7-3

COUNTY	CONTRACT	F.A. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12) I-95-2 (8)	'64	1	215

THE STATE OF DELAWARE

STATE HIGHWAY DEPARTMENT

As Built Plans 1-5-27 [illegible]

PLAN
FOR
CONSTRUCTION OF CONTRACT № 64-03-004

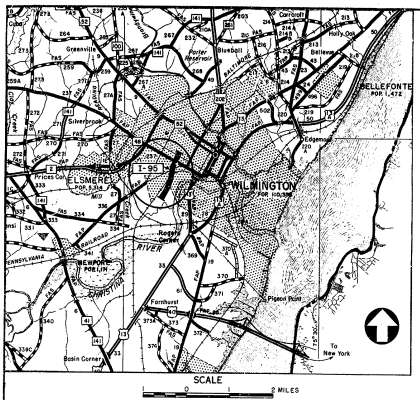
STA. 289+55 TO STA. 319+82.29

3027.29 FEET: 0.573 MILES

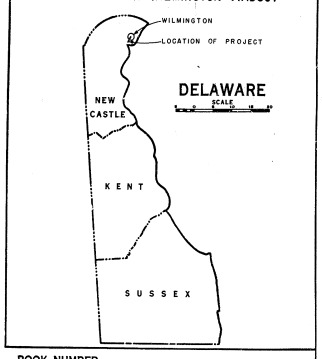
SCALE: PLAN: 1 IN.= 30 FT.
PROFILE: HOR. 1 IN.= 30 FT.
VERT. 1 IN.= 10 FT.

FEDERAL AID PROJECT Nos. I-95-2 (12)
I-95-2(8)

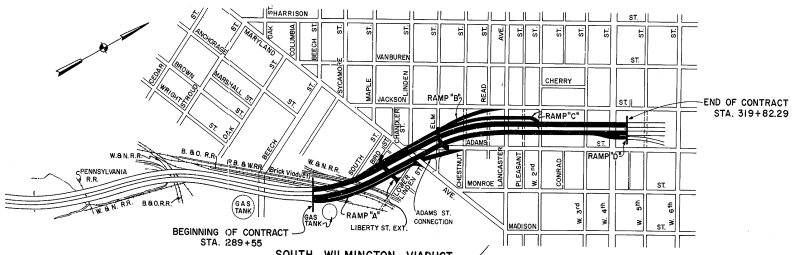
(THIS IS A CONTROLLED ACCESS HIGHWAY)



INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT



BOOK NUMBER



SOUTH WILMINGTON VIADUCT
LOCATION PLAN
SCALE 1" = 400'

DESIGN CRITERIA

DESIGN SPEED	60 MPH
TURNOUT SPEED	25 MPH
MAXIMUM SUPERELEVATION	.06 FT./FT.
MINIMUM RADIUS	1263 FT.
MINIMUM LENGTH OF SPIRAL	300 FT.
MINIMUM EXPRESSWAY GRADE	0.5%
MAXIMUM EXPRESSWAY GRADE	3%
MINIMUM VERTICAL CLEARANCES	
OVER ROADWAYS	14 FT.- 3 IN.
OVER PENNA R.R. VIADUCT	23 FT.- 6 IN.
OVER OTHER R.R.	23 FT.- 0 IN.

FOR STRUCTURAL DESIGN CRITERIA SEE SH.- NO. 36

PREPARED AND RECOMMENDED BY
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS NEW YORK

Thomas J. Mutter DATE April 1, 1964

DELAWARE P.E. LIC. NO 874

Reference :- Standard Specifications for Highway Construction, July 1, 1960

CONVENTIONAL SIGNS
(SEE SHEET NO. 3)

INDEX OF DRAWINGS
(SEE SHEET NO. 2)

RECOMMENDED 4/16 1964 E. Powell Smith Chief, Planning & Design Division
RECOMMENDED 4/17 1964 R. E. Tomasetti Asst. Chief Engineer
APPROVED 4/16 1964 Joe S. Robinson Chief Engineer
APPROVED 4-16 1964 E. [illegible] Director of Operations

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

COUNTY	CONTRACT	F.A.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	2	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

HIGHWAY

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5	BASELINE CONTROL
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7	ALIGNMENT, GRADING AND PAVING II - STA. 296+84 TO STA. 303+91
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9	ALIGNMENT, GRADING AND PAVING IV - STA. 312+96 TO STA. 320+02.33
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PLANS REVIEWED AND RECOMMENDED BY

R.D. Bennett 4/16/64

PLANNING AND REVIEW ENGINEER — DATE

INDEX OF DRAWINGS

ABBREVIATIONS

℄	Base Line
℄	Center Line
℘	Property Line
B.M.	Bench Mark
H.W.	Head Wall
M.H.	Manhole
C.B.	Catch Basin or Inlet
Inv.	Invert
Macc.	Macadam
P.V.C.	Point of Vertical Curvature
P.V.T.	Point of Vertical Tangency
P.V.I.	Point of Vertical Intersection
El. or Elev.	Elevation
T.S.	Point of Tangency, Tangent to Spiral
S.C.	Point of Common Tangency, Spiral to Curve
C.S.	Point of Common Tangency, Curve to Spiral
S.T.	Point of Tangency, Spiral to Tangent
P.I.	Point of Intersection of Tangents
R.O.W.	Right-of-Way
Δ	Angle of Deflection between Tangents
Δc	Central Angle of Curve with Constant Radius
Lc	Length of Curve with Constant Radius
Rc	Radius of Curvature
Ls	Length of Spiral
Ts	External Tangent, TS or S.T. to Vertex
Θs	Angle Between Tangents of Spiral
M.O.	Middle Ordinate
Gr.	Proposed Grade
S.E. or e	Rate of Superelevation
D.P.L.	Delaware Power & Light
DST	Diamond State Telephone
F.H.	Fire Hydrant
W.V.	Water Valve
G.V.	Gas Valve
L.H.	Lamp Hole
Mon.	Monument
R.C.P.	Reinforced Concrete Pipe
E.S.R.C.P.	Extra Strength Reinforced Concrete Pipe
C.I.P.	Cast Iron Pipe
W.I.P.	Wrought Iron Pipe
T.C.	Terra Cotta (Vitrified Clay) Pipe
V.C.P.	Vitrified Clay Pipe
V.C.P.X.	Vitrified Clay Pipe Extra Strength
C.M.P.	Corrugated Metal Pipe
A.O.B.E.	As Ordered By Engineer
P.C.M.P.	Perforated Corrugated Metal Pipe

LEGEND

EXISTING		PROPOSED
	City Line	
	Right-of-Way or Property Line	
	Center Line, Proposed Roadway	
—X—X—	Fence	
12"T.C. San. & Storm	Drainage Line	18" R.C.P.
◎	Manhole	○
▥ or □	Catch Basin or Inlet	□
	Scupper	■
⊠F.H.	Fire Hydrant	
ø	Power or Telephone Pole	
—W—	Water Line	
—G—	Gas Line	
—Po—	Power Line Overhead	
----Po----	Power Line Underground	
—To—	Telephone Line Overhead	
----To----	Telephone Line Underground	
	Slope Line	
◔ or ● 12G 12G	Boring Location	
C.B. 24"RCP ##### #####	Drainage Pipe and Catch Basin to be Abandoned or Removed, as Directed by the Engineer.	
	Water Service (House) Connection (to be Cut Off at Main)	

For Legend of "Electrical Plan and Details" See Drawing No. E-2, Sh. No. 171.

For Legend of Paving Items see Alignment, Grading & Paving Plan Sheets Nos. 6, 7, 8 & 9.

For Legend of Traffic Signal Details see Traffic Signal Layout Sheet No. 29.

Control of Access Line ——— — ———

COUNTY	CONTRACT	R.P.A. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	3	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

GENERAL NOTES

Underground Utilities are Shown in Accordance with the Best Available Information.

All Privately Owned Utilities Except as Noted Under Item No. 46 of the Specifications, shall be Adjusted or Moved by Others as Indicated on the Plans.

Sidewalks Shall be Constucted, Repaired and/or Adjusted with a 4" Depth Cement Concrete to the Widths Indicated on the Plans or as Directed by the Engineer.

Where Drainage Construction Must be Performed in Existing Streets Not to be Closed or Reconstructed, the Contractor Shall Patch Existing Paving in Accordance with the Details on the Plans and Shall Restore Curbs, Walks and Miscellaneous Structures in a Condition at Least Equal to that Existing Prior to Construction. Patching of Flexible Pavement is Incidental to Drainage and Utility Construction.

All V.C. Pipe Connections to New Manholes Shall be Made with the Use of Standard Bends as Required.

Strengthening of Existing V.C. Pipe Where Flow Must be Maintained Shall be Accomplished with 3" Concrete Encasement Type "A" as Detailed on Plans and at Locations as Directed by the Engineer and/or in Conformity with the Plans. WYE and Riser Pipe Connections to be Abandoned and Left in Place Shall be Plugged with Concrete.

Type "B" Concrete Encasement For New V.C. Pipe to be Installed Shall be Used as Detailed and Shown on Plans and at Locations Shown on the Plans and/or as Directed by the Engineer.

All Existing Catch Basins, Inlets Structures and etc. Indicated on the Drawings to be Abandoned or Demolished Shall be Removed to Subgrade Elevations or to the Extent Necessary to Clear New Construction.

Voids Left by Removal of Existing Structures, Appurtenances, and Pipes Shall be Backfilled and Mechanically Tamped with Salvaged Base Course Material and/or Select Borrow at No Additional Cost to the State.

Stationing and Offsets Shown on the Drainage Schedules For Locating Proposed Inlets and Catch Basins Refers to a Point on the Centerline of the Structure at the Curb Line. These Stationing and Offsets are Approximate and may be Adjusted in Field by the Engineer.

All Existing Combination Sewer and Drainage Pipes to be Abandoned and Left in Place Shall be Plugged with Concrete.

All Field Connections of New Drainage Pipes to Existing Facilities Shall be Completed with a Cement Concrete Mortar Collar.

All Drainage Grates, Covers, Frames, Etc. and Lamphole Frame and Cover Removed Shall be Salvaged as Directed by the Engineer.

For Notes Pertaining to Water Line Ajustments See Drainage and Utilities Plan Sheets.

Where Streets are to be Permanently Closed Under this Contract, Pavement, Sidewalks and Curbs are to be Removed from these Streets in Accordance With the Item "Clearing, Demolition, Excavation, Filling and Grading of the Special Provisions, and the Area Regraded as shown on the Plans to the Satisfaction of the Engineer. (See Clearing and Improvement Sheet).

Where new Roadway Pavement is to meet the edge of an Existing Street the Surface Course of the Existing Street Shall be Removed for a Minimum Width of 2 feet and Refinished with Hot Mix-Hot Laid Asphaltic Concrete as Indicated on the Plans or as Directed by the Engineer.

Where new Curbs are to Connect Existing Curbs of a Different Size, a Minimum Length of 10 feet will be used to Effect a Smooth Transition.

Structural Supports for Structure-Mounted Signs are included in this Contract. Erection of Posts, Braces, Trusses and Sign Faces will be performed by others.

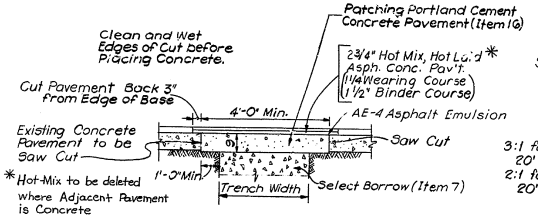
All Streets, Sidewalks and other areas which will be used by the travelling public during Construction shall be Keep Clean and Free from Obstruction to the Satisfaction of the Engineer and in Accordance with the Ordinances of the City of Wilmington.

Work shall be Conducted so as to be in Conformance with the City of Wilmington Ordinance Entitled "Safety Code for Trenches and Excavations for the City of Wilmington".

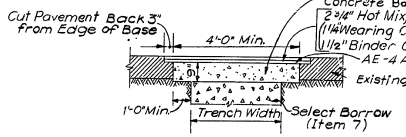
LEGEND & GENERAL NOTES

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	4	215

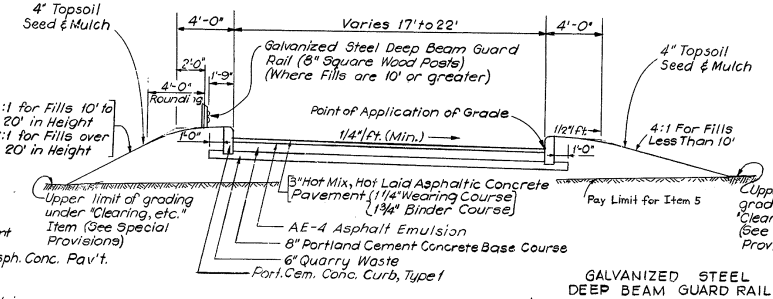
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



CONCRETE BASE ROADWAY-FLEXIBLE SURFACE



MACADAM ROADWAY - FLEXIBLE TYPE
METHOD OF CUTTING AND REPAIRING OPENINGS IN EXISTING ROADWAYS

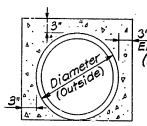


NORMAL RAMP SECTION

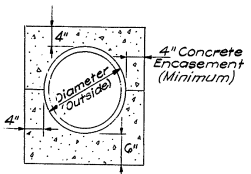
GALVANIZED STEEL DEEP BEAM GUARD RAIL

STA.	TO STA.	SIDE	QUANTITY
"C" 2+71	- "C" 3+33.5	Lt.	62.5 L.F.
"C" 2+71	- "C" 3+33.5	Rt.	62.5 L.F.
"C" 4+87.8	- "C" G+75.3	Lt.	187.5 L.F.
"C" 4+87.8	- "C" G+75.3	Rt.	187.5 L.F.
"A" 14+61.8	- "A" 15+36.8	Lt.	75.0 L.F.
"A" 14+61.8	- "A" 15+36.8	Rt.	75.0 L.F.
At Ramp "D" Bullnose See Dwg. 3A86			

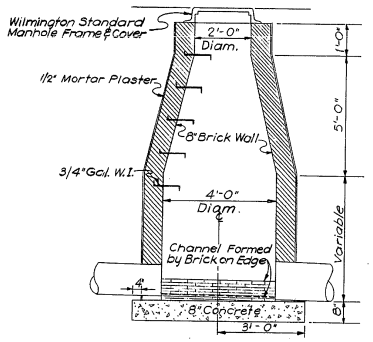
Note:
Along Line of Strengthening Existing V.C. Pipe with Concrete Encasement, Cut and Plug Abandoned House Connections or Risers as Encountered.



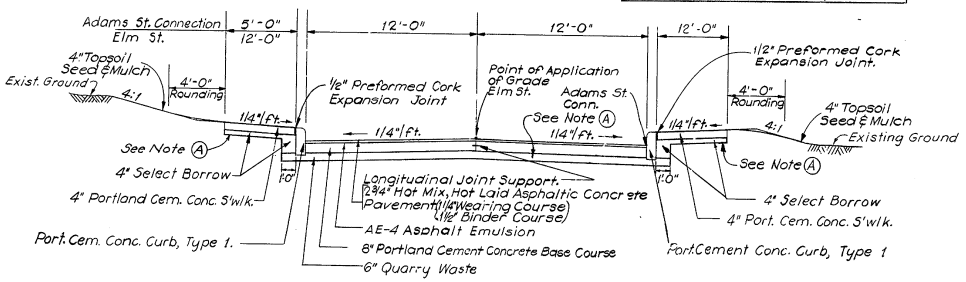
(See Special Provisions)
TYPICAL SECTION-TYPE "A"
CONCRETE ENCASEMENT FOR EXISTING V.C. PIPE
SCALE: 1" = 1'-0"



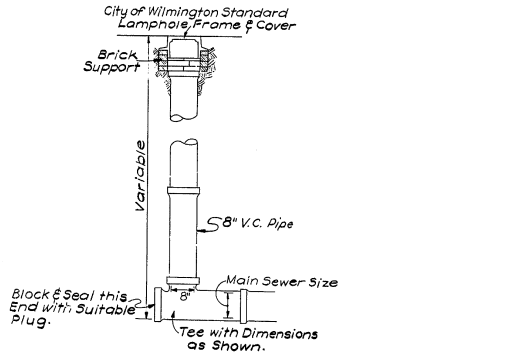
(See Special Provisions)
TYPICAL SECTION-TYPE "B"
CONCRETE ENCASEMENT FOR NEW V.C. PIPE
SCALE: 1" = 1'-0"



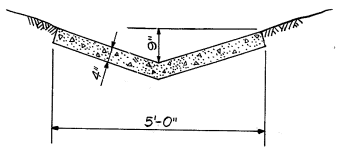
STANDARD MANHOLE SECTION
(CITY OF WILMINGTON)



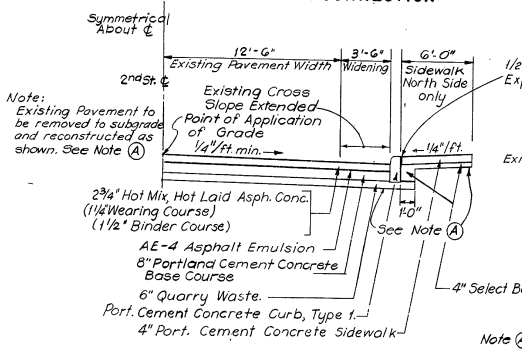
ELM ST. RELOCATION
ADAMS ST. CONNECTION



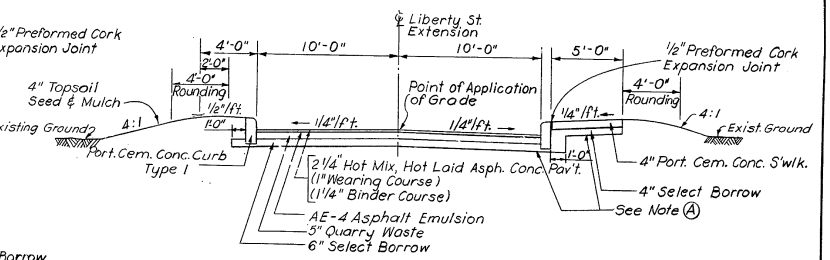
TYPICAL LAMPHOLE
SCALE: 1/2" = 1'-0"



CONCRETE GUTTER
SCALE: 3/4" = 1'-0"



RECONSTRUCTION OF 2nd STREET
SCALE: 1/4" = 1'-0"



LIBERTY STREET EXTENSION
SCALE 1/4" = 1'-0"

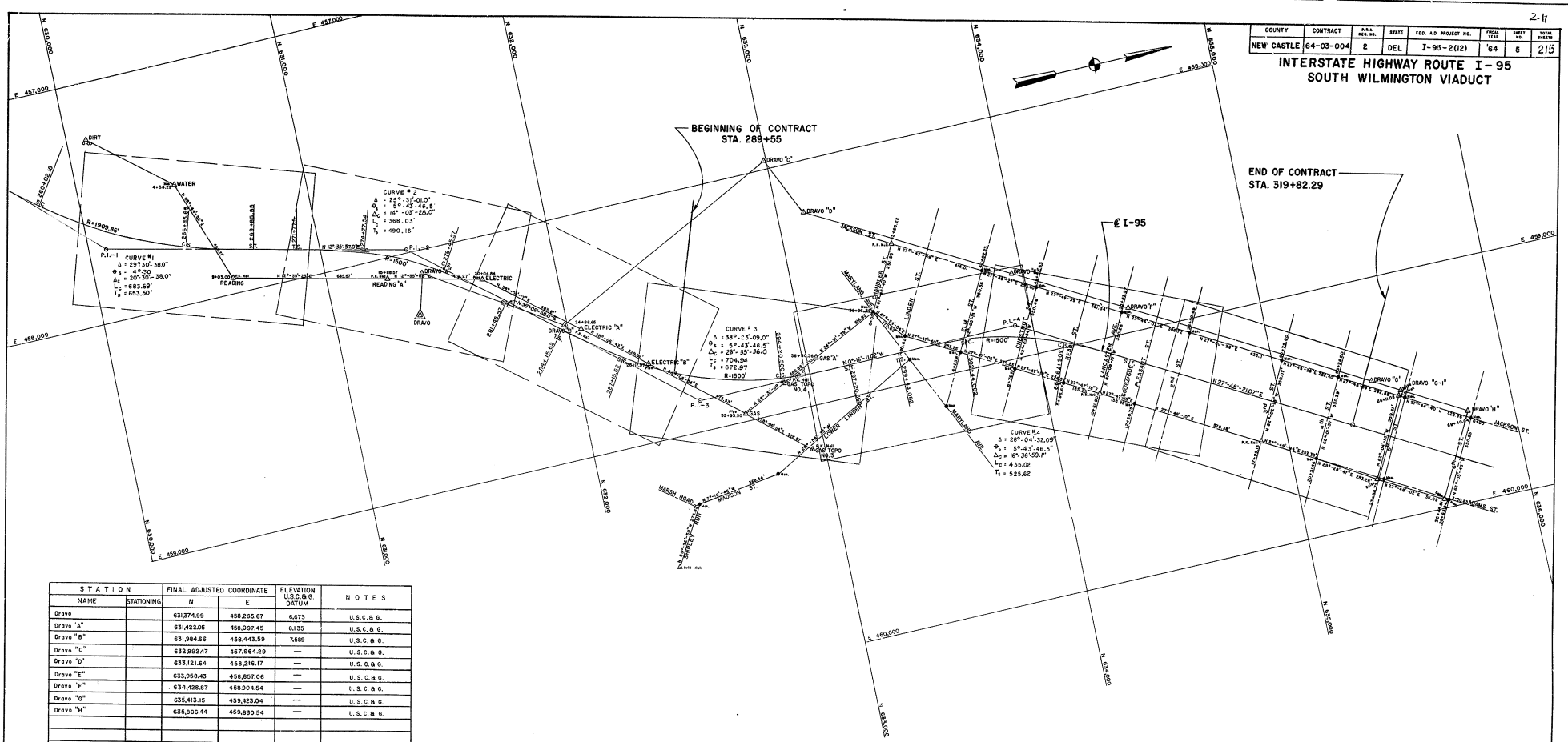
Note A
Upper Limit to which Roadway Sections are to be graded under the Item "Clearing, Demolition Excavation, Filling & Grading" (See Clearing and Improvement Sheet)

TYPICAL SECTIONS & DETAILS
SCALE: AS NOTED

D C B A

COUNTY	CONTRACT	R.A.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	5	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



STATION NAME	STATIONING	FINAL ADJUSTED COORDINATE N	E	ELEVATION U.S.C.&G.S. DATUM	NOTES
Dravo		631,374.99	458,265.67	6.673	U.S.C.& G.
Dravo "A"		631,422.05	458,097.45	6.135	U.S.C.& G.
Dravo "B"		631,984.66	458,443.59	7.589	U.S.C.& G.
Dravo "C"		632,992.47	457,964.29	—	U.S.C.& G.
Dravo "D"		633,121.64	458,216.17	—	U.S.C.& G.
Dravo "E"		633,958.43	458,657.06	—	U.S.C.& G.
Dravo "F"		634,428.87	458,904.64	—	U.S.C.& G.
Dravo "G"		635,413.15	459,423.04	—	U.S.C.& G.
Dravo "H"		635,806.44	459,630.54	—	U.S.C.& G.

NOTE:-
Care is to be taken to Insure that Permanent Control Points and Bench Marks in the Vicinity of Construction Remain Undisturbed. The Contractor will Take Whatever Steps are Necessary to Protect such Points Until they can be Transferred by USC&GS Personnel.

HORIZONTAL CONTROL:
U.S. Coast and Geodetic Survey
North American 1927 Datum Delaware' Vol. II
Published by U.S. Dept. of Commerce April 1960

VERTICAL CONTROL:
U.S. Coast and Geodetic Survey
Sea Level Datum of 1929
Published by U.S. Dept. of Commerce January 1960

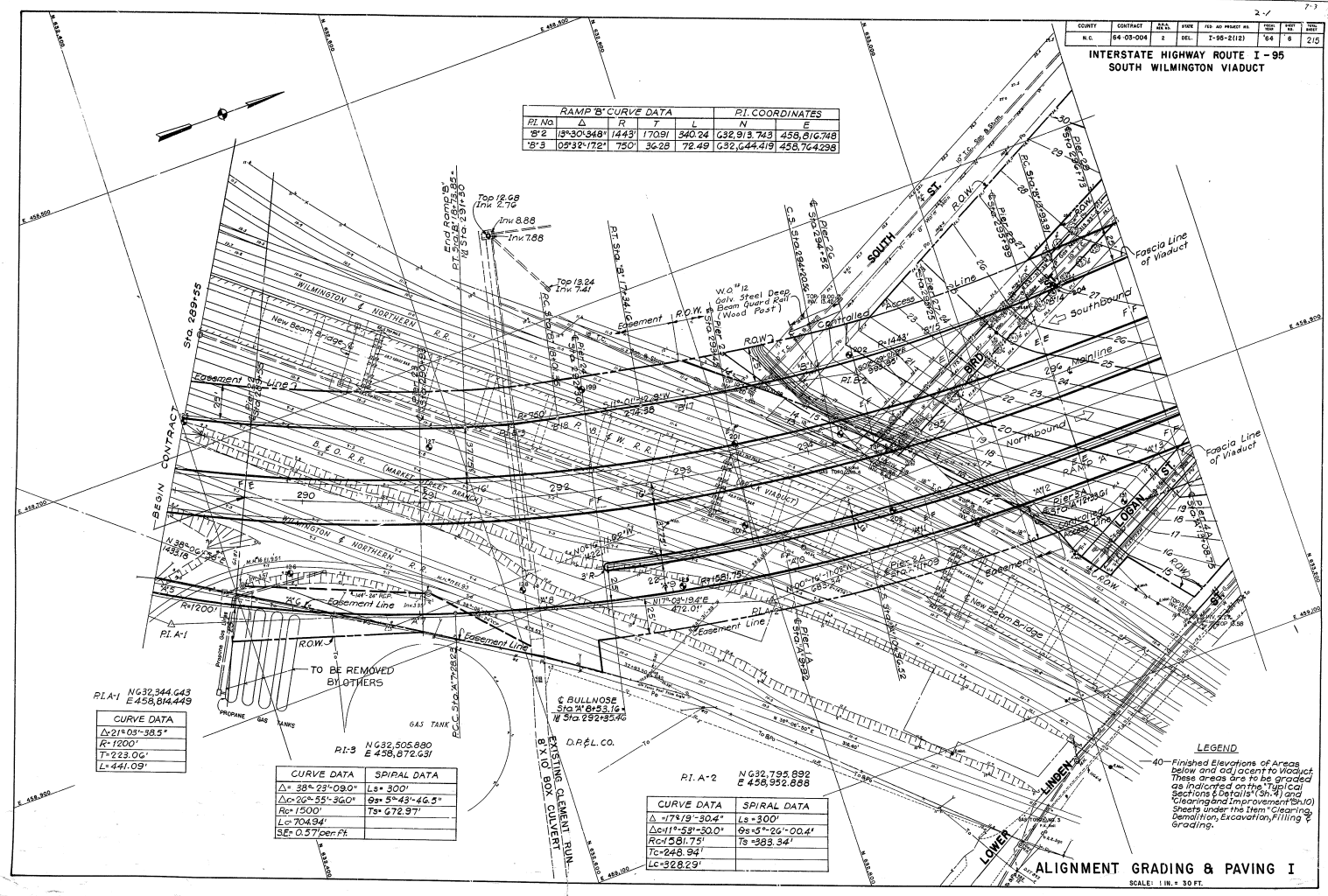
Survey prepared for Tippetts-Abbett-Mc Carthy-Stratton
By Van Demark and Lynch, Inc.
Engineers and Surveyors
Wilmington, Delaware

BASELINE CONTROL
SCALE: 1 IN = 200 FT.

COUNTY	CONTRACT	R.O.W. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
N.C.	64-03-004	2	DEL.	I-95-2(12)	'64	6	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

RAMP 'B' CURVE DATA					P.I. COORDINATES	
P.I. No.	Δ	R	T	L	N	E
'B'2	13°30'-34.8"	1443'	170.91	340.24	632,913.743	458,816.748
'B'3	05°32'-17.2"	750'	36.28	72.49	632,644.419	458,764.298



P.I. A-1 N 632,344.643 E 458,814.449

CURVE DATA
Δ=21°03'-38.5"
R=1200'
T=223.06'
L=441.09'

P.I.-3 N 632,505.880 E 458,872.631

CURVE DATA	SPIRAL DATA
Δ= 38°-23'-09.0"	Ls= 300'
Δc=26°-55'-36.0"	θs= 5°-43'-46.5"
Rc=1500'	Ts= 672.97'
Lc=704.94'	
SE= 0.57' per Ft.	

P.I. A-2 N 632,795.892 E 458,952.888

CURVE DATA	SPIRAL DATA
Δ =17°19'-30.4"	Ls =300'
Δc=11°-53'-50.0"	θs=5°-26'-00.4'
Rc=1581.75'	Ts =383.34'
Tc=248.94'	
Lc=328.29'	

LEGEND

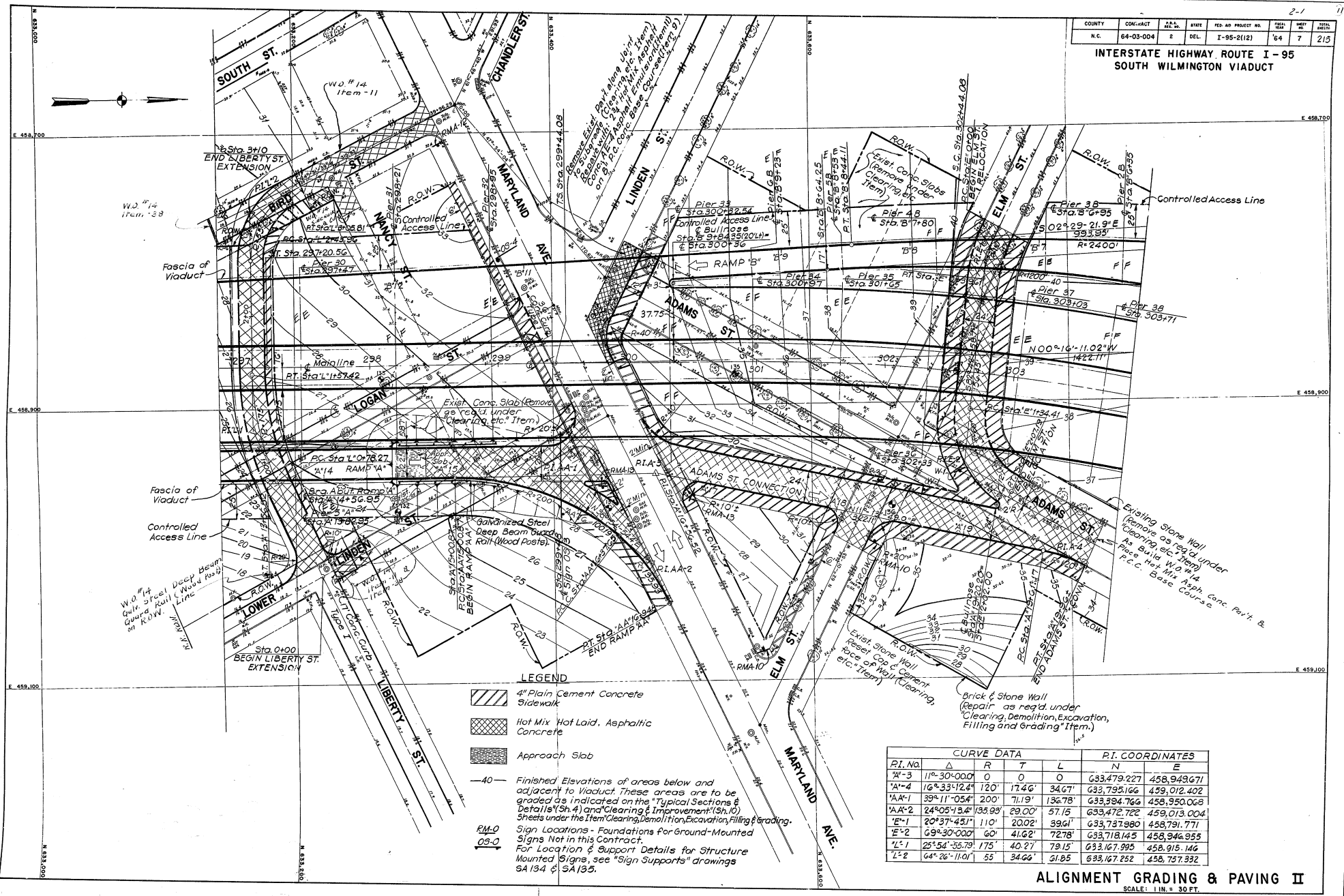
40— Finished Elevations of Areas below and adjacent to Viaduct. These areas are to be graded as indicated on the "Typical Sections & Details" (Sh. 4) and "Clearing and Improvement" (Sh. 10) Sheets under the Item "Clearing, Demolition, Excavation, Filling & Grading.

ALIGNMENT GRADING & PAVING I

SCALE: 1 IN. = 30 FT.

COUNTY	CONTRACT	P.R.S. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.C.	64-03-004	2	DEL.	I-95-2(12)	'64	7	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

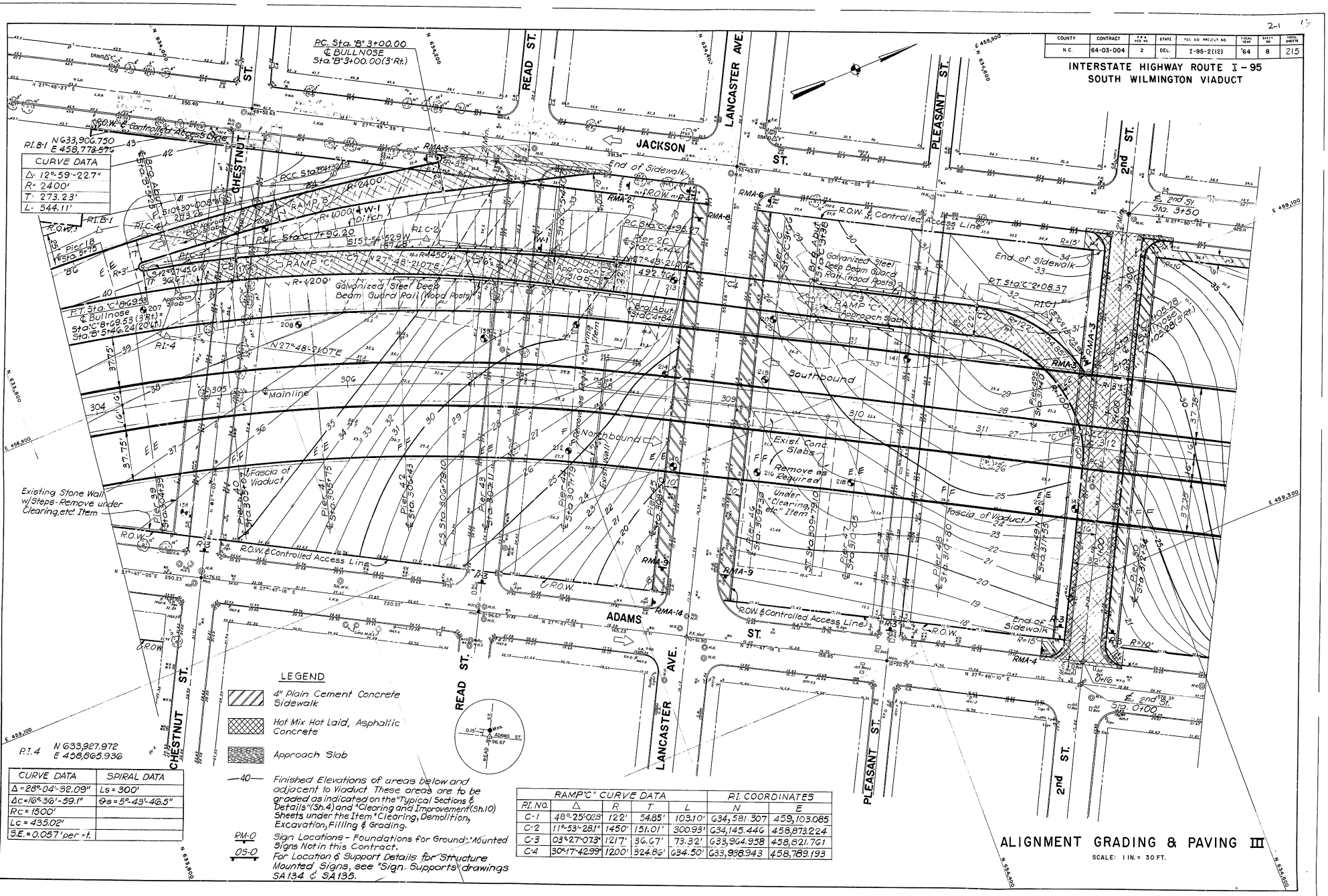


CURVE DATA					P.I. COORDINATES	
P.I. No.	Δ	R	T	L	N	E
"A"-3	11°-30'-00.0"	0	0	0	633,479.227	458,949.671
"A"-4	16°-33'-12.4"	120'	17.46'	34.67'	633,795.166	459,012.402
"A.A"-1	39°-11'-05.4"	200'	71.19'	136.78'	633,394.766	458,950.068
"A.A"-2	24°-05'-13.4"	136.93'	29.00'	57.15	633,472.722	459,013.004
"E"-1	20°-37'-45.1"	110'	20.02'	39.61'	633,737.980	458,791.771
"E"-2	69°-30'-00.0"	60'	41.62'	72.78'	633,718.145	458,946.955
"L"-1	25°-54'-55.79"	175'	40.27'	79.15'	633,167.995	458,915.146
"L"-2	64°-26'-11.01"	55	34.66'	61.85	633,167.252	458,757.332

ALIGNMENT GRADING & PAVING II

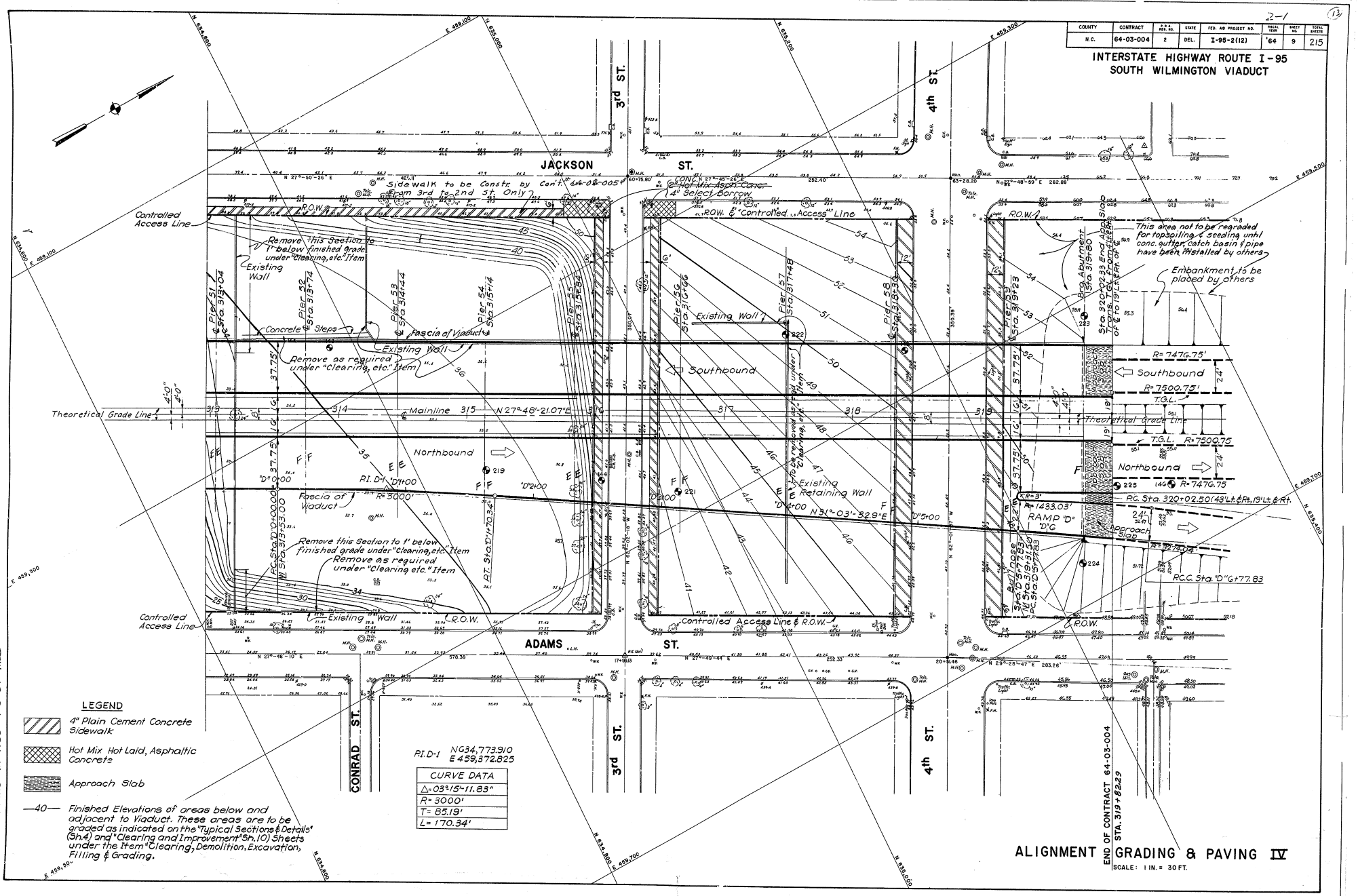
SCALE: 1 IN. = 30 FT.

As Built Plans in Red 1-1967 MEC


INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT
ALIGNMENT GRADING & PAVING III
SCALE: 1 IN. = 30 FT.
JACKSON ST.
ADAMS ST.
CHESTNUT ST.
READ ST.
LANCASTER AVE.
PLEASANT ST.
2nd ST.
Southbound
Northbound
Mainline
RAMP "B"
RAMP "C"
Approach Slab
Galvanized Steel Deep Beam Guard Rail (Wood Posts)
Existing Stone Wall w/Steps-Remove under Clearing, etc. Item
Fascia of Viaduct
Exist. Conc. Slabs
Remove as Required
Under "Clearing, etc." Item
R.O.W. & Controlled Access Line
End of Sidewalk
LEGEND
4" Plain Cement Concrete Sidewalk
Hot Mix Hot Laid, Asphaltic Concrete
Approach Slab
—40— Finished Elevations of areas below and adjacent to Viaduct. These areas are to be graded as indicated on the "Typical Sections & Details" (Sh.4) and "Clearing and Improvement" (Sh.10) Sheets under the Item "Clearing, Demolition, Excavation, Filling & Grading.
RM-0 / 09-0 Sign Locations - Foundations for Ground-Mounted Signs Not in this Contract. For Location & Support Details for Structure Mounted Signs, see "Sign Supports" drawings SA 134 & SA 135.
P.I. 1 N 633,906.750 E 458,773.576
P.I. 4 N 633,927.972 E 456,865.936
CURVE DATA
Δ = 12°-59'-22.7"
R = 2400'
T = 273.23'
L = 544.11'
RAMP "C" CURVE DATA
P.I. NO. | Δ | R | T | L | P.I. COORDINATES N | E
C-1 | 48°-25'-02.5" | 122' | 54.85' | 103.10' | 634,581.307 | 459,103.085
C-2 | 11°-53'-28.1" | 1450' | 151.01' | 300.93' | 634,145.446 | 458,873.224
C-3 | 03°-27'-07.3" | 1217' | 36.67' | 73.32' | 633,964.958 | 458,821.761
C-4 | 30°-17'-42.99" | 1200' | 324.86' | 634.50' | 633,938.943 | 458,789.193
CURVE DATA | SPIRAL DATA
Δ = 28°-04'-32.09" | Ls = 300'
Δc = 16°-36'-59.1" | θs = 5°-43'-46.5"
Rc = 1500'
Lc = 435.02'
S.E. = 0.057' per ft.
COUNTY N.C. | CONTRACT 64-03-004 | F.A.P. REG. NO. 2 | STATE DEL. | F.A.D. &/D PROJECT NO. I-95-2(112) | FISCAL YEAR '64 | SHEET NO. 8 | TOTAL SHEETS 215
As Built Plans in Red - 1-9-67 MRC

COUNTY	CONTRACT	R/W REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.C.	64-03-004	2	DEL.	I-95-2(12)	'64	9	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



LEGEND

- 4" Plain Cement Concrete Sidewalk
- Hot Mix Hot Laid, Asphaltic Concrete
- Approach Slab
- —40— Finished Elevations of areas below and adjacent to Viaduct. These areas are to be graded as indicated on the "Typical Sections & Details" (Sh. 4) and "Clearing and Improvement" Sh. (10) Sheets under the Item "Clearing, Demolition, Excavation, Filling & Grading.

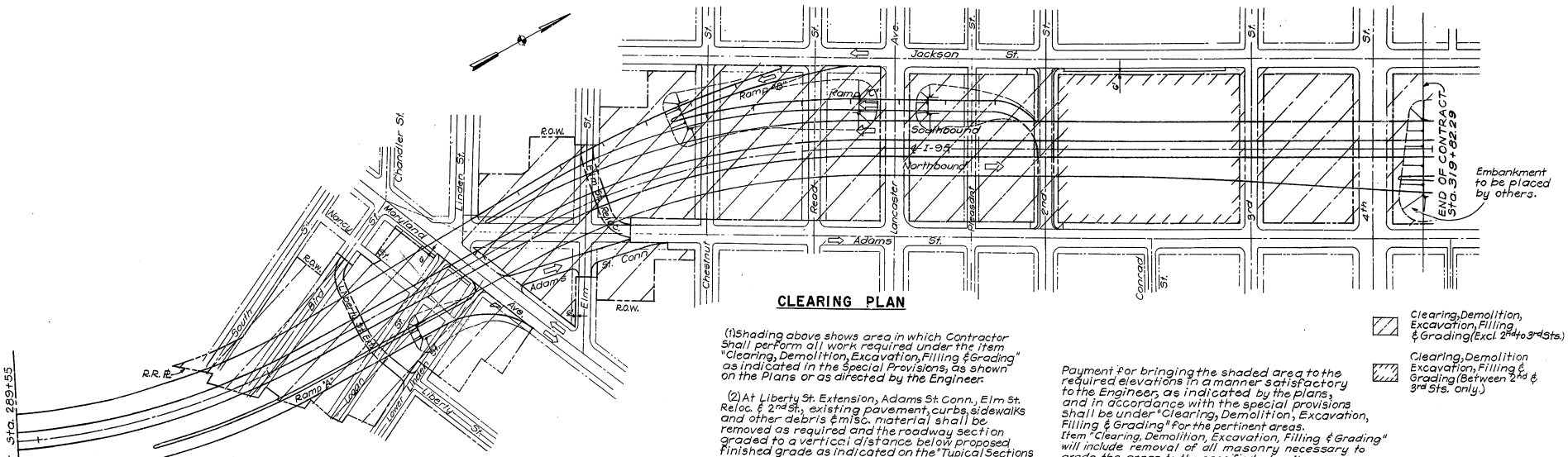
ALIGNMENT GRADING & PAVING IV

SCALE: 1 IN. = 30 FT.

As Built Plans in Red - 1-9-67 HRC

COUNTY	CONTRACT	F.H.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	10	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



CLEARING PLAN

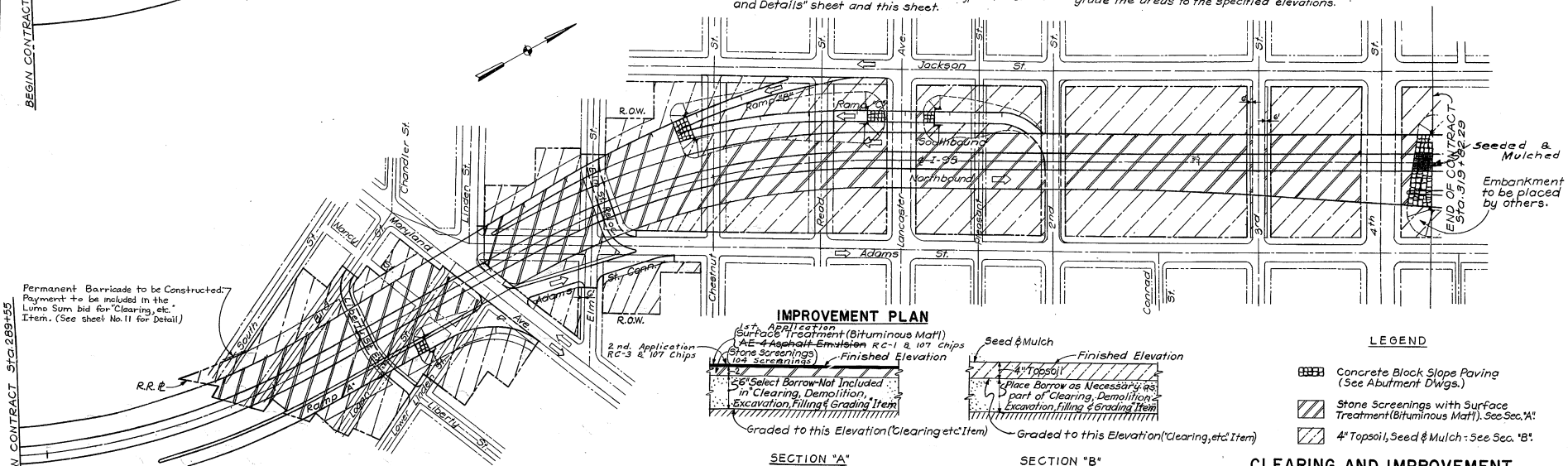
(1) Shading above shows area in which Contractor shall perform all work required under the item "Clearing, Demolition, Excavation, Filling & Grading" as indicated in the Special Provisions, as shown on the Plans or as directed by the Engineer.

(2) At Liberty St. Extension, Adams St. Conn., Elm St. Reloc. & 2nd St., existing pavement, curbs, sidewalks and other debris & misc. material shall be removed as required and the roadway section graded to a vertical distance below proposed finished grade as indicated on the "Typical Sections and Details" sheet and this sheet.

Payment for bringing the shaded area to the required elevations in a manner satisfactory to the Engineer, as indicated by the plans, and in accordance with the special provisions shall be under "Clearing, Demolition, Excavation, Filling & Grading" for the pertinent areas. Item "Clearing, Demolition, Excavation, Filling & Grading" will include removal of all masonry necessary to grade the areas to the specified elevations.

Clearing, Demolition, Excavation, Filling & Grading (Excl 2nd to 3rd Sts.)

Clearing, Demolition Excavation, Filling & Grading (Between 2nd & 3rd Sts. only.)



IMPROVEMENT PLAN

SECTION "A"

SECTION "B"

LEGEND

- Concrete Block Slope Paving (See Abutment Dwgs.)
- Stone Screenings with Surface Treatment (Bituminous Matl.). See Sec. "A".
- 4" Topsoil, Seed & Mulch: See Sec. "B".

CLEARING AND IMPROVEMENT

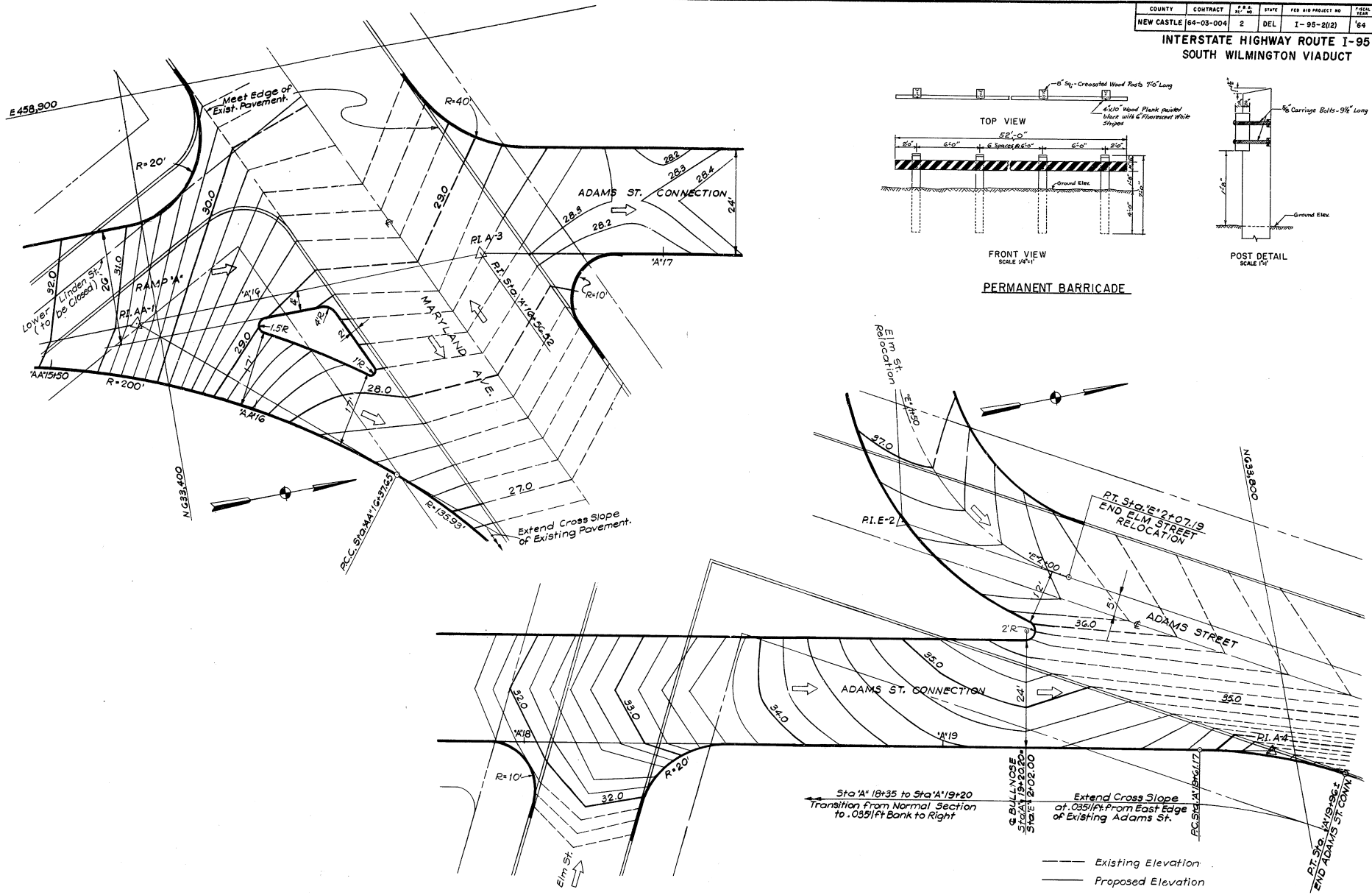
SCALE: 1 IN. = 100 FT.

As Built Plans in Red - 1-9-67 MBC

COUNTY	CONTRACT	F.A.S. RTE. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	11	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PERMANENT BARRICADE

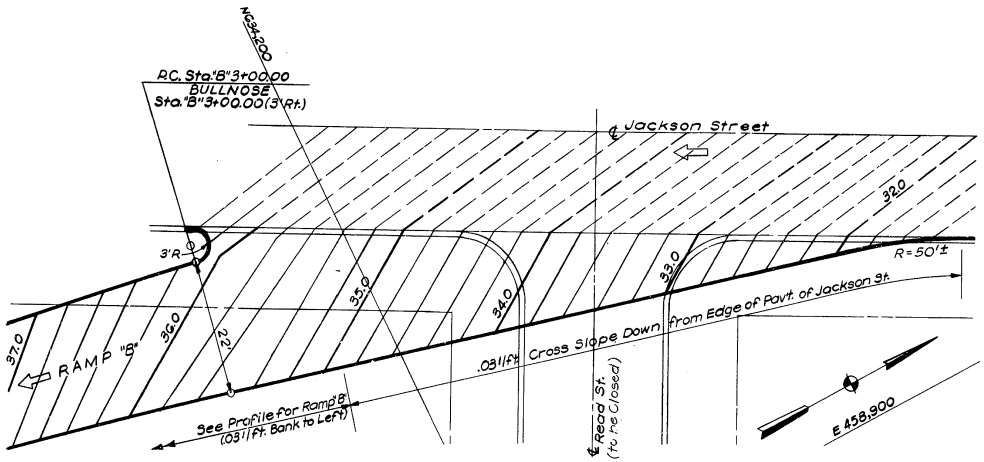


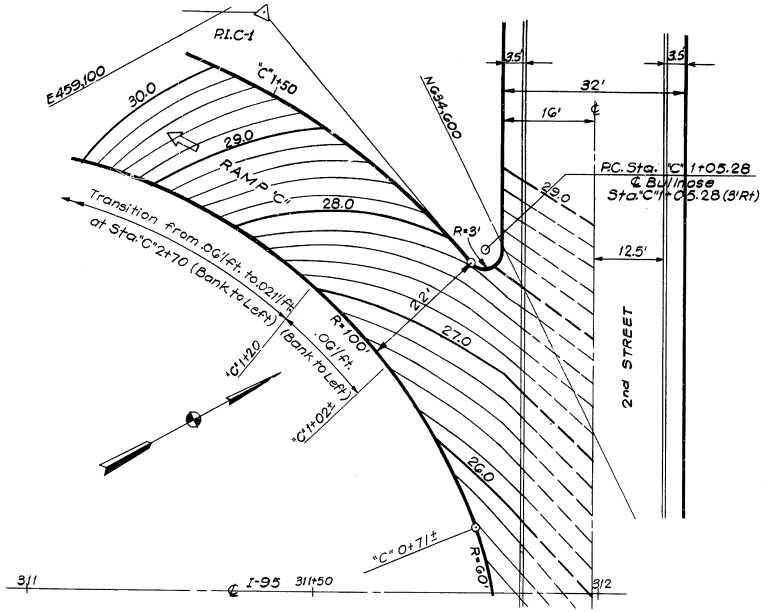
PAVEMENT GRADING DETAILS

SCALE: 1 IN. = 10 FT.

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	12	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





Note:
2nd St. to be Reconstructed to Existing Finished Grade Elevations. (See Profile Sh. No. 15) Existing Cross Slope to be Extended for Widening on Each Side.

——— Existing Elevations

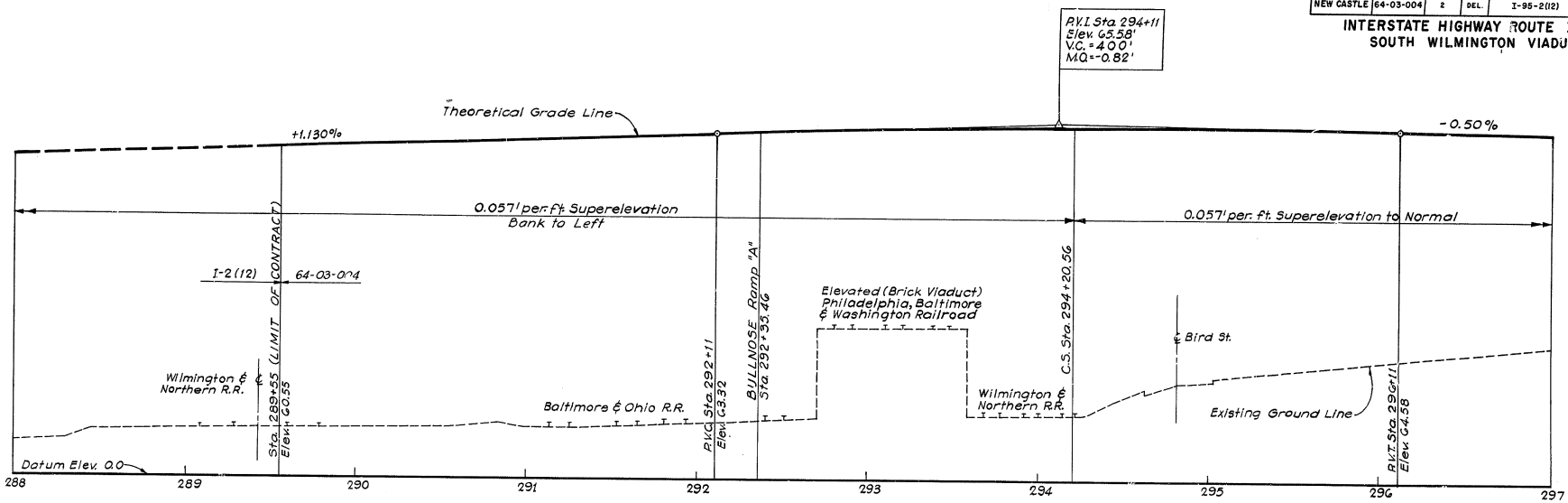
——— Proposed Elevations

PAVEMENT GRADING DETAILS

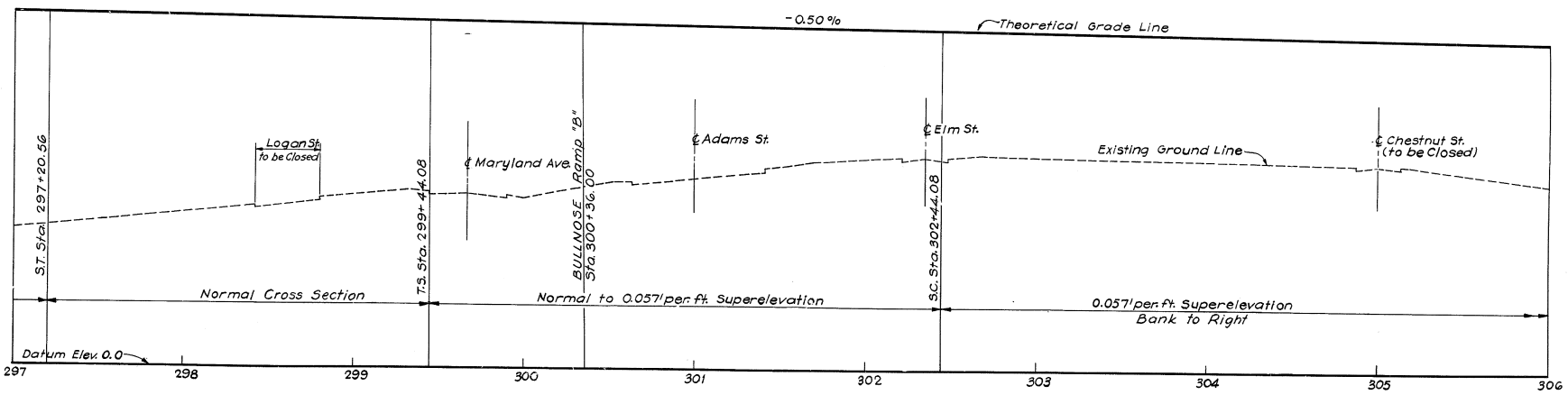
SCALE: 1 IN. = 10 FT.

COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	13	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



℄ STA. 289+55 TO STA. 297+00



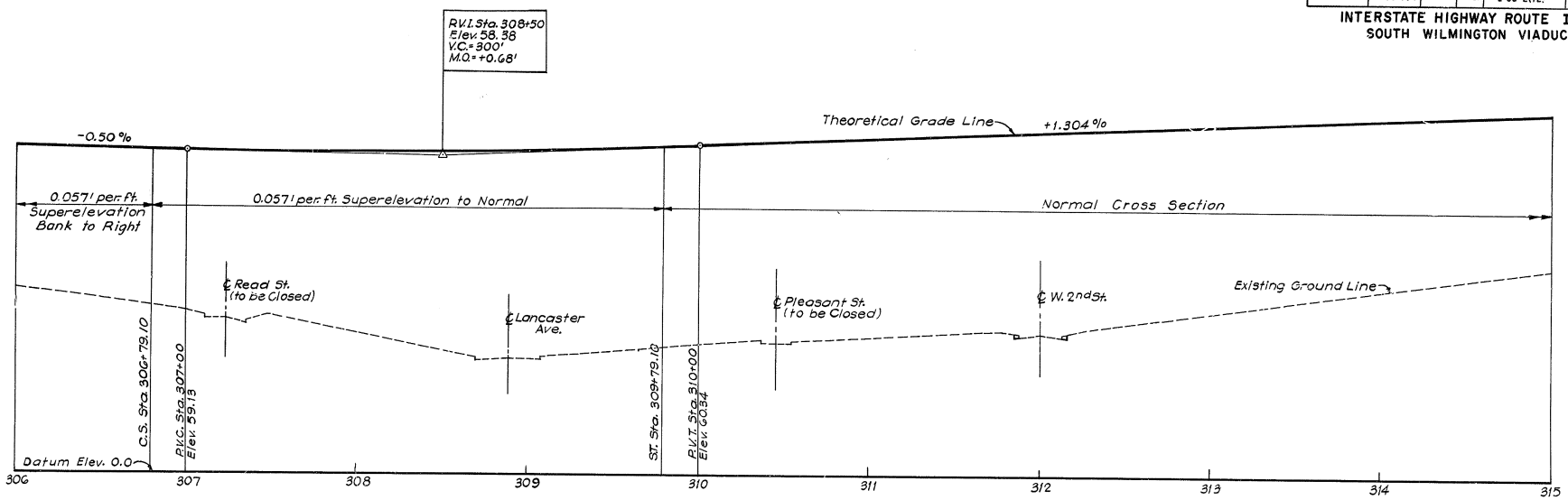
℄ STA. 297+00 TO STA. 306+00

PROFILES

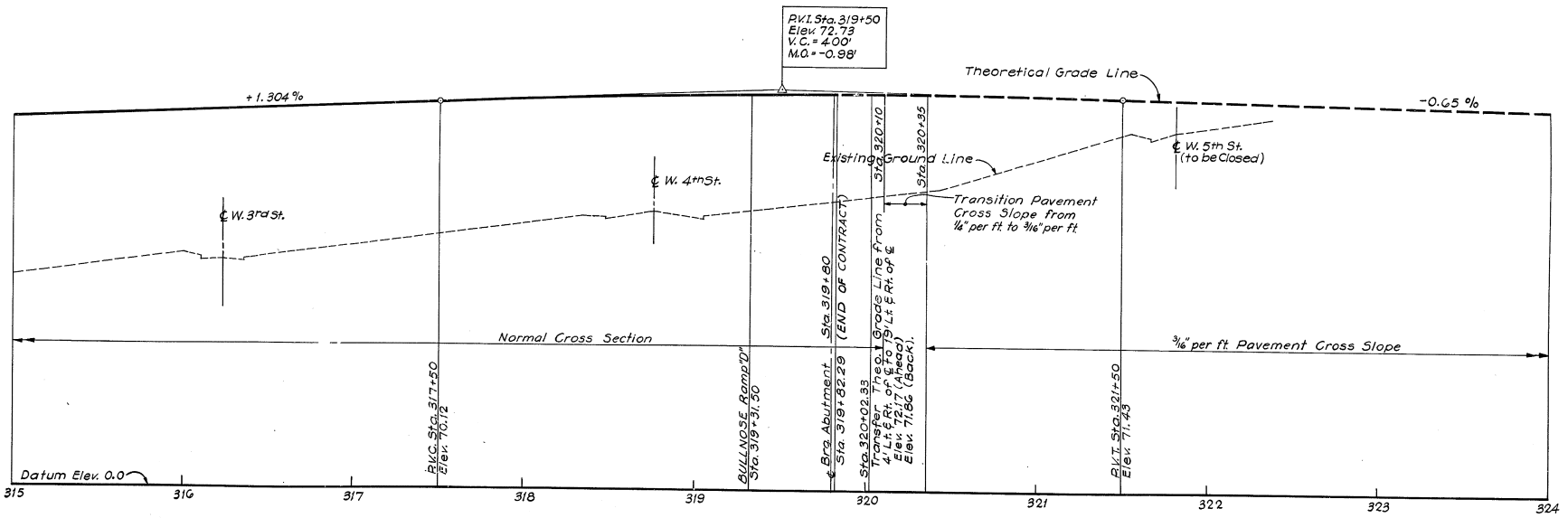
SCALES : HOR.: 1 IN. = 30 FT.
VERT: 1 IN. = 10 FT.

COUNTY	CONTRACT	P.R.D. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(112)	'64	14	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT



℄ STA. 306+00 TO STA. 315+00



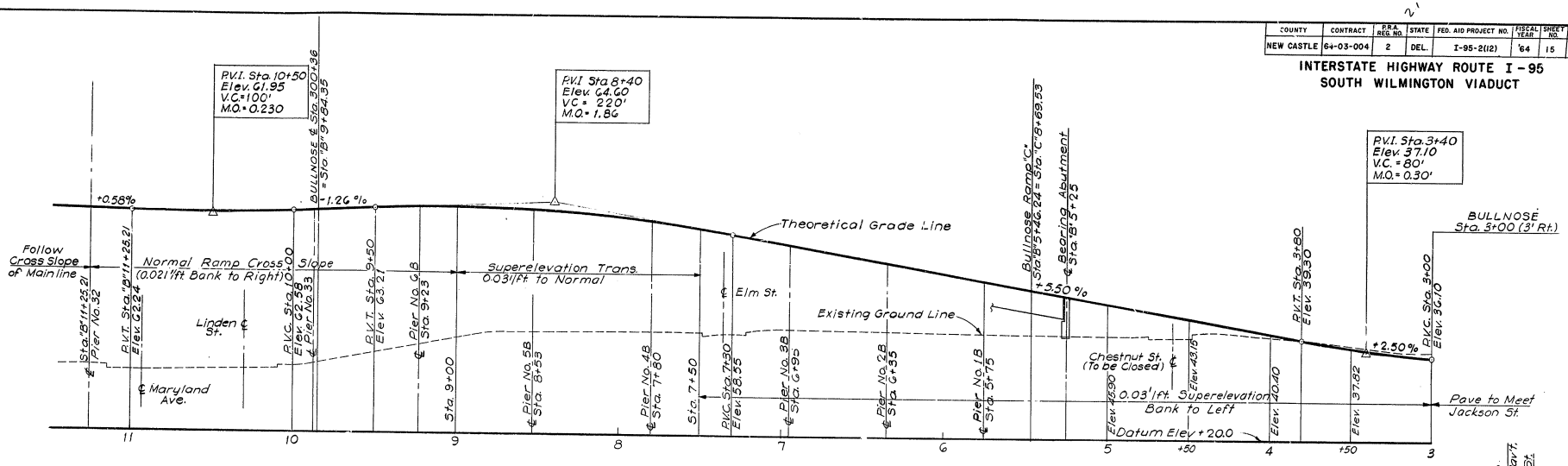
℄ STA. 315+00 TO STA. 320+02.33

SCALES : HOR.: 1 IN. = 30 FT.
VERT: 1 IN.= 10 FT.

PROFILES

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	15	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



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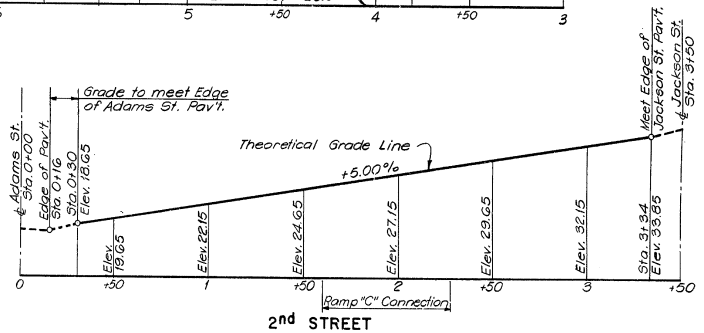
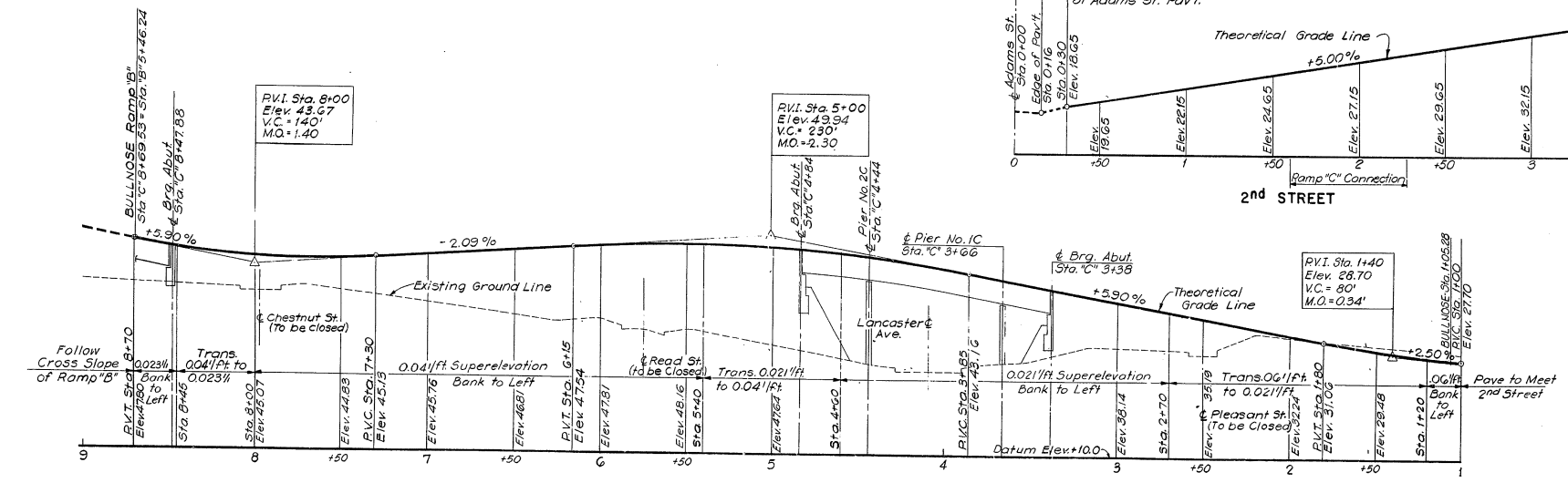


2nd STREET



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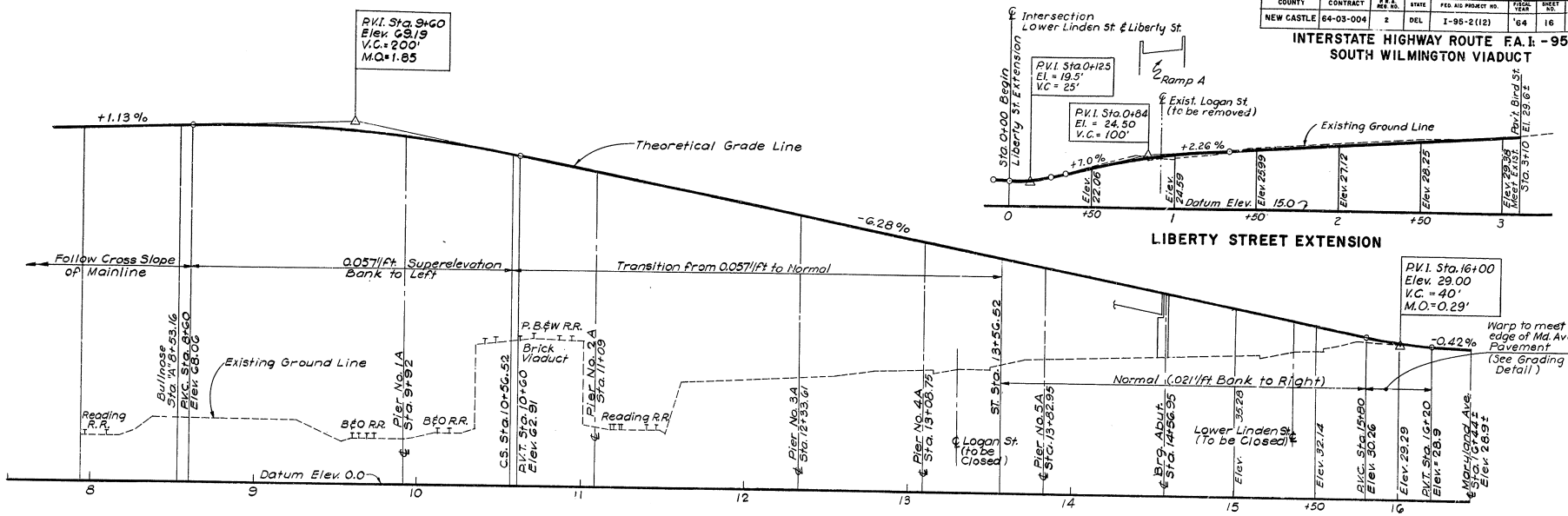
PROFILES

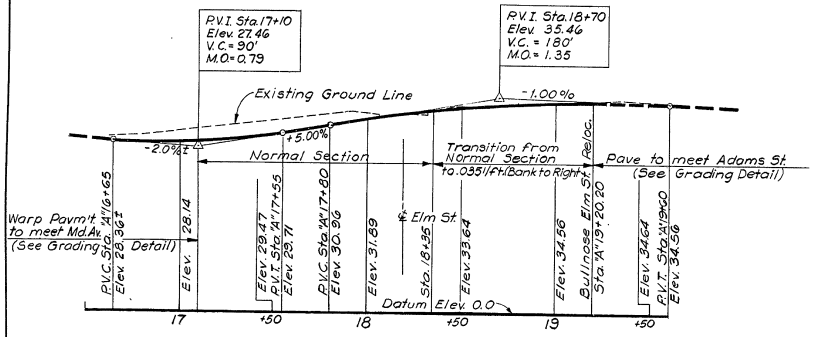
SCALES :- HOR: 1 IN. = 30 FT.
VERT: 1 IN. = 10 FT.

COUNTY	CONTRACT	R & R REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	16	215

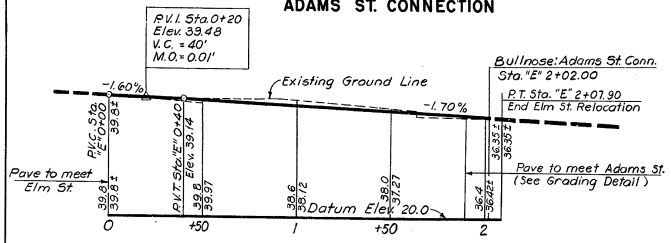
INTERSTATE HIGHWAY ROUTE F.A.I. - 95
SOUTH WILMINGTON VIADUCT



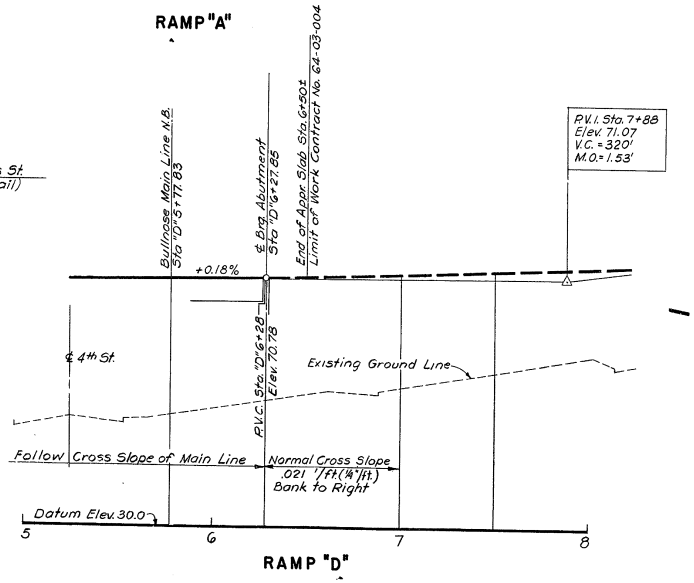
LIBERTY STREET EXTENSION



ADAMS ST. CONNECTION



ELM ST. RELOCATION



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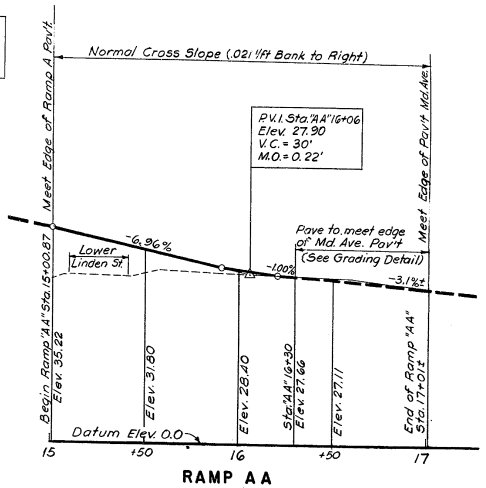
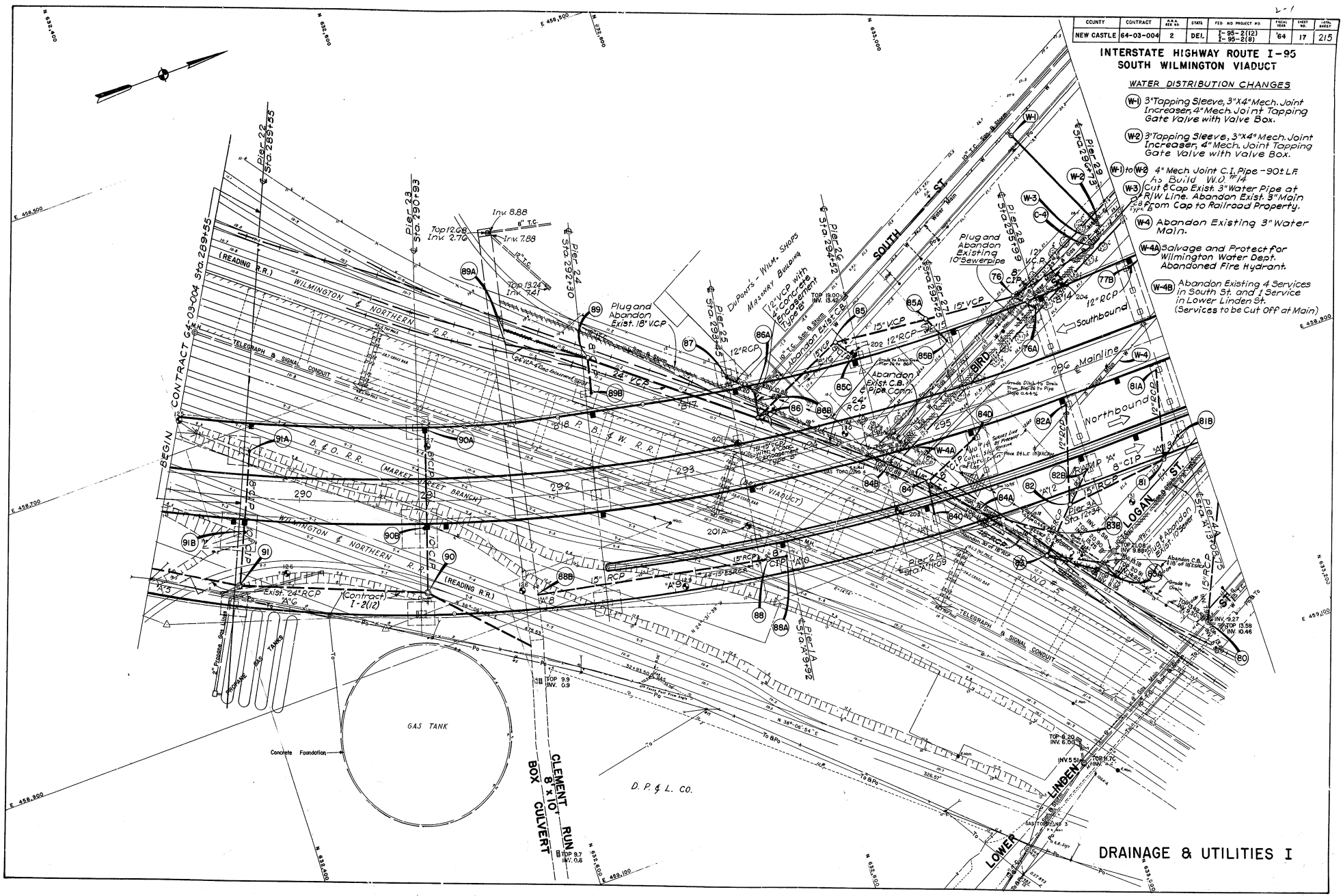


RAMP AA

PROFILES

SCALES:- HOR: 1 IN. = 30 FT.
VERT: 1 IN. = 10 FT.

12

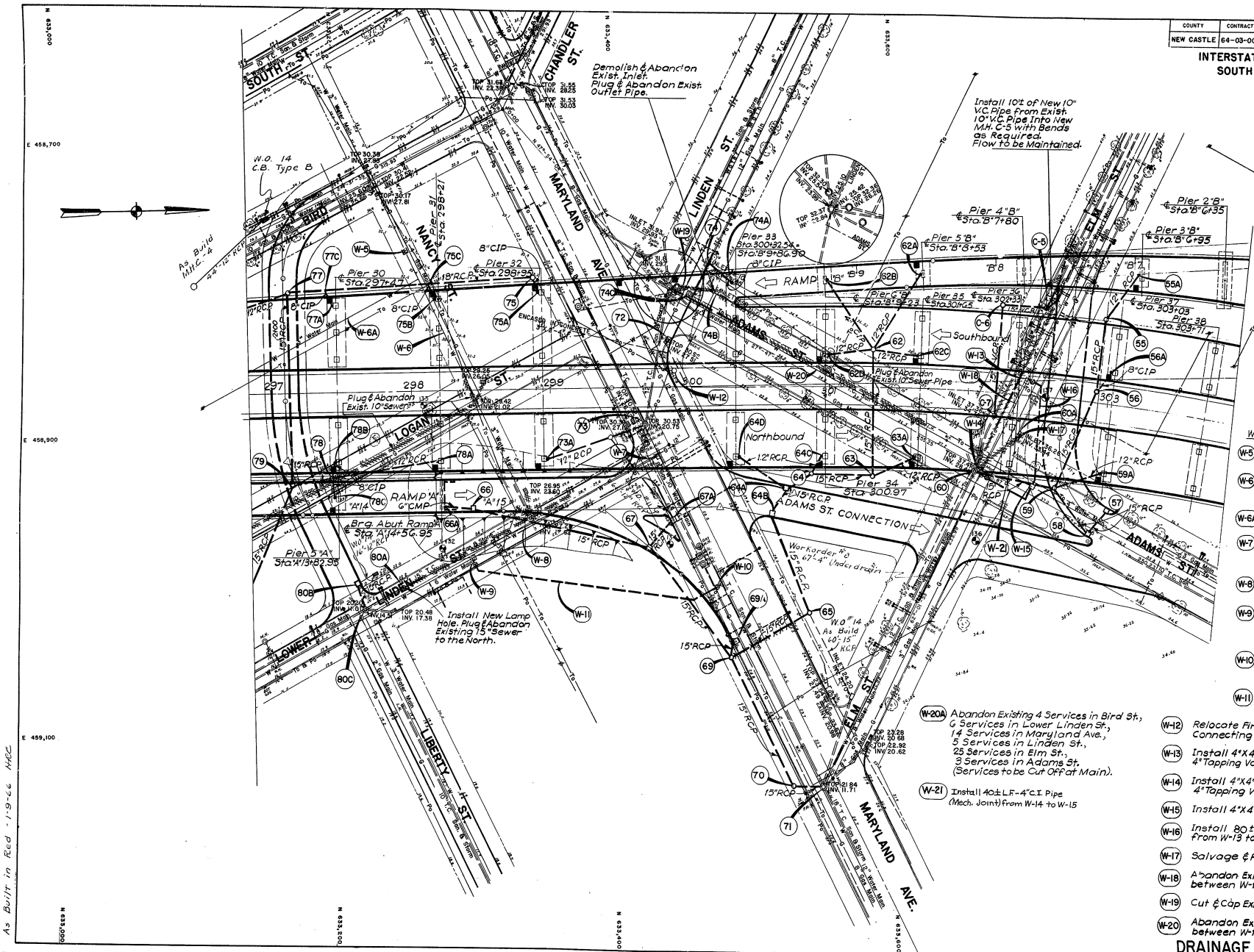


COUNTY	CONTRACT	R.R.A. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	17	215

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	18	215

2-1

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

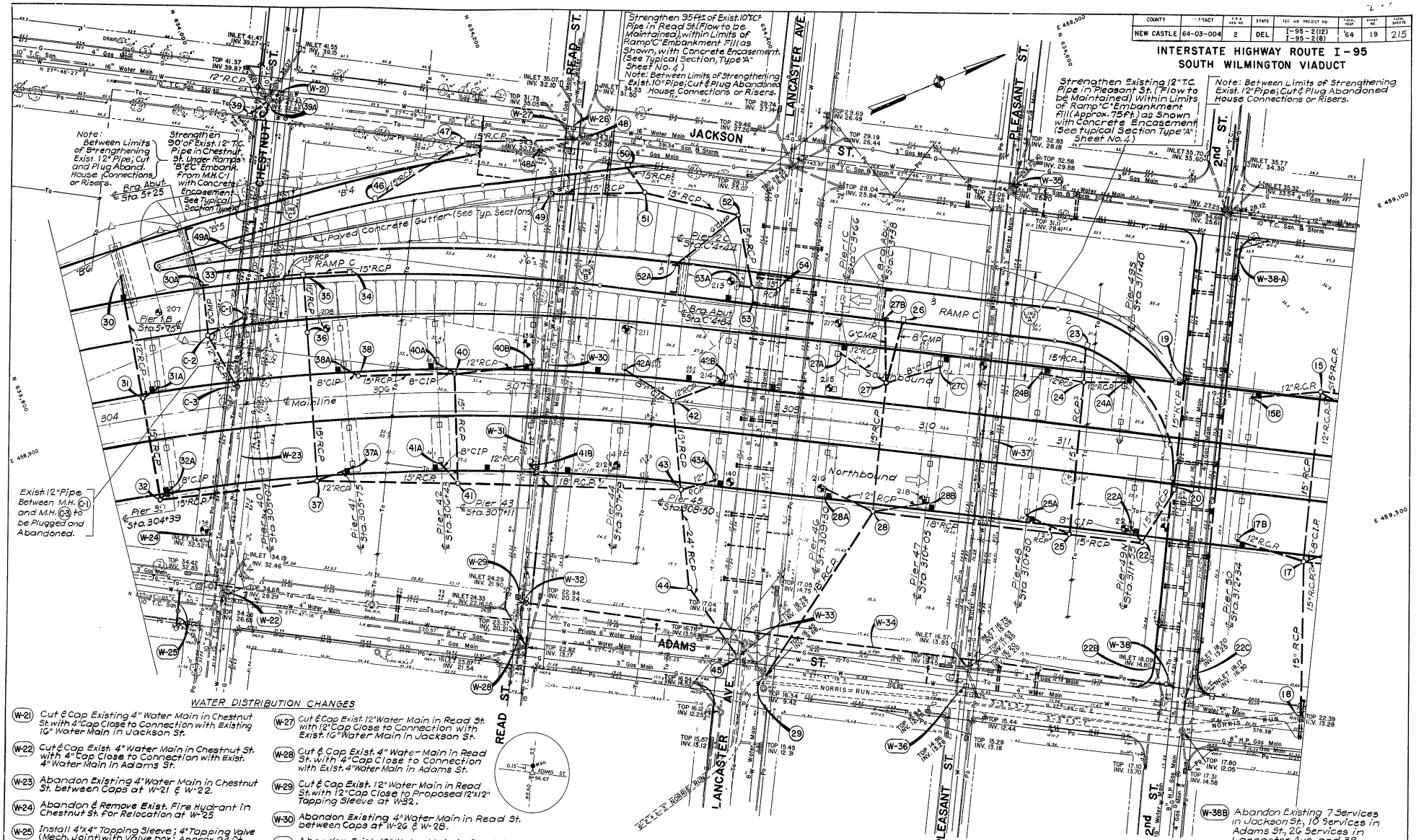


WATER DISTRIBUTION CHANGES

- (W-5) Cut & Cap Existing 3" Water Main at R/W Line.
- (W-6) Abandon Exist. 3" Water Main in Nancy St. from Cap at W-5 to Exist 6" Water Main in Lower Linden St.
- (W-6A) Abandon Exist. 3" Water Main.
- (W-7) Cut & Cap Exist. 6" Water Main in Lower Linden St. Close to Connection with Exist. 10" Water Main in Maryland Ave.
- (W-8) Abandon Exist. 6" Water Main in Lower Linden St. beteen W-7 & W-9.
- (W-9) Install 6"X6" Tapping Sleeve (with 6" Cap); 6" Tapping Valve (Mech. Joint) with Valve Box; 6" to 8" Increaser Fitting (Mech. Joint).
- (W-10) Install 12"X8" Tapping Sleeve; 8" Tapping Valve (Mech. Joint) with Valve Box.
- (W-11) Install 8" C.I. Pipe (Mech. Joint) from W-9 to W-10, Approx. 180 L.F.
- (W-12) Relocate Fire Hydrant including 8'± L.F. of Connecting Pipe, Equivalent in Size to Exist. Pipe.
- (W-13) Install 4"X4" Tapping Sleeve (with 4" Cap); 4" Tapping Valve (Mech. Joint) with Valve Box.
- (W-14) Install 4"X4" Tapping Sleeve (with 4" Cap); 4" Tapping Valve with Valve Box.
- (W-15) Install 4"X4" Cross Fitting with 4" Cap.
- (W-16) Install 80± L.F.-4" C.I. Pipe (Mech. Joint) from W-13 to W-15
- (W-17) Salvage & Protect Abandoned Fire Hydrant
- (W-18) Abandon Exist. 4" Water Main in Elm St. between W-13 & W-14.
- (W-19) Cut & Cap Exist. 4" Water Main in Adams St.
- (W-20) Abandon Exist. 4" Water Main in Adams St. between W-19 & W-15.
- (W-20A) Abandon Existing 4 Services in Bird St., 6 Services in Lower Linden St., 14 Services in Maryland Ave., 5 Services in Linden St., 25 Services in Elm St., 3 Services in Adams St. (Services to be Cut Off at Main).
- (W-21) Install 40± L.F.-4" C.I. Pipe (Mech. Joint) from W-14 to W-15

DRAINAGE & UTILITIES II

As Built in Red - 1-9-66 HRC



COUNTY	F.A.P. NO.	S.B.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	19	215

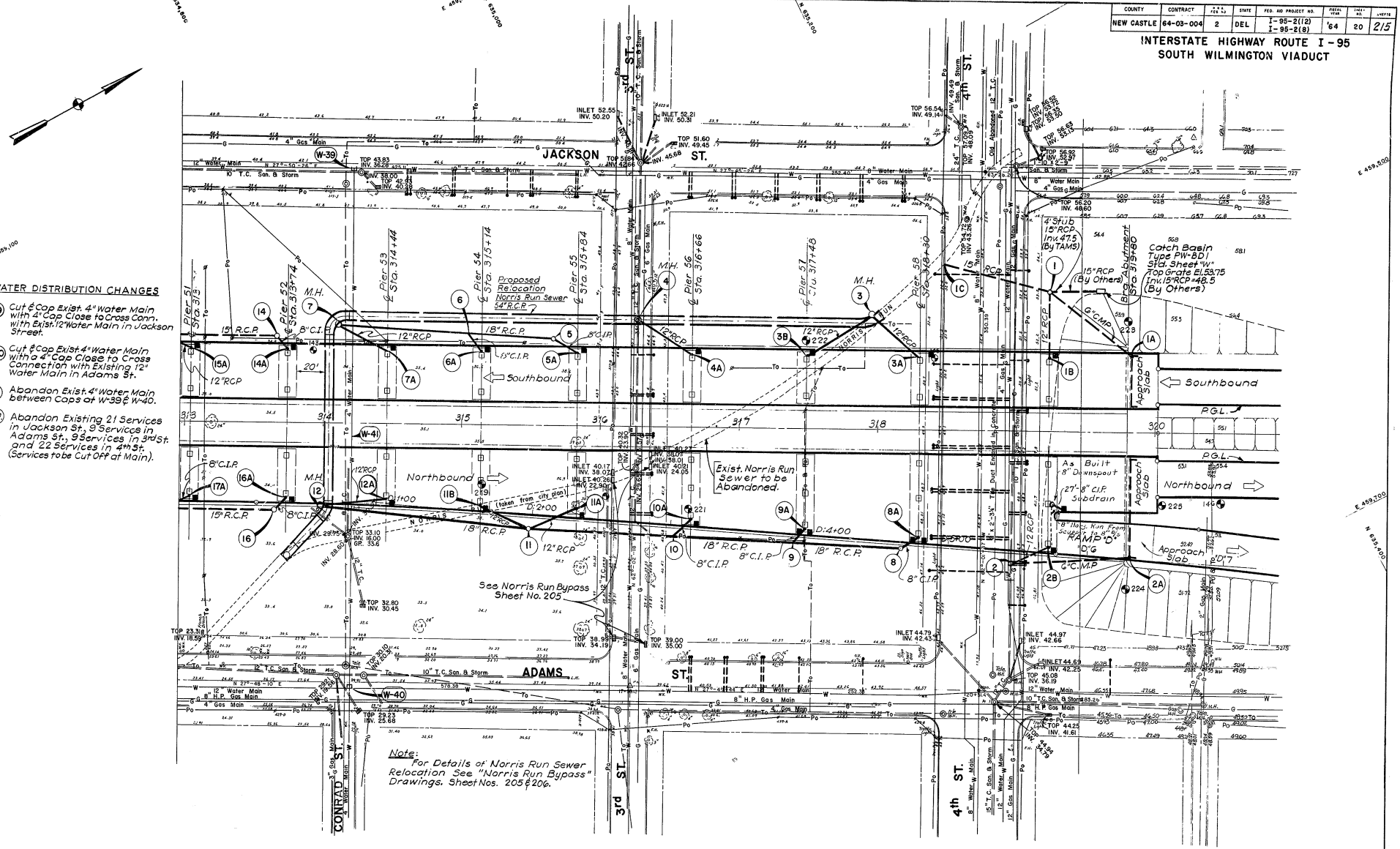
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

DRAINAGE & UTILITIES III

As Built Plans in Red 1967 MFC

COUNTY	CONTRACT	R.R. FED. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	20	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



WATER DISTRIBUTION CHANGES

- (W-39) Cut & Cap Exist. 4" Water Main with 4" Cap Close to Cross Conn. with Exist. 12" Water Main in Jackson Street.
- (W-40) Cut & Cap Exist. 4" Water Main with a 4" Cap Close to Cross Connection with Existing 12" Water Main in Adams St.
- (W-41) Abandon Exist. 4" Water Main between Caps at W-39 & W-40.
- (W-42) Abandon Existing 21 Services in Jackson St. & Services in Adams St., 9 Services in 3rd St. and 22 Services in 4th St. (Services to be Cut Off at Main).

DRAINAGE & UTILITIES IV

As Built Plans in Red - HRS 1-9-67

COUNTY	CONTRACT	P.R.J. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	21	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
81A	296+79	22'Rt.			22.3							12"RCP Conn. from 8" Downspout at Pier 29-N
						81A-81	12"	RCP	58.10 GG	22.3	20.0	* (See Note on Drainage Schedule II)
81B	"A"13+09	11'Lt.							18.60			8"CIP Conn. From 8" Downspout at Pier 4-A
						81B8	8"	CIP	18'	21.3	20.0	
81	296+55	83'Rt.	M.H.	22.8	11.0							Standard MH - See Std. Sheet "MH"
						81-82	15"	RCP	76'	16.0	14.0	
82	295+78	91'Rt.	M.H.	21.2	11.0				427'			Standard MH - See Std. Sheet "MH"
						82A-82	12"	RCP	70'	20.3	18.3	* (See Note on Drainage Schedule II)
82-A	295+99	22'Rt.			20.3				24.6			12" RCP Conn. from 8" Downspout at Pier 28-N
						82B-82	12"	RCP	28'	19.8	18.3	* (See Note on Drainage Schedule II)
82B	"A"12+34	11'Lt.			19.8	82B8		RCP	8.5'			12" RCP Conn. from 8" Downspout at Pier 3-A
						82-83	15"	RCP	36'	11.0	8.75	
~~83~~	~~295+80~~	~~12'Rt.~~	~~M.H.~~	~~12.6~~	~~8.50~~	16-1	18"	RCP	14.0'	8.85	8.50	~~Standard MH - See Std. Sheet "MH"~~ Eliminate
	~~295+80~~			~~12.6~~		83A-83	18"	RCP	36'			
83A	295+82	42'Rt.	C.B.	14.0	8.85	83 B			60.0'			~~Catch Basin Type 8 - See Std. Sheet "M"~~ Abandon
						83B-84	18"	RCP	38'	8.50	7.86	
84A	295+11	74'Rt.	Exist. C.B.	11.48	7.86							Exist. C.B. to be Retained
						84-84	18"	RCP	36' 40'	7.86	7.34	
84	294+82	42'Rt.	M.H.	12.0	7.30							Standard M.H. See Std. Sheet "MH"
						84-84	8"	CIP	48'	8.6	8.1	
84C	"A"11+09	15'Lt.			8.6				41.7			8"CIP Conn. From 8" Downspout at Pier 2A
						84B-84	8"	CIP	41.8'	17.0	8.3	Provide 2-8" Bends as Required
84D	295+25	22'Rt.			17.0				36'			8"CIP Conn. From 8" Downspout at Pier 27-N
						84-84	18"	RCP	30'	7.30	6.90	
84B	294+55	23'Rt.	Exist. C.B.	10.88	6.40							Exist. C.B. to be Retained
						84B-86	24"	RCP	100'	6.40	5.80	
86	293+63	31'Lt.	M.H.	11.50	5.77							Type "A" M.H. - See Std. Sheet "MH"
C-4	296+58	79'Lt.	M.H.	27.5	18.5							City of Wilmington Std. M.H.
						C4-76	12"	VCP	54.33 GG	18.5	16.5	
76	295+83	65'Lt.	M.H.	25.5	16.0				28.5'			City of Wilmington Std. M.H.
						76A-76	8"	CIP	18'	23.3	22.3	
76A	295+99	52'Lt.			23.3				47			8"CIP Conn. From 8" Downspout at Pier 28-S
						76-85A	15"	VCP	GG	16.0	14.0	
85A	295+11	70'Lt.	M.H.	23.0	13.0				141'			City of Wilmington Std. M.H.
						85B-85A	12"	RCP	22'	19.0	18.5	* (See Note on Drainage Schedule II)
85B	295+25	50'Lt.			19.0				7.8			12" RCP Conn. From 8" Downspout at Pier 27-S
						85A-85	15"	VCP	GG	13.0	10.75	
85	294+82	72'Lt.	M.H.	19.0	10.0				14			City of Wilmington Std. M.H.
						85C-85	8"	CIP	7.82	17.3	16.50	
85C	294+52	59'Lt.			17.3	85-86	15"	VCP	74.5' 78'	10.0	6.52	8"CIP Conn. From 8" Downspout at Pier 26S
												Install 63 ft. of 15" VCP From Struct. 85, the Remaining 15' Into Struct. 86 Install 15" VCP with 4" Conc. Encasement Under Relocated R.R. Track. See Profile Sheet & Sheet Showing Typical Encasement Detail. (Type "B") Dem. & Aban. Exist. C.B. Plug & Aban. Exist. Connecting Pipes.
86B	293+65	44'Lt.	Exist. C.B.									
86A	293+66	51'Lt.	Exist. C.B.	10.34	6.77							Exist. C.B. to be Retained
						86A-86	12"	VCP	14 15'	7.05	6.77	12" VCP Encased with 4" Concrete under Relocated R.R. Track (Type "B")
87	293+45	63'Lt.			8.0				17.6			12" RCP Conn. From 8" Downspout at Pier 25S
87B	292+34	70'Lt.			7.00	87B-A	12"	RCP	22'	8.0	7.35	* (See Note on Drainage Schedule II)
						87B8	8"	CIP	18.5 8'	7.00	6.2	8"CIP Conn. From 8" Downspout at Pier 24S
89	292+30	95'Lt.	C.B.	10.5	4.92							Type "B" C.B. with Paved Invert and No Silt Basin. - See Std. Sheet "M"
	67	110'Lt.				86-89	24"	VCP	135'	5.77	4.92	
89A	291+66	122'Lt.	Exist. Box Culv.		2.40				68'			Exist. Element Run 4.5'X10' Box Culv. Inv. Approx. 2.40' - Set in Field
						89-89A	24"	VCP	GG	4.92	4.50	Provide Opening in Exist. Box Culv. For 24" Pipe. Match Inside Tops - 24" VCP Encased with 4" Concrete (Type B)
88A	"A"9+82	11'Lt.			6.3				15.1			8"CIP Conn. From 8" Downspout at Pier 1A
						88A-88	8"	CIP	7.82	6.3	6.0	
88	"A"9+74	11'Lt.	M.H.	10.2	5.5	88-888	15"	RCP	85.65	5.5	4.0	Standard M.H. - Std. Sheet "MH" Provide opening in Exist. Box Culv. for 15" Pipe
888	A7+94	10'Lt.	Exist. Box Culv.		1.24							Exist. Element Run 4.5'x10' Box Culvert (Inv. Approx. 1.24)
90A	290+97	54'Lt.			7.3							8"CIP Conn. From 8" Downspout at Pier 23S
						90A-908	8"	CIP	47.5 74'	7.3	5.8	
908	290+97	20'Rt.			5.7				4.8			10"CIP Conn. From 8" Downspout at Pier 23 Center
						908-90	10"	CIP	40'	5.7	4.52	
90	290+86	GG'Rt.	Exist. M.H.	9.3	3.35							Exist. M.H. (Contract 1-2(12))
91A	289+60	33'Lt.			7.1							8"CIP Conn. From 8" Downspout at Pier 22-S
						91A-91	8"	CIP	58.5 58'	7.1	5.9	
91B	289+60	25'Rt.			5.8				36			10"CIP Conn. From 8" Downspout at Pier 22 Center
						91B-91	10"	CIP	35'	5.8	4.74	Conn. to Exist. 10" CIP Stub in Exist. M.H.
91	289+60	64'Rt.	Exist. M.H.	9.5	3.57							Exist. M.H. (Contract 1-2(12))

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
83B	295+61	105'Lt.	C.B.	10.7	8.50	83B-84A	18"	ESCP	58'	8.75	8.60	Type PW C.B., Top Elev. is to gutter

DRAINAGE SCHEDULE I

As Built Plans in Red - 1-9-67. MRC

Revised 8-30-66 as per instructions of 8-29-66 and 8-30-66

Revised 8-8-66 as per instructions of 8-5-66

Revised 7-25-66 as per instructions of 7-22-66

As Built Plans in Red - 1-9-67 NRC

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	22	215

2-1

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
33	C7+95	17'Lt.	C.B.	44.30	40.5	33-35	15"	RCP	24' [23.58]	40.5	40.0	Type A-1 Catch Basin-Std. Sheet "Y"
34	C7+30	18'Lt.	C.B.	44.41	40.5	34-35	15"	RCP	32'	40.5	40.0	Type A-1 Catch Basin-Std. Sheet "Y"
35	C7+67	17.5'Lt.	C.B.	44.05	33.5	35-36	15"	RCP	38' [36.16]	35.5	34.4	Type A-1 Catch Basin Std. Sheet "Y"
36	305+50	45'Lt.	M.H.	38.6	33.5	36-37	15"	RCP	98'	33.5	30.5	Standard M.H.-Std. Sheet "MH"
37	305+50	57'Rt.	M.H.	35.4	27.5	32-37	15"	RCP	112'	32.0	30.3	Standard M.H.-Std. Sheet "MH"
37A	305+75	49'Rt.			31.8	37A-37	12"	RCP	26' [18]	31.8	31.0	12"RCP Conn. from 8" Downspout at Pier 41-N * See Note Below
38A	305+75	19'Lt.			35.7	38A-38	8"	CIP	10' [10.25]	35.7	35.3	8"CIP Conn. from 8" Downspout at Pier 41-S
38	305+85	13'Lt.	M.H.	37.3	31.3	38-40	15"	RCP	67' [66]	31.3	28.8	Standard M.H. - Std. Sheet "MH"
40A	306+43	19'Lt.			30.7	40A-40	8"	CIP	12'	30.7	29.2	8"CIP Conn. from 8" Downspout at Pier 42-S
40	306+55	12'Lt.	M.H.	32.0	27.25	40B-40	12"	RCP	56' [48]	30.0	29.1	Standard M.H. - Std. Sheet "MH" * See Note Below
40B	307+11	19'Lt.			30.0	40-41	15"	RCP	72'	27.25	25.0	12"RCP Conn. from 8" Downspout at Pier 43-S
41	306+55	63'Rt.	M.H.	29.0	23.0	37-41	15"	RCP	100' [98]	27.5	25.0	Standard M.H. - Std Sheet "MH"
41A	306+43	49'Rt.			27.7	41A-41	8"	CIP	18' [14.5]	27.7	27.0	8"CIP Conn. from 8" Downspout at Pier 42-N
42A	307+79	19'Lt.			28.2	42A-42	8"	CIP	40' [36]	28.2	21.0	8"CIP Conn. from 8" Downspout at Pier 44-S with 2 Bends as Required.
42B	308+50	19'Lt.			21.8	42B-42	12"	RCP	38'	21.8	21.0	12"RCP Conn. from 8" Downspout at Pier 45S * See Note Below
42	308+14	2'Lt.	M.H.	25.0	19.5	42-43	15"	RCP	56' [57.1]	19.5	18.0	Standard M.H. - Std. Sheet "MH"
43	308+26	58'Rt.	M.H.	22.4	15.5	41-48	18"	RCP	160' [166.1]	23.0	17.7	Standard M.H. - Std. Sheet "MH"
41B	307+11	49'Rt.			24.7	43A-43	12"	RCP	24' [22.5]	19.0	18.5	Provide Wye Conn. to Run 41-43 from *(See Note Below) Pier 43-N (22'-12"RCP)
43A	308+50	49'Rt.			19.0	43-44	24"	RCP	64'	15.5	14.5	12"RCP Conn. from 8" Downspout at Pier 45N
44	308+40	124'Rt.	M.H.	19.0	13.5	44-45	24"	RCP	56' [54.66]	13.5	12.4	Standard M.H. - Std. Sheet "MH" Provide opening in Exist. M.H. for 24" Pipe
45	308+79	167'Rt.	Exist. M.H.	16.79	10.27							Exist. City M.H. on 2x3' Comb Sewer in Lancaster St. & Adams St.
46	B'3+80	19'Lt.	C.B.	38.7	34.0	46-47	15"	RCP	72' [75']	34.0	32.4	Type A-1 Catch Basin-Std. Sheet "Y"
47	B'3+08	10'Rt.	C.B.	36.8	32.4	47-48	15"	RCP	82' [84]	32.4	30.5	Type A-1 Catch Basin - Std. Sheet "Y" Provide opening in Exist. M.H. for 15" Pipe
48	B'2+22	4'Lt.	Exist. M.H.	34.31	25.36	48A-48	10"±	V.C.	28'	30.76		Exist. City M.H. in Jackson St. Plug & Abandon Exist. 10"± V.C. Pipe
48A	B'2+53	8'Lt.	Exist Inlet	34.36	30.76							Demolish & Abandon Exist. City Inlet
49A	C"8+20	7'Rt.	Con. Gutter		45.0	49A-49			240'	45.0	33.5	Beg. of Conc. Gutter. See Typ. Sections. Limits of Conc. Gutter.
49	"C"5+83	40'Rt.	C.B.	33.5	28.8	49-51	15"	RCP	66' [60]	28.8	27.25	Parkway C.B. Type P.W. - B.D.I. Std. Sh. "W"
51	"B"1+83	52'Lt.	M.H.	32.2	26.0	50-51	15"	RCP	20' [15.83]	28.0	27.5	Standard M.H. - Std. Sheet "MH"
50	"B"1+83	29'Lt.	C.B.	31.7	28.0	51-52	15"	RCP	66' [71.3]	26.0	24.5	Type "A-1" Catch Basin - Std. Sheet "Y"
52	"C"4+48	35'Rt.	M.H.	28.4	22.0	52A-52	6"	CMP	54' [53.5]	39.0	25.0	Standard M.H. - Std. Sheet "M.H." Provide 2-6" Bends as Req'd
52A	"C"4+87				39.0	52-53	15"	RCP	46' [43.8]	22.0	21.2	6" CMP Conn. from 6" Subdrain at Ramp "C" So. Abutment
53	"C"4+24	10'Lt.	M.H.	25.4	21.0	53A-53	8"	CIP	8' [13]	22.2	21.8	Standard M.H - See Std. Sheet "MH"
53A	C"4+42	11'Lt.			22.2	53-54	15"	RCP	14' [16]	21.0	20.5	8"CIP Conn. from 8" Downspout at Pier "2-C"
54	C"4+14	10'Lt.	M.H.	24.6	14.8							Constr. M.H. on Exist. 2x3' Comb. Sewer Type "D" M.H. Std. Sheet "MH"
55A	B"6+95	12'Lt.			38.5	55A-55	12"	RCP	36' [32.1]	38.5	37.0	12"RCP Conn. from 8" Downspout at Pier "38" * See Note Below
55	302+93	57'Lt.	M.H.	39.8	35.0	55-56	15"	RCP	45	35.0	33.9	Standard M.H. - Std. Sheet "MH"
56	302+92	7'Lt.	M.H.	39.0	33.7	56A-56	8"	CIP	15' [10]	37.3	37.0	Standard M.H. - Std. Sheet "MH"
56A	303+03	22'Lt.			37.3							8"CIP Conn. from 8" Downspout at Pier 37-S
57	E'2+02	12'Lt.	C.B.	36.15	32.8	57-58	15"	RCP	20' [20.1]	32.8	32.5	Type A-1 Catch Basin-Std. Sheet "Y"
58	E'2+00	12'Rt.	C.B.	36.15	32.5	58-59	15"	RCP	36' [39.08]	32.5	32.0	Type A-1 Catch Basin-Std. Sheet "Y"
59	302+68	60'Rt.	M.H.	36.75	31.8	59A-59	12"	RCP	32' [29]	35.7	34.1	Standard M.H. - Std. Sheet "MH" * See Note Below
59A	303+03	47'Rt.			33.7	56-59	15"	RCP	67' [66.9]	33.7	32.0	12"RCP Conn. from 8" Downsprout at Pier 37-N
60	302+07	53'Rt.	Exist. M.H.	37.41	28.41	59-60	15"	RCP	55' [55.67]	31.8	30.7	Exist. City M.H. in Adams & Elm Sts.
C-5	302+50	59'Lt.	M.H.	38.8	30.15	(Install 10" V.C.P. Conn. to C5 from Exist. 10" V.C.P.) C5 to C6	15"	VCP	28'	30.15	29.81	City of Wilm. Type M.H. - Sewer Dept. Std. (Flow to be Maintained).
C-6	302+20	59'Lt.	M.H.	39.1	29.81	C6 to C7	15"	VCP	70' [68]	29.81	29.0	City of Wilm. Type M.H. - Sewer Dept. Std.
C-7	302+19	16'Rt.	M.H.	37.6	29.0							City of Wilm. Type M.H. - Sewer Dept. Std.
60A	302+38	27'Rt.	Exist C.B.	36.26	33.44	60A-60	10"±	VCP		33.44		Demolish Exist. Catch Basin Plug & Aban. Exist. 10" Drain Pipe - Approx. 36 L.F.

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
G2A	'B'8+53	85'Lt.			36.3	G2A-G2	12"	RCP	60' [54]	36.3	32.5	12"RCP Conn. from 8" Downspout at Pier 5-B * See Note Below
G2B	'B'9+23	85'Lt.			34.2	G2B-G2	4"	CIP	55'	34.2	32.9	4"CIP Conn. from 4" Downspout at Pier G-B
G2	301+31	25'Lt.	M.H.	36.5	32.0	G2C-G2	12"	RCP	32' [27.6]	36.2	32.5	Standard M.H. - Std. Sheet "MH" * See Note Below
G2C	301+65	22'Lt.			36.2	G2D-G2	12"	RCP	30'	33.1	32.5	12"RCP Conn. from 8" Downspout at Pier 35S * See Note Below
G2D	300+97	22'Lt.			33.1	G2-G3	15"	RCP	80'	32.0	30.0	12"RCP Conn. from 8" Downspout at Pier 34-S
G3	301+31	59'Rt.	M.H.	33.5	28.0	G3A-G3	12"	RCP	30' [28]	34.3	31.3	Standard M.H. - Std. Sheet "MH" * See Note Below
G3A	301+65	47'Rt.			34.3	G3-G4	15"	RCP	40' [41.75]	28.0	26.0	12"RCP Conn. from 8" Downspout at Pier 35-N
G4	300+83	66'Rt.	M.H.	30.4	25.7	G4C-G4	8"	CIP	15' [18]	31.2	28.0	Standard M.H. - Std. Sheet "MH" Provide Bends as Required
G4C	300+97	47'Rt.			31.2	G4-G4A	15"	RCP	16' [10.16]	25.7	25.0	8"CIP Conn. from 8" Downspout at Pier 34N
G4D	300+33	47'Rt.			28.3	G4D-G4A	12"	RCP	38' [38.7]	28.3	25.5	12"RCP Conn. from 8" Downspout at Pier 33N * See Note Below
G4A	A17+00	24'Lt.	C.B.	28.10	25.0	G4A-G4B	15"	RCP	16' [22.25]	25.0	24.5	Type A-1 Catch Basin-Std. Sheet "Y"
G4B	A16+93	0.0	C.B.	28.10	24.0	G4B-G5	15"	RCP	68' [66.5]	24.0	23.0	Type A-1 Catch Basin-Std. Sheet "Y"
G5	A17+32	58'Rt.	M.H.	27.0	22.0							Standard M.H. - Std. Sheet "MH"
G6A	A14+60	2'Lt.			30.5	G6A-G6	6"	CMP	18' [20.0]	30.5	30.0	6"CMP Conn. from 6" Subdrain at Ramp "A" Abutment.
G6	A14+80	0.0	C.B.	36.5	29.2	G6-G7	15"	RCP	124' [114.4]	29.2	23.50	Type A-1 Catch Basin-Std. Sheet "Y"
						G7-G9	15"	RCP	90' [89.32]	23.50	21.4	
G7A	"A"16+22	8'Rt.	C.B.	28.6	24.0	G7A-G7	15"	RCP	22' [23]	24.0	23.5	Type A-1 Catch Basin-Std. Sheet "Y"
G7	"AA"16+10	0.0	C.B.	28.0	23.5							Type A-1 Catch Basin - Std. Sheet "Y"
G9A	"AA"16+98	0.0	Inlet	23.5	21.6	G9A-G9	15"	RCP	10' [7]	21.6	21.4	Type A-1 Catch Basin-Std. Sheet "Y"
G9	"AA"17+06±	7'Rt.	M.H.	26.2	21.0	G5-G9	15"	RCP	60'	22.0	21.4	Standard M.H. - Std. Sheet "MH"
70	South Side Maryland Ave.		M.H.	22.8	16.5	G9-70	15"	RCP	94'	21.0	18.0	Standard M.H. - Std. Sheet "MH"
71	Maryland Ave.		Exist. M.H.	21.84	11.71	70-71	15"	RCP	18'	16.5	16.0	Exist. City M.H. in Maryland Ave. Provide opening in Exist. M.H. for 15" R.C. Pipe
72	299+86	32'Lt.	C.B.	31.0	27.51		12"±	RCP	8'±			Demolish Exist. Inlet. Install New C.B. Type A-1 (Std. Sh. "Y") at Reloc. Curb with Pipe Conn. of Equiv. Size
74A	300+30	70'Lt.			31.0	74A-74	8"	CIP	20'	31.0	29.6	8"CIP Conn. from 8" Downspout at Pier 33-S
74	300+14	83'Lt.	C.B.	32.10	29.45							Demolish Exist. Inlet. Install new C.B. Type A-1 (Std. Sh. Y) at Same location. Provide Conn. for Exist. Pipe Outlet
74B	300+19	63'Lt.	Exist. Inlet	31.99	29.99							Aban. Exist Inlet on Adams St. - Plug and Abandon Exist. Outlet Pipe.
73A	298+95	47'Rt.			27.5	73A-73	12"	RCP	72'	27.5	26.0	12"RCP Conn. from 8" Downspout at Pier 32-N Connect to Exist. MH *(See Note Below)
73	299+67	25'Rt.	Exist. M.H.	30.53	20.75							Exist. City M.H. in Maryland Ave.
75A	298+95	65'Lt.			29.0	75A-75	8"	CIP	10'	29.0	28.5	8"CIP Conn. from 8" Downspout at Pier 32-S
75	298+88	76'Lt	M.H.	33.2	27.7	75-77	18"	RCP	174' [173.3]	27.7	24.2	Standard M.H - Std. Sheet "MH"
75B	298+21	62'Lt.			28.5	75B-75C	8"	CIP	12' [5]	28.5		8"CIP Conn. from 8" Downspout at Pier 31-S Provide outlet Wye Conn. in Run 75-77
77A	297+47	58'Lt.			27.0	77A-77C	8"	CIP	12'	27.0		8"CIP Conn. from 8" Downspout at Pier 30-S Provide outlet Wye Conn. in Run 75-77
77B	296+73	55'Lt.			25.7	77B-77	12"	RCP	36' [35.40]	25.7	25.0	12"RCP Conn. from 8" Downspout at Pier 29-S *(See Note Below)
77	297+12	68'Lt.	M.H.	27.7	24.0	77-79	15"	RCP	126'	24.0	19.0	Standard M.H. - Std. Sheet "MH"
79	297+13	62'Rt.	M.H.	24.6	16.0	78-79	15"	RCP	26'	21.0	20.0	Standard M.H. - Std. Sheet "MH"
78A	298+21	47'Rt.			26.0	78A-78	12"	RCP	76' [72]	26.0	23.0	12"RCP Conn. from 8" Downspout at Pier 31-N *(See Note Below)
78	297+41	57'Rt.	M.H.	25.3	21.0	78B-78	8"	CIP	10' [5.83]	24.0	23.0	Standard M.H - Std. Sheet "MH"
78B	297+47	47'Rt.			24.0	78C-78	8"	CIP	10' [8]	23.5	23.0	8"CIP Conn. from 8" Downspout at Pier 30-N
78C	A'13+83	11'Lt.			23.5	79-80	15"	RCP	154' [153.7]	16.0	10.0	8"CIP Conn. from 8" Downspout at Pier 5-A Provide opening in Exist. M.H. (80) for 15" RCP
80	Lower Linden St.		Exist. M.H.	13.8	5.9							Exist. City M.H. in Lower Linden St.
80A	297+90	133'Rt.	L.H.	21.4	12.5							Install Lamphole in Lower Linden St. on Exist 15"VCP at Exist. Inv. Elev. 12.5± Construct Lamphole in Accordance with City of Wilmington Std. Plug & Abandon Exist. 15"VCP to the North in Lower Linden St.
80B	Liberty St. Ext. 0+22	10'Rt.	C.B.	20.0	16.0	80B-80C	15"	RCP	15' [20']	16.0	15.0	Type A-1 Catch Basin - Std. Sheet "Y" Provide Opening in Exist. M.H. for 15" RCP
80C	0+03	5'Rt.	Exist. M.H.	20.2	11.01±							Exist. City M.H. in Lower Linden St.
74C	300+00	62'Lt.	Exist. M.H.	32.5±								Adjust Manhole Top

* Where 8" W.I. Pipe connects with 12" R.C. Pipe, a Concrete Junction Box is to be provided. No separate payment is to be made for this Junction Box. It is to be included with the cost of the Concrete Pipe. See this sheet for Junction Box Detail.

JUNCTION BOX DETAIL

DRAINAGE SCHEDULE II

As Built Plans in Red - 1-9-67 HRC

STRUCTURE				ELEV.		PIPE				INVERT		CONSTRUCTION NOTES
NO.	STATION	OFFSET	TYPE	TOP	INV.	RUN	SIZE	TYPE	L	INLET	OUTLET	
1A	319+82	53'Lt.			63.7							6"CMP Conn. from 6" Subdrain W. North
						1A-1	6"	CMP	~~76'~~ 83	63.7	48.3	Abut. N.B. Lane with Bends as Req'd.
1	319+23	94'Lt.	M.H.	53.3	47.5							Standard M.H.-See Std. Sheet "MH".
1B	319+23	50'Lt.			48.5							12"R.C.P. conn. from 8" Downspout Pier 59-S
						1B-1	12"	R.C.P.	42'	49.0	48.1	(Install 4' Stub-15"RCP Inv. 47.5 at M.H. ①
2A	319+82	84'Rt.			62.7							*See Note on Drainage Schedule II
						2A-2	6"	CMP	~~90'~~ 94.25	62.7	43.0	6"CMP Conn. from 6" Subdrain at W No.
												Abut. N.B. Lane with Bends as Req'd.
2	318+97	90'Rt.	M.H.	46.8	38.4							City of Wilmington - Std. Type M.H.
						2B-2	12"	R.C.P.	~~26'~~ 28	46.0	44.0	*See Note on Drainage Schedule II
2B	319+23	78'Rt.			46.0							12" R.C.P. conn. from 8" Downspout Pier 59-N
3A	318+30	50'Lt.			48.5							12"R.C.P. conn. from 8" Downspout at Pier 58-S
						3A-3	12"	R.C.P.	~~40'~~ [illegible]	48.5	47.5	*See Note on Drainage Schedule II
3	317+95	73'Lt.	M.H.	51.3±	37.4±							M.H. on Reloc. Norris Run 54"Ø Sewer
						3B-3	12"	R.C.P.	~~52'~~ 47.7	47.0	46.20	
3B	317+48	50'Lt.			47.0							12"R.C.P. conn. from 8" Downspout at Pier 57-S
4A	316+66	50'Lt.			42.0							12"R.C.P. conn. from 8" Downspout at Pier 56-S
						4A-4	12"	R.C.P.	~~42'~~ 43.5	42.0	40.0	
4	316+26	72'Lt.	M.H.	45.8±	30.2±							M.H. in 3rd St. on Reloc. Norris Run 54"Ø Sewer
5A	315+84	50'Lt.			36.5							8"CIP Conn. from 8" Downspout at Pier 55-S
						5A-5	8"	CIP	~~20'~~ 18	36.5	34.8	
5	315+66	58'Lt.	M.H.	37.0	34.0							Standard M.H.-See Std. Sheet "MH"
						5-7	18"	RCP	~~152'~~ 151.5	34.0	31.0	
7	314+11	66'Lt.	M.H.	35.7	21.8±							M.H. on Reloc. Norris Run 54"Ø Sewer
						7A-7	12"	R.C.P.	~~36'~~ 32	33.3	32.3	*See Note on Drainage Schedule II
7A	314+44	50'Lt.			33.3							12"R.C.P. Conn. from 8" Downspout at Pier 53-S
6A	315+14	50'Lt.			34.3							8"CIP Conn. from 8" Downspout at Pier 54-S
						6A-6	8"	CIP	~~14'~~ 8.17	34.3	33.3	
6	315+05	61'Lt.			33.5							Provide "Y" Conn. on 18" RCP for 8"CIP from Pier 54-S.
8A	318+30	72'Rt.			45.7							8"CIP Conn. from 8" Downspout at Pier 58-N
						8A-8	8"	CIP	~~12'~~ 6.0	45.7	44.7	
8	318+20	81'Rt.	M.H.	47.0	42.0							Standard M.H.- See Std. Sheet "MH"
						8-11	18"	RCP	~~268'~~ 272.2	42.0	31.0	
11	315+48	70'Rt.	M.H.	35.8	30.5							Standard M.H.- See Std. Sheet "MH"
9A	317+48	68'Rt.			41.8							8"CIP Conn. from 8" Downspout at Pier 57-N
						9A-9	8"	CIP	~~15'~~ 10.5	41.8	39.1	
9	317+37	78'Rt.			38.6							Provide "Y" Conn. on 18" RCP for 8" CIP from Pier 57-N.
10A	316+66	62'Rt.			39.2							8"CIP Conn. from 8" Downspout at Pier 56-N
						10A-10	8"	CIP	~~18'~~ 8.67	39.2	35.5	
10	316+52	74'Rt.			35.5							Provide "Y" Conn. on 18" RCP for 8" CIP from Pier 56-N
11A	315+84	58'Rt.										12"R.C.P. conn. from 8" Downspout at Pier 55-N
						11A-11	12"	R.C.P.	~~36'~~ 36.4	35.3	32.3	*See Note on Drainage Schedule II
11B	315+14	56'Rt.										12"R.C.P. conn. from 8" Downspout at Pier 54-N
						11B-11	12"	R.C.P.	~~36'~~ 31.7	33.3	32.3	*See Note on Drainage Schedule II
12	313+99	56'Rt.	M.H.	34.7	16.4±							M.H. on Reloc. Norris Run 54"Ø Sewer
						11-12	18"	RCP	~~150'~~ 150.34	30.5	28.5	
12A	314+44	52'Rt.										12"R.C.P. conn. from 8" Downspout at Pier 53-N
						12A-12	12"	R.C.P.	~~45'~~ 62.85	32.2	30.0	*See Note on Drainage Schedule II
1	319+23	94'Lt.	M.H.	53.3	47.5							Standard M.H.-See Std. Sheet "MH"
						1-1C	15"	RCP	~~76'~~ 77.0	47.5	45.0	
1C	318+47	112'Lt.	Exist. Norris Run Box Culv.		40.9±							Provide Opening in Exist. Norris Run Box Culvert for 15" RCP.
39	"B"4+57	63'Rt.	C.B.	40.7	37.0							Type "B" Catch Basin - Std. Sheet "M"
						39-39A	12"	R.C.P.	~~16'~~ 14	37.0	36.5	
39A	"B"4+40	69'Rt.	Exist. M.H.	41.7	32.82							Provide Opening in Exist M.H. for 12" R.C.P.

STRUCTURE				ELEV.		PIPE				INVERT		CONSTRUCTION NOTES
NO.	STATION	OFFSET	TYPE	TOP	INV.	RUN	SIZE	TYPE	L	INLET	OUTLET	
14A	313+74	49'Lt.	–	–	33.0							8"C.I.P. conn. from 8" Downspout Pier #52-S
						14A-14	8"	C.I.P.	~~12'~~ 9.5	33.0	32.5	
14	313+65	58'Lt.	M.H.	35.0	28.0							Standard Manhole - See Std. Sh. "MH"
						14-15	15"	R.C.P.	80'	28.0	25.5	
15	312+84	58'Lt.	M.H.	34.5	24.5							Standard Manhole - See Std. Sh. "MH"
						15-17	15"	R.C.P.	~~114'~~ 115	24.5	21.0	
15A	313+04	49'Lt.	–	–	30.5							12"R.C.P. conn. from 8" Downspout Pier #51-S
						15A-15	12"	R.C.P.	~~22'~~ 18.95	30.5	29.8	*See Note on Drainage Schedule II
15B	312+34	49'Lt.	–	–	27.0							12"R.C.P. conn. from 8" Downspout Pier #50-S
						15B-15	12"	R.C.P.	~~48'~~ 42	27.0	26.0	*See Note on Drainage Schedule II
16A	313+74	50'Rt.	–	–	32.3							8"C.I.P. conn. from 8" Downspout Pier #52-N
						16A-16	8"	C.I.P.	~~12'~~ 9.5	32.3	31.8	
16	313+65	59'Rt.	M.H.	33.8	26.0							Standard Manhole - See Std. Sh. "MH"
						16-17	15"	R.C.P.	~~78'~~ 78.8	26.0	23.0	
17	312+84	59'Rt.	M.H.	29.5	20.75							Standard Manhole - See Std. Sh. "MH"
17A	313+04	50'Rt.	–	–	28.8							8"C.I.P. conn. from 8" Downspout Pier #51-N
						17A-17	8"	C.I.P.	~~20'~~ 20.5	28.8	27.0	
17B	312+34	50'Rt.	–	–	23.0							12"R.C.P. conn. from 8" Downspout Pier #50-N
						17B-17	12"	R.C.P.	~~48'~~ 45.3	23.0	22.0	*See Note on Drainage Schedule II
18	312+95	105'Rt.	(Exist. M.H.)	22.39	13.28							Exist. City M.H. on Norris Run Sewer in Adams St.
						17-18	15"	R.C.P.	~~100'~~ 105.0	20.75	17.75	Provide opening in Exist. Norris Run Box Culv. M.H. for 15" R.C.P.
19	311+85	57'Lt.	C.B.	28.3	23.0							Type A-1 Catch Basin-Std. Sheet "Y"
						19-20	15"	R.C.P.	74'	23.0	20.8	
20	311+85	20'Rt.	INLET	24.5	20.8							Type A-1 Catch Basin-Std. Sheet "Y"
						20-22	15"	R.C.P.	~~40'~~ 40.25	20.8	19.6	
22	311+64	58'Rt.	M.H.	24.0	19.6							Standard M.H. - Std. Sheet "MH"
						22A-22	8"	C.I.P.	~~10'~~ 6.0	22.3	22.0	
22-A	311+65	49'Rt.	–	–	22.3							8"C.I.P. conn. from 8" Downspout Pier #49-N
22-B	311+85	141'Rt.	C.B.	18.0	14.80	Conn. 6-10" V.C.P. as req'd. to new C.B.						Demolish Exist. C.B.-Construct new type A-1 Catch Basin at new curb line-Std. Sh. "Y"
22-C	312+12	142'Rt.	C.B.	18.1	13.25	Conn. & Provide 6' new 10" V.C.P. to New C.B. as required.						Demolish Exist. C.B-Construct new type A-1 Catch Basin at new curb line-Std. Sh. "Y"
23	1+80 RAMP "C"	22'Lt.	C.B.	30.09	24.5							Type A-1 C.B.-State Std.- Sheet "Y"
						23-24	15"	R.C.P.	~~20'~~ 24	24.5	24.0	
24	311+10	45'Lt.	M.H.	29.7	23.25							Standard M.H. - Std. Sheet "MH"
						24-25	15"	R.C.P.	~~102'~~ 103.67	23.25	19.5	
24A	311+40	49'Lt.	–	–	26.0							12"R.C.P. conn. from 8" Downspout-Pier #49-S
						24A-24	12"	R.C.P.	~~28'~~ 32.0	26.0	25.4	*See Note on Drainage Schedule II
24B	310+80	49'Lt.	–	–	26.0							12"R.C.P. conn. from 8" Downspout-Pier #48-S
						24B-24	12"	R.C.P.	~~30'~~ 25.3	26.0	25.4	*See Note on Drainage Schedule II
25A	310+82	47'Rt.	–	–	22.3							12"R.C.P. conn. from 8" Downspout-Pier #48-N
						25A-25	12"	R.C.P.	~~30'~~ 25.35	22.3	21.0	*See Note on Drainage Schedule II
25	311+10	58'Rt.	M.H.	24.2	18.75							Standard M.H. - Std. Sheet "MH"
						22-25	15"	R.C.P.	~~50'~~ 51.35	19.6	19.0	
26	3+20 RAMP "C"	22'Lt.	C.B.	38.86	35.0							Type A-1 C.B - State Std.-Sheet "Y"
						26-27	8"	C.M.P.	~~46'~~ 50	35.0	20.0	Typ. Fill Downspout-Sh. "H" with 8" Bends as req'd.
27	309+68	30'Lt.	M.H.	25.0	19.0							Standard M.H. - Std. Sheet "MH"
27A	309+30	46'Lt.	–	–	21.3							12"R.C.P. conn. from 8" Downspout-Pier #46-S
						27A-27	12"	R.C.P.	~~38'~~ 34.7	21.3	20.5	*See Note on Drainage Schedule II
27B	309+62	73'Lt.	–	–	32.5							6"C.M.P. conn. from Subdrain at No. Abut. Ramp "C"
						27B-27	6"	C.M.P.	~~44'~~ 43	32.5	21.0	with 2-6" Bends as Required.
27C	310+05	45'Lt.	–	–	24.3							12"R.C.P. conn. from 8" Downspout-Pier #47-S
						27C-27	12"	R.C.P.	~~38'~~ 39	24.3	21.3	*See Note on Drainage Schedule II
28	309+68	59'Rt.	M.H.	22.2	15.7							Standard M.H. - Std. Sheet "MH"
						27-28	15"	R.C.P.	~~84'~~ 85	19.0	18.0	
						25-28	18"	R.C.P.	140'	18.75	16.0	+ Placed - 141.62
28A	309+30	47'Rt.	–	–	19.3							12"R.C.P. conn. from 8" Downspout-Pier #46-N
						28A-28	12"	R.C.P.	~~36'~~ 31.50	19.3	18.6	*See Note on Drainage Schedule II
28B	310+05	48'Rt.	–	–	20.8							12"R.C.P. conn. from 8" Downspout-Pier #47-N
						28B-28	12"	R.C.P.	36'	20.8	18.6	*See Note on Drainage Schedule II
29	309+00	179'Rt.	Exist. M.H.	16.45	9.66							Exist. City M.H. on Norris Run Sewer in Adams St.
						28-29	18"	R.C.P.	~~135'~~ 134.0	15.7	12.3	Provide opening for 18" pipe in Ex. Norris Run M.H.
Line "A"	2+45 RAMP "C"	25' Rt. 50' Lt.	Conc. Encasement			Flow to be maintained in Exist. 12" Comb. Sewer in Pleasant St. Strengthen 75' of Exist. Pipe with 3" Conc. Encasement (See typ. sect. - Type "A")						
Line "B"	5+70 RAMP "C"	35' Rt. 60' Lt.	Conc. Encasement			Flow to be maintained in Exist. 10" Comb. Sewer in Read St. Strengthen 95' of Exist. Pipe with 3" Conc. Encasement (See typ. sect. - Type "A")						
Line "C"	8+02 RAMP "C"	50' Rt. 40' Lt.	Conc. Encasement			Flow to be Maintained in Exist. 12" Comb. Sewer in Chestnut Sewer in Chestnut St. Strengthen 90' of Exist. Pipe from MH. C-1 to Ramp "B" Toe of Slope with 3" Conc. Encasement. (See typical Section Type "A").						
C-1	305+07	59'Lt.	M.H.	40.5	30.18							City of Wilmington - Std. Type Sewer M.H.
						C-1 to C-2	12"	V.C.P.	~~26'~~ 27.25	30.18	29.80	Exist. Sewage Flow to be Maintained.
C-2	304+79	48'Lt.	M.H.	39.0	29.80							City of Wilmington - Std. Type Sewer M.H.
						C-2 to C-3	12"	VCP	~~38'~~ 33.42	29.80	29.30	Exist. Sewage Flow to be Maintained.
C-3	304+96	12'Lt.	M.H.	37.3	29.30							City of Wilmington - Std. Type Sewer M.H.
30-A	8+40 RAMP "C"	17'Lt.			38.5							
						30A to C2	6"	CMP	~~34'~~ 27.25	38.5	34.0	6"CMP Conn. from Subdrain at Ramp "B" Abut.
30	5+78 RAMP "B"	18'Lt.			37.3							12"RCP Conn. from 8" Downspout at Pier 1-B
						30-31	12"	R.C.P.	~~83'~~ 84	37.3	35.6	*See Note on Drainage Schedule II
31	304+26	15'Lt.	M.H.	38.5	33.1							Standard M.H.- Std. Sheet "MH"
						31A-31	8"	CIP	~~12'~~ 6.83	36.2	35.7	
31A	304+39	19'Lt.			36.2							8"CIP Conn. from 8" Downspout at Pier 39-S
32	304+28	57'Rt.	M.H.	37.0	32.0							Standard M.H.- Std. Sheet "MH"
						31-32	15"	RCP	~~68'~~ 66	33.1	32.1	
32A	304+39	50'Rt.			34.7							8"CIP Conn. from 8" Downspout at Pier 39-N
						32A-32	8"	CIP	~~10'~~ 5.5	34.7	34.3	

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	23	215

2-1

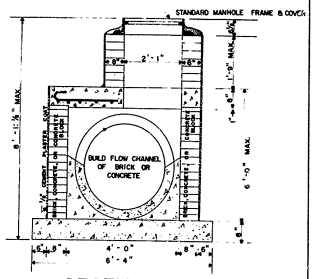
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

DRAINAGE SCHEDULE III

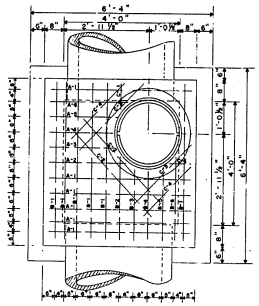
COUNTY	CONTRACT	A.P.D. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	24	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

TYPE "A" MANHOLE



SECTION

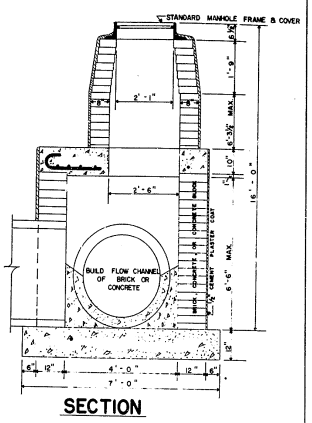


BILL OF MATERIALS

REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	6	5/8"ϕ	5'-8"	A-1	4'-10"
	6	5/8"ϕ	5'-8"	B-1	4'-10"
	1	5/8"ϕ	3'-2"	A-2	2'-9"
	1	5/8"ϕ	2'-9"	A-3	2'-4"
	1	5/8"ϕ	2'-8"	A-4	2'-3"
	1	5/8"ϕ	2'-9"	A-5	2'-4"
	1	5/8"ϕ	3'-2"	A-6	2'-9"
	1	5/8"ϕ	3'-2"	B-2	2'-9"
	1	5/8"ϕ	2'-9"	B-3	2'-4"
	1	5/8"ϕ	2'-8"	B-4	2'-3"
	1	5/8"ϕ	2'-9"	B-5	2'-4"
	1	5/8"ϕ	3'-2"	B-6	2'-9"
	STRAIGHT BARS				
	2	5/8"ϕ	0'-10"	C-1	0'-10"
	2	5/8"ϕ	3'-10"	C-2	3'-10"
	2	5/8"ϕ	3'-0"	C-3	3'-0"
	2	5/8"ϕ	2'-4"	C-4	2'-4"

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

TYPE "B" MANHOLE



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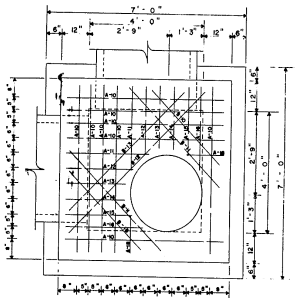


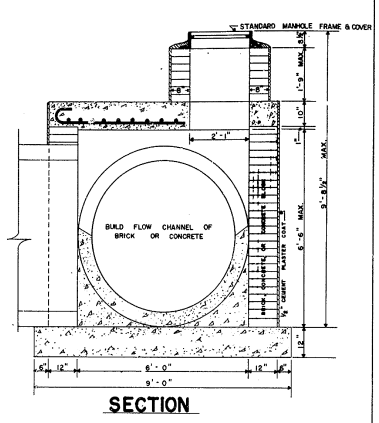
PLAN

BILL OF MATERIALS

REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	10	3/4"ϕ	6'-6"	A-10	5'-6"
	2	3/4"ϕ	3'-4"	A-11	2'-10"
	2	3/4"ϕ	2'-10"	A-12	2'-4"
	2	3/4"ϕ	2'-7"	A-13	2'-1"
	2	3/4"ϕ	2'-7"	A-14	2'-1"
	2	3/4"ϕ	2'-10"	A-15	2'-4"
	2	3/4"ϕ	3'-4"	A-16	2'-10"
	STRAIGHT BARS				
	2	3/4"ϕ	1'-4"	A-18	
	2	3/4"ϕ	3'-6"	B-10	
	2	3/4"ϕ	4'-6"	B-11	
	1	3/4"ϕ	6'-9"	B-12	
	1	3/4"ϕ	5'-9"	B-13	

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

TYPE "C" MANHOLE



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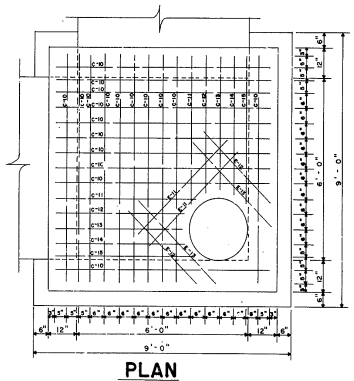


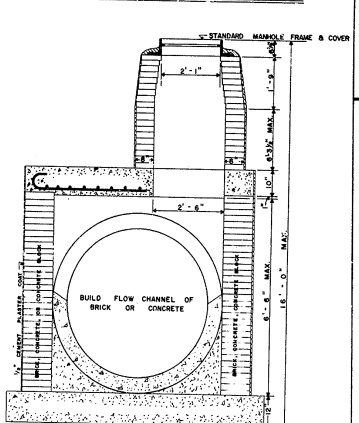
PLAN

BILL OF MATERIALS

REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	20	3/4"ϕ	8'-6"	C-10	7'-6"
	2	3/4"ϕ	5'-6"	C-11	5'-0"
	2	3/4"ϕ	5'-1"	C-12	4'-7"
	2	3/4"ϕ	5'-0"	C-13	4'-6"
	2	3/4"ϕ	5'-1"	C-14	4'-7"
	2	3/4"ϕ	5'-6"	C-15	5'-0"
	STRAIGHT BARS				
	2	1/4"ϕ	4'-6"	E-11	
	2	1/4"ϕ	3'-5"	E-12	
	2	3/4"ϕ	3'-10"	E-13	

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

TYPE "D" MANHOLE



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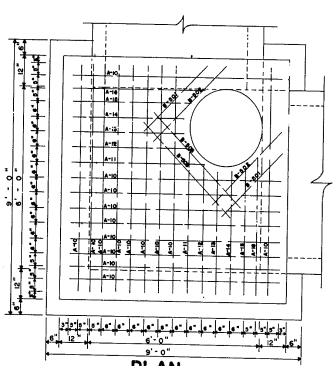


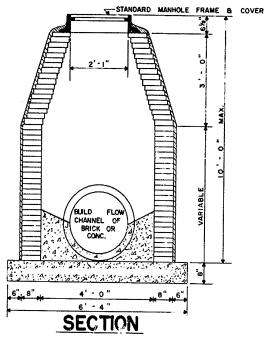
PLAN

BILL OF MATERIALS

REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	18	3/4"ϕ	8'-6"	A-10	7'-6"
	2	3/4"ϕ	5'-4"	A-11	4'-10"
	2	3/4"ϕ	4'-10"	A-12	4'-4"
	2	3/4"ϕ	4'-7"	A-13	4'-1"
	2	3/4"ϕ	4'-7"	A-14	4'-1"
	2	3/4"ϕ	4'-10"	A-15	4'-4"
	2	3/4"ϕ	5'-4"	A-16	4'-10"
	STRAIGHT BARS				
	2	3/4"ϕ	3'-0"	B-501	3'-0"
	2	3/4"ϕ	3'-6"	B-502	3'-6"
	2	3/4"ϕ	4'-6"	B-503	4'-6"

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

STANDARD MANHOLE



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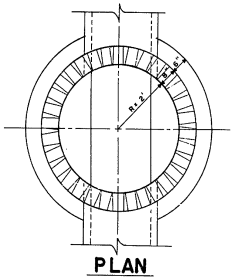


PLAN

NOTE: All scales ½" = 1'-0"

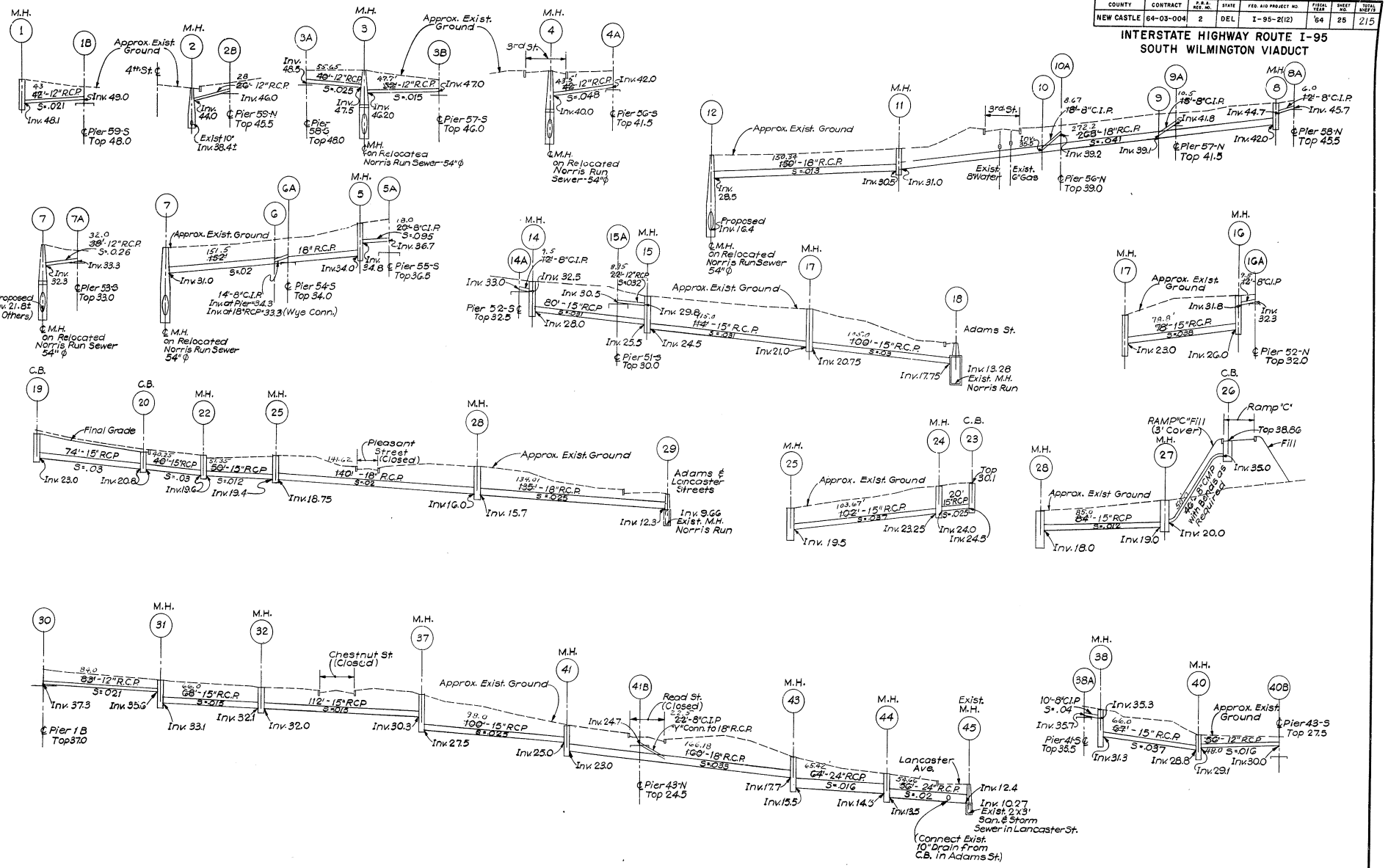
DRAINAGE DETAIL SHEET "MH"

APPROVED _____ DATE _____ CHIEF ENGINEER

BEARINGS
TIE POINTS
BENCH MARKS
EARTHWORK
DRAINAGE

COUNTY	CONTRACT	P.E.N. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'94	25	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



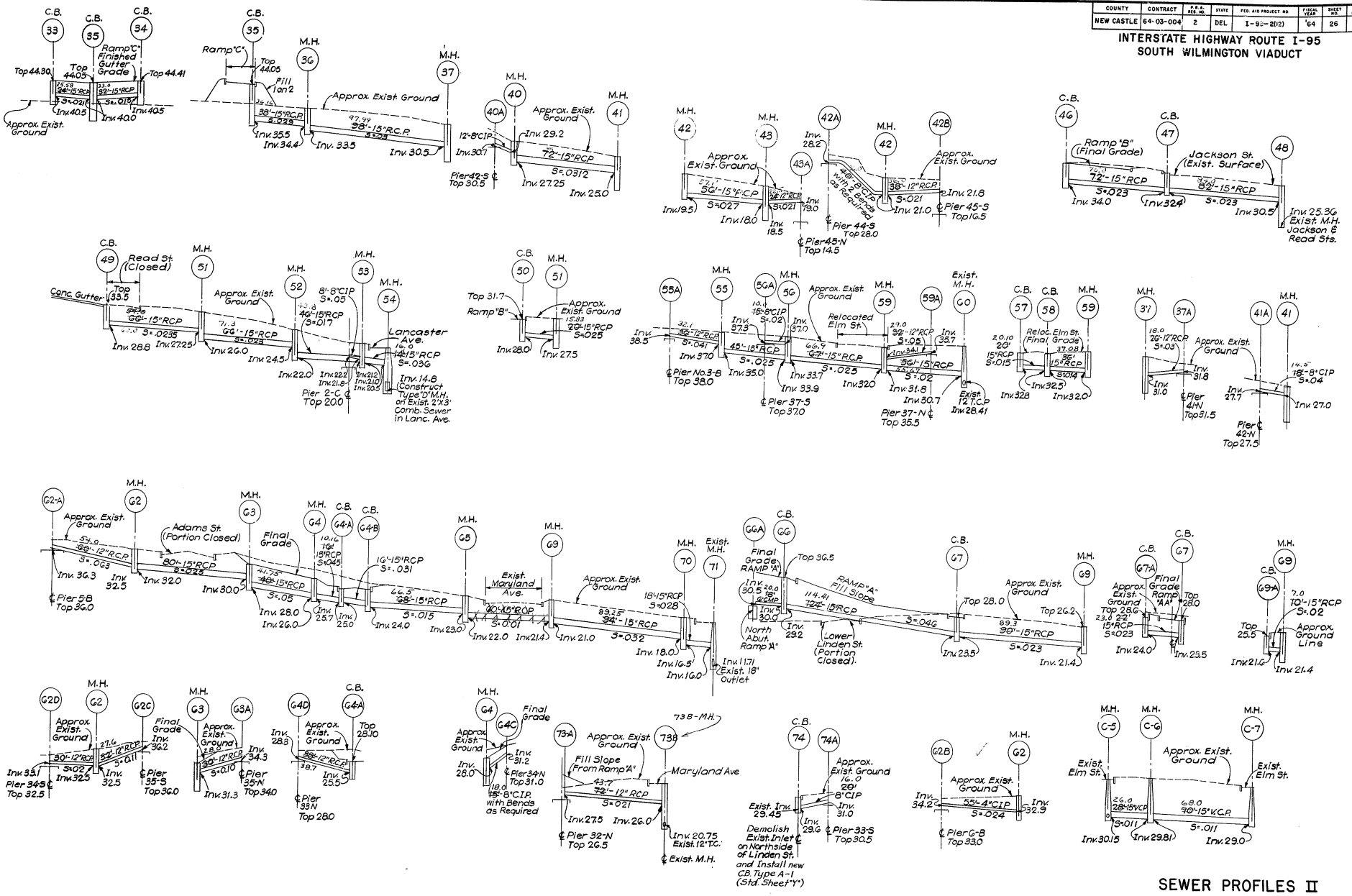
SEWER PROFILES I

SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

As Built Plans in Red - 1-97 MEL

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	26	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



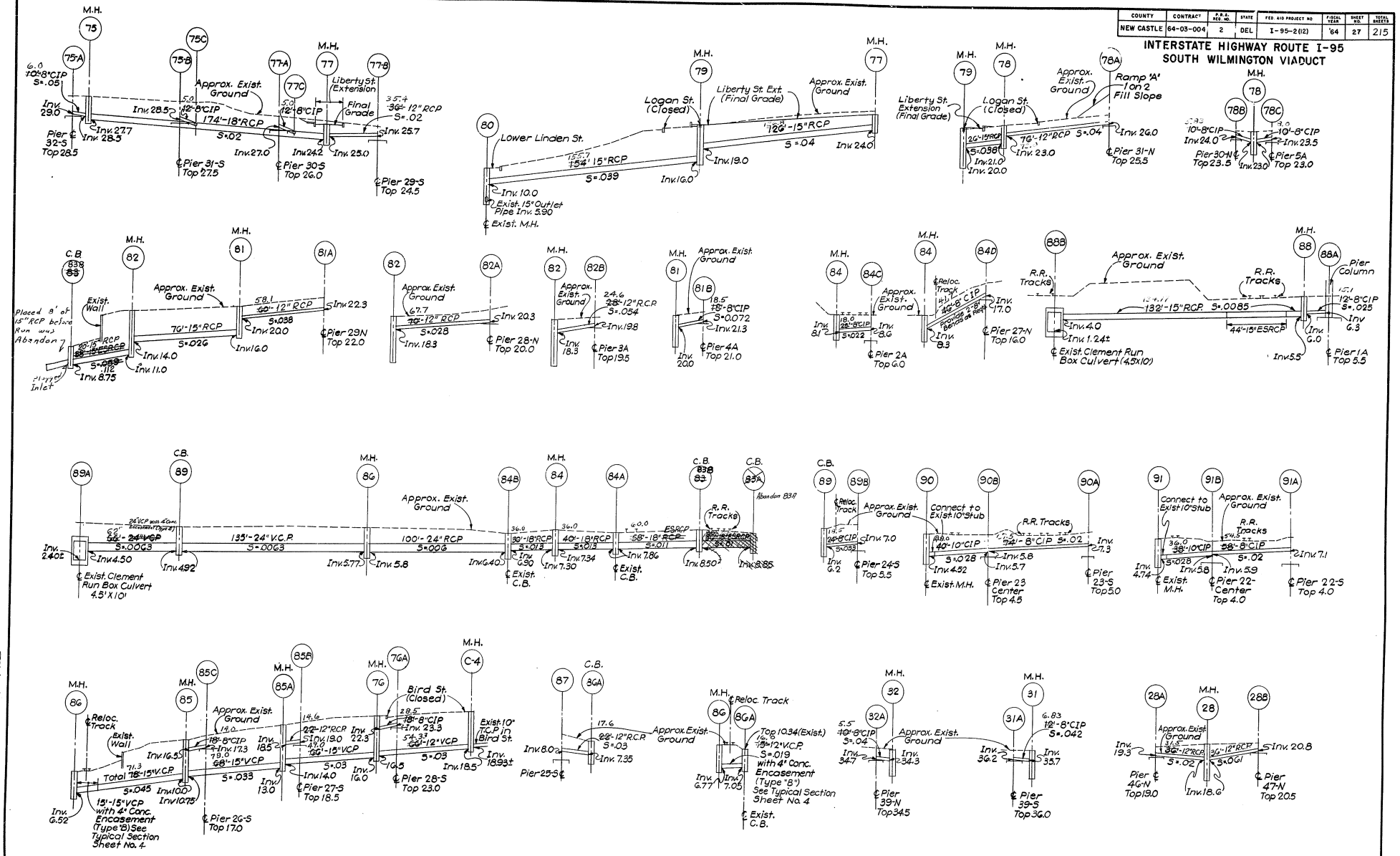
SEWER PROFILES II

SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

As Built Plans in Red - 1-9-67 MRC

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	27	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



SEWER PROFILES III

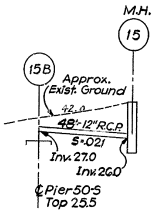
SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

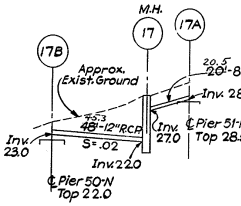
As Built Plans in Red - 1-9-67 MEC

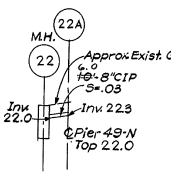
Revised 8-5-69, 8-6-69, 8-8-69, 8-13-69, 8-15-69, 8-27-69, 9-2-69

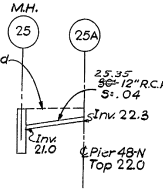
COUNTY	CONTRACT	P. R. A. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	28	215

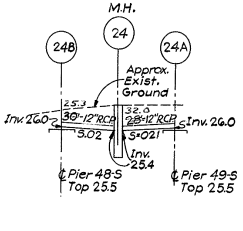
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

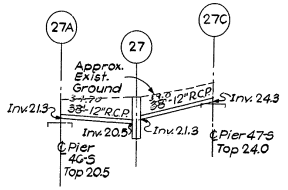


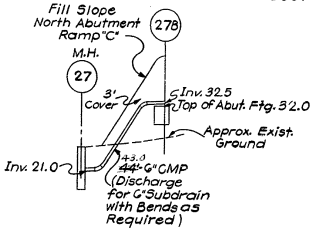


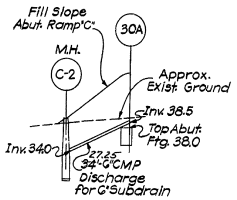


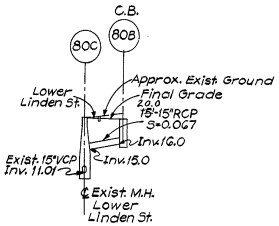


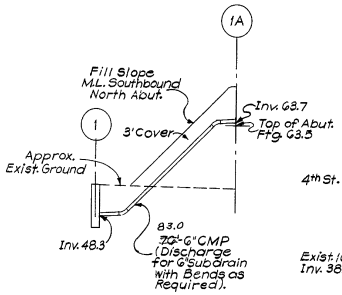


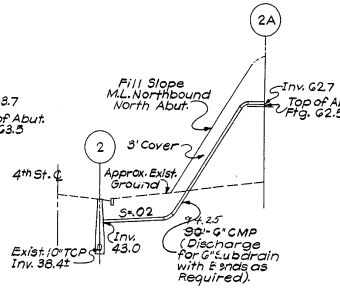


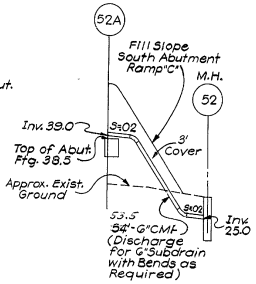


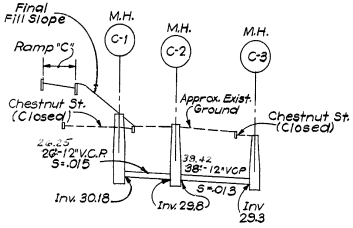


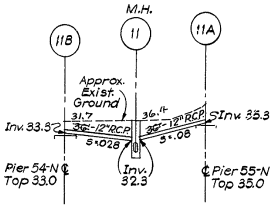


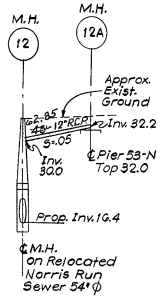


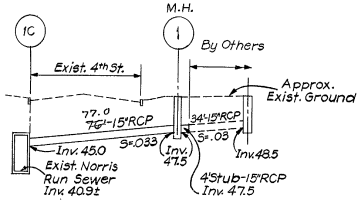


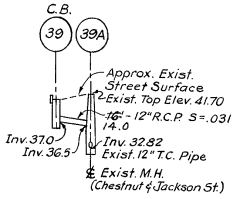












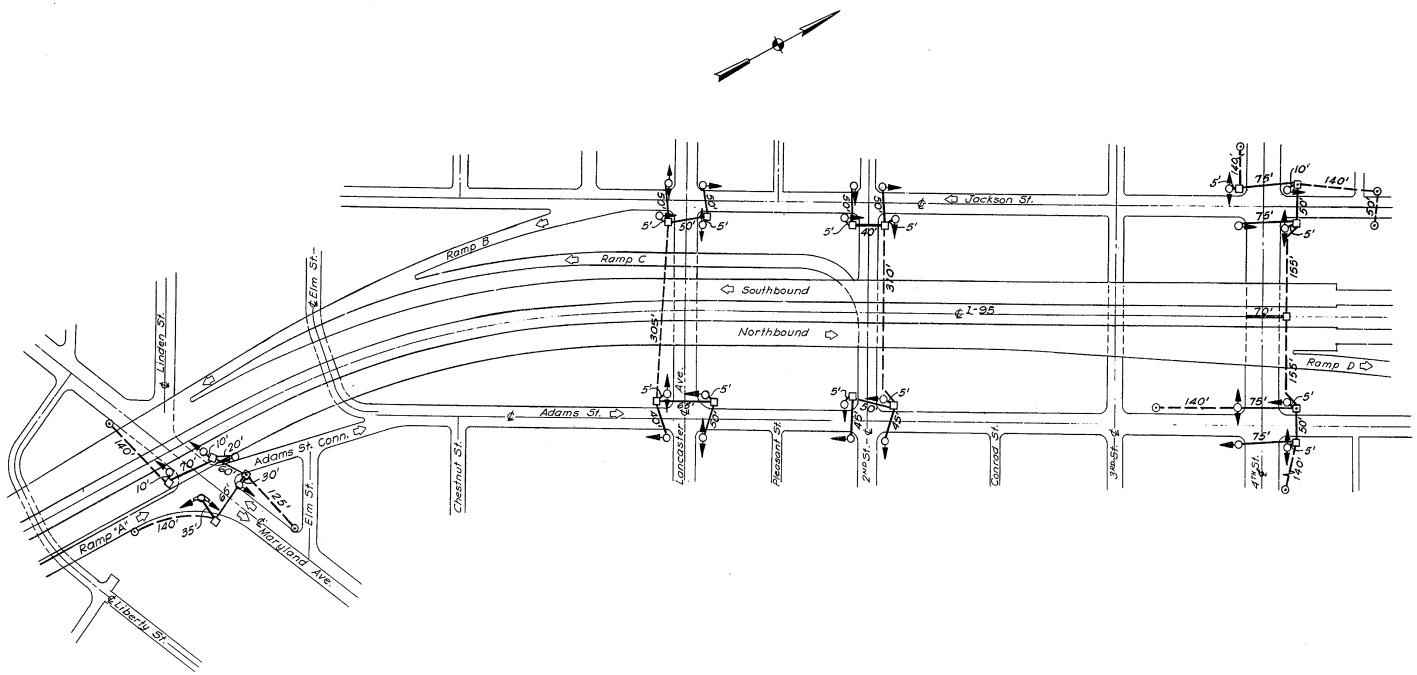
SEWER PROFILES IV

SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

As Built Plans in Red - 1-9-67 HBC

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	29	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



See Sheets 29A & 29B

LEGEND
- ○ Pedestal Base
- ⊙ Aluminum Pole Base
- ● Steel Pole Base
- □ Junction Well
- ⊡ M Cabinet Base
- —— 2" Conduit
- - - - 1 1/2" Conduit
- ▭▭ 4" Non-Metallic Conduit
- O► Direction Signal Faces

Note:
Locations of Bases, Wells & Conduit as shown hereon are Approximate. They will be Accurately Established in the Field by the Engineer.
Lengths of Conduit, as shown on this Plan, are approximate.

See Standard Sheet "T"

TRAFFIC SIGNAL LAYOUT
SCALE: 1 IN. = 100 FT.

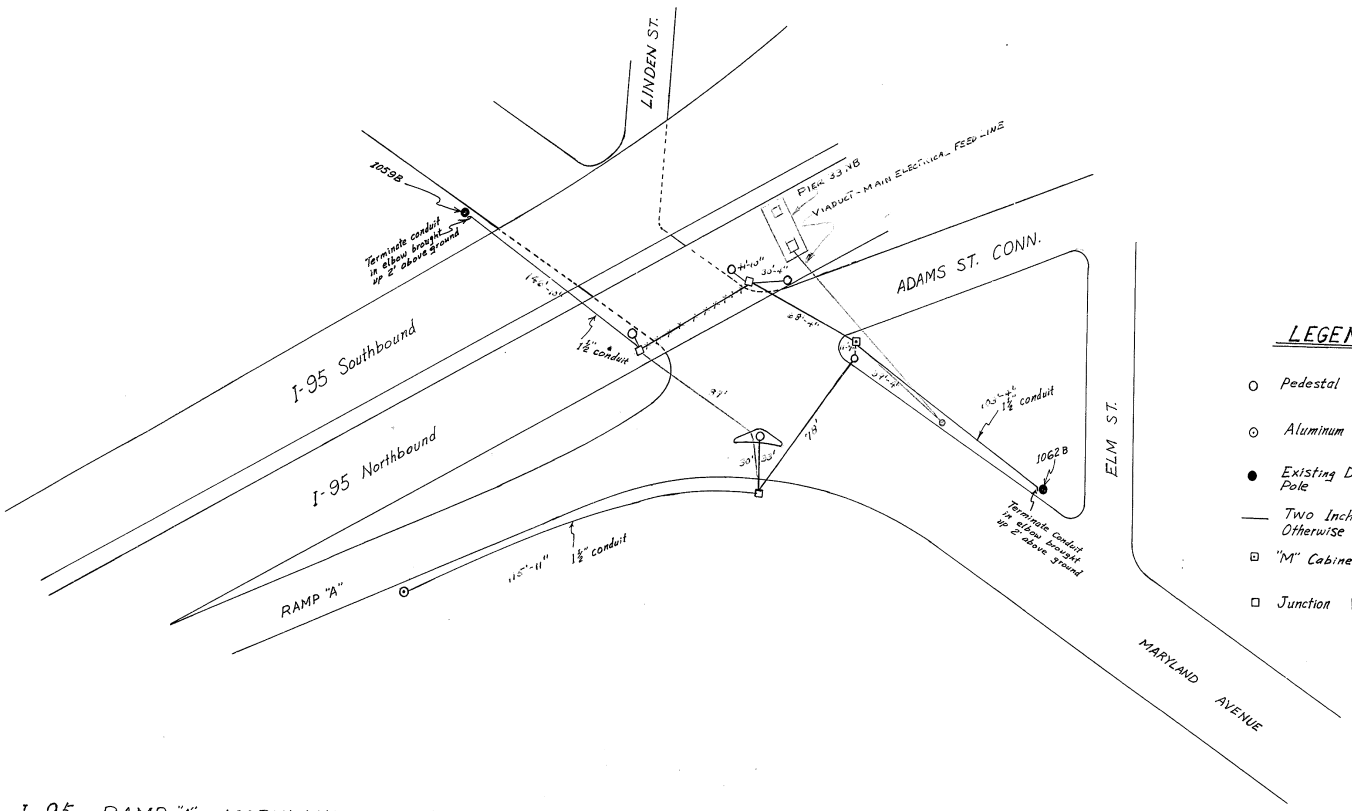
As Built Plans in Red - 1-9-67 NBC

D C B A

COUNTY	CONTRACT	P. R. A. REG. NO.	STATE	FED. AID PRO. NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	29A	215

I-95 REVISED SIGAL LAYOUT

As Built Plans in Red - 1-9-67 HRC



LEGEND

- Pedestal Base
- Aluminum Pole Base
- Existing Delaware Power & Light Pole
- Two Inch Conduit Unless Otherwise Specified
- "M" Cabinet Base
- Junction Well

I-95, RAMP "A", MARYLAND AVE. & ADAMS ST.

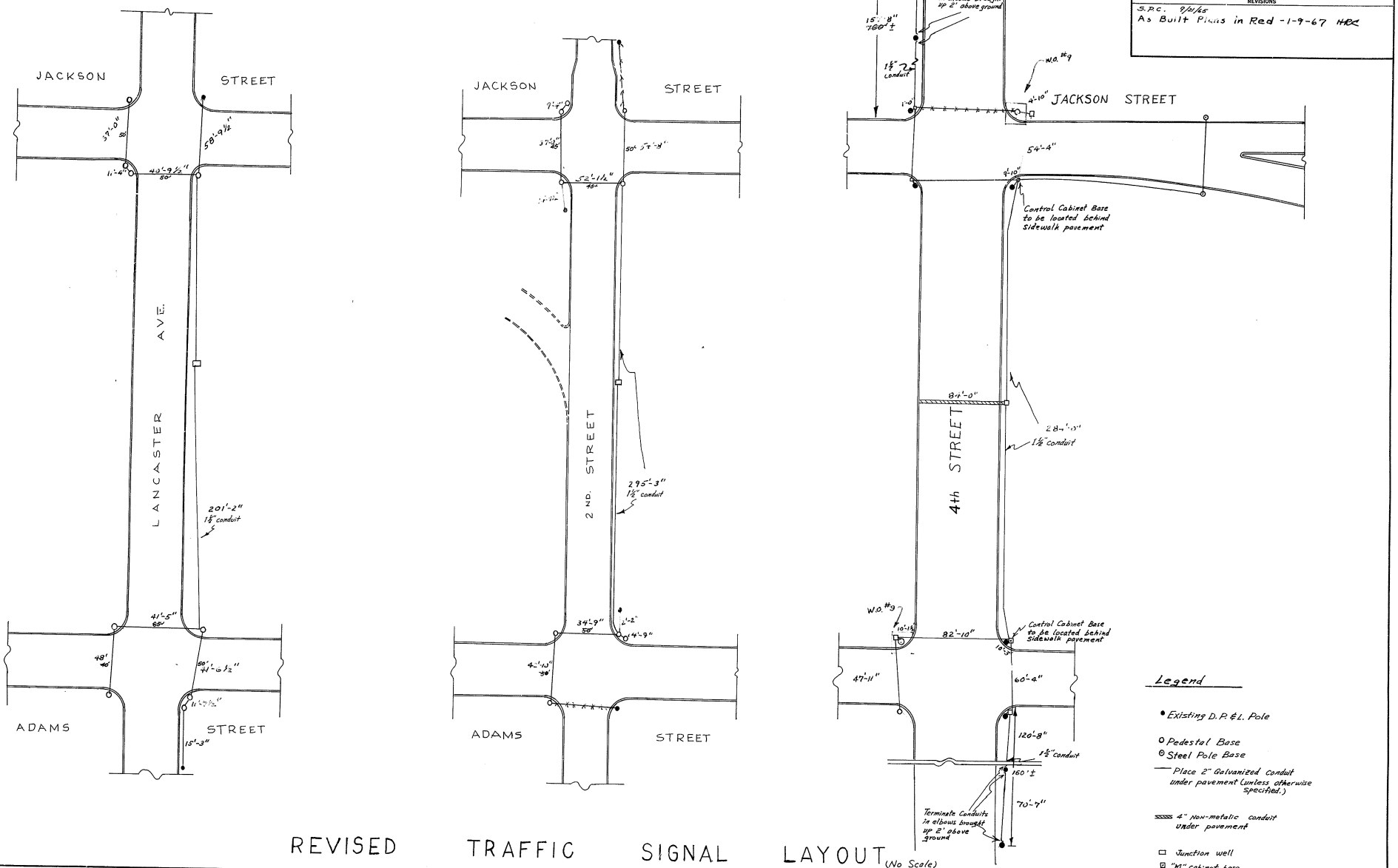
REVISED SIGNAL LAYOUT (NO SCALE)

COUNTY	CONTRACT	P. R. A. REQ. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
New Castle	64-03-004	2	DEL.	I-35-2(12)	29B	215

PREL. TRACING _____ DESIGN _____ CHKD. _____

REVISIONS

S.P.C. 9/21/65
As Built Plans in Red - 1-9-67 HRK



REVISED TRAFFIC SIGNAL LAYOUT (No Scale)

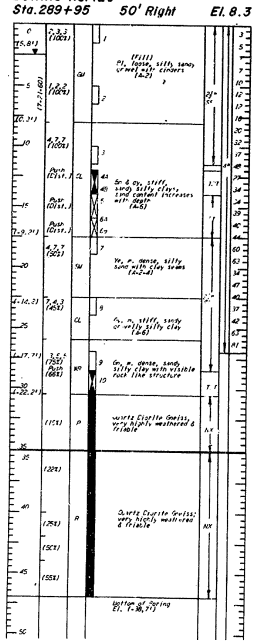
Legend

- ● Existing D. P. & L. Pole
- ○ Pedestal Base
- ⊙ Steel Pole Base
- —— Place 2" Galvanized conduit under pavement (unless otherwise specified.)
- ▨ 4" Non-metalic conduit under pavement
- □ Junction well
- ⊡ "M" cabinet base

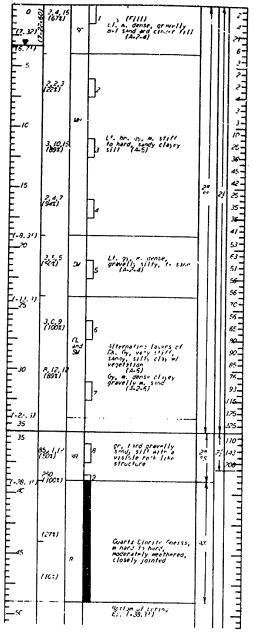
COUNTY	CONTRACT	F.A.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	30	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

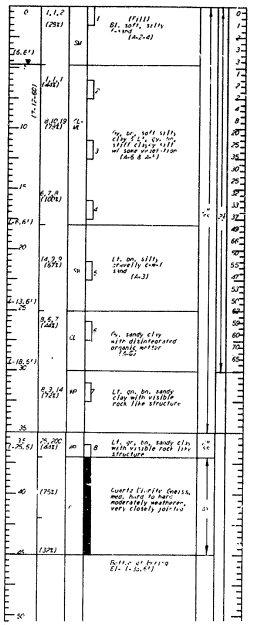
BORING NO. 126
Sta. 289+95 50' Right El. 8.3



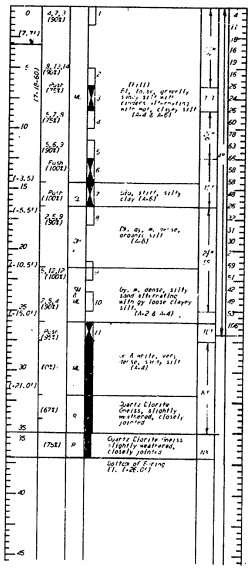
BORING NO. 127
Sta. 291+00 40' Left El. 10.7



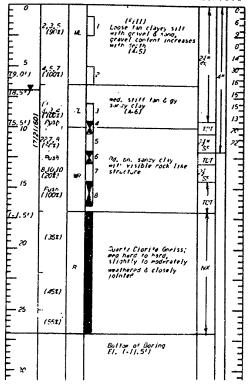
BORING NO. 128
Sta. 291+70 68' Right El. 11.4



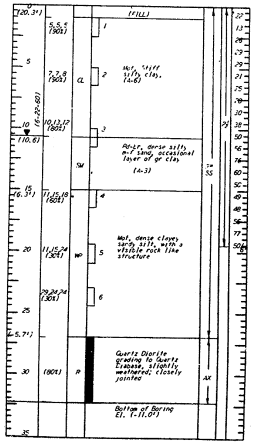
BORING NO. 129
Sta. 292+88 78' Right El. 11.0



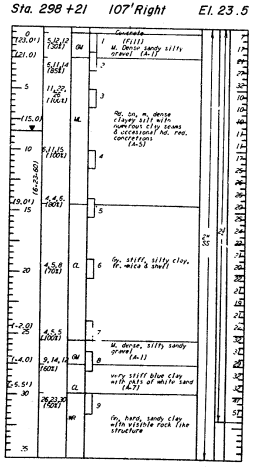
BORING NO. 130
Sta. 294+27 6' Left El. 15.5



BORING NO. 131
Sta. 296+20 106' Right



BORING NO. 132
Sta. 298+21 107' Right El. 23.5



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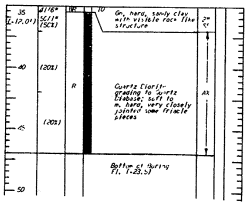
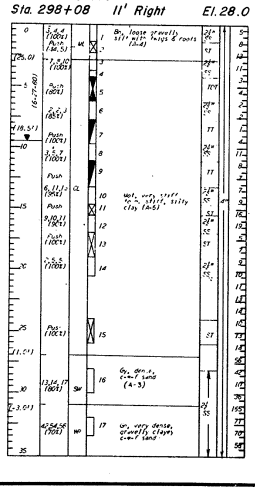
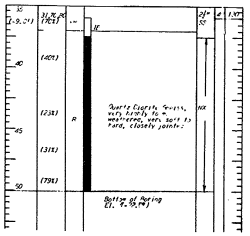


BORING NO. 133
Sta. 298+08 11' Right El. 28.0

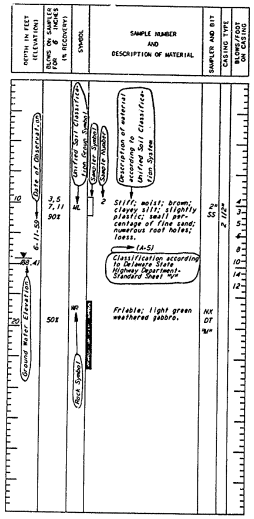


BORING NO. 133 *(Cont'd)*



TYPICAL BORING LOG SYMBOLS AND NOTES

BORING LOG



DEFINITION OF SYMBOLS AND ABBREVIATIONS

A	Auger Sample
ang	angular
AX	AX size
bl	black
blu	blue
bn	brown
B	Boulder
BX	BX size
c	coarse
DDT	Denison Double Tube Soil sample
DT	Double Tube Core Barrel Sample
dk	dark
f	fine
frags	fragments
gn	green
gy	gray
lt	light
"M"	Series "M" Core Barrel
m	medium
max	maximum
mot	mottled
NX	NX size Core or Casing
org	organic
pkts	pockets
PL	Plastic Limit
rd	red
rnd	round
R	Rock
RP	Retractable Plug Sample
S	Shovel Sample
SS	Split Spoon Sample
ST	Shelby Tube Sample
Subang	Subangular
Subrnd	Subrounded
TDT	TAMS Double Tube Soil Sample
TPP	TAMS Piston Plug Sample
TSP	TAMS Stationary Piston Sample
TT	TAMS Thinwall Sample
ye	yellow
wh	white
WOH	Weight of Hammer
WOC	Weight of Casing
WOR	Weight of Rod
WR	Weathered Rock
RS	Visible Rock Like Structure
Dist	Disturbed Sample

GENERAL NOTES ON SUBSURFACE EXPLORATION

1. For locations of borings, see Plan Sheets. Borings are located with reference to the ℄ of Route F-11-2 unless otherwise indicated.

2. The information furnished or referred to on the Boring Sheets is not guaranteed as to accuracy or completeness and is not necessarily indicative of the material that will be encountered during construction. It is to be expressly understood that the State will not be responsible for any interpretation or conclusion drawn therefrom by the contractor.

3. Water levels recorded during subsurface exploration seldom correspond to the natural level of free ground water, except in extensive and thick deposits of sand and gravels which are sufficiently pervious to permit rapid stabilization of subsurface water level in the exploratory hole. Absence of subsurface water level in the log of any exploration is not necessarily to be construed as meaning ground water will not be encountered in the excavation at that level.

4. Borings No. 126 to 146 were performed during June and July 1960 under supervision of Tippetts-Abbett-McCarthy-Stratton, Engineers and Architects.

   Driving Energy:

2" Split Spoon Sampler	4200 in-lbs.
2½" Split Spoon Sampler	5400 in-lbs. (except 5056 in-lbs. for Boring No. 133, and 5025 in-lbs. for Borings No. 137, 138, 141, and 142)
2½" Casing	7200 in-lbs. (except 5400 in-lbs. for Boring No. 139, 7360 in-lbs. for Boring No. 135, and 9000 in-lbs for Borings No. 131 and 144)
4" Casing	7200 in-lbs. (except 7648 in-lbs. for Boring No. 133)

5. Borings No. 199 to 226 were performed during August and September 1962 under supervision of Tippetts-Abbett-McCarthy-Stratton, Engineers and Architects.

   Driving Energy:

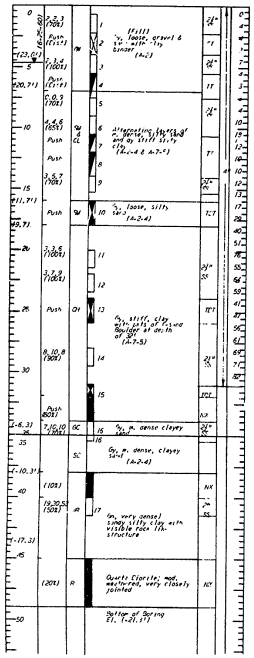
2" Split Spoon Sampler	4200 in-lbs.
3" Split Spoon Sampler	5100 in-lbs.
2½" Casing	5400 in-lbs. (except 5100 in-lbs. for Borings No. 202, 214, and 216)
4" Casing	5400 in-lbs.

BORING LOGS 126 TO 133

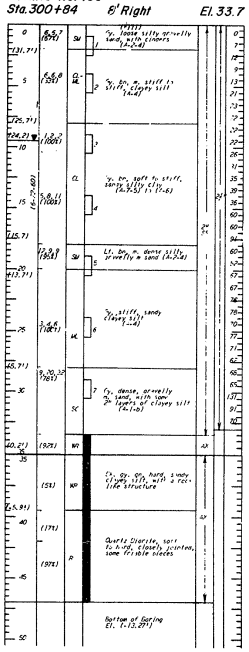
COUNTY	CONTRACT	P.D.A. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	31	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

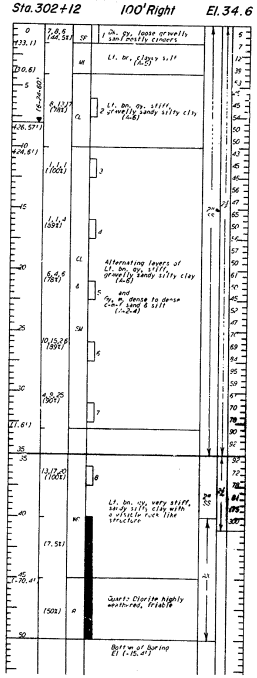
BORING NO. 134
Sta. 299+84 106' Right El. 27.7



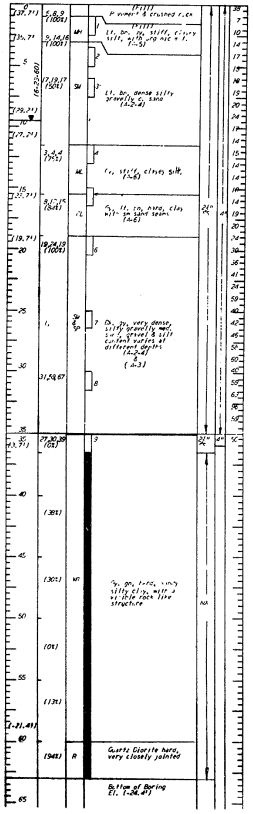
BORING NO. 135
Sta. 300+84 8' Right El. 33.7



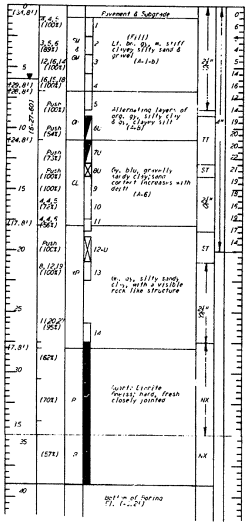
BORING NO. 136
Sta. 302+12 100' Right El. 34.6



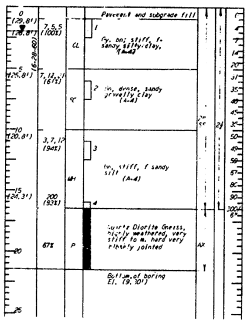
BORING NO. 137
Sta. 302+56 ℄ El. 38.7



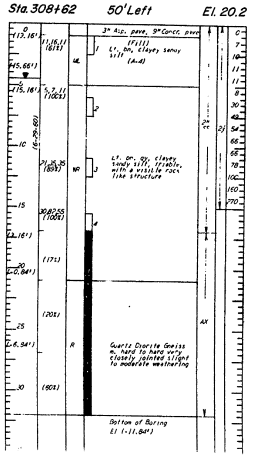
BORING NO. 138
Sta. 304+58 82' Right El. 35.8



BORING NO. 139
Sta. 307+07 34' Left El. 30.8



BORING NO. 140
Sta. 308+62 50' Left El. 20.2



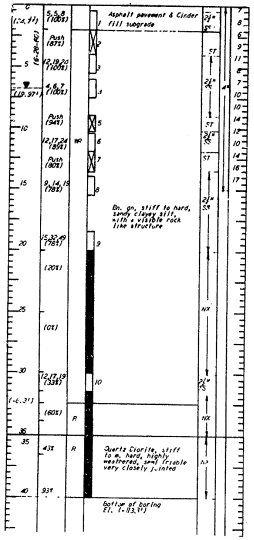
For Symbols and General Notes see Sheet No.

BORING LOGS
134 TO 140

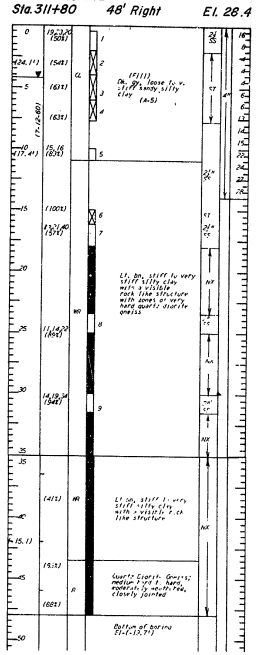
COUNTY	CONTRACT	P.R.E. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	32	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

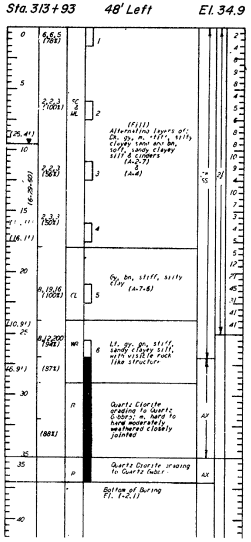
BORING NO. 141
Sta. 310+36 50' Left El. 26.7



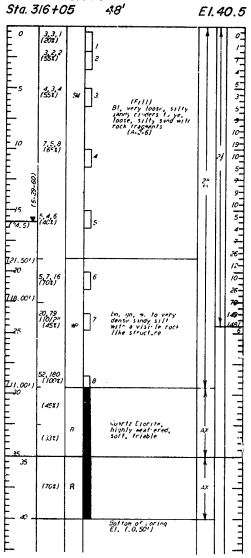
BORING NO. 142
Sta. 311+80 48' Right El. 28.4



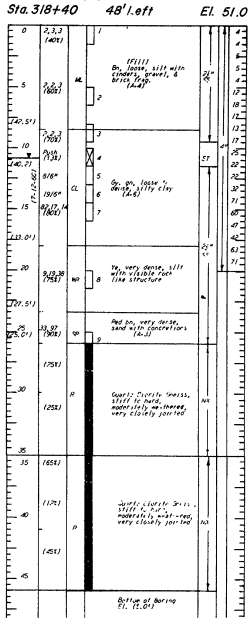
BORING NO. 143
Sta. 313+93 48' Left El. 34.9



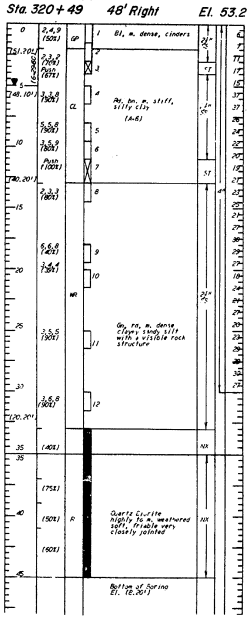
BORING NO. 144
Sta. 316+05 48' El. 40.5



BORING NO. 145
Sta. 318+40 48' Left El. 51.0



BORING NO. 146
Sta. 320+49 48' Right El. 53.2



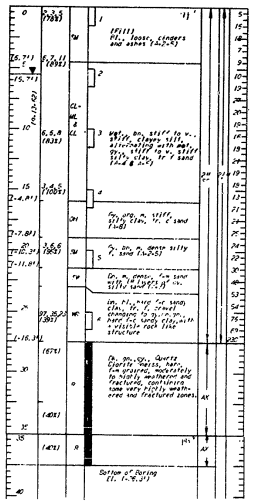
For Symbols and General Notes see Sheet No.

BORING LOGS
141 TO 146

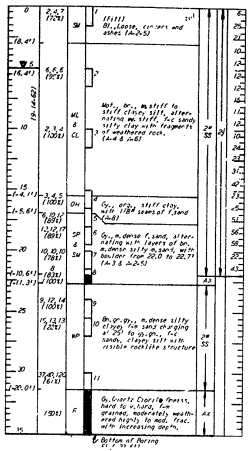
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	33	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

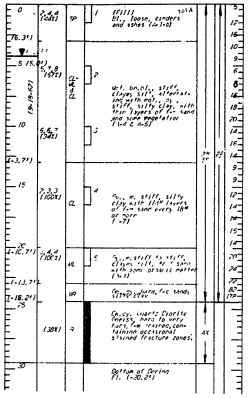
BORING NO. 199
Sta. 292+30 74' Left El. 11.2



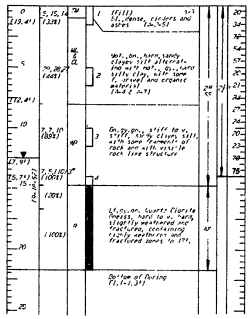
BORING NO. 201
Sta. 293+45 17' Left El. 11.4



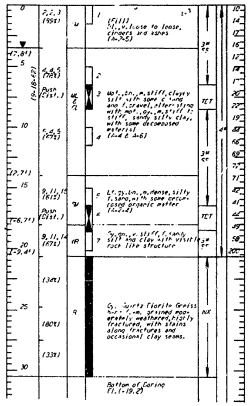
BORING NO. 201 A
Sta. 293+42 43' Right El. 9.3



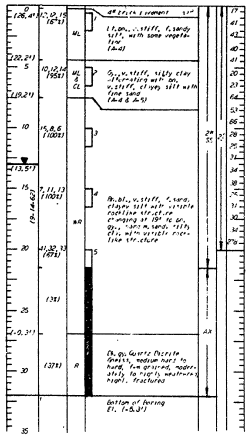
BORING NO. 202
Sta. 294+49 61' Left El. 20.4



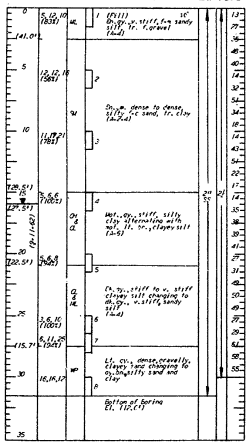
BORING NO. 203
Sta. 294+53 58' Right El. 11.3



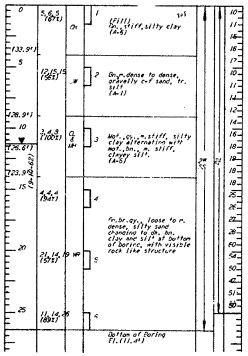
BORING NO. 204
Sta. 296+21 62' Left El. 26.7



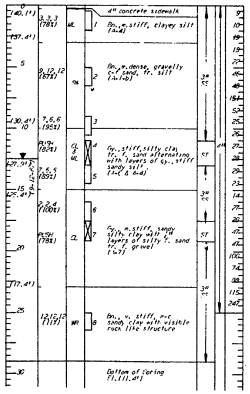
BORING NO. 207
Sta. 304+47 70' Left El. 43.5



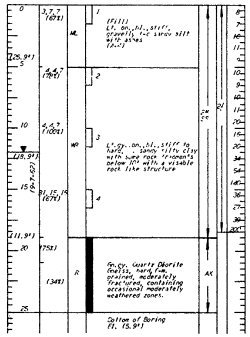
BORING NO. 208
Sta. 305+64 47' Left El. 37.9



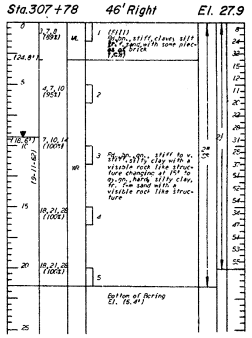
BORING NO. 209
Sta. 305+44 130' Left El. 40.4



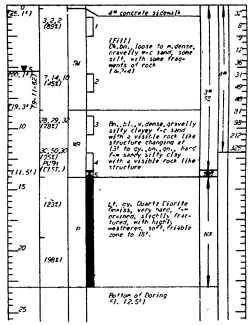
BORING NO. 211
Sta. 307+78 48' Left El. 30.9



BORING NO. 212
Sta. 307+78 46' Right El. 27.9



BORING NO. 213
Sta. 308+48 88' Left El. 25.5



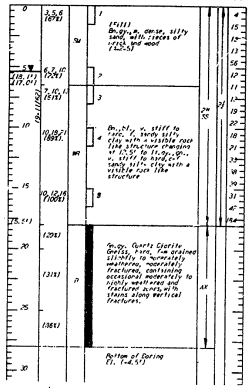
For Symbols and General Notes see Sheet No.

BORING LOGS
199 TO 213

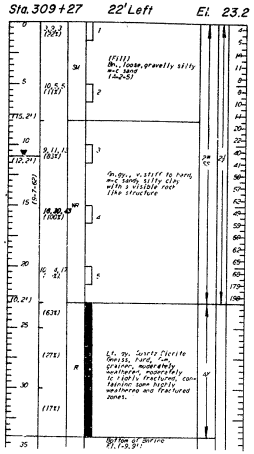
COUNTY	CONTRACT	P.M.D. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	34	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

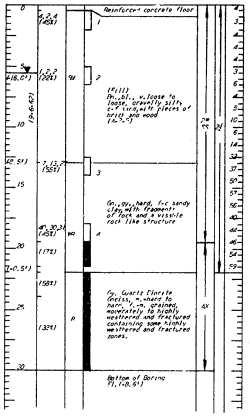
BORING NO. 214
Sta. 308+48 18' Left El. 23.5



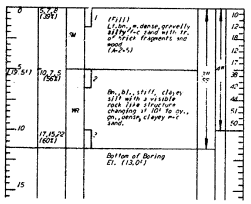
BORING NO. 215
Sta. 309+27 22' Left El. 23.2



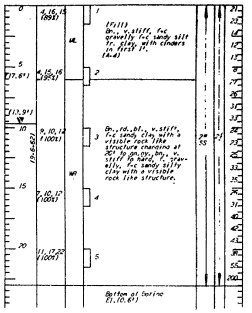
BORING NO. 216
Sta. 309+28



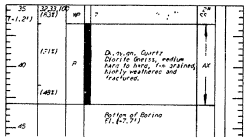
BORING NO. 217
Sta. 309+28 67' Left El. 24.5



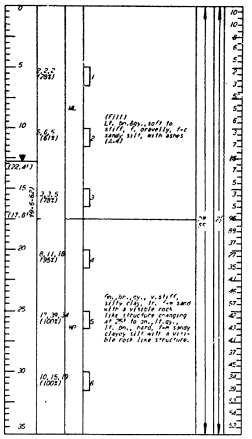
BORING NO. 218
Sta. 310+02 47' Right El. 23.6



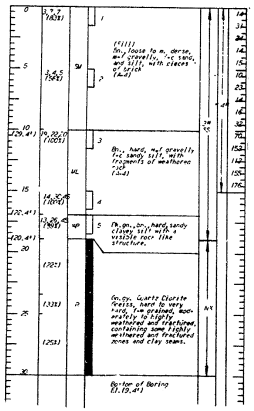
BORING NO. 219 (Cont'd)



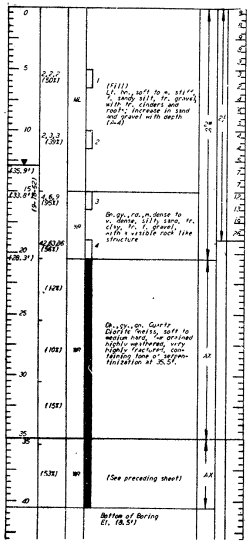
BORING NO. 219
Sta. 315+15 40' Right El. 35.3



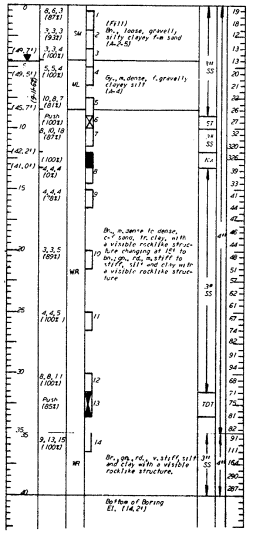
BORING NO. 221
Sta. 316+65 55' Right El. 39.4



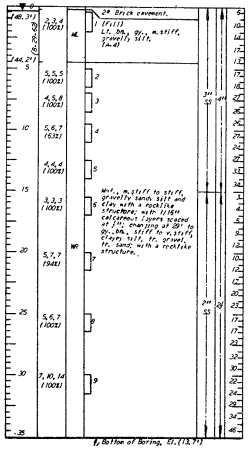
BORING NO. 222
Sta. 317+48 60' Left El. 48.8



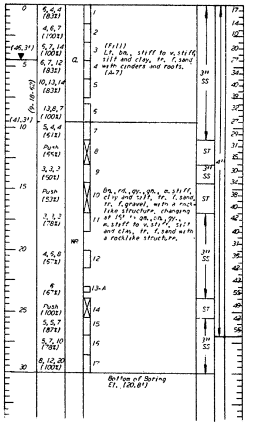
BORING NO. 223
Sta. 319+80 75' Left El. 54.2



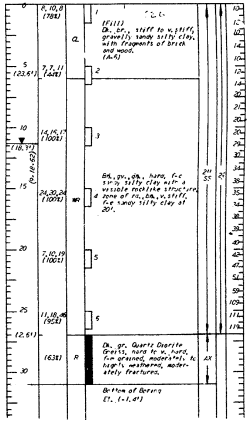
BORING NO. 224
Sta. 319+80 105' Right El. 48.7



BORING NO. 225
Sta. 320+05 48.5' Right El. 50.8



BORING NO. 226
Sta. 311+51 50.5' Left El. 29.6

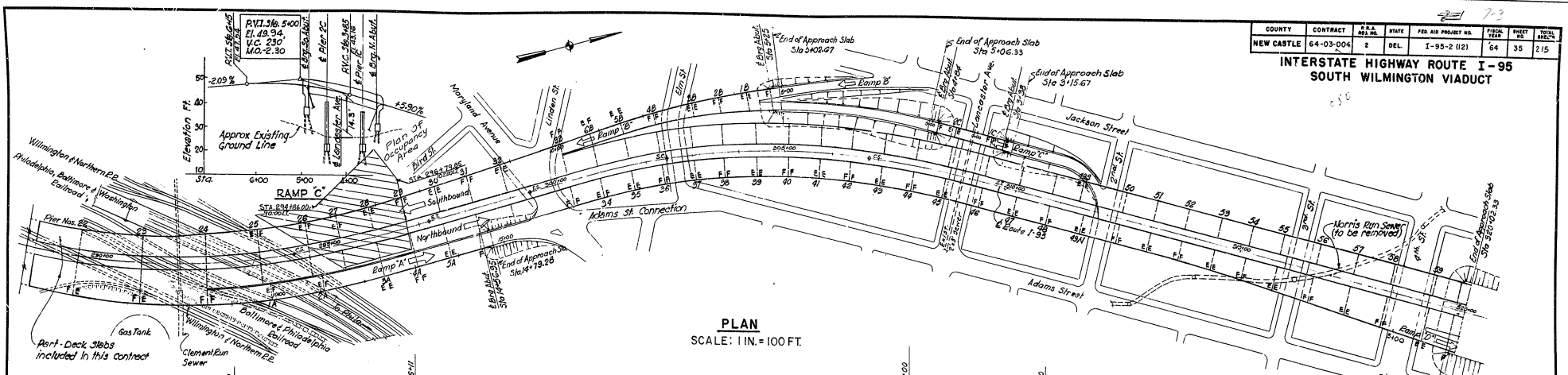


For Symbols and General Notes see Sheet No.

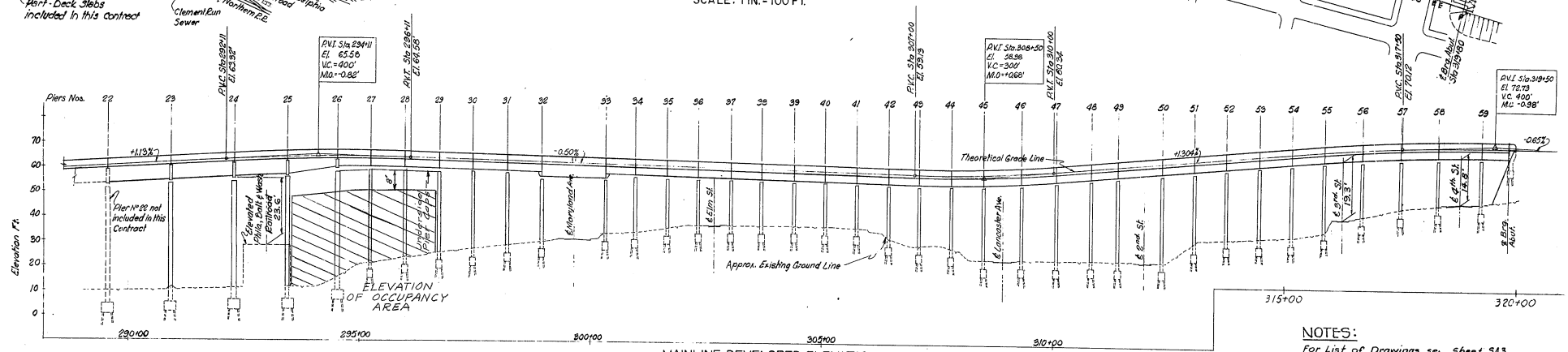
BORING LOGS
214 TO 226

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	35	215

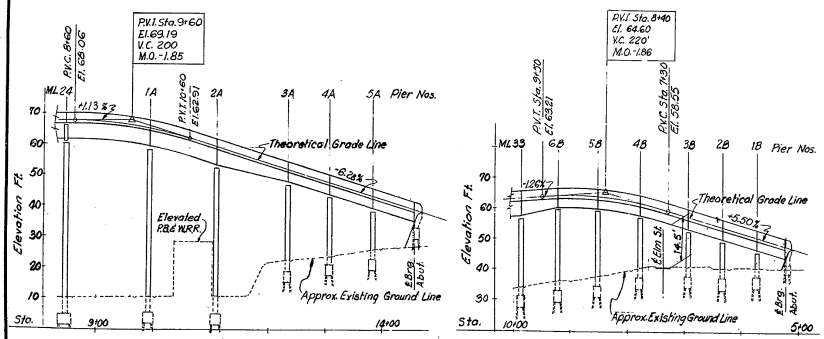
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



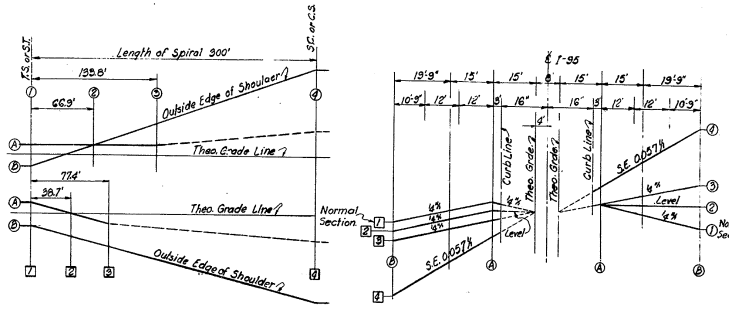
PLAN
SCALE: 1 IN. = 100 FT.



MAINLINE-DEVELOPED ELEVATION
SCALE: VERT.: 1 IN=20 FT.
HORIZ.: 1 IN=100 FT.



DEVELOPED ELEVATIONS
SCALE: VERT. 1 IN=20 FT.
HORIZ. 1 IN=100 FT.



SUPERELEVATION TRANSITION DIAGRAM

NOTES:

For List of Drawings see Sheet 5A3
For General Notes, see Dwg. 5A2
For Table of Bridge Quantities, see Dwg. 5A3
For Typical Sections, see Dwgs. 5A4 & 5A5
For Foundation Plan, see Dwgs. 5A6 thru 5A10
For North Abutment, see Dwgs. 5A35 thru 5A39
For Ramp "A" Abutment, see Dwgs. 5A40 thru 5A42
For Ramp "B" Abutment, see Dwgs. 5A43 thru 5A45
For Ramp "C" Abutments, see Dwgs. 5A46 thru 5A48
For Framing Plan, see Dwgs. 5A5d thru 5A58
For Deck Reinforcement, see Dwgs. 5A77 thru 5A86

Drawn by M.B.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION

APPROVED BY: James R. Sweeney
BRIDGE ENGINEER
4-16-64
DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. 5A1

COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	64	36	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

1 DESIGN SPECIFICATIONS

a Standard Specifications for Highway Bridges of AASHO dated 1961 including Interim Specifications, except as noted.
b Standard Specifications for Welded Highway and Railway Bridges of the American Welding Society, latest edition.

2 MATERIALS AND FABRICATION

a Standard Specifications for Highway Construction of the State of Delaware dated July 1, 1960.

3 DESIGN LOAD

a Live Load H-20-S16-44 modified for Interstate.
b The minimum waiting period before loads are placed on the structure after the structural slab is poured shall be 21 days; for load requirements see Standard Specifications Para. 18.20.

4 FOUNDATION

a The contractors attention is directed to the special foundation notes as given in the Proposal, in connection with the anticipated subsurface conditions and the requirements for the foundation construction.
b The contractors attention is also directed to elevation of ground water to be encountered so that he will plan his work with full knowledge of water being present. Any cost involved in keeping the foundation sites free from water shall be included in the bid for Item 4.

5 EXCAVATION

The payment limits for excavation for piers are shown on Dwgs. SA 25, SA 26 & SA29; for the abutment on SA 37.

6 STEEL WORK

a Allowable unit stresses will conform to 1961 A.A.S.H.O. Standard Specifications.
b Field connections shall be fastened with 7/8" high strength bolts (A.S.T.M.) on unpainted surfaces.
c Steel shall be structural carbon steel (A.S.T.M. - A36) The high strength low alloy structural steel called for shall be A.S.T.M. - A440.
d Do not paint steel surface in contact with concrete except paint the first 5 feet from end of stringers or end diaphragms. The shoes when in final position, are to be painted in order to prevent rust stains on concrete. Anchor bolts immediately after the concrete has attained its initial set, shall be thoroughly coated with an approved, heavy grease and securely wrapped in burlap. (Payment for these rust preventive measures shall be included in the price bid for Item 22).
e No welded field splices will be permitted. If splices are to be made in the field, the contractor shall submit a high strength bolted splice for approval by state instead of welded splice shown on the drawings.
f All stiffener plates to be truly vertical when stringers are in final erected position with slab and hot mix finish in place. Box girders to have all stiffener plates including the closure plates truly vertical.
g Beams to be cambered as shown on drawings. Allow for loss of camber due to welding. Excess camber in a beam which will decrease the slab thickness below the design thickness shown on the drawings shall be removed or corrected at no cost to the state. The Contractor shall verify the correctness of the camber in the shop.

7 CONCRETE NOTES

a n = 10
f'_c = Minimum 28 day compressive strength = 3000 pounds per square inch.
f_c = 1,200 pounds per square inch.
b Splices of reinforcing bars shall have a minimum lap of 20 diameters for longitudinal bars in slab and 24 diameters for all others.
c Reinforcing bars to be intermediate grade, A.S.T.M. serial designation A15.
d All concrete directly beneath bearing plates shall be poured ¼ inch higher than the bearing elevations shown and bush hammered to exact elevation.
e Tops of abutment backwalls supporting bridge slab to be trowel finished.
f Construction joints other than those shown will not be permitted without written permission of the Engineer.
g Chamfer all exposed edges ¾ inch except where specifically shown on the drawings.
h If there is an interference between the reinforcing steel in the slab and beam spirals, the bar spacing may be varied 1 inch ±. The required area of steel must be placed in a 5 foot interval even though some bars may be threaded through the spirals.
i Concrete cover except where specifically shown on drawings to be governed by A.A.S.H.O. 1961 Specifications including Interim Specifications

8 PILES

a Piles shall develop a minimum bearing capacity of 40 or 60 tons as noted on drawings.
b Pile locations as shown in plan are dimensioned in the plane of the bottom surface of the footing.

9 PROTECTION OF THE STRUCTURE & UNDERGROUND PIPES

The contractor shall be responsible for damage to the existing structures that occurs during or as a result of the work under this contract. He shall repair such damage to the satisfaction of the Engineer at no cost to the state.

10 For radiographic inspection of welded girders and members, refer to special provisions.

11 Due to Railroad electrification protection requirements and clearance, approved metal forms to remain in place must be used for slab construction from pier 22 to pier 26 on mainline and from pier 1-A to pier 2-A on Ramp A. The payment for metal forms to be under contract Item 18. All metal forms and supports shall be galvanized. Metal screws shall be non-corrosive.

12 Metal forms to remain in place shall not be used beyond Pier 26.

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

GENERAL NOTES

APPROVED BY: [signature] BRIDGE ENGINEER 4-16-64 DATE

SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA2

COUNTY	CONTRACT	A.R.M. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12) I-95-2 (8)	'64	37	42

INTERSTATE HIGHWAY ROUTE I-95

ITEM NO.	DESCRIPTION	UNIT	VIADUCT	ROADWAY	QUANTITY NEAT	QUANTITY ROUNDED
4	Excavation for Structures	C.Y.	13,777		13,777	13,800
5	Borrow	C.Y.		14,900	14,900	15,000
7	Select Borrow	C.Y.	646	12,206	12,852	13,000
8c	Quarry Waste Base Course (Per 1" Thickness)	S.Y.		36,400	36,400	36,500
9	Portland Cement Concrete Base Course	C.Y.		1,126	1,126	1,150
11	Hot Mix Asphaltic Concrete Pavement	Ton	4,318	958	5,276	5,300
11	Sand for Tack Coat	Ton		14	14	14
16	Patching Portland Cement Concrete Pavement - 9"	S.Y.		218	218	220
*16	Portland Cement Concrete Masonry in Approach Slab	C.Y.	197		197	197
*18	Portland Cement Concrete Masonry in Abutments	C.Y.	478		478	478
*18	Portland Cement Concrete Masonry in Pier Footings	C.Y.	5,323		5,323	5,323
◊ *18	Portland Cement Concrete Masonry in Piers above Footings	C.Y.	~~4,100~~ 4,196		~~4,100~~ 4,196	~~4,100~~ 4,196
*18	Portland Cement Concrete Masonry in Superstructure	C.Y.	10,879		10,879	10,879
◊ 18	Subfoundation Concrete	C.Y.	~~100~~ 96		~~100~~ 96	~~100~~ 100
19	Superficial Waterproofing	S.Y.	215		215	220
◊ *20	Bar Reinforcement	Lb.	~~1,196,200~~ 1,196,800		~~1,196,200~~ 1,196,800	~~1,196,200~~ 1,196,800
22	Structural Steel - ASTM-A36 (Approx. Wt. 12,750,000 Lbs.)	L.S.				L.S.
22	Structural Steel - ASTM-A440 (Approx. Wt. 650,000 Lbs.)	L.S.				L.S.
26	12" R.C. Pipe	L.F.		1,596	1,596	1,600
26	15" R.C. Pipe	L.F.		3,241	3,241	3,250
26	18" R.C. Pipe	L.F.		1,346	1,346	1,350
26	24" R.C. Pipe	L.F.		220	220	230
26	15" E.S.R.C. Pipe	L.F.		82	82	90
26	18" E.S.R.C. Pipe	L.F.		36	36	40
28	4" C.I. Pipe	L.F.		55	55	60
28	8" C.I. Pipe	L.F.		650	650	660
28	10" C.I. Pipe	L.F.		78	78	80
29	8" Corrugated Metal Pipe	L.F.		46	46	50
30	10" Vitrified Clay Pipe	L.F.		22	22	26
30	12" Vitrified Clay Pipe	L.F.		130	130	135
30	15" Vitrified Clay Pipe	L.F.		295	295	300
30	24" Vitrified Clay Pipe	L.F.		201	201	210
31	6" Perf. C.M. Pipe Underdrain	L.F.	312		312	320
35	Closed End Steel Shell Test Piles	L.F.	445		445	445
35	Open End Steel Shell Test Piles	L.F.	90		90	90
35	Closed End Pile Load Tests	Ea.	19		19	19
35	Open End Pile Load Tests	Ea.	4		4	4
35	Closed End Cast-in-Place Concrete Piles	L.F.	48,215		48,215	49,000
35	Open End Cast-in-Place Concrete Piles	L.F.	3,970		3,970	4,000
37	Portland Cement Concrete Gutter	S.Y.		135	135	140
38	Portland Cement Concrete Curb, Type I	L.F.		4,677	4,677	4,700
41	4" Portland Cement Concrete Sidewalk	S.F.		43,806	43,806	44,000
44	Type "A-1" Catch Basin	Ea.		23	23	23
44	Type "B" Catch Basin	Ea.		~~3~~ 3	~~3~~ 3	~~3~~ 3
44	Type PW-BD-1 Catch Basin	Ea.		1	1	1
45	Standard Manhole	Ea.		41	41	41
45	Type "A" Manhole	Ea.		1	1	1
45	Type "D" Manhole	Ea.		1	1	1
45	City of Wilmington Standard Sewer Manhole	Ea.		11	11	11
46	Adjusting & Repairing Minor Installations	Ea.		4	4	5
51	Topsoil (4" Deep)	S.Y.		53,020	53,020	53,000
53	Seeding	Acre		11.32	11.32	11.50
54	Mulching	S.Y.		53,020	53,020	53,000
61	Calcium Chloride for Dust Control	Ton		5	5	5
	City of Wilmington Standard Lamphole	Ea.		1	1	1
	Viaduct Drain Scuppers	Ea.	83		83	83
	W.I. Viaduct Drain Trough	L.F.	2,065		2,065	2,100
	4" W.I. Viaduct Drain Pipe	L.F.	462		462	470
	8" W.I. Viaduct Drain Pipe	L.F.	3,346		3,346	3,350
	6" Corrugated Metal Pipe	L.F.		316	316	320
	Stone Bedding for Pipes	Ton		50		50
	Concrete Encasement of Existing 10" Pipe	L.F.		100	100	110
	Concrete Encasement of Existing 12" Pipe	L.F.		165	165	180
	Concrete Encasement of New 12" Pipe	L.F.		15	15	20
	Concrete Encasement of New 15" Pipe	L.F.		15	15	20

* Estimated Fixed Quantity Items (See Special Provisions)
◊ Additions acct. of changes to Piers 26 & 27 S. See T.A.M.S. letter of 1-4-65. A.W.R. 1-8-65.

Revisions: Type 'A' Catch Basin - Ea. 3 - 5-27-65

ITEM NO.	DESCRIPTION	UNIT	VIADUCT	ROADWAY	QUANTITY NEAT	QUANTITY ROUNDED
	Aluminum Screen Manhole Cover 2'-10" x 1'-10"	Ea.	6		6	6
	Aluminum Screen Manhole Cover 2'-6" x 1'-2½"	Ea.	2		2	2
	Aluminum Viaduct Railing	L.F.	15,006		15,006	15,020
	Protective Aluminum Wall (or Protective Steel Wall)	L.F.	125		125	125
	Aluminum Protective Barrier Railing (or Steel Protective Barrier Railing)	L.S.				L.S.
	Galvanized Steel Deep Beam Guard Rail (Wood Posts)	L.F.	22	650	672	700
	Slope Paving with Portland Cement Concrete Block	S.Y.	864		864	900
	Coarse Aggregate	Ton	100		100	100
	Clearing, Demolition, Excavation, Filling & Grading (Excluding 2nd St. to 3rd St.)	L.S.				L.S.
	Clearing, Demolition, Excavation, Filling & Grading (Between 2nd St. & 3rd St. only)	L.S.				L.S.
	Protective Coating for Metal Surfaces	S.F.	15,637		15,637	15,700
	Norris Run Sewer Demolition	L.S.				L.S.
	Maintenance of Traffic, Vehicular	L.S.				L.S.
	Maintenance of Traffic, Railroad	L.S.				L.S.
	Conduit System for Future Highway & Street Lighting	L.S.				L.S.
	Pedestal Base	Ea.		29	29	29
	Aluminum Pole Base	Ea.		8	8	8
	Junction Well	Ea.		15	15	15
	"M" Cabinet Base	Ea.		3	3	3
	1½" Galv. Conduit (Under Exist. Pav't.)	L.F.		625	625	650
	1½" Galv. Conduit (Under New Pav't.)	L.F.		1,315	1,315	1,350
	2" Galv. Conduit (Under Exist. Pav't.)	L.F.		975	975	1,000
	2" Galv. Conduit. (Under New Pav't.)	L.F.		370	370	380
	4" Non-Metallic Conduit (Under Exist. Pav't)	L.F.		70	70	70
3A	Rock Excavation for Structures & Trenches	C.Y.	22		22	25
	Stone Screenings - 2" Thick	S.Y.		30,444	30,444	31,000
	Coarse Aggregate for Surface Treatment	S.Y.		30,444	30,444	31,000
	AE-4 Asphalt Emulsion for Surface Treatment	Gal.		15,222	15,222	15,300

ITEM NO.	DESCRIPTION	UNIT	VIADUCT	ROADWAY	QUANTITY NEAT	QUANTITY ROUNDED
	NORRIS RUN BY-PASS CONSTRUCTION					
	54" R.C. Pipe	L.F.		570	570	580
	10" V.C. Pipe	L.F.		120	120	130
	Type "A-1" Catch Basin	Ea.		2	2	2
	City of Wilmington Standard Manhole	Ea.		1	1	1
	Manhole (No. 3)	Ea.		1	1	1
	Junction Bends (No. 1A, 1, 2 & 4)	Ea.		4	4	4
	Protection and Backfill	L.S.				L.S.
	R.R. ELECTRIFICATION CHANGES					
	Railroad Communication & Signal Cable Manholes 324A & 325A	L.S.				L.S.
	Railroad Communication & Signal Cable Ducts	L.S.				L.S.
	Electrification Structures W481A & W490A	L.S.				L.S.
	Permanent Modification of Existing Electrification Structures	L.S.				L.S.
	Temporary Modification of Electrification Structure W486	L.S.				L.S.
	Removal & Partial Removal of Existing Electrification Structures	L.S.				L.S.
	WATER LINES					
	Water Distribution Changes	L.S.				L.S.
	Shutting off & Cutting Water Service House Connections	Ea.		204	204	210

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TABLE OF QUANTITIES

APPROVED BY: Dennis R. Heaney II
BRIDGE ENGINEER

4-16-64
DATE

SCALE:

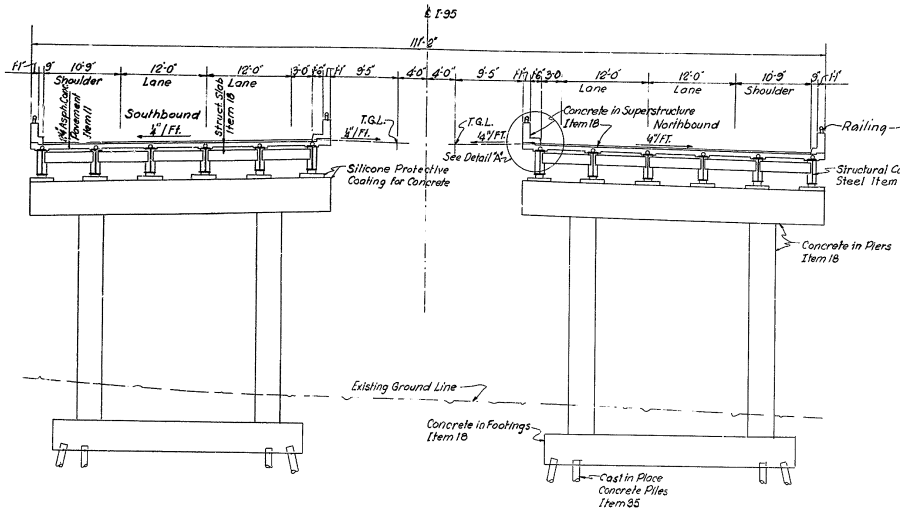
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

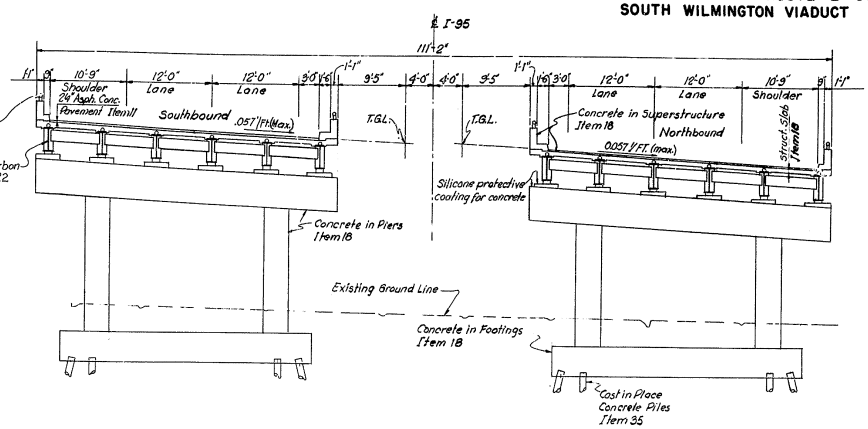
DWG. NO. SA3

COUNTY	CONTRACT	R.P.E. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	38	215

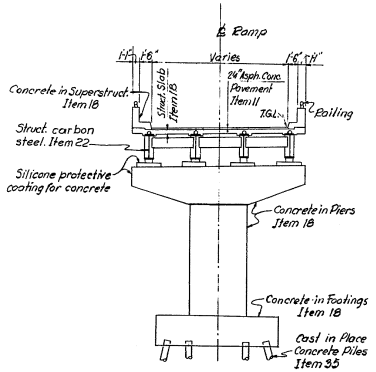
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



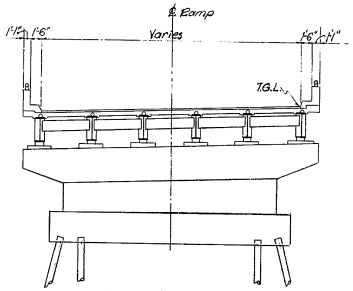
TWO COLUMN RIGID FRAME
TANGENT SECTION
SCALE: 1/8 IN. = 1 FT.



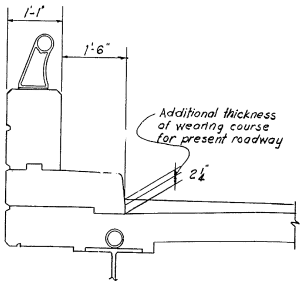
TWO COLUMN RIGID FRAME
SUPERELEVATED ROADWAY
SCALE: 1/8 IN. = 1 FT.



TYPICAL RAMP PIER
SCALE: 1/8 IN. = 1 FT.



RAMP "B" PIERS 1B, 2B & 3B
SCALE: 1/8 IN. = 1 FT.



DETAIL "A"
SCALE: 3 IN. = 1 FT.

NOTES:
For general notes, see Dwg. SA2
For sheet 2 of Typical Sections, see Dwg. SA5

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

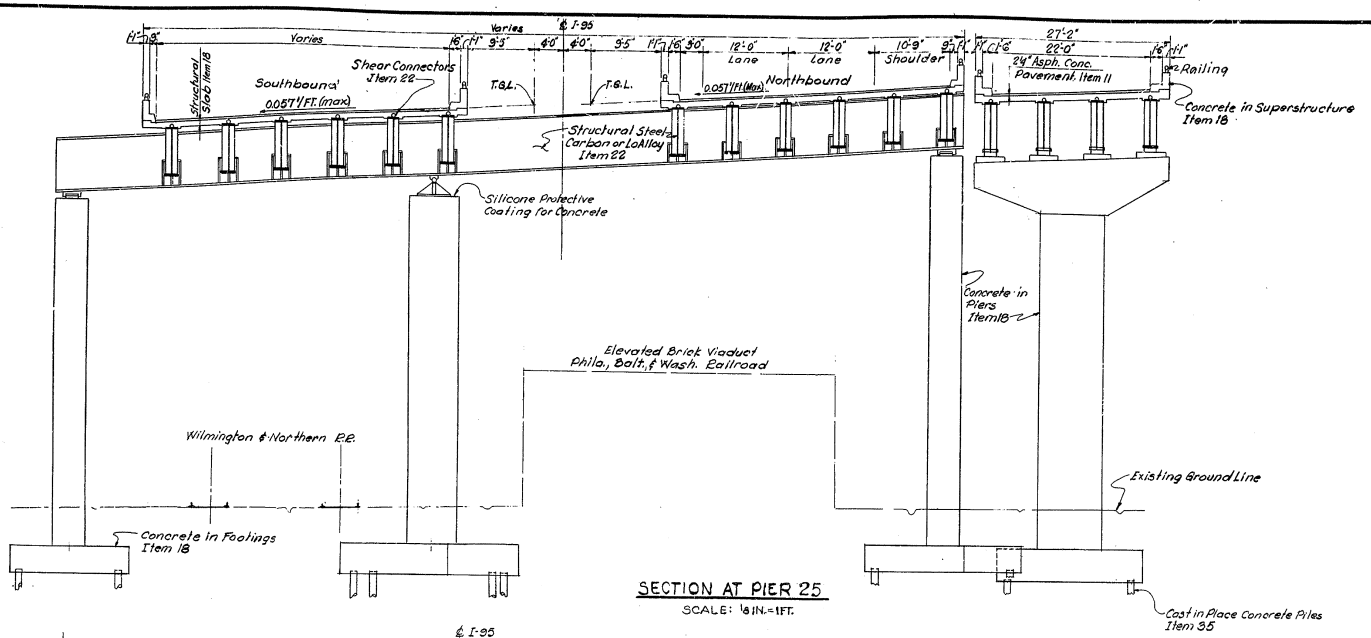
TYPICAL SECTIONS
SHEET 1 OF 2

APPROVED BY: [signature] BRIDGE ENGINEER — DATE: 4-16-64

SCALE: AS NOTED
DATE: APRIL 1, 1964

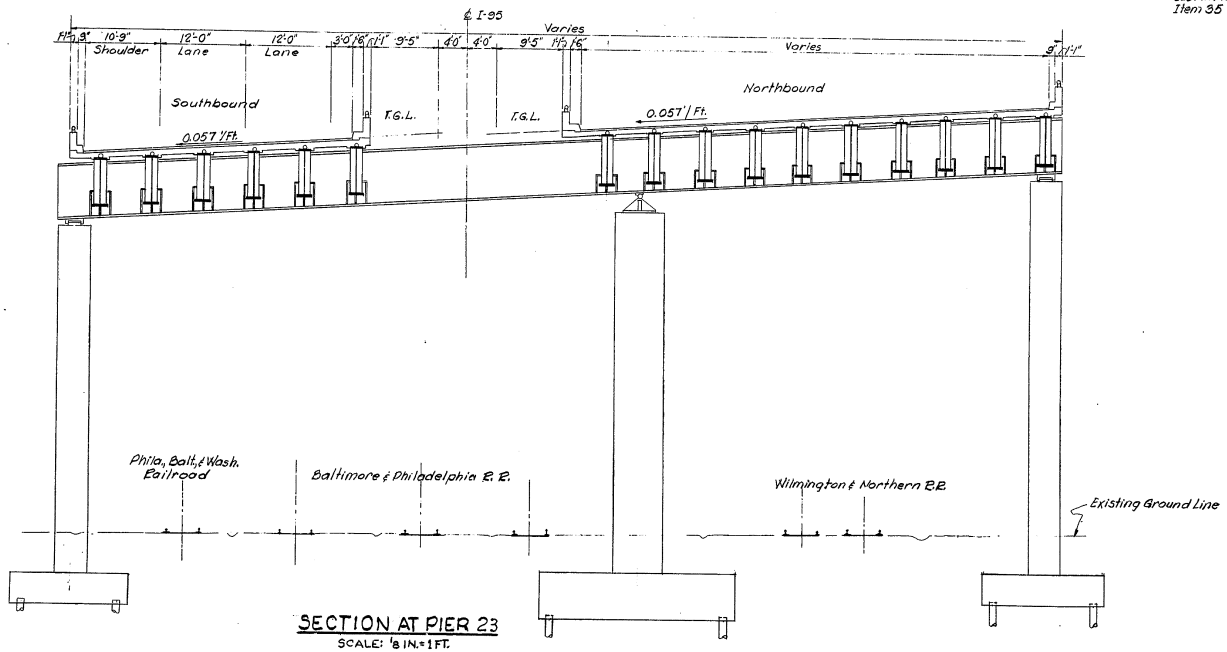
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA4



SECTION AT PIER 25

SCALE: 1/8 IN. = 1FT.



SECTION AT PIER 23

SCALE: 1/8 IN. = 1FT.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	39	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

Notes:
For General Notes, see Dwg. SA2
For sheet 1 of Typical Sections, see Dwg. SA4

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TYPICAL SECTIONS
SHEET 2 OF 2

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

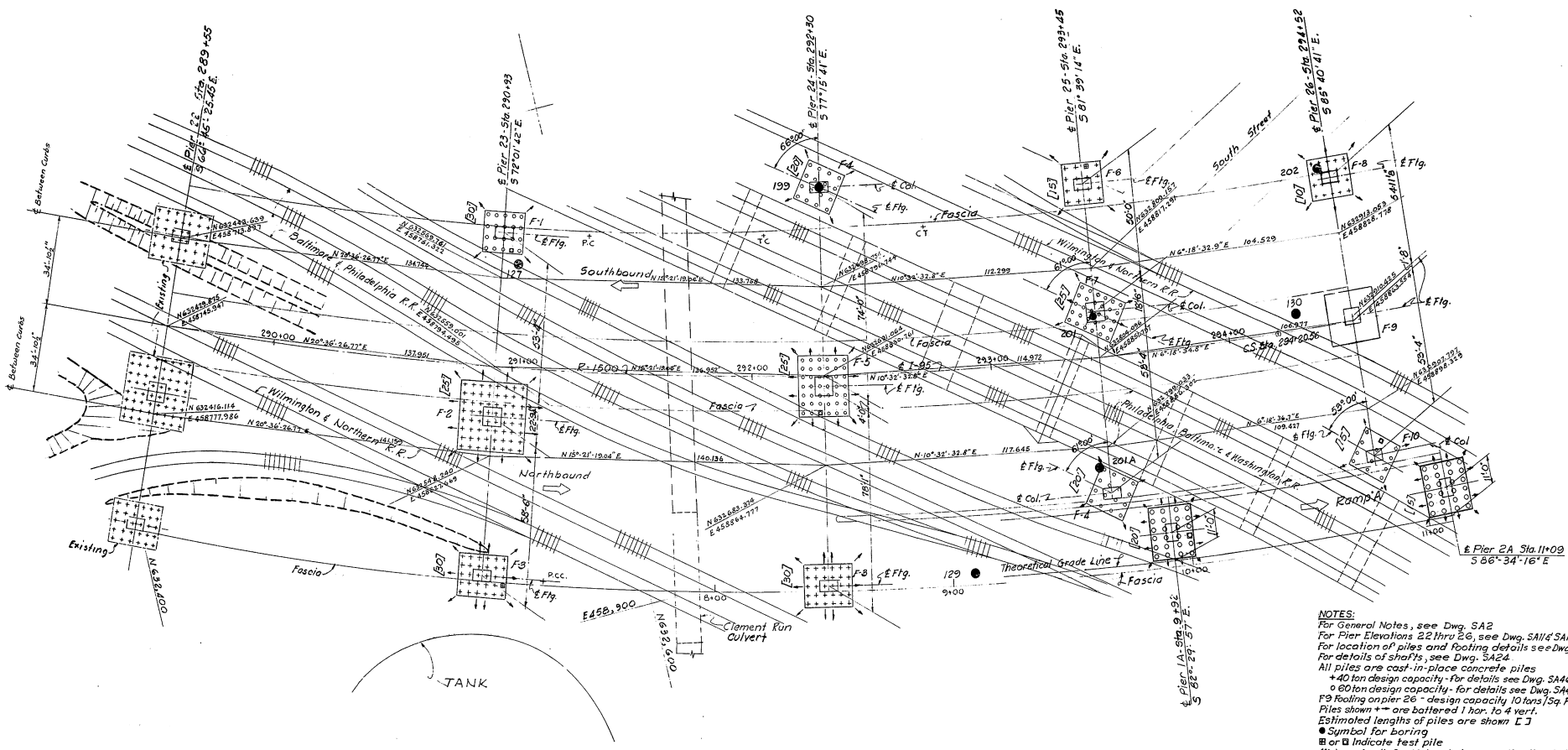
SCALE: 1/8 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA5

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	64	40	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
Lengths and Bearings shown are those of chords.
Center between Curbs has no relation to center of footers.
Coordinates & chord lengths figured by computer & added at request of Freeways Div. Feb. 8, 1965.

NOTES:
For General Notes, see Dwg. SA2
For Pier Elevations 22 thru 26, see Dwg. SA11 & SA12
For location of piles and footing details see Dwg SA25
For details of shafts, see Dwg. SA24.
All piles are cast-in-place concrete piles
+ 40 ton design capacity - for details see Dwg. SA46
○ 60 ton design capacity - for details see Dwg. SA46
F9 footing on pier 26 - design capacity 10 tons / Sq. Ft.
Piles shown +- are battered 1 hor. to 4 vert.
Estimated lengths of piles are shown [ ]
● Symbol for boring
⊞ or ⧈ Indicate test pile
Minimum length for 60 ton design capacity piles to be 2 Ft. less than the estimated length shown.

Drawn by W.J.K.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FOUNDATION PLAN
MAINLINE-PIER 22 TO PIER 26
RAMP A-PIERS 1A & 2A

APPROVED BY: [signature] BRIDGE ENGINEER — DATE 4-16-64

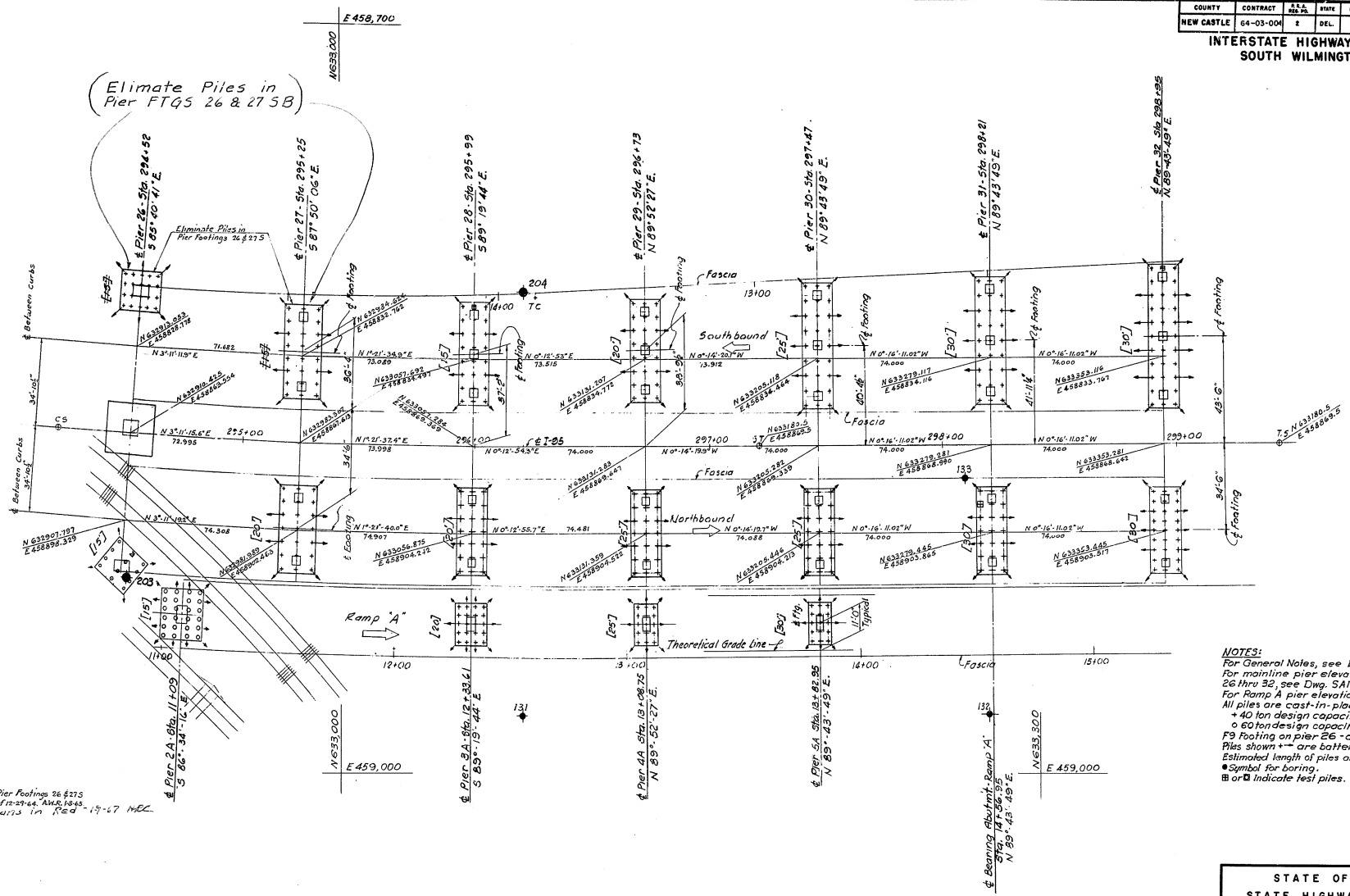
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA6

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	41	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



Revision:
Eliminate Piles in Pier Footings 26 & 27 S
See T.A.M.S. letter of 12-29-64, A.W.R. 18-65.
As Built Plans in Red - 19-67 MRC

NOTES:
For General Notes, see Dwg. SA2
For mainline pier elevations & types, piers 26 thru 32, see Dwg. SA12 & SA13
For Ramp A pier elevations, see Dwg. SA21
All piles are cast-in-place concrete piles.
+ 40 ton design capacity - for details see Dwg. SA46
o 60 ton design capacity - for details see Dwg. SA46
F9 footing on pier 26 - design capacity 10 tons/Sq.Ft.
Piles shown +— are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring.
⊞ or ⊠ Indicate test piles.

Drawn by W.J.K.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

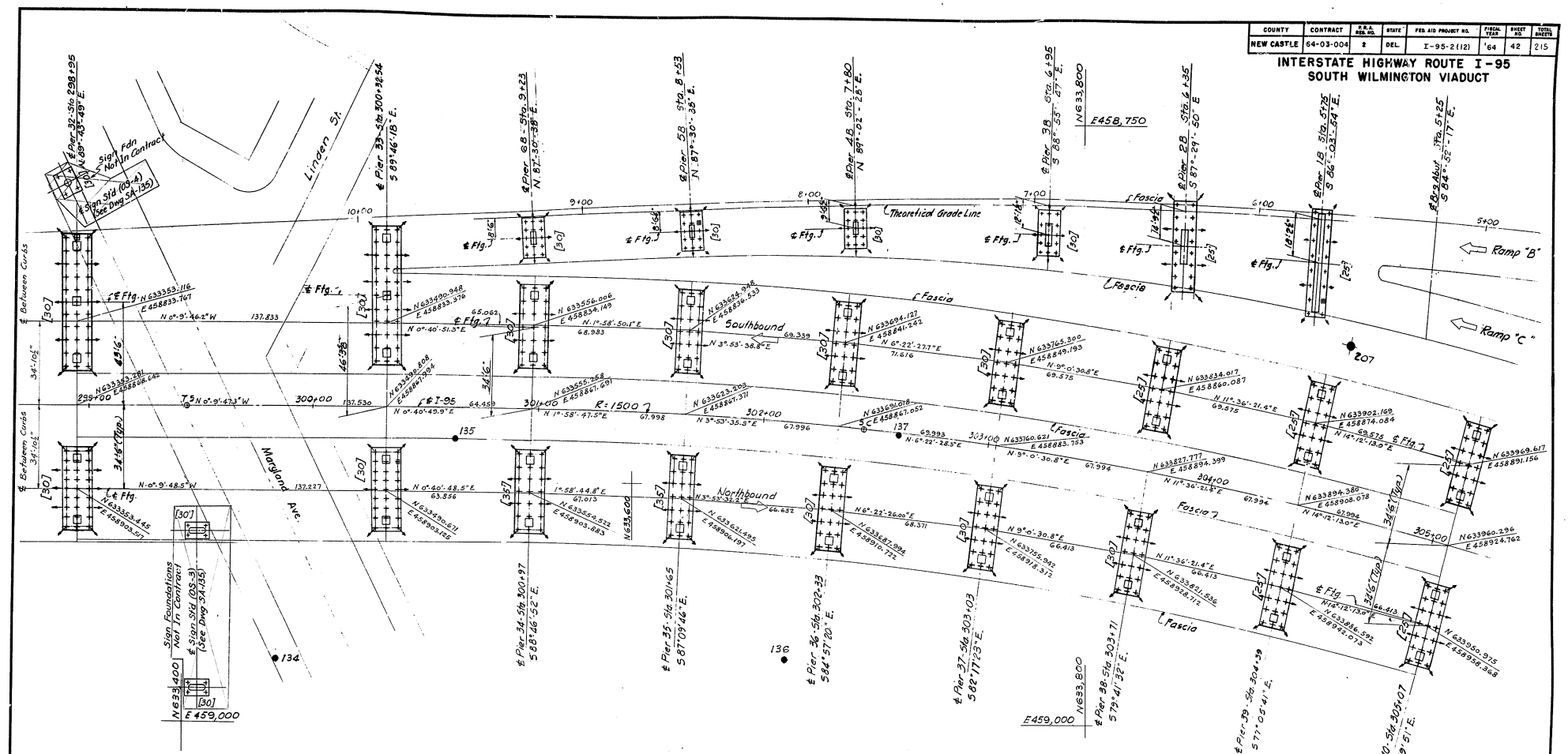
FOUNDATION PLAN
MAINLINE-PIER 26 TO PIER 32
RAMP A-PIERS 2A THRU 5A

APPROVED BY: [signature] 9-16-64
BRIDGE ENGINEER — DATE

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA7



COUNTY	CONTRACT	F.A.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	42	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

NOTES
For General Notes see Dwg. SA2
For mainline pier elevations & types, piers 32 thru 40, see Dwgs. SA13, SA14 & SA15
For ramp B pier elevations, see Dwg. SA22
All piles are cast-in-place concrete piles with design capacity of 40 tons. For details see Dwg. SA46
Piles shown ←→ are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring.
⊞ Indicates test piles

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FOUNDATION PLAN
MAINLINE-PIER 32 TO PIER 40
RAMP B

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

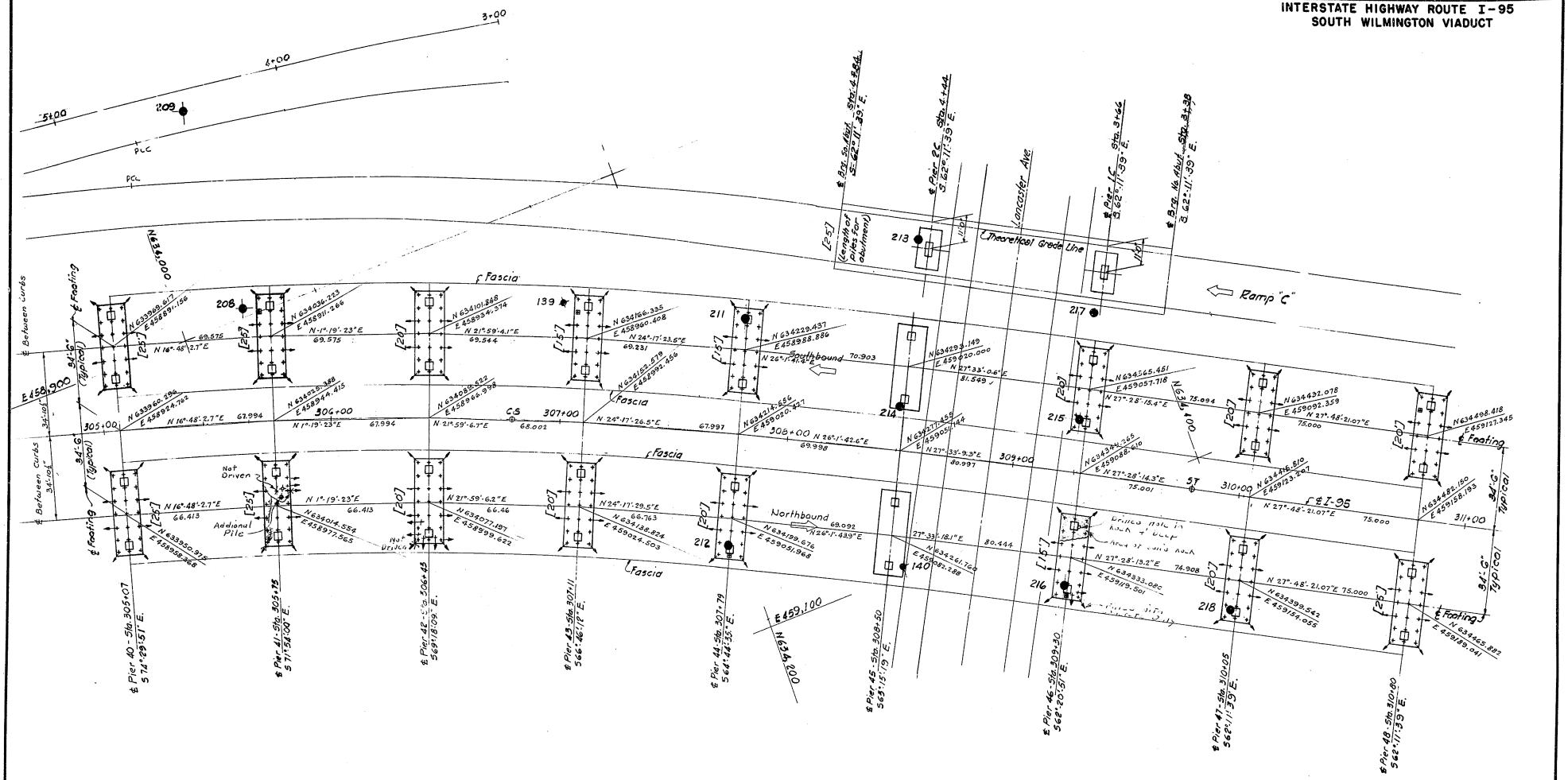
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA8

Drawn by W.J.K.
Checked by L.R.

COUNTY	CONTRACT	R.P.E. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	43	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For mainline pier elevations & types, piers 40 thru 48, see Dwgs. SA15, SA16 & SA17.
For ramp C pier elevations, see Dwg. SA23
All piles are cast-in-place concrete piles with design capacity of 40 tons. For details see Dwg. SA46
Mainline pier 45 and ramp C piers 1 & 2 have a footing design capacity of 2 tons/Sq. Ft.
Piles shown ←→ are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring
⊞ Indicates test piles

Drawn by W.J.K.
Checked by L.R.

As Built Plans - 1-9-67 MRC

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FOUNDATION PLAN
MAINLINE-PIER 40 TO PIER 48
RAMP C

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER DATE

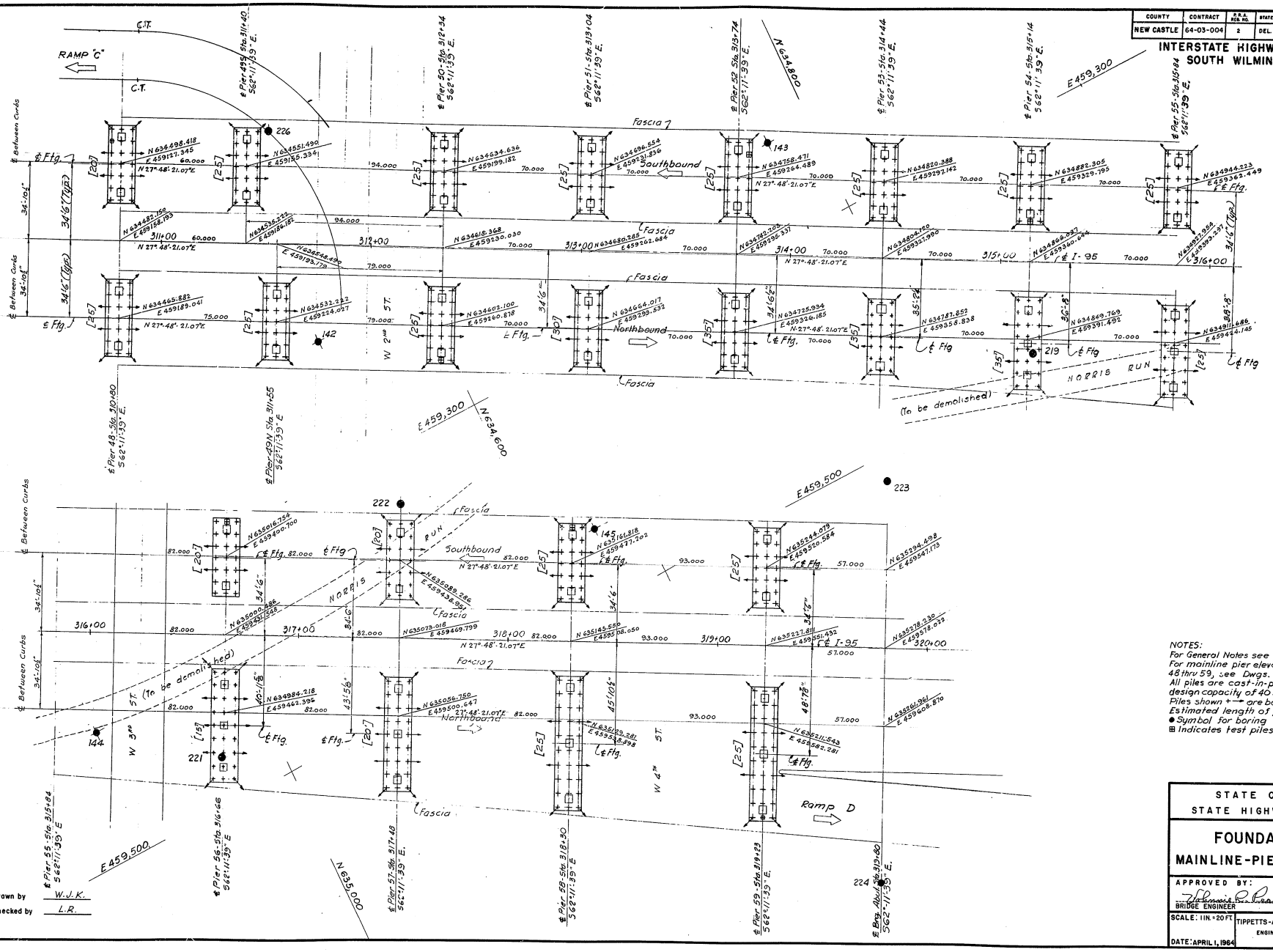
SCALE: 1 IN. = 20 FT
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA9

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	44	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For mainline pier elevations & types, piers 48 thru 59, see Dwgs. SA17 thru SA20.
All piles are cast-in-place concrete piles with a design capacity of 40 tons. For details see Dwg. SA46
Piles shown +—+ are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring
⊞ Indicates test piles

Drawn by W.J.K.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

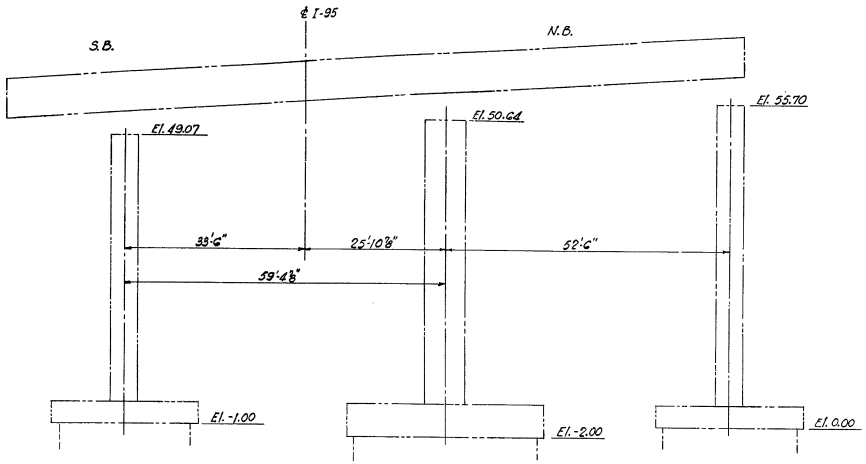
FOUNDATION PLAN
MAINLINE-PIER 48 TO PIER 59

APPROVED BY: Wilmine R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

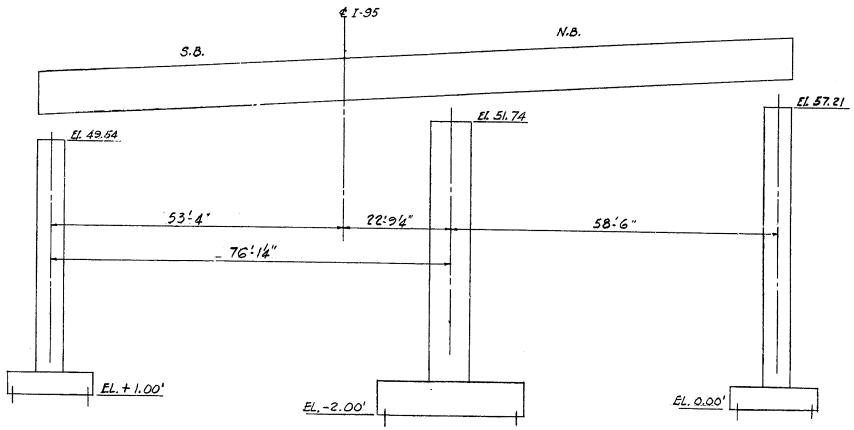
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA10

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	45	215

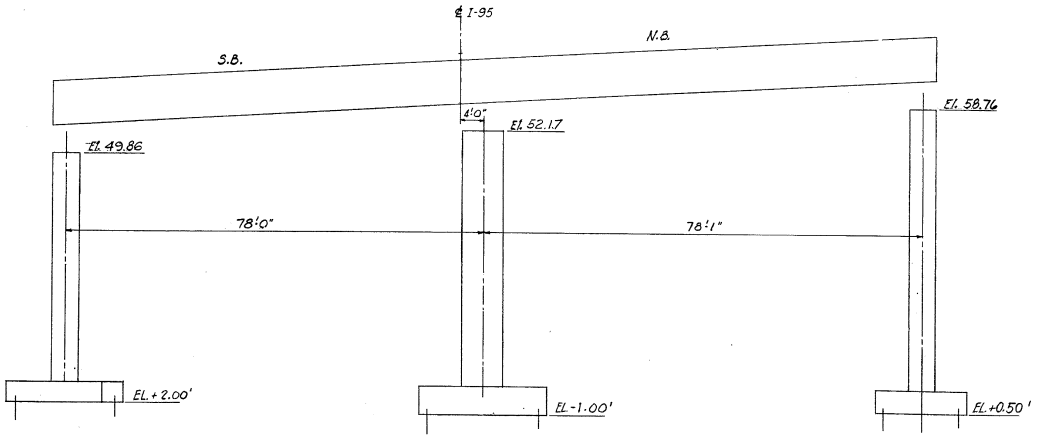
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PIER 22
(EXISTING PIERS)



PIER 23



PIER 24

NOTES:
For General Notes see Dwg. SA2
For Foundation Plan, see Dwg. SA6
For details of foundations, see Dwg. SA24
For details of Shafts, see Dwg. SA25
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For extent of areas to be bush hammered on top of piers, See Dwg. SA25

Drawn by E.N.
Checked by H.B.L. & L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

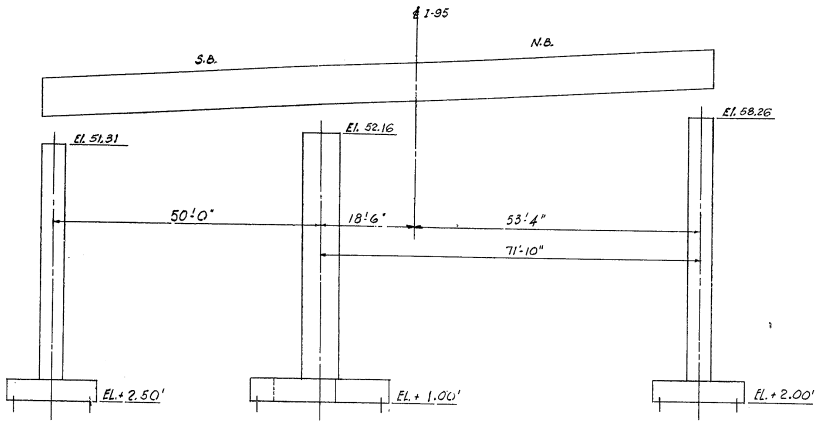
MAINLINE PIER ELEVATIONS
PIERS 22, 23, & 24

APPROVED BY: Vonnie C. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

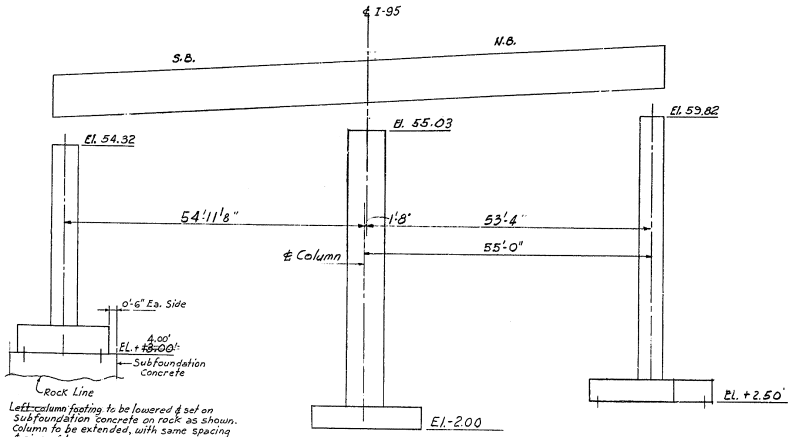
SCALE: 3/32 IN = 1 FT
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA11

COUNTY	CONTRACT	R.B.A. NOS. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	46	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

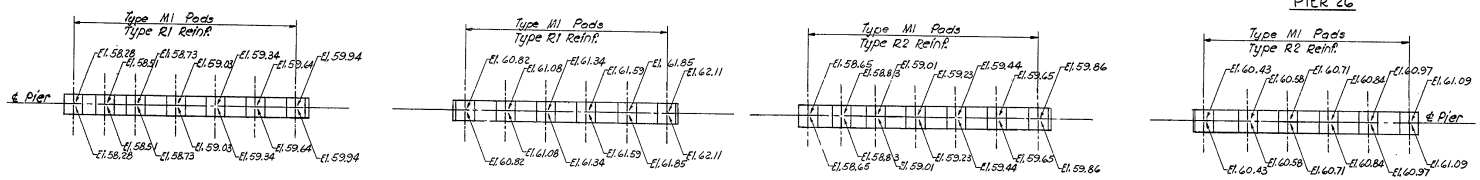


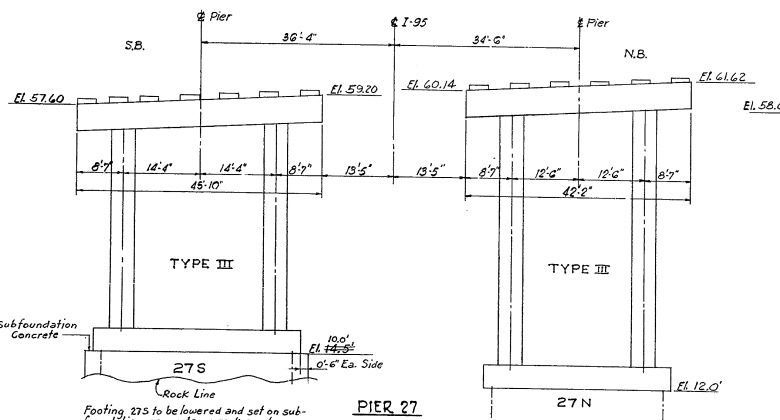
PIER 25



Left column footing to be lowered & set on subfoundation concrete on rock as shown. Column to be extended, with same spacing & size of bars.

PIER 26

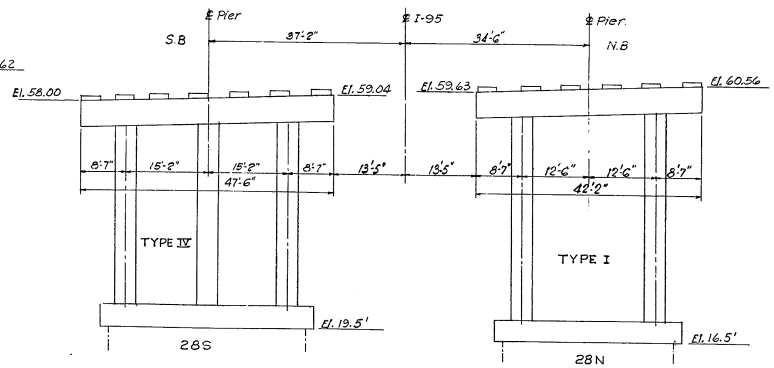




PIER 27

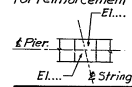
Footing 27S to be lowered and set on subfoundation concrete on rock as shown. Columns to be extended, with same spacing & size of bars.

Revision:
Footings for Piers 26 & 27S lowered as shown. See T.A.M.S. letter of 12-29-64 A.M.R. 1-8-65.



PIER 28

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan of piers 25 & 26, see Dwg. SA6
For Foundation Plan of piers 27 & 28, see Dwg. SA7
For details of foundation of piers 25 & 26, see Dwg. SA24
For details of shafts of piers 25 & 26, see Dwg. SA25
For details of type I Rigid frames, see Dwg. SA26
For details of type III Rigid frames, see Dwg. SA27
For details of type IV Rigid frames, see Dwg. SA28
All elevations are taken looking upstation putting northbound on righ side and southbound on left side.
For extent of areas to be bush hammered on top of piers 22 & 23, see Dwg. SA25.
For pad masonry details, see Dwg. SA33
For reinforcement details, see Dwg. SA34



El.... El. on pier 27 & 28 indicates final elevation of concrete pad. See general notes, Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 25, 26, 27, & 28

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 3/32 IN = 1FT.

DATE: APRIL, 1964

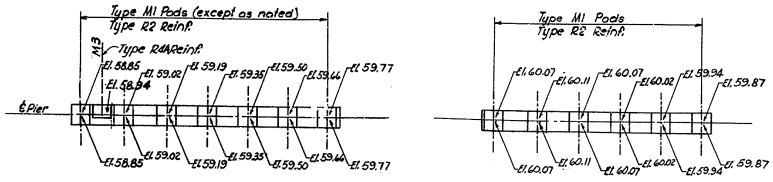
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

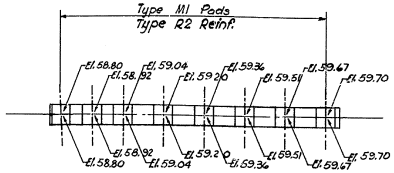
DWG. NO. SA12

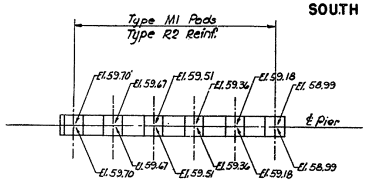
Drawn by E.N.
Checked by L.R. & H.B.L.

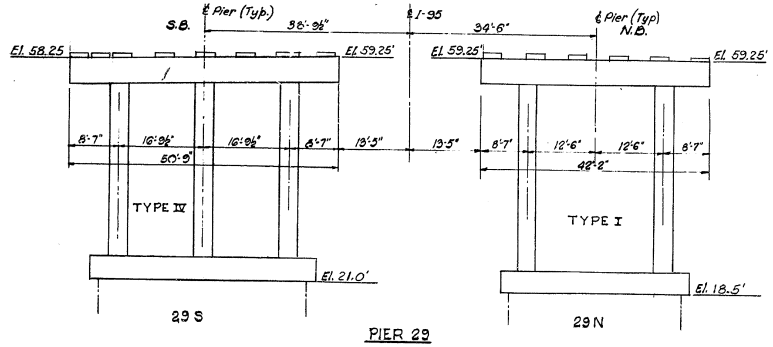
COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	47	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

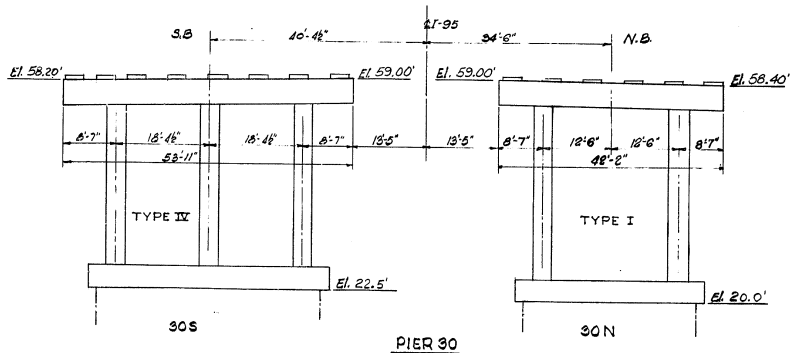




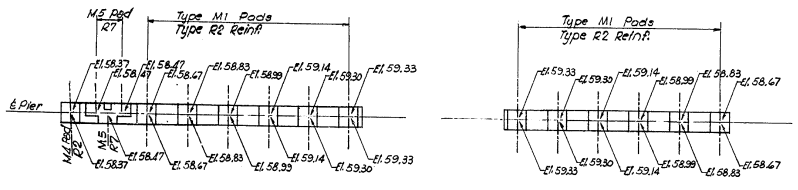


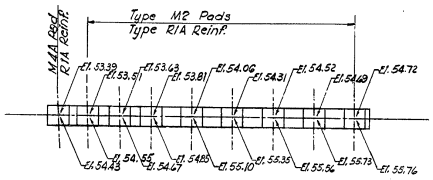


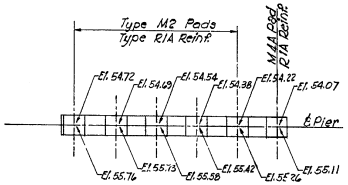
PIER 29

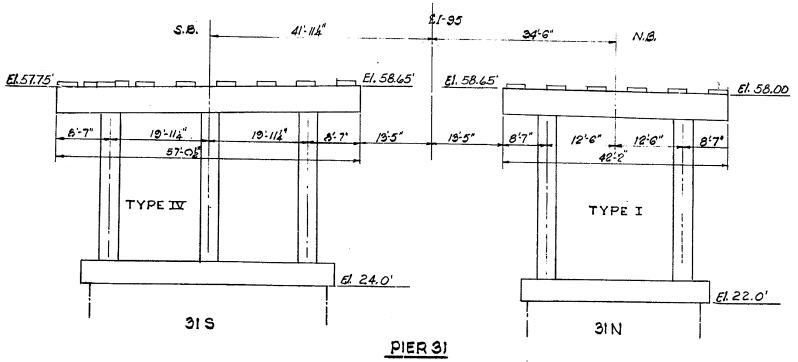


PIER 30

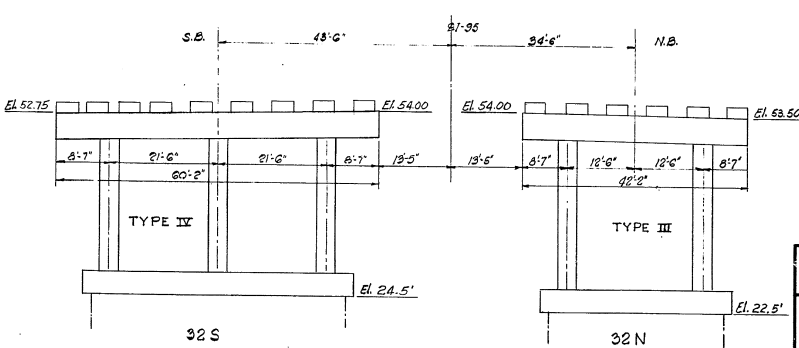






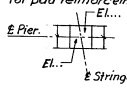


PIER 31



PIER 32

NOTES:
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA7
For details of type I Rigid frame, see Dwg. SA26
For details of type III Rigid frame, see Dwg. SA27
For details of type IV Rigid frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 29, 30, 31, & 32

APPROVED BY: Dennis R. Hansen
BRIDGE ENGINEER — DATE 4-16-64

SCALE: 3/32 IN = 1FT
DATE: APRIL 1, 1964

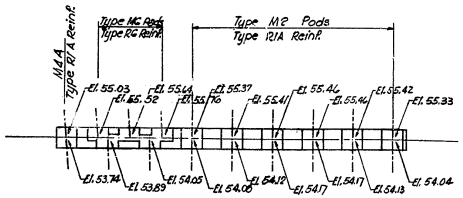
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

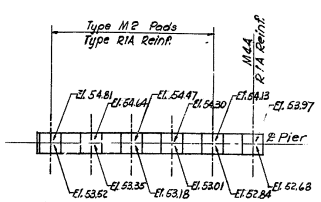
DWG. NO. SA13

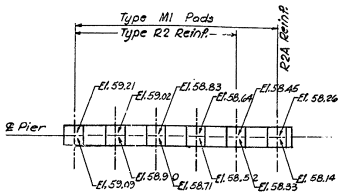
Drawn by E.N.
Checked by L.R.& H.B.L.

