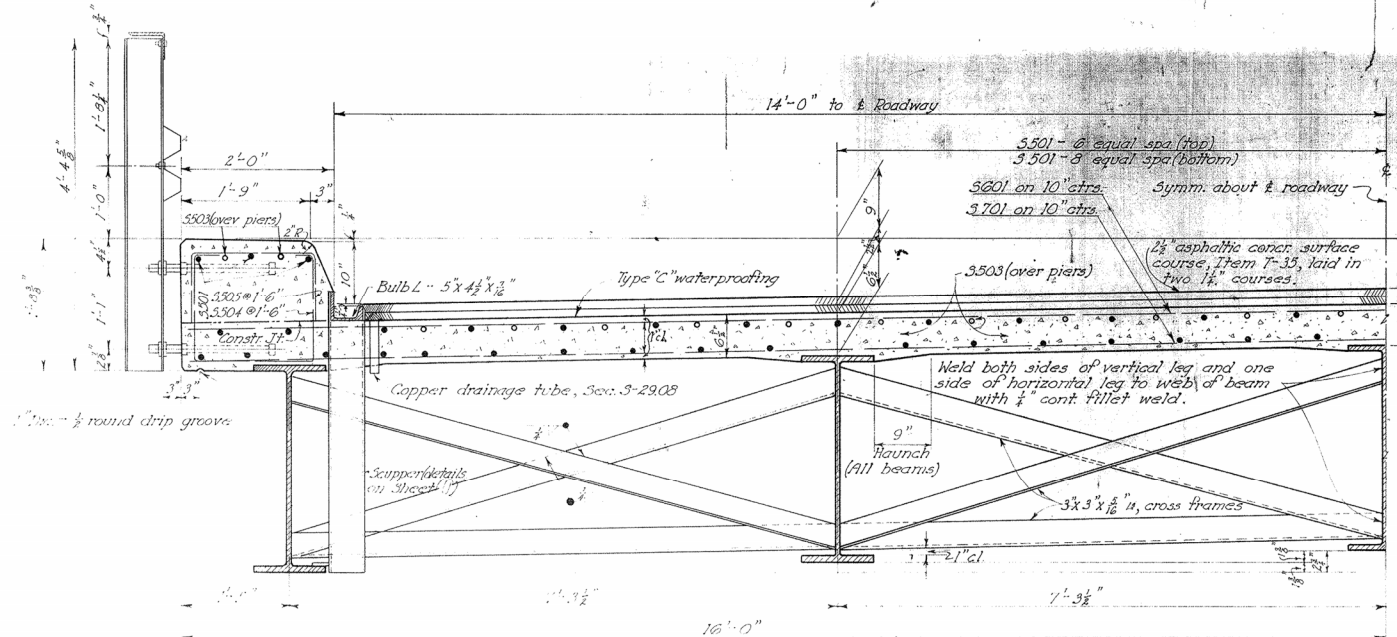


ATB-322-5.28



TRANSVERSE HALF-SECTION

All beams are 33 WF 130  
2" clear distance shall be provided between horizontal and inclined cross frame members.

- NOTES**
- BEAM SPLICE WELDING PROCEDURE:**
1. At first pier, weld bottom flange moment plate to beam on middle span side of joint only.
  2. Raise end of beam at first abutment.
  3. Weld beam flanges and web at first pier.
  4. Weld top flange moment plate at first pier (both sides of joint).
  5. Complete welding of bottom flange moment plate at first pier.
  6. Repeat steps 1 to 5 inclusive at second pier by raising at second abutment.
  7. Lower ends of beams at both abutments.

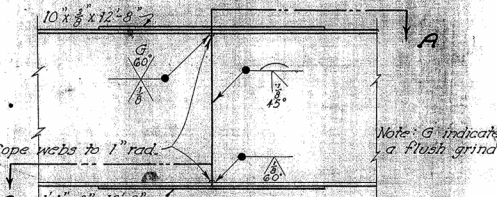
CONCRETE shall be Class "C".

CAMBER: No cambering of beams is required. Beams shall be so fabricated that any curved beams will be placed convex flange up.

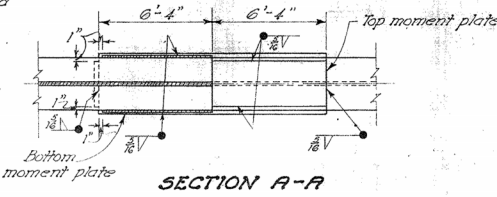
**DECK CONSTRUCTION PROCEDURE:** Deck slab shall be placed in sections, between transverse construction joints, in the numerical order and in the direction shown, in order that the major portion of dead load deflection may occur prior to placing concrete over each pier.

**RAILING:** The guard rail and hand rail shall be painted white in accordance with Sec. I-1507 of the Construction and Material Specifications. The galvanized posts and anchor bolts shall not be painted.

