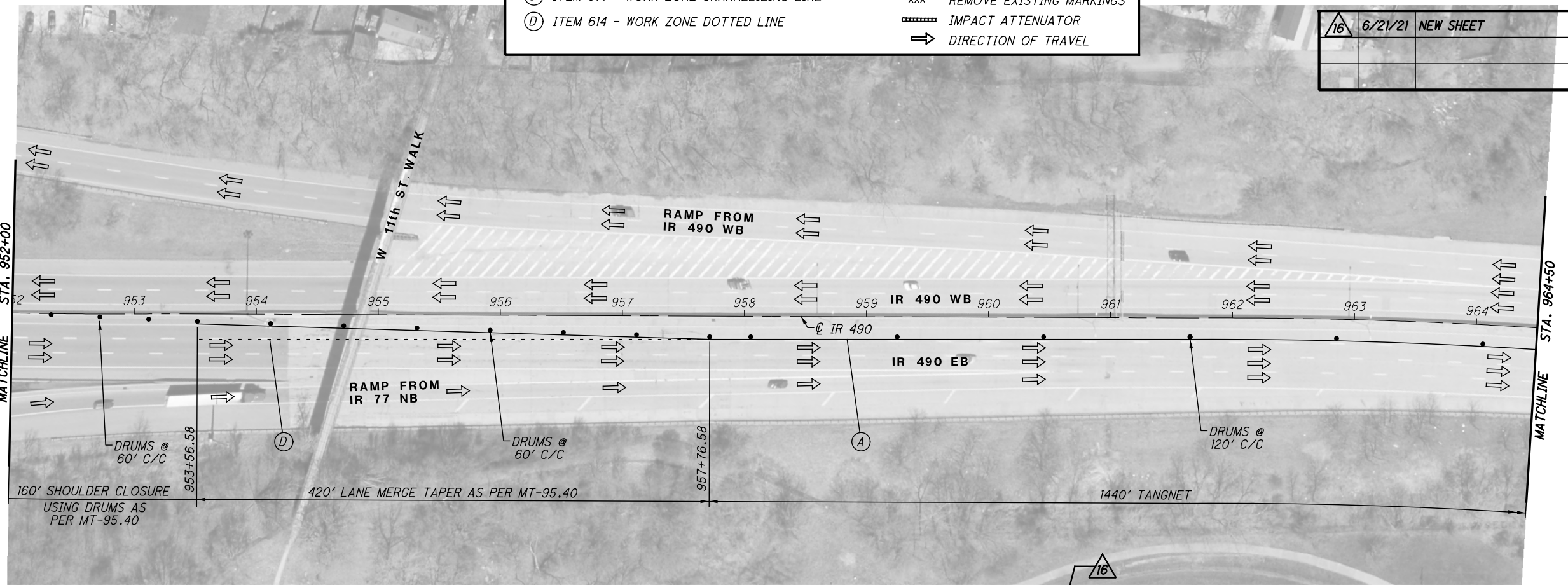


**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVE EXISTING MARKINGS
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL



16	6/21/21	NEW SHEET

CALCULATED  
DAW  
CHECKED  
ALP

0 50 100  
25  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN  
LOCATION 16: CUY-490-0100 - PHASES 1 & 2**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

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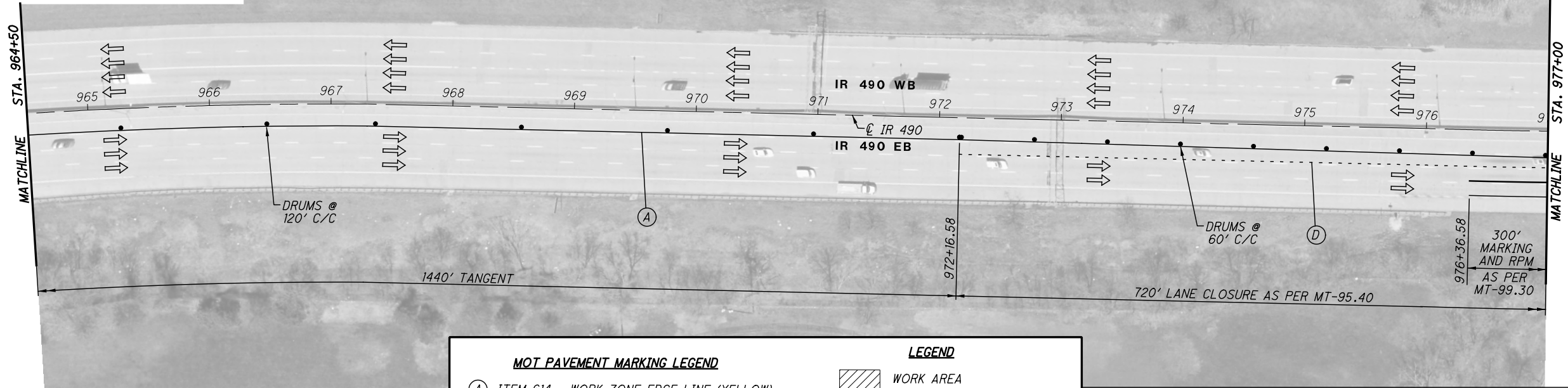


**NOTES:**

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
2. SEE MT-95.40 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG  $\bar{C}$  IR 490 UNLESS OTHERWISE NOTED.

CALCULATED  
DAW  
CHECKED  
ALP

0 50 100  
25  
HORIZONTAL  
SCALE IN FEET



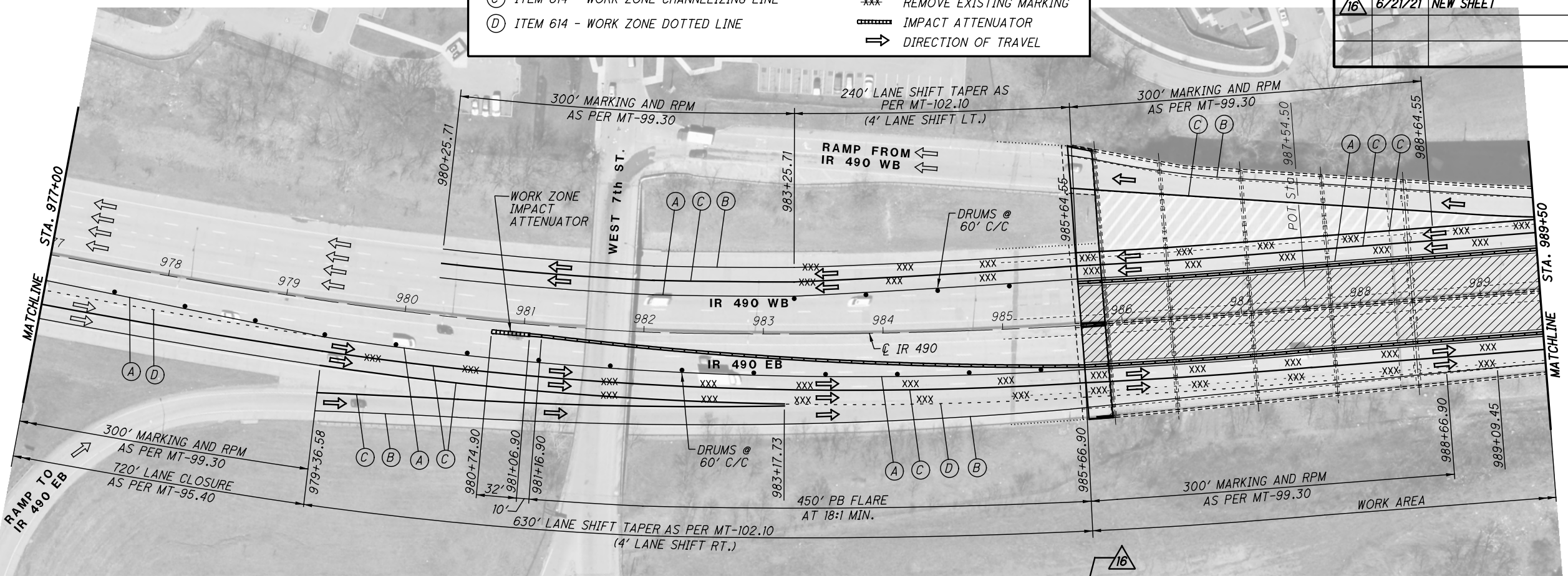
**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVE EXISTING MARKING
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL

16	6/21/21	NEW SHEET

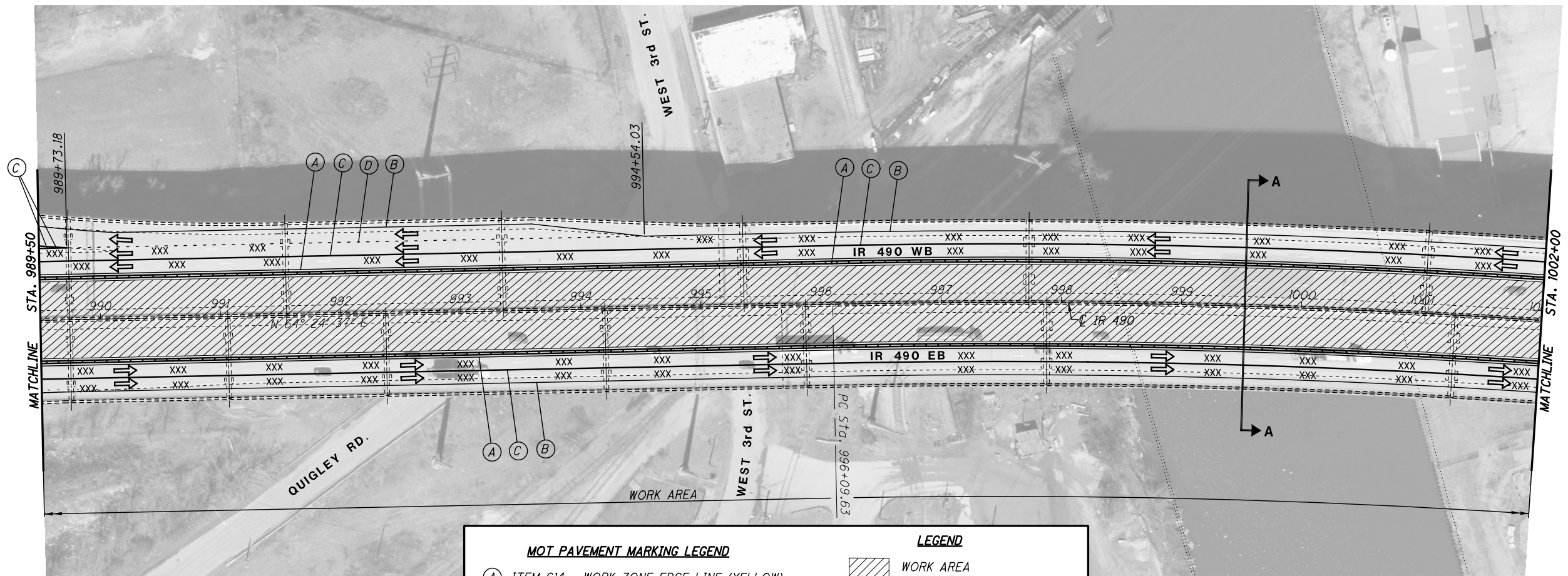


**MAINTENANCE OF TRAFFIC PLAN**  
**LOCATION 16: CUY-490-0100 - PHASES 1 & 2**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

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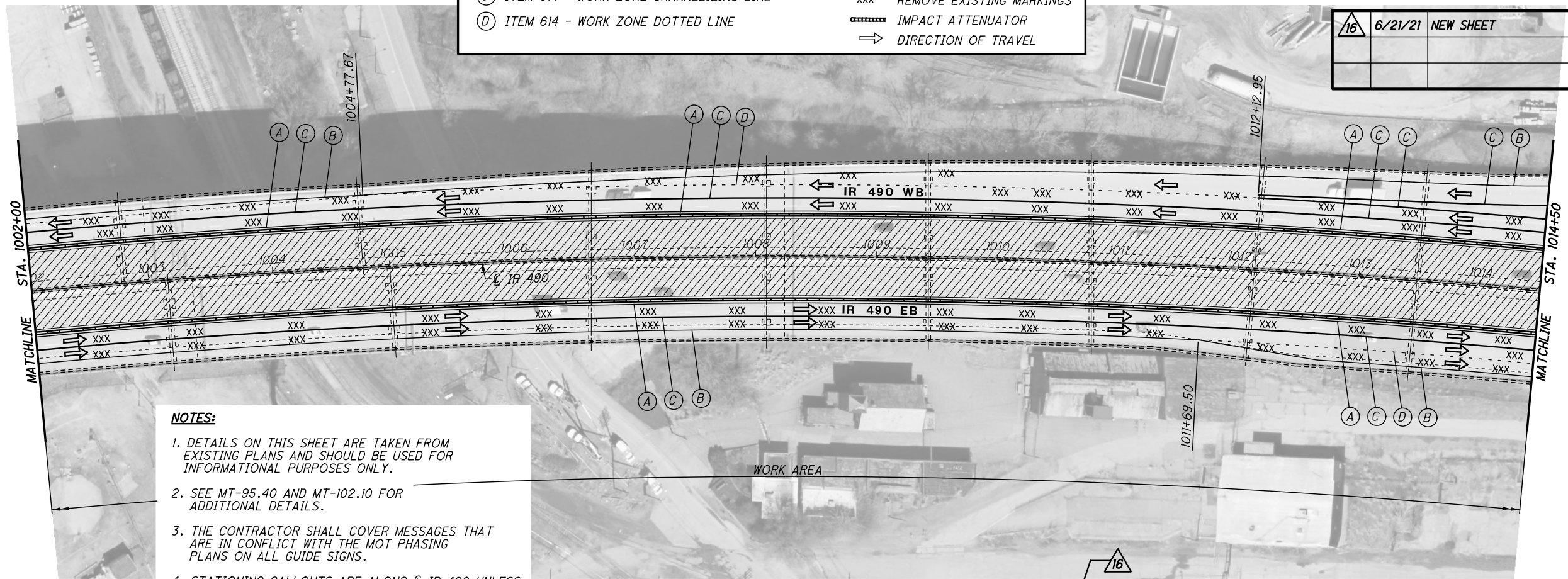


**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVE EXISTING MARKINGS
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL



**NOTES:**

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2. SEE MT-95.40 AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG CL IR 490 UNLESS OTHERWISE NOTED.

16	6/21/21	NEW SHEET

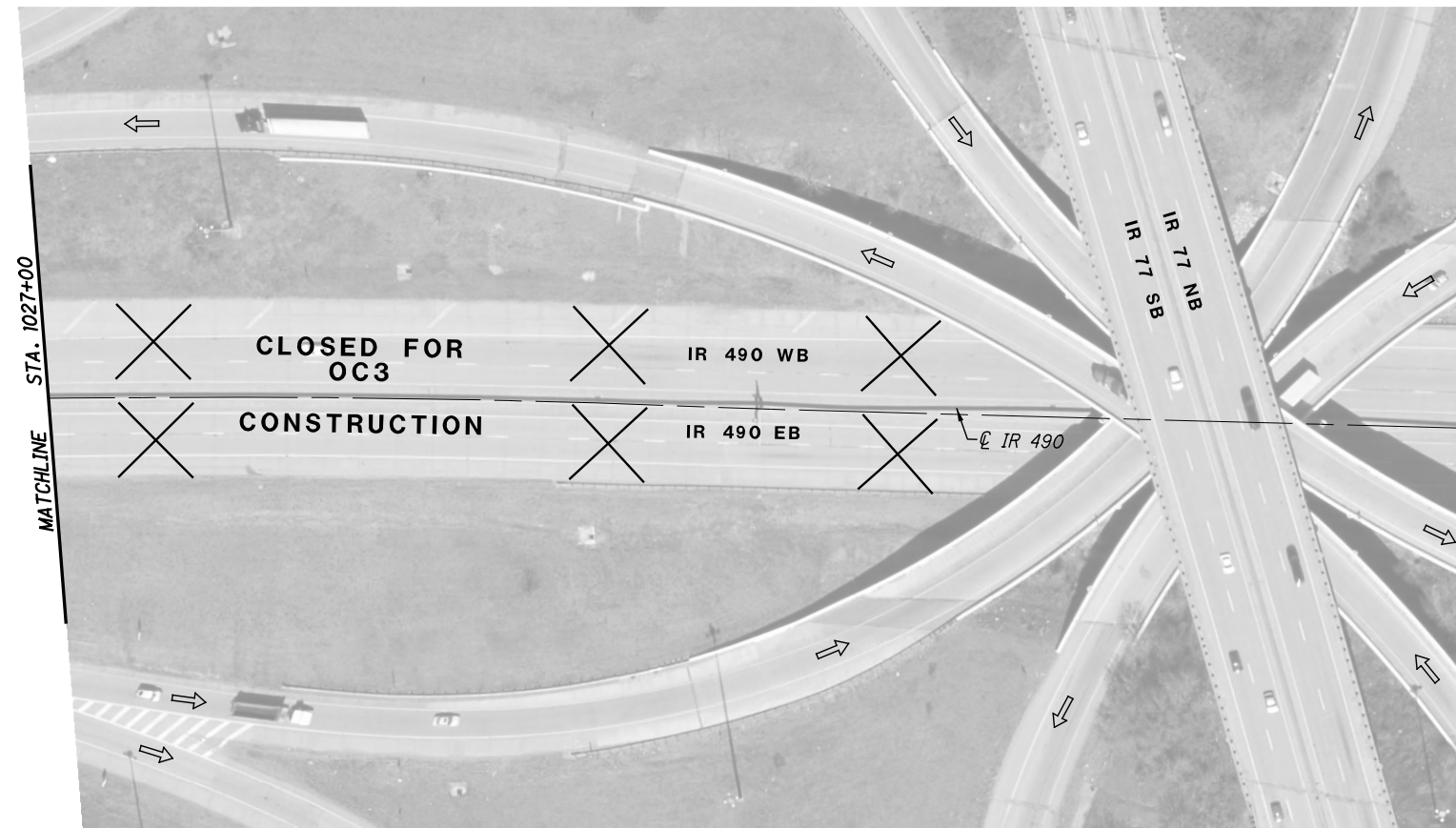
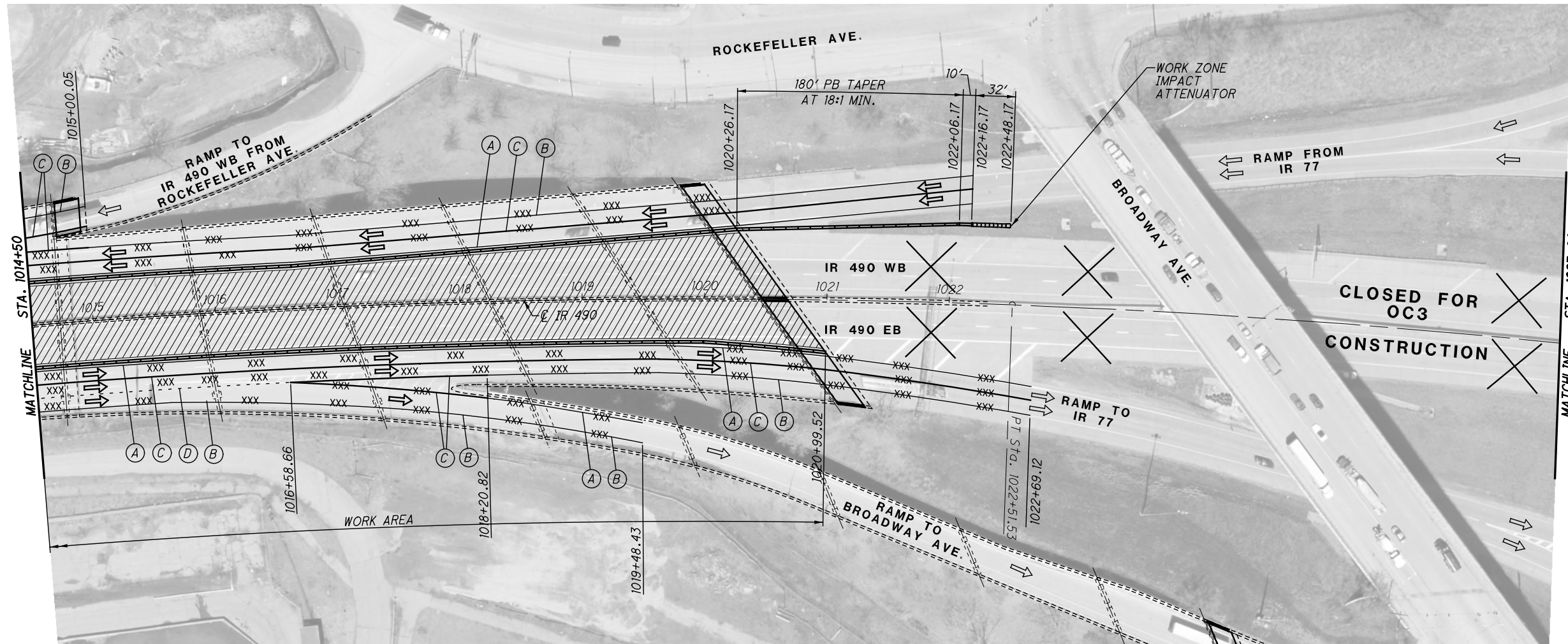
CALCULATED  
DAW  
CHECKED  
ALP

0 50 100  
25  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN**  
**LOCATION 16: CUY-490-0100 - PHASES 1 & 2**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

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**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVE EXISTING MARKINGS
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL

16	6/21/21	NEW SHEET

- NOTES:**
1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
  2. SEE MT-95.40 AND MT-102.10 FOR ADDITIONAL DETAILS.
  3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
  4. STATIONING CALLOUTS ARE ALONG  $\text{CL IR 490}$  UNLESS OTHERWISE NOTED.

N

0 50 100  
25  
HORIZONTAL  
SCALE IN FEET

CALCULATED  
DAW  
CHECKED  
ALP

**MAINTENANCE OF TRAFFIC PLAN  
LOCATION 16: CUY-490-0100 - PHASES 1 & 2**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

**NOTES:**

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2. SEE MT-95.40, MT-98.29, AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG  $\bar{C}$  IR 490 UNLESS OTHERWISE NOTED.

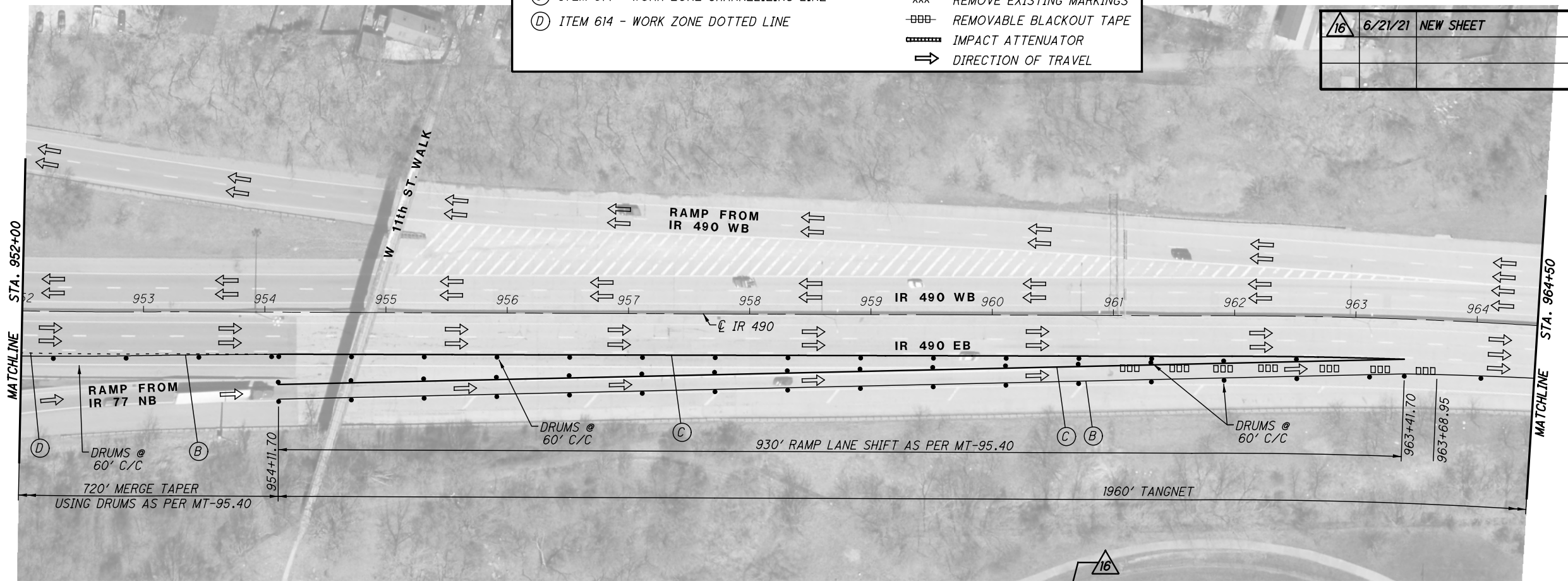


**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVE EXISTING MARKINGS
- REMOVABLE BLACKOUT TAPE
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL



16	6/21/21	NEW SHEET

CALCULATED  
DAW  
CHECKED  
ALP

0 50 100  
25  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN**  
**LOCATION 16: CUY-490-0100 - PHASES 3 & 4**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

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**NOTES:**

1. DETAILS ON THIS SHEET ARE TAKEN FROM EXISTING PLANS AND SHOULD BE USED FOR INFORMATIONAL PURPOSES ONLY.
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4. STATIONING CALLOUTS ARE ALONG  $\phi$  IR 490 UNLESS OTHERWISE NOTED.

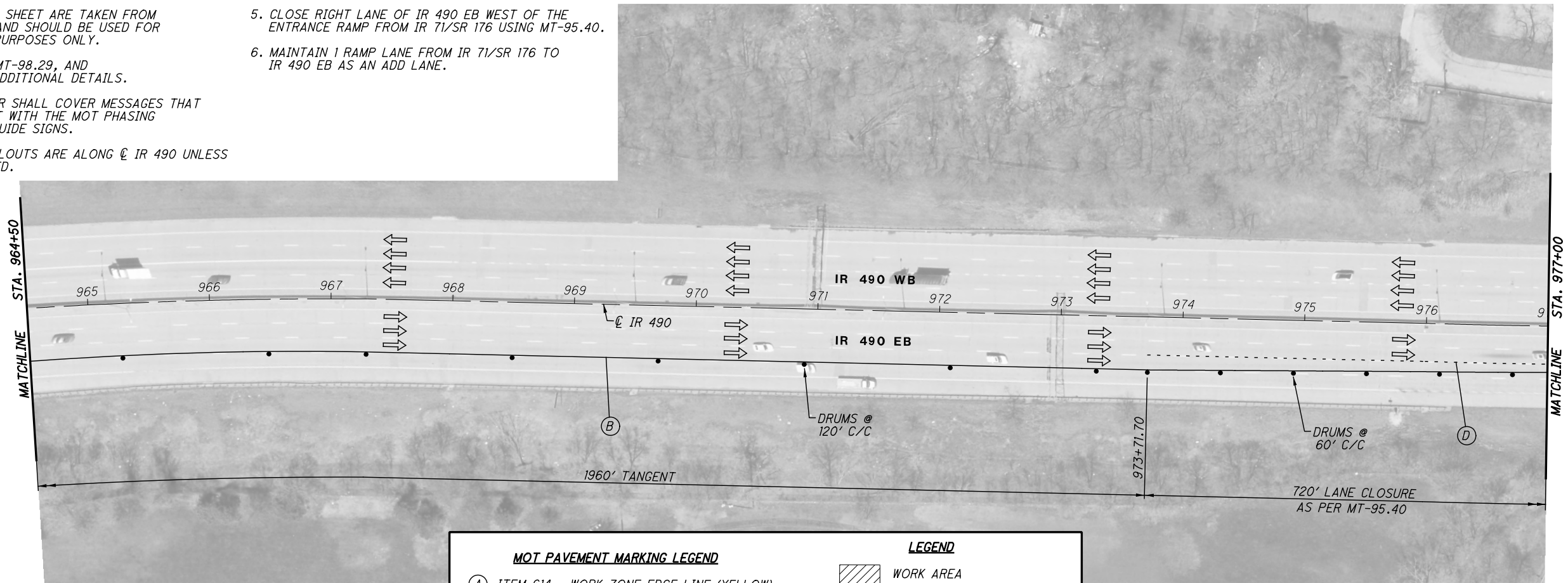
5. CLOSE RIGHT LANE OF IR 490 EB WEST OF THE ENTRANCE RAMP FROM IR 71/SR 176 USING MT-95.40.
6. MAINTAIN 1 RAMP LANE FROM IR 71/SR 176 TO IR 490 EB AS AN ADD LANE.

0 25 50 100  
HORIZONTAL SCALE IN FEET

CALCULATED  
DAW  
CHECKED  
ALP

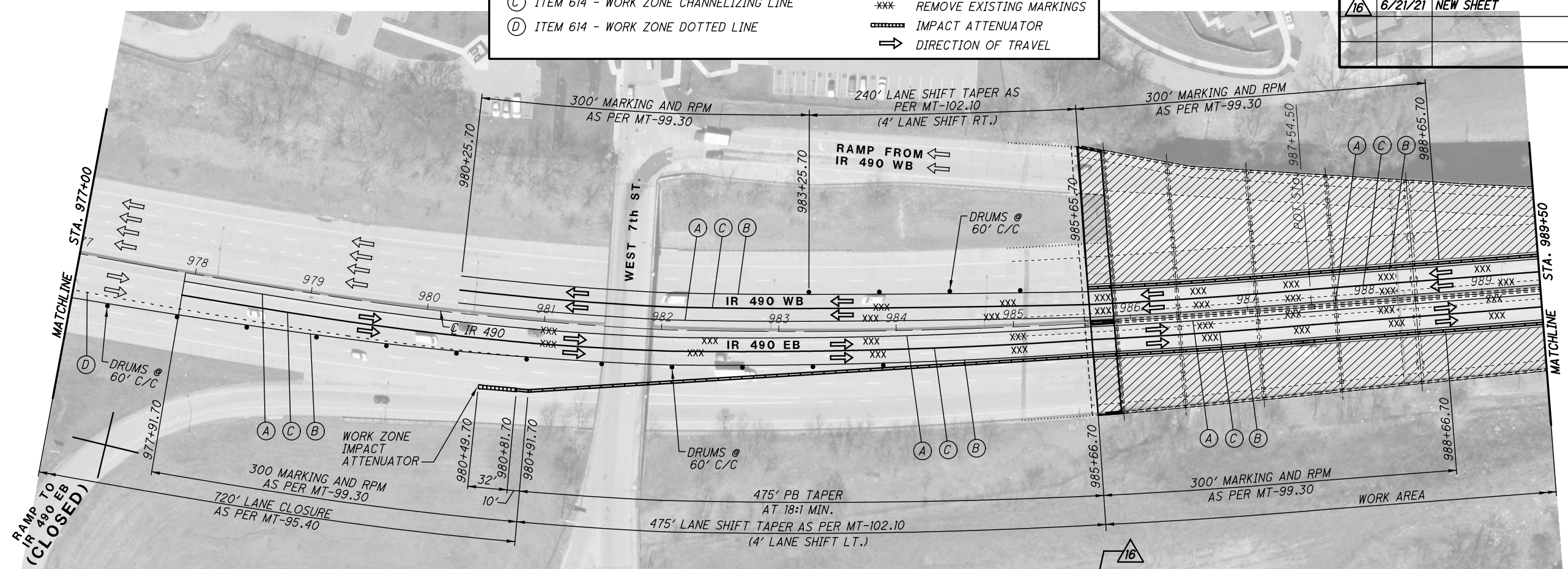
**MAINTENANCE OF TRAFFIC PLAN  
LOCATION 16: CUY-490-0100 - PHASES 3 & 4**

CUY-BH-FY2021(B) MISC  
PID NO. 109131



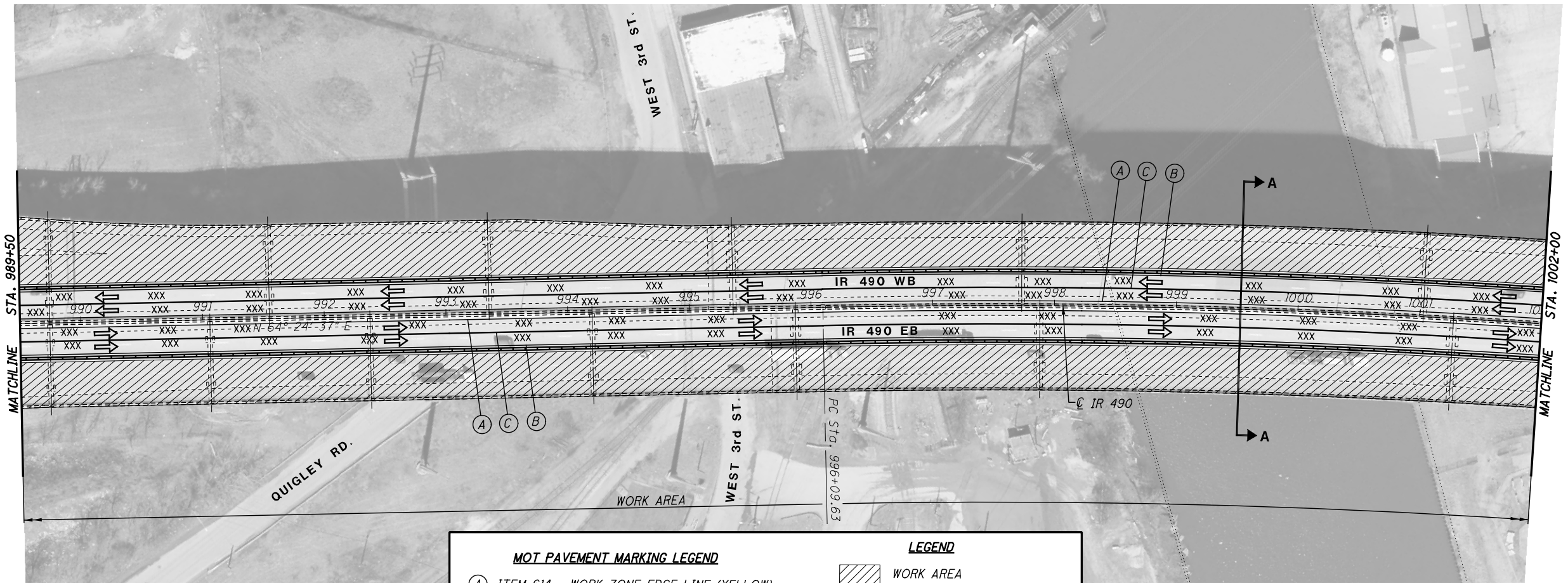
MOT PAVEMENT MARKING LEGEND		LEGEND	
(A)	ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA
(B)	ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS
(C)	ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER
(D)	ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS
			IMPACT ATTENUATOR
			DIRECTION OF TRAVEL

16	6/21/21	NEW SHEET
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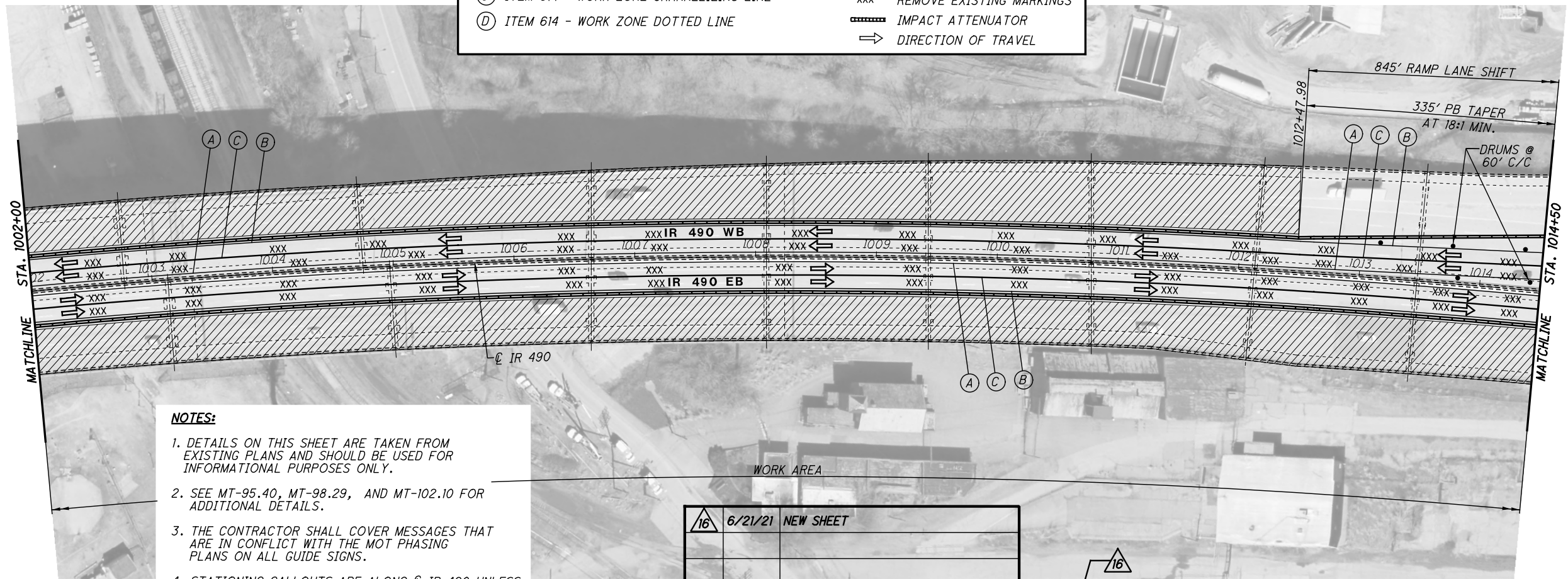


**MOT PAVEMENT MARKING LEGEND**

- (A) ITEM 614 - WORK ZONE EDGE LINE (YELLOW)
- (B) ITEM 614 - WORK ZONE EDGE LINE (WHITE)
- (C) ITEM 614 - WORK ZONE CHANNELIZING LINE
- (D) ITEM 614 - WORK ZONE DOTTED LINE

**LEGEND**

- WORK AREA
- DRUMS
- PORTABLE BARRIER
- REMOVE EXISTING MARKINGS
- IMPACT ATTENUATOR
- DIRECTION OF TRAVEL



**NOTES:**

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2. SEE MT-95.40, MT-98.29, AND MT-102.10 FOR ADDITIONAL DETAILS.
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4. STATIONING CALLOUTS ARE ALONG CL IR 490 UNLESS OTHERWISE NOTED.