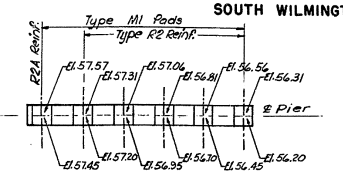
COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	48	215

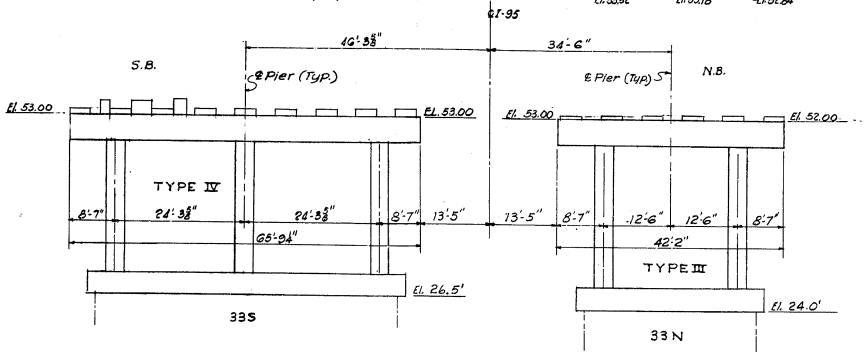
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



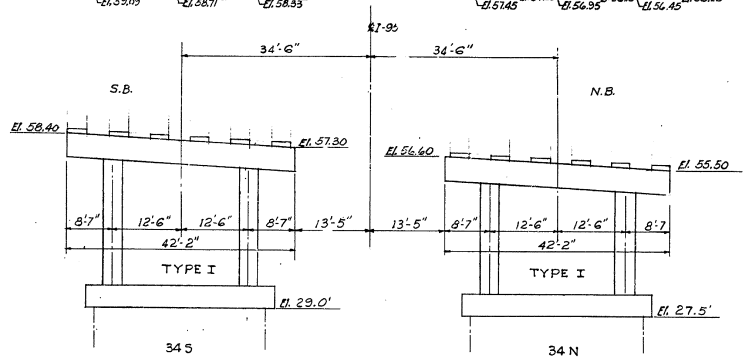




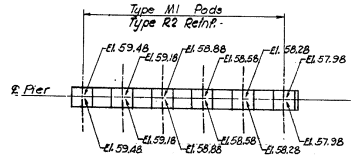


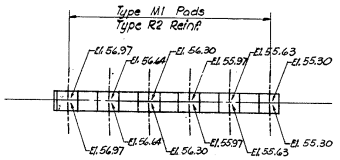


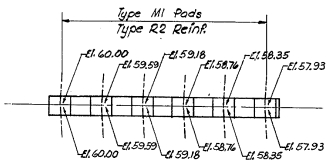
PIER 33

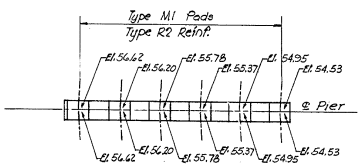


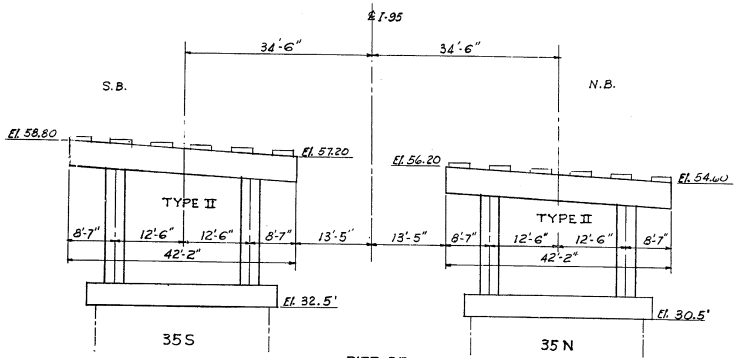
PIER 34



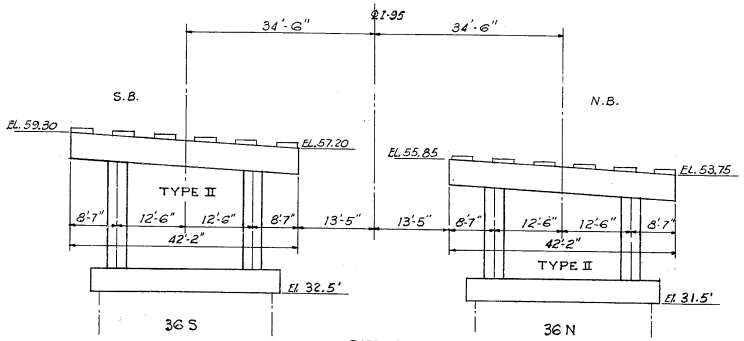






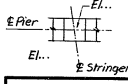


PIER 35



PIER 36

NOTES
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA8
For details of type I & II Rigid frame see Dwg. SA26
For details of type III Rigid frame, see Dwg. SA27
For details of type IV Rigid frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34.



El... Indicates final elevation of concrete pad. See general notes, Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 33, 34, 35, & 36

APPROVED BY: _____ BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 3/32 IN. = 1 FT

DATE: APRIL 1, 1964

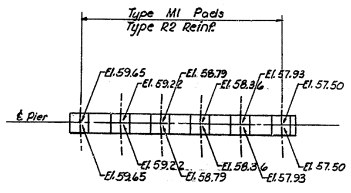
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

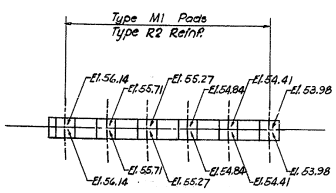
DWG. NO. SA14

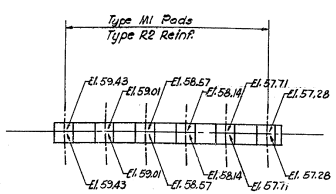
Drawn by B.N.
Checked by L.R.# H.B.L.

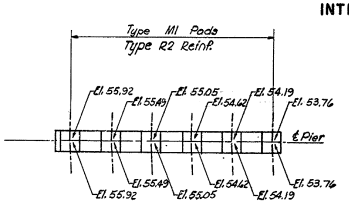
COUNTY	CONTRACT	R.R.I. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	49	215

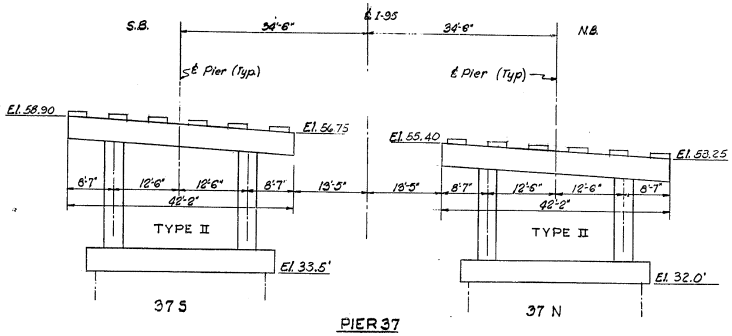
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



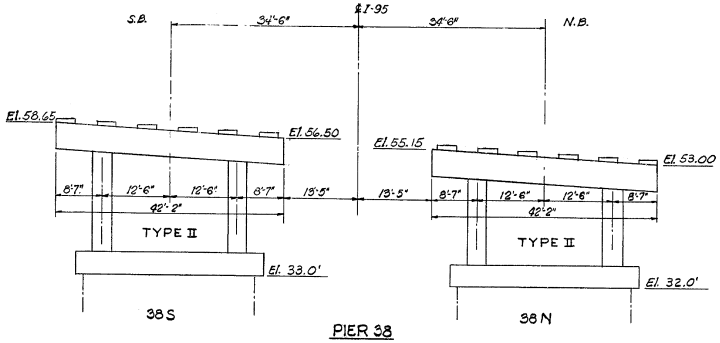




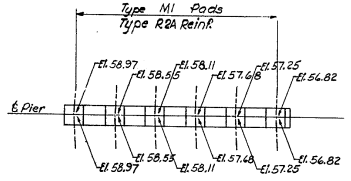


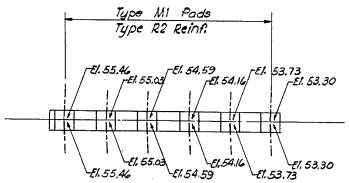


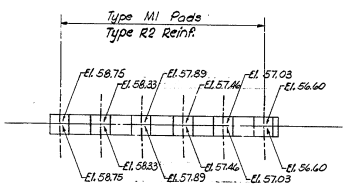
PIER 37

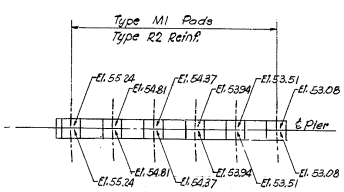


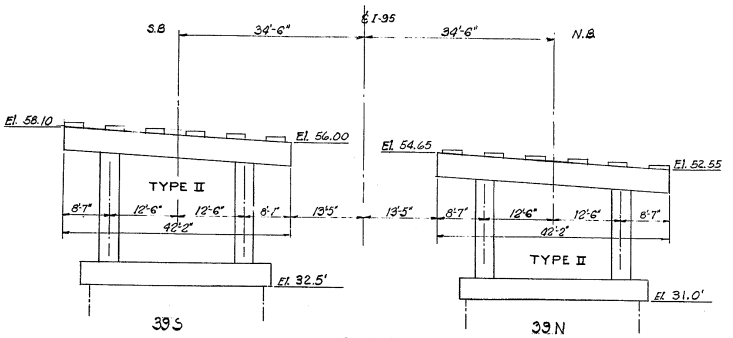
PIER 38



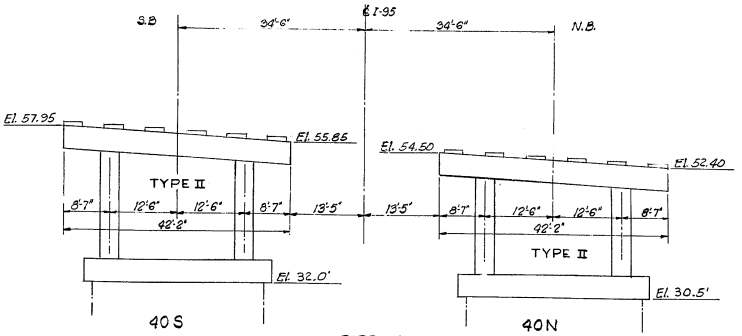






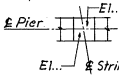


PIER 39



PIER 40

NOTES:
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA8
For details of type III Rigid frame, see Dwg. SA27
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34.



El... indicates final elevation of concrete pad. See general notes, Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 37, 38, 39, & 40

APPROVED BY: T. Dennis O'Rourke
BRIDGE ENGINEER
4-16-64
DATE

SCALE: 3/32 IN = 1 FT.
DATE: APRIL 1, 1964

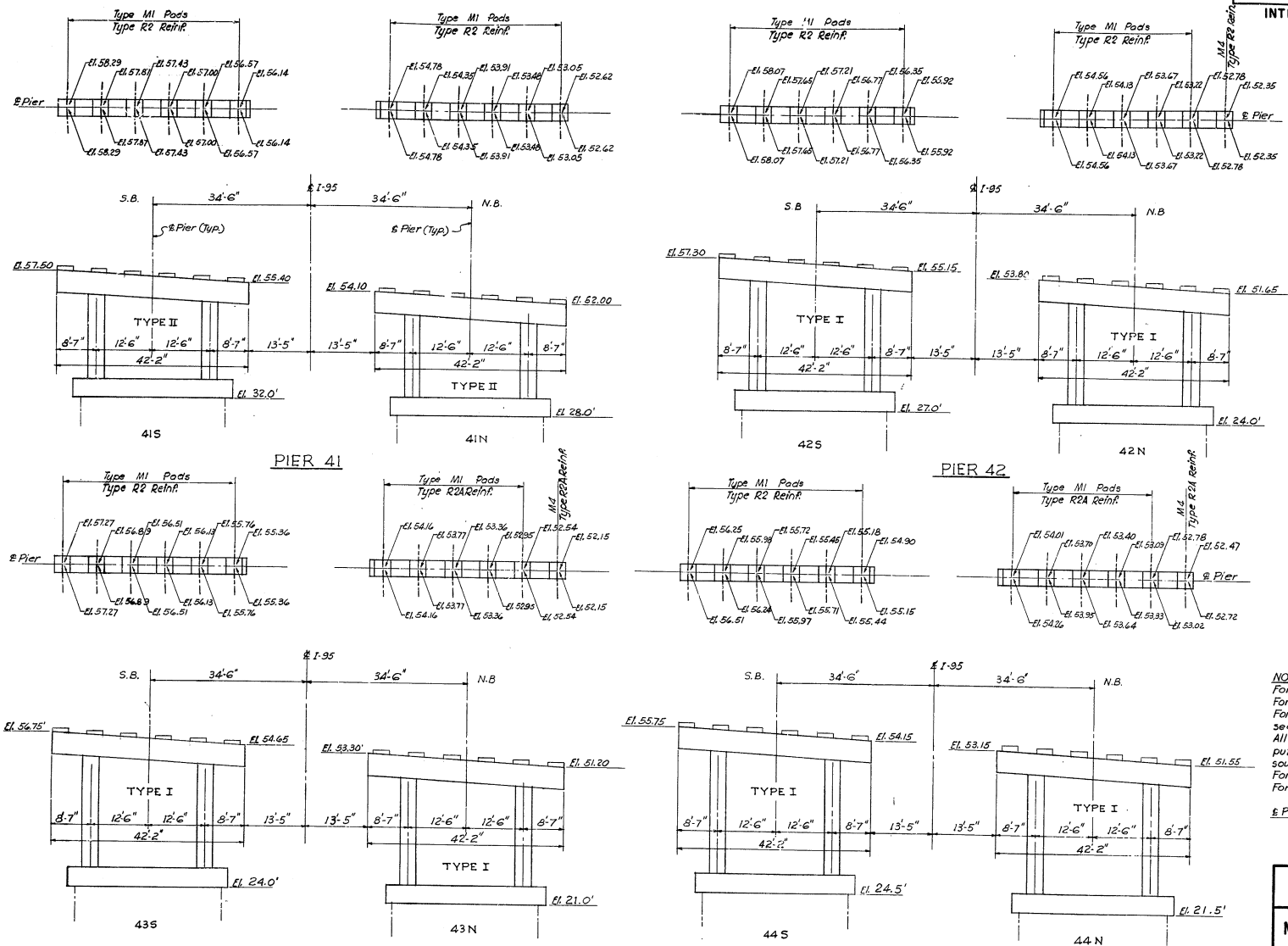
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA15

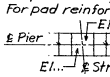
Drawn by E.N.
Checked by L.R.& H.B.L.

COUNTY	CONTRACT	R.R.& RES. No.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	50	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA9
For details of types I & II Rigid frame, see Dwg. SA26
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

Drawn by E.N.
Checked by L.R.& H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 41, 42, 43, & 44

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

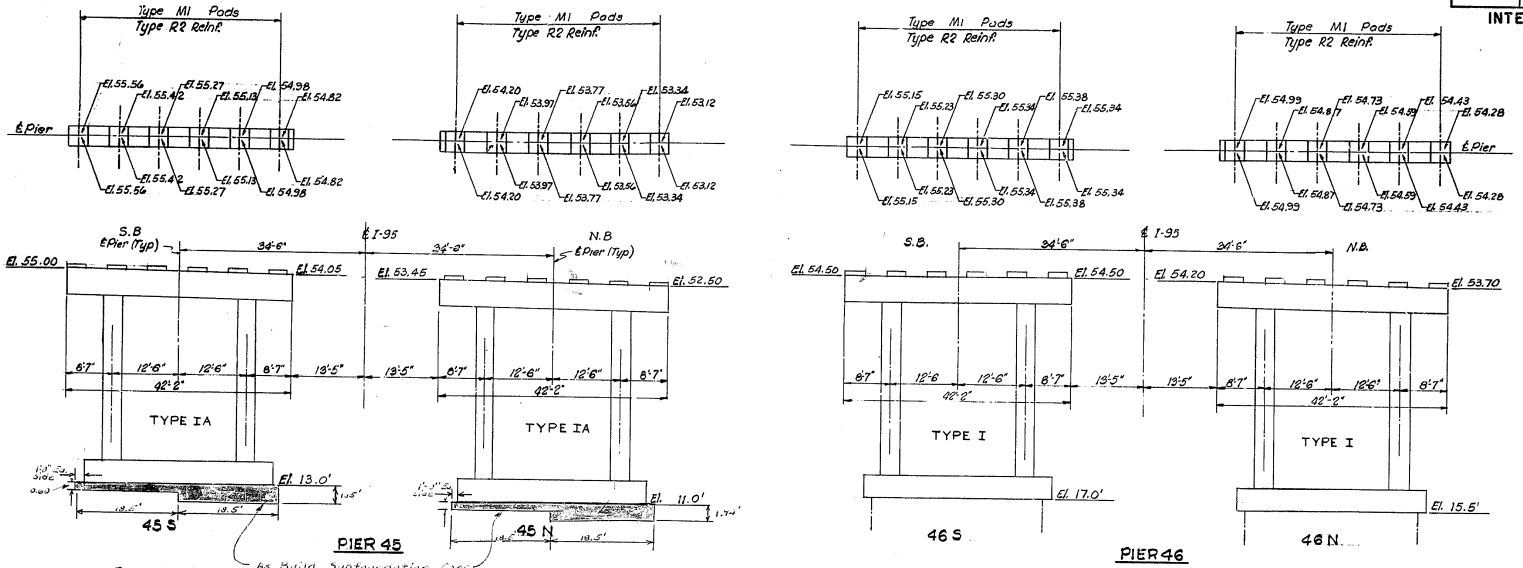
SCALE: 3/32 IN.=1FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

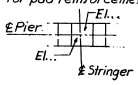
DWG. NO. SA16

COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	51	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For Foundation plan, see Dwg. SA9
For details type I & IA Rigid frame see Dwg. SA26
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El...indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 45, 46, 47, & 48

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 3/32 IN=1FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA17

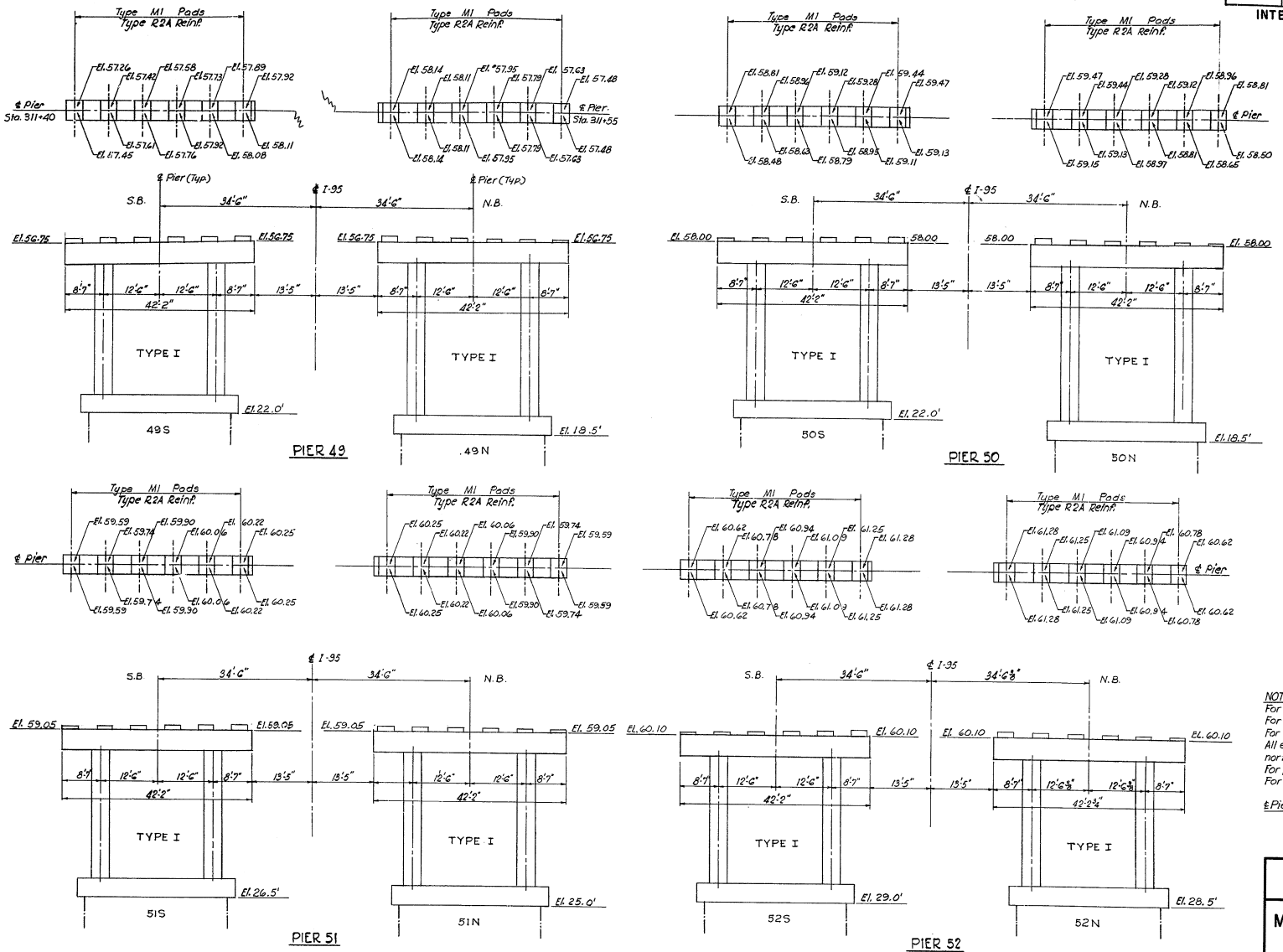
Drawn by M.B.
Checked by L.R. & H.B.L.

As Built Plans - HRD 1-7-67

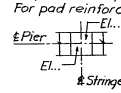
D C B A

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	52	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA10
For details of type I Rigid frame, see Dwg. SA26
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 49, 50, 51, & 52

APPROVED BY: Johnnie P. Pearson Jr.
BRIDGE ENGINEER
4-14-64
DATE

SCALE: 3/32 IN = 1 FT
DATE: APRIL 1, 1964

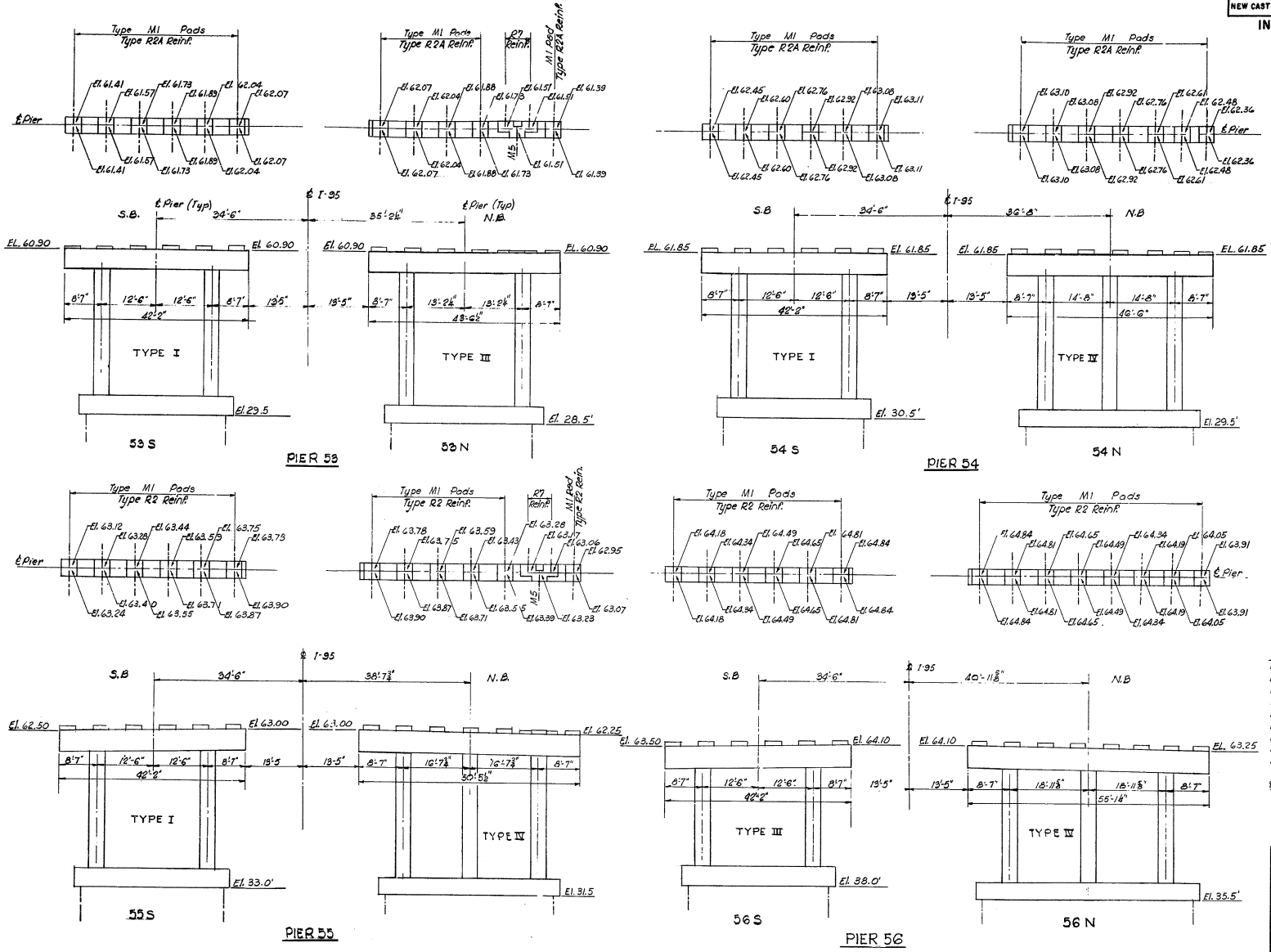
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA18

Drawn by E.N.
Checked by L.R.& H.B.L.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	53	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA10
For details of type I Rigid Frame, see Dwg. SA26
For details of type III Rigid Frame, see Dwg. SA27
For details of type IV Rigid Frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 53, 54, 55, & 56

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 3/32 IN = 1FT
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

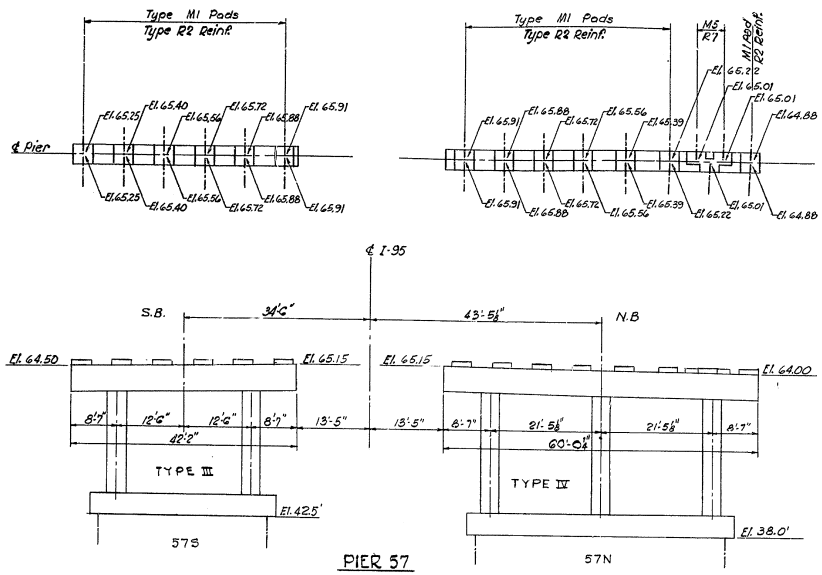
DWG. NO. SA19

Drawn by M.B.
Checked by L.R. & H.B.L.

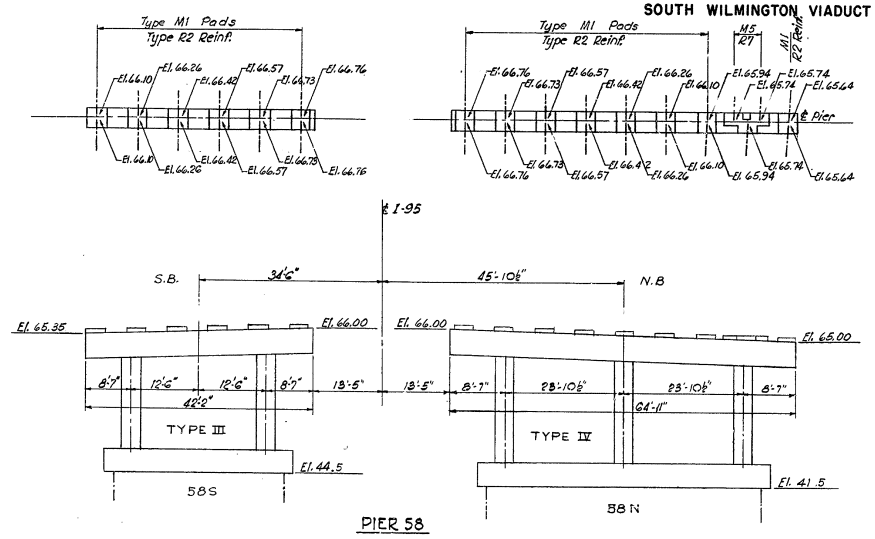
55N

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	54	215

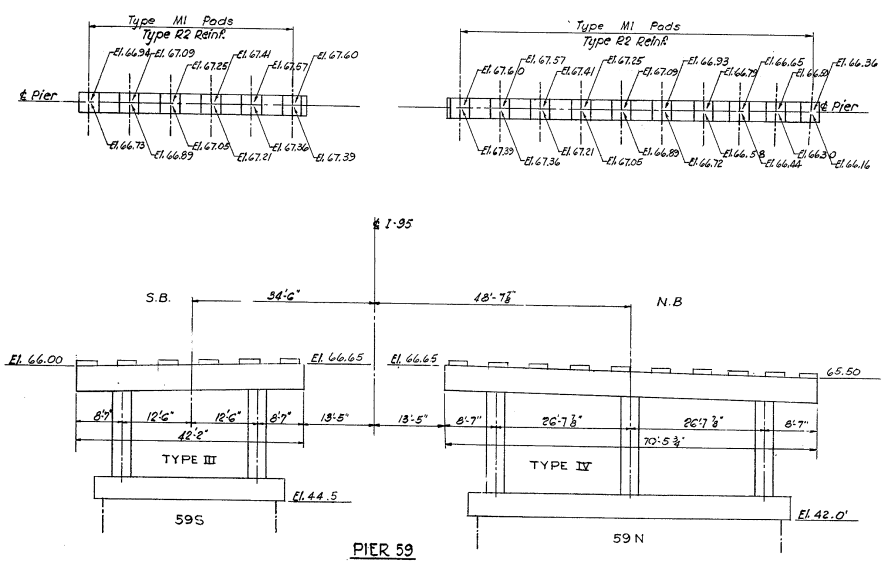
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PIER 57

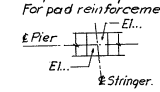


PIER 58



PIER 59

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA10
For details of type III rigid frame, see Dwg. SA27
For details of type IV rigid frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final elevation of concrete pad. see general notes Dwg. SA2 for bush hammering.

Drawn by M.B.
Checked by L.R. & H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 57, 58, & 59

APPROVED BY: Thomas L. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

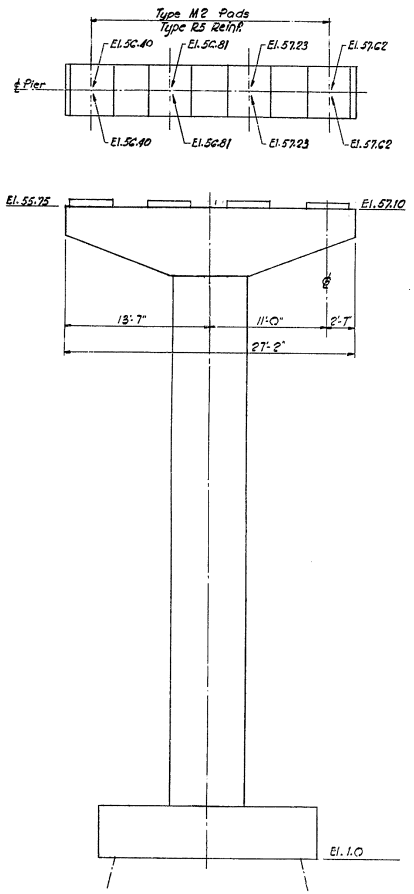
SCALE: 3/32 IN.=1FT — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

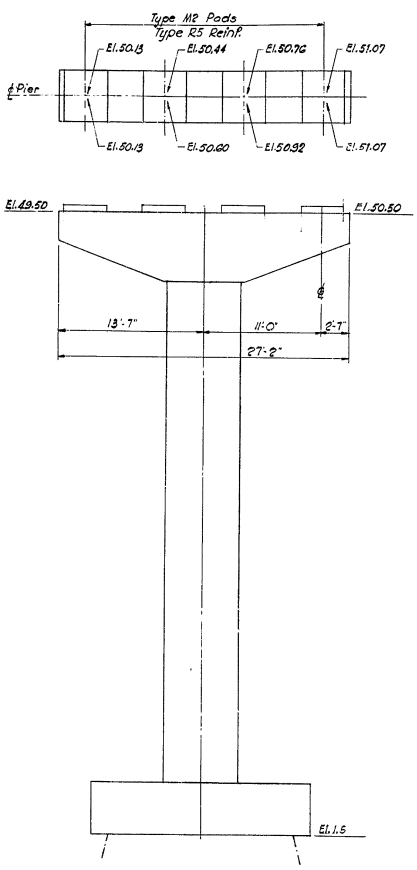
DWG. NO. SA20

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	55	215

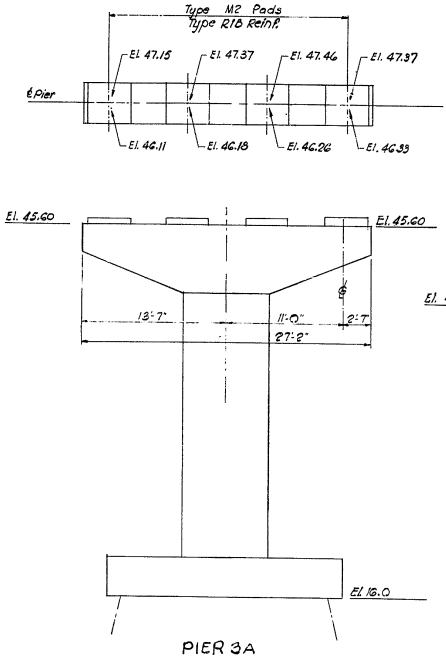
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



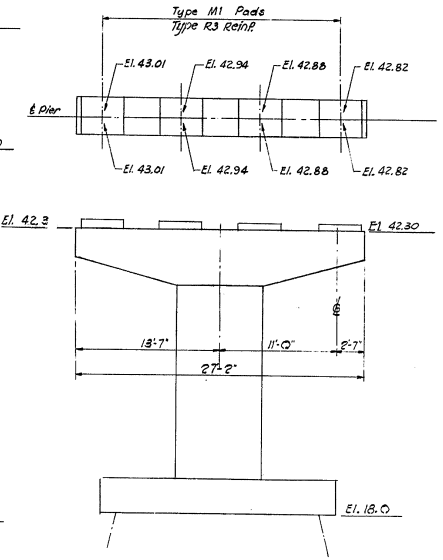
PIER 1A



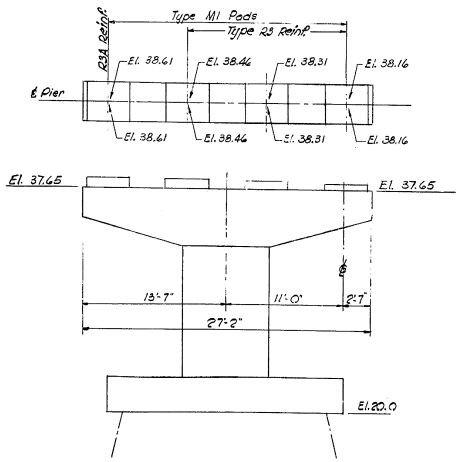
PIER 2A



PIER 3A

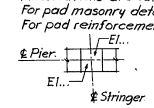


PIER 4A



PIER 5A

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA6 & SA7
For details of piers 1A & 2A, see Dwg. SA29
For details of piers 3A, 4A & 5A, see Dwg. SA31
All elevations are taken looking upstation.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final bush hammered elevation of top of concrete pad under bearing plate.

Drawn by M.B.
Checked by L.R. & H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

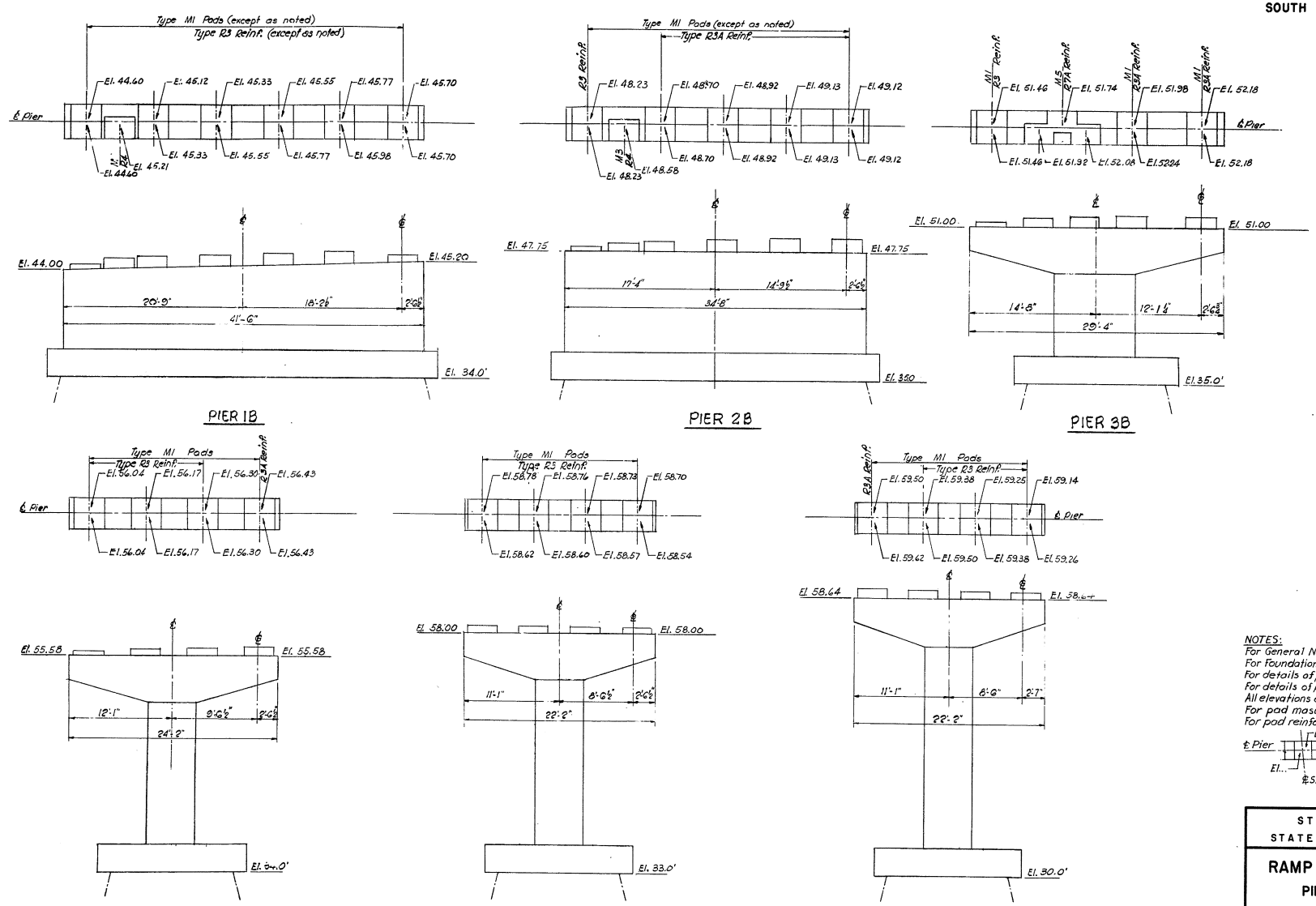
RAMP A PIER ELEVATIONS
PIERS 1A THRU 5A

APPROVED BY: Johnnie L. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

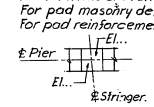
SCALE: 3/16 IN = 1 FT
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA21

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	56	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg SA8
For details of piers 1B, 2B & 3B, see Dwg. SA30
For details of piers 4B, 5B & 6B, see Dwg. SA31
All elevations are taken looking upstation
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA4



El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

Drawn by M.B.
Checked by L.R. & H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

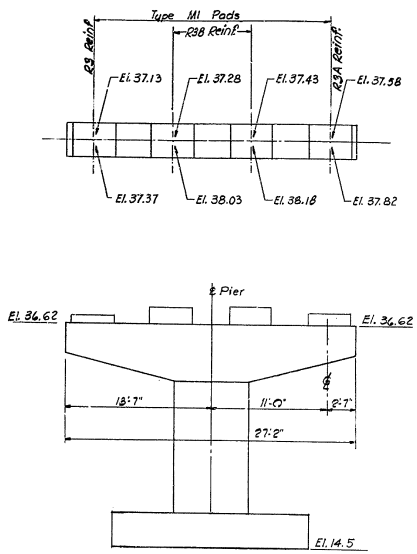
RAMP B PIER ELEVATIONS
PIERS 1B THRU 6B

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

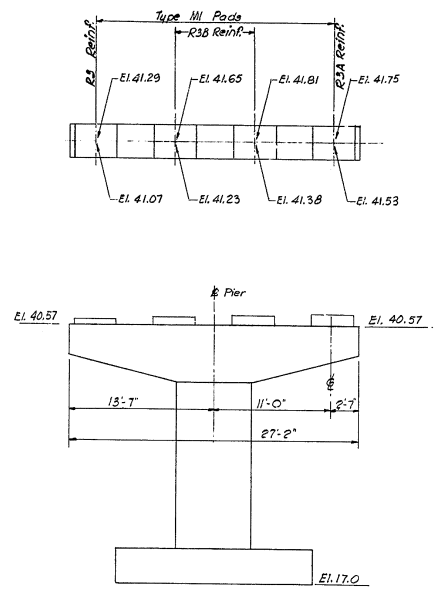
SCALE: 3/16 IN.=1 FT.
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA22

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	57	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

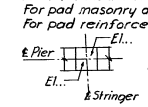


PIER 1C



PIER 2C

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA9
For details of piers, see Dwg. SA31
All elevations are taken looking upstation
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final bush-hammered elevation of concrete pad under bearing plate.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP C PIER ELEVATIONS
PIERS 1C & 2C

APPROVED BY: Johnnie L. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 3/16 IN.=1 FT. — DATE: APRIL 1, 1964

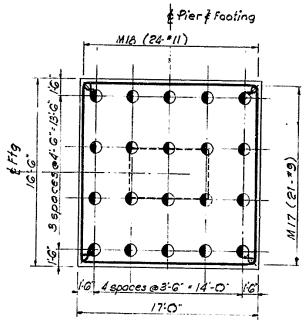
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA23

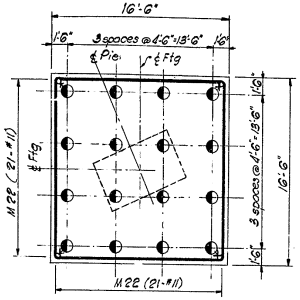
Drawn by M.B.
Checked by L.R. & H.B.L.

COUNTY	CONTRACT	R.R.S. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	58	215

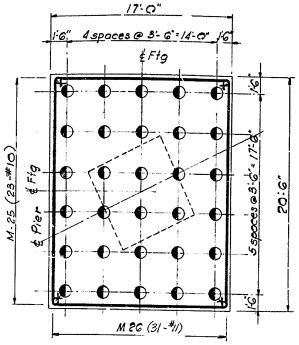
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



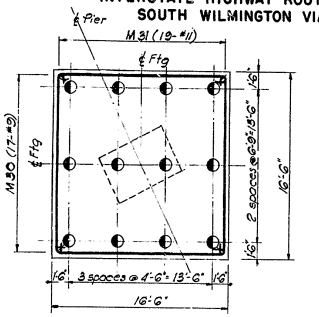
F-1



F-4



F-7



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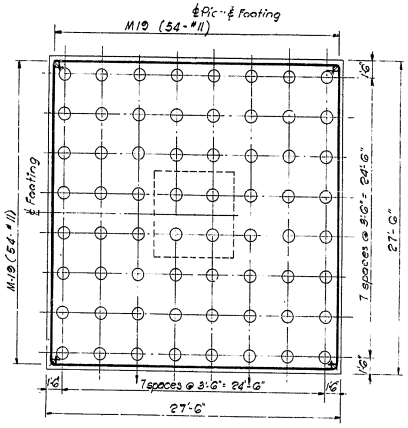
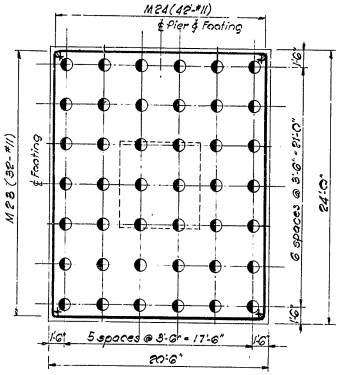


F-2



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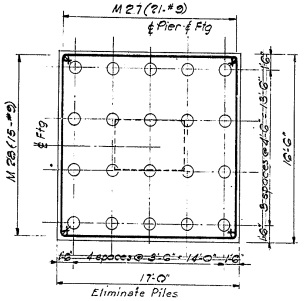

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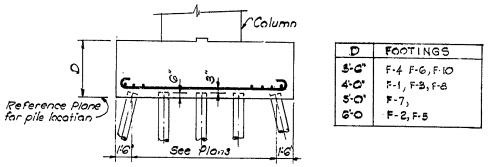
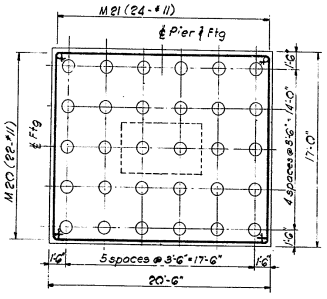


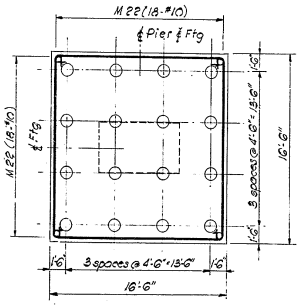
D	FOOTINGS
5'-6"	F-4 F-6, F-10
4'-0"	F-1, F-3, F-8
5'-0"	F-7,
6'-0	F-2, F-5

TYPICAL SECTION

LEGEND
○ - denotes 40 Ton Pile
◐ - denotes 80 Ton Pile

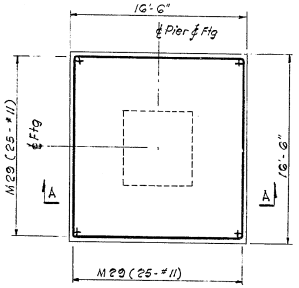


F-3

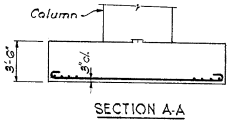


F-6

Revision:
Eliminate Piles in Pier Footing F-8
See T.A.M.S. letter of 12-29-64.
A.W.R. 1-8-65.



F-9



SECTION A-A

NOTES:
For General Notes, see Dwg. SA2
For location of battered piles, see foundation plan Dwg. SA6.
For details of shafts, see Dwg. SA25
For details of piles, see Dwg. SA46

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE
PIERS 23 THRU 26
FOOTINGS

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

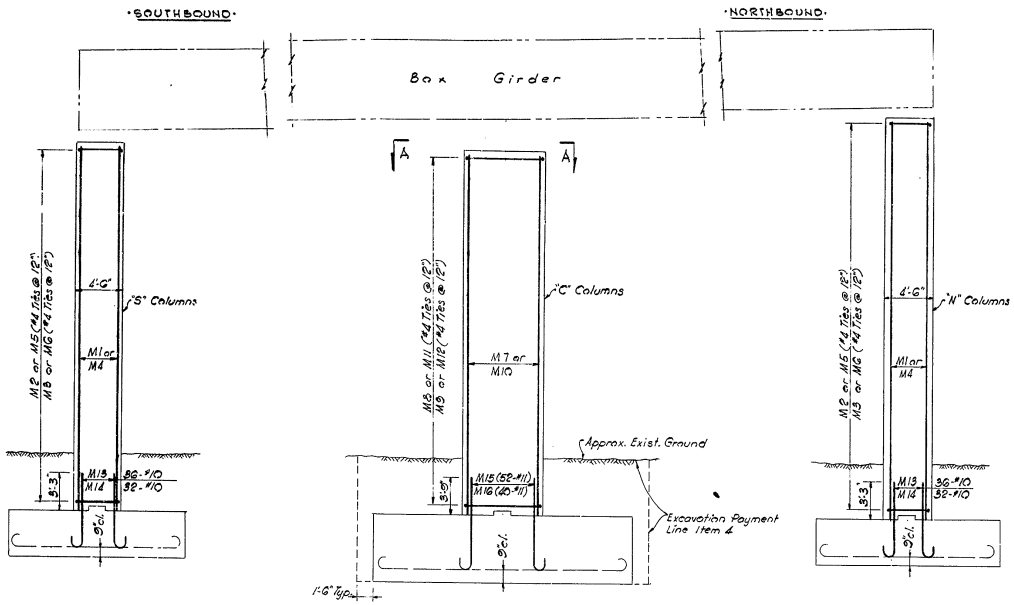
SCALE: 3/16 IN = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

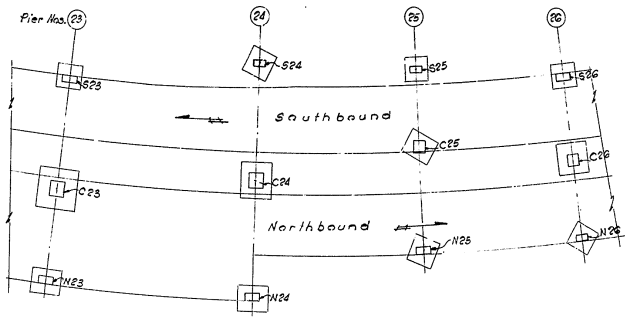
DWG. NO. SA24

COUNTY	CONTRACT	F. A. P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	59	215

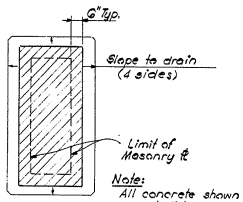
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



ELEVATION
SCALE $\frac{3}{32}$ IN. = 1 FT.

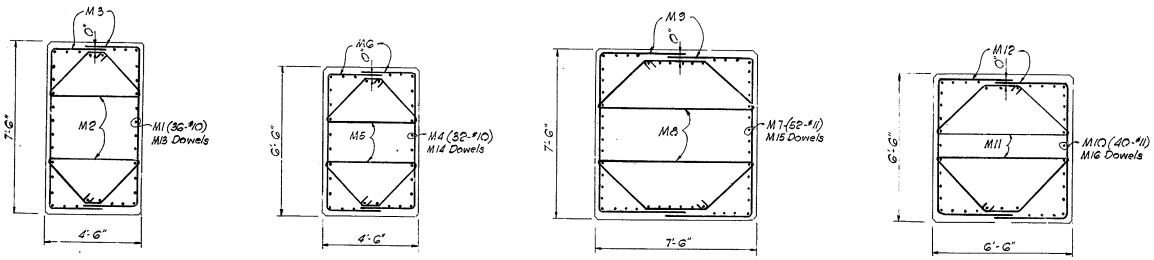


KEY PLAN
NOT TO SCALE



Note:
All concrete shown in shaded area shall be poured 6" higher than bearing elevations shown, then bushhammered to exact elevations.

SECTION A-A (TYPICAL ALL COLS.)
NOT TO SCALE



S23, S24, S25
N23, N24, N25

S26 & N26

C23, C24, & C25

C26

TYPICAL COLUMN SECTIONS
SCALE $\frac{3}{32}$ IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA6
For details of footings, see Dwg. SA24
For details of shoes and anchor bolts, see Dwg. SA73
Anchor bolts to be placed before pouring concrete.

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE
PIERS 23 THRU 26
SHAFTS

APPROVED BY: _____ BRIDGE ENGINEER
4-14-64 DATE

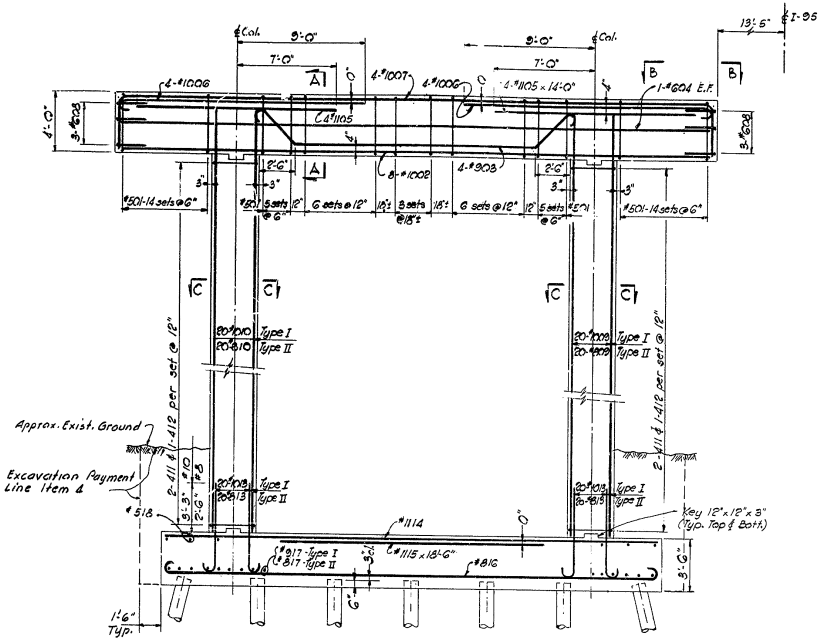
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA25

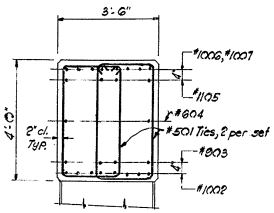
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	95-03-004	2	DEL.	I-95-2(12)	'64	60	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

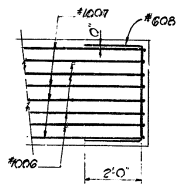


ELEVATION - TYPES I & II
SCALE ½ IN. = 1 FT.

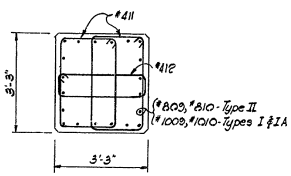
Note: For pier dimensions, see Pier Elevations.



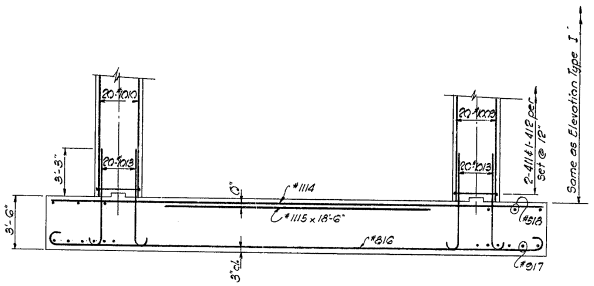
SECTION A-A
SCALE ½ IN. = 1 FT.



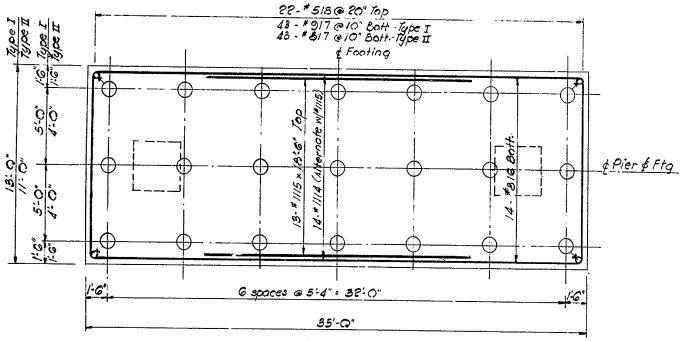
PLAN B-B
SCALE ½ IN. = 1 FT.



SECTION C-C
SCALE ½ IN. = 1 FT.

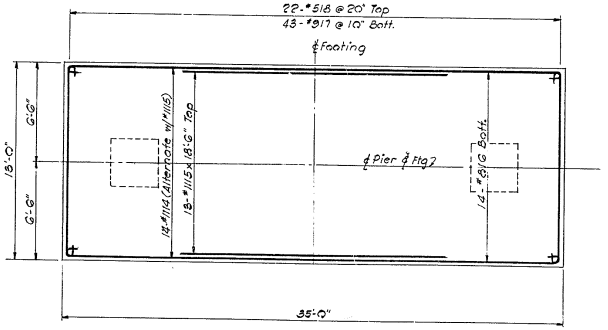


ELEVATION - TYPE IA
SCALE ½ IN. = 1 FT.



FOOTING PLAN - TYPES I & II
SCALE ½ IN. = 1 FT.

Note: All piles are 40T piles.



FOOTING PLAN - TYPE IA
SCALE ½ IN. = 1 FT.
PIER 45

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans, see Dwgs. SA6 thru SA10
For Framing Plans, see Dwgs. SA54 thru SA58
For elevations of piers denoting types, see Dwgs. SA11 thru SA20
For details of shoes & anchor bolts, see Dwg. SA74
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER
TWO COLUMN RIGID FRAME
TYPES I, IA & II

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

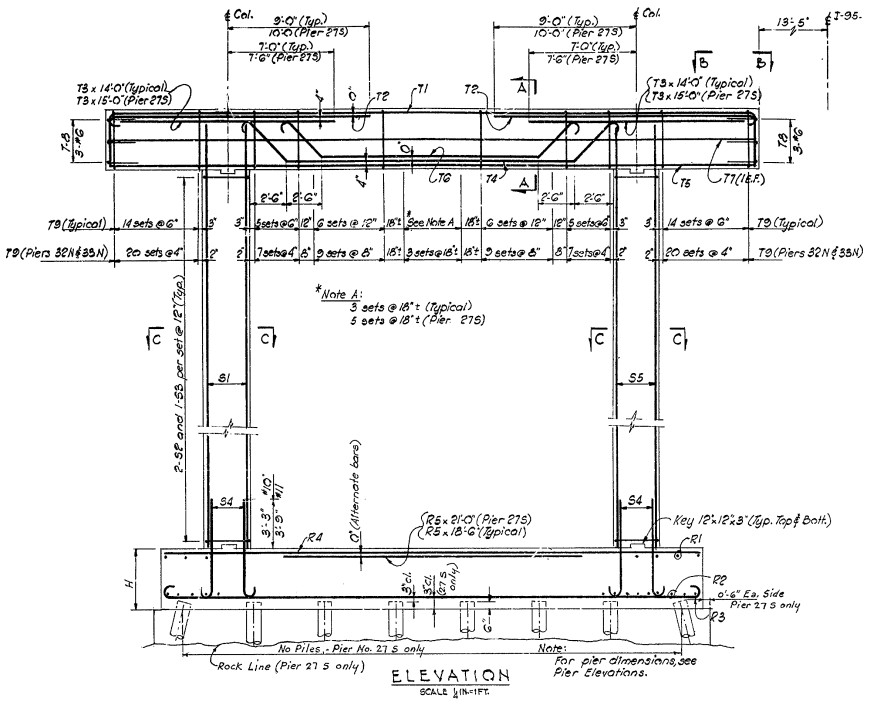
SCALE: AS NOTED
DATE: APRIL, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

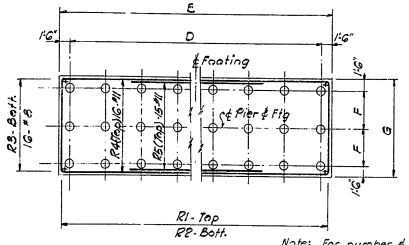
DWG. NO. SA 26

COUNTY	CONTRACT	P.R.A. REG. I-95	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	61	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

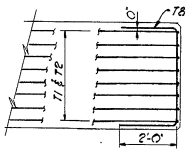


ELEVATION
SCALE ½IN.=1FT.

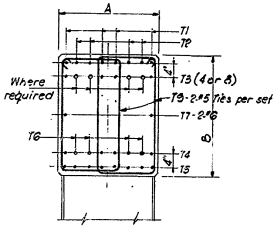


FOOTING PLAN
SCALE ⅛IN.=1FT.

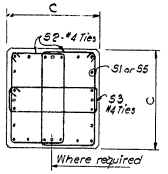
Note: For number & direction of batter piles, see Foundation Plans.
All Piles are 60T piles.



PLAN B-B
SCALE ½IN.=1FT.



SECTION A-A
SCALE ½IN.=1FT.



SECTION C-C
SCALE ½IN.=1FT.

PIER NO.	A	B	C	D	E	F	G	H	R1	R2	S1, S5	S4	T1	T2	T3	T4	T5	T6
27S	3'-9"	4'-0"	3'-6"	~~7 spcs @ 6'-0" = 36'-0"~~ 14 Piles	36'-0"	~~6'-6"~~ 6'-6"	10'-0"	4'-0"	26-#5 @ 18"	51-#8 @ 8"	24-#11	24-#11	4-#11	4-#11	8-#10	4-#11	8-#11	4-#11
27N	3'-9"	4'-0"	3'-6"	6 spcs @ 5'-4" = 32'-0"	35'-0"	6'-6"	10'-0"	4'-0"	24-#5 @ 18"	47-#8 @ 8"	24-#11	24-#11	4-#10	4-#10	4-#11	4-#9	8-#10	—
32N, 33N	3'-8"	4'-0"	3'-6"	6 spcs @ 4'-0" = 32'-0"	35'-0"	5'-0"	13'-0"	4'-0"	27-#5 @ 16"	53-#8 @ 8"	24-#11	24-#11	4-#11	4-#11	8-#11	4-#11	8-#11	—
58N	3'-6"	4'-0"	3'-3"	6 spcs @ 5'-4" = 32'-0"	35'-0"	5'-0"	15'-0"	5'-6"	22-#5 @ 20"	43-#8 @ 10"	20-#10	20-#10	4-#11	4-#11	4-#11	4-#10	8-#11	—
56, 58S, 59S	3'-6"	4'-0"	3'-3"	7 spcs @ 4'-7½" = 32'-0"	35'-0"	5'-0"	15'-0"	5'-6"	24-#5 @ 18"	47-#8 @ 9"	20-#10	20-#10	4-#11	4-#11	4-#11	4-#10	8-#10	—
57S	3'-6"	4'-0"	3'-3"	7 spcs @ 4'-7½" = 32'-0"	35'-0"	5'-0"	15'-0"	5'-6"	24-#5 @ 18"	47-#8 @ 9"	20-#10	20-#10	4-#11	4-#11	4-#11	4-#10	8-#10	—

Revision:
Eliminate Piles in Pier Footings 27S
See T.A.M.S. letter of 12-24-64.
A.W.R. 1-8-65

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans, see Dwgs. SA6 thru SA10
For Framing Plans, see Dwgs SA54 thru SA58
For elevations of piers denoting types, see Dwgs. SA11 thru SA20
For details of shoes and anchor bolts, see Dwg. SA74
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIERS
TWO COLUMN RIGID FRAME
TYPE III

APPROVED BY: Thomas D. Heavey Jr. 4-16-64
BRIDGE ENGINEER — DATE

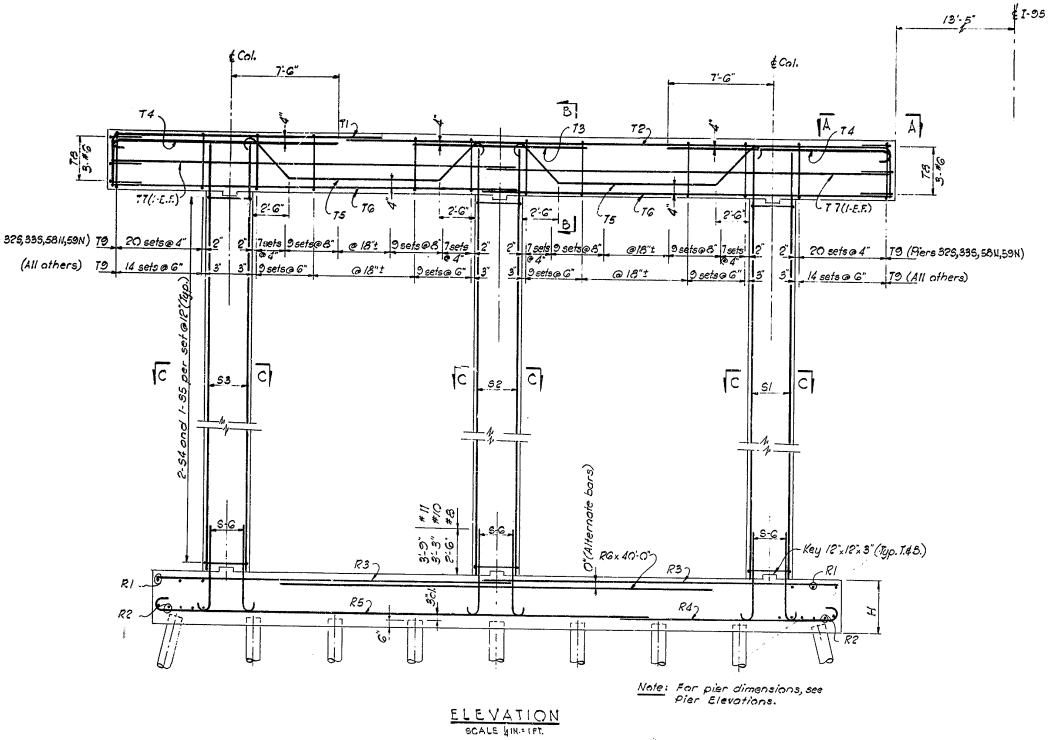
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA27

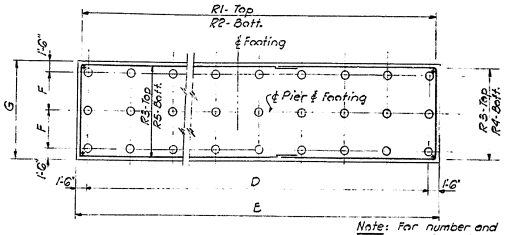
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	62	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



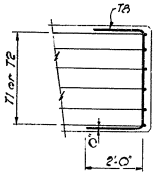
ELEVATION
SCALE ¼IN.=1FT.

Note: For pier dimensions, see Pier Elevations.

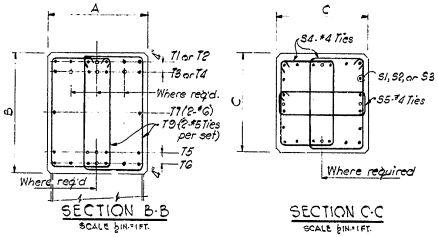


FOOTING PLAN
SCALE ⅛IN.=1FT.

Note: For number and direction of batter piles, see Foundation Plans. All piles are 40T piles.



PLAN A-A
SCALE ⅛IN.=1FT.



SECTION B-B
SCALE ⅛IN.=1FT.

SECTION C-C
SCALE ⅛IN.=1FT.

PIER NOS.	A	B	C	D	E	F	G	H	R1	R2	R3	R4	R5	RG	S1,S2,S3	SG	T1,T2	T3	T4	T5	T6
28S,29S	5'-6"	4'-0"	3'-3"	7 spcs @ 5'-6" = 38'-6"	41'-6"	5'-0"	15'-0"	5'-6"	28-#5 @ 20"	51-#9 @ 10"	27-#9	14-#9	14-#9	—	20-#8	20-#8	G-#10	4-#9x10'-0"	G-#11	4-#9	G-#10
30S,31S,57N	5'-6"		3'-3"	8 spcs @ 6'-0" = 48'-0"	51'-0"	5'-0"	15'-0"	5'-6"	31-#5 @ 20"	61-#9 @ 10"	27-#10	14-#10	14-#10	—	20-#10	20-#10	G-#10	6-#11x12'-0"	G-#11	4-#9	G-#11
32S,33S	5'-9"		3'-6"	10 spcs @ 5'-6" = 55'-0"	58'-0"	5'-0"	15'-0"	6'-0"	36-#5 @ 20"	71-#9 @ 10"	14-#11	14-#11	14-#11	13-#11	24-#11	24-#11	7-#11	7-#11x12'-0"	7-#11	5-#9	7-#11
54N,55N	5'-6"		3'-3"	7 spcs @ 5'-6" = 38'-6"	41'-6"	5'-0"	15'-0"	5'-6"	28-#5 @ 20"	51-#9 @ 10"	27-#9	14-#9	14-#9	—	20-#8	20-#8	G-#10	4-#9x10'-0"	G-#11	4-#9	G-#10
56N	5'-6"		3'-3"	8 spcs @ 6'-0" = 48'-0"	51'-0"	5'-0"	15'-0"	5'-6"	31-#5 @ 20"	61-#9 @ 10"	27-#10	14-#10	14-#10	—	20-#10	20-#10	G-#10	6-#11x12'-0"	G-#11	4-#9	G-#11
58N,58N	5'-6"	4'-0"	3'-3"	9 spcs @ 6'-6" = 58'-6"	61'-6"	5'-0"	18'-0"	4'-0"	37-#5 @ 20"	73-#9 @ 10"	14-#11	14-#11	14-#11	13-#11	20-#11	20-#11	7-#11	7-#11x12'-0"	7-#11	5-#9	7-#11

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans, see Dwgs. SA6 thru SA10
For Framing Plans, see Dwgs. SA54 thru SA58
For elevations of piers denoting types, see Dwgs. SA11 thru SA20
For details of shoes and anchor bolts, see Dwg. SA74
For pad masonry deta.-s, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.W.
Checked by L.E.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIERS
THREE COLUMN RIGID FRAME
TYPE IV

APPROVED BY: Delaware P. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

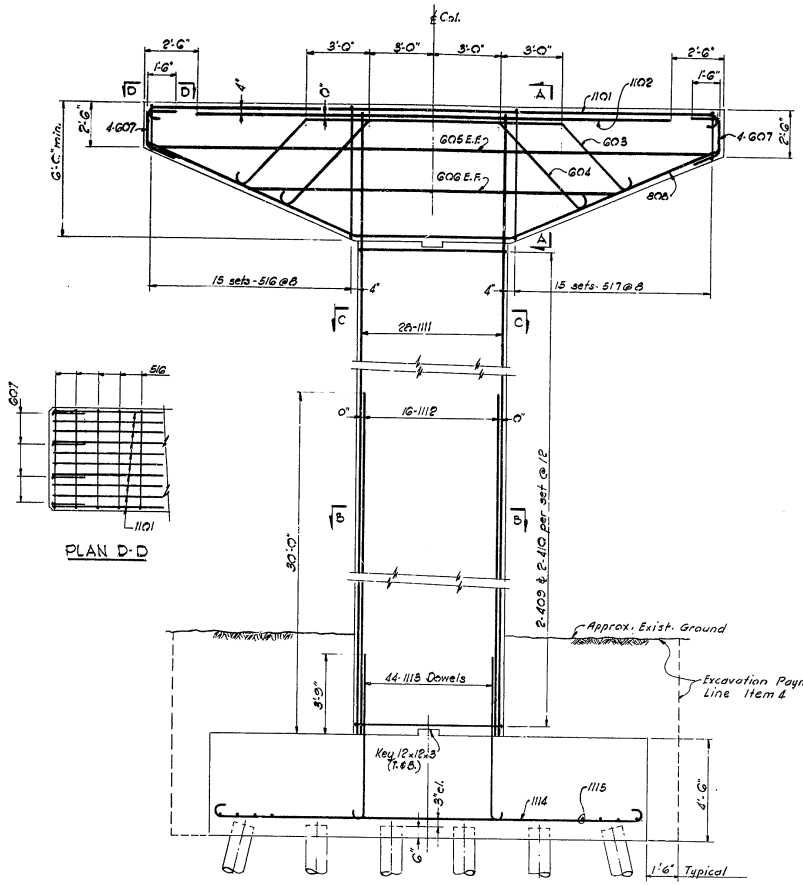
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

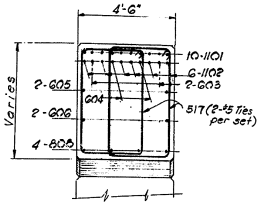
DWG. NO. SA28

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	63	215

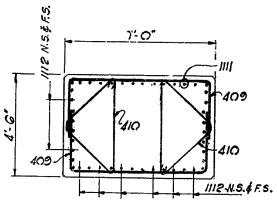
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



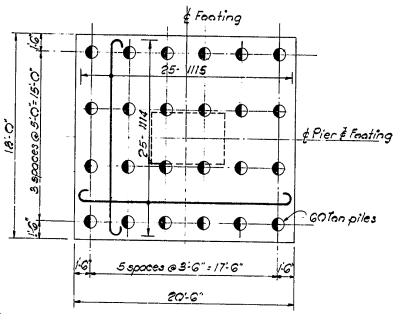
ELEVATION
SCALE ⅜ IN. = 1 FT.



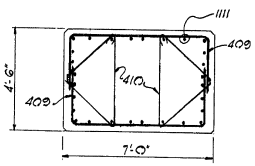
SECTION A-A
SCALE ⅜ IN. = 1 FT.



SECTION B-B
SCALE ⅜ IN. = 1 FT.



FOOTING PLAN
SCALE ⅜ IN. = 1 FT.



SECTION C-C
SCALE ⅜ IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For details of Ramp A piers 3A, 4 & 5A, see Dwg. SA31
For Foundation Plan, see Dwg. SA6
For elevations of piers, see Dwg. SA21
For details of shoes and anchor bolts, see Dwg. SA74
For Framing Plan, see Dwg SA55
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.V.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP A
PIERS 1A & 2A

APPROVED BY: J. Dennis O'Connor
BRIDGE ENGINEER
4-16-64
DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

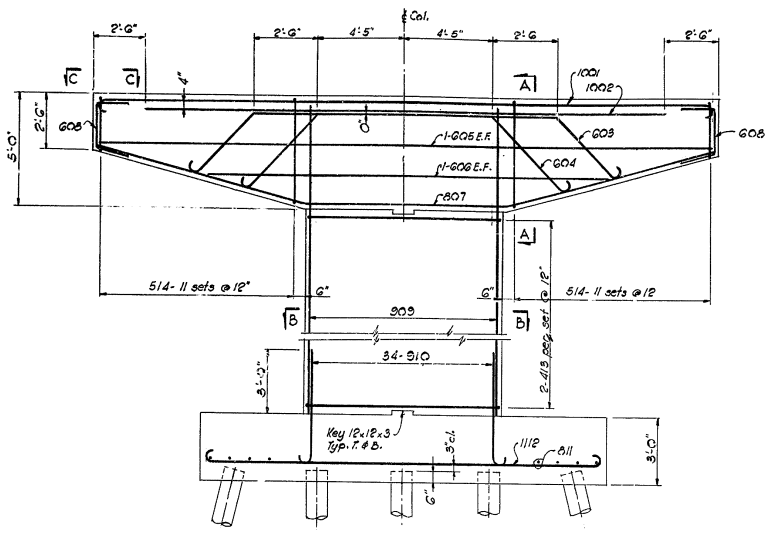
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA29

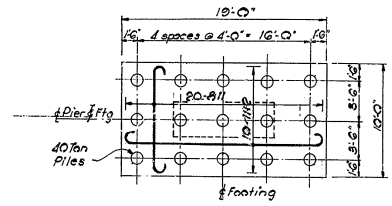
D C B A

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	64	215

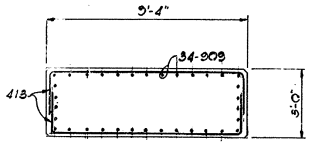
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



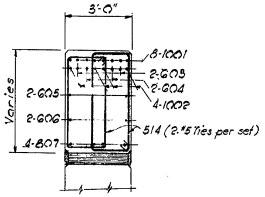
ELEVATION
SCALE 3/8 IN.=1 FT.



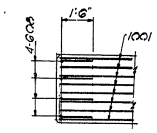
FOOTING PLAN
SCALE 3/16 IN.=1 FT.



SECTION B-B
SCALE 3/8 IN.=1 FT.

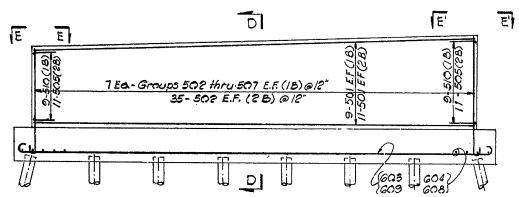


SECTION A-A
SCALE 3/8 IN.=1 FT.

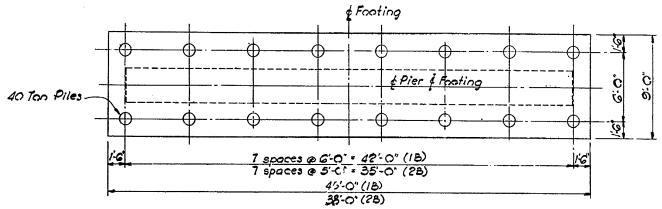


PLAN C-C

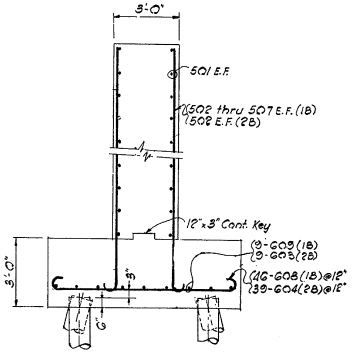
PIER 3B



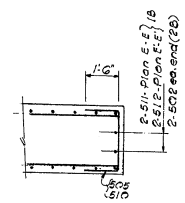
ELEVATION
SCALE 3/16 IN.=1 FT.



FOOTING PLAN
SCALE 3/16 IN.=1 FT.



SECTION D-D
SCALE 3/8 IN.=1 FT.



PLANS E-E & E'-E'
SCALE 3/8 IN.=1 FT.

PIERS 1B & 2B

NOTES:
For General Notes, see Dwg. SA2
For details of Ramp B piers 4B, 5B & 6B, see Dwg. SA31
For Foundation Plan, see Dwg. SA8
For elevation of piers, see Dwg. SA22
For details of shoes and anchor bolts, see Dwg. SA74
For Framing Plan, see Dwg. SA56
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B
PIERS 1B, 2B, & 3B

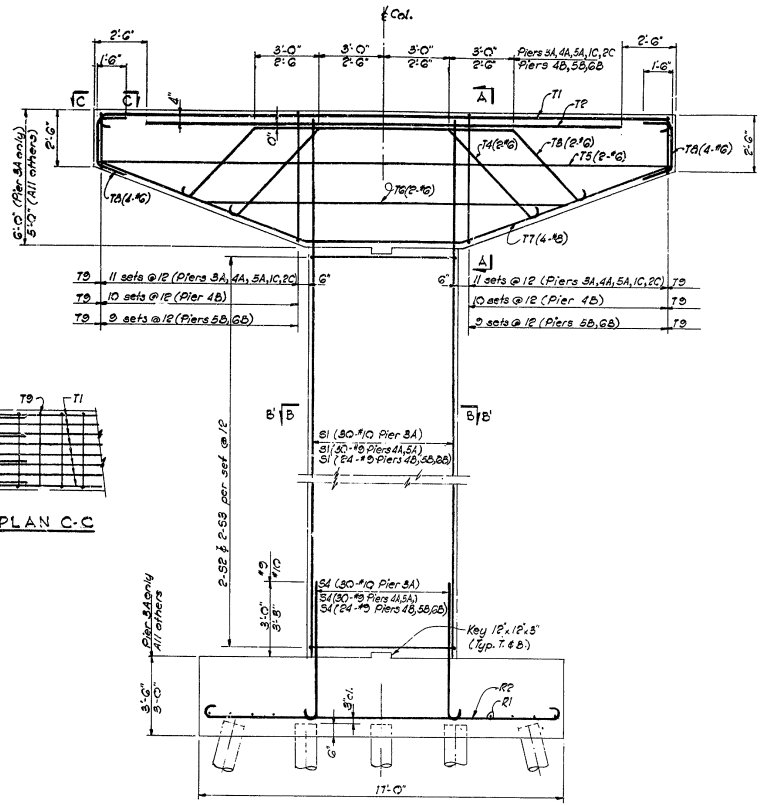
APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA30

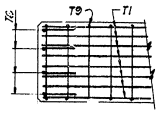
Drawn by S.W.
Checked by L.R.

COUNTY	CONTRACT	P.R.D. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	65	215

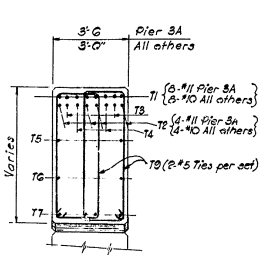
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



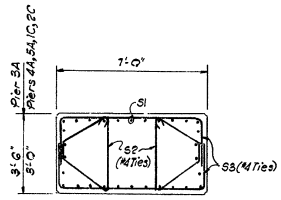
ELEVATION - PIERS 3A,4A,5A,4B,5B,6B
SCALE 3/8 IN. = 1 FT.



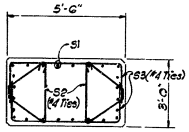
PLAN C-C



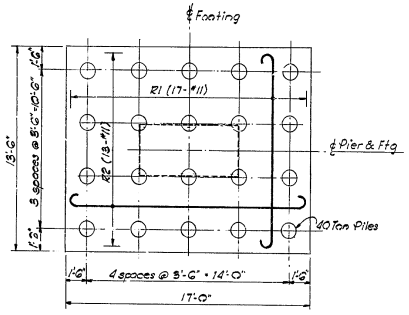
SECTION A-A
SCALE 3/8 IN. = 1 FT.



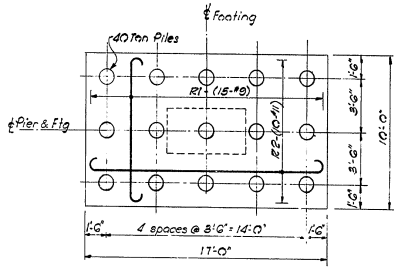
SECTION B-B
SCALE 3/8 IN. = 1 FT.
PIERS 3A,4A,5A,1C,2C



SECTION B'-B'
SCALE 3/8 IN. = 1 FT.
PIERS 4B,5B,6B ONLY

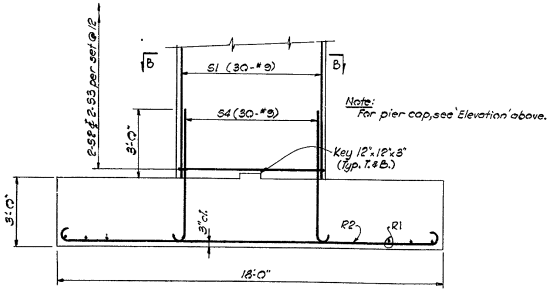


FOOTING PLAN
SCALE 1/4 IN. = 1 FT.
PIER 3A

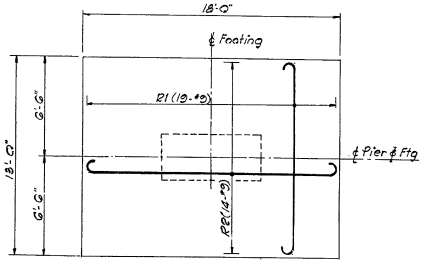


FOOTING PLAN
SCALE 1/4 IN. = 1 FT.
PIERS 4A,5A,4B,5B,6B

NOTES:
For General Notes, see Dwg. SA2
For details of Ramp A piers 1A & 2A, see Dwg. SA29
For details of Ramp B piers 1B, 2B & 3B, see Dwg. SA30
For Foundation Plans of Ramps A, B & C, see Dwgs. SA6 thru SA9
For elevation of ramp piers, see Dwgs. SA21, SA22 and SA23
For details of shoes and anchor bolts, see Dwg. SA24
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



ELEVATION - PIERS 1C, 2C
SCALE 3/8 IN. = 1 FT.



FOOTING PLAN
SCALE 1/4 IN. = 1 FT.
PIERS 1C, 2C

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMPS A, B & C
PIERS 3A, 4A & 5A
PIERS 4B, 5B & 6B
PIERS 1C & 2C

APPROVED BY: Johnnie O. Ramsey Jr. 4-14-64
BRIDGE ENGINEER — DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

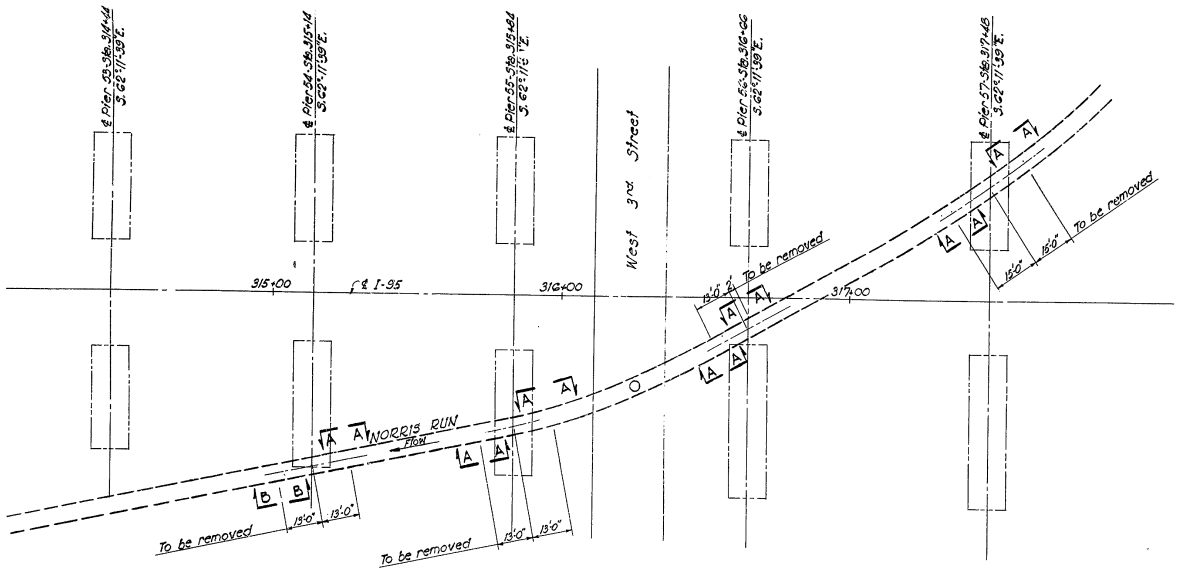
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA31

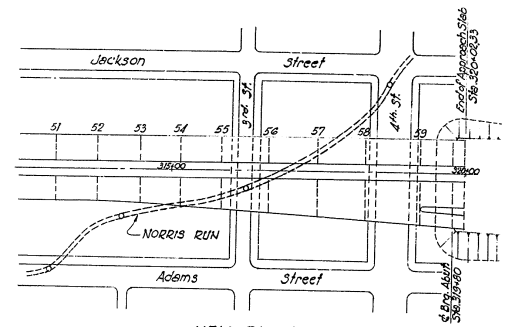
Drawn by S.W.
Checked by L.E.

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	66	215

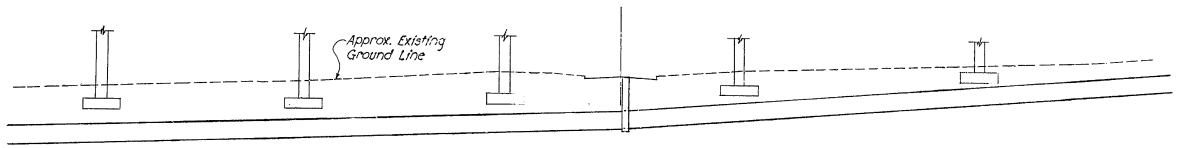
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



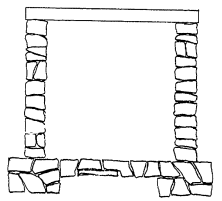
PLAN
SCALE: 1 IN = 20 FT.



KEY PLAN
SCALE: 1 IN = 100 FT.

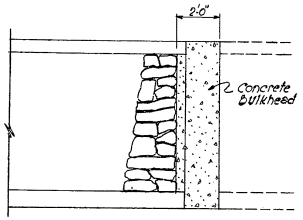


PROFILE
SCALE: 1 IN = 20 FT.

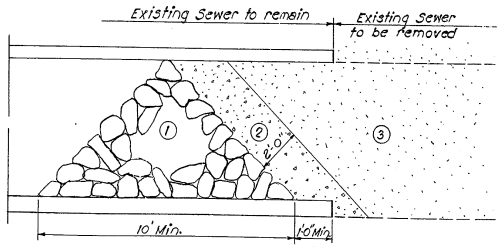


ASSUMED SEWER SECTION
SCALE: ⅜ IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans of mainline piers 53 thru 57, See Dwg. SA10.
For pier elevations of mainline piers 53 thru 57, see Dwgs. SA19 & SA20.
Norris Run Sewer is approximate as shown in location. Contractor to verify in field and notify engineer of any change required for the demolition length.



SECTION B-B
SCALE: ⅜ IN. = 1 FT.



SECTION A-A
TYPICAL
FOR AREAS WHERE NORRIS RUN SEWER WILL BE REMOVED
SCALE: ⅜ IN. = 1 FT.

① Stone (from demolished section of sewer) extending to full height and full width of remaining sewer.

② Sandy gravel or crushed stone meeting gradation requirements for Grading A, Select Borrow.

③ Sand with less than 50% passing No. 40 sieve and less than 10% passing No. 200 sieve. Sand backfill shall be compacted according to the requirements of backfilling for structure excavations as given in the Delaware State Highway Department Standard Specifications. Sand backfill is required up to elevation of the existing ground.

Drawn by R.G.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DEMOLITION
NORRIS RUN SEWER
PIERS 54N, 55N, 56N & 57S

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

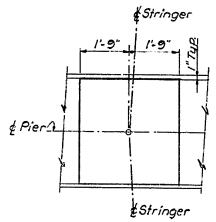
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

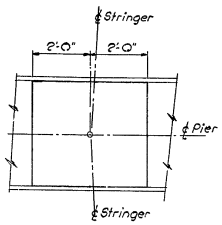
DWG. NO. SA32

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	67	215

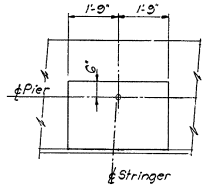
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



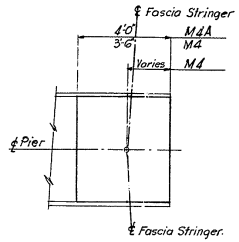
M 1



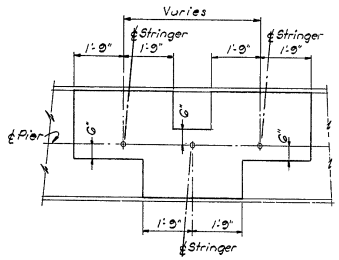
M 2



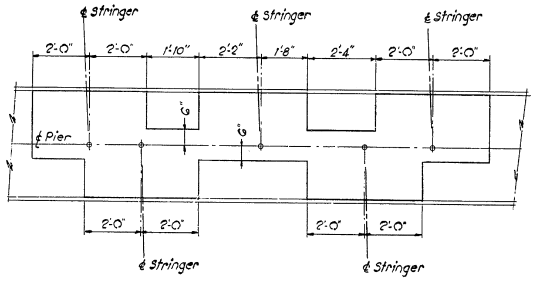
M 3



M4 & M4A



M 5



M 6

NOTES:
For General Notes, see Dwg. SA2
For reinforcement in pads, see Dwg. SA34
For location of pads, see elevations of piers Dwgs. SA11 thru SA23.

Drawn by R.G.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PADS
MASONRY

APPROVED BY: Johnnie L. Pearson, Jr.
BRIDGE ENGINEER — DATE 4-16-64

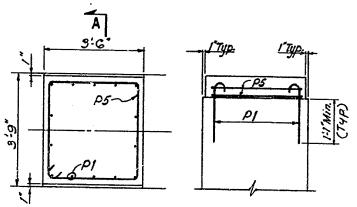
SCALE: 1/2 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

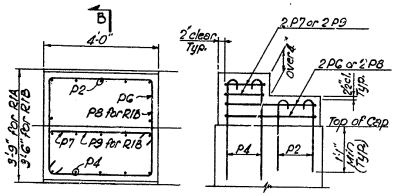
DWG. NO. SA33

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	68	215

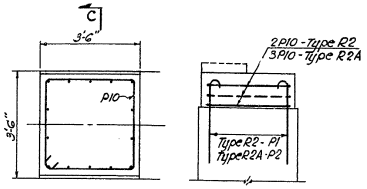
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



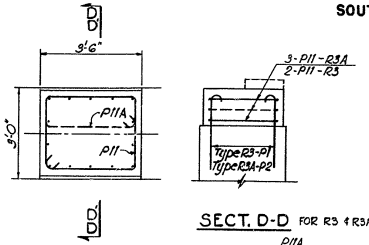
TYPE R1



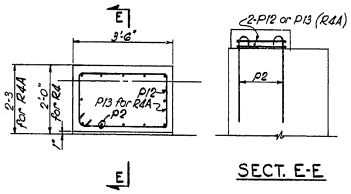
TYPE R1A, R1B



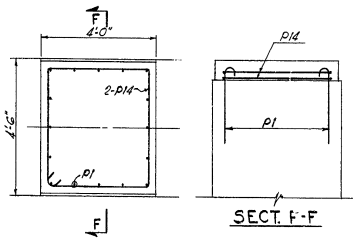
TYPE R2, R2A



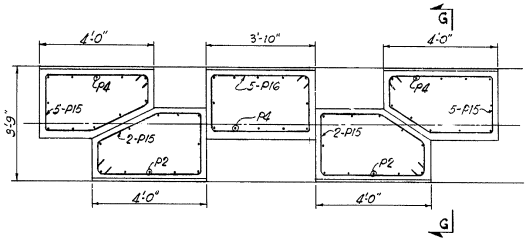
TYPE R3, R3A, R3B



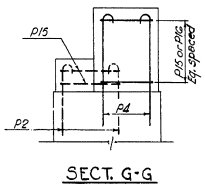
TYPE R4, R4A

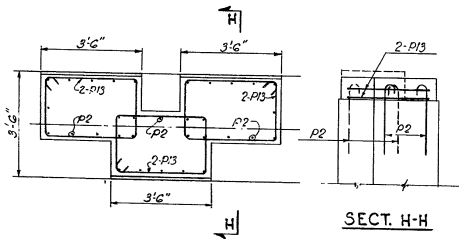


TYPE R5

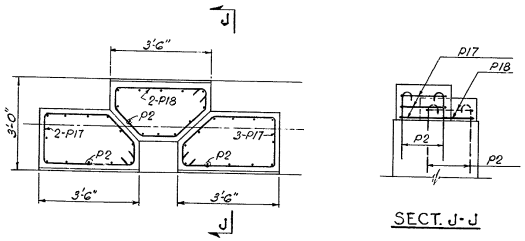


TYPE R6





TYPE R7



TYPE R7A

NOTES:
For General Notes, see Dwg. SA2
For masonry dimensions of pads, see Dwg. SA33

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PADS
REINFORCEMENT

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 1/2 IN = 1 FT.
DATE: APRIL 1, 1964

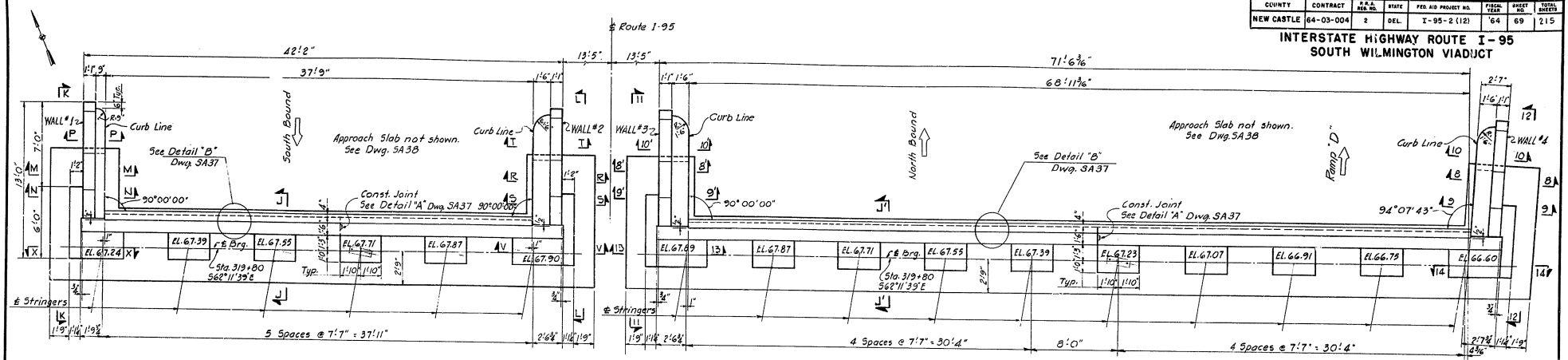
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA34

Drawn by R.G.
Checked by F.Y.

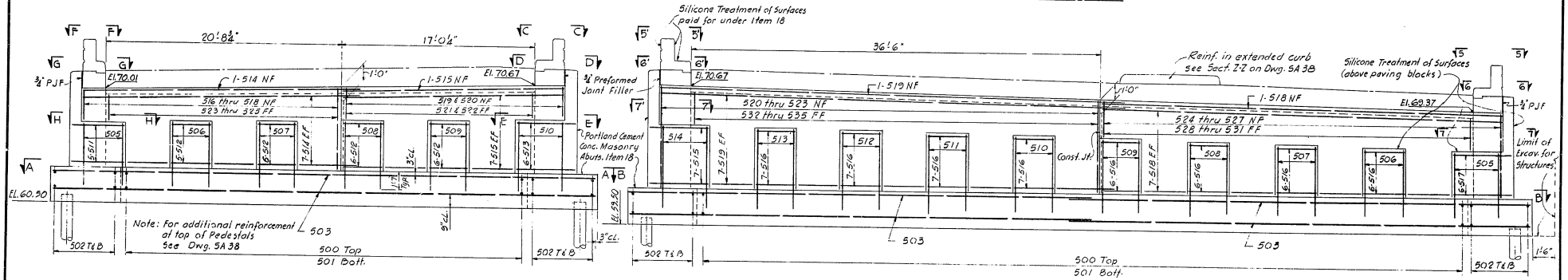
COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	69	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



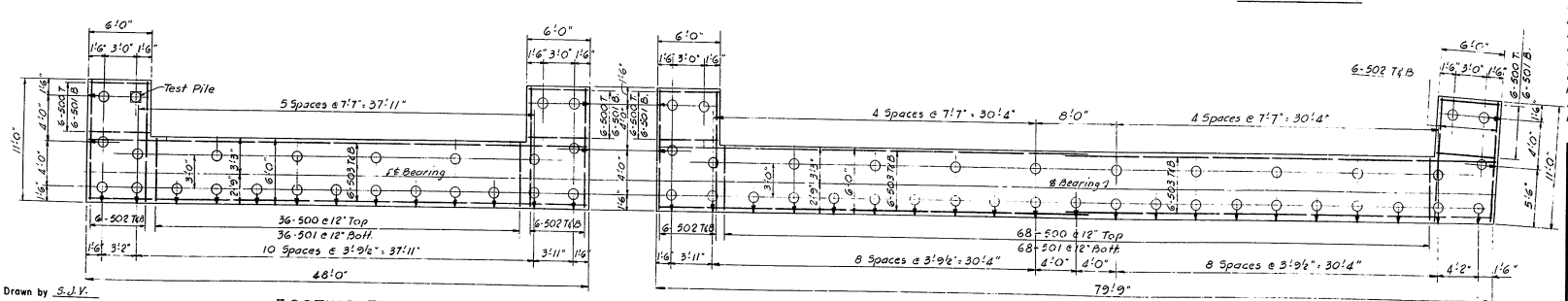
DECK PLAN
SOUTH BOUND

DECK PLAN
NORTH BOUND



ELEVATION

ELEVATION



FOOTING PLAN
SOUTH BOUND
SCALE: 3/16 IN. = 1 FT.

Note: Piles in abutment have a design capacity of 40 tons.

FOOTING PLAN
NORTH BOUND
SCALE: 3/16 IN. = 1 FT.

NOTES:
For General Plan, see Dwg. SA2
For dowel placement, see plan on Dwg. SA37
For Details "A" & "B", see Dwg. SA37
For Sections, see Dwgs. SA36 thru SA39
For Typical Wing Wall Elevation, see Dwg. SA37
For Mall details, see Dwg. SA38
For additional notes, see Dwg. SA38
For drains behind backwall, see Dwg. SA39

Drawn by S.J.V.
Checked by JAR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

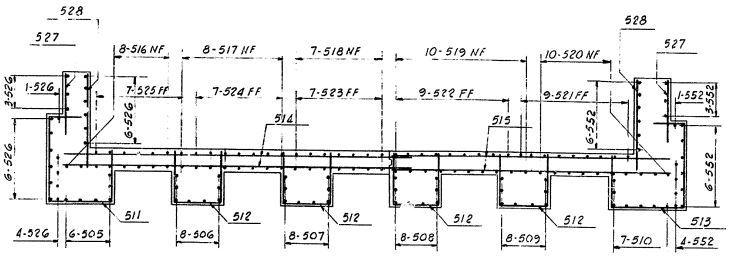
MAINLINE NORTH ABUTMENT
DECK & FOOTING PLANS & ELEVATIONS

APPROVED BY: Johnnie R. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

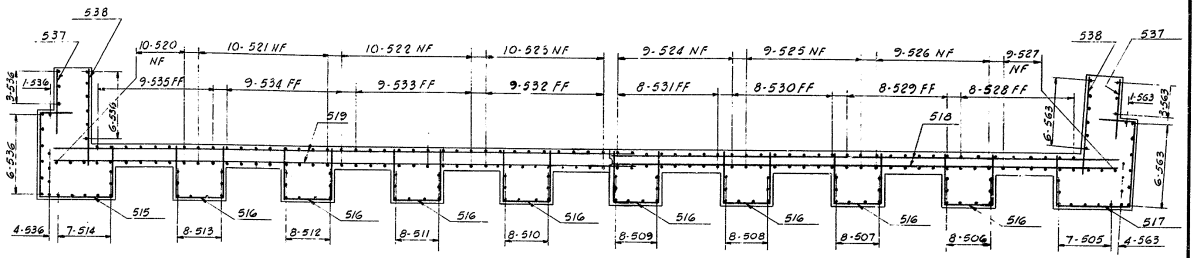
SCALE: 1/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA35

COUNTY	CONTRACT	P.R.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	70	215

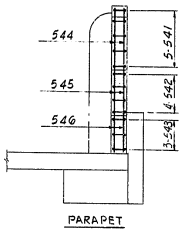
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



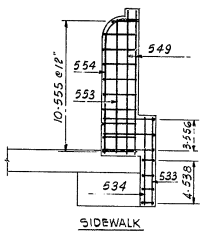
SECTIONAL PLAN A-A
Southbound



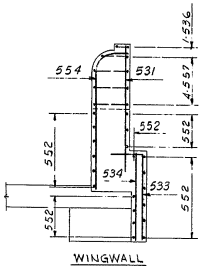
SECTIONAL PLAN B-B
Northbound



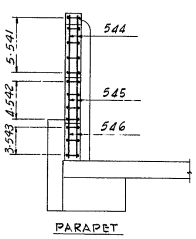
SECTION C-C



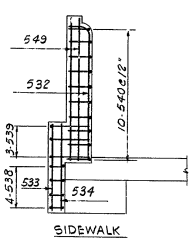
SECTION D-D



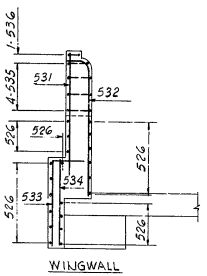
SECTION E-E



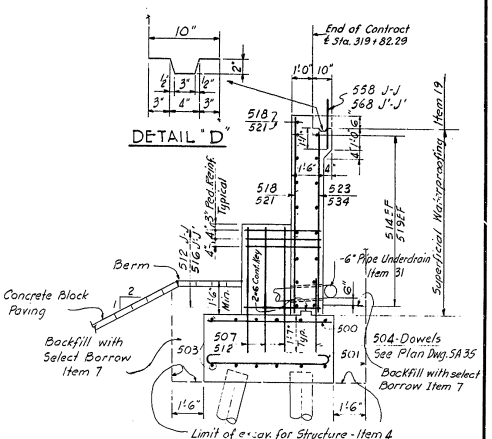
SECTION F-F



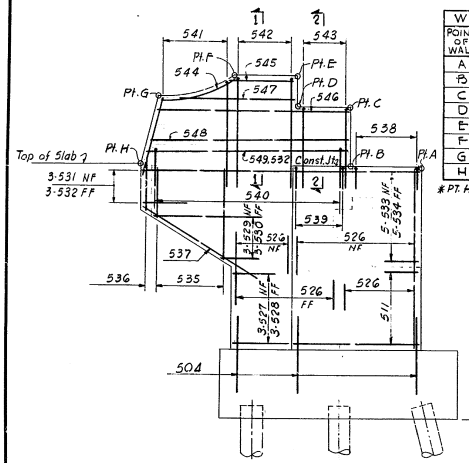
SECTION G-G



SECTION H-H



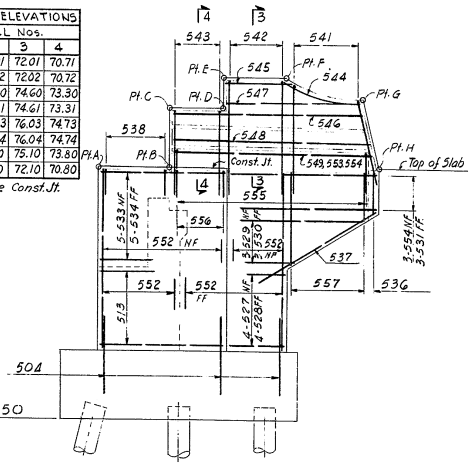
SECTIONS J-J & J'J'
SCALE: 3/8 IN. = 1 FT.



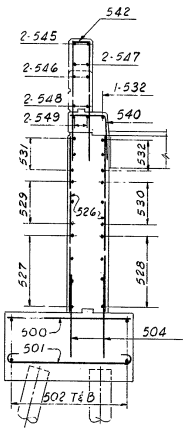
ELEVATION K-K Wall #1
SCALE: 3/8 IN. = 1 FT.

WING WALL ELEVATIONS				
POINT OF WALL	WALL Nos. 1	2	3	4
A	71.35	72.01	72.01	70.71
B	71.36	72.02	72.02	70.72
C	73.94	74.60	74.60	73.30
D	73.95	74.61	74.61	73.31
E	75.37	76.03	76.03	74.73
F	75.38	76.04	76.04	74.74
G	74.44	75.10	75.10	73.80
H*	71.44	72.10	72.10	70.80

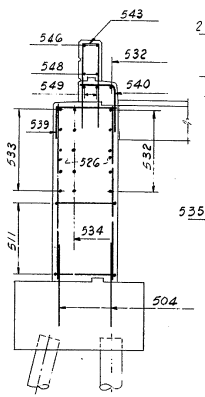
*PT. H is ¾" above Const. Jt.



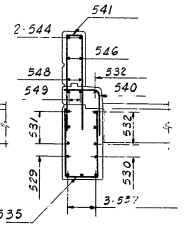
ELEVATION L-L Wall #2
SCALE: 3/8 IN. = 1 FT.



SECTION M-M
SCALE: 3/8 IN. = 1 FT.



SECTION N-N
SCALE: 3/8 IN. = 1 FT.



SECTION P-P
SCALE: 3/8 IN. = 1 FT.

NOTES:

1. For Deck & Footing Plans see Dwg. SA35
2. For dowel placement see Plan on Dwg. SA37
3. For additional Notes see Dwg. SA38
4. Embankment to be in place at least 4 months prior to start of construction of North Abut.
5. If embankment is not placed by May 30, 1965, sufficient borrow will be placed by the contractor to build the abutment, under the Item Borrow for this Contract.

Drawn by S.J.V.
Checked by J.A.E.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE NORTH ABUTMENT PLANS, SECTIONS & ELEVATIONS SHEET 1 OF 3

APPROVED BY: William P. Pearson Jr. 4-14-64
BRIDGE ENGINEER DATE

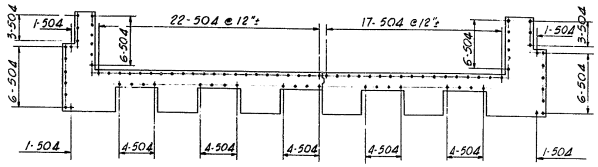
SCALE: 1/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

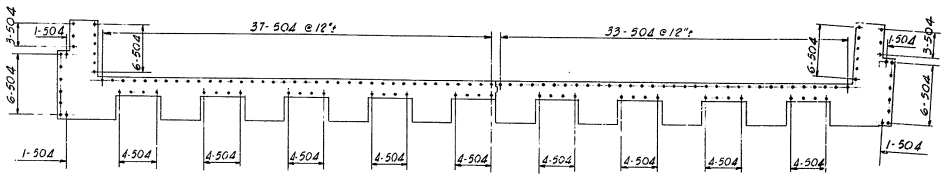
DWG. NO. SA36

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	71	215

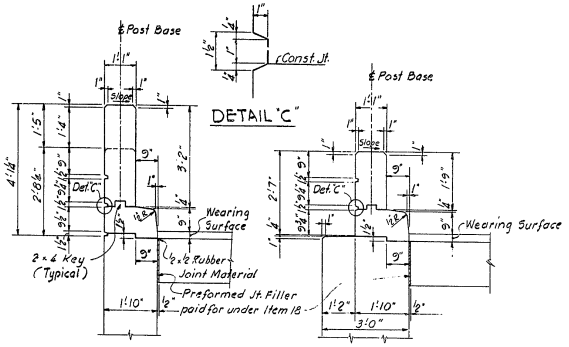
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PLAN OF DOWEL PLACEMENT
SOUTH BOUND
SCALE: 3/16 IN. = 1 FT.

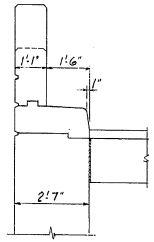


PLAN OF DOWEL PLACEMENT
NORTH BOUND
SCALE: 3/16 IN. = 1 FT.



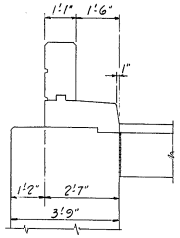
SECTION 1-1
SCALE: 1/2 IN. = 1 FT.

SECTION 2-2
SCALE: 1/2 IN. = 1 FT.



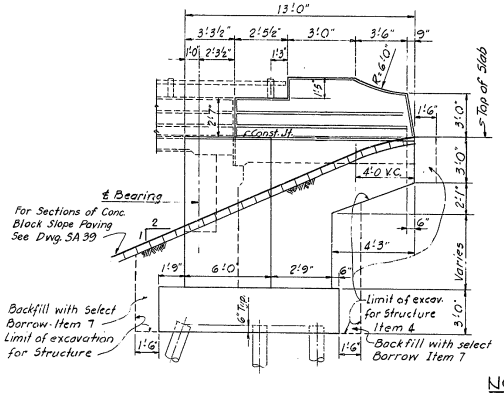
Dimensions and notes not shown same as Section 1-1

SECTION 3-3
SCALE: 1/2 IN. = 1 FT.



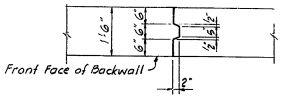
Dimensions and notes not shown same as Section 2-2

SECTION 4-4
SCALE: 1/2 IN. = 1 FT.

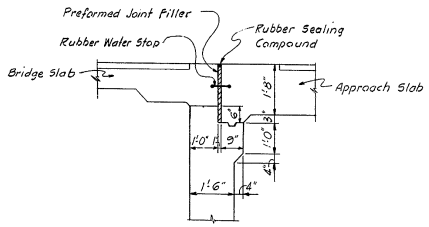


TYPICAL WING WALL ELEVATION

NOTES:
For Deck & Footing Plans see Dwg. SA35
For additional Notes see Dwg. SA38



DETAIL "A"
SCALE: 1/2 IN. = 1 FT.



DETAIL "B"
SCALE: 1/2 IN. = 1 FT.

Drawn by S.J.V.
Checked by JAR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE NORTH ABUTMENT
PLANS, SECTIONS & ELEVATIONS
SHEET 2 OF 3

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

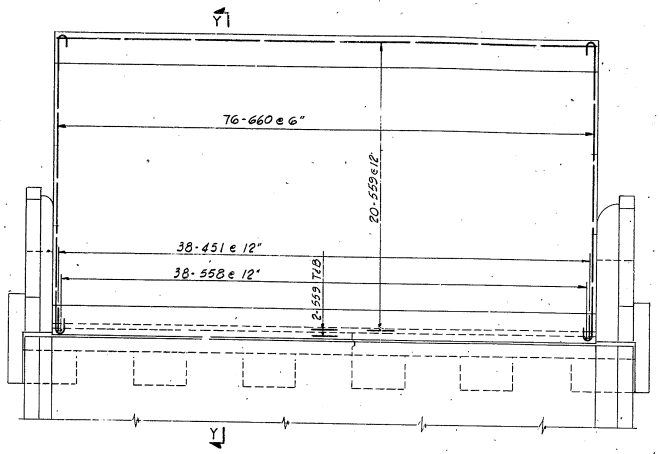
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

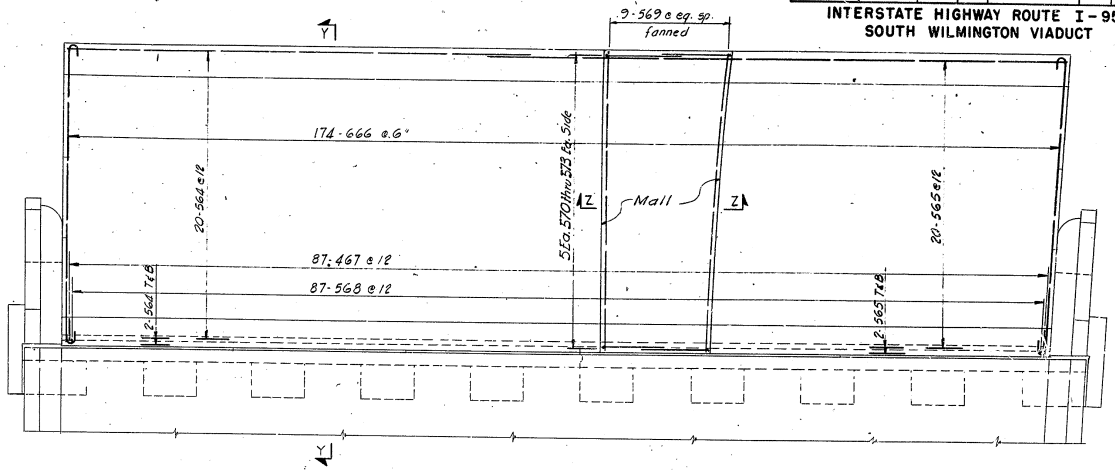
DWG. NO. SA37

COUNTY	CONTRACT	R.R.L. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	72	215

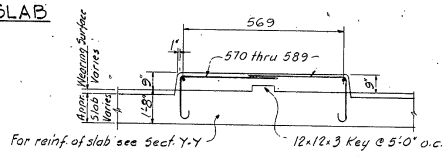
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



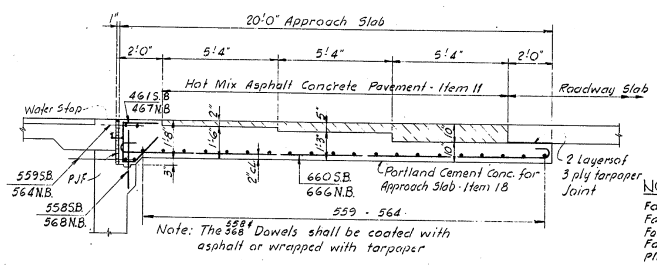
PLAN OF APPROACH SLAB
SOUTH BOUND
SCALE: 1/4 IN. = 1 FT.



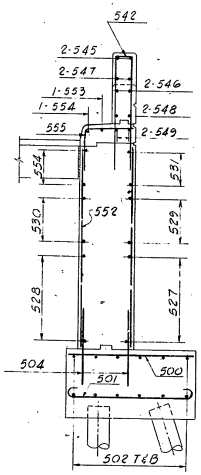
PLAN OF APPROACH SLAB
NORTH BOUND & RAMP D
SCALE: 1/4 IN. = 1 FT.



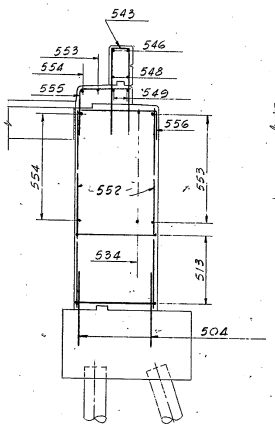
SECTION Z-Z
SCALE: 3/8 IN. = 1 FT.



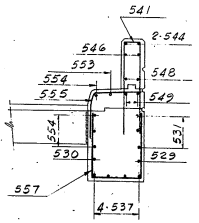
SECTION Y-Y
SCALE: 3/8 IN. = 1 FT.



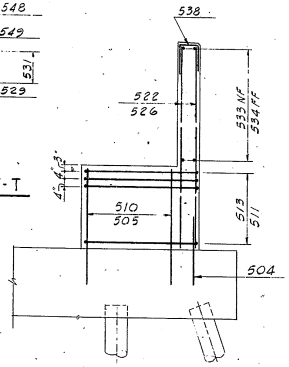
SECTION R-R
SCALE: 3/8 IN. = 1 FT.



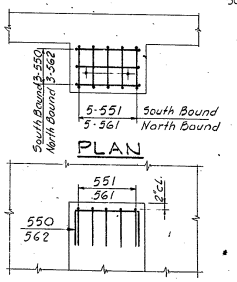
SECTION S-S
SCALE: 3/8 IN. = 1 FT.



SECTION T-T
SCALE: 3/8 IN. = 1 FT.



SECTION V-V (As Shown)
SECTION X-X (Opp. Hand)
SCALE: 3/8 IN. = 1 FT.



PLAN

ELEVATION

ADDITIONAL REINFORCEMENT AT TOP OF PEDESTALS

NOTES:

For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA58
For Railing Details see Dwg. SA87
For placing of Anchor Bolts see Dwg. SA73
Place Anchor Bolts in Pedestals before concrete is poured.
All piles are cast-in-place, 12" Dia. concrete piles, (Steel Shells) closed ends. Item 35
For pile reinforcement see Dwg. SA46
Piles shown ○→ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 45'-0"
All reinforcing bars in North Bound Abutment to be prefixed NA. Reinforcement in South Bound Abutment to be prefixed SA.
For additional Plans & Sections see Dwgs. SA35 To 39

Drawn by S.J.V.
Checked by JAR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

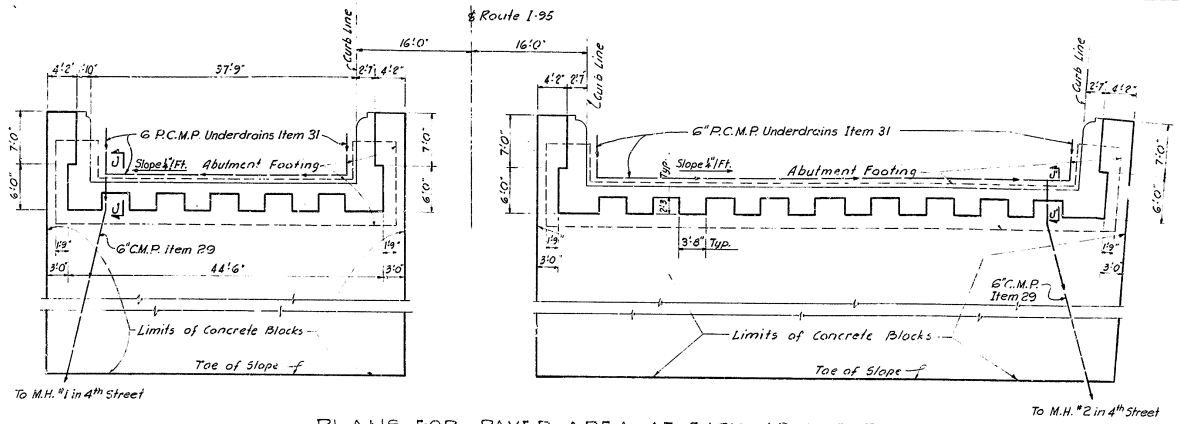
MAINLINE NORTH ABUTMENT
PLANS, SECTIONS & ELEVATIONS
SHEET 3 OF 3

APPROVED BY: Volmine L. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

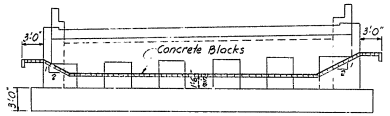
SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA38

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	73	215

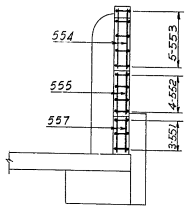
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



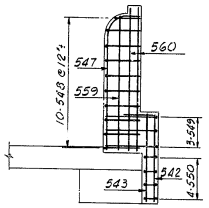
PLANS FOR PAVED AREA AT EACH ABUTMENT
SOUTH BOUND — SCALE: 1/8 IN. = 1 FT — NORTH BOUND



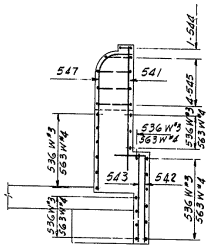
ELEVATION (Southbound-Shown Northbound-Similar)
SCALE: 1/8 IN. = 1 FT.



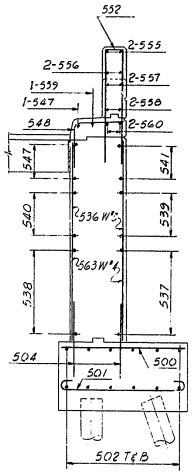
PARAPET
SECTION 5-5 (As Shown)
SECTION 5'-5' (Opp. Hand)
SCALE: 1/4 IN. = 1 FT.



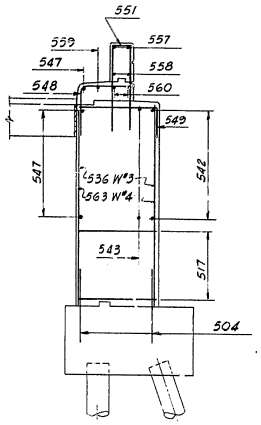
SIDEWALK
SECTION 6-6 (As Shown)
SECTION 6'-6' (Opp. Hand)
SCALE: 1/4 IN. = 1 FT.



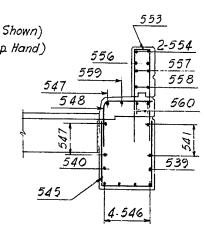
WINGWALL
SECTION 7-7 (As Shown)
SECTION 7'-7' (Opp. Hand)
SCALE: 1/4 IN. = 1 FT.



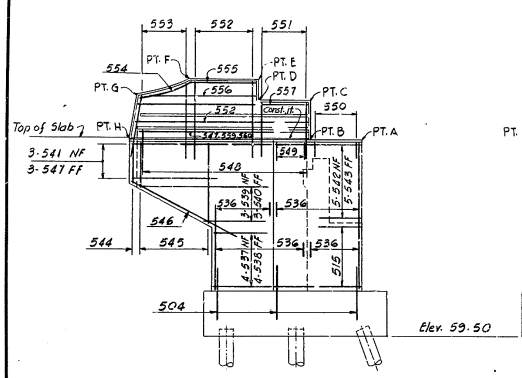
SECTION 8-8 (As Shown)
SECTION 8'-8' (Opp. Hand)



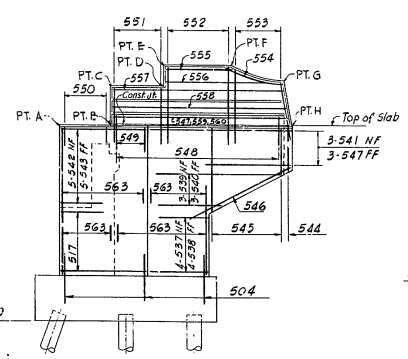
SECTION 9-9 (As Shown)
SECTION 9'-9' (Opp. Hand)



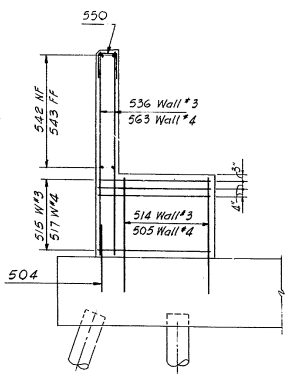
SECTION 10-10 (As Shown)
SECTION 10'-10' (Opp. Hand)
SCALE: 3/8 IN. = 1 FT.



SECTION 11-11 Wall #3
SCALE: 1/4 IN. = 1 FT.



SECTION 12-12 Wall #4
SCALE: 1/4 IN. = 1 FT.



SECTION 13-13
SECTION 14-14
SCALE: 3/8 IN. = 1 FT.

NOTES:

For Deck & Footing Plans see Dwg. SA35
For additional Notes see Dwg SA38
For Sections J-J & J'-J', see Dwg. SA36

Drawn by S.J.V.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE NORTH ABUTMENT DETAILS

APPROVED BY: Johnnie L. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

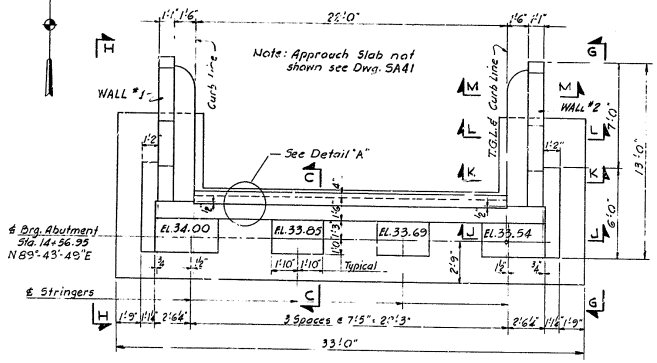
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

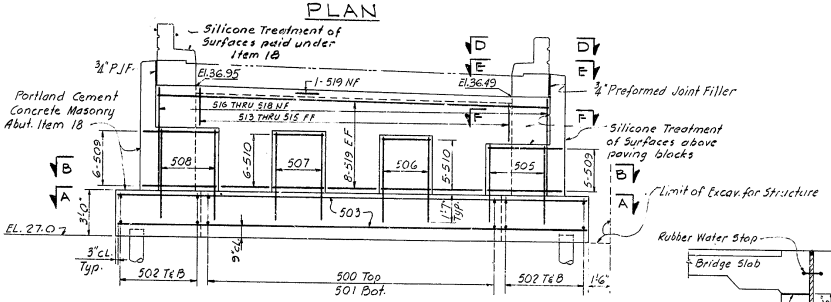
DWG. NO. SA39

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	74	215

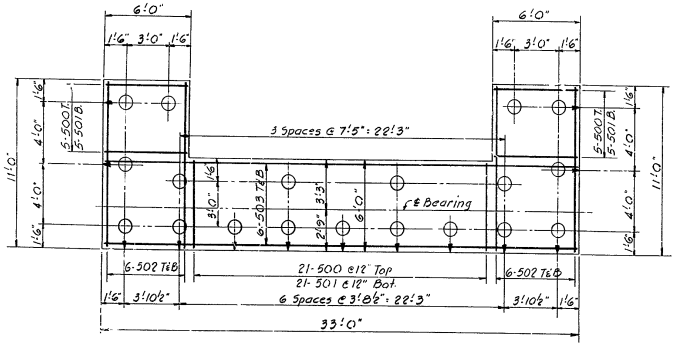
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



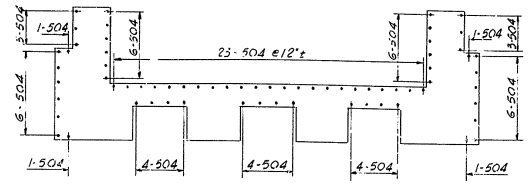
PLAN



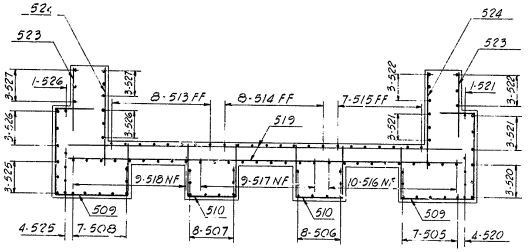
ELEVATION



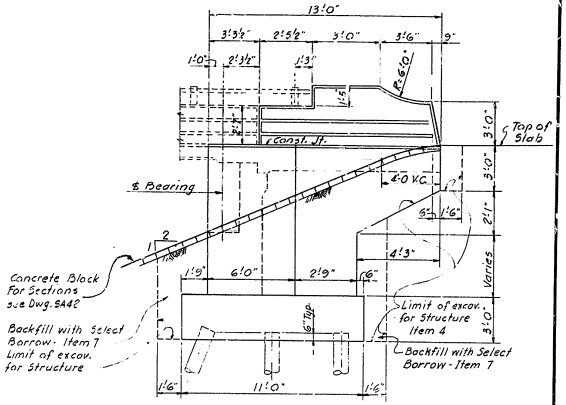
FOOTING PLAN



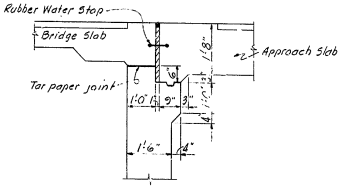
SECTIONAL PLAN A-A
DOWELS



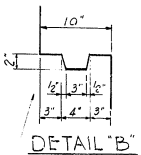
SECTIONAL PLAN B-B



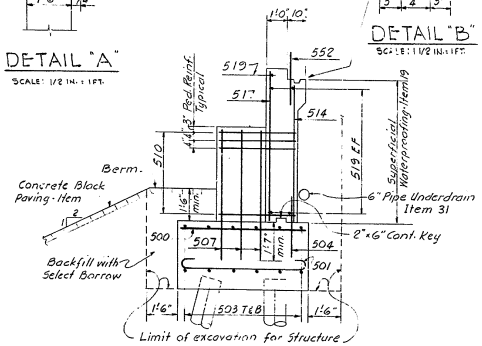
TYPICAL WING WALL ELEVATION
NOT TO SCALE



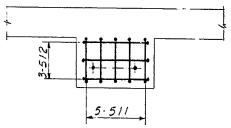
DETAIL "A"
SCALE: 1/2 IN. = 1 FT.



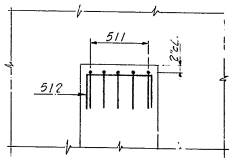
DETAIL "B"
SCALE: 1 1/2 IN. = 1 FT.



SECTION C-C
SCALE: 3/8 IN. = 1 FT.



PLAN



ELEVATION

ADDITIONAL REINF. AT TOP OF PEDESTALS
Not To Scale

NOTES:

For additional Plans & Sections see Dwgs. SA41 & 42
For additional Notes see Dwg. SA42
Piles in abutment have a design capacity of 40 tons.
For drains behind the backwall, see Dwg. SA42

Drawn by SJV
Checker by H.B.J.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP A ABUTMENT
PLANS, ELEVATIONS & SECTIONS
SHEET 1 OF 3

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

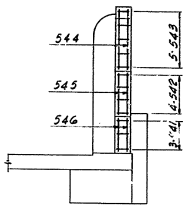
SCALE: 1/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 40

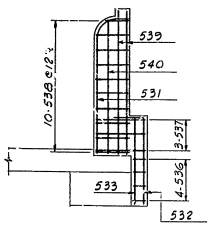
COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	75	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



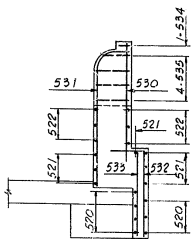
PARAPET

SECTION D-D
SCALE: 1/4 IN. = 1 FT.



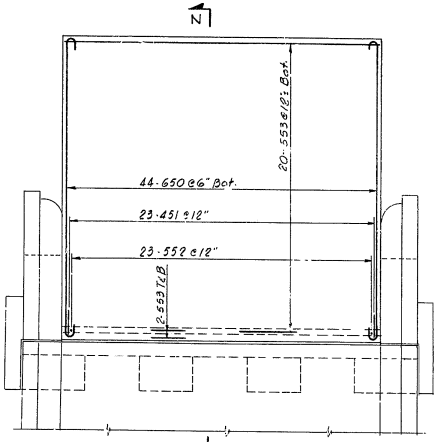
SIDEWALK

SECTION E-E
SCALE: 1/4 IN. = 1 FT.

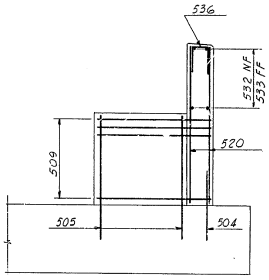


WINGWALL

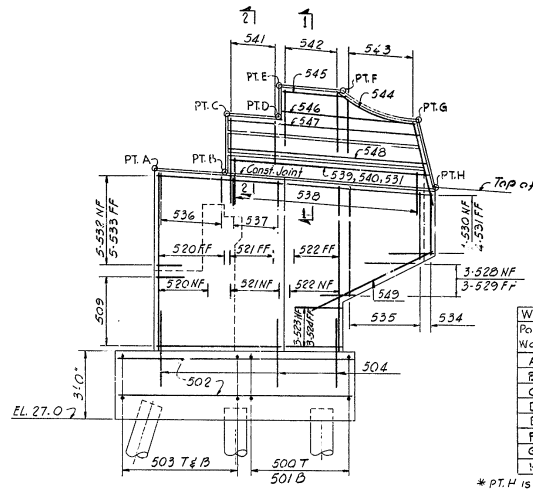
SECTION F-F
SCALE: 1/4 IN. = 1 FT.



PLAN OF APPROACH SLAB
SCALE: 1/4 IN. = 1 FT.



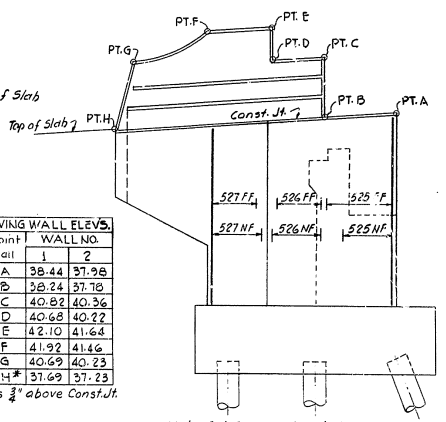
SECTION J-J
SCALE: 3/8 IN. = 1 FT.



ELEVATION G-G (Wall # 2)
SCALE: 3/8 IN. = 1 FT.

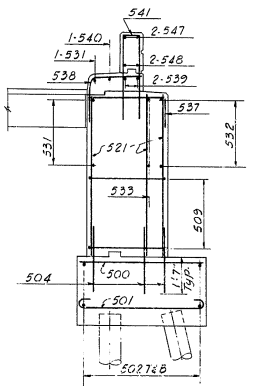
WING WALL ELEVS.		
Point Wall	WALL NO. 1	WALL NO. 2
A	38.44	37.98
B	38.24	37.78
C	40.82	40.36
D	40.68	40.22
E	42.10	41.64
F	41.92	41.46
G	40.69	40.23
H*	37.69	37.23

* PT. H is 3/4" above Const. Jt.

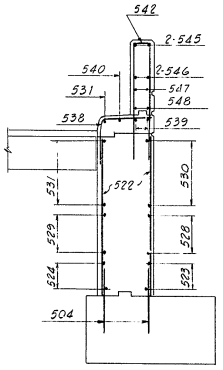


Note: Reinforcement not shown same as Elev. G-G

ELEVATION H-H (Wall # 1)
SCALE 3/8 IN = 1 FT.

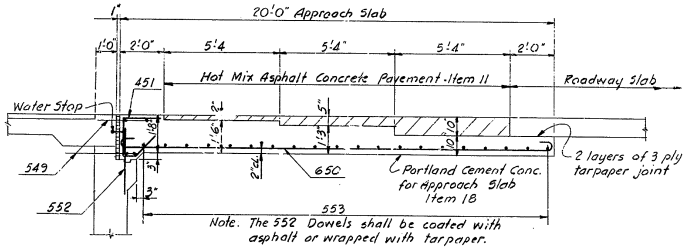


SECTION K-K
SCALE: 3/8 IN. = 1 FT.

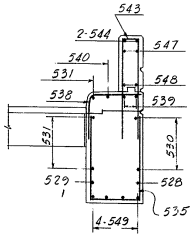


SECTION L-L
SCALE: 3/8 IN. = 1 FT.

NOTES:
For additional Plans & Sections see Dwgs. SA40 & 42
For additional Notes see Dwg. SA42



SECTION N-N
SCALE: 3/8 IN. = 1 FT.



SECTION M-M
SCALE: 3/8 IN. = 1 FT.

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP A ABUTMENT
PLAN, ELEVATIONS & SECTIONS
SHEET 2 OF 3

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER DATE

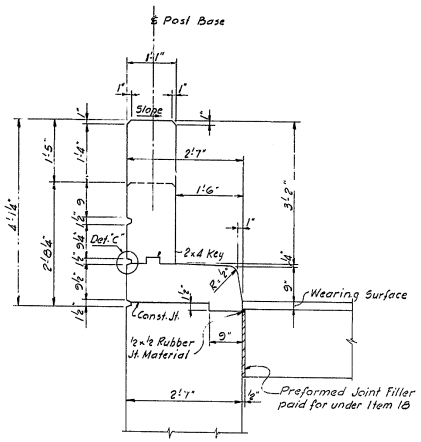
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

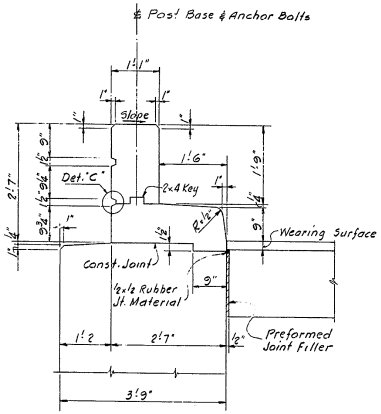
DWG. NO. SA41

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	76	215

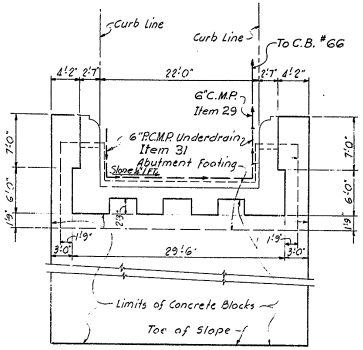
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



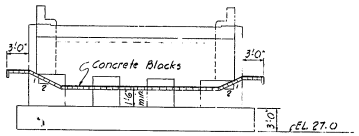
SECTION 1-1
SCALE: 3/4 IN. = 1 FT.



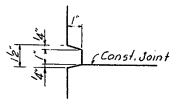
SECTION 2-2
SCALE: 3/4 IN. = 1 FT.



ABUTMENT PAVED AREA PLAN
SCALE: 1/8 IN. = 1 FT.



ELEVATION
SCALE: 1/8 IN. = 1 FT.



DETAIL "C"

NOTES:
For General Notes see Drawing SA 2.
For Framing Plan see Drawing SA 55
For additional Plans & Sections see Dwgs. SA40 & 41
For Railing details see Drawing SA 87
For placing of Anchor Bolts see Drawing SA 73
Place Anchor Bolts in Pedestals before concrete is poured.
All piles are cast-in-place 12" dia. concrete piles (Steel Shells) closed end. Item 35.
For pile reinforcement see Drawing SA 46
Piles shown O→ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 35'-0".
All reinforcing bars in Ramp "A" Abutment to be prefixed "RA"

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

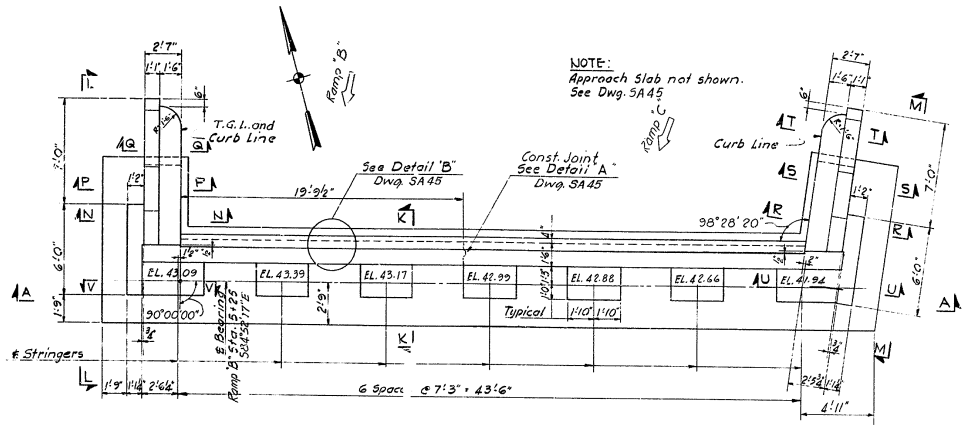
RAMP A ABUTMENT
PLAN, ELEVATION AND SECTIONS
SHEET 3 OF 3

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

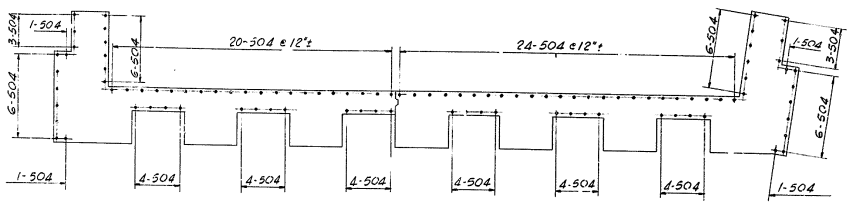
SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA42

COUNTY	CONTRACT	F.A.P. REA. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64 03-004	2	DEL.	I-95-2(12)	'64	77	215

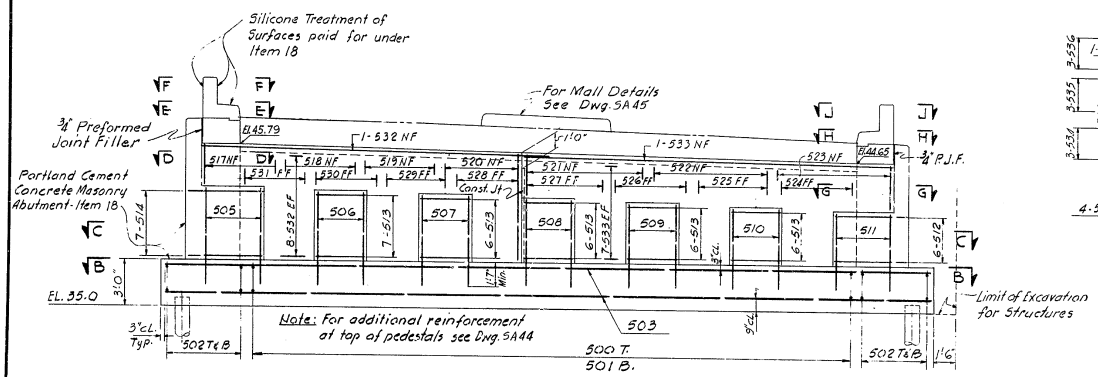
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



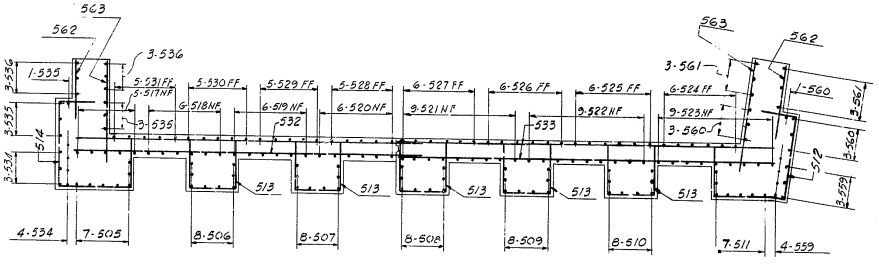
PLAN



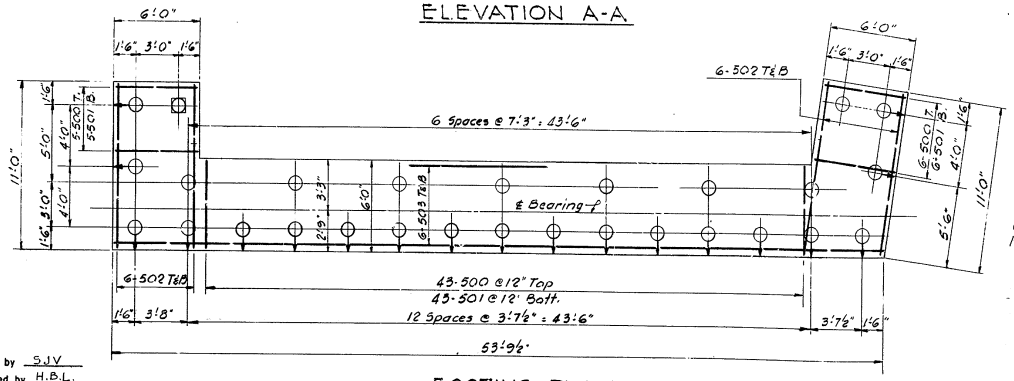
SECTIONAL PLAN B-B
(DOWELS)



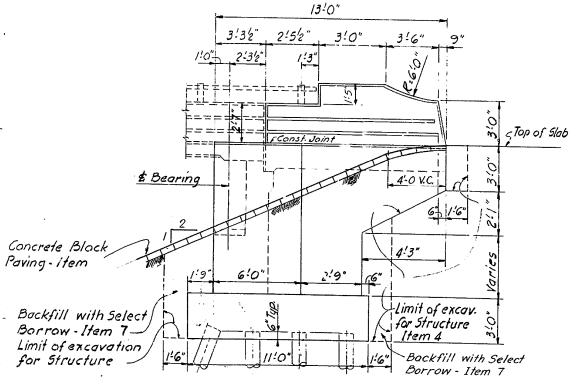
ELEVATION A-A



SECTIONAL PLAN C-C



FOOTING PLAN



TYPICAL WING WALL ELEVATION

NOTES:
For General Plan see Dwg. SA2
For Details 'A' & 'B' see Dwg. SA45
For Sections see Dwgs. SA44 & SA45
For Mall details see Dwg. SA45
For additional Notes see Dwg SA45
□ Indicates test piles
Piles in abutment have a design capacity of 40 tons.
For drains behind the backwall, see Dwg. SA45

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B ABUTMENT
PLANS & ELEVATIONS

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

SCALE: 1/4 IN. = 1 FT.
DATE: APRIL 1, 1964

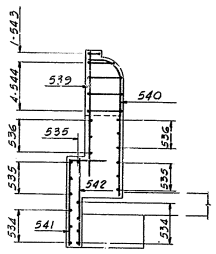
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA43

D C B A

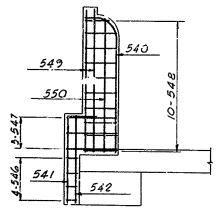
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	78	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



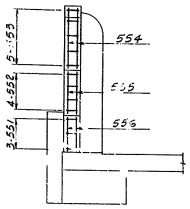
WINGWALL

SECTION D-D
SCALE: 1/4 IN. = 1 FT.



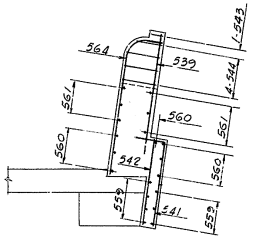
SIDEWALK

SECTION E-E
SCALE: 1/4 IN. = 1 FT.



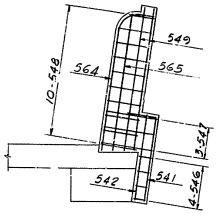
PARAPET

SECTION F-F
SCALE: 1/4 IN. = 1 FT.



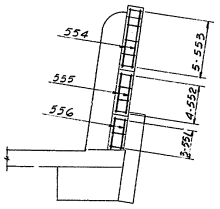
WINGWALL

SECTION G-G
SCALE: 1/4 IN. = 1 FT.



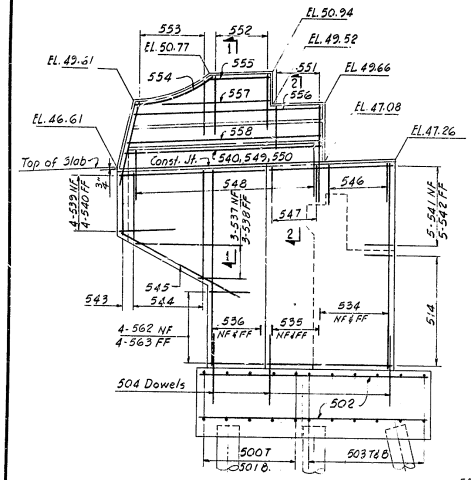
SIDEWALK

SECTION H-H
SCALE: 1/4 IN. = 1 FT.

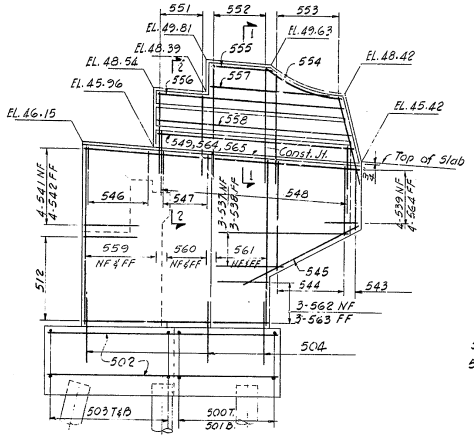


PARAPET

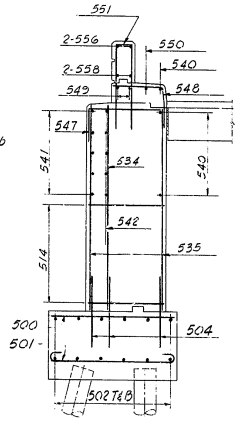
SECTION J-J
SCALE: 1/4 IN. = 1 FT.



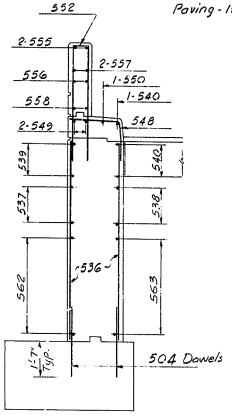
ELEVATION L-L



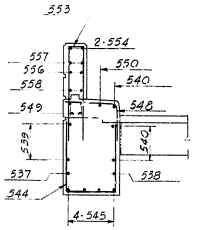
ELEVATION M-M



SECTION N-N

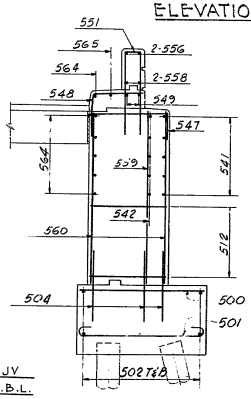


SECTION P-P

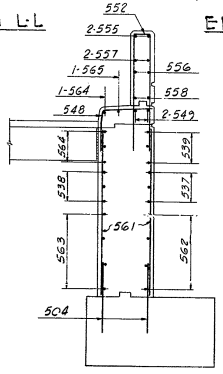


SECTION K-K
SCALE: 3/8 IN. = 1 FT.

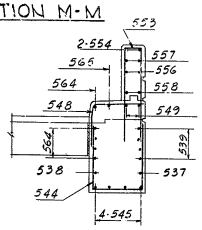
SECTION Q-Q



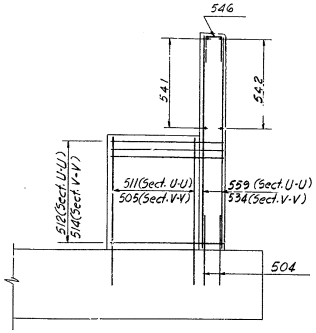
SECTION R-R



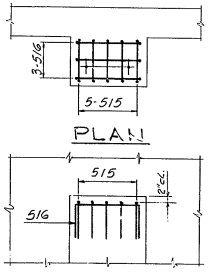
SECTION S-S



SECTION T-T



SECTION U-U
SECTION V-V



PLAN

ELEVATION

ADDITIONAL REINFORCEMENT AT TOP OF PEDESTALS

NOTES:
For Deck, Footing & Dowel Plans see Dwg. SA43
For additional Notes see Dwg. SA45

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B ABUTMENT
SECTIONS, ELEVATIONS & DETAILS

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

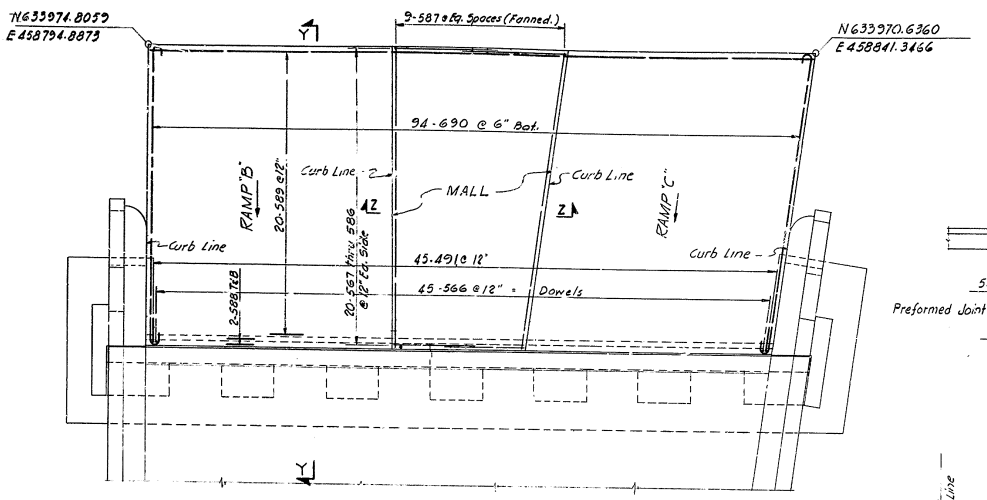
SCALE: 3/8 IN = 1 FT UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

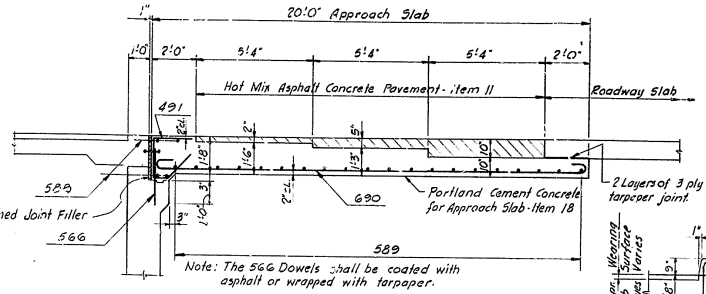
DWG. NO. SA44

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	79	215

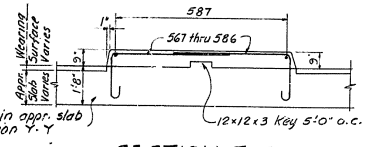
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



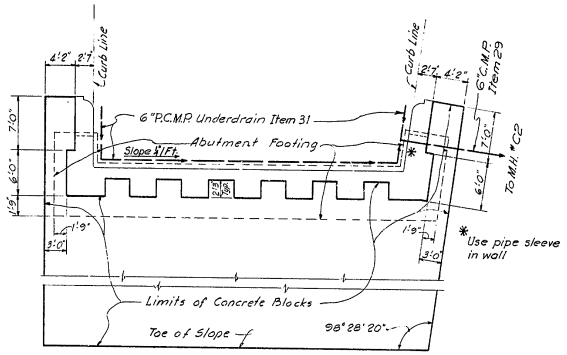
PLAN OF APPROACH SLAB
SCALE: 1/4 IN. = 1 FT.



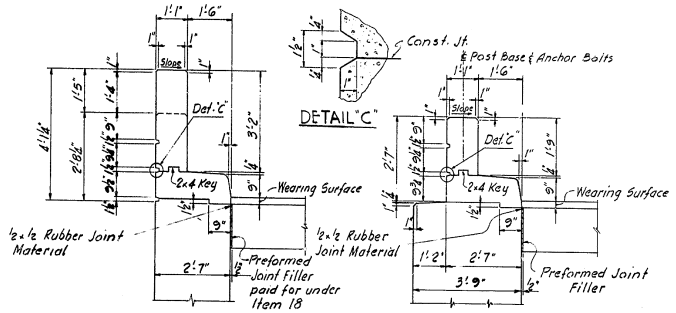
SECTION Y-Y
SCALE: 3/8 IN. = 1 FT.



SECTION Z-Z
SCALE: 3/8 IN. = 1 FT.

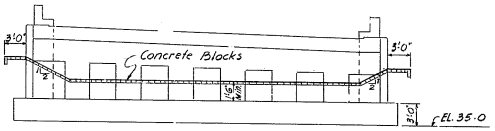


PAVED AREA AT ABUTMENT PLAN
SCALE: 1/8 IN. = 1 FT.

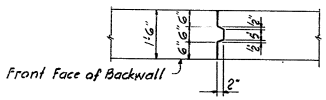


SECTION 1-1
SCALE: 1/2 IN. = 1 FT.

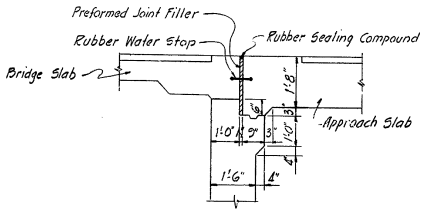
SECTION 2-2
SCALE: 1/2 IN. = 1 FT.



ELEVATION
SCALE: 1/8 IN. = 1 FT.



DETAIL "A"
SCALE: 1/2 IN. = 1 FT.



DETAIL "B"
SCALE: 1/2 IN. = 1 FT.

NOTES:
For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA56
For Pile reinforcement see Dwg. SA46
For placing of Anchor Bolts see Dwg. SA73
Place Anchor Bolts before concrete is poured.
For Railing details see Dwg. SA87
All piles are Cast-in-place 12" Dia. Concrete piles (Steel Shell) closed ends. Item 35
Piles shown ○→ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 25'-0"
All reinforcing bars to be prefixed BC
For additional Plans & Sections see Dwgs. SA45 & 46

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B ABUTMENT
PLANS, SECTIONS & DETAILS

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

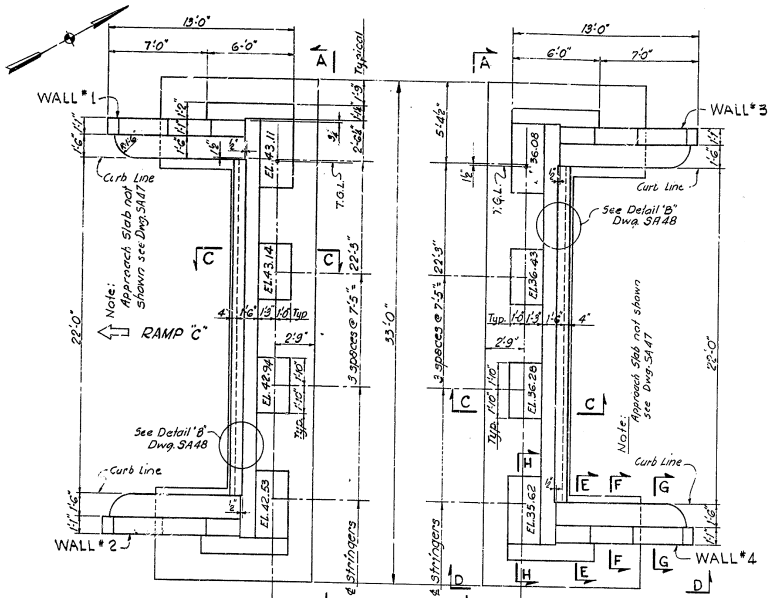
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA45

COUNTY	CONTRACT	R.S.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	80	215

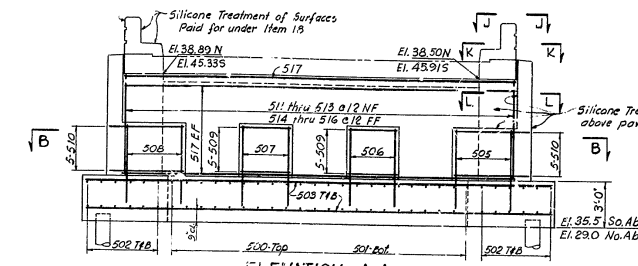
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



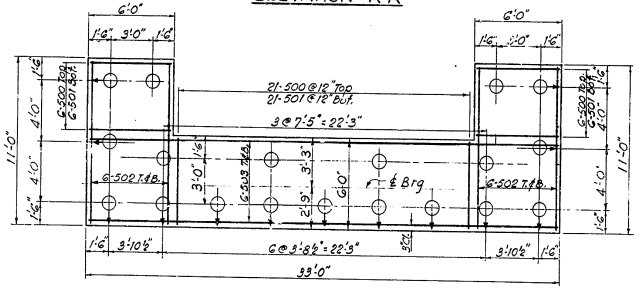
DECK PLAN

WING WALL ELEVATIONS				
POINT ON WALL	WALL NO. 1	2	3	4
A	47.22	46.64	40.35	39.92
B	47.89	46.69	40.19	39.73
C	49.87	49.27	42.77	42.31
D	49.92	49.33	42.63	42.17
E	51.34	50.75	44.05	43.59
F	51.40	50.80	43.87	43.41
G	50.56	49.90	42.68	42.22
H*	47.56	46.92	39.68	39.22

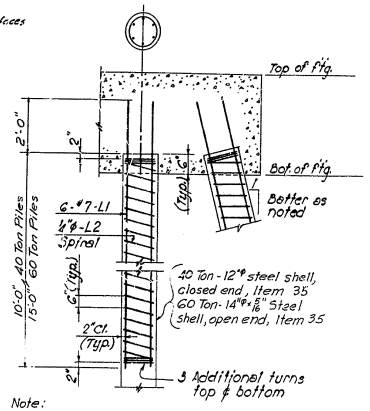
*PT. H is 3" above Const. Jt.



ELEVATION A-A

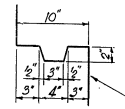


FOOTING PLAN

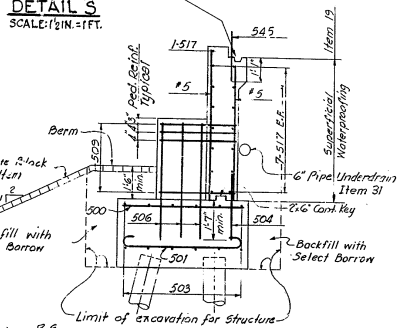


Note:
Splice detail to be approved by engineer.
Reinforcement to be paid under Item 35.

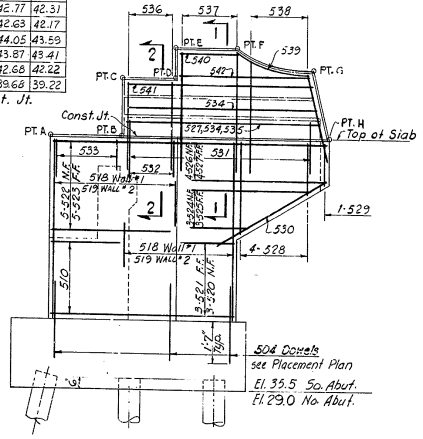
TYPICAL PILE DETAILS
40 & 60 TON CAST-IN-PLACE CONCRETE PILES



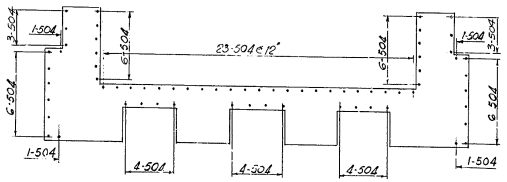
DETAIL "S"
SCALE: 1½ IN. = 1 FT.



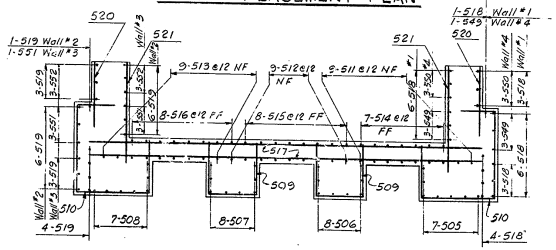
SECTION C-C
SCALE: ⅜ IN. = 1 FT.



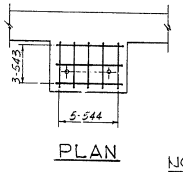
ELEVATION D-D (As shown for Walls *1 & 2 Walls *3 & *4 Similar)
NOT TO SCALE



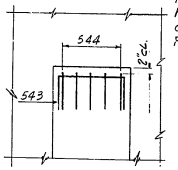
DOWEL PLACEMENT PLAN



SECTIONAL PLAN B-B



PLAN



ELEVATION
ADDITIONAL REINF. TOP OF PEDESTALS
NOT TO SCALE

NOTES:
For additional Plans & Sections see Dwgs. SA47 & 48
For additional notes see Dwg. SA48
Piles in abutment have a design capacity of 40 tons.
For drains behind the backwall, see Dwg. SA48

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP C ABUTMENTS
PLANS & ELEVATIONS

APPROVED BY: _____ BRIDGE ENGINEER — DATE: 4-16-64

SCALE: 1/4 IN. = 1 FT. UNLESS NOTED

DATE: APRIL 1, 1964

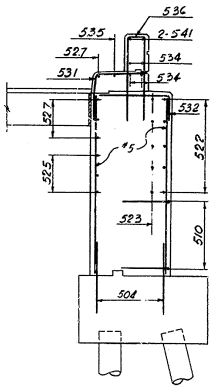
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA46

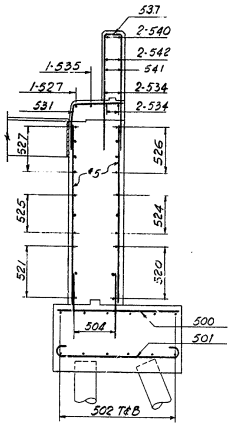
Drawn by R.G.
Checked by H.B.L.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	81	215

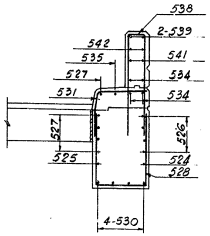
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



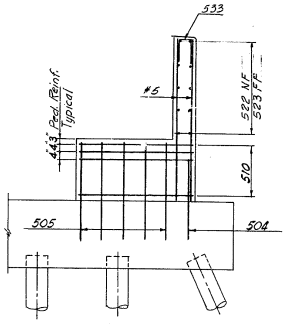
SECTION E-E



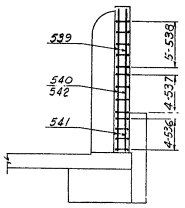
SECTION F-F



SECTION G-G

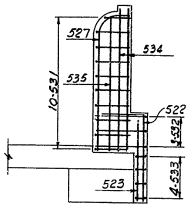


SECTION H-H



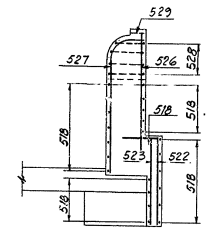
PARAPET

SECTION J-J



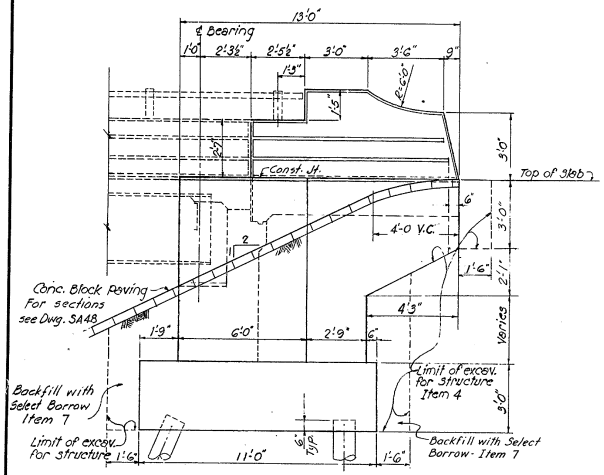
SIDEWALK

SECTION K-K



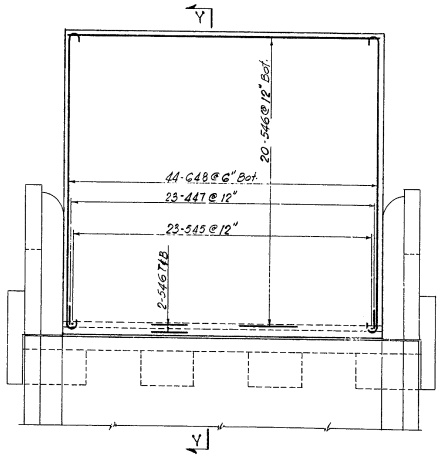
WINGWALL

SECTION L-L (As shown for Wall #1 Wall #4 Similar)



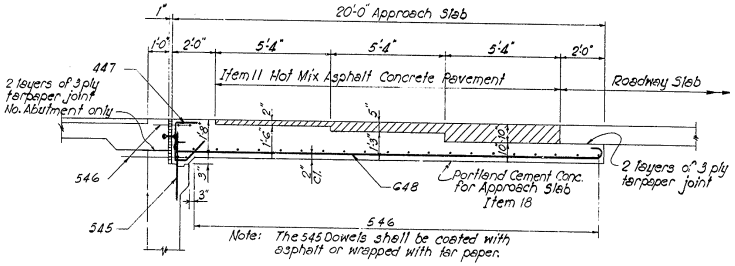
TYPICAL WING WALL ELEVATION

For Elevation of Wing Walls see Dwg. SA46



PLAN OF APPROACH SLAB

SCALE: ¼ IN. = 1 FT.



SECTION Y-Y

NOTES:
For additional Plans & Sections see Dwgs. SA46 & 48
For additional notes see Dwg. SA48

Drawn by R.G.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP C ABUTMENTS
PLAN, ELEVATION & SECTIONS

APPROVED BY: Wilmie R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

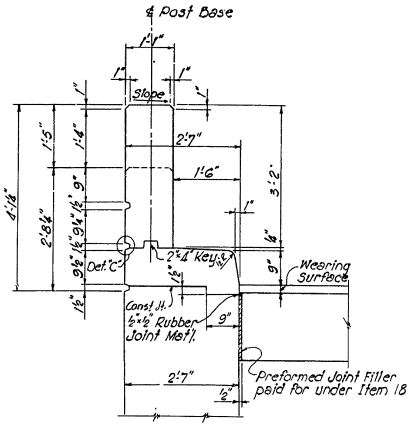
SCALE: 3/8 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

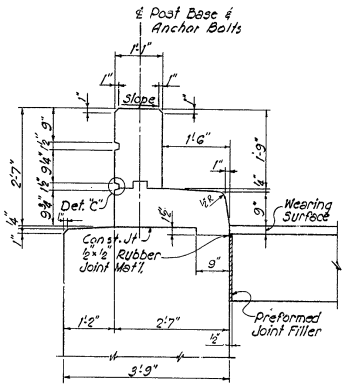
DWG. NO. SA47

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	82	215

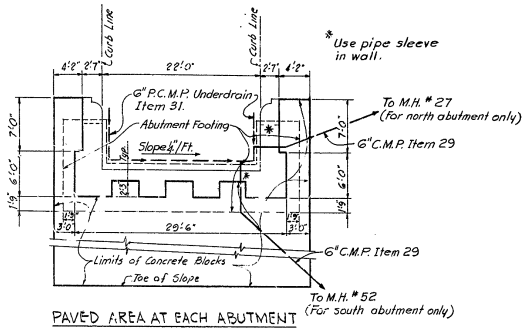
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



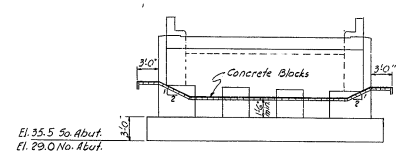
SECTION 1-1
SCALE: ¾ IN. = 1 FT.



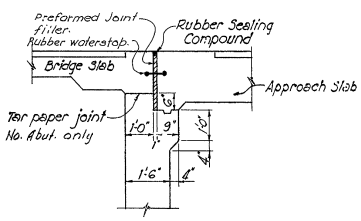
SECTION 2-2
SCALE: ¾ IN. = 1 FT.



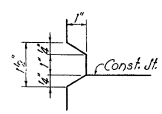
PAVED AREA AT EACH ABUTMENT
PLAN
SCALE: 1/8 IN. = 1 FT.



ELEVATION
SCALE: 1/8 IN. = 1 FT.



DETAIL "B"
SCALE: ½ IN. = 1 FT.



DETAIL "C"

NOTES:

For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA57
For Railing details see Dwg. SA87
For placing of anchor bolts see Dwg. SA73
Place anchor bolts in pedestal before concrete is poured
All piles are cast-in-place 12" dia. Concrete Piles, (Steel Shells) closed end. Item 35
For pile reinforcement see Dwg. SA46
Piles shown ⊕ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 25'-0"
All reinforcing bars in North Abutment to be prefixed NC. Reinforcing bars in South Abutment to be prefixed SC.
For additional Plans & Sections see Dwgs. SA46 & 47

Drawn by R.G.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

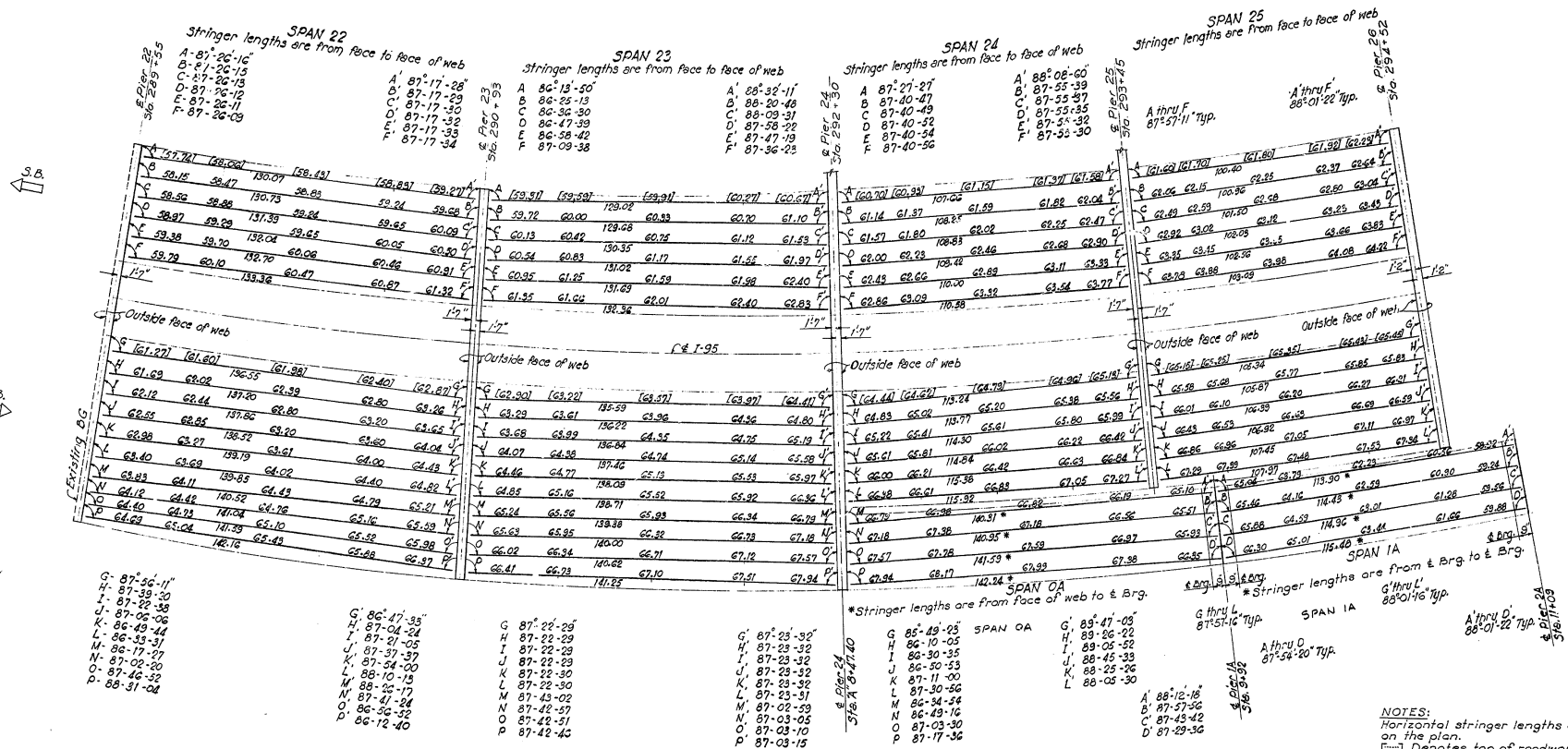
RAMP C ABUTMENTS
SECTIONS & DETAILS

APPROVED BY: Johnnie P. Pearson Jr. 4-1-64
BRIDGE ENGINEER DATE

SCALE: 3/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA48

COUNTY	CONTRACT	R.R.A. No.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	83	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths are as noted on the plan.
[····] Denotes top of roadway elevations which are given at 4 points of stringer.
For framing plan, see Dwg. No. SA54
All anchor bolts to be set 90° to the center line of stringer.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 1 OF 5

APPROVED BY: _____ BRIDGE ENGINEER
DATE: 4-16-64

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

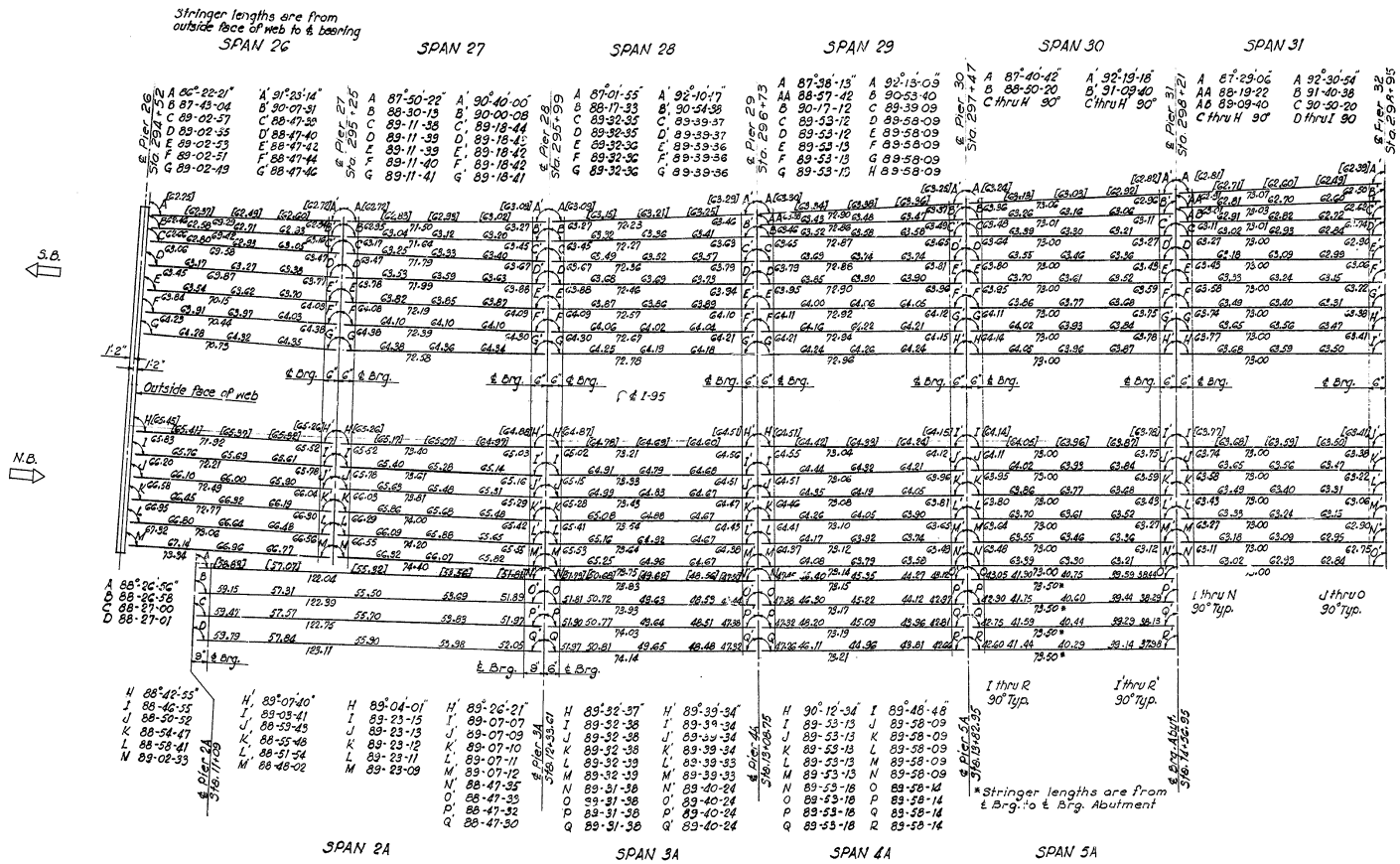
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA49

Drawn by R.G.
Checked by F.Y.

COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	84	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths are computed from ℄ Brg. to ℄ Brg except as noted on the plan.
[ ] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan, see Dwg. SA55

Drawn by R.G.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 2 OF 5

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

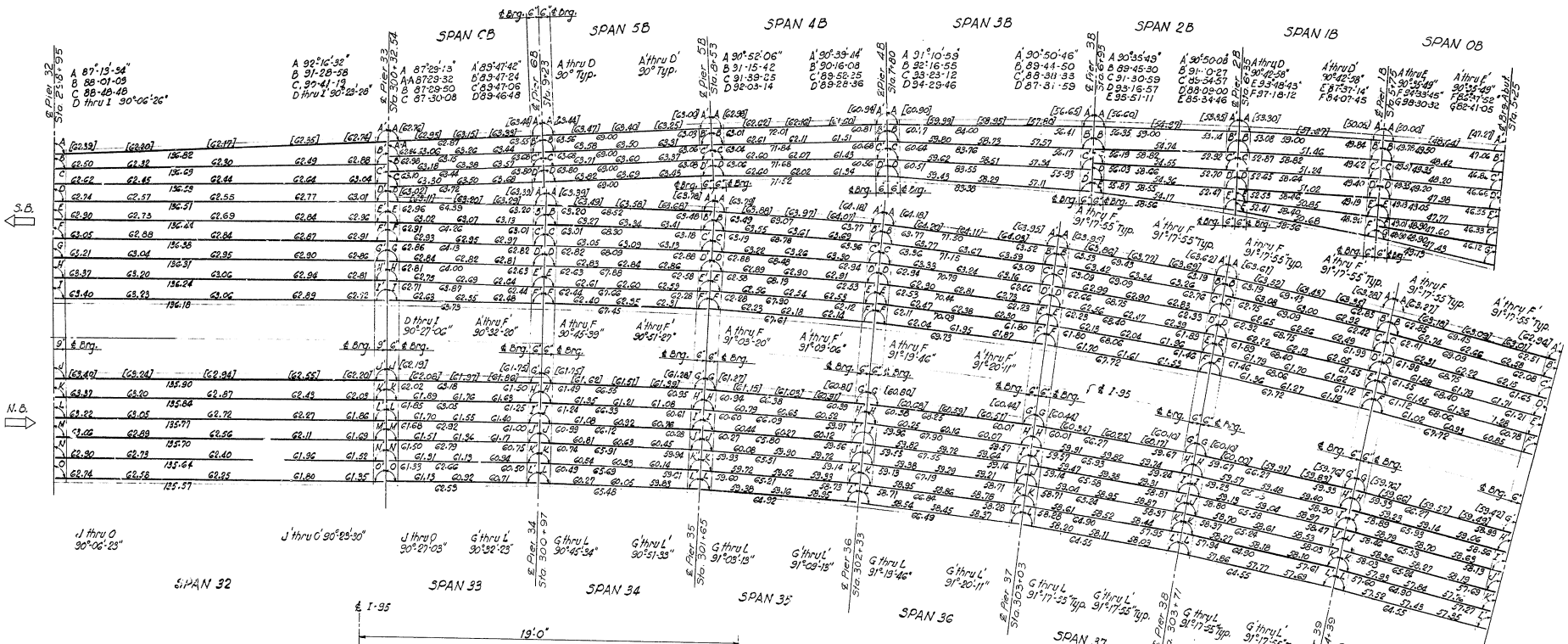
SCALE: 1 IN.=20 FT. DATE: APRIL 1, 1964

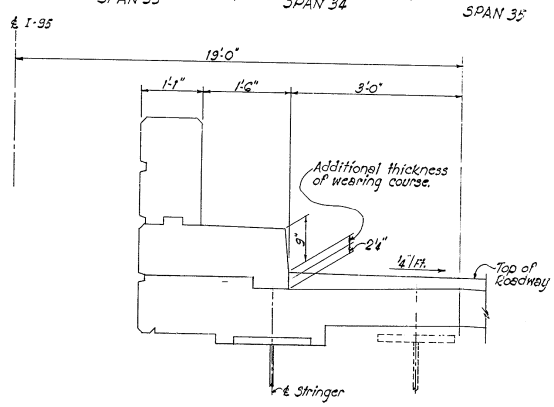
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA50

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	85	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





DETAIL AT
TANGENT SECTION ONLY
(SEE DWGS. S-1 & S-4)
SCALE: 1 IN.=1 FT.

NOTES:
Horizontal stringer lengths are computed from ℄ Brg to ℄ Brg.
[·····] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan, see Dwg SA56

Drawn by R.G.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

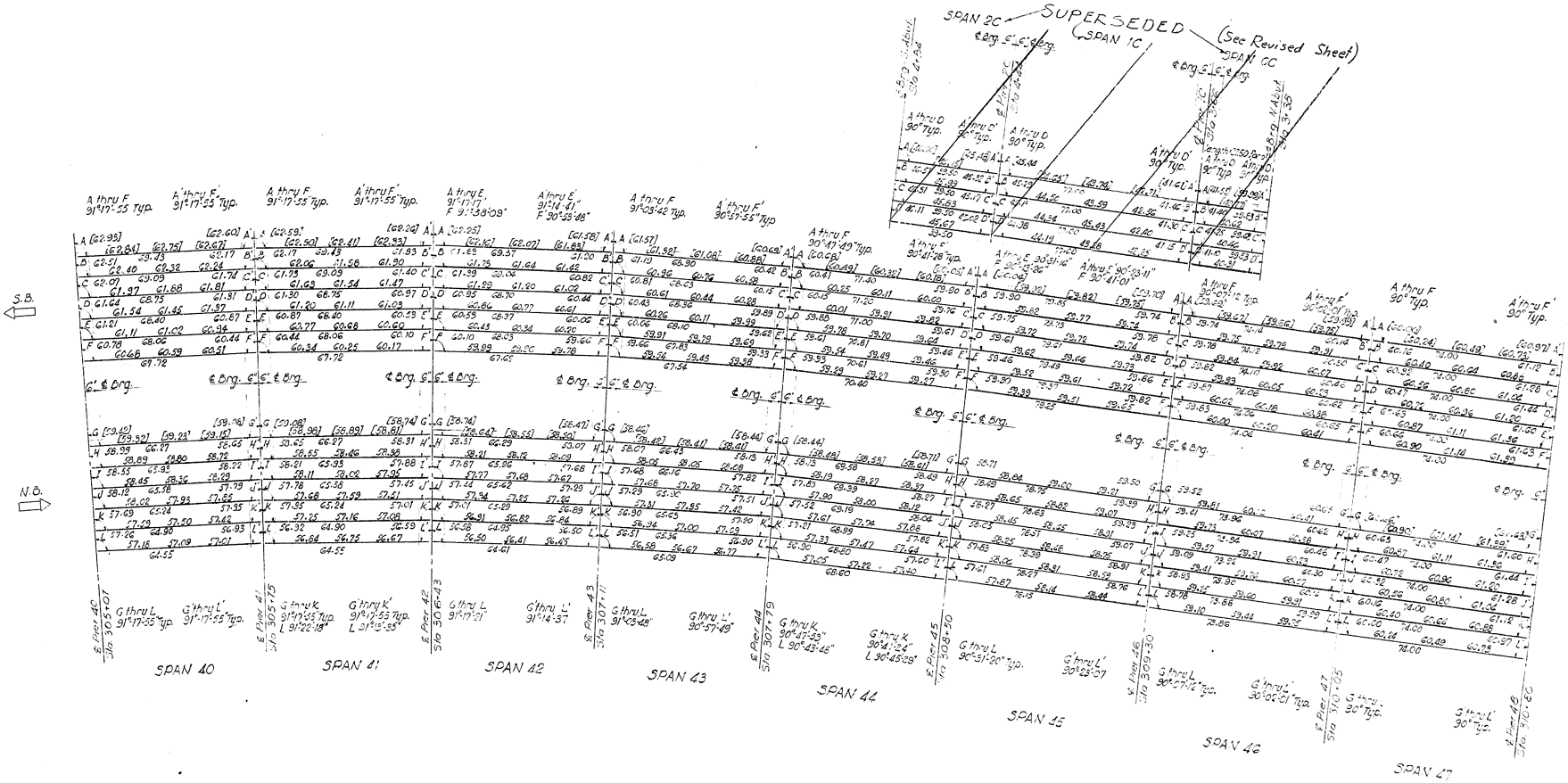
DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 3 OF 5

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 1 IN.=20 FT.
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA51

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95 2(12)	'64	86	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths computed from ℄ Brg. to ℄ Brg.
[ ] Denotes top of roadway elevations which are given at 4 points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan see Dwg. S457

Drawn by R.G.
Checked by J.A.P.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 4 OF 5

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE: 1 IN = 20 FT
DATE: APRIL 1, 1964

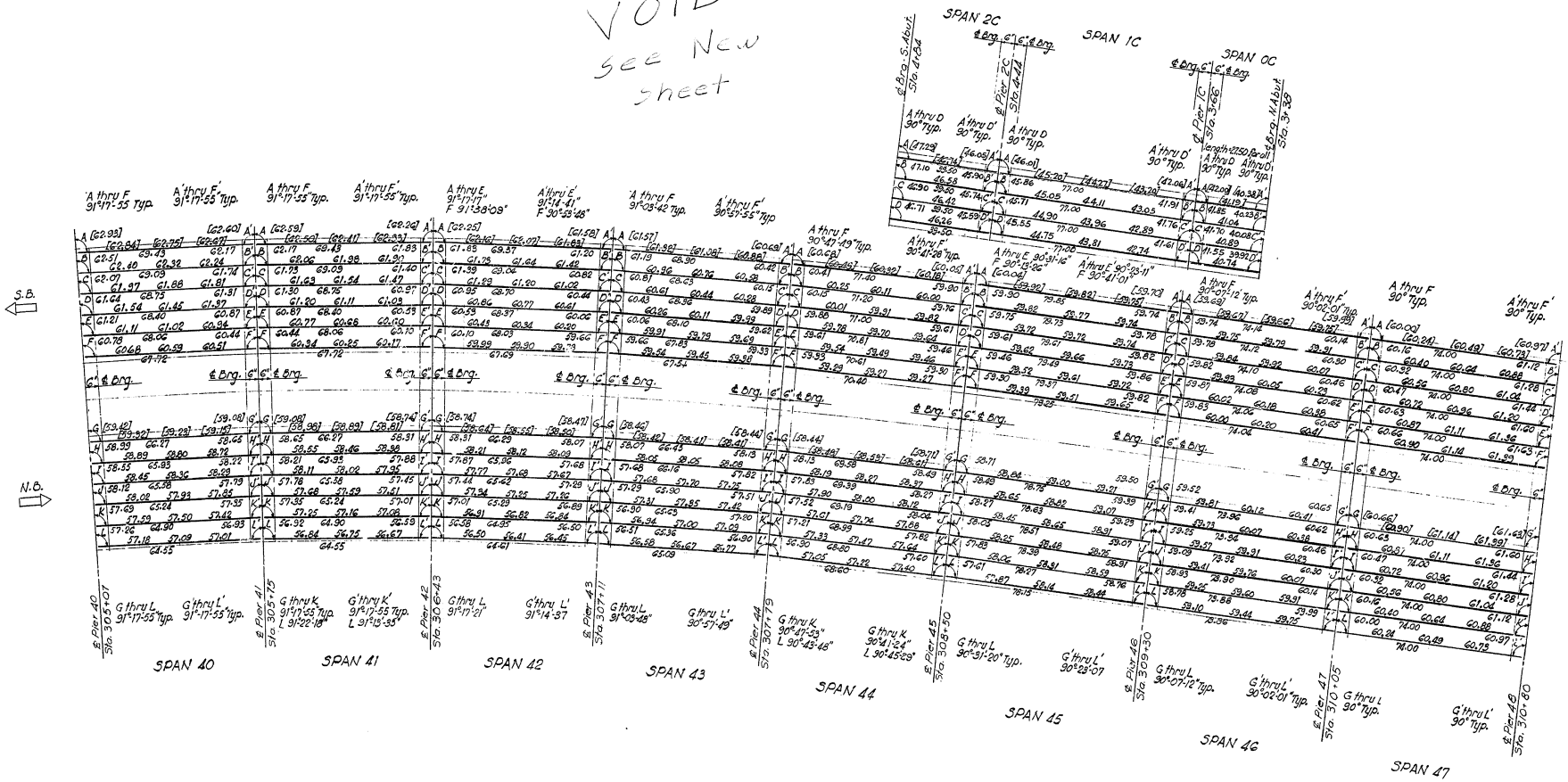
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 52

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	86	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

VOID
See New Sheet



NOTES:
Horizontal stringer lengths computed from ℄ Brg. to ℄ Brg.
[·····] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan see Dwg. SA51

Drawn by R.G.
Checked by J.A.P.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 4 OF 5

APPROVED BY: _____ 4-14-64
BRIDGE ENGINEER DATE

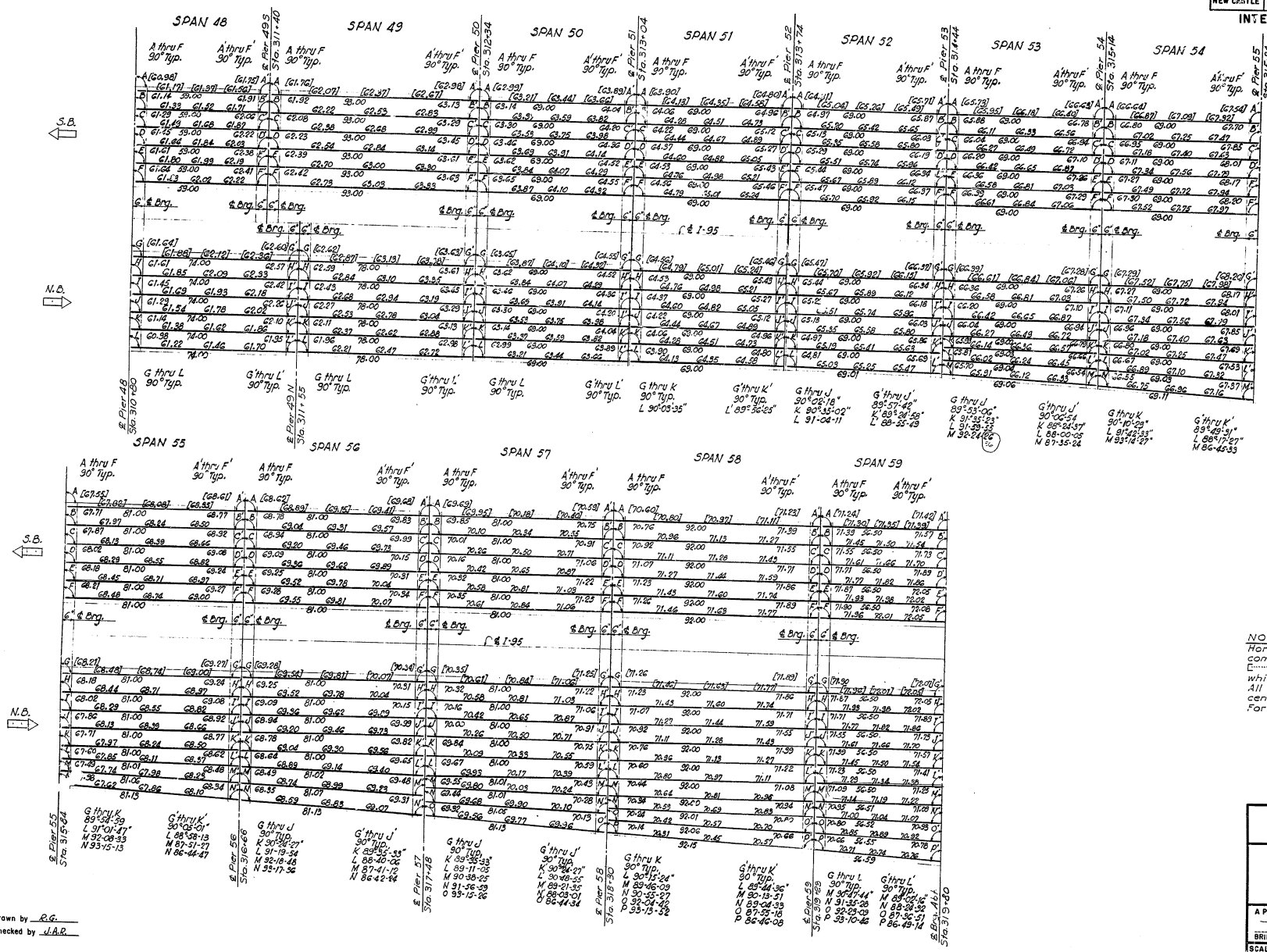
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA52

COUNTY	CONTRACT	R.R.A. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	87	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths are computed from ℄ Brg. to ℄ Brg.
[·····] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan see DWG. SA 58

Drawn by R.G.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 5 OF 5

APPROVED BY: Volmine R. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

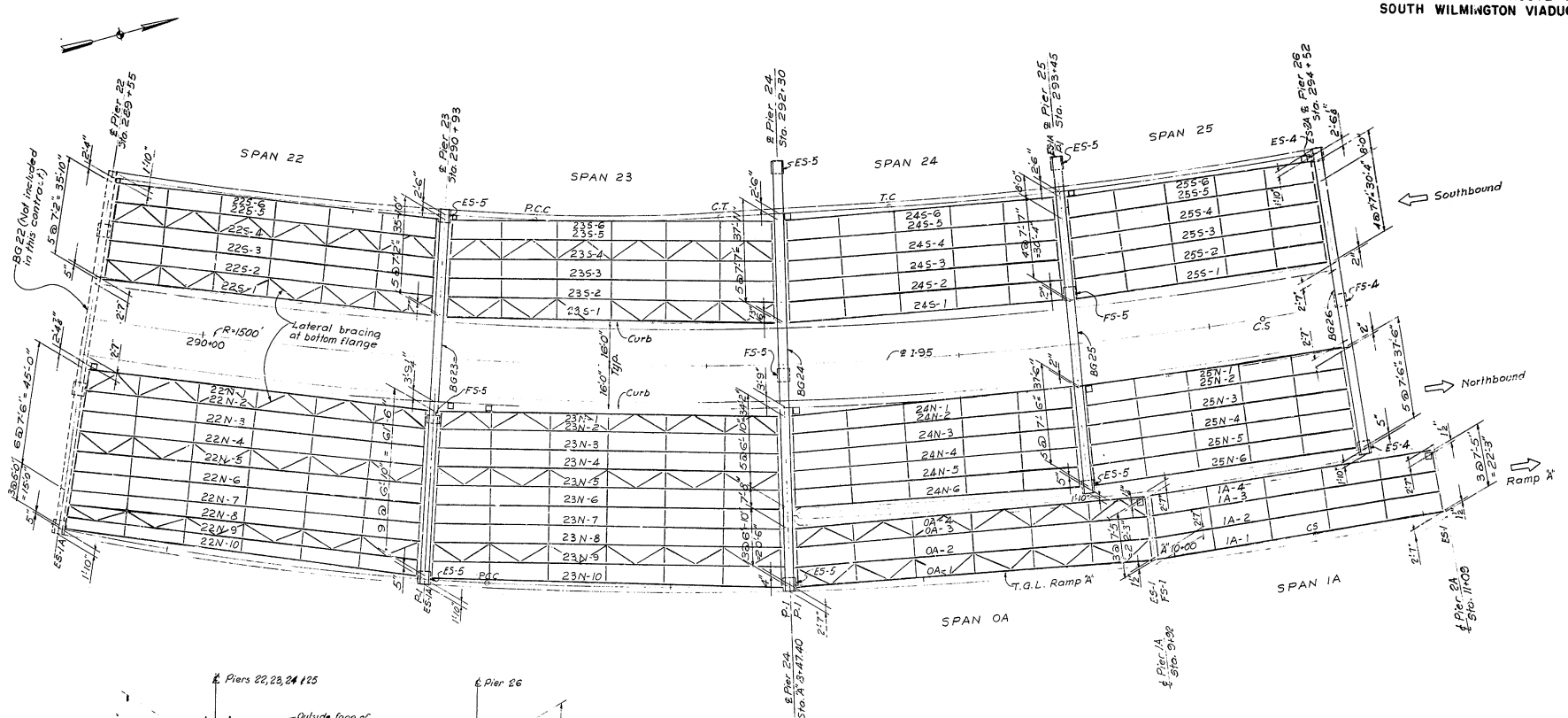
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

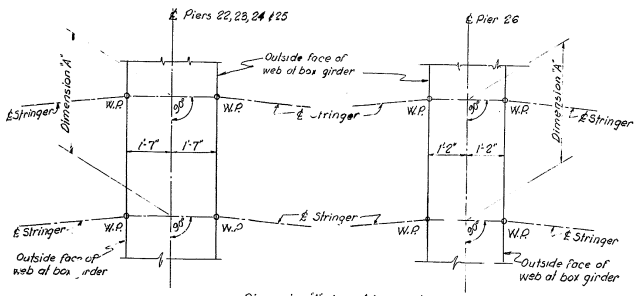
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 53

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	88	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





Dimension 'A' given at box girders is measured along ℄ pier. Working points for ℄ stringers are established by extending a line at right angles to ℄ pier, to outside face of web plate.

NOTES:
- For General Notes, see Dwg. SA 2
- For location of ℄ bearings and stringer geometry see Dwg. SA 49
- For stringer data, see Dwgs. SA 59 to SA 64
- For stringer details & shear connectors, see Dwgs. SA 65 to SA 68
- For box girders, see Dwgs. SA 69 to SA 76
- For details of shoes, see Dwgs. SA 73 & SA 74
- [F.J.] denotes a flinger joint, See Dwg. SA 75
- All Expansion Jts. are plate joints except as noted on Dwgs SA 54 thru SA 58.
- □ denotes scupper, see Dwgs SA 88 thru SA 90.
- For other references, see Index of Drawings.

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 22 TO PIER 26
RAMP A-SPANS OA & 1A

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE: 1 IN. = 20 FT.

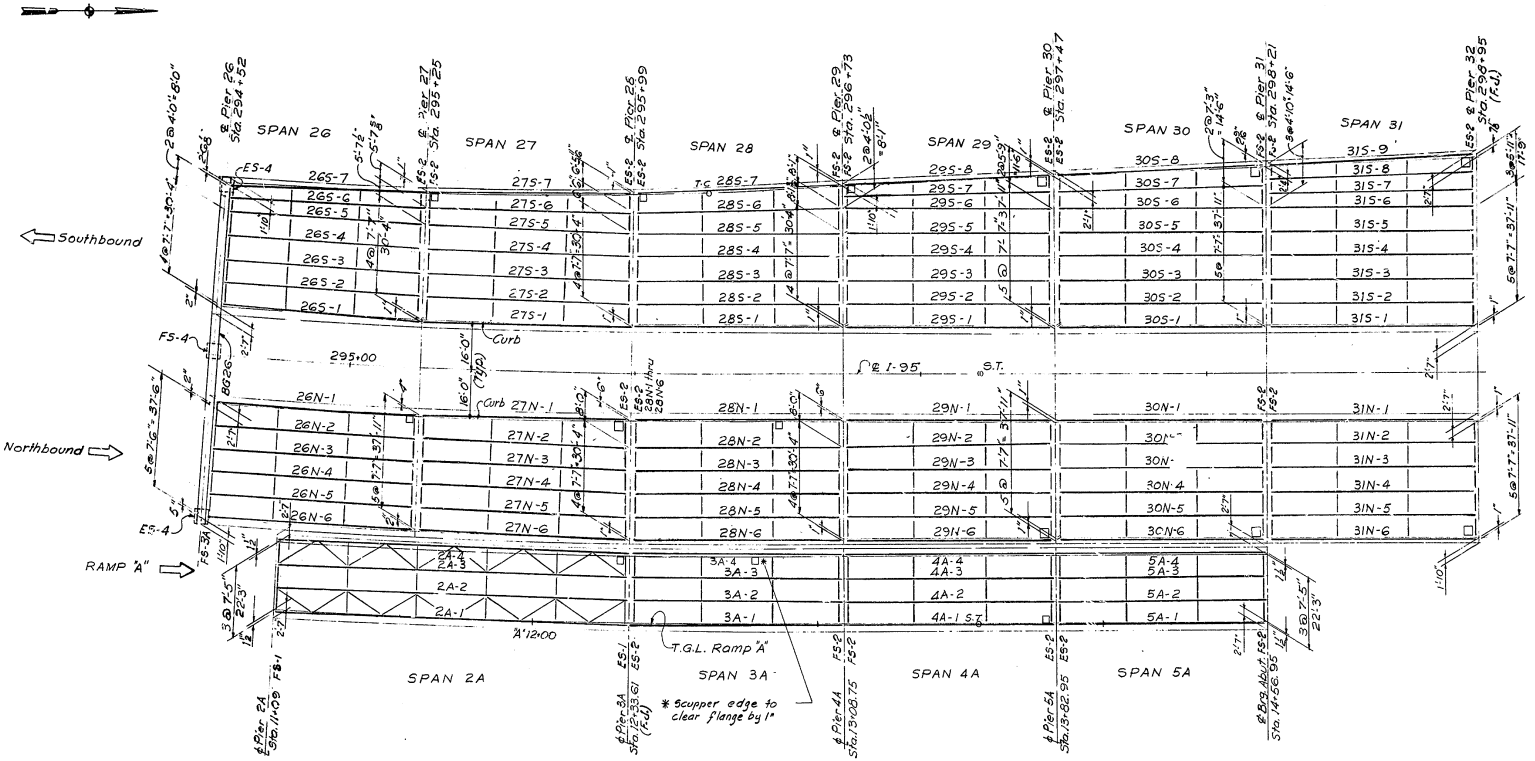
DATE: APRIL 1, 1964

T. PETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA 54

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	89	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 26 TO PIER 32
RAMP A-SPANS 2A THRU 5A

APPROVED BY: Valentine D. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

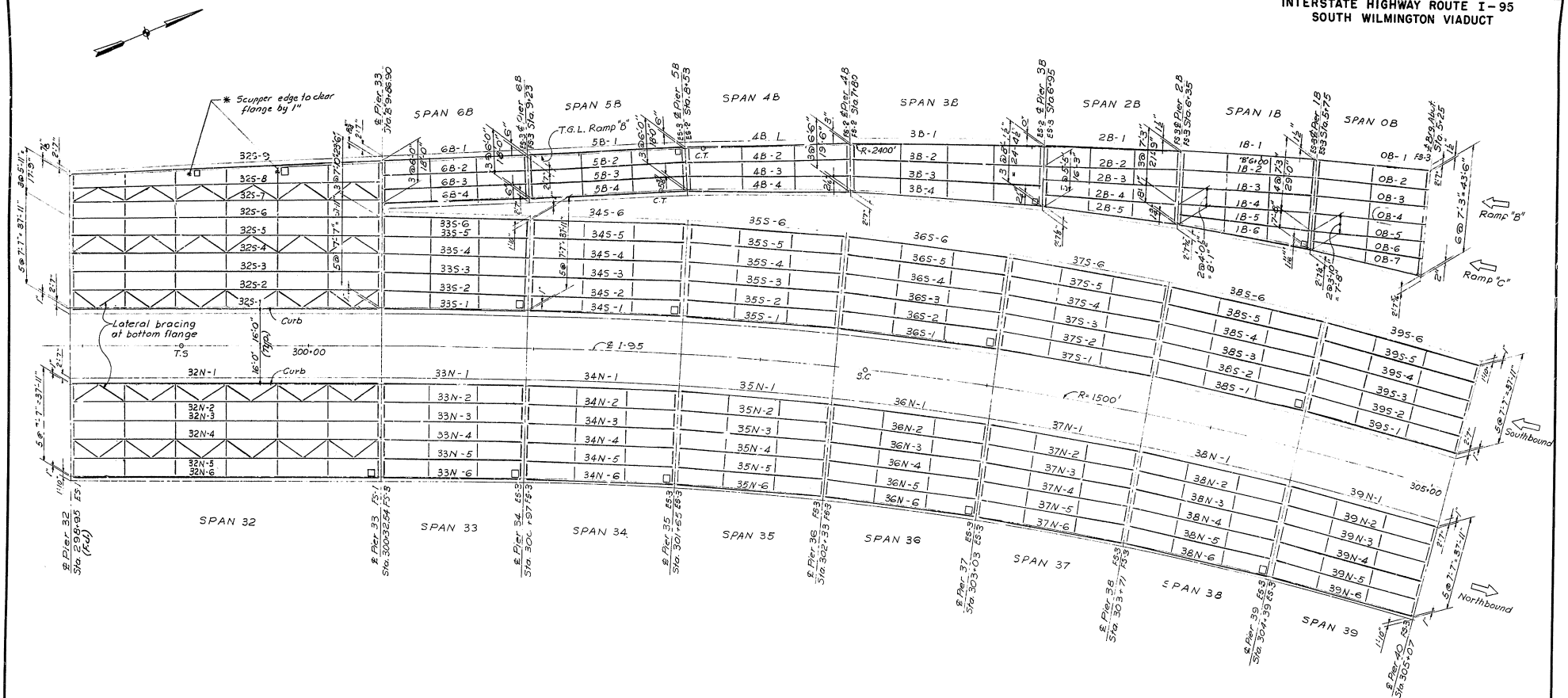
SCALE: 1 IN.=20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA55

COUNTY	CONTRACT	R.N.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	90	95

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 32 TO PIER 40
RAMP B-SPANS OB THRU 6B

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 1 IN. = 20 FT
DATE: APRIL 1, 1964

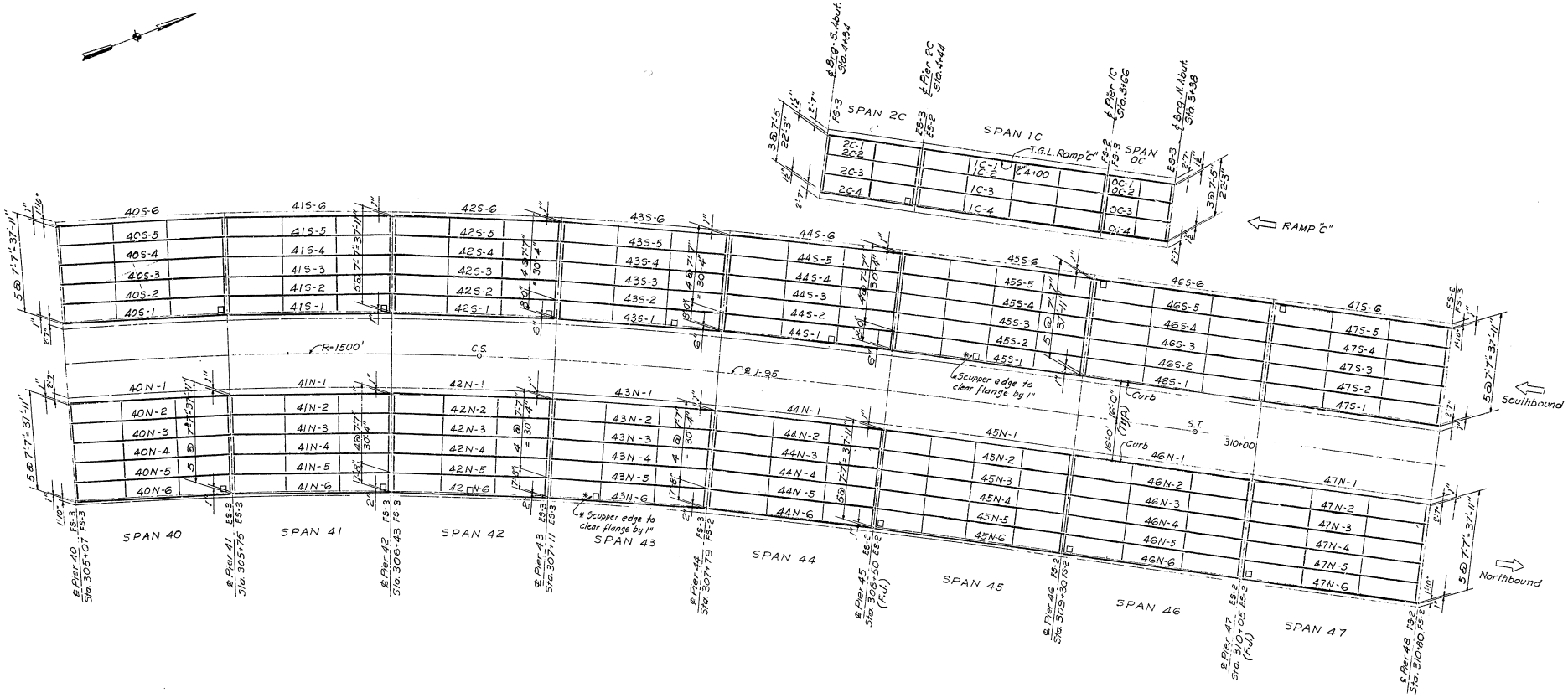
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA56

Drawn by E.N.
Checked by F.Y.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	91	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 40 TO PIER 48
RAMP C

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

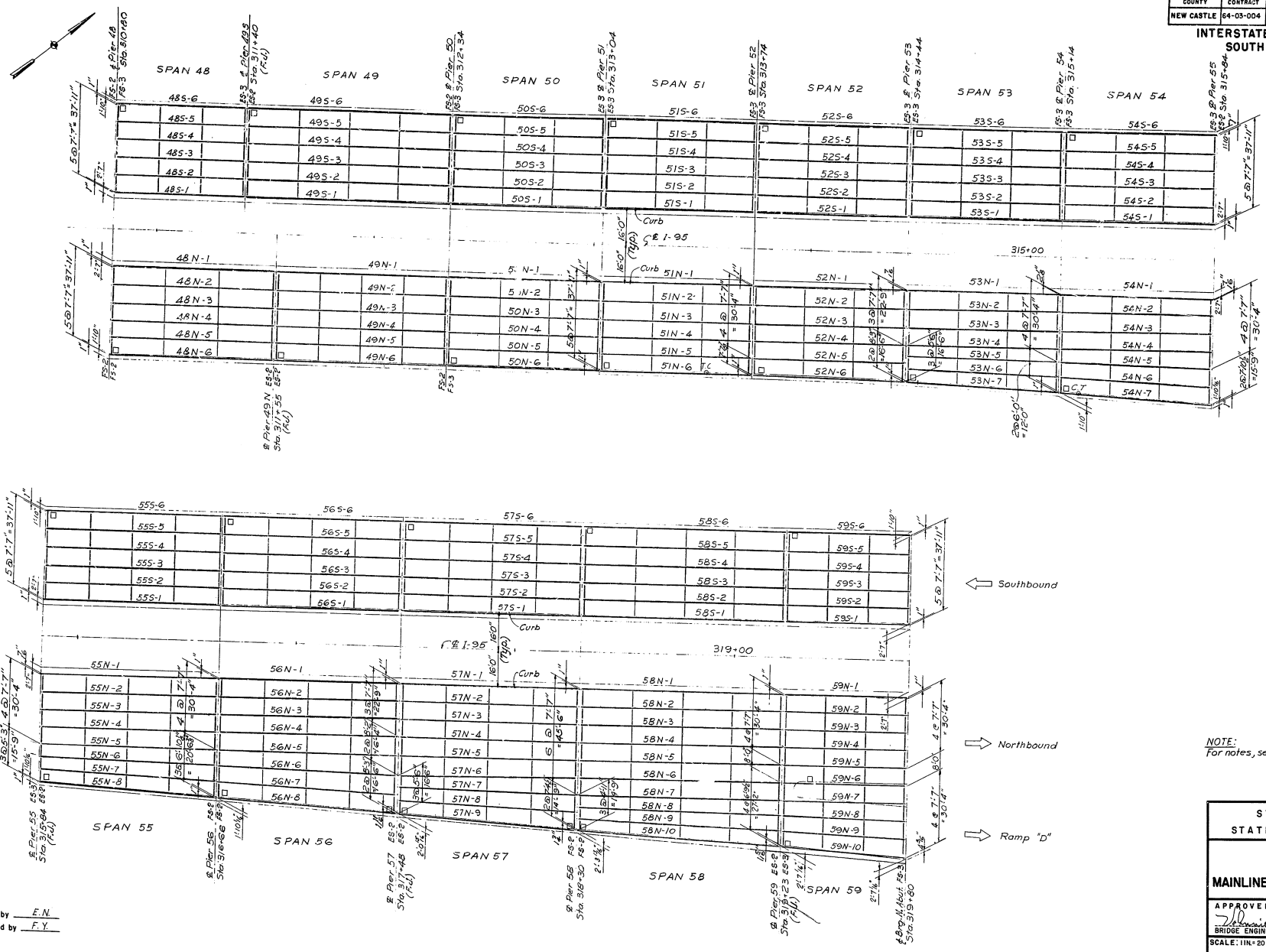
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA57

Drawn by E.N
Checked by F.Y.

COUNTY	CONTRACT	A.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	92	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

Drawn by E.N.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 48 TO NORTH ABUTMENT

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

SCALE: 1IN = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA58

COUNTY	CONTRACT	P.D.A. REG NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	93	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB B.W.S	CAMBER V.C.	CAMBER TOTAL	REMARKS
26S-1	36WF150	14x1/4 x 55-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16		1 1/8	
26S-2															
26S-3															
26S-4		14x1/2 x 55-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8			1 1/8	
26S-5		14x3/8 x 52-0		II	10-0	11-0	II	10-0	12-0	5/16	1"			1 5/16	
26S-6		10x1/2 x 48-0		III	14-0	9-0	III	14-0	9-0	5/16	7/8			1 3/16	
26S-7	36WF150	14x3/8 x 49-0		IV	15-0	10-0	IV	15-0	10-0	5/16	1/8	5/16	1/8	1 1/8	
26N-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	1/8	2 3/16	
26N-2															
26N-3															
26N-4															
26N-5		14x1 1/8 x 58-0		I	10-0	14-0	I	10-0	13-0				1/8	2 3/16	
26N-6	36WF160	16x1 3/8 x 57-0		II	12-0	13-0	II	12-0	14-0	7/16	1/4	3/8	1/4	2 5/16	
27S-1	36WF160	14x1 1/4 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	1/4	2 5/16	
27S-2															
27S-3															
27S-4															
27S-5		14x1 1/4 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 5/16	
27S-6		14x3/4 x 58-0		III	14-0	12-0	III	14-0	12-0	1/16	1 1/16			2 1/8	
27S-7	36WF160	14x3/8 x 58-0		III	14-0	12-0	III	14-0	12-0	3/8	1	3/8	1/4	2	
27N-1	36WF160	14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 3/8	3/8	0	2 5/16	
27N-2														0	2 5/16
27N-3														1/8	2 5/16
27N-4														1/4	2 5/16
27N-5		14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0		1 3/8	3/8	1/4	2 5/16	
27N-6	36WF160	14x1 1/8 x 58-0		II	12-0	13-0	II	12-0	14-0	7/16	1/4	3/8	1/4	2 5/16	
28S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	-	2 1/16	
28S-2													-		
28S-3													-		
28S-4													-		
28S-5													-		
28S-6		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4		-	2 1/16	
28S-7	36WF160	14x1 1/16 x 650		II	11-0	13-0	II	11-0	14-0	7/16	1/16	3/8	1/4	2 5/8	
28N-1	36WF160	14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 1/8	3/8	0	2 5/8	
28N-2															
28N-3															
28N-4															
28N-5		14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0		1 1/8			2 5/8	
28N-6	36WF160	14x1 1/8 x 57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/8	3/8	0	2	
29S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8		1 3/16	
29S-2														1/8	3 5/8
29S-3															
29S-4															
29S-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			3 5/8	
29S-6		14x1 1/16 x 55-0		II	11-0	11-0	II	11-0	12-0	1 3/16				3 1/4	
29S-7		10x3/4 x 50-0		IV	14-0	10-0	IV	14-0	10-0		1			3 1/16	
29S-8	36WF160	10-13/16 x 51-0		IV	15-0	10-0	IV	15-0	10-0	7/16	1	3/8	1/4	3 1/16	
29N-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	-	2 1/16	
29N-2													-		
29N-3													-		
29N-4													-		
29N-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4		-	2 1/16	
29N-6	36WF160	14x1 1/8 x 57-0		II	12-0	1. 0	II	12-0	14-0	7/16	1 3/16	3/8	-	2	
30S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	5/16	0	2 1/16	
30S-2															
30S-3															
30S-4															
30S-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
30S-6		14x1 1/4 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
30S-7		14x15/16 x 55-0		II	11-0	11-0	II	11-0	12-0		1 3/16			2	
30S-8	36WF160	14x3/4 x 54-0	None	II	11-0	11-0	II	11-0	12-0	7/16	1/4	3/8	0	1 3/16	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB B.W.S	CAMBER V.C.	CAMBER TOTAL	REMARKS
30N-1	36WF160	14x1 3/8 x 58-0	None	I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	0	2 1/16	
30N-2															
30N-3															
30N-4															
30N-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
30N-6	36WF160	14x1" x 56-0		II	12-0	12-0	II	12-0	13-0	7/16	1 3/8	3/8		1 15/16	
31S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8		2 1/16	
31S-2															
31S-3															
31S-4															
31S-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
31S-6		14x1 1/16 x 55-0		II	11-0	11-0	II	11-0	12-0		1 3/16			2	
31S-7		14x5/8 x 52-0		III	12-0	11-0	III	12-0	11-0		1/16			1 1/8	
31S-8		14x5/8 x 52-0		III	"	"	III	"	"		1/16			1 1/8	
31S-9	36WF160	14x5/8 x 54-0		III	12-0	11-0	III	12-0	11-0	7/16	1	3/8		1 15/16	
31N-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	5/8		2 1/16	
31N-2															
31N-3															
31N-4															
31N-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
31N-6	36WF160	14x1 x 560	None	II	12-0	12-0	II	12-0	13-0	7/16	1 3/8	3/8	0	1 15/16	
32S-1	See Dwg. SA63														Built up girder
32S-2															"
32S-3															"
32S-4															"
32S-5															"
32S-6															"
32S-7															"
32S-8															"
32S-9															"
32N-1															Built up girder
32N-2															"
32N-3															"
32N-4															"
32N-5															"
32N-6	See Dwg. SA63														"
33S-1	36WF150	14x13/16 x 49-0	None	I	10-0	12-0	I	10-0	11-0	1/4	15/16	1/4	-	1 7/16	
33S-2													-		
33S-3													-		
33S-4													-		
33S-5		14x13/16 x 49-0		I	10-0	12-0	I	10-0	11-0		15/16		-	1 7/16	
33S-6	36WF150	14x5/8 x 47-0		II	11-0	11-0	II	11-0	12-0	1/4	15/16	1/4	-	1 5/16	
33N-1	36WF150	16x3/4 x 48-0		I	10-0	12-0	I	10-0	11-0	1/4	7/8	1/4	0	1 3/8	
33N-2															
33N-3															
33N-4															
33N-5		14x3/4 x 48-0		I	10-0	12-0	I	10-0	11-0		7/8			1 3/8	
33N-6	36WF150	14x1/2 x 45-0		II	11-0	11-0	II	11-0	12-0	1/4	3/4	1/4	0	1 1/8	
34S-1	36WF150	14x1/2 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
34S-2													-		
34S-3													-		
34S-4													-		
34S-5		14x1 3/8 x 54-0		I	10-0	14-0	I	10-0	13-0		1/8		-	1 1/16	
34S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 1/16	
34N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
34N-2													-		
34N-3													-		
34N-4													-		
34N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0		1		-	1 5/8	
34N-6	36WF150	14x5/8 x 48-0	None	II	11-0	11-0	II	11-0	12-0	5/16	15/16	5/16	-	1 1/16	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB B.W.S	CAMBER V.C.	CAMBER TOTAL	REMARKS
35S-1	36WF150	14x1 1/2 x 54-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 7/16	
35S-2													-		
35S-3													-		
35S-4													-		
35S-5		14x1 1/2 x 54-0		I	10-0	14-0	I	10-0	13-0		1/8		-	1 1/16	
35S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 1/16	
35N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
35N-2													-		
35N-3													-		
35N-4													-		
35N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
35N-6	36WF150	14x5/8 x 47-0		II	11-0	11-0	II	11-0	12-0	1/4	15/16	5/16	-	1 1/16	
36S-1	36WF150	14x1 3/8 x 57-0		I	10-0	14-0	I	10-0	13-0	3/8	1/4	3/8	0	2	
36S-2													0	2	
36S-3													1/8	2 1/16	
36S-4													1/4	2 1/16	
36S-5		14x1 3/8 x 57-0		I	10-0	14-0	I	10-0	13-0	3/8	1/4	3/8	1/4	2 1/16	
36S-6	36WF150	14x1 1/8 x 56-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	3/8	1/4	2 1/16	
36N-1	36WF150	14x1 3/8 x 53-0		I	10-0	13-0	I	10-0	12-0	5/16	1/16	5/16	-	1 15/16	
36N-2													-		
36N-3													-		
36N-4													-		
36N-5		14x1 1/4 x 53-0		I	10-0	13-0	I	10-0	12-0		1/16		-	1 15/16	
36N-6	36WF150	14x3/4 x 49-0		II	11-0	11-0	II	11-0	12-0	5/16	1/8	5/16	-	1 1/8	
37S-1	36WF150	14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
37S-2													-		
37S-3													-		
37S-4													-		
37S-5		14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
37S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 5/16	
37N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
37N-2													-		
37N-3													-		
37N-4													-		
37N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
37N-6	36WF150	14x5/8 x 47-0		II	11-0	11-0	II	11-0	12-0	1/4	15/16	5/16	-	1 1/16	
38S-1	36WF150	14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
38S-2													-		
38S-3													-		
38S-4													-		
38S-5		14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
38S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 5/16	
38N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
38N-2													-		
38N-3													-		
38N-4													-		
38N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
38N-6	36WF150	14x3/8 x 47-0	None	II	11-0	11-0	II	11-0	12-0	1/4	15/16	5/16	-	1 1/16	

NOTES:
For Framing Plan, see Dwgs. SA55 & SA56
For stringer and shear connector details, see Dwgs. SA67 & SA68

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 26 THRU 38

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA59

COUNTY	CONTRACT	B.P.R. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	94	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE		SHEAR CONNECTORS						CAMBER					REMARKS
		BOTTOM	TOP	SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	
39S-1	36WF150	14x1 1/8x54-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
39S-2													-		
39S-3													-		
39S-4													-		
39S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
39S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
39N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
39N-2															
39N-3													-		
39N-4													-		
39N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
39N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
40S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
40S-2													-		
40S-3													-		
40S-4													-		
40S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
40S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
40N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
40N-2															
40N-3													-		
40N-4													-		
40N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
40N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
41S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
41S-2															
41S-3													-		
41S-4													-		
41S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
41S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
41N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
41N-2															
41N-3													-		
41N-4													-		
41N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
41N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
42S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	1/4	2 1/16	
42S-2													1/2	2 5/16	
42S-3													7/8	2 11/16	
42S-4													1 1/8	2 15/16	
42S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		1 1/2	3 5/16	
42S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	1 3/4	3 1/2	
42N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
42N-2													-		
42N-3													-		
42N-4													-		
42N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
42N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
43S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
43S-2													-		
43S-3													-		
43S-4													-		
43S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
43S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
43N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
43N-2													-		
43N-3													-		
43N-4													-		
43N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
43N-6	36WF150	14x5/8x47-0	None	II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	

MARK	SIZE	COVER PLATE		SHEAR CONNECTORS						CAMBER					REMARKS
		BOTTOM	TOP	SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	
44S-1	36WF150	14x1 3/8x57-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1 1/4	3/8	-	2	
44S-2													-		
44S-3													-		
44S-4													-		
44S-5		14x1 3/8x57-0		I	10-0	14-0	I	10-0	13-0		1 1/4		-	2	
44S-6	36WF150	14x1 1/8x56-0		II	12-0	12-0	II	12-0	13-0	3/8	1 3/16	3/8	-	1 15/16	
44N-1	36WF150	14x1 1/4x55-0		I	10-0	14-0	I	10-0	13-0	3/8	1 3/16	5/16	-	1 7/8	
44N-2													-		
44N-3													-		
44N-4													-		
44N-5		14x1 1/4x55-0		I	10-0	14-0	I	10-0	13-0		1 3/16		-	1 7/8	
44N-6	36WF150	14x13/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	15/16	5/16	-	1 5/8	
45S-1	36WF194	14x1 1/2x63-0		I	10-0	17-0	I	10-0	16-0	9/16	1 1/2	1/2	-	2 9/16	
45S-2													-		
45S-3													-		
45S-4													-		
45S-5		14x1 1/2x63-0		I	10-0	17-0	I	10-0	16-0		1 1/2		-	2 9/16	
45S-6	36WF194	14x1 1/4x61-0		II	12-0	15-0	II	12-0	16-0	9/16	1 3/8	1/2	-	2 7/16	
45N-1	36WF194	14x1 1/2x61-0		I	11-0	16-0	I	11-0	15-0	9/16	1 7/16	7/16	-	2 7/16	
45N-2													-		
45N-3													-		
45N-4													-		
45N-5		14x1 1/2x61-0		I	11-0	16-0	I	11-0	16-0		1 7/16		-	2 7/16	
45N-6	36WF194	14x1 1/8x59-0		II	12-0	14-0	II	12-0	15-0	9/16	1 1/4	7/16	-	2 1/4	
46S-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 3/8	3/8	-	2 3/16	
46S-2													-		
46S-3													-		
46S-4													-		
46S-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 3/8		-	2 3/16	
46S-6	36WF160	14x1 1/8x58-0		II	12-0	13-0	II	12-0	14-0	7/16	1 1/4	3/8	-	2 1/16	
46N-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8	1/2	2 5/8	
46N-2													5/8	2 3/4	
46N-3													5/8	2 3/4	
46N-4													3/4	2 7/8	
46N-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16		3/4	2 7/8	
46N-6	36WF160	14x1 1/8x57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8	3/4	2 3/4	
47S-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8	0	2 1/8	
47S-2															
47S-3															
47S-4															
47S-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16			2 1/8	
47S-6	36WF160	14x1 1/8x57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8		2	
47N-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8		2 1/8	
47N-2															
47N-3															
47N-4															
47N-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16			2 1/8	
47N-6	36WF160	14x1 1/8x57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8		2	
48S-1	36WF150	10x3/4x41-0		I	10-0	10-0	I	10-0	10-0	3/16	11/16	1/4		1 1/8	
48S-2															
48S-3															
48S-4															
48S-5		10x3/4x41-0		I	10-0	10-0	I	10-0	10-0		11/16			1 1/8	
48S-6	36WF150	10x7/16x39-0		II	11-0	9-0	II	11-0	10-0	3/16	5/8	1/4		1 1/16	
48N-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8		2 1/8	
48N-2															
48N-3															
48N-4															
48N-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16			2 1/8	
48N-6	36WF160	14x1 1/8x57-0	None	II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8	0	2	

MARK	SIZE	COVER PLATE		SHEAR CONNECTORS						CAMBER					REMARKS
		BOTTOM	TOP	SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	
49S-1	36WF300	18x1 3/8x68-0	None	II	11-0	15-0	II	16-0	16-0	1	1 3/4	5/8	0	3 3/8	
49S-2															
49S-3															
49S-4															
49S-5		18x1 3/8x68-0		II	16-0	15-0	II	16-0	16-0		1 3/4			3 3/8	
49S-6	36WF300	18x1x65-0		III	22-0	12-0	III	22-0	12-0	1	1 1/2	5/8		3 1/8	
49N-1	36WF194	14x1 3/8x61-0		I	12-0	14-0	I	12-0	13-0	1/2	1 3/8	7/16		2 5/16	
49N-2															
49N-3															
49N-4															
49N-5		14x1 3/8x61-0		I	12-0	14-0	I	12-0	13-0		1 3/8			2 5/16	
49N-6	36WF194	14x1 1/8x58-0		II	12-0	14-0	II	12-0	15-0	1/2	1 1/4	7/16		2 3/16	
50S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
50S-2															
50S-3															
50S-4															
50S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
50S-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
50N-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
50N-2															
50N-3															
50N-4															
50N-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
50N-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
51S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
51S-2															
51S-3															
51S-4															
51S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
51S-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
51N-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
51N-2															
51N-3															
51N-4															
51N-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
51N-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
52S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
52S-2															
52S-3															
52S-4															
52S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
52S-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
52N-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
52N-2		14x1 1/8x54-0			10-0	14-0		10-0	13-0						
52N-3		14x1 1/8x54-0			10-0	14-0		10-0	13-0						
52N-4		14x1 1/4x55-0			12-0	13-0		12-0	12-0						
52N-5		14x1 1/4x55-0		I	12-0	13-0	I	12-0	12-0	3/8	1 1/8			1 13/16	
52N-6	36WF150	14x15/16x53-0	None	II	12-0	12-0	II	12-0	13-0	5/16	1	5/16	0	1 5/8	

NOTES

For Framing Plan, see Dwg. SA56, SA57 and SA58

For stringer & shear connector details, see Dwgs. SA67 & SA68

Made by S.J.V.

Traced by S.J.V.

Checked by J.A.R.

STATE OF DELAWARE

STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 39 THRU 52

APPROVED BY: [signature] 4-16-64

BRIDGE ENGINEER DATE

SCALE:

TIPPETTS-ABBETT-McCARTHY-STRATTON

ENGINEERS AND ARCHITECTS

DWG. NO. SA60

DATE: APRIL 1, 1964

COUNTY	CONTRACT	F.A.P. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	95	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
535-1	36WF150	14×1⅛×54-0	None	I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16	0	1⅞	
535-2															
535-3															
535-4															
535-5		14×1⅛×54-0		I	10-0	14-0	I	10-0	15-6	⅜	1⅛			1⅞	
535-6	36WF150	14×⅞×52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1⅝	
53N-1	36WF150	14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16		1⅞	
53N-2															
53N-3															
53N-4		14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0		1⅛			1⅛	
53N-5		14×⅞×52-0		II	10-0	11-0	II	10-0	12-0		1			1⅛	
53N-6		14×⅞×52-0		II	10-0	11-0	II	10-0	12-0		1			1⅛	
53N-7	36WF120	14×⅞×50-0		III	14-0	8-0	III	14-0	9-0	⅜	1⅛	5/16		1⅝	
545-1	36WF150	14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16		1⅞	
545-2															
545-3															
545-4															
545-5		14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛			1⅞	
545-6	36WF150	14×⅞×52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1⅝	
54N-1	36WF150	14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16		1⅞	
54N-2															
54N-3															
54N-4															
54N-5		14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0		1⅛			1⅞	
54N-6		14×1×54-0		II	12-0	12-0	II	12-0	13-0		1¼			1⅜	
54N-7	36WF150	14×⅞×52-0		II	10-0	12-0	II	10-0	13-0	⅜	1	5/16		1⅝	
555-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
555-2															
555-3															
555-4															
555-5		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜			2⅝	
555-6	36WF230	18×⅞×57-0		II	14-0	12-0	II	14-0	13-0	⅝	1⅜	½		2⅝	
55N-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
55N-2															
55N-3															
55N-4															
55N-5		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜	½		2⅝	
55N-6		14×⅞×55-0		III	15-0	13-0	III	15-0	13-0		1⅛	5/16		2⅝	
55N-7		16×⅞×55-0		III	15-0	13-0	III	15-0	13-0		1⅛	5/16		2⅝	
55N-8	36WF230	16×⅞×54-0		III	16-0	11-0	III	16-0	11-0	⅝	1 7/16	½		2⅝	
565-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
565-2															
565-3															
565-4															
565-5		18×1×60-0		I	12-0	15-0	I	12-0	14-1		1⅜			2⅝	
565-6	36WF230	18×⅞×57-0		II	14-0	12-0	II	14-0	13-0	⅝	1⅛	½		2⅜	
56N-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
56N-2											1⅛			2⅝	
56N-3											1⅜			2⅝	
56N-4											1 7/16			2⅞	
56N-5											1 7/16			2⅞	
56N-6											1⅜			2⅝	
56N-7		18×1⅛×60-0		I	12-0	15-0	I	12-0	14-0		1⅜	↓	↓	2⅝	
56N-8	36WF230	18×⅞×57-0	None	II	14-0	12-0	II	14-0	13-0	⅝	1¼	½	0	2⅜	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
575-1	36WF230	18×1×60-0	None	I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½	½	3	
575-2															
575-3															
575-4															
575-5		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜			3	
575-6	36WF230	18×⅞×57-0		II	14-0	12-0	II	14-0	13-0	⅝	1⅛	½	½	2⅝	
57N-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½	½	3	
57N-2		18×1×60-0									1⅜			3	
57N-3		18×1×60-0									1⅜			3	
57N-4		18×1⅛×61-0									1¾			3⅛	
57N-5		18×1⅛×61-0									1¾			3⅛	
57N-6		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜			3	
57N-7		14×⅞×56-0		II	12-0	13-0	II	12-0	14-0		1 5/16			2⅜	
57N-8		14×⅞×56-0		II	12-0	13-0	II	12-0	14-0		1 5/16			2⅜	
57N-9	36WF230	18×⅞×55-0		III	17-0	14-0	III	16-0	15-0	⅝	1¾	½	½	2⅞	
585-1	36WF300	18×1¼×67-0		II	16-0	15-0	II	16-0	16-0	15/16	1⅛	⅝	⅝	3 15/16	
585-2															
585-3															
585-4															
585-5		18×1¼×67-0		II	16-0	15-0	II	16-0	16-0		1⅛			3⅛	
585-6	36WF300	18×⅞×64-0		III	22-0	12-0	III	22-0	12-0	15/16	1⅛	⅝	⅝	3⅛	
58N-1	36WF300	18×1¼×67-0		II	16-0	15-0	II	16-0	16-0	15/16	1⅛	⅝	⅝	3 15/16	
58N-2															
58N-3															
58N-4															
58N-5															
58N-6		18×1¼×67-0									1⅛			3⅛	
58N-7		18×1×64-0		II	16-0	15-0	II	16-0	16-0		1⅛			3⅛	
58N-8		18×¾×60-0		IV	20-0	13-0	IV	22-0	11-0		1⅞			3⅝	
58N-9		14×¾×60-0		IV	20-0	13-0	IV	22-0	11-0		1⅞			3⅝	
58N-10	36WF300	18×¾×60-0		IV	20-0	12-0	IV	22-0	10-0	15/16	1⅞	⅝	⅝	3⅝	
595-1	36WF150	10×⅝×39-0		I	10-0	9-0	I	10-0	9-0	3/16	⅝	3/16	¼	1¼	
595-2															
595-3															
595-4															
595-5		10×⅝×39-0		I	10-0	9-0	I	10-0	9-0		⅝			1¼	
595-6	36WF150	10×½×36-0		II	11-0	8-0	II	11-0	9-0	3/16	½	3/16	¼	1⅛	
59N-1	36WF150	10×⅝×39-0		I	10-0	9-0	I	10-0	9-0	3/16	⅝	3/16	¼	1¼	
59N-2															
59N-3															
59N-4															
59N-5															
59N-6		10×⅝×39-0		I	10-0	9-0	I	10-0	9-0						
59N-7		10×½×38-0		II	11-0	9-0	II	11-0	10-0						
59N-8		10×½×38-0				9-0			10-0						
59N-9		10×½×38-0				9-0			10-0		⅝			1¼	
59N10	36WF150	10×½×36-0	None	II	11-0	8-0	II	11-0	9-0	3/16	½	3/16	¼	1⅛	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS

NOTES:
For Framing Plan, see Dwg. SA58
For stringer & shear connectors details, see Dwgs. SA67 & SA68

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 53 THRU 59

APPROVED BY: Nathaniel R. Peacock, Jr. BRIDGE ENGINEER — 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA61

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	96	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
OA-1	See Dwg.	SA63													Built up girder
OA-2															
OA-3															
OA-4	See Dwg.	SA63													
1A-1	See Dwg.	SA63													Built up girder
1A-2															
1A-3															
1A-4	See Dwg.	SA63													
2A-1	See Dwg.	SA64													Tapered girder Stgr.
2A-2															
2A-3															
2A-4	See Dwg.	SA64													
3A-1	36WF160	14x1 3/8 x 59-0	None	I	11-0	14-0	I	11-0	13-0	7/16	1 3/8	7/16	0	2 1/4	
3A-2											15/16			2 3/16	
3A-3											15/16			2 3/16	
3A-4	36WF160	14x1 3/8 x 59-0		I	11-0	14-0	I	11-0	13-0	7/16	1 3/8	7/16	0	2 1/4	
4A-1	36WF160	14x1 1/8 x 58-0		I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	0	2 1/16	
4A-2		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0				1/4	2 1/16	
4A-3		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0				1/4	2 1/16	
4A-4	36WF160	14x1 1/8 x 58-0		I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	3/4	2 1/16	
5A-1	36WF160	14x1 1/8 x 58-0		I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	0	2 1/16	
5A-2		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0						
5A-3		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0						
5A-4	36WF160	14x1 3/8 x 58-0	None	I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	0	2 1/16	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
OB-1	36WF150	None	None	II	9-0	8-0	II	9-0	9-0	1/8	3/8	1/8	0	5/8	
OB-2	30WF108	12x3/4x38-0		I	11-0	8-0	I	11-0	7-0		5/8	3/4	0	15/16	
OB-3		12x3/4x32-0									5/8		0	15/16	
OB-4		12x3/4x38-0									5/8		-	15/16	
OB-5		12x7/8x36-0		I	11-0	8-0	I	11-0	7-0		7/16		-	3/8	
OB-6	30WF108	12x1/4x33-0		II	9-0	8-0	II	9-0	9-0		1/2	3/4	-	15/16	
OB-7	36WF150	None		III	10-0	7-0	III	10-0	7-0	1/8	1/8	1/8	-	5/8	
1B-1	36WF150	10x7/8x41-0		II	11-0	9-0	II	11-0	10-0	3/16	11/16	1/4	0	1 1/8	
1B-2	33WF130	16x3/4x46-0		I	11-0	10-0	I	11-0	9-0	1/4	13/16			1 5/16	
1B-3		18x3/4x44-0		I	11-0	10-0	I	11-0	9-0		13/16			1 5/16	
1B-4		16x3/4x44-0		I	10-0	9-0	I	10-0	8-0		3/4			1 1/4	
1B-5	33WF130	10x7/8x41-0		III	11-0	7-0	III	11-0	8-0	1/4	7/16			1 1/2	
1B-6	36WF150	10x1/2x39-0		II	11-0	7-0	II	11-0	8-0	3/16	7/16	1/4	0	1 1/8	
2B-1	36WF150	10x3/4x42-0		I	10-0	9-0	I	10-0	8-0	3/16	7/16	1/4	0	1 1/8	
2B-2	33WF130	18x3/4x46-0			11-0	10-0		11-0	9-0	1/4	13/16			1 5/16	
2B-3	33WF130	16x7/8x44-0			10-0	9-0		10-0	8-0	1/4	3/4			1 1/4	
2B-4	33WF130	16x7/8x44-0		I	10-0	9-0	I	10-0	8-0	1/4	3/4			1 1/4	
2B-5	36WF150	10x1/2x40-0		II	11-0	8-0	II	11-0	9-0	3/16	3/4	1/4	0	1 1/8	
3B-1	36WF230	18x1 1/8x63-0		II	15-0	13-0	II	15-0	14-0	1/4	1 1/8	3/8	2	4 1/8	
3B-2				I	12-0	15-0	I	12-0					1	4 1/8	
3B-3				I	12-0	15-0	I	12-0					1 1/4	4 1/8	
3B-4	36WF230	18x1 1/8x63-0		II	15-0	13-0	II	15-0	16-0	5/16	1 1/16	3/8	1/2	3 3/16	
4B-1	36WF160	18x7/8x54-0		II	10-0	12-0	II	10-0	13-0	7/16	1 1/8	7/16	2 3/8	4 3/8	
4B-2		18x7/16x54-0									1 1/16		2 3/8	4 5/16	
4B-3		18x7/16x54-0									1 1/16		2 3/8	4 5/16	
4B-4	36WF160	18x7/8x54-0		II	10-0	12-0	II	10-0	13-0	7/16	1 1/8	7/16	2 3/8	4 1/2	
5B-1	36WF150	16x3/4x51-0		II	10-0	11-0	II	10-0	12-0	3/8	1	3/8	2 3/8	3 7/8	
5B-2													2 3/8	4 1/8	
5B-3													2 3/8	4 1/8	
5B-4	36WF150	16x3/4x51-0		II	10-0	11-0	II	10-0	12-0	3/8	1	3/8	3	4 3/8	
6B-1	36WF150	16x1/2x45-0		II	10-0	9-0	II	10-0	10-0	1/4	13/16	5/16	5/8	2	
6B-2											3/4			1 15/16	
6B-3											3/4			1 15/16	
6B-4	36WF150	16x1/2x45-0	None	II	10-0	9-0	II	10-0	10-0	1/4	13/16	5/16	5/8	2	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
OC-1	36WF150	None	None	–	–	–	–	–	–	–	1/2	1/2	0	1/2	Non-Comp.
OC-2	30WF108			–	–	–	–	–	–	–	1	1	1	1	" "
OC-3	30WF108			–	–	–	–	–	–	–	1	1	1	1	" "
OC-4	36WF150	None	None	–	–	–	–	–	–	–	1/2	1/2	0	1/2	" "
1C-1	36WF194	18x1 1/4x58-0	None	I	11-0	12-0	I	11-0	11-0	1/2	1 5/16	1/2	2 1/2	4 3/16	
1C-2		18x1 3/8x59-0													
1C-3		18x1 3/8x59-0													
1C-4	36WF194	18x1 1/4x58-0	None	I	11-0	12-0	I	11-0	11-0	1/2	1 5/16	1/2	2 1/2	4 3/16	
2C-1	36WF150	None	None	–	–	–	–	–	–	1/2	1/2	1/2	1/2	1	Non-Comp.
2C-2	33WF141			–	–	–	–	–	–		5/16	1/2	1/2	1 1/4	" "
2C-3	33WF141			–	–	–	–	–	–		5/16	1/2	1/2	1 1/4	" "
2C-4	36WF150	None	None	–	–	–	–	–	–	1/2	1/2	1/2	1/4	1 1/4	" "

NOTES:
For Framing Plan, see Dwg. SA54 thru SA58
For stringer & shear connector details, see Dwgs. SA67 & SA68
For stringer data on spans OA, 1A & 2A, see Dwg. SA64

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
RAMPS A, B & C

APPROVED BY: Thomas D. Feaney Jr. BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA62

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	97	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

MAINLINE

STRINGER MARK	WEB PLATE	TOP FLANGE PLATES P1 SIZE	P1 L1	P2 SIZE	P2 L2	P3 SIZE	BOTTOM FLANGE PLATES P4 SIZE	P4 L4	P5 SIZE	P5 L5	P6 SIZE	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	REMARKS
22S-1	72×7/16	16×1 3/4	88-6	–	–	16×7/8	20×2 1/8	88-6	20×1 3/8	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 5/16	1/2	–	3 13/16	
2	↕	16×1 1/2	87-0	–	–	16×3/4	20×2	87-0	20×1 1/2	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	2 1/16	9/16	–	3 5/8	
3	↕	↕	86-6	–	–	↕	20×2	86-6	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	9/16	–	3 5/8	
4	↕	↕	86-0	–	–	↕	20×2	86-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	9/16	–	3 5/8	
5	↕	↕	85-0	–	–	↕	20×2	85-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	9/16	–	3 5/8	
22S-6	72×7/16	16×1 1/2	84-0	–	–	16×3/4	20×1 7/8	84-0	20×1 1/2	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 1/16	1/2	–	3 9/16	
22N-1	72×7/16	20×1 3/4	92-0	–	–	20×7/8	24×2	92-0	22×1 5/8	9-0	20×1	V	20-0	19-0	V	20-0	10-0	1 1/8	2 7/16	1/2	–	4 1/16	
2	↕	20×1 1/2	85-6	–	–	↕	24×1 7/8	85-6	↕	11-0	↕	↕	22-0	↕	V	22-0	↕	1 3/16	2 3/16	5/8	–	4	
3	↕	↕	86-0	–	–	↕	↕	86-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
4	↕	↕	87-0	–	–	↕	↕	87-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
5	↕	↕	87-6	–	–	↕	↕	87-6	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
6	↕	↕	88-0	–	–	↕	↕	88-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
7	↕	20×1 1/2	90-0	–	–	20×7/8	24×1 7/8	90-0	22×1 5/8	11-0	↕	↕	22-0	19-0	↕	22-0	↕	1 3/16	↕	5/8	–	4	
8	↕	18×1 1/2	92-0	–	–	18×3/4	22×1 3/4	92-0	22×1 3/8	9-0	↕	↕	18-0	18-0	↕	18-0	↕	1 1/4	↕	3/4	–	4 3/16	
9	↕	18×1 1/2	93-0	·	–	18×3/4	22×1 3/4	93-0	22×1 3/8	9-0	↕	↕	18-0	18-0	↕	18-0	↕	1 1/4	2 3/16	3/4	–	4 3/16	
22N-10	72×7/16	20×1 7/8	95-0	–	–	20×1	24×2 1/8	95-0	22×1 3/4	10-0	20×1	V	18-0	18-0	V	18-0	10-0	1 5/16	2 1/2	5/8	–	4 7/16	
23S-1	72×7/16	16×1 3/4	88-0	–	–	16×7/8	20×2 1/8	88-0	20×1 5/8	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 5/16	1/2	–	3 13/16	
2	↕	16×1 1/2	86-0	–	–	16×3/4	20×2	86-0	20×1 1/2	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	2 1/16	↕	–	3 9/16	
3	↕	↕	85-6	–	–	↕	20×2	85-6	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
4	↕	↕	85-0	–	–	↕	20×2	85-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
5	↕	↕	84-0	–	–	↕	20×2	84-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
23S-6	72×7/16	16×1 1/2	84-0	–	–	16×3/4	20×1 7/8	84-0	20×1 1/2	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 1/16	1/2	–	3 9/16	
23N-1	72×7/16	18×2	90-0	18×1	11-0	18×3/4	22×2 1/4	90-0	22×1 3/4	11-0	20×1	V	18-0	21-0	V	18-0	14-0	1 1/8	2 9/16	1/2	–	4 3/16	
2	↕	18×1 1/2	86-0	–	–	↕	22×1 7/8	86-0	22×1 1/2	10-0	↕	↕	24-0	↕	↕	24-0	↕	↕	2 1/4	5/8	–	4	
3	↕	18×1 1/2	87-0	–	–	↕	22×1 7/8	87-0	22×1 1/2	10-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
4	↕	18×1 1/2	87-6	–	–	↕	22×1 7/8	87-6	22×1 1/2	10-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
5	↕	18×1 1/2	88-0	–	–	18×3/4	22×1 7/8	88-0	22×1 1/2	10-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
6	↕	18×1 5/8	91-0	–	–	18×7/8	22×2	91-0	22×1 1/2	9-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
7	↕	18×1 5/8	92-0	–	–	18×7/8	22×2	92-0	22×1 1/2	9-0	↕	↕	24-0	↕	↕	24-0	↕	1 1/8	↕	↕	–	4	
8	↕	18×1 5/8	91-6	–	–	18×7/8	22×2	91-6	22×1 1/2	9-0	↕	↕	22-0	↕	↕	22-0	↕	1 3/16	↕	↕	–	4 1/16	
9	↕	18×1 5/8	92-0	–	–	18×7/8	22×2	92-0	22×1 1/2	9-0	↕	↕	22-0	↕	↕	22-0	↕	1 3/16	2 1/4	5/8	–	4 1/16	
23N-10	72×7/16	18×2	92-0	18×1	12-0	18×3/4	22×2 1/4	92-0	22×1 3/4	12-0	20×1	V	18-0	21-0	V	18-0	14-0	1 1/4	2 9/16	9/16	–	4 3/8	
24S-1	72×7/16	14×1	70-6	–	–	14×5/8	20×1 1/2	79-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	9/16	1 11/16	5/16	0	2 9/16	
2	↕	14×7/8	71-6	–	–	↕	20×1 3/8	76-0	–	–	↕	IV	18-0	13-0	IV	18-0	↕	↕	1 1/2	↕	0	2 3/8	
3	↕	14×7/8	71-0	–	–	↕	↕	75-6	–	–	↕	IV	18-0	13-0	IV	18-0	↕	↕	1 1/2	↕	0	2 3/8	
4	↕	14×7/8	70-6	–	–	↕	↕	75-0	–	–	↕	IV	18-0	13-0	IV	18-0	↕	↕	1 1/2	↕	0	2 3/8	
5	↕	14×7/8	70-0	–	–	↕	↕	75-0	–	–	↕	IV	18-0	13-0	IV	18-0	↕	9/16	1 1/2	↕	0	2 3/8	
24S-6	72×7/16	14×1	70-0	–	–	14×5/8	20×1 3/8	75-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	1/2	1 9/16	5/16	0	2 3/8	
24N-1	72×7/16	14×1 1/8	74-6	–	–	14×5/8	20×1 1/2	81-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	5/8	1 3/4	3/8	0	2 3/4	
2	↕	14×1	72-0	–	–	↕	↕	79-6	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
3	↕	14×1	72-6	–	–	↕	↕	80-0	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
4	↕	14×1	73-0	–	–	↕	↕	80-6	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
5	↕	14×1	73-6	–	–	↕	↕	81-0	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
24N-6	72×7/16	14×1 1/8	74-6	–	–	14×5/8	20×1 1/2	81-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	5/8	1 3/4	3/8	0	2 3/4	
32S-1	72×7/16	20×1 3/8	86-6	–	–	20×7/8	24×1 7/8	86-6	22×1 5/8	10-6	20×1	V	23-0	20-0	V	23-0	12-0	1 1/8	2 1/4	9/16	–	3 15/16	
2	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	–	↕	
3	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
4	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
5	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
6	↕	20×1 3/8	86-6	–	–	20×7/8	24×1 7/8	86-6	22×1 5/8	↕	20×1	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	–	↕	
7	↕	18×1 1/2	89-6	–	–	18×3/4	22×1 7/8	89-6	22×1 1/2	↕	20×7/8	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
8	↕	18×1 1/2	89-6	–	–	18×3/4	22×1 7/8	89-6	22×1 1/2	10-6	20×7/8	↕	23-0	↕	↕	23-0	↕	↕	2 1/4	9/16	–	3 15/16	
32S-9	72×7/16	18×1 1/2	91-0	–	–	18×3/4	22×1 3/4	91-0	22×1 3/8	10-0	20×7/8	V	20-0	20-0	V	20-0	12-0	1 1/8	2 1/8	5/8	–	3 7/8	
32N-1	72×7/16	20×1 3/8	86-6	–	–	20×7/8	24×1 7/8	86-6	22×1 5/8	10-6	20×1	V	23-0	20-0	V	23-0	12-0	1 1/8	2 1/4	9/16	1 3/4	5 11/16	
2	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	2	5 15/16	
3	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	2 1/8	6 1/16	
4	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	2 1/8	6 1/16	
5	↕	20×1 3/8	86-6	–	–	↕	24×1 7/8	86-6	22×1 5/8	10-6	↕	↕	26-0	20-0	↕	26-0	12-0	↕	2 1/4	9/16	2 1/4	6 3/16	
32N-6	72×7/16	20×1 1/4	88-6	–	–	20×7/8	24×1 5/8	88-6	22×1 3/8	8-0	20×1	V	21-0	22-0	V	21-0	14-0	1 1/8	2	5/8	2 3/8	6 1/8	

RAMP "A"

STRINGER MARK	WEB PLATE	TOP FLANGE PLATES P1 SIZE	P1 L1	P2 SIZE	P2 L2	P3 SIZE	BOTTOM FLANGE PLATES P4 SIZE	P4 L4	P5 SIZE	P5 L5	P6 SIZE	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	REMARKS
OA-1	72×7/16	20×2	92-0	–	–	20×1	24×2 1/4	92-0	22×2	13-0	20×1	IV	16-0	12-0	IV	16-0	12-0	1 1/4	2 9/16	11/16	10 1/8	14 5/8	
OA-2	72×7/16	20×1 5/8	93-0	–	–	20×7/8	24×2	93-0	22×1 3/4	11-0	20×1	IV	18-0	12-0	IV	18-0	12-0	1 1/4	2 1/4	3/4	10	14 1/4	
OA-3	72×7/16	20×1 5/8	93-0	–	–	20×7/8	24×2	93-0	22×1 3/4	11-0	20×1	IV	18-0	12-0	IV	18-0	12-0	1 1/4	2 1/4	3/4	10	14 1/4	
OA-4	72×7/16	20×1 5/8	90-0	--	–	20×7/8	24×2	90-0	22×1 3/4	12-0	20×1	V	25-0	20-0	V	25-0	12-0	1 1/4	2 1/8	3/4	10 1/2	14 5/8	
1A-1	72×7/16	14×1 3/8	74-0	–	–	14×3/4	18×1 7/8	74-0	18×1 1/2	9-6	18×3/4	IV	18-0	15-0	IV	18-0	15-0	11/16	1 13/16	7/16	4 1/4	7 3/16	
1A-2	72×7/16	14×1 1/8	74-6	–	–	14×5/8	18×1 3/4	74-6	18×1 3/8	8-0	18×3/4	IV	20-0	15-0	IV	20-0	15-0	5/8	1 1/16	1/2	3 1/2	6 5/16	
1A-3	72×7/16	14×1 1/8	74-6	–	–	14×5/8	18×1 3/4	74-6	18×1 3/8	8-0	18×3/4	IV	20-0	15-0	IV	20-0	15-0	5/8	1 1/16	1/2	2 7/8	5 11/16	
1A-4	72×7/16	14×1	73-0	–	–	14×5/8	18×1 5/8	73-0	18×1 1/2	7-0	18×3/4	V	22-0	22-0	V	22-0	16-0	5/8	1 7/16	1/2	3	5 9/16	

NOTES:
For Framing Plan, see Dwgs. SA54, SA55 & SA56
For stringer & shear connector details, see Dwg. SA66

Drawn by S.V.J.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 22, 23, 24 & 32
RAMP A - SPANS OA & 1A

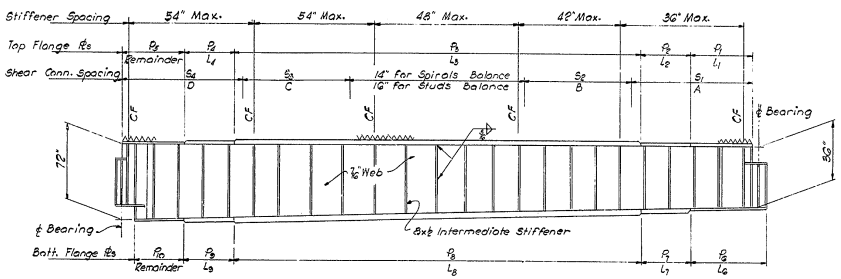
APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER DATE

SCALE:
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DATE: APRIL 1, 1964
DWG. NO. SA63

COUNTY	CONTRACT	R.P.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	98	215

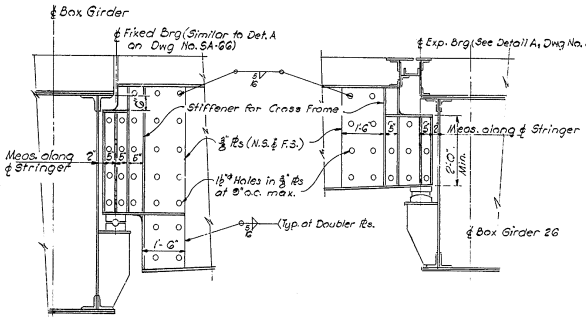
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

STRINGER MARK	WEB PLATE	TOP FLANGE PLATES									BOTTOM FLANGE PLATES									SHEAR CONNECTORS														STEEL	SLAB	CURB & W.S.	V.C.	TOTAL
		P1		P2		P3		P4		P5	P6		P7		P8		P9		P10	SPIRAL								STUD											
		SIZE	L1	SIZE	L2	SIZE	L3	SIZE	L4	SIZE	SIZE	L6	SIZE	L7	SIZE	L8	SIZE	L9	SIZE	S1	A	S2	B	S3	C	S4	D	S1	A	S2	B	S3	C	S4	D					
2S S-1	3G to 72 x 7/16	14 x 5/8	3'-6	14 x 1 1/8	6'-0	14 x 1 1/2	70'-0	—	—	14 x 3/4	20 x 7/8	5'-6	20 x 1 3/8	6'-0	20 x 1 3/4	70'-0	20 x 1 3/8	7'-0	20 x 7/8	4 1/4	24'-0	9	16'-0	11	16'-0	8	20'-0	5	22'-0	10	18'-0	12	18'-0	9	18'-0	4 1/4	1 3/8	3/4	—	3
-2			6'-0	14 x 1		14 x 1 1/4	66'-6	—	—	14 x 3/4		6'-0				66'-6		8'-0			22'-0				18'-0				24'-0				20'-0				1 3/8	5/8	—	2 5/8
-3			6'-0					—	—			6'-0																											
-4			5'-6					—	—			5'-6																											
-5			5'-6	14 x 1		14 x 1 1/4		—	—	14 x 5/8		5'-6											16'-0				20'-0					18'-0			18'-0	4 1/4	1 3/8	3/4	—	2 3/8
2S S-G	5G to 72 x 7/16	14 x 5/8	5'-6	14 x 1 3/8	6'-0	14 x 1 3/8	66'-6	—	—	14 x 3/4	20 x 7/8	5'-6	20 x 1 3/8	6'-0	20 x 1 3/4	66'-6	20 x 1 3/8	8'-0	20 x 5/8	4 1/4	26'-0	9	14'-0	11	18'-0	8	18'-0	5	24'-0	10	16'-0	12	20'-0	9	16'-0	4 1/4	1 3/8	3/4	—	2 3/8
								—	—																															
2S N-1	3G to 72 x 7/16	16 x 5/8	6'-0	16 x 1	7'-0	16 x 1 1/4	68'-0	—	—	14 x 3/4	20 x 7/8	6'-0	20 x 1 3/8	7'-0	20 x 1 3/4	68'-0	20 x 1 1/2	10'-6	20 x 3/4	4 1/4	26'-0	9	16'-0	11	16'-0	8	20'-0	5	24'-0	10	18'-0	12	20'-0	9	18'-0	4 1/4	1 3/8	1/2	5/8	3 3/8
-2			6'-0					—	—			6'-0																											
-3			6'-6					—	—			6'-6																										1/2	3 3/8
-4			6'-6					—	—			6'-6																										1/2	4 1/4
-5			7'-0	16 x 1				—	—			7'-0									22'-0						20'-0		24'-0								1/2	4 3/8
2S N-G	3G to 72 x 7/16	16 x 5/8	7'-0	16 x 1 1/8	7'-0	16 x 1 3/8	68'-6	—	—	16 x 3/4	20 x 7/8	7'-0	20 x 1 3/8	7'-0	20 x 1 3/4	68'-6	20 x 1 1/2	10'-6	20 x 3/4	4 1/4	24'-0	9	16'-0	11	16'-0	8	18'-0	5	22'-0	10	18'-0	12	20'-0	9	16'-0	4 1/4	1 3/8	1/2	5/8	4 1/2
2A-1	3G to 72 x 7/16	20 x 7/8	6'-0	20 x 1 1/8	8'-6	20 x 1 3/8	82'-6	—	—	20 x 1	20 x 1	6'-0	22 x 2	8'-6	24 x 2 1/2	82'-6	22 x 2	14'-6	20 x 1	4 1/4	22'-0	9	20'-0	11	16'-0	8	20'-0	5	20'-0	10	22'-0	12	18'-0	9	18'-0	1 1/8	2 5/8	5/8	—	4 3/8
-2			6'-6	20 x 1 3/8	8'-6	20 x 1 3/8	81'-0	—	—			6'-6	22 x 2	8'-6	24 x 2 3/8	81'-0	22'-2	15'-0														22'-0				20'-0		20'-0			
-3			6'-6	20 x 1 3/8	8'-6	20 x 1 3/8	81'-0	—	—			6'-6	22 x 2	8'-6	24 x 2 3/8	81'-0	22'-2	15'-0														22'-0				24'-0		20'-0		4 3/8	
2A-4	3G to 72 x 7/16	20 x 7/8	6'-6	20 x 1 1/8	8'-6	20 x 1 3/8	81'-6	—	—	20 x 7/8	20 x 1	6'-6	22 x 1 3/8	8'-6	24 x 2 3/8	81'-6	22 x 1 3/4	12'-6	20 x 1	4 1/4	22'-0	9	20'-0	11	16'-0	8	20'-0	5	20'-0	10	22'-0	12	18'-0	9	18'-0	1 1/8	2 1/4	5/8	—	4 1/2

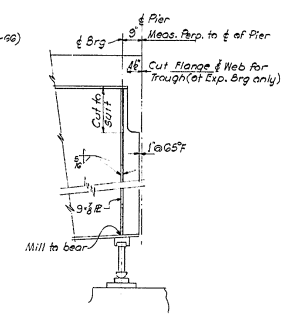


ELEVATION - SPAN 25 AS SHOWN

SPAN 2A SIMILAR EXCEPT AT ENDS



SPAN 25
SCALE ½ IN. = 1 FT.



SPAN 2A
SCALE ½ IN. = 1 FT.

