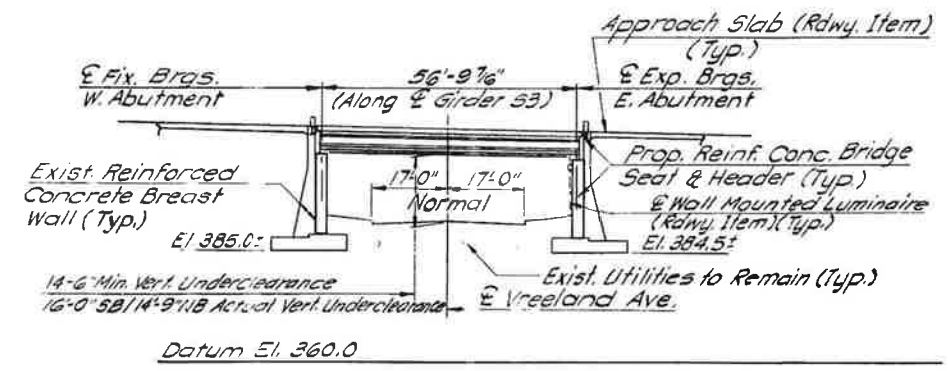


- LEGEND:**
- 1959 Borings
 - Proposed 18"x36" Junction Box
 - Proposed Inlet

NOTE:
 For Entrance Guide Rail Connection Detail, see Structure Plan and for Exit Guide Rail Connection (Type B) Detail, see Roadway Plan.



GENERAL NOTES:

DESIGN SPECIFICATIONS:
 (A) 1989 AASHTO STANDARD SPECIFICATIONS FOR HIGHWAY BRIDGES (WITH INTERIMS) AS MODIFIED BY SECTION 3 OF N.J.DOT DESIGN MANUAL FOR BRIDGES AND STRUCTURES.
 (B) ALLOWABLE FATIGUE STRESSES BASED ON CASE 1 OF AASHTO TABLE 10.3.2A.

CONSTRUCTION SPECIFICATIONS:
 1989 N.J.DOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AS MODIFIED BY THE SUPPLEMENTARY SPECIFICATIONS.

LIVE LOAD: (NEW DECK AND GIRDERS)
 (A) AASHTO HS20(MS18) + 25%(HS25) OR TANDEM 24 KIP AXLES AT 4 FOOT CENTERS, WHICHEVER GOVERNS.
 (B) LIVE LOAD DEFLECTION SHALL NOT EXCEED 1/1000 OF THE SPAN LENGTH.

LIVE LOAD: (EXISTING DECK AND GIRDERS)
 AASHTO HS20(MS18) OR TANDEM 24 KIP AXLES AT 4 FOOT CENTERS, WHICHEVER GOVERNS.

FUTURE DEAD LOADS:
 NONE

CONCRETE DESIGN STRESSES:
 (A) SPECIFIED DESIGN COMPRESSIVE STRENGTHS (F'_c)
 CLASS A = 4,000 P.S.I.
 CLASS B = 3,000 P.S.I.
 (B) CLASS DESIGN STRENGTHS
 CLASS A = 4,600 P.S.I.
 CLASS B = 3,700 P.S.I.
 (C) ALLOWABLE STRENGTHS, EXTREME FIBER IN COMPRESSION
 CLASS A = 1,600 PSI
 DECK SLABS = 1,400 PSI
 CLASS B = 1,200 PSI

REINFORCEMENT STEEL:
 (A) ASTM A615, GRADE 60.
 TENSILE STRENGTH F_s = 24,000 P.S.I.

PRETENSIONED PRESTRESSED CONCRETE STRESSES: (PROPOSED GIRDERS)
 MINIMUM STRENGTH AT 28 DAYS F'_c = 5,000 P.S.I.
 MINIMUM STRENGTH AT TRANSFER F'_{ci} = 4,000 P.S.I.

PRESTRESSING STEEL: (PROPOSED GIRDERS)
 ASTM A418 - 88b, 1/2" DIAMETER, TYPE 270K
 ULTIMATE STRENGTH PER STRAND 41.3 KIPS
 INITIAL TENSIONS PER STRAND 28.9 KIPS
 STRESS RELIEVED STRANDS

SUPERSTRUCTURE:
 COMPOSITE PRECAST PRESTRESSED CONCRETE I-BEAMS AND REINFORCED CONCRETE DECK SLAB
 1-1/4" LATEX MODIFIED CONCRETE OVERLAY FOR PROPOSED DECK SLAB

EXISTING PLANS:
 PLANS OF THE EXISTING STRUCTURES ARE AVAILABLE FOR INSPECTION AT THE OFFICE OF MR. DANIEL J. WOLFE, BUREAU OF STRUCTURAL ENGINEERING SERVICES, NEW JERSEY DEPARTMENT OF TRANSPORTATION, 1035 PARKWAY AVENUE, TRENTON, NEW JERSEY, 08625

