

**STATE OF OHIO  
DEPARTMENT OF TRANSPORTATION**

**CUY-90-20.35**

**CITY OF CLEVELAND  
CUYAHOGA COUNTY**

**PROJECT DESCRIPTION:**

REHABILITATION OF 7 BRIDGES ALONG I-90 IN THE CITY OF CLEVELAND BY 7 DECKS, RAISING ONE PEDESTRIAN BRIDGE.

PROJECT EARTH DISTURBED AREA - N/A (MAINTENANCE PROJECT)  
ESTIMATED CONTRACTOR EARTH DISTURBED AREA - N/A (MAINTENANCE PROJECT)  
NOTICE OF INTENT EARTH DISTURBED AREA - NA (MAINTENANCE PROJECT)

**2002 SPECIFICATIONS**

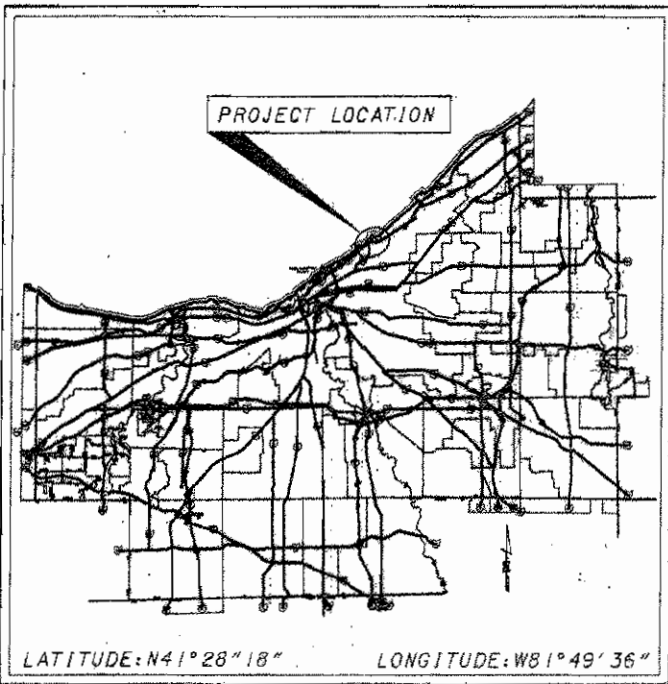
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF I-90 AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL REQUIRE THE CLOSING TO TRAFFIC OF VALLEY VIEW DRIVE AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH IN THE PLANS AND ESTIMATES.

APPROVED [Signature]  
DATE 11-30-03 DISTRICT DEPUTY DIRECTOR

APPROVED [Signature]  
DATE 11-3-03 DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP



PORTION TO BE IMPROVED -----  
STATE & FEDERAL ROUTES -----  
OTHER ROADS -----

**DESIGN DESIGNATION**

CURRENT ADT (2002) ----- 127,598  
DESIGN YEAR ADT (2022) ----- 145,773  
DESIGN HOURLY VOLUME (2022) ----- 14,577  
DIRECTIONAL DISTRIBUTION ----- 55%  
TRUCKS (24 HOUR B&C) (2002) ----- 9,140  
DESIGN ADTT (2022) ----- 9,640  
DESIGN SPEED ----- 60 MPH  
LEGAL SPEED ----- 55 MPH

DESIGN FUNCTIONAL CLASSIFICATION - URBAN INTERSTATE

**DESIGN EXCEPTIONS:**

NONE

**INDEX OF SHEETS:**

TITLE SHEET	-----	1
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TRAFFIC CONTROL	-----	102-103

Sheet 86 and 97 NOT USED

**LINE DATA**

**PROJECT LIMITS:**

STA. 198+31.9 TO STA. 309+56.76 = 8190.36 L.F.

**STANDARD CONSTRUCTION DRAWINGS**

STANDARD CONSTRUCTION DRAWINGS						SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS					
HL-30.31	1/17/03	MT-95.10	4/20/01	MT-102.10	10/18/02	GR-3.1	4/18/03	AS-1-81	7/19/02	832	2/12/2003	
HL-30.32	4/19/02	MT-95.30	4/19/02	MT-102.20	10/18/02	GR-3.2	4/18/03	BR-1	7/19/02	833	2/12/2003	
HL-50.11	7/20/01	MT-95.31	4/19/02	MT-110.30	10/18/02	GR-6.1	4/18/03	EXJ-4-87	7/19/02	846	4/19/2002	
HL-50.21	4/19/02	MT-95.40	7/18/03			RM-2.1	4/18/03	PCB-91	7/19/02	864	7/11/2000	
HL-60.12	7/20/01	MT-95.41	7/18/03			RM-4.2	4/18/03	VPF-1-90	7/19/02	954	9/9/1997	
		MT-98.12	4/19/02			BP-2.3	7/28/00					
		MT-98.13	4/19/02			BP-3.1	7/28/00					
		MT-98.14	4/19/02			F-1.1	7/28/00					
		MT-98.15	4/19/02			F-3.1	7/28/00					
		MT-98.16	4/19/02			TC-65.10	10/19/01					
		MT-98.17	10/18/02			TC-65.11	10/19/01					
		MT-98.18	10/18/02									
		MT-98.19	10/18/02									
		MT-101.20	10/18/02									
		MT-101.60	10/18/02									
		MT-101.70	10/18/02									