16	6/21/21	NEW SHEET



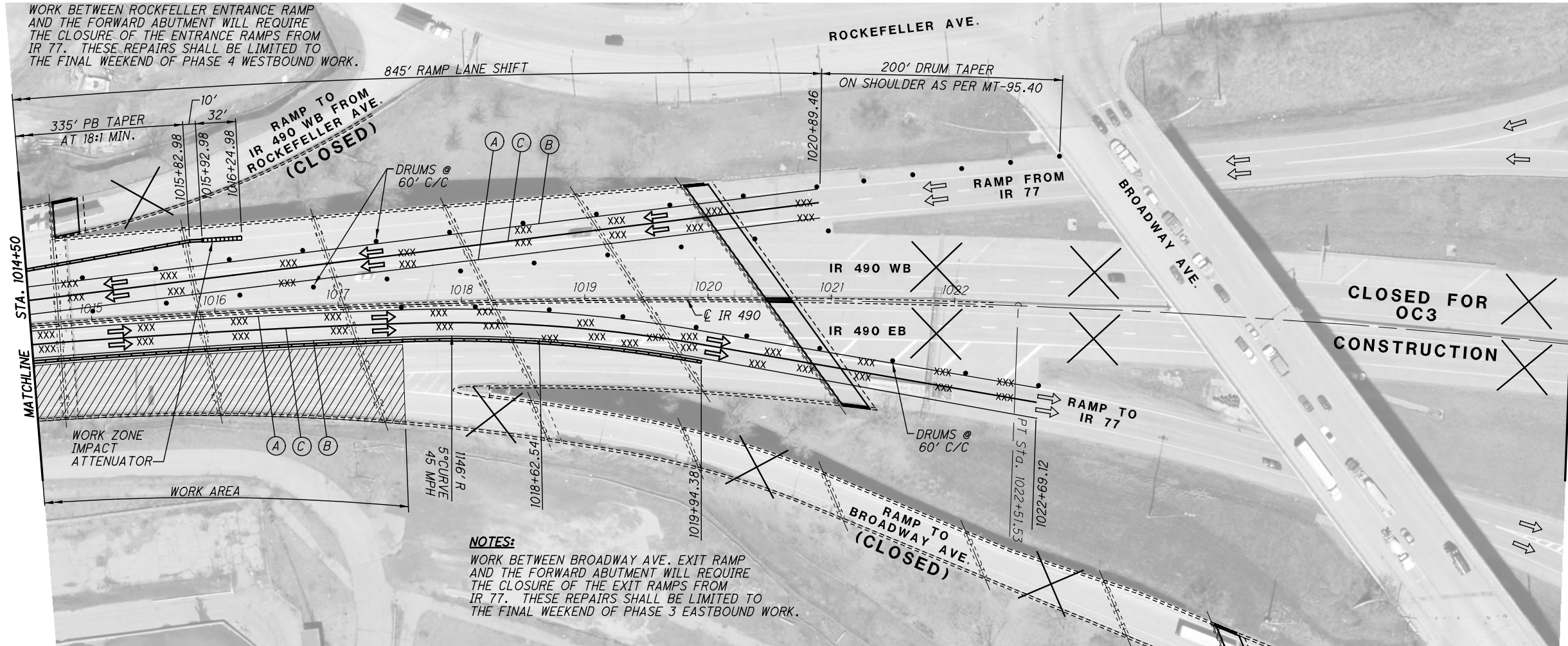
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**MAINTENANCE OF TRAFFIC PLAN**  
**LOCATION 16: CUY-490-0100 - PHASES 3 & 4**

CUY-BH-FY2021(B) MISC  
 PID NO. 109131  
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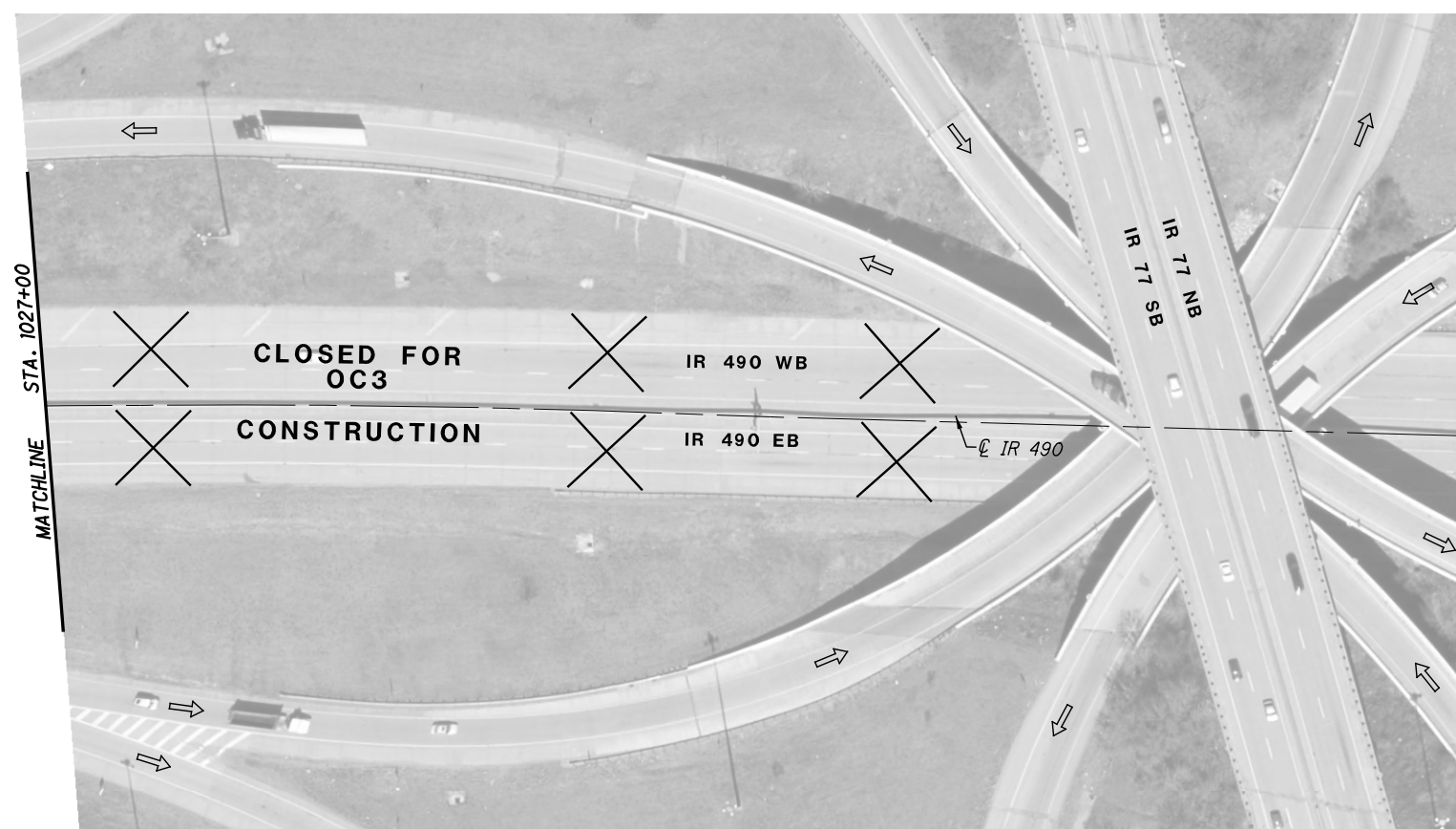
**NOTES:**

WORK BETWEEN ROCKFELLER ENTRANCE RAMP AND THE FORWARD ABUTMENT WILL REQUIRE THE CLOSURE OF THE ENTRANCE RAMP FROM IR 77. THESE REPAIRS SHALL BE LIMITED TO THE FINAL WEEKEND OF PHASE 4 WESTBOUND WORK.



**NOTES:**

WORK BETWEEN BROADWAY AVE. EXIT RAMP AND THE FORWARD ABUTMENT WILL REQUIRE THE CLOSURE OF THE EXIT RAMP FROM IR 77. THESE REPAIRS SHALL BE LIMITED TO THE FINAL WEEKEND OF PHASE 3 EASTBOUND WORK.

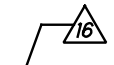


MOT PAVEMENT MARKING LEGEND		LEGEND	
(A)	ITEM 614 - WORK ZONE EDGE LINE (YELLOW)		WORK AREA
(B)	ITEM 614 - WORK ZONE EDGE LINE (WHITE)		DRUMS
(C)	ITEM 614 - WORK ZONE CHANNELIZING LINE		PORTABLE BARRIER
(D)	ITEM 614 - WORK ZONE DOTTED LINE		REMOVE EXISTING MARKINGS
			IMPACT ATTENUATOR
			DIRECTION OF TRAVEL

**NOTES:**

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2. SEE MT-95.40, MT-98.29, AND MT-102.10 FOR ADDITIONAL DETAILS.
3. THE CONTRACTOR SHALL COVER MESSAGES THAT ARE IN CONFLICT WITH THE MOT PHASING PLANS ON ALL GUIDE SIGNS.
4. STATIONING CALLOUTS ARE ALONG @ IR 490 UNLESS OTHERWISE NOTED.

16	6/21/21	NEW SHEET



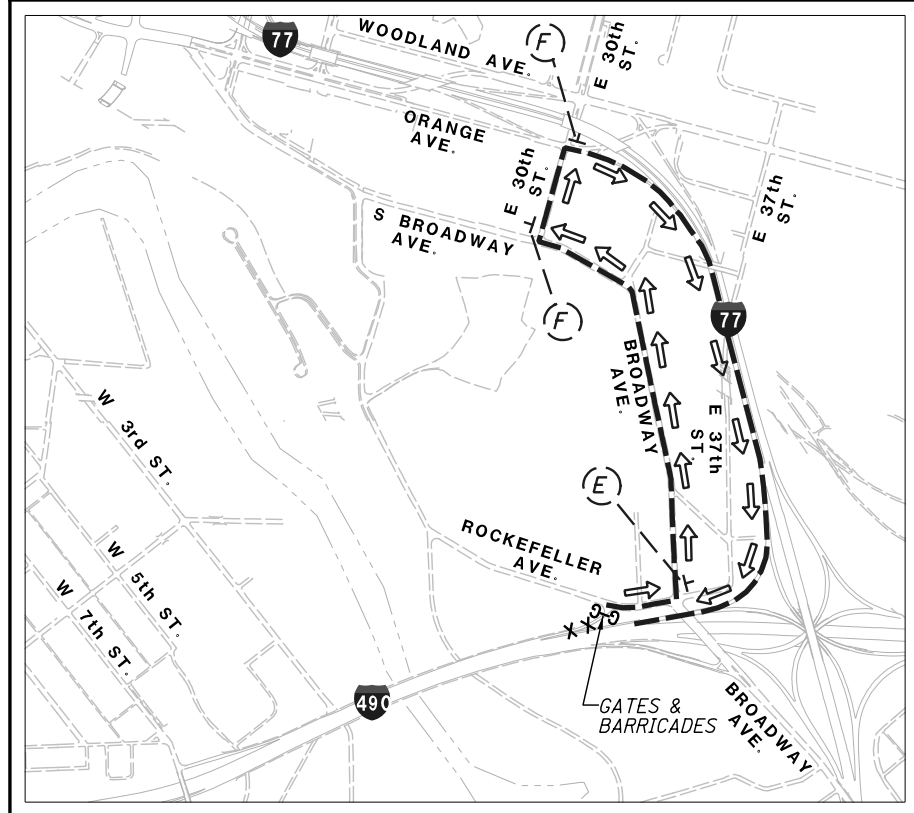
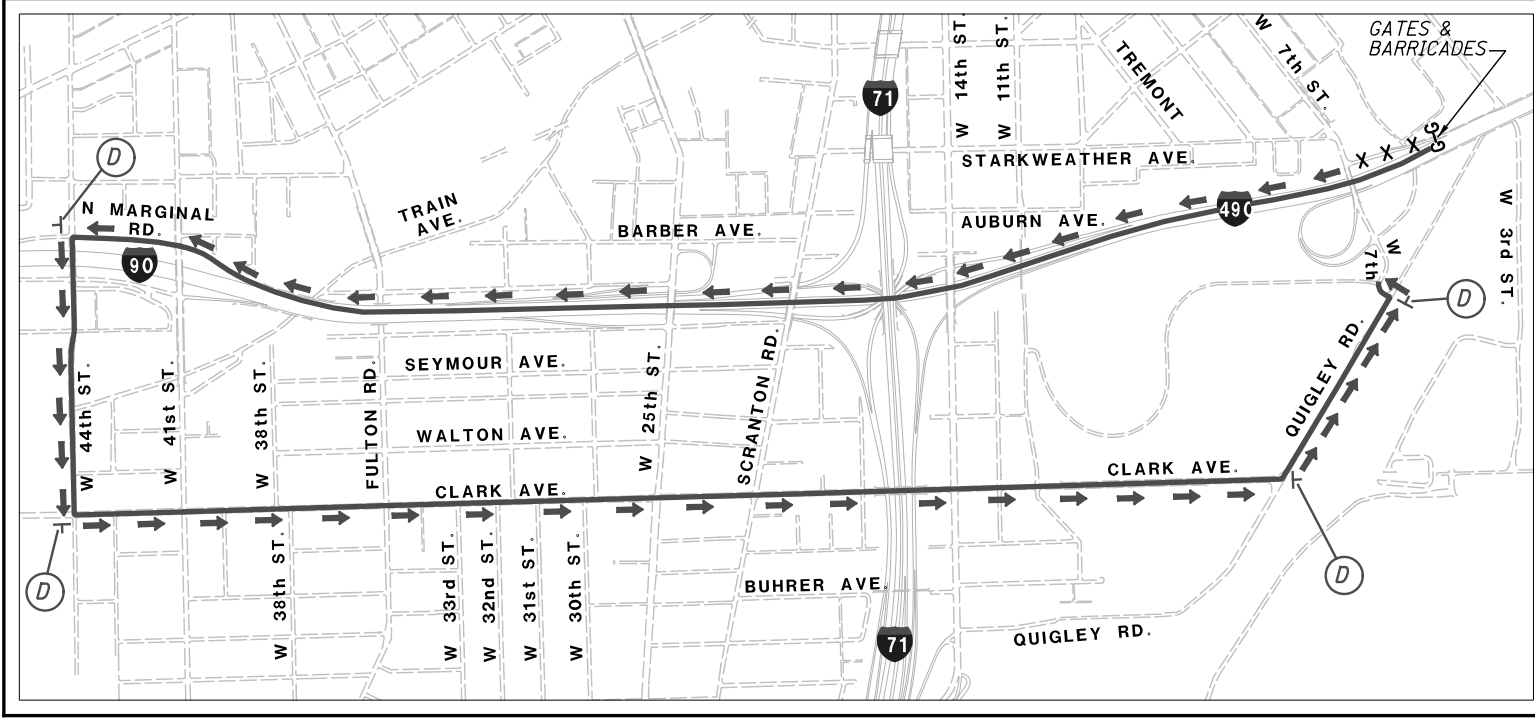
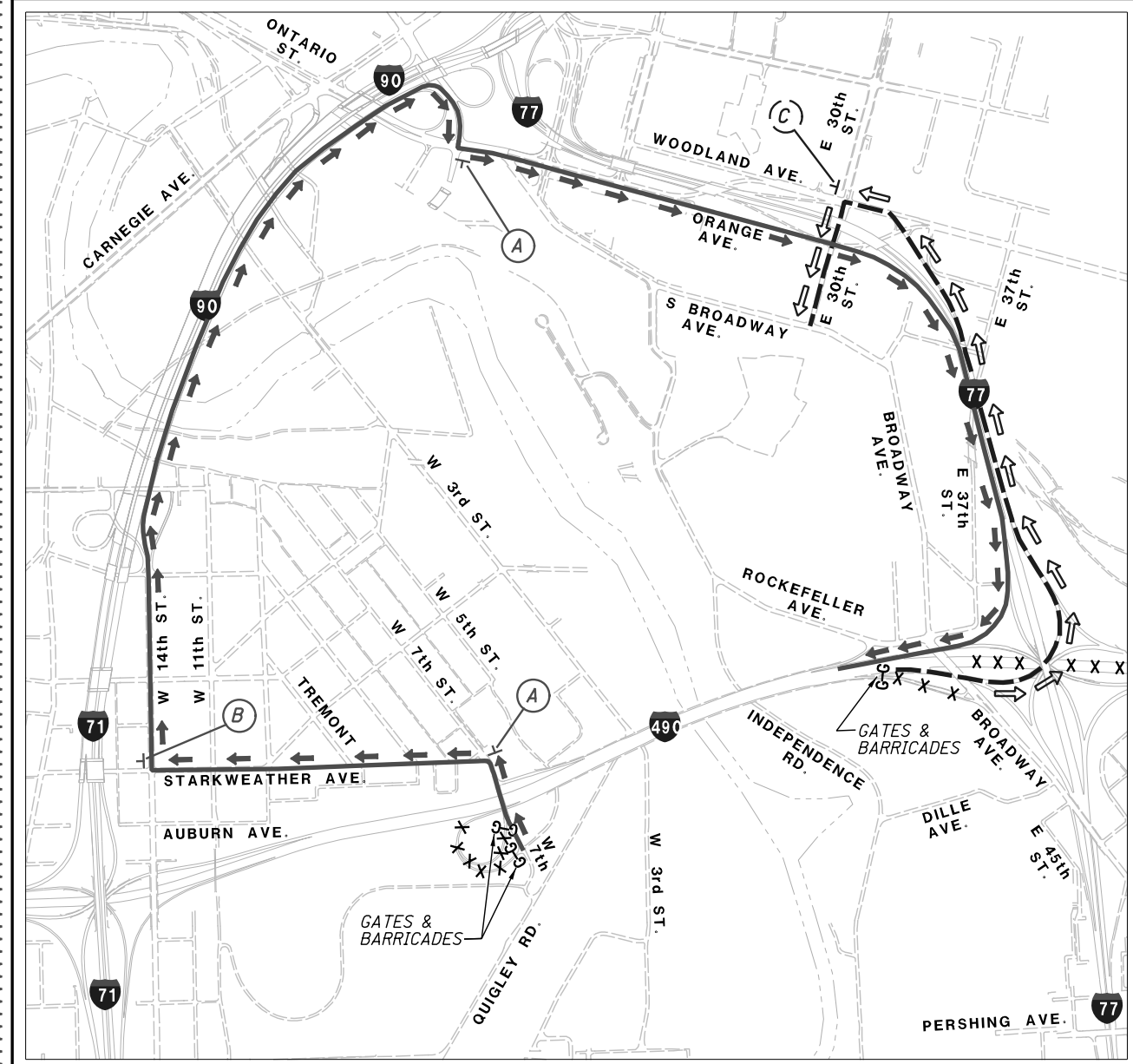
CALCULATED  
DAW  
CHECKED  
ALP

0 50 100  
25  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC PLAN**  
**LOCATION 16: CUY-490-0100 - PHASES 3 & 4**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

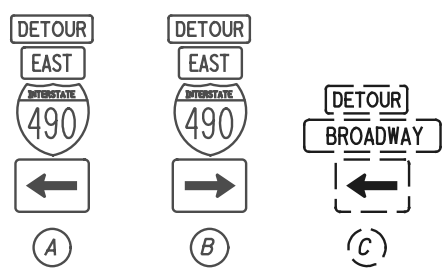
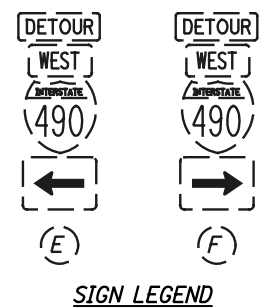
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**LEGEND**

XXX ROAD CLOSED

G-G GATES & BARRICADES AS PER MT-101.60



16	6/21/21	NEW SHEET

**ITEM 614 - DETOUR SIGNING**

ALL DETOUR SIGNS SHOWN SHALL BE INCLUDED FOR PAYMENT IN LUMP SUM PRICE BID FOR ITEM 614 DETOUR SIGNING. DETOUR SIGN ASSEMBLIES ARE 24" MINIMUM.

**NOTE:** DETOUR ROUTE SIGNS ARE 24" MINIMUM WITH APPROPRIATELY SIZED AUXILIARY SIGNS.

CALCULATED  
TJF  
CHECKED  
DAW

**MAINTENANCE OF TRAFFIC DETOUR ROUTE**

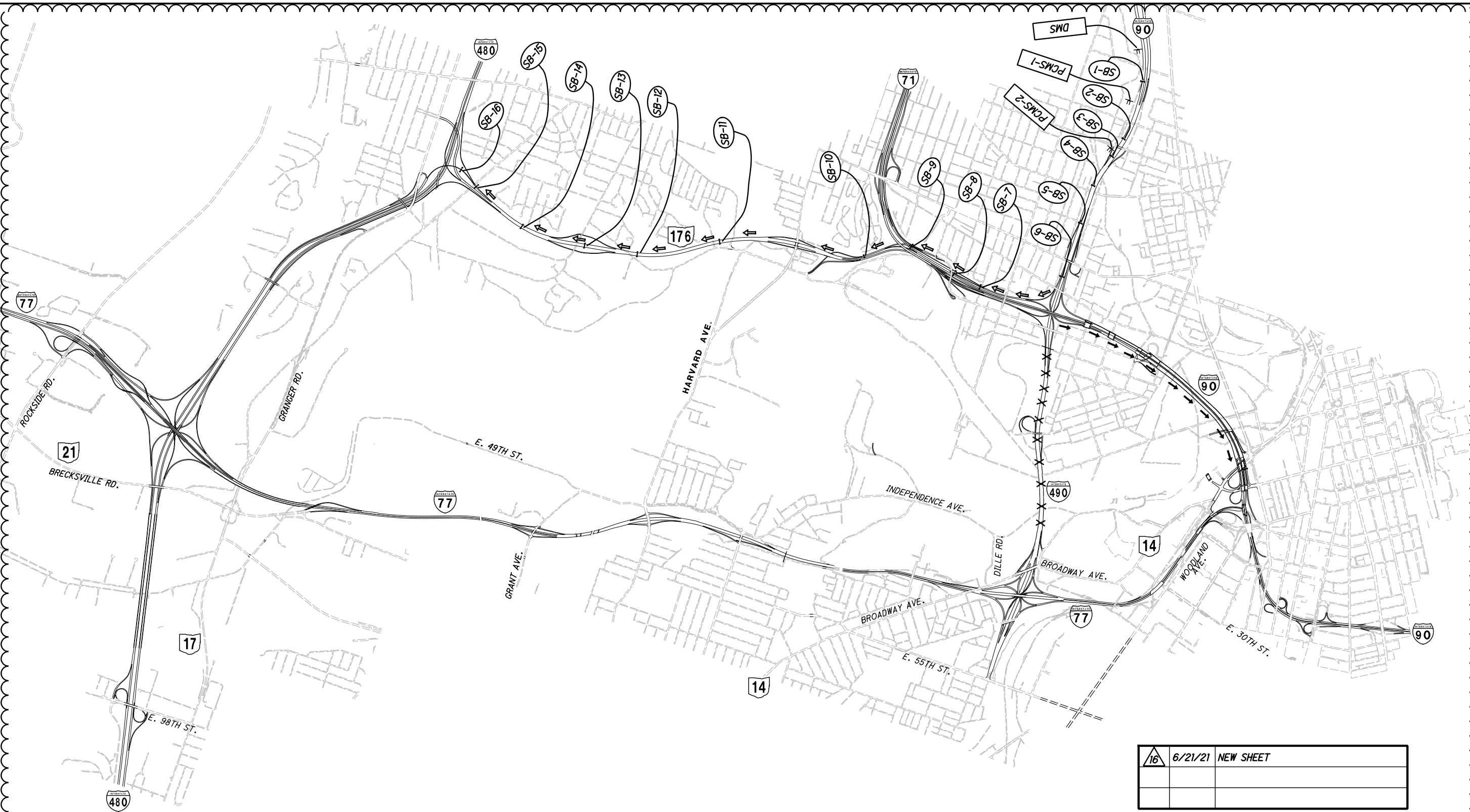
**CUY-BH-FY2021(B) MISC  
PID NO. 109131**

10 / 18

(66J)  
253



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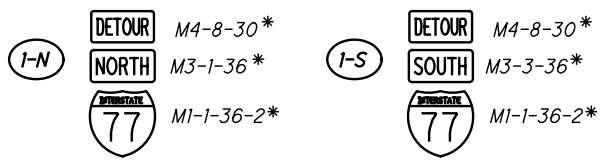


**NOTES:**

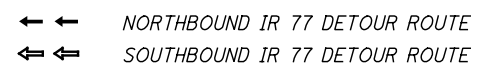
1. DURING WEEKEND CLOSURE ON 490 EB  
CLOSE IR 90 EB TO IR 490 EB PER  
SCD MT-99.50.
2. DETOUR ROUTE SIGNS ON INTERSTATES SHALL BE  
36" MINIMUM WITH APPROPRIATELY SIZED AUXILIARY  
SIGNS.

**614 DETOUR SIGNING**

ALL DETOUR SIGNS SHOWN SHALL BE INCLUDED FOR  
PAYMENT IN LUMP SUM PRICE BID FOR ITEM 614 DETOUR  
SIGNING. ALL PERMITTED DETOUR CLOSURES SHALL BE  
INCLUDED IN THIS LUMP SUM ITEM AND NOT PAID FOR  
PER EACH CLOSURE PERIOD.



\* SEE NOTE 2 FOR SIGN SIZES



16	6/21/21	NEW SHEET

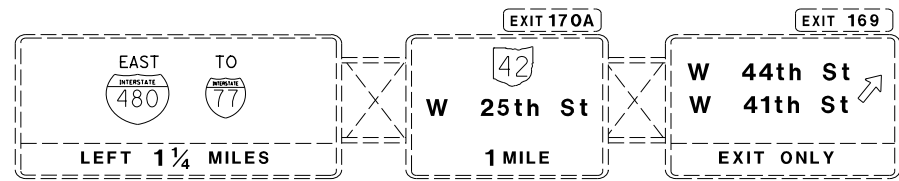
PORTABLE CHANGEABLE MESSAGE SIGNS RECOMMENDED MESSAGES		
	ALTERNATE ROUTE	
	FLASH 1	FLASH 2
PCMS-1	I-490 EB TO I-77 SB	USE SR-176 SOUTH
PCMS-2	I-490 EB TO I-77 NB	USE I-90 WEST
DMS	ROAD WORK I-490 EB USE DETOURS	



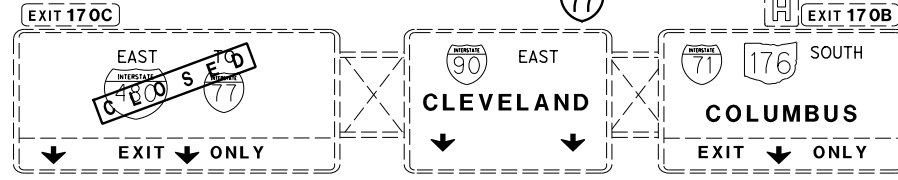
**MAINTENANCE OF TRAFFIC DETOUR ROUTE**  
**LOCATION 16: CUY-490-0100/IR 490 EASTBOUND**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

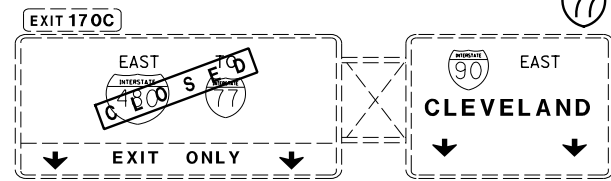
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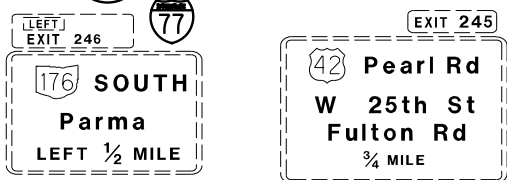
SB-1



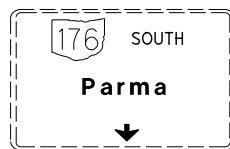
SB-6



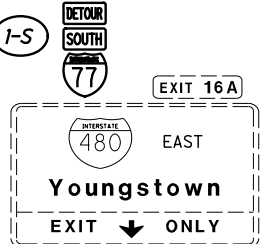
SB-2



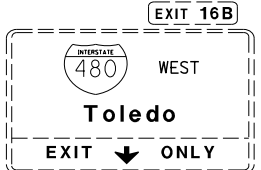
SB-7



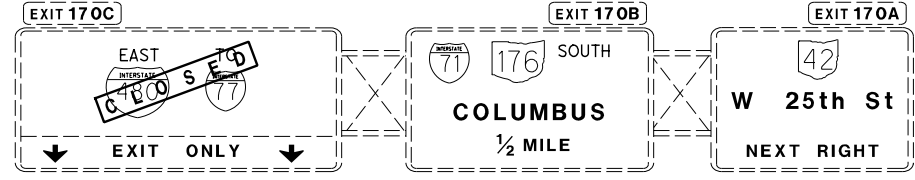
SB-12



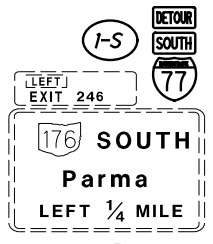
SB-13



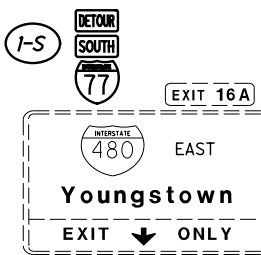
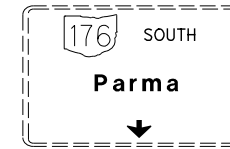
SB-14



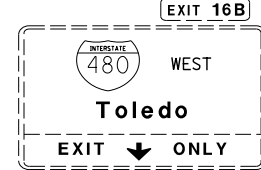
SB-3



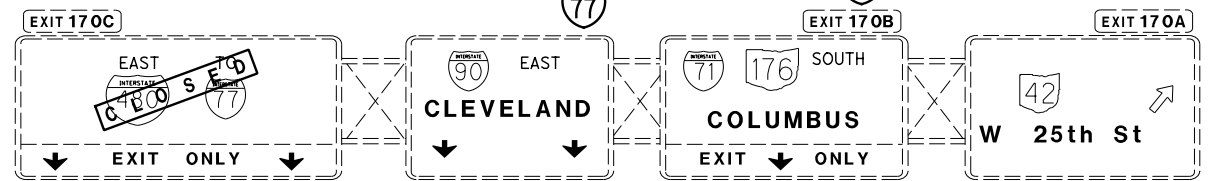
SB-8



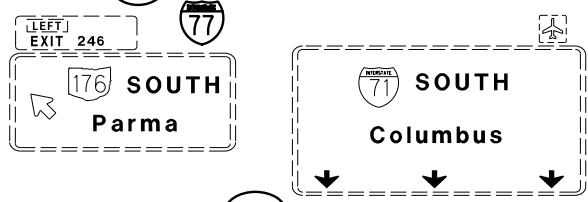
SB-10



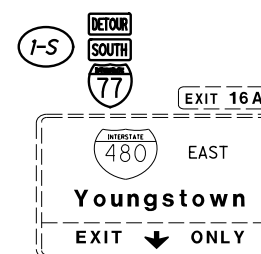
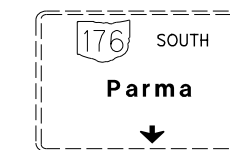
SB-11



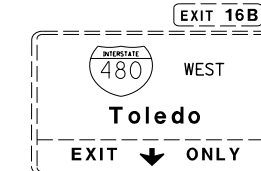
SB-4



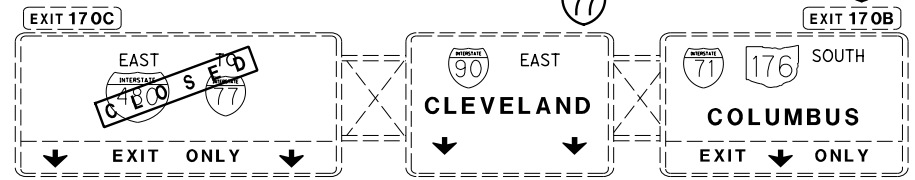
SB-5



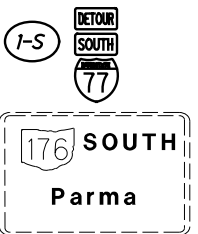
SB-7



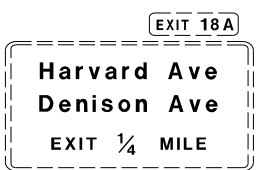
SB-8



SB-9



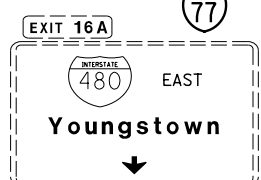
SB-10



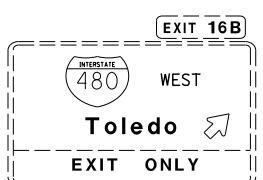
SB-11



SB-13



SB-14

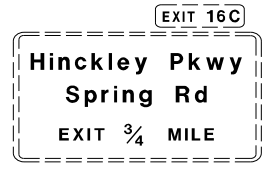


SB-15

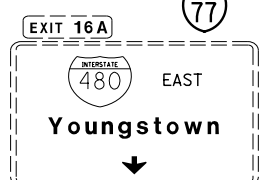
Table with 3 columns: 16, 6/21/21, NEW SHEET



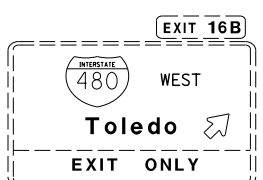
SB-16



SB-17



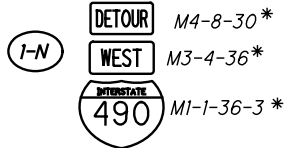
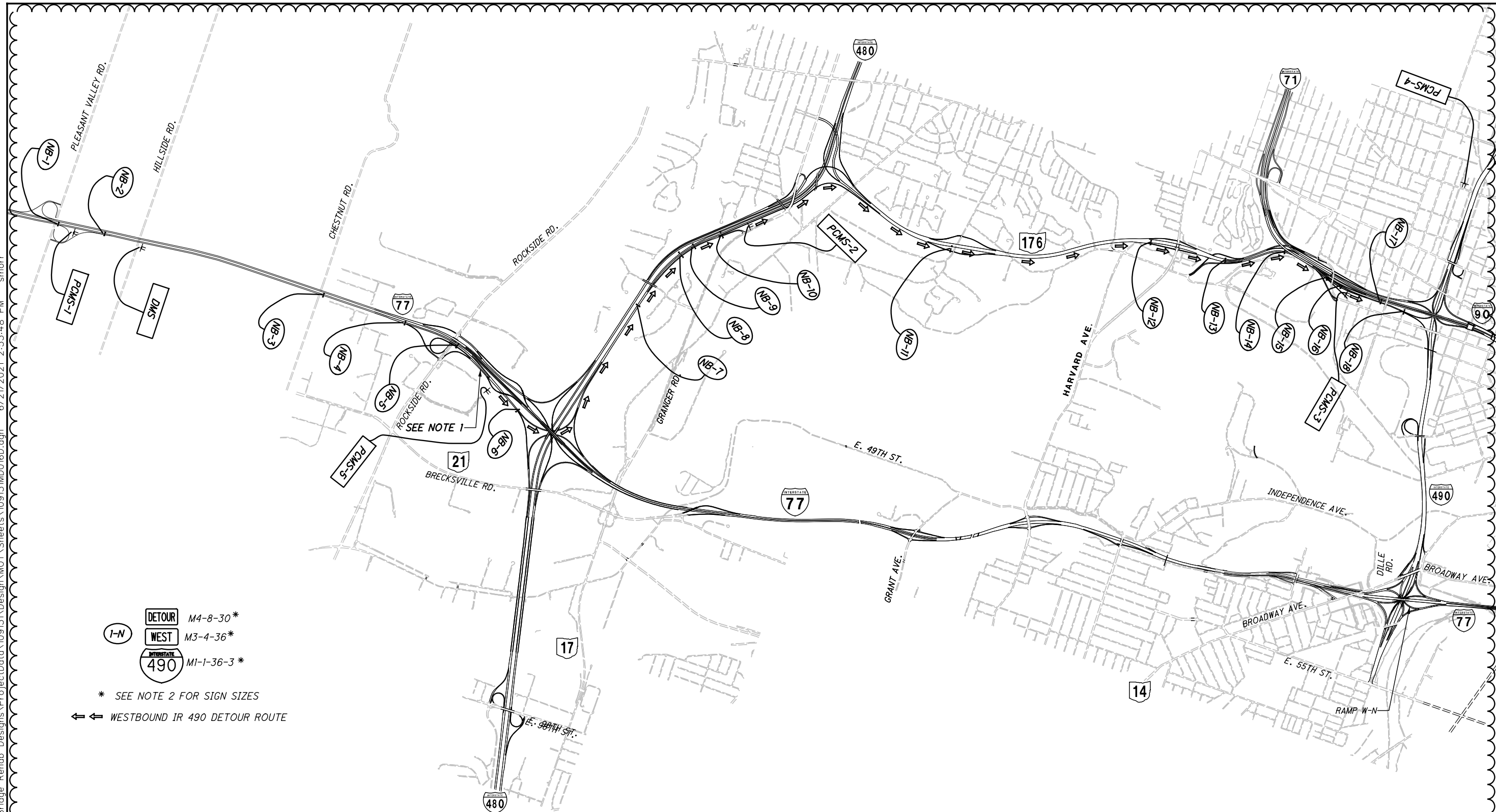
SB-18



SB-19

CALCULATED MAF CHECKED TJF MAINTENANCE OF TRAFFIC DETOUR ROUTE OVERHEAD SIGNS LOCATION 16: CUY-490-0100/IR 490 EASTBOUND CUY-BH-FY2021(B) MISC PID NO. 109131 12/18 66L 253

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- NOTES:**
- DURING WEEKEND CLOSURE OF RAMP S-W FROM IR 77 NB TO IR 490 WB PROVIDE DETOUR FOR IR 490 WB AT IR 77 NB AT IR 480.
  - DETOUR ROUTE SIGNS ON INTERSTATES SHALL BE 36" MINIMUM WITH APPROPRIATELY SIZED AUXILIARY SIGNS.

