

STATE OF NEW YORK
DEPARTMENT OF PUBLIC WORKS
DIVISION OF CONSTRUCTION

PLANS FOR RECONSTRUCTING A PORTION OF THE
CATSKILL THRUWAY
SAUGERTIES-GREENE COUNTY LINE, C.T. 46-1

Between Station 3935+00 and Station 4126+26.8; a length of 3.69 miles in the Town of Saugerties

54 Sheets Contract CT-RC 48-151

ULSTER COUNTY

State	Fiscal Year	Sheet No.	Total Sheets
N.Y.		1	54

CATSKILL THRUWAY
SAUGERTIES-GREENE CO. LINE C.T. 46-1
PAVING

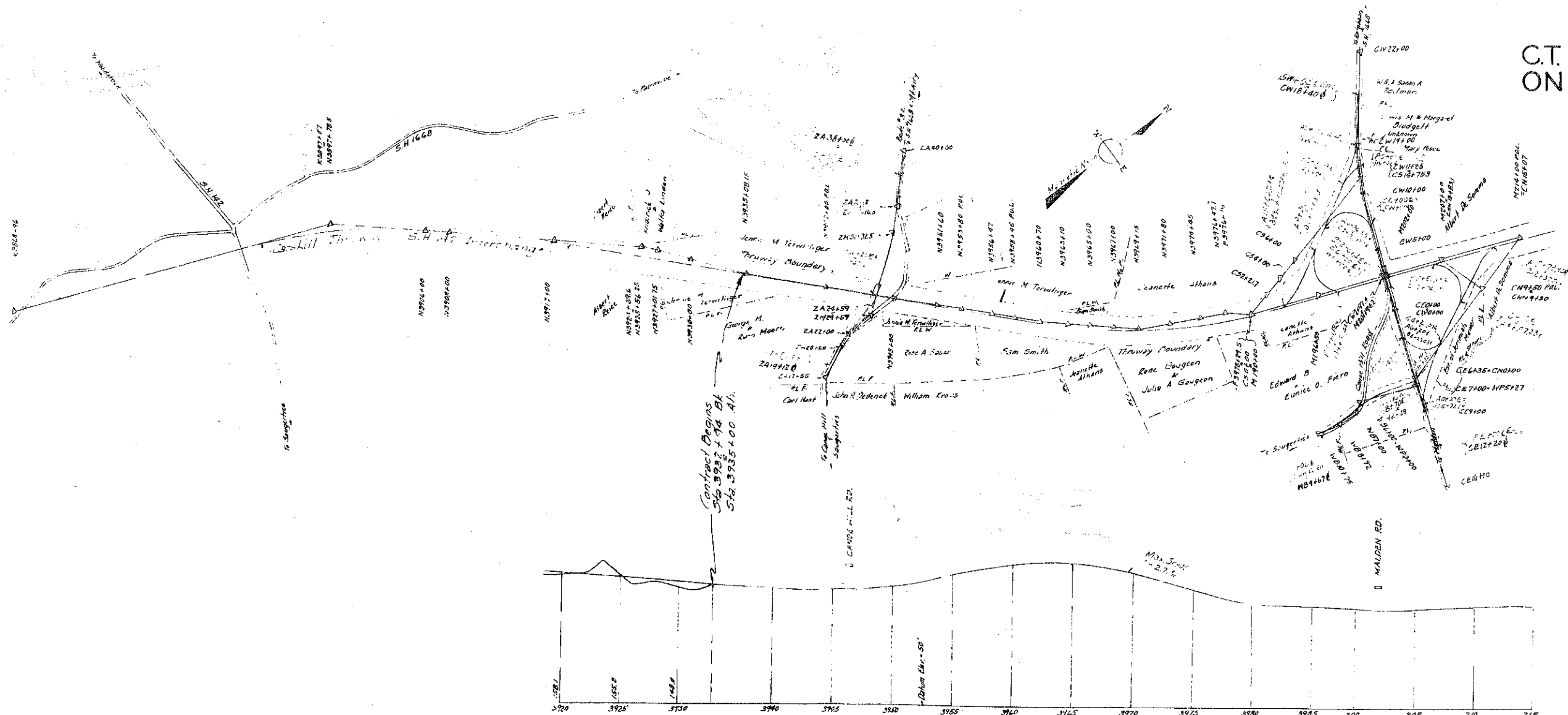
TYPE OF CONSTRUCTION
Reinforced Concrete Pavement 3.69 Miles
Highway Grade Separations at
Cane Hill Road - 4 Span I-Beam (Alpha), Total Length 219.6
Malden Road - 4 Span I-Beam (Alpha), Total Length 212.5
Katsbaan Road - 4 Span I-Beam (Alpha), Total Length 203.8
Asbury Road - 4 Span I-Beam (Alpha), Total Length 203.8
Bridge at Station 15+34 on Katsbaan Road, Twin Box Culvert, Span 2 x 10.12 Each

STANDARD STRUCTURE SHEETS
39-9, 40-1, 40-101R, 40-103R, 44-27, 45-33, 46-4, 46-7, 46-11, 46-14R, 46-15, 46-16, 46-18, 46-29R, 47-2, 47-2C, 47-12, 47-34, 47-36, 48-3R, 48-6, 48-39

All work contemplated under this contract to be covered by and in conformity with the specifications adopted January 2, 1947, except as modified on these plans and in the Itemized Proposal.

COMBINED WITH
C.T. 48-1, R.C. 48-152 IN
ONE CONTRACT.

BIN 5515590



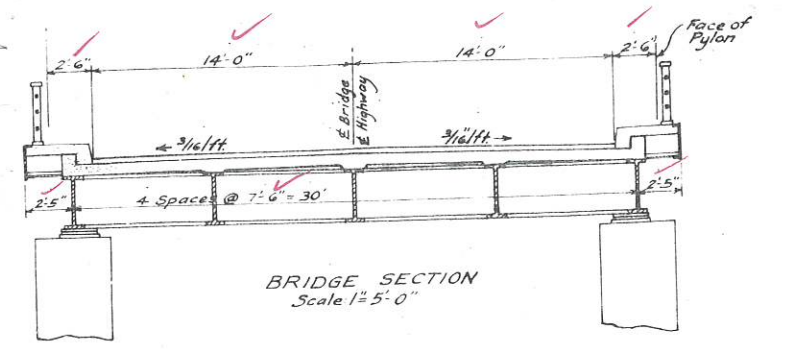
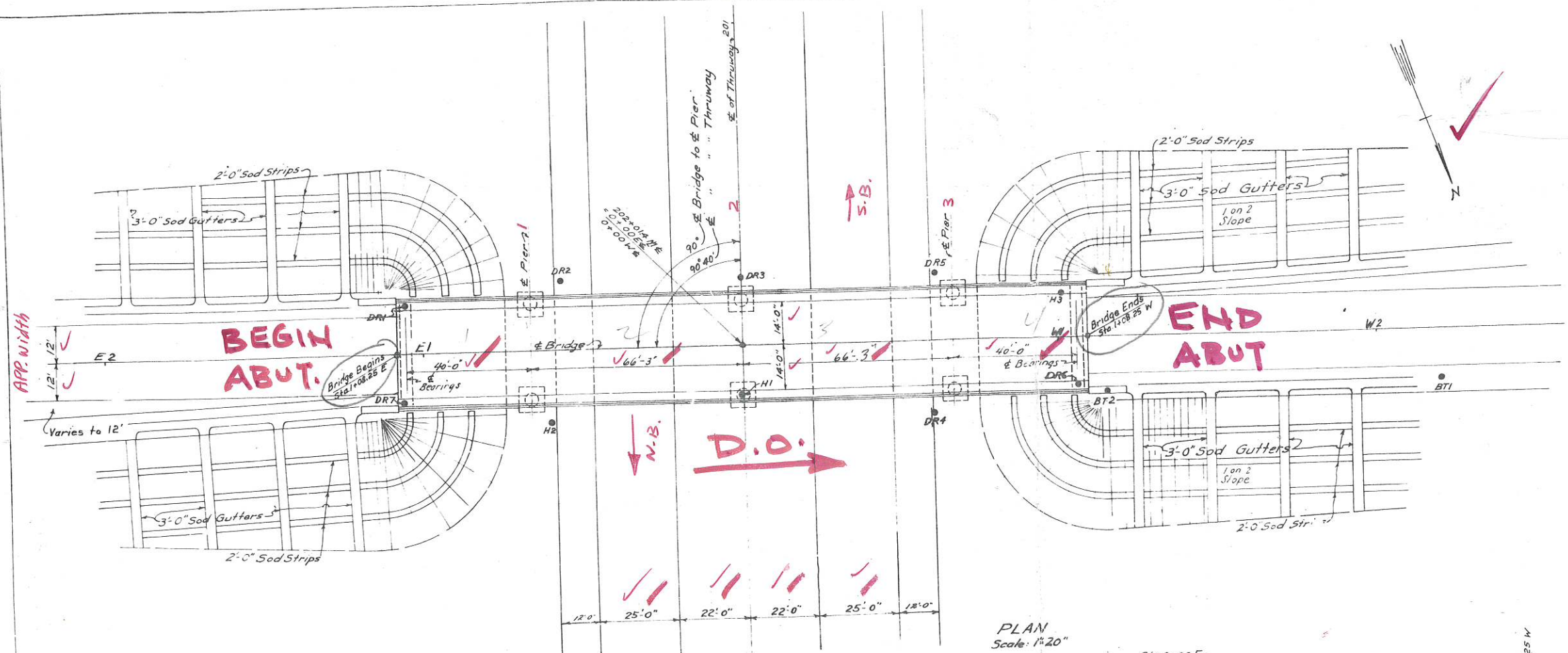
Approved _____, 15
Chief Engineer