**UNDERGROUND UTILITIES**  
TWO WORKING DAYS BEFORE YOU DIG  
CALL 1-800-362-2764 (TOLL FREE)  
OHIO UTILITIES PROTECTION SERVICE NON-MEMBERS MUST BE CALLED DIRECTLY

PLAN PREPARED BY:  
OHIO DEPARTMENT OF TRANSPORTATION  
DISTRICT 12  
PRODUCTION



ARMY CORP  
NATION WIDE PERMIT #3

ASBESTOS ABATMENT

FEDERAL PROJECT NO. E036 (719)  
PID NO. 0019685  
CONSTRUCTION PROJECT NO. 0019685  
RAILROAD INVOLVEMENT NONE  
CUYAHOGA COUNTY CUY-90-20.35  
1/103

PLOTTED BY: NAME: DIST: 12 PLOT SUBMITTED: CUY-90-20.35 PID #19685 040292 05-05-04

PLOTTED BY: mmc  
PLOTTED FROM: I:\PROJECTS\19685\LOCATION.dgn  
FILENAME.DGN  
PLOT SUBMITTED: 15-SEP-2003 19:28

LAKE ERIE

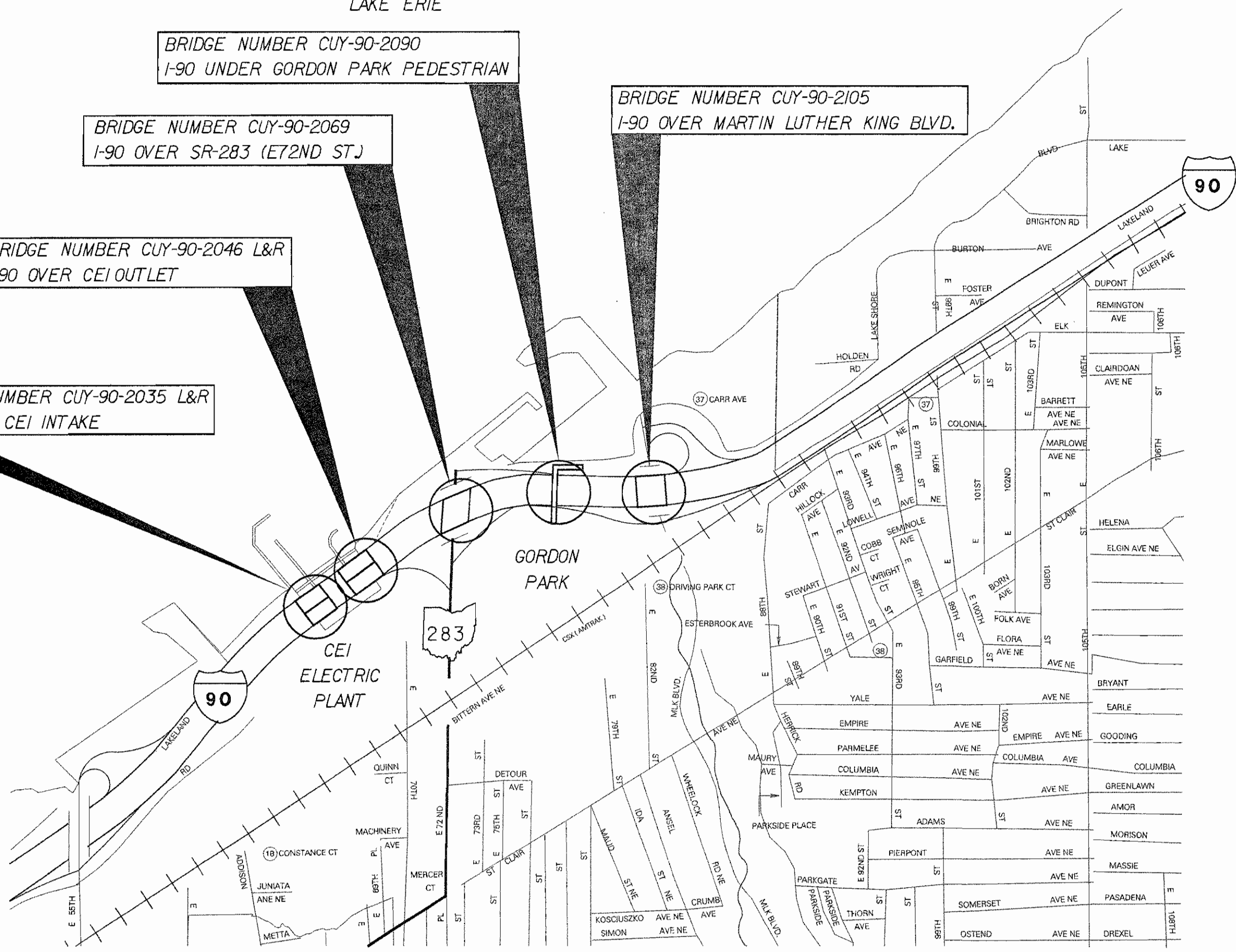
BRIDGE NUMBER CUY-90-2090  
I-90 UNDER GORDON PARK PEDESTRIAN

BRIDGE NUMBER CUY-90-2069  
I-90 OVER SR-283 (E72ND ST)