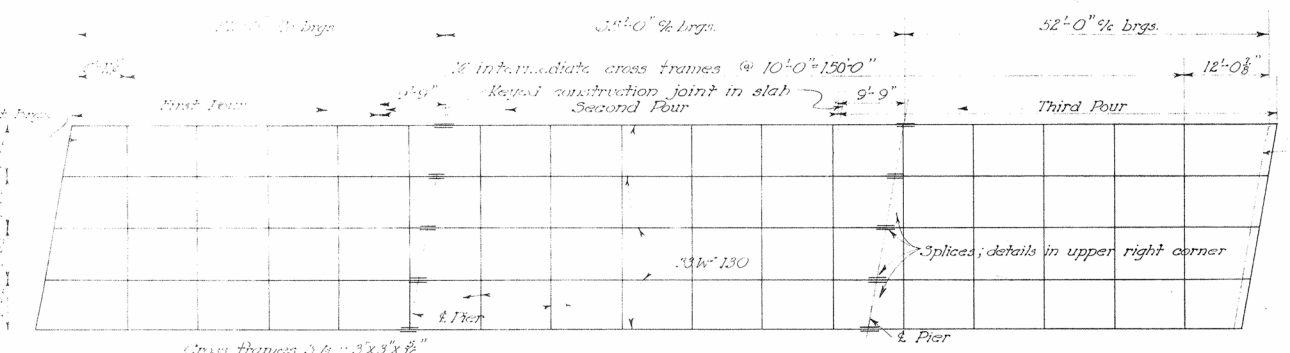
**END FINISH** shall be copper-bearing steel. A welded butt joint in the end finish, at the centerline of roadway, will be required for that portion of the end finish attached to the superstructure. The portion attached to the backwall shall be placed in segments which shall be closely butted, with one of the joints at the apex of the crown, but shall not be welded.



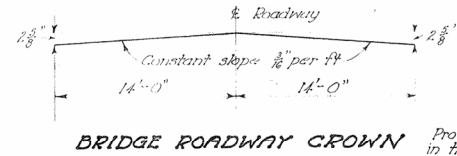
BEAM SPLICE DETAILS



SECTION A-A

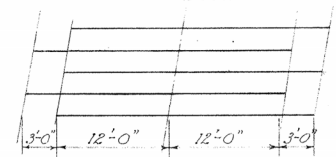


STEEL FRAMING PLAN  
Slab Pouring Sequence Shown

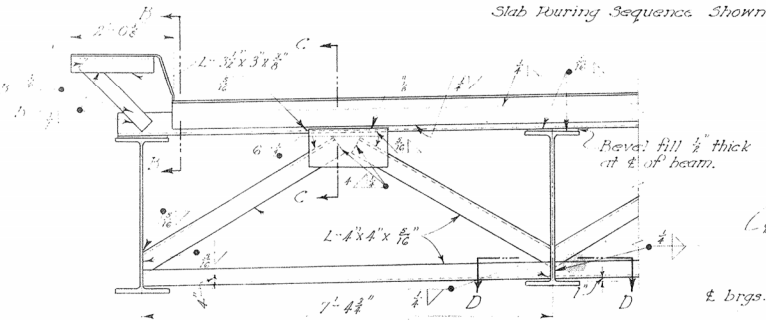


BRIDGE ROADWAY CROWN

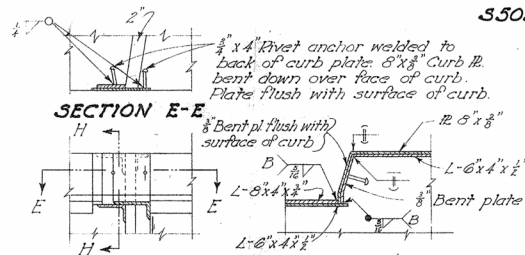
Provide a joint in the edge bar and in the angle on the center line of the roadway. Additional joints may be provided in them at a minimum spacing of 6'-0" (joints shall not be welded.)



S503 BAR LAYOUT

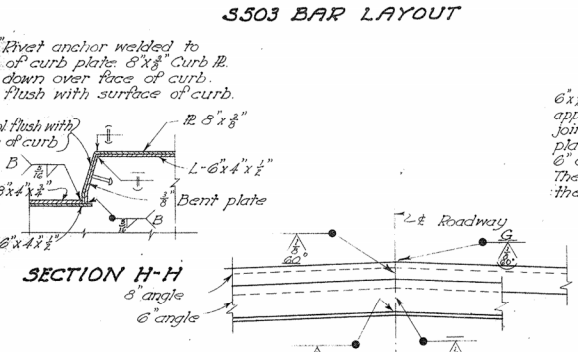


END CROSS FRAME



SECTION E-E

VIEW B-B



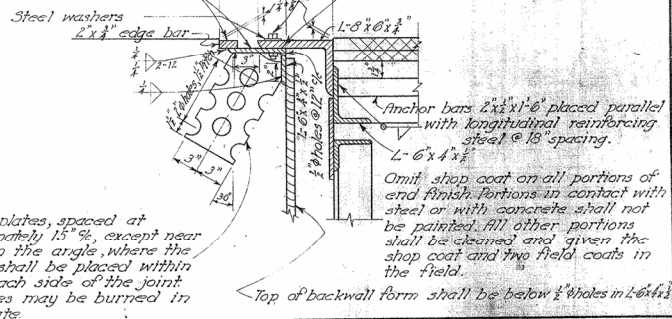
SECTION H-H

SECTION C-C

6x1/2x12 plates, spaced at approximately 15%, except near joints in the angle, where the plates shall be placed within 6\"/>