Notes:
For Framing Plan of Span 25, see Dwg. SA54
For Framing Plan of Span 2A, see Dwg. SA55
For Shoe Locations, see Dwgs. SA54 & SA55
For Shoe Details, see Dwg. SA73

Drawn by S.J.V.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA - TAPERED GIRDERS
MAINLINE - SPAN 25
RAMP A - SPAN 2A

APPROVED BY: Wilhelmina D. Pressey, Jr.
BRIDGE ENGINEER — DATE 4-16-64

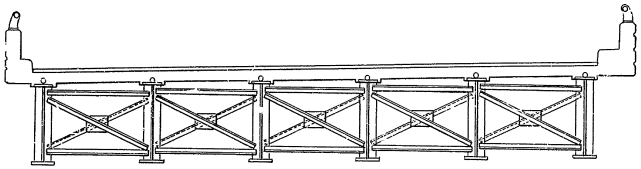
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

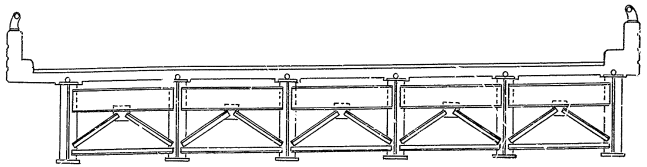
DWG. NO. SA64

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2 (12)	'64	99	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

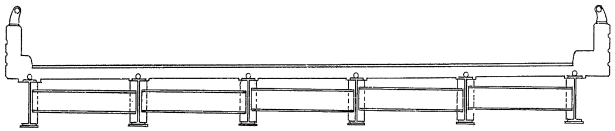


INTERMEDIATE CROSS-FRAMES

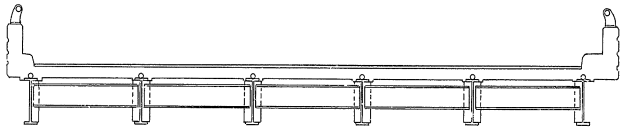


END CROSS-FRAMES

AT BUILT-UP GIRDERS-MAINLINE

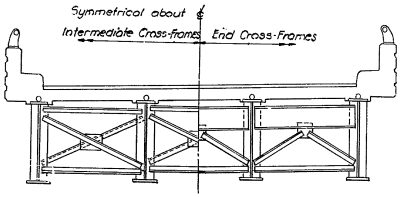


INTERMEDIATE DIAPHRAGMS

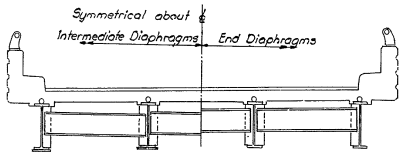


END DIAPHRAGMS

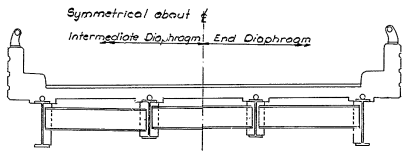
AT ROLLED BEAM SECTIONS-MAINLINE



AT BUILT-UP GIRDERS-RAMP



AT ROLLED BEAM SECTIONS-RAMPS
EXCEPT RAMP C SPANS OC & 2C



AT RAMP C- SPANS OC & 2C

NOTES:
For General Notes, see Dwg. SA2
For Framing Plans, see Dwgs. SA54 thru SA58

Drawn by S.J.V
Checked by J.AR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SUPERSTRUCTURE
TYPICAL SECTIONS

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

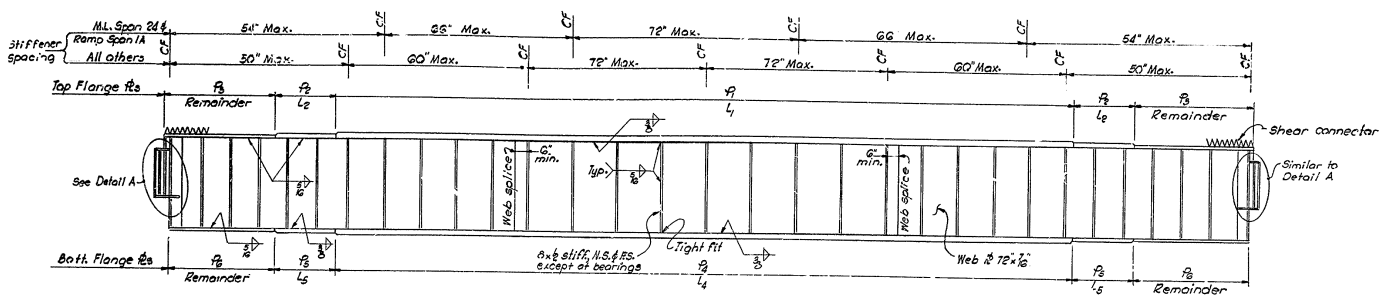
SCALE: 1/4 IN = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

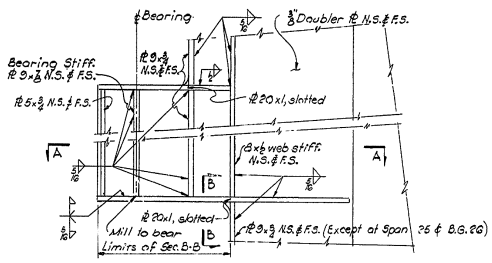
DWG. NO. SA65

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	JEL.	I-95-2 (12)	'64	100	215

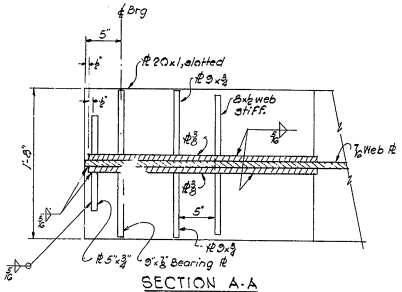
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



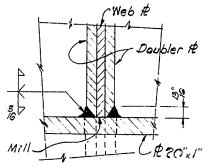
TYPICAL ELEVATION
Note: All material to be Structural Carbon Steel ASTM A36
NOT TO SCALE



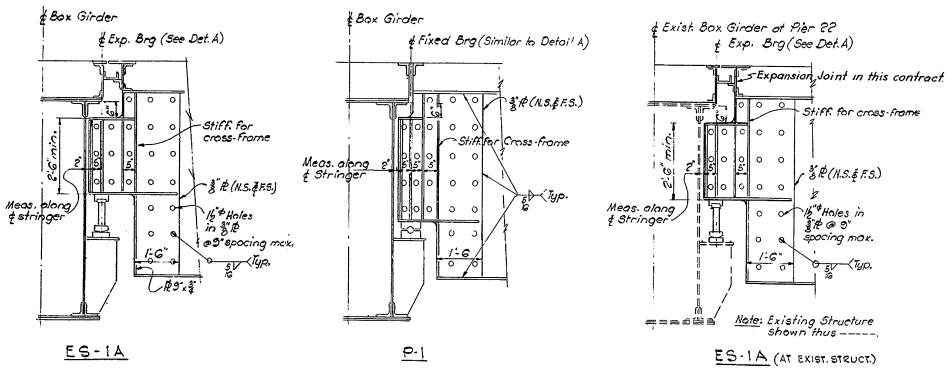
DETAIL A
SCALE 1½ IN. = 1 FT.
EXP. BRG AS SHOWN
FIXED BRG SIMILAR



SECTION A-A
SCALE 1½ IN. = 1 FT.

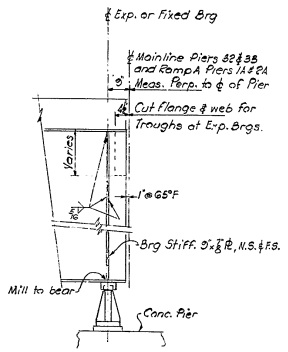


SECTION B-B
SCALE 1½ IN. = 1 FT.



ES-1A
P-1
ES-1A (AT EXIST. STRUCT.)

TYPICAL FRAMING AT BOX GIRDERS
SCALE ½ IN. = 1 FT.



ES-1 & FS-1
NOTE: FS-1 SHOWN - ES-1 AS NOTED

Notes:
For Framing Plans of Ramp A, see Dwgs. SA54 & SA55
For Framing Plans of Mainline Spans 22, 23 & 24 see Dwg. SA54; Mainline Span 32, see Dwg. SA56
For Shoe Locations, see Dwgs. SA54, SA55 & SA56
For Shoe Details, see Dwg. SA73

Drawn by S.W.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

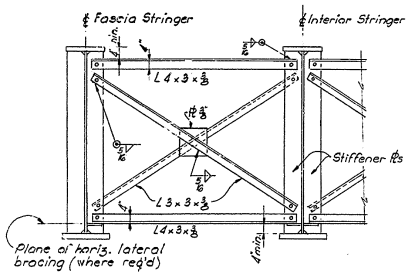
STRINGERS
MAINLINE - SPANS 22, 23, 24 & 32
RAMP A - SPANS 0A & 1A

APPROVED BY: [signature]
BRIDGE ENGINEER
4-16-64
DATE

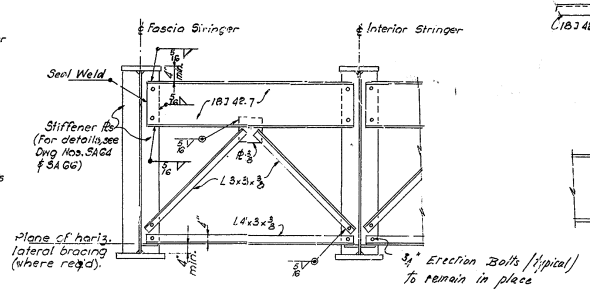
SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA66

COUNTY	CONTRACT	R.H.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	101	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

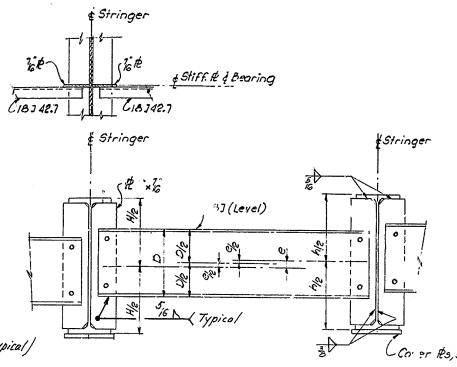


TYPICAL INTERMEDIATE CROSS-FRAME

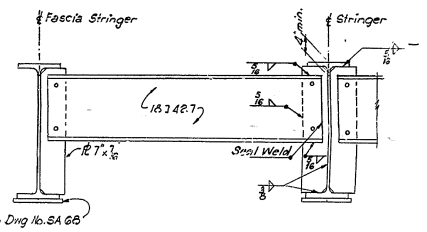


TYPICAL END CROSS-FRAME

BUILT-UP GIRDER STRINGERS
SCALE 1/2 IN. = 1 FT.

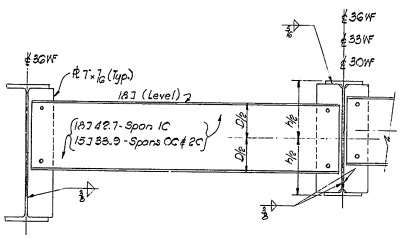


TYPICAL INTERMEDIATE DIAPHRAGM

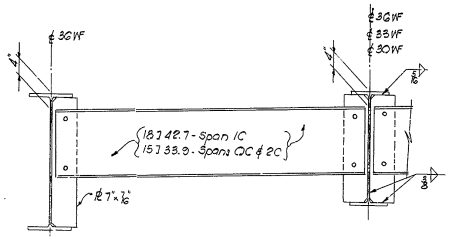


TYPICAL END DIAPHRAGM

CONSTANT DEPTH WF STRINGERS
SCALE 3/4 IN. = 1 FT.

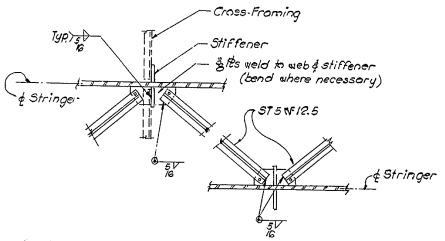


INTERMEDIATE DIAPHRAGM



END DIAPHRAGM

TYPICAL SPANS-RAMP C
SCALE 3/4 IN. = 1 FT.



TYPICAL LATERAL BRACING
SCALE 1/2 IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For Framing Plans, see Dwgs. SA54 thru SA58
Diaphragms & bracing to be structural carbon steel A.A.S.H.O M165 (A.S.T.M-A373)

Drawn by S.W.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRUCTURAL DETAILS

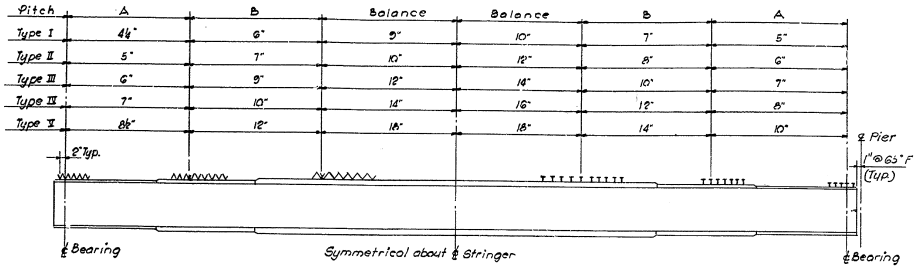
APPROVED BY: Johnnie R. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA67

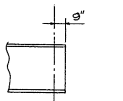
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	102	215

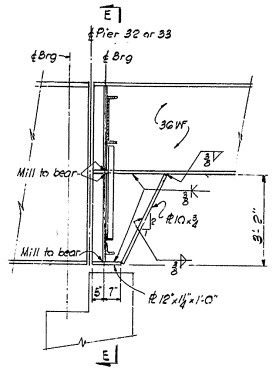
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

Pitch	A	B	Balance	Balance	B	A
Type I	4½"	6"	9"	10"	7"	5"
Type II	5"	7"	10"	12"	8"	6"
Type III	6"	9"	12"	14"	10"	7"
Type IV	7"	10"	14"	16"	12"	8"
Type V	8½"	12"	16"	18"	14"	10"

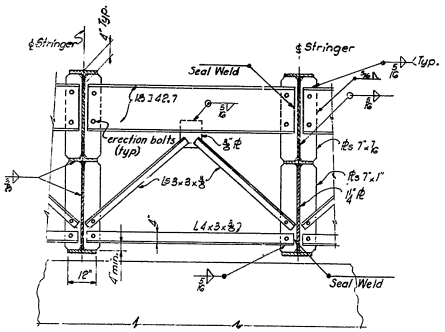


ELEVATION



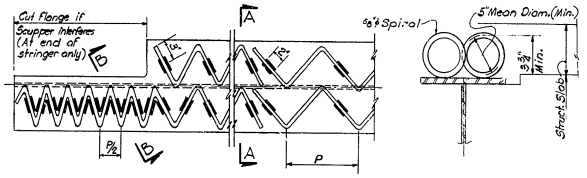


ELEVATION



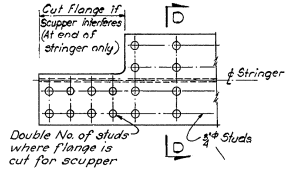
SECTION E-E

FRAMING AT M.L. PIERS 32 & 33
SCALE ½ IN. = 1 FT.

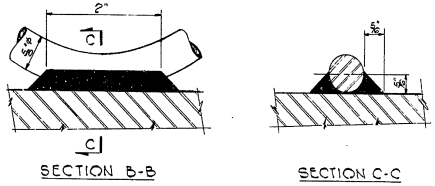


PART PLAN

SECTION A-A



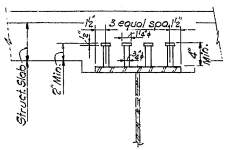
PART PLAN



SECTION B-B

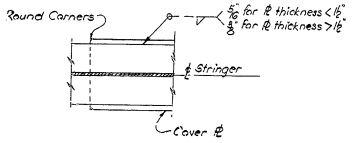
SECTION C-C

SPIRAL DETAILS

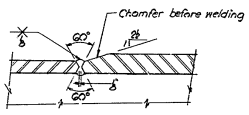


SECTION D-D

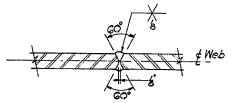
STUD DETAILS - ALTERNATE



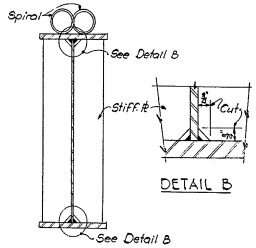
COVER ℄ DETAIL
NO SCALE



TYPICAL SHOP FLANGE SPLICE



TYPICAL WEB SPLICE



STIFFENER ℄ DETAILS
FOR WELDING OF STIFF. ℄S TO STRINGERS, SEE DWGS. SAG4, SAG5, & SAG7.

Drawn by S.W.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SHEAR CONNECTORS & WELDED BEAM FLANGE DETAILS

APPROVED BY: Johnnie O. Pearson Jr. 4-15-64
BRIDGE ENGINEER DATE

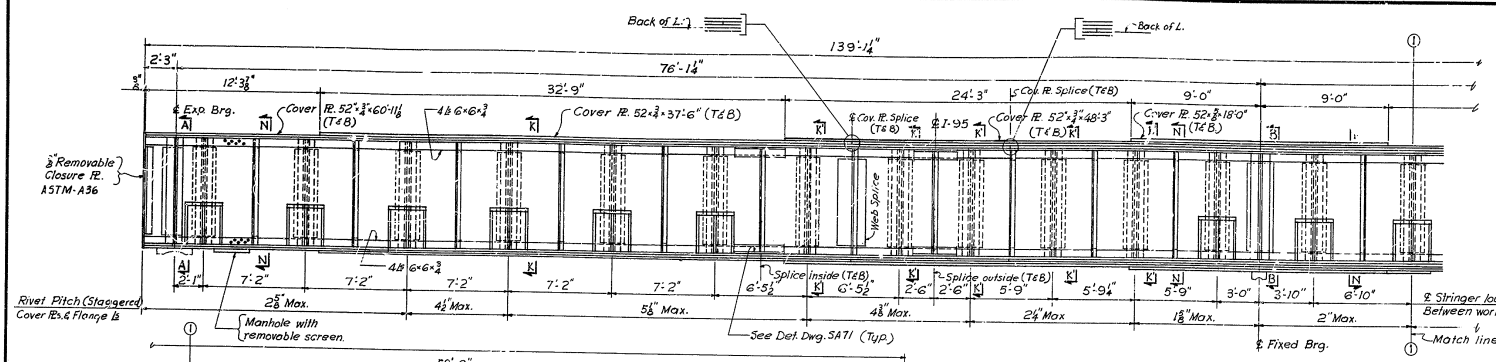
SCALE: AS NOTED
DATE: APRIL 1, 1964

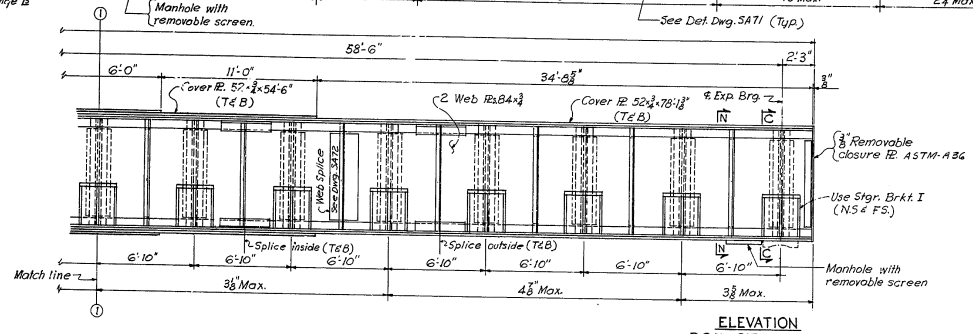
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA68

COUNTY	CONTRACT	R.N.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	103	215

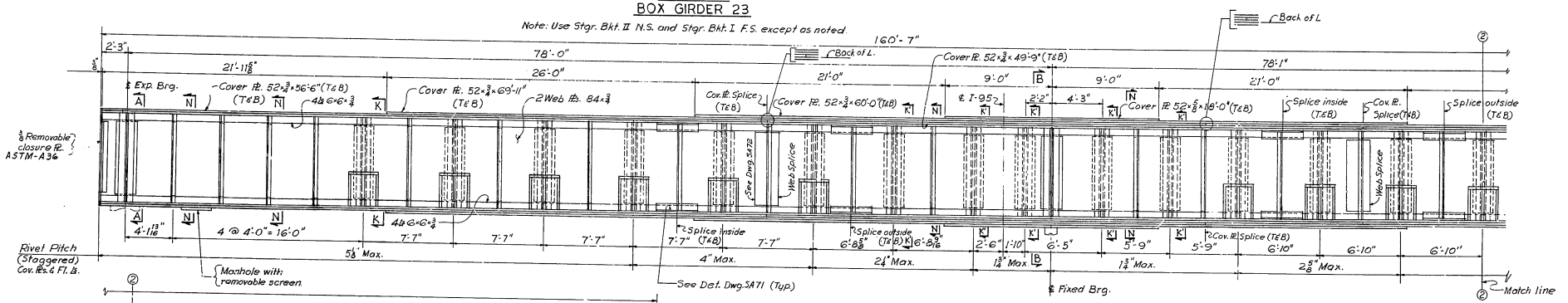
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

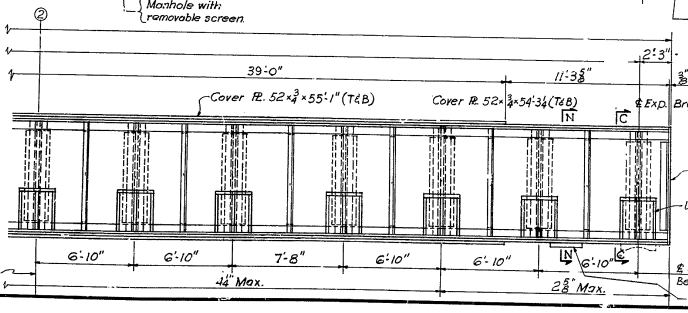




ELEVATION
BOX GIRDER 23

Note: Use Stgr. Bkt. II N.S. and Stgr. Bkt. I F.S. except as noted





ELEVATION
BOX GIRDER 24

Note: Use Stgr. Bkt. II N.S. & F.S. except as noted.
See dwg. SA88 for location of pipe supports.

NOTES

For General Notes see Dwg. SA2.
All BG Elevations are taken looking upstation.
For Framing Plans see Dwg. SA54.
For Sections and Details see Dwgs. SA71 & SA72.
For Girder Shoes see Dwg. SA73.
For details of concrete slab on girder see Dwg. SA85.
For stringer details see Dwgs. SA64 & SA66.
For joint detail see Dwgs. SA75 & SA76.
All material in box girders to be low alloy steel A.S.T.M.-A440 except that which is noted to be ASTM-A36.

Stringer brackets to be Structural Steel for welding ASTM-A36.
Interior of girders to be painted with protective coating for metal surface.
All rivets to be ⅞" structural carbon rivets unless noted H.S. (High strength).

Drawn by E.N.
Checked by P.S. & L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDERS
BG 23 & BG 24

APPROVED BY _____ BRIDGE ENGINEER
4-16-64 DATE

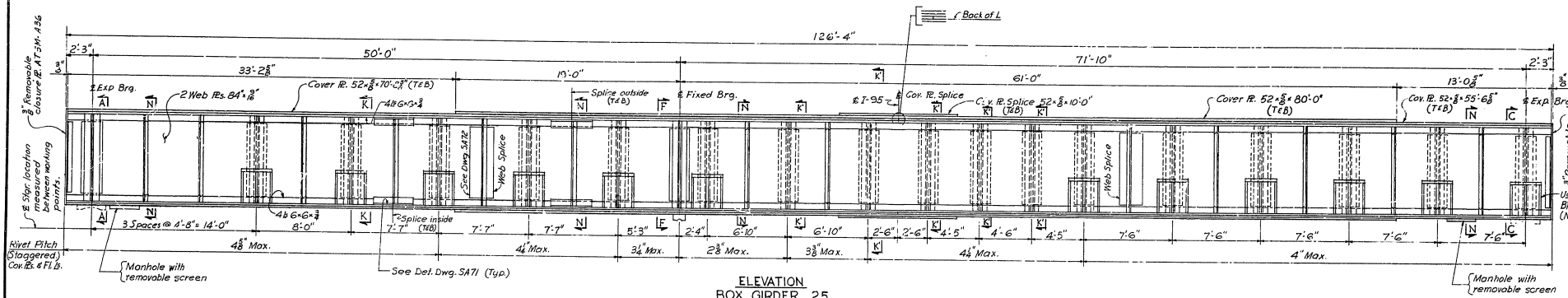
SCALE: 1/4 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA69

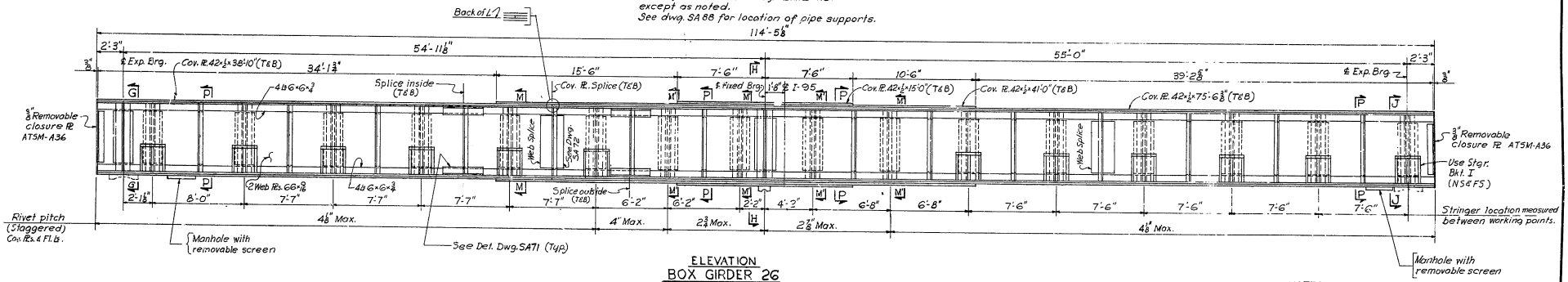
COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	104	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



ELEVATION
BOX GIRDER 25

Note: Use Stgr. Bkt. I N.S. and Stgr. Bkt. II F.S. except as noted.
See dwg. SA88 for location of pipe supports.



ELEVATION
BOX GIRDER 26

Note: Use Stgr. Bkt. II N.S. & F.S. except as noted.

NOTES
For Notes applying to this sheet see Dwg. SA69
For sections and details see Dwg. SA71 & SA72

Drawn by E.N.
Checked by P.S.&L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDERS
BG 25 & BG 26

APPROVED BY: Johnnie R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

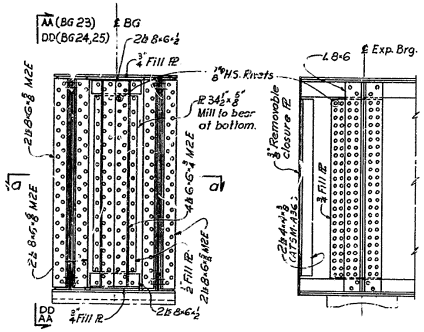
SCALE: 1/4 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA70

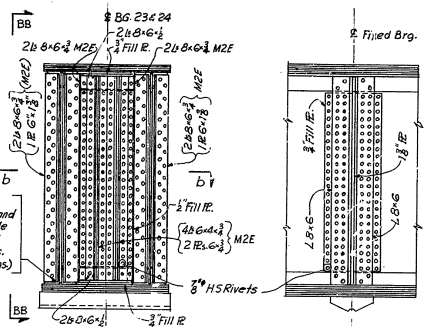
COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	105	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



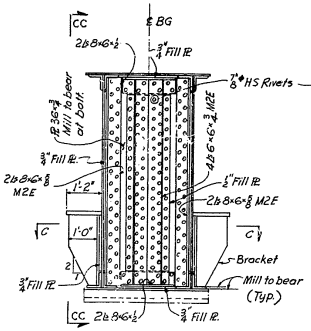
SECT. A-A

ELEV. AA-AA

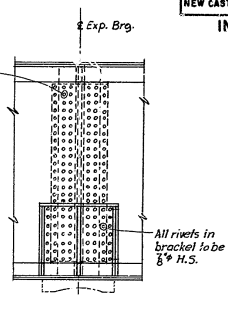


SECT. B-B

ELEV. BB-BB

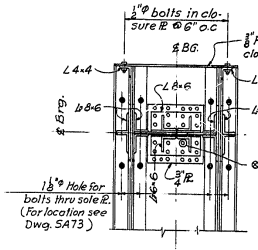


SECT. C-C

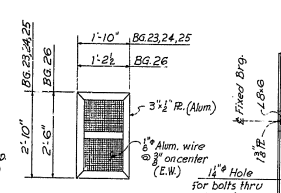


ELEV. CC-CC

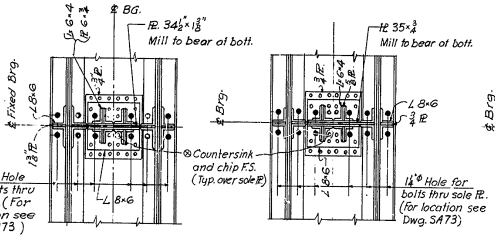
Note:
In Sections A-A, AA-AA, B-B, BB-BB, C-C, CC-CC, Rivets to be ⅞" H.S. ASTM-A195. Use ⅞" ASTM-A141 for riveting flange Ls to web and flange plates.



SECT. a-a

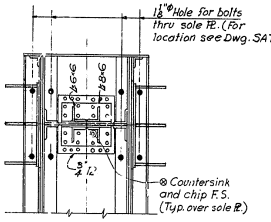


MANHOLE SCREEN COVER

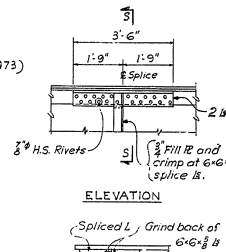


SECT. b-b

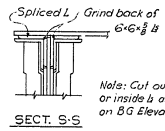
SECT. f-f



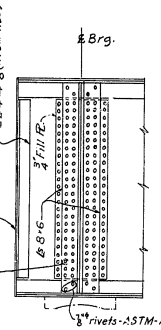
SECT. c-c



ELEVATION

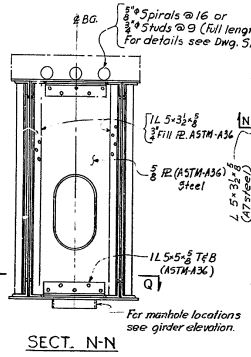


SECT. S-S

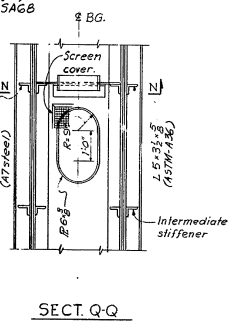


ELEV. DD-DD

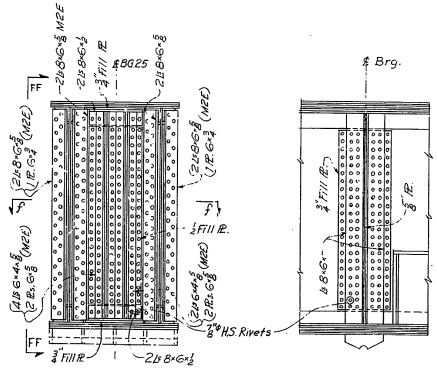
Rivets to be ⅞" H.S. ASTM-A195, except as noted.



SECT. N-N



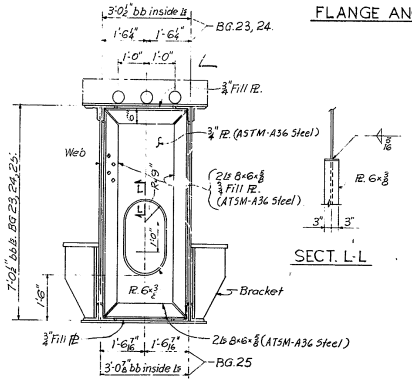
SECT. Q-Q



SECT. F-F

ELEV. FF-FF

Note: Rivets to be ⅞" H.S. ASTM-A195. Use ⅞" ASTM-A141 for riveting flange Ls to web and flange plates.



SECT. K-K

SECT. K'-K' (Omit Brackets)

Typical at each interior stringer.

FLANGE ANGLE SPLICE DETAIL

NOTES
For BG elevations see Dwgs. SA69 & SA70
For additional notes applying to this sheet, see Dwg. SA69

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDER DETAILS
SHEET 1 OF 2

APPROVED BY: W. Bruce D. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: 1/2 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

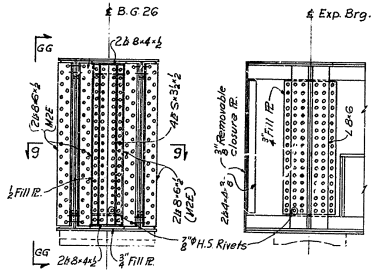
DWG. NO. SA71

Drawn by E.N.
Checked by P.S.

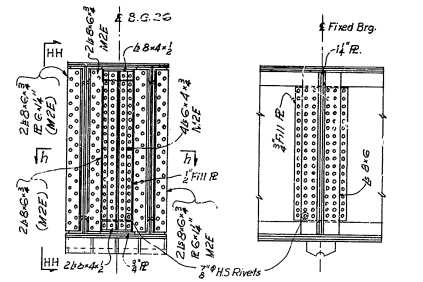
D C B A 1 5 10 A B C D

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	106	215

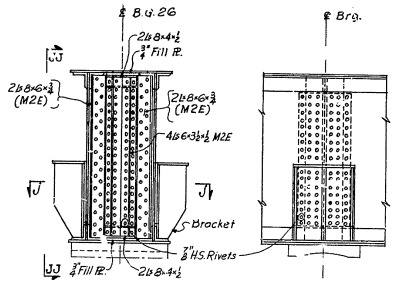
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



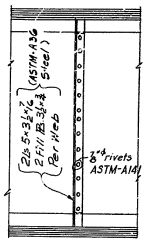
SECT. G-G ELEV. GG-GG



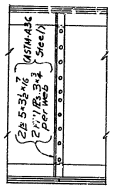
SECT. H-H ELEV. HH-HH



SECT. J-J ELEV. JJ-JJ



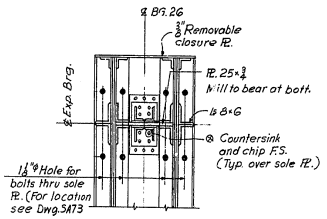
BG 23,24,25



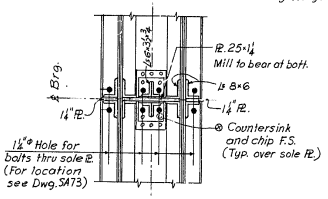
BG 26

TYPICAL INTERMEDIATE STIFFENER

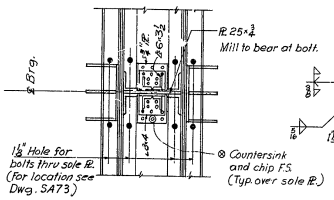
Note:
In Sections G-G, GG-GG, H-H, HH-HH, J-J, JJ-JJ, Rivets to be ⅞"ϕ H.S. ASTM-A195. Use ⅞"ϕ ASTM-A141 for riveting flange Ls to web and flange plates.



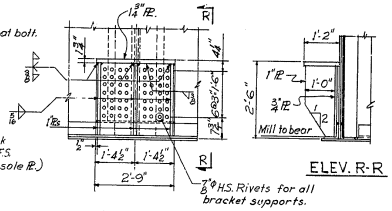
SECT. 9-9



SECT. h-h

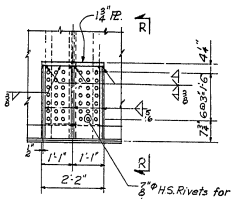


SECT. J-J

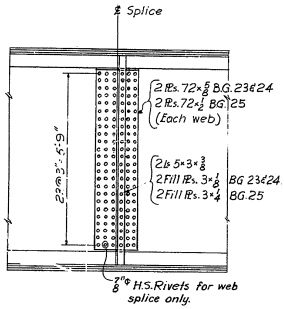


ELEV. R-R

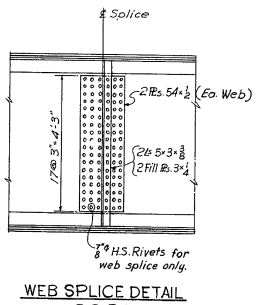
BRACKET I



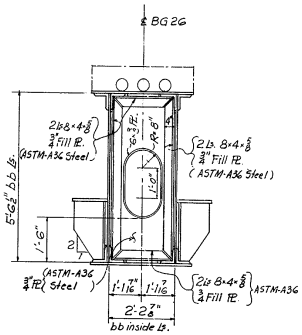
BRACKET II



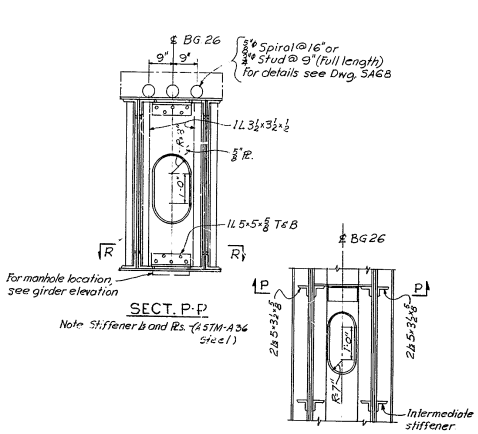
WEB SPLICE DETAIL
BG 23, 24, 25



WEB SPLICE DETAIL
BG 26



SECT. M-M
SECT. M'-M' (Omit Brackets)
Typical of each interior stringer



SECT. P-P
Note: Stiffener Ls and Pls. (ASTM-A36 Steel)

SECT. R-R

NOTES
For BG elevations see Dwgs. SA69 & SA70
For additional notes applying to this sheet, see Dwg. SA69

Drawn by E.N.
Checked by P.S.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDER DETAILS
SHEET 2 OF 2

APPROVED BY: [signature] BRIDGE ENGINEER [signature] DATE 4-16-64

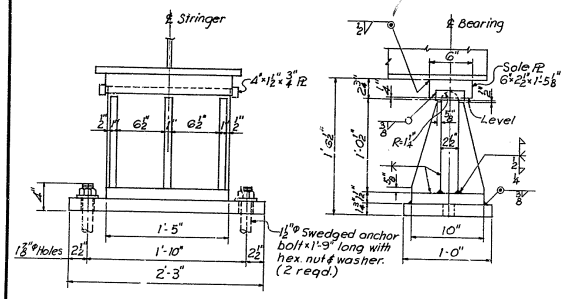
SCALE: 1/2 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA72

COUNTY	CONTRACT	R & A REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	107	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

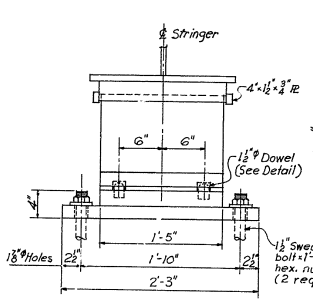


FRONT VIEW

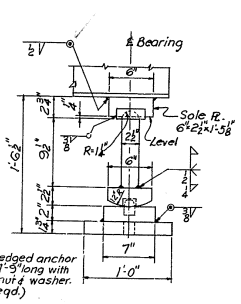
SIDE VIEW

Note: Adjust shoe to proper alignment prior to field welding to masonry PL.

FS-1
SCALE: 1½ IN.=1FT.

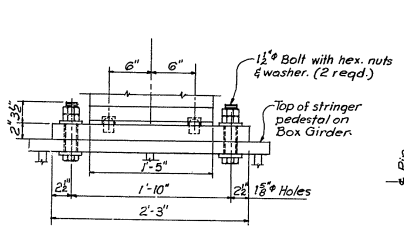


FRONT VIEW



SIDE VIEW

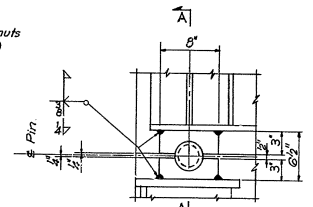
ES-1
SCALE: 1½ IN=1 FT.

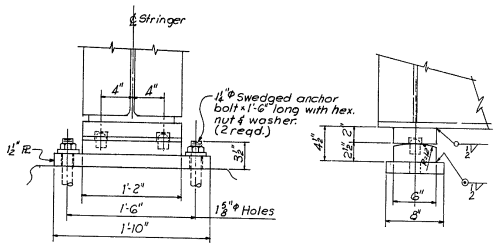


FRONT VIEW

Note: Details not shown are similar to ES-1.

ES-1A
SCALE: 1½ IN.=1FT.

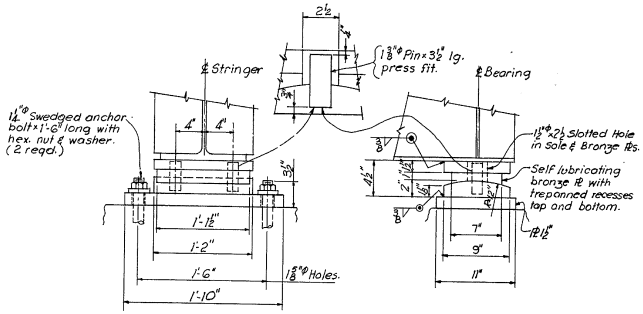




FRONT VIEW

SIDE VIEW

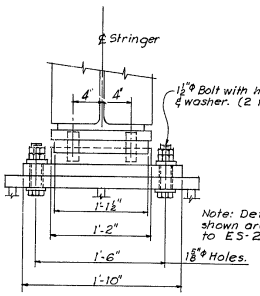
FS-2
SCALE: 1½ IN.=1FT.



FRONT VIEW

SIDE VIEW

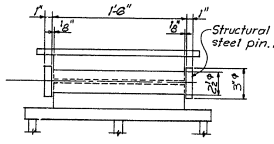
ES-2
SCALE: 1½ IN.=1FT.



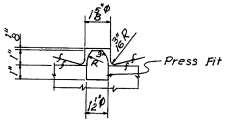
Note: Details not shown are similar to ES-2

FRONT VIEW

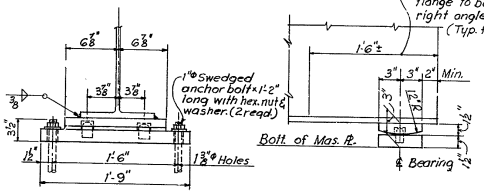
ES-2A
SCALE: 1½ IN.=1FT.



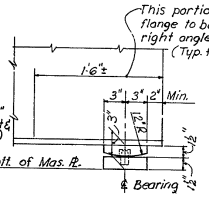
P-1
SCALE: 1½ IN.=1FT.



TYPICAL SECTION THRU DOWEL
SCALE: 3 IN.=1FT.

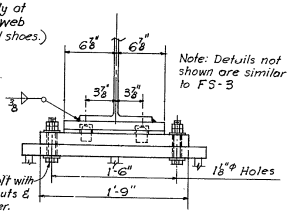


FRONT VIEW



SIDE VIEW

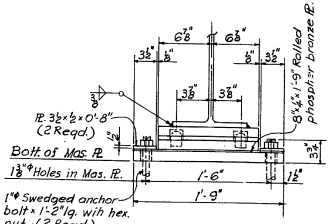
FS-3
SCALE: 1½ IN.=1FT.



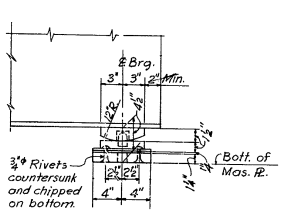
Note: Details not shown are similar to FS-3

FRONT VIEW

FS-3A
SCALE: 1½ IN. = 1FT



FRONT VIEW



SIDE VIEW

ES-3
SCALE: 1½ IN.=1FT.

NOTES:
For General Notes see Dwg. SA2
For location of shoes see Framing Plans Dwgs. SA54 thru SA58
Adjust shoes to proper alignment prior to field welding to masonry PL.

Drawn by E.N
Checked by F.Y

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SHOES
SHEET 1 OF 2

APPROVED BY: [signature] BRIDGE ENGINEER
DATE: 4-14-64

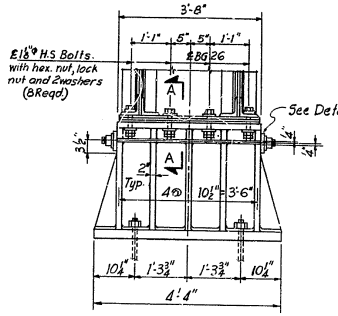
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

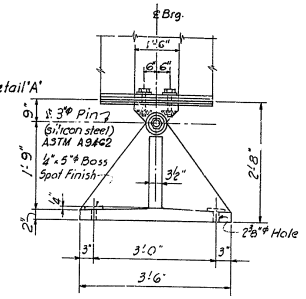
DWG. NO. SA73

COUNTY	CONTRACT	R.R.A. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	108	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

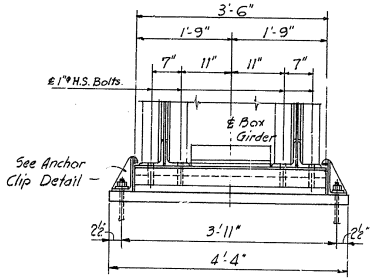


FRONT VIEW

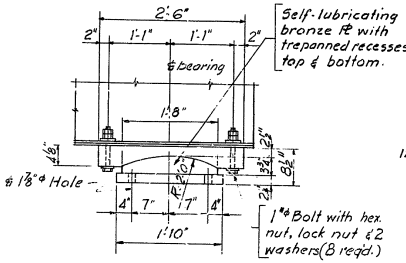


SIDE VIEW

F S - 4
SCALE ¾ IN. = 1 FT.

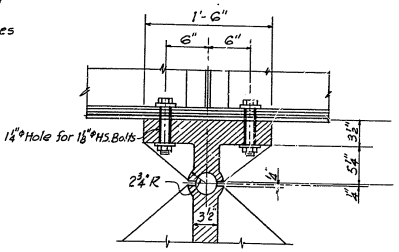


FRONT VIEW

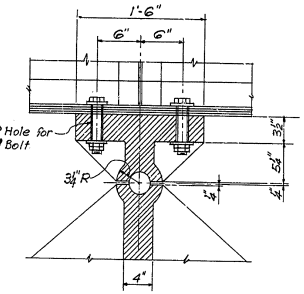


SIDE VIEW

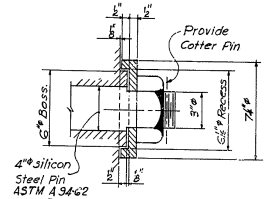
F S - 4
SCALE 1 IN. = 1 FT.



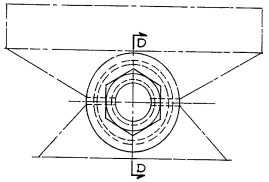
SECTION A-A
SCALE 1½ IN. = 1 FT.



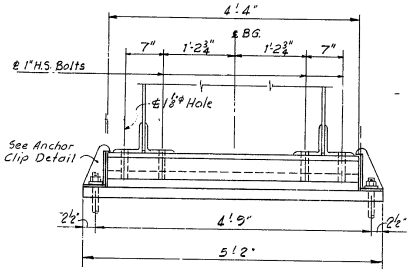
SECTION C-C
SCALE 1½ IN. = 1 FT.



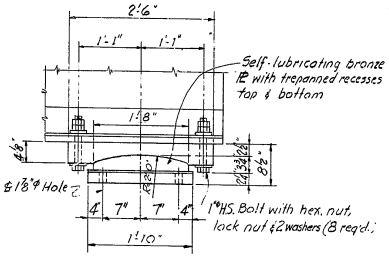
SECTION D-D



DETAIL "B"
SCALE 3 IN. = 1 FT.

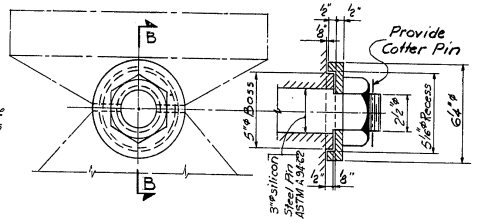


FRONT VIEW

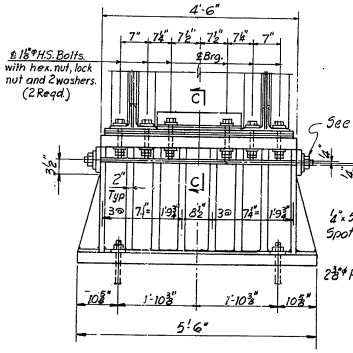


SIDE VIEW

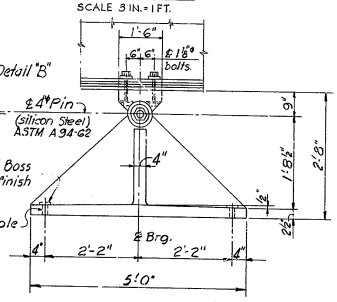
F S - 5
SCALE 1 IN. = 1 FT.



DETAIL "A" SECTION B-B
SCALE 3 IN. = 1 FT.

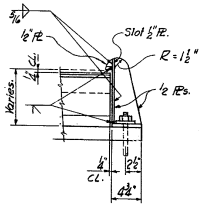


FRONT VIEW

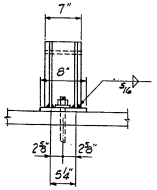


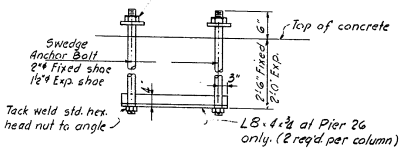
SIDE VIEW

F S - 5
SCALE ¾ IN. = 1 FT.



ANCHOR CLIP DETAIL
NOT TO SCALE





ANCHOR BOLT DETAIL
NOT TO SCALE

NOTES:

For General Notes see Dwg. No. SA2
For location of shoes see Framing Plan Dwg. Nos. SA54 thru SA58
All material in shoe types FS-4 and FS-5 to be cast steel unless otherwise indicated.
All material in shoe types ES-4 and ES-5 to be structural carbon steel unless otherwise indicated.
Payment for all shoes and anchor bolts to be included under item for structural carbon steel.
Bevel top of all sole plates parallel to girder cross slope; bottom of sole ℙ to be level.
Dimensi , shown apply at ℄ bearing.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SHOES
SHEET 2 OF 2

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

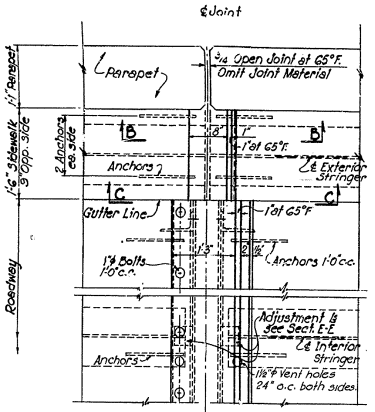
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA74

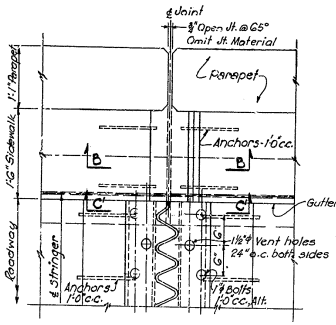
Drawn by E.N.
Checked by F.Y.

COUNTY	CONTRACT	C.W.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	109	215

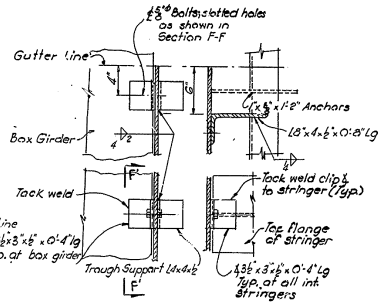
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



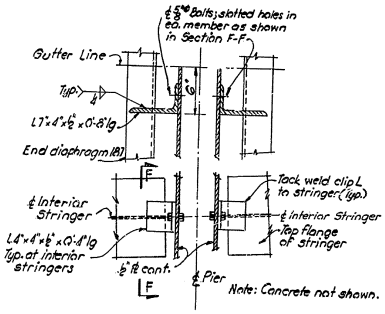
PLAN AT EXPANSION JOINT
SLIDING PLATE DETAIL
SCALE: 1 IN. = 1 FT.



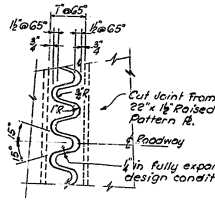
PLAN AT EXPANSION JOINT
FINGER JOINT DETAIL
SCALE: 1 IN. = 1 FT.



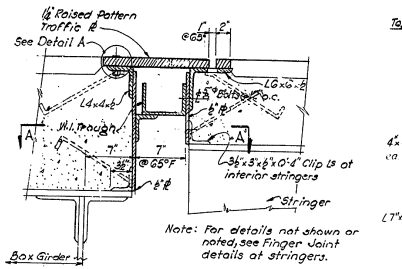
SECTION A-A
SCALE 1½ IN. = 1 FT.



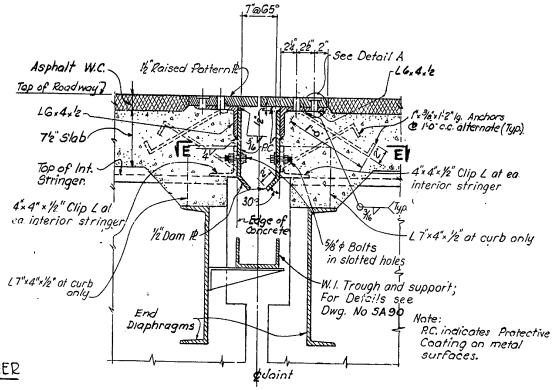
SECTION E-E
SCALE 1½ IN. = 1 FT.



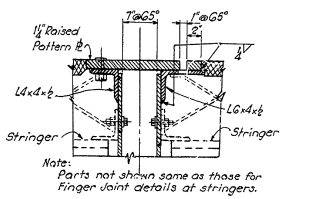
FINGER JOINT
NO SCALE.



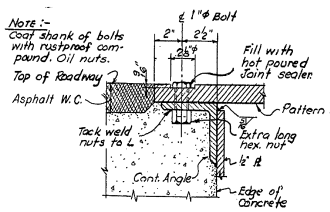
SLIDING ℓ JOINT AT BOX GIRDER & STRINGER
SCALE 1½ IN. = 1 FT.



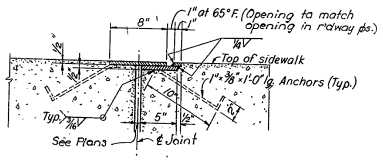
FINGER JOINT DETAIL AT STRINGERS
SCALE 1½ IN. = 1 FT.



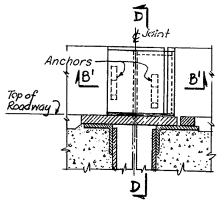
SLIDING ℓ JOINT AT STRINGERS
SCALE 1½ IN. = 1 FT.



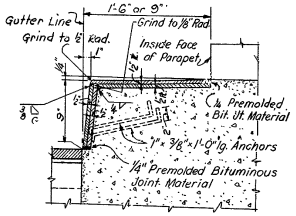
DETAIL "A"
SCALE: 3 IN. = 1 FT.



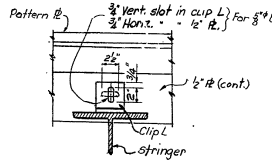
SECTION B-B (SHOWN)
SECTION B'-B' (SIMILAR)
SCALE: 1½ IN. = 1 FT.



SECTION C-C (SHOWN)
SECTION C'-C' (SIMILAR)
SCALE 1½ IN. = 1 FT.



SECTION D-D
SCALE: 1½ IN. = 1 FT.



SECTION F-F (SHOWN)
SECTION F'-F' (SIMILAR)
SCALE 1½ IN. = 1 FT.

NOTES:
For General Notes see Dwg. SA2
For Fixed Joint Details see Dwg. SA76

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

EXPANSION JOINT DETAILS

APPROVED BY _____ DATE 4-16-64
BRIDGE ENGINEER

SCALE: AS NOTED
DATE: APRIL 1, 1964

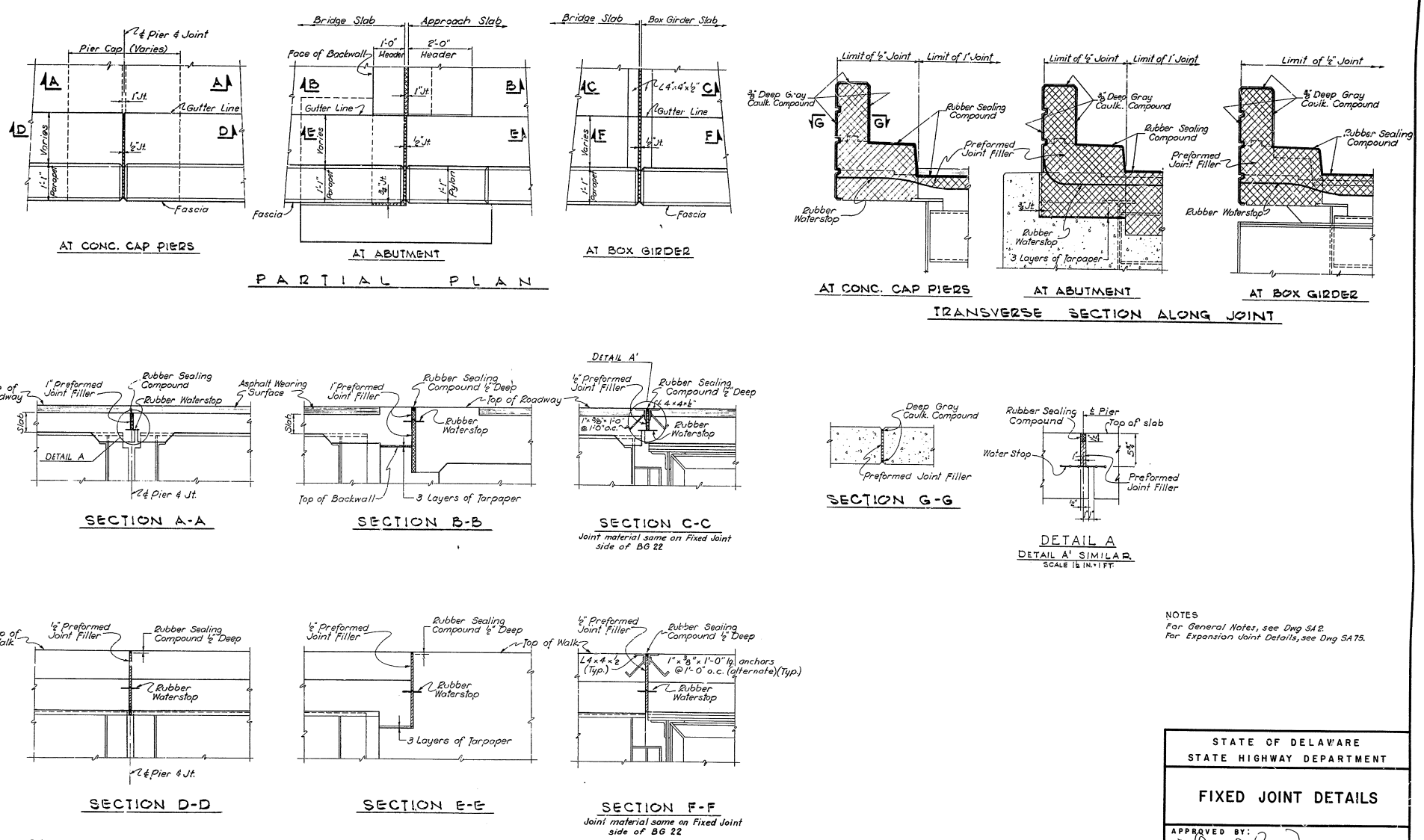
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA75

Drawn by S.W.
Checked by F.Y.

COUNTY	CONTRACT	R.R.J. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	110	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES
For General Notes, see Dwg SA2.
For Expansion Joint Details, see Dwg SA75.

Drawn by R.E.G.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

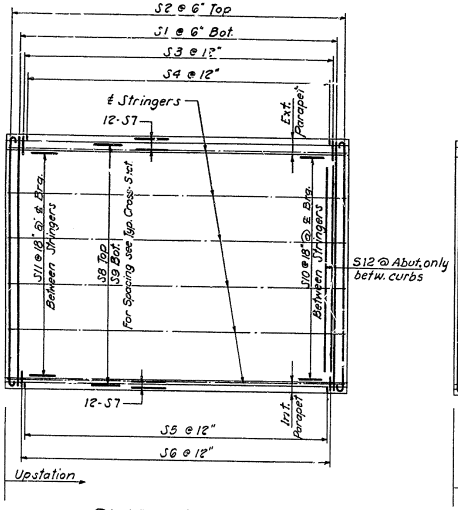
FIXED JOINT DETAILS

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER DATE

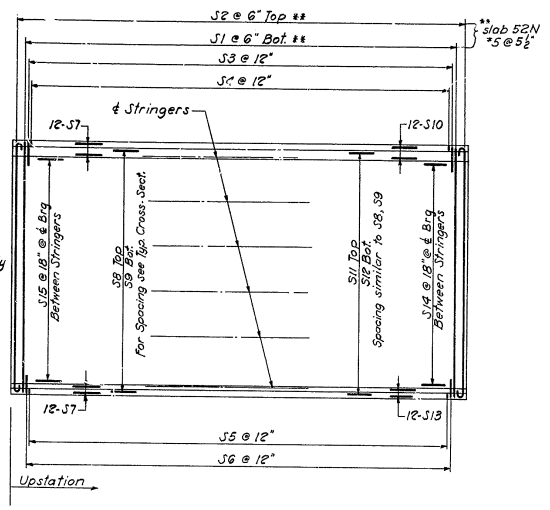
SCALE: 3/4"=1'-0"
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA76

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	111	215

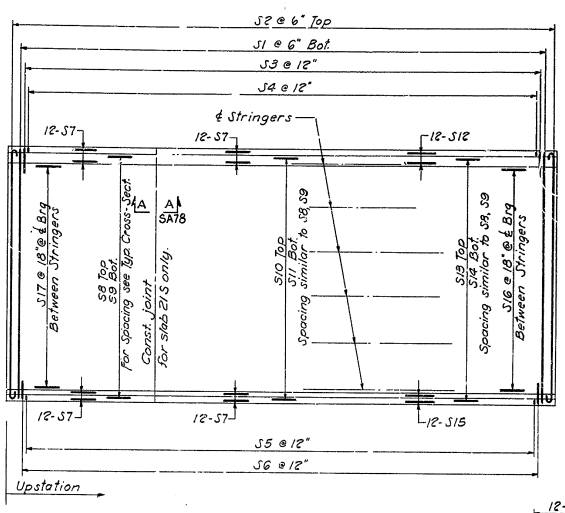
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



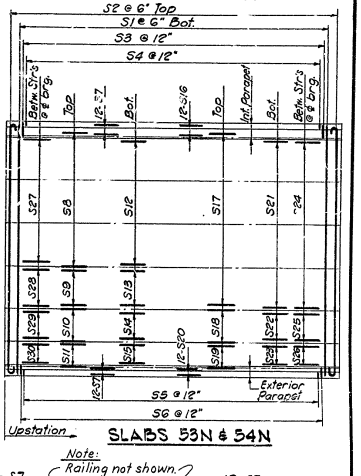
SLABS 48S, 59S



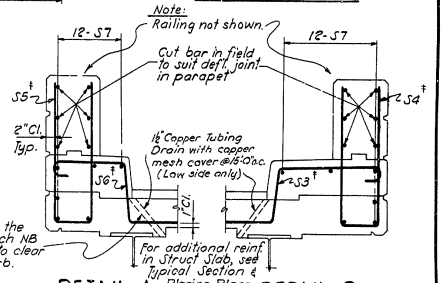
SLABS 24S, 25S, 34S thru 47S, 49S thru 58S
SLABS 25N thru 31N, 33N thru 52N



SLABS 21S, 22S, 23S & 32N

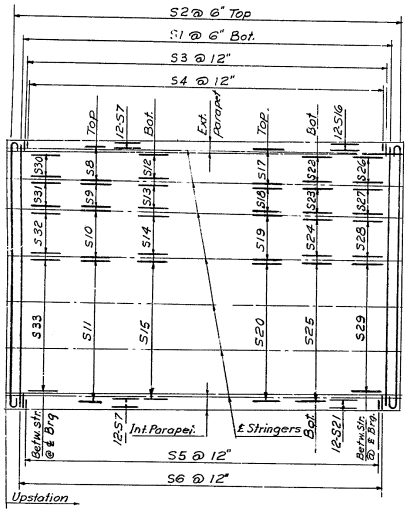


SLABS 53N & 54N

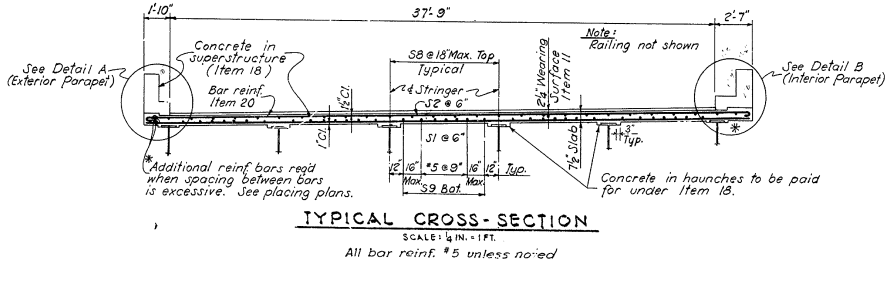


DETAIL A (EXTERIOR) DETAIL B (INTERIOR)

†As shown and noted for Northbound Roadway



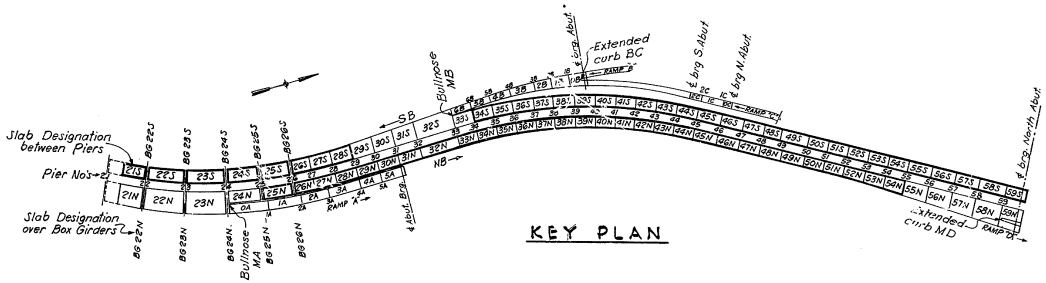
SLABS 26S, 27S, 28S



TYPICAL CROSS-SECTION

SCALE: ½ IN. = 1 FT.

All bar reinf. #5 unless noted



KEY PLAN

Drawn by J.D.
Checked by H.B.L.

NOTES:

For General Notes see Dwg. SA2
Slabs are designated by the marks shown on the Key Plan
All bars are to have their slab designation as the prefix to the bar mark. Bar 301 in slab 2A will have the bar mark 2A301.
For details of joints and misceilaneous reinf. see Dwg. SA85
For framing Plans, see Dwgs. SA54 thru SA58
For details of parapet and railing see Dwg. SA87

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
SLABS 21S THRU 28S & 34S THRU 59S
SLABS 25N THRU 54N

APPROVED BY: Lonnie D. Pearson BRIDGE ENGINEER 4-16-64 DATE

SCALE: NO SCALE

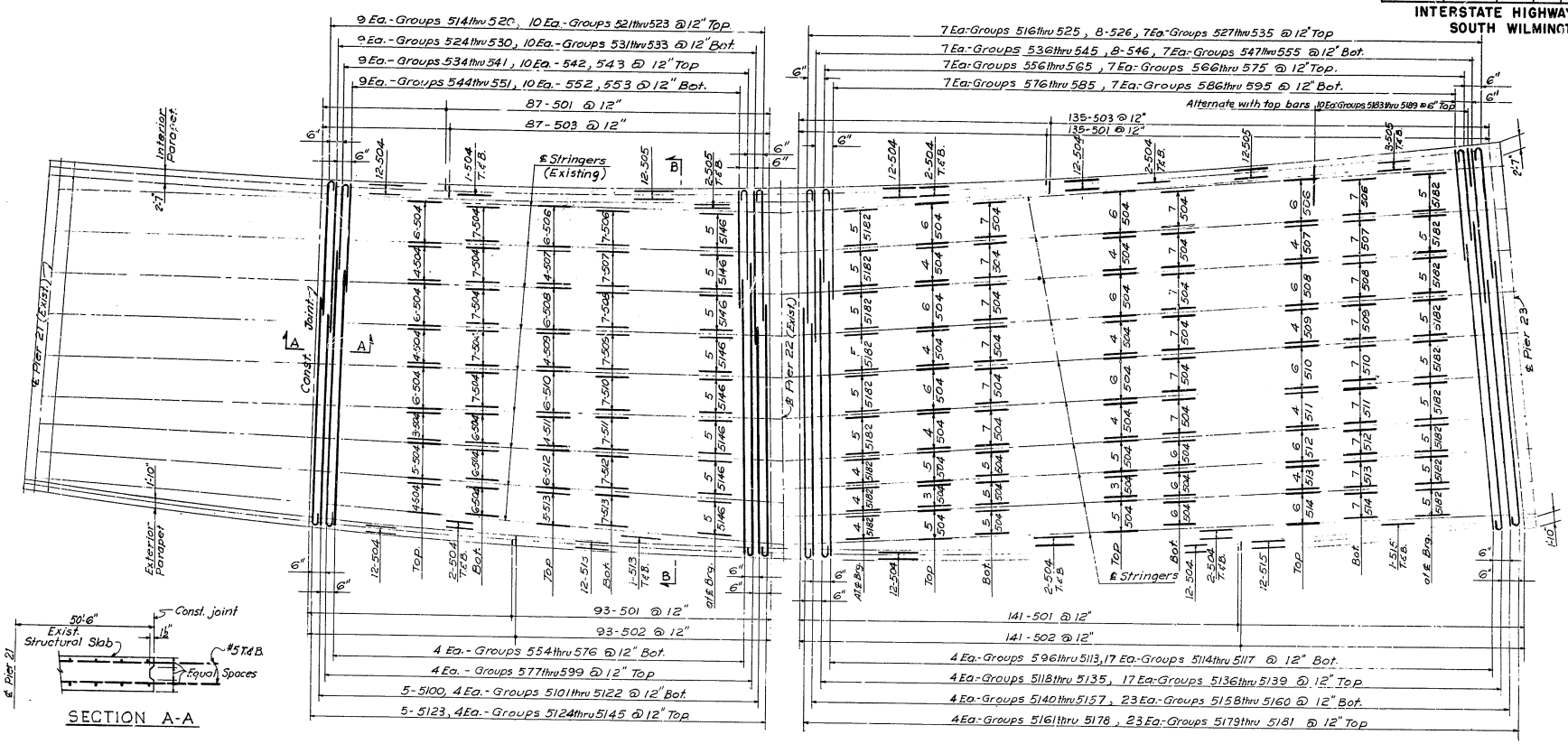
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA77

COUNTY	CONTRACT	A.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-08-004	2	DEL.	I-95-2 (12)	'64	112	215

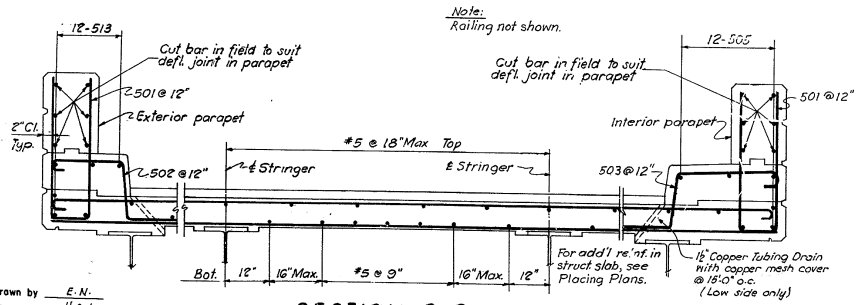
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



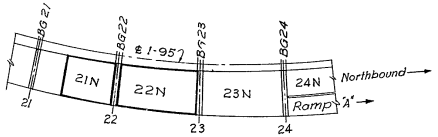
SLAB 21N

SLAB 22N

SECTION A-A



SECTION B-B



KEY PLAN

NOTES:
For General Notes, see Dwg. SA2
For Key Plan and additional notes see Dwg. SA77
For miscellaneous details, see Dwg. SA85
For Framing Plan see Dwg. SA54
For details of parapet and railing see Dwg. SA87

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
SLABS 21N & 22N

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

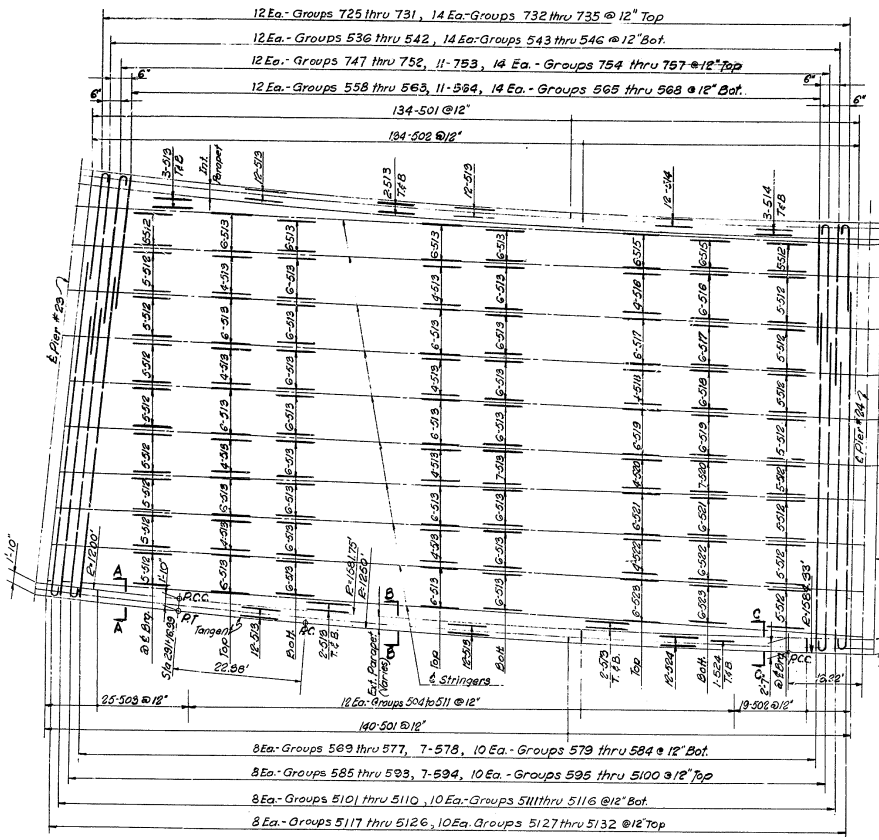
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

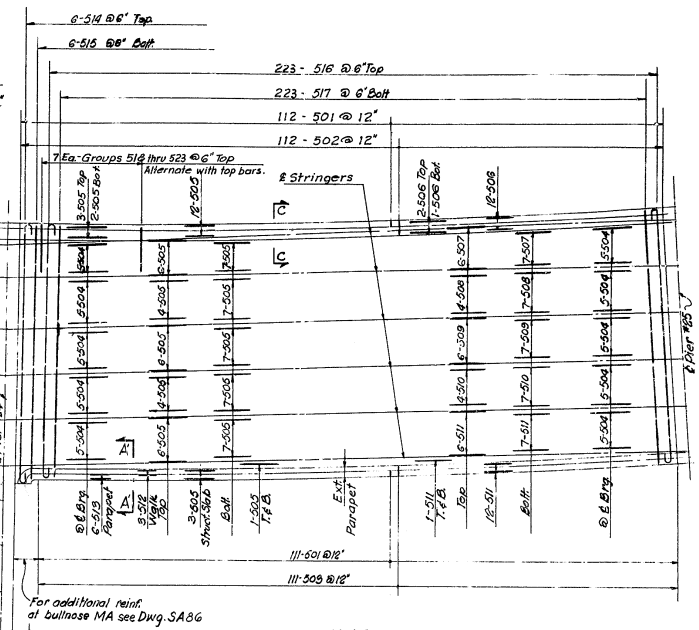
DWG. NO. SA78

COUNTY	CONTRACT	F.A.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	113	215

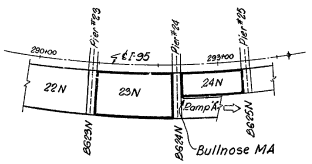
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



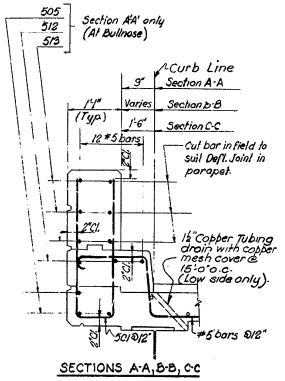
SLAB 23 N



SLAB 24 N



KEY PLAN



SECTIONS A-A, B-B, C-C

Note:
For additional Reinf. in Struct Slab see Placing Plans

NOTES:
For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA54
For Typical Cross Section & reinf. details see Dwg. SA77
For additional reinf. details see Dwg. SA85

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

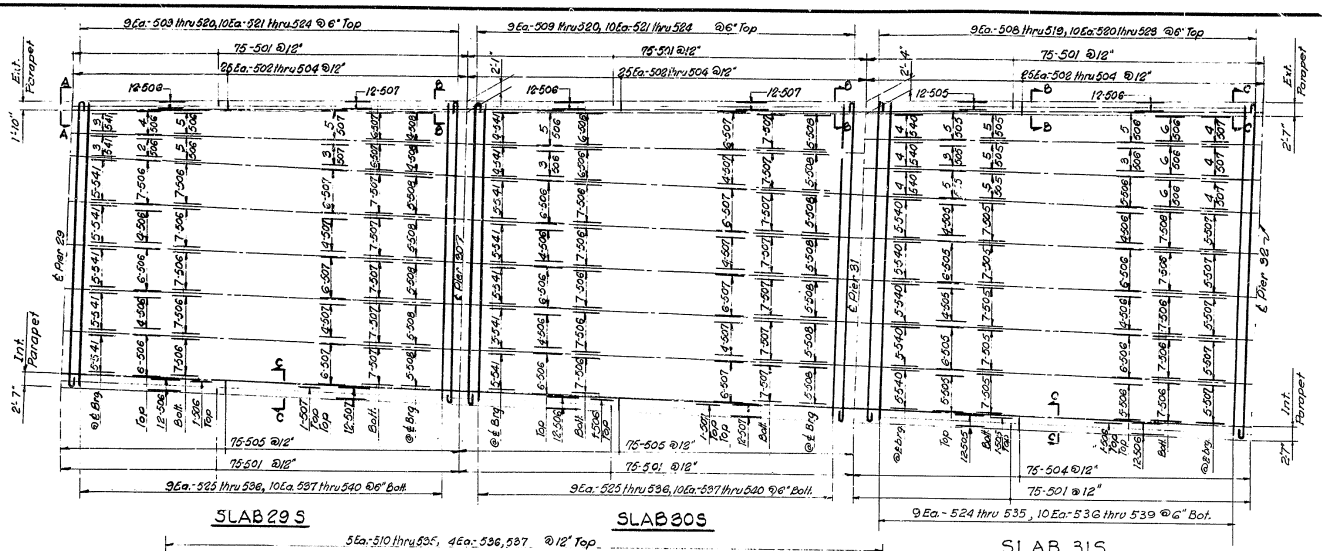
DECK REINFORCEMENT
SLABS 23N & 24N

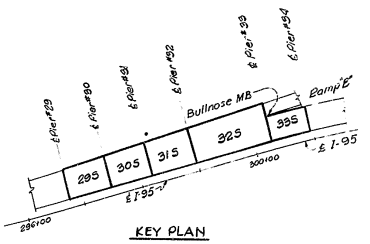
APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE: NO SCALE
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA79

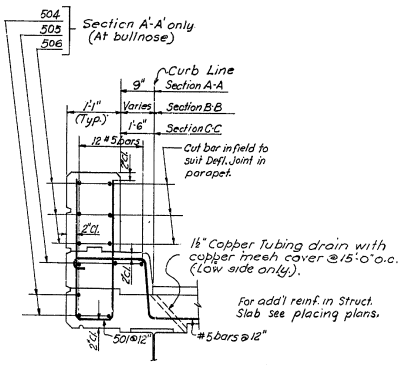
COUNTY	CONTRACT	F.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	114	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

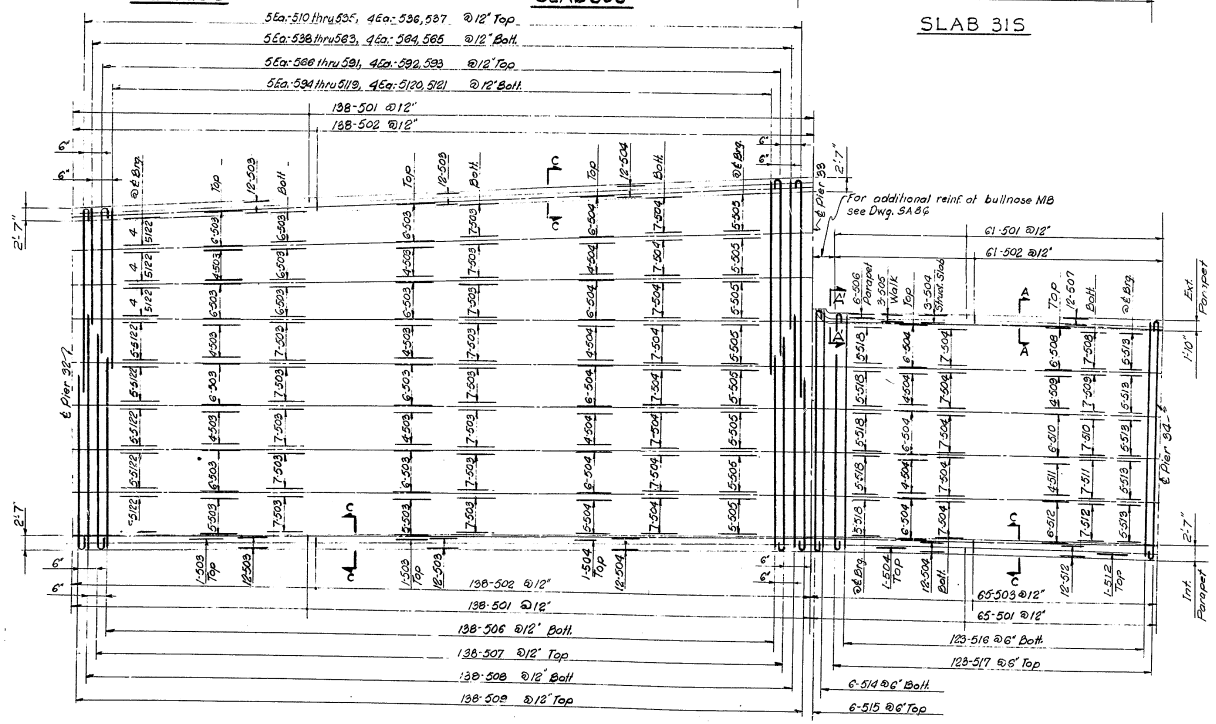




KEY PLAN



SECTIONS A-A, B-B, C-C



NOTES:
For General Notes see Dwg. SA2
For Framing Plans see Dwgs. SA55 & SA56
For additional notes see Dwg. SA77
For details of joints and misc. reinf. see Dwg SA85

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
SLABS 29S THRU 33S

APPROVED BY: W. Lewis R. Pearson Jr. 4-16-64
BRIDGE ENGINEER — DATE

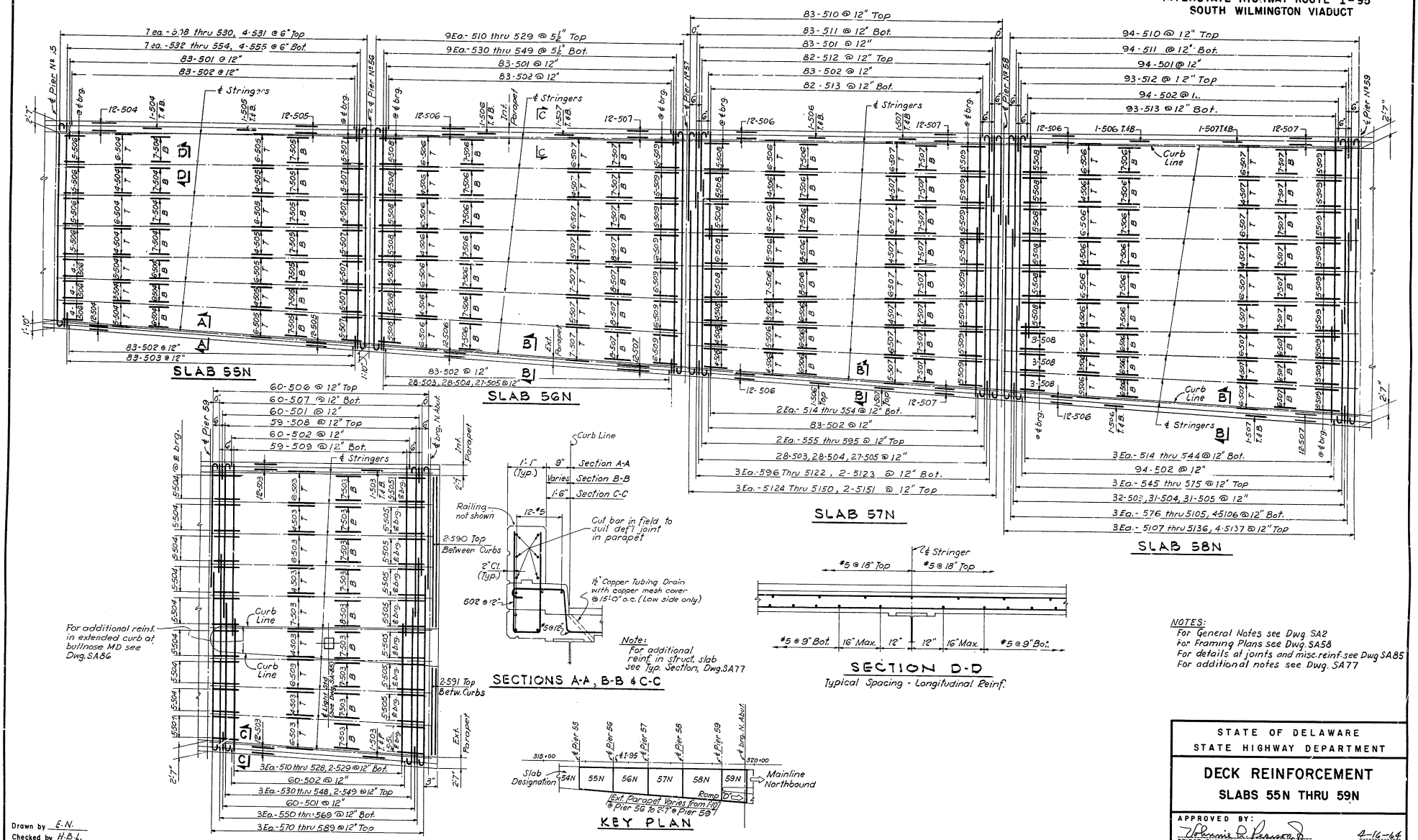
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA80

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FIELD YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	115	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For Framing Plans see Dwg. SA58
For details at joints and misc. reinf. see Dwg. SA85
For additional notes see Dwg. SA77

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

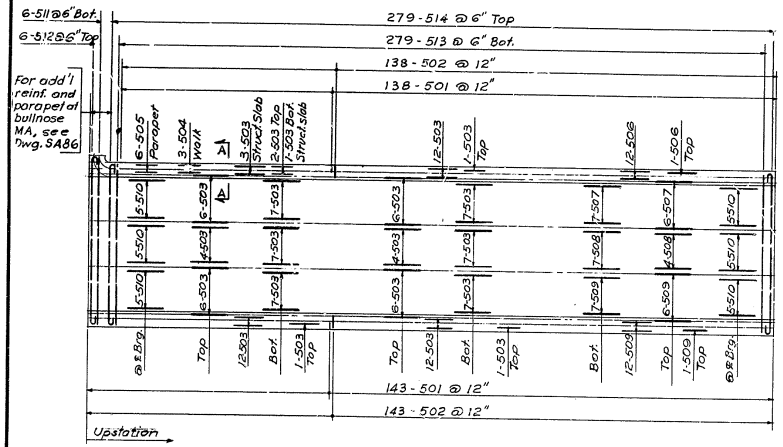
DECK REINFORCEMENT
SLABS 55N THRU 59N

APPROVED BY: Wohnnie D. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

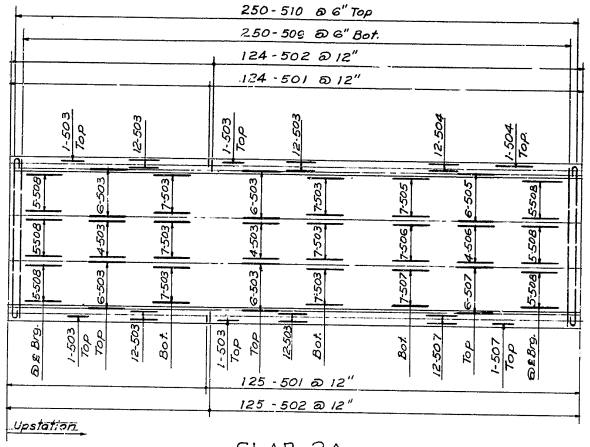
SCALE: NO SCALE
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA81

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	115	215

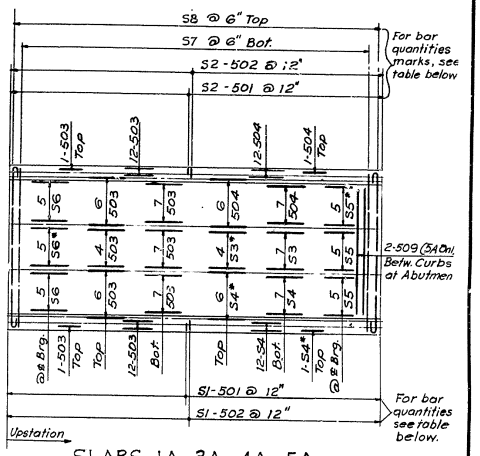
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



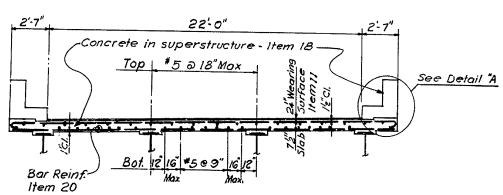
SLAB OA
No Scale



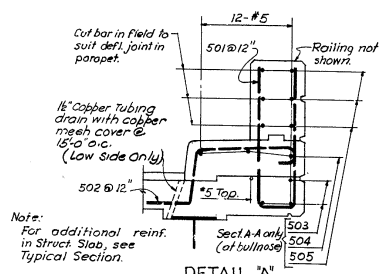
SLAB 2A
No Scale



SLABS 1A, 3A, 4A, 5A
*For bar marks, see table below



TYPICAL SECTION
SCALE ¼ IN. = 1 FT.
For Sections at exp. & fixed joints see Dwg. SA85

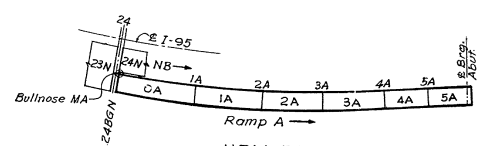


Note:
For additional reinf. in Struct. Slab, see Typical Section.

DETAIL "A"
SCALE ¾ IN. = 1 FT.

BAR / SLAB	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8
1A	118	116	505	506	507	507	234-508	234-509
3A	76	76	504	504	505	508	151-506	151-507
4A	75	75	504	504	505	508	148-506	148-507
5A	77	77	504	504	505	506	153-507	153-508

NOTES
For General Notes see Dwg. SA2
Slabs are designated by the marks shown on the Key Plan.
All bars are to have their slab designation as the prefix to the bar mark. Bar 501 in slab 2A will have the bar mark 2A501.
For details at joints and miscellaneous reinf. see Dwg SA85
For Framing Plan see Dwgs. SA54 & SA55
For parapet and railing details see Dwg. SA87



KEY PLAN
No Scale

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

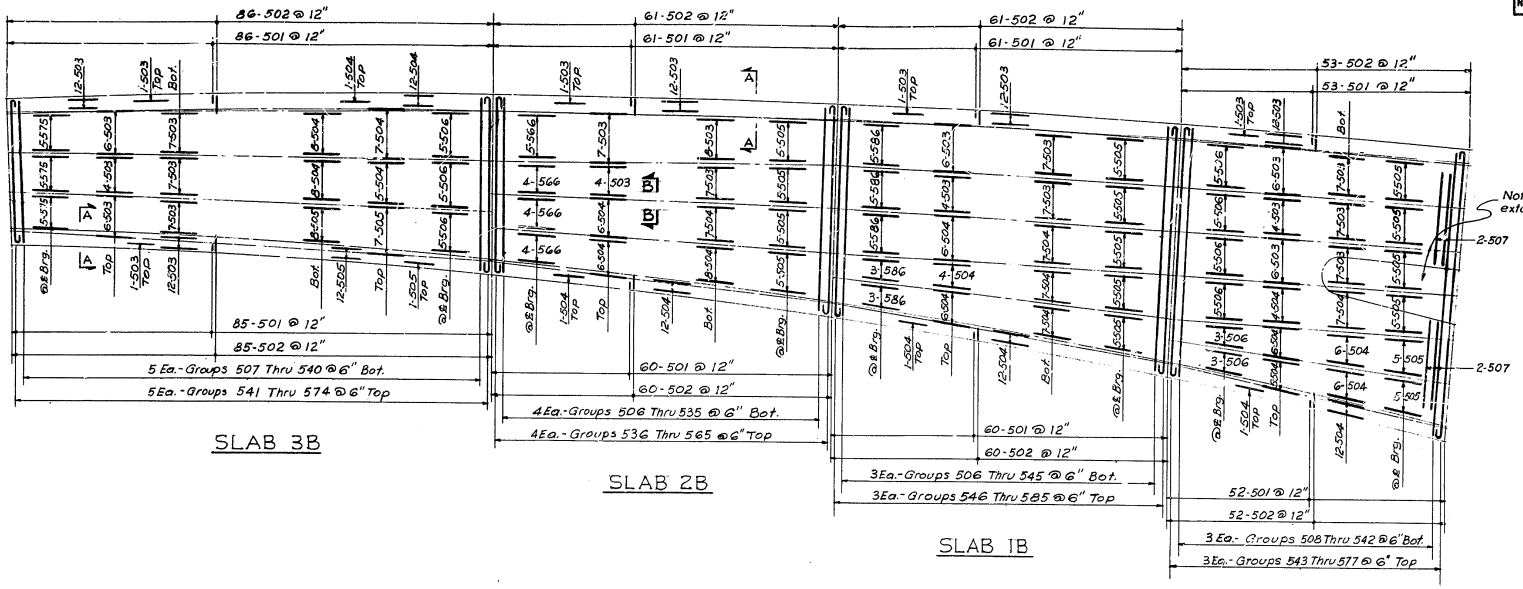
DECK REINFORCEMENT
RAMP A
SLABS OA THRU 5A

APPROVED BY: Wilmie R. Pearson Jr.
BRIDGE ENGINEER — DATE 4-16-64

SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA82

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	Fed. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-[illegible]-2(12)	'64	117	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

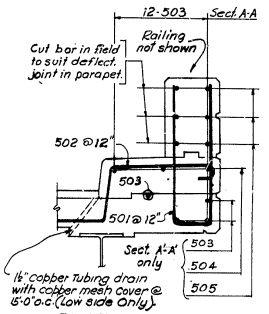


SLAB 3B

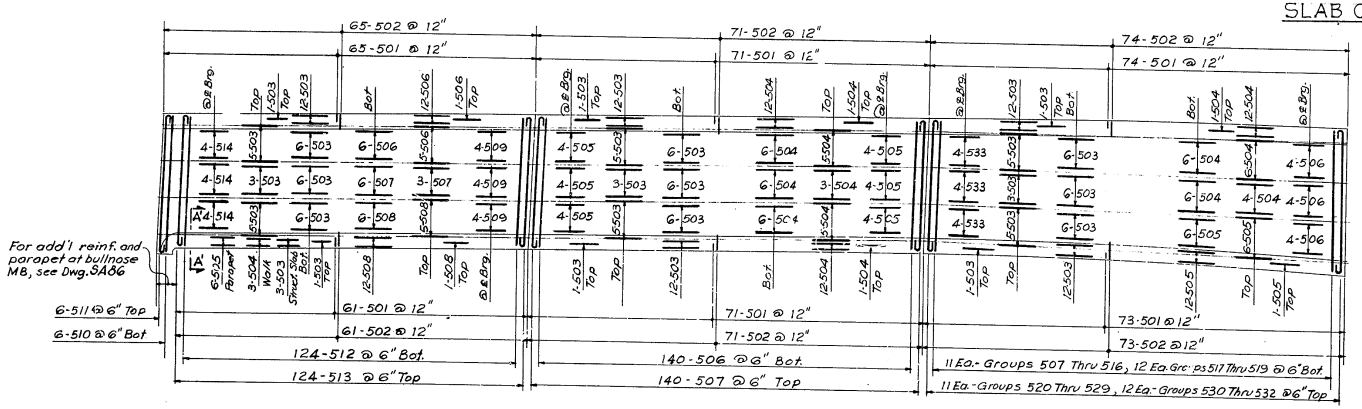
SLAB 2B

SLAB 1B

SLAB OB



SECTION A-A
SECTION A-A (at bullnose)



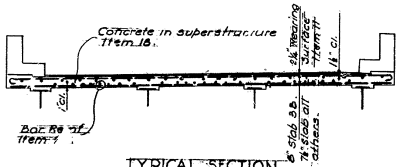
SLAB 6B

SLAB 5B

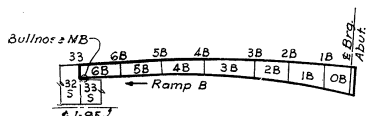
SLAB 4B

NOTES:

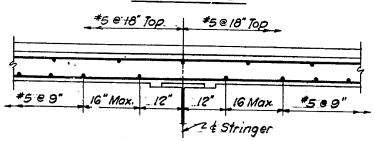
For General Notes, see Dwg. SA2
For Framing Plan, see Dwg. SA56
For additional notes, see Dwg. SA82



TYPICAL SECTION
SCALE ¼ IN = 1 FT.



KEY PLAN



SECTION B-B
Typical Spacing - Long. Reinf.

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
RAMP B
SLABS OB THRU 6B

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

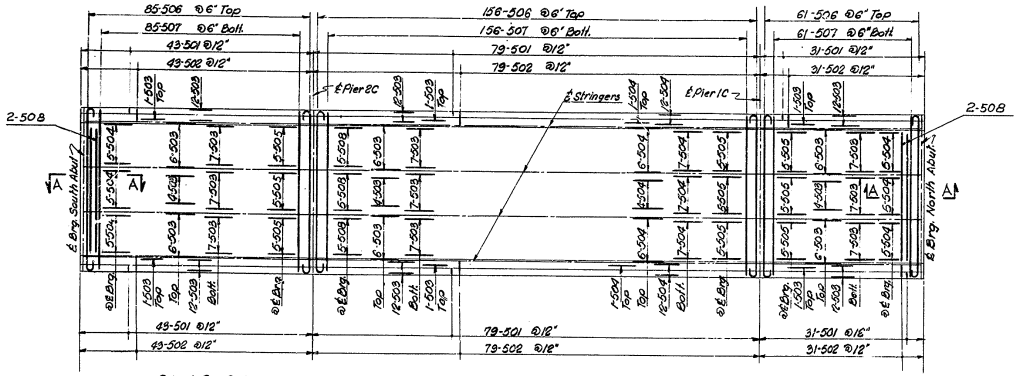
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

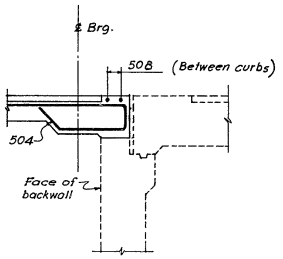
DWG. NO. SA83

COUNTY	CONTRACT	F.H.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	118	215

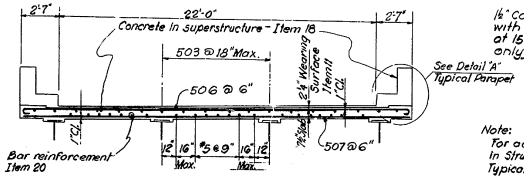
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



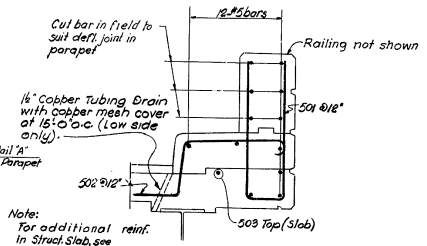
SLAB 2C | SLAB 1C (NO SCALE) | SLAB 0C



SECTION A-A
SCALE: ½ IN. = 1 FT.
For additional reinf. in struct. slab, see Typical Section.



TYPICAL SECTION
SCALE ¼ IN. = 1 FT.
For Sections at exp. & fixed joints See Dwg. No.



DETAIL "A"
SCALE ¾ IN. = 1 FT.

Notes:
For general notes, see Dwg. SA2
Slabs are designated by the marks shown on the Key Plan, see Dwg. SA77
All bars are to have their slab designation as the prefix to the bar mark. Bar 501 in slab 2C will have the bar mark 2C501.
For details of joints and misc. reinf., see Dwg. SA85
For framing plan, see Dwg. SA57
For details of parapet and railing see Dwg. SA87

Drawn by EN
Checked by HBL

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
RAMP C
SLABS 0C THRU 2C

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

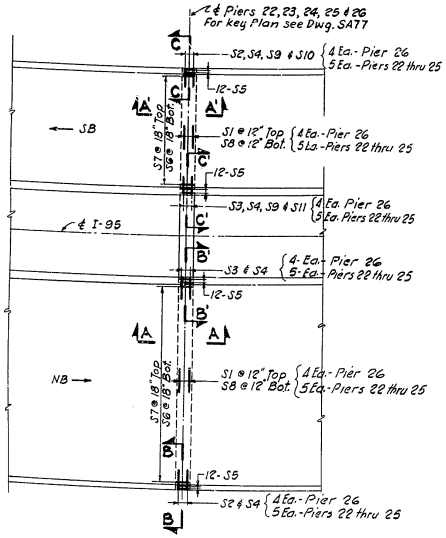
SCALE: AS NOTED | DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA84

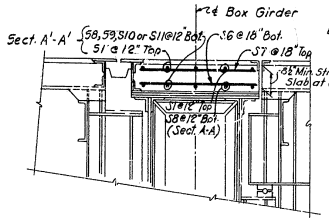
COUNTY	CONTRACT	F.A.P. OR S.R. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	119	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



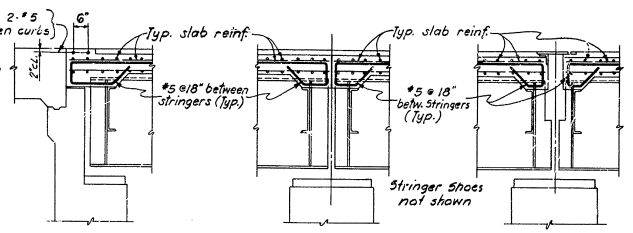
REINFORCEMENT FOR DECK SLABS OVER BOX GIRDERS

SCALE: NONE



SECTION A-A
SECTION A'-A'

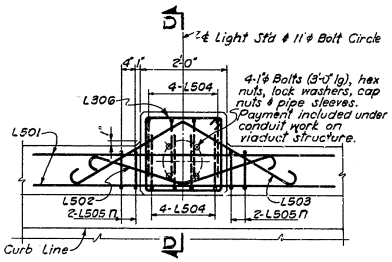
SCALE: 1/2 IN. = 1 FT.



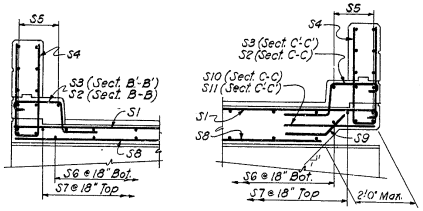
AT ABUTMENT | AT FIXED JOINT | AT EXPANSION JOINT

REINFORCEMENT BETWEEN STRINGERS AT ℄ BEARING

SCALE: 1/2 IN. = 1 FT.



PLAN - LIGHT STANDARD PEDESTAL ✓

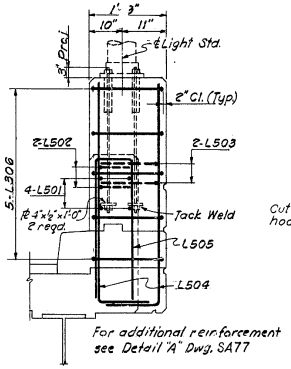


SECTION B-B
SECTION B'-B' ✓

SCALE: 1/2 IN. = 1 FT.

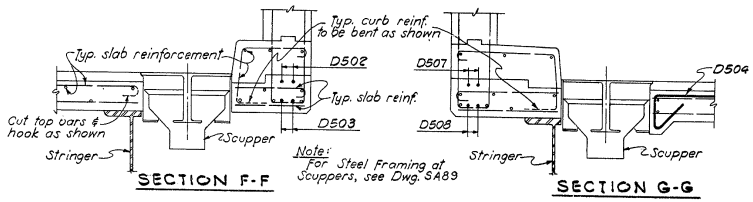
SECTION C-C
SECTION C'-C'

SCALE: 1/2 IN. = 1 FT.



SECTION D-D ✓

SCALE: 3/8 IN. = 1 FT.

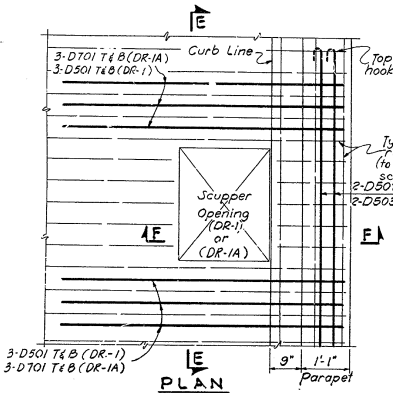


SECTION F-F

SECTION G-G

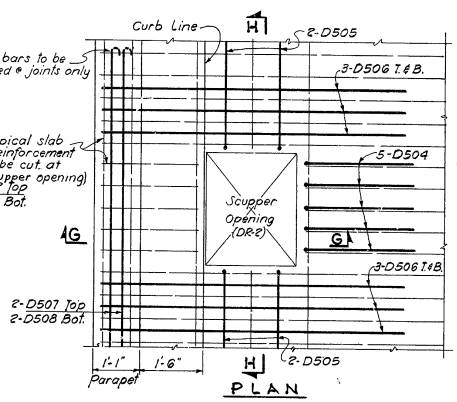
TYPICAL REINFORCEMENT AT SCUPPERS

SCALE: 3/8 IN. = 1 FT.

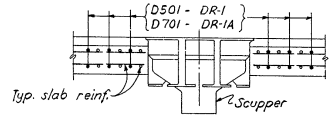


E PLAN

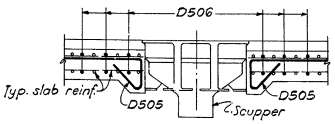
DR-1A (2-Req'd) adjacent to Stringer 23N-1



H PLAN



SECTION E-E



SECTION H-H

NOTES

For General Notes see Dwg. SA2
For Typical Cross Section, Details, Key Plan and additional notes see Dwg. SA77
All longitudinal bars, top and bottom, are to have their laps staggered. Stagger splices by shifting the longer bar from one end to the opposite end in adjacent lines of bars.
For location of scuppers see Framing Plans.
For location of Light Standards see Dwgs. E1 thru E4

Drawn by S.J.V
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT DETAILS

APPROVED BY:
BRIDGE ENGINEER
4-14-64
DATE

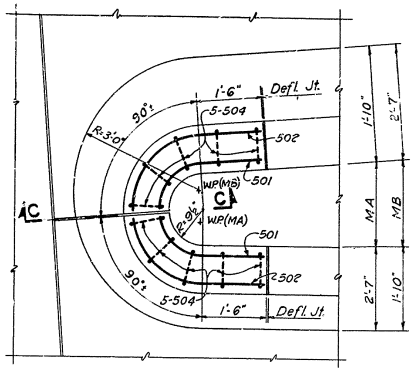
SCALE: AS NOTED
DATE: APRIL 1, 1964

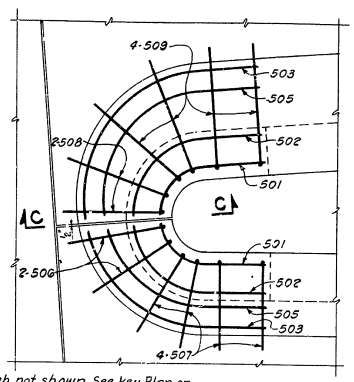
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA85

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	120	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

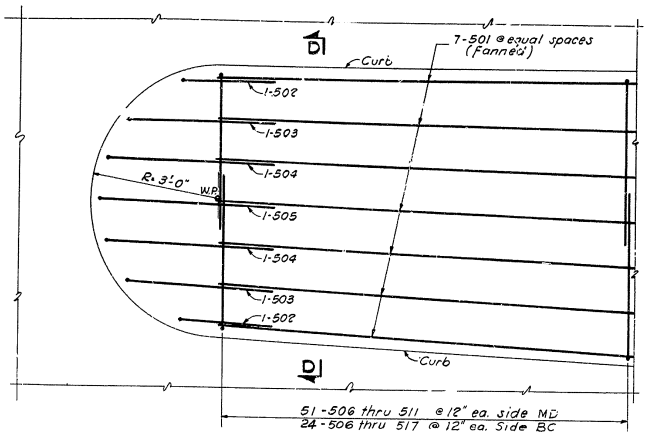




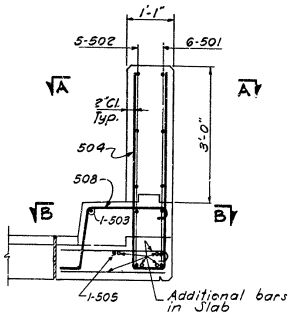
Additional reinf. in Deck Slab not shown. See key Plan on Dwg. SA77 for adjacent Deck Slabs.

SECTION A-A **SECTION B-B**

DETAIL AT BULLNOSES MA & MB

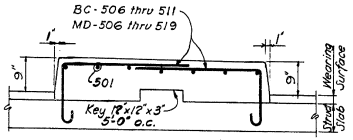


EXTENDED CURB AT BULLNOSES MD & BC



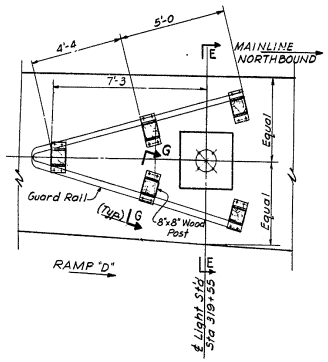
SECTION C-C

Details of joint at deck slab and parapet are similar to those for details at fixed joint on Dwg. S476

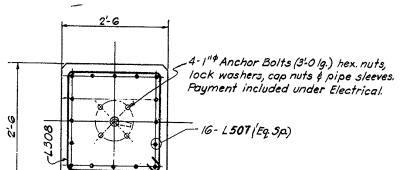


Additional reinf. in Deck Slab not shown.

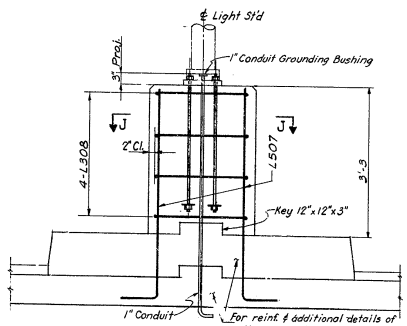
SECTION D-D



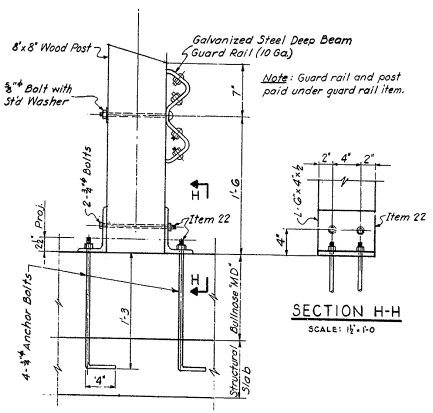
PLAN
SCALE: 3/8" = 1'-0



SECTION J-J
SCALE: 3/4" = 1'-0



SECTION E-E
SCALE: 3/4" = 1'-0



SECTION G-G
SCALE: 1½" = 1'-0

SECTION H-H
SCALE: 1½" = 1'-0

NOTES
For General Notes see Dwg. SA2
For key Plan & Typical Cross Section see Dwg. SA77
In the bar list for Bullnoses, all bars are to have their bullnose mark as the prefix to the bar mark.
For parapet and railing details see Dwg. SA87

Drawn by S.L.V
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BULLNOSE DETAILS

APPROVED BY: [signature] BRIDGE ENGINEER
4-16-64 DATE

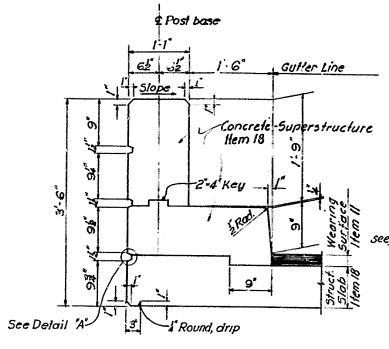
SCALE: 3/4 IN. = 1 FT
DATE: APRIL 1, 1964

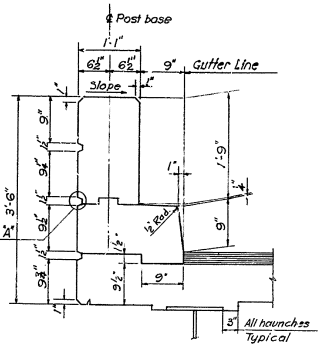
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA86

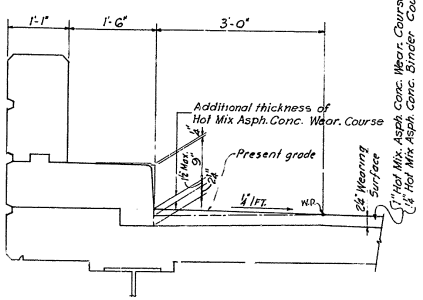
COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	121	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

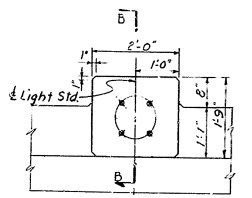




TYPICAL PARAPET AND CURB SECTIONS ✓
SCALE: 1 IN. = 1 FT.

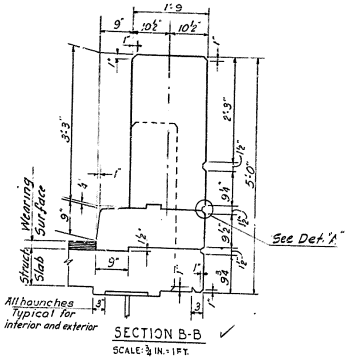


TANGENT SECTION ONLY
SCALE 1 IN. = 1 FT.

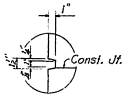


PLAN-LIGHT STANDARD PEDESTAL ✓
SCALE: ¾ IN. = 1 FT.

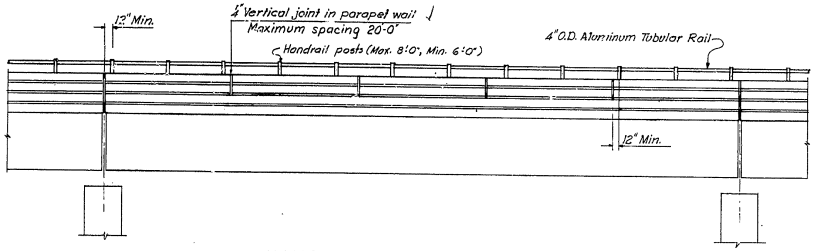
For details of anchor bolts and reinf. in pedestal, see Dwg SA-85
For Elect. Plan & Details, see Dwgs. E1 thru E5



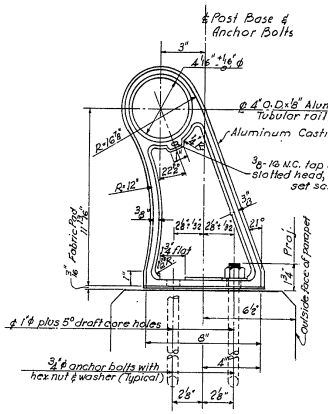
SECTION B-B ✓
SCALE: ¾ IN. = 1 FT.

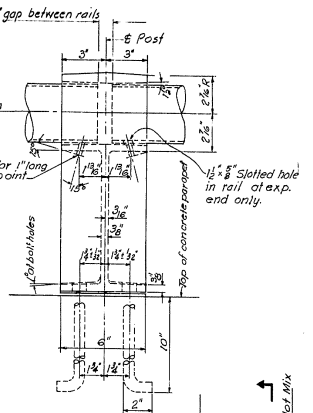


DETAIL "A"
NO SCALE



HANDRAIL POST ELEVATION
NO SCALE





RAILING DETAILS ✓
SCALE: 3 IN. = 1 FT.

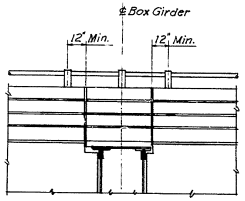
Note: Corner radii = ⅜" unless otherwise noted.
Fillets ⅜" unless otherwise noted.

RAILING NOTES

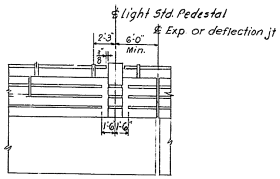
1) Railing to be continuous through a minimum of 2 panels and continuous through end posts.
2) Exposed ends of tubular rails to be closed with an aluminum plug welded in.
3) The finished aluminum alloy bolts, nuts and washers shall be given an anodic coating at least 0.0002 in. thick and a chromate seal.
4) All bolts & nuts shall be made of aluminum alloy as per A.S.T.M.-B211, Alloy 2024-T4 (Bolts) Alloy 6061-T6 (Nuts) All washers shall be made of aluminum alloy, A.S.T.M.-B209 Alclad 2024-T4.

RAILING ERECTION PROCEDURE

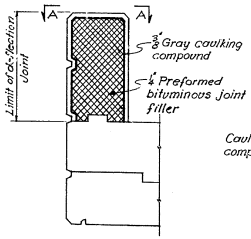
1) Anchor bolts to be set by template.
2) Post to be normal to grade and rail to be parallel to established grade.
3) Top of anchor bolts are to be peened after nut is tightened.



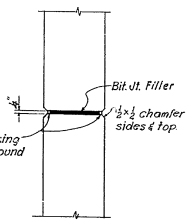
TYPICAL ARRANGEMENT OF RAILING AT BOX GIRDER SIMILAR FOR PLATE GIRDER
SCALE: ½ IN. = 1 FT.



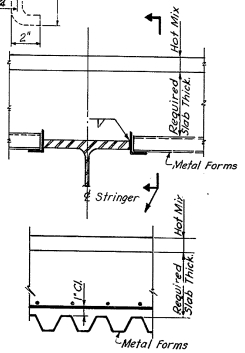
TYPICAL ARRANGEMENT OF RAILING AT LIGHT STANDARD PEDESTAL



SECTION AT DEFLECTION JOINT
SCALE: 1 IN. = 1 FT.



SECTION A-A
SCALE: 1 IN. = 1 FT.



ARRANGEMENT OF METAL FORMS FOR SLAB SUPPORT
SCALE: 1½" = 1'-0"

Drawn by S.W.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PARAPET AND RAILING DETAILS

APPROVED BY: Lorraine D. Pearson
BRIDGE ENGINEER
4-16-64
DATE

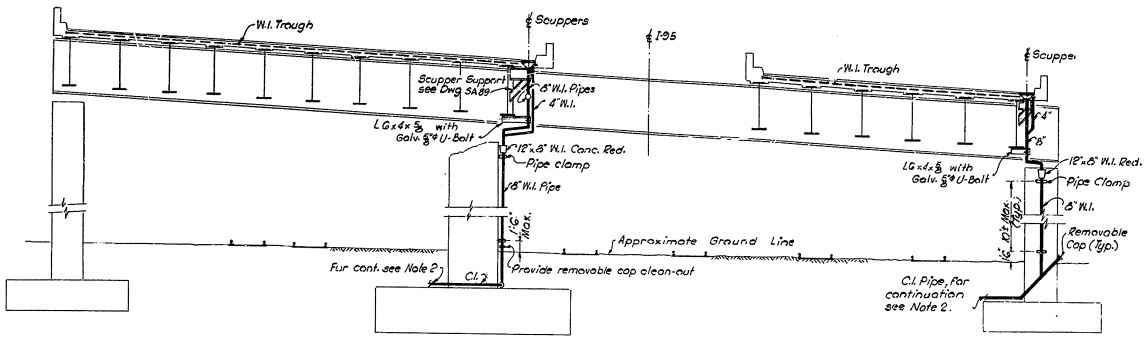
SCALE: AS NOTED
DATE: APRIL 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

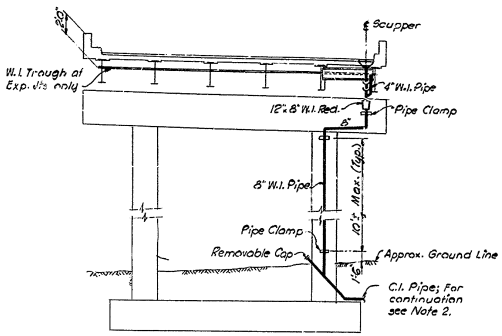
DWG. NO. SA87

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	122	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

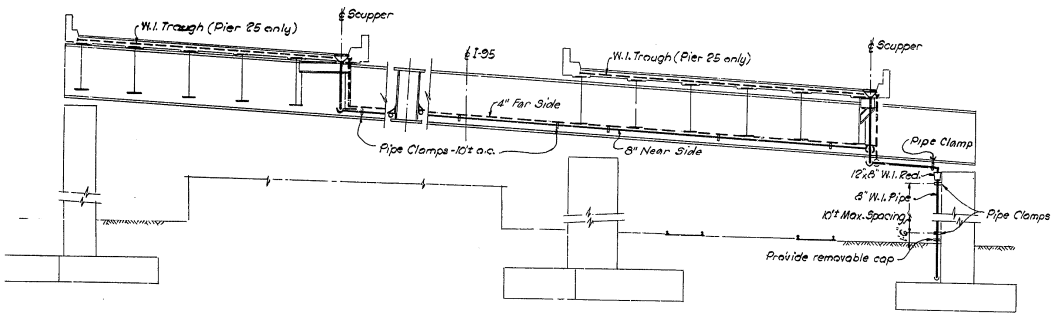


AT PIER 23

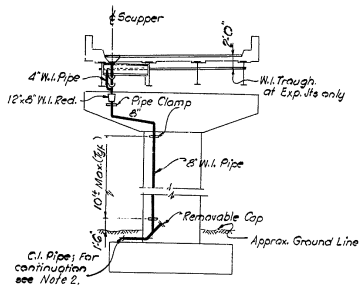


AT RIGID FRAMES

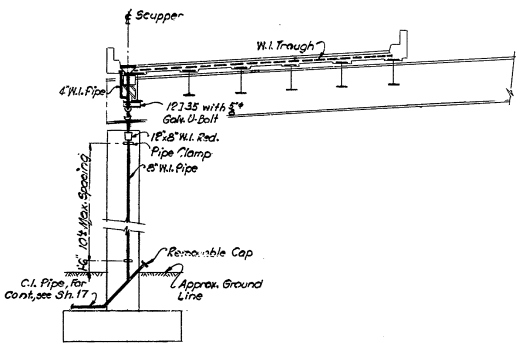
Note: Two column rigid frame shown; Three column rigid frame similar.



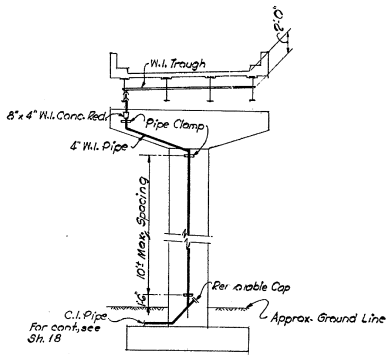
AT PIER 25 AS SHOWN
AT PIER 24 SIMILAR



AT RAMPS



AT PIER 26



AT PIER 6B

NOTES:

1. Work this sheet with Dwgs SA89 & SA90
2. Run-outs to connect into Wyes and Laterals on Mains. See Highway Plans, Sh. Nos. 17, 18, 19 & 20
3. For General Notes, see Dwg SA2
4. For Pier Elevations, see SA11 thru SA23
5. All Piping to be Schedule 40 wall thickness.
6. All Fittings to be Std. Wt., Galv.
7. All metal surfaces in contact with concrete to be given an extra heavy coat of "Bitumastic"
8. Trough Supports to be spaced 10'± o.c.

Drawn by S.W.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DRAINAGE
TYPICAL SCHEMATICS

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

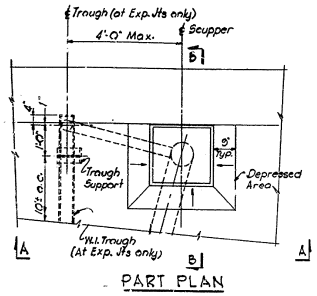
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

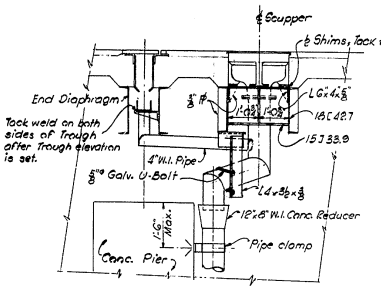
DWG. NO. SA88

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	123	215

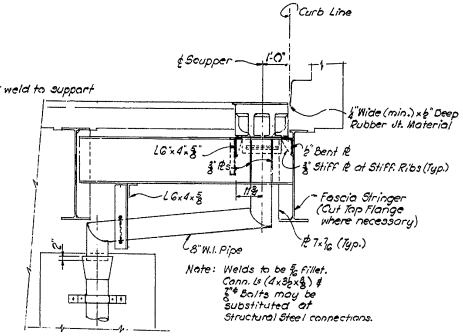
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PART PLAN

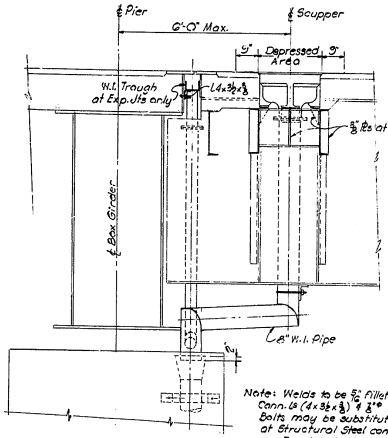


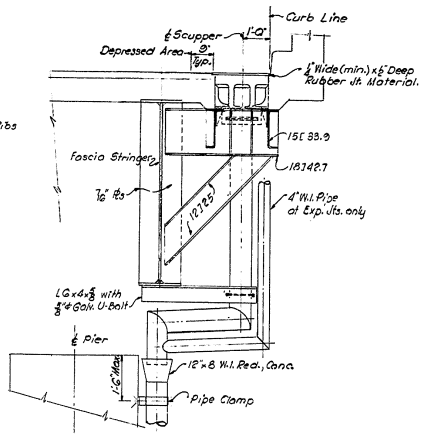
ELEVATION A-A



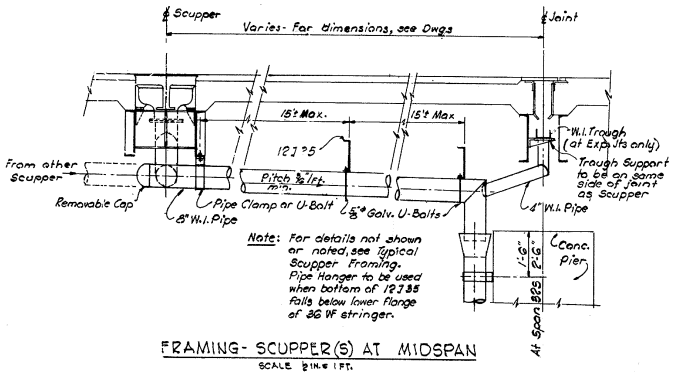
SECTION B-B

TYPICAL SCUPPER FRAMING
SCALE ½IN.=1FT.





FRAMING AT BOX GIRDERS
SCALE ½IN.=1FT.



FRAMING- SCUPPER(S) AT MIDSPAN
SCALE ½IN.=1FT.

Drawn by S.W.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DRAINAGE

DETAILS - SHEET 1 OF 2

APPROVED BY: _____ BRIDGE ENGINEER — DATE: 4-16-64

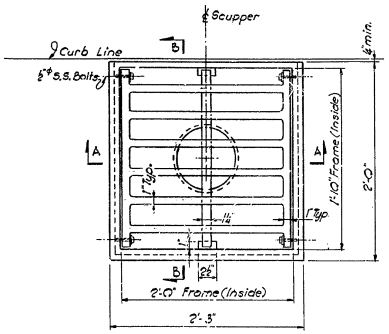
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA89

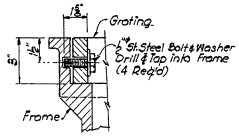
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	124	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

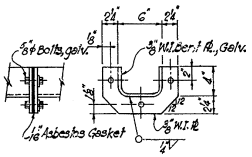


PLAN

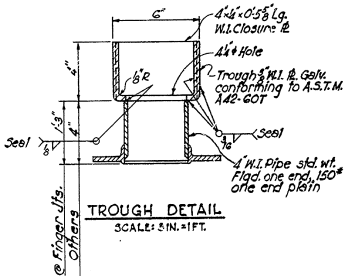
NOTES:-
1. Scupper Frame to be Cast Iron, galv, conforming to A.S.T.M. Designation A-48-GOT class no.30, see Specs.
2. All intersections (except for grating rest) to have ½" min. radius Fillet.
3. Grind corners of grating to clear Fillets.
4. Gratings to be Cast Steel, galv, conforming to A.S.T.M. A-27-GO, Grade GS-35.



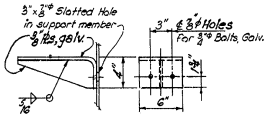
DETAIL A
SCALE 3 IN. = 1 FT.



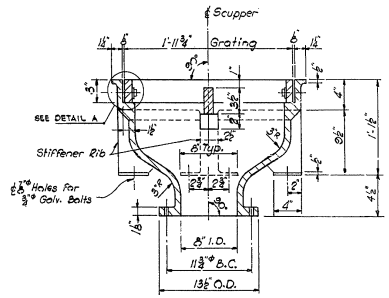
TROUGH SPLICE
SCALE: 1½ IN. = 1 FT.



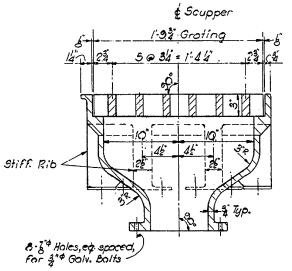
TROUGH DETAIL
SCALE: 3 IN. = 1 FT.



TROUGH SUPPORT (ITEM 22)
SCALE: 1½ IN. = 1 FT.

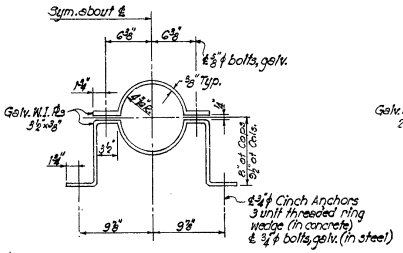


SECTION A-A

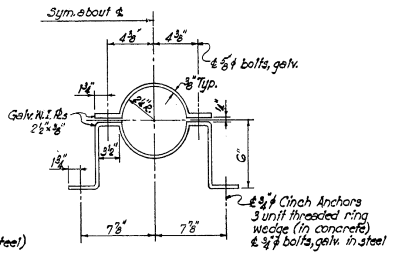


SECTION B-B

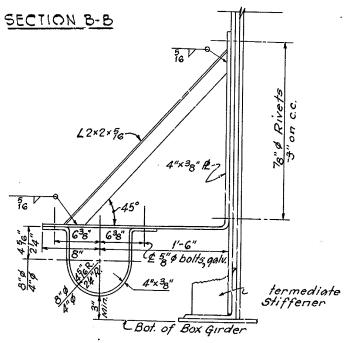
SCUPPER DETAILS
SCALE 1½ IN. = 1 FT.



PIPE CLAMP
FOR 8" PIPE
SCALE: 1½ IN. = 1 FT.



PIPE CLAMP
FOR 4" PIPE
SCALE: 3 IN. = 1 FT.



PIPE CLAMP TO BG 24 & BG 25
Scale: 1½ IN. = 1 FT.

Drawn by J.W.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DRAINAGE

DETAILS – SHEET 2 OF 2

APPROVED BY: Dennis D. Heasley Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: AS NOTED
DATE: APRIL, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA90

COUNTY	CONTRACT	S.D.H. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	125	215

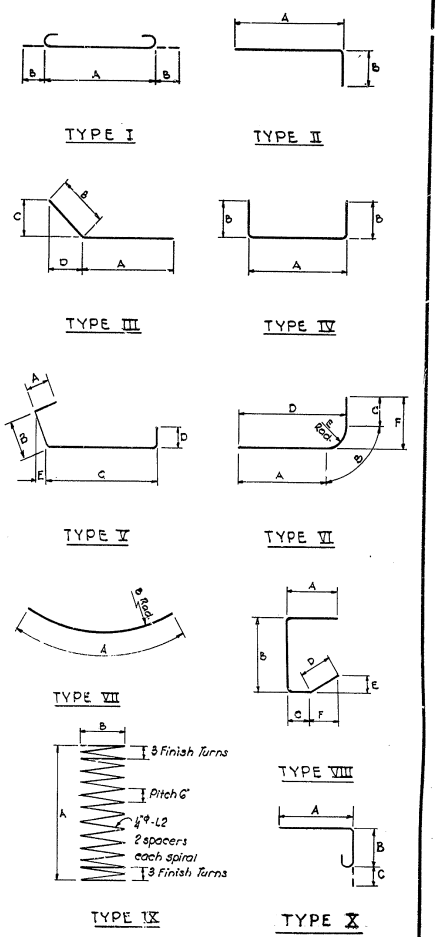
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

NORTHBOUND ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	NA 500	5	80	5'-6	Str.								Footing
	NA 501		80	6'-8	I	5'-6	7						Footing
	NA 502		24	10'-6	Str.								Footing
	NA 503		24	40'-3									Footing
	NA 504		140	3'-2									Dowels
	NA 505		7	5'-6									Pedestals
	NA 506		8	5'-4									
	NA 507		8	5'-10									
	NA 508		8	6'-0									
	NA 509		8	6'-2									
	NA 510		8	6'-4									
	NA 511		8	6'-6									
	NA 512		8	6'-7									
	NA 513		8	6'-9									
	NA 514		7	6'-10	Str.								
	NA 515		7	15'-10	V	2'-1	5'-8	3'-2	3'-2	0			
	NA 516		52	9'-6	IV	3'-4	3'-2						
	NA 517		6	15'-11	V	2'-1	5'-8	5'-3	3'-2	5			Pedestals
	NA 518		15	34'-10	Str.								Backwall
	NA 519		15	40'-1									
	NA 520		10	7'-11									
	NA 521		10	7'-9									
	NA 522		10	7'-7									
	NA 523		10	7'-4									
	NA 524		9	7'-2									
	NA 525		9	7'-0									
	NA 526		9	6'-10									
	NA 527		9	6'-8									
	NA 528		8	6'-2									
	NA 529		8	6'-6									
	NA 530		8	6'-8									
	NA 531		8	6'-10									
	NA 532		9	6'-11									
	NA 533		9	7'-1									
	NA 534		9	7'-3									
	NA 535		9	7'-5									
	NA 536		20	8'-4									
	NA 537		8	3'-8									
	NA 538		8	5'-11									
	NA 539		6	4'-6 to 8'-0									2x3 Δ = 1'-9
	NA 540		6	6'-9 to 10'-3									2x3 Δ = 1'-9
	NA 541		6	8'-1	Str.								
	NA 542		10	7'-8	II	5'-8	8'-1						
	NA 543		10	5'-8	Str.								
	NA 544		2	5'-11	IV	9	5'-8						
	NA 545		8	8'-1 to 11'-7	IV	2'-8	5'-0 to 6'-8						2x4 Δ_B = 7"
	NA 546		8	6'-0	Str.								
	NA 547		8	10'-6	VI	7'-5	2'-4	9	8'-11	1'-6	2'-3		
	NA 548		80	4'-1	II	2'-2	2'-0						
	NA 549		6	4'-5	II	3'-5	1'-1						
	NA 550		8	2'-9	IV	9	1'-1						
	NA 551		6	7'-7	IV	9	3'-6						
	NA 552		8	10'-5	IV	9	4'-11						
	NA 553		10	8'-7 to 9'-11	IV	9	4'-0 to 4'-8						2x5 Δ_A = 2"
	NA 554		4	3'-6	III	3'-6	6'-0						
	NA 555		4	2'-8	Str.								
	NA 556		4	6'-0									
	NA 557		4	8'-9									
	NA 558		4	9'-2									
	NA 559		2	8'-10									
	NA 560		4	9'-3	Str.								
	NA 561		80	3'-11	III	1'-11	1'-1						Add. Ped.
	NA 562		30	5'-4	IV	3'-4	1'-1						Add. Ped.
	NA 563		20	8'-0	Str.								
	NA 564		24	50'-0	Str.								
	NA 565	5	24	36'-0 to 37'-6	Str.								Δ = 1"
	NA 666	6	174	20'-10"	I	18'-6	8						
	NA 467	4	87	5'-5	VIII	1'-8	1'-7	6	1'-10	1'-4	1'-3		
	NA 568	5	87	2'-2	Str.								
	NA 569	5	9	19'-6	Str.								
	NA510 thru 518	5	40	6'-7 to 7'-1	X	4'-8 to 5'-1	1'-8	7					4x10 Δ_A 2"
L1	NA 774	7	222	18'-0	Str.								6 per pile
L2	NA 275	6/8	37		IX	9'-8	7/8						1 per pile

SOUTHBOUND ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	SA 500	5	48	5'-6	Str.								Footing
	SA 501		48	6'-8	I	5'-6	7						Footing
	SA 502		24	10'-6	Str.								Footing
	SA 503		12	47'-6									Footing
	SA 504		91	3'-2									Dowels
	SA 505		6	5'-2									Pedestals
	SA 506		8	5'-4									
	SA 507		8	5'-6									
	SA 508		8	5'-7									
	SA 509		8	5'-9									
	SA 510		7	5'-10	Str.								
	SA 511		5	15'-1	V	2'-1	5'-8	4'-5	3'-2	0			
	SA 512		58	9'-6	IV	3'-4	3'-2						
	SA 518		6	15'-10	V	2'-1	5'-8	5'-2	3'-2	0			Pedestals
	SA 514		15	23'-6	Str.								Backwall
	SA 515		15	19'-4									
	SA 516		8	12'-4									
	SA 517		8	6'-6									
	SA 518		7	6'-8									
	SA 519		10	6'-10									
	SA 520		10	7'-0									
	SA 521		9	6'-6									
	SA 522		9	6'-4									
	SA 523		7	6'-2									
	SA 524		7	6'-0									
	SA 525		7	5'-10									
	SA 526		20	7'-8									Backwall
	SA 527		7	3'-8									Cheekwall
	SA 528		7	5'-11									
	SA 529		6	4'-6 to 8'-0									2x3 Δ = 1'-9
	SA 530		6	6'-9 to 10'-3									2x3 Δ = 1'-9
	SA 531		6	8'-1	Str.								
	SA 532		4	10'-1	VI	8'-2	1'-2	9	8'-11	9	1'-6		
	SA 533		10	7'-9	II	5'-8	2'-1						
	SA 534		10	5'-8	Str.								
	SA 535		4	7'-4 to 10'-10	IV	1'-6	5'-0 to 6'-8						Δ_B = 7"
	SA 536		1	5'-11	IV	9	2'-8						
	SA 537		7	6'-0	Str.								
	SA 538		8	2'-9	IV	9	1'-1						
	SA 539		8	3'-8	II	2'-8	1'-1						
	SA 540		10	3'-2	II	1'-6	1'-8						
	SA 541		10	8'-7 to 9'-11	IV	9	4'-0 to 4'-8						2x5 Δ_A 2"
	SA 542		8	10'-5	IV	9	4'-11						
	SA 543		6	7'-7	III	9	3'-6						
	SA 544		4	3'-6	VIII	3'-6	6'-0						
	SA 545		4	2'-8	Str.								
	SA 546		4	6'-9									
	SA 547		4	6'-0									
	SA 548		4	9'-2									
	SA 549		4	9'-3	Str.								
	SA 550		18	5'-4	IV	3'-4	1'-1						Add. Ped.
	SA 551		30	8'-11	IV	1'-11	1'-1						Add. Ped.
	SA 552		20	6'-4	Str.								
	SA 553		1	8'-10	Str.								
	SA 554		4	10'-6	VI	7'-5	2'-4	9	8'-11	1'-6	2'-3		
	SA 555		10	4'-1	II	2'-2	2'-0						
	SA 556		3	4'-5	II	3'-5	1'-1						
	SA 557		4	8'-1 to 11'-7	IV	2'-8	5'-0 to 6'-8						Δ_B = 7"
	SA 558		38	2'-2	Str.								
	SA 559	5	24	37'-5	Str.								
	SA 660	6	76	20'-10	I	18'-6	8						
	SA 461	4	38	5'-6	VIII	1'-8	1'-7	6	1'-10	1'-4	1'-3		
L1	SA 762	7	150	12'-0	Str.								6 per pile
L2	SA 868	6/8	25		IX	9'-8	7/8						1 per pile



Note: All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

Made by S.W.
Traced by S.W.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
ABUTMENT
NORTHBOUND & SOUTHBOUND

APPROVED BY: Johnnie D. Pearsey Jr. 4-14-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA91

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	126	215

INTERSTATE HIGHWAY ROUTE I-93
SOUTH WILMINGTON VIADUCT

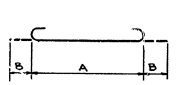
RAMP A ABUTMENTS

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	RA500	5	31	5'-6	Str.								Footing
	501		31	6'-8	I	5'-6	7						Footing
	502		24	10'-6	Str.								Footing
	503		12	32'-6									Footing
	504		69	3'-2									Dowels
	505		7	5'-0									Pedestal
	506		8	5'-1									
	507		8	5'-3									
	508		7	5'-5	Str.								
	509		11	15'-9	V	2'-1	5'-8	5'-1	3'-2				
	510		11	9'-6	III	3'-4	3'-2						
	511		20	3'-11	II	1'-11	1'-1						
	512		12	5'-6	IV	3'-6	1'-1						Pedestal
	513		8	6'-3	Str.								Backwall
	514		8	6'-1									
	515		7	5'-11									
	516		10	6'-5									
	517		9	6'-7									
	518		9	6'-9									
	519		17	27'-0									Backwall
	520		7	7'-7									Cheekwall
	521		7	7'-5									
	522		6	7'-3									
	523		6	3'-8									
	524		6	5'-11									
	525		7	8'-1									
	526		7	7'-11									
	527		6	7'-9									Cheekwall
	528		6	4'-6 to 8'-0									2x3 Δ = 1'-9"
	529		6	6'-9 to 10'-3									2x3 Δ = 1'-9"
	530		8	8'-1	Str.								
	531		10	10'-6	VI	7'-5	2'-4	9	8'-11	1'-6	2'-3		
	532		10	7'-8	II	5'-8	2'-1						
	533		10	5'-8	Str.								
	534		2	5'-11	IV	9	2'-8						
	535		8	8'-1 to 11'-7	III	2'-3	3'-0½						2x4 @ 7"
							4'-9						
	536		8	2'-9	IV	9	1'-1						
	537		6	4'-5	II	3'-5	1'-1						
	538		20	4'-1	II	2'-2	2'-0						
	539		4	9'-4	Str.								
	540		2	8'-10	Str.								
	541		6	7'-7	IV	9	3'-6						
	542		8	10'-5	IV	9	4'-11						
	543		10	8'-7 to 9'-11	III	9	4'-0½						2x5 Δ_B = 2
							4'-8						
	544		4	3'-6	VII	3'-6	6'-0						
	545		4	2'-8	Str.								
	546		4	6'-0	Str.								
	547		4	8'-9	Str.								
	548		4	9'-2	Str.								
	549	5	8	6'-0	Str.								
	650	6	44	20'-10	I	19'-6	8						
	451	4	23	5'-5	VIII	1'-8	1'-7	6	1'-10	1'-4	1'-3		
	552	5	23	2'-2	Str.								
	RA553	5	24	21'-8	Str.								
L1	RA754	7	114	12'-0	Str.								6 Per Pile
L2	RA255	4"ϕ	19		IX	9'-8	7½						1 Per Pile

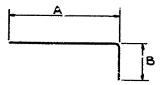
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS

Note:
All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

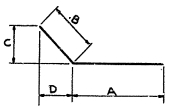
TYPE I



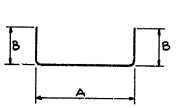
TYPE II



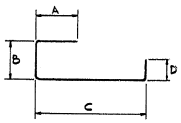
TYPE III



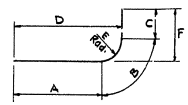
TYPE IV



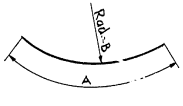
TYPE V



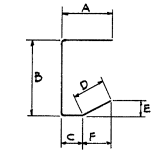
TYPE VI



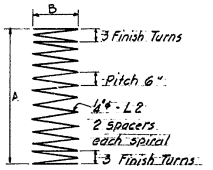
TYPE VII



TYPE VIII



TYPE IX



Made by J.J.V.
Traced by J.R.D.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
RAMP A ABUTMENT

APPROVED BY: Dennis D. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA92

COUNTY	CONTRACT	R.R.X. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	127	215

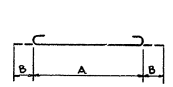
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

RAMP B ABUTMENT

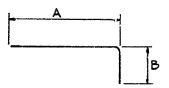
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	BC 500	5	54	5-6	STR.								
	BC 501	"	54	6-8	I	5-6	0-7						
	BC 502		24	10-6	STR.								
	BC 503		12	53-3	"								
	BC 504		102	3-2									
	BC 505		7	6-6									
	BC 506		8	6-9									
	BC 507		8	6-7									
	BC 508		8	6-5									
	BC 509		8	6-3									
	BC 510		8	6-1									
	BC 511		7	5-4	STR.								
	BC 512		6	15-9	V	2-1	5-8	5-0	3-2	0-10			
	BC 513		31	9-6	IV	3-4	3-2						
	BC 514		7	15-9	V	2-1	5-6	5-2	3-2	0			
	BC 515		35	8-11	III	1-11	1-1						
	BC 516		21	5-4	IV	3-4	1-1						
	BC 517		5	7-6	STR.								
	BC 518		6	7-4	"								
	BC 519		6	7-2									
	BC 520		6	7-0									
	BC 521		9	6-9									
	BC 522		9	6-6									
	BC 523		9	6-4									
	BC 524		6	5-11									
	BC 525		6	6-1									
	BC 526		6	6-3									
	BC 527		6	6-5									
	BC 528		5	6-7									
	BC 529		5	6-8									
	BC 530		5	6-10									
	BC 531		5	6-11									
	BC 532		17	23-4									
	BC 533		15	26-2									
	BC 534		7	8-11									
	BC 535		7	8-9									
	BC 536		6	8-7									
	BC 537		6	4-6 To 8-0									2×3, A=1-9
	BC 538		6	6-9 To 10-3									2×3, A=1-9
	BC 539	"	8	8-0	STR								
	BC 540	5	5	10-6	VI	7-5	2-4	0-9	8-11	1-6	2-3		

RAMP B ABUTMENT Cont.

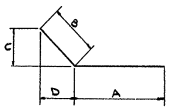
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	BC 541	5	9	7-8	II	5-8	2-1						
	BC 542	"	9	5-8	STR.								
	BC 543		2	5-11	IV	0-9	2-8						
	BC 544		8	8-1 To 11-7	IV	2-3	3-9 To 4-5						2×4, A_B=7
	BC 545		8	6-0	STR								
	BC 546		8	2-11	IV	0-9	1-1						
	BC 547		6	4-5	II	3-5	1-1						
	BC 548		20	4-2	II	2-3	2-0						
	BC 549		4	9-4	STR								
	BC 550		1	8-10	STR								
	BC 551		6	7-7	IV	0-9	3-6						
	BC 552		8	10-5	IV	0-9	4-11						
	BC 553		10	8-7 To 9-11	IV	0-9	4-9 To 4-5						A_B=2
	BC 554		4	3-6	VII	3-6	6-0						
	BC 555		4	2-8	STR								
	BC 556		4	8-9	"								
	BC 557		4	6-0									
	BC 558		4	9-2									
	BC 559		7	7-9									
	BC 560		7	7-7									
	BC 561		6	7-5									
	BC 562		7	3-8									
	BC 563		7	6-3	STR								
	BC 564		5	10-10	VI	7-9	2-4	0-9	9-3	1-6	2-3		
	BC 565		1	9-0	STR								
	BC 566		45	2-2	STR								
	BC 567 To 586		40	7-7 To 9-2	X	5-1 To 6-8	2-0	0-7					2×20, A_A=1
	BC 587		9	19-6	STR								
	BC 588	"	4	43-2	STR								
	BC 589	5	20	43-3 To 44-3	STR								A=1⅞
	BC 590	6	94	20-10	I	19-6	0-8						
	BC 491	4	45	5-5	VIII	1-8	1-7	0-6	1-10	1-4	1-3		
L1	BC 792	7	168	12-0	STR								6 Per Pile
L2	BC 293	4	28		IX	9-8	0-7½						1 per pile



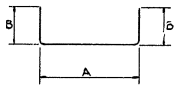
TYPE I



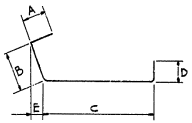
TYPE II



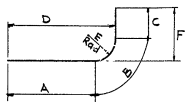
TYPE III



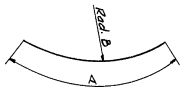
TYPE IV



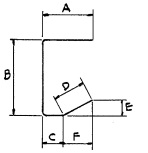
TYPE V



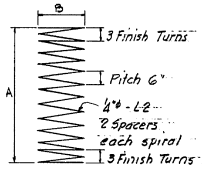
TYPE VI



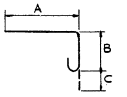
TYPE VII



TYPE VIII



TYPE IX



TYPE X

Note: All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

Made by S.J.V.
Traced by S.J.V.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
RAMP B ABUTMENT

APPROVED BY: _____ BRIDGE ENGINEER — 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG NO. SA 93

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(112)	'64	128	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

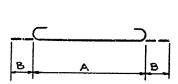
SOUTH ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	SC500	5	33	5'-6"	STR.								
	SC501	↓	33	6'-8"	I	5-6	0-7						
	SC502		24	10'-6"	STR.								
	SC503		12	32'-6"	↓								
	SC504		69	3'-2"									
	SC505		7	5'-11"									
	SC506		8	6'-0"									
	SC507		8	5'-9"									
	SC508		7	5'-4"	STR.								
	SC509		10	9'-6"	IV	3-4	3-2						
	SC510		10	15'-9"	V	2-1	5-8	5-1	3-2				
	SC511		9	7'-0"	STR								
	SC512		9	6'-9"	↓								
	SC513		9	6'-6"									
	SC514		7	6'-5"									
	SC515		8	6'-3"									
	SC616		8	6'-1"									
	SC517		15	27'-0"									
	SC518		20	8'-6"									
	SC519		20	7'-11"									
	SC520		6	3'-8"									
	SC521		6	5'-11"	STR								
	SC522		10	7'-8"	II	5-8	2-1						
	SC523		10	5'-8"	STR.								
	SC524		6	4'-6" To 8'-0"	↓								2×3, Δ=1'-9"
	SC525		6	6'-9" To 10'-3"									2×3, Δ=1'-9"
	SC526		8	8'-1"	STR.								
	SC527		10	10'-6"	VI	7-5	2-4	0-9	8-11	1-6	2-3		
	SC528		8	8'-1" To 11'-7"	IV	2-3	3-9 To 4-9						
	SC529		2	5'-11"	III	0-9	2-8						2×4 Δ=7"
	SC530		8	6'-0"	STR.								
	SC531		20	4'-1"	II	2-2	2-0						
	SC532		6	4'-7"	II	3-5	1-3						
	SC533		8	2'-9"	III	0-9	1-1						
	SC534		8	9'-2"	STR.								
	SC535		2	8'-10"	STR.								
	SC536		8	7'-7"	IV	0-9	3-6						
	SC537		8	10'-5"	IV	0-9	4-11						
	SC538		10	8'-7" To 9'-11"	IV	0-9	4-9 To 4-9						2×5, Δ=2
	SC539		4	3'-6"	VII	3-6	6-0						
	SC540		4	2'-8"	STR.								
	SC541		4	8'-9"	STR.								
	SC542		4	6'-0"	STR.								
	SC543		12	5'-4"	III	3-4	1-1						
	SC544		20	3'-11"	III	1-11	1-1						
	SC545	↓	23	2'-2"	STR.								
	SC546	5	24	21'-8"	STR.								
	SC447	4	23	6'-5"	VIII	1-8	1-7	0-6	1-10	1-4	1-3		
	SC648	6	44	20'-10"	I	19-6	0-8						
L1	SC749	7	114	12'-0"	STR								6 per pile
L2	SC250	4?	19		IX	9-8	0-7½						1 per pile

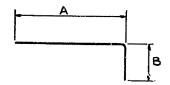
NORTH ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	NC500	5	33	5-6	STR.								
	NC501	↓	33	6-8	I	5-6	0-7						
	NC502		24	10-6	STR.								
	NC503		12	32-6	↓								
	NC504		69	3-2									
	NC505		7	5-1									
	NC506		8	5-9									
	NC507		8	5-11									
	NC508		7	5-7	STR.								
	NC509		10	9-6	IV	3-4	3-2						
	NC510		10	15-9	V	2-1	5-8	5-1	3-2				
	NC511		9	6-3	STR								
	NC512		9	6-5	↓								
	NC513		9	6-7									
	NC514		7	5-9									
	NC515		8	5-11									
	NC516		8	6-1									
	NC517		15	27-0									
	NC518		7	7-8									
	NC519		7	8-1									
	NC520		6	3-8	↓								
	NC321		6	5'-11	STR.								
	NC522		10	7-8	II	5-8	2-1						
	NC523		10	5-8	STR								
	NC524		6	4-6 To 8-0	↓								2×3, Δ=1'-9"
	NC525		6	6-9 To 10-3									2×3, Δ=1'-9"
	NC526		8	8-1	STR								
	NC527		10	10-6	VI	7-5	2-4	0-9	8-11	1-6	2-3		
	NC528		8	8-1 To 11-7	IV	2-3	3-9 To 4-9						
	NC529		2	5-11	III	0-9	2-8						2×4 Δ=7"
	NC530		8	6-0	STR								
	NC521		20	4-1	II	2-2	2-0						
	NC532		6	4-7	II	3-5	1-3						
	NC533		8	2-9	III	0-9	1-1						
	NC534		8	9-2	STR.								
	NC535		2	8-10	STR								
	NC536		8	7-7	IV	0-9	3-6						
	NC537		8	10-5	IV	0-9	4-11						
	NC538		10	8-7 To 9-11	IV	0-9	4-9 To 4-9						2×5, Δ=2
	NC539		4	3-6	VII	3-6	6-0						
	NC540		4	2-8	STR								
	NC541		4	8-9	STR								
	NC542		4	6-0	STR								
	NC543		12	5-4	IV	3-4	1-1						
	NC544		20	3-11	III	1-11	1-1						
	NC545	↓	23	2-2	STR								
	NC546	5	24	21-8	STR								
	NC447	4	23	5-5	VIII	1-8	1-7	0-6	1-10	1-4	1-3		
	NC648	6	44	20-10	I	19-6	0-8						
	NC549	5	7	7-6	STR								
	NC550	5	6	7-4	↓								
	NC551	5	7	7-11									
	NC552	5	6	7-9	STR.								
L1	NC753	7	114	12-0	STR								6 per pile
L2	NC254	4?	19		IX	9-8	0-7½						1 per pile

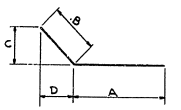
TYPE I



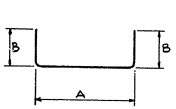
TYPE II



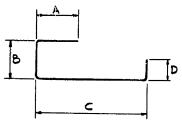
TYPE III



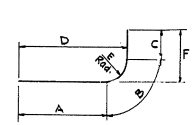
TYPE IV



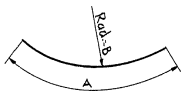
TYPE V



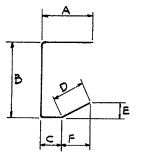
TYPE VI



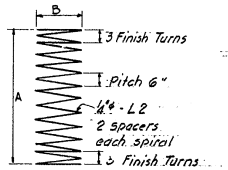
TYPE VII



TYPE VIII



TYPE IX



Note: All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

Mode by S.J.V.
Traced by S.J.V.
Checked by HBL

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
RAMP C ABUTMENT

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA94

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	129	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 23

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M1	23P1001	10	36	44-4	STR.								'S' COL.
M1	" 1002	10	36	53-0	STR.								'N' COL.
M2	403	4	198	11'-0	VII	9	4'-2	2'-9	5	2'-2			90('S' col); 108('N' col)
M3	404	4	198	12'-2	VI	7'-2	2'-7						90 " 108 "
M7	1105	11	52	47-6	STR.								
M8	406	4	96	17'-3	VII	3'-0	7'-2	3'-3	5	2'-5			
M9	407	4	96	15'-2	VI	7'-2	4'-1						
M13	1008	10	72	7'-11	I	6'-6	1'-5						
M15	1109	11	52	10'-7	I	9'-0	1'-7						
M17	910	9	21	19'-0	II	16'-6	1'-3						
M18	1111	11	84	19'-2	II	16'-0	1'-7						
M19	1112	11	108	30'-2	II	27'-0	1'-7						
M20	" 1113	11	22	23'-2	II	20'-0	1'-7						
M21	23P1114	11	24	19'-8	II	16'-6	1'-7						

PIER 24

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M1	24P1001	10	36	44'-2	STR.								'S' COL.
M1	" 1002	10	36	54'-1	STR.								'N' COL.
M2	403	4	198	11'-0	VII	9	4'-2	2'-9	5	2'-2			88('S' col); 110('N' col)
M3	404	4	198	12'-2	VI	7'-2	2'-7						88 " 110 "
M7	1105	11	52	47'-0	STR.								
M8	406	4	96	17'-3	VII	3'-0	7'-2	3'-3	5	2'-5			
M9	407	4	96	15'-2	VI	7'-2	4'-1						
M13	1008	10	36	7'-5	I	6'-0	1'-5						'S' COL.
M13	1009	10	36	7'-11	I	6'-6	1'-5						'N' COL.
M15	1110	11	52	10'-7	I	9'-0	1'-7						
M20	1111	11	22	23'-2	II	20'-0	1'-7						
M21	1112	11	24	19'-8	II	16'-6	1'-7						
M22	1113	11	42	19'-2	II	16'-0	1'-7						
M23	" 1114	11	32	23'-2	II	20'-0	1'-7						
M24	24P1115	11	42	24'-8	II	23'-6	1'-7						

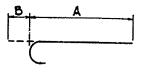
PIER 25

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M1	25P1001	10	36	45-0	STR.								'S' COL.
M1	" 1002	10	36	52-7	STR.								'N' COL.
M2	403	4	198	11'-0	VII	9	4'-2	2'-9	5	2'-2			92('S' col); 106('N' col)
M3	404	4	198	12'-2	VI	7'-2	2'-7						92 " 106 "
M7	1105	11	52	46-0	STR.								
M8	406	4	94	17'-3	VII	3'-0	7'-2	3'-3	5	2'-5			
M9	407	4	94	15'-2	VI	7'-2	4'-1						
M13	1008	10	72	7'-5	I	6'-0	1'-5						
M15	1109	11	52	9'-7	I	8'-0	1'-7						
M22	1110	11	42	19'-2	II	16'-0	1'-7						'N' Col. Ftg.
M22	1011	10	36	18'-10	II	16'-0	1'-5						'S' Col. Ftg.
M25	" 1012	10	23	19'-4	II	16'-6	1'-5						
M26	25P1113	11	31	23'-2	II	20'-0	1'-7						

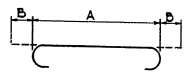
PIER 26

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M4	26P1001	10	32	37'-1	STR.								'S' COL.
M4	" 1002	10	32	53'-7	STR.								'N' COL.
M5	403	4	184	11'-3	VII	9	4'-2	2'-9	5	2'-2			76('S' col); 108('N' col)
M6	404	4	184	11'-2	VI	6'-2	2'-7						76 " 108 "
M10	1105	11	40	53'-4	STR.								
M11	406	4	108	15'-3	VII	1'-6	6'-2	3'-6	5	2'-7			
M12	407	4	108	13'-2	VI	6'-2	3'-7						
M14	1008	10	32	7'-11	I	6'-6	1'-5						'S' COL.
M14	1009	10	32	7'-5	I	6'-0	1'-5						'N' COL.
M16	1110	11	40	8'-7	I	7'-0	1'-7						
M27	911	9	21	18'-6	II	16'-0	1'-3						
M28	912	9	15	19'-0	II	16'-6	1'-3						
M29	1113	11	50	19'-2	II	16'-0	1'-7						
M30	" 914	9	17	18'-6	II	16'-0	1'-3						
M31	26P1115	11	19	19'-2	II	16'-0	1'-7						

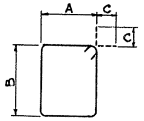
TYPE I



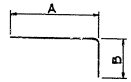
TYPE II



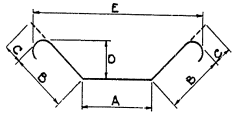
TYPE III



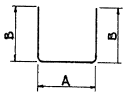
TYPE IV



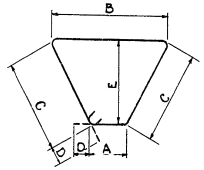
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 23 THRU 26

APPROVED BY: Louis P. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 95

Made by W.J.K.
Traced by W.J.K.
Checked by J.E.D.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	130	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 27S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	27SP 501	5	26	15'-6"	STR								
R2	" 902	9	51	18'-0"	II	15-6	1-3						
R3	" 803	8	16	39'-8"	II	37-6	1-1						
R4	" 1104	11	16	37'-6"	STR								
R5	" 1105	11	15	21'-0"	STR								
S1	" 1106	11	24	38'-6"	STR								
S2	" 407	4	148	11'-5"	III	2-3	3-2	5					Ext. Col.
S3	" 408	4	74	9'-5"	III	3-2	1-3	5					Half ea. Col.
S4	" 1109	11	48	8'-7"	I	7-0	1-7						Half ea. Col.
S5	" 1110	11	24	39'-6"	STR								" "
T1	" 1111	11	4	48'-8"	II	45-6	1-7						Int. Col.
T2	" 1112	11	8	21'-11"	IV	18-5	3-8						
T3	" 1013	10	16	15'-0"	STR								
T4	" 1114	11	4	31'-10"	V	20-2	4-3	1-7	3-0	26-2			
T5	" 1115	11	8	45'-6"	STR								
T6	" 1116	11	4	26'-10"	V	15-2	4-3	1-7	3-0	21-2			
T7	" 617	6	2	45-6"	STR								
T8	" 618	6	6	7'-2"	VI	3-4	2-0						
T9	27SP 519	5	110	12'-9"	III	2-4	3-8	6					

PIER 28S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	28SP 501	5	26	12'-6"	STR.								
R2	" 902	9	51	15'-0"	II	12-6	1-3						
R3	" 903	9	54	21'-6"	STR								
R4	" 904	9	14	15'-9"	I	14-6	1-3						
R5	" 905	9	14	30'-9"	I	29-6	1-3						
S1	" 806	8	20	35'-0"	STR.								Int. Col.
S2	" 807	8	20	34'-8"	STR								
S3	" 808	8	20	34'-4"	STR								Ext. Col.
S4	" 409	4	192	10'-5"	III	2-0	2-11	5					G4 ea. Col.
S5	" 410	4	96	7'-11"	III	2-11	9	5					32 ea. Col.
S6	" 811	8	60	6'-4"	I	5-3	1-1						20 ea. Col.
T1	" 1012	10	6	18'-8"	I	17-3	1-5						
T2	" 1013	10	6	33'-10"	I	32-5	1-5						
T3	" 914	9	4	10'-0"	STR								
T4	" 1115	11	12	19'-5"	IV	15-11	3-8						
T5	" 916	9	8	17'-11"	V	6-11	4-3	1-3	3-0	12-11			
T6	" 1017	10	12	24'-8"	STR								
T7	" 618	6	4	24'-3	STR								
T8	" 619	6	6	6'-11"	VI	3-1	2-0						
T9	28SP 520	5	136	12'-1"	III	2-0	3-8	6					

PIER 29S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	29SP 501	5	26	12'-6"	STR								
R2	" 902	9	51	15'-0"	II	12-6	1-3						
R3	" 903	9	54	21'-6"	STR								
R4	" 904	9	14	15'-9"	I	14-6	1-3						
R5	" 905	9	14	30'-9"	I	29-6	1-3						
S1	" 808	8	20	33'-9"	STR								Int. Col.
S2	" 807	8	20	33'-5"	STR								
S3	" 808	8	20	33'-0"	STR.								Ext. Col.
S4	" 409	4	186	10'-5"	III	2-0	2-11	5					G2 ea. Col.
S5	" 410	4	93	7'-11"	III	2-11	9	5					31 ea. Col.
S6	" 811	8	60	6'-4"	I	5-3	1-1						20 ea. Col.
T1	" 1012	10	6	19'-6"	I	18-1	1-5						
T2	" 1013	10	6	36'-3"	I	34-10	1-5						
T3	" 914	9	4	10'-0"	STR								
T4	" 1115	11	12	19'-5"	IV	15-11	3-8						
T5	" 916	9	8	19'-7"	V	8-7	4-3	1-3	3-0	14-7			
T6	" 1017	10	12	26'-5"	STR								
T7	" 618	6	4	26'-0"	STR								
T8	" 619	6	6	6'-11"	VI	3-1	2-0						
T9	29SP 520	5	140	12'-1"	III	2-0	3-8	6					

PIER 30S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	30SP 501	5	31	12'-6	STR								
R2	" 902	9	81	15'-0	II	12-6	1-3						
R3	" 1003	10	54	26'-6	STR								
R4	" 1004	"	14	19-2	I	17-9	1-5						
R5	" 1005	"	14	37-5	I	36-0	1-5						
S1	" 1006		20	32-0	STR								Int. Col.
S2	" 1007	"	20	31-9	STR								
S3	" 1008	10	20	31-6	STR								Ext. Col.
S4	" 409	4	174	10'-5	III	2-0	2-11	5					58 ea. Col.
S5	" 410	4	87	7'-11	III	2-11	9	5					29 ea. Col.
S6	" 1011	10	60	7'-5	I	6-0	1-5						20 ea. Col.
T1	" 1012	10	6	20'-2	I	18-9	1-5						
T2	" 1013	10	6	38'-9	I	37-4	1-5						
T3	" 1114	11	6	12'-0	STR								
T4	" 1115	11	12	19'-5	IV	15-11	3-8						
T5	" 916	9	8	21'-2	V	10-2	4-3	1-3	3-0	16-2			
T6	" 1117	11	12	28'-0	STR								
T7	" 618	6	4	27'-7	STR								
T8	" 619	6	6	6'-11	VI	3-1	2-0						
T9	30SP 520	5	144	12'-1	III	2-0	3-8	6					

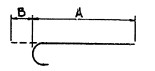
PIER 31S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	31SP 501	5	31	12'-6	STR								
R2	" 902	9	61	15'-0	II	12-6	1-3						
R3	" 1003	10	54	26'-6	STR								
R4	" 1004	"	14	18'-5	I	17-0	1-5						
R5	" 1005	"	14	38'-2	I	36-9	1-5						
S1	" 1006		20	30'-2	STR								Int. Col.
S2	" 1007	"	20	29'-10	STR								
S3	" 1008	10	20	29'-6	STR								Ext. Col.
S4	" 409	4	162	10'-5	III	2-0	2-11	5					54 ea. Col.
S5	" 410	4	81	7'-11	III	2-11	9	5					27 ea. Col.
S6	" 1011	10	60	7'-5	I	6-0	1-5						20 ea. Col.
T1	" 1012	10	6	20'-10	I	19-5	1-5						
T2	" 1013	10	6	41'-0	I	39-7	1-5						
T3	" 1114	11	6	12'-0	STR								
T4	" 1115	11	12	19'-5	IV	15-11	3-8						
T5	" 916	9	8	22'-8	V	11-8	4-3	1-3	3-0	17-8			
T6	" 1117	11	12	29'-6	STR								
T7	" 618	6	4	29'-2	STR								
T8	" 619	6	6	6'-11	VI	3-1	2-0						
T9	31SP 520	5	148	12'-1	III	2-0	3-8	6					

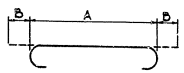
PIER 32S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	32SP 501	5	36	12'-6	STR								
R2	" 902	9	71	15'-0	II	12-6	1-3						
R3	" 1103	11	28	50'-0	STR								
R4	" 1104	"	14	21'-7	I	20-0	1-7						
R5	" 1105		14	43'-0	I	41-5	1-7						
R7	" 1106	"	13	40'-0	STR								
S1	" 1107	"	24	24-6	"								Int. Col.
S2	" 1108	"	24	24-0	"								
S3	" 1109	11	24	23-7	STR								Ext Col.
S4	" 410	4	126	11-5	III	2-3	3-2	5					42 ea Col.
S5	" 411	4	63	9'-5	III	3-2	1-3	5					21 ea. Col.
S6	" 1112	11	72	8'-7	I	7-0	1-7						24 ea. Col.
T1	" 1113	"	7	22'-1	I	20-6	1-7						
T2	" 1"	"	7	43'-8	I	42-1	1-7						
T3	" 1115	"	7	12'-0	STR								
T4	" 1116	11	14	19'-5	IV	15-11	3-8						
T5	" 917	9	10	24'-0	V	13-0	4-3	1-3	3-0	19-0			
T6	" 1118	11	14	31'-3	STR.								
T7	" 619	6	4	30'-9	STR								
T8	" 620	6	6	7'-2	VI	3-4	2-0						
T9	32SP 521	5	212	12'-5	III	2-2	3-8	6					

TYPE I



TYPE II



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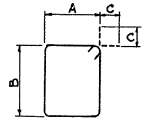
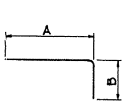
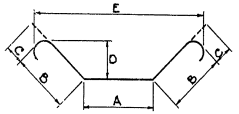


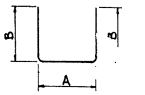
TYPE IV



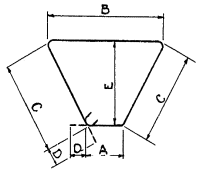
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 27S THRU 32S

APPROVED BY: Johnnie R. Deavers Jr. BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA96

COUNTY	CONTRACT	F.A.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	131	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 33S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	335P 501	5	36	12'-6	STR								
R2	902	9	71	15'-0	II	12-6	1-3						
R3	1103	11	28	30'-0	STR								
R4	1104	11	14	20'-2	I	18-7	1-7						
R5	1105	11	14	44'-7	I	43-0	1-7						
R7	1106	11	13	40'-0	STR								
S1	1107	11	24	21'-8	STR								
S2	1108	11	24	21'-8	STR								
S3	1109	11	24	21'-8	STR								
S4	410	4	114	11'-5	III	2-3	3-2	5					38 ea. Col.
S5	411	4	57	9'-5	III	3-2	1-3	5					19 ea. Col.
S6	1112	11	72	8'-7	I	7-0	1-7						24 ea. Col.
T1	1113	11	7	23'-6	I	21-11	1-7						
T2	1114	11	7	47'-10	I	46-3	1-7						
T3	1115	11	7	12'-0	STR								
T4	1116	11	14	19'-5	IV	15-11	3-6						
T5	917	9	10	26'-10	V	13-10	4-3	1-3	3-0	21-10			
T6	1118	11	14	34'-0	STR								
T7	619	6	4	33'-6	STR								
T8	620	6	6	7'-2	VI	3-4	2-0						
T9	335P 521	5	216	12'-5	III	2-2	3-8	6					

PIER 34S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	345P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	24-2	STR								Int. Col.
	1010	10	20	24-9	STR								Ext. Col.
	411	4	88	10'-5	III	2-0	2-11	5					Half ea. Col
	412	4	44	7'-11	III	2-11	9	5					" " "
	1013	10	40	7'-5	I	6-0	1-5						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	V	12-6	1-3						
	345P 518	5	22	12'-6	STR								

PIER 35S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	355P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	20-8	STR								Int. Col.
	810	8	20	21-9	STR								Ext. Col.
	411	4	76	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	38	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	355P 518	5	22	10'-6	STR								

PIER 36S

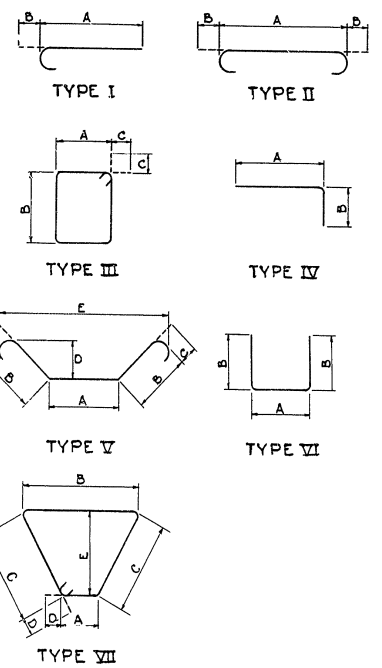
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	365P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	20-9	STR								Int. Col.
	810	8	20	22-0	STR								Ext. Col.
	411	4	76	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	38	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	365P 518	5	22	10'-6	STR								

PIER 37S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	375P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	19'-4	STR								Int. Col.
	810	8	20	20'-8	STR								Ext. Col.
	411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	36	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	375P 518	5	22	10'-6	STR								

PIER 38S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	385P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	19'-7	STR								Int. Col.
	810	8	20	20-10	STR								Ext. Col.
	411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	36	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	385P 518	5	22	10'-6	STR								



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 33S THRU 38S

APPROVED BY: Thomas B. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 97

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	132	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 39S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
39SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
809	8	20	19'-7	STR								Int. Col.
810	8	20	20'-10	STR								Ext. Col.
411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	36	7'-11	III	2-11	9	5					" " "
813	8	40	6'-4	I	5-3	1-1						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
817	8	43	12'-8	II	10-6	1-1						
39SP 518	5	22	10'-6	STR								

PIER 40S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
40SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
809	8	20	19-11	STR								Int. Col.
810	8	20	21-2	STR								Ext. Col.
411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	36	7'-11	III	2-11	9	5					" " "
813	8	40	6'-4	I	5-3	1-1						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
817	8	43	12'-8	II	10-6	1-1						
40SP 518	5	22	10'-6	STR								

PIER 41S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
41SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
809	8	20	19-5	STR								Int. Col.
810	8	20	20-8	STR								Ext. Col.
411	4	68	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	34	7'-11	III	2-11	9	5					" " "
813	8	40	6'-4	I	5-3	1-1						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
817	8	43	12'-8	II	10-6	1-1						
41SP 518	5	22	10'-6	STR								

PIER 42S

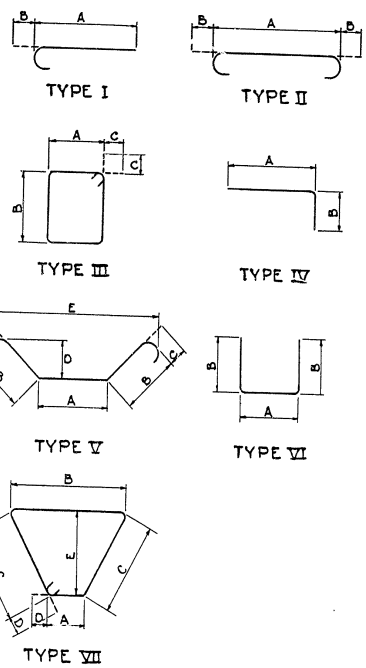
MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
42SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	24-3	STR								
1010	10	20	25-6	STR								Int. Col.
411	4	92	10'-5	III	2-0	2-11	5					Ext. Col.
412	4	46	7'-11	III	2-11	9	5					Half ea. Col.
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								" " "
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
42SP 518	5	22	12'-6	STR								

PIER 43S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
43SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	26-9	STR								Int. Col.
1010	10	20	28-0	STR								Ext. Col.
411	4	100	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	50	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
43SP 518	5	22	12'-6	STR								

PIER 44S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
44SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	25-7	STR								
1010	10	20	26-7	STR								Int. Col.
411	4	96	10'-5	III	2-0	2-11	5					Ext. Col.
412	4	48	7'-11	III	2-11	9	5					Half ea. Col.
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								" " "
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
44SP 518	5	22	12'-6	STR								



Note
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 39S THRU 44S

APPROVED BY: [signature] BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA98

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	#	DEL.	I-95-2(12)	'64	133	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 45S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
45SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	36-11	STR								Int. Col.
1010	10	20	37-5	STR								Ext. Col.
411	4	140	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	70	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-11	I	6-6	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
45SP 518	5	22	12'-6	STR								

PIER 46S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 46SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	33'-2	STR								
1010	10	20	33'-2	STR								
411	4	124	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	62	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
46SP 518	5	22	12'-6	STR								

PIER 47S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 47SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	30'-8	STR								Int. Col.
1010	10	20	30'-2	STR								Ext. Col.
411	4	112	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	56	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
47SP 518	5	22	12'-6	STR								

PIER 48S

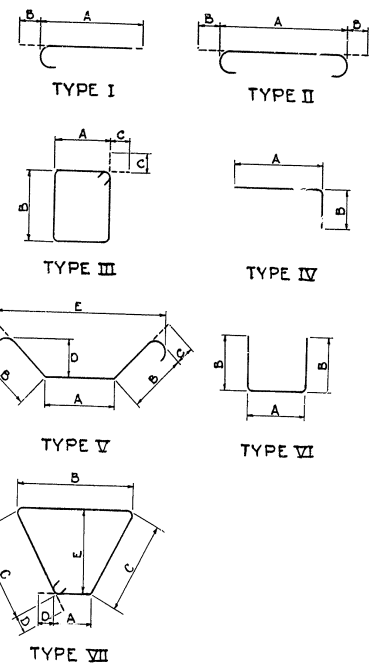
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
48SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	29-8	STR								
1010	10	20	29-8	STR								
411	4	108	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	54	7-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
48SP 518	5	22	12'-6	STR								

PIER 49S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 49SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	30-5	STR								
1010	10	20	30-5	STR								
411	4	112	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	56	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
49SP 518	5	22	12'-6	STR								

PIER 50S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 50SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	31-8	STR								
1010	10	20	31-8	STR								
411	4	116	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	58	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
50SP 518	5	22	12'-6	STR								



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 45S THRU 50S

APPROVED BY: Dennis D. Canan Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA99

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	134	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 51S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
51SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	28'-2	STR								
1010	10	20	28'-2	STR								
411	4	104	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	52	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
51SP 518	5	22	12'-6	STR								

PIER 52S

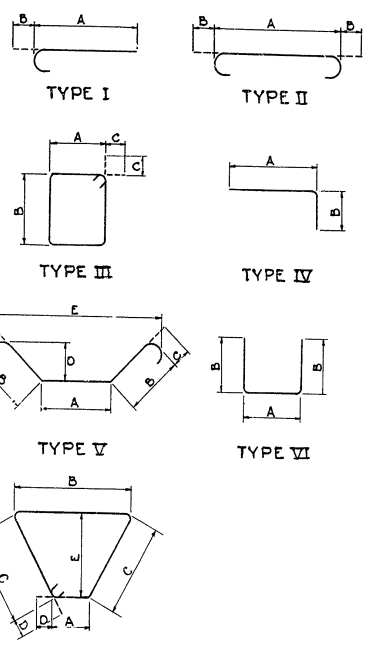
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
52SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	26'-9	STR								
1010	10	20	26'-9	STR								
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
52SP 518	5	22	12'-6	STR								

PIER 53S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
53SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27'-1	STR								
1010	10	20	27'-1	STR								
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
53SP 518	5	22	12'-6	STR								

PIER 54S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
54SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27'-0	STR								
1010	10	20	27'-0	STR								
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
54SP 518	5	22	12'-6	STR								



Note:
All dimensions are out to out of bar.

Made by S.J.V
Traced by S.J.V.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 51S THRU 54S

APPROVED BY: Edmund D. Bassett Jr. BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA100

COUNTY	CONTRACT	F.A.P. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	135	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 55S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	55SP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	25-6	STR								
	1010	10	20	25-3	STR								Int. Col.
	411	4	92	10'-5	III	2-0	2-11	5					Ext. Col.
	412	4	46	7'-11	III	2-11	9	5					Half ea. Col.
	1013	10	40	7'-5	I	6-0	1-5						" " "
	1114	11	14	34'-6	STR								" " "
	1115	11	13	19'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	55SP 518	5	22	12'-6	STR								

PIER 56S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	56SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1006	10	20	21-3	STR								
S2	407	4	76	10'-5	III	2-0	2-11	5					Ext. Col.
S3	408	4	38	7'-11	III	2-11	9	5					Half ea. Col.
S4	1009	10	40	7'-5	I	6-0	1-5						" " "
S5	1010	10	20	21-8	STR								" " "
T1	1111	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	1014	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	6'-11	VI	3-1	2-0						
T9	56SP 518	5	106	12'-1	III	2-0	3-8	6					

PIER 57S

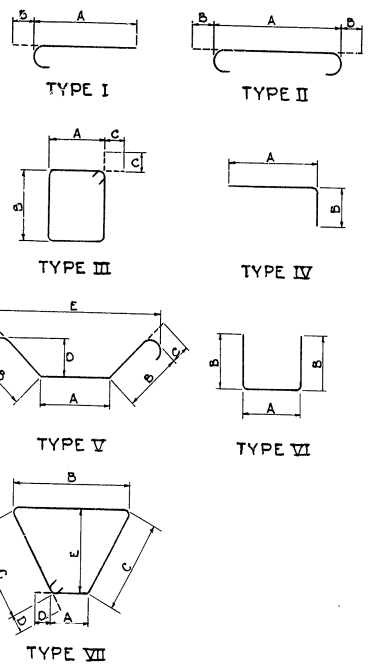
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	57SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36-8	II	34-6	1-1						
R4	1104	11	16	34-6	STR								
R5	1105	11	15	18-6	STR								
S1	1010	10	20	17-9	STR								
S2	411	4	60	10'-5	III	2-0	2-11	5					Ext. Col.
S3	412	4	30	7'-11	III	2-11	9	5					Half ea. Col.
S4	1013	10	40	7'-5	I	6-0	1-5						" " "
S5	1014	10	20	18-2	STR								" " "
T1	1115	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1116	11	8	20'-11	IV	17-5	3-8						
T3	1117	11	8	14'-0	STR								
T4	1018	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1019	10	8	41'-10	STR								
T7	620	6	2	41'-10	STR								
T8	621	6	6	6'-11	VI	3-1	2-0						
T9	57SP 522	5	106	12'-1	III	2-0	3-8	6					

PIER 58S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	58SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1006	10	20	16-8	STR								
S2	407	4	56	10'-5	III	2-0	2-11	5					Ext. Col.
S3	408	4	28	7'-11	III	2-11	9	5					Half ea. Col.
S4	1009	10	40	7'-5	I	6-0	1-5						" " "
S5	1010	10	20	17'-0	STR								" " "
T1	1111	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	1014	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	6'-11	VI	3-1	2-0						
T9	58SP 518	5	106	12'-1	III	2-0	3-8	6					

PIER 59S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	59SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1006	10	20	17-3	STR								
S2	407	4	60	10'-5	III	2-0	2-11	5					Ext. Col.
S3	408	4	30	7'-11	III	2-11	9	5					Half ea. Col.
S4	1009	10	40	7'-5	I	6-0	1-5						" " "
S5	1010	10	20	17-8	STR								Int. Col.
T1	1111	11	4	45'-0	II	41-10	1-7						
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	1014	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	6'-11	VI	3-1	2-0						
T9	59SP 518	5	106	12'-1	III	2-0	3-8	6					



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 55S THRU 59S

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 101

COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-002	9	DEL.	I-95-2 (12)	'64	136	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 27N – PIER 28N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	27NP 501	5	24	15'-6	STR								
R2	902	9	47	18'-0	II	15-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	16'-3	STR								
S1	1106	11	24	44'-6	STR								
S2	407	4	168	11'-5	III	2-3	3-2	5					Ext. Col.
S3	408	4	84	9'-5	III	3-2	1-3	5					Half ea. Col.
S4	1109	11	48	8'-7	I	7-0	1-7						" "
S5	1110	11	24	43-7	STR								Int. Col.
T1	1011	10	4	44'-8	II	41-10	1-5						
T2	1012	10	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	914	9	4	27'-6	V	16-6	4-3	1-3	3-0	22-6			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	7'-2	VI	3-4	2-0						
T9	27NP 518	5	106	12'-9	III	2-4	3-8	6					

PIER 28N – PIER 29N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	28NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	39-0	STR								Int. Col.
	1010	10	20	39-6	STR								Ext. Col.
	411	4	148	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	74	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	28NP 518	5	22	12'-6	STR								

PIER 29N – PIER 30N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	29NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	36-5	STR								
	1010	10	20	36-5	STR								
	411	4	136	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	68	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	29NP 518	5	22	12'-6	STR								

PIER 30N – PIER 31N

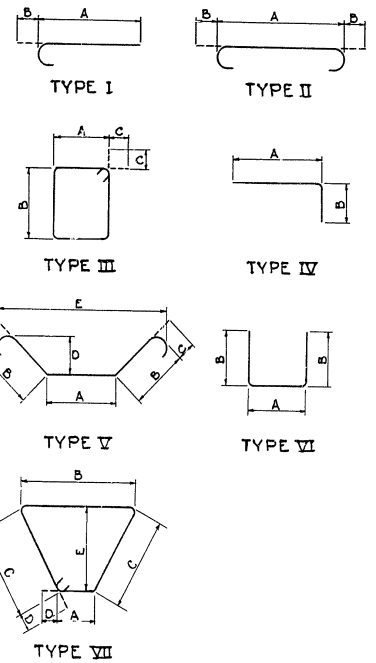
	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	30NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	34'-6	STR								Int. Col.
	1010	10	20	34'-2	STR								Ext. Col.
	411	4	128	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	64	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	30NP 518	5	22	12'-6	STR								

PIER 31N – PIER 32N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	31NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	32'-2	STR								Int. Col.
	1010	10	20	31'-9	STR								Ext. Col.
	411	4	116	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	58	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	31NP 518	5	22	12'-6	STR								

PIER 32N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	32NP 501	5	27	12'-6	STR								
R2	902	9	53	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1106	11	24	26'-3	STR								
S2	407	4	96	11'-5	III	2-3	3-2	5					Ext. Col.
S3	408	4	48	9'-5	III	3-2	1-3	5					Half ea. Col.
S4	1109	11	48	8'-7	I	7-0	1-7						" "
S5	1110	11	24	26'-6	STR								" "
T1	1111	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	16	14'-0	STR								
T4	1114	11	4	28'-2	V	16-6	4-3	1-7	3-0	22-6			
T5	1115	11	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	7'-2	VI	3-4	2-0						
T9	32NP 518	5	150	12'-9	III	2-4	3-8	6					



Note:
All dimensions are out to out of bar

Mode by SJV
Traced by SJV
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 27N THRU 32N

APPROVED BY: J. Dennis D. Pearson, Jr. BRIDGE ENGINEER 9-16-68 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 102

COUNTY	CONTRACT	F.A.S. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	137	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 33N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	33NP 501	5	27	12'-6	STR								
R2	502	9	53	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1106	11	84	23-4	STR								
S2	401	4	84	11-5	III	2-3	3-8	5					Ext. Col.
S3	408	4	42	9-5	III	5-8	1-3	5					Half ea. Col.
S4	1109	11	48	8'-7	I	7-0	1-7						" "
S5	1110	11	24	24-0	STR								" "
T1	1111	11	4	46'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	16	14'-0	STR								
T4	1114	11	4	28'-2	V	16-6	4-3	1-7	3-0	22-6			
T5	1115	11	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	7'-2	VI	3-4	2-0						
T9	33NP 518	5	150	12'-9	III	2-4	3-8	6					

PIER 34N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	34NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	24-6	STR								Int. Col.
	1010	10	20	23-10	STR								Ext. Col.
	411	4	88	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	44	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	34NP 518	5	22	12'-6	STR								

PIER 35N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	35NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	21-0	STR								Int. col.
	810	8	20	20-1	STR								Ext. col.
	411	4	72	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	36	7'-11	III	2-11	9	5					" "
	813	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	35NP 518	5	22	10'-6	STR								

PIER 36N

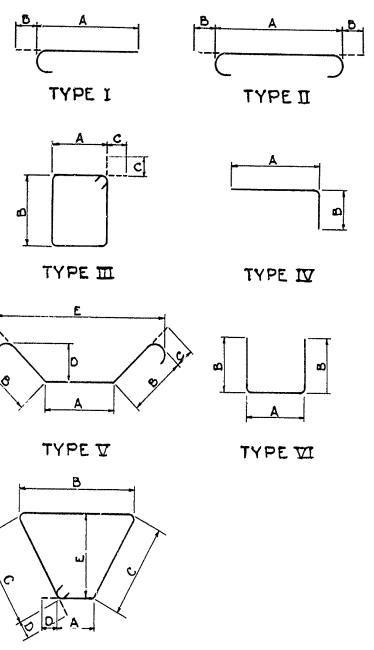
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	36NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	19-7	STR								Int. Col.
	810	8	20	18-4	STR								Ext. Col.
	411	4	68	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	34	7'-11	III	2-11	9	5					" "
	013	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	36NP 518	5	22	10'-6	STR								

PIER 37N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	37NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	18-7	STR								Int. Col.
	810	8	20	17-4	STR								Ext. col.
	411	4	64	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	32	7'-11	III	2-11	9	5					" "
	813	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	37NP 518	5	22	10'-6	STR								

PIER 38N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	38NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	18-4	STR								Int. col.
	810	8	20	17-1	STR								Ext. col.
	411	4	64	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	32	7'-11	III	2-11	9	5					" "
	813	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	38NP 518	5	22	10'-6	STR								



Note:
All dimensions are out to out of bar

Mode by SJV
Traced by SJV
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 33N THRU 38N

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 103

COUNTY	CONTRACT	R.B.D. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-C04	2	DEL.	I-95-2(12)	'64	138	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 39N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
39NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR.								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR.								
1105	11	8	14'-0	STR.								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
809	8	20	18-10	STR								Int. Col.
810	8	20	17-8	STR								Ext. Col.
411	4	64	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	32	7'-11	III	2'-11	9	5					" "
813	8	40	6'-4	I	5'-3	1'-1						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
817	8	43	12'-8	II	10'-6	1'-1						
39NP 518	5	22	10'-6	STR								

PIER 40N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
40NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR.								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR.								
1105	11	8	14'-0	STR.								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
809	8	20	19-3	STR								Int. Col.
810	8	20	18-0	STR								Ext. Col.
411	4	64	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	32	7'-11	III	2'-11	9	5					" "
813	8	40	6'-4	I	5'-3	1'-1						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
817	8	43	12'-8	II	10'-6	1'-1						
40NP 518	5	22	10'-6	STR								

PIER 41N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
41NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
809	8	20	21-4	STR								Int. col.
810	8	20	20-1	STR								Ext. col.
411	4	76	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	38	7'-11	III	2'-11	9	5					" "
813	8	40	6'-4	I	5'-3	1'-1						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
817	8	43	12'-8	II	10'-6	1'-1						
41NP 518	5	22	10'-6	STR								

PIER 42N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
42NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	25-0	STR								Int. Col.
1010	10	20	23-9	STR								Ext. Col.
411	4	88	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	44	7'-11	III	2'-11	9	5					" "
1013	10	40	7'-5	I	6'-0	1'-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
42NP 518	5	22	12'-6	STR								

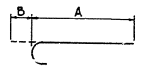
PIER 43N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
43NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27-6	STR								Int. col.
1010	10	20	26-3	STR								Ext. col.
411	4	100	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	50	7'-11	III	2'-11	9	5					" "
1013	10	40	7'-5	I	6'-0	1'-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
43NP 518	5	22	12'-6	STR								

PIER 44N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
44NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27-0	STR								Int. Col.
1010	10	20	26-0	STR								Ext. col.
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" "
1013	10	40	7'-5	I	6'-0	1'-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
44NP 518	5	22	12'-6	STR								

TYPE I



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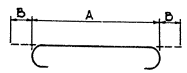
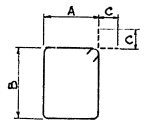
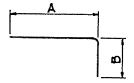


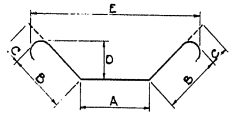
TYPE III



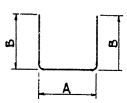
TYPE IV



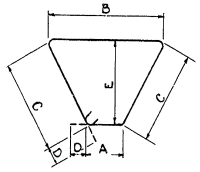
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

Made by W.J.K.
Traced by W.J.K.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 39N THRU 44N

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 104

COUNTY	CONTRACT	R.R.L. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	64	139	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 45N – 46N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
45NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	37-1.	STR								Int. Col
1010	10	20	37-4	STR								Ext. col.
411	4	140	10'-5	III	2-0	2-11	5					Half ea. col
412	4	70	7'-11	III	2-11	9	5					" "
1013	10	40	7'-11	I	6-6	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
45NP 518	5	22	12'-6	STR								
46NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	34-3	STR								Int. Col.
1010	10	20	33-11	STR								Ext. Col.
411	4	128	10'-5	III	2-0	2-11	5					Half ea. col
412	4	64	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
46NP 518	5	22	12'-6	STR								

PIER 47N – 46N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
47NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	16'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	34-2	STR								Int. Col.
1010	10	20	33-8	STR								Ext. Col.
411	4	128	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	64	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
47NP 518	5	22	12'-6	STR								

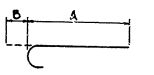
PIER 48N – 49N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
48NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	33'-2	STR								
1010	10	20	33'-2	STR								
411	4	120	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	60	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
48NP 518	5	22	12'-6	STR								
49NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	33'-11	STR								
1010	10	20	33'-11	STR								
411	4	124	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	62	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
49NP 518	5	22	12'-6	STR								

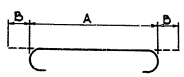
PIER 50N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
50NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	35-2	STR								
1010	10	20	35-2	STR								
411	4	128	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	64	7'-11"	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
50NP 518	5	22	12'-6	STR								

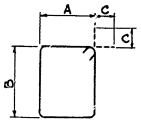
TYPE I



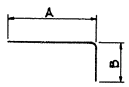
TYPE II



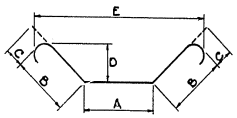
TYPE III



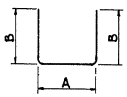
TYPE IV



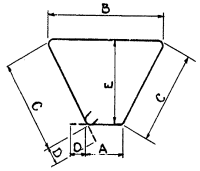
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 45N THRU 50N

APPROVED BY: Johnnie B. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA105

Made by SJV
Traced by SJV
Checked by J.R.D.

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	140	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 51N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	51NP 501	5	106	12-1	III	2-0	3-8	6					
	1002	10	8	41-10	STR								
	903	9	4	27-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41-10	STR								
	1105	11	8	14-0	STR								
	1006	10	8	20-11	IV	17-5	3-8						
	1007	10	4	44-8	II	41-10	1-5						
	608	6	6	6-11	VI	3-1	2-0						
	1009	10	20	29-8	STR								
	1010	10	20	29-8	STR								
	411	4	108	10-5	III	2-0	2-11	5					Half ea. col.
	412	4	54	7-11	III	2-11	9	5					" "
	1013	10	40	7-5	I	6-0	1-5						
	1114	11	14	34-6	STR								
	1115	11	13	18-6	STR								
	816	8	14	36-8	II	34-6	1-1						
	917	9	43	15-0	II	12-6	1-3						
	51NP 518	5	22	12-6	STR								

PIER 52N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	52NP 501	5	106	12-1	III	2-0	3-8	6					
	1002	10	8	41-10	STR								
	903	9	4	27-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41-10	STR								
	1105	11	8	14-0	STR								
	1006	10	8	20-11	IV	17-5	3-8						
	1007	10	4	44-8	II	41-10	1-5						
	608	6	6	6-11	VI	3-1	2-0						
	1009	10	20	27-3	STR								
	1010	10	20	27-3	STR								
	411	4	100	10-5	III	2-0	2-11	5					Half ea. col.
	412	4	50	7-11	III	2-11	9	5					" "
	1013	10	40	7-5	I	6-0	1-5						
	1114	11	14	34-6	STR								
	1115	11	13	18-6	STR								
	816	8	14	36-8	II	34-6	1-1						
	917	9	43	15-0	II	12-6	1-3						
	52NP 518	5	22	12-6	STR								

PIER 53N

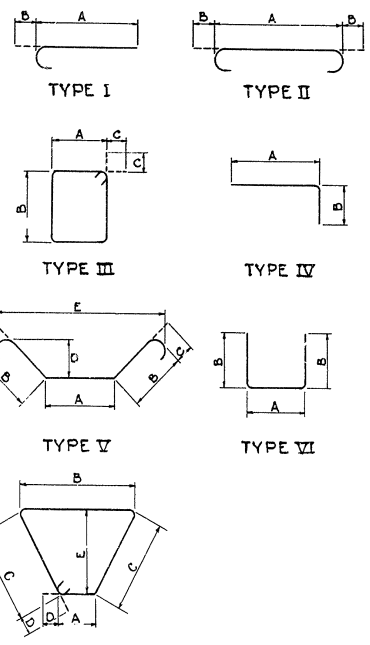
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	53NP 501	5	22	12-6	STR.								
R2	902	9	43	15-0	II	12-6	1-3						
R3	803	8	16	36-8	II	34-6	1-1						
R4	1104	11	16	34-6	STR								
R5	1105	11	15	18-6	STR								
S1	1006	10	20	28-0	STR								
S2	407	4	100	10-5	III	2-0	2-11	5					Half ea. col.
S3	408	4	50	7-11	III	2-11	9	5					" "
S4	1009	10	40	7-5	I	6-0	1-5						" "
S5	1010	10	20	28-0	STR								
T1	1111	11	4	46-4	II	43-2	1-7						
T2	1112	11	8	20-11	IV	17-5	3-8						
T3	1113	11	8	14-0	STR								
T4	1014	10	4	29-5	V	18-1	4-3	1-5	3-0	24-1			
T5	1115	11	8	43-2	STR								
T7	616	6	2	43-2	STR								
T8	617	6	6	6-11	VI	3-1	2-0						
T9	53NP 518	5	106	12-1	III	2-0	3-8	6					

PIER 54N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	54NP 501	5	26	12-6	STR								
R2	902	9	51	15-0	II	12-6	1-3						
R3	903	9	54	21-6	STR								
R4	904	9	14	15-10	I	14-7	1-3						
R5	905	9	14	30-6	I	29-3	1-3						
S1	806	8	20	28-0	STR								
S2	807	8	20	28-0	STR								
S3	808	8	20	28-0	STR								
S4	409	4	150	10-5	III	2-0	2-11	5					50 Ea. col.
S5	410	4	75	7-11	III	2-11	9	5					25 Ea. col.
S6	811	8	60	6-4	I	5-3	1-1						20 Ea. col.
T1	1012	10	6	18-5	I	17-0	1-5						
T2	1013	10	6	33-1	I	31-8	1-5						
T3	914	9	4	10-0	STR								
T4	1115	11	12	19-5	IV	15-11	3-8						
T5	916	9	8	17-5	V	6-5	4-3	1-3	3-0	12-5			
T6	1017	10	12	24-2	STR								
T7	618	6	4	23-9	STR								
T8	619	6	6	6-11	VI	3-1	2-0						
T9	54NP 520	5	132	12-1	III	2-0	3-8	6					

PIER 55N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	55NP 501	5	26	12-6	STR								
R2	902	9	51	15-0	II	12-6	1-3						
R3	903	9	54	21-6	STR								
R4	904	9	14	14-10	I	13-7	1-3						
R5	905	9	14	31-6	I	30-3	1-3						
S1	806	8	20	27-0	STR								Int. Col.
S2	807	8	20	26-9	STR								
S3	808	8	20	26-6	STR								Ext. Col.
S4	409	4	144	10-5	III	2-0	2-11	5					48 Ea. col.
S5	410	4	72	7-11	III	2-11	9	5					24 Ea. col.
S6	811	8	60	6-4	I	5-3	1-1						20 Ea. col.
T1	1012	10	6	19-5	I	18-0	1-5						
T2	1013	10	6	36-1	I	34-8	1-5						
T3	914	9	4	10-0	STR								
T4	1115	11	12	19-5	IV	15-11	3-8						
T5	916	9	8	19-5	V	8-5	4-3	1-3	3-0	14-5			
T6	1017	10	12	24-2	STR								
T7	618	6	4	23-9	STR								
T8	619	6	6	6-11	VI	3-1	2-0						
T9	55NP 520	5	136	12-1	III	2-0	3-8	6					



Note:
All dimensions are out to out of bar.

Made by W. J. K.
Traced by W. J. K.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

RS 5IN THRU 55N

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE: DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA106

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-05-004	2	DEL.	I-95-2(112)	64	141	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 56N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	56NP501	5	31	12 - 6	STR.								
R2	902	9	61	15 - 0	II	12-6	1-3						
R3	1003	10	54	26 - 5	STR.								
R4	1004	10	14	18 - 10	I	17-5	1-5						
R5	1005	10	14	37 - 9	I	36-4	1-5						
S1	1006	10	20	24 - 1	STR.								
S2	1007	10	20	23 -10	STR.								Int. Col.
S3	1008	10	20	23 -6	STR.								
S4	409	4	126	10 - 5	III	2-0	2-11	5					Ext. Col.
S5	410	4	63	7 - 11	III	2-11	9	5					42 Lig. Col.
S6	1011	10	60	7 - 5	I	6-0	1-5						21 Ea. Col.
T1	1012	10	6	20 - 7	I	19-2	1-5						20 Ea. Col.
T2	1013	10	6	39 - 6	I	38-1	1-5						
T3	1114	11	6	12 - 0	STR.								
T4	1115	11	12	19 - 5	IV	15-11	3-8						
T5	916	9	8	21 - 8	V	10-8	4-3	1-3	3-0	16-8			
T6	1117	11	12	28 - 8	STR.								
T7	618	6	4	28 - 0	STR.								
T8	619	6	6	6 - 11	VI	3-1	2-0						
T9	56NP520	5	144	12 - 1	III	2-0	3-8	6					

PIER 57N

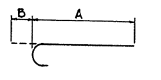
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	57NP501	5	31	12 - 6	STR.								
R2	902	9	61	15 - 0	II	12-6	1-3						
R3	1003	10	54	26 -6	STR.								
R4	1004	10	14	17 - 9	I	16-4	1-5						
R5	1005	10	14	37 - 11	I	36-6	1-5						
S1	1006	10	20	22 - 8	STR.								
S2	1007	10	20	22 - 3	STR.								Int. Col.
S3	1008	10	20	21 -10	STR.								
S4	409	4	120	10 - 5	III	2-0	2-11	5					Ext. Col.
S5	410	4	60	7 - 11	III	2-11	9	5					40 Ea. Col.
S6	1011	10	60	7 - 5	I	6-0	1-5						20 Ea. Col.
T1	1012	10	6	20 - 8	I	19-3	1-5						20 Ea. Col.
T2	1013	10	6	44 - 5	I	43-0	1-5						
T3	1114	11	6	12 - 0	STR.								
T4	1115	11	12	19 - 5	III	15-11	3-8						
T5	916	9	8	24 - 2	V	13-2	4-3	1-3	3-0	19-2			
T6	1117	11	12	31 - 2	STR.								
T7	618	6	4	30 - 8	STR.								
T8	619	6	6	6 - 11	VI	3-1	2-0						
T9	57NP520	5	152	12 - 1	III	2-0	3-8	6					

PIER 58N

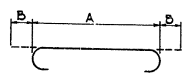
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	58NP501	5	37	12 - 6	STR.								
R2	902	9	73	15 - 0	II	12-6	1-3						
R3	1103	11	28	31 - 9	STR.								
R4	1104	11	14	22 - 4	I	20-9	1-7						
R5	1105	11	14	45 - 7	I	44-0	1-7						
R6	1106	11	13	40 - 0	STR.								
S1	1107	11	20	19 - 6	STR.								Int. Col.
S2	1108	11	20	19 - 2	STR.								
S3	1109	11	20	18 - 9	STR.								Ext. Col.
S4	410	4	102	10 - 5	III	2-0	2-11	5					34 Ea. Col.
S5	411	4	51	7 - 11	III	2-11	9	5					17 Ea. Col.
S6	1112	11	60	8 - 7	I	7-0	1-7						20 Ea. Col.
T1	1113	11	7	23 - 4	I	21-9	1-7						
T2	1114	11	7	47 - 2	I	45-7	1-7						
T3	1115	11	7	12 - 0	STR								
T4	1116	11	14	19 - 5	IV	15-11	3-8						
T5	917	9	10	26 - 7	V	15-7	4-3	1-3	3-0	21-7			
T6	1118	11	14	33 - 6	STR.								
T7	619	6	4	33 - 0	STR.								
T8	620	6	6	6 - 11	VI	3-1	2-0						
T9	58NP521	5	216	12 - 1	III	2-0	3-8	6					

PIER 59N

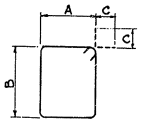
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	59NP501	5	37	12 - 6	STR.								
R2	902	9	73	15 - 0	II	12-6	1-3						
R3	1103	11	28	31 - 9	STR.								
R4	1104	11	14	20 - 7	I	19-0	1-7						
R5	1105	11	14	47 - 2	I	45-7	1-7						
R6	1106	11	13	40 - 0	STR.								
S1	1107	11	20	19 - 8	STR.								Int. Col.
S2	1108	11	20	19 - 3	STR.								
S3	1109	11	20	18 - 9	STR.								Ext. Col.
S4	410	4	102	10 - 5	III	2-0	2-11	5					34 Ea. Col.
S5	411	4	51	7 - 11	III	2-11	9	5					17 Ea. Col.
S6	1112	11	60	8 - 7	I	7-0	1-7						20 Ea. Col.
T1	1113	11	7	24 - 9	I	23-2	1-7						
T2	1114	11	7	51 - 4	I	49-9	1-7						
T3	1115	11	7	12 - 0	STR.								
T4	1116	11	14	19 - 5	IV	15-11	3-8						
T5	917	9	10	29 - 5	V	18-5	4-3	1-3	3-0	24-5			
T6	1118	11	14	36 - 6	STR.								
T7	619	6	4	35 - 9	STR.								
T8	620	6	6	6 - 11	VI	3-1	2-0						
T9	59NP521	5	224	12 - 1	III	2-0	3-8	6					



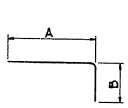
TYPE I



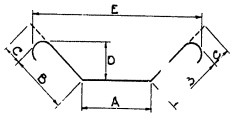
TYPE II



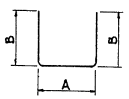
TYPE III



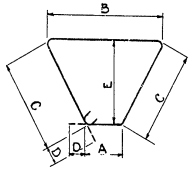
TYPE IV



TYPE V



TYPE VI



TYPE VII

Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 56N THRU 59N

APPROVED BY: Johannes R. Pancoast, Jr. BRIDGE ENGINEER — 9-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA107

Made by E.N.
Traced by E.N.
Checked by J.R.D.

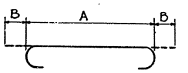
COUNTY	CONTRACT	F.A.S. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	142	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	H	REMARKS
PIER 1 RAMP A		1AP 1101	11	10	30-0	II	26-10	1-7							
	↑	1102	11	6	22-2	STR									
		603	6	2	22-10	V	12-0	4-8	8	4-10	3-10	3-8	3-5	3-3	
		604	6	2	19-6	V	6-0	6-0	8	6-2	4-8	4-6	4-4	4-2	
		605	6	2	26-10	STR									
		606	6	2	16-0	STR									
		607	6	8	5-1	VI	2-2	1-6							
		808	8	4	28-5	IV	6-10	10-7	11-0	3-6	4-10	9-11	9-11		
		409	4	90	11-8	VI	6-8	2-7							
		410	4	90	11-2	VII	9	4-2	2-10	5	2-3				
		1111	11	28	50-0	STR									
		1112	11	16	30-0	STR									
		1113	11	44	9-1	I	7-6	1-7							
		1114	11	25	23-2	II	20-0	1-7							
		1115	11	25	20-8	II	17-6	1-7							
	↓	516	5	30	10-11 TO 18-7	III	2-11	2-2 7/8 TO 6-0	6						15 Groups, 2ea. Δ=3½
		1AP 517	5	30	10-11 TO 19-1	III	2-11	2-2 7/8 TO 6-0	6						" " " Δ=3½
PIER 2 RAMP A		2AP 1101	11	10	30-0	II	26-10	1-7							
	↑	1102	11	6	22-2	STR									
		603	6	2	22-9	V	12-0	4-8	8	4-9	3-9	3-8	3-4	3-3	
		604	6	2	19-3	V	6-0	5-11	8	6-0	4-7	4-6	4-3	4-2	
		605	6	2	26-10	STR									
		606	6	2	16-0	STR									
		607	6	8	5-1	VI	2-2	1-6							
		808	8	4	28-3	IV	6-10	10-7	10-10	3-6	4-5	9-11	9-11		
		409	4	76	11-8	VI	6-8	2-7							
		410	4	76	11-2	VII	9	4-2	2-10	5	2-3				
		1111	11	28	43-0	STR									
		1112	11	16	30-0	STR									
		1113	11	44	9-1	I	7-6	1-7							
		1114	11	25	23-2	II	20-0	1-7							
		1115	11	25	20-8	II	17-6	1-7							
	↓	516	5	30	10-11 TO 18-3	III	2-11	2-2 7/8 TO 6-0	6						15 Groups, 2ea. Δ=3⅜
		2AP 517	5	30	10-11 TO 18-9	III	2-11	2-2 7/8 TO 6-7	6						" " " Δ=3⅜
PIER 3 RAMP A	R1	3AP 1101	11	17	16-2	II	13-0	1-7							
	R2 ↑	1102	11	13	19-8	II	16-6	1-7							
	S1	1003	10	30	25-3	STR									
	S2	404	4	42	9-6	VII	11	3-2	2-5	5	2-1				
	S3	405	4	42	10-8	VI	6-8	2-1							
	S4	1006	10	30	7-5	I	6-0	1-5							
	T1	1107	11	8	30-0	II	26-10	1-7							
	T2	1108	11	4	22-2	STR									
	T3	609	6	2	22-8	V	12-0	4-8	8	4-8	3-6	3-6	3-3	3-3	
	T4	610	6	2	18-8	V	6-0	5-8	8	5-8	4-3	4-3	4-0	4-0	
	T5	611	6	2	26-10	STR									
	T6	612	6	2	17-0	STR									
	T7	813	8	4	28-0	IV	6-10	10-7	10-7	3-6	3-6	9-11	9-11		
	T8 ↓	614	6	8	5-1	VI	2-2	1-6							
	T9	3AP 515	5	44	9-1 TO 15-9	III	2-7	2-2 7/8 TO 5-6	6						11 Groups, 4ea. Δ=4

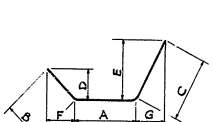
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	H	REMARKS
PIER 4 RAMP A	R1	4AP 901	9	15	12-0	II	9-6	1-3							
	R2 ↑	1102	11	10	19-8	II	16-6	1-7							
	S1	903	9	30	20-5	STR									
	S2	404	4	34	8-7	VII	8	2-8	2-4	5	2-1				
	S3	405	4	34	10-2	VI	6-8	1-10							
	S4	906	9	30	6-4	I	5-1	1-3							
	T1	1007	10	8	29-8	II	26-10	1-5							
	T2	1008	10	4	22-2	STR									
	T3	609	6	2	21-6	V	12-0	4-1	8	4-1	3-1	3-1	2-10	2-10	
	T4	610	6	2	17-4	V	6-0	5-0	8	5-0	3-9	3-9	3-6	3-6	
	T5	611	6	2	26-10	STR									
	T6	612	6	2	17-0	STR									
	T7	813	8	4	27-4	IV	6-10	10-3	10-3	2-6	2-6	9-11	9-11		
	T8	614	6	8	5-1	VI	2-2	1-6							
	T9	4AP 515	5	44	8-7 TO 13-3	III	1-9	2-2 7/8 TO 4-6	6						11 Groups, 4ea. Δ=2¾
PIER 5 RAMP A	R1	5AP 901	9	15	12-0	II	9-6	1-3							
	R2 ↑	1102	11	10	19-8	II	16-6	1-7							
	S1	903	9	30	13-9	STR									
	S2	404	4	20	8-7	VII	8	2-8	2-4	5	2-1				
	S3	405	4	20	10-2	VI	6-8	1-10							
	S4	906	9	30	6-4	I	5-1	1-3							
	T1	1007	10	8	29-8	II	26-10	1-5							
	T2	1008	10	4	22-2	STR									
	T3	609	6	2	21-6	V	12-0	4-1	8	4-1	3-1	3-1	2-10	2-10	
	T4	610	6	2	17-4	V	6-0	5-0	8	5-0	3-9	3-9	3-6	3-6	
	T5	611	6	2	26-10	STR									
	T6	612	6	2	17-0	STR									
	T7	813	8	4	27-4	IV	6-10	10-3	10-3	2-6	2-6	9-11	9-11		
	T8	614	6	8	5-1	VI	2-2	1-6							
	T9	5AP 515	5	44	8-7 TO 13-3	III	1-9	2-2 7/8 TO 4-6	6						11 Groups, 4ea. Δ=2¾

TYPE I



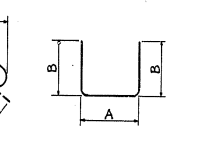
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

TYPE VII

Note:
All dimensions are out to out of bar.

Made by W.J.K.
Traced by W.J.K.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 1 THRU 5 RAMP A

APPROVED BY: Wilmer E. Cannon Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA108

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	143	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 1 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
13P 501	5	18	41 - 2	STR								
↑ 502 Thru	5	84	9 - 7 To	I	9-0 To	7						6 Groups, 14 ea. Δ = 3
507			10 - 10		10-3							
508	6	46	9 - 10	II	8-6	8						
609	6	9	45 - 10	II	44-6	8						
510	5	18	5 - 6	VI	2-18	1-6						
↓ 511	5	2	9 - 7	I	9-0	7						
18P 512	5	2	10 - 10	I	10-3	7						

PIER 2 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
28P 501	5	22	34 - 4	STR								
↑ 502	5	70	12 - 5	I	11-10	7						
603	6	9	38 - 10	II	37-6	8						
↓ 604	6	39	9 - 10	II	8-6	8						
28P 505	5	22	5 - 6	VI	2-8	1-6						

PIER 3 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
38P 1001	10	8	31 - 10	II	29-0	1-5						
↑ 1002	10	4	24 - 4	STR.								
603	6	2	23 - 2	V	13-10	4-0	8	2-10	20-0			
604	6	2	20 - 2	V	8-10	5-0	8	3-6	16-4			
605	6	2	29 - 0	STR.								
606	6	2	19 - 6	STR.								
807	8	4	29 - 6	IV	9-2	10-2	2-6	9-10	28-10			
608	6	8	5 - 0	VI	2-2	1-6						
909	9	34	12 - 2	STR.								
910	9	34	6 - 6	I	5-3	1-3						
811	8	20	11 - 8	II	9-6	1-1						
1112	11	10	21 - 8	II	18-6	1-7						
↓ 413	4	16	12 - 6	VI	9-0	1-10						
38P 514	5	44	8 - 7 To	III	1-9	2-2 To	6					11 Groups, 4 ea. Δ = 2¾
			13 - 3			4-6						

PIER 4 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 48P 901	9	15	12 - 0	II	9-6	1-3						
R2 ↑ 1102	11	10	19 - 8	II	16-6	1-7						
S1 903	9	24	17 - 9	STR.								
S2 404	4	28	7 - 11	VII	8	2-8	2-0	5	1-9			
S3 405	4	28	8 - 8	VI	5-2	1-10						
S4 906	9	24	6 - 6	I	5-3	1-3						
T1 1007	10	8	26 - 8	II	23-10	1-5						
T2 1008	10	4	19 - 2	STR								
T3 ↑ 609	6	2	19 - 4	V	10-0	4-0	8	2-10	16-2			
T4 610	6	2	16 - 4	V	5-0	5-0	8	3-4	12-2			
T5 611	6	2	23 - 10	STR.								
T6 612	6	2	15 - 0	STR.								
T7 813	8	4	24 - 6	IV	5-6	9-6	2-6	9-2	23-10			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 48P 515	5	40	8 - 7 To	III	1-9	2-2 To	6					10 Groups, 4 ea. Δ = 3½
			13 - 3			4-6						

PIER 5 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 58P 901	9	15	12 - 0	II	9-6	1-3						
R2 ↑ 1102	11	10	19 - 8	II	16-6	1-7						
S1 903	9	24	21 - 2	STR.								
S2 404	4	34	7 - 11	VII	8	2-8	2-0	5	1-9			
S3 405	4	34	8 - 8	VI	5-2	1-10						
S4 906	9	24	6 - 6	I	5-3	1-3						
T1 1007	10	8	24 - 8	II	21-10	1-5						
T2 1008	10	4	17 - 2	STR								
T3 609	6	2	19 - 4	V	10-0	4-0	8	2-9	16-0			
T4 610	6	2	15 - 10	V	5-0	4-9	8	3-5	12-4			
T5 611	6	2	21 - 10	STR.								
T6 612	6	2	14 - 0	STR.								
T7 813	8	4	22 - 6	IV	5-6	8-6	2-6	8-1	21-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 58P 515	5	36	8 - 7 To	III	1-9	2-2 To	6					9 Groups, 4 ea. Δ = 3½
			13 - 3			4-6						

PIER 6 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 6BP 901	9	15	12 - 0	II	9-6	1-3						
R2 ↑ 1102	11	10	19 - 8	II	16-6	1-7						
S1 903	9	24	24 - 9	STR.								
S2 404	4	42	7 - 11	VII	8	2-8	2-0	5	1-9			
S3 405	4	42	8 - 8	VI	5-2	1-10						
S4 906	9	24	6 - 6	I	5-3	1-3						
T1 1007	10	8	24 - 8	II	21-10	1-5						
T2 1008	10	4	17 - 2	STR.								
T3 609	6	2	19 - 4	V	10-0	4-0	8	2-9	16-0			
T4 610	6	2	15 - 10	V	5-0	4-9	8	3-5	12-4			
T5 611	6	2	21 - 10	STR.								
T6 612	6	2	14 - 0	STR.								
T7 813	8	4	22 - 6	IV	5-6	8-6	2-6	8-1	21-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 6BP 515	5	36	8 - 7 To	III	1-9	2-2 To	6					9 Groups, 4 ea. Δ = 3½
			13 - 3			4-6						

PIER 1 RAMP C

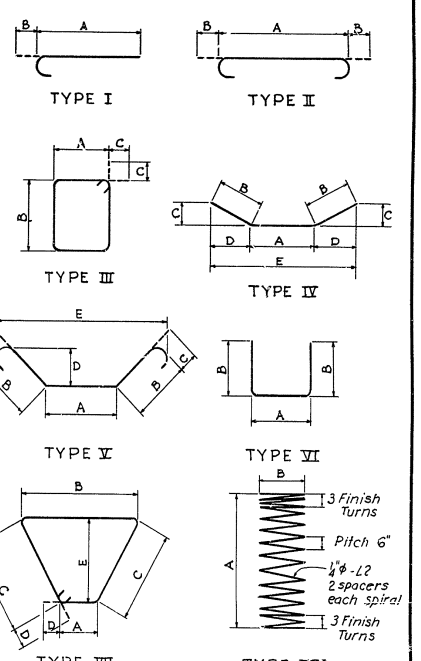
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 1CP 901	9	19	15 - 0	II	12-6	1-3						
R2 ↑ 902	9	14	20 - 0	II	17-6	1-3						
S1 903	9	30	18 - 4	STR.								
S2 404	4	30	8 - 7	VII	8	2-8	2-4	5	2-1			
S3 405	4	30	10 - 2	VI	6-8	1-10						
S4 906	9	30	7 - 0	I	5-9	1-3						
T1 1007	10	8	29 - 8	II	26-10	1-5						
T2 1008	10	4	22 - 2	STR								
T3 609	6	2	21 - 6	V	12-0	4-1	8	2-10	18-2			
T4 610	6	2	17 - 4	V	6-0	5-0	8	3-6	13-6			
T5 611	6	2	26 - 10	STR.								
T6 612	6	2	17 - 0	STR.								
T7 813	8	4	27 - 4	IV	6-10	10-3	2-6	9-11	26-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 1CP 515	5	44	8 - 7 To	III	1-9	2-2 To	6					11 Groups, 4 ea. Δ = 2¾
			13 - 3			4-6						

PIER 2 RAMP C

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 2CP 901	9	19	15 - 0	II	12-6	1-3						
R2 ↑ 902	9	14	20 - 0	II	17-6	1-3						
S1 903	9	30	19 - 9	STR								
S2 404	4	32	8 - 7	VII	8	2-8	2-4	5	2-1			
S3 405	4	32	10 - 2	VI	6-8	1-10						
S4 906	9	30	7 - 0	I	5-9	1-3						
T1 1007	10	8	29 - 8	II	26-10	1-5						
T2 1008	10	4	22 - 2	STR.								
T3 609	6	2	21 - 6	V	12-0	4-1	8	2-10	18-2			
T4 610	6	2	17 - 4	V	6-0	5-0	8	3-6	13-6			
T5 611	6	2	26 - 10	STR								
T6 612	6	2	17 - 0	STR								
T7 813	8	4	27 - 4	IV	6-10	10-3	2-6	9-11	26-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 2CP 515	5	44	8 - 7 To	III	1-9	2-2 To	6					11 Groups, 4 ea. Δ = 2¾
			13 - 3			4-6						

*PILES

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
L1 PP 701	7	10458	12 - 0	STR								6 per pile (40 Ton)
L1 PP 702	7	1104	17 - 0	STR.								6 per pile (60 Ton)
L2 PP 203	4#	1739		VIII	9-8	7½						40 Ton piles
L2 PP 204	4#	184		VIII	14-8	9½						60 Ton piles



Note
All dimensions are out to out of bar.
* Quantities as given are for all 40 & 60 Ton piles in Mainline and Ramp Piers
Reinforcement bar marks L1 & L2 are included under Item 35.

Mode by E.N
Traced by E.N
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
PIERS I THRU 6 RAMP B
PIERS I & 2 RAMP C

APPROVED BY: _____ BRIDGE ENGINEER — 4-16-64 DATE

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

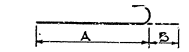
DWG. NO. SA109

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	P1	501	5	182	2-6	I	1-11	7						14 Each Pad
	P5	502	5	26	13-7	II	3-3	3-2	3-3	3-2	6			2
R1A	P2	503	5	196	3-0	I	2-5	7						7
	P4	604	6	280	4-3	I	3-8	7						10
	P6	605	6	56	14-9	II	3-3	3-8	3-3	3-8	7			2
	P7	606	6	56	11-1	II	1-5	3-8	1-5	3-8	7			2
R1B	P2	503	5	28	3-0	I	2-5	7						7
	P4	604	6	40	4-3	I	3-8	7						10
	P8	607	6	8	14-5	II	3-0	3-8	3-0	3-8	7			2
	P9	608	6	8	10-11	II	1-4	3-8	1-4	3-8	7			2
R2	P1	501	5	3808	2-6	I	1-11	7						14
	P10	509	5	544	13-1	II	3-0	3-2	3-0	3-2	6			2
R2A	P2	503	5	1428	3-0	I	2-5	7						14
	P10	509	5	306	13-1	II	3-0	3-2	3-0	3-2	6			3
	P3				DELETED									
R3	P1	501	5	378	2-6	I	1-11	7						14
	P11	510	5	54	12-1	II	2-6	3-2	2-6	3-2	6			2
R3A	P2	503	5	154	3-0	I	2-5	7						14
	P11	510	5	33	12-1	II	2-6	3-2	2-6	3-2	6			3
R3B	P2	503	5	56	3-0	I	2-5	7						14
	P11	510	5	8	12-1	II	2-6	3-2	2-6	3-2	6			2
	P11A	511	5	4	9-3	II	1-1	3-2	1-1	3-2	6			1
R4	P2	503	5	24	3-0	I	2-5	7						12
	P12	512	5	4	10-3	II	1-7	3-2	1-7	3-2	6			2
R4A	P2	503	5	12	3-0	I	2-5	7						12
	P13	513	5	2	10-3	II	1-10	3-2	1-10	3-2	6			2
R5	P1	501	5	128	2-6	I	1-11	7						16
	P14	514	5	16	16-1	II	4-0	3-8	4-0	3-8	6			2 Each Pad
R6	P2	503	5	22	3-0	I	2-5	7						
	P4	604	6	34	4-3	I	3-8	7						
	P15	615	6	14	10-8	III	1-0	2-2	1-7	1-11	5-8	7		
	P16	616	6	5	11-9	II	1-11	3-6	1-11	3-6	7			
R7	P2	503	5	180	3-0	I	2-5	7						36 Each Group
	P13	513	5	30	10-3	II	1-10	3-2	1-10	3-2	6			6 " "
R7A	P2	503	5	36	3-0	I	2-5	7						
	P17	517	5	5	9-9	III	8	1-1	2-5	1-7	3-2	6		
	P18	518	5	2	9-3	IV	8	1-1	1-9	3-2	6	1-7		

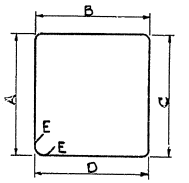
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	144	215

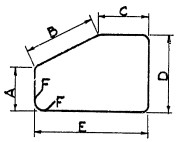
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



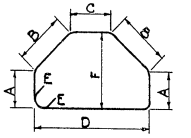
TYPE I



TYPE II



TYPE III



TYPE IV

Note:
All dimensions are out to out of bar

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PADS R1 THRU R7A

APPROVED BY: Johnson R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA110

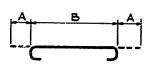
Made by R.G.
Traced by R.G.
Checked by F.Y.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-02-004	2	DEL.	I-95-2 (12)	'64	145	215

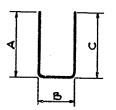
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
21S SLAB	S1	21S 501	5	168	41-9	Str.							
	S2	502		168	42-11	I	7	41-9					
	S3	503		81	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	504		81	6-9	II	3-1	9	3-1				" "
	S5	504		85	6-9	II	3-1	9	3-1				Interior Parapet
	S6	505		85	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	506		24	50-0	Str.							
	S10	506		29	50-0								
	S11	506		38	50-0								
	S12	507		12	31-6								
	S13	508		29	31-6 To								Δ=1⅝
					35-4								
	S14	509		38	31-6 To								Δ=1¼
					35-4								
	S15	510		12	35-3	Str.							
	S16	21S 511	5	25	5-9	IV	4-0	9½	6	7½	3	7	
22S SLAB	S1	22S 501	5	264	41-9	Str.							
	S2	502		264	42-11	I	7	41-9					
	S3	503		129	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	504		129	6-9	II	3-1	9	3-1				" "
	S5	504		132	6-9	II	3-1	9	3-1				Interior Parapet
	S6	505		132	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	506		48	50-0	Str.							
	S8	506		29	50-0								
	S9	506		38	50-0								
	S10	506		29	50-0								
	S11	506		38	50-0								
	S12	507		12	30-6								
	S13	508		29	30-6 To								Δ=1⅝
					34-3								
	S14	509		38	30-6 To								Δ=1¼
					34-4								
	S15	510		12	34-3	Str.							
	S16	511		25	5-9	IV	4-0	9½	6	7½	3	7	
	S17	22S 511	5	25	5-9	IV	4-0	9½	6	7½	3	7	
23S SLAB	S1	23S 501	5	90	41-9	Str.							
		502 Thru		64	41-10 To	Str.							16 Ea. Δ=2
		505			42-4								
		506 Thru		70	42-6 To	Str.							14 Ea. Δ=2½
		510			43-4								
		511 Thru		40	43-5 To	Str							8 Ea. Δ=2¼
		515			44-2								
	S2	516		90	42-11	I	7	41-9					
		517 Thru		64	43-0 To	I	7	41-10⅞					16 Ea. Δ=2
		520			43-6			42-4					
		521 Thru		70	43-8 To	I	7	42-6⅞					14 Ea. Δ=2½
		525			44-6			43-4					
		526 Thru		40	44-7 To	I	7	43-5⅞					8 Ea. Δ=2¼
		530			45-4			44-2					
	S3	531		128	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	532		128	6-9	II	3-1	9	3-1				" "
	S5	532		131	6-9	II	3-1	9	3-1				Interior Parapet
	S6	533		131	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	534		48	50-0	Str.							
	S8	534		29	50-0								
	S9	534		38	50-0								
	S10	534		29	50-0								
	S11	534		38	50-0								
	S12	535		12	29-7								
	S13	536		29	29-7 To								Δ=1⅝
					33-4								
	S14	537		38	29-7 To								Δ=1¼
					33-5								
	S15	538		12	33-4	Str.							
	S16	539		25	5-9	IV	4-0	9½	6	7½	3	7	
	S17	23S 539	5	25	5-9	IV	4-0	9½	6	7½	3	7	

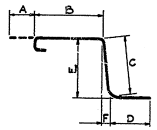
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
24S SLAB	S1	24S 501 Thru	5	90	44-3 To	Str.							18 Ea. Δ=2
		505			44-11								
		506		128	45-0	Str.							
	S2	507 Thru		90	45-5 To	I	7	44-3⅞					
		511			46-1			44-11					
		512		128	46-2	I	7	45-0					
	S3	513		107	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	514		107	6-9	II	3-1	9	3-1				" "
	S5	514		110	6-9	II	3-1	9	3-1				Interior Parapet
	S6	515		110	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	516		24	60-0	Str.							
	S8	516		29	60-0								
	S9	516		38	60-0								
	S10	517		12	47-0								
	S11	518		29	47-1 To								Δ=1¼
					50-0								
	S12	519		38	47-0 To								Δ=1
					50-1								
	S13	520		12	50-1	Str.							
	S14	521		25	5-9	IV	4-0	9½	6	7½	3	7	
	S15	24S 521	5	25	5-9	IV	4-0	9½	6	7½	3	7	
25S SLAB	S1	25S 501	5	204	45-0	Str.							
	S2	502		204	46-2	I	7	45-0					
	S3	503		100	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	504		100	6-9	II	3-1	9	3-1				" "
	S5	504		102	6-9	II	3-1	9	3-1				Interior Parapet
	S6	505		102	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	506		24	55-0	Str.							
	S8	506		29	55-0								
	S9	506		38	55-0								
	S10	507		12	44-10								
	S11	508		29	44-11 To								Δ=1¼
					47-10								
	S12	509		38	44-10 To								Δ=1
					47-11								
	S13	510		12	47-11	Str.							
	S14	511		25	5-9	IV	4-0	9½	6	7½	3	7	
	S15	25S 511	5	25	5-9	IV	4-0	9½	6	7½	3	7	



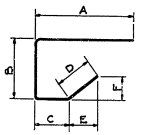
TYPE I



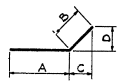
TYPE II



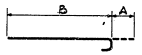
TYPE III



TYPE IV



TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 21S THRU 25S

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-15-64

SCALE: —

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 111

COUNTY	CONTRACT	V.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	146	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 26S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	26S 501	5	47	24-11	Str.								
	502		47	45-1	Str.								
	503		48	45-3	Str.								
S2	504		47	46-1	I	7	44-11						
	505		47	46-3	I	7	45-1						
	506		48	46-5	I	7	45-3						
S3	507		70	4-3	III	7	1-5	1-4	1-1	1-1	1-4	1½	
S4	508		70	6-9	II	3-1	9	3-1					
S5	508		72	6-9	II	3-1	9	3-1					
S6	509		72	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	510		24	30-0	Str.								
S8	510		5	30-0									
S9	510		3	30-0									
S10	510		6	30-0									
S11	510		16	30-0									
S12	510		6	30-0									
S13	510		5	30-0									
S14	510		7	30-0									
S15	510		21	30-0									
S16	511		12	40-7									
S17	511		5	40-7									
S18	512		3	41-2									
S19	512		6	41-2									
S20	513		16	41-2 To									
				42-5									Δ=1
S21	514		12	42-5									
S22	511		5	40-7									
S23	512		5	41-2									
S24	512		7	41-2									
S25	515 Thru		21	41-2 To	Str.								
	521			42-5									3 Ea. Δ=2½
S26	522		4	5-9	IV	4-0	9½	6	7½	3	7		
S27	522		4	5-9	IV	4-0	9½	6	7½	3	7		
S28	522		5	5-9	IV	4-0	9½	6	7½	3	7		
S29	522		15	5-9	IV	4-0	9½	6	7½	3	7		
S30	522		3	5-9	IV	4-0	9½	6	7½	3	7		
S31	522		3	5-9	IV	4-0	9½	6	7½	3	7		
S32	522		5	5-9	IV	4-0	9½	6	7½	3	7		
S33	26S 522	5	15	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 27S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	27S 501 Thru	5	70	45-4 To	Str.								
	505			46-0									14 Ea. Δ=2
	506 Thru		78	46-2 To	Str								
	511			47-0									13 Ea. Δ=2
S2	512 Thru		70	46-6 To	I	7	45-4 To						
	516			47-2			46-0						14 Ea. Δ=2
	517 Thru		78	47-4 To	I	7	46-2 To						
	522			48-2			47-0						13 Ea. Δ=2
S3	523		73	4-3	III	7	1-5	1-4	1-1	1-1	1-4	1½	
S4	524		73	6-9	II	3-1	9	3-1					
S5	524		75	6-9	II	3-1	9	3-1					
S6	525		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	526		24	30-0	Str.								
S8	526		5	30-0									
S9	526		3	30-0									
S10	526		6	30-0									
S11	526		16	30-0									
S12	526		5	30-0									
S13	526		5	30-0									
S14	526		7	30-0									
S15	526		21	30-0									
S16	527		12	43-10									
S17	527		6	43-10									
S18	528		4	44-3									
S19	528		6	44-3									
S20	529 Thru		16	44-3 To									
	532			45-0									4 Ea. Δ=3
S21	533		12	45-2									
S22	527		6	43-10									
S23	528		6	44-3									
S24	27S 528	5	7	44-3	Str.								

SLAB 27S Cont.

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S25	27S 534 Thru	5	21	44-3 To	Str.								
	540			45-3									3 Ea. Δ=2
S26	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S27	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S28	541		5	5-9	IV	4-0	9½	6	7½	3	7		
S29	541		15	5-9	IV	4-0	9½	6	7½	3	7		
S30	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S31	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S32	541		3	5-9	IV	4-0	9½	6	7½	3	7		
S33	27S 541	5	15	5-9	IV	4-0	9½	6	7½	3	7		

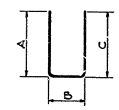
SLAB 28S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	28S 501 Thru	5	64	47-0 To	Str.								
	508			48-2									8 Ea. Δ=2
	509 Thru		84	48-4 To	Str.								
	520			50-2									7 Ea. Δ=2
S2	521 Thru		64	48-2 To	I	7	47-0 To						
	528			49-4			48-2						8 Ea. Δ=2
	529 Thru		84	49-6 To	I	7	48-4 To						
	540			51-4			50-2						7 Ea. Δ=2
S3	541		74	4-3	III	7	1-5	1-4	1-1	1-4	1½		
S4	542		74	6-9	II	3-1	9	3-1					
S5	542		75	6-9	II	3-1	9	3-1					
S6	543		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	544		24	30-0	Str.								
S8	544		6	30-0									
S9	544		4	30-0									
S10	544		6	30-0									
S11	544		16	30-0									
S12	544		7	30-0									
S13	544		7	30-0									
S14	544		7	30-0									
S15	544		21	30-0									
S16	545		12	44-4									
S17	546		7	44-8									
S18	546		5	44-8									
S19	546		6	44-8									
S20	547		16	45-1									
S21	547		12	45-1									
S22	546		8	44-8									
S23	546		8	44-8									
S24	546		7	44-8									
S25	547		21	45-1	Str.								
S26	548		5	5-11	III	4-0	9½	8	7½	3	7		
S27	548		5	5-11	III	4-0	9½	8	7½	3	7		
S28	548		5	5-11	III	4-0	9½	8	7½	3	7		
S29	548		15	5-11	III	4-0	9½	8	7½	3	7		
S30	549		4	5-9	III	4-0	9½	6	7½	3	7		
S31	549		4	5-9	III	4-0	9½	6	7½	3	7		
S32	549		5	5-9	III	4-0	9½	6	7½	3	7		
S33	28S 549	5	15	5-9	III	4-0	9½	6	7½	3	7		

SLAB 29S

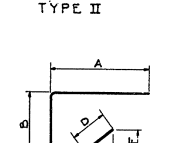
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	29S 501	5	150	6-9	II	3-1	9	3-1					
	502		25	4-3	III	7	1-5	1-4	1-1	1-4	1½		
	503		25	4-4	III	7	1-6	1-4	1-1	1-4	1½		
	504		25	4-5	III	7	1-7	1-4	1-1	1-4	1½		
	505		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	506		103	30-1	Str.								
	507		106	45-0	Str.								
	508		33	5-9	IV	4-0	9½	6	7½	3	7		
	509 Thru		108	51-5 To	I	7	50-3 To						
	520			53-8			52-6						9 Ea. Δ=2½
	521 Thru		40	53-10 To	I	7	52-8 To						
	524			54-6			53-4						10 Ea. Δ=2½
	525 Thru		108	50-3 To	Str.								
	536			52-6									9 Ea. Δ=2½
	537 Thru		40	52-8 To	Str.								
	540			53-4									10 Ea. Δ=2½
	29S 541	5	31	5-11	III	4-0	9½	8	7½	3	7		

TYPE I



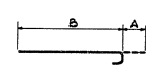
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 26S THRU 29S

APPROVED BY: Johnnie R. Chaney Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA112

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	147	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

SLAB 30S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	305 501	5	150	6 - 9	II	3-1	9	3-1					
↑	502	↑	25	4 - 6	III	7	1-8	1-4	1-1	1-4	1½		
	503		25	4 - 7	III	7	1-9	1-4	1-1	1-4	1½		
	504		25	4 - 8	III	7	1-10	1-4	1-1	1-4	1½		
	505		75	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	506		106	30 - 2	Str.								
	507		110	45 - 0	Str.								
	508		35	5 - 11	IV	4-0	9½	8	7½	3	7		
	509 Thru		108	54 - 7 To	I	7	53-5½						9 Ea., Δ = 2½
	520			56 - 10			55-8						
	521 Thru		40	57 - 0 To	I	7	55-10½						10 Ea., Δ = 2½
	524			57 - 8			56-6						
	525 Thru		108	53 - 5 To	Str.								9 Ea., Δ = 2½
	536			55 - 8									
	537 Thru		40	55 - 10 To	Str.								10 Ea., Δ = 2½
↓	540	↓		56 - 6									
	305 541	5	33	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 31S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	315 501	5	150	6 - 9	II	3-1	9	3-1					
↑	502	↑	25	4 - 9	III	7	1-11	1-4	1-1	1-4	1½		
	503		25	4 - 10	III	7	2-0	1-4	1-1	1-4	1½		
	504		100	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	505		113	30 - 2	Str.								
	506		116	45 - 0	Str.								
	507		37	5 - 9	IV	4-0	9½	6	7½	3	7		
	508 Thru		108	57 - 8 To	I	7	56-6½						9 Ea., Δ = 2½
	519			59 - 11			58-9						
	520 Thru		40	60 - 1 To	I	7	58-11½						10 Ea., Δ = 2½
	523			60 - 9			59-7						
	524 Thru		108	56 - 6 To	Str.								9 Ea., Δ = 2½
	535			58 - 9									
	536 Thru		40	58 - 11 To	Str.								10 Ea., Δ = 2½
↓	539	↓		59 - 7									
	315 540	5	37	5 - 11	IV	4-0	9½	8	7½	3	7		

SLAB 32S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	325 501	5	276	6 - 9	II	3-1	9	3-1					
↑	502	↑	276	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	503		241	44 - 0	Str.								
	504		122	52 - 3	Str.								
	505		40	5 - 11	IV	4-0	9½	8	7½	3	7		
	506		138	33 - 5	Str.								
	507		138	37 - 10	VI	7	37-3						
	508		138	41 - 0	Str.								
	509		138	30 - 3	VI	7	29-8						
	510 Thru		130	32 - 6 To	VI	7	31-11 To						5 Ea., Δ = 2½
	535			37 - 9			37-2						
	536		4	38 - 0	VI	7	37-5						
	537		4	38 - 3	VI	7	37-8						
	538 Thru		130	20 - 4 To	Str.								5 Ea. Δ = 2½
	563			25 - 7									
	564		4	25 - 10	Str.								
	565		4	26 - 1	Str.								
	566 Thru		130	24 - 9 To	VI	7	24-2½						5 Ea., Δ = 2½
	591			30 - 0			29-5						
	592		4	30 - 3	VI	7	29-8						
	593		4	30 - 6	VI	7	29-11						
	594 Thru		130	27 - 11 To	Str.								5 Ea. Δ = 2½
	5119			33 - 2									
	5120		4	33 - 5	Str.								
↓	5121	↓	4	33 - 8	Str.								
	325 5122	5	37	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 33S

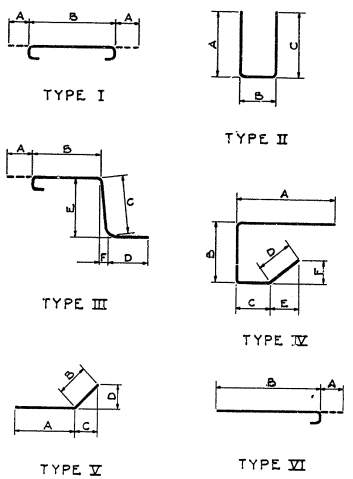
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	335 501	5	126	6 - 9	II	3-1	9	3-1					
↑	502	↑	61	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		
	503		65	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	504		77	40 - 0	Str.								
	505		3	36 - 6									
	506		6	35 - 0									
	507		12	26 - 6									
	508		13	26 - 4									
	509		11	26 - 2									
	510		13	26 - 0									
	511		11	25 - 10									
	512		26	25 - 8	Str.								
	513		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	514		6	42 - 5	Str.								
	515		6	43 - 7	I	7	42-5						
	516		123	41 - 9	Str.								
↓	517	↓	123	42 - 11	I	7	41-9						
	335 518	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		

SLAB 34S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	345 501	5	139	41 - 9	Str.								
S2	↑ 502	↑	139	42 - 11	I	7	41-9						
S3	503		70	4 - 3	III	7	1 -5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		70	6 - 9	II	3-1	9	3-1					" "
S5	504		63	6 - 9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40 - 0	Str.								
S8	506		27	40 - 0									
S9	506		36	40 - 0									
S10	507		12	30 - 7									
S11	508 Thru		27	30 - 7 To									3 Ea., Δ = 1½
	516			29 - 7									
S12	517 Thru		36	30 - 7 To									4 Ea., Δ = 1½
	525			29 - 7									
S13	526		12	29 - 6	Str.								
S14	↓ 527	↓	25	5 - 9	IV	4-0	9½	6	7½	3	7		
S15	345 527	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 35S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	355 501	5	140	41 - 9	Str.								
S2	↑ 502	↑	140	42 - 11	I	7	41-9						
S3	503		71	4 - 3	III	7	1 -5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6 - 9	II	3-1	9	3-1					" "
S5	504		69	6 - 9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40 - 0	Str.								
S8	506		27	40 - 0									
S9	506		36	40 - 0									
S10	507		12	31 - 3									
S11	508 Thru		27	31 - 2 To									3 Ea. Δ = 2½
	516			29 - 9									
S12	517 Thru		36	31 - 2 To									4 Ea. Δ = 2½
	525			29 - 9									
S13	526		12	29 - 8	Str.								
S14	↓ 527	↓	25	5 - 11	IV	4-0	9½	8	7½	3	7		
S15	355 528	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		



Note
All dimensions are out to out of bar

Mode by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 30S THRU 35S

APPROVED BY: Dennis R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA113

COUNTY	CONTRACT	R.A.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-01-006	2	DEL.	I-95-2(12)	'64	148	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 36S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	↺	REMARKS
S1	36S501	5	145	41-9	Str.								
S2	↑ 502	↑	145	42-11	I	7	41-9						
S3	503		73	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		73	6-9	II	3-1	9	3-1					" "
S5	504		71	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	33-8									
S11	508Thru		27	33-8 To									3 Ea. Δ=2½
	516			32-0									
S12	517Thru		36	33-8 To									4 Ea. Δ=2½
	525			32-0	↓								
S13	526		12	31-11	Str.								
S14	↓ 527	↓	25	5-9	IV	4-0	9½	6	7½	3	7		
S15	36S528	5	25	5-11	III	4-0	9½	8	7½	3	7		

SLAB 37S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	↺	REMARKS
S1	37S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	37S528	5	25	5-9	III	4-0	9½	6	7½	3	7		

SLAB 38S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	↺	REMARKS
S1	38S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	6	7½	3	7		
S15	38S528	5	25	5-9	III	4-0	9½	8	7½	3	7		

SLAB 39S

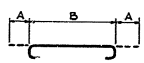
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	39S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	39S528	5	25	5-9	III	4-0	9½	6	7½	3	7		

SLAB 40S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	40S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	40S528	5	25	5-11	IV	4-0	9½	6	7½	3	7		

SLAB 41S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	41S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	41S528	5	25	5-9	IV	4-0	9½	6	7½	3	7		



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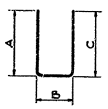

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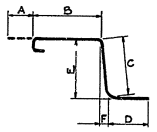

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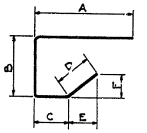

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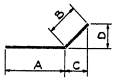
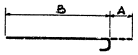


TYPE V



TYPE VI

Note
All dimensions are out to out of bar

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 36S THRU 41S

APPROVED BY: Louis D. Pearson Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA114

Made by E.N
Traced by E.N
Checked by J.R.D

COUNTY	CONTRACT	R.A.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	109	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 42S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	425501	5	141	41-9	Str.								
S2	502		141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	31-6									
S11	508 Thru		27	31-5 To									3 Ea. Δ=2¼
	516			29-11									
S12	517 Thru		36	31-5 To									4 Ea. Δ=2¼
	525			29-11									
S13	526		12	29-10	Str.								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	425528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 43S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	435501	5	140	41-9	Str.								
S2	502		140	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	31-2									
S11	508 Thru		27	31-2 To									3 Ea. Δ=2¼
	516			29-8									
S12	517 Thru		36	31-2 To									4 Ea. Δ=2¼
	525			29-8									
S13	526		12	29-7	Str.								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	435528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 44S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	445501	5	145	41-9	Str.								
S2	502		145	42-11	I	7	41-9						
S3	503		73	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		73	6-9	II	3-1	9	3-1					" "
S5	504		72	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		72	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	33-6									
S11	508 Thru		27	33-6 To									3 Ea. Δ=1½
	516			32-6									
S12	517 Thru		36	33-6 To									4 Ea. Δ=1½
	525			32-6									
S13	526		12	32-6	Str.								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	445528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 45S

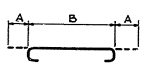
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	455501	5	162	41-9	Str.								
S2	502		162	42-11	I	7	41-9						
S3	503		82	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		82	6-9	II	3-1	9	3-1					" "
S5	504		81	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		81	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	32-0									
S11	508 Thru		27	32-0 To									3 Ea. Δ=1
	516			31-4									
S12	517 Thru		36	32-0 To									4 Ea. Δ=1
	525			31-4									
S13	526		12	31-4	Str.								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	455528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 46S

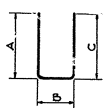
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	465501	5	150	41-9	Str.								
S2	502		150	42-11	I	7	41-9						
S3	503		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		76	6-9	II	3-1	9	3-1					" "
S5	504		76	6-9	II	3-1	9	3-1					
S6	505		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	26-1									
S11	507		27	26-1									
S12	507		36	26-1									
S13	507		12	26-1	Str.								
S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	465509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 47S

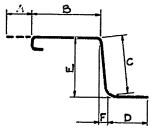
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	475501	5	150	41-9	Str.								
S2	502		150	42-11	I	7	41-9						
S3	503		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		76	6-9	II	3-1	9	3-1					" "
S5	504		76	6-9	II	3-1	9	3-1					
S6	505		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	26-1									
S11	507		27	26-1									
S12	507		36	26-1									
S13	507		12	26-1	Str.								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	475509	5	25	5-9	IV	4-0	9½	6	7½	3	7		



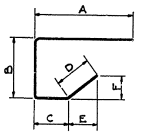
TYPE I



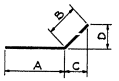
TYPE II



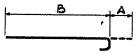
TYPE III



TYPE IV



TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 42S THRU 47S

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA115

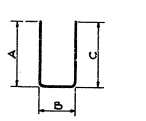
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	150	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 48S	S1	485501	5	120	41 - 9	Str.								
	S2	502		120	42 - 11	I	7	41-9						
	S3	503		61	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		61	6 - 9	II	3-1	9	3-1					
	S5	504		61	6 - 9	II	3-1	9	3-1					
	S6	505		61	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	59 - 5	Str.								
	S8	506		27	59 - 5	Str.								
	S9	506		36	59 - 5	Str.								
	S10	507		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S11	485508	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		
SLAB 49S	S1	495501	5	188	41 - 9	Str.								
	S2	502		188	42 - 11	I	7	41-9						
	S3	503		95	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		95	6 - 9	II	3-1	9	3-1					
	S5	504		95	6 - 9	II	3-1	9	3-1					
	S6	505		95	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	55 - 0	Str.								
	S8	506		27	55 - 0									
	S9	506		36	55 - 0									
	S10	507		12	40 - 1									
	S11	507		27	40 - 1									
	S12	507		36	40 - 1									
	S13	507		12	40 - 1	Str.								
	S14	508		25	5 - 11	IV	4-0	9½	8	7½	3	7		
	S15	495509	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		
SLAB 50S	S1	505501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S15	505509	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		
SLAB 51S	S1	515501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 11	IV	4-0	9½	8	7½	3	7		
	S15	415 509	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 52S	S1	525501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	50		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S15	525509	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		
SLAB 53S	S1	535501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 11	IV	4-0	9½	8	7½	3	7		
	S15	535509	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		
SLAB 54S	S1	545501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S15	545509	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		

TYPE I



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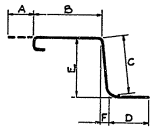

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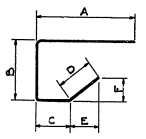
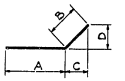
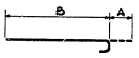


TYPE IV



TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 48S THRU 54S

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA116

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	151	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 55S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	55S501	5	164	41-9	Str.								
S2	502		164	42-11	I	7	41-9						
S3	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		83	6-9	II	3-1	9	3-1					
S5	504		83	6-9	II	3-1	9	3-1					
S6	505		83	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	33-1									
S11	507		27	33-1									
S12	507		36	33-1									
S13	507		12	33-1	Str.								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	55S509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 56S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	56S501	5	164	41-9	Str.								
S2	502		164	42-11	I	7	41-9						
S3	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		83	6-9	II	3-1	9	3-1					
S5	504		83	6-9	II	3-1	9	3-1					
S6	505		83	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	33-1									
S11	507		27	33-1									
S12	507		36	33-1									
S13	507		12	33-1	Str.								
S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	56S509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 57S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	57S501	5	164	41-9	Str.								
S2	502		164	42-11	I	7	41-9						
S3	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		83	6-9	II	3-1	9	3-1					
S5	504		83	6-9	II	3-1	9	3-1					
S6	505		83	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	33-1									
S11	507		27	33-1									
S12	507		36	33-1									
S13	507		12	33-1	Str.								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	57S509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

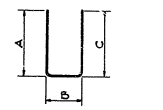
SLAB 58S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	58S501	5	186	41-9	Str.								
S2	502		186	42-11	I	7	41-9						
S3	503		94	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		94	6-9	II	3-1	9	3-1					
S5	504		94	6-9	II	3-1	9	3-1					
S6	505		94	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	44-1									
S11	507		27	44-1									
S12	507		36	44-1									
S13	507		12	44-1	Str.								
S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	58S509	5	25	5-11	IV	4-0	9½	9	7½	3	7		

SLAB 59S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	59S501	5	118	41-9	Str.								
S2	502		118	42-11	I	7	41-9						
S3	503		60	4-3	III	7	1'-5	1-4	1-1	1-4	1½		
S4	504		60	6-9	II	3-1	9	3-1					
S5	504		60	6-9	II	3-1	9	3-1					
S6	505		60	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	506		24	58-8	Str.								
S8	506		27	58-8	Str.								
S9	506		36	58-8	Str								
S10	507		25	8-9	III	5'-6	9½	2'-0	7½	3	7		
S11	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S12	59S509	5	2	37-5	Str.								

TYPE I



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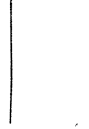

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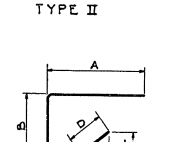
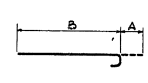


TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Mode by E.N.
Traced by E.N.
Checked by J.P.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 55S. THRU 59S

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

SCALE: —
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 117

COUNTY	CONTRACT	F.A.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	152	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

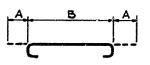
SLAB 21N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
21N 501	5	180	6-9	II	3-1	9	3-1					
502		93	4-3	III	7	1-5	1-4	1-1	1-4	1½		
503		87	5-0	III	7	2-2	1-4	1-1	1-4	1½		
504		121	50-0	STR								
505		16	37-10									
506		13	38-7									
507		11	39-4									
508		13	40-1									
509		11	40-10									
510		13	41-6									
511		11	42-2									
512		13	42-10									
513		26	45-6	STR								
514 thru		63	23-10 to	VI	7	23-3 to						9 Ea. Δ = 2
520			24-10			24-3						
521 thru		30	25-0 to	VI	7	24-5 to						10 Ea. Δ = 2
523			25-4			24-9						
524 thru		63	27-0 to	STR								9 Ea. Δ = 2
530			28-0									
531 thru		30	28-2 to	STR								10 Ea. Δ = 2
533			28-6									
534 thru		72	16-1 to	VI	7	15-6 to						9 Ea. Δ = 2
541			17-3			16-8						
542		10	17-5	VI	7	16-10						
543		10	17-7	VI	7	17-0						
544 thru		72	19-3 to	STR								9 Ea. Δ = 2
551			20-5									
552		10	20-7	STR								
553		10	20-9	STR								
554 thru		92	45-3 to	STR								4 Ea. Δ = 1½
576			48-0									
577 thru		92	49-7 to	VI	7	49-0 to						4 Ea. Δ = 1½
599			52-4			51-9						
5100		5	37-6	STR								
5101 thru		88	37-8 to	STR								4 Ea. Δ = 1½
5122			40-3									
5123		5	41-10	VI	7	41-3						
5124 thru		88	42-0 to	VI	7	41-5 to						4 Ea. Δ = 1½
5145			44-7			44-0						
21N 5146	5	40	5-9	IV	4-0	9½	6	7½	5	7		

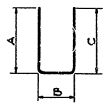
SLAB 22N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
22N 501	5	276	6-9	II	3-1	9	3-1					
502		141	4-3	III	7	1-5	1-4	1-1	1-4	1½		
503		135	5-0	III	7	2-2	1-4	1-1	1-4	1½		
504		267	55	STR								
505		18	27-0									
506		15	27-9									
507		11	28-5									
508		13	29-2									
509		11	29-10									
510		13	30-6									
511		11	31-3									
512		13	31-10									
513		11	32-5									
514		13	33-0									
515		14	33-3	STR								
516 thru		70	25-1 to	VI	7	24-6 to						7 Ea. Δ = 2½
525			23-2			22-7						
526		8	23-4	VI	7	22-9						
527 thru		63	23-6 to	VI	7	23-1 to						7 Ea. Δ = 1⅞
535			24-9			24-2						
536 thru		70	28-3 to	STR								7 Ea. Δ = 2¾
545			26-2									
546		8	26-3	STR								
547 thru		63	26-4 to	STR								7 Ea. Δ = 1⅞
555			27-7									
556 thru		70	17-7 to	VI	7	17-0 to						7 Ea. Δ = 2⅛
565			16-0			15-5						
566 thru		70	16-3 to	VI	7	15-8 to						7 Ea. Δ = 2⅛
575			17-10			17-3						
576 thru		70	20-9 to	STR								7 Ea. Δ = 2⅝
585			19-0									
586 thru		70	19-1 to	STR								7 Ea. Δ = 2¼
595			20-9									
596 thru		72	48-1 to	STR								4 Ea. Δ = 2¾
5113			52-0									
5114 thru		68	51-9 to	STR								17 Ea. Δ = 3
5117			51-0									
5118 thru		72	52-4 to	VI	7	51-9 to						4 Ea. Δ = 2⅝
5135			56-0			55-5						
5136 thru		68	55-9 to	VI	7	55-2 to						17 Ea. Δ = 3
5139			55-0			54-5						
5140 thru		72	40-6 to	STR								4 Ea. Δ = 3
5157			44-9									
5158 thru		69	44-6 to	STR								23 Ea. Δ = 3
5160			44-0									
5161 thru		72	44-10 to	VI	7	44-3 to						4 Ea. Δ = 3
5178			49-0			48-5						
5179 thru		69	48-9 to	VI	7	48-2 to						23 Ea. Δ = 3
5181			48-3			47-8						
5182		87	5-9	IV	4-0	9½	6	7½	5	7		
5185 thru		70	9-0 to	STR								10 Ea. Δ = 2½
22N 5189	5		10-3									

TYPE I



TYPE II



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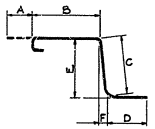

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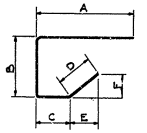

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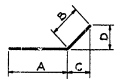
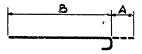


TYPE VI



Note:
All dimensions are out to out of bar.

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 21N & 22N

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA118

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	153	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 23N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
23N 501	5	274	6 - 9	II	3-1	9	3-1					
502	↑	153	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
503		25	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		
504 thru		96	4 - 4 to	III	7	1-6 to	1-4	1-1	1-4	1½		12 Ea. Δ = 1
511			4 - 11			2-1						
512		90	5 - 9	IV	4-0	9½	6	7½	3	7		
513		267	50 - 0	STR								
514		18	36 - 3	↑								
515		12	36 - 11									
516		10	37 - 8									
517		12	38 - 3									
518		10	39 - 0									
519		12	39 - 8									
520		11	40 - 3									
521		12	40 - 10									
522		10	41 - 5									
523	↓	12	42 - 0	↓								
524	5	14	42 - 2	STR								
725 thru	7	72	18 - 4 to	VI	10	17-6 to						12 Ea. Δ = 4
730			16 - 8			15-10						
731	7	12	16 - 10	VI	10	16-0						
732 thru	7	56	17 - 0 to	VI	10	16-2 to						14 Ea. Δ = 4
735			18 - 0			17-2						
536 thru	5	72	27 - 7 to	STR								12 Ea. Δ = 3
541			26 - 4									
542	5	12	26 - 7	STR								
543 thru	5	56	26 - 10 to	STR								14 Ea. Δ = 3
546			27 - 7									
747 thru	7	72	25 - 2 to	VI	10	24-4 to						12 Ea. Δ = 4
752			23 - 6			22-8						
753	7	11	23 - 8	VI	10	22-10						
754 thru	7	56	23 - 10 to	VI	10	23-0 to						14 Ea. Δ = 4
757			24 - 10			24-0						
558 thru	5	72	20 - 9 to	STR								12 Ea. Δ = 3
563	↑		19 - 6									
564		11	19 - 9	STR								
565 thru		56	20 - 0 to	STR								14 Ea. Δ = 3
568			20 - 9									
569 thru		72	51 - 6 to	STR								8 Ea. Δ = 2
577			52 - 10									
578		7	52 - 8	STR								
579 thru		60	52 - 7 to	STR								10 Ea. Δ = 2
584			51 - 9									
585 thru		72	49 - 0 to	VI	7	48-5 to						8 Ea. Δ = 2
593			50 - 4			49-9						
594		7	50 - 3	VI	7	49-8						
595 thru		60	50 - 2 to	VI	7	49-7 to						10 Ea. Δ = 2
5100			49 - 4			48-9						
5101 thru		72	44 - 10 to	STR								8 Ea. Δ = 2
5109			46 - 2									
5110		8	46 - 1	STR								
5111 thru		60	45 - 11 to	STR								10 Ea. Δ = 2
5116			45 - 1									
5117 thru		72	55 - 11 to	VI	7	55-4 to						8 Ea. Δ = 2
5125			57 - 3			56-8						
5126	↓	8	57 - 2	VI	7	56-7						
5127 thru	↑	60	57 - 1 to	VI	7	56-6 to						10 Ea. Δ = 2
23N 5132	5		56 - 3			55-8						

SLAB 24N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
24N 501	5	223	6 - 9	II	3-1	9	3-1					
502	↑	112	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
503		111	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		
504		50	5 - 9	IV	4-0	9½	6	7½	3	7		
505		83	60 - 0	STR								
506		15	52 - 6	↑								
507		13	55 - 0									
508		11	53 - 7									
509		13	54 - 2									
510		11	54 - 9									
511		27	55 - 6									
512		3	56 - 6	↓								
513		6	55 - 0	STR								
514		6	43 - 7	I	7	42-5						
515		6	42 - 5	STR								
516		223	42 - 11	I	7	41-9						
517		223	41 - 9	STR								
518 thru	↓	42	11 - 3 to	STR								7 Ea. Δ = 3
24N 523	5		10 - 0									

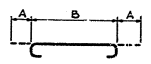
SLAB 25N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1 25N 501	5	213	41 - 9	STR								
S2 ↑ 502	↑	213	42 - 11	I	7	41-9						
S3 503		104	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4 504		104	6 - 9	II	3-1	9	3-1					
S5 504		107	6 - 9	II	3-1	9	3-1					
S6 505		107	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7 506		24	60 - 0	STR								
S8 506		28	60 - 0	↑								
S9 506		37	60 - 0									
S10 507		12	44 - 9									
S11 508		28	44 - 9 to									Δ = 1½
			47 - 7									
S12 509		37	44 - 9 to									Δ = 1
			47 - 9	↓								
S13 510		12	47 - 7	STR								
S14 ↓ 511	↓	25	5 - 9	IV	4-0	9½	6	7½	3	7		
S15 25N 511	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 26N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1 26N 501	5	146	41 - 9	STR								
S2 ↑ 502	↑	146	42 - 11	I	7	41-9						
S3 503		72	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4 504		72	6 - 9	II	3-1	9	3-1					
S5 504		74	6 - 9	II	3-1	9	3-1					
S6 505		74	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7 506		24	40 - 0	STR								
S8 506		28	40 - 0	↑								
S9 506		37	40 - 0									
S10 507		12	33 - 0									
S11 508 thru		28	33 - 1 to									4 Ea. Δ = 3
514			34 - 7									
S12 515 thru		37	33 - 1 to									8 Groups 4 Ea., 1 Group 5 Δ = 2¼
524			34 - 7									
S13 525		12	34 - 7	STR								
S14 ↓ 526	↓	25	5 - 9	IV	4-0	9½	6	7½	3	7		
S15 26N 526	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

TYPE I



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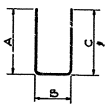

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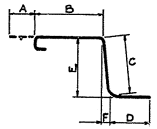

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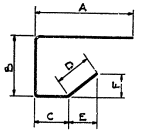
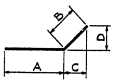
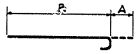


TYPE V



TYPE VI



Note:
All dimensions are out to out of bar.