BRIDGE NUMBER CUY-90-2046 L&R  
I-90 OVER CEI OUTLET

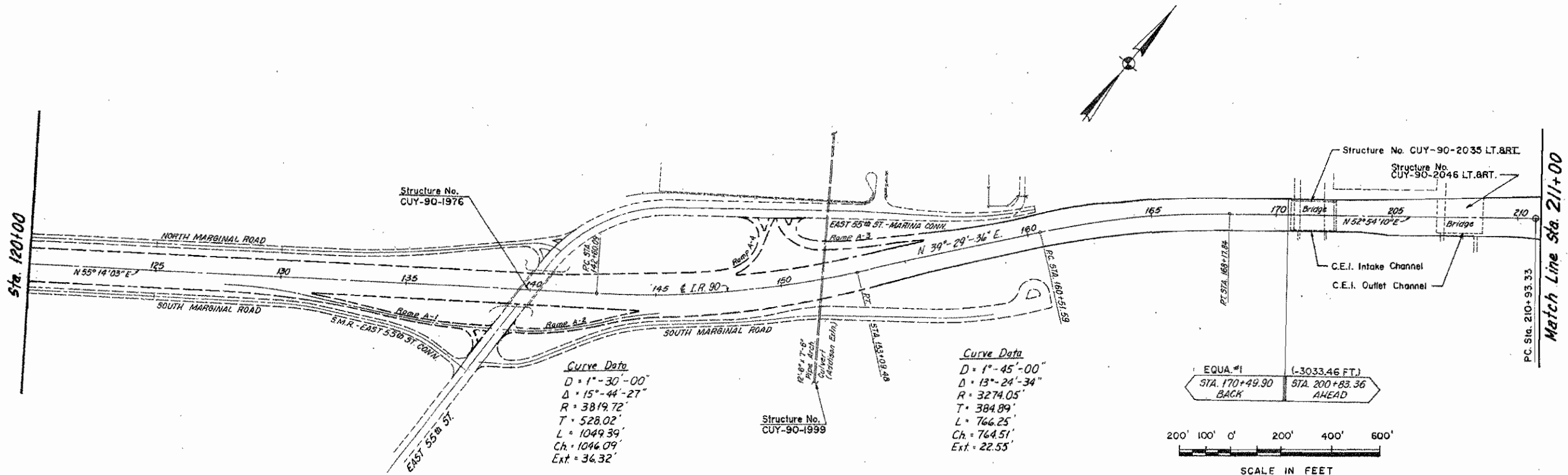
BRIDGE NUMBER CUY-90-2035 L&R  
I-90 OVER CEI INTAKE

BRIDGE NUMBER CUY-90-2105  
I-90 OVER MARTIN LUTHER KING BLVD.



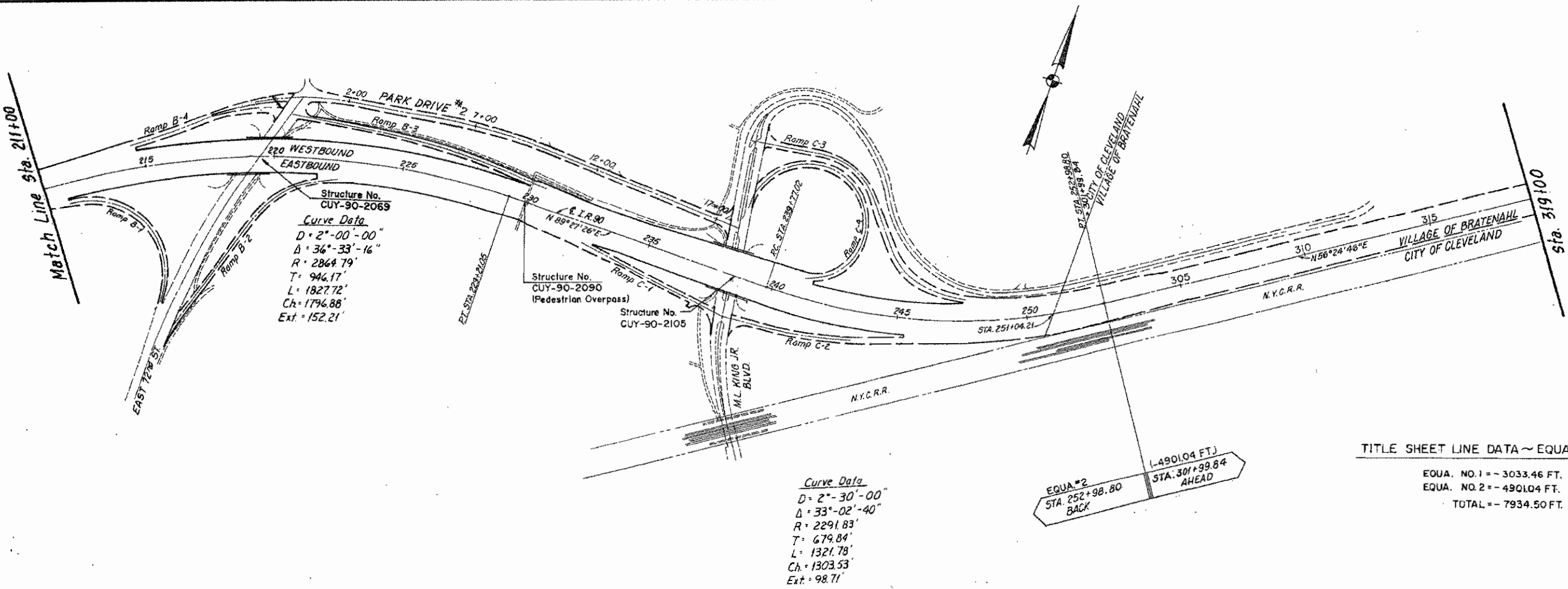
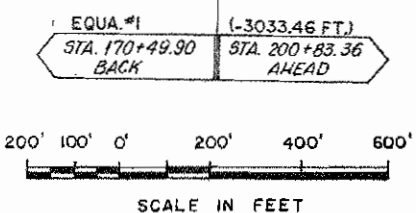
LOCATION MAP

