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AUG 5 1991

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

SCIOTO COUNTY OHIO
SCI-23-0535 FHWA REGION 5
FR-22 (28) FEDERAL PROJECT

1
6

PLAN NO. BR-134-82

SCI-23-0535 SCIOTO COUNTY

STRUCTURE IMPROVEMENT-BRIDGE MAJOR REPAIR

1983 SPECIFICATIONS

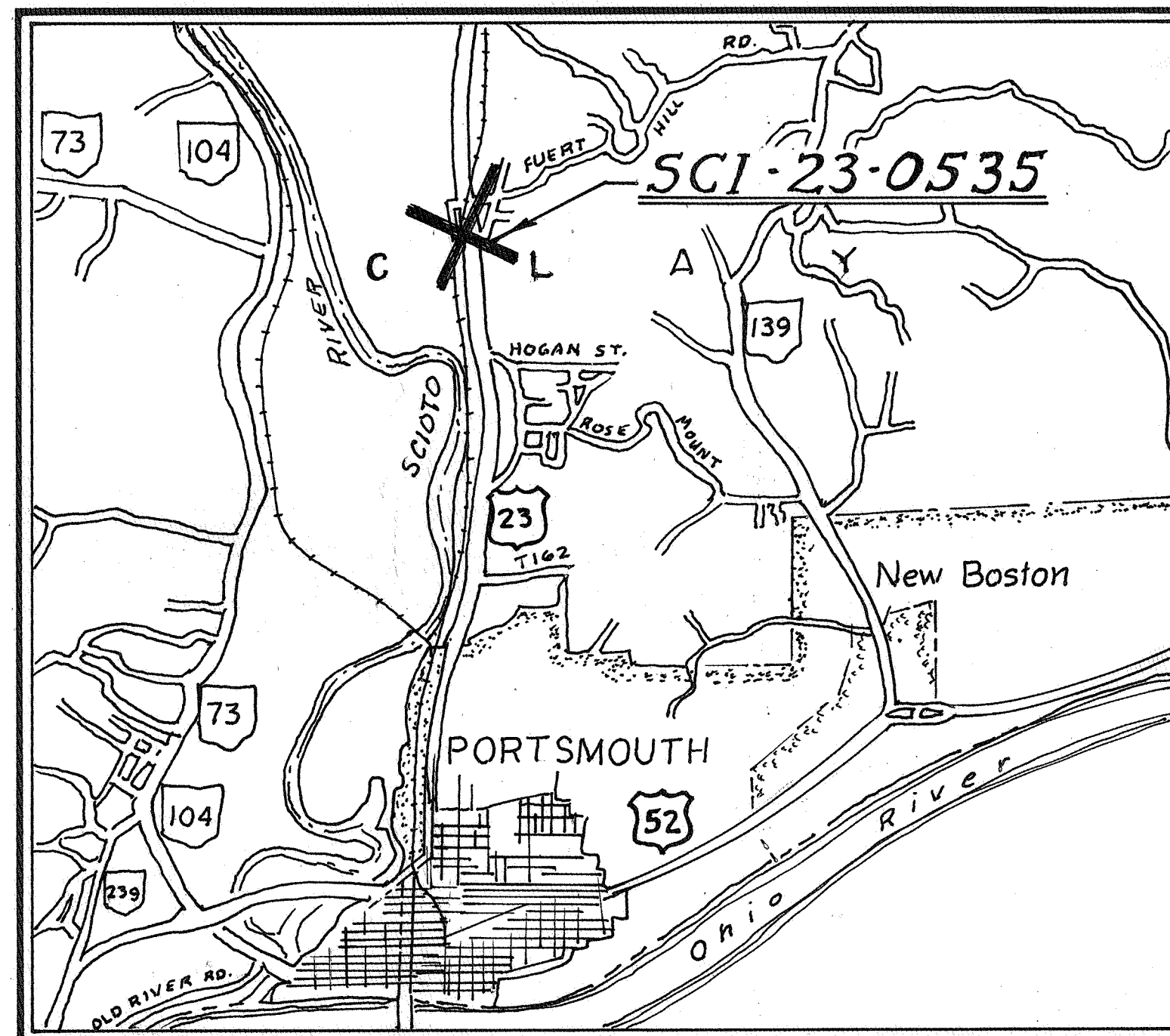
The standard specifications of the State of Ohio, Department of Transportation, including changes and supplemental specifications listed in the proposal shall govern this improvement.

I hereby approve these plans and declare that the making of this improvement will not require the closing to traffic of the highway and that provisions for the maintenance and safety of traffic will be as set forth on the plans & estimates.

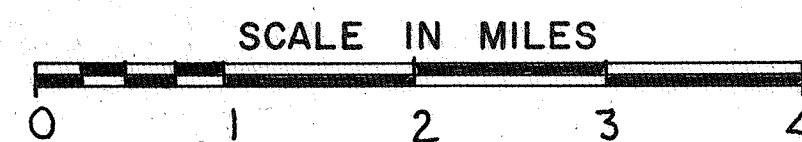
CONVENTIONAL SIGNS	
County Line	-----
Township Line	-----
Section Line	-----
Corporation Line	----- or -----
Fence Line (existing)	-x-x- (proposed) -x-x-
Center Line	352 353
Trees	(to be removed)
Utility Poles: Telephone	Power Light
Limited Access (only)	LA
Right of Way (only)	RW
Limited Access & Right of Way	LA & RW
Existing Right of Way	-----
Property Line	(in existing fence)
Railroad	or
Guardrail (existing)	(proposed)

INDEX OF SHEETS

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4. Site Plan & Profile	-----	
5. Details	-----	5
6. Sections, Existing Deck, Work Areas, Traffic Lanes	-----	6



LOCATION MAP



Portion to be improved: _____
State & Federal Routes _____
Other Roads _____

SCALES

Plan: _____
Profile: _____ Horizontal _____, Vertical _____
Cross Section: Horizontal _____, Vertical _____

SUPPLEMENTAL SPECIFICATIONS	
845	3-2-81
953	8-21-80

UNDERGROUND UTILITIES
48 HOURS
BEFORE YOU DIG
Call 800-362-2764 (Toll free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

LINE DATA

Project Length = 867.25 or 0.164 mi.
Work Length = 879.75 or 0.167 mi.

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS

MC-3	6-1-73				
GR-1	2-5-82				
TC-3510	10-5-77				
GR-3B	2-5-82				
GR-3	2-5-82				

Plan Prepared By:
DISTRICT NO. 9
O. D. O. T.