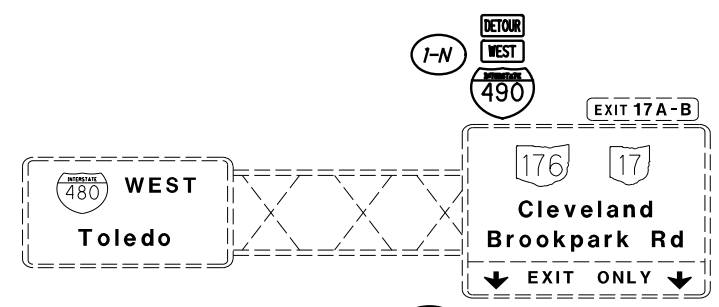
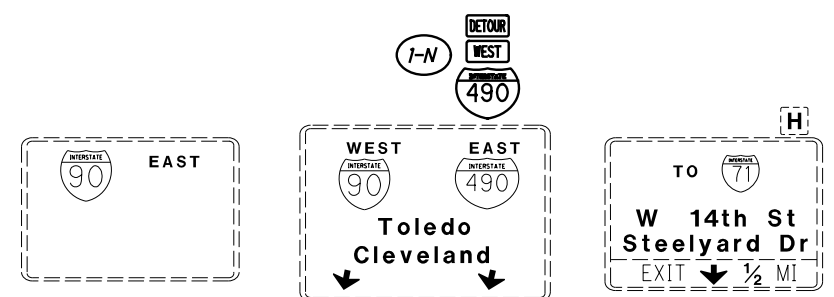
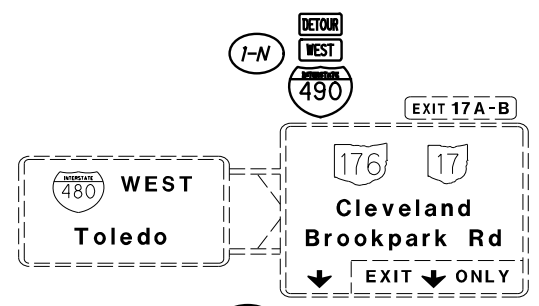
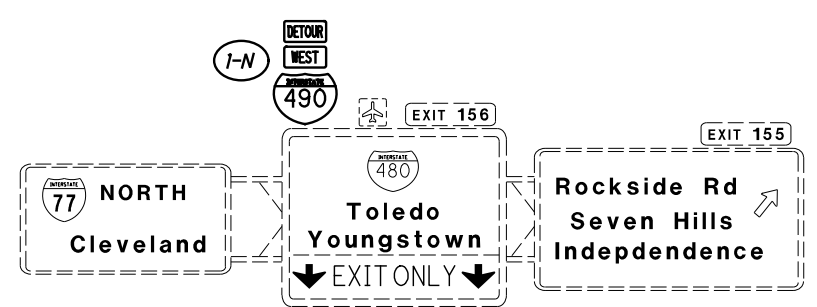
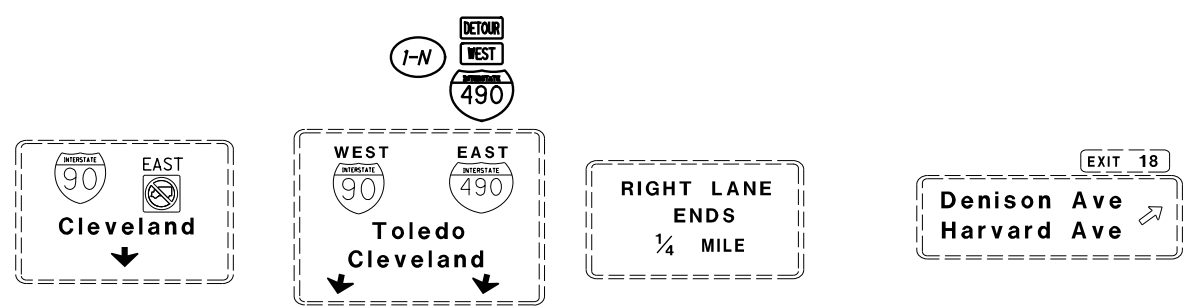
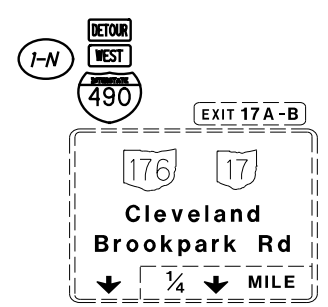
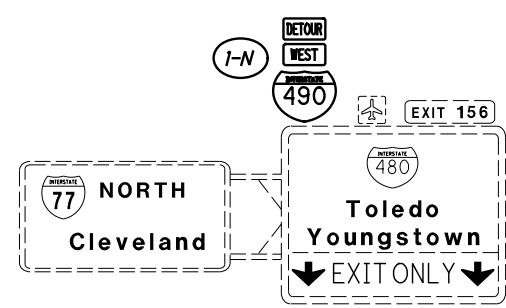
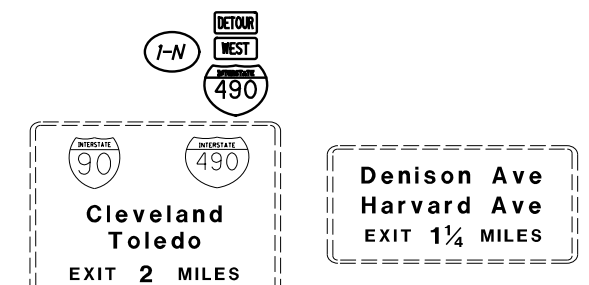
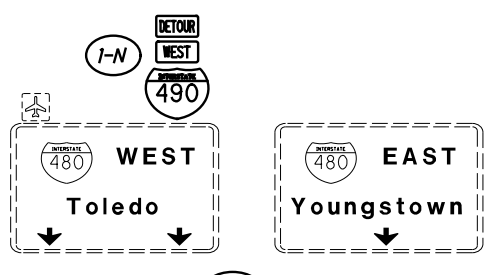
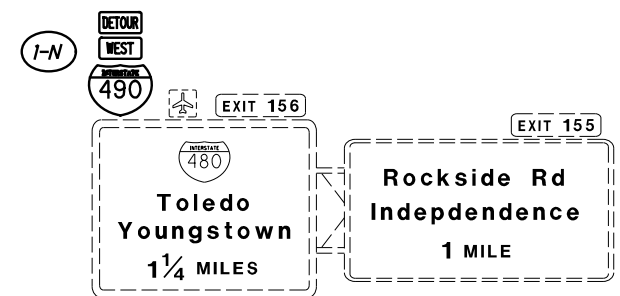
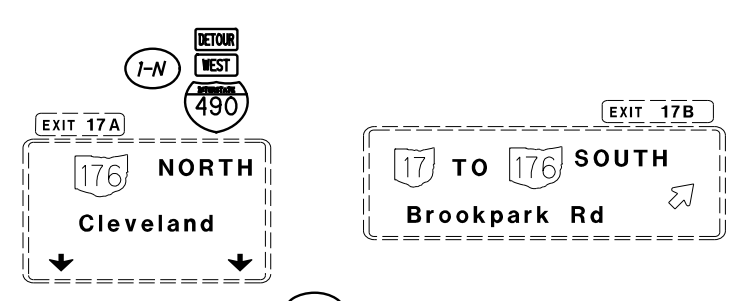
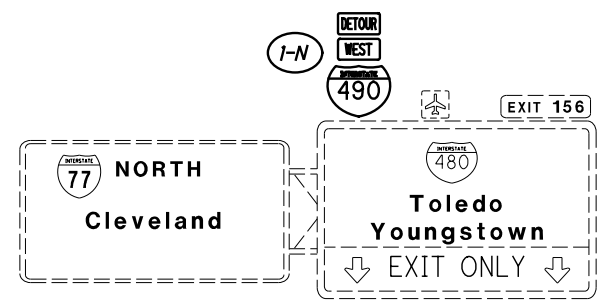
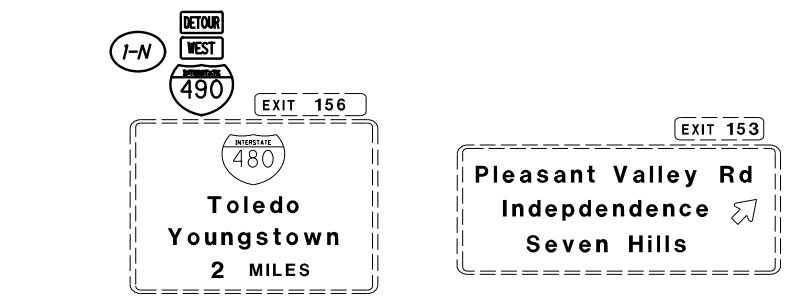
**614 DETOUR SIGNING**  
 ALL DETOUR SIGNS SHOWN SHALL BE INCLUDED FOR PAYMENT IN LUMP SUM PRICE BID FOR ITEM 614 DETOUR SIGNING. ALL PERMITTED DETOUR CLOSURES SHALL BE INCLUDED IN THIS LUMP SUM ITEM AND NOT PAID FOR PER EACH CLOSURE PERIOD.

PORTABLE CHANGEABLE MESSAGE SIGNS RECOMMENDED MESSAGES WHEN RAMP S-W IS CLOSED			
	77 NB DETOUR ROUTE		
	FLASH 1	FLASH 2	FLASH 1
PCMS-1	I-490 WB CLOSED	USE I-480 WEST	I-77 NB CLOSED
PCMS-2	I-490 WB CLOSED	USE 176 NORTH	N/A
PCMS-3	I-490 CLOSED TO 77	USE 90 EAST	N/A
PCMS-4	I-490 CLOSED TO 77	USE 90 EAST	N/A
PCMS-5	I-490 WB CLOSED	USE I-480 WEST	N/A
DMS	ROAD WORK I-490 WB USE DETOUR - I-480 WB		I-77 NB CLOSED AT I-490 USE ALT - I-480 WB

16	6/21/21	NEW SHEET

CALCULATED DAW CHECKED TJF  
 MAINTENANCE OF TRAFFIC DETOUR ROUTE  
 LOCATION 16: CUY-490-0100/RAMP S-W  
 CUY-BH-FY2021(B) MISC  
 PID NO. 109131  
 13 / 18  
 66M  
 253

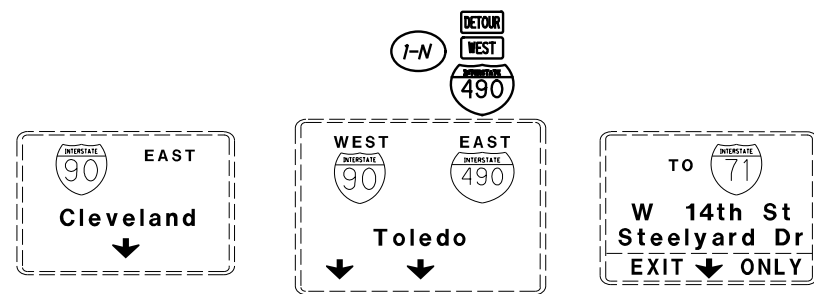
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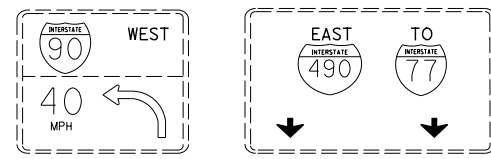
16	6/21/21	NEW SHEET

CALCULATED MAF CHECKED TJF  
**MAINTENANCE OF TRAFFIC DETOUR ROUTE OVERHEAD SIGNS**  
**LOCATION 16: CUY-490-0100/RAMP S-W**  
 CUY-BH-FY2021(B) MISC  
 PID NO. 109131  
 14 / 18  
 66N  
 253

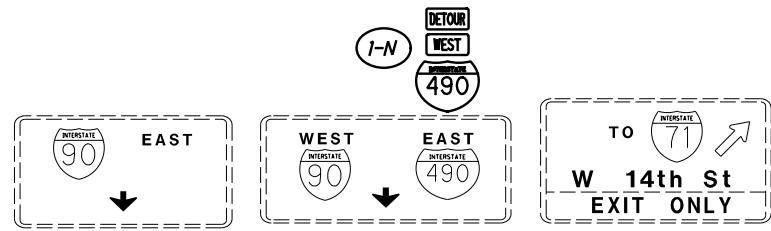
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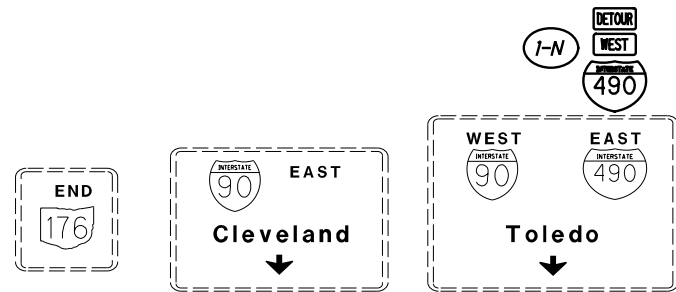
SR-176 NB (ON STRUCTURE DIRECTLY UNDER BRIDGE)  
NO WORK  
NB-14



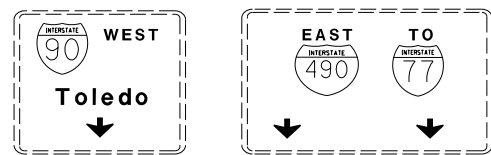
NO WORK  
NB-18



SR-176 NB (MTD. UNDER BRIDGE)  
NO WORK  
NB-15



NO WORK  
NB-16



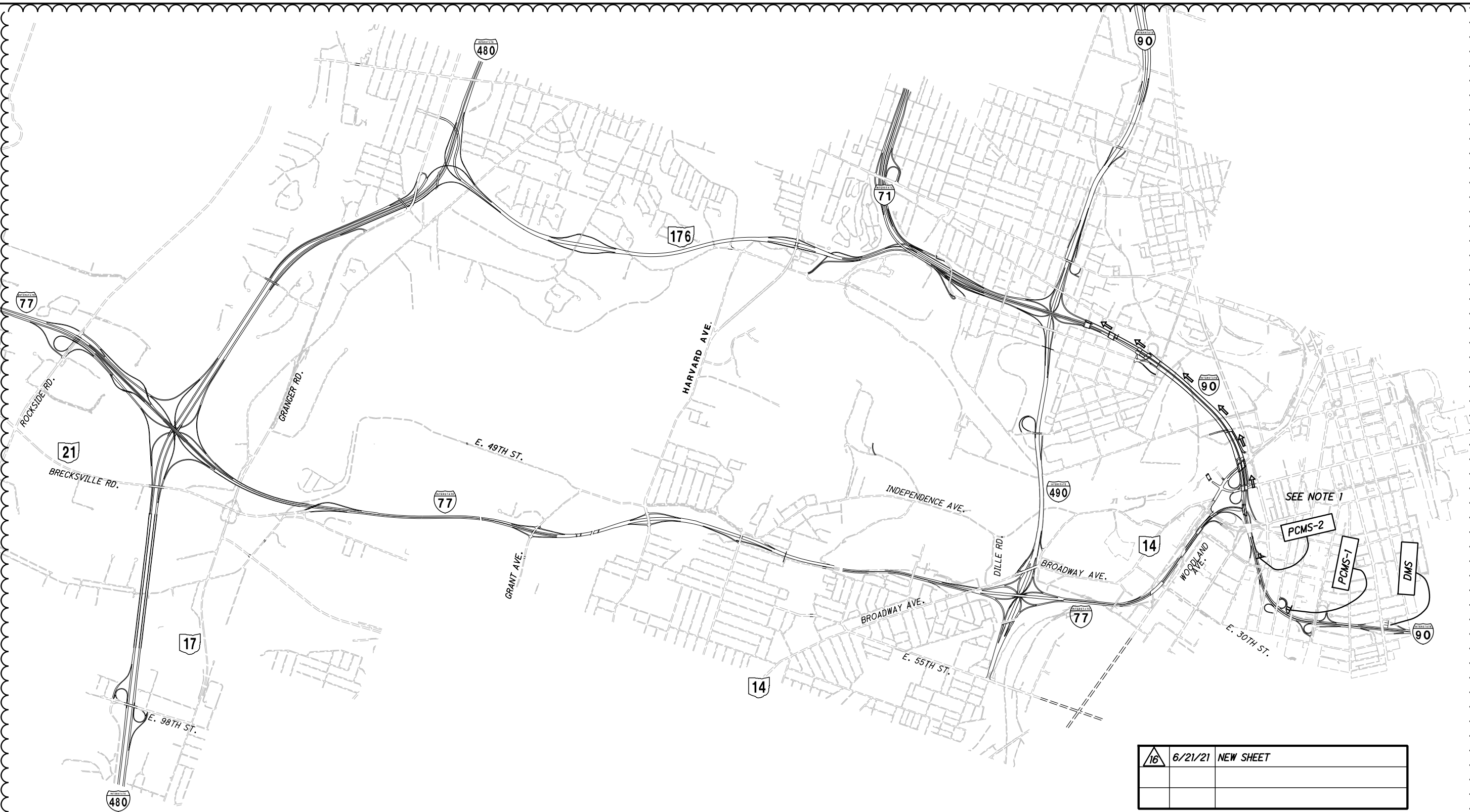
NO WORK  
NB-17



16	6/21/21	NEW SHEET

CALCULATED MAF T.JF  
 MAINTENANCE OF TRAFFIC DETOUR ROUTE OVERHEAD SIGNS  
 CUY-BH-FY2021(B) MISC  
 PID NO. 109131  
 LOCATION 16: CUY-490-0100/RAMP S-W  
 15 / 18  
 660  
 253

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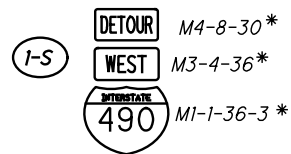


**NOTES:**

1. DURING WEEKEND CLOSURES ON RAMP N-W FROM IR 77 SB TO IR 490 WB PROVIDE DETOUR FOR IR 490 WB AT IR 77 SB.
2. DETOUR ROUTE SIGNS ON INTERSTATES SHALL BE 36" MINIMUM WITH APPROPRIATELY SIZED AUXILIARY SIGNS.

**614 DETOUR SIGNING**

ALL DETOUR SIGNS SHOWN SHALL BE INCLUDED FOR PAYMENT IN LUMP SUM PRICE BID FOR ITEM 614 DETOUR SIGNING. ALL PERMITTED DETOUR CLOSURES SHALL BE INCLUDED IN THIS LUMP SUM ITEM AND NOT PAID FOR PER EACH CLOSURE PERIOD.



\* SEE NOTE 2 FOR SIGN SIZES

← ← WESTBOUND IR 490 DETOUR ROUTE

16	6/21/21	NEW SHEET

PORTABLE CHANGEABLE MESSAGE SIGNS RECOMMENDED MESSAGES			
	DETOUR ROUTE		
	FLASH 1	FLASH 2	
PCMS-1	I-490 WB CLOSED	USE I-90 WEST	
PCMS-2	I-490 WB CLOSED	USE I-90 WEST	
DMS	ROAD WORK I-490 WB USE DETOUR - I-90 WB		

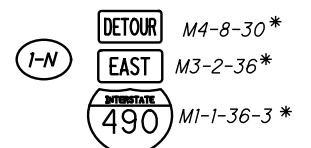
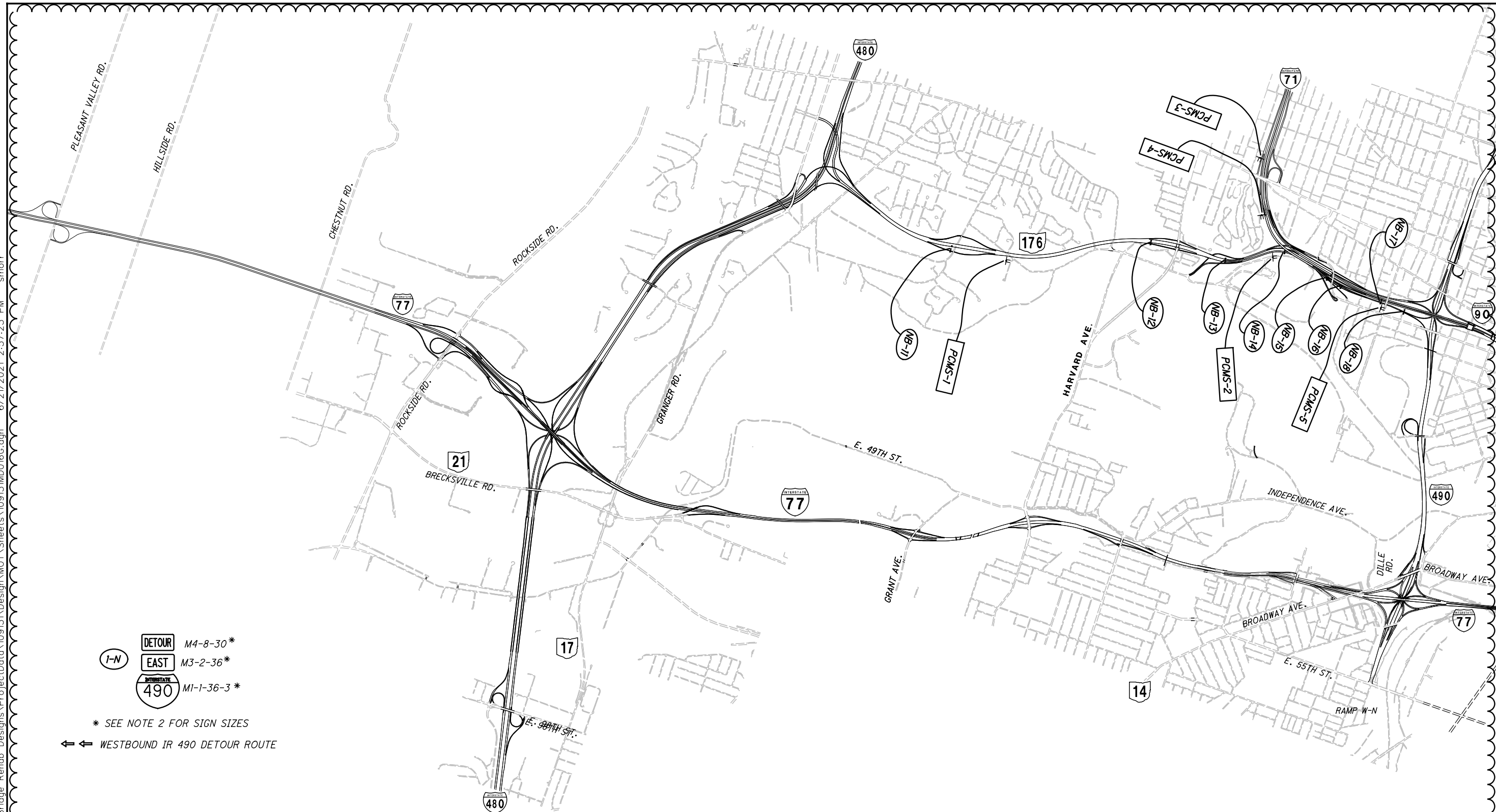
CALCULATED  
DAW  
CHECKED  
TJF

0 1500 3000  
750  
HORIZONTAL  
SCALE IN FEET

**MAINTENANCE OF TRAFFIC DETOUR ROUTE**  
**LOCATION 16: CUY-490-0100/RAMP N-W**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

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\* SEE NOTE 2 FOR SIGN SIZES

↑↑ WESTBOUND IR 490 DETOUR ROUTE

- NOTES:**
1. DURING WEEKEND CLOSURES ON IR 490 EB CLOSE THE EXIT RAMP TO IR 490 EB PER SCD MT-98.29.
  2. DETOUR ROUTE SIGNS ON INTERSTATES SHALL BE 36" MINIMUM WITH APPROPRIATELY SIZED AUXILIARY SIGNS.

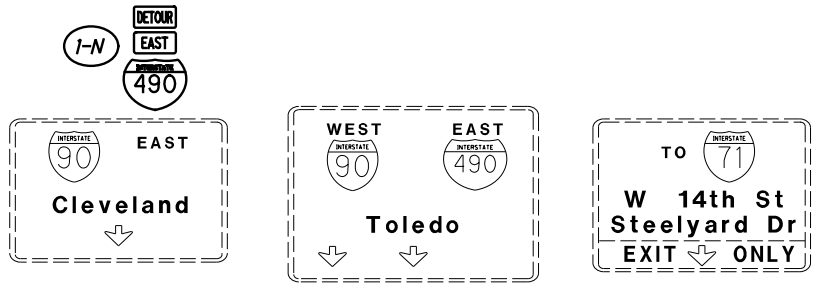
**614 DETOUR SIGNING**  
 ALL DETOUR SIGNS SHOWN SHALL BE INCLUDED FOR PAYMENT IN LUMP SUM PRICE BID FOR ITEM 614 DETOUR SIGNING. ALL PERMITTED DETOUR CLOSURES SHALL BE INCLUDED IN THIS LUMP SUM ITEM AND NOT PAID FOR PER EACH CLOSURE PERIOD.

PORTABLE CHANGEABLE MESSAGE SIGNS RECOMMENDED MESSAGES WHEN RAMP TO 490 EB CLOSED		
	FLASH 1	FLASH 2
PCMS-1	I-490 EB CLOSED	USE I-90 EB
PCMS-2	I-490 EB CLOSED	USE I-90 EB
PCMS-3	I-490 EB CLOSED	USE I-90 EB
PCMS-4	I-490 EB CLOSED	USE I-90 EB
PCMS-5	I-490 EB CLOSED	USE I-90 EB

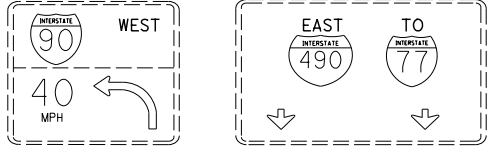
16	6/21/21	NEW SHEET

  
 0 1500 3000  
 HORIZONTAL SCALE IN FEET  
 CALCULATED DAW CHECKED TJF  
**MAINTENANCE OF TRAFFIC DETOUR ROUTE**  
**LOCATION 16: CUY-490-0100/RAMP 176/171 TO 490 EB**  
 CUY-BH-FY2021(B) MISC  
 PID NO. 109131  
 17 / 18  
 66Q  
 253

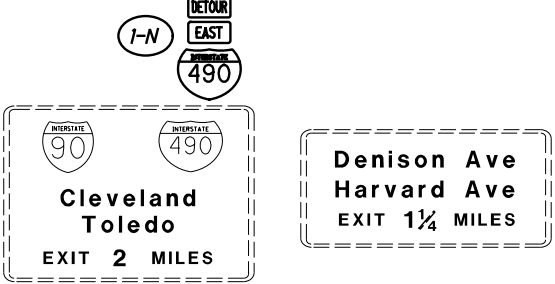
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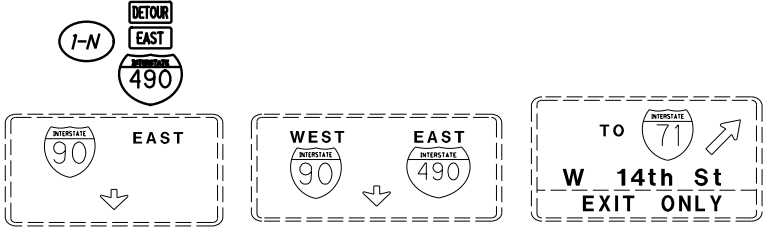
SR-176 NB (ON STRUCTURE DIRECTLY UNDER BRIDGE)



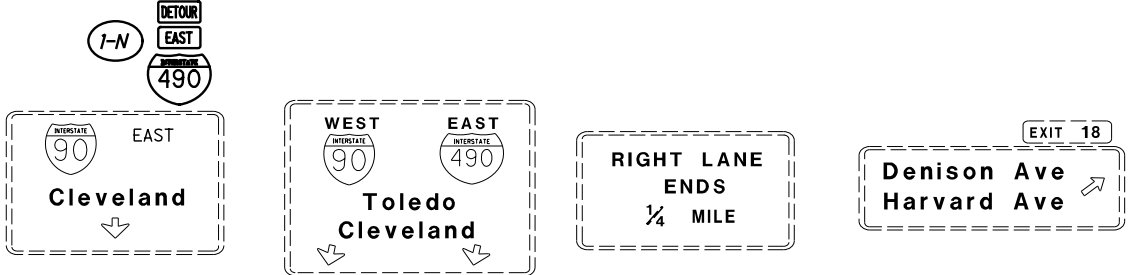
NO WORK



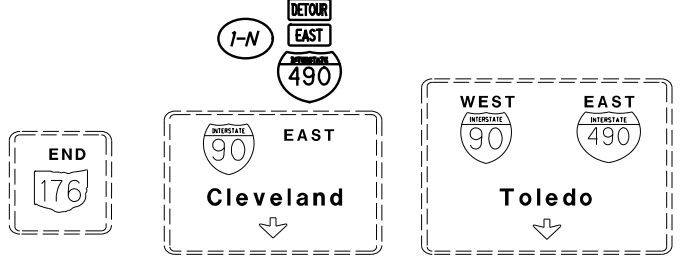
NB-11



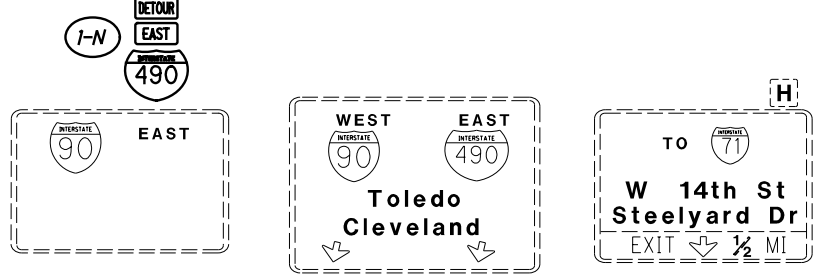
SR-176 NB (MTD. UNDER BRIDGE)



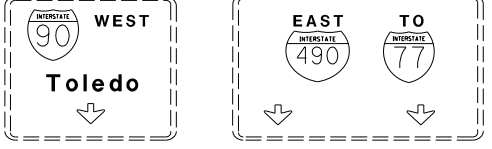
NB-12



NB-16



NB-13



NO WORK

NB-17



16	6/21/21	NEW SHEET

CALCULATED MAF CHECKED TJF  
 MAINTENANCE OF TRAFFIC DETOUR ROUTE OVERHEAD SIGNS  
 LOCATION 16: CUY-490-0100/RAMP S-W  
 CUY-BH-FY2021(B) MISC  
 PID NO. 109131  
 18 / 18  
 66R  
 253





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SHEET NUMBER														PARTICIPATION	ALT	ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.		
8-11	12-66	74-80	81	89-102	103-106	107-115	116-125	126-150	151-170	171-188	189-205	206-229	230-236	237-253	01/ NFP/BR	(X)							
				LS											LS		202	11201	LS			<b>STRUCTURE REPAIR (CUY-71-0467, SFN: 1803875 - LOCATION 3)</b>	
				24264											24264		509	10000	24264	LB		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	90
				150											150		509	20001	150	LB		<del>REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN</del>	<del>90</del>
				181											181		511	34449	181	CY		CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	90
				331											331		512	10050	331	SY		SEALING OF CONCRETE SURFACES (NON-EPOXY)	
				511											511		512	10101	511	SY		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	90
				940											940		512	10400	940	SY		TREATING OF CONCRETE BRIDGE DECK WITH SRS	
				16											16		512	10600	16	FT		CONCRETE REPAIR BY EPOXY INJECTION	
				1028											1028		513	21500	1028	LB		REPLACEMENT OF DETERIORATED END CROSSFRAMES	
				LS											LS		513	95020	LS			STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR	90
				81											81		516	11211	81	FT		STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	96
				10											10		516	45305	10	EACH		REFURBISH BEARING DEVICE, AS PER PLAN	90
				LS											LS		516	47001	LS			JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN	90
				12											12		518	12500	12	EACH		SCUPPER, MISC.: SCUPPER CLEANOUT	90
				596											596		SPECIAL	51900100	596	SF		COMPOSITE FIBER WRAP SYSTEM	91
				132											132		519	11101	132	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	90
				4664											4664		SPECIAL	53000600	4664	SF		STRUCTURES, TIMBER SUBDECK	90
				34											34		601	20000	34	SY		CRUSHED AGGREGATE SLOPE PROTECTION	
				84											84		844	10001	84	SF		CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	91
				555											555		607	39900	555	FT		<b>STRUCTURE REPAIR (CUY-71-0467, SFN: 1803875 - LOCATION 3) ALTERNATES</b>	
				555											555		SPECIAL	60740000	555	FT		VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC (ALTERNATE 1)	
																						VANDAL PROTECTION FENCE, 6' STRAIGHT WELDED WIRE WITH LETTERING (ALTERNATE 2)	100
				153											153		512	10101	153	SY		<b>STRUCTURE REPAIR (CUY-77-0223, SFN: 1805762 - LOCATION 5)</b>	
				152											152		512	74001	152	SY		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	104
				1604											1604		SPECIAL	51900100	1604	SF		REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	104
				7											7		519	11101	7	SF		COMPOSITE FIBER WRAP SYSTEM	104
				212											212		844	10001	212	SF		PATCHING CONCRETE STRUCTURE, AS PER PLAN	104
																						CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	104
				LS											LS		202	11203	LS			<b>STRUCTURE REPAIR (CUY-77-0881, SFN: 1806297 - LOCATION 6)</b>	
				3											3		511	34410	3	CY		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN	108
				248											248		512	10101	248	SY		CLASS QC2 CONCRETE, SUPERSTRUCTURE	
				241											241		512	74001	241	SY		SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	108
				741											741		513	90000	741	LB		REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	108
				LS											LS		514	21000	LS			STRUCTURAL STEEL, MISC.: DAMAGED CROSSFRAME REPLACEMENT	114,115
				1166											1166		SPECIAL	51900100	1166	SF		FIELD PAINTING OF DAMAGED STRUCTURAL STEEL	
				67											67		519	11101	67	SF		COMPOSITE FIBER WRAP SYSTEM	109
				7											7		519	12200	7	SY		PATCHING CONCRETE STRUCTURE, AS PER PLAN	108
				34											34		844	10001	34	SF		PATCHING CONCRETE BRIDGE DECK - TYPE A	108
				LS											LS							CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN	109
				LS											LS		849	10000	LS			DAMAGE ASSESSMENT	
				5											5		849	10600	5	hour		SURFACE PREPARATION	
				LS											LS		849	10700	LS			REPAIRING DAMAGED MEMBERS BY GRINDING	
																						STRAIGHTENING DAMAGED MEMBERS	

**GENERAL SUMMARY**

CUY-BH-FY2021(B) MISC  
PID NO. 109131

1	3/8/21	REMOVE PARTICIPATION SPLIT/ REMOVE QUANTITY
14	6/9/21	REVISE QUANTITY
18	6/24/21	ADD REINFORCING STEEL ITEM









**REFER TO STANDARD BRIDGE DRAWINGS:**

BR-2-15 (DATED 7-17-2015)  
EXJ-4-87 (REVISED 1-19-2018)  
GSD-1-19 (REVISED 1-15-2021)

**REFER TO SUPPLEMENTAL SPECIFICATIONS:**

SS 800 (DATED 1-15-2021)  
SS 844 (DATED 4-20-2018)

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN**

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES AND THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. 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 CMS 501.05.

