

DESIGN DESIGNATION

Current Year ADT (1993) = 22,930
Design Year ADT (2013) = 32,110
D H V = 3211
D = 55%
T = 18%
V = 70 m.p.h.
Legal Speed = 65 m.p.h.
Functional Classification = Interstate

MICROFILMED
MAR 13 1996

PID 08301
C No. 940428

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MED-76-0.61

VILLAGE OF SEVILLE
WESTFIELD, GUILFORD, WADSWORTH TOWNSHIP
MEDINA COUNTY

MED-76-0.61

OHIO

FHWA
REGION 5

IM-76-1(29)

FEDERAL
PROJECT

1
299

LIMITED ACCESS

This improvement is especially designed for through traffic and has been declared a limited access highway or freeway by action of the Director in accordance with the provisions of Section 5511.02 of the Revised Code of Ohio.

1993 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, except as noted on sheets 15-18 and that provisions for the maintenance and safety of traffic will be as set forth on the plans and estimates.

Under authority of Section 4511.21, Division (1) of the Revised Code of Ohio. The revised prima facie speed limits as indicated herein are determined to be reasonable and safe, and are hereby established for the duration of this project. The prima facie speed limit or limits hereby established shall become effective when appropriate signs giving notice thereof are erected.

CONVENTIONAL SIGNS

County Line _____ Limited Access (only) _____ LA _____
Township Line _____ Right of Way (only) _____ RW _____
Section Line _____ Limited Access & Right of Way _____ LA&RW _____
Corporation Line _____ or _____ Existing Right of Way _____ EX RW _____
Fence Line (existing) _____ (proposed) _____ Property Line _____ (in existing fence) _____
Center Line _____ Railroad _____ or _____ (proposed) _____
Trees, Stumps, (to be removed) _____ Guardrail (existing) _____ (proposed) _____
Utility Poles: Telephone, Power, Light

INDEX OF SHEETS

TITLE SHEET	1	MAINLINE PLAN	88-111
SCHEMATIC PLAN	2	MAINLINE CROSS-SECTIONS	112-130*
TYPICAL SECTIONS	3-11	LIGHT POLE CROSS-SECTIONS	131-132
GENERAL NOTES	12-13	CROSS-ROAD PLAN & PROFILE	133-138
MAINTENANCE OF TRAFFIC	14-60, 46A	CROSS-ROAD CROSS-SECTIONS	139-141
CALCULATIONS	61-83	DETAILS	142-148
SUB-SUMMARIES	84-85	TRAFFIC CONTROL	149-180
GENERAL SUMMARY	86-87	STRUCTURES, OVER 20' SPAN	181-299

* - I16A, I18A-B, I29A-D, I30A-G

C.H. 49 CROSS-SECTION 141A

LINE DATA

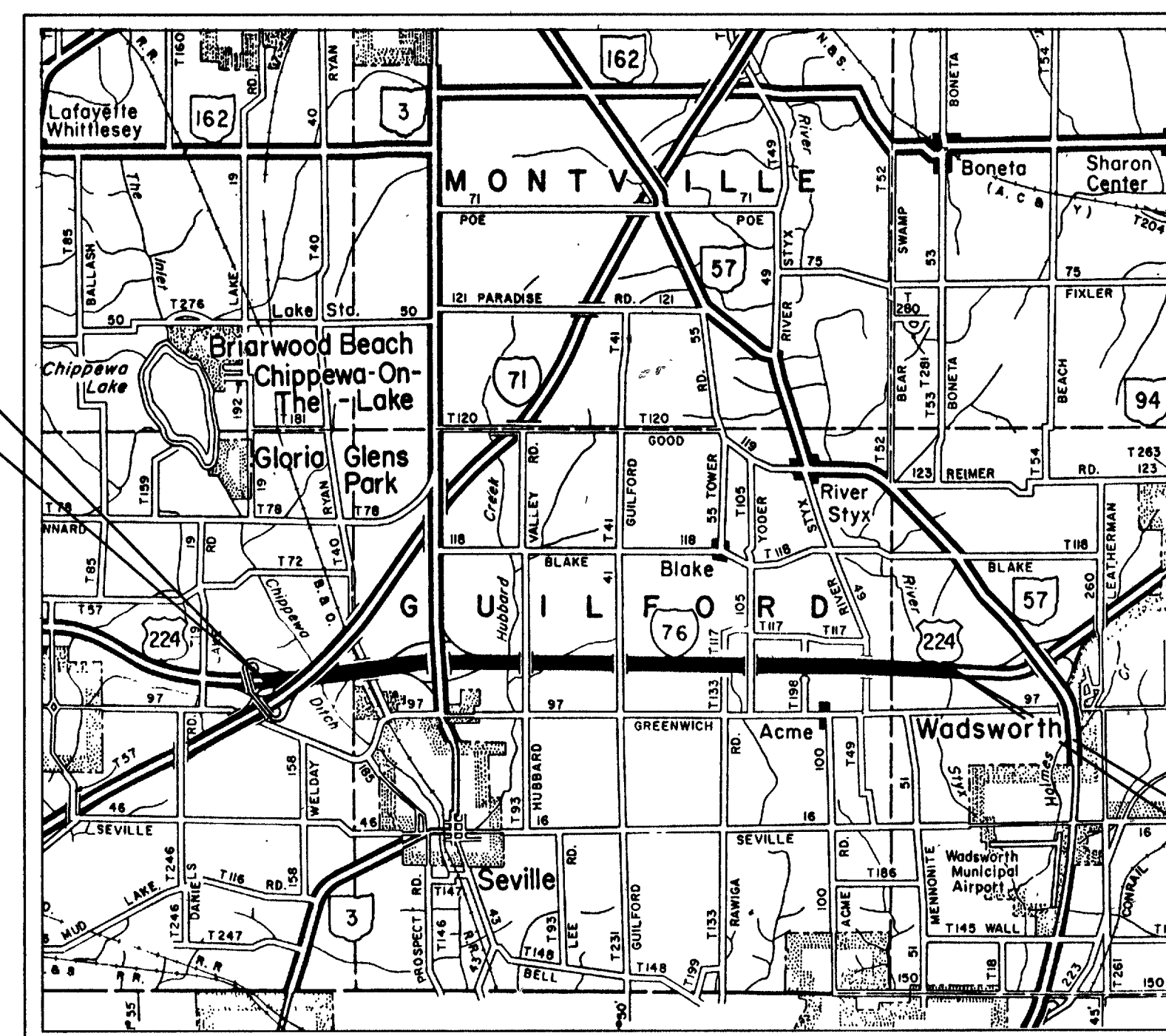
BEGIN PROJECT	STA. 854+29.39
END PROJECT	STA. 1190+00
LENGTH OF PROJECT	33,570.61 L.F. = 6.358 MI.
ADD FOR WORK:	
I-76 STA. 845+20 TO STA. 854+29.39	909.39 L.F.
I-76 STA. 1190+00 TO STA. 1198+23	823.00 L.F.
S.R. 3 STA. 4+00 TO STA. 18+50	1,450.00 L.F.
T.H. 93 STA. 10+95 TO STA. 22+43	1,148.00 L.F.
C.H. 41 STA. 11+11 TO STA. 19+55	844.00 L.F.
C.H. 105 STA. 20+45 TO STA. 28+44	799.00 L.F.
TOTAL LENGTH OF WORK	39,544.00 L.F. = 7.489 MI.

UNDERGROUND UTILITIES

TWO WORKING DAYS
BEFORE YOU DIG
Call 800-362-2764 (Toll Free)
OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

Plan Prepared By:
THOMAS FOX & ASSOCIATES, LTD.
3898 MAHONING AVE.
YOUNGSTOWN, OHIO 44515
216-799-1501

Project MED-76-0.61 MEDINA COUNTY
Date of Letting 19 Contract No.



LOCATION MAP

SCALE IN MILES

Portion to be Improved _____
State & Federal Routes _____
Other Roads _____

SCALES

Plan _____
Profile _____ Horizontal _____ Vertical _____
Cross Section Horiz _____ Vertical _____

SUPPLEMENTAL SPECIFICATIONS			
802	4-13-90	942	3-18-92
820	3-18-92	944	3-18-92
849	12-24-85	949	9-26-86
852	7-30-93	962	1-23-90
862	12-16-88	933	2-10-87
902	8-31-79		
921	12-04-72		
923	1-10-69		
931	3-18-92		

SUPPLEMENTAL PRINTS OF STANDARD CONSTRUCTION DRAWINGS			
CR-2-2A-B 5-1-79	GR-1.2 10-30-92	MC-4 7-26-76	TC-51.11 1-20-84
A-1-69 6-12-69	GR-1.3 2-21-92	MC-9A 1-11-85	TC-52.10 4-03-79
BP-2.2 2-21-92	GR-2.1 5-06-91	MC-9.1 10-30-92	TC-52.20 4-03-79
BP-2.4 2-21-92	GR-3.1 5-06-91	MC-9.2 5-06-91	TC-52.20 4-03-79
BP-2.5 2-21-92	GR-3.2 5-06-91	MC-9.3 10-30-92	TC-52.20 4-03-79
BP-3.1 2-21-92	GR-4.1 5-06-91	MC-11 8-01-78	TC-52.20 4-03-79
BP-5.1 2-21-92	GR-4.2 5-06-91	MC-11 8-01-78	TC-52.20 4-03-79
CB-458A 5-1-79	GR-5.1 10-30-92	MC-11 8-01-78	TC-52.20 4-03-79
CB-3A 5-01-79	GR-5.2 10-30-92	MC-11 8-01-78	TC-52.20 4-03-79
CB-5 11-10-83	GR-6 2-05-82	MC-11 8-01-78	TC-52.20 4-03-79
CB-8 11-10-83	GR-7.1 10-30-92	MC-11 8-01-78	TC-52.20 4-03-79
F-2 5-1-76	GR-8 10-25-90	MC-11 8-01-78	TC-52.20 4-03-79
F-3 5-1-76	GR-9 10-25-90	MC-11 8-01-78	TC-52.20 4-03-79
F-5 5-1-76	GR-10 10-25-90	MC-11 8-01-78	TC-52.20 4-03-79
F-6 5-1-76	GR-11 10-25-90	MC-11 8-01-78	TC-52.20 4-03-79
GR-1.1 5-6-91	GR-12 10-30-92	MC-11 8-01-78	TC-52.20 4-03-79

Approved Phillip A. Harwood
Date 11-3-93 District Deputy Director
of Transportation

Approved B.D. Harwood
Date 1/25/94 Engineer, Bureau of Bridges and
Structural Design

Approved Christopher L. Ruman
Date 2-15-94 Deputy Director, Design

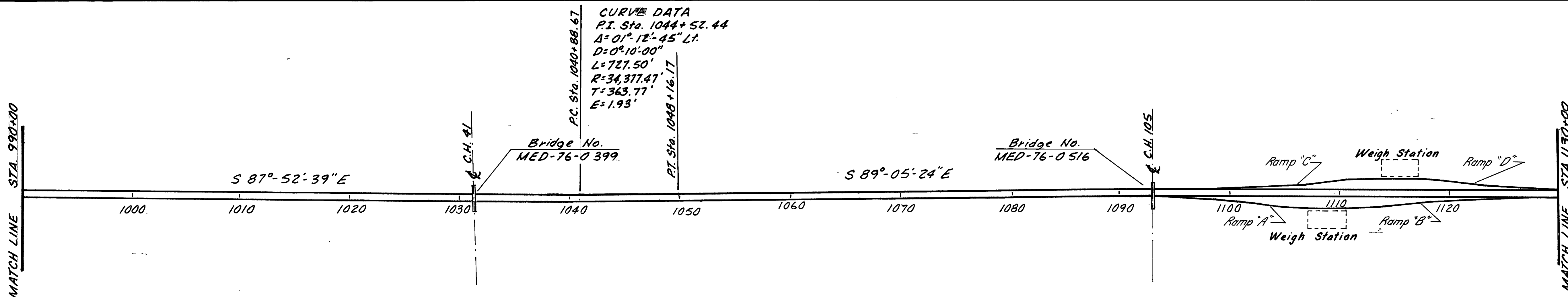
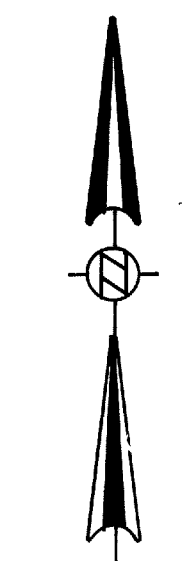
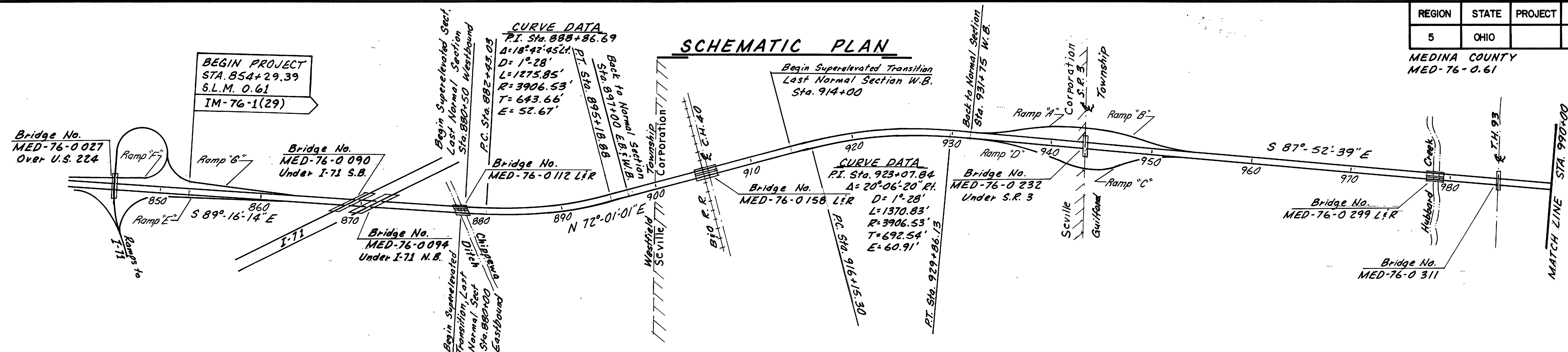
Approved Jerry Wray
Date 2-15-94 Director, Department of Transportation

DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
APPROVED

DIVISION ADMINISTRATOR

DATE

SCHEMATIC PLAN



SCHEMATIC PLAN

GENERAL NOTES

REGION	STATE	PROJECT	
5	OHIO		

273
299

MEDINA COUNTY
MED-76-0.61

REFERENCE SHALL BE MADE TO STANDARD DRAWINGS:

AS-1-81 Dated 11/27/81

AND TO SUPPLEMENTAL SPECIFICATIONS:

852 Dated 7/30/93
933 Dated 8/30/89
Dated 2/10/87

DESIGN SPECIFICATION This structure conforms to "Standard Specifications for Highway Bridges" adopted by the American Association of State Highway and Transportation Officials, 1992 and the Ohio "Supplement" to these specifications. Reference is also made to the Ohio Department Of Transportation's "Construction and Material Specifications", 1993 edition.

DESIGN DATA:

DESIGN STRESSES:

Concrete, Class S - Compressive Strength 4500 p.s.i.
Concrete, Class C - Compressive Strength 4000 p.s.i.
Reinforcing Steel - ASTM A615, A616, or A617, Grade 60, minimum yield strength 60,000 p.s.i.

EXISTING STRUCTURE VERIFICATION: Details and dimensions shown on these plans pertaining to the existing structures have been obtained from plans of the existing structures and from field observations and measurements. Consequently, they are indicative of the existing structure and the proposed work, but they shall be considered tentative and approximate. The Contractor is referred to C.M.S. sections 102.05, 105.02, and 513.02. The original construction plans of the existing bridges are available upon request at the District 3 Office of the OHIO DEPARTMENT OF TRANSPORTATION, ASHLAND OHIO. Contract bid prices shall be based upon a recognition of the uncertainties described above and upon a pre-bid examination of the existing structure by the Contractor. However, all project work shall be based upon actual details and dimensions which have been verified by the Contractor in the field.

WORK LIMITATIONS: No concrete deck overlays shall be placed before April 15. The Contractor shall schedule the work so that all deck overlays are placed before October 15. If for some unforeseen circumstances, the deck overlays or portions of deck overlay are not placed by October 15, regardless of the work remaining, the full depth repairs shall be completed as per 511 and the unfinished deck shall be resurfaced with Item 448 Asphalt Concrete and opened to traffic. The Contractor shall place and maintain at his expense the asphalt wearing surface until removed at his expense the following spring when the deck overlay can be placed after April 15.