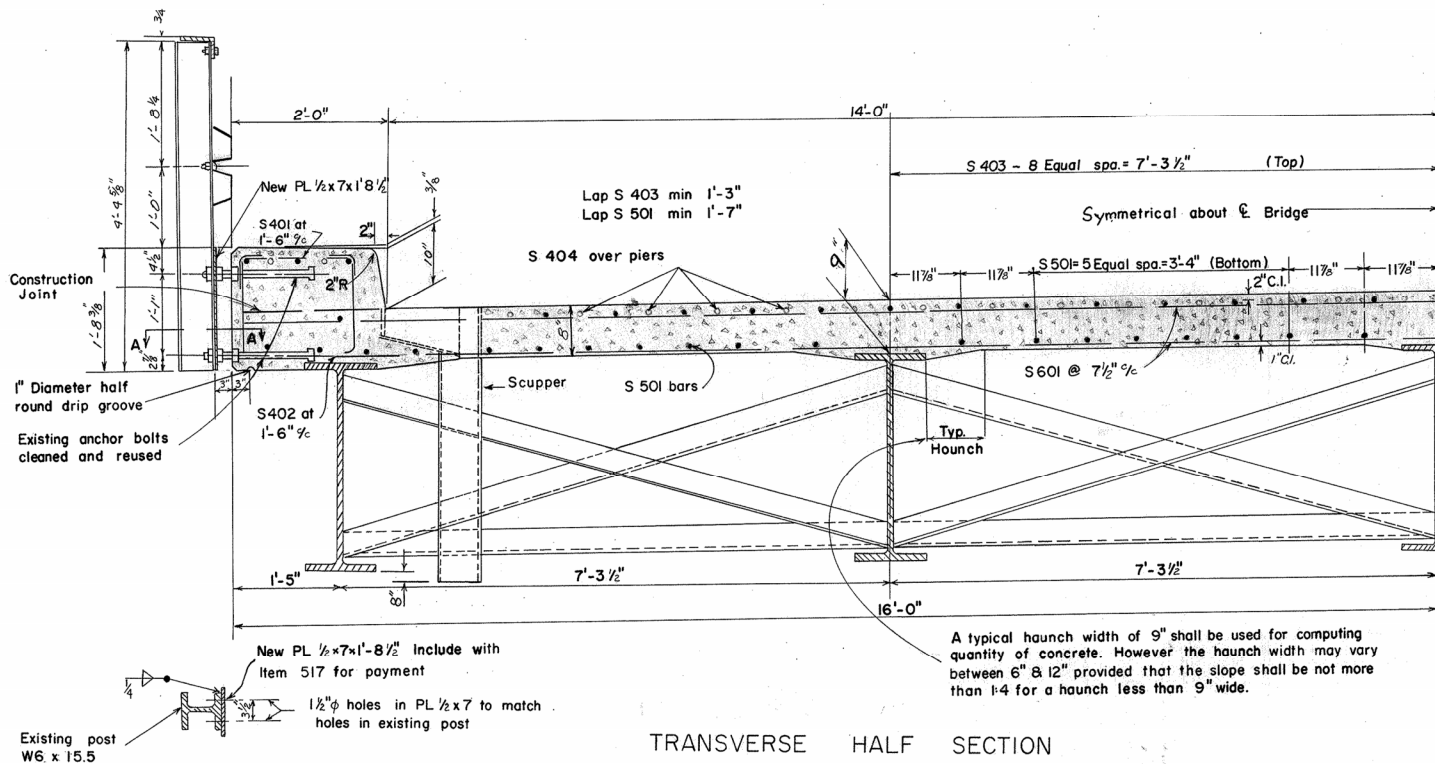
3/4x2 bolts at not more than 2'-0\"/>

This contact surface shall not be painted but shall be lubricated with flake graphite prior to placing of backwall concrete.



STATE OF OHIO			
DEPARTMENT OF HIGHWAYS			
DIVISION OF DESIGN AND CONSTRUCTION			
BUREAU OF BRIDGES			
<b>EXISTING SUPERSTRUCTURE DETAILS</b>			
BRIDGE No. ATB-322-5.28			
OVER GRAND RIVER			
RAHABULA COUNTY		Sta. 90+20.71	
Sec. ATB-322-5.17		Sta. 91+94.28	
DESIGNED	DRAWN	TRACED	CHECKED
BDH	BDH	FG	RHN
DATE		REVISION	
9/17 3-25-55		1	

WELDED BUTT-JOINT IN SUPERSTRUCTURE  
END FINISH ANGLES AT ± OF ROADWAY



TRANSVERSE HALF SECTION

SECTION A-A

Item 837 shall include painting of new PL 1/2 x 7 and areas of paint damaged by welding new plate to existing post.

**WORK TO BE DONE**

This project calls for the removal of the asphalt wearing course and the entire concrete deck, including safety curb and bridge rail. Remove existing railing for reuse. Clean and reuse the existing expansion joints. Replace the existing deck with a new 8" concrete deck as shown including safety curbs and railing. Paint structural steel. Use Item 836 Concrete Curing & Protective Membrane on the deck and safety curbs.

**PLANS OF EXISTING BRIDGE**

The original contract construction plans dated 3-26-55 may be examined at Division 4 office of the State Highway Department, Ravenna, Ohio and in the Bureau of Bridges in Columbus, Ohio under the title of ATB-322-517. *Sheet 2 of this plan is from the original construction plans and is for information only.*

**DETOUR**

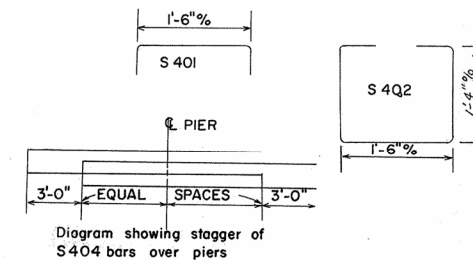
The traffic will be rerouted on S.R. 45, S.R. 534, and U.S. 6 until the project is completed.