THIS WORK CONSISTS OF THE REMOVAL OF PARAPETS, FENCING, SIDEWALKS, END CROSS FRAMES, ABUTMENT BACKWALL, SLAB AND SIDEWALK CONCRETE, APPROACH SLAB, 1 1/2" S.P.C. OVERLAY, ADDITIONAL EPOXY COATED REINFORCEMENT AND EXPANSION JOINTS AS INDICATED IN THE PLANS.

**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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 12 OFFICE  
5500 TRANSPORTATION BOULEVARD  
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:  
[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

**DESCRIPTION OF WORK:**

1. PATCH ABUTMENTS
2. PATCH PIERS AND FIBERWRAP
3. REFURBISH ABUTMENT BEARING DEVICES
4. REPAIR FORWARD ABUTMENT SLOPE PROTECTION
5. REPLACE DETERIORATED CROSS FRAMES
6. INSTALL TIMBER SUB DECKING
7. CLEAN OUT SCUPPERS
8. REMOVE AND REPLACE EXPANSION JOINTS
9. REPLACE PARAPETS, VANDAL PROTECTION FENCE, AND SIDEWALKS
10. REPAIR SIDEWALK COVER PLATES
11. SEAL DECK WITH SRS TREATMENT
12. REPLACE GUARDRAIL AT APPROACHES
13. PATCH AND SEAL APPROACH SIDEWALK

**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 IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. 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 AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ANY DAMAGE DONE TO THE EXISTING BRIDGE DECK WEARING SURFACE, CONCRETE OR ASPHALT DUE TO THE CONTRACTOR'S NEGLIGENCE AND LACK OF CARE WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR. ANY PRE-EXISTING CONDITIONS SHALL BE AGREED UPON, NOTED AND DOCUMENTED BY THE CONTRACTOR AND PROJECT ENGINEER PRIOR TO THE START OF WORK AT THAT LOCATION.

**ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN**

PROPOSED CONCRETE FOR BOTH THE PARAPET AND SIDEWALK ON THE DECK AND APPROACH SLABS SHALL BE QUANTIFIED IN CUBIC YARDS AND BE INCLUDED FOR PAYMENT UNDER ITEM 511 - CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN.

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

SEAL ALL PIER CAPS, ABUTMENT BACK WALLS, AND ABUTMENT STEMS WHERE ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN WAS PERFORMED. THE PROPOSED CONCRETE PARAPETS WITH TWIN STEEL TUBE RAILS SHALL ALSO BE SEALED. THE COLOR OF THE FINISH COAT SHALL BE FS NO. 17778 (LIGHT NEUTRAL). CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, FENCE AND POSTS, RAILING AND ALL OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE SEALING OPERATIONS. SEALING OF THE FIBER WRAPPED AREAS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO SEAL ALL OF THE AREAS DETAILED IN THE PLANS SHALL BE PAID UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

**ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR**

THE PLATES COVERING THE SIDEWALK EXPANSION OPENINGS SHALL BE RETROFIT. TRIM EXISTING BENT SLIDING PLATE AT THE FENCE OF SIDEWALK ARMOR. GRIND THE CUT EDGE FLUSH WITH THE TOP SURFACE OF THE ARMOR. WELD THE NEW SLIDING PLATE TO THE TOP OF THE ABUTMENT ARMOR.

MATERIAL SHALL BE A709 GRADE 36 OR 50.

PAINTING OF THIS REPAIR WORK IS NOT REQUIRED.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO REMOVE THE EXISTING SLIDING PLATE AND INSTALL THE NEW SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL, MISC.: SIDEWALK COVER PLATE REPAIR.

**ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN**

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 (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 [15° C], 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.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN**

THIS WORK INCLUDES RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS 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 ACCORDANCE 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.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

**ITEM 518 - SCUPPER, MISC.: SCUPPER CLEANOUT**

IN ADDITION TO CMS 518, THIS WORK SHALL ALSO CONSIST OF REMOVING SEDIMENT AND DEBRIS FROM THE EXISTING SCUPPERS SPECIFIED IN THE PLANS. ALL MATERIAL REMOVED SHALL BE DISPOSED OF AS PER 105.16 AND 105.17. ALL DRAINAGE SHALL BE CLEANED OUT TO THE SATISFACTION OF THE ENGINEER.

ALL COSTS INCLUDING LABOR, MATERIALS, EQUIPMENT AND INCIDENTALS TO PERFORM THIS WORK AS APPROVED BY THE ENGINEER SHALL BE PAID FOR AT THE UNIT PRICE BID EACH, FOR ITEM 518 - SCUPPER, MISC.: SCUPPER CLEANOUT, EACH.

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

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 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.

**ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK**

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.

MATERIALS:

TIMBER BEAMS SHALL CONFORM TO CMS 711.26 AND SHALL BE DOUGLAS FIR LARCH WITH A COMMERCIAL GRADE OF NO. 2 OR BETTER OR SOUTHERN PINE WITH A COMMERCIAL GRADE OF NO. 2 OR BETTER. PRESERVATIVE TREATMENT FOR TIMBER BEAMS SHALL CONFORM TO CMS 712.06.

THE TIMBER SHEATHING SHALL BE 3/4" CDX PRESERVATIVE TREATED PLYWOOD MANUFACTURED FROM EITHER DOUGLAS FIR OR SOUTHERN PINE. 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 SUBDECKING. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK.

**ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN**

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 EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

18

18	6/24/21	ADD DAMAGE NOTE/REINFORCING NOTE

GENERAL NOTES CONTINUED: SEE SHEET 3/14.

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DESIGN AGENCY:  330 W. ST. CLAIR, CLEVELAND, OH 44115

DATE: 1/2021

REVIEWED: RJM

STRUCTURE FILE NUMBER: 1803875

DRAWN: JAG

CHECKED: RJM

DESIGNED: PPA

GENERAL NOTES - LOCATION 3

BRIDGE NO. CUY-71-0467

WHITNEY ROAD OVER IR 71

CUY-BH-FY2021(B) MISC

PID No. 109131

2 / 14

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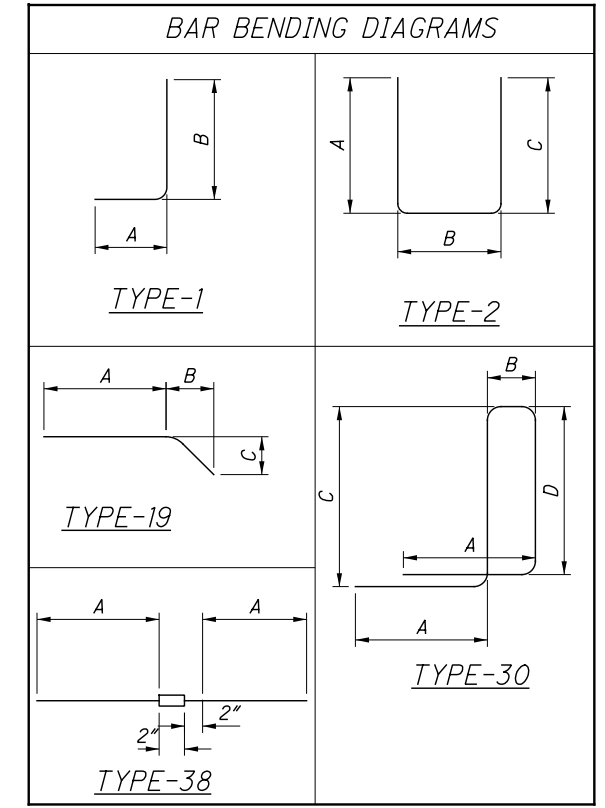
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ESTIMATED QUANTITIES

CALC BY: PPA DATE: 10/2020  
CHECK BY: CBY DATE: 10/2020

ITEM	EXT.	QUANTITY	UNIT	DESCRIPTION	SUPER	PIERS	ABUT.	GEN'L	REF. SHEET
202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN					2/14
509	10000	24264	LB	EPOXY COATED REINFORCING STEEL	24264				2/14
509	20001	150	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				150	2/14
511	34449	181	CY	CLASS GC2 CONCRETE, BRIDGE DECK (PARAPET), AS PER PLAN	112			89	2/14
512	10050	331	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	331				
512	10101	511	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	494	10	7		2/14
512	10400	940	SY	TREATING OF CONCRETE BRIDGE DECK WITH SRS	940				
512	10600	16	FT	CONCRETE REPAIR BY EPOXY INJECTION	6		10		
513	21500	1028	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES	1028				
513	95020	LS		STRUCTURAL STEEL, MISC: SIDEWALK COVER PLATE REPAIR					2/14
516	11211	88	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN	88				8/14
516	45305	10	EACH	REFURBISH BEARING DEVICE, AS PER PLAN	10				2/14
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN					2/14
518	12500	12	EACH	SCUPPER, MISC.: SCUPPER CLEANOUT	12				2/14
519	00100	596	SF	SPECIAL - COMPOSITE FIBER WRAP SYSTEM		596			3/14
519	11101	132	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	25	44	63		2/14
530	00600	4664	SF	SPECIAL - STRUCTURES, TIMBER SUBDECK	4664				2/14
601	20000	34	SY	CRUSHED AGGREGATE SLOPE PROTECTION				34	
844	10001	84	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN		84			3/14



MARK	NUMBER			LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC.
RAILINGS													
R501			160	30'-0"	5007	ST.							
R502			16	10'-0"	167	ST.							
R503			64	11'-6"	768	ST.							
R504			216	5'-6"	1240	ST.							
R505	BAR NOT USED												
R506			8	11'-6"	96	1	0'-10"	10'-9"					
R507			8	6'-3"	53	1	3'-5"	2'-11"				7 3/8"	
R508			8	11'-11"	100	ST.							
R509			4	13'-7"	57	19	12'-2"	1'-4 1/4"	0'-5"				
R510			4	13'-6"	57	ST.							
R511			16	13'-5"	224	ST.							
R512			16	13'-7"	227	19	12'-2"	1'-4 1/4"	0'-5"				
R513	BAR NOT USED												
R514	BAR NOT USED												
R515			798	9'-10"	8185	30	1'-6"	0'-8"	3'-5"	3'-3"			
R516			112	10'-10"	1266	30	1'-6"	0'-8"	3'-11"	3'-9"			
R517			20	4'-6"	94	1	3'-1"	1'-6"					
R518			20	4'-4"	91	1	2'-11"	1'-6"					
TOTAL =					17632								

MARK	NUMBER			LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC.
SIDEWALKS													
S501			452	4'-8"	2201	ST.							
S502			120	30'-0"	3755	ST.							
S503			48	13'-6"	676	ST.							
TOTAL =					6632								

MARK	NUMBER			LENGTH	WEIGHT (LBS)	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC.
SUPERSTRUCTURE													
S401			128	2'-4"	200	2	0'-7 1/4"	1'-5"					
S601			12	14'-6"	262	ST.							
S602			12	7'-0"	127	38	3'-4"						
S701			12	14'-6"	356	ST.							
S702			12	7'-10"	193	38	3'-9"						
TOTAL =					938	**							

\*\* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL INCLUDED WITH ITEM 516 - STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL, AS PER PLAN FOR PAYMENT.

18	6/24/21	ADD REINFORCING STEEL ITEM
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NOTES:

- THE BAR SIZE NUMBER IS SPECIFIED ON THE PLANS IN THE BAR MARK COLUMN. THE FIRST DIGIT INDICATES THE BAR SIZE NUMBER. FOR EXAMPLE, R501 IS A NO. 5 BAR.
- BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. "R" INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.
- "ST." INDICATES A STRAIGHT BAR.
- ALL REINFORCING TO BE EPOXY COATED.
- SEE SHEET 10/14 FOR DETAILS OF RAILING AND SIDEWALK REINFORCING.

DESIGN AGENCY: 333 W. ST. CHARLES, CLEVELAND, OH 44115

DATE: 1/2021

REVIEWED: RJM

DRAWN: JAG

DESIGNED: PPA

CHECKED: RPM

STRUCTURE FILE NUMBER: 1803875

ESTIMATED QUANTITIES & REINFORCING SCHEDULE - LOCATION 3

BRIDGE NO. CUY-71-0467

WHITNEY ROAD OVER IR 71

CUY-BH-FY2021(B) MISC

PID No. 109131

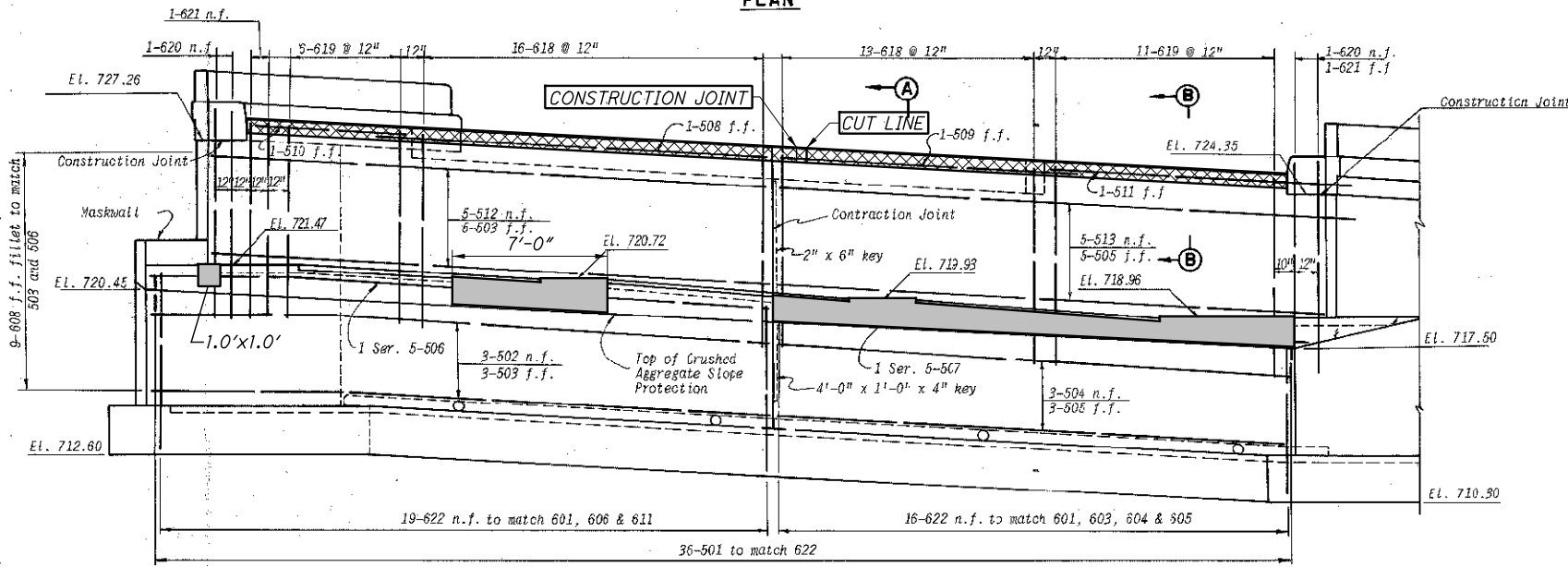
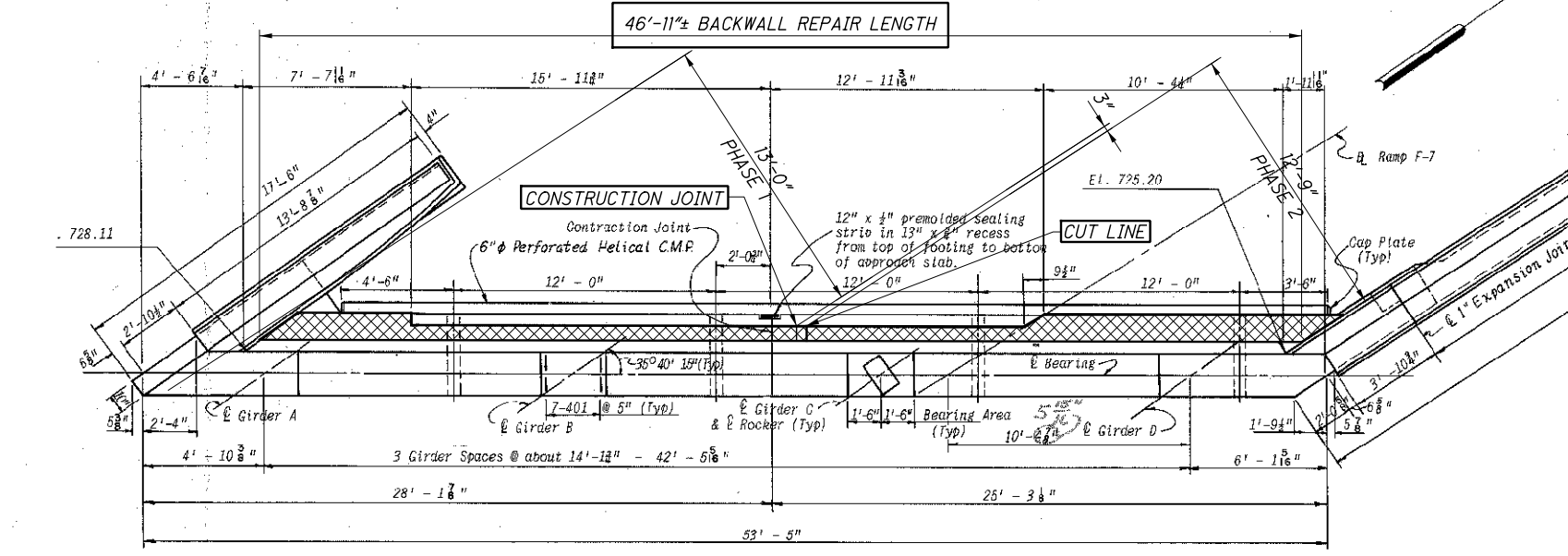
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NOTE: Elevations along backwall are given to top of 8 x 4 x 1 angle at end dam.  
Curb transitions the same for both wingwalls.



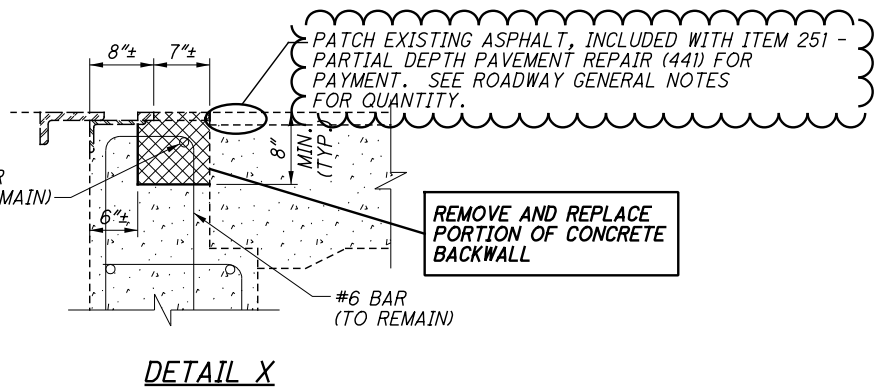
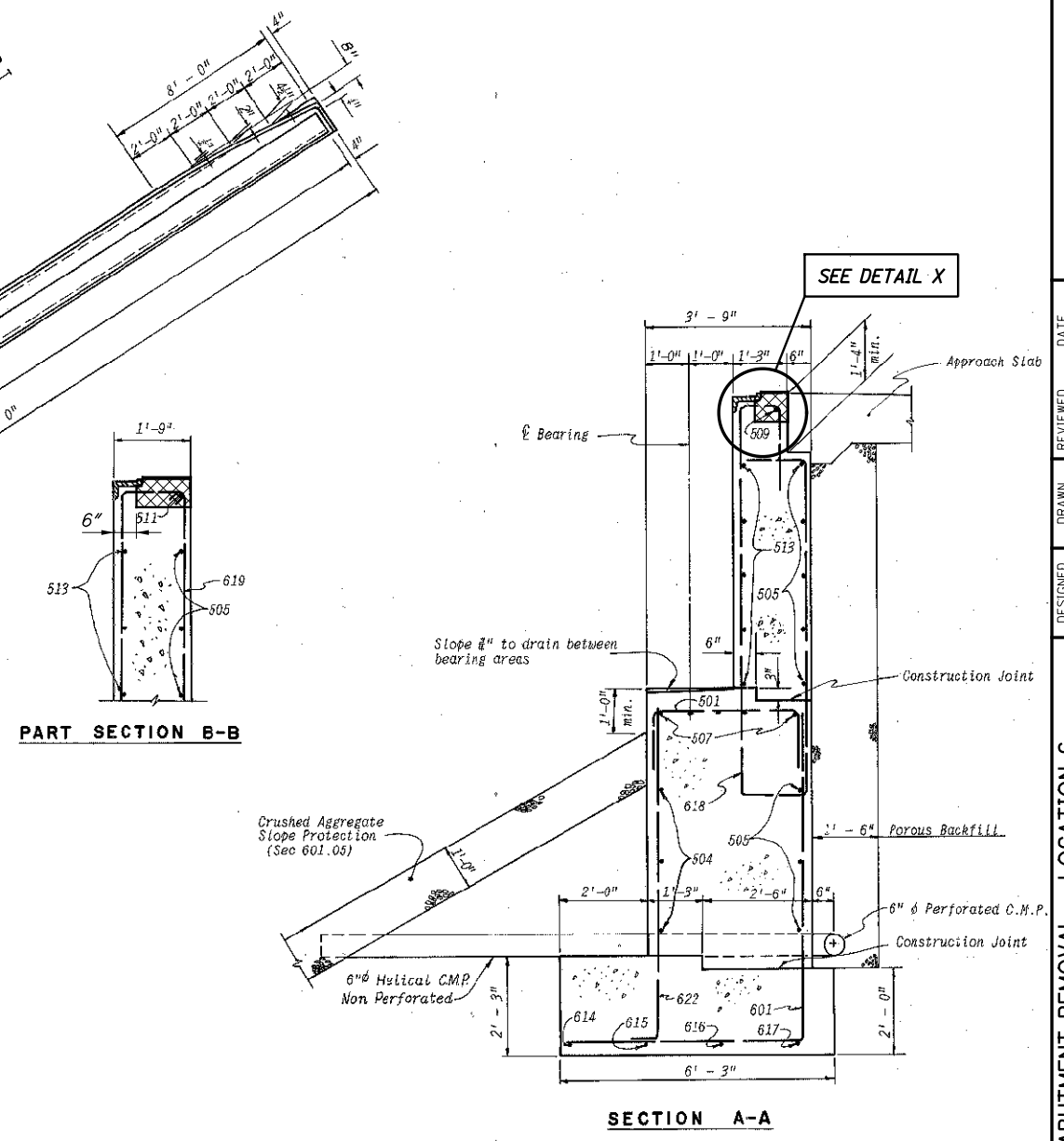
ELEVATION  
(Type 1 Railing Not Shown)

6	6/3/21	REVISE NOTE

**LEGEND**

INDICATES CONCRETE TO BE REMOVED PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN, AND REPLACED PER ITEM 511 - CLASS QC2 CONCRETE, SUPERSTRUCTURE.

INDICATES AREAS OF CONCRETE PATCHING PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN. TOTAL AREA THIS SHEET = 37 S.F.



**NOTES**

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

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**SURFACE PREPARATION:** THE SURFACE TO RECEIVE THE COMPOSITE WRAP SHALL BE FREE FROM FINES, SHARP EDGES, AND PROTRUSIONS THAT WILL CAUSE VOIDS BEHIND THE CASING OR THAT, IN THE OPINION OF THE ENGINEER, WILL DAMAGE THE FIBER. IF FIBERS ARE TO WRAP AROUND CORNERS OF RECTANGLE CROSS-SECTIONS, THE CORNERS SHALL BE ROUNDED TO A 1/2 INCH RADIUS. THIS WILL HELP PREVENT STRESS CONCENTRATIONS IN THE FIBER WRAP AND VOIDS BETWEEN THE FIBER WRAP AND THE CONCRETE. IN ADDITION, THE SURFACE SHALL BE SMOOTH AND FREE OF VOIDS OR UNDULATIONS THAT WOULD PREVENT FULL CONTACT BETWEEN THE CONCRETE AND THE FIBER WRAP. THE REMOVAL OF THE EXISTING COATING FROM THE CONCRETE SURFACES IS INCLUDED WITH THE SURFACE PREPARATION FOR THE COMPOSITE FIBER WRAP SYSTEM AND WILL NOT BE PAID SEPARATELY UNDER ITEM 512.

**COMPOSITE APPLICATION:** THE AMBIENT TEMPERATURE AND THE TEMPERATURE OF THE EPOXY RESIN COMPONENTS SHALL BE BETWEEN 55 DEG. F AND 95 DEG. F AT THE TIME OF MIXING. THE COMPOSITE SHALL BE APPLIED WHEN THE RELATIVE HUMIDITY IS LESS THAN 85% AND THE SURFACE TEMPERATURE IS MORE THAN 5 DEG. F ABOVE THE DEW POINT. APPLICATION SHALL BEGIN WITHIN ONE HOUR AFTER THE BATCH HAS BEEN MIXED. A MANUFACTURER REPRESENTATIVE SHALL BE ON SITE FOR THE FIRST APPLICATION OF THE COMPOSITE FIBER WRAP SYSTEM TO APPROVE THE CONTRACTOR'S APPLICATION PROCESS. THIS REQUIREMENT MAY BE WAIVED WITH WRITTEN APPROVAL FROM THE ENGINEER.

THE COMPONENTS OF THE EPOXY RESIN SHALL BE MIXED WITH A MECHANICAL MIXER AND APPLIED UNIFORMLY TO THE FIBER AT A RATE THAT SHALL INSURE COMPLETE SATURATION OF THE FABRIC.

THE FABRIC/EPOXY COMPOSITE SHALL BE APPLIED TO THE SURFACE OF THE COLUMN BY WRAPPING METHODS THAT PRODUCE A UNIFORM FORCE THAT IS DISTRIBUTED ACROSS THE ENTIRE WIDTH OF THE FABRIC. THE PRIMARY FIBERS OF THE FABRIC SHALL NOT DEVIATE FROM A HORIZONTAL LINE MORE THAN 1/2 INCH PER FOOT. ENTRAPPED AIR SHALL BE RELEASED OR ROLLED OUT BEFORE THE EPOXY SETS.

SUCCESSIVE LAYERS OF COMPOSITE MATERIALS SHALL BE PLACED BEFORE POLYMERIZATION OF THE PREVIOUS LAYER OF EPOXY IS TOO DRY TO ACHIEVE ADEQUATE BOND BETWEEN LAYERS. IF POLYMERIZATION DOES OCCUR BETWEEN LAYERS THE SURFACE MUST BE ROUGHENED USING A LIGHT ABRASIVE THAT WILL NOT DAMAGE THE FIBER.

THE FINAL LAYER OF EPOXY SHALL BE APPLIED TO THE FINAL LAYER OF FABRIC, WITH CARE TAKEN TO ENSURE COATING OF ALL EDGES AND SEAMS. SPACES BETWEEN THE BANDS OF FABRIC SHALL BE FILLED WITH EPOXY THICKENED AS DIRECTED BY THE MANUFACTURER.

A FINAL INSPECTION SHALL BE PERFORMED ON ALL FIBER WRAPPED COLUMNS AFTER THE EPOXY SETS YET PRIOR TO THE APPLICATION OF THE URETHANE TOP COAT. ALL DEFECTS (INCLUDING BUBBLES, DELAMINATIONS AND FABRIC TEARS) MORE THAN 1 SQUARE INCH OF THE SURFACE AREA, OR AS SPECIFIED BY THE PROJECT ENGINEER, SHALL BE REPAIRED AS SUCH.

1. SMALL DEFECTS (ON THE ORDER OF 6" DIAMETER) SHALL BE INJECTED OR BACK FILLED WITH EPOXY.
2. BUBBLES LESS THAN 12" DIAMETER SHALL BE REPAIRED BY INJECTING WITH EPOXY. TWO HOLES SHALL BE DRILLED INTO THE BUBBLE TO ALLOW INJECTION OF THE EPOXY AND ESCAPE OF ENTRAPPED AIR.
3. BUBBLES, DELAMINATIONS AND FABRIC TEARS GREATER THAN 12" IN DIAMETER SHALL BE REPAIRED BY REMOVING AND REAPPLYING THE REQUIRED NUMBER OF LAYERS OF THE COMPOSITE AND THE REQUIRED FINISH COATING. ALL REPAIRS SHALL BE APPROVED BY THE PROJECT ENGINEER.

**COATING SYSTEM APPLICATION:** A FINAL URETHANE COATING IS REQUIRED TO PROTECT THE FIBERS FROM THE ELEMENTS, SPECIFICALLY UV RADIATION, AND TO GIVE THE FINAL AESTHETIC EFFECT.

AFTER 96 HOURS FROM THE FINAL APPLICATION OF EPOXY, IF THE FINAL EPOXY COAT IS COMPLETELY POLYMERIZED, THE EXTERIOR SURFACES OF THE COMPOSITE WRAP SHALL BE CLEANED AND ROUGHENED BY A LIGHT ABRASIVE. CARE SHOULD BE TAKEN DURING THE ROUGHENING PROCESS SO THAT THE FIBERS ARE NOT DAMAGED. ALL CLEANED AND ROUGHENED SURFACES SHALL BE DRY BEFORE APPLYING THE URETHANE COATING.

**MEASUREMENT AND PAYMENT:** THE DEPARTMENT WILL PAY FOR THIS ITEM PER SQUARE FOOT OF FIBER WRAP MATERIAL INSTALLED AND ACCEPTED TO COMPLETE THE PROPOSED WORK. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS AND EQUIPMENT NECESSARY TO PROVIDE AND INSTALL A FIBER WRAP COLUMN CASING SYSTEM USING HIGH STRENGTH, HYBRID FIBER/EPOXY COMPOSITES FIELD APPLIED TO THE COLUMN, INCLUDING ERECTION OF SCAFFOLDING, CLEANING, SURFACE PREPARATION, WRAPPING THE COLUMN, URETHANE SEALER, AND ALL INCIDENTALS NECESSARY TO COMPLETE THE INSTALLATION PER THE MANUFACTURER'S REQUIREMENTS. PAYMENT FOR ALL OF THE ABOVE SHALL BE AT THE UNIT PRICE BID PER SQUARE FOOT FOR ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM.

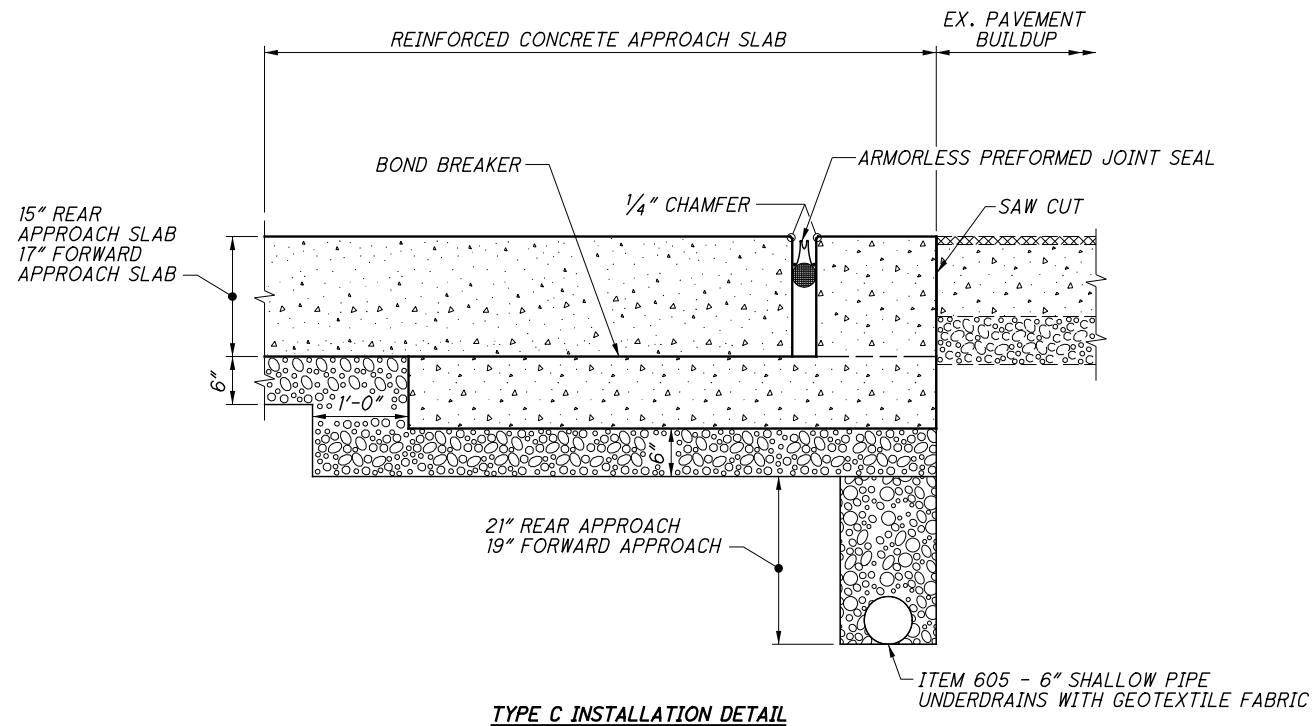
5

**ITEM 503 - UNCLASSIFIED EXCAVATION, AS PER PLAN**

THIS WORK CONSISTS OF MISCELLANEOUS EXCAVATION BEHIND THE ABUTMENTS AND WINGWALLS TO DO THE BACKWALL REPAIR WORK AND SUPPLYING COMPACTED 304 AGGREGATE BASE BACKFILL TO FILL THIS AREA OR OTHER VOID AREAS UNDER THE APPROACH SLAB.

**ITEM 526 - TYPE C INSTALLATION, AS PER PLAN**

THE TYPE C INSTALLATION SHALL BE MODIFIED AS SHOWN IN THE TYPE C INSTALLATION DETAIL BELOW. ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC SHALL BE INSTALLED BELOW THE SLEEPER SLAB AS DETAILED. PAYMENT FOR THE UNDERDRAINS SHALL BE INCLUDED WITH ITEM 605 - 6" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC FOR PAYMENT. THE CONTRACTOR SHALL VERIFY THE LOCATION OF THE EXISTING UNDERDRAINS AND SHALL CONNECT THE PROPOSED UNDERDRAINS TO THE EXISTING UNDERDRAIN SYSTEM.