ITEM SPECIAL - SEALING OF CONCRETE SURFACES (EPOXY):

A concrete sealer shall be applied to the following concrete surfaces:

- Exposed faces of the parapet and the gutter line
- All columns on piers 1 & 2 (seal 3/4 of the pier columns with the 1/4 furthest from the direction of travel being unsealed, see sketch on sheet 3/9). (Epoxy)

See proposal note for surface preparation requirements, application rates, material requirements and application procedures.

TRAFFIC MAINTENANCE: The traffic maintenance for Phase 1C and 1F can be found on project plan sheets 34 + 38.

ITEM 202 - WEARING COURSE REMOVED, AS PER PLAN: Work shall consist of removing the existing asphalt wearing surface by grinding. Payment for all of the above shall be at the unit price bid per sq. yd. for Item 202, WEARING COURSE REMOVED, AS PER PLAN which shall include all labor, equipment, materials, and incidentals necessary to complete the above work.

ITEM 202 - PORTIONS OF STRUCTURES REMOVED, ABUTMENT, AS PER PLAN: This Item of work shall be used to remove all Items as shown on the detail sheets except for removal of existing wearing surface & bridge railing. Care shall be taken not to crack the deck. If the deck is cracked, it shall be repaired as directed by the District Construction Engineer at the Contractor's expense. The deck concrete shall be removed by a hydraulic splitting method. A line of holes shall be drilled along the removal line and a hydraulic splitter used as per the manufacturer's recommendations. Thirty-five (35) and fifteen (15) pound jack hammers shall be used for the final finish work. A hoe ram or concrete crusher will not be permitted to do any of the work. Concrete shall be removed in a manner that prevents cutting, elongating, or damaging of the existing reinforcing steel to be salvaged. If existing reinforcing steel designated for salvage is damaged during removal operations, it shall be replaced at the Contractor's expense as noted above.

Payment for all of the above shall be at the unit price bid per cubic yard for Item 202, PORTIONS OF STRUCTURE REMOVED, ABUTMENT, AS PER PLAN which shall include all labor, equipment, materials, and incidentals necessary to complete the above work.

Temporary support for deck slab shall be included with this Item for payment.

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

One of the following methods shall be used to remove the Parapets.

METHOD A: (Plan Detailed)

The concrete shall be removed by a hydraulic splitting method. A line of holes shall be drilled along the removal line and a hydraulic splitter used as per Manufacturer's recommendations.

Concrete shall be removed in a manner that prevents cutting, elongation or damaging of existing reinforcing steel to be preserved. If existing reinforcing steel designated for preservation is damaged during the removal operation, doweled reinforcing steel shall be added at the Contractor's expense. The length into the deck shall be 6". All dowel holes shall be grouted as per supplemental specifications 852 and 952 (optional)

METHOD B: (optional)

The concrete shall be removed by saw cutting. The water from the sawing operation shall be immediately washed from the structure.

For the reinforcing steel marked for preservation that is cut off, The Contractor shall provide longer vertical bars. These bars shall be doweled into the deck 6" deep. All dowel holes shall be grouted as per Supplemental Specification 852 and 952.

The cost of the additional length bars, dowel holes and grouting shall be included in Item 202 PORTIONS OF STRUCTURE REMOVED, PARAPETS, AS PER PLAN.

BOTH METHODS:

The final removal shall be preformed using thirty five (35) and fifteen (15) pound jack hammers. A hoe ram, concrete crusher or other similar type impactive device will not be permitted for any of the removal work. Existing smooth construction joints or saw cuts shall be mechanically scarified 1/4" deep to insure bonding of the new concrete.

ITEM 510 - DOWEL HOLE AS PER PLAN: This item shall be performed as indicated on the plans or as directed by the Engineer and shall be used to replace the deteriorated bars which were to remain, or to place new dowel bars where a new concrete section is being attached to the remaining portions of existing concrete. The grout shall be epoxy, and shall conform to Supplemental Specification 952 and the installation shall conform to Supplemental Specification 852. The dowel bars are to be paid for under "ITEM 509 - EPOXY COATED REINFORCING STEEL, GRADE 60" and the dowel holes are to be paid for under "ITEM 510 - DOWEL HOLE, AS PER PLAN"

ITEM 511 - CLASS S CONCRETE, PARAPET, AS PER PLAN:

This Item shall be used as per details in the Plan.

Not more than 24 hours prior to placing the concrete, all existing surfaces to which the concrete is to bond, including exposed reinforcing and structural steel shall be cleaned by abrasive blasting. These surfaces shall be made free of spalls, laitance, and other contaminates detrimental to achieving an adequate bond. Immediately before the concrete is placed all adjacent concrete surfaces shall be covered with a thin layer of bonding grout. The bonding grout shall consist of equal parts by volume of Portland Cement and sand, mixed with enough water to form a slurry of paint like consistency which shall be such as to allow it to be applied with a stiff brush or broom to existing concrete surfaces in a thin even coating that will not run or puddle. The grout shall be applied for a short distance in advance of the placement of the concrete and shall not be dry. In lieu of the proportioning specified in 499.03 and 511.02, the following table shall be used to establish the quantities per cubic yard for concrete, the coarse aggregate shall be limestone.

QUANTITIES PER CUBIC YARD (USING NO. 8 LESTONE)

AGGREGATE			CEMENT		WATER/CEMENT RATIO
FINE (LB)	COURSE (LB)	TOTAL (LB)	CONTENT (LB)		
1591	1127	2718	715		0.40

AIR CONTENT - 8% PLUS OR MINUS 2%

High range water reducer (superplasticizer) may be used at the option of the Contractor. The dosage rate will be determined by the Contractor based on the Manufacturer's recommendation to achieve the desired workability level. High range water reducer shall conform to 705.12, ASTM-C494 type F and shall not contain calcium chloride. Type A or D chemical admixture conforming to 705.12, ASTM-C494 and not containing chloride shall be added to the concrete at the plant. All additives, including air entrainment, shall be manufactured by the same company and certified as compatible by the Manufacturing Co. The cement content shall be maintained and a maximum water-cement ratio of 0.40 shall not be exceeded. The slump of the superplasticized concrete delivered to the job site shall be 1 1/2" plus or minus 1/2". The superplasticized admixture shall be added at the job site and mixed a minimum of five (5) minutes. After the superplasticizer has been added the slump shall be 6 1/2" plus or minus 1/2". The Contractor shall furnish a volumetric dispenser for the superplasticizer.

Concrete mixtures containing a high range water reducer shall meet the same requirements for entrained air content, maximum strength, and maximum water-cement ratio as required for the respective grade of concrete without a high range water reducer. Sampling and testing for entrained air content and minimum strength should be taken from the concrete that has been treated with a high range water reducer. Curing shall be in accordance with 511.14 type A water curing.

Payment for all of the above shall be at the unit price bid per cubic yard for ITEM 511, CLASS S CONCRETE, AS PER PLAN which shall include all labor, equipment, materials, and incidentals necessary to complete the above work.

ITEM 511 - CLASS C CONCRETE, ABUTMENT, AS PER PLAN:

Course aggregate in this Item shall be limestone. Item 520, Pneumatically Placed Mortar shall be included with this Item for Payment.

ITEM SPECIAL - URETHANE TOP COAT SEALER FOR CONCRETE SURFACES: This item shall consist of the application of a urethane top coat sealer over concrete areas coated with epoxy sealer or solvent-free epoxy resin. The color shall be federal color standard no. 595A-16187.

The urethane topcoat shall be applied according to the Manufacturer's recommendations at the minimum application rate of 150 sq. ft. per gallon after the epoxy sealer has become dry tacky and 1 1/2 to 6 hours have elapsed since the epoxy was applied. The surface shall be clean when the urethane is applied. Application shall be airless spray, brush or roller as directed by the Engineer.

The urethane top coat shall be one of the following products:

- 1) AMERON AMERCOAT 450 H.S.
- 2) POLY-CARB MARK 73
- 3) TNESEC SERIES 70 ENDURA SHIELD
- 4) DURAL AQUATHANE

The cost of all labor, equipment and materials necessary to accomplish this item of work shall be included in the unit price bid per Sq. Yd. for ITEM SPECIAL, URETHANE TOPCOAT SEALER FOR CONCRETE SURFACES.

ITEM SPECIAL - MICRO-SILICA MODIFIED CONCRETE OVERLAY 1 3/4 INCHES THICK): (SEE PROPOSAL NOTE)

Course aggregate shall be limestone or slag. Payment for this item shall be at the unit price bid per square yard for ITEM SPECIAL, MICRO-SILICA MODIFIED CONCRETE OVERLAY (1 3/4 INCHES THICK), which shall include all labor, equipment, materials, and incidentals necessary to complete this item in place.

ITEM SPECIAL - KEYWAY DRAIN: Plastic tubes shall be drilled 2" into the abutment keyway as shown on sht. no. 9/13. The tubes shall be spaced on four (4) foot centers or as directed by the Engineer. Payment for all of the above shall be at the unit price bid per each for ITEM SPECIAL, KEYWAY DRAIN which shall include all labor, equipment, materials, and incidentals necessary to complete the above work.

REPLACEMENT OF EXISTING REINFORCING STEEL: Any existing reinforcing bars which are to be incorporated into the new work and which are made unusable by the Contractor's concrete removal operations shall be replaced with new steel at his cost. Any existing reinforcing bars deemed by the Engineer to be unusable because of corrosion shall be replaced with new steel. An allowance of 100 pounds for each bridge is included in Item 509 for this purpose. (See Item 510 - DOWEL HOLE AS PER PLAN.)

PROTECTION OF TRAFFIC: Prior to the demolition of any portions of the existing structure, the Contractor shall submit his plans for the protection of traffic under the structure to the Director for approval. These plans shall include provisions for any devices and structures that may be necessary to insure such protection. The cost of this protection shall be included in ITEM 202 for Payment.

THOMAS FOK & ASSOCIATES, LTD.
CONSULTING ENGINEERS, SURVEYORS & PLANNERS
3896 MAHONING AVE. YOUNGSTOWN, OHIO

GENERAL NOTES

BRIDGE NO. MED-76-0622 L/R
OVER C.R. 49

MEDINA COUNTY

OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISD
1/92	1/92		D.L.B. 11/92	12/92	

CALC. BY D.L.G.CHK'D BY J.D.V.

REGION	STATE	PROJECT	
5	OHIO		

MEDINA COUNTY
MED-76-0.61274
299

ESTIMATED QUANTITIES					LEFT BRIDGE				RIGHT BRIDGE			
ITEM	ITEM EXT.	TOTAL	UNIT	DESCRIPTION	SUPER.	ABUT.	PIER	GEN'L	SUPER.	ABUT.	PIER	GEN'L
STRUCTURE												
202	11301	14	Cu.Yd.	Portions of Structures Removed, Abutment, as per plan	1	6			1	6		
202	11301	34	Cu. Yd.	Portions of Structure Removed, Parapet, as per plan	17				17			
202	23501	1036	Sq. Yd.	Wearing Course Removed, <i>AS PER PLAN</i>	518				518			
202	38500	475	Lin.Ft.	Bridge Railing Removed	237.5				237.5			
509	15820	11,058	Lb	Epoxy Coated Reinforcing Steel, Grade 60	3566	1863		100	3566	1863		100
510	11101	376	Each	Dowel Hole, as per plan		128		60		128		60
511	34001	52	Cu.Yd.	Class S Concrete, <i>Superstructure</i> as per plan, <i>Parapet</i>	26				26			
511**	33404	52	Cu.Yd.	Class S Concrete, <i>Superstructure</i> (Using Shrinkage Compensating Cement), <i>Parapet</i> (See Proposal Note)	26				26			
511**	33410	Lump	Lump	Class S Concrete, Using Shrinkage Compensating Cement, for Preplacement Testing (See Proposal Note)	Lump				Lump			
511	45701	12	Cu.Yd.	Class C Concrete, Abutment, as per plan		6				6		
Spec.	51267502	548	Sq.Yd.	Sealing of Concrete Surfaces (Epoxy)(See Proposal Note)	190		84		190		84	
Spec.	51271500	548	Sq.Yd.	Urethane Top Coat Sealer For Concrete Surfaces	190		84		190		84	
516	10000	186	Lin.Ft.	Preformed Elastomeric Compression Joint Seal (705.11)				93				93
Spec.	51861400	44	Each	Keyway Drain		22				22		
Spec.	51922006	1077	Sq.Yd.	Micro-Silica Modified Concrete Overlay (1.75") (See Proposal Note)	538.5				538.5			
Spec.	51922100	24	Cu.Yd.	Micro-Silica Modified Concrete Overlay (Variable Thickness) (See Proposal Note)	12				12			
Spec.	51922300	Lump	Lump	Test Slab				Lump				Lump
Spec.	85050070	1077	Sq.Yd.	Bridge Deck Grooving (See Proposal Note)	538.5				538.5			

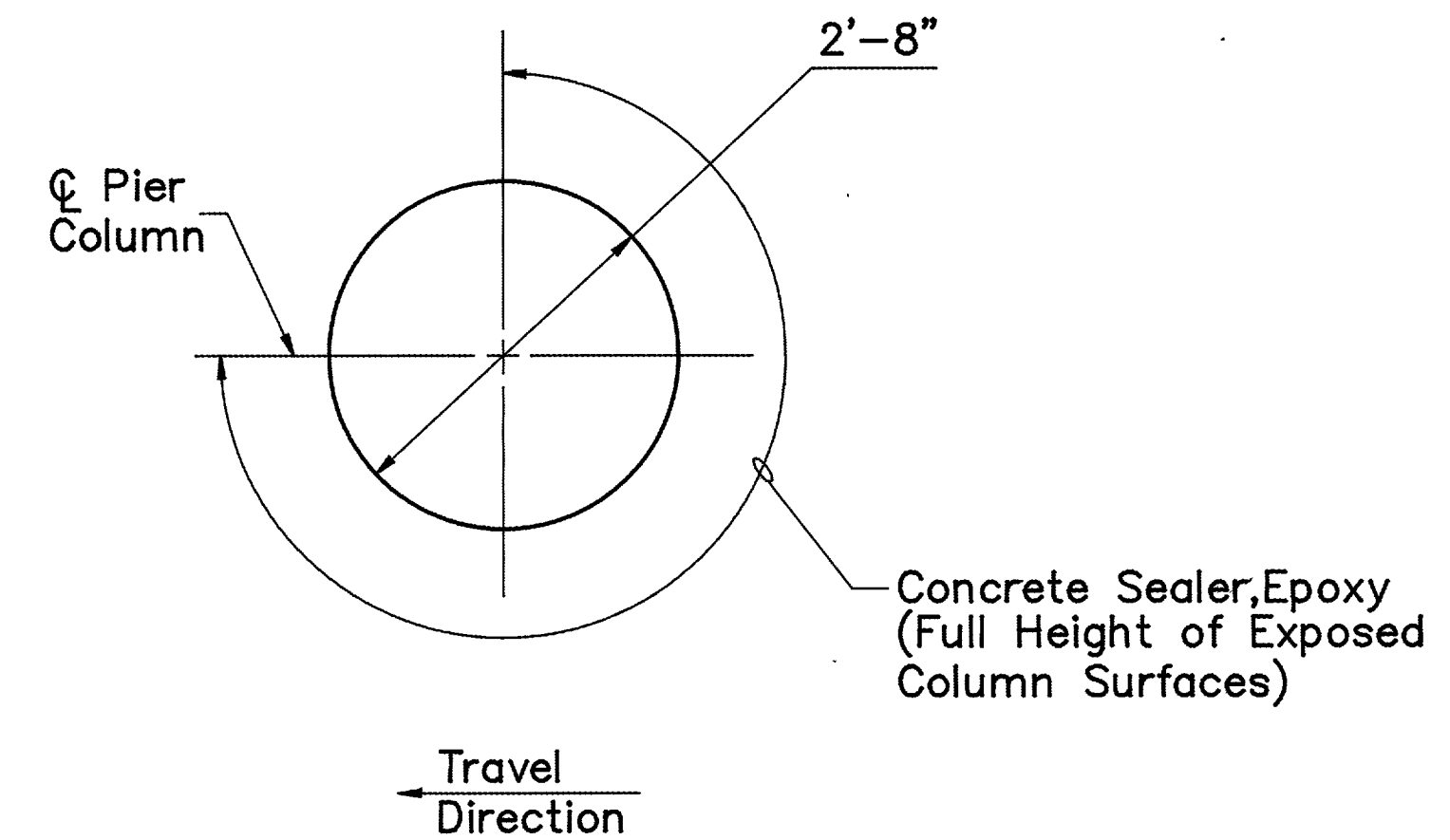
** Alternate Bid Item: These Two Items Shall Constitute One Alternate Bid to Class S Concrete, *Parapet*, As Per Plan.