Approved E. T. GAWKINS, 19
Deputy Chief Engineer

Approved _____, 1348
H. O. Schermerhorn
Consulting Engineer

Approved Sept 16, 1948
B. D. Tallamy
Chief Engineer

State	County	Fiscal Year	Sheet No.	Total Sheets
N.Y.	Ulster		14	54
CATSKILL THRUWAY				CT 46-1
SAUGERTIES-GREEN CO. LINE				

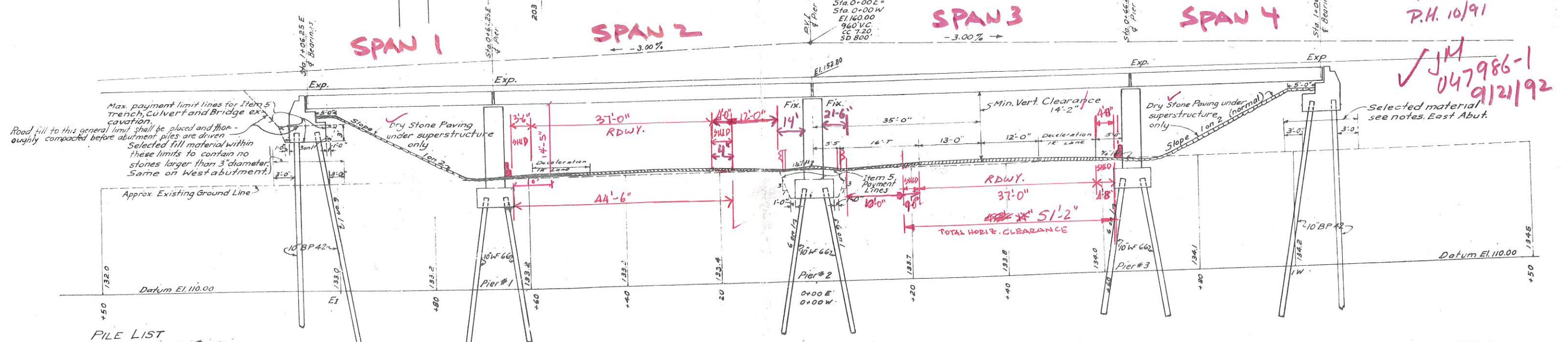


REVIEWED
4-9-85
R.D.

A. Land
12/9/86

B.M.
12/88
P.H. 10/12/90
P.H. 10/91

JM
047986-1
9/21/92



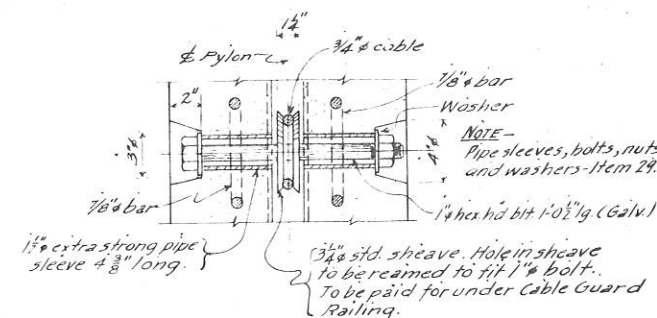
- PILE LIST**
- East Abutment 8 Piles 10" BP 42*125' long
 - West Abutment 4 " 10" BP 42*95' " (for North side)
 - " 4 " 10" BP 42 85 " (for South side)
 - East Pier 4 Piles 10"W 66*90' Long (for North side) Pier #1
 - " 4 " 10"W 66*100' " (for South side) "
 - Center Pier 8 Piles 10"W 66*80' Long Pier #2
 - West Pier 8 Piles 10"W 66*75' " Pier #3

NOTE: The Contractor shall order and drive Steel Bearing Piles of the size and lengths above indicated. Payment will be made under Item 85HA for 10" BP 42* Piles and under Item 85HB for 10"W 66* Piles. For design purposes the assumed load per pile does not exceed 38-Tons at abutments and 65-Tons at piers.

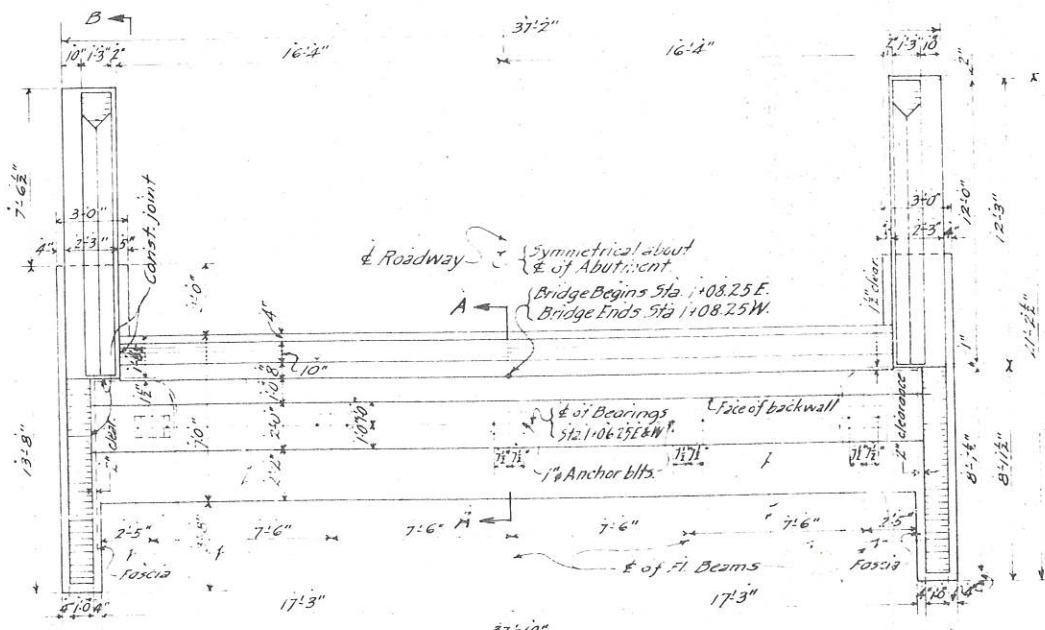
BIN 5515590

MALDEN ROAD BRIDGE
GENERAL PLAN
STA. 202+01.4

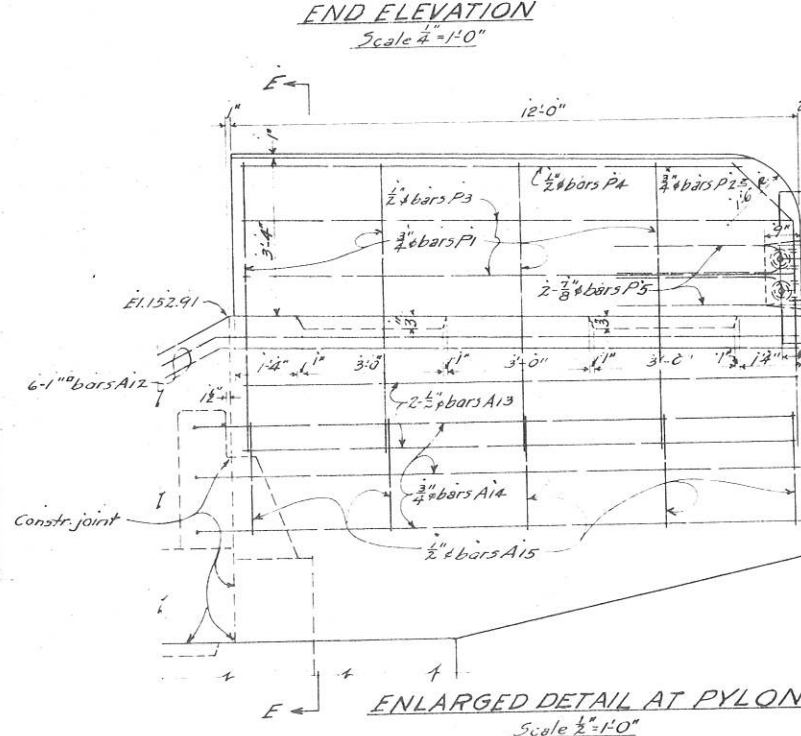
APPROVED
J. H. [Signature]
J. H. [Signature]
J. H. [Signature]



