

**TOWN OF VERNON, CONNECTICUT**  
**ADDENDUM NO. 1**  
**CONTRACT #2140**  
**REPAIR AND RESURFACING OF BRIDGE No. 05240**  
**KELLY ROAD OVER THE HOCKANUM RIVER**

**Bid Opening: Tuesday, May 14, 2024**  
**@ 11:00 AM**

All bidders are hereby advised of the following amendments to the Contract Bid Documents which are hereby an integral part of the specifications for the subject project, prepared by Cardinal Engineering Associates, Inc., Meriden, Connecticut, to the same extent as all other documents.

Bids submitted shall be deemed to include the Contract Documents information as shown in this Addendum. General bidders shall notify sub-bidders that may be affected by this Addendum as applicable. Failure by the Bidder to incorporate this Addendum may result in a rejection of the bid. Bidders are directed to review changes to all portions of the work as changes to one portion may affect the work of another.

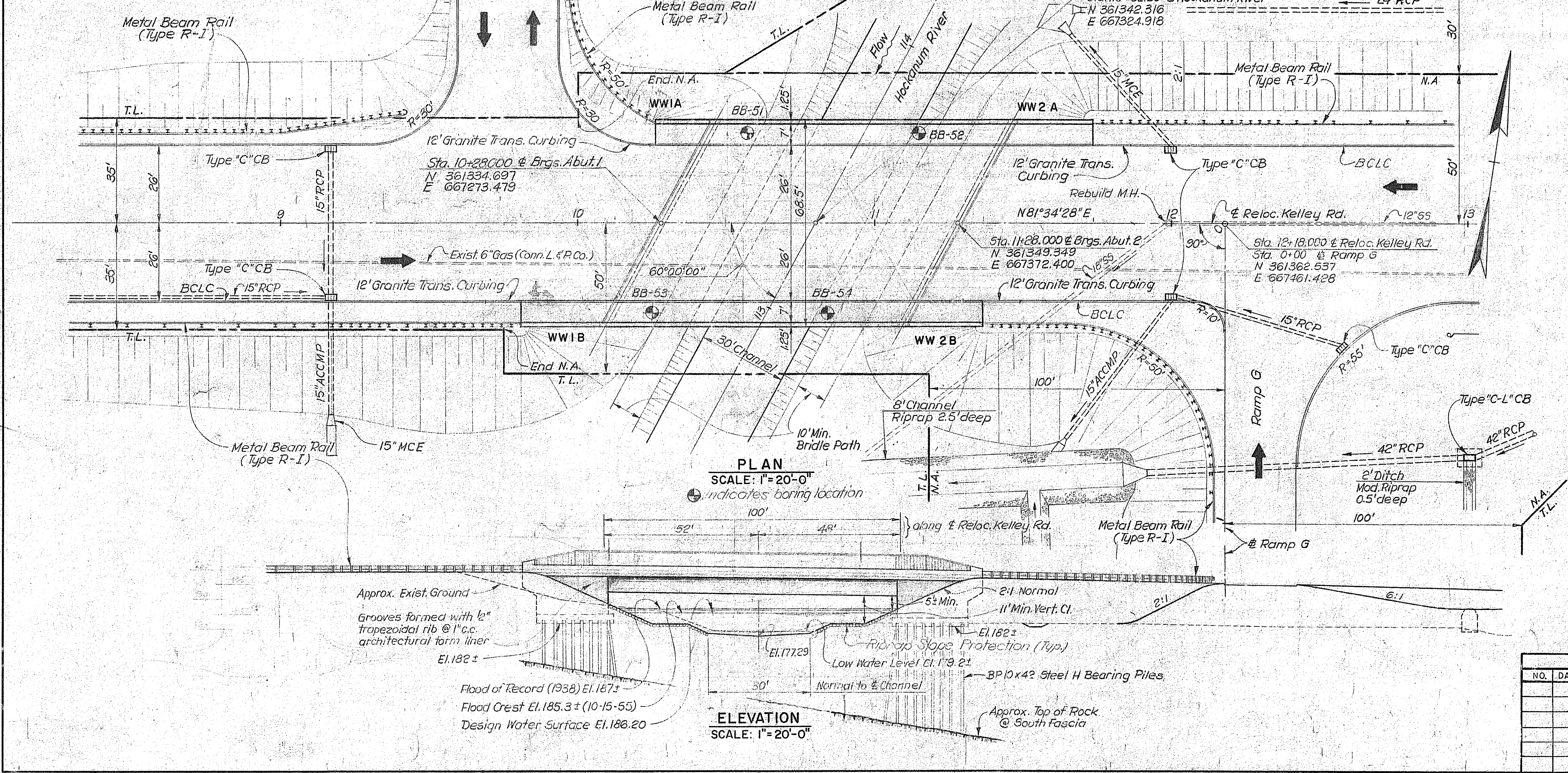
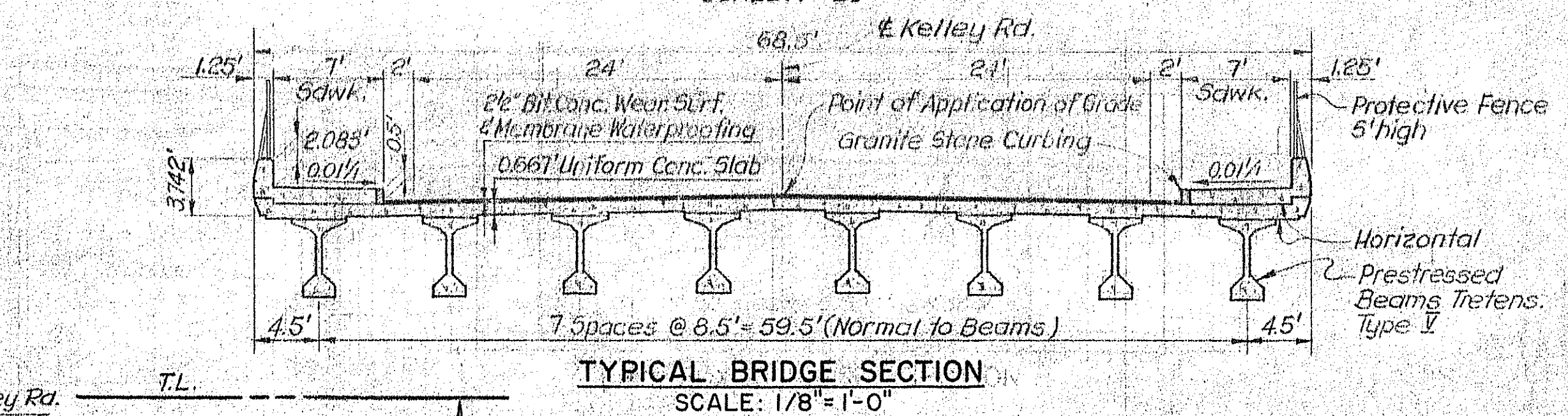
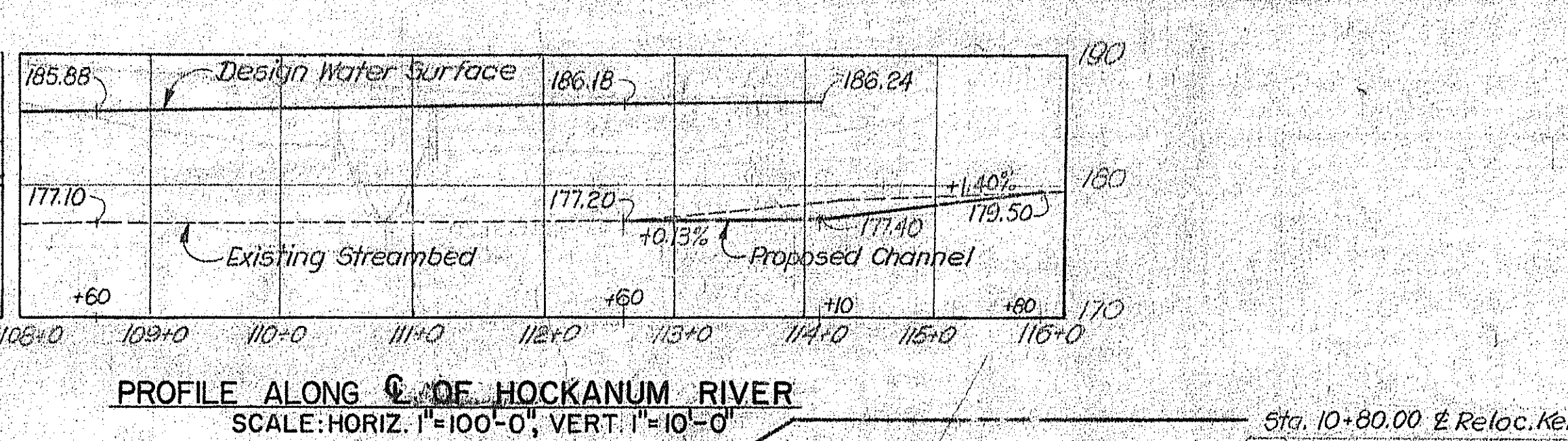
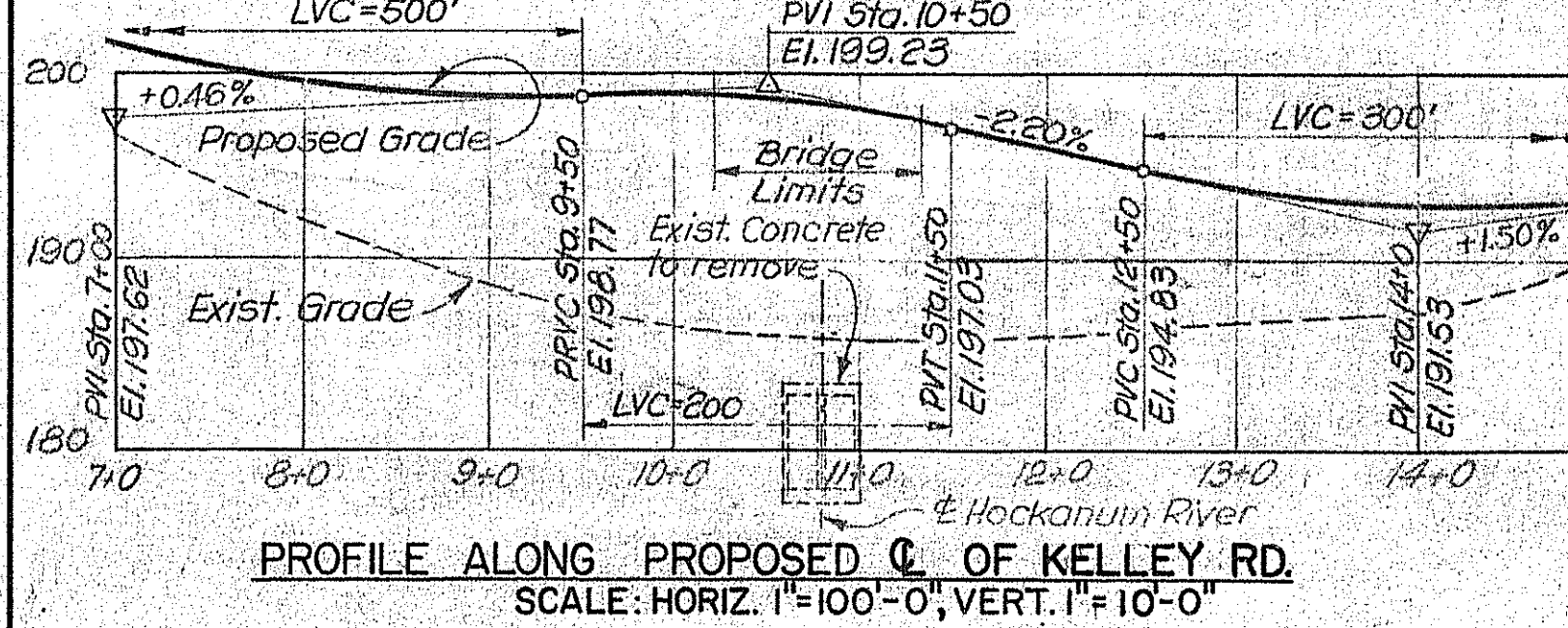
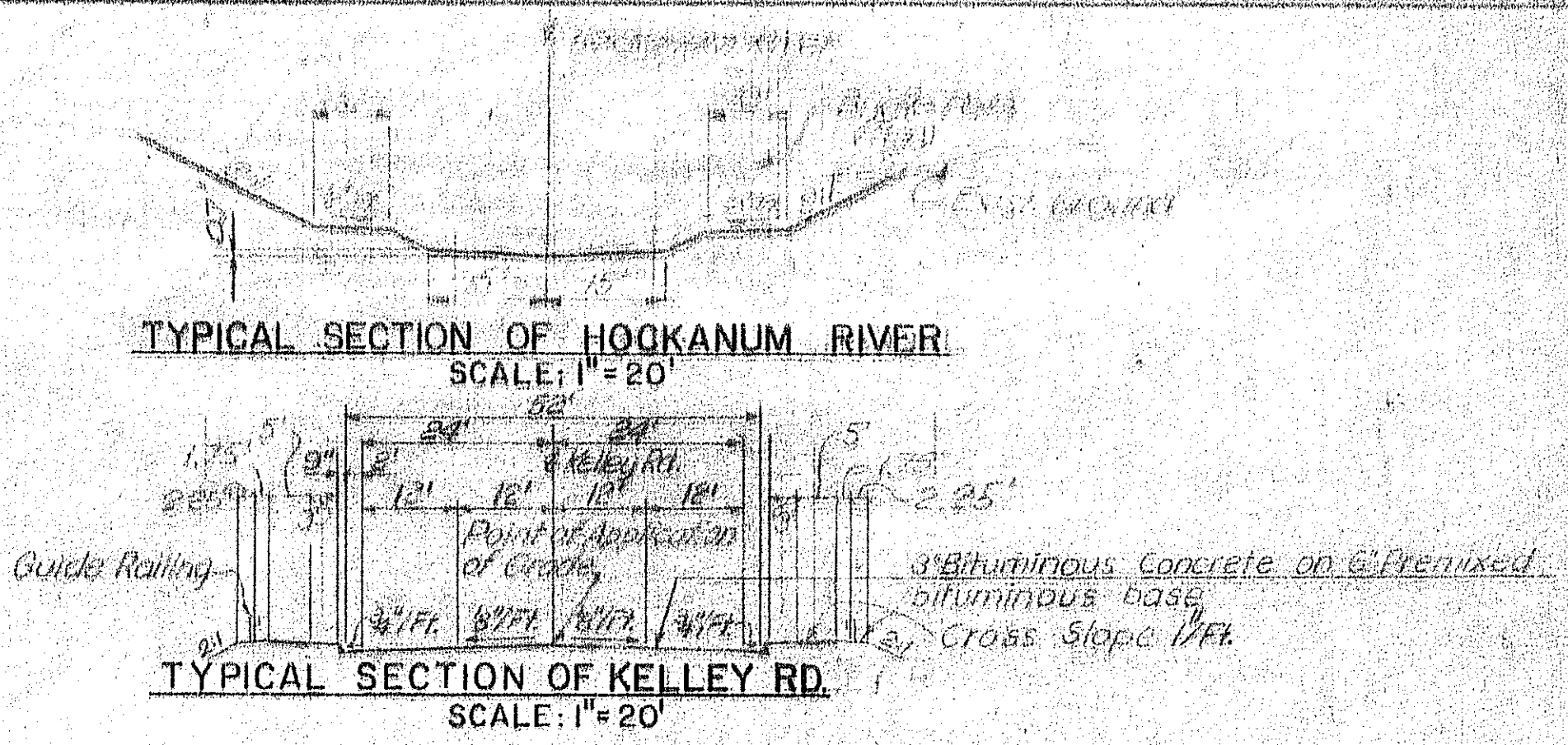
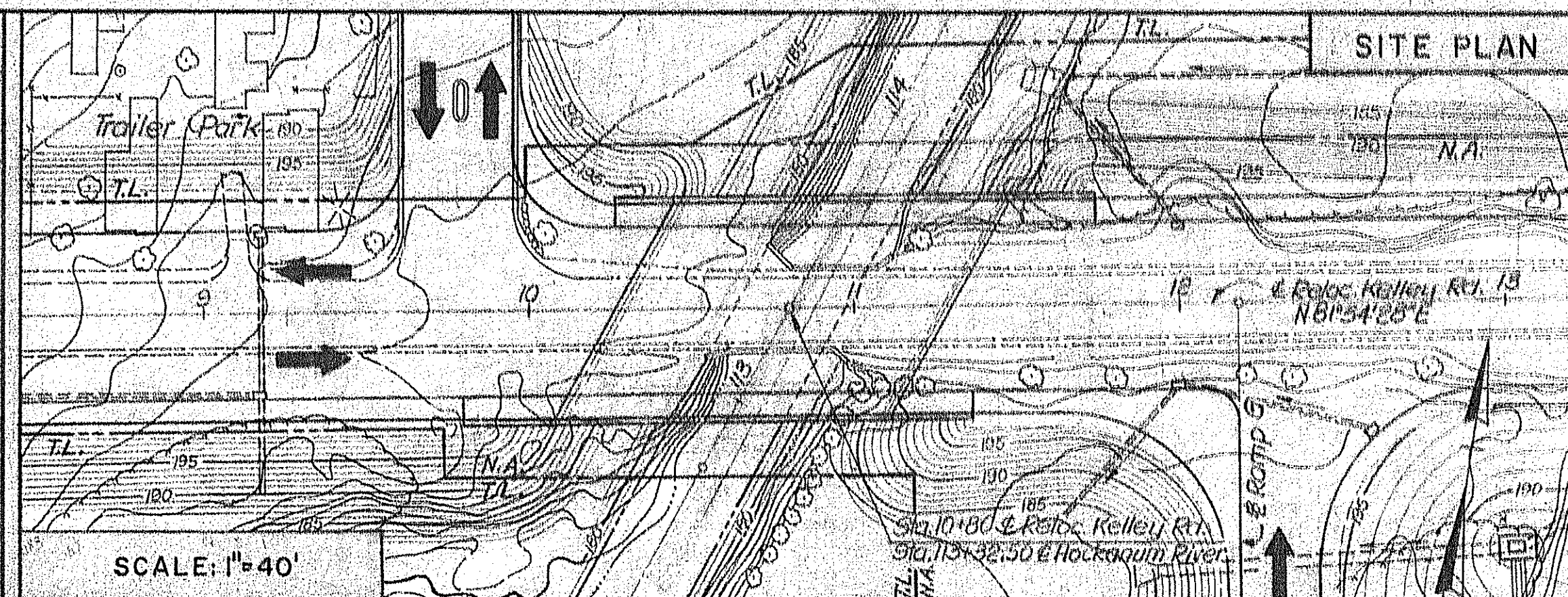
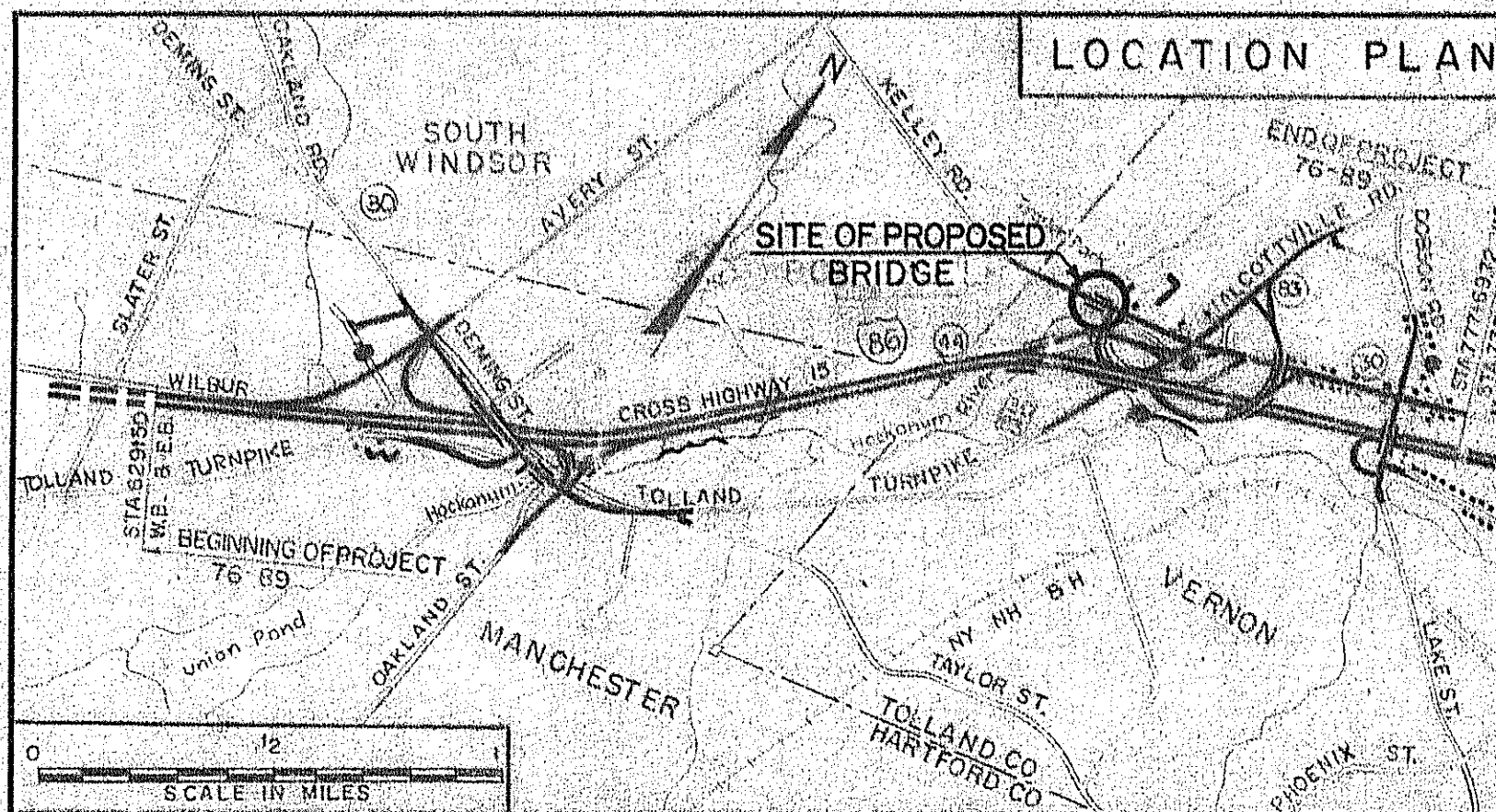
**I. PROJECT MANUAL**