PROPOSED WORK-0622L (WESTBOUND)

- Place traffic control barriers for Phase 1C as shown on sheet 34, and complete Phase 1C work, outside lanes, as described below.
- Remove existing asphalt wearing surface.
- Remove existing guardrail and concrete parapets as per plan.
- Provide temporary support for ends of deck and remove portions of existing abutments, as per plan.
- Place keyway drains, reface existing abutments and remove temporary supports after refacing concrete is cured.
- Repair existing deck surfaces as noted, remove scuppers and place new parapets.
- Prepare existing deck surface and place new 1 3/4" micro-silica modified concrete overlay as per plan.
- Place new approach slabs.
- Seal joint between approach slab and deck with compression seal.
- Seal concrete surfaces as per plan.
- Place transverse grooves in new bridge deck overlay.
- After Phase 1C work is complete and can be opened to traffic, place traffic control barriers for Phase 1F as shown on sheet 38. Then complete Phase 1F work, the remaining portion of structure, as described above.
- After the remaining portion of the structure is complete and can be reopened to traffic, remove traffic control barriers.

PROPOSED WORK-0622R (EASTBOUND)

- Place traffic control barriers for Phase 1C as shown on sheet 34, and complete Phase 1C work, outside lanes, as described below.
- Remove existing asphalt wearing surface.
- Remove existing guardrail and concrete parapets as per plan.
- Provide temporary support for ends of deck and remove portions of existing abutments, as per plan.
- Place keyway drains, reface existing abutments and remove temporary supports after refacing concrete is cured.
- Repair existing deck surfaces as noted, remove scuppers and place new parapets.
- Prepare existing deck surface and place new 1 3/4" micro-silica modified concrete overlay as per plan.
- Place new approach slabs.
- Seal joint between approach slab and deck with compression seal.
- Seal concrete surfaces as per plan.
- Place transverse grooves in new bridge deck overlay.
- After Phase 1C work is complete and can be opened to traffic, place traffic control barriers for Phase 1F as shown on sheet 38. Then complete Phase 1F work, the remaining portion of structure, as described above.
- After the remaining portion of the structure is complete and can be reopened to traffic, remove traffic control barriers.



SEALING OF CONCRETE SURFACES-PIERS

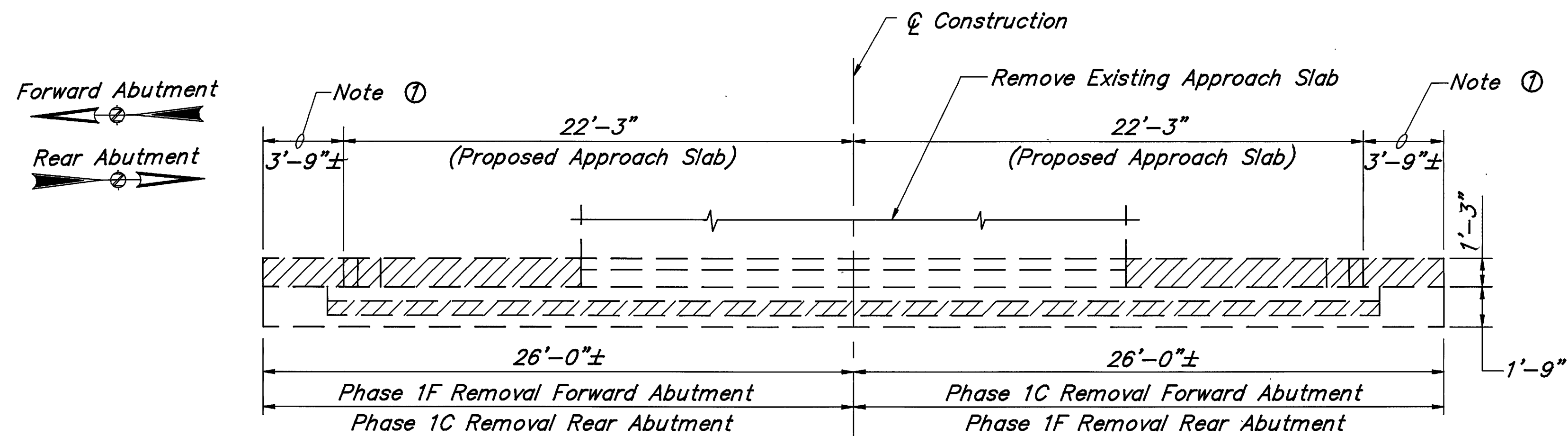
(Typical at 8 Columns per Structure)

THOMAS FOK & ASSOCIATES, LTD. CONSULTING ENGINEERS, SURVEYORS & PLANNERS 3896 MAHONING AVE. YOUNGSTOWN, OHIO					
PROPOSED WORK & ESTIMATED QUANTITIES					
BRIDGE NO. MED-76-0622 L/R OVER C.H. 49					
MEDINA COUNTY OHIO					
DESIGNED D.L.G. 1/92	DRAWN D.L.G. 1/92	TRACED J.D.V. 8/92	CHECKED J.D.V. 8/92	REVIEWED J.F. 8/92	REVISED

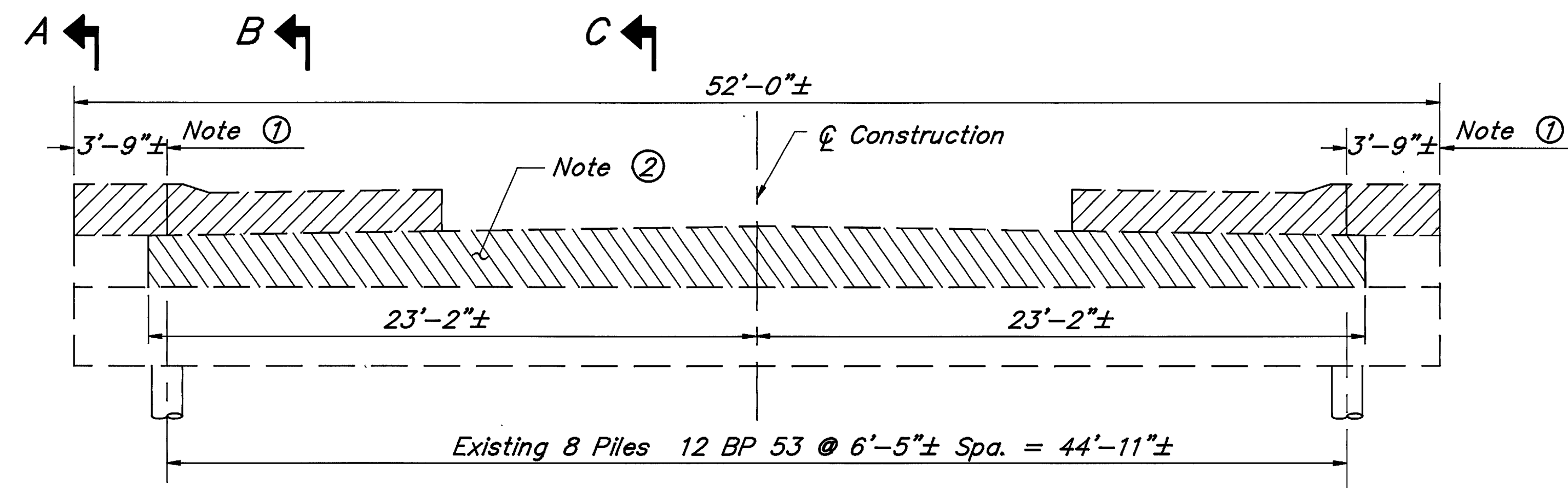
REGION	STATE	PROJECT	
5	OHIO		

MEDINA COUNTY
MED-76-0.61

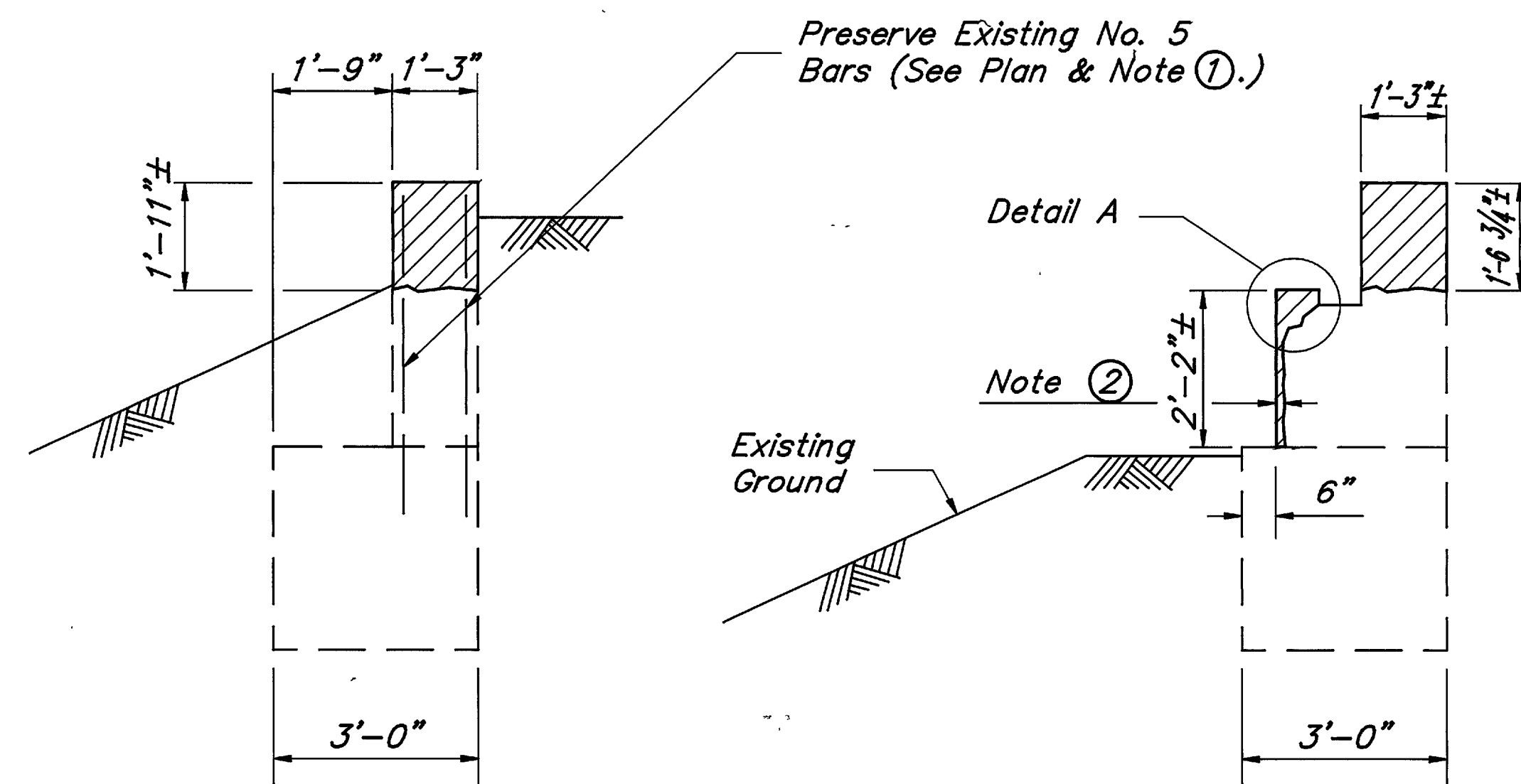
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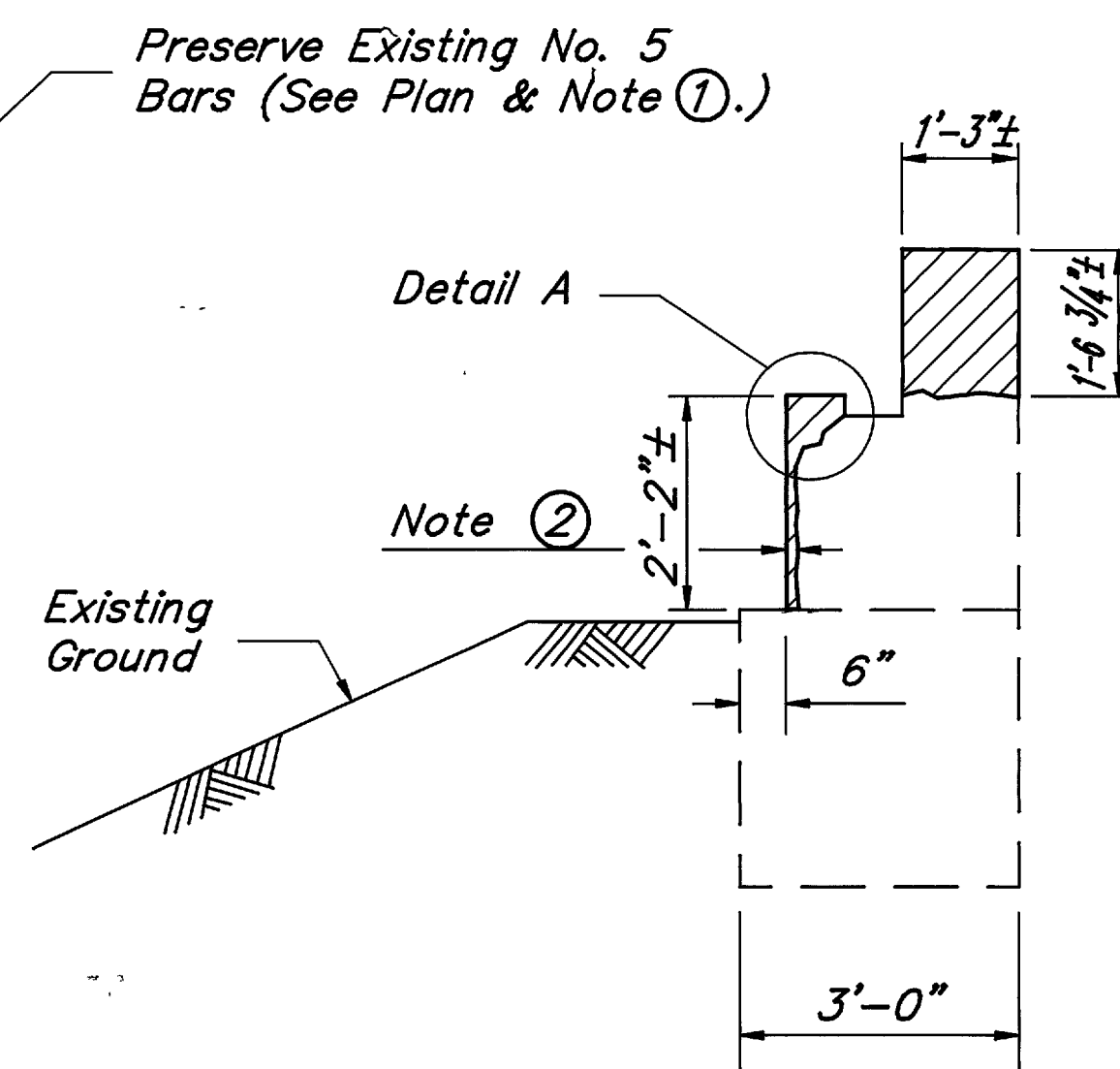
ABUTMENT PLAN
(TYP. EASTBOUND & WESTBOUND LANES)