SEAL

Approved: Marshall P. Baum, P.E.
Date: 3-7-83 District Deputy Director of Transportation

Approved: Robert B. Pfeiffer
Date: 3-21-83 Engineer, Bureau of Bridges and Structural Design

Approved: James R. Longmeyer
Date: 3-25-83 Chief Engineer, Operations

Approved: Warren J. Smith
Date: 3-28-83 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED: _____
DIVISION ADMINISTRATOR DATE

Project: _____
Date of Letting: _____ 19____, Contract No. _____

SUPERSTRUCTURE:

AREAS OF WORK & TRAFFIC CONTROL:

The Latex Modified Concrete is to be applied on the Southbound lanes only, except that the latex concrete shall also be used as grouting to repair the expansion joints on the North Bound Lanes. The repair to the expansion joints is to extend for 25 ft. of the half bridge width centered in the travelled lanes of both the Northbound & Southbound lanes.

The joint repair shall be omitted in the median & curb areas. All work on the scuppers, curbs & medians is to be as shown on the plans.

In the first phase the work lanes shall be in the two lanes on either side of the median while maintaining traffic in one lane northbound and one lane southbound in the curb lanes.

In the second phase the work lanes shall be in the two lanes adjacent to the curbs on either side of the bridge while maintaining traffic in one lane northbound and one lane southbound in the median lanes.

EXPANSION JOINT REPAIR: Item 516

Repairs to the Expansion Joints shall include the removal of concrete, the sandblast cleaning of anchors, the providing & welding in of the reinforcing anchor bars; the providing and placing of the Latex Modified Concrete, to be used first as grouting on both bridges, (then as overlay on Southbound as described on the plans. The removal and replacement of the bituminous material on the North Bound Lanes shall be included in 403 & 404 Items for payment. Any additional removal necessary for access to repair the joints and all other materials, labor & incidentals to complete the item as outlined in plans shall be included in Item 516.

GUARD RAIL TO BRIDGE RAIL CONNECTIONS: Item 606

A galvanized flat plate 2'-6" x 1'-0" of 1/4" pl. steel, drilled to match a terminal connector shall be positioned, braced bolted and/or welded to the existing lower railing angle at each trailing run on the bridge in a location which will allow the existing approach guard rail, when extended, to terminate in an attachment to a terminal connector as shown. See Std. Dwg. GR-1 & Plan Sh. 5.

A suitable length of guard rail is to be installed at each trailing corner to make the extension and any necessary adjustments, in length and/or vertical positioning required to suit conditions encountered in the field, shall be made.

Drill lower angle rail for clearance holes for bolting rail & connections to existing railing if necessary.

Include all of the above for payment in the price bid for Item 606, Bridge Terminal Assembly, Type B, As Per Plan.

SUBSTRUCTURE REPAIR:

REPAIRS TO NORTH & SOUTHBOUND LANES

Remove downspouts and repair and paint downspouts, leaders and catch basins as per plan.

LATEX OVERLAY: (ITEM 845)

LONGITUDINAL JOINTS in the concrete overlay are permitted but only to the extent necessary to accommodate the width of the finishing machine, to allow maintenance of vehicular traffic or to facilitate changes in roadway crown. Except as approved by the Director, joints shall not be used adjacent to the curbs or deck edges.

South Bound Lanes

See Plan Sheet 6.

1st Phase
Median
Lane

1. Remove the 2 1/2" asphalt wearing course and scarify the median lane for full length between bridge limits.
2. Chip away 6" depth of concrete on both sides of each expansion joint to a vertical face exposing the existing 3/4" square anchor bar and continue chipping to remove a 3" depth of concrete under the top plate and any additional depth necessary to remove deteriorated or cracked concrete.
3. Weld in 3/4" square reinforcing anchors to existing bent bars at every other one on both sides of joint, in median lane.
4. Prepare deck for latex overlay as on 55 B45.
5. Form & place latex grout to cover anchor rods and to fill all voids.
6. Place overlay on South Bound Median Lane.

2nd Phase
Curb
Lane

7. Change traffic lanes & signs to second phase and repeat operations 1 thru 6 above in curb lane.
8. Cut off scuppers to suit latex overlay in curb lane & place latex grout & overlay in curb lane.
9. Install Bridge Terminal Assembly & approach railing,

North Bound Lanes

See Plan Sheet 6.

1st Phase
Median
Lane

1. In the median lane remove the 2 1/2" of asphalt concrete on either side of each expansion joint as shown on Plan Sheet No. 5
2. Chip away 6" depth of concrete on both sides of each expansion joint exposing the existing 3/4" square anchor bar and continue chipping to remove a 3" depth of concrete under the top plate and any additional depth necessary to remove deteriorated or cracked concrete.
3. Weld in 3/4" square reinforcing anchors to bent bars at every other existing anchor on both sides of joint, for 25' of travelled lane.
4. Form and place latex concrete to cover anchor rods, fill all voids under top plate and strike off level to top of existing concrete deck.
5. Replace bituminous on both sides of joint and roll for smooth traffic flow across bridge.

2nd Phase
Curb
Lane

6. Change traffic lanes and signs to second phase, repeat operations 1 thru 5 above in curb lane.
7. Install leading corner Bridge Terminal Assembly, Type H & Trailing corner Bridge Terminal Assembly, Type B, As Per Plan.
8. Cut off scuppers, grout & overlay as above.
9. Repair & replace downspouts, paint drain systems & bridge railing and Open to Traffic.

PAINTING ; Pay Item 514 System.

The painting of existing steel includes all of the existing and replaced downspout assemblies, scuppers, leaders, brackets and pipes and all the angle railing & posts on the superstructure on both sides of bridge.

CONCRETE PATCHING

The 519 concrete patching shall be as directed by the Engineer and may be non-performed in whole or in part. This item does not include bridge curb nor bridge median repairs.

CURB & MEDIAN REPAIRS

The curb & median repairs, including the Silane Treatment application over the entire length of curbs & medians, including repairs, shall be completed during the proper traffic phase for the various work areas. The existing reinforcing steel is to remain. Payment for curb & median replacement is in 202 & 511.

BITUMINOUS PAVING

The bituminous feather on the south approach to the North Bound Lanes and the replaced bituminous paving at all expansion joints on North Bound Lanes shall be placed with extreme care and finished to a profile grade across bridge so that vehicles will track smoothly.