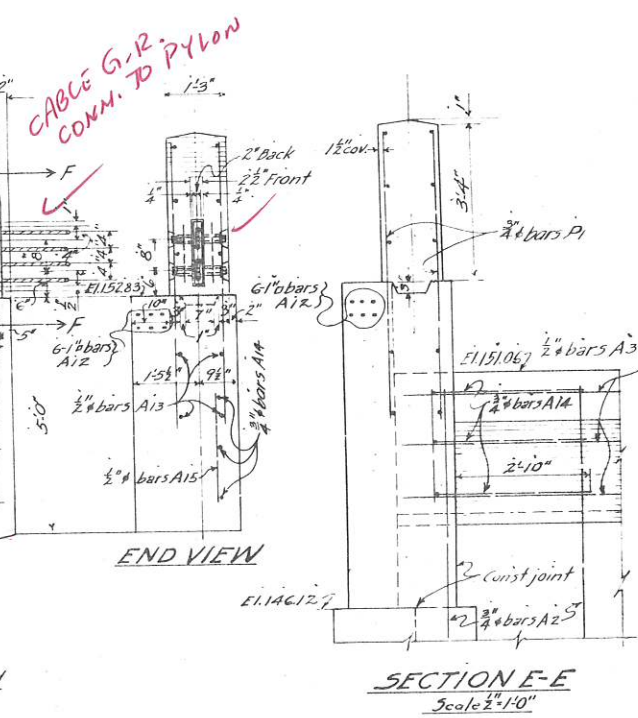
SECTION F-F
Scale 2"=1'-0"



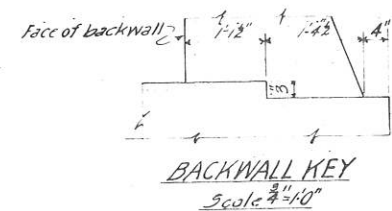
PLAN
Scale $\frac{1}{2} = 1'-0''$



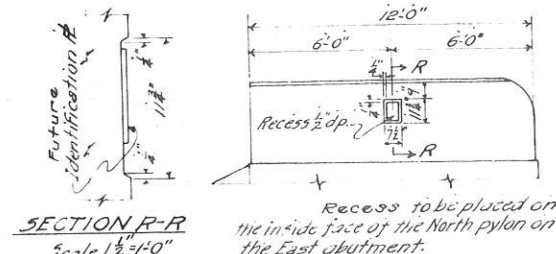
ENLARGED DETAIL AT PYLON
SCALE 1" = 10"



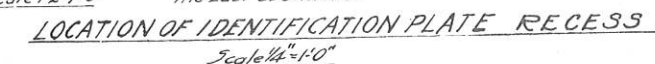
SECTION E-E
Scale $\frac{1}{2}'' = 1'-0''$



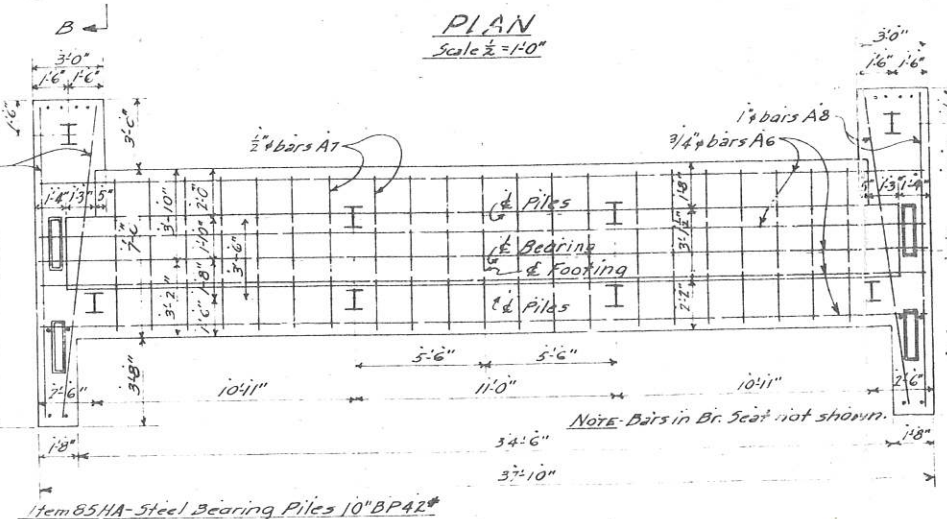
BACKWALL KEY
9.02/4 = 2.25" = 1'0"



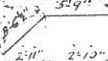

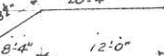
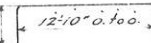
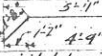
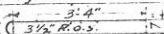
SECTION R-R
Scale $1\frac{1}{2}'' = 1'-0''$



LOCATION OF IDENTIFICATION PLATE RECESS
Scale $\frac{1}{4}" = 1'-0"$



FOOTING & PILE PLAN
Scale $1/4" = 1'-0"$

BAR LIST FOR ABUTMENTS				
Mark	Size	No	length	Description and Location
A1	$\frac{3}{8}$ "	24	5'-6"	Vertical straight bars in back wall.
A2	$\frac{3}{8}$ "	24	6'-1"	 Bent bars in back wall. (Bent in field)
A3	$\frac{1}{2}$ "	10	3'-10"	Horizontal straight bars in back wall.
A4	$\frac{3}{8}$ "	10	3'-10"	Horizontal " " " Bridge seat.
A5	$\frac{1}{2}$ "	46	4'-2"	Spacer bars in br. seat.
A6	$\frac{3}{8}$ "	10	3'-6"	Horizontal str. bars in both of footing.
A7	$\frac{1}{2}$ "	42	6'-8"	Spacer bars in both of footing.
A8	$\frac{1}{4}$ "	8	13'-4"	str. bars in both of footing at ends.
A9	$1\frac{1}{4}$ "	8	8'-10" x 5'-4"	 Vert bent bars in end of footing.
A10	$1\frac{1}{4}$ "	8	10'-7" x 7'-8"	
A11	$1\frac{1}{4}$ "	16	7'-2"	str. vertical bars in end of footing.
A12	$1\frac{1}{4}$ "	24	21'-2"	 Bent bars in side wall and pylon bracket.
A13	$\frac{1}{2}$ "	16	1'-9"	str. horizontal bars in pylon bracket.
A14	$\frac{3}{4}$ "	12	16'-0"	 Bend bars in back wall and pylon bracket.
A15	$\frac{1}{4}$ "	20	2'-6"	Spacer bars in pylon bracket.
P1	$\frac{3}{8}$ "	32	5'-11"	str. vertical bars in pylon.
P2	$\frac{1}{2}$ "	4	6'-4"	 Bent bars in pylon.
P3	$\frac{1}{2}$ "	14	11'-8"	straight horizontal bars in pylon.
P4	$\frac{1}{2}$ "	8	10'-6"	straight " " " pylon.
P5	$\frac{1}{2}$ "	16	7'-6"	 Bent bars in pylon.