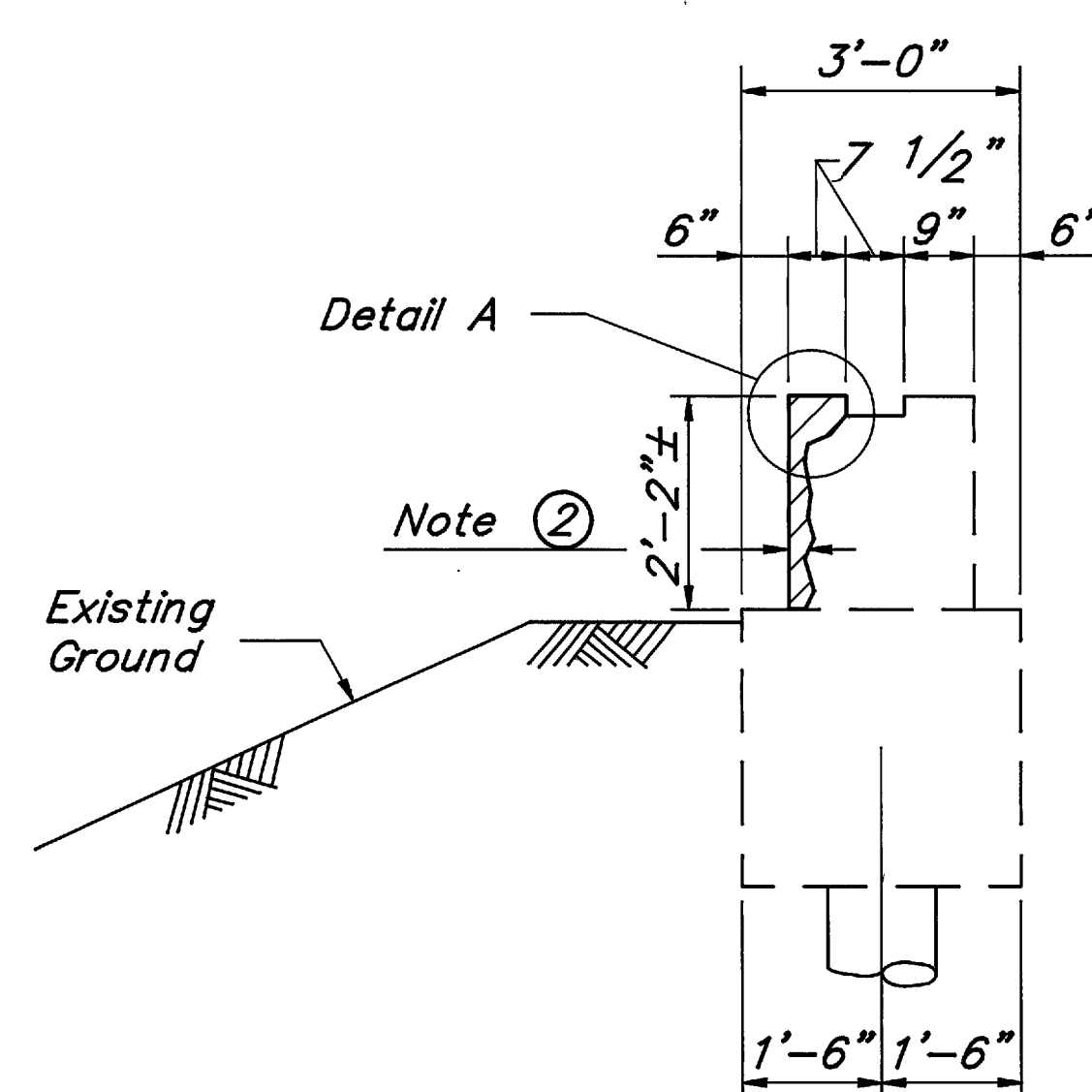
ABUTMENT ELEVATION
(TYP. EASTBOUND & WESTBOUND LANES)



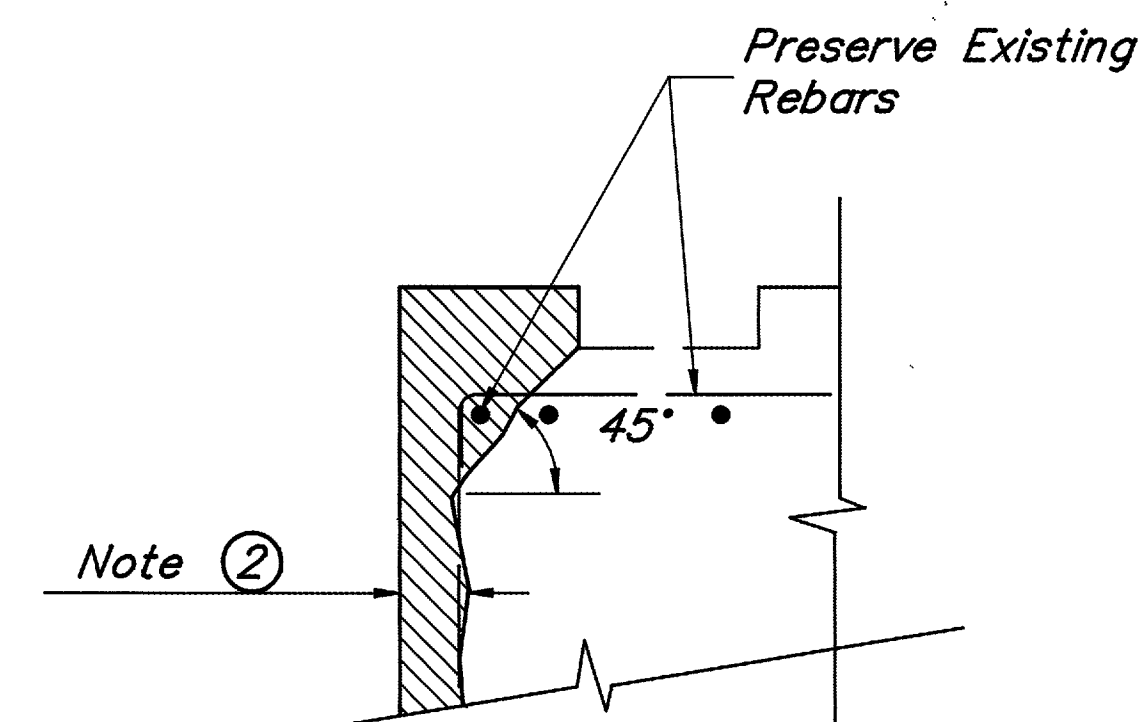
SECTION A-A



SECTION B-B



SECTION C-C



Detail A

NOTE ① - The existing reinforcing bars are to be preserved outside the limits of the new approach as shown in the Plan View.

NOTE ② - A minimum of 1/4" to a maximum of 1" of existing concrete shall be removed from the entire face of the bridge seat prior to placing the new concrete facing as shown on sheet 6/9. Any areas of loose and disintegrated concrete that are encountered shall be removed to sound concrete prior to the above removal.

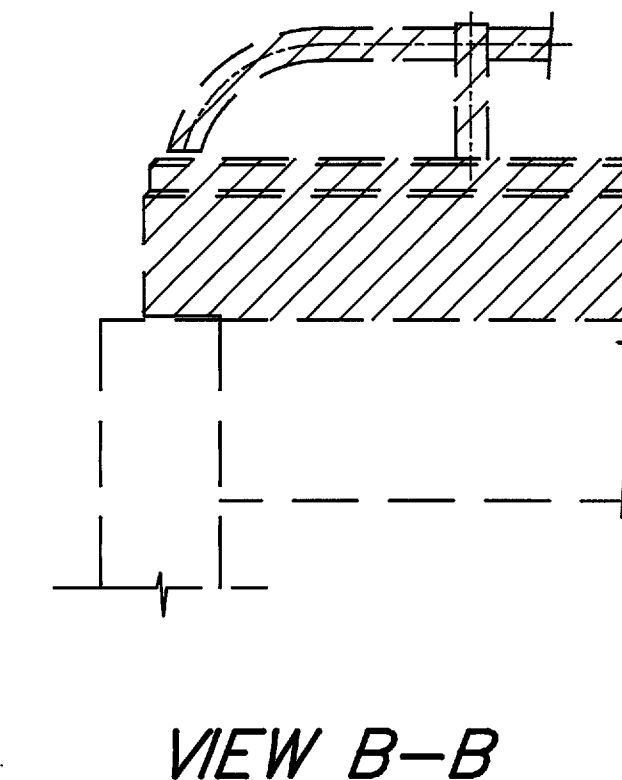
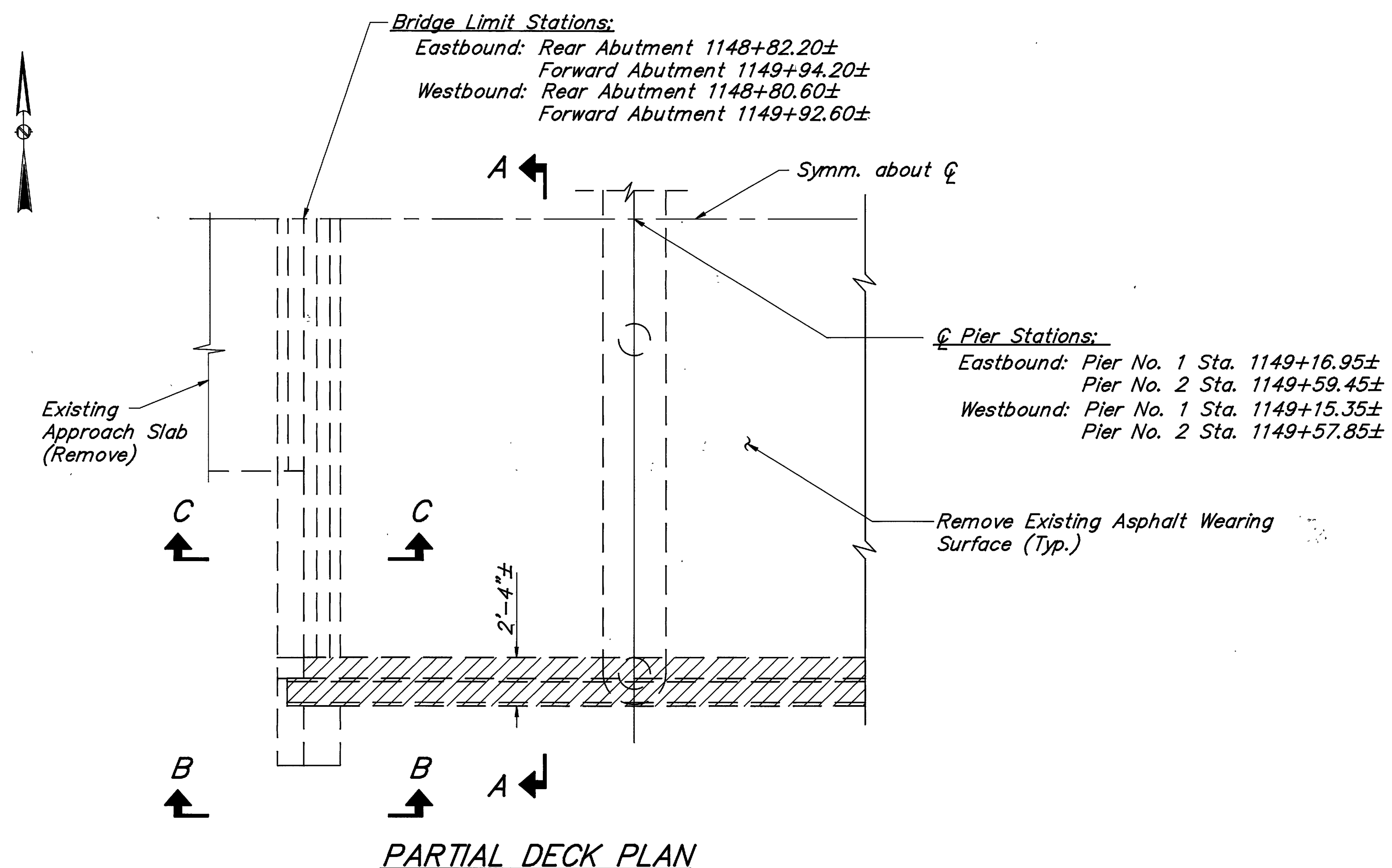
Removal Limits shown are for both the Rear and Forward Abutments.

THOMAS FOK & ASSOCIATES, LTD. CONSULTING ENGINEERS, SURVEYORS & PLANNERS 3896 MAHONING AVE. YOUNGSTOWN, OHIO					
EXISTING ABUTMENT REMOVAL DETAILS BRIDGE NO. MED-76-0622 L/R OVER C.H. 49					
MEDINA COUNTY OHIO					
DESIGNED D.L.C.	DRAWN D.L.C.	TRACED J.D.V.	REVIEWED J.F.	REVISED	
12/91	12/91	12/92	12/92		

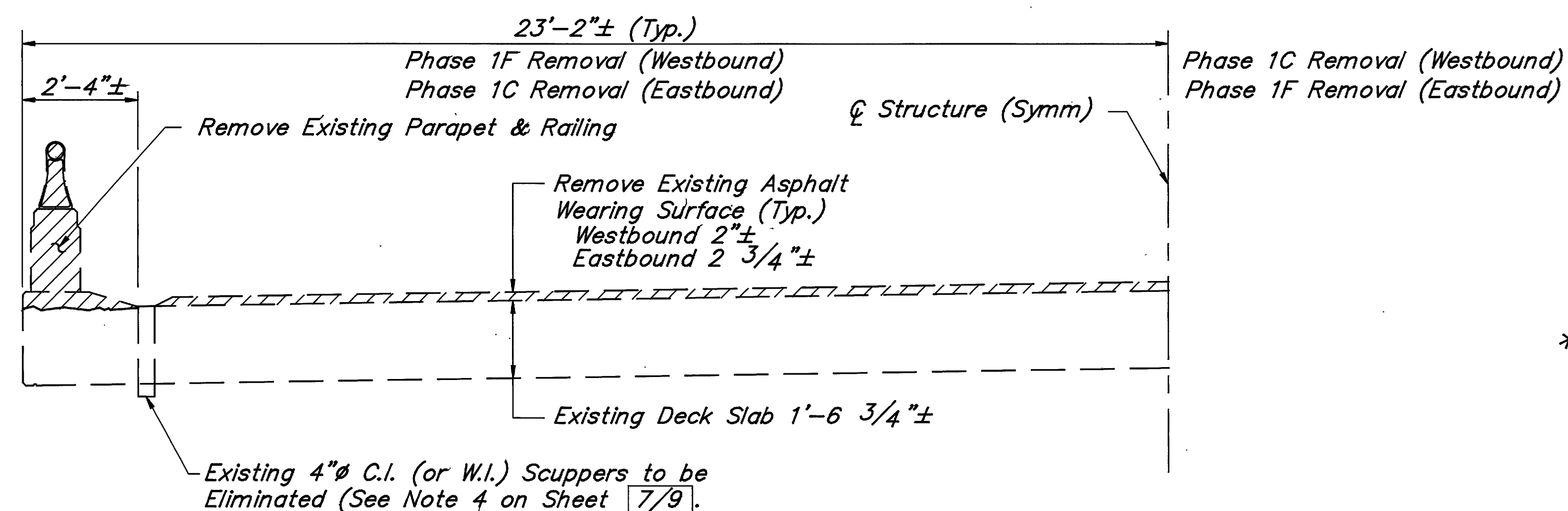
REGION	STATE	PROJECT	
5	OHIO		

276
279

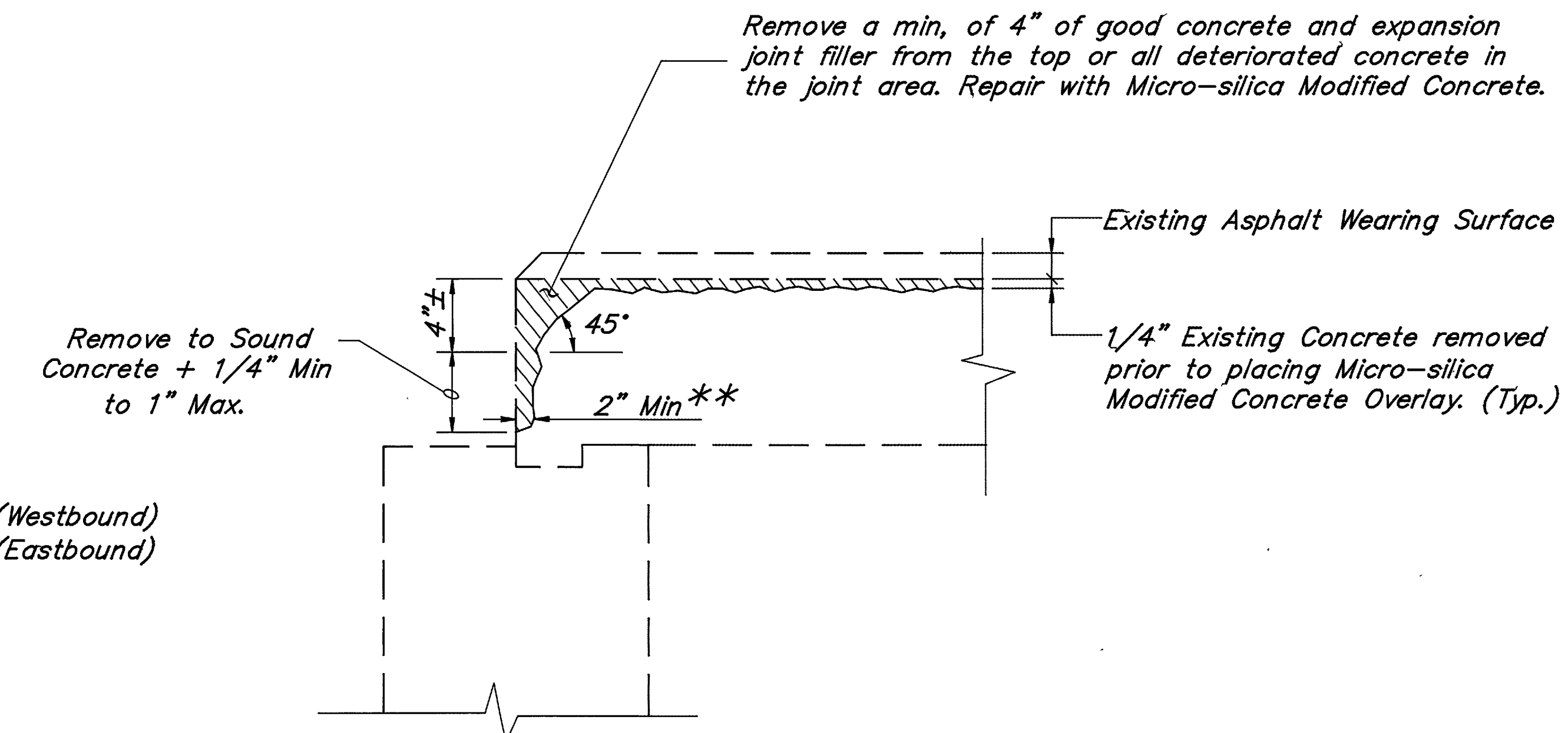
MEDINA COUNTY
MED-76-0.61



Indicates limits of existing structure to be removed, as per Item 202.