Rev. 4-15-83 RLE

ESTIMATED QUANTITIES

Item	Total	Unit	Description
202	2554	Sq. Yds.	Wearing Course Removed,
202	250	Lin. Ft.	Guardrail Removed As Per Plan.
202	Lump	Sum	Portions of structures removed, Curbs & Medians As Per Plan.
403	4	Cu. Yds	Asphalt Concrete.
404	5	Cu. Yds	Asphalt Concrete.
511	93	Sq. Yds.	Curb Repairs, As Per Plan.
511	100	Sq. Yds.	Median Repairs, As Per Plan.
514	Lump	Sum	Field Painting of Existing Steel
			Surface Preparation, System B. *
514	Lump	Sum	Field Painting of Existing Steel
			Complete Coat Prime, System B. *
514	Lump	Sum	Field Painting of Existing Steel
			Complete Coat Finish, System B. *
516	Lump	Sum	Expansion & Contraction Joints Repaired, As Per Plan
518	39	Ea.	Existing Scuppers Modified, As Per Plan
518	150	Lin. Ft.	6" Pipe Downspouts, Replacements Including Specials, As Per Plan.
519	50	Sq. Ft.	Patching Concrete Structures. **
606	2	Ea.	Bridge Terminal Assembly Type B, As Per Plan
606	2	Ea.	Bridge Terminal Assembly, Type H
606	258	Lin. Ft.	Guardrail, Type 5
614	Lump	Sum	Maintaining Traffic
624	Lump	Sum	Mobilization
Special	1515	Sq. Yds.	Sealing of Concrete Surfaces (See Proposal Note)
845	2554	Sq. Yds.	Latex Modified Concrete Overlay (1 1/4" Thick)
845	86	Cu. Yds.	Latex Modified Concrete Overlay (Variable Thickness) As Per Plan.
845	3	Cu. Yds.	Full Depth Repair

* 100% State Participation
** 50% Federal Participation

Notes:

1. Eleven cubic yards of Latex Modified Concrete are included in Item 845 Variable Thickness for use in combination with 516 in repairing joints.
2. Item 514 Field Painting of Existing Steel includes both the 1735 Lin. Ft. of steel angle railing above deck and the catch basin & drain pipe assemblies, existing and/or replaced, below deck as per plan.
3. Pay Item 516 includes 930 lbs of additional steel anchor bars.

STATE OF OHIO		2 / 6
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFF.		
GENERAL NOTES		
WORK PROCEDURE		
ESTIMATED QUANTITIES		
BRIDGE NO. SC1-23-0535		
OVER N & W RY. & OLD U.S. 23		
DESIGNED	DRAWN	TRACED
msc	mse	mse
CHECKED	REVIEWED	DATE
msc	msc	2-83

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PLAN NO. BR-134-82

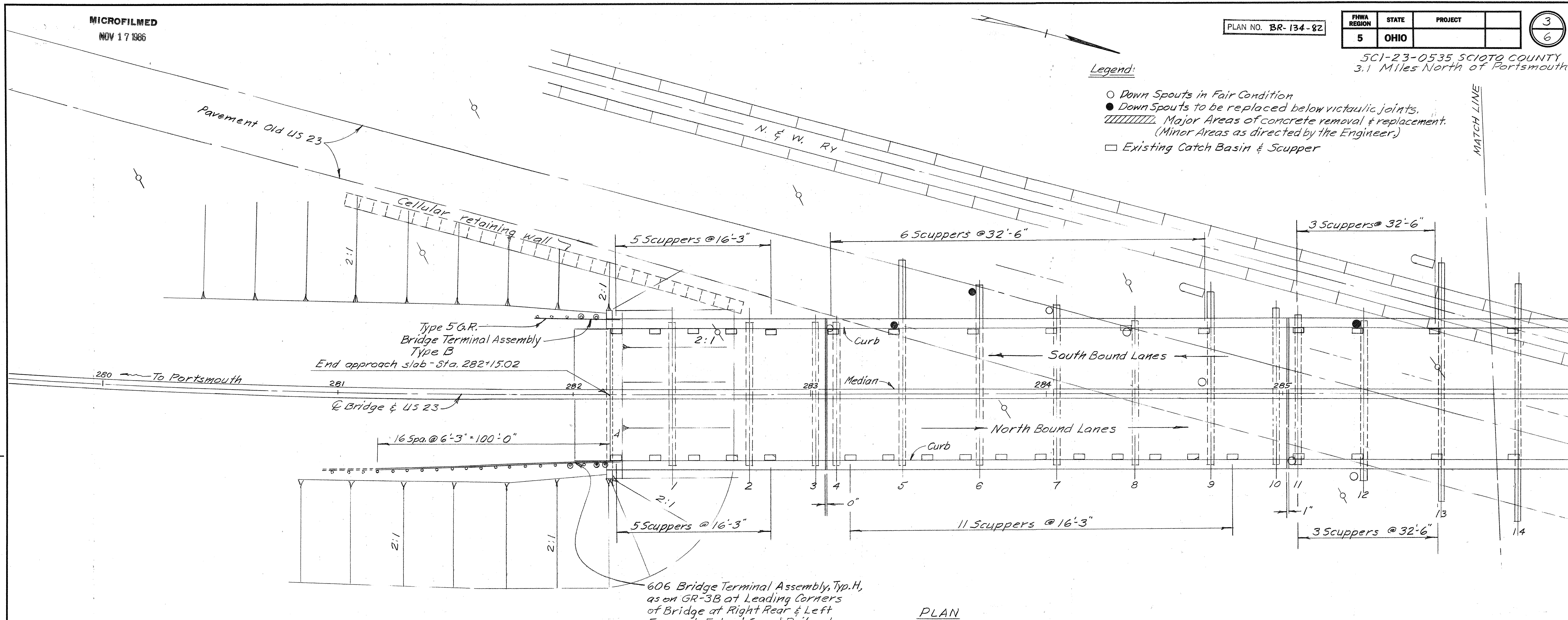
FHWA REGION	STATE	PROJECT
5	OHIO	

3
6

5C1-23-0535 SCIOTO COUNTY
3.1 Miles North of Portsmouth

Legend:

- Down Spouts in Fair Condition
- Down Spouts to be replaced below victaulic joints.
- ▨ Major Areas of concrete removal & replacement. (Minor Areas as directed by the Engineer.)
- Existing Catch Basin & Scupper



606 Bridge Terminal Assembly, Typ. H,
as on GR-3B at Leading Corners
of Bridge at Right Rear & Left
Forward. Extend Guard Rail and
adjust proposed past locations
so that railing will transition
smoothly into existing run.
(Typical)

PLAN

Note:

1. Scuppers at locations shown on Southbound Lanes are to be modified above deck as shown on DETAIL SECTION and the catch basins, leaders & downspouts repaired, cleaned & painted as shown on DETAIL DRAIN PIPE ASSEMBLY on Plan Sheet No. 5.