P.H. 10/12/90
P.M 10/91

✓ JM
PE 047986-1
9/21/92

BIN 5515590

MALDEN ROAD BRIDGE
EAST & WEST ABUTMENT
STA. 202+01.4

N-K Blumenthal
 Altenburg
 Campbell 2/27/46

STATE	COUNTY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.Y.	ULSTER		16	54

CATSKILL THRUWAY
SAUGERTIES-GREEN CO. LINE CT 46-1

GENERAL NOTES SUPERSTRUCTURE

All concrete in superstructure except pavement shall be Item 18V5.
Concrete pavement shall be Item 475.
No construction joints other than those shown on the plans will be permitted without written permission of the Engineer.
The cost of furnishing and installing joint material including caulking compound, preformed bituminous joint, bituminous material Item 71B and copper flashing shall be included in the price bid for Item 18V5.
Reinforcement bars may be spliced at places approved by the Engineer. Bars so spliced shall be lapped 45 diameters.
Rivets and bolts to be 7/8" diameter. Open holes 1/2" unless otherwise noted.
Shop paint red lead and oil. First field coat to be aluminum paint. Second field coat to be gray-green paint. Top flanges of 66" span "Alpha" beams in contact with concrete shall not be painted.
Camber beams of 40'0" span, or end spans 1'. Camber bms. of 66'3" span, or interior spans 2 1/2'. Camber bms. of 28'0" span, or crossbeams 2'.
Railing including posts & connections will be paid for under Item 37. Railing post anchor bolts will be paid for under Item 29.
Designing & detailing have been done in accordance with the A.A.S.H.O. Specifications, 1944 for Highway Bridges.
Material & fabrication - Specifications of N.Y. State Dept. of Public Works, Jan. 2, 1947 and current modifications.
All welding to be electric arc and shall conform to the American Welding Society Specifications for Welded Hwy. & R.R. Bridges, 1947.
The camber in steel beams to compensate for deflection does not correspond with the probable actual deflection under dead load.
To insure uniform grades on roadway & sidewalk surfaces on multiple spans under dead load, corrections must be made in the thickness of wearing surface of roadway and thickness of sidewalk slab. The thickness is to be increased over the piers. At the ends of the bridge the normal thickness of wearing surface & sidewalk thickness is to be used.

SUBSTRUCTURE

Concrete in abutments, excepting pylons shall be Item 20V5. Concrete in pylons & piers shall be Item 18V5.
Payment for furnishing and placing anchor bolts & nuts will be under Item 24. For description of anchor bolts see superstructure sheet.
Bridge seat areas directly under ends of beams shall be bush hammered for bearing if directed by the Engineer.

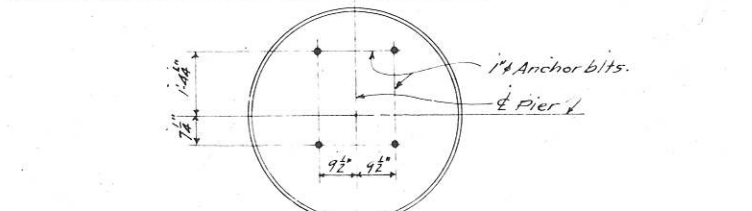
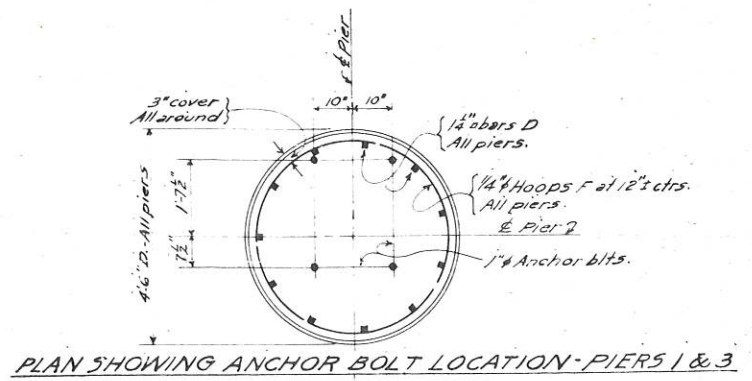
LOADING
This structure has been designed for a series of 20-ton trucks in each traffic lane. Dimensions and distribution, as specified in the A.A.S.H.O. 1944 specifications. Trucks spaced 30 feet apart between axles.

BAR LIST FOR PIERS				
Mark	Size	No.	Length	Description & Location
D	1 1/4"	66	17'-0"	Vertical bars in stems of piers.
E	1 1/4"	66	7'-8"	" " " " and footings of piers.
F	1 1/4"	102	13'-6"	Hoop bars in stems of piers.

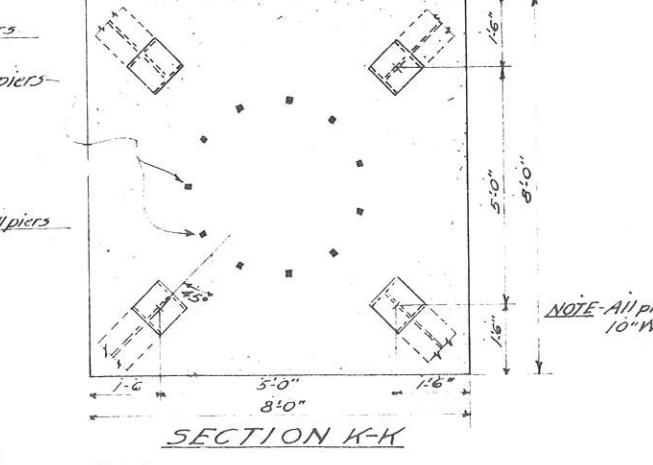
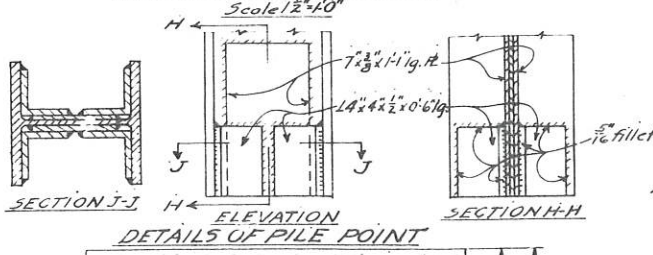
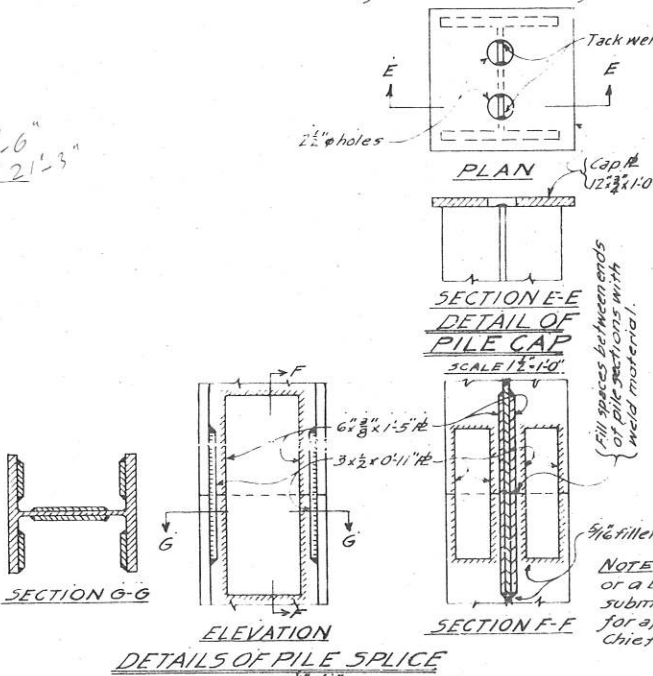
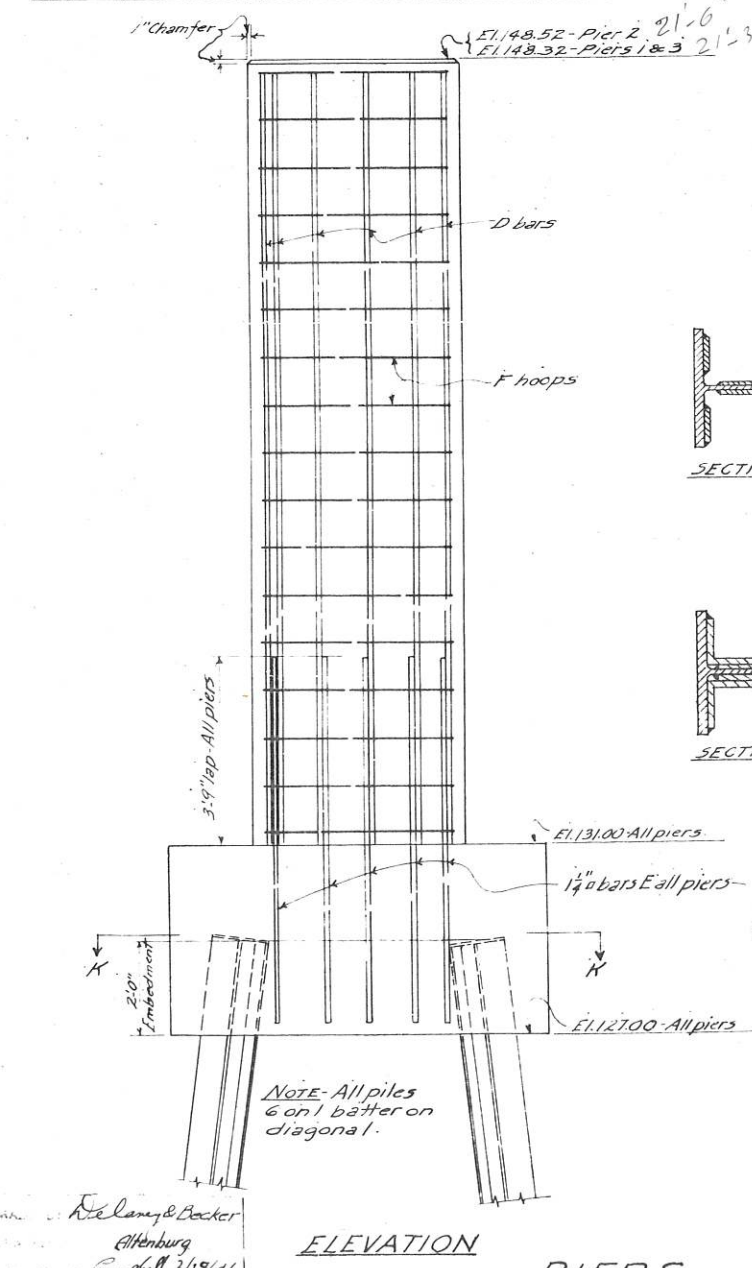
BAR LIST FOR SUPERSTRUCTURE				
Mark	Size	No.	Length	Description & Location
A	3/8"	942	30'-8"	Transverse straight top & bottom rdwy. slab - all spans.
B	1/2"	168	34'-0"	Longitudinal " " " " - top curbs - 66'3" spans.
B1	1/2"	42	42'-5"	" " " " " " - East app. span.
B2	1/2"	42	40'-11"	" " " " " " - West " " "
C	5/8"	290	1'-11"	Dowels in curbs at 1'-6" ctrs.