BRIDGE NO. 10 & 11

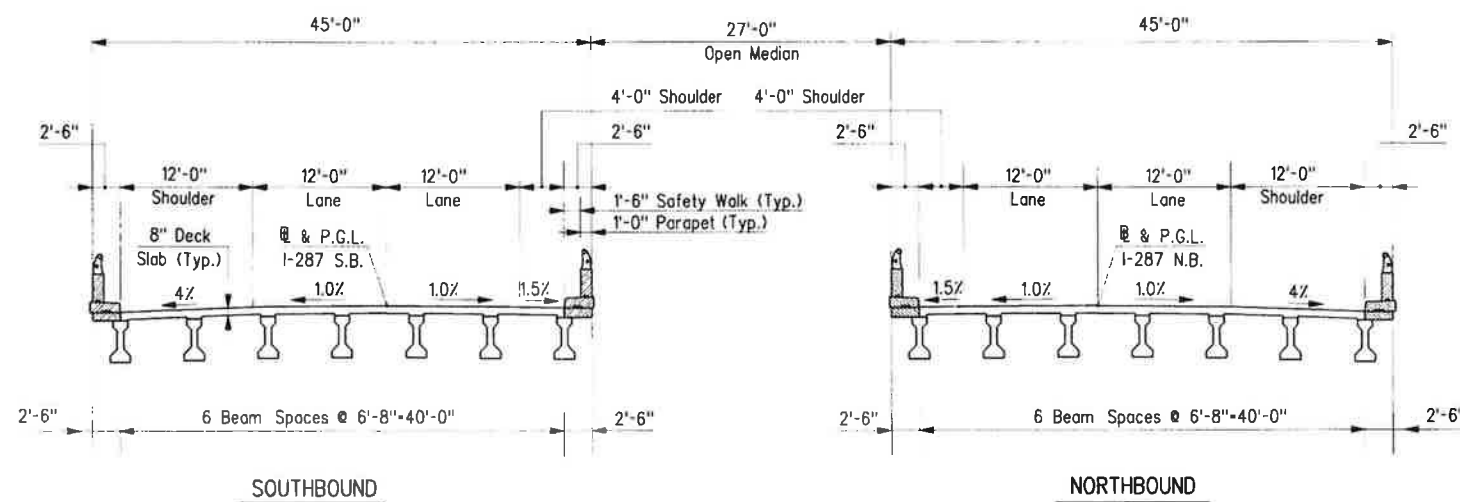
NEW JERSEY DEPARTMENT OF TRANSPORTATION

GENERAL PLAN AND ELEVATION

SAMPLE

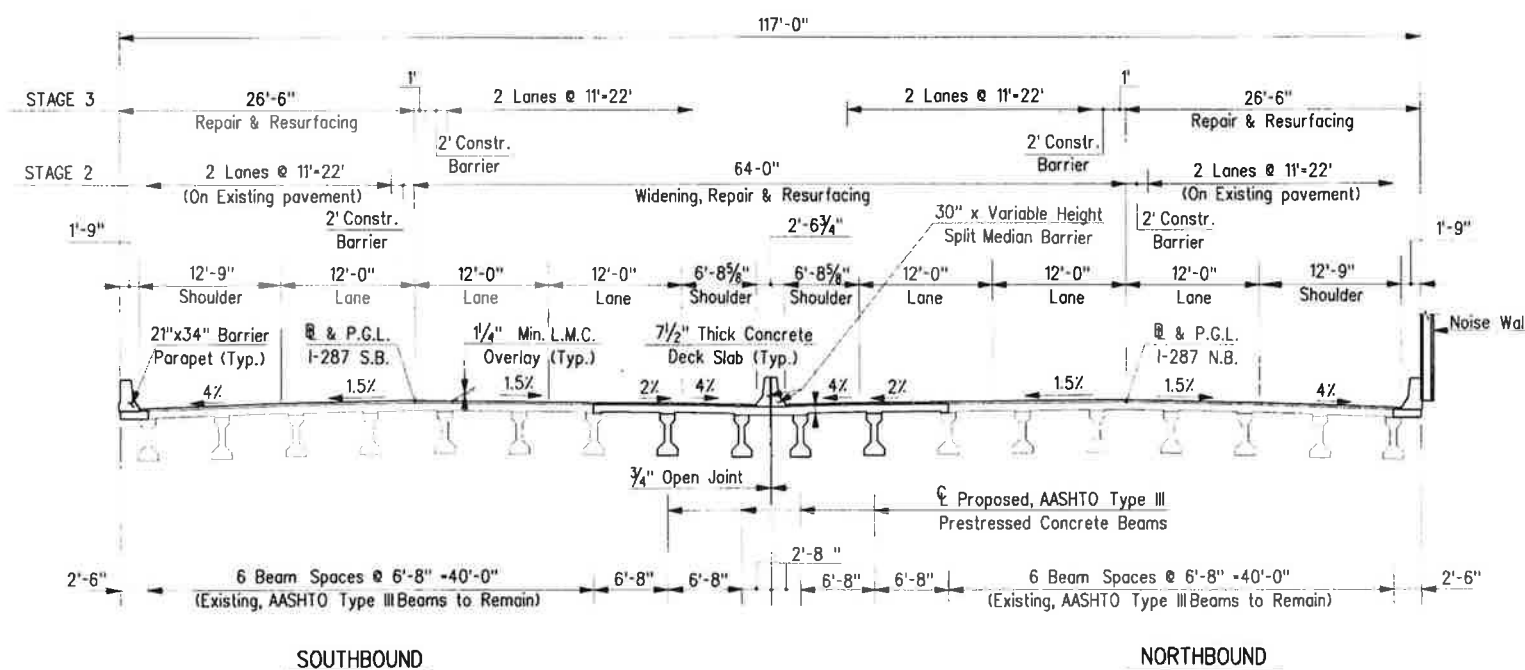


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EXISTING CROSS SECTION
Scale: 1/8" = 1'-0"

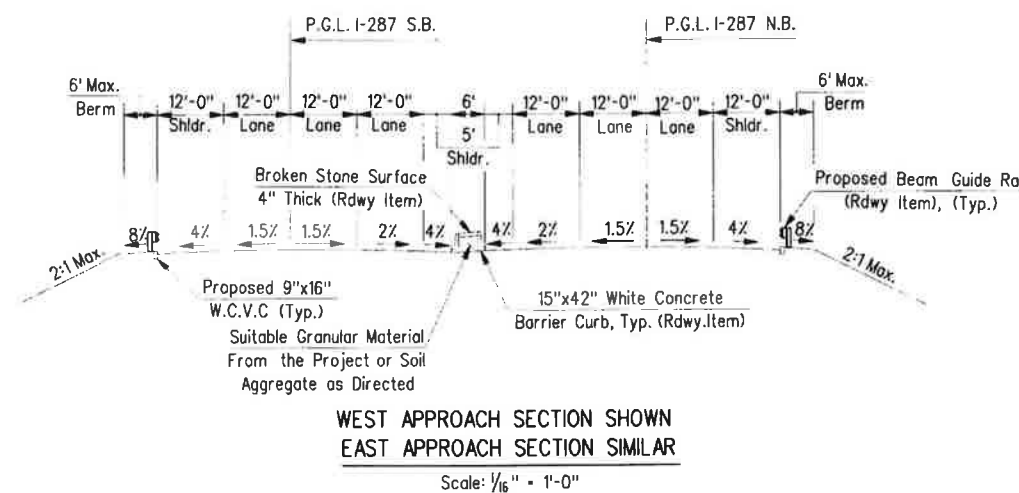
LEGEND
Concrete to be Removed under, "Clearing Site, Bridge"



PROPOSED CROSS SECTION
Scale: 1/8" = 1'-0"

SEQUENCE OF CONSTRUCTION:

- STAGE 1A: PLACE DRUMS AND MAINTAIN TRAFFIC ON EXISTING CONCRETE PAVEMENT. RECONSTRUCT ROADWAY OUTSIDE SHOULDER.
- STAGE 2: INSTALL CONSTRUCTION BARRIER AND SHIFT TRAFFIC TO OUTSIDE LANE AND SHOULDER. WIDEN ROADWAY AND STRUCTURES TO INSIDE AS SHOWN.
- STAGE 3: RELOCATE BARRIER AND SHIFT TRAFFIC ONTO WIDENED STRUCTURE AND PAVEMENT. REPAIR THE EXISTING DECK. CONSTRUCT BARRIER PARAPET AND NOISE BARRIER ON STRUCTURE.