STATE OF OHIO		3/6	
DISTRICT 9		DEPARTMENT OF TRANSPORTATION BRIDGE OFC.	
SITE PLAN & PROFILE SOUTH HALF			
BRIDGE NO. 5C1-23-0535 OVER N & W RY. & OLD U.S. 23			
DESIGNED	DRAWN	TRACED	CHECKED
MSE	MSE	MSE	YR/AB
REVIEWED	DATE	REVISED	
	2-83		

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PLAN NO. BR-134-82

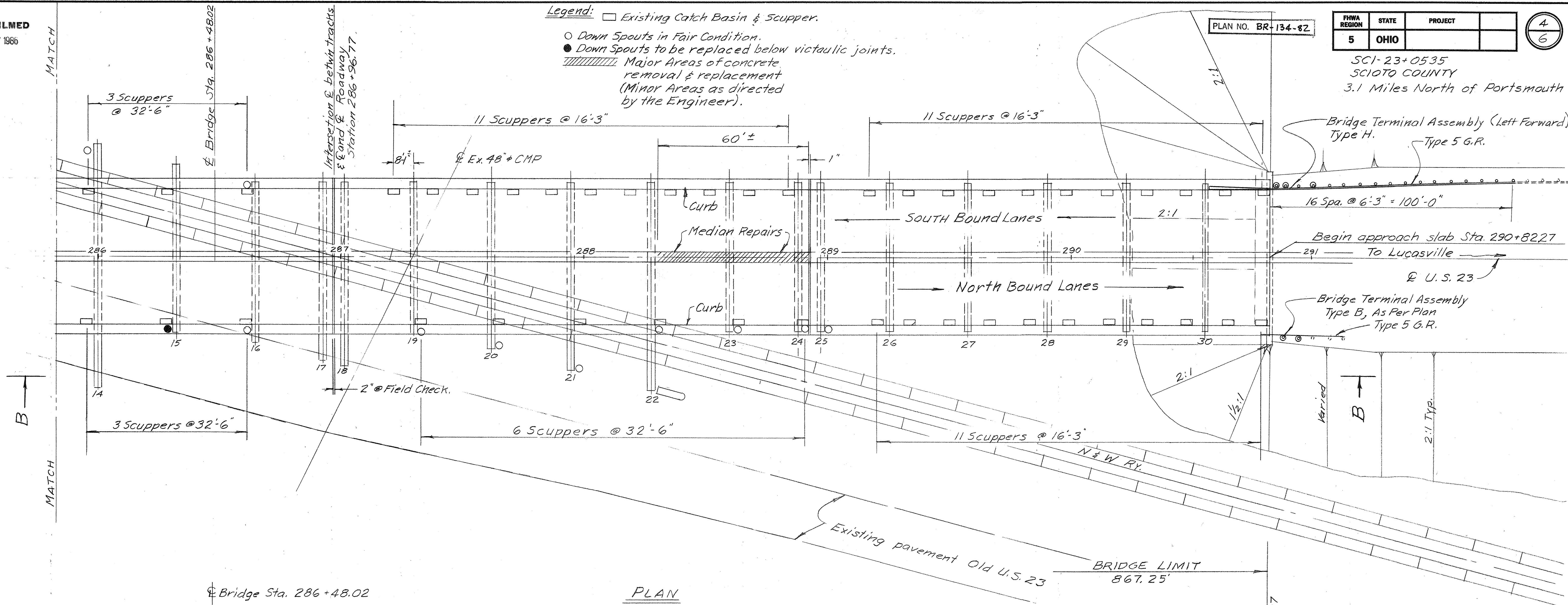
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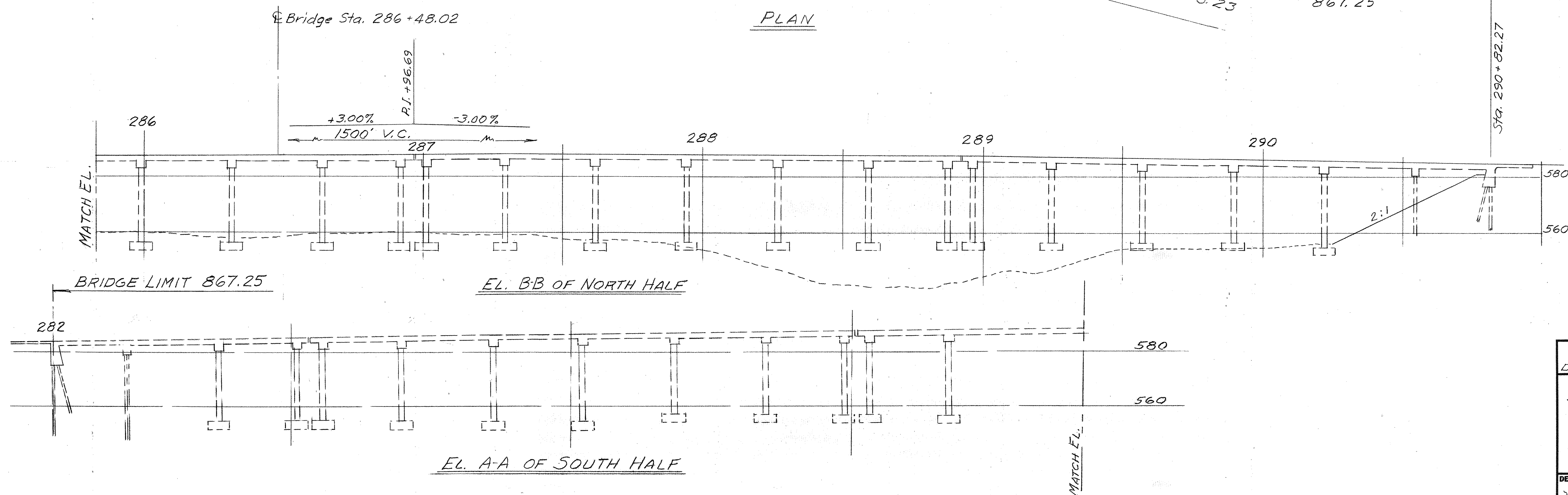
SCI-23+0535
SCIOTO COUNTY
3.1 Miles North of Portsmouth

Legend: Existing Catch Basin & Scupper.