ESTIMATE OF QUANTITIES SUPERSTRUCTURE & SUBSTRUCTURE				
ITEM NO.	DESCRIPTION	UNIT	NEAT	ROUNDED
5	Trench, Culvert & Bridge Excavation	Cu.Yd.	335	370
15	Portland Cement	Bbl.	118	753
15D	Natural Cement	Bbl.	120	726
18	Concrete for Structures	Cu.Yd.	321	337
20	First Class Concrete	Cu.Yd.	147	154
25F	Steel Fabric Reinforcement	Sq.Yd.	1021	1070
28	Bar Reinforcement for Structures	Lbs.	62,330	65,400
28A	Spiral Bar Reinforcement	Lbs.	1,278	1,340
29	Structural Steel	Lbs.	230,700	238,000
37	Metal Railing	Lin.Ft.	434	440
47E	Cement Concrete Pavement *	Sq.Yd.	56	60
62	Membrane Waterproofing with Protection Course	Sq.Yd.	765	800
85HA	Steel Bearing Piles *	Lin.Ft.	1720	1800
85HB	Steel Bearing Piles	Lin.Ft.	2000	2100
85HC	Splices for Steel Bearing Piles *	Each	24	28
87	Furnishing Equipment for Driving Piles	L.S.	258,800	25% total
119	Run of Bank Gravel Backfill.	Cu.Yd.	106	120
15-2	Portland Cement	Bbl.	733	769
15 N	Natural Cement	Bbl.	105	110

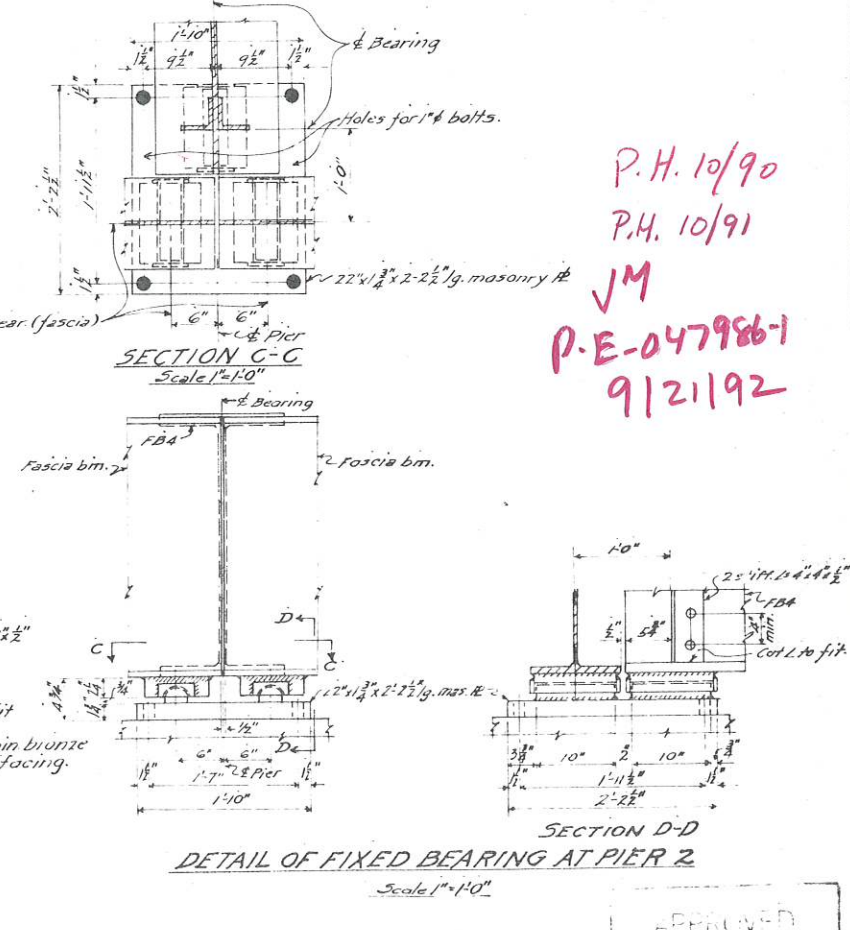
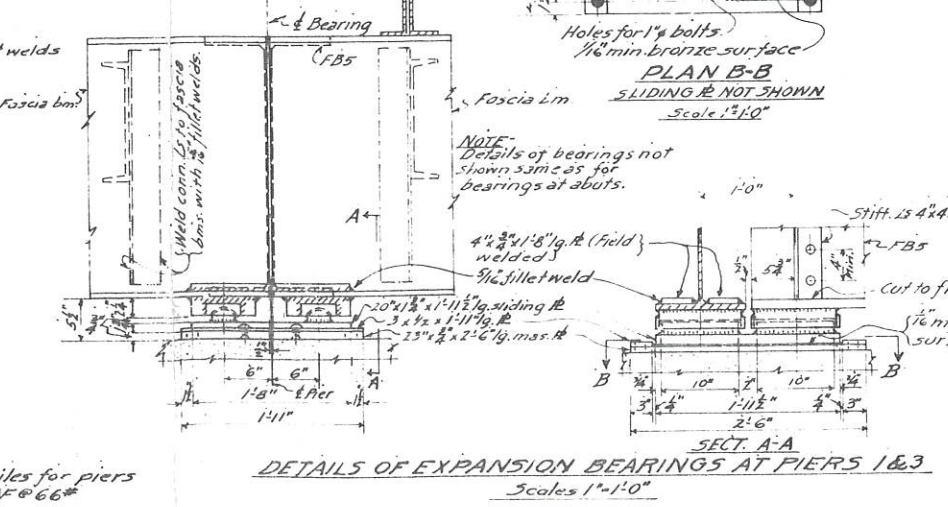
Items & Item numbers shown on these plans are in accordance with the 1942 D.P.W. specifications. Items & item numbers to be used are in accordance with the 1947 Public Works specifications. Estimate of quantities on this sheet shows comparative items for 1942 & 1947 Item numbers.



NOTE - Other details & dimensions same as for Piers 1 & 3



NOTE - Details for riveted or a bolted splice may be submitted by the Contractor for approval by the Deputy Chief Engineer.