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 23N THRU 26N

APPROVED BY: Lawrence B. Peasong Jr. 9-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA119

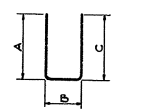
COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	154	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 27N	S1	27N 501	5	151	41-9	STR								
	S2	502		151	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		76	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-5									
	S11	508 thru		27	25-6 to									3 Ea. Δ+1½
		516			26-6									
	S12	517 thru		36	25-6 to									4 Ea. Δ+1½
		525			26-6									
	S13	526		12	26-7	STR								
	S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	27N 527	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 28N	S1	28N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		26	50-0									
	S9	506		35	50-0									
	S10	507		12	25-4									
	S11	508		9	25-6									
		509		9	25-8									
		510		8	25-10									
	S12	511 thru		35	25-6 to									7 Ea. Δ+1
		515			25-10									
	S13	516		12	25-11	STR								
	S14	517		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	28N 518	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 29N	S1	29N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-2									
	S11	507		27	25-2									
	S12	507		36	25-2									
	S13	507		12	25-2	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	29N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

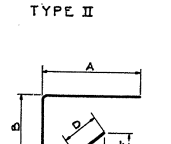
		MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 30N	S1	30N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-2									
	S11	507		36	25-2									
	S12	507		36	25-2									
	S13	507		12	25-2	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	30N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 31N	S1	31N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-2									
	S11	507		27	25-2									
	S12	507		36	25-2									
	S13	507		12	25-2	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	31N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 32N	S1	32N 501	5	275	41-9	STR								
	S2	502		275	42-11	I	7	41-9						
	S3	503		138	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		138	6-9	II	3-1	9	3-1					
	S5	504		138	6-9	II	3-1	9	3-1					
	S6	505		138	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		48	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	506		27	50-0									
	S11	506		36	50-0									
	S12	507		12	40-0									
	S13	507		27	40-0									
	S14	507		36	40-0									
	S15	508		12	39-7	STR								
	S16	509		25	5-11	IV	4-0	9½	8	7½	3	7		
	S17	32N 510	5	25	5-9	IV	4-0	9½	6	7½	3	7		

TYPE I



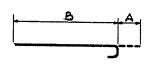
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 27N THRU 32N

APPROVED BY: Dennis D. Canavan Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 120

COUNTY	CONTRACT	C.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	155	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

33N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	33N 501	5	129	41-9	STR								
S2	502		129	42-11	I	7	41-9						
S3	503		65	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		65	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		64	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		64	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	25-4									
S11	508 thru		27	25-5 to									9 Ea. Δ=5
	510			24-9									
S12	511 thru		36	25-5 to									9 Ea. Δ=2
	514			24-9									
S13	515		12	24-8	STR								
S14	516		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	33N 517	5	25	5-11	IV	4-0	9½	8	7½	3	7		

34N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	34N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		67	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		67	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-9									
S11	508 thru		27	28-9 to									3 Ea. Δ=1½
	516			27-9									
S12	517 thru		36	28-9 to									4 Ea. Δ=1½
	525			27-9									
S13	526		12	27-8	STR								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	34N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

35N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	35N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		67	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		67	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-7									
S11	508 thru		27	28-7 to									3 Ea. Δ=2
	516			27-5									
S12	517 thru		36	28-7 to									4 Ea. Δ=2
	525			27-3									
S13	526		12	27-2	STR								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	35N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

36N SLAB

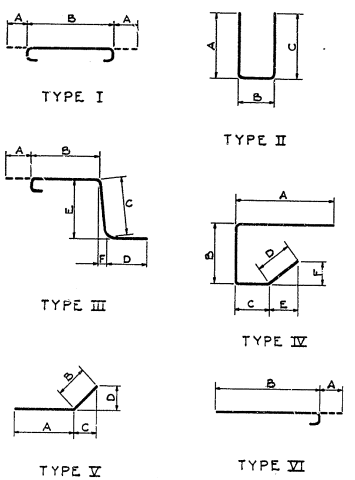
	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	36N 501	5	139	41-9	STR								
S2	502		139	42-11	I	7	41-9						
S3	503		70	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		70	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		68	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		68	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	30-5									
S11	508 thru		27	30-6 to									3 Ea. Δ=3
	516			28-6									
S12	517 thru		36	30-6 to									4 Ea. Δ=3
	525			28-6									
S13	526		12	28-5	STR								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	36N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

37N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	37N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-4									
S11	508 thru		27	28-3 to									3 Ea. Δ=2¼
	516			26-9									
S12	517 thru		36	28-3 to									4 Ea. Δ=2¼
	525			26-9									
S13	526		12	26-8	STR								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	37N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

38N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	38N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-4									
S11	508 thru		27	28-3 to									3 Ea. Δ=2¼
	516			26-9									
S12	517 thru		36	28-3 to									4 Ea. Δ=2¼
	525			26-9									
S13	526		12	26-8	STR								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	38N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		



Note:
All dimensions are out to out of bar

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 33N THRU 38N

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-14-64

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

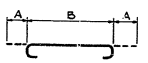
DWG. NO. SA 121

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
39N SLAB	S1	39N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-4									
	S11	508 thru		27	28-3 to									3 Ea. Δ·2¼
		516			26-9									
	S12	517 thru		36	28-3 to									4 Ea. Δ·2¼
		525			26-9									
	S13	526		12	26-8	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	39N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		
40N SLAB	S1	40N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-4									
	S11	508 thru		27	28-3 to									3 Ea. Δ·2¼
		516			26-9									
	S12	517 thru		36	28-3 to									4 Ea. Δ·2¼
		525			26-9									
	S13	526		12	26-8	STR								
	S14	527		25	5-9	IV	4-0	9½	8	7½	3	7		
	S15	40N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		
41N SLAB	S1	41N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-4									
	S11	508 thru		27	28-3 to									3 Ea. Δ·2¼
		516			26-9									
	S12	517 thru		36	28-3 to									4 Ea. Δ·2¼
		525			26-9									
	S13	526		12	26-8	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	41N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

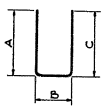
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
42N SLAB	S1	42N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-5									
	S11	508 thru		27	28-5 to									3 Ea. Δ·2¼
		516			26-11									
	S12	517 thru		36	28-5 to									4 Ea. Δ·2¼
		525			26-11									
	S13	526		12	26-10	STR								
	S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	42N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		
43N SLAB	S1	43N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		67	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		67	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-7									
	S11	508 thru		27	28-8 to									3 Ea. Δ·2¼
		516			27-2									
	S12	517 thru		36	28-8 to									4 Ea. Δ·2¼
		525			27-2									
	S13	526		12	27-2	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	43N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		
44N SLAB	S1	44N 501	5	141	41-9	STR								
	S2	502		141	42-11	I	7	41-9						
	S3	503		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		71	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		70	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		70	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	31-8									
	S11	508 thru		27	31-8 to									3 Ea. Δ·1½
		516			30-8									
	S12	517 thru		36	31-8 to									4 Ea. Δ·1½
		525			30-8									
	S13	526		12	30-8	STR								
	S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	44N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

COUNTY	CONTRACT	R.B.& BDG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	156	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



TYPE I



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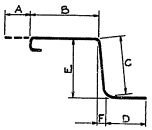

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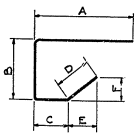

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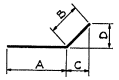
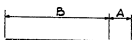


TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS 39N THRU 44N

APPROVED BY: Johnnie P. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 122

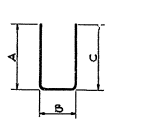
COUNTY	CONTRACT	R.D.A. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	157	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

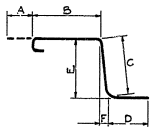
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
45N SLAB	S1	45N 501	5	160	41-9	STR								
	S2	502		160	42-11	I	7	41-9						
	S3	503		81	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		81	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		80	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		80	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	30-11									
	S11	508 thru		27	30-11 to									3 Eq. Δ1
		516			30-3									
	S12	517 thru		36	30-11 to									4 Eq. Δ1
		525			30-3									
	S13	526		12	30-3	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	45N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		
46N SLAB	S1	46N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		76	6-9	II	3-1	9	3-1					
	S5	504		76	6-9	II	3-1	9	3-1					
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	26-1									
	S11	507		27	26-1									
	S12	507		36	26-1									
	S13	507		12	26-1	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	46N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		
47N SLAB	S1	47N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		76	6-9	II	3-1	9	3-1					
	S5	504		76	6-9	II	3-1	9	3-1					
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	26-1									
	S11	507		27	26-1									
	S12	507		36	26-1									
	S13	507		12	26-1	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	47N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
48N SLAB	S1	48N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		76	6-9	II	3-1	9	3-1					
	S5	504		76	6-9	II	3-1	9	3-1					
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	26-1									
	S11	507		27	26-1									
	S12	507		36	26-1									
	S13	507		12	26-1	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	48N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		
49N SLAB	S1	49N 501	5	158	41-9	STR								
	S2	502		158	42-11	I	7	41-9						
	S3	503		80	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		80	6-9	II	3-1	9	3-1					
	S5	504		80	6-9	II	3-1	9	3-1					
	S6	505		80	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	30-1									
	S11	507		27	30-1									
	S12	507		36	30-1									
	S13	507		12	30-1	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	49N 509	5	25	5-9	IV	4-0	3½	6	7½	3	7		
50N SLAB	S1	50N 501	5	140	41-9	STR								
	S2	502		140	42-11	I	7	41-9						
	S3	503		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		71	6-9	II	3-1	9	3-1					
	S5	504		71	6-9	II	3-1	9	3-1					
	S6	505		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	21-1									
	S11	507		27	21-1									
	S12	507		36	21-1									
	S13	507		12	21-1	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	50N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

TYPE I



TYPE II



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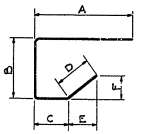

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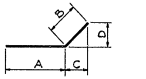

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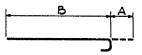


TYPE VI

Note:
All dimensions are out to out of bar

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 45N THRU 50N

APPROVED BY: Dennis R. Heaney
BRIDGE ENGINEER — DATE 4-14-64

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 123

D C B A 1 5 10 A B C D

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	158	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 51N

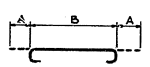
	MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	51N 501	5	140	41-9	STR								
S2	502		140	42-11	I	7	41-9						
S3	503		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		71	6-9	II	3-1	9	3-1					
S5	504		71	6-9	II	3-1	9	5-1					
S6	505		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	50-0	STR								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	21-1									
S11	507		27	21-1									
S12	507		36	21-1									
S13	507		12	21-1	STR								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	51N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 52N

	MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	52N 501	5	110	41-8 to	STR								22 Ea. Δ-2¼
	thru 505			42-5									
	506		22	42-8	STR								
	507		21	42-11	STR								
S2	508 thru		110	42-10 to	I	7	41-8½						22 Ea. Δ-2¼
	512			43-7			42-5						
	513		22	43-10	I	7	42-8						
	514		21	44-1	I	7	42-11						
S3	515		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	516		71	6-9	II	3-1	9	3-1					
S5	516		71	6-9	II	3-1	9	3-1					
S6	517		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	518		24	31-1	STR								
S8	518		27	31-1									
S9	518		36	31-1									
S10	519		12	40-0									
S11	519		29	40-0									
S12	519		38	40-0									
S13	519		12	40-0	STR								
S14	520		27	5-9	IV	4-0	9½	6	7½	3	7		
S15	52N 521	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 53N

	MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	53N 501	5	70	43-0 to	STR								7 Ea. Δ-2
	thru 510			44-5									
	511		70	44-6 to	STR								7 Ea. Δ-2
	thru 520			45-11									
S2	521		70	44-2 to	I	7	43-0 to						7 Ea. Δ-2
	thru 530			45-7			44-5						
	531		70	45-8 to	I	7	44-6 to						7 Ea. Δ-2
	thru 540			47-1			45-11						
S3	541		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S4	542		71	6-9	II	3-1	9	3-1					
S5	542		71	6-9	II	3-1	9	3-1					
S6	543		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		
S7	544		24	21-1	STR								
S8	544		17	21-1									
S9	544		3	21-1									
S10	544		5	21-1									
S11	544		4	21-1									
S12	544		21	21-1									
S13	544		6	21-1									
S14	544		6	21-1									
S15	544		6	21-1									
S16	545		12	50-0									
S17	545		21	50-0									
S18	545		5	50-0									
S19	545		4	50-0									
S20	545		12	50-0									
S21	545		28	50-0									
S22	545		6	50-0									
S23	545		6	50-0	STR								
S24	546		20	5-11	IV	4-0	9½	8	7½	3	7		
S25	546		4	5-11	IV	4-0	9½	8	7½	3	7		
S26	546		4	5-11	IV	4-0	9½	8	7½	3	7		
S27	546		15	5-9	IV	4-0	9½	6	7½	3	7		
S28	547		4	5-9	IV	4-0	9½	6	7½	3	7		
S29	547		4	5-9	IV	4-0	9½	6	7½	3	7		
S30	53N 547	5	4	5-9	IV	4-0	9½	6	7½	3	7		



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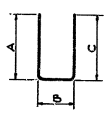

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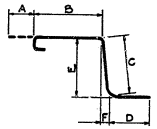

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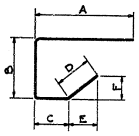

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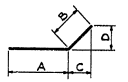
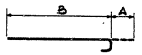


TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Mode by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 51N THRU 53N

APPROVED BY: _____ BRIDGE ENGINEER — 8-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA124

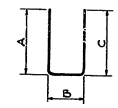
COUNTY	CONTRACT	F.A.S. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	64	159	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	54N 501	5	70	45-11 to	STR								7 Ea. Δ·2½
	thru 510			47-9									
	511		70	47-11 to	STR								7 Ea. Δ·2½
	thru 520			49-10									
S2	521		70	47-1 to	I	7	45-11 to 47-9						7 Ea. Δ·2½
	thru 530			48-11									
	531		70	49-1 to	I	7	47-11 to 49-11						7 Ea. Δ·2½
	thru 540			51-3									
S3	541		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S4	542		71	6-9	II	3-1	9	3-1					
S5	542		71	6-9	II	3-1	9	3-1					
S6	543		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		
S7	544		24	21-2	STR								
S8	544		17	21-2									
S9	544		4	21-2									
S10	544		5	21-2									
S11	544		4	21-2									
S12	544		21	21-2									
S13	544		7	21-2									
S14	544		6	21-2									
S15	544		6	21-2									
S16	545		12	50-0									
S17	545		21	50-0									
S18	545		6	50-0									
S19	545		5	50-0									
S20	545		12	50-0									
S21	545		28	50-0									
S22	545		7	50-0									
S23	545		7	50-0	STR								
S24	546		20	5-9	IV	4-0	9½	6	7½	3	7		
S25	546		5	5-9	IV	4-0	9½	6	7½	3	7		
S26	546		5	5-9	IV	4-0	9½	6	7½	3	7		
S27	547		15	5-11	IV	4-0	9½	8	7½	3	7		
S28	547		5	5-11	IV	4-0	9½	8	7½	3	7		
S29	547		4	5-11	IV	4-0	9½	8	7½	3	7		
S30	54N 547	5	4	5-11	IV	4-0	9½	8	7½	3	7		
	55N 501	5	83	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	502		166	6-9	II	3-1	9	3-1					
	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		
	504		105	50-0	STR								
	505		111	33-0	STR								
	506		32	5-9	IV	4-0	9½	6	7½	3	7		
	507		35	5-11	IV	4-0	9½	8	7½	3	7		
	508		161	51-2 to	I	7	50-0½						7 Ea. Δ·2½
	thru 530			55-9			54-7						
	531		4	55-10	I	7	54-8						
	532		161	50-0 to	STR								7 Ea. Δ·2½
	thru 554			54-7									
	55N 555	5	4	54-8	STR								

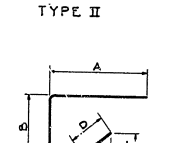
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	56N 501	5	83	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	502		166	6-9	II	3-1	9	3-1					
	503		28	4-3	III	7	1-5	1-4	1-1	1-4	1½		
	504		28	4-4	III	7	1-6	1-4	1-1	1-4	1½		
	505		27	4-5	III	7	1-7	1-4	1-1	1-4	1½		
	506		111	50-0	STR								
	507		119	33-0	STR								
	508		35	5-11	IV	4-0	9½	8	7½	3	7		
	509		39	5-9	IV	4-0	9½	6	7½	3	7		
	510		180	55-10 to	I	7	54-8 to						9 Ea. Δ·3"
	thru 529			60-7			59-5						
	530		180	54-8 to	STR								9 Ea. Δ·3"
	56N thru 549	5		59-6									
	57N 501	5	83	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	502		166	6-9	II	3-1	9	3-1					
	503		28	4-6	III	7	1-8	1-4	1-1	1-4	1½		
	504		28	4-7	III	7	1-9	1-4	1-1	1-4	1½		
	505		27	4-8	III	7	1-10	1-4	1-1	1-4	1½		
	506		122	50-0	STR								
	507		124	33-0	STR								
	508		39	5-9	IV	4-0	9½	6	7½	3	7		
	509		40	5-11	IV	4-0	9½	8	7½	3	7		
	510		83	22-7	VI	22-0	7						
	511		83	18-2	STR								
	512		82	15-0	VI	14-5	7						
	513		82	25-9	STR								
	514		82	35-4 to	STR								2 Ea. Δ·1½
	thru 554			40-4									
	555		82	47-4 to	VI	46-8 to	7						2 Ea. Δ·1½
	thru 595			52-4			51-9						
	596		81	42-10 to	STR								3 Ea. Δ·2¼
	thru 5122			47-9									
	5123		2	47-11	STR								
	5124		81	39-8 to	VI	39-1 to	7						3 Ea. Δ 2¼
	thru 5150			44-7			44-0						
	57N 5151	5	2	44-9	VI	44-2	7						

TYPE I



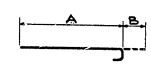
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 54N THRU 57N

APPROVED BY: Volumnia R. Casson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 125

COUNTY	CONTRACT	F.A.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	180	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

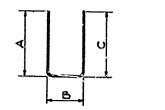
SLAB 58N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
58N 501	5	94	5-0	III	7	2-2	1-4	1-1	1-4	1½		
502	↓	188	6-9	II	3-1	9	3-1					
503		32	4-9	III	7	1-11	1-4	1-1	1-4	1½		
504		31	4-10	III	7	2-0	1-4	1-1	1-4	1½		
505		31	4-11	III	7	2-1	1-4	1-1	1-4	1½		
506		131	50-0	STR								
507		134	44-2	STR								
508		39	5-11	IV	4-0	9½	8	7½	3	7		
509		45	5-9	IV	4-0	9½	6	7½	3	7		
510		94	22-7	VI	22-0	7						
511		94	25-8	STR								
512		98	45-4	VI	44-9	7						
513		98	48-5	STR								
514		98	17-5 to	STR								3 Ea. Δ·2¼
thru 544			23-0									
545		98	21-10 to	VI	21-3 to	7						5 Ea. Δ·2¼
thru 575			27-5		26-10							
576		90	40-2 to	STR								3 Ea. Δ·2¼
thru 5105			45-7									
5106		4	45-9	STR								
5107		90	44-7 to	VI	44-0 to	7						3 Ea. Δ·2¼
thru 5136	↓		50-0		49-5							
58N 5137	5	4	50-2	VI	49-7	7						

SLAB 59N

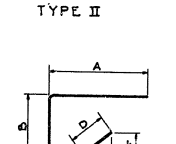
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
59N 501	5	120	5-0	III	7	2-2	1-4	1-1	1-4	1½		
502	↓	120	6-9	II	3-1	9	3-1					
503		139	58-7	STR								
504		45	5-9	IV	4-0	9½	6	7½	3	7		
505		45	8-9	IV	5-6	9½	2-0	7½	3	7		
506		60	30-1	VI	29-6	7						
507		60	25-8	STR								
508		59	37-11	VI	37-4	7						
509		59	41-4	STR								
510		57	30-2 to	STR								3 Ea. Δ·2
thru 528			58-2									
529		2	33-4	STR								
530		57	34-9 to	VI	34-2 to	7						3 Ea. Δ·2
thru 548			37-9		37-2							
549		2	37-11	VI	37-4	7						
550		60	45-9 to	STR								3 Ea. Δ·2
thru 569			48-11									
570		60	42-7 to	VI	42 0 to	7						3 Ea. Δ·2
thru 589			45-9		45-2							
590	↓	2	37-5	STR								
59N 591	5	2	21-8	STR								

TYPE I



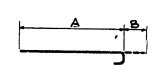
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 58N & 59N

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA126

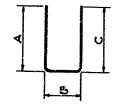
COUNTY	CONTRACT	A.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	1-95-2(12)	'64	161	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
BG 22N	S1	BG22N501	5	10	28-4	Str.								Splice 5 T.&B.
	&S3	↓ 502	↑	10	40-0	Str.								Splice 5 T.&B.
	S2	503		5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	504		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	505		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	506		24	4-0	Str.								" " "
	S6	↓ 506	↓	44	4-0	Str.								
	S7	BG22N506	5	45	4-0	Str.								
BG 23N	S1	BG23N501	5	10	40-0	Str.								Splice 5 T.&B.
	&S3	↓ 502	↑	10	31-2	Str.								Splice 5 T.&B.
	S2	503		5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	504		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	505		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	506		24	4-0	Str.								" " "
	S6	↓ 506	↓	46	4-0	Str.								
	S7	BG23N506	5	47	4-0	Str.								
BG 24N	S1	BG24N501	5	10	40-0	Str.								Splice 5 T.&B.
	&S8	↓ 502	↑	10	32-0	Str.								Splice 5 T.&B.
	S2	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	↓ 505	↓	46	4-0	Str.								
	S7	BG24N505	5	47	4-0	Str.								
BG 25N	S1	BG25N501	5	5	41-9	Str.								
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		27	4-0	Str.								
	S7	↓ 505	↓	28	4-0	Str.								
	S8	BG25N501	5	5	41-9	Str.								
BG 26N	S1	BG26N501	5	4	41-9	Str.								
	S2	↓ 502	↑	4	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		4	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		8	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	3-0	Str.								" " "
	S6	505		27	3-0	Str.								
	S7	↓ 505	↓	28	3-0	Str.								
	S8	BG26N501	5	4	41-9	Str.								

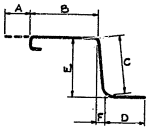
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
BG 22S	S1	BG22S501	5	5	42-11	I	7	41-9						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		28	4-0	Str.								
	S7	505		28	4-0	Str.								
	S8	506		5	38-6	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								Exterior Parapet
	S11	BG22S509	5	5	2-6	Str.								Interior Parapet
BG 23S	S1	BG23S501	5	5	42-11	I	7	41-9						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		28	4-0	Str.								
	S7	505		28	4-0	Str.								
	S8	506		5	38-8	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								Exterior Parapet
	S11	BG23S509	5	5	2-6	Str.								Interior Parapet
BG 24S	S1	BG24S501	5	5	45-6	I	7	44-4						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		30	4-0	Str.								
	S7	505		30	4-0	Str.								
	S8	506		5	40-9	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								Exterior Parapet
	S11	BG24S509	5	5	3-0	Str.								Interior Parapet
BG 25S	S1	BG25S501	5	5	46-2	I	7	45-0						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		30	4-0	Str.								
	S7	505		30	4-0	Str.								
	S8	506		5	41-3	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								
	S11	BG25S508	5	5	3-6	Str.								
BG 26S	S1	BG26S501	5	4	46-2	I	7	45-0						
	S2	↓ 502	↑	4	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		4	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		8	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	3-0	Str.								" " "
	S6	505		30	3-0	Str.								
	S7	505		30	3-0	Str.								
	S8	506		4	41-3	Str.								
	S9	507		8	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	4	3-6	Str.								
	S11	BG26S508	5	4	3-6	Str.								

TYPE I

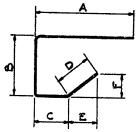


TYPE II

TYPE III



TYPE IV



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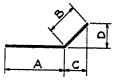

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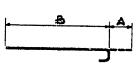


Note:
All dimensions are out to out of bar

Made by J.E.D.
Traced by J.E.D.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS - MISCELLANEOUS
SHEET 1 OF 2

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA127

COUNTY	CONTRACT	R.N.S. REQ. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	162	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

BULL NOSES AND EXTENDED CURBS

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
MA501	5	12	2-10	VII	1-4	1-6	1-1					
502		10	3-9	VII	1-4	2-5	1-8					
503		2	5-10	VII	1-4	4-6	3-0					
504		10	9-3	II	4-4	9	4-4					
505		2	4-11	VII	1-4	3-7	2-5					
506		2	4-2	III	7	1-11	1-4	6	1-4	1½		
507		4	5-0	III	7	2-2	1-4	1-1	1-4	1½		
508		2	3-11	III	7	1-8	1-4	6	1-4	1½		
MA509	5	4	4-4	III	7	1-6	1-4	1-1	1-4	1½		
MB501	5	12	2-10	VII	1-4	1-6	1-1					
502		10	3-9	VII	1-4	2-5	1-8					
503		2	5-10	VII	1-4	4-6	3-0					
504		10	9-3	II	4-4	9	4-4					
505		2	4-11	VII	1-4	3-7	2-5					
506		2	3-11	III	7	1-8	1-4	6	1-4	1½		
507		4	4-4	III	7	1-6	1-4	1-1	1-4	1½		
508		2	4-2	III	7	1-11	1-4	6	1-4	1½		
MA509	5	4	5-0	III	7	2-2	1-4	1-1	1-4	1½		
MD501	5	7	56-0	Str								
502		2	3-10	VIII	2-3	1-1	7					
503		2	4-10	VIII	3-3	1-1	7					
504		2	5-4	VIII	3-9	1-1	7					
505		1	5-7	VIII	4-0	1-1	7					
506 thru		60	5-0 to	VIII	3-5 to	1-1	7					20 ea. Δ=2
508			5-4		3-9							
509 thru		42	5-6 to	VIII	3-11 to	1-1	7					14 ea. Δ=2
MD511	5		5-10		4-3							
BC501	5	7	23-4	Str								
502		2	3-10	VIII	2-3	1-1	7					
503		2	4-10	VIII	3-3	1-1	7					
504		2	5-4	VIII	3-9	1-1	7					
505		1	5-7	VIII	4-0	1-1	7					
506 thru		48	5-0 to	VIII	3-5 to	1-1	7					4 ea. Δ=1⅞
BC511	5		6-8		5-1							

LIGHT STD. PEDESTAL

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	L501	5	148	7-0	Str								4 each pedestal
	L502	5	74	5-8	I	4-2	9	7					2 " "
	L503	5	74	6-6	I	4-6	1-4	7					2 " "
	L504	5	296	5-6	II	4-7	1-0						8 " "
	L505	5	148	6-7	IV	9	3-0						4 " "
	L506	3	185	6-7	III	1-8	1-5	4					5 " "
	L507	5	16	5-3	II	4-6	10						Bullnose MD
	L508	3	4	9'-1	III	2'-2	2'-2	4					" "

SCUPPERS

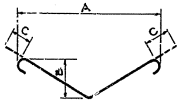
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
DR-1	D501	5	96	7-0	Str								12 each scupper
	D502	5	16	8-7	VI	8-0	7						2 " "
	D503	5	16	8-0	Str								2 " "
DR-1A	D701	7	12	7-0	Str								NB adjacent to Pier 23
	D502	5	2	8-7	VI	8-0	7						
	D503	5	2	8-0	Str								
DR-1A	D701	7	12	7-0	Str								NB between Piers 23 & 24
	D502	5	2	8-0	Str								
	D503	5	2	8-0	Str								
DR-2	D504	5	370	4-2	V	2-6	9	1-0					5 each scupper
	D505	5	296	5-8	V	2-0	9	1-0					4 " "
	D506	5	888	7-0	Str								12 " "
	D507	5	148	8-7	VI	8-0	7						2 " "
	D508	5	148	8-0	Str								2 " "

SIGN FOUNDATIONS

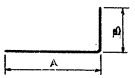
Not In Contract 7

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
OS-3	SS601	6	24	7-10	IX	6-6	8						12 each footing
	SS602	6	16	11-10	IX	10-6	8						8 " "
	SS603	4	16	9-8	X	4-3	1-0						8 " "
	SS604	6	36	4-6	Str								18 " "
OS-4	SS805	8	11	10-8	IX	8-6	1-1						
	SS806	8	11	8-6	Str								
	SS807	8	13	12-5	IX	10-3	1-1						
	SS808	8	13	10-3	Str								
	SS409	4	4	8-10	XI	1-3	1-0						
	SS810	8	16	5-7	VI	4-6	1-1						
	SS311	3	76	7-1	IV	1-2	3-1						4 each footing
	SS312	3	57	3-2	Str								3 " "
	SS313	3	114	5-2	IV	1-2	2-0						6 " "

TYPE I



TYPE II



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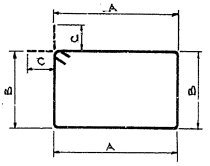

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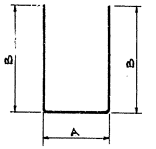

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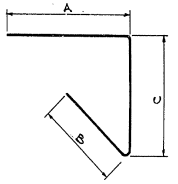

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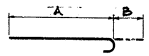

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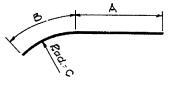
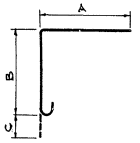


TYPE VIII



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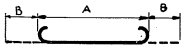

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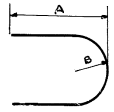

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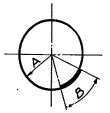


Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS - MISCELLANEOUS
SHEET 2 OF 2

APPROVED BY: T. Dennis O'Connor Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA128

Made by J.R.D.
Traced by J.R.D.
Checked by H.B.L.

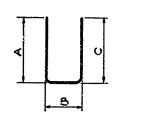
COUNTY	CONTRACT	F.A.S. REG. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	163	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

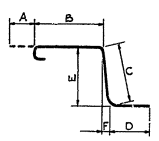
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 0A	0A 501	5	281	6-9	II	3-1	9	3-1					
	502		281	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		119	50-0	STR								
	504		3	46-6									
	505		6	45-0									
	506		13	42-6									
	507		13	43-1									
	508		11	43-9									
	509		26	44-6	STR								
	510		30	5-9	IV	4-0	9½	6	7½	3	7		
	511		6	27-5	STR								
	512		6	28-7	I	7	27-5						
	513		279	26-9	STR								
	0A 514	5	279	27-11	I	7	26-9						
SLAB 1A	1A 501	5	234	6-9	II	3-1	9	3-1					
	502		234	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	60-0	STR								
	504		26	57-1	STR								
	505		11	57-7	STR								
	506		26	58-2	STR								
	507		30	5-9	IV	4-0	9½	6	7½	3	7		
	508		234	26-9	STR								
	1A 509	5	234	27-11	I	7	26-9						
SLAB 2A	2A 501	5	249	6-9	II	3-1	9	3-1					
	502		249	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		126	50-0	STR								
	504		13	25-6									
	505		13	25-10									
	506		11	26-2									
	507		26	26-8	STR								
	508		30	5-9	IV	4-0	9½	6	7½	3	7		
	509		250	26-9	STR								
	2A 510	5	250	27-11	I	7	26-9						
SLAB 3A	3A 501	5	152	6-9	II	3-1	9	3-1					
	502		152	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	50-0	STR								
	504		63	26-0	STR								
	505		15	5-11	IV	4-0	9½	8	7½	3	7		
	506		151	26-9	STR								
	507		151	27-11	I	7	26-9						
	3A 508	5	15	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 4A	4A 501	5	150	6-9	II	3-1	9	3-1					
	502		150	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	40-0	STR								
	504		63	35-0	STR								
	505		15	5-9	IV	4-0	9½	6	7½	3	7		
	506		148	26-9	STR								
	507		148	27-11	I	7	26-9						
	4A 508	5	15	5-11	IV	4-0	9½	8	7½	3	7		

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 5A	5A 501	5	154	6-9	II	3-1	9	3-1					
	502		154	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	50-0	STR								
	504		63	27-0	STR								
	505		15	8-9	IV	5-6	9½	2-0	7½	3	7		
	506		15	5-9	IV	4-0	9½	6	7½	3	7		
	507		153	26-9	STR								
	508		153	27-11	I	7	26-9						
	5A 509	5	2	21-8	STR								

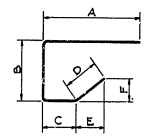
TYPE I



TYPE II



TYPE III



TYPE IV

Note:
All dimensions are out to out of bar.

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS RAMP A

APPROVED BY: Johannes E. Brevoort, Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA129

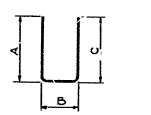
COUNTY	CONTRACT	P.R.& REF. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	164	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

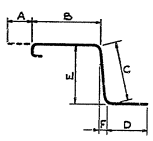
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 0B	0B 501	5	105	6-9	II	3-1	9	3-1					
	502	↕	105	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		50	51-8	STR								
	504		47	51-6	STR								
	505		30	8-9	IV	5-6	9½	2-0	7½	3	7		
	506		26	5-9	IV	4-0	9½	6	7½	3	7		
	507		4	16-8	STR								
	508 thru		54	41-0 to	STR								3 Ea. Δ=2⅜
	525			44-4									
	526 thru		51	44-6 to	STR								3 Ea. Δ=2½
	542			47-10									
	543 thru		54	42-2 to	I	7	41-0						3 Ea. Δ=2⅜
	560			45-6			44-4						
	561 thru	↕	51	45-8 to	I	7	44 6 to						3 Ea. Δ=2½
	OB 577	5		49-0			47-10						
SLAB 1B	1B 501	5	121	6-9	II	3-1	9	3-1					
	502	↕	121	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		37	59-5	STR								
	504		50	59-3	STR								
	505		25	5-9	IV	4-0	9½	6	7½	3	7		
	506 thru		60	34-5 to	STR								3 Ea. Δ=2
	525			37-5									
	526 thru		60	37-7 to	STR								3 Ea. Δ=2⅛
	545			41-0									
	546 thru		60	35-5 to	I	7	34 3 to						3 Ea. Δ=2
	565			38-7			37-5						
	566 thru		60	38-9 to	I	7	37 7 to						3 Ea. Δ=2⅛
	585	↕		42-2			41-0						
	1B 586	5	21	5-11	IV	4-0	9½	8	7½	3	7		
SLAB 2B	2B 501	5	121	6-9	II	3-1	9	3-1					
	502	↕	121	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		39	59-5	STR								
	504		40	59-3	STR								
	505		20	5-11	IV	4-0	9½	8	7½	3	7		
	506 thru		60	28-10 to	STR								4 Ea. Δ=2¼
	520			31-5									
	521 thru		60	31-6 to	STR								4 Ea. Δ=2⅜
	535			34-3									
	536 thru		60	30-0 to	I	7	28 10 to						4 Ea. Δ=2¼
	550			32-7			31-5						
	551 thru		60	32-8 to	I	7	31-6 to						4 Ea. Δ=2⅜
	565	↕		35-5			34-3						
	2B 566	5	17	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 3B	3B 501	5	171	6-9	II	3-1	9	3-1					
	502	↕	171	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	40-0	STR								
	504		41	46-0	STR								
	505		28	45-8	STR								
	506		15	5-9	IV	4-0	9½	6	7½	3	7		
	507 thru		85	23-9 to	STR								5 Ea. Δ=1¾
	523			26-1									
	524 thru		85	26-2 to	STR								5 Ea. Δ=2
	540			28-10									
	541 thru		85	24-11 to	I	7	23 9 to						5 Ea. Δ=1¾
	557			27-3			26-1						
	558 thru		85	27-4 to	I	7	26 2 to						5 Ea. Δ=2
	574	↕		30-0			28-10						
	3B 575	5	15	5-11	IV	4-0	9½	8	7½	3	7		

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 4B	4B 501	5	147	6-9	II	3-1	9	3-1					
	502	↕	147	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		57	40-0	STR								
	504		35	34-2	STR								
	505		25	33-9	STR								
	506		12	5-11	IV	4-0	9½	8	7½	3	7		
	507 thru		110	21-9 to	STR								11 Ea. Δ=1¾
	516			23-1									
	517 thru		36	23-4 to	STR								12 Ea. Δ=2
	519			23-8									
	520 thru		110	22-11 to	I	7	21 9 to						11 Ea. Δ=1¾
	529			24-3			23-1						
	530 thru		36	24-6 to	I	7	23 4 to						12 Ea. Δ=2
	532	↕		24-10			23-8						
	4B 533	5	12	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 5B	5B 501	5	142	6-9	II	3-1	9	3-1					
	502	↕	142	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		57	40-0	STR								
	504		57	31-1	STR								
	505		24	5-9	IV	4-0	9½	6	7½	3	7		
	506	↕	140	21-9	STR								
	5B 507	5	140	22-11	I	7	21-9						
SLAB 6B	6B 501	5	126	6-9	II	3-1	9	3-1					
	502	↕	126	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		48	30-0	STR								
	504		3	26-6	↕								
	505		6	25-0									
	506		24	35-4									
	507		9	35-8	↕								
	508		24	36-0	STR								
	509		12	5-9	IV	4-0	9½	6	7½	3	7		
	510		6	22-5	STR								
	511		6	23-7	I	7	22-5						
	512		124	21-9	STR								
	513	↕	124	22-11	I	7	21-9						
	6B 514	5	12	5-11	IV	4-0	9½	8	7½	3	7		

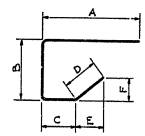
TYPE I



TYPE II



TYPE III



TYPE IV

Note:
All dimensions are out to out of bar.

Mode by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS RAMP B

APPROVED BY: Johnnie W. Kennedy Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

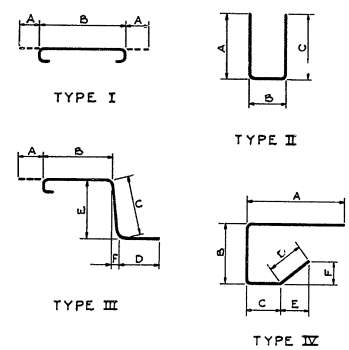
DWG. NO. SA130

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	165	

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB OC	OC 501	5	62	6-9	II	3-1	9	3-1					
	502		62	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	29-10	STR								
	504		15	8-9	IV	5-6	9½	2-0	7½	3	7		
	505		15	5-11	IV	4-0	9½	8	7½	3	7		
	506		61	27-11	I	7	26-9						
	507		61	26-9	STR								
	OC 508	5	2	21-8	STR								
SLAB IC	IC 501	5	158	6-9	II	3-1	9	3-1					
	502		158	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	50-0	STR								
	504		63	29-1	STR								
	505		15	5-11	IV	4-0	9½	8	7½	3	7		
	506		156	27-11	I	7	26-9						
	507		156	26-9	STR								
	IC 508	5	15	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 2C	2C 501	5	86	6-9	II	3-1	9	3-1					
	502		86	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	41-9	STR								
	504		15	8-9	IV	5-6	9½	2-0	7½	3	7		
	505		15	5-9	IV	4-0	9½	6	7½	3	7		
	506		85	27-11	I	7	26-9						
	507		85	26-9	STR								
	2C 508	5	2	21-8	STR								

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS



Note:
All dimensions are out to out of bar.

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS RAMP C

APPROVED BY: Lorraine R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

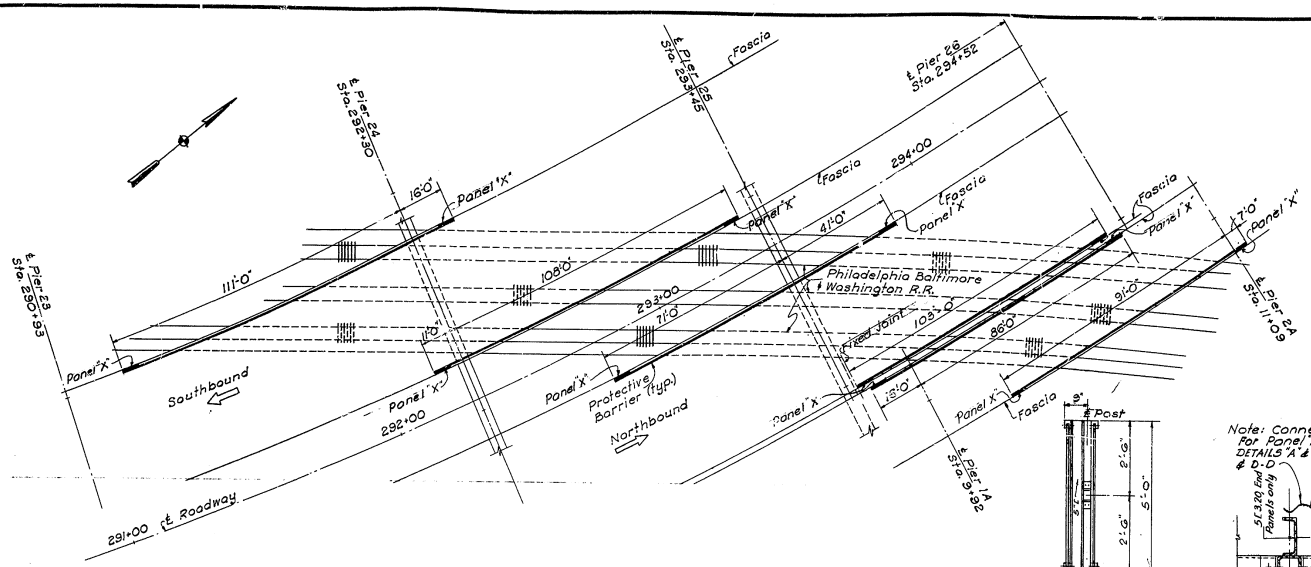
SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

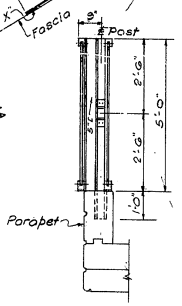
DWG. NO. SA131

COUNTY	CONTRACT	P.R.S. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	166	215

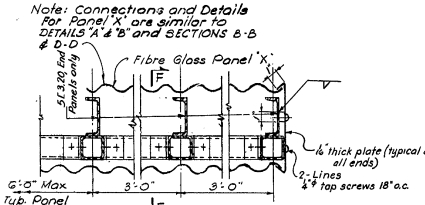
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



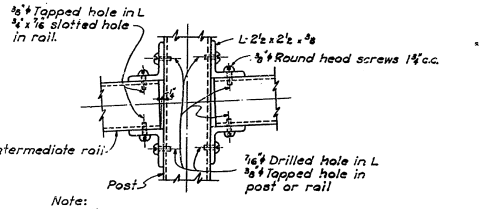
PLAN
SCALE 1 IN. = 20 FT.



SECTION F-F
SCALE 1½ IN. = 1 FT.

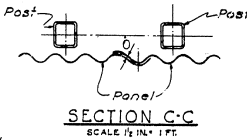


SECTION E-E
SCALE 1½ IN. = 1 FT.

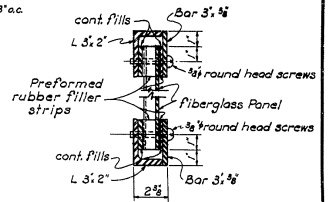


Note:
Fiberglass panel not shown

DETAIL "B"
SCALE 3 IN. = 1 FT.

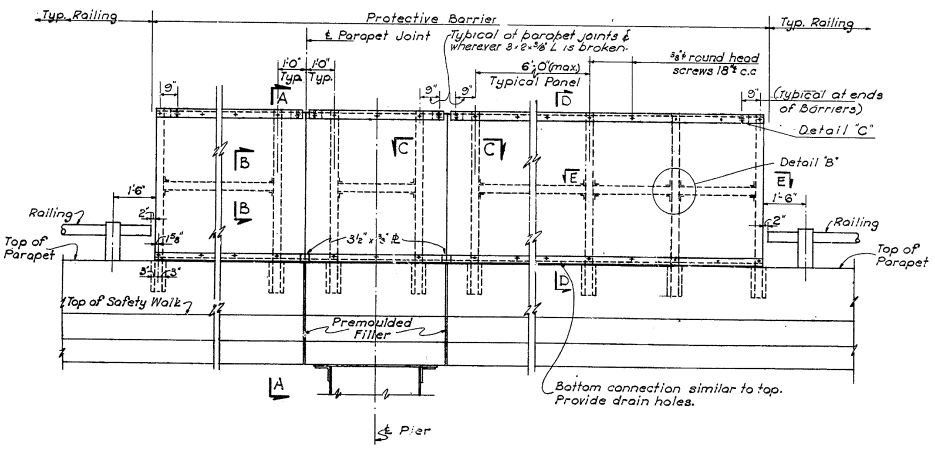


SECTION C-C
SCALE 1½ IN. = 1 FT.

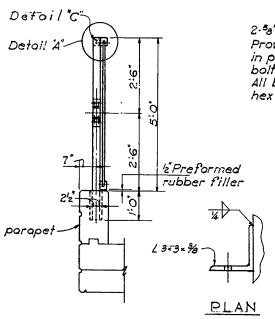


Note:
Intermediate rail not shown see Section B-B.

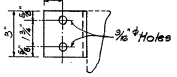
SECTION D-D
SCALE 3 IN. = 1 FT.



ELEVATION
SCALE ½ IN. = 1 FT.



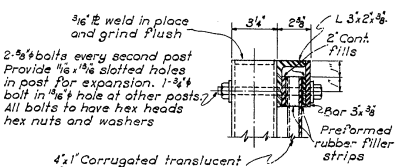
SECTION A-A
SCALE ½ IN. = 1 FT.



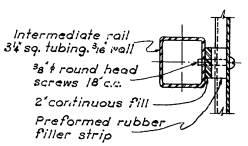
PLAN

ELEVATION
DETAIL "C"
SCALE 3 IN. = 1 FT.

Note
"Clip angles" to be welded to track side of barrier per dimensions of Elevation.



DETAIL A
SCALE 3 IN. = 1 FT.



SECTION B-B
SCALE 3 IN. = 1 FT.

NOTES:
1. Material to be of aluminum - see specifications.
2. If steel alternate is to be used
   a. All materials and details to be galvanized structural carbon steel after fabrication.
   b. Sizes of material and details to be same as or equivalent to aluminum sizes.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PROTECTIVE BARRIER FOR PENNSYLVANIA RAILROAD

APPROVED BY: [signature] BRIDGE ENGINEER — DATE 4-15-64

SCALE: AS NOTED

DATE: APRIL 1, 1964

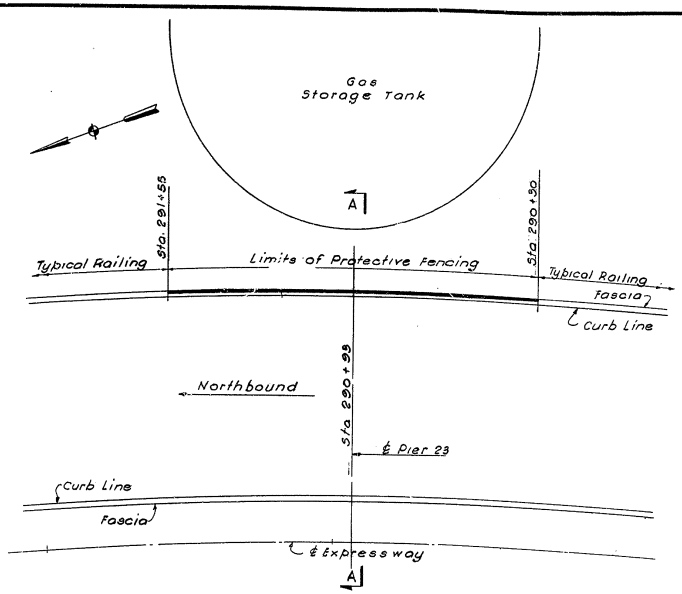
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA132

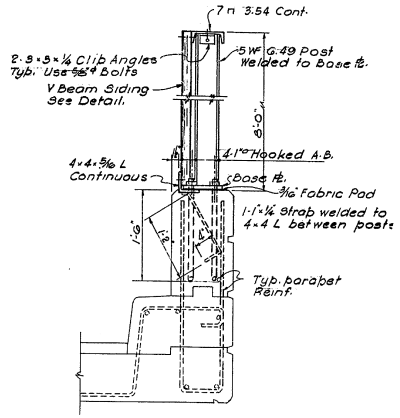
7-4

COUNTY	CONTRACT	P.R.A. R.D. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	167	215

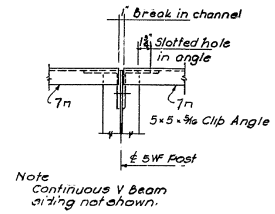
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



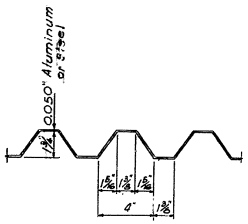
PLAN
SCALE 1 IN. = 20 FT.



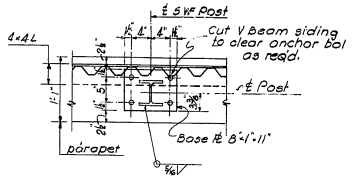
SECTION B-B
SCALE 1 IN. = 1 FT.



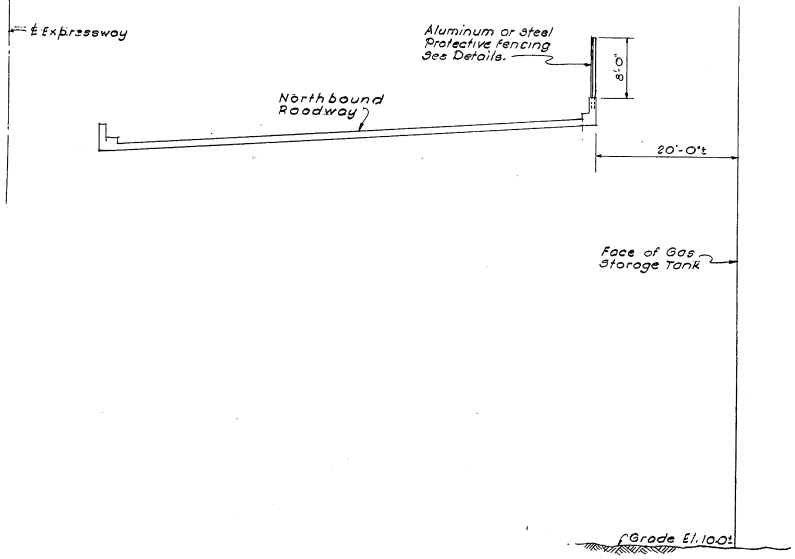
DETAIL "A"
SCALE 1½ IN. = 1 FT.



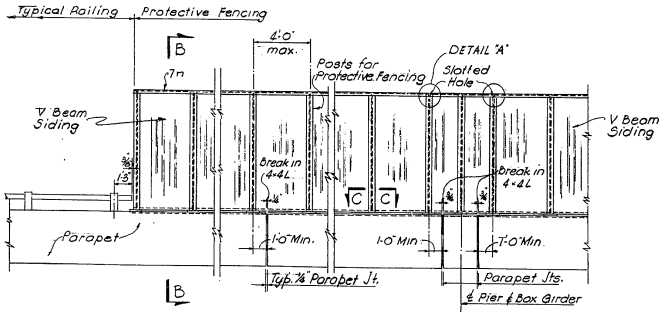
V BEAM SIDING
NO SCALE



SECTION C-C
SCALE 1 IN. = 1 FT.



SECTION A-A
SCALE ⅛ IN. = 1 FT.



PROTECTIVE FENCING ELEVATION
SCALE ¼ IN. = 1 FT.

NOTES - ALUMINUM

1. DETAILS
   a. V Beam fasteners to angle or channel 10⅝" o.c. max.
   b. V Beam fasteners for side laps 12" o.c. max.
   c. Continuous angle and channel interrupt at posts where required by available lengths.
2. For parapet and related details see structural drawings.

NOTES - STEEL ALTERNATE

1. All material and details to be galvanized structural carbon steel.
2. Sizes of material and details to be same as or equivalent to aluminum sizes.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PROTECTIVE FENCING AT GASOLINE STORAGE TANK
STA. 290+30 TO STA. 291+55

APPROVED BY: Wilmer R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

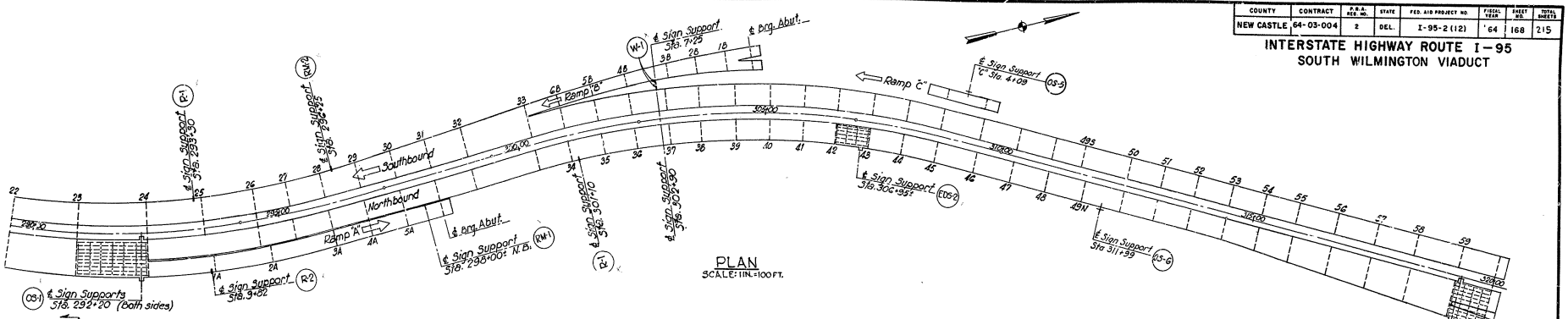
SCALE: AS NOTED
DATE: APRIL 1, 1964

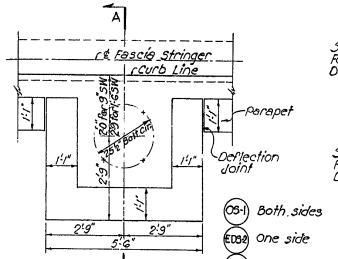
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

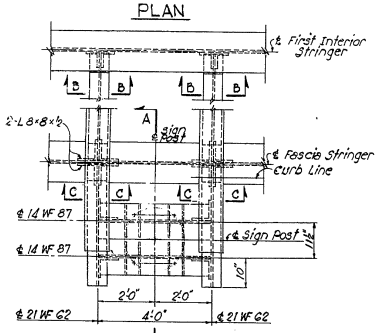
DWG. NO. SA133

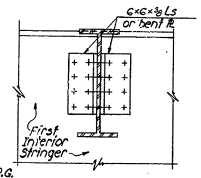
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	168	215

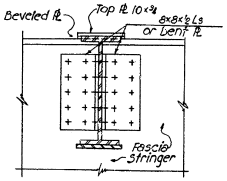
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

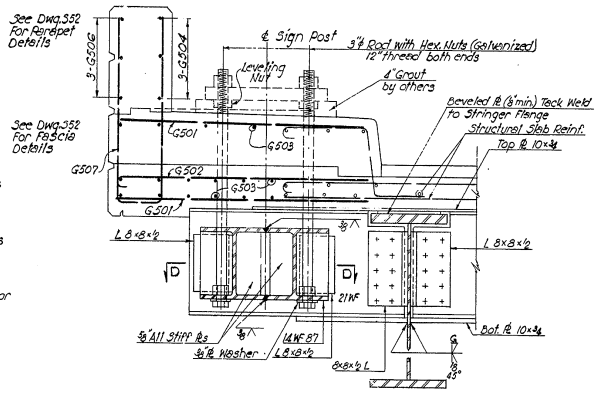


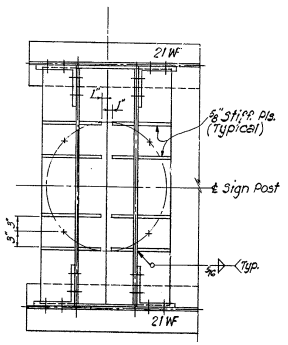


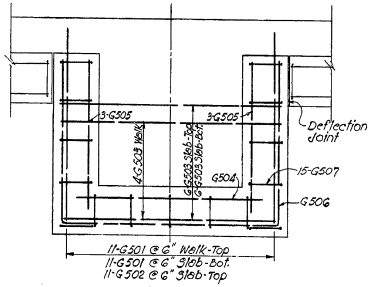


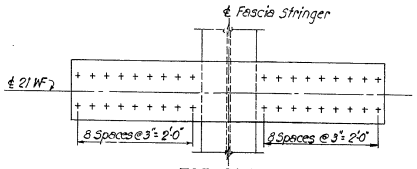


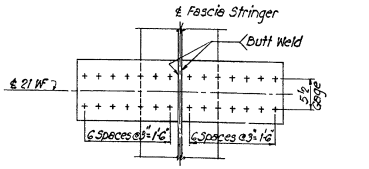






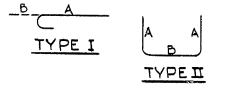


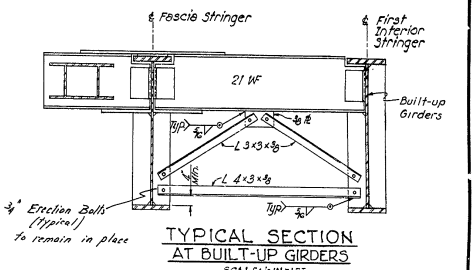




BAR LIST

MARK	SIZE	NO. REQD.	LGTH.	TYPE	A	B
G501	5	4×22	4-4	STR.		
G502		4×11	4-11	I	4-4	7
G503		4×12	5-2	STR.		
G504		4×3	4-3	STR.		
G505		4×6	3-6	STR.		
G506	4	4×3	12-3	II	3-6	5-1
G507	5	4×15	6-9	II	3-7	9





(R-1) Sta. 293+30 M.L.

(R-2) Sta. 9+82 Ramp "A"

Notes:
For general notes, see dwg. SA2.
For framing plans see dwgs. SA54 thru SA58.
Interior surfaces of box formed by the 2-14 WF 87 shall be coated with a protective coating for metal surfaces before joining and touched up with the same material after welding.
Structural Steel for sign supports ASTM-A36.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SIGN SUPPORTS
SHEET 1 OF 2

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE AS NOTED
DATE: APRIL 1, 1964

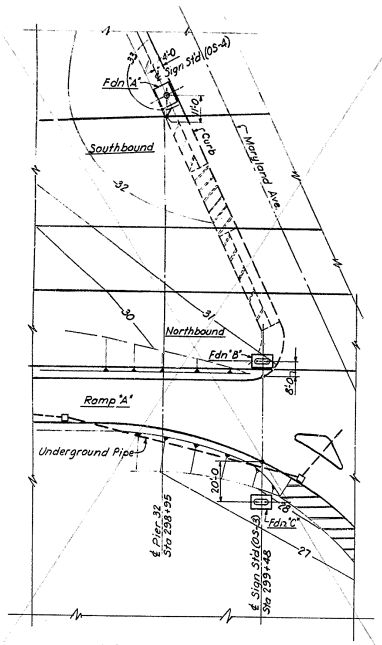
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA134

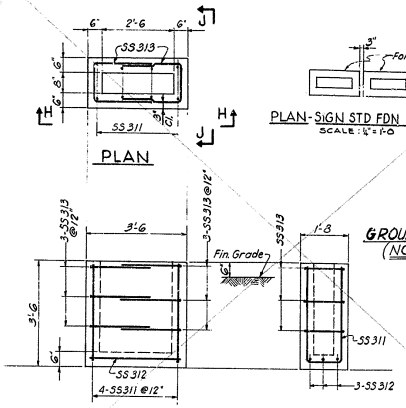
Dr. by R.G.
Chk. by J.A.R.

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2 (12)	'64	169	215

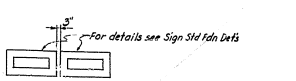
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



LOCATION PLAN
SIGNS OS-3 & OS-4
SCALE: 1 IN. = 50 FT

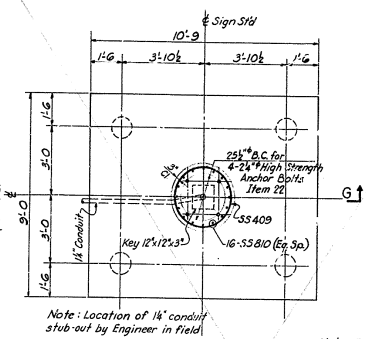


SIGN ST'D FOUNDATION DETAILS
(RMA-2,3,8,9,10,12,13,14,R-3,R-4 & W-1)
SCALE: ½" = 1'-0



PLAN-SIGN STD FDN FOR RMA-1,4,6&7
SCALE: ¼" = 1'-0

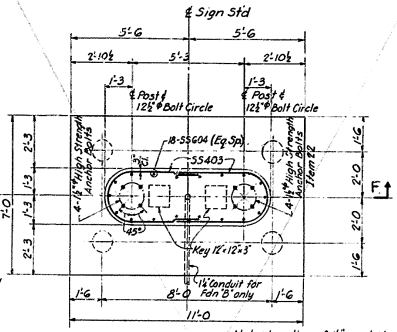
GROUND MOUNTED SIGN FDN'S
(NOT IN CONTRACT)



Note: Location of 14" conduit stub-out by Engineer in field

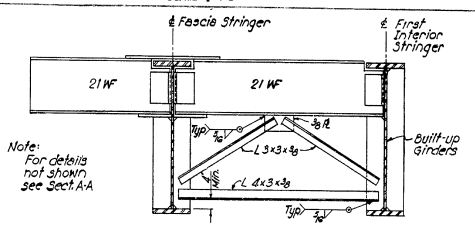
PLAN

Note: Foundation concrete for ground mounted signs to be paid for under Item 18- Portland Cement Concrete Masonry in Pier Footings.



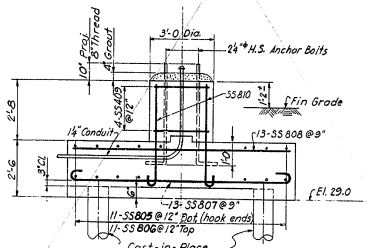
PLAN

Note: Location of 14" conduit stub-out by Engineer in Field

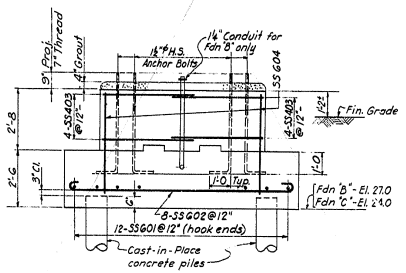


Note: For details not shown see Sect A-A

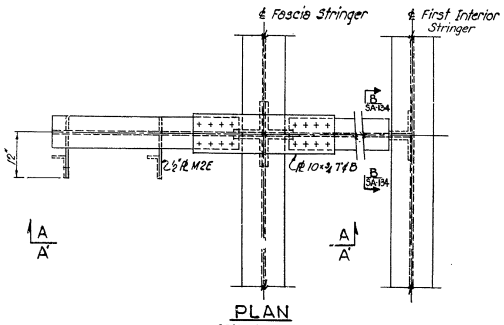
SECTION A'-A'
TYPICAL FOR BUILT UP GIRDERS
SCALE: ½ IN = 1 FT.



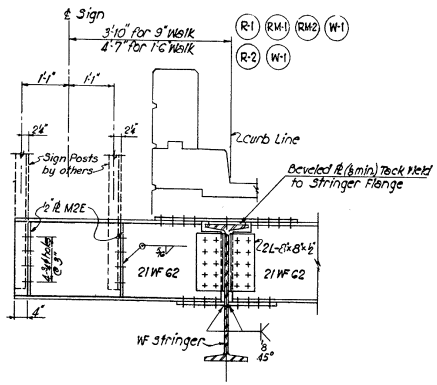
SECTION G-G
SIGN ST'D FOUNDATION "A"
(OS-4)
SCALE: ⅜" = 1'-0



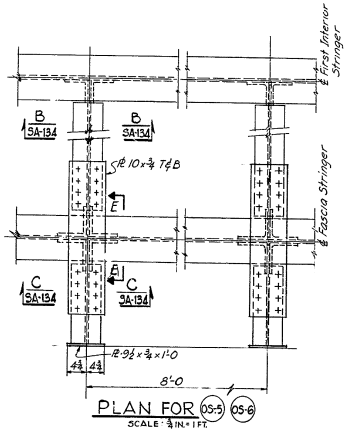
SECTION F-F
SIGN ST'D FOUNDATIONS "B" & "C"
(OS-3)
SCALE: ⅜" = 1'-0



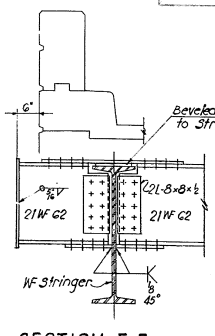
PLAN
SCALE: ½ IN = 1 FT.



SECTION A-A
TYPICAL FOR WF STRINGERS
SCALE: ½ IN. = 1 FT.



PLAN FOR OS-5 OS-6
SCALE: ½ IN. = 1 FT.



SECTION E-E
TYPICAL FOR WF STRINGERS
SCALE: ½ IN. = 1 FT.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SIGN SUPPORTS
SHEET 2 OF 2

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

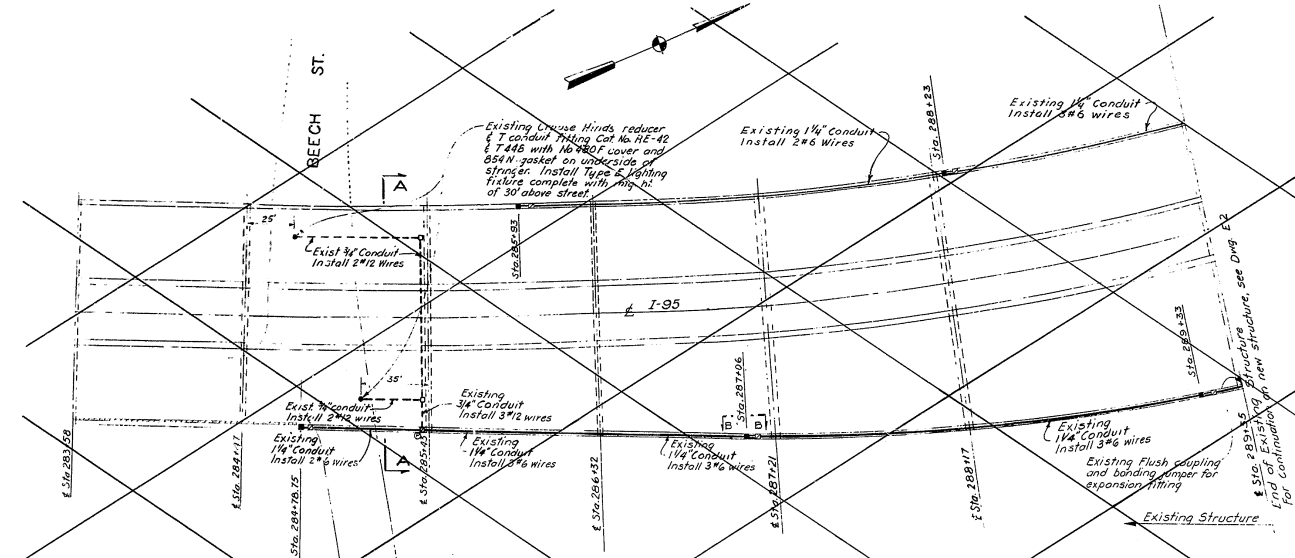
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

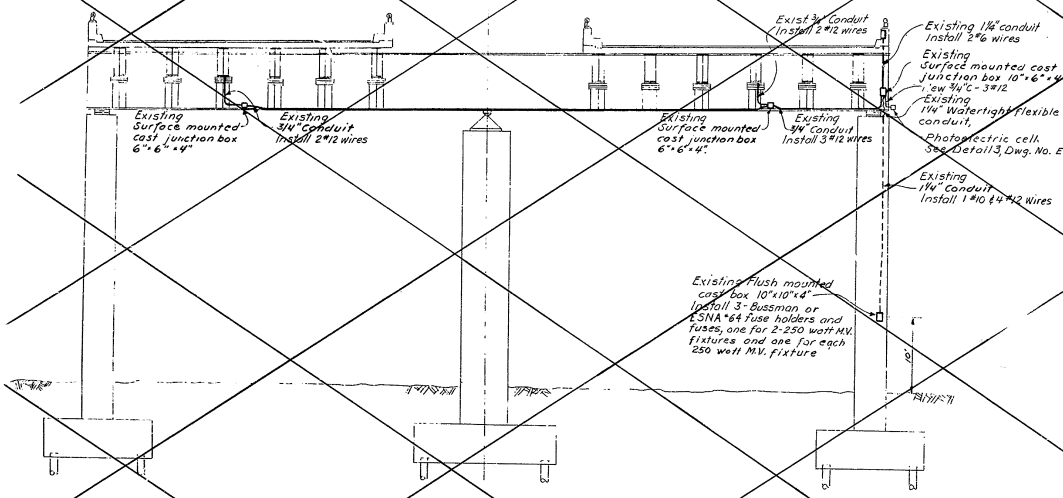
DWG. NO. SA135

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	170	215

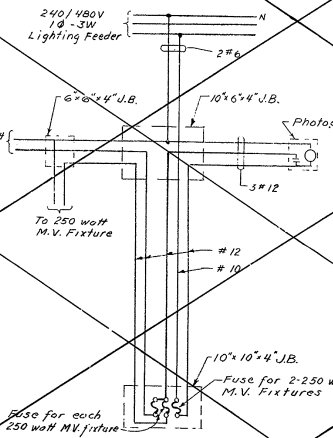
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



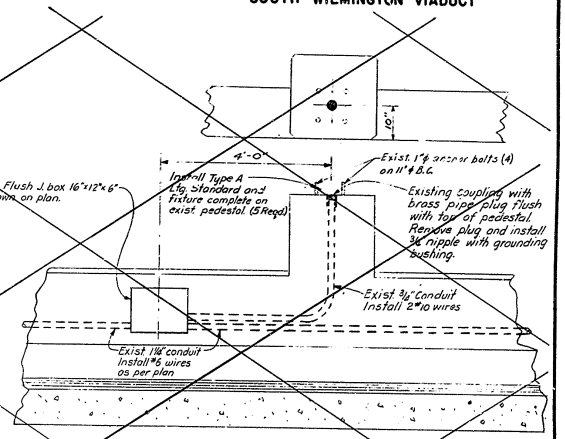
PLAN
Scale: 1 IN. = 30 FT.



SECTION A-A
Scale: ⅛ IN = 1 FT



WIRING DIAGRAM FOR TYPE "E" FIXTURES
BEACH ST. UNDERPASS



SECTION B-B
TYPICAL - ALL PEDESTALS
ON EXISTING STRUCTURE
Scale: ¾ IN. = 1 FT.

LEGEND

- Existing Pedestal for Type A street lighting standard
- Existing Flush mounted cast box 16"x12"x6"
- Existing Surface mounted cast box 6"x6"x4"
- Existing Rigid conduit exposed
- Existing Rigid conduit concealed in concrete
- (P) Photoelectric cell for underpass lighting control

NOTES

1- Station numbers indicated as locations of exist. pedestals for street lighting standards, are approximate.

2- For typical electrical details, see Dwgs. E-4 & E-5.

THIS SHEET NOT IN THIS CONTRACT

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

ELECTRICAL PLAN AND DETAILS
EXISTING STRUCTURE

APPROVED BY: [signature] BRIDGE ENGINEER — DATE: 4-16-64

SCALE: AS NOTED

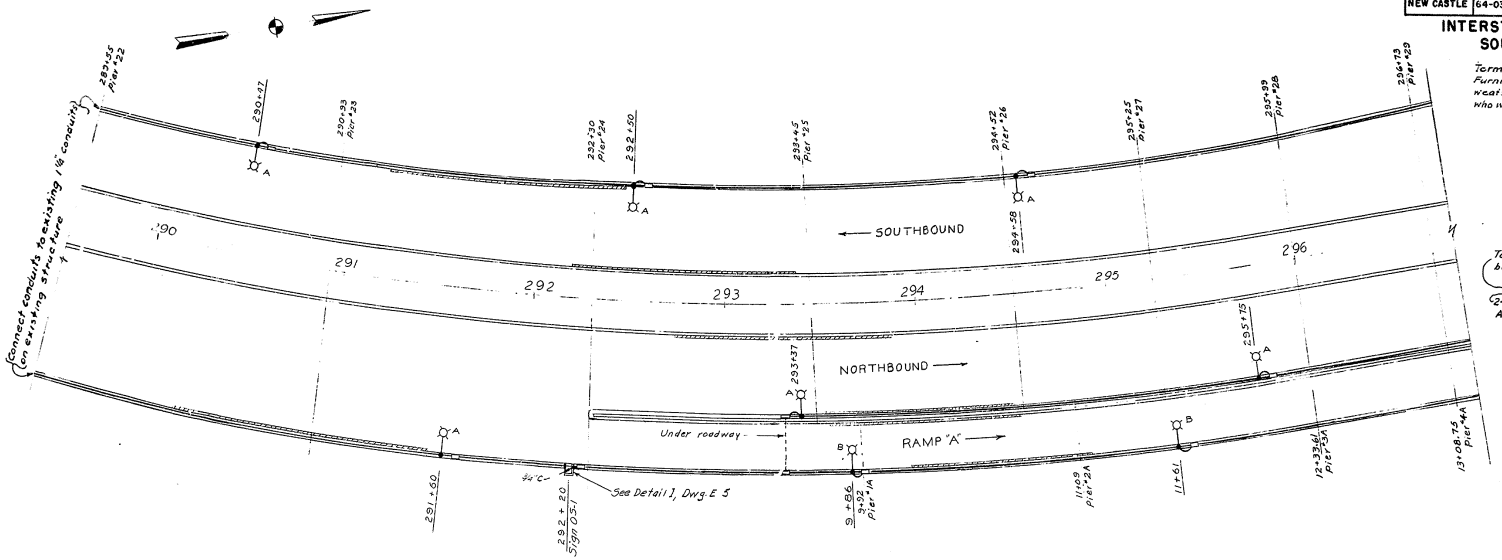
DATE: APRIL 1, '64

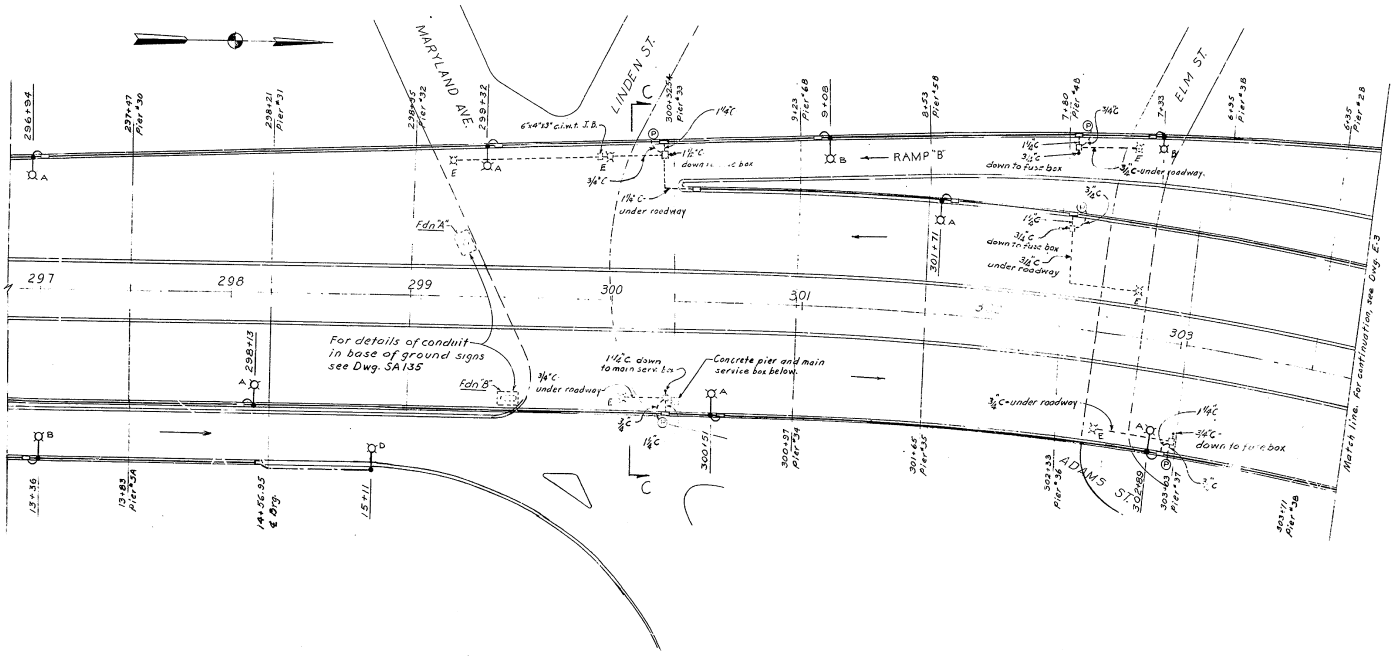
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

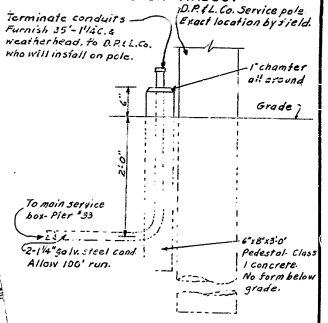
DWG. NO. E1

COUNTY	CONTRACT	F.A.P. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	171	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT







DETAIL I
D.P.& L. CO. SERVICE POLE
SCALE: 1 IN. = 1 FT.

LEGEND

- Street lighting standard and fixture. Letter indicates type (To be furn. & install. by others)
- Junction or pull box, cast iron galvanized. 16"x12"x6" flush except where noted.
- Galvanized rigid conduit, embedded in parapet. Conduit 1½" except where noted.
- Underpass Lighting Fixture (To be furnished & installed by others.)
- Galvanized rigid conduit, exposed. Otherwise same as embedded.
- Galvanized rigid conduit, underground. Otherwise same as embedded.
- Photoelectric cell for control of underpass lighting (To be Furnished & installed by others.)

Notes

1. For Section C-C and typical electrical details see Dwgs. *E 4 & *E 5.
2. For structural details of lighting standard pedestals on parapets, see Dwg. SA87

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

ELECTRICAL PLAN-I

APPROVED BY: Thomas D. Casarow Jr. 4-16-64
BRIDGE ENGINEER — DATE

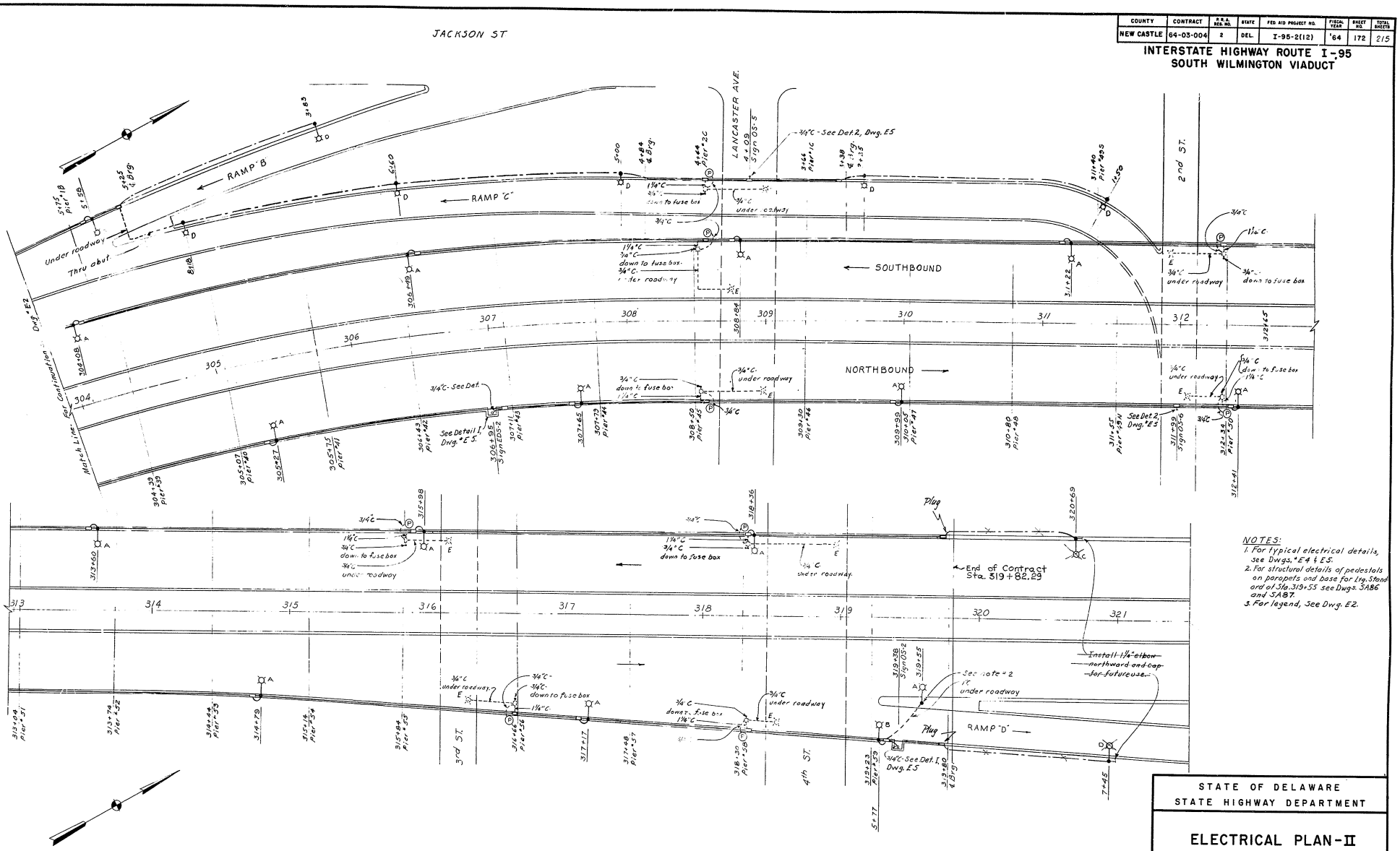
SCALE: 1 IN. = 30FT
DATE: APRIL 1, '64

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. E2

COUNTY	CONTRACT	R.R.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	172	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
1. For typical electrical details, see Dwgs. "E4 & E5.
2. For structural details of pedestals on parapets and base for Ltg. Standard of Sta. 319+55 see Dwgs. SAB6 and SAB7.
3. For legend, See Dwg. E2.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

ELECTRICAL PLAN-II

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

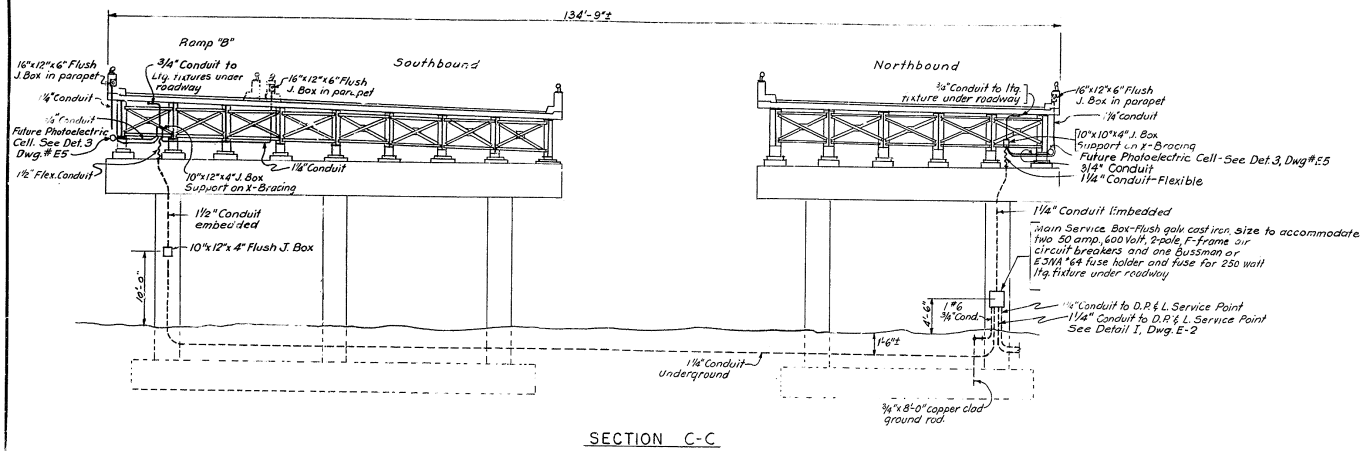
SCALE: 1 IN. = 30 FT.
DATE: APRIL 1, '64

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

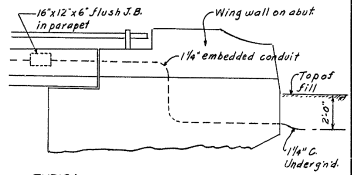
DWG. NO. E3

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I 95-2(12)	'64	173	215

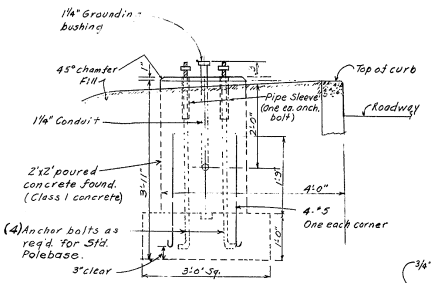
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



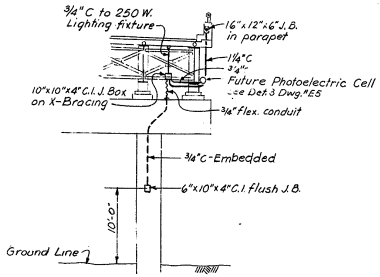
SECTION C-C
SCALE 1/8 IN. = 1 FT.



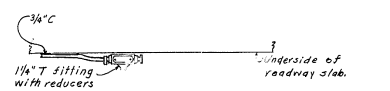
TYPICAL TRANSITION OF CONDUIT FROM ABUTMENT TO UNDERGROUND
SCALE 1/4 IN. = 1 FT.



TYPICAL TYPE C AND TYPE D LIGHTING FIXTURES
SCALE 3/4 IN. = 1 FT.

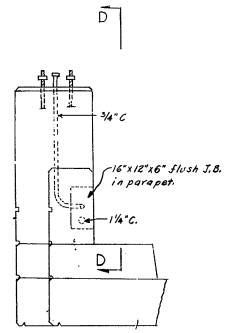


TYPICAL SERVICE FOR 1-250 WATT LIGHTING FIXTURE UNDER ROADWAY
SCALE 1/8 IN. = 1 FT.

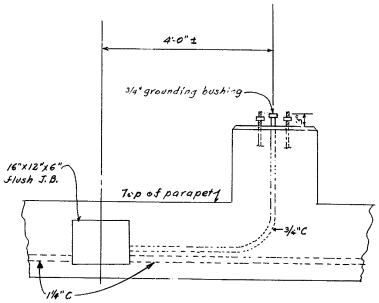


Note: Use 6"x4"x3" c.i.w.t. surf. m'td. J.B. where conduit runs thru to add'l. fixture.

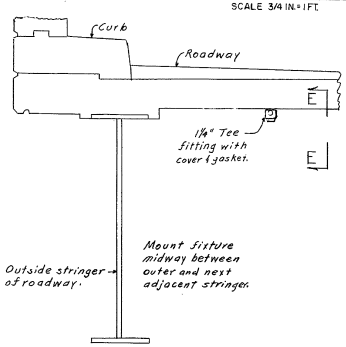
SECTION E-E
SCALE 3/4 IN. = 1 FT.



TYPICAL TYPE A AND TYPE B LIGHTING FIXTURES
SCALE 3/4 IN. = 1 FT.



SECTION D-D
SCALE 3/4 IN. = 1 FT.



TYPICAL TYPE E LIGHTING FIXTURE
SCALE 3/4 IN. = 1 FT.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

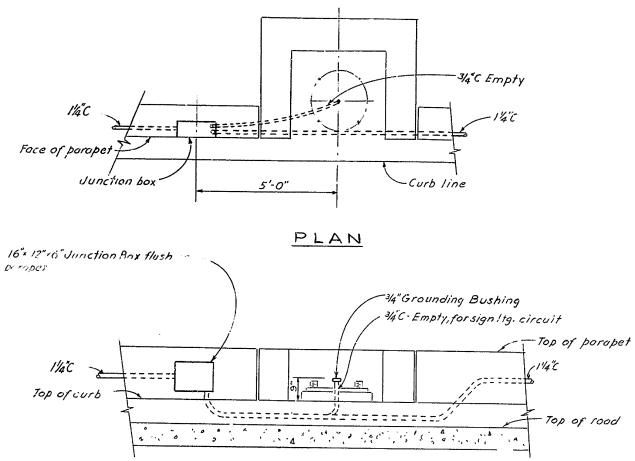
ELECTRICAL DETAILS - I

APPROVED BY: Thomas R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

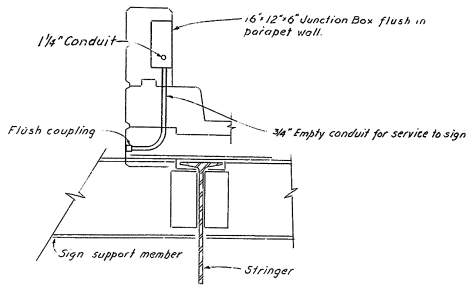
SCALE: AS NOTED
DATE: APRIL 1, '64
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. E4

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I 95-2(12)	'64	174	215

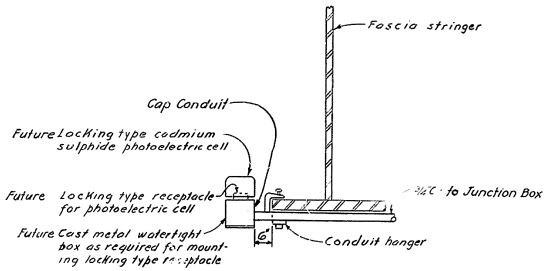
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



DETAIL-I
ELECTRIC CONSTRUCTION FOR SIGN SERVICE
TYPICAL FOR SIGNS: OS-1, OS-2 & EDS-2
SCALE: 1/2 IN.= 1 FT.



DETAIL-2
ELECTRIC CONSTRUCTION FOR SIGN SERVICE
TYPICAL FOR SIGNS: OS-5 & OS-6
SCALE: 1/2 IN = 1 FT



DETAIL-3
TYPICAL MOUNTING FOR PHOTOELECTRIC CELL
FOR UNDERPASS LIGHTING CONTROL
SCALE: 1 1/2 IN.= 1 FT.

NOTES:
1) For structural details of sign supports see Dwg. # SA 134 & SA-135

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

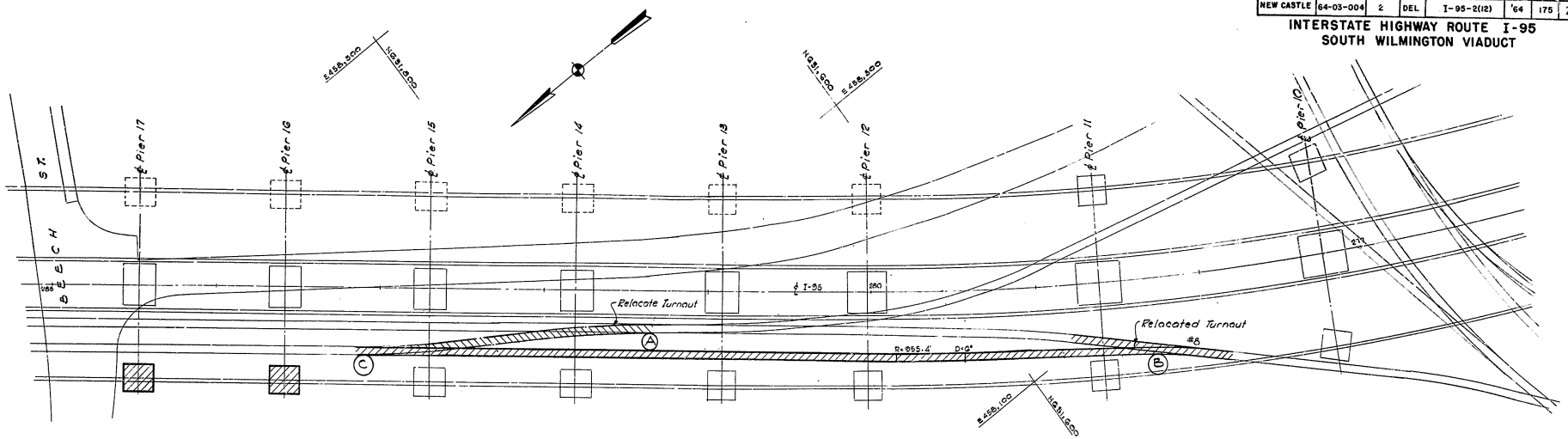
ELECTRICAL DETAILS - II

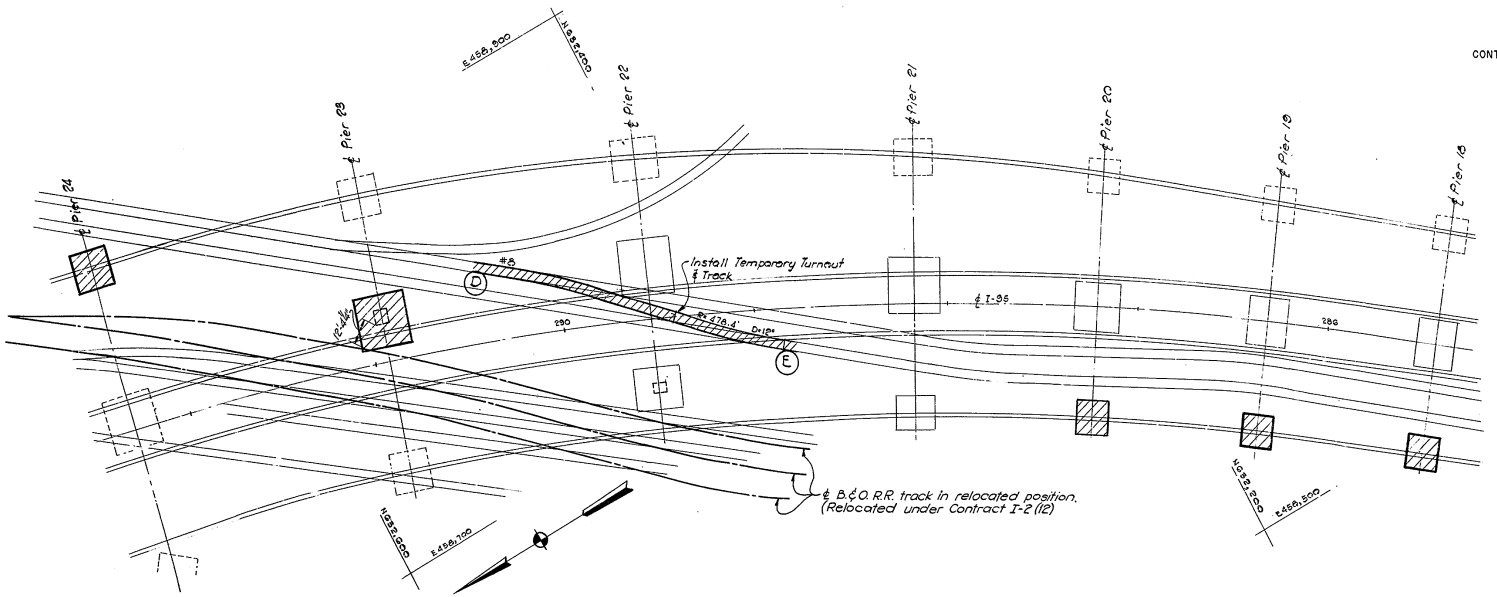
APPROVED BY:
Johnnie L. Pearson, Jr.
BRIDGE ENGINEER
4-16-64
DATE

SCALE: AS NOTED
DATE: APRIL 1, '64
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. E5

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	175	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





STAGE 4

CONTRACT I-2(12)
1. Relocate turnout at Point (A) to Point (B).
2. Construct track between Points (B) & (C).

CONTRACT 64-03-004
3. Install temporary turnout & track between Points (D) & (E).
4. Construct footings as indicated. (Piers 23 & 24)
5. Remove temporary turnout & track between Points (D) & (E) and restore track to final position.

NOTES

1. Stage 4 construction indicated thus ▨
2. For location & geometry of footings, see Foundation Drawings.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TRACK CHANGES
READING CO.
STAGE 4

APPROVED BY: Johnnie P. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

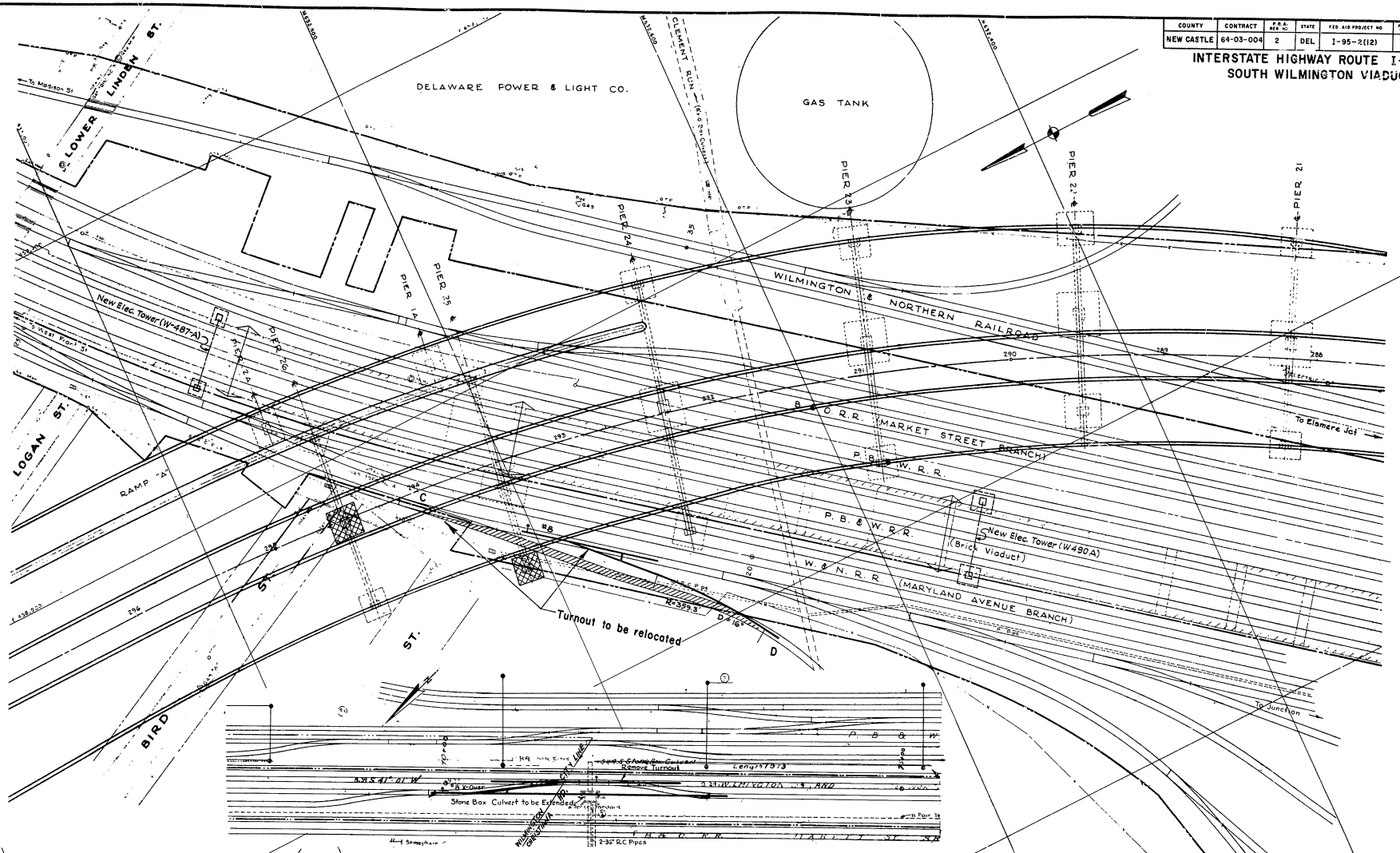
SCALE: 1" = 30'
DATE:

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. P-13204-4

COUNTY	CONTRACT	P.R.R. REF. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	176	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PROPOSED CONNECTION TO LATIMER SIDING

STAGE 5

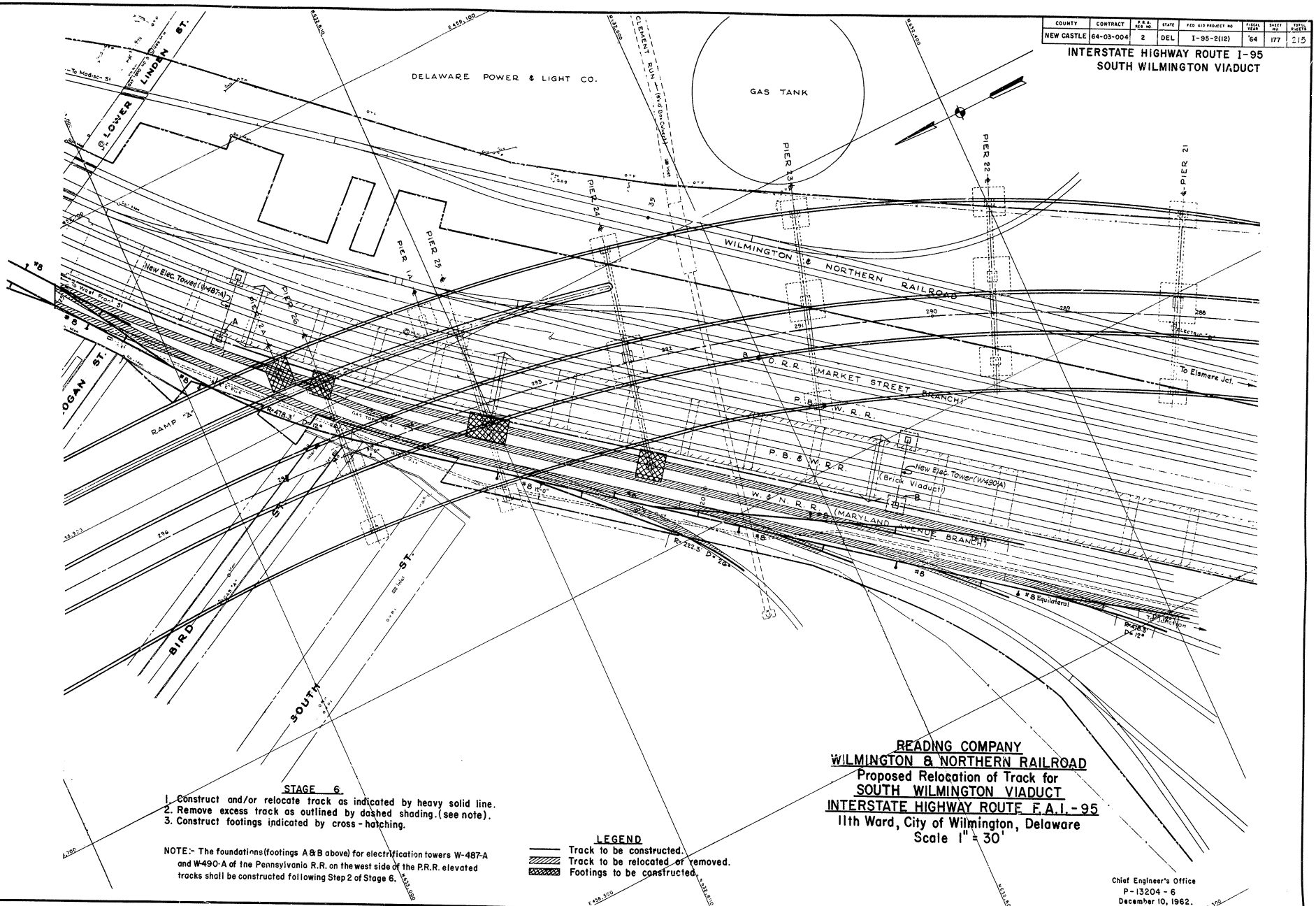
1. Relocate turnout and track between C and D. Remove excess track.
2. Construct footings indicated by cross-hatching.
3. Construct connection to Latimer siding

READING COMPANY
WILMINGTON & NORTHERN RAILROAD
Proposed Relocation of Track for
SOUTH WILMINGTON VIADUCT
INTERSTATE HIGHWAY ROUTE F.A.I.-95
11th Ward, City of Wilmington, Delaware
Scale 1" = 30'

Chief Engineer's Office
P-13204-5
December 7, 1962.
Revised Sept. 16, 1963

COUNTY	CONTRACT	P.R.A. RES. NO	STATE	FED AID PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	177	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



STAGE 6.

1. Construct and/or relocate track as indicated by heavy solid line.
2. Remove excess track as outlined by dashed shading. (see note).
3. Construct footings indicated by cross-hatching.

NOTE:- The foundations (footings A & B above) for electrification towers W-487-A and W-490-A of the Pennsylvania R.R. on the west side of the P.R.R. elevated tracks shall be constructed following Step 2 of Stage 6.

LEGEND

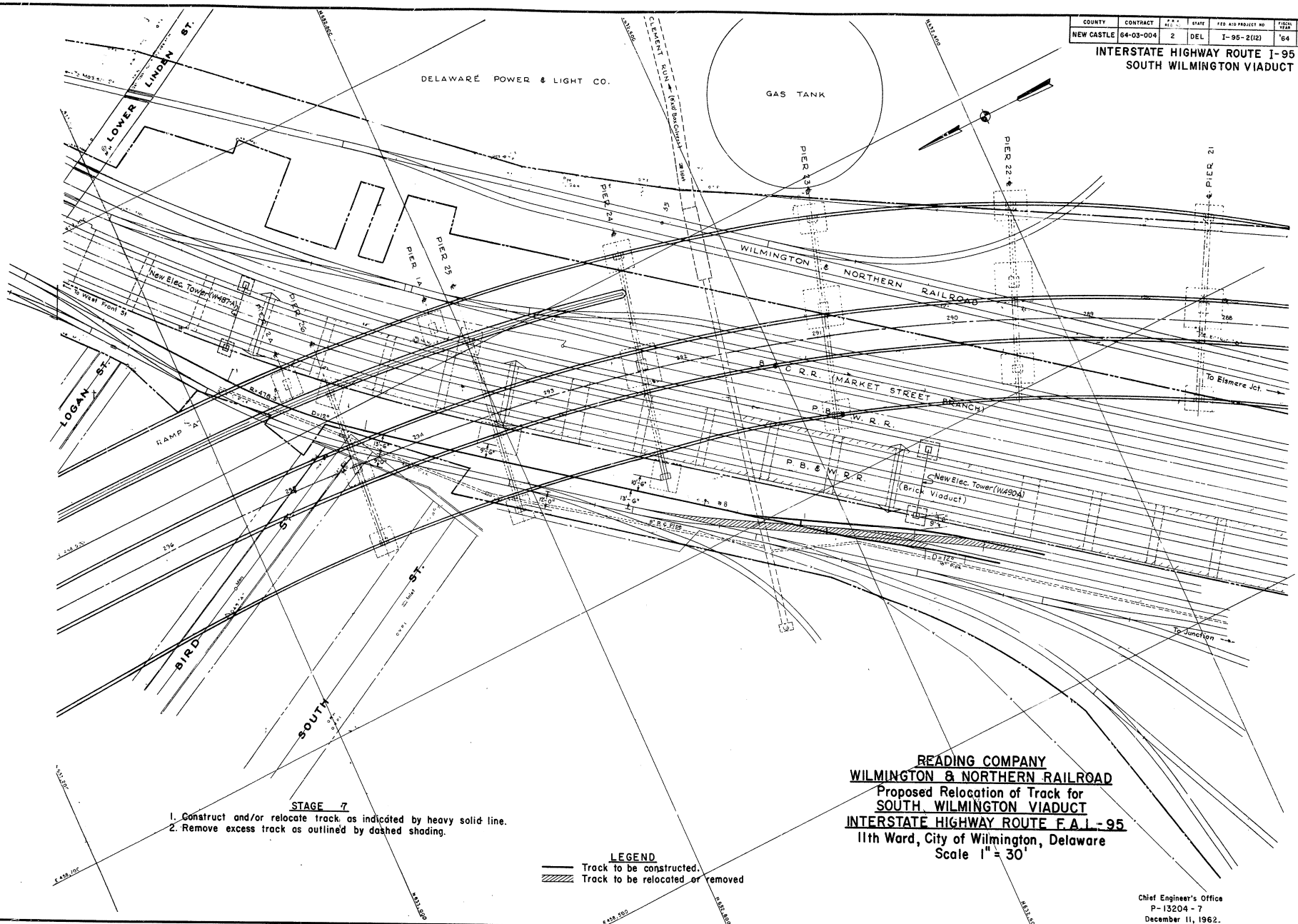
- Track to be constructed.
- Track to be relocated or removed.
- Footings to be constructed.

READING COMPANY
WILMINGTON & NORTHERN RAILROAD
Proposed Relocation of Track for
SOUTH WILMINGTON VIADUCT
INTERSTATE HIGHWAY ROUTE F.A.I.-95
11th Ward, City of Wilmington, Delaware
Scale 1" = 30'

Chief Engineer's Office
P-13204-6
December 10, 1962.
Revised Sept. 16, 1963

COUNTY	CONTRACT	F.A.I. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	178	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

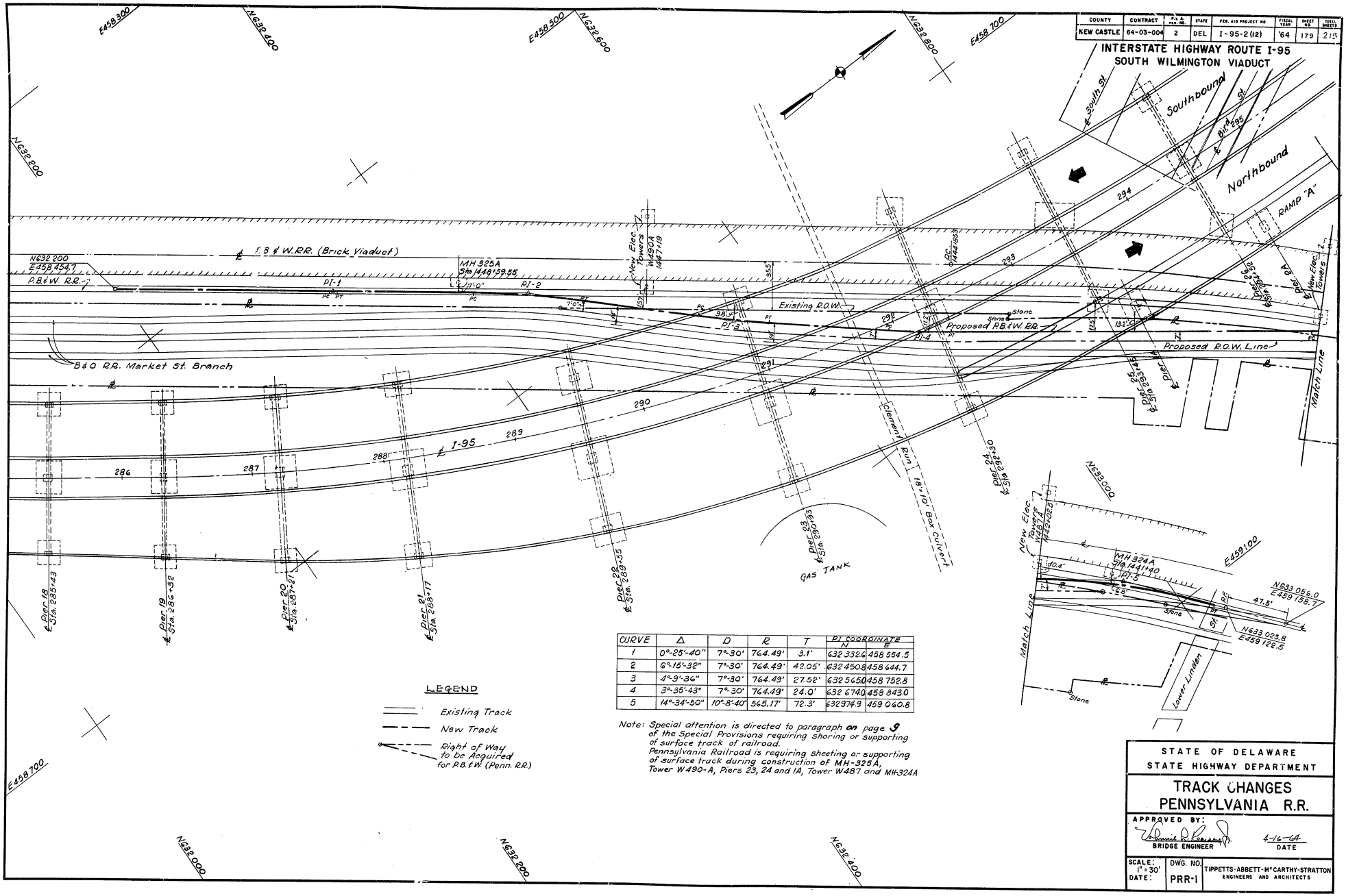


READING COMPANY
WILMINGTON & NORTHERN RAILROAD
Proposed Relocation of Track for
SOUTH WILMINGTON VIADUCT
INTERSTATE HIGHWAY ROUTE F.A.I.-95
11th Ward, City of Wilmington, Delaware
Scale 1" = 30'

Chief Engineer's Office
P-13204-7
December 11, 1962.
Revised Sept. 17, 1963

COUNTY	CONTRACT	P.L.A. REV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	179	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



CURVE	Δ	D	R	T	PI COORDINATE N	PI COORDINATE E
1	0°-25'-40"	7°-30'	764.49'	3.1'	632 332.6	458 554.5
2	6°-15'-32"	7°-30'	764.49'	42.05'	632 450.8	458 644.7
3	4°-9'-36"	7°-30'	764.49'	27.52'	632 565.0	458 752.8
4	3°-35'-43"	7°-30'	764.49'	24.0'	632 674.0	458 843.0
5	14°-34'-50"	10°-8'-40"	565.17'	72.3'	632 974.9	459 060.8

Note: Special attention is directed to paragraph on page 9 of the Special Provisions requiring shoring or supporting of surface track of railroad.
Pennsylvania Railroad is requiring sheeting or supporting of surface track during construction of MH-325A, Tower W490-A, Piers 23, 24 and 1A, Tower W487 and MH-324A

LEGEND

Existing Track

New Track

Right of Way to be Acquired for P.B.&W. (Penn. R.R.)

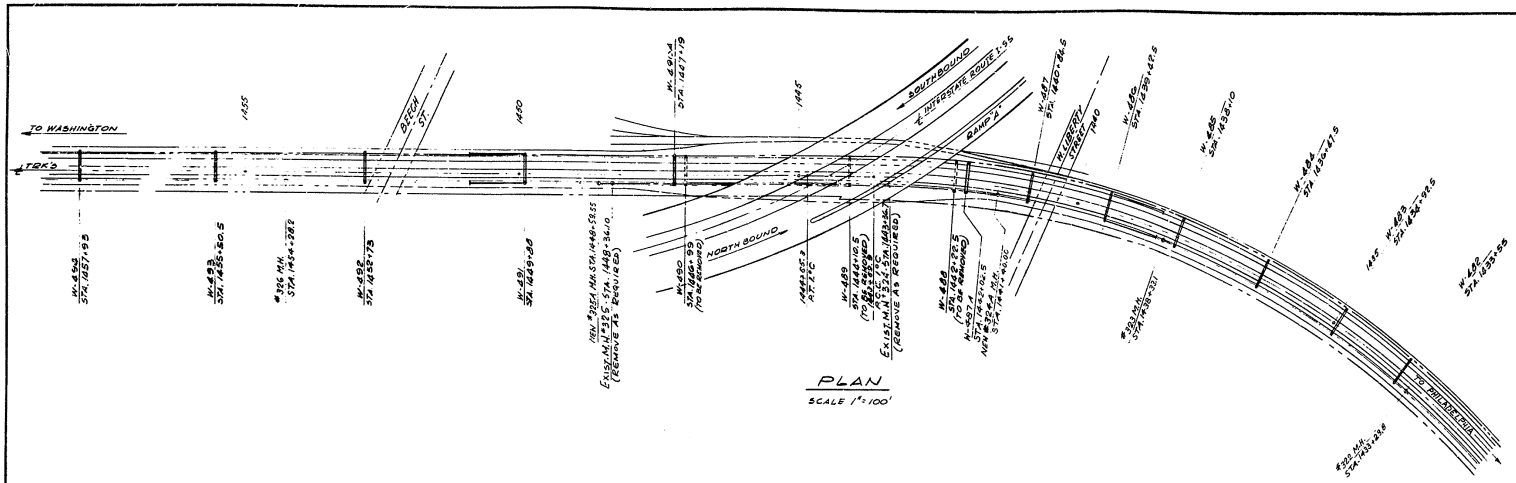
STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TRACK CHANGES
PENNSYLVANIA R.R.

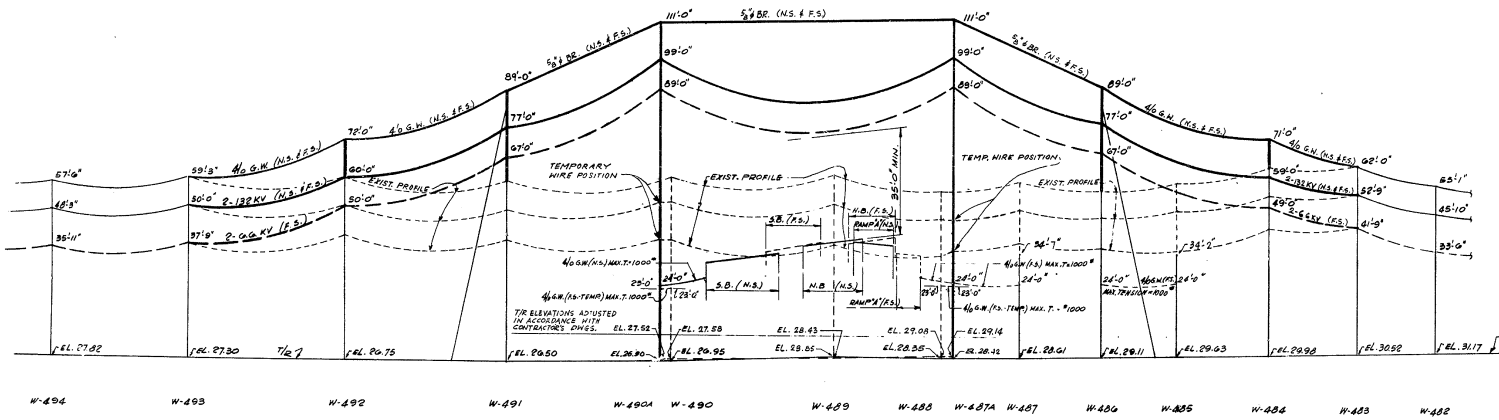
APPROVED BY:
BRIDGE ENGINEER — DATE 4-16-64

SCALE: 1" = 30'
DATE:
DWG. NO. PRR-1
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	180	215



PLAN
SCALE 1" = 100'



PROFILE
SCALE: HOR. 1" = 100'
VERT. 1" = 20'

LIST OF DRAWINGS:

PLAN & PROFILE	DWG.	46-S-141
MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486	"	46-S-7417
" " " " W-485 & W-487	"	46-S-7418
ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A	"	46-S-7419
MODIFICATIONS TO EXISTING BEAM BRIDGES W-491 & W-492	"	46-S-7420
STEEL DETAILS OF CROSS-BEAMS & SAG BRACES FOR NEW BEAM BR'S W-487A & W-490A	"	46-S-2234
CROSS-ARM DETAILS	"	46-S-2235
STEEL DETAILS OF POLES W-487AA, W-487AB, W-490AA & W-490AB	"	46-S-2236
POLE EXTENSIONS FOR BEAM BRIDGES W-484, W-486, W-491 & W-492	"	46-S-2237
HARDWARE DETAILS	"	46-S-2238
FOUNDATIONS & ANCHORS	"	46-S-2239
CATENARY ATTACHMENTS: PLAN	"	46-S-3042
" " : ELEVATIONS	"	46-S-3043
" " : DETAILS	"	46-S-3044
DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1	"	46-S-2240
" " " , " " , SH. #2	"	46-S-2241
" " " , " " , SH. #3	"	46-S-2242
" " " , SECTIONS	"	46-S-2243
PULL BOX DETAILS, SHEET #1	"	46-S-2224
" " " , " #2	"	46-S-2246
MANHOLE #325A, CONCRETE DETAILS, SH. #1	"	46-S-2245
MANHOLE 324A & 325A CONCRETE DETAILS, SH #2	"	46-S-2247
MODIFICATIONS TO EXISTING BEAM BRIDGE W-489	"	46-S-2251
MANHOLE #324A, CONCRETE DETAILS, SH. #1	"	46-S-2252
MANHOLE #324A & 325A, CONCRETE DETAILS, SH #3	"	46-S-2254
BONDING OF PROTECTIVE BARRIERS	"	46-S-3046

FOR GENERAL NOTES SEE DWG No 46-S-2234 & 46-S-2239

ISSUE NO	DATE	D'WN	CH'K'D	APPROVALS	CAT	ELEC.	A.E.	ISSUED FOR
3	1-9-64	SD	WC					CONSTRUCTION JRS
2	10-8-63	RM	WD					REV. FOR STRUCTURAL APPROVAL
1	7-1-63							STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-141-3

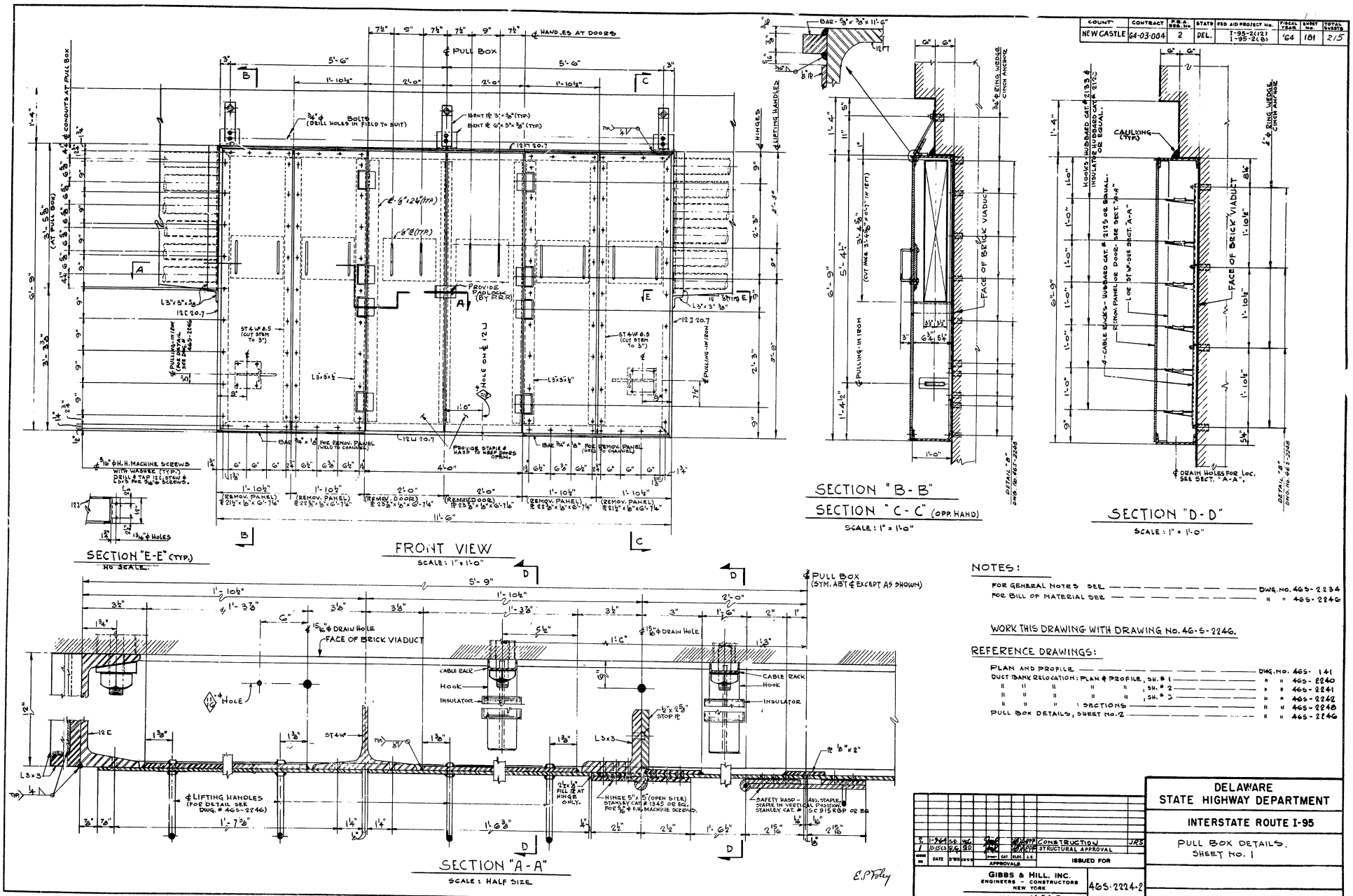
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

PLAN AND PROFILE

E.P. Foley

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	181	215



NOTES:

FOR GENERAL NOTES SEE — DWG. NO. 46S-2234
FOR BILL OF MATERIAL SEE — " " 46S-2246

WORK THIS DRAWING WITH DRAWING No. 46-S-2246.

REFERENCE DRAWINGS:

PLAN AND PROFILE — DWG. NO. 46S-141
DUCT BANK RELOCATION: PLAN & PROFILE, SH. # 1 — " " 46S-2240
" " " " " , SH. # 2 — " " 46S-2241
" " " " " , SH. # 3 — " " 46S-2242
" " " SECTIONS — " " 46S-2248
PULL BOX DETAILS, SHEET No. 2 — " " 46S-2246

ISSUE NO.	DATE	D'WN	CH'K'D					
2	1-29-64	S.D.	W.C.	[illegible]	[illegible]	[illegible]	CONSTRUCTION	JRS
1	10-15-63	G.G.	S.D.	[illegible]	[illegible]	[illegible]	STRUCTURAL APPROVAL	

APPROVALS — ISSUED FOR

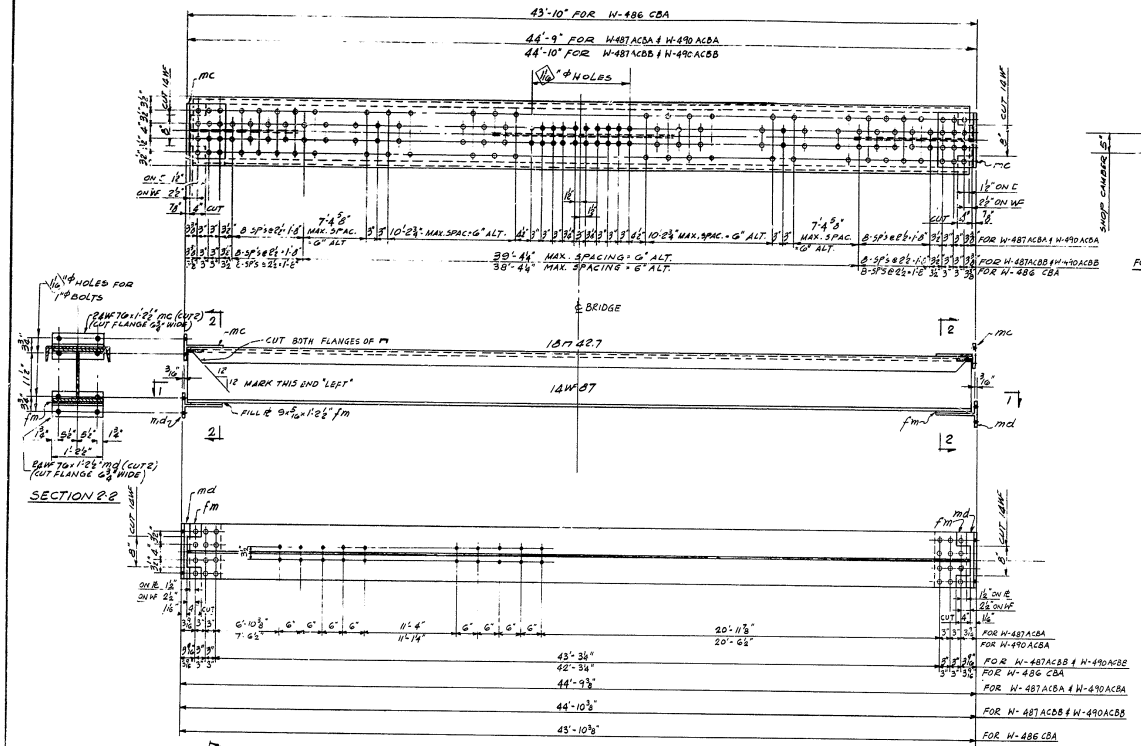
GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46S-2224-2

DELAWARE
STATE HIGHWAY DEPARTMENT

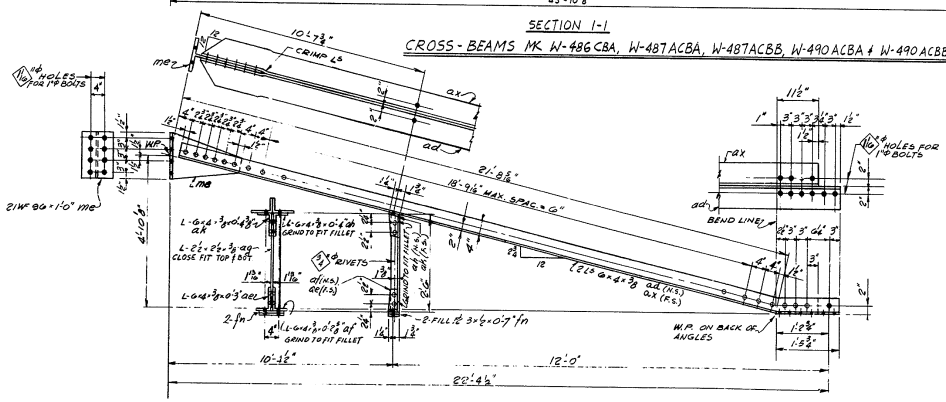
INTERSTATE ROUTE I-95

PULL BOX DETAILS.
SHEET No. 1

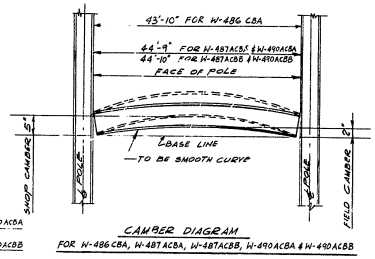


SECTION 1-1

CROSS-BEAMS MK W-486 CBA, W-487 ACBA, W-487 ACBB, W-490 ACBA & W-490 ACBB



SAG BRACE MK "SB-1"



CAMBER DIAGRAM

FOR W-486 CBA, W-487 ACBA, W-487 ACBB, W-490 ACBA & W-490 ACBB

COUNTY	CONTRACT	P.R.A. REQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(18)	'64	182	215

BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		CROSS-BEAM W-487 ACBA		
W487ACBA	THIS DWG.	14 WF 87	EA.	1
	" "	18 ϖ 42.7	"	1
mc	" "	24 WF 76 x 1'-2½"	"	2
md	" "	24 WF 76 x 1'-2½"	"	2
fm	" "	⅞ ϕ x ⅞ = 1'-2½"	"	2
		RIVETS & BOLTS	"	AS REQ'D
		CROSS-BEAM W-490 ACBA		
		MATERIAL AS ABOVE FOR W-487 ACBA		
		CROSS-BEAM W-487 ACBB		
W487ACBB	THIS DWG.	14 WF 87	EA.	1
	" "	18 ϖ 42.7	"	1
		OTHER MATERIAL AS FOR W-487 ACBA		
		CROSS-BEAM W-490 ACBB		
		MATERIAL AS FOR W-487 ACBB		
		SAG BRACE SB-1 (ONE LISTED - 4 REQ'D)		
ad	THIS DWG.	L-G-4-⅜	EA.	1
ax	" "	L-G-4-⅜	"	1
me	" "	21 WF 96 x 1'-0"	"	1
ae	" "	L-G-4-⅜ x 0'-3"	"	1
af	" "	L-G-4-⅜ x 0'-2⅝"	"	1
ag	" "	L-2½-2½-⅜ (STRUT)	"	1
ah	" "	L-G-4 x ⅜ x 0'-4"	"	1
ak	" "	L-G-4 x ⅜ x 0'-4⅜"	"	1
fn	" "	FILL ℄ 3-⅜-0'-7"	"	2
		CROSS-BEAM W-486 CBA		
W-486 CBA	THIS DWG.	14 WF 87	EA.	1
	" "	18 ϖ 42.7	"	1
		OTHER MATERIAL AS FOR W-487 ACBA		

GENERAL NOTES (STEEL):

1. RIVETS & BOLTS ⅞ ϕ, HOLES 1⅛ ϕ UNLESS NOTED
2. ALL FIELD WORK TO BE BOLTED
3. ALL CONNECTION BOLTS & WASHERS TO BE SUPPLIED BY FABRICATOR.
4. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST A.R.E.A. SPECIFICATIONS FOR STEEL RAILWAY BRIDGES, EXCEPT FOR DESIGN.
5. GALVANIZING SHALL CONFORM TO THE A.S.T.M. DESIGNATION No. A-123 & A-153 LATEST ISSUE.
6. ALL STEEL EMBEDDED IN CONCRETE TO BE UNPAINTED.
7. CROSS-ARMS SHALL BE SUPPLIED WITH ALL PARTS INCLUDING SAG RODS COMPLETELY ASSEMBLED & BOLTED.

REFERENCE DRAWINGS:

ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A	DWG. No. 46-S-7419
STEEL DETAILS OF POLES W-487AA, W-487AB, W-490AA & W-490AB	" " 46-S-2236
POLE EXTENSIONS FOR BRIDGES W-484, W-486, W-491 & W-492	" " 46-S-2237

NO.	DATE	BY	CHK'D	APPROVALS	
2	1-19-64	SG	WL		APP'D CONSTRUCTION JRS
1	10-16-63	SG	WD		APP'D STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB No. 1489 A

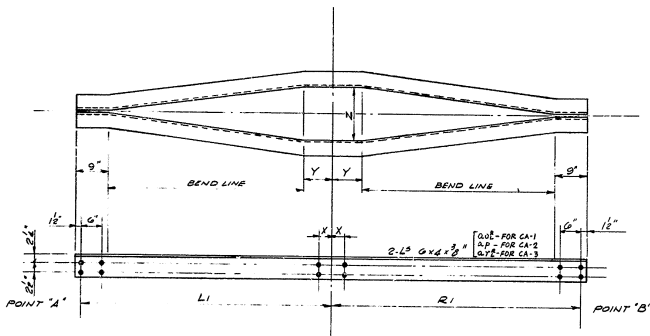
46-S-2234-2

DELAWARE
STATE HIGHWAY DEPARTMENT

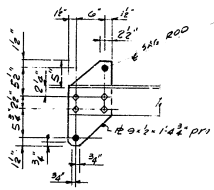
INTERSTATE ROUTE I-95

STEEL DETAILS OF CROSS-BEAM FOR BEAM BRIDGE W-486 AND CROSS-BEAMS AND SAG BRACES FOR NEW BEAM BRIDGES W-487A & W-490A

COUNTY	CONTRACT	P.R.& REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(26)	'64	183	215

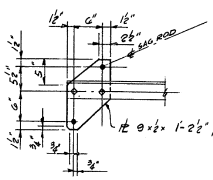


CROSS-ARM TYPE "A"



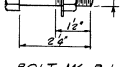
ASSEMBLY - 1

ASSEMBLY - 2

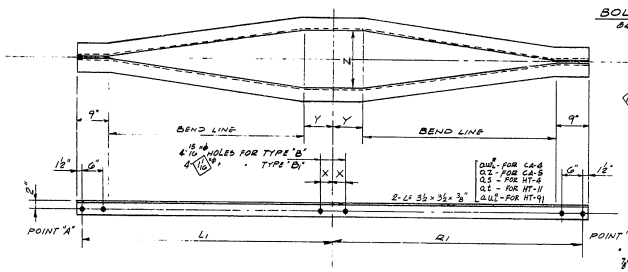


ASSEMBLY - 4

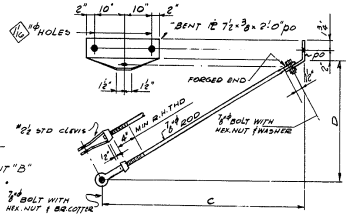
ASSEMBLY - 5
EQUAL EXCEPT AS NOTED



BOLT MK B-1
8A REQUIRED



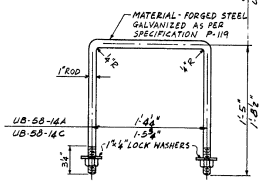
CROSS-ARM TYPE "B" & "B1"



ASSEMBLY - 3

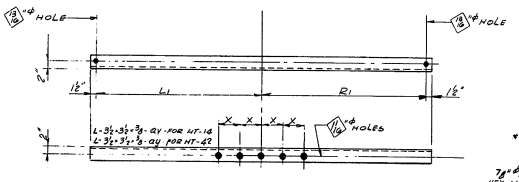
MARK	DIMENSIONS	
	"C"	"D"
SR-5	7'-4½"	4'-3"
SR-6	9'-10½"	6'-3"

SAG RODS MK SR-5 & SR-6

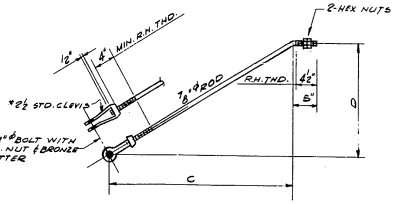


U-BOLT MK UB-58-16A (4-REQ'D)

U-BOLT MK UB-58-14C (2-REQ'D)

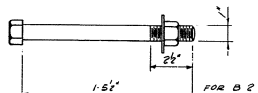


CROSS-ARM TYPE "C"



SAG RODS
MK SR-1, SR-2, SR-3, SR-4
HC-104, HC-41 & HC-51

MARK	DIMENSIONS	
	"C"	"D"
SR-1	6'-4½"	4'-3⅜"
SR-2	13'-4½"	4'-3⅜"
SR-3	8'-10½"	4'-3⅜"
SR-4	9'-4½"	4'-3⅜"
HC-104	7'-4½"	4'-0"
HC-41	2'-10½"	1'-11"
HC-51	3'-10½"	1'-11"



BOLT MK "B2" (8-REQ'D)
BOLT MK "B3" (8-REQ'D)
(GALVANIZED)

NOTES
FOR GENERAL NOTES SEE DWG. No. 605-2234
ALL CROSS-ARM MATERIAL TO BE GALVANIZED

REFERENCE DWGS.

MODIF'S TO EXISTING BEAM BRIDGES W-486 & W-490	DWG. No. 605-7617
ERECTION DIAGR'S OF NEW BEAM BR'S. W-487A & W-490A	" " 605-7619
MODIF'S TO EXISTING BEAM BRIDGES W-491 & W-492	" " 605-7620
STEEL DETAILS OF POLES W-487A, W-487AB, W-490AB & W-490AS	" " 605-2234
POLE 6X13 FOR DM. B2'S W-486, W-490, W-491 & W-492	" " 605-2237

E.P. Foley

CROSS-ARM TABULATION

MARK	TYPE	ASSEMB. TO USE AT POINT A	ASSEMB. TO USE AT POINT B	DIMENSIONS L1	R1	X	Y	Z	SAG ROD AT POINT A	SAG ROD AT POINT B	BOLTS FOR POLE CONN.
CA-1	A	1	2	7'-0"	14'-0"	3½	8¼	1'-3½	SR-1	SR-2	8
CA-2	A	1	1	11'-0"	11'-0"	3½	8¼	1'-3½	SR-3	SR-3	8
CA-3	A	1	2	7'-0"	10'-0"	3½	8¼	1'-3½	SR-1	SR-4	8
"-T4	B	3	3	8'-0"	8'-0"	3½	8¼	1'-3½	HC-104	HC-104	4
"-T"	B	3	3	4'-0"	4'-0"	3½	8¼	1'-3½	HC-41	HC-41	4
HT-91	B	3	4	4'-0"	6'-0"	3½	8¼	1'-3½	HC-41	HC-51	4
"T-14	C	—	—	3'-0"	3'-0"	8¼	—	—	—	—	ARE DIRECT DIAGRAM
HT-42	C	—	—	3'-0"	3'-0"	8¼	—	—	—	—	" " "
CA-4	B1	3	5	8'-0"	11'-0"	8¼	11"	1'-6"	SR-5	SR-6	" " "
CA-5	B1	3	3	6'-0"	8'-0"	8¼	11"	1'-6"	SR-5	SR-5	" " "

BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT
		CROSS-ARM "CA" (ONE LISTED - 2 REQ'D)		
aq2	THIS DWG.	L - 6"x4"x 3/8	EA.	1-aq2 R 1-aq1
pm	" "	PL - 9"x ½" x 1'-4¾"	"	2
al	" "	L - 4"x 3½"x ½" x 1'-11¾"	"	1
—	—	WASHER ⅜" THICK	"	1
SR-1	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
SR-2	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
		CROSS-ARM "CA-2" (ONE LISTED - 2 REQ'D)		
ap	THIS DWG.	L - 6"x4"x 3/8	EA.	2
pm	" "	PL - 9"x ½" x 1'-4¾"	"	2
SR-3	" "	⅞"ø ROD WITH 2 HEX. NUTS	"	2
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "CA-3" (ONE LISTED - 4 REQ'D)		
aq1	THIS DWG.	L - 6"x4"x 3/8	EA.	1-aq1 R 1-aq2
pm	" "	PL - 9"x ½" x 1'-4¾"	"	2
al	" "	L - 4"x 3½"x ½" x 1'-11¾"	"	1
—	—	WASHER ⅜" THICK	"	1
SR-1	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
SR-4	" "	⅞"ø " " " " "	"	1
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-4" (ONE LISTED - 4 REQ'D)		
aq	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	2
pm	" "	PL - 9"x ½" x 1'-2¾"	"	2
HC-104	" "	⅞"ø ROD WITH 2 HEX. NUTS	"	2
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-11" (ONE LISTED - ONE REQ'D)		
aq2	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1-aq2 R 1-aq1
pm	" "	PL 9"x ½" x 1'-2¾"	"	2
HC-41	" "	⅞"ø ROD WITH 2 HEX. NUTS	"	2
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-91" (ONE LISTED - ONE REQ'D)		
aq2	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1-aq2 R 1-aq1
pm	" "	PL - 9"x ½" x 1'-2¾"	"	2
am	" "	L - 3"x 2½"x 3"x 1'-5¾"	"	1
—	—	WASHER ⅞" THICK	"	1
HC-41	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
HC-51	" "	⅞"ø " " " " "	"	1
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-14" (ONE LISTED - 4 REQ'D)		
av	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1
		CROSS-ARM "HT-42" (ONE LISTED - 2 REQ'D)		
ay	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT
		CROSS-ARM "CA-4" (ONE LISTED, 2 REQ'D)		
aw2	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1-aw2 R 1-aw1
pn	"	PL 9"x ½" x 1'-2¾"	"	2
ax	"	L - 4"x 3½"x ½" x 2'-5½"	"	1
—	—	WASHER ⅜" THICK	"	1
SR-5	—	⅞"ø ROD WITH ⅞"ø BOLT WITH H.N. & W.	"	1
SR-6	—	" " " " " " "	"	1
po		BENT PL 7½"x ⅜"x 2'-0"	"	2
#2½		#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.N. & BRZ. COTTER	"	2
		CROSS-ARM "CA-5" (ONE LISTED, 2 REQ'D)		
az	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	2
pn	"	PL 9"x ½" x 1'-2½"	"	2
SR-5	"	⅞"ø ROD WITH ⅞"ø BOLT WITH H.N. & W.	"	2
#2½	"	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.N. & BRZ. COTTER	"	2
po	"	BENT PL 7½"x ⅜"x 2'-0"	"	2

	DATE	BY	CHKD	APPROVALS: PROJ. ENGR.	CAT. ENGR.	ELEC. ENGR.	A.E.
2	1-9-64	S.D.	JHC	JHC	WHBDT	CONSTRUCTION	JRS
1	10-25-63	R.M.	W.D.	JHC		STRUCTURAL APPROVAL	

ISSUED FOR

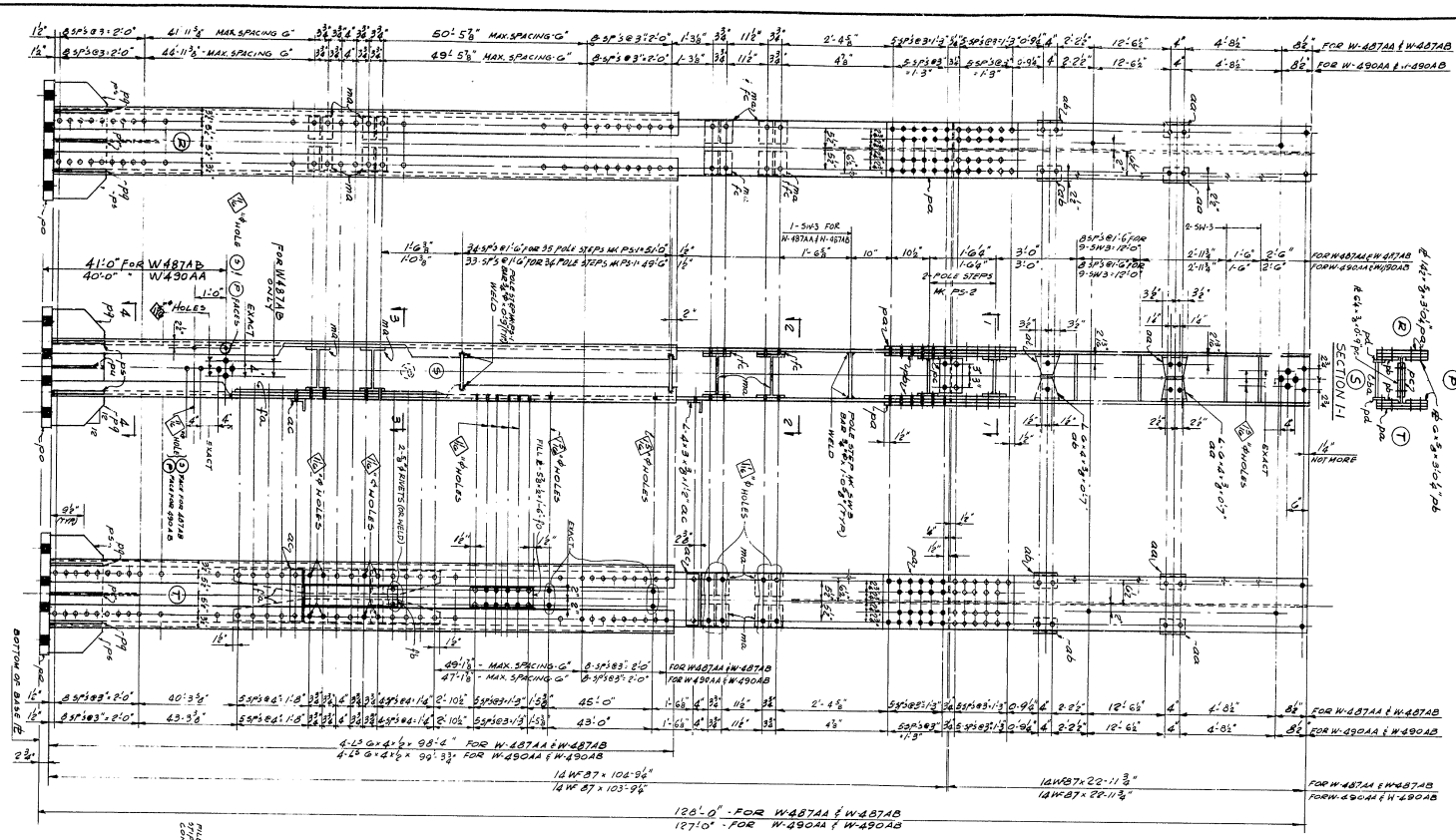
GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

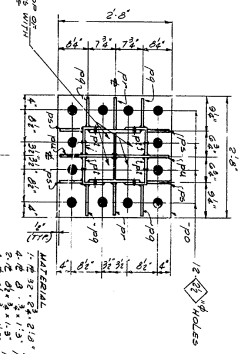
DELAWARE
STATE HIGHWAY DEPARTMENT

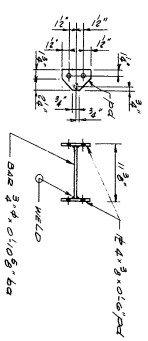
INTERSTATE ROUTE I-95

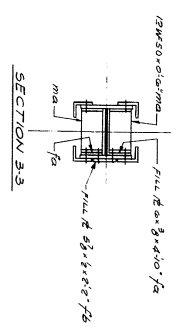
CROSS-ARM DETAILS

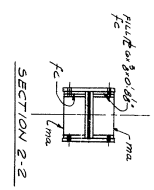
46-S-2235-2











NOTES

CONNECT COLUMN AND REINFORCING ANGLES TO BASE PLATE WITH ½" CONTINUOUS FILLET WELD ALL AROUND.

CONNECT ALL REINFORCING ANGLES TO COLUMN FLANGES WITH ⅜" FILLET WELDS AT TOE OF ANGLE AND EDGE OF FLANGE AT BOTT. OF POLE.

CONNECT ALL ¾" STIFFENER PLATES TO BASE PLATE WITH ⅜" CONTINUOUS BUTT WELD.

CONNECT VERTICAL "PL" PLATES TO TOES OF REINFORCING ANGLES WITH CONTINUOUS BUTT WELDS.

CONNECT VERTICAL EDGES OF STIFFENER PLATES TO COLUMN WITH ⅜" CONT. FILLET WELDS BOTH SIDES.

COUNTY	CONTRACT	F.B.A. DWG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	184	215

BILL OF MATERIAL

MARK	DWG No.	DESCRIPTION	UNIT	QUANT
		POLE W-487AA		
—	THIS DWG	14 WF 87 SPLICED [104-9¼" 22-11¾"]	EA	1
—	" "	L-6×4×½×98'-4" (REINFORCING ANGLES)	"	4
aa	" "	L-6×4×⅜×0'-7"	"	4
ab	" "	L-6×4×⅜×0'-7"	"	4
ac	" "	L-4×3×⅜×1'-2"	"	2
pa	" "	PL-14½×⅝×3'-0¼"	"	2
pb	" "	PL-6×⅝×3'-0¼"	"	4
pc	" "	PL-6¼×⅜×0'-9"	"	2
ma	" "	12 WF 50×0'-6"	"	8
fa	" "	FILL PL-6×⅜×4'-10"	"	2
fb	" "	" PL-5⅞×½×2'-2"	"	1
fc	" "	" PL-6×⅜×0'-8⅛"	"	4
fo	" "	" PL-5⅞×½×1'-6"	"	1
PS-1	" "	BAR ¾"φ×0'-9" (POLE STEP)	"	35
PS-2	" "	POLE STEP (FOR MATERIAL SEE BELOW)	"	2
SW-3	" "	BAR ¾"φ×1'-0⅝" (POLE STEP)	"	12
		RIVETS, BOLTS	"	AS REQ'D
po	THIS DWG.	PL 32×2¾×2'-8"	"	1
pq	" "	PL 8×¾×1'-3"	"	4
pr	" "	PL 8½×¾×1'-3"	"	2
ps	" "	PL 6½×¾×1'-3"	"	4
pt	" "	PL 3⅞×¾×1'-3"	"	4
pu	" "	PL 15×¾×1'-3¼"	"	2
—	—	WELD		AS REQ'D.
		POLE W-487AB		
—	THIS DWG.	MATERIAL AS FOR W-487AA		
		POLE W-490AA		
—	THIS DWG.	14 WF 87 SPLICED [103-9¼" 22-11¾"]	EA	1
—	" "	L-6×4×½×99'-3¾" (REINF. ANGLES)	"	4
PS-1	" "	BAR ¾"φ×0'-9" (POLE STEP)	"	34
PS-2	" "	POLE STEP (FOR MATERIAL SEE BELOW)	"	2
SW-3	" "	BAR ¾"φ×1'-0⅝" (POLE STEP)	"	11
		OTHER MATERIAL AS FOR W-487AA		
		POLE W-490AB		
	THIS DWG.	MATERIAL AS FOR W-490AA		
		POLE STEP PS-2		
ba	THIS DWG.	BAR ¾"φ×0'-10⅝"	EA.	1
pd	"	PL-4×⅜×0'-6"	"	2

REFERENCE DRAWINGS

ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A	DWG. No. 46-S-7419
STEEL DETAILS OF CROSS-BEAMS & SAG BRACES FOR W-487A & W-490A	" " 46-S-2234
CROSS-ARM DETAILS	" " 46-S-2235
HARDWARE DETAILS	" " 46-S-2238

NOTES

FOR GENERAL NOTES SEE DWG No. 46S-2234

ISSUE NO	DATE	D'WN	CHK'D	APPROVALS		ISSUED FOR
2	1-9-64	SD	WC			CONSTRUCTION JRS
1	10-15-63	RM	WD			STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2236-2

DELAWARE
STATE HIGHWAY DEPARTMENT

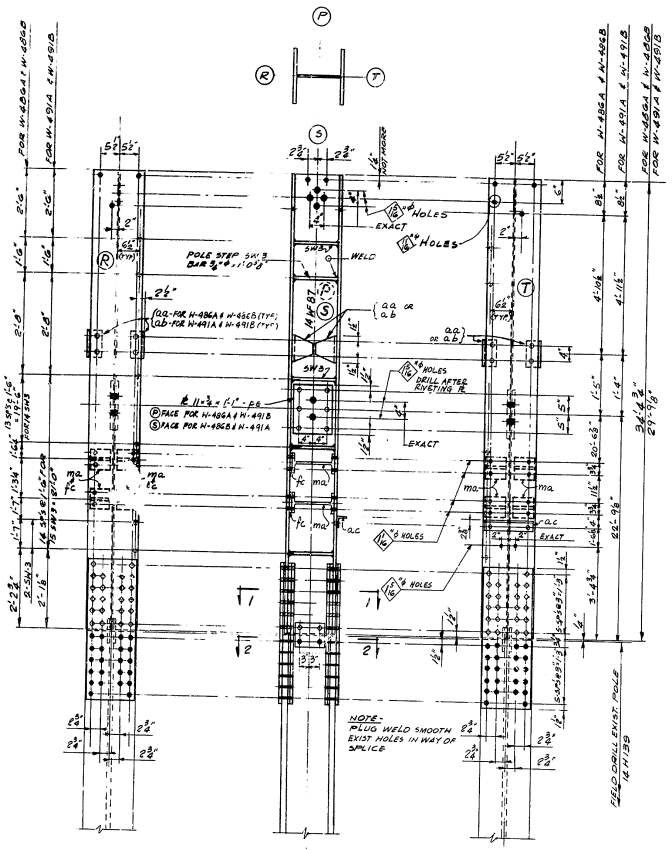
INTERSTATE ROUTE I-95

STEEL DETAILS OF POLES
W-487AA, W-487AB, W-490AA & W-490AB
FOR CATENARY BRIDGES W-487A & W-490A

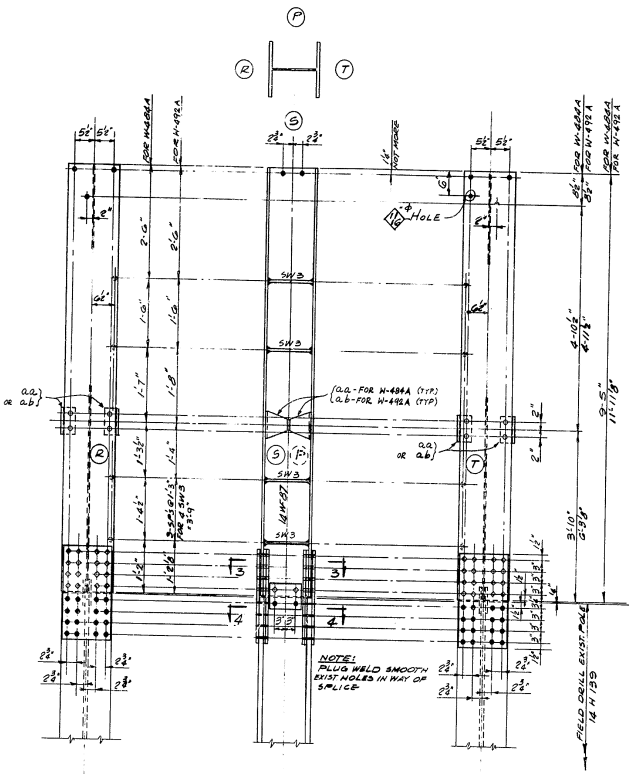
COUNTY	CONTRACT	F.A.P. SEC. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	185	215

BILL OF MATERIAL

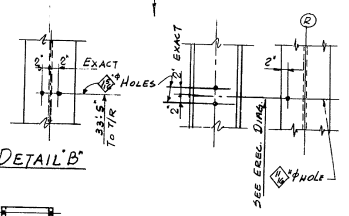
MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		POLE EXTENSION W-484A		
—	THIS DWG.	14 WF 87 - 9'-5"	EA.	1
aa	46-5-2236	L-6×4×⅜ = 0'-7"	"	4
pc	" "	PL-6½×⅜ = 0'-9"	"	2
pk	THIS DWG.	PL-14×⅝ = 2'-0¾"	"	2
pl	" "	PL-6×⅝ = 2'-0¾"	"	4
ff	" "	FILL PL-3×½ = 0'-9"	"	2
fh	" "	" PL-14×⅝ = F.O."	"	2
fk	" "	" PL-6×⅝ = F.O."	"	4
fl	" "	BEVEL FILL PL-6×(⅝×⅝)=F.O."	"	4
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	4
		BOLTS AND/OR RIVETS	"	AS REQ'D
		POLE EXTENSION W-492A		
—	THIS DWG.	14 WF 87 - 11'-11⅝"	EA.	1
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	6
ab	46-5-2236	L-6×4×⅜ = 0'-7"	"	4
	OTHER MATERIAL AS FOR W-484A - OMIT aa			
		POLE EXTENSION W-486A		
—	THIS DWG.	14 WF 87 - 34'-4¾"	EA.	1
aa	46-5-2236	L-6×4×⅜ × 0'-7"	"	4
ac	" "	C-10×3×⅜ × 1'-2"	"	1
pe	THIS DWG.	PL 11×¾ = 1'-1"	"	1
pf	" "	PL-14×⅝×3'-0¾"	"	2
pg	" "	PL-6×⅝×3'-0¾"	"	4
pc	46-5-2236	PL-6½×⅜ = 0'-9"	"	2
fc	" "	FILL PL-6½×⅜ = 0'-8½"	"	4
fd	THIS DWG.	" PL-14×⅝×1'-6"	"	2
fe	" "	" PL-6×⅝×1'-6"	"	4
ff	" "	" PL-3×½×0'-9"	"	2
fg	" "	BEVEL FILL PL-6×(⅜−¼)×1'-6"	"	4
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	18
ma	46-5-2236	12 WF 50 - 0'-6"	"	4
		BOLTS AND RIVETS	"	AS REQ'D
		POLE EXTENSION W-486B		
—	THIS DWG.	MATERIAL AS FOR W-486A		
		POLE EXTENSION W-491A		
—	THIS DWG.	14 WF 87 - 29'-9⅝"	EA.	1
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	17
ab	46-5-2236	L-6×4×⅜ = 0'-7"	"	4
	OTHER MATERIAL AS FOR W-486A - OMIT aa, ac, fc & ma.			
		POLE EXTENSION W-491B		
—	THIS DWG.	MATERIAL AS FOR W-491A		



POLE EXTENSIONS
MK W-486A, W-486B, W-491A & W-491B

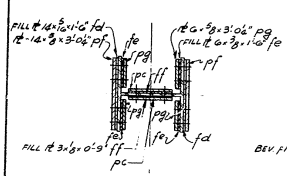


POLE EXTENSIONS
MK W-484A & W-492A

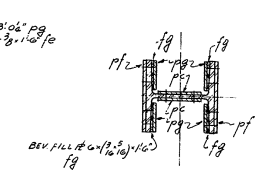


DETAIL "B"

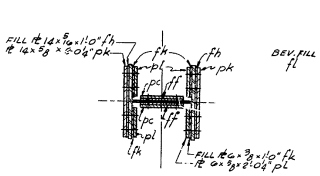
DETAIL "C"



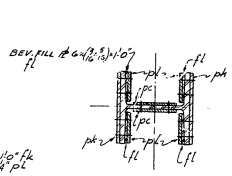
SECTION 1-1



SECTION 2-2



SECTION 3-3



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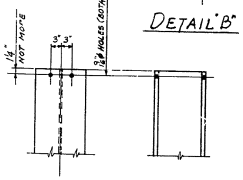


DETAIL "A"
SCALE ¾"=1'-0"

NOTES:
FOR GENERAL NOTES (STEEL) SEE DWG. No. 46-5-2234

REFERENCE DRAWINGS
MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486 DWG. No. 46-5-7417
" " " " " W-485 & W-487 " " 46-5-7418
" " " " " W-491 & W-492 " " 46-5-7420
CROSS-ARM DETAILS " " 46-5-2234
HARDWARE DETAILS " " 46-5-2235
STEEL DETAILS " " 46-5-2236

NO.	DATE	DWN.	CHK.	APPROVALS
2	1-9-64	GO	WJL	APPROVED CONSTRUCTION
1	10-15-63	WD	WJL	APPROVED STRUCTURAL APPROVAL

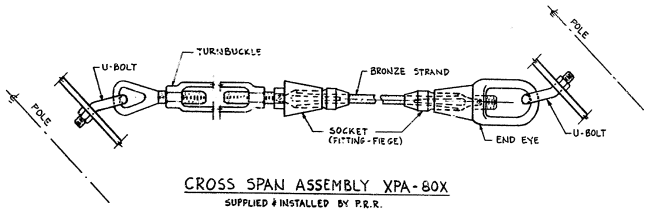
ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS — CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2237-2

DELAWARE
STATE HIGHWAY DEPARTMENT
INTERSTATE ROUTE I-95
POLE EXTENSIONS FOR BRIDGES
W-484, W-486, W-491 & W-492

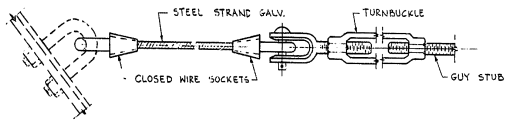
COUNTY	CONTRACT	P & A REQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	186	215



CROSS SPAN ASSEMBLY XPA-80X

SUPPLIED & INSTALLED BY P.R.R.

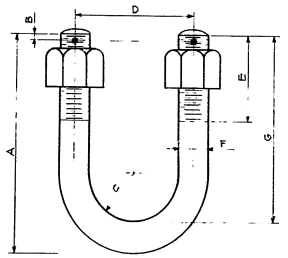
M.M.L. ITEM	DWG. No.	MARK	DESCRIPTION	P.R.R. STORES REF. No.	No. REQ'D
			CROSS SPAN ASSEMBLY XPA-80X (ONE LISTED - 4 REQ'D)		
23-17	—	—	CABLE, BRONZE, BARE, CIRC. 112 C. I", 19 WIRES (FOR LENGTH SEE ERECT DIAGRAMS)	10 - 232050	—
98-16	ET-3080	TB-26	TURNBUCKLE, FORGED STEEL GALV., L.H. EYE 1⅛"	10 - 983805	1
53-24	ET-9825	MF-8L	FITTING, FIEGE, STUD, AL BRONZE, ASTM SPEC. B148 (LAT. ISSUE) 98NT	10 - 819157	1
53-23	ET-9815	MF-8S	" " " " " " " "	10 - 818209	1
52-27	14B-65	EE-4	END EYE, STEEL, FORG. GALV.	10 - 560751	1
19-16	THIS DWG.	UB-35	U-BOLT, STEEL GALV. 1⅛" x 4'-5⅛"	10 - 193108	2



GUY STRAND ASSEMBLY 51B

SUPPLIED & INSTALLED BY P.R.R.

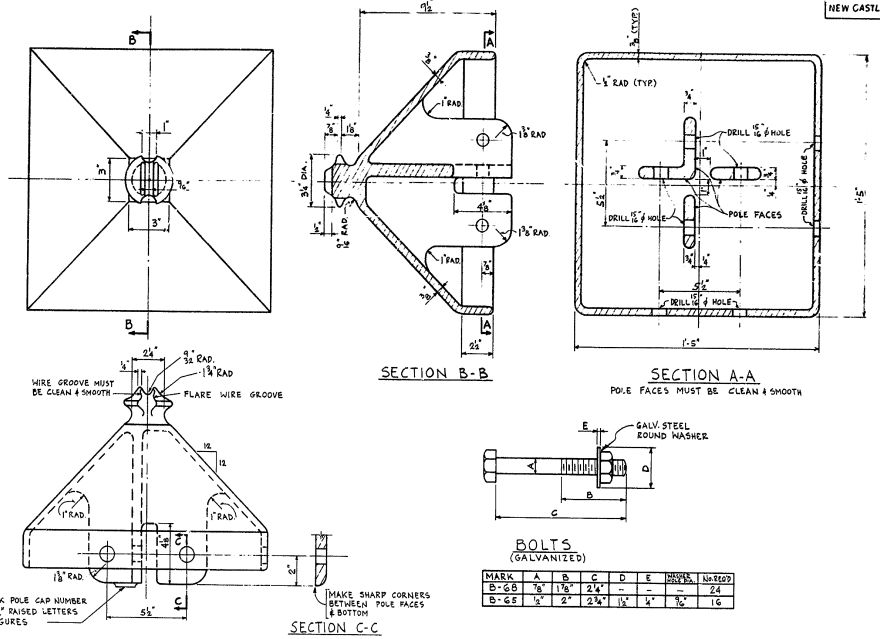
M.M.L. ITEM	DWG. No.	MARK	DESCRIPTION	P.R.R. STORES REF. No.	UNIT	No. REQ'D
			GUY STRAND ASSEMBLY 51B (ONE LISTED - 4 REQ'D)			
24-5	—	—	CABLE, E.H.S. STEEL, GALV. ⅜"ø-19 WIRES (FOR LENGTH, SEE ERECT DIAGRAMS)	10 - 223505	FT.	120±
77-5	D-428580	LS 7	SOCKET, LOOP, STEEL SAE 1035 GALV.	10 - 803953	EA	2
98-2	ET-3080	TB 1	TURNBUCKLE, FORGED STEEL-PAINTED, SPEC. P-209, L.H. CL. 1½"	10 - 979803	EA	1



DETAIL OF U-BOLT (GALV.)

MARK	A	B	C	D	E	F	G	BRONZE COTTER
UB-34	7⅛"	⅜"	1⅝"	4"	2½"	1¼"	5⅛"	⅝" x 2½"

4 - REQUIRED

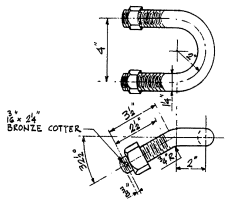


POLE CAP PCJ-14

MATERIAL - CAST IRON
12 - REQUIRED

BOLTS (GALVANIZED)

MARK	A	B	C	D	E	THREADS PER IN.	No. REQ'D
B-68	⅞"	1⅞"	2¼"	–	–	–	24
B-65	½"	2"	2¾"	1½"	¼"	9	16



DETAIL OF U-BOLT - MK UB-35

(GALV.)
SUPPLIED & INSTALLED BY P.R.R.

NOTES:

FOR GENERAL NOTES (STEEL) SEE DWG. No. 46-S-2234

REFERENCE DRAWINGS:

MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486 — DWG. NO. 46-S-7417
ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A — " " 46-S-7419

NO.	DATE	BY	CHK.	APPROVALS	ISSUED FOR
2	1-9-64	SO	LK	DES.	PRELIM. APP. CONSTRUCTION
1	10-15-63	JS	WD	DRAWN	FINAL APP. STRUCTURAL APPROVAL
				CHK.	JRS

E. P. Foley

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB No 1489A

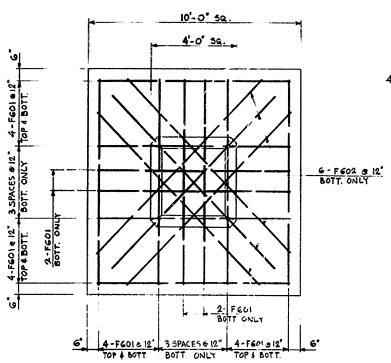
46-S-2238-2

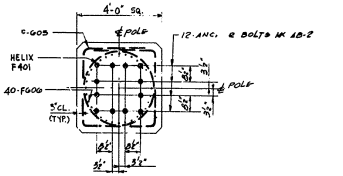
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

HARDWARE DETAILS

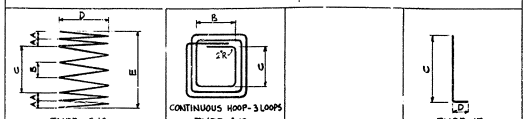
COUNTY	CONTRACT	R.B.A. SEQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(13)	'64	187	215





SECTION 1-1

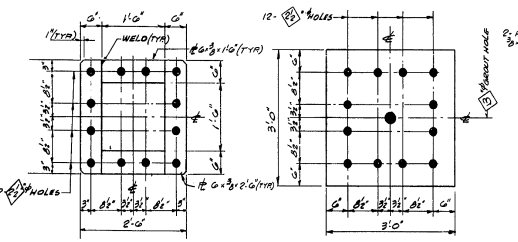
REINFORCING SCHEDULE



MARK	No. REQ'D	SIZE	LENGTH	TYPE	A	B	C	D	E		REMARKS
FOUNDATION TYPE "D" (ONE LISTED - 4 REQ'D)											
F401	1	#4	242'-0"	512	2"	4½"	6'-6"	3'-6"	7'-4"		HELIX
FG01	36	#6	9'-0"	STR.							
FG02	6	#6	11'-0"	STR.							
FG05	2	#6	44'-6"	513			3'-6"	3'-6"			
FG06	40	#6	9'-9"	17				9'-6"	3"		

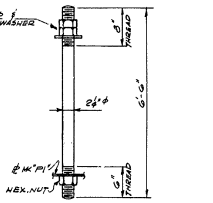
BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		FOUNDATION TYPE "F1" (ONE LISTED - 4 REQ'D)		
—	—	CONCRETE	CU. YDS.	15±
SEE SCHEDULE	THIS DWG.	REINFORCING BARS	LBS.	1600
"P1"	THIS DWG.	℄ #8 S 0'-3½" x 1'-0" 2 ℄ #5 S 0'-3½" x 2'-0"	EA.	1
"P2"	"	℄ 3G x 1 x 3'-0"	"	1
AB-2	"	2½"ø ANCHOR BOLTS WITH 3 H. NUTS & ONE ⅜"x5" ROUND W.	"	12
		ANCHOR MK TPM (ONE LISTED - 4 REQ'D)		
WQ.	THIS DWG.	℄ 16 WF 87 x 1'-9" (CUT)	EA.	1
AB-1	" "	ANCHOR BOLTS 1¼"ø x 3'-0" LG. WITH 2 H.N. & WASHER	"	4
pb	" "	℄, ⅝"	"	2
pc	" "	℄ 14½ x 1 x 1'-9"	"	AS REQ'D
pd	" "	℄ 14½ x ½ x 1'-9"	"	" "
—	" "	STEEL WEDGE 2" x (6"x1) x 0'-5"	"	1
		RIVETS		AS REQ'D
		GUY STUB MK G.S. 1-A (ONE LISTED - 4 REQ'D)		
—	THIS DWG.	1¼"ø GUY STUB x 8'-0" LG.	EA.	1
—	" "	#5½ STD. R.H. CLEVIS WITH H.N. & BRONZE COTTER	"	1

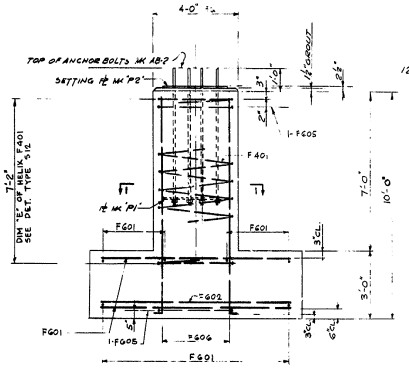


DETAIL OF ℄ MK "P1"
SCALE ¾" = 1'-0"

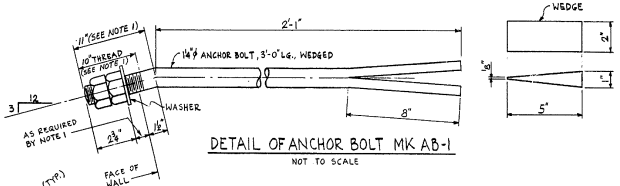
DETAIL OF ℄ MK "P2"
℄ 3G x 1 x 3'-0"
SCALE ¾" = 1'-0"



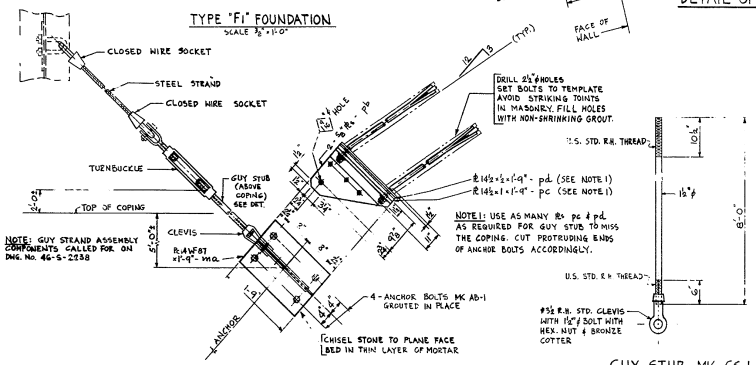
DETAIL OF ANCHOR BOLT MK AB-2
N.T.S.



TYPE "F1" FOUNDATION
SCALE ⅜" = 1'-0"



DETAIL OF ANCHOR BOLT MK AB-1
NOT TO SCALE



ANCHOR MK TPM
NOT TO SCALE

GUY STUB MK G.S.1-A
NOT TO SCALE
4 - REQUIRED

GENERAL NOTES (CONCRETE)

1. CONCRETE TO HAVE MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST ISSUE OF THE AMERICAN CONCRETE INSTITUTE STANDARD CODE, ENTITLED BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318).
3. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS AND DEFORMATIONS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-305.
4. ALLOWABLE TENSILE STRESS IN REINF. STEEL SHALL BE 20,000 PSI.
5. ALL STEEL EMBEDDED IN CONCRETE TO BE UNPAINTED
6. CHAMFER ALL EXPOSED CORNERS ONE INCH.

FOR STEEL NOTES SEE DWG. 46-S-2234

REFERENCE DRAWINGS

MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486	DWG. No. 46-S-1417
ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-440A	" " 46-S-1419
HARDWARE DETAILS	" " 46-S-2238

MARK	DATE	DRAWN BY	APPROVALS	
2	1-9-64	SD	WC	CONSTRUCTION JRS
1	10-16-63	JS	[illegible]	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-2239-2

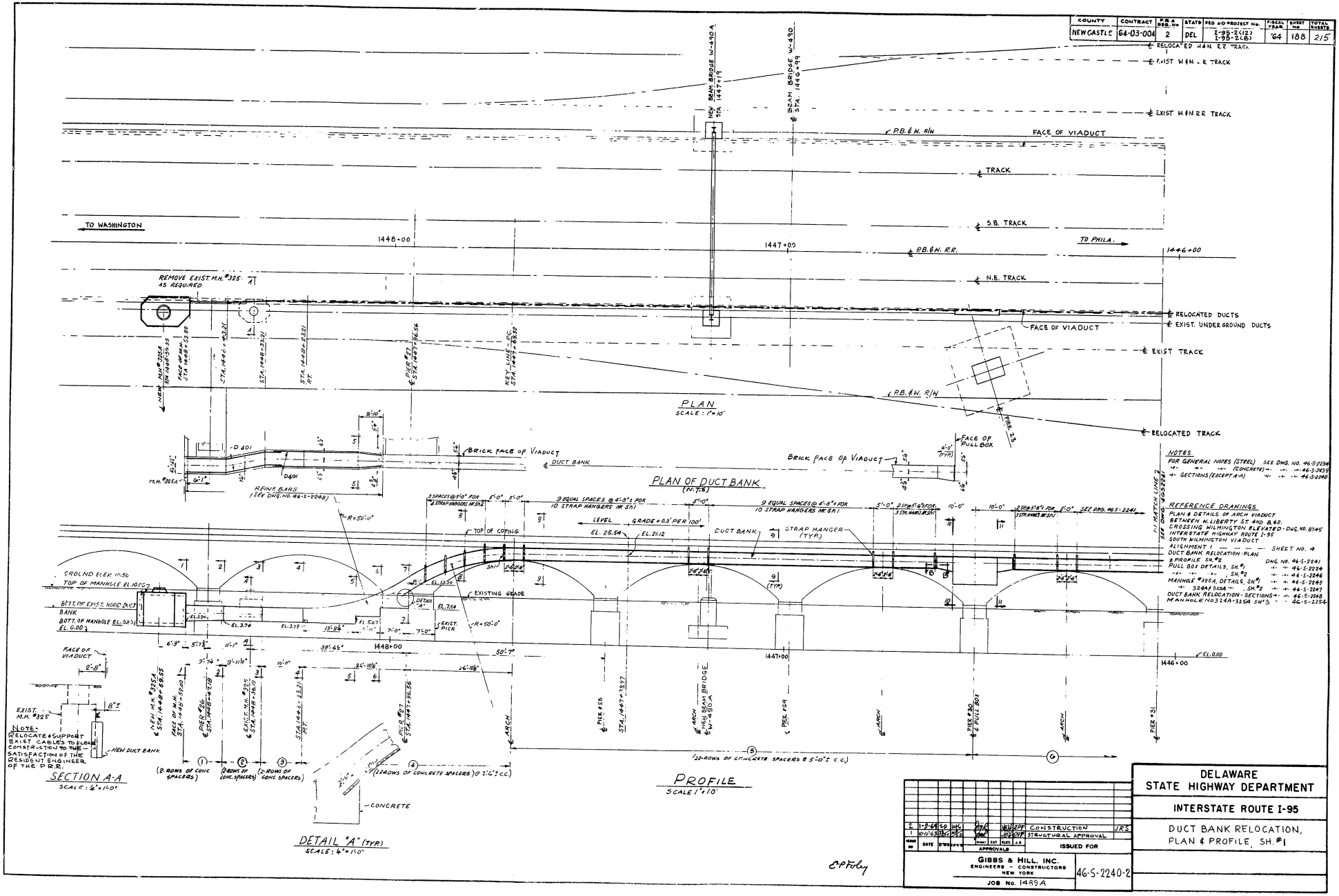
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

FOUNDATIONS & ANCHOR DETAILS

E.P. Foley

COUNTY	CONTRACT	P.R.A. DEG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(B)	'64	188	215



ISSUE NO	DATE	D'WN	CHK'D	APPROVALS	CAT	ELEC	A.E.	ISSUED FOR
2	1-9-64	SD	WK				EPF	CONSTRUCTION JRS
1	10-15-63						EPF	STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2240-2

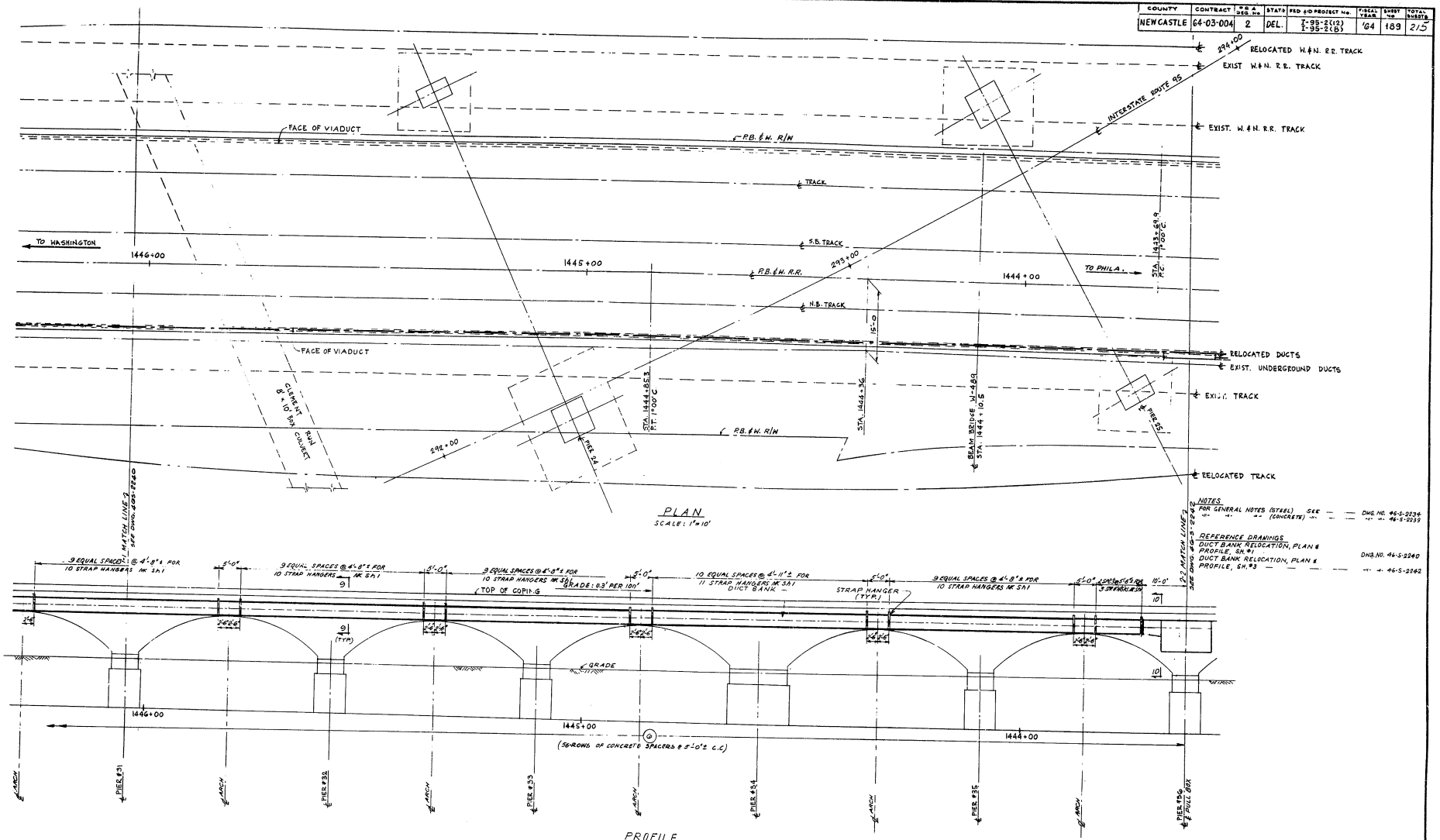
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1

E.P. Foley

COUNTY	CONTRACT	R.D.A. DES. NO.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	G4-03-004	2	DEL.	I-95-2(12) I-95-2(65)	'64	189	215



PROFILE
SCALE: 1"=10'

NO.	DATE	BY	REVISIONS	APPROVALS
2	1-24-63	[illegible]	[illegible]	CONSTRUCTION JRS
1	10-15-62	[illegible]	[illegible]	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS — CONSTRUCTORS
NEW YORK
JOB NO. 1489A

46-S-2241-2

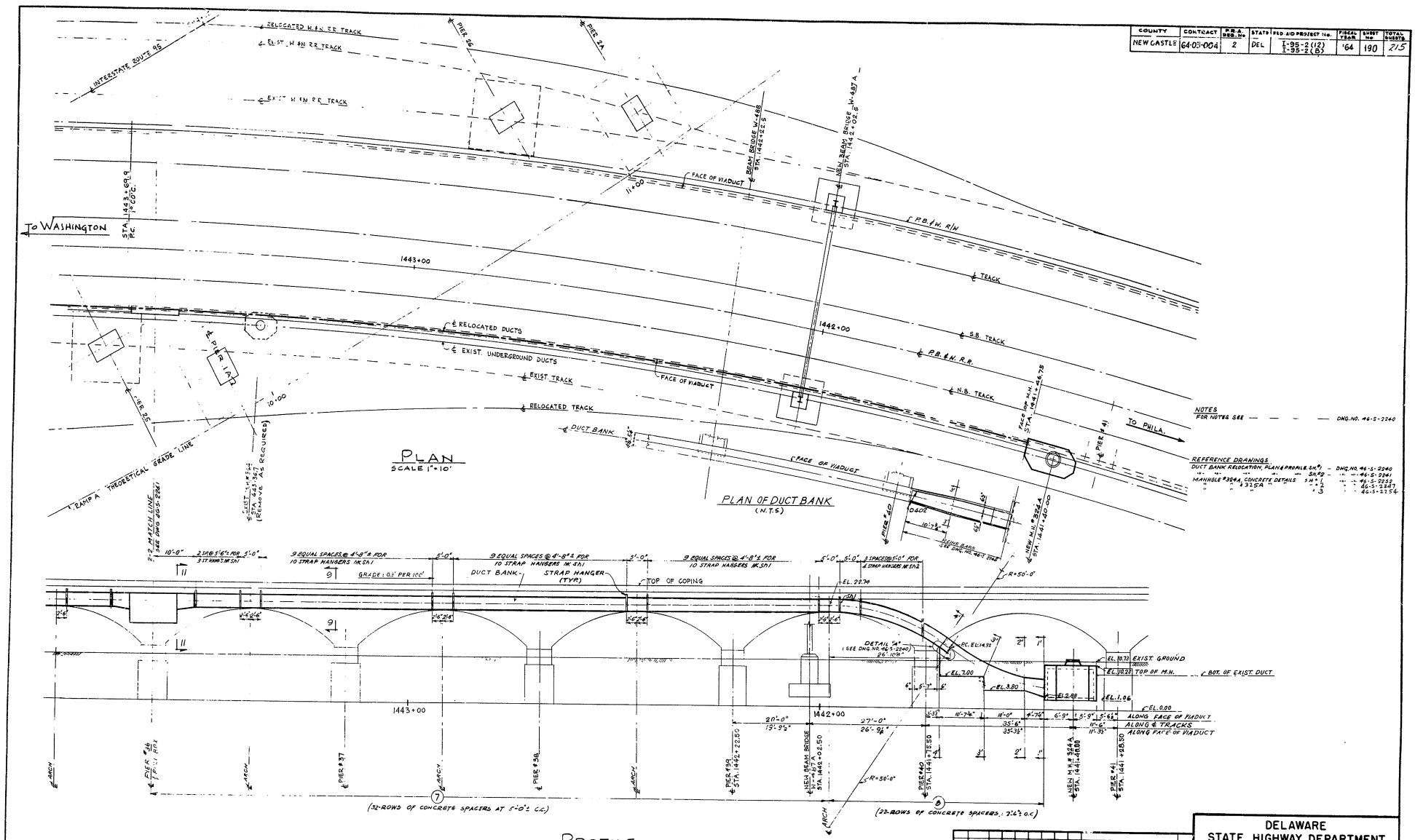
E.P. Foley

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION, PLAN & PROFILE, SH. #2

COUNTY	CONTRACT	P.R.A. DEG. No	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
NEW CASTLE	64-031-004	2	DEL	I-95-2(12) I-95-2(B)	'64	190	215



ISSUE No	DATE	D'WN	CH'K'D	APPROVALS	CAT	ELEC	A.E.	ISSUED FOR
2	1-9-64	S.O.	WG	[illegible]		VBH	EPF	CONSTRUCTION JRS
1	10-15-63	[illegible]	[illegible]	[illegible]		VBH	EPF	STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2242-2

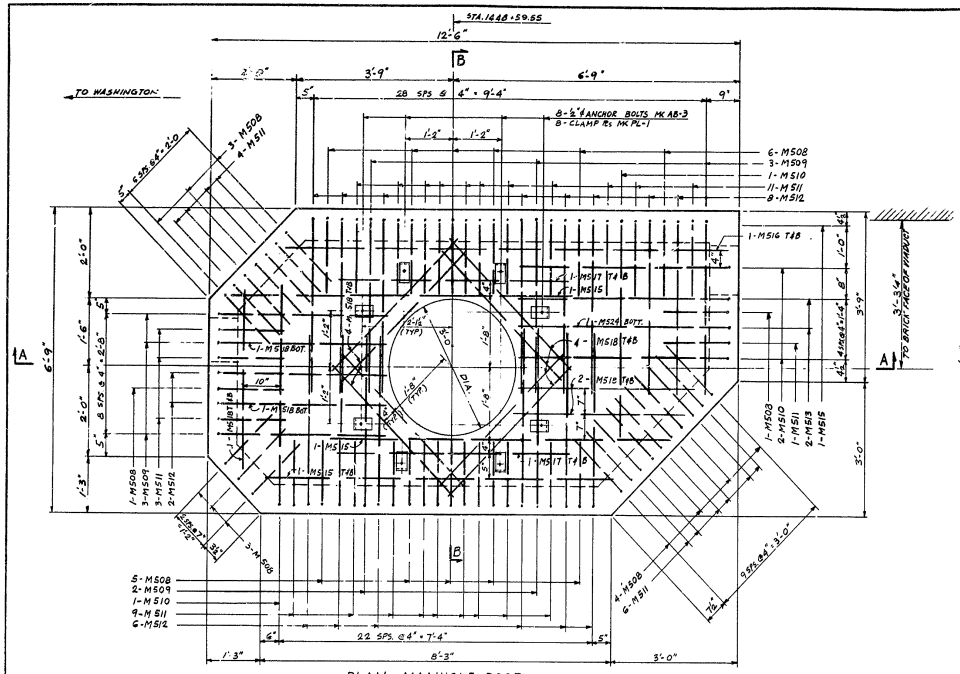
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION,
PLAN & PROFILE SH. #3

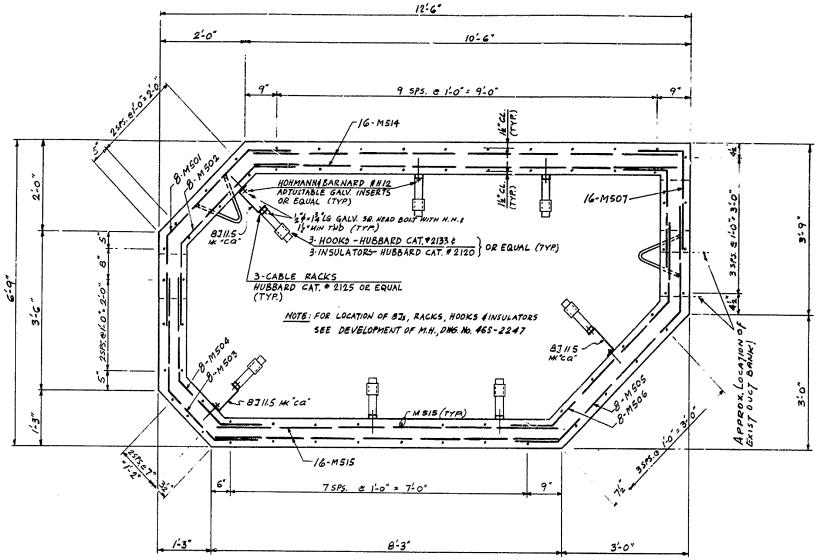
E P Foley

COUNTY	CONTRACT	R.D.A. DES. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	191	215



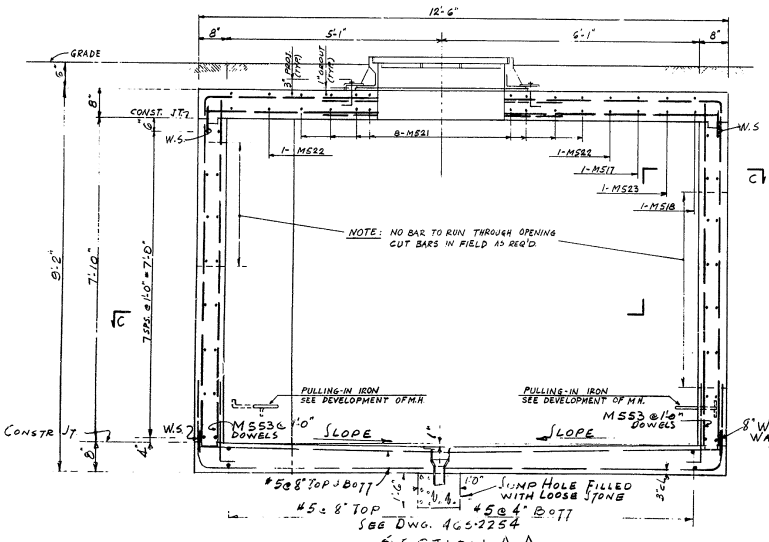
PLAN MANHOLE ROOF

SCALE ¾"=1'-0"

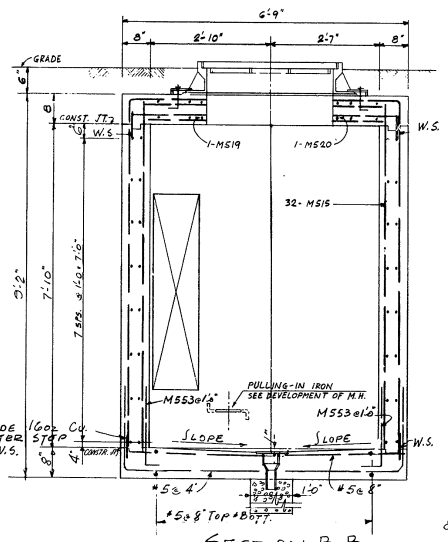


SECTION C-C

SCALE ¾"=1'-0"



SECTION A-A



SECTION B-B

NOTES

FOR NOTES SEE DWG. 465-2247 & 465-2254

REFERENCE DRAWINGS

PLAN & PROFILE	DWG. No. 46-5-161
DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1	" 46-5-2240
" , SECTIONS	" 46-5-2248
MANHOLE #328A & 325A, CONCR. DETAILS, SH. #2	" 46-5-2247
MANHOLES #328A & 325A, CONCRETE DET'S, SH #3	" 46-5-2254

E.P. Foley

NO.	DATE	D'WN	CHK'D	APPROVALS		
2	1-8-64	GO	WHC	DES.	CONSTRUCTION	JRS
1	06-03-63	GG	WHC	DES.	STRUCTURAL APPROVAL	
				DES.	CKT	ELEC	A.E.	ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MANHOLE No. 325 A
CONCRETE DETAILS SH. #1

46-5-2245 2

COUNTY	CONTRACT	F.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(B)	'64	192	215

ELEVATION - SHOWING CINCH ANCHOR LOCATION.

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

PULLING-IN IRON - DETAIL

SCALE: 3" = 1'-0"

BILL OF MATERIAL

MARK	DWG. NO	DESCRIPTION	UNIT	QUANT.
		PULL BOX (ONE LISTED - TWO REQ'D)		
—	465-2224 465-2246	PULL BOX	EA.	1
—	465-2246	3/4"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH BEVELED WASHER, 9" LG. GALV. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL.	"	27
—	"	3/4"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH STD. WASHER, 9" LG. GALV. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL.	"	8
—	"	1/2"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH 9" LG. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL.	"	16
—	"	PULLING-IN IRON	"	2
—	465-2224	CABLE RACK, HUBBARD CAT. # 2125 OR EQUAL	"	12
—	"	HOOK, HUBBARD CAT. # 2133 OR EQUAL	"	24
—	"	INSULATOR, HUBBARD CAT. # 2120 OR EQUAL	"	24
	465-2246	3/4"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH STD. WASHER, 6" LG. GALV. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL	"	3

LIFTING HANDLE - DETAIL

SCALE: 3" = 1'-0"

NOTES:

FOR GENERAL NOTES SEE — — — — DWG. NO. 465-2234

WORK THIS DRAWING WITH DRAWING NO. 465-2224 & 465-2248

REFERENCE DRAWINGS:

PULL BOX DETAILS, SHEET NO. 1 — — — — DWG. NO. 465-2224

ISSUE NO	DATE	DWN	CHKD	APPROVALS			ISSUED FOR	
2	1-9-64	S.D.	W.C.				CONSTRUCTION	J.R.S.
1	10-15-63	G.G.	S.D.				STRUCTURAL APPROVAL	

E.P. Foley

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB NO. 1489A

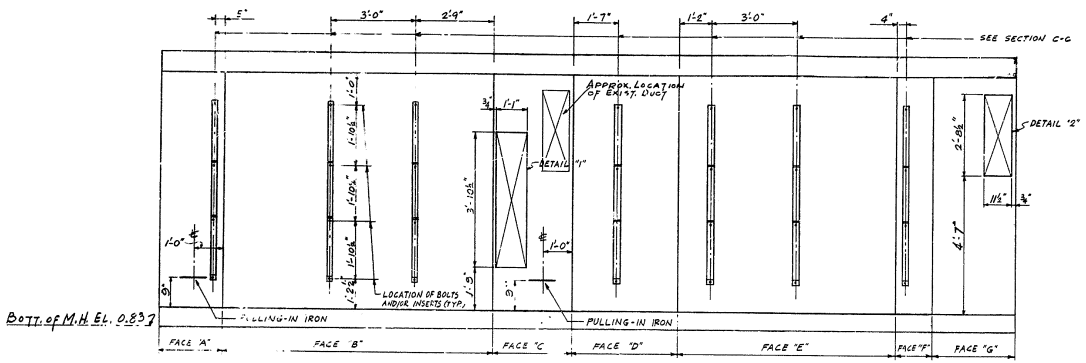
465-2246-2

DELAWARE
STATE HIGHWAY DEPARTMENT

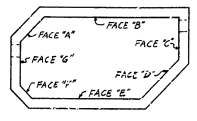
INTERSTATE ROUTE I-95

PULL BOX DETAILS
SHEET NO. 2

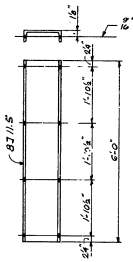
COUNTY	CONTRACT	R.R.& BRDG. NO.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	193	215



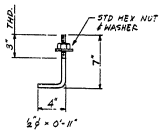
DEVELOPMENT OF MANHOLE No 325A



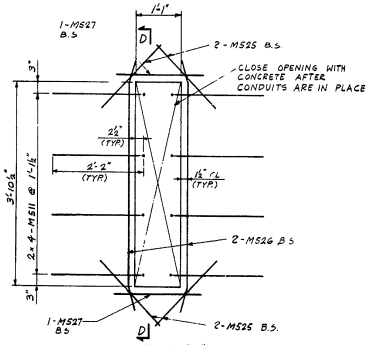
KEY PLAN



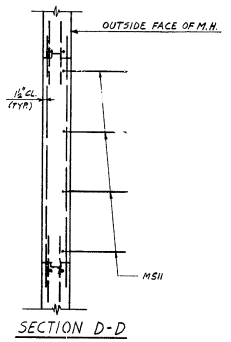
DETAIL OF 8C11.5 MK 'ca' CABLE RACK EXTENSION
(SEE SECTION C-C)
3 REQ'D



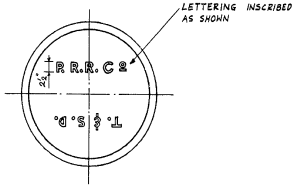
ANCHOR BOLT MK AB-3
6 REQ'D



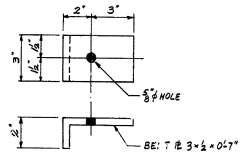
DETAIL "1"



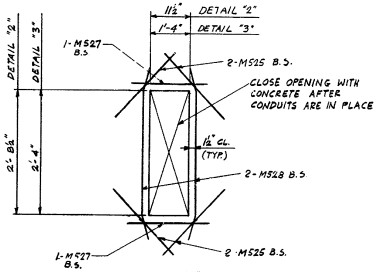
SECTION D-D



PLAN M.H. COVER



CLAMP PLATE MK PL-1
8 REQ'D



DETAIL "2"
DETAIL "3"

BAR SCHEDULE

TYPE 14A

TYPE 17

MANHOLE No. 325A

MARK	No. REQ'D	SIZE	LENGTH	TYPE	A	B	C	D	E	LOCATION
M501	8	#5	5'-9"	14A	1'-1"	8½"	2'-8"	2'-0"	1'-5"	HORIZ. IN WALLS
M502	8	"	5'-0"	"	1'-0"	8½"	2'-5½"	1'-6"	1'-3½"	" " "
M503	8	"	5'-3"	14A	8"	1'-9½"	1'-7"	1'-0"	8½"	" " "
M504	8	"	4'-9"	14A	4"	1'-7½"	1'-4½"	1'-0½"	8½"	" " "
M505	8	"	7'-0"	14A	1'-"	8½"	4'-1"	2'-4"	1'-8"	" " "
M506	8	"	6'-9"	14A	1"	8½"	3'-10½"	1'-9½"	1'-3"	" " "
M507	16	"	3'-3"	17		1'-0"	2'-3"			" " "
M508	23	"	10'-0"	17		1'-8"	8'-4"			IN WALLS & ROOF
M509	8	"	12'-3"	17		3'-11"	8'-4"			" " "
M510	4	"	13'-3"	17		4'-11"	8'-4"			" " "
M511	42	"	3'-9"	17		1'-7"	2'-2"			AT OPENING IN WALL (36) (8)
M512	16	"	6'-0"	17		3'-10"	2'-2"			IN WALLS & ROOF
M513	2	"	7'-0"	17		4'-10"	2'-2"			" " "
M514	16	"	10'-0"	STR.						HORIZ. IN WALLS
										" " " (16)
M515	53	"	8'-3"	STR.						VERT. IN WALLS (35)
										HORIZ. IN ROOF (4)
M516	2	"	10'-6"	STR.						" " "
M517	5	"	5'-6"	STR.						" " "
M518	25	"	4'-0"	STR.						" " "
M519	1	"	12'-0"	STR.						" " "
M520	1	"	10'-9"	STR.						" " "
M521	8	"	6'-9"	STR.						" " "
M522	2	"	6'-0"	STR.						" " "
M523	1	"	4'-6"	STR.						" " "
M524	1	"	5'-3"	STR.						" " "
M525	16	"	2'-0"	STR.						AT OPENINGS IN WALLS
M526	4	"	3'-0"	14A	6½"	2"	3'-11"	6½"	2"	" " " "
M527	8	"	2'-0"	STR.						" " " "
M528	4	"	3'-9"	14A	6"	2"	2'-9"	6"	2"	" " " "
FOR FLOOR SLAB REINFORCING SEE DWG. 46-S-2254										
MANHOLE No. 324A										
REINFORCING BARS, SAME AS ABOVE										

NOTES:
1. FOR GENERAL NOTES (CONCRETE) SEE DWG No. 46-S-2239
2. FOR GENERAL NOTES (STEEL) SEE " " 46-S-2234
3. IN INSTALLING INSERTS CARE MUST BE TAKEN SO THAT NO REINFORCING SHALL COME IN DIRECT CONTACT WITH INSERTS. A MINIMUM OF 2" CLEARANCE SHALL BE MAINTAINED BETWEEN INSERTS & REINFORCEMENT.
4. FOR NOTES SEE DWG 46-S-2254.

REFERENCE DRAWINGS

MANHOLE No. 325A, CONCRETE DETAILS SH. NO. 1 DWG. No. 46-S-2245
MANHOLE No. 324A, " " 46-S-2252
MANHOLES No. 324A & 325A, CONCRETE DET'S, SH No. 3 " " 46-S-2256

BILL OF MATERIAL - FOR M.H. #325A

No. REQ'D	DESCRIPTION	MARK	DWG. No.
2	PULLING-IN IRON - HUBBARD #9120 OR EQUAL	–	THIS DWG.
28	HOHMANN & BARNARD #HN12 ADJUSTABLE GALV. INSERT OR EQUAL	–	46-S-2245
3	8J 11.5 × 6'-0" LG. GALV.	CA	THIS DWG.
40	½"ø × ⅞" LG. GALV. BOLT WITH 3Ø H. & HEX. N., 1⅝" MIN. THD.	–	46-S-2245
21	CABLE RACK - HUBBARD # 2105 OR EQUAL	–	" " "
21	HOOK - HUBBARD # 2133 OR EQUAL	–	" " "
21	INSULATOR - HUBBARD # 2120 OR EQUAL	–	" " "
1	MANHOLE FRAME & COVER - FLOCKHART TYPE 604-C #60457 OR EQUAL - INSCRIBED AS SHOWN.	–	" " " & THIS DWG.
8	CLAMP PLATE 3 × ½ × 0'-7"	PL-1	THIS DWG.
8	ANCHOR BOLT ½"ø × 0'-11"	AB-3	" "
80 LIN. FT.	COPPER WATER STOP - 8" WIDE × 16 OZ.	W.S.	46-S-2245
1	4" T.C. PIPE WITH STRAINER	–	"
	M.H. # 324A MATERIAL SAME AS FOR M.H. #325A		

E P Foley

NO.	DATE	DESCRIPTION	APPROVALS
2	12-64	3-D WKG.	CONSTRUCTION JRS
1	8/15/63	3-D WKG.	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS – CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-2247-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MANHOLES No. 324A & 325A
CONCRETE DETAILS SH. #2

COUNTY	CONTRACT	R & A DRG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
NEW CASTLE	G4-03-004	2	DEL.	I-95-2(12) I-95-2(13)	'66	194	215

LIST OF MATERIAL

SCHEDULE OF TRANSITE CONDUIT & FITTINGS, TYPE I, 4" I.D., JOHNS MANVILLE OR EQUAL

RUN	FROM	TO	DWG. No.	10'-0" LG. (EA.)	5'-0" LG. (EA.)	STD. END BELL (EA.)	PLASTIC COUPLING (EA.)	REMARKS
①	M.H. #325 A	SECTION 2-2	46-S-2240	6	—	6	6	CUT CONDUIT IN FIELD AS REQUIRED. OMIT TAPERED COUPLING FOR EACH TRANSITE CONDUIT.
②	SECTION 2-2	" 3-3	"	6	—	—	6	
③	" 3-3	" 4-4	"	6	—	—	6	
④	" 4-4	℄ ARCH BETW. PIER #27 & PIER #28	"	—	72	—	72	
⑤	℄ ARCH BETW. PIER #32 & PIER #28	PULL BOX PIER # 30	"	66	6	6	66	
⑥	PULL BOX PIER # 30	PULL BOX PIER # 36	46-S-2240 46-S-2241	162	12	12	162	
⑦	PULL BOX PIER # 36	℄ ARCH BETW. PIER # 39 & PIER #40	46-S-2242	90	6	6	90	
⑧	℄ ARCH BETW. PIER # 39 & PIER #40	M.H. # 324 A	"	—	72	6	66	
TOTAL				336 (EA.)	168 (EA.)	36 (EA.)	474 (EA.)	

MISC. STEEL DETAILS

RUN	DWG. No.	DESCRIPTION: 10LL 20.0 FIT IN FIELD (FT.)	L 4×3½×⅜ × 6'-0" LG. MK "aa" (EA.)	BENT PL ⅜"×2"×1'-0" MK "pa" (EA.)	BENT PL ⅜"×2"×1'-0" MK "pb" (EA.)	PL ⅜"×2"×1'-0" MK "pc" (EA.)	STRAP HANGER 3½"×3½"×¼" MK "sh1" (EA.)	STRAP HANGER 3½"×5"×¼" MK "sh2" (EA.)	¾ ø × 6" LG. BOLT WITH H.H. NUT (EA.)	¾ ø RIVNG HOOK CINCH ANCHOR 3 UNITS WITH BOLT NUT & ¾ ø × 2½" LG. (EA.)	FIELD WELD
①	46-S-2240	—	—	—	—	—	—	—	—	—	—
②	"	—	—	—	—	—	—	—	—	—	—
③	"	—	—	—	—	—	—	—	—	—	—
④	"	32.0	—	—	5	2	1	4	16	13 2	AS REQ'D
⑤	"	115.0	2	1	23	5	23	—	48	46 23	" "
⑥	46-S-2240 46-S-2241	280.0	4	2	57	14	57	—	128	114 57	"
⑦	46-S-2242	165.0	2	1	33	10	33	—	88	66 33	"
⑧	46-S-2242	32.0	—	—	5	2	1	4	16	14 1	"
TOTAL		624.0 (FT.)	8 (EA.)	4 (EA.)	123 (EA.)	33 (EA.)	115 (EA.)	8 (EA.)	196 (EA.)	253 114 (EA.) (EA.)	

SCHEDULE OF REINFORCEMENT

RUN	MARK	LOCATION	DWG. No.	DESCRIPTION	UNIT	QUANT.
① TO ④	D401	AT M.H. #325A	46-S-2240 46-S-2242	#4 BAR 88'-0" LG. BEND IN FORM	EA.	16
⑤	D402	AT M.H. #324 A	46-S-2242 46-S-2243	#4 BAR 27'-0" LG. " " "	EA.	8
① TO ⑧	MK FB 1	FROM M.H. #325 A TO M.H. #324 A	46-S-2248	WELDED WIRE FABRIC, TWO-WAY TYPE, STYLE DESIGNATION : 6×6 - 6/6	SQ. FT.	2700

CONCRETE

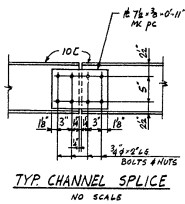
RUN	FROM	TO	DWG. No.	MK CS 1	MK CS 2	MK CS 3	MK CS 4	CONCRETE (CU.YD.)
①	M.H. # 325 A	SECTION 2-2	46-S-2240	10	2	—	—	1.50
②	SECT. 2-2	" 3-3	"	10	2	—	—	1.25
③	" 3-3	" 4-4	"	10	2	—	—	1.25
④	" 4-4	℄ ARCH BETW. PIER #27 & PIER #28	"	50	10	60	12	7.50
⑤	℄ ARCH BETW. PIER #32	℄ PULL BOX PIER #30	"	—	—	110	22	8.50
⑥	℄ PULL BOX PIER #30	℄ PULL BOX PIER #36	46-S-2240 46-S-2241	—	—	280	56	21.00
⑦	℄ PULL BOX PIER #36	℄ ARCH BETW. PIER # 39 & PIER #40	46-S-2242	—	—	160	32	12.50
⑧	℄ ARCH BETW. PIER #39 & PIER #40	M.H. # 324 A	"	50	10	60	12	7.50
TOTAL RUN ① TO RUN ⑧				130	26	670	134	61.00

NOTES:

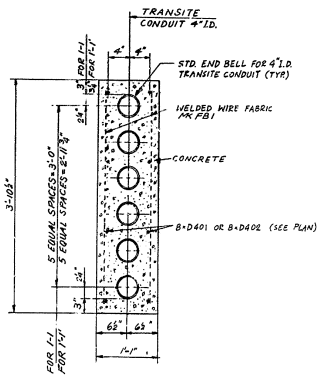
FOR GENERAL NOTES (STEEL) SEE ——— DWG. No. 46-S-2234
" " " (CONCRETE) SEE ——— " " 46-S-2239

REFERENCE DRAWINGS:

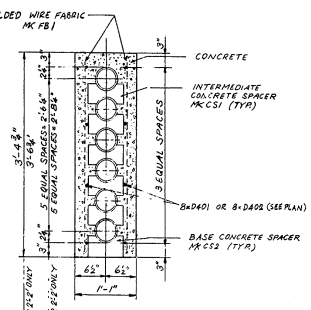
DUCT BANK RELOCATION, SH. #1 ——— DWG. No. 46-S-2240
" " " SH. #2 ——— " " 46-S-2241
" " " SH. #3 ——— " " 46-S-2242
MANHOLE #325 A, CONCRETE DETAILS, SH. #1 ——— " " 46-S-2245
" " #324 A " SH. #2 ——— " " 46-S-2247
" " #324 A " ——— " " 46-S-2252
PULL BOX DETAILS, SH. #1 ——— " " 46-S-2234
" " " SH. #2 ——— " " 46-S-2246
MANHOLE #324A & #325A CONCRETE DETAILS, SH. #3 " " 46-S-2254



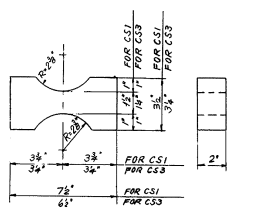
TYP. CHANNEL SPLICE
NO SCALE



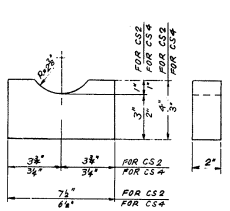
SECTION 1-1
SECTION 1'-1'
SCALE: 1"=1'-0"



SECTION 2-2
SECTION 3-3
SECTION 4-4
SECTION 2'-2'
SCALE: 1"=1'-0"

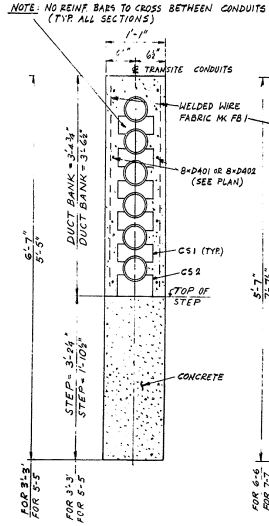


INTERMEDIATE CONCRETE SPACER
MK CS1 & CS3
SCALE: 3"=1'-0"

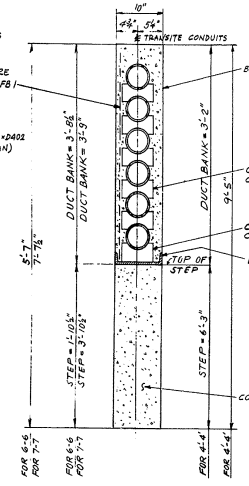


BASE CONCRETE SPACER
MK CS2 & MK CS4
SCALE: 3"=1'-0"

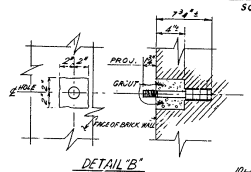
NOTE: NO REINF. BARS TO CROSS BETWEEN CONDUITS (TYP. ALL SECTIONS)



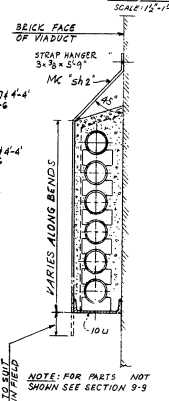
SECTION 3'-3'
SECTION 5-5
SCALE: 1"=1'-0"



SECTION 6-6
SECTION 7-7
SECTION 4'-4'
SCALE: 1"=1'-0"

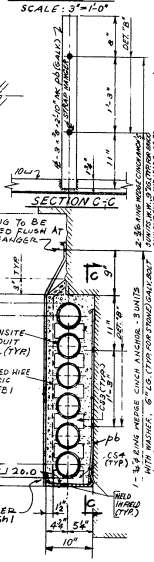


DETAIL "B"
SCALE: 1½"=1'-0"

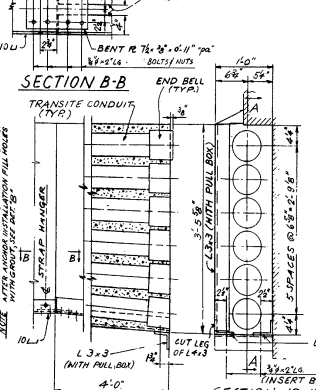


NOTE: FOR PARTS NOT SHOWN SEE SECTION 9-9

SECTION 8-8
SCALE: 1"=1'-0"



SECTION C-C



SECTION B-B

SECTION 10-10
SECTION 11-11 OPP HAND

SECTION A-A
SCALE: 1"=1'-0"

NOTE: REMEDIAL ACTION SHALL BE TAKEN AT THE DISCRETION OF THE FIELD ENGINEER IF IN HIS OPINION AT ANY PARTICULAR LOCATION THE FACIAL BRICK IS IN POOR STRUCTURAL CONDITION - BEFORE INSTALLING CINCH ANCHORS.

E. P. Foley

NO.	DATE	BY	CHK'D	APPROVED
2	1-24-66	WC	EPF	FOR CONSTRUCTION JRS
1	10-25-65	WC	EPF	STRUCTURAL APPROVAL
ISSUE NO.	DATE	DESCRIPTION	CHK'D	APPROVED

APPROVALS — ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

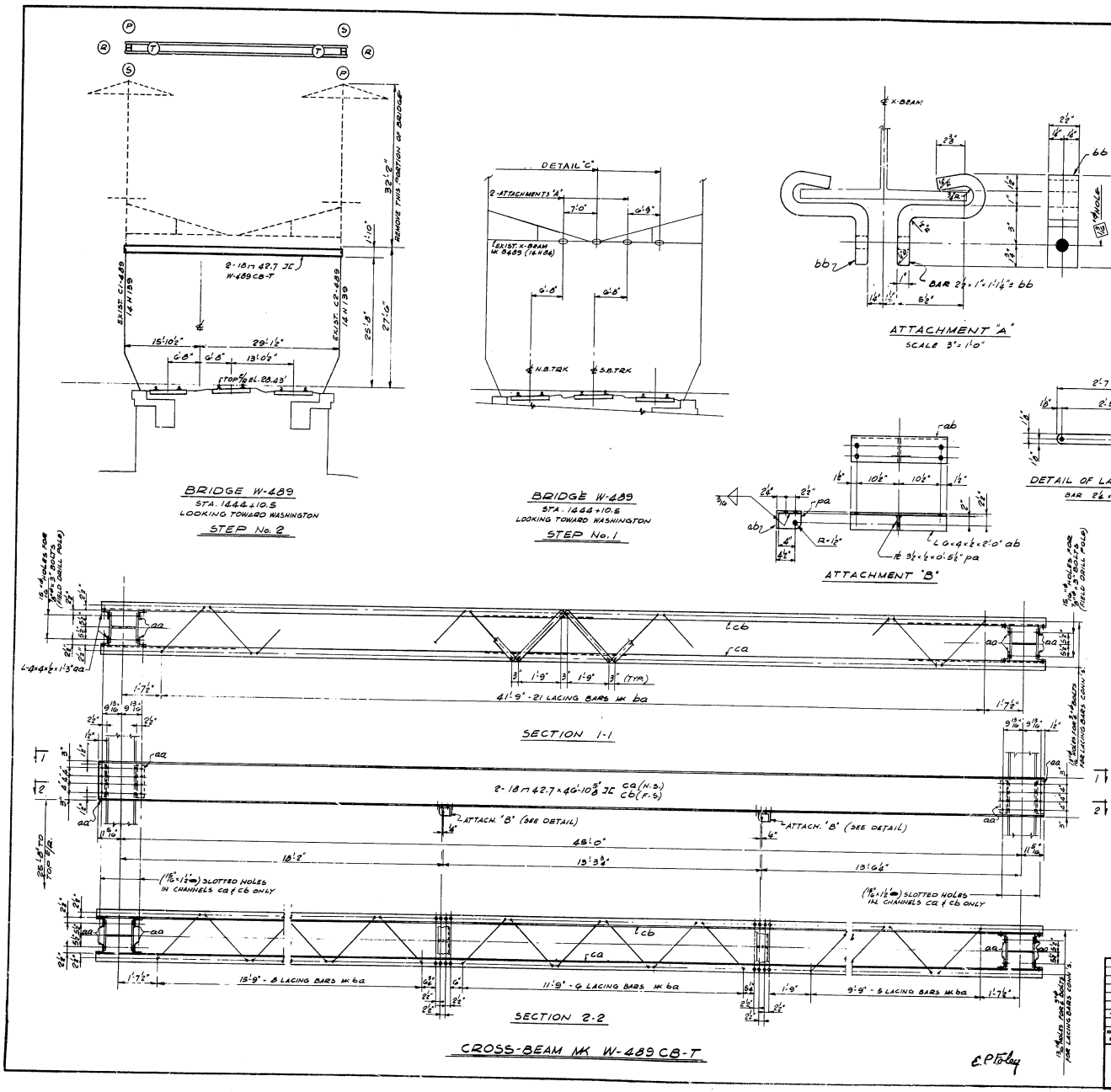
46-S-2248

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION
SECTIONS

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	195	215



BILL OF MATERIAL

	MARK	DWG. No.		DESCRIPTION	UN.	QUANT.
				CROSS BEAM MK W489 CB-T		
	ca	THIS DWG.		18 [42.7 × 46'-10 5/8"	EA.	1
	cb	"		18 [42.7 × 46'-10 5/8"	"	1
	ba	"		LACING BAR 2 1/4 × 1/4 × 2'-7 15/16"	"	40
	pa	"		PL 3 1/2 × 1/2 × 0'-5 1/2"	"	2
	aa	"		L-4 × 4 × 1/2 × 1'-3"	"	8
	ab	"		L-6 × 4 × 1/2 × 2'-0"	"	2
				BOLTS - WITH H.H.N. & W.	"	AS REQ'D.
				ATTACHMENT "A" (ONE LISTED, 2-REQ'D.)		
*	bb			BAR 2 1/2 × 1" × 1'-1 1/4" ± (BENT) - GALV. -	EA.	2
*				DETAIL "C"	"	2

* TO BE SUPPLIED & INSTALLED BY P.R.R.
ALL OTHER MATERIAL TO BE SUPPLIED & INSTALLED BY GEN. CONTRACTOR

NOTES:

FOR GENERAL NOTES (STEEL) SEE DWG. 46S-2234

REFERENCE DWG'S

ERECTION DIAGRAMS FOR TEMP. CAT. ARRANGEMENTS DWG. No. 46X621
(EXISTING) 3 TR. CURVE BEAM BR., DIAGRAM OF BR. W-489 " " 11B-989

ISSUE NO.	DATE	D'WN	CK'D	APPROVALS	ISSUED FOR
2	1-9-64	S.O.	W.L.		CONSTRUCTION JRS
1	10-15-63	R.M.	W.D.		STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

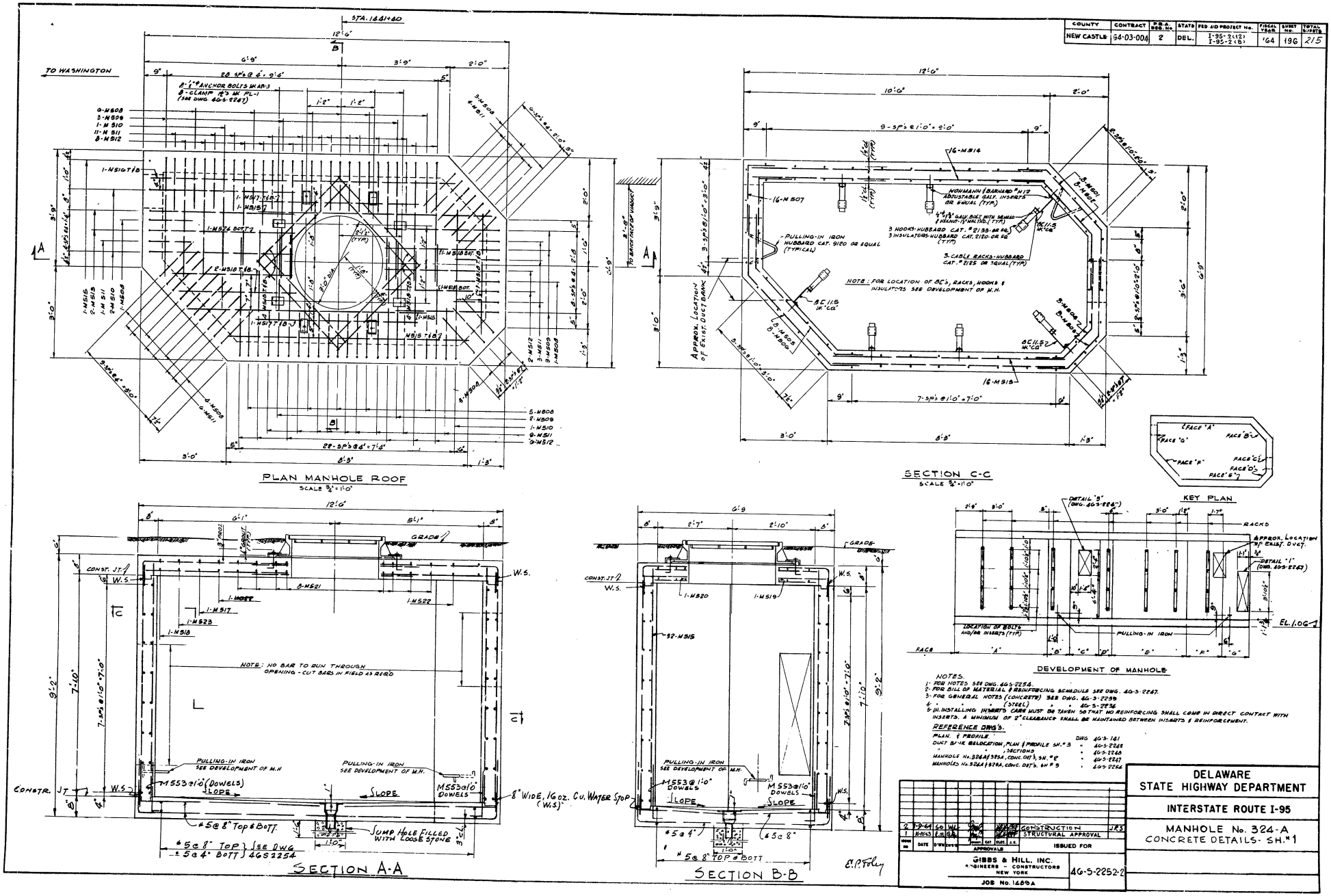
46-S-2251-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING
BEAM BRIDGE W-489

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	196	215



NOTES.
1- FOR NOTES SEE DWG. 46S-2254.
2- FOR BILL OF MATERIAL & REINFORCING SCHEDULE SEE DWG. 46-S-2247.
3- FOR GENERAL NOTES (CONCRETE) SEE DWG. 46-S-2239
4- " " " (STEEL) " " 46-S-2234
5- IN INSTALLING INSERTS CARE MUST BE TAKEN SO THAT NO REINFORCING SHALL COME IN DIRECT CONTACT WITH INSERTS. A MINIMUM OF 2" CLEARANCE SHALL BE MAINTAINED BETWEEN INSERTS & REINFORCEMENT.

REFERENCE DWG'S.

PLAN & PROFILE	DWG	46-S-141
DUCT BANK RELOCATION, PLAN & PROFILE SH. #3	"	46-S-2242
" " SECTIONS	"	46-S-2248
MANHOLE No. 324A & 325A, CONC. DET'S, SH. #2	"	46-S-2247
MANHOLES No. 324A & 325A, CONC. DET'S. SH. #3	"	46-S-2254

ISSUE NO.	DATE	D'WN	CHK'D	APPROVALS	CAT.	ELEC.	A.C.	ISSUED FOR
2	7-9-64	SO	WLL					CONSTRUCTION JRS
1	10-15-63	R.M.	G.A.					STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

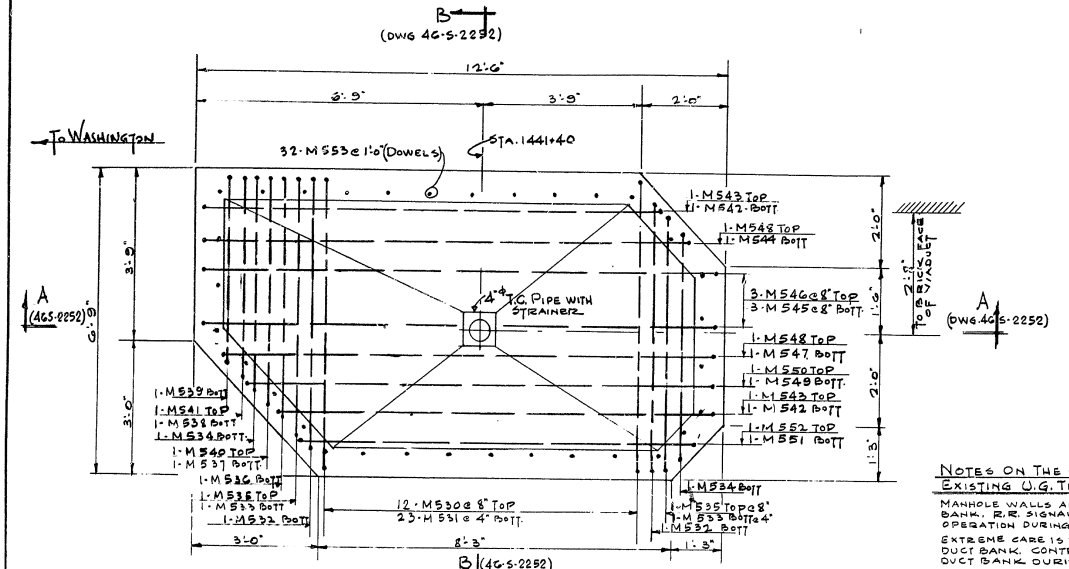
46-S-2252-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

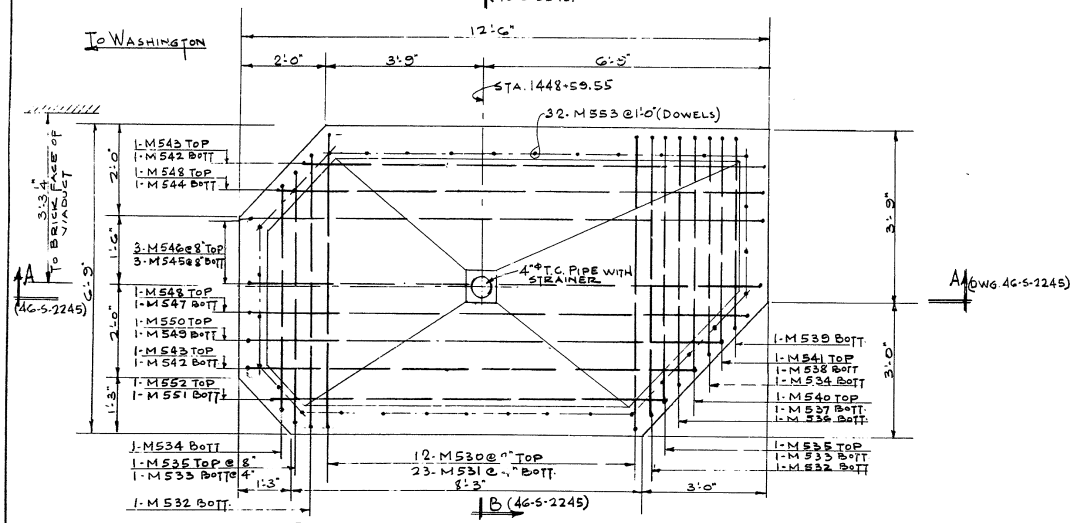
MANHOLE No. 324-A
CONCRETE DETAILS - SH. #1

COUNTY	CONTRACT	FED. & STATE PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(18)	'64	197	215



PLAN - FLOOR SLAB - MANHOLE Nº 324A

SCALE 3/4":1'-0"



PLAN - FLOOR SLAB - MANHOLE Nº 325A

SCALE 3/4":1'-0"

NOTES ON THE CONSTRUCTION OF MANHOLES AROUND EXISTING U.G. TEL. & SIGNAL DUCT BANK

MANHOLE WALLS ARE TO BE CONSTRUCTED AROUND EXISTING DUCT BANK. R.R. SIGNAL CABLES IN DUCT BANK MUST BE KEPT IN OPERATION DURING THE CONSTRUCTION OF MANHOLES.

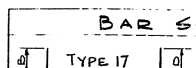
EXTREME CARE IS TO BE USED IN EXCAVATING AROUND THE DUCT BANK. CONTRACTOR TO PROTECT & SUPPORT THE EXISTING DUCT BANK DURING CONSTRUCTION.

R.R. FORCES WILL FURNISH, INSTALL & SPLICE ALL CABLES

AFTER THE REMOVAL OF ALL DUCT MATERIAL, THE UNUSED OPENINGS IN THE MANHOLES ARE TO BE CLOSED WITH CONCRETE OR BRICK

ALL WORK TO BE DONE TO THE SATISFACTION OF THE R.R. ENGINEER.

BAR SCHEDULE



FLOOR SLAB - MANHOLE Nº 324A

MARK	NO REQ'D	SIZE	LENGTH	TYPE	A	B	C	D	E	LOCATION
M530	12	#5	6'-3"	STR						HORIZ. IN FLOOR SLAB
M531	23		10'-0"	17		1'-10"	6'-4"	1'-10"		
M532	2		9'-6"	17		1'-10"	5'-10"	1'-10"		
M533	2		9'-3"	17		1'-10"	5'-7"	1'-10"		
M534	2		8'-6"	17		1'-10"	4'-10"	1'-10"		
M535	2		5'-6"	STR						
M536	1		9'-0"	17		1'-10"	5'-4"	1'-10"		
M537	1		8'-9"	17		1'-10"	5'-1"	1'-10"		
M538	1		8'-3"	17		1'-10"	4'-7"	1'-10"		
M539	1		7'-9"	17		1'-10"	4'-1"	1'-10"		
M540	1		5'-0"	STR						
M541	1		4'-6"	STR						
M542	2		14'-6"	17		1'-10"	10'-10"	1'-10"		
M543	2		10'-9"	STR						
M544	1		15'-3"	17		1'-10"	11'-7"	1'-10"		
M545	3		15'-9"	17		1'-10"	12'-1"	1'-10"		
M546	3		12'-0"	STR						
M547	1		15'-6"	17		1'-10"	11'-10"	1'-10"		
M548	2		11'-9"	STR						
M549	1		14'-9"	17		1'-10"	11'-1"	1'-10"		
M550	1		11'-0"	STR						
M551	1		13'-0"	17		1'-10"	9'-4"	1'-10"		
M552	1		9'-3"	STR						HORIZ. IN FLOOR SLAB
M553	32	#5	2'-9"	17		1'-0"	1'-9"	—		VERTICAL - DOWELS

FLOOR SLAB - MANHOLE Nº 325A
REINFORCING BARS SAME AS ABOVE

NOTES

FOR NOTES SEE DWG 46-S-2239 & 46-S-2234.

REFERENCE DWGS.

MANHOLE Nº 324A - CONCRETE DETAILS SH. Nº 1	46-S-2252
" " 325A " " " "	46A-S-2245
MANHOLES - Nº 324A & 325A - CONCRETE DETAILS SH. Nº 2	46-S-2247

NO.	DATE	BY	DESCRIPTION
2	1-9-64	WC	CONSTRUCTION
1	10-15-63	WC	STRUCTURAL APPROVAL

APPROVALS — ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB NO. 1489A

46-S-2254-2

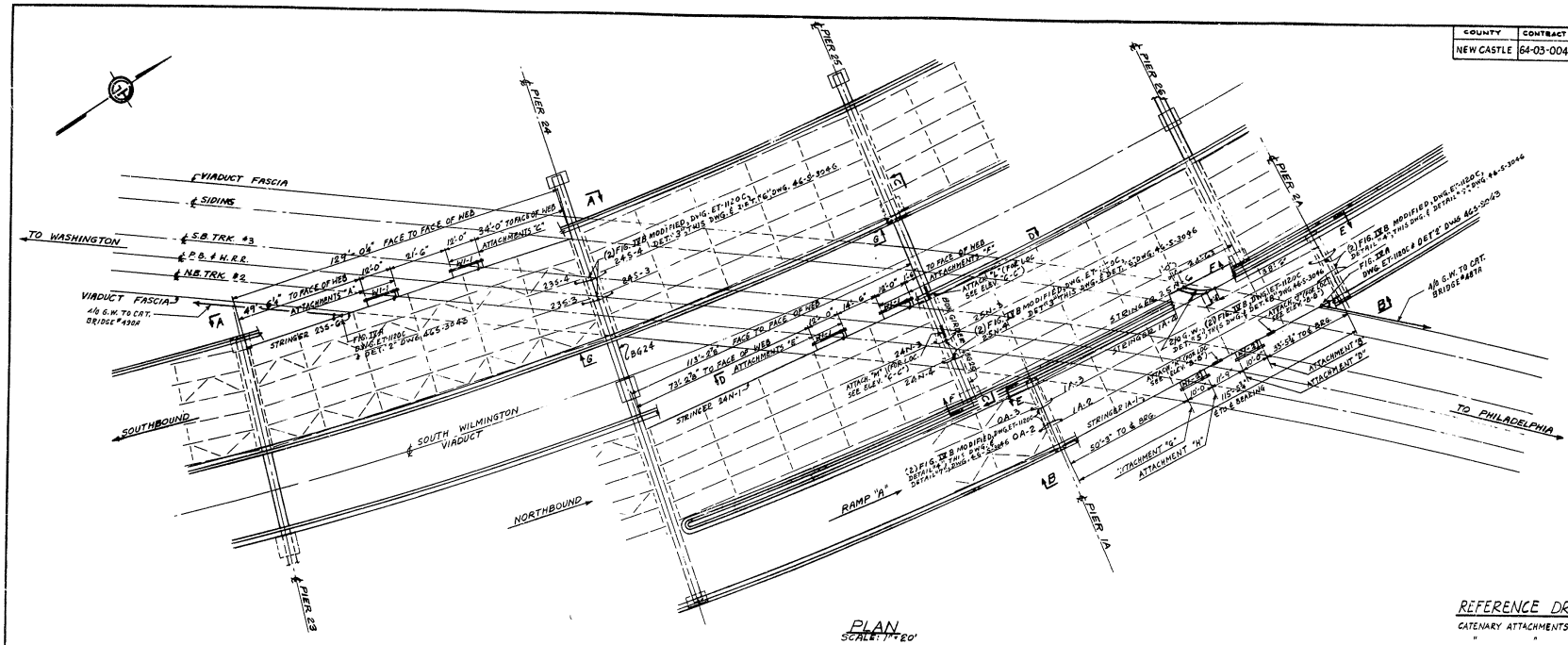
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MANHOLES Nº 324A & 325A
CONCRETE DETAILS SH. Nº 3

C P Foley

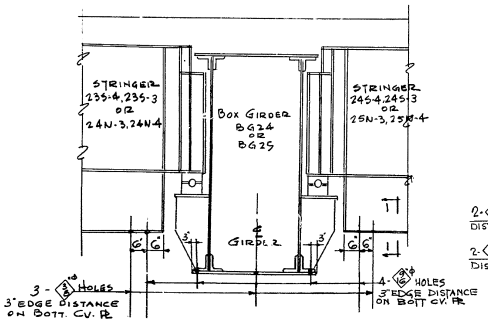
COUNTY	CONTRACT	P.B.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	198	215



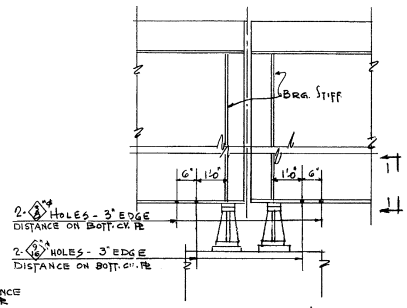
PLAN
SCALE: 1" = 20'

REFERENCE DRAWINGS:

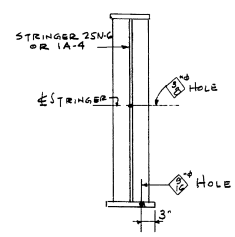
CATENARY ATTACHMENTS - ELEVATIONS	DWG. No. 46-S-3043
" " - STEEL DETAILS	" " 46-S-3044
GROUNDING MATERIAL LIST	" " 46 ML-41
BONDING OF PROTECTIVE BARRIERS	" " 46-S-3046



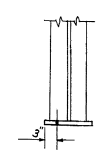
DETAIL "3"
N.T.S.



DETAIL 4
N.T.S.



DETAIL "5"
N.T.S.



SECTION 1-1

E P Foley

2	1-9-64	SO	WL				ADD BONDING - CONSTRUCTION	JRS
1	10-15-63	JS					STRUCTURAL APPROVAL	
ISSUE NO	DATE	D'WN	CK'D	DWN	CAT	ELEC	APPROVALS	ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

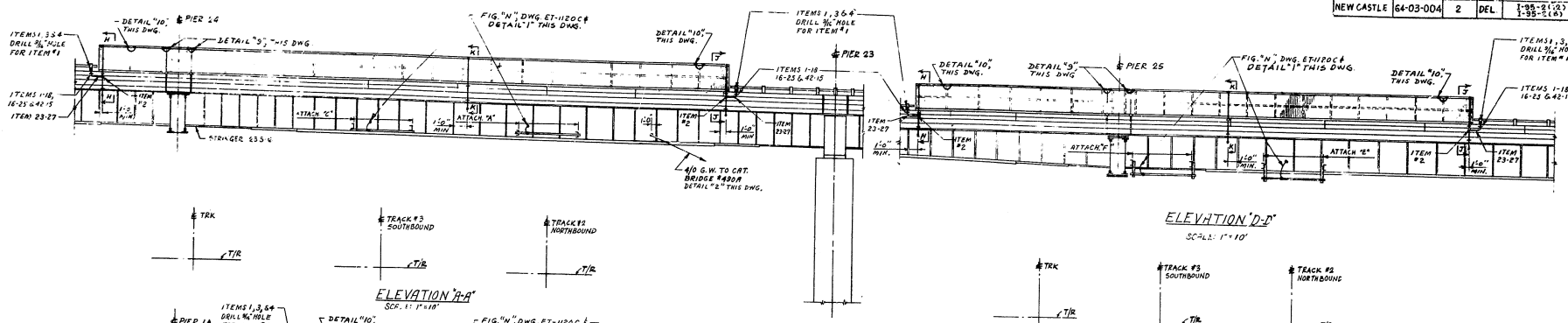
46-S-3042-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

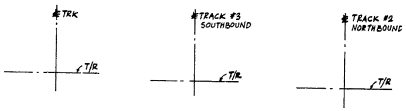
CATENARY ATTACHMENTS
PLAN

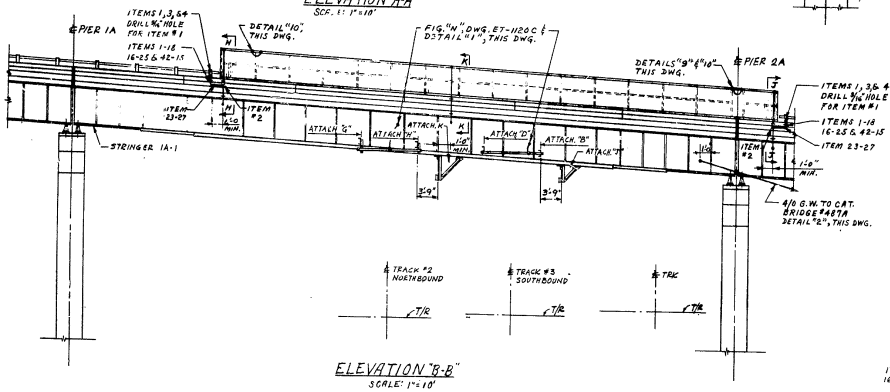
COUNTY	CONTRACT	P.E.A. REQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(16)	'64	199	215



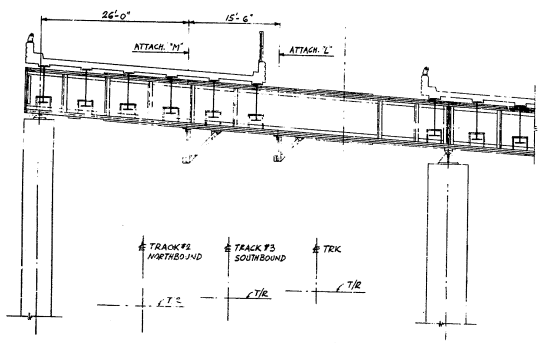
ELEVATION "D-D"
SCALE: 1"=10'

ELEVATION "A-A"
SCALE: 1"=10'

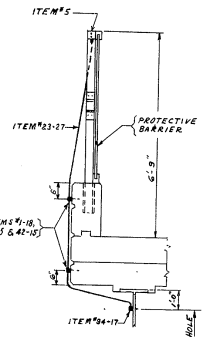




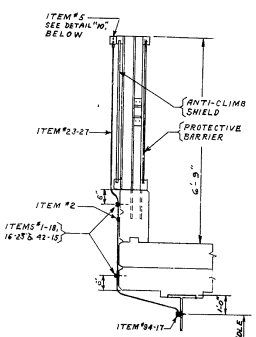
ELEVATION "B-B"
SCALE: 1"=10'



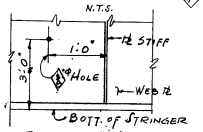
ELEVATION "C-C"
SCALE 1"=10'



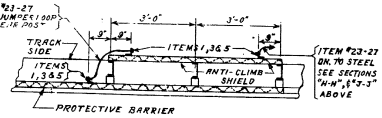
SECTION K-K
N.T.S.



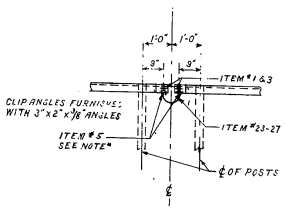
SECTION H-H
SECTION J-J (OPPOSITE HAND)
N.T.S.



DETAIL "1"
N.T.S.



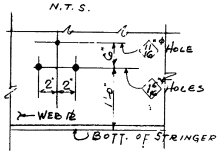
ANTI-CLIMB SHIELD
DETAIL "10"
N.T.S.



EXPANSION JOINT JUMPER

* NOTE:
TIN CABLE ENDS WITH ITEM #6 BEFORE CONNECTING [illegible]

DETAIL "9"
N.T.S.



DETAIL "2"
N.T.S.

E.P. Foley

REFERENCE DRAWINGS:

CATENARY ATTACHMENTS	DWG No. 46-S-3042
" " STEEL DETAILS	" " 46-S-3044
GROUNDING MATERIAL LIST	" " 46 ML-41
BONDING OF PROTECTIVE BARRIERS	" " 46-S-3046

NOTE:

HOLD BONDING OF BRIDGE BARRIERS PENDING RECEIPT OF INFORMATION DEFINING BREAKS IN TOP ANGLE.

NO.	DATE	DESCRIPTION	APPROVALS
2	1-12-64	GP WHO ADD BONDING: CONSTRUCTION JRS	
1	9-10-63	JS STRUCTURAL APPROVAL	

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS — CONSTRUCTORS
NEW YORK
JOB No. 1489A

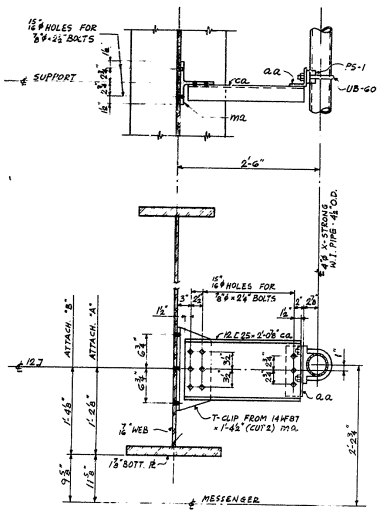
46-S-3043-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

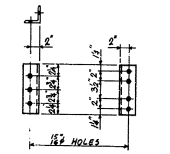
CATENARY ATTACHMENTS
ELEVATIONS

COUNTY	CONTRACT	R.B.& BRDG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CAST. E	64-03-004	2	DEL.	I-95-2(12) I-95-2(15)	'64	200	215

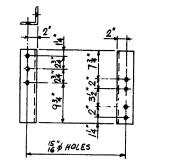


ATTACHMENTS "A" & "B"

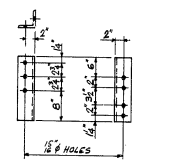
ATTACH "A": 2 REQ'D
" "B": 1 " "
SCALE: 1" = 1'-0"



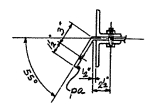
L-3½ x 3½ x ⅜ x 0'-10" MK aa



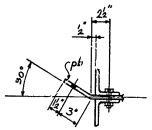
L-3½ x 3½ x ⅜ x 1'-4½" MK ab



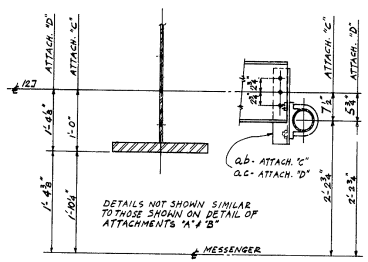
L-3½ x 3½ x ⅜ x 1'-2¾" MK ac



SECTION 1-1
FOR ATT. "J" & "K"

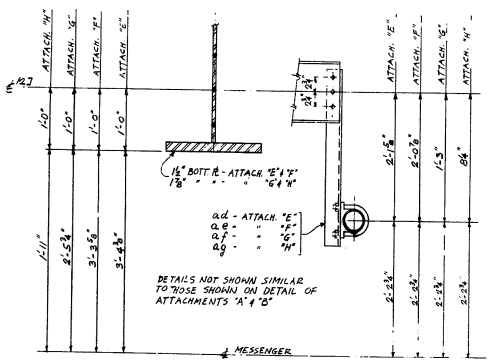


SECTION 2-2
FOR ATT. "L" & "M"



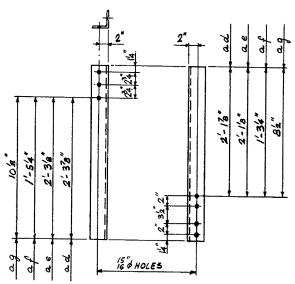
ATTACHMENTS "C" & "D"

ATTACH. "C": 2 REQ'D
" "D": 1 " "
SCALE: 1" = 1'-0"

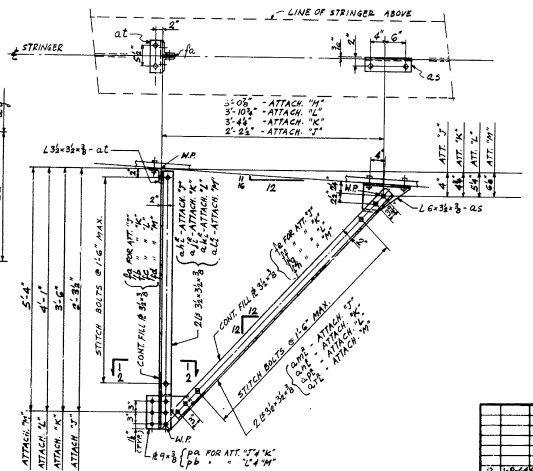


ATTACHMENTS "E", "F", "G" & "H"

ATTACH. "E": 2 REQ'D
" "F": 2 " "
" "G": 1 " "
" "H": 1 " "
SCALE: 1" = 1'-0"



L-3½ x 3½ x ⅜ x 2'-10⅝" MK ad
L-3½ x 3½ x ⅜ x 2'-9⅞" MK ae
L-3½ x 3½ x ⅜ x 2'-0" MK af
L-3½ x 3½ x ⅜ x 1'-5¼" MK ag



ATTACHMENTS "J" "K" "L" & "M"

ONE OF EACH REQ'D
SCALE: 1" = 1'-0"

MMI ITEM	MARK	DWG. No.	FED. STORES REF. NO.	DESCRIPTION	UNIT	QUANT.
				ATTACH. "A" "B" "C" "D" "E" "F" "G" "H" (GALV.)		
—	ca	THIS DWG.	—	12 C 25 x 2'-0⅝"	EA.	12
—	ma	" "	—	T CLIP FROM 14 WF 87 x 1'-4½"	"	12
—	aa	" "	—	L-3½ x 3½ x ⅜ x 0'-10"	"	3
—	ab	" "	—	" x 1'-4½"	"	2
—	ac	" "	—	" x 1'-2¾"	"	1
—	ad	" "	—	" x 2'-10⅝"	"	2
—	ae	" "	—	" x 2'-9⅞"	"	2
—	af	" "	—	" x 2'-0"	"	1
—	ag	" "	—	" x 1'-5¼"	"	1
				BOLTS ⅞ϕ x 2¼" LG. WITH H.H.N. & H.	"	108
				" ⅞ϕ x 2½" LG. WITH H.H.N. & H.	"	72
				ATTACH. "J" "K" "L" "M" (GALV.)		
—	ah	THIS DWG.	—	L-3½ x 3½ x ⅜	EA.	1-ah
—	aj	" "	—	"	"	1-aj
—	ak	" "	—	"	"	1-ak
—	al	" "	—	"	"	1-al
—	am	" "	—	"	"	1-am
—	an	" "	—	"	"	1-an
—	ap	" "	—	"	"	1-ap
—	ar	" "	—	"	"	1-ar
—	as	" "	—	L-6 x 3½ x ⅜	"	1-as
—	at	" "	—	L-3½ x 3½ x ⅜	"	4
—	pa	" "	—	PL 9 x ⅜ (BENT)	"	2
—	pb	" "	—	PL 9 x ⅜ (BENT)	"	2
—	fa	" "	—	FILL PL 3½ x ⅜	"	1
—	fb	" "	—	" " "	"	1
—	fc	" "	—	" " "	"	1
—	fd	" "	—	" " "	"	1
—	fe	" "	—	" " "	"	1
—	ff	" "	—	" " "	"	1
—	fg	" "	—	" " "	"	1
—	fh	" "	—	" " "	"	1
				BOLTS ⅞ϕ WITH H.H.N. & H.	"	AS REQ'D
*	74-18	PS 1	14 E 133	10-290955 SADDLE, PIPE, MALLEABLE IRON, GALV.	EA.	12
*	19-12	UB-60	ET-148 E	10-178201 BOLT, U, STEEL, GALV. ⅞ x 5½ x 6⅛	"	12
*	66-7	WI-1	—	42-2774 PIPE, W.I., 4" BLACK, X-STRONG, N/O THD. (45.15-016)	FT.	74'-0"
*	66-7	WI-2	—	" " " " " (26.11-016)	"	

* SUPPLIED & INSTALLED BY P.R.R.
ALL OTHER MATERIAL SUPPLIED & INSTALLED BY GENERAL CONTRACTOR

REFERENCE DRAWINGS:

CATENARY ATTACHMENTS - PLAN — DWG. No. 46-S-3042
" " - ELEVATIONS — " " 46-S-3043

NOTES:

FOR GENERAL NOTES SEE DWG. No. 46-S-2234

ISSUE NO.	DATE	D'WN CH'K'D	APPROVALS
2	1-9-64	MC	CONSTRUCTION
1	10-15-63	JS	STRUCTURAL APPROVAL
			ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

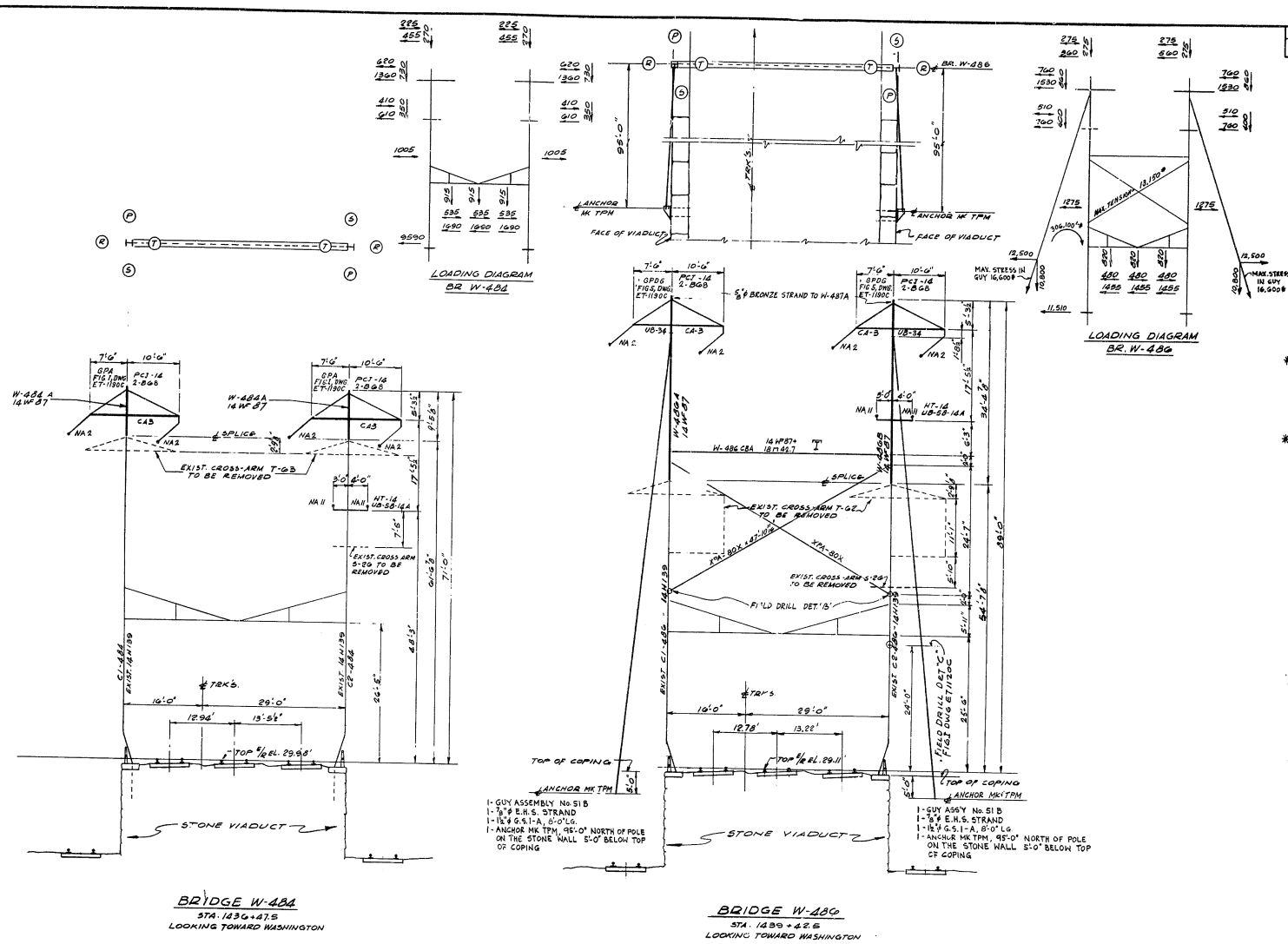
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

CATENARY ATTACHMENTS
STEEL DETAILS

46-S-3044-2

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(B)	'64	201	215



BRIDGE W-484
STA. 1436+47.5
LOOKING TOWARD WASHINGTON

BRIDGE W-486
STA. 1439+42.5
LOOKING TOWARD WASHINGTON

BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	NO. UNITS
		BRIDGE W-484		
W-484 A	46-S-2237	POLE EXTENSION - 14 WF 87	EA.	2
HT-14	46-S-2235	CROSS-ARM	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
CA 3	46-S-2235	CROSS-ARM	"	2
PCI-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4
		BRIDGE W-486		
W-486A	46-S-2237	POLE EXTENSION - 14 WF 87	EA.	1
W-486B	46-S-2237	" " 14 WF 87	"	1
CA 3	46-S-2235	CROSS-ARM	"	2
HT-14	46-S-2235	" "	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
TPM	46-S-2239	ANCHOR	"	2
G.S. I-A	46-S-2239	1½"ϕ GUY STUB x 8'-0" LG.	"	2
* 51 B	46-S-2238	GUY ASSEMBLY	"	2
UB-34	46-S-2238	U-BOLT	"	2
PCI-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4
W-486 CBA	46-S-2234	CROSS BEAM	"	1
* XPA-80X	46-S-2238	CROSS-SPAN ASSEMBLY	"	2
DET. 'B'	46-S-2237	FIELD DRILLING	"	2
DET. 'C'	46-S-2237	" "	"	1

* TO BE SUPPLIED AND INSTALLED BY P.R.R.
ALL OTHER MATERIAL TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

REFERENCE DRAWINGS:

PLAN & PROFILE	DWG. No. 46-S-141
CROSS-ARM DETAILS	" " 46-S-2235
POLE EXTENSIONS FOR BEAM BRIDGES W-484, W-486, W-491 & W-492	" " 46-S-2237
HARDWARE DETAILS	" " 46-S-2238
FOUNDATIONS & ANCHORS	" " 46-S-2239
(EXISTING) 3 TR. CURVE BEAM BRIDGE, DIAGRAM OF BRIDGE W-484	" " 11B-984
" " " " " " " W-486	" " 11B-986
GROUNDING MATERIAL LIST	" " 46-ML-41

FOR GENERAL NOTES SEE DWG. No. 46-S-2234

E.P. Foley

ISSUE NO.	DATE	D'WN	CK'D'WN	DRAWN	CAT	ELEC.	J.E.	ISSUED FOR
3	1-9-69	S.D.	WC				BPF	CONSTRUCTION JRS
2	10-15-63		W.D.				BPF	REV. FOR STRUCTURAL APPROVAL
1	7-1-63		W.D.				BPF	STRUCTURAL APPROVAL

APPROVALS

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

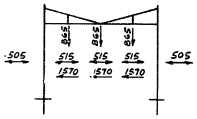
46-S-7417-3

DELAWARE
STATE HIGHWAY DEPARTMENT

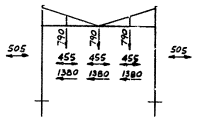
INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486

COUNTY	CONTRACT	P.R.A. BRIDGE No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(10)	'64	202	215



LOADING DIAGRAM
BR. W-485

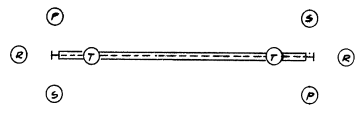


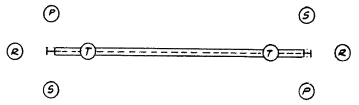
LOADING DIAGRAM
BR. W-487

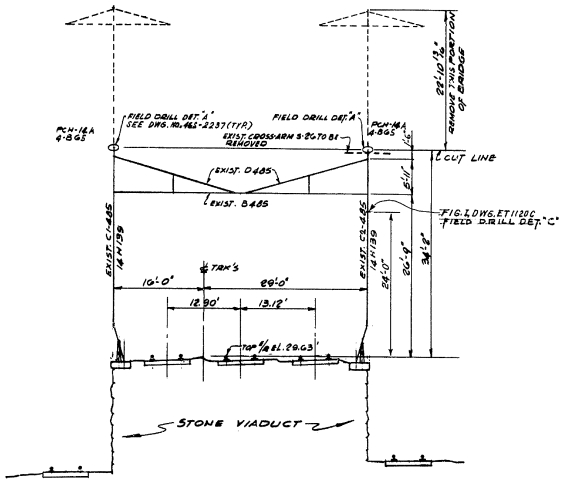
BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		BRIDGE W-485		
PCH-14A	—	POLE CAP: REUSE EXISTING	EA.	2
B-65	46-S-2238	¾ϕ BOLT	"	8
DET. "A"	46-S-2257	FIELD DRILLING	"	2
—	46-S-2258	GALV. STEEL ROUND WASHER 1¼ϕ, ¼ THICK, ⅞ϕ HOLE	"	8
DET. "C"	46-S-2257	FIELD DRILLING	"	2
		BRIDGE W-487		
B-65	46-S-2238	¾ϕ BOLT	"	8
PCH-14A	—	POLE CAP: REUSE EXISTING	"	2
—	46-S-2258	GALV. STEEL ROUND WASHER 1¼ϕ, ¼ THICK, ⅞ϕ HOLE	"	2
DET "A"	46-S-2257	FIELD DRILLING	"	2
DET "C"	46-S-2257	" "	"	1

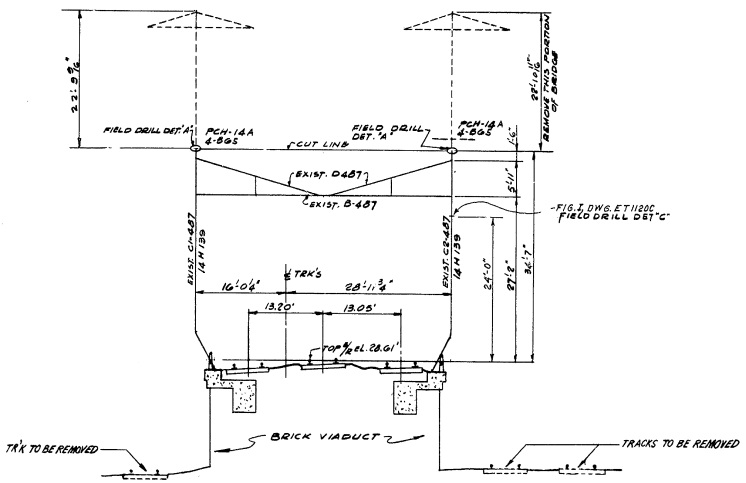
ALL MATERIAL TO BE SUPPLIED & INSTALLED BY GEN. CONTRACTOR.







BRIDGE W-485
STA. 1458+10
LOOKING TOWARD WASHINGTON



BRIDGE W-487
STA. 1440+84.5
LOOKING TOWARD WASHINGTON

REFERENCE DRAWINGS:

	DWG. No.
PLAN & PROFILE	46-S-141
POLE EXTENSIONS FOR BRIDGES W-484, W-486, W-491 & W-498	" " 46-S-2257
HARDWARE DETAILS	" " 46-S-2238
(EXISTING) 5 TR. CURVE BEAM BR., DIAGRAM OF BRIDGE W-485	" " 118-985
" " " " " " " " W-487	" " 118-987
GROUNDING MATERIAL LIST	" " 46-MI-81

FOR GENERAL NOTES SEE DWG. No 46-S-2234.

NO.	DATE	BY	CHK.	APPROVALS
3	1-24-64	S.D.	W.C.	CONSTRUCTION
2	8-16-63	W.D.	W.C.	REV. FOR STRUCTURAL APPROVAL
1	7-1-63	W.D.	W.C.	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB No. 1489 A

46-S-7418-3

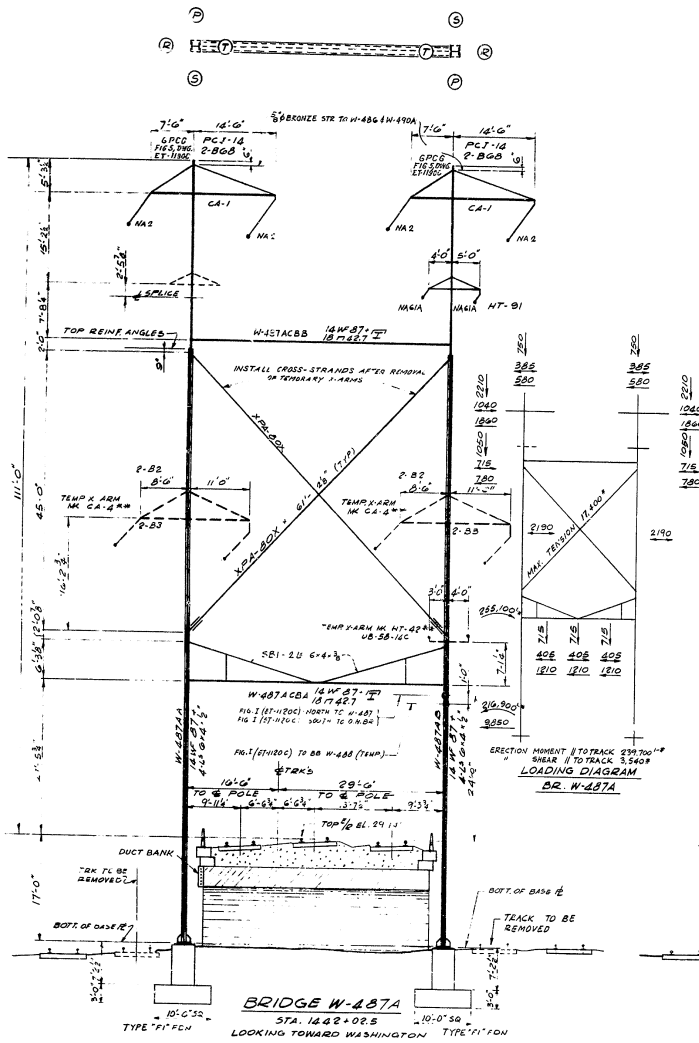
E.P. Foley

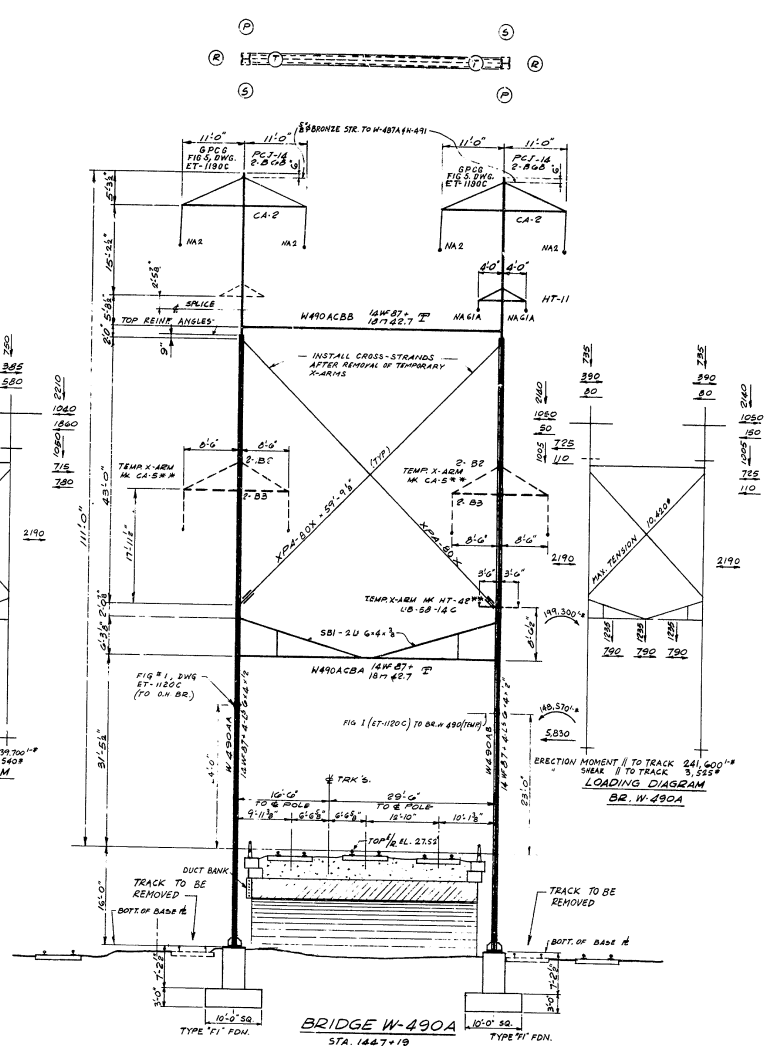
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING BEAM BRIDGES W-485 & W-487

COUNTY	CONTRACT	R.B.& B. SEC. No	STATE	PSB AND PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTL	64-03-004	2	DEL	I-95-2(10) I-95-2(8)	'64	203	215





** TEMPORARY X-ARM TO BE REMOVED WHEN TRANSMISSION CABLES ARE IN FINAL POSITON

BILL OF MATERIAL

MARK	DWG. NO	DESCRIPTION	UNIT	QUAN.
		BRIDGE W-487A		
CA-4	46-5-2235	CROSS-ARM	EA.	2
W-487AA	46-5-2234	POLE, 14WF87 REINFORCED	EA.	1
W-487AB	46-5-2236	" " "	"	1
CA-1	46-5-2235	CROSS-ARM	"	2
HT-91	46-5-2235	" "	"	1
W-487ACBA	46-5-2234	CROSS-BEAM	"	1
SB-1	46-5-2234	SAG BRACE	"	2
W-487ACBB	46-5-2234	CROSS-BEAM	"	1
PCT-14	46-5-2238	POLE CAP	"	2
B-6B	46-5-2238	3/4"ϕ BOLT	"	4
F1	46-5-2239	FOUNDATION	"	2
* XPA-80X	46-5-2238	CROSS-SPAN ASSEMBLY	"	2
HT-42	403-2235	CROSS-ARM	"	1
UB-58-14C	"	U-BOLT	"	1
B2	"	1"ϕ BOLT	"	4
B3	"	1"ϕ BOLT	"	4
		BRIDGE W-490A		
W-490AA	46-5-2236	POLE, 14WF87 REINFORCED	EA.	1
W-490AB	46-5-2236	" " "	"	1
CA-2	46-5-2235	CROSS-ARM	"	2
HT-11	46-5-2235	" "	"	2
W-490ACBA	46-5-2234	CROSS-BEAM	"	1
SB-1	46-5-2234	SAG BRACE	"	2
W-490ACBB	46-5-2234	CROSS-BEAM	"	1
PCT-14	46-5-2238	POLE CAP	"	2
B-6B	46-5-2238	3/4"ϕ BOLT	"	4
F1	46-5-2239	FOUNDATION	"	2
* XPA-80X	46-5-2238	CROSS-SPAN ASSEMBLY	"	2
CA-5	46-5-2235	CROSS-ARM	"	2
HT-42	"	" "	"	1
UB-58-14C	"	U-BOLT	"	1
B2	"	1"ϕ BOLT	"	4
B3	"	1"ϕ BOLT	"	4

* TO BE SUPPLIED AND INSTALLED BY P&B
ALL OTHER MATERIAL TO BE SUPPLIED & INSTALLED BY GENERAL CONTRACTOR.