- Down Spouts in Fair Condition.
- Down Spouts to be replaced below vertical joints.
- ▨ Major Areas of concrete removal & replacement (Minor Areas as directed by the Engineer).



PLAN



STATE OF OHIO						4/6
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFC.						
SITE PLAN & PROFILE NORTH HALF - EL. SOUTH HALF						
BRIDGE NO. SCI-23-0535 OVER N & W RY. & OLD U.S. 23						
DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	DATE	REVISED
M.S.C.	M.S.C.	M.S.C.	M.A.B.	M.P.B.	2-83	

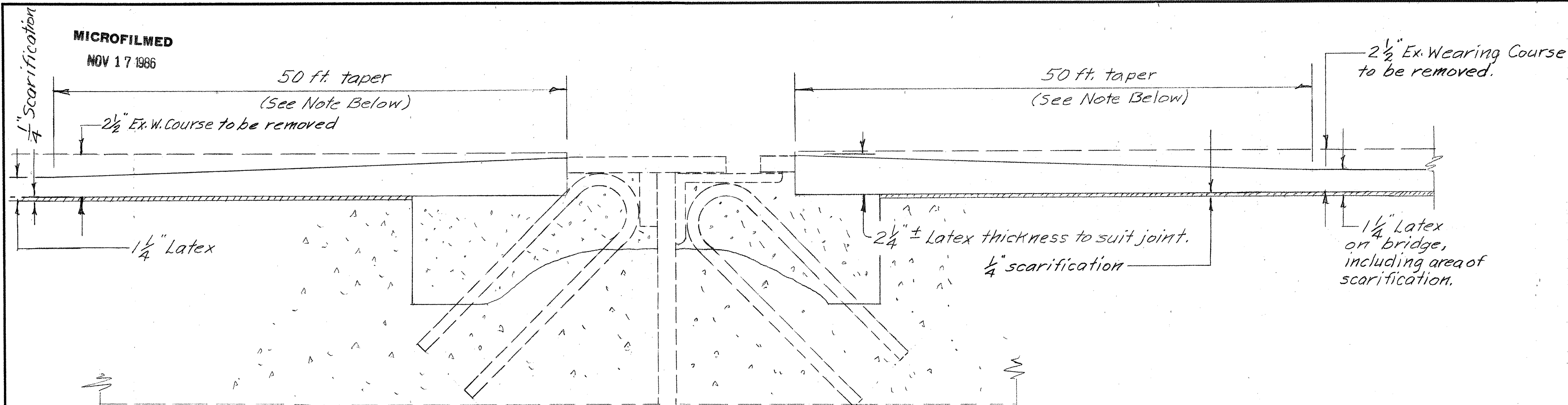
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NOV 17 1986

PLAN NO. BR-134-82

FHWA REGION	STATE	PROJECT	
5	OHIO		

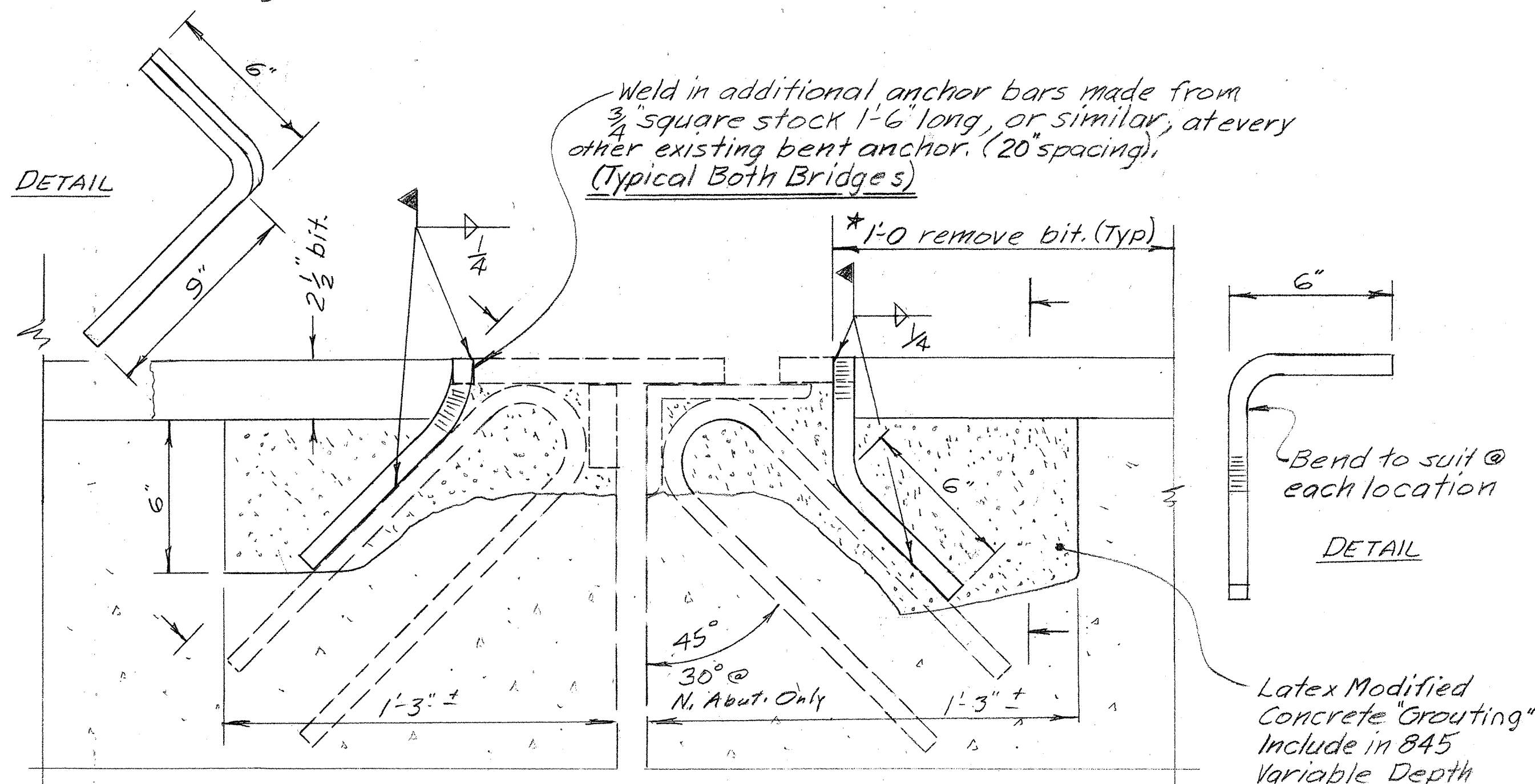
SCI-23-0535 SCIOTO COUNTY
3.1 Miles North of Portsmouth