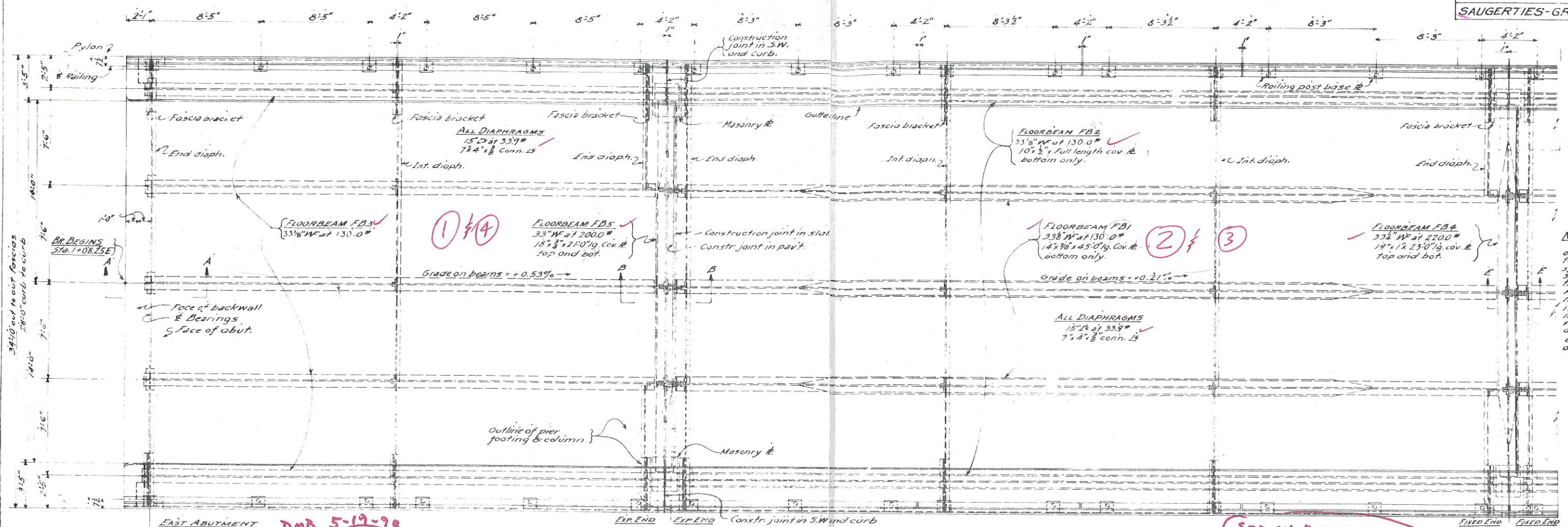
P.H. 10/90
P.H. 10/91
JM
P.E.-047986-1
9/21/92

BIN 5515590

MALDEN ROAD BRIDGE
PIERS & DETAILS
Sta. 202+01.4

STATE	COUNTY	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.Y.	ULSTER		17	54

CATSKILL THRUWAY
SAUGERTIES-GREEN CO. LINE CT 46-1

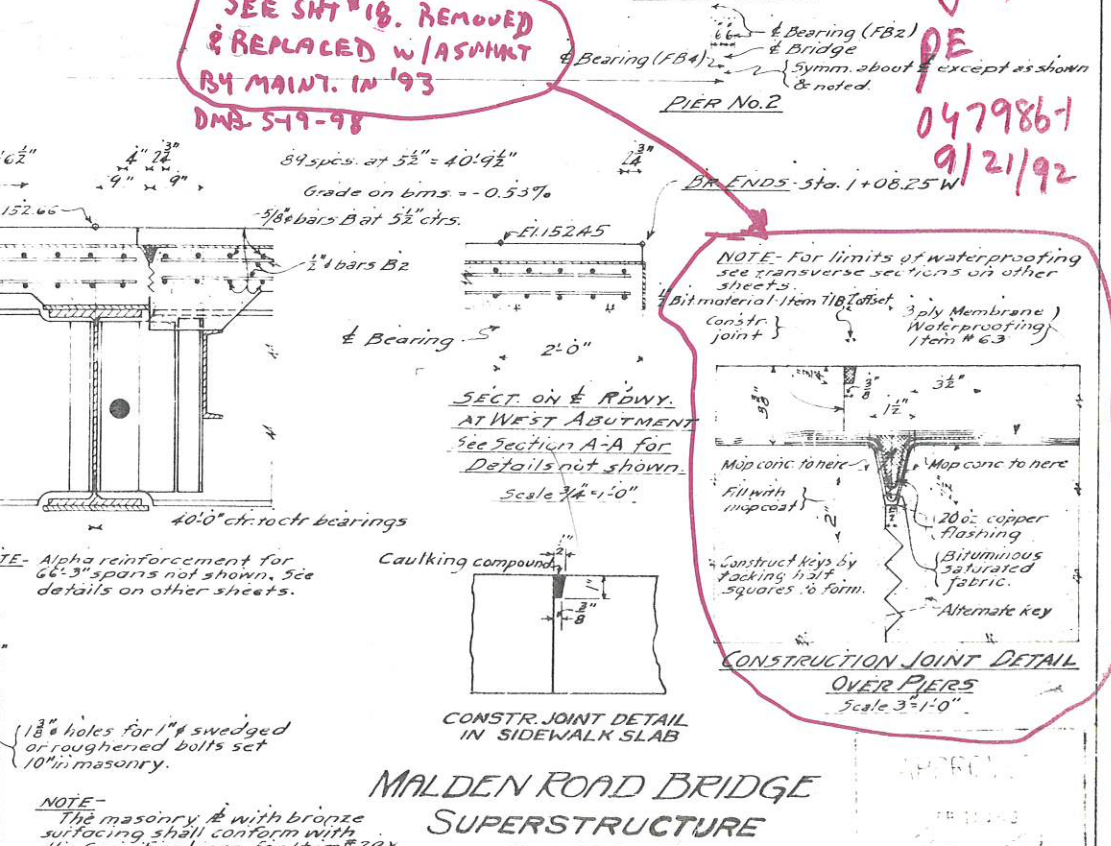
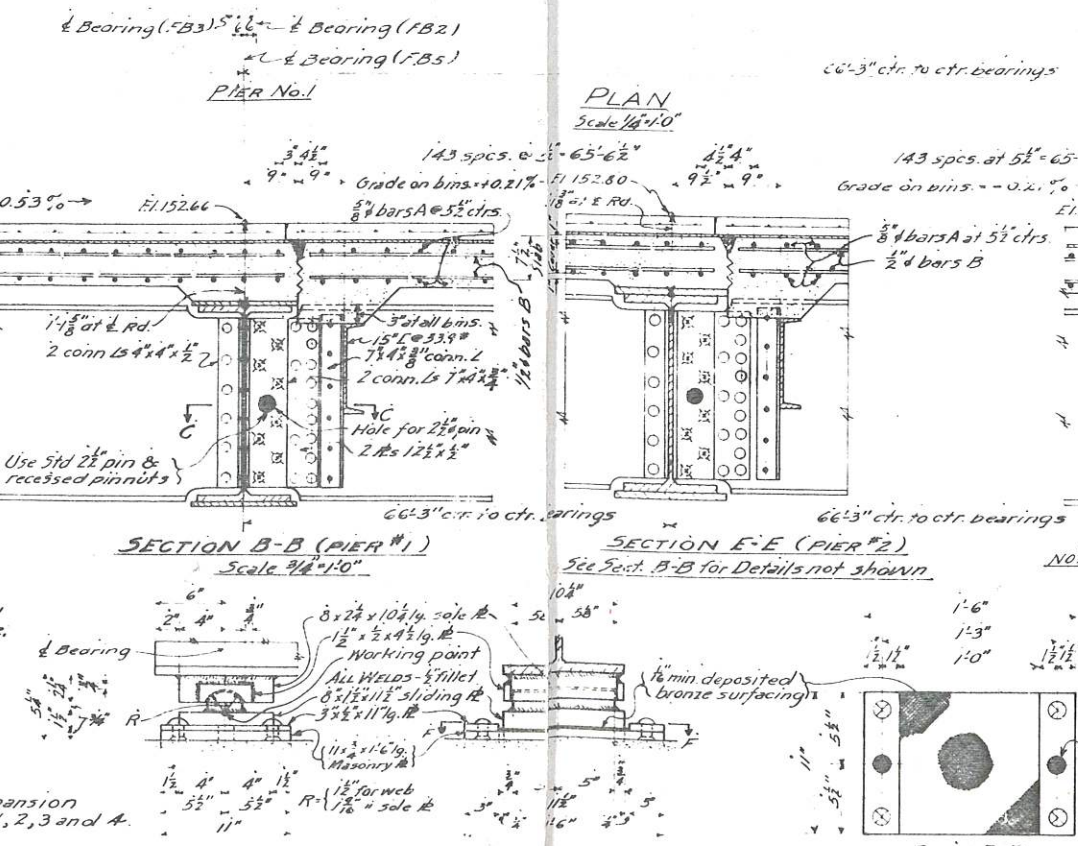
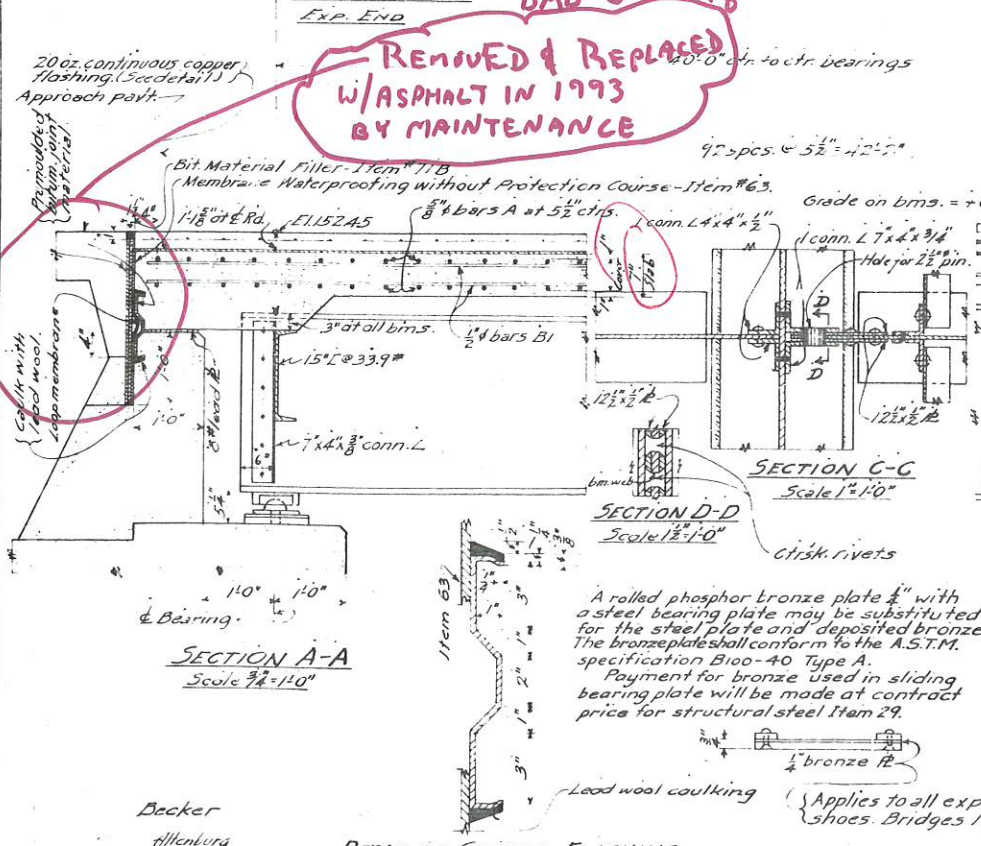