REFERENCE DRAWINGS:

	DWG No
PLAN & PROFILE	46-5-131
STEEL DETAILS OF CROSS-BEAMS AND SAG BRACES	" " 46-5-2234
CROSS-ARM DETAILS	" " 46-5-2235
STEEL DETAILS OF POLES W-487AA, W-487AB, W-490AA & W-490AB	" " 46-5-2236
HARDWARE DETAILS	" " 46-5-2238
FOUNDATIONS & ANCHORS	" " 46-5-2239
GROUNDING MATERIAL LIST	46-ML-41

FOR GENERAL NOTES SEE DWG No 46-5-2234 & 46-5-2239

3	1-9-64	S.D.	W.C.		W.M.	DFF	CONSTRUCTION
2	10-15-63	A.M.	W.D.			DFF	REV. FOR STRUCTURAL APPROVAL
1	7-1-63	D.S.	W.D.			SSF	FOR PRELIMINARY APPROVAL
ISSUE NO	DATE	D'WN CHK'D				CAT	ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 4671

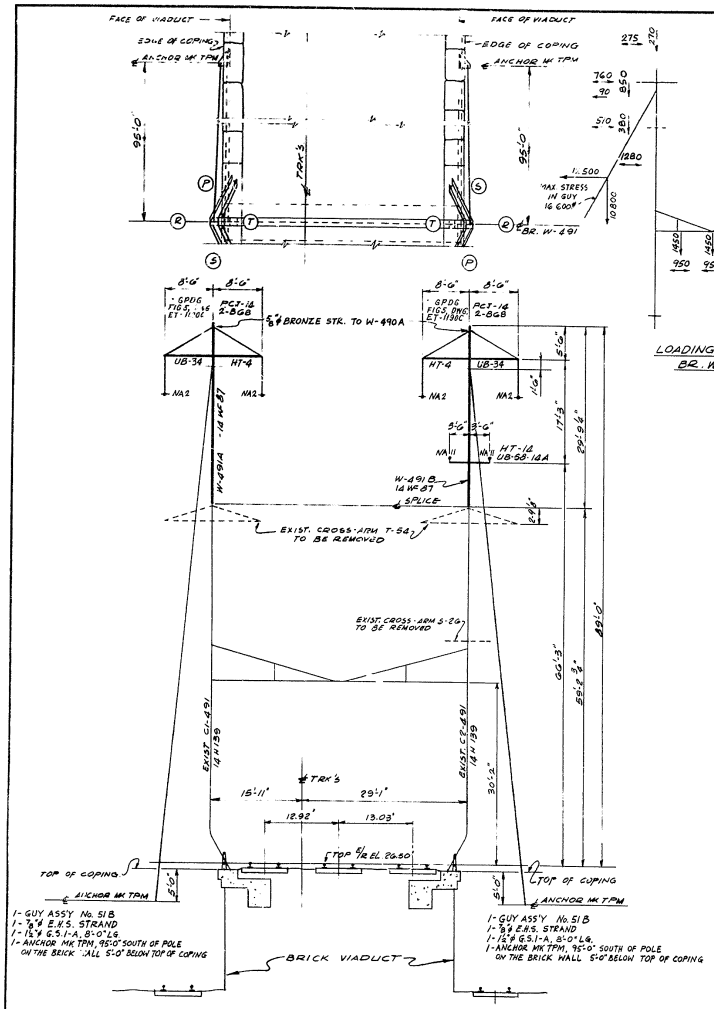
46-5-7419-3

DELAWARE
STATE HIGHWAY DEPARTMENT

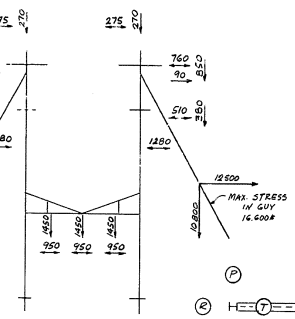
INTERSTATE ROUTE I-95

ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A

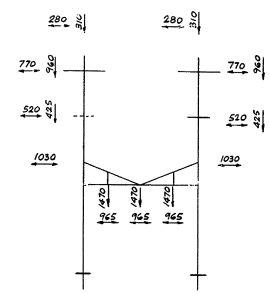
COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	G4-03-0C4	2	DEL	I-95-2 (12) I-95-2 (8)	'64	204	215



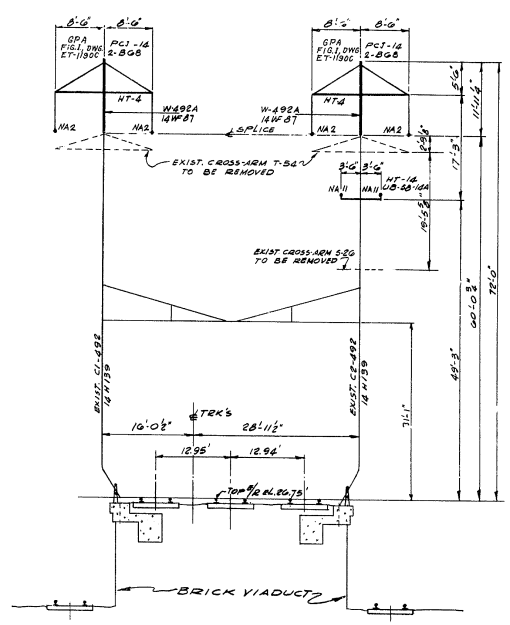
BRIDGE W-491
STA 449+88
LOOKING TOWARD WASHINGTON



LOADING DIAGRAM
BR. W-491



LOADING DIAGRAM
BR. W-492



BRIDGE W-492
STA. 1452+73
LOOKING TOWARD WASHINGTON

BILL OF MATERIAL

MARK	DWG No	DESCRIPTION	UNIT	QUANT.
		BRIDGE W-491		
W-491 A	46-S-2237	POLE EXTENSION, 14WF87	EA.	1
W-491 B	46-S-2237	" " "	"	1
HT-4	46-S-2235	CROSS-ARM	"	2
HT-14	46-S-2235	" "	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
UB-34	46-S-2238	U-BOLT	"	2
* 51 B	46-S-2238	GUY ASSEMBLY	"	2
G.S.1-A	46-S-2239	1½"ϕ GUY STUB × 8'-0" LG.	"	2
TPM	46-S-2239	ANCHOR	"	2
PCJ-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4
		BRIDGE W-492		
W-492A	46-S-2237	POLE EXTENSION, 14WF87	EA.	2
HT-4	46-S-2235	CROSS-ARM	"	2
HT-14	46-S-2235	" "	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
PCJ-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4

* TO BE SUPPLIED AND INSTALLED BY P.R.R.
ALL OTHER MATERIAL TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

REFERENCE DRAWINGS:

PLAN & PROFILE	DWG. No. 46-S-141
CROSS-ARM DETAILS	" " 46-S-2235
POLE EXTENSIONS FOR BRIDGES W-484, W-486, W-491 & W-492	" " 46-S-2237
HARDWARE DETAILS	" " 46-S-2238
FOUNDATIONS & ANCHORS	" " 46-S-2239
(EXISTING) 3 TR. TAN. BEAM BRIDGE, DIAGRAM OF BRIDGE W-491	" " 11B-991
" " " " " " " W-492	" " 11B-992
GROUNDING MATERIAL LIST	" " 46-ML-41

FOR GENERAL NOTES SEE DWG. No. 46-S-2234

ISSUE NO	DATE	D'WN	CH'K'D	APPROVALS				ISSUED FOR
3	1-9-64	S.D.	WC					CONSTRUCTION JRS
2	10-15-63		WD					REV. FOR STRUCTURAL APPROVAL
1	7-1-63		WD					STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-7420-3

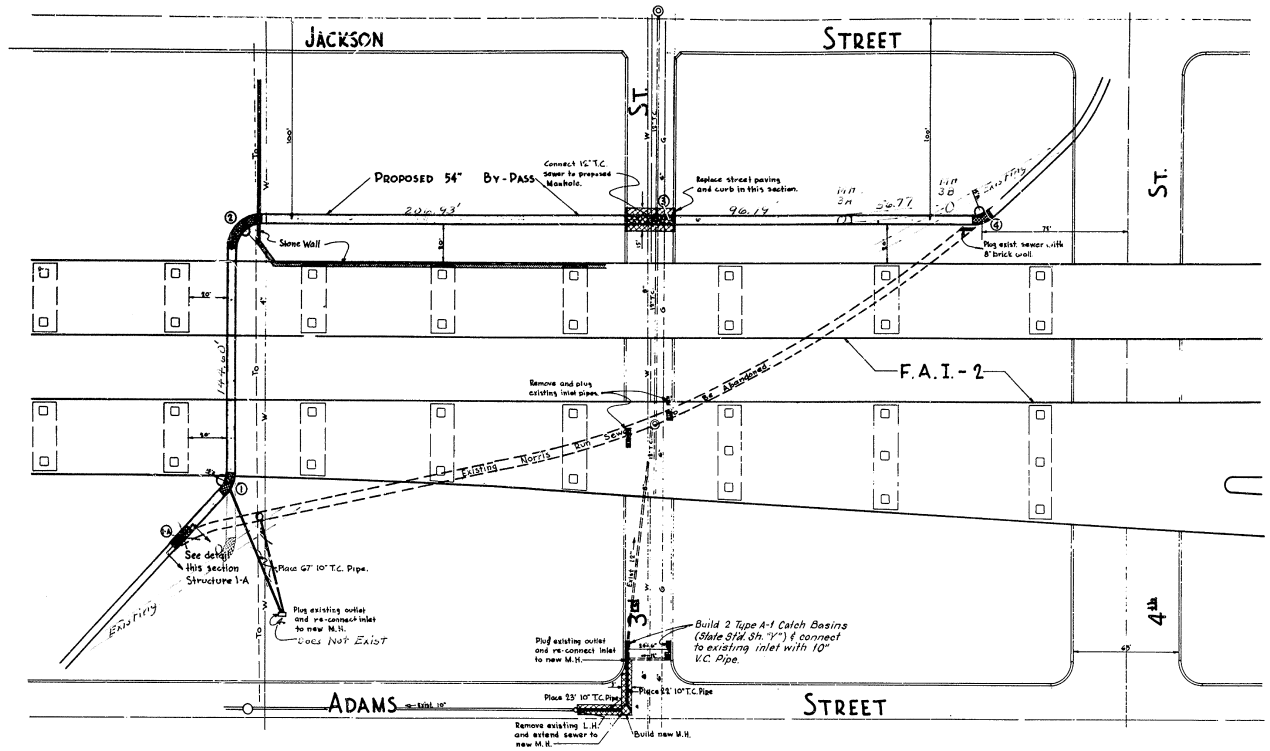
DELAWARE
STATE HIGHWAY DEPARTMENT

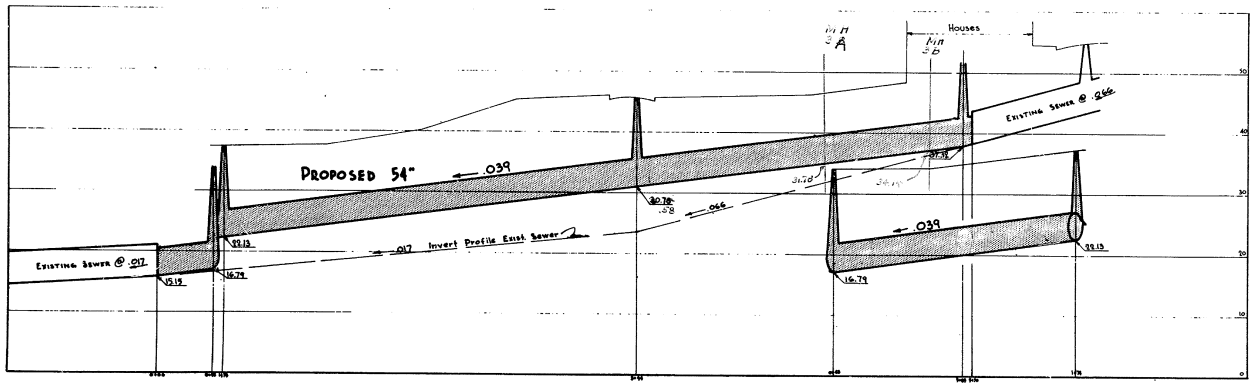
INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING BEAM BRIDGES W-491 & W-492

COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	205	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





DEPARTMENT of PUBLIC WORKS
WILMINGTON, DELAWARE

NORRIS RUN BYPASS
PLAN AND PROFILE

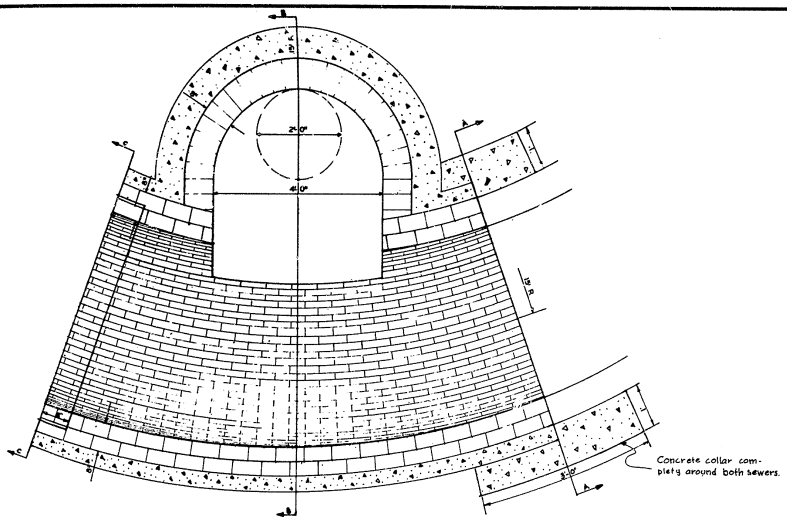
Drawn By Howard F. Smith	Scale: Hor. 1"=30'
Checked By	Vert. 1"=10'
Date Jan. 8, 1964	
Approved By Chief Engineer	Date
Contract No. PW-	Sheet No. of

As Built Plans in Red - 1-9-67 WDC

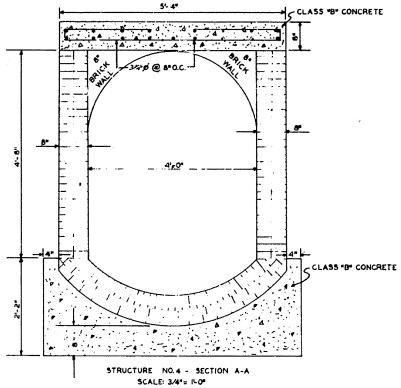
D C B A 1 5 10 A B C D

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	206	215

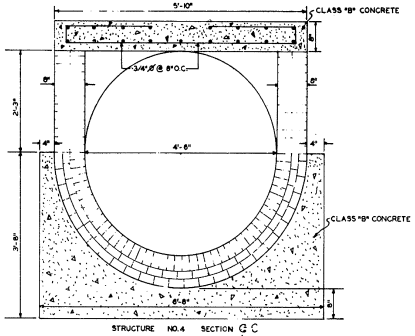
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



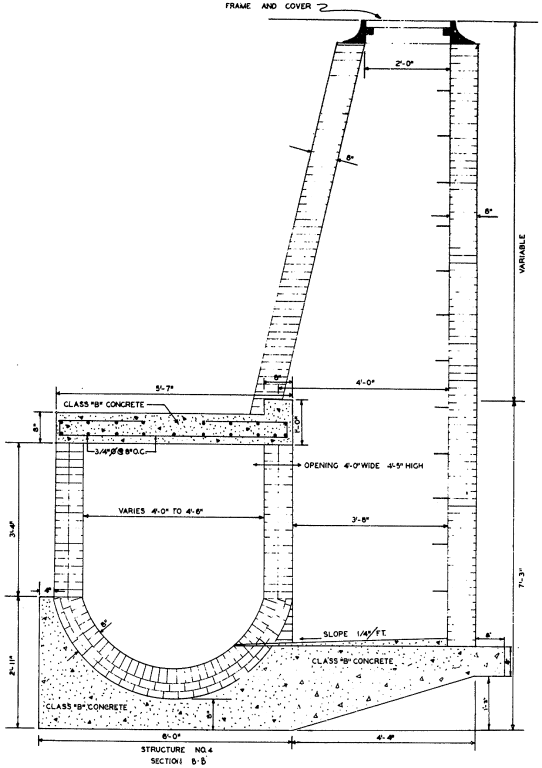
BRICK BEND STRUCTURE NO. 4
TYPICAL BEND STRUCTURE SEE NOTES THIS SHEET.
SCALE: 3/4" = 1'-0"



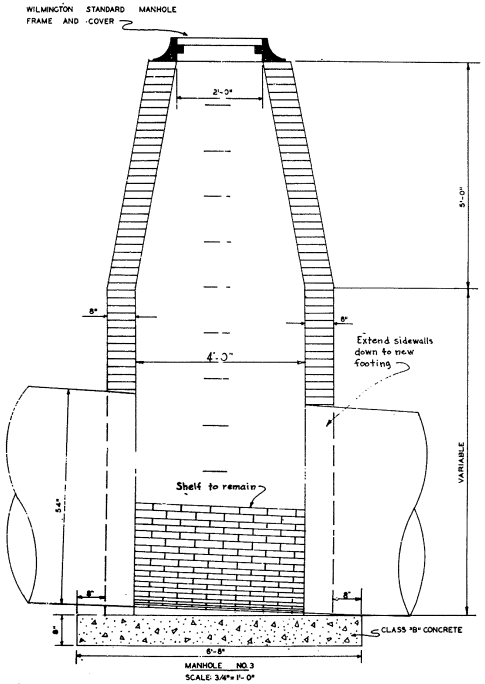
STRUCTURE NO. 4 - SECTION A-A
SCALE: 3/4" = 1'-0"



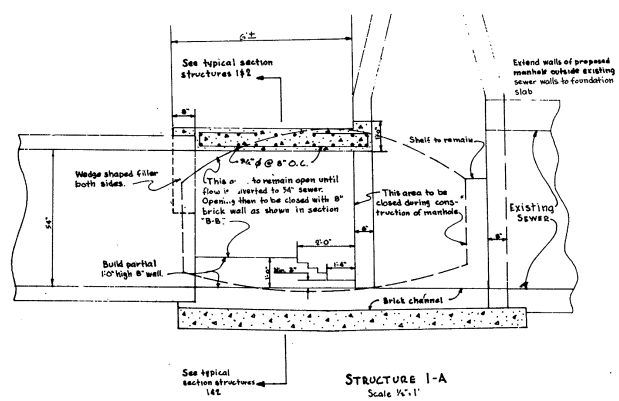
STRUCTURE NO. 4 SECTION C-C
TYPICAL FOR STRUCTURES 1 & 2
SCALE: 3/4" = 1'-0"



STRUCTURE NO. 4
SECTION B-B
SCALE: 3/4" = 1'-0"



MANHOLE NO. 3
SCALE: 3/4" = 1'-0"



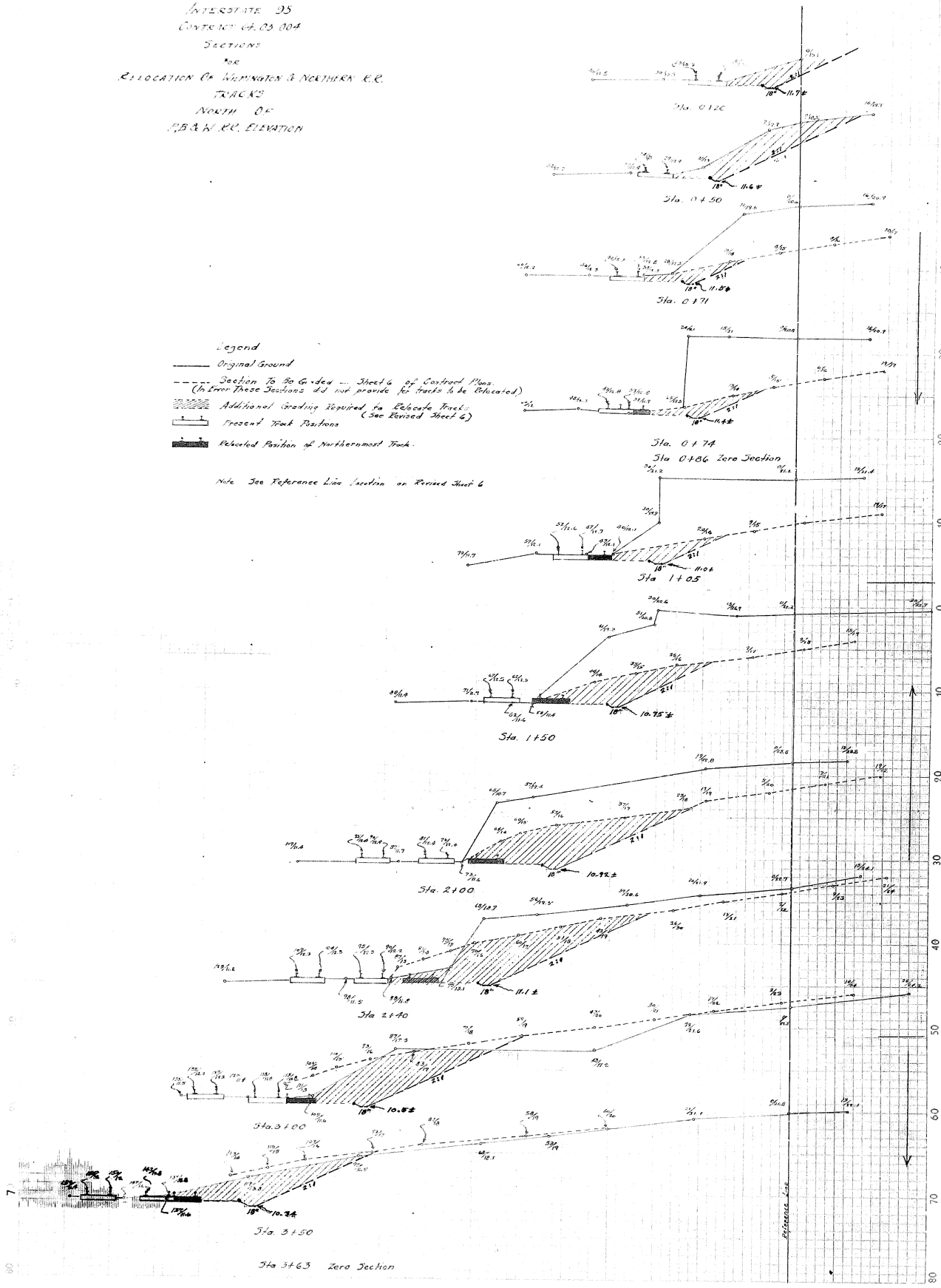
STRUCTURE 1-A
Scale 1/4" = 1'

DEPARTMENT of PUBLIC WORKS
WILMINGTON, DELAWARE

NORRIS RUN BYPASS
DETAILS

Drawn By H.F. Smith Jr.	Scale:
Checked By	Hor. 3/4" = 1'-0"
Date March 6, 1964	Vert.
Approved By Chief Engineer	Date
Contract No. PW-	Sheet No. of

INTERSTATE 95
CONTRACT CF-03 004
SECTIONS
FOR
RELOCATION OF WILMINGTON & NORTHERN R.R.
TRACKS
NORTH OF
P.B.& W. R.R. ELEVATION

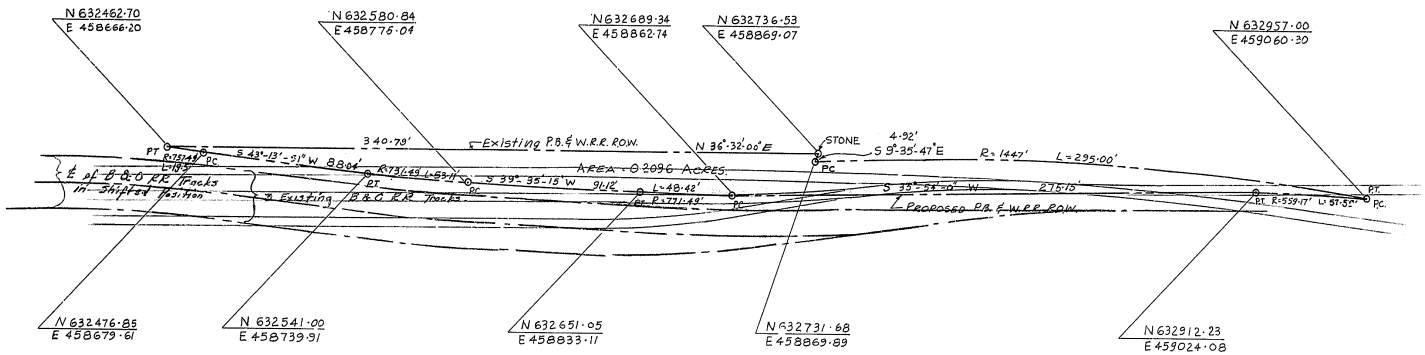


COUNTY	CONTRACT	P.W.A. REG. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)		

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT - SECTION II

NO.	REVISIONS	BY	DATE

Note: See Sh# 179 of 64-03-004 Construction Plans



DELAWARE
STATE HIGHWAY DEPARTMENT

PROPERTY
TO BE ACQUIRED FOR
THE P. B. & W.R.R. CO.

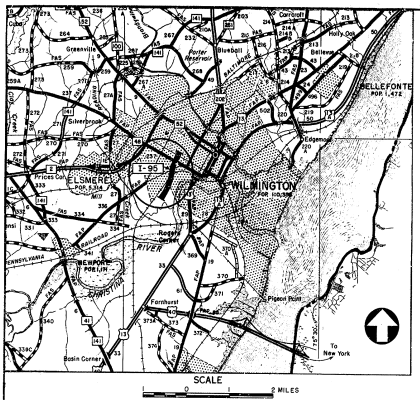
D.	SCALE	APPROVED BY:
T. RKP 6/10/64	1" = 30'-0'	
C. JHF " "		BRIDGE ENGINEER

K+E IMPERIAL TRACING CLOTH

7-3

COUNTY	CONTRACT	F.A. RD. NO.	STATE	FED. RD. PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12) I-95-2 (8)	'64	1	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT



THE STATE OF DELAWARE

STATE HIGHWAY DEPARTMENT

As Built Plans
1-5-27 [illegible]

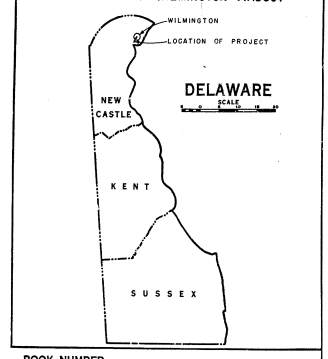
PLAN
FOR
CONSTRUCTION OF CONTRACT № 64-03-004

STA. 289+55 TO STA. 319+82.29
3027.29 FEET: 0.573 MILES

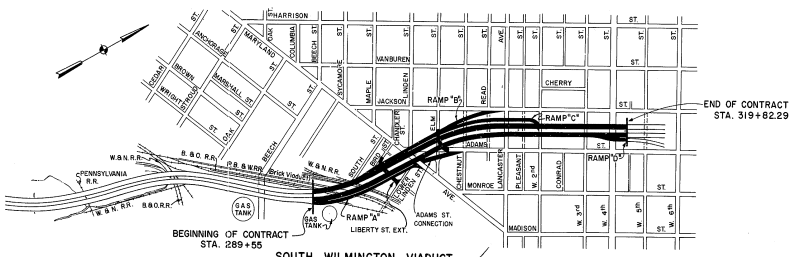
SCALE: PLAN: 1 IN.= 30 FT.
PROFILE: HOR. 1 IN.= 30 FT.
VERT. 1 IN.= 10 FT.

FEDERAL AID PROJECT Nos. I-95-2 (12)
I-95-2(8)

(THIS IS A CONTROLLED ACCESS HIGHWAY)



BOOK NUMBER



SOUTH WILMINGTON VIADUCT
LOCATION PLAN
SCALE 1" = 400'

DESIGN CRITERIA

DESIGN SPEED	60 MPH
TURNOUT SPEED	25 MPH
MAXIMUM SUPERELEVATION	.06 FT./FT.
MINIMUM RADIUS	1263 FT.
MINIMUM LENGTH OF SPIRAL	300 FT.
MINIMUM EXPRESSWAY GRADE	0.5%
MAXIMUM EXPRESSWAY GRADE	3%
MINIMUM VERTICAL CLEARANCES	
OVER ROADWAYS	14 FT.- 3 IN.
OVER PENNA R.R. VIADUCT	23 FT.- 6 IN.
OVER OTHER R.R.	23 FT.- 0 IN.

FOR STRUCTURAL DESIGN CRITERIA SEE SH.- NO. 36

PREPARED AND RECOMMENDED BY
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS NEW YORK

Thomas J. Mutter DATE April 1, 1964

DELAWARE P.E. LIC. NO 874

Reference :- Standard Specifications for Highway Construction, July 1, 1960

CONVENTIONAL SIGNS
(SEE SHEET NO. 3)

INDEX OF DRAWINGS
(SEE SHEET NO. 2)

RECOMMENDED 4/16 1964 E. Powell Smith Chief, Planning & Design Division
RECOMMENDED 4/17 1964 R. E. Tomasetti Asst. Chief Engineer
APPROVED 4/16 1964 Joe S. Robinson Chief Engineer
APPROVED 4-16 1964 E. [illegible] Director of Operations

DEPARTMENT OF COMMERCE
BUREAU OF PUBLIC ROADS

APPROVED:

DIVISION ENGINEER DATE

COUNTY	CONTRACT	F.A.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	2	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

HIGHWAY

SH. NO.	
1	TITLE
2	INDEX OF DRAWINGS
3	LEGEND & GENERAL NOTES
4	TYPICAL SECTIONS AND DETAILS
5	BASELINE CONTROL
6	ALIGNMENT, GRADING AND PAVING I - STA. 289+55 TO STA. 296+84
7	ALIGNMENT, GRADING AND PAVING II - STA. 296+84 TO STA. 303+91
8	ALIGNMENT, GRADING AND PAVING III - STA. 303+91 TO STA. 312+96
9	ALIGNMENT, GRADING AND PAVING IV - STA. 312+96 TO STA. 320+02.33
10	CLEARING AND IMPROVEMENT
11	PAVEMENT GRADING AT INTERSECTIONS - I
12	PAVEMENT GRADING AT INTERSECTIONS - II
13	PROFILES STA. 289+55 TO STA. 306+00
14	PROFILES STA. 306+00 TO STA. 320+02.33
15	PROFILES RAMPS "B" & "C"
16	PROFILES RAMPS "A" & "D" & LOCAL STREETS
17	DRAINAGE & UTILITIES I - STA. 289+55 TO ST.. 296+84
18	DRAINAGE & UTILITIES II - STA. 296+84 TO STA. 303+91
19	DRAINAGE & UTILITIES III - STA. 303+91 TO STA. 312+96
20	DRAINAGE & UTILITIES IV - STA. 312+96 TO STA. 320+02.33
21	DRAINAGE SCHEDULE I
22	DRAINAGE SCHEDULE II
23	DRAINAGE SCHEDULE III
24	DRAINAGE DETAIL SHEET "MH"
25	SEWER PROFILES I
26	SEWER PROFILES II
27	SEWER PROFILES III
28	SEWER PROFILES IV
29	TRAFFIC SIGNAL LAYOUT
30	BORING LOGS: 126 TO 133
31	BORING LOGS: 134 TO 140
32	BORING LOGS: 141 TO 146
33	BORING LOGS: 199 TO 213
34	BORING LOGS: 214 TO 226

STRUCTURAL

SH. NO.	DWG. NO.	
35	SA1	GENERAL PLAN & ELEVATION
36	SA2	GENERAL NOTES
37	SA3	TABLE OF QUANTITIES
38	SA4	TYPICAL SECTIONS - SHEET 1 OF 2
39	SA5	TYPICAL SECTIONS - SHEET 2 OF 2
40	SA6	FOUNDATION PLAN - MAINLINE-PIER 22 TO PIER 26 RAMP A-PIERS 1A & 2A
41	SA7	FOUNDATION PLAN - MAINLINE-PIER 26 TO PIER 32 RAMP A-PIERS 2A THRU 5A
42	SA8	FOUNDATION PLAN - MAINLINE-PIER 32 TO PIER 40 - RAMP B
43	SA9	FOUNDATION PLAN - MAINLINE-PIER 40 TO PIER 48 - RAMP C
44	SA10	FOUNDATION PLAN - MAINLINE-PIER 48 TO PIER 59
45	SA11	MAINLINE PIER ELEVATIONS - PIERS 22, 23, & 24
46	SA12	MAINLINE PIER ELEVATIONS - PIERS 25, 26, 27, & 28
47	SA13	MAINLINE PIER ELEVATIONS - PIERS 29, 30, 31, & 32
48	SA14	MAINLINE PIER ELEVATIONS - PIERS 33, 34, 35, & 36
49	SA15	MAINLINE PIER ELEVATIONS - PIERS 37, 38, 39, & 40
50	SA16	MAINLINE PIER ELEVATIONS - PIERS 41, 42, 43, & 44
51	SA17	MAINLINE PIER ELEVATIONS - PIERS 45, 46, 47, & 48
52	SA18	MAINLINE PIER ELEVATIONS - PIERS 49, 50, 51, & 52
53	SA19	MAINLINE PIER ELEVATIONS - PIERS 53, 54, 55, & 56
54	SA20	MAINLINE PIER ELEVATIONS - PIERS 57, 58, & 59
55	SA21	RAMP A PIER ELEVATIONS - PIERS 1A THRU 5A
56	SA22	RAMP B PIER ELEVATIONS - PIERS 1B THRU 6B
57	SA23	RAMP C PIER ELEVATIONS - PIERS 1C & 2C
58	SA24	MAINLINE - PIERS 23 THRU 26 - FOOTINGS
59	SA25	MAINLINE - PIERS 23 THRU 26 - SHAFTS
60	SA26	MAINLINE PIER - TWO COLUMN RIGID FRAME TYPES I, IA & II
61	SA27	MAINLINE PIERS - TWO COLUMN RIGID FRAME - TYPE III
62	SA28	MAINLINE PIERS - THREE COLUMN RIGID FRAME - TYPE IV
63	SA29	RAMP A - PIERS 1A & 2A
64	SA30	RAMP B - PIERS 1B, 2B, & 3B
65	SA31	RAMPS A, B & C - PIERS 3A, 4A & 5A - PIERS 4B, 5B & 6B PIERS 1C & 2C
66	SA32	DEMOLITION - NORRIS RUN SEWER - PIERS 54N, 55N, 56N & 57S
67	SA33	PADS - MASONRY
68	SA34	PADS - REINFORCEMENT
69	SA35	MAINLINE NORTH ABUTMENT - DECK & FOOTING PLANS & ELEVATIONS
70	SA36	MAINLINE NORTH ABUTMENT - PLANS, SECTIONS & ELEVATIONS SHEET 1 OF 3
71	SA37	MAINLINE NORTH ABUTMENT - PLANS, SECTIONS & ELEVATIONS SHEET 2 OF 3
72	SA38	MAINLINE NORTH ABUTMENT - PLANS, SECTIONS & ELEVATIONS SHEET 3 OF 3
73	SA39	MAINLINE NORTH ABUTMENT - DETAILS
74	SA40	RAMP A ABUTMENT - PLANS, ELEVATIONS & SECTIONS - SHEET 1 OF 3
75	SA41	RAMP A ABUTMENT - PLAN, ELEVATIONS & SECTIONS - SHEET 2 OF 3
76	SA42	RAMP A ABUTMENT - PLAN, ELEVATIONS & SECTIONS - SHEET 3 OF 3
77	SA43	RAMP B ABUTMENT - PLANS & ELEVATIONS
78	SA44	RAMP B ABUTMENT - SECTIONS, ELEVATIONS & DETAILS
79	SA45	RAMP B ABUTMENT - PLANS, SECTIONS & DETAILS
80	SA46	RAMP C ABUTMENTS - PLANS & ELEVATIONS
81	SA47	RAMP C ABUTMENTS - PLAN, ELEVATION & SECTIONS
82	SA48	RAMP C ABUTMENTS - SECTIONS & DETAILS
83	SA49	DECK ELEVATIONS AND STRINGER GEOMETRY - SHEET 1 OF 5
84	SA50	DECK ELEVATIONS AND STRINGER GEOMETRY - SHEET 2 OF 5
85	SA51	DECK ELEVATIONS AND STRINGER GEOMETRY - SHEET 3 OF 5
86	SA52	DECK ELEVATIONS AND STRINGER GEOMETRY - SHEET 4 OF 5
87	SA53	DECK ELEVATIONS AND STRINGER GEOMETRY - SHEET 5 OF 5
88	SA54	FRAMING PLAN - MAINLINE-PIER 22 TO PIER 26 RAMP A-SPANS 0A & 1A
89	SA55	FRAMING PLAN - MAINLINE-PIER 26 TO PIER 32 RAMP A-SPANS 2A THRU 5A
90	SA56	FRAMING PLAN - MAINLINE-PIER 32 TO PIER 40 RAMP B-SPANS 0B THRU 6B
91	SA57	FRAMING PLAN - MAINLINE-PIER 40 TO PIER 48 - RAMP C
92	SA58	FRAMING PLAN - MAINLINE-PIER 48 TO NORTH ABUTMENT
93	SA59	STRINGER DATA - MAINLINE-SPANS 26 THRU 38
94	SA60	STRINGER DATA - MAINLINE-SPANS 39 THRU 52
95	SA61	STRINGER DATA - MAINLINE-SPANS 53 THRU 59
96	SA62	STRINGER DATA - RAMPS A, B & C
97	SA63	STRINGER DATA - MAINLINE-SPANS 22, 23, 24 & 32 RAMP A-SPANS 0A & 1A
98	SA64	STRINGER DATA-TAPERED GIRDERS - MAINLINE-SPAN 25 RAMP A-SPAN 2A

STRUCTURAL

SH. NO.	DWG. NO.	
99	SA65	SUPERSTRUCTURE - TYPICAL SECTIONS
100	SA66	STRINGERS - MAINLINE - SPANS 22, 23, 24 & 32 RAMP A-SPANS 0A & 1A
101	SA67	STRUCTURAL DETAILS
102	SA68	SHEAR CONNECTORS & WELDED BEAM FLANGE DETAILS
103	SA69	BOX GIRDERS - BG 23 & BG 24
104	SA70	BOX GIRDERS - BG 25 & BG 26
105	SA71	BOX GIRDER DETAILS - SHEET 1 OF 2
106	SA72	BOX GIRDER DETAILS - SHEET 2 OF 2
107	SA73	SHOES - SHEET 1 OF 2
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116	SA82	DECK REINFORCEMENT - RAMP A - SLABS 0A THRU 5A
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130	SA96	BAR LIST - PIERS 27S THRU 38S
131	SA97	BAR LIST - PIERS 33S THRU 38S
132	SA98	BAR LIST - PIERS 39S THRU 44S
133	SA99	BAR LIST - PIERS 45S THRU 50S
134	SA100	BAR LIST - PIERS 51S THRU 54S
135	SA101	BAR LIST - PIERS 55S THRU 59S
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137	SA103	BAR LIST - PIERS 33N THRU 38N
138	SA104	BAR LIST - PIERS 39N THRU 44N
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147	SA113	BAR LIST - SLABS 30S THRU 35S
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172	E-3	ELECTRICAL PLAN II
173	E-4	ELECTRICAL DETAILS I
174	E-5	ELECTRICAL DETAILS II

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176	P13804-5	TRACK CHANGES - READING CO. (STAGE 5)
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182	4682234-2	STEEL DETAILS OF CROSS BEAM FOR BEAM BRIDGE W-486 AND CROSS BEAMS AND SAG BRACES FOR NEW BEAM BRIDGES W-487A AND W-490A
183	4682235-2	CROSS ARM DETAILS
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185	4682237-2	POLE EXTENSIONS FOR BEAM BRIDGES W-484, W-486 W-491 AND W-492
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187	4682239-2	FOUNDATIONS AND ANCHOR DETAILS
188	4682240-2	DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1
189	4682241-2	DUCT BANK RELOCATION, PLAN & PROFILE, SH. #2
190	4682242-2	DUCT BANK RELOCATION, PLAN & PROFILE, SH. #3
191	4682245-2	MANHOLE #3825A, CONCRETE DETAILS, SH. #1
192	4682246-2	PULL BOX DETAILS, SH. #2
193	4682247-2	MANHOLES #3824 AND #3825A, CONCRETE DETAILS, SH. #2
194	4682248-2	DUCT BANK RELOCATION, SECTIONS
195	4682251-2	MODIFICATIONS TO EXISTING BEAM BRIDGE W-489
196	4682252-2	MANHOLE #3824A, CONCRETE DETAILS, SH. #1
197	4682253-2	MANHOLES #3824A AND #3825A, CONCRETE DETAILS, SH. #3
198	4683042-2	CATENARY ATTACHMENTS: PLAN
199	4683043-2	CATENARY ATTACHMENTS: ELEVATIONS
200	4683044-2	CATENARY ATTACHMENTS: STEEL DETAILS
201	4687417-3	MODIFYCATIONS TO EXISTING BEAM BRIDGES W-484 AND W-486
202	4687418-3	MODIFICATIONS TO EXISTING BEAM BRIDGES W-485 AND W-487
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205		NORRIS RUN BYPASS - PLAN & PROFILE
206		NORRIS RUN BYPASS - DETAILS

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PLANS REVIEWED AND RECOMMENDED BY

R.D. Bennett 4/16/64

PLANNING AND REVIEW ENGINEER — DATE

INDEX OF DRAWINGS

ABBREVIATIONS

℄	Base Line
℄	Center Line
℘	Property Line
B.M.	Bench Mark
H.W.	Head Wall
M.H.	Manhole
C.B.	Catch Basin or Inlet
Inv.	Invert
Macc.	Macadam
P.V.C.	Point of Vertical Curvature
P.V.T.	Point of Vertical Tangency
P.V.I.	Point of Vertical Intersection
El. or Elev.	Elevation
T.S.	Point of Tangency, Tangent to Spiral
S.C.	Point of Common Tangency, Spiral to Curve
C.S.	Point of Common Tangency, Curve to Spiral
S.T.	Point of Tangency, Spiral to Tangent
P.I.	Point of Intersection of Tangents
R.O.W.	Right-of-Way
Δ	Angle of Deflection between Tangents
Δc	Central Angle of Curve with Constant Radius
Lc	Length of Curve with Constant Radius
Rc	Radius of Curvature
Ls	Length of Spiral
Ts	External Tangent, TS or S.T. to Vertex
Θs	Angle Between Tangents of Spiral
M.O.	Middle Ordinate
Gr.	Proposed Grade
S.E. or e	Rate of Superelevation
D.P.L.	Delaware Power & Light
DST	Diamond State Telephone
F.H.	Fire Hydrant
W.V.	Water Valve
G.V.	Gas Valve
L.H.	Lamp Hole
Mon.	Monument
R.C.P.	Reinforced Concrete Pipe
E.S.R.C.P.	Extra Strength Reinforced Concrete Pipe
C.I.P.	Cast Iron Pipe
W.I.P.	Wrought Iron Pipe
T.C.	Terra Cotta (Vitrified Clay) Pipe
V.C.P.	Vitrified Clay Pipe
V.C.P.X.	Vitrified Clay Pipe Extra Strength
C.M.P.	Corrugated Metal Pipe
A.O.B.E.	As Ordered By Engineer
P.C.M.P.	Perforated Corrugated Metal Pipe

LEGEND

EXISTING		PROPOSED
	City Line	
	Right-of-Way or Property Line	
	Center Line, Proposed Roadway	
—X—X—	Fence	
12"T.C. San. & Storm	Drainage Line	18" R.C.P.
◎	Manhole	○
▥ or □	Catch Basin or Inlet	□
	Scupper	■
⊠F.H.	Fire Hydrant	
ø	Power or Telephone Pole	
—W—	Water Line	
—G—	Gas Line	
—Po—	Power Line Overhead	
----Po----	Power Line Underground	
—To—	Telephone Line Overhead	
----To----	Telephone Line Underground	
	Slope Line	
◔ or ● 12G 12G	Boring Location	
C.B. 24"RCP ##### #####	Drainage Pipe and Catch Basin to be Abandoned or Removed, as Directed by the Engineer.	
	Water Service (House) Connection (to be Cut Off at Main)	

For Legend of "Electrical Plan and Details" See Drawing No. E-2, Sh. No. 171.

For Legend of Paving Items see Alignment, Grading & Paving Plan Sheets Nos. 6, 7, 8 & 9.

For Legend of Traffic Signal Details see Traffic Signal Layout Sheet No. 29.

Control of Access Line ——— — ———

COUNTY	CONTRACT	R.P.A. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	3	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

GENERAL NOTES

Underground Utilities are Shown in Accordance with the Best Available Information.

All Privately Owned Utilities Except as Noted Under Item No. 46 of the Specifications, shall be Adjusted or Moved by Others as Indicated on the Plans.

Sidewalks Shall be Constucted, Repaired and/or Adjusted with a 4" Depth Cement Concrete to the Widths Indicated on the Plans or as Directed by the Engineer.

Where Drainage Construction Must be Performed in Existing Streets Not to be Closed or Reconstructed, the Contractor Shall Patch Existing Paving in Accordance with the Details on the Plans and Shall Restore Curbs, Walks and Miscellaneous Structures in a Condition at Least Equal to that Existing Prior to Construction. Patching of Flexible Pavement is Incidental to Drainage and Utility Construction.

All V.C. Pipe Connections to New Manholes Shall be Made with the Use of Standard Bends as Required.

Strengthening of Existing V.C. Pipe Where Flow Must be Maintained Shall be Accomplished with 3" Concrete Encasement Type "A" as Detailed on Plans and at Locations as Directed by the Engineer and/or in Conformity with the Plans. WYE and Riser Pipe Connections to be Abandoned and Left in Place Shall be Plugged with Concrete.

Type "B" Concrete Encasement For New V.C. Pipe to be Installed Shall be Used as Detailed and Shown on Plans and at Locations Shown on the Plans and/or as Directed by the Engineer.

All Existing Catch Basins, Inlets Structures and etc. Indicated on the Drawings to be Abandoned or Demolished Shall be Removed to Subgrade Elevations or to the Extent Necessary to Clear New Construction.

Voids Left by Removal of Existing Structures, Appurtenances, and Pipes Shall be Backfilled and Mechanically Tamped with Salvaged Base Course Material and/or Select Borrow at No Additional Cost to the State.

Stationing and Offsets Shown on the Drainage Schedules For Locating Proposed Inlets and Catch Basins Refers to a Point on the Centerline of the Structure at the Curb Line. These Stationing and Offsets are Approximate and may be Adjusted in Field by the Engineer.

All Existing Combination Sewer and Drainage Pipes to be Abandoned and Left in Place Shall be Plugged with Concrete.

All Field Connections of New Drainage Pipes to Existing Facilities Shall be Completed with a Cement Concrete Mortar Collar.

All Drainage Grates, Covers, Frames, Etc. and Lamphole Frame and Cover Removed Shall be Salvaged as Directed by the Engineer.

For Notes Pertaining to Water Line Ajustments See Drainage and Utilities Plan Sheets.

Where Streets are to be Permanently Closed Under this Contract, Pavement, Sidewalks and Curbs are to be Removed from these Streets in Accordance With the Item "Clearing, Demolition, Excavation, Filling and Grading of the Special Provisions, and the Area Regraded as shown on the Plans to the Satisfaction of the Engineer. (See Clearing and Improvement Sheet).

Where new Roadway Pavement is to meet the edge of an Existing Street the Surface Course of the Existing Street Shall be Removed for a Minimum Width of 2 feet and Refinished with Hot Mix-Hot Laid Asphaltic Concrete as Indicated on the Plans or as Directed by the Engineer.

Where new Curbs are to Connect Existing Curbs of a Different Size, a Minimum Length of 10 feet will be used to Effect a Smooth Transition.

Structural Supports for Structure-Mounted Signs are included in this Contract. Erection of Posts, Braces, Trusses and Sign Faces will be performed by others.

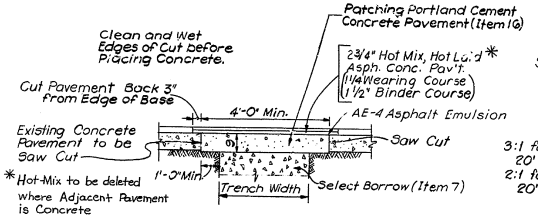
All Streets, Sidewalks and other areas which will be used by the travelling public during Construction shall be Keep Clean and Free from Obstruction to the Satisfaction of the Engineer and in Accordance with the Ordinances of the City of Wilmington.

Work shall be Conducted so as to be in Conformance with the City of Wilmington Ordinance Entitled "Safety Code for Trenches and Excavations for the City of Wilmington".

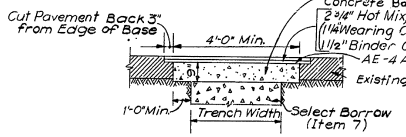
LEGEND & GENERAL NOTES

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	4	215

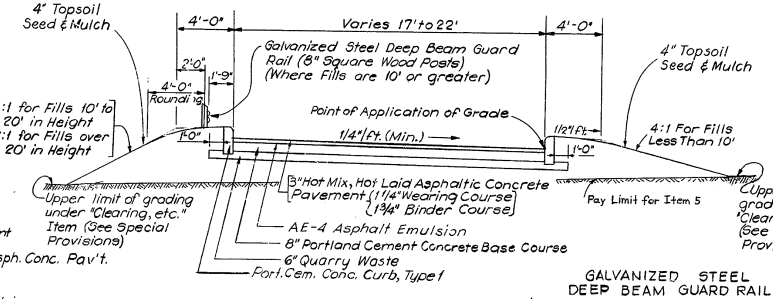
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



CONCRETE BASE ROADWAY-FLEXIBLE SURFACE



MACADAM ROADWAY - FLEXIBLE TYPE
METHOD OF CUTTING AND REPAIRING OPENINGS IN EXISTING ROADWAYS

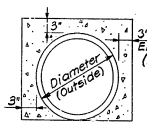


NORMAL RAMP SECTION

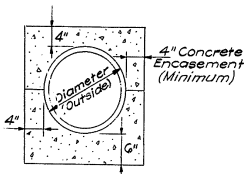
GALVANIZED STEEL DEEP BEAM GUARD RAIL

STA.	TO STA.	SIDE	QUANTITY
"C" 2+71	- "C" 3+33.5	Lt.	62.5 L.F.
"C" 2+71	- "C" 3+33.5	Rt.	62.5 L.F.
"C" 4+87.8	- "C" G+75.3	Lt.	187.5 L.F.
"C" 4+87.8	- "C" G+75.3	Rt.	187.5 L.F.
"A" 14+61.8	- "A" 15+36.8	Lt.	75.0 L.F.
"A" 14+61.8	- "A" 15+36.8	Rt.	75.0 L.F.
At Ramp "D" Bullnose See Dwg. 3A86			

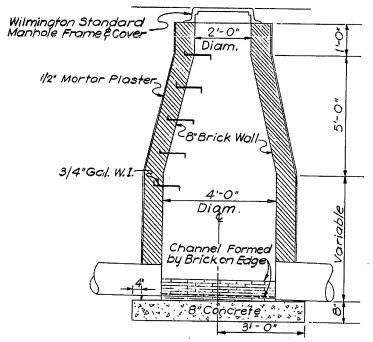
Note:
Along Line of Strengthening Existing V.C. Pipe with Concrete Encasement, Cut and Plug Abandoned House Connections or Risers as Encountered.



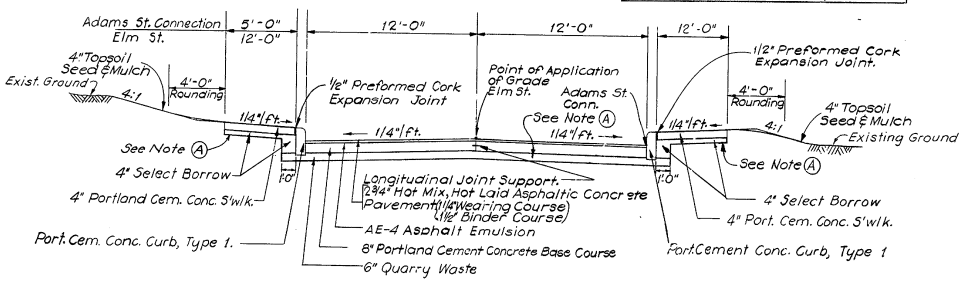
(See Special Provisions)
TYPICAL SECTION-TYPE "A"
CONCRETE ENCASEMENT FOR EXISTING V.C. PIPE
SCALE: 1" = 1'-0"



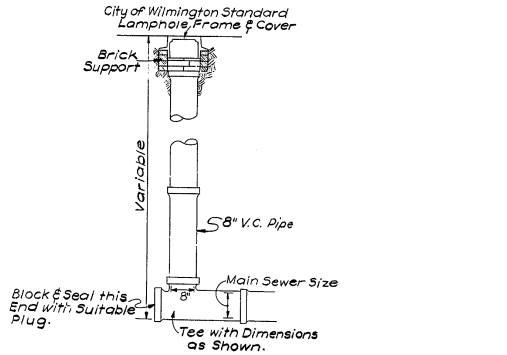
(See Special Provisions)
TYPICAL SECTION-TYPE "B"
CONCRETE ENCASEMENT FOR NEW V.C. PIPE
SCALE: 1" = 1'-0"



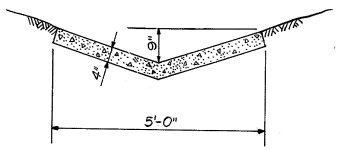
STANDARD MANHOLE SECTION
(CITY OF WILMINGTON)



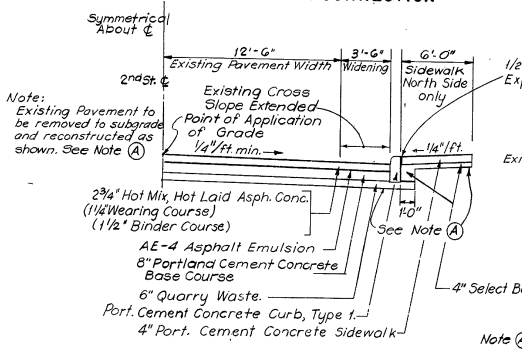
ELM ST. RELOCATION
ADAMS ST. CONNECTION



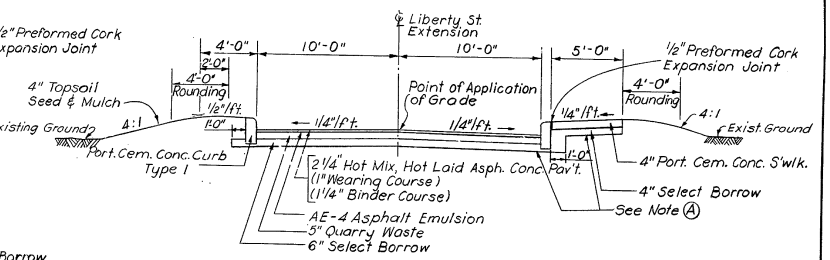
TYPICAL LAMPHOLE
SCALE: 1/2" = 1'-0"



CONCRETE GUTTER
SCALE: 3/4" = 1'-0"



RECONSTRUCTION OF 2nd STREET
SCALE: 1/4" = 1'-0"



LIBERTY STREET EXTENSION
SCALE 1/4" = 1'-0"

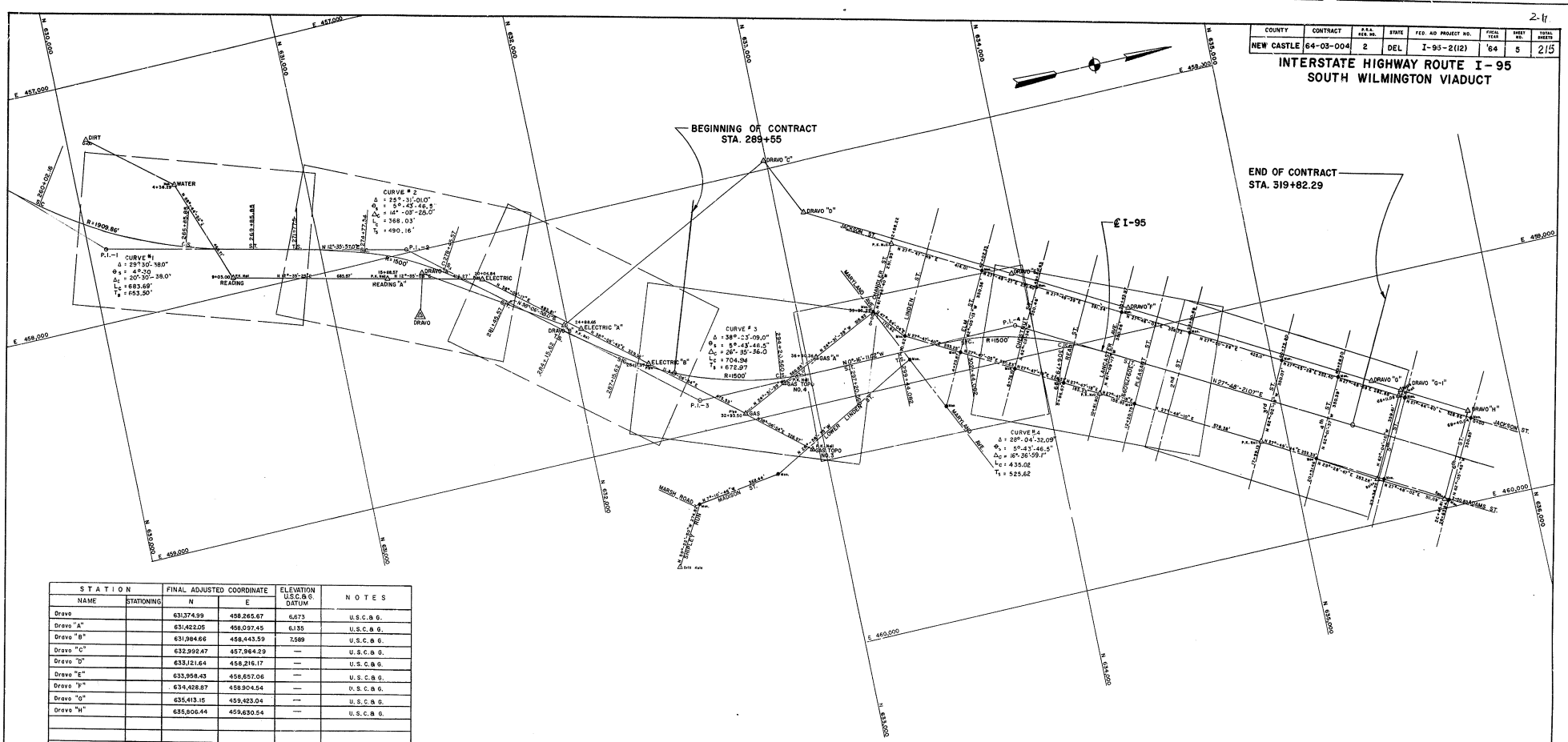
Note A
Upper Limit to which Roadway Sections are to be graded under the Item "Clearing, Demolition Excavation, Filling & Grading" (See Clearing and Improvement Sheet)

TYPICAL SECTIONS & DETAILS
SCALE: AS NOTED

D C B A

COUNTY	CONTRACT	R.A.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	5	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



STATION NAME	STATIONING	FINAL ADJUSTED COORDINATE N	E	ELEVATION U.S.C.&G.S. DATUM	NOTES
Dravo		631,374.99	458,265.67	6.673	U.S.C.& G.
Dravo "A"		631,422.05	458,097.45	6.135	U.S.C.& G.
Dravo "B"		631,984.66	458,443.59	7.589	U.S.C.& G.
Dravo "C"		632,992.47	457,964.29	—	U.S.C.& G.
Dravo "D"		633,121.64	458,216.17	—	U.S.C.& G.
Dravo "E"		633,958.43	458,657.06	—	U.S.C.& G.
Dravo "F"		634,428.87	458,904.64	—	U.S.C.& G.
Dravo "G"		635,413.15	459,423.04	—	U.S.C.& G.
Dravo "H"		635,806.44	459,630.54	—	U.S.C.& G.

NOTE:-
Care is to be taken to Insure that Permanent Control Points and Bench Marks in the Vicinity of Construction Remain Undisturbed. The Contractor will Take Whatever Steps are Necessary to Protect such Points Until they can be Transferred by USC&GS Personnel.

HORIZONTAL CONTROL:
U.S. Coast and Geodetic Survey
North American 1927 Datum Delaware' Vol. II
Published by U.S. Dept. of Commerce April 1960

VERTICAL CONTROL:
U.S. Coast and Geodetic Survey
Sea Level Datum of 1929
Published by U.S. Dept. of Commerce January 1960

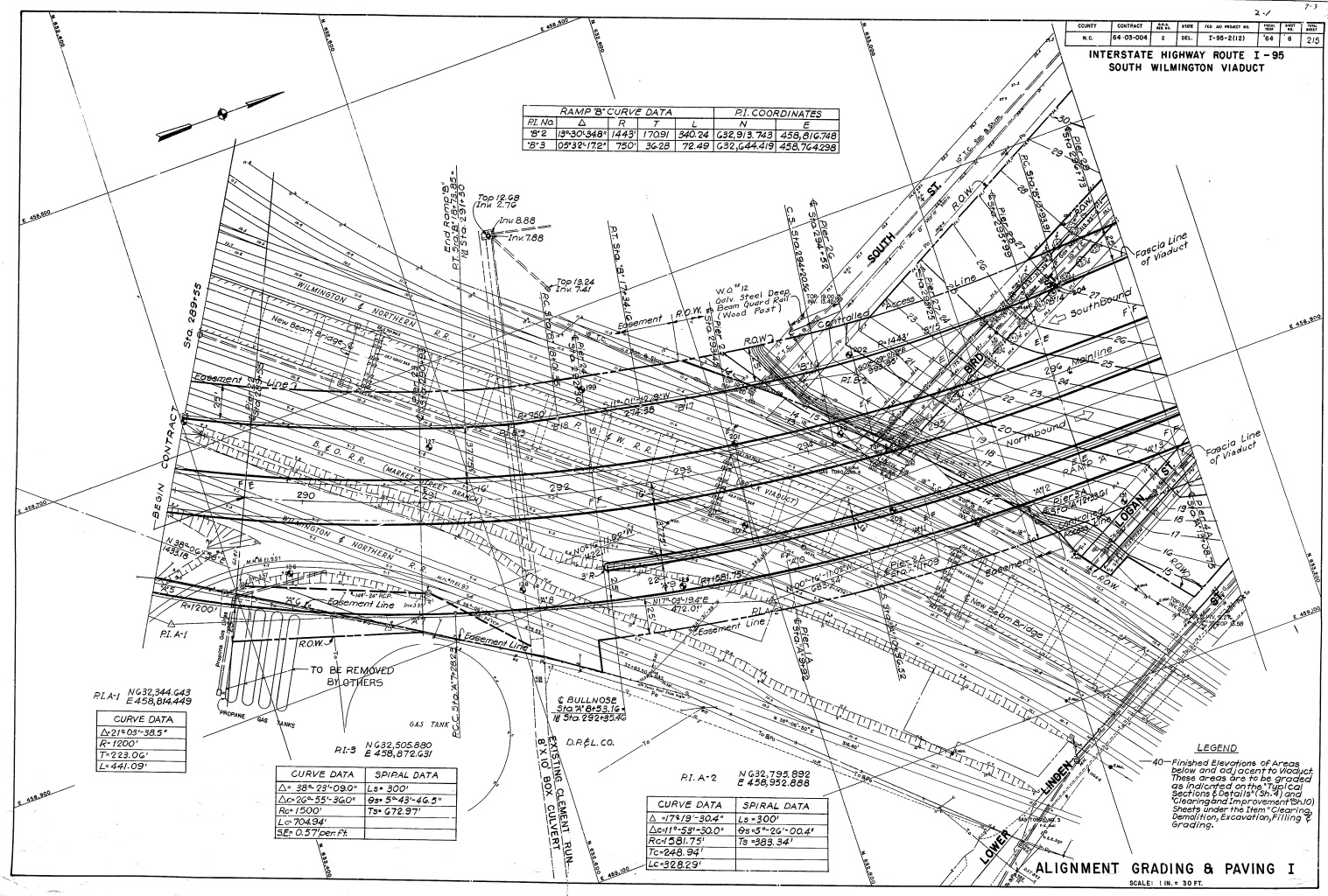
Survey prepared for Tippetts-Abbett-Mc Carthy-Stratton
By Van Demark and Lynch, Inc.
Engineers and Surveyors
Wilmington, Delaware

BASELINE CONTROL
SCALE: 1 IN = 200 FT.

COUNTY	CONTRACT	R.O.W. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
N.C.	64-03-004	2	DEL.	I-95-2(12)	'64	6	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

RAMP "B" CURVE DATA					P.I. COORDINATES	
P.I. No.	Δ	R	T	L	N	E
"B"2	13°30'-34.8"	1443'	170.91	340.24	G32,913.743	458,816.748
"B"3	05°32'-17.2"	750'	36.28	72.49	G32,644.419	458,764.298



P.I. A-1 N 632,344.643 E 458,814.449

CURVE DATA
Δ=21°03'-38.5"
R=1200'
T=223.06'
L=441.09'

P.I. A-2 N 632,795.892 E 458,952.888

CURVE DATA	SPIRAL DATA
Δ=17°19'-30.4"	Ls=300'
Δc=11°-53'-50.0"	θs=5°-26'-00.4'
Rc=1581.75'	Ts=383.34'
Tc=248.94'	
Lc=328.29'	

P.I. A-3 N 632,505.880 E 458,872.631

CURVE DATA	SPIRAL DATA
Δ=38°-23'-09.0"	Ls=300'
Δc=26°-55'-36.0"	θs=5°-43'-46.5"
Rc=1500'	Ts=672.97'
Lc=704.94'	
SE=0.57' per Ft.	

LEGEND

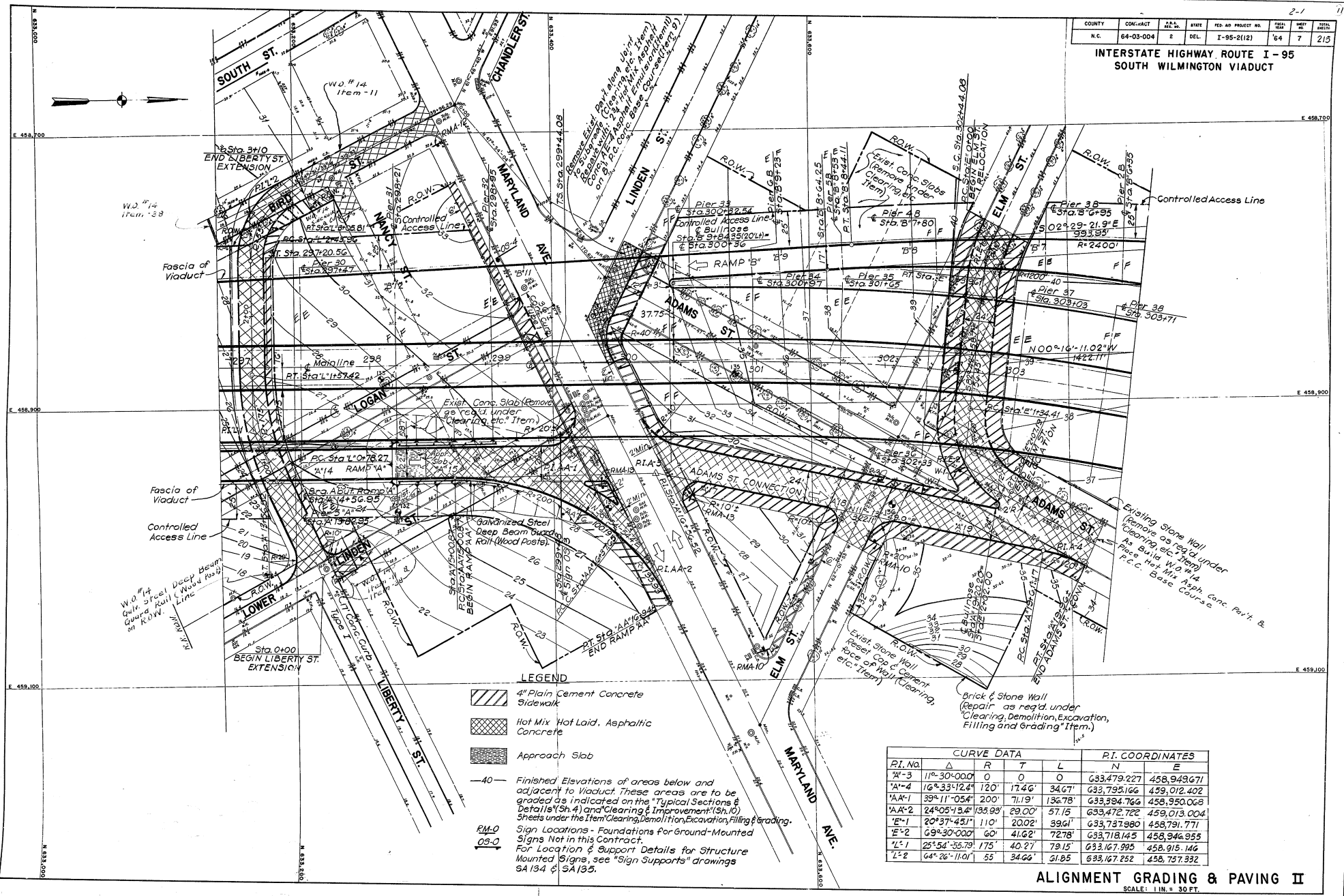
40 — Finished Elevations of Areas below and adjacent to Viaduct. These areas are to be graded as indicated on the "Typical Sections & Details" (Sh. 4) and "Clearing and Improvement" (Sh. 10) Sheets under the Item "Clearing, Demolition, Excavation, Filling & Grading.

ALIGNMENT GRADING & PAVING I

SCALE: 1 IN. = 30 FT.

COUNTY	CONTRACT	P.R.S. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.C.	64-03-004	2	DEL.	I-95-2(12)	'64	7	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

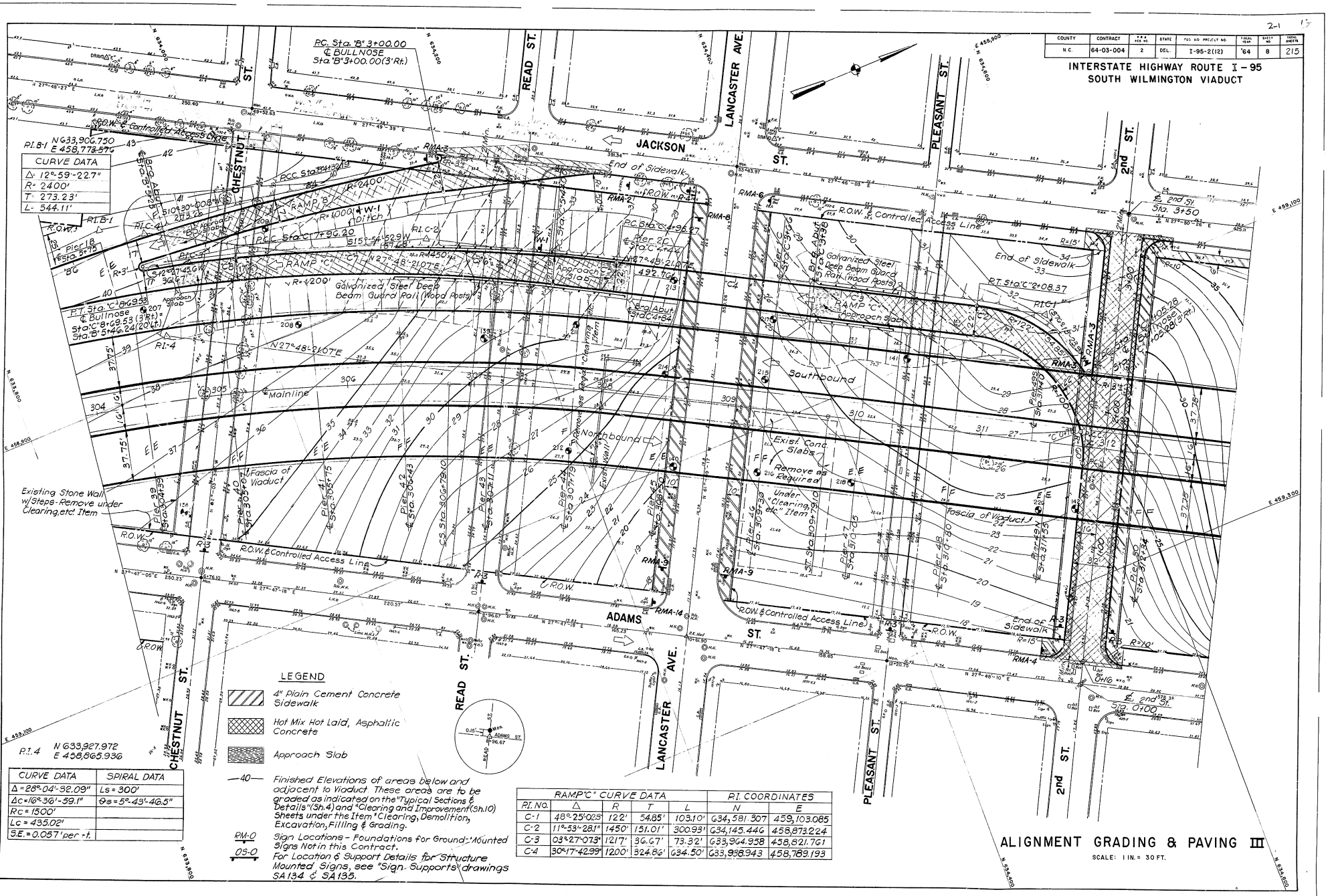


CURVE DATA					P.I. COORDINATES	
P.I. No.	Δ	R	T	L	N	E
"A"-3	11°-30'-00.0"	0	0	0	633,479.227	458,949.671
"A"-4	16°-33'-12.4"	120'	17.46'	34.67'	633,795.166	459,012.402
"A.A"-1	39°-11'-05.4"	200'	71.19'	136.78'	633,394.766	458,950.068
"A.A"-2	24°-05'-13.4"	136.93'	29.00'	57.15	633,472.722	459,013.004
"E"-1	20°-37'-45.1"	110'	20.02'	39.61'	633,737.980	458,791.771
"E"-2	69°-30'-00.0"	60'	41.62'	72.78'	633,718.145	458,946.955
"L"-1	25°-54'-55.79"	175'	40.27'	79.15'	633,167.995	458,915.146
"L"-2	64°-26'-11.01"	55	34.66'	61.85	633,167.252	458,757.332

ALIGNMENT GRADING & PAVING II

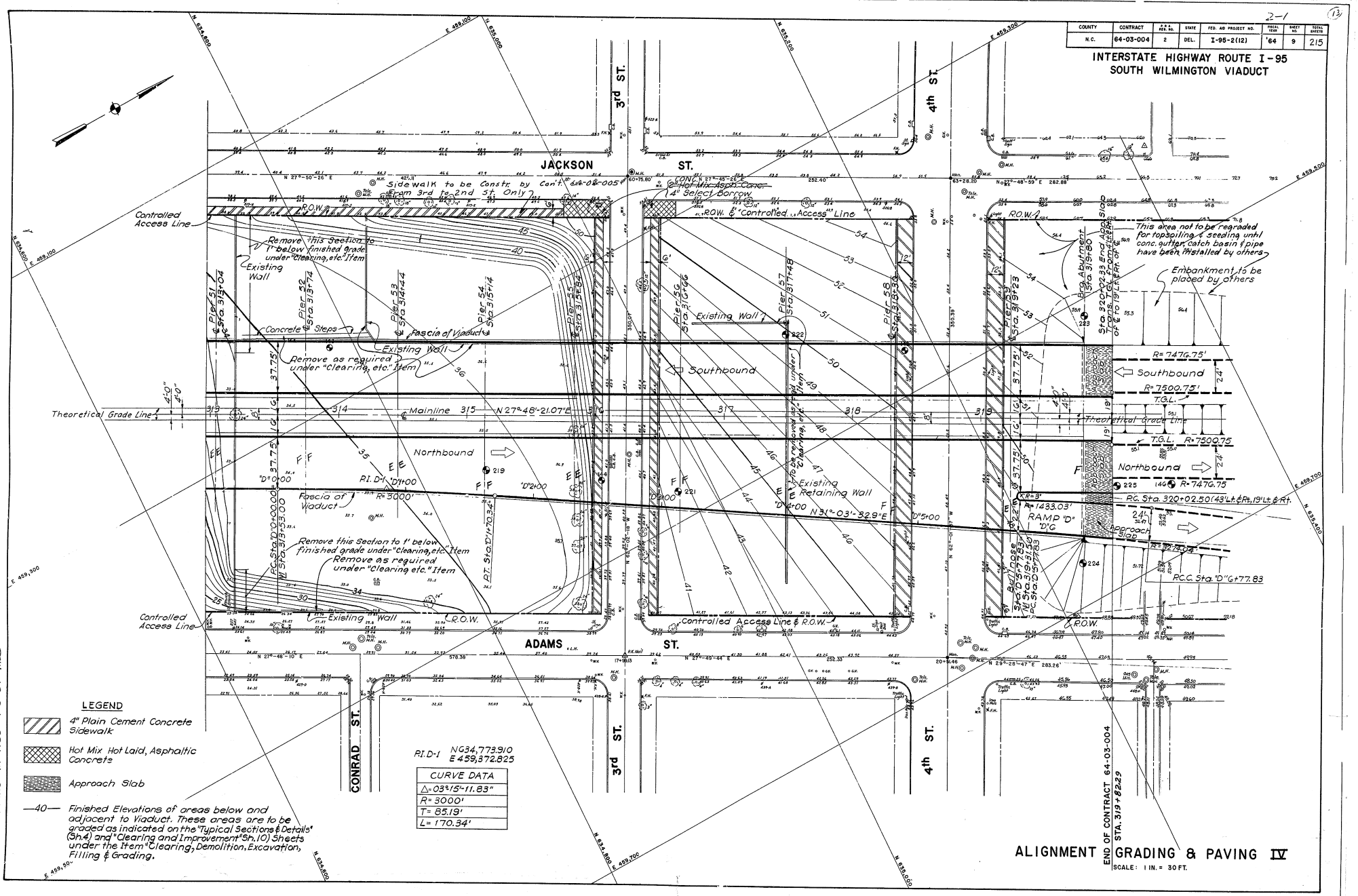
SCALE: 1 IN. = 30 FT.

As Built Plans in Red 1-1967 MEC


INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT
ALIGNMENT GRADING & PAVING III
SCALE: 1 IN. = 30 FT.
JACKSON ST.
ADAMS ST.
CHESTNUT ST.
READ ST.
LANCASTER AVE.
PLEASANT ST.
2nd ST.
Southbound
Northbound
Mainline
RAMP "B"
RAMP "C"
Approach Slab
Galvanized Steel Deep Beam Guard Rail (Wood Posts)
Existing Stone Wall w/Steps-Remove under Clearing, etc. Item
Fascia of Viaduct
Exist. Conc. Slabs
Remove as Required
Under "Clearing, etc." Item
R.O.W. & Controlled Access Line
End of Sidewalk
LEGEND
4" Plain Cement Concrete Sidewalk
Hot Mix Hot Laid, Asphaltic Concrete
Approach Slab
—40— Finished Elevations of areas below and adjacent to Viaduct. These areas are to be graded as indicated on the "Typical Sections & Details" (Sh.4) and "Clearing and Improvement" (Sh.10) Sheets under the Item "Clearing, Demolition, Excavation, Filling & Grading.
RM-0 / 09-0 Sign Locations - Foundations for Ground-Mounted Signs Not in this Contract. For Location & Support Details for Structure Mounted Signs, see "Sign Supports" drawings SA 134 & SA 135.
P.I. 1 N 633,906.750 E 458,773.576
P.I. 4 N 633,927.972 E 456,865.936
CURVE DATA
Δ = 12°-59'-22.7"
R = 2400'
T = 273.23'
L = 544.11'
RAMP "C" CURVE DATA
P.I. NO. | Δ | R | T | L | P.I. COORDINATES N | E
C-1 | 48°-25'-02.5" | 122' | 54.85' | 103.10' | 634,581.307 | 459,103.085
C-2 | 11°-53'-28.1" | 1450' | 151.01' | 300.93' | 634,145.446 | 458,873.224
C-3 | 03°-27'-07.3" | 1217' | 36.67' | 73.32' | 633,964.958 | 458,821.761
C-4 | 30°-17'-42.99" | 1200' | 324.86' | 634.50' | 633,938.943 | 458,789.193
CURVE DATA | SPIRAL DATA
Δ = 28°-04'-32.09" | Ls = 300'
Δc = 16°-36'-59.1" | θs = 5°-43'-46.5"
Rc = 1500'
Lc = 435.02'
S.E. = 0.057' per ft.
COUNTY N.C. | CONTRACT 64-03-004 | F.A.P. REG. NO. 2 | STATE DEL. | F.A.D. &/D PROJECT NO. I-95-2(112) | FISCAL YEAR '64 | SHEET NO. 8 | TOTAL SHEETS 215
As Built Plans in Red - 1-9-67 MRC

COUNTY	CONTRACT	R/W REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
N.C.	64-03-004	2	DEL.	I-95-2(12)	'64	9	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



LEGEND

- 4" Plain Cement Concrete Sidewalk
- Hot Mix Hot Laid, Asphaltic Concrete
- Approach Slab
- —40— Finished Elevations of areas below and adjacent to Viaduct. These areas are to be graded as indicated on the "Typical Sections & Details" (Sh. 4) and "Clearing and Improvement" Sh. (10) Sheets under the Item "Clearing, Demolition, Excavation, Filling & Grading.

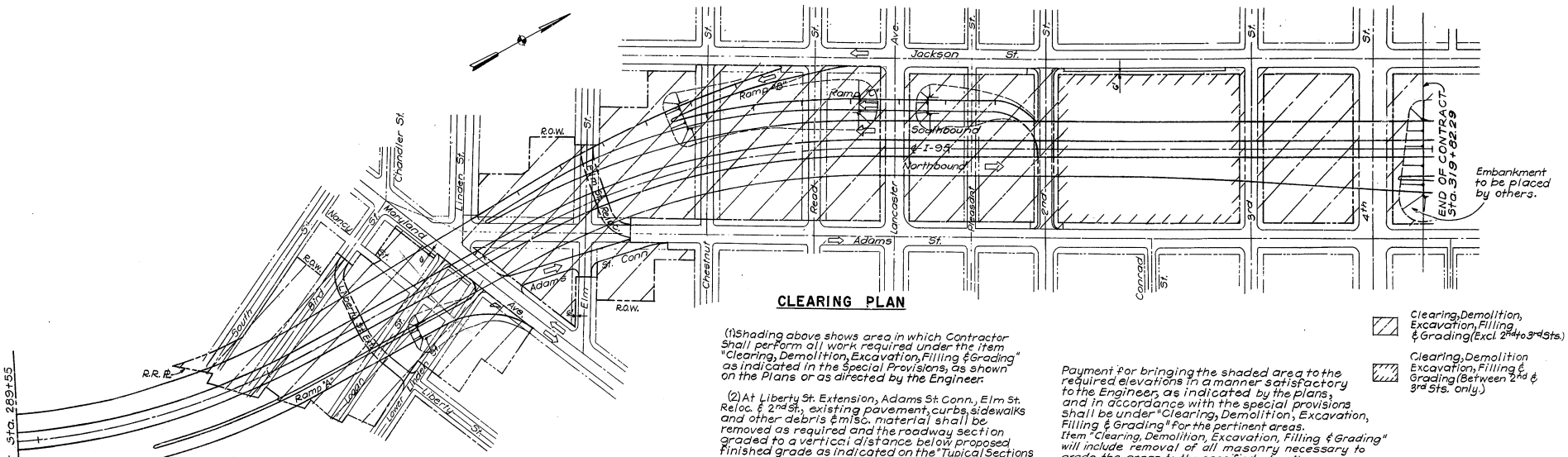
ALIGNMENT GRADING & PAVING IV

SCALE: 1 IN. = 30 FT.

As Built Plans in Red - 1-9-67 HRC

COUNTY	CONTRACT	F.H.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	10	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



CLEARING PLAN

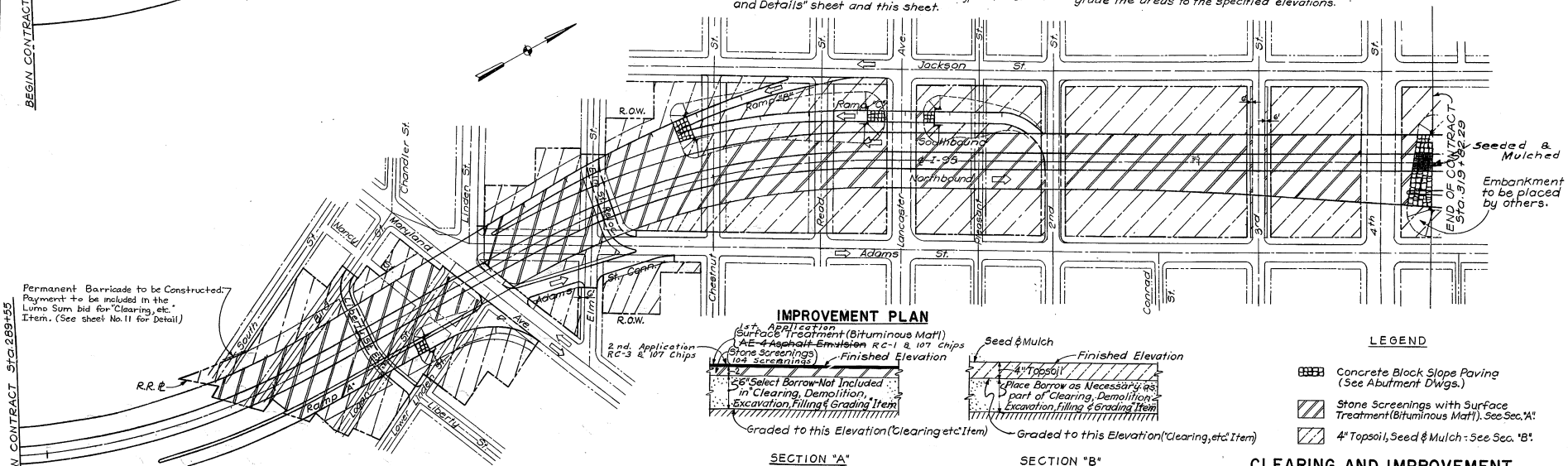
(1) Shading above shows area in which Contractor shall perform all work required under the item "Clearing, Demolition, Excavation, Filling & Grading" as indicated in the Special Provisions, as shown on the Plans or as directed by the Engineer.

(2) At Liberty St. Extension, Adams St. Conn., Elm St. Reloc. & 2nd St., existing pavement, curbs, sidewalks and other debris & misc. material shall be removed as required and the roadway section graded to a vertical distance below proposed finished grade as indicated on the "Typical Sections and Details" sheet and this sheet.

Payment for bringing the shaded area to the required elevations in a manner satisfactory to the Engineer, as indicated by the plans, and in accordance with the special provisions shall be under "Clearing, Demolition, Excavation, Filling & Grading" for the pertinent areas. Item "Clearing, Demolition, Excavation, Filling & Grading" will include removal of all masonry necessary to grade the areas to the specified elevations.

Clearing, Demolition, Excavation, Filling & Grading (Excl 2nd to 3rd Sts.)

Clearing, Demolition Excavation, Filling & Grading (Between 2nd & 3rd Sts. only.)



IMPROVEMENT PLAN

SECTION "A"

SECTION "B"

LEGEND

- Concrete Block Slope Paving (See Abutment Dwgs.)
- Stone Screenings with Surface Treatment (Bituminous Matl.). See Sec. "A".
- 4" Topsoil, Seed & Mulch: See Sec. "B".

CLEARING AND IMPROVEMENT

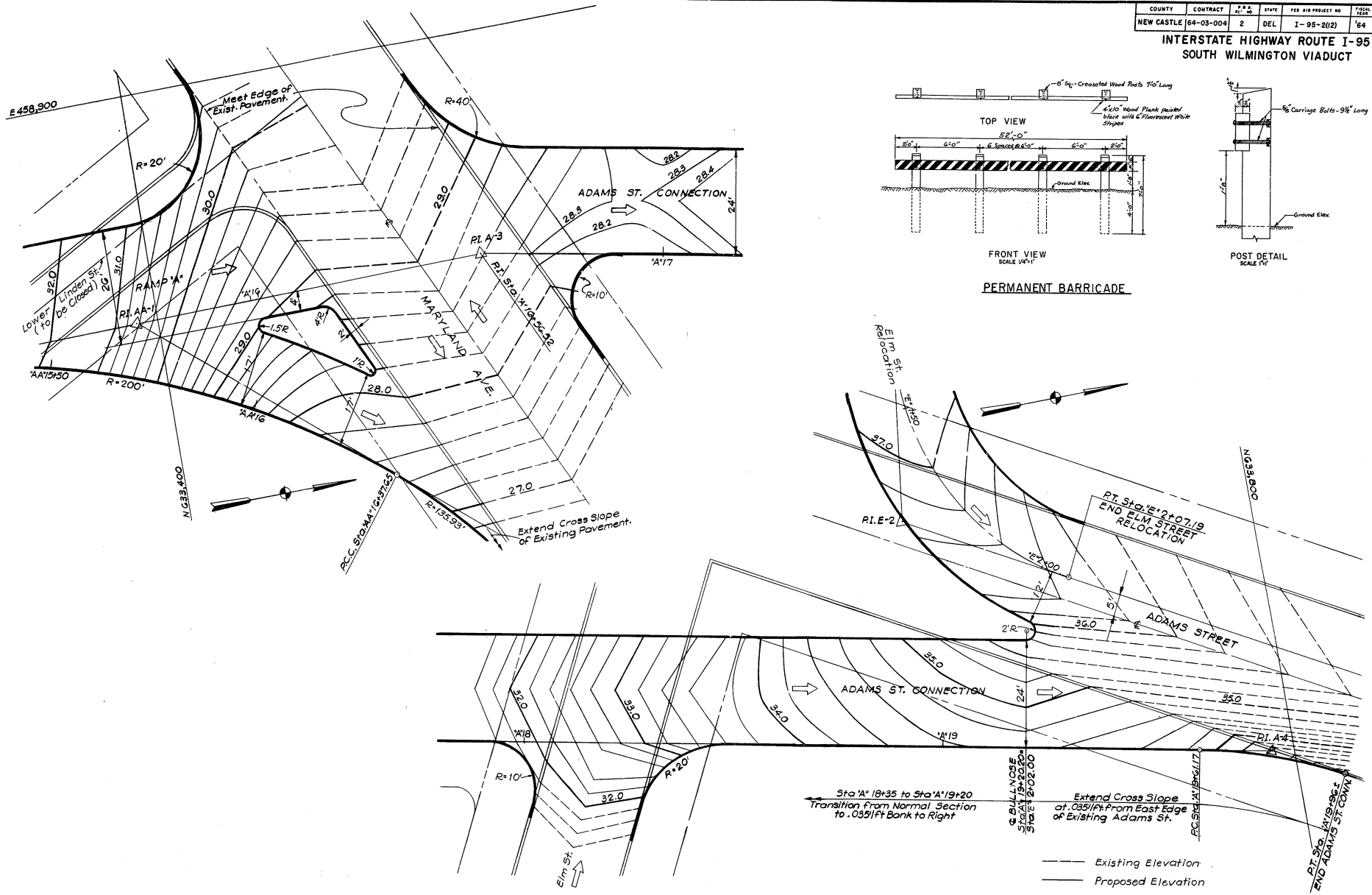
SCALE: 1 IN. = 100 FT.

As Built Plans in Red - 1-9-67 MBC

COUNTY	CONTRACT	F.A.S. RTE. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	11	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PERMANENT BARRICADE

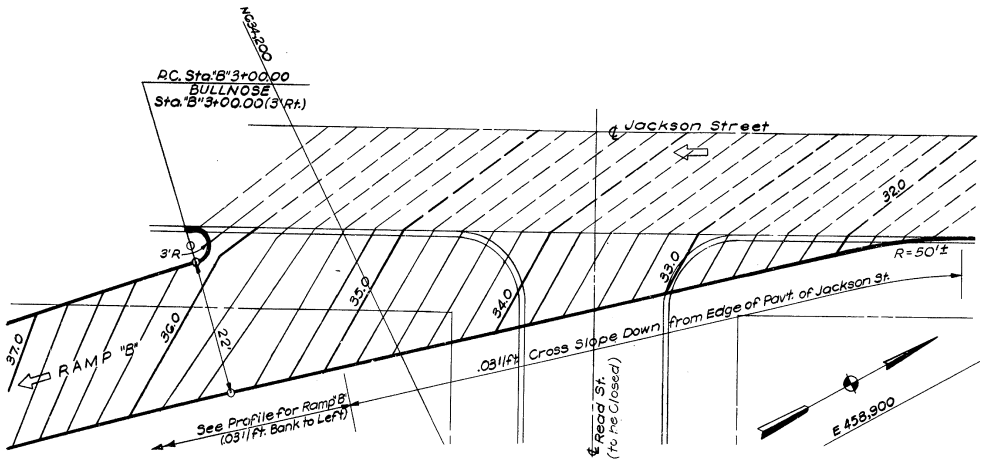


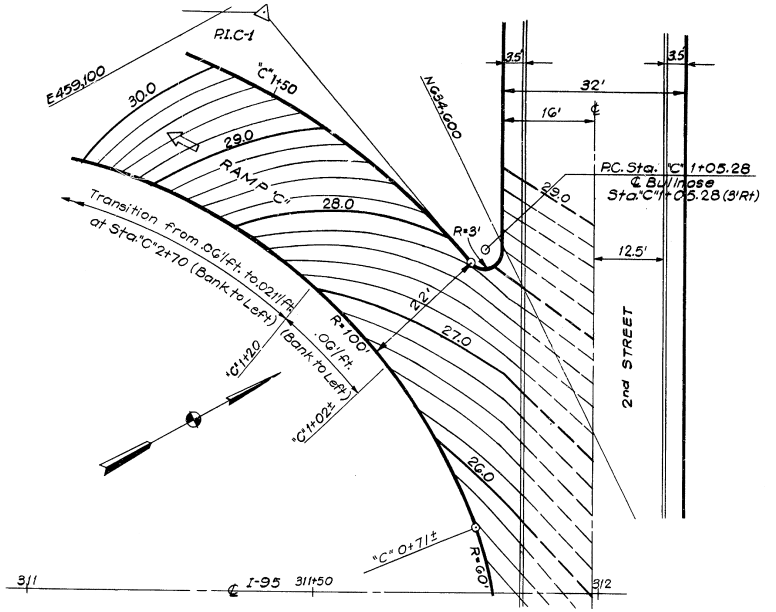
PAVEMENT GRADING DETAILS

SCALE: 1 IN. = 10 FT.

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	12	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





Note:
2nd St. to be Reconstructed to Existing Finished Grade Elevations. (See Profile Sh. No. 15) Existing Cross Slope to be Extended for Widening on Each Side.

——— Existing Elevations

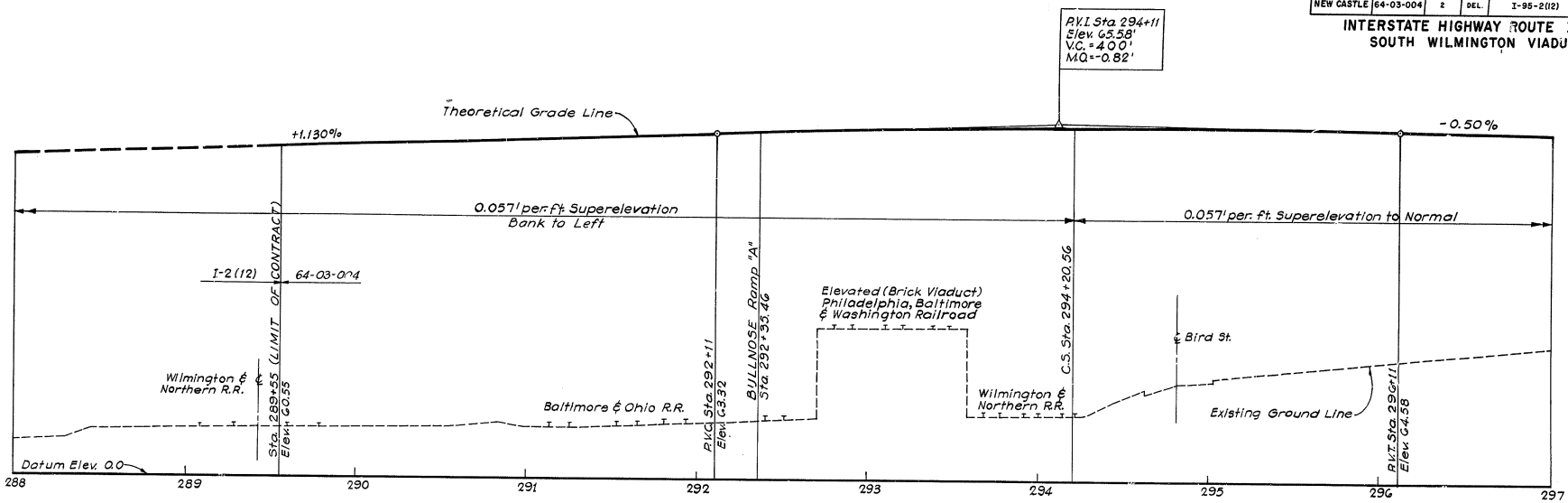
——— Proposed Elevations

PAVEMENT GRADING DETAILS

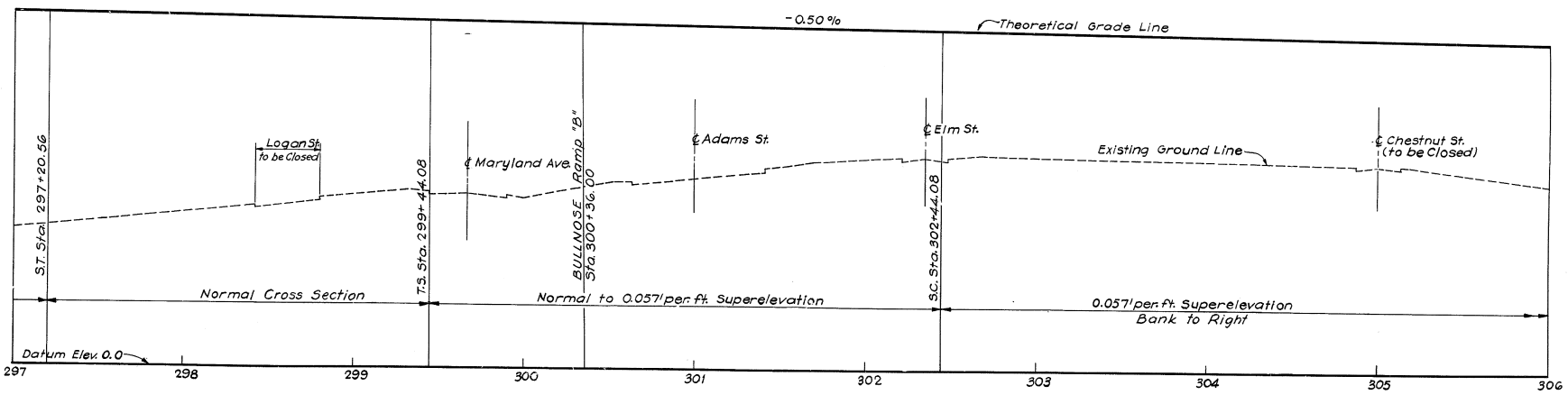
SCALE: 1 IN. = 10 FT.

COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	13	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



℄ STA. 289+55 TO STA. 297+00



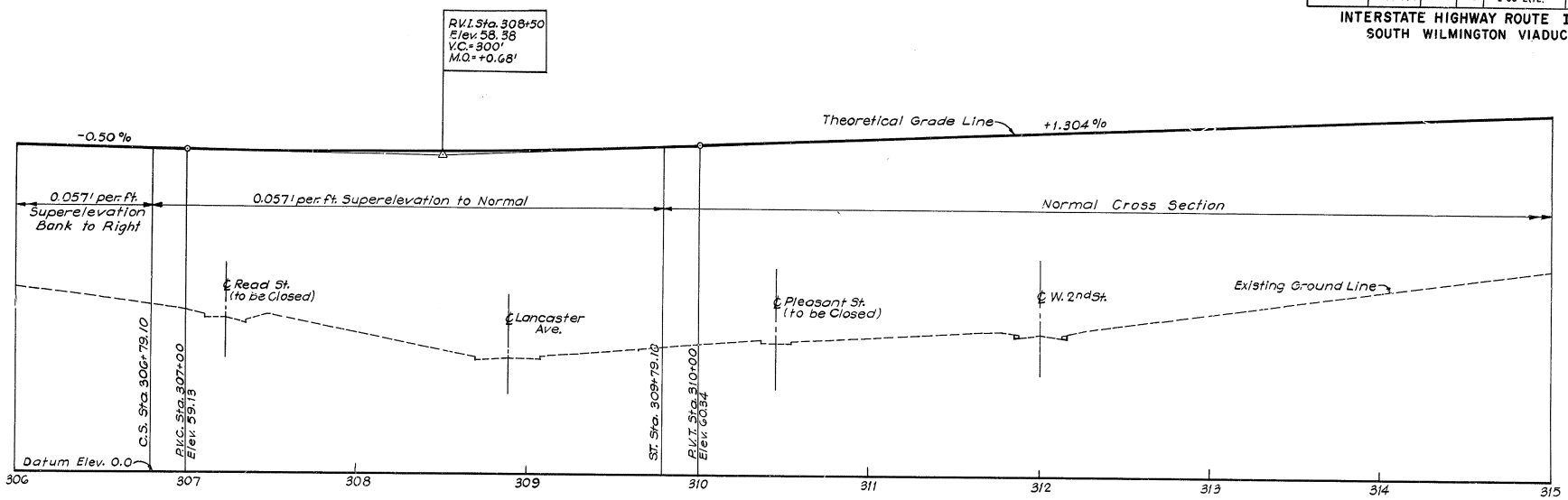
℄ STA. 297+00 TO STA. 306+00

PROFILES

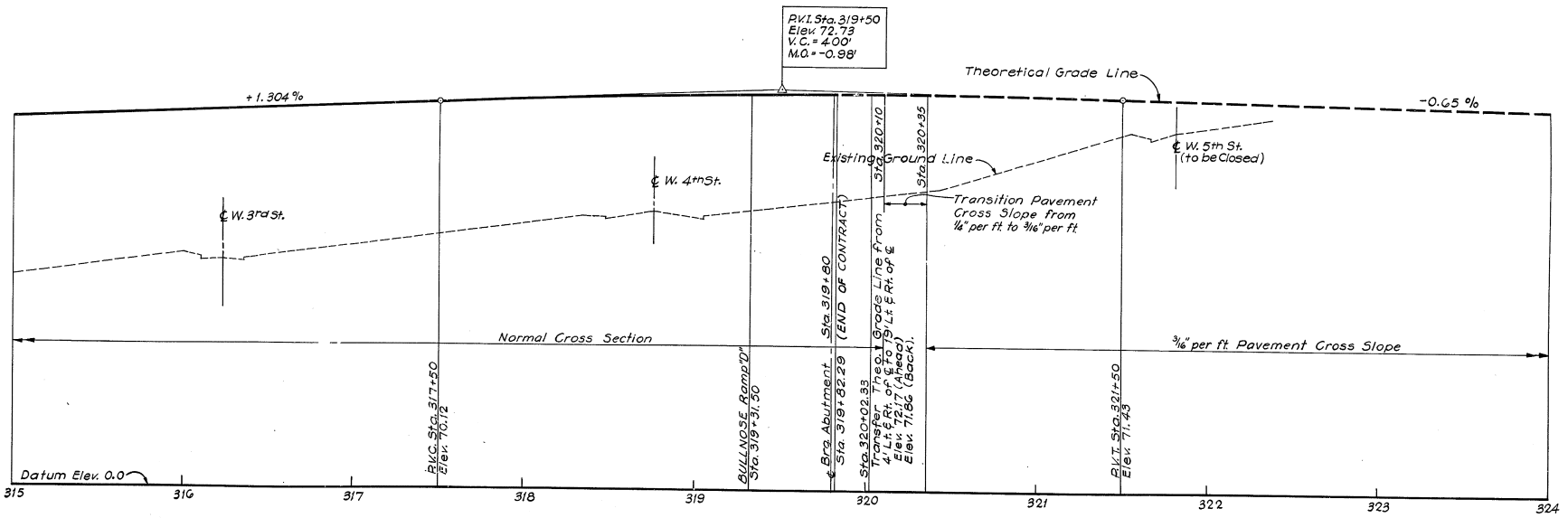
SCALES : HOR.: 1 IN. = 30 FT.
VERT: 1 IN. = 10 FT.

COUNTY	CONTRACT	P.R.D. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(112)	'64	14	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT



℄ STA. 306+00 TO STA. 315+00



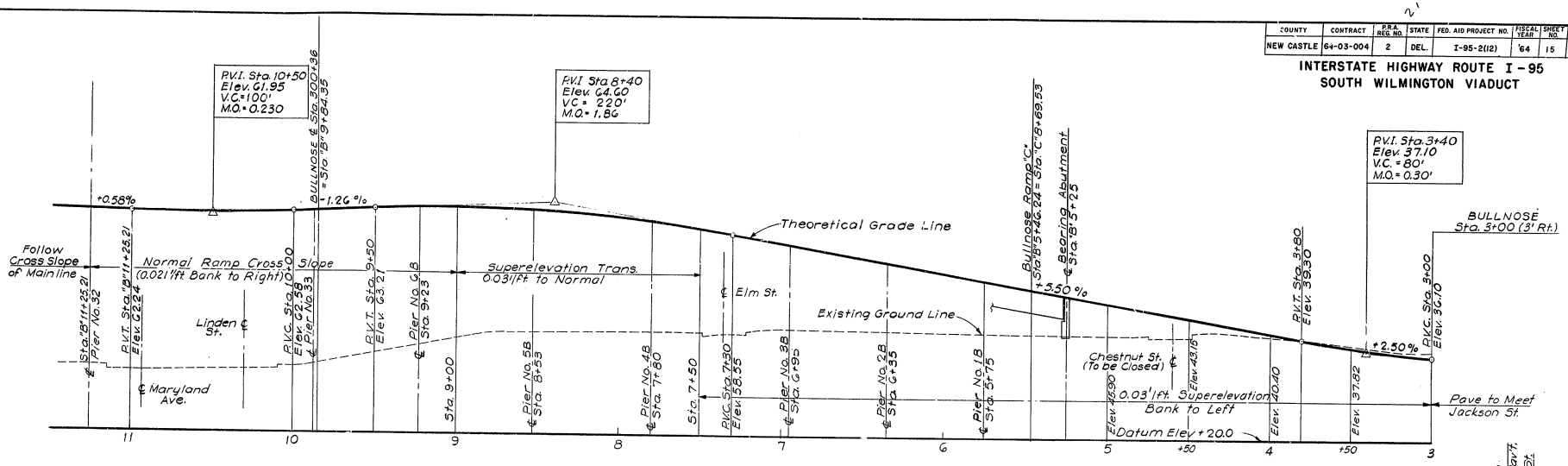
℄ STA. 315+00 TO STA. 320+02.33

SCALES : HOR.: 1 IN. = 30 FT.
VERT: 1 IN.= 10 FT.

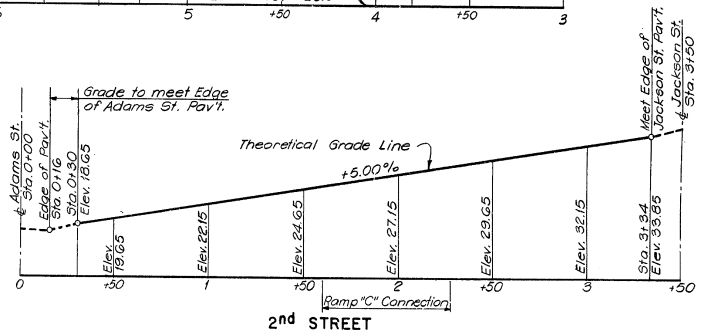
PROFILES

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	15	215

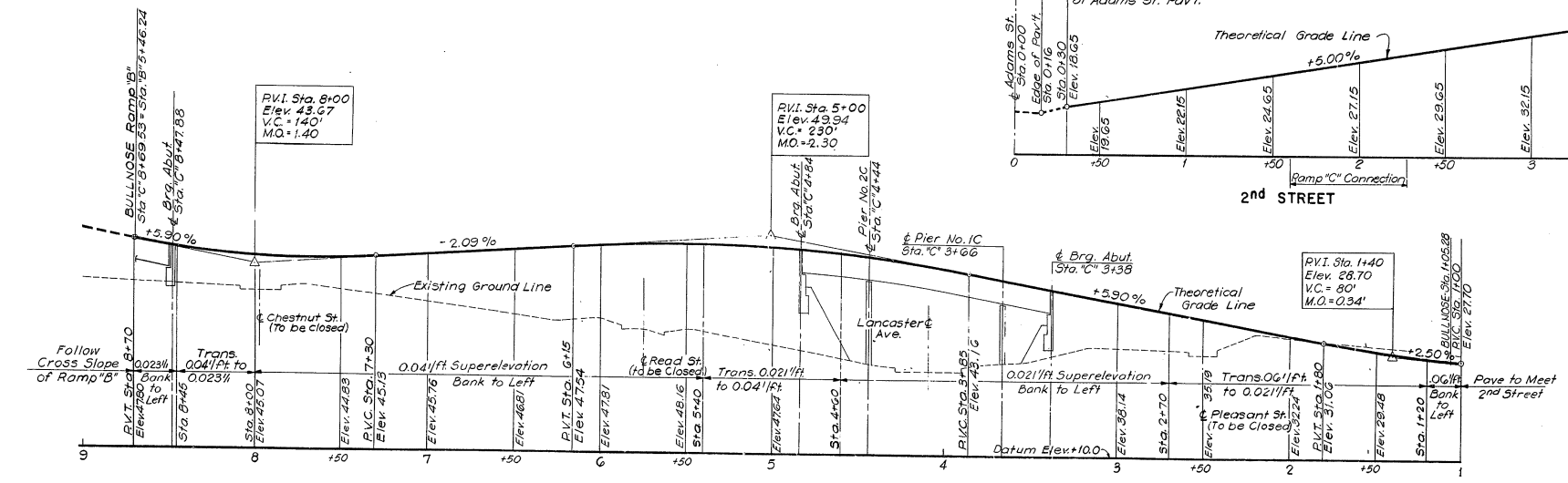
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



RAMP "B"



2nd STREET



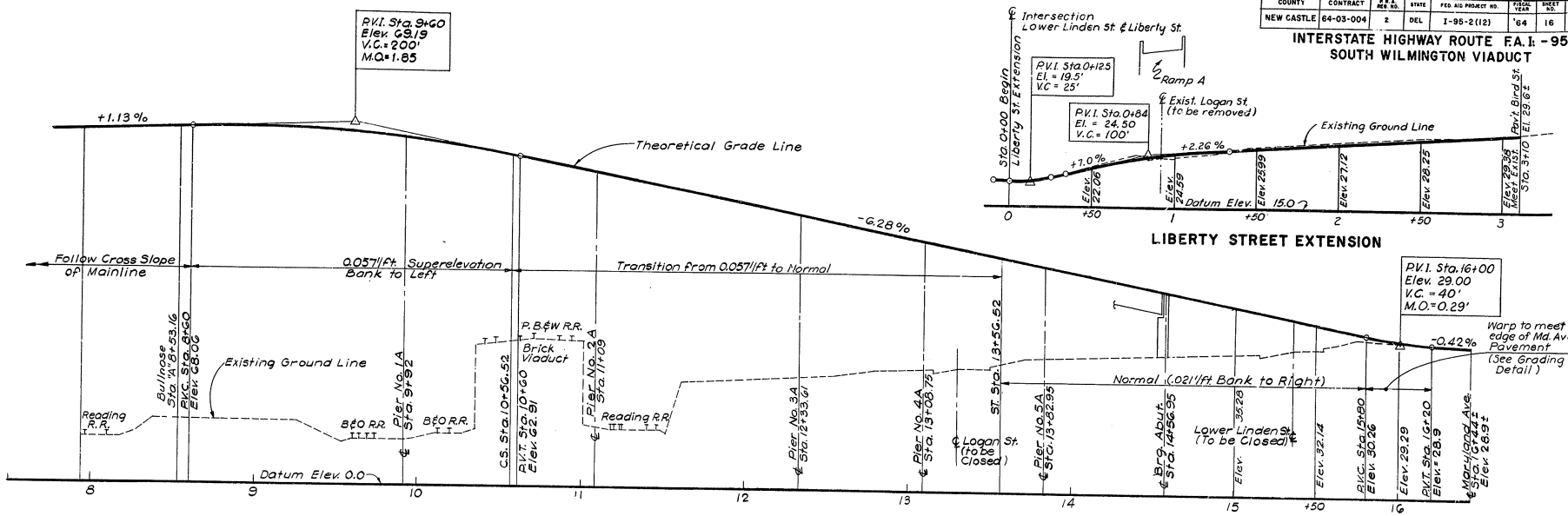
RAMP "C"

PROFILES

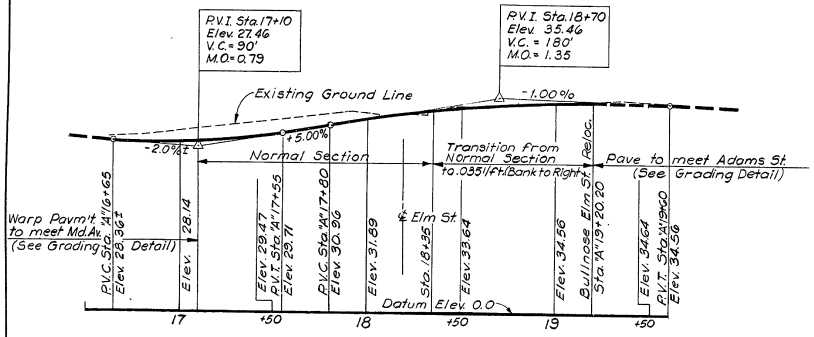
SCALES :- HOR: 1 IN. = 30 FT.
VERT: 1 IN. = 10 FT.

COUNTY	CONTRACT	R & R REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	16	215

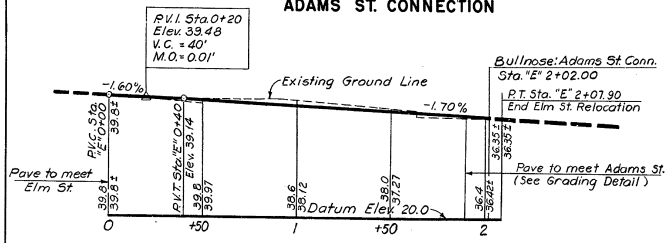
INTERSTATE HIGHWAY ROUTE F.A.I. - 95
SOUTH WILMINGTON VIADUCT



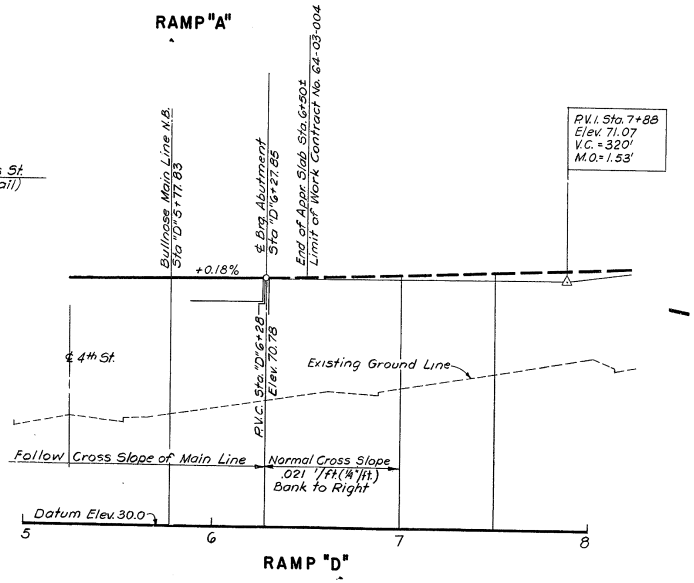
LIBERTY STREET EXTENSION



ADAMS ST. CONNECTION



ELM ST. RELOCATION



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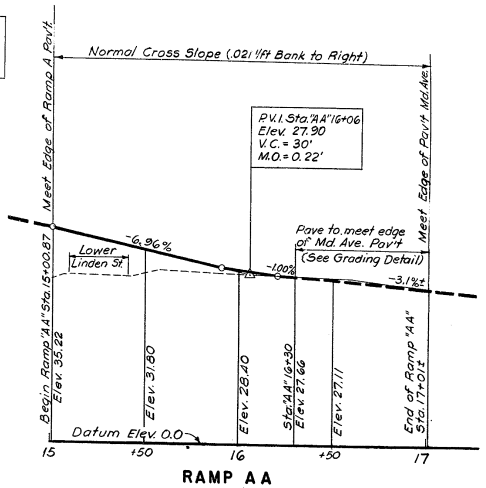
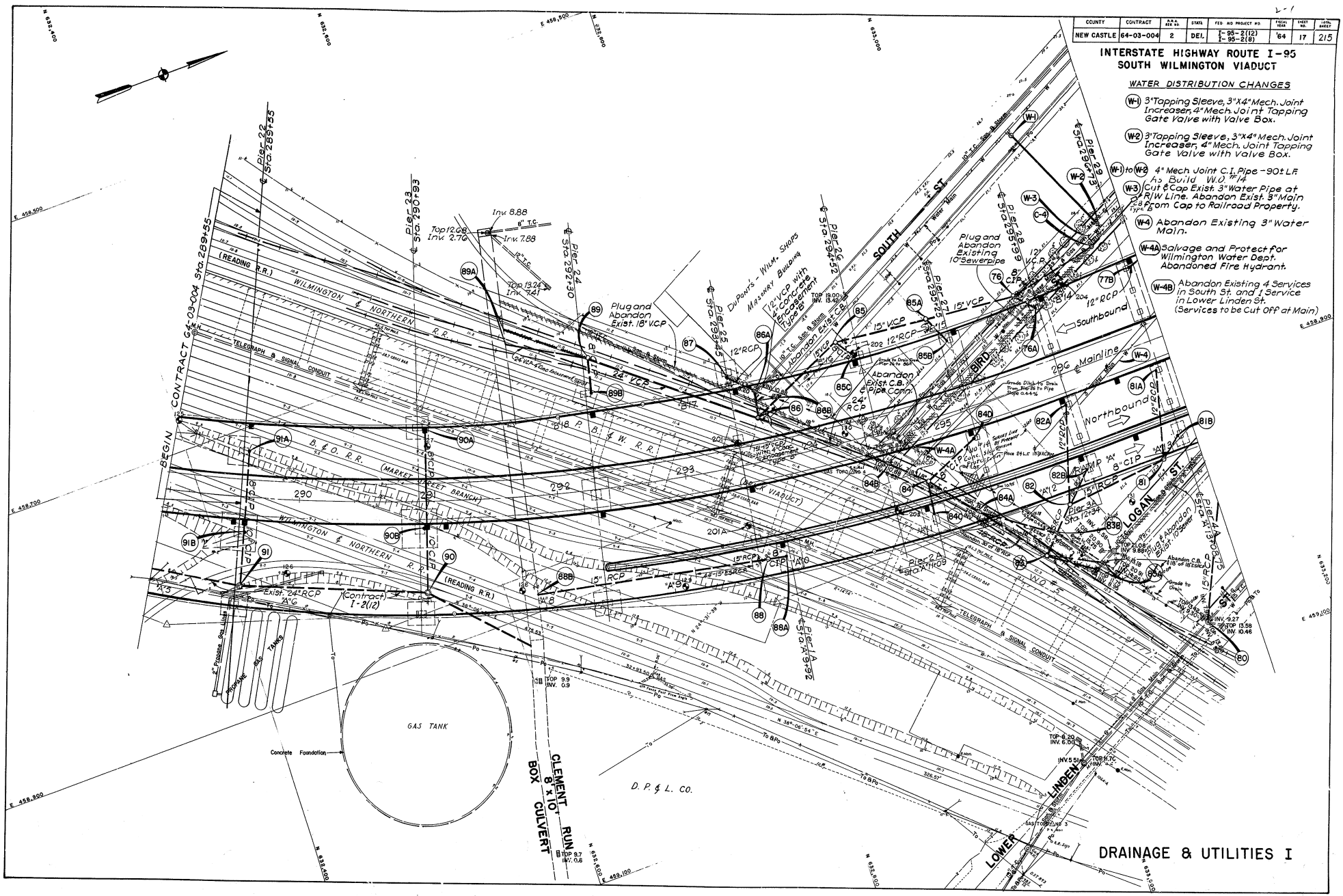


RAMP AA

PROFILES

SCALES:- HOR: 1 IN. = 30 FT.
VERT: 1 IN. = 10 FT.

12

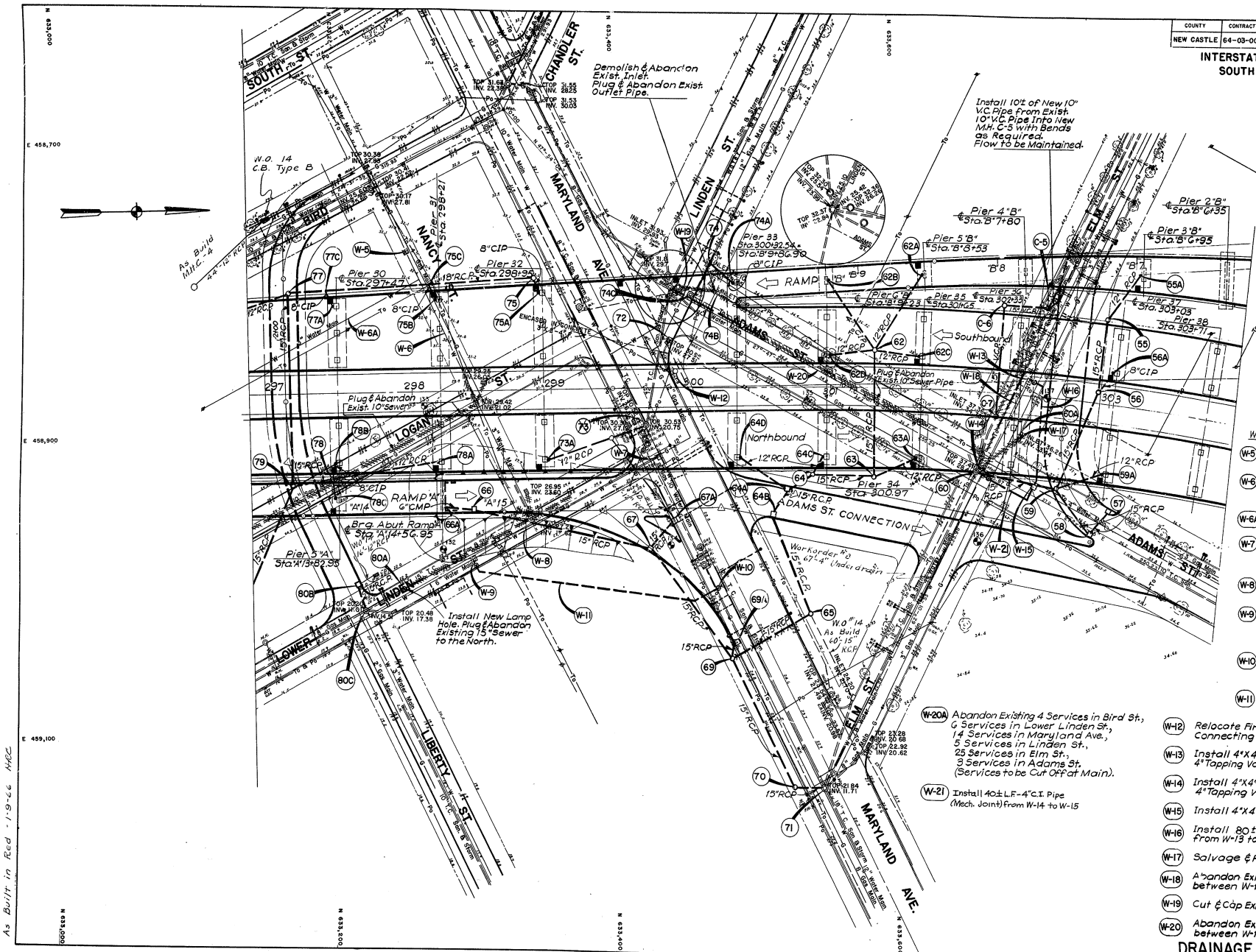


COUNTY	CONTRACT	R.R.A. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEET
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	17	215

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	18	215

2-1

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

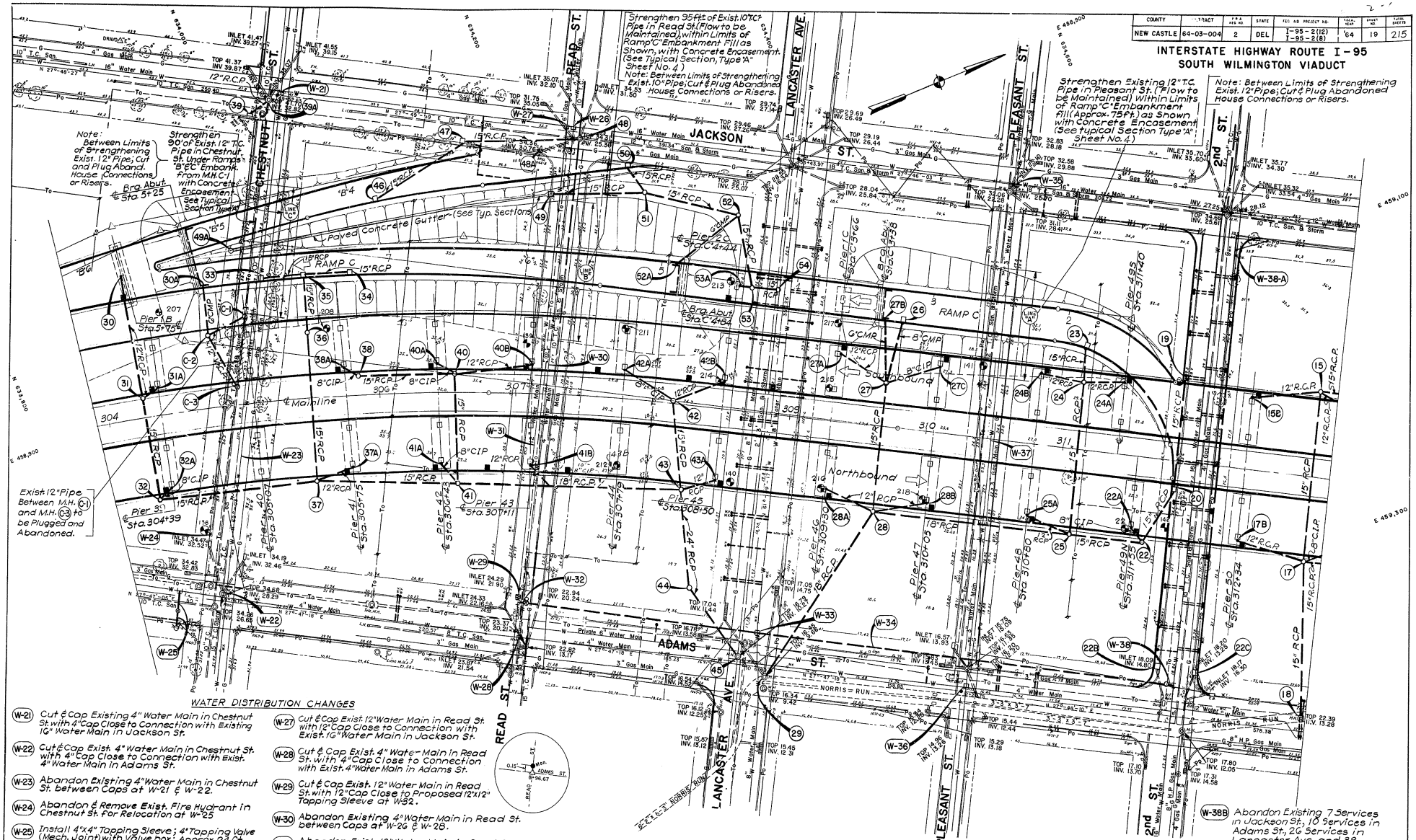


WATER DISTRIBUTION CHANGES

- (W-5) Cut & Cap Existing 3" Water Main at R/W Line.
- (W-6) Abandon Exist. 3" Water Main in Nancy St. from Cap at W-5 to Exist 6" Water Main in Lower Linden St.
- (W-6A) Abandon Exist. 3" Water Main.
- (W-7) Cut & Cap Exist. 6" Water Main in Lower Linden St. Close to Connection with Exist. 10" Water Main in Maryland Ave.
- (W-8) Abandon Exist. 6" Water Main in Lower Linden St. beteen W-7 & W-9.
- (W-9) Install 6"X6" Tapping Sleeve (with 6" Cap); 6" Tapping Valve (Mech. Joint) with Valve Box; 6" to 8" Increaser Fitting (Mech. Joint).
- (W-10) Install 12"X8" Tapping Sleeve; 8" Tapping Valve (Mech. Joint) with Valve Box.
- (W-11) Install 8" C.I. Pipe (Mech. Joint) from W-9 to W-10, Approx. 180 L.F.
- (W-12) Relocate Fire Hydrant including 8'± L.F. of Connecting Pipe, Equivalent in Size to Exist. Pipe.
- (W-13) Install 4"X4" Tapping Sleeve (with 4" Cap); 4" Tapping Valve (Mech. Joint) with Valve Box.
- (W-14) Install 4"X4" Tapping Sleeve (with 4" Cap); 4" Tapping Valve with Valve Box.
- (W-15) Install 4"X4" Cross Fitting with 4" Cap.
- (W-16) Install 80± L.F.-4" C.I. Pipe (Mech. Joint) from W-13 to W-15
- (W-17) Salvage & Protect Abandoned Fire Hydrant
- (W-18) Abandon Exist. 4" Water Main in Elm St. between W-13 & W-14.
- (W-19) Cut & Cap Exist. 4" Water Main in Adams St.
- (W-20) Abandon Exist. 4" Water Main in Adams St. between W-19 & W-15.
- (W-20A) Abandon Existing 4 Services in Bird St., 6 Services in Lower Linden St., 14 Services in Maryland Ave., 5 Services in Linden St., 25 Services in Elm St., 3 Services in Adams St. (Services to be Cut Off at Main).
- (W-21) Install 40± L.F.-4" C.I. Pipe (Mech. Joint) from W-14 to W-15

DRAINAGE & UTILITIES II

As Built in Red - 1-9-66 HRC



COUNTY	F.A.P. NO.	S.B.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	19	215

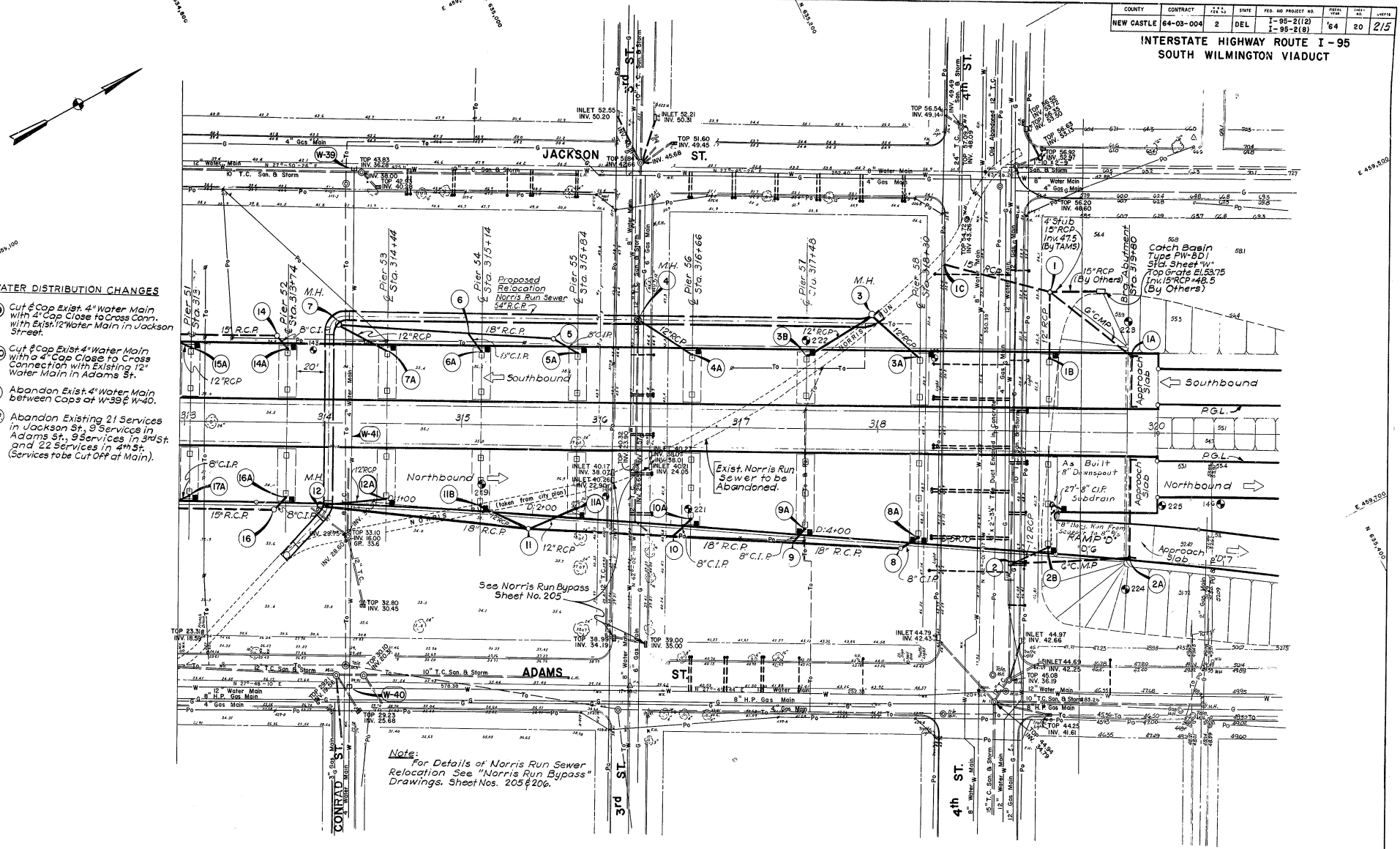
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

DRAINAGE & UTILITIES III

As Built Plans in Red 1967 MFC

COUNTY	CONTRACT	R.R. FED. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	20	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



WATER DISTRIBUTION CHANGES

- (W-39) Cut & Cap Exist. 4" Water Main with 4" Cap Close to Cross Conn. with Exist. 12" Water Main in Jackson Street.
- (W-40) Cut & Cap Exist. 4" Water Main with a 4" Cap Close to Cross Connection with Existing 12" Water Main in Adams St.
- (W-41) Abandon Exist. 4" Water Main between Caps at W-39 & W-40.
- (W-42) Abandon Existing 21 Services in Jackson St. & Services in Adams St., 9 Services in 3rd St. and 22 Services in 4th St. (Services to be Cut Off at Main).

DRAINAGE & UTILITIES IV

As Built Plans in Red - HRS 1-9-67

COUNTY	CONTRACT	P.R.J. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	21	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
81A	296+79	22'Rt.			22.3							12"RCP Conn. from 8" Downspout at Pier 29-N
						81A-81	12"	RCP	58.10 GG	22.3	20.0	* (See Note on Drainage Schedule II)
81B	"A"13+09	11'Lt.							18.60			8"CIP Conn. From 8" Downspout at Pier 4-A
						81B8	8"	CIP	18'	21.3	20.0	
81	296+55	83'Rt.	M.H.	22.8	11.0							Standard MH - See Std. Sheet "MH"
						81-82	15"	RCP	76'	16.0	14.0	
82	295+78	91'Rt.	M.H.	21.2	11.0				427'			Standard MH - See Std. Sheet "MH"
						82A-82	12"	RCP	70'	20.3	18.3	* (See Note on Drainage Schedule II)
82-A	295+99	22'Rt.			20.3				24.6			12" RCP Conn. from 8" Downspout at Pier 28-N
						82B-82	12"	RCP	28'	19.8	18.3	* (See Note on Drainage Schedule II)
82B	"A"12+34	11'Lt.			19.8	82B8		RCP	8.5'			12" RCP Conn. from 8" Downspout at Pier 3-A
						82-83	15"	RCP	36'	11.0	8.75	
~~83~~	~~295+80~~	~~12'Rt.~~	~~M.H.~~	~~12.6~~	~~8.50~~	16-1	18"	RCP	14.0'	8.85	8.50	~~Standard MH - See Std. Sheet "MH"~~ Eliminate
	~~295+80~~			~~12.6~~		83A-83	18"	RCP	36'			
83A	295+82	42'Rt.	C.B.	14.0	8.85	83 B			60.0'			~~Catch Basin Type 8 - See Std. Sheet "M"~~ Abandon
						83B-84	18"	RCP	38'	8.50	7.86	
84A	295+11	74'Rt.	Exist. C.B.	11.48	7.86							Exist. C.B. to be Retained
						84-84	18"	RCP	36' 40'	7.86	7.34	
84	294+82	42'Rt.	M.H.	12.0	7.30							Standard M.H. See Std. Sheet "MH"
						84-84	8"	CIP	48'	8.6	8.1	
84C	"A"11+09	15'Lt.			8.6				41.7			8"CIP Conn. From 8" Downspout at Pier 2A
						84B-84	8"	CIP	41.8'	17.0	8.3	Provide 2-8" Bends as Required
84D	295+25	22'Rt.			17.0				36'			8"CIP Conn. From 8" Downspout at Pier 27-N
						84-84	18"	RCP	30'	7.30	6.90	
84B	294+55	23'Rt.	Exist. C.B.	10.88	6.40							Exist. C.B. to be Retained
						84B-86	24"	RCP	100'	6.40	5.80	
86	293+63	31'Lt.	M.H.	11.50	5.77							Type "A" M.H. - See Std. Sheet "MH"
C-4	296+58	79'Lt.	M.H.	27.5	18.5							City of Wilmington Std. M.H.
						C4-76	12"	VCP	54.33 GG	18.5	16.5	
76	295+83	65'Lt.	M.H.	25.5	16.0				28.5'			City of Wilmington Std. M.H.
						76A-76	8"	CIP	18'	23.3	22.3	
76A	295+99	52'Lt.			23.3				47			8"CIP Conn. From 8" Downspout at Pier 28-S
						76-85A	15"	VCP	GG	16.0	14.0	
85A	295+11	70'Lt.	M.H.	23.0	13.0				141'			City of Wilmington Std. M.H.
						85B-85A	12"	RCP	22'	19.0	18.5	* (See Note on Drainage Schedule II)
85B	295+25	50'Lt.			19.0				7.8			12" RCP Conn. From 8" Downspout at Pier 27-S
						85A-85	15"	VCP	GG	13.0	10.75	
85	294+82	72'Lt.	M.H.	19.0	10.0				14			City of Wilmington Std. M.H.
						85C-85	8"	CIP	7.82	17.3	16.50	
85C	294+52	59'Lt.			17.3	85-86	15"	VCP	74.5' 78'	10.0	6.52	8"CIP Conn. From 8" Downspout at Pier 26S
												Install 63 ft. of 15" VCP From Struct. 85, the Remaining 15' Into Struct. 86 Install 15" VCP with 4" Conc. Encasement Under Relocated R.R. Track. See Profile Sheet & Sheet Showing Typical Encasement Detail. (Type "B") Dem. & Aban. Exist. C.B. Plug & Aban. Exist. Connecting Pipes.
86B	293+65	44'Lt.	Exist. C.B.									
86A	293+66	51'Lt.	Exist. C.B.	10.34	6.77							Exist. C.B. to be Retained
						86A-86	12"	VCP	14 15'	7.05	6.77	12" VCP Encased with 4" Concrete under Relocated R.R. Track (Type "B")
87	293+45	63'Lt.			8.0				17.6			12" RCP Conn. From 8" Downspout at Pier 25S
87B	292+34	70'Lt.			7.00	87B-A	12"	RCP	22'	8.0	7.35	* (See Note on Drainage Schedule II)
						87B8	8"	CIP	18.5 8'	7.00	6.2	8"CIP Conn. From 8" Downspout at Pier 24S
89	292+30	95'Lt.	C.B.	10.5	4.92							Type "B" C.B. with Paved Invert and No Silt Basin. - See Std. Sheet "M"
	67	110'Lt.				86-89	24"	VCP	135'	5.77	4.92	
89A	291+66	122'Lt.	Exist. Box Culv.		2.40				68'			Exist. Element Run 4.5'X10' Box Culv. Inv. Approx. 2.40' - Set in Field
						89-89A	24"	VCP	GG	4.92	4.50	Provide Opening in Exist. Box Culv. For 24" Pipe. Match Inside Tops - 24" VCP Encased with 4" Concrete (Type B)
88A	"A"9+82	11'Lt.			6.3				15.1			8"CIP Conn. From 8" Downspout at Pier 1A
						88A-88	8"	CIP	7.82	6.3	6.0	
88	"A"9+74	11'Lt.	M.H.	10.2	5.5	88-888	15"	RCP	85.65	5.5	4.0	Standard M.H. - Std. Sheet "MH" Provide opening in Exist. Box Culv. for 15" Pipe
888	A7+94	10'Lt.	Exist. Box Culv.		1.24							Exist. Element Run 4.5'x10' Box Culvert (Inv. Approx. 1.24)
90A	290+97	54'Lt.			7.3							8"CIP Conn. From 8" Downspout at Pier 23S
						90A-908	8"	CIP	47.5 74'	7.3	5.8	
908	290+97	20'Rt.			5.7				4.8			10"CIP Conn. From 8" Downspout at Pier 23 Center
						908-90	10"	CIP	40'	5.7	4.52	
90	290+86	GG'Rt.	Exist. M.H.	9.3	3.35							Exist. M.H. (Contract 1-2(12))
91A	289+60	33'Lt.			7.1							8"CIP Conn. From 8" Downspout at Pier 22-S
						91A-91	8"	CIP	58.5 58'	7.1	5.9	
91B	289+60	25'Rt.			5.8				36			10"CIP Conn. From 8" Downspout at Pier 22 Center
						91B-91	10"	CIP	35'	5.8	4.74	Conn. to Exist. 10" CIP Stub in Exist. M.H.
91	289+60	64'Rt.	Exist. M.H.	9.5	3.57							Exist. M.H. (Contract 1-2(12))

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
83B	295+61	105'Lt.	C.B.	10.7	8.50	83B-84A	18"	ESCP	58'	8.75	8.60	Type PW C.B., Top Elev. is to gutter

DRAINAGE SCHEDULE I

As Built Plans in Red - 1-9-67. MRC

Revised 8-30-66 as per instructions of 8-29-66 and 8-30-66

Revised 8-8-66 as per instructions of 8-5-66

Revised 7-25-66 as per instructions of 7-22-66

As Built Plans in Red - 1-9-67 NRC

NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
33	C7+95	17'Lt.	C.B.	44.30	40.5							Type A-1 Catch Basin-Std. Sheet "Y"
						33-35	15"	RCP	24' (25.58)	40.5	40.0	
34	C7+30	18'Lt.	C.B.	44.41	40.5							Type A-1 Catch Basin-Std. Sheet "Y"
						34-35	15"	RCP	32'	40.5	40.0	
35	C7+67	17.5'Lt.	C.B.	44.05	33.5							Type A-1 Catch Basin Std. Sheet "Y"
						35-36	15"	RCP	38' (36.16)	35.5	34.4	
36	305+50	45'Lt.	M.H.	38.6	33.5							Standard M.H.-Std. Sheet "MH"
						36-37	15"	RCP	98'	33.5	30.5	
37	305+50	57'Rt.	M.H.	35.4	27.5							Standard M.H.-Std. Sheet "MH"
						32-37	15"	RCP	112'	32.0	30.3	
37A	305+75	49'Rt.			31.8							12"RCP Conn. from 8" Downspout at Pier 41-N
						37A-37	12"	RCP	26' (18)	31.8	31.0	* See Note Below
38A	305+75	19'Lt.			35.7							8"CIP Conn. from 8" Downspout at Pier 41-S
						38A-38	8"	CIP	10' (10.25)	35.7	35.3	
38	305+65	13'Lt.	M.H.	37.3	31.3							Standard M.H. - Std. Sheet "MH"
						38-40	15"	RCP	67' (6.6)	31.3	28.8	
40A	306+43	19'Lt.			30.7							8"CIP Conn. from 8" Downspout at Pier 42-S
						40A-40	8"	CIP	12'	30.7	29.2	
40	306+55	12'Lt.	M.H.	32.0	27.25							Standard M.H. - Std. Sheet "MH"
						40B-40	12"	RCP	56' (4.8)	30.0	29.1	* See Note Below
40B	307+11	9'Lt.			30.0							12"RCP Conn. from 8" Downspout at Pier 43-S
						40-41	15"	RCP	72'	27.25	25.0	
41	306+55	63'Rt.	M.H.	29.0	23.0							Standard M.H. - Std Sheet "MH"
						37-41	15"	RCP	100' (9.8)	27.5	25.0	
41A	306+43	49'Rt.			27.7							8"CIP Conn. from 8" Downspout at Pier 42-N
						41A-41	8"	CIP	18' (14.5)	27.7	27.0	
42A	307+79	19'Lt.			28.2							8"CIP Conn. from 8" Downspout at Pier 44-S
						42A-42	8"	CIP	40' (36)	28.2	21.0	with 2 Bends as Required.
42B	308+50	19'Lt.			21.8							12"RCP Conn. from 8" Downspout at Pier 45S
						42B-42	12"	RCP	38'	21.8	21.0	* See Note Below
42	308+14	2'Lt.	M.H.	25.0	19.5							Standard M.H. - Std. Sheet "MH"
						42-43	15"	RCP	56' (57.1)	19.5	18.0	
43	308+26	58'Rt.	M.H.	22.4	15.5							Standard M.H. - Std. Sheet "MH"
						41-48	18"	RCP	160' (166.18)	23.0	17.7	
41B	307+11	49'Rt.			24.7							Provide Wye Conn. to Run 41-43 from
						43A-43	12"	RCP	24' (22.5)	19.0	18.5	*(See Note Below) Pier 43-N (22'-12"RCP)
43A	308+50	49'Rt.			19.0							12"RCP Conn. from 8" Downspout at Pier 45N
						43-44	24"	RCP	64'	15.5	14.5	
44	308+40	124'Rt.	M.H.	19.0	13.5							Standard M.H. - Std. Sheet "MH"
						44-45	24"	RCP	56' (54.66)	13.5	12.4	Provide opening in Exist. M.H. for 24" Pipe
45	308+79	167'Rt.	Exist. M.H.	16.79	10.27							Exist. City M.H. on 2'x3' Comb Sewer in Lancaster St. & Adams St.
46	B3+80	19'Lt.	C.B.	38.7	34.0							Type A-1 Catch Basin-Std. Sheet "Y"
						46-47	15"	RCP	72' (7.5)	34.0	32.4	
47	B3+08	10'Rt.	C.B.	36.8	32.4							Type A-1 Catch Basin - Std. Sheet "Y"
						47-48	15"	RCP	82' (8.4)	32.4	30.5	Provide opening in Exist. M.H. for 15" Pipe
48	B2+22	4'Lt.	Exist. M.H.	34.31	25.36							Exist. City M.H. in Jackson St.
						48A-48	10"±	V.C.	28'	30.76		Plug & Abandon Exist. 10"± V.C. Pipe
48A	B2+53	8'Lt.	Exist. Inlet	34.36	30.76							Demolish & Abandon Exist. City Inlet
49A	C8+20	7'Rt.	Con. Gutter		45.0							Beg. of Conc. Gutter. See Typ. Sections.
						49A-49			240'	45.0	33.5	Limits of Conc. Gutter.
49	C5+83	40'Rt.	C.B.	33.5	28.8							Parkway C.B. Type P.W. - B.D.I. Std. Sh. "W"
						49-51	15"	RCP	66' (6.0)	28.8	27.25	
51	B1+83	52'Lt.	M.H.	32.2	26.0							Standard M.H.-Std. Sheet "MH"
						50-51	15"	RCP	20' (15.83)	28.0	27.5	
50	B1+83	29'Lt.	C.B.	31.7	28.0							Type "A-1" Catch Basin-Std. Sheet "Y"
						51-52	15"	RCP	66' (71.3)	26.0	24.5	
52	C4+48	35'Rt.	M.H.	28.4	22.0							Standard M.H. - Std. Sheet "M.H."
						52A-52	6"	CMP	54' (53.5)	39.0	25.0	Provide 2-6" Bends as Req'd
52A	C4+87				39.0							6" CMP Conn. from 6" Subdrain at
						52-53	15"	RCP	46' (43.8)	22.0	21.2	Ramp "C" So. Abutment
53	C4+24	10'Lt.	M.H.	25.4	21.0							Standard M.H. - See Std. Sheet "MH"
						53A-53	8"	CIP	8' (13)	22.2	21.8	
53A	C4+42	11'Lt.			22.2							8"CIP Conn. from 8" Downspout at Pier "2-C"
						53-54	15"	RCP	14' (16)	21.0	20.5	
54	C4+14	10'Lt.	M.H.	24.6	14.8							Constr. M.H. on Exist. 2'x3' Comb. Sewer Type "D" M.H. Std. Sheet "MH"
55A	B6+95	12'Lt.			38.5							12"RCP Conn. from 8" Downspout at Pier "3B"
						55A-55	12"	RCP	36' (32.1)	38.5	37.0	* See Note Below
55	302+93	57'Lt.	M.H.	39.8	35.0							Standard M.H. - Std. Sheet "MH"
						55-56	15"	RCP	45	35.0	33.9	
56	302+92	7'Lt.	M.H.	39.0	33.7							Standard M.H. - Std. Sheet "MH"
						56A-56	8"	CIP	15' (10)	37.3	37.0	
56A	303+03	22'Lt.			37.3							8"CIP Conn. from 8" Downspout at Pier 37-S
57	E2+02	12'Lt.	C.B.	36.15	32.8							Type A-1 Catch Basin-Std. Sheet "Y"
						57-58	15"	RCP	20' (20.1)	32.8	32.5	
58	E2+00	12'Rt.	C.B.	36.15	32.5							Type A-1 Catch Basin-Std. Sheet "Y"
						58-59	15"	RCP	36' (37.08)	32.5	32.0	
59	302+68	60'Rt.	M.H.	36.75	31.8							Standard M.H. - Std. Sheet "MH"
						59A-59	12"	RCP	32' (2.9)	33.7	34.1	* See Note Below
59A	303+03	47'Rt.			33.7							12"RCP Conn. from 8" Downspout at Pier 37-N
						56-59	15"	RCP	67' (66.9)	33.7	32.0	
60	302+07	53'Rt.	Exist. M.H.	37.41	28.41							Exist. City M.H. in Adams & Elm Sts.
						59-60	15"	RCP	55' (55.67)	31.8	30.7	
						Install 10" VCP Conn. to C-5 from Exist. 10" VCP						
C-5	302+50	59'Lt.	M.H.	38.8	30.15							City of Wilm. Type M.H. - Sewer Dept. Std.
						C-5 to C-6	15"	VCP	28' (6.8)	30.15	29.81	(Flow to be Maintained).
C-6	302+20	59'Lt.	M.H.	39.1	29.81							City of Wilm. Type M.H. - Sewer Dept. Std.
						C-6 to C-7	15"	VCP	40'	29.81	29.0	
C-7	302+19	16'Rt.	M.H.	37.6	29.0							City of Wilm. Type M.H.: Sewer Dept. Std.
60A	302+38	27'Rt.	Exist. C.B.	36.20	33.44							Demolish Exist. Catch Basin
						60A-60	10"±	VCP		33.44		Plug & Aban. Exist. 10" Drain Pipe - Approx. 36 L.F.

NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	SIZE	TYPE	L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
G2A	B8+53	8.5'Lt.			36.3							12"RCP Conn. from 8" Downspout at Pier 5-B
						G2A-G2	12"	RCP	60' (54)	36.3	32.5	* See Note Below
G2B	B9+23	8.5'Lt.			34.2							4"CIP Conn. from 4" Downspout at Pier G-B
						G2B-G2	4"	CIP	55'	34.2	32.9	
G2	301+31	25'Lt.	M.H.	36.5	32.0							Standard M.H. - Std. Sheet "MH"
						G2C-G2	12"	RCP	32' (27.6)	36.2	32.5	* See Note Below
G2C	301+65	22'Lt.			36.2							12"RCP Conn. from 8" Downspout at Pier 35S
						G2D-G2	12"	RCP	30'	33.1	32.5	* See Note Below
G2D	300+97	22'Lt.			33.1							12"RCP Conn. from 8" Downspout at Pier 34S
						G2-G3	15"	RCP	80'	32.0	30.0	
G3	301+31	59'Rt.	M.H.	33.5	28.0							Standard M.H. - Std. Sheet "MH"
						G3A-G3	12"	RCP	50' (2.8)	34.3	31.3	* See Note Below
G3A	301+65	47'Rt.			34.3							12"RCP Conn. from 8" Downspout at Pier 35-N
						G3-G4	15"	RCP	40' (41.75)	28.0	26.0	
G4	300+83	66'Rt.	M.H.	30.4	25.7							Standard M.H. - Std. Sheet "MH"
						G4C-G4	8"	CIP	15' (13)	31.2	28.0	Provide Bends as Required
G4C	300+97	47'Rt.			31.2							8"CIP Conn. from 8" Downspout at Pier 34N
						G4-G4A	15"	RCP	16' (18)	25.7	25.0	
G4D	300+33	47'Rt.			28.3							12"RCP Conn. from 8" Downspout at Pier 33N
						G4D-G4A	12"	RCP	38' (10.16)	28.3	25.5	* See Note Below
G4A	A17+00	24'Lt.	C.B.	28.10	25.0							Type A-1 Catch Basin-Std. Sheet "Y"
						G4A-G4B	15"	RCP	16' (22.25)	25.0	24.5	
G4B	A16+93	0.0	C.B.	28.10	24.0							Type A-1 Catch Basin-Std. Sheet "Y"
						G4B-G5	15"	RCP	68' (66.5)	24.0	23.0	
G5	A17+32	58'Rt.	M.H.	27.0	22.0							Standard M.H. - Std. Sheet "MH"
G6A	A14+60	2'Lt.			30.5							6"CMP Conn. from 6" Subdrain at
						G6A-G6	6"	CMP	18' (20.0)	30.5	30.0	Ramp "A" Abutment.
G6	A14+80	0.0	C.B.	36.5	29.2							Type A-1 Catch Basin-Std. Sheet "Y"
						G6-G7	15"	RCP	124' (114.4)	29.2	23.50	
						G7-G9	15"	RCP	90'	23.50	21.4	
G7A	A16+22	8'Rt.	C.B.	28.6	24.0							Type A-1 Catch Basin-Std. Sheet "Y"
						G7A-G7	15"	RCP	22' (23)	24.0	23.5	
G7	AA16+10	0.0	C.B.	28.0	23.5							Type A-1 Catch Basin - Std. Sheet "Y"
G9A	AA16+98	0.0	Inlet	25.5	21.6							Type A-1 Catch Basin-Std. Sheet "Y"
						G9A-G9	15"	RCP	10' (7)	21.6	21.4	
G9	AA17+06±	7'Rt.	M.H.	26.2	21.0							Standard M.H. - Std. Sheet "MH"
						G5-G9	15"	RCP	60'	22.0	21.4	
70	South Side Maryland Ave.		M.H.	22.8	16.5							Standard M.H. - Std. Sheet "MH"
						G9-70	15"	RCP	34'	21.0	18.0	
71	Maryland Ave.		Exist. M.H.	21.84	11.71							Exist. City M.H. in Maryland Ave.
						70-71	15"	RCP	18'	16.5	16.0	Provide opening in Exist. M.H. for 15" R.C. Pipe
							12"±	RCP	8'±			Demolish Exist. Inlet. Install New C.B. Type A-1
72	299+86	32'Lt.	C.B.	31.0	27.51							Std. Sh. "Y" at Reloc. Curb with Pipe Conn. of Equiv. Size
74A	300+30	70'Lt.			31.0							8"CIP Conn. from 8" Downspout at Pier 33-S
						74A-74	8"	CIP	20'	31.0	29.6	Demolish Exist. Inlet. Install new C.B. Type A-1 (Std. Sh. Y) at
74	300+14	83'Lt.	C.B.	32.10	29.45							Same location. Provide Conn. for Exist. Pipe Outlet
74B	300+19	63'Lt.	Exist. Inlet	31.99	29.99							Aban. Exist. Inlet on Adams St. - Plug and
73A	298+95	47'Rt.			27.5							Abandon Exist. Outlet Pipe.
												12"RCP Conn. from 8" Downspout at Pier 32-N
						73A-73	12"	RCP	72'	27.5	26.0	Connect to Exist. MH *(See Note Below)
73	299+67	25'Rt.	Exist. M.H.	30.53	20.75							Exist. City M.H. in Maryland Ave.
75A	298+95	65'Lt.			29.0							8"CIP Conn. from 8" Downspout at Pier 32-S
						75A-75	8"	CIP	10'	29.0	28.5	
75	298+88	76'Lt.	M.H.	33.2	27.7							Standard M.H. - Std. Sheet "MH"
						75-77	18"	RCP	174' (173.3)	27.7	24.2	
75B	298+21	62'Lt.			28.5							8"CIP Conn. from 8" Downspout at Pier 31-S
						75B-75	8"	CIP	12' (5)	28.5		Provide outlet Wye Conn. in Run 75-77
77A	297+47	58'Lt.			27.0							8"CIP Conn. from 8" Downspout at Pier 30-S
						77A-77C	8"	CIP	12'	27.0		Provide outlet Wye Conn. in Run 75-77
77B	296+73	55'Lt.			25.7							12"RCP Conn. from 8" Downspout at Pier 29-S
						77B-77	12"	RCP	30'	25.7	25.0	*(See Note Below)
77	297+12	68'Lt.	M.H.	27.7	24.0							Standard M.H. - Std. Sheet "MH"
						77-79	15"	RCP	126'	24.0	19.0	
79	297+13	62'Rt.	M.H.	24.6	16.0							Standard M.H. - Std. Sheet "MH"
						78-79	15"	RCP	26'	21.0	20.0	
78A	298+21	47'Rt.			26.0							12"RCP Conn. from 8" Downspout at Pier 31-N
						78A-78	12"	RCP	76' (72)	26.0	23.0	*(See Note Below)
78	297+41	57'Rt.	M.H.	25.3	21.0							Standard M.H. - Std. Sheet "MH"
						78B-78	8"	CIP	10' (5.83)	24.0	23.0	
78B	297+47	47'Rt.			24.0							8"CIP Conn. from 8" Downspout at Pier 30-N
						78C-78	8"	CIP	10' (8)	23.5	23.0	
78C	A13+83	11'Lt.			23.5							8"CIP Conn. from 8" Downspout at Pier 5-A
						79-80	15"	RCP	154' (155.7)	16.0	10.0	Provide opening in Exist. M.H. (80) for 15" RCP
80	Lower Linden St.		Exist. M.H.	13.8	5.9							Exist. City M.H. in Lower Linden St.
80A	297+90	133'Rt.	L.H.	21.4	12.5							Install Lamphole in Lower Linden St. on Exist. 15" VCP at Exist. Inv. Elev. 12.5± Construct Lamphole in Accordance with City of Wilmington Std. Plug & Abandon Exist. 15" VCP to the North in Lower Linden St.
80B	Liberty St. Ext. 0+22	10'Rt.	C.B.	20.0	16.0							Type A-1 Catch Basin - Std. Sheet "Y"
						80B-80C	15"	RCP	15' (10')	16.0	15.0	Provide Opening in Exist. M.H. for 15" RCP
80C	0+03	5'Rt.	Exist. M.H.	20.2	11.01±							Exist. City M.H. in Lower Linden St.
74C	300+00	62'Lt.	Exist. M.H.	32.5±								Adjust Manhole Top

* Where 8" W.I. Pipe connects with 12" R.C. Pipe, a Concrete Junction Box is to be provided. No separate payment is to be made for this Junction Box. It is to be included with the cost of the Concrete Pipe. See this sheet for Junction Box Detail.

COUNTY	CONTRACT	F.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	22	215

2-1

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

WALLS SHALL BE CONSTRUCTED OF BRICK, CONCRETE OR CONCRETE BLOCK.

PLAN

SECTION B-B

SECTION A-A

JUNCTION BOX DETAIL

DRAINAGE SCHEDULE II

As Built Plans in Red - 1-9-67 HRC

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	23	215

2-1

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	PIPE SIZE	PIPE TYPE	PIPE L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
1A	319+82	53'Lt.			63.7	1A-1	6"	CMP	83 ~~76'~~	63.7	48.3	6"CMP Conn. from 6" Subdrain W/ North Abut. N.B. Lane with Bends as Reqd.
1	319+23	94'Lt.	M.H.	53.3	47.5							Standard M.H.-See Std. Sheet "MH".
1B	319+23	50'Lt.			48.5	1B-1	12"	RCP	42'	49.0	48.1	12"R.C.P. conn. from 8" Downspout Pier 59-S (Install 4' Stub-15"RCP Inv. 47.5 at M.H.①)
2A	319+82	84'Rt.			62.7	2A-2	6"	CMP	94.25 ~~90'~~	62.7	43.0	*See Note on Drainage Schedule II; 6"CMP Conn. from 6" Subdrain at M No. Abut. N.B. Lane with Bends as Reqd.
2	318+97	90'Rt.	M.H.	46.8	38.4							City of Wilmington - Std. Type M.H.
2B	319+23	78'Rt.			46.0	2B-2	12"	RCP	2.8 ~~26'~~	46.0	44.0	*See Note on Drainage Schedule II; 12"R.C.P. conn. from 8" Downspout Pier 59-N
3A	318+30	50'Lt.			48.5	3A-3	12"	RCP	55.x ~~40'~~	48.5	47.5	12"R.C.P. conn. from 8" Downspout at Pier 58-S; *See Note on Drainage Schedule II
3	317+95	73'Lt.	M.H.	51.3±	37.4±							M.H. on Reloc. Norris Run 54" ∅ Sewer
3B	317+48	50'Lt.			47.0	3B-3	12"	RCP	47.7 ~~52'~~	47.0	46.20	12"R.C.P. conn. from 8" Downspout at Pier 57-S
4A	316+66	50'Lt.			42.0	4A-4	12"	RCP	43.5 ~~42'~~	42.0	40.0	12"R.C.P. conn. from 8" Downspout at Pier 56-S
4	316+26	72'Lt.	M.H.	45.8±	30.2±							M.H. in 3rd St. on Reloc. Norris Run 54" ∅ Sewer
5A	315+84	50'Lt.			36.5	5A-5	8"	CIP	18 ~~20'~~	36.5	34.8	8"CIP Conn. from 8" Downspout at Pier 55-S
5	315+66	58'Lt.	M.H.	37.0	34.0	5-7	18"	RCP	151.5 ~~152'~~	34.0	31.0	Standard M.H.-See Std. Sheet "MH"
7	314+11	66'Lt.	M.H.	35.7	21.8±							M.H. on Reloc. Norris Run 54" ∅ Sewer
7A	314+44	50'Lt.			33.3	7A-7	12"	RCP	32 ~~38'~~	33.3	32.3	*See Note on Drainage Schedule II; 12"R.C.P. Conn. from 8" Downspout at Pier 53-S
6A	315+14	50'Lt.			34.3	6A-6	8"	CIP	8.17 ~~14'~~	34.3	33.3	8"CIP Conn. from 8" Downspout at Pier 54-S
6	315+05	61'Lt.			33.5							Provide "Y" Conn. on 18"RCP for 8"CIP from Pier 54-S.
8A	318+30	72'Rt.			45.7	8A-8	8"	CIP	6.0 ~~12'~~	45.7	44.7	8"CIP Conn. from 8" Downspout at Pier 58-N
8	318+20	81'Rt.	M.H.	47.0	42.0	8-11	18"	RCP	272.2 ~~268'~~	42.0	31.0	Standard M.H.-See Std. Sheet "MH"
11	315+48	70'Rt.	M.H.	35.8	30.5							Standard M.H.-See Std. Sheet "MH"
9A	317+48	68'Rt.			41.8	9A-9	8"	CIP	10.5 ~~15'~~	41.8	39.1	8"CIP Conn. from 8" Downspout at Pier 57-N
9	317+37	78'Rt.			38.6							Provide "Y" Conn. on 18"RCP for 8"CIP from Pier 57-N.
10A	316+66	62'Rt.			39.2	10A-10	8"	CIP	8.67 ~~18'~~	39.2	35.5	8"CIP Conn. from 8" Downspout at Pier 56-N
10	316+52	74'Rt.			35.5							Provide "Y" Conn. on 18"RCP for 8"CIP from Pier 56-N
11A	315+84	58'Rt.				11A-11	12"	RCP	36.4 ~~36'~~	35.3	32.3	12"R.C.P. conn. from 8" Downspout at Pier 55-N; *See Note on Drainage Schedule II
11B	315+14	56'Rt.				11B-11	12"	RCP	31.7 ~~36'~~	33.3	32.3	12"R.C.P. conn. from 8" Downspout at Pier 54-N; *See Note on Drainage Schedule II
12	313+99	56'Rt.	M.H.	34.7	16.4±	11-12	18"	RCP	150.34 ~~150'~~	30.5	28.5	M.H. on Reloc. Norris Run 54" ∅ Sewer
12A	314+44	52'Rt.				12A-12	12"	RCP	42.85 ~~45'~~	32.2	30.0	12"R.C.P. conn. from 8" Downspout at Pier 53-N; *See Note on Drainage Schedule II
1	319+23	94'Lt.	M.H.	53.3	47.5	1-1C	15"	RCP	77.0 ~~76'~~	47.5	45.0	Standard M.H.-See Std. Sheet "MH"
1C	318+47	112'Lt.	Exist. Norris Run Box Culv.		40.9±							Provide Opening in Exist. Norris Run Box Culvert for 15" RCP.
39	B4+57	63'Rt.	C.B.	40.7	37.0	39-39A	12"	RCP	14 ~~16'~~	37.0	36.5	Type "B" Catch Basin - Std. Sheet "M"
39A	B4+40	69'Rt.	Exist. M.H.	41.7	32.82							Provide Opening in Exist. M.H. for 12" R.C.P.

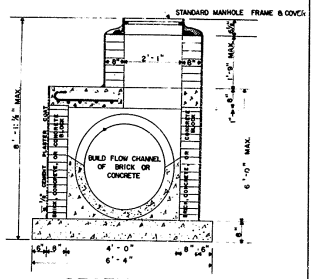
STRUCTURE NO.	STATION	OFFSET	TYPE	ELEV. TOP	ELEV. INV.	PIPE RUN	PIPE SIZE	PIPE TYPE	PIPE L	INVERT INLET	INVERT OUTLET	CONSTRUCTION NOTES
14A	313+74	49'Lt.	–	–	33.0	14A-14	8"	C.I.P.	9.5 ~~12'~~	33.0	32.5	8"C.I.P. conn. from 8" Downspout Pier #52-S
14	313+65	58'Lt.	M.H.	35.0	28.0	14-15	15"	R.C.P.	80'	28.0	25.5	Standard Manhole - See Std. Sh. "MH"
15	312+84	58'Lt.	M.H.	34.5	24.5	15-17	15"	R.C.P.	115 ~~114'~~	24.5	21.0	Standard Manhole - See Std. Sh. "MH"
15A	313+04	49'Lt.	–	–	30.5	15A-15	12"	R.C.P.	18.95 ~~22'~~	30.5	29.8	12"R.C.P. conn. from 8" Downspout Pier #51-S; *See Note on Drainage Schedule II
15B	312+34	49'Lt.	–	–	27.0	15B-15	12"	R.C.P.	42 ~~48'~~	27.0	26.0	12"R.C.P. conn. from 8" Downspout Pier #50-S; *See Note on Drainage Schedule II
16A	313+74	50'Rt.	–	–	32.3	16A-16	8"	C.I.P.	9.5 ~~12'~~	32.3	31.8	8"C.I.P. conn. from 8" Downspout Pier #52-N
16	313+65	59'Rt.	M.H.	33.8	26.0	16-17	15"	R.C.P.	78.8 ~~78'~~	26.0	23.0	Standard Manhole - See Std. Sh. "MH"
17	312+84	59'Rt.	M.H.	29.5	20.75							Standard Manhole - See Std. Sh. "MH"
17A	313+04	50'Rt.	–	–	28.8	17A-17	8"	C.I.P.	20.5 ~~20'~~	28.8	27.0	8"C.I.P. conn. from 8" Downspout Pier #51-N
17B	312+34	50'Rt.	–	–	23.0	17B-17	12"	R.C.P.	45.3 ~~48'~~	23.0	22.0	12"R.C.P. conn. from 8" Downspout Pier #50-N; *See Note on Drainage Schedule II
18	312+95	105'Rt.	(Exist. M.H.)	22.39	13.28	17-18	15"	R.C.P.	105.0 ~~100'~~	20.75	17.75	Exist. City M.H. on Norris Run Sewer in Adams St. Provide opening in Exist. Norris Run Box Culv. M.H. for 15" R.C.P.
19	311+85	57'Lt.	C.B.	28.3	23.0	19-20	15"	R.C.P.	74'	23.0	20.8	Type A-1 Catch Basin - Std. Sheet "Y"
20	311+85	20'Rt.	INLET	24.5	20.8	20-22	15"	R.C.P.	40.25 ~~40'~~	20.8	19.6	Type A-1 Catch Basin - Std. Sheet "Y"
22	311+64	58'Rt.	M.H.	24.0	19.6							Standard M.H. - Std. Sheet "MH"
22-A	311+65	49'Rt.	–	–	22.3	22A-22	8"	C.I.P.	6.0 ~~10'~~	22.3	22.0	8"C.I.P. conn. from 8" Downspout Pier #49-N
22-B	311+85	141'Rt.	C.B.	18.0	14.80	Conn. 6'-10" V.C.P. as reqd. to new C.B.						Demolish Exist. C.B. - Construct new type A-1 Catch Basin at new curb line - Std. Sh. "Y"
22-C	312+12	142'Rt.	C.B.	18.1	13.25	Conn. & Provide 6' new 10" V.C.P. to New C.B. as required.						Demolish Exist. C.B. - Construct new type A-1 Catch Basin at new curb line - Std. Sh. "Y"
23	1+80 RAMP "C"	22'Lt.	C.B.	30.09	24.5	23-24	15"	R.C.P.	24 ~~20'~~	24.5	24.0	Type A-1 C.B. - State Std. - Sheet "Y"
24	311+10	45'Lt.	M.H.	29.7	23.25	24-25	15"	R.C.P.	103.67 ~~102'~~	23.25	19.5	Standard M.H. - Std. Sheet "MH"
24A	311+40	49'Lt.	–	–	26.0	24A-24	12"	R.C.P.	32.0 ~~28'~~	26.0	25.4	12"R.C.P. conn. from 8" Downspout - Pier #49-S; *See Note on Drainage Schedule II
24B	310+80	49'Lt.	–	–	26.0	24B-24	12"	R.C.P.	25.3 ~~30'~~	26.0	25.4	12"R.C.P. conn. from 8" Downspout - Pier #48-S; *See Note on Drainage Schedule II
25A	310+82	47'Rt.	–	–	22.3	25A-25	12"	R.C.P.	25.35 ~~30'~~	22.3	21.0	12"R.C.P. conn. from 8" Downspout - Pier #48-N; *See Note on Drainage Schedule II
25	311+10	58'Rt.	M.H.	24.2	18.75	22-25	15"	R.C.P.	51.35 ~~50'~~	19.6	19.0	Standard M.H. - Std. Sheet "MH"
26	3+20 RAMP "C"	22'Lt.	C.B.	38.86	35.0	26-27	8"	C.M.P.	50 ~~46'~~	35.0	20.0	Type A-1 C.B. - State Std. - Sheet "Y"; Typ. Fill Downspout - Sh. "H" with 8" Bends as reqd.
27	309+68	30'Lt.	M.H.	25.0	19.0							Standard M.H. - Std. Sheet "MH"
27A	309+30	46'Lt.	–	–	21.3	27A-27	12"	R.C.P.	34.7 ~~38'~~	21.3	20.5	12"R.C.P. conn. from 8" Downspout - Pier #46-S; *See Note on Drainage Schedule II
27B	309+62	73'Lt.	–	–	32.5	27B-27	6"	C.M.P.	43 ~~44'~~	32.5	21.0	6"C.M.P. conn. from Subdrain at No. Abut. Ramp "C" with 2-6" Bends as Required.
27C	310+05	45'Lt.	–	–	24.3	27C-27	12"	R.C.P.	37 ~~38'~~	24.3	21.3	12"R.C.P. conn. from 8" Downspout - Pier #47-S; *See Note on Drainage Schedule II
28	309+68	59'Rt.	M.H.	22.2	15.7	27-28	15"	R.C.P.	85 ~~84'~~	19.0	18.0	Standard M.H. - Std. Sheet "MH"
						25-28	18"	R.C.P.	140'	18.75	16.0	+ Placed - 141.62
28A	309+30	47'Rt.	–	–	19.3	28A-28	12"	R.C.P.	31.50 ~~30'~~	19.3	18.6	12"R.C.P. conn. from 8" Downspout - Pier #46-N; *See Note on Drainage Schedule II
28B	310+05	48'Rt.	–	–	20.8	28B-28	12"	R.C.P.	36'	20.8	18.6	12"R.C.P. conn. from 8" Downspout - Pier #47-N; *See Note on Drainage Schedule II
29	309+00	179'Rt.	Exist. M.H.	16.45	9.66	28-29	18"	R.C.P.	134.0 ~~135'~~	15.7	12.3	Exist. City M.H. on Norris Run Sewer in Adams St. Provide opening for 18" pipe in Ex. Norris Run M.H.
Line "A"	2+45 RAMP "C"	25' Rt. 50' Lt.	Conc. Encasement			Flow to be maintained in Exist. 75' of Exist. Pipe with 3" Conc. Encasement (See typ. sect. - Type "A")						12" Comb. Sewer in Pleasant St. Strengthen
Line "B"	5+70 RAMP "C"	35' Rt. 60' Lt.	Conc. Encasement			Flow to be maintained in Exist. 95' of Exist. Pipe with 3" Conc. Encasement (See typ. sect. - Type "A")						10" Comb. Sewer in Read St. Strengthen
Line "C"	8+02 RAMP "C"	50' Rt. 40' Lt.	Conc. Encasement			Flow to be Maintained in Exist. 12" Comb. Sewer in Chestnut Sewer in Chestnut St. Strengthen 90' of Exist. Pipe from MH. C-1 to Ramp "B" Toe of Slope with 3" Conc. Encasement. (See typical Section Type "A").						
C-1	305+07	59'Lt.	M.H.	40.5	30.18	C-1 to C-2	12"	V.C.P.	27.25 ~~26'~~	30.18	29.80	City of Wilmington - Std. Type Sewer M.H. Exist. Sewage Flow to be Maintained.
C-2	304+79	48'Lt.	M.H.	39.0	29.80	C-2 to C-3	12"	VCP	33.42 ~~38'~~	29.80	29.30	City of Wilmington - Std. Type Sewer M.H. Exist. Sewage Flow to be Maintained.
C-3	304+96	12'Lt.	M.H.	37.3	29.30							City of Wilmington - Std. Type Sewer M.H.
30-A	5+40 RAMP "C"	17'Lt.			38.5	30A to C-2	6"	CMP	27.25 ~~34'~~	38.5	34.0	6"CMP Conn. from Subdrain at Ramp "B" Abut.
30	5+78 RAMP "B"	18'Lt.			37.3	30-31	12"	R.C.P.	84 ~~83'~~	37.3	35.6	12"RCP Conn. from 8" Downspout at Pier 1-B; *See Note on Drainage Schedule II
31	304+26	15'Lt.	M.H.	38.5	33.1	31A-31	8"	CIP	6.83 ~~12'~~	36.2	35.7	Standard M.H. - Std. Sheet "MH"
31A	304+39	19'Lt.			36.2							8"CIP Conn. from 8" Downspout at Pier 39-S
32	304+28	57'Rt.	M.H.	37.0	32.0	31-32	15"	RCP	66 ~~68'~~	33.1	32.1	Standard M.H. - Std. Sheet "MH"
32A	304+39	50'Rt.			34.7	32A-32	8"	CIP	5.5 ~~10'~~	34.7	34.3	8"CIP Conn. from 8" Downspout at Pier 39-N

DRAINAGE SCHEDULE III

COUNTY	CONTRACT	A.P.D. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	24	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

TYPE "A" MANHOLE



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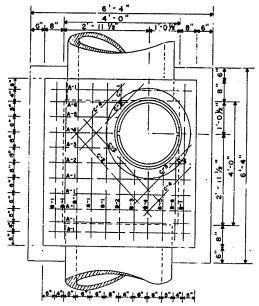
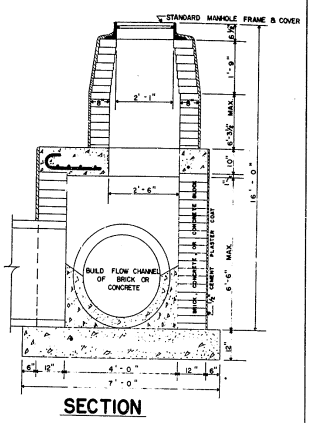


BILL OF MATERIALS

REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	6	5/8"ϕ	5'-8"	A-1	4'-10"
	6	5/8"ϕ	5'-8"	B-1	4'-10"
	1	5/8"ϕ	3'-2"	A-2	2'-9"
	1	5/8"ϕ	2'-9"	A-3	2'-4"
	1	5/8"ϕ	2'-8"	A-4	2'-3"
	1	5/8"ϕ	2'-9"	A-5	2'-4"
	1	5/8"ϕ	3'-2"	A-6	2'-9"
	1	5/8"ϕ	3'-2"	B-2	2'-9"
	1	5/8"ϕ	2'-9"	B-3	2'-4"
	1	5/8"ϕ	2'-8"	B-4	2'-3"
	1	5/8"ϕ	2'-9"	B-5	2'-4"
	1	5/8"ϕ	3'-2"	B-6	2'-9"
	STRAIGHT BARS				
	2	5/8"ϕ	0'-10"	C-1	0'-10"
	2	5/8"ϕ	3'-10"	C-2	3'-10"
	2	5/8"ϕ	3'-0"	C-3	3'-0"
	2	5/8"ϕ	2'-4"	C-4	2'-4"

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

TYPE "B" MANHOLE



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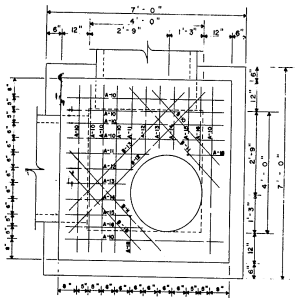


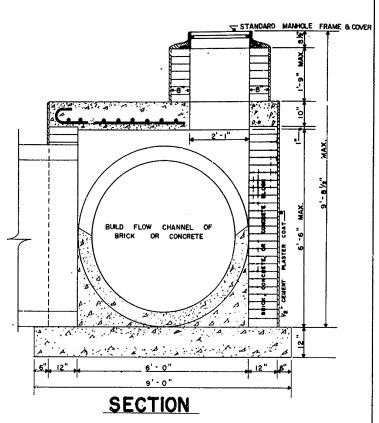
PLAN

BILL OF MATERIALS

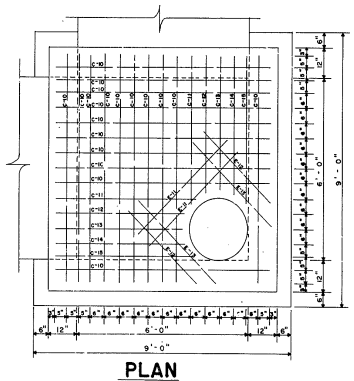
REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	10	3/4"ϕ	6'-6"	A-10	5'-6"
	2	3/4"ϕ	3'-4"	A-11	2'-10"
	2	3/4"ϕ	2'-10"	A-12	2'-4"
	2	3/4"ϕ	2'-7"	A-13	2'-1"
	2	3/4"ϕ	2'-7"	A-14	2'-1"
	2	3/4"ϕ	2'-10"	A-15	2'-4"
	2	3/4"ϕ	3'-4"	A-16	2'-10"
	STRAIGHT BARS				
	2	3/4"ϕ	1'-4"	A-18	
	2	3/4"ϕ	3'-6"	B-10	
	2	3/4"ϕ	4'-6"	B-11	
	1	3/4"ϕ	6'-9"	B-12	
	1	3/4"ϕ	5'-9"	B-13	

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

TYPE "C" MANHOLE



SECTION



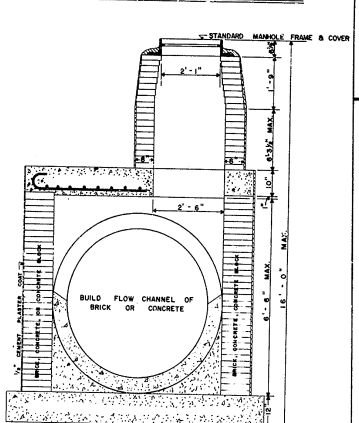
PLAN

BILL OF MATERIALS

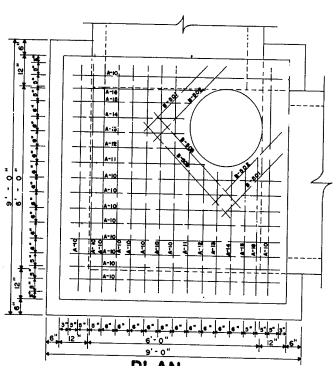
REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	20	3/4"ϕ	8'-6"	C-10	7'-6"
	2	3/4"ϕ	5'-6"	C-11	5'-0"
	2	3/4"ϕ	5'-1"	C-12	4'-7"
	2	3/4"ϕ	5'-0"	C-13	4'-6"
	2	3/4"ϕ	5'-1"	C-14	4'-7"
	2	3/4"ϕ	5'-6"	C-15	5'-0"
	STRAIGHT BARS				
	2	1/4"ϕ	4'-6"	E-11	
	2	1/4"ϕ	3'-5"	E-12	
	2	3/4"ϕ	3'-10"	E-13	

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

TYPE "D" MANHOLE



SECTION



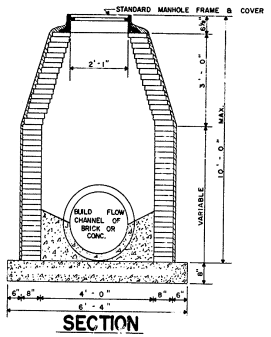
PLAN

BILL OF MATERIALS

REIN. STEEL	BENT BARS No.	SIZE	LENGTH	MARK	BENDING DIAGRAM (ALL DIMENSIONS ARE OUT-OUT)
	18	3/4"ϕ	8'-6"	A-10	7'-6"
	2	3/4"ϕ	5'-4"	A-11	4'-10"
	2	3/4"ϕ	4'-10"	A-12	4'-4"
	2	3/4"ϕ	4'-7"	A-13	4'-1"
	2	3/4"ϕ	4'-7"	A-14	4'-1"
	2	3/4"ϕ	4'-10"	A-15	4'-4"
	2	3/4"ϕ	5'-4"	A-16	4'-10"
	STRAIGHT BARS				
	2	3/4"ϕ	3'-0"	B-501	3'-0"
	2	3/4"ϕ	3'-6"	B-502	3'-6"
	2	3/4"ϕ	4'-6"	B-503	4'-6"

NOTE: ALL REINFORCING STEEL TO BE INCLUDED IN UNIT PRICE BID FOR MANHOLE.

STANDARD MANHOLE



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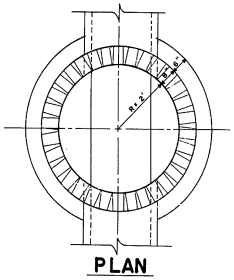


PLAN

NOTE: All scales ½" = 1'-0"

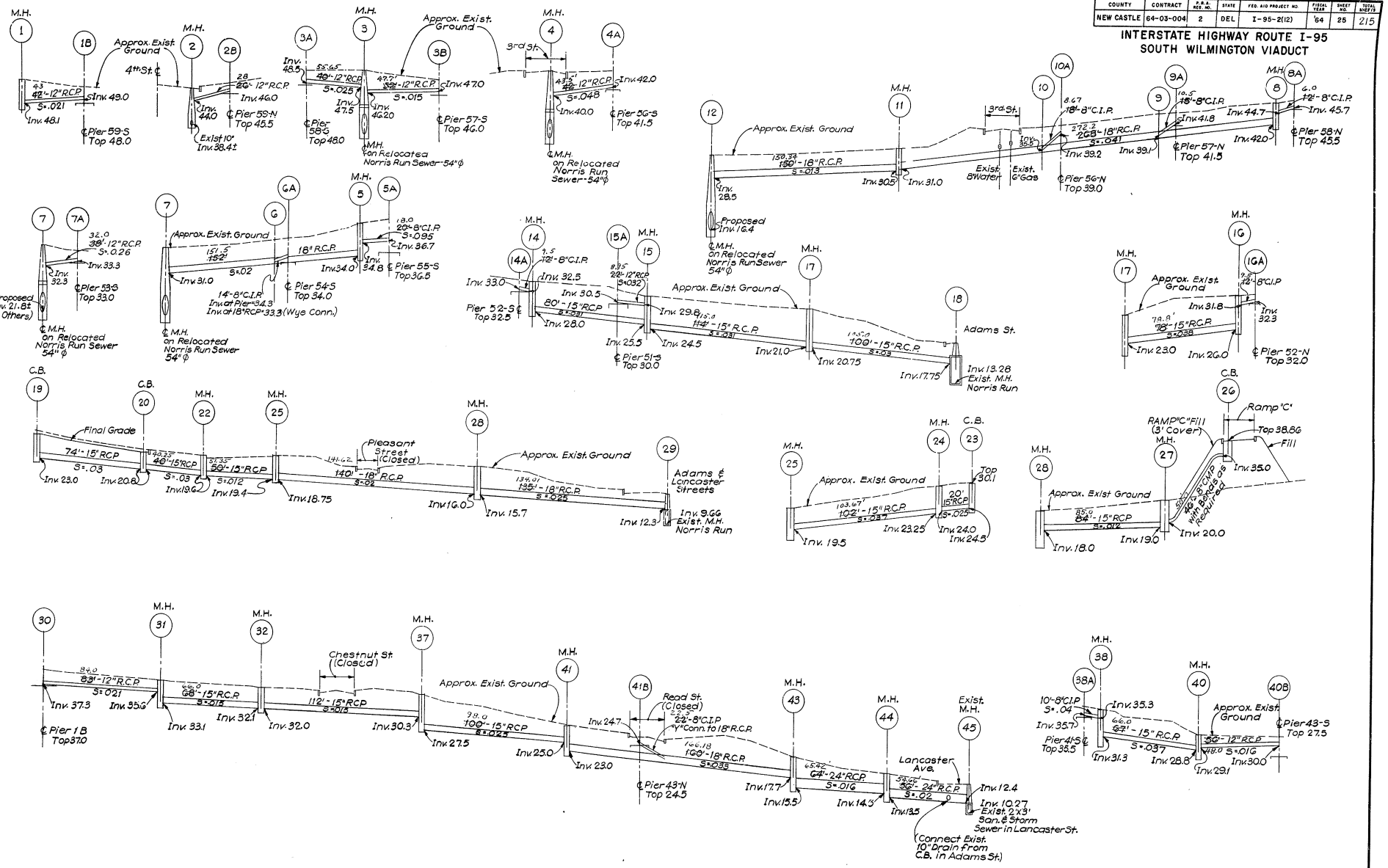
DRAINAGE DETAIL SHEET "MH"

APPROVED _____ DATE _____ CHIEF ENGINEER

BEARINGS
TIE POINTS
BENCH MARKS
EARTHWORK
DRAINAGE

COUNTY	CONTRACT	P.E.N. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'94	25	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



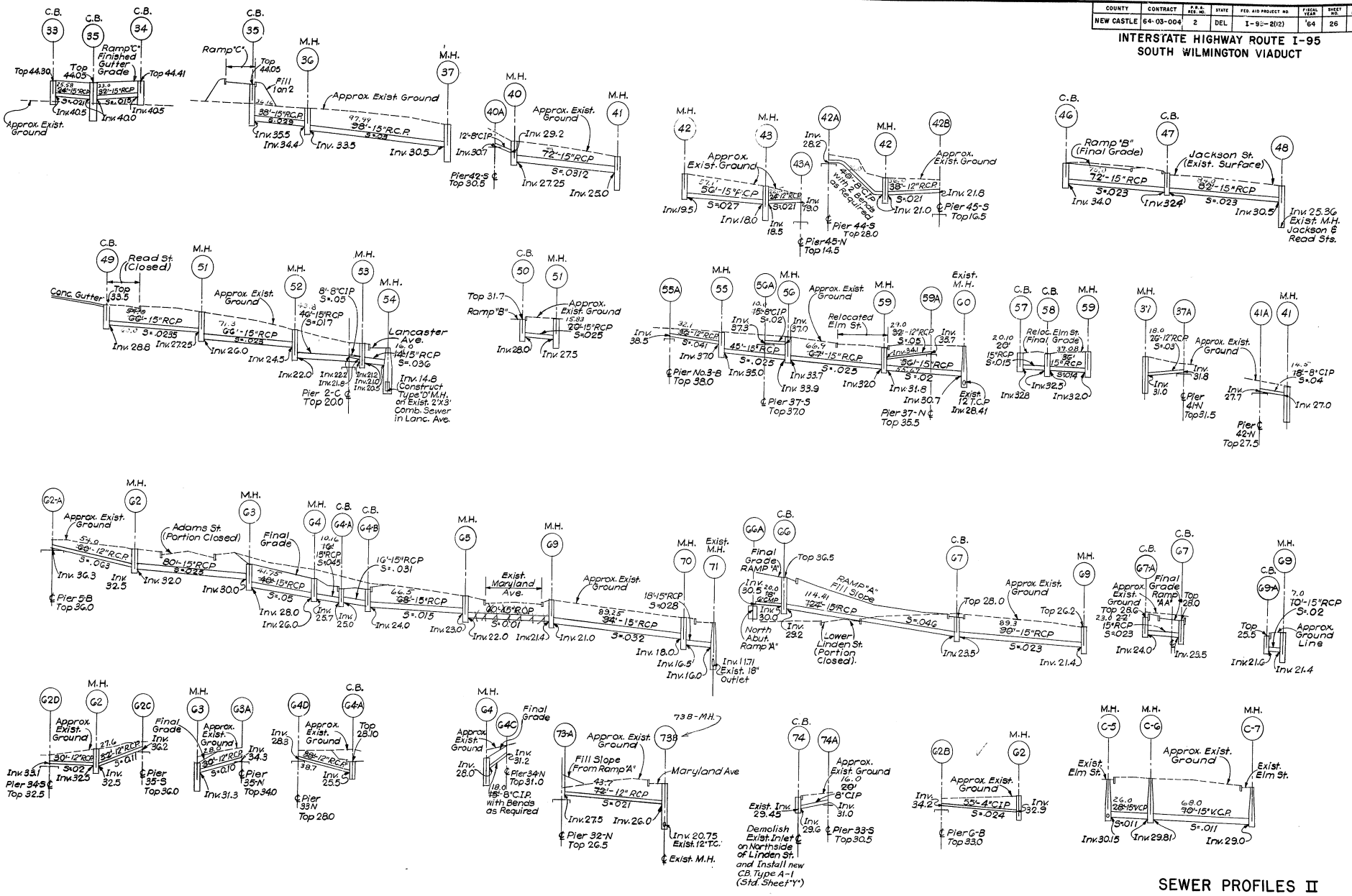
SEWER PROFILES I

SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

As Built Plans in Red - 1-97 MEL

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	26	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



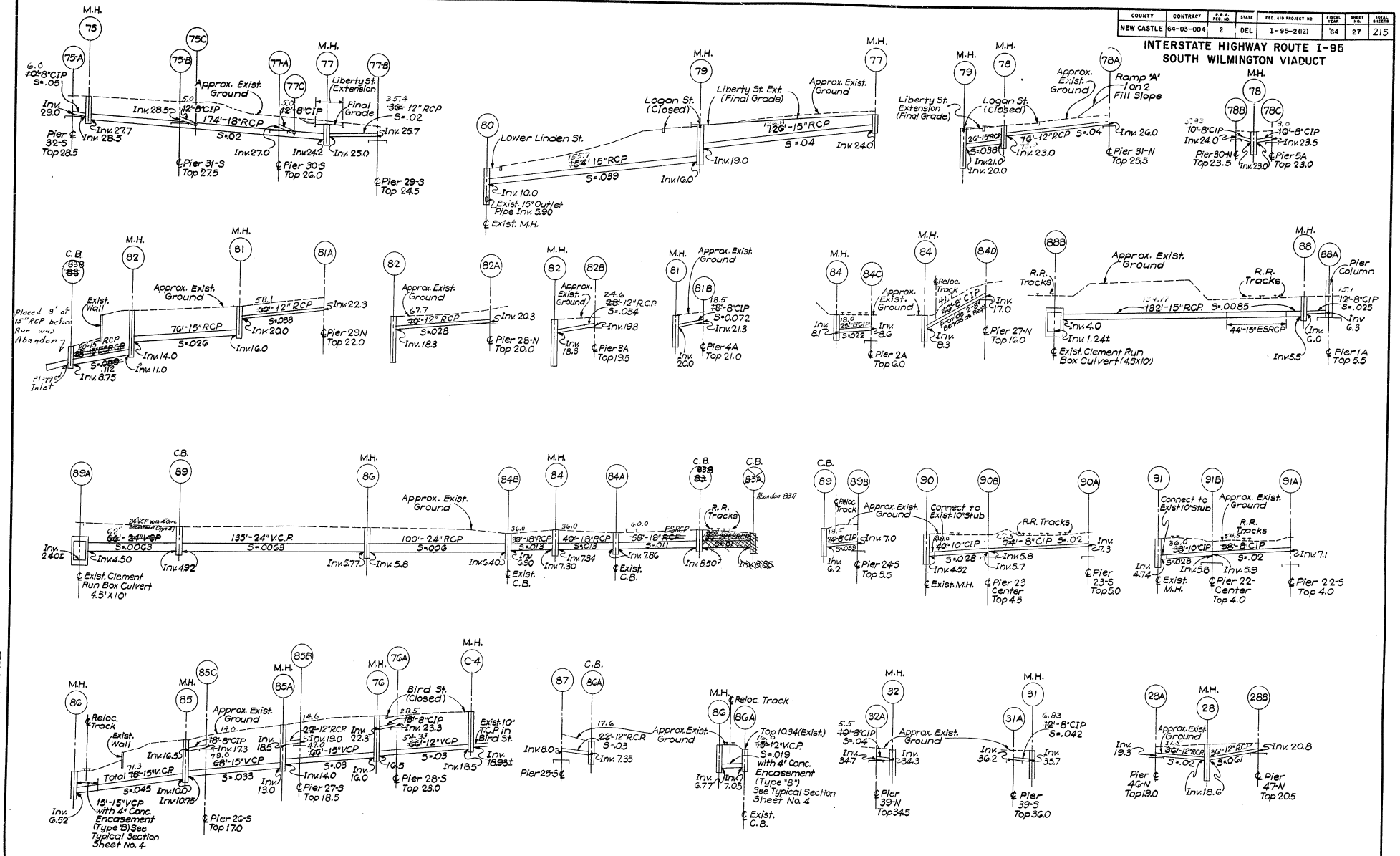
SEWER PROFILES II

SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

As Built Plans in Red - 1-9-67 MRC

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	27	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



SEWER PROFILES III

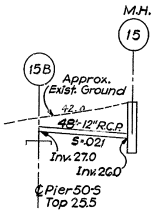
SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

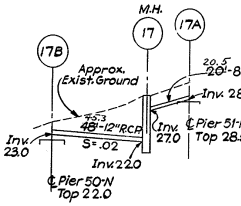
As Built Plans in Red - 1-9-67 MEC

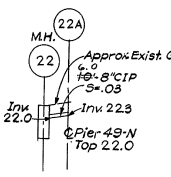
Revised 8-5-69, 8-6-69, 8-8-69, 8-13-69, 8-15-69, 8-27-69, 9-2-69

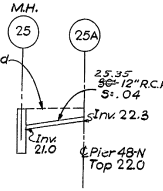
COUNTY	CONTRACT	P. R. A. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	28	215

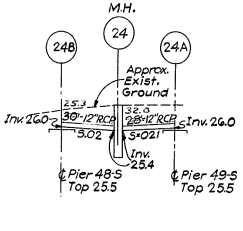
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

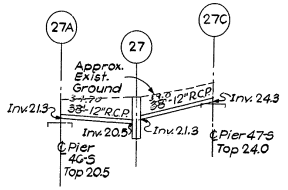


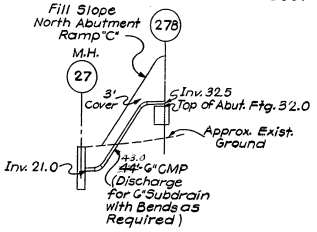


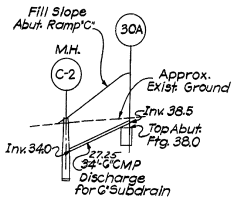


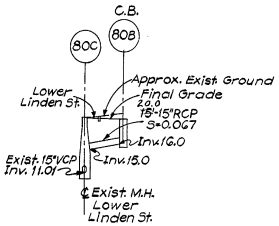


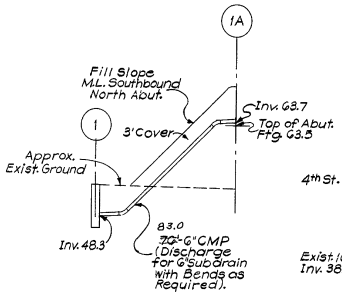


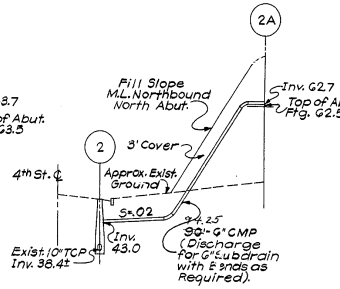


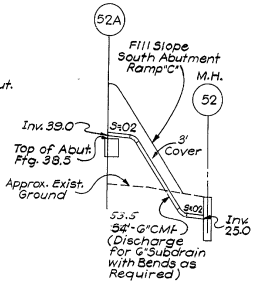


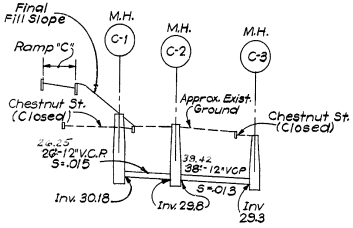


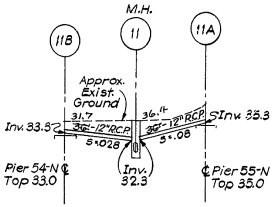


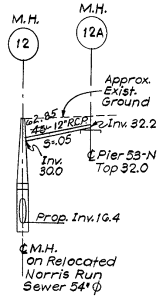


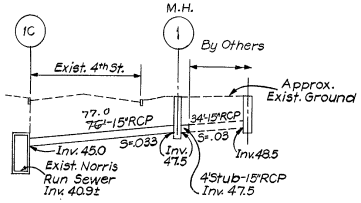


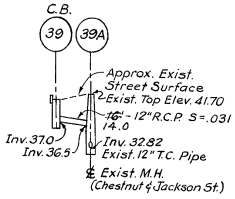












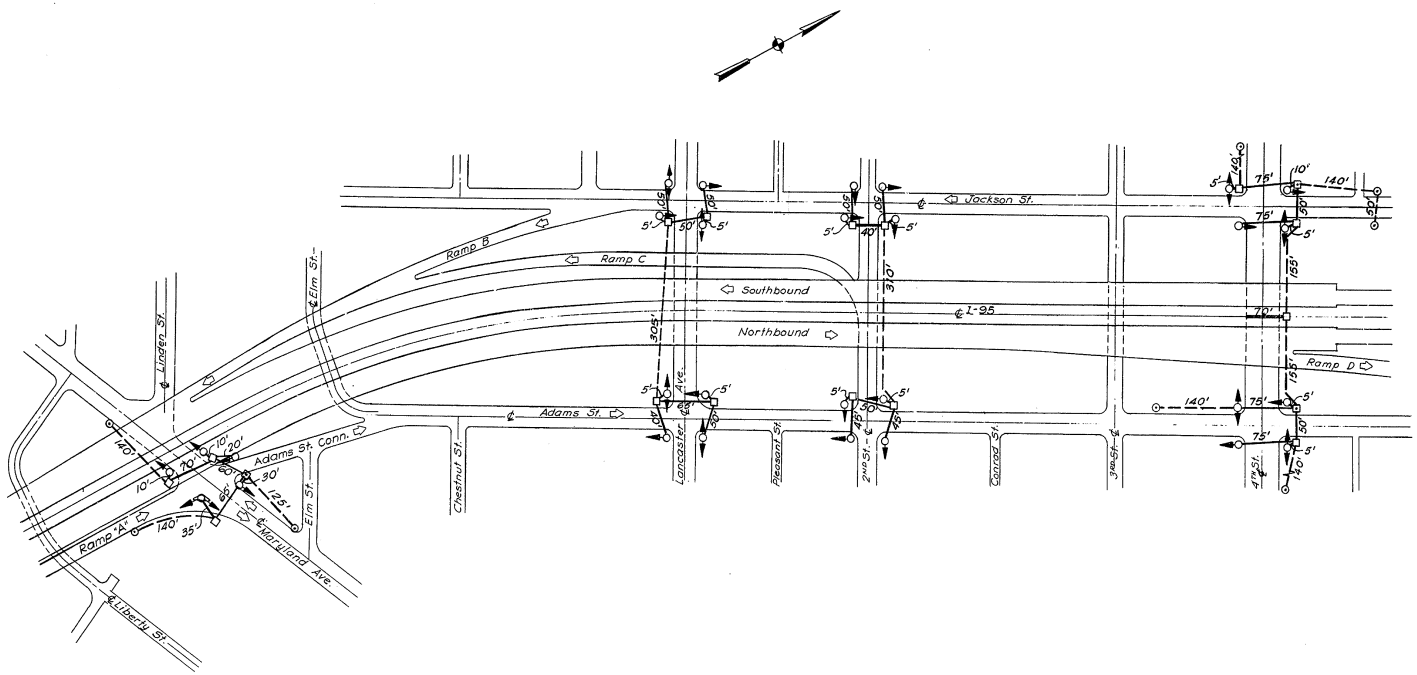
SEWER PROFILES IV

SCALE: 1 IN. = 30 FT. HOR.
1 IN. = 10 FT. VER.

As Built Plans in Red - 1-9-67 HBC

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	29	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



See Sheets 29A & 29B

LEGEND
- ○ Pedestal Base
- ⊙ Aluminum Pole Base
- ● Steel Pole Base
- □ Junction Well
- ⊡ M Cabinet Base
- —— 2" Conduit
- - - - 1 1/2" Conduit
- ▭▭ 4" Non-Metallic Conduit
- O► Direction Signal Faces

Note:
Locations of Bases, Wells & Conduit as shown hereon are Approximate. They will be Accurately Established in the Field by the Engineer.
Lengths of Conduit, as shown on this Plan, are approximate.

See Standard Sheet "T"

TRAFFIC SIGNAL LAYOUT
SCALE: 1 IN. = 100 FT.

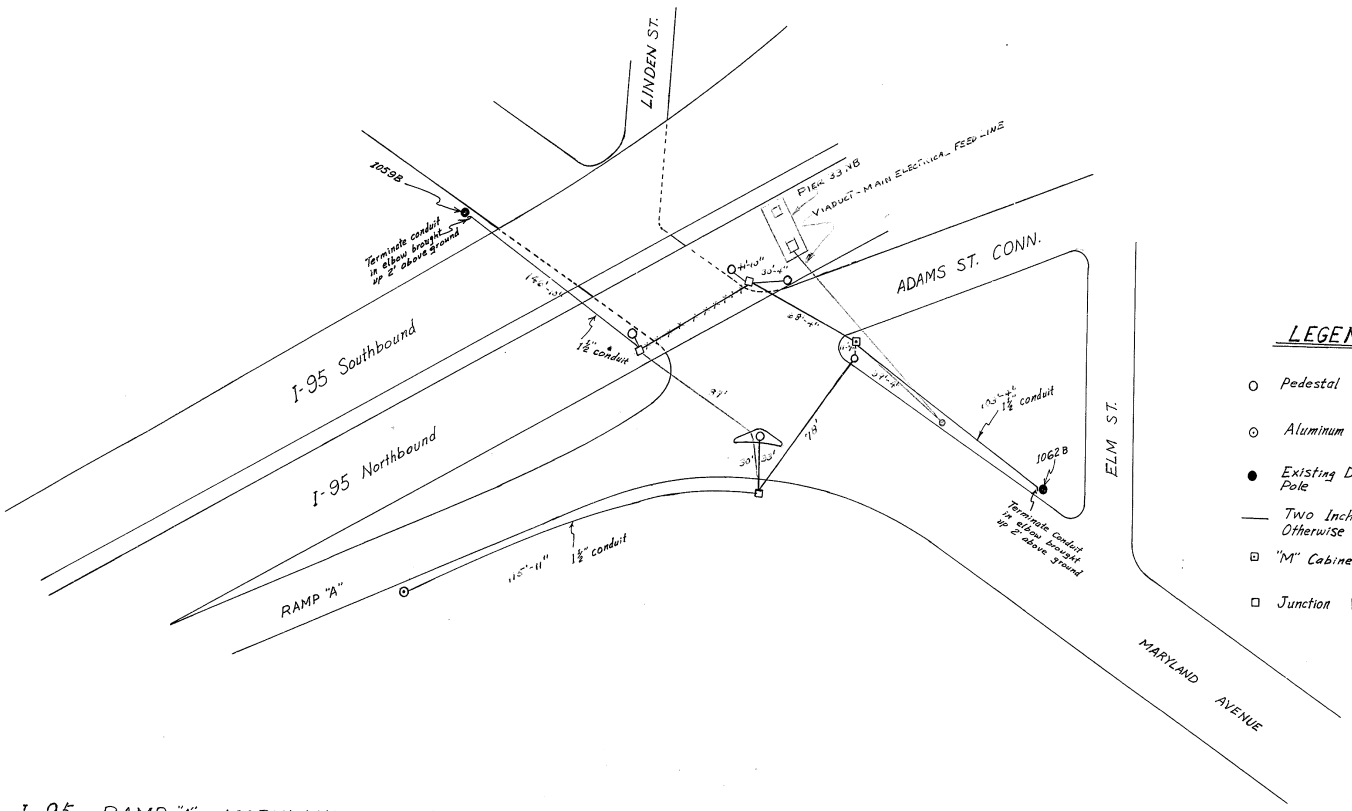
As Built Plans in Red - 1-9-67 NBC

D C B A

COUNTY	CONTRACT	P. R. A. REG. NO.	STATE	FED. AID PRO. NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	29A	215

I-95 REVISED SIGAL LAYOUT

As Built Plans in Red - 1-9-67 HRC



LEGEND

- Pedestal Base
- Aluminum Pole Base
- Existing Delaware Power & Light Pole
- Two Inch Conduit Unless Otherwise Specified
- "M" Cabinet Base
- Junction Well

I-95, RAMP "A", MARYLAND AVE. & ADAMS ST.

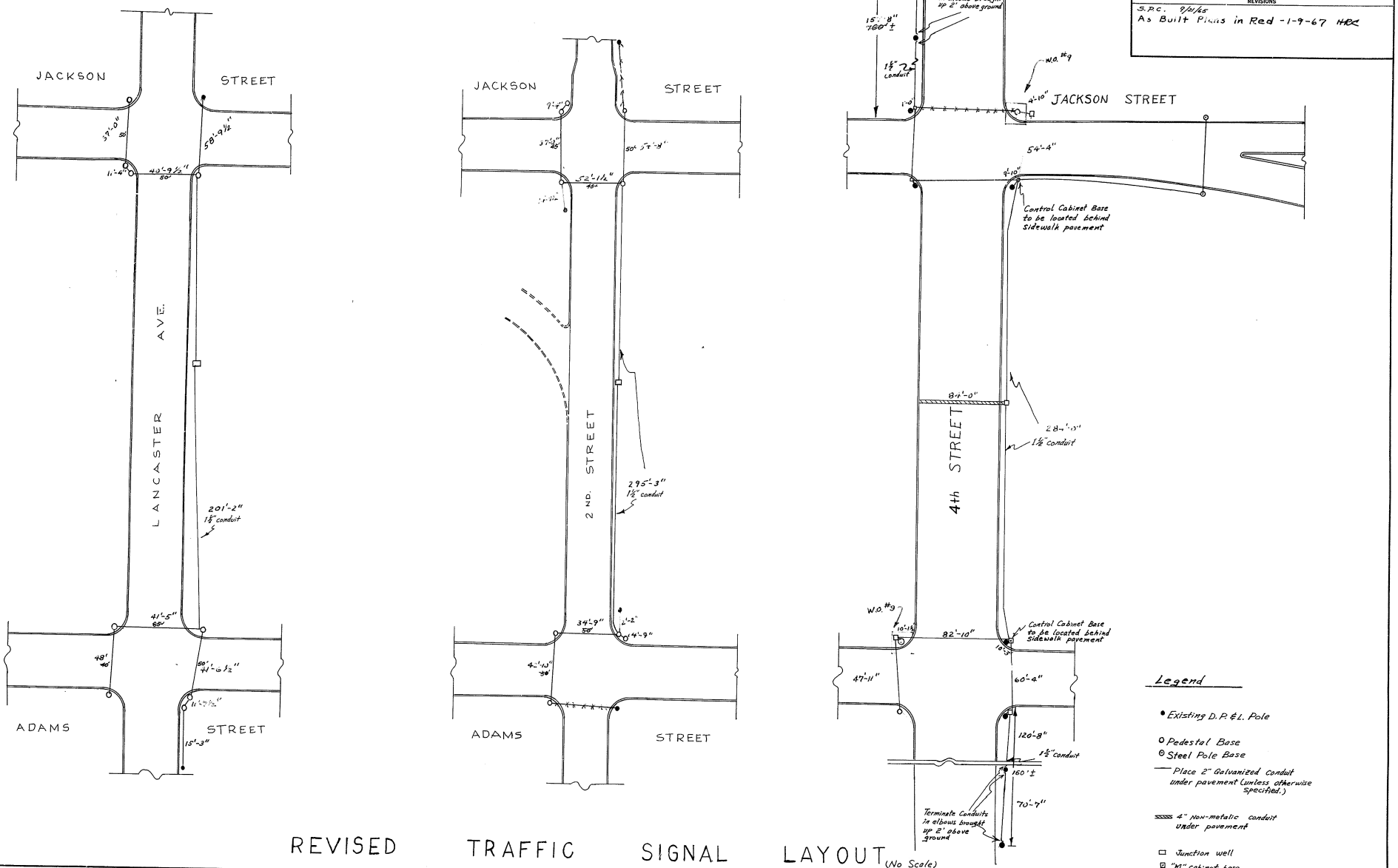
REVISED SIGNAL LAYOUT (NO SCALE)

COUNTY	CONTRACT	P. R. A. REQ. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
New Castle	64-03-004	2	DEL.	I-35-2(12)	29B	215

PREL. TRACING _____ DESIGN _____ CHKD. _____

REVISIONS

S.P.C. 9/21/65
As Built Plans in Red - 1-9-67 HRK



REVISED TRAFFIC SIGNAL LAYOUT (No Scale)

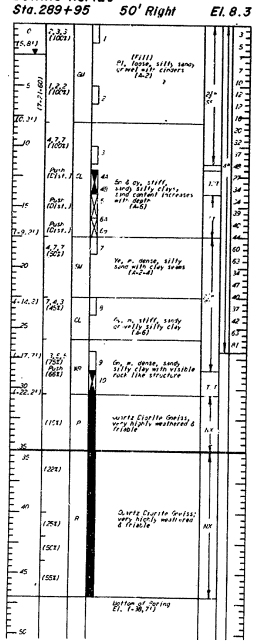
Legend

- ● Existing D. P. & L. Pole
- ○ Pedestal Base
- ⊙ Steel Pole Base
- —— Place 2" Galvanized conduit under pavement (unless otherwise specified.)
- ▨ 4" Non-metalic conduit under pavement
- □ Junction well
- ⊡ "M" cabinet base

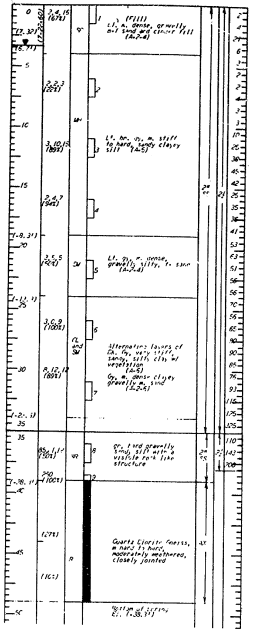
COUNTY	CONTRACT	F.A.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	30	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

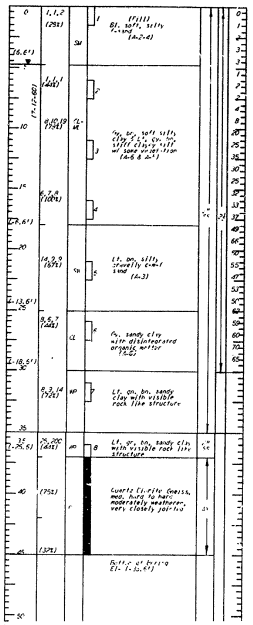
BORING NO. 126
Sta. 289+95 50' Right El. 8.3



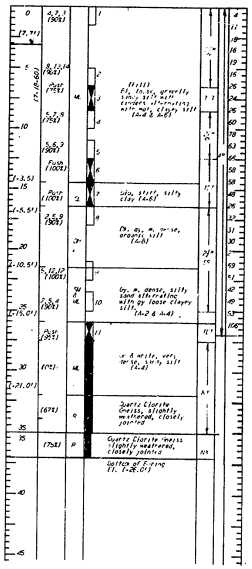
BORING NO. 127
Sta. 291+00 40' Left El. 10.7



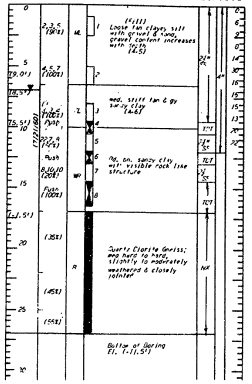
BORING NO. 128
Sta. 291+70 68' Right El. 11.4



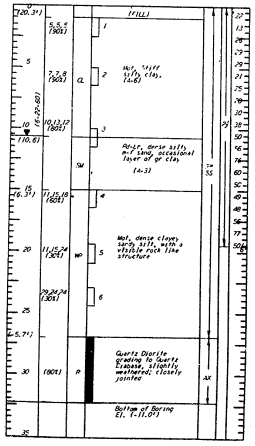
BORING NO. 129
Sta. 292+88 78' Right El. 11.0



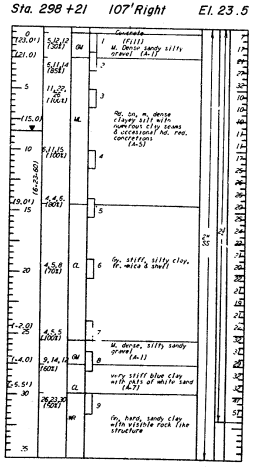
BORING NO. 130
Sta. 294+27 6' Left El. 15.5



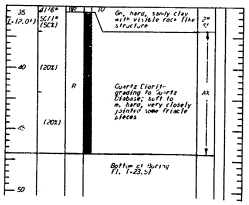
BORING NO. 131
Sta. 296+20 106' Right



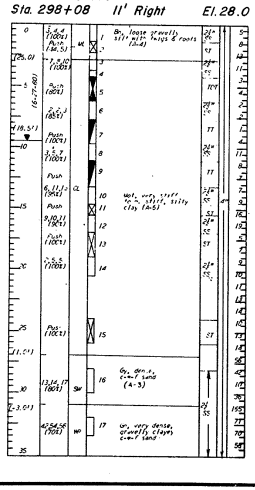
BORING NO. 132
Sta. 298+21 107' Right El. 23.5



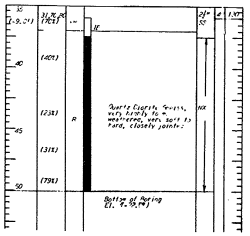
BORING NO. 132 *(Cont'd)*



BORING NO. 133
Sta. 298+08 11' Right El. 28.0

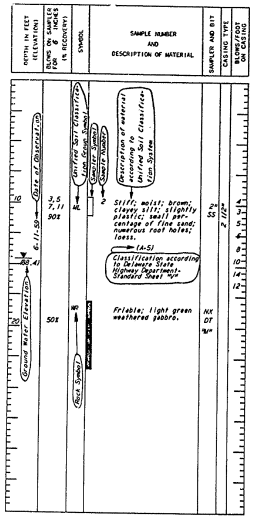


BORING NO. 133 *(Cont'd)*



TYPICAL BORING LOG SYMBOLS AND NOTES

BORING LOG



DEFINITION OF SYMBOLS AND ABBREVIATIONS

A	Auger Sample
ang	angular
AX	AX size
bl	black
blu	blue
bn	brown
B	Boulder
BX	BX size
c	coarse
DDT	Denison Double Tube Soil sample
DT	Double Tube Core Barrel Sample
dk	dark
f	fine
frags	fragments
gn	green
gy	gray
lt	light
"M"	Series "M" Core Barrel
m	medium
max	maximum
mot	mottled
NX	NX size Core or Casing
org	organic
pkts	pockets
PL	Plastic Limit
rd	red
rnd	round
R	Rock
RP	Retractable Plug Sample
S	Shovel Sample
SS	Split Spoon Sample
ST	Shelby Tube Sample
Subang	Subangular
Subrnd	Subrounded
TDT	TAMS Double Tube Soil Sample
TPP	TAMS Piston Plug Sample
TSP	TAMS Stationary Piston Sample
TT	TAMS Thinwall Sample
ye	yellow
wh	white
WOH	Weight of Hammer
WOC	Weight of Casing
WOR	Weight of Rod
WR	Weathered Rock
RS	Visible Rock Like Structure
Dist	Disturbed Sample

GENERAL NOTES ON SUBSURFACE EXPLORATION

1. For locations of borings, see Plan Sheets. Borings are located with reference to the ℄ of Route F-11-2 unless otherwise indicated.

2. The information furnished or referred to on the Boring Sheets is not guaranteed as to accuracy or completeness and is not necessarily indicative of the material that will be encountered during construction. It is to be expressly understood that the State will not be responsible for any interpretation or conclusion drawn therefrom by the contractor.

3. Water levels recorded during subsurface exploration seldom correspond to the natural level of free ground water, except in extensive and thick deposits of sand and gravels which are sufficiently pervious to permit rapid stabilization of subsurface water level in the exploratory hole. Absence of subsurface water level in the log of any exploration is not necessarily to be construed as meaning ground water will not be encountered in the excavation at that level.

4. Borings No. 126 to 146 were performed during June and July 1960 under supervision of Tippetts-Abbett-McCarthy-Stratton, Engineers and Architects.

   Driving Energy:

2" Split Spoon Sampler	4200 in-lbs.
2½" Split Spoon Sampler	5400 in-lbs. (except 5056 in-lbs. for Boring No. 133, and 5025 in-lbs. for Borings No. 137, 138, 141, and 142)
2½" Casing	7200 in-lbs. (except 5400 in-lbs. for Boring No. 139, 7360 in-lbs. for Boring No. 135, and 9000 in-lbs for Borings No. 131 and 144)
4" Casing	7200 in-lbs. (except 7648 in-lbs. for Boring No. 133)

5. Borings No. 199 to 226 were performed during August and September 1962 under supervision of Tippetts-Abbett-McCarthy-Stratton, Engineers and Architects.

   Driving Energy:

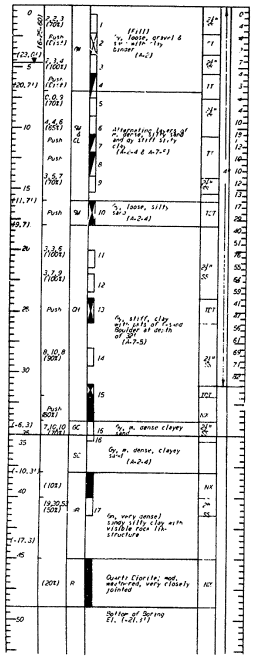
2" Split Spoon Sampler	4200 in-lbs.
3" Split Spoon Sampler	5100 in-lbs.
2½" Casing	5400 in-lbs. (except 5100 in-lbs. for Borings No. 202, 214, and 216)
4" Casing	5400 in-lbs.

BORING LOGS 126 TO 133

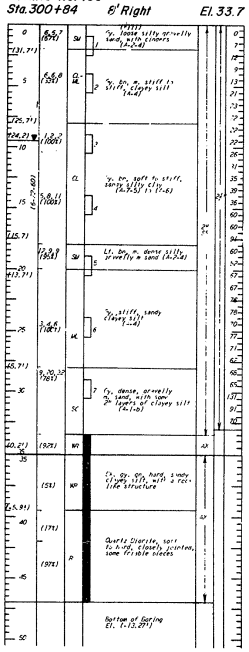
COUNTY	CONTRACT	P.D.A. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	31	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

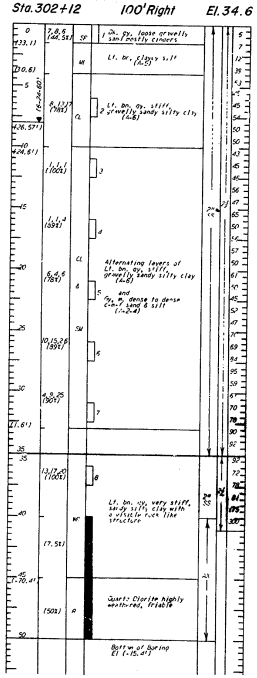
BORING NO. 134
Sta. 299+84 106' Right El. 27.7



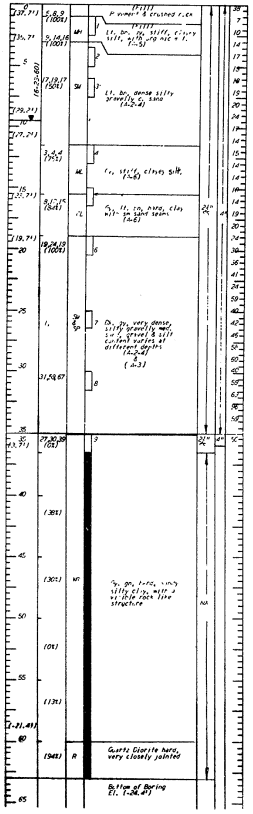
BORING NO. 135
Sta. 300+84 8' Right El. 33.7



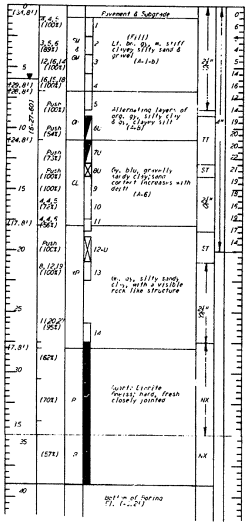
BORING NO. 136
Sta. 302+12 100' Right El. 34.6



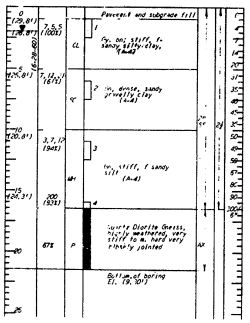
BORING NO. 137
Sta. 302+56 ℄ El. 38.7



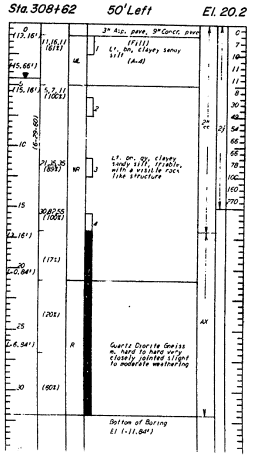
BORING NO. 138
Sta. 304+58 82' Right El. 35.8



BORING NO. 139
Sta. 307+07 34' Left El. 30.8



BORING NO. 140
Sta. 308+62 50' Left El. 20.2



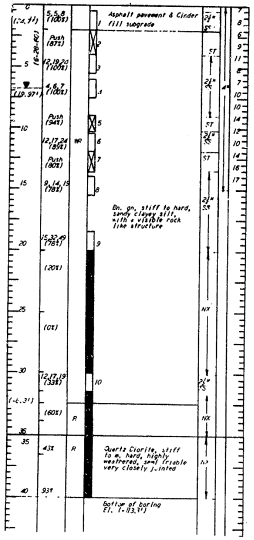
For Symbols and General Notes see Sheet No.

BORING LOGS
134 TO 140

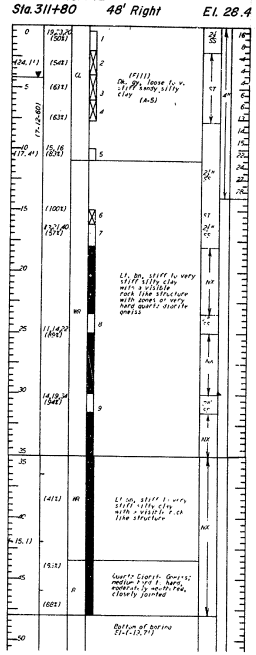
COUNTY	CONTRACT	P.R.E. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	32	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

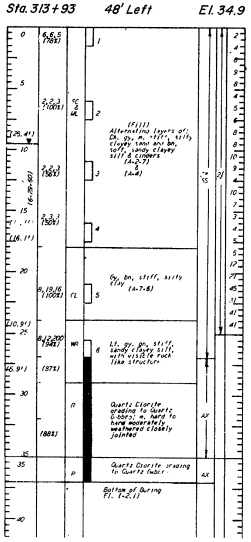
BORING NO. 141
Sta. 310+36 50' Left El. 26.7



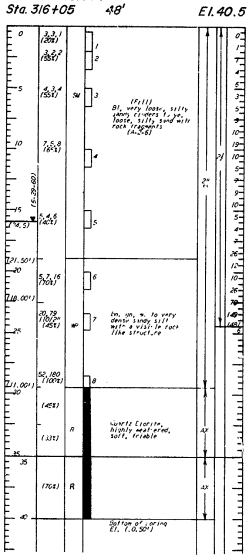
BORING NO. 142
Sta. 311+80 48' Right El. 28.4



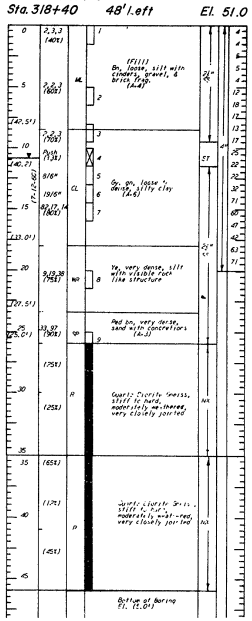
BORING NO. 143
Sta. 313+93 48' Left El. 34.9



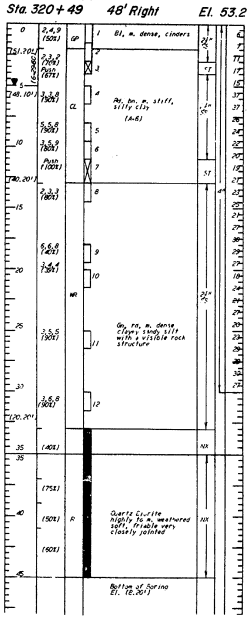
BORING NO. 144
Sta. 316+05 48' El. 40.5



BORING NO. 145
Sta. 318+40 48' Left El. 51.0



BORING NO. 146
Sta. 320+49 48' Right El. 53.2



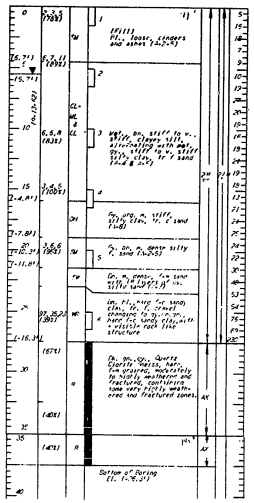
For Symbols and General Notes see Sheet No.

BORING LOGS
141 TO 146

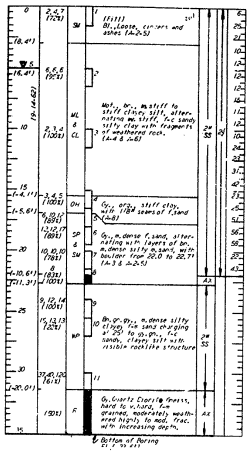
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	33	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

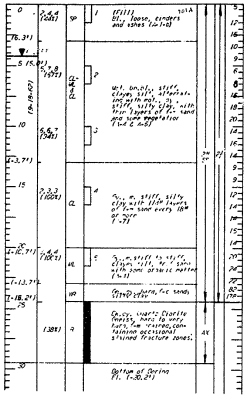
BORING NO. 199
Sta. 292+30 74' Left El. 11.2



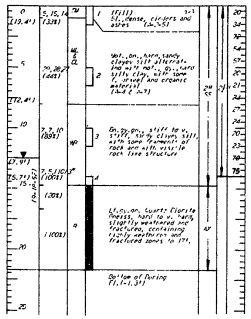
BORING NO. 201
Sta. 293+45 17' Left El. 11.4



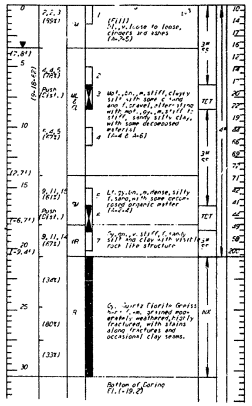
BORING NO. 201 A
Sta. 293+42 43' Right El. 9.3



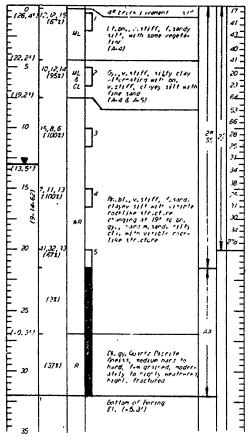
BORING NO. 202
Sta. 294+49 61' Left El. 20.4



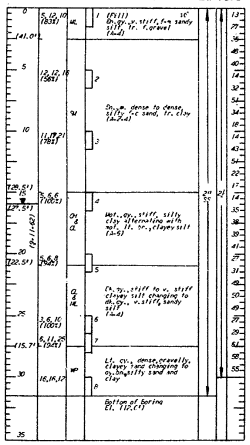
BORING NO. 203
Sta. 294+53 58' Right El. 11.3



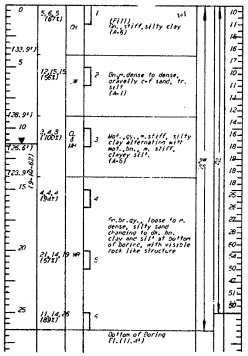
BORING NO. 204
Sta. 296+21 62' Left El. 26.7



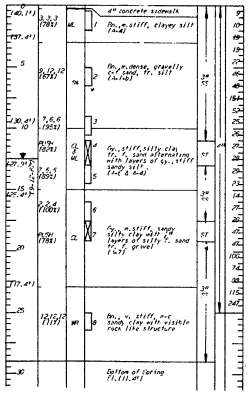
BORING NO. 207
Sta. 304+47 70' Left El. 43.5



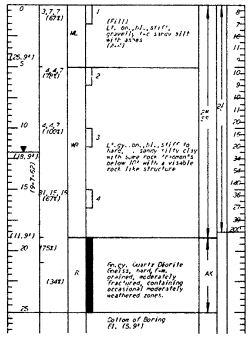
BORING NO. 208
Sta. 305+64 47' Left El. 37.9



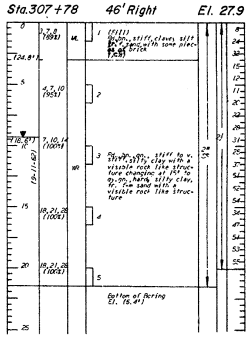
BORING NO. 209
Sta. 305+44 130' Left El. 40.4



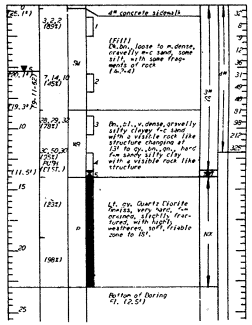
BORING NO. 211
Sta. 307+78 48' Left El. 30.9



BORING NO. 212
Sta. 307+78 46' Right El. 27.9



BORING NO. 213
Sta. 308+48 88' Left El. 25.5



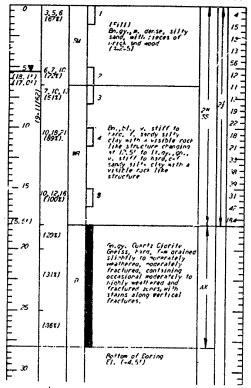
For Symbols and General Notes see Sheet No.

BORING LOGS
199 TO 213

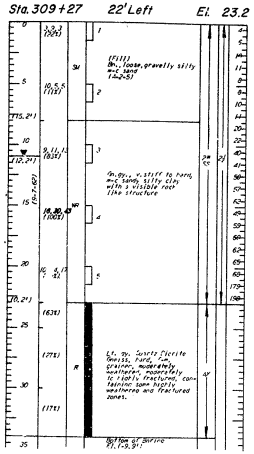
COUNTY	CONTRACT	P.M.D. REG. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	34	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

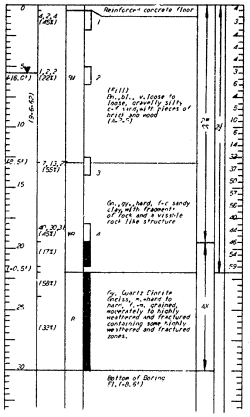
BORING NO. 214
Sta. 308+48 18' Left El. 23.5



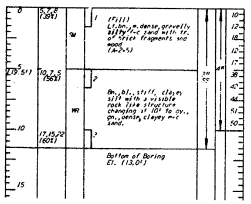
BORING NO. 215
Sta. 309+27 22' Left El. 23.2



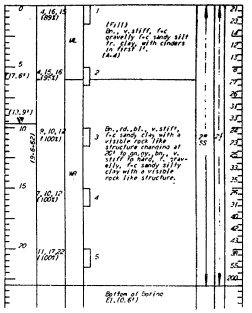
BORING NO. 216
Sta. 309+28



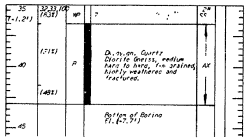
BORING NO. 217
Sta. 309+28 67' Left El. 24.5



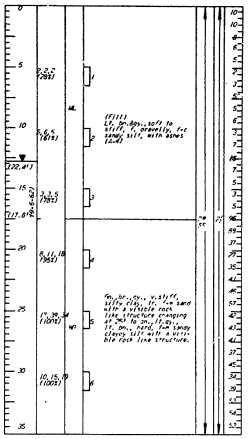
BORING NO. 218
Sta. 310+02 47' Right El. 23.6



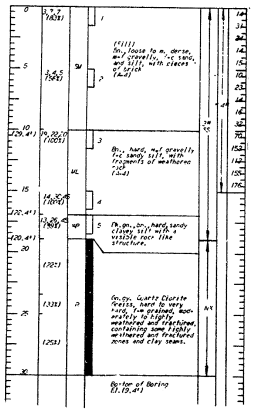
BORING NO. 219 (Cont'd)



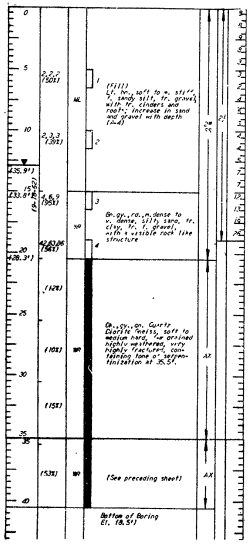
BORING NO. 219
Sta. 315+15 40' Right El. 35.3



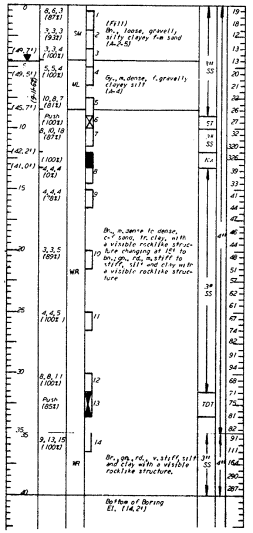
BORING NO. 221
Sta. 316+65 55' Right El. 39.4



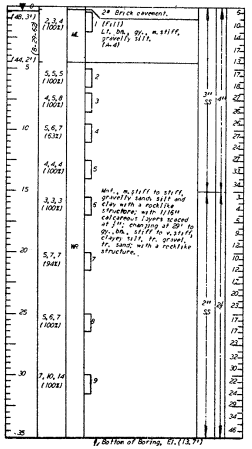
BORING NO. 222
Sta. 317+48 60' Left El. 48.8



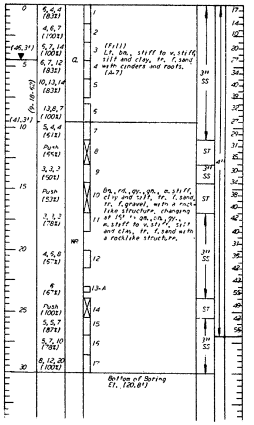
BORING NO. 223
Sta. 319+80 75' Left El. 54.2



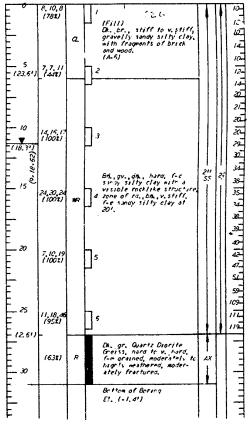
BORING NO. 224
Sta. 319+80 105' Right El. 48.7



BORING NO. 225
Sta. 320+05 48.5' Right El. 50.8



BORING NO. 226
Sta. 311+51 50.5' Left El. 29.6

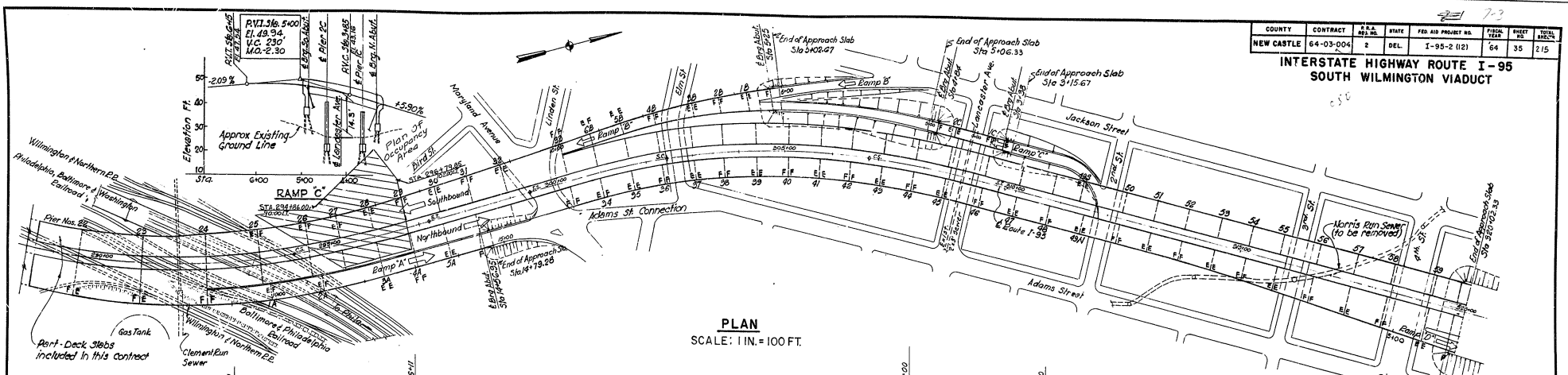


For Symbols and General Notes see Sheet No.

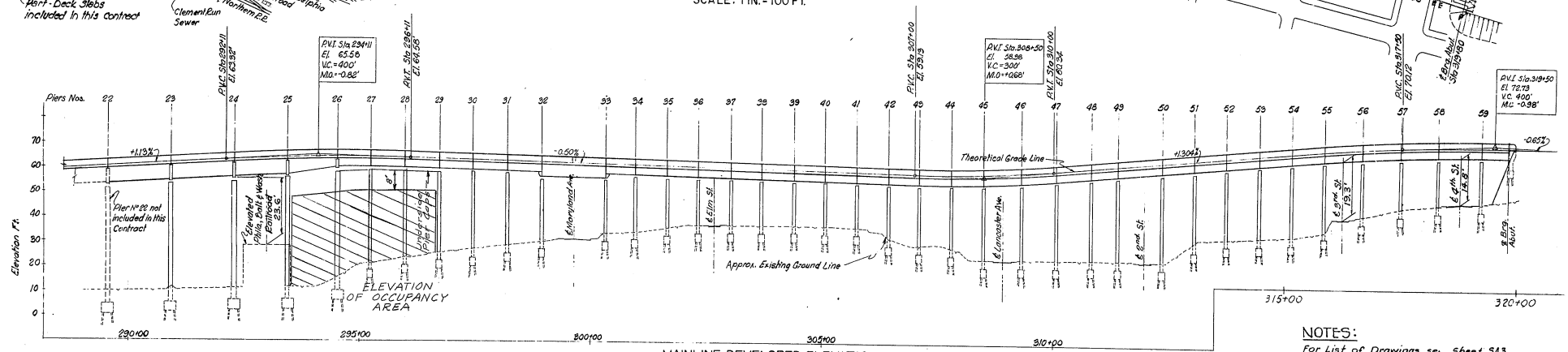
BORING LOGS
214 TO 226

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	35	215

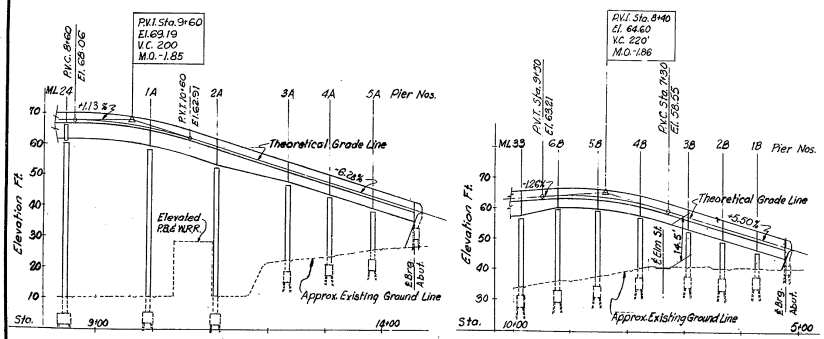
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



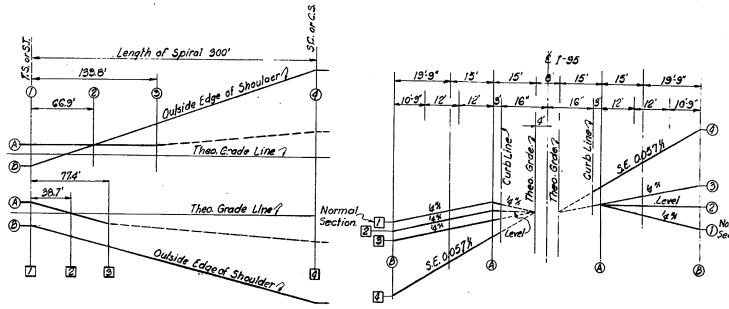
PLAN
SCALE: 1 IN. = 100 FT.



MAINLINE-DEVELOPED ELEVATION
SCALE: VERT.: 1 IN=20 FT.
HORIZ.: 1 IN=100 FT.



DEVELOPED ELEVATIONS
SCALE: VERT. 1 IN=20 FT.
HORIZ. 1 IN=100 FT.



SUPERELEVATION TRANSITION DIAGRAM

NOTES:

For List of Drawings see Sheet 5A3
For General Notes, see Dwg. 5A2
For Table of Bridge Quantities, see Dwg. 5A3
For Typical Sections, see Dwgs. 5A4 & 5A5
For Foundation Plan, see Dwgs. 5A6 thru 5A10
For North Abutment, see Dwgs. 5A35 thru 5A39
For Ramp "A" Abutment, see Dwgs. 5A40 thru 5A42
For Ramp "B" Abutment, see Dwgs. 5A43 thru 5A45
For Ramp "C" Abutments, see Dwgs. 5A46 thru 5A48
For Framing Plan, see Dwgs. 5A5d thru 5A58
For Deck Reinforcement, see Dwgs. 5A77 thru 5A86

Drawn by M.B.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

GENERAL PLAN & ELEVATION

APPROVED BY: James R. Sweeney
BRIDGE ENGINEER
4-16-64
DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. 5A1

COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	64	36	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

1 DESIGN SPECIFICATIONS

a Standard Specifications for Highway Bridges of AASHO dated 1961 including Interim Specifications, except as noted.
b Standard Specifications for Welded Highway and Railway Bridges of the American Welding Society, latest edition.

2 MATERIALS AND FABRICATION

a Standard Specifications for Highway Construction of the State of Delaware dated July 1, 1960.

3 DESIGN LOAD

a Live Load H-20-S16-44 modified for Interstate.
b The minimum waiting period before loads are placed on the structure after the structural slab is poured shall be 21 days; for load requirements see Standard Specifications Para. 18.20.

4 FOUNDATION

a The contractors attention is directed to the special foundation notes as given in the Proposal, in connection with the anticipated subsurface conditions and the requirements for the foundation construction.
b The contractors attention is also directed to elevation of ground water to be encountered so that he will plan his work with full knowledge of water being present. Any cost involved in keeping the foundation sites free from water shall be included in the bid for Item 4.

5 EXCAVATION

The payment limits for excavation for piers are shown on Dwgs. SA 25, SA 26 & SA29; for the abutment on SA 37.

6 STEEL WORK

a Allowable unit stresses will conform to 1961 A.A.S.H.O. Standard Specifications.
b Field connections shall be fastened with 7/8" high strength bolts (A.S.T.M.) on unpainted surfaces.
c Steel shall be structural carbon steel (A.S.T.M. - A36) The high strength low alloy structural steel called for shall be A.S.T.M. - A440.
d Do not paint steel surface in contact with concrete except paint the first 5 feet from end of stringers or end diaphragms. The shoes when in final position, are to be painted in order to prevent rust stains on concrete. Anchor bolts immediately after the concrete has attained its initial set, shall be thoroughly coated with an approved, heavy grease and securely wrapped in burlap. (Payment for these rust preventive measures shall be included in the price bid for Item 22).
e No welded field splices will be permitted. If splices are to be made in the field, the contractor shall submit a high strength bolted splice for approval by state instead of welded splice shown on the drawings.
f All stiffener plates to be truly vertical when stringers are in final erected position with slab and hot mix finish in place. Box girders to have all stiffener plates including the closure plates truly vertical.
g Beams to be cambered as shown on drawings. Allow for loss of camber due to welding. Excess camber in a beam which will decrease the slab thickness below the design thickness shown on the drawings shall be removed or corrected at no cost to the state. The Contractor shall verify the correctness of the camber in the shop.

7 CONCRETE NOTES

a n = 10
f'_c = Minimum 28 day compressive strength = 3000 pounds per square inch.
f_c = 1,200 pounds per square inch.
b Splices of reinforcing bars shall have a minimum lap of 20 diameters for longitudinal bars in slab and 24 diameters for all others.
c Reinforcing bars to be intermediate grade, A.S.T.M. serial designation A15.
d All concrete directly beneath bearing plates shall be poured ¼ inch higher than the bearing elevations shown and bush hammered to exact elevation.
e Tops of abutment backwalls supporting bridge slab to be trowel finished.
f Construction joints other than those shown will not be permitted without written permission of the Engineer.
g Chamfer all exposed edges ¾ inch except where specifically shown on the drawings.
h If there is an interference between the reinforcing steel in the slab and beam spirals, the bar spacing may be varied 1 inch ±. The required area of steel must be placed in a 5 foot interval even though some bars may be threaded through the spirals.
i Concrete cover except where specifically shown on drawings to be governed by A.A.S.H.O. 1961 Specifications including Interim Specifications

8 PILES

a Piles shall develop a minimum bearing capacity of 40 or 60 tons as noted on drawings.
b Pile locations as shown in plan are dimensioned in the plane of the bottom surface of the footing.

9 PROTECTION OF THE STRUCTURE & UNDERGROUND PIPES

The contractor shall be responsible for damage to the existing structures that occurs during or as a result of the work under this contract. He shall repair such damage to the satisfaction of the Engineer at no cost to the state.

10 For radiographic inspection of welded girders and members, refer to special provisions.

11 Due to Railroad electrification protection requirements and clearance, approved metal forms to remain in place must be used for slab construction from pier 22 to pier 26 on mainline and from pier 1-A to pier 2-A on Ramp A. The payment for metal forms to be under contract Item 18. All metal forms and supports shall be galvanized. Metal screws shall be non-corrosive.

12 Metal forms to remain in place shall not be used beyond Pier 26.

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

GENERAL NOTES

APPROVED BY: [signature] BRIDGE ENGINEER 4-16-64 DATE

SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA2

COUNTY	CONTRACT	A.R.M. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12) I-95-2 (8)	'64	37	42

INTERSTATE HIGHWAY ROUTE I-95

ITEM NO.	DESCRIPTION	UNIT	VIADUCT	ROADWAY	QUANTITY NEAT	QUANTITY ROUNDED
4	Excavation for Structures	C.Y.	13,777		13,777	13,800
5	Borrow	C.Y.		14,900	14,900	15,000
7	Select Borrow	C.Y.	646	12,206	12,852	13,000
8c	Quarry Waste Base Course (Per 1" Thickness)	S.Y.		36,400	36,400	36,500
9	Portland Cement Concrete Base Course	C.Y.		1,126	1,126	1,150
11	Hot Mix Asphaltic Concrete Pavement	Ton	4,318	958	5,276	5,300
11	Sand for Tack Coat	Ton		14	14	14
16	Patching Portland Cement Concrete Pavement - 9"	S.Y.		218	218	220
*16	Portland Cement Concrete Masonry in Approach Slab	C.Y.	197		197	197
*18	Portland Cement Concrete Masonry in Abutments	C.Y.	478		478	478
*18	Portland Cement Concrete Masonry in Pier Footings	C.Y.	5,323		5,323	5,323
◊ *18	Portland Cement Concrete Masonry in Piers above Footings	C.Y.	~~4,100~~ 4,196		~~4,100~~ 4,196	~~4,100~~ 4,196
*18	Portland Cement Concrete Masonry in Superstructure	C.Y.	10,879		10,879	10,879
◊ 18	Subfoundation Concrete	C.Y.	~~100~~ 96		~~100~~ 96	~~100~~ 100
19	Superficial Waterproofing	S.Y.	215		215	220
◊ *20	Bar Reinforcement	Lb.	~~1,196,200~~ 1,196,800		~~1,196,200~~ 1,196,800	~~1,196,200~~ 1,196,800
22	Structural Steel - ASTM-A36 (Approx. Wt. 12,750,000 Lbs.)	L.S.				L.S.
22	Structural Steel - ASTM-A440 (Approx. Wt. 650,000 Lbs.)	L.S.				L.S.
26	12" R.C. Pipe	L.F.		1,596	1,596	1,600
26	15" R.C. Pipe	L.F.		3,241	3,241	3,250
26	18" R.C. Pipe	L.F.		1,346	1,346	1,350
26	24" R.C. Pipe	L.F.		220	220	230
26	15" E.S.R.C. Pipe	L.F.		82	82	90
26	18" E.S.R.C. Pipe	L.F.		36	36	40
28	4" C.I. Pipe	L.F.		55	55	60
28	8" C.I. Pipe	L.F.		650	650	660
28	10" C.I. Pipe	L.F.		78	78	80
29	8" Corrugated Metal Pipe	L.F.		46	46	50
30	10" Vitrified Clay Pipe	L.F.		22	22	26
30	12" Vitrified Clay Pipe	L.F.		130	130	135
30	15" Vitrified Clay Pipe	L.F.		295	295	300
30	24" Vitrified Clay Pipe	L.F.		201	201	210
31	6" Perf. C.M. Pipe Underdrain	L.F.	312		312	320
35	Closed End Steel Shell Test Piles	L.F.	445		445	445
35	Open End Steel Shell Test Piles	L.F.	90		90	90
35	Closed End Pile Load Tests	Ea.	19		19	19
35	Open End Pile Load Tests	Ea.	4		4	4
35	Closed End Cast-in-Place Concrete Piles	L.F.	48,215		48,215	49,000
35	Open End Cast-in-Place Concrete Piles	L.F.	3,970		3,970	4,000
37	Portland Cement Concrete Gutter	S.Y.		135	135	140
38	Portland Cement Concrete Curb, Type I	L.F.		4,677	4,677	4,700
41	4" Portland Cement Concrete Sidewalk	S.F.		43,806	43,806	44,000
44	Type "A-1" Catch Basin	Ea.		23	23	23
44	Type "B" Catch Basin	Ea.		~~3~~ 3	~~3~~ 3	~~3~~ 3
44	Type PW-BD-1 Catch Basin	Ea.		1	1	1
45	Standard Manhole	Ea.		41	41	41
45	Type "A" Manhole	Ea.		1	1	1
45	Type "D" Manhole	Ea.		1	1	1
45	City of Wilmington Standard Sewer Manhole	Ea.		11	11	11
46	Adjusting & Repairing Minor Installations	Ea.		4	4	5
51	Topsoil (4" Deep)	S.Y.		53,020	53,020	53,000
53	Seeding	Acre		11.32	11.32	11.50
54	Mulching	S.Y.		53,020	53,020	53,000
61	Calcium Chloride for Dust Control	Ton		5	5	5
	City of Wilmington Standard Lamphole	Ea.		1	1	1
	Viaduct Drain Scuppers	Ea.	83		83	83
	W.I. Viaduct Drain Trough	L.F.	2,065		2,065	2,100
	4" W.I. Viaduct Drain Pipe	L.F.	462		462	470
	8" W.I. Viaduct Drain Pipe	L.F.	3,346		3,346	3,350
	6" Corrugated Metal Pipe	L.F.		316	316	320
	Stone Bedding for Pipes	Ton		50		50
	Concrete Encasement of Existing 10" Pipe	L.F.		100	100	110
	Concrete Encasement of Existing 12" Pipe	L.F.		165	165	180
	Concrete Encasement of New 12" Pipe	L.F.		15	15	20
	Concrete Encasement of New 15" Pipe	L.F.		15	15	20

* Estimated Fixed Quantity Items (See Special Provisions)
◊ Additions acct. of changes to Piers 26 & 27 S. See T.A.M.S. letter of 1-4-65. A.W.R. 1-8-65.

Revisions: Type 'A' Catch Basin - Ea. 3 - 5-27-65

ITEM NO.	DESCRIPTION	UNIT	VIADUCT	ROADWAY	QUANTITY NEAT	QUANTITY ROUNDED
	Aluminum Screen Manhole Cover 2'-10" x 1'-10"	Ea.	6		6	6
	Aluminum Screen Manhole Cover 2'-6" x 1'-2½"	Ea.	2		2	2
	Aluminum Viaduct Railing	L.F.	15,006		15,006	15,020
	Protective Aluminum Wall (or Protective Steel Wall)	L.F.	125		125	125
	Aluminum Protective Barrier Railing (or Steel Protective Barrier Railing)	L.S.				L.S.
	Galvanized Steel Deep Beam Guard Rail (Wood Posts)	L.F.	22	650	672	700
	Slope Paving with Portland Cement Concrete Block	S.Y.	864		864	900
	Coarse Aggregate	Ton	100		100	100
	Clearing, Demolition, Excavation, Filling & Grading (Excluding 2nd St. to 3rd St.)	L.S.				L.S.
	Clearing, Demolition, Excavation, Filling & Grading (Between 2nd St. & 3rd St. only)	L.S.				L.S.
	Protective Coating for Metal Surfaces	S.F.	15,637		15,637	15,700
	Norris Run Sewer Demolition	L.S.				L.S.
	Maintenance of Traffic, Vehicular	L.S.				L.S.
	Maintenance of Traffic, Railroad	L.S.				L.S.
	Conduit System for Future Highway & Street Lighting	L.S.				L.S.
	Pedestal Base	Ea.		29	29	29
	Aluminum Pole Base	Ea.		8	8	8
	Junction Well	Ea.		15	15	15
	"M" Cabinet Base	Ea.		3	3	3
	1½" Galv. Conduit (Under Exist. Pav't.)	L.F.		625	625	650
	1½" Galv. Conduit (Under New Pav't.)	L.F.		1,315	1,315	1,350
	2" Galv. Conduit (Under Exist. Pav't.)	L.F.		975	975	1,000
	2" Galv. Conduit. (Under New Pav't.)	L.F.		370	370	380
	4" Non-Metallic Conduit (Under Exist. Pav't)	L.F.		70	70	70
3A	Rock Excavation for Structures & Trenches	C.Y.	22		22	25
	Stone Screenings - 2" Thick	S.Y.		30,444	30,444	31,000
	Coarse Aggregate for Surface Treatment	S.Y.		30,444	30,444	31,000
	AE-4 Asphalt Emulsion for Surface Treatment	Gal.		15,222	15,222	15,300

ITEM NO.	DESCRIPTION	UNIT	VIADUCT	ROADWAY	QUANTITY NEAT	QUANTITY ROUNDED
	NORRIS RUN BY-PASS CONSTRUCTION					
	54" R.C. Pipe	L.F.		570	570	580
	10" V.C. Pipe	L.F.		120	120	130
	Type "A-1" Catch Basin	Ea.		2	2	2
	City of Wilmington Standard Manhole	Ea.		1	1	1
	Manhole (No. 3)	Ea.		1	1	1
	Junction Bends (No. 1A, 1, 2 & 4)	Ea.		4	4	4
	Protection and Backfill	L.S.				L.S.
	R.R. ELECTRIFICATION CHANGES					
	Railroad Communication & Signal Cable Manholes 324A & 325A	L.S.				L.S.
	Railroad Communication & Signal Cable Ducts	L.S.				L.S.
	Electrification Structures W481A & W490A	L.S.				L.S.
	Permanent Modification of Existing Electrification Structures	L.S.				L.S.
	Temporary Modification of Electrification Structure W486	L.S.				L.S.
	Removal & Partial Removal of Existing Electrification Structures	L.S.				L.S.
	WATER LINES					
	Water Distribution Changes	L.S.				L.S.
	Shutting off & Cutting Water Service House Connections	Ea.		204	204	210

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TABLE OF QUANTITIES

APPROVED BY: Dennis R. Heaney II
BRIDGE ENGINEER

4-16-64
DATE

SCALE:

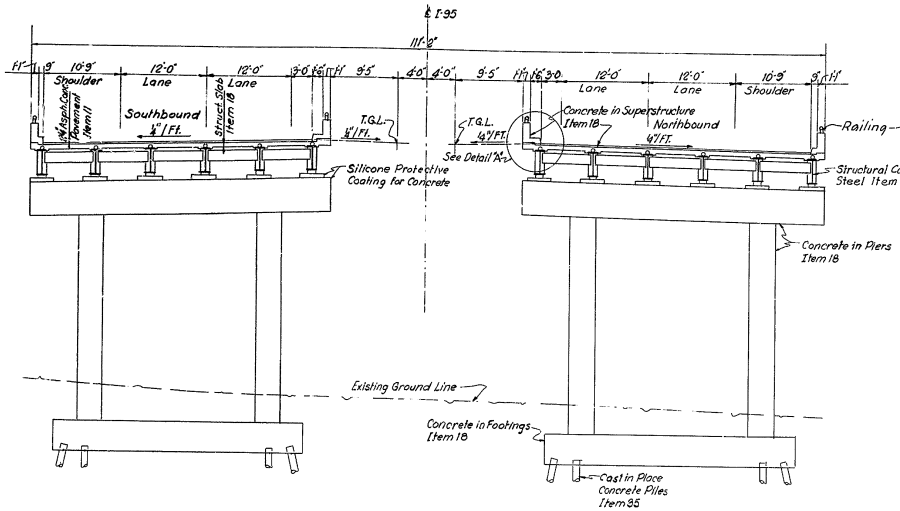
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

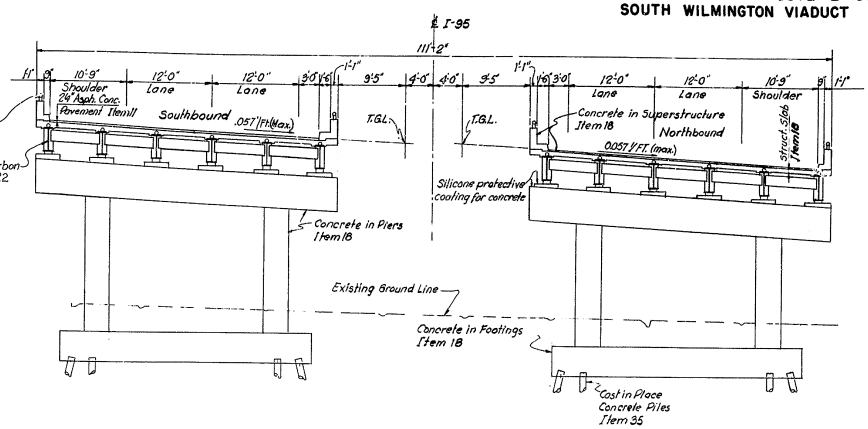
DWG. NO. SA3

COUNTY	CONTRACT	R.P.E. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	38	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



TWO COLUMN RIGID FRAME
TANGENT SECTION
SCALE: 1/8 IN. = 1 FT.



TWO COLUMN RIGID FRAME
SUPERELEVATED ROADWAY
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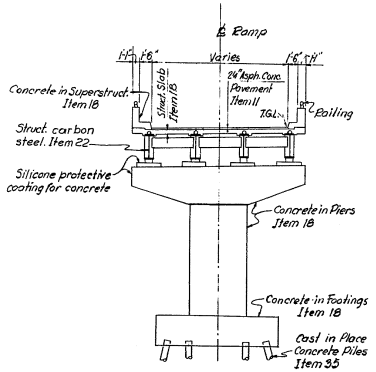
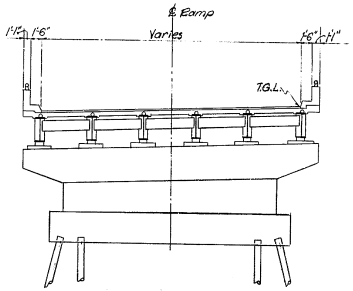
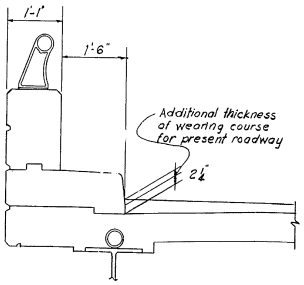


TYPICAL RAMP PIER
SCALE: 1/8 IN. = 1 FT.



RAMP "B" PIERS 1B, 2B & 3B
SCALE: 1/8 IN. = 1 FT.



DETAIL "A"
SCALE: 3 IN. = 1 FT.

NOTES:
For general notes, see Dwg. SA2
For sheet 2 of Typical Sections, see Dwg. SA5

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

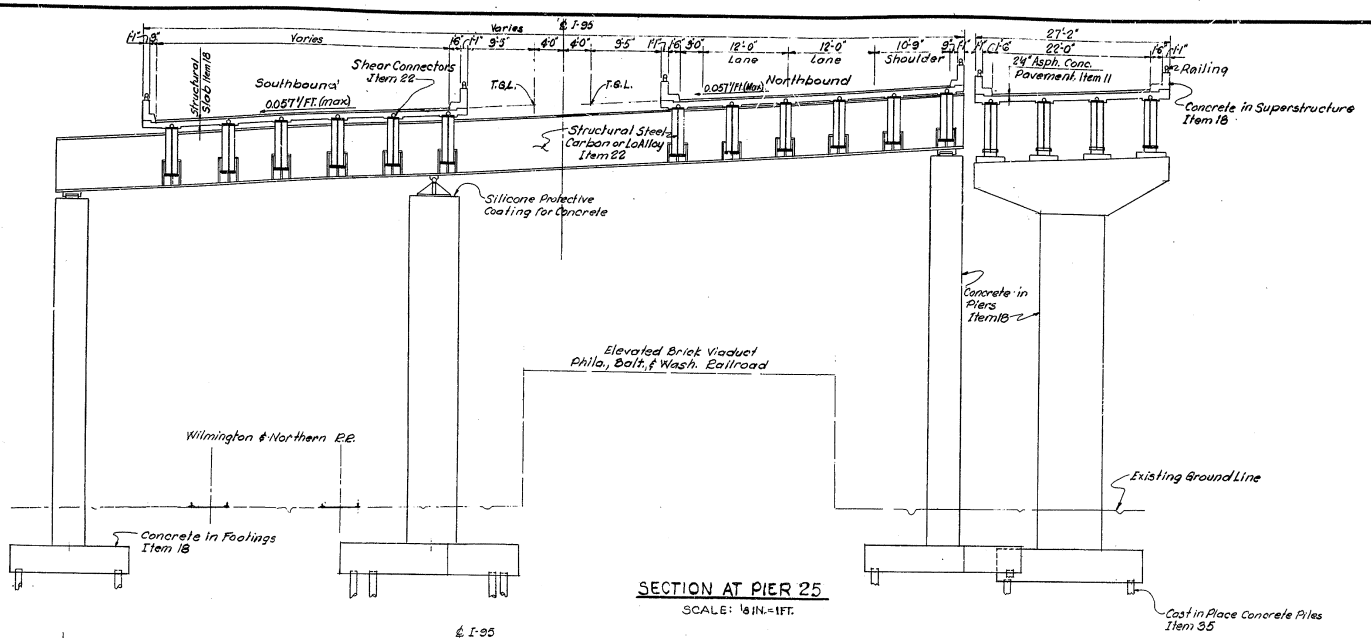
TYPICAL SECTIONS
SHEET 1 OF 2

APPROVED BY: [signature] BRIDGE ENGINEER — DATE: 4-16-64

SCALE: AS NOTED
DATE: APRIL 1, 1964

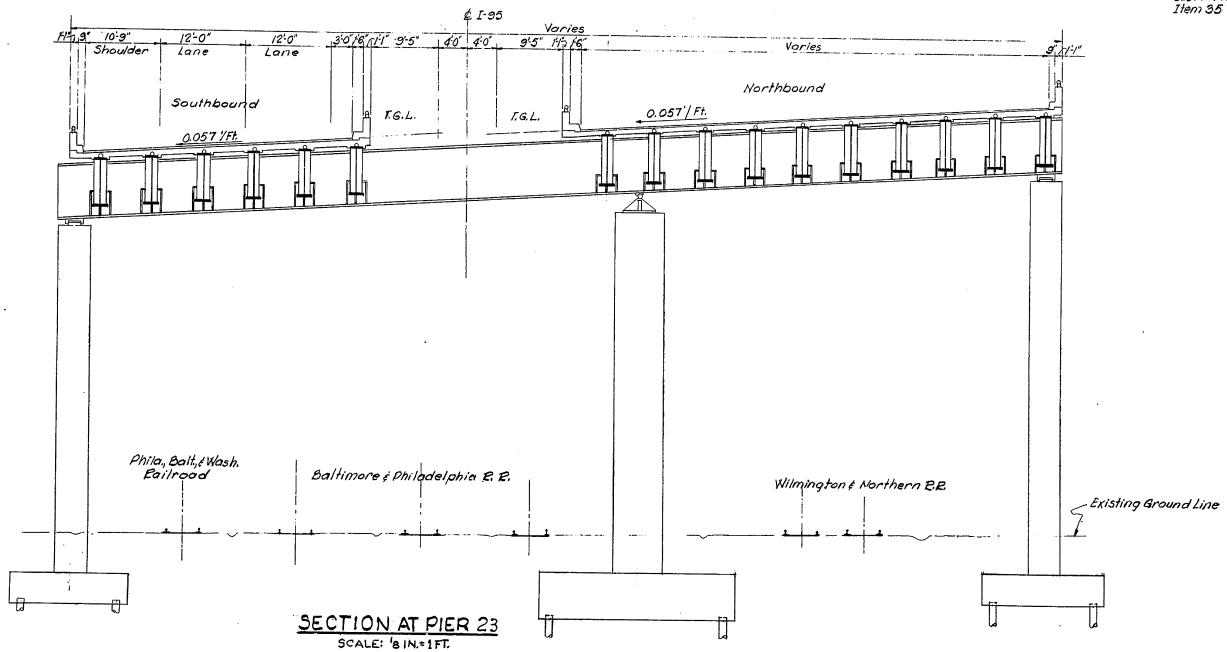
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA4



SECTION AT PIER 25

SCALE: 1/8 IN. = 1FT.