SECTION A-A
 EASTBOUND & WESTBOUND STRUCTURES IDENTICAL



** Remove to 2" Min. or to Sound Concrete + 1/4" Min. to 1" Max.

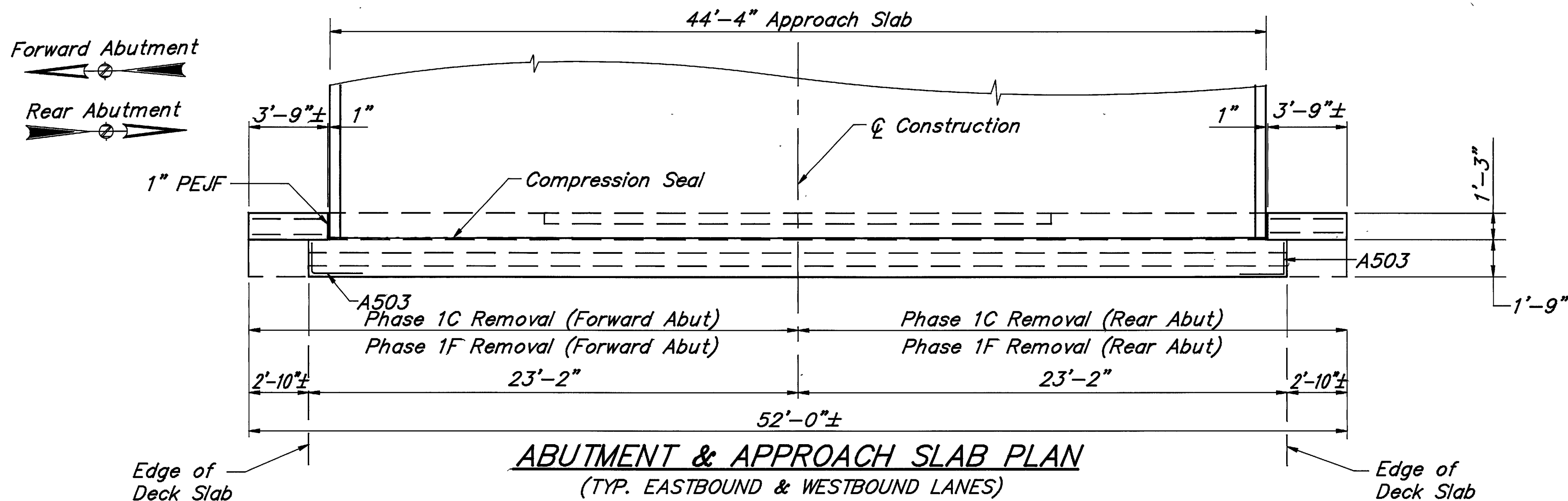
5/9

THOMAS FOK & ASSOCIATES, LTD.
 CONSULTING ENGINEERS, SURVEYORS & PLANNERS
 3896 MAHONING AVE. YOUNGSTOWN, OHIO

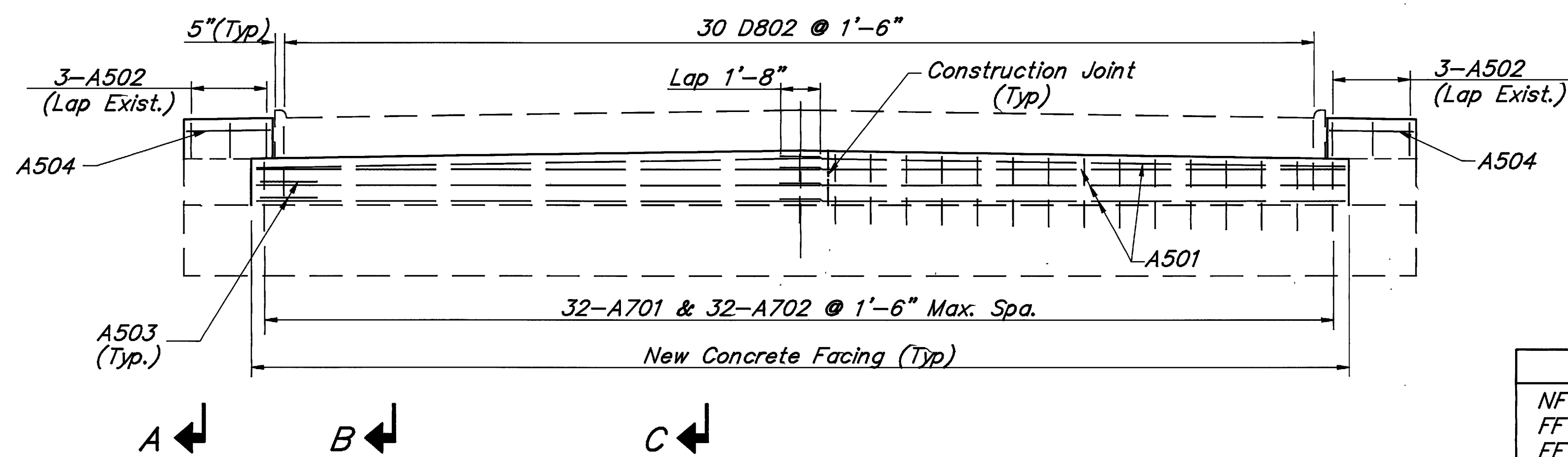
**EXISTING SUPERSTRUCTURE
 REMOVAL DETAILS**
 BRIDGE NO. MED-76-0622 L/R
 OVER C.H. 49

MEDINA COUNTY OHIO

DESIGNED D.L.G.	DRAWN D.L.G.	TRACED J.D.V.	CHECKED J.F.	REVIEWED J.F.	REVISED
12/91	12/91		12/92	12/92	

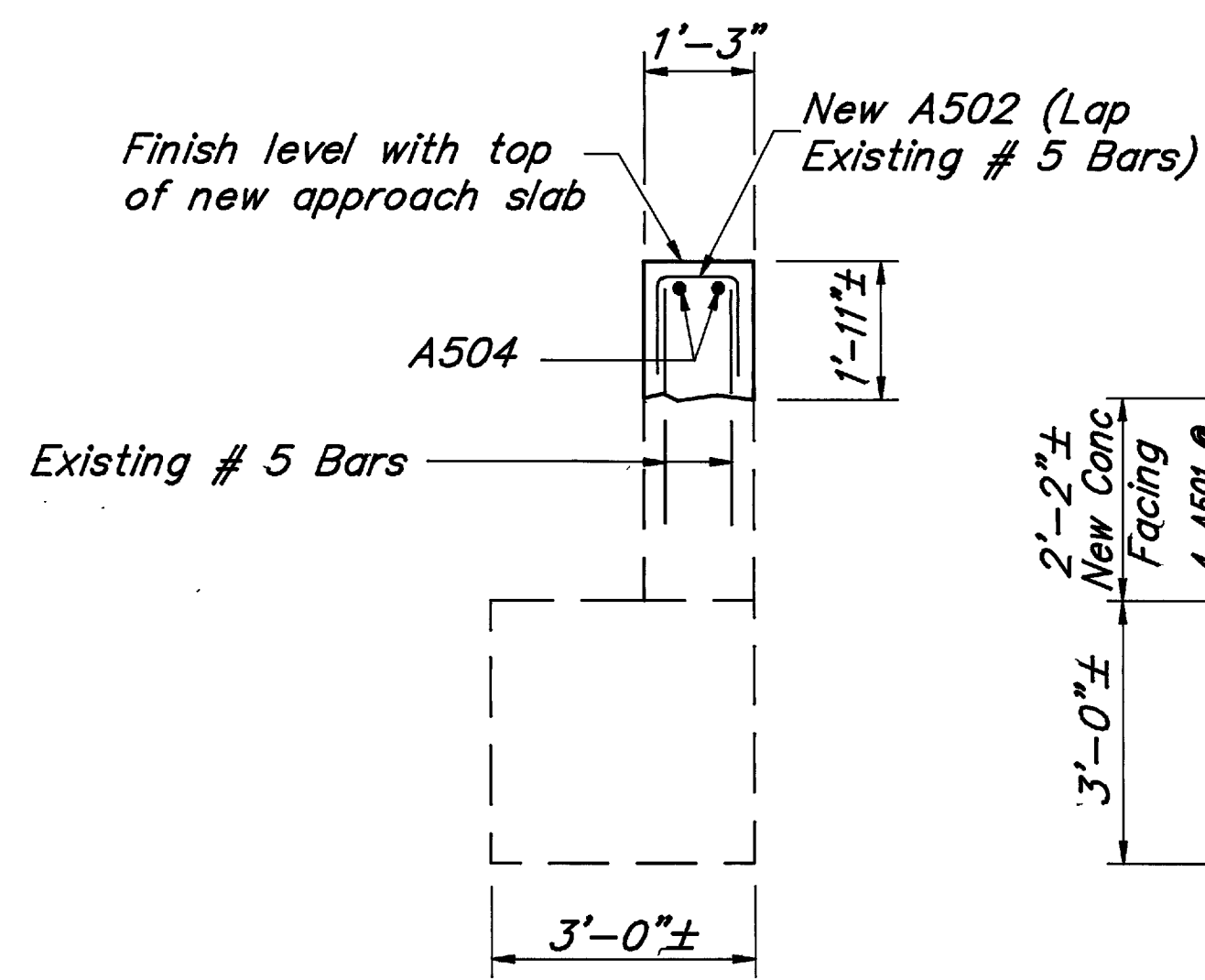


ABUTMENT & APPROACH SLAB PLAN
(TYP. EASTBOUND & WESTBOUND LANES)

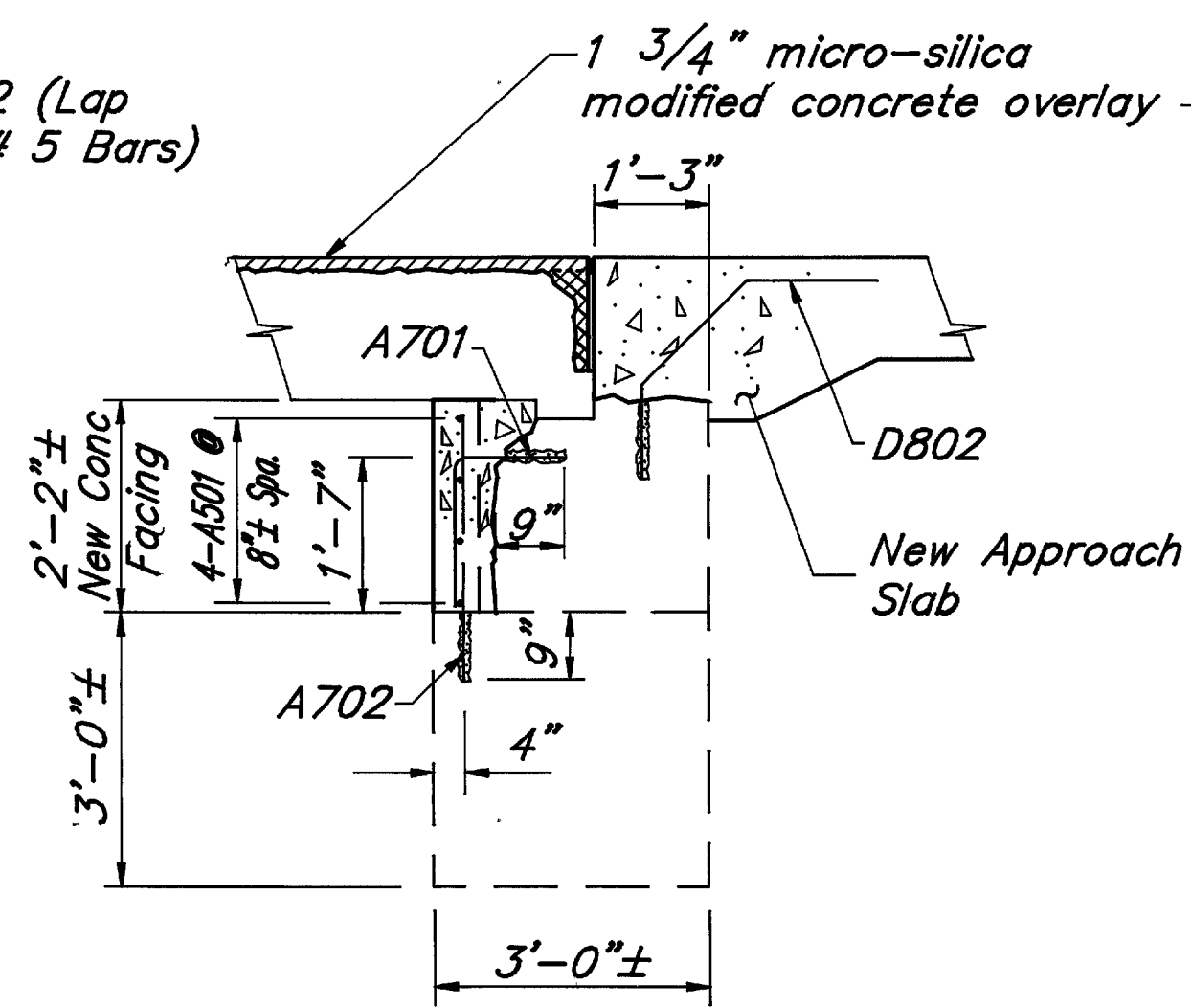


ABUTMENT ELEVATION
(TYP. EASTBOUND & WESTBOUND LANES)