- a. Add Appendix C – Existing Bridge Plans. Construction plans for the existing bridge are included for bidders' information.

***THE BIDDER MUST ACKNOWLEDGE THAT THE BID INCLUDES THIS  
ADDENDUM AT THE BOTTOM OF SCHEDULE OF PRICES***

## APPENDIX C





**GENERAL NOTES:**

**Specifications:** Connecticut State Highway Department Form 610 (1969), Interim Specifications and Special Provisions.

**Design Specifications:** Standard Specifications for Highway Bridges (AASHTO-1969) with the Interim Specifications up to and including (1972) as supplemented by the Connecticut State Highway Department Bridge Manual (1964).

**Allowable Design Stresses:** Class "A" and Class "F" Concrete  $f_c$  - 1200 psi; Reinforcement (A615 Grade 40)  $f_s$  (tensile) - 20000 psi; Prestressed Concrete I-beams: Materials and construction for Prestressed Concrete shall conform to the requirements of the Special Provisions.

**Live Load:** HS 20-44.

**Future Paving Allowance:** None.

**Composite Construction:** No temporary intermediate supports shall be used prior to and during the pouring and setting of the concrete deck slab. Live and superimposed dead loads will be permitted when directed by the Engineer but not less than 10 days after the slab has been poured.

**Proposed Structure:** Superstructure: Single simple, prestressed concrete span, composite for live loads only. Substructure: Cantilever type abutments of reinforced concrete. Slab: Reinforced concrete railing. Reinforced concrete barrier type with superimposed pipe rail.

**Borings and Soils:** Borings as shown on P.D. Sheet #2. Soils Report accompanies P.D. Sheet.

**Hydraulic Design Criteria:**  $Q = 3200$  cfs;  $V = 8.24$  f/sec.

**Waterway Area:** 471 SF.

**Utilities:** To be provided for in the final design.

**CONNECTICUT  
STATE HIGHWAY DEPARTMENT  
PRELIMINARY LAYOUT AND DESIGN  
TOWN OF VERNON  
KELLEY ROAD  
OVER  
HOCKANUM RIVER  
BRIDGE 76-89-8**

REVISIONS		NO.	DATE	DESCRIPTION
NO.	DATE			

DESIGNED BY: FRANKLAND & LIENHARD CONSULTING ENGINEERS

PROJECT NO. 76-89

SCALES: As noted

MADE BY: A.K.