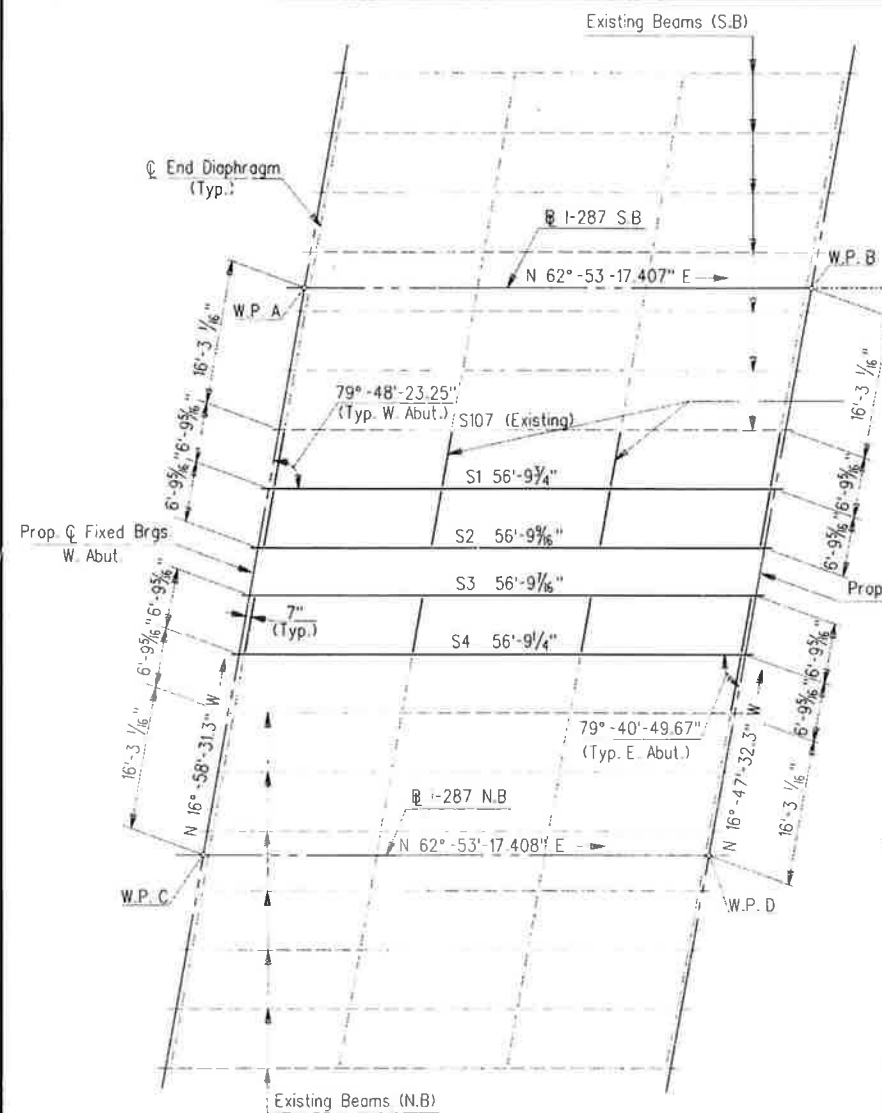
NEW JERSEY DEPARTMENT OF TRANSPORTATION

TYPICAL SECTIONS

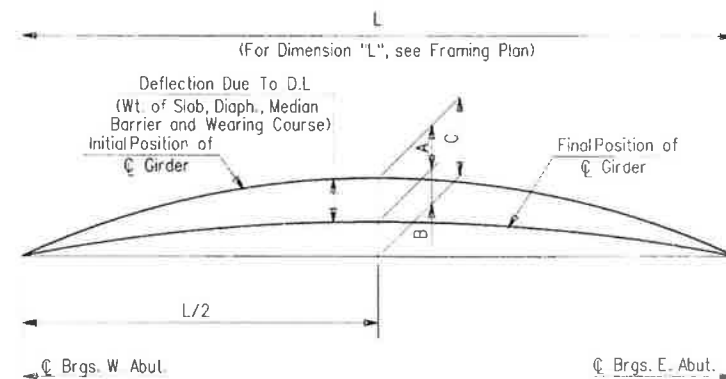
SAMPLE



REVISION	BY	CKD	DATE



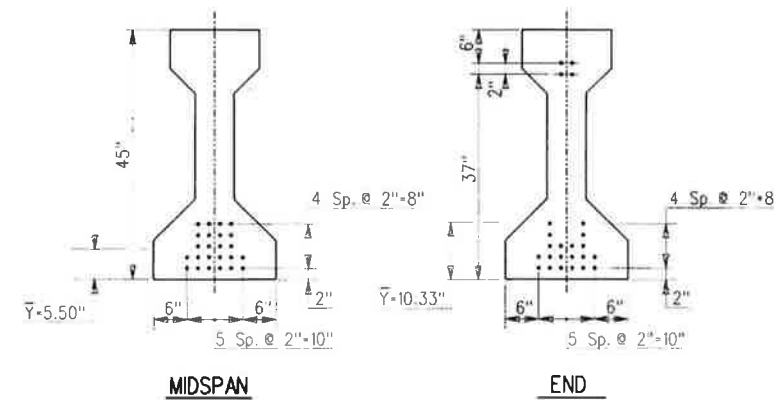
FRAMING PLAN
Scale: 1"=10'-0"



CAMBER DIAGRAM
N.T.S.

CAMBER TABLE			
GIRDER	A	B	C
S2 & S3	0.081	0.056	0.115
S1 & S4	0.088	0.049	0.115

All Cambers in Decimals of a Foot



STRAND PATTERNS - 24 STRANDS
Scale: 3/4"=1'-0"

ESTIMATE OF QUANTITIES			
ITEM	UNIT	QUANTITY	AS-BUILT QUANTITY
PRESTRESSED CONCRETE BEAMS, 45"	L.F.	233	233
STRUCTURAL STEEL BEARINGS FOR PRESTRESSED CONCRETE BEAMS (APPROX. 3112 LBS.)	L.S.	1	1

CAMBER NOTES:

1. Initial Girder position is based upon a Camber Growth Factor of 1.8 at time of erection, which is anticipated to be approximately 30 days after fabrication.
2. The Camber Diagram should be adjusted if a different Camber Growth Factor or time of erection is anticipated.

REFERENCES:

1. For Working Point Layout, see Sheet No. B-170
2. For Girder Details, see Sheet No. B-178
3. For Existing Girder Details, see Existing Plans.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