SECTION AT PIER 23

SCALE: 1/8 IN. = 1FT.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	39	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

Notes:
For General Notes, see Dwg. SA2
For sheet 1 of Typical Sections, see Dwg. SA4

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TYPICAL SECTIONS
SHEET 2 OF 2

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

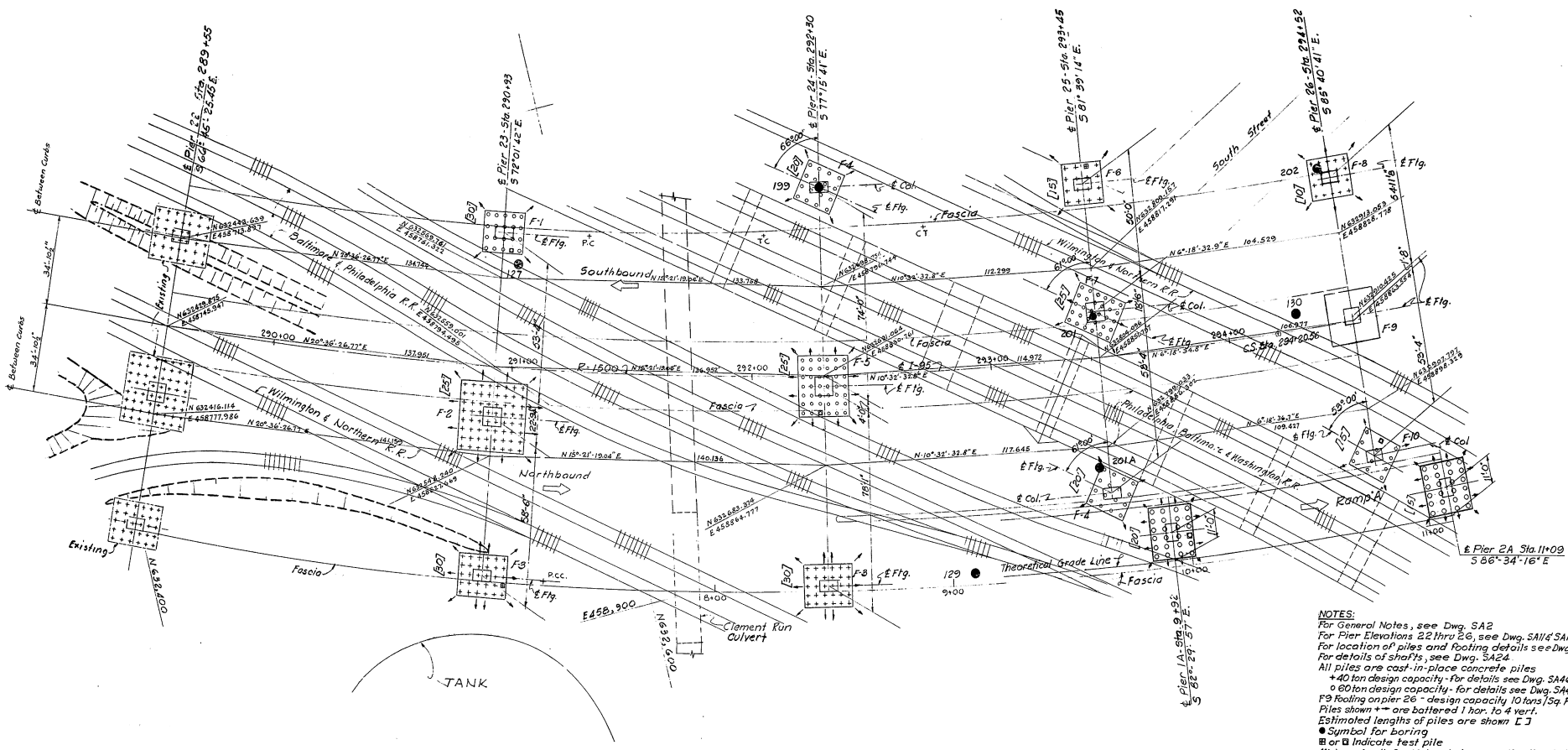
SCALE: 1/8 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA5

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	64	40	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
Lengths and Bearings shown are those of chords.
Center between Curbs has no relation to center of footers.
Coordinates & chord lengths figured by computer & added at request of Freeways Div. Feb. 8, 1965.

NOTES:
For General Notes, see Dwg. SA2
For Pier Elevations 22 thru 26, see Dwg. SA11 & SA12
For location of piles and footing details see Dwg SA25
For details of shafts, see Dwg. SA24.
All piles are cast-in-place concrete piles
+ 40 ton design capacity - for details see Dwg. SA46
○ 60 ton design capacity - for details see Dwg. SA46
F9 footing on pier 26 - design capacity 10 tons / Sq. Ft.
Piles shown +- are battered 1 hor. to 4 vert.
Estimated lengths of piles are shown [ ]
● Symbol for boring
⊞ or ⧈ Indicate test pile
Minimum length for 60 ton design capacity piles to be 2 Ft. less than the estimated length shown.

Drawn by W.J.K.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FOUNDATION PLAN
MAINLINE-PIER 22 TO PIER 26
RAMP A-PIERS 1A & 2A

APPROVED BY: [signature] BRIDGE ENGINEER — DATE 4-16-64

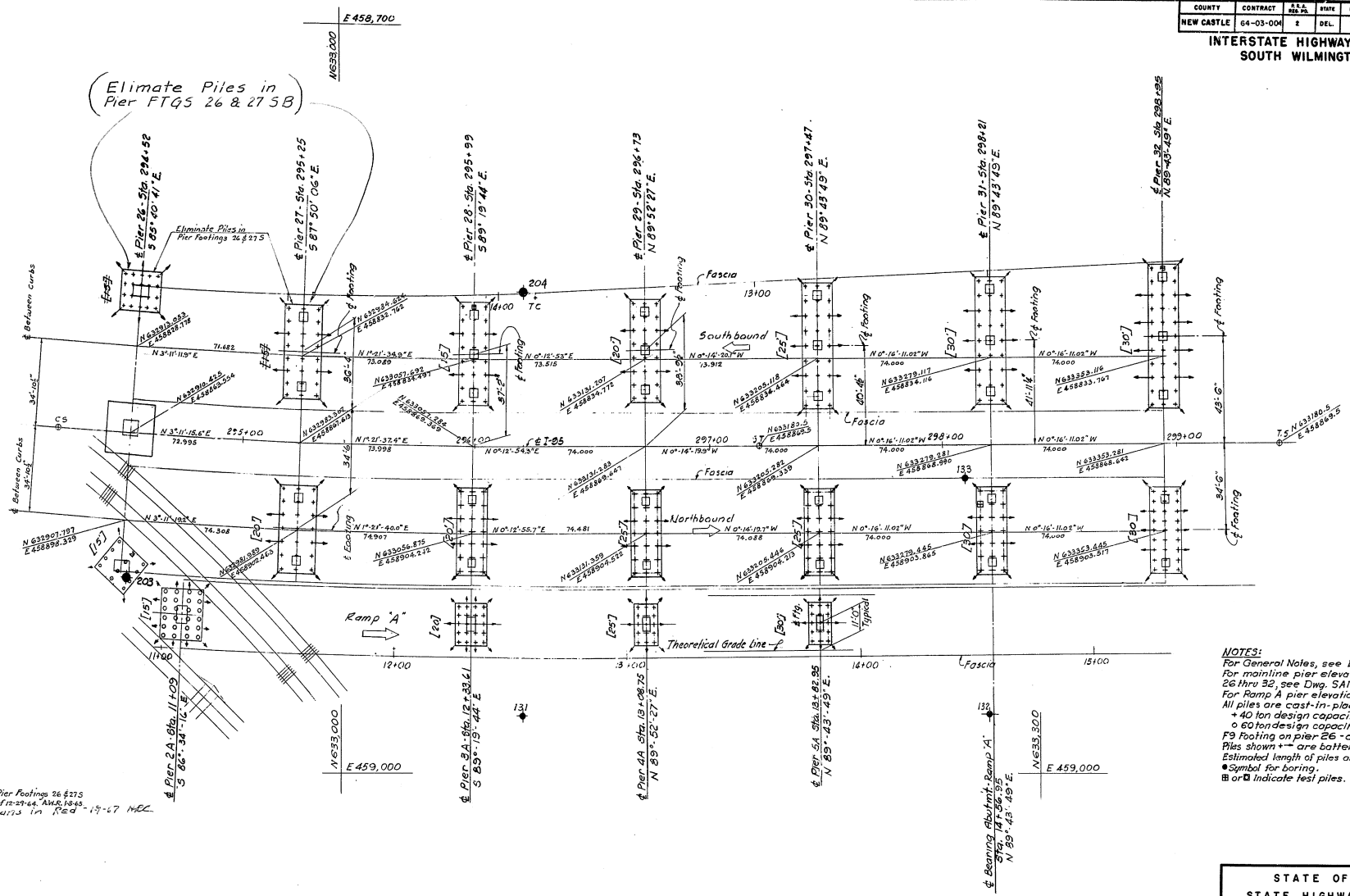
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA6

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	41	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



Revision:
Eliminate Piles in Pier Footings 26 & 27 S
See T.A.M.S. letter of 12-29-64, A.W.R. 18-65.
As Built Plans in Red - 19-67 MRC

NOTES:
For General Notes, see Dwg. SA2
For mainline pier elevations & types, piers 26 thru 32, see Dwg. SA12 & SA13
For Ramp A pier elevations, see Dwg. SA21
All piles are cast-in-place concrete piles.
+ 40 ton design capacity - for details see Dwg. SA46
o 60 ton design capacity - for details see Dwg. SA46
F9 footing on pier 26 - design capacity 10 tons/Sq.Ft.
Piles shown +— are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring.
⊞ or ⊠ Indicate test piles.

Drawn by W.J.K.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

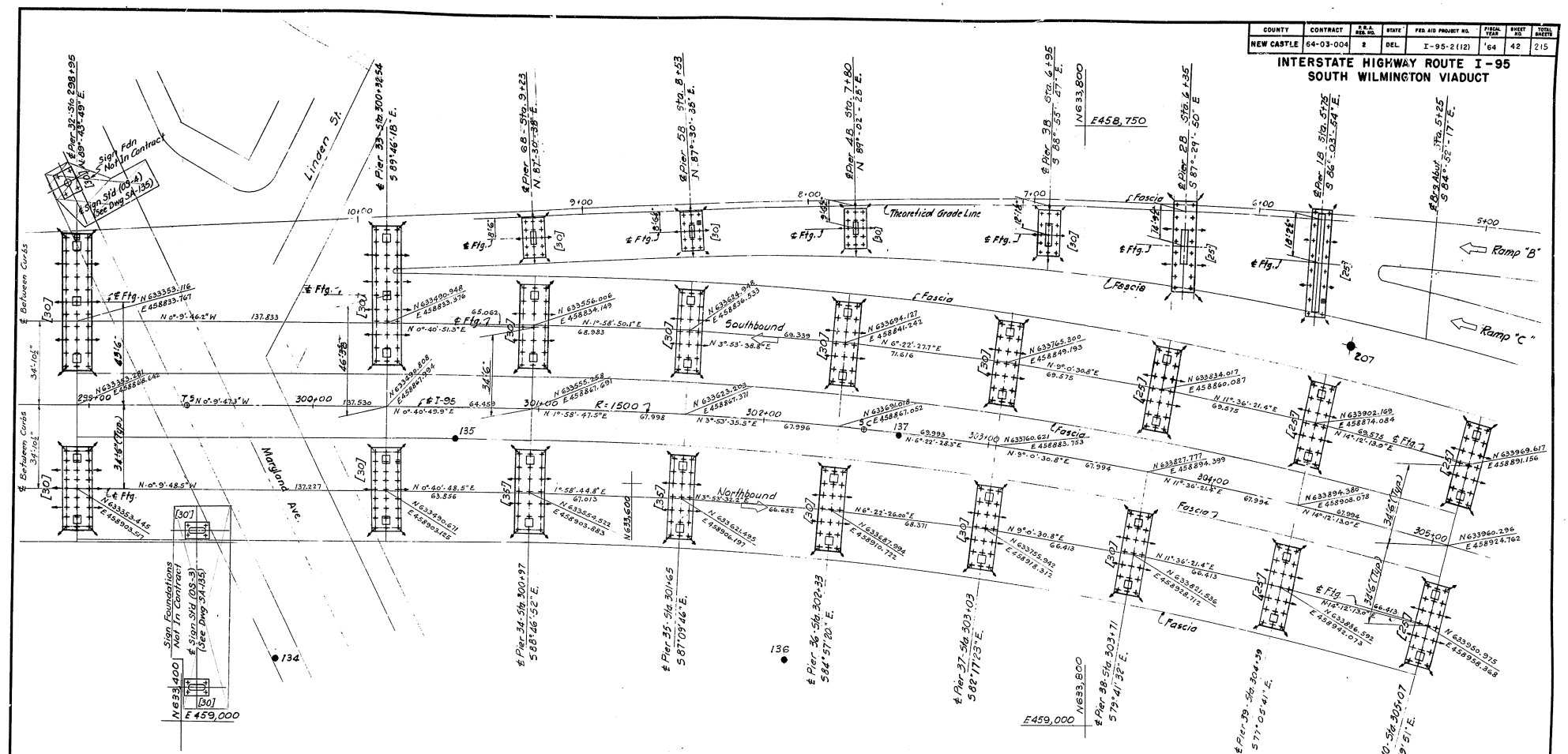
FOUNDATION PLAN
MAINLINE-PIER 26 TO PIER 32
RAMP A-PIERS 2A THRU 5A

APPROVED BY: [signature] 9-16-64
BRIDGE ENGINEER — DATE

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA7



COUNTY	CONTRACT	F.A.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	42	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

NOTES
For General Notes see Dwg. SA2
For mainline pier elevations & types, piers 32 thru 40, see Dwgs. SA13, SA14 & SA15
For ramp B pier elevations, see Dwg. SA22
All piles are cast-in-place concrete piles with design capacity of 40 tons. For details see Dwg. SA46
Piles shown ←→ are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring.
⊞ Indicates test piles

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FOUNDATION PLAN
MAINLINE-PIER 32 TO PIER 40
RAMP B

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

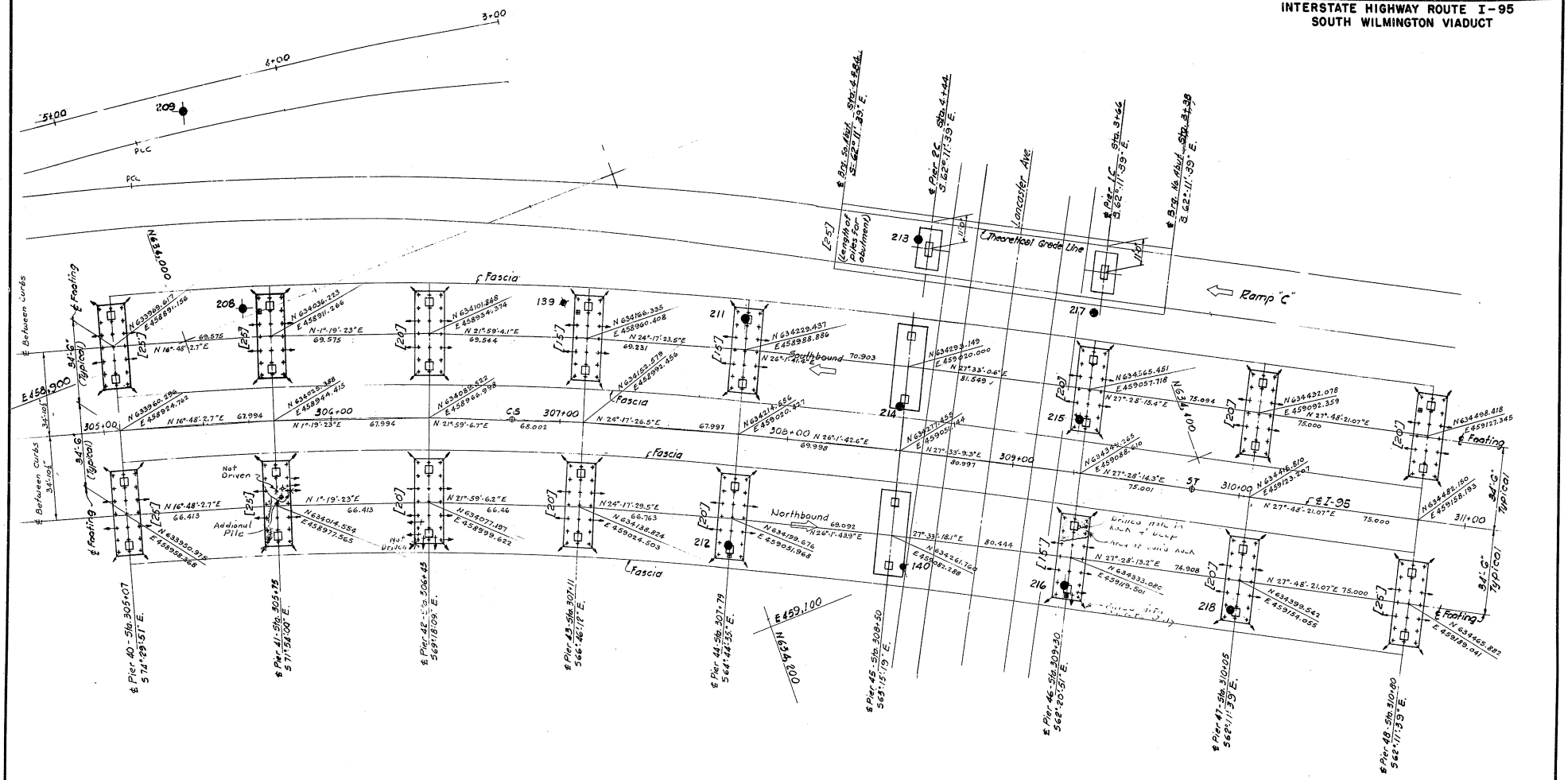
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA8

Drawn by W.J.K.
Checked by L.R.

COUNTY	CONTRACT	R.P.E. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	43	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For mainline pier elevations & types, piers 40 thru 48, see Dwgs. SA15, SA16 & SA17.
For ramp C pier elevations, see Dwg. SA23
All piles are cast-in-place concrete piles with design capacity of 40 tons. For details see Dwg. SA46
Mainline pier 45 and ramp C piers 1 & 2 have a footing design capacity of 2 tons/Sq. Ft.
Piles shown ←→ are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring
⊞ Indicates test piles

Drawn by W.J.K.
Checked by L.R.

As Built Plans - 1-9-67 MRC

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FOUNDATION PLAN
MAINLINE-PIER 40 TO PIER 48
RAMP C

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER DATE

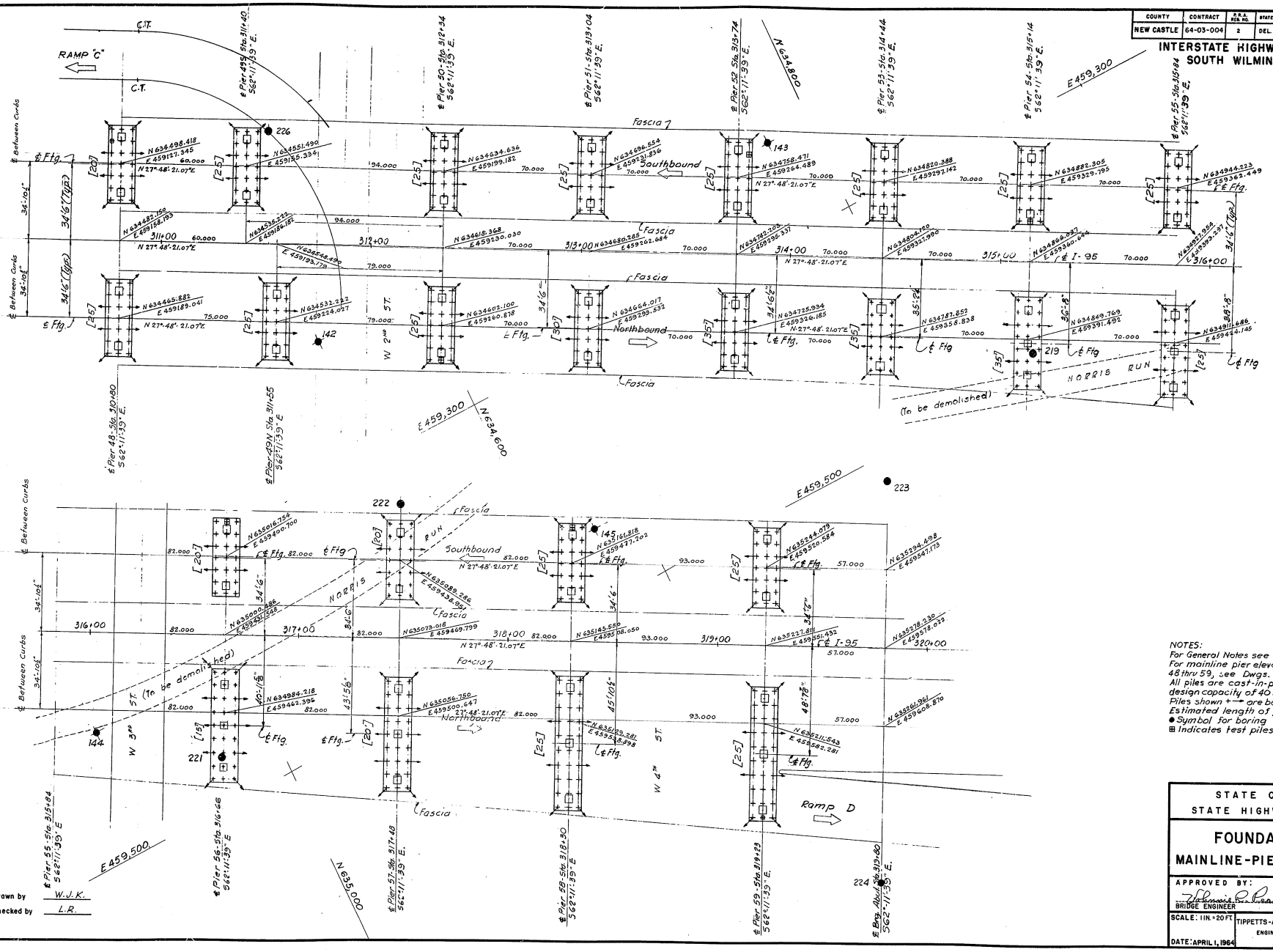
SCALE: 1 IN. = 20 FT
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA9

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	44	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For mainline pier elevations & types, piers 48 thru 59, see Dwgs. SA17 thru SA20.
All piles are cast-in-place concrete piles with a design capacity of 40 tons. For details see Dwg. SA46
Piles shown +—→ are battered 1 hor. to 4 vert.
Estimated length of piles are shown [ ]
● Symbol for boring
⊞ Indicates test piles

Drawn by W.J.K.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

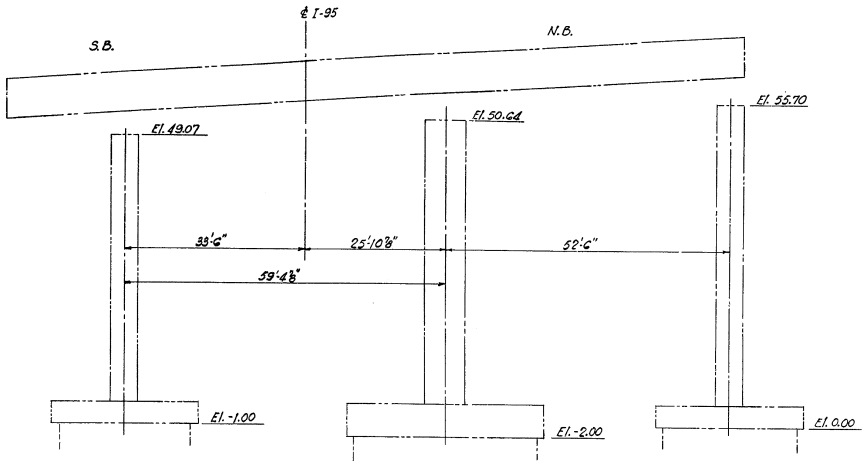
FOUNDATION PLAN
MAINLINE-PIER 48 TO PIER 59

APPROVED BY: Wilmine R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

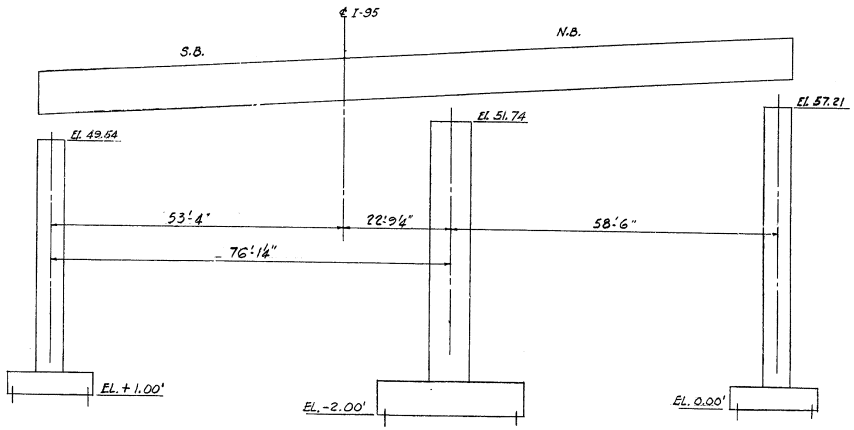
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA10

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	45	215

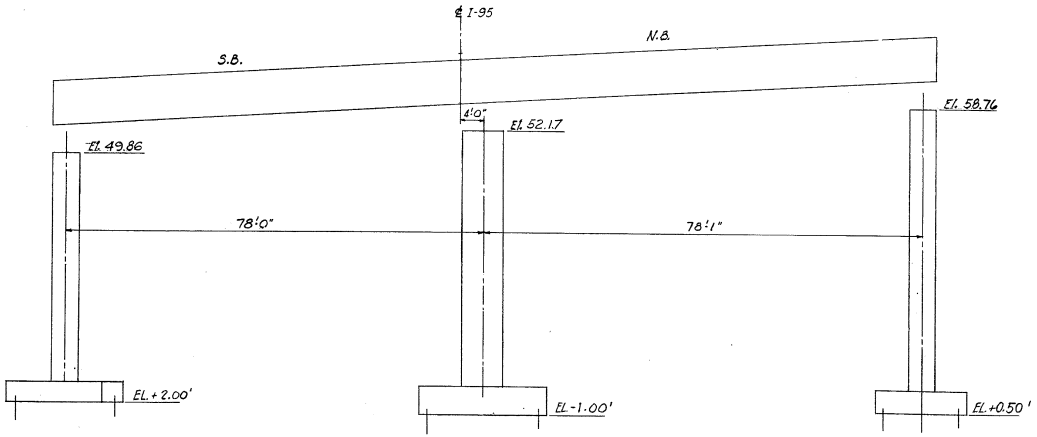
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PIER 22
(EXISTING PIERS)



PIER 23



PIER 24

NOTES:
For General Notes see Dwg. SA2
For Foundation Plan, see Dwg. SA6
For details of foundations, see Dwg. SA24
For details of Shafts, see Dwg. SA25
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For extent of areas to be bush hammered on top of piers, See Dwg. SA25

Drawn by E.N.
Checked by H.B.L. & L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 22, 23, & 24

APPROVED BY: Vonnie C. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

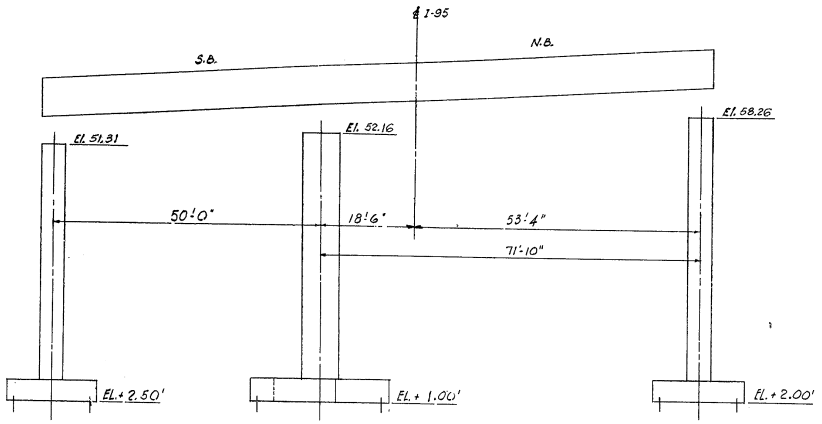
SCALE: 3/32 IN = 1 FT
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

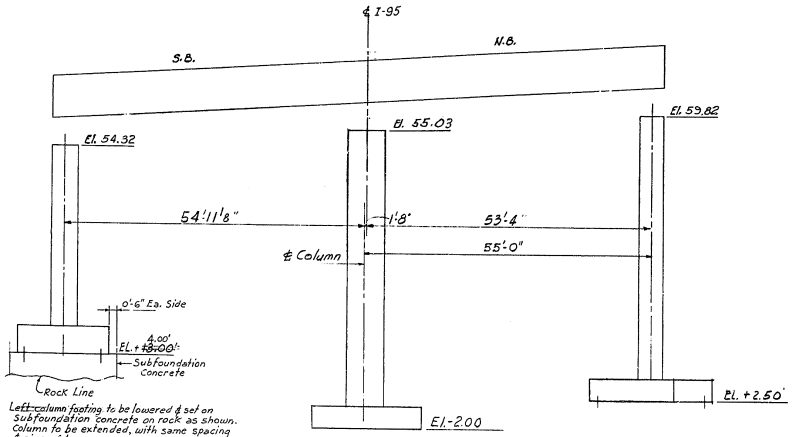
DWG. NO. SA11

COUNTY	CONTRACT	R.B.A. NOS. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	46	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

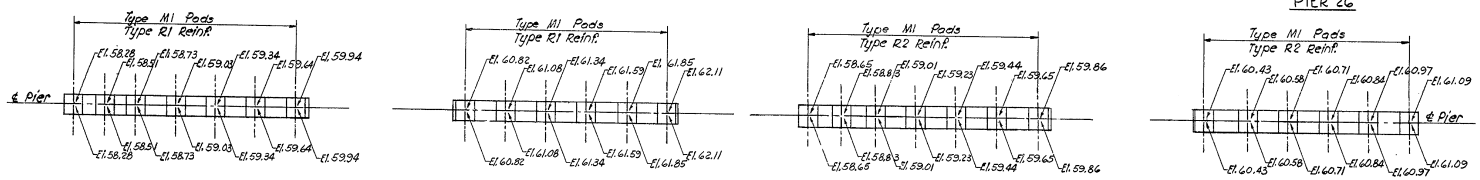


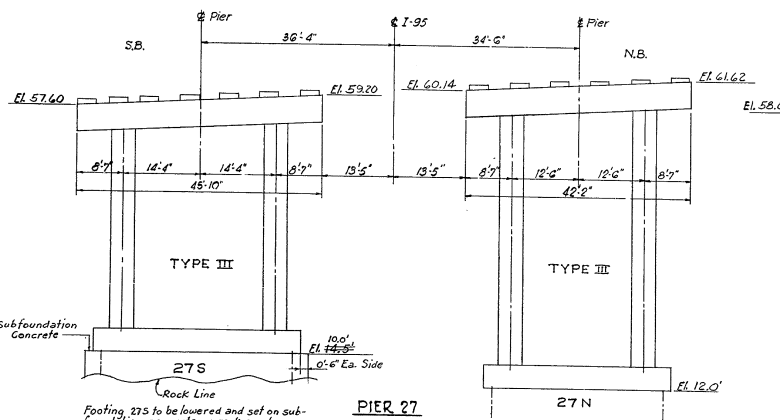
PIER 25



Left column footing to be lowered & set on subfoundation concrete on rock as shown. Column to be extended, with same spacing & size of bars.

PIER 26

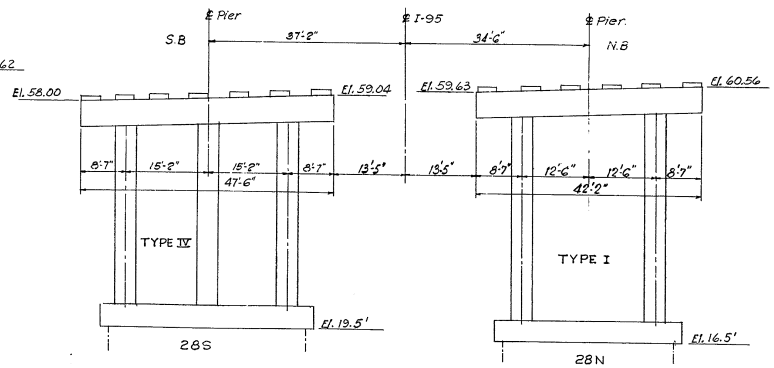




PIER 27

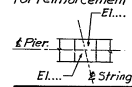
Footing 27S to be lowered and set on subfoundation concrete on rock as shown. Columns to be extended, with same spacing & size of bars.

Revision:
Footings for Piers 26 & 27S lowered as shown. See T.A.M.S. letter of 12-29-64 A.M.R. 1-8-65.



PIER 28

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan of piers 25 & 26, see Dwg. SA6
For Foundation Plan of piers 27 & 28, see Dwg. SA7
For details of foundation of piers 25 & 26, see Dwg. SA24
For details of shafts of piers 25 & 26, see Dwg. SA25
For details of type I Rigid frames, see Dwg. SA26
For details of type III Rigid frames, see Dwg. SA27
For details of type IV Rigid frames, see Dwg. SA28
All elevations are taken looking upstation putting northbound on righ side and southbound on left side.
For extent of areas to be bush hammered on top of piers 22 & 23, see Dwg. SA25.
For pad masonry details, see Dwg. SA33
For reinforcement details, see Dwg. SA34



El.... El. on pier 27 & 28 indicates final elevation of concrete pad. See general notes, Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 25, 26, 27, & 28

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 3/32 IN = 1FT.

DATE: APRIL, 1964

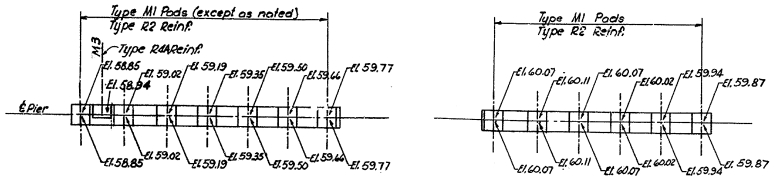
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

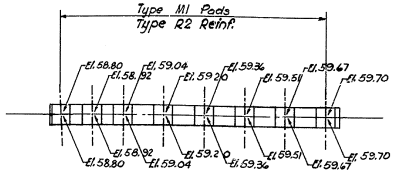
DWG. NO. SA12

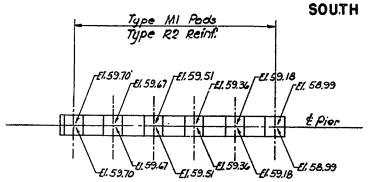
Drawn by E.N.
Checked by L.R. & H.B.L.

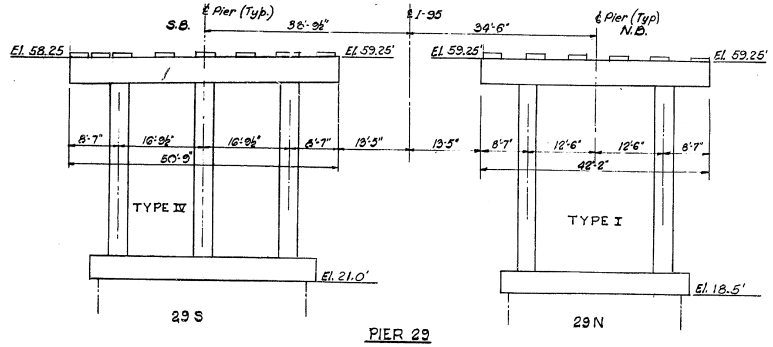
COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	47	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

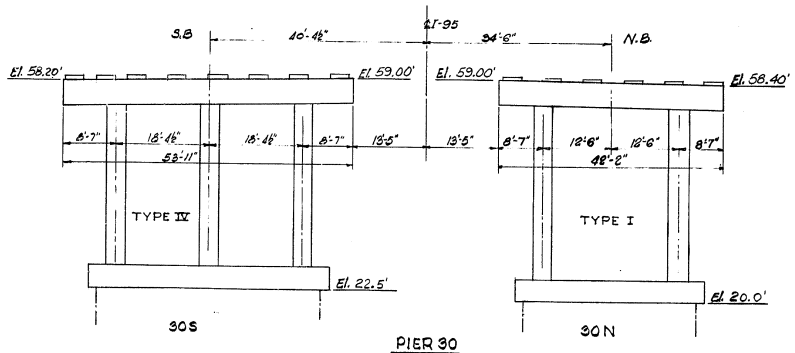




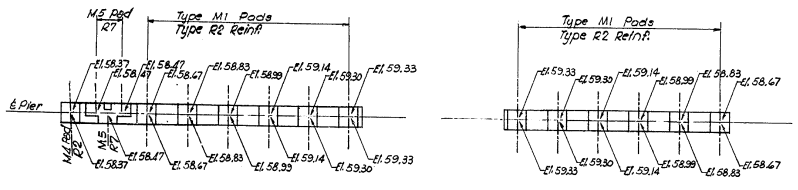


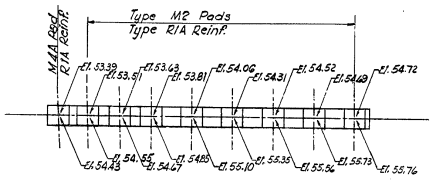


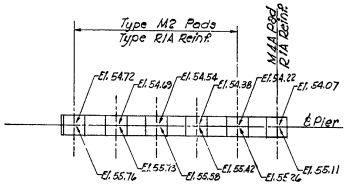
PIER 29

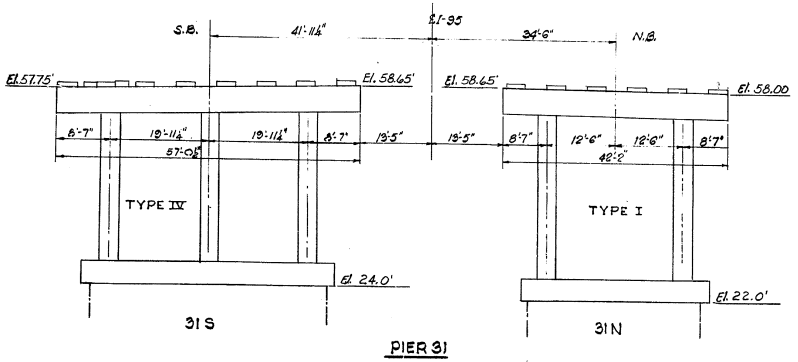


PIER 30

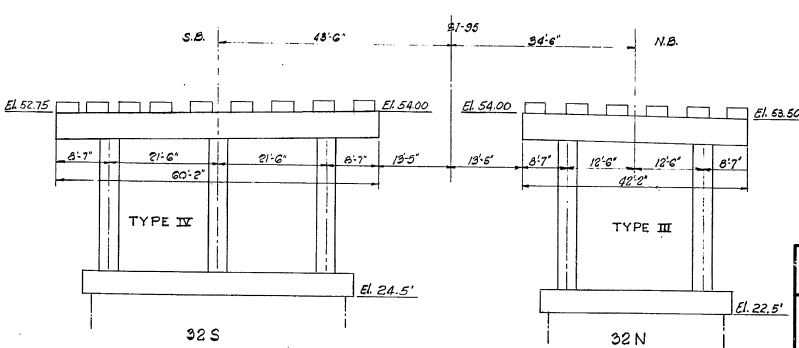






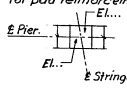


PIER 31



PIER 32

NOTES:
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA7
For details of type I Rigid frame, see Dwg. SA26
For details of type III Rigid frame, see Dwg. SA27
For details of type IV Rigid frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 29, 30, 31, & 32

APPROVED BY: Dennis R. Hansen
BRIDGE ENGINEER — DATE 4-16-64

SCALE: 3/32 IN = 1FT
DATE: APRIL 1, 1964

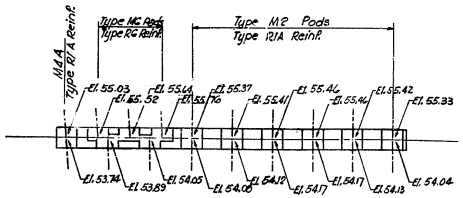
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

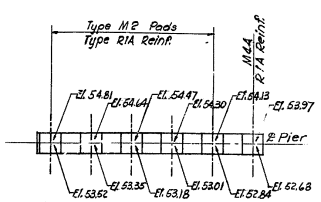
DWG. NO. SA13

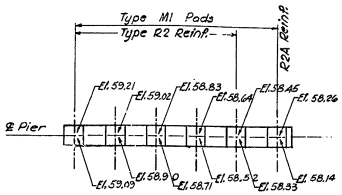
Drawn by E.N.
Checked by L.R.& H.B.L.

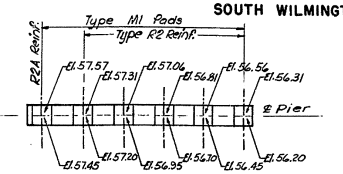
COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	48	215

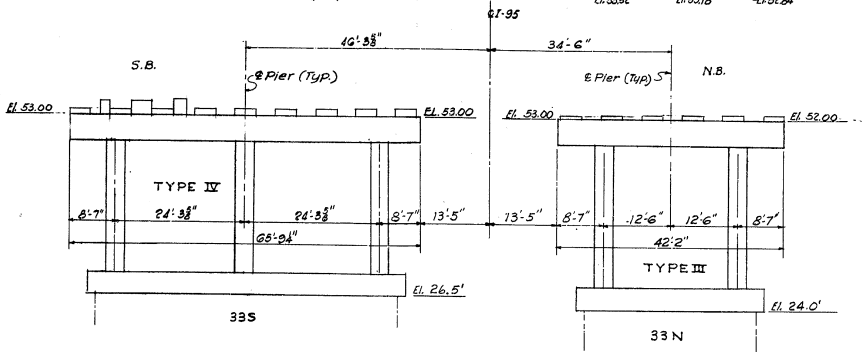
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



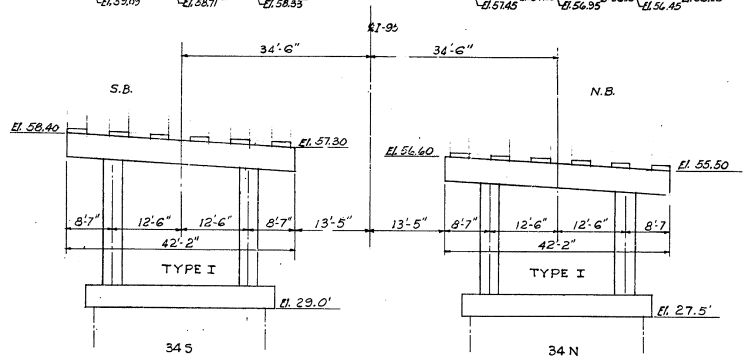




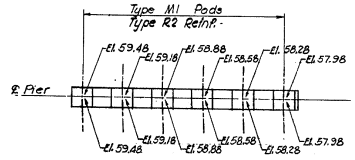


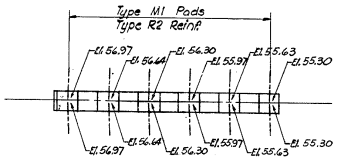


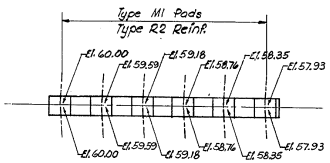
PIER 33

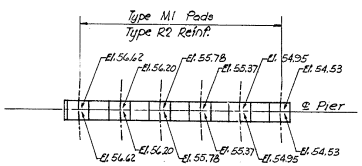


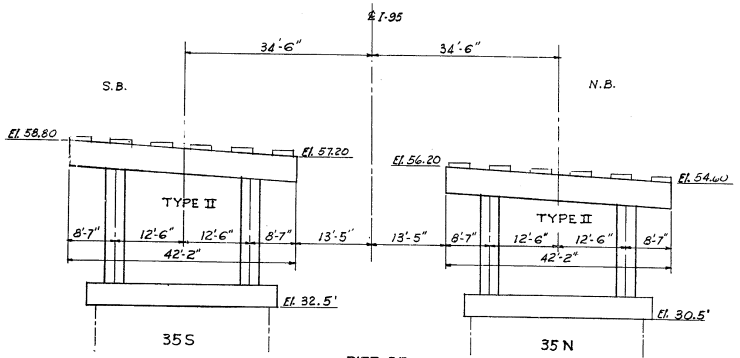
PIER 34



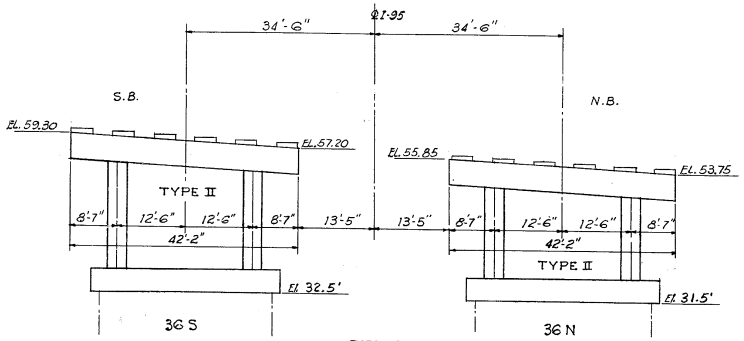






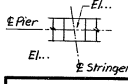


PIER 35



PIER 36

NOTES
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA8
For details of type I & II Rigid frame see Dwg. SA26
For details of type III Rigid frame, see Dwg. SA27
For details of type IV Rigid frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34.



El... Indicates final elevation of concrete pad. See general notes, Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 33, 34, 35, & 36

APPROVED BY: _____ BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 3/32 IN. = 1 FT

DATE: APRIL 1, 1964

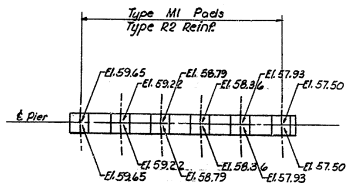
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

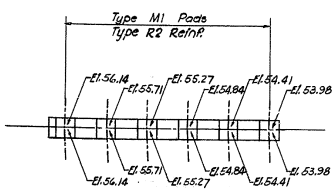
DWG. NO. SA14

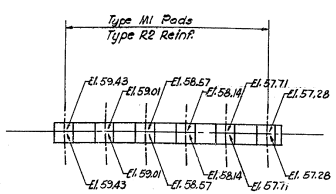
Drawn by B.N.
Checked by L.R.# H.B.L.

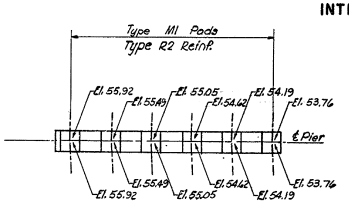
COUNTY	CONTRACT	R.R.I. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	49	215

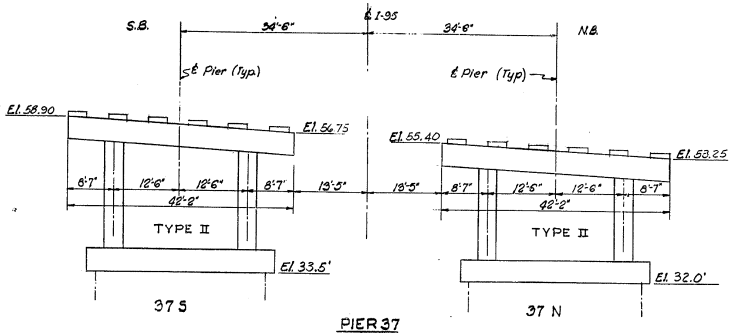
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



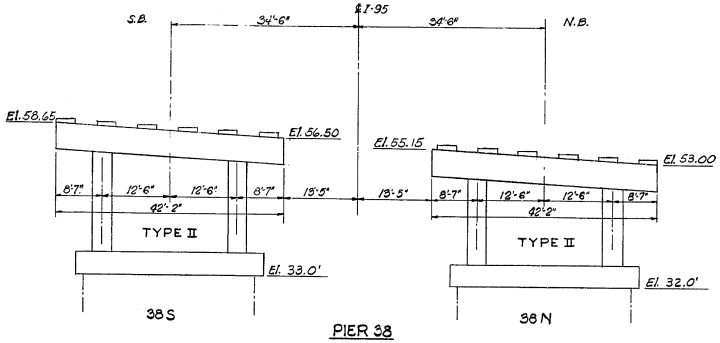




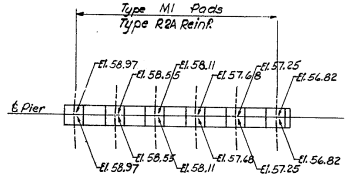


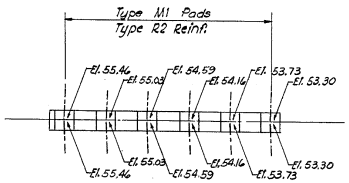


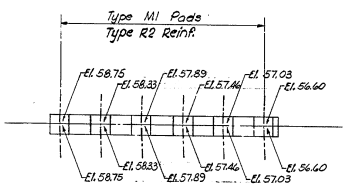
PIER 37

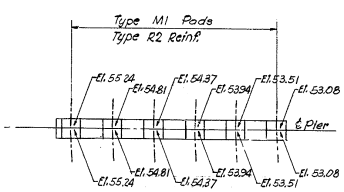


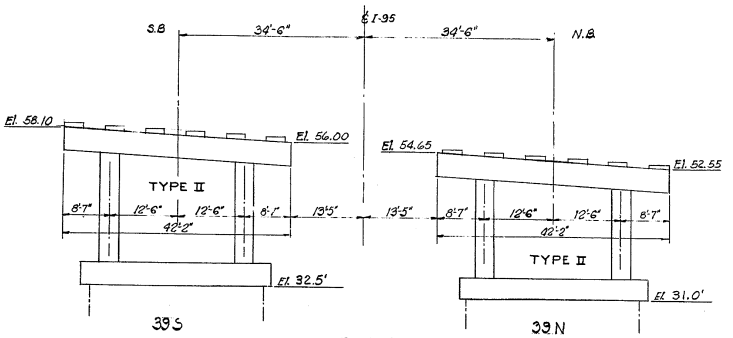
PIER 38



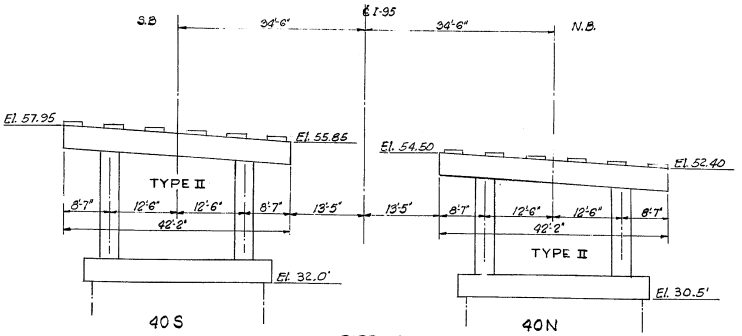






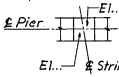


PIER 39



PIER 40

NOTES:
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA8
For details of type III Rigid frame, see Dwg. SA27
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34.



El... indicates final elevation of concrete pad. See general notes, Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 37, 38, 39, & 40

APPROVED BY: T. Dennis O'Rourke
BRIDGE ENGINEER
4-16-64
DATE

SCALE: 3/32 IN = 1 FT.
DATE: APRIL 1, 1964

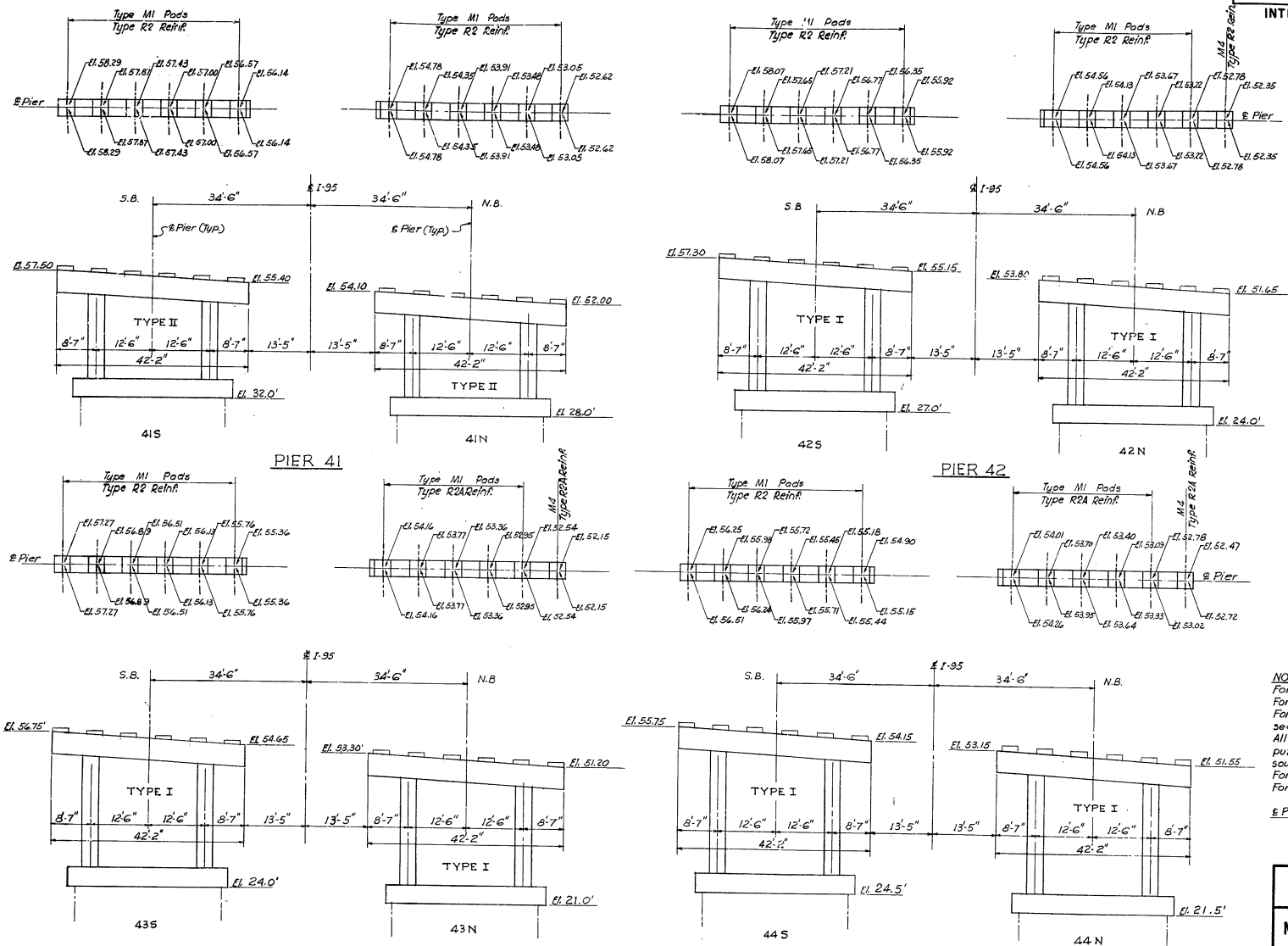
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA15

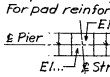
Drawn by E.N.
Checked by L.R.& H.B.L.

COUNTY	CONTRACT	R.R.& RES. No.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	50	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation plan, see Dwg. SA9
For details of types I & II Rigid frame, see Dwg. SA26
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

Drawn by E.N.
Checked by L.R.& H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 41, 42, 43, & 44

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

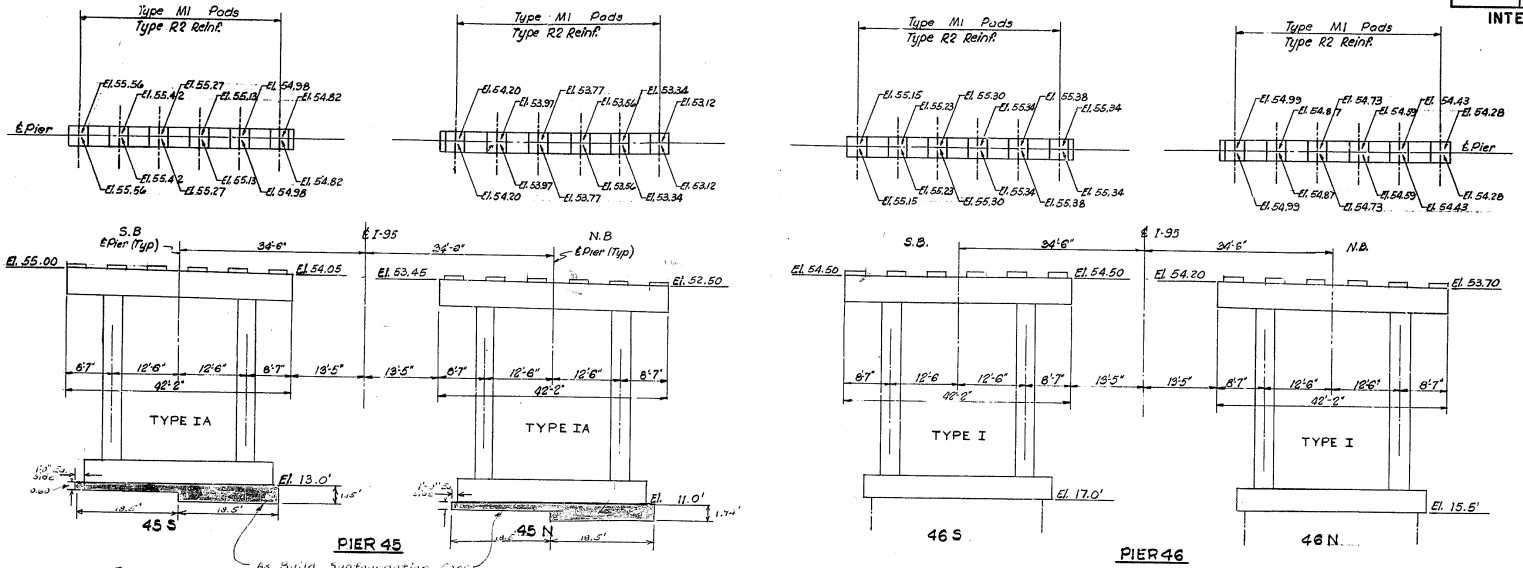
SCALE: 3/32 IN.=1FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

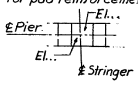
DWG. NO. SA16

COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	51	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For Foundation plan, see Dwg. SA9
For details type I & IA Rigid frame see Dwg. SA26
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El...indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 45, 46, 47, & 48

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 3/32 IN=1FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA17

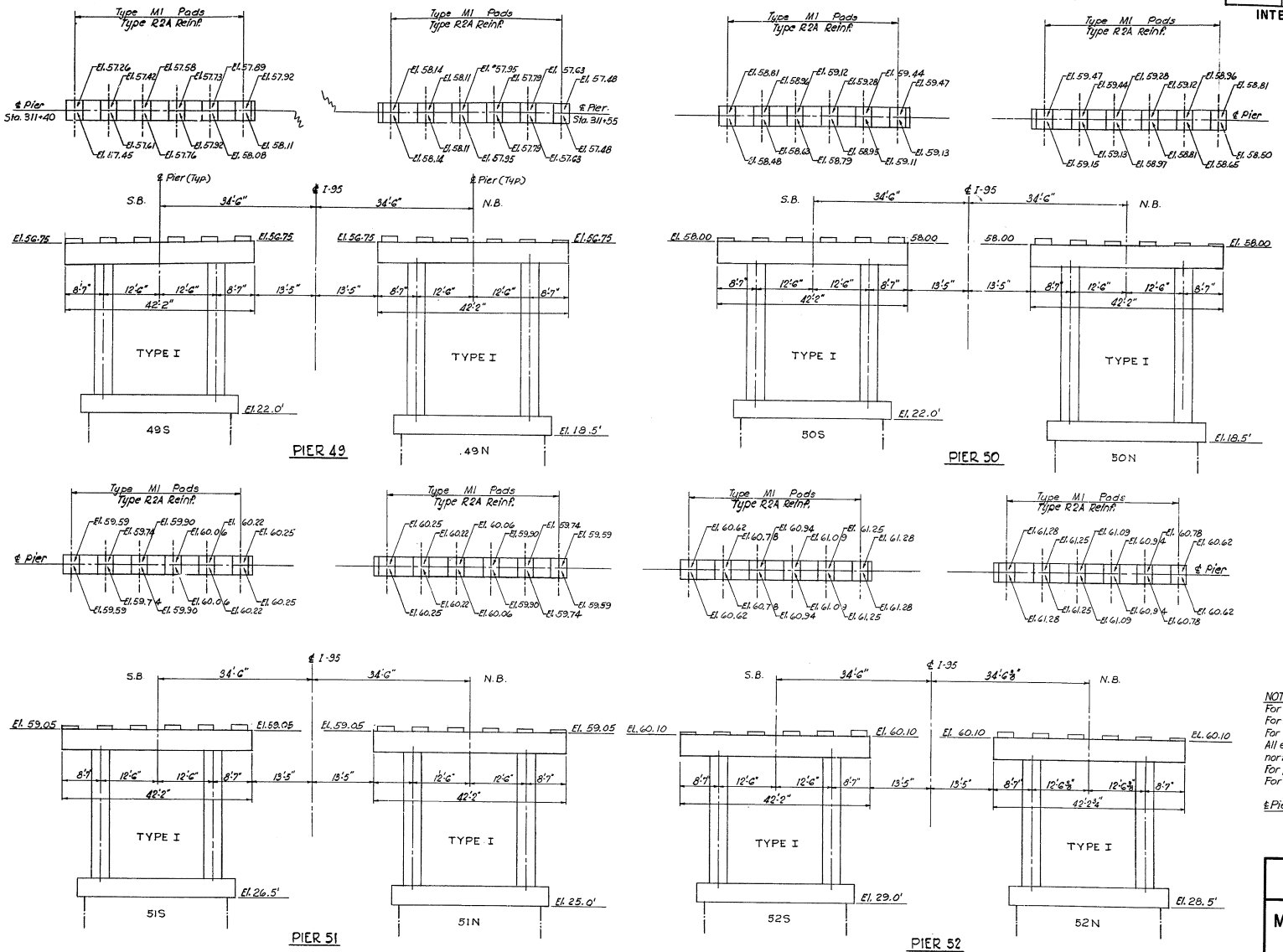
Drawn by M.B.
Checked by L.R. & H.B.L.

As Built Plans - HRD 1-7-67

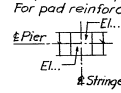
D C B A

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	52	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA10
For details of type I Rigid frame, see Dwg. SA26
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 49, 50, 51, & 52

APPROVED BY: Johnnie P. Pearson Jr.
BRIDGE ENGINEER
4-14-64
DATE

SCALE: 3/32 IN = 1 FT
DATE: APRIL 1, 1964

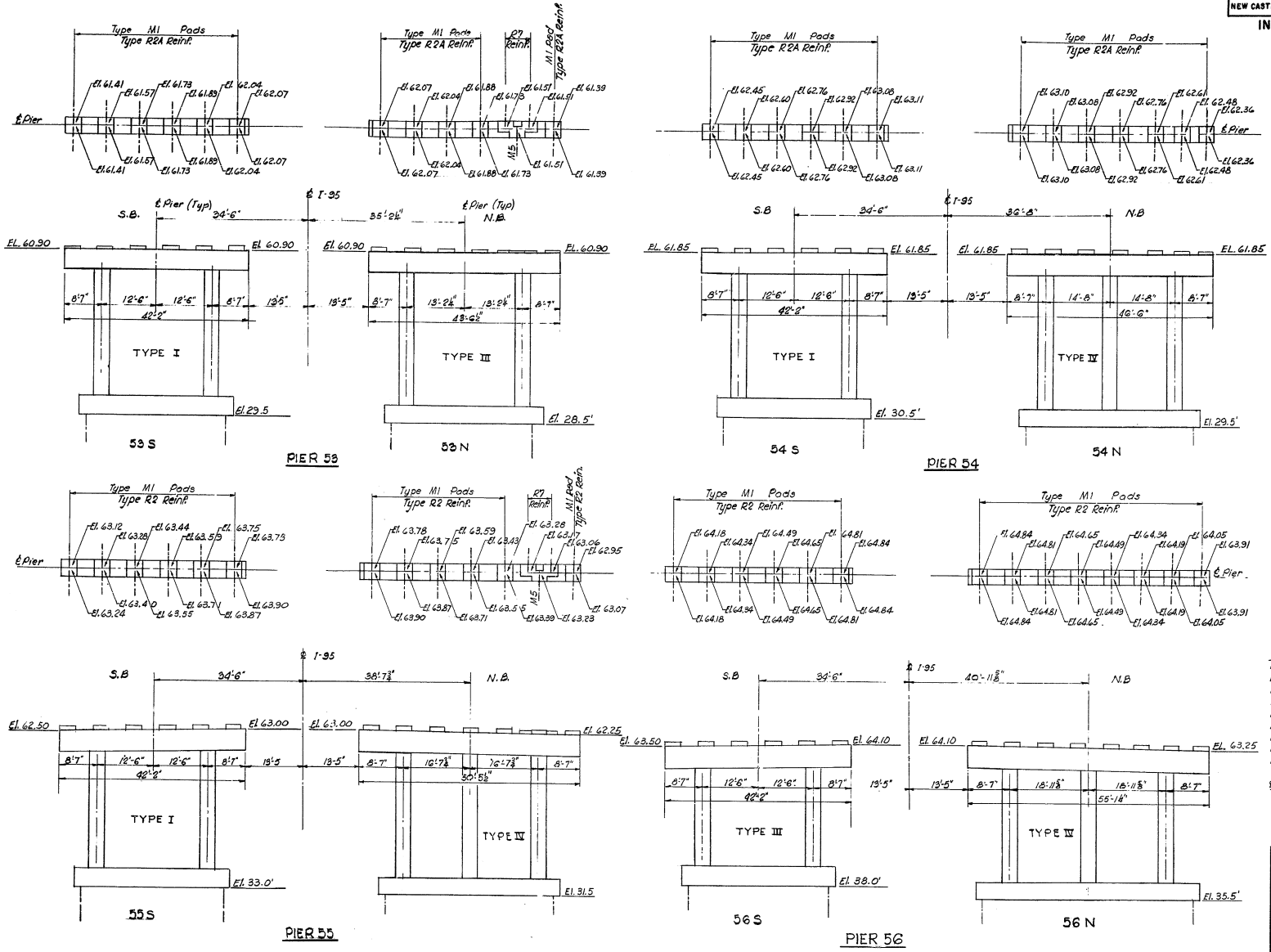
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA18

Drawn by E.N.
Checked by L.R.& H.B.L.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	53	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA10
For details of type I Rigid Frame, see Dwg. SA26
For details of type III Rigid Frame, see Dwg. SA27
For details of type IV Rigid Frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 53, 54, 55, & 56

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 3/32 IN = 1FT
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

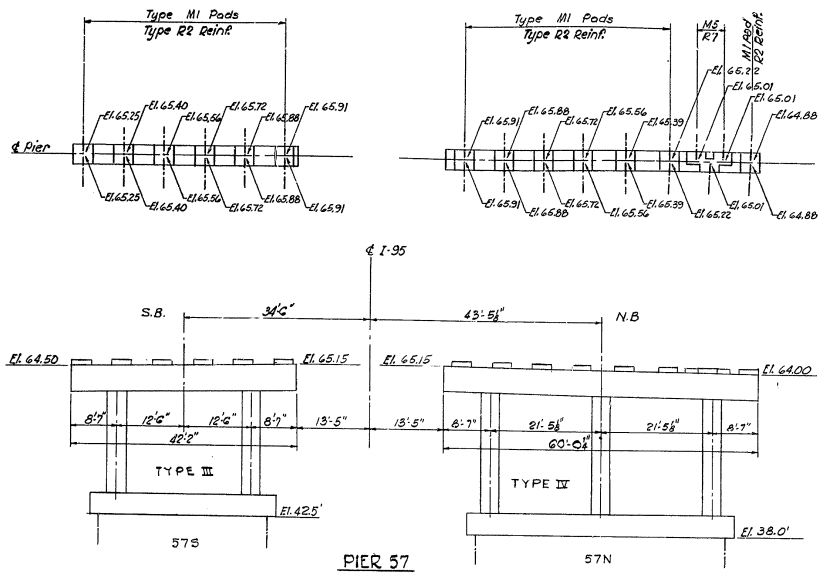
DWG. NO. SA19

Drawn by M.B.
Checked by L.R. & H.B.L.

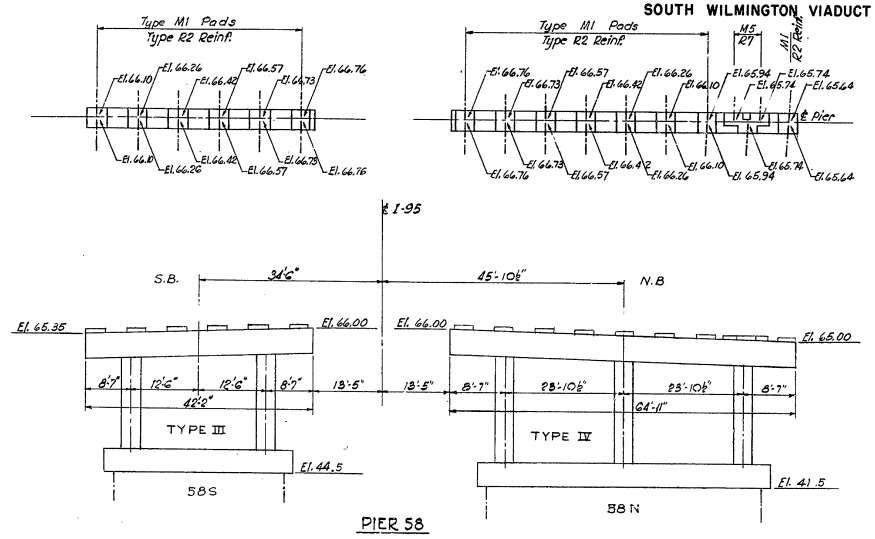
55N

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	54	215

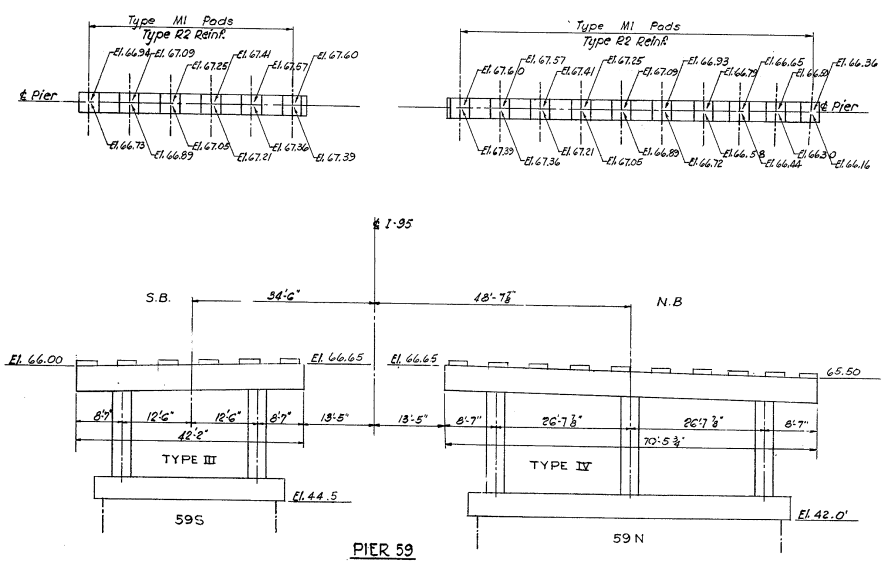
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PIER 57

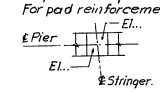


PIER 58



PIER 59

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA10
For details of type III rigid frame, see Dwg. SA27
For details of type IV rigid frame, see Dwg. SA28
All elevations are taken looking upstation putting northbound on right side and southbound on left side.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final elevation of concrete pad. see general notes Dwg. SA2 for bush hammering.

Drawn by M.B.
Checked by L.R. & H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER ELEVATIONS
PIERS 57, 58, & 59

APPROVED BY: Thomas L. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

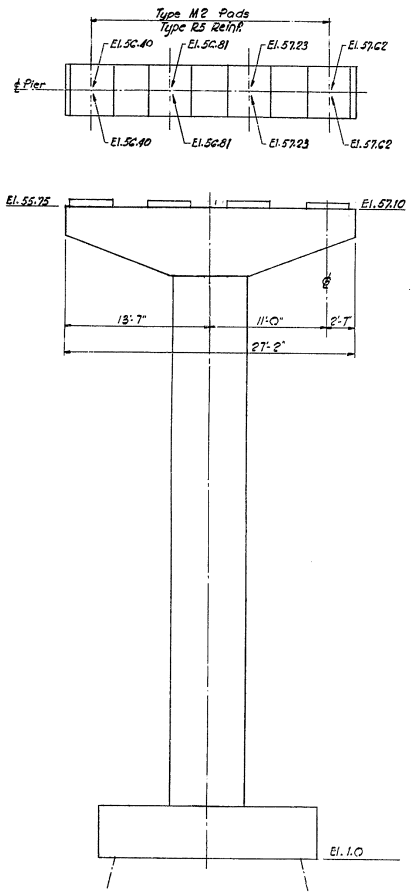
SCALE: 3/32 IN.=1FT — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

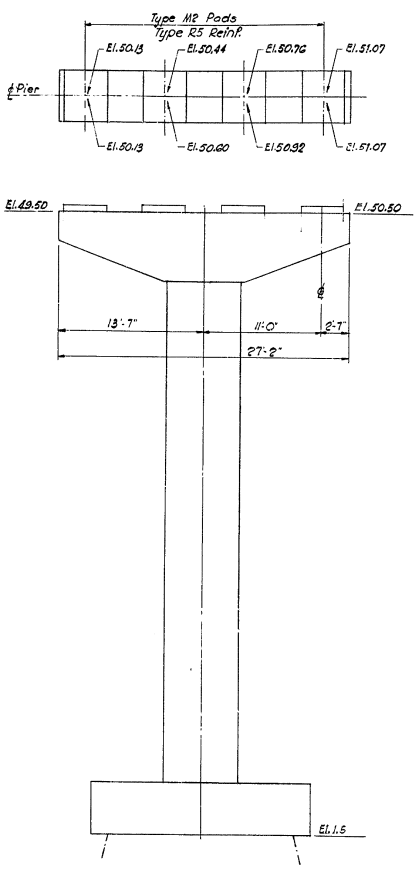
DWG. NO. SA20

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	55	215

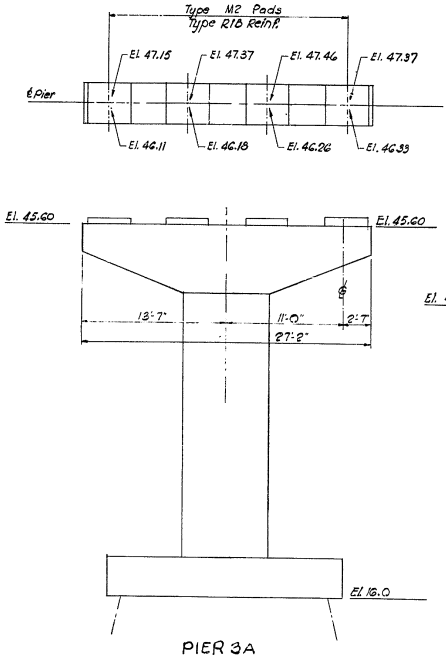
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



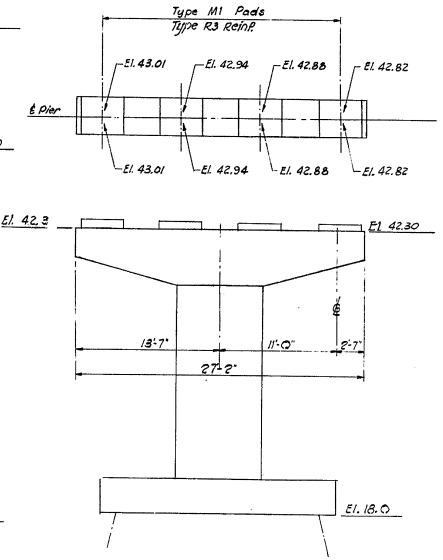
PIER 1A



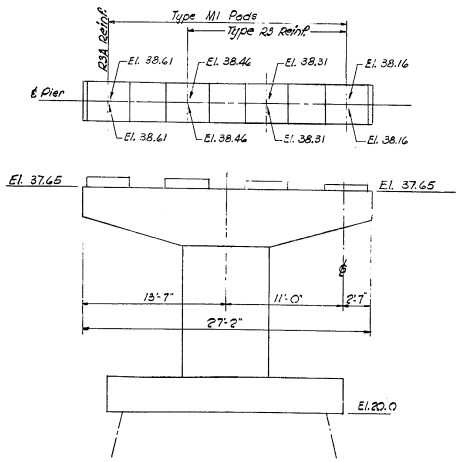
PIER 2A



PIER 3A

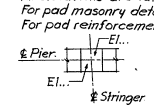


PIER 4A



PIER 5A

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA6 & SA7
For details of piers 1A & 2A, see Dwg. SA29
For details of piers 3A, 4A & 5A, see Dwg. SA31
All elevations are taken looking upstation.
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final bush hammered elevation of top of concrete pad under bearing plate.

Drawn by M.B.
Checked by L.R. & H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

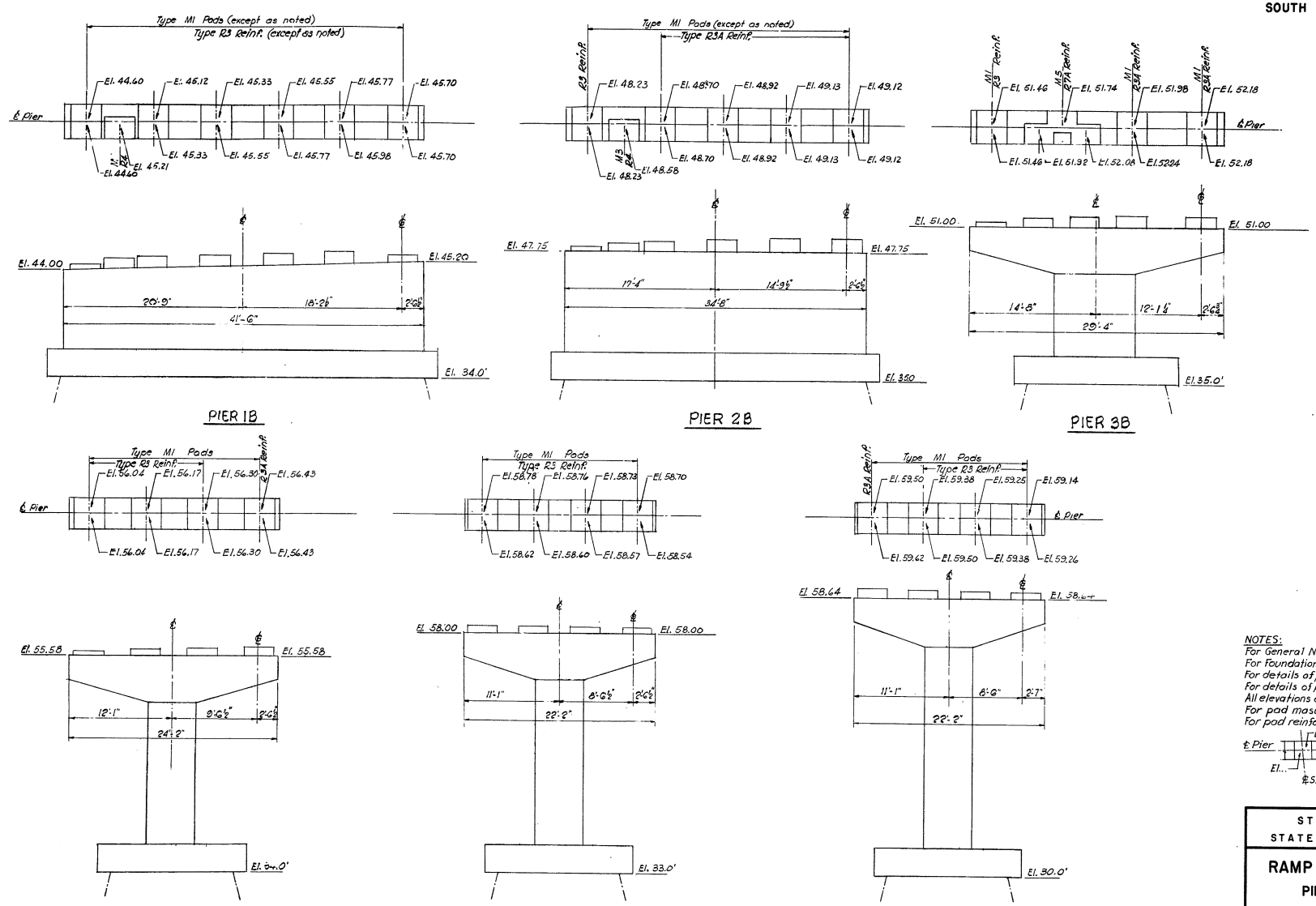
RAMP A PIER ELEVATIONS
PIERS 1A THRU 5A

APPROVED BY: Johnnie L. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

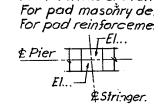
SCALE: 3/16 IN = 1 FT
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA21

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	56	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg SA8
For details of piers 1B, 2B & 3B, see Dwg. SA30
For details of piers 4B, 5B & 6B, see Dwg. SA31
All elevations are taken looking upstation
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA4



El... Indicates final elevation of concrete pad. See general notes Dwg. SA2 for bush hammering.

Drawn by M.B.
Checked by L.R. & H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

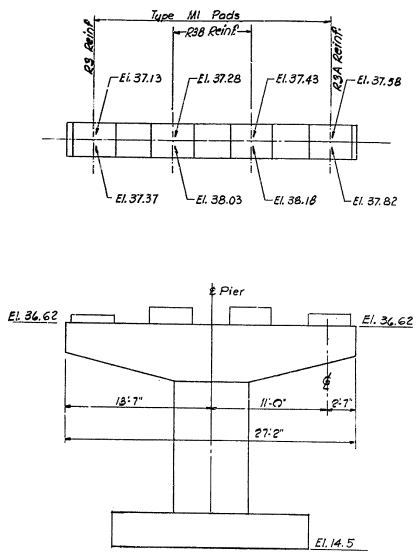
RAMP B PIER ELEVATIONS
PIERS 1B THRU 6B

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

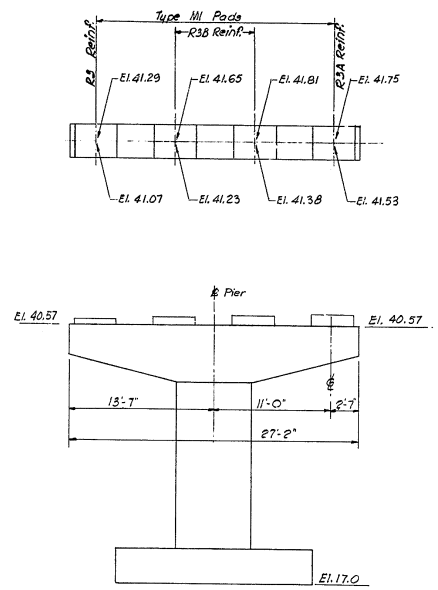
SCALE: 3/16 IN.=1 FT.
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA22

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	57	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

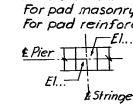


PIER 1C



PIER 2C

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA9
For details of piers, see Dwg. SA31
All elevations are taken looking upstation
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



El... Indicates final bush-hammered elevation of concrete pad under bearing plate.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP C PIER ELEVATIONS
PIERS 1C & 2C

APPROVED BY: Johnnie L. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 3/16 IN.=1 FT. — DATE: APRIL 1, 1964

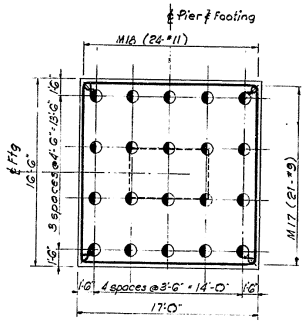
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA23

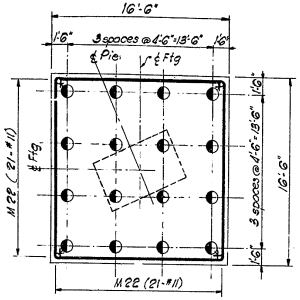
Drawn by M.B.
Checked by L.R. & H.B.L.

COUNTY	CONTRACT	R.R.S. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	58	215

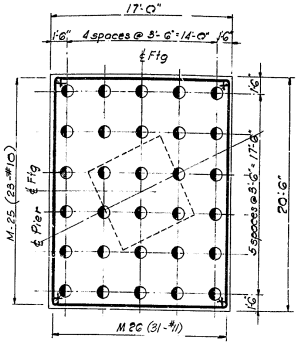
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



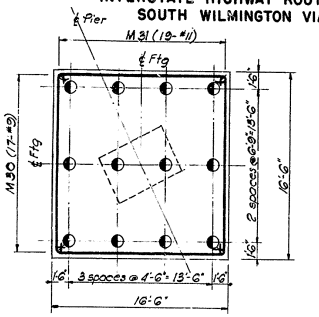
F-1



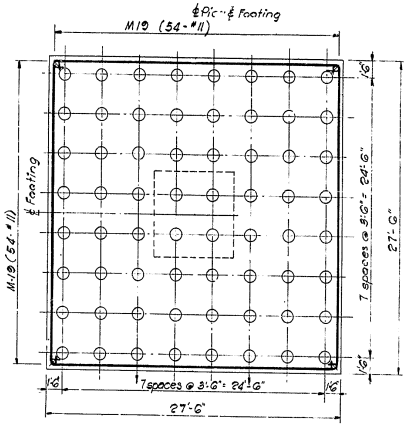
F-4



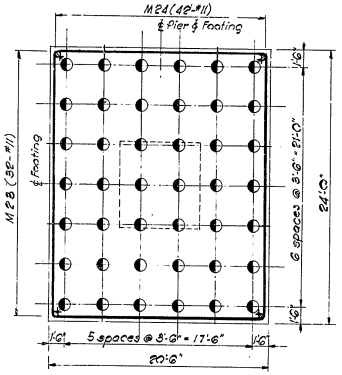
F-7



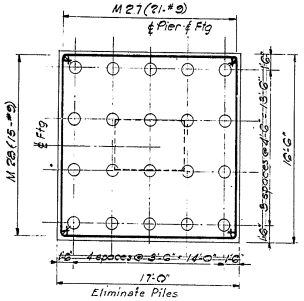
F-10



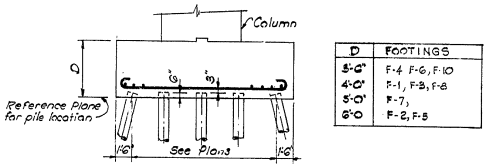
F-2



F-5



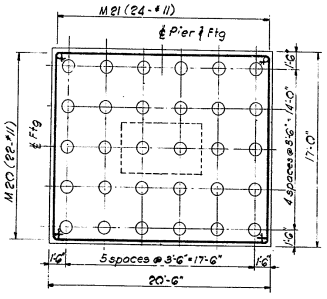
F-8



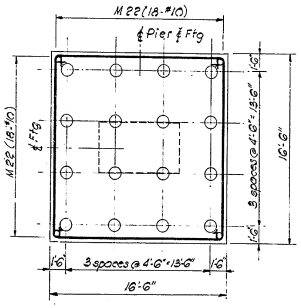
D	FOOTINGS
5'-6"	F-4 F-6, F-10
4'-0"	F-1, F-3, F-8
5'-0"	F-7,
6'-0	F-2, F-5

TYPICAL SECTION

LEGEND
○ - denotes 40 Ton Pile
◐ - denotes 80 Ton Pile

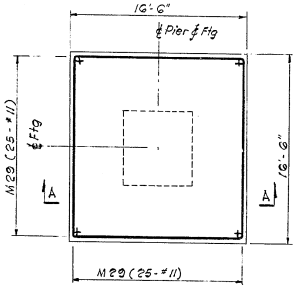


F-3

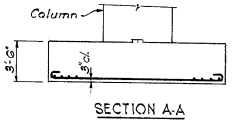


F-6

Revision:
Eliminate Piles in Pier Footing F-8
See T.A.M.S. letter of 12-29-64.
A.W.R. 1-8-65.



F-9



SECTION A-A

NOTES:
For General Notes, see Dwg. SA2
For location of battered piles, see foundation plan Dwg. SA6.
For details of shafts, see Dwg. SA25
For details of piles, see Dwg. SA46

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE
PIERS 23 THRU 26
FOOTINGS

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

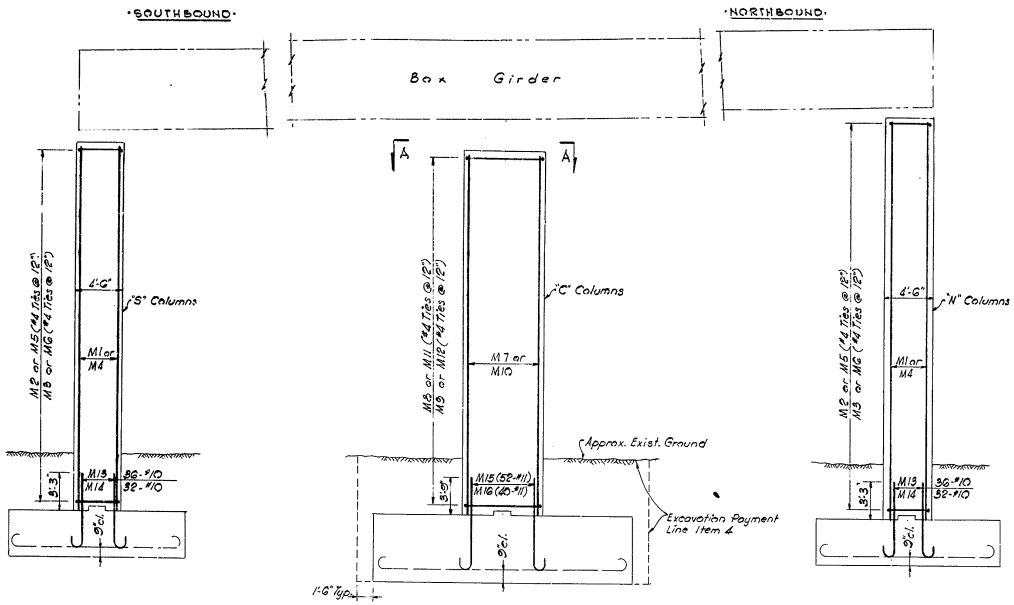
SCALE: 3/16 IN = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

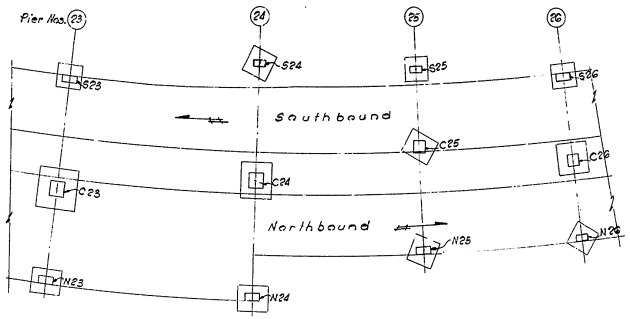
DWG. NO. SA24

COUNTY	CONTRACT	F. A. P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	59	215

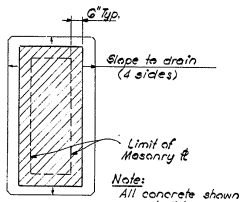
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



ELEVATION
SCALE $\frac{3}{32}$ IN. = 1 FT.

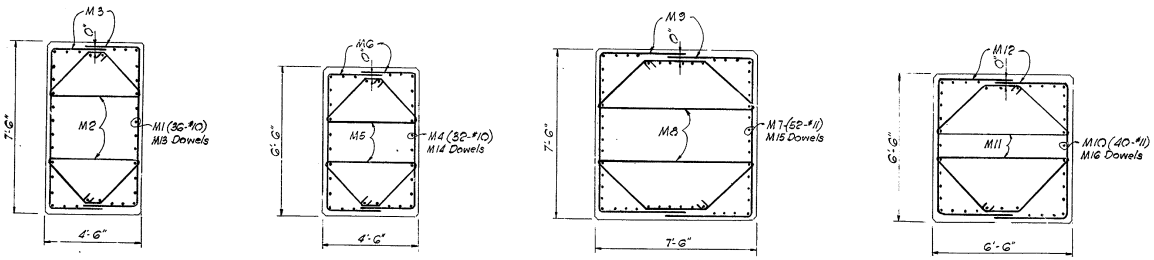


KEY PLAN
NOT TO SCALE



Note:
All concrete shown in shaded area shall be poured 6" higher than bearing elevations shown, then bushhammered to exact elevations.

SECTION A-A (TYPICAL ALL COLS.)
NOT TO SCALE



S23, S24, S25
N23, N24, N25

S26 & N26

C23, C24, & C25

C26

TYPICAL COLUMN SECTIONS
SCALE $\frac{3}{32}$ IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plan, see Dwg. SA6
For details of footings, see Dwg. SA24
For details of shoes and anchor bolts, see Dwg. SA73
Anchor bolts to be placed before pouring concrete.

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE
PIERS 23 THRU 26
SHAFTS

APPROVED BY: _____ BRIDGE ENGINEER
4-14-64 DATE

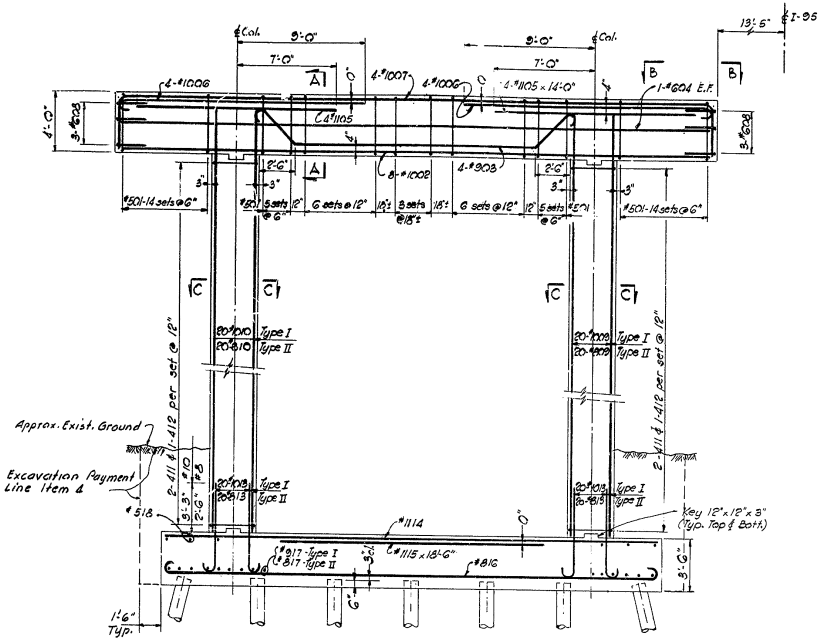
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA25

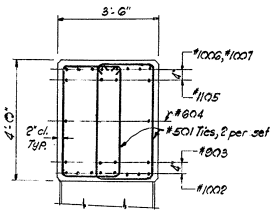
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	95-03-004	2	DEL.	I-95-2(12)	'64	60	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

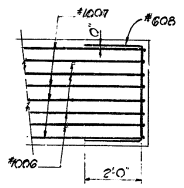


ELEVATION - TYPES I & II
SCALE ½ IN. = 1 FT.

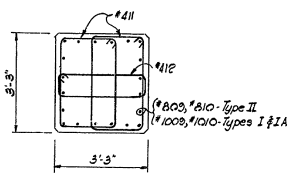
Note: For pier dimensions, see Pier Elevations.



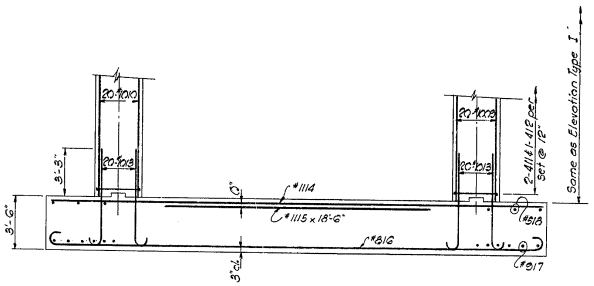
SECTION A-A
SCALE ½ IN. = 1 FT.



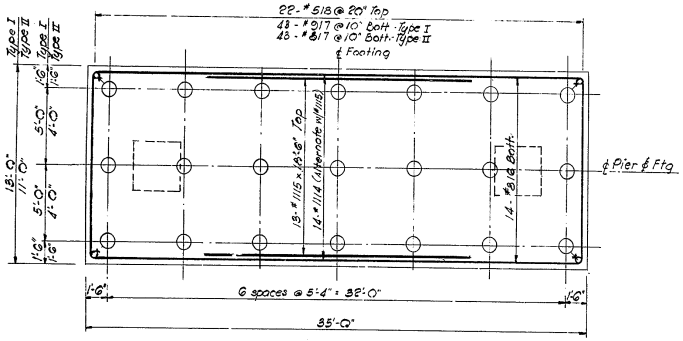
PLAN B-B
SCALE ½ IN. = 1 FT.



SECTION C-C
SCALE ½ IN. = 1 FT.

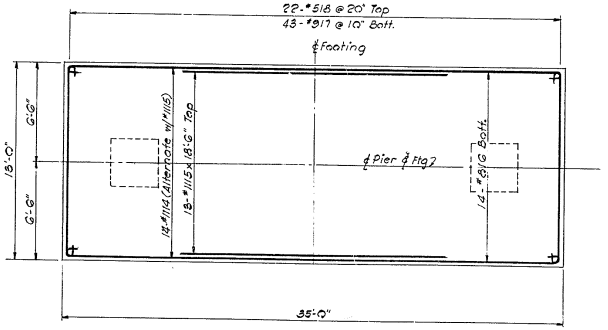


ELEVATION - TYPE IA
SCALE ½ IN. = 1 FT.



FOOTING PLAN - TYPES I & II
SCALE ½ IN. = 1 FT.

Note: All piles are 40T piles.



FOOTING PLAN - TYPE IA
SCALE ½ IN. = 1 FT.
PIER 45

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans, see Dwgs. SA6 thru SA10
For Framing Plans, see Dwgs. SA54 thru SA58
For elevations of piers denoting types, see Dwgs. SA11 thru SA20
For details of shoes & anchor bolts, see Dwg. SA74
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIER
TWO COLUMN RIGID FRAME
TYPES I, IA & II

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

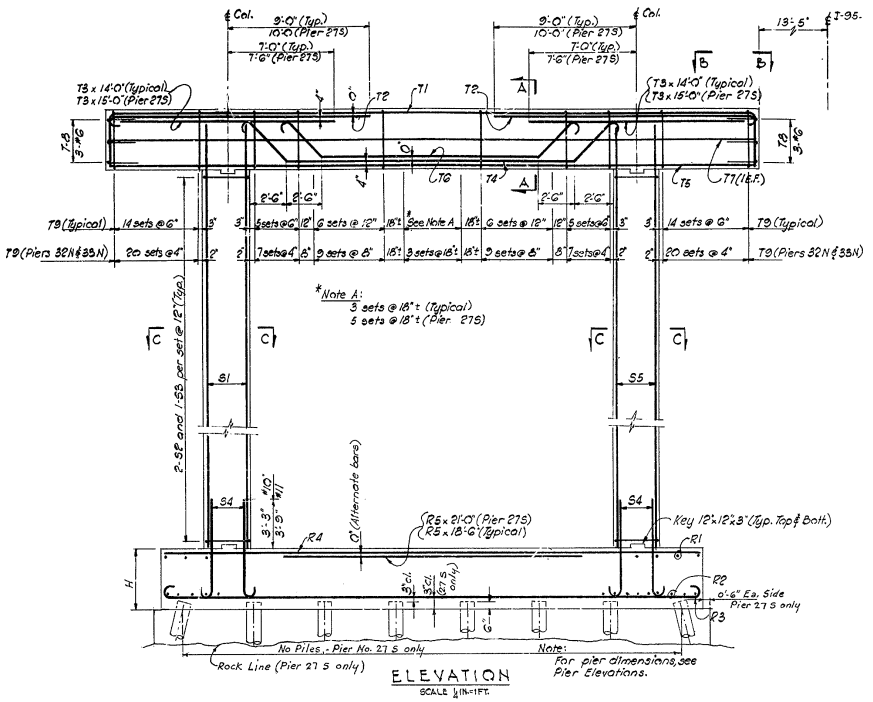
SCALE: AS NOTED
DATE: APRIL, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

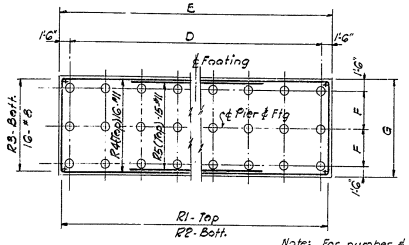
DWG. NO. SA 26

COUNTY	CONTRACT	P.R.A. REG. I-95	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	61	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

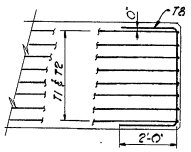


ELEVATION
SCALE ½IN.=1FT.

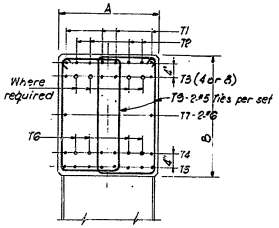


FOOTING PLAN
SCALE ⅛IN.=1FT.

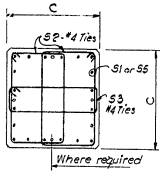
Note: For number & direction of batter piles, see Foundation Plans.
All Piles are 60T piles.



PLAN B-B
SCALE ½IN.=1FT.



SECTION A-A
SCALE ½IN.=1FT.



SECTION C-C
SCALE ½IN.=1FT.

PIER NO.	A	B	C	D	E	F	G	H	R1	R2	S1, S5	S4	T1	T2	T3	T4	T5	T6
27S	3'-9"	4'-0"	3'-6"	~~7 spcs @ 6'-0" = 36'-0"~~ 14 Piles	36'-0"	~~6'-6"~~ 6'-6"	10'-0"	4'-0"	26-#5 @ 18"	51-#8 @ 8"	24-#11	24-#11	4-#11	4-#11	8-#10	4-#11	8-#11	4-#11
27N	3'-9"	4'-0"	3'-6"	6 spcs @ 5'-4" = 32'-0"	35'-0"	6'-6"	10'-0"	4'-0"	24-#5 @ 18"	47-#8 @ 8"	24-#11	24-#11	4-#10	4-#10	4-#11	4-#9	8-#10	—
32N, 33N	3'-8"	4'-0"	3'-6"	6 spcs @ 4'-0" = 32'-0"	35'-0"	5'-0"	13'-0"	4'-0"	27-#5 @ 16"	53-#8 @ 8"	24-#11	24-#11	4-#11	4-#11	8-#11	4-#11	8-#11	—
58N	3'-6"	4'-0"	3'-3"	6 spcs @ 5'-4" = 32'-0"	35'-0"	5'-0"	15'-0"	5'-6"	22-#5 @ 20"	43-#8 @ 10"	20-#10	20-#10	4-#11	4-#11	4-#11	4-#10	8-#11	—
56, 58S, 59S	3'-6"	4'-0"	3'-3"	7 spcs @ 4'-7½" = 32'-0"	35'-0"	5'-0"	15'-0"	5'-6"	24-#5 @ 18"	47-#8 @ 9"	20-#10	20-#10	4-#11	4-#11	4-#11	4-#10	8-#10	—
57S	3'-6"	4'-0"	3'-3"	7 spcs @ 4'-7½" = 32'-0"	35'-0"	5'-0"	15'-0"	5'-6"	24-#5 @ 18"	47-#8 @ 9"	20-#10	20-#10	4-#11	4-#11	4-#11	4-#10	8-#10	—

Revision:
Eliminate Piles in Pier Footings 27S
See T.A.M.S. letter of 12-24-64.
A.W.R. 1-8-65

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans, see Dwgs. SA6 thru SA10
For Framing Plans, see Dwgs SA54 thru SA58
For elevations of piers denoting types, see Dwgs. SA11 thru SA20
For details of shoes and anchor bolts, see Dwg. SA74
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.W.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIERS
TWO COLUMN RIGID FRAME
TYPE III

APPROVED BY: Thomas D. Heavey Jr. 4-16-64
BRIDGE ENGINEER — DATE

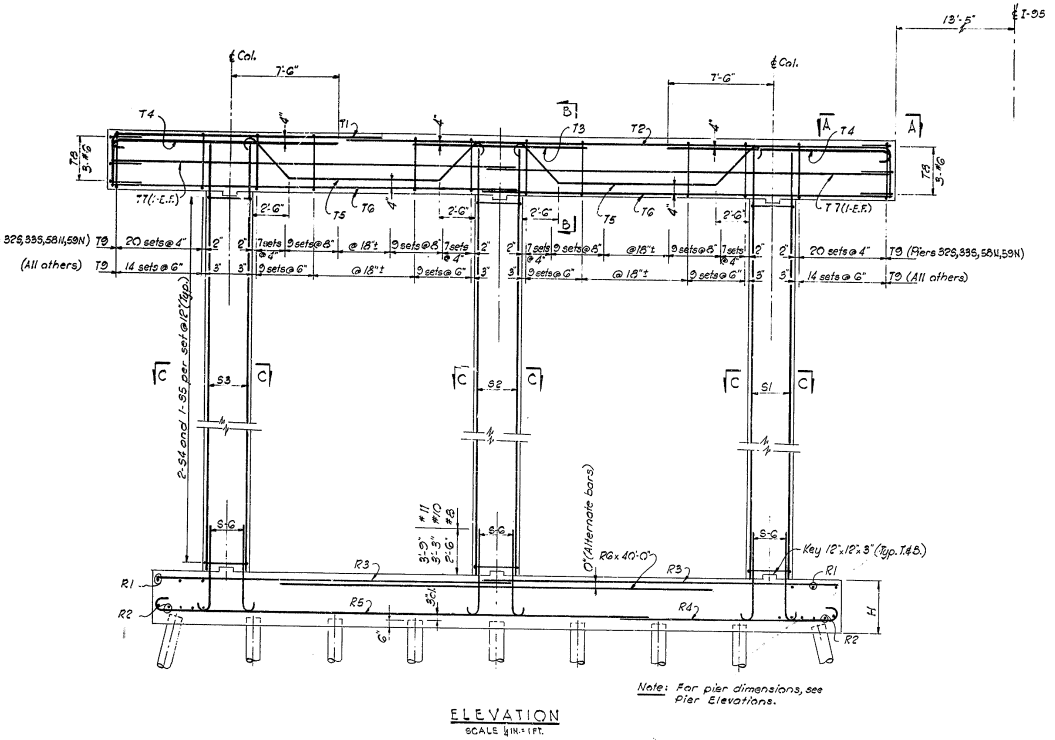
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA27

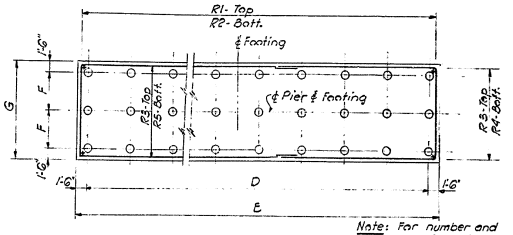
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	62	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



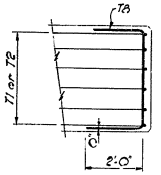
ELEVATION
SCALE ¼IN.=1FT.

Note: For pier dimensions, see Pier Elevations.

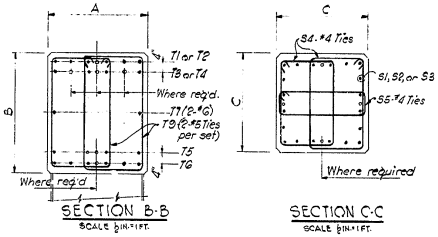


FOOTING PLAN
SCALE ⅛IN.=1FT.

Note: For number and direction of batter piles, see Foundation Plans. All piles are 40T piles.



PLAN A-A
SCALE ⅛IN.=1FT.



SECTION B-B
SCALE ⅛IN.=1FT.

SECTION C-C
SCALE ⅛IN.=1FT.

PIER NOS.	A	B	C	D	E	F	G	H	R1	R2	R3	R4	R5	RG	S1,S2,S3	SG	T1,T2	T3	T4	T5	T6
28S,29S	5'-6"	4'-0"	3'-3"	7 spcs @ 5'-6" = 38'-6"	41'-6"	5'-0"	15'-0"	5'-6"	28-#5 @ 20"	51-#9 @ 10"	27-#9	14-#9	14-#9	—	20-#8	20-#8	G-#10	4-#9x10'-0"	G-#11	4-#9	G-#10
30S,31S,57N	5'-6"		3'-3"	8 spcs @ 6'-0" = 48'-0"	51'-0"	5'-0"	15'-0"	5'-6"	31-#5 @ 20"	61-#9 @ 10"	27-#10	14-#10	14-#10	—	20-#10	20-#10	G-#10	6-#11x12'-0"	G-#11	4-#9	G-#11
32S,33S	5'-9"		3'-6"	10 spcs @ 5'-6" = 55'-0"	58'-0"	5'-0"	15'-0"	6'-0"	36-#5 @ 20"	71-#9 @ 10"	14-#11	14-#11	14-#11	13-#11	24-#11	24-#11	7-#11	7-#11x12'-0"	7-#11	5-#9	7-#11
54N,55N	5'-6"		3'-3"	7 spcs @ 5'-6" = 38'-6"	41'-6"	5'-0"	15'-0"	5'-6"	28-#5 @ 20"	51-#9 @ 10"	27-#9	14-#9	14-#9	—	20-#8	20-#8	G-#10	4-#9x10'-0"	G-#11	4-#9	G-#10
56N	5'-6"		3'-3"	8 spcs @ 6'-0" = 48'-0"	51'-0"	5'-0"	15'-0"	5'-6"	31-#5 @ 20"	61-#9 @ 10"	27-#10	14-#10	14-#10	—	20-#10	20-#10	G-#10	6-#11x12'-0"	G-#11	4-#9	G-#11
58N,58N	5'-6"	4'-0"	3'-3"	9 spcs @ 6'-6" = 58'-6"	61'-6"	5'-0"	18'-0"	4'-0"	37-#5 @ 20"	73-#9 @ 10"	14-#11	14-#11	14-#11	13-#11	20-#11	20-#11	7-#11	7-#11x12'-0"	7-#11	5-#9	7-#11

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans, see Dwgs. SA6 thru SA10
For Framing Plans, see Dwgs. SA54 thru SA58
For elevations of piers denoting types, see Dwgs. SA11 thru SA20
For details of shoes and anchor bolts, see Dwg. SA74
For pad masonry deta.-s, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.W.
Checked by L.E.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE PIERS
THREE COLUMN RIGID FRAME
TYPE IV

APPROVED BY: Delaware P. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

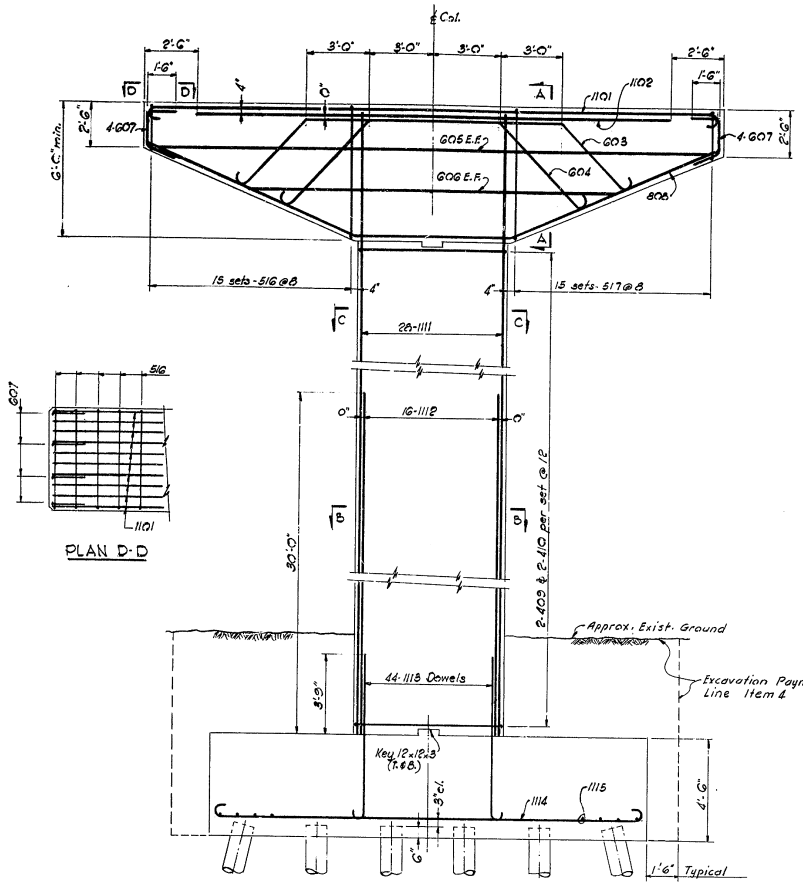
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

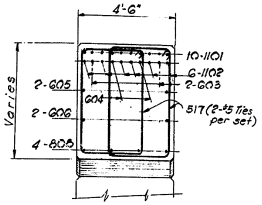
DWG. NO. SA28

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	63	215

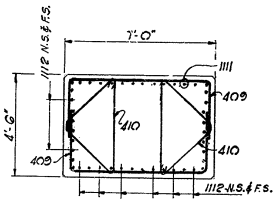
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



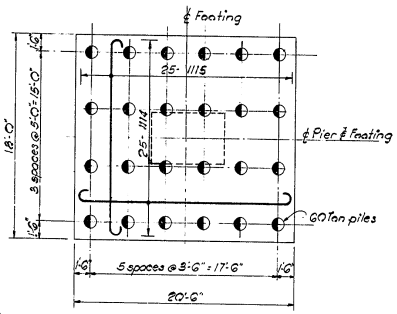
ELEVATION
SCALE ⅜ IN. = 1 FT.



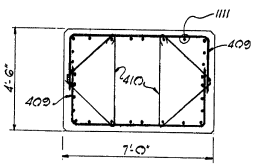
SECTION A-A
SCALE ⅜ IN. = 1 FT.



SECTION B-B
SCALE ⅜ IN. = 1 FT.



FOOTING PLAN
SCALE ⅜ IN. = 1 FT.



SECTION C-C
SCALE ⅜ IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For details of Ramp A piers 3A, 4 & 5A, see Dwg. SA31
For Foundation Plan, see Dwg. SA6
For elevations of piers, see Dwg. SA21
For details of shoes and anchor bolts, see Dwg. SA74
For Framing Plan, see Dwg SA55
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

Drawn by S.V.
Checked by L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP A
PIERS 1A & 2A

APPROVED BY: J. Dennis O'Connor
BRIDGE ENGINEER
4-16-64
DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

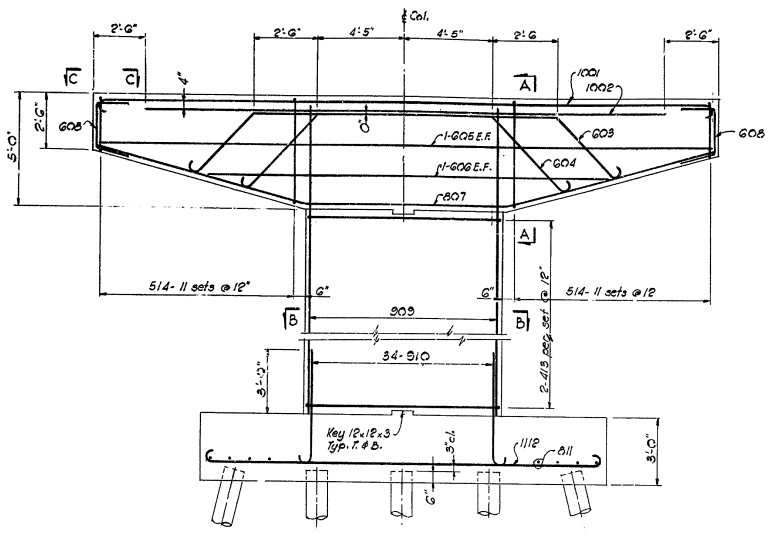
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA29

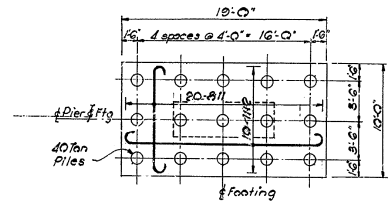
D C B A

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	64	215

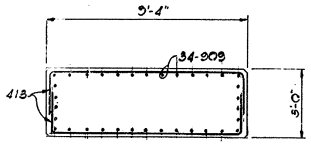
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



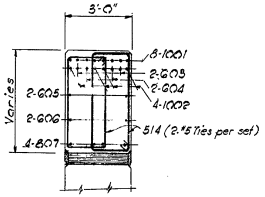
ELEVATION
SCALE 3/8 IN.=1 FT.



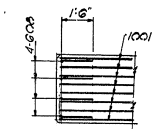
FOOTING PLAN
SCALE 3/16 IN.=1 FT.



SECTION B-B
SCALE 3/8 IN.=1 FT.

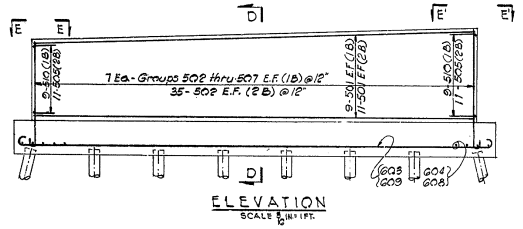


SECTION A-A
SCALE 3/8 IN.=1 FT.

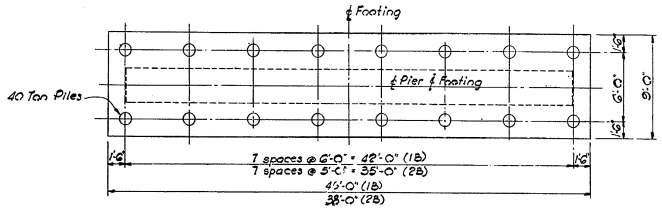


PLAN C-C

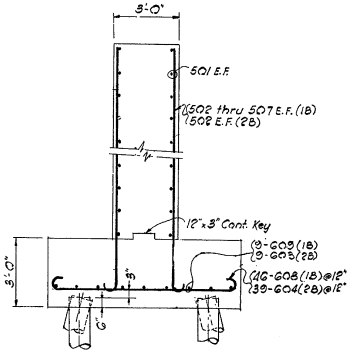
PIER 3B



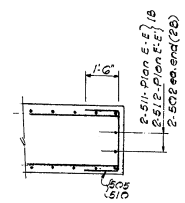
ELEVATION
SCALE 3/16 IN.=1 FT.



FOOTING PLAN
SCALE 3/16 IN.=1 FT.



SECTION D-D
SCALE 3/8 IN.=1 FT.



PLANS E-E & E'-E'
SCALE 3/8 IN.=1 FT.

PIERS 1B & 2B

NOTES:
For General Notes, see Dwg. SA2
For details of Ramp B piers 4B, 5B & 6B, see Dwg. SA31
For Foundation Plan, see Dwg. SA8
For elevation of piers, see Dwg. SA22
For details of shoes and anchor bolts, see Dwg. SA74
For Framing Plan, see Dwg. SA56
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B
PIERS 1B, 2B, & 3B

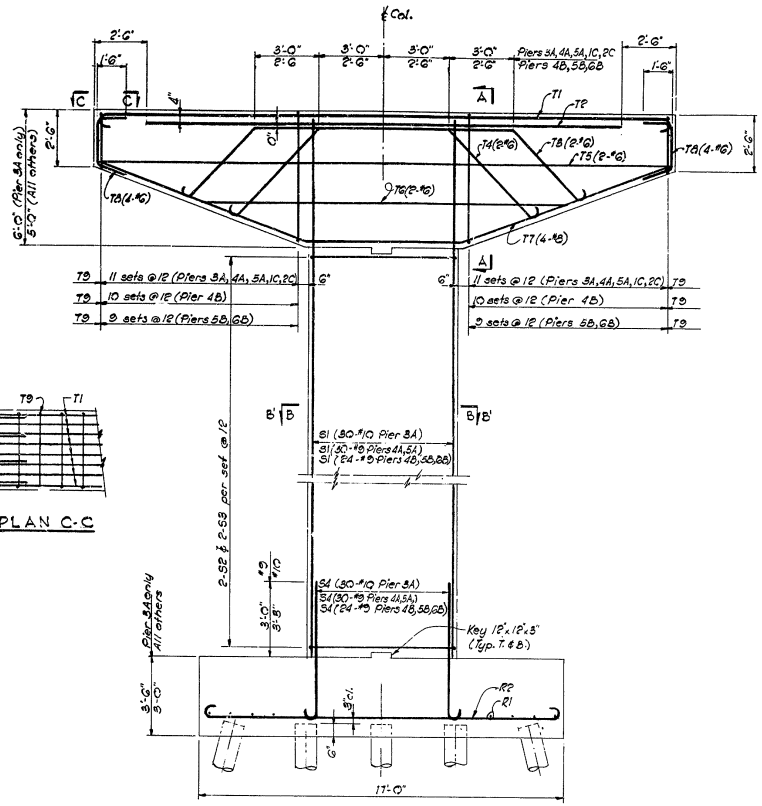
APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA30

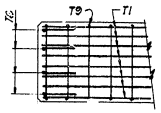
Drawn by S.W.
Checked by L.R.

COUNTY	CONTRACT	P.R.D. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	65	215

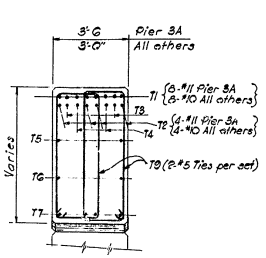
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



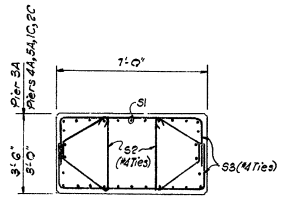
ELEVATION - PIERS 3A,4A,5A,4B,5B,6B
SCALE 3/8 IN. = 1 FT.



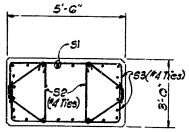
PLAN C-C



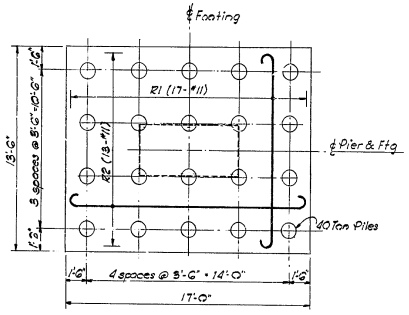
SECTION A-A
SCALE 3/8 IN. = 1 FT.



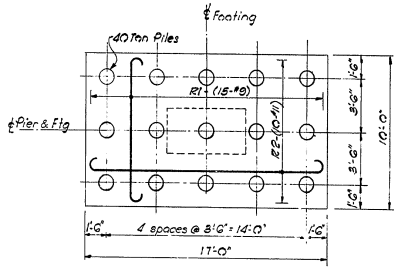
SECTION B-B
SCALE 3/8 IN. = 1 FT.
PIERS 3A,4A,5A,1C,2C



SECTION B'-B'
SCALE 3/8 IN. = 1 FT.
PIERS 4B,5B,6B ONLY

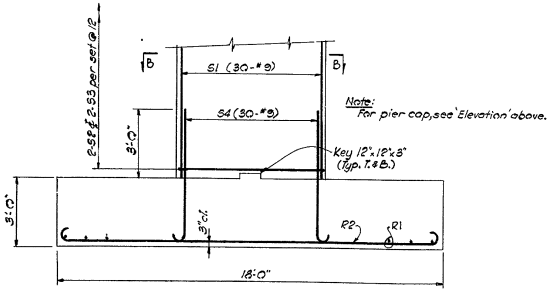


FOOTING PLAN
SCALE 1/4 IN. = 1 FT.
PIER 3A

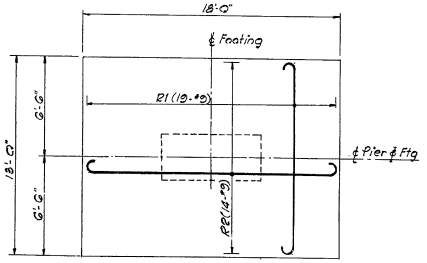


FOOTING PLAN
SCALE 1/4 IN. = 1 FT.
PIERS 4A,5A,4B,5B,6B

NOTES:
For General Notes, see Dwg. SA2
For details of Ramp A piers 1A & 2A, see Dwg. SA29
For details of Ramp B piers 1B, 2B & 3B, see Dwg. SA30
For Foundation Plans of Ramps A, B & C, see Dwgs. SA6 thru SA9
For elevation of ramp piers, see Dwgs. SA21, SA22 and SA23
For details of shoes and anchor bolts, see Dwg. SA24
For pad masonry details, see Dwg. SA33
For pad reinforcement details, see Dwg. SA34



ELEVATION - PIERS 1C, 2C
SCALE 3/8 IN. = 1 FT.



FOOTING PLAN
SCALE 1/4 IN. = 1 FT.
PIERS 1C, 2C

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMPS A, B & C
PIERS 3A, 4A & 5A
PIERS 4B, 5B & 6B
PIERS 1C & 2C

APPROVED BY: Johnnie O. Ramsey Jr. 4-14-64
BRIDGE ENGINEER — DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

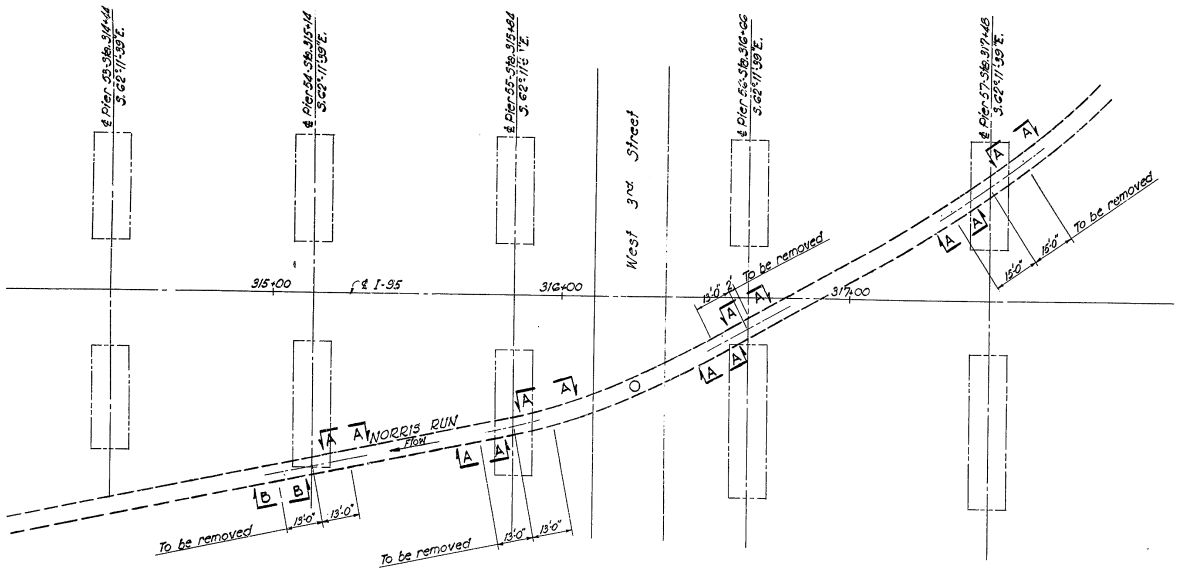
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA31

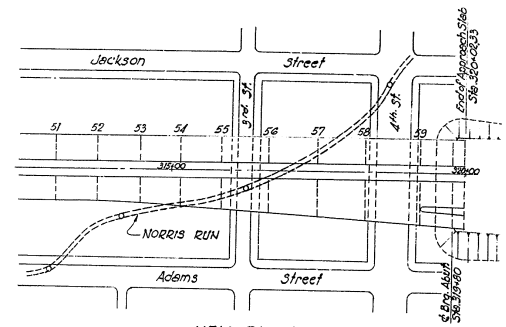
Drawn by S.W.
Checked by L.E.

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	66	215

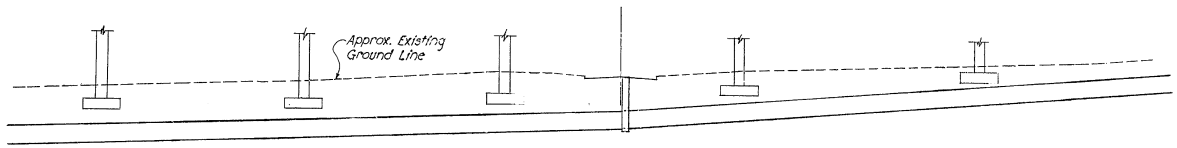
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



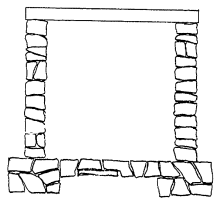
PLAN
SCALE: 1 IN = 20 FT.



KEY PLAN
SCALE: 1 IN = 100 FT.

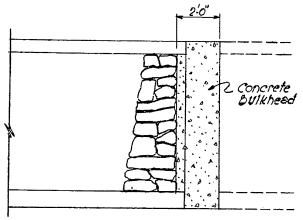


PROFILE
SCALE: 1 IN = 20 FT.

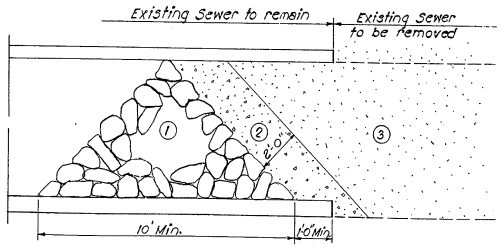


ASSUMED SEWER SECTION
SCALE: ⅜ IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For Foundation Plans of mainline piers 53 thru 57, See Dwg. SA10.
For pier elevations of mainline piers 53 thru 57, see Dwgs. SA19 & SA20.
Norris Run Sewer is approximate as shown in location. Contractor to verify in field and notify engineer of any change required for the demolition length.



SECTION B-B
SCALE: ⅜ IN. = 1 FT.



SECTION A-A
TYPICAL
FOR AREAS WHERE NORRIS RUN SEWER WILL BE REMOVED
SCALE: ⅜ IN. = 1 FT.

① Stone (from demolished section of sewer) extending to full height and full width of remaining sewer.

② Sandy gravel or crushed stone meeting gradation requirements for Grading A, Select Borrow.

③ Sand with less than 50% passing No. 40 sieve and less than 10% passing No. 200 sieve. Sand backfill shall be compacted according to the requirements of backfilling for structure excavations as given in the Delaware State Highway Department Standard Specifications. Sand backfill is required up to elevation of the existing ground.

Drawn by R.G.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DEMOLITION
NORRIS RUN SEWER
PIERS 54N, 55N, 56N & 57S

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

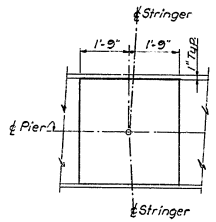
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

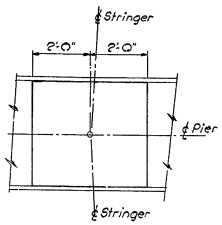
DWG. NO. SA32

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	67	215

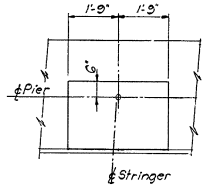
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



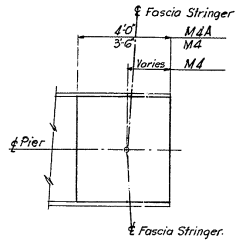
M 1



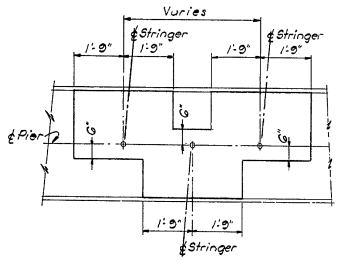
M 2



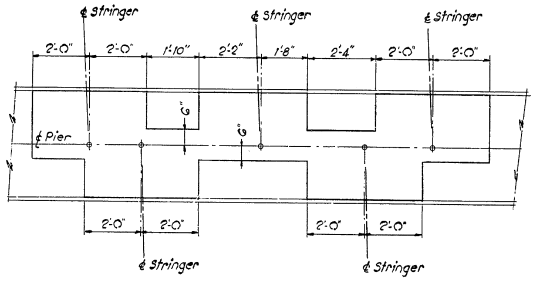
M 3



M4 & M4A



M 5



M 6

NOTES:
For General Notes, see Dwg. SA2
For reinforcement in pads, see Dwg. SA34
For location of pads, see elevations of piers Dwgs. SA11 thru SA23.

Drawn by R.G.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PADS
MASONRY

APPROVED BY: Johnnie L. Pearson, Jr.
BRIDGE ENGINEER
4-16-64
DATE

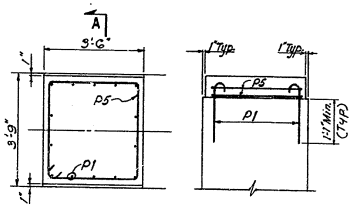
SCALE: 1/2 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

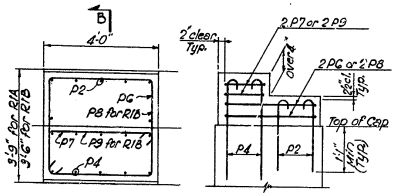
DWG. NO. SA33

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	68	215

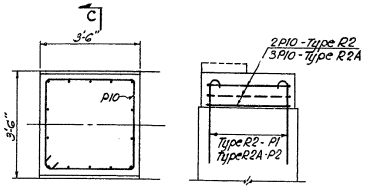
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



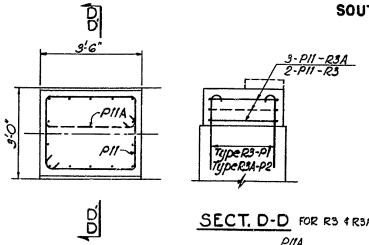
TYPE R1



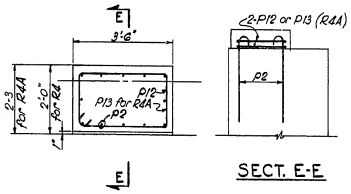
TYPE R1A, R1B



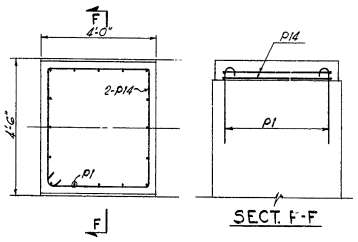
TYPE R2, R2A



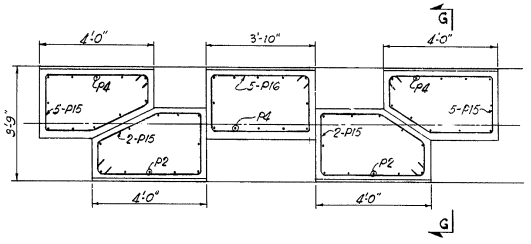
TYPE R3, R3A, R3B



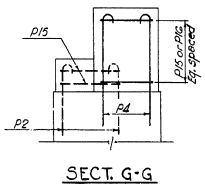
TYPE R4, R4A

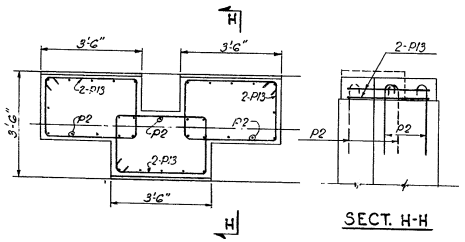


TYPE R5

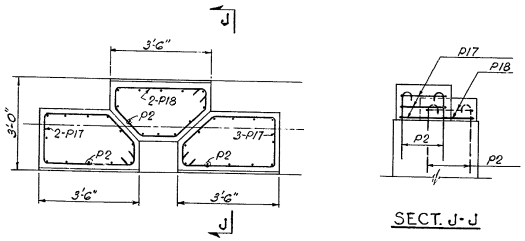


TYPE R6





TYPE R7



TYPE R7A

NOTES:
For General Notes, see Dwg. SA2
For masonry dimensions of pads, see Dwg. SA33

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PADS
REINFORCEMENT

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 1/2 IN = 1 FT.
DATE: APRIL 1, 1964

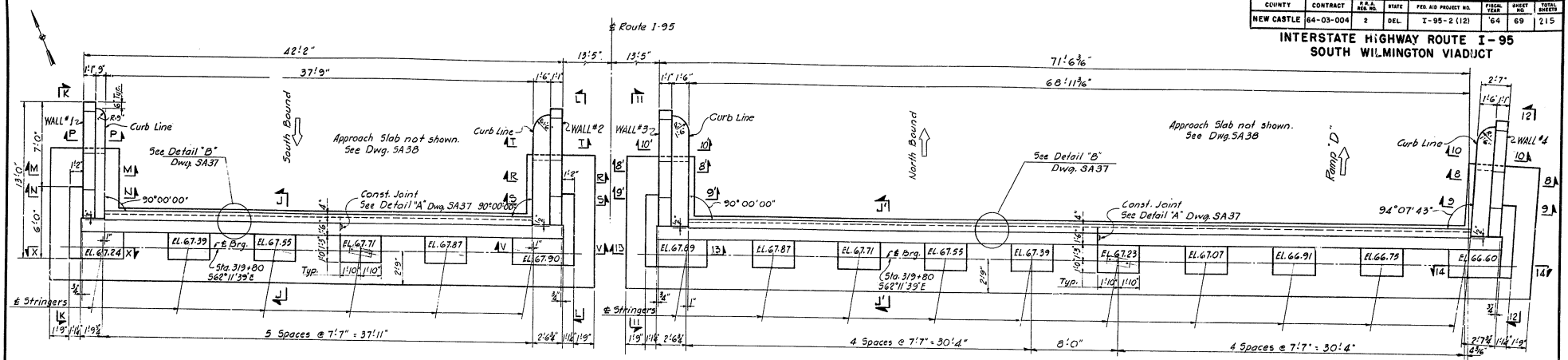
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA34

Drawn by R.G.
Checked by F.Y.

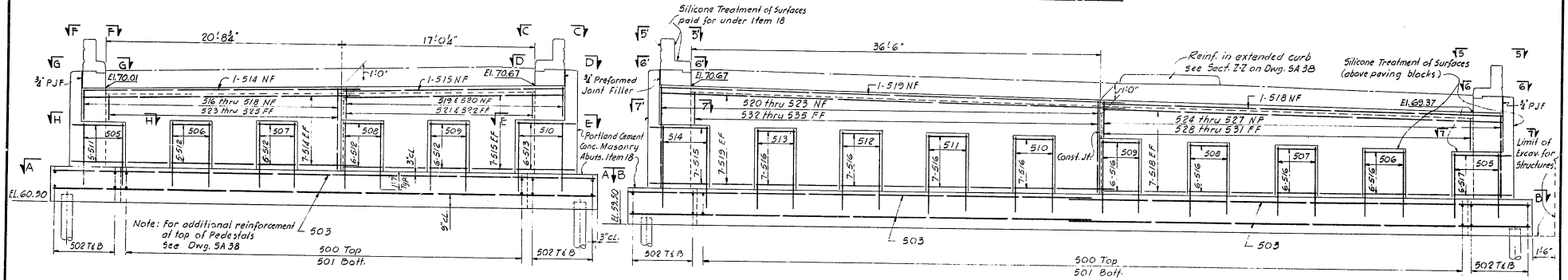
COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	69	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



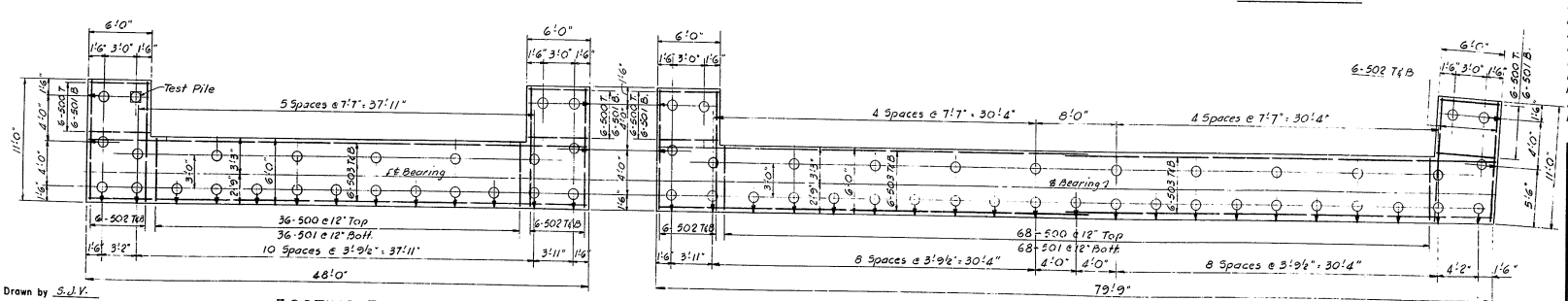
DECK PLAN
SOUTH BOUND

DECK PLAN
NORTH BOUND



ELEVATION

ELEVATION



FOOTING PLAN
SOUTH BOUND
SCALE: 3/16 IN. = 1 FT.

Note: Piles in abutment have a design capacity of 40 tons.

FOOTING PLAN
NORTH BOUND
SCALE: 3/16 IN. = 1 FT.

NOTES:
For General Plan, see Dwg. SA2
For dowel placement, see plan on Dwg. SA37
For Details "A" & "B", see Dwg. SA37
For Sections, see Dwgs. SA36 thru SA39
For Typical Wing Wall Elevation, see Dwg. SA37
For Mall details, see Dwg. SA38
For additional notes, see Dwg. SA38
For drains behind backwall, see Dwg. SA39

Drawn by S.J.V.
Checked by JAR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

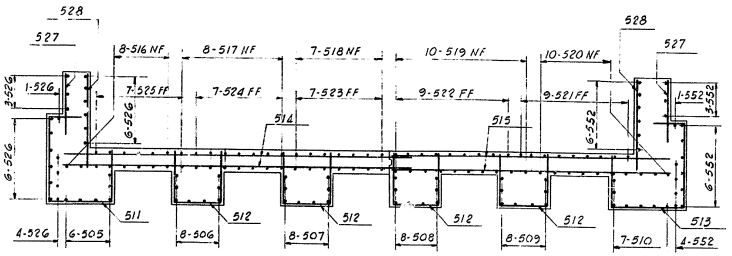
MAINLINE NORTH ABUTMENT
DECK & FOOTING PLANS & ELEVATIONS

APPROVED BY: Johnnie R. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

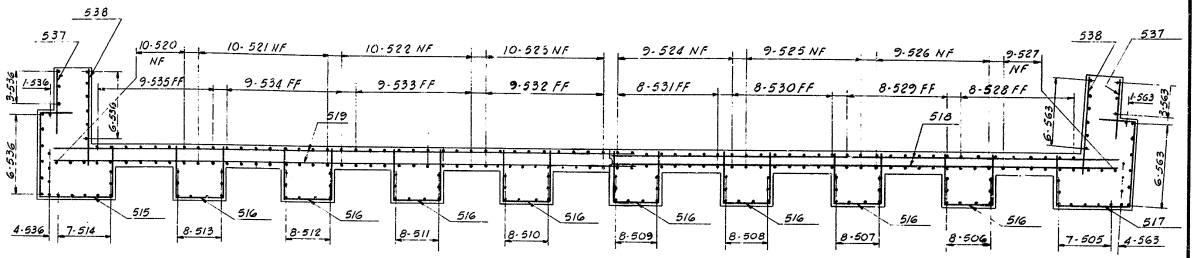
SCALE: 1/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA35

COUNTY	CONTRACT	P.R.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	70	215

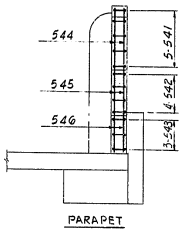
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



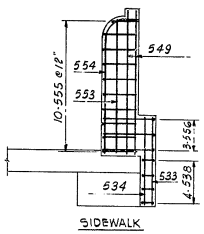
SECTIONAL PLAN A-A
Southbound



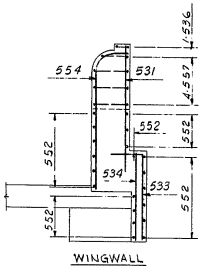
SECTIONAL PLAN B-B
Northbound



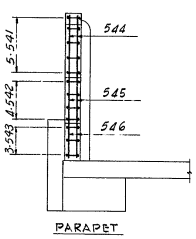
SECTION C-C



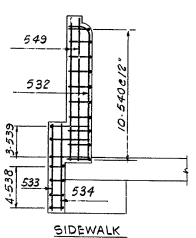
SECTION D-D



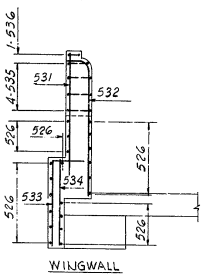
SECTION E-E



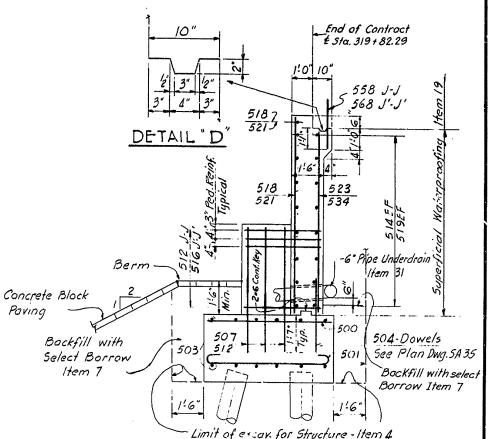
SECTION F-F



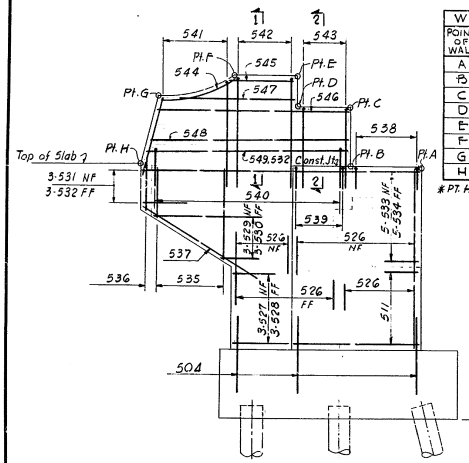
SECTION G-G



SECTION H-H



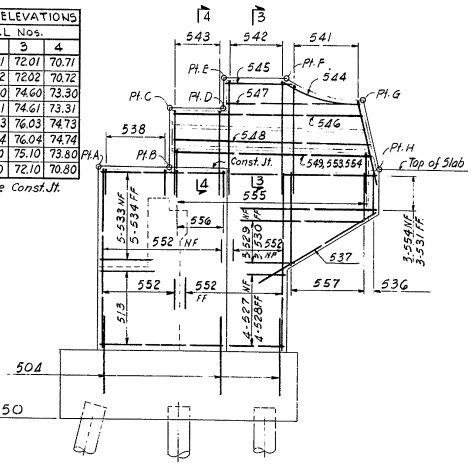
SECTIONS J-J & J'J'
SCALE: 3/8 IN. = 1 FT.



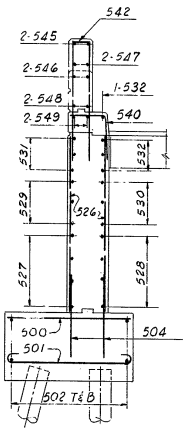
ELEVATION K-K Wall #1
SCALE: 3/8 IN. = 1 FT.

WING WALL ELEVATIONS				
POINT OF WALL	WALL Nos. 1	2	3	4
A	71.35	72.01	72.01	70.71
B	71.36	72.02	72.02	70.72
C	73.94	74.60	74.60	73.30
D	73.95	74.61	74.61	73.31
E	75.37	76.03	76.03	74.73
F	75.38	76.04	76.04	74.74
G	74.44	75.10	75.10	73.80
H*	71.44	72.10	72.10	70.80

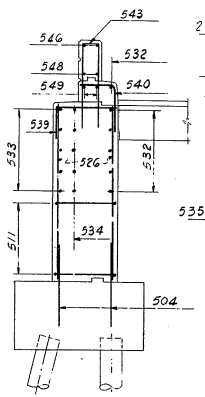
*PT. H is ¾" above Const. Jt.



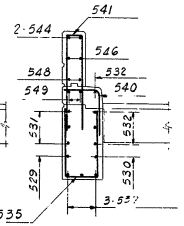
ELEVATION L-L Wall #2
SCALE: 3/8 IN. = 1 FT.



SECTION M-M
SCALE: 3/8 IN. = 1 FT.



SECTION N-N
SCALE: 3/8 IN. = 1 FT.



SECTION P-P
SCALE: 3/8 IN. = 1 FT.

NOTES:

1. For Deck & Footing Plans see Dwg. SA35
2. For dowel placement see Plan on Dwg. SA37
3. For additional Notes see Dwg. SA38
4. Embankment to be in place at least 4 months prior to start of construction of North Abut.
5. If embankment is not placed by May 30, 1965, sufficient borrow will be placed by the contractor to build the abutment, under the Item Borrow for this Contract.

Drawn by S.J.V.
Checked by J.A.E.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE NORTH ABUTMENT PLANS, SECTIONS & ELEVATIONS SHEET 1 OF 3

APPROVED BY: William P. Pearson Jr. 4-14-64
BRIDGE ENGINEER DATE

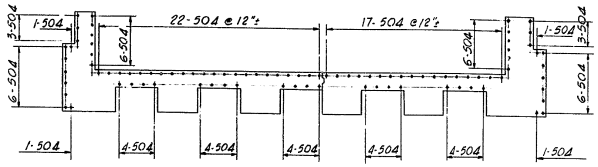
SCALE: 1/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

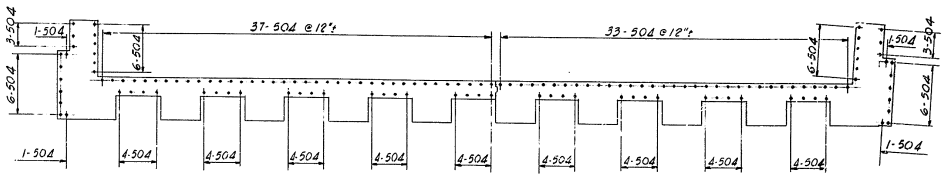
DWG. NO. SA36

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	71	215

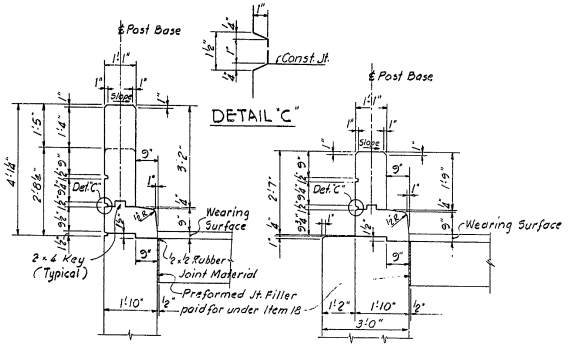
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PLAN OF DOWEL PLACEMENT
SOUTH BOUND
SCALE: 3/16 IN. = 1 FT.

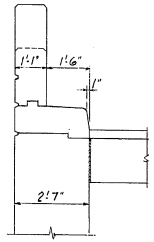


PLAN OF DOWEL PLACEMENT
NORTH BOUND
SCALE: 3/16 IN. = 1 FT.



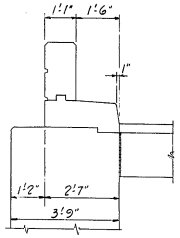
SECTION 1-1
SCALE: 1/2 IN. = 1 FT.

SECTION 2-2
SCALE: 1/2 IN. = 1 FT.



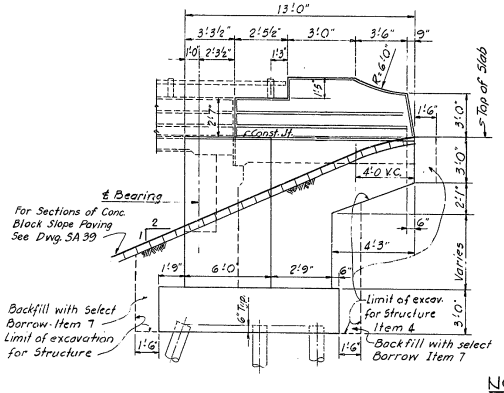
Dimensions and notes not shown same as Section 1-1

SECTION 3-3
SCALE: 1/2 IN. = 1 FT.



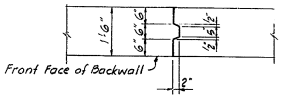
Dimensions and notes not shown same as Section 2-2

SECTION 4-4
SCALE: 1/2 IN. = 1 FT.

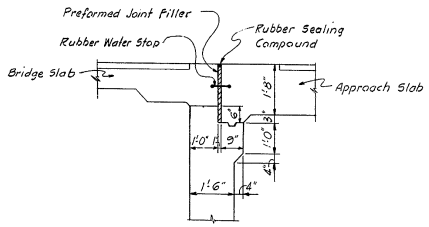


TYPICAL WING WALL ELEVATION

NOTES:
For Deck & Footing Plans see Dwg. SA35
For additional Notes see Dwg. SA38



DETAIL "A"
SCALE: 1/2 IN. = 1 FT.



DETAIL "B"
SCALE: 1/2 IN. = 1 FT.

Drawn by S.J.V.
Checked by JAR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE NORTH ABUTMENT
PLANS, SECTIONS & ELEVATIONS
SHEET 2 OF 3

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

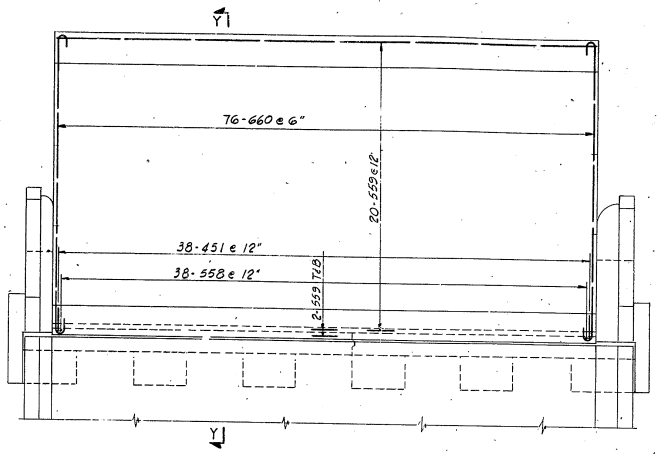
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

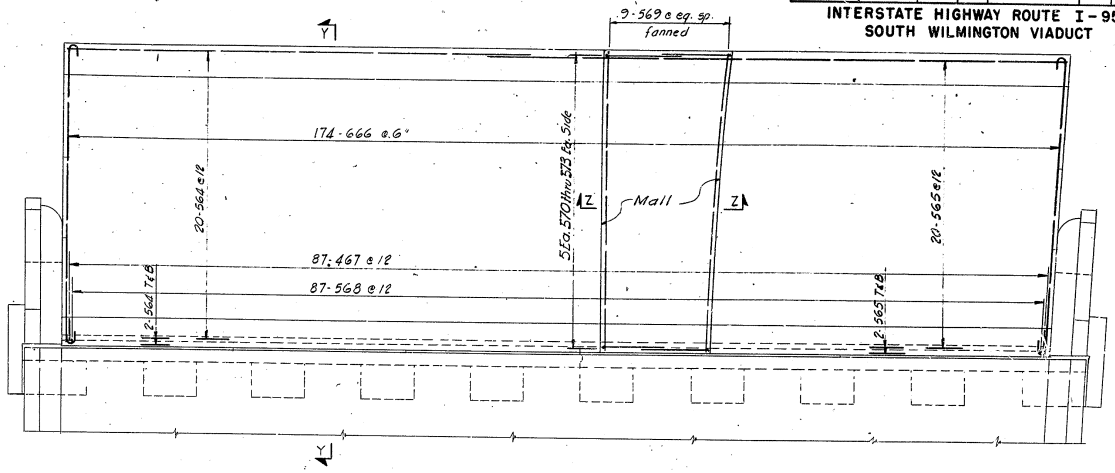
DWG. NO. SA37

COUNTY	CONTRACT	R.R.L. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	72	215

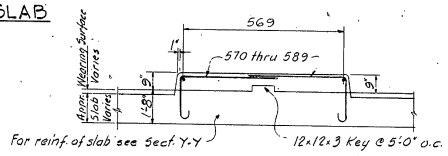
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



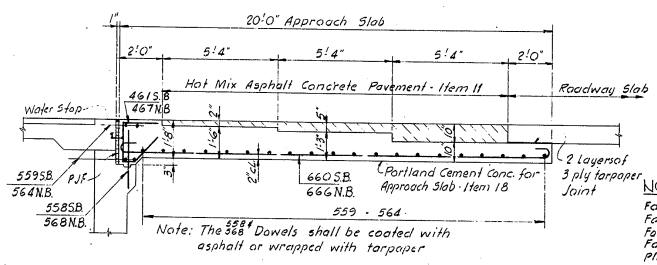
PLAN OF APPROACH SLAB
SOUTH BOUND
SCALE: 1/4 IN. = 1 FT.



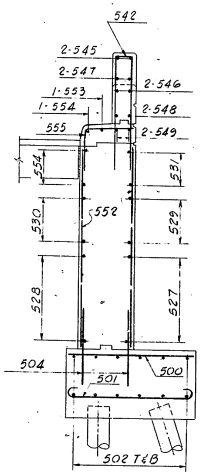
PLAN OF APPROACH SLAB
NORTH BOUND & RAMP D
SCALE: 1/4 IN. = 1 FT.



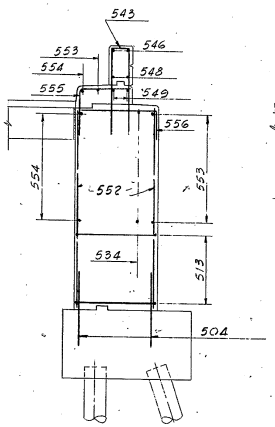
SECTION Z-Z
SCALE: 3/8 IN. = 1 FT.



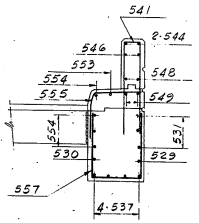
SECTION Y-Y
SCALE: 3/8 IN. = 1 FT.



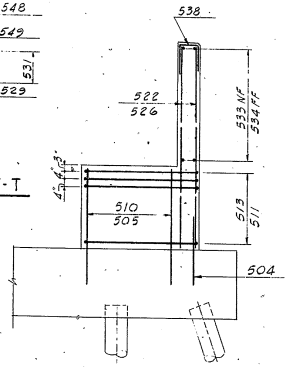
SECTION R-R
SCALE: 3/8 IN. = 1 FT.



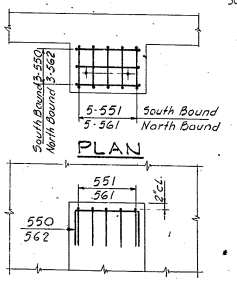
SECTION S-S
SCALE: 3/8 IN. = 1 FT.



SECTION T-T
SCALE: 3/8 IN. = 1 FT.



SECTION V-V (As Shown)
SECTION X-X (Opp. Hand)
SCALE: 3/8 IN. = 1 FT.



PLAN

ELEVATION

ADDITIONAL REINFORCEMENT AT TOP OF PEDESTALS

NOTES:

For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA58
For Railing Details see Dwg. SA87
For placing of Anchor Bolts see Dwg. SA73
Place Anchor Bolts in Pedestals before concrete is poured.
All piles are cast-in-place, 12" Dia. concrete piles, (Steel Shells) closed ends. Item 35
For pile reinforcement see Dwg. SA46
Piles shown ○→ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 45'-0"
All reinforcing bars in North Bound Abutment to be prefixed NA. Reinforcement in South Bound Abutment to be prefixed SA.
For additional Plans & Sections see Dwgs. SA35 To 39

Drawn by S.J.V.
Checked by JAR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

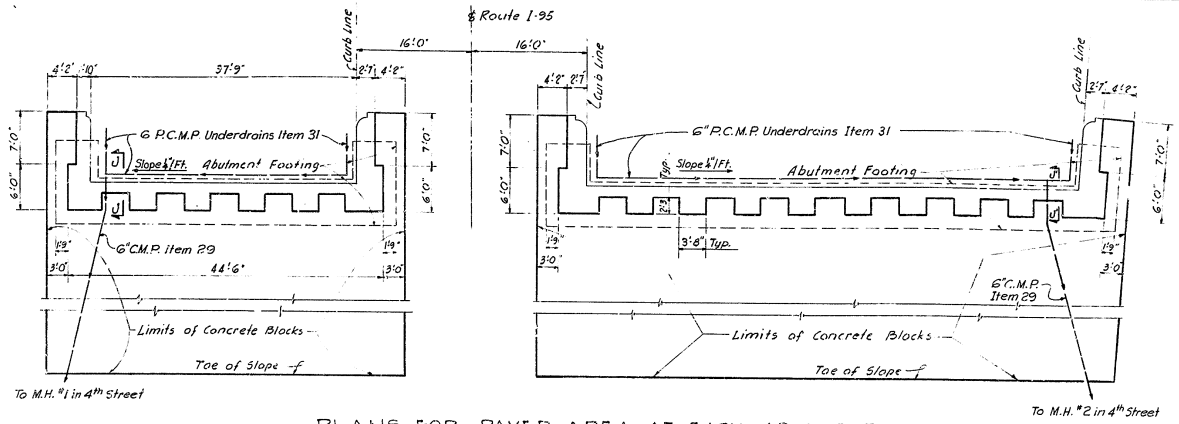
MAINLINE NORTH ABUTMENT
PLANS, SECTIONS & ELEVATIONS
SHEET 3 OF 3

APPROVED BY: Volmine L. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

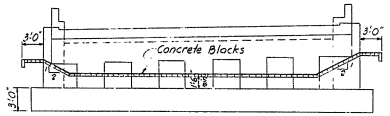
SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA38

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	73	215

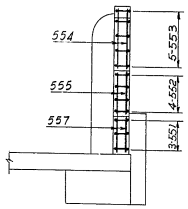
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



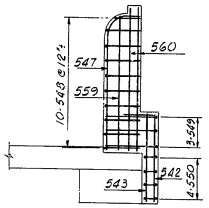
PLANS FOR PAVED AREA AT EACH ABUTMENT
SOUTH BOUND — SCALE: 1/8 IN. = 1 FT — NORTH BOUND



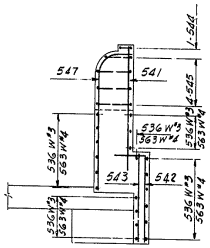
ELEVATION (Southbound-Shown Northbound-Similar)
SCALE: 1/8 IN. = 1 FT.



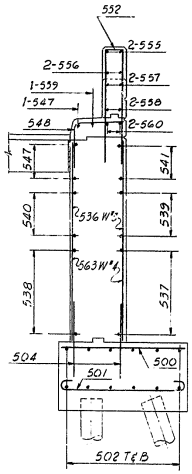
PARAPET
SECTION 5-5 (As Shown)
SECTION 5'-5' (Opp. Hand)
SCALE: 1/4 IN. = 1 FT.



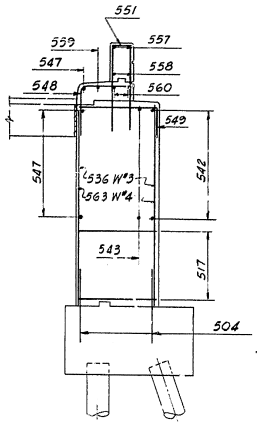
SIDEWALK
SECTION 6-6 (As Shown)
SECTION 6'-6' (Opp. Hand)
SCALE: 1/4 IN. = 1 FT.



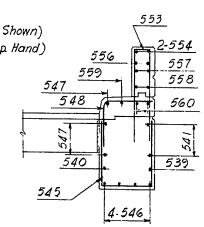
WINGWALL
SECTION 7-7 (As Shown)
SECTION 7'-7' (Opp. Hand)
SCALE: 1/4 IN. = 1 FT.



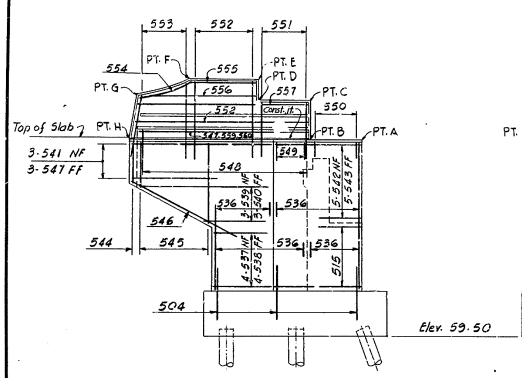
SECTION 8-8 (As Shown)
SECTION 8'-8' (Opp. Hand)



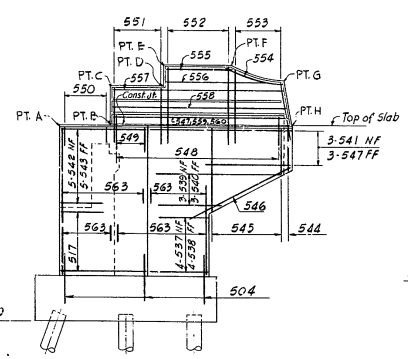
SECTION 9-9 (As Shown)
SECTION 9'-9' (Opp. Hand)



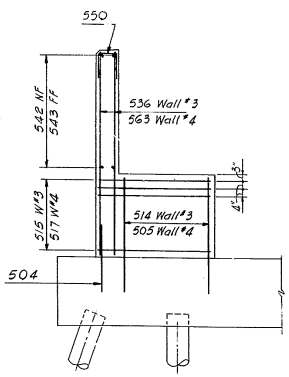
SECTION 10-10 (As Shown)
SECTION 10'-10' (Opp. Hand)
SCALE: 3/8 IN. = 1 FT.



SECTION 11-11 Wall #3
SCALE: 1/4 IN. = 1 FT.



SECTION 12-12 Wall #4
SCALE: 1/4 IN. = 1 FT.



SECTION 13-13
SECTION 14-14
SCALE: 3/8 IN. = 1 FT.

NOTES:

For Deck & Footing Plans see Dwg. SA35
For additional Notes see Dwg SA38
For Sections J-J & J'-J', see Dwg. SA36

Drawn by S.J.V.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

MAINLINE NORTH ABUTMENT DETAILS

APPROVED BY: Johnnie L. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

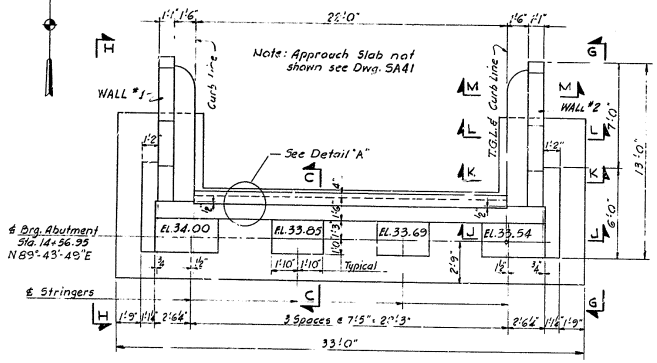
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

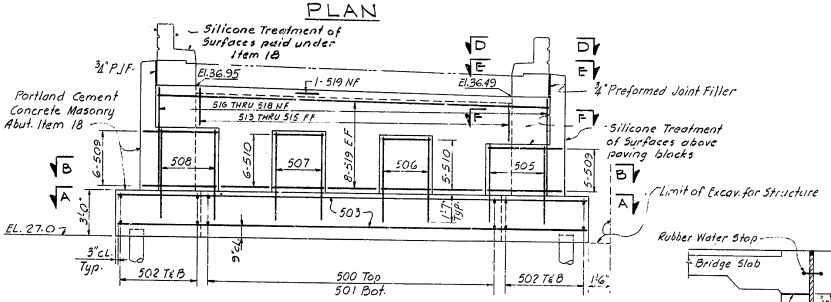
DWG. NO. SA39

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	74	215

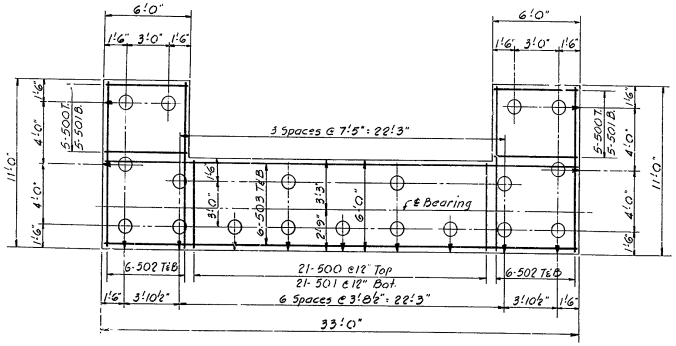
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



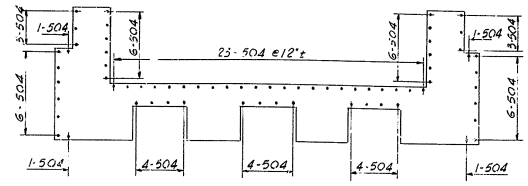
PLAN



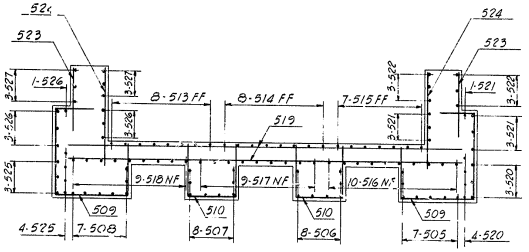
ELEVATION



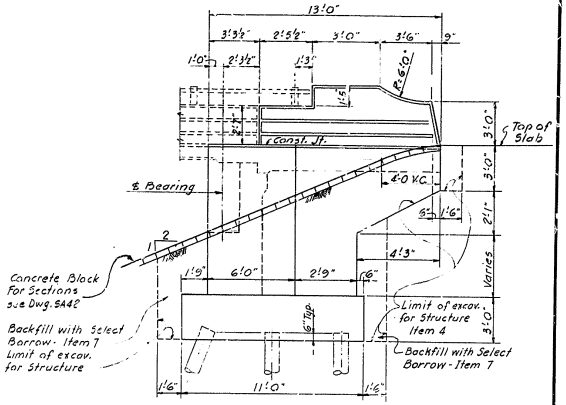
FOOTING PLAN



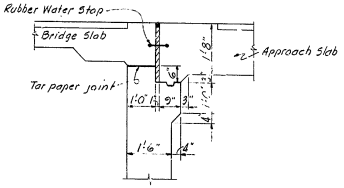
SECTIONAL PLAN A-A
DOWELS



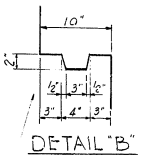
SECTIONAL PLAN B-B



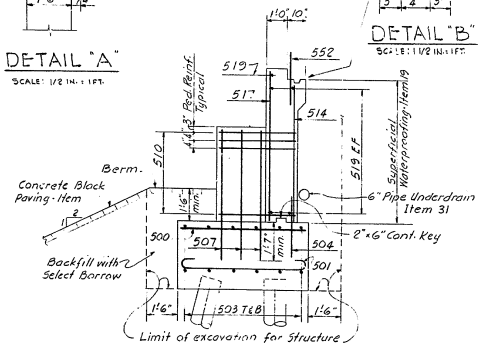
TYPICAL WING WALL ELEVATION
NOT TO SCALE



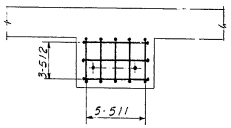
DETAIL "A"
SCALE: 1/2 IN. = 1 FT.



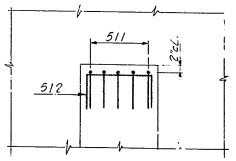
DETAIL "B"
SCALE: 1 1/2 IN. = 1 FT.



SECTION C-C
SCALE: 3/8 IN. = 1 FT.



PLAN



ELEVATION

ADDITIONAL REINF. AT TOP OF PEDESTALS
Not To Scale

NOTES:

For additional Plans & Sections see Dwgs. SA41 & 42
For additional Notes see Dwg. SA42
Piles in abutment have a design capacity of 40 tons.
For drains behind the backwall, see Dwg. SA42

Drawn by SJV
Checker by H.B.J.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP A ABUTMENT
PLANS, ELEVATIONS & SECTIONS
SHEET 1 OF 3

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

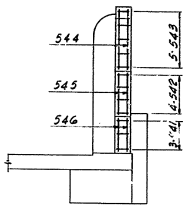
SCALE: 1/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 40

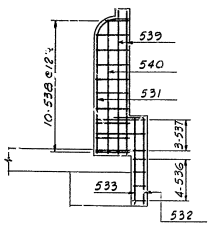
COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	75	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



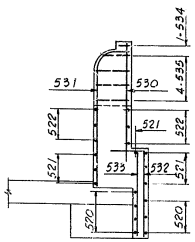
PARAPET

SECTION D-D
SCALE: 1/4 IN. = 1 FT.



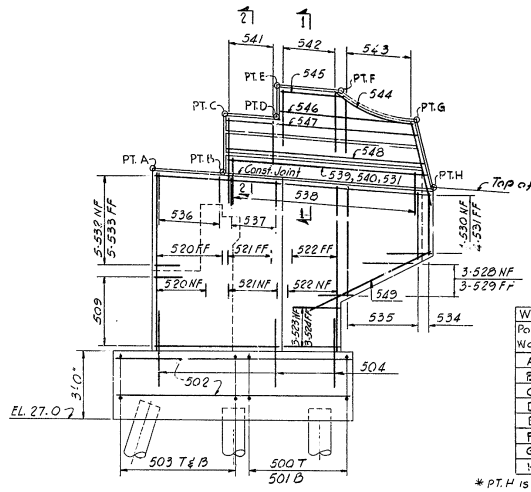
SIDEWALK

SECTION E-E
SCALE: 1/4 IN. = 1 FT.



WINGWALL

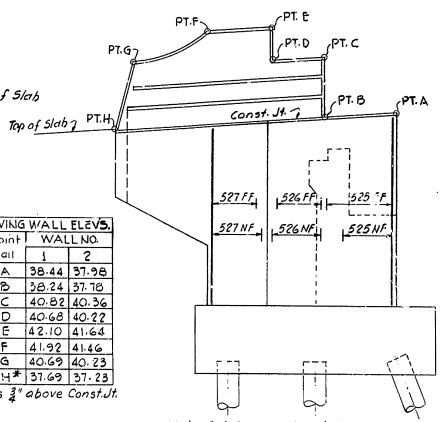
SECTION F-F
SCALE: 1/4 IN. = 1 FT.



ELEVATION G-G (Wall # 2)
SCALE: 3/8 IN. = 1 FT.

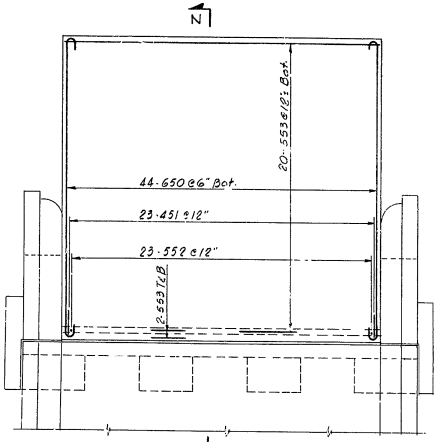
WING WALL ELEVS.		
Point	WALL NO.	
Wall	1	2
A	38.44	37.98
B	38.24	37.78
C	40.82	40.36
D	40.68	40.22
E	42.10	41.64
F	41.92	41.46
G	40.69	40.23
H*	37.69	37.23

* PT. H is 3/4" above Const. Jt.

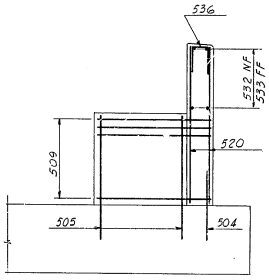


Note: Reinforcement not shown same as Elev. G-G

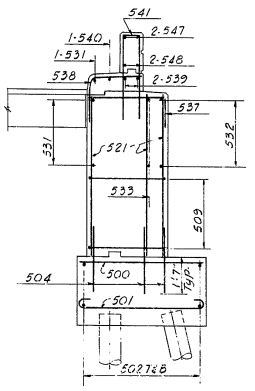
ELEVATION H-H (Wall # 1)
SCALE 3/8 IN = 1 FT.



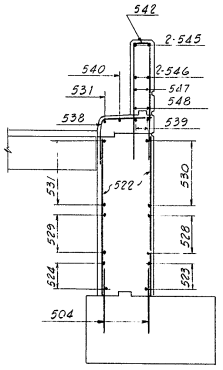
PLAN OF APPROACH SLAB
SCALE: 1/4 IN. = 1 FT.



SECTION J-J
SCALE: 3/8 IN. = 1 FT.

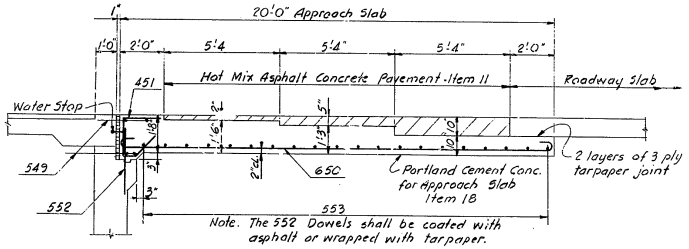


SECTION K-K
SCALE: 3/8 IN. = 1 FT.

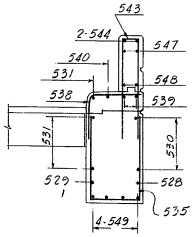


SECTION L-L
SCALE: 3/8 IN. = 1 FT.

NOTES:
For additional Plans & Sections see Dwgs. SA40 & 42
For additional Notes see Dwg. SA42



SECTION N-N
SCALE: 3/8 IN. = 1 FT.



SECTION M-M
SCALE: 3/8 IN. = 1 FT.

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP A ABUTMENT
PLAN, ELEVATIONS & SECTIONS
SHEET 2 OF 3

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER DATE

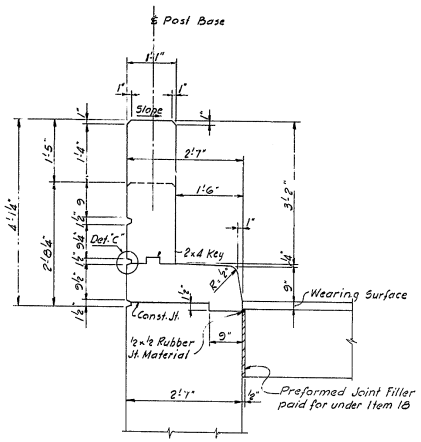
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

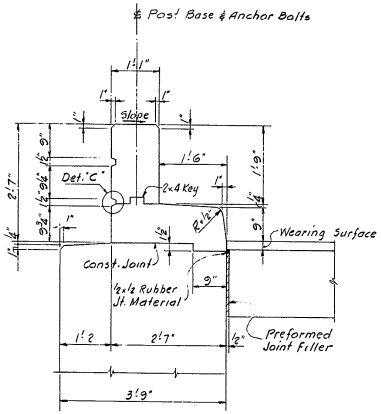
DWG. NO. SA41

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	76	215

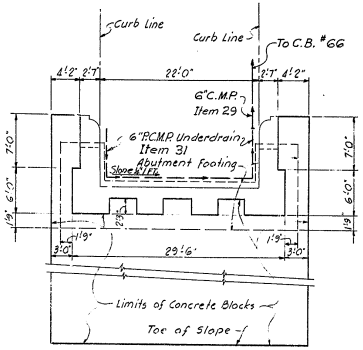
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



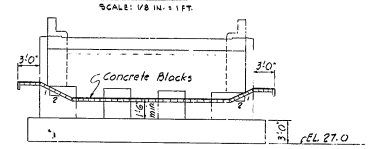
SECTION 1-1
SCALE: 3/4 IN. = 1 FT.



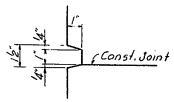
SECTION 2-2
SCALE: 3/4 IN. = 1 FT.



ABUTMENT PAVED AREA PLAN
SCALE: 1/8 IN. = 1 FT.



ELEVATION
SCALE: 1/8 IN. = 1 FT.



DETAIL "C"

NOTES:
For General Notes see Drawing SA 2.
For Framing Plan see Drawing SA 55
For additional Plans & Sections see Dwgs. SA40 & 41
For Railing details see Drawing SA 87
For placing of Anchor Bolts see Drawing SA 73
Place Anchor Bolts in Pedestals before concrete is poured.
All piles are cast-in-place 12" dia. concrete piles (Steel Shells) closed end. Item 35.
For pile reinforcement see Drawing SA 46
Piles shown O→ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 35'-0".
All reinforcing bars in Ramp "A" Abutment to be prefixed "RA"

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

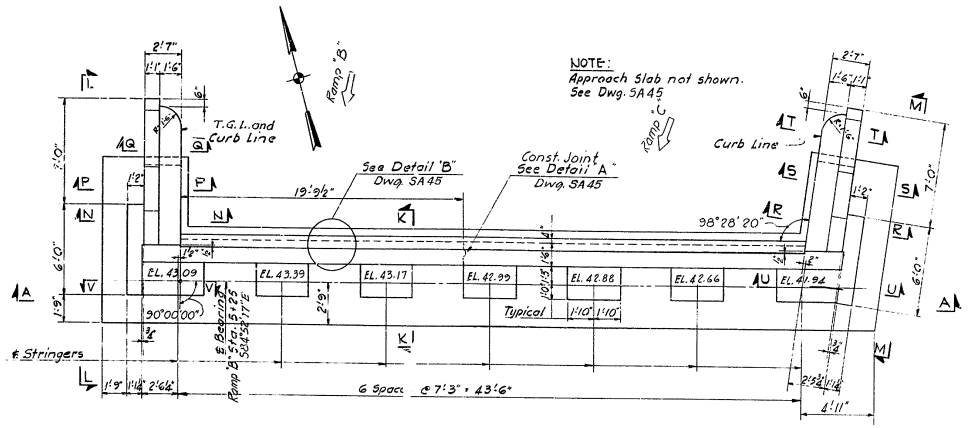
RAMP A ABUTMENT
PLAN, ELEVATION AND SECTIONS
SHEET 3 OF 3

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

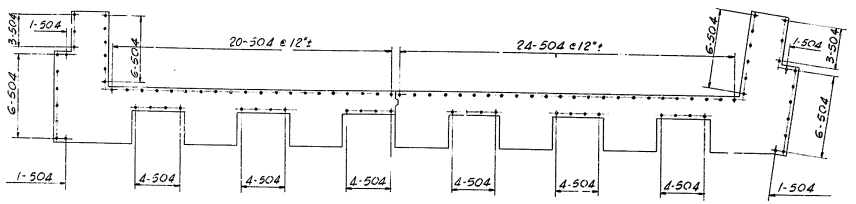
SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA42

COUNTY	CONTRACT	F.A.P. REA. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64 03-004	2	DEL.	I-95-2(12)	'64	77	215

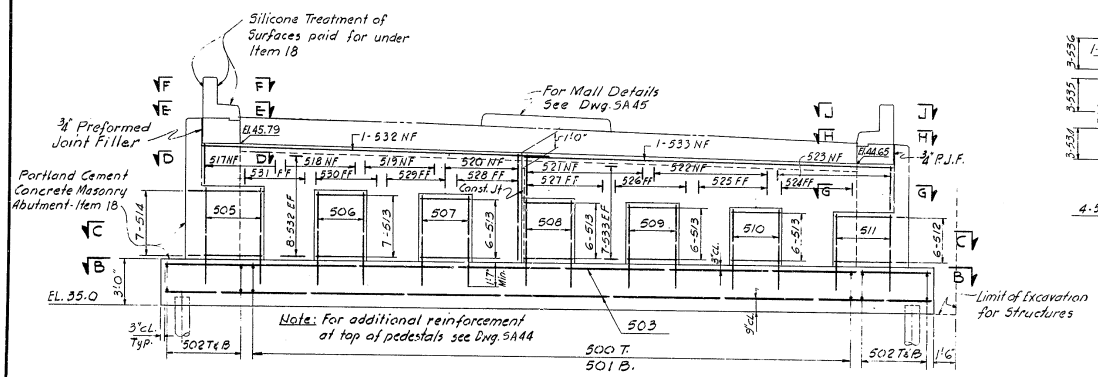
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



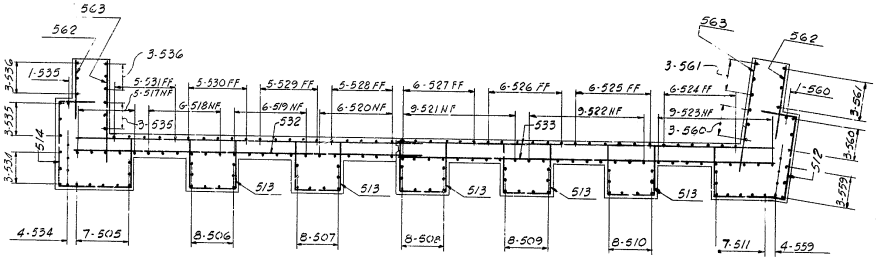
PLAN



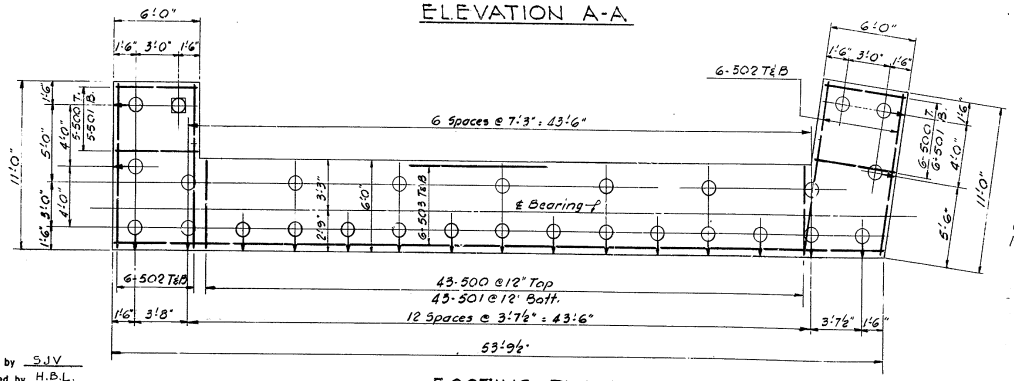
SECTIONAL PLAN B-B
(DOWELS)



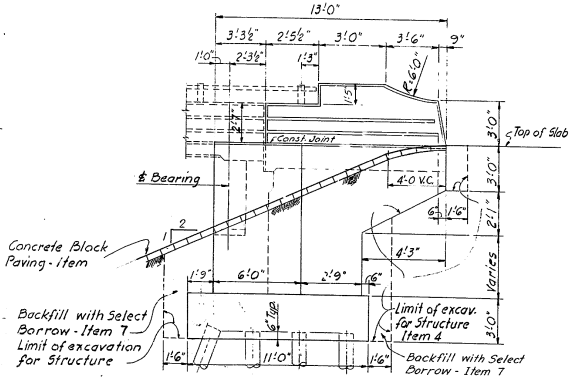
ELEVATION A-A



SECTIONAL PLAN C-C



FOOTING PLAN



TYPICAL WING WALL ELEVATION

NOTES:
For General Plan see Dwg. SA2
For Details 'A' & 'B' see Dwg. SA45
For Sections see Dwgs. SA44 & SA45
For Mall details see Dwg. SA45
For additional Notes see Dwg SA45
□ Indicates test piles
Piles in abutment have a design capacity of 40 tons.
For drains behind the backwall, see Dwg. SA45

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B ABUTMENT
PLANS & ELEVATIONS

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

SCALE: 1/4 IN. = 1 FT.
DATE: APRIL 1, 1964

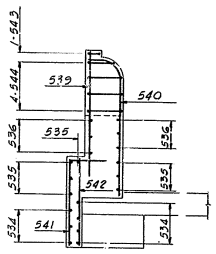
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA43

D C B A

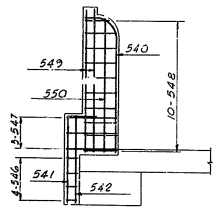
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	78	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



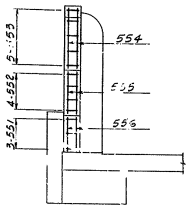
WINGWALL

SECTION D-D
SCALE: 1/4 IN. = 1 FT.



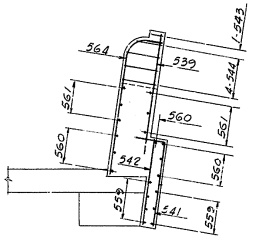
SIDEWALK

SECTION E-E
SCALE: 1/4 IN. = 1 FT.



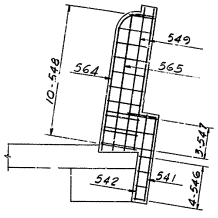
PARAPET

SECTION F-F
SCALE: 1/4 IN. = 1 FT.



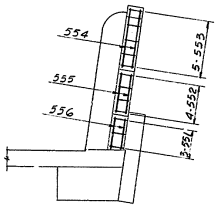
WINGWALL

SECTION G-G
SCALE: 1/4 IN. = 1 FT.



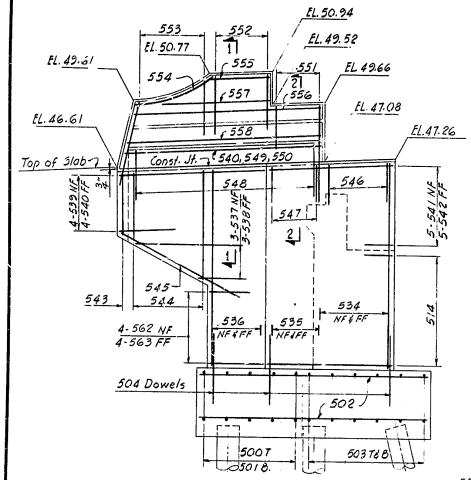
SIDEWALK

SECTION H-H
SCALE: 1/4 IN. = 1 FT.

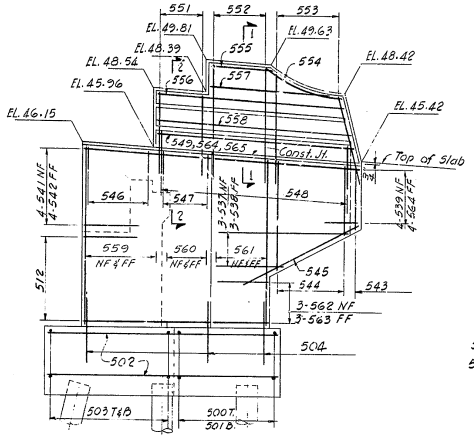


PARAPET

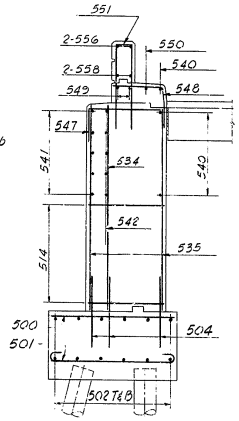
SECTION J-J
SCALE: 1/4 IN. = 1 FT.



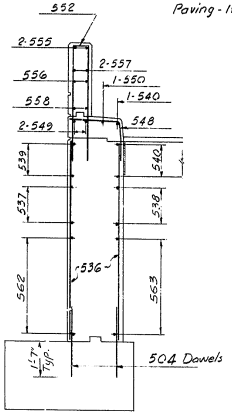
ELEVATION L-L



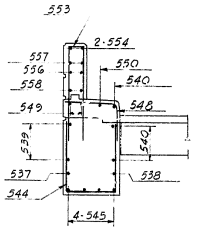
ELEVATION M-M



SECTION N-N

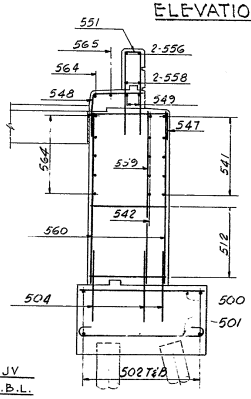


SECTION P-P

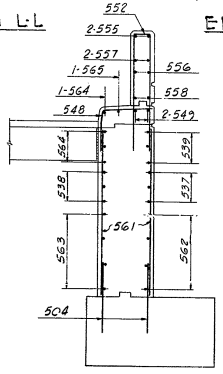


SECTION K-K
SCALE: 3/8 IN. = 1 FT.

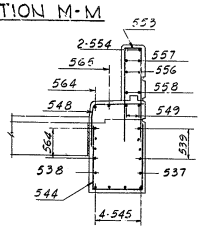
SECTION Q-Q



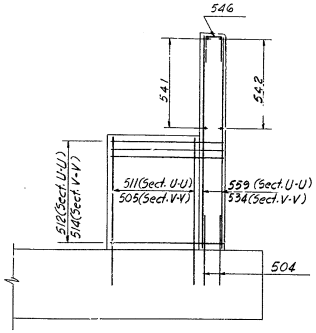
SECTION R-R



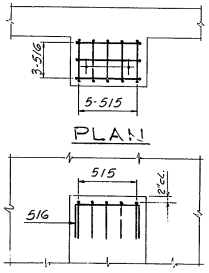
SECTION S-S



SECTION T-T



SECTION U-U
SECTION V-V



PLAN

ELEVATION

ADDITIONAL REINFORCEMENT AT TOP OF PEDESTALS

NOTES:
For Deck, Footing & Dowel Plans see Dwg. SA43
For additional Notes see Dwg. SA45

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B ABUTMENT
SECTIONS, ELEVATIONS & DETAILS

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

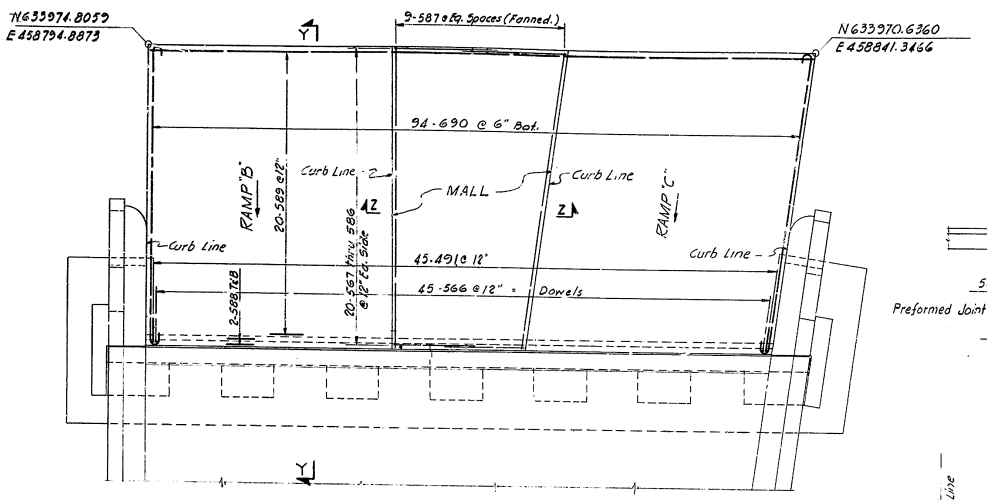
SCALE: 3/8 IN = 1 FT UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

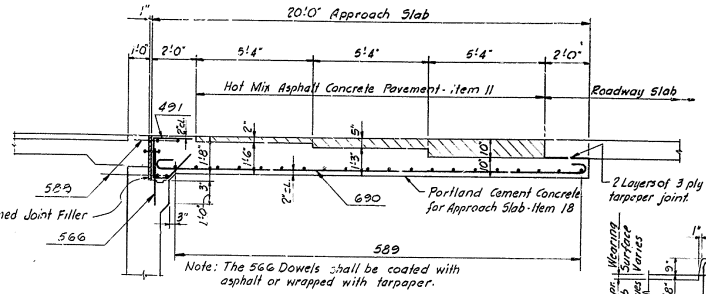
DWG. NO. SA44

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	79	215

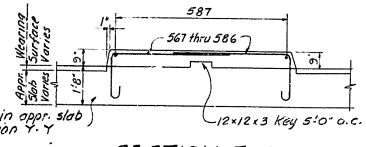
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PLAN OF APPROACH SLAB
SCALE: 1/4 IN. = 1 FT.



SECTION Y-Y
SCALE: 3/8 IN. = 1 FT.



SECTION Z-Z
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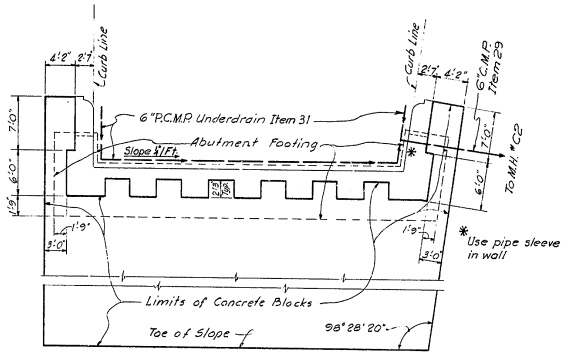
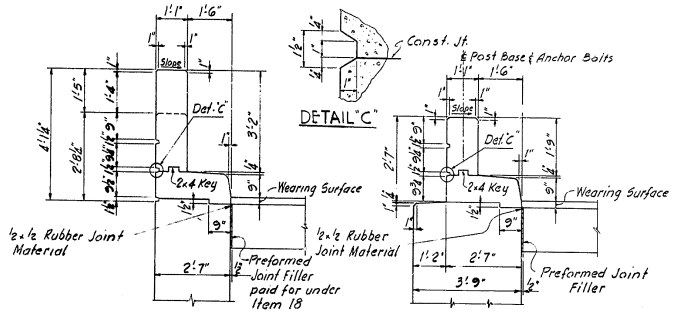
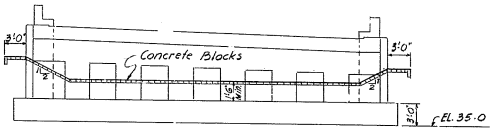


PAVED AREA AT ABUTMENT PLAN
SCALE: 1/8 IN. = 1 FT.

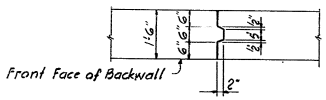


SECTION 1-1
SCALE: 1/2 IN. = 1 FT.

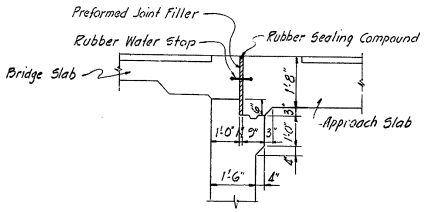
SECTION 2-2
SCALE: 1/2 IN. = 1 FT.



ELEVATION
SCALE: 1/8 IN. = 1 FT.



DETAIL "A"
SCALE: 1/2 IN. = 1 FT.



DETAIL "B"
SCALE: 1/2 IN. = 1 FT.

NOTES:
For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA56
For Pile reinforcement see Dwg. SA46
For placing of Anchor Bolts see Dwg. SA73
Place Anchor Bolts before concrete is poured.
For Railing details see Dwg. SA87
All piles are Cast-in-place 12" Dia. Concrete piles (Steel Shell) closed ends. Item 35
Piles shown ○→ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 25'-0"
All reinforcing bars to be prefixed BC
For additional Plans & Sections see Dwgs. SA45 & 46

Drawn by SJV
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP B ABUTMENT
PLANS, SECTIONS & DETAILS

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

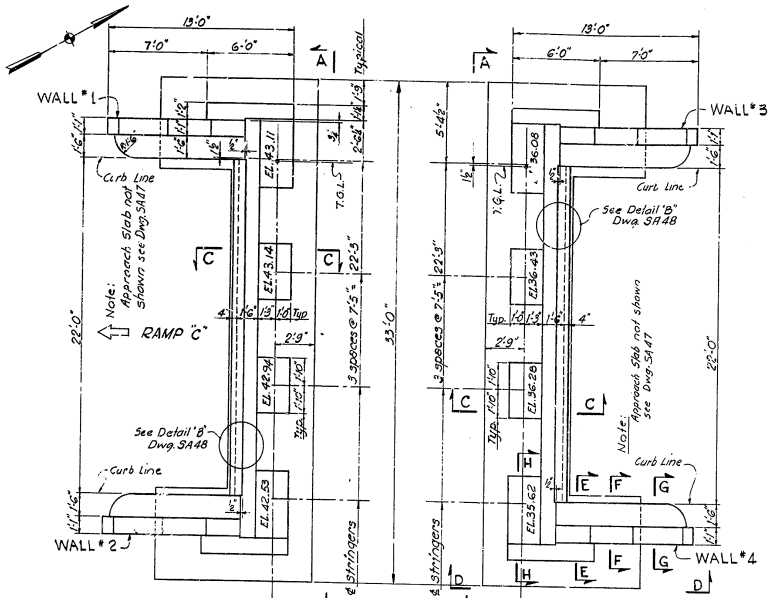
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA45

COUNTY	CONTRACT	R.S.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	80	215

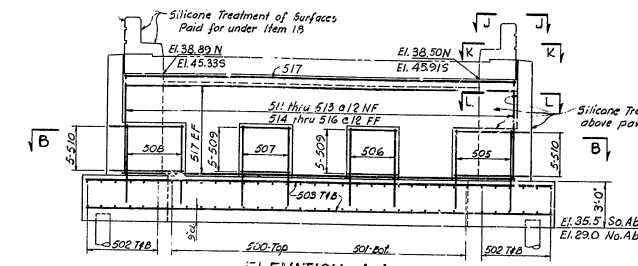
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



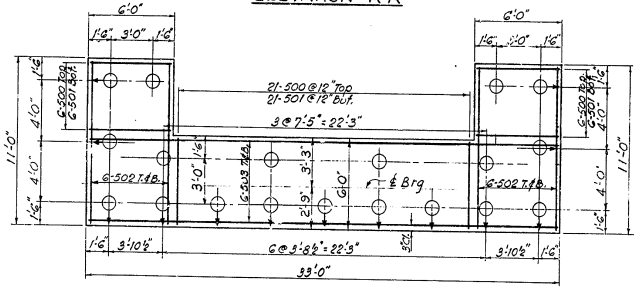
DECK PLAN

WING WALL ELEVATIONS				
POINT ON WALL	WALL NO. 1	2	3	4
A	47.22	46.64	40.35	39.92
B	47.89	46.69	40.19	39.73
C	49.87	49.27	42.77	42.31
D	49.92	49.33	42.63	42.17
E	51.34	50.75	44.05	43.59
F	51.40	50.80	43.87	43.41
G	50.56	49.90	42.68	42.22
H*	47.56	46.92	39.68	39.22

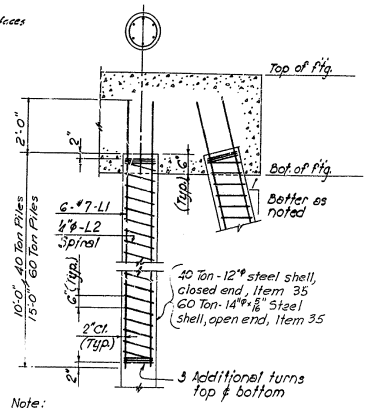
*PT. H is 3" above Const. Jt.



ELEVATION A-A

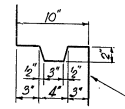


FOOTING PLAN

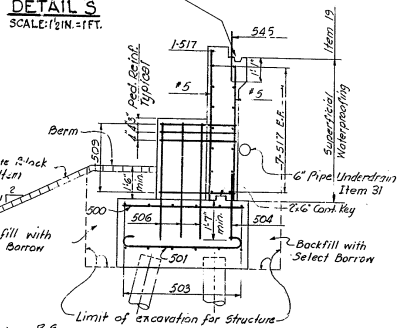


Note:
Splice detail to be approved by engineer.
Reinforcement to be paid under Item 35.

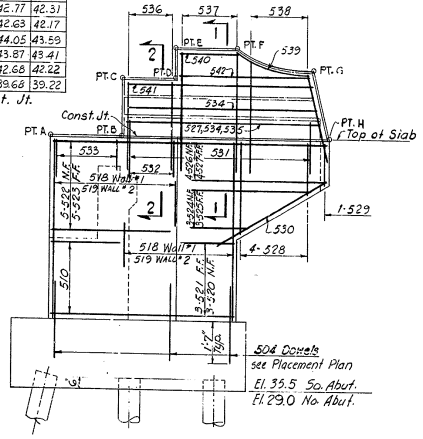
TYPICAL PILE DETAILS
40 & 60 TON CAST-IN-PLACE CONCRETE PILES



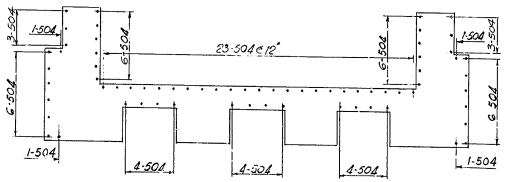
DETAIL "S"
SCALE: 1½ IN. = 1 FT.



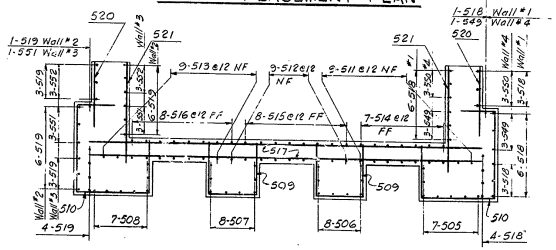
SECTION C-C
SCALE: ⅜ IN. = 1 FT.



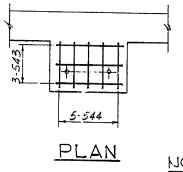
ELEVATION D-D (As shown for Walls *1 & 2 Walls *3 & *4 Similar)
NOT TO SCALE



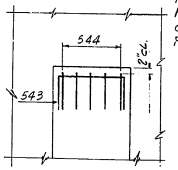
DOWEL PLACEMENT PLAN



SECTIONAL PLAN B-B



PLAN



ELEVATION
ADDITIONAL REINF. TOP OF PEDESTALS
NOT TO SCALE

NOTES:
For additional Plans & Sections see Dwgs. SA47 & 48
For additional notes see Dwg. SA48
Piles in abutment have a design capacity of 40 tons.
For drains behind the backwall, see Dwg. SA48

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP C ABUTMENTS
PLANS & ELEVATIONS

APPROVED BY: _____ BRIDGE ENGINEER — DATE: 4-16-64

SCALE: 1/4 IN. = 1 FT. UNLESS NOTED

DATE: APRIL 1, 1964

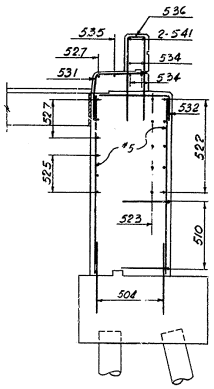
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA46

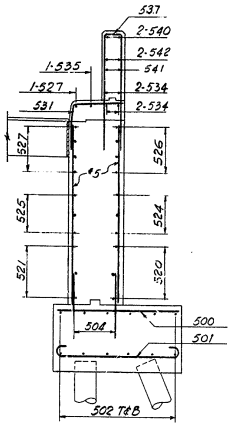
Drawn by R.G.
Checked by H.B.L.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	81	215

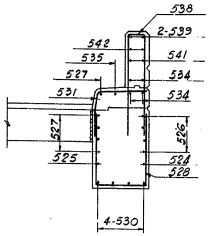
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



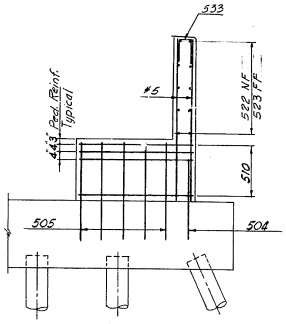
SECTION E-E



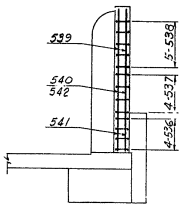
SECTION F-F



SECTION G-G

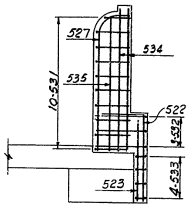


SECTION H-H



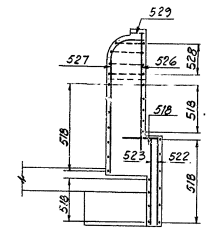
PARAPET

SECTION J-J



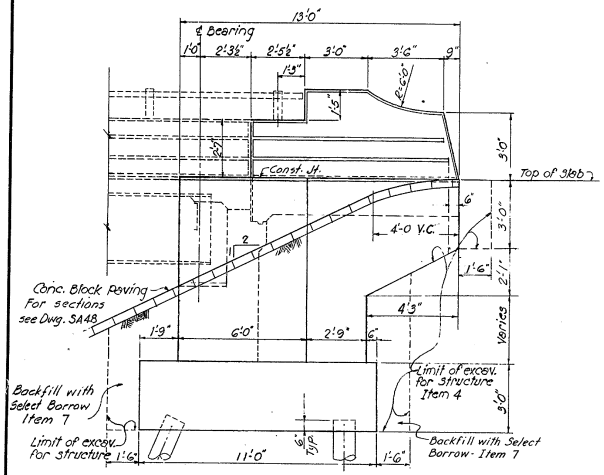
SIDEWALK

SECTION K-K



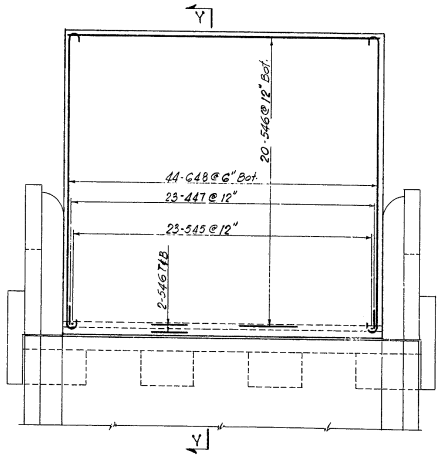
WINGWALL

SECTION L-L (As shown for Wall #1 Wall #4 Similar)



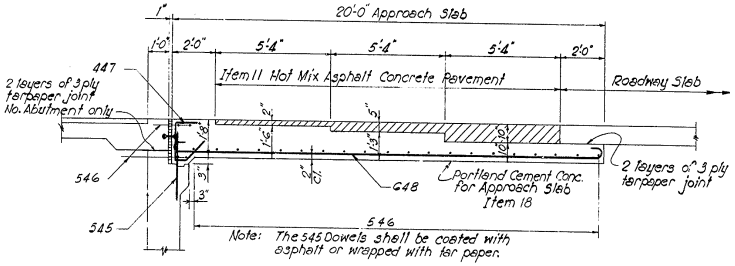
TYPICAL WING WALL ELEVATION

For Elevation of Wing Walls see Dwg. SA46



PLAN OF APPROACH SLAB

SCALE: ¼ IN. = 1 FT.



SECTION Y-Y

NOTES:
For additional Plans & Sections see Dwgs. SA46 & 48
For additional notes see Dwg. SA48

Drawn by R.G.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

RAMP C ABUTMENTS
PLAN, ELEVATION & SECTIONS

APPROVED BY: Wilmie R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

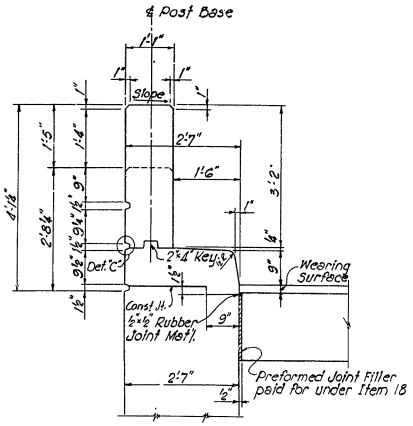
SCALE: 3/8 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

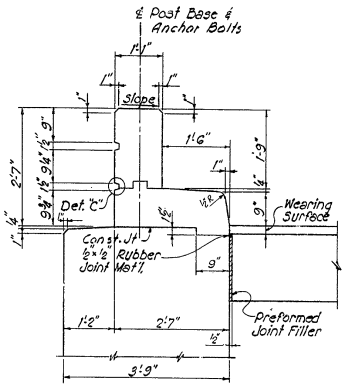
DWG. NO. SA47

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	82	215

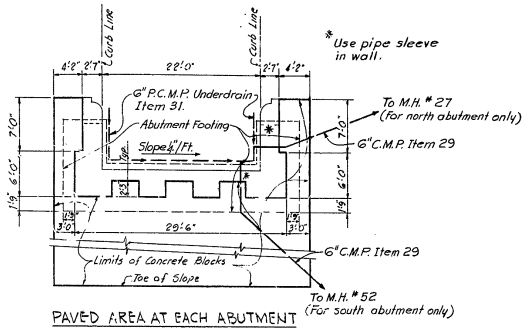
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



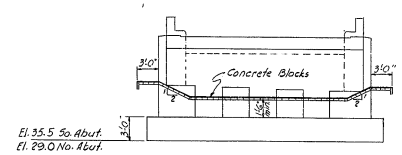
SECTION 1-1
SCALE: ¾ IN. = 1 FT.



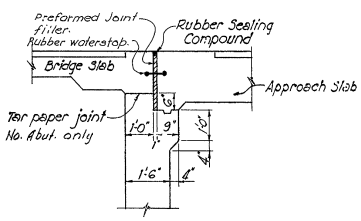
SECTION 2-2
SCALE: ¾ IN. = 1 FT.



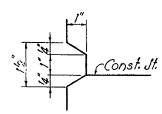
PAVED AREA AT EACH ABUTMENT
PLAN
SCALE: 1/8 IN. = 1 FT.



ELEVATION
SCALE: 1/8 IN. = 1 FT.



DETAIL "B"
SCALE: ½ IN. = 1 FT.



DETAIL "C"

NOTES:

For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA57
For Railing details see Dwg. SA87
For placing of anchor bolts see Dwg. SA73
Place anchor bolts in pedestal before concrete is poured
All piles are cast-in-place 12" dia. Concrete Piles, (Steel Shells) closed end. Item 35
For pile reinforcement see Dwg. SA46
Piles shown ⊕ are to have a batter of 1 horizontal to 4 vertical unless noted.
Estimated length of piles is 25'-0"
All reinforcing bars in North Abutment to be prefixed NC. Reinforcing bars in South Abutment to be prefixed SC.
For additional Plans & Sections see Dwgs. SA46 & 47

Drawn by R.G.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

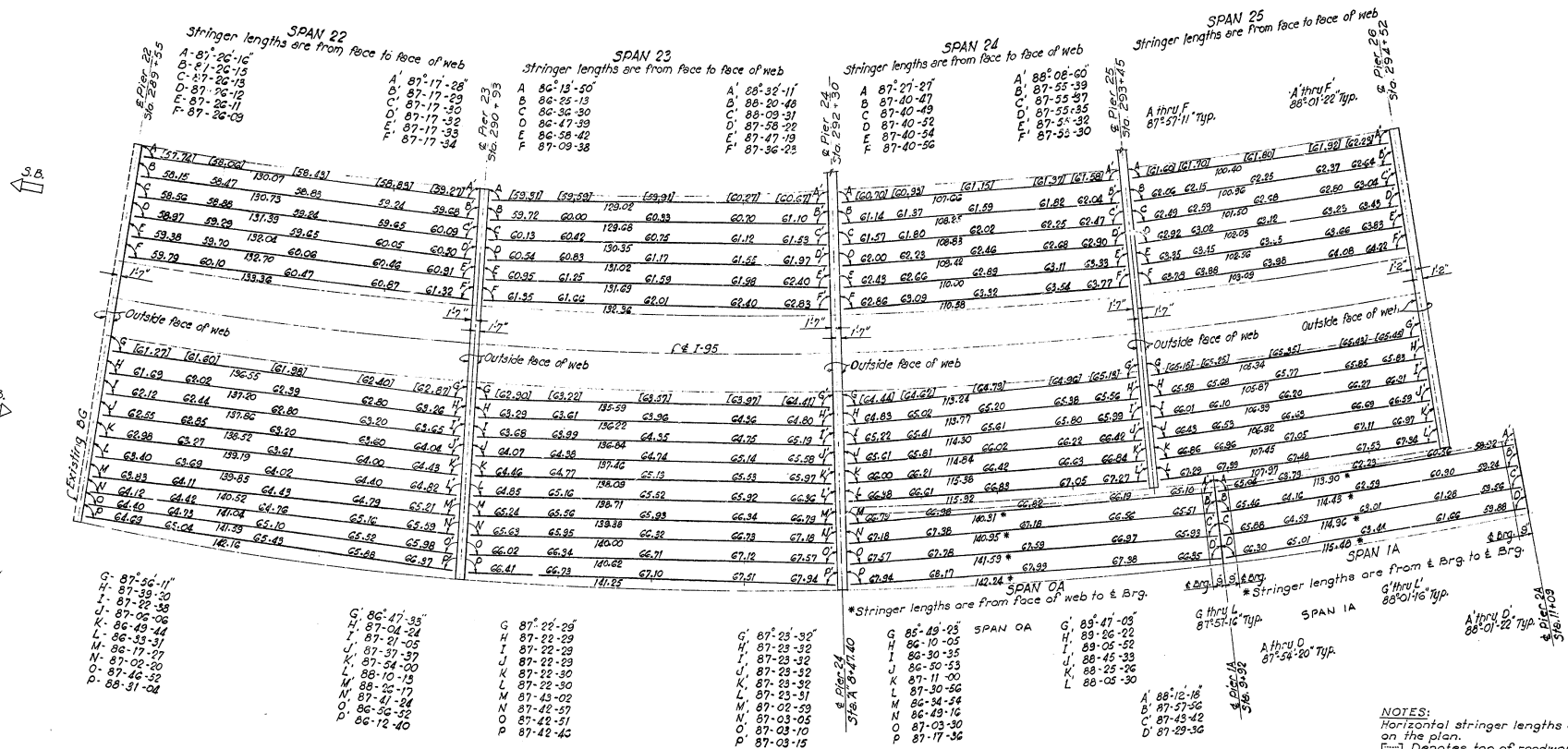
RAMP C ABUTMENTS
SECTIONS & DETAILS

APPROVED BY: Johnnie P. Pearson Jr. 4-1-64
BRIDGE ENGINEER DATE

SCALE: 3/4 IN. = 1 FT. UNLESS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA48

COUNTY	CONTRACT	R.R.A. No.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	83	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths are as noted on the plan.
[····] Denotes top of roadway elevations which are given at 4 points of stringer.
For framing plan, see Dwg. No. SA54
All anchor bolts to be set 90° to the center line of stringer.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 1 OF 5

APPROVED BY: _____ BRIDGE ENGINEER
DATE: 4-16-64

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

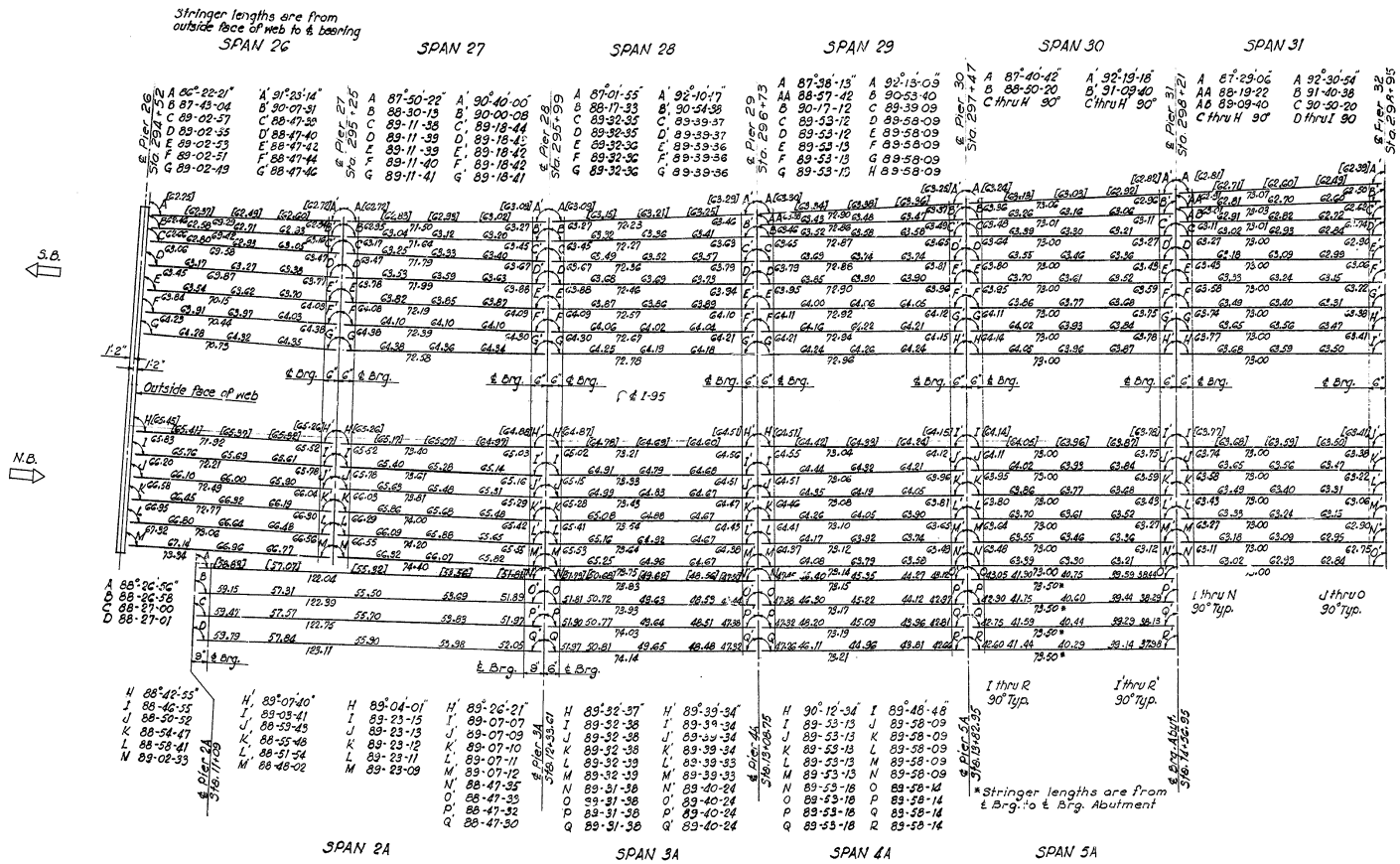
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA49

Drawn by R.G.
Checked by F.Y.

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	84	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths are computed from ℄ Brg. to ℄ Brg except as noted on the plan.
[ ] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan, see Dwg. SA55

Drawn by R.G.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 2 OF 5

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

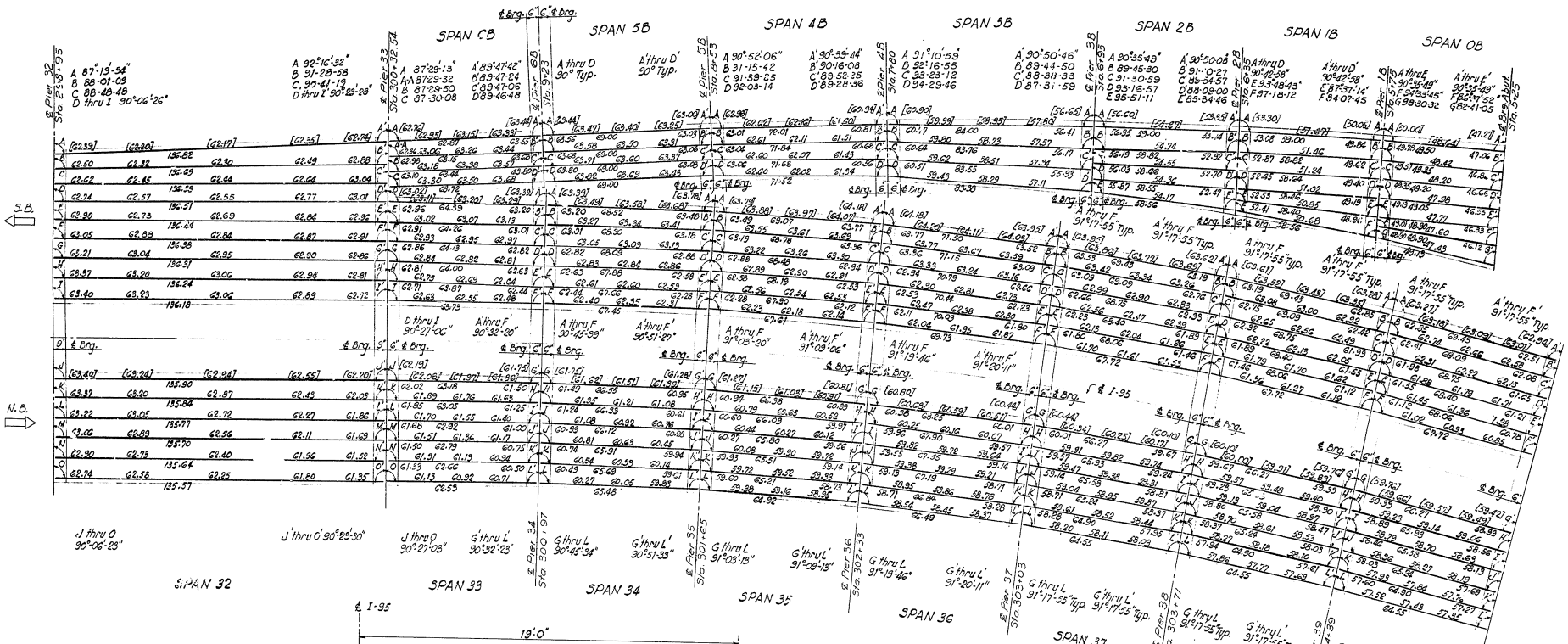
SCALE: 1 IN.=20 FT. DATE: APRIL 1, 1964

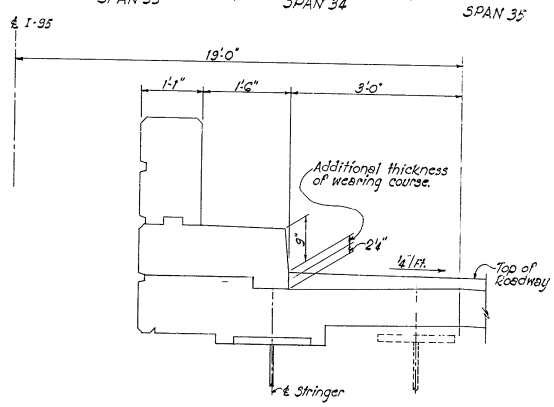
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA50

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	85	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





DETAIL AT
TANGENT SECTION ONLY
(SEE DWGS. S-1 & S-4)
SCALE: 1 IN.=1 FT.

NOTES:
Horizontal stringer lengths are computed from ℄ Brg to ℄ Brg.
[····] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan, see Dwg SA56

Drawn by R.G.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

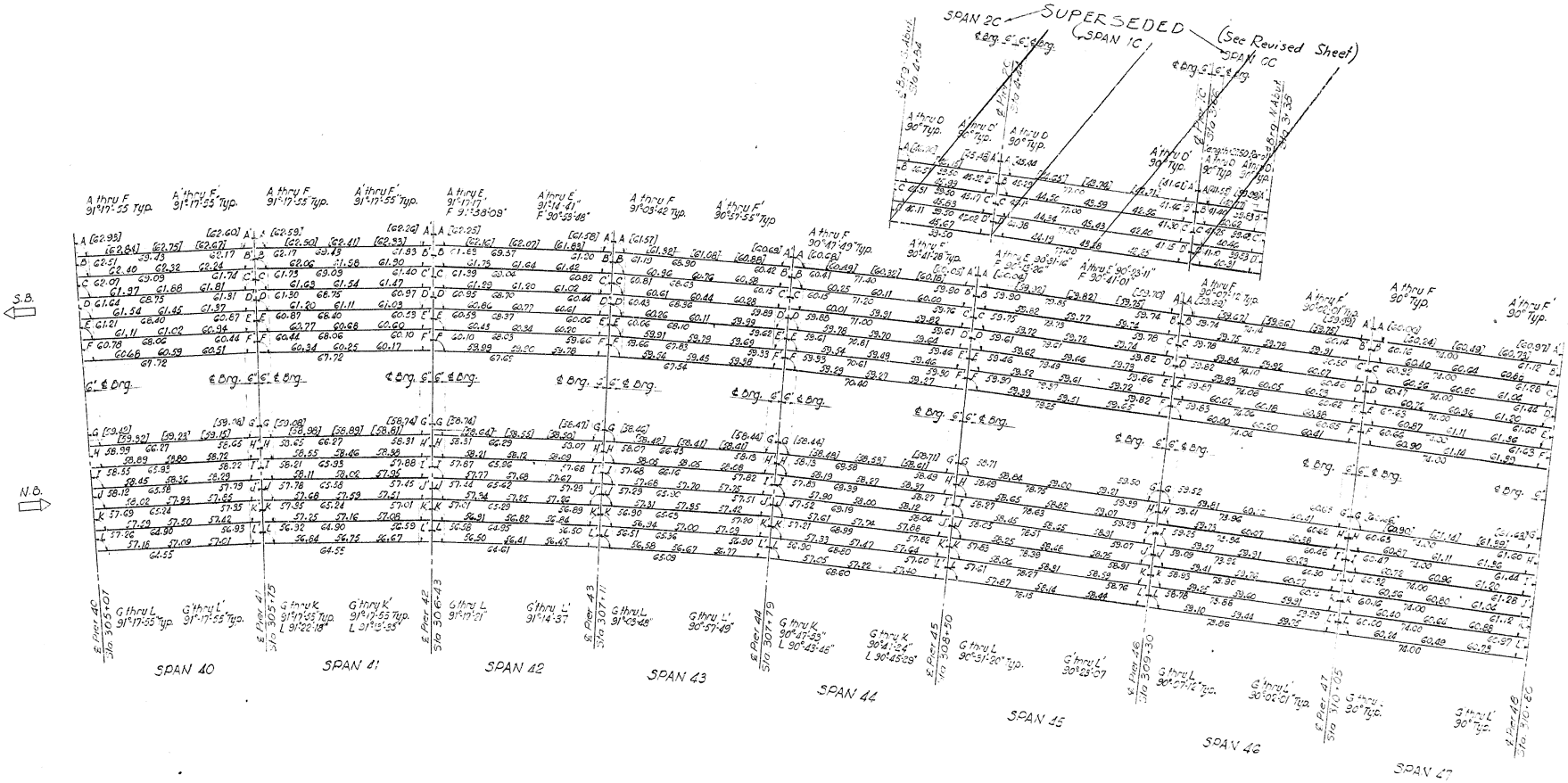
DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 3 OF 5

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE: 1 IN.=20 FT.
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA51

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95 2(12)	'64	86	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths computed from ℄ Brg. to ℄ Brg.
[ ] Denotes top of roadway elevations which are given at 4 points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan see Dwg. S457

Drawn by R.G.
Checked by J.A.P.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 4 OF 5

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE: 1 IN = 20 FT
DATE: APRIL 1, 1964

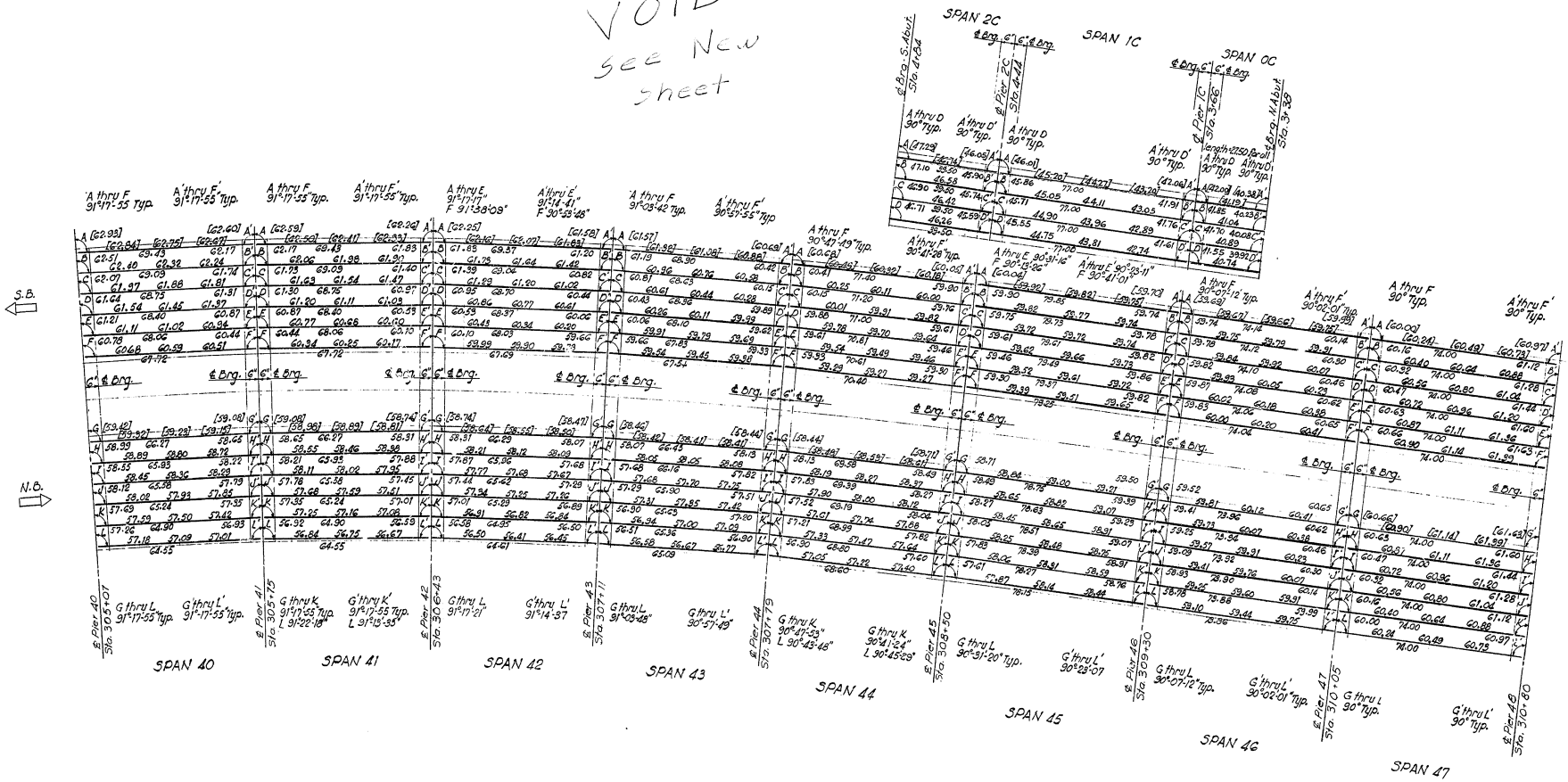
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 52

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	86	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

VOID
See New Sheet



NOTES:
Horizontal stringer lengths computed from ℄ Brg. to ℄ Brg.
[·····] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan see Dwg. SA51

Drawn by R.G.
Checked by J.A.P.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 4 OF 5

APPROVED BY: _____ 4-14-64
BRIDGE ENGINEER DATE

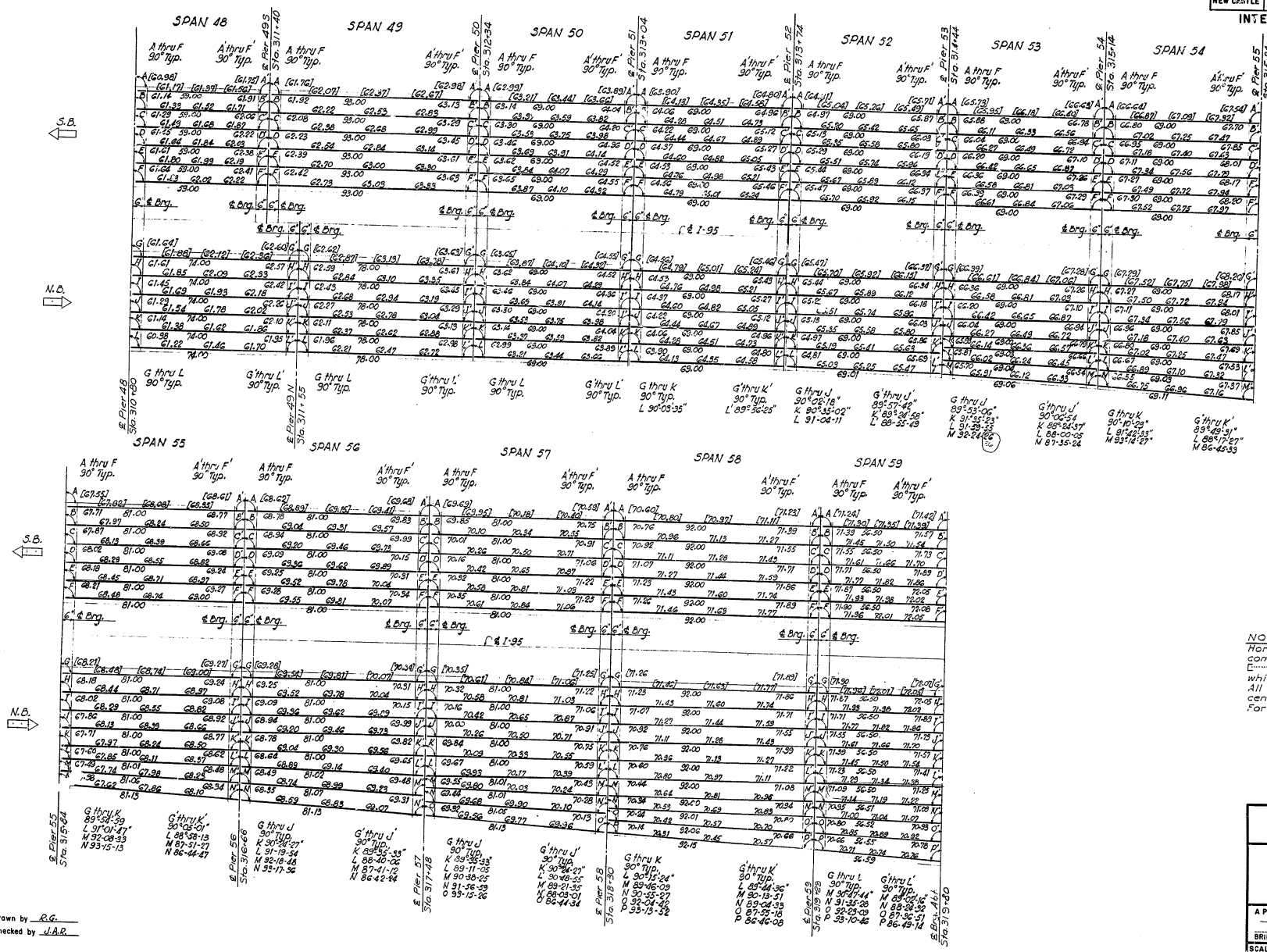
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA52

COUNTY	CONTRACT	R.R.A. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	87	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
Horizontal stringer lengths are computed from ℄ Brg. to ℄ Brg.
[·····] Denotes top of roadway elevations which are given at ¼ points of stringer.
All anchor bolts to be set 90° to the center line of stringer.
For framing plan see DWG. SA 58

Drawn by R.G.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK ELEVATIONS AND STRINGER GEOMETRY
SHEET 5 OF 5

APPROVED BY: Volmine R. Pearson, Jr. — BRIDGE ENGINEER — 4-16-64 DATE

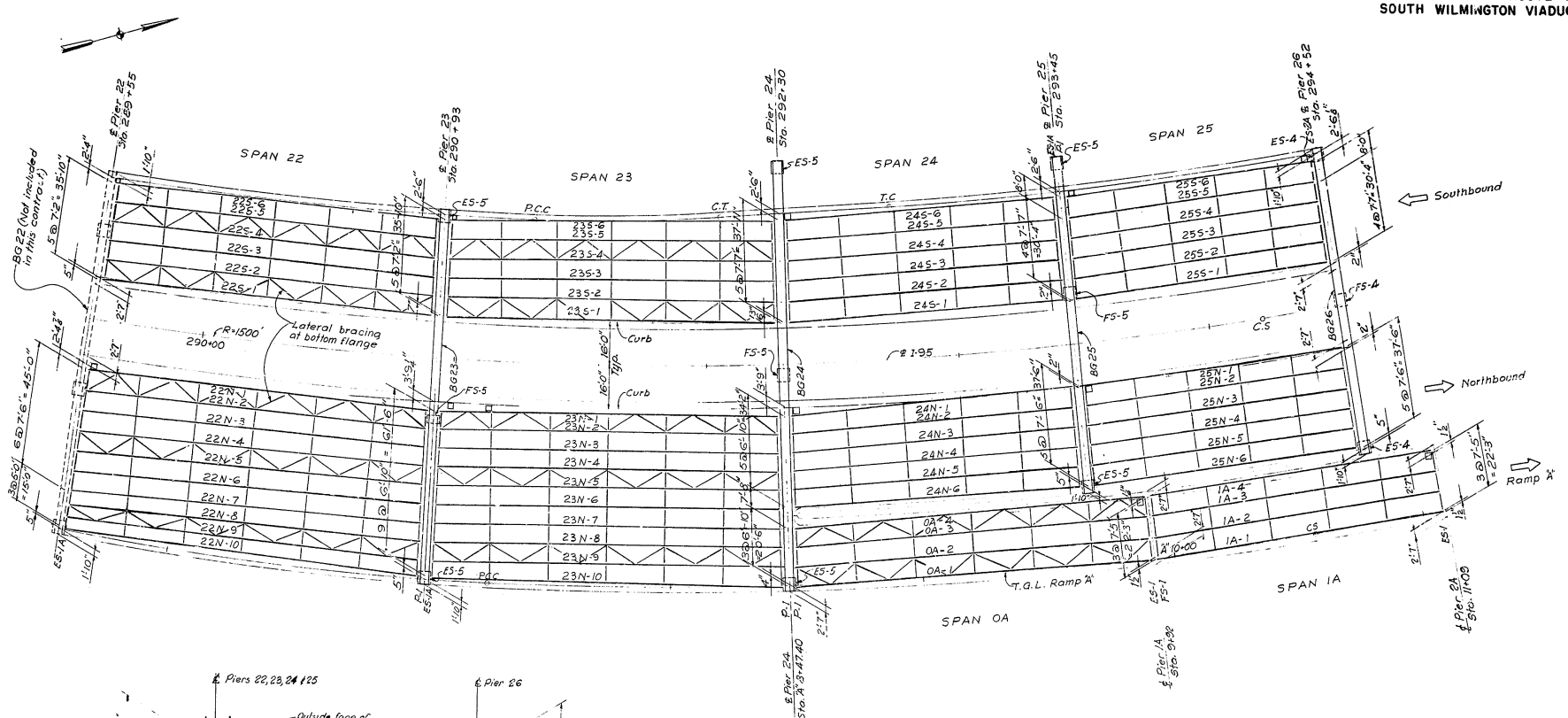
SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

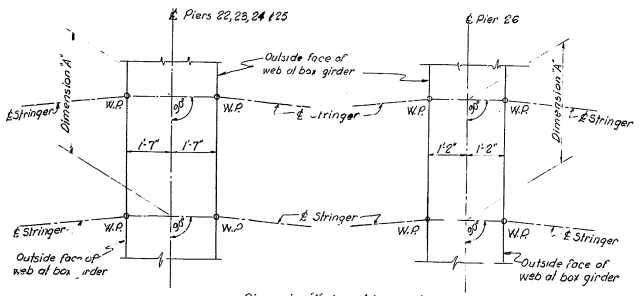
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 53

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	88	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





Dimension 'A' given at box girders is measured along ℄ pier. Working points for ℄ stringers are established by extending a line at right angles to ℄ pier, to outside face of web plate.

NOTES:
- For General Notes, see Dwg. SA 2
- For location of ℄ bearings and stringer geometry see Dwg. SA 49
- For stringer data, see Dwgs. SA 59 to SA 64
- For stringer details & shear connectors, see Dwgs. SA 65 to SA 68
- For box girders, see Dwgs. SA 69 to SA 76
- For details of shoes, see Dwgs. SA 73 & SA 74
- [F.J.] denotes a flinger joint, See Dwg. SA 75
- All Expansion Jts. are plate joints except as noted on Dwgs SA 54 thru SA 58.
- □ denotes scupper, see Dwgs SA 88 thru SA 90.
- For other references, see Index of Drawings.

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 22 TO PIER 26
RAMP A-SPANS OA & 1A

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE: 1 IN. = 20 FT.

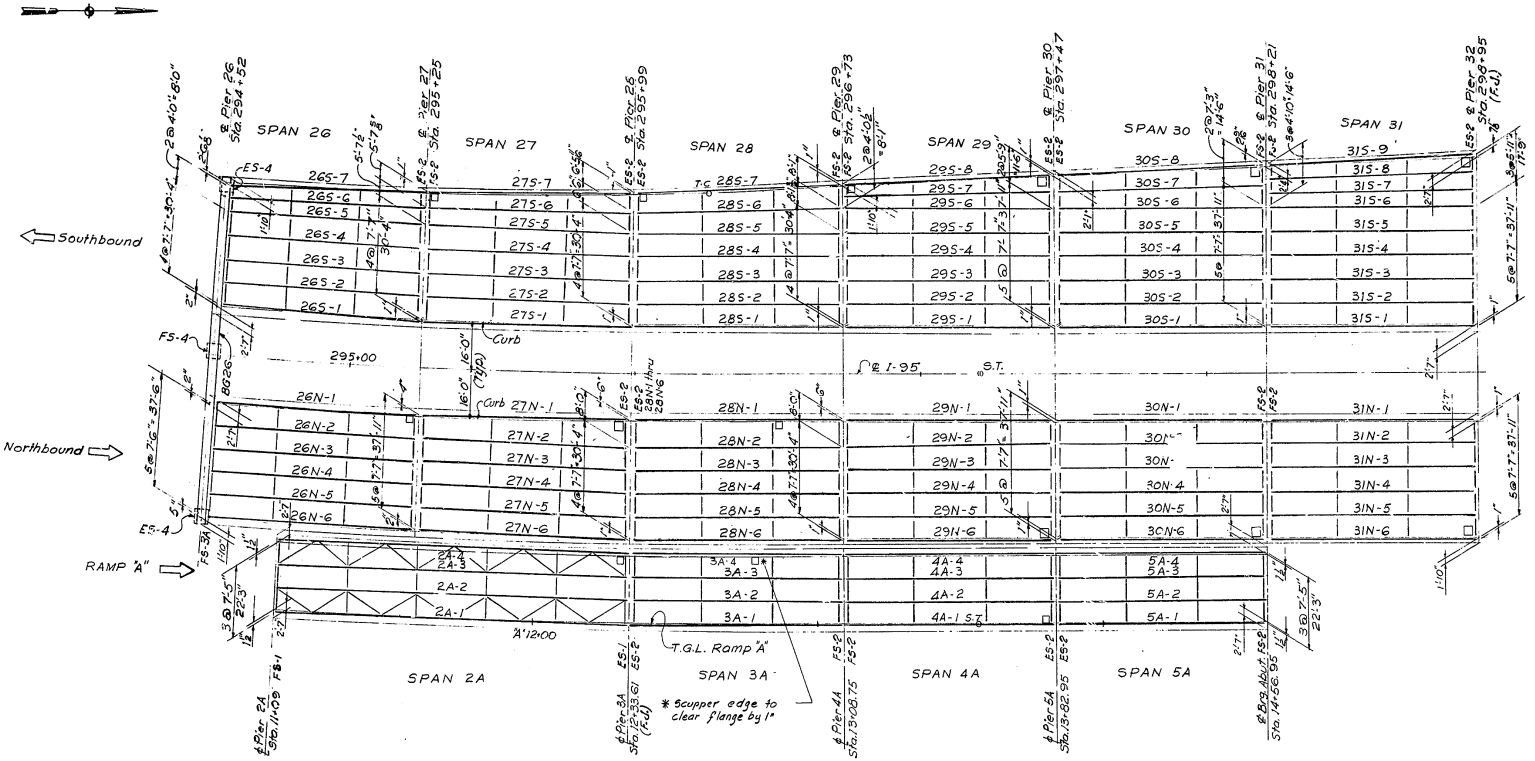
DATE: APRIL 1, 1964

T. PETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA 54

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	89	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

Drawn by E.N.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 26 TO PIER 32
RAMP A-SPANS 2A THRU 5A

APPROVED BY: Valentine D. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

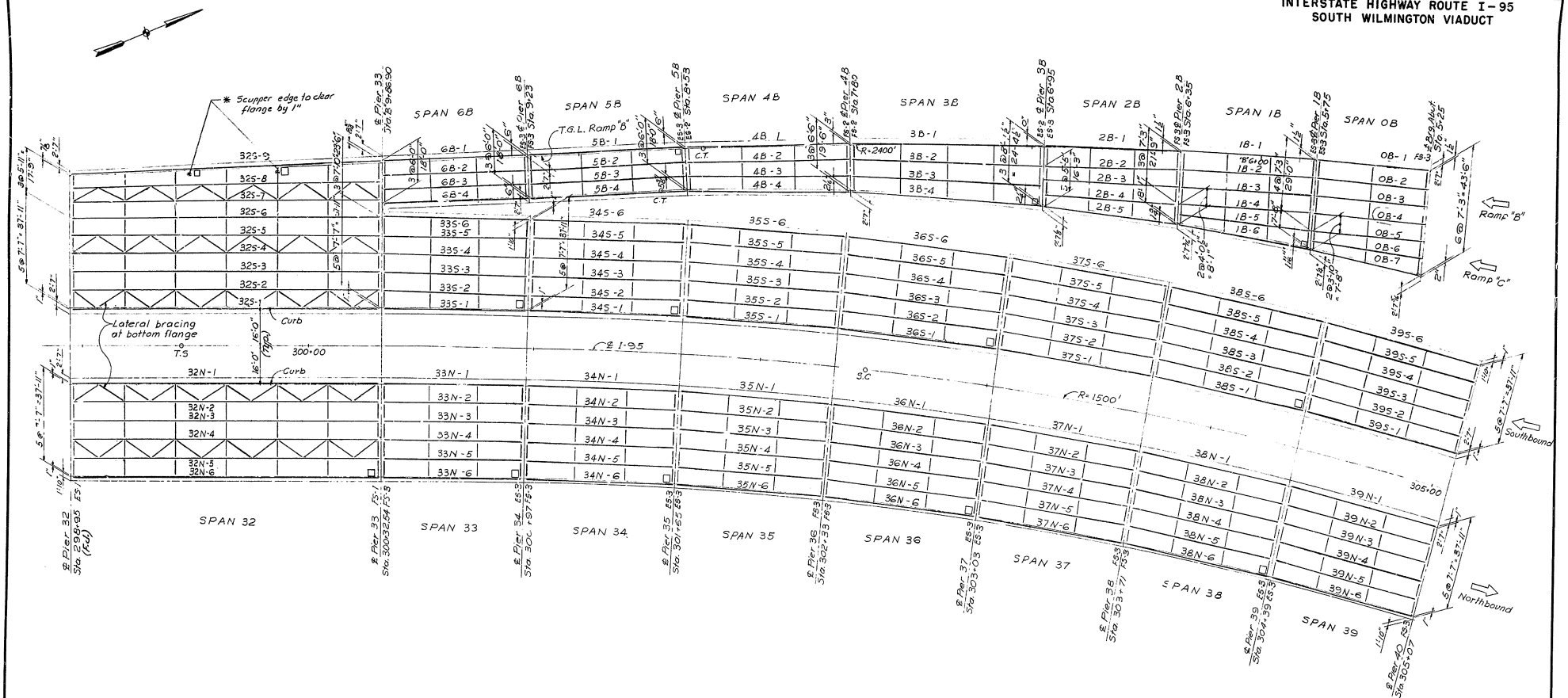
SCALE: 1 IN.=20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA55

COUNTY	CONTRACT	R.N.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	90	95

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 32 TO PIER 40
RAMP B-SPANS OB THRU 6B

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE: 1 IN. = 20 FT
DATE: APRIL 1, 1964

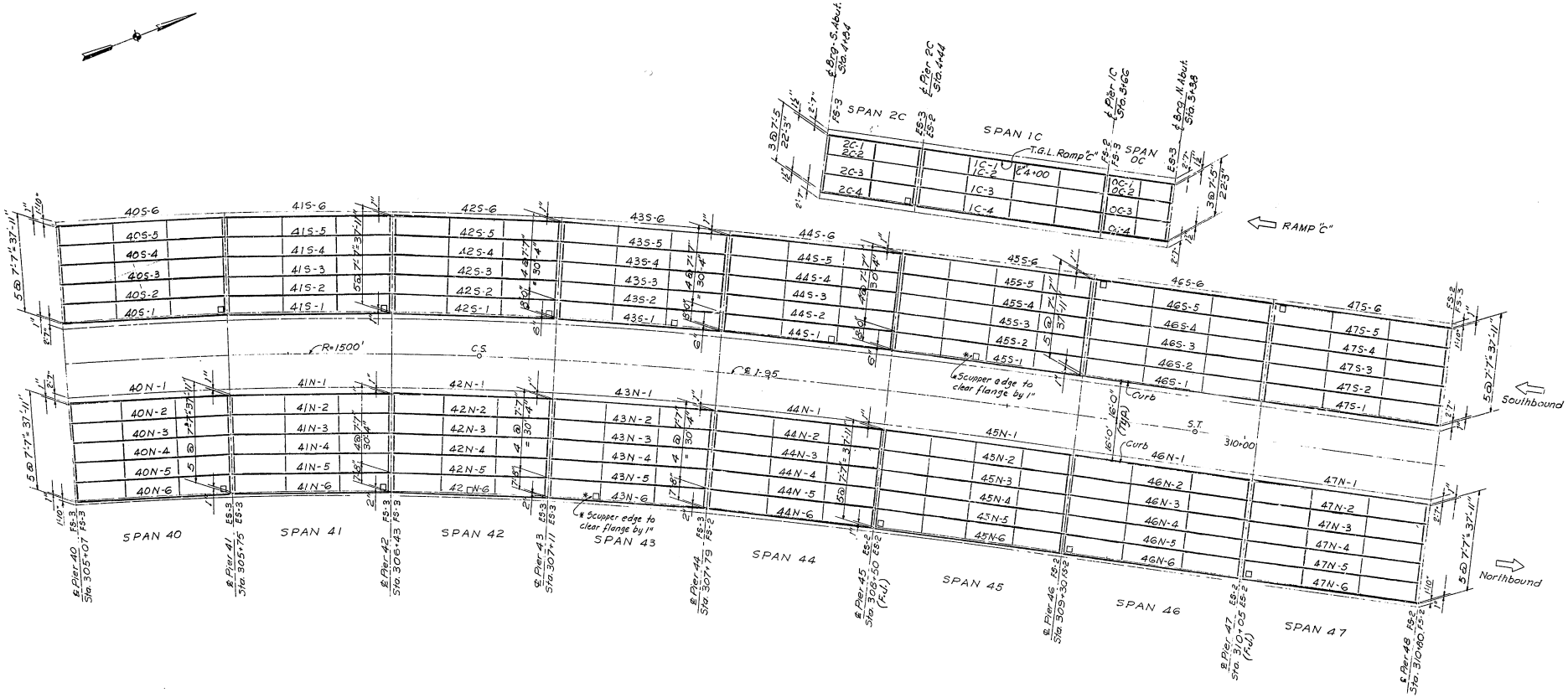
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA56

Drawn by E.N.
Checked by F.Y.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	91	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 40 TO PIER 48
RAMP C

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: 1 IN. = 20 FT.
DATE: APRIL 1, 1964

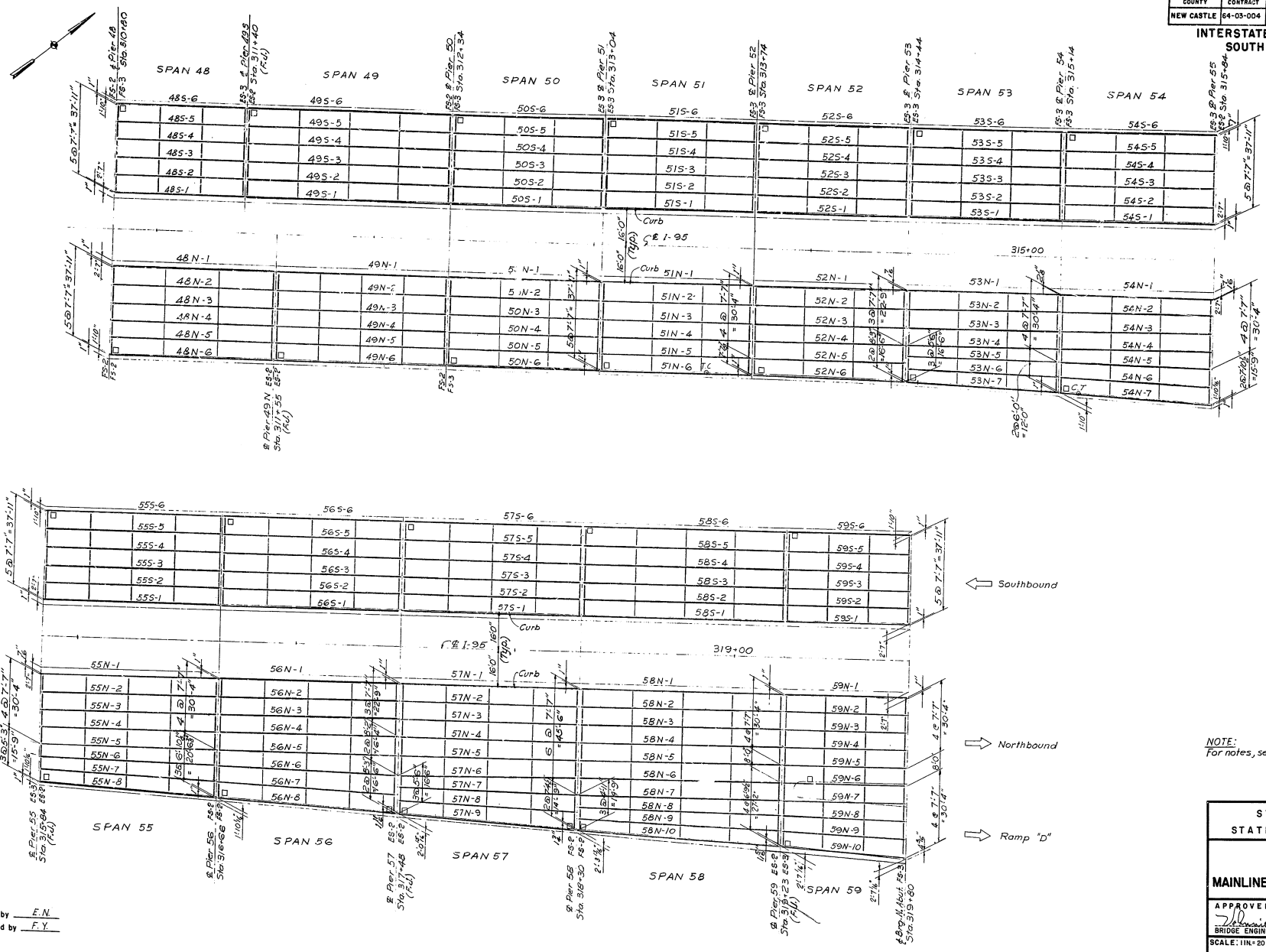
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA57

Drawn by E.N
Checked by F.Y.