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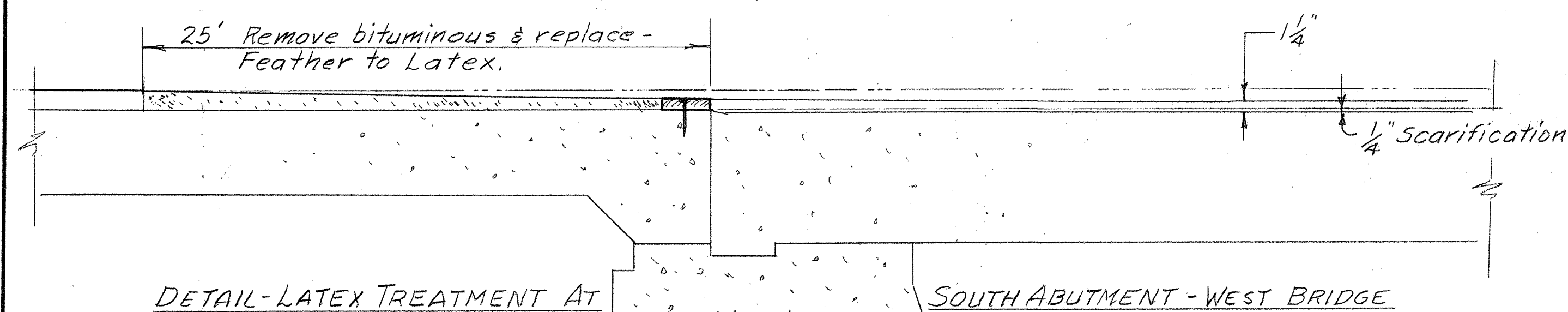
DETAIL - LATEX PROFILE TAPER AT ROAD EXPANSION DEVICES - SOUTH BOUND

Note: Joint configuration requires deeper latex thickness at joints than the thickness of overlay on bridge. This tapered thickness shall extend from the thickness required to match the top of the joint metal wearing surface to the nominal 1/4" thickness on the bridge, thru a distance of 50 ft. both ways from the intermediate expansion joints and 50 ft. from North abutment joint onto the bridge.



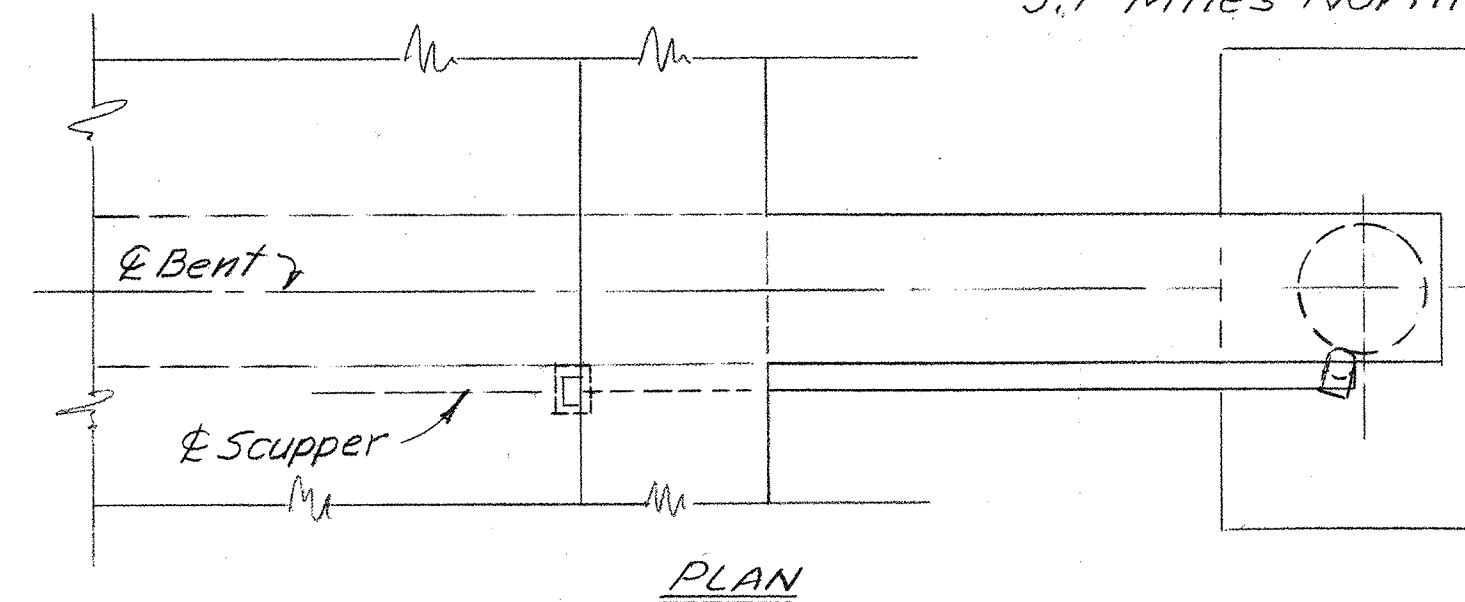
DETAIL - EXPANSION JOINT STRENGTHENING & REPAIRS - NORTH BOUND

- Note:
1. Remove the wearing course of 2 1/2" of asphalt concrete on a neat line one foot on either side of and parallel to the edge of the joint metal.
 2. Weld anchor bars & place Latex Modified Concrete "grouting" See Work Procedure.