FRAMING PLAN
AND GIRDER DETAILS

SAMPLE

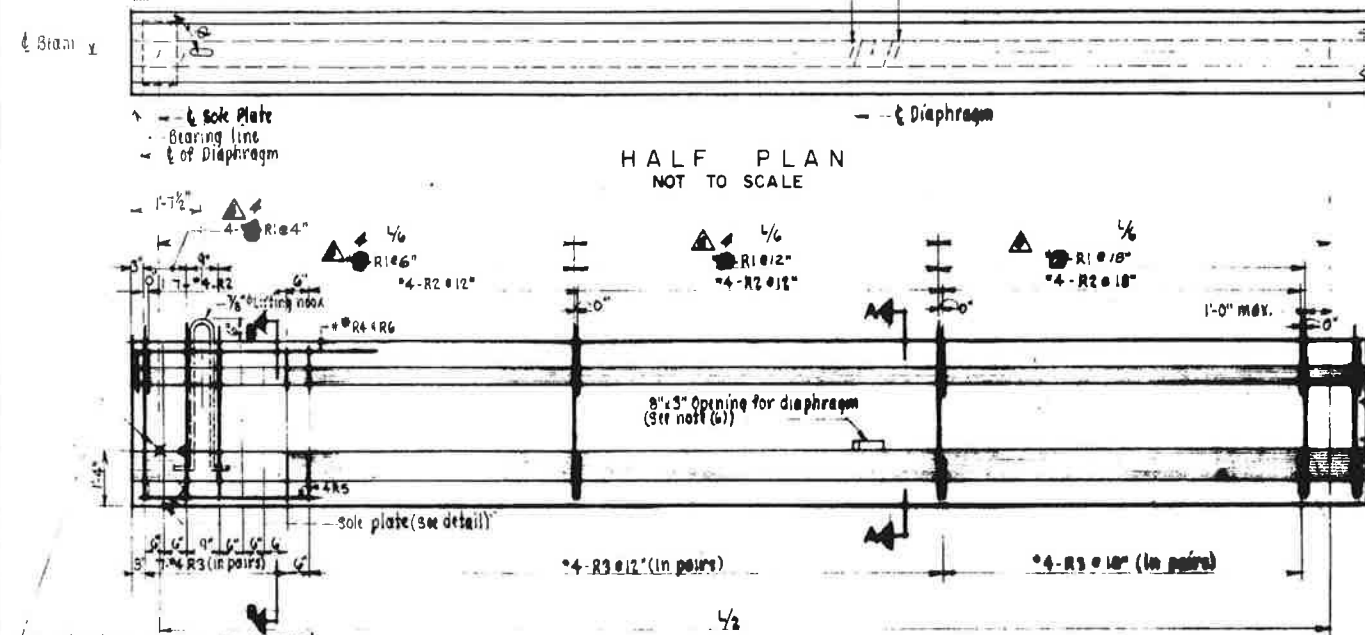


REVISION	BY	CKD.	DATE

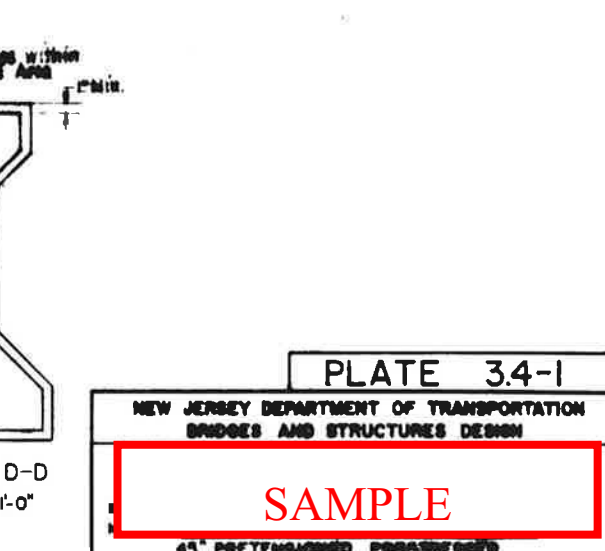
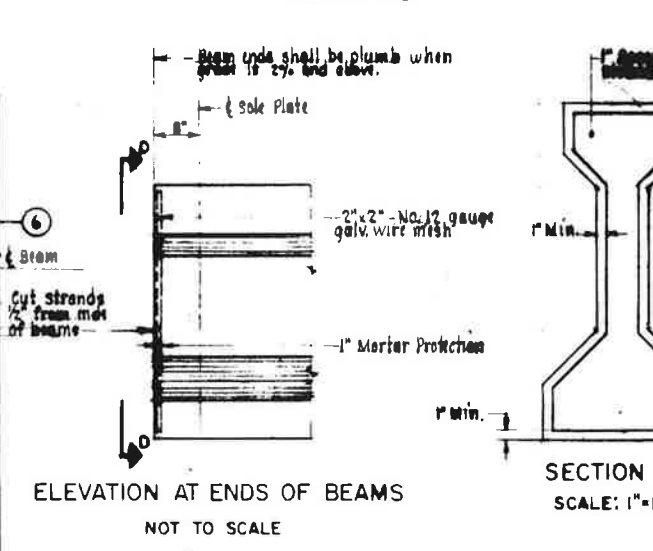
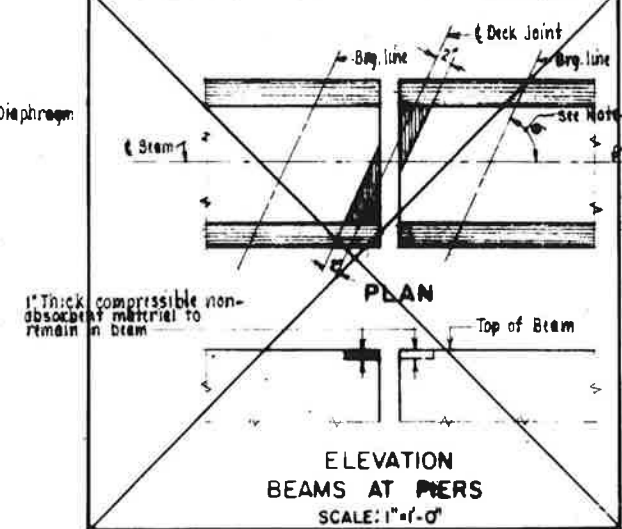
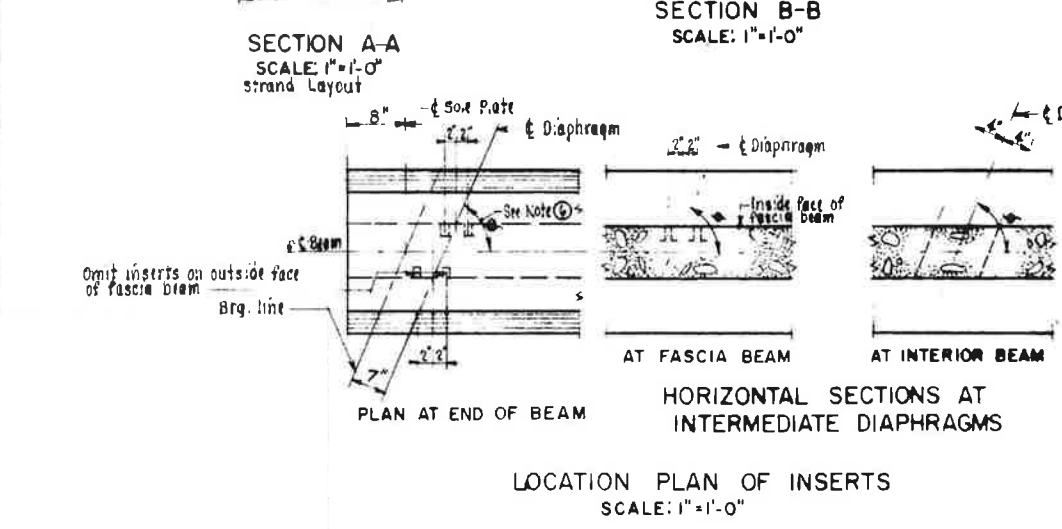
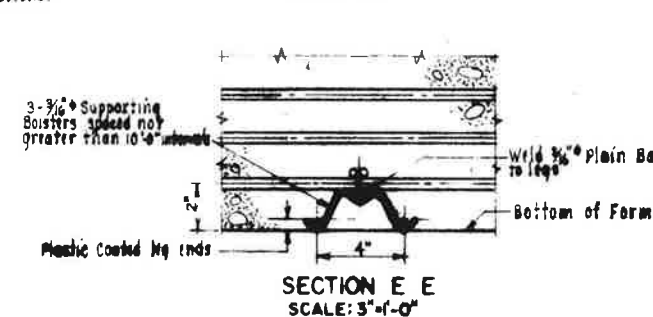
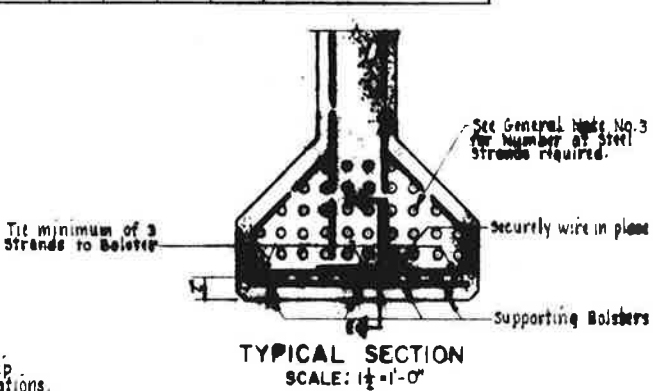
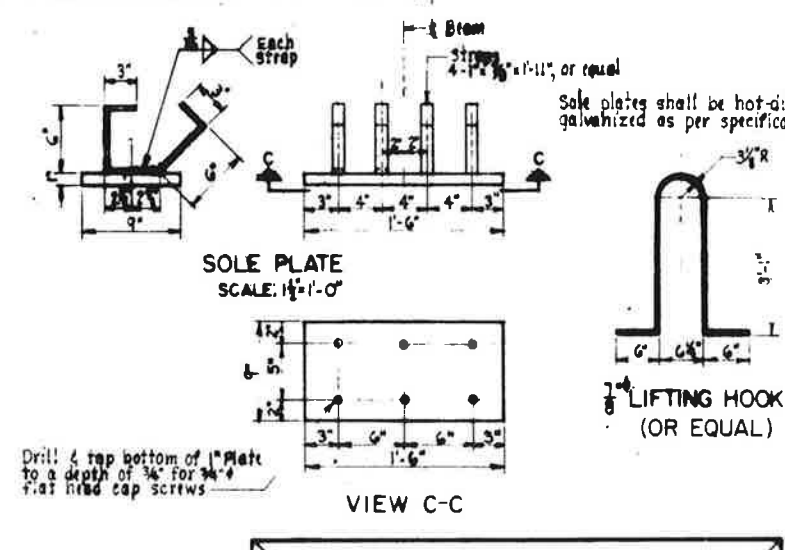
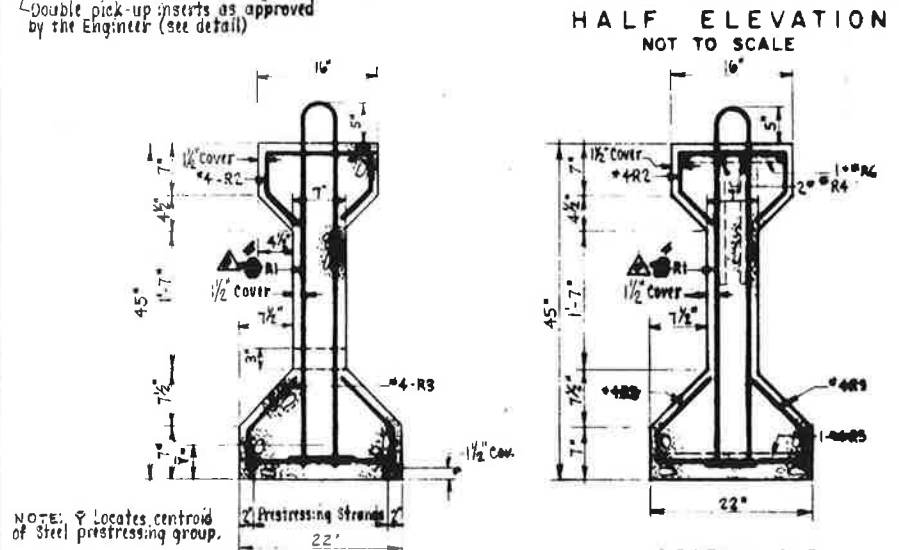
Interior Beam 8"
Fascia Beam 8"
Min. - See Note ⑥