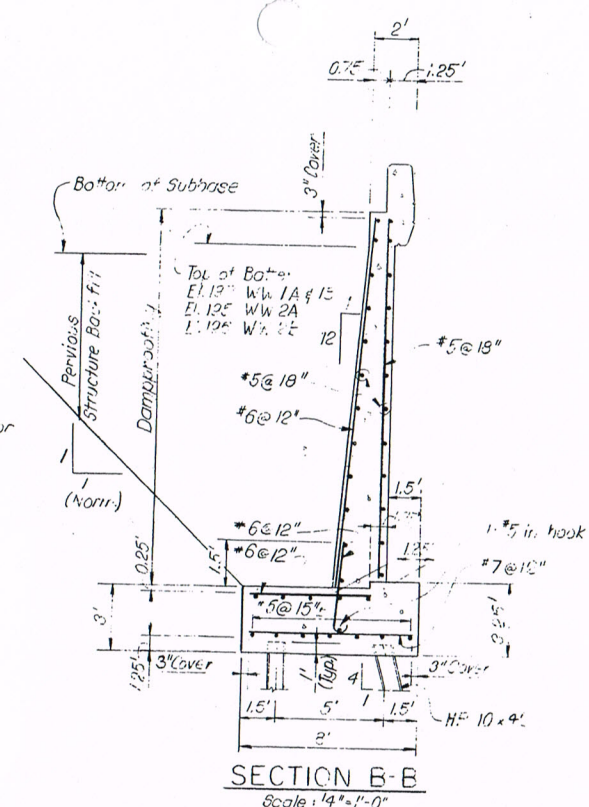
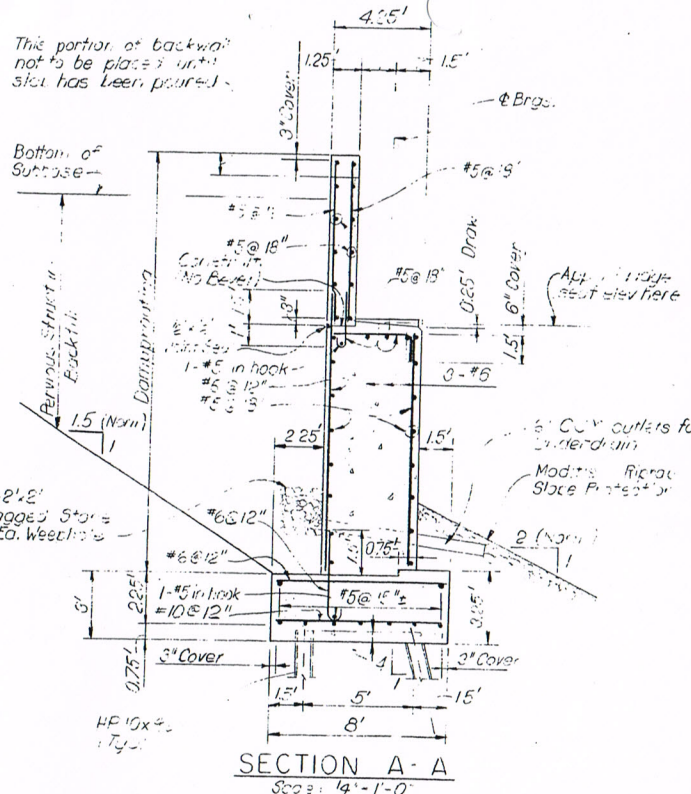
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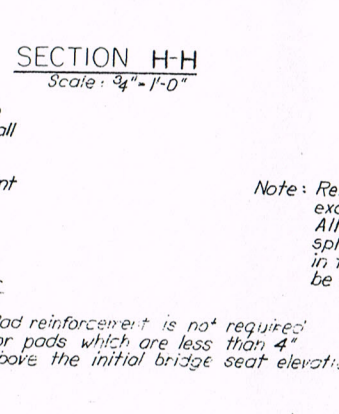
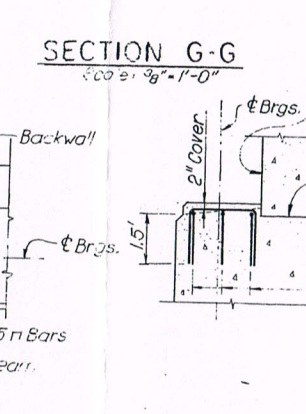
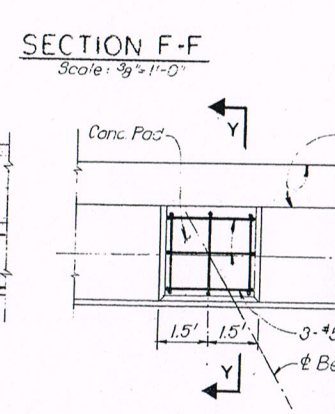
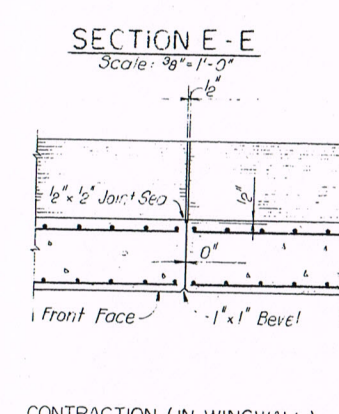
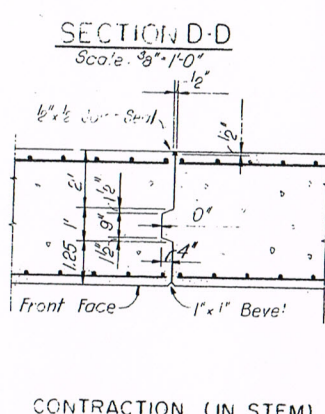
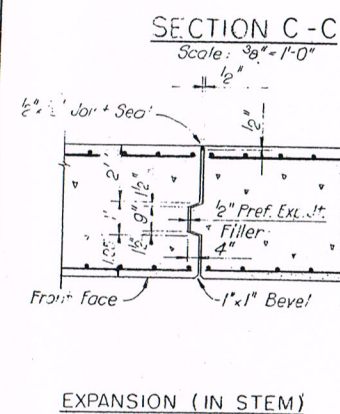
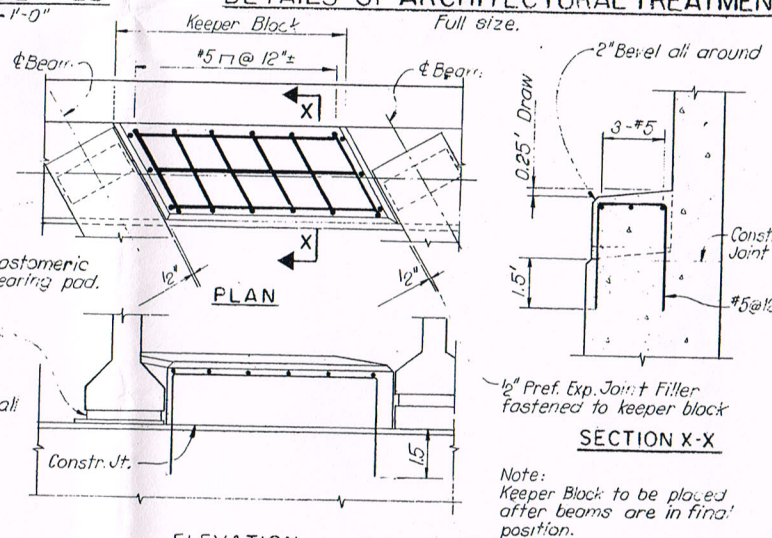
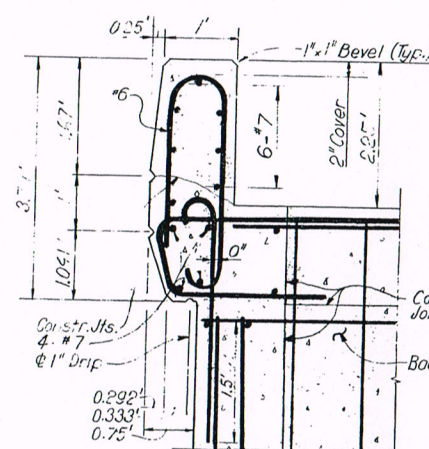
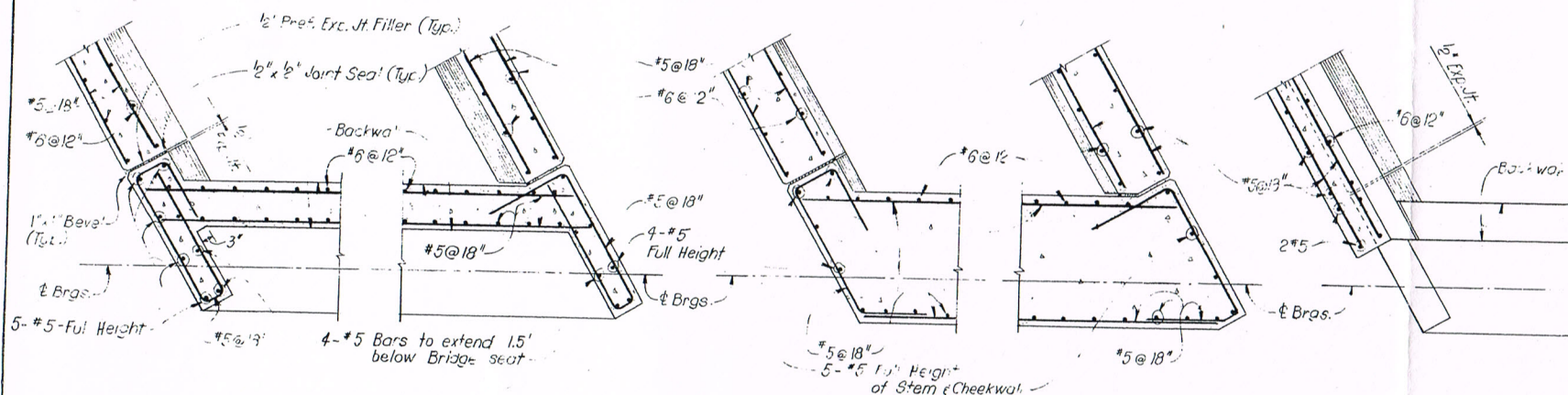
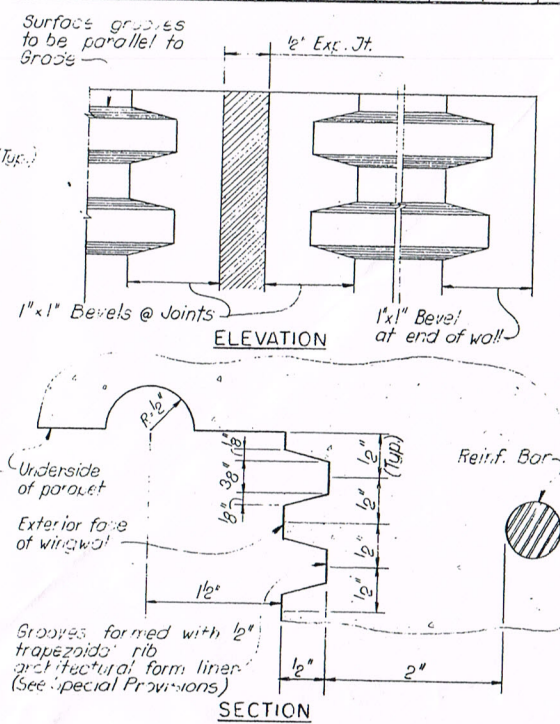
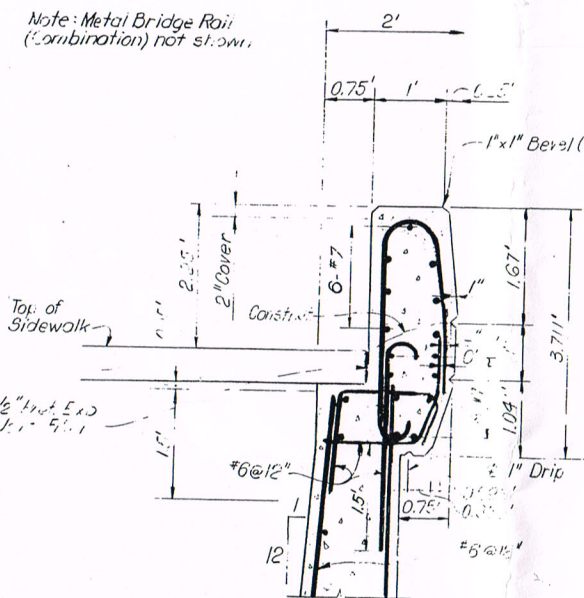
P.D. NO. [Blank]



This portion of backwall  
not to be placed until  
slab has been poured.



Note: Metal Bridge Rail  
(Combination) not shown.



# KEEPER BLOCK DETAILS

NOTES: For General Notes see Br.Sh.1  
For Abutment Plans & Elevations see Br.Sh.3 & 4  
For Pile Plans see Br.Sh.5  
For Wingwall Elevations see Br.Sh.6

EXPANSION (IN STEM)

CONTRACTION (IN STEM)

CONTRACTION (IN WINGWALL)

## JOINT DETAILS

Notes: Joint Seal in Abutment to extend from top of footing to top of Backwall and horizontally along top of backwall. Joint Seal in Wingwalls to extend from top of footing to top of curb.

Keys to extend from top of footing to within 1'-0" of the bridge seat. No reinforcement shall pass through expansion or contraction joints. Reinforcement shall pass through construction joints.

## BEARING PAD REINFORCING DETAILS

Note: Pad reinforcement is not required for pads which are less than 4" above the initial bridge seat elevation.

Note: Reinforcing to have 2" cover except as noted otherwise. All longitudinal bars to be spliced 24 dia. except those in top of reel which shall be spliced 32 dia.

THE INFORMATION, INCLUDING ESTIMATED QUANTITIES OF WORK, SHOWN ON THESE SHEETS IS BASED ON LIMITED INVESTIGATIONS BY THE STATE AND IS IN NO WAY WARRANTED TO INDICATE THE TRUE CONDITIONS OR ACTUAL QUANTITIES OR DISTRIBUTION OF QUANTITIES OF WORK WHICH WILL BE REQUIRED.