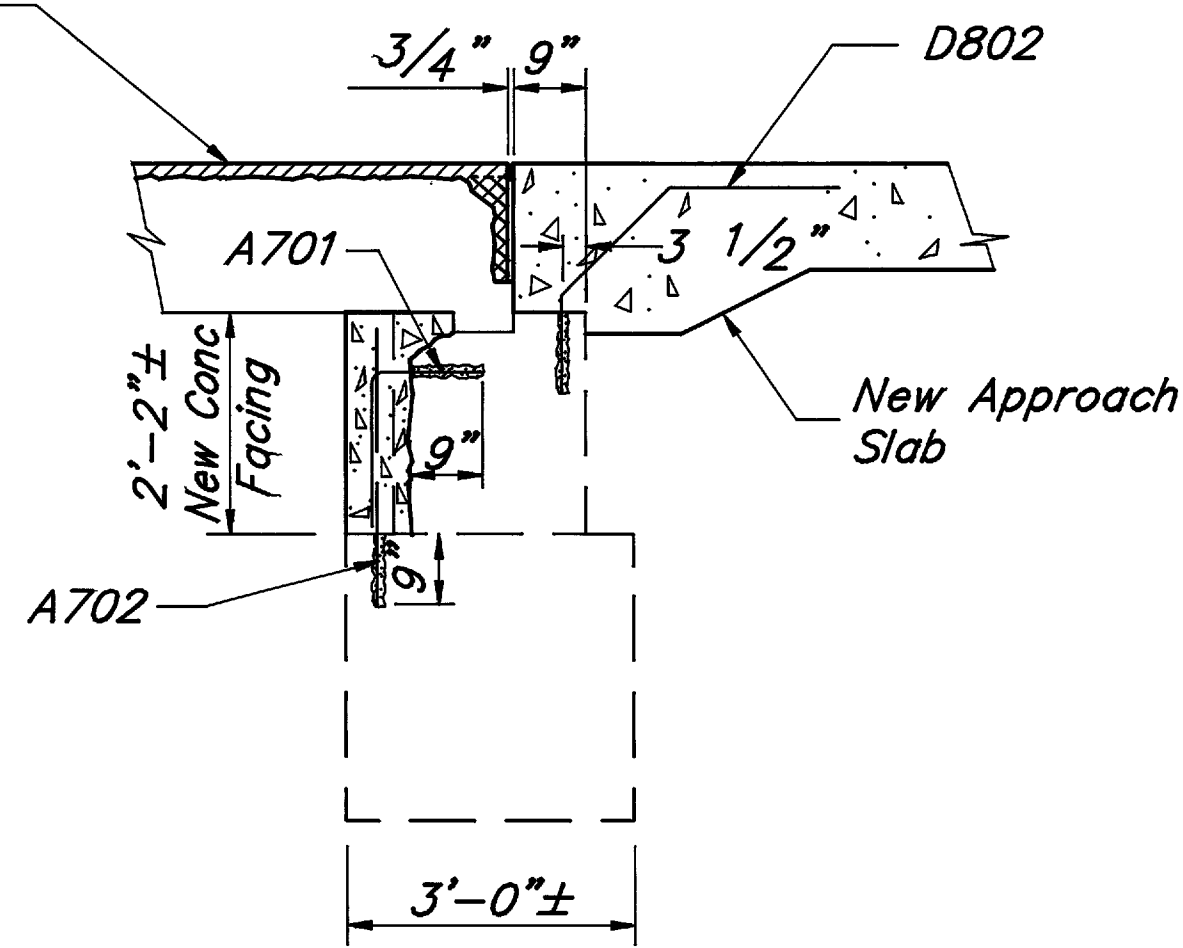
LEGEND	
NF	= Near Face
FF	= Far Face
EF	= Each Face
RA	= Rear Abutment
FA	= Forward Abutment



SECTION A-A
(Typ at Eastbound & Westbound Abutments)



SECTION B-B
(Typ at Eastbound & Westbound Abutments)



SECTION C-C
(Typ at Eastbound & Westbound Abutments)

• 1 1/4" Min. or to removal limits shown on sheet 5/9 minus 3/4"

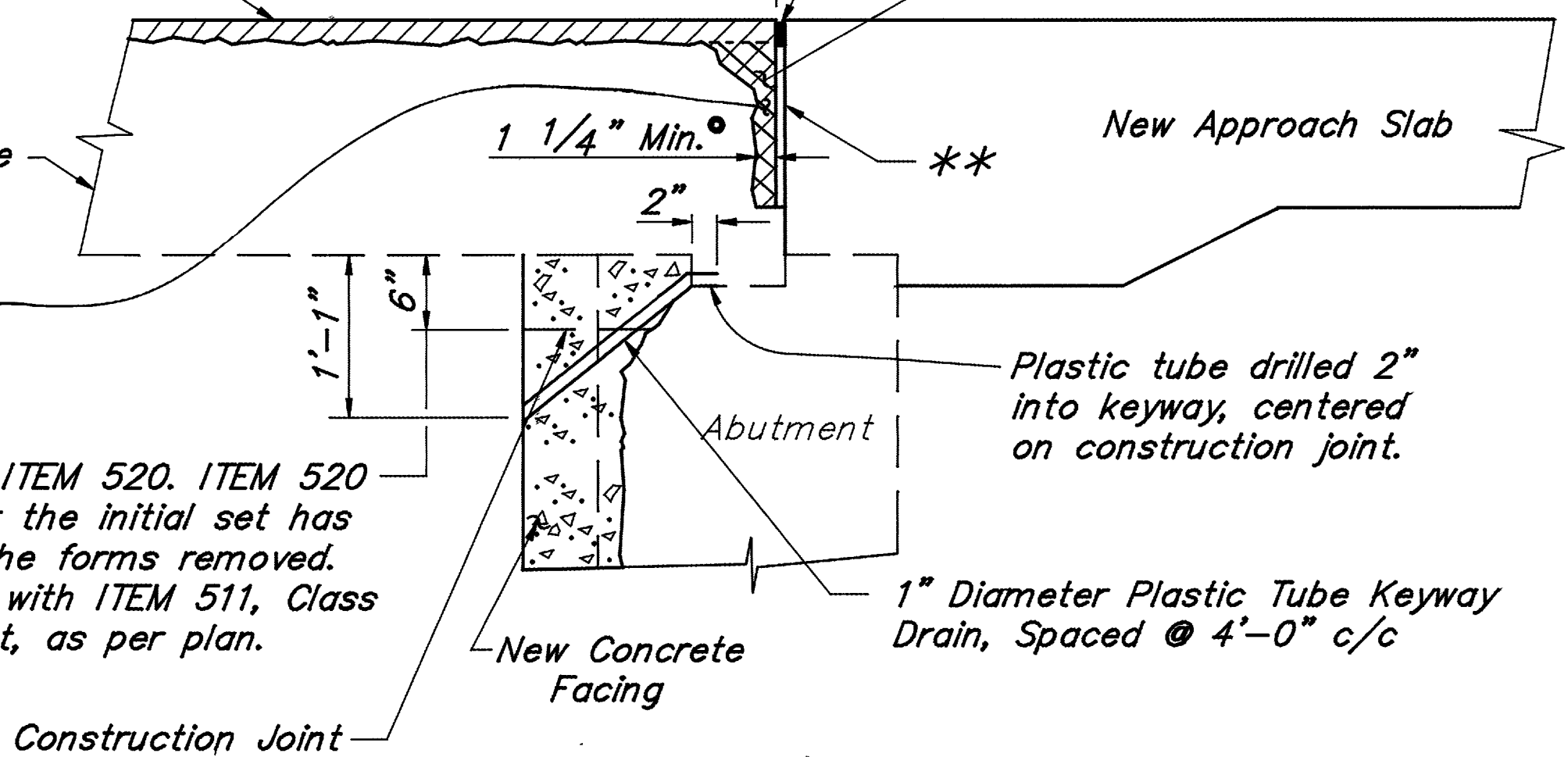
1 3/4" Min. Micro-Silica Modified Concrete Overlay

Existing Concrete Deck Slab

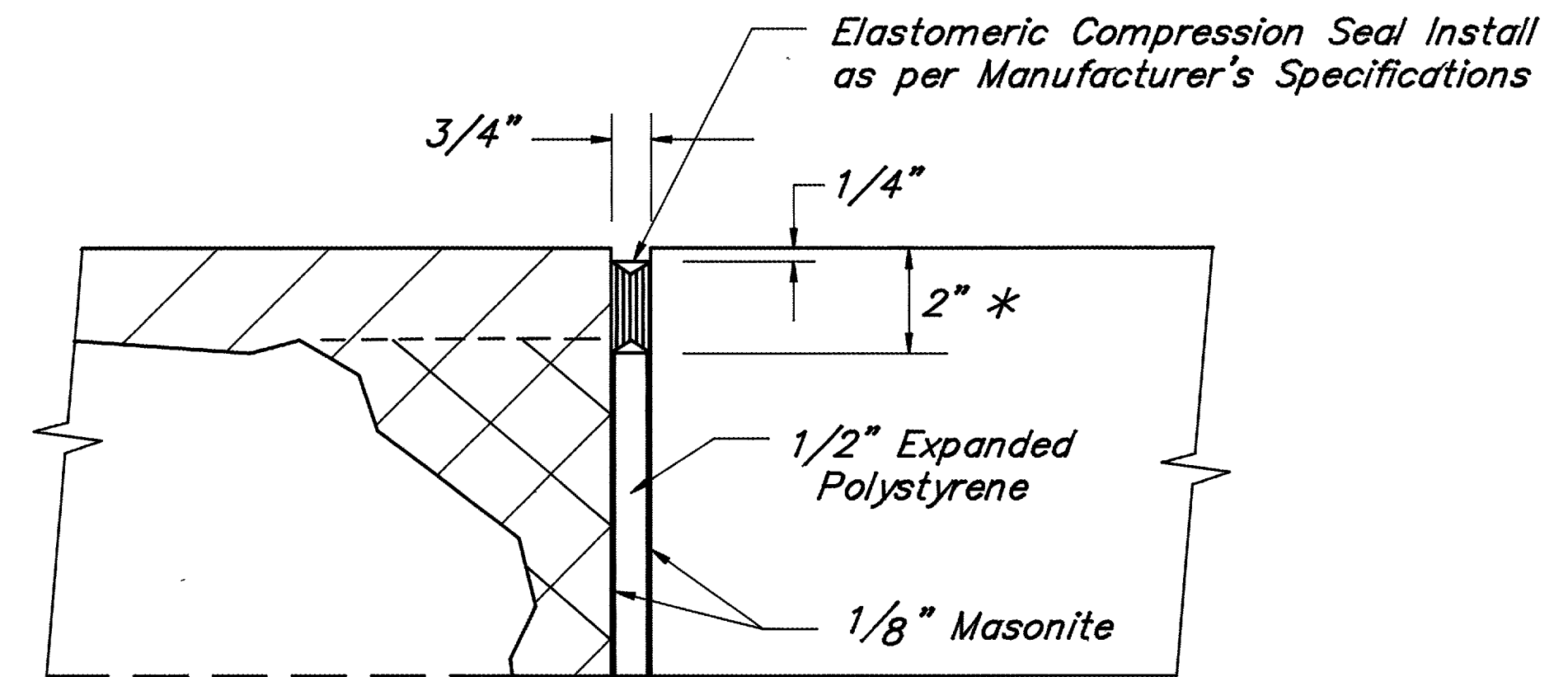
MICRO-SILICA MODIFIED CONCRETE OVERLAY (VARIABLE THICKNESS)

The top 6" shall be ITEM 520. ITEM 520 shall be placed after the initial set has been achieved and the forms removed. Include for Payment with ITEM 511, Class C Concrete Abutment, as per plan.

Eastbound & Westbound Full Length



JOINT REPAIR DETAIL



DETAIL A

NOTE: The compression seal shall be one continuous piece and shall seal the joint the full width of the slab deck.

* Dimensions shown are for Watson Bowman Acme Inc. WA-125, Structural Accessories SA1250 or D.S. Brown H-1250. Use any of the above or approved equal as per 705.11.

** Glue 1/2" expanded polystyrene between two pieces of 1/8" masonite. Install total depth of repaired area. The masonite and polystyrene shall be in place before any concrete is placed, and shall be below the final roadway grade to facilitate finishing of the concrete on both sides of the joint.

If the concrete on both sides of the joint is not finished to the same height, the joint surface shall be ground smooth as directed by the Engineer.

Saw out enough masonite and polystyrene to install the compression seal after the joint has been repaired.

Payment for all materials, except the concrete, and labor to repair the joint as per details on this sheet shall be included in the unit price bid per linear foot of Item 516, Preformed Elastomeric Compression Joint Seal (705.11).

REGION	STATE	PROJECT
5	OHIO	

MEDINA COUNTY
MED-76-0.61

Elastomeric Compression Seal, 705.11 (See Detail A)
For Deck Removal Limits, See Sheet 5/9.

New Approach Slab

Plastic tube drilled 2" into keyway, centered on construction joint.