**TYPE C INSTALLATION DETAIL**

5	6/3/21	ADD NOTE

**ESTIMATED QUANTITIES**

CALCULATED JLS DATED 10/20  
 CHECKED dht DATED 10/20

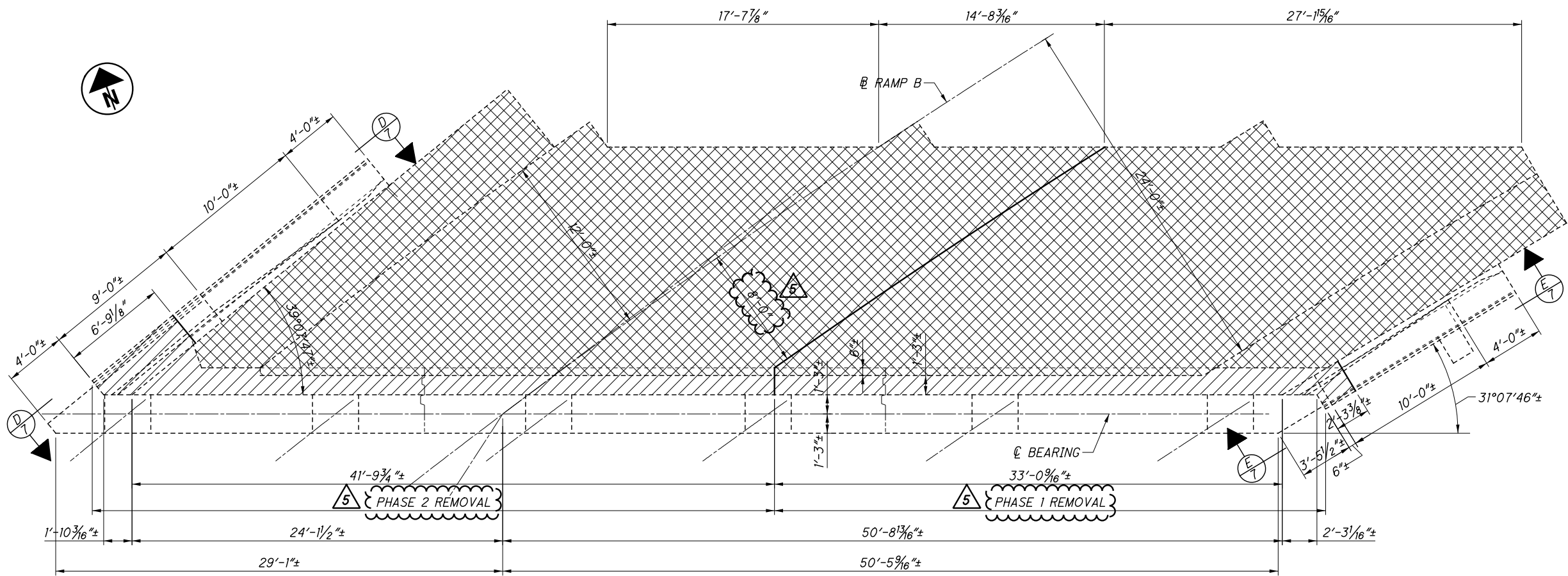
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	ABUTS.	GEN'L	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2/25
202	22900	257	SY	APPROACH SLAB REMOVED				257	
503	21301	LS		UNCLASSIFIED EXCAVATION, AS PER PLAN				LS	3/25
509	10000	7597	LB	EPOXY COATED REINFORCING STEEL	2180		5417		
511	34410	43	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	14		29		
512	10101	1283	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	1006		277		2/25
512	74001	669	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	478		191		2/25
513	21000	12	EACH	TRIMMING OF BEAM END	12				
514	21001	LS		FIELD PAINTING OF DAMAGED STRUCTURAL STEEL, AS PER PLAN				LS	2/25
516	10010	138	FT	ARMORLESS PREFORMED JOINT SEAL				138	
516	11210	135	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	135				
518	51300	1	EA	DOWNSPOUT MODIFICATION, 6" DIAMETER, 45° RADIUS, GALVANIZED PIPE EXTENSION	LS				3/25
SPECIAL	51900100	5609	SF	COMPOSITE FIBER WRAP SYSTEM		5609			2/25
519	11101	107	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN	37		70		2/25
526	25001	122	SY	REINFORCED CONCRETE APPROACH SLABS (T=15"), AS PER PLAN				122	2/25
526	30001	152	SY	REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN				152	2/25
526	90031	137	FT	TYPE C INSTALLATION, AS PER PLAN				137	3/25
844	10001	791	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN		791			2/25

5

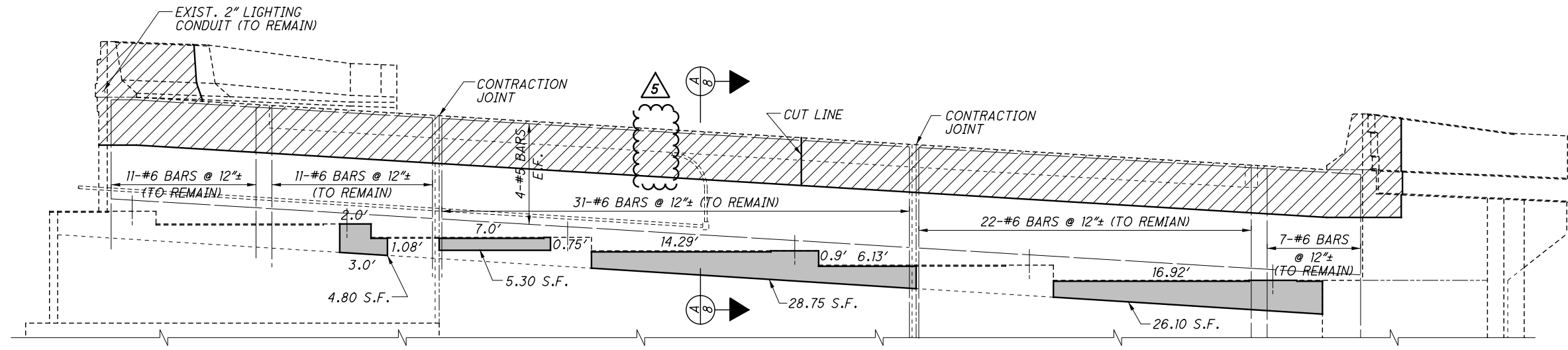
5	6/3/21	ADD AND REVISE QUANTITIES



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FORWARD ABUTMENT PLAN & APPROACH SLAB PLAN



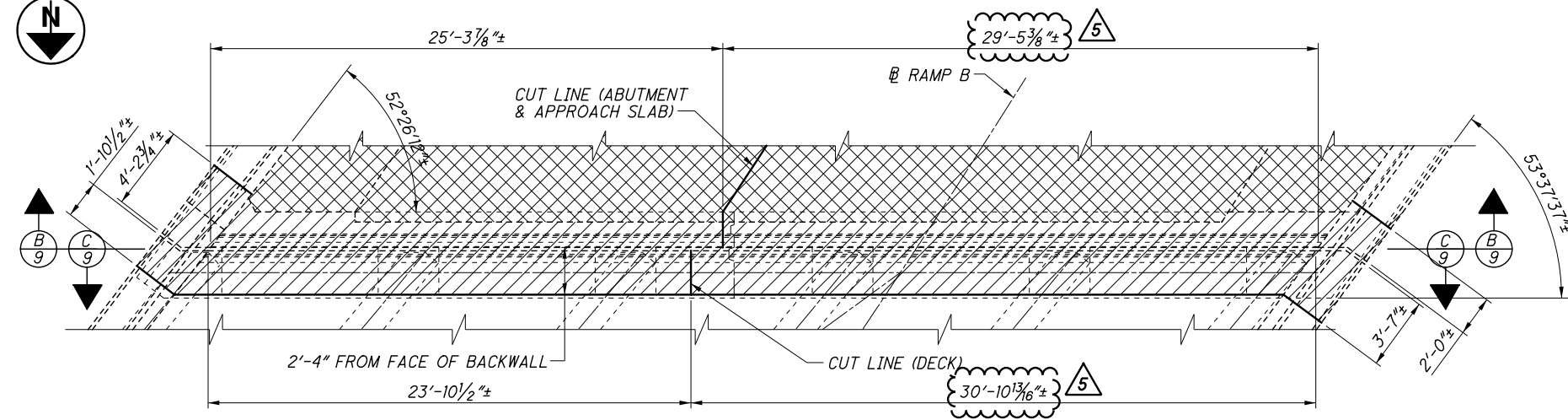
FORWARD ABUTMENT ELEVATION

LEGEND

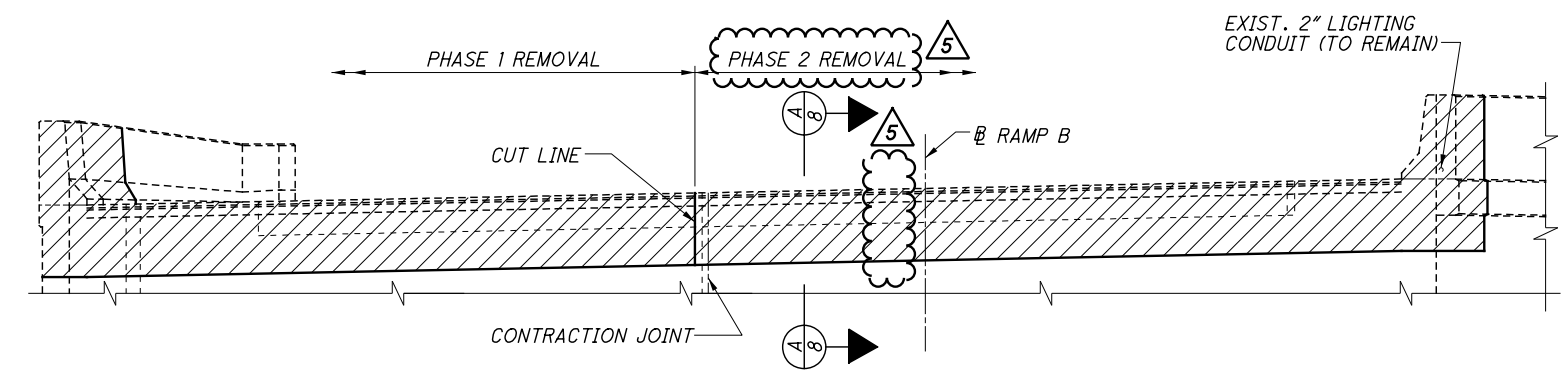
- INDICATES AREAS OF CONCRETE PATCHING PER ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN. TOTAL AREA THIS SHEET = 67 S.F.
- INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES APPROACH SLAB AND CONCRETE SLAB REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED.

5	6/03/21	ELIMINATED PHASE 3 REMOVAL

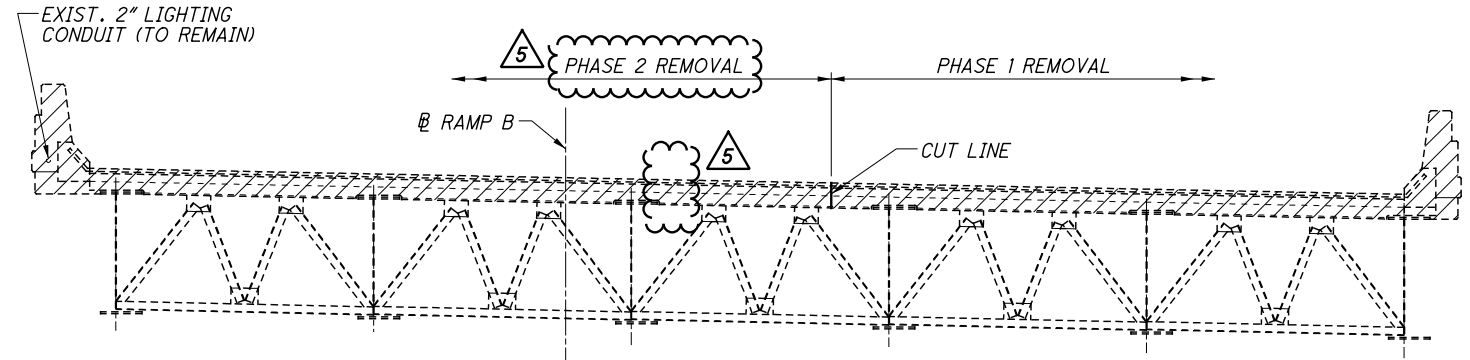
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**REAR EXPANSION JOINT REMOVAL PLAN**



**SECTION B-B**



**SECTION C-C**

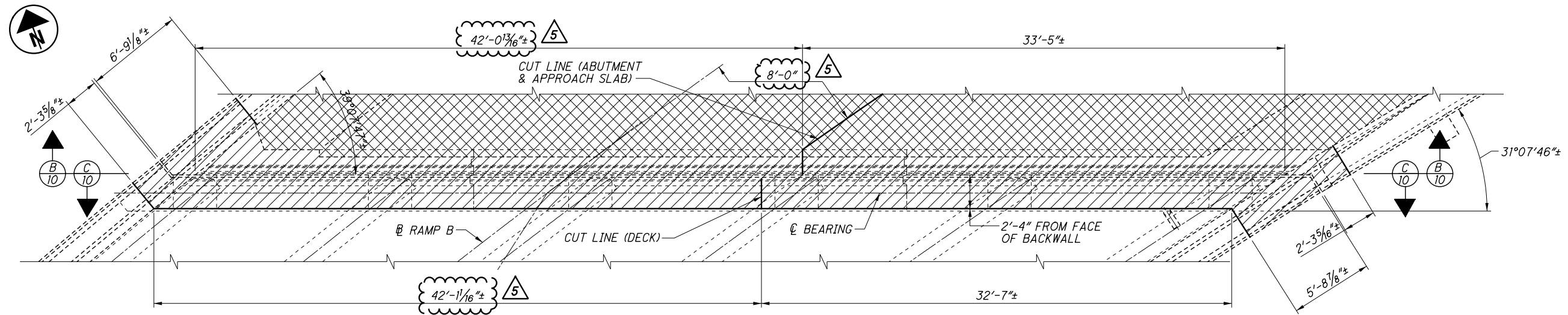
**LEGEND**

- INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
- INDICATES APPROACH SLAB AND CONCRETE SLAB REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED.

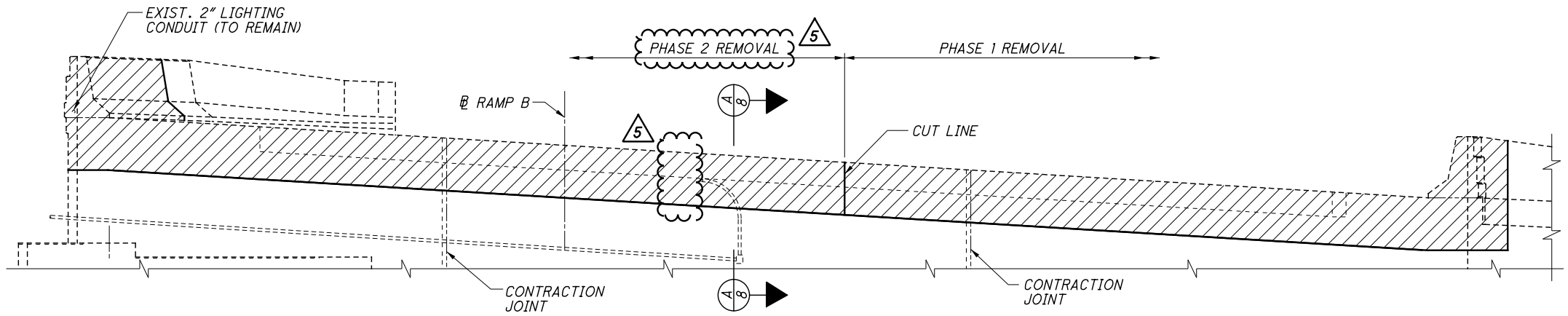
5	6/03/21	ELIMINATED PHASE 3 REMOVAL

<b>CUY - BH - FY2021(B) MISC</b> PID No. 109131	<b>REAR EXPANSION JOINT REMOVAL DETAILS - LOCATION 8</b> BRIDGE NO. CUY-90-0683 RAMP B OVER IR 90	RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902 DATE: 01/2021 REVIEWED DLR: STRUCTURE FILE NUMBER 1808508
9 / 25	134	253

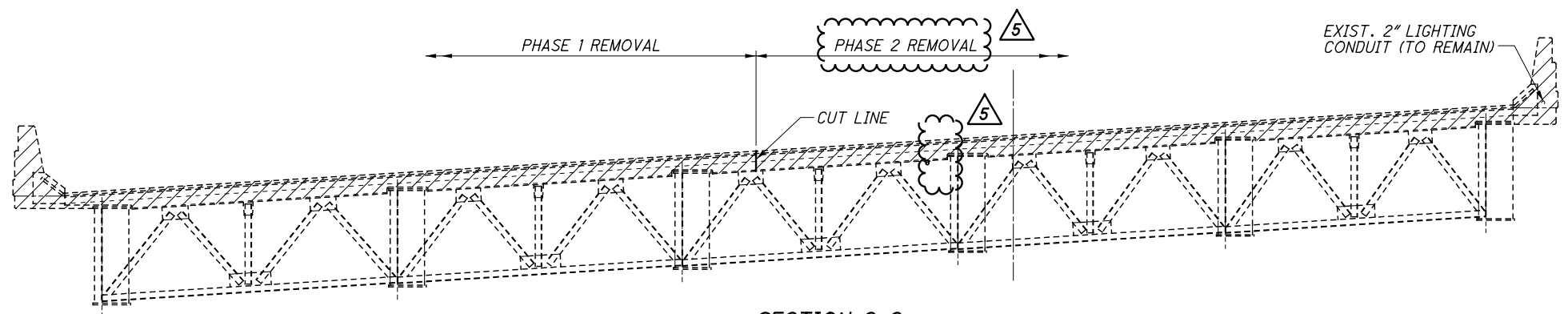
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**FORWARD EXPANSION JOINT PLAN**



**SECTION B-B**

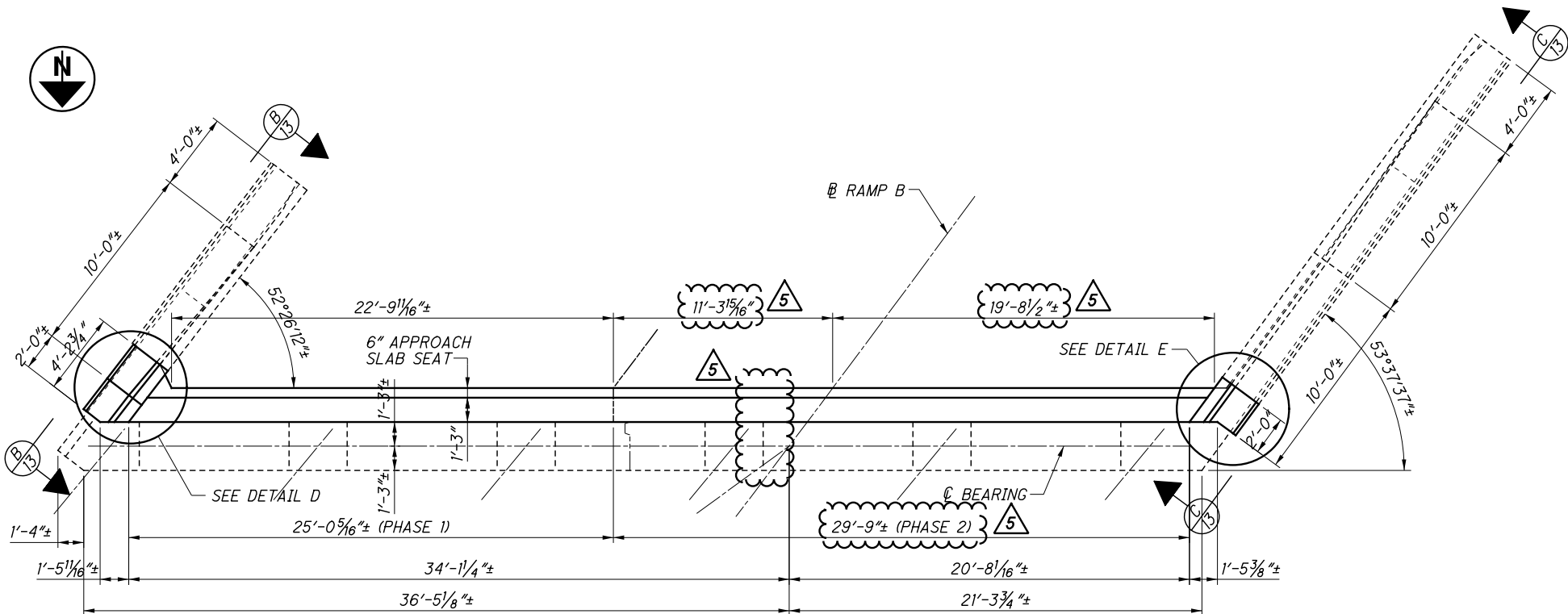


**SECTION C-C**

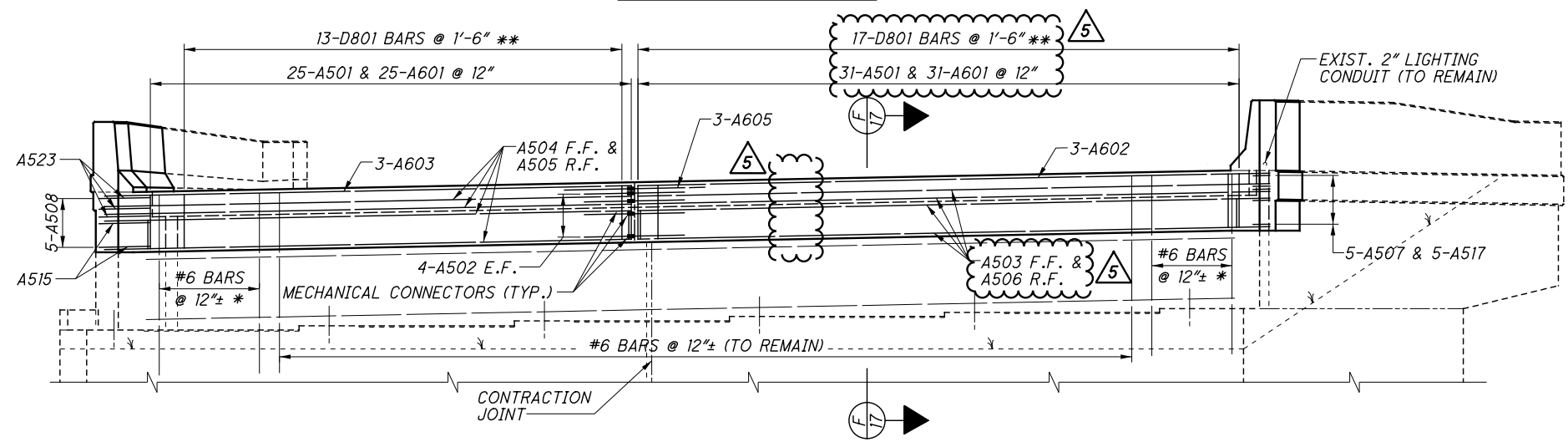
- LEGEND**
- INDICATES REMOVAL PER ITEM 202 - PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN.
  - INDICATES APPROACH SLAB AND CONCRETE SLAB REMOVAL PER ITEM 202 - APPROACH SLAB REMOVED.

5	6/03/21	ELIMINATED PHASE 3 REMOVAL

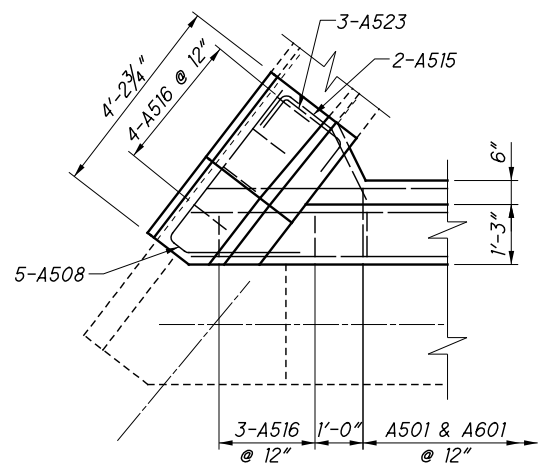
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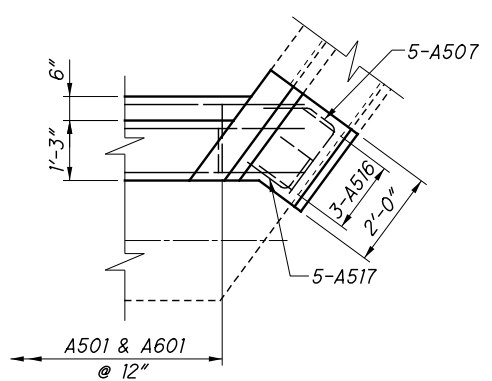
REAR ABUTMENT PLAN



REAR ABUTMENT ELEVATION



DETAIL D



DETAIL E

LEGEND

- \* EXISTING BARS TO REMAIN
- \*\* MEASURED PERPENDICULAR TO APPROACH SLAB PHASE CONSTRUCTION JOINTS.

NOTES

REINFORCING STEEL SPLICE LENGTHS SHALL BE 2'-3" FOR #5 BARS AND 3'-4" FOR #6 BARS.

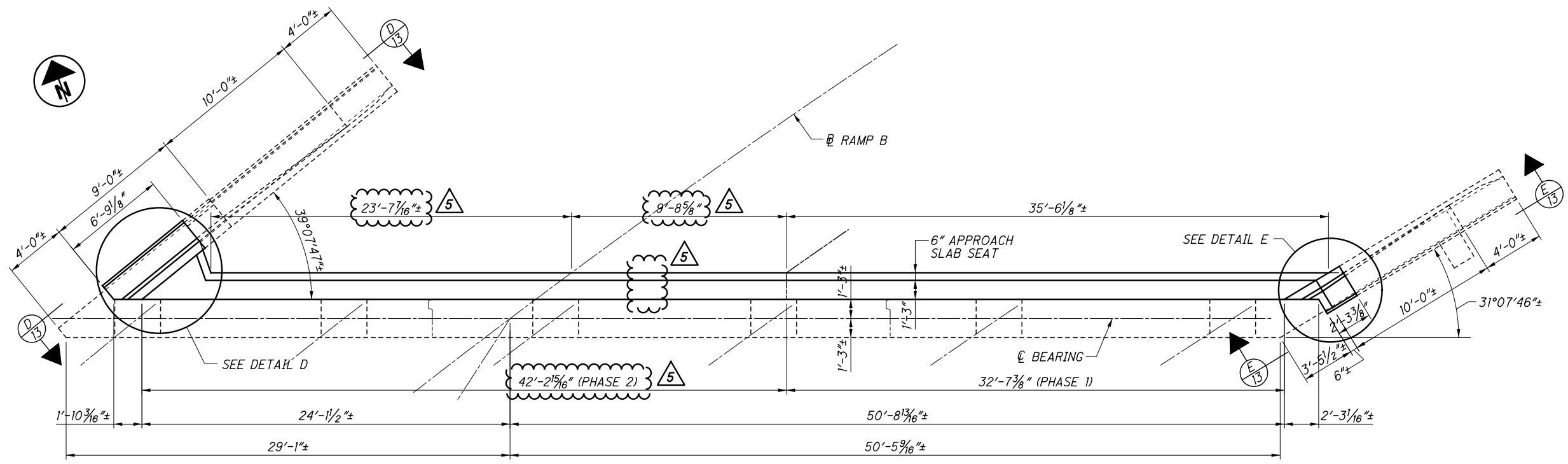
NOTATION: F.F. - FRONT FACE  
R.F. - REAR FACE  
E.F. - EACH FACE

PARAPET DETAILS & REINFORCING: SEE SHEETS 18/25 & 19/25.

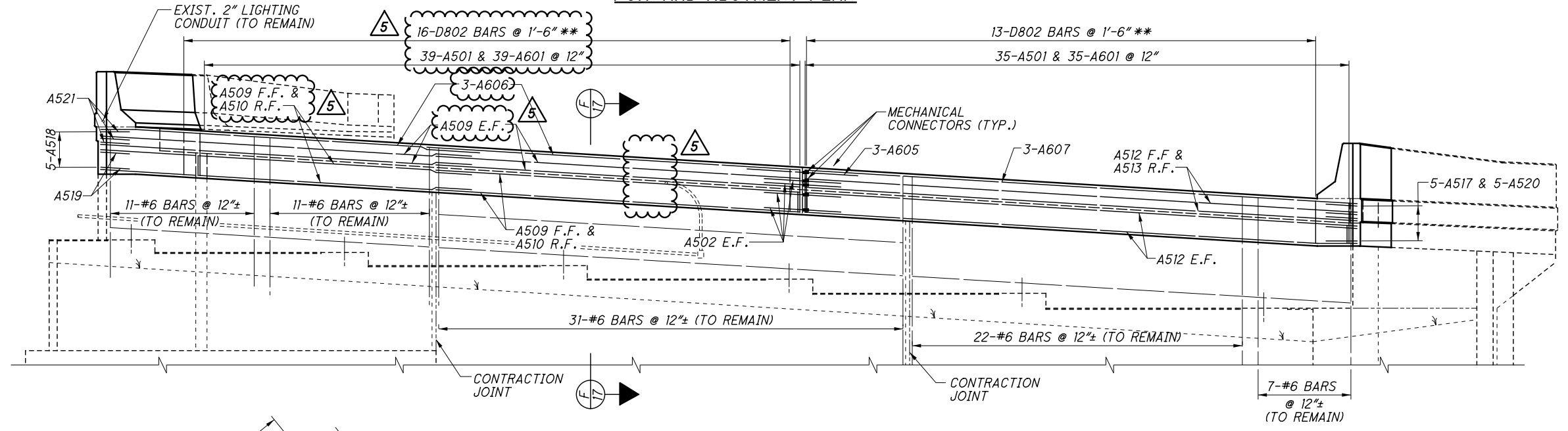
5	6/03/21	ELIMINATED PHASE 3 CONSTRUCTION



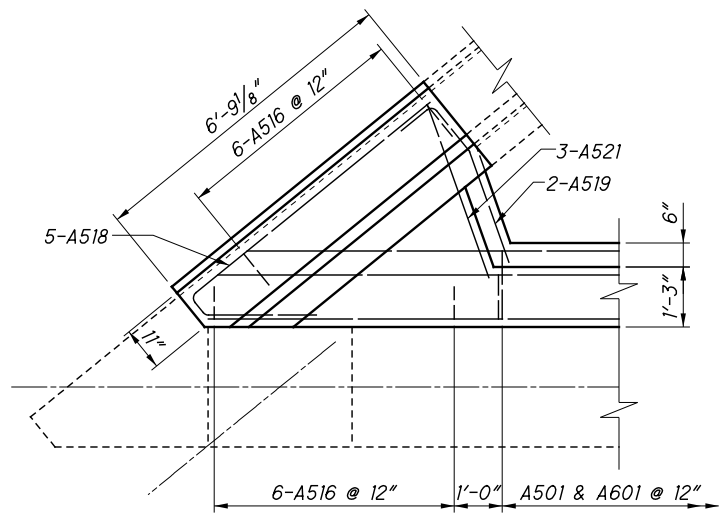
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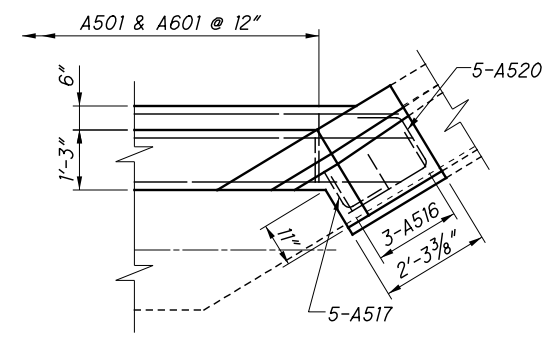
**FORWARD ABUTMENT PLAN**



**FORWARD ABUTMENT ELEVATION**



**DETAIL D**



**DETAIL E**

5	6/03/21	ELIMINATED PHASE 3 CONSTRUCTION

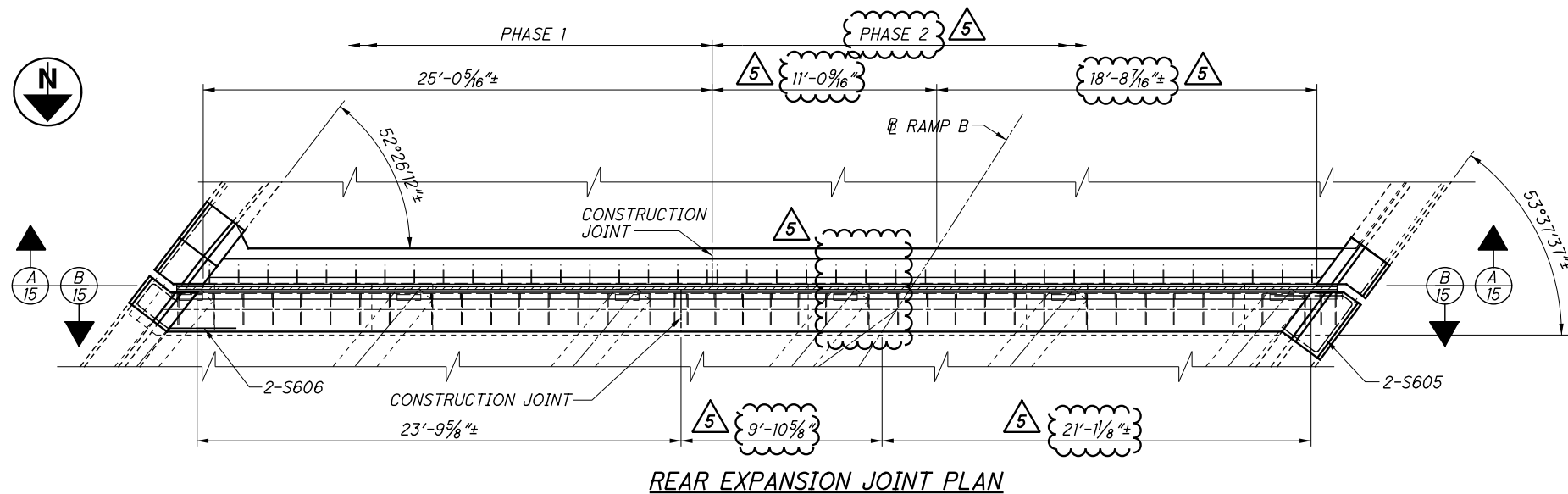
**LEGEND**

\*\* MEASURED PERPENDICULAR TO APPROACH SLAB PHASE CONSTRUCTION JOINT.