**CONSTRUCTION & MATERIALS**

Use State of Ohio Department of Highways, Construction and Materials Specifications dated 1-1-71 and Supplemental specification 808 & 836 dated 1-1-71, 837 dated 12-31-70, and 929 dated 3-28-67.

ITEM		QUAN	UNIT	DESCRIPTION	PART I	
					SUPER	GEN.
202	540	S.Y.		Wearing course removed		540
202	130	C.Y.		Portions of structure removed		130
202	347	L.F.		Deep beam bridge railing removed for re-use		347
509	39,547	Lbs.		Reinforcing steel		39,547
511	167	C.Y.		Class "C" concrete superstructure		167
516	56	L.F.		expansion & contraction joints, as per plan		56
517	347	L.F.		Bridge railing rebuilt, as per plan		347
518	20	Ea.		Scuppers		20
808	167	Units		Chemical admixture for concrete, Type A, B, or D		167
837	Lump Sum			Surface preparation		LUMP
837	Lump Sum			Spot Prime Painting		LUMP
837	Lump Sum			Complete coat finish painting		LUMP
614	Lump Sum			Maintaining Traffic		LUMP

REINFORCING STEEL				
Bar Mark	Length	No.	Bt. or St.	Weight
S 401	2'-4"	228	Bt	365
S 402	4'-9"	228	Bt	730
S 403	35'-6"	175	St.	4148
S 404	26'-0"	64	St.	1114
S 501	35'-6"	190	St.	7030
S 601	31'-8"	550	St.	26,160
REPLACEMENT BARS				
RE 401	6'-3"	1	St.	
RE 501	6'-7"	1	St.	
RE 601	6'-11"	1	St.	
<b>TOTAL</b>				<b>39,547</b>



GENERAL NOTES PART I

**ITEM 516**

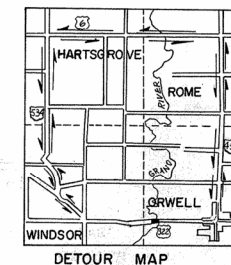
The expansion joints shall be cleaned of all tar and other foreign material.

**ITEM 837** Shall conform to SS 837 dated 12/31/70

Clean and spot prime any rusted or bare metal on existing structure. This will include any damaged areas that occur during deck removal. Inspect all welds on cross frames and restore broken welds. All structural steel shall then receive one finish coat of paint conforming to SS 837. Payment for inspection and repair of welds to be included in Item 837; Surface Preparation.

**ITEM 518**

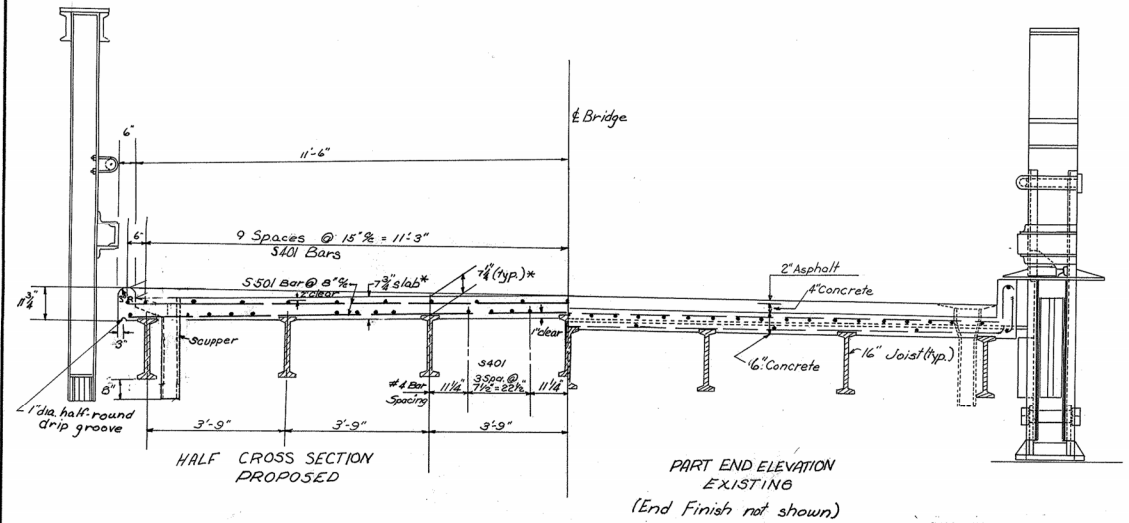
Replace the existing 20 scuppers with 20 new scuppers. The scuppers shall conform to Std. Dr. SD 1-69 and shall be located in approximately the same locations as the existing scuppers. Scuppers shall extend 8" below bottom flange of exterior beam instead of 2".



**PROPOSED DECK DETAILS**  
 Bridge No. ATB-322-0528  
 Over Grand River  
**PART I**

Ashtabula County      Sta. 90 + 20.71  
 Sec. ATB-322-5.28      Sta. 91 + 94.28

Designed	Drawn	Traced	Check	Reviewed	Date	Revised
M.F.			J.F.			