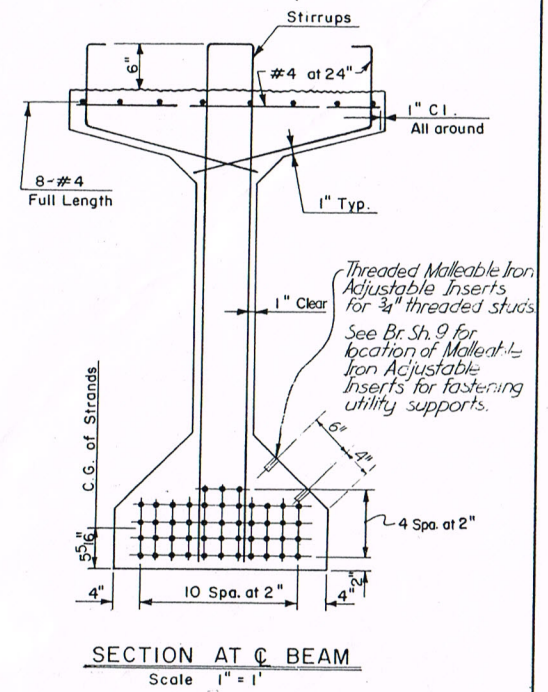
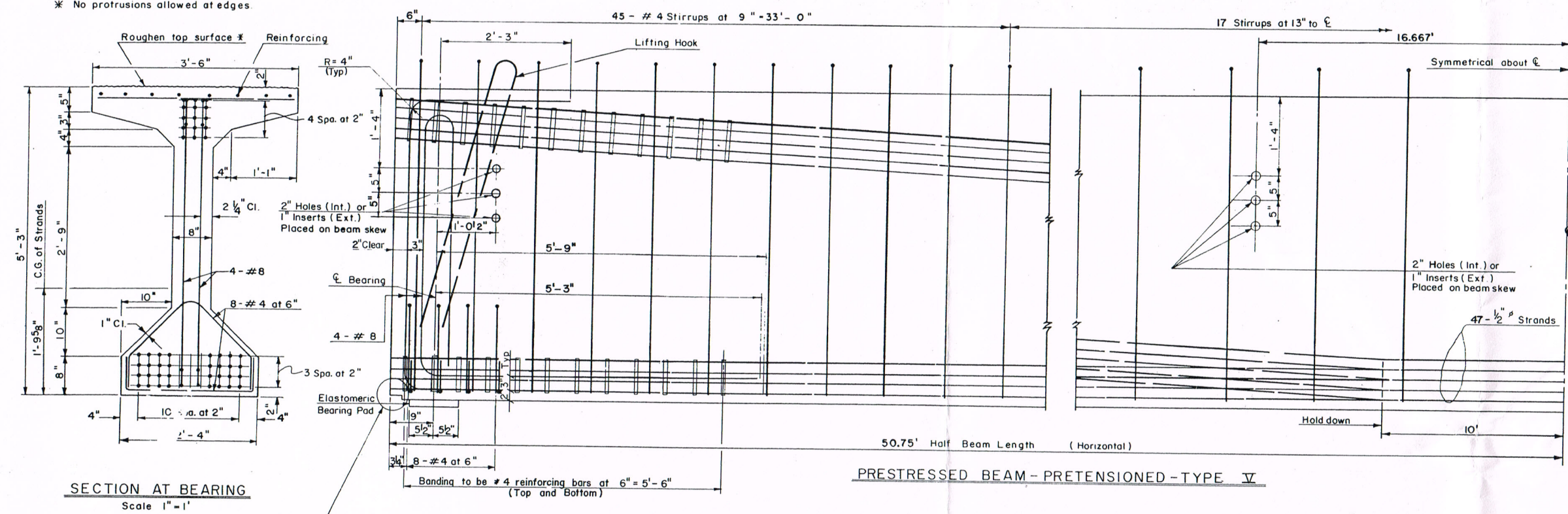
REVISIONS		
NO.	DATE	DESCRIPTION

CONNECTICUT  
DEPARTMENT OF TRANSPORTATION  
BUREAU OF HIGHWAYS  
TOWN OF VERNON  
KELLEY ROAD  
OVER  
HOCKANUM RIVER  
ABUTMENT DETAILS

DESIGNED BY FRANKLAND & LIENHARD CONSULTING ENGINEERS  
SCALES As shown  
MADE BY J.Z.  
CHECKED BY I.S.  
APPROVED S.J.  
PROJECT NO. 76-89  
DATE 8-20-79  
DATE 3-30-79  
DATE 3-30-79  
BRIDGE SHEET NO. 7 OF 17

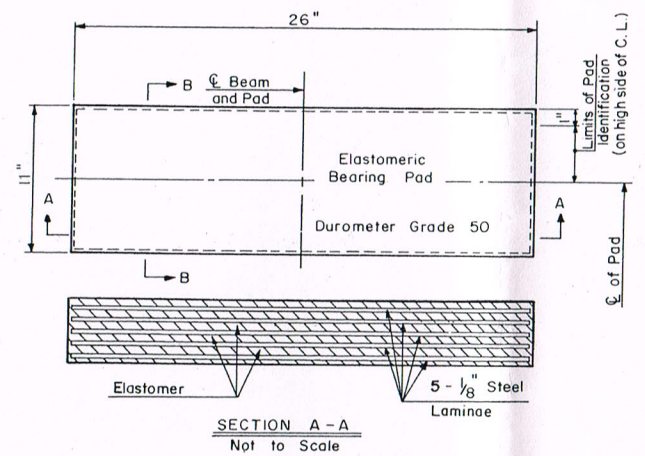
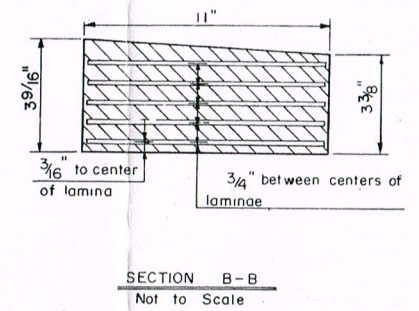


\* No protrusions allowed at edges.



Stringer No.	Estimated Camber (Ft.)	Total Dead Load Defl. Excluding Beam Wt. (Ft.)	Residual Camber (Ft.)	Elastomeric Bearing Pad D.L. Deflection (feet)
AI-1	.097	.082	.015	.006
AI-2	.097	.096	.001	.007
AI-3	.097	.096	.001	.007
AI-4	.097	.096	.001	.007
AI-5	.097	.096	.001	.007
AI-6	.097	.096	.001	.007
AI-7	.097	.096	.001	.007
AI-8	.097	.082	.015	.006

Estimated Camber = Deflection due to  $P_g$  minus deflection due to weight of beam.



**NOTES**

**Prestressed Beams**

Prestressed beams shall conform to the following requirements:

- $f'_c = 5500$  psi
- $f_{ci} = 4250$  psi

Prestressed strands shall conform to the following requirements:

- Ultimate Strength ( $f_s$ ) = 270,000 psi
- Jacking Tension ( $F_j$ ) = 31,000 lbs per strand

Ends of beams shall be vertical after application of full dead load. The drilling of holes in prestressed beams, or the use of power actuated tools on prestressed beams will not be permitted. Prestressing strands shall have 1 1/2" min. cover.

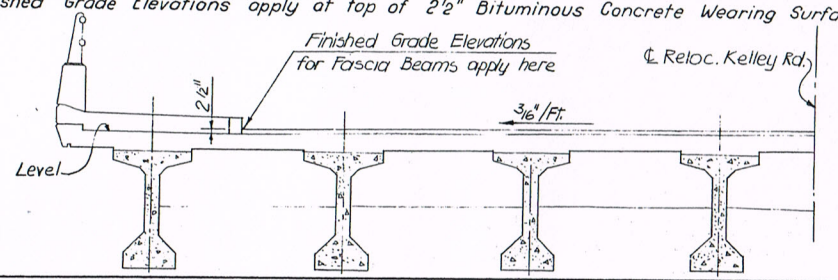
**Elastomeric Bearing Pads**

The contractor shall set the elastomeric bearing pads on a prepared surface as required by Article 6.01.03-14. See Special Provisions for tolerances governing laminae dimensions.

**\* FINISHED GRADE ELEVATIONS**

Beam description	℄ Bearing Abut. 1	1	2	3	4	5	6	7	8	9	℄ Bearing Abut. 2
AI-1	198.199	198.112	198.012	197.898	197.771	197.630	197.477	197.310	197.129	196.936	196.729
AI-2	198.312	198.231	198.137	198.030	197.909	197.775	197.628	197.467	197.294	197.106	196.906
AI-3	198.479	198.405	198.317	198.217	198.103	197.975	197.834	197.681	197.513	197.333	197.139
AI-4	198.643	198.576	198.495	198.400	198.293	198.172	198.038	197.890	197.730	197.556	197.368
AI-5	198.672	198.610	198.536	198.448	198.347	198.233	198.105	197.964	197.810	197.643	197.462
AI-6	198.564	198.509	198.442	198.360	198.266	198.158	198.037	197.903	197.755	197.594	197.420
AI-7	198.453	198.405	198.344	198.269	198.181	198.080	197.965	197.837	197.696	197.542	197.374
AI-8	198.398	198.356	198.301	198.233	198.152	198.057	197.949	197.823	197.693	197.545	197.384

\* Finished Grade Elevations apply at top of 2 1/2" Bituminous Concrete Wearing Surface