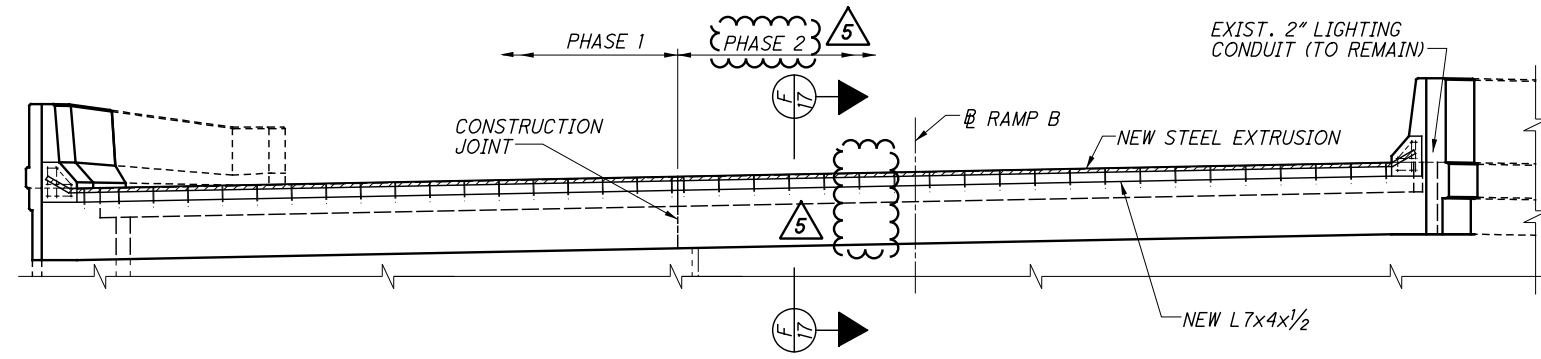
**NOTES**

**PARAPET DETAILS & REINFORCING:** SEE SHEETS 18/25 & 19/25.  
**ADDITIONAL NOTES:** SEE SHEET 11/25.

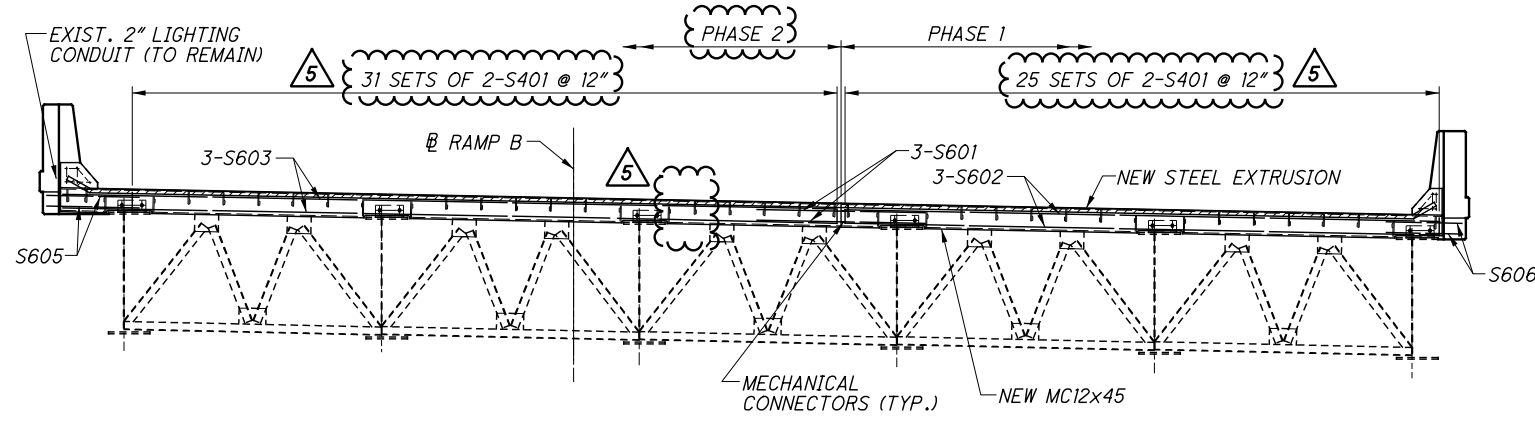
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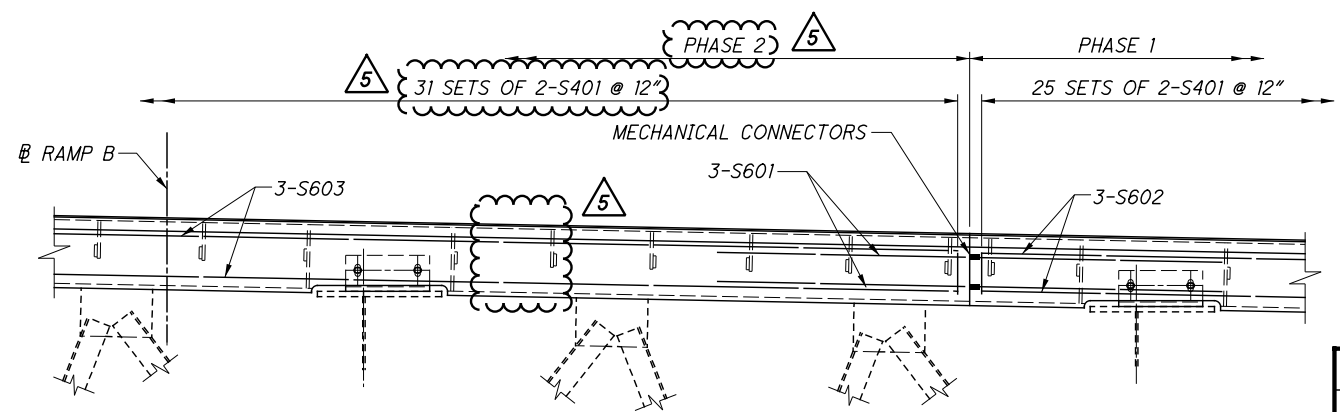
REAR EXPANSION JOINT PLAN



SECTION A-A



SECTION B-B



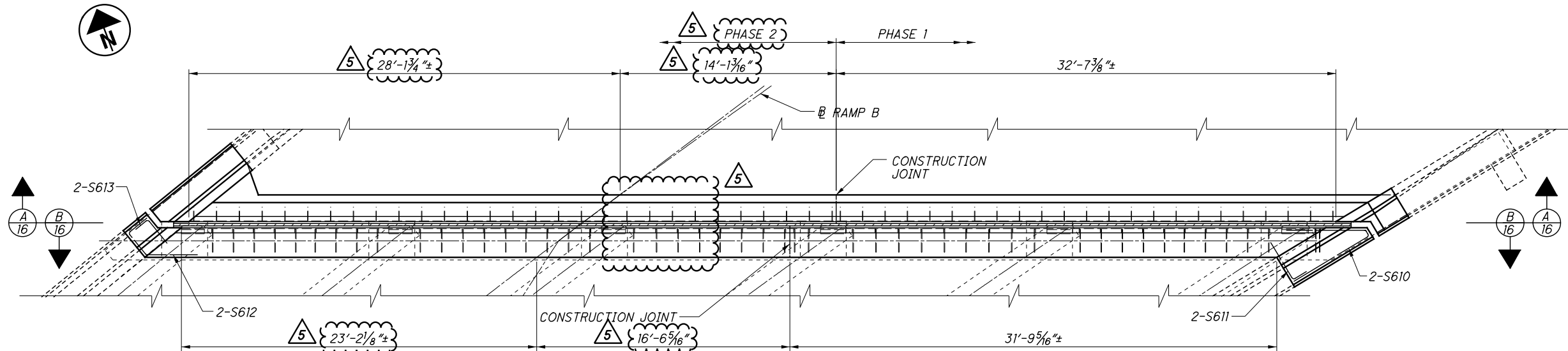
DECK REINFORCING DETAIL AT PHASE CONSTRUCTION JOINT

5	6/03/21	ELIMINATED PHASE 3 CONSTRUCTION

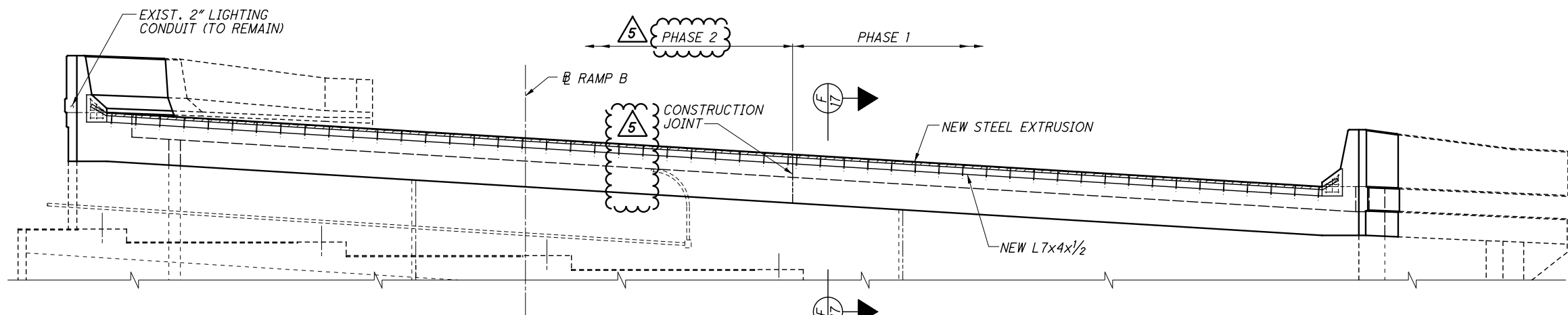
**NOTES**

- REINFORCING STEEL SPLICE LENGTHS SHALL BE 3'-4" FOR #6 BARS.
- ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING EXJ-4-87.
- REAR ABUTMENT REINFORCING: SEE SHEET 11/25.
- ABUTMENT PARAPET & REINFORCING: SEE SHEET 18/25.
- DECK PARAPET & REINFORCING: SEE SHEET 19/25.

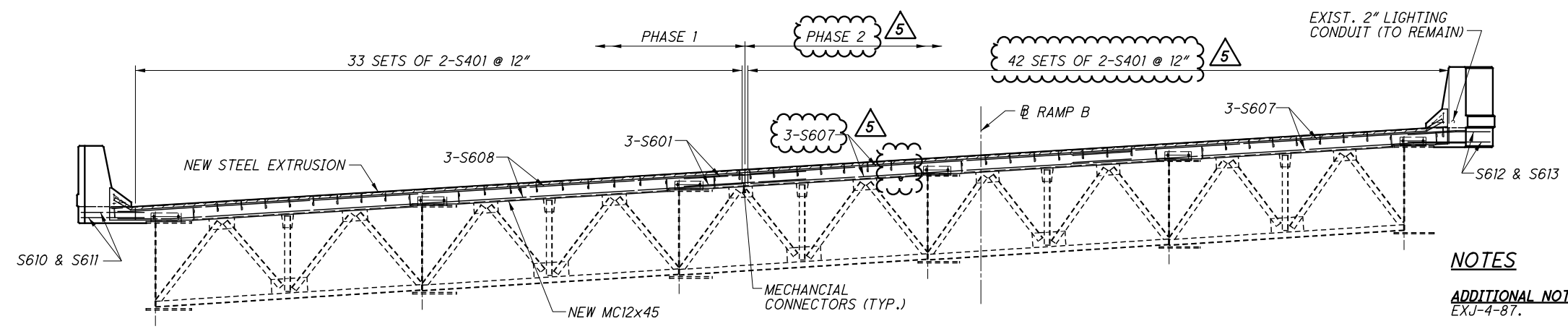
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FORWARD ABUTMENT EXPANSION JOINT PLAN



SECTION A-A



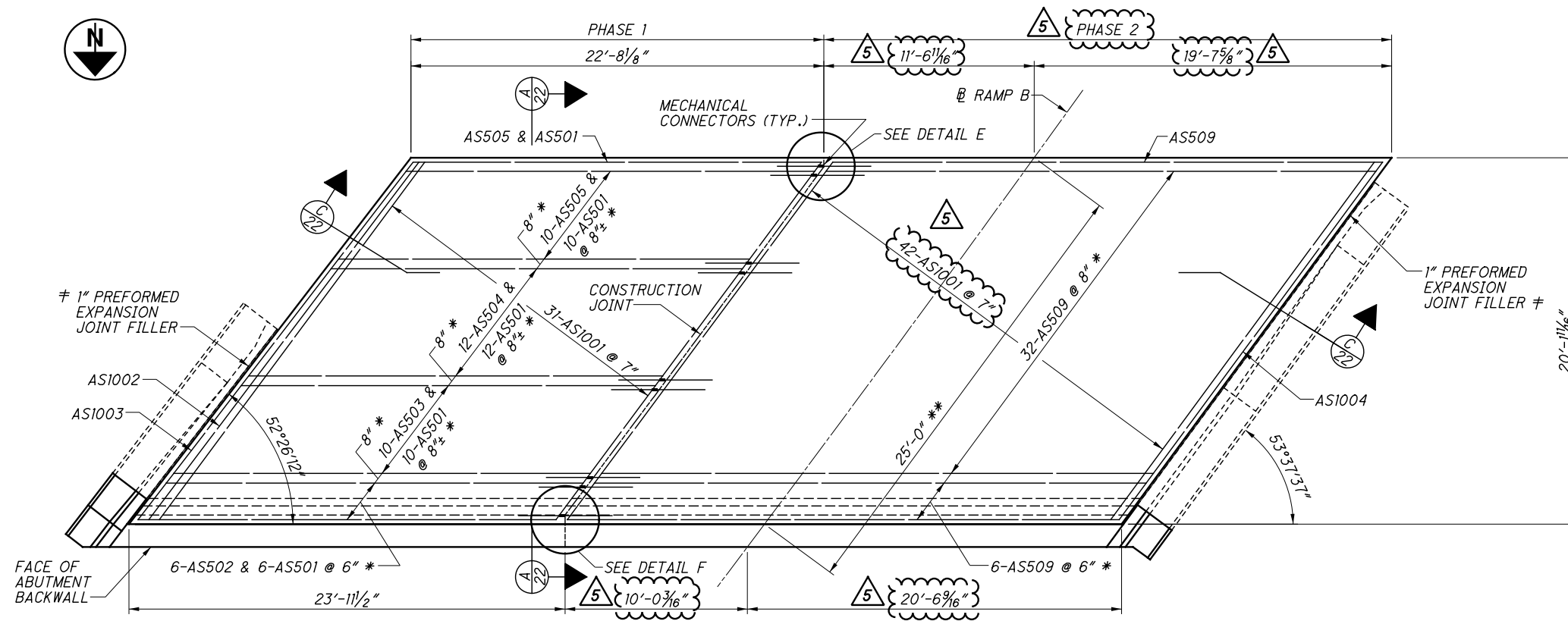
SECTION B-B

5	6/03/21	ELIMINATED PHASE 3 CONSTRUCTION

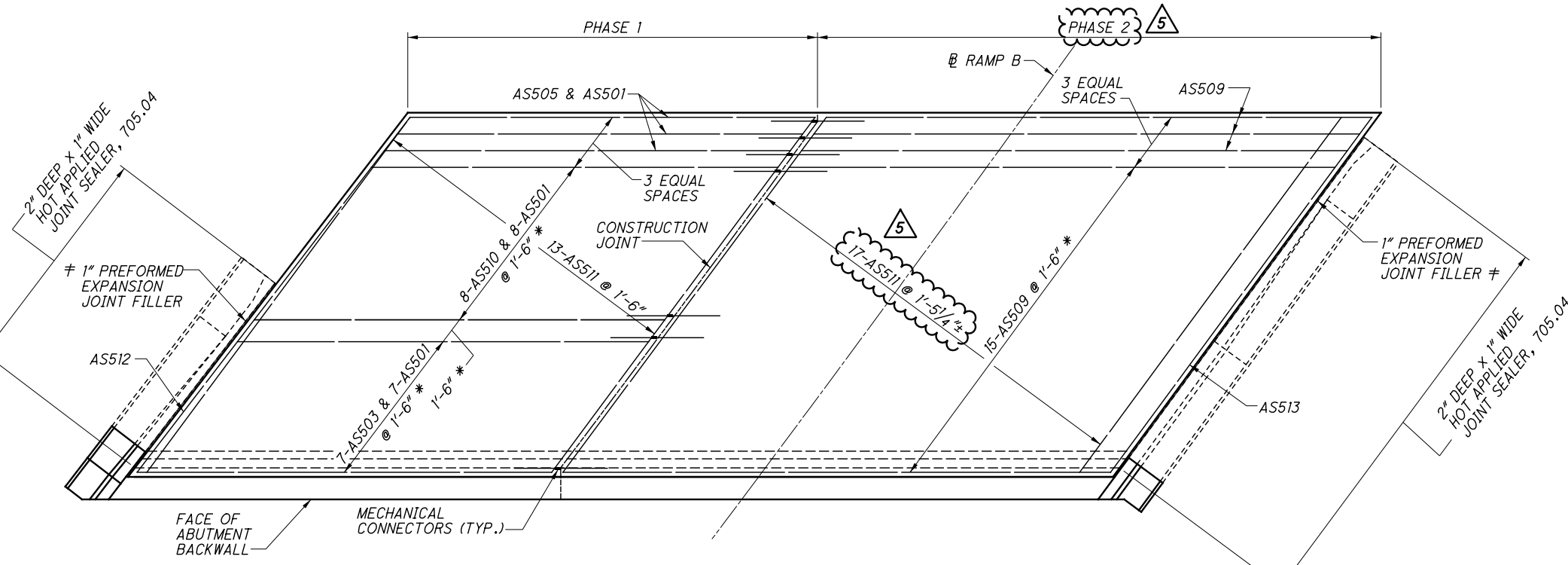
**NOTES**

- ADDITIONAL NOTES & DETAILS:** SEE STANDARD DRAWING EXJ-4-87.
- FORWARD ABUTMENT REINFORCING:** SEE SHEET 12/25.
- ABUTMENT PARAPET & REINFORCING:** SEE SHEET 18/25.
- DECK PARAPET & REINFORCING:** SEE SHEET 19/25.
- DECK REINFORCING DETAIL AT CONSTRUCTION JOINTS:** SEE SHEET 15/25.

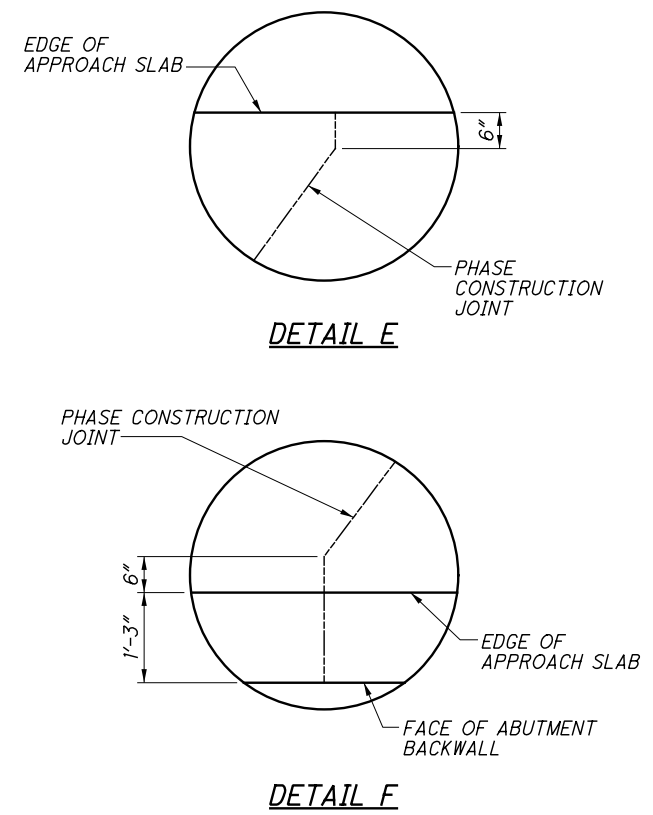
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REAR APPROACH SLAB - BOTTOM REINFORCING



REAR APPROACH SLAB - TOP REINFORCING



**LEGEND**

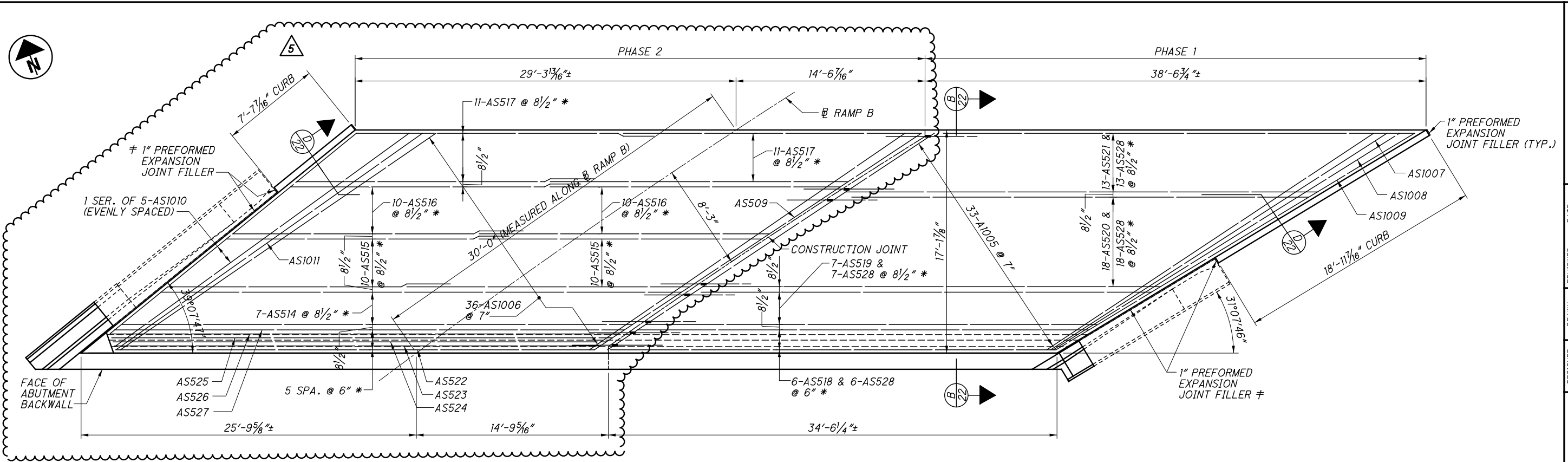
- \* TRANSVERSE REINFORCING STEEL SPACING IS MEASURED ALONG PHASE 1 CONSTRUCTION JOINT.
- \*\* MEASURED ALONG @ RAMP B.
- ≠ 2" DEEP x 1" WIDE HOT APPLIED JOINT SEALER, 705.04, SHALL ALSO BE APPLIED FOR THE ENTIRE LENGTH OF THE WINGWALLS. 1" PEJF AND JOINT SEALER INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15%), AS PER PLAN FOR PAYMENT.

**NOTES**

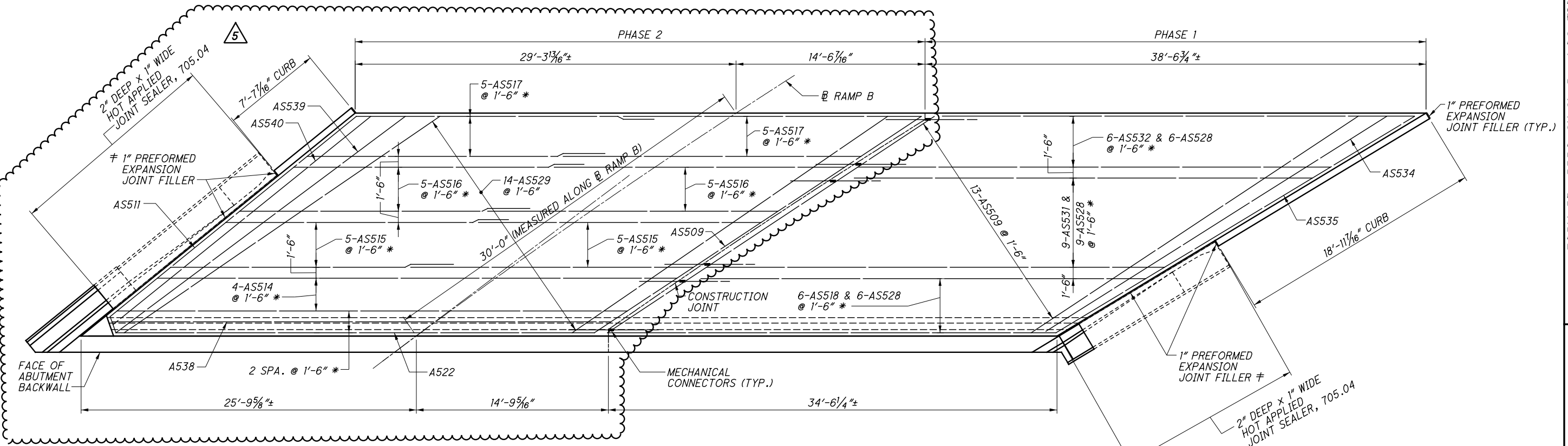
- REINFORCING STEEL SPLICE LENGTHS** SHALL BE 2'-3" FOR #5 BARS.
- FORWARD APPROACH SLAB:** SEE SHEET 21/25.
- ADDITIONAL NOTES & DETAILS:** SEE STANDARD DRAWING AS-1-15.

5	6/03/21	ELIMINATED PHASE 3 CONSTRUCTION

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FORWARD APPROACH SLAB - BOTTOM REINFORCING



FORWARD APPROACH SLAB - TOP REINFORCING

LEGEND

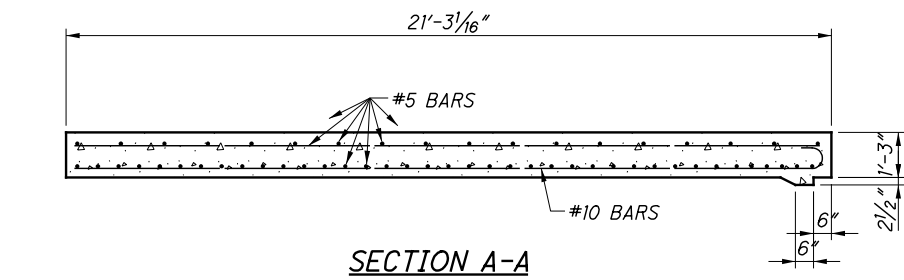
- \* TRANSVERSE REINFORCING STEEL SPACING IS MEASURED ALONG PHASE 1 CONSTRUCTION JOINT.
- ≠ 2" DEEP x 1" WIDE HOT APPLIED JOINT SEALER, 705.04, SHALL ALSO BE APPLIED FOR THE ENTIRE LENGTH OF THE WINGWALLS. 1" PEJF AND JOINT SEALER INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=17"), AS PER PLAN FOR PAYMENT.

NOTES

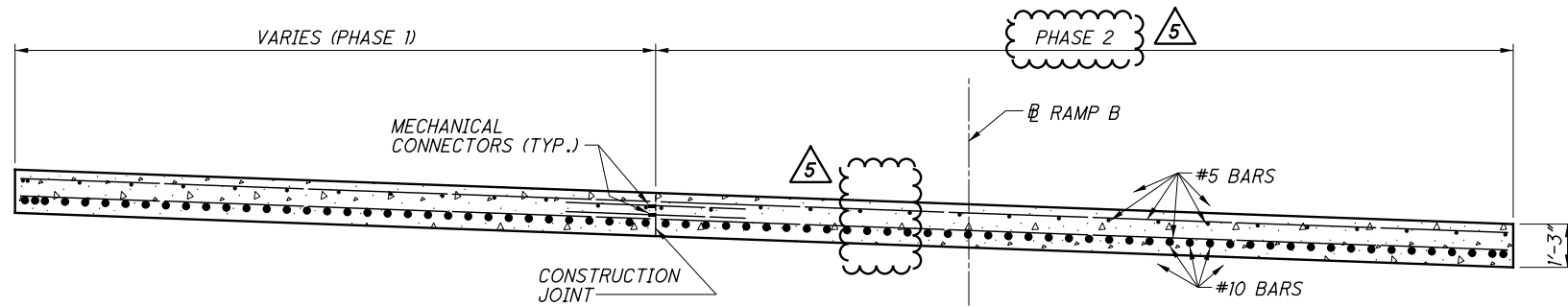
- REAR APPROACH SLAB: SEE SHEET [20/25].
- ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING AS-1-15 AND SHEET [20/25].

5	6/04/21	ELIMINATED PHASE 3 CONSTRUCTION

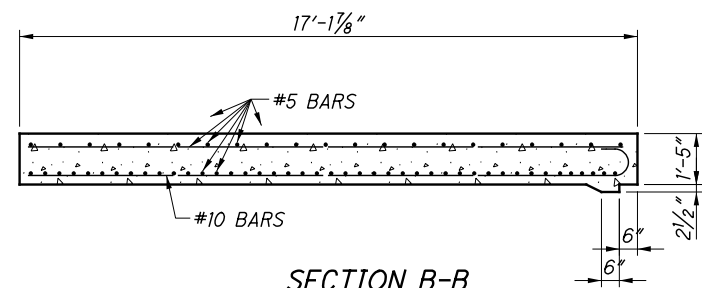
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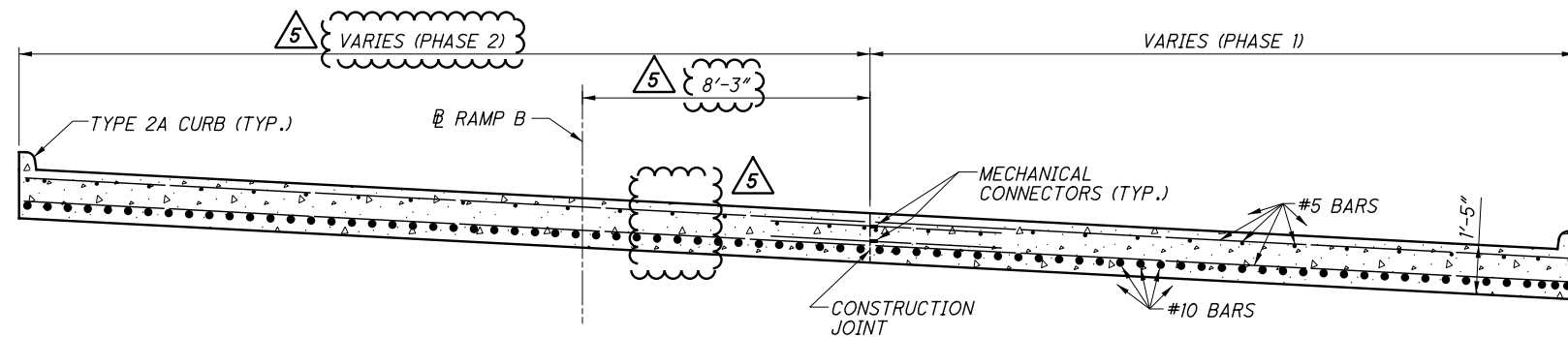
SECTION A-A



SECTION C-C



SECTION B-B



SECTION D-D

5	6/04/21	ELIMINATED PHASE 3 CONSTRUCTION

**NOTES**

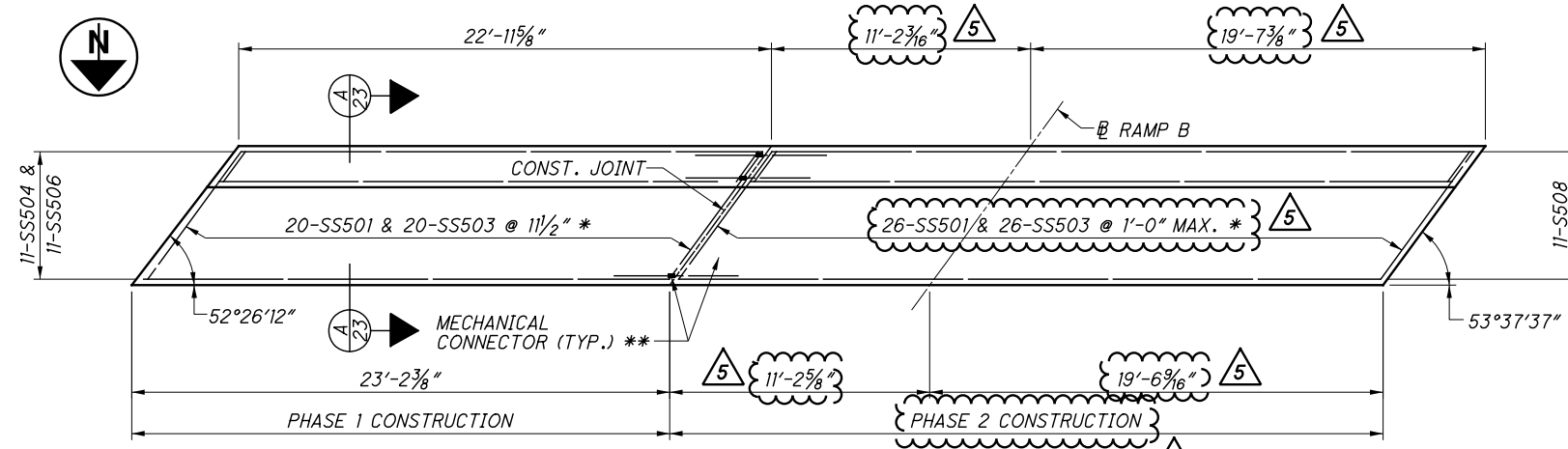
SECTIONS A-A & C-C: FOR LOCATIONS SEE SHEET 20/25.

SECTIONS B-B & D-D: FOR LOCATIONS SEE SHEET 21/25.

ADDITIONAL NOTES & DETAILS: SEE STANDARD DRAWING AS-1-15 AND SHEET 20/25.

 RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	REVIEWED DLR DATE 01/2021	STRUCTURE FILE NUMBER 1808508	APPROACH SLAB SECTIONS - LOCATION 8 BRIDGE NO. CUY-90-0683 RAMP B OVER IR 90
DESIGNED BLN	DRAWN JLS	CHECKED DHT	CUY -BH -FY2021(B) MISC PID No. 109131
22 / 25			147 253

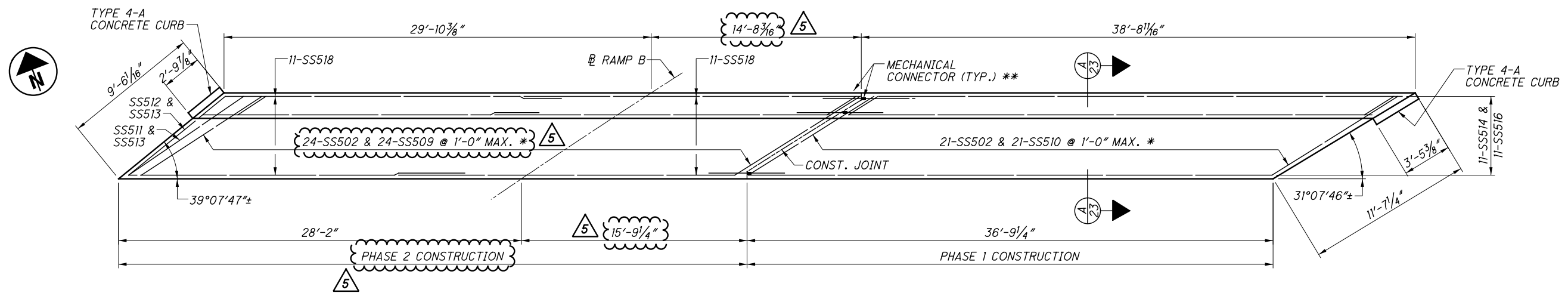
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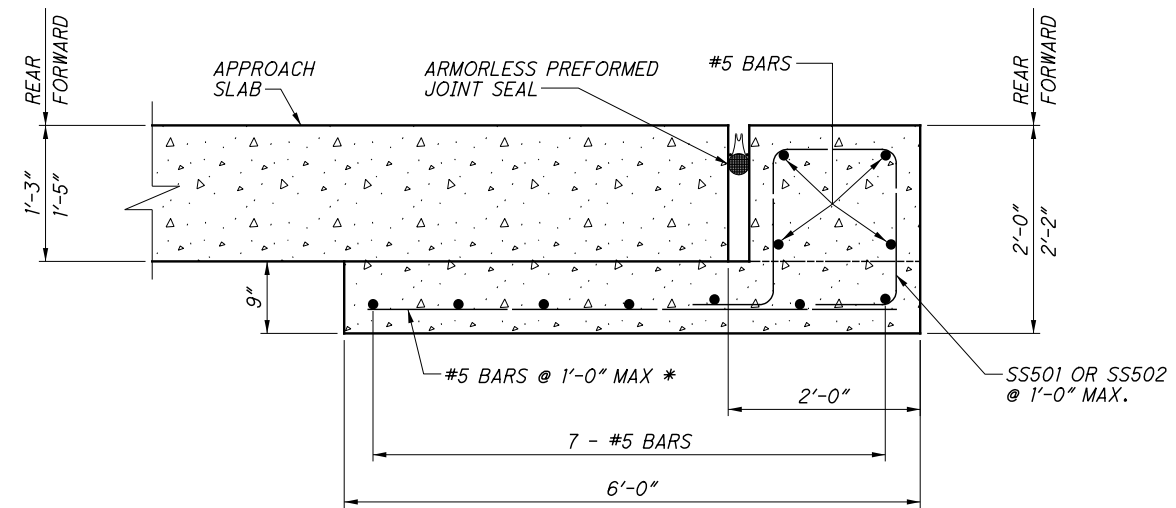
**TYPE C INSTALLATION - REAR APPROACH SLAB**

**LEGEND**

- \* 1'-0" MAX. BAR SPACING IS TAKEN PERPENDICULAR TO PHASE CONSTRUCTION JOINT.
- \*\* THE LONGER LEG OF THE MECHANICAL CONNECTOR BARS (SS504, SS505, SS514 & SS515) ARE PLACED IN THE PHASE 1 OR PHASE 3 SECTIONS.



**TYPE C INSTALLATION - FORWARD APPROACH SLAB**



**SECTION A-A**

5	6/03/21	ELIMINATED PHASE 3 CONSTRUCTION

**NOTES**

**ADDITIONAL NOTES & DETAILS:** SEE STANDARD DRAWING AS-2-15.

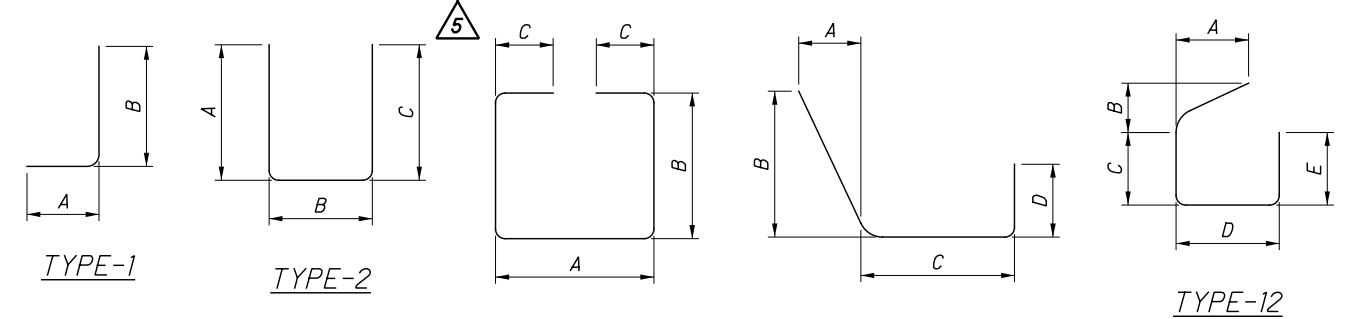
**REAR APPROACH SLAB:** SEE SHEET 20/25.