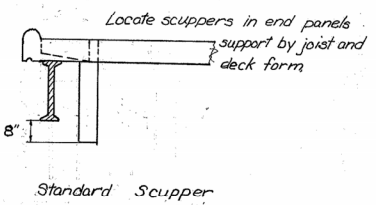


\* These are nominal dimensions. The quantity of deck concrete to be paid for shall be based on these dimensions even though deviation from them may be necessary because the top flange of the beam may not have the exact configuration required to place it parallel to the finished grade.

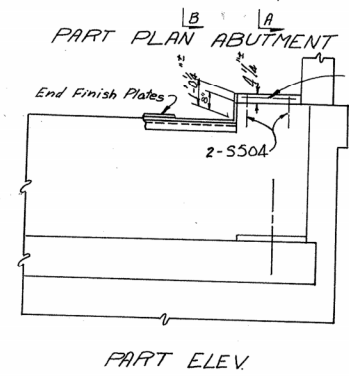
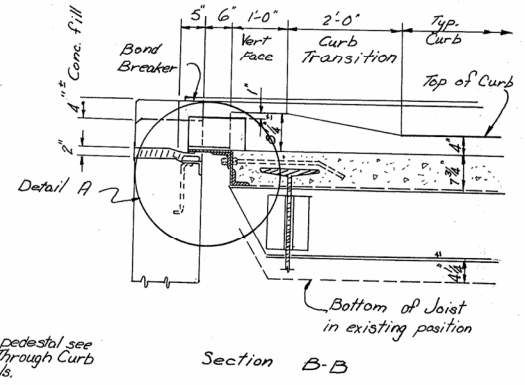
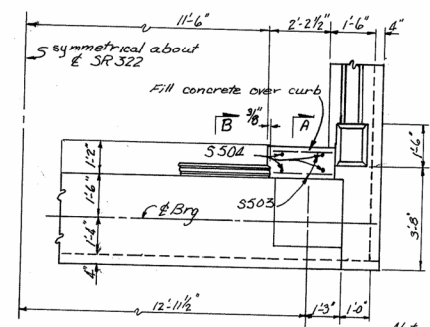
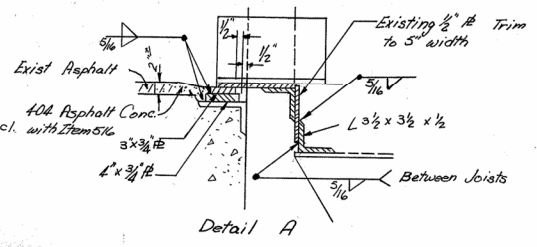
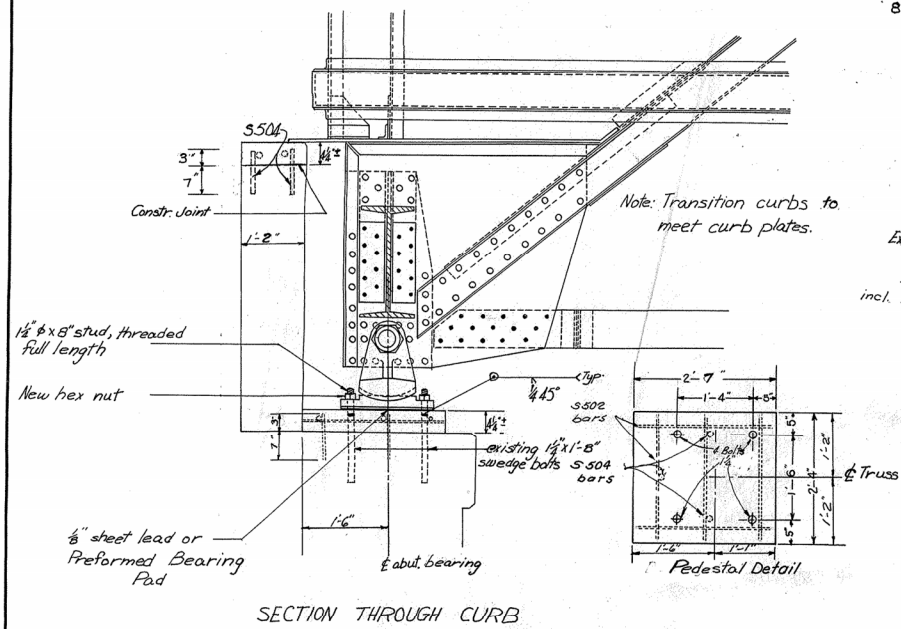
Scuppers shall be in accordance with Std. Dwg. S.D.-1-69 except that scupper pipes shall extend 8" below the bottom of the beams instead of 2".

Reinforcing Steel List				
Bar Mark	Length	No.	Bt. or St.	Weight
S401	38'-6"	188	St.	4832
S501	23'-6"	60	St.	1470
S502	2'-2"	20	St.	46
S503	2'-0"	4	St.	8
S504	10"	28	St.	24
Replacement Bar				
RE 501	6'-7"	1	St.	
RE 401	6'-3"	1	St.	
Total				6380

Bar Size is indicated in the bar mark. The first digit indicates the bar size number. For example A601 is a No. 6 size bar.



Studs, hex nuts, bearing pads and labor connected with the anchor bolt extension and resetting of bearing plates shall be included with Item 513 for payment.