CUYAHOGA COUNTY  
CUY-90-20.35



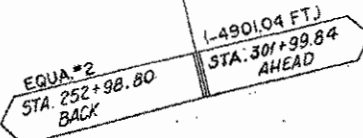
**Curve Data**  
 D = 1°-30'-00"  
 Δ = 15°-44'-27"  
 R = 3819.72'  
 T = 528.02'  
 L = 1049.39'  
 Ch = 1046.09'  
 Ext = 36.32'

**Curve Data**  
 D = 1°-45'-00"  
 Δ = 13°-24'-34"  
 R = 3274.05'  
 T = 384.89'  
 L = 766.25'  
 Ch = 764.51'  
 Ext = 22.55'



**Curve Data**  
 D = 2°-00'-00"  
 Δ = 36°-33'-16"  
 R = 2864.79'  
 T = 946.17'  
 L = 1827.72'  
 Ch = 1796.88'  
 Ext = 152.21'

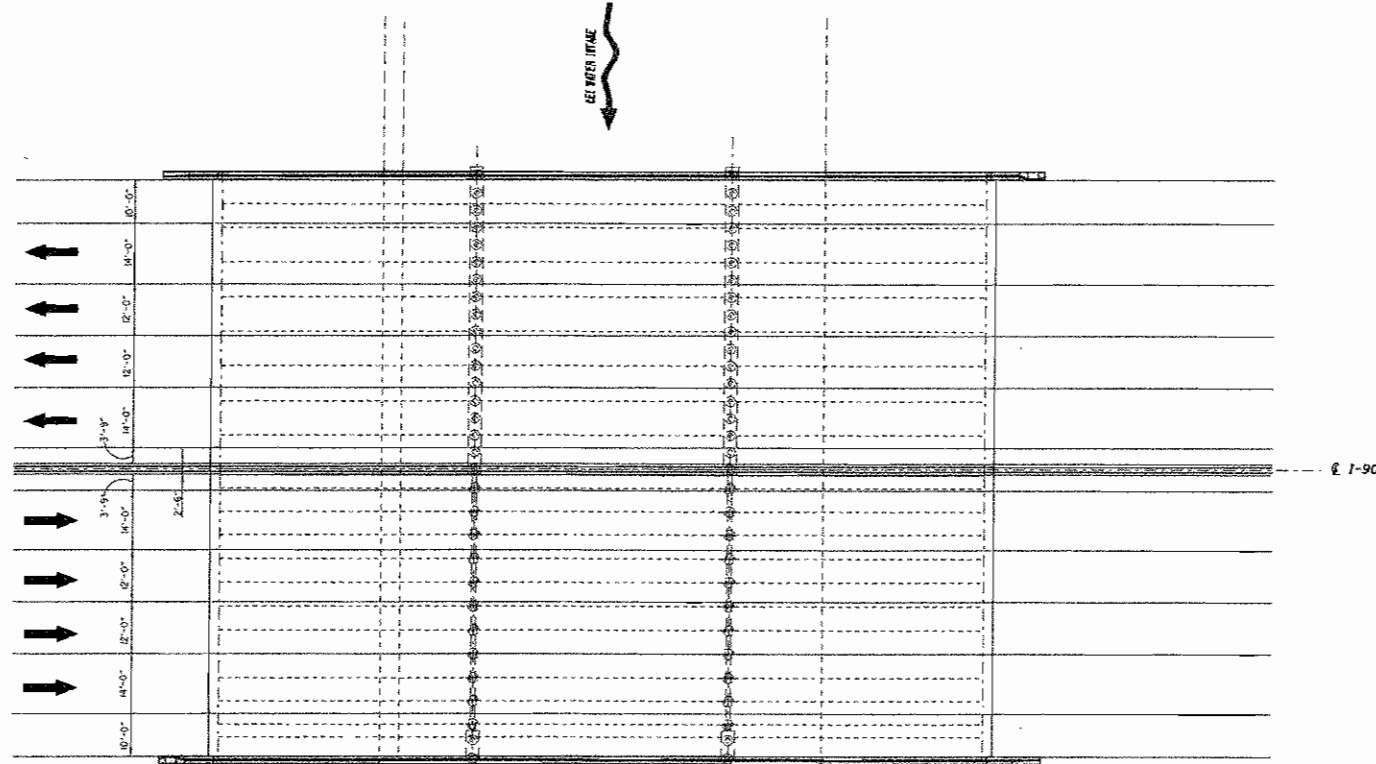
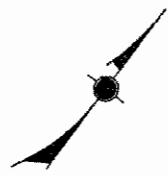
**Curve Data**  
 D = 2°-30'-00"  
 Δ = 33°-02'-40"  
 R = 2291.83'  
 T = 679.84'  
 L = 1321.78'  
 Ch = 1303.53'  
 Ext = 98.71'



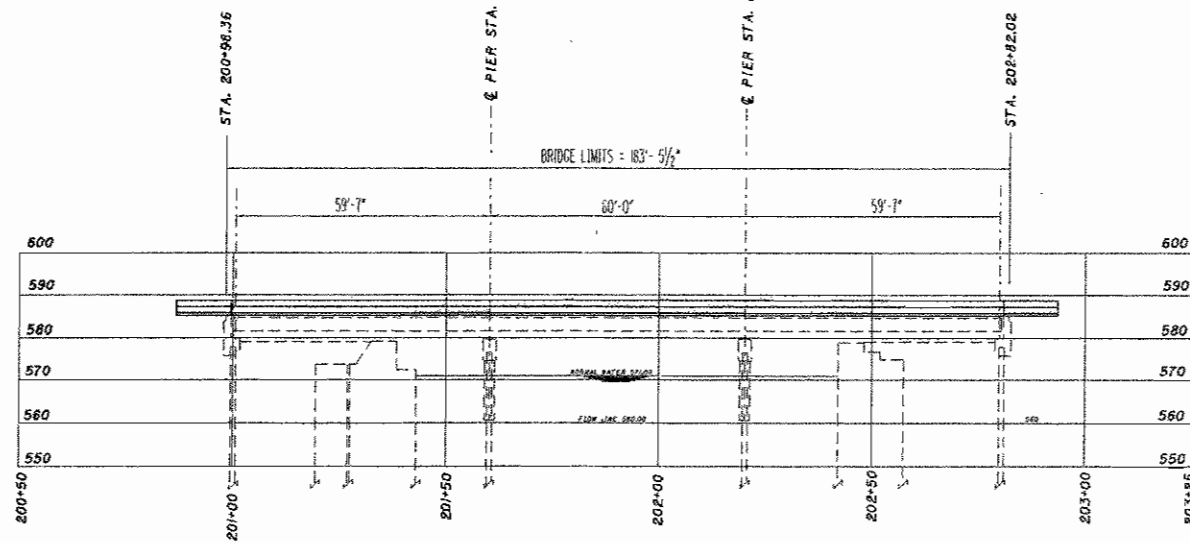
**TITLE SHEET LINE DATA ~ EQUATIONS**  
 EQUA. NO. 1 = -3033.46 FT.  
 EQUA. NO. 2 = -4901.04 FT.  
 TOTAL = -7934.50 FT.

SCHEMATIC PLAN

CUYAHOGA COUNTY  
CUY-90-20.35



PLAN



PROFILE ALONG C OF I-90

PROPOSED WORK

REPLACE DECK

BENCHMARK #1 (TO BE PROVIDED AT PRE-CON)  
 BENCHMARK #2 (TO BE PROVIDED AT PRE-CON)

TRAFFIC DATA	
CURRENT YEAR ADT (2002)	127,598
DESIGN YEAR ADT (2022)	145,773
DESIGN YEAR ADTT (2022)	9,640

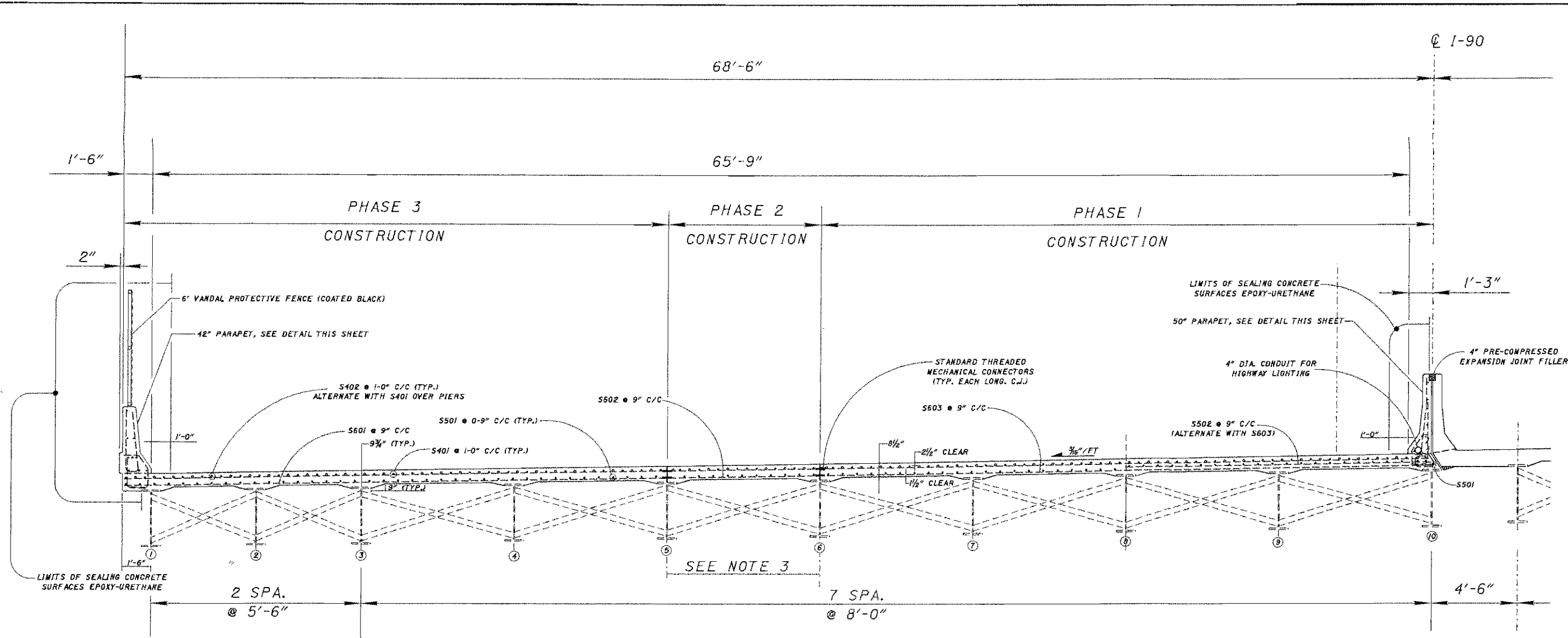
EXISTING STRUCTURE

TYPE: CONTINUOUS STEEL BEAM BRIDGE WITH REINFORCED CONCRETE SUBSTRUCTURE. RIGHT BRIDGE HAS FILLED STEEL GRID DECK AND LEFT BRIDGE HAS REINFORCED CONCRETE DECK  
 SPANS: 59'-7", 60'-0", 59'-7" C/C BEARINGS  
 ROADWAY: 134'-0" WITH 2'-6" MEDIAN  
 SKEW: 0°- 00' - 00"  
 LOADING: HS-20-44 + ALTERNATE  
 DATE BUILT: 1938, WIDENED IN 1952  
 SFN: RIGHT IS 1808397, LEFT IS 1808281  
 APPROACH SLABS: AS-1-67 (15'-0" LONG)  
 WEARING SURFACE: LEFT IS 1 1/4" LMC, RIGHT IS ASPHALT  
 ALIGNMENT: TANGENT

PROPOSED STRUCTURE

TYPE: CONTINUOUS STEEL BEAM WITH REINFORCED CONCRETE DECK AND SUBSTRUCTURE  
 SPANS: 59'-7", 60'-0", 59'-7" C/C BEARINGS  
 ROADWAY: 134'-0" WITH 2'-6" MEDIAN  
 SKEW: 0°- 00' - 00"  
 LOADING: LEFT HS20-44 +ALT, RIGHT IS HS25-44 +ALT  
 SFN: RIGHT IS 1808397, LEFT IS 1808281  
 APPROACH SLABS: AS-1-67 (15'-0" LONG)  
 WEARING SURFACE: 1" MONOLITHIC  
 ALIGNMENT: TANGENT  
 CROWN: 3/16" PER FOOT  
 LATITUDE: N41°32'06" LONGITUDE: W81°38'42"

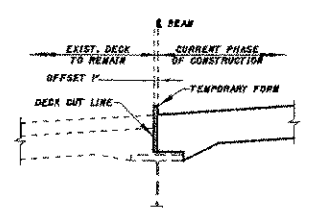
DESIGN AGENCY ODOT DISTRICT 12	DESIGNED MJM	DATE	REVIEWED MJM	STRUCTURE FILE NUMBER 1808281, 1808397
SITE PLAN BRIDGE NO. CUY-90-2035 L&R I-90 OVER CEI INTAKE	CHECKED MJM		REVISED	
	CUY-90-20.35	1/9		
				12 103



TRANSVERSE SECTION - CUY-90-2035 L

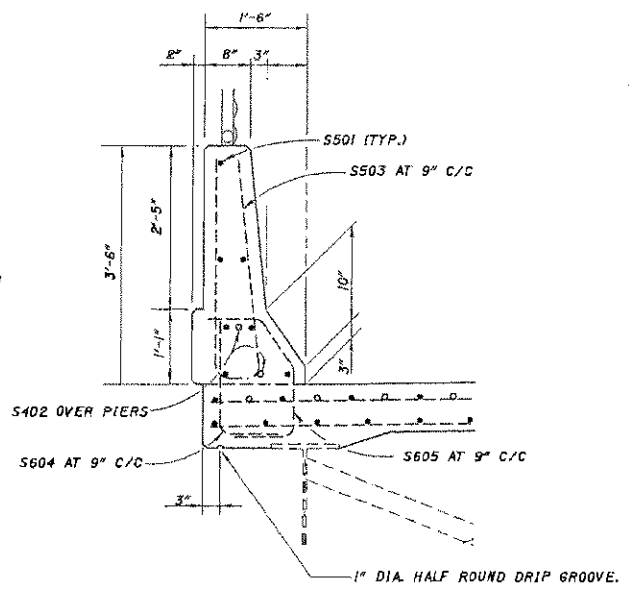
WESTBOUND

CL 1-90



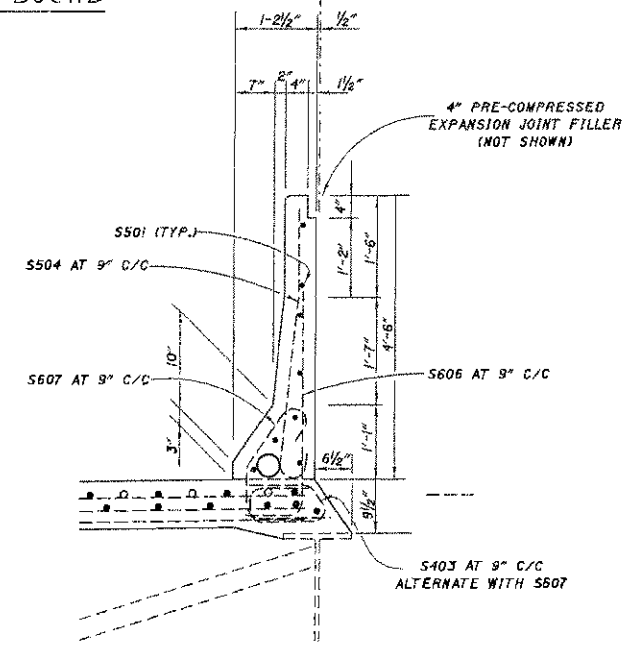
DETAIL OF DECK CUT LINE AND LONGITUDINAL CONSTRUCTION JOINT FOR PHASE CONSTRUCTION  
WESTBOUND SHOWN, EASTBOUND OPPOSITE HAND

NOTE: DECK SLAB CONCRETE SHALL NOT BE CAST DIRECTLY AGAINST THE EXISTING PART-WIDTH DECK TO REMAIN. A TEMPORARY FORM PROVIDING A SMOOTH EDGE SHALL BE USED DURING DECK CONCRETE PLACEMENT.



OUTSIDE PARAPET DETAIL

CONCRETE COVER  
2 1/2" TRAFFIC FACE AND TOP  
1 1/2" BACK FACE AND BOTTOM



MEDIAN PARAPET DETAIL

CONCRETE COVER  
2 1/2" TRAFFIC FACE AND TOP  
1 1/2" BACK FACE AND BOTTOM

LEGEND:

- LONG. C.J. - LONGITUDINAL CONSTRUCTION JOINT
- C/C - CENTER TO CENTER

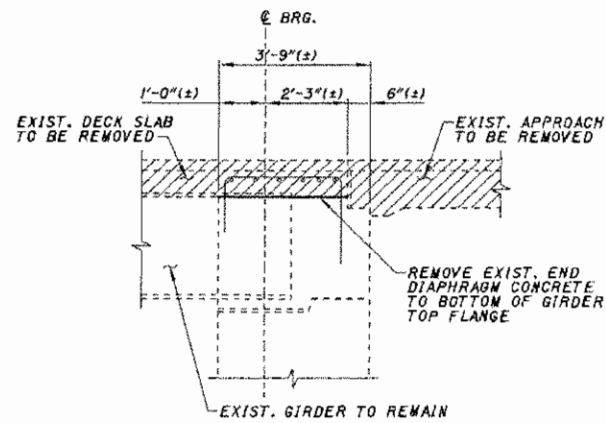
NOTES:

1. DECK SLAB DEPTH FOR CONCRETE QUANTITY: THE DECK THICKNESS, 8 1/2", HAS BEEN USED FOR COMPUTING THE DECK CONCRETE QUANTITIES. CONCRETE REQUIRED TO FILL THE HAUNCHES, INCLUDING ADDITIONAL OR LESS MATERIAL REQUIRED DUE TO HAUNCH CONSTRUCTION TOLERANCES, SHALL BE CONSIDERED AS INCIDENTAL AND WILL NOT BE INCLUDED IN THE QUANTITY CALCULATIONS FOR PAYMENT.
2. THREADED MECHANICAL CONNECTORS SHALL BE RICHMOND SCREW ANCHOR THREADED DOWEL BAR ASSEMBLY, LENTON REBAR SPlicing MECHANISM, OR APPROVED EQUAL. PLACE TRANSVERSE BARS TO LAP MECHANICAL MINIMUM LAP LENGTH FOR #6 BAR MECHANICAL CONNECTORS IS 2'-6"
3. TO FACILITATE THE QUICK COMPLETION OF PHASE TWO CONSTRUCTION, THE CONTRACTOR MAY USE STAY-IN-PLACE DECK FORMS IN THIS BAY. SEE THE GENERAL NOTES FOR ADDITIONAL INFORMATION.
4. A HAUNCH WIDTH OF 9 INCHES SHALL BE USED. HOWEVER, THE HAUNCH WIDTH MAY VARY BETWEEN 6 INCHES AND 12 INCHES.

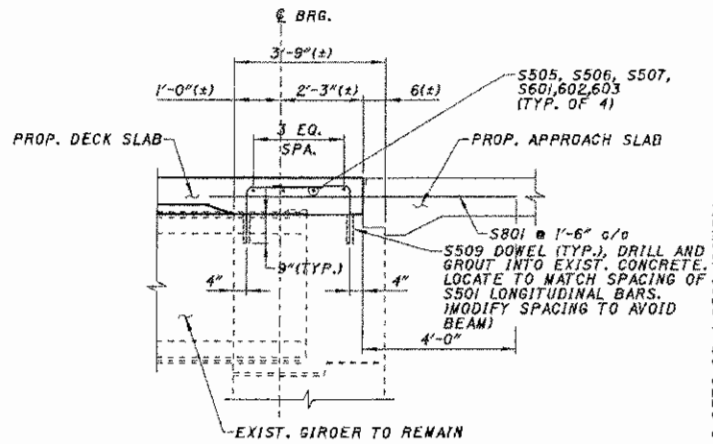
DESIGN AGENCY <b>ODOT DISTRICT 12</b>	DATE <b>1808281</b>	STRUCTURE FILE NUMBER <b>1808281</b>
DRAWN <b>MJM</b>	REVIEWED <b>MJM</b>	PRODUCTION <b>MJM</b>
DESIGNED <b>MJM</b>	CHECKED <b>MJM</b>	
TRANSVERSE SECTION BRIDGE NO. CUY-90-2035 L I-90 W.B. OVER CEI INTAKE		
CUY-90-20.35		
4 / 9		
15 103		

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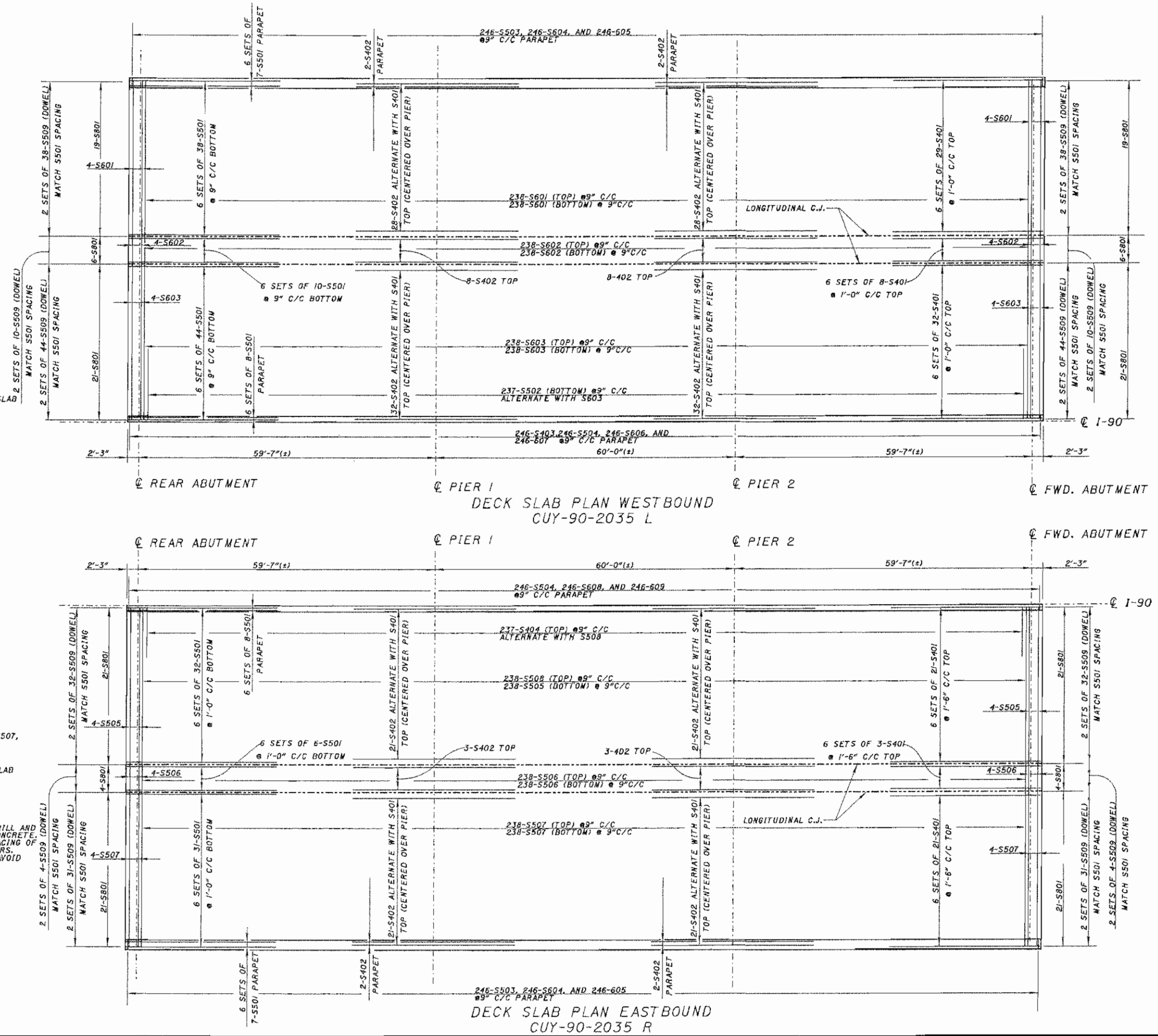




SECTION THROUGH END DIAPHRAGM  
SHOWING TYPICAL REMOVAL BETWEEN GIRDERS



SECTION THROUGH END DIAPHRAGM  
SHOWING TYPICAL RECONSTRUCTION



DESIGN NUMBER  
ODOT DISTRICT 12  
PRODUCTION

DESIGNED	DATE	REVIEWED	DATE
MJM		MJM	
CHECKED	STRUCTURE FILE NUMBER	REVISION	
MJM	1808281, 1808397		

DECK SLAB PLAN  
CUY-90-2035 L & R  
1-90 OVER CEI-INTAKE

CUY-90-20.35