**ELASTOMERIC BEARING PAD**  
**TYPE EBP5-4A**

**CONNECTICUT**  
**DEPARTMENT OF TRANSPORTATION**  
**BUREAU OF HIGHWAYS**

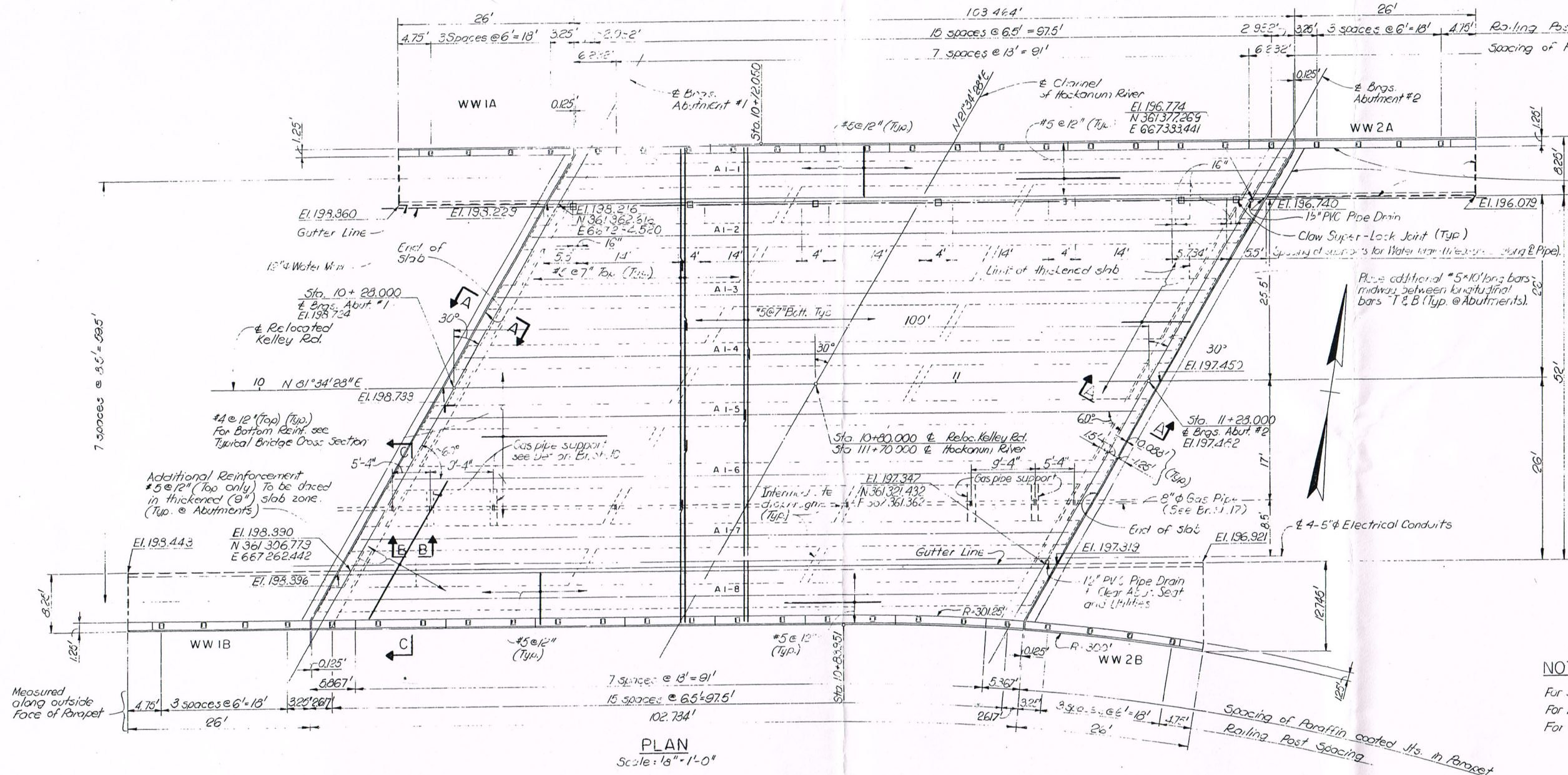
**TOWN OF VERNON**

**KELLEY ROAD**  
**OVER**  
**HOCKANUM RIVER**

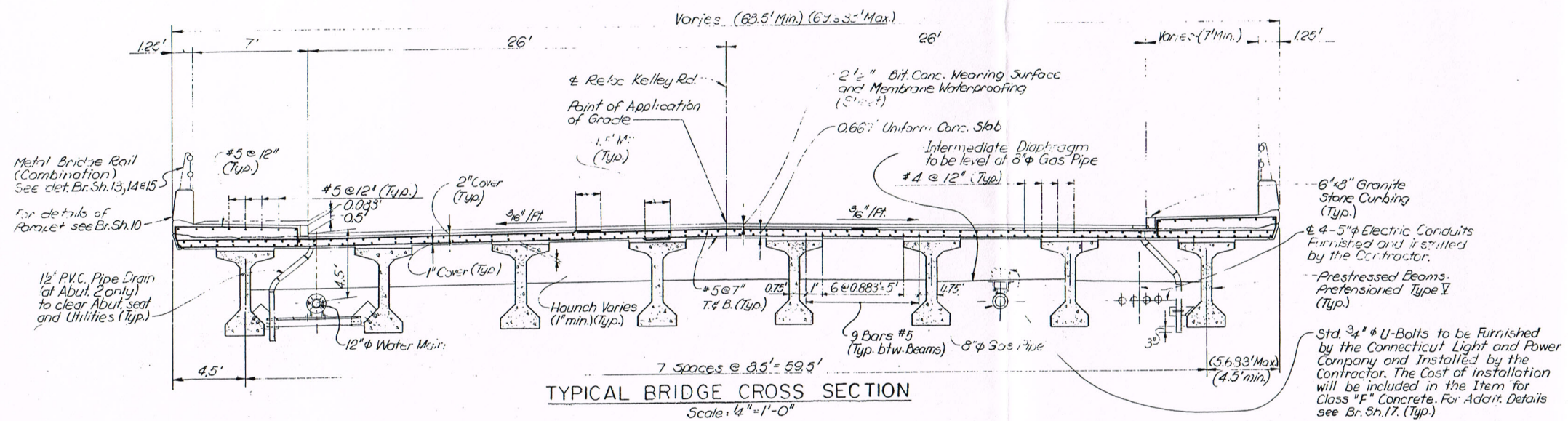
**PRESTRESSED BEAM - DETAILS**

ENGINEER	FRANKLAND & LIENHARD CONSULTING ENGINEERS
APPROVED	S.J. DATE 3-30-78
DRAFTSMAN	I.T. CHECKER I.S. DESIGNER
NO. DATE	DESCRIPTION
REVISIONS	STRUCTURE NO. 76-89 B STRUCTURE SHEET 8 OF 17



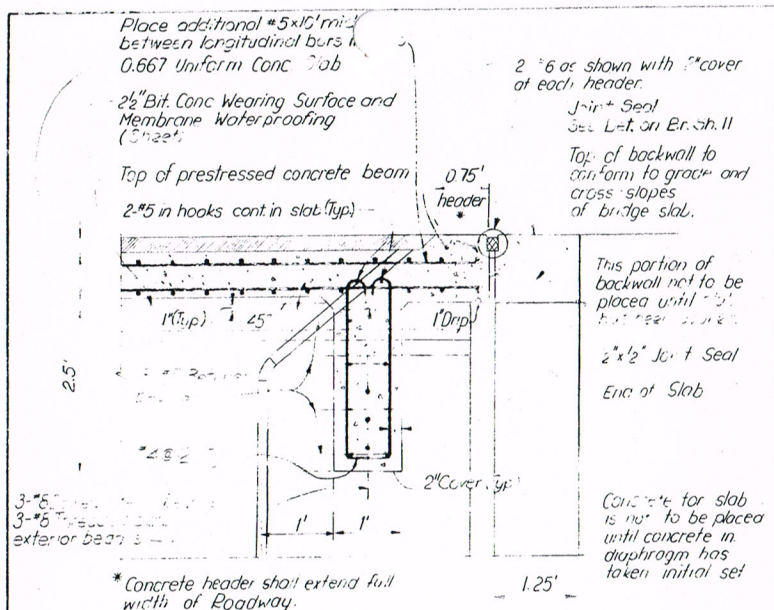


**NOTE:**  
 For Section A-A, B-B and C-C see Br. Sh. 10  
 For Water Main Supports Det. see Br. Sh. 11.  
 For Gas Main Supports Det. see Br. Sh. 10 & 17

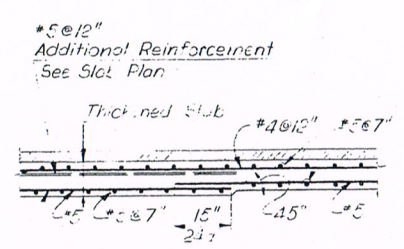


CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS			
TOWN OF VERNON KELLEY ROAD OVER HOCKANUM RIVER			
<b>SLAB PLAN &amp; CROSS SECTION</b>			
DESIGNED BY FRANKLAND & LIENHARD CONSULTING ENGINEERS			
SCALES As shown MADE BY I.T. CHECKED BY I.S. APPROVED S.J.	DATE 8-31-73 DATE 3-30-78 DATE 3-30-78	PROJECT NO. 76-89 BRIDGE SHEET NO. 9 OF 17	

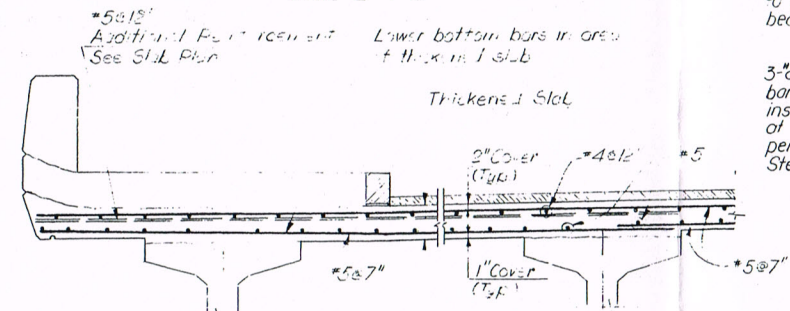




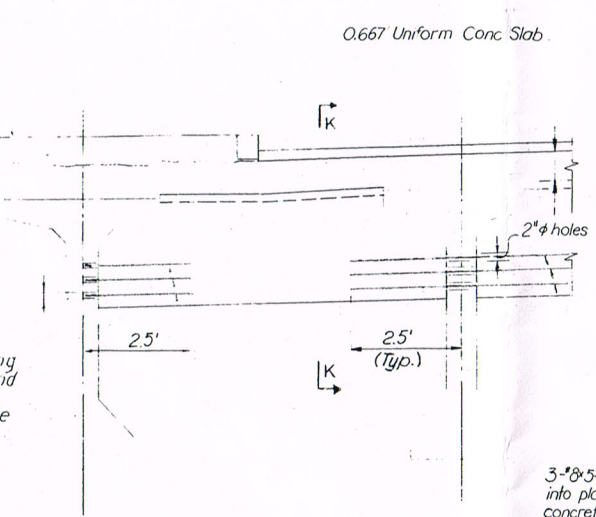
SECTION A - A



SECTION F - F  
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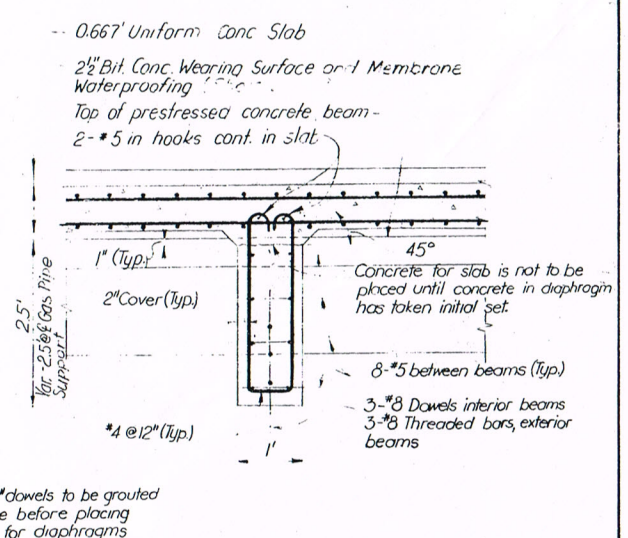