**PART 2**  
**PROPOSED DECK**  
**DETAILS**

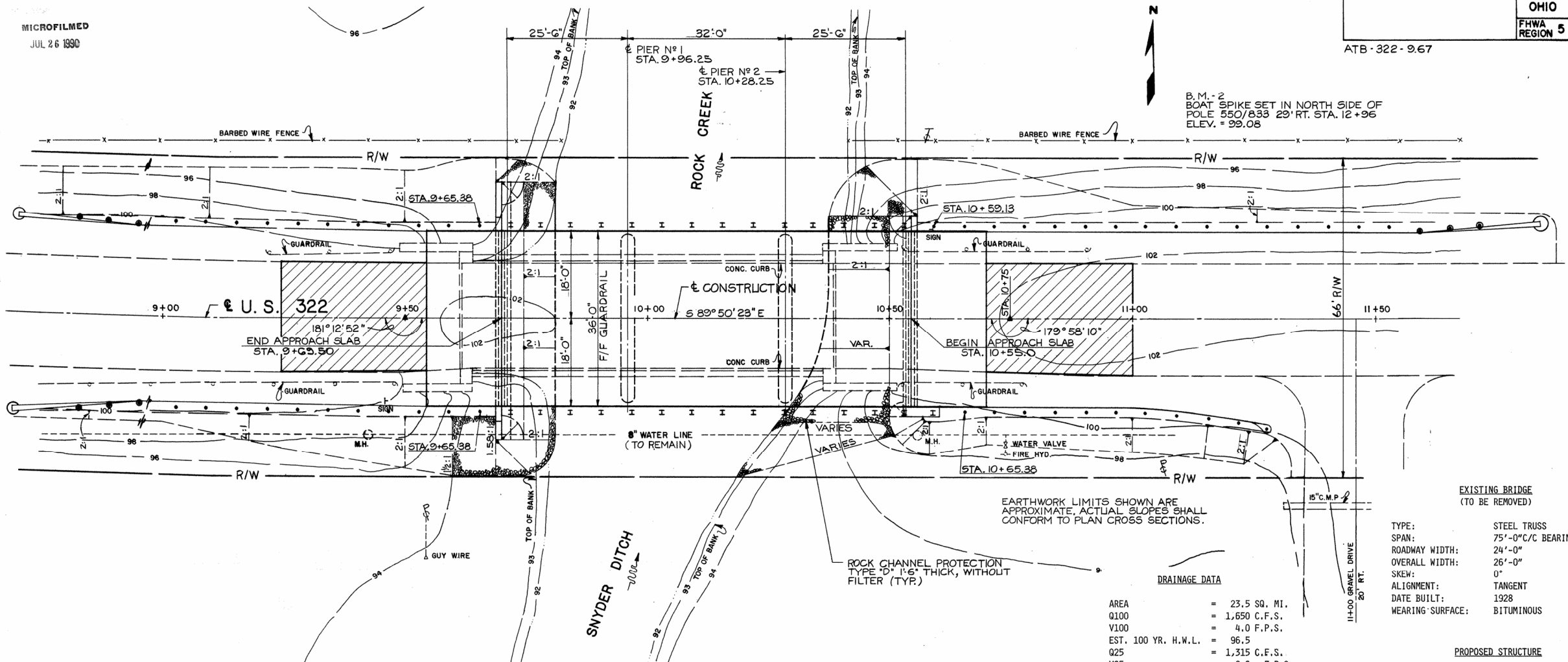
Bridge No. ATB-322-0967  
Over Rock Creek

Ashtabula County  
B. No. ATB-322-0967

Sta. 2+85  
Sta. 3+60

Designed	Drawn	Traced	Check	Reviewed	Date	Revised
M.F.			J.F.			

ATB-322-0967



B.M.-2  
 BOAT SPIKE SET IN NORTH SIDE OF  
 POLE 550/833 20' RT. STA. 12+96  
 ELEV. = 99.08

EARTHWORK LIMITS SHOWN ARE  
 APPROXIMATE. ACTUAL SLOPES SHALL  
 CONFORM TO PLAN CROSS SECTIONS.

EXISTING BRIDGE  
 (TO BE REMOVED)

TYPE: STEEL TRUSS  
 SPAN: 75'-0" C/C BEARINGS  
 ROADWAY WIDTH: 24'-0"  
 OVERALL WIDTH: 26'-0"  
 SKEW: 0°  
 ALIGNMENT: TANGENT  
 DATE BUILT: 1928  
 WEARING SURFACE: BITUMINOUS

DRAINAGE DATA

AREA	=	23.5 SQ. MI.
Q100	=	1,650 C.F.S.
V100	=	4.0 F.P.S.
EST. 100 YR. H.W.L.	=	96.5
Q25	=	1,315 C.F.S.
V25	=	2.6 F.P.S.
EST. 25 YR. H.W.L.	=	96.1