Stirrups adjacent to 8"x3" opening shall be skewed

Beam Symmetrical about centerline



SCHEDULE OF MILD STEEL REINFORCEMENT									
MARK	SIZE	LENGTH	TYPE	A	B	C	D		
R1	#4	8'-3"	1	4'-0 1/2"	4'				
R2	#4	3'-3"	3	5 3/8"	5 3/8"	5"	1'-1"		
R3	#4	2'-6"	4	7 3/4"	7 3/4"	4 1/4"	1'-3"		
(D) R4	#5	8'-0"	2	6'-6"	1'-6"				
R5	#4	11'-0"	2	4'-9"	1'-6"	4'-9"			
(D) R6	#5	14'-0"	2	6'-6"	1'-0"	6'-6"			



GENERAL NOTES

- DESIGN SPECIFICATIONS
A.A.S.H.T.O. STANDARD Specifications for Highway Bridges, 1989
- DESIGN LOADS
A.A.S.H.T.O. HS20-44+10%
- PRESTRESSING STEEL
The pre-tensioning strands shall be 1/2" #7 Wire
Uncoated Steel Strands
Each strand shall be given an initial tension of 29,000 lbs.
Any change in the system of prestressing must be accompanied by complete calculations for approval by the Engineer.
- CONCRETE
All exposed corners shall be chamfered 1/4" or rounded to 1/4" radius. Angles of intersection between webs and flanges shall be rounded to not less than 1/4" radius.
Top surface of beams shall be roughened to satisfaction of Engineer.
At approximate time of initial set all laitance shall be removed with a stiff wire brush.
- SOLE PLATES
Cost of sole plates shall be included in price bid for Prestressed Concrete Beams.
- DIAPHRAGMS
For show each and location of diaphragms see Superstructure sheets.
- MILD STEEL REINFORCEMENT
Reinforcement bars shall conform to A.S.T.M. A601 and shall have 10% yield point.
Cost of furnishing and placing reinforcement steel shall be included in the price bid for Prestressed Concrete Beams.

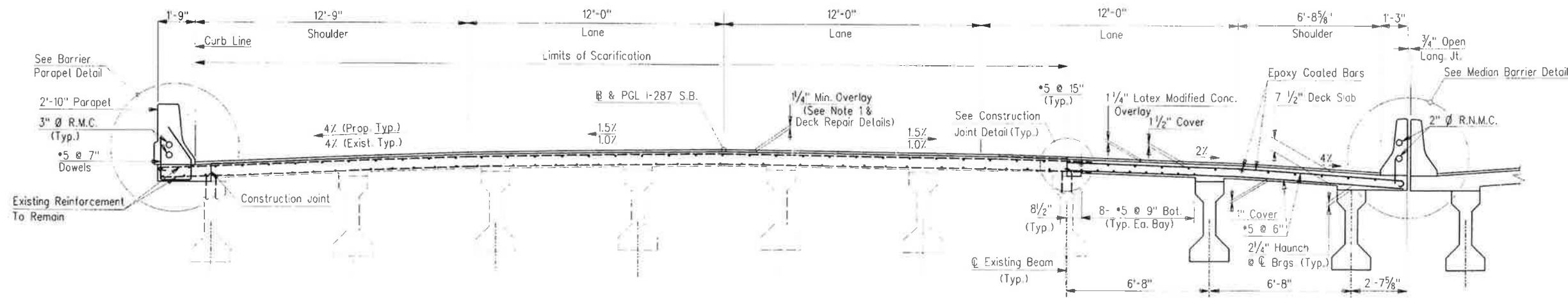
PLATE 34-1

NEW JERSEY DEPARTMENT OF TRANSPORTATION
BRIDGES AND STRUCTURES DESIGN

SAMPLE

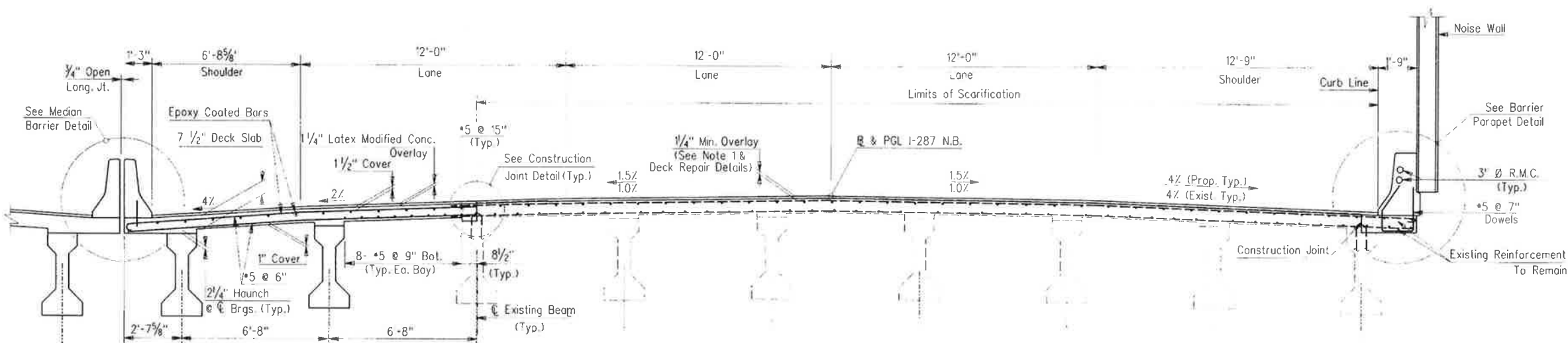
45" PRETENSIONED PRESTRESSED
CONCRETE BEAMS

SAMPLE



TYPICAL CROSS SECTION-SOUTHBOUND

Scale: 3/8" = 1'-0"



TYPICAL CROSS SECTION-NORTHBOUND

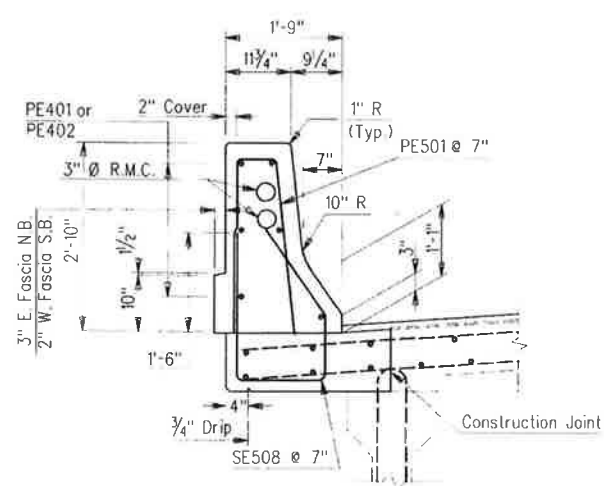
Scale: 3/8" = 1'-0"

NOTES:

1. Contractor Shall Scarify Existing Deck as required to provide 1/4" Min. Latex Modified Concrete Overlay for Final Grade and Cross Slopes, while maintaining the required cover. In any case, the Scarification depth shall be a minimum of 1/4".
2. See Standard and Supplementary Specifications for cleaning contact surface and placing L.M.C. Overlay.
3. Epoxy Bonding Coat required for Joint in First-Course Slab. Excess overflow at top to be removed by sandblasting or high pressure water blasting.
4. Reinforcing steel in Parapets and in top layer of deck shall be Epoxy Coated.

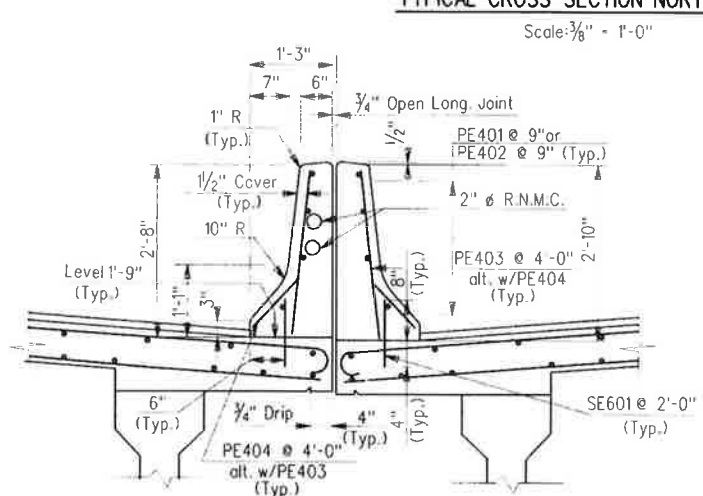
REFERENCES:

1. For Existing Deck Repair & Scarification details, see Sheet B-163
2. For Deck Joint Details, see Sheet No. B-162



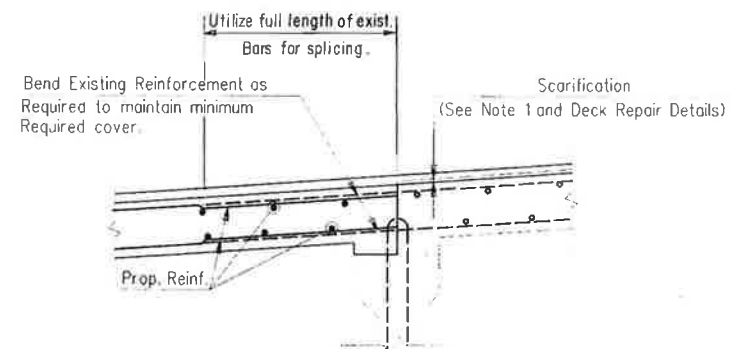
BARRIER PARAPET DETAIL

Scale: 3/4" = 1'-0"



MEDIAN BARRIER DETAIL

Scale: 3/4" = 1'-0"



CONSTRUCTION JOINT DETAIL

Scale: 1" = 1'-0"

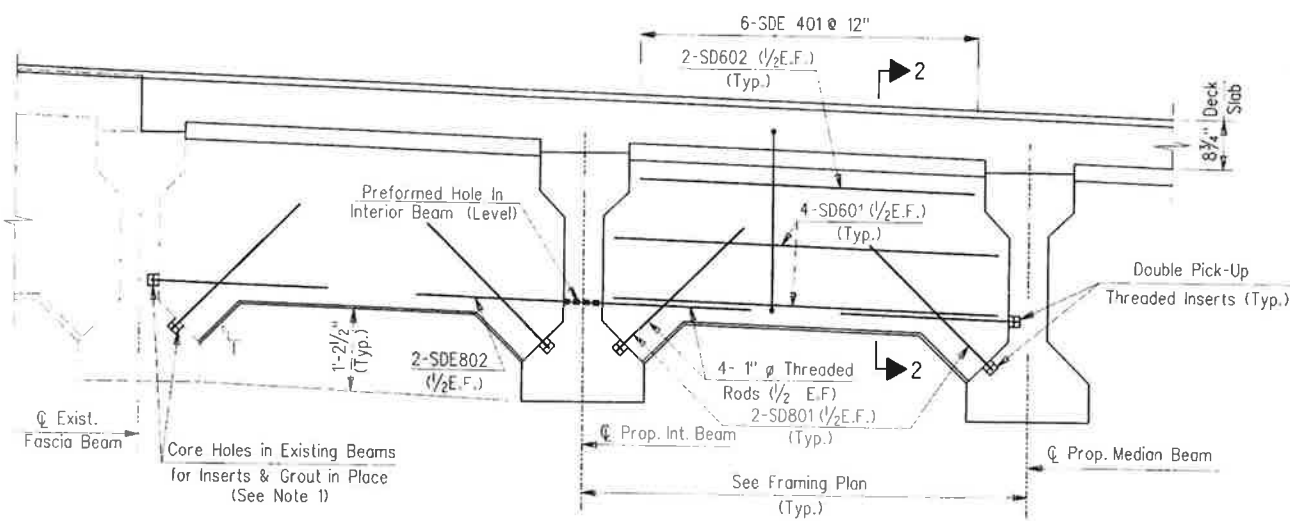


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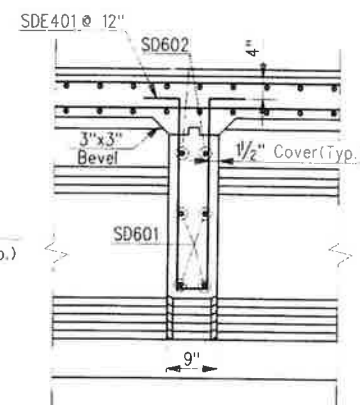
NEW JERSEY DEPARTMENT OF TRANSPORTATION

SUPERSTRUCTURE CROSS SECTION

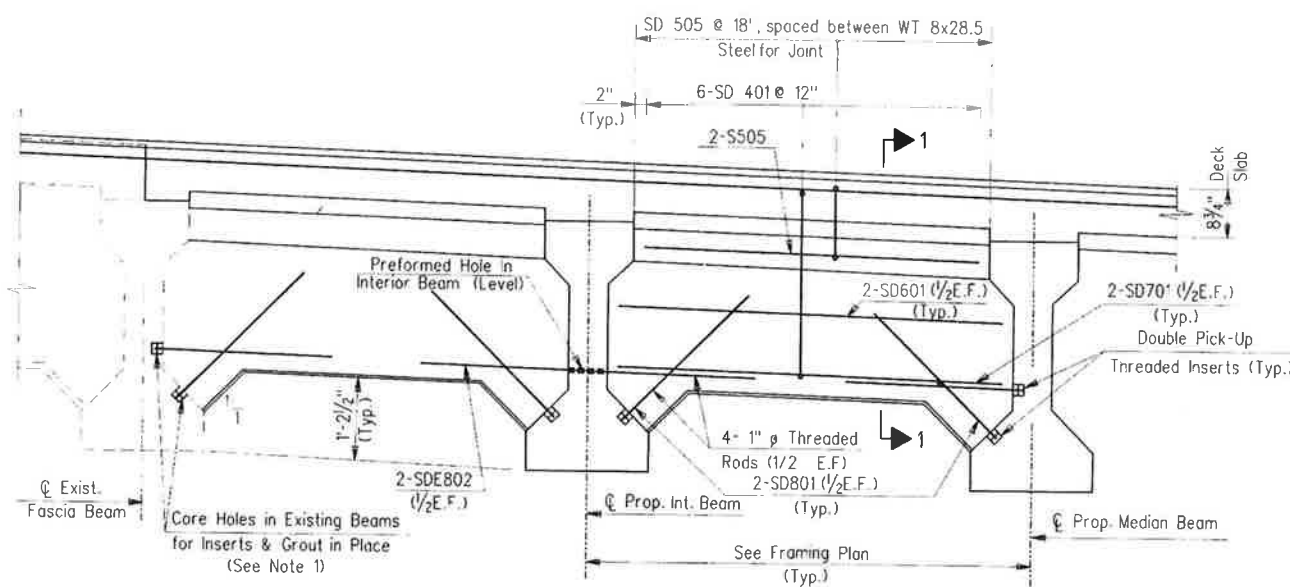
SAMPLE



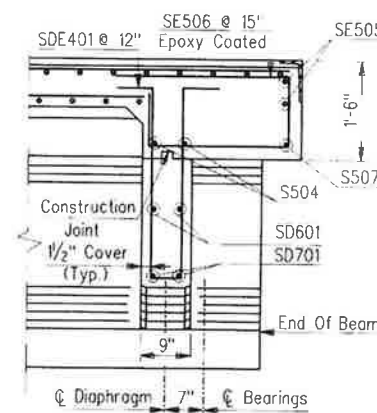
INTERMEDIATE DIAPHRAGMS



SECTION 2-2



END DIAPHRAGMS



SECTION 1-1

NOTES:

1. Before coring holes into Existing Beams, a Pachometer shall be used to locate existing reinforcement.
2. Top of Girder shall be clean, free of laitance, and intentionally roughened to a full amplitude of approx. 1/4".
3. Diaphragm Concrete is Paid under "Concrete in Superstructure, Deck Slabs (Class A)."

REFERENCES:

1. For Deck Plan, see Sheet No. B-179
2. For Bar List, see Sheet No. B-188

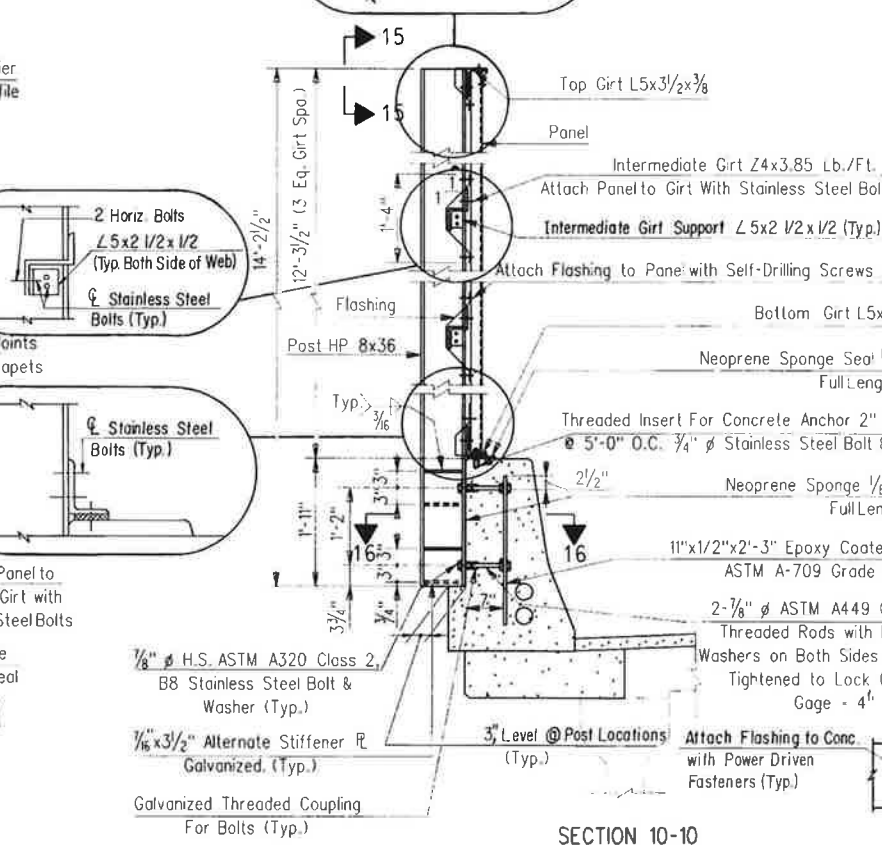
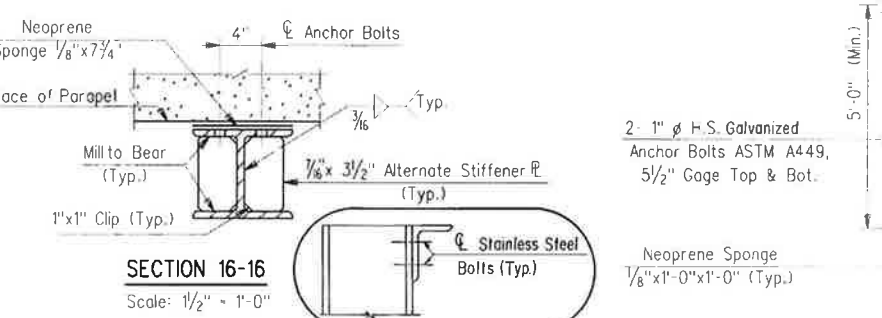
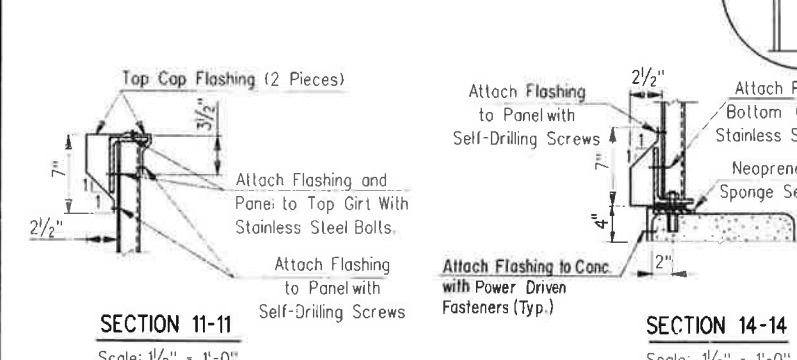
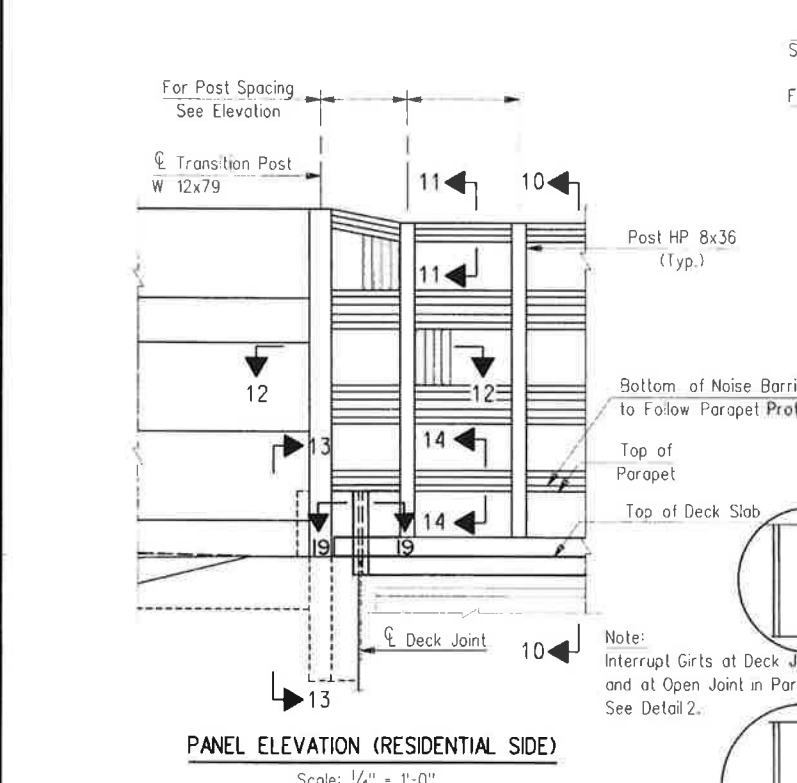
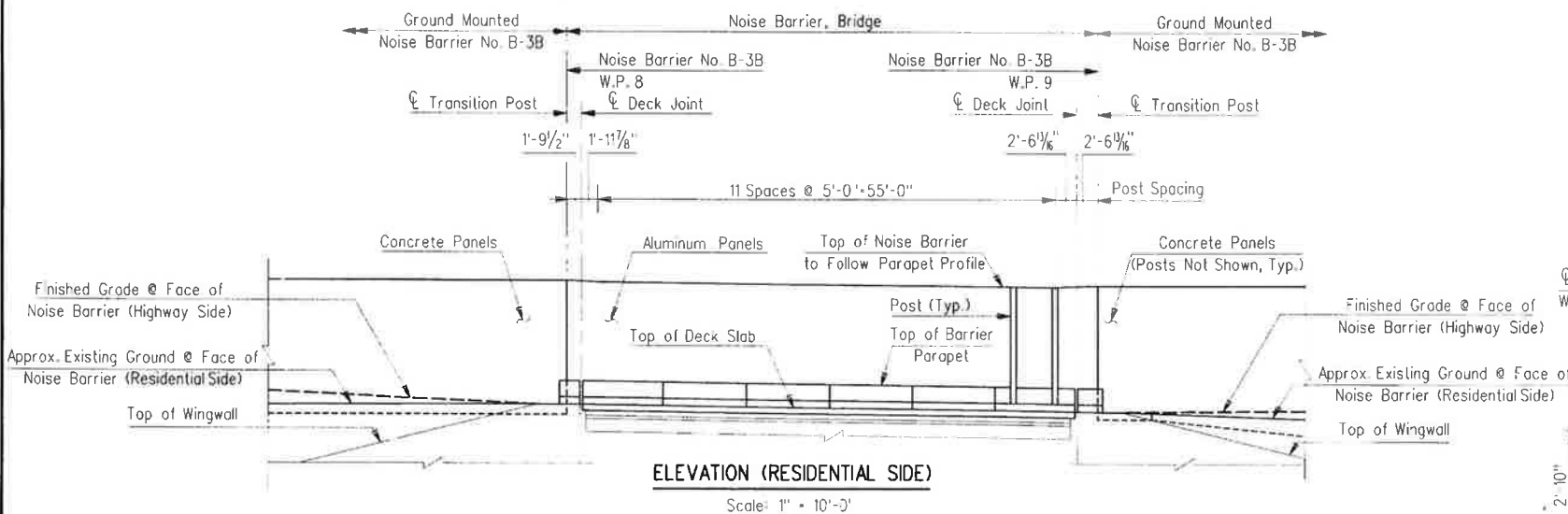
NEW JERSEY DEPARTMENT OF TRANSPORTATION

DIAPHRAGM DETAILS

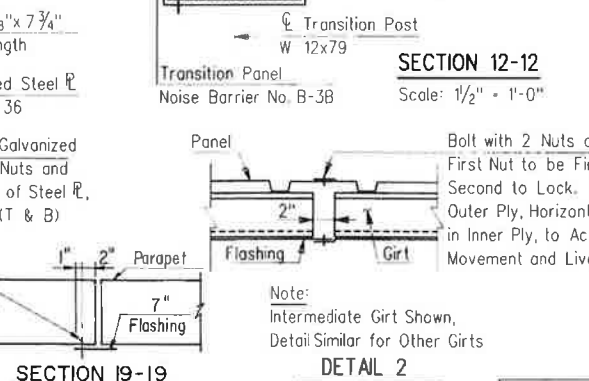
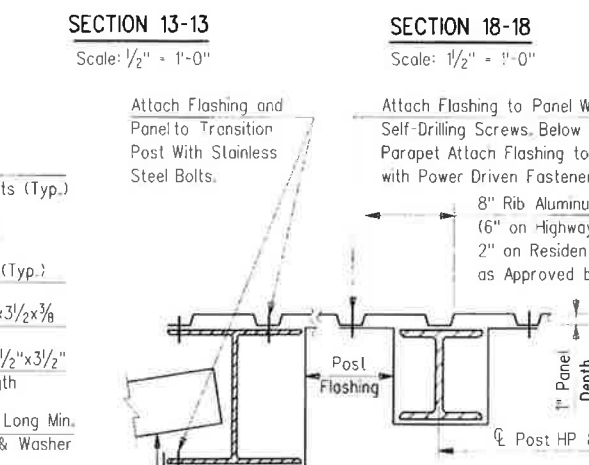
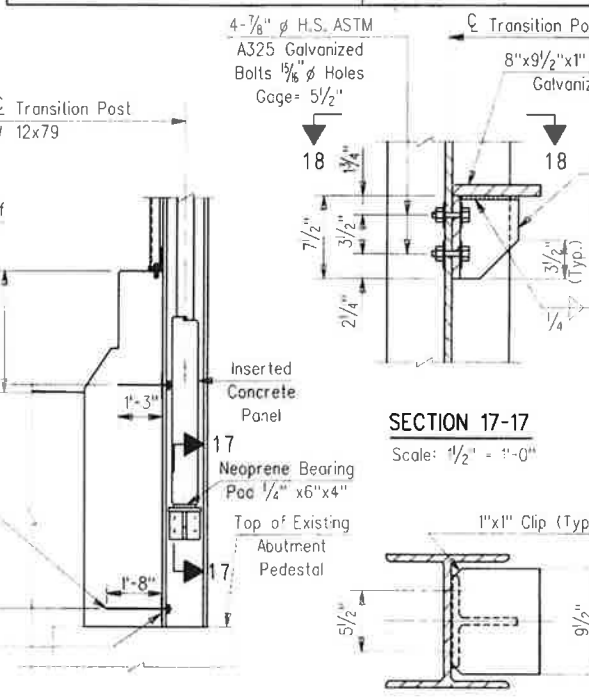
SAMPLE

1/4"=1'-0" 1 6" 0 1 2 3

REVISION	BY	CHKD.	DATE



ESTIMATE OF QUANTITIES			
ITEM	UNIT	QUANTITY	AS-BUILT QUANTITY
NOISE BARRIER, BRIDGE	SF	786	



- NOTES:**
- DESIGN CRITERIA:**
- DESIGN WIND LOAD IS 50 POUNDS PER SQUARE FOOT, WHICH CORRESPONDS TO A WIND VELOCITY OF 100 MILES PER HOUR.
- MATERIALS:**
- STEEL POSTS SHALL CONFORM TO ASTM A709, GRADE 36, AND SHALL BE GALVANIZED AFTER FABRICATION.
 - GIRTS AND CONNECTION ANGLES SHALL BE ALUMINUM ALLOY 6061-T6 CONFORMING TO ASTM B308.
 - PANELS SHALL BE ALUMINUM ALLOY ALCLAD 3004-H16, WITH A BARE MATERIAL THICKNESS OF 0.04 IN.
 - FLASHING SHALL BE FLAT SHEET ALUMINUM ALLOY ALCLAD 3004 CONFORMING TO ASTM B209, WITH A BARE MATERIAL THICKNESS OF 0.04 IN.
 - BOLTS AND SHEET FASTENERS SHALL BE STAINLESS STEEL OF SIZES INDICATED AND IN ACCORDANCE WITH SIDING MANUFACTURERS STANDARDS.
- CONSTRUCTION:**
- CONTRACTOR SHALL SUBMIT DETAILED SHOP DRAWINGS FOR THE ENGINEER'S APPROVAL.
 - NOISE BARRIER SHALL BE ERECTED AND CONSTRUCTED SO THAT IT WILL NOT PERMIT THE PASSAGE OF LIGHT.
 - POSTS SHALL BE ERECTED PERFECTLY PLUMB.
 - ALL GIRTS SHALL FOLLOW THE CONCRETE PARAPET VERTICAL PROFILE. GIRTS SHALL HAVE SLOTTED HOLES TO ALLOW FOR VERTICAL AND HORIZONTAL ADJUSTMENT DUE TO VERTICAL PROFILE.
 - PANEL LENGTH SHALL BE FIELD CUT TO PROVIDE PROPER LAP FOR CONNECTION AT TOP AND BOTTOM GIRTS DUE TO PARAPET VERTICAL PROFILE.
 - NOISE BARRIER FINISH COLOR SHALL BE BROWN AND SHALL MATCH THE FINISH COLOR OF THE ADJACENT GROUND MOUNTED NOISE BARRIERS.

- REFERENCES:**
- For Parapet Joint Spacing, see Sheet No. B-179.
 - For Working Point Locations and Noise Barrier No. B-3B, see Sheet No. B-246.
 - For Details of Existing Structure, see Existing Plans.

NEW JERSEY DEPARTMENT OF TRANSPORTATION			
NOISE BARRIER ELEVATION & DETAILS			
SAMPLE			
REVISION	BY	CHKD.	DATE