**FORWARD APPROACH SLAB:** SEE SHEET 21/25.

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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS						
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC
<b>ABUTMENTS</b>													
5	A501	56	74	130	4'-0"	542	2	1'-5"	1'-5"	1'-5"			
	A502	8	8	16	5'-0"	83	38	2'-4"					
	A503	4		4	32'-2"	134	STR						
	A504	4		4	26'-3"	110	STR						
	A505	4		4	26'-0"	108	STR						
5	A506	4		4	32'-7"	136	STR						
	A507	5		5	3'-2"	17	10	0'-8"	0'-6"	0'-10"	1'-8"		
	A508	5		5	6'-7"	34	10	1'-9 1/2"	1'-4 1/2"	0'-7 1/4"	3'-10 1/2"		
	A509		8	8	23'-1"	193	STR						
5	A510		4	4	22'-10"	95	STR						
	A511		2	2	33'-11"	71	STR						
	A512		6	6	36'-3"	227	STR						
	A513		2	2	36'-6"	76	STR						
5	A514		8	8	9'-5"	79	STR						
	A515	2		2	3'-8"	8	10	1'-5 3/4"	0'-8 3/4"	1'-3 1/2"	0'-10"		
	A516	10	15	25	4'-1"	106	2	0'-10"	2'-8"	0'-10"			
	A517	5	5	10	1'-8"	17	1	1'-0"	0'-10"				
	A518		5	5	9'-1"	47	10	1'-5"	1'-9"	0'-7"	6'-5"		
	A519		2	2	4'-5"	9	10	2'-3 3/4"	0'-9 3/4"	1'-3 1/2"	0'-10"		
	A520		5	5	3'-10"	20	10	0'-5 1/4"	0'-8 1/2"	1'-2 3/4"	1'-11 1/4"		
	A521		3	3	3'-10"	12	STR						
	A522	5	7	12	7'-7"	95	22	1'-0"	3'-2 1/2"	3'-0"		0'-5"	
	A523	3		3	3'-2"	10	2	0'-10"	1'-9"	0'-10"			
	A524	2		2	3'-8"	8	16	3'-1"					
5	A601	56	74	130	7'-6"	1464	5	0'-11"	2'-8"	0'-11"			
	A602	3		3	32'-6"	146	STR						
	A603	3		3	26'-4"	119	STR						
	A604	3		3	7'-9"	35	STR						
5	A605	3	3	6	7'-0"	63	38	3'-4"					
	A606		6	6	23'-8"	213	STR						
	A607		3	3	36'-3"	163	STR						
5	A608		3	3	9'-5"	42	STR						
	A609	7	9	16	4'-6"	108	14	1'-0"	1'-6 1/4"	0'-10 3/4"	0'-7 1/2"	1'-1 1/2"	
	A610	5	7	12	3'-3"	59	1	1'-0"	2'-5"				
	A611	2	2	4	5'-4"	32	1	1'-0"	4'-6"				
	D801	30		30	5'-4"	427	18	3'-1 1/4"	1'-0"	1'-0"			
	D802		29	29	6'-11"	536	18	4'-8 3/4"	1'-0"	1'-0"			
	TOTAL					5,417							

MARK	NUMBER	LENGTH	WEIGHT	TYPE	DIMENSIONS							
					A	B	C	D	E	R	INC	
<b>SUPERSTRUCTURE</b>												
5	S401	262	2'-3"	394	2	0'-7"	1'-4"	0'-7"				
	S501	13	7'-7"	103	22	1'-0"	3'-2 1/2"	3'-0"			0'-5"	
	S502	3	4'-8"	15	2	2'-0"	0'-11"	2'-0"				
	S503	3	7'-2"	22	2	3'-3"	0'-11"	3'-3"				
	S504	1	6'-8"	7	2	3'-3"	0'-5"	3'-3"				
	S505	1	4'-2"	4	2	2'-0"	0'-5"	2'-0"				
5	S601	12	7'-0"	126	38	3'-4"						
	S602	6	25'-1"	226	STR							
	S603	6	32'-0"	288	STR							
5	S604	6	6'-1"	55	STR							
	S605	2	8'-8"	26	12	1'-11 3/4"	2'-8 1/4"	0'-6 3/4"	3'-0 1/4"	2'-0 1/2"		
	S606	2	7'-9"	23	12	2'-0 1/2"	2'-7 3/4"	1'-11 1/4"	1'-3 3/4"	1'-6"		
5	S607	12	22'-8"	409	STR							
	S608	6	35'-7"	321	STR							
5	S609	6	9'-6"	86	STR							
	S610	2	11'-1"	33	10	2'-8"	4'-5"	0'-5 1/4"	5'-8 1/2"			
	S611	2	3'-10"	12	1	1'-0"	3'-0"					
	S612	2	6'-6"	20	10	2'-1 1/4"	2'-7"	1'-10"	1'-6 1/2"			
	S613	2	3'-1"	9	1	1'-0"	2'-3"					
	S614	13	4'-3"	83	14	1'-2"	1'-1"	0'-10 3/4"	0'-7 1/2"	1'-1 1/2"		
	S615	13	3'-0"	59	1	1'-2"	2'-0"					
	TOTAL			2,180								



5 6/07/21 ELIMINATED PHASE 3 CONSTRUCTION

**NOTES**

BAR SIZE IS INDICATED IN THE BAR MARK. THE FIRST LETTER IDENTIFIES BAR LOCATION, THE NEXT DIGIT INDICATES THE BAR SIZE DESIGNATION, THE REMAINING DIGITS STATE THE SEQUENCE NUMBER.

EXAMPLE: A501  
A = LOCATION OF THE BAR IN ABUTMENT  
5 = BAR SIZE DESIGNATION  
01 = SEQUENCE NUMBER

BAR DIMENSIONS SHOWN ARE OUT TO OUT UNLESS OTHERWISE INDICATED. R INDICATES INSIDE RADIUS, UNLESS OTHERWISE NOTED.

ALL REINFORCING STEEL TO BE EPOXY COATED.



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MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS									
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC			
<b>APPROACH SLABS</b>																
													CALCULATED CHECKED	JLS BLN	DATE 12/20 1/21	
5	AS501	57		57	5'-2"	307	37	2'-5"	2'-5"							
	AS502	6		6	22'-11"	143	STR									
	AS503	17		17	22'-9"	403	STR									
	AS504	12		12	22'-7"	283	STR									
	AS505	14		14	22'-5"	327	STR									
	AS506	6		6	7'-6"	47	STR									
5	AS507	33		33	7'-5"	255	STR									
	AS508	18		18	7'-4"	138	STR									
	AS509	57	15	72	30'-2"	2265	STR									
	AS510	8		8	22'-6"	188	STR									
	AS511	30	1	31	24'-5"	790	STR									
	AS512	1		1	24'-9"	26	STR									
	AS513	1		1	24'-4"	25	STR									
	AS514		11	11	39'-3"	450	STR									
5	AS515		30	30	21'-9"	681	STR									
	AS516		30	30	22'-4"	699	STR									
	AS517		32	32	22'-11"	765	STR									
	AS518		12	12	34'-3"	429	STR									
	AS519		7	7	34'-8"	253	STR									
	AS520		18	18	35'-2"	660	STR									
	AS521		13	13	36'-3"	492	STR									
	AS522		2	2	36'-10"	77	STR									
	AS523		1	1	37'-4"	39	STR									
	AS524		1	1	37'-11"	40	STR									
	AS525		1	1	38'-6"	40	STR									
	AS526		1	1	39'-1"	41	STR									
5	AS527		1	1	39'-3"	41	STR									
	AS528		65	65	6'-7"	446	STR	2'-10"	3'-5"							
	AS529		14	14	8'-8"	430	STR									
5	AS530		65	65	6'-9"	458	STR	3'-1"	3'-4"							
	AS531		9	9	35'-3"	331	STR									
	AS532		6	6	36'-4"	227	STR									
5	AS533		13	13	30'-2"	409	STR									
	AS534		1	1	31'-2"	33	STR									
	AS535		1	1	32'-2"	34	STR									
5	AS536		5	5	31'-8"	165	STR									
	AS537		3	3	32'-7"	102	STR									
	AS538		1	1	38'-4"	40	STR									
	AS539		1	1	27'-9"	29	STR									
	AS540		1	1	25'-6"	27	STR									
5	AS1001	73		73	25'-10"	8115	16	24'-5"								
	AS1002	1		1	26'-0"	112	16	24'-7"								
	AS1003	1		1	26'-2"	113	16	24'-9"								
	AS1004	1		1	25'-9"	111	16	24'-4"								
	AS1005		33	33	31'-7"	4485	16	30'-2"								
5	AS1006		36	36	30'-10"	4776	16	29'-5"								
	AS1007		1	1	32'-2"	138	16	30'-9"								
	AS1008		1	1	32'-10"	141	16	31'-5"								
	AS1009		1	1	33'-7"	145	16	32'-2"								
	AS1010		1 SR OF 5	1 SR OF 5	25'-10" TO 29'-4"	593	16	24'-5" TO 27'-11"							0'-10 1/2"	
	AS1011		1	1	30'-3"	130	16	28'-10"								
	<b>TOTAL</b>					29,920										

\* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL INCLUDED WITH ITEM 526 - REINFORCED CONCRETE APPROACH SLABS (T=15" OR T=17"), AS PER PLAN FOR PAYMENT.

MARK	NUMBER			LENGTH	WEIGHT	TYPE	DIMENSIONS									
	REAR	FORWARD	TOTAL				A	B	C	D	E	R	INC			
<b>TYPE C INSTALLATION</b>																
													CALCULATED CHECKED	JLS BLN	DATE 11/20 1/21	
5	SS501	46		46	5'-11"	284	30	0'-10"	1'-8"	1'-7"	1'-7"					
	SS502		45	45	6'-11"	325	30	0'-10"	2'-4"	1'-9"	1'-9"					
	SS503	46		46	6'-9"	324	STR									
	SS504	11		11	5'-7"	64	37	2'-9"	2'-6"							
5	SS505	11		11	5'-5"	62	37	2'-6"	2'-7"							
	SS506	11		11	22'-5"	257	STR									
	SS507	11		11	7'-7"	87	STR									
5	SS508	11		11	30'-3"	347	STR									
	SS509		24	24	10'-1"	252	STR									
	SS510		21	21	10'-4"	226	STR									
	SS511		1	1	9'-9"	10	STR									
	SS512		1	1	8'-8"	9	STR									
	SS513		2	2	6'-7"	14	30	0'-10"	2'-0"	1'-9"	1'-9"					
	SS514		11	11	7'-0"	80	37	3'-9"	2'-11"							
5	SS515		11	11	7'-11"	91	37	3'-5"	4'-2"							
	SS516		11	11	36'-7"	420	STR									
5	SS517		11	11	9'-5"	108	STR									
	SS518		22	22	23'-6"	539	STR									
	<b>TOTAL</b>					3,151										

\*\* FOR INFORMATIONAL PURPOSES ONLY. REINFORCING STEEL INCLUDED WITH ITEM 526 - TYPE C INSTALLATION, AS PER PLAN FOR PAYMENT.

5	6/07/21	ELIMINATED PHASE 3 CONSTRUCTION
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**NOTES**

ADDITIONAL NOTES & BENDING DIAGRAMS: SEE SHEET [24/25].

**REINFORCING STEEL LIST - 2 - LOCATION 8**  
 BRIDGE NO. CUY-90-0683  
 RAMP B OVER IR 90

**CUY - BH - FY 2021(B) MISC**  
 PID No. 109131

REVIEWED DATE 01/2021  
 DLR 01/2021  
 STRUCTURE FILE NUMBER 1808508

RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902

25 / 25  
 150  
 253

**STANDARD DRAWINGS:**

REFER TO THE FOLLOWING STANDARD BRIDGE DRAWING(S):

EXJ-4-87 REVISED 1-19-2018  
GSD-1-19 REVISED 1-18-2019  
RB-1-55 REVISED 7-19-2013

AND THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:  
800 DATED 1-15-21  
844 DATED 4-20-18

	6/3/21	REVISE NOTE

**DESIGN SPECIFICATIONS:**

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

**DESIGN LOADING:**

EXISTING STRUCTURE: HS20-44 AND THE ALTERNATE MILITARY LOADING  
FIELD SPLICE: HL-93 AND FUTURE WEARING SURFACE OF 60 PSF

**DESIGN STRESSES:**

STRUCTURAL STEEL - ASTM A709 GRADE 36 - YIELD STRENGTH 36 KSI  
CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4.5 KSI (SUPERSTRUCTURE)

**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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 12 OFFICE  
5500 TRANSPORTATION BOULEVARD  
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:  
[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

**DESCRIPTION OF WORK:**

1. PATCH AND FIBER WRAP THE PIER COLUMNS.
2. REPAIR THE ABUTMENTS.
3. REFURBISH THE ABUTMENT BEARINGS.
4. REPLACE THE STRIP SEAL OF THE EXPANSION JOINT AT THE REAR ABUTMENT.
5. REPLACE FASCIA BEAMS AT THE FORWARD ABUTMENT.
6. REMOVE FORWARD ABUTMENT CROSSFRAMES AT FASCIA AND REATTACH.
7. PAINT NEW BEAM ENDS.
8. REPLACE MISSING PORTIONS OF APPROACH CURB.
9. PATCH AND SEAL THE PARAPETS.
10. PATCH AND SEAL THE CURB AT THE AREAS DESIGNATED IN THE PLANS.
11. REPLACE DECK AND RAILING AT BEAMS A AND K.
12. REPAIR SOUTH FASCIA BEAM.

**ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN:**

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 NORMAL 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.

**FASCIA BEAM REPAIR:**

AN ESTIMATED QUANTITY FOR EACH LOCATION IS PROVIDED FOR FASCIA BEAM REPAIR AS DETERMINED BY FIELD INSPECTION AND AS DIRECTED BY THE ENGINEER. SUPPORT THE EXISTING SECONDARY MEMEBERS. FLAME OR SAW CUT THE EXISTING MEMEBERS TO WITH 1#8 INCH OF THE

EXISTING MAIN MATERIAL USING A MECHANICAL GUIDE ACCORDING TO C&MS 513.12. PROVIDE SHIELDING AS NECESSARY TO PREVENT DAMAGE TO MAIN OR SECONDARY MATERIALS THAT REMAIN. GRIND THE EXISTING MAIN OR SECONDARY MEMEBER SMOOTH IN PREPARATION FOR COMPLETE PENETRATION OR FILLET WELDING. PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 MIL (TO ACCOMODATE THE PROPOSED REPLACEMENT MATERIALS). DETERMINE FINAL QUANTITIES BY FIELD MEASUREMENTS. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN.

**STEEL RESTRAINT OR PRELOAD LIMITS:**

EXISTING ASTM A709 GRADE 36 - DO NOT SUBJECT ANY PART OF THE STRUCTURE TO A JACKING, PULLING OR RESTRAINING UNIT STRESS EXCEEDING 18,000 PSI (124.1 MPA)

**ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL**

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 EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

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

THIS WORK CONSISTS OF APPLYING AN APPROVED SEALER ON EXISTING AND NEW CONCRETE SURFACE AREAS AFTER THE CONCRETE REPAIRS ARE COMPLETED AND CURED. APPLY THE SEALER TO LOCATIONS DESCRIBED IN THE PLANS. APPLY THE SEALER LISTED IN THE PAY ITEM DESCRIPTION.

THE CONTRACTOR IS TO ENSURE THAT THE SEALER COLOR MATCHES THE EXISTING SEALER. TO ENSURE THE COLOR MATCHES, A TEST LOCATION SHALL BE SEALED AND ALLOWED 24 HOURS TO DRY.

**ITEM 513 - STRUCTURAL STEEL MISC.: CROSSFRAME DETACHMENT AND REATTACHMENT**

DETACH THE END CROSSFRAMES AT THE LOCATIONS DESIGNATED IN THE PLANS. ONCE THE NEW BEAM END IS IN PLACE, REATTACH THE CROSSFRAMES TO THE NEW AND EXISTING BEAM ENDS. PERFORM ALL WORK ACCORDING TO CMS SECTION 513. MATERIAL SHALL BE A709 GRADE 36.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO FURNISH AND INSTALL THE PROPOSED GIRDER ENDS, INCLUDING SPLICES, SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL, MISC.: CROSSFRAME DETACHMENT AND REATTACHMENT.

**ITEM 513 - STRUCTURAL STEEL MISC.: NEW BEAM ENDS**

REPLACE THE ENDS OF THE EXISTING GIRDERS AT THE LOCATIONS DESIGNATED IN THE PLANS. PERFORM ALL WORK ACCORDING TO CMS SECTION 513. MATERIAL SHALL BE CVN, LEVEL 4 FABRICATED A709 GRADE 36.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO FURNISH AND INSTALL THE PROPOSED GIRDER ENDS, INCLUDING SPLICES, SHALL BE INCLUDED FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL, MISC.: NEW BEAM ENDS.

**ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN:**

ALL REQUIREMENTS OF 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, 501.06, TO THE ENGINEER. PROVIDE SHOP DRAWINGS ACCORDING TO 513.06 OR SUPPLY THE ENGINEER WITH "AS BUILT" DRAWINGS MEETING 513.06 AFTER COMPLETION OF FIELD FABRICATION. THE ENGINEER WILL REVIEW THE SUBMITTED DRAWINGS FOR CONCURRENCE WITH THE FINAL AS-BUILT CONDITION. 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, SEALED AND DATED, ACCORDING TO S1002, TO THE STRUCTURAL, WELDING AND METALS SECTION OF THE OFFICE OF MATERIAL MANAGEMENT FOR RECORD PURPOSES. THE MEMEBERS INCLUDED IN THIS ITEM ARE PROVIDED. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MEMBERS, LEVEL UF, AS PER PLAN: POUND.

**ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MEMBERS, COPE HOLES:**

AN ESTIMATED QUANTITY FOR EACH LOCATION IS PROVIDED FOR COPING MAIN MEMBERS AS DETERMINED BY FIELD INSPECTION OR AS DIRECTED BY THE ENGINEER. PROVIDE A 2 INCH DIAMETER X 4 INCH LONG COPE ACCORDING TO PLAN DETAILS OR AS DIRECTED BY THE ENGINEER. GRIND THE HOLES SMOOTH ACCORDING TO C&MS 513.19. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MEMBERS, COPE HOLES: EACH.

**ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN MEMBER, COMPLETE PENETRATION WELDING:**

AFTER DAMAGED AREAS HAVE BEEN INSPECTED, PREPARE THE DAMAGED MATERIAL FOR WELDING, PROVIDE RUNOFF TABS FOR ALL COMPLETE PENETRATION WELDS. PERFORM COMPLETE PENETRATION WELDS ACCORDING TO C&MS 513 USING APPROVED ELECTRODES, PROCEDURES AND WELDERS. REMOVE RUNOFF TABS AND GRIND THE COMPLETED EDGES SMOOTH. GRIND THE COMPLETED WELDS SMOOTH

AND FLUSH WITH THE ADJACENT SURFACES TO PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 MIL. DO NOT OVER GRIND AS TO REDUCE THE MATERIAL THICKNESS OR WIDTH OF THE NEW OR EXISTING MATERIALS. PREPARE ALL REENRANT CORNERS WITH A ONE INCH RADIUS. REMOVE WELDING, START AND STOP DISCONTINUITIES. RADIOGRAPHIC TEST THE FINISHED WELDS ACCORDING TO C&MS 513.25A AND SUBMIT COPIES OF THE REPORTS TO THE ENGINEER. THE ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN MEMBERS, COMPLETE PENETRATION WELDING: FOOT.

**ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN MEMBER, FILLET WELDING:**

AFTER DAMAGED AREAS HAVE BEEN INSPECTED, PREPARE THE DAMAGED MATERIAL FOR WELDING, PERFORMING 3/16 INCH FILLET WELDS ACCORDING TO ITEM 513 USING APPROVED ELECTRODES, PROCEDURES AND WELDERS. WELD EACH SECONDARY MEMBER ACCORDING TO PLAN DETAILS. MAGNETIC PARTICLE INSPECT ALL FILLET WELDS ACCORDING TO C&MS 513.25B. THE ENGINEER MAY OBTAIN TECHNICAL ASSISTANCE FROM THE OFFICE OF MATERIALS MANAGEMENT. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MAIN OR SECONDARY MEMBERS, FILLET WELDING: FOOT.

**ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MEMBER, DRILLING:**

AN ESTIMATED QUANTITY FOR EACH LOCATION IS PROVIDED FOR DRILLING MAIN OR SECONDARY MEMBERS AS DETERMINED BY FIELD INSPECTION OR DIRECTED BY THE ENGINEER. DRILL 2 INCH DIAMETER HOLES AT BOTH ENDS OF EACH IDENTIFIED HOLE AS DIRECTED BY THE ENGINEER. GRIND THE HOLES SMOOTH ACCORDING TO C&MS 513.19. THE DEPARTMENT WILL INCLUDE ALL MATERIALS, TOOLS, LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THE ABOVE WORK FOR PAYMENT WITH ITEM 513 - STRUCTURAL STEEL MISC., REPAIR OF DAMAGED MEMBER, DRILLING: EACH.

**ITEM 514 - FIELD PAINTING MISC.: NEW BEAM ENDS**

THIS WORK CONSISTS OF FIELD PAINTING THE PROPOSED GIRDER ENDS AND SPLICES. IN ADDITION, FIELD PAINT ANY PORTIONS OF THE EXISTING STEEL TO REMAIN WHERE THE EXISTING PAINT SYTEM HAS BEEN DAMAGED BY THE REMOVAL PROCESS. PERFORM ALL WORK ACCORDING TO CMS SECTION 514.

ALL EQUIPMENT, LABOR, AND MATERIALS REQUIRED TO PAINT THE PROPOSED GIRDER ENDS, INCLUDING SPLICES, SHALL BE INCLUDED FOR PAYMENT WITH ITEM 514 - FIELD PAINTING, MISC.: NEW BEAM ENDS.

**ITEM 516 - REFURBISH BEARING DEVICE, AS PER PLAN:**

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS AS WELL AS THEIR CLEANING AND PAINTING. INCLUDED SHALL BE DISASSEMBLY OF THE BEARINGS, HAND TOOL CLEANING (GRINDING IF NECESSARY), PAINTING ACCORDING TO ITEM 514, 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, 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 DEVICES, AS PER PLAN.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN:**

THIS WORK CONSISTS OF TEMPORARILY SUPPORTING THE EXISTING GIRDERS DURING GIRDER END REPLACEMENT AND RAISING THE EXISTING STRUCTURE AS REQUIRED FOR REFURBISHING THE BEARINGS. THIS ITEM WILL ALSO COVER THE COST OF THE MATRIALS AND LABOR NEEDED FOR CONSTRUCTION OF THE UTILITY SUPPORT. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH C&MS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS, 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 ACCORDANCE WITH C&MS 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. THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516, JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN:**

PRIOR TO THE SURFACE CLEANING SPECIFIED IN C&MS 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 CONTAINMENT, OR VACUUM ABRASIVE BLASTING.

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**E.L. ROBINSON**  
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1468 West 9th Street - Cleveland, Ohio 44113  
www.elrobinsonengineering.com

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REVIEWED	MJM	STRUCTURE FILE NUMBER	1811258
DATE	1/28/2021		

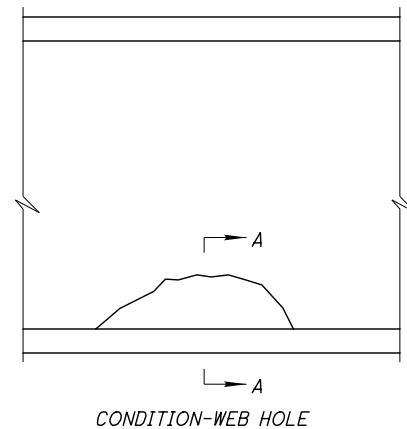
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BRIDGE NO. CUY-422-1122  
US 422 (CHAGRIN BLVD.) OVER IR 271

**CUY-BH-FY 2021**  
**(B) MISC**  
PID No. 109131

3 / 20

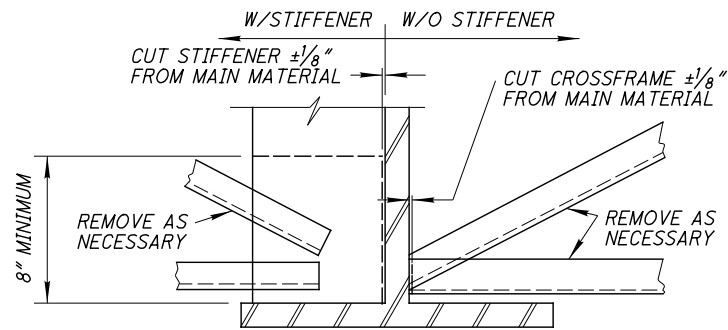
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CONDITION-WEB HOLE

**REPAIR WCI-1**  
SEE NOTE 3

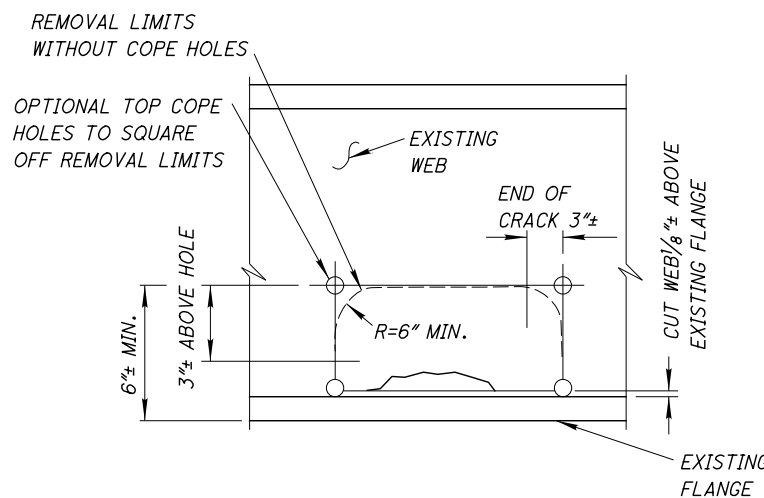


**SECTION A-A**  
SEE NOTE 3

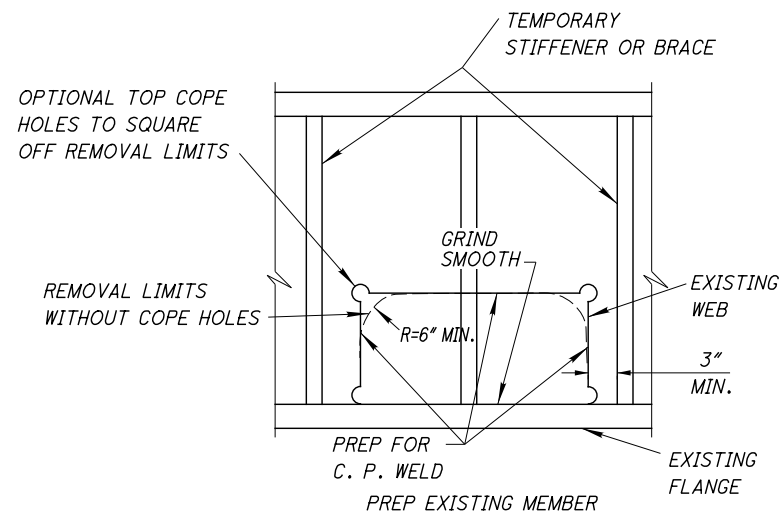
**NOTES:**

1. MARK REMOVAL AREA.
2. INSTALL TEMPORARY STIFFENERS ON EACH SIDE OF REPAIR AREA IF REPAIR AREA OVERLAPS AN EXISTING STIFFENER.
3. REMOVE SECONDARY MEMBERS AS NECESSARY IF APPLICABLE. CAREFULLY GRIND EXISTING WELDS FLUSH. DO NOT DAMAGE WEB OR FLANGE. PROVIDE SHIELDING AS NECESSARY.
4. DRILL 2 OR 4 CORNER HOLES 1" DIAMETER.
5. SAW OR FLAME CUT TO REMOVE DETERIORATED WEB PLATE USING A MECHANICAL GUIDE.
6. PREP EXISTING MEMBER, BEVEL EDGES FOR COMPLETE PENETRATION AND FILLET WELDS.
7. CUT AND BEVEL NEW PLATES, FOR COMPLETE PENETRATION AND FILLET WELDS. THE 5/8" WEB MATERIAL SHALL BE CVN.
8. CHECK FIT OF NEW PLATES, NO GAPS EXCEEDING 1/16".
9. PERFORM WELDING.
10. GRIND WELDS SMOOTH AND PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 mil.
11. GRIND THE INSIDE SURFACE OF ALL DRILLED CORNER HOLES OR BOTTOM COPES TO A 1" RADIUS AND PROVIDE A SURFACE FINISH ACCORDING TO ANSI B46.1 OF 250 mil.
12. PERFORM NDT TESTS ACCORDING TO C&MS 513.25A.
13. REPAIR SECONDARY MEMBERS IF APPLICABLE. MAKE CONNECTIONS TO MATCH EXISTING DETAILS UNLESS MODIFIED HEREIN.
14. THE NEW PLATES SHALL MATCH THE SIZE AND THICKNESS OF THE EXISTING MATERIAL REMOVED.

CAUTION: PROVIDE ADDITIONAL TEMPORARY OR PERMANENT STIFFENERS (SEE REPAIR WCI-3).

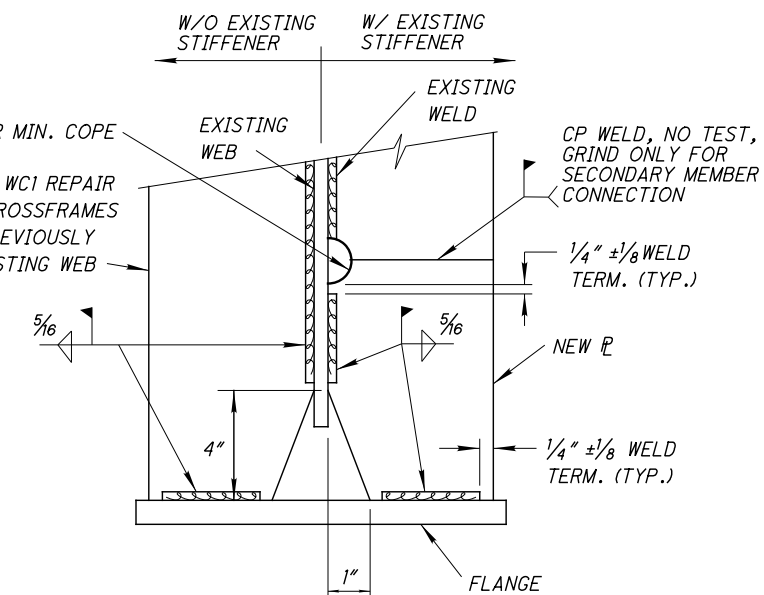


**REPAIR WCI-2**  
SEE NOTES 1 & 4

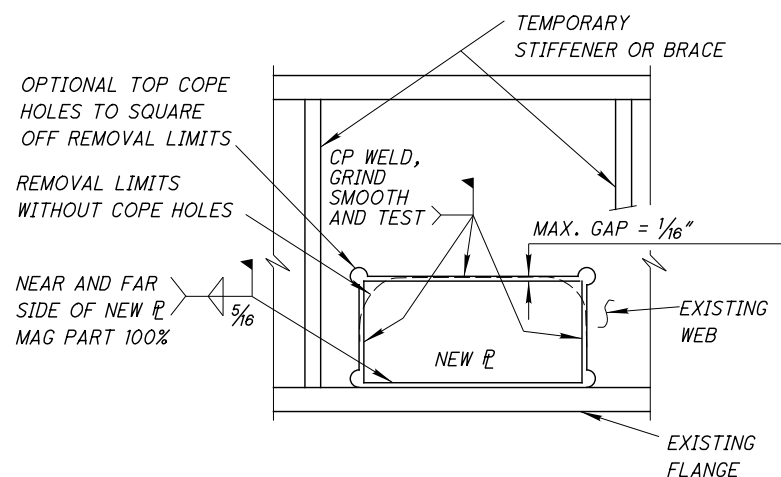


**REPAIR WCI-3**  
SEE NOTE 5 & 6

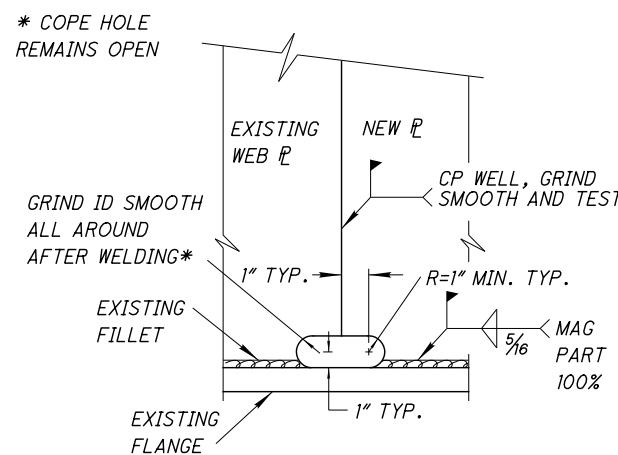
PROVIDE A NEW STIFFENER AT WCI REPAIR LOCATIONS WHERE EXISTING CROSSFRAMES OR LATERAL BRACING WERE PREVIOUSLY WELDED DIRECTLY TO THE EXISTING WEB



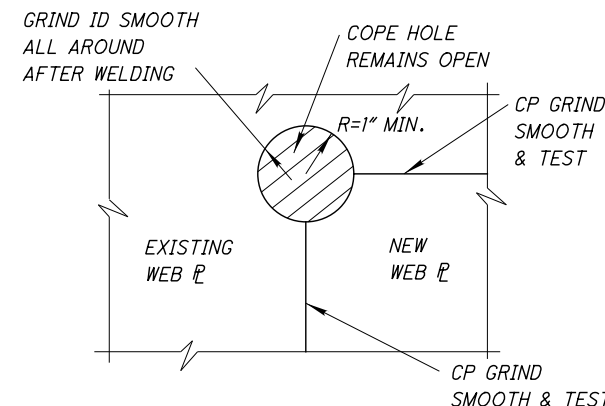
**FIELD REPAIR STIFFENER WCI-7**  
SEE NOTE 6 THROUGH 13



**REPAIR WCI-4**  
SEE NOTES 7 THROUGH 12



**FIELD REPAIR BOTTOM COPE WCI-5**  
SEE NOTES 10 & 11



**FIELD REPAIR TOP COPE WCI-6**  
SEE NOTES 10 & 11

9	6/3/21	REVISE NOTE
11	6/4/21	ADD NOTE

REPAIR OF WEB HOLES WCI - LOCATION 10

BRIDGE NO. CUY-422-1122  
US 422 (CHAGRIN BLVD.) OVER I-71

CUY-BH-FY2021  
(B) MISC  
PID No. 109131

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DATE	1/28/2021		

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**REFER TO STANDARD BRIDGE DRAWINGS**

VPF-1-90 (7-20-2018)  
BR-2-15 (7-17-2015)  
PCB-91 (7-17-2020)  
TVPF-1-18 (7-02-18)  
EXJ-4-87 (1-19-2018)

**REFER TO SUPPLEMENTAL SPECIFICATIONS**

SS 844

**RIGHT OF WAY**

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

**UTILITY OWNERSHIP**

THE NATURE OF THE WORK REQUIRED BY THIS PROJECT WILL NOT AFFECT ANY KNOWN UTILITIES IN THE WORK 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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 12 OFFICE  
5500 TRANSPORTATION BOULEVARD  
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:  
[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

**EXISTING DIMENSIONS**

ALL DIMENSIONS ARE ±.

**MATERIAL REQUIREMENTS**

STRUCTURAL STEEL: ASTM A 709 GRADE 50

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)

**DESCRIPTION OF WORK:**

1. PATCH AND FIBER WRAP DESIGNATED PIER COLUMNS.
2. PATCH ABUTMENT SEATS, FACE OF BACKWALLS, BREASTWALLS, WINGWALLS AND PIER CAPS.
3. REMOVE EAST SIDE SIDEWALK, RAILING AND VANDAL PROTECTION FENCE.
4. RESET SOUTHEAST BEARING.
5. CONSTRUCT NEW SIDEWALK AND RAILING INCLUDING SIDEWALK SLIDING PLATE JOINTS. REPLACE EAST CURBS ON APPROACH SLABS.
6. INSTALL NEW VANDAL PROTECTION FENCE.
7. PATCH CONCRETE APPROACH SLABS.
8. SEAL RAILING, SIDEWALK (NON-EPOXY), PIER CAPS, ABUTMENT AND WINGWALL SURFACES.
9. ADD SUB-DECKING TO EXISTING PORTIONS OF SUPERSTRUCTURE INDICATEDS IN THE PLANS.
10. PAINT 10 FEET OF ORIGINAL STEEL GIRDERS AND CROSSFRAMES BEYOND THE ABUTMENTS.
11. REMOVE AND RE-ERECT EAST SIDE LIGHT POLES AND LUMINAIRE'S: REPLACE LIGHTING CONDUIT AND WIRING (SEE ROADWAY PLAN DETAILS AND NOTES).