NOTE: The computed spacing of the transverse slab reinforcement is 5 1/2" since this spacing conflicts with the spiral pitches welded to the stringers at the 66'-3" Alpha spans, it will be necessary to vary the spacing of the slab reinforcement to fit. The slab bars will be considered satisfactory if there are 8 bars in each layer in a distance of 3'-8"

PH. 10/90
P.H. 10/91
JM
PE
0479861
9/21/92

REMOVED & REPLACED W/ ASPHALT IN 1993 BY MAINTENANCE
DMS 5-19-98

SEE SHT #18. REMOVED & REPLACED W/ ASPHALT BY MAINT. IN '93
DMS 5-19-98



MALDEN ROAD BRIDGE
SUPERSTRUCTURE
STA. 202+01.4

State	County	Fiscal Year	Sheet No.	Total Sheets
N.Y.	Ulster		15	54

CATSKILL THRUWAY
SAUGERTIES-GREEN CO. LINE CT 46-1

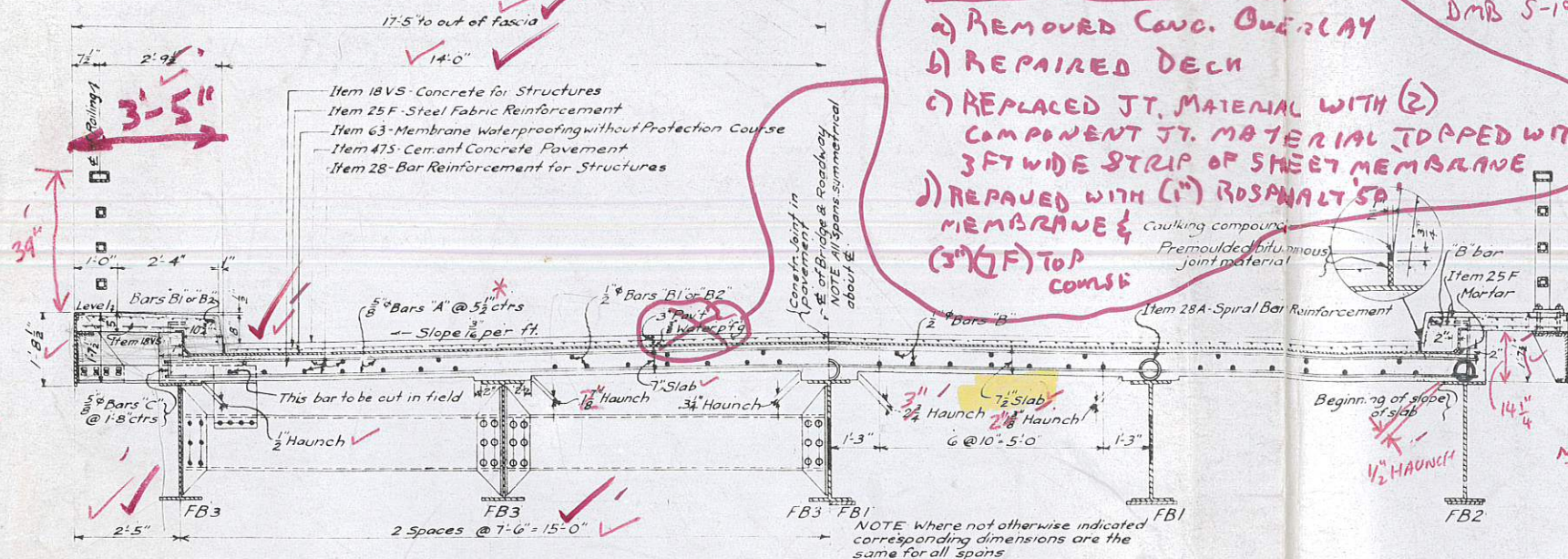
'93 MAINTENANCE WORK

- a) REMOVED CONC. OVERLAY
- b) REPAIRED DECK
- c) REPLACED JT. MATERIAL WITH (2) COMPONENT JT. MATERIAL TAPPED WITH 3FT WIDE STRIP OF SHEET MEMBRANE
- d) REPAIRED WITH (1") ROSANALT SP MEMBRANE & (3") (F) TOP COMB

DMB 5-19-98

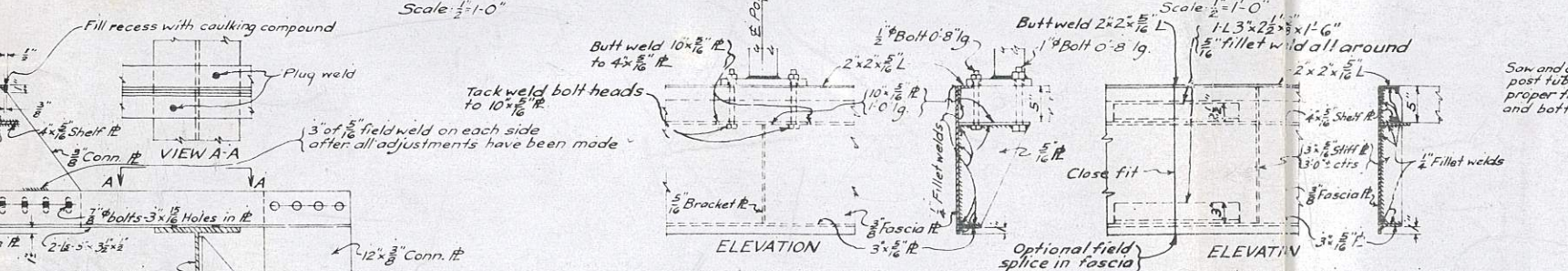
REVIEWED
4-9-85
R.D.