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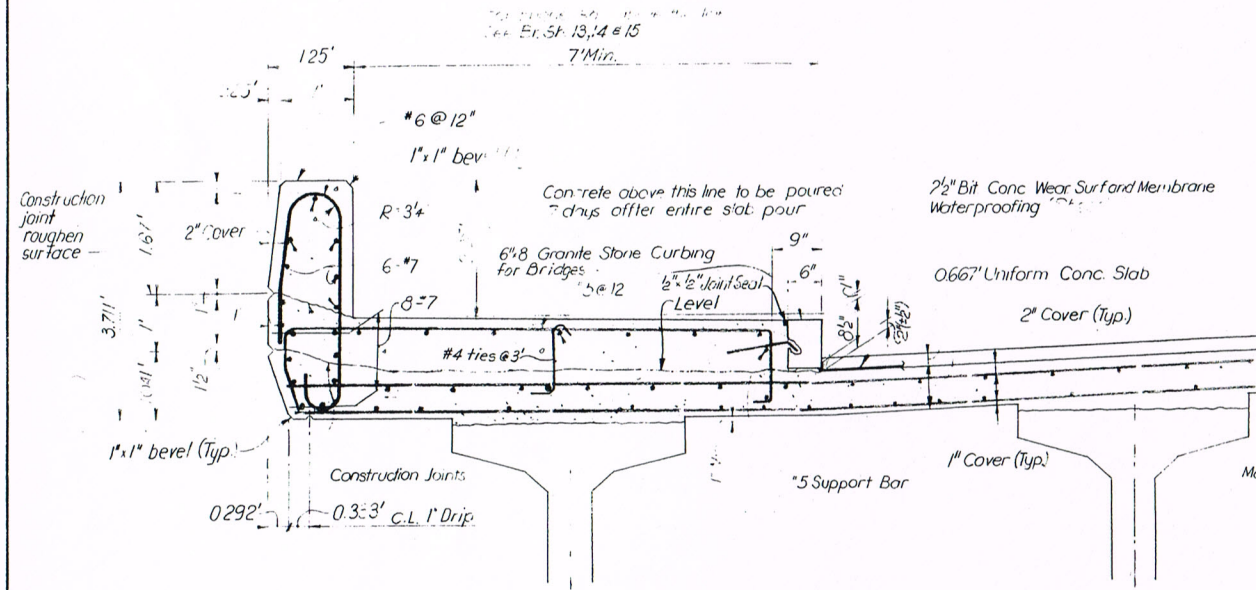


TYPICAL SECTION  
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INTERMEDIATE DIAPHRAGM DETAILS

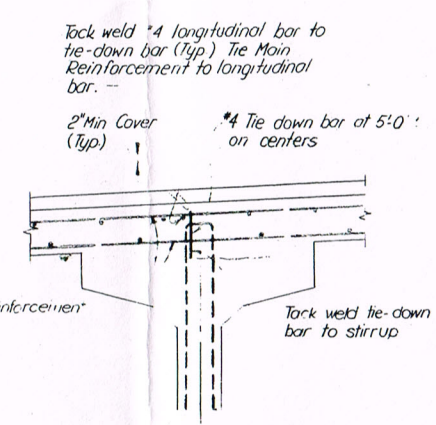


SECTION K - K  
Similar to section K-K except depth - Variable

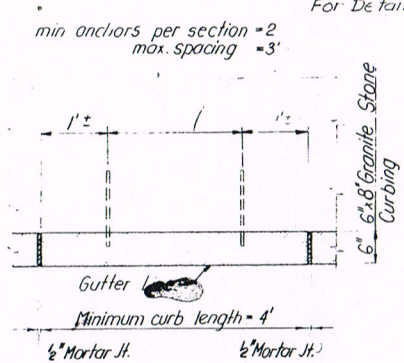


SIDEWALK AND PARAPET DETAILS

NOTE: Tie-down bars do not include the use of chairs for supporting the reinforcement mat. The cost of furnishing and placing tie down bars to be included in the contract item "Deformed Steel Bars"

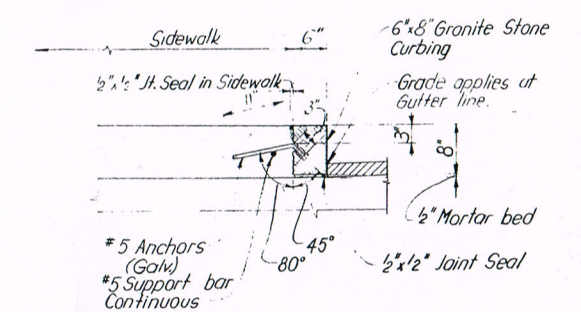


TIE-DOWN DETAIL



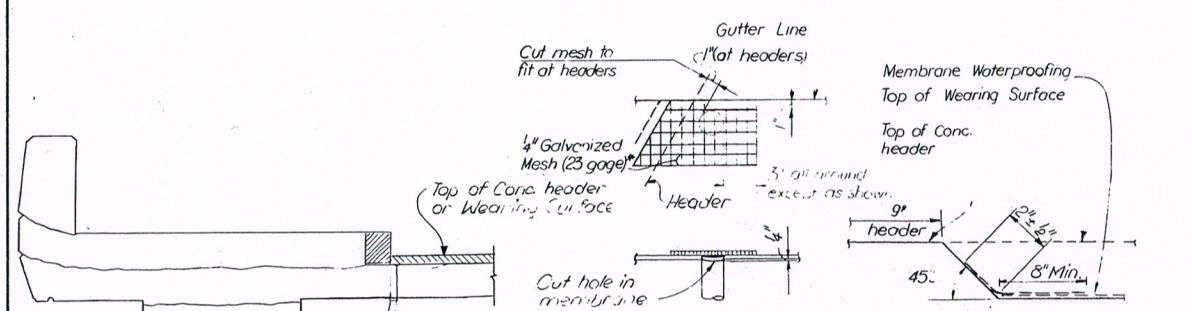
PLAN

GAS PIPE SUPPORT DETAILS

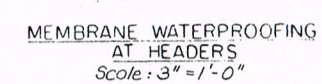


TYPICAL SECTION

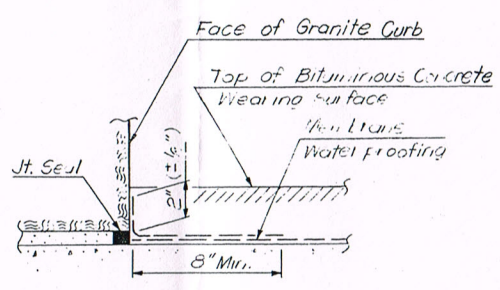
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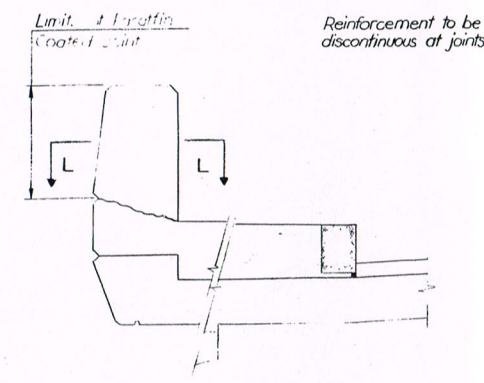
TYPICAL DRAIN DETAIL  
Scale: 1 1/2\"/>



MEMBRANE WATERPROOFING AT HEADERS  
Scale: 3\"/>



MEMBRANE WATERPROOFING AT CURB  
Scale: 3\"/>



PARAFFIN COATED JOINT DETAIL

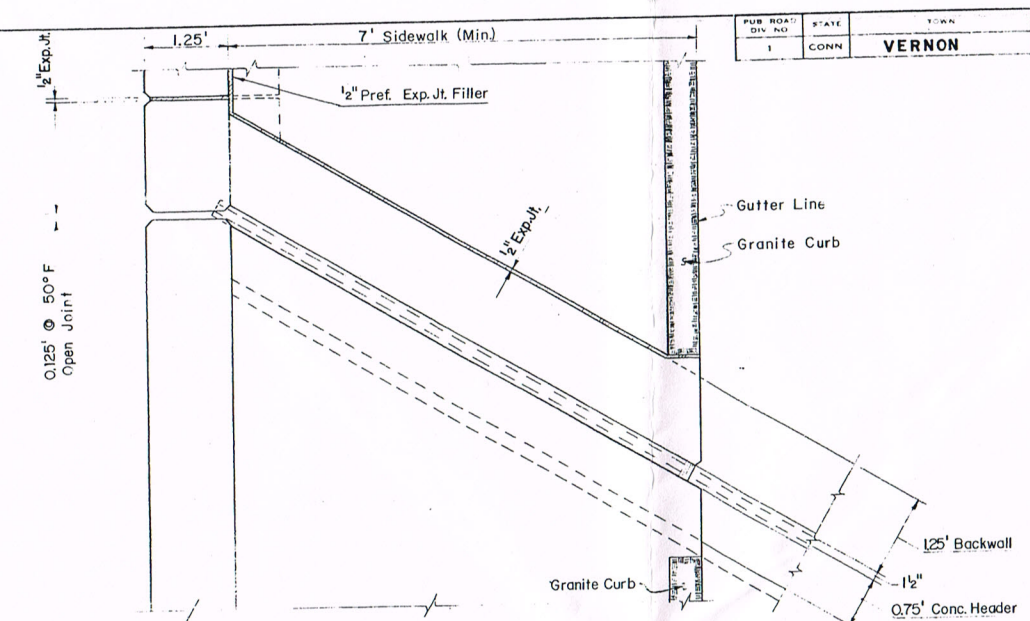
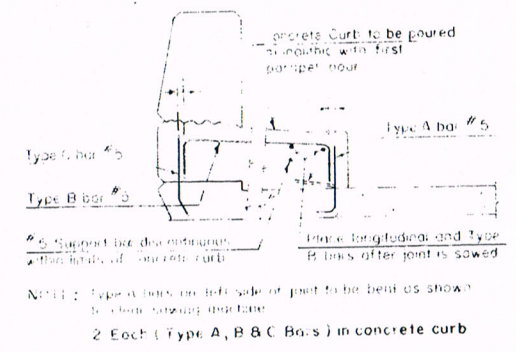
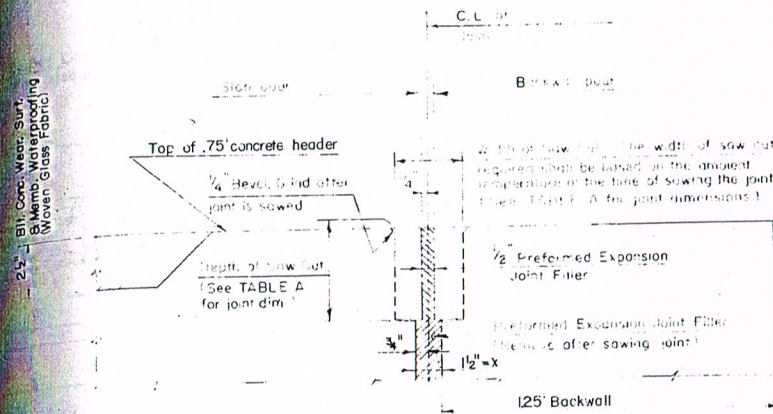