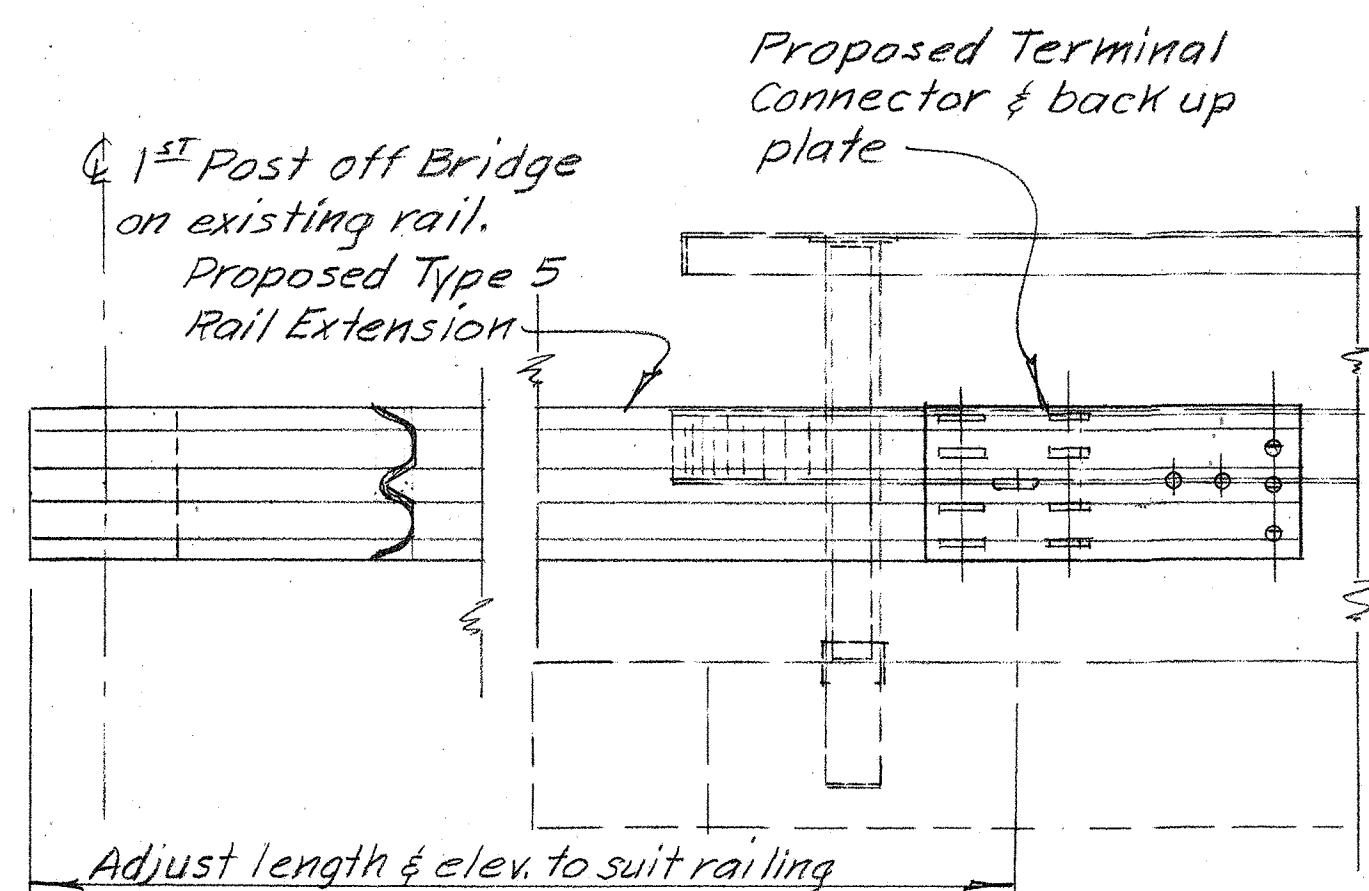


DETAIL - LATEX TREATMENT AT

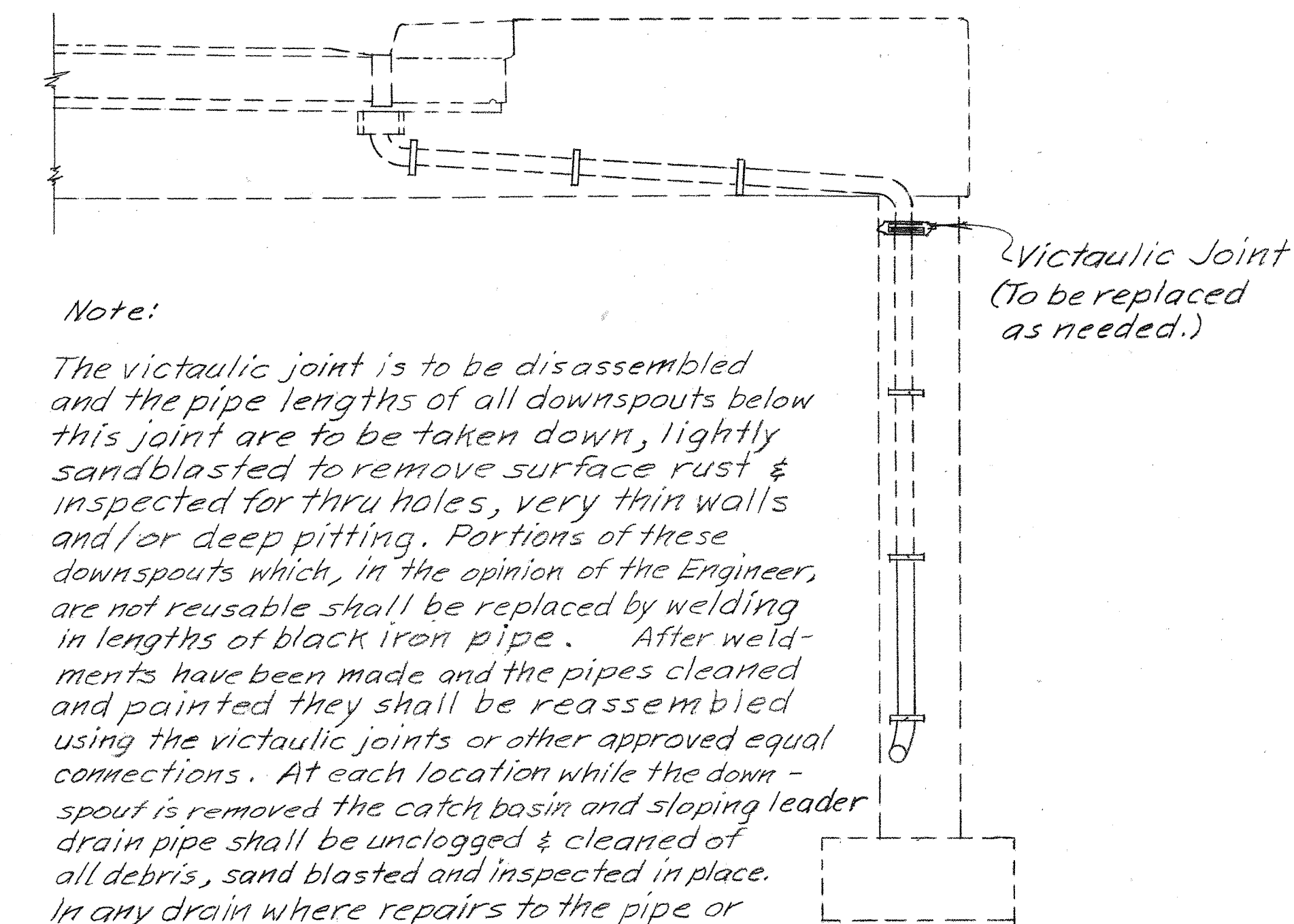
SOUTH ABUTMENT - WEST BRIDGE



PLAN



DETAIL - APPROACH RAIL CONNECTION TO BRIDGE RAIL
Two Required - One at each trailing end of bridge.

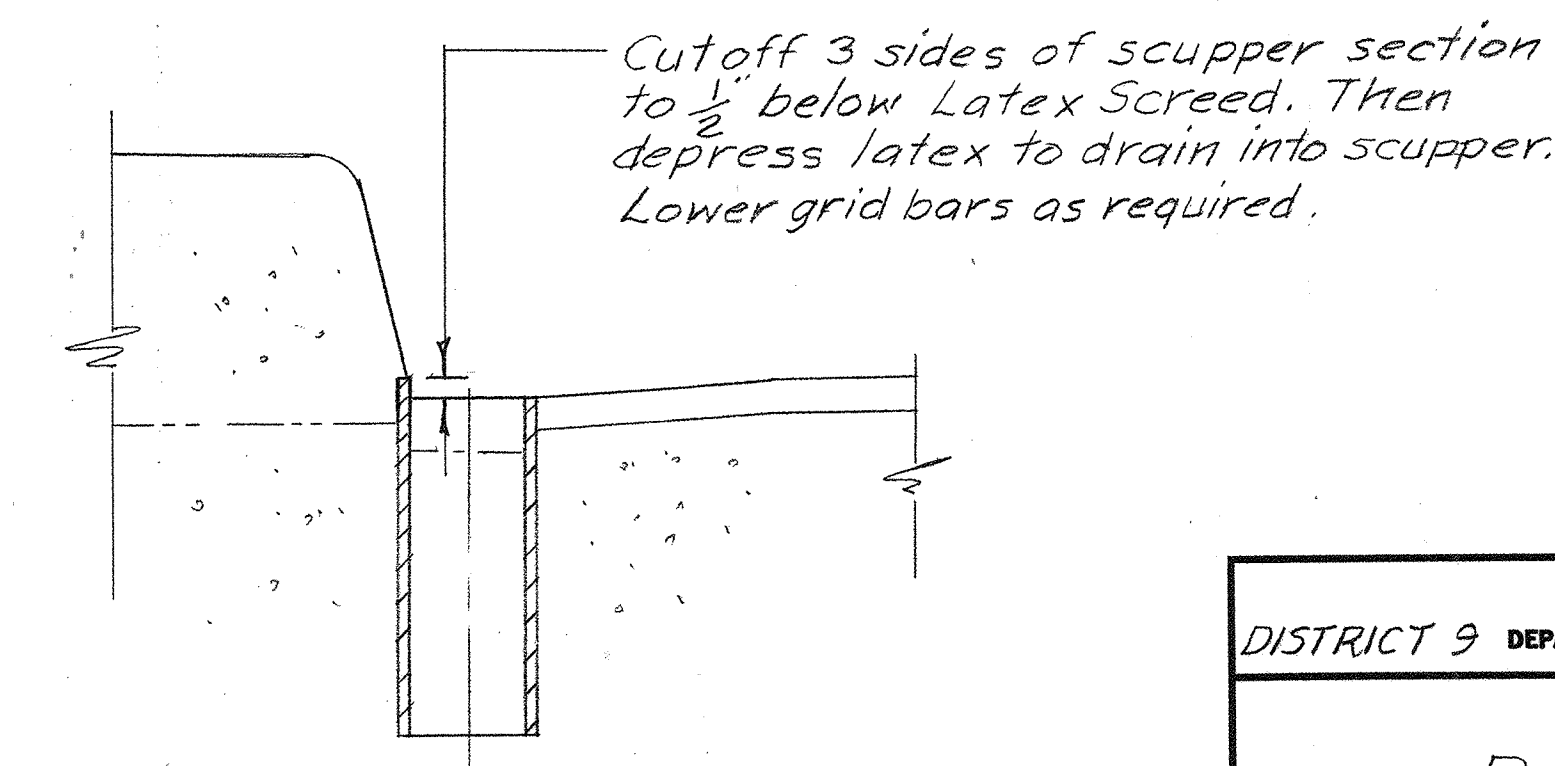


DETAIL - DRAIN PIPE ASSEMBLY REPLACEMENT & REPAIRS.

The above operations to downspouts are to be included in pay item 518 including replaced joints, pipe and all other materials, labor & incidentals.

845 Variable Thickness Overlay:

- 1" Clearance Ex. Reinf. Steel
- 12/8" top most bar
- 6/8" lower bar
- 1 16/8" = 3" Depth Patch
- 2554 S.Y. x .25% x 3/36 = 53.21 C.Y.
- Plus 10 tapers:
- 10 x 26.5/27 x 50 x .042 = 20.61 C.Y.
- Sub Total = 73.8 say 74 C.Y.
- Plus Grout 12 C.Y.
- TOTAL 86 C.Y.



DETAIL - SECTION SHOWING MODIFICATIONS TO EXISTING 39 SCUPPERS ON SOUTH BOUND LMS.

STATE OF OHIO		5/6	
DISTRICT 9 DEPARTMENT OF TRANSPORTATION BRIDGE OFF.			
DETAILS			
BRIDGE NO. SCI-23-0535 OVER N & W RY. & OLD U.S. 23			
DESIGNED	DRAWN	TRACED	CHECKED
mse	mse	mse	WAB
REVIEWED	DATE	REVISED	
JAB	2-83		