TRAFFIC DATA

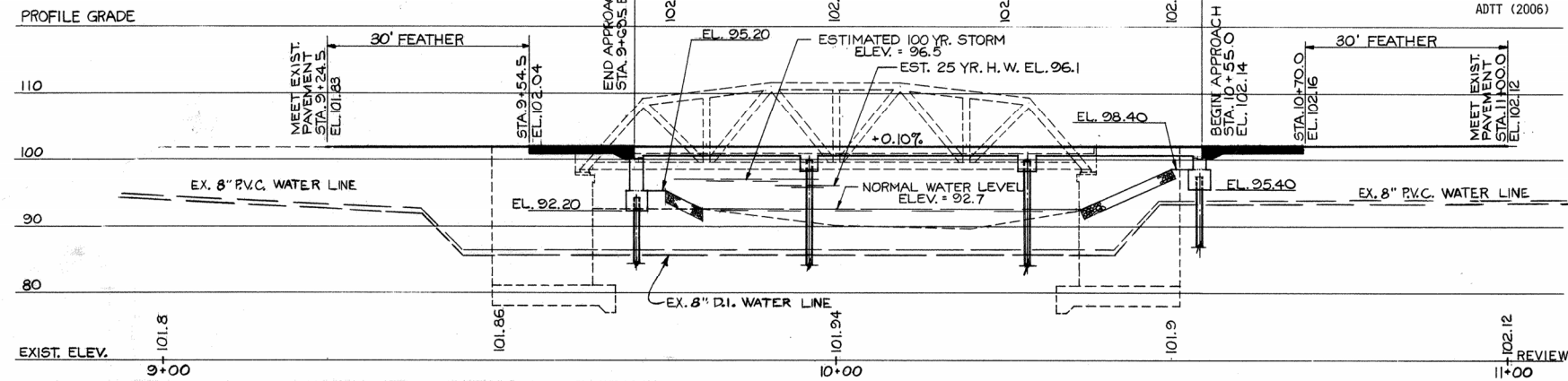
ADT (2006)	5,020
ADTT (2006)	430

PROPOSED STRUCTURE

TYPE: CONTINUOUS REINFORCED  
 CONCRETE SLAB WITH  
 REINFORCED CONCRETE  
 SUBSTRUCTURE.  
 SPANS: 25'-6", 32'-0", 25'-6"  
 ROADWAY WIDTH: 36'-0" F/F GUARDRAILS  
 LIVE LOAD: HS20-44 AND ALTERNATE  
 MILITARY LOADING  
 SKEW ANGLE: 0°  
 WEARING SURFACE: MONOLITHIC CONCRETE  
 APPROACH SLAB: 15 FT. (AS-1-81)  
 UPERELEVATION: NONE  
 ALIGNMENT: TANGENT

ESTIMATED AVERAGE PILE  
 PAY LENGTHS  
 ABUTMENTS No 1 & 2  
 HP 10x42 = 30'  
 PIERS No 1 & 2  
 HP 12x53 = 30'