COUNTY	CONTRACT	A.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	92	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTE:
For notes, see Dwg. SA54

Drawn by E.N.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FRAMING PLAN
MAINLINE-PIER 48 TO NORTH ABUTMENT

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

SCALE: 1IN = 20 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA58

COUNTY	CONTRACT	P.D.A. REG NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	93	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB B.W.S	CAMBER V.C.	CAMBER TOTAL	REMARKS
26S-1	36WF150	14x1/4 x 55-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16		1 1/8	
26S-2															
26S-3															
26S-4		14x1/2 x 55-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8			1 1/8	
26S-5		14x3/8 x 52-0		II	10-0	11-0	II	10-0	12-0	5/16	1"			1 5/16	
26S-6		10x1/2 x 48-0		III	14-0	9-0	III	14-0	9-0	5/16	7/8			1 3/16	
26S-7	36WF150	14x3/8 x 49-0		IV	15-0	10-0	IV	15-0	10-0	5/16	1/8	5/16	1/8	1 1/8	
26N-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	1/8	2 3/16	
26N-2															
26N-3															
26N-4															
26N-5		14x1 1/8 x 58-0		I	10-0	14-0	I	10-0	13-0				1/8	2 3/16	
26N-6	36WF160	16x1 3/8 x 57-0		II	12-0	13-0	II	12-0	14-0	7/16	1/4	3/8	1/4	2 5/16	
27S-1	36WF160	14x1 1/4 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	1/4	2 5/16	
27S-2															
27S-3															
27S-4															
27S-5		14x1 1/4 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 5/16	
27S-6		14x3/4 x 58-0		III	14-0	12-0	III	14-0	12-0	1/16	1 1/16			2 1/8	
27S-7	36WF160	14x3/8 x 58-0		III	14-0	12-0	III	14-0	12-0	3/8	1	3/8	1/4	2	
27N-1	36WF160	14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 3/8	3/8	0	2 5/16	
27N-2														0	2 5/16
27N-3														1/8	2 5/16
27N-4														1/4	2 5/16
27N-5		14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0		1 3/8	3/8	1/4	2 5/16	
27N-6	36WF160	14x1 1/8 x 58-0		II	12-0	13-0	II	12-0	14-0	7/16	1/4	3/8	1/4	2 5/16	
28S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	-	2 1/16	
28S-2													-		
28S-3													-		
28S-4													-		
28S-5													-		
28S-6		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4		-	2 1/16	
28S-7	36WF160	14x1 1/16 x 650		II	11-0	13-0	II	11-0	14-0	7/16	1/16	3/8	1/4	2 5/8	
28N-1	36WF160	14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 1/8	3/8	0	2 5/8	
28N-2															
28N-3															
28N-4															
28N-5		14x1 3/8 x 59-0		I	10-0	14-0	I	10-0	13-0		1 1/8			2 5/8	
28N-6	36WF160	14x1 1/8 x 57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/8	3/8	0	2	
29S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8		1 3/16	
29S-2														1/8	3 5/8
29S-3															
29S-4															
29S-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			3 5/8	
29S-6		14x1 1/16 x 55-0		II	11-0	11-0	II	11-0	12-0	1 3/16				3 1/4	
29S-7		10x3/4 x 50-0		IV	14-0	10-0	IV	14-0	10-0		1			3 1/16	
29S-8	36WF160	10-13/16 x 51-0		IV	15-0	10-0	IV	15-0	10-0	7/16	1	3/8	1/4	3 1/16	
29N-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	-	2 1/16	
29N-2													-		
29N-3													-		
29N-4													-		
29N-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4		-	2 1/16	
29N-6	36WF160	14x1 1/8 x 57-0		II	12-0	1. 0	II	12-0	14-0	7/16	1 3/16	3/8	-	2	
30S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	5/16	0	2 1/16	
30S-2															
30S-3															
30S-4															
30S-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
30S-6		14x1 1/4 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
30S-7		14x15/16 x 55-0		II	11-0	11-0	II	11-0	12-0		1 3/16			2	
30S-8	36WF160	14x3/4 x 54-0	None	II	11-0	11-0	II	11-0	12-0	7/16	1/4	3/8	0	1 3/16	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB B.W.S	CAMBER V.C.	CAMBER TOTAL	REMARKS
30N-1	36WF160	14x1 3/8 x 58-0	None	I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8	0	2 1/16	
30N-2															
30N-3															
30N-4															
30N-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
30N-6	36WF160	14x1" x 56-0		II	12-0	12-0	II	12-0	13-0	7/16	1 3/8	3/8		1 15/16	
31S-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	3/8		2 1/16	
31S-2															
31S-3															
31S-4															
31S-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
31S-6		14x1 1/16 x 55-0		II	11-0	11-0	II	11-0	12-0		1 3/16			2	
31S-7		14x5/8 x 52-0		III	12-0	11-0	III	12-0	11-0		1/16			1 1/8	
31S-8		14x5/8 x 52-0		III	"	"	III	"	"		1/16			1 1/8	
31S-9	36WF160	14x5/8 x 54-0		III	12-0	11-0	III	12-0	11-0	7/16	1	3/8		1 15/16	
31N-1	36WF160	14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0	7/16	1/4	5/8		2 1/16	
31N-2															
31N-3															
31N-4															
31N-5		14x1 3/8 x 58-0		I	10-0	14-0	I	10-0	13-0		1/4			2 1/16	
31N-6	36WF160	14x1 x 560	None	II	12-0	12-0	II	12-0	13-0	7/16	1 3/8	3/8	0	1 15/16	
32S-1	See Dwg. SA63														Built up girder
32S-2															"
32S-3															"
32S-4															"
32S-5															"
32S-6															"
32S-7															"
32S-8															"
32S-9															"
32N-1															Built up girder
32N-2															"
32N-3															"
32N-4															"
32N-5															"
32N-6	See Dwg. SA63														"
33S-1	36WF150	14x13/16 x 49-0	None	I	10-0	12-0	I	10-0	11-0	1/4	15/16	1/4	-	1 7/16	
33S-2													-		
33S-3													-		
33S-4													-		
33S-5		14x13/16 x 49-0		I	10-0	12-0	I	10-0	11-0		15/16		-	1 7/16	
33S-6	36WF150	14x5/8 x 47-0		II	11-0	11-0	II	11-0	12-0	1/4	15/16	1/4	-	1 5/16	
33N-1	36WF150	16x3/4 x 48-0		I	10-0	12-0	I	10-0	11-0	1/4	7/8	1/4	0	1 3/8	
33N-2															
33N-3															
33N-4															
33N-5		14x3/4 x 48-0		I	10-0	12-0	I	10-0	11-0		7/8			1 3/8	
33N-6	36WF150	14x1/2 x 45-0		II	11-0	11-0	II	11-0	12-0	1/4	3/4	1/4	0	1 1/8	
34S-1	36WF150	14x1/2 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
34S-2													-		
34S-3													-		
34S-4													-		
34S-5		14x1 3/8 x 54-0		I	10-0	14-0	I	10-0	13-0		1/8		-	1 1/16	
34S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 1/16	
34N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
34N-2													-		
34N-3													-		
34N-4													-		
34N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0		1		-	1 5/8	
34N-6	36WF150	14x5/8 x 48-0	None	II	11-0	11-0	II	11-0	12-0	5/16	15/16	5/16	-	1 1/16	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB B.W.S	CAMBER V.C.	CAMBER TOTAL	REMARKS
35S-1	36WF150	14x1 1/2 x 54-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 7/16	
35S-2													-		
35S-3													-		
35S-4													-		
35S-5		14x1 1/2 x 54-0		I	10-0	14-0	I	10-0	13-0		1/8		-	1 1/16	
35S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 1/16	
35N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
35N-2													-		
35N-3													-		
35N-4													-		
35N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
35N-6	36WF150	14x5/8 x 47-0		II	11-0	11-0	II	11-0	12-0	1/4	15/16	5/16	-	1 1/16	
36S-1	36WF150	14x1 3/8 x 57-0		I	10-0	14-0	I	10-0	13-0	3/8	1/4	3/8	0	2	
36S-2													0	2	
36S-3													1/8	2 1/16	
36S-4													1/4	2 1/16	
36S-5		14x1 3/8 x 57-0		I	10-0	14-0	I	10-0	13-0	3/8	1/4	3/8	1/4	2 1/16	
36S-6	36WF150	14x1 1/8 x 56-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	3/8	1/4	2 1/16	
36N-1	36WF150	14x1 3/8 x 53-0		I	10-0	13-0	I	10-0	12-0	5/16	1/16	5/16	-	1 15/16	
36N-2													-		
36N-3													-		
36N-4													-		
36N-5		14x1 1/4 x 53-0		I	10-0	13-0	I	10-0	12-0		1/16		-	1 15/16	
36N-6	36WF150	14x3/4 x 49-0		II	11-0	11-0	II	11-0	12-0	5/16	1/8	5/16	-	1 1/8	
37S-1	36WF150	14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
37S-2													-		
37S-3													-		
37S-4													-		
37S-5		14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
37S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 5/16	
37N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
37N-2													-		
37N-3													-		
37N-4													-		
37N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
37N-6	36WF150	14x5/8 x 47-0		II	11-0	11-0	II	11-0	12-0	1/4	15/16	5/16	-	1 1/16	
38S-1	36WF150	14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
38S-2													-		
38S-3													-		
38S-4													-		
38S-5		14x1 1/8 x 54-0		I	10-0	14-0	I	10-0	13-0	3/8	1/8	5/16	-	1 1/16	
38S-6	36WF150	14x15/16 x 53-0		II	12-0	12-0	II	12-0	13-0	3/8	1/16	5/16	-	1 5/16	
38N-1	36WF150	14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
38N-2													-		
38N-3													-		
38N-4													-		
38N-5		14x15/16 x 51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
38N-6	36WF150	14x3/8 x 47-0	None	II	11-0	11-0	II	11-0	12-0	1/4	15/16	5/16	-	1 1/16	

NOTES:
For Framing Plan, see Dwgs. SA55 & SA56
For stringer and shear connector details, see Dwgs. SA67 & SA68

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 26 THRU 38

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA59

COUNTY	CONTRACT	B.P.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	94	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	REMARKS
39S-1	36WF150	14x1 1/8x54-0	None	I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
39S-2													-		
39S-3													-		
39S-4													-		
39S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
39S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
39N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
39N-2													-		
39N-3													-		
39N-4													-		
39N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
39N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
40S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
40S-2													-		
40S-3													-		
40S-4													-		
40S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
40S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
40N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
40N-2													-		
40N-3													-		
40N-4													-		
40N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
40N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
41S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
41S-2													-		
41S-3													-		
41S-4													-		
41S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
41S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
41N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
41N-2													-		
41N-3													-		
41N-4													-		
41N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
41N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
42S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	1/4	2 1/16	
42S-2													1/2	2 5/16	
42S-3													7/8	2 11/16	
42S-4													1 1/8	2 15/16	
42S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		1 1/2	3 5/16	
42S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	1 3/4	3 1/2	
42N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
42N-2													-		
42N-3													-		
42N-4													-		
42N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
42N-6	36WF150	14x5/8x47-0		II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	
43S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16	-	1 13/16	
43S-2													-		
43S-3													-		
43S-4													-		
43S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0		1 1/8		-	1 13/16	
43S-6	36WF150	14x15/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	1 1/16	5/16	-	1 3/4	
43N-1	36WF150	14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1	5/16	-	1 5/8	
43N-2													-		
43N-3													-		
43N-4													-		
43N-5		14x15/16x51-0		I	10-0	13-0	I	10-0	12-0	5/16	1		-	1 5/8	
43N-6	36WF150	14x5/8x47-0	None	II	11-0	11-0	II	11-0	12-0	1/4	13/16	5/16	-	1 3/8	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	REMARKS
44S-1	36WF150	14x1 3/8x57-0	NONE	I	10-0	14-0	I	10-0	13-0	3/8	1 1/4	3/8	-	2	
44S-2													-		
44S-3													-		
44S-4													-		
44S-5		14x1 3/8x57-0		I	10-0	14-0	I	10-0	13-0		1 1/4		-	2	
44S-6	36WF150	14x1 1/8x56-0		II	12-0	12-0	II	12-0	13-0	3/8	1 3/16	3/8	-	1 15/16	
44N-1	36WF150	14x1 1/4x55-0		I	10-0	14-0	I	10-0	13-0	3/8	1 3/16	5/16	-	1 7/8	
44N-2													-		
44N-3													-		
44N-4													-		
44N-5		14x1 1/4x55-0		I	10-0	14-0	I	10-0	13-0		1 3/16		-	1 7/8	
44N-6	36WF150	14x13/16x53-0		II	12-0	12-0	II	12-0	13-0	3/8	15/16	5/16	-	1 5/8	
45S-1	36WF194	14x1 1/2x63-0		I	10-0	17-0	I	10-0	16-0	9/16	1 1/2	1/2	-	2 9/16	
45S-2													-		
45S-3													-		
45S-4													-		
45S-5		14x1 1/2x63-0		I	10-0	17-0	I	10-0	16-0		1 1/2		-	2 9/16	
45S-6	36WF194	14x1 1/4x61-0		II	12-0	15-0	II	12-0	16-0	9/16	1 3/8	1/2	-	2 7/16	
45N-1	36WF194	14x1 1/2x61-0		I	11-0	16-0	I	11-0	15-0	9/16	1 7/16	7/16	-	2 7/16	
45N-2													-		
45N-3													-		
45N-4													-		
45N-5		14x1 1/2x61-0		I	11-0	16-0	I	11-0	16-0		1 7/16		-	2 7/16	
45N-6	36WF194	14x1 1/8x59-0		II	12-0	14-0	II	12-0	15-0	9/16	1 1/4	7/16	-	2 1/4	
46S-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 3/8	3/8	-	2 3/16	
46S-2													-		
46S-3													-		
46S-4													-		
46S-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 3/8		-	2 3/16	
46S-6	36WF160	14x1 1/8x58-0		II	12-0	13-0	II	12-0	14-0	7/16	1 1/4	3/8	-	2 1/16	
46N-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8	1/2	2 5/8	
46N-2													5/8	2 3/4	
46N-3													5/8	2 3/4	
46N-4													3/4	2 7/8	
46N-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16		3/4	2 7/8	
46N-6	36WF160	14x1 1/8x57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8	3/4	2 3/4	
47S-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8	0	2 1/8	
47S-2															
47S-3															
47S-4															
47S-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16			2 1/8	
47S-6	36WF160	14x1 1/8x57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8		2	
47N-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8		2 1/8	
47N-2															
47N-3															
47N-4															
47N-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16			2 1/8	
47N-6	36WF160	14x1 1/8x57-0		II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8		2	
48S-1	36WF150	10x3/4x41-0		I	10-0	10-0	I	10-0	10-0	3/16	11/16	1/4		1 1/8	
48S-2															
48S-3															
48S-4															
48S-5		10x3/4x41-0		I	10-0	10-0	I	10-0	10-0		11/16			1 1/8	
48S-6	36WF150	10x7/16x39-0		II	11-0	9-0	II	11-0	10-0	3/16	5/8	1/4		1 1/16	
48N-1	36WF160	14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0	7/16	1 5/16	3/8		2 1/8	
48N-2															
48N-3															
48N-4															
48N-5		14x1 3/8x59-0		I	10-0	14-0	I	10-0	13-0		1 5/16			2 1/8	
48N-6	36WF160	14x1 1/8x57-0	NONE	II	12-0	13-0	II	12-0	14-0	7/16	1 3/16	3/8	0	2	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	SLAB	CURB & W.S.	V.C.	TOTAL	REMARKS
49S-1	36WF300	18x1 3/8x68-0	NONE	II	11-0	15-0	II	16-0	16-0	1	1 3/4	5/8	0	3 3/8	
49S-2															
49S-3															
49S-4															
49S-5		18x1 3/8x68-0		II	16-0	15-0	II	16-0	16-0		1 3/4			3 3/8	
49S-6	36WF300	18x1x65-0		III	22-0	12-0	III	22-0	12-0	1	1 1/2	5/8		3 1/8	
49N-1	36WF194	14x1 3/8x61-0		I	12-0	14-0	I	12-0	13-0	1/2	1 3/8	7/16		2 5/16	
49N-2															
49N-3															
49N-4															
49N-5		14x1 3/8x61-0		I	12-0	14-0	I	12-0	13-0		1 3/8			2 5/16	
49N-6	36WF194	14x1 1/8x58-0		II	12-0	14-0	II	12-0	15-0	1/2	1 1/4	7/16		2 3/16	
50S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
50S-2															
50S-3															
50S-4															
50S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
50S-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
50N-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
50N-2															
50N-3															
50N-4															
50N-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
50N-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
51S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
51S-2															
51S-3															
51S-4															
51S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
51S-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
51N-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
51N-2															
51N-3															
51N-4															
51N-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
51N-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
52S-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
52S-2															
52S-3															
52S-4															
52S-5		14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8			1 13/16	
52S-6	36WF150	14x7/8x52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1 5/8	
52N-1	36WF150	14x1 1/8x54-0		I	10-0	14-0	I	10-0	13-0	3/8	1 1/8	5/16		1 13/16	
52N-2		14x1 1/8x54-0			10-0	14-0		10-0	13-0						
52N-3		14x1 1/8x54-0			10-0	14-0		10-0	13-0						
52N-4		14x1 1/4x55-0			12-0	13-0		12-0	12-0						
52N-5		14x1 1/4x55-0		I	12-0	13-0	I	12-0	12-0	3/8	1 1/8			1 13/16	
52N-6	36WF150	14x15/16x53-0	NONE	II	12-0	12-0	II	12-0	13-0	5/16	1	5/16	0	1 5/8	

NOTES

For Framing Plan, see Dwg. SA56, SA57 and SA58
For stringer & shear connector details, see Dwgs. SA67 & SA68

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 39 THRU 52

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA60

COUNTY	CONTRACT	F.A.P. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	95	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
535-1	36WF150	14×1⅛×54-0	None	I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16	0	1⅞	
535-2															
535-3															
535-4															
535-5		14×1⅛×54-0		I	10-0	14-0	I	10-0	15-6	⅜	1⅛			1⅞	
535-6	36WF150	14×⅞×52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1⅝	
53N-1	36WF150	14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16		1⅞	
53N-2															
53N-3															
53N-4		14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0		1⅛			1⅛	
53N-5		14×⅞×52-0		II	10-0	11-0	II	10-0	12-0		1			1⅛	
53N-6		14×⅞×52-0		II	10-0	11-0	II	10-0	12-0		1			1⅛	
53N-7	36WF120	14×⅞×50-0		III	14-0	8-0	III	14-0	9-0	⅜	1⅛	5/16		1⅝	
545-1	36WF150	14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16		1⅞	
545-2															
545-3															
545-4															
545-5		14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛			1⅞	
545-6	36WF150	14×⅞×52-0		II	12-0	12-0	II	12-0	13-0	5/16	1	5/16		1⅝	
54N-1	36WF150	14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0	⅜	1⅛	5/16		1⅞	
54N-2															
54N-3															
54N-4															
54N-5		14×1⅛×54-0		I	10-0	14-0	I	10-0	13-0		1⅛			1⅞	
54N-6		14×1×54-0		II	12-0	12-0	II	12-0	13-0		1¼			1⅜	
54N-7	36WF150	14×⅞×52-0		II	10-0	12-0	II	10-0	13-0	⅜	1	5/16		1⅝	
555-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
555-2															
555-3															
555-4															
555-5		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜			2⅝	
555-6	36WF230	18×⅞×57-0		II	14-0	12-0	II	14-0	13-0	⅝	1⅜	½		2⅝	
55N-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
55N-2															
55N-3															
55N-4															
55N-5		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜	½		2⅝	
55N-6		14×⅞×55-0		III	15-0	13-0	III	15-0	13-0		1⅛	5/16		2⅝	
55N-7		16×⅞×55-0		III	15-0	13-0	III	15-0	13-0		1⅛	5/16		2⅝	
55N-8	36WF230	16×⅞×54-0		III	16-0	11-0	III	16-0	11-0	⅝	1 7/16	½		2⅝	
565-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
565-2															
565-3															
565-4															
565-5		18×1×60-0		I	12-0	15-0	I	12-0	14-1		1⅜			2⅝	
565-6	36WF230	18×⅞×57-0		II	14-0	12-0	II	14-0	13-0	⅝	1⅛	½		2⅜	
56N-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½		2⅝	
56N-2											1⅛			2⅝	
56N-3											1⅜			2⅝	
56N-4											1 7/16			2⅞	
56N-5											1 7/16			2⅞	
56N-6											1⅜			2⅝	
56N-7		18×1⅛×60-0		I	12-0	15-0	I	12-0	14-0		1⅜	↓	↓	2⅝	
56N-8	36WF230	18×⅞×57-0	None	II	14-0	12-0	II	14-0	13-0	⅝	1¼	½	0	2⅜	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
575-1	36WF230	18×1×60-0	None	I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½	½	3	
575-2															
575-3															
575-4															
575-5		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜			3	
575-6	36WF230	18×⅞×57-0		II	14-0	12-0	II	14-0	13-0	⅝	1⅛	½	½	2⅝	
57N-1	36WF230	18×1×60-0		I	12-0	15-0	I	12-0	14-0	⅝	1⅜	½	½	3	
57N-2		18×1×60-0									1⅜			3	
57N-3		18×1×60-0									1⅜			3	
57N-4		18×1⅛×61-0									1¾			3⅛	
57N-5		18×1⅛×61-0									1¾			3⅛	
57N-6		18×1×60-0		I	12-0	15-0	I	12-0	14-0		1⅜			3	
57N-7		14×⅞×56-0		II	12-0	13-0	II	12-0	14-0		1 5/16			2⅜	
57N-8		14×⅞×56-0		II	12-0	13-0	II	12-0	14-0		1 5/16			2⅜	
57N-9	36WF230	18×⅞×55-0		III	17-0	14-0	III	16-0	15-0	⅝	1¾	½	½	2⅞	
585-1	36WF300	18×1¼×67-0		II	16-0	15-0	II	16-0	16-0	15/16	1⅛	⅝	⅝	3 15/16	
585-2															
585-3															
585-4															
585-5		18×1¼×67-0		II	16-0	15-0	II	16-0	16-0		1⅛			3⅛	
585-6	36WF300	18×⅞×64-0		III	22-0	12-0	III	22-0	12-0	15/16	1⅛	⅝	⅝	3⅛	
58N-1	36WF300	18×1¼×67-0		II	16-0	15-0	II	16-0	16-0	15/16	1⅛	⅝	⅝	3 15/16	
58N-2															
58N-3															
58N-4															
58N-5															
58N-6		18×1¼×67-0									1⅛			3⅛	
58N-7		18×1×64-0		II	16-0	15-0	II	16-0	16-0		1⅛			3⅛	
58N-8		18×¾×60-0		IV	20-0	13-0	IV	22-0	11-0		1⅞			3⅝	
58N-9		14×¾×60-0		IV	20-0	13-0	IV	22-0	11-0		1⅞			3⅝	
58N-10	36WF300	18×¾×60-0		IV	20-0	12-0	IV	22-0	10-0	15/16	1⅞	⅝	⅝	3⅝	
595-1	36WF150	10×⅝×39-0		I	10-0	9-0	I	10-0	9-0	3/16	⅝	3/16	¼	1¼	
595-2															
595-3															
595-4															
595-5		10×⅝×39-0		I	10-0	9-0	I	10-0	9-0		⅝			1¼	
595-6	36WF150	10×½×36-0		II	11-0	8-0	II	11-0	9-0	3/16	½	3/16	¼	1⅛	
59N-1	36WF150	10×⅝×39-0		I	10-0	9-0	I	10-0	9-0	3/16	⅝	3/16	¼	1¼	
59N-2															
59N-3															
59N-4															
59N-5															
59N-6		10×⅝×39-0		I	10-0	9-0	I	10-0	9-0						
59N-7		10×½×38-0		II	11-0	9-0	II	11-0	10-0						
59N-8		10×½×38-0				9-0			10-0						
59N-9		10×½×38-0				9-0			10-0		⅝			1¼	
59N10	36WF150	10×½×36-0	None	II	11-0	8-0	II	11-0	9-0	3/16	½	3/16	¼	1⅛	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS

NOTES:
For Framing Plan, see Dwg. SA58
For stringer & shear connectors details, see Dwgs. SA67 & SA68

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 53 THRU 59

APPROVED BY: Nathaniel R. Peacock, Jr. BRIDGE ENGINEER — 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA61

COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	96	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
OA-1	See Dwg.	SA63													Built up girder
OA-2															
OA-3															
OA-4	See Dwg.	SA63													
1A-1	See Dwg.	SA63													Built up girder
1A-2															
1A-3															
1A-4	See Dwg.	SA63													
2A-1	See Dwg.	SA64													Tapered girder Stgr.
2A-2															
2A-3															
2A-4	See Dwg.	SA64													
3A-1	36WF160	14x1 3/8 x 59-0	None	I	11-0	14-0	I	11-0	13-0	7/16	1 3/8	7/16	0	2 1/4	
3A-2											15/16			2 3/16	
3A-3											15/16			2 3/16	
3A-4	36WF160	14x1 3/8 x 59-0		I	11-0	14-0	I	11-0	13-0	7/16	1 3/8	7/16	0	2 1/4	
4A-1	36WF160	14x1 1/8 x 58-0		I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	0	2 1/16	
4A-2		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0				1/4	2 1/16	
4A-3		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0				1/4	2 1/16	
4A-4	36WF160	14x1 1/8 x 58-0		I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	3/4	2 1/16	
5A-1	36WF160	14x1 1/8 x 58-0		I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	0	2 1/16	
5A-2		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0						
5A-3		14x1 3/8 x 59-0			11-0	14-0		11-0	13-0						
5A-4	36WF160	14x1 3/8 x 58-0	None	I	10-0	13-0	I	10-0	12-0	7/16	15/16	7/16	0	2 1/16	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
OB-1	36WF150	None	None	II	9-0	8-0	II	9-0	9-0	1/8	3/8	1/8	0	5/8	
OB-2	30WF108	12x3/4x38-0		I	11-0	8-0	I	11-0	7-0		5/8	3/4	0	15/16	
OB-3		12x3/4x32-0									5/8		0	15/16	
OB-4		12x3/4x38-0									5/8		-	15/16	
OB-5		12x7/8x36-0		I	11-0	8-0	I	11-0	7-0		7/16		-	3/8	
OB-6	30WF108	12x1/4x33-0		II	9-0	8-0	II	9-0	9-0		1/2	3/4	-	15/16	
OB-7	36WF150	None		III	10-0	7-0	III	10-0	7-0	1/8	1/8	1/8	-	5/8	
1B-1	36WF150	10x7/8x41-0		II	11-0	9-0	II	11-0	10-0	3/16	11/16	1/4	0	1 1/8	
1B-2	33WF130	16x3/4x46-0		I	11-0	10-0	I	11-0	9-0	1/4	13/16			1 5/16	
1B-3		18x3/4x44-0		I	11-0	10-0	I	11-0	9-0		13/16			1 5/16	
1B-4		16x3/4x44-0		I	10-0	9-0	I	10-0	8-0		3/4			1 1/4	
1B-5	33WF130	10x7/8x41-0		III	11-0	7-0	III	11-0	8-0	1/4	7/16			1 1/2	
1B-6	36WF150	10x1/2x39-0		II	11-0	7-0	II	11-0	8-0	3/16	7/16	1/4	0	1 1/8	
2B-1	36WF150	10x3/4x42-0		I	10-0	9-0	I	10-0	8-0	3/16	7/16	1/4	0	1 1/8	
2B-2	33WF130	18x3/4x46-0			11-0	10-0		11-0	9-0	1/4	13/16			1 5/16	
2B-3	33WF130	16x7/8x44-0			10-0	9-0		10-0	8-0	1/4	3/4			1 1/4	
2B-4	33WF130	16x7/8x44-0		I	10-0	9-0	I	10-0	8-0	1/4	3/4			1 1/4	
2B-5	36WF150	10x1/2x40-0		II	11-0	8-0	II	11-0	9-0	3/16	3/4	1/4	0	1 1/8	
3B-1	36WF230	18x1 1/8x63-0		II	15-0	13-0	II	15-0	14-0	1/4	1 1/8	3/8	2	4 1/8	
3B-2				I	12-0	15-0	I	12-0					1	4 1/8	
3B-3				I	12-0	15-0	I	12-0					1 1/4	4 1/8	
3B-4	36WF230	18x1 1/8x63-0		II	15-0	13-0	II	15-0	16-0	5/16	1 1/16	3/8	1/2	3 3/16	
4B-1	36WF160	18x7/8x54-0		II	10-0	12-0	II	10-0	13-0	7/16	1 1/8	7/16	2 3/8	4 3/8	
4B-2		18x7/16x54-0									1 1/16		2 3/8	4 5/16	
4B-3		18x7/16x54-0									1 1/16		2 3/8	4 5/16	
4B-4	36WF160	18x7/8x54-0		II	10-0	12-0	II	10-0	13-0	7/16	1 1/8	7/16	2 3/8	4 1/2	
5B-1	36WF150	16x3/4x51-0		II	10-0	11-0	II	10-0	12-0	3/8	1	3/8	2 3/8	3 7/8	
5B-2													2 3/8	4 1/8	
5B-3													2 3/8	4 1/8	
5B-4	36WF150	16x3/4x51-0		II	10-0	11-0	II	10-0	12-0	3/8	1	3/8	3	4 3/8	
6B-1	36WF150	16x1/2x45-0		II	10-0	9-0	II	10-0	10-0	1/4	13/16	5/16	5/8	2	
6B-2											3/4			1 15/16	
6B-3											3/4			1 15/16	
6B-4	36WF150	16x1/2x45-0	None	II	10-0	9-0	II	10-0	10-0	1/4	13/16	5/16	5/8	2	

MARK	SIZE	COVER PLATE BOTTOM	COVER PLATE TOP	SHEAR CONNECTORS SPIRAL TYPE	SPIRAL A	SPIRAL B	SHEAR CONNECTORS STUD TYPE	STUD A	STUD B	CAMBER STEEL	CAMBER SLAB	CAMBER CURB & W.S.	CAMBER V.C.	CAMBER TOTAL	REMARKS
OC-1	36WF150	None	None	–	–	–	–	–	–	–	1/2	1/2	0	1/2	Non-Comp.
OC-2	30WF108			–	–	–	–	–	–	–	1	1	1	1	" "
OC-3	30WF108			–	–	–	–	–	–	–	1	1	1	1	" "
OC-4	36WF150	None	None	–	–	–	–	–	–	–	1/2	1/2	0	1/2	" "
1C-1	36WF194	18x1 1/4x58-0	None	I	11-0	12-0	I	11-0	11-0	1/2	1 5/16	1/2	2 1/2	4 3/16	
1C-2		18x1 3/8x59-0													
1C-3		18x1 3/8x59-0													
1C-4	36WF194	18x1 1/4x58-0	None	I	11-0	12-0	I	11-0	11-0	1/2	1 5/16	1/2	2 1/2	4 3/16	
2C-1	36WF150	None	None	–	–	–	–	–	–	1/2	1/2	1/2	1/2	1	Non-Comp.
2C-2	33WF141			–	–	–	–	–	–		5/16	1/2	1/2	1 1/4	" "
2C-3	33WF141			–	–	–	–	–	–		5/16	1/2	1/2	1 1/4	" "
2C-4	36WF150	None	None	–	–	–	–	–	–	1/2	1/2	1/2	1/4	1 1/4	" "

NOTES:
For Framing Plan, see Dwg. SA54 thru SA58
For stringer & shear connector details, see Dwgs. SA67 & SA68
For stringer data on spans OA, 1A & 2A, see Dwg. SA64

Made by S.J.V.
Traced by S.J.V.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
RAMPS A, B & C

APPROVED BY: Thomas D. Feaney Jr. BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA62

MAINLINE

Stringer Mark	Web Plate	Top Flange P_1 Size	L_1	P_2 Size	L_2	P_3 Size	Bottom Flange P_4 Size	L_4	P_5 Size	L_5	P_6 Size	Spiral Type	Spiral A	Spiral B	Stud Type	Stud A	Stud B	Camber Steel	Slab	Curb & W.S.	V.C.	Total	Remarks
22S-1	72×7/16	16×1 3/4	88-6	–	–	16×7/8	20×2 1/8	88-6	20×1 5/8	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 5/16	1/2	–	3 13/16	
2	↕	16×1 1/2	87-0	–	–	16×3/4	20×2	87-0	20×1 1/2	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	2 1/16	9/16	–	3 5/8	
3	↕	↕	86-6	–	–	↕	20×2	86-6	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	9/16	–	3 5/8	
4	↕	↕	86-0	–	–	↕	20×2	86-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	9/16	–	3 5/8	
5	↕	↕	85-0	–	–	↕	20×2	85-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	9/16	–	3 5/8	
22S-6	72×7/16	16×1 1/2	84-0	–	–	16×3/4	20×1 7/8	84-0	20×1 1/2	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 1/16	1/2	–	3 9/16	
22N-1	72×7/16	20×1 3/4	92-0	–	–	20×7/8	24×2	92-0	22×1 5/8	9-0	20×1	V	20-0	19-0	V	20-0	10-0	1 1/8	2 7/16	1/2	–	4 1/16	
2	↕	20×1 1/2	85-6	–	–	↕	24×1 7/8	85-6	↕	11-0	↕	↕	22-0	↕	V	22-0	↕	1 3/16	2 3/16	5/8	–	4	
3	↕	↕	86-0	–	–	↕	↕	86-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕		↕	
4	↕	↕	87-0	–	–	↕	↕	87-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
5	↕	↕	87-6	–	–	↕	↕	87-6	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
6	↕	↕	88-0	–	–	↕	↕	88-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
7	↕	20×1 1/2	90-0	–	–	20×7/8	24×1 7/8	90-0	22×1 5/8	11-0	↕	↕	22-0	19-0	↕	22-0	↕	1 3/16	↕	5/8	–	4	
8	↕	18×1 1/2	92-0	–	–	18×3/4	22×1 3/4	92-0	22×1 3/8	9-0	↕	↕	18-0	18-0	↕	18-0	↕	1 1/4	↕	3/4	–	4 3/16	
9	↕	18×1 1/2	93-0	·	–	18×3/4	22×1 3/4	93-0	22×1 3/8	9-0	↕	↕	18-0	18-0	↕	18-0	↕	1 1/4	2 3/16	3/4	–	4 3/16	
22N-10	72×7/16	20×1 7/8	95-0	–	–	20×1	24×2 1/8	95-0	22×1 3/4	10-0	20×1	V	18-0	18-0	V	18-0	10-0	1 5/16	2 1/2	5/8	–	4 7/16	
23S-1	72×7/16	16×1 3/4	88-0	–	–	16×7/8	20×2 1/8	88-0	20×1 5/8	9-0	20×7/8	V	20×0	17-0	V	20-0	10-0	1	2 5/16	1/2	–	3 13/16	
2	↕	16×1 1/2	86-0	–	–	16×3/4	20×2	86-0	20×1 1/2	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	2 1/16	↕	–	3 9/16	
3	↕	↕	85-6	–	–	↕	20×2	85-6	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
4	↕	↕	85-0	–	–	↕	20×2	85-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
5	↕	↕	84-0	–	–	↕	20×2	84-0	↕	↕	↕	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
23S-6	72×7/16	16×1 1/2	84-0	–	–	16×3/4	20×1 7/8	84-0	20×1 1/2	9-0	20×7/8	V	20-0	17-0	V	20-0	10-0	1	2 1/16	1/2	–	3 9/16	
23N-1	72×7/16	18×2	90-0	18×1	11-0	18×3/4	22×2 1/4	90-0	22×1 3/4	11-0	20×1	V	18-0	21-0	V	18-0	14-0	1 1/8	2 9/16	1/2	–	4 3/16	
2	↕	18×1 1/2	86-0	–	–	↕	22×1 7/8	86-0	22×1 1/2	10-0	↕	↕	24-0	↕	↕	24-0	↕	↕	2 1/4	5/8	–	4	
3	↕	18×1 1/2	87-0	–	–	↕	22×1 7/8	87-0	22×1 1/2	10-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕		↕	
4	↕	18×1 1/2	87-6	–	–	↕	22×1 7/8	87-6	22×1 1/2	10-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
5	↕	18×1 1/2	88-0	–	–	18×3/4	22×1 7/8	88-0	22×1 1/2	10-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
6	↕	18×1 5/8	91-0	–	–	18×7/8	22×2	91-0	22×1 1/2	9-0	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
7	↕	18×1 5/8	92-0	–	–	18×7/8	22×2	92-0	22×1 1/2	9-0	↕	↕	24-0	↕	↕	24-0	↕	1 1/8	↕	↕	–	4	
8	↕	18×1 5/8	91-6	–	–	18×7/8	22×2	91-6	22×1 1/2	9-0	↕	↕	22-0	↕	↕	22-0	↕	1 5/16	↕	↕	–	4 1/16	
9	↕	18×1 5/8	92-0	–	–	18×7/8	22×2	92-0	22×1 1/2	9-0	↕	↕	22-0	↕	↕	22-0	↕	1 3/16	2 1/4	5/8	–	4 1/16	
23N-10	72×7/16	18×2	92-0	18×1	12-0	18×3/4	22×2 1/4	92-0	22×1 3/4	12-0	20×1	V	18-0	21-0	V	18-0	14-0	1 1/4	2 9/16	9/16	–	4 3/8	
24S-1	72×7/16	14×1	70-6	–	–	14×5/8	20×1 1/2	79-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	9/16	1 1/16	5/16	0	2 9/16	
2	↕	14×7/8	71-6	–	–	↕	20×1 3/8	76-0	–	–	↕	IV	18-0	13-0	IV	18-0	↕	↕	1 1/2	↕	0	2 3/8	
3	↕	14×7/8	71-0	–	–	↕	↕	75-6	–	–	↕	IV	18-0	13-0	IV	18-0	↕	↕	1 1/2	↕	0	2 3/8	
4	↕	14×7/8	70-6	–	–	↕	↕	75-0	–	–	↕	IV	18-0	13-0	IV	18-0	↕	↕	1 1/2	↕	0	2 3/8	
5	↕	14×7/8	70-0	–	–	↕	↕	75-0	–	–	↕	IV	18-0	13-0	IV	18-0	↕	9/16	1 1/2	↕	0	2 3/8	
24S-6	72×7/16	14×1	70-0	–	–	14×5/8	20×1 3/8	75-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	1/2	1 1/16	5/16	0	2 3/8	
24N-1	72×7/16	14×1 1/8	74-6	–	–	14×5/8	20×1 1/2	81-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	5/8	1 3/4	3/8	0	2 3/4	
2	↕	14×1	72-0	–	–	↕	↕	79-6	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
3	↕	14×1	72-6	–	–	↕	↕	80-0	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
4	↕	14×1	73-0	–	–	↕	↕	80-6	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 5/8	↕	0	2 5/8	
5	↕	14×1	73-6	–	–	↕	↕	81-0	–	–	↕	↕	↕	↕	↕	↕	↕	↕	1 3/4	↕	0	2 3/4	
24N-6	72×7/16	14×1 1/8	74-6	–	–	14×5/8	20×1 1/2	81-0	–	–	20×7/8	V	22-0	19-0	V	22-0	13-0	5/8	1 3/4	3/8	0	2 3/4	
32S-1	72×7/16	20×1 3/8	86-6	–	–	20×7/8	24×1 7/8	86-6	22×1 5/8	10-6	20×1	V	23-0	20-0	V	23-0	12-0	1 1/8	2 1/4	9/16	–	3 15/16	
2	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	–	↕	
3	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
4	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
5	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	↕	–	↕	
6	↕	20×1 3/8	86-6	–	–	20×7/8	24×1 7/8	86-6	22×1 5/8	↕	20×1	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	–	↕	
7	↕	18×1 1/2	89-6	–	–	18×3/4	22×1 7/8	89-6	22×1 1/2	↕	20×7/8	↕	23-0	↕	↕	23-0	↕	↕	↕	↕	–	↕	
8	↕	18×1 1/2	89-6	–	–	18×3/4	22×1 7/8	89-6	22×1 1/2	10-6	20×7/8	↕	23-0	↕	↕	23-0	↕	↕	2 1/4	9/16	–	3 15/16	
32S-9	72×7/16	18×1 1/2	91-0	–	–	18×3/4	22×1 3/4	91-0	22×1 3/8	10-0	20×7/8	V	20-0	20-0	V	20-0	12-0	1 1/8	2 1/8	5/8	–	3 7/8	
32N-1	72×7/16	20×1 3/8	86-6	–	–	20×7/8	24×1 7/8	86-6	22×1 5/8	10-6	20×1	V	23-0	20-0	V	23-0	12-0	1 1/8	2 1/4	9/16	1 3/4	5 11/16	
2	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	2	5 15/16	
3	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	2 1/8	6 1/16	
4	↕	↕	↕	–	–	↕	↕	↕	↕	↕	↕	↕	26-0	↕	↕	26-0	↕	↕	↕	↕	2 1/8	6 1/16	
5	↕	20×1 3/8	86-6	–	–	↕	24×1 7/8	86-6	22×1 5/8	10-6	↕	↕	26-0	20-0	↕	26-0	12-0	↕	2 1/4	9/16	2 1/4	6 3/16	
32N-6	72×7/16	20×1 1/4	88-6	–	–	20×7/8	24×1 5/8	88-6	22×1 3/8	8-0	20×1	V	21-0	22-0	V	21-0	14-0	1 1/8	2	5/8	2 3/8	6 1/8	

RAMP "A"

Stringer Mark	Web Plate	Top Flange P_1 Size	L_1	P_2 Size	L_2	P_3 Size	Bottom Flange P_4 Size	L_4	P_5 Size	L_5	P_6 Size	Spiral Type	Spiral A	Spiral B	Stud Type	Stud A	Stud B	Camber Steel	Slab	Curb & W.S.	V.C.	Total	Remarks
OA-1	72×7/16	20×2	92-0	–	–	20×1	24×2 1/4	92-0	22×2	13-0	20×1	IV	16-0	12-0	III	16-0	12-0	1 1/4	2 9/16	11/16	10 1/8	14 5/8	
OA-2	72×7/16	20×1 5/8	93-0	–	–	20×7/8	24×2	93-0	22×1 3/4	11-0	20×1	IV	18-0	12-0	IV	18-0	12-0	1 1/4	2 1/4	3/4	10	14 1/4	
OA-3	72×7/16	20×1 5/8	93-0	–	–	20×7/8	24×2	93-0	22×1 3/4	11-0	20×1	IV	18-0	12-0	IV	18-0	12-0	1 1/4	2 1/4	3/4	10	14 1/4	
OA-4	72×7/16	20×1 5/8	90-0	--	–	20×7/8	24×2	90-0	22×1 3/4	12-0	20×1	V	25-0	20-0	V	25-0	12-0	1 1/4	2 1/8	3/4	10 1/2	14 5/8	
1A-1	72×7/16	14×1 3/8	74-0	–	–	14×3/4	18×1 3/8	74-0	18×1 1/2	9-6	18×3/4	IV	18-0	15-0	IV	18-0	15-0	11/16	1 13/16	7/16	4 1/4	7 3/16	
1A-2	72×7/16	14×1 1/8	74-6	–	–	14×5/8	18×1 3/4	74-6	18×1 3/8	8-0	18×3/4	IV	20-0	15-0	IV	20-0	15-0	5/8	1 11/16	1/2	3 1/2	6 5/16	
1A-3	72×7/16	14×1 1/8	74-6	–	–	14×5/8	18×1 3/4	74-6	18×1 3/8	8-0	18×3/4	IV	20-0	15-0	IV	20-0	15-0	5/8	1 11/16	1/2	2 7/8	5 11/16	
1A-4	72×7/16	14×1	73-0	–	–	14×5/8	18×1 5/8	73-0	18×1 1/2	7-0	18×3/4	V	22-0	22-0	V	22-0	16-0	5/8	1 7/16	1/2	3	5 9/16	

County	Contract	P.R.A. Reg. No.	State	Fed Aid Project No.	Fiscal Year	Sheet No.	Total Sheets
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	97	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

NOTES:
For Framing Plan, see Dwgs. SA54, SA55 & SA56
For stringer & shear connector details, see Dwg. SA66

Drawn by S.V.J.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA
MAINLINE - SPANS 22, 23, 24 & 32
RAMP A - SPANS OA & 1A

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

SCALE:
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

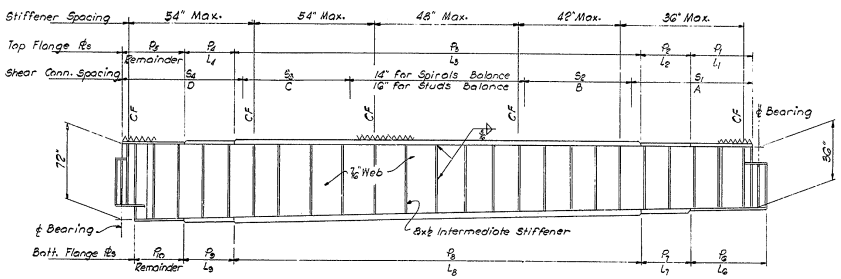
DATE: APRIL 1, 1964

DWG. NO. SA63

COUNTY	CONTRACT	R.P.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	98	215

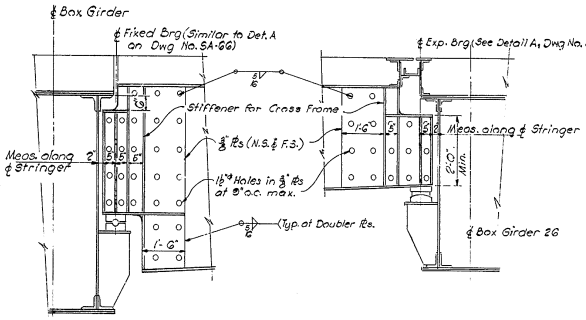
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

STRINGER MARK	WEB PLATE	TOP FLANGE PLATES									BOTTOM FLANGE PLATES									SHEAR CONNECTORS														STEEL	SLAB	CURB & W.S.	V.C.	TOTAL
		P1		P2		P3		P4		P5	P6		P7		P8		P9		P10	SPIRAL								STUD											
		SIZE	L1	SIZE	L2	SIZE	L3	SIZE	L4	SIZE	SIZE	L6	SIZE	L7	SIZE	L8	SIZE	L9	SIZE	S1	A	S2	B	S3	C	S4	D	S1	A	S2	B	S3	C	S4	D					
2S S-1	3G to 72 x 7/16	14 x 5/8	3'-6	14 x 1 1/8	6'-0	14 x 1 1/2	70'-0	—	—	14 x 3/4	20 x 7/8	5'-6	20 x 1 3/8	6'-0	20 x 1 3/4	70'-0	20 x 1 3/8	7'-0	20 x 7/8	4 1/4	24'-0	9	16'-0	11	16'-0	8	20'-0	5	22'-0	10	18'-0	12	18'-0	9	18'-0	4 1/4	1 3/8	3/4	—	3
-2			6'-0	14 x 1		14 x 1 1/4	66'-6	—	—	14 x 3/4		6'-0				66'-6		8'-0			22'-0				18'-0				24'-0				20'-0				1 3/8	5/8	—	2 5/8
-3			6'-0					—	—			6'-0																											
-4			5'-6					—	—			5'-6																											
-5			5'-6	14 x 1		14 x 1 1/4		—	—	14 x 5/8		5'-6											16'-0				20'-0					18'-0			18'-0	4 1/4	1 3/8	3/4	—	2 3/8
2S S-G	5G to 72 x 7/16	14 x 5/8	5'-6	14 x 1 3/8	6'-0	14 x 1 3/8	66'-6	—	—	14 x 3/4	20 x 7/8	5'-6	20 x 1 3/8	6'-0	20 x 1 3/4	66'-6	20 x 1 3/8	8'-0	20 x 5/8	4 1/4	26'-0	9	14'-0	11	18'-0	8	18'-0	5	24'-0	10	16'-0	12	20'-0	9	16'-0	4 1/4	1 3/8	3/4	—	2 3/8
								—	—																															
2S N-1	3G to 72 x 7/16	16 x 5/8	6'-0	16 x 1	7'-0	16 x 1 1/4	68'-0	—	—	14 x 3/4	20 x 7/8	6'-0	20 x 1 3/8	7'-0	20 x 1 3/4	68'-0	20 x 1 1/2	10'-6	20 x 3/4	4 1/4	26'-0	9	16'-0	11	16'-0	8	20'-0	5	24'-0	10	18'-0	12	20'-0	9	18'-0	4 1/4	1 3/8	1/2	5/8	3 3/8
-2			6'-0					—	—			6'-0																											
-3			6'-6					—	—			6'-6																										1/2	3 3/8
-4			6'-6					—	—			6'-6																										1/2	4 1/4
-5			7'-0	16 x 1				—	—			7'-0									22'-0						20'-0		24'-0								1/2	4 3/8
2S N-G	3G to 72 x 7/16	16 x 5/8	7'-0	16 x 1 1/8	7'-0	16 x 1 3/8	68'-6	—	—	16 x 3/4	20 x 7/8	7'-0	20 x 1 3/8	7'-0	20 x 1 3/4	68'-6	20 x 1 1/2	10'-6	20 x 3/4	4 1/4	24'-0	9	16'-0	11	16'-0	8	18'-0	5	22'-0	10	18'-0	12	20'-0	9	16'-0	4 1/4	1 3/8	1/2	5/8	4 1/2
2A-1	3G to 72 x 7/16	20 x 7/8	6'-0	20 x 1 1/8	8'-6	20 x 1 3/8	82'-6	—	—	20 x 1	20 x 1	6'-0	22 x 2	8'-6	24 x 2 1/2	82'-6	22 x 2	14'-6	20 x 1	4 1/4	22'-0	9	20'-0	11	16'-0	8	20'-0	5	20'-0	10	22'-0	12	18'-0	9	18'-0	1 1/8	2 5/8	5/8	—	4 3/8
-2			6'-6	20 x 1 3/8	8'-6	20 x 1 3/8	81'-0	—	—			6'-6	22 x 2	8'-6	24 x 2 3/8	81'-0	22'-2	15'-0														22'-0				20'-0		20'-0			
-3			6'-6	20 x 1 3/8	8'-6	20 x 1 3/8	81'-0	—	—			6'-6	22 x 2	8'-6	24 x 2 3/8	81'-0	22'-2	15'-0														22'-0				24'-0		20'-0		4 3/8	
2A-4	3G to 72 x 7/16	20 x 7/8	6'-6	20 x 1 1/8	8'-6	20 x 1 3/8	81'-6	—	—	20 x 7/8	20 x 1	6'-6	22 x 1 3/8	8'-6	24 x 2 3/8	81'-6	22 x 1 3/4	12'-6	20 x 1	4 1/4	22'-0	9	20'-0	11	16'-0	8	20'-0	5	20'-0	10	22'-0	12	18'-0	9	18'-0	1 1/8	2 1/4	5/8	—	4 1/2

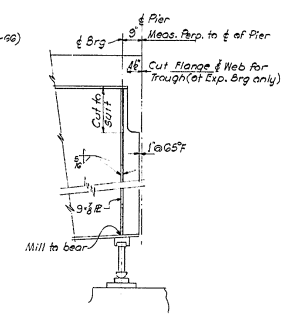


ELEVATION - SPAN 25 AS SHOWN

SPAN 2A SIMILAR EXCEPT AT ENDS



SPAN 25
SCALE ½ IN. = 1 FT.



SPAN 2A
SCALE ½ IN. = 1 FT.

Notes:
For Framing Plan of Span 25, see Dwg. SA54
For Framing Plan of Span 2A, see Dwg. SA55
For Shoe Locations, see Dwgs. SA54 & SA55
For Shoe Details, see Dwg. SA73

Drawn by S.J.V.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRINGER DATA - TAPERED GIRDERS
MAINLINE - SPAN 25
RAMP A - SPAN 2A

APPROVED BY: Wilhelmina D. Pressey, Jr.
BRIDGE ENGINEER — DATE 4-16-64

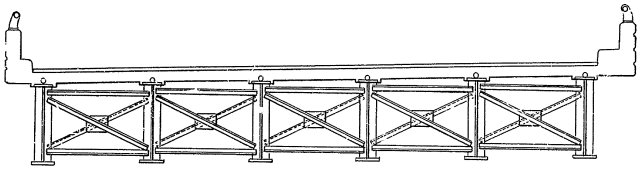
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

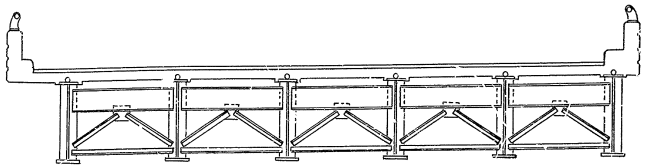
DWG. NO. SA64

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2 (12)	'64	99	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

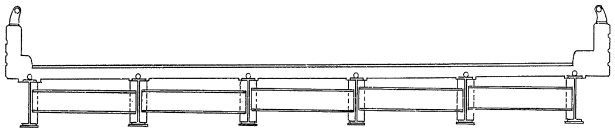


INTERMEDIATE CROSS-FRAMES

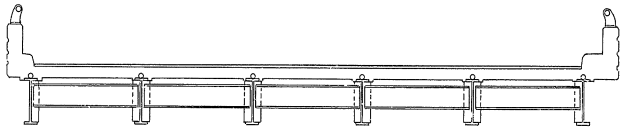


END CROSS-FRAMES

AT BUILT-UP GIRDERS-MAINLINE

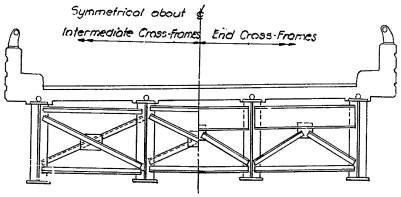


INTERMEDIATE DIAPHRAGMS

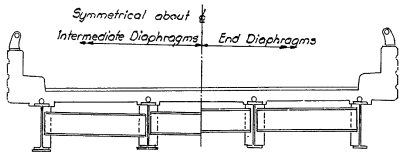


END DIAPHRAGMS

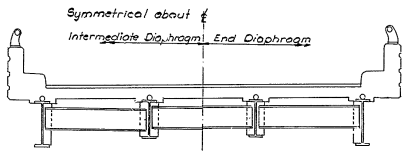
AT ROLLED BEAM SECTIONS-MAINLINE



AT BUILT-UP GIRDERS-RAMP



AT ROLLED BEAM SECTIONS-RAMPS
EXCEPT RAMP C SPANS OC & 2C



AT RAMP C- SPANS OC & 2C

NOTES:
For General Notes, see Dwg. SA2
For Framing Plans, see Dwgs. SA54 thru SA58

Drawn by S.J.V
Checked by J.AR

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SUPERSTRUCTURE
TYPICAL SECTIONS

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

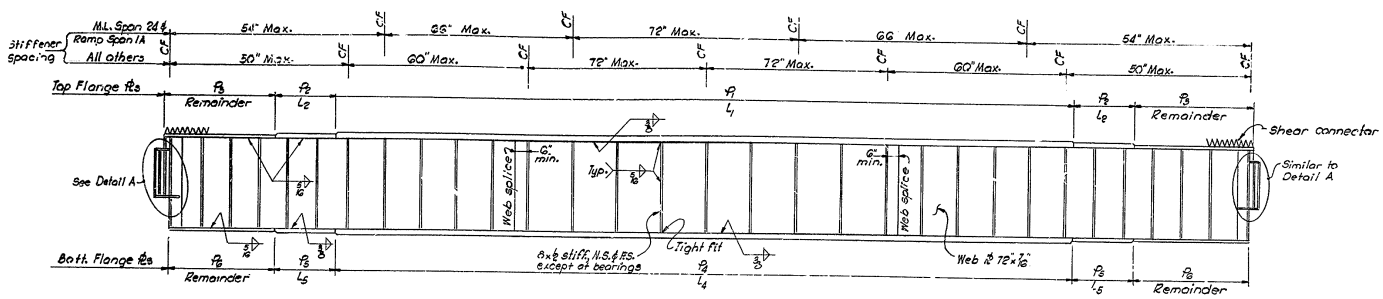
SCALE: 1/4 IN = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

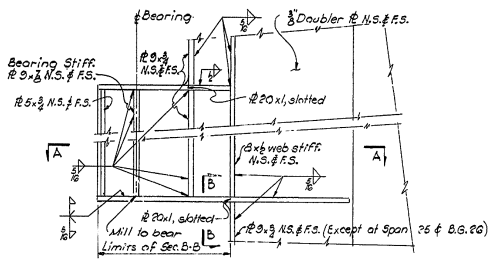
DWG. NO. SA65

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	JEL.	I-95-2 (12)	'64	100	215

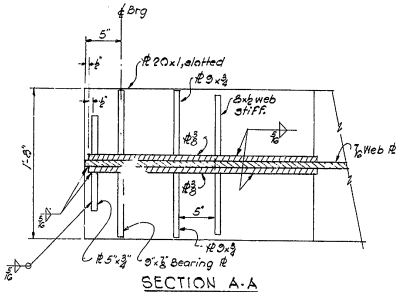
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



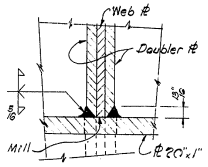
TYPICAL ELEVATION
Note: All material to be Structural Carbon Steel ASTM A36
NOT TO SCALE



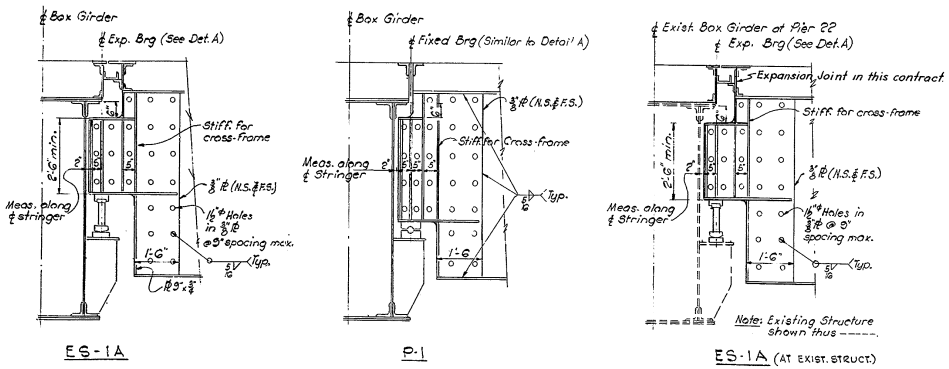
DETAIL A
SCALE 1½ IN. = 1 FT.
EXP. BRG AS SHOWN
FIXED BRG SIMILAR



SECTION A-A
SCALE 1½ IN. = 1 FT.

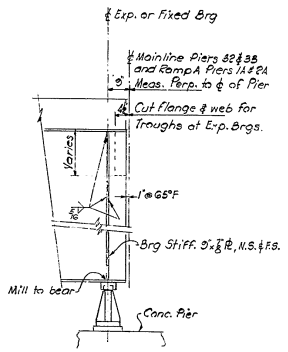


SECTION B-B
SCALE 1½ IN. = 1 FT.



ES-1A
P-1
ES-1A (AT EXIST. STRUCT.)

TYPICAL FRAMING AT BOX GIRDERS
SCALE ½ IN. = 1 FT.



ES-1 & FS-1
NOTE: FS-1 SHOWN - ES-1 AS NOTED

Notes:
For Framing Plans of Ramp A, see Dwgs. SA54 & SA55
For Framing Plans of Mainline Spans 22, 23 & 24 see Dwg. SA54; Mainline Span 32, see Dwg. SA56
For Shoe Locations, see Dwgs. SA54, SA55 & SA56
For Shoe Details, see Dwg. SA73

Drawn by S.W.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

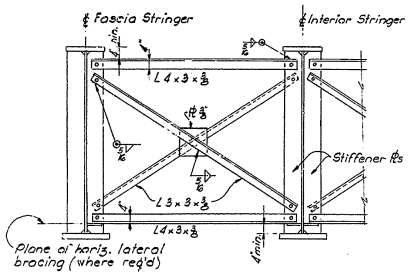
STRINGERS
MAINLINE - SPANS 22, 23, 24 & 32
RAMP A - SPANS 0A & 1A

APPROVED BY: [signature]
BRIDGE ENGINEER
4-16-64
DATE

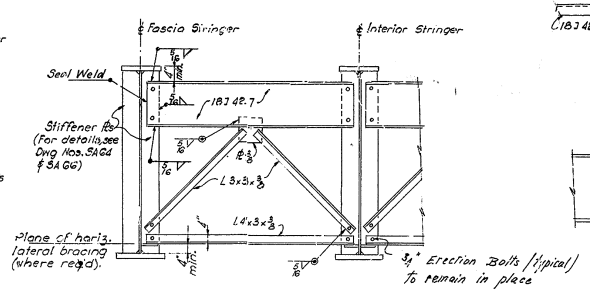
SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA66

COUNTY	CONTRACT	R.H.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	101	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

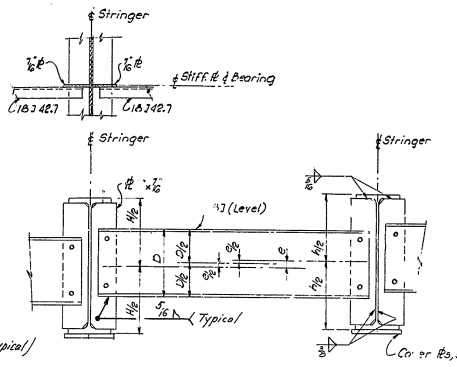


TYPICAL INTERMEDIATE CROSS-FRAME

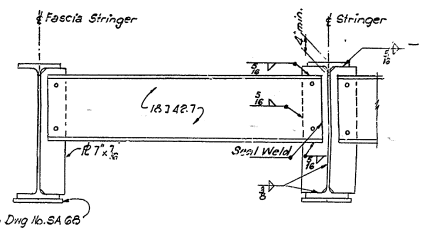


TYPICAL END CROSS-FRAME

BUILT-UP GIRDER STRINGERS
SCALE 1/2 IN. = 1 FT.

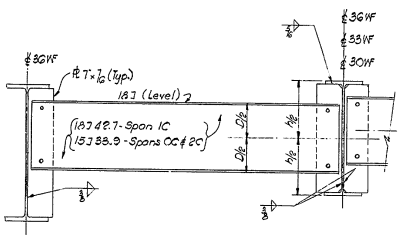


TYPICAL INTERMEDIATE DIAPHRAGM

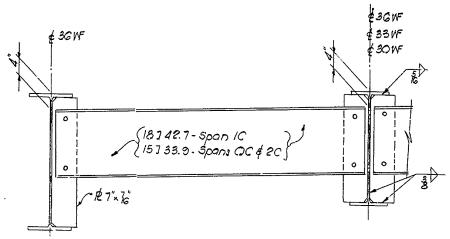


TYPICAL END DIAPHRAGM

CONSTANT DEPTH WF STRINGERS
SCALE 3/4 IN. = 1 FT.

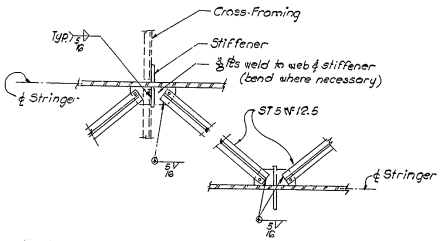


INTERMEDIATE DIAPHRAGM



END DIAPHRAGM

TYPICAL SPANS-RAMP C
SCALE 3/4 IN. = 1 FT.



TYPICAL LATERAL BRACING
SCALE 1/2 IN. = 1 FT.

NOTES:
For General Notes, see Dwg. SA2
For Framing Plans, see Dwgs. SA54 thru SA58
Diaphragms & bracing to be structural carbon steel A.A.S.H.O M165 (A.S.T.M-A373)

Drawn by S.W.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

STRUCTURAL DETAILS

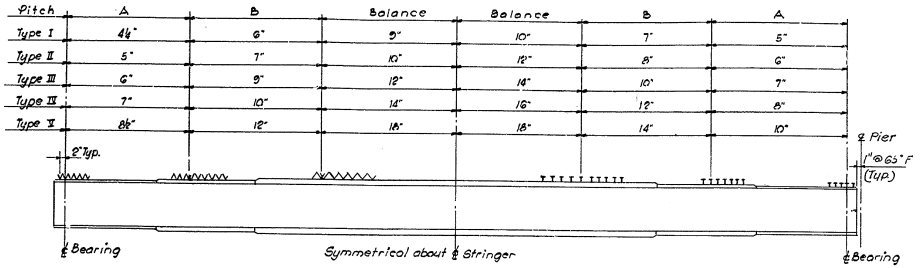
APPROVED BY: Johnnie R. Pearson, Jr. — BRIDGE ENGINEER — DATE 4-16-64

SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA67

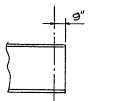
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	102	215

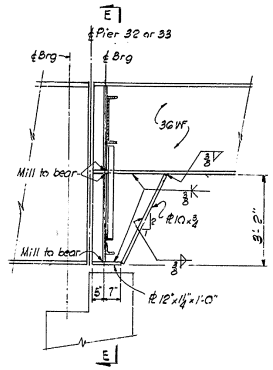
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

Pitch	A	B	Balance	Balance	B	A
Type I	4½"	6"	9"	10"	7"	5"
Type II	5"	7"	10"	12"	8"	6"
Type III	6"	9"	12"	14"	10"	7"
Type IV	7"	10"	14"	16"	12"	8"
Type V	8½"	12"	16"	18"	14"	10"

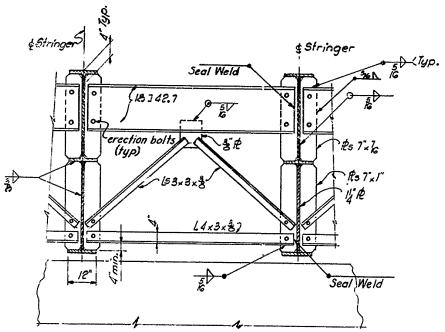


ELEVATION



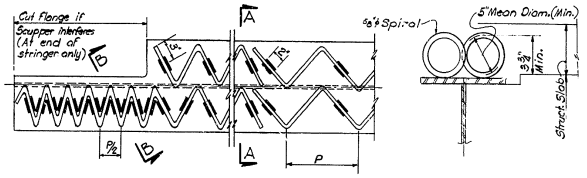


ELEVATION



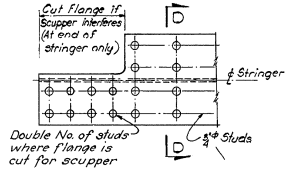
SECTION E-E

FRAMING AT M.L. PIERS 32 & 33
SCALE ½ IN. = 1 FT.

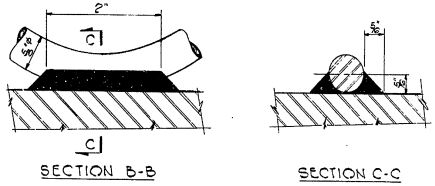


PART PLAN

SECTION A-A



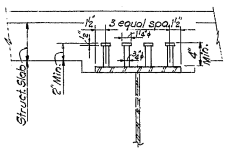
PART PLAN



SECTION B-B

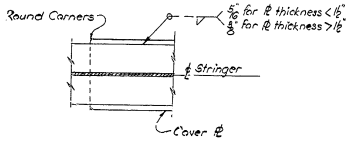
SECTION C-C

SPIRAL DETAILS

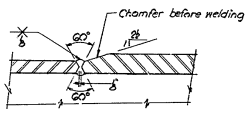


SECTION D-D

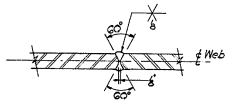
STUD DETAILS - ALTERNATE



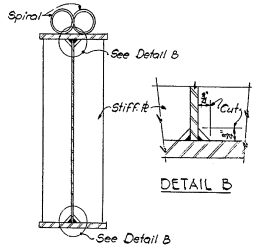
COVER ℄ DETAIL
NO SCALE



TYPICAL SHOP FLANGE SPLICE



TYPICAL WEB SPLICE



STIFFENER ℄ DETAILS
FOR WELDING OF STIFF. ℄S TO STRINGERS, SEE DWGS. SAG4, SAG5, & SAG7.

Drawn by S.W.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SHEAR CONNECTORS & WELDED BEAM FLANGE DETAILS

APPROVED BY: Johnnie O. Pearson Jr. 4-15-64
BRIDGE ENGINEER DATE

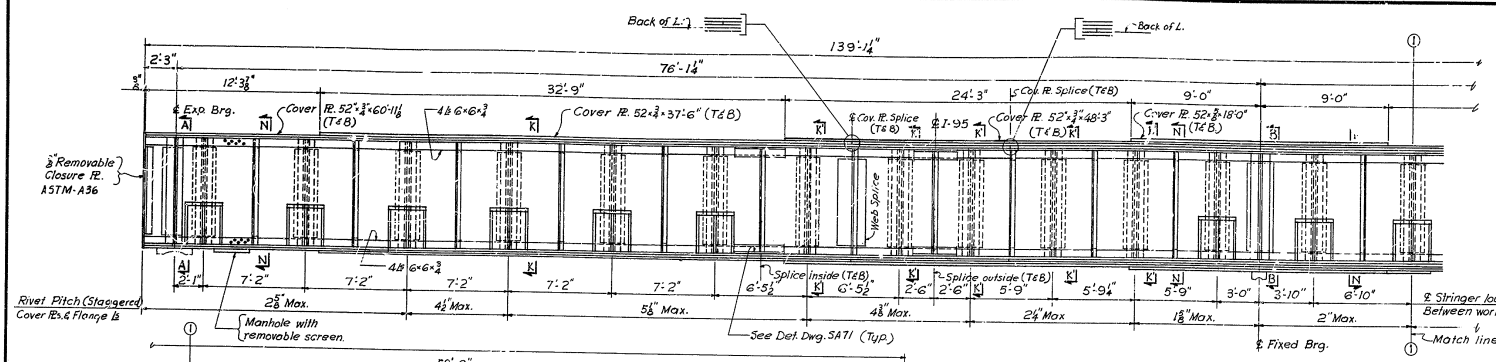
SCALE: AS NOTED
DATE: APRIL 1, 1964

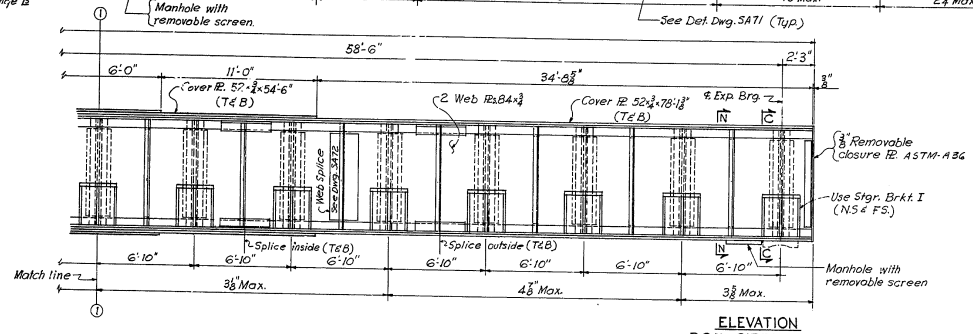
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA68

COUNTY	CONTRACT	R.N.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	103	215

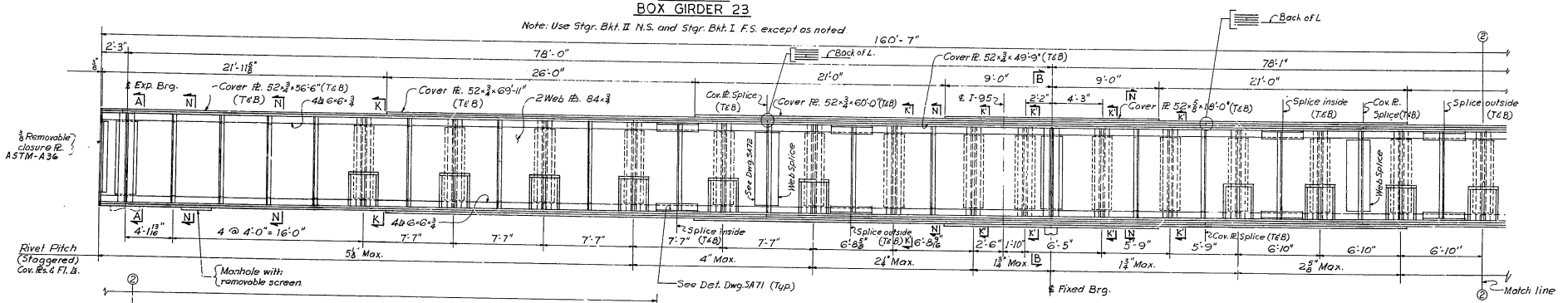
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

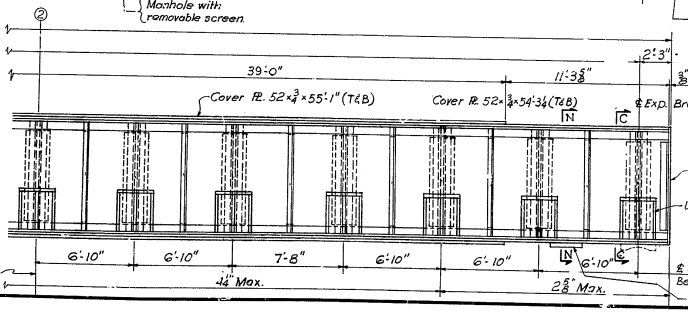




ELEVATION
BOX GIRDER 23

Note: Use Stgr. Bkt. II N.S. and Stgr. Bkt. I F.S. except as noted





ELEVATION
BOX GIRDER 24

Note: Use Stgr. Bkt. II N.S. & F.S. except as noted.
See dwg. SA88 for location of pipe supports.

NOTES

For General Notes see Dwg. SA2.
All BG Elevations are taken looking upstation.
For Framing Plans see Dwg. SA54.
For Sections and Details see Dwgs. SA71 & SA72.
For Girder Shoes see Dwg. SA73.
For details of concrete slab on girder see Dwg. SA85.
For stringer details see Dwgs. SA64 & SA66.
For joint detail see Dwgs. SA75 & SA76.
All material in box girders to be low alloy steel A.S.T.M.-A440 except that which is noted to be ASTM-A36.

Stringer brackets to be Structural Steel for welding ASTM-A36.
Interior of girders to be painted with protective coating for metal surface.
All rivets to be ⅞" structural carbon rivets unless noted H.S. (High strength).

Drawn by E.N.
Checked by P.S. & L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDERS
BG 23 & BG 24

APPROVED BY _____ BRIDGE ENGINEER
4-16-64 DATE

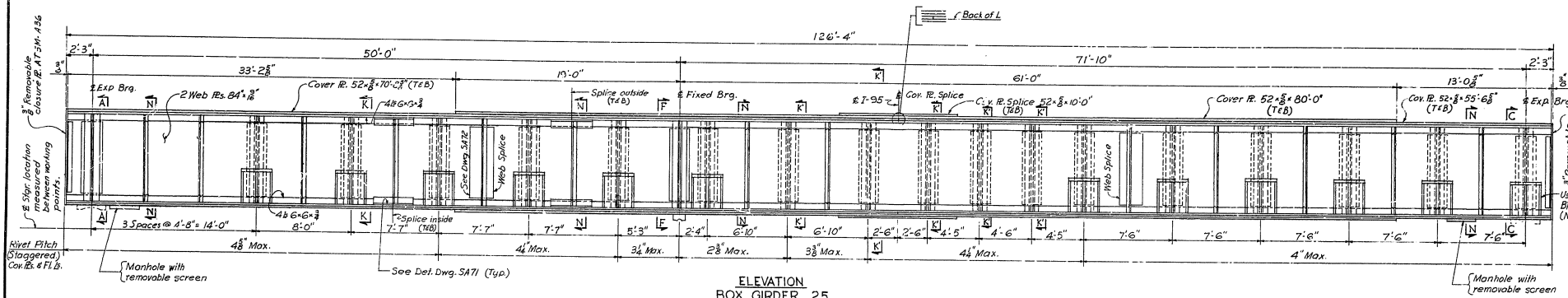
SCALE: 1/4 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA69

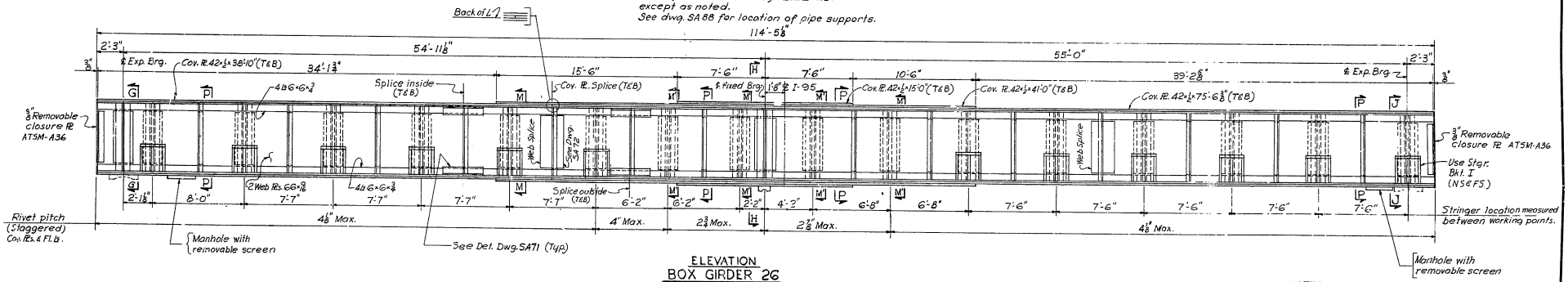
COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	104	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



ELEVATION
BOX GIRDER 25

Note: Use Stgr. Bkt. I N.S. and Stgr. Bkt. II F.S. except as noted.
See dwg. SA88 for location of pipe supports.



ELEVATION
BOX GIRDER 26

Note: Use Stgr. Bkt. II N.S. & F.S. except as noted.

NOTES
For Notes applying to this sheet see Dwg. SA69
For sections and details see Dwg. SA71 & SA72

Drawn by E.N.
Checked by P.S.&L.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDERS
BG 25 & BG 26

APPROVED BY: Johnnie R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

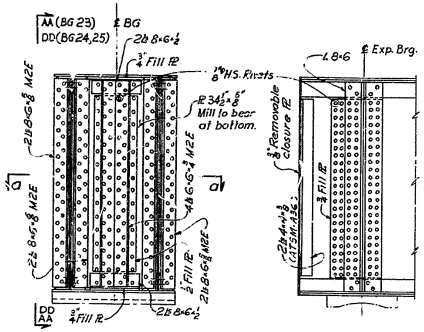
SCALE: 1/4 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA70

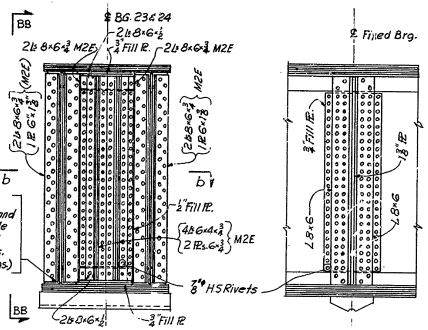
COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	105	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



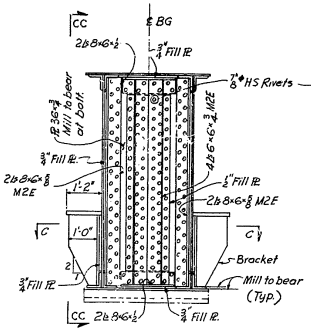
SECT. A-A

ELEV. AA-AA

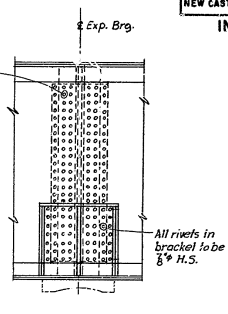


SECT. B-B

ELEV. BB-BB

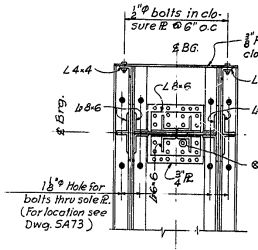


SECT. C-C

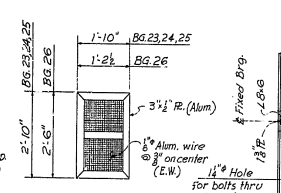


ELEV. CC-CC

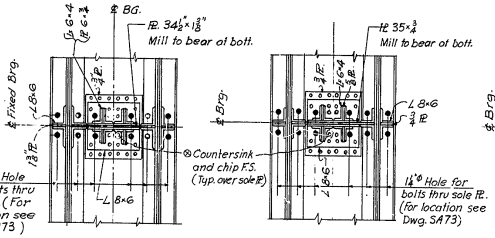
Note:
In Sections A-A, AA-AA, B-B, BB-BB, C-C, CC-CC, Rivets to be ⅞" H.S. ASTM-A195. Use ⅞" ASTM-A141 for riveting flange Ls to web and flange plates.



SECT. a-a

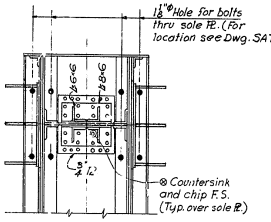


MANHOLE SCREEN COVER

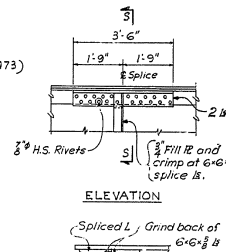


SECT. b-b

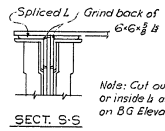
SECT. f-f



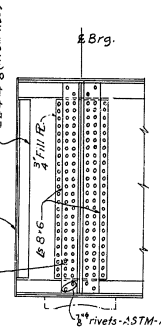
SECT. c-c



ELEVATION

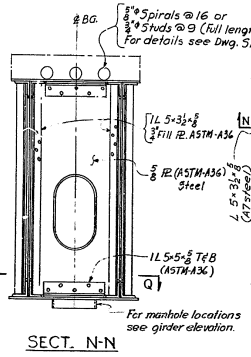


SECT. S-S

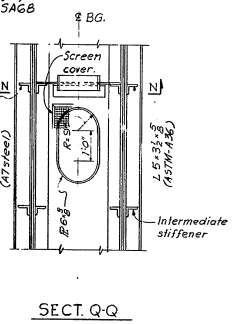


ELEV. DD-DD

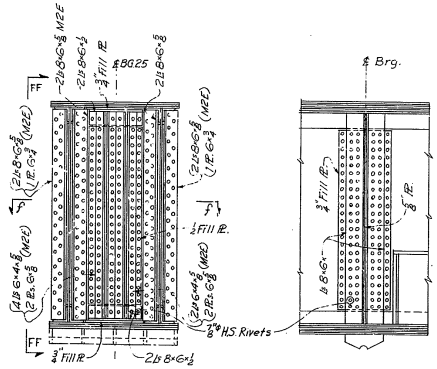
Rivets to be ⅞" H.S. ASTM-A195, except as noted.



SECT. N-N



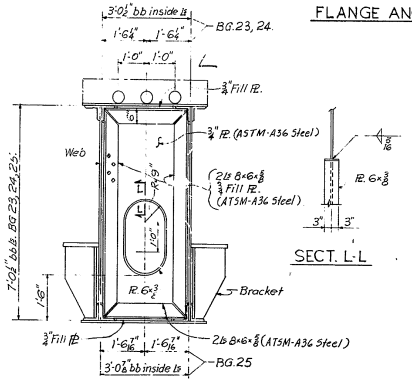
SECT. Q-Q



SECT. F-F

ELEV. FF-FF

Note: Rivets to be ⅞" H.S. ASTM-A195. Use ⅞" ASTM-A141 for riveting flange Ls to web and flange plates.



SECT. K-K

SECT. K'-K' (Omit Brackets)

Typical at each interior stringer.

FLANGE ANGLE SPLICE DETAIL

NOTES
For BG elevations see Dwgs. SA69 & SA70
For additional notes applying to this sheet, see Dwg. SA69

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDER DETAILS
SHEET 1 OF 2

APPROVED BY: W. Bruce D. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: 1/2 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

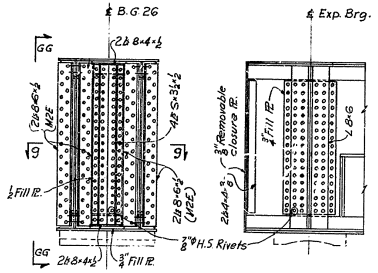
DWG. NO. SA71

Drawn by E.N.
Checked by P.S.

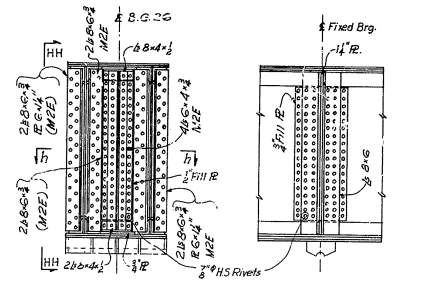
D C B A 1 5 10 A B C D

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	106	215

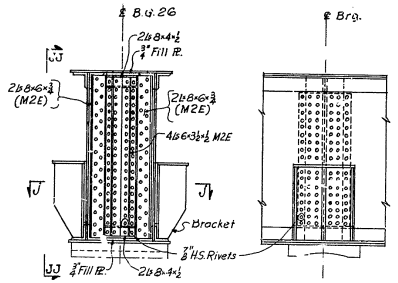
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



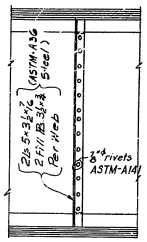
SECT. G-G ELEV. GG-GG



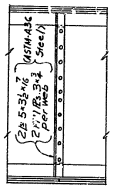
SECT. H-H ELEV. HH-HH



SECT. J-J ELEV. JJ-JJ



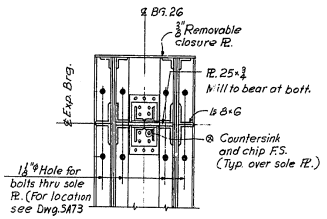
BG 23,24,25



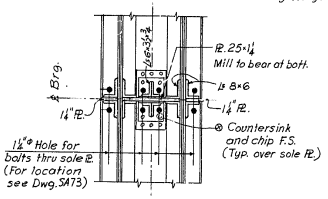
BG 26

TYPICAL INTERMEDIATE STIFFENER

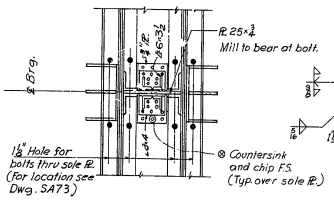
Note:
In Sections G-G, GG-GG, H-H, HH-HH, J-J, JJ-JJ, Rivets to be ⅞"ϕ H.S. ASTM-A195. Use ⅞"ϕ ASTM-A141 for riveting flange Ls to web and flange plates.



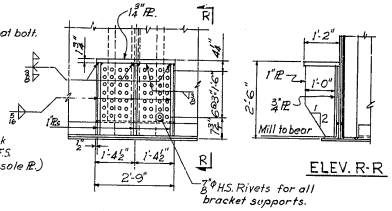
SECT. 9-9



SECT. h-h

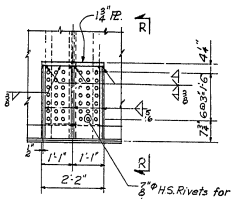


SECT. J-J

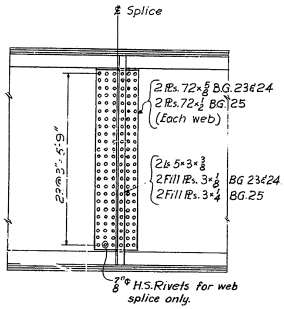


ELEV. R-R

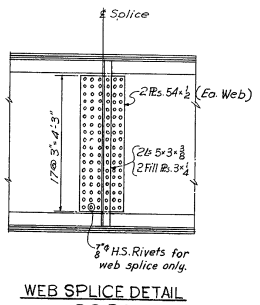
BRACKET I



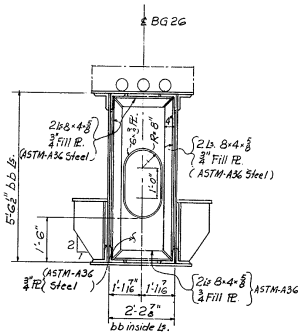
BRACKET II



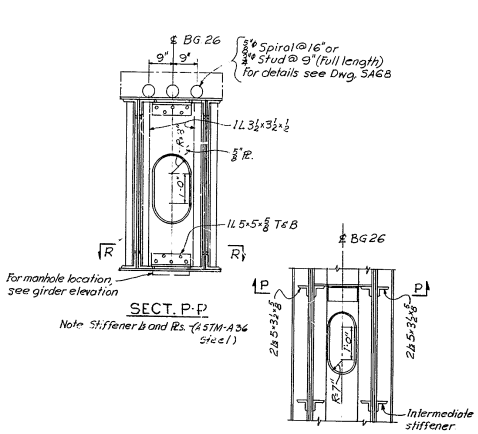
WEB SPLICE DETAIL
BG 23, 24, 25



WEB SPLICE DETAIL
BG 26



SECT. M-M
SECT. M'-M' (Omit Brackets)
Typical of each interior stringer



SECT. P-P
Note: Stiffener Ls and Pls. (ASTM-A36 Steel)

SECT. R-R

NOTES
For BG elevations see Dwgs. SA69 & SA70
For additional notes applying to this sheet, see Dwg. SA69

Drawn by E.N.
Checked by P.S.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BOX GIRDER DETAILS
SHEET 2 OF 2

APPROVED BY: [signature] BRIDGE ENGINEER [signature] DATE 4-16-64

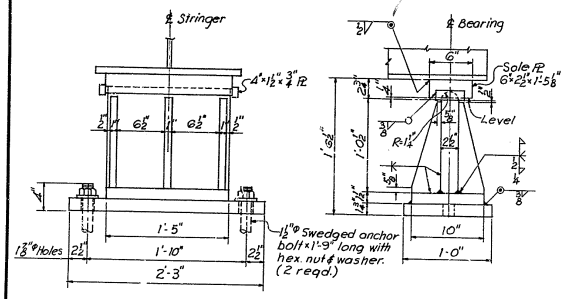
SCALE: 1/2 IN. = 1 FT.
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA72

COUNTY	CONTRACT	R & A REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	107	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

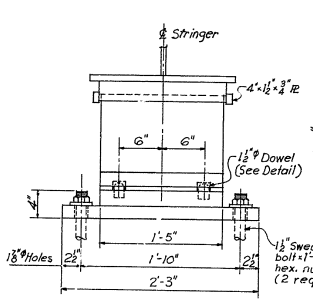


FRONT VIEW

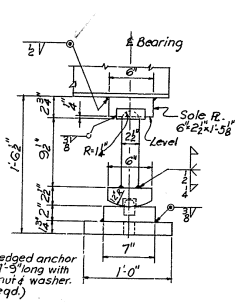
SIDE VIEW

Note: Adjust shoe to proper alignment prior to field welding to masonry PL.

FS-1
SCALE: 1½ IN.=1FT.

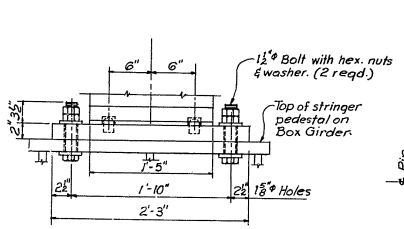


FRONT VIEW



SIDE VIEW

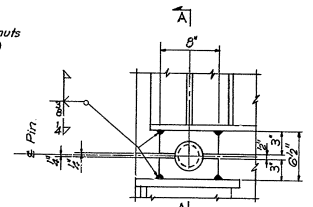
ES-1
SCALE: 1½ IN=1 FT.

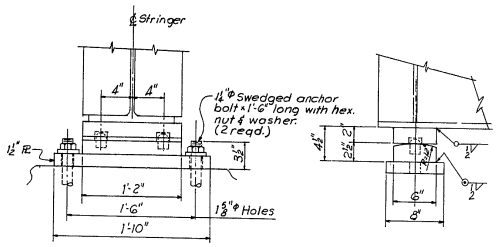


FRONT VIEW

Note: Details not shown are similar to ES-1.

ES-1A
SCALE: 1½ IN.=1FT.

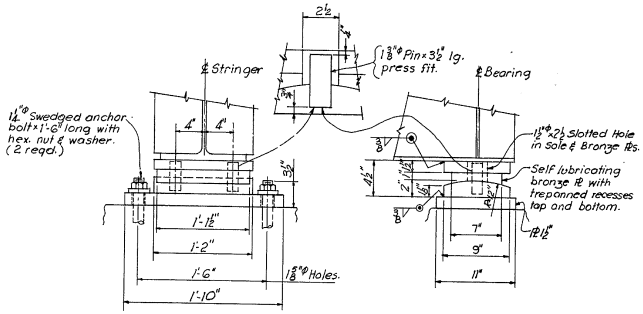




FRONT VIEW

SIDE VIEW

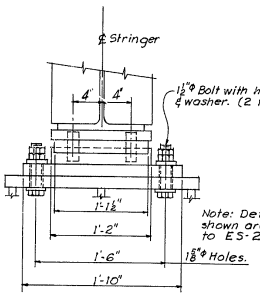
FS-2
SCALE: 1½ IN.=1FT.



FRONT VIEW

SIDE VIEW

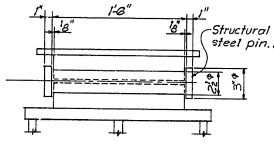
ES-2
SCALE: 1½ IN.=1FT.



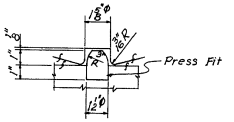
Note: Details not shown are similar to ES-2

FRONT VIEW

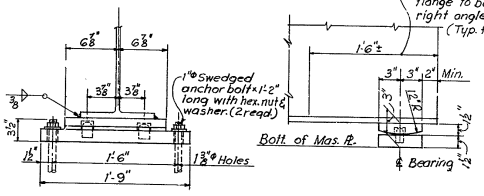
ES-2A
SCALE: 1½ IN.=1FT.



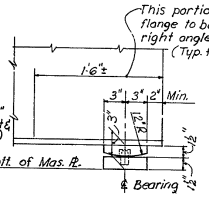
P-1
SCALE: 1½ IN.=1FT.



TYPICAL SECTION THRU DOWEL
SCALE: 3 IN.=1FT.

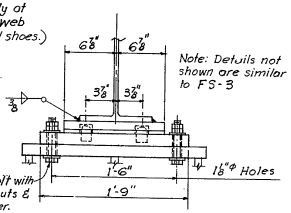


FRONT VIEW



SIDE VIEW

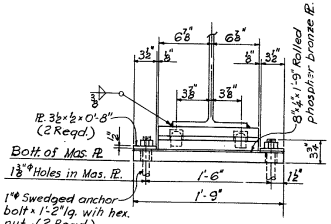
FS-3
SCALE: 1½ IN.=1FT.



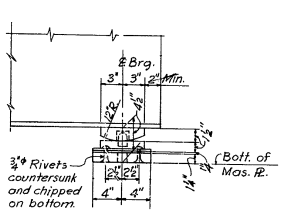
Note: Details not shown are similar to FS-3

FRONT VIEW

FS-3A
SCALE: 1½ IN. = 1FT



FRONT VIEW



SIDE VIEW

ES-3
SCALE: 1½ IN.=1FT.

NOTES:
For General Notes see Dwg. SA2
For location of shoes see Framing Plans Dwgs. SA54 thru SA58
Adjust shoes to proper alignment prior to field welding to masonry PL.

Drawn by E.N
Checked by F.Y

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SHOES
SHEET 1 OF 2

APPROVED BY: [signature] BRIDGE ENGINEER
DATE: 4-14-64

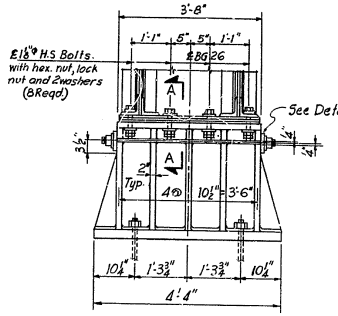
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

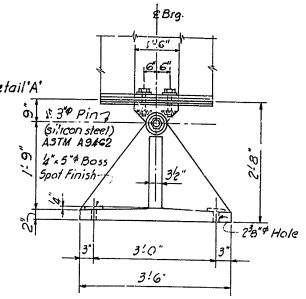
DWG. NO. SA73

COUNTY	CONTRACT	R.R.A. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	108	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

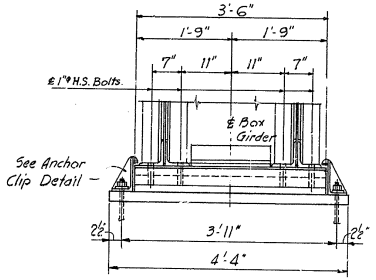


FRONT VIEW

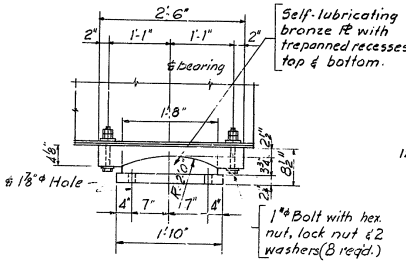


SIDE VIEW

F S - 4
SCALE ¾ IN. = 1 FT.

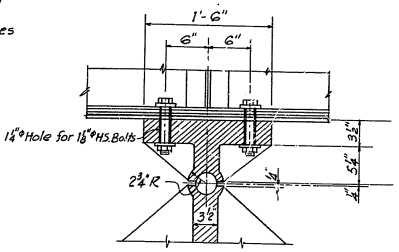


FRONT VIEW

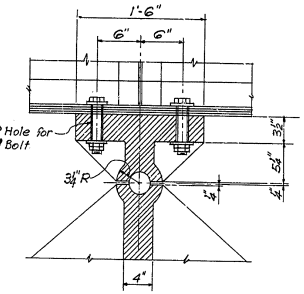


SIDE VIEW

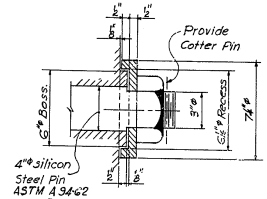
F S - 4
SCALE 1 IN. = 1 FT.



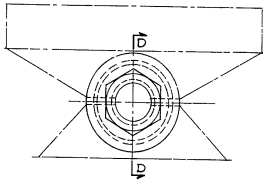
SECTION A-A
SCALE 1½ IN. = 1 FT.



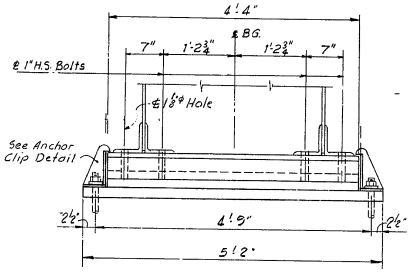
SECTION C-C
SCALE 1½ IN. = 1 FT.



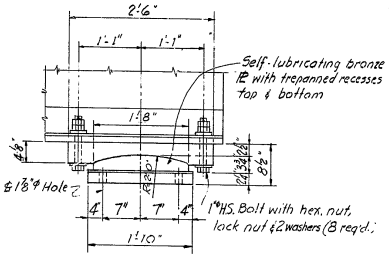
SECTION D-D



DETAIL "B"
SCALE 3 IN. = 1 FT.

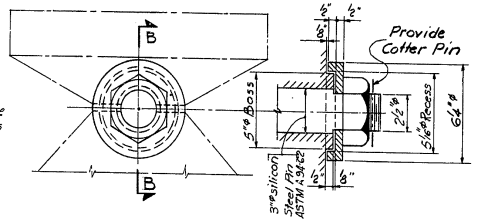


FRONT VIEW

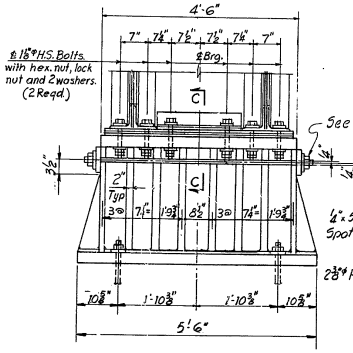


SIDE VIEW

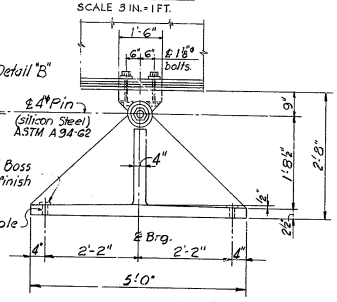
F S - 5
SCALE 1 IN. = 1 FT.



DETAIL "A" SECTION B-B
SCALE 3 IN. = 1 FT.

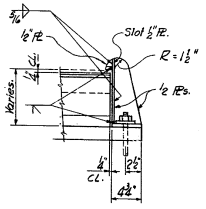


FRONT VIEW

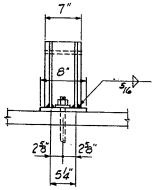


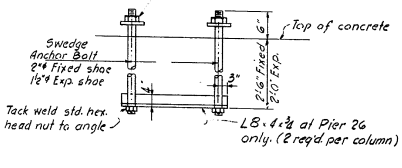
SIDE VIEW

F S - 5
SCALE ¾ IN. = 1 FT.



ANCHOR CLIP DETAIL
NOT TO SCALE





ANCHOR BOLT DETAIL
NOT TO SCALE

NOTES:

For General Notes see Dwg. No. SA2
For location of shoes see Framing Plan Dwg. Nos. SA54 thru SA58
All material in shoe types FS-4 and FS-5 to be cast steel unless otherwise indicated.
All material in shoe types ES-4 and ES-5 to be structural carbon steel unless otherwise indicated.
Payment for all shoes and anchor bolts to be included under item for structural carbon steel.
Bevel top of all sole plates parallel to girder cross slope; bottom of sole ℙ to be level.
Dimensi , shown apply at ℄ bearing.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SHOES
SHEET 2 OF 2

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

SCALE: AS NOTED
DATE: APRIL 1, 1964

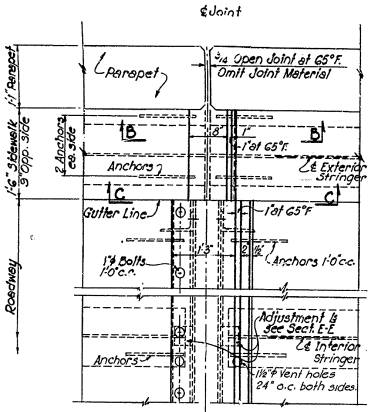
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA74

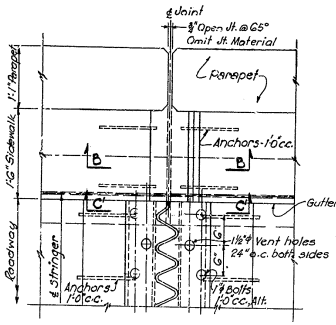
Drawn by E.N.
Checked by F.Y.

COUNTY	CONTRACT	C.W.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	109	215

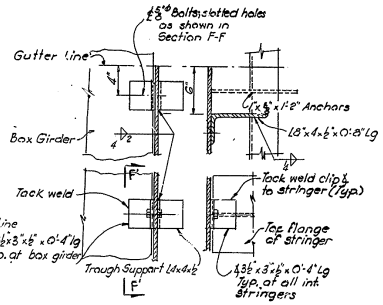
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



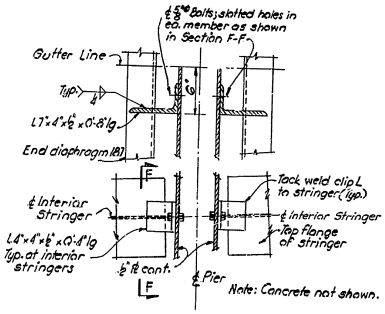
PLAN AT EXPANSION JOINT
SLIDING PLATE DETAIL
SCALE: 1 IN. = 1 FT.



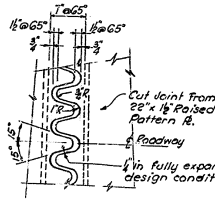
PLAN AT EXPANSION JOINT
FINGER JOINT DETAIL
SCALE: 1 IN. = 1 FT.



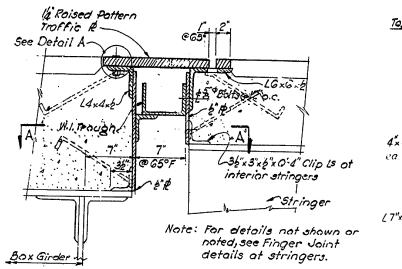
SECTION A-A
SCALE 1½ IN. = 1 FT.



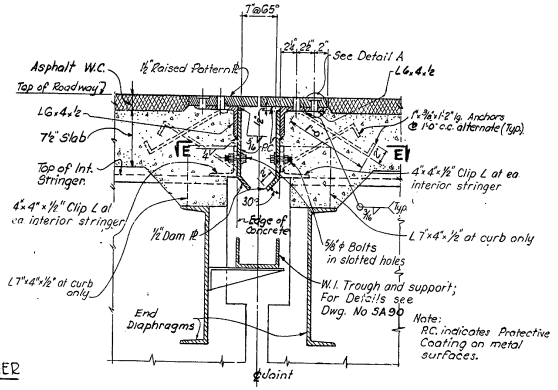
SECTION E-E
SCALE 1½ IN. = 1 FT.



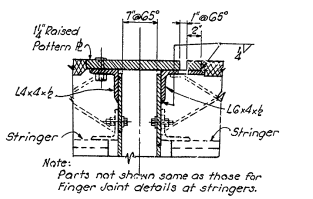
FINGER JOINT
NO SCALE.



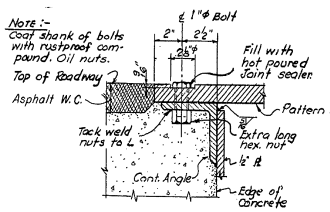
SLIDING ℓ JOINT AT BOX GIRDER & STRINGER
SCALE 1½ IN. = 1 FT.



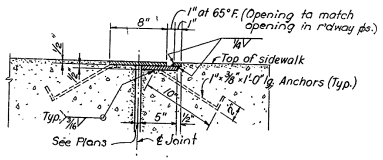
FINGER JOINT DETAIL AT STRINGERS
SCALE 1½ IN. = 1 FT.



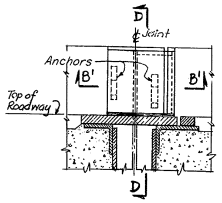
SLIDING ℓ JOINT AT STRINGERS
SCALE 1½ IN. = 1 FT.



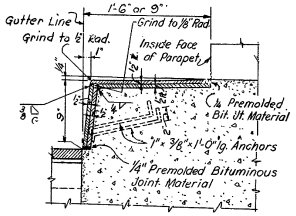
DETAIL "A"
SCALE: 3 IN. = 1 FT.



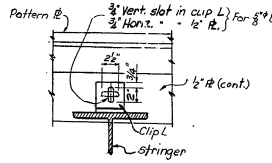
SECTION B-B (SHOWN)
SECTION B'-B' (SIMILAR)
SCALE: 1½ IN. = 1 FT.



SECTION C-C (SHOWN)
SECTION C'-C' (SIMILAR)
SCALE 1½ IN. = 1 FT.



SECTION D-D
SCALE: 1½ IN. = 1 FT.



SECTION F-F (SHOWN)
SECTION F'-F' (SIMILAR)
SCALE 1½ IN. = 1 FT.

NOTES:
For General Notes see Dwg. SA2
For Fixed Joint Details see Dwg. SA76

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

EXPANSION JOINT DETAILS

APPROVED BY _____ DATE 4-16-64
BRIDGE ENGINEER

SCALE: AS NOTED
DATE: APRIL 1, 1964

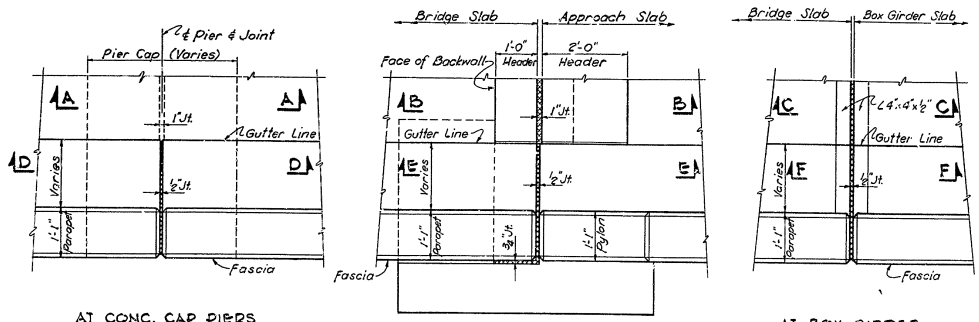
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA75

Drawn by S.W.
Checked by F.Y.

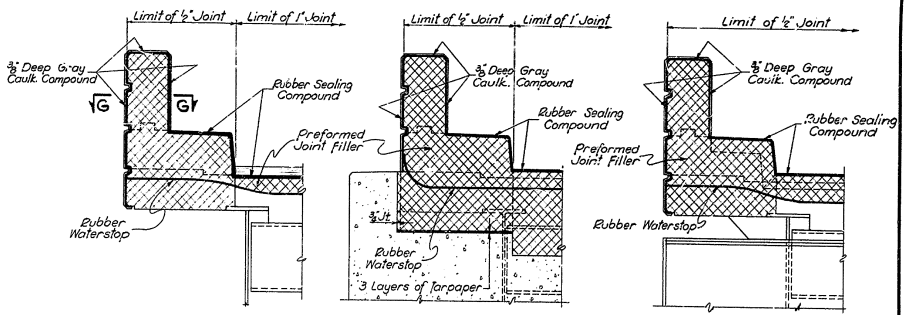
COUNTY	CONTRACT	R.R.J. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	110	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



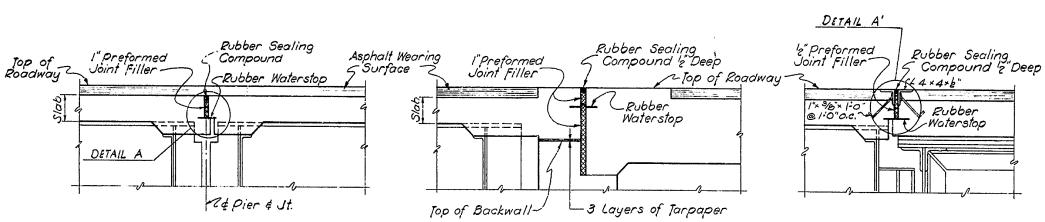
AT CONC. CAP PIERS — AT ABUTMENT — AT BOX GIRDER

PARTIAL PLAN



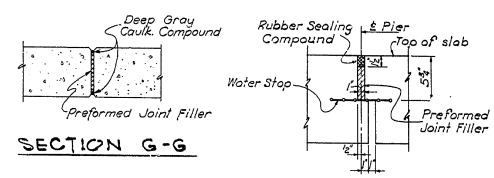
AT CONC. CAP PIERS — AT ABUTMENT — AT BOX GIRDER

TRANSVERSE SECTION ALONG JOINT



SECTION A-A — SECTION B-B — SECTION C-C

Joint material same on Fixed Joint side of BG 22

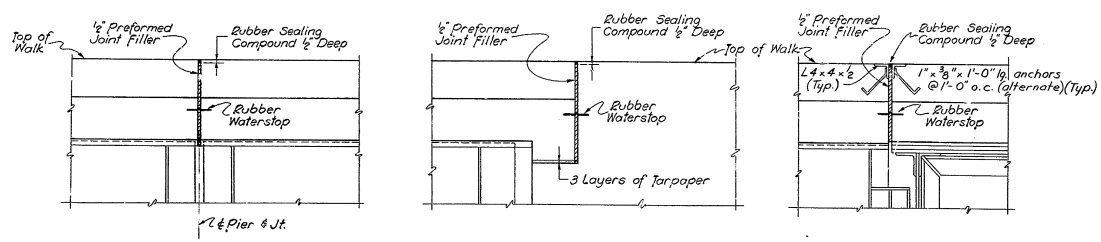


SECTION G-G

DETAIL A

DETAIL A' SIMILAR

SCALE 1½ IN. = 1 FT.



SECTION D-D — SECTION E-E — SECTION F-F

Joint material same on Fixed Joint side of BG 22

NOTES
For General Notes, see Dwg SA2.
For Expansion Joint Details, see Dwg SA75.

Drawn by R.E.G.
Checked by F.Y.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

FIXED JOINT DETAILS

APPROVED BY: [signature] 4-16-64
BRIDGE ENGINEER — DATE

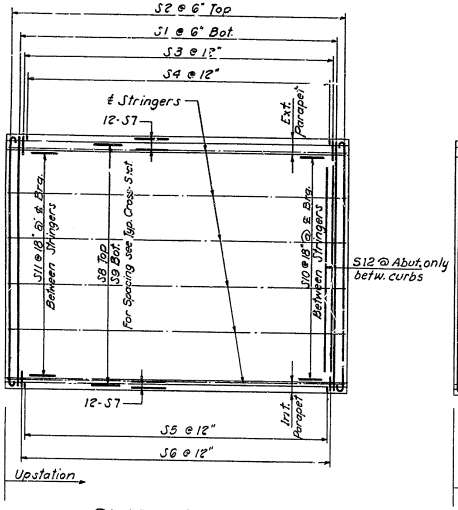
SCALE: 3/4" = 1'-0"
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

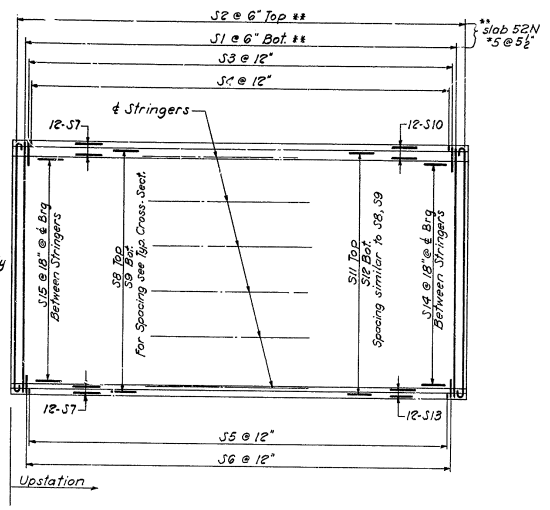
DWG. NO. SA76

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	111	215

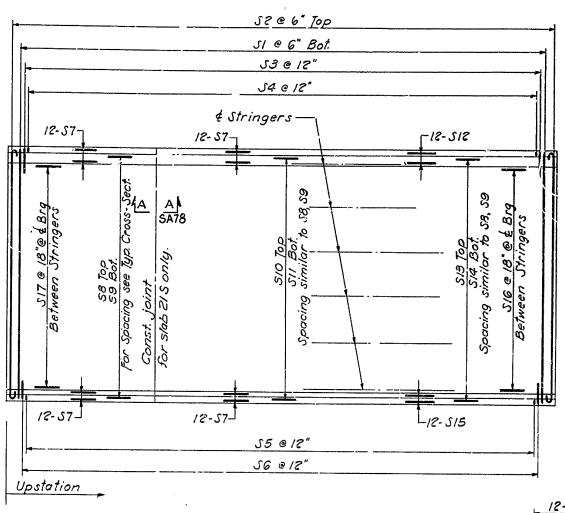
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



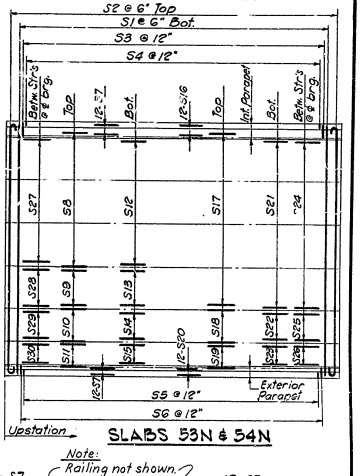
SLABS 48S, 59S



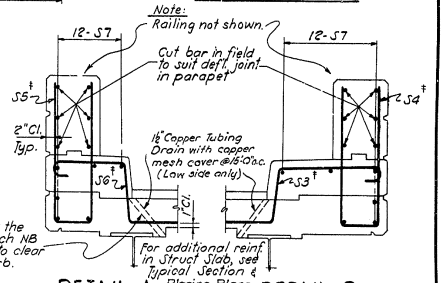
SLABS 24S, 25S, 34S thru 47S, 49S thru 58S
SLABS 25N thru 31N, 33N thru 52N



SLABS 21S, 22S, 23S & 32N

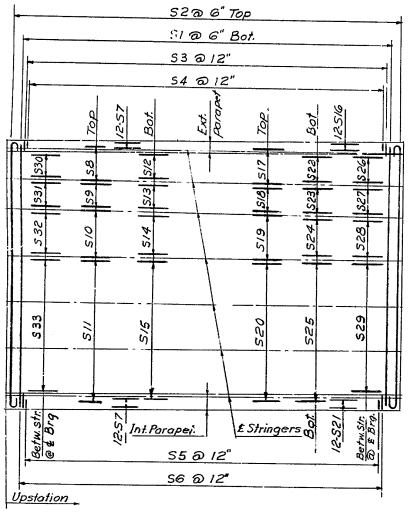


SLABS 53N & 54N

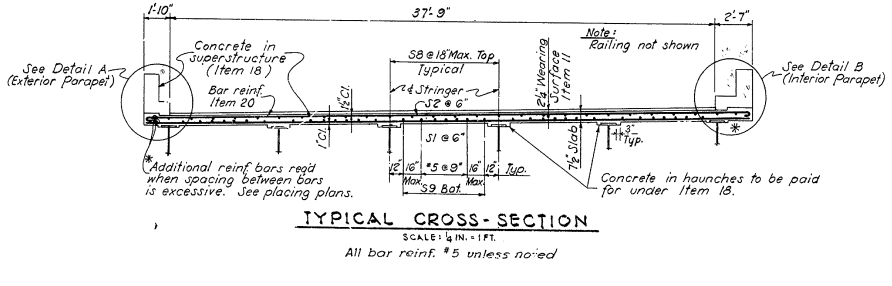


DETAIL A (EXTERIOR) DETAIL B (INTERIOR)

†As shown and noted for Northbound Roadway



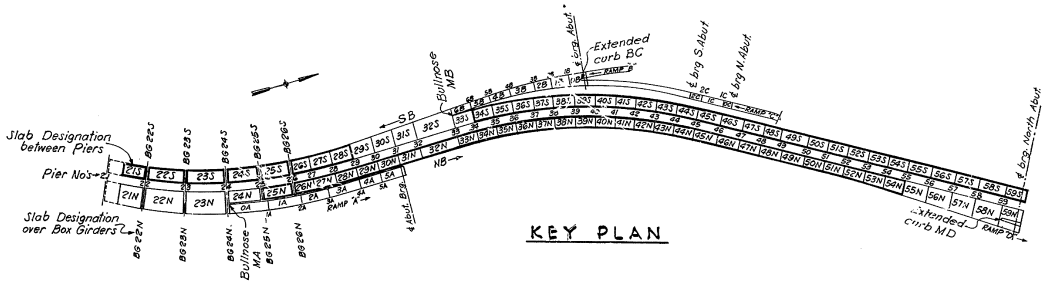
SLABS 26S, 27S, 28S



TYPICAL CROSS-SECTION

SCALE: ½ IN. = 1 FT.

All bar reinf. #5 unless noted



KEY PLAN

Drawn by J.D.
Checked by H.B.L.

NOTES:

For General Notes see Dwg. SA2
Slabs are designated by the marks shown on the Key Plan
All bars are to have their slab designation as the prefix to the bar mark. Bar 301 in slab 2A will have the bar mark 2A301.
For details of joints and misceilaneous reinf. see Dwg. SA85
For framing Plans, see Dwgs. SA54 thru SA58
For details of parapet and railing see Dwg. SA87

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
SLABS 21S THRU 28S & 34S THRU 59S
SLABS 25N THRU 54N

APPROVED BY: Lonnie D. Pearson BRIDGE ENGINEER 4-16-64 DATE

SCALE: NO SCALE

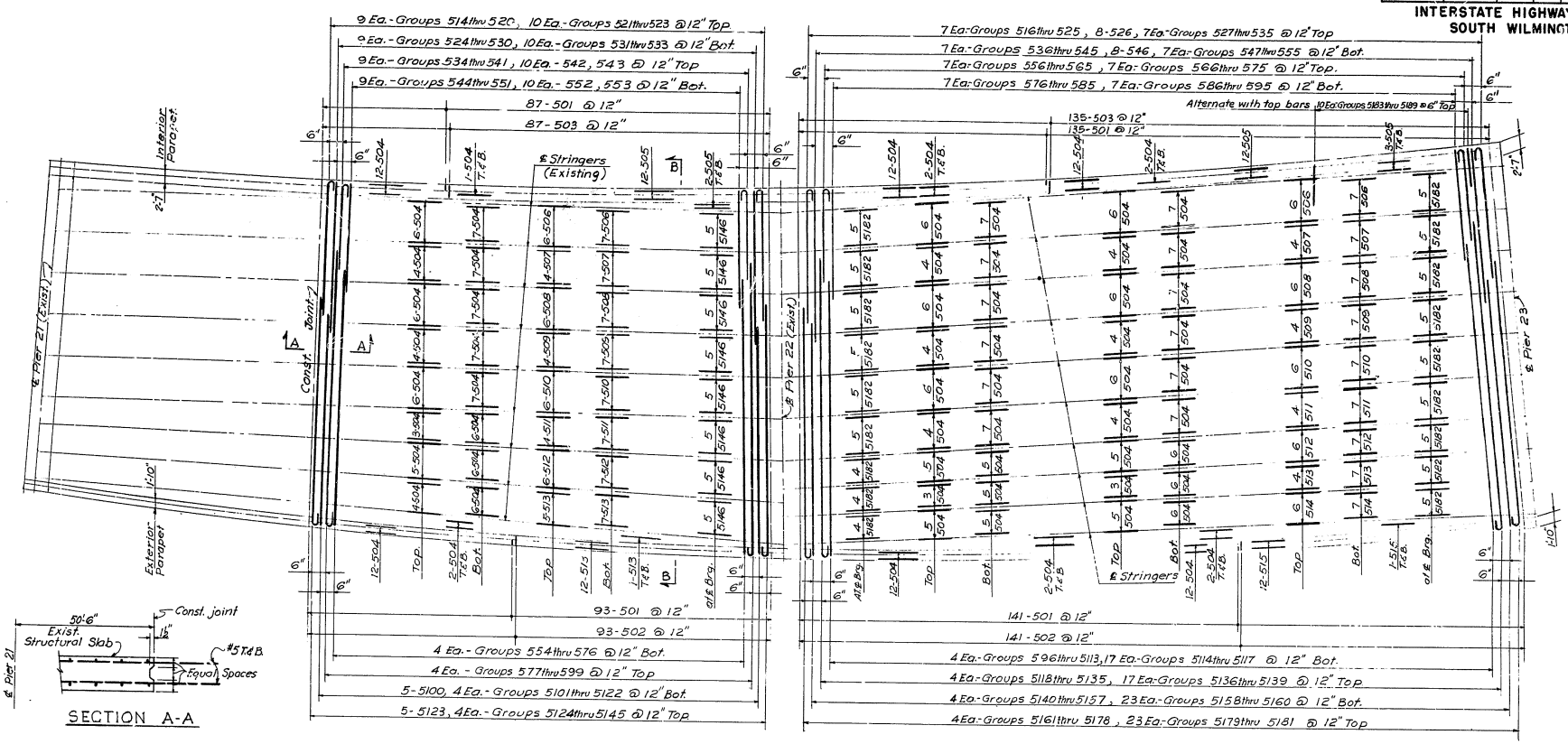
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA77

COUNTY	CONTRACT	A.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-08-004	2	DEL.	I-95-2 (12)	'64	112	215

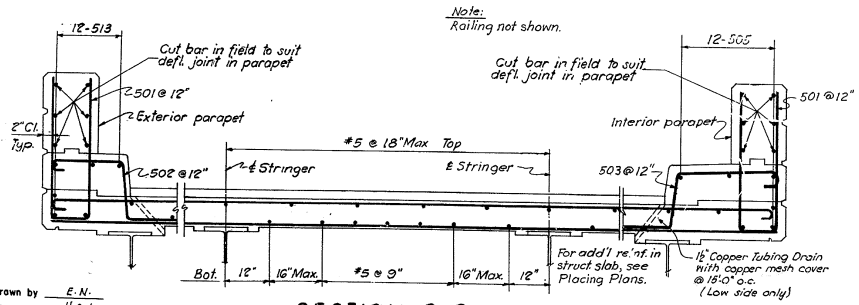
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



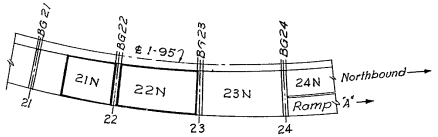
SLAB 21N

SLAB 22N

SECTION A-A



SECTION B-B



KEY PLAN

NOTES:
For General Notes, see Dwg. SA2
For Key Plan and additional notes see Dwg. SA77
For miscellaneous details, see Dwg. SA85
For Framing Plan see Dwg. SA54
For details of parapet and railing see Dwg. SA87

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
SLABS 21N & 22N

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

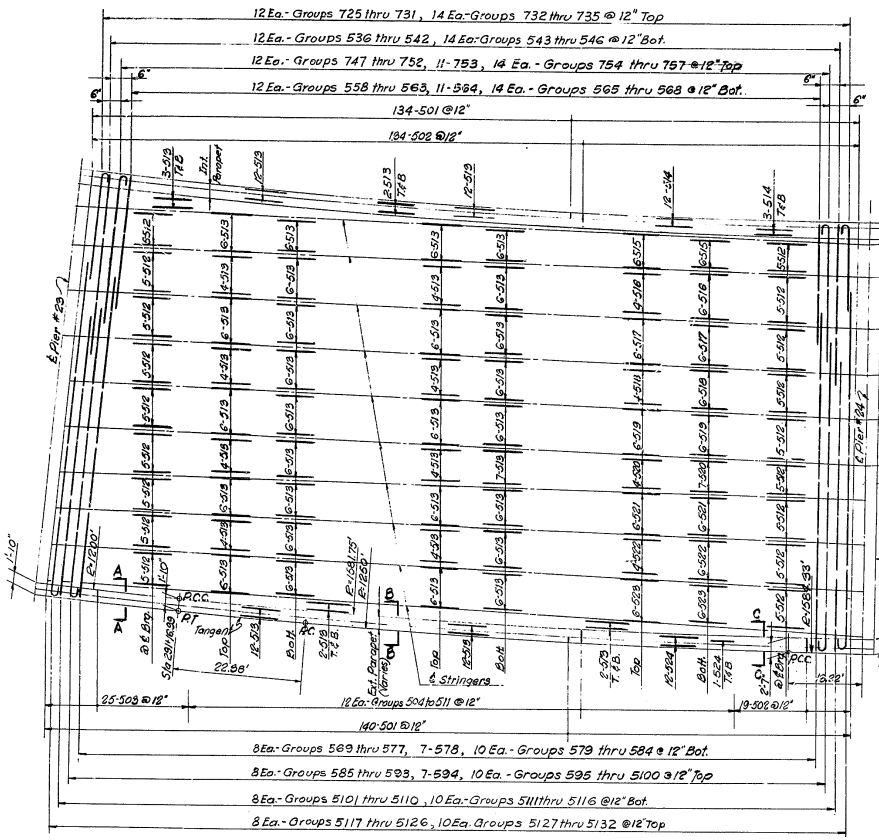
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

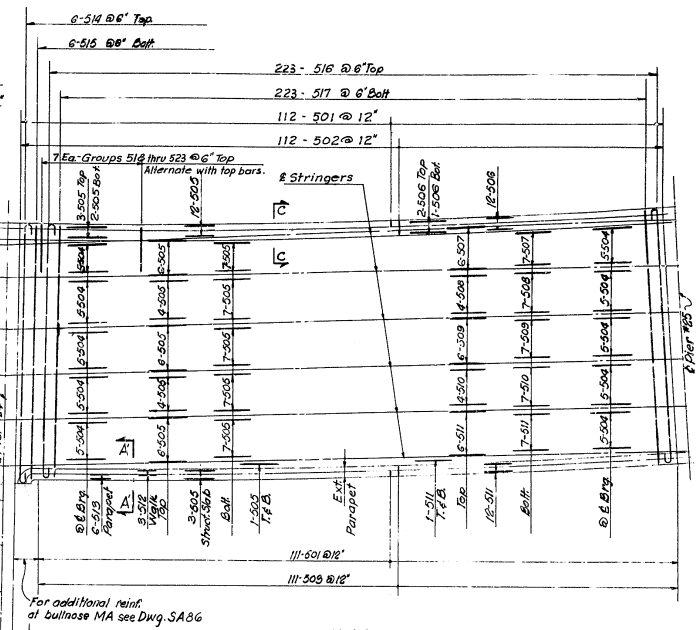
DWG. NO. SA78

COUNTY	CONTRACT	F.A.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	113	215

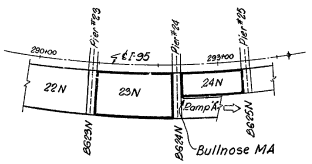
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



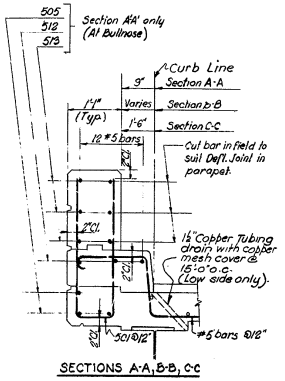
SLAB 23 N



SLAB 24 N



KEY PLAN



SECTIONS A-A, B-B, C-C

Note:
For additional Reinf. in Struct Slab see Placing Plans

NOTES:
For General Notes see Dwg. SA2
For Framing Plan see Dwg. SA54
For Typical Cross Section & reinf. details see Dwg. SA77
For additional reinf. details see Dwg. SA85

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

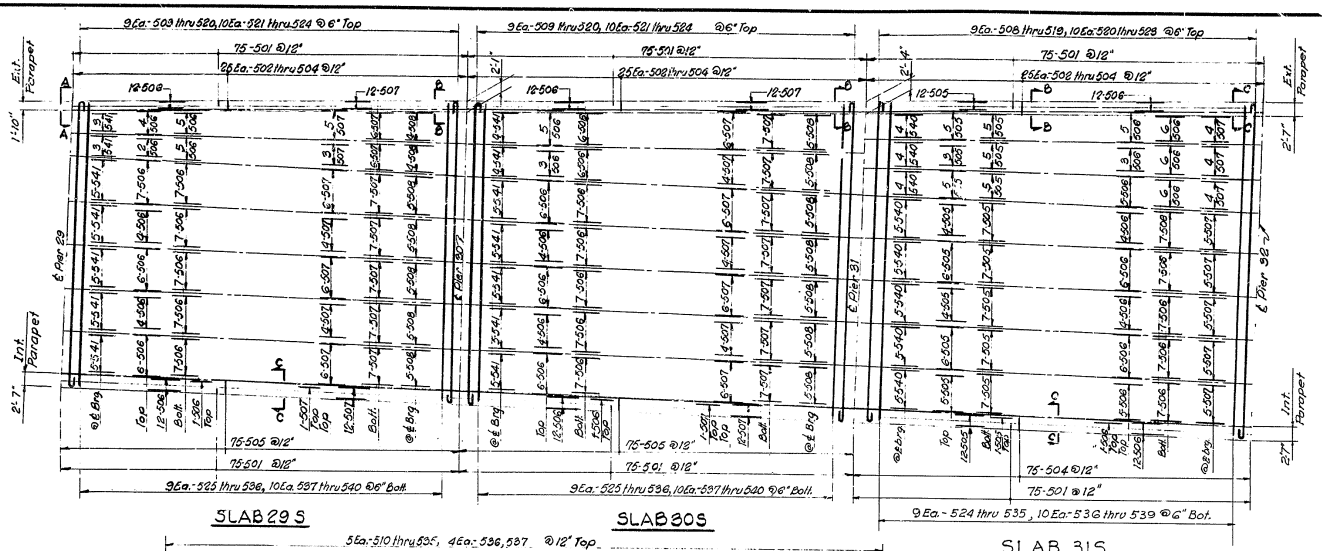
DECK REINFORCEMENT
SLABS 23N & 24N

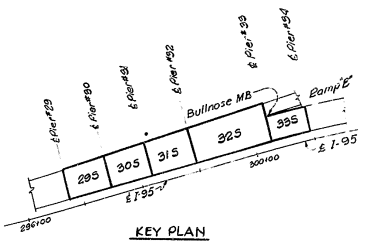
APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

SCALE: NO SCALE
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. SA79

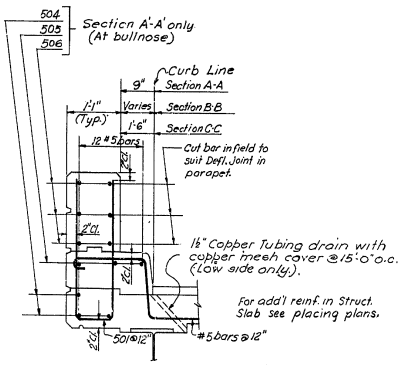
COUNTY	CONTRACT	F.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	114	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

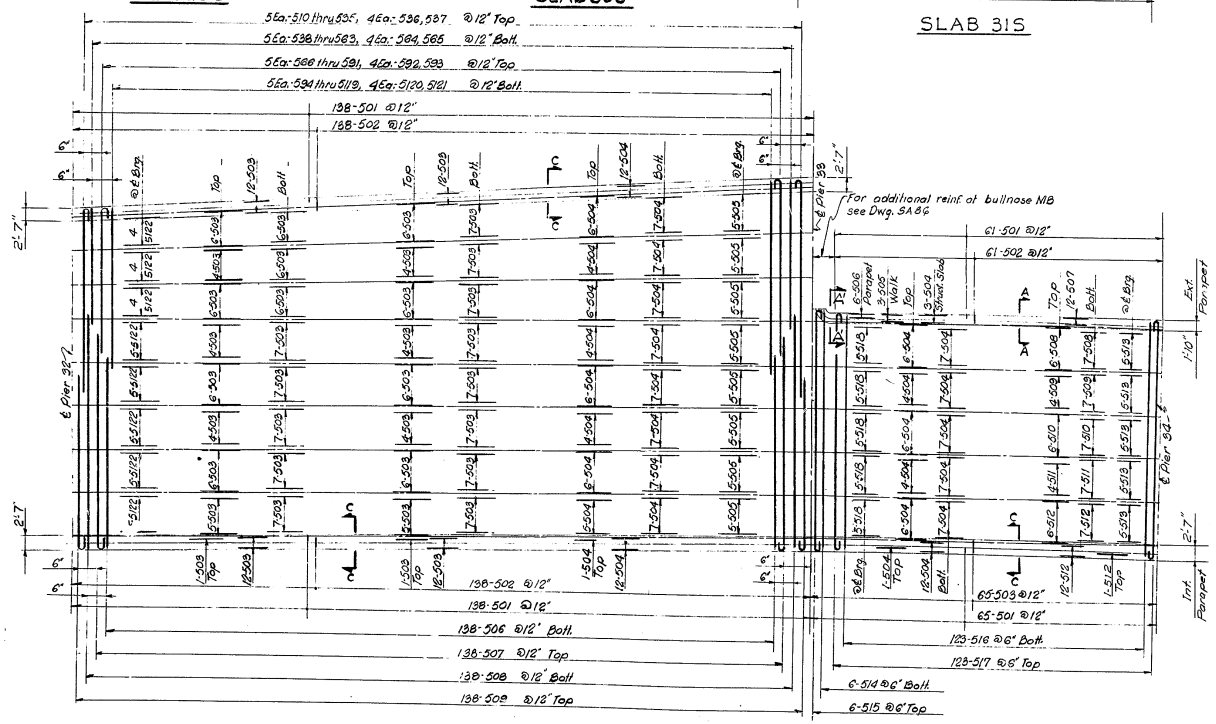




KEY PLAN



SECTIONS A-A, B-B, C-C



NOTES:
For General Notes see Dwg. SA2
For Framing Plans see Dwgs. SA55 & SA56
For additional notes see Dwg. SA77
For details of joints and misc. reinf. see Dwg SA85

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
SLABS 29S THRU 33S

APPROVED BY: W. Lewis R. Pearson Jr. 4-16-64
BRIDGE ENGINEER — DATE

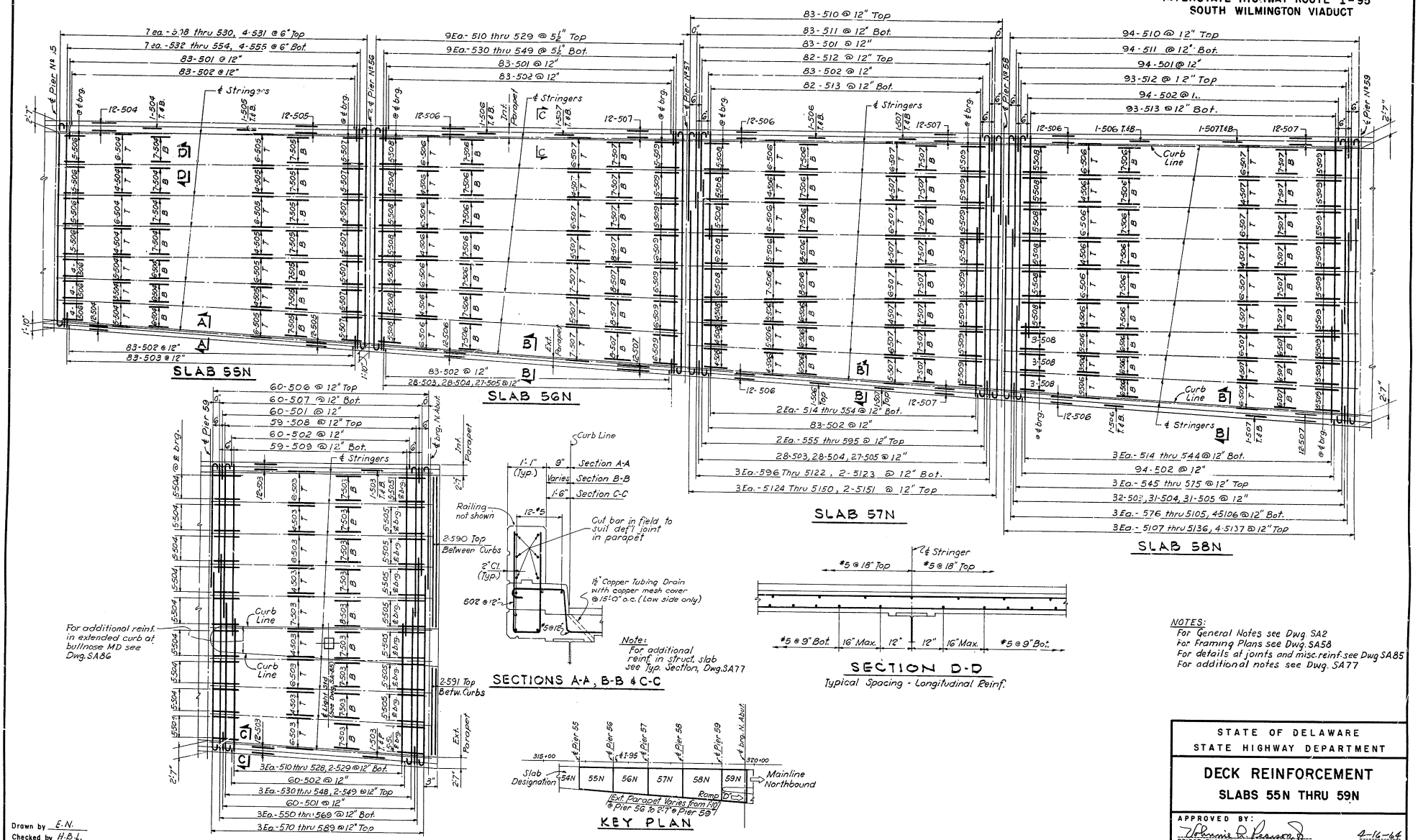
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA80

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FIELD YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	115	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
For General Notes see Dwg. SA2
For Framing Plans see Dwg. SA58
For details at joints and misc. reinf. see Dwg. SA85
For additional notes see Dwg. SA77

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

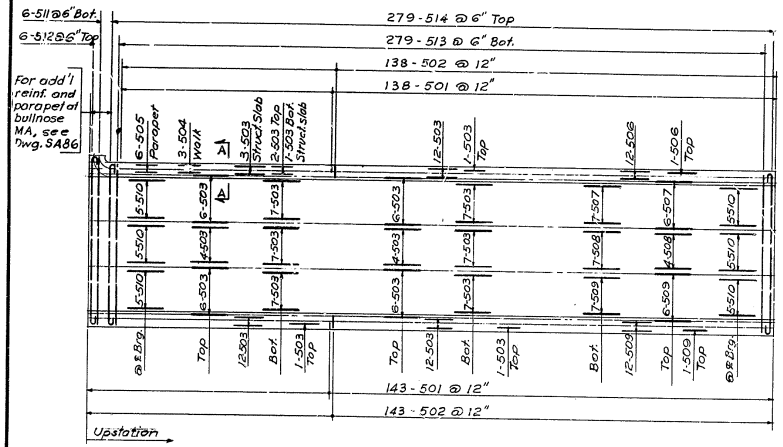
DECK REINFORCEMENT
SLABS 55N THRU 59N

APPROVED BY: Wohnnie D. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

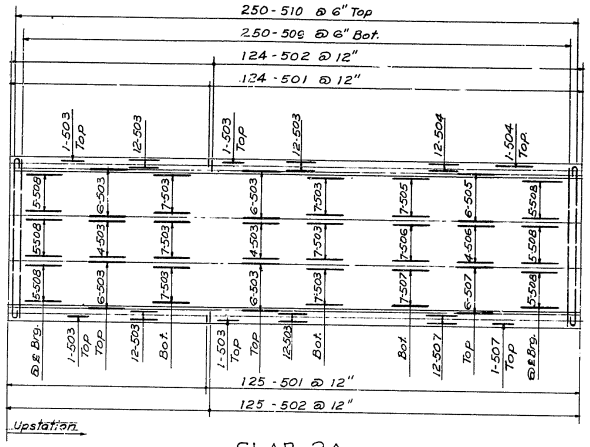
SCALE: NO SCALE
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA81

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	115	215

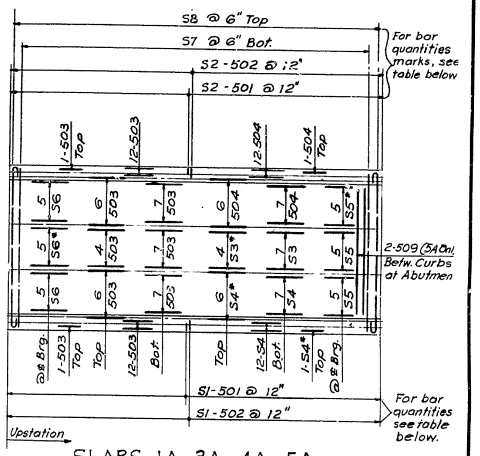
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



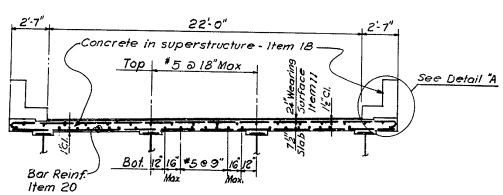
SLAB OA
No Scale



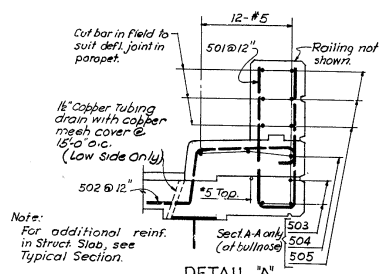
SLAB 2A
No Scale



SLABS 1A, 3A, 4A, 5A
*For bar marks, see table below



TYPICAL SECTION
SCALE ¼ IN. = 1 FT.
For Sections at exp. & fixed joints see Dwg. SA85

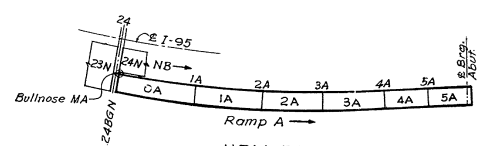


Note:
For additional reinf. in Struct. Slab, see Typical Section.

DETAIL "A"
SCALE ¾ IN. = 1 FT.

BAR / SLAB	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8
1A	118	116	505	506	507	507	234-508	234-509
3A	76	76	504	504	505	508	151-506	151-507
4A	75	75	504	504	505	508	148-506	148-507
5A	77	77	504	504	505	506	153-507	153-508

NOTES
For General Notes see Dwg. SA2
Slabs are designated by the marks shown on the Key Plan.
All bars are to have their slab designation as the prefix to the bar mark. Bar 501 in slab 2A will have the bar mark 2A501.
For details at joints and miscellaneous reinf. see Dwg SA85
For Framing Plan see Dwgs. SA54 & SA55
For parapet and railing details see Dwg. SA87



KEY PLAN
No Scale

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

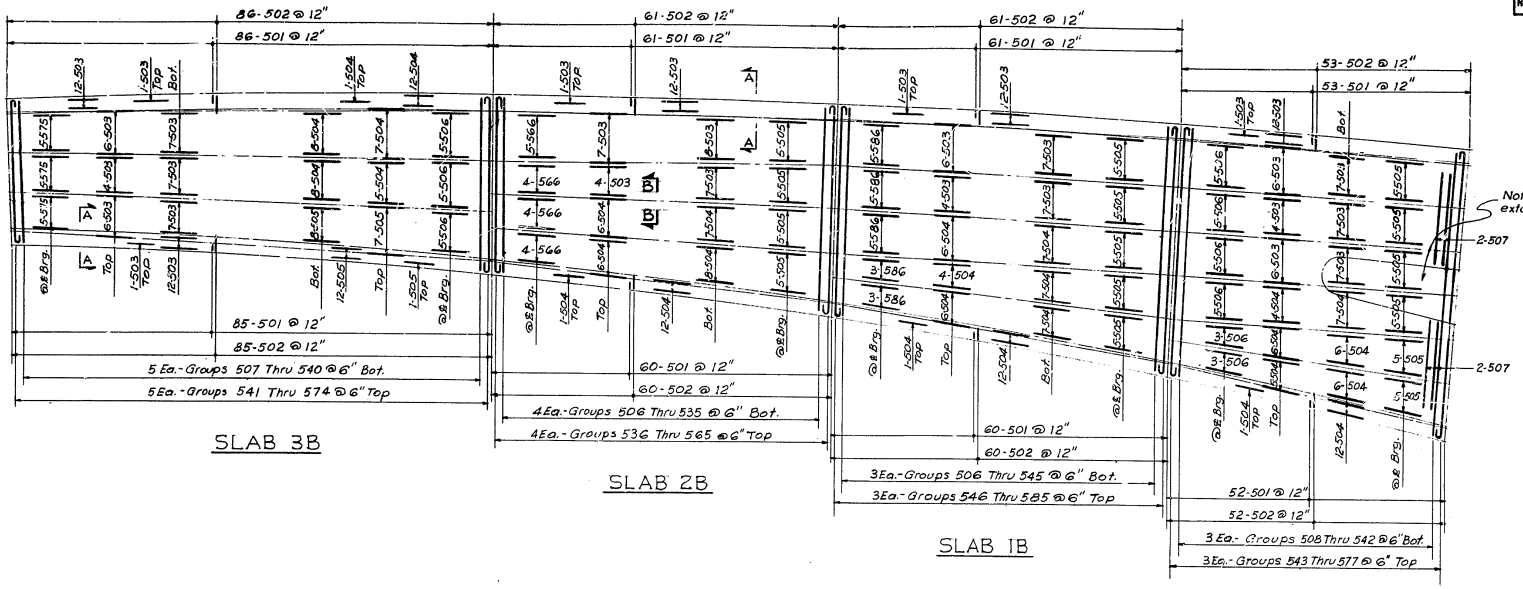
DECK REINFORCEMENT
RAMP A
SLABS OA THRU 5A

APPROVED BY: Wilmie R. Pearson Jr.
BRIDGE ENGINEER — DATE 4-16-64

SCALE: AS NOTED
DATE: APRIL 1, 1964
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. SA82

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	Fed. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-[illegible]-2(12)	'64	117	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

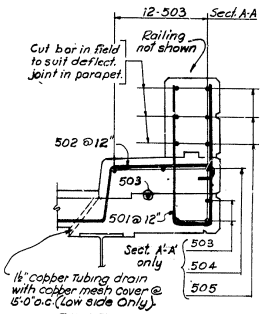


SLAB 3B

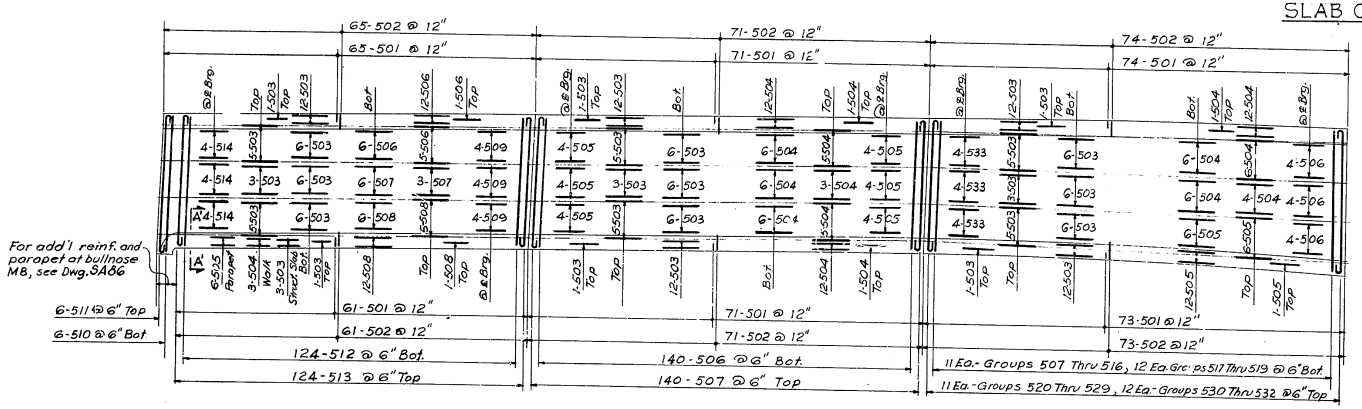
SLAB 2B

SLAB 1B

SLAB OB



SECTION A-A
SECTION A-A (at bullnose)



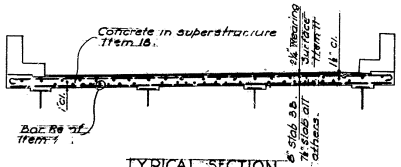
SLAB 6B

SLAB 5B

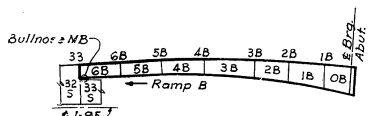
SLAB 4B

NOTES:

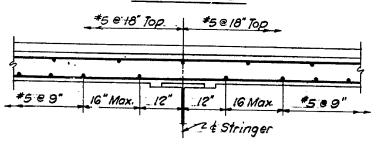
For General Notes, see Dwg. SA2
For Framing Plan, see Dwg. SA56
For additional notes, see Dwg. SA82



TYPICAL SECTION
SCALE ¼ IN = 1 FT.



KEY PLAN



SECTION B-B
Typical Spacing - Long. Reinf.

Drawn by E.N.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
RAMP B
SLABS OB THRU 6B

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

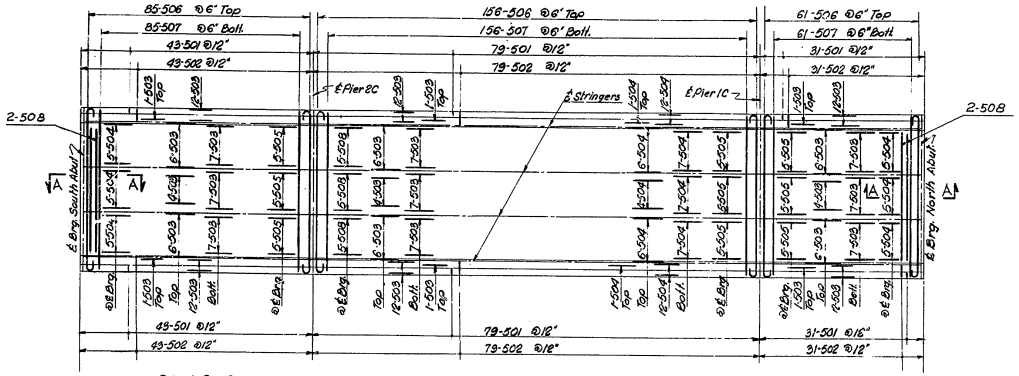
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

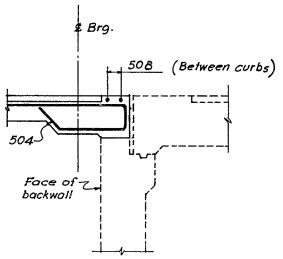
DWG. NO. SA83

COUNTY	CONTRACT	F.H.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	118	215

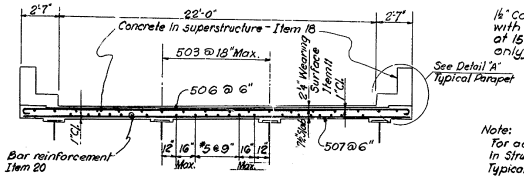
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



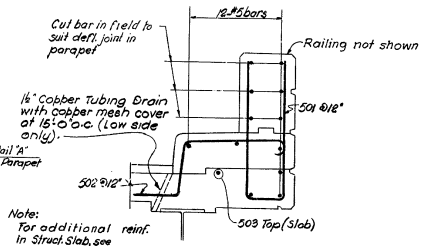
SLAB 2C | SLAB 1C (NO SCALE) | SLAB 0C



SECTION A-A
SCALE: ½ IN. = 1 FT.
For additional reinf. in struct. slab, see Typical Section.



TYPICAL SECTION
SCALE ¼ IN. = 1 FT.
For Sections at exp. & fixed joints See Dwg. No.



DETAIL "A"
SCALE ¾ IN. = 1 FT.

Notes:
For general notes, see Dwg. SA2
Slabs are designated by the marks shown on the Key Plan, see Dwg. SA77
All bars are to have their slab designation as the prefix to the bar mark. Bar 501 in slab 2C will have the bar mark 2C501.
For details of joints and misc. reinf., see Dwg. SA85
For framing plan, see Dwg. SA57
For details of parapet and railing see Dwg. SA87

Drawn by EN
Checked by HBL

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT
RAMP C
SLABS 0C THRU 2C

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

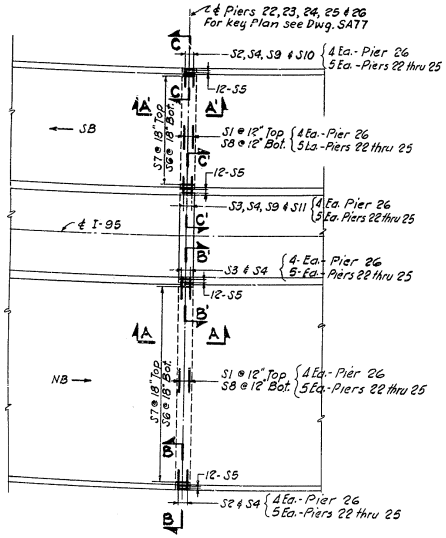
SCALE: AS NOTED | DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA84

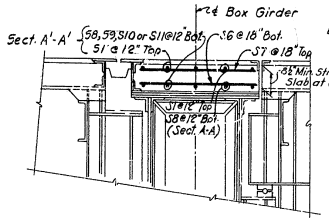
COUNTY	CONTRACT	F.A.P. OR S.R. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	119	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



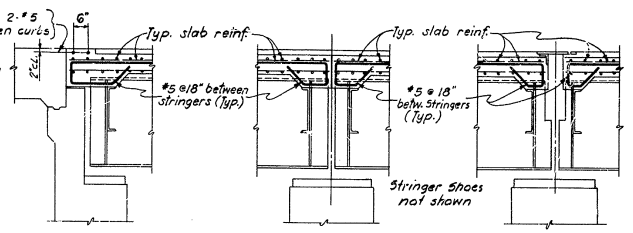
REINFORCEMENT FOR DECK SLABS OVER BOX GIRDERS

SCALE: NONE



SECTION A-A
SECTION A'-A'

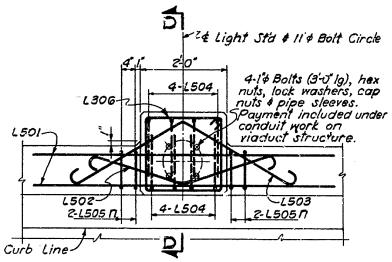
SCALE: 1/2 IN. = 1 FT.



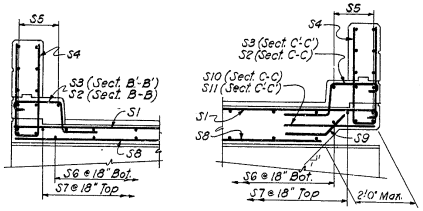
AT ABUTMENT | AT FIXED JOINT | AT EXPANSION JOINT

REINFORCEMENT BETWEEN STRINGERS AT ℄ BEARING

SCALE: 1/2 IN. = 1 FT.



PLAN - LIGHT STANDARD PEDESTAL ✓

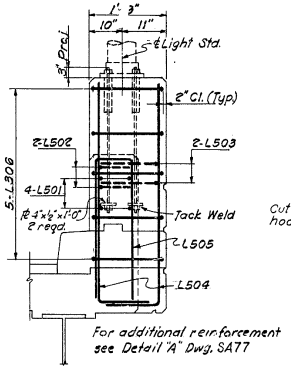


SECTION B-B
SECTION B'-B' ✓

SCALE: 1/2 IN. = 1 FT.

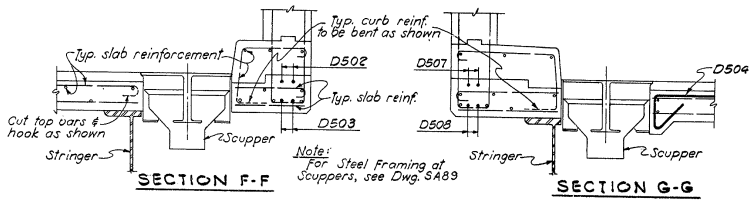
SECTION C-C
SECTION C'-C'

SCALE: 1/2 IN. = 1 FT.



SECTION D-D ✓

SCALE: 3/8 IN. = 1 FT.

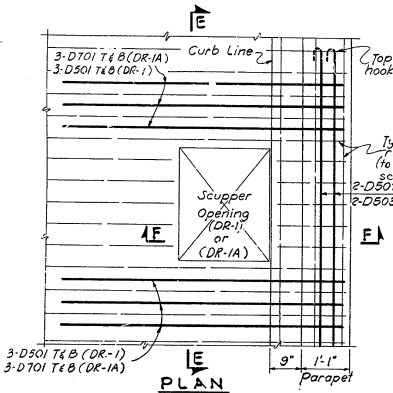


SECTION F-F

SECTION G-G

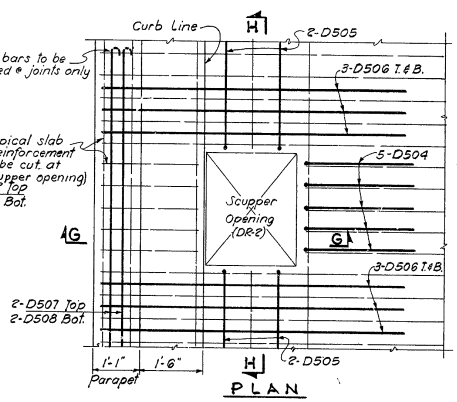
TYPICAL REINFORCEMENT AT SCUPPERS

SCALE: 3/8 IN. = 1 FT.

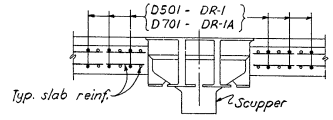


E PLAN

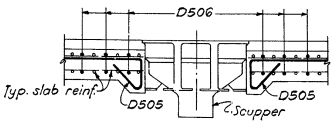
DR-1A (2-Req'd) adjacent to Stringer 23N-1



H PLAN



SECTION E-E



SECTION H-H

NOTES

For General Notes see Dwg. SA2
For Typical Cross Section, Details, Key Plan and additional notes see Dwg. SA77
All longitudinal bars, top and bottom, are to have their laps staggered. Stagger splices by shifting the longer bar from one end to the opposite end in adjacent lines of bars.
For location of scuppers see Framing Plans.
For location of Light Standards see Dwgs. E1 thru E4

Drawn by S.J.V
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DECK REINFORCEMENT DETAILS

APPROVED BY:
BRIDGE ENGINEER
4-14-64
DATE

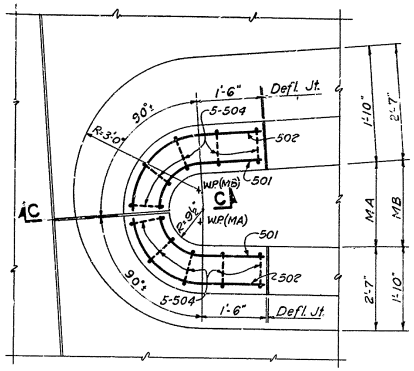
SCALE: AS NOTED
DATE: APRIL 1, 1964

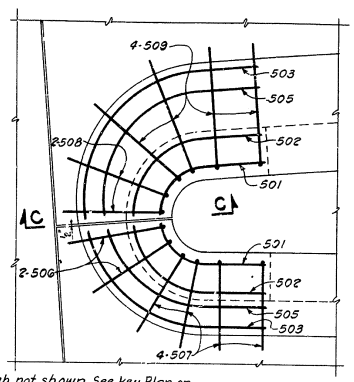
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA85

COUNTY	CONTRACT	F.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	120	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

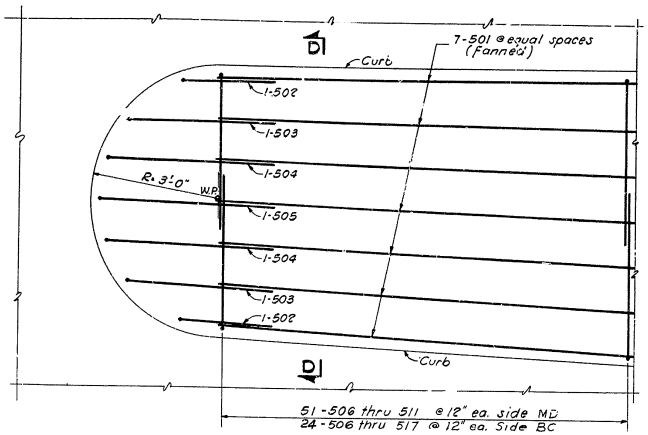




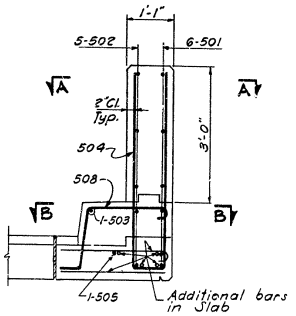
Additional reinf. in Deck Slab not shown. See key Plan on Dwg. SA77 for adjacent Deck Slabs.

SECTION A-A **SECTION B-B**

DETAIL AT BULLNOSES MA & MB

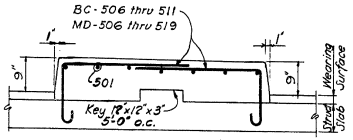


EXTENDED CURB AT BULLNOSES MD & BC



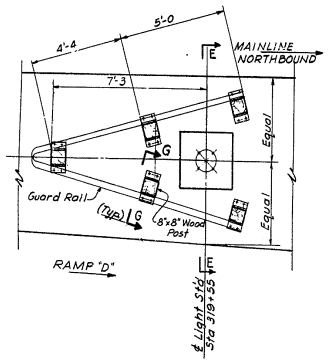
SECTION C-C

Details of joint at deck slab and parapet are similar to those for details at fixed joint on Dwg. S476

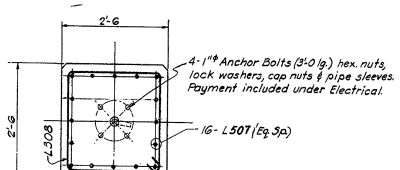


Additional reinf. in Deck Slab not shown.

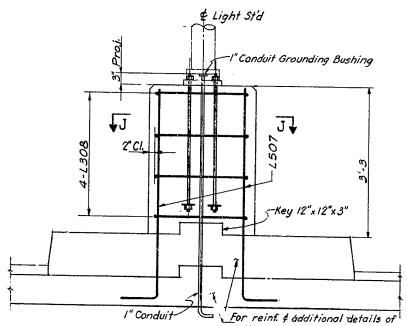
SECTION D-D



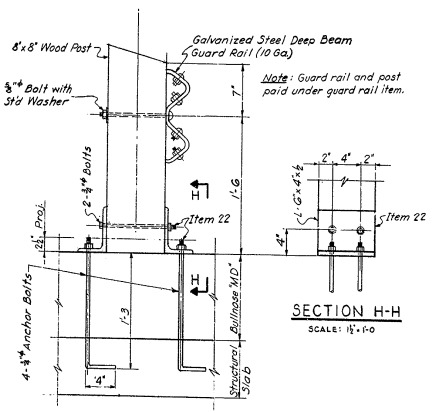
PLAN
SCALE: 3/8" = 1'-0



SECTION J-J
SCALE: 3/4" = 1'-0



SECTION E-E
SCALE: 3/4" = 1'-0



SECTION G-G
SCALE: 1½" = 1'-0

SECTION H-H
SCALE: 1½" = 1'-0

NOTES
For General Notes see Dwg. SA2
For key Plan & Typical Cross Section see Dwg. SA77
In the bar list for Bullnoses, all bars are to have their bullnose mark as the prefix to the bar mark.
For parapet and railing details see Dwg. SA87

Drawn by S.L.V
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BULLNOSE DETAILS

APPROVED BY: [signature] BRIDGE ENGINEER
4-16-64 DATE

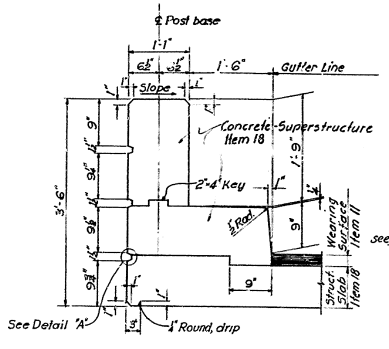
SCALE: 3/4 IN. = 1 FT
DATE: APRIL 1, 1964

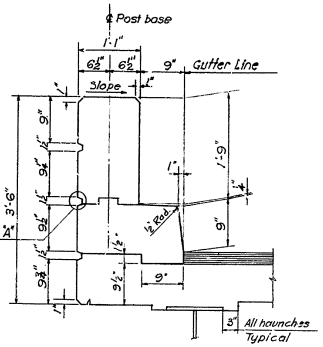
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA86

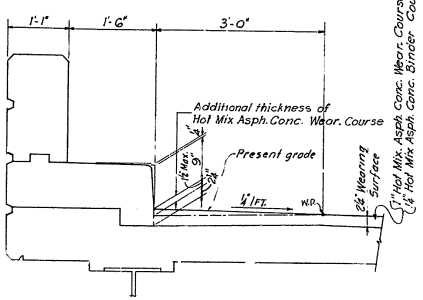
COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	121	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

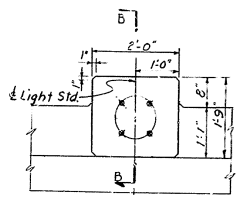




TYPICAL PARAPET AND CURB SECTIONS ✓
SCALE: 1 IN. = 1 FT.

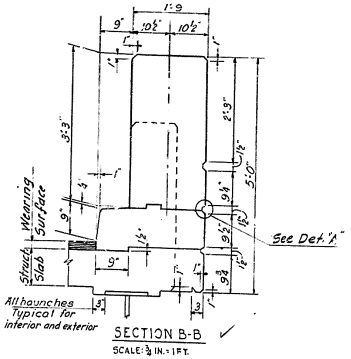


TANGENT SECTION ONLY
SCALE 1 IN. = 1 FT.

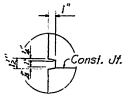


PLAN-LIGHT STANDARD PEDESTAL ✓
SCALE: ¾ IN. = 1 FT.

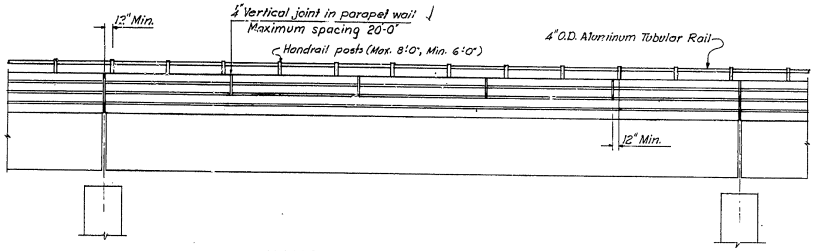
For details of anchor bolts and reinf. in pedestal, see Dwg SA-85
For Elect. Plan & Details, see Dwgs. E1 thru E5



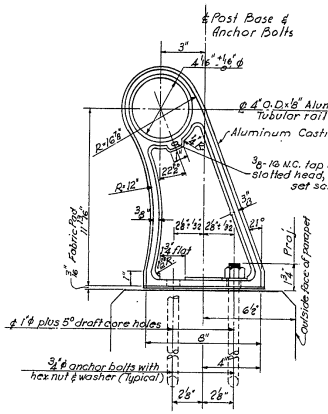
SECTION B-B ✓
SCALE: ¾ IN. = 1 FT.

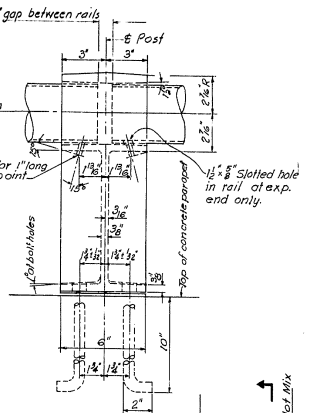


DETAIL "A"
NO SCALE



HANDRAIL POST ELEVATION
NO SCALE





RAILING DETAILS ✓
SCALE: 3 IN. = 1 FT.

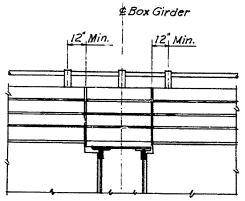
Note: Corner radii = ⅜" unless otherwise noted.
Fillets ⅜" unless otherwise noted.

RAILING NOTES

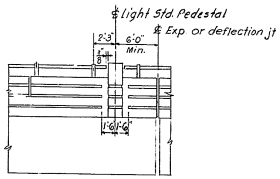
1) Railing to be continuous through a minimum of 2 panels and continuous through end posts.
2) Exposed ends of tubular rails to be closed with an aluminum plug welded in.
3) The finished aluminum alloy bolts, nuts and washers shall be given an anodic coating at least 0.0002 in. thick and a chromate seal.
4) All bolts & nuts shall be made of aluminum alloy as per A.S.T.M.-B211, Alloy 2024-T4 (Bolts) Alloy 6061-T6 (Nuts) All washers shall be made of aluminum alloy, A.S.T.M.-B209 Alclad 2024-T4.

RAILING ERECTION PROCEDURE

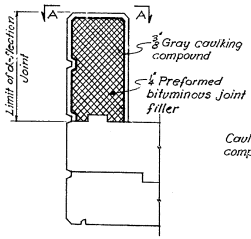
1) Anchor bolts to be set by template.
2) Post to be normal to grade and rail to be parallel to established grade.
3) Top of anchor bolts are to be peened after nut is tightened.



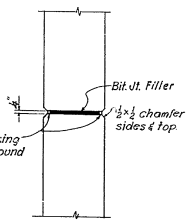
TYPICAL ARRANGEMENT OF RAILING AT BOX GIRDER SIMILAR FOR PLATE GIRDER
SCALE: ½ IN. = 1 FT.



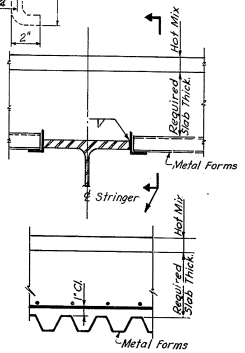
TYPICAL ARRANGEMENT OF RAILING AT LIGHT STANDARD PEDESTAL



SECTION AT DEFLECTION JOINT
SCALE: 1 IN. = 1 FT.



SECTION A-A
SCALE: 1 IN. = 1 FT.



ARRANGEMENT OF METAL FORMS FOR SLAB SUPPORT
SCALE: 1½" = 1'-0"

Drawn by S.W.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PARAPET AND RAILING DETAILS

APPROVED BY: Lorraine D. Pearson
BRIDGE ENGINEER
4-16-64
DATE

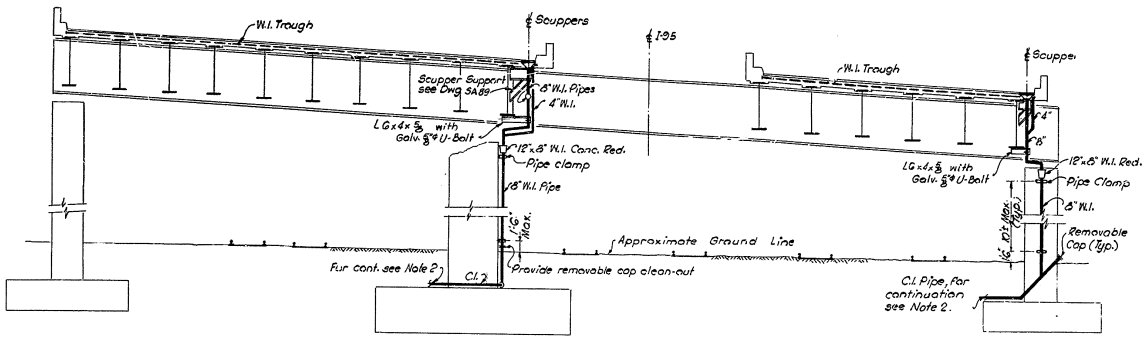
SCALE: AS NOTED
DATE: APRIL 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

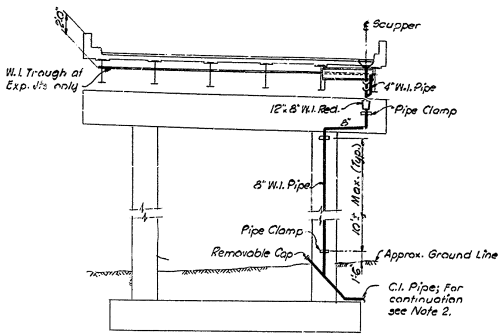
DWG. NO. SA87

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	122	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

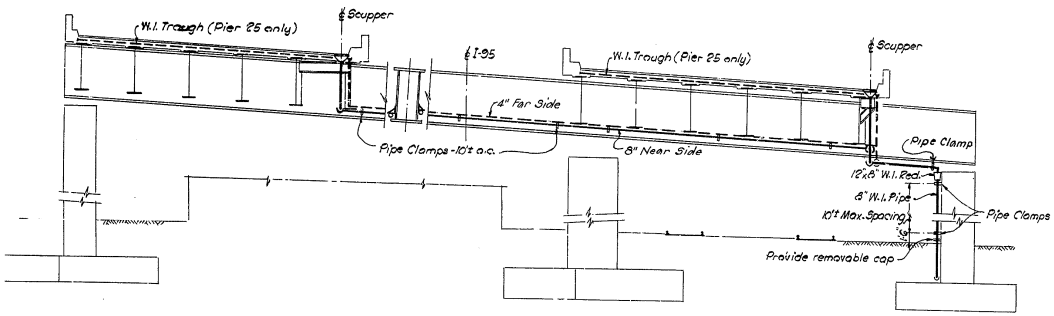


AT PIER 23

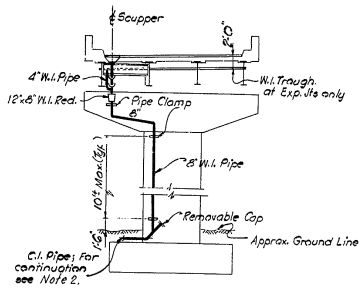


AT RIGID FRAMES

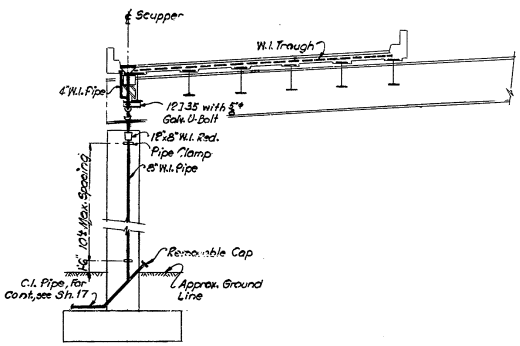
Note: Two column rigid frame shown; Three column rigid frame similar.



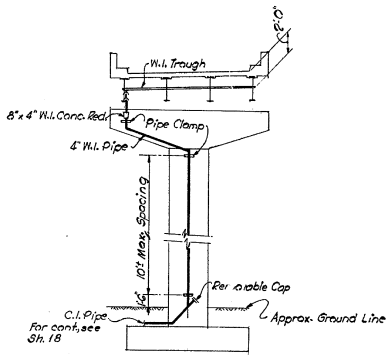
AT PIER 25 AS SHOWN
AT PIER 24 SIMILAR



AT RAMPS



AT PIER 26



AT PIER 6B

NOTES:

1. Work this sheet with Dwgs SA89 & SA90
2. Run-outs to connect into Wyes and Laterals on Mains. See Highway Plans, Sh. Nos. 17, 18, 19 & 20
3. For General Notes, see Dwg SA2
4. For Pier Elevations, see SA11 thru SA23
5. All Piping to be Schedule 40 wall thickness.
6. All Fittings to be Std. Wt., Galv.
7. All metal surfaces in contact with concrete to be given an extra heavy coat of "Bitumastic"
8. Trough Supports to be spaced 10'± o.c.

Drawn by S.W.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DRAINAGE
TYPICAL SCHEMATICS

APPROVED BY: [signature] BRIDGE ENGINEER — 4-16-64 DATE

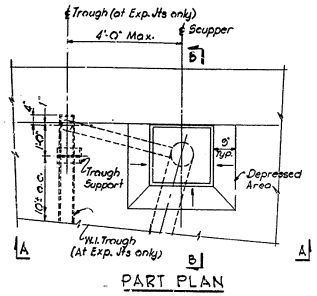
SCALE: NO SCALE
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

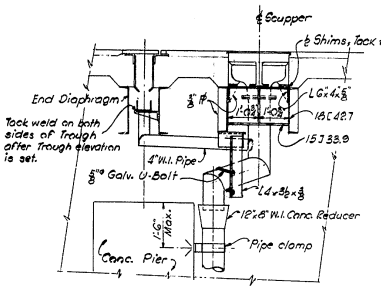
DWG. NO. SA88

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	123	215

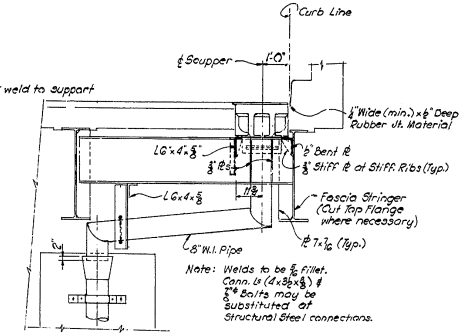
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PART PLAN

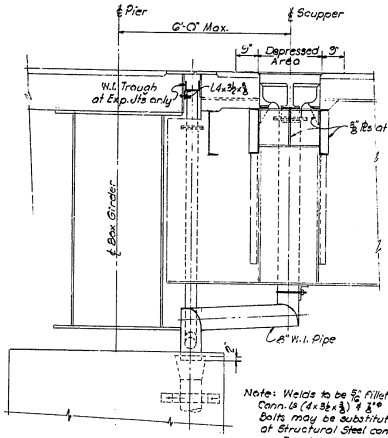


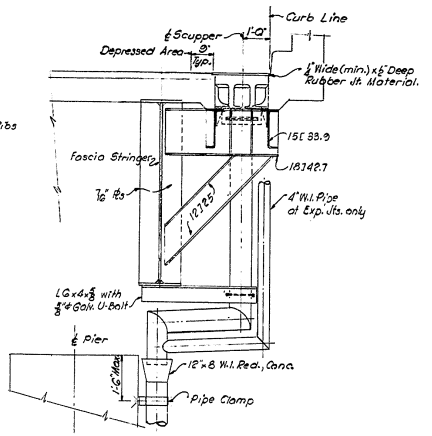
ELEVATION A-A



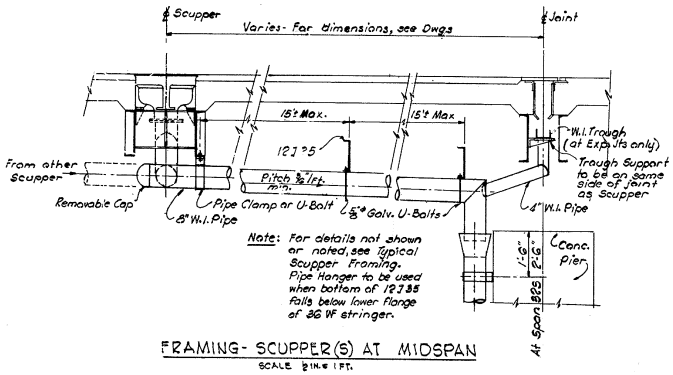
SECTION B-B

TYPICAL SCUPPER FRAMING
SCALE ½IN.=1FT.





FRAMING AT BOX GIRDERS
SCALE ½IN.=1FT.



FRAMING- SCUPPER(S) AT MIDSPAN
SCALE ½IN.=1FT.

Drawn by S.W.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DRAINAGE

DETAILS - SHEET 1 OF 2

APPROVED BY: _____ BRIDGE ENGINEER — DATE: 4-16-64

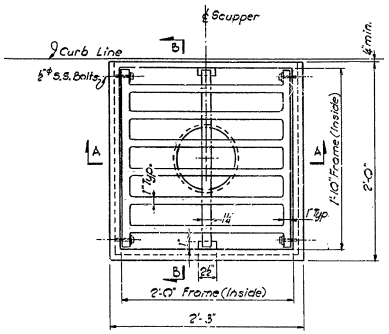
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA89

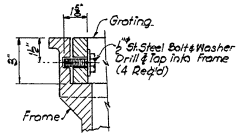
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	124	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

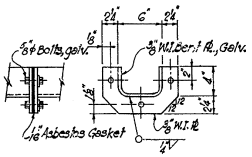


PLAN

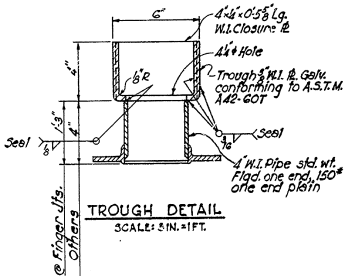
NOTES:-
1. Scupper Frame to be Cast Iron, galv, conforming to A.S.T.M. Designation A-48-GOT class no.30, see Specs.
2. All intersections (except for grating rest) to have ½" min. radius Fillet.
3. Grind corners of grating to clear Fillets.
4. Gratings to be Cast Steel, galv, conforming to A.S.T.M. A-27-GO, Grade GS-35.



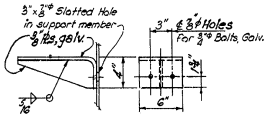
DETAIL A
SCALE 3 IN. = 1 FT.



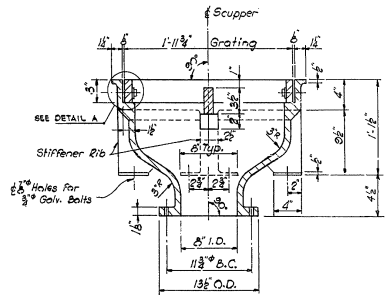
TROUGH SPLICE
SCALE: 1½ IN. = 1 FT.



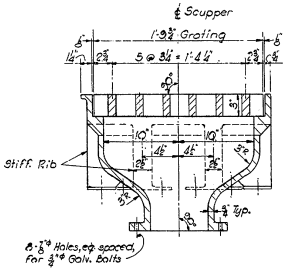
TROUGH DETAIL
SCALE: 3 IN. = 1 FT.



TROUGH SUPPORT (ITEM 22)
SCALE: 1½ IN. = 1 FT.

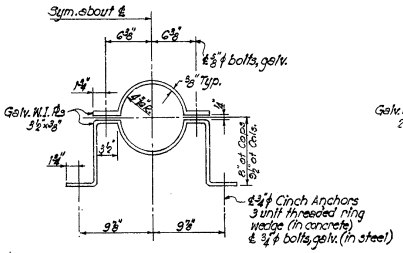


SECTION A-A

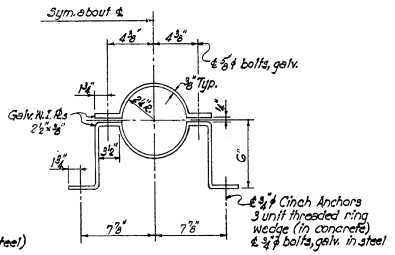


SECTION B-B

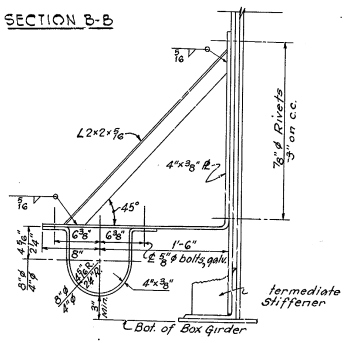
SCUPPER DETAILS
SCALE 1½ IN. = 1 FT.



PIPE CLAMP
FOR 8" PIPE
SCALE: 1½ IN. = 1 FT.



PIPE CLAMP
FOR 4" PIPE
SCALE: 3 IN. = 1 FT.



PIPE CLAMP TO BG 24 & BG 25
Scale: 1½ IN. = 1 FT.

Drawn by J.W.
Checked by J.A.R.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

DRAINAGE

DETAILS – SHEET 2 OF 2

APPROVED BY: Dennis D. Heasley Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: AS NOTED
DATE: APRIL, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA90

COUNTY	CONTRACT	S.D.H. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	125	215

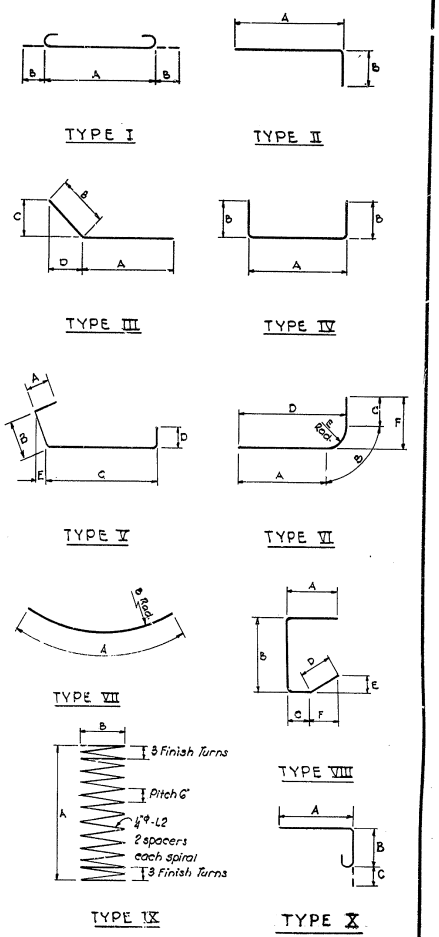
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

NORTHBOUND ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	NA 500	5	80	5'-6	Str.								Footing
	NA 501		80	6'-8	I	5'-6	7						Footing
	NA 502		24	10'-6	Str.								Footing
	NA 503		24	40'-3									Footing
	NA 504		140	3'-2									Dowels
	NA 505		7	5'-6									Pedestals
	NA 506		8	5'-4									
	NA 507		8	5'-10									
	NA 508		8	6'-0									
	NA 509		8	6'-2									
	NA 510		8	6'-4									
	NA 511		8	6'-6									
	NA 512		8	6'-7									
	NA 513		8	6'-9									
	NA 514		7	6'-10	Str.								
	NA 515		7	15'-10	V	2'-1	5'-8	3'-2	3'-2	0			
	NA 516		52	9'-6	IV	3'-4	3'-2						
	NA 517		6	15'-11	V	2'-1	5'-8	5'-3	3'-2	5			Pedestals
	NA 518		15	34'-10	Str.								Backwall
	NA 519		15	40'-1									
	NA 520		10	7'-11									
	NA 521		10	7'-9									
	NA 522		10	7'-7									
	NA 523		10	7'-4									
	NA 524		9	7'-2									
	NA 525		9	7'-0									
	NA 526		9	6'-10									
	NA 527		9	6'-8									
	NA 528		8	6'-2									
	NA 529		8	6'-6									
	NA 530		8	6'-8									
	NA 531		8	6'-10									
	NA 532		9	6'-11									
	NA 533		9	7'-1									
	NA 534		9	7'-3									
	NA 535		9	7'-5									
	NA 536		20	8'-4									
	NA 537		8	3'-8									
	NA 538		8	5'-11									
	NA 539		6	4'-6 to 8'-0									2x3 Δ = 1'-9
	NA 540		6	6'-9 to 10'-3									2x3 Δ = 1'-9
	NA 541		6	8'-1	Str.								
	NA 542		10	7'-8	II	5'-8	8'-1						
	NA 543		10	5'-8	Str.								
	NA 544		2	5'-11	IV	9	5'-8						
	NA 545		8	8'-1 to 11'-7	IV	2'-8	5'-0 to 6'-8						2x4 Δ_B = 7"
	NA 546		8	6'-0	Str.								
	NA 547		8	10'-6	VI	7'-5	2'-4	9	8'-11	1'-6	2'-3		
	NA 548		80	4'-1	II	2'-2	2'-0						
	NA 549		6	4'-5	II	3'-5	1'-1						
	NA 550		8	2'-9	IV	9	1'-1						
	NA 551		6	7'-7	IV	9	3'-6						
	NA 552		8	10'-5	IV	9	4'-11						
	NA 553		10	8'-7 to 9'-11	IV	9	4'-0 to 4'-8						2x5 Δ_A = 2"
	NA 554		4	3'-6	III	3'-6	6'-0						
	NA 555		4	2'-8	Str.								
	NA 556		4	6'-0									
	NA 557		4	8'-9									
	NA 558		4	9'-2									
	NA 559		2	8'-10									
	NA 560		4	9'-3	Str.								
	NA 561		80	3'-11	III	1'-11	1'-1						Add. Ped.
	NA 562		30	5'-4	IV	3'-4	1'-1						Add. Ped.
	NA 563		20	8'-0	Str.								
	NA 564		24	50'-0	Str.								
	NA 565	5	24	36'-0 to 37'-6	Str.								Δ = 1"
	NA 666	6	174	20'-10"	I	18'-6	8						
	NA 467	4	87	5'-5	VIII	1'-8	1'-7	6	1'-10	1'-4	1'-3		
	NA 568	5	87	2'-2	Str.								
	NA 569	5	9	19'-6	Str.								
	NA510 thru 518	5	40	6'-7 to 7'-1	X	4'-8 to 5'-1	1'-8	7					4x10 Δ_A 2"
L1	NA 774	7	222	18'-0	Str.								6 per pile
L2	NA 275	6/8	37		IX	9'-8	7/8						1 per pile

SOUTHBOUND ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	SA 500	5	48	5'-6	Str.								Footing
	SA 501		48	6'-8	I	5'-6	7						Footing
	SA 502		24	10'-6	Str.								Footing
	SA 503		12	47'-6									Footing
	SA 504		91	3'-2									Dowels
	SA 505		6	5'-2									Pedestals
	SA 506		8	5'-4									
	SA 507		8	5'-6									
	SA 508		8	5'-7									
	SA 509		8	5'-9									
	SA 510		7	5'-10	Str.								
	SA 511		5	15'-1	V	2'-1	5'-8	4'-5	3'-2	0			
	SA 512		58	9'-6	IV	3'-4	3'-2						
	SA 518		6	15'-10	V	2'-1	5'-8	5'-2	3'-2	0			Pedestals
	SA 514		15	23'-6	Str.								Backwall
	SA 515		15	19'-4									
	SA 516		8	12'-4									
	SA 517		8	6'-6									
	SA 518		7	6'-8									
	SA 519		10	6'-10									
	SA 520		10	7'-0									
	SA 521		9	6'-6									
	SA 522		9	6'-4									
	SA 523		7	6'-2									
	SA 524		7	6'-0									
	SA 525		7	5'-10									
	SA 526		20	7'-8									Backwall
	SA 527		7	3'-8									Cheekwall
	SA 528		7	5'-11									
	SA 529		6	4'-6 to 8'-0									2x3 Δ = 1'-9
	SA 530		6	6'-9 to 10'-3									2x3 Δ = 1'-9
	SA 531		6	8'-1	Str.								
	SA 532		4	10'-1	VI	8'-2	1'-2	9	8'-11	9	1'-6		
	SA 533		10	7'-9	II	5'-8	2'-1						
	SA 534		10	5'-8	Str.								
	SA 535		4	7'-4 to 10'-10	IV	1'-6	5'-0 to 6'-8						Δ_B = 7"
	SA 536		1	5'-11	IV	9	2'-8						
	SA 537		7	6'-0	Str.								
	SA 538		8	2'-9	IV	9	1'-1						
	SA 539		8	3'-8	II	2'-8	1'-1						
	SA 540		10	3'-2	II	1'-6	1'-8						
	SA 541		10	8'-7 to 9'-11	IV	9	4'-0 to 4'-8						2x5 Δ_A 2"
	SA 542		8	10'-5	IV	9	4'-11						
	SA 543		6	7'-7	III	9	3'-6						
	SA 544		4	3'-6	VIII	3'-6	6'-0						
	SA 545		4	2'-8	Str.								
	SA 546		4	6'-9									
	SA 547		4	6'-0									
	SA 548		4	9'-2									
	SA 549		4	9'-3	Str.								
	SA 550		18	5'-4	IV	3'-4	1'-1						Add. Ped.
	SA 551		30	8'-11	IV	1'-11	1'-1						Add. Ped.
	SA 552		20	6'-4	Str.								
	SA 553		1	8'-10	Str.								
	SA 554		4	10'-6	VI	7'-5	2'-4	9	8'-11	1'-6	2'-3		
	SA 555		10	4'-1	II	2'-2	2'-0						
	SA 556		3	4'-5	II	3'-5	1'-1						
	SA 557		4	8'-1 to 11'-7	IV	2'-8	5'-0 to 6'-8						Δ_B = 7"
	SA 558		38	2'-2	Str.								
	SA 559	5	24	37'-5	Str.								
	SA 660	6	76	20'-10	I	18'-6	8						
	SA 461	4	38	5'-6	VIII	1'-8	1'-7	6	1'-10	1'-4	1'-3		
L1	SA 762	7	150	12'-0	Str.								6 per pile
L2	SA 868	6/8	25		IX	9'-8	7/8						1 per pile



Note: All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

Made by S.W.
Traced by S.W.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
ABUTMENT
NORTHBOUND & SOUTHBOUND

APPROVED BY: Johnnie D. Pearsey Jr. 4-14-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA91

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	126	215

INTERSTATE HIGHWAY ROUTE I-93
SOUTH WILMINGTON VIADUCT

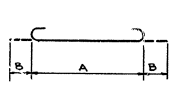
RAMP A ABUTMENTS

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	RA500	5	31	5'-6	Str.								Footing
	501		31	6'-8	I	5'-6	7						Footing
	502		24	10'-6	Str.								Footing
	503		12	32'-6									Footing
	504		69	3'-2									Dowels
	505		7	5'-0									Pedestal
	506		8	5'-1									
	507		8	5'-3									
	508		7	5'-5	Str.								
	509		11	15'-9	V	2'-1	5'-8	5'-1	3'-2				
	510		11	9'-6	III	3'-4	3'-2						
	511		20	3'-11	II	1'-11	1'-1						
	512		12	5'-6	IV	3'-6	1'-1						Pedestal
	513		8	6'-3	Str.								Backwall
	514		8	6'-1									
	515		7	5'-11									
	516		10	6'-5									
	517		9	6'-7									
	518		9	6'-9									
	519		17	27'-0									Backwall
	520		7	7'-7									Cheekwall
	521		7	7'-5									
	522		6	7'-3									
	523		6	3'-8									
	524		6	5'-11									
	525		7	8'-1									
	526		7	7'-11									
	527		6	7'-9									Cheekwall
	528		6	4'-6 to 8'-0									2x3 Δ = 1'-9"
	529		6	6'-9 to 10'-3									2x3 Δ = 1'-9"
	530		8	8'-1	Str.								
	531		10	10'-6	VI	7'-5	2'-4	9	8'-11	1'-6	2'-3		
	532		10	7'-8	II	5'-8	2'-1						
	533		10	5'-8	Str.								
	534		2	5'-11	IV	9	2'-8						
	535		8	8'-1 to 11'-7	III	2'-3	3'-0½						2x4 @ 7"
							4'-9						
	536		8	2'-9	IV	9	1'-1						
	537		6	4'-5	II	3'-5	1'-1						
	538		20	4'-1	II	2'-2	2'-0						
	539		4	9'-4	Str.								
	540		2	8'-10	Str.								
	541		6	7'-7	IV	9	3'-6						
	542		8	10'-5	IV	9	4'-11						
	543		10	8'-7 to 9'-11	III	9	4'-0½						2x5 Δ_B = 2
							4'-8						
	544		4	3'-6	VII	3'-6	6'-0						
	545		4	2'-8	Str.								
	546		4	6'-0	Str.								
	547		4	8'-9	Str.								
	548		4	9'-2	Str.								
	549	5	8	6'-0	Str.								
	650	6	44	20'-10	I	19'-6	8						
	451	4	23	5'-5	VIII	1'-8	1'-7	6	1'-10	1'-4	1'-3		
	552	5	23	2'-2	Str.								
	RA553	5	24	21'-8	Str.								
L1	RA754	7	114	12'-0	Str.								6 Per Pile
L2	RA255	4"ϕ	19		IX	9'-8	7½						1 Per Pile

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS

Note:
All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

TYPE I



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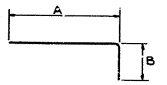

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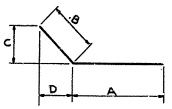

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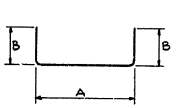
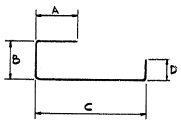
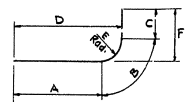


TYPE V



TYPE VI



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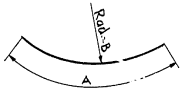

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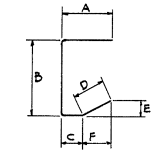
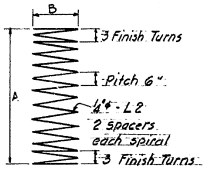


TYPE IX



Made by J.J.V.
Traced by J.R.D.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
RAMP A ABUTMENT

APPROVED BY: Dennis D. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA92

COUNTY	CONTRACT	R.R.X. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	127	215

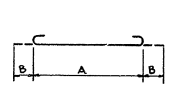
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

RAMP B ABUTMENT

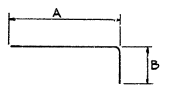
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	BC 500	5	54	5-6	STR.								
	BC 501	"	54	6-8	I	5-6	0-7						
	BC 502		24	10-6	STR.								
	BC 503		12	53-3	"								
	BC 504		102	3-2									
	BC 505		7	6-6									
	BC 506		8	6-9									
	BC 507		8	6-7									
	BC 508		8	6-5									
	BC 509		8	6-3									
	BC 510		8	6-1									
	BC 511		7	5-4	STR.								
	BC 512		6	15-9	V	2-1	5-8	5-0	3-2	0-10			
	BC 513		31	9-6	IV	3-4	3-2						
	BC 514		7	15-9	V	2-1	5-6	5-2	3-2	0			
	BC 515		35	8-11	III	1-11	1-1						
	BC 516		21	5-4	IV	3-4	1-1						
	BC 517		5	7-6	STR.								
	BC 518		6	7-4	"								
	BC 519		6	7-2									
	BC 520		6	7-0									
	BC 521		9	6-9									
	BC 522		9	6-6									
	BC 523		9	6-4									
	BC 524		6	5-11									
	BC 525		6	6-1									
	BC 526		6	6-3									
	BC 527		6	6-5									
	BC 528		5	6-7									
	BC 529		5	6-8									
	BC 530		5	6-10									
	BC 531		5	6-11									
	BC 532		17	23-4									
	BC 533		15	26-2									
	BC 534		7	8-11									
	BC 535		7	8-9									
	BC 536		6	8-7									
	BC 537		6	4-6 To 8-0									2×3, A=1-9
	BC 538		6	6-9 To 10-3									2×3, A=1-9
	BC 539	"	8	8-0	STR								
	BC 540	5	5	10-6	VI	7-5	2-4	0-9	8-11	1-6	2-3		

RAMP B ABUTMENT Cont.

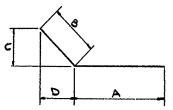
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	BC 541	5	9	7-8	II	5-8	2-1						
	BC 542	"	9	5-8	STR.								
	BC 543		2	5-11	IV	0-9	2-8						
	BC 544		8	8-1 To 11-7	IV	2-3	3-9 To 4-5						2×4, A_B=7
	BC 545		8	6-0	STR								
	BC 546		8	2-11	IV	0-9	1-1						
	BC 547		6	4-5	II	3-5	1-1						
	BC 548		20	4-2	II	2-3	2-0						
	BC 549		4	9-4	STR								
	BC 550		1	8-10	STR								
	BC 551		6	7-7	IV	0-9	3-6						
	BC 552		8	10-5	IV	0-9	4-11						
	BC 553		10	8-7 To 9-11	IV	0-9	4-9 To 4-5						A_B=2
	BC 554		4	3-6	VII	3-6	6-0						
	BC 555		4	2-8	STR								
	BC 556		4	8-9	"								
	BC 557		4	6-0									
	BC 558		4	9-2									
	BC 559		7	7-9									
	BC 560		7	7-7									
	BC 561		6	7-5									
	BC 562		7	3-8									
	BC 563		7	6-3	STR								
	BC 564		5	10-10	VI	7-9	2-4	0-9	9-3	1-6	2-3		
	BC 565		1	9-0	STR								
	BC 566		45	2-2	STR								
	BC 567 To 586		40	7-7 To 9-2	X	5-1 To 6-8	2-0	0-7					2×20, A_A=1
	BC 587		9	19-6	STR								
	BC 588	"	4	43-2	STR								
	BC 589	5	20	43-3 To 44-3	STR								A=1⅞
	BC 590	6	94	20-10	I	19-6	0-8						
	BC 491	4	45	5-5	VIII	1-8	1-7	0-6	1-10	1-4	1-3		
L1	BC 792	7	168	12-0	STR								6 Per Pile
L2	BC 293	4	28		IX	9-8	0-7½						1 per pile



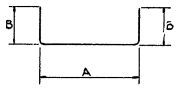
TYPE I



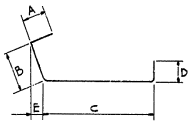
TYPE II



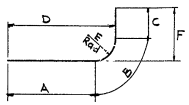
TYPE III



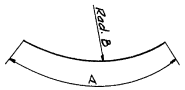
TYPE IV



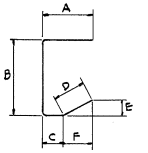
TYPE V



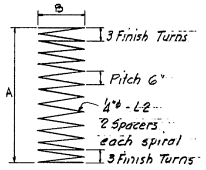
TYPE VI



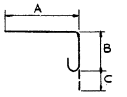
TYPE VII



TYPE VIII



TYPE IX



TYPE X

Note: All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

Made by S.J.V.
Traced by S.J.V.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
RAMP B ABUTMENT

APPROVED BY: _____ BRIDGE ENGINEER — 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG NO. SA 93

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(112)	'64	128	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

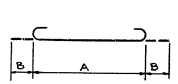
SOUTH ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	SC500	5	33	5'-6"	STR.								
	SC501	↓	33	6'-8"	I	5-6	0-7						
	SC502		24	10'-6"	STR.								
	SC503		12	32'-6"	↓								
	SC504		69	3'-2"									
	SC505		7	5'-11"									
	SC506		8	6'-0"									
	SC507		8	5'-9"									
	SC508		7	5'-4"	STR.								
	SC509		10	9'-6"	IV	3-4	3-2						
	SC510		10	15'-9"	V	2-1	5-8	5-1	3-2				
	SC511		9	7'-0"	STR								
	SC512		9	6'-9"	↓								
	SC513		9	6'-6"									
	SC514		7	6'-5"									
	SC515		8	6'-3"									
	SC616		8	6'-1"									
	SC517		15	27'-0"									
	SC518		20	8'-6"									
	SC519		20	7'-11"									
	SC520		6	3'-8"									
	SC521		6	5'-11"	STR								
	SC522		10	7'-8"	II	5-8	2-1						
	SC523		10	5'-8"	STR.								
	SC524		6	4'-6" To 8'-0"	↓								2×3, Δ=1'-9"
	SC525		6	6'-9" To 10'-3"									2×3, Δ=1'-9"
	SC526		8	8'-1"	STR.								
	SC527		10	10'-6"	VI	7-5	2-4	0-9	8-11	1-6	2-3		
	SC528		8	8'-1" To 11'-7"	IV	2-3	3-9 To 4-9						
	SC529		2	5'-11"	III	0-9	2-8						2×4 Δ=7"
	SC530		8	6'-0"	STR.								
	SC531		20	4'-1"	II	2-2	2-0						
	SC532		6	4'-7"	II	3-5	1-3						
	SC533		8	2'-9"	III	0-9	1-1						
	SC534		8	9'-2"	STR.								
	SC535		2	8'-10"	STR.								
	SC536		8	7'-7"	IV	0-9	3-6						
	SC537		8	10'-5"	IV	0-9	4-11						
	SC538		10	8'-7" To 9'-11"	IV	0-9	4-9 To 4-9						2×5, Δ=2
	SC539		4	3'-6"	VII	3-6	6-0						
	SC540		4	2'-8"	STR.								
	SC541		4	8'-9"	STR.								
	SC542		4	6'-0"	STR.								
	SC543		12	5'-4"	III	3-4	1-1						
	SC544		20	3'-11"	III	1-11	1-1						
	SC545	↓	23	2'-2"	STR.								
	SC546	5	24	21'-8"	STR.								
	SC447	4	23	6'-5"	VIII	1-8	1-7	0-6	1-10	1-4	1-3		
	SC648	6	44	20'-10"	I	19-6	0-8						
L1	SC749	7	114	12'-0"	STR								6 per pile
L2	SC250	4?	19		IX	9-8	0-7½						1 per pile

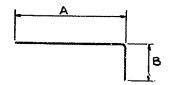
NORTH ABUTMENT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	NC500	5	33	5-6	STR.								
	NC501	↓	33	6-8	I	5-6	0-7						
	NC502		24	10-6	STR.								
	NC503		12	32-6	↓								
	NC504		69	3-2									
	NC505		7	5-1									
	NC506		8	5-9									
	NC507		8	5-11									
	NC508		7	5-7	STR.								
	NC509		10	9-6	IV	3-4	3-2						
	NC510		10	15-9	V	2-1	5-8	5-1	3-2				
	NC511		9	6-3	STR								
	NC512		9	6-5	↓								
	NC513		9	6-7									
	NC514		7	5-9									
	NC515		8	5-11									
	NC516		8	6-1									
	NC517		15	27-0									
	NC518		7	7-8									
	NC519		7	8-1									
	NC520		6	3-8	↓								
	NC321		6	5'-11	STR.								
	NC522		10	7-8	II	5-8	2-1						
	NC523		10	5-8	STR								
	NC524		6	4-6 To 8-0	↓								2×3, Δ=1'-9"
	NC525		6	6-9 To 10-3									2×3, Δ=1'-9"
	NC526		8	8-1	STR								
	NC527		10	10-6	VI	7-5	2-4	0-9	8-11	1-6	2-3		
	NC528		8	8-1 To 11-7	IV	2-3	3-9 To 4-9						
	NC529		2	5-11	III	0-9	2-8						2×4 Δ=7"
	NC530		8	6-0	STR								
	NC521		20	4-1	II	2-2	2-0						
	NC532		6	4-7	II	3-5	1-3						
	NC533		8	2-9	III	0-9	1-1						
	NC534		8	9-2	STR.								
	NC535		2	8-10	STR								
	NC536		8	7-7	IV	0-9	3-6						
	NC537		8	10-5	IV	0-9	4-11						
	NC538		10	8-7 To 9-11	IV	0-9	4-9 To 4-9						2×5, Δ=2
	NC539		4	3-6	VII	3-6	6-0						
	NC540		4	2-8	STR								
	NC541		4	8-9	STR								
	NC542		4	6-0	STR								
	NC543		12	5-4	IV	3-4	1-1						
	NC544		20	3-11	III	1-11	1-1						
	NC545	↓	23	2-2	STR								
	NC546	5	24	21-8	STR								
	NC447	4	23	5-5	VIII	1-8	1-7	0-6	1-10	1-4	1-3		
	NC648	6	44	20-10	I	19-6	0-8						
	NC549	5	7	7-6	STR								
	NC550	5	6	7-4	↓								
	NC551	5	7	7-11									
	NC552	5	6	7-9	STR.								
L1	NC753	7	114	12-0	STR								6 per pile
L2	NC254	4?	19		IX	9-8	0-7½						1 per pile

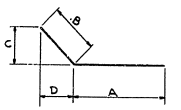
TYPE I



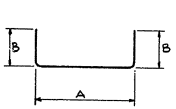
TYPE II



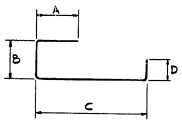
TYPE III



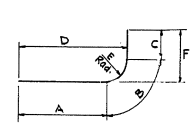
TYPE IV



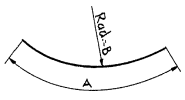
TYPE V



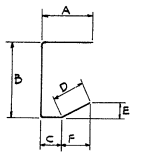
TYPE VI



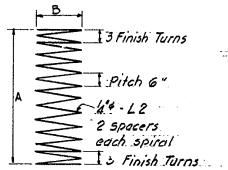
TYPE VII



TYPE VIII



TYPE IX



Note: All dimensions are out to out of bars.
Reinforcement bar marks L1 & L2 are included under Item 35.

Mode by S.J.V.
Traced by S.J.V.
Checked by HBL

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
RAMP C ABUTMENT

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA94

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	129	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 23

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M1	23P1001	10	36	44-4	STR.								'S' COL.
M1	" 1002	10	36	53-0	STR.								'N' COL.
M2	403	4	198	11'-0	VII	9	4'-2	2'-9	5	2'-2			90('S' col); 108('N' col)
M3	404	4	198	12'-2	VI	7'-2	2'-7						90 " 108 "
M7	1105	11	52	47-6	STR.								
M8	406	4	96	17'-3	VII	3'-0	7'-2	3'-3	5	2'-5			
M9	407	4	96	15'-2	VI	7'-2	4'-1						
M13	1008	10	72	7'-11	I	6'-6	1'-5						
M15	1109	11	52	10'-7	I	9'-0	1'-7						
M17	910	9	21	19'-0	II	16'-6	1'-3						
M18	1111	11	84	19'-2	II	16'-0	1'-7						
M19	1112	11	108	30'-2	II	27'-0	1'-7						
M20	" 1113	11	22	23'-2	II	20'-0	1'-7						
M21	23P1114	11	24	19'-8	II	16'-6	1'-7						

PIER 24

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M1	24P1001	10	36	44'-2	STR.								'S' COL.
M1	" 1002	10	36	54'-1	STR.								'N' COL.
M2	403	4	198	11'-0	VII	9	4'-2	2'-9	5	2'-2			88('S' col); 110('N' col)
M3	404	4	198	12'-2	VI	7'-2	2'-7						88 " 110 "
M7	1105	11	52	47'-0	STR.								
M8	406	4	96	17'-3	VII	3'-0	7'-2	3'-3	5	2'-5			
M9	407	4	96	15'-2	VI	7'-2	4'-1						
M13	1008	10	36	7'-5	I	6'-0	1'-5						'S' COL.
M13	1009	10	36	7'-11	I	6'-6	1'-5						'N' COL.
M15	1110	11	52	10'-7	I	9'-0	1'-7						
M20	1111	11	22	23'-2	II	20'-0	1'-7						
M21	1112	11	24	19'-8	II	16'-6	1'-7						
M22	1113	11	42	19'-2	II	16'-0	1'-7						
M23	" 1114	11	32	23'-2	II	20'-0	1'-7						
M24	24P1115	11	42	24'-8	II	23'-6	1'-7						

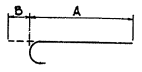
PIER 25

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M1	25P1001	10	36	45-0	STR.								'S' COL.
M1	" 1002	10	36	52-7	STR.								'N' COL.
M2	403	4	198	11'-0	VII	9	4'-2	2'-9	5	2'-2			92('S' col); 106('N' col)
M3	404	4	198	12'-2	VI	7'-2	2'-7						92 " 106 "
M7	1105	11	52	46-0	STR.								
M8	406	4	94	17'-3	VII	3'-0	7'-2	3'-3	5	2'-5			
M9	407	4	94	15'-2	VI	7'-2	4'-1						
M13	1008	10	72	7'-5	I	6'-0	1'-5						
M15	1109	11	52	9'-7	I	8'-0	1'-7						
M22	1110	11	42	19'-2	II	16'-0	1'-7						'N' Col. Ftg.
M22	1011	10	36	18'-10	II	16'-0	1'-5						'S' Col. Ftg.
M25	" 1012	10	23	19'-4	II	16'-6	1'-5						
M26	25P1113	11	31	23'-2	II	20'-0	1'-7						

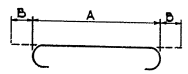
PIER 26

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
M4	26P1001	10	32	37'-1	STR.								'S' COL.
M4	" 1002	10	32	53'-7	STR.								'N' COL.
M5	403	4	184	11'-3	VII	9	4'-2	2'-9	5	2'-2			76('S' col); 108('N' col)
M6	404	4	184	11'-2	VI	6'-2	2'-7						76 " 108 "
M10	1105	11	40	53'-4	STR.								
M11	406	4	108	15'-3	VII	1'-6	6'-2	3'-6	5	2'-7			
M12	407	4	108	13'-2	VI	6'-2	3'-7						
M14	1008	10	32	7'-11	I	6'-6	1'-5						'S' COL.
M14	1009	10	32	7'-5	I	6'-0	1'-5						'N' COL.
M16	1110	11	40	8'-7	I	7'-0	1'-7						
M27	911	9	21	18'-6	II	16'-0	1'-3						
M28	912	9	15	19'-0	II	16'-6	1'-3						
M29	1113	11	50	19'-2	II	16'-0	1'-7						
M30	" 914	9	17	18'-6	II	16'-0	1'-3						
M31	26P1115	11	19	19'-2	II	16'-0	1'-7						

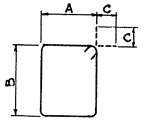
TYPE I



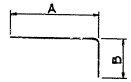
TYPE II



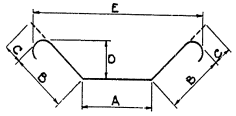
TYPE III



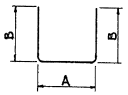
TYPE IV



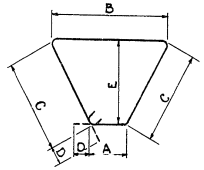
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 23 THRU 26

APPROVED BY: Louis P. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 95

Made by W.J.K.
Traced by W.J.K.
Checked by J.E.D.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	130	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 27S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	27SP 501	5	26	15'-6"	STR								
R2	" 902	9	51	18'-0"	II	15-6	1-3						
R3	" 803	8	16	39'-8"	II	37-6	1-1						
R4	" 1104	11	16	37'-6"	STR								
R5	" 1105	11	15	21'-0"	STR								
S1	" 1106	11	24	38'-6"	STR								
S2	" 407	4	148	11'-5"	III	2-3	3-2	5					Ext. Col.
S3	" 408	4	74	9'-5"	III	3-2	1-3	5					Half ea. Col.
S4	" 1109	11	48	8'-7"	I	7-0	1-7						Half ea. Col.
S5	" 1110	11	24	39'-6"	STR								" "
T1	" 1111	11	4	48'-8"	II	45-6	1-7						Int. Col.
T2	" 1112	11	8	21'-11"	IV	18-5	3-8						
T3	" 1013	10	16	15'-0"	STR								
T4	" 1114	11	4	31'-10"	V	20-2	4-3	1-7	3-0	26-2			
T5	" 1115	11	8	45'-6"	STR								
T6	" 1116	11	4	26'-10"	V	15-2	4-3	1-7	3-0	21-2			
T7	" 617	6	2	45-6"	STR								
T8	" 618	6	6	7'-2"	VI	3-4	2-0						
T9	27SP 519	5	110	12'-9"	III	2-4	3-8	6					

PIER 28S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	28SP 501	5	26	12'-6"	STR.								
R2	" 902	9	51	15'-0"	II	12-6	1-3						
R3	" 903	9	54	21'-6"	STR								
R4	" 904	9	14	15'-9"	I	14-6	1-3						
R5	" 905	9	14	30'-9"	I	29-6	1-3						
S1	" 806	8	20	35'-0"	STR.								Int. Col.
S2	" 807	8	20	34'-8"	STR								
S3	" 808	8	20	34'-4"	STR								Ext. Col.
S4	" 409	4	192	10'-5"	III	2-0	2-11	5					G4 ea. Col.
S5	" 410	4	96	7'-11"	III	2-11	9	5					32 ea. Col.
S6	" 811	8	60	6'-4"	I	5-3	1-1						20 ea. Col.
T1	" 1012	10	6	18'-8"	I	17-3	1-5						
T2	" 1013	10	6	33'-10"	I	32-5	1-5						
T3	" 914	9	4	10'-0"	STR								
T4	" 1115	11	12	19'-5"	IV	15-11	3-8						
T5	" 916	9	8	17'-11"	V	6-11	4-3	1-3	3-0	12-11			
T6	" 1017	10	12	24'-8"	STR								
T7	" 618	6	4	24'-3	STR								
T8	" 619	6	6	6'-11"	VI	3-1	2-0						
T9	28SP 520	5	136	12'-1"	III	2-0	3-8	6					

PIER 29S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	29SP 501	5	26	12'-6"	STR								
R2	" 902	9	51	15'-0"	II	12-6	1-3						
R3	" 903	9	54	21'-6"	STR								
R4	" 904	9	14	15'-9"	I	14-6	1-3						
R5	" 905	9	14	30'-9"	I	29-6	1-3						
S1	" 808	8	20	33'-9"	STR								Int. Col.
S2	" 807	8	20	33'-5"	STR								
S3	" 808	8	20	33'-0"	STR.								Ext. Col.
S4	" 409	4	186	10'-5"	III	2-0	2-11	5					G2 ea. Col.
S5	" 410	4	93	7'-11"	III	2-11	9	5					31 ea. Col.
S6	" 811	8	60	6'-4"	I	5-3	1-1						20 ea. Col.
T1	" 1012	10	6	19'-6"	I	18-1	1-5						
T2	" 1013	10	6	36'-3"	I	34-10	1-5						
T3	" 914	9	4	10'-0"	STR								
T4	" 1115	11	12	19'-5"	IV	15-11	3-8						
T5	" 916	9	8	19'-7"	V	8-7	4-3	1-3	3-0	14-7			
T6	" 1017	10	12	26'-5"	STR								
T7	" 618	6	4	26'-0"	STR								
T8	" 619	6	6	6'-11"	VI	3-1	2-0						
T9	29SP 520	5	140	12'-1"	III	2-0	3-8	6					

PIER 30S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	30SP 501	5	31	12'-6	STR								
R2	" 902	9	81	15'-0	II	12-6	1-3						
R3	" 1003	10	54	26'-6	STR								
R4	" 1004	"	14	19-2	I	17-9	1-5						
R5	" 1005	"	14	37-5	I	36-0	1-5						
S1	" 1006		20	32-0	STR								Int. Col.
S2	" 1007	"	20	31-9	STR								
S3	" 1008	10	20	31-6	STR								Ext. Col.
S4	" 409	4	174	10'-5	III	2-0	2-11	5					58 ea. Col.
S5	" 410	4	87	7'-11	III	2-11	9	5					29 ea. Col.
S6	" 1011	10	60	7'-5	I	6-0	1-5						20 ea. Col.
T1	" 1012	10	6	20'-2	I	18-9	1-5						
T2	" 1013	10	6	38'-9	I	37-4	1-5						
T3	" 1114	11	6	12'-0	STR								
T4	" 1115	11	12	19'-5	IV	15-11	3-8						
T5	" 916	9	8	21'-2	V	10-2	4-3	1-3	3-0	16-2			
T6	" 1117	11	12	28'-0	STR								
T7	" 618	6	4	27'-7	STR								
T8	" 619	6	6	6'-11	VI	3-1	2-0						
T9	30SP 520	5	144	12'-1	III	2-0	3-8	6					

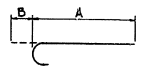
PIER 31S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	31SP 501	5	31	12'-6	STR								
R2	" 902	9	61	15'-0	II	12-6	1-3						
R3	" 1003	10	54	26'-6	STR								
R4	" 1004	"	14	18'-5	I	17-0	1-5						
R5	" 1005	"	14	38'-2	I	36-9	1-5						
S1	" 1006		20	30'-2	STR								Int. Col.
S2	" 1007	"	20	29'-10	STR								
S3	" 1008	10	20	29'-6	STR								Ext. Col.
S4	" 409	4	162	10'-5	III	2-0	2-11	5					54 ea. Col.
S5	" 410	4	81	7'-11	III	2-11	9	5					27 ea. Col.
S6	" 1011	10	60	7'-5	I	6-0	1-5						20 ea. Col.
T1	" 1012	10	6	20'-10	I	19-5	1-5						
T2	" 1013	10	6	41'-0	I	39-7	1-5						
T3	" 1114	11	6	12'-0	STR								
T4	" 1115	11	12	19'-5	IV	15-11	3-8						
T5	" 916	9	8	22'-8	V	11-8	4-3	1-3	3-0	17-8			
T6	" 1117	11	12	29'-6	STR								
T7	" 618	6	4	29'-2	STR								
T8	" 619	6	6	6'-11	VI	3-1	2-0						
T9	31SP 520	5	148	12'-1	III	2-0	3-8	6					

PIER 32S

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	32SP 501	5	36	12'-6	STR								
R2	" 902	9	71	15'-0	II	12-6	1-3						
R3	" 1103	11	28	50'-0	STR								
R4	" 1104	"	14	21'-7	I	20-0	1-7						
R5	" 1105		14	43'-0	I	41-5	1-7						
R7	" 1106	"	13	40'-0	STR								
S1	" 1107	"	24	24-6	"								Int. Col.
S2	" 1108	"	24	24-0	"								
S3	" 1109	11	24	23-7	STR								Ext Col.
S4	" 410	4	126	11-5	III	2-3	3-2	5					42 ea Col.
S5	" 411	4	63	9'-5	III	3-2	1-3	5					21 ea. Col.
S6	" 1112	11	72	8'-7	I	7-0	1-7						24 ea. Col.
T1	" 1113	"	7	22'-1	I	20-6	1-7						
T2	" 1"	"	7	43'-8	I	42-1	1-7						
T3	" 1115	"	7	12'-0	STR								
T4	" 1116	11	14	19'-5	IV	15-11	3-8						
T5	" 917	9	10	24'-0	V	13-0	4-3	1-3	3-0	19-0			
T6	" 1118	11	14	31'-3	STR.								
T7	" 619	6	4	30'-9	STR								
T8	" 620	6	6	7'-2	VI	3-4	2-0						
T9	32SP 521	5	212	12'-5	III	2-2	3-8	6					

TYPE I



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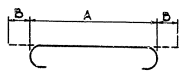

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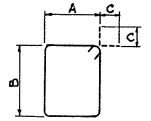

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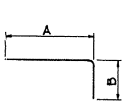

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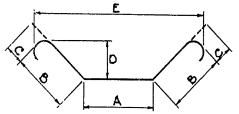

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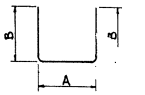

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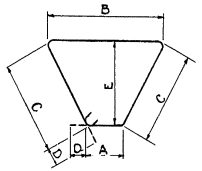


Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 27S THRU 32S

APPROVED BY: Johnnie R. Deavers Jr. BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA96

COUNTY	CONTRACT	F.A.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	131	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 33S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	335P 501	5	36	12'-6	STR								
R2	902	9	71	15'-0	II	12-6	1-3						
R3	1103	11	28	30'-0	STR								
R4	1104	11	14	20'-2	I	18-7	1-7						
R5	1105	11	14	44'-7	I	43-0	1-7						
R7	1106	11	13	40'-0	STR								
S1	1107	11	24	21'-8	STR								
S2	1108	11	24	21'-8	STR								
S3	1109	11	24	21'-8	STR								
S4	410	4	114	11'-5	III	2-3	3-2	5					38 ea. Col.
S5	411	4	57	9'-5	III	3-2	1-3	5					19 ea. Col.
S6	1112	11	72	8'-7	I	7-0	1-7						24 ea. Col.
T1	1113	11	7	23'-6	I	21-11	1-7						
T2	1114	11	7	47'-10	I	46-3	1-7						
T3	1115	11	7	12'-0	STR								
T4	1116	11	14	19'-5	IV	15-11	3-6						
T5	917	9	10	26'-10	V	13-10	4-3	1-3	3-0	21-10			
T6	1118	11	14	34'-0	STR								
T7	619	6	4	33'-6	STR								
T8	620	6	6	7'-2	VI	3-4	2-0						
T9	335P 521	5	216	12'-5	III	2-2	3-8	6					

PIER 34S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	345P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	24-2	STR								Int. Col.
	1010	10	20	24-9	STR								Ext. Col.
	411	4	88	10'-5	III	2-0	2-11	5					Half ea. Col
	412	4	44	7'-11	III	2-11	9	5					" " "
	1013	10	40	7'-5	I	6-0	1-5						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	V	12-6	1-3						
	345P 518	5	22	12'-6	STR								

PIER 35S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	355P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	20-8	STR								Int. Col.
	810	8	20	21-9	STR								Ext. Col.
	411	4	76	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	38	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	355P 518	5	22	10'-6	STR								

PIER 36S

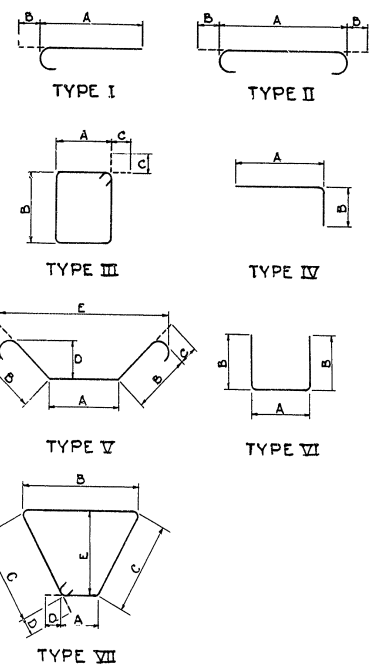
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	365P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	20-9	STR								Int. Col.
	810	8	20	22-0	STR								Ext. Col.
	411	4	76	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	38	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	365P 518	5	22	10'-6	STR								

PIER 37S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	375P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	19'-4	STR								Int. Col.
	810	8	20	20'-8	STR								Ext. Col.
	411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	36	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	375P 518	5	22	10'-6	STR								

PIER 38S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	385P 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	19'-7	STR								Int. Col.
	810	8	20	20-10	STR								Ext. Col.
	411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	36	7'-11	III	2-11	9	5					" " "
	813	8	40	6'-4	I	5-3	1-1						" " "
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	385P 518	5	22	10'-6	STR								



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 33S THRU 38S

APPROVED BY: Thomas B. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 97

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	132	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 39S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
39SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
809	8	20	19'-7	STR								Int. Col.
810	8	20	20'-10	STR								Ext. Col.
411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	36	7'-11	III	2-11	9	5					" " "
813	8	40	6'-4	I	5-3	1-1						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
817	8	43	12'-8	II	10-6	1-1						
39SP 518	5	22	10'-6	STR								

PIER 40S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
40SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
809	8	20	19-11	STR								Int. Col.
810	8	20	21-2	STR								Ext. Col.
411	4	72	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	36	7'-11	III	2-11	9	5					" " "
813	8	40	6'-4	I	5-3	1-1						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
817	8	43	12'-8	II	10-6	1-1						
40SP 518	5	22	10'-6	STR								

PIER 41S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
41SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
809	8	20	19-5	STR								Int. Col.
810	8	20	20-8	STR								Ext. Col.
411	4	68	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	34	7'-11	III	2-11	9	5					" " "
813	8	40	6'-4	I	5-3	1-1						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
817	8	43	12'-8	II	10-6	1-1						
41SP 518	5	22	10'-6	STR								

PIER 42S

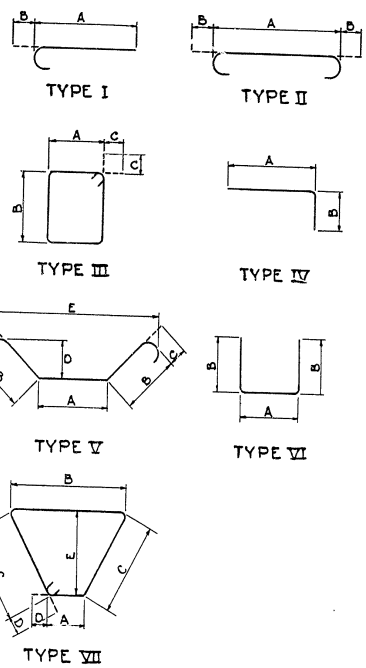
MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
42SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	24-3	STR								
1010	10	20	25-6	STR								Int. Col.
411	4	92	10'-5	III	2-0	2-11	5					Ext. Col.
412	4	46	7'-11	III	2-11	9	5					Half ea. Col.
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								" " "
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
42SP 518	5	22	12'-6	STR								

PIER 43S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
43SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	26-9	STR								Int. Col.
1010	10	20	28-0	STR								Ext. Col.
411	4	100	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	50	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
43SP 518	5	22	12'-6	STR								

PIER 44S

MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
44SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	25-7	STR								
1010	10	20	26-7	STR								Int. Col.
411	4	96	10'-5	III	2-0	2-11	5					Ext. Col.
412	4	48	7'-11	III	2-11	9	5					Half ea. Col.
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								" " "
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
44SP 518	5	22	12'-6	STR								



Note
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 39S THRU 44S

APPROVED BY: [signature] BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA98

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	#	DEL.	I-95-2(12)	'64	133	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 45S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
45SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	36-11	STR								Int. Col.
1010	10	20	37-5	STR								Ext. Col.
411	4	140	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	70	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-11	I	6-6	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
45SP 518	5	22	12'-6	STR								

PIER 46S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 46SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	33'-2	STR								
1010	10	20	33'-2	STR								
411	4	124	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	62	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
46SP 518	5	22	12'-6	STR								

PIER 47S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 47SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	30'-8	STR								Int. Col.
1010	10	20	30'-2	STR								Ext. Col.
411	4	112	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	56	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
47SP 518	5	22	12'-6	STR								

PIER 48S

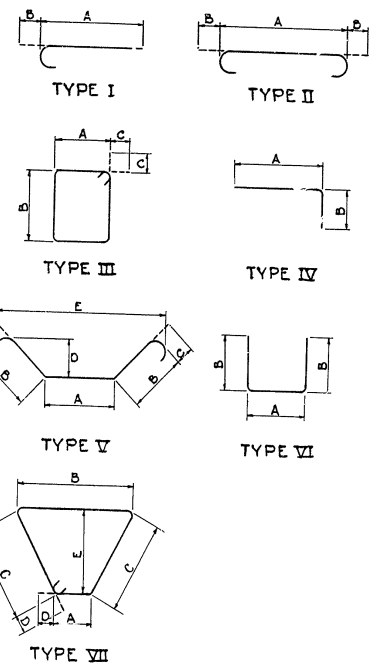
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
48SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	29-8	STR								
1010	10	20	29-8	STR								
411	4	108	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	54	7-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
48SP 518	5	22	12'-6	STR								

PIER 49S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 49SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	30-5	STR								
1010	10	20	30-5	STR								
411	4	112	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	56	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
49SP 518	5	22	12'-6	STR								

PIER 50S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
✓ 50SP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	31-8	STR								
1010	10	20	31-8	STR								
411	4	116	10'-5	III	2-0	2-11	5					Half ea. Col.
412	4	58	7'-11	III	2-11	9	5					" " "
1013	10	40	7'-5	I	6-0	1-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
50SP 518	5	22	12'-6	STR								



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 45S THRU 50S

APPROVED BY: Dennis D. Canan Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA99

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	134	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 51S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
51SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	28'-2	STR								
1010	10	20	28'-2	STR								
411	4	104	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	52	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
51SP 518	5	22	12'-6	STR								

PIER 52S

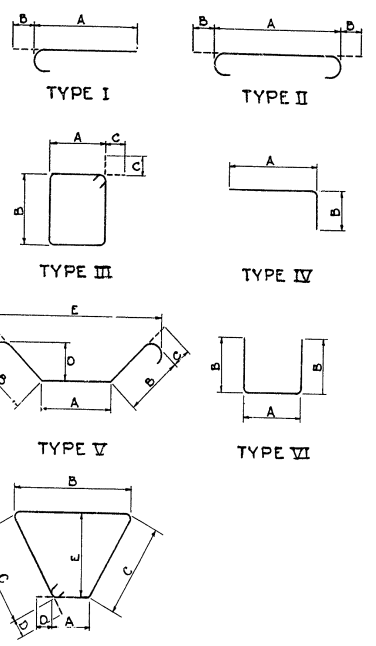
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
52SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	26'-9	STR								
1010	10	20	26'-9	STR								
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
52SP 518	5	22	12'-6	STR								

PIER 53S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
53SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27'-1	STR								
1010	10	20	27'-1	STR								
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
53SP 518	5	22	12'-6	STR								

PIER 54S

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
54SP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27'-0	STR								
1010	10	20	27'-0	STR								
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" " "
1013	10	40	7'-5	I	6'-0	1'-5						" " "
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
54SP 518	5	22	12'-6	STR								



Note:
All dimensions are out to out of bar.

Made by S.J.V
Traced by S.J.V.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 51S THRU 54S

APPROVED BY: Edmund D. Bassett Jr. BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA100

COUNTY	CONTRACT	F.A.P. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	135	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 55S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	55SP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	25-6	STR								
	1010	10	20	25-3	STR								Int. Col.
	411	4	92	10'-5	III	2-0	2-11	5					Ext. Col.
	412	4	46	7'-11	III	2-11	9	5					Half ea. Col.
	1013	10	40	7'-5	I	6-0	1-5						" " "
	1114	11	14	34'-6	STR								" " "
	1115	11	13	19'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	55SP 518	5	22	12'-6	STR								

PIER 56S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	56SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1006	10	20	21-3	STR								
S2	407	4	76	10'-5	III	2-0	2-11	5					Ext. Col.
S3	408	4	38	7'-11	III	2-11	9	5					Half ea. Col.
S4	1009	10	40	7'-5	I	6-0	1-5						" " "
S5	1010	10	20	21-8	STR								" " "
T1	1111	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	1014	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	6'-11	VI	3-1	2-0						
T9	56SP 518	5	106	12'-1	III	2-0	3-8	6					

PIER 57S

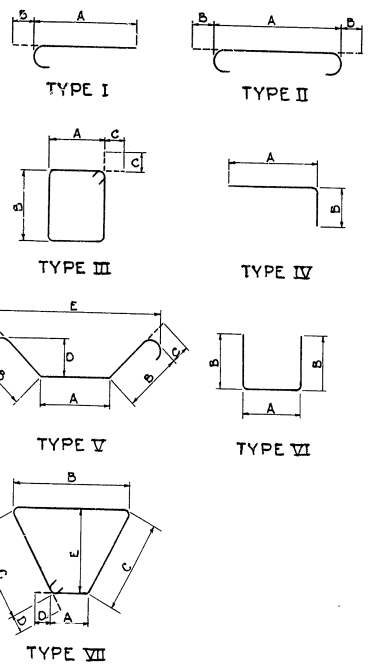
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	57SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36-8	II	34-6	1-1						
R4	1104	11	16	34-6	STR								
R5	1105	11	15	18-6	STR								
S1	1010	10	20	17-9	STR								
S2	411	4	60	10'-5	III	2-0	2-11	5					Ext. Col.
S3	412	4	30	7'-11	III	2-11	9	5					Half ea. Col.
S4	1013	10	40	7'-5	I	6-0	1-5						" " "
S5	1014	10	20	18-2	STR								" " "
T1	1115	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1116	11	8	20'-11	IV	17-5	3-8						
T3	1117	11	8	14'-0	STR								
T4	1018	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1019	10	8	41'-10	STR								
T7	620	6	2	41'-10	STR								
T8	621	6	6	6'-11	VI	3-1	2-0						
T9	57SP 522	5	106	12'-1	III	2-0	3-8	6					

PIER 58S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	58SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1006	10	20	16-8	STR								
S2	407	4	56	10'-5	III	2-0	2-11	5					Ext. Col.
S3	408	4	28	7'-11	III	2-11	9	5					Half ea. Col.
S4	1009	10	40	7'-5	I	6-0	1-5						" " "
S5	1010	10	20	17'-0	STR								" " "
T1	1111	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	1014	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	6'-11	VI	3-1	2-0						
T9	58SP 518	5	106	12'-1	III	2-0	3-8	6					

PIER 59S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	59SP 501	5	24	12'-6	STR								
R2	902	9	47	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1006	10	20	17-3	STR								
S2	407	4	60	10'-5	III	2-0	2-11	5					Ext. Col.
S3	408	4	30	7'-11	III	2-11	9	5					Half ea. Col.
S4	1009	10	40	7'-5	I	6-0	1-5						" " "
S5	1010	10	20	17-8	STR								Int. Col.
T1	1111	11	4	45'-0	II	41-10	1-7						
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	1014	10	4	28'-1	V	16-9	4-3	1-5	3-0	22-9			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	6'-11	VI	3-1	2-0						
T9	59SP 518	5	106	12'-1	III	2-0	3-8	6					



Note:
All dimensions are out to out of bar.

Made by S.J.V.
Traced by S.J.V.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 55S THRU 59S

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 101

COUNTY	CONTRACT	R.B.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-002	9	DEL.	I-95-2 (12)	'64	136	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 27N – PIER 28N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	27NP 501	5	24	15'-6	STR								
R2	902	9	47	18'-0	II	15-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	16'-3	STR								
S1	1106	11	24	44'-6	STR								
S2	407	4	168	11'-5	III	2-3	3-2	5					Ext. Col.
S3	408	4	84	9'-5	III	3-2	1-3	5					Half ea. Col.
S4	1109	11	48	8'-7	I	7-0	1-7						" "
S5	1110	11	24	43-7	STR								Int. Col.
T1	1011	10	4	44'-8	II	41-10	1-5						
T2	1012	10	8	20'-11	IV	17-5	3-8						
T3	1113	11	8	14'-0	STR								
T4	914	9	4	27'-6	V	16-6	4-3	1-3	3-0	22-6			
T5	1015	10	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	7'-2	VI	3-4	2-0						
T9	27NP 518	5	106	12'-9	III	2-4	3-8	6					

PIER 28N – PIER 29N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	28NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	39-0	STR								Int. Col.
	1010	10	20	39-6	STR								Ext. Col.
	411	4	148	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	74	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	28NP 518	5	22	12'-6	STR								

PIER 29N – PIER 30N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	29NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	36-5	STR								
	1010	10	20	36-5	STR								
	411	4	136	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	68	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	29NP 518	5	22	12'-6	STR								

PIER 30N – PIER 31N

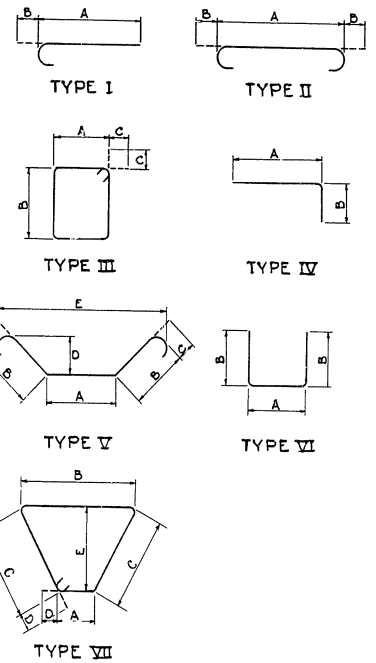
	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	30NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	34'-6	STR								Int. Col.
	1010	10	20	34'-2	STR								Ext. Col.
	411	4	128	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	64	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	30NP 518	5	22	12'-6	STR								

PIER 31N – PIER 32N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	31NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	32'-2	STR								Int. Col.
	1010	10	20	31'-9	STR								Ext. Col.
	411	4	116	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	58	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	31NP 518	5	22	12'-6	STR								

PIER 32N

	MARK	SIZE	AMT REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	32NP 501	5	27	12'-6	STR								
R2	902	9	53	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1106	11	24	26'-3	STR								
S2	407	4	96	11'-5	III	2-3	3-2	5					Ext. Col.
S3	408	4	48	9'-5	III	3-2	1-3	5					Half ea. Col.
S4	1109	11	48	8'-7	I	7-0	1-7						" "
S5	1110	11	24	26'-6	STR								" "
T1	1111	11	4	45'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	16	14'-0	STR								
T4	1114	11	4	28'-2	V	16-6	4-3	1-7	3-0	22-6			
T5	1115	11	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	7'-2	VI	3-4	2-0						
T9	32NP 518	5	150	12'-9	III	2-4	3-8	6					



Note:
All dimensions are out to out of bar

Mode by SJV
Traced by SJV
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 27N THRU 32N

APPROVED BY: J. Dennis D. Pearson, Jr. BRIDGE ENGINEER 9-16-68 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 102

COUNTY	CONTRACT	F.A.S. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	137	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 33N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	33NP 501	5	27	12'-6	STR								
R2	502	9	53	15'-0	II	12-6	1-3						
R3	803	8	16	36'-8	II	34-6	1-1						
R4	1104	11	16	34'-6	STR								
R5	1105	11	15	18'-6	STR								
S1	1106	11	84	23-4	STR								
S2	401	4	84	11-5	III	2-3	3-8	5					Ext. Col.
S3	408	4	42	9-5	III	5-8	1-3	5					Half ea. Col.
S4	1109	11	48	8'-7	I	7-0	1-7						" "
S5	1110	11	24	24-0	STR								" "
T1	1111	11	4	46'-0	II	41-10	1-7						Int. Col.
T2	1112	11	8	20'-11	IV	17-5	3-8						
T3	1113	11	16	14'-0	STR								
T4	1114	11	4	28'-2	V	16-6	4-3	1-7	3-0	22-6			
T5	1115	11	8	41'-10	STR								
T7	616	6	2	41'-10	STR								
T8	617	6	6	7'-2	VI	3-4	2-0						
T9	33NP 518	5	150	12'-9	III	2-4	3-8	6					

PIER 34N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	34NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	1009	10	20	24-6	STR								Int. Col.
	1010	10	20	23-10	STR								Ext. Col.
	411	4	88	10'-5	III	2-0	2-11	5					Half ea. Col.
	412	4	44	7'-11	III	2-11	9	5					" "
	1013	10	40	7'-5	I	6-0	1-5						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	917	9	43	15'-0	II	12-6	1-3						
	34NP 518	5	22	12'-6	STR								

PIER 35N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	35NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	21-0	STR								Int. col.
	810	8	20	20-1	STR								Ext. col.
	411	4	72	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	36	7'-11	III	2-11	9	5					" "
	813	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	35NP 518	5	22	10'-6	STR								

PIER 36N

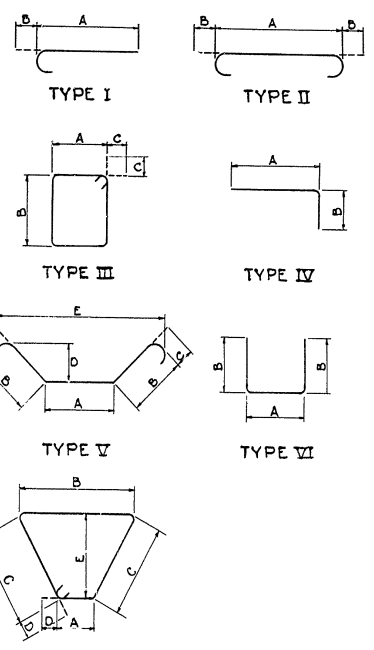
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	36NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	19-7	STR								Int. Col.
	810	8	20	18-4	STR								Ext. Col.
	411	4	68	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	34	7'-11	III	2-11	9	5					" "
	013	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	36NP 518	5	22	10'-6	STR								

PIER 37N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	37NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	18-7	STR								Int. Col.
	810	8	20	17-4	STR								Ext. col.
	411	4	64	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	32	7'-11	III	2-11	9	5					" "
	813	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	37NP 518	5	22	10'-6	STR								

PIER 38N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	38NP 501	5	106	12'-1	III	2-0	3-8	6					
	1002	10	8	41'-10	STR								
	903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41'-10	STR								
	1105	11	8	14'-0	STR								
	1006	10	8	20'-11	IV	17-5	3-8						
	1007	10	4	44'-8	II	41-10	1-5						
	608	6	6	6'-11	VI	3-1	2-0						
	809	8	20	18-4	STR								Int. col.
	810	8	20	17-1	STR								Ext. col.
	411	4	64	10'-5	III	2-0	2-11	5					Half ea. col.
	412	4	32	7'-11	III	2-11	9	5					" "
	813	8	40	6'-4	I	5-3	1-1						
	1114	11	14	34'-6	STR								
	1115	11	13	18'-6	STR								
	816	8	14	36'-8	II	34-6	1-1						
	817	8	43	12'-8	II	10-6	1-1						
	38NP 518	5	22	10'-6	STR								



Note:
All dimensions are out to out of bar

Mode by SJV
Traced by SJV
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 33N THRU 38N

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 103

COUNTY	CONTRACT	R.B.D. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-C04	2	DEL.	I-95-2(12)	'64	138	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 39N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
39NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR.								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR.								
1105	11	8	14'-0	STR.								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
809	8	20	18-10	STR								Int. Col.
810	8	20	17-8	STR								Ext. Col.
411	4	64	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	32	7'-11	III	2'-11	9	5					" "
813	8	40	6'-4	I	5'-3	1'-1						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
817	8	43	12'-8	II	10'-6	1'-1						
39NP 518	5	22	10'-6	STR								

PIER 40N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
40NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR.								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR.								
1105	11	8	14'-0	STR.								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
809	8	20	19-3	STR								Int. Col.
810	8	20	18-0	STR								Ext. Col.
411	4	64	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	32	7'-11	III	2'-11	9	5					" "
813	8	40	6'-4	I	5'-3	1'-1						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
817	8	43	12'-8	II	10'-6	1'-1						
40NP 518	5	22	10'-6	STR								

PIER 41N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
41NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
809	8	20	21-4	STR								Int. col.
810	8	20	20-1	STR								Ext. col.
411	4	76	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	38	7'-11	III	2'-11	9	5					" "
813	8	40	6'-4	I	5'-3	1'-1						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
817	8	43	12'-8	II	10'-6	1'-1						
41NP 518	5	22	10'-6	STR								

PIER 42N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
42NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	25-0	STR								Int. Col.
1010	10	20	23-9	STR								Ext. Col.
411	4	88	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	44	7'-11	III	2'-11	9	5					" "
1013	10	40	7'-5	I	6'-0	1'-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
42NP 518	5	22	12'-6	STR								

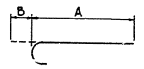
PIER 43N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
43NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27-6	STR								Int. col.
1010	10	20	26-3	STR								Ext. col.
411	4	100	10'-5	III	2'-0	2'-11	5					Half ea. col.
412	4	50	7'-11	III	2'-11	9	5					" "
1013	10	40	7'-5	I	6'-0	1'-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
43NP 518	5	22	12'-6	STR								

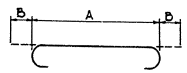
PIER 44N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
44NP 501	5	106	12'-1	III	2'-0	3'-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16'-9	4'-3	1'-3	3'-0	22'-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17'-5	3'-8						
1007	10	4	44'-8	II	41'-10	1'-5						
608	6	6	6'-11	VI	3'-1	2'-0						
1009	10	20	27-0	STR								Int. Col.
1010	10	20	26-0	STR								Ext. col.
411	4	96	10'-5	III	2'-0	2'-11	5					Half ea. Col.
412	4	48	7'-11	III	2'-11	9	5					" "
1013	10	40	7'-5	I	6'-0	1'-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34'-6	1'-1						
917	9	43	15'-0	II	12'-6	1'-3						
44NP 518	5	22	12'-6	STR								

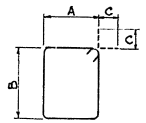
TYPE I



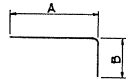
TYPE II



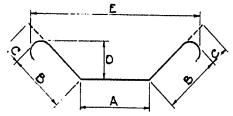
TYPE III



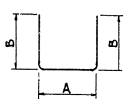
TYPE IV



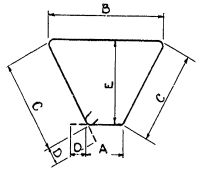
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

Made by W.J.K.
Traced by W.J.K.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 39N THRU 44N

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 104

COUNTY	CONTRACT	R.R.L. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	64	139	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 45N – 46N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
45NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	37-1.	STR								Int. Col
1010	10	20	37-4	STR								Ext. col.
411	4	140	10'-5	III	2-0	2-11	5					Half ea. col
412	4	70	7'-11	III	2-11	9	5					" "
1013	10	40	7'-11	I	6-6	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
45NP 518	5	22	12'-6	STR								
46NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	34-3	STR								Int. Col.
1010	10	20	33-11	STR								Ext. Col.
411	4	128	10'-5	III	2-0	2-11	5					Half ea. col
412	4	64	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
46NP 518	5	22	12'-6	STR								

PIER 47N – 46N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
47NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	16'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	34-2	STR								Int. Col.
1010	10	20	33-8	STR								Ext. Col.
411	4	128	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	64	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
47NP 518	5	22	12'-6	STR								

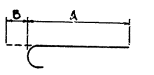
PIER 48N – 49N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
48NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	33'-2	STR								
1010	10	20	33'-2	STR								
411	4	120	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	60	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
48NP 518	5	22	12'-6	STR								
49NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	33'-11	STR								
1010	10	20	33'-11	STR								
411	4	124	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	62	7'-11	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
49NP 518	5	22	12'-6	STR								

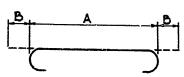
PIER 50N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
50NP 501	5	106	12'-1	III	2-0	3-8	6					
1002	10	8	41'-10	STR								
903	9	4	27'-9	V	16-9	4-3	1-3	3-0	22-9			
604	6	2	41'-10	STR								
1105	11	8	14'-0	STR								
1006	10	8	20'-11	IV	17-5	3-8						
1007	10	4	44'-8	II	41-10	1-5						
608	6	6	6'-11	VI	3-1	2-0						
1009	10	20	35-2	STR								
1010	10	20	35-2	STR								
411	4	128	10'-5	III	2-0	2-11	5					Half ea. col.
412	4	64	7'-11"	III	2-11	9	5					" "
1013	10	40	7'-5	I	6-0	1-5						
1114	11	14	34'-6	STR								
1115	11	13	18'-6	STR								
816	8	14	36'-8	II	34-6	1-1						
917	9	43	15'-0	II	12-6	1-3						
50NP 518	5	22	12'-6	STR								

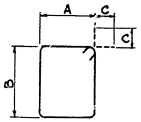
TYPE I



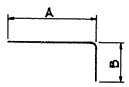
TYPE II



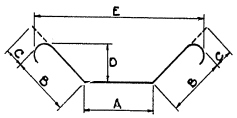
TYPE III



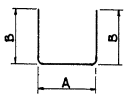
TYPE IV



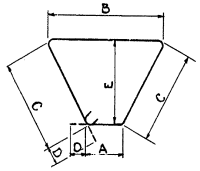
TYPE V



TYPE VI



TYPE VII



Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 45N THRU 50N

APPROVED BY: Johnnie B. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA105

Made by SJV
Traced by SJV
Checked by J.R.D.

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	140	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 51N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	51NP 501	5	106	12-1	III	2-0	3-8	6					
	1002	10	8	41-10	STR								
	903	9	4	27-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41-10	STR								
	1105	11	8	14-0	STR								
	1006	10	8	20-11	IV	17-5	3-8						
	1007	10	4	44-8	II	41-10	1-5						
	608	6	6	6-11	VI	3-1	2-0						
	1009	10	20	29-8	STR								
	1010	10	20	29-8	STR								
	411	4	108	10-5	III	2-0	2-11	5					Half ea. col.
	412	4	54	7-11	III	2-11	9	5					" "
	1013	10	40	7-5	I	6-0	1-5						
	1114	11	14	34-6	STR								
	1115	11	13	18-6	STR								
	816	8	14	36-8	II	34-6	1-1						
	917	9	43	15-0	II	12-6	1-3						
	51NP 518	5	22	12-6	STR								

PIER 52N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	52NP 501	5	106	12-1	III	2-0	3-8	6					
	1002	10	8	41-10	STR								
	903	9	4	27-9	V	16-9	4-3	1-3	3-0	22-9			
	604	6	2	41-10	STR								
	1105	11	8	14-0	STR								
	1006	10	8	20-11	IV	17-5	3-8						
	1007	10	4	44-8	II	41-10	1-5						
	608	6	6	6-11	VI	3-1	2-0						
	1009	10	20	27-3	STR								
	1010	10	20	27-3	STR								
	411	4	100	10-5	III	2-0	2-11	5					Half ea. col.
	412	4	50	7-11	III	2-11	9	5					" "
	1013	10	40	7-5	I	6-0	1-5						
	1114	11	14	34-6	STR								
	1115	11	13	18-6	STR								
	816	8	14	36-8	II	34-6	1-1						
	917	9	43	15-0	II	12-6	1-3						
	52NP 518	5	22	12-6	STR								

PIER 53N

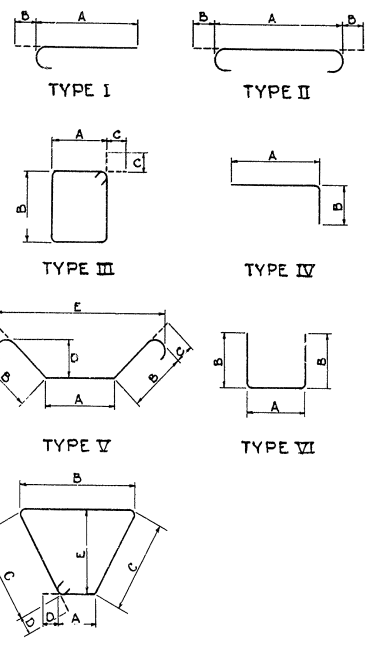
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	53NP 501	5	22	12-6	STR.								
R2	902	9	43	15-0	II	12-6	1-3						
R3	803	8	16	36-8	II	34-6	1-1						
R4	1104	11	16	34-6	STR								
R5	1105	11	15	18-6	STR								
S1	1006	10	20	28-0	STR								
S2	407	4	100	10-5	III	2-0	2-11	5					Half ea. col.
S3	408	4	50	7-11	III	2-11	9	5					" "
S4	1009	10	40	7-5	I	6-0	1-5						" "
S5	1010	10	20	28-0	STR								
T1	1111	11	4	46-4	II	43-2	1-7						
T2	1112	11	8	20-11	IV	17-5	3-8						
T3	1113	11	8	14-0	STR								
T4	1014	10	4	29-5	V	18-1	4-3	1-5	3-0	24-1			
T5	1115	11	8	43-2	STR								
T7	616	6	2	43-2	STR								
T8	617	6	6	6-11	VI	3-1	2-0						
T9	53NP 518	5	106	12-1	III	2-0	3-8	6					

PIER 54N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	54NP 501	5	26	12-6	STR								
R2	902	9	51	15-0	II	12-6	1-3						
R3	903	9	54	21-6	STR								
R4	904	9	14	15-10	I	14-7	1-3						
R5	905	9	14	30-6	I	29-3	1-3						
S1	806	8	20	28-0	STR								
S2	807	8	20	28-0	STR								
S3	808	8	20	28-0	STR								
S4	409	4	150	10-5	III	2-0	2-11	5					50 Ea. col.
S5	410	4	75	7-11	III	2-11	9	5					25 Ea. col.
S6	811	8	60	6-4	I	5-3	1-1						20 Ea. col.
T1	1012	10	6	18-5	I	17-0	1-5						
T2	1013	10	6	33-1	I	31-8	1-5						
T3	914	9	4	10-0	STR								
T4	1115	11	12	19-5	IV	15-11	3-8						
T5	916	9	8	17-5	V	6-5	4-3	1-3	3-0	12-5			
T6	1017	10	12	24-2	STR								
T7	618	6	4	23-9	STR								
T8	619	6	6	6-11	VI	3-1	2-0						
T9	54NP 520	5	132	12-1	III	2-0	3-8	6					

PIER 55N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	55NP 501	5	26	12-6	STR								
R2	902	9	51	15-0	II	12-6	1-3						
R3	903	9	54	21-6	STR								
R4	904	9	14	14-10	I	13-7	1-3						
R5	905	9	14	31-6	I	30-3	1-3						
S1	806	8	20	27-0	STR								Int. Col.
S2	807	8	20	26-9	STR								
S3	808	8	20	26-6	STR								Ext. Col.
S4	409	4	144	10-5	III	2-0	2-11	5					48 Ea. col.
S5	410	4	72	7-11	III	2-11	9	5					24 Ea. col.
S6	811	8	60	6-4	I	5-3	1-1						20 Ea. col.
T1	1012	10	6	19-5	I	18-0	1-5						
T2	1013	10	6	36-1	I	34-8	1-5						
T3	914	9	4	10-0	STR								
T4	1115	11	12	19-5	IV	15-11	3-8						
T5	916	9	8	19-5	V	8-5	4-3	1-3	3-0	14-5			
T6	1017	10	12	24-2	STR								
T7	618	6	4	23-9	STR								
T8	619	6	6	6-11	VI	3-1	2-0						
T9	55NP 520	5	136	12-1	III	2-0	3-8	6					



Note:
All dimensions are out to out of bar.

Made by W. J. K.
Traced by W. J. K.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

RS 5IN THRU 55N

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE: DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA106

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-05-004	2	DEL.	I-95-2(112)	64	141	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 56N

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	56NP501	5	31	12 - 6	STR.								
R2	902	9	61	15 - 0	II	12-6	1-3						
R3	1003	10	54	26 - 5	STR.								
R4	1004	10	14	18 - 10	I	17-5	1-5						
R5	1005	10	14	37 - 9	I	36-4	1-5						
S1	1006	10	20	24 - 1	STR.								
S2	1007	10	20	23 -10	STR.								Int. Col.
S3	1008	10	20	23 -6	STR.								
S4	409	4	126	10 - 5	III	2-0	2-11	5					Ext. Col.
S5	410	4	63	7 - 11	III	2-11	9	5					42 Lig. Col.
S6	1011	10	60	7 - 5	I	6-0	1-5						21 Ea. Col.
T1	1012	10	6	20 - 7	I	19-2	1-5						20 Ea. Col.
T2	1013	10	6	39 - 6	I	38-1	1-5						
T3	1114	11	6	12 - 0	STR.								
T4	1115	11	12	19 - 5	IV	15-11	3-8						
T5	916	9	8	21 - 8	V	10-8	4-3	1-3	3-0	16-8			
T6	1117	11	12	28 - 8	STR.								
T7	618	6	4	28 - 0	STR.								
T8	619	6	6	6 - 11	VI	3-1	2-0						
T9	56NP520	5	144	12 - 1	III	2-0	3-8	6					

PIER 57N

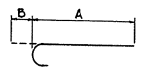
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	57NP501	5	31	12 - 6	STR.								
R2	902	9	61	15 - 0	II	12-6	1-3						
R3	1003	10	54	26 -6	STR.								
R4	1004	10	14	17 - 9	I	16-4	1-5						
R5	1005	10	14	37 - 11	I	36-6	1-5						
S1	1006	10	20	22 - 8	STR.								
S2	1007	10	20	22 - 3	STR.								Int. Col.
S3	1008	10	20	21 -10	STR.								
S4	409	4	120	10 - 5	III	2-0	2-11	5					Ext. Col.
S5	410	4	60	7 - 11	III	2-11	9	5					40 Ea. Col.
S6	1011	10	60	7 - 5	I	6-0	1-5						20 Ea. Col.
T1	1012	10	6	20 - 8	I	19-3	1-5						20 Ea. Col.
T2	1013	10	6	44 - 5	I	43-0	1-5						
T3	1114	11	6	12 - 0	STR.								
T4	1115	11	12	19 - 5	III	15-11	3-8						
T5	916	9	8	24 - 2	V	13-2	4-3	1-3	3-0	19-2			
T6	1117	11	12	31 - 2	STR.								
T7	618	6	4	30 - 8	STR.								
T8	619	6	6	6 - 11	VI	3-1	2-0						
T9	57NP520	5	152	12 - 1	III	2-0	3-8	6					

PIER 58N

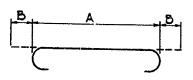
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	58NP501	5	37	12 - 6	STR.								
R2	902	9	73	15 - 0	II	12-6	1-3						
R3	1103	11	28	31 - 9	STR.								
R4	1104	11	14	22 - 4	I	20-9	1-7						
R5	1105	11	14	45 - 7	I	44-0	1-7						
R6	1106	11	13	40 - 0	STR.								
S1	1107	11	20	19 - 6	STR.								Int. Col.
S2	1108	11	20	19 - 2	STR.								
S3	1109	11	20	18 - 9	STR.								Ext. Col.
S4	410	4	102	10 - 5	III	2-0	2-11	5					34 Ea. Col.
S5	411	4	51	7 - 11	III	2-11	9	5					17 Ea. Col.
S6	1112	11	60	8 - 7	I	7-0	1-7						20 Ea. Col.
T1	1113	11	7	23 - 4	I	21-9	1-7						
T2	1114	11	7	47 - 2	I	45-7	1-7						
T3	1115	11	7	12 - 0	STR								
T4	1116	11	14	19 - 5	IV	15-11	3-8						
T5	917	9	10	26 - 7	V	15-7	4-3	1-3	3-0	21-7			
T6	1118	11	14	33 - 6	STR.								
T7	619	6	4	33 - 0	STR.								
T8	620	6	6	6 - 11	VI	3-1	2-0						
T9	58NP521	5	216	12 - 1	III	2-0	3-8	6					

PIER 59N

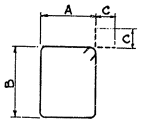
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	59NP501	5	37	12 - 6	STR.								
R2	902	9	73	15 - 0	II	12-6	1-3						
R3	1103	11	28	31 - 9	STR.								
R4	1104	11	14	20 - 7	I	19-0	1-7						
R5	1105	11	14	47 - 2	I	45-7	1-7						
R6	1106	11	13	40 - 0	STR.								
S1	1107	11	20	19 - 8	STR.								Int. Col.
S2	1108	11	20	19 - 3	STR.								
S3	1109	11	20	18 - 9	STR.								Ext. Col.
S4	410	4	102	10 - 5	III	2-0	2-11	5					34 Ea. Col.
S5	411	4	51	7 - 11	III	2-11	9	5					17 Ea. Col.
S6	1112	11	60	8 - 7	I	7-0	1-7						20 Ea. Col.
T1	1113	11	7	24 - 9	I	23-2	1-7						
T2	1114	11	7	51 - 4	I	49-9	1-7						
T3	1115	11	7	12 - 0	STR.								
T4	1116	11	14	19 - 5	IV	15-11	3-8						
T5	917	9	10	29 - 5	V	18-5	4-3	1-3	3-0	24-5			
T6	1118	11	14	36 - 6	STR.								
T7	619	6	4	35 - 9	STR.								
T8	620	6	6	6 - 11	VI	3-1	2-0						
T9	59NP521	5	224	12 - 1	III	2-0	3-8	6					



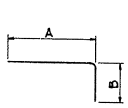
TYPE I



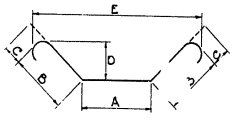
TYPE II



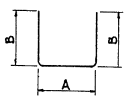
TYPE III



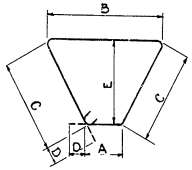
TYPE IV



TYPE V



TYPE VI



TYPE VII

Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 56N THRU 59N

APPROVED BY: Johannes R. Pancoast, Jr. BRIDGE ENGINEER — 9-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS

DWG. NO. SA107

Made by E.N.
Traced by E.N.
Checked by J.R.D.

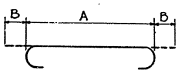
COUNTY	CONTRACT	F.A.S. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	142	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	H	REMARKS
PIER 1 RAMP A		1AP 1101	11	10	30-0	II	26-10	1-7							
	↑	1102	11	6	22-2	STR									
		603	6	2	22-10	V	12-0	4-8	8	4-10	3-10	3-8	3-5	3-3	
		604	6	2	19-6	V	6-0	6-0	8	6-2	4-8	4-6	4-4	4-2	
		605	6	2	26-10	STR									
		606	6	2	16-0	STR									
		607	6	8	5-1	VI	2-2	1-6							
		808	8	4	28-5	IV	6-10	10-7	11-0	3-6	4-10	9-11	9-11		
		409	4	90	11-8	VI	6-8	2-7							
		410	4	90	11-2	VII	9	4-2	2-10	5	2-3				
		1111	11	28	50-0	STR									
		1112	11	16	30-0	STR									
		1113	11	44	9-1	I	7-6	1-7							
		1114	11	25	23-2	II	20-0	1-7							
		1115	11	25	20-8	II	17-6	1-7							
	↓	516	5	30	10-11 TO 18-7	III	2-11	2-2 7/8 TO 6-0	6						15 Groups, 2ea. Δ=3½
		1AP 517	5	30	10-11 TO 19-1	III	2-11	2-2 7/8 TO 6-0	6						" " " Δ=3½
PIER 2 RAMP A		2AP 1101	11	10	30-0	II	26-10	1-7							
	↑	1102	11	6	22-2	STR									
		603	6	2	22-9	V	12-0	4-8	8	4-9	3-9	3-8	3-4	3-3	
		604	6	2	19-3	V	6-0	5-11	8	6-0	4-7	4-6	4-3	4-2	
		605	6	2	26-10	STR									
		606	6	2	16-0	STR									
		607	6	8	5-1	VI	2-2	1-6							
		808	8	4	28-3	IV	6-10	10-7	10-10	3-6	4-5	9-11	9-11		
		409	4	76	11-8	VI	6-8	2-7							
		410	4	76	11-2	VII	9	4-2	2-10	5	2-3				
		1111	11	28	43-0	STR									
		1112	11	16	30-0	STR									
		1113	11	44	9-1	I	7-6	1-7							
		1114	11	25	23-2	II	20-0	1-7							
		1115	11	25	20-8	II	17-6	1-7							
	↓	516	5	30	10-11 TO 18-3	III	2-11	2-2 7/8 TO 6-0	6						15 Groups, 2ea. Δ=3⅜
		2AP 517	5	30	10-11 TO 18-9	III	2-11	2-2 7/8 TO 6-7	6						" " " Δ=3⅜
PIER 3 RAMP A	R1	3AP 1101	11	17	16-2	II	13-0	1-7							
	R2 ↑	1102	11	13	19-8	II	16-6	1-7							
	S1	1003	10	30	25-3	STR									
	S2	404	4	42	9-6	VII	11	3-2	2-5	5	2-1				
	S3	405	4	42	10-8	VI	6-8	2-1							
	S4	1006	10	30	7-5	I	6-0	1-5							
	T1	1107	11	8	30-0	II	26-10	1-7							
	T2	1108	11	4	22-2	STR									
	T3	609	6	2	22-8	V	12-0	4-8	8	4-8	3-6	3-6	3-3	3-3	
	T4	610	6	2	18-8	V	6-0	5-8	8	5-8	4-3	4-3	4-0	4-0	
	T5	611	6	2	26-10	STR									
	T6	612	6	2	17-0	STR									
	T7	813	8	4	28-0	IV	6-10	10-7	10-7	3-6	3-6	9-11	9-11		
	T8 ↓	614	6	8	5-1	VI	2-2	1-6							
	T9	3AP 515	5	44	9-1 TO 15-9	III	2-7	2-2 7/8 TO 5-6	6						11 Groups, 4ea. Δ=4

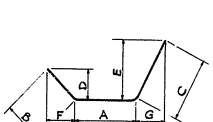
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	H	REMARKS
PIER 4 RAMP A	R1	4AP 901	9	15	12-0	II	9-6	1-3							
	R2 ↑	1102	11	10	19-8	II	16-6	1-7							
	S1	903	9	30	20-5	STR									
	S2	404	4	34	8-7	VII	8	2-8	2-4	5	2-1				
	S3	405	4	34	10-2	VI	6-8	1-10							
	S4	906	9	30	6-4	I	5-1	1-3							
	T1	1007	10	8	29-8	II	26-10	1-5							
	T2	1008	10	4	22-2	STR									
	T3	609	6	2	21-6	V	12-0	4-1	8	4-1	3-1	3-1	2-10	2-10	
	T4	610	6	2	17-4	V	6-0	5-0	8	5-0	3-9	3-9	3-6	3-6	
	T5	611	6	2	26-10	STR									
	T6	612	6	2	17-0	STR									
	T7	813	8	4	27-4	IV	6-10	10-3	10-3	2-6	2-6	9-11	9-11		
	T8	614	6	8	5-1	VI	2-2	1-6							
	T9	4AP 515	5	44	8-7 TO 13-3	III	1-9	2-2 7/8 TO 4-6	6						11 Groups, 4ea. Δ=2¾
PIER 5 RAMP A	R1	5AP 901	9	15	12-0	II	9-6	1-3							
	R2 ↑	1102	11	10	19-8	II	16-6	1-7							
	S1	903	9	30	13-9	STR									
	S2	404	4	20	8-7	VII	8	2-8	2-4	5	2-1				
	S3	405	4	20	10-2	VI	6-8	1-10							
	S4	906	9	30	6-4	I	5-1	1-3							
	T1	1007	10	8	29-8	II	26-10	1-5							
	T2	1008	10	4	22-2	STR									
	T3	609	6	2	21-6	V	12-0	4-1	8	4-1	3-1	3-1	2-10	2-10	
	T4	610	6	2	17-4	V	6-0	5-0	8	5-0	3-9	3-9	3-6	3-6	
	T5	611	6	2	26-10	STR									
	T6	612	6	2	17-0	STR									
	T7	813	8	4	27-4	IV	6-10	10-3	10-3	2-6	2-6	9-11	9-11		
	T8	614	6	8	5-1	VI	2-2	1-6							
	T9	5AP 515	5	44	8-7 TO 13-3	III	1-9	2-2 7/8 TO 4-6	6						11 Groups, 4ea. Δ=2¾

TYPE I



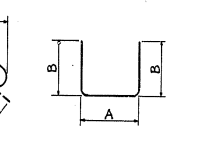
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

TYPE VII

Note:
All dimensions are out to out of bar.

Made by W.J.K.
Traced by W.J.K.
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PIERS 1 THRU 5 RAMP A

APPROVED BY: Wilmer E. Cannon Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA108

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	143	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

PIER 1 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
13P 501	5	18	41 - 2	STR								
↑ 502 Thru	5	84	9 - 7 To	I	9-0 To	7						6 Groups, 14 ea. Δ = 3
507			10 - 10		10-3							
508	6	46	9 - 10	II	8-6	8						
609	6	9	45 - 10	II	44-6	8						
510	5	18	5 - 6	VI	2-18	1-6						
↓ 511	5	2	9 - 7	I	9-0	7						
18P 512	5	2	10 - 10	I	10-3	7						

PIER 2 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
28P 501	5	22	34 - 4	STR								
↑ 502	5	70	12 - 5	I	11-10	7						
603	6	9	38 - 10	II	37-6	8						
↓ 604	6	39	9 - 10	II	8-6	8						
28P 505	5	22	5 - 6	VI	2-8	1-6						

PIER 3 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
38P 1001	10	8	31 - 10	II	29-0	1-5						
↑ 1002	10	4	24 - 4	STR.								
603	6	2	23 - 2	V	13-10	4-0	8	2-10	20-0			
604	6	2	20 - 2	V	8-10	5-0	8	3-6	16-4			
605	6	2	29 - 0	STR.								
606	6	2	19 - 6	STR.								
807	8	4	29 - 6	IV	9-2	10-2	2-6	9-10	28-10			
608	6	8	5 - 0	VI	2-2	1-6						
909	9	34	12 - 2	STR.								
910	9	34	6 - 6	I	5-3	1-3						
811	8	20	11 - 8	II	9-6	1-1						
1112	11	10	21 - 8	II	18-6	1-7						
↓ 413	4	16	12 - 6	VI	9-0	1-10						
38P 514	5	44	8 - 7 To	III	1-9	2-2 To	6					11 Groups, 4 ea. Δ = 2¾
			13 - 3			4-6						

PIER 4 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 48P 901	9	15	12 - 0	II	9-6	1-3						
R2 ↑ 1102	11	10	19 - 8	II	16-6	1-7						
S1 903	9	24	17 - 9	STR.								
S2 404	4	28	7 - 11	VII	8	2-8	2-0	5	1-9			
S3 405	4	28	8 - 8	VI	5-2	1-10						
S4 906	9	24	6 - 6	I	5-3	1-3						
T1 1007	10	8	26 - 8	II	23-10	1-5						
T2 1008	10	4	19 - 2	STR								
T3 ↑ 609	6	2	19 - 4	V	10-0	4-0	8	2-10	16-2			
T4 610	6	2	16 - 4	V	5-0	5-0	8	3-4	12-2			
T5 611	6	2	23 - 10	STR.								
T6 612	6	2	15 - 0	STR.								
T7 813	8	4	24 - 6	IV	5-6	9-6	2-6	9-2	23-10			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 48P 515	5	40	8 - 7 To	III	1-9	2-2 To	6					10 Groups, 4 ea. Δ = 3½
			13 - 3			4-6						

PIER 5 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 58P 901	9	15	12 - 0	II	9-6	1-3						
R2 ↑ 1102	11	10	19 - 8	II	16-6	1-7						
S1 903	9	24	21 - 2	STR.								
S2 404	4	34	7 - 11	VII	8	2-8	2-0	5	1-9			
S3 405	4	34	8 - 8	VI	5-2	1-10						
S4 906	9	24	6 - 6	I	5-3	1-3						
T1 1007	10	8	24 - 8	II	21-10	1-5						
T2 1008	10	4	17 - 2	STR								
T3 609	6	2	19 - 4	V	10-0	4-0	8	2-9	16-0			
T4 610	6	2	15 - 10	V	5-0	4-9	8	3-5	12-4			
T5 611	6	2	21 - 10	STR.								
T6 612	6	2	14 - 0	STR.								
T7 813	8	4	22 - 6	IV	5-6	8-6	2-6	8-1	21-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 58P 515	5	36	8 - 7 To	III	1-9	2-2 To	6					9 Groups, 4 ea. Δ = 3½
			13 - 3			4-6						

PIER 6 RAMP B

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 6BP 901	9	15	12 - 0	II	9-6	1-3						
R2 ↑ 1102	11	10	19 - 8	II	16-6	1-7						
S1 903	9	24	24 - 9	STR.								
S2 404	4	42	7 - 11	VII	8	2-8	2-0	5	1-9			
S3 405	4	42	8 - 8	VI	5-2	1-10						
S4 906	9	24	6 - 6	I	5-3	1-3						
T1 1007	10	8	24 - 8	II	21-10	1-5						
T2 1008	10	4	17 - 2	STR.								
T3 609	6	2	19 - 4	V	10-0	4-0	8	2-9	16-0			
T4 610	6	2	15 - 10	V	5-0	4-9	8	3-5	12-4			
T5 611	6	2	21 - 10	STR.								
T6 612	6	2	14 - 0	STR.								
T7 813	8	4	22 - 6	IV	5-6	8-6	2-6	8-1	21-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 6BP 515	5	36	8 - 7 To	III	1-9	2-2 To	6					9 Groups, 4 ea. Δ = 3½
			13 - 3			4-6						

PIER 1 RAMP C

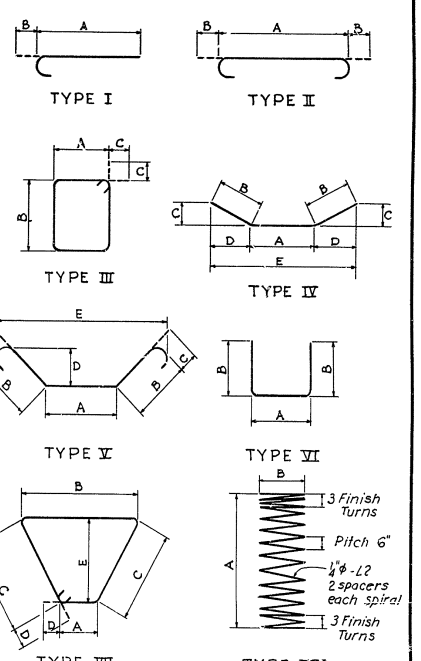
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 1CP 901	9	19	15 - 0	II	12-6	1-3						
R2 ↑ 902	9	14	20 - 0	II	17-6	1-3						
S1 903	9	30	18 - 4	STR.								
S2 404	4	30	8 - 7	VII	8	2-8	2-4	5	2-1			
S3 405	4	30	10 - 2	VI	6-8	1-10						
S4 906	9	30	7 - 0	I	5-9	1-3						
T1 1007	10	8	29 - 8	II	26-10	1-5						
T2 1008	10	4	22 - 2	STR								
T3 609	6	2	21 - 6	V	12-0	4-1	8	2-10	18-2			
T4 610	6	2	17 - 4	V	6-0	5-0	8	3-6	13-6			
T5 611	6	2	26 - 10	STR.								
T6 612	6	2	17 - 0	STR.								
T7 813	8	4	27 - 4	IV	6-10	10-3	2-6	9-11	26-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 1CP 515	5	44	8 - 7 To	III	1-9	2-2 To	6					11 Groups, 4 ea. Δ = 2¾
			13 - 3			4-6						

PIER 2 RAMP C

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1 2CP 901	9	19	15 - 0	II	12-6	1-3						
R2 ↑ 902	9	14	20 - 0	II	17-6	1-3						
S1 903	9	30	19 - 9	STR								
S2 404	4	32	8 - 7	VII	8	2-8	2-4	5	2-1			
S3 405	4	32	10 - 2	VI	6-8	1-10						
S4 906	9	30	7 - 0	I	5-9	1-3						
T1 1007	10	8	29 - 8	II	26-10	1-5						
T2 1008	10	4	22 - 2	STR.								
T3 609	6	2	21 - 6	V	12-0	4-1	8	2-10	18-2			
T4 610	6	2	17 - 4	V	6-0	5-0	8	3-6	13-6			
T5 611	6	2	26 - 10	STR								
T6 612	6	2	17 - 0	STR								
T7 813	8	4	27 - 4	IV	6-10	10-3	2-6	9-11	26-8			
T8 ↓ 614	6	8	5 - 0	VI	2-2	1-6						
T9 2CP 515	5	44	8 - 7 To	III	1-9	2-2 To	6					11 Groups, 4 ea. Δ = 2¾
			13 - 3			4-6						

*PILES

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
L1 PP 701	7	10458	12 - 0	STR								6 per pile (40 Ton)
L1 PP 702	7	1104	17 - 0	STR.								6 per pile (60 Ton)
L2 PP 203	4#	1739		VIII	9-8	7½						40 Ton piles
L2 PP 204	4#	184		VIII	14-8	9½						60 Ton piles



Note
All dimensions are out to out of bar.
* Quantities as given are for all 40 & 60 Ton piles in Mainline and Ramp Piers
Reinforcement bar marks L1 & L2 are included under Item 35.