SECTION L - L

CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS		TOWN OF VERNON	
KELLEY ROAD OVER HOCKANUM RIVER		SLAB DETAILS	
DESIGNED BY FRANKLAND & LENHARD CONSULTING ENGINEERS			
SCALES 3/4\"/>		PROJECT NO. 76-89	
MADE BY E.K.		DATE 6-20-73	
CHECKED BY I.S.		DATE 3-30-74	
APPROVED S.J.		DATE 3-30-76	
		BRIDGE SHEET NO. 10 OF 17	

NOTE: 1/2\"/>



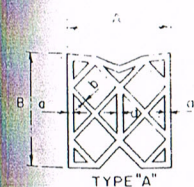


Type	Nom. Width	Joint	Width of Saw Cut		Depth of Saw Cut		Reinforcement		X
			A	B	A	B	A	B	
Fixed	2"	A or B	1/4"	1/4"	1/4"	1/4"	2 3/4"	2 3/4"	1/2"
Exp.	Up to 50"	2"	1/4"	1/4"	1/4"	1/4"	2 3/4"	2 3/4"	1/2"
Exp.	55" to 90"	3"	1/4"	1/4"	1/4"	1/4"	4"	3 3/4"	1/2"
Exp.	95" to 125"	4"	1/4"	1/4"	1/4"	1/4"	5 1/4"	5"	1/2"
Exp.	130" to 300"	4"	1/4"	1/4"	1/4"	1/4"	5 1/4"	5"	1/2"

\* Depth of saw cut same as above for 4" seal

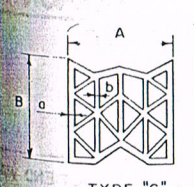
**TABLE "A"**

**NOTES:** NOTE: While it is important that the joint be constructed exactly as detailed, saw cutting will be permitted seven days after the final pour at the joint. The compression seal shall not be installed above temperatures at which the width of joint is less than 60% of the original width of the seal.



Nom. Width	TYPE "A"		Thickness	
	A	B	a	b
2"	2.000" ± .188"	2.063" ± .125"	.125" ± .031"	.094" ± .031"
3"	3.000" ± .250"	3.406" ± .188"	.188" ± .047"	.125" ± .047"
4"	4.000" ± .313"	4.719" ± .250"	.250" ± .063"	.188" ± .063"

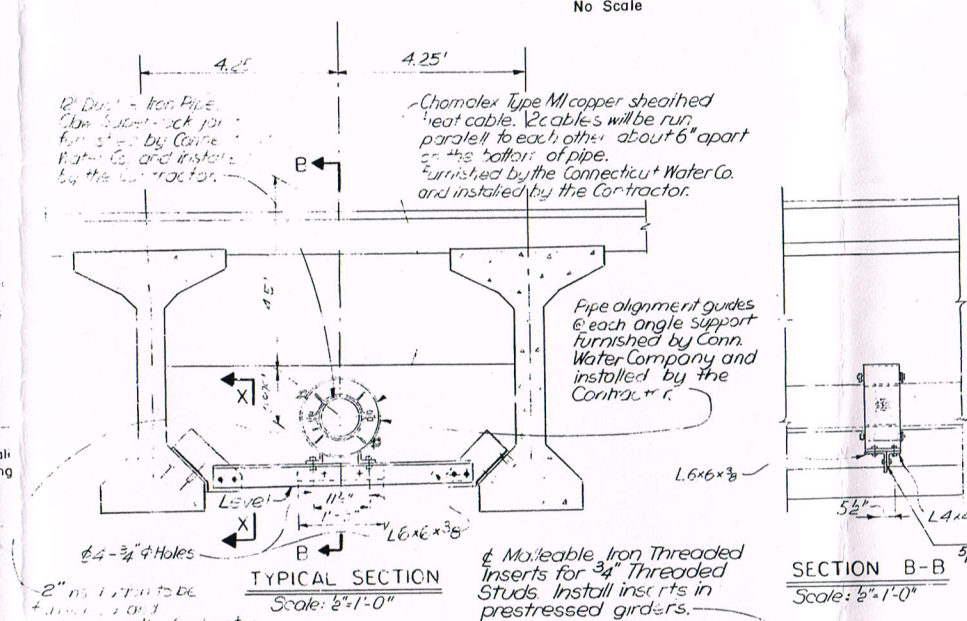
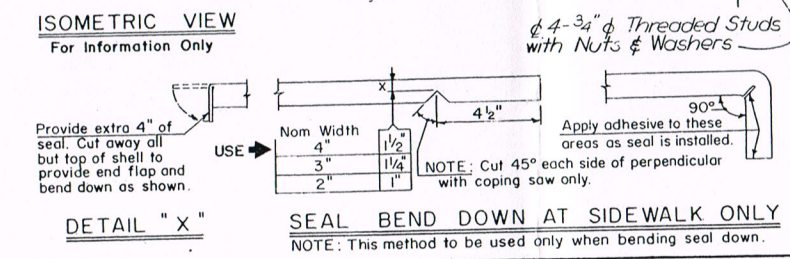
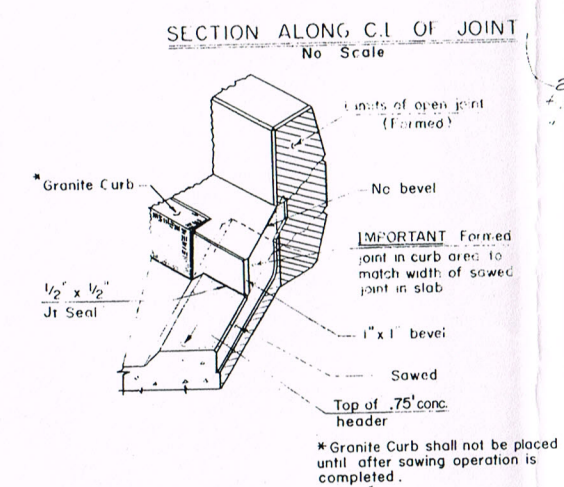
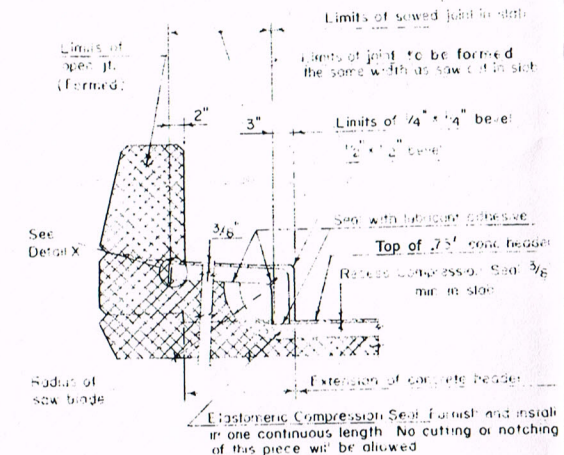
**TYPE "A"**



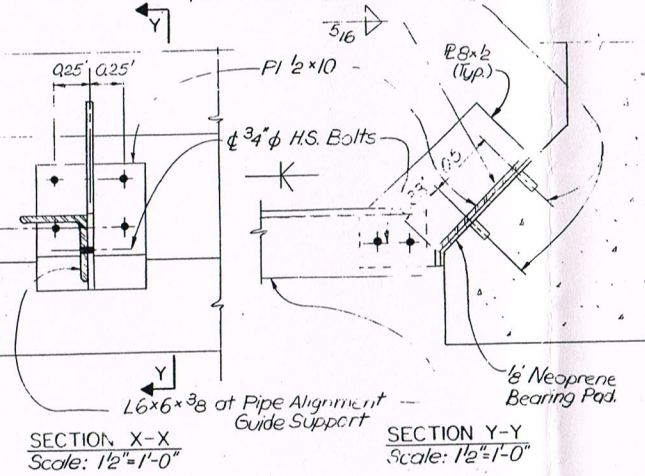
Nom. Width	TYPE "C"		Thickness	
	A	B	a	b
3"	3.000" ± .250"	3.000" ± .188"	.188" ± .047"	.125" ± .047"
4"	4.000" ± .313"	4.000" ± .250"	.250" ± .063"	.125" ± .063"

**TYPE "C"**

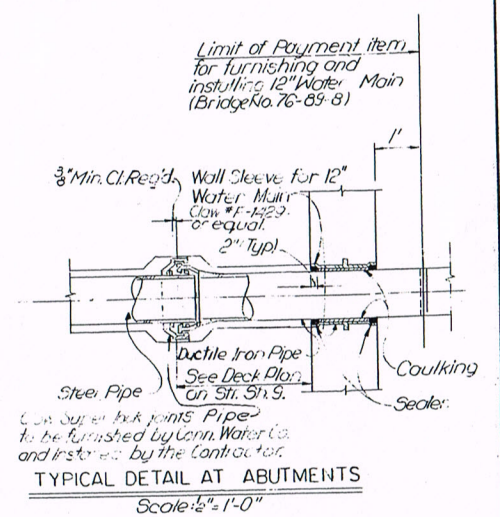
**ELASTOMERIC COMPRESSION SEAL DETAILS**



**SECTION B-B**  
Scale: 1/2"=1'-0"



**PIPE ROLL SUPPORT FOR 12" WATER MAIN**



**NOTE:** Cast all supports over 3" connections, 1" dia. concrete inserts, 8" neoprene bearing pads, and pipe alignment guides with alignment guides. Include 1 item "Installing 12" Water Main (Bridge No. 76-89-8) These items shall be furnished and installed by the Contractor. Pipe material, pipe alignment guides, wall sleeves and heat cables will be furnished by the Connecticut Water Company and shall be installed by the Contractor.

<b>CONNECTICUT DEPARTMENT OF TRANSPORTATION BUREAU OF HIGHWAYS</b>			
<b>TOWN OF VERNON</b>			
<b>KELLEY ROAD OVER HOCKANUM RIVER</b>			
<b>SLAB DETAILS</b>			
ENGINEER	FRANKLAND & LEONARD CONSULTING ENGINEERS		
APPROVED	S.J.	DATE	3-30-78
DRAFTSMAN	E.N.	CHECKER	I.S.
DESIGNER			
STRUCTURE NO. 76-89-8		STRUCTURE SHEET II OF 17	