B.M.-1  
 BOAT SPIKE SET IN N.E. SIDE OF  
 POLE 550/830 26.6' RT. STA. 8+47  
 ELEV. = 100.00



**GPD** 1/7  
 GLAUS, PYLE, SCHOMER, BURNES & DeHAVEN, INC.  
 AKRON, OHIO

**SITE PLAN**

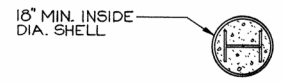
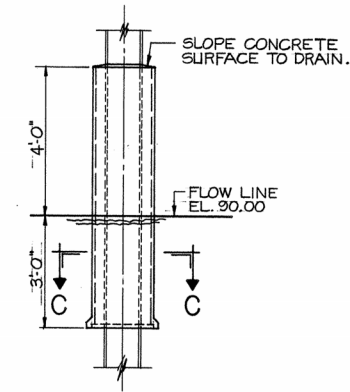
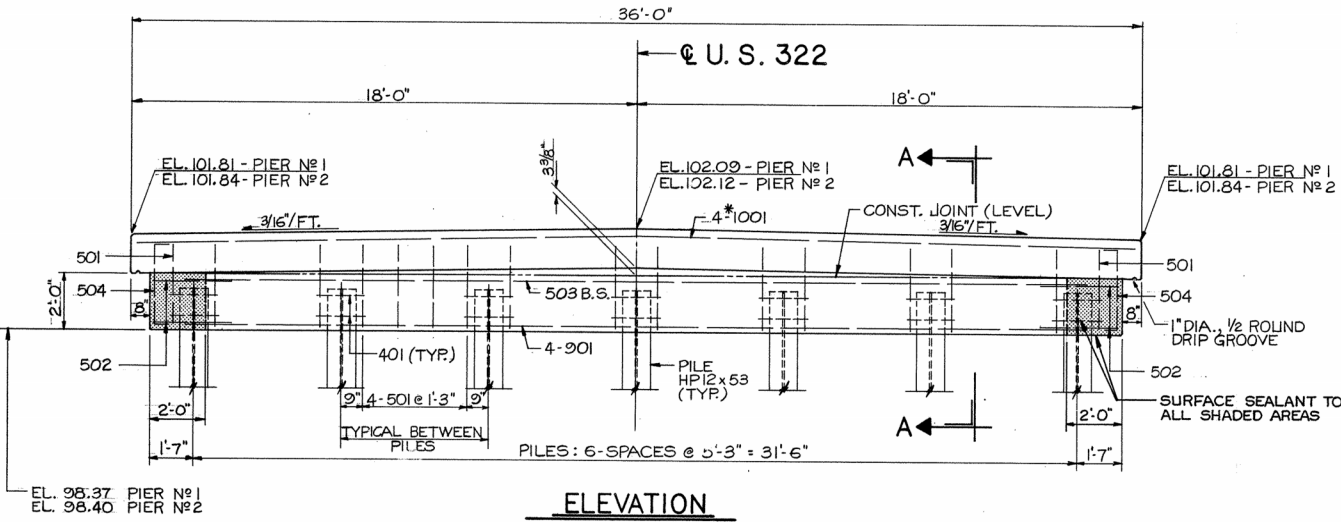
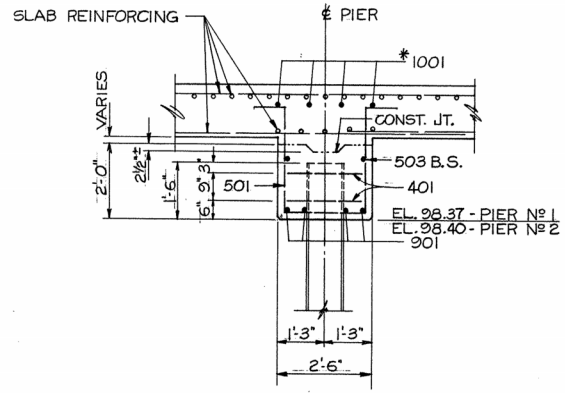
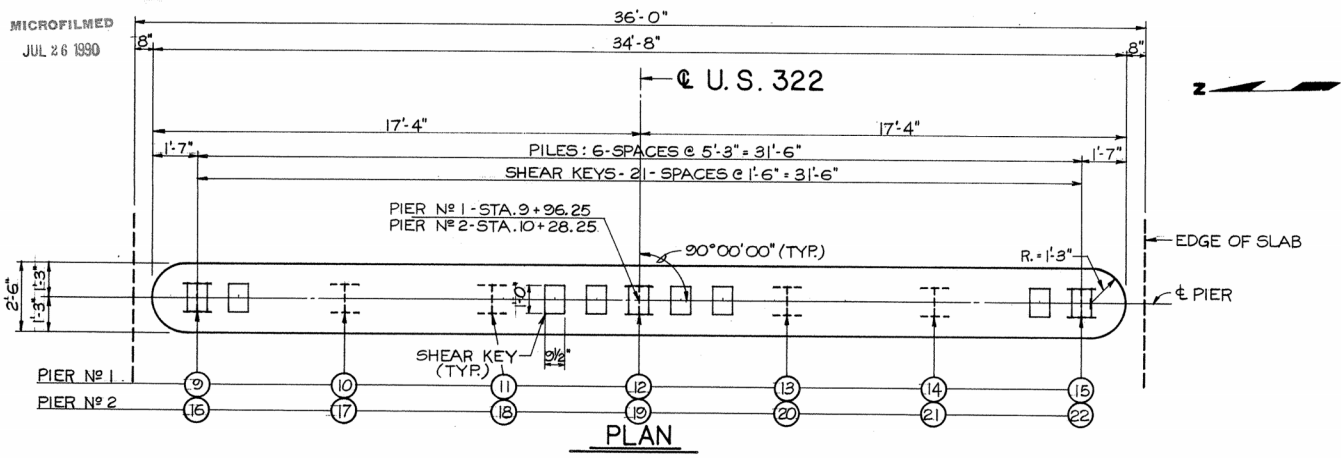
BRIDGE No ATB-322-0967  
 OVER ROCK CREEK

ASHTABULA COUNTY STA. 9+69.50 TO  
 STA. 10+55.00

DESIGNED JRS	DRAWN R.L.W.	TRACED	CHECKED FBG	REVIEWED DATE RAH 3-19-86	REVID
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REVIEWED BY BURGESS & NIPLE, LTD.  
 J.L.G. 12/9/86

MICROFILMED  
JUL 26 1990



ATB-322-9.67

NOTES

- PREFIXES "1P" AND "2P" WILL BE ADDED TO ALL REBAR MARKS SHOWN FOR PIER NO. 1 AND PIER NO. 2 RESPECTIVELY. SEE REINFORCING SCHEDULE.
- REINFORCING STEEL SHOWN THUS (\*) TO BE EPOXY-COATED.
- MINIMUM COVER TO REBARS SHALL BE 2" UNLESS NOTED OTHERWISE.
- ATTACHMENT OF FALSEWORK SUPPORT MEMBERS TO PIER PILES WILL BE PERMITTED IF THE ATTACHMENT IS MADE TO THAT PORTION OF PILE ENCASED IN THE PIER CAP.

5. PILE ENCASEMENT: EXPOSED STEEL PILES IN PIERS SHALL HAVE PILE ENCASEMENT AS SHOWN IN DETAIL "A". THE ENCASEMENT SHALL CONSIST OF CLASS C CONCRETE PLACED WITHIN A SHELL OF EXTRA-STRENGTH VITRIFIED CLAY PIPE, GALVANIZED CORRUGATED STEEL PIPE, OR PLAIN OR CORRUGATED PLASTIC PIPE ALL HAVING A MINIMUM INSIDE DIAMETER OF APPROXIMATELY 18 INCHES FOR HP12 X 53 PILES.

COST OF ENCASEMENT SHALL BE INCLUDED WITH THE PILES FOR PAYMENT.

<b>GPD</b>		5/7	
GLAUS, PYLE, SCHOMER, BURNS & DeHAVEN, INC. AKRON, OHIO			
<b>PIERS NO 1 &amp; 2</b>			
BRIDGE NO ATB-322-0967 OVER ROCK CREEK			
ASHTABULA COUNTY		STA. 9+69.50 TO STA. 10+55.0	
DESIGNED	DRAWN	TRACED	CHECKED
BWL	R.L.W.		K.S.J.
REVIEWED	DATE	REVISION	
	10-30-96		