Mode by E.N
Traced by E.N
Checked by J.R.D

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
PIERS I THRU 6 RAMP B
PIERS I & 2 RAMP C

APPROVED BY: _____ BRIDGE ENGINEER — 4-16-64 DATE

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

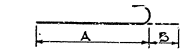
DWG. NO. SA109

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
R1	P1	501	5	182	2-6	I	1-11	7						14 Each Pad
	P5	502	5	26	13-7	II	3-3	3-2	3-3	3-2	6			2
R1A	P2	503	5	196	3-0	I	2-5	7						7
	P4	604	6	280	4-3	I	3-8	7						10
	P6	605	6	56	14-9	II	3-3	3-8	3-3	3-8	7			2
	P7	606	6	56	11-1	II	1-5	3-8	1-5	3-8	7			2
R1B	P2	503	5	28	3-0	I	2-5	7						7
	P4	604	6	40	4-3	I	3-8	7						10
	P8	607	6	8	14-5	II	3-0	3-8	3-0	3-8	7			2
	P9	608	6	8	10-11	II	1-4	3-8	1-4	3-8	7			2
R2	P1	501	5	3808	2-6	I	1-11	7						14
	P10	509	5	544	13-1	II	3-0	3-2	3-0	3-2	6			2
R2A	P2	503	5	1428	3-0	I	2-5	7						14
	P10	509	5	306	13-1	II	3-0	3-2	3-0	3-2	6			3
	P3				DELETED									
R3	P1	501	5	378	2-6	I	1-11	7						14
	P11	510	5	54	12-1	II	2-6	3-2	2-6	3-2	6			2
R3A	P2	503	5	154	3-0	I	2-5	7						14
	P11	510	5	33	12-1	II	2-6	3-2	2-6	3-2	6			3
R3B	P2	503	5	56	3-0	I	2-5	7						14
	P11	510	5	8	12-1	II	2-6	3-2	2-6	3-2	6			2
	P11A	511	5	4	9-3	II	1-1	3-2	1-1	3-2	6			1
R4	P2	503	5	24	3-0	I	2-5	7						12
	P12	512	5	4	10-3	II	1-7	3-2	1-7	3-2	6			2
R4A	P2	503	5	12	3-0	I	2-5	7						12
	P13	513	5	2	10-3	II	1-10	3-2	1-10	3-2	6			2
R5	P1	501	5	128	2-6	I	1-11	7						16
	P14	514	5	16	16-1	II	4-0	3-8	4-0	3-8	6			2 Each Pad
R6	P2	503	5	22	3-0	I	2-5	7						
	P4	604	6	34	4-3	I	3-8	7						
	P15	615	6	14	10-8	III	1-0	2-2	1-7	1-11	5-8	7		
	P16	616	6	5	11-9	II	1-11	3-6	1-11	3-6	7			
R7	P2	503	5	180	3-0	I	2-5	7						36 Each Group
	P13	513	5	30	10-3	II	1-10	3-2	1-10	3-2	6			6 " "
R7A	P2	503	5	36	3-0	I	2-5	7						
	P17	517	5	5	9-9	III	8	1-1	2-5	1-7	3-2	6		
	P18	518	5	2	9-3	IV	8	1-1	1-9	3-2	6	1-7		

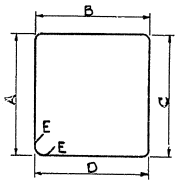
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	144	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



TYPE I



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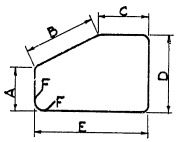
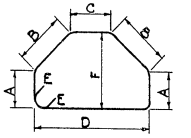


TYPE III



TYPE IV

Note:
All dimensions are out to out of bar

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

PADS R1 THRU R7A

APPROVED BY: Johnson R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA110

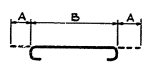
Made by R.G.
Traced by R.G.
Checked by F.Y.

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-02-004	2	DEL.	I-95-2 (12)	'64	145	215

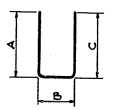
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
21S SLAB	S1	21S 501	5	168	41-9	Str.							
	S2	502		168	42-11	I	7	41-9					
	S3	503		81	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	504		81	6-9	II	3-1	9	3-1				" "
	S5	504		85	6-9	II	3-1	9	3-1				Interior Parapet
	S6	505		85	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	506		24	50-0	Str.							
	S10	506		29	50-0								
	S11	506		38	50-0								
	S12	507		12	31-6								
	S13	508		29	31-6 To								Δ=1⅝
					35-4								
	S14	509		38	31-6 To								Δ=1¼
					35-4								
	S15	510		12	35-3	Str.							
	S16	21S 511	5	25	5-9	IV	4-0	9½	6	7½	3	7	
22S SLAB	S1	22S 501	5	264	41-9	Str.							
	S2	502		264	42-11	I	7	41-9					
	S3	503		129	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	504		129	6-9	II	3-1	9	3-1				" "
	S5	504		132	6-9	II	3-1	9	3-1				Interior Parapet
	S6	505		132	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	506		48	50-0	Str.							
	S8	506		29	50-0								
	S9	506		38	50-0								
	S10	506		29	50-0								
	S11	506		38	50-0								
	S12	507		12	30-6								
	S13	508		29	30-6 To								Δ=1⅝
					34-3								
	S14	509		38	30-6 To								Δ=1¼
					34-4								
	S15	510		12	34-3	Str.							
	S16	511		25	5-9	IV	4-0	9½	6	7½	3	7	
	S17	22S 511	5	25	5-9	IV	4-0	9½	6	7½	3	7	
23S SLAB	S1	23S 501	5	90	41-9	Str.							
		502 Thru		64	41-10 To	Str.							16 Ea. Δ=2
		505			42-4								
		506 Thru		70	42-6 To	Str.							14 Ea. Δ=2½
		510			43-4								
		511 Thru		40	43-5 To	Str							8 Ea. Δ=2¼
		515			44-2								
	S2	516		90	42-11	I	7	41-9					
		517 Thru		64	43-0 To	I	7	41-10⅞					16 Ea. Δ=2
		520			43-6			42-4					
		521 Thru		70	43-8 To	I	7	42-6⅞					14 Ea. Δ=2½
		525			44-6			43-4					
		526 Thru		40	44-7 To	I	7	43-5⅞					8 Ea. Δ=2¼
		530			45-4			44-2					
	S3	531		128	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	532		128	6-9	II	3-1	9	3-1				" "
	S5	532		131	6-9	II	3-1	9	3-1				Interior Parapet
	S6	533		131	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	534		48	50-0	Str.							
	S8	534		29	50-0								
	S9	534		38	50-0								
	S10	534		29	50-0								
	S11	534		38	50-0								
	S12	535		12	29-7								
	S13	536		29	29-7 To								Δ=1⅝
					33-4								
	S14	537		38	29-7 To								Δ=1¼
					33-5								
	S15	538		12	33-4	Str.							
	S16	539		25	5-9	IV	4-0	9½	6	7½	3	7	
	S17	23S 539	5	25	5-9	IV	4-0	9½	6	7½	3	7	

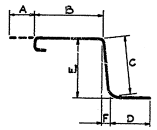
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
24S SLAB	S1	24S 501 Thru	5	90	44-3 To	Str.							18 Ea. Δ=2
		505			44-11								
		506		128	45-0	Str.							
	S2	507 Thru		90	45-5 To	I	7	44-3⅞					
		511			46-1			44-11					
		512		128	46-2	I	7	45-0					
	S3	513		107	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	514		107	6-9	II	3-1	9	3-1				" "
	S5	514		110	6-9	II	3-1	9	3-1				Interior Parapet
	S6	515		110	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	516		24	60-0	Str.							
	S8	516		29	60-0								
	S9	516		38	60-0								
	S10	517		12	47-0								
	S11	518		29	47-1 To								Δ=1¼
					50-0								
	S12	519		38	47-0 To								Δ=1
					50-1								
	S13	520		12	50-1	Str.							
	S14	521		25	5-9	IV	4-0	9½	6	7½	3	7	
	S15	24S 521	5	25	5-9	IV	4-0	9½	6	7½	3	7	
25S SLAB	S1	25S 501	5	204	45-0	Str.							
	S2	502		204	46-2	I	7	45-0					
	S3	503		100	4-3	III	7	1-5	1-4	1-1	1-4	1½	Exterior Parapet
	S4	504		100	6-9	II	3-1	9	3-1				" "
	S5	504		102	6-9	II	3-1	9	3-1				Interior Parapet
	S6	505		102	5-0	III	7	2-2	1-4	1-1	1-4	1½	" "
	S7	506		24	55-0	Str.							
	S8	506		29	55-0								
	S9	506		38	55-0								
	S10	507		12	44-10								
	S11	508		29	44-11 To								Δ=1¼
					47-10								
	S12	509		38	44-10 To								Δ=1
					47-11								
	S13	510		12	47-11	Str.							
	S14	511		25	5-9	IV	4-0	9½	6	7½	3	7	
	S15	25S 511	5	25	5-9	IV	4-0	9½	6	7½	3	7	



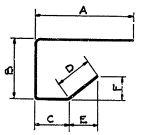
TYPE I



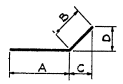
TYPE II



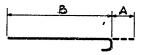
TYPE III



TYPE IV



TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 21S THRU 25S

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-15-64

SCALE: —

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 111

COUNTY	CONTRACT	V.R.A. REQ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	146	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 26S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	26S 501	5	47	24-11	Str.								
	502		47	45-1	Str.								
	503		48	45-3	Str.								
S2	504		47	46-1	I	7	44-11						
	505		47	46-3	I	7	45-1						
	506		48	46-5	I	7	45-3						
S3	507		70	4-3	III	7	1-5	1-4	1-1	1-1	1-4	1½	
S4	508		70	6-9	II	3-1	9	3-1					
S5	508		72	6-9	II	3-1	9	3-1					
S6	509		72	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	510		24	30-0	Str.								
S8	510		5	30-0									
S9	510		3	30-0									
S10	510		6	30-0									
S11	510		16	30-0									
S12	510		6	30-0									
S13	510		5	30-0									
S14	510		7	30-0									
S15	510		21	30-0									
S16	511		12	40-7									
S17	511		5	40-7									
S18	512		3	41-2									
S19	512		6	41-2									
S20	513		16	41-2 To									
				42-5									Δ=1
S21	514		12	42-5									
S22	511		5	40-7									
S23	512		5	41-2									
S24	512		7	41-2									
S25	515 Thru		21	41-2 To	Str.								
	521			42-5									3 Ea. Δ=2½
S26	522		4	5-9	IV	4-0	9½	6	7½	3	7		
S27	522		4	5-9	IV	4-0	9½	6	7½	3	7		
S28	522		5	5-9	IV	4-0	9½	6	7½	3	7		
S29	522		15	5-9	IV	4-0	9½	6	7½	3	7		
S30	522		3	5-9	IV	4-0	9½	6	7½	3	7		
S31	522		3	5-9	IV	4-0	9½	6	7½	3	7		
S32	522		5	5-9	IV	4-0	9½	6	7½	3	7		
S33	26S 522	5	15	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 27S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	27S 501 Thru	5	70	45-4 To	Str.								
	505			46-0									14 Ea. Δ=2
	506 Thru		78	46-2 To	Str								
	511			47-0									13 Ea. Δ=2
S2	512 Thru		70	46-6 To	I	7	45-4 To						
	516			47-2			46-0						14 Ea. Δ=2
	517 Thru		78	47-4 To	I	7	46-2 To						
	522			48-2			47-0						13 Ea. Δ=2
S3	523		73	4-3	III	7	1-5	1-4	1-1	1-1	1-4	1½	
S4	524		73	6-9	II	3-1	9	3-1					
S5	524		75	6-9	II	3-1	9	3-1					
S6	525		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	526		24	30-0	Str.								
S8	526		5	30-0									
S9	526		3	30-0									
S10	526		6	30-0									
S11	526		16	30-0									
S12	526		5	30-0									
S13	526		5	30-0									
S14	526		7	30-0									
S15	526		21	30-0									
S16	527		12	43-10									
S17	527		6	43-10									
S18	528		4	44-3									
S19	528		6	44-3									
S20	529 Thru		16	44-3 To									
	532			45-0									4 Ea. Δ=3
S21	533		12	45-2									
S22	527		6	43-10									
S23	528		6	44-3									
S24	27S 528	5	7	44-3	Str.								

SLAB 27S Cont.

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S25	27S 534 Thru	5	21	44-3 To	Str.								
	540			45-3									3 Ea. Δ=2
S26	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S27	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S28	541		5	5-9	IV	4-0	9½	6	7½	3	7		
S29	541		15	5-9	IV	4-0	9½	6	7½	3	7		
S30	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S31	541		4	5-9	IV	4-0	9½	6	7½	3	7		
S32	541		3	5-9	IV	4-0	9½	6	7½	3	7		
S33	27S 541	5	15	5-9	IV	4-0	9½	6	7½	3	7		

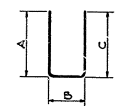
SLAB 28S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	28S 501 Thru	5	64	47-0 To	Str.								
	508			48-2									8 Ea. Δ=2
	509 Thru		84	48-4 To	Str.								
	520			50-2									7 Ea. Δ=2
S2	521 Thru		64	48-2 To	I	7	47-0 To						
	528			49-4			48-2						8 Ea. Δ=2
	529 Thru		84	49-6 To	I	7	48-4 To						
	540			51-4			50-2						7 Ea. Δ=2
S3	541		74	4-3	III	7	1-5	1-4	1-1	1-4	1½		
S4	542		74	6-9	II	3-1	9	3-1					
S5	542		75	6-9	II	3-1	9	3-1					
S6	543		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	544		24	30-0	Str.								
S8	544		6	30-0									
S9	544		4	30-0									
S10	544		6	30-0									
S11	544		16	30-0									
S12	544		7	30-0									
S13	544		7	30-0									
S14	544		7	30-0									
S15	544		21	30-0									
S16	545		12	44-4									
S17	546		7	44-8									
S18	546		5	44-8									
S19	546		6	44-8									
S20	547		16	45-1									
S21	547		12	45-1									
S22	546		8	44-8									
S23	546		8	44-8									
S24	546		7	44-8									
S25	547		21	45-1	Str.								
S26	548		5	5-11	III	4-0	9½	8	7½	3	7		
S27	548		5	5-11	III	4-0	9½	8	7½	3	7		
S28	548		5	5-11	III	4-0	9½	8	7½	3	7		
S29	548		15	5-11	III	4-0	9½	8	7½	3	7		
S30	549		4	5-9	III	4-0	9½	6	7½	3	7		
S31	549		4	5-9	III	4-0	9½	6	7½	3	7		
S32	549		5	5-9	III	4-0	9½	6	7½	3	7		
S33	28S 549	5	15	5-9	III	4-0	9½	6	7½	3	7		

SLAB 29S

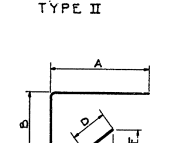
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	29S 501	5	150	6-9	II	3-1	9	3-1					
	502		25	4-3	III	7	1-5	1-4	1-1	1-4	1½		
	503		25	4-4	III	7	1-6	1-4	1-1	1-4	1½		
	504		25	4-5	III	7	1-7	1-4	1-1	1-4	1½		
	505		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	506		103	30-1	Str.								
	507		106	45-0	Str.								
	508		33	5-9	IV	4-0	9½	6	7½	3	7		
	509 Thru		108	51-5 To	I	7	50-3 To						
	520			53-8			52-6						9 Ea. Δ=2½
	521 Thru		40	53-10 To	I	7	52-8 To						
	524			54-6			53-4						10 Ea. Δ=2½
	525 Thru		108	50-3 To	Str.								
	536			52-6									9 Ea. Δ=2½
	537 Thru		40	52-8 To	Str.								
	540			53-4									10 Ea. Δ=2½
	29S 541	5	31	5-11	III	4-0	9½	8	7½	3	7		

TYPE I



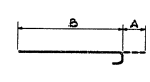
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 26S THRU 29S

APPROVED BY: Johnnie R. Chaney Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA112

COUNTY	CONTRACT	R.R.A. REQ. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	147	215

INTERSTATE HIGHWAY ROUTE I - 95
SOUTH WILMINGTON VIADUCT

SLAB 30S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	305 501	5	150	6 - 9	II	3-1	9	3-1					
↑	502	↑	25	4 - 6	III	7	1-8	1-4	1-1	1-4	1½		
	503		25	4 - 7	III	7	1-9	1-4	1-1	1-4	1½		
	504		25	4 - 8	III	7	1-10	1-4	1-1	1-4	1½		
	505		75	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	506		106	30 - 2	Str.								
	507		110	45 - 0	Str.								
	508		35	5 - 11	IV	4-0	9½	8	7½	3	7		
	509 Thru		108	54 - 7 To	I	7	53-5½						9 Ea., Δ = 2½
	520			56 - 10			55-8						
	521 Thru		40	57 - 0 To	I	7	55-10½						10 Ea., Δ = 2½
	524			57 - 8			56-6						
	525 Thru		108	53 - 5 To	Str.								9 Ea., Δ = 2½
	536			55 - 8									
	537 Thru		40	55 - 10 To	Str.								10 Ea., Δ = 2½
↓	540	↓		56 - 6									
	305 541	5	33	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 31S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	315 501	5	150	6 - 9	II	3-1	9	3-1					
↑	502	↑	25	4 - 9	III	7	1-11	1-4	1-1	1-4	1½		
	503		25	4 - 10	III	7	2-0	1-4	1-1	1-4	1½		
	504		100	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	505		113	30 - 2	Str.								
	506		116	45 - 0	Str.								
	507		37	5 - 9	IV	4-0	9½	6	7½	3	7		
	508 Thru		108	57 - 8 To	I	7	56-6½						9 Ea., Δ = 2½
	519			59 - 11			58-9						
	520 Thru		40	60 - 1 To	I	7	58-11½						10 Ea., Δ = 2½
	523			60 - 9			59-7						
	524 Thru		108	56 - 6 To	Str.								9 Ea., Δ = 2½
	535			58 - 9									
	536 Thru		40	58 - 11 To	Str.								10 Ea., Δ = 2½
↓	539	↓		59 - 7									
	315 540	5	37	5 - 11	IV	4-0	9½	8	7½	3	7		

SLAB 32S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	325 501	5	276	6 - 9	II	3-1	9	3-1					
↑	502	↑	276	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	503		241	44 - 0	Str.								
	504		122	52 - 3	Str.								
	505		40	5 - 11	IV	4-0	9½	8	7½	3	7		
	506		138	33 - 5	Str.								
	507		138	37 - 10	VI	7	37-3						
	508		138	41 - 0	Str.								
	509		138	30 - 3	VI	7	29-8						
	510 Thru		130	32 - 6 To	VI	7	31-11 To						5 Ea., Δ = 2½
	535			37 - 9			37-2						
	536		4	38 - 0	VI	7	37-5						
	537		4	38 - 3	VI	7	37-8						
	538 Thru		130	20 - 4 To	Str.								5 Ea. Δ = 2½
	563			25 - 7									
	564		4	25 - 10	Str.								
	565		4	26 - 1	Str.								
	566 Thru		130	24 - 9 To	VI	7	24-2½						5 Ea., Δ = 2½
	591			30 - 0			29-5						
	592		4	30 - 3	VI	7	29-8						
	593		4	30 - 6	VI	7	29-11						
	594 Thru		130	27 - 11 To	Str.								5 Ea. Δ = 2½
	5119			33 - 2									
	5120		4	33 - 5	Str.								
↓	5121	↓	4	33 - 8	Str.								
	325 5122	5	37	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 33S

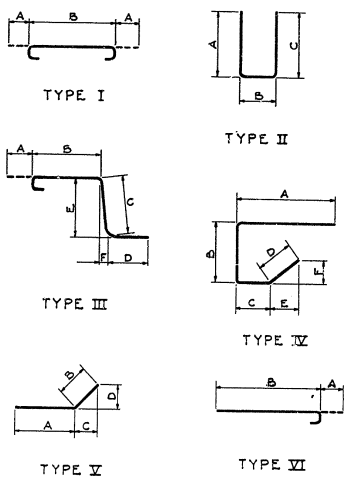
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	335 501	5	126	6 - 9	II	3-1	9	3-1					
↑	502	↑	61	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		
	503		65	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
	504		77	40 - 0	Str.								
	505		3	36 - 6									
	506		6	35 - 0									
	507		12	26 - 6									
	508		13	26 - 4									
	509		11	26 - 2									
	510		13	26 - 0									
	511		11	25 - 10									
	512		26	25 - 8	Str.								
	513		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	514		6	42 - 5	Str.								
	515		6	43 - 7	I	7	42-5						
	516		123	41 - 9	Str.								
↓	517	↓	123	42 - 11	I	7	41-9						
	335 518	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		

SLAB 34S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	345 501	5	139	41 - 9	Str.								
S2	↑ 502	↑	139	42 - 11	I	7	41-9						
S3	503		70	4 - 3	III	7	1 -5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		70	6 - 9	II	3-1	9	3-1					" "
S5	504		63	6 - 9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40 - 0	Str.								
S8	506		27	40 - 0									
S9	506		36	40 - 0									
S10	507		12	30 - 7									
S11	508 Thru		27	30 - 7 To									3 Ea., Δ = 1½
	516			29 - 7									
S12	517 Thru		36	30 - 7 To									4 Ea., Δ = 1½
	525			29 - 7									
S13	526		12	29 - 6	Str.								
S14	↓ 527	↓	25	5 - 9	IV	4-0	9½	6	7½	3	7		
S15	345 527	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 35S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	355 501	5	140	41 - 9	Str.								
S2	↑ 502	↑	140	42 - 11	I	7	41-9						
S3	503		71	4 - 3	III	7	1 -5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6 - 9	II	3-1	9	3-1					" "
S5	504		69	6 - 9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40 - 0	Str.								
S8	506		27	40 - 0									
S9	506		36	40 - 0									
S10	507		12	31 - 3									
S11	508 Thru		27	31 - 2 To									3 Ea. Δ = 2½
	516			29 - 9									
S12	517 Thru		36	31 - 2 To									4 Ea. Δ = 2½
	525			29 - 9									
S13	526		12	29 - 8	Str.								
S14	↓ 527	↓	25	5 - 11	IV	4-0	9½	8	7½	3	7		
S15	355 528	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		



Note
All dimensions are out to out of bar

Mode by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 30S THRU 35S

APPROVED BY: Dennis R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA113

COUNTY	CONTRACT	R.A.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-01-006	2	DEL.	I-95-2(12)	'64	148	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 36S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	↺	REMARKS
S1	36S501	5	145	41-9	Str.								
S2	↑ 502	↑	145	42-11	I	7	41-9						
S3	503		73	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		73	6-9	II	3-1	9	3-1					" "
S5	504		71	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	33-8									
S11	508Thru		27	33-8 To									3 Ea. Δ=2½
	516			32-0									
S12	517Thru		36	33-8 To									4 Ea. Δ=2½
	525			32-0	↓								
S13	526		12	31-11	Str.								
S14	↓ 527	↓	25	5-9	IV	4-0	9½	6	7½	3	7		
S15	36S528	5	25	5-11	III	4-0	9½	8	7½	3	7		

SLAB 37S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	↺	REMARKS
S1	37S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	37S528	5	25	5-9	III	4-0	9½	6	7½	3	7		

SLAB 38S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	↺	REMARKS
S1	38S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	6	7½	3	7		
S15	38S528	5	25	5-9	III	4-0	9½	8	7½	3	7		

SLAB 39S

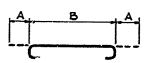
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	39S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	39S528	5	25	5-9	III	4-0	9½	6	7½	3	7		

SLAB 40S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	40S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	40S528	5	25	5-11	IV	4-0	9½	6	7½	3	7		

SLAB 41S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	41S501	5	141	41-9	Str.								
S2	↑ 502	↑	141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0	↓								
S9	506		36	40-0									
S10	507		12	31-6									
S11	508Thru		27	31-5 To									3 Ea. Δ=2½
	516			29-11									
S12	517Thru		36	31-5 To									4 Ea. Δ=2½
	525			29-11	↓								
S13	526		12	29-10	Str.								
S14	↓ 527	↓	25	5-11	IV	4-0	9½	8	7½	3	7		
S15	41S528	5	25	5-9	IV	4-0	9½	6	7½	3	7		



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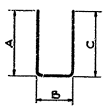
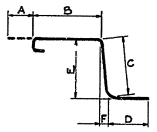
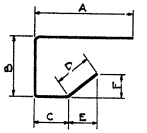


TYPE II



TYPE III



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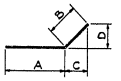

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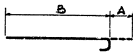


TYPE VI

Note
All dimensions are out to out of bar

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 36S THRU 41S

APPROVED BY: Louis D. Pearson Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA114

Made by E.N
Traced by E.N
Checked by J.R.D

COUNTY	CONTRACT	R.A.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	109	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 42S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	425501	5	141	41-9	Str.								
S2	502		141	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	31-6									
S11	508 Thru		27	31-5 To									3 Ea. Δ=2¼
	516			29-11									
S12	517 Thru		36	31-5 To									4 Ea. Δ=2¼
	525			29-11									
S13	526		12	29-10	Str.								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	425528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 43S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	435501	5	140	41-9	Str.								
S2	502		140	42-11	I	7	41-9						
S3	503		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		71	6-9	II	3-1	9	3-1					" "
S5	504		69	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		69	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	31-2									
S11	508 Thru		27	31-2 To									3 Ea. Δ=2¼
	516			29-8									
S12	517 Thru		36	31-2 To									4 Ea. Δ=2¼
	525			29-8									
S13	526		12	29-7	Str.								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	435528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 44S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	445501	5	145	41-9	Str.								
S2	502		145	42-11	I	7	41-9						
S3	503		73	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		73	6-9	II	3-1	9	3-1					" "
S5	504		72	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		72	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	40-0	Str.								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	33-6									
S11	508 Thru		27	33-6 To									3 Ea. Δ=1½
	516			32-6									
S12	517 Thru		36	33-6 To									4 Ea. Δ=1½
	525			32-6									
S13	526		12	32-6	Str.								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	445528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 45S

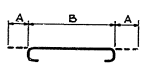
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	455501	5	162	41-9	Str.								
S2	502		162	42-11	I	7	41-9						
S3	503		82	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		82	6-9	II	3-1	9	3-1					" "
S5	504		81	6-9	II	3-1	9	3-1					Interior Parapet
S6	505		81	5-0	III	7	2-2	1-4	1-1	1-4	1½		" "
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	32-0									
S11	508 Thru		27	32-0 To									3 Ea. Δ=1
	516			31-4									
S12	517 Thru		36	32-0 To									4 Ea. Δ=1
	525			31-4									
S13	526		12	31-4	Str.								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	455528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 46S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	465501	5	150	41-9	Str.								
S2	502		150	42-11	I	7	41-9						
S3	503		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		76	6-9	II	3-1	9	3-1					" "
S5	504		76	6-9	II	3-1	9	3-1					
S6	505		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	26-1									
S11	507		27	26-1									
S12	507		36	26-1									
S13	507		12	26-1	Str.								
S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	465509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 47S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	475501	5	150	41-9	Str.								
S2	502		150	42-11	I	7	41-9						
S3	503		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		76	6-9	II	3-1	9	3-1					" "
S5	504		76	6-9	II	3-1	9	3-1					
S6	505		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	26-1									
S11	507		27	26-1									
S12	507		36	26-1									
S13	507		12	26-1	Str.								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	475509	5	25	5-9	IV	4-0	9½	6	7½	3	7		



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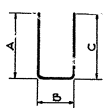

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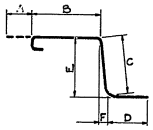

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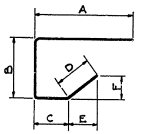
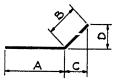
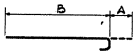


TYPE IV



TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 42S THRU 47S

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA115

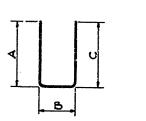
COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	150	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

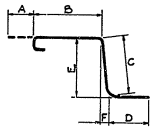
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 48S	S1	485501	5	120	41 - 9	Str.								
	S2	502		120	42 - 11	I	7	41-9						
	S3	503		61	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		61	6 - 9	II	3-1	9	3-1					
	S5	504		61	6 - 9	II	3-1	9	3-1					
	S6	505		61	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	59 - 5	Str.								
	S8	506		27	59 - 5	Str.								
	S9	506		36	59 - 5	Str.								
	S10	507		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S11	485508	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		
SLAB 49S	S1	495501	5	188	41 - 9	Str.								
	S2	502		188	42 - 11	I	7	41-9						
	S3	503		95	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		95	6 - 9	II	3-1	9	3-1					
	S5	504		95	6 - 9	II	3-1	9	3-1					
	S6	505		95	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	55 - 0	Str.								
	S8	506		27	55 - 0									
	S9	506		36	55 - 0									
	S10	507		12	40 - 1									
	S11	507		27	40 - 1									
	S12	507		36	40 - 1									
	S13	507		12	40 - 1	Str.								
	S14	508		25	5 - 11	IV	4-0	9½	8	7½	3	7		
	S15	495509	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		
SLAB 50S	S1	505501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S15	505509	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		
SLAB 51S	S1	515501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 11	IV	4-0	9½	8	7½	3	7		
	S15	415 509	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 52S	S1	525501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	50		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S15	525509	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		
SLAB 53S	S1	535501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 11	IV	4-0	9½	8	7½	3	7		
	S15	535509	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		
SLAB 54S	S1	545501	5	140	41 - 9	Str.								
	S2	502		140	42 - 11	I	7	41-9						
	S3	503		71	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S4	504		71	6 - 9	II	3-1	9	3-1					
	S5	504		71	6 - 9	II	3-1	9	3-1					
	S6	505		71	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S7	506		24	50 - 0	Str.								
	S8	506		27	50 - 0									
	S9	506		36	50 - 0									
	S10	507		12	21 - 1									
	S11	507		27	21 - 1									
	S12	507		36	21 - 1									
	S13	507		12	21 - 1	Str.								
	S14	508		25	5 - 9	IV	4-0	9½	6	7½	3	7		
	S15	545509	5	25	5 - 11	IV	4-0	9½	8	7½	3	7		

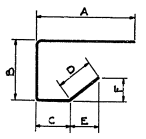
TYPE I



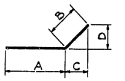
TYPE II



TYPE III



TYPE IV



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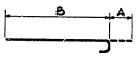


TYPE VI

Note:
All dimensions are out to out of bar.

Made by E.N.
Traced by E.N.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 48S THRU 54S

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA116

COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	151	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 55S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	55S501	5	164	41-9	Str.								
S2	502		164	42-11	I	7	41-9						
S3	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		83	6-9	II	3-1	9	3-1					
S5	504		83	6-9	II	3-1	9	3-1					
S6	505		83	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	33-1									
S11	507		27	33-1									
S12	507		36	33-1									
S13	507		12	33-1	Str.								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	55S509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 56S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	56S501	5	164	41-9	Str.								
S2	502		164	42-11	I	7	41-9						
S3	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		83	6-9	II	3-1	9	3-1					
S5	504		83	6-9	II	3-1	9	3-1					
S6	505		83	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	33-1									
S11	507		27	33-1									
S12	507		36	33-1									
S13	507		12	33-1	Str.								
S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	56S509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 57S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	57S501	5	164	41-9	Str.								
S2	502		164	42-11	I	7	41-9						
S3	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		83	6-9	II	3-1	9	3-1					
S5	504		83	6-9	II	3-1	9	3-1					
S6	505		83	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	33-1									
S11	507		27	33-1									
S12	507		36	33-1									
S13	507		12	33-1	Str.								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	57S509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

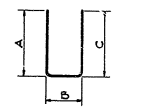
SLAB 58S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	58S501	5	186	41-9	Str.								
S2	502		186	42-11	I	7	41-9						
S3	503		94	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S4	504		94	6-9	II	3-1	9	3-1					
S5	504		94	6-9	II	3-1	9	3-1					
S6	505		94	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S7	506		24	50-0	Str.								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	44-1									
S11	507		27	44-1									
S12	507		36	44-1									
S13	507		12	44-1	Str.								
S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	58S509	5	25	5-11	IV	4-0	9½	9	7½	3	7		

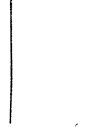
SLAB 59S

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	59S501	5	118	41-9	Str.								
S2	502		118	42-11	I	7	41-9						
S3	503		60	4-3	III	7	1'-5	1-4	1-1	1-4	1½		
S4	504		60	6-9	II	3-1	9	3-1					
S5	504		60	6-9	II	3-1	9	3-1					
S6	505		60	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S7	506		24	58-8	Str.								
S8	506		27	58-8	Str.								
S9	506		36	58-8	Str								
S10	507		25	8-9	III	5'-6	9½	2'-0	7½	3	7		
S11	508		25	5-9	IV	4-0	9½	6	7½	3	7		
S12	59S509	5	2	37-5	Str.								

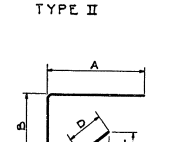
TYPE I



TYPE II

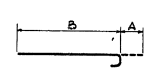


TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Mode by E.N.
Traced by E.N.
Checked by J.P.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 55S. THRU 59S

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER — DATE

SCALE: —
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 117

COUNTY	CONTRACT	F.A.P. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	152	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

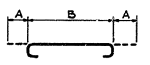
SLAB 21N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
21N 501	5	180	6-9	II	3-1	9	3-1					
502		93	4-3	III	7	1-5	1-4	1-1	1-4	1½		
503		87	5-0	III	7	2-2	1-4	1-1	1-4	1½		
504		121	50-0	STR								
505		16	37-10									
506		13	38-7									
507		11	39-4									
508		13	40-1									
509		11	40-10									
510		13	41-6									
511		11	42-2									
512		13	42-10									
513		26	45-6	STR								
514 thru		63	23-10 to	VI	7	23-3 to						9 Ea. Δ = 2
520			24-10			24-3						
521 thru		30	25-0 to	VI	7	24-5 to						10 Ea. Δ = 2
523			25-4			24-9						
524 thru		63	27-0 to	STR								9 Ea. Δ = 2
530			28-0									
531 thru		30	28-2 to	STR								10 Ea. Δ = 2
533			28-6									
534 thru		72	16-1 to	VI	7	15-6 to						9 Ea. Δ = 2
541			17-3			16-8						
542		10	17-5	VI	7	16-10						
543		10	17-7	VI	7	17-0						
544 thru		72	19-3 to	STR								9 Ea. Δ = 2
551			20-5									
552		10	20-7	STR								
553		10	20-9	STR								
554 thru		92	45-3 to	STR								4 Ea. Δ = 1½
576			48-0									
577 thru		92	49-7 to	VI	7	49-0 to						4 Ea. Δ = 1½
599			52-4			51-9						
5100		5	37-6	STR								
5101 thru		88	37-8 to	STR								4 Ea. Δ = 1½
5122			40-3									
5123		5	41-10	VI	7	41-3						
5124 thru		88	42-0 to	VI	7	41-5 to						4 Ea. Δ = 1½
5145			44-7			44-0						
21N 5146	5	40	5-9	IV	4-0	9½	6	7½	5	7		

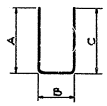
SLAB 22N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
22N 501	5	276	6-9	II	3-1	9	3-1					
502		141	4-3	III	7	1-5	1-4	1-1	1-4	1½		
503		135	5-0	III	7	2-2	1-4	1-1	1-4	1½		
504		267	55	STR								
505		18	27-0									
506		15	27-9									
507		11	28-5									
508		13	29-2									
509		11	29-10									
510		13	30-6									
511		11	31-3									
512		13	31-10									
513		11	32-5									
514		13	33-0									
515		14	33-3	STR								
516 thru		70	25-1 to	VI	7	24-6 to						7 Ea. Δ = 2½
525			23-2			22-7						
526		8	23-4	VI	7	22-9						
527 thru		63	23-6 to	VI	7	23-1 to						7 Ea. Δ = 1⅞
535			24-9			24-2						
536 thru		70	28-3 to	STR								7 Ea. Δ = 2¾
545			26-2									
546		8	26-3	STR								
547 thru		63	26-4 to	STR								7 Ea. Δ = 1⅞
555			27-7									
556 thru		70	17-7 to	VI	7	17-0 to						7 Ea. Δ = 2⅛
565			16-0			15-5						
566 thru		70	16-3 to	VI	7	15-8 to						7 Ea. Δ = 2⅛
575			17-10			17-3						
576 thru		70	20-9 to	STR								7 Ea. Δ = 2⅝
585			19-0									
586 thru		70	19-1 to	STR								7 Ea. Δ = 2¼
595			20-9									
596 thru		72	48-1 to	STR								4 Ea. Δ = 2¾
5113			52-0									
5114 thru		68	51-9 to	STR								17 Ea. Δ = 3
5117			51-0									
5118 thru		72	52-4 to	VI	7	51-9 to						4 Ea. Δ = 2⅝
5135			56-0			55-5						
5136 thru		68	55-9 to	VI	7	55-2 to						17 Ea. Δ = 3
5139			55-0			54-5						
5140 thru		72	40-6 to	STR								4 Ea. Δ = 3
5157			44-9									
5158 thru		69	44-6 to	STR								23 Ea. Δ = 3
5160			44-0									
5161 thru		72	44-10 to	VI	7	44-3 to						4 Ea. Δ = 3
5178			49-0			48-5						
5179 thru		69	48-9 to	VI	7	48-2 to						23 Ea. Δ = 3
5181			48-3			47-8						
5182		87	5-9	IV	4-0	9½	6	7½	5	7		
5185 thru		70	9-0 to	STR								10 Ea. Δ = 2½
22N 5189	5		10-3									

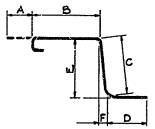
TYPE I



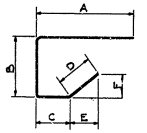
TYPE II



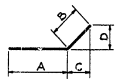
TYPE III



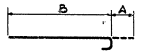
TYPE IV



TYPE V



TYPE VI



Note:
All dimensions are out to out of bar.

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 21N & 22N

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA118

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	153	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 23N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
23N 501	5	274	6 - 9	II	3-1	9	3-1					
502	↑	153	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
503		25	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		
504 thru		96	4 - 4 to	III	7	1-6 to	1-4	1-1	1-4	1½		12 Ea. Δ = 1
511			4 - 11			2-1						
512		90	5 - 9	IV	4-0	9½	6	7½	3	7		
513		267	50 - 0	STR								
514		18	36 - 3	↑								
515		12	36 - 11									
516		10	37 - 8									
517		12	38 - 3									
518		10	39 - 0									
519		12	39 - 8									
520		11	40 - 3									
521		12	40 - 10									
522		10	41 - 5									
523	↓	12	42 - 0	↓								
524	5	14	42 - 2	STR								
725 thru	7	72	18 - 4 to	VI	10	17-6 to						12 Ea. Δ = 4
730			16 - 8			15-10						
731	7	12	16 - 10	VI	10	16-0						
732 thru	7	56	17 - 0 to	VI	10	16-2 to						14 Ea. Δ = 4
735			18 - 0			17-2						
536 thru	5	72	27 - 7 to	STR								12 Ea. Δ = 3
541			26 - 4									
542	5	12	26 - 7	STR								
543 thru	5	56	26 - 10 to	STR								14 Ea. Δ = 3
546			27 - 7									
747 thru	7	72	25 - 2 to	VI	10	24-4 to						12 Ea. Δ = 4
752			23 - 6			22-8						
753	7	11	23 - 8	VI	10	22-10						
754 thru	7	56	23 - 10 to	VI	10	23-0 to						14 Ea. Δ = 4
757			24 - 10			24-0						
558 thru	5	72	20 - 9 to	STR								12 Ea. Δ = 3
563	↑		19 - 6									
564		11	19 - 9	STR								
565 thru		56	20 - 0 to	STR								14 Ea. Δ = 3
568			20 - 9									
569 thru		72	51 - 6 to	STR								8 Ea. Δ = 2
577			52 - 10									
578		7	52 - 8	STR								
579 thru		60	52 - 7 to	STR								10 Ea. Δ = 2
584			51 - 9									
585 thru		72	49 - 0 to	VI	7	48-5 to						8 Ea. Δ = 2
593			50 - 4			49-9						
594		7	50 - 3	VI	7	49-8						
595 thru		60	50 - 2 to	VI	7	49-7 to						10 Ea. Δ = 2
5100			49 - 4			48-9						
5101 thru		72	44 - 10 to	STR								8 Ea. Δ = 2
5109			46 - 2									
5110		8	46 - 1	STR								
5111 thru		60	45 - 11 to	STR								10 Ea. Δ = 2
5116			45 - 1									
5117 thru		72	55 - 11 to	VI	7	55-4 to						8 Ea. Δ = 2
5125			57 - 3			56-8						
5126	↓	8	57 - 2	VI	7	56-7						
5127 thru	↑	60	57 - 1 to	VI	7	56-6 to						10 Ea. Δ = 2
23N 5132	5		56 - 3			55-8						

SLAB 24N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
24N 501	5	223	6 - 9	II	3-1	9	3-1					
502	↑	112	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		
503		111	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		
504		50	5 - 9	IV	4-0	9½	6	7½	3	7		
505		83	60 - 0	STR								
506		15	52 - 6	↑								
507		13	55 - 0									
508		11	53 - 7									
509		13	54 - 2									
510		11	54 - 9									
511		27	55 - 6									
512		3	56 - 6	↓								
513		6	55 - 0	STR								
514		6	43 - 7	I	7	42-5						
515		6	42 - 5	STR								
516		223	42 - 11	I	7	41-9						
517		223	41 - 9	STR								
518 thru	↓	42	11 - 3 to	STR								7 Ea. Δ = 3
24N 523	5		10 - 0									

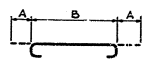
SLAB 25N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1 25N 501	5	213	41 - 9	STR								
S2 ↑ 502	↑	213	42 - 11	I	7	41-9						
S3 503		104	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4 504		104	6 - 9	II	3-1	9	3-1					
S5 504		107	6 - 9	II	3-1	9	3-1					
S6 505		107	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7 506		24	60 - 0	STR								
S8 506		28	60 - 0	↑								
S9 506		37	60 - 0									
S10 507		12	44 - 9									
S11 508		28	44 - 9 to									Δ = 1½
			47 - 7									
S12 509		37	44 - 9 to									Δ = 1
			47 - 9	↓								
S13 510		12	47 - 7	STR								
S14 ↓ 511	↓	25	5 - 9	IV	4-0	9½	6	7½	3	7		
S15 25N 511	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

SLAB 26N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1 26N 501	5	146	41 - 9	STR								
S2 ↑ 502	↑	146	42 - 11	I	7	41-9						
S3 503		72	5 - 0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4 504		72	6 - 9	II	3-1	9	3-1					
S5 504		74	6 - 9	II	3-1	9	3-1					
S6 505		74	4 - 3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7 506		24	40 - 0	STR								
S8 506		28	40 - 0	↑								
S9 506		37	40 - 0									
S10 507		12	33 - 0									
S11 508 thru		28	33 - 1 to									4 Ea. Δ = 3
514			34 - 7									
S12 515 thru		37	33 - 1 to									8 Groups 4 Ea., 1 Group 5 Δ = 2¼
524			34 - 7									
S13 525		12	34 - 7	STR								
S14 ↓ 526	↓	25	5 - 9	IV	4-0	9½	6	7½	3	7		
S15 26N 526	5	25	5 - 9	IV	4-0	9½	6	7½	3	7		

TYPE I



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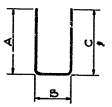

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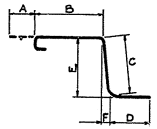

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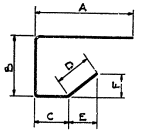

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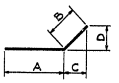
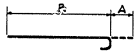


TYPE VI



Note:
All dimensions are out to out of bar.

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 23N THRU 26N

APPROVED BY: Lawrence B. Peasong Jr. 9-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA119

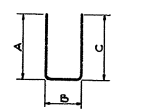
COUNTY	CONTRACT	F.A.P. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	154	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 27N	S1	27N 501	5	151	41-9	STR								
	S2	502		151	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		76	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-5									
	S11	508 thru		27	25-6 to									3 Ea. Δ+1½
		516			26-6									
	S12	517 thru		36	25-6 to									4 Ea. Δ+1½
		525			26-6									
	S13	526		12	26-7	STR								
	S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	27N 527	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 28N	S1	28N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		26	50-0									
	S9	506		35	50-0									
	S10	507		12	25-4									
	S11	508		9	25-6									
		509		9	25-8									
		510		8	25-10									
	S12	511 thru		35	25-6 to									7 Ea. Δ+1
		515			25-10									
	S13	516		12	25-11	STR								
	S14	517		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	28N 518	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 29N	S1	29N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-2									
	S11	507		27	25-2									
	S12	507		36	25-2									
	S13	507		12	25-2	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	29N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

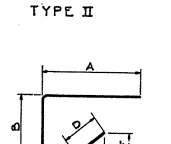
		MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 30N	S1	30N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-2									
	S11	507		36	25-2									
	S12	507		36	25-2									
	S13	507		12	25-2	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	30N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 31N	S1	31N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		75	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		75	6-9	II	3-1	9	3-1					
	S5	504		75	6-9	II	3-1	9	3-1					
	S6	505		75	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	25-2									
	S11	507		27	25-2									
	S12	507		36	25-2									
	S13	507		12	25-2	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	31N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 32N	S1	32N 501	5	275	41-9	STR								
	S2	502		275	42-11	I	7	41-9						
	S3	503		138	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		138	6-9	II	3-1	9	3-1					
	S5	504		138	6-9	II	3-1	9	3-1					
	S6	505		138	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		48	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	506		27	50-0									
	S11	506		36	50-0									
	S12	507		12	40-0									
	S13	507		27	40-0									
	S14	507		36	40-0									
	S15	508		12	39-7	STR								
	S16	509		25	5-11	IV	4-0	9½	8	7½	3	7		
	S17	32N 510	5	25	5-9	IV	4-0	9½	6	7½	3	7		

TYPE I



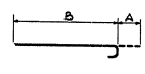
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar.

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 27N THRU 32N

APPROVED BY: Dennis D. Canavan Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 120

COUNTY	CONTRACT	C.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	155	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

33N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	33N 501	5	129	41-9	STR								
S2	502		129	42-11	I	7	41-9						
S3	503		65	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		65	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		64	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		64	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	25-4									
S11	508 thru		27	25-5 to									9 Ea. Δ=5
	510			24-9									
S12	511 thru		36	25-5 to									9 Ea. Δ=2
	514			24-9									
S13	515		12	24-8	STR								
S14	516		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	33N 517	5	25	5-11	IV	4-0	9½	8	7½	3	7		

34N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	34N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		67	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		67	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-9									
S11	508 thru		27	28-9 to									3 Ea. Δ=1½
	516			27-9									
S12	517 thru		36	28-9 to									4 Ea. Δ=1½
	525			27-9									
S13	526		12	27-8	STR								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	34N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

35N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	35N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		67	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		67	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-7									
S11	508 thru		27	28-7 to									3 Ea. Δ=2
	516			27-5									
S12	517 thru		36	28-7 to									4 Ea. Δ=2
	525			27-3									
S13	526		12	27-2	STR								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	35N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

36N SLAB

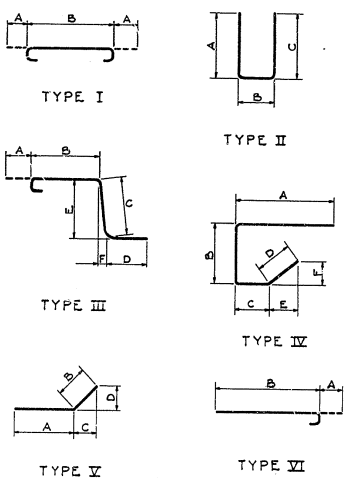
	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	36N 501	5	139	41-9	STR								
S2	502		139	42-11	I	7	41-9						
S3	503		70	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		70	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		68	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		68	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	30-5									
S11	508 thru		27	30-6 to									3 Ea. Δ=3
	516			28-6									
S12	517 thru		36	30-6 to									4 Ea. Δ=3
	525			28-6									
S13	526		12	28-5	STR								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	36N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

37N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	37N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-4									
S11	508 thru		27	28-3 to									3 Ea. Δ=2¼
	516			26-9									
S12	517 thru		36	28-3 to									4 Ea. Δ=2¼
	525			26-9									
S13	526		12	26-8	STR								
S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	37N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

38N SLAB

	MARK	SIZE	AMT REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	38N 501	5	135	41-9	STR								
S2	502		135	42-11	I	7	41-9						
S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	40-0	STR								
S8	506		27	40-0									
S9	506		36	40-0									
S10	507		12	28-4									
S11	508 thru		27	28-3 to									3 Ea. Δ=2¼
	516			26-9									
S12	517 thru		36	28-3 to									4 Ea. Δ=2¼
	525			26-9									
S13	526		12	26-8	STR								
S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
S15	38N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		



Note:
All dimensions are out to out of bar

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 33N THRU 38N

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-14-64

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

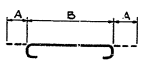
DWG. NO. SA 121

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
39N SLAB	S1	39N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-4									
	S11	508 thru		27	28-3 to									3 Ea. Δ·2¼
		516			26-9									
	S12	517 thru		36	28-3 to									4 Ea. Δ·2¼
		525			26-9									
	S13	526		12	26-8	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	39N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		
40N SLAB	S1	40N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-4									
	S11	508 thru		27	28-3 to									3 Ea. Δ·2¼
		516			26-9									
	S12	517 thru		36	28-3 to									4 Ea. Δ·2¼
		525			26-9									
	S13	526		12	26-8	STR								
	S14	527		25	5-9	IV	4-0	9½	8	7½	3	7		
	S15	40N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		
41N SLAB	S1	41N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-4									
	S11	508 thru		27	28-3 to									3 Ea. Δ·2¼
		516			26-9									
	S12	517 thru		36	28-3 to									4 Ea. Δ·2¼
		525			26-9									
	S13	526		12	26-8	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	41N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		

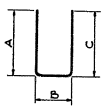
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
42N SLAB	S1	42N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		66	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		66	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-5									
	S11	508 thru		27	28-5 to									3 Ea. Δ·2¼
		516			26-11									
	S12	517 thru		36	28-5 to									4 Ea. Δ·2¼
		525			26-11									
	S13	526		12	26-10	STR								
	S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	42N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		
43N SLAB	S1	43N 501	5	135	41-9	STR								
	S2	502		135	42-11	I	7	41-9						
	S3	503		68	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		68	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		67	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		67	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	28-7									
	S11	508 thru		27	28-8 to									3 Ea. Δ·2¼
		516			27-2									
	S12	517 thru		36	28-8 to									4 Ea. Δ·2¼
		525			27-2									
	S13	526		12	27-2	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	43N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		
44N SLAB	S1	44N 501	5	141	41-9	STR								
	S2	502		141	42-11	I	7	41-9						
	S3	503		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		71	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		70	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		70	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	40-0	STR								
	S8	506		27	40-0									
	S9	506		36	40-0									
	S10	507		12	31-8									
	S11	508 thru		27	31-8 to									3 Ea. Δ·1½
		516			30-8									
	S12	517 thru		36	31-8 to									4 Ea. Δ·1½
		525			30-8									
	S13	526		12	30-8	STR								
	S14	527		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	44N 528	5	25	5-11	IV	4-0	9½	8	7½	3	7		

COUNTY	CONTRACT	R.B.& BDG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	156	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



TYPE I



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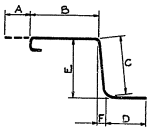

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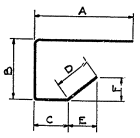

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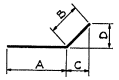

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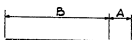


TYPE VI

Note:
All dimensions are out to out of bar

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS 39N THRU 44N

APPROVED BY: Johnnie P. Pearson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 122

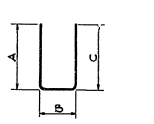
COUNTY	CONTRACT	R.D.A. PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	157	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
45N SLAB	S1	45N 501	5	160	41-9	STR								
	S2	502		160	42-11	I	7	41-9						
	S3	503		81	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		81	6-9	II	3-1	9	3-1					Interior Parapet
	S5	504		80	6-9	II	3-1	9	3-1					Exterior Parapet
	S6	505		80	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	30-11									
	S11	508 thru		27	30-11 to									3 Eq. Δ1
		516			30-3									
	S12	517 thru		36	30-11 to									4 Eq. Δ1
		525			30-3									
	S13	526		12	30-3	STR								
	S14	527		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	45N 528	5	25	5-9	IV	4-0	9½	6	7½	3	7		
46N SLAB	S1	46N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		76	6-9	II	3-1	9	3-1					
	S5	504		76	6-9	II	3-1	9	3-1					
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	26-1									
	S11	507		27	26-1									
	S12	507		36	26-1									
	S13	507		12	26-1	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	46N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		
47N SLAB	S1	47N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		76	6-9	II	3-1	9	3-1					
	S5	504		76	6-9	II	3-1	9	3-1					
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	26-1									
	S11	507		27	26-1									
	S12	507		36	26-1									
	S13	507		12	26-1	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	47N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
48N SLAB	S1	48N 501	5	150	41-9	STR								
	S2	502		150	42-11	I	7	41-9						
	S3	503		76	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		76	6-9	II	3-1	9	3-1					
	S5	504		76	6-9	II	3-1	9	3-1					
	S6	505		76	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	26-1									
	S11	507		27	26-1									
	S12	507		36	26-1									
	S13	507		12	26-1	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	48N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		
49N SLAB	S1	49N 501	5	158	41-9	STR								
	S2	502		158	42-11	I	7	41-9						
	S3	503		80	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		80	6-9	II	3-1	9	3-1					
	S5	504		80	6-9	II	3-1	9	3-1					
	S6	505		80	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	30-1									
	S11	507		27	30-1									
	S12	507		36	30-1									
	S13	507		12	30-1	STR								
	S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
	S15	49N 509	5	25	5-9	IV	4-0	3½	6	7½	3	7		
50N SLAB	S1	50N 501	5	140	41-9	STR								
	S2	502		140	42-11	I	7	41-9						
	S3	503		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		71	6-9	II	3-1	9	3-1					
	S5	504		71	6-9	II	3-1	9	3-1					
	S6	505		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S7	506		24	50-0	STR								
	S8	506		27	50-0									
	S9	506		36	50-0									
	S10	507		12	21-1									
	S11	507		27	21-1									
	S12	507		36	21-1									
	S13	507		12	21-1	STR								
	S14	508		25	5-9	IV	4-0	9½	6	7½	3	7		
	S15	50N 509	5	25	5-11	IV	4-0	9½	8	7½	3	7		

TYPE I



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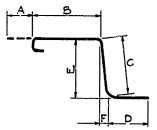

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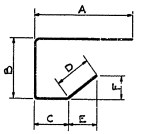

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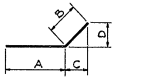
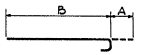


TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 45N THRU 50N

APPROVED BY: Dennis R. Heaney
BRIDGE ENGINEER — DATE 4-14-64

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 123

D C B A 1 5 10 A B C D

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	158	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

SLAB 51N

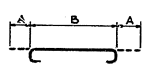
	MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	51N 501	5	140	41-9	STR								
S2	502		140	42-11	I	7	41-9						
S3	503		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	504		71	6-9	II	3-1	9	3-1					
S5	504		71	6-9	II	3-1	9	5-1					
S6	505		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	506		24	50-0	STR								
S8	506		27	50-0									
S9	506		36	50-0									
S10	507		12	21-1									
S11	507		27	21-1									
S12	507		36	21-1									
S13	507		12	21-1	STR								
S14	508		25	5-11	IV	4-0	9½	8	7½	3	7		
S15	51N 509	5	25	5-9	IV	4-0	9½	6	7½	3	7		

SLAB 52N

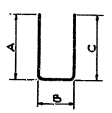
	MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	52N 501	5	110	41-8 to	STR								22 Ea. Δ-2¼
	thru 505			42-5									
	506		22	42-8	STR								
	507		21	42-11	STR								
S2	508 thru		110	42-10 to	I	7	41-8½						22 Ea. Δ-2¼
	512			43-7			42-5						
	513		22	43-10	I	7	42-8						
	514		21	44-1	I	7	42-11						
S3	515		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
S4	516		71	6-9	II	3-1	9	3-1					
S5	516		71	6-9	II	3-1	9	3-1					
S6	517		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
S7	518		24	31-1	STR								
S8	518		27	31-1									
S9	518		36	31-1									
S10	519		12	40-0									
S11	519		29	40-0									
S12	519		38	40-0									
S13	519		12	40-0	STR								
S14	520		27	5-9	IV	4-0	9½	6	7½	3	7		
S15	52N 521	5	25	5-11	IV	4-0	9½	8	7½	3	7		

SLAB 53N

	MARK	SIZE	AMT. REQ'D	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	53N 501	5	70	43-0 to	STR								7 Ea. Δ-2
	thru 510			44-5									
	511		70	44-6 to	STR								7 Ea. Δ-2
	thru 520			45-11									
S2	521		70	44-2 to	I	7	43-0 to						7 Ea. Δ-2
	thru 530			45-7			44-5						
	531		70	45-8 to	I	7	44-6 to						7 Ea. Δ-2
	thru 540			47-1			45-11						
S3	541		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S4	542		71	6-9	II	3-1	9	3-1					
S5	542		71	6-9	II	3-1	9	3-1					
S6	543		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		
S7	544		24	21-1	STR								
S8	544		17	21-1									
S9	544		3	21-1									
S10	544		5	21-1									
S11	544		4	21-1									
S12	544		21	21-1									
S13	544		6	21-1									
S14	544		6	21-1									
S15	544		6	21-1									
S16	545		12	50-0									
S17	545		21	50-0									
S18	545		5	50-0									
S19	545		4	50-0									
S20	545		12	50-0									
S21	545		28	50-0									
S22	545		6	50-0									
S23	545		6	50-0	STR								
S24	546		20	5-11	IV	4-0	9½	8	7½	3	7		
S25	546		4	5-11	IV	4-0	9½	8	7½	3	7		
S26	546		4	5-11	IV	4-0	9½	8	7½	3	7		
S27	546		15	5-9	IV	4-0	9½	6	7½	3	7		
S28	547		4	5-9	IV	4-0	9½	6	7½	3	7		
S29	547		4	5-9	IV	4-0	9½	6	7½	3	7		
S30	53N 547	5	4	5-9	IV	4-0	9½	6	7½	3	7		



TYPE I



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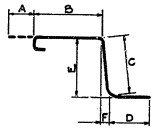

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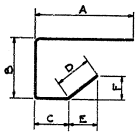

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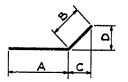

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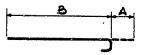


TYPE VI

Note:
All dimensions are out to out of bar

Mode by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 51N THRU 53N

APPROVED BY: _____ BRIDGE ENGINEER — 8-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA124

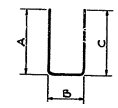
COUNTY	CONTRACT	F.A.S. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	64	159	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
S1	54N 501	5	70	45-11 to	STR								7 Ea. Δ·2½
	thru 510			47-9									
	511		70	47-11 to	STR								7 Ea. Δ·2½
	thru 520			49-10									
S2	521		70	47-1 to	I	7	45-11 to 47-9						7 Ea. Δ·2½
	thru 530			48-11									
	531		70	49-1 to	I	7	47-11 to 49-11						7 Ea. Δ·2½
	thru 540			51-3									
S3	541		71	5-0	III	7	2-2	1-4	1-1	1-4	1½		
S4	542		71	6-9	II	3-1	9	3-1					
S5	542		71	6-9	II	3-1	9	3-1					
S6	543		71	4-3	III	7	1-5	1-4	1-1	1-4	1½		
S7	544		24	21-2	STR								
S8	544		17	21-2									
S9	544		4	21-2									
S10	544		5	21-2									
S11	544		4	21-2									
S12	544		21	21-2									
S13	544		7	21-2									
S14	544		6	21-2									
S15	544		6	21-2									
S16	545		12	50-0									
S17	545		21	50-0									
S18	545		6	50-0									
S19	545		5	50-0									
S20	545		12	50-0									
S21	545		28	50-0									
S22	545		7	50-0									
S23	545		7	50-0	STR								
S24	546		20	5-9	IV	4-0	9½	6	7½	3	7		
S25	546		5	5-9	IV	4-0	9½	6	7½	3	7		
S26	546		5	5-9	IV	4-0	9½	6	7½	3	7		
S27	547		15	5-11	IV	4-0	9½	8	7½	3	7		
S28	547		5	5-11	IV	4-0	9½	8	7½	3	7		
S29	547		4	5-11	IV	4-0	9½	8	7½	3	7		
S30	54N 547	5	4	5-11	IV	4-0	9½	8	7½	3	7		
	55N 501	5	83	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	502		166	6-9	II	3-1	9	3-1					
	503		83	4-3	III	7	1-5	1-4	1-1	1-4	1½		
	504		105	50-0	STR								
	505		111	33-0	STR								
	506		32	5-9	IV	4-0	9½	6	7½	3	7		
	507		35	5-11	IV	4-0	9½	8	7½	3	7		
	508		161	51-2 to	I	7	50-0½						7 Ea. Δ·2½
	thru 530			55-9			54-7						
	531		4	55-10	I	7	54-8						
	532		161	50-0 to	STR								7 Ea. Δ·2½
	thru 554			54-7									
	55N 555	5	4	54-8	STR								

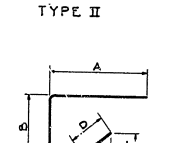
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	56N 501	5	83	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	502		166	6-9	II	3-1	9	3-1					
	503		28	4-3	III	7	1-5	1-4	1-1	1-4	1½		
	504		28	4-4	III	7	1-6	1-4	1-1	1-4	1½		
	505		27	4-5	III	7	1-7	1-4	1-1	1-4	1½		
	506		111	50-0	STR								
	507		119	33-0	STR								
	508		35	5-11	IV	4-0	9½	8	7½	3	7		
	509		39	5-9	IV	4-0	9½	6	7½	3	7		
	510		180	55-10 to	I	7	54-8 to						9 Ea. Δ·3"
	thru 529			60-7			59-5						
	530		180	54-8 to	STR								9 Ea. Δ·3"
	56N thru 549	5		59-6									
	57N 501	5	83	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	502		166	6-9	II	3-1	9	3-1					
	503		28	4-6	III	7	1-8	1-4	1-1	1-4	1½		
	504		28	4-7	III	7	1-9	1-4	1-1	1-4	1½		
	505		27	4-8	III	7	1-10	1-4	1-1	1-4	1½		
	506		122	50-0	STR								
	507		124	33-0	STR								
	508		39	5-9	IV	4-0	9½	6	7½	3	7		
	509		40	5-11	IV	4-0	9½	8	7½	3	7		
	510		83	22-7	VI	22-0	7						
	511		83	18-2	STR								
	512		82	15-0	VI	14-5	7						
	513		82	25-9	STR								
	514		82	35-4 to	STR								2 Ea. Δ·1½
	thru 554			40-4									
	555		82	47-4 to	VI	46-8 to	7						2 Ea. Δ·1½
	thru 595			52-4			51-9						
	596		81	42-10 to	STR								3 Ea. Δ·2¼
	thru 5122			47-9									
	5123		2	47-11	STR								
	5124		81	39-8 to	VI	39-1 to	7						3 Ea. Δ 2¼
	thru 5150			44-7			44-0						
	57N 5151	5	2	44-9	VI	44-2	7						

TYPE I



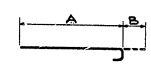
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 54N THRU 57N

APPROVED BY: Volumnia R. Casson, Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE: DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA 125

COUNTY	CONTRACT	F.A.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	180	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

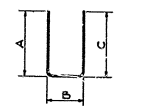
SLAB 58N

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
58N 501	5	94	5-0	III	7	2-2	1-4	1-1	1-4	1½		
502	↓	188	6-9	II	3-1	9	3-1					
503		32	4-9	III	7	1-11	1-4	1-1	1-4	1½		
504		31	4-10	III	7	2-0	1-4	1-1	1-4	1½		
505		31	4-11	III	7	2-1	1-4	1-1	1-4	1½		
506		131	50-0	STR								
507		134	44-2	STR								
508		39	5-11	IV	4-0	9½	8	7½	3	7		
509		45	5-9	IV	4-0	9½	6	7½	3	7		
510		94	22-7	VI	22-0	7						
511		94	25-8	STR								
512		98	45-4	VI	44-9	7						
513		98	48-5	STR								
514		98	17-5 to	STR								3 Ea. Δ·2¼
thru 544			23-0									
545		98	21-10 to	VI	21-3 to	7						5 Ea. Δ·2¼
thru 575			27-5		26-10							
576		90	40-2 to	STR								3 Ea. Δ·2¼
thru 5105			45-7									
5106		4	45-9	STR								
5107		90	44-7 to	VI	44-0 to	7						3 Ea. Δ·2¼
thru 5136	↓		50-0		49-5							
58N 5137	5	4	50-2	VI	49-7	7						

SLAB 59N

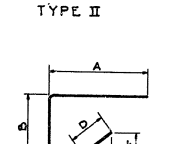
MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
59N 501	5	120	5-0	III	7	2-2	1-4	1-1	1-4	1½		
502	↓	120	6-9	II	3-1	9	3-1					
503		139	58-7	STR								
504		45	5-9	IV	4-0	9½	6	7½	3	7		
505		45	8-9	IV	5-6	9½	2-0	7½	3	7		
506		60	30-1	VI	29-6	7						
507		60	25-8	STR								
508		59	37-11	VI	37-4	7						
509		59	41-4	STR								
510		57	30-2 to	STR								3 Ea. Δ·2
thru 528			58-2									
529		2	33-4	STR								
530		57	34-9 to	VI	34-2 to	7						3 Ea. Δ·2
thru 548			37-9		37-2							
549		2	37-11	VI	37-4	7						
550		60	45-9 to	STR								3 Ea. Δ·2
thru 569			48-11									
570		60	42-7 to	VI	42 0 to	7						3 Ea. Δ·2
thru 589			45-9		45-2							
590	↓	2	37-5	STR								
59N 591	5	2	21-8	STR								

TYPE I



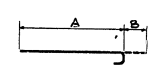
TYPE II

TYPE III



TYPE IV

TYPE V



TYPE VI

Note:
All dimensions are out to out of bar

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS 58N & 59N

APPROVED BY: _____ BRIDGE ENGINEER 4-16-64 DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA126

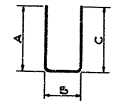
COUNTY	CONTRACT	A.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	1-95-2(12)	'64	161	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
BG 22N	S1	BG22N501	5	10	28-4	Str.								Splice 5 T.&B.
	&S3	↓ 502	↑	10	40-0	Str.								Splice 5 T.&B.
	S2	503		5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	504		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	505		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	506		24	4-0	Str.								" " "
	S6	↓ 506	↓	44	4-0	Str.								
	S7	BG22N506	5	45	4-0	Str.								
BG 23N	S1	BG23N501	5	10	40-0	Str.								Splice 5 T.&B.
	&S3	↓ 502	↑	10	31-2	Str.								Splice 5 T.&B.
	S2	503		5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	504		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	505		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	506		24	4-0	Str.								" " "
	S6	↓ 506	↓	46	4-0	Str.								
	S7	BG23N506	5	47	4-0	Str.								
BG 24N	S1	BG24N501	5	10	40-0	Str.								Splice 5 T.&B.
	&S8	↓ 502	↑	10	32-0	Str.								Splice 5 T.&B.
	S2	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	↓ 505	↓	46	4-0	Str.								
	S7	BG24N505	5	47	4-0	Str.								
BG 25N	S1	BG25N501	5	5	41-9	Str.								
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		27	4-0	Str.								
	S7	↓ 505	↓	28	4-0	Str.								
	S8	BG25N501	5	5	41-9	Str.								
BG 26N	S1	BG26N501	5	4	41-9	Str.								
	S2	↓ 502	↑	4	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		4	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		8	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	3-0	Str.								" " "
	S6	505		27	3-0	Str.								
	S7	↓ 505	↓	28	3-0	Str.								
	S8	BG26N501	5	4	41-9	Str.								

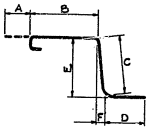
		MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
BG 22S	S1	BG22S501	5	5	42-11	I	7	41-9						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		28	4-0	Str.								
	S7	505		28	4-0	Str.								
	S8	506		5	38-6	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								Exterior Parapet
	S11	BG22S509	5	5	2-6	Str.								Interior Parapet
BG 23S	S1	BG23S501	5	5	42-11	I	7	41-9						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		28	4-0	Str.								
	S7	505		28	4-0	Str.								
	S8	506		5	38-8	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								Exterior Parapet
	S11	BG23S509	5	5	2-6	Str.								Interior Parapet
BG 24S	S1	BG24S501	5	5	45-6	I	7	44-4						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		30	4-0	Str.								
	S7	505		30	4-0	Str.								
	S8	506		5	40-9	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								Exterior Parapet
	S11	BG24S509	5	5	3-0	Str.								Interior Parapet
BG 25S	S1	BG25S501	5	5	46-2	I	7	45-0						
	S2	↓ 502	↑	5	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		5	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		10	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	4-0	Str.								" " "
	S6	505		30	4-0	Str.								
	S7	505		30	4-0	Str.								
	S8	506		5	41-3	Str.								
	S9	507		10	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	5	3-6	Str.								
	S11	BG25S508	5	5	3-6	Str.								
BG 26S	S1	BG26S501	5	4	46-2	I	7	45-0						
	S2	↓ 502	↑	4	4-3	III	7	1-5	1-4	1-1	1-4	1½		Exterior Parapet
	S3	503		4	5-0	III	7	2-2	1-4	1-1	1-4	1½		Interior Parapet
	S4	504		8	6-9	II	3-1	9	3-1					Half each parapet
	S5	505		24	3-0	Str.								" " "
	S6	505		30	3-0	Str.								
	S7	505		30	3-0	Str.								
	S8	506		4	41-3	Str.								
	S9	507		8	2-4	V	1-6	10	7	7				Half each curb
	S10	↓ 508	↓	4	3-6	Str.								
	S11	BG26S508	5	4	3-6	Str.								

TYPE I



TYPE II

TYPE III



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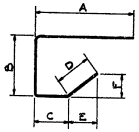

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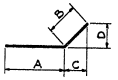
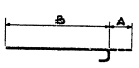


TYPE VI



Note:
All dimensions are out to out of bar

Made by J.E.D.
Traced by J.E.D.
Checked by H.B.L.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS - MISCELLANEOUS
SHEET 1 OF 2

APPROVED BY: _____ BRIDGE ENGINEER — DATE 4-16-64

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA127

COUNTY	CONTRACT	R.N.S. REQ. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	162	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

BULL NOSES AND EXTENDED CURBS

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
MA501	5	12	2-10	VII	1-4	1-6	1-1					
502		10	3-9	VII	1-4	2-5	1-8					
503		2	5-10	VII	1-4	4-6	3-0					
504		10	9-3	II	4-4	9	4-4					
505		2	4-11	VII	1-4	3-7	2-5					
506		2	4-2	III	7	1-11	1-4	6	1-4	1½		
507		4	5-0	III	7	2-2	1-4	1-1	1-4	1½		
508		2	3-11	III	7	1-8	1-4	6	1-4	1½		
MA509	5	4	4-4	III	7	1-6	1-4	1-1	1-4	1½		
MB501	5	12	2-10	VII	1-4	1-6	1-1					
502		10	3-9	VII	1-4	2-5	1-8					
503		2	5-10	VII	1-4	4-6	3-0					
504		10	9-3	II	4-4	9	4-4					
505		2	4-11	VII	1-4	3-7	2-5					
506		2	3-11	III	7	1-8	1-4	6	1-4	1½		
507		4	4-4	III	7	1-6	1-4	1-1	1-4	1½		
508		2	4-2	III	7	1-11	1-4	6	1-4	1½		
MA509	5	4	5-0	III	7	2-2	1-4	1-1	1-4	1½		
MD501	5	7	56-0	Str								
502		2	3-10	VIII	2-3	1-1	7					
503		2	4-10	VIII	3-3	1-1	7					
504		2	5-4	VIII	3-9	1-1	7					
505		1	5-7	VIII	4-0	1-1	7					
506 thru		60	5-0 to	VIII	3-5 to	1-1	7					20 ea. Δ=2
508			5-4		3-9							
509 thru		42	5-6 to	VIII	3-11 to	1-1	7					14 ea. Δ=2
MD511	5		5-10		4-3							
BC501	5	7	23-4	Str								
502		2	3-10	VIII	2-3	1-1	7					
503		2	4-10	VIII	3-3	1-1	7					
504		2	5-4	VIII	3-9	1-1	7					
505		1	5-7	VIII	4-0	1-1	7					
506 thru		48	5-0 to	VIII	3-5 to	1-1	7					4 ea. Δ=1⅞
BC511	5		6-8		5-1							

LIGHT STD. PEDESTAL

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
	L501	5	148	7-0	Str								4 each pedestal
	L502	5	74	5-8	I	4-2	9	7					2 " "
	L503	5	74	6-6	I	4-6	1-4	7					2 " "
	L504	5	296	5-6	II	4-7	1-0						8 " "
	L505	5	148	6-7	IV	9	3-0						4 " "
	L506	3	185	6-7	III	1-8	1-5	4					5 " "
	L507	5	16	5-3	II	4-6	10						Bullnose MD
	L508	3	4	9'-1	III	2'-2	2'-2	4					" "

SCUPPERS

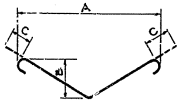
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
DR-1	D501	5	96	7-0	Str								12 each scupper
	D502	5	16	8-7	VI	8-0	7						2 " "
	D503	5	16	8-0	Str								2 " "
DR-1A	D701	7	12	7-0	Str								NB adjacent to Pier 23
	D502	5	2	8-7	VI	8-0	7						
	D503	5	2	8-0	Str								
DR-1A	D701	7	12	7-0	Str								NB between Piers 23 & 24
	D502	5	2	8-0	Str								
	D503	5	2	8-0	Str								
DR-2	D504	5	370	4-2	V	2-6	9	1-0					5 each scupper
	D505	5	296	5-8	V	2-0	9	1-0					4 " "
	D506	5	888	7-0	Str								12 " "
	D507	5	148	8-7	VI	8-0	7						2 " "
	D508	5	148	8-0	Str								2 " "

SIGN FOUNDATIONS

Not In Contract 7

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
OS-3	SS601	6	24	7-10	IX	6-6	8						12 each footing
	SS602	6	16	11-10	IX	10-6	8						8 " "
	SS603	4	16	9-8	X	4-3	1-0						8 " "
	SS604	6	36	4-6	Str								18 " "
OS-4	SS805	8	11	10-8	IX	8-6	1-1						
	SS806	8	11	8-6	Str								
	SS807	8	13	12-5	IX	10-3	1-1						
	SS808	8	13	10-3	Str								
	SS409	4	4	8-10	XI	1-3	1-0						
	SS810	8	16	5-7	VI	4-6	1-1						
	SS311	3	76	7-1	IV	1-2	3-1						4 each footing
	SS312	3	57	3-2	Str								3 " "
	SS313	3	114	5-2	IV	1-2	2-0						6 " "

TYPE I



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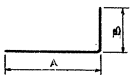

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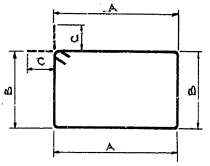

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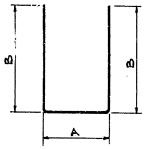

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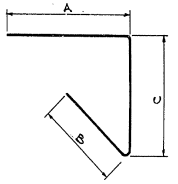

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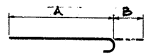

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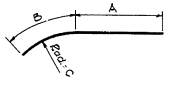

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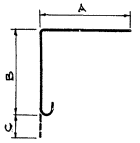

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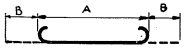
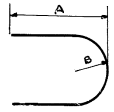
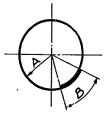


TYPE X



TYPE XI



Note:
All dimensions are out to out of bar.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS - MISCELLANEOUS
SHEET 2 OF 2

APPROVED BY: T. Dennis O'Connor Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE: — DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA128

Made by J.R.D.
Traced by J.R.D.
Checked by H.B.L.

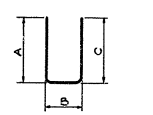
COUNTY	CONTRACT	F.A.S. REG. NO.	STATE	FED. AID PROJ. NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	163	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

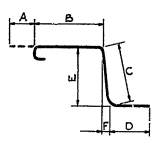
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 0A	0A 501	5	281	6-9	II	3-1	9	3-1					
	502		281	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		119	50-0	STR								
	504		3	46-6									
	505		6	45-0									
	506		13	42-6									
	507		13	43-1									
	508		11	43-9									
	509		26	44-6	STR								
	510		30	5-9	IV	4-0	9½	6	7½	3	7		
	511		6	27-5	STR								
	512		6	28-7	I	7	27-5						
	513		279	26-9	STR								
	0A 514	5	279	27-11	I	7	26-9						
SLAB 1A	1A 501	5	234	6-9	II	3-1	9	3-1					
	502		234	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	60-0	STR								
	504		26	57-1	STR								
	505		11	57-7	STR								
	506		26	58-2	STR								
	507		30	5-9	IV	4-0	9½	6	7½	3	7		
	508		234	26-9	STR								
	1A 509	5	234	27-11	I	7	26-9						
SLAB 2A	2A 501	5	249	6-9	II	3-1	9	3-1					
	502		249	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		126	50-0	STR								
	504		13	25-6									
	505		13	25-10									
	506		11	26-2									
	507		26	26-8	STR								
	508		30	5-9	IV	4-0	9½	6	7½	3	7		
	509		250	26-9	STR								
	2A 510	5	250	27-11	I	7	26-9						
SLAB 3A	3A 501	5	152	6-9	II	3-1	9	3-1					
	502		152	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	50-0	STR								
	504		63	26-0	STR								
	505		15	5-11	IV	4-0	9½	8	7½	3	7		
	506		151	26-9	STR								
	507		151	27-11	I	7	26-9						
	3A 508	5	15	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 4A	4A 501	5	150	6-9	II	3-1	9	3-1					
	502		150	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	40-0	STR								
	504		63	35-0	STR								
	505		15	5-9	IV	4-0	9½	6	7½	3	7		
	506		148	26-9	STR								
	507		148	27-11	I	7	26-9						
	4A 508	5	15	5-11	IV	4-0	9½	8	7½	3	7		

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 5A	5A 501	5	154	6-9	II	3-1	9	3-1					
	502		154	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	50-0	STR								
	504		63	27-0	STR								
	505		15	8-9	IV	5-6	9½	2-0	7½	3	7		
	506		15	5-9	IV	4-0	9½	6	7½	3	7		
	507		153	26-9	STR								
	508		153	27-11	I	7	26-9						
	5A 509	5	2	21-8	STR								

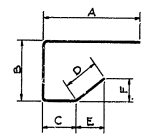
TYPE I



TYPE II



TYPE III



TYPE IV

Note:
All dimensions are out to out of bar.

Made by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS RAMP A

APPROVED BY: Johannes E. Brevoort, Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA129

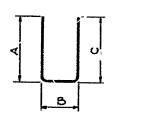
COUNTY	CONTRACT	P.R.& REF. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	164	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

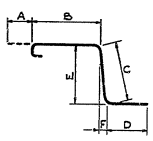
	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 0B	0B 501	5	105	6-9	II	3-1	9	3-1					
	502	↕	105	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		50	51-8	STR								
	504		47	51-6	STR								
	505		30	8-9	IV	5-6	9½	2-0	7½	3	7		
	506		26	5-9	IV	4-0	9½	6	7½	3	7		
	507		4	16-8	STR								
	508 thru		54	41-0 to	STR								3 Ea. Δ=2⅜
	525			44-4									
	526 thru		51	44-6 to	STR								3 Ea. Δ=2½
	542			47-10									
	543 thru		54	42-2 to	I	7	41-0						3 Ea. Δ=2⅜
	560			45-6			44-4						
	561 thru	↕	51	45-8 to	I	7	44 6 to						3 Ea. Δ=2½
	OB 577	5		49-0			47-10						
SLAB 1B	1B 501	5	121	6-9	II	3-1	9	3-1					
	502	↕	121	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		37	59-5	STR								
	504		50	59-3	STR								
	505		25	5-9	IV	4-0	9½	6	7½	3	7		
	506 thru		60	34-5 to	STR								3 Ea. Δ=2
	525			37-5									
	526 thru		60	37-7 to	STR								3 Ea. Δ=2⅛
	545			41-0									
	546 thru		60	35-5 to	I	7	34 3 to						3 Ea. Δ=2
	565			38-7			37-5						
	566 thru		60	38-9 to	I	7	37 7 to						3 Ea. Δ=2⅛
	585	↕		42-2			41-0						
	1B 586	5	21	5-11	IV	4-0	9½	8	7½	3	7		
SLAB 2B	2B 501	5	121	6-9	II	3-1	9	3-1					
	502	↕	121	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		39	59-5	STR								
	504		40	59-3	STR								
	505		20	5-11	IV	4-0	9½	8	7½	3	7		
	506 thru		60	28-10 to	STR								4 Ea. Δ=2¼
	520			31-5									
	521 thru		60	31-6 to	STR								4 Ea. Δ=2⅜
	535			34-3									
	536 thru		60	30-0 to	I	7	28 10 to						4 Ea. Δ=2¼
	550			32-7			31-5						
	551 thru		60	32-8 to	I	7	31-6 to						4 Ea. Δ=2⅜
	565	↕		35-5			34-3						
	2B 566	5	17	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 3B	3B 501	5	171	6-9	II	3-1	9	3-1					
	502	↕	171	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	40-0	STR								
	504		41	46-0	STR								
	505		28	45-8	STR								
	506		15	5-9	IV	4-0	9½	6	7½	3	7		
	507 thru		85	23-9 to	STR								5 Ea. Δ=1¾
	523			26-1									
	524 thru		85	26-2 to	STR								5 Ea. Δ=2
	540			28-10									
	541 thru		85	24-11 to	I	7	23 9 to						5 Ea. Δ=1¾
	557			27-3			26-1						
	558 thru		85	27-4 to	I	7	26 2 to						5 Ea. Δ=2
	574	↕		30-0			28-10						
	3B 575	5	15	5-11	IV	4-0	9½	8	7½	3	7		

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB 4B	4B 501	5	147	6-9	II	3-1	9	3-1					
	502	↕	147	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		57	40-0	STR								
	504		35	34-2	STR								
	505		25	33-9	STR								
	506		12	5-11	IV	4-0	9½	8	7½	3	7		
	507 thru		110	21-9 to	STR								11 Ea. Δ=1¾
	516			23-1									
	517 thru		36	23-4 to	STR								12 Ea. Δ=2
	519			23-8									
	520 thru		110	22-11 to	I	7	21 9 to						11 Ea. Δ=1¾
	529			24-3			23-1						
	530 thru		36	24-6 to	I	7	23 4 to						12 Ea. Δ=2
	532	↕		24-10			23-8						
	4B 533	5	12	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 5B	5B 501	5	142	6-9	II	3-1	9	3-1					
	502	↕	142	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		57	40-0	STR								
	504		57	31-1	STR								
	505		24	5-9	IV	4-0	9½	6	7½	3	7		
	506	↕	140	21-9	STR								
	5B 507	5	140	22-11	I	7	21-9						
SLAB 6B	6B 501	5	126	6-9	II	3-1	9	3-1					
	502	↕	126	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		48	30-0	STR								
	504		3	26-6	↕								
	505		6	25-0									
	506		24	35-4									
	507		9	35-8	↕								
	508		24	36-0	STR								
	509		12	5-9	IV	4-0	9½	6	7½	3	7		
	510		6	22-5	STR								
	511		6	23-7	I	7	22-5						
	512		124	21-9	STR								
	513	↕	124	22-11	I	7	21-9						
	6B 514	5	12	5-11	IV	4-0	9½	8	7½	3	7		

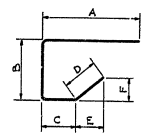
TYPE I



TYPE II



TYPE III



TYPE IV

Note:
All dimensions are out to out of bar.

Mode by A. D. C.
Traced by A. D. C.
Checked by J. R. D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST

SLABS RAMP B

APPROVED BY: Johnnie W. Kennedy Jr. 4-16-64
BRIDGE ENGINEER DATE

SCALE:

DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

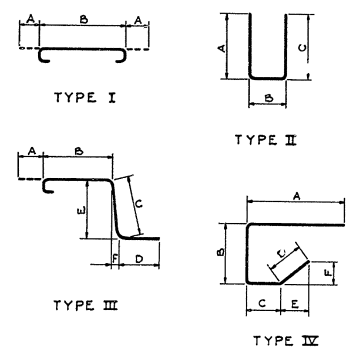
DWG. NO. SA130

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	165	

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

	MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS
SLAB OC	OC 501	5	62	6-9	II	3-1	9	3-1					
	502		62	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	29-10	STR								
	504		15	8-9	IV	5-6	9½	2-0	7½	3	7		
	505		15	5-11	IV	4-0	9½	8	7½	3	7		
	506		61	27-11	I	7	26-9						
	507		61	26-9	STR								
	OC 508	5	2	21-8	STR								
SLAB IC	IC 501	5	158	6-9	II	3-1	9	3-1					
	502		158	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	50-0	STR								
	504		63	29-1	STR								
	505		15	5-11	IV	4-0	9½	8	7½	3	7		
	506		156	27-11	I	7	26-9						
	507		156	26-9	STR								
	IC 508	5	15	5-9	IV	4-0	9½	6	7½	3	7		
SLAB 2C	2C 501	5	86	6-9	II	3-1	9	3-1					
	502		86	5-0	III	7	2-2	1-4	1-1	1-4	1½		
	503		63	41-9	STR								
	504		15	8-9	IV	5-6	9½	2-0	7½	3	7		
	505		15	5-9	IV	4-0	9½	6	7½	3	7		
	506		85	27-11	I	7	26-9						
	507		85	26-9	STR								
	2C 508	5	2	21-8	STR								

MARK	SIZE	AMT. REQ'D.	LENGTH	TYPE	A	B	C	D	E	F	G	REMARKS



Note:
All dimensions are out to out of bar.

Made by A.D.C.
Traced by A.D.C.
Checked by J.R.D.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

BAR LIST
SLABS RAMP C

APPROVED BY: Lorraine R. Pearson Jr. 4-16-64
BRIDGE ENGINEER DATE

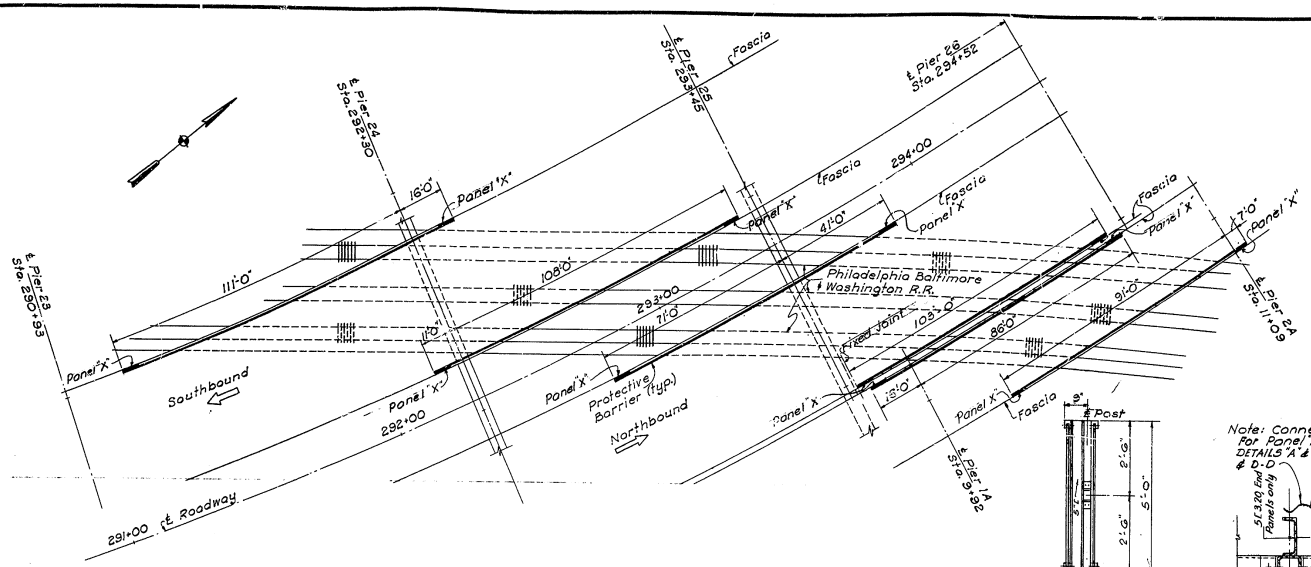
SCALE:
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

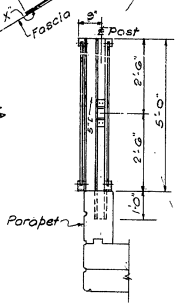
DWG. NO. SA131

COUNTY	CONTRACT	P.R.S. REF. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	166	215

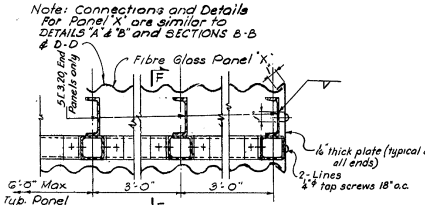
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



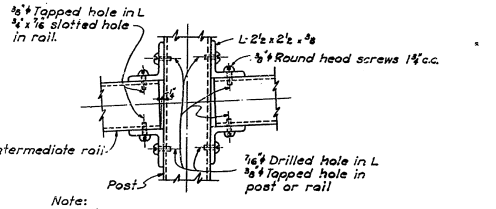
PLAN
SCALE 1 IN. = 20 FT.



SECTION F-F
SCALE 1½ IN. = 1 FT.

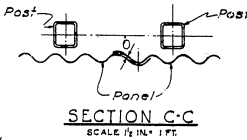


SECTION E-E
SCALE 1½ IN. = 1 FT.

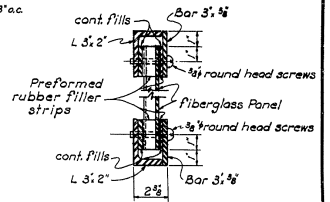


Note:
Fiberglass panel not shown

DETAIL "B"
SCALE 3 IN. = 1 FT.

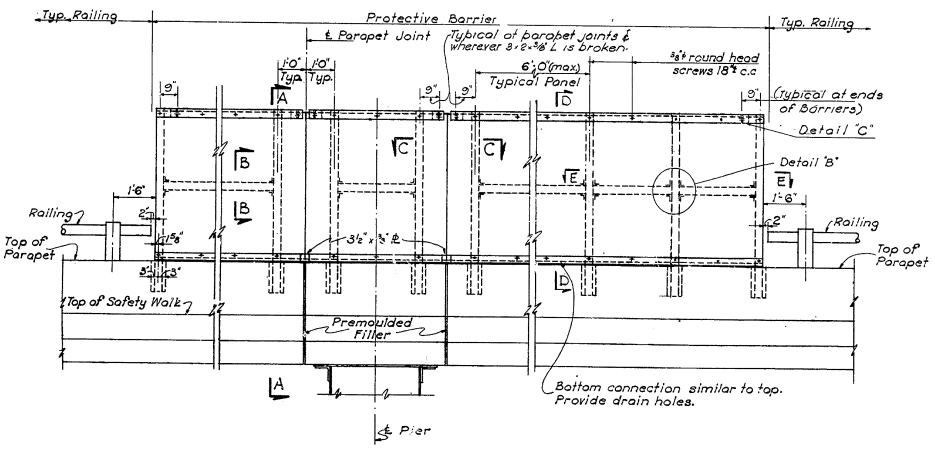


SECTION C-C
SCALE 1½ IN. = 1 FT.

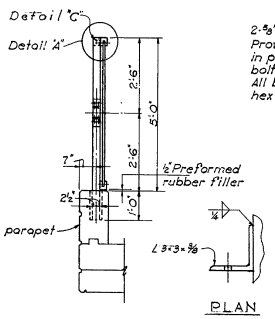


Note:
Intermediate rail not shown see Section B-B.

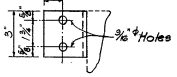
SECTION D-D
SCALE 3 IN. = 1 FT.



ELEVATION
SCALE ½ IN. = 1 FT.



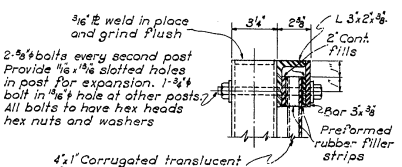
SECTION A-A
SCALE ½ IN. = 1 FT.



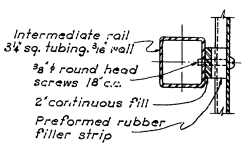
PLAN

ELEVATION
DETAIL "C"
SCALE 3 IN. = 1 FT.

Note
"Clip angles" to be welded to track side of barrier per dimensions of Elevation.



DETAIL A
SCALE 3 IN. = 1 FT.



SECTION B-B
SCALE 3 IN. = 1 FT.

NOTES:
1. Material to be of aluminum - see specifications.
2. If steel alternate is to be used
   a. All materials and details to be galvanized structural carbon steel after fabrication.
   b. Sizes of material and details to be same as or equivalent to aluminum sizes.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PROTECTIVE BARRIER FOR PENNSYLVANIA RAILROAD

APPROVED BY: [signature] BRIDGE ENGINEER — DATE 4-15-64

SCALE: AS NOTED

DATE: APRIL 1, 1964

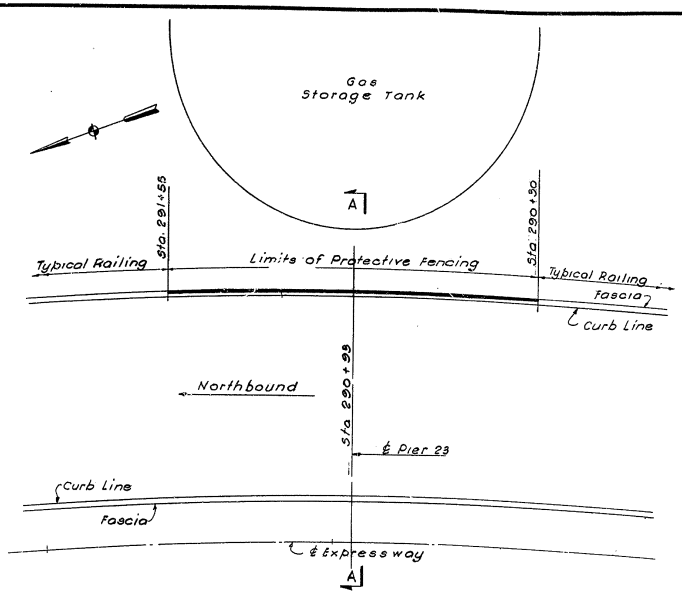
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA132

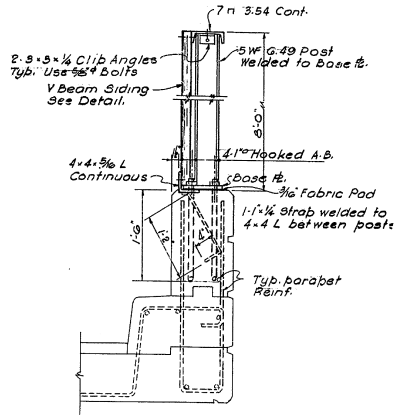
7-4

COUNTY	CONTRACT	P.R.A. R.D. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2 (12)	'64	167	215

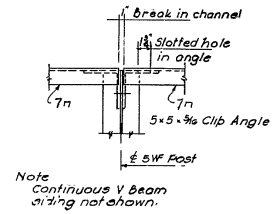
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



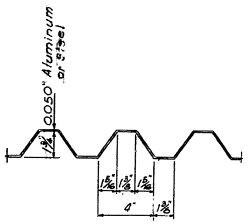
PLAN
SCALE 1 IN. = 20 FT.



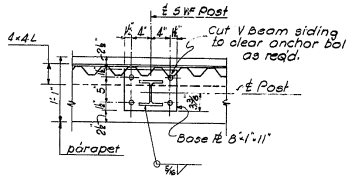
SECTION B-B
SCALE 1 IN. = 1 FT.



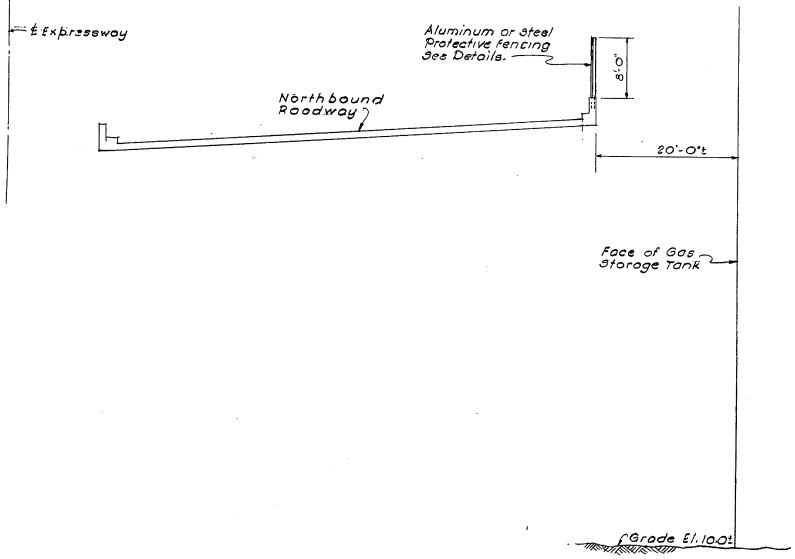
DETAIL "A"
SCALE 1½ IN. = 1 FT.



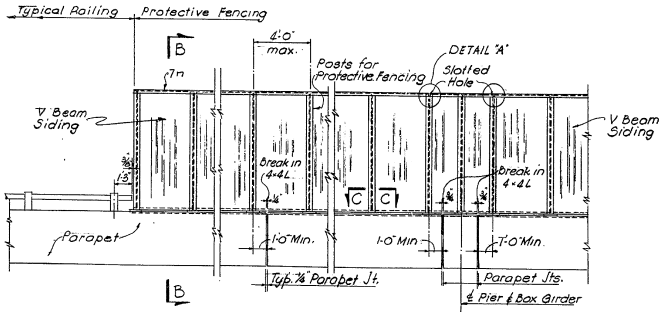
V BEAM SIDING
NO SCALE



SECTION C-C
SCALE 1 IN. = 1 FT.



SECTION A-A
SCALE ⅛ IN. = 1 FT.



PROTECTIVE FENCING ELEVATION
SCALE ¼ IN. = 1 FT.

NOTES - ALUMINUM

1. DETAILS
   a. V Beam fasteners to angle or channel 10⅝" o.c. max.
   b. V Beam fasteners for side laps 12" o.c. max.
   c. Continuous angle and channel interrupt at posts where required by available lengths.
2. For parapet and related details see structural drawings.

NOTES - STEEL ALTERNATE

1. All material and details to be galvanized structural carbon steel.
2. Sizes of material and details to be same as or equivalent to aluminum sizes.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

PROTECTIVE FENCING AT GASOLINE STORAGE TANK
STA. 290+30 TO STA. 291+55

APPROVED BY: Wilmer R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

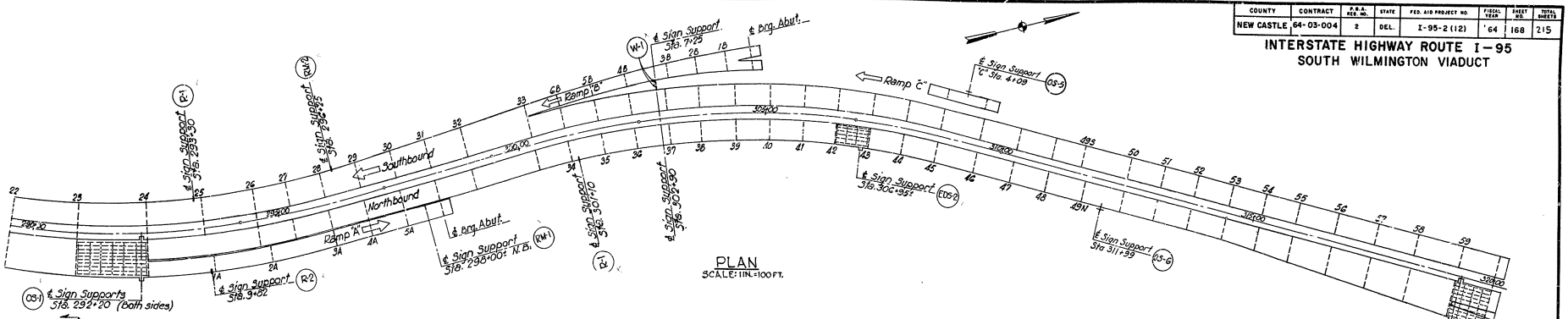
SCALE: AS NOTED
DATE: APRIL 1, 1964

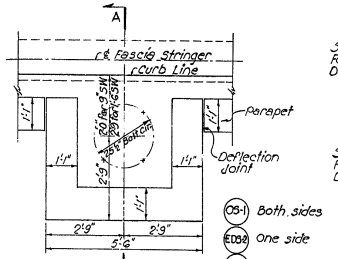
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

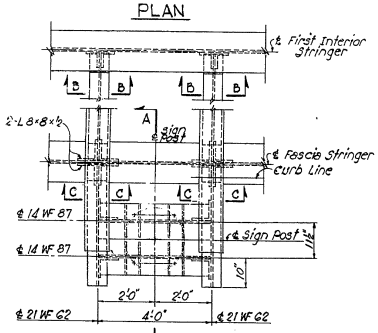
DWG. NO. SA133

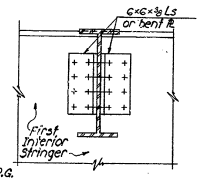
COUNTY	CONTRACT	P.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	168	215

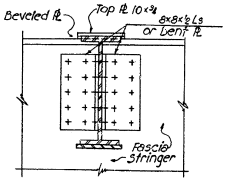
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

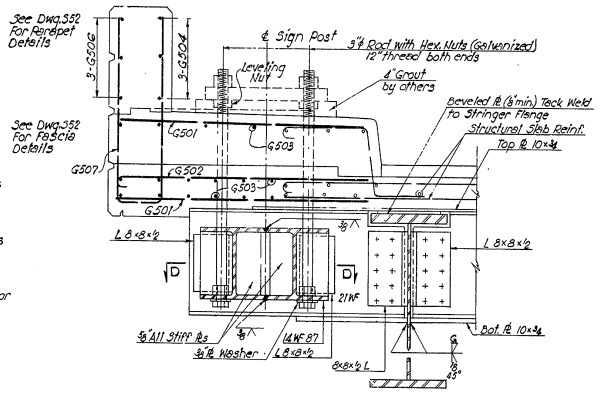


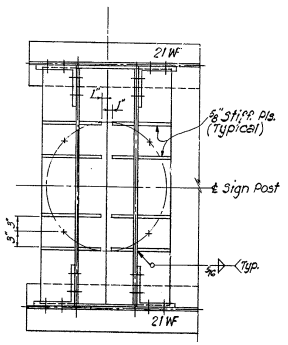


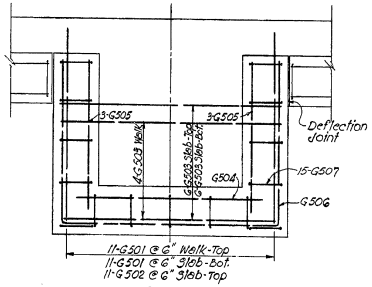


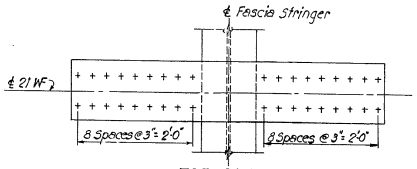


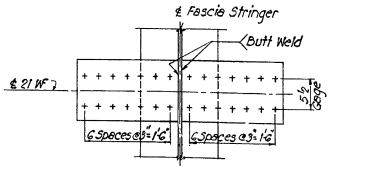






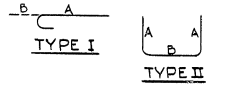


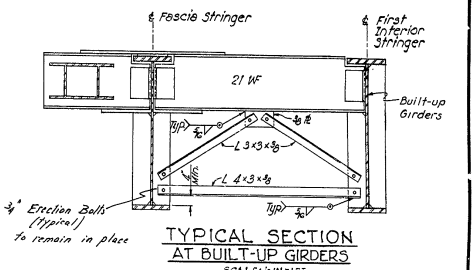




BAR LIST

MARK	SIZE	NO. REQD.	LGTH.	TYPE	A	B
G501	5	4×22	4-4	STR.		
G502		4×11	4-11	I	4-4	7
G503		4×12	5-2	STR.		
G504		4×3	4-3	STR.		
G505		4×6	3-6	STR.		
G506	4	4×3	12-3	II	3-6	5-1
G507	5	4×15	6-9	II	3-7	9





(R-1) Sta. 293+30 M.L.

(R-2) Sta. 9+82 Ramp "A"

Notes:
For general notes, see dwg. SA2.
For framing plans see dwgs. SA54 thru SA58.
Interior surfaces of box formed by the 2-14 WF 87 shall be coated with a protective coating for metal surfaces before joining and touched up with the same material after welding.
Structural Steel for sign supports ASTM-A36.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SIGN SUPPORTS
SHEET 1 OF 2

APPROVED BY: Johnnie R. Pearson Jr. 4-16-64
BRIDGE ENGINEER — DATE

SCALE AS NOTED
DATE: APRIL 1, 1964

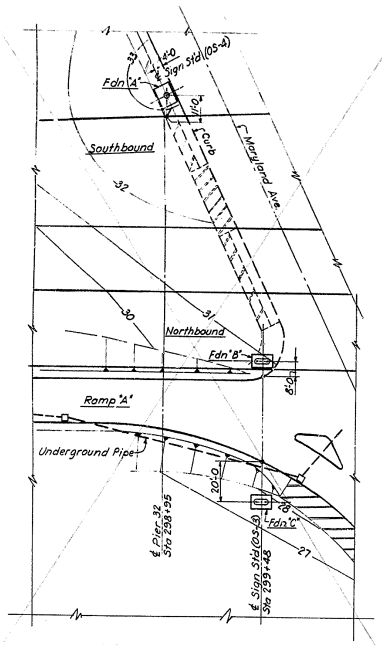
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. SA134

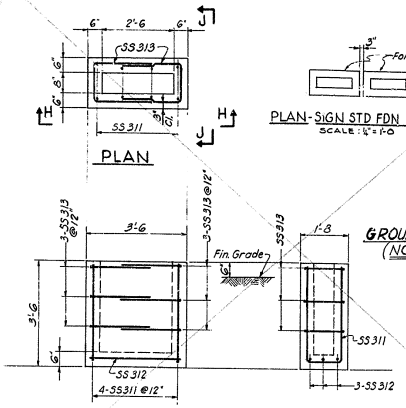
Dr. by R.G.
Chk. by J.A.R.

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2 (12)	'64	169	215

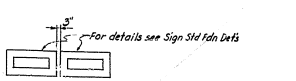
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



LOCATION PLAN
SIGNS OS-3 & OS-4
SCALE: 1 IN. = 50 FT

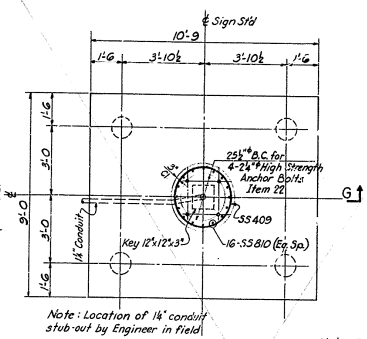


SIGN ST'D FOUNDATION DETAILS
(RMA-2,3,8,9,10,12,13,14,R-3,R-4 & W-1)
SCALE: ½" = 1'-0



PLAN-SIGN STD FDN FOR RMA-1,4,6&7
SCALE: ¼" = 1'-0

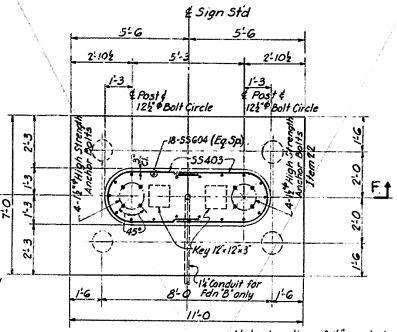
GROUND MOUNTED SIGN FDN'S
(NOT IN CONTRACT)



Note: Location of 14" conduit stub-out by Engineer in field

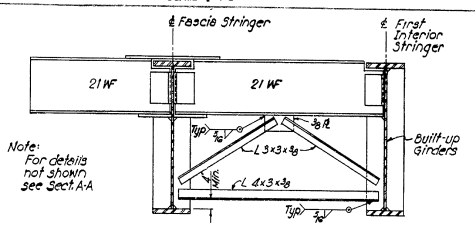
PLAN

Note: Foundation concrete for ground mounted signs to be paid for under Item 18- Portland Cement Concrete Masonry in Pier Footings.



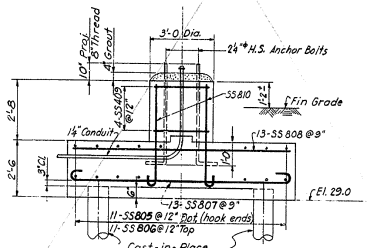
PLAN

Note: Location of 14" conduit stub-out by Engineer in Field

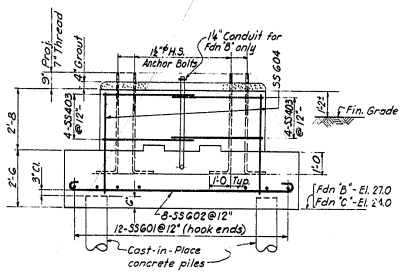


Note: For details not shown see Sect A-A

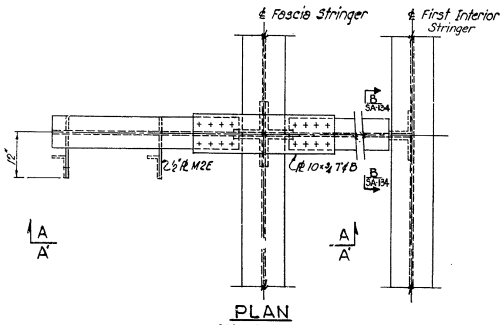
SECTION A'-A'
TYPICAL FOR BUILT UP GIRDERS
SCALE: ½ IN = 1 FT.



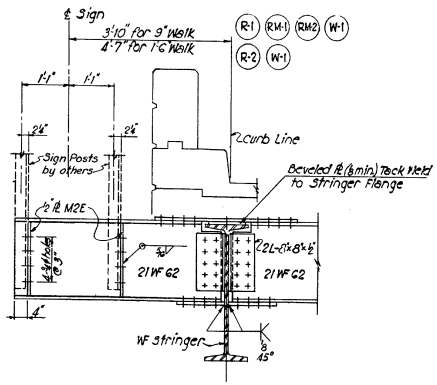
SECTION G-G
SIGN ST'D FOUNDATION "A"
(OS-4)
SCALE: ⅜" = 1'-0



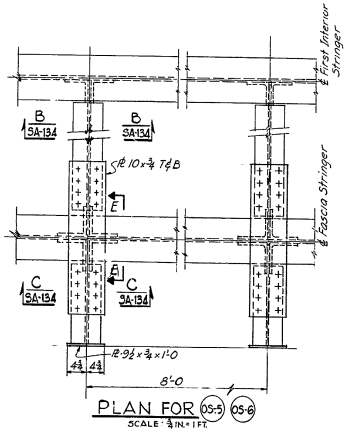
SECTION F-F
SIGN ST'D FOUNDATIONS "B" & "C"
(OS-3)
SCALE: ⅜" = 1'-0



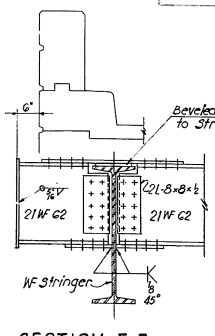
PLAN
SCALE: ½ IN = 1 FT.



SECTION A-A
TYPICAL FOR WF STRINGERS
SCALE: ½ IN. = 1 FT.



PLAN FOR OS-5 OS-6
SCALE: ½ IN. = 1 FT.



SECTION E-E
TYPICAL FOR WF STRINGERS
SCALE: ½ IN. = 1 FT.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

SIGN SUPPORTS
SHEET 2 OF 2

APPROVED BY: _____ 4-16-64
BRIDGE ENGINEER DATE

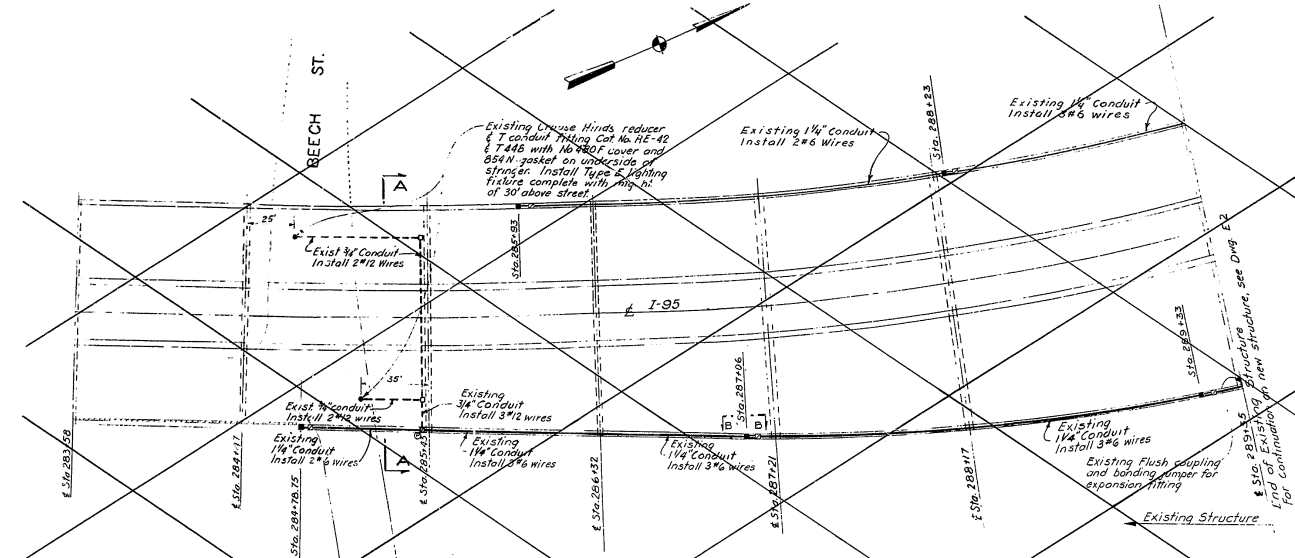
SCALE: AS NOTED
DATE: APRIL 1, 1964

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

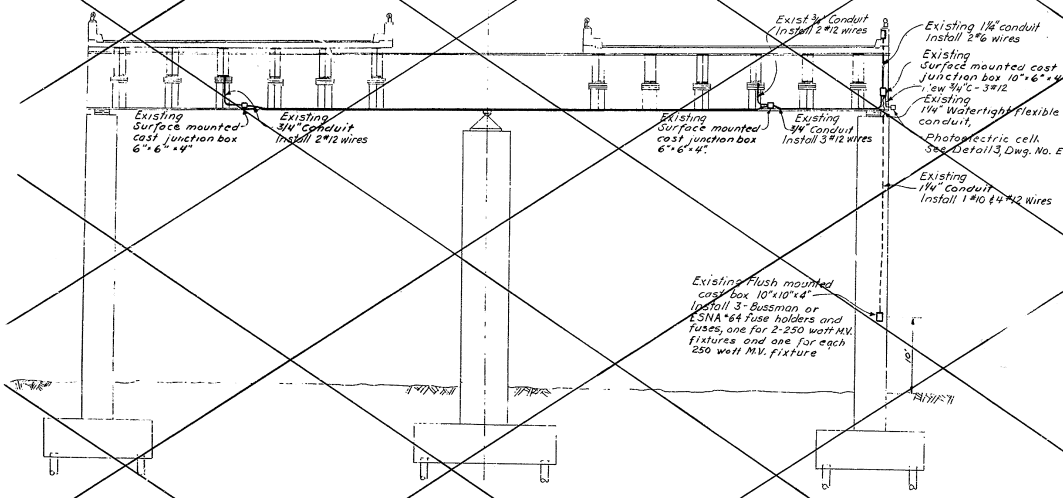
DWG. NO. SA135

COUNTY	CONTRACT	R.P.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	170	215

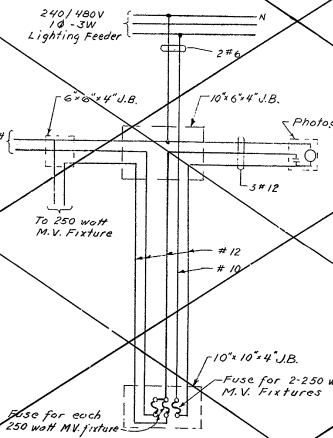
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



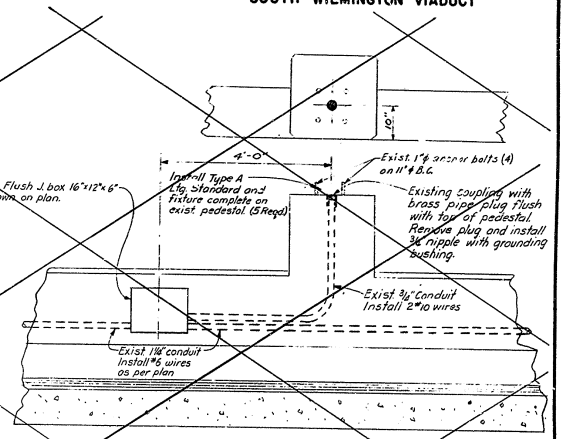
PLAN
Scale: 1 IN. = 30 FT.



SECTION A-A
Scale: ⅛ IN = 1 FT



WIRING DIAGRAM FOR TYPE "E" FIXTURES
BEACH ST. UNDERPASS



SECTION B-B
TYPICAL - ALL PEDESTALS
ON EXISTING STRUCTURE
Scale: ¾ IN. = 1 FT.

LEGEND

- Existing Pedestal for Type A street lighting standard
- Existing Flush mounted cast box 16"x12"x6"
- Existing Surface mounted cast box 6"x6"x4"
- Existing Rigid conduit exposed
- Existing Rigid conduit concealed in concrete
- (P) Photoelectric cell for underpass lighting control

NOTES

1- Station numbers indicated as locations of exist. pedestals for street lighting standards, are approximate.

2- For typical electrical details, see Dwgs. E-4 & E-5.

THIS SHEET NOT IN THIS CONTRACT

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

ELECTRICAL PLAN AND DETAILS
EXISTING STRUCTURE

APPROVED BY: [signature] BRIDGE ENGINEER — DATE: 4-16-64

SCALE: AS NOTED

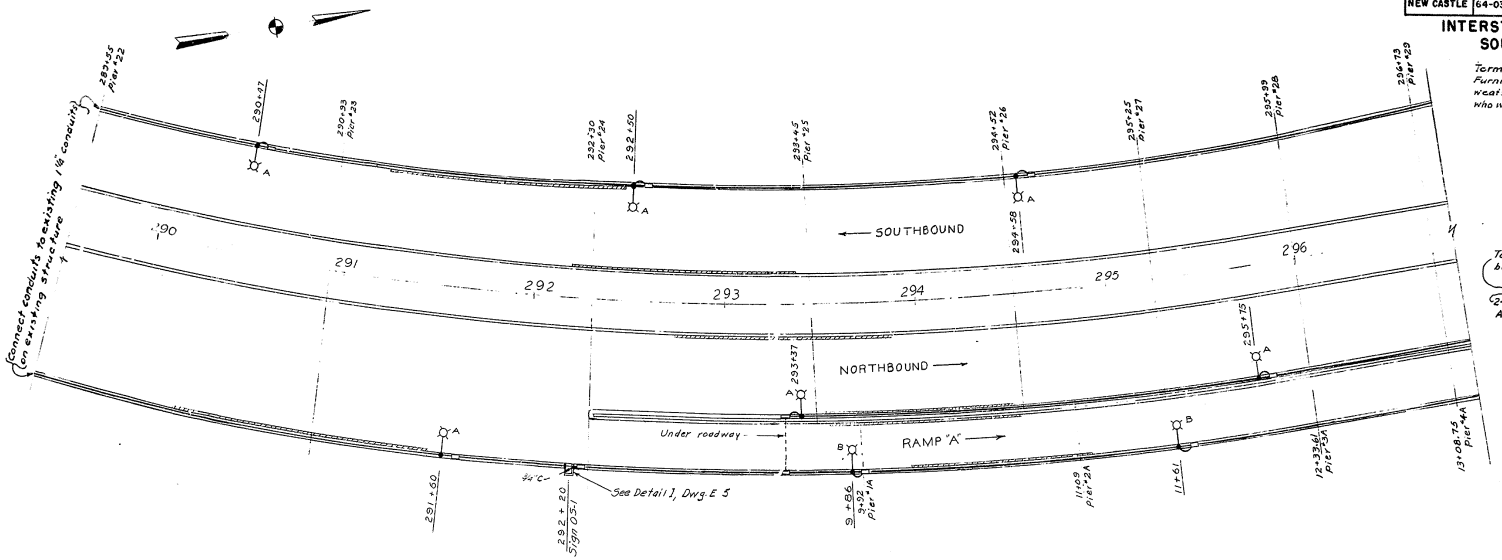
DATE: APRIL 1, '64

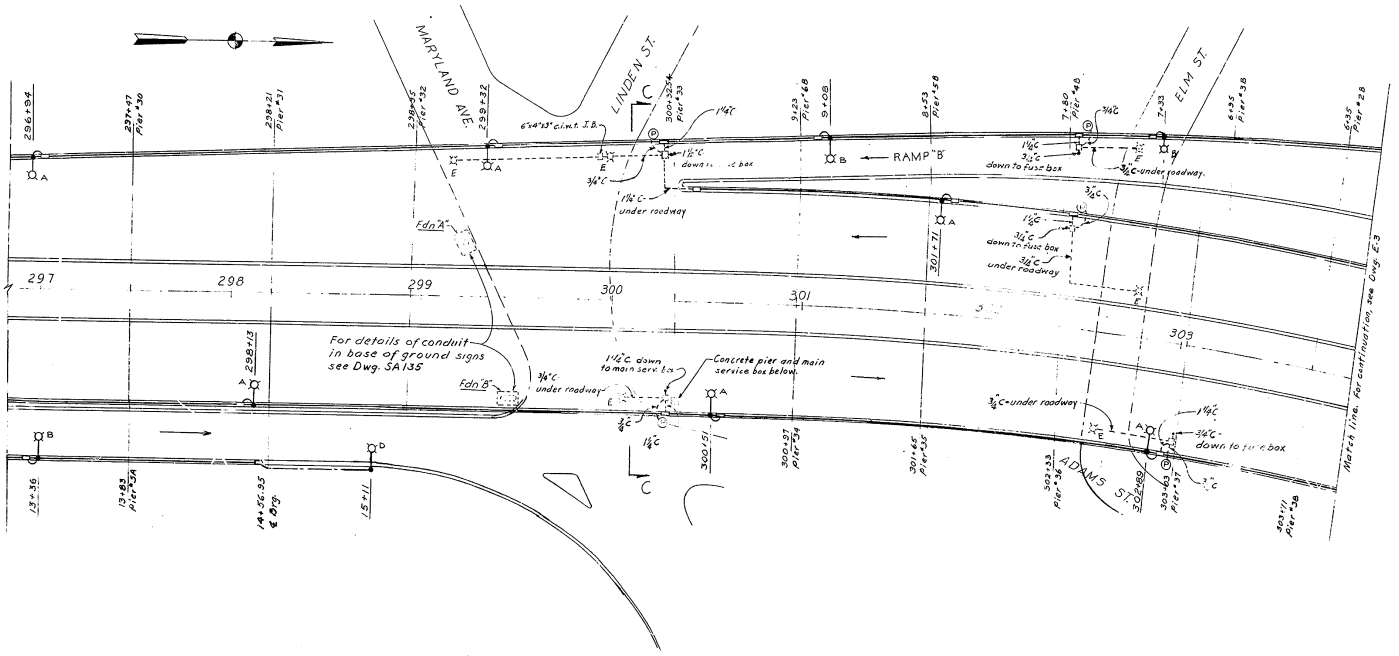
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

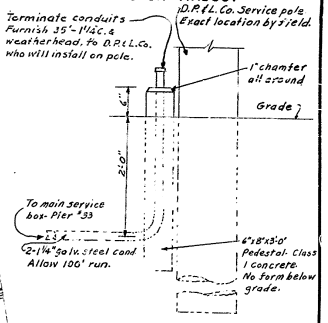
DWG. NO. E1

COUNTY	CONTRACT	F.A.P. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	171	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT







DETAIL I
D.P.& L. CO. SERVICE POLE
SCALE: 1 IN. = 1 FT.

LEGEND

- Street lighting standard and fixture. Letter indicates type (To be furn. & install. by others)
- Junction or pull box, cast iron galvanized. 16"x12"x6" flush except where noted.
- Galvanized rigid conduit, embedded in parapet. Conduit 1½" except where noted.
- Underpass Lighting Fixture (To be furnished & installed by others.)
- Galvanized rigid conduit, exposed. Otherwise same as embedded.
- Galvanized rigid conduit, underground. Otherwise same as embedded.
- Photoelectric cell for control of underpass lighting (To be Furnished & installed by others.)

Notes

1. For Section C-C and typical electrical details see Dwgs. *E 4 & *E 5.
2. For structural details of lighting standard pedestals on parapets, see Dwg. SA87

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

ELECTRICAL PLAN-I

APPROVED BY: Thomas D. Casarow Jr. 4-16-64
BRIDGE ENGINEER — DATE

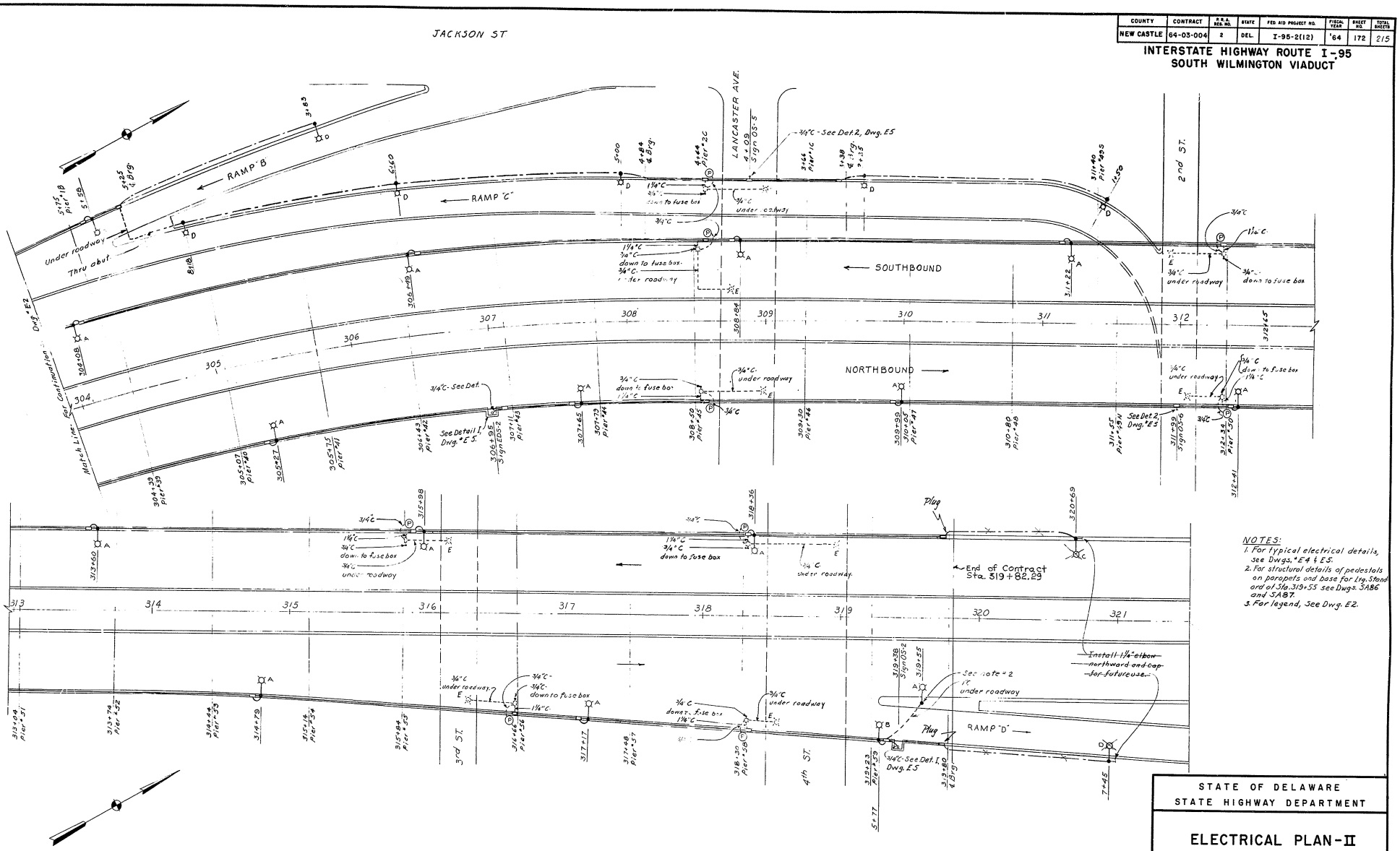
SCALE: 1 IN. = 30FT
DATE: APRIL 1, '64

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. E2

COUNTY	CONTRACT	R.R.A. RES. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	172	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



NOTES:
1. For typical electrical details, see Dwgs. "E4 & E5.
2. For structural details of pedestals on parapets and base for Ltg. Standard of Sta. 319+55 see Dwgs. SAB6 and SAB7.
3. For legend, See Dwg. E2.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

ELECTRICAL PLAN-II

APPROVED BY: _____ BRIDGE ENGINEER
4-16-64 DATE

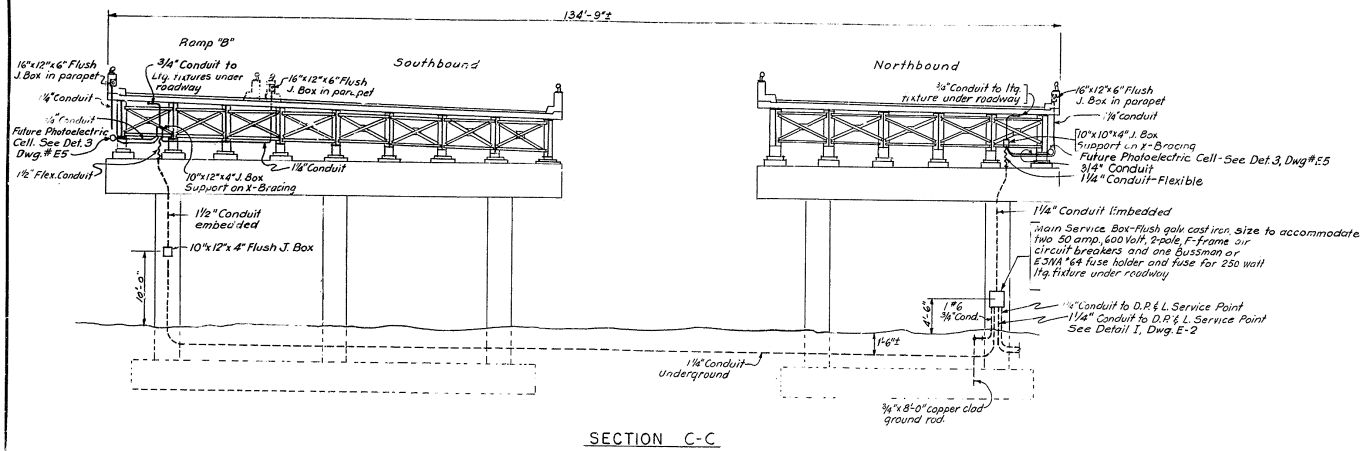
SCALE: 1 IN. = 30 FT.
DATE: APRIL 1, '64

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

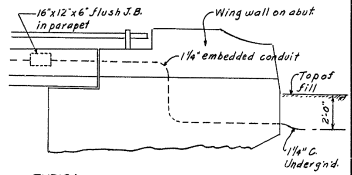
DWG. NO. E3

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I 95-2(12)	'64	173	215

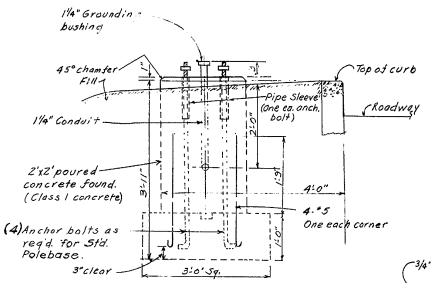
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



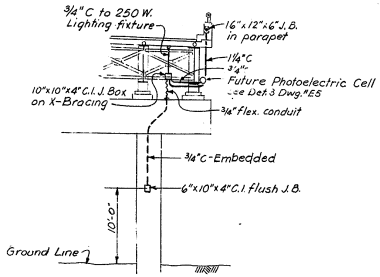
SECTION C-C
SCALE 1/8 IN. = 1 FT.



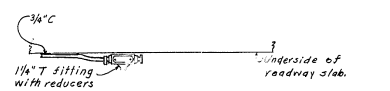
TYPICAL TRANSITION OF CONDUIT FROM ABUTMENT TO UNDERGROUND
SCALE 1/4 IN. = 1 FT.



TYPICAL TYPE C AND TYPE D LIGHTING FIXTURES
SCALE 3/4 IN. = 1 FT.

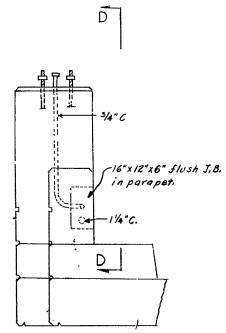


TYPICAL SERVICE FOR 1-250 WATT LIGHTING FIXTURE UNDER ROADWAY
SCALE 1/8 IN. = 1 FT.

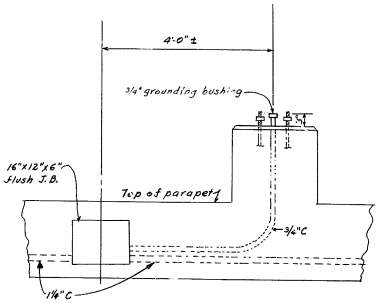


Note: Use 6"x4"x3" c.i.w.t. surf. m'td. J.B. where conduit runs thru to add'l. fixture.

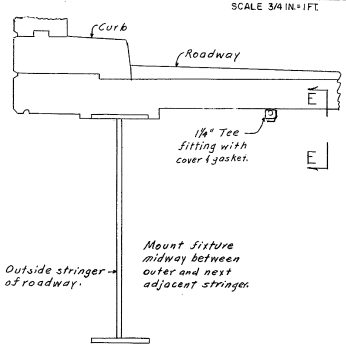
SECTION E-E
SCALE 3/4 IN. = 1 FT.



TYPICAL TYPE A AND TYPE B LIGHTING FIXTURES
SCALE 3/4 IN. = 1 FT.



SECTION D-D
SCALE 3/4 IN. = 1 FT.



TYPICAL TYPE E LIGHTING FIXTURE
SCALE 3/4 IN. = 1 FT.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

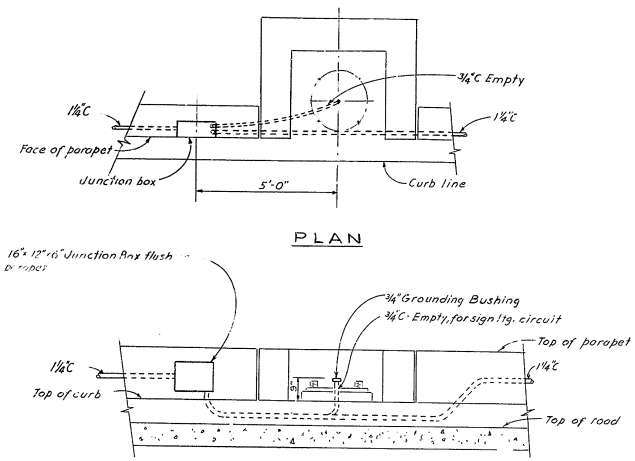
ELECTRICAL DETAILS - I

APPROVED BY: Thomas R. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

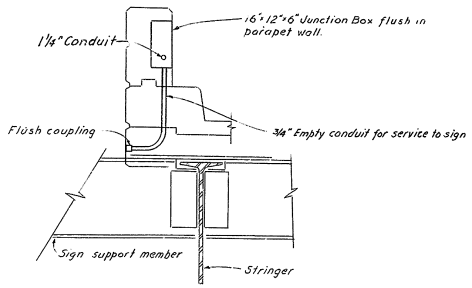
SCALE: AS NOTED
DATE: APRIL 1, '64
TIPPETTS-ABBETT-McCARTHY-STRATTON ENGINEERS AND ARCHITECTS
DWG. NO. E4

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I 95-2(12)	'64	174	215

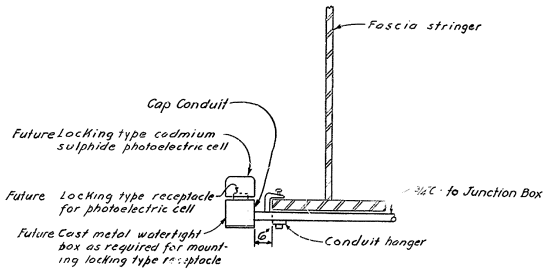
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



DETAIL-I
ELECTRIC CONSTRUCTION FOR SIGN SERVICE
TYPICAL FOR SIGNS: OS-1, OS-2 & EDS-2
SCALE: 1/2 IN.= 1 FT.



DETAIL-2
ELECTRIC CONSTRUCTION FOR SIGN SERVICE
TYPICAL FOR SIGNS: OS-5 & OS-6
SCALE: 1/2 IN = 1 FT



DETAIL-3
TYPICAL MOUNTING FOR PHOTOELECTRIC CELL
FOR UNDERPASS LIGHTING CONTROL
SCALE: 1 1/2 IN.= 1 FT.

NOTES:
1) For structural details of sign supports see Dwg. # SA 134 & SA-135

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

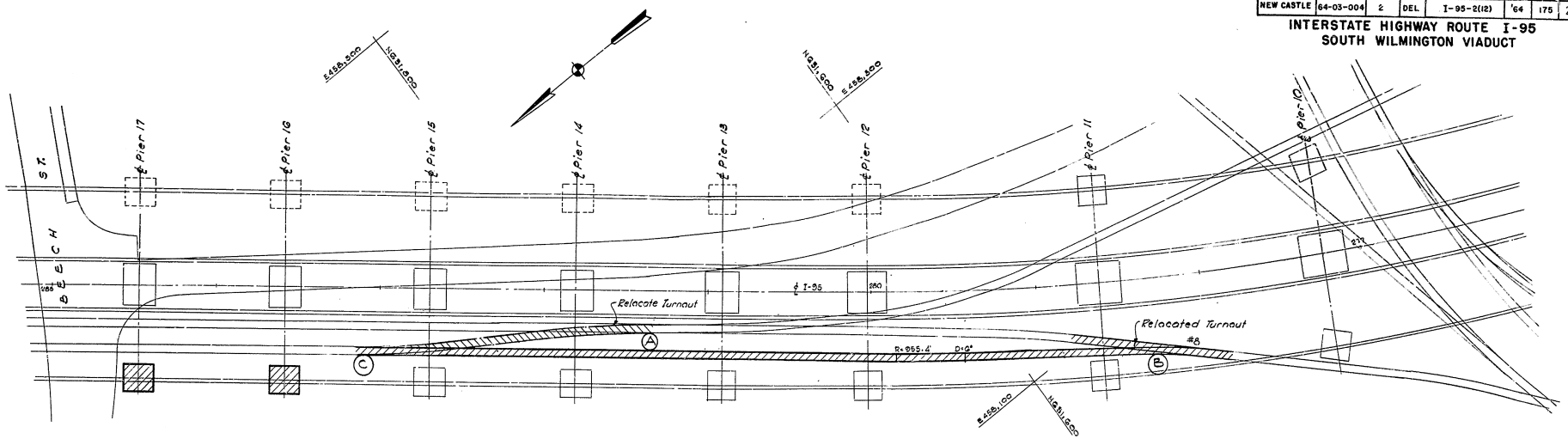
ELECTRICAL DETAILS - II

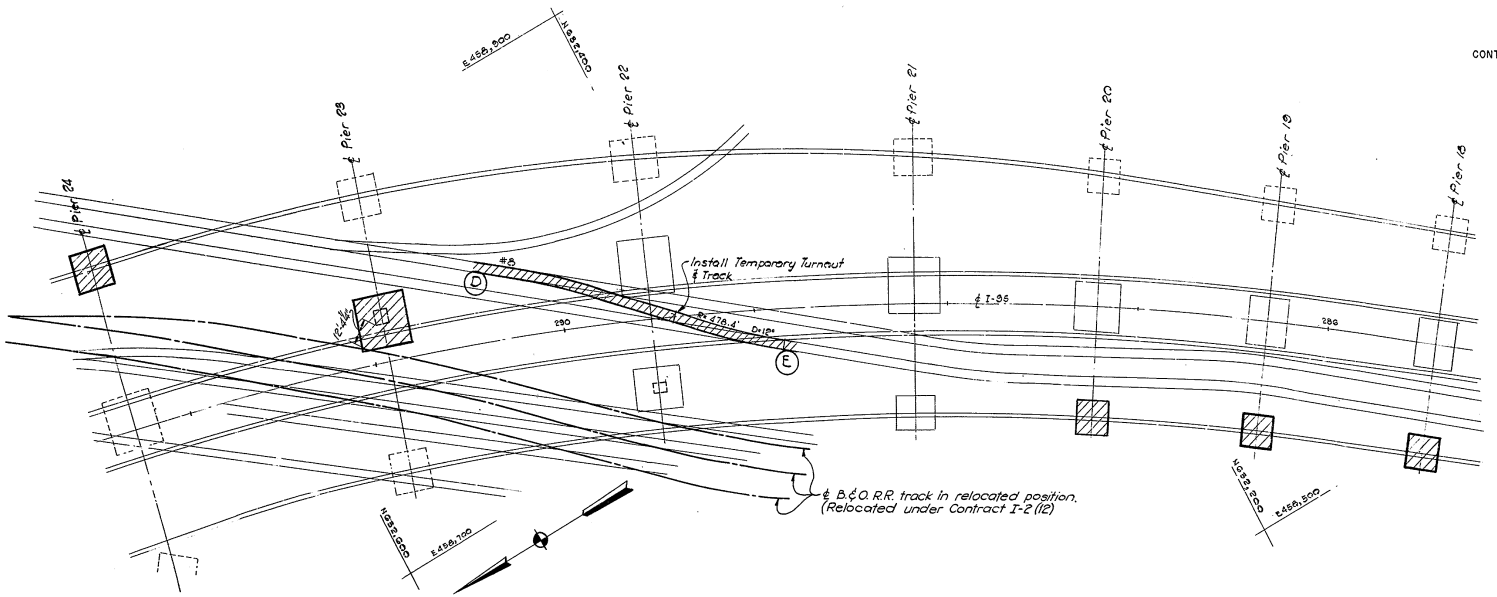
APPROVED BY:
Johnnie L. Pearson, Jr.
BRIDGE ENGINEER
4-16-64
DATE

SCALE: AS NOTED
DATE: APRIL 1, '64
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS
DWG. NO. E5

COUNTY	CONTRACT	R.R.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	175	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





STAGE 4

CONTRACT I-2(12)
1. Relocate turnout at Point (A) to Point (B).
2. Construct track between Points (B) & (C).

CONTRACT 64-03-004
3. Install temporary turnout & track between Points (D) & (E).
4. Construct footings as indicated. (Piers 23 & 24)
5. Remove temporary turnout & track between Points (D) & (E) and restore track to final position.

NOTES

1. Stage 4 construction indicated thus ▨
2. For location & geometry of footings, see Foundation Drawings.

STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TRACK CHANGES
READING CO.
STAGE 4

APPROVED BY: Johnnie P. Pearson Jr. — BRIDGE ENGINEER — 4-16-64 DATE

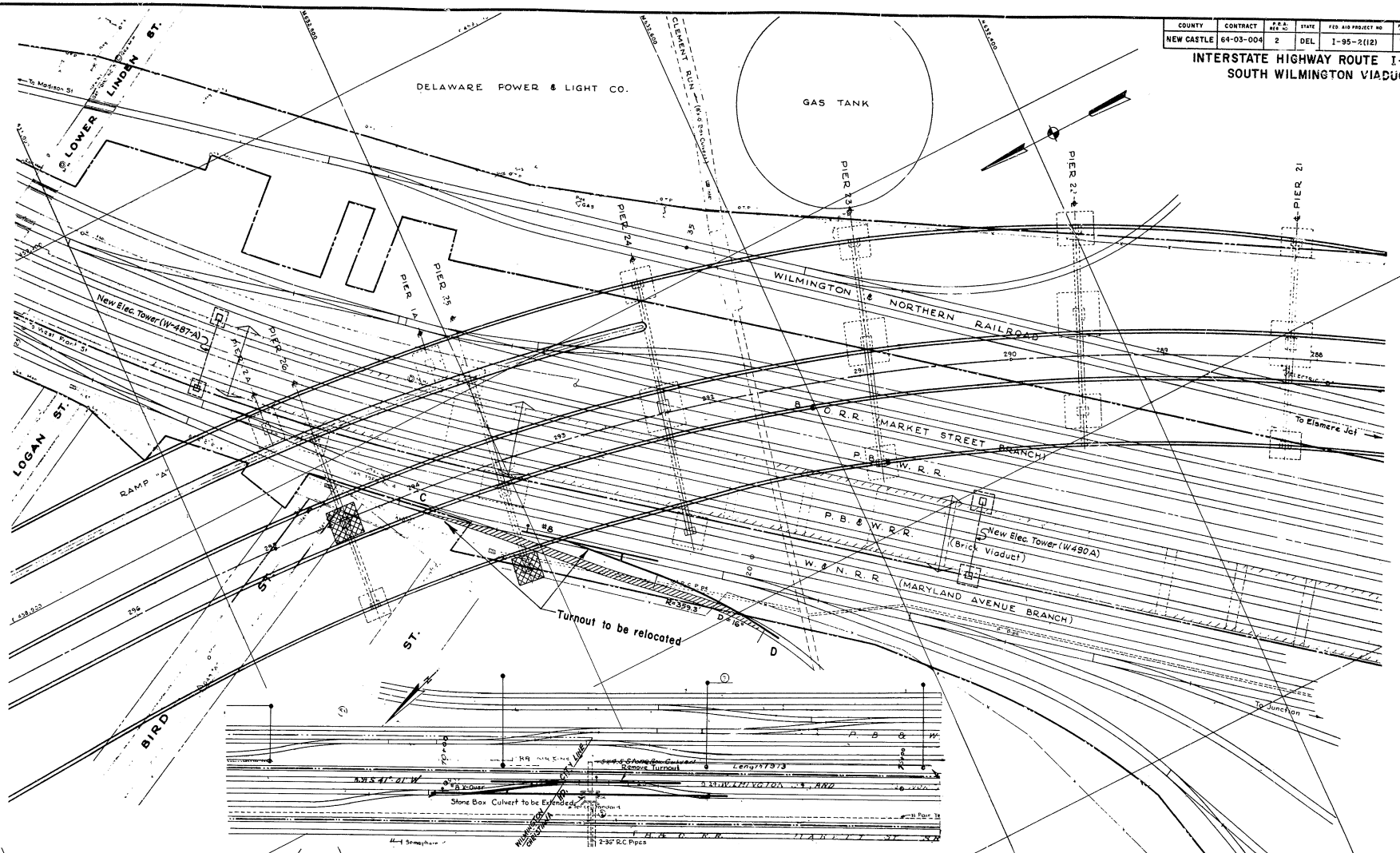
SCALE: 1" = 30'
DATE:

TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

DWG. NO. P-13204-4

COUNTY	CONTRACT	P.R.R. REF. NO.	STATE	FED. AID PROJECT NO	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	176	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



PROPOSED CONNECTION TO LATIMER SIDING

STAGE 5

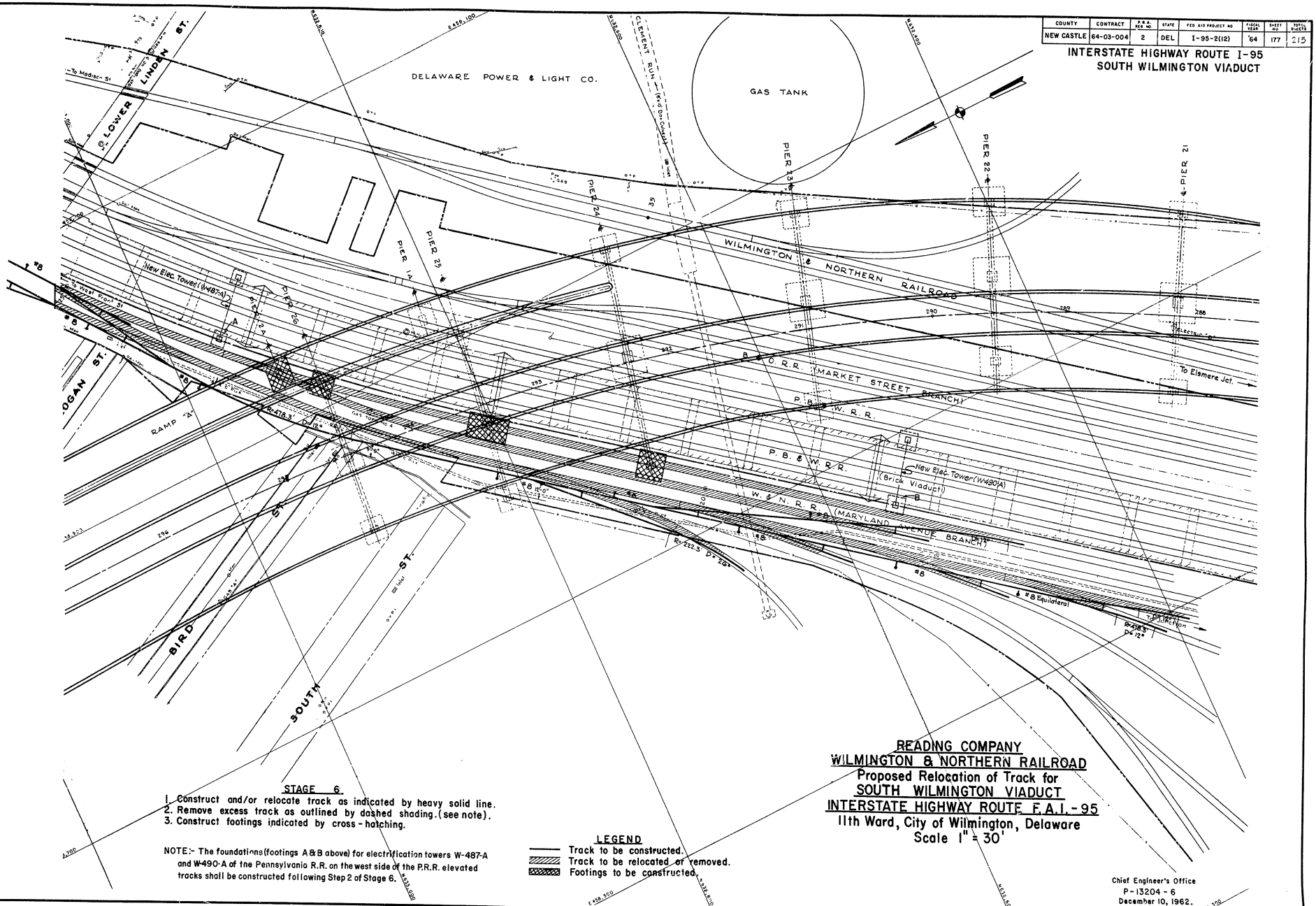
1. Relocate turnout and track between C and D. Remove excess track.
2. Construct footings indicated by cross-hatching.
3. Construct connection to Latimer siding

READING COMPANY
WILMINGTON & NORTHERN RAILROAD
Proposed Relocation of Track for
SOUTH WILMINGTON VIADUCT
INTERSTATE HIGHWAY ROUTE F.A.I.-95
11th Ward, City of Wilmington, Delaware
Scale 1" = 30'

Chief Engineer's Office
P-13204-5
December 7, 1962.
Revised Sept. 16, 1963

COUNTY	CONTRACT	P.R.A. RES. NO	STATE	FED AID PROJECT NO	FISCAL YEAR	SHEET NO	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	177	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



STAGE 6.

1. Construct and/or relocate track as indicated by heavy solid line.
2. Remove excess track as outlined by dashed shading. (see note).
3. Construct footings indicated by cross-hatching.

NOTE:- The foundations (footings A & B above) for electrification towers W-487-A and W-490-A of the Pennsylvania R.R. on the west side of the P.R.R. elevated tracks shall be constructed following Step 2 of Stage 6.

LEGEND

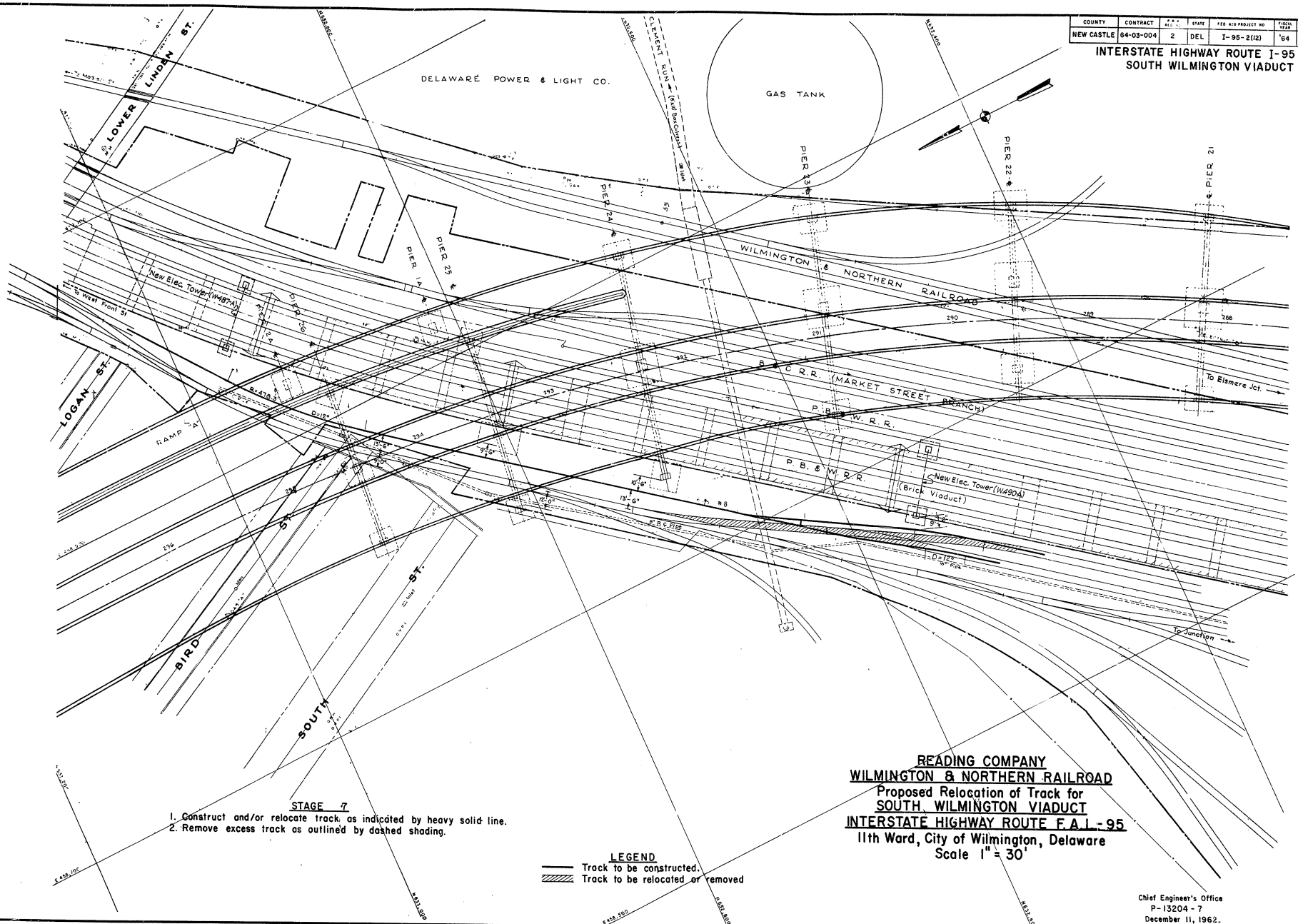
- Track to be constructed.
- Track to be relocated or removed.
- Footings to be constructed.

READING COMPANY
WILMINGTON & NORTHERN RAILROAD
Proposed Relocation of Track for
SOUTH WILMINGTON VIADUCT
INTERSTATE HIGHWAY ROUTE F.A.I.-95
11th Ward, City of Wilmington, Delaware
Scale 1" = 30'

Chief Engineer's Office
P-13204-6
December 10, 1962.
Revised Sept. 16, 1963

COUNTY	CONTRACT	F.A.I. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	178	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT

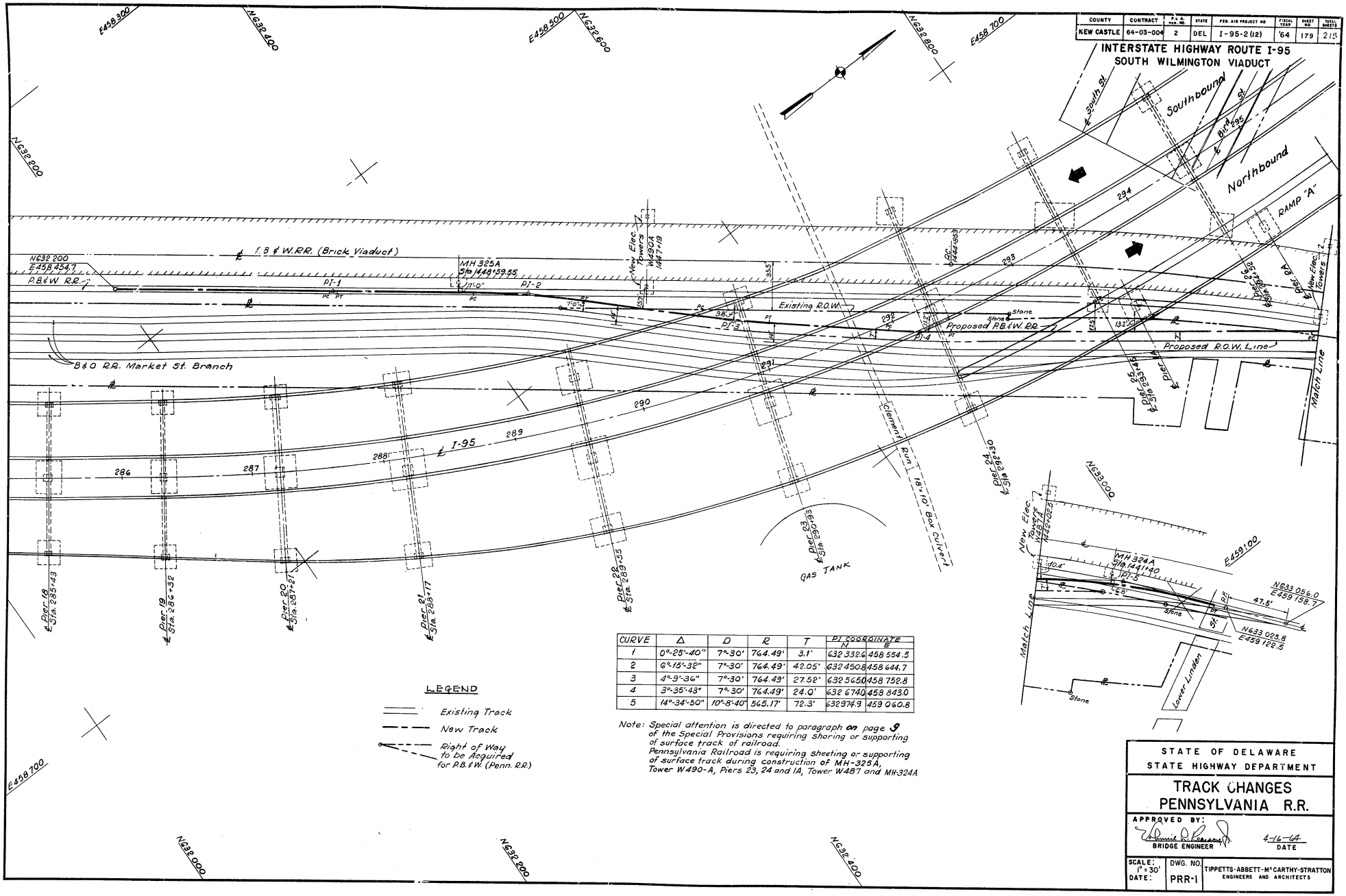


READING COMPANY
WILMINGTON & NORTHERN RAILROAD
Proposed Relocation of Track for
SOUTH WILMINGTON VIADUCT
INTERSTATE HIGHWAY ROUTE F.A.I.-95
11th Ward, City of Wilmington, Delaware
Scale 1" = 30'

Chief Engineer's Office
P-13204-7
December 11, 1962.
Revised Sept. 17, 1963

COUNTY	CONTRACT	P.L.A. REV. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12)	'64	179	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



CURVE	Δ	D	R	T	PI COORDINATE N	PI COORDINATE E
1	0°-25'-40"	7°-30'	764.49'	3.1'	632 332.6	458 554.5
2	6°-15'-32"	7°-30'	764.49'	42.05'	632 450.8	458 644.7
3	4°-9'-36"	7°-30'	764.49'	27.52'	632 565.0	458 752.8
4	3°-35'-43"	7°-30'	764.49'	24.0'	632 674.0	458 843.0
5	14°-34'-50"	10°-8'-40"	565.17'	72.3'	632 974.9	459 060.8

Note: Special attention is directed to paragraph on page 9 of the Special Provisions requiring shoring or supporting of surface track of railroad.
Pennsylvania Railroad is requiring sheeting or supporting of surface track during construction of MH-325A, Tower W490-A, Piers 23, 24 and 1A, Tower W487 and MH-324A

LEGEND

Existing Track

New Track

Right of Way to be Acquired for P.B.&W. (Penn. R.R.)

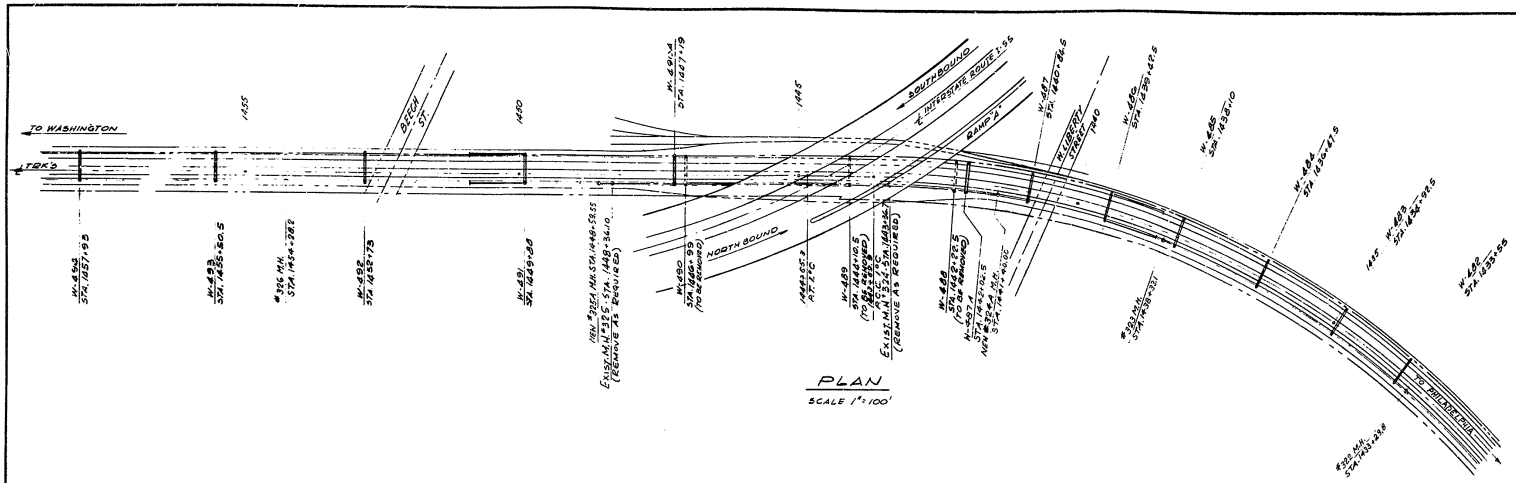
STATE OF DELAWARE
STATE HIGHWAY DEPARTMENT

TRACK CHANGES
PENNSYLVANIA R.R.

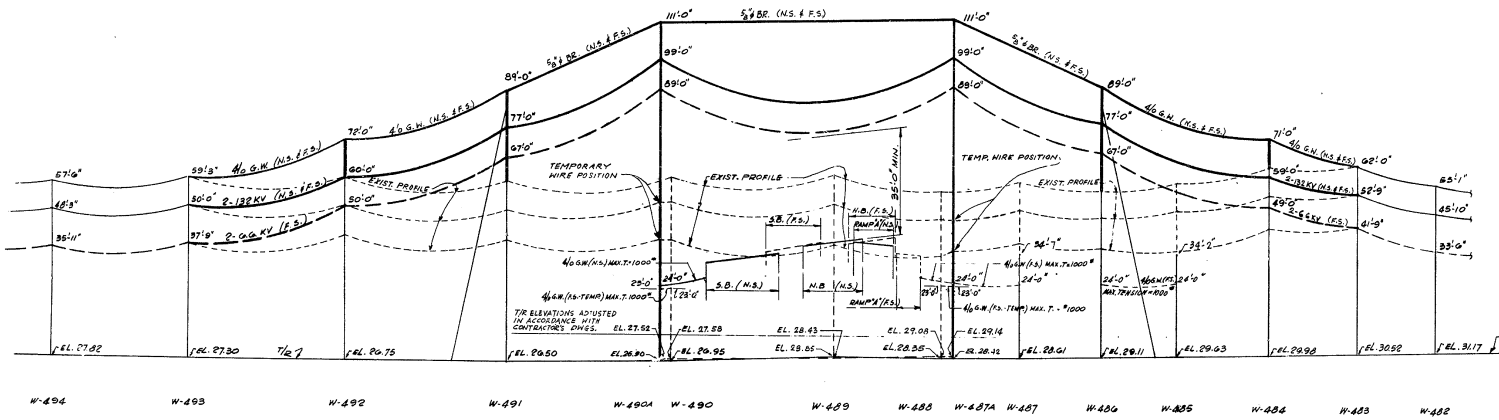
APPROVED BY:
BRIDGE ENGINEER — DATE 4-16-64

SCALE: 1" = 30'
DATE:
DWG. NO. PRR-1
TIPPETTS-ABBETT-McCARTHY-STRATTON
ENGINEERS AND ARCHITECTS

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	180	215



PLAN
SCALE 1" = 100'



PROFILE
SCALE: HOR. 1" = 100'
VERT. 1" = 20'

LIST OF DRAWINGS:

PLAN & PROFILE	DWG.	46-S-141
MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486	"	46-S-7417
" " " " W-485 & W-487	"	46-S-7418
ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A	"	46-S-7419
MODIFICATIONS TO EXISTING BEAM BRIDGES W-491 & W-492	"	46-S-7420
STEEL DETAILS OF CROSS-BEAMS & SAG BRACES FOR NEW BEAM BR'S W-487A & W-490A	"	46-S-2234
CROSS-ARM DETAILS	"	46-S-2235
STEEL DETAILS OF POLES W-487AA, W-487AB, W-490AA & W-490AB	"	46-S-2236
POLE EXTENSIONS FOR BEAM BRIDGES W-484, W-486, W-491 & W-492	"	46-S-2237
HARDWARE DETAILS	"	46-S-2238
FOUNDATIONS & ANCHORS	"	46-S-2239
CATENARY ATTACHMENTS: PLAN	"	46-S-3042
" " : ELEVATIONS	"	46-S-3043
" " : DETAILS	"	46-S-3044
DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1	"	46-S-2240
" " " , " " , SH. #2	"	46-S-2241
" " " , " " , SH. #3	"	46-S-2242
" " " , SECTIONS	"	46-S-2243
PULL BOX DETAILS, SHEET #1	"	46-S-2224
" " " , " #2	"	46-S-2246
MANHOLE #325A, CONCRETE DETAILS, SH. #1	"	46-S-2245
MANHOLE 324A & 325A CONCRETE DETAILS, SH #2	"	46-S-2247
MODIFICATIONS TO EXISTING BEAM BRIDGE W-489	"	46-S-2251
MANHOLE #324A, CONCRETE DETAILS, SH. #1	"	46-S-2252
MANHOLE #324A & 325A, CONCRETE DETAILS, SH #3	"	46-S-2254
BONDING OF PROTECTIVE BARRIERS	"	46-S-3046

FOR GENERAL NOTES SEE DWG No 46-S-2234 & 46-S-2239

ISSUE NO	DATE	D'WN	CH'K'D	APPROVALS	CAT	ELEC.	A.E.	ISSUED FOR
3	1-9-64	SD	WC					CONSTRUCTION JRS
2	10-8-63	RM	WD					REV. FOR STRUCTURAL APPROVAL
1	7-1-63							STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-141-3

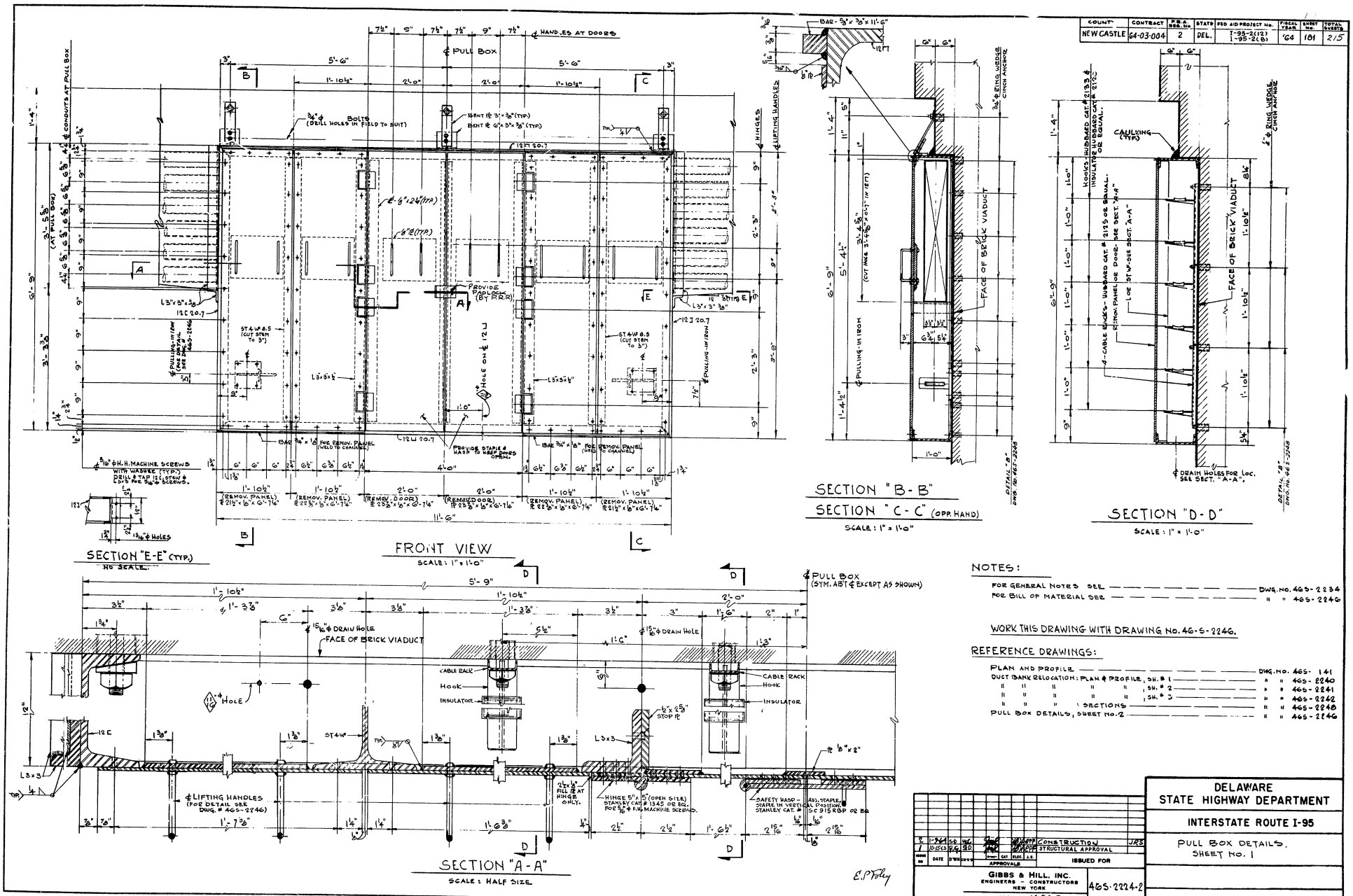
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

PLAN AND PROFILE

E.P. Foley

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	181	215



NOTES:

FOR GENERAL NOTES SEE — DWG. NO. 46S-2234
FOR BILL OF MATERIAL SEE — " " 46S-2246

WORK THIS DRAWING WITH DRAWING No. 46-S-2246.

REFERENCE DRAWINGS:

PLAN AND PROFILE — DWG. NO. 46S-141
DUCT BANK RELOCATION: PLAN & PROFILE, SH. # 1 — " " 46S-2240
" " " " " , SH. # 2 — " " 46S-2241
" " " " " , SH. # 3 — " " 46S-2242
" " " SECTIONS — " " 46S-2248
PULL BOX DETAILS, SHEET No. 2 — " " 46S-2246

ISSUE NO.	DATE	D'WN	CH'K'D					
2	1-29-64	S.D.	W.C.	[illegible]	[illegible]	[illegible]	CONSTRUCTION	JRS
1	10-15-63	G.G.	S.D.	[illegible]	[illegible]	[illegible]	STRUCTURAL APPROVAL	

APPROVALS — ISSUED FOR

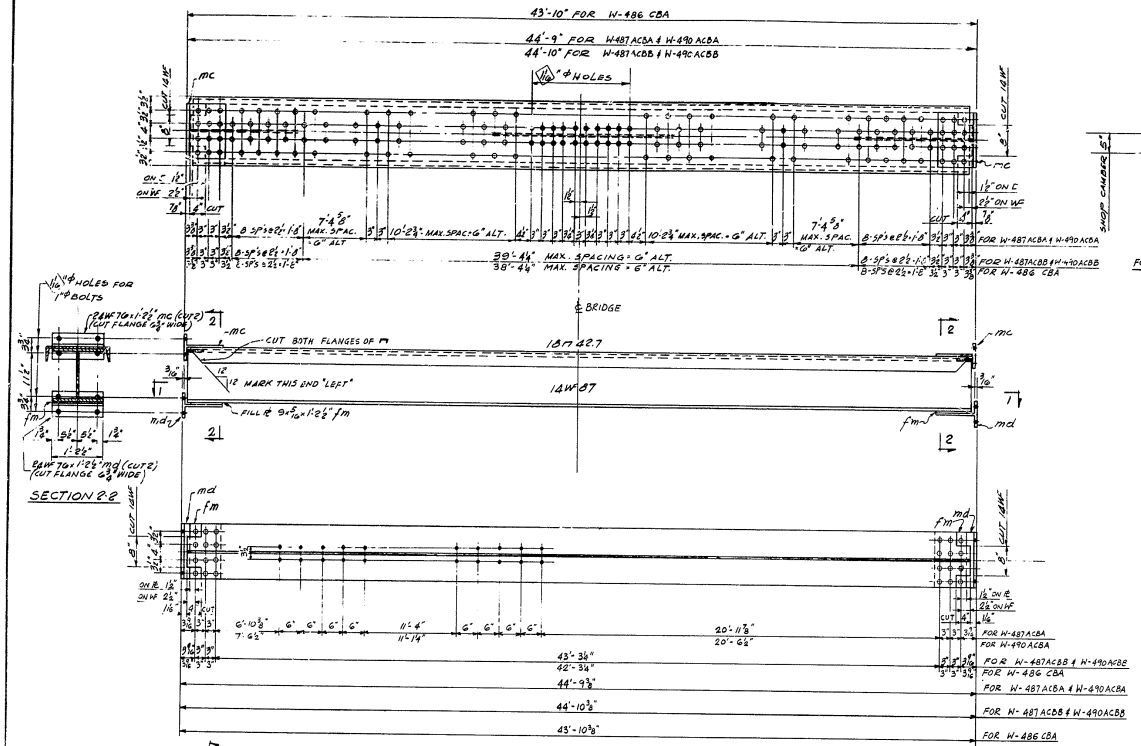
GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46S-2224-2

DELAWARE
STATE HIGHWAY DEPARTMENT

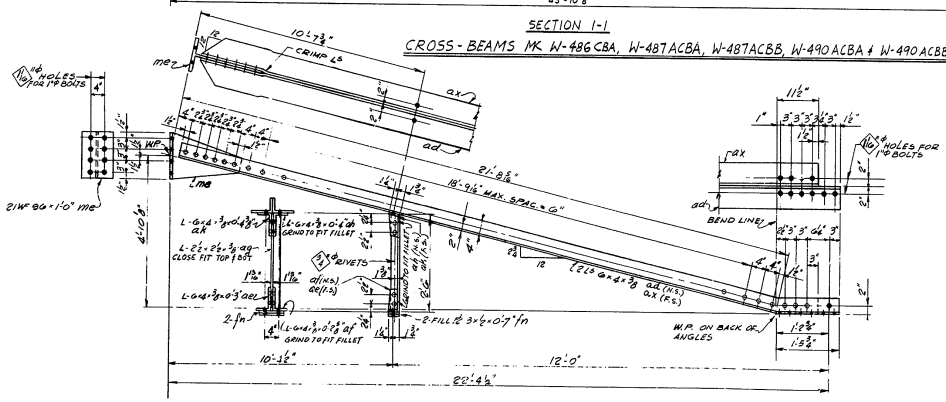
INTERSTATE ROUTE I-95

PULL BOX DETAILS.
SHEET No. 1

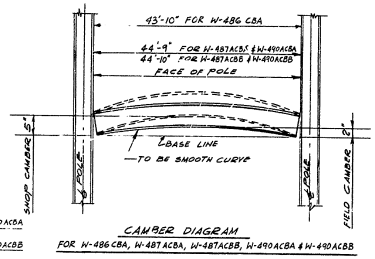


SECTION 1-1

CROSS-BEAMS MK W-486 CBA, W-487 ACBA, W-487 ACBB, W-490 ACBA & W-490 ACBB



SAG BRACE MK "SB-1"



CAMBER DIAGRAM

FOR W-486 CBA, W-487 ACBA, W-487 ACBB, W-490 ACBA & W-490 ACBB

COUNTY	CONTRACT	P.R.A. REQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(18)	'64	182	215

BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		CROSS-BEAM W-487 ACBA		
W487ACBA	THIS DWG.	14 WF 87	EA.	1
	" "	18 ϖ 42.7	"	1
mc	" "	24 WF 76 x 1'-2½"	"	2
md	" "	24 WF 76 x 1'-2½"	"	2
fm	" "	⅞ ϕ x ⅞ = 1'-2½"	"	2
		RIVETS & BOLTS	"	AS REQ'D
		CROSS-BEAM W-490 ACBA		
		MATERIAL AS ABOVE FOR W-487 ACBA		
		CROSS-BEAM W-487 ACBB		
W487ACBB	THIS DWG.	14 WF 87	EA.	1
	" "	18 ϖ 42.7	"	1
		OTHER MATERIAL AS FOR W-487 ACBA		
		CROSS-BEAM W-490 ACBB		
		MATERIAL AS FOR W-487 ACBB		
		SAG BRACE SB-1 (ONE LISTED - 4 REQ'D)		
ad	THIS DWG.	L-G-4-⅜	EA.	1
ax	" "	L-G-4-⅜	"	1
me	" "	21 WF 96 x 1'-0"	"	1
ae	" "	L-G-4-⅜ x 0'-3"	"	1
af	" "	L-G-4-⅜ x 0'-2⅝"	"	1
ag	" "	L-2½-2½-⅜ (STRUT)	"	1
ah	" "	L-G-4 x ⅜ x 0'-4"	"	1
ak	" "	L-G-4 x ⅜ x 0'-4⅜"	"	1
fn	" "	FILL ℄ 3-⅜-0'-7"	"	2
		CROSS-BEAM W-486 CBA		
W-486 CBA	THIS DWG.	14 WF 87	EA.	1
	" "	18 ϖ 42.7	"	1
		OTHER MATERIAL AS FOR W-487 ACBA		

GENERAL NOTES (STEEL):

1. RIVETS & BOLTS ⅞ ϕ, HOLES 1⅛ ϕ UNLESS NOTED
2. ALL FIELD WORK TO BE BOLTED
3. ALL CONNECTION BOLTS & WASHERS TO BE SUPPLIED BY FABRICATOR.
4. STRUCTURAL STEEL SHALL CONFORM TO THE LATEST A.R.E.A. SPECIFICATIONS FOR STEEL RAILWAY BRIDGES, EXCEPT FOR DESIGN.
5. GALVANIZING SHALL CONFORM TO THE A.S.T.M. DESIGNATION No. A-123 & A-153 LATEST ISSUE.
6. ALL STEEL EMBEDDED IN CONCRETE TO BE UNPAINTED.
7. CROSS-ARMS SHALL BE SUPPLIED WITH ALL PARTS INCLUDING SAG RODS COMPLETELY ASSEMBLED & BOLTED.

REFERENCE DRAWINGS:

ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A	DWG. No. 46-S-7419
STEEL DETAILS OF POLES W-487AA, W-487AB, W-490AA & W-490AB	" " 46-S-2236
POLE EXTENSIONS FOR BRIDGES W-484, W-486, W-491 & W-492	" " 46-S-2237

NO.	DATE	BY	CHK'D	APPROVALS	
2	1-19-64	SG	WL		APP'D CONSTRUCTION JRS
1	10-16-63	SG	WD		APP'D STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB No. 1489 A

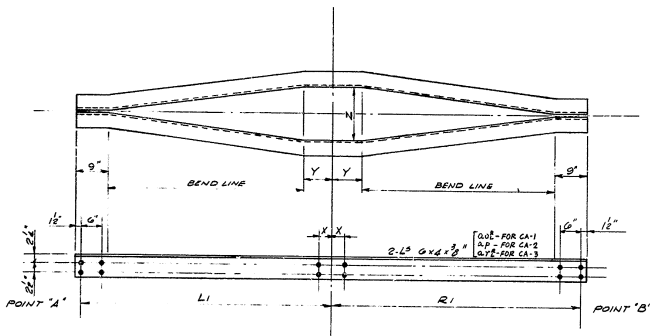
46-S-2234-2

DELAWARE
STATE HIGHWAY DEPARTMENT

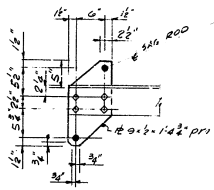
INTERSTATE ROUTE I-95

STEEL DETAILS OF CROSS-BEAM FOR BEAM BRIDGE W-486 AND CROSS-BEAMS AND SAG BRACES FOR NEW BEAM BRIDGES W-487A & W-490A

COUNTY	CONTRACT	P.R.& REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(26)	'64	183	215

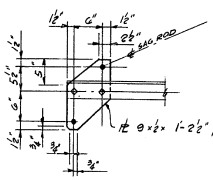


CROSS-ARM TYPE "A"



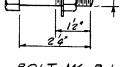
ASSEMBLY - 1

ASSEMBLY - 2

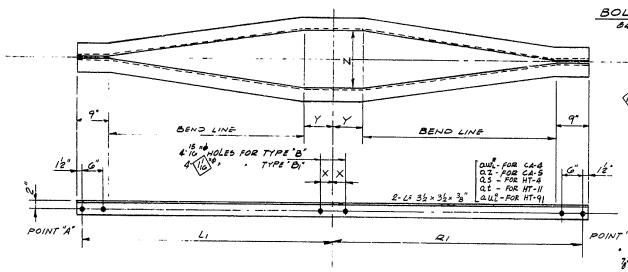


ASSEMBLY - 4

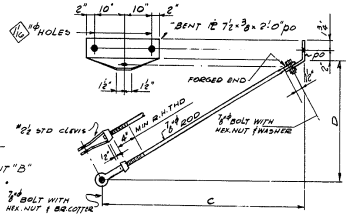
ASSEMBLY - 5
EQUAL EXCEPT AS NOTED



BOLT MK B-1
8A REQUIRED



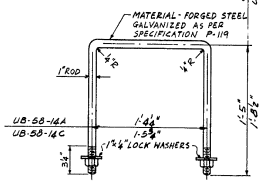
CROSS-ARM TYPE "B" & "B1"



ASSEMBLY - 3

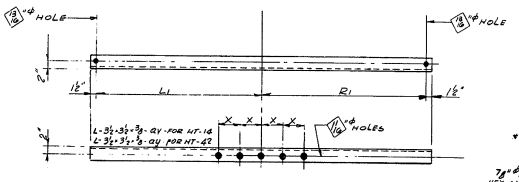
MARK	DIMENSIONS	
	"C"	"D"
SR-5	7'-4½"	4'-3"
SR-6	9'-10½"	6'-3"

SAG RODS MK SR-5 & SR-6

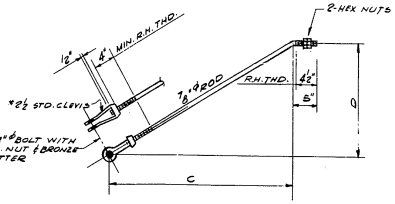


U-BOLT MK UB-58-16A (4-REQ'D)

U-BOLT MK UB-58-14C (2-REQ'D)

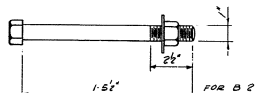


CROSS-ARM TYPE "C"



SAG RODS
MK SR-1, SR-2, SR-3, SR-4
HC-104, HC-41 & HC-51

MARK	DIMENSIONS	
	"C"	"D"
SR-1	6'-4½"	4'-3⅜"
SR-2	13'-4½"	4'-3⅜"
SR-3	8'-10½"	4'-3⅜"
SR-4	9'-4½"	4'-3⅜"
HC-104	7'-4½"	4'-0"
HC-41	2'-10½"	1'-11"
HC-51	3'-10½"	1'-11"



BOLT MK "B2" (8-REQ'D)
BOLT MK "B3" (8-REQ'D)
(GALVANIZED)

NOTES
FOR GENERAL NOTES SEE DWG. No. 605-2234
ALL CROSS-ARM MATERIAL TO BE GALVANIZED

REFERENCE DWGS.

MODIF'S TO EXISTING BEAM BRIDGES W-486 & W-490	DWG. No. 605-7617
ERECTION DIAGR'S OF NEW BEAM BR'S. W-487A & W-490A	" " 605-7619
MODIF'S TO EXISTING BEAM BRIDGES W-491 & W-492	" " 605-7620
STEEL DETAILS OF POLES W-487A, W-487AB, W-490AB & W-490AS	" " 605-2234
POLE 6X13 FOR DM. B2'S W-486, W-490, W-491 & W-492	" " 605-2237

E.P. Foley

CROSS-ARM TABULATION

MARK	TYPE	ASSEMB. TO USE AT POINT A	ASSEMB. TO USE AT POINT B	DIMENSIONS L1	R1	X	Y	Z	SAG ROD AT POINT A	SAG ROD AT POINT B	BOLTS FOR POLE CONN.
CA-1	A	1	2	7'-0"	14'-0"	3½	8¼	1'-3½	SR-1	SR-2	8
CA-2	A	1	1	11'-0"	11'-0"	3½	8¼	1'-3½	SR-3	SR-3	8
CA-3	A	1	2	7'-0"	10'-0"	3½	8¼	1'-3½	SR-1	SR-4	8
"-T4	B	3	3	8'-0"	8'-0"	3½	8¼	1'-3½	HC-104	HC-104	4
"-T"	B	3	3	4'-0"	4'-0"	3½	8¼	1'-3½	HC-41	HC-41	4
HT-91	B	3	4	4'-0"	6'-0"	3½	8¼	1'-3½	HC-41	HC-51	4
"T-14	C	—	—	3'-0"	3'-0"	8¼	—	—	—	—	ARE DIRECT DIAGRAM
HT-42	C	—	—	3'-0"	3'-0"	8¼	—	—	—	—	" " "
CA-4	B1	3	5	8'-0"	11'-0"	8¼	11"	1'-6"	SR-5	SR-6	" " "
CA-5	B1	3	3	6'-0"	8'-0"	8¼	11"	1'-6"	SR-5	SR-5	" " "

BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT
		CROSS-ARM "CA" (ONE LISTED - 2 REQ'D)		
aq2	THIS DWG.	L - 6"x4"x 3/8	EA.	1-aq2 R 1-aq1
pm	" "	PL - 9"x ½" x 1'-4¾"	"	2
al	" "	L - 4"x 3½"x ½" x 1'-11¾"	"	1
—	—	WASHER ⅜" THICK	"	1
SR-1	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
SR-2	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
		CROSS-ARM "CA-2" (ONE LISTED - 2 REQ'D)		
ap	THIS DWG.	L - 6"x4"x 3/8	EA.	2
pm	" "	PL - 9"x ½" x 1'-4¾"	"	2
SR-3	" "	⅞"ø ROD WITH 2 HEX. NUTS	"	2
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "CA-3" (ONE LISTED - 4 REQ'D)		
aq1	THIS DWG.	L - 6"x4"x 3/8	EA.	1-aq1 R 1-aq2
pm	" "	PL - 9"x ½" x 1'-4¾"	"	2
al	" "	L - 4"x 3½"x ½" x 1'-11¾"	"	1
—	—	WASHER ⅜" THICK	"	1
SR-1	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
SR-4	" "	⅞"ø " " " " "	"	1
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-4" (ONE LISTED - 4 REQ'D)		
aq	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	2
pm	" "	PL - 9"x ½" x 1'-2¾"	"	2
HC-104	" "	⅞"ø ROD WITH 2 HEX. NUTS	"	2
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-11" (ONE LISTED - ONE REQ'D)		
aq2	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1-aq2 R 1-aq1
pm	" "	PL 9"x ½" x 1'-2¾"	"	2
HC-41	" "	⅞"ø ROD WITH 2 HEX. NUTS	"	2
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-91" (ONE LISTED - ONE REQ'D)		
aq2	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1-aq2 R 1-aq1
pm	" "	PL - 9"x ½" x 1'-2¾"	"	2
am	" "	L - 3"x 2½"x 3"x 1'-5¾"	"	1
—	—	WASHER ⅞" THICK	"	1
HC-41	THIS DWG.	⅞"ø ROD WITH 2 HEX. NUTS	"	1
HC-51	" "	⅞"ø " " " " "	"	1
#2½	—	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.NUT & BRZ. COTTER	"	2
		CROSS-ARM "HT-14" (ONE LISTED - 4 REQ'D)		
av	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1
		CROSS-ARM "HT-42" (ONE LISTED - 2 REQ'D)		
ay	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT
		CROSS-ARM "CA-4" (ONE LISTED, 2 REQ'D)		
aw2	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	1-aw2 R 1-aw1
pn	"	PL 9"x ½" x 1'-2¾"	"	2
ax	"	L - 4"x 3½"x ½" x 2'-5½"	"	1
—	—	WASHER ⅜" THICK	"	1
SR-5	—	⅞"ø ROD WITH ⅞"ø BOLT WITH H.N. & W.	"	1
SR-6	—	" " " " " " "	"	1
po		BENT PL 7½"x ⅜"x 2'-0"	"	2
#2½		#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.N. & BRZ. COTTER	"	2
		CROSS-ARM "CA-5" (ONE LISTED, 2 REQ'D)		
az	THIS DWG.	L - 3½"x 3½"x 3/8	EA.	2
pn	"	PL 9"x ½" x 1'-2½"	"	2
SR-5	"	⅞"ø ROD WITH ⅞"ø BOLT WITH H.N. & W.	"	2
#2½	"	#2½ STD. CLEVIS WITH ⅞"ø BOLT WITH H.N. & BRZ. COTTER	"	2
po	"	BENT PL 7½"x ⅜"x 2'-0"	"	2

	DATE	BY	CHKD	APPROVALS: PROJ. ENGR.	CAT. ENGR.	ELEC. ENGR.	A.E.
2	1-9-64	S.D.	JHC	JHC	WHBDT	CONSTRUCTION	JRS
1	10-25-63	R.M.	W.D.	JHC		STRUCTURAL APPROVAL	

ISSUED FOR

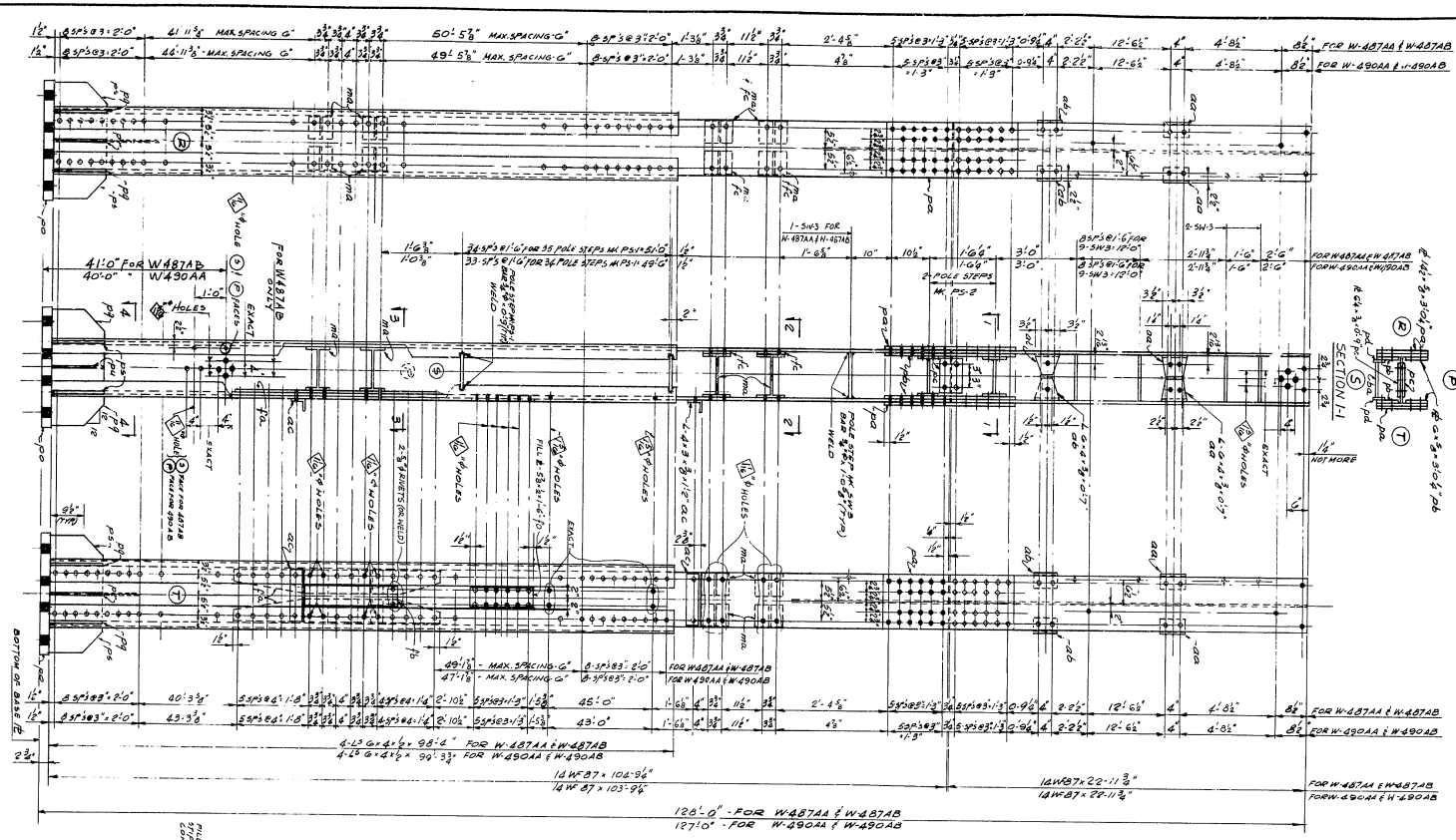
GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

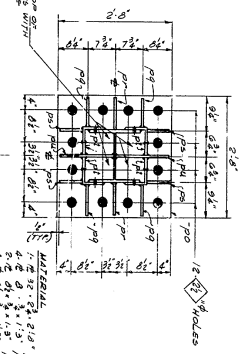
DELAWARE
STATE HIGHWAY DEPARTMENT

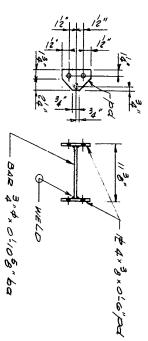
INTERSTATE ROUTE I-95

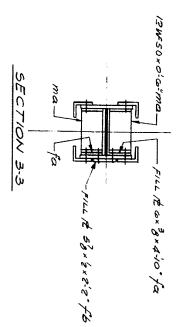
CROSS-ARM DETAILS

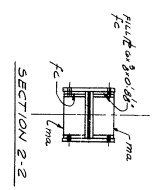
46-S-2235-2











NOTES

CONNECT COLUMN AND REINFORCING ANGLES TO BASE PLATE WITH ½" CONTINUOUS FILLET WELD ALL AROUND.

CONNECT ALL REINFORCING ANGLES TO COLUMN FLANGES WITH ⅜" FILLET WELDS AT TOE OF ANGLE AND EDGE OF FLANGE AT BOTT. OF POLE.

CONNECT ALL ¾" STIFFENER PLATES TO BASE PLATE WITH ⅜" CONTINUOUS BUTT WELD.

CONNECT VERTICAL "PL" PLATES TO TOES OF REINFORCING ANGLES WITH CONTINUOUS BUTT WELDS.

CONNECT VERTICAL EDGES OF STIFFENER PLATES TO COLUMN WITH ⅜" CONT. FILLET WELDS BOTH SIDES.

COUNTY	CONTRACT	F.B.A. DWG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	184	215

BILL OF MATERIAL

MARK	DWG No.	DESCRIPTION	UNIT	QUANT
		POLE W-487AA		
—	THIS DWG	14 WF 87 SPLICED [104-9¼" 22-11¾"]	EA	1
—	" "	L-6×4×½×98'-4" (REINFORCING ANGLES)	"	4
aa	" "	L-6×4×⅜×0'-7"	"	4
ab	" "	L-6×4×⅜×0'-7"	"	4
ac	" "	L-4×3×⅜×1'-2"	"	2
pa	" "	PL-14½×⅝×3'-0¼"	"	2
pb	" "	PL-6×⅝×3'-0¼"	"	4
pc	" "	PL-6¼×⅜×0'-9"	"	2
ma	" "	12 WF 50×0'-6"	"	8
fa	" "	FILL PL-6×⅜×4'-10"	"	2
fb	" "	" PL-5⅞×½×2'-2"	"	1
fc	" "	" PL-6×⅜×0'-8⅛"	"	4
fo	" "	" PL-5⅞×½×1'-6"	"	1
PS-1	" "	BAR ¾"φ×0'-9" (POLE STEP)	"	35
PS-2	" "	POLE STEP (FOR MATERIAL SEE BELOW)	"	2
SW-3	" "	BAR ¾"φ×1'-0⅝" (POLE STEP)	"	12
		RIVETS, BOLTS	"	AS REQ'D
po	THIS DWG.	PL 32×2¾×2'-8"	"	1
pq	" "	PL 8×¾×1'-3"	"	4
pr	" "	PL 8½×¾×1'-3"	"	2
ps	" "	PL 6½×¾×1'-3"	"	4
pt	" "	PL 3⅞×¾×1'-3"	"	4
pu	" "	PL 15×¾×1'-3¼"	"	2
—	—	WELD		AS REQ'D.
		POLE W-487AB		
—	THIS DWG.	MATERIAL AS FOR W-487AA		
		POLE W-490AA		
—	THIS DWG.	14 WF 87 SPLICED [103-9¼" 22-11¾"]	EA	1
—	" "	L-6×4×½×99'-3¾" (REINF. ANGLES)	"	4
PS-1	" "	BAR ¾"φ×0'-9" (POLE STEP)	"	34
PS-2	" "	POLE STEP (FOR MATERIAL SEE BELOW)	"	2
SW-3	" "	BAR ¾"φ×1'-0⅝" (POLE STEP)	"	11
		OTHER MATERIAL AS FOR W-487AA		
		POLE W-490AB		
	THIS DWG.	MATERIAL AS FOR W-490AA		
		POLE STEP PS-2		
ba	THIS DWG.	BAR ¾"φ×0'-10⅝"	EA.	1
pd	"	PL-4×⅜×0'-6"	"	2

REFERENCE DRAWINGS

ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A	DWG. No. 46-S-7419
STEEL DETAILS OF CROSS-BEAMS & SAG BRACES FOR W-487A & W-490A	" " 46-S-2234
CROSS-ARM DETAILS	" " 46-S-2235
HARDWARE DETAILS	" " 46-S-2238

NOTES

FOR GENERAL NOTES SEE DWG No. 46S-2234

ISSUE NO	DATE	D'WN	CHK'D	APPROVALS		ISSUED FOR
2	1-9-64	SD	WC			CONSTRUCTION JRS
1	10-15-63	RM	WD			STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2236-2

DELAWARE
STATE HIGHWAY DEPARTMENT

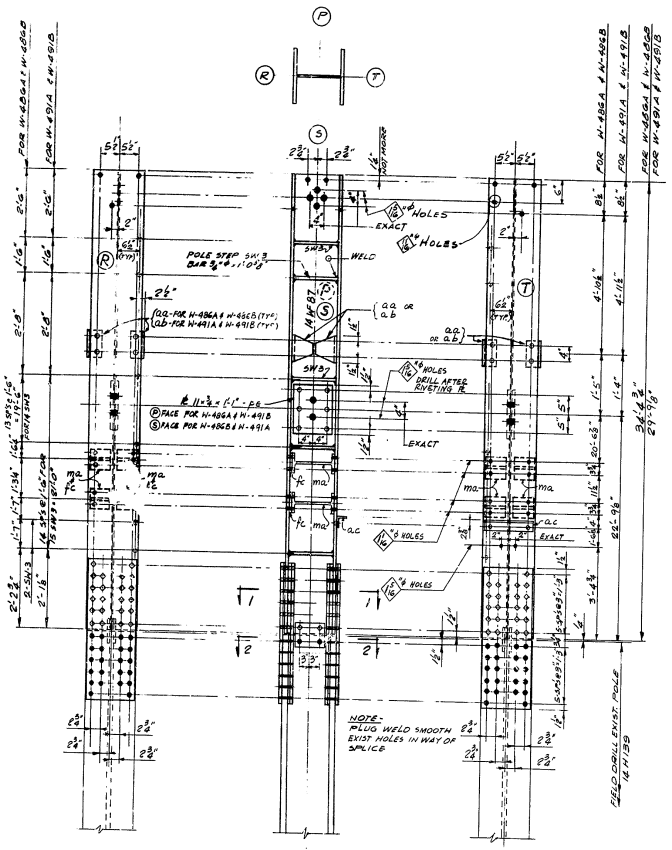
INTERSTATE ROUTE I-95

STEEL DETAILS OF POLES
W-487AA, W-487AB, W-490AA & W-490AB
FOR CATENARY BRIDGES W-487A & W-490A

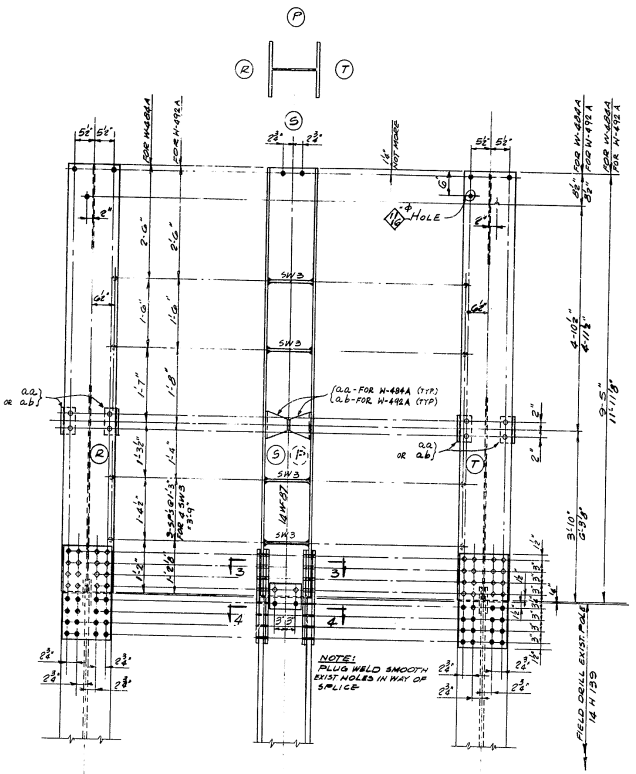
COUNTY	CONTRACT	F.A.P. SEC. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)	'64	185	215

BILL OF MATERIAL

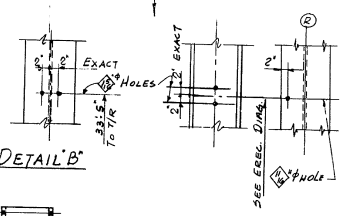
MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		POLE EXTENSION W-484A		
—	THIS DWG.	14 WF 87 - 9'-5"	EA.	1
aa	46-5-2236	L-6×4×⅜ = 0'-7"	"	4
pc	" "	PL-6½×⅜ = 0'-9"	"	2
pk	THIS DWG.	PL-14×⅝ = 2'-0¾"	"	2
pl	" "	PL-6×⅝ = 2'-0¾"	"	4
ff	" "	FILL PL-3×½ = 0'-9"	"	2
fh	" "	" PL-14×⅝ = F.O."	"	2
fk	" "	" PL-6×⅝ = F.O."	"	4
fl	" "	BEVEL FILL PL-6×(⅝×⅝)=F.O."	"	4
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	4
		BOLTS AND/OR RIVETS	"	AS REQ'D
		POLE EXTENSION W-492A		
—	THIS DWG.	14 WF 87 - 11'-11⅝"	EA.	1
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	6
ab	46-5-2236	L-6×4×⅜ = 0'-7"	"	4
	OTHER MATERIAL AS FOR W-484A - OMIT aa			
		POLE EXTENSION W-486A		
—	THIS DWG.	14 WF 87 - 34'-4¾"	EA.	1
aa	46-5-2236	L-6×4×⅜ × 0'-7"	"	4
ac	" "	C-10×3×⅜ × 1'-2"	"	1
pe	THIS DWG.	PL 11×¾ = 1'-1"	"	1
pf	" "	PL-14×⅝×3'-0¾"	"	2
pg	" "	PL-6×⅝×3'-0¾"	"	4
pc	46-5-2236	PL-6½×⅜ = 0'-9"	"	2
fc	" "	FILL PL-6½×⅜ = 0'-8½"	"	4
fd	THIS DWG.	" PL-14×⅝×1'-6"	"	2
fe	" "	" PL-6×⅝×1'-6"	"	4
ff	" "	" PL-3×½×0'-9"	"	2
fg	" "	BEVEL FILL PL-6×(⅜−¼)×1'-6"	"	4
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	18
ma	46-5-2236	12 WF 50 - 0'-6"	"	4
		BOLTS AND RIVETS	"	AS REQ'D
		POLE EXTENSION W-486B		
—	THIS DWG.	MATERIAL AS FOR W-486A		
		POLE EXTENSION W-491A		
—	THIS DWG.	14 WF 87 - 29'-9⅝"	EA.	1
SW3	" "	POLE STEP, BAR ¾"ϕ × 1'-0½"	"	17
ab	46-5-2236	L-6×4×⅜ = 0'-7"	"	4
	OTHER MATERIAL AS FOR W-486A - OMIT aa, ac, fc & ma.			
		POLE EXTENSION W-491B		
—	THIS DWG.	MATERIAL AS FOR W-491A		



POLE EXTENSIONS
MK W-486A, W-486B, W-491A & W-491B

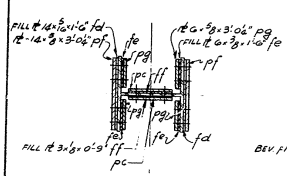


POLE EXTENSIONS
MK W-484A & W-492A

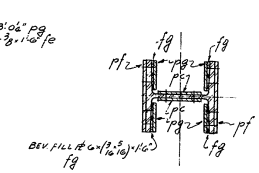


DETAIL "B"

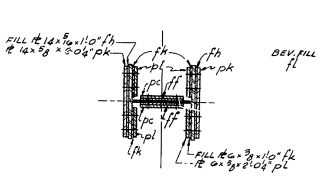
DETAIL "C"



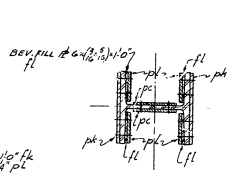
SECTION 1-1



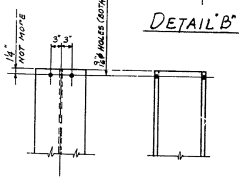
SECTION 2-2



SECTION 3-3



SECTION 4-4



DETAIL "A"
SCALE ¾"=1'-0"

NOTES:
FOR GENERAL NOTES (STEEL) SEE DWG. No. 46-5-2234

REFERENCE DRAWINGS
MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486 DWG. No. 46-5-7417
" " " " " W-485 & W-487 " " 46-5-7418
" " " " " W-491 & W-492 " " 46-5-7420
CROSS-ARM DETAILS " " 46-5-2234
HARDWARE DETAILS " " 46-5-2235
STEEL DETAILS " " 46-5-2236

NO.	DATE	DWN.	CHK.	APPROVALS
2	1-9-64	GO	WJL	APPROVED CONSTRUCTION
1	10-15-63	WD	WJL	APPROVED STRUCTURAL APPROVAL

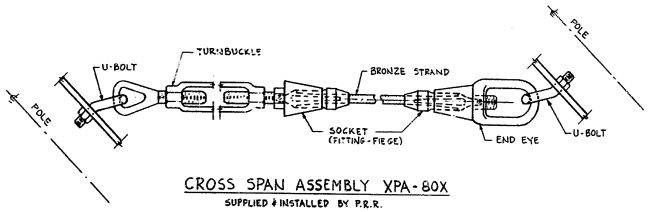
ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS — CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2237-2

DELAWARE
STATE HIGHWAY DEPARTMENT
INTERSTATE ROUTE I-95
POLE EXTENSIONS FOR BRIDGES
W-484, W-486, W-491 & W-492

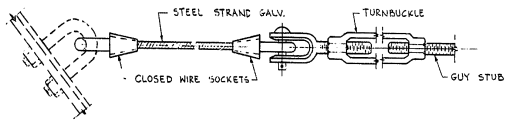
COUNTY	CONTRACT	P & A REQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	186	215



CROSS SPAN ASSEMBLY XPA-80X

SUPPLIED & INSTALLED BY P.R.R.

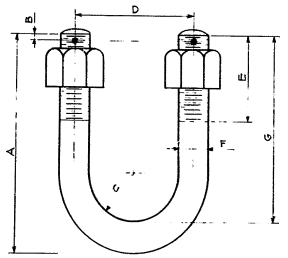
M.M.L. ITEM	DWG. No.	MARK	DESCRIPTION	P.R.R. STORES REF. No.	No. REQ'D
			CROSS SPAN ASSEMBLY XPA-80X (ONE LISTED - 4 REQ'D)		
23-17	—	—	CABLE, BRONZE, BARE, CIRC. 112 C. I", 19 WIRES (FOR LENGTH SEE ERECT DIAGRAMS)	10 - 232050	—
98-16	ET-3080	TB-26	TURNBUCKLE, FORGED STEEL GALV., L.H. EYE 1⅛"	10 - 983805	1
53-24	ET-9825	MF-8L	FITTING, FIEGE, STUD, AL BRONZE, ASTM SPEC. B148 (LAT. ISSUE) 98NT	10 - 819157	1
53-23	ET-9815	MF-8S	" " " " " " " "	10 - 818209	1
52-27	14B-65	EE-4	END EYE, STEEL, FORG. GALV.	10 - 560751	1
19-16	THIS DWG.	UB-35	U-BOLT, STEEL GALV. 1⅛" x 4'-5⅛"	10 - 193108	2



GUY STRAND ASSEMBLY 51B

SUPPLIED & INSTALLED BY P.R.R.

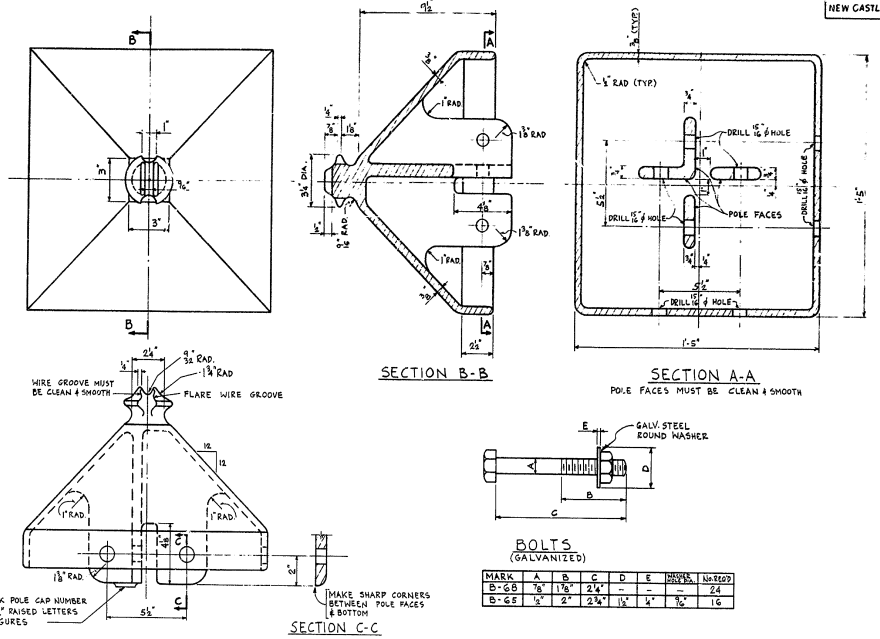
M.M.L. ITEM	DWG. No.	MARK	DESCRIPTION	P.R.R. STORES REF. No.	UNIT	No. REQ'D
			GUY STRAND ASSEMBLY 51B (ONE LISTED - 4 REQ'D)			
24-5	—	—	CABLE, E.H.S. STEEL, GALV. ⅜"ø-19 WIRES (FOR LENGTH, SEE ERECT DIAGRAMS)	10 - 223505	FT.	120±
77-5	D-428580	LS 7	SOCKET, LOOP, STEEL SAE 1035 GALV.	10 - 803953	EA	2
98-2	ET-3080	TB 1	TURNBUCKLE, FORGED STEEL-PAINTED, SPEC. P-209, L.H. CL. 1½"	10 - 979803	EA	1



DETAIL OF U-BOLT (GALV.)

MARK	A	B	C	D	E	F	G	BRONZE COTTER
UB-34	7⅛"	⅜"	1⅝"	4"	2½"	1¼"	5⅛"	⅝" x 2½"

4 - REQUIRED

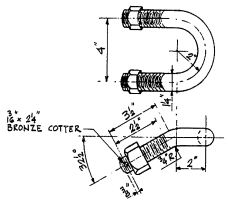


POLE CAP PCJ-14

MATERIAL - CAST IRON
12 - REQUIRED

BOLTS (GALVANIZED)

MARK	A	B	C	D	E	THREADS PER IN.	No. REQ'D
B-68	⅞"	1⅞"	2¼"	–	–	–	24
B-65	½"	2"	2¾"	1½"	¼"	9	16



DETAIL OF U-BOLT - MK UB-35

(GALV.)
SUPPLIED & INSTALLED BY P.R.R.

NOTES:

FOR GENERAL NOTES (STEEL) SEE DWG. No. 46-S-2234

REFERENCE DRAWINGS:

MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486 — DWG. NO. 46-S-7417
ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A — " " 46-S-7419

NO.	DATE	BY	CHK.	APPROVALS	ISSUED FOR
2	1-9-64	SO	LK	DES.	PRELIM. APP. CONSTRUCTION
1	10-15-63	JS	WD	DRAWN	FINAL APP. STRUCTURAL APPROVAL
				CHK.	JRS

E. P. Foley

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB No 1489A

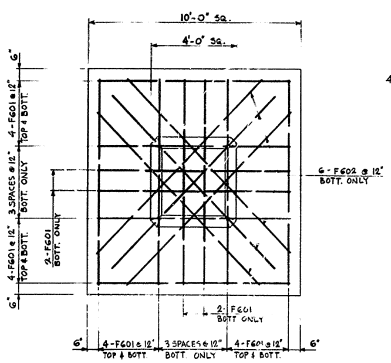
46-S-2238-2

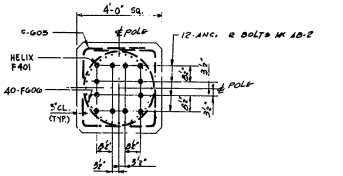
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

HARDWARE DETAILS

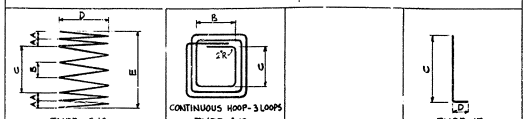
COUNTY	CONTRACT	R.B.A. SEQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(13)	'64	187	215





SECTION 1-1

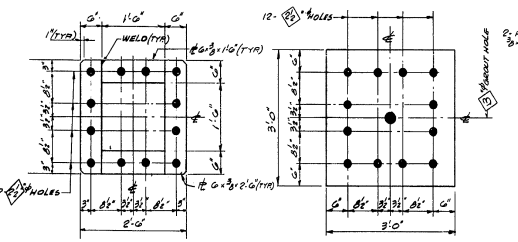
REINFORCING SCHEDULE



MARK	No. REQ'D	SIZE	LENGTH	TYPE	A	B	C	D	E		REMARKS
FOUNDATION TYPE "D" (ONE LISTED - 4 REQ'D)											
F401	1	#4	242'-0"	512	2"	4½"	6'-6"	3'-6"	7'-4"		HELIX
FG01	36	#6	9'-0"	STR.							
FG02	6	#6	11'-0"	STR.							
FG05	2	#6	44'-6"	513			3'-6"	3'-6"			
FG06	40	#6	9'-9"	17				9'-6"	3"		

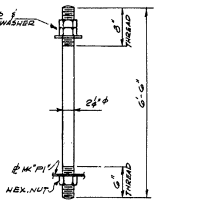
BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		FOUNDATION TYPE "F1" (ONE LISTED - 4 REQ'D)		
—	—	CONCRETE	CU. YDS.	15±
SEE SCHEDULE	THIS DWG.	REINFORCING BARS	LBS.	1600
"P1"	THIS DWG.	℄ #8 S 0'-3½" x 1'-0" 2 ℄ #5 S 0'-3½" x 2'-0"	EA.	1
"P2"	"	℄ 3G x 1 x 3'-0"	"	1
AB-2	"	2½"ø ANCHOR BOLTS WITH 3 H. NUTS & ONE ⅜"x5" ROUND W.	"	12
		ANCHOR MK TPM (ONE LISTED - 4 REQ'D)		
WQ.	THIS DWG.	℄ 16 WF 87 x 1'-9" (CUT)	EA.	1
AB-1	" "	ANCHOR BOLTS 1¼"ø x 3'-0" LG. WITH 2 H.N. & WASHER	"	4
pb	" "	℄, ⅝"	"	2
pc	" "	℄ 14½ x 1 x 1'-9"	"	AS REQ'D
pd	" "	℄ 14½ x ½ x 1'-9"	"	" "
—	" "	STEEL WEDGE 2" x (6"x1) x 0'-5"	"	1
		RIVETS		AS REQ'D
		GUY STUB MK G.S. 1-A (ONE LISTED - 4 REQ'D)		
—	THIS DWG.	1¼"ø GUY STUB x 8'-0" LG.	EA.	1
—	" "	#5½ STD. R.H. CLEVIS WITH H.N. & BRONZE COTTER	"	1

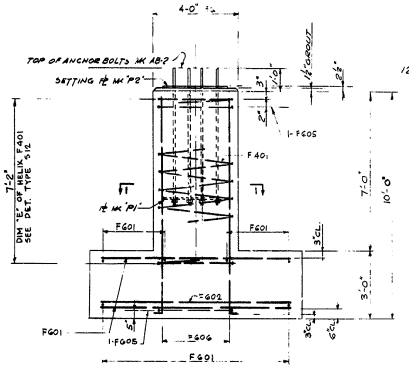


DETAIL OF ℄ MK "P1"
SCALE ¾" = 1'-0"

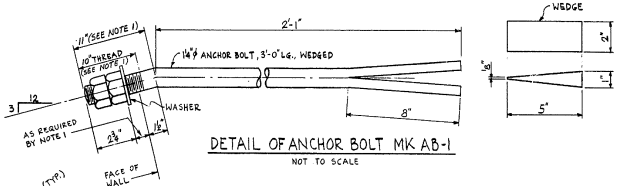
DETAIL OF ℄ MK "P2"
℄ 3G x 1 x 3'-0"
SCALE ¾" = 1'-0"



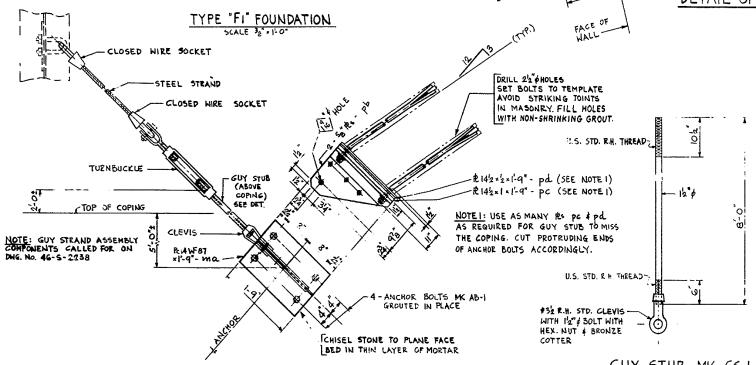
DETAIL OF ANCHOR BOLT MK AB-2
N.T.S.



TYPE "F1" FOUNDATION
SCALE ⅜" = 1'-0"



DETAIL OF ANCHOR BOLT MK AB-1
NOT TO SCALE



ANCHOR MK TPM
NOT TO SCALE

GUY STUB MK G.S.1-A
NOT TO SCALE
4 - REQUIRED

GENERAL NOTES (CONCRETE)

1. CONCRETE TO HAVE MIN. COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
2. ALL MATERIAL AND WORKMANSHIP SHALL CONFORM TO THE LATEST ISSUE OF THE AMERICAN CONCRETE INSTITUTE STANDARD CODE, ENTITLED BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318).
3. REINFORCING STEEL SHALL BE INTERMEDIATE GRADE DEFORMED BARS AND DEFORMATIONS SHALL MEET THE REQUIREMENTS OF A.S.T.M. DESIGNATION A-305.
4. ALLOWABLE TENSILE STRESS IN REINF. STEEL SHALL BE 20,000 PSI.
5. ALL STEEL EMBEDDED IN CONCRETE TO BE UNPAINTED
6. CHAMFER ALL EXPOSED CORNERS ONE INCH.

FOR STEEL NOTES SEE DWG. 46-S-2234

REFERENCE DRAWINGS

MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486	DWG. No. 46-S-1417
ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-440A	" " 46-S-1419
HARDWARE DETAILS	" " 46-S-2238

MARK	DATE	DRAWN BY	APPROVALS	
2	1-9-64	SD	WC	CONSTRUCTION JRS
1	10-16-63	JS	[illegible]	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-2239-2

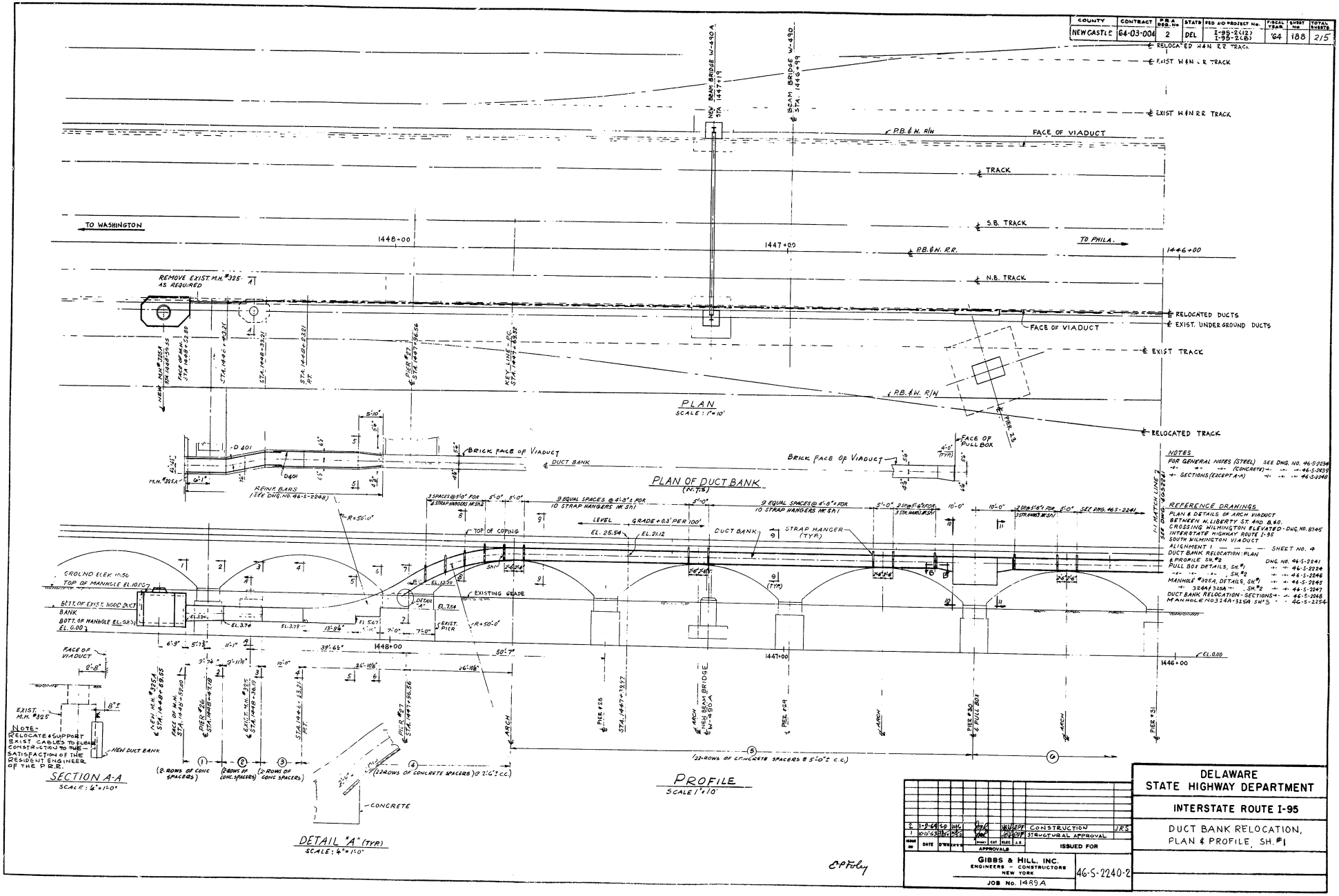
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

FOUNDATIONS & ANCHOR DETAILS

E.P. Foley

COUNTY	CONTRACT	P.R.A. DEG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(B)	'64	188	215



ISSUE NO	DATE	D'WN	CHK'D	APPROVALS				ISSUED FOR
2	1-9-64	SD	WK					CONSTRUCTION JRS
1	10-15-63							STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

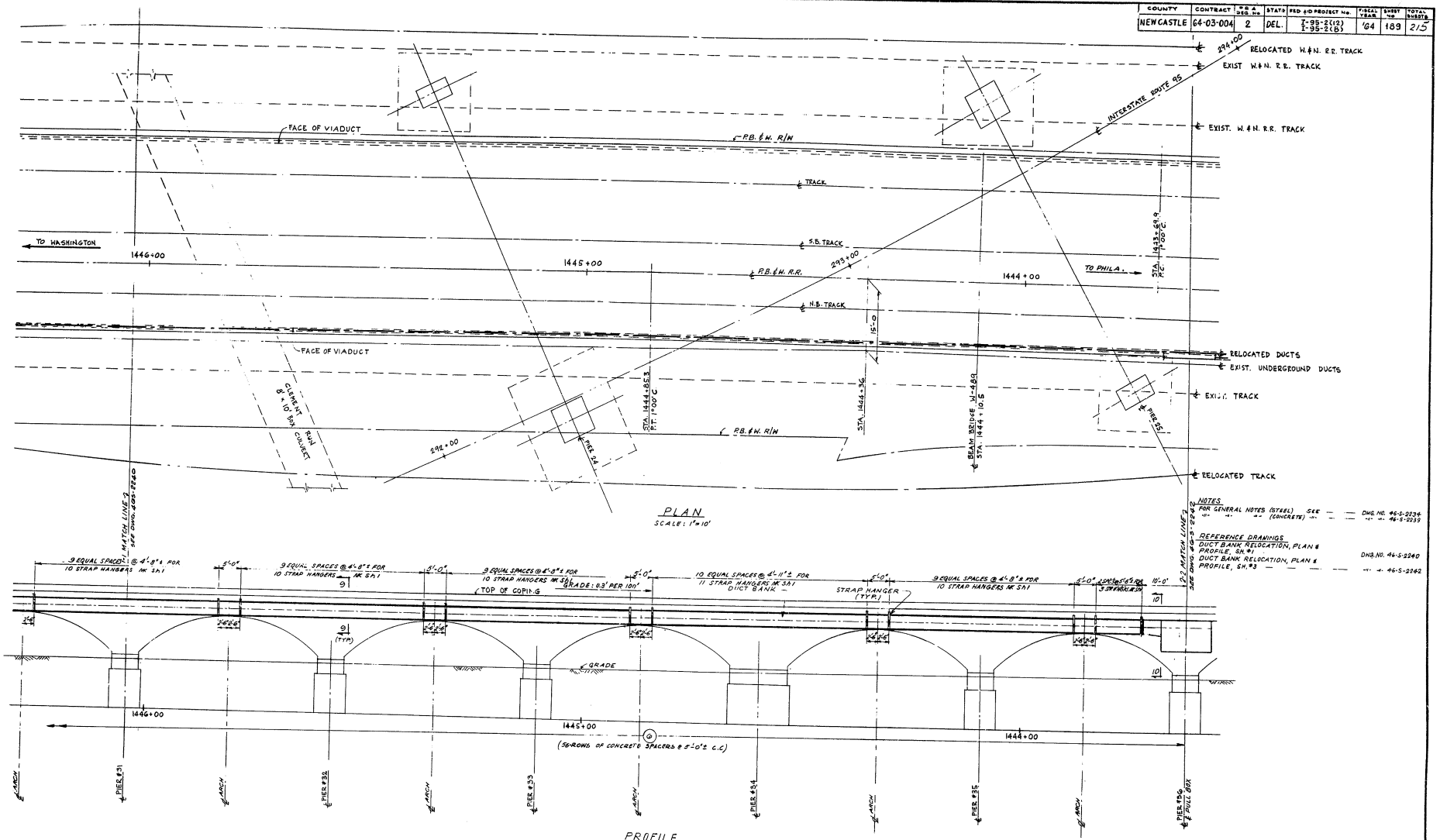
46-S-2240-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1

COUNTY	CONTRACT	R.D.A. DES. NO.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	G4-03-004	2	DEL.	I-95-2(12) I-95-2(65)	'64	189	215



PROFILE
SCALE: 1"=10'

NO.	DATE	BY	REVISIONS	APPROVALS
2	1-24-63	[illegible]	[illegible]	CONSTRUCTION JRS
1	10-15-62	[illegible]	[illegible]	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS — CONSTRUCTORS
NEW YORK
JOB NO. 1489A

46-S-2241-2

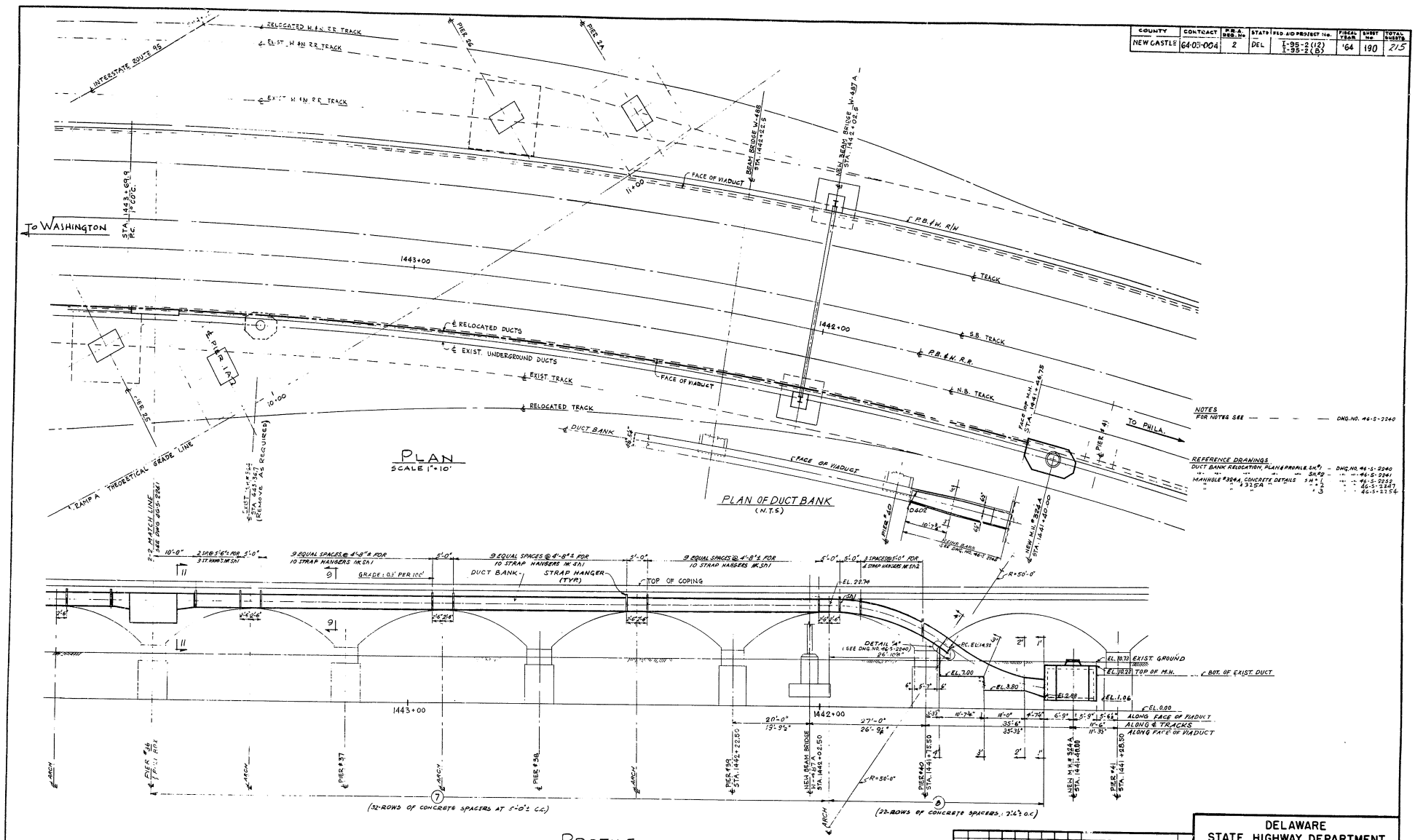
E.P. Foley

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION, PLAN & PROFILE, SH. #2

COUNTY	CONTRACT	P.R.A. DEG. No	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
NEW CASTLE	64-031-004	2	DEL	I-95-2(12) I-95-2(B)	'64	190	215



ISSUE No	DATE	D'WN	CH'K'D	APPROVALS	CAT	ELEC	A.E.	ISSUED FOR
2	1-9-64	S.O.	WG	[illegible]		VBH	EPF	CONSTRUCTION JRS
1	10-15-63	[illegible]	[illegible]	[illegible]		VBH	EPF	STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

46-S-2242-2

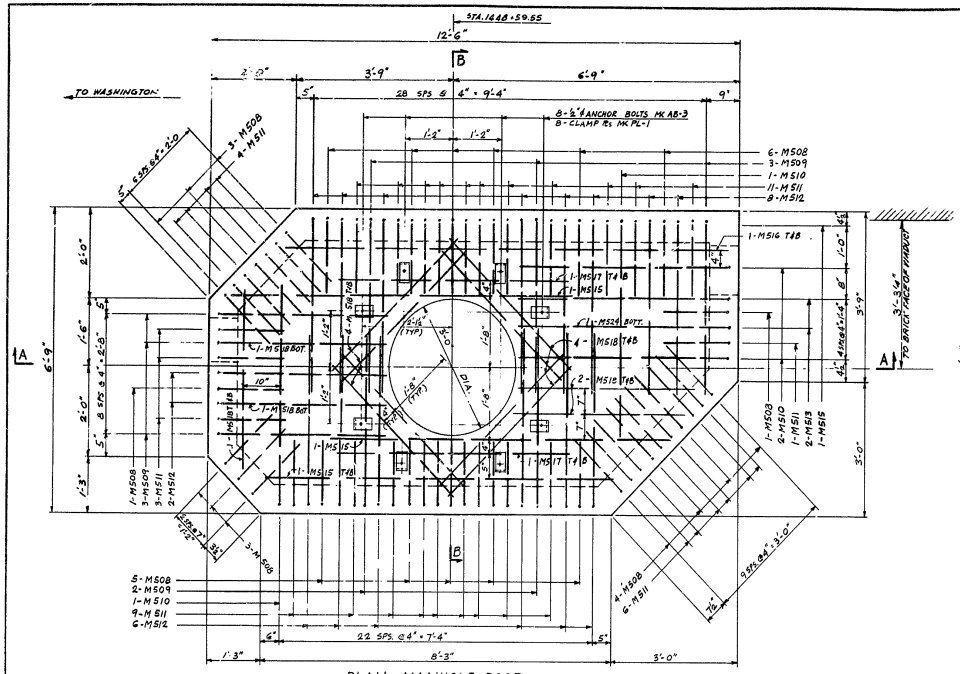
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION,
PLAN & PROFILE SH. #3

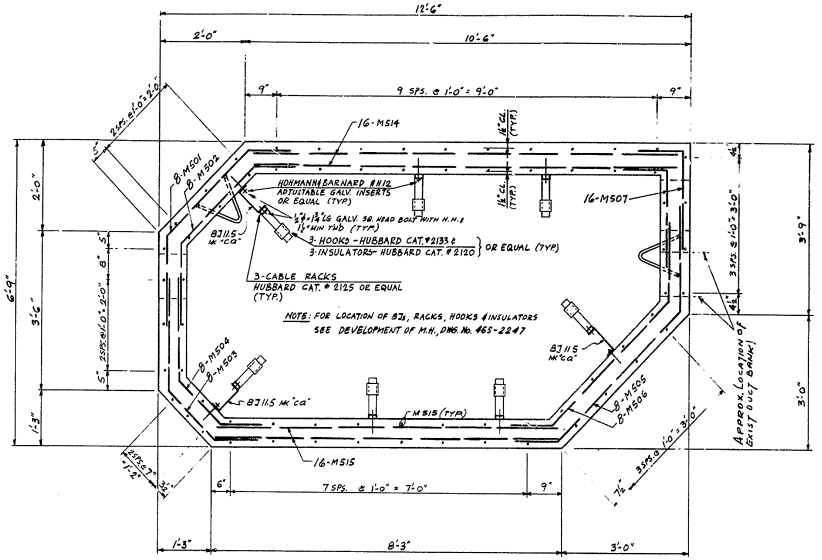
E P Foley

COUNTY	CONTRACT	R.D.A. DES. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	191	215



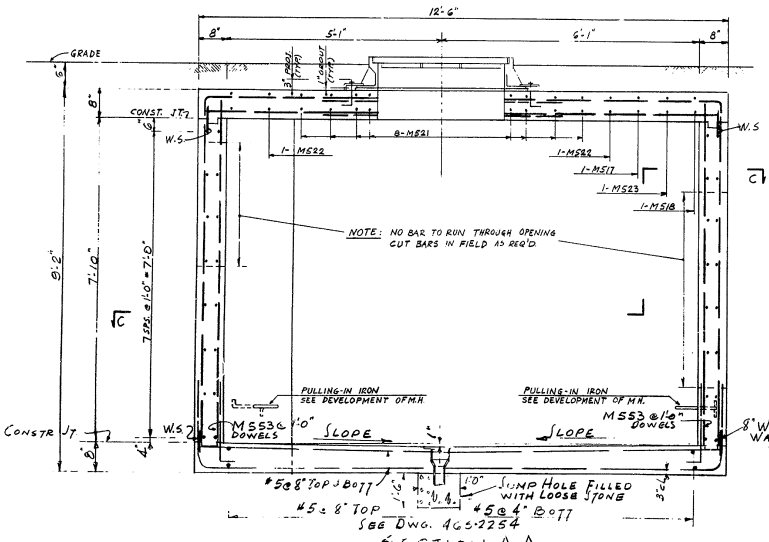
PLAN MANHOLE ROOF

SCALE ¾"=1'-0"

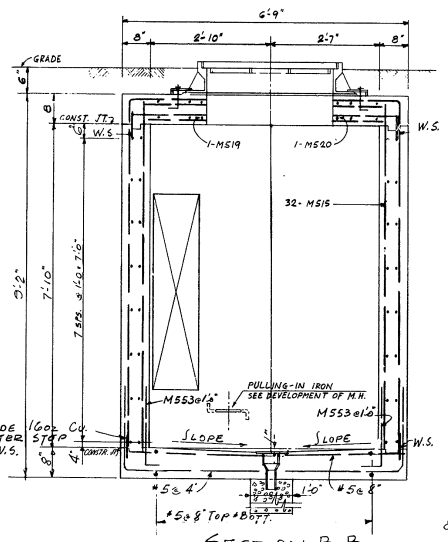


SECTION C-C

SCALE ¾"=1'-0"



SECTION A-A



SECTION B-B

NOTES

FOR NOTES SEE DWG. 465-2247 & 465-2254

REFERENCE DRAWINGS

PLAN & PROFILE	DWG. No. 46-5-161
DUCT BANK RELOCATION, PLAN & PROFILE, SH. #1	" 46-5-2240
" , SECTIONS	" 46-5-2248
MANHOLE #328A & 325A, CONCR. DETAILS, SH. #2	" 46-5-2247
MANHOLES #328A & 325A, CONCRETE DET'S, SH #3	" 46-5-2254

E.P. Foley

NO.	DATE	D'WN	CHK'D	APPROVALS		
2	1-8-64	GO	WHC	DES.	CONSTRUCTION	JRS
1	06-03-63	GG	WHC	DES.	STRUCTURAL APPROVAL	
				DES.	CKT	ELEC	A.E.	ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MANHOLE No. 325 A
CONCRETE DETAILS SH. #1

46-5-2245 2

COUNTY	CONTRACT	F.P.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	192	215

ELEVATION - SHOWING CINCH ANCHOR LOCATION.

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

PULLING - IN IRON - DETAIL

SCALE: 3" = 1'-0"

BILL OF MATERIAL

MARK	DWG. NO	DESCRIPTION	UNIT	QUANT.
		PULL BOX (ONE LISTED - TWO REQ'D)		
—	465-2224 465-2246	PULL BOX	EA.	1
—	465-2246	3/4"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH BEVELED WASHER, 9" LG. GALV. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL.	"	27
—	"	3/4"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH STD. WASHER, 9" LG. GALV. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL.	"	8
—	"	1/2"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH 9" LG. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL.	"	16
—	"	PULLING-IN IRON	"	2
—	465-2224	CABLE RACK, HUBBARD CAT. # 2125 OR EQUAL	"	12
—	"	HOOK, HUBBARD CAT. # 2133 OR EQUAL	"	24
—	"	INSULATOR, HUBBARD CAT. # 2120 OR EQUAL	"	24
	465-2246	3/4"φ-3 UNIT-RING WEDGE CINCH ANCHOR WITH STD. WASHER, 6" LG. GALV. BOLT & NUT, NATIONAL LEAD CO. OR EQUAL	"	3

LIFTING HANDLE - DETAIL

SCALE: 3" = 1'-0"

NOTES:

FOR GENERAL NOTES SEE — — — DWG. NO. 465-2234

WORK THIS DRAWING WITH DRAWING NO. 465-2224 & 465-2248

REFERENCE DRAWINGS:

PULL BOX DETAILS, SHEET NO. 1 — — — DWG. NO. 465-2224

E.P. Foley

ISSUE NO.	DATE	DWN.	CH'K'D	APPROVALS			ISSUED FOR	
2	1-9-64	S.O.	W.C.				CONSTRUCTION	J.R.S.
1	10-15-63	G.G.	S.D.				STRUCTURAL APPROVAL	

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

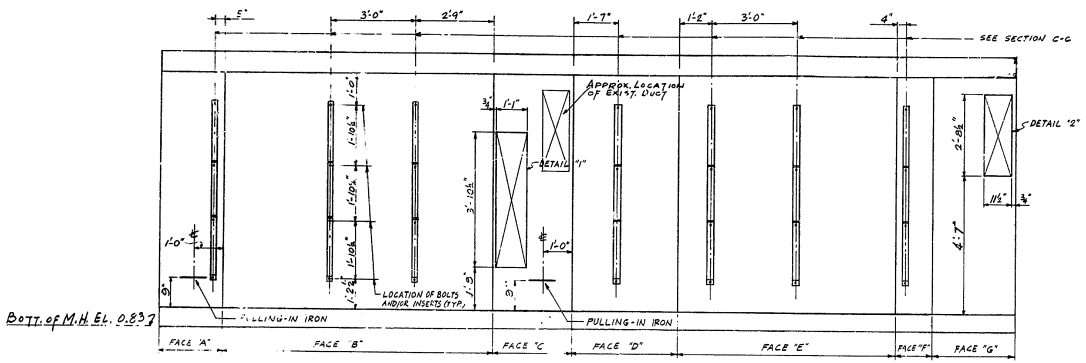
465-2246-2

DELAWARE
STATE HIGHWAY DEPARTMENT

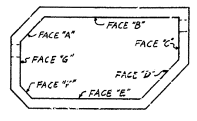
INTERSTATE ROUTE I-95

PULL BOX DETAILS
SHEET No. 2

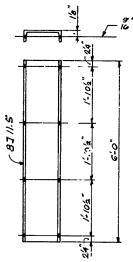
COUNTY	CONTRACT	R.R.& BRDG. NO.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	193	215



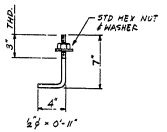
DEVELOPMENT OF MANHOLE No 325A



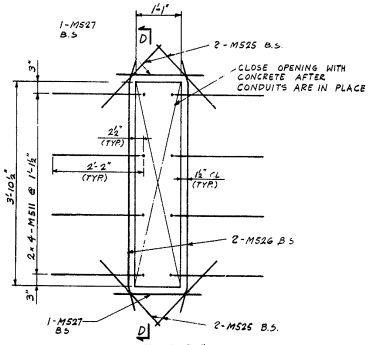
KEY PLAN



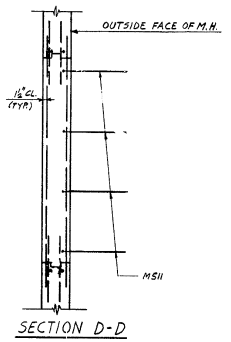
DETAIL OF 8C11.5 MK 'ca' CABLE RACK EXTENSION
(SEE SECTION C-C)
3 REQ'D



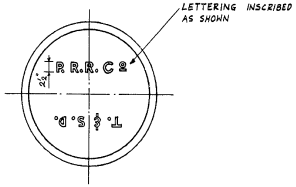
ANCHOR BOLT MK AB-3
6 REQ'D



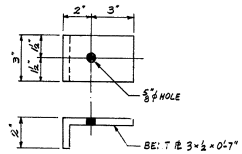
DETAIL "1"



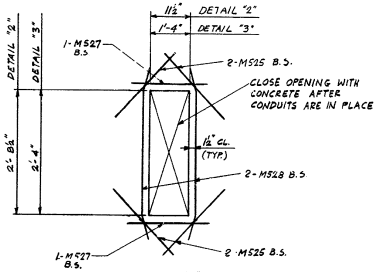
SECTION D-D



PLAN M.H. COVER



CLAMP PLATE MK PL-1
8 REQ'D



DETAIL "2"
DETAIL "3"

BAR SCHEDULE

TYPE 14A

TYPE 17

MANHOLE No. 325A

MARK	No. REQ'D	SIZE	LENGTH	TYPE	A	B	C	D	E	LOCATION
M501	8	#5	5'-9"	14A	1'-1"	8½"	2'-8"	2'-0"	1'-5"	HORIZ. IN WALLS
M502	8	"	5'-0"	"	1'-0"	8½"	2'-5½"	1'-6"	1'-3½"	" " "
M503	8	"	5'-3"	14A	8"	1'-9½"	1'-7"	1'-0"	8½"	" " "
M504	8	"	4'-9"	14A	4"	1'-7½"	1'-4½"	1'-0½"	8½"	" " "
M505	8	"	7'-0"	14A	1'-"	8½"	4'-1"	2'-4"	1'-8"	" " "
M506	8	"	6'-9"	14A	1"	8½"	3'-10½"	1'-9½"	1'-3"	" " "
M507	16	"	3'-3"	17		1'-0"	2'-3"			" " "
M508	23	"	10'-0"	17		1'-8"	8'-4"			IN WALLS & ROOF
M509	8	"	12'-3"	17		3'-11"	8'-4"			" " "
M510	4	"	13'-3"	17		4'-11"	8'-4"			" " "
M511	42	"	3'-9"	17		1'-7"	2'-2"			AT OPENING IN WALL (36) (8)
M512	16	"	6'-0"	17		3'-10"	2'-2"			IN WALLS & ROOF
M513	2	"	7'-0"	17		4'-10"	2'-2"			" " "
M514	16	"	10'-0"	STR.						HORIZ. IN WALLS
										" " " (16)
M515	53	"	8'-3"	STR.						VERT. IN WALLS (35)
										HORIZ. IN ROOF (4)
M516	2	"	10'-6"	STR.						" " "
M517	5	"	5'-6"	STR.						" " "
M518	25	"	4'-0"	STR.						" " "
M519	1	"	12'-0"	STR.						" " "
M520	1	"	10'-9"	STR.						" " "
M521	8	"	6'-9"	STR.						" " "
M522	2	"	6'-0"	STR.						" " "
M523	1	"	4'-6"	STR.						" " "
M524	1	"	5'-3"	STR.						" " "
M525	16	"	2'-0"	STR.						AT OPENINGS IN WALLS
M526	4	"	3'-0"	14A	6½"	2"	3'-11"	6½"	2"	" " " "
M527	8	"	2'-0"	STR.						" " " "
M528	4	"	3'-9"	14A	6"	2"	2'-9"	6"	2"	" " " "
FOR FLOOR SLAB REINFORCING SEE DWG. 46-S-2254										
MANHOLE No. 324A										
REINFORCING BARS, SAME AS ABOVE										

NOTES:
1. FOR GENERAL NOTES (CONCRETE) SEE DWG No. 46-S-2239
2. FOR GENERAL NOTES (STEEL) SEE " " 46-S-2234
3. IN INSTALLING INSERTS CARE MUST BE TAKEN SO THAT NO REINFORCING SHALL COME IN DIRECT CONTACT WITH INSERTS. A MINIMUM OF 2" CLEARANCE SHALL BE MAINTAINED BETWEEN INSERTS & REINFORCEMENT.
4. FOR NOTES SEE DWG 46-S-2254.

REFERENCE DRAWINGS

MANHOLE No. 325A, CONCRETE DETAILS SH. NO. 1 DWG. No. 46-S-2245
MANHOLE No. 324A, " " 46-S-2252
MANHOLES No. 324A & 325A, CONCRETE DET'S, SH No. 3 " " 46-S-2256

BILL OF MATERIAL - FOR M.H. #325A

No. REQ'D	DESCRIPTION	MARK	DWG. No.
2	PULLING-IN IRON - HUBBARD #9120 OR EQUAL	–	THIS DWG.
28	HOHMANN & BARNARD #HN12 ADJUSTABLE GALV. INSERT OR EQUAL	–	46-S-2245
3	8J 11.5 × 6'-0" LG. GALV.	CA	THIS DWG.
40	½"ø × ⅞" LG. GALV. BOLT WITH 3Ø H. & HEX. N., 1⅝" MIN. THD.	–	46-S-2245
21	CABLE RACK - HUBBARD # 2105 OR EQUAL	–	" " "
21	HOOK - HUBBARD # 2133 OR EQUAL	–	" " "
21	INSULATOR - HUBBARD # 2120 OR EQUAL	–	" " "
1	MANHOLE FRAME & COVER - FLOCKHART TYPE 604-C #60457 OR EQUAL - INSCRIBED AS SHOWN.	–	" " " & THIS DWG.
8	CLAMP PLATE 3 × ½ × 0'-7"	PL-1	THIS DWG.
8	ANCHOR BOLT ½"ø × 0'-11"	AB-3	" "
80 LIN. FT.	COPPER WATER STOP - 8" WIDE × 16 OZ.	W.S.	46-S-2245
1	4" T.C. PIPE WITH STRAINER	–	"
	M.H. # 324A MATERIAL SAME AS FOR M.H. #325A		

E P Foley

NO.	DATE	DESCRIPTION	APPROVALS
2	12-64	3-D WKG.	CONSTRUCTION JRS
1	8/15/63	3-D WKG.	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS – CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-2247-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MANHOLES No. 324A & 325A
CONCRETE DETAILS SH. #2

COUNTY	CONTRACT	R & A DRG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No	TOTAL SHEETS
NEW CASTLE	G4-03-004	2	DEL.	I-95-2(12) I-95-2(13)	'66	194	215

LIST OF MATERIAL

SCHEDULE OF TRANSITE CONDUIT & FITTINGS, TYPE I, 4" I.D., JOHNS MANVILLE OR EQUAL

RUN	FROM	TO	DWG. No.	10'-0" LG. (EA.)	5'-0" LG. (EA.)	STD. END BELL (EA.)	PLASTIC COUPLING (EA.)	REMARKS
①	M.H. #325 A	SECTION 2-2	46-S-2240	6	—	6	6	CUT CONDUIT IN FIELD AS REQUIRED. OMIT TAPERED COUPLING FOR EACH TRANSITE CONDUIT.
②	SECTION 2-2	" 3-3	"	6	—	—	6	
③	" 3-3	" 4-4	"	6	—	—	6	
④	" 4-4	℄ ARCH BETW. PIER #27 & PIER #28	"	—	72	—	72	
⑤	℄ ARCH BETW. PIER #32 & PIER #28	PULL BOX PIER # 30	"	66	6	6	66	
⑥	PULL BOX PIER # 30	PULL BOX PIER # 36	46-S-2240 46-S-2241	162	12	12	162	
⑦	PULL BOX PIER # 36	℄ ARCH BETW. PIER # 39 & PIER #40	46-S-2242	90	6	6	90	
⑧	℄ ARCH BETW. PIER # 39 & PIER #40	M.H. # 324 A	"	—	72	6	66	
TOTAL				336 (EA.)	168 (EA.)	36 (EA.)	474 (EA.)	

MISC. STEEL DETAILS

RUN	DWG. No.	DESCRIPTION: 10LL 20.0 FIT IN FIELD (FT.)	L 4×3½×⅜ × 6'-0" LG. MK "aa" (EA.)	BENT PL ⅜"×2"×1'-0" MK "pa" (EA.)	BENT PL ⅜"×2"×1'-0" MK "pb" (EA.)	PL ⅜"×2"×1'-0" MK "pc" (EA.)	STRAP HANGER 3½"×3½"×¼" MK "sh1" (EA.)	STRAP HANGER 3½"×5"×¼" MK "sh2" (EA.)	¾ ø × 6" LG. BOLT WITH H.H. NUT (EA.)	¾ ø RIVNG HOOK CINCH ANCHOR 3 UNITS WITH BOLT NUT & ¾ ø × 2½" LG. (EA.)	FIELD WELD
①	46-S-2240	—	—	—	—	—	—	—	—	—	—
②	"	—	—	—	—	—	—	—	—	—	—
③	"	—	—	—	—	—	—	—	—	—	—
④	"	32.0	—	—	5	2	1	4	16	13 2	AS REQ'D
⑤	"	115.0	2	1	23	5	23	—	48	46 23	" "
⑥	46-S-2240 46-S-2241	280.0	4	2	57	14	57	—	128	114 57	"
⑦	46-S-2242	165.0	2	1	33	10	33	—	88	66 33	"
⑧	46-S-2242	32.0	—	—	5	2	1	4	16	14 1	"
TOTAL		624.0 (FT.)	8 (EA.)	4 (EA.)	123 (EA.)	33 (EA.)	115 (EA.)	8 (EA.)	196 (EA.)	253 114 (EA.) (EA.)	

SCHEDULE OF REINFORCEMENT

RUN	MARK	LOCATION	DWG. No.	DESCRIPTION	UNIT	QUANT.
① TO ④	D401	AT M.H. #325A	46-S-2240 46-S-2242	#4 BAR 88'-0" LG. BEND IN FORM	EA.	16
⑤	D402	AT M.H. #324 A	46-S-2242 46-S-2243	#4 BAR 27'-0" LG. " " "	EA.	8
① TO ⑧	MK FB 1	FROM M.H. #325 A TO M.H. #324 A	46-S-2248	WELDED WIRE FABRIC, TWO-WAY TYPE, STYLE DESIGNATION : 6×6 - 6/6	SQ. FT.	2700

CONCRETE

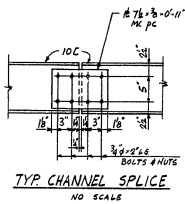
RUN	FROM	TO	DWG. No.	MK CS 1	MK CS 2	MK CS 3	MK CS 4	CONCRETE (CU.YD.)
①	M.H. # 325 A	SECTION 2-2	46-S-2240	10	2	—	—	1.50
②	SECT. 2-2	" 3-3	"	10	2	—	—	1.25
③	" 3-3	" 4-4	"	10	2	—	—	1.25
④	" 4-4	℄ ARCH BETW. PIER #27 & PIER #28	"	50	10	60	12	7.50
⑤	℄ ARCH BETW. PIER #32	℄ PULL BOX PIER #30	"	—	—	110	22	8.50
⑥	℄ PULL BOX PIER #30	℄ PULL BOX PIER #36	46-S-2240 46-S-2241	—	—	280	56	21.00
⑦	℄ PULL BOX PIER #36	℄ ARCH BETW. PIER # 39 & PIER #40	46-S-2242	—	—	160	32	12.50
⑧	℄ ARCH BETW. PIER #39 & PIER #40	M.H. # 324 A	"	50	10	60	12	7.50
TOTAL RUN ① TO RUN ⑧				130	26	670	134	61.00

NOTES:

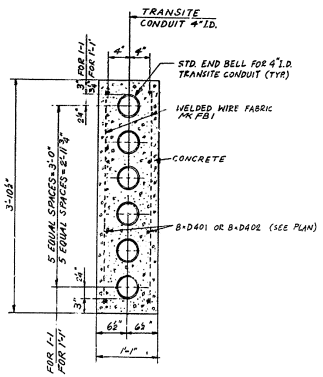
FOR GENERAL NOTES (STEEL) SEE ——— DWG. No. 46-S-2234
" " " (CONCRETE) SEE ——— " " 46-S-2239

REFERENCE DRAWINGS:

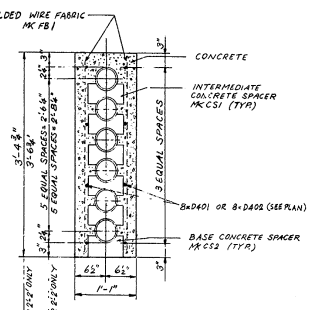
DUCT BANK RELOCATION, SH. #1 ——— DWG. No. 46-S-2240
" " " SH. #2 ——— " " 46-S-2241
" " " SH. #3 ——— " " 46-S-2242
MANHOLE #325 A, CONCRETE DETAILS, SH. #1 ——— " " 46-S-2245
" " #324 A " SH. #2 ——— " " 46-S-2247
" " #324 A " ——— " " 46-S-2252
PULL BOX DETAILS, SH. #1 ——— " " 46-S-2234
" " " SH. #2 ——— " " 46-S-2246
MANHOLE #324A & #325A CONCRETE DETAILS, SH. #3 " " 46-S-2254



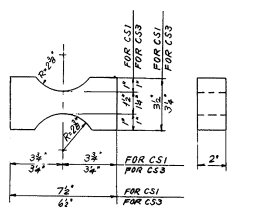
TYP. CHANNEL SPLICE
NO SCALE



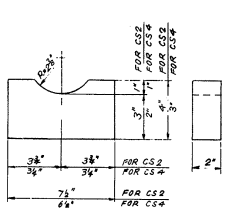
SECTION 1-1
SECTION 1'-1'
SCALE: 1"=1'-0"



SECTION 2-2
SECTION 3-3
SECTION 4-4
SECTION 2'-2'
SCALE: 1"=1'-0"

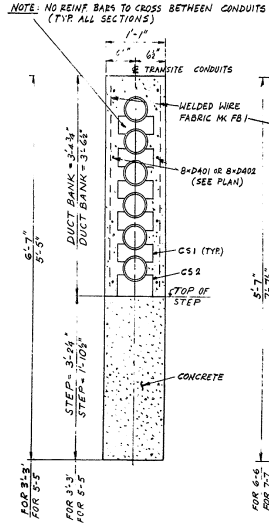


INTERMEDIATE CONCRETE SPACER
MK CS1 & CS3
SCALE: 3"=1'-0"

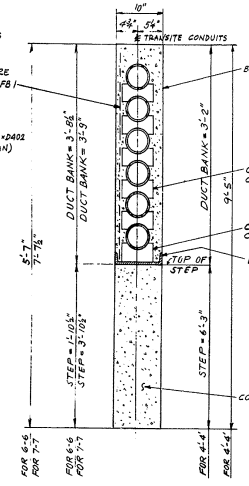


BASE CONCRETE SPACER
MK CS2 & MK CS4
SCALE: 3"=1'-0"

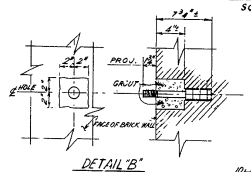
NOTE: NO REINF. BARS TO CROSS BETWEEN CONDUITS (TYP. ALL SECTIONS)



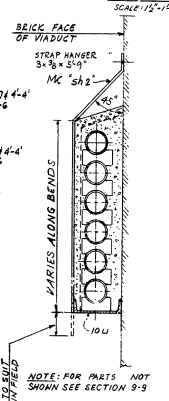
SECTION 3'-3'
SECTION 5-5
SCALE: 1"=1'-0"



SECTION 6-6
SECTION 7-7
SECTION 4'-4'
SCALE: 1"=1'-0"

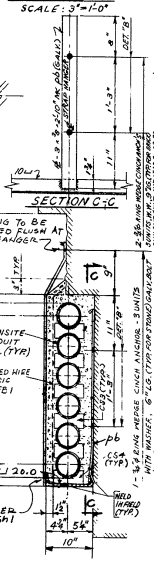


DETAIL "B"
SCALE: 1½"=1'-0"

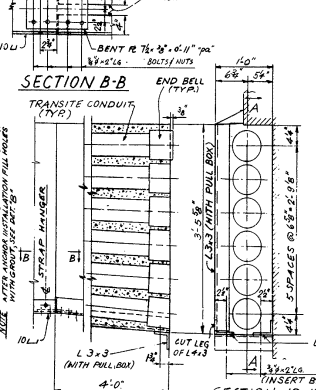


NOTE: FOR PARTS NOT SHOWN SEE SECTION 9-9

SECTION 8-8
SCALE: 1"=1'-0"



SECTION C-C



SECTION B-B

SECTION 10-10
SECTION 11-11 OPP HAND

SECTION A-A
SCALE: 1"=1'-0"

NOTE: REMEDIAL ACTION SHALL BE TAKEN AT THE DISCRETION OF THE FIELD ENGINEER IF IN HIS OPINION AT ANY PARTICULAR LOCATION THE FACIAL BRICK IS IN POOR STRUCTURAL CONDITION - BEFORE INSTALLING CINCH ANCHORS.

E. P. Foley

NO.	DATE	BY	CHK'D	APPROVED
2	1-24-66	WC	EPF	FOR CONSTRUCTION JRS
1	10-25-65	WC	EPF	STRUCTURAL APPROVAL
ISSUE NO.	DATE	DESCRIPTION	CHK'D	APPROVED

APPROVALS — ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

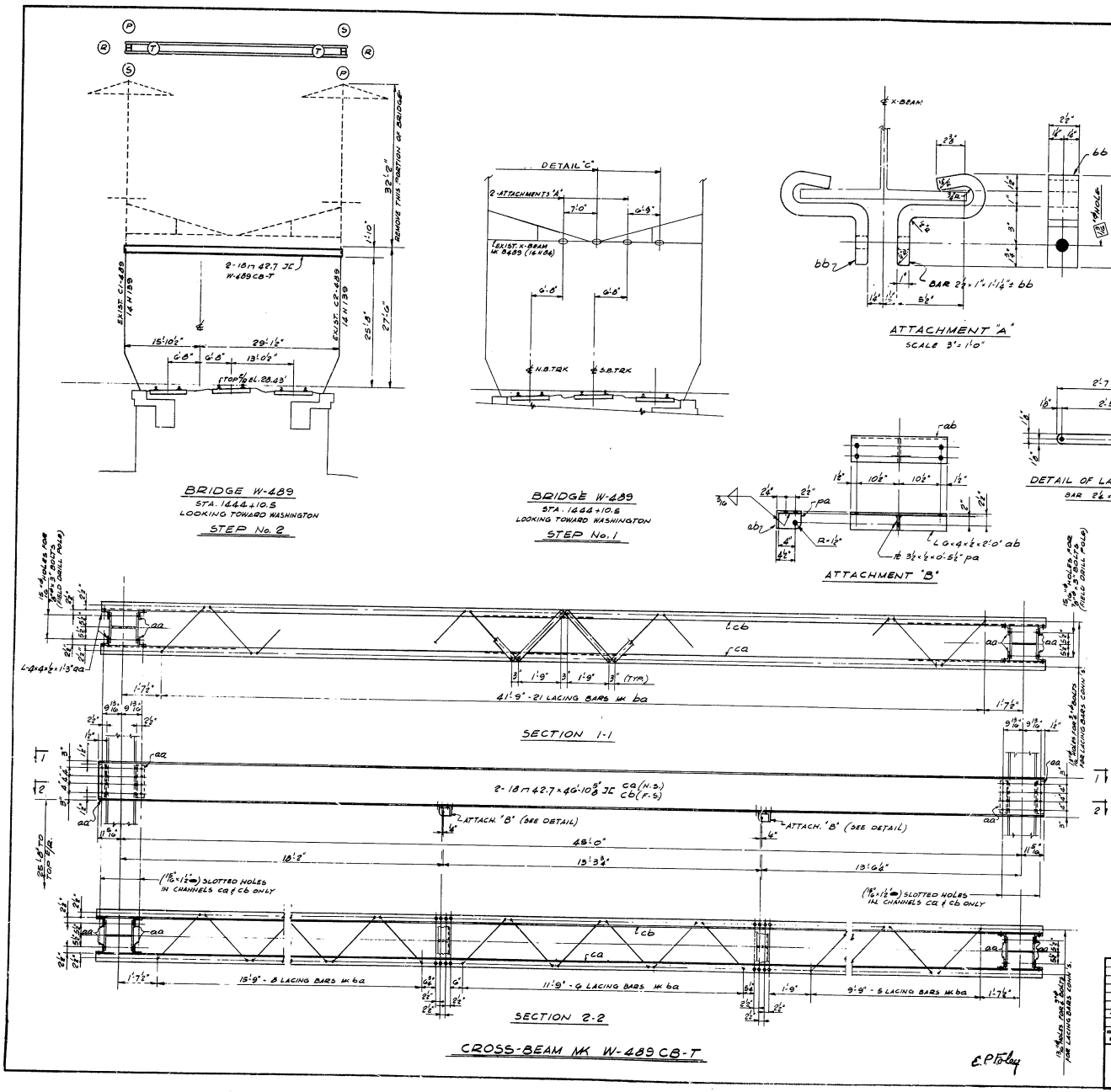
46-S-2248

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

DUCT BANK RELOCATION
SECTIONS

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	195	215



BILL OF MATERIAL

	MARK	DWG. No.		DESCRIPTION	UN.	QUANT.
				CROSS BEAM MK W489 CB-T		
	ca	THIS DWG.		18 [42.7 × 46'-10 5/8"	EA.	1
	cb	"		18 [42.7 × 46'-10 5/8"	"	1
	ba	"		LACING BAR 2 1/4 × 1/4 × 2'-7 15/16"	"	40
	pa	"		PL 3 1/2 × 1/2 × 0'-5 1/2"	"	2
	aa	"		L-4 × 4 × 1/2 × 1'-3"	"	8
	ab	"		L-6 × 4 × 1/2 × 2'-0"	"	2
				BOLTS - WITH H.H.N. & W.	"	AS REQ'D.
				ATTACHMENT "A" (ONE LISTED, 2-REQ'D.)		
*	bb			BAR 2 1/2 × 1" × 1'-1 1/4" ± (BENT) - GALV. -	EA.	2
*				DETAIL "C"	"	2

* TO BE SUPPLIED & INSTALLED BY P.R.R.
ALL OTHER MATERIAL TO BE SUPPLIED & INSTALLED BY GEN. CONTRACTOR

NOTES:

FOR GENERAL NOTES (STEEL) SEE DWG. 46S-