



CUY-90-14.90

PID 77332/85531

APPENDIX EX-48

CUY-090-1524 PID 0.646

(Reference Document)

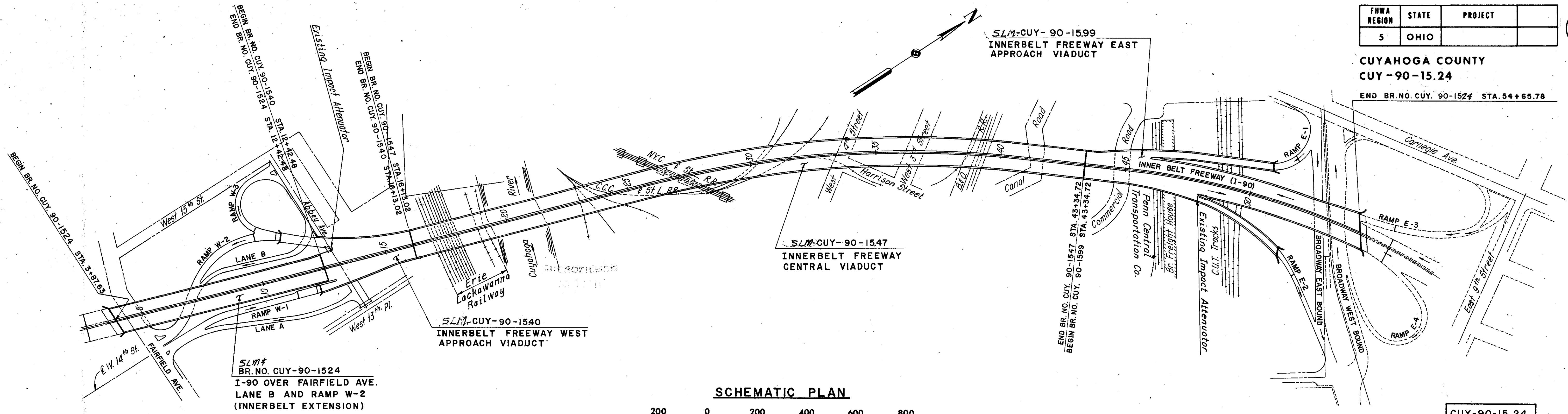
State of Ohio
Department of Transportation
Jolene M. Molitoris, Director

**Innerbelt Bridge
Construction Contract Group 1 (CCG1)**

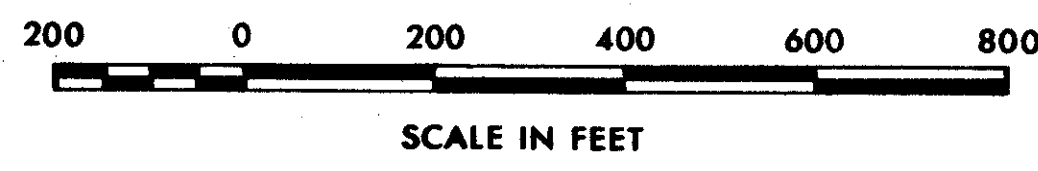
FHWA REGION	STATE	PROJECT
5	OHIO	

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19

CUYAHOGA COUNTY
 CUY-90-15.24
 END BR. NO. CUY. 90-1524 STA. 54+65.78



SCHMATIC PLAN



CUY-90-15.24
 BEGIN WORK
 SLM 14.56

CUY-90-15.24
 END WORK
 SLM 16.83

EXISTING STRUCTURE - SLM CUY-90-1524

TYPE: Units 1W and 1E - Continuous welded steel girder with reinforced concrete deck and substructure.
 Units 2W, 3W and 2E - Continuous steel beam with reinforced concrete deck and substructure.

SPANS: Unit 1W 64'-0", 70'-6", 65'-6", 8'-0" Cantilever.
 Unit 2W 63'-0", 90'-0", 79'-6", 64'-0", 6'-0" Cantilever.
 Unit 3W 66'-0", 3 @ 72'-0", 61'-11 1/2"
 Unit 1E 64'-0", 102'-0", 103'-0", 90'-0", 79'-6", 64'-0", 6'-0" Cantilever.
 Unit 2E 66'-0", 3 @ 72'-0", 61'-11 1/2"

ROADWAY: 2 @ 53'-0" curb to curb with barrier safety curbs and concrete barrier median.

LOAD FREQUENCY: CF2000(57) adequate for A.A.S.H.T.O. alternate loading.

SKEW: Varies

WEARING SURFACE: 2" Asphalt Concrete

APPROACH SLAB: AS-1-54 (25' Long)

ALIGNMENT: Tangent

EXISTING STRUCTURE - SLM CUY-90-1540

TYPE: Continuous steel beams and girders with concrete deck and substructure.

SPAN: Varies (see General Plan)

ROADWAY: 2 @ 52'-0" with barrier safety curbs and concrete barrier median.

LOADING: CF 2000

SKEW: Varies

WEARING SURFACE: 2 1/2" Asphalt Concrete

APPROACH SLABS: AS-1-54 (25' Long)

ALIGNMENT: Tangent

EXISTING STRUCTURE - SLM CUY-90-1547

TYPE: Steel deck trusses with reinforced concrete deck and substructure.

SPANS: Varies (see General Plans)

ROADWAYS: 2 @ 52'-0" curb to curb with barrier safety curbs and concrete barrier median.

LOADING: CF 2000, adequate for A.A.S.H.T.O. alternate loading.

SKEW: Varies

WEARING SURFACE: 2 1/2" Asphalt Concrete

ALIGNMENT: Tangent, 1°30' Curve Right, Tangent.

EXISTING STRUCTURE - SLM CUY-90-1599

TYPE: Continuous steel beams and girders with concrete deck and substructure.

SPAN: Varies (see General Plans)

ROADWAY: 2 @ 52'-0" with barrier safety curbs and concrete barrier median.

LOADING: CF 2000, adequate for A.A.S.H.T.O. alternate loading.

SKEW: Varies

WEARING SURFACE: 2 1/2" Asphalt Concrete

APPROACH SLAB: AS-1-54 (25' Long)

ALIGNMENT: 2° Curve Right

SCHMATIC PLAN

CUY-90-1524
 90-1540
 90-1547
 90-1599

CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE	DATE	DATE	DATE	

GENERAL SUMMARY

ITEM	QUANTITY	UNIT	DESCRIPTION
SPECIAL	LUMP	LUMP	CLEANOUT OF BRIDGE DRAINAGE SYSTEM
SPECIAL	LUMP	LUMP	REMOVAL OF DIRT AND DEBRIS FROM BRIDGE SEATS
624	LUMP	LUMP	MOBILIZATION
614	LUMP	LUMP	MAINTAINING TRAFFIC

COOPERATION WITH RAILROADS

The Contractor shall cooperate at all times with the local officials of the railroad company. He shall use all reasonable care and diligence in the work in order to avoid accidents, damage or interference with the trains or other property of the railroad. The contractor shall notify the local officials of the railroad prior to starting work that may affect railroad property and facilities and shall pay the railroad company the cost of flag men furnished by the railroad company and made necessary by any of the contractor's operations over or adjacent to the tracks.

No scaffold, planks or other equipment shall be suspended or erected above or within 10 feet of a rail over which trains are operating without prior written approval of the Chief Engineer, or his authorized representative, of the Railroad Company.

Failure to notify the Railroad Company as noted above shall be cause for stopping work until all provisions for protecting Railroad property have been provided.

GENERAL NOTES

PLANS OF EXISTING BRIDGE

CONSTRUCTION PLANS FOR THE EXISTING BRIDGE ARE ON FILE AT THE OHIO DEPARTMENT OF TRANSPORTATION, DISTRICT 12 OFFICE, 10100 BROADWAY AVENUE, GARFIELD HEIGHTS, OHIO AND ARE AVAILABLE FOR REFERENCE.

ITEM SPECIAL - CLEANOUT OF BRIDGE DRAINAGE SYSTEM

THE LOCATION AND DETAILS OF THE EXISTING DRAINAGE SYSTEMS ARE SHOWN IN THE PLANS. THIS ITEM SHALL CONSIST OF REMOVING ALL DIRT AND DEBRIS FROM THE DECK AREA NEAR CURB, DECK AREA NEAR MEDIAN, SIDEWALK AREAS, SCUPPERS, CROSS DRAINS, DRAINAGE TROUGHS, HOPPERS, HORIZONTAL PIPE COLLECTORS, AND VERTICAL PIPE DOWNSPOUTS INCLUDING THE UNDERGROUND STORM SEWERS TO THE ADJACENT MANHOLE OR CATCH BASIN. AFTER THE DIRT AND DEBRIS ARE REMOVED, THE ENTIRE SYSTEM SHALL BE FLUSHED OUT WITH CLEAN WATER MAKING CERTAIN THE WATER FLOWS SMOOTHLY TO THE ADJACENT MANHOLE OR CATCH BASIN.

THE CONTRACTOR SHALL PROVIDE NECESSARY EQUIPMENT PRIOR TO BEGINNING OF WORK FOR THE PURPOSE OF EXAMINING THE EXISTING BRIDGE DRAINAGE SYSTEMS. THE CONTRACTOR'S SUPERINTENDENT SHALL ACCOMPANY THE ENGINEER AT THIS TIME IN MAKING THIS DETAILED EXAMINATION. NO SEPARATE PAYMENT WILL BE MADE TO THE CONTRACTOR TO COVER ANY COSTS OF THIS EXAMINATION.

THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THE CLEANOUT OF THE BRIDGE DRAINAGE SYSTEM.

ITEM SPECIAL - REMOVE ALL DIRT AND DEBRIS FROM BRIDGE SEATS

THIS WORK SHALL CONSIST OF REMOVING ALL DIRT AND DEBRIS FROM PIER AND ABUTMENT BRIDGE SEATS. THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIAL NECESSARY TO COMPLETE THIS WORK.

DISPOSAL OF DIRT AND DEBRIS

DIRT AND DEBRIS REMOVED FROM THE STRUCTURE DURING THE CLEANING PROCESS SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED BY HIM FROM THE SITE.

ITEM 624 - MAINTAINING TRAFFIC

GENERALLY THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS AS TO PERFORM THE PROPOSED WORK WITH A MINIMUM OF HAZARD, DELAY AND INCONVENIENCE TO THE MOTORISTS USING THE HIGHWAY AFFECTED BY THE WORK DONE UNDER THIS CONTRACT; FURTHERMORE, THE FOLLOWING SPECIFIC PROVISIONS ARE MANDATORY.

I. NOTIFICATION

THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF ANY LANE CLOSURES AT LEAST THE DAY BEFORE THE CLOSURE IS TO BE IMPLEMENTED. THIS CLOSURE SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER.

II. NIGHTTIME WORK

NIGHTTIME WORK SHALL NOT BE PERMITTED.

III. TRAFFIC CONTROL SYSTEMS

A. LINES REQUIRED

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED 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, HERETOFTER 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 FERGE CONDITION EXISTS HE MAY DIRECT THAT ADDITIONAL OR ALTERNATIVE DEVICES BE USED.

B. CONDITIONS

DURING ALL PARTS OF THIS PROJECT, SIGNING, BARRICADES, CONES, FLASHING ARROWS, ETC. SHALL BE LOCATED AS INDICATED ON SHEET NUMBERED 19/12. ONLY ONE LANE OF TRAFFIC IN EACH DIRECTION MAY BE CLOSED AT ONE TIME. THE CONTRACTOR SHALL BE PERMITTED TO CLOSE THESE LANES OF TRAFFIC ONLY BETWEEN THE HOURS OF 9:00 A.M. TO 3:00 P.M. DURING WEEKDAYS AND DURING THE DAYLIGHT HOURS OF SATURDAYS. THE CONTRACTOR SHALL NOT PERFORM WORK ON SUNDAYS OR DURING THE PERIOD BEGINNING AT 12:00 NOON ON THE DAY PRECEDING AND CONTINUING UNTIL SUNRISE ON THE DAY FOLLOWING LEGAL HOLIDAYS AND HOLIDAY WEEKENDS.

C. ADVANCE WARNING SIGNS

ALL ADVANCE WARNING SIGNS FOR ANY CONDITION WHICH RESTRICTS TRAFFIC SHALL BE ERRECTED 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.

D. FLASHING ARROW REQUIREMENT

WHENEVER ANY PART OF THE TRAVELED SURFACE IS CLOSED, THE MOTORISTS SHALL BE WARNED AND DIRECTED BY THE CONTRACTOR THROUGH THE USE OF ONE FLASHING ARROW FOR EACH LANE CLOSED IN ADDITION TO THOSE PROVISIONS, SET FORTH IN THE "MANUAL".

E. FAILURE TO COMPLY

IF THERE IS ANY FAILURE TO COMPLY WITH THE 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. TRAFFIC CONTROL MATERIAL

A. SIGNS

SIGN DIMENSIONS AND SPECIFICATIONS, INCLUDING LETTER SIZES, SHALL BE AS PROVIDED IN THE "MANUAL", OR IN SIGN 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.

E. SIGN SUPPORTS

SIGN SUPPORTS SHALL BE OF SUFFICIENT SIZE AND HEIGHT AS TO SUPPORT THE SIGNS AT THE HEIGHT INDICATED IN THE "MANUAL" ON PLATE C-1. SUPPORTS SHALL ALSO BE ADEQUATE IN MASS AND STABILITY TO PREVENT THE SIGNS BEING BLOWN OVER BY WIND OR VEHICULAR GENERATED AIR TURBULENCE.

C. CONES

STANDARD RUBBER OR PLASTIC CONES SHALL BE USED. CONES SHALL BE AT LEAST 36" HIGH AND SHALL BE PREDOMINANTLY ORANGE IN COLOR. ALL CONES SHALL HAVE WEIGHTED BASES.

D. FLASHING ARROWS

THE ELECTRIC FLASHING ARROWS SHALL BE TYPE "A" AS SHOWN ON STANDARD CONSTRUCTION DRAWING TC-35.10. PAYMENT FOR FLASHING ARROWS SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

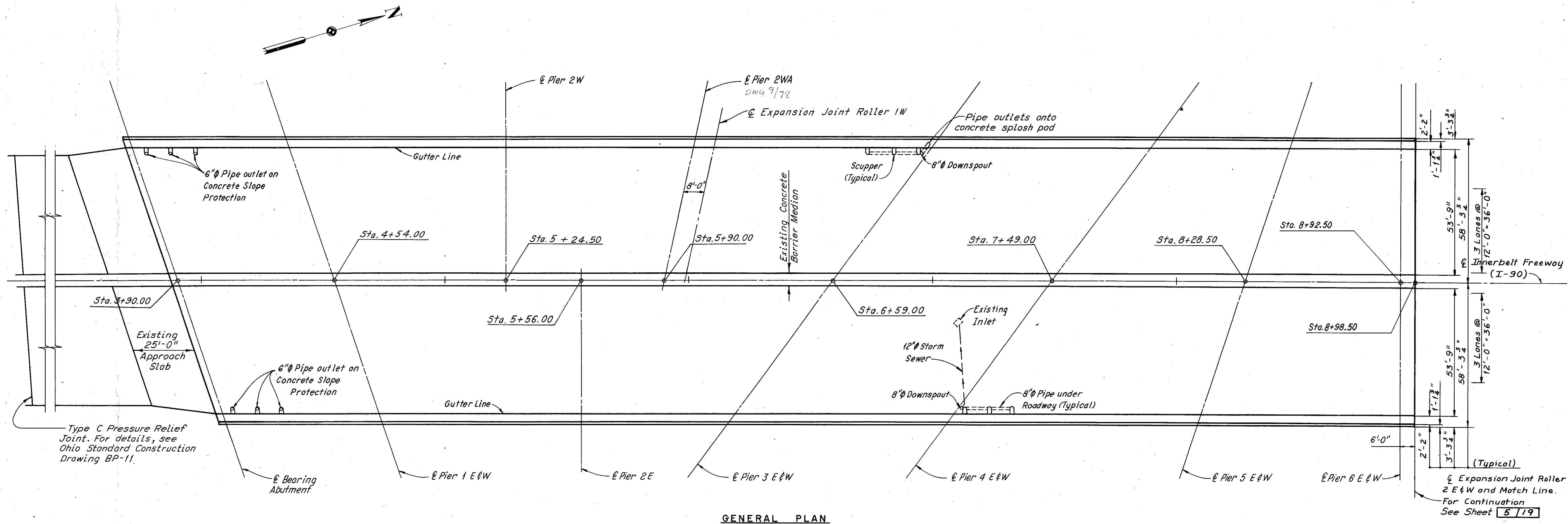
RIGHT-OF-WAY

ALL WORK WILL BE PERFORMED WITHIN EXISTING RIGHT-OF-WAY.

FHWA REGION	STATE	PROJECT	
	OHIO		

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CUYAHOGA COUNTY
CUY-90-15.24

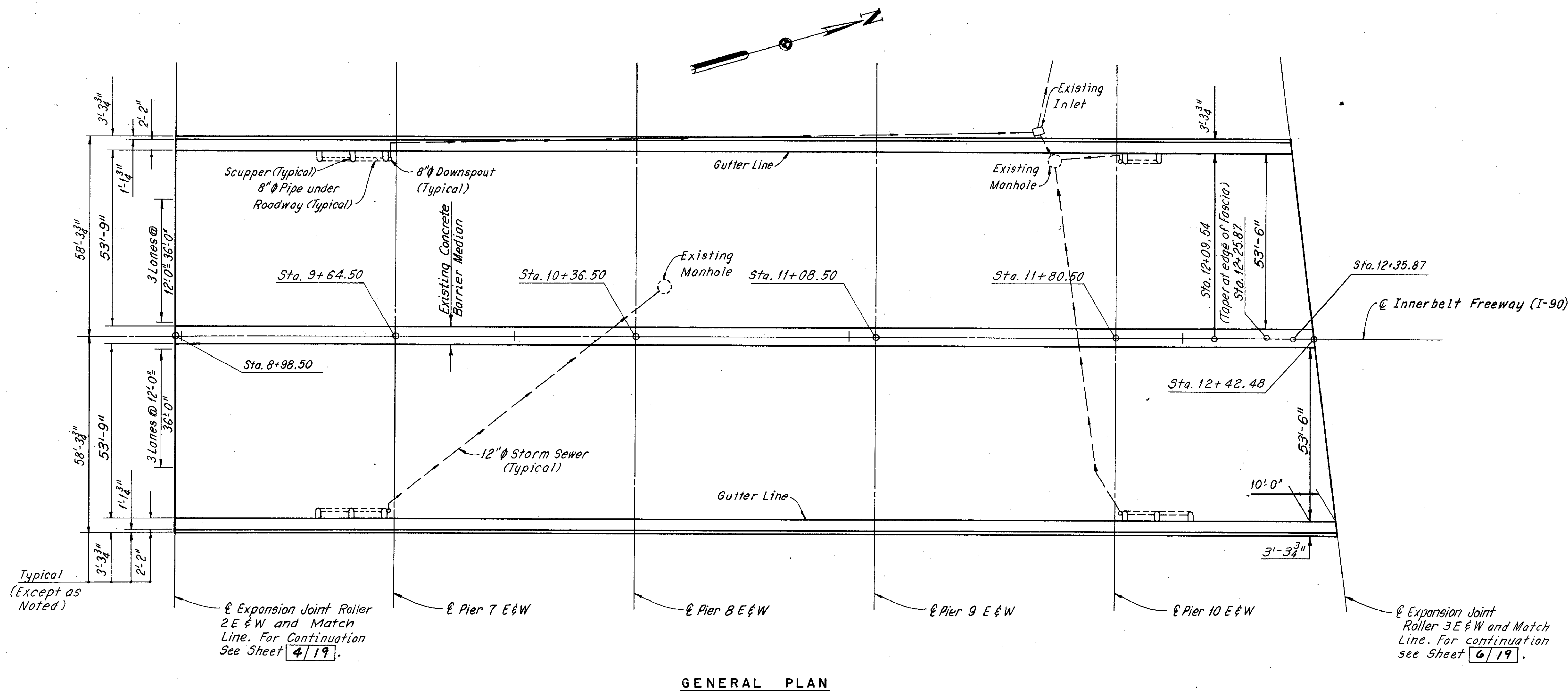


GENERAL PLAN INNERBELT EXTENSION				
PROJ. NO. CUY-90-1524				
90-1540			STA. 2+65±	
90-1547			STA. 56+00±	
90-1599				
CUYAHOGA COUNTY OHIO				
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE	DATE	DATE	DATE	

FHWA REGION	STATE	PROJECT	
	OHIO		

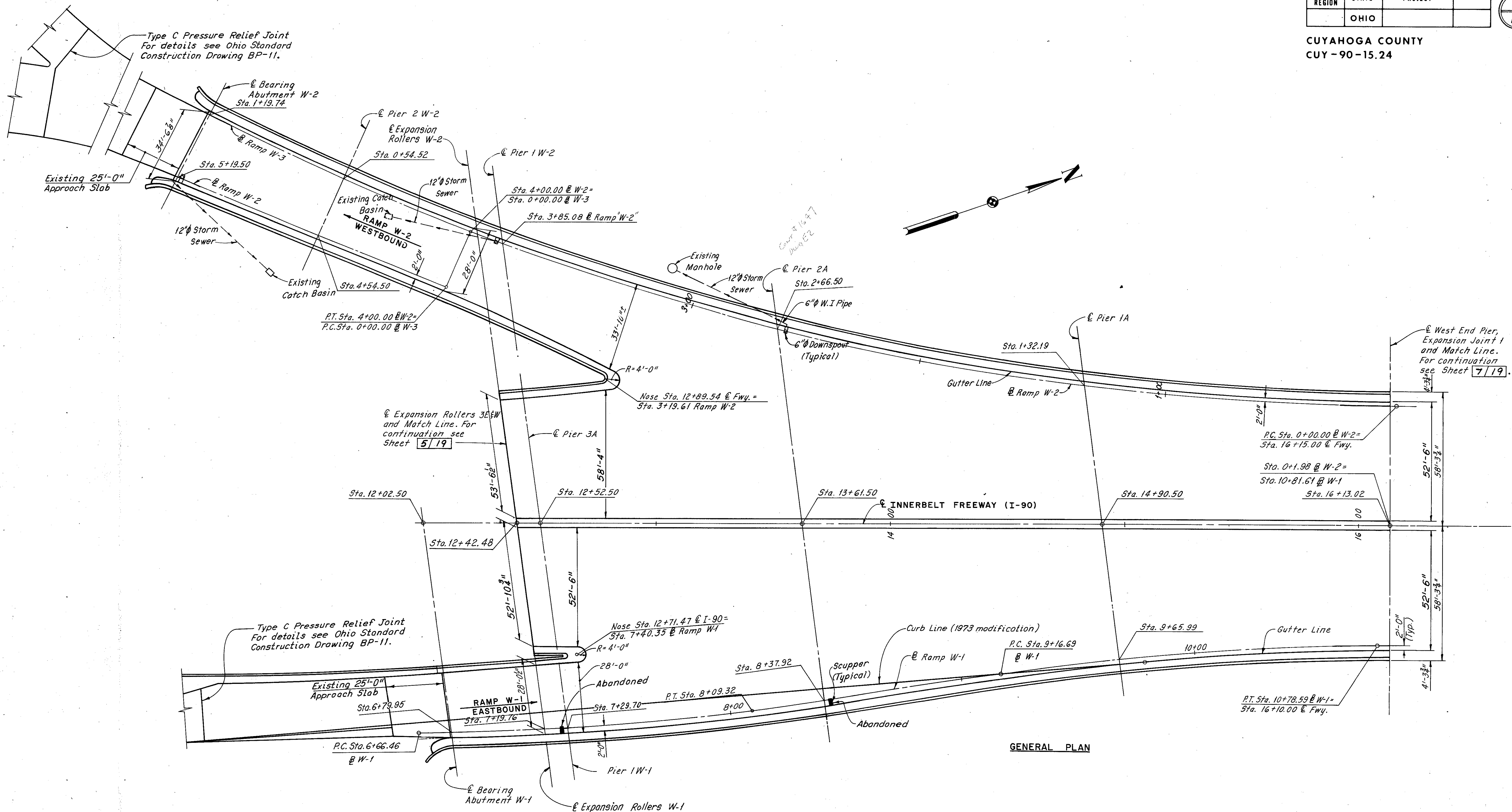
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CUYAHOGA COUNTY
CUY-90-15.24



GENERAL PLAN

GENERAL PLAN INNERBELT EXTENSION				
90-1524 CUY-90-1524				
			STA. 2+65±	
			STA. 56+00±	
CUYAHOGA COUNTY OHIO				
DRAWN DATE	TRACED DATE	CHECKED DATE	REVIEWED DATE	REVISED



GENERAL PLAN

**GENERAL PLAN
WEST APPROACH**

SR. NO. CUY-90-1524
90-1540
90-1547
90-1599

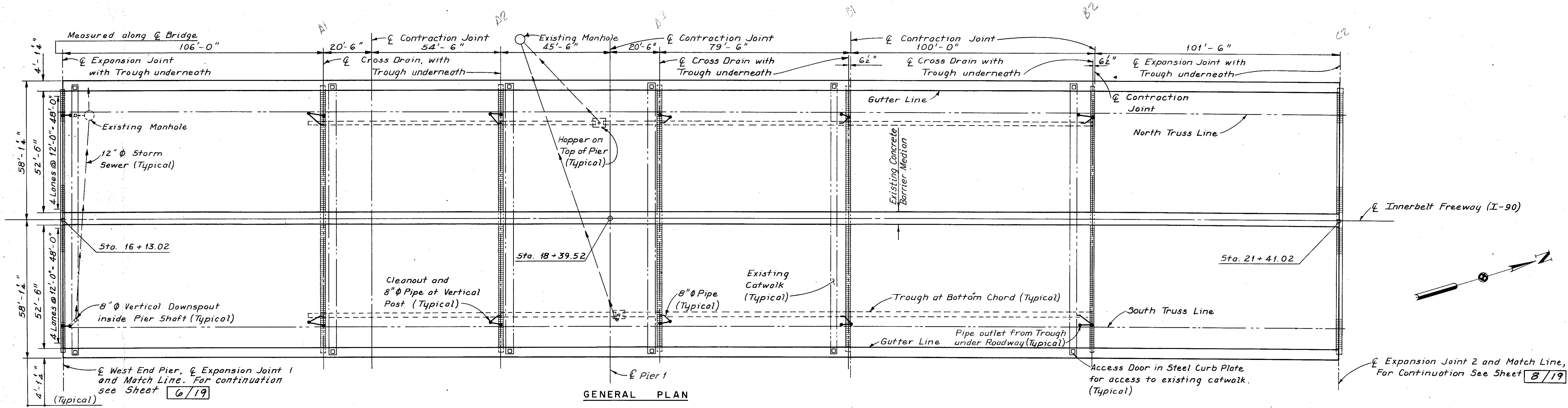
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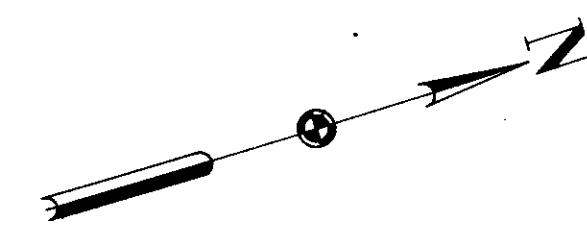
FHWA REGION	STATE	PROJECT	
5	OHIO		

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CUYAHOGA COUNTY
CUY-90-15.24



GENERAL PLAN



Expansion Joint 2 and Match Line, For Continuation See Sheet 8/19

**GENERAL PLAN
CENTRAL VIADUCT**

~~PR. NO.~~ CUY-90-1524
 90-1540
 90-1547
 90-1599

STA. 2+65±
 STA. 56+00±

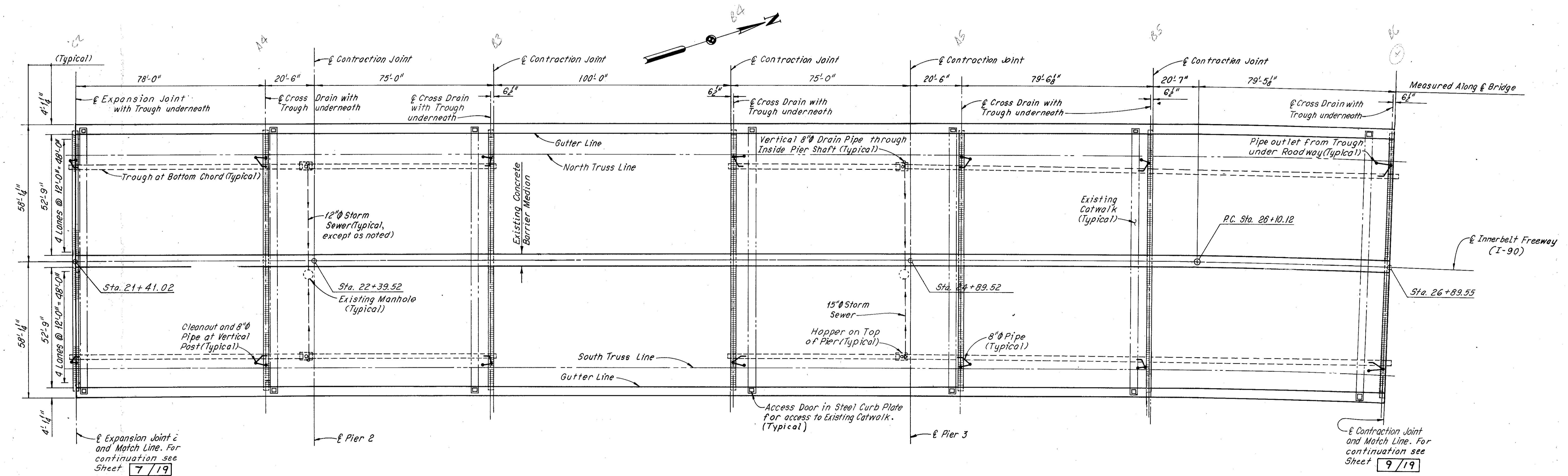
CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED
DATE	DATE	DATE	DATE

FHWA REGION	STATE	PROJECT	
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CUYAHOGA COUNTY
CUY-90-15.24



GENERAL PLAN

GENERAL PLAN
CENTRAL VIADUCT

CUY-90-1524
90-1540
90-1547
90-1599

STA. 2+65±
STA. 56+00±

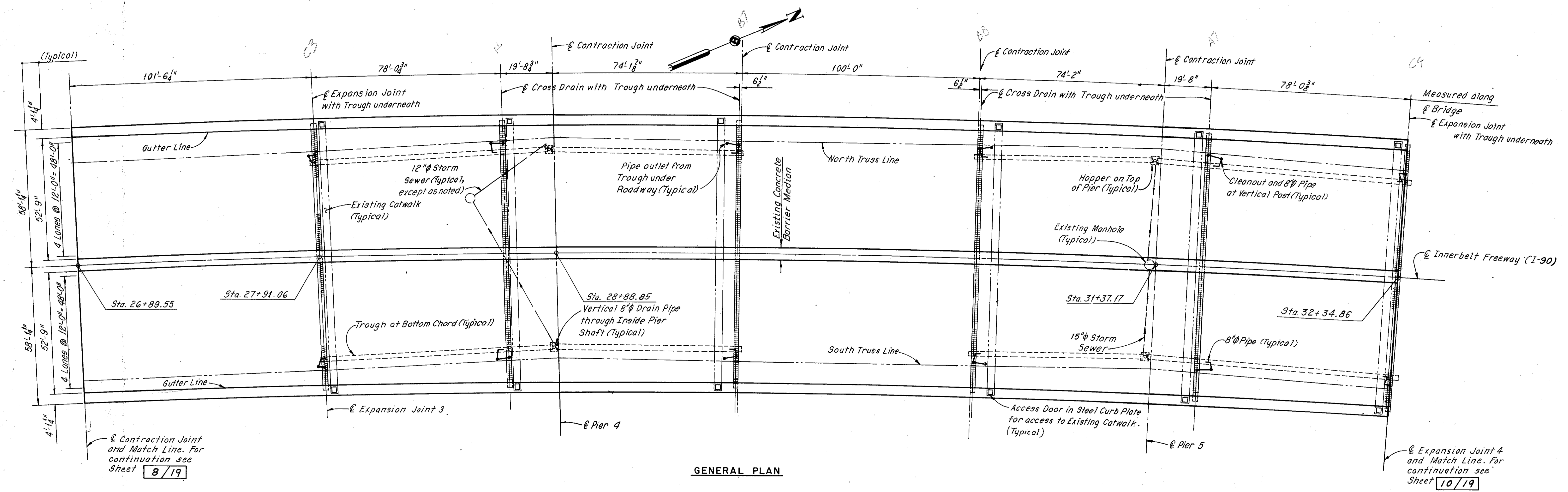
CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE	DATE	DATE	DATE	

FHWA REGION	STATE	PROJECT	
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CUYAHOGA COUNTY
CUY-90-15.24



GENERAL PLAN

Contraction Joint and Match Line. For continuation see Sheet **8/19**

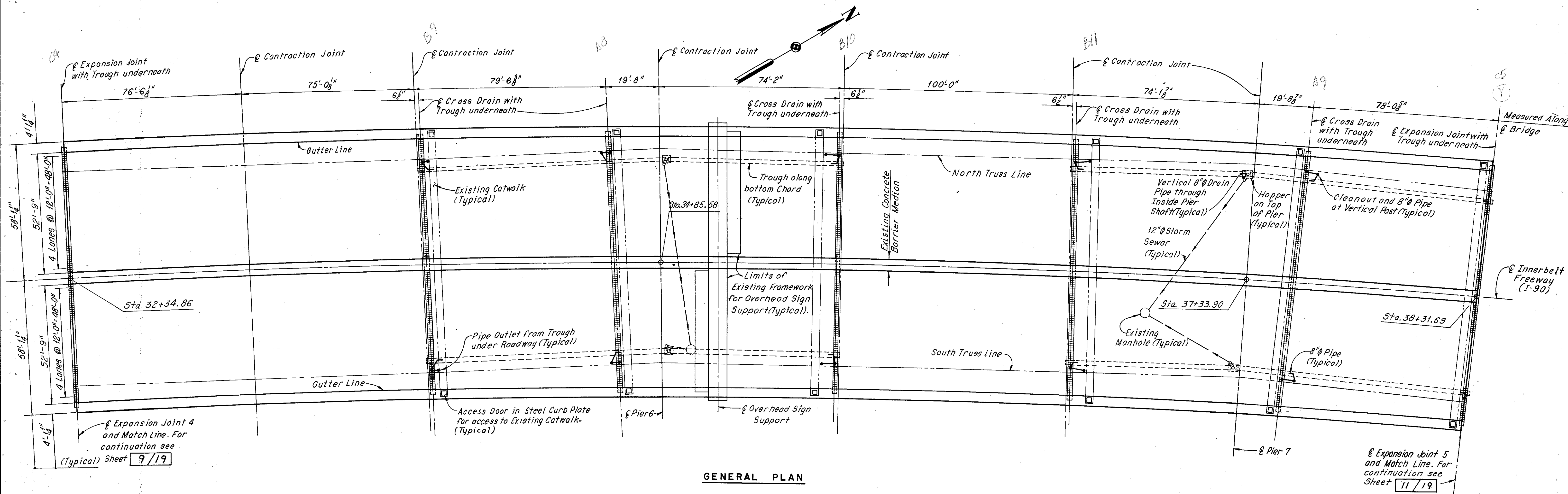
Expansion Joint 4 and Match Line. For continuation see Sheet **10/19**

GENERAL PLAN CENTRAL VIADUCT				
TR-113 CUY-90-1524		STA. 2+65±		
90-1540		STA. 56+00±		
90-1547				
90-1599				
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DRAWN DATE	TRACED DATE	CHECKED DATE	REVIEWED DATE	REVISED

FHWA REGION	STATE	PROJECT	
5	OHIO		

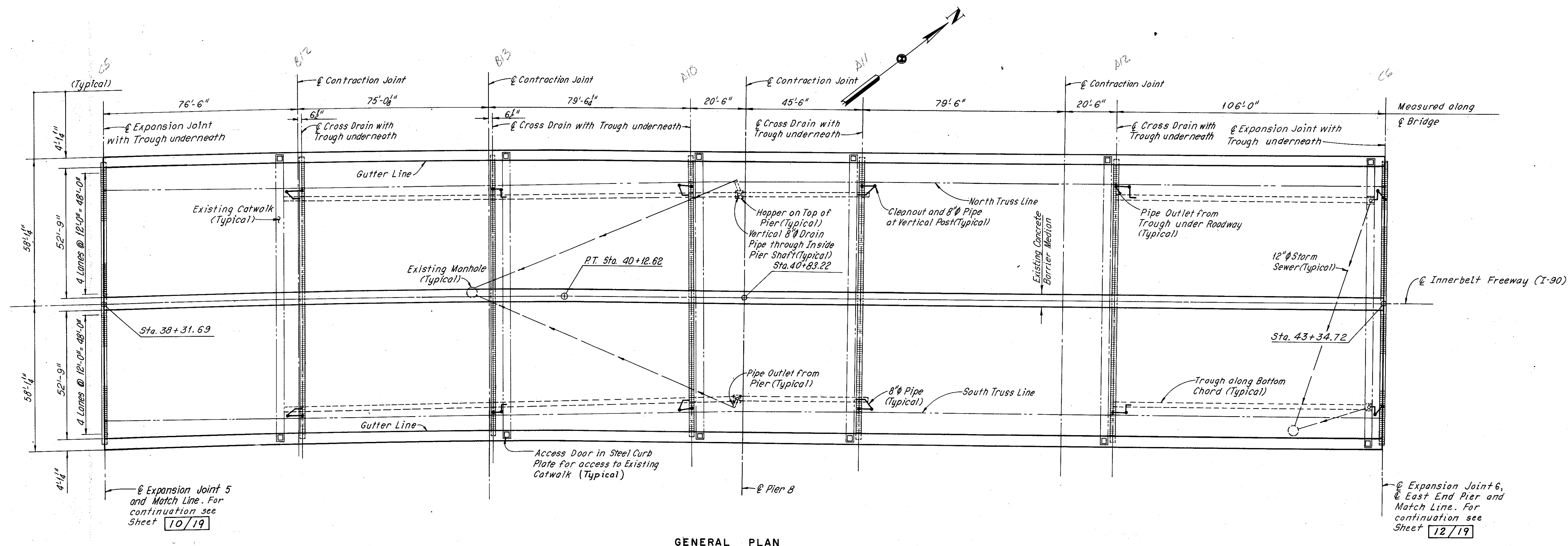
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CUYAHOGA COUNTY,
CUY-90-15.24



GENERAL PLAN

GENERAL PLAN CENTRAL VIADUCT				
90-1540 CUY-90-1524 90-1540 90-1547 90-1599				
			STA. 2+65±	
			STA. 56+00±	
CUYAHOGA COUNTY OHIO				
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GENERAL PLAN

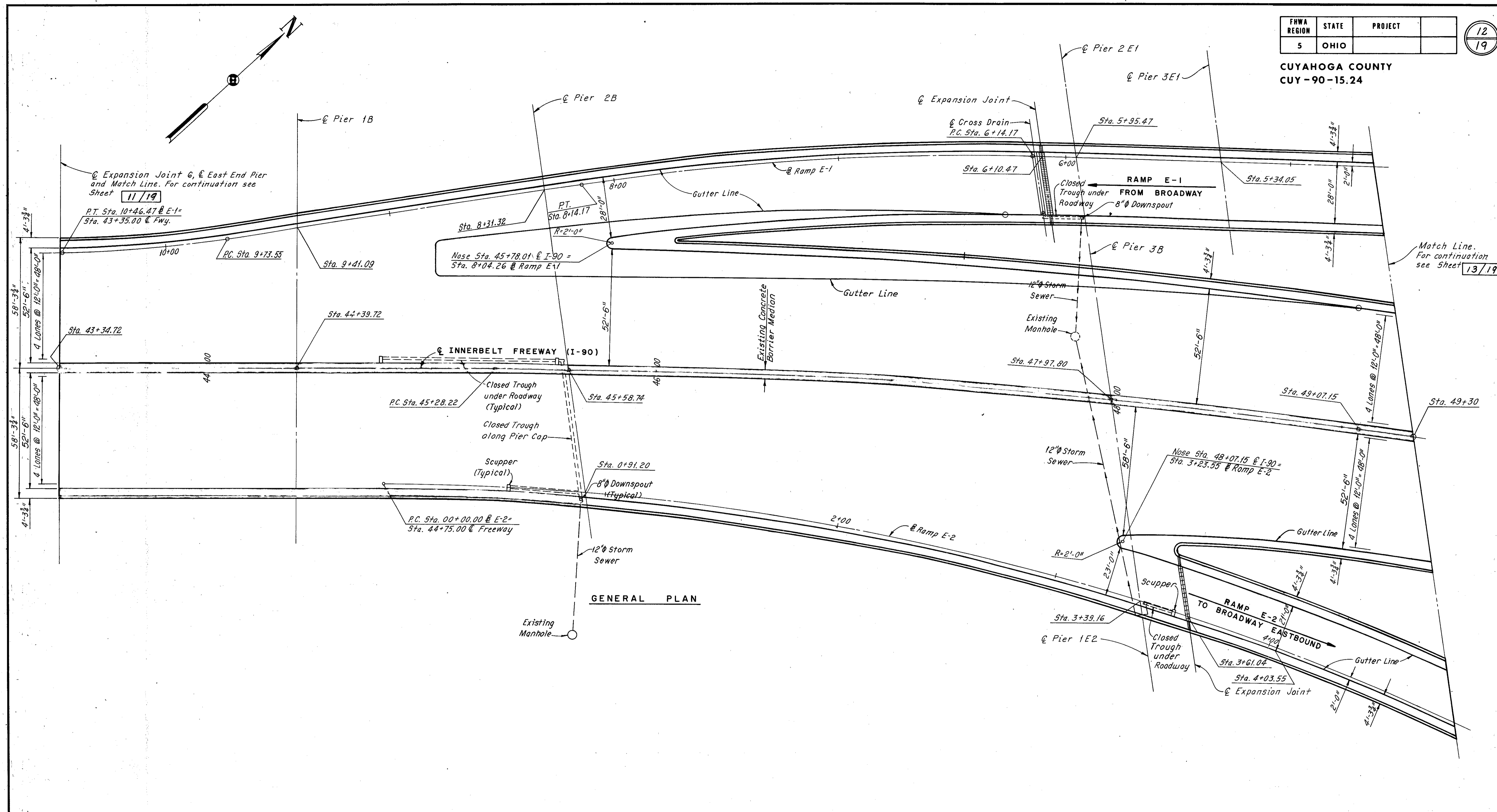
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90-1540 CUY-90-1524				
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90-1599				
CUYAHOGA COUNTY				OHIO
DRAWN DATE	TRACED DATE	CHECKED DATE	REVIEWED DATE	REVISED

STA. 2+65±
STA. 56+00±

FHWA REGION	STATE	PROJECT
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CUYAHOGA COUNTY
CUY-90-15.24



GENERAL PLAN

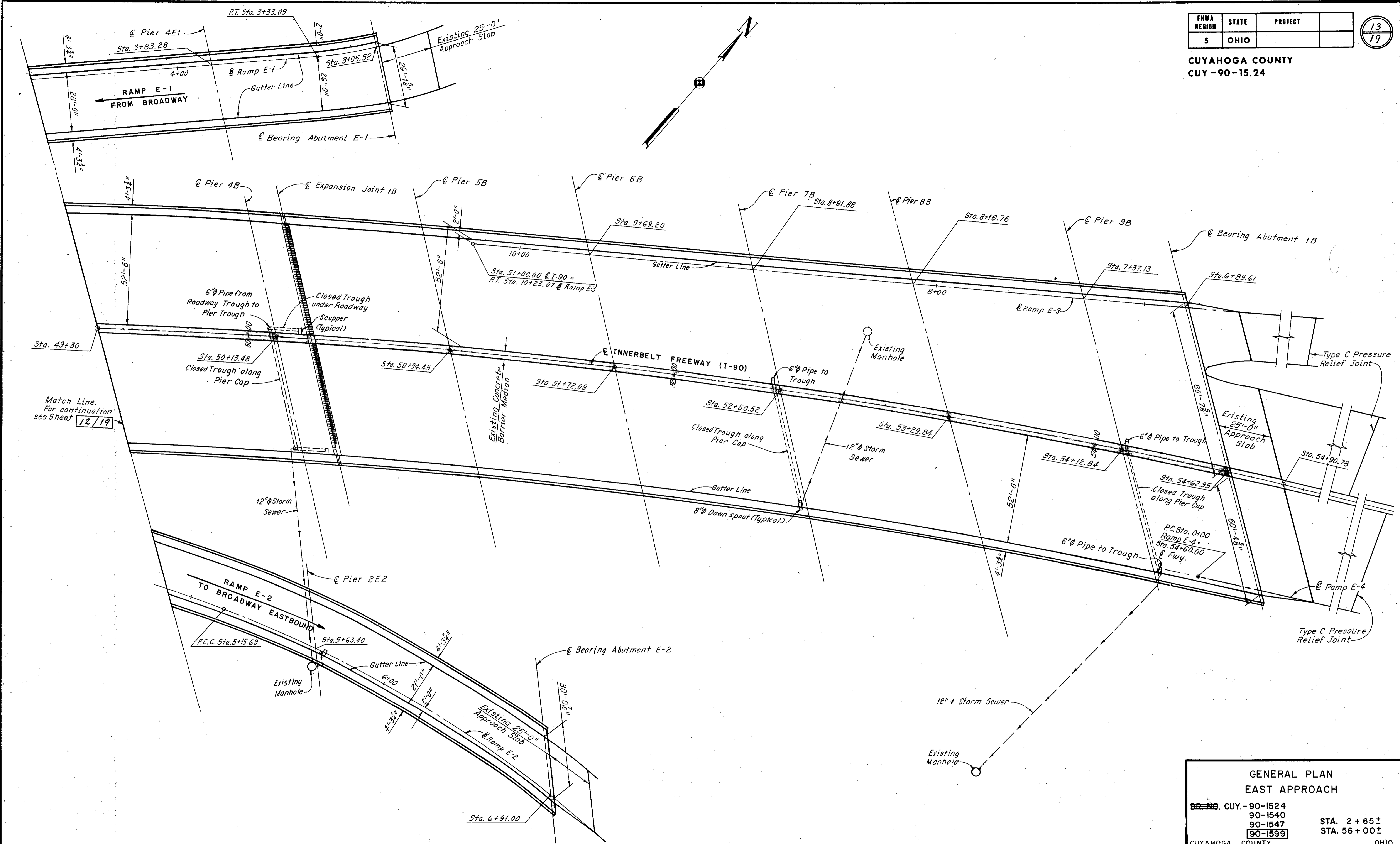
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CUY-90-1524				
90-1540				
90-1547				
90-1599				
CUYAHOGA COUNTY				OHIO
DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE	DATE	DATE	DATE	DATE

STA. 2+65±
STA. 56+00±

FHWA REGION	STATE	PROJECT	
5	OHIO		

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CUYAHOGA COUNTY
CUY-90-15.24



Match Line.
For continuation
see Sheet **12/19**

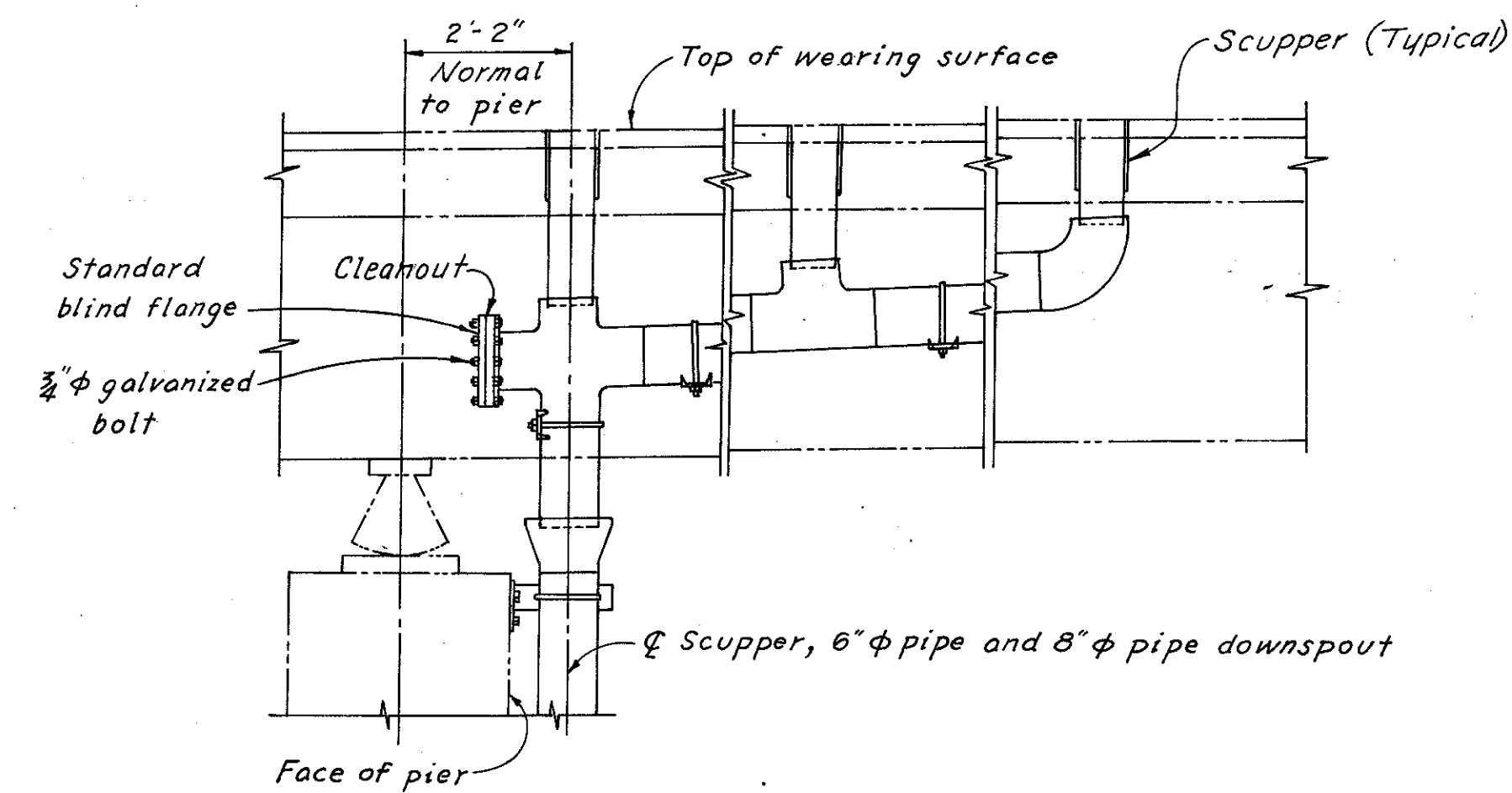
**GENERAL PLAN
EAST APPROACH**

CUY-90-1524
90-1540
90-1547
90-1599

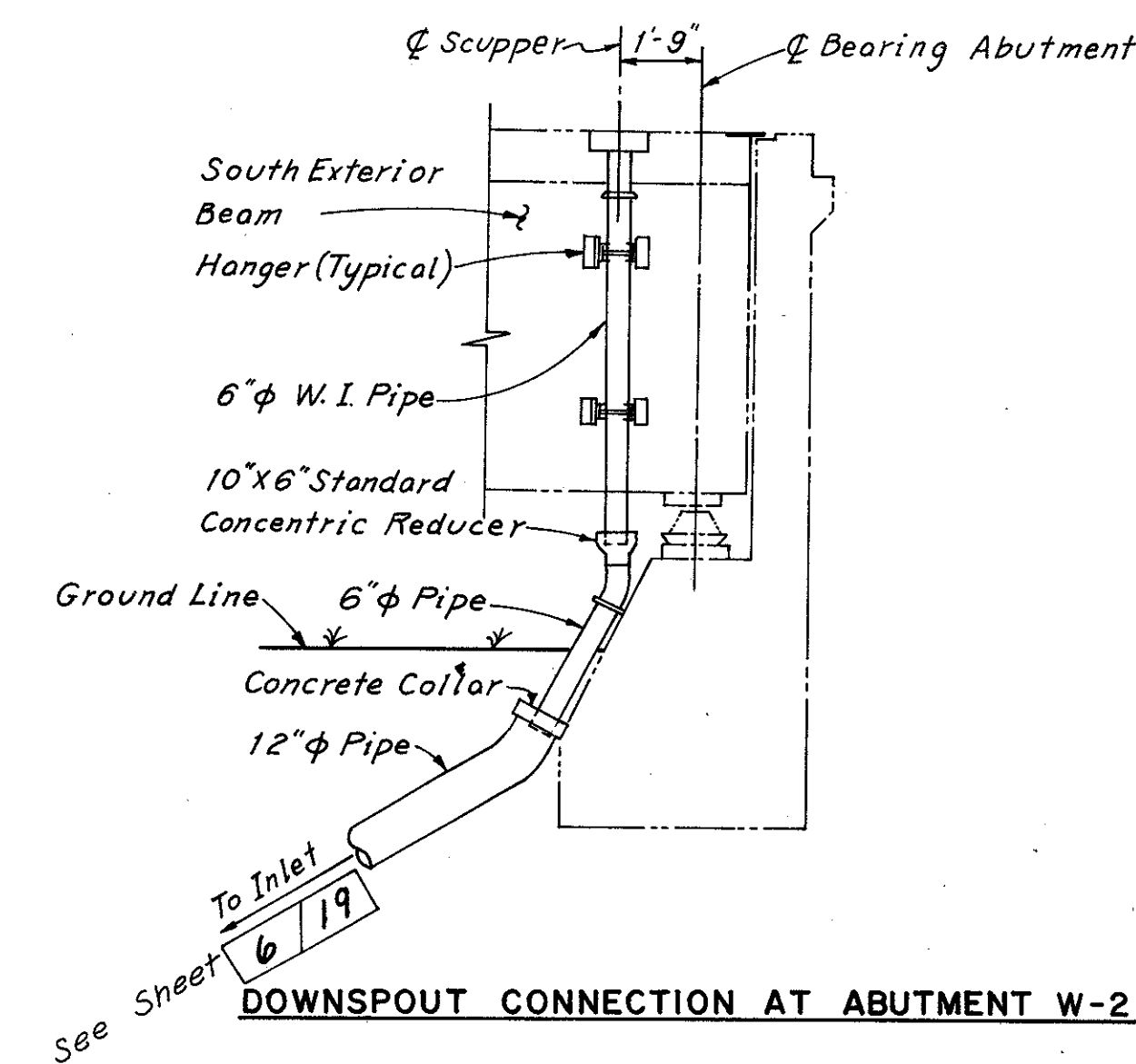
STA. 2 + 65 ±
STA. 56 + 00 ±

CUYAHOGA COUNTY OHIO

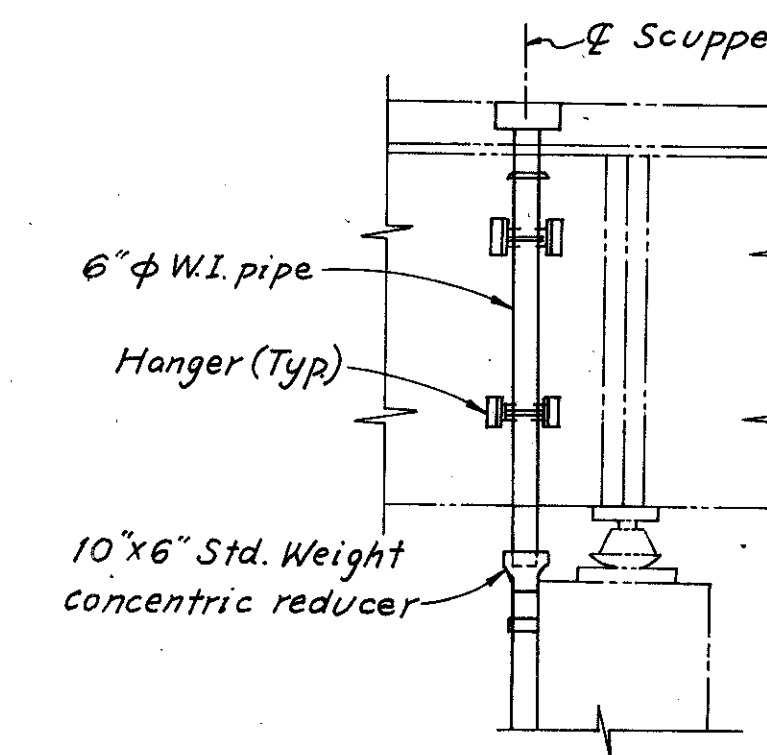
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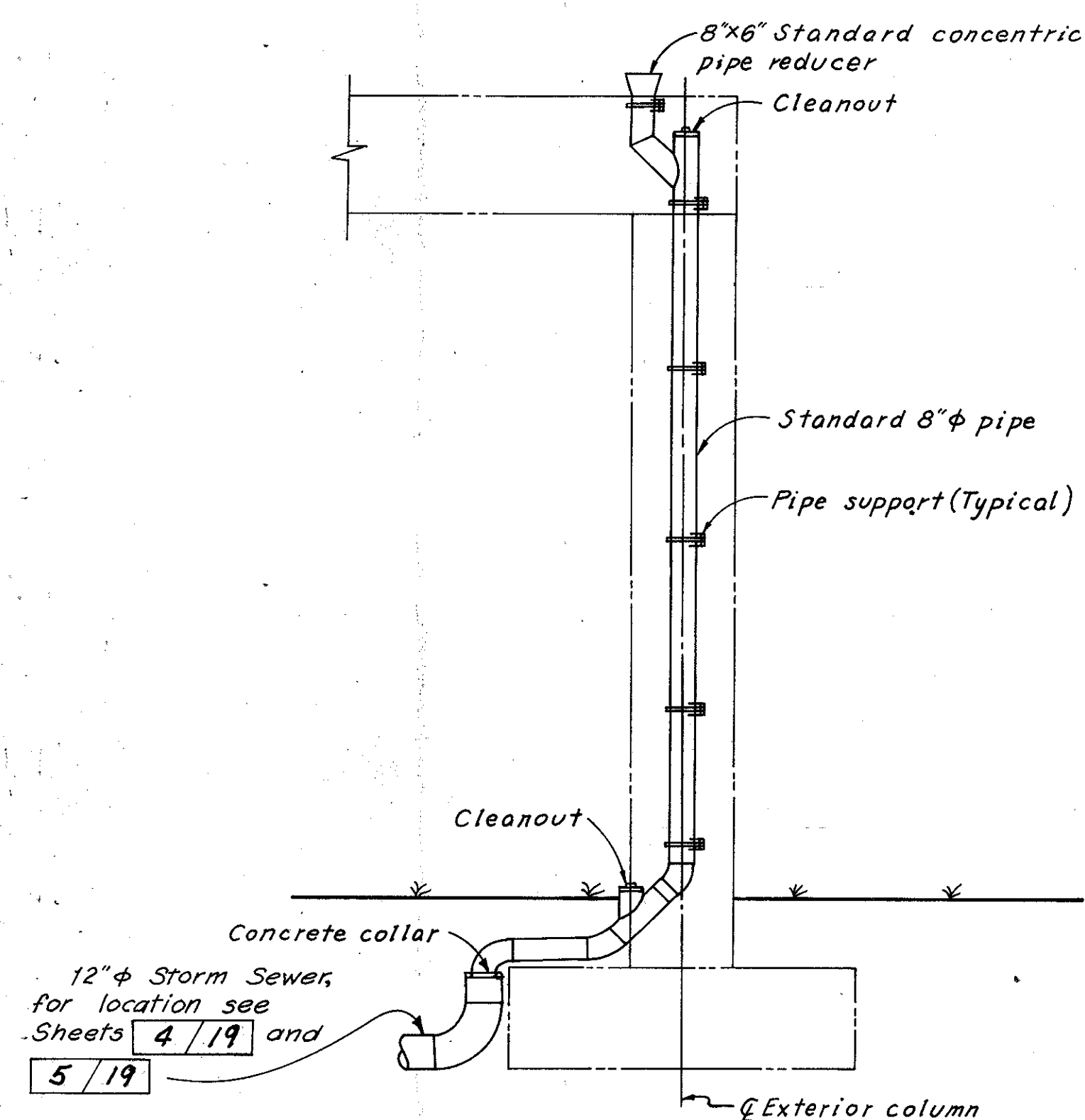
COLLECTOR SYSTEM AT PIERS



DOWNSPOUT CONNECTION AT ABUTMENT W-2

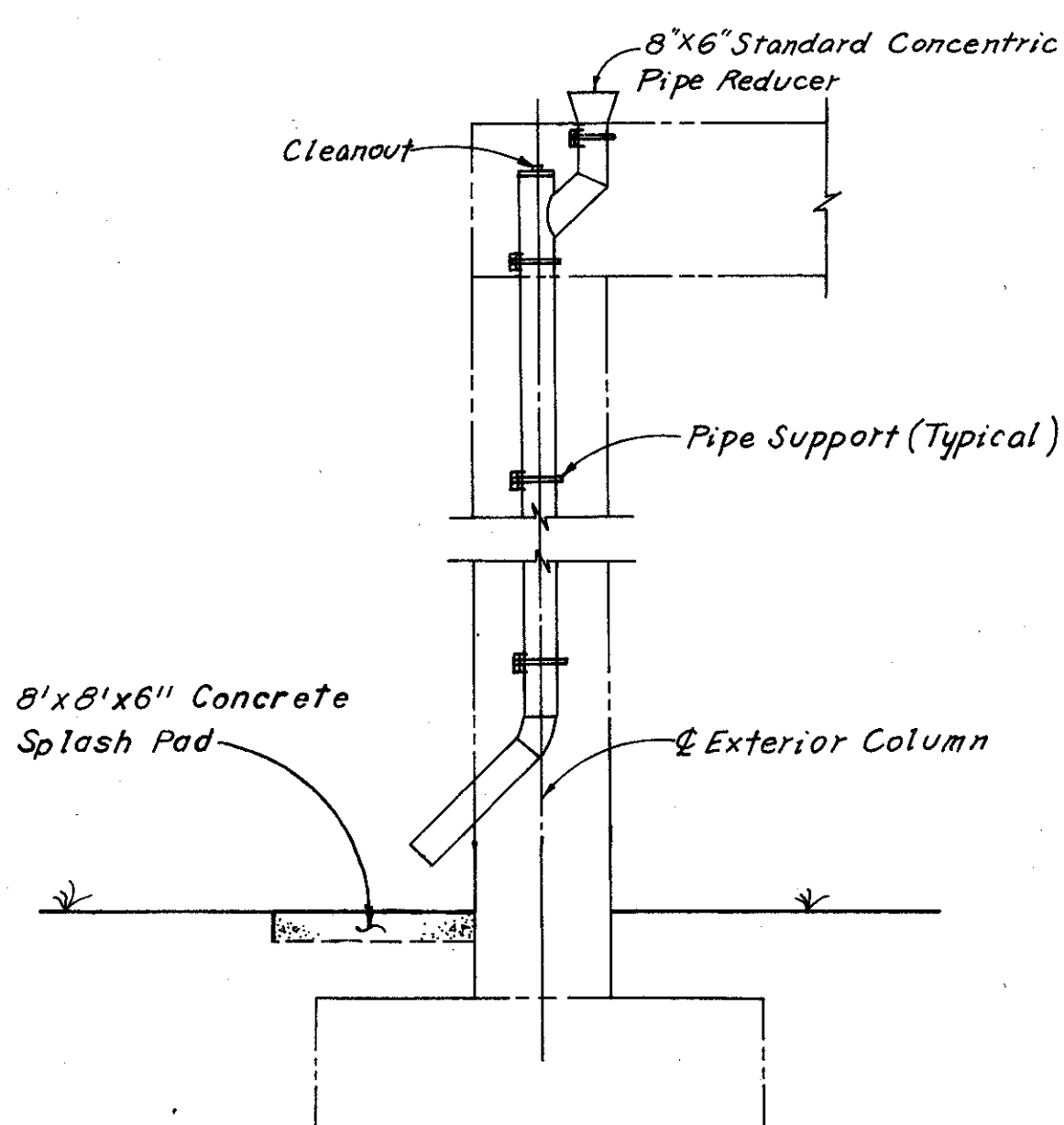


TYPICAL DOWNSPOUT CONNECTION AT PIERS

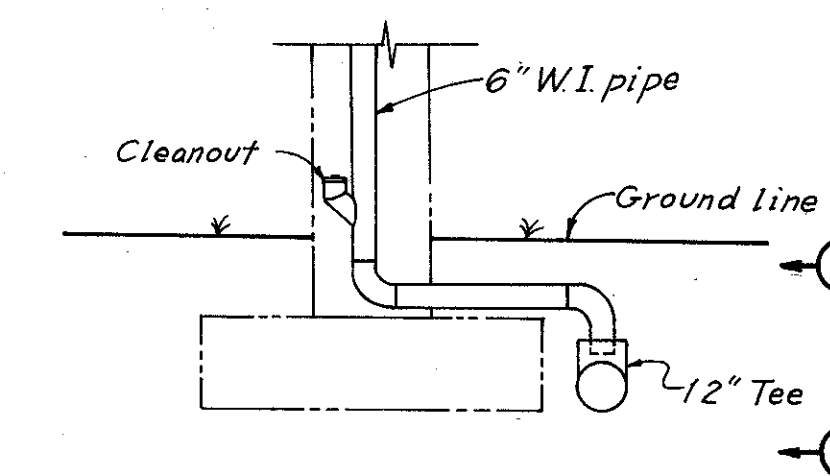


DOWNSPOUTS AT PIERS 4E, 7E, 7W, 10E AND 10W

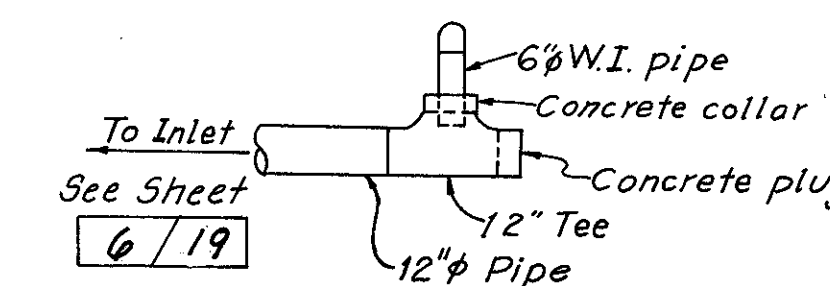
INNERBELT EXTENSION



DOWNSPOUT DETAIL AT PIER 3W



TYPICAL CONNECTION AT PIERS
6" φ W.I. PIPE TO 12" φ STORM SEWER



VIEW A-A

WEST APPROACH

Notes:

The details shown represent the original plan drawings for the drainage system. The existing drainage system shall be cleaned out as indicated in the General Notes.

Scupper boxes at Innerbelt Extension are similar to those shown on Ohio Standard Drawing SD-1-69, sheet 3 of 4, except there are 12 grate spaces at 3"± with a total inside width of 3'-3"±.

Scupper boxes at West Approach are similar to those shown on East Approach Drainage Details, Sheet 18/19.

For Scupper Locations see Sheets 4/19, 5/19 and 6/19.

INNERBELT EXTENSION AND WEST APPROACH DRAINAGE DETAILS

CUYAHOGA COUNTY
90-1524
90-1540
90-1547
90-1599

STA. 2+65±
STA. 56+00±

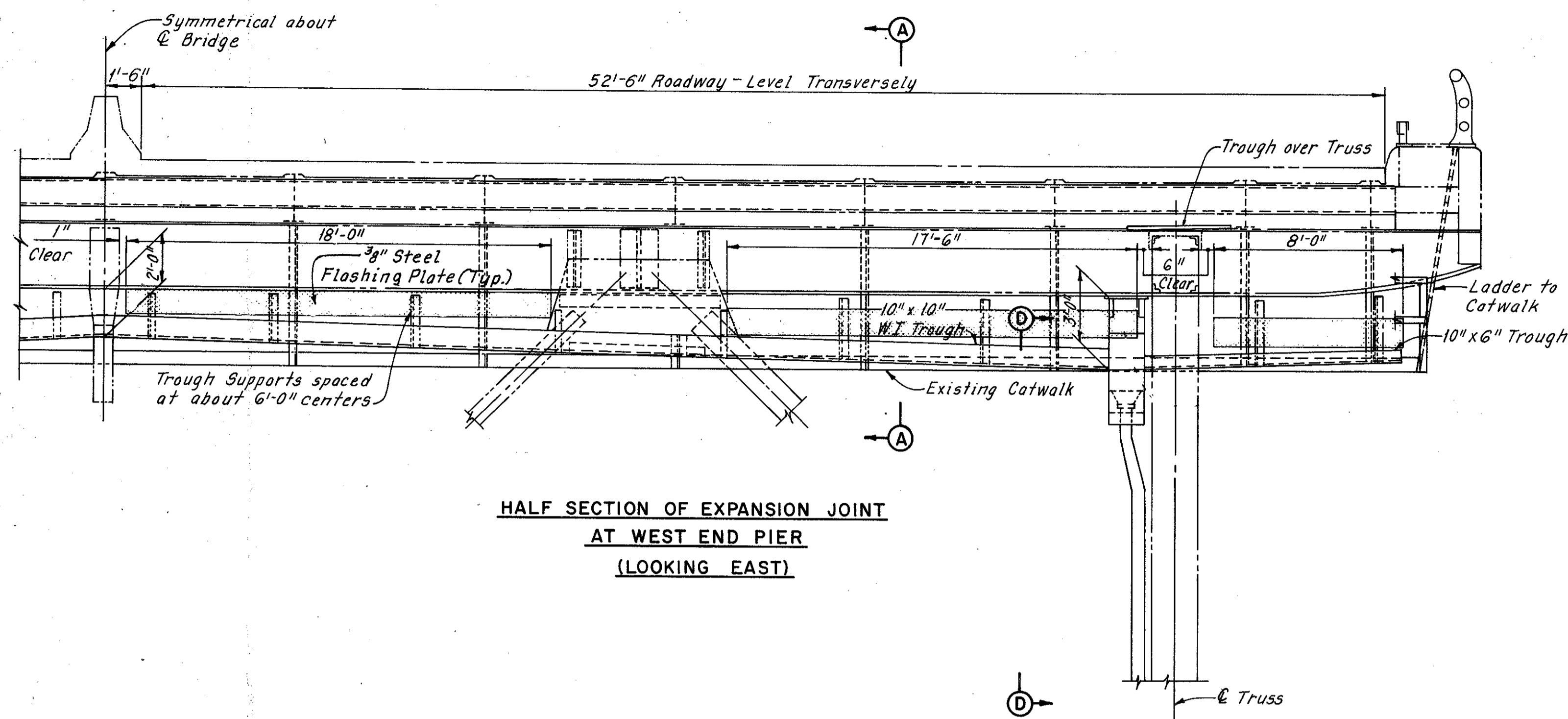
CUYAHOGA COUNTY OHIO

DRAWN DATE	TRACED DATE	CHECKED DATE	REVIEWED DATE	REVISED

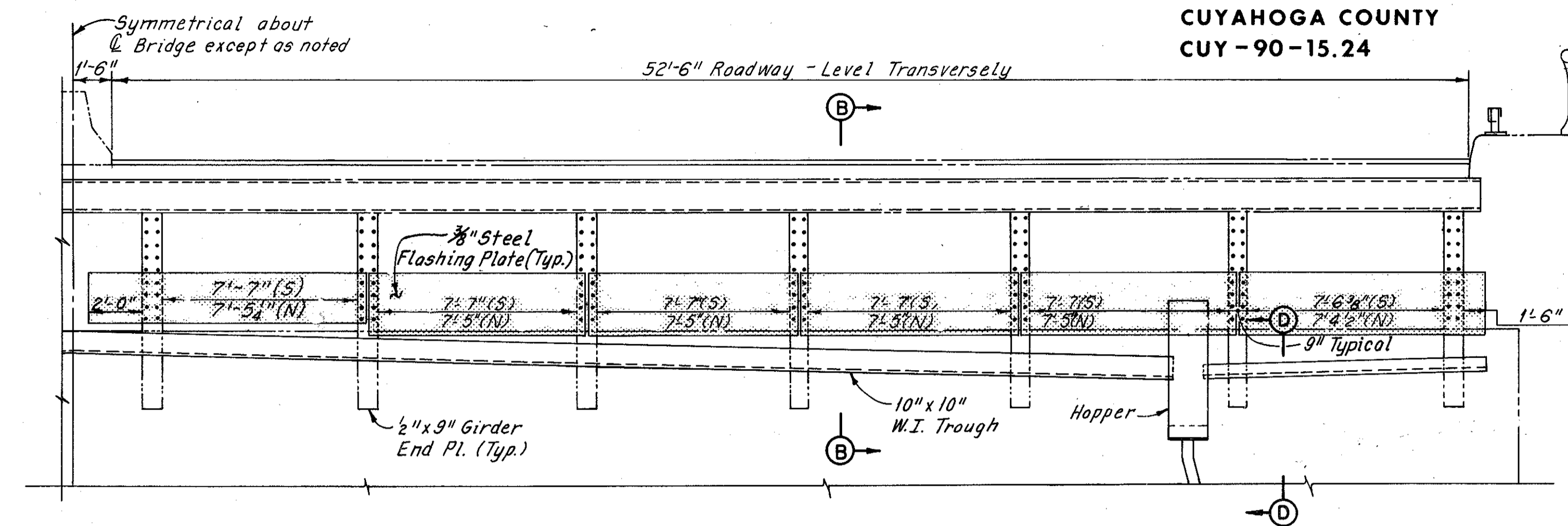
FHWA REGION	STATE	PROJECT
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CUYAHOGA COUNTY
CUY-90-15.24

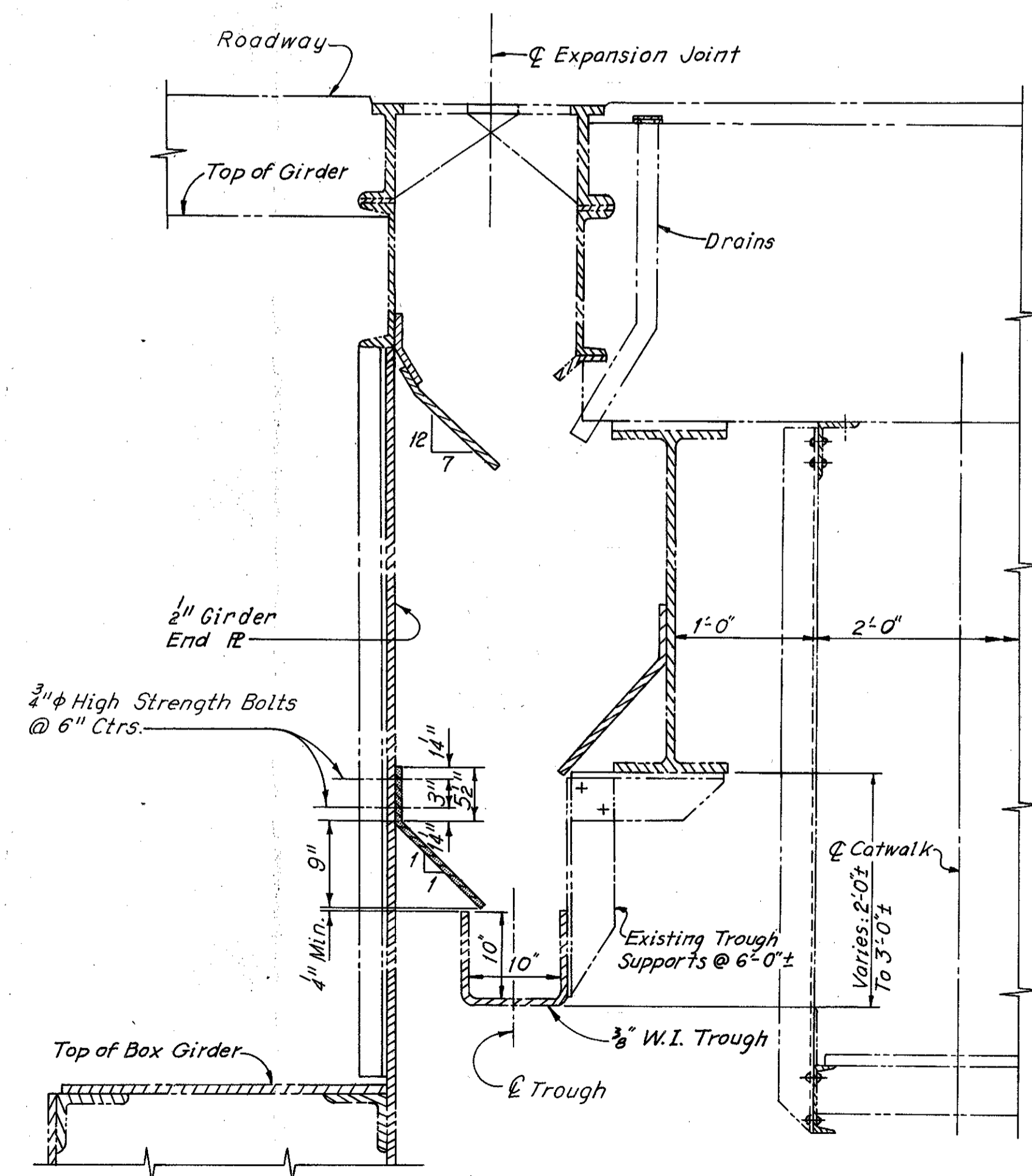


HALF SECTION OF EXPANSION JOINT
AT WEST END PIER
(LOOKING EAST)

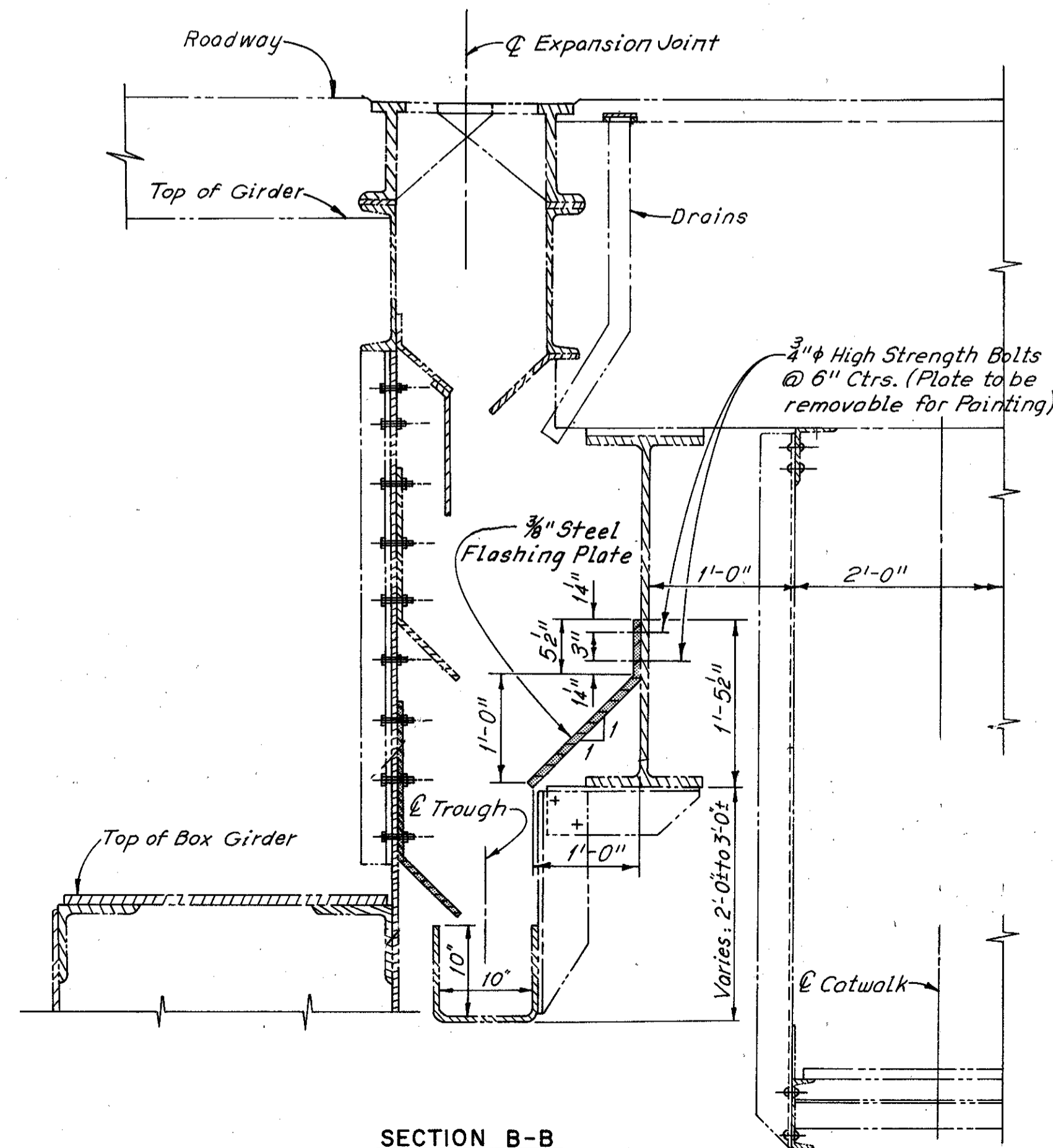


HALF SECTION OF EXPANSION JOINT
AT EAST END PIER
(LOOKING EAST)

Note: (N) = Indicates North of \bar{C} Bridge
(S) = Indicates South of \bar{C} Bridge



SECTION A-A



SECTION B-B

For View D-D and Hopper Detail at top of piers see Sheet 17/19.

CENTRAL VIADUCT
DRAINAGE DETAILS

CUY-90-1524
90-1540
90-1547
90-1599

STA. 2+65 \pm
STA. 56+00 \pm

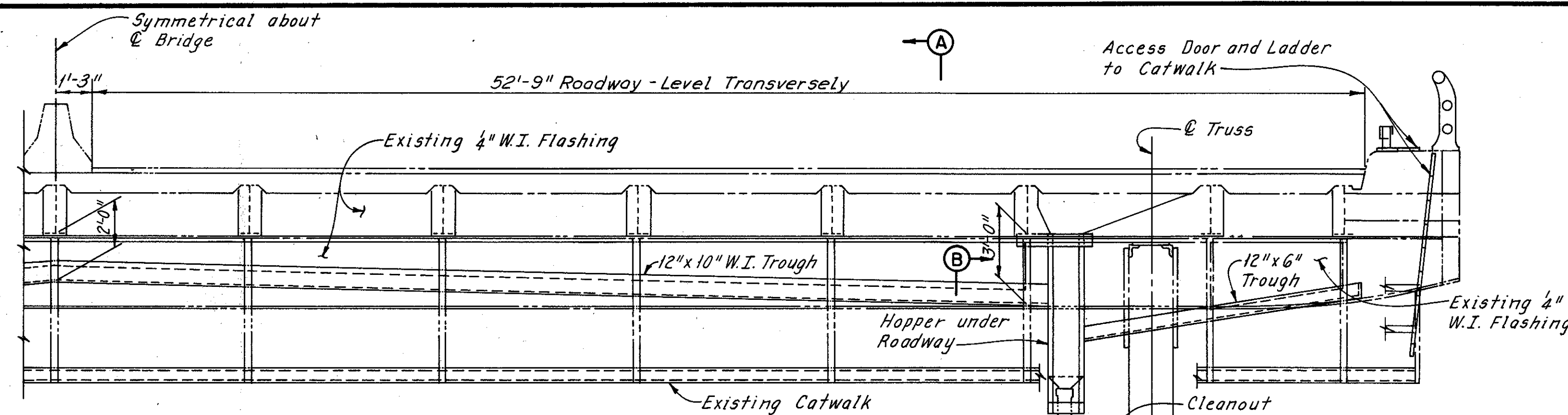
CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE	DATE	DATE	DATE	DATE

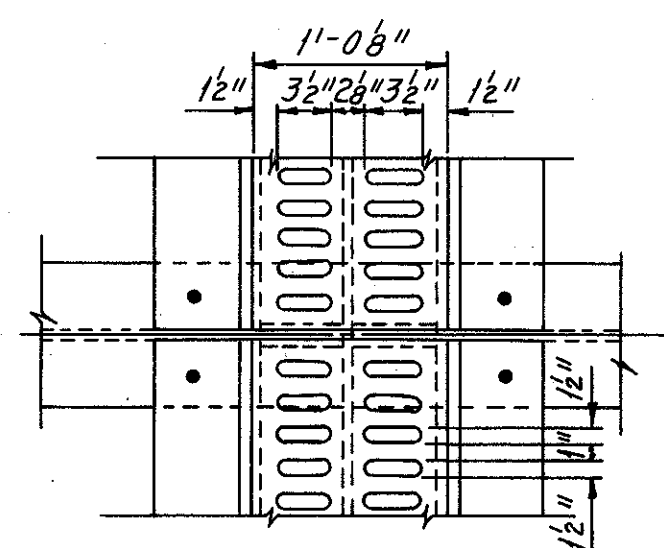
FHWA REGION	STATE	PROJECT
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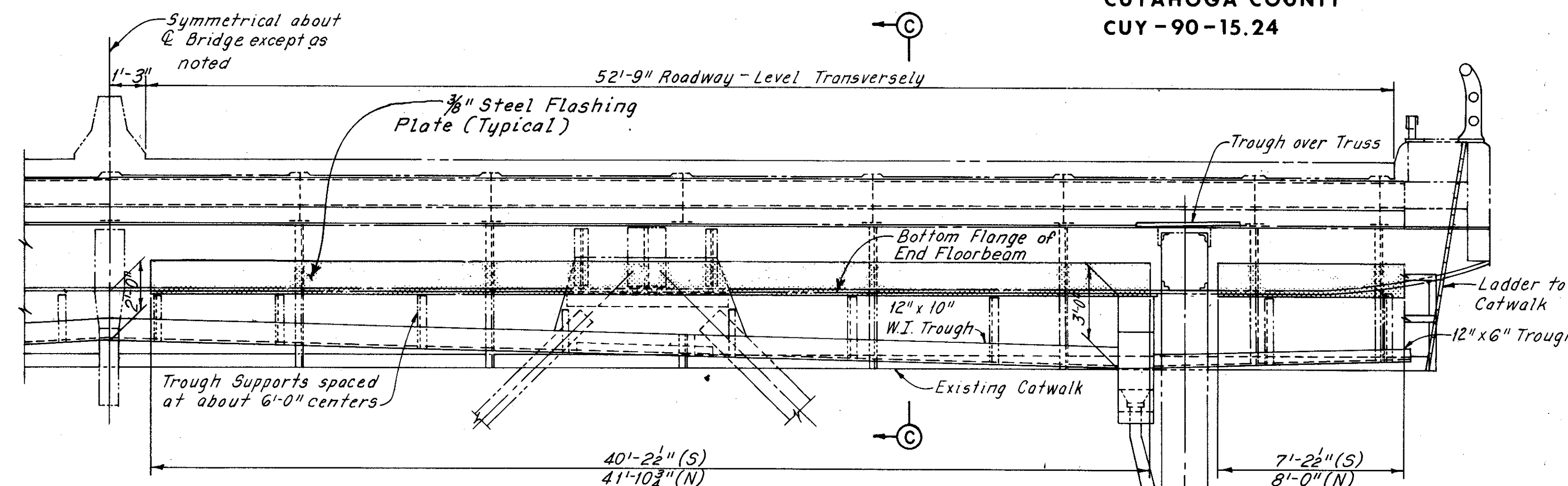
CUYAHOGA COUNTY
CUY-90-15.24



TYPICAL HALF SECTION AT CROSS DRAINS



PLAN OF CROSS DRAIN



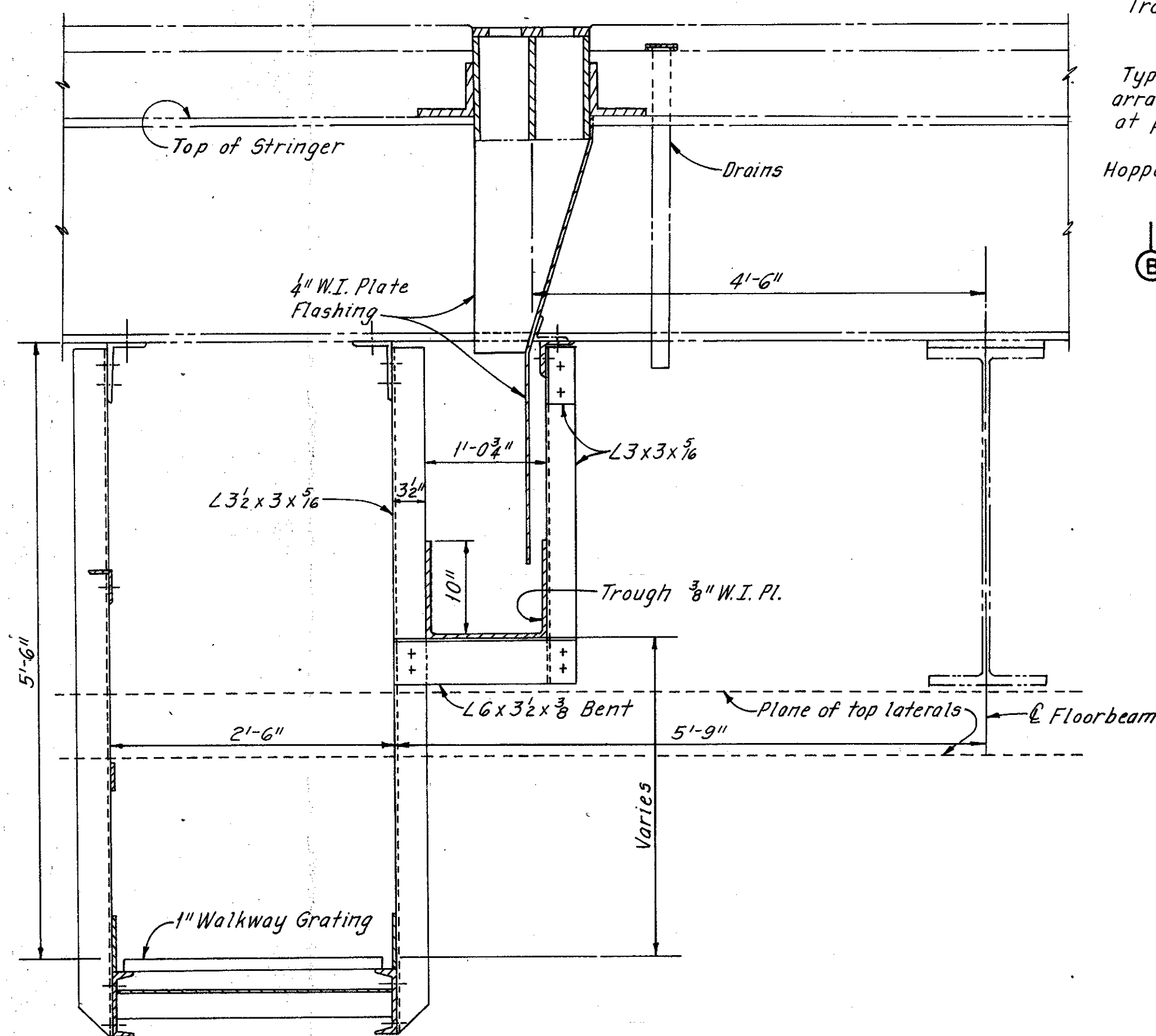
HALF SECTION AT EXPANSION JOINTS

2 THRU 5

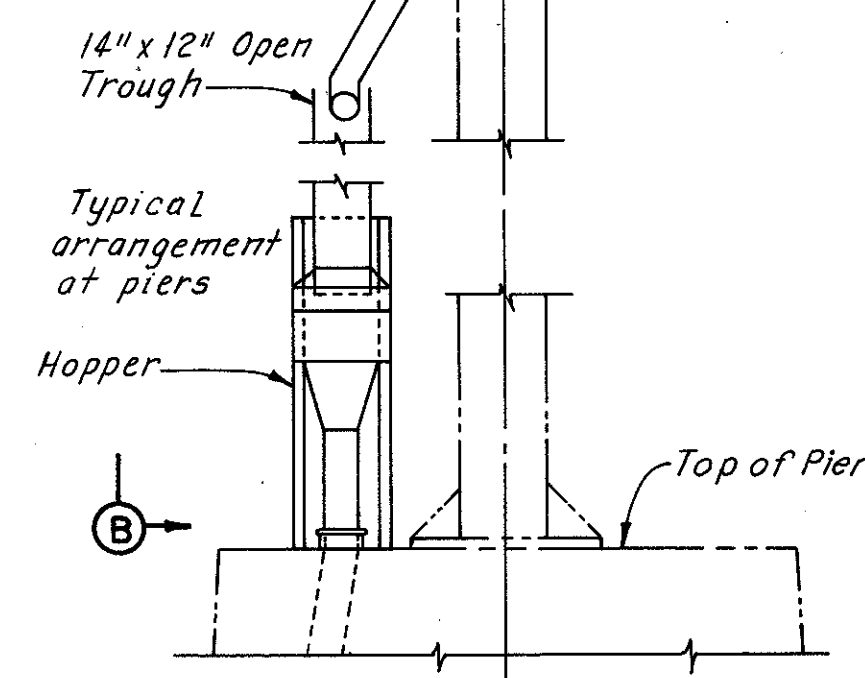
(Looking East - For Expansion Joints 2 & 3)
(Looking West - For Expansion Joints 4 & 5)

Note:

(N) - Indicates North of Centerline of Bridge.
(S) - Indicates South of Centerline of Bridge.

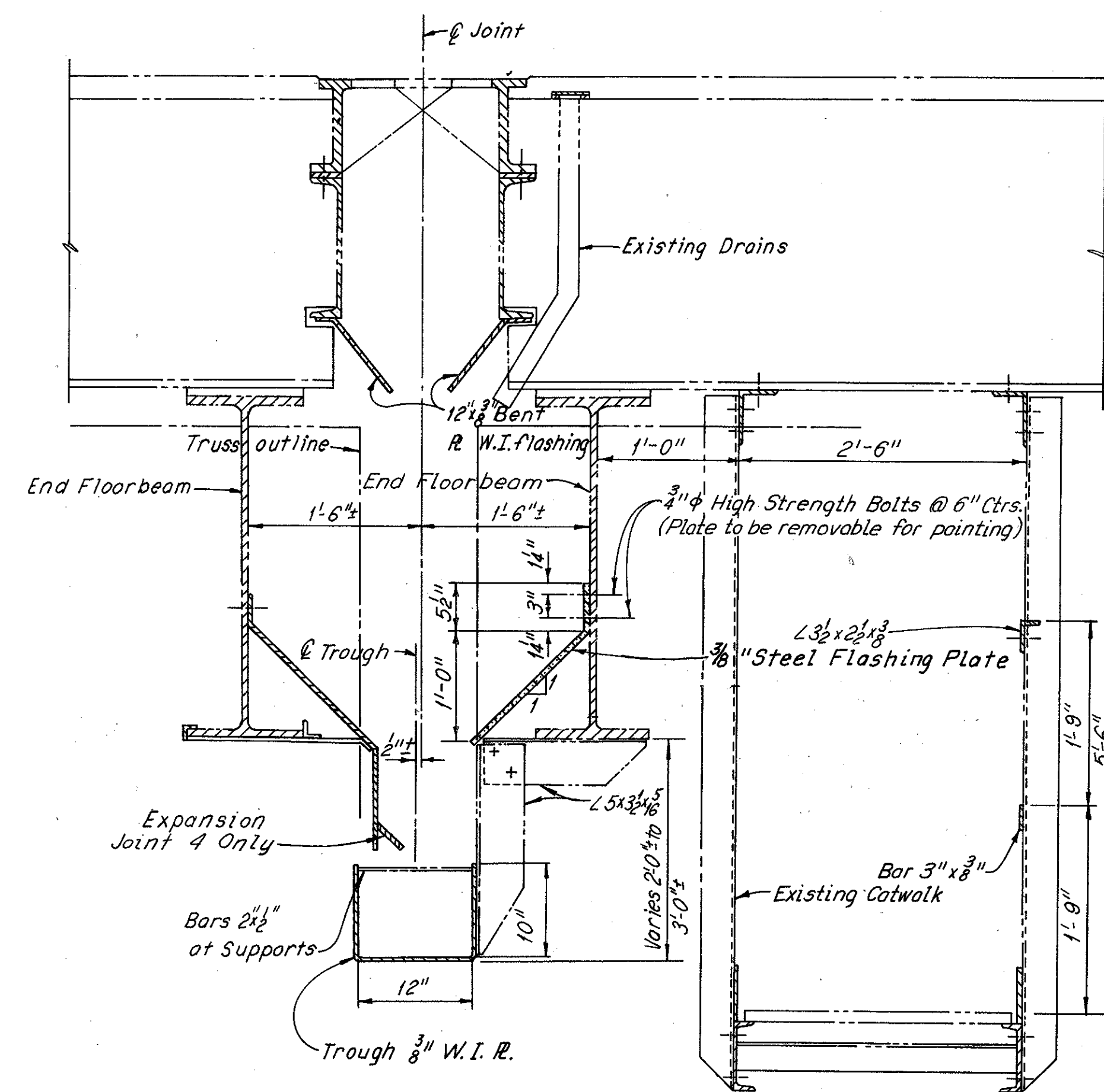


SECTION A-A



Note:

The Crossdrain Details shown are for a crossdrain not at a Contraction Joint. When a crossdrain is located at a Roadway Contraction Joint, the Details are similar.



SECTION C-C

For View B-B and Hopper Detail at top of piers see Sheet 17/19.

CENTRAL VIADUCT
DRAINAGE DETAILS

BB NO. CUY-90-1524
90-1540
90-1547
90-1599

STA. 2+65±
STA. 56+00±

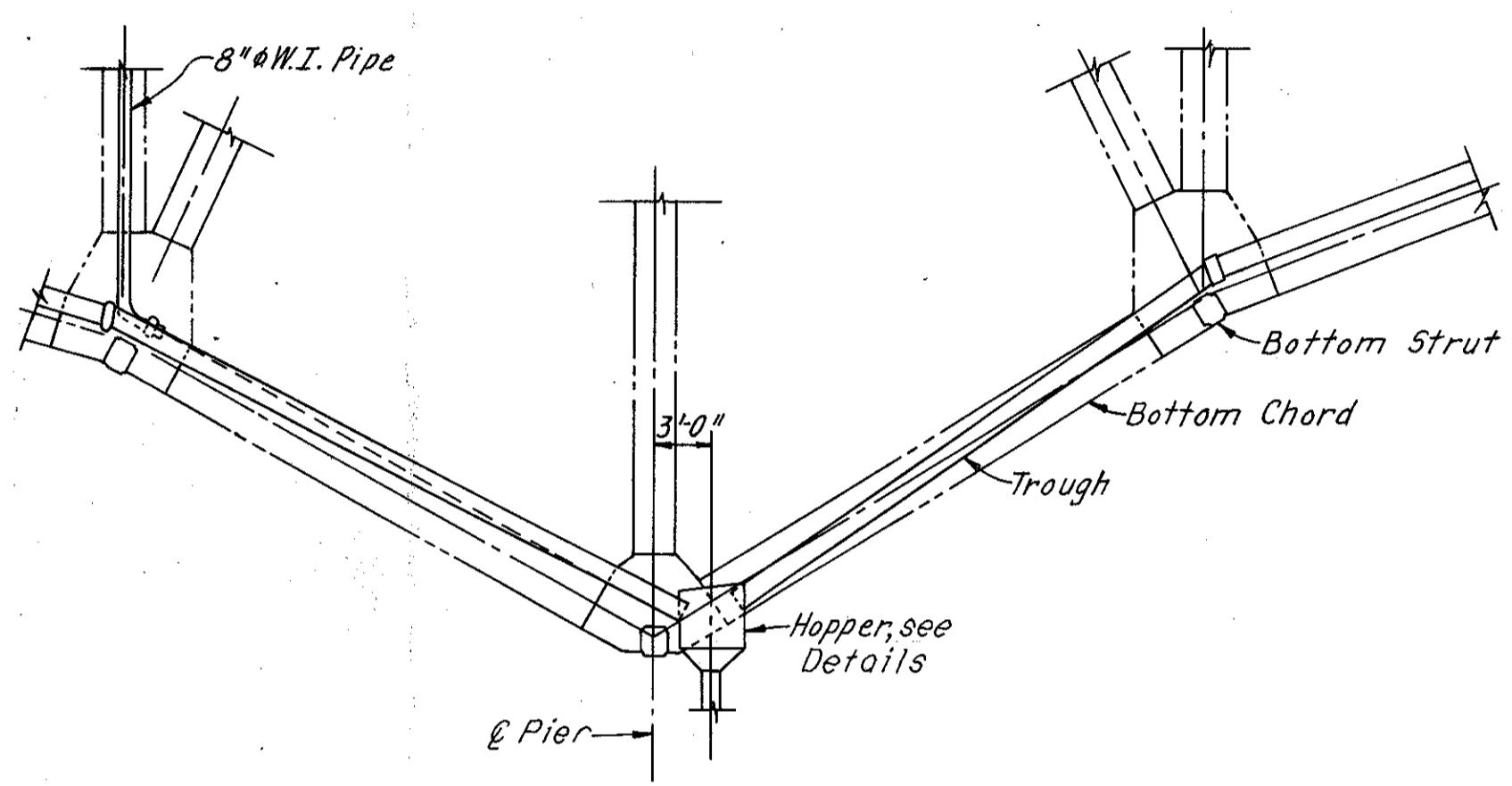
CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
	DATE	DATE	DATE	

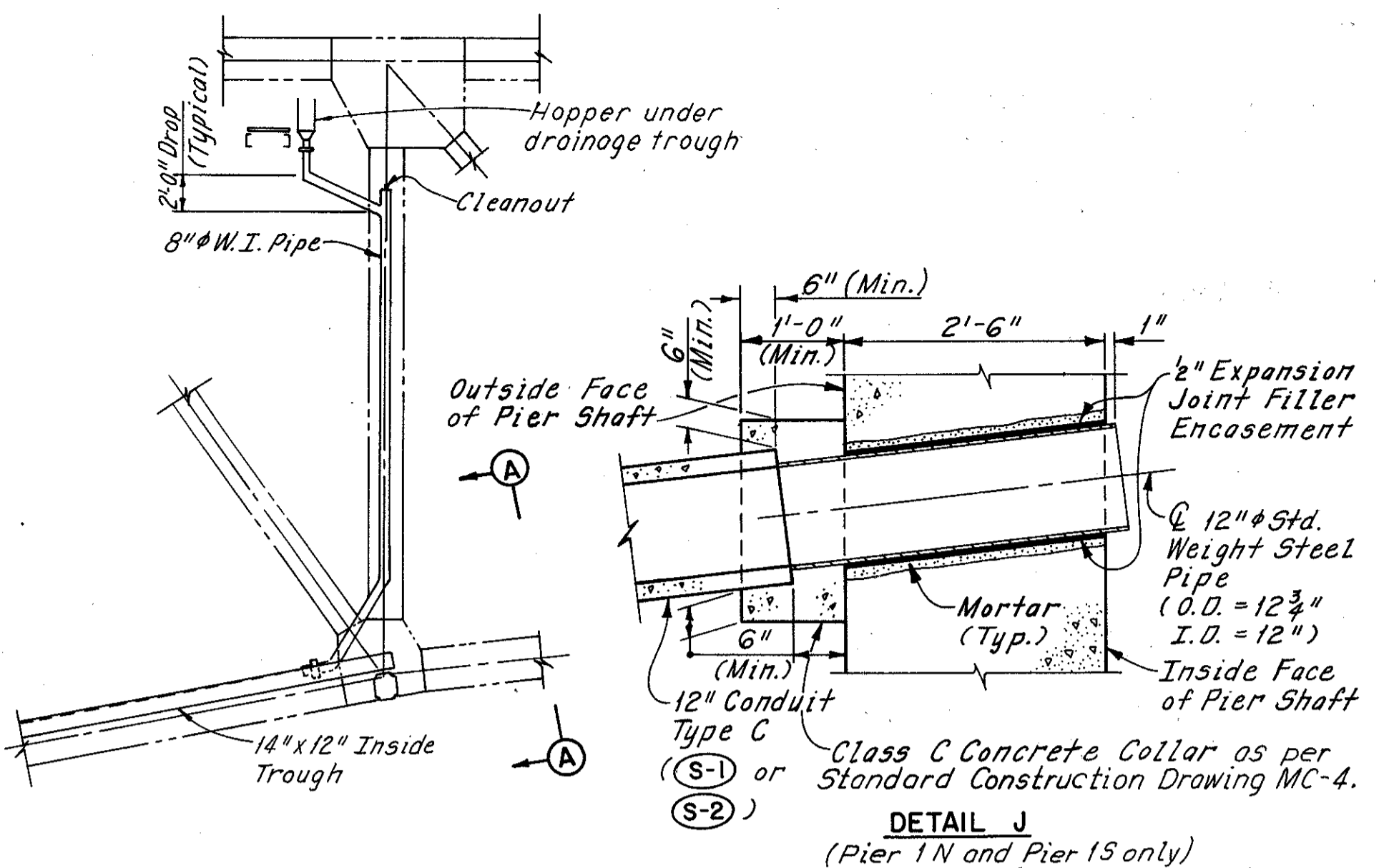
FHWA REGION	STATE	PROJECT
5	OHIO	

17
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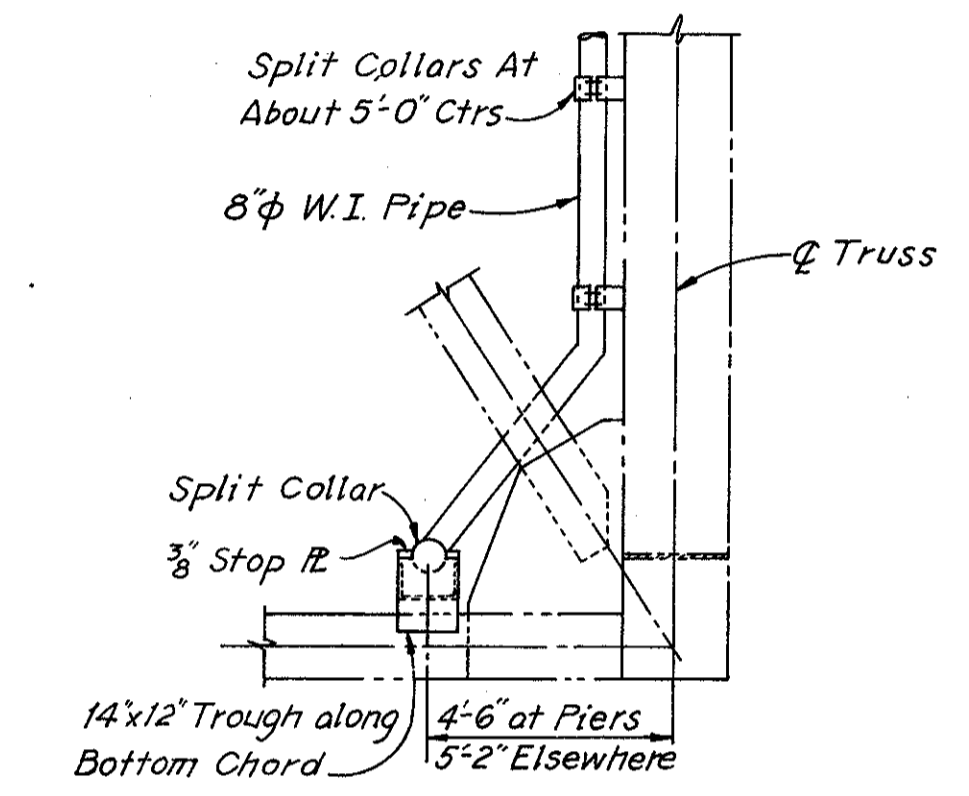
CUYAHOGA COUNTY
CUY-90-15.24



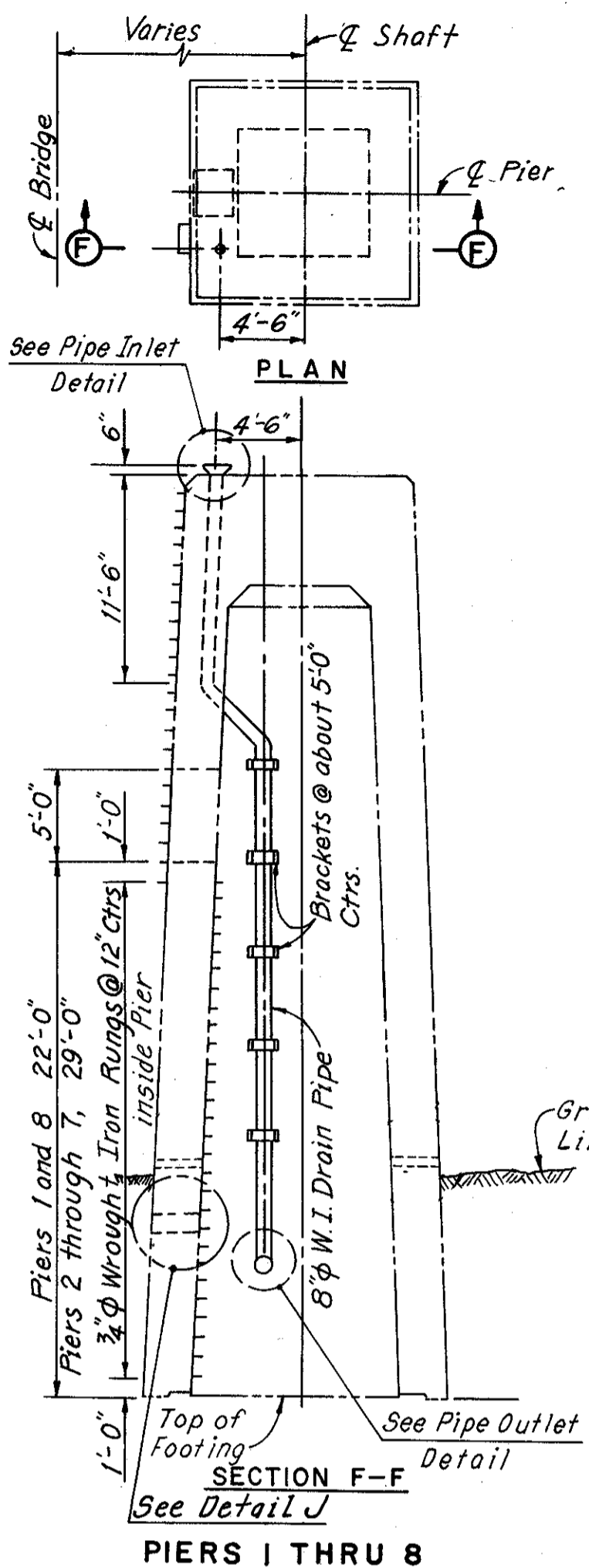
VIEW B-B
(For location of View B-B, see Sheet 16/19)



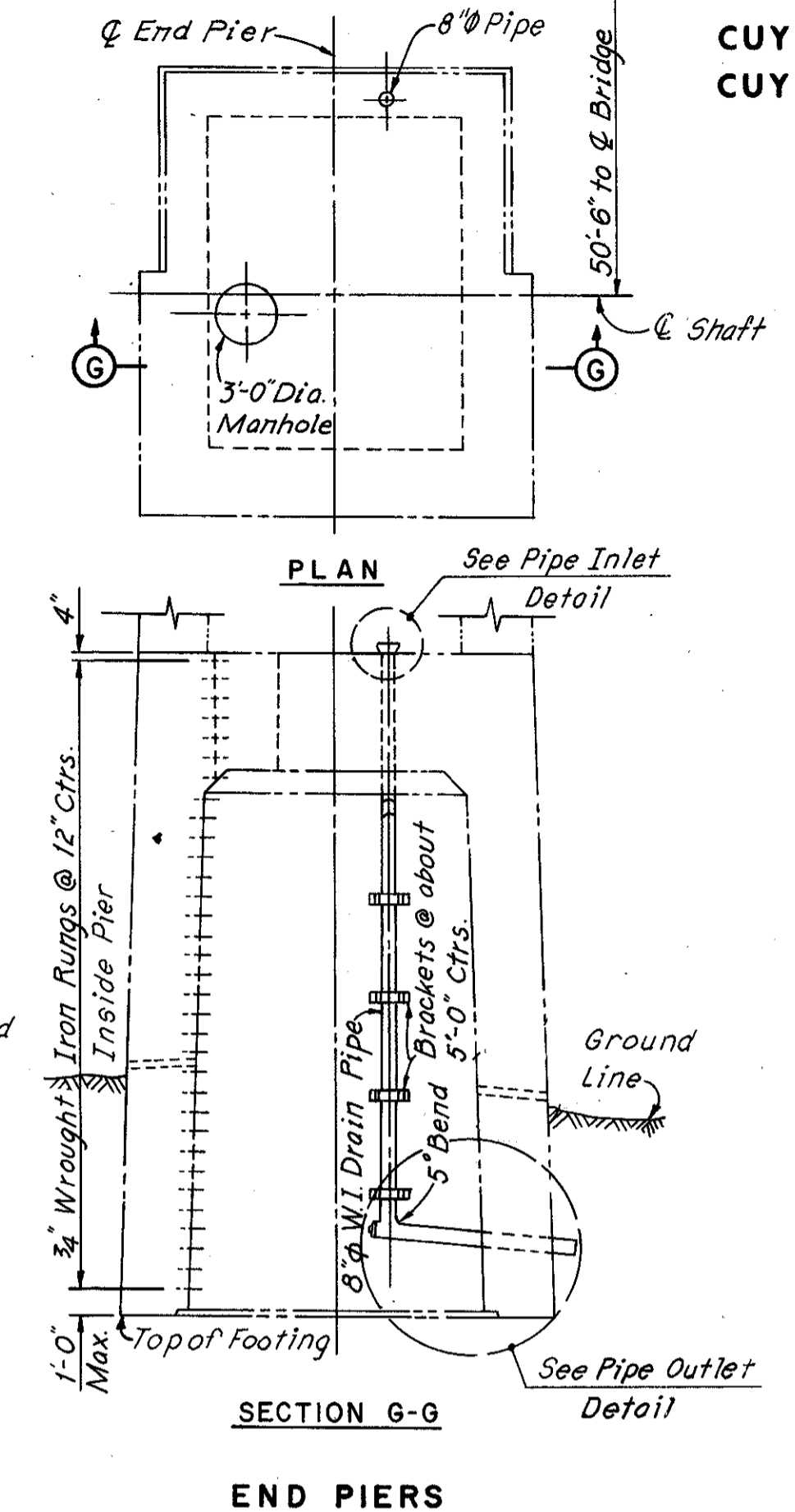
DETAIL J
(Pier 1N and Pier 1S only)



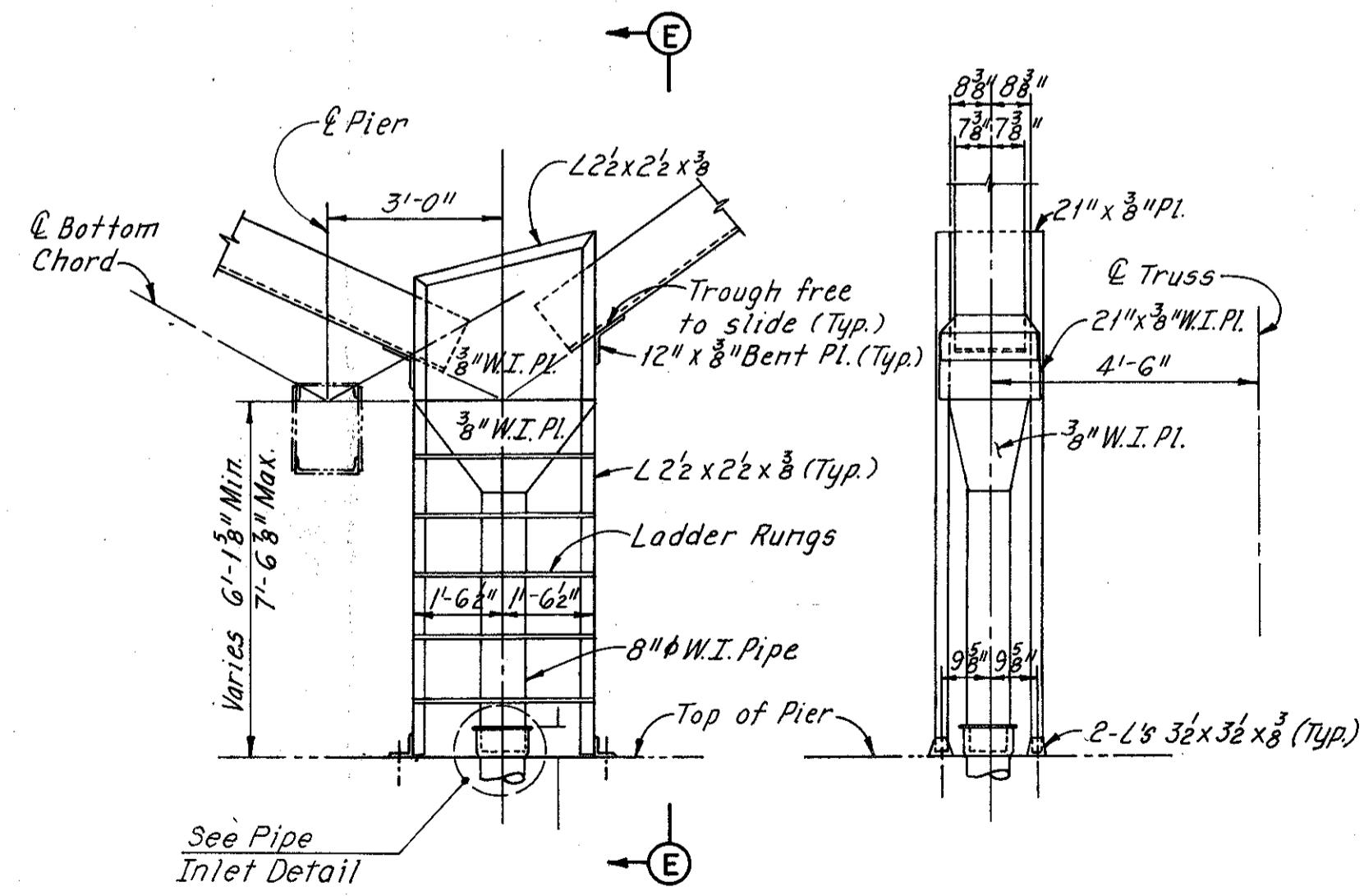
SECTION A-A



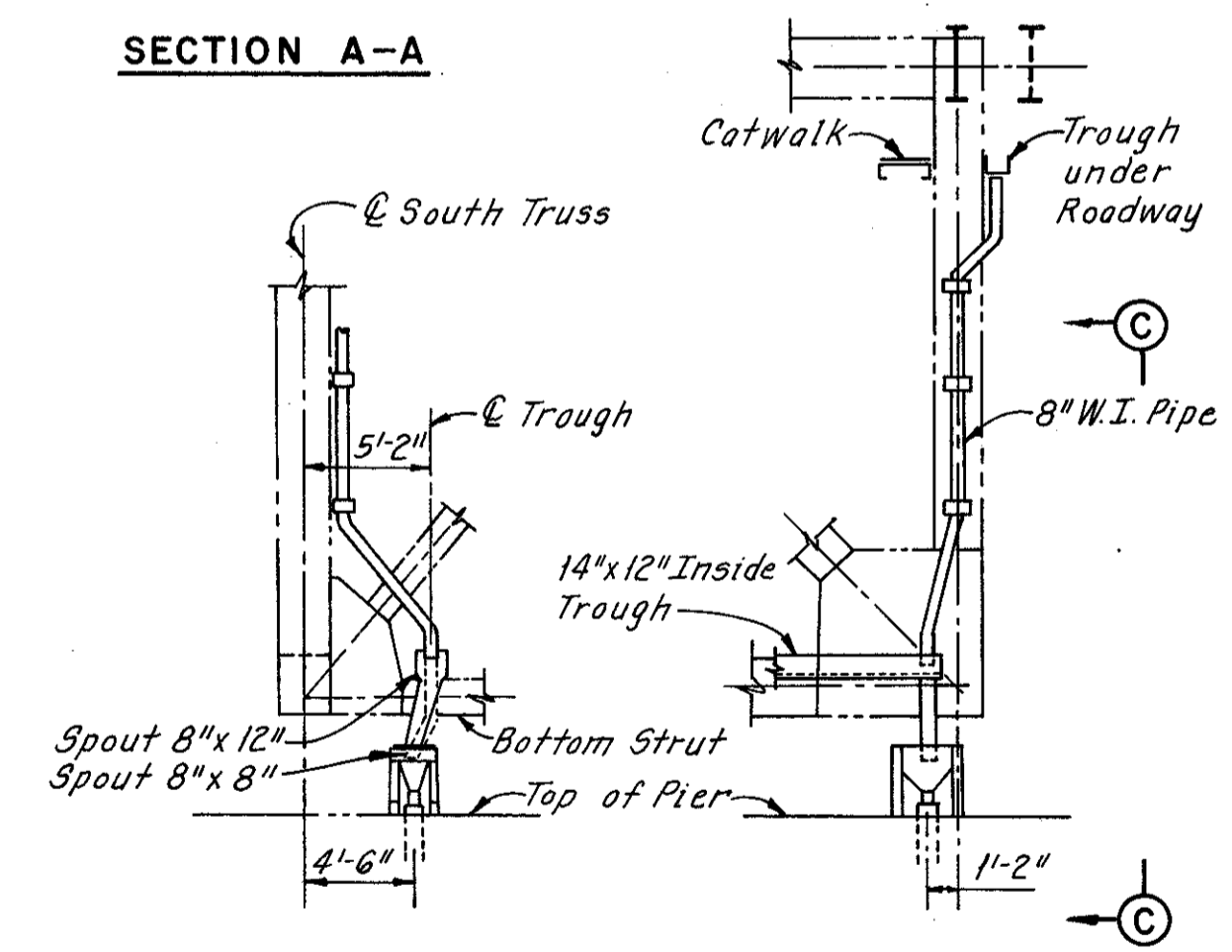
PIERS 1 THRU 8



END PIERS



TYPICAL DETAIL OF HOPPER AT TOP OF PIERS

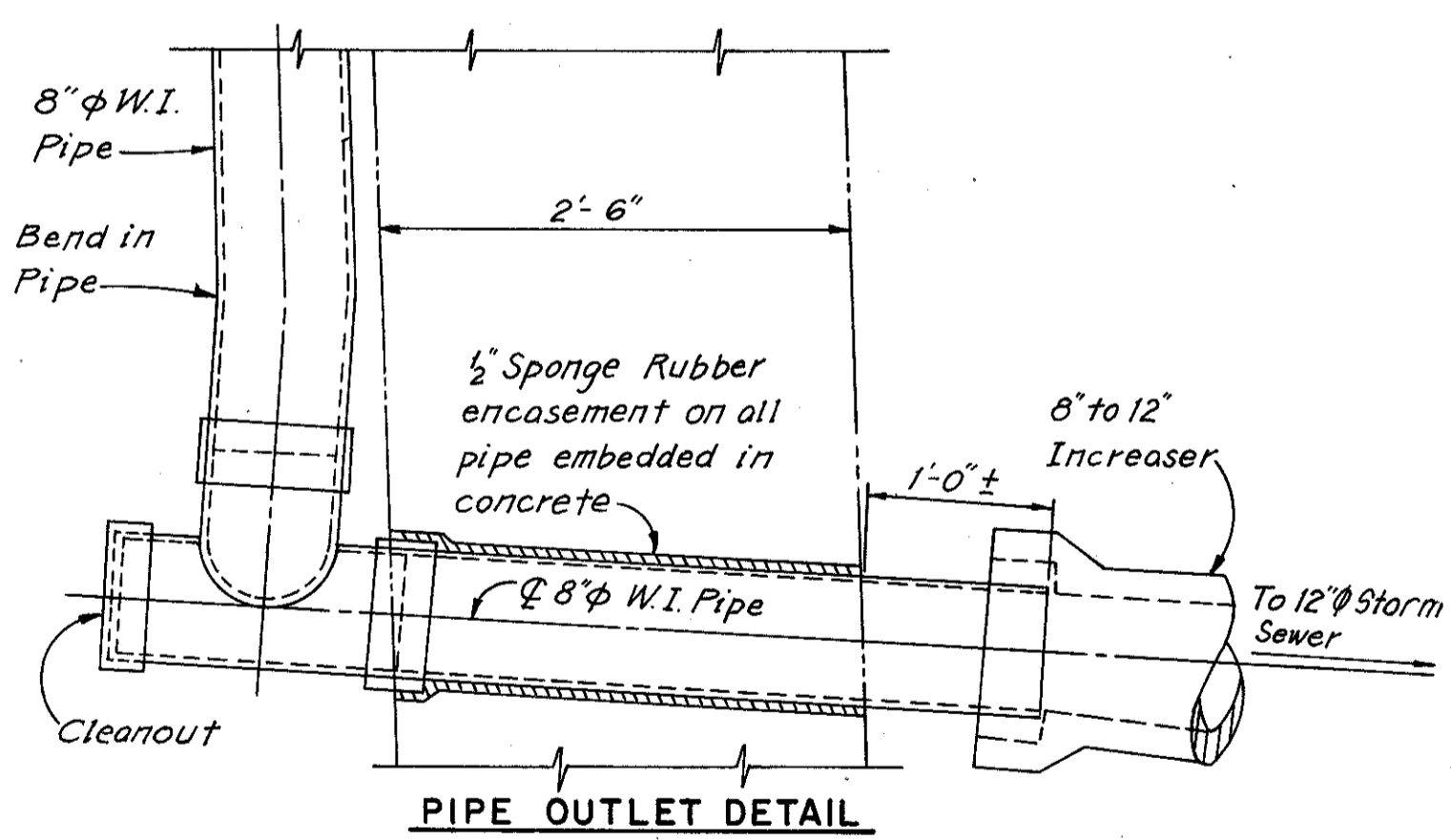


SECTION C-C

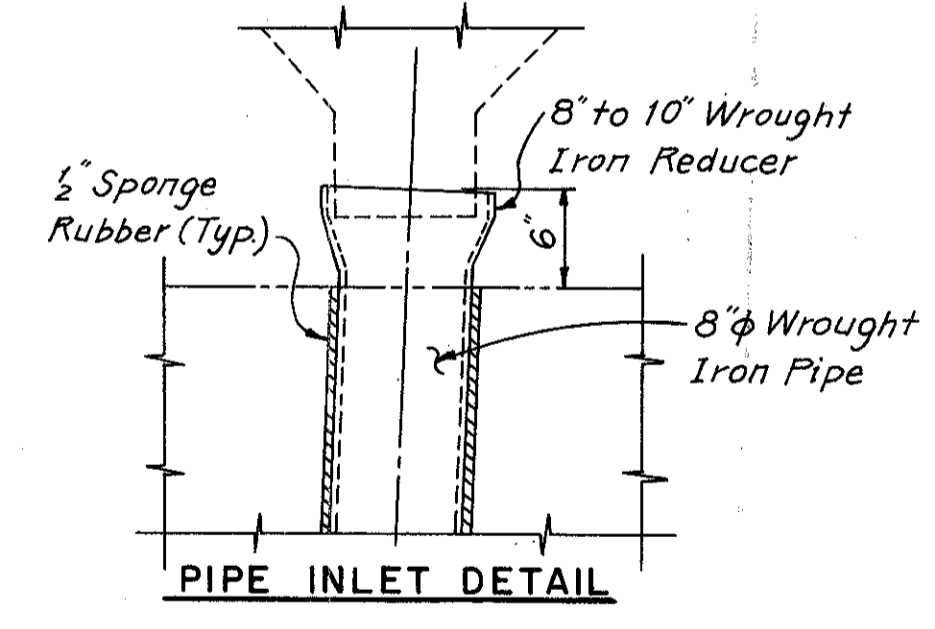
VIEW D-D
(For location of View D-D, see Sheet 15/19)

East End Pier is shown. At West End Pier the trough is omitted and the downspout goes down into the hopper.

SECTION AT END PIERS



PIPE OUTLET DETAIL



PIPE INLET DETAIL

DRAINAGE DETAILS INSIDE PIERS

DRAINAGE DETAILS ABOVE PIERS

**CENTRAL VIADUCT
DRAINAGE DETAILS**

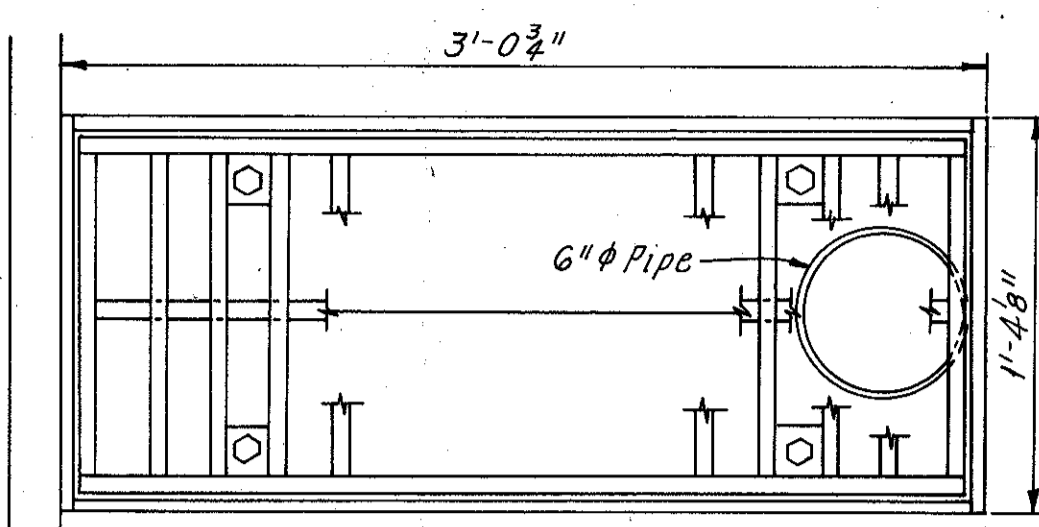
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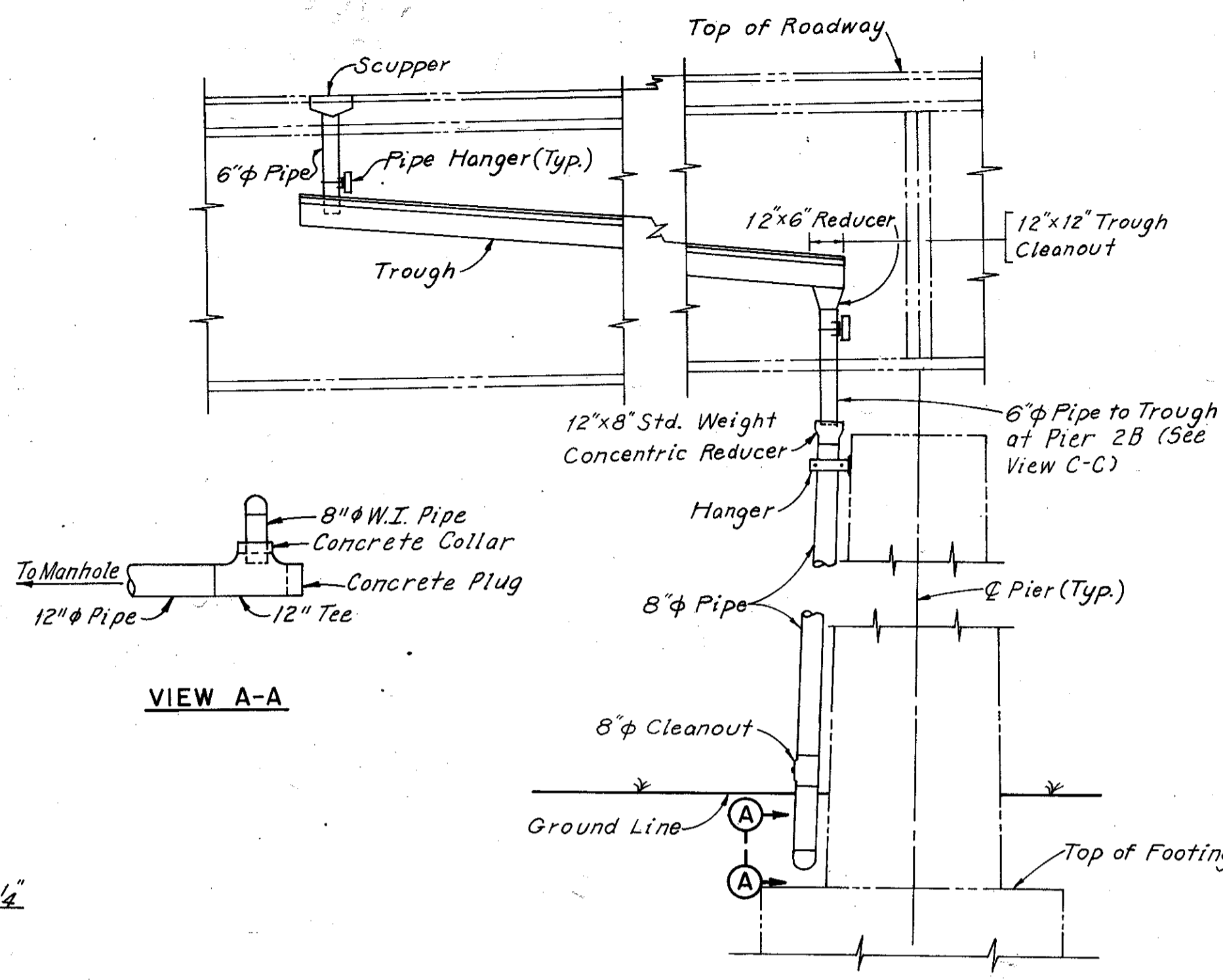
CUYAHOGA COUNTY OHIO

DRAWN	TRACED	CHECKED	REVIEWED	REVISED
DATE	DATE	DATE	DATE	

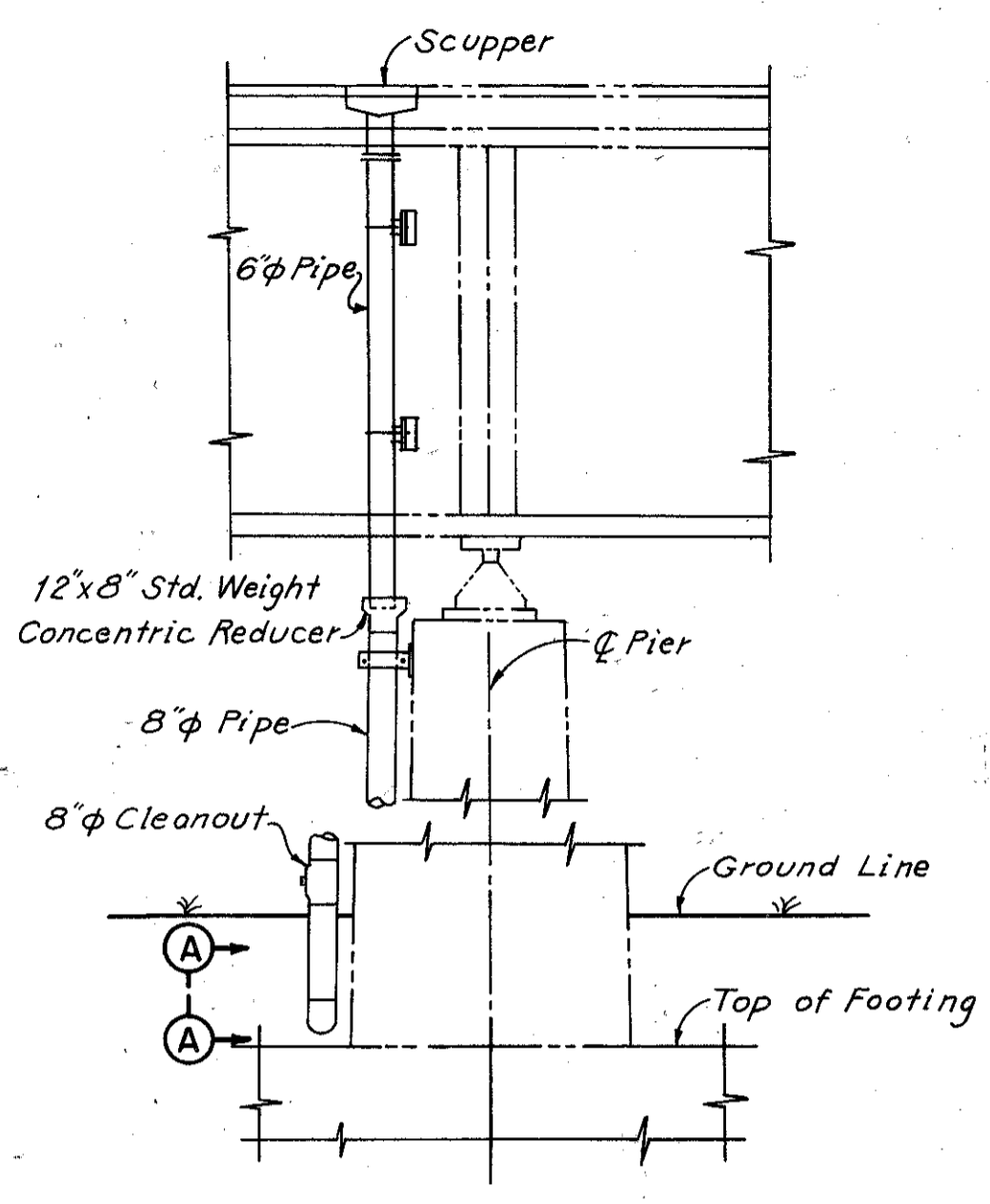
CUYAHOGA COUNTY
CUY-90-15.24



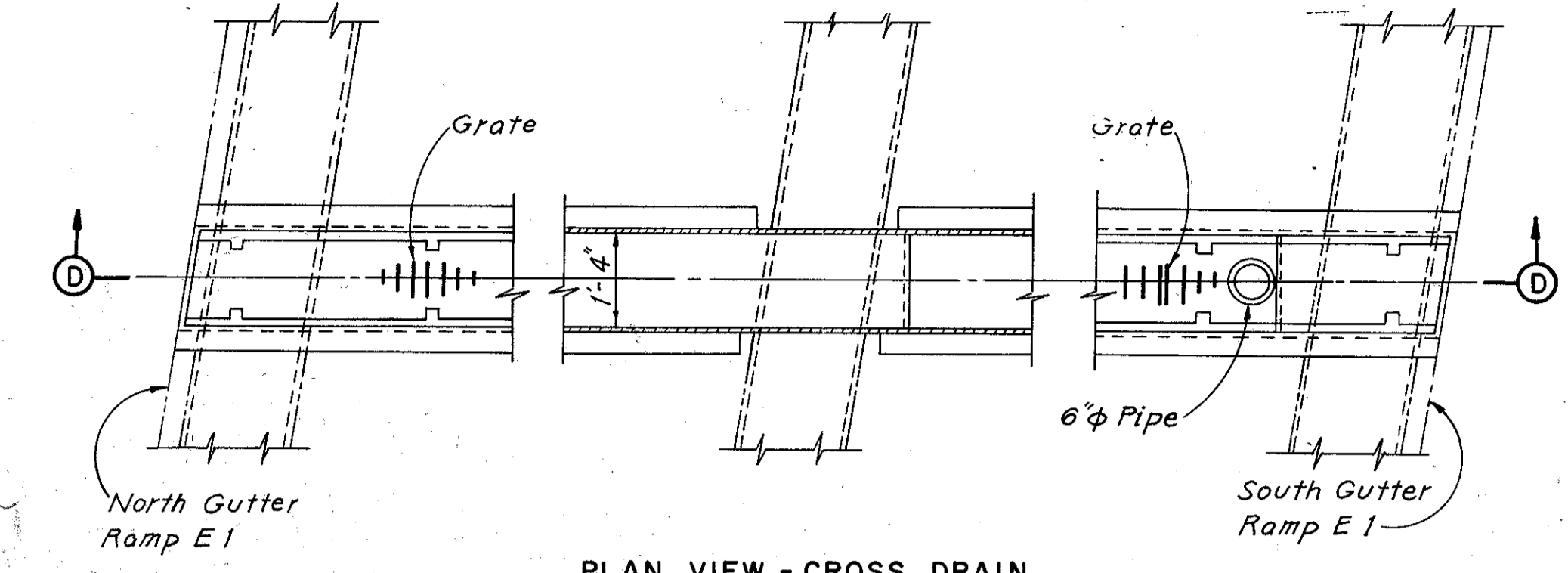
TYPICAL SCUPPER PLAN



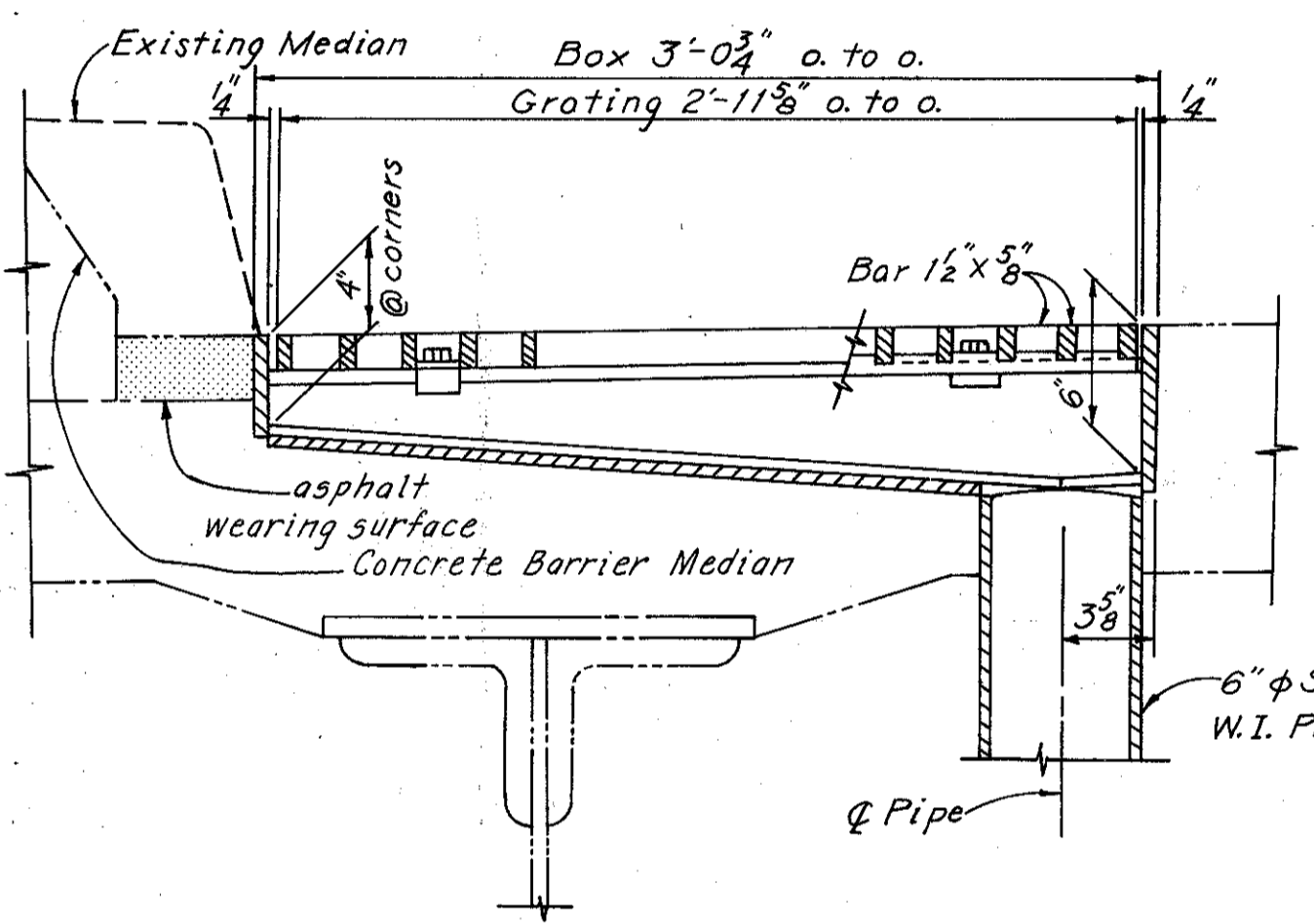
VIEW A-A



DRAINAGE AT PIER 2E2 (LOOKING SOUTH)

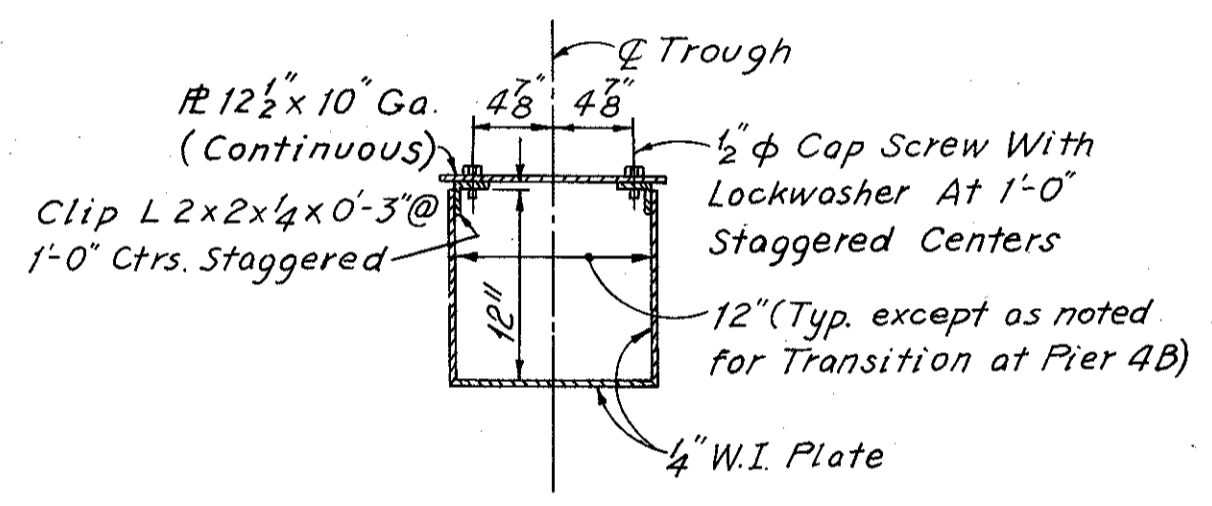


PLAN VIEW - CROSS DRAIN

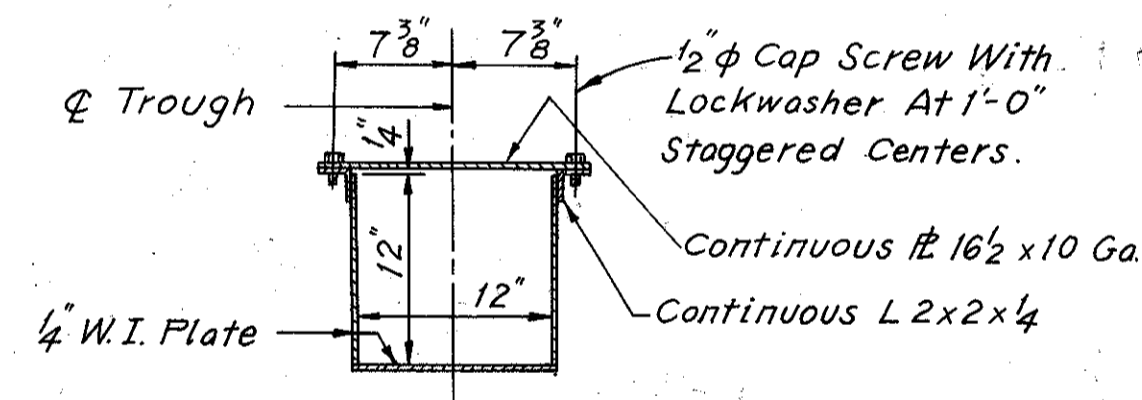


SECTION B-B

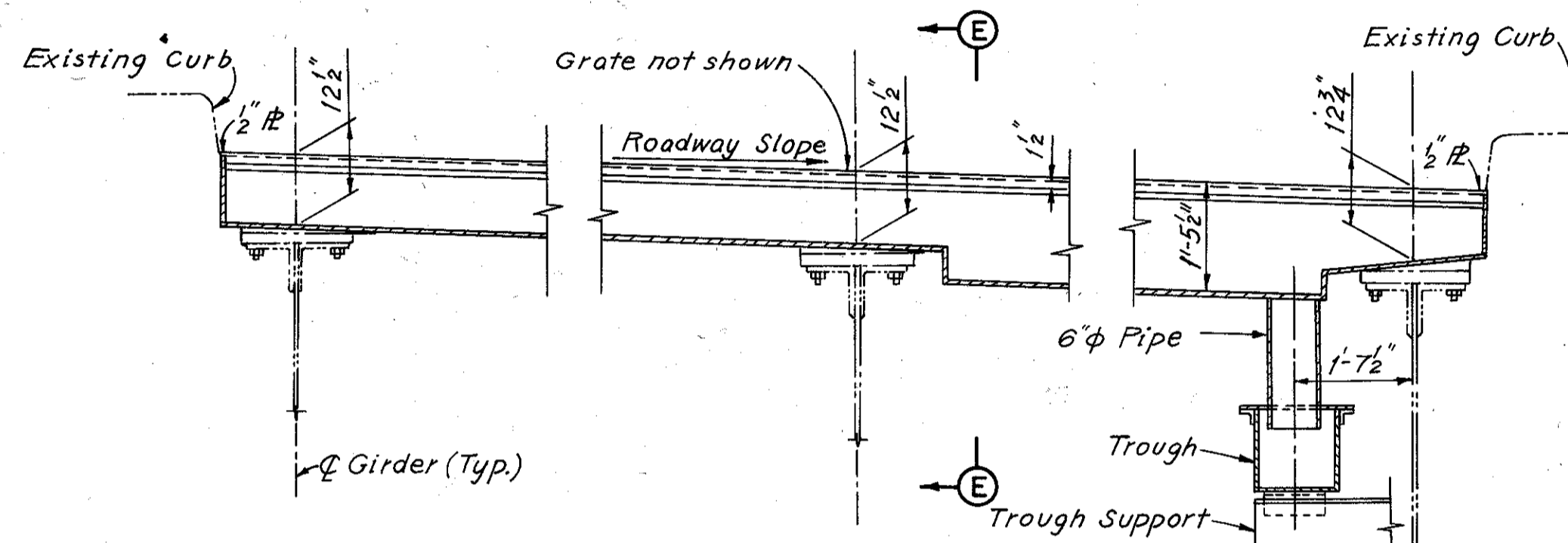
DRAINAGE AT PIER 1E2 - (LOOKING SOUTH)
DRAINAGE AT PIER 2B SOUTH CURB - (LOOKING NORTH)



TYPICAL TROUGH SECTION ALONG PIER CAPS

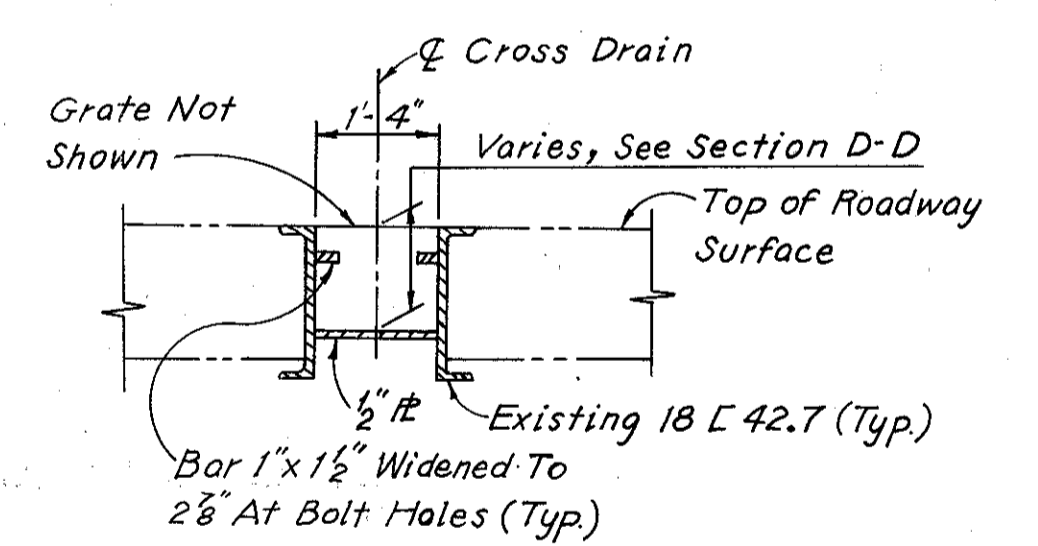


TYPICAL TROUGH SECTION ALONG GIRDERS



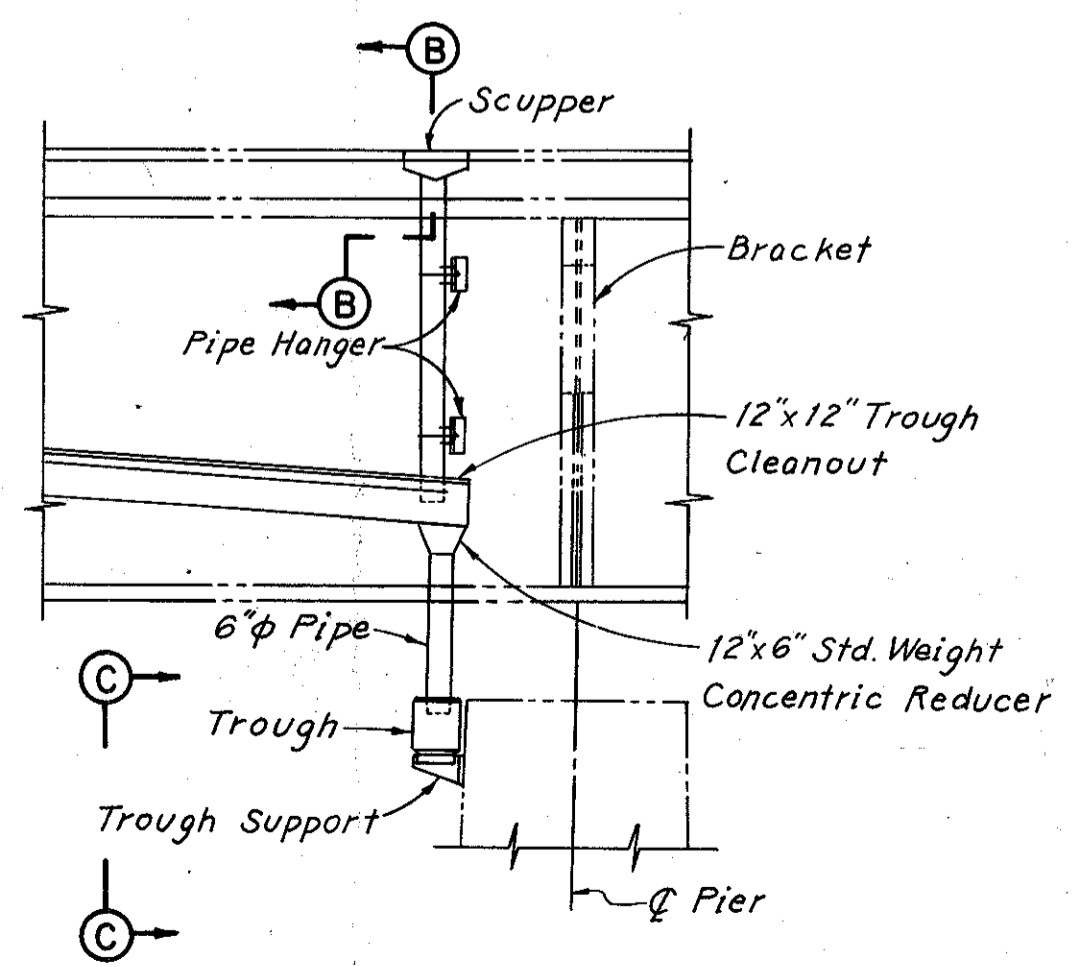
SECTION D-D

Note: Drainage from trough at Pier 2E1 is similar to Pier 1E2 drainage.

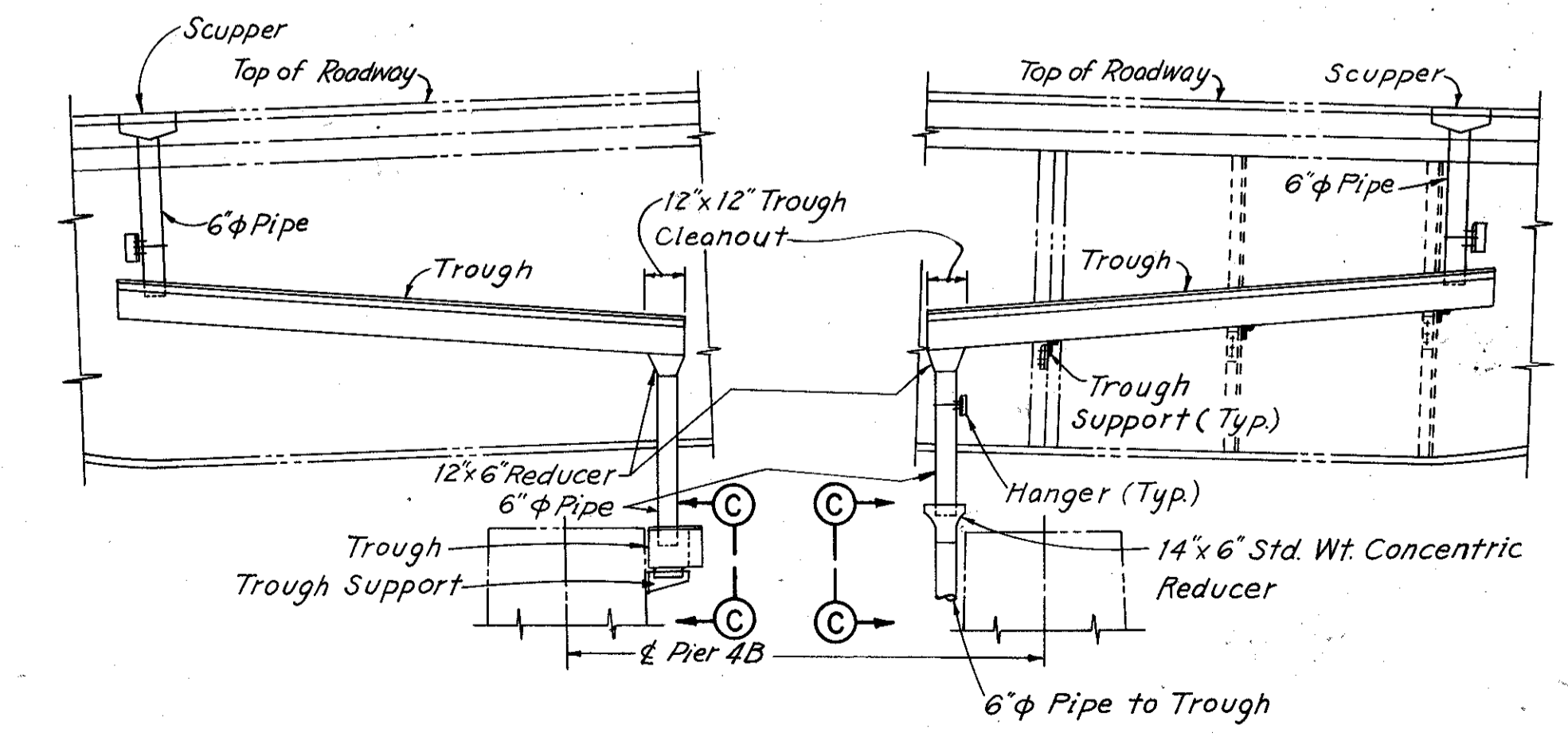


SECTION E-E

Notes:
The details shown represent the original plan drawings for the drainage system. The existing drainage system shall be cleaned out as indicated in the General Notes.
For Scupper and Cross Drain locations see General Plan, Sheets 12/19 and 13/19.

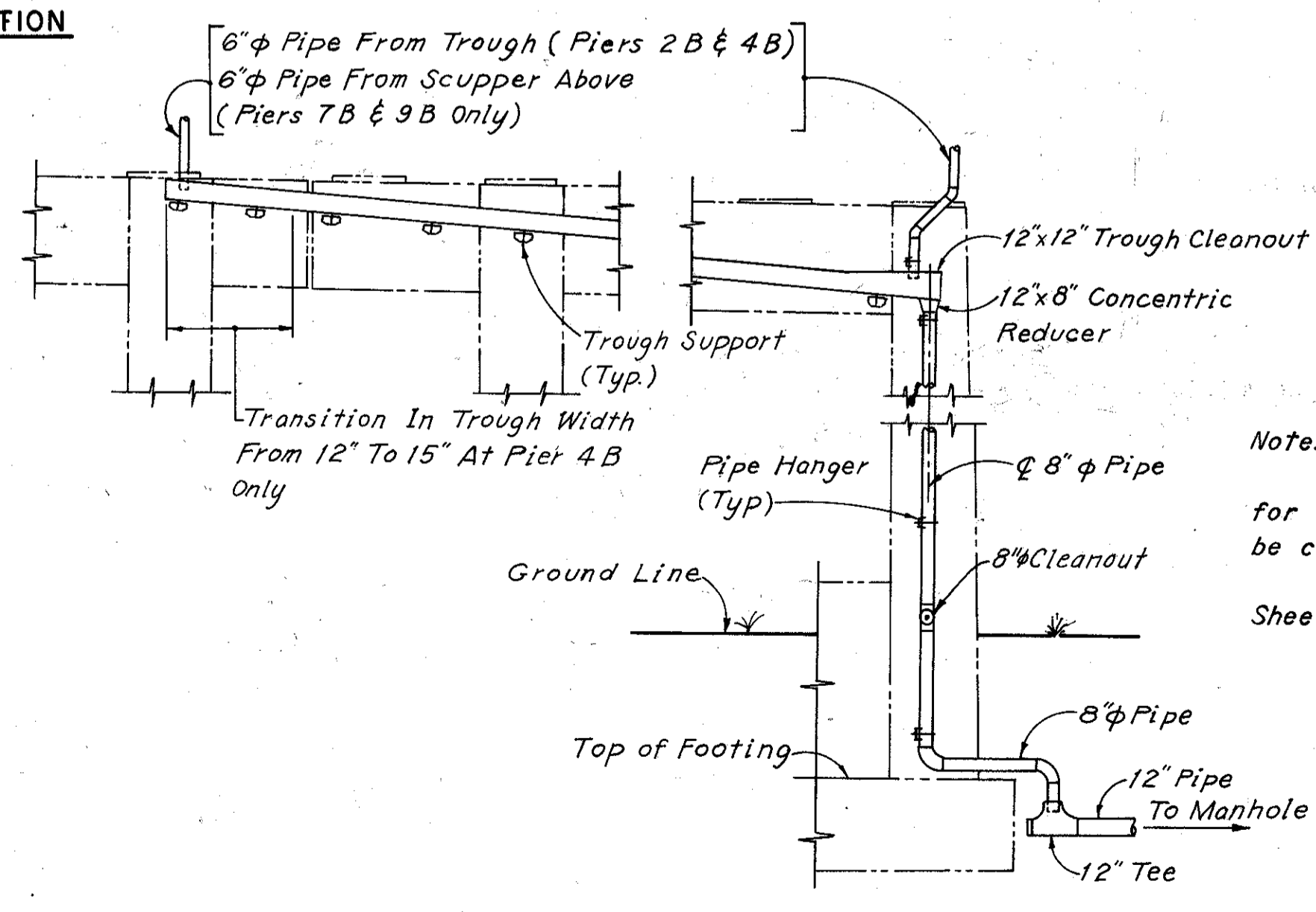


NORTH MEDIAN DRAINAGE AT PIER 2B (LOOKING NORTH)



NORTH MEDIAN DRAINAGE AT PIER 4B (LOOKING SOUTH)

SOUTH CURB DRAINAGE AT PIER 4B (LOOKING NORTH)



VIEW C-C AT PIERS 2B AND 4B (Similar at Piers 7B and 9B, except as noted)

EAST APPROACH DRAINAGE DETAILS

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DRAWN	TRACED	CHECKED	REVIEWED	REVISION
DATE	DATE	DATE	DATE	SHEET

TRAFFIC CONTROL DETAILS

FHWA REGION	STATE	PROJECT
5	OHIO	

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19