1" Diameter Plastic Tube Keyway Drain, Spaced @ 4'-0" c/c

Elastomeric Compression Seal Install as per Manufacturer's Specifications

1/2" Expanded Polystyrene

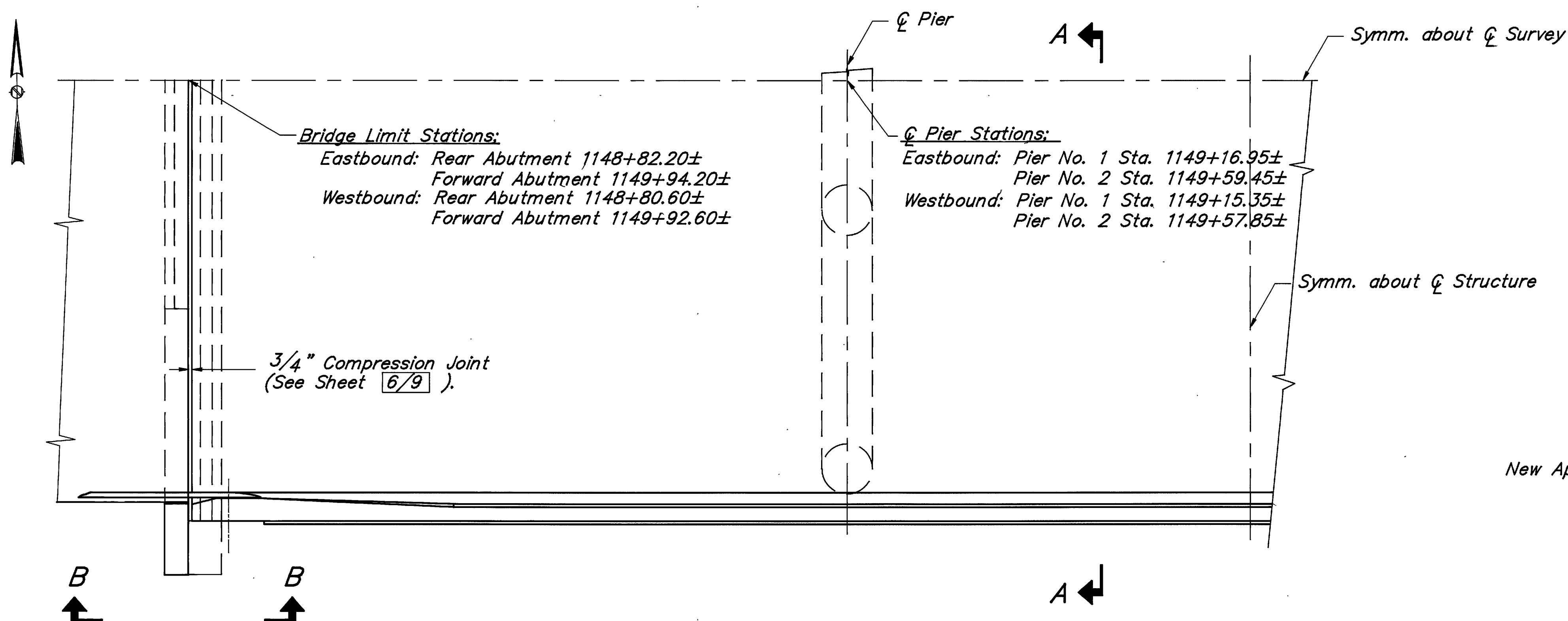
1/8" Masonite

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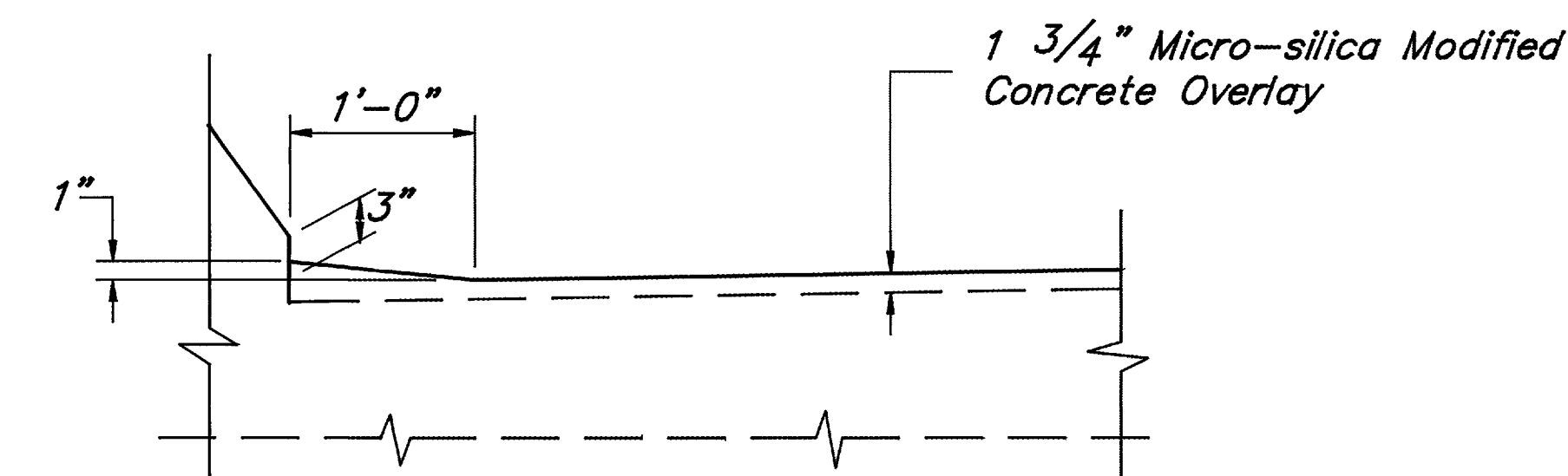
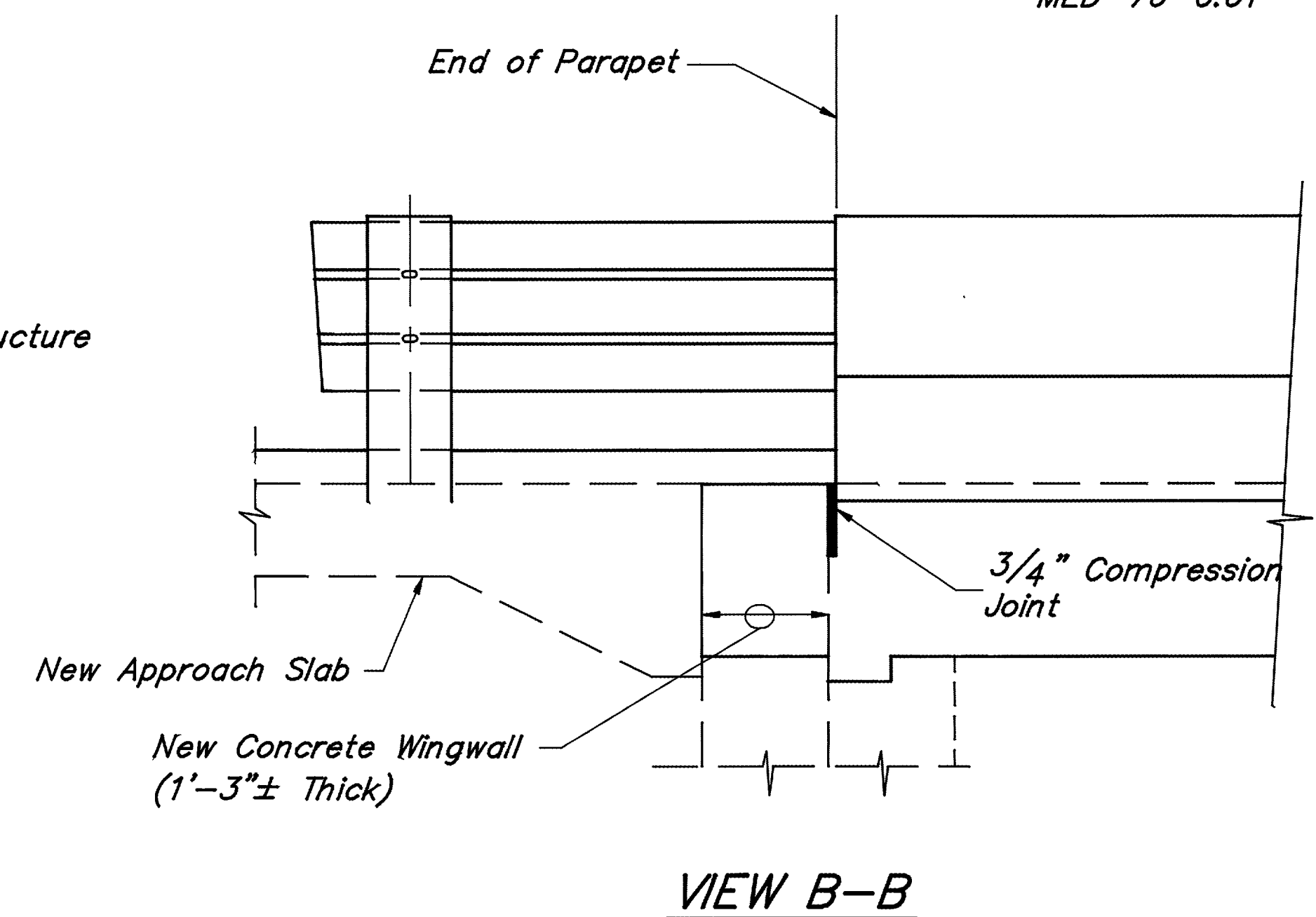
ABUTMENT DETAILS
BRIDGE NO. MED-76-0622 L/R
OVER C.H. 49

MEDINA COUNTY		OHIO	
DESIGNED	DRAWN	TRACED	CHECKED
D.L.C.	D.L.C.	J.D.V.	J.F.
12/91	12/91	12/92	12/92

61.9



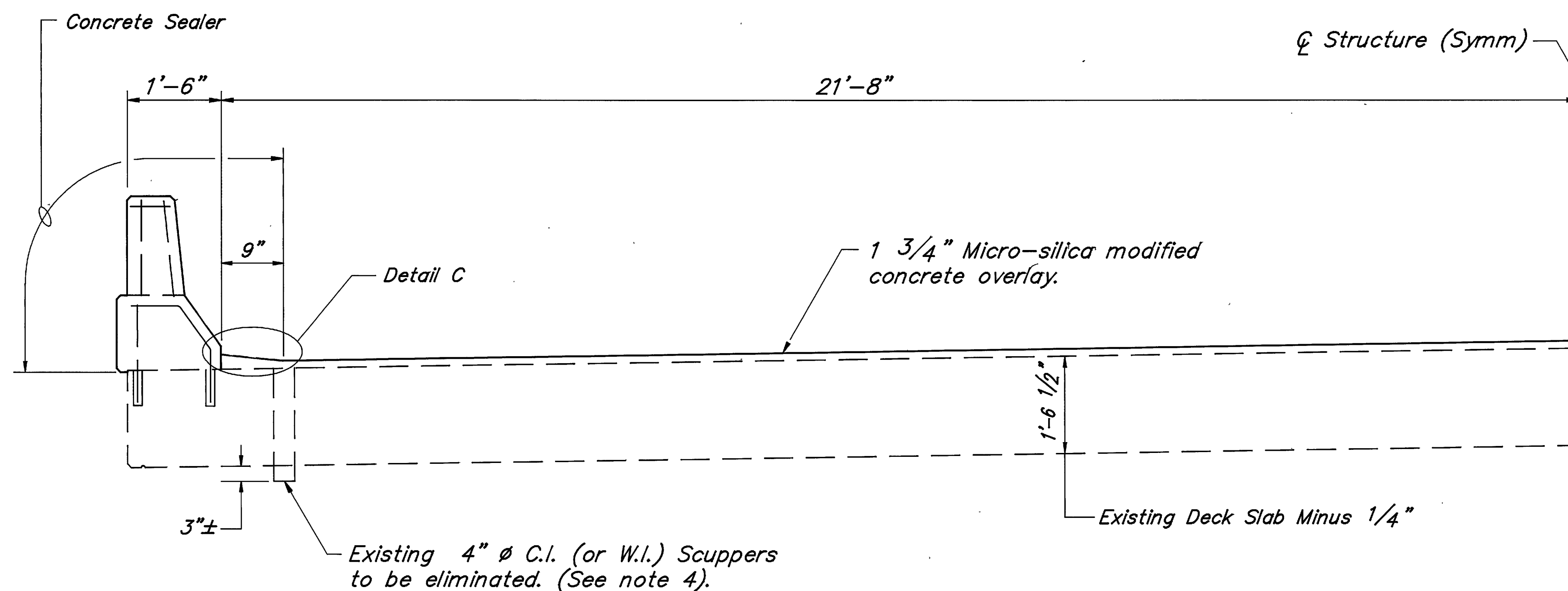
SUPERSTRUCTURE PLAN



Detail C

Notes:

1. For New Micro-silica Modified Concrete Overlay, refer to Proposal Note and General Note, Item Special - Micro-silica Modified Concrete Overlay (1 3/4 inches thick).
2. For Deck Repair & Removal Details, See Sheet 5/9.
3. For Parapet Details, See Sheet 8/9.
4. Existing 4" Ø C.I. (or W.I.) Scuppers to be plugged and filled with Micro-silica Modified Concrete Overlay. Include for payment with the unit price bid per cubic yard for Item Special Micro-silica Modified Concrete Overlay.



SECTION A-A

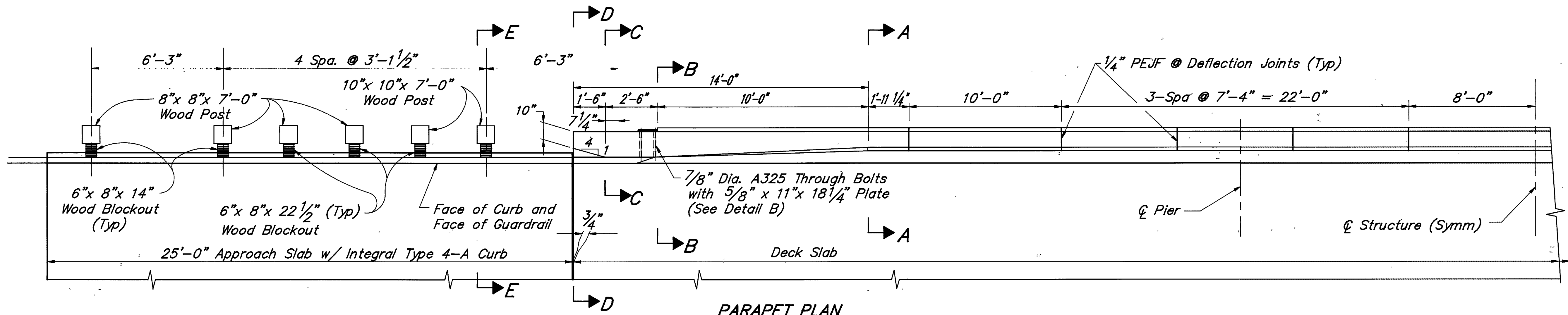
EASTBOUND & WESTBOUND STRUCTURES IDENTICAL

THOMAS FOK & ASSOCIATES, LTD.
 CONSULTING ENGINEERS, SURVEYORS & PLANNERS
 3896 MAHONING AVE. YOUNGSTOWN, OHIO

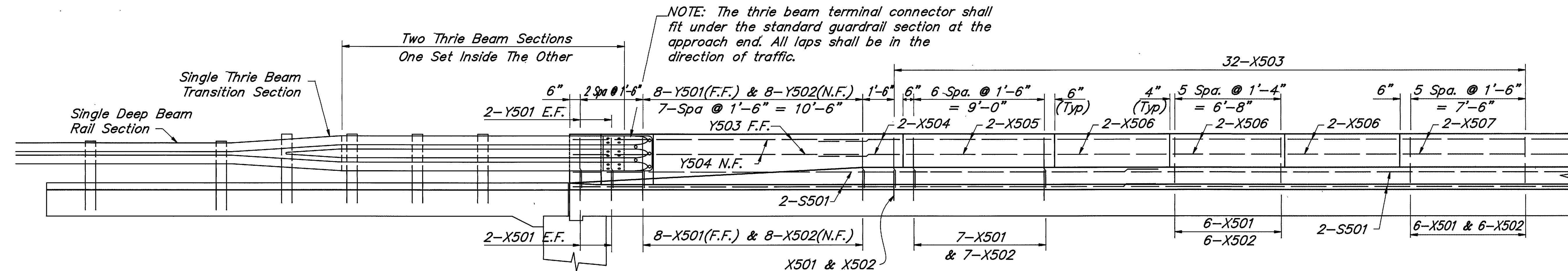
SUPERSTRUCTURE DETAILS
CONCRETE OVERLAY
 BRIDGE NO. MED-76-0622 L/R
 OVER C.H. 49

MEDINA COUNTY OHIO

DESIGNED D.L.C.	DRAWN D.L.C.	TRACED	CHECKED J.D.V.	REVIEWED J.F.	REVISED
12/91	12/91		12/92	12/92	

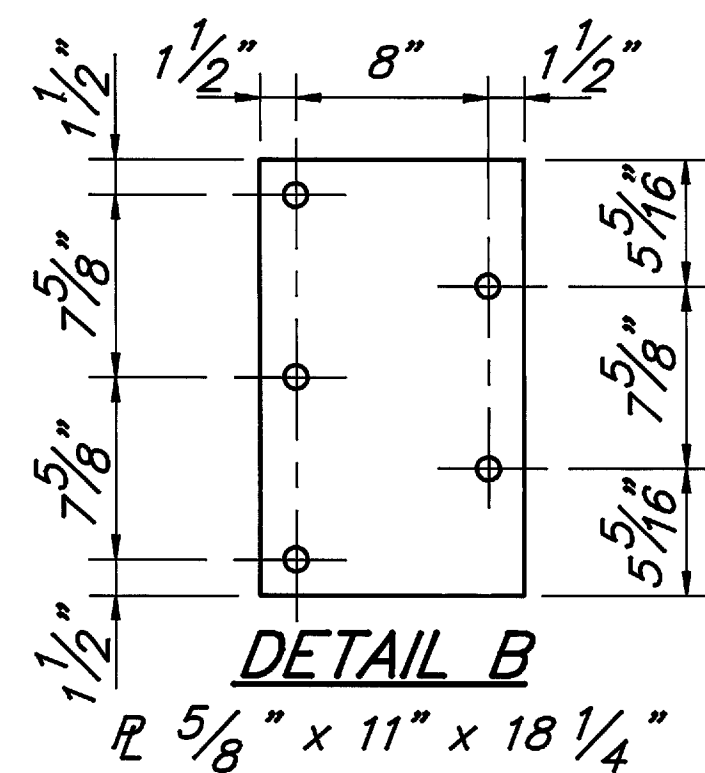
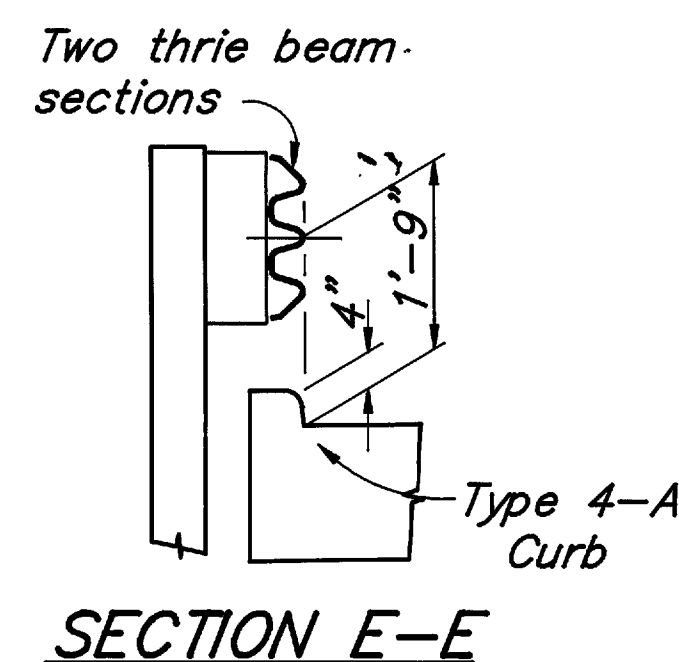
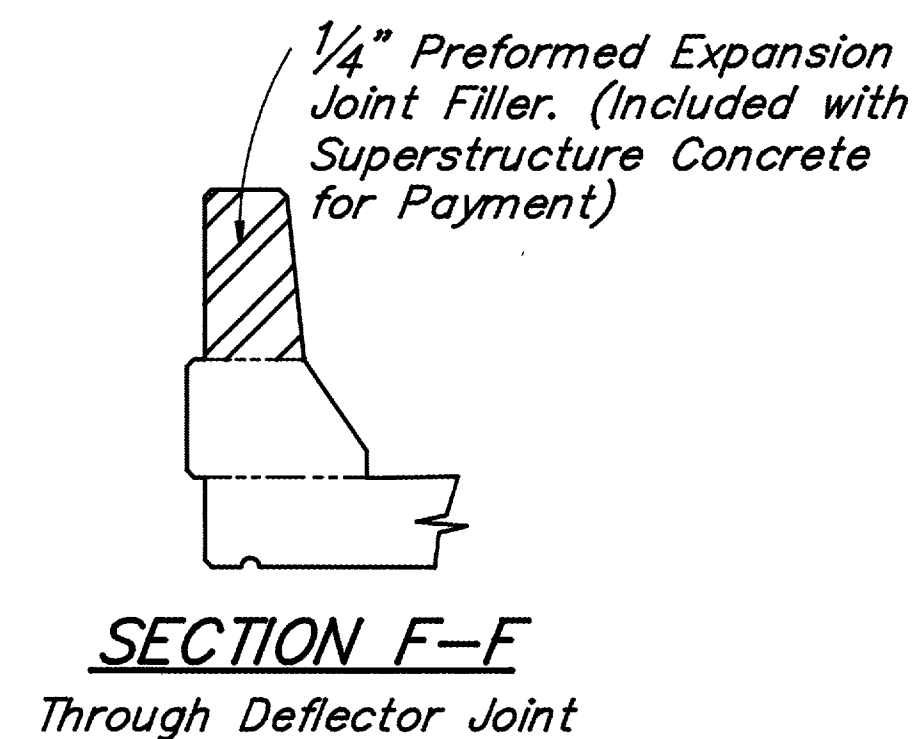
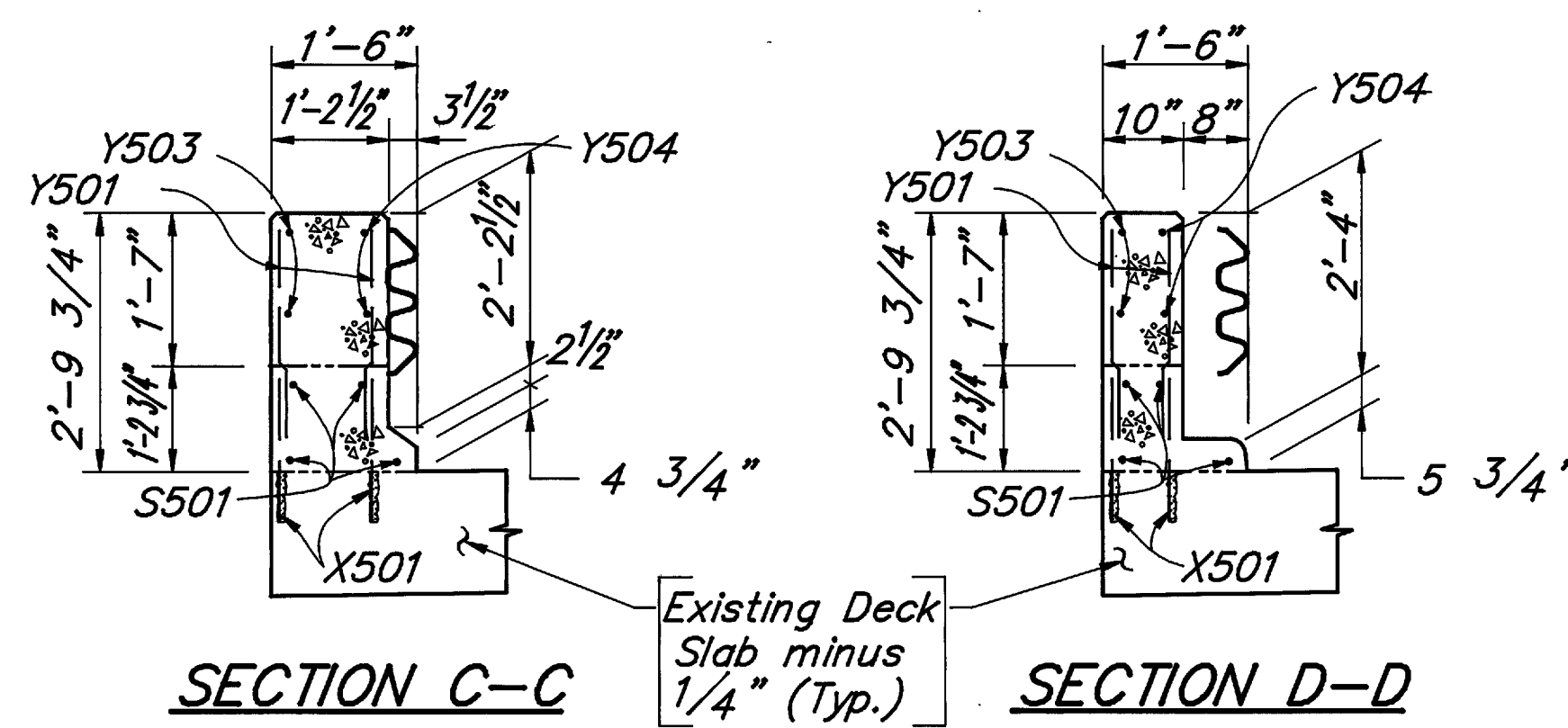
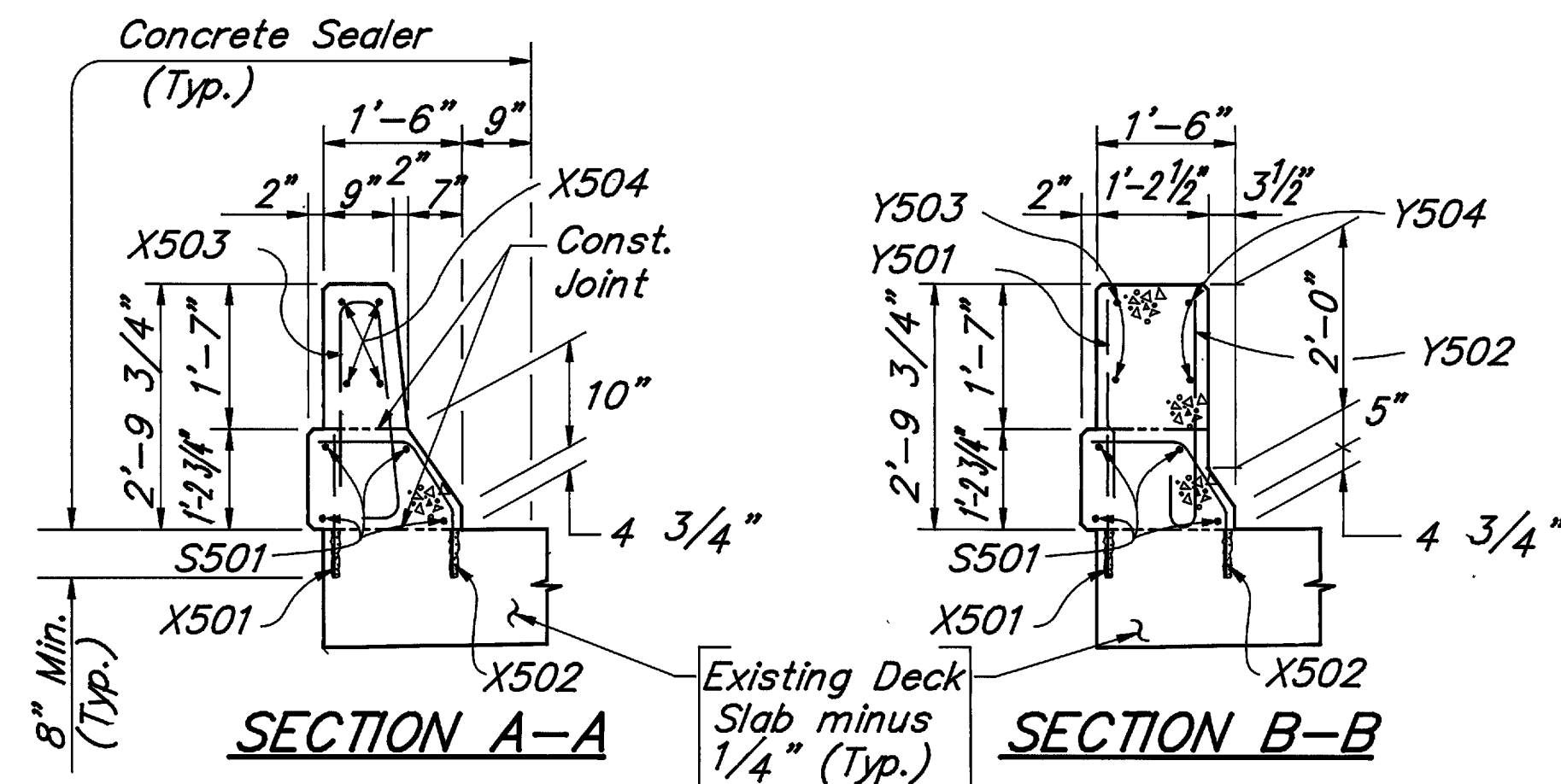


PARAPET PLAN



PARAPET ELEVATION

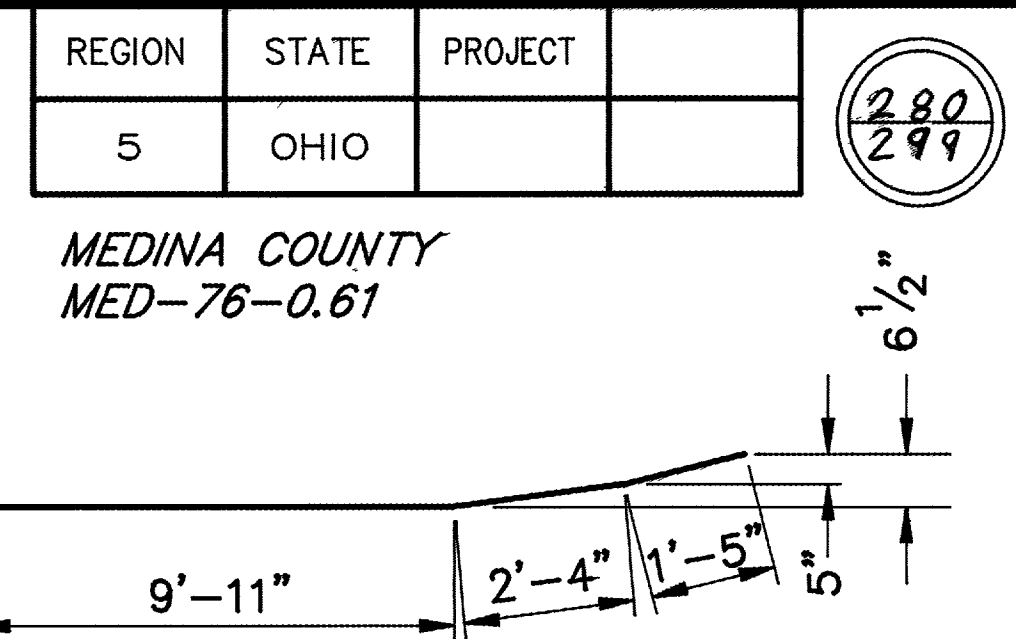
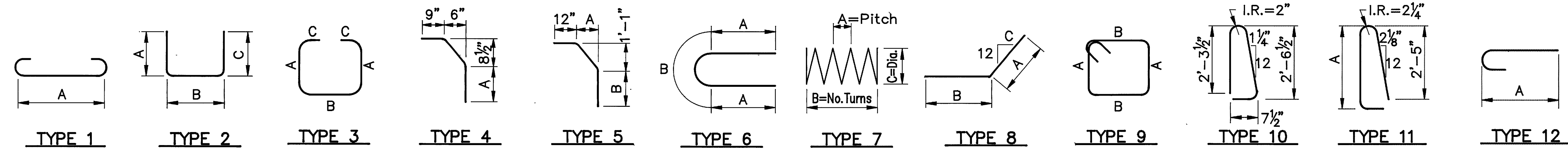
NORTH PARAPET SHOWN, SOUTH PARAPET SIMILAR



NOTES

- Concrete shall be Class S, $f'_c = 4500$ P.S.I., $f_c = 1800$ P.S.I. Reinforcing steel ASTM A615, A616, or A617, Grade 60 Epoxy Coated.
- Payment: Additional guardrail cost in excess of normal guardrail cost, such as: Terminal connector, steel plate, bolts, nuts, plate washers and other hardware shall be included with bridge terminal assembly for payment. Quantities of concrete and reinforcing steel for parapet are included with superstructure for payment.

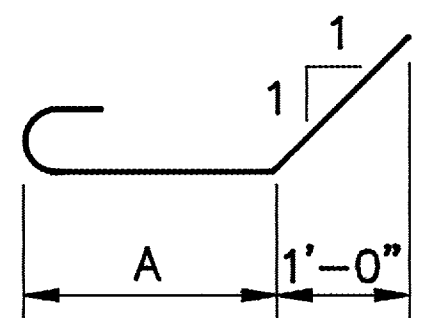
- PREFORMED EXPANSION JOINT FILLER in the parapet deflection joints may be either 1/4 inch gray sponge rubber or 1/4 inch gray cellular polyvinyl chloride (PVC) sponge. If rubber is used it shall meet the requirements of AASHTO M-153, Type 1. Density of PVC sponge shall not be less than 20 pounds per cubic foot.
- CONCRETE PARAPETS above the upper construction joint shall be placed in alternate sections by use of bulkheads. Closing sections shall be placed after removal of bulkheads and after placement of expansion joint filler. Exposed edges of the filler shall be flush with the surface of the concrete and shall be free of mortar.
- QUANTITIES of concrete and reinforcing steel for the parapet are included with the superstructure for payment.



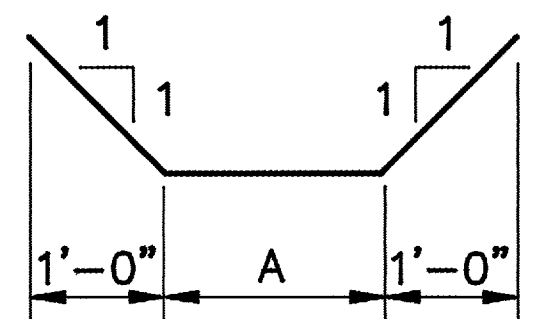
REINFORCING STEEL - WESTBOUND (LEFT)											
MARK	LENGTH	TYPE	A	B	C	D	INCR.	REAR ABT. NO.	FWD. ABT. NO.	SUPERSTRUCTURE NO.	WEIGHT LBS.
ABUTMENT											
A501	23'-10"	Str.						8	8		398
A502	3'-0"	2	1'-2"	11"	1'-2"			6	6		38
A503	3'-0"	2	1'-5"	1'-8"	0			4	4		25
A504	3'-5"	Str.						4	4		29
A701	2'-3"	2	1'-6"	11"	0			32	32		295
A702	2'-10"	Str.						32	32		370
D802	4'-5"	16	2'-7"					30	30		708
										Sub-Total	1,863
PARAPETS											
S501	29'-2"	Str.								32	974
X501	1'-8"	Str.								174	302
X502	2'-5"	4	10"							158	398
X503	5'-6"	10								126	723
X504	3'-8"	Str.								16	61
X505	9'-8"	Str.								16	162
X506	7'-0"	Str.								48	351
X507	15'-8"	Str.								8	131
Y501	2'-7"	Str.								48	130
Y502	3'-2"	12	2'-7"							32	106
Y503	13'-8"	Str.								8	114
Y504	13'-8"	14								8	114
										Sub-Total	3,566
										Total	5,429

REINFORCING STEEL - EASTBOUND (RIGHT)											
MARK	LENGTH	TYPE	A	B	C	D	INCR.	REAR ABT. NO.	FWD. ABT. NO.	SUPERSTRUCTURE NO.	WEIGHT LBS.
ABUTMENT											
A501	23'-10"	Str.						8	8		398
A502	3'-0"	2	1'-2"	11"	1'-2"			6	6		38
A503	3'-0"	2	1'-5"	1'-8"	0			4	4		25
A504	3'-5"	Str.						4	4		29
A701	2'-3"	2	1'-6"	11"	0			32	32		295
A702	2'-10"	Str.						32	32		370
D802	4'-5"	16	2'-7"					30	30		708
										Sub-Total	1,863
PARAPETS											
S501	29'-2"	Str.								32	974
X501	1'-8"	Str.								174	302
X502	2'-5"	4	10"							158	398
X503	5'-6"	10								126	723
X504	3'-8"	Str.								16	61
X505	9'-8"	Str.								16	162
X506	7'-0"	Str.								48	351
X507	15'-8"	Str.								8	131
Y501	2'-7"	Str.								48	130
Y502	3'-2"	12	2'-7"							32	106
Y503	13'-8"	Str.								8	114
Y504	13'-8"	14								8	114
										Sub-Total	3,566
										Total	5,429

TYPE 14



TYPE 15



TYPE 16

NOTES :

BAR SIZE : The bar size is indicated in the bar mark. The first digit where three digits are used, and the first two digits where four are used, indicate the bar size number. For example: A506 is No. 5 size bar and P1101 is a No. 11 size bar.

All Bars are Epoxy Coated.
Str. = Straight

9/ 9

THOMAS FOK & ASSOCIATES, LTD.
 CONSULTING ENGINEERS, SURVEYORS & PLANNERS
 3896 MAHONING AVE. YOUNGSTOWN, OHIO

REINFORCING STEEL LIST
 BRIDGE NO. MED-76-0622 L/R
 OVER C.H. 49

MEDINA COUNTY OHIO

DESIGNED	DRAWN	TRACED	CHECKED	REVIEWED	REVISED
J.D.V.	D.L.B.		D.L.B.	J.F.	
11/92	11/92		11/92	12/92	