18	6/24/21	ADD DAMAGE NOTE/REINFORCING NOTE

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES; AND ELEMENTS THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. 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 CMS 501.05.

**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 IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. 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 AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ANY DAMAGE DONE TO THE EXISTING BRIDGE DECK WEARING SURFACE, CONCRETE OR ASPHALT DUE TO THE CONTRACTOR'S NEGLIGENCE AND LACK OF CARE WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR. ANY PRE-EXISTING CONDITIONS SHALL BE AGREED UPON, NOTED AND DOCUMENTED BY THE CONTRACTOR AND PROJECT ENGINEER PRIOR TO THE START OF WORK AT THAT LOCATION.

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

SEAL PIER CAPS, ABUTMENT BACKWALLS, SEATS, BREASTWALLS, WINGWALLS AND RAILINGS. THE COLOR OF THE FINISH COAT SHALL BE FS NO. 17778 (LIGHT NEUTRAL). CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, FENCE AND POSTS, RAILING AND ALL OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE SEALING OPERATIONS. SEALING OF THE FIBER WRAPPED AREAS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - STRUCTURES, COMPOSITE FIBER WRAP SYSTEM.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO SEAL ALL OF THE AREAS DETAILED IN THE PLANS SHALL BE PAID UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

**ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN**

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 EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

**ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN**

THIS ITEM IS INCLUDED FOR THE REMOVAL OF EXISTING COATINGS FROM EXISTING CONCRETE SURFACES TO BE SEALED. AREAS OF CONCRETE REQUIRING PATCHES OR FIBERWRAP SHALL NOT BE INCLUDED IN THIS ITEM.

**ITEM 516 - RESET BEARING, AS PER PLAN**

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN THE EAST BRIDGE BEARING AT THE FORWARD ABUTMENT, REPLACE ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21), INSTALL ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGN THE LOWER MASONRY PLATE BY RELOCATING IT SO THAT THE BEARING IS VERTICALLY ALIGNED AT 60-DEGREES F (15-DEGREES C), AND INSTALL BEARING RESTRAINING PLATES IF REQUIRED PER PLAN DETAILS.

ASSURE THE BEARING IS SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING".

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 - RESET BEARING, AS PER PLAN.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN**

THIS WORK INCLUDES RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS 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 ACCORDANCE 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.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN (CONT.)**

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

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, THE 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.

**ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN**

THE FINAL PAINT COLOR SHALL CLOSELY MATCH THE EXISTING BRIDGE COLOR, AS APPROVED BY THE ENGINEER.

**ITEM 519 - PATCHING CONCRETE BRIDGE DECK - TYPE A**

THIS WORK IS REQUIRED FOR THE ABUTMENT PATCHING.

**A. DESCRIPTION:**

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIALS AND EQUIPMENT TO REPAIR CONCRETE BRIDGE DECKS, INCLUDING THE REMOVAL OF ALL LOOSE AND UNSOUND CONCRETE, BITUMINOUS PATCHES, SURFACE PREPARATION, BONDING COAT AND THE MIXING, PLACING, FINISHING AND CURING OF THE MORTAR OR CONCRETE PATCHES.

**B. MATERIALS:**

MATERIALS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

FINE AGGREGATE (NATURAL SAND) .....	703.02
COARSE AGGREGATE (NO. 8) .....	703.02
PORTLAND CEMENT .....	701.05
QUICK SETTING CONCRETE MORTAR, TYPE 1 OR 2 .....	705.21
AIR-ENTRAINING ADMIXTURE .....	705.10
CURING MATERIALS - TYPE A OR B PATCHES .....	705.07
CURING MATERIALS - TYPE C PATCHES .....	MFGR'S RECOMMENDATIONS

**C. REMOVAL OF UNSOUND CONCRETE:**

THE ENGINEER SHALL SOUND AND OUTLINE THE AREAS TO BE REMOVED PER DIRECTION OF THE ENGINEER. SOUNDING MAY HAVE TO BE DELAYED UNTIL THE DECK IS SUFFICIENTLY DRY TO PERMIT DETECTION OF ALL AREAS OF DELAMINATION. THE PERIMETER OF ALL REMOVAL AREAS SHALL BE SAWED TO A DEPTH OF 1 INCH TO PRODUCE A VERTICAL OR SLIGHTLY UNDERCUT FACE. ADDITIONAL SAWCUTS MAY BE REQUIRED TO FACILITATE REMOVAL. ALL UNSOUND CONCRETE INCLUDING ALL PATCHES OTHER THAN SOUND PORTLAND CEMENT CONCRETE, AND ALL LOOSE AND DISINTEGRATED CONCRETE SHALL BE REMOVED. THE UNSOUND CONCRETE MAY BE REMOVED BY CHIPPING OR HAND DRESSING. CHIPPING HAMMERS SHALL NOT BE HEAVIER THAN THE NOMINAL 35 POUND CLASS AND SHALL BE OPERATED AT AN ANGLE OF LESS THAN 45 DEGREES MEASURED FROM THE SURFACE OF THE DECK. CONCRETE SHALL BE REMOVED IN A MANNER THAT PREVENTS CUTTING, ELONGATING OR DAMAGING REINFORCING STEEL. WHERE THE BOND BETWEEN CONCRETE AND A PRIMARY REINFORCING BAR HAS BEEN DESTROYED, OR WHERE MORE THAN ONE HALF OF THE PERIPHERY OF SUCH A BAR HAS BEEN EXPOSED, THE ADJACENT CONCRETE SHALL BE REMOVED TO A DEPTH THAT WILL PROVIDE A MINIMUM 3/4" INCH CLEARANCE AROUND THE BAR EXCEPT WHERE OTHER REINFORCING BARS MAKE THIS IMPRACTICABLE. REINFORCEMENT WHICH HAS BECOME LOOSE SHALL BE ADEQUATELY SUPPORTED AND TIED BACK INTO PLACE. AFTER COMPLETION OF THE SECONDARY REMOVAL OPERATIONS, THE ENGINEER WILL RE-SOUND THE DECK TO ENSURE THAT ONLY SOUND CONCRETE REMAINS. MINIMIZE CONSTRUCTION JOINTS. CONSTRUCTION JOINTS SHALL ONLY BE PLACED ON THE PERIMETER OF THE REMOVAL AREAS.

**D. SURFACE PREPARATION:**

CLEANING SHALL CLOSELY PRECEDE APPLICATION OF THE BONDING GROUT AND/OR THE PATCHING MATERIAL. THE SURFACE TO BE PATCHED AND THE EXPOSED REINFORCING STEEL SHALL BE THOROUGHLY CLEANED BY SANDBLASTING FOLLOWED BY AN AIR BLAST. IT MAY BE NECESSARY TO USE HAND TOOLS TO REMOVE SCALE FROM THE REINFORCING STEEL. FOR TYPE A AND TYPE B PATCHES AND TYPE C PATCHES WHICH DO NOT USE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE SURFACE DRY. FOR TYPE C PATCHES WHICH REQUIRE WATER AS THE ACTIVATOR, THE PREPARED SURFACE SHALL BE LEFT IN THE CONDITION AS RECOMMENDED BY THE MANUFACTURER. ANY ADDITIONAL SURFACE PREPARATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS FOR THE PATCHING MATERIAL WHICH IS USED.

 RICHLAND ENGINEERING LIMITED 29 NORTH PARK STREET MANSFIELD, OHIO 44902	DATE 01/2021	REVIEWED DLR	STRUCTURE FILE NUMBER 1812556	DRAWN RB	REVISIONS dnt	DESIGNED BLN	CHECKED dnt
GENERAL NOTES-1 - LOCATION 13 BRIDGE NO. CUY-480-1955 TRANSPORTATION BOULEVARD OVER I-480							
CUY -BH -FY 2021(B) MISC PID No. 109131				2 / 17			
190 253							

ESTIMATED QUANTITIES

CALCULATED *dht* DATED 10/20  
 CHECKED *RRB* DATED 1/21

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	ABUTS.	GEN'L	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2/17
202	75260	441	FT	VANDAL PROTECTION FENCE REMOVED					
509	10000	18,361	LB	EPOXY COATED REINFORCING STEEL	18,361				
509	20001	150	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				150	2/17
510	10000	564	EACH	DOWEL HOLES WITH NON-SHRINK, NON-METALIC GROUT	540		24		
511	34410	147	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	146		1		
512	10050	255	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	255				
512	10101	999	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	553	291	155		2/17
512	74001	609	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN	198	282	129		2/17
514	00100	LS		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL				LS	
514	00200	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT				LS	
514	00300	LS		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				LS	
514	00401	LS		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN				LS	2/17
516	12200	10	FT	STRUCTURAL STEEL EXPANSION JOINT (SIDEWALK)	10				
516	46701	1	EACH	RESET BEARING, AS PER PLAN					2/17
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LS	2/17
SPECIAL	51900100	6061	SF	COMPOSITE FIBER WRAP SYSTEM		6061			3/17
519	11101	429	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		79	350		2/17
519	12200	30	SY	PATCHING CONCRETE BRIDGE DECK - TYPE A	30				
526	98200	34	FT	APPROACH SLABS, MISC.: CURB REMOVAL AND REPLACEMENT				34	11/17
SPECIAL	53000600	4901	SF	STRUCTURE: TIMBER SUBDECK	4901				3/17
607	39901	441	FT	VANDAL PROTECTION FENCE, 6' STRAIGHT, COATED FABRIC, AS PER PLAN	441				11/17
844	10001	665	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN		665			3/17

4	5/25/21	ADD LOCATION 13 ITEM
13	6/7/21	FIX ITEM 511 CLASS QC2 CONCRETE, SUPERSTRUCTURE QUANTITY
18	6/24/21	ADD REINFORCING STEEL ITEM

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**ESTIMATED QUANTITIES - LOCATION 13**

BRIDGE NO. CUY-480-1955  
 TRANSPORTATION BOULEVARD OVER I-480

**CUY-BH-FY2021(B) MISC**  
 PID No. 109131

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RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902  
 DATE 01/2021  
 REVIEWED DLR 01/2021  
 STRUCTURE FILE NUMBER 1812556  
 DRAWN RB  
 REVISIONS  
 DESIGNED BLN  
 CHECKED dht

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**REFER TO STANDARD BRIDGE DRAWINGS**

EXJ-4-87 (REVISED 1-19-2018)  
BR-2-15 (7-17-2015)  
VPF-1-90 (REVISED 7-20-2018)  
GSD-1-19 (1-15-2021)  
PCB-91 (7-17-2020)  
TVPF-1-18 (7-02-2018)

**REFER TO SUPPLEMENTAL SPECIFICATIONS**

SS 844 (DATED 4-20-2018)

**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 SECTIONS 102.05 AND 105.02 OF THE 2019 CONSTRUCTION AND MATERIAL SPECIFICATIONS.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PRE-BID EXAMINATION OF THE EXISTING STRUCTURE BY THE CONTRACTOR. HOWEVER, THE DEPARTMENT WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

THE EXISTING STRUCTURE PLANS MAY BE REVIEWED AT THE:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 12 OFFICE  
5500 TRANSPORTATION BOULEVARD  
GARFIELD HEIGHTS, OH 44125

EXISTING PLANS ARE ALSO AVAILABLE THROUGH THE FOLLOWING ODOT WEBSITE:  
[HTTP://WWW.DOT.STATE.OH.US/DIVISIONS/CONTRACTADMIN/CONTRACTS/PAGES/DESIGNFILES.ASPX](http://www.dot.state.oh.us/divisions/contractadmin/contracts/pages/designfiles.aspx)

**DESCRIPTION OF WORK**

1. PATCH AND FIBER WRAP DESIGNATED PIER COLUMNS.
2. PATCH ABUTMENT SEATS, FACE OF BACKWALLS, BREASTWALLS, AND PIER CAPS.
3. REMOVE SIDEWALKS, RAILINGS, AND VANDAL PROTECTION FENCE.
4. REMOVE ABUTMENT EXPANSION JOINTS, PORTIONS OF BACKWALL AND SUPERSTRUCTURE DECK.
5. TRIM BEAM/GIRDER ENDS AS REQUIRED.
6. REPLACE DETERIORATED ABUTMENT CROSSFRAME MEMBER.
7. INSTALL NEW STRIP SEAL JOINTS INCLUDING PORTIONS OF DECK AND BACKWALL AND MODIFY END CROSSFRAMES TO ATTACH TO NEW JOINTS.
8. CONSTRUCT NEW SIDEWALKS AND RAILING. REPLACE CURBS ON APPROACH SLABS.
9. INSTALL NEW VANDAL PROTECTION FENCE.
10. SEAL RAILING, SIDEWALKS (NON-EPOXY SEALER), PIER CAPS, ABUTMENT SURFACES AND WINGWALLS.
11. PAINT 10 FEET OF STEEL GIRDERS AND CROSSFRAMES BEYOND THE ABUTMENTS.
12. REMOVE AND RE-ERECT LIGHT POLES AND LUMINAIRES. REPLACE LIGHTING CONDUIT AND WIRE ON SUPERSTRUCTURE.
13. REPAIR SLOPE PROTECTION AT THE FORWARD ABUTMENT.
14. RESET ALL ABUTMENT BEARINGS.
15. INSTALL TIMBER SUBDECKING.

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

THIS ITEM SHALL INCLUDE THE ELEMENTS INDICATED IN THE PLANS AND GENERAL NOTES; AND ELEMENTS THAT ARE NOT SEPARATELY LISTED FOR PAYMENT. 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 CMS 501.05.

**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 IN PLACE. INSTALL DOWEL BARS IF SPECIFIED. 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 AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

ANY DAMAGE DONE TO THE EXISTING BRIDGE DECK WEARING SURFACE, CONCRETE OR ASPHALT DUE TO THE CONTRACTOR'S NEGLIGENCE AND LACK OF CARE WILL BE THE CONTRACTOR'S RESPONSIBILITY TO REPAIR. ANY PRE-EXISTING CONDITIONS SHALL BE AGREED UPON, NOTED AND DOCUMENTED BY THE CONTRACTOR AND PROJECT ENGINEER PRIOR TO THE START OF WORK AT THAT LOCATION.

**ITEM 509 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN**

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 EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

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

SEAL PIER CAPS; ABUTMENT BACK WALLS, SEATS, BREASTWALLS AND WINGWALLS; AND RAILING. REMOVE DEBRIS AND CLEAN SURFACES OF WALLS AND SEATS PER 512.03 E & F. THE COLOR OF THE FINISH COAT SHALL BE FS NO. 17778 (LIGHT NEUTRAL). THE CONTRACTOR SHALL ENSURE ANY EXISTING UNDERPASS LIGHTING, FENCE AND POSTS, RAILING AND ALL OTHER BRIDGE COMPONENTS ARE PROTECTED DURING THE SEALING OPERATIONS. SEALING OF THE FIBER WRAPPED AREAS SHALL BE INCLUDED FOR PAYMENT UNDER ITEM SPECIAL - COMPOSITE FIBER WRAP SYSTEM.

ALL EQUIPMENT, LABOR, MATERIALS AND INCIDENTALS REQUIRED TO SEAL ALL OF THE AREAS DETAILED IN THE PLANS SHALL BE PAID UNDER ITEM 512 - SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN.

**ITEM 512 - REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN**

THIS ITEM IS INCLUDED FOR THE REMOVAL OF EXISTING COATINGS FROM EXISTING CONCRETE SURFACES TO BE SEALED. AREAS OF CONCRETE REQUIRING PATCHES OR FIBERWRAP SHALL NOT BE INCLUDED IN THIS ITEM.

**ITEM 514 - FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN**

THE FINAL PAINT COLOR SHALL CLOSELY MATCH THE EXISTING STEEL PAINT COLOR, AS APPROVED BY THE ENGINEER.

**ITEM 516 - RESET BEARING, AS PER PLAN**

THIS ITEM SHALL INCLUDE ALL WORK NECESSARY TO PROPERLY ALIGN BRIDGE BEARINGS, REPLACEMENT OF ANY DAMAGED SHEET LEAD WITH PREFORMED BEARING PADS (711.21). INSTALLATION OF ANY NECESSARY STEEL SHIMS OF THE SAME SIZE AS THE BEARINGS TO PROVIDE A SNUG FIT, REALIGNMENT OF THE LOWER MASONRY PLATE BY RELOCATING IT SO THAT THE BEARINGS ARE VERTICALLY ALIGNED AT 60-DEGREES F (15-DEGREES C), AND INSTALLING BEARING RESTRAINING PLATES IF REQUIRED PER PLAN DETAILS.

ASSURE ALL BEARINGS ARE SHIMMED ADEQUATELY AND THAT NO BEAMS AND/OR BEARING DEVICES ARE "FLOATING".

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 - RESET BEARING, AS PER PLAN.

**ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN**

THIS WORK INCLUDES RAISING OR RE-POSITIONING EXISTING STRUCTURES TO PERFORM THE WORK DEFINED IN THE PROJECT PLANS. SUBMIT CONSTRUCTION PLANS IN ACCORDANCE WITH CMS 501.05. IF, DURING THE JACKING OPERATIONS, CRACKING OF THE CONCRETE SUPERSTRUCTURE, SEPARATION OF THE CONCRETE DECK FROM THE STEEL STRINGERS 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 ACCORDANCE 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.

THE DEPARTMENT WILL MEASURE THIS WORK ON A LUMP SUM BASIS. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT PRICE FOR ITEM 516 - JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN.

**ITEM 519 - PATCHING CONCRETE STRUCTURE, AS PER PLAN**

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, THE CONTRACTOR SHALL ENSURE ANY EXISTING 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.

**ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK**

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 TRAVELLED LANES, AS WELL AS PAVED SHOULDERS.

MATERIALS:

TIMBER BEAMS SHALL CONFORM TO CMS 711.26 AND SHALL BE DOUGLAS FIR LARCH WITH A COMMERCIAL GRADE OF NO. 2 OR BETTER OR SOUTHERN PINE WITH A COMMERCIAL GRADE OF NO. 2 OR BETTER. PRESERVATIVE TREATMENT FOR TIMBER BEAMS SHALL CONFORM TO CMS 712.06.

THE TIMBER SHEATHING SHALL BE 3/4" CDX PRESERVATIVE TREATED PLYWOOD MANUFACTURED FROM EITHER DOUGLAS FIR OR SOUTHERN PINE. ALL TRANSVERSE EDGES OF THE PLYWOOD SHALL BE SUPPORTED BY 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, EQUIPMENT, AND ALL OTHER INCIDENTALS NECESSARY TO COMPLETE THE TIMBER SUBDECKING. PAYMENT SHALL BE MADE UNDER ITEM SPECIAL - STRUCTURES: TIMBER SUBDECK.

**ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN**

REPAIR WORK SHALL BE PER SUPPLEMENTAL SPECIFICATION 844. THE MINIMUM SPACING OF 100 GRAM ZINC ANODE SHALL BE 18" OR EQUIVALENT TOTAL ZINC CONTENT PER AREA. THIS ITEM SHALL BE PER ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN AND INCLUDE ALL REQUIRED PATCHING AND PROTECTION WORK TO MAKE THE PIER COLUMNS READY FOR THE COMPOSITE FIBER WRAP SYSTEM.

GENERAL NOTES CONTINUED: SEE SHEET 3/24.

18	6/24/21	ADD DAMAGE NOTE

**GENERAL NOTES - 1 - LOCATION 14**

BRIDGE NO. CUY-480-2019  
TURNKEY ROAD OVER I-480

**CUY-BH-FY2021(B) MISC**

PID No. 109131

2 / 24

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RICHLAND ENGINEERING LIMITED  
29 NORTH PARK STREET  
MANSFIELD, OHIO 44902

DATE: 01/2021  
REVIEWED: DLR  
DRAWN: DPH  
DESIGNED: BLN  
CHECKED: dnt

STRUCTURE FILE NUMBER: 1812564

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**ESTIMATED QUANTITIES**

CALCULATED JLS DATED 12/20  
 CHECKED dht DATED 10/20

ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	PIERS	ABUTS.	GEN'L	REF. SHEET
202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	2/24
202	75260	779	FT	VANDAL PROTECTION FENCE REMOVED	779				
509	10000	17 19,921	LB	EPOXY COATED REINFORCING STEEL	17 16,940		2981		
509	20001	150	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN				150	2/24
510	10000	980	EACH	DOWEL HOLES WITH NONSHRINK, NONMETALLIC GROUT	956		24		
511	34410	243	CY	CLASS QC2 CONCRETE, SUPERSTRUCTURE	220		23		
512	10050	534	SY	SEALING OF CONCRETE SURFACES (NON-EPOXY)	528	6			
512	10101	1270	SY	SEALING OF CONCRETE SURFACES (EPOXY-URETHANE), AS PER PLAN	779	305	186		2/24
512	74001	181	SY	REMOVAL OF EXISTING COATINGS FROM CONCRETE SURFACES, AS PER PLAN			181		2/24
513	21000	16	EACH	TRIMMING OF BEAM END	16				
513	21500	73	LB	REPLACEMENT OF DETERIORATED END CROSSFRAMES	73				
514	00100	LS		SURFACE PREPARATION OF EXISTING STRUCTURAL STEEL				LS	
514	00200	LS		FIELD PAINTING OF EXISTING STRUCTURAL STEEL, PRIME COAT				LS	
514	00300	LS		FIELD PAINTING STRUCTURAL STEEL, INTERMEDIATE COAT				LS	
514	00401	LS		FIELD PAINTING STRUCTURAL STEEL, FINISH COAT, AS PER PLAN				LS	2/24
516	11210	133	FT	STRUCTURAL EXPANSION JOINT INCLUDING ELASTOMERIC STRIP SEAL	133				
516	46701	16	EACH	RESET BEARING, AS PER PLAN	16				2/24
516	47001	LS		JACKING AND TEMPORARY SUPPORT OF SUPERSTRUCTURE, AS PER PLAN				LS	2/24
517	75122	774	FT	RAILING (CONCRETE PARAPET WITH TWIN STEEL TUBE RAILING AND VANDAL PROTECTION FENCE)	774				
518	21200	7	CY	POROUS BACKFILL WITH GEOTEXTILE FABRIC			7		
SPECIAL	51900100	993	SF	COMPOSITE FIBER WRAP SYSTEM		993			3/24
519	11101	55	SF	PATCHING CONCRETE STRUCTURE, AS PER PLAN		8	47		2/24
526	98200	80	FT	APPROACH SLABS, MISC.: CURB REMOVAL AND REPLACEMENT	80				20/24
SPECIAL	53000600	8396	SF	STRUCTURES: TIMBER SUBDECK	8396				2/24
601	27000	20	CY	DUMPED ROCK FILL, TYPE C			20		
844	10001	87	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN		87			2/24

17	6/14/21	REVISE QUANTITIES

**ESTIMATED QUANTITIES - LOCATION 14**  
 BRIDGE NO. CUY-480-2019  
 TURNKEY ROAD OVER IIR 480

**CUY-BH-FY2021(B) MISC**  
 PID No. 109131

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 209  
 253

RICHLAND ENGINEERING LIMITED  
 29 NORTH PARK STREET  
 MANSFIELD, OHIO 44902

REVIEWED DATE 01/2021  
 DLR 01/2021  
 STRUCTURE FILE NUMBER 1812564

DRAWN DPH  
 REVISIONS

DESIGNED BLN  
 CHECKED dht

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**REFER TO THE FOLLOWING STANDARD BRIDGE DRAWINGS:**

BR-1-13 REVISED 01-17-14  
VPF-1-90 REVISED 07-20-18

**AND TO THE FOLLOWING SUPPLEMENTAL SPECIFICATIONS:**

800 DATED 10-16-20  
844 DATED 04-20-18

**DESIGN SPECIFICATIONS:**

THE EXISTING STRUCTURE WAS DESIGNED IN CONFORMANCE WITH THE "STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES" ADOPTED BY THE AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS, DATED 1969, INCLUDING THE 1970 INTERIM SPECIFICATIONS AND THE OHIO "SUPPLEMENT" TO THESE SPECIFICATIONS.

**DESIGN LOADING:**

HS20-44 CASE I AND THE ALTERNATE MILITARY LOADING  
FUTURE WEARING SURFACE (FWS) OF 0.030 KIPS PER SQUARE FOOT

**DESIGN DATA:**

CONCRETE CLASS QC2 - COMPRESSIVE STRENGTH 4500 PSI (SUPERSTRUCTURE)  
CONCRETE CLASS QC1 - COMPRESSIVE STRENGTH 4000 PSI (SUBSTRUCTURE)

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

STRUCTURAL STEEL - ASTM A572 GRADE 50, YIELD STRENGTH 50 KSI (EXISTING)

**MONOLITHIC WEARING SURFACE:**

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

**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 CMS SECTIONS 102.05 AND 105.02.

BASE CONTRACT BID PRICES UPON A RECOGNITION OF THE UNCERTAINTIES DESCRIBED ABOVE AND UPON A PREBID EXAMINATION OF THE EXISTING STRUCTURE. HOWEVER, THE OWNER WILL PAY FOR ALL PROJECT WORK BASED UPON ACTUAL DETAILS AND DIMENSIONS THAT HAVE BEEN VERIFIED IN THE FIELD.

**EXISTING STRUCTURE PLANS:**

PLANS MAY BE EXAMINED BY PROSPECTIVE BIDDERS AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12, 5500 TRANSPORTATION BLVD., GARFIELD HEIGHTS, OH 44125-5396, TEL 216-581-2100. EXISTING PLANS MAY ALSO BE DOWNLOADED AT THE FOLLOWING LINK: <http://ftp.dot.state.oh.us/pub/Contracts/Attach>

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

DESCRIPTION: THIS WORK CONSISTS OF THE REMOVAL OF PORTIONS OF CONCRETE BRIDGE RAILINGS AT THE LOCATIONS SHOWN IN THE PLANS AS REQUIRED FOR REPAIR AND RECONSTRUCTION. THE PROVISIONS OF ITEM 202 APPLY EXCEPT AS SPECIFIED BY THE FOLLOWING NOTES. PERFORM WORK CAREFULLY TO PROTECT PORTIONS OF THE EXISTING BRIDGE RAILINGS AND DECK SLAB TO REMAIN. THE USE OF EXPLOSIVES, HEADACHE BALLS AND/OR HOE RAM TYPE OF EQUIPMENT IS PROHIBITED. SUBMIT CONSTRUCTION PLANS ACCORDING TO C&MS 501.05.

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 AND LOOSE RUST. THOROUGHLY DRENCH EXISTING CONCRETE SURFACES WITH CLEAN WATER AND ALLOW TO DRY TO A DAMP CONDITION BEFORE PLACING CONCRETE.

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 - REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN:**

REPLACE ALL EXISTING REINFORCING STEEL 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 EPOXY COATED REINFORCING STEEL OF THE SAME SIZE AT NO COST TO THE DEPARTMENT.

**ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: MEDIAN BARRIER SEAL:**

DESCRIPTION: THIS WORK CONSISTS OF FURNISHING AND INSTALLING A NEOPRENE SEAL ALONG THE TOP OF THE BRIDGE MEDIAN TO REPLACE MISSING OR DAMAGED PORTIONS OF THE EXISTING MEDIAN BARRIER SEAL AT THE LOCATIONS SHOWN IN THE PLANS.

MATERIALS: THE NEW SEAL SHALL MATCH THE EXISTING AS CLOSELY AS PRACTICABLE IN WIDTH, THICKNESS, AND METHOD OF ATTACHMENT. REFER TO THE STRUCTURE GENERAL NOTES IN THE ORIGINAL CONSTRUCTION PLANS FOR THE ORIGINAL MATERIAL SPECIFICATIONS. SUBMIT PRODUCT DATA TO THE ENGINEER FOR APPROVAL PRIOR TO ORDERING MATERIALS.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF FEET ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE EXISTING MEDIAN BARRIER SEAL REPAIR. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 516 - STRUCTURAL JOINT OR JOINT SEALER, MISC.: MEDIAN BARRIER SEAL.

**ITEM 607 - FENCE REBUILT, TYPE CL, AS PER PLAN:**

DESCRIPTION: THIS WORK CONSISTS OF REMOVING, STORING, AND REINSTALLING THE EXISTING PARAPET-MOUNTED CHAIN LINK FENCE AT LOCATIONS WHERE THE PARAPET IS TO BE REBUILT AND REPAIRING OR REPLACING DAMAGED AREAS OF THE EXISTING PARAPET-MOUNTED CHAIN LINK FENCE IN ACCORDANCE WITH THE DETAILS SHOWN IN THE PLANS ON SHEETS 15/17 AND 16/17.

MATERIALS: STRUCTURAL STEEL FOR BASE PLATES SHALL BE ASTM A709 GRADE 36 OR 50, GALVANIZED IN ACCORDANCE WITH C&MS 711.02. REPLACEMENT POSTS, LINE RAILS, EXPANSION COUPLINGS, BRACKETS, FENCE FABRIC, AND MISCELLANEOUS HARDWARE SHALL BE CHAIN LINK FENCE INDUSTRY STANDARD, COMPATIBLE IN SIZE, COLOR, AND FIT-UP WITH EXISTING FENCE COMPONENTS TO REMAIN. FURNISH MATERIALS IN CONFORMANCE WITH C&MS 607.

ANTICIPATED REPAIR QUANTITIES: BASED ON A VISUAL INSPECTION PERFORMED IN APRIL 2020, THE DEFECTS IN THE EXISTING FENCE THAT ARE TO BE CORRECTED BY THIS WORK INCLUDE THE FOLLOWING:

- BROKEN TOP LINE RAIL COUPLINGS
- BROKEN BOTTOM LINE RAIL BRACKETS
- BROKEN LINE RAIL EXPANSION SLEEVES (JOINT 6)
- BENT/DAMAGED UNSALVAGEABLE FENCE POSTS WITH BASE PLATES
- DAMAGED OR MISSING (DUE TO PREVIOUS REPAIR) BOTTOM LINE RAILS
- DAMAGED OR MISSING (DUE TO PREVIOUS REPAIR) TOP LINE RAILS
- DAMAGED FENCE FABRIC

BASED ON THE APRIL 2020 INSPECTION, PORTIONS OF THE EXISTING CHAIN LINK FENCE WILL REQUIRE REMOVAL AND REPLACEMENT WITH NEW MATERIALS BECAUSE THE DAMAGE TO POSTS AND FENCE FABRIC EXTENDS OVER MULTIPLE SEQUENTIAL PANELS OR A PREVIOUS REPAIR OMITTED THE LINE RAILS. FOR FENCE REPAIR LOCATIONS AND ESTIMATED QUANTITIES, SEE SHEETS 3 TO 12/17.

THE INFORMATION ABOVE SHALL BE CONSIDERED TENTATIVE AND APPROXIMATE AND AN ALLOWANCE INCLUDED IN THE BID FOR ADDITIONAL DETERIORATION OR DAMAGE THAT MAY BE FOUND AT THE TIME OF CONSTRUCTION. AT THE START OF THE WORK, THE CONTRACTOR, TOGETHER WITH THE ENGINEER, SHALL INSPECT THE EXISTING FENCE TO DETERMINE THE EXACT LOCATIONS OF DEFECTIVE, DAMAGED, OR MISSING

FENCE COMPONENTS TO BE REPLACED. ALL EXISTING FENCE ON THE BRIDGE SHALL BE RESTORED TO A SAFE AND SERVICEABLE CONDITION, AS FOLLOWS: POST SPACINGS NOT EXCEEDING TEN (10) FEET CENTER-TO-CENTER; ALL POSTS STRAIGHT, VERTICAL, AND FIRMLY ANCHORED TO THE CONCRETE PARAPET; TOP AND BOTTOM LINE RAILS CONTINUOUS AND FIRMLY ATTACHED TO POSTS; TENSION RODS AND OTHER HARDWARE TIGHT AND SECURE; AND FENCE FABRIC HAVING NO GAPS, BULGES, OR SNAGS. THE PAY LENGTH FOR THIS WORK HAS BEEN INCREASED BY 100 LF OVER MEASURED QUANTITIES TO ALLOW FOR ADDITIONAL DETERIORATION.

MEASUREMENT AND PAYMENT: THE DEPARTMENT WILL MEASURE THIS WORK BY THE NUMBER OF FEET ACCEPTED IN PLACE. THE BID PRICE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, AND INCIDENTALS NECESSARY TO COMPLETE THE WORK. THE DEPARTMENT WILL PAY FOR THE ACCEPTED QUANTITIES AT THE CONTRACT UNIT PRICE BID FOR ITEM 607 - FENCE REBUILT, TYPE CL, AS PER PLAN.

**ITEM 844 - CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN:**

THIS WORK CONSISTS OF PATCHING EXISTING REINFORCED CONCRETE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATION 844, MODIFIED AS FOLLOWS:

WHERE THE AREA OF THE AREA OF AN INDIVIDUAL REPAIR, AS DETERMINED IN THE FIELD AT THE TIME OF CONSTRUCTION, TOTALS LESS THAN FIVE (5) SQUARE FEET, THE INSTALLATION OF GALVANIC ANODES IS NOT REQUIRED, AND THE WORK SHALL BE PERFORMED IN ACCORDANCE WITH C&MS 519.

THE ANODE SPACING SHALL BE 24" FOR REPAIRS ON EXISTING BRIDGE PARAPETS.

**ITEM 847 - FULL DEPTH REPAIR, AS PER PLAN:**

THE CONCRETE FOR THE FULL DEPTH REPAIRS WILL BE MICRO-SILICA MODIFIED CONCRETE.

**INTERIM COMPLETION DATE:**

TO ACCOMMODATE THE OPENING OF THE OPPORTUNITY CORRIDOR PROJECT, ALL WORK (DECK REPAIRS, PARAPET REPAIRS AND FENCE REPAIRS) ON BRIDGE NO. CUY-490-0100 (SFN 1811991) SHALL BE COMPLETED BY OCTOBER 15, 2021.



DATE 10/29/20  
REVIEWED MJL  
DRAWN PAT  
DESIGNED PAT  
CHECKED JAM/CJS  
STRUCTURE FILE NUMBER 1811991

STRUCTURE GENERAL NOTES - LOCATION 16  
BRIDGE NO. CUY-490-0100  
I-490 OVER CUYAHOGA RIVER

CUY-BH-FY2021(B) MISC  
PID No. 109131

JAM	06/18/21	△ - FULL DEPTH REPAIR NOTE
JAM	06/10/21	△ - COMPLETION DATE
JAM	06/07/21	△ - FENCE REBUILT QUANTITY
REV. BY	DATE	DESCRIPTION

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FUNDING		ESTIMATED QUANTITIES									CALC. BY: PAT DATE: 10/28/20		CHKD. BY: CJS DATE: 10/29/20	
--/--/--	ITEM	ITEM EXTENSION	TOTAL	UNIT	DESCRIPTION	ABUTMENTS	PIERS	SUPER-STRUCTURE	GENERAL	REF. SHEET NUMBER				
	202	11203	LS		PORTIONS OF STRUCTURE REMOVED, OVER 20 FOOT SPAN, AS PER PLAN				LS	1/17				
	509	10000	797	LB	EPOXY COATED REINFORCING STEEL			797						
	509	20001	200	LB	REINFORCING STEEL, REPLACEMENT OF EXISTING REINFORCING STEEL, AS PER PLAN			200		1/17				
	511	34448	8	CY	CLASS QC2 CONCRETE, BRIDGE DECK (PARAPET)			8						
	512	10600	914	FT	CONCRETE REPAIR BY EPOXY INJECTION			914						
	516	14600	28	FT	STRUCTURAL JOINT OR JOINT SEALER, MISC.: MEDIAN BARRIER SEAL			28		1/17				
	519	10000	1,370	SY	PATCHING CONCRETE BRIDGE DECK OVERLAY WITH MICRO-SILICA MODIFIED CONCRETE			1,370						
	607	22001	714	FT	FENCE REBUILT, TYPE CL, AS PER PLAN			714		1/17				
	844	10001	994	SF	CONCRETE PATCHING WITH GALVANIC ANODE PROTECTION, AS PER PLAN			994		1/17				
	847	30201	44	CY	FULL DEPTH REPAIR, AS PER PLAN			44		1/17				

△



DESIGNED BY: PAT  
 CHECKED BY: CJS  
 DRAWN BY: PAT  
 REVISIONS: 181991

ESTIMATED QUANTITIES - LOCATION 16  
 BRIDGE NO. CUY-490-0100  
 I-490 OVER CUYAHOGA RIVER

CUY-BH-FY2021(B) MISC  
 PID No. 109131

2 / 17

JAM	06/18/21	△ - FULL DEPTH REPAIR ITEM
JAM	06/10/21	△ - FULL DEPTH REPAIR QUANTITY
JAM	06/07/21	△ - FENCE REBUILT QUANTITY
REV. BY	DATE	DESCRIPTION

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