A. J. Land
12/9/86



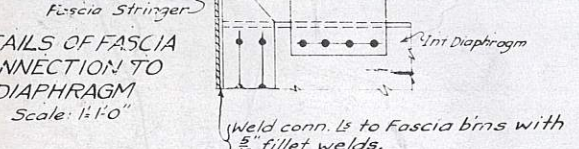
HALF SECTION OF END SPAN SHOWING FASCIA CONNECTION AT DIAPHRAGM
Scale: 1/2"=1'-0"

HALF SECTION OF INTERIOR SPAN SHOWING FASCIA CONNECTION AT RAILING POST
Scale: 1/2"=1'-0"

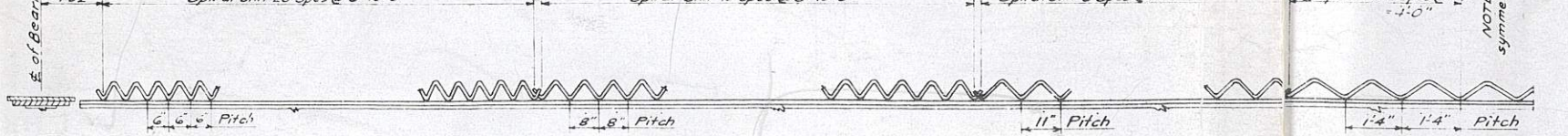


DETAILS OF FASCIA CONNECTION AT RAILING POST
Scale: 1/2"=1'-0"

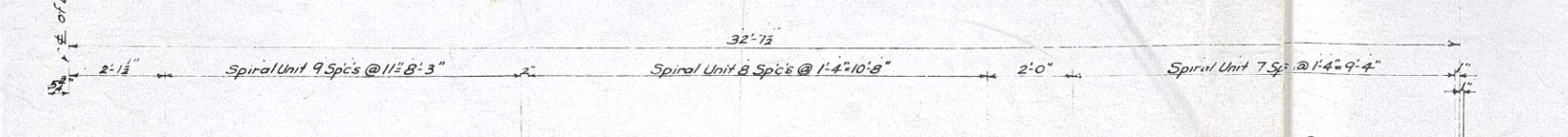
DETAILS OF TYPICAL SECTION THRU FASCIA
Scale: 1/2"=1'-0"



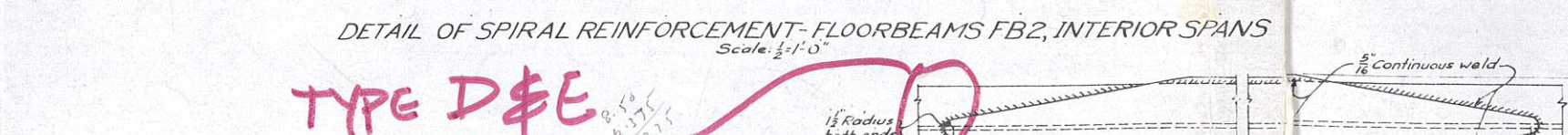
DETAILS OF FASCIA CONNECTION TO DIAPHRAGM
Scale: 1/2"=1'-0"



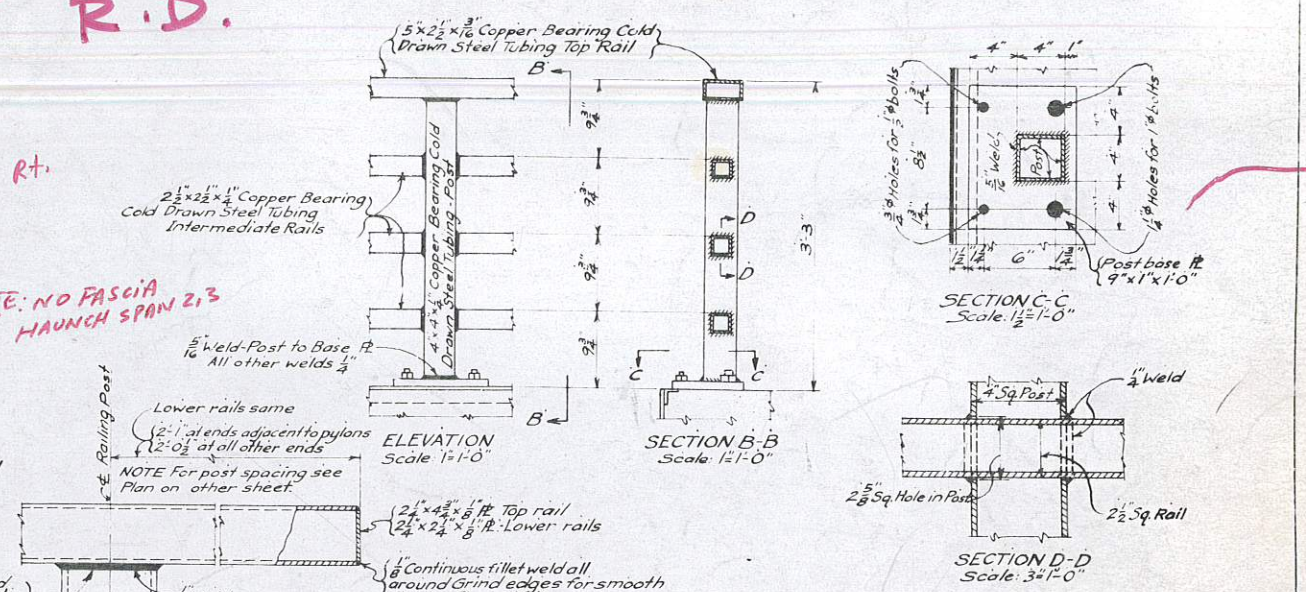
DETAIL OF SPIRAL REINFORCEMENT-FLOORBEAMS FB1, INTERIOR SPANS
Scale: 1/2"=1'-0"



DETAIL OF SPIRAL REINFORCEMENT-FLOORBEAMS FB2, INTERIOR SPANS
Scale: 1/2"=1'-0"



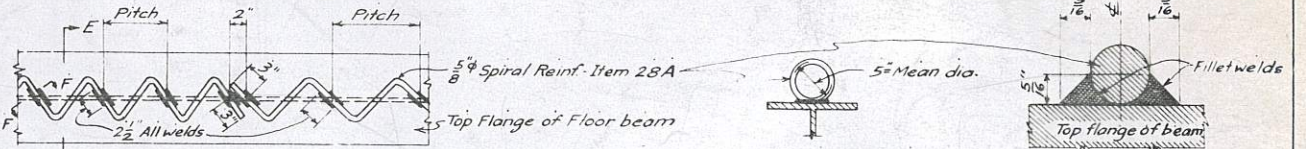
COVER PL DETAIL
FB1, FB4 & FB5



DETAILS OF RAILING
Scale: 1/2"=1'-0"

RAILING NOTES

Dimensions for tubing are outside dimensions
Shop or field welding may be used in the fabrication and erection of the railing.
Since the posts must be vertical and the finished railing must meet all requirements of fit and alignment and grade to the full satisfaction of the Engineer it is suggested that complete field measurements be made before any shop fabrication work is performed.
Over the shop coat of red lead paint the under-side of railing post base plates shall be given two field coats of approved high luster asphalt paint composed of at least 36% of pure Gilsontite Asphaltum 4% linseed oil or vegetable oils and not more than 60% of Volatile spirits. Paint shall dry free of tackiness in 8 hours and shall weigh not less than 8 pounds per gallon.
All railings are to be fabricated and erected so that rails are parallel to each other and to the top of fascia and posts are truly vertical.

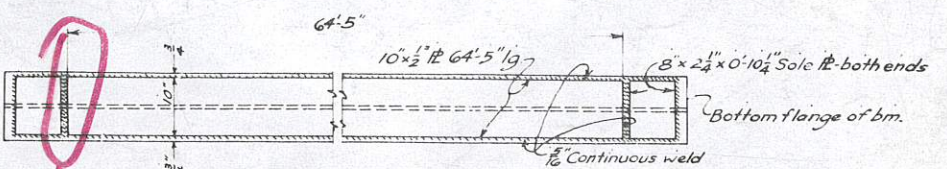


TYPICAL PLAN
Scale: 1/2"=1'-0"

SECTION E-E
Scale: 1/2"=1'-0"

SECTION F-F
Scale: Full Size

DETAILS OF SPIRALS



COVER PL DETAIL FOR FB2 INT. SPANS
Scale: 1/2"=1'-0"

TYPE D & E WELD

TYPE D & E WELD

BIN 55/5590

**MALDEN ROAD BRIDGE
SUPERSTRUCTURE
STA. 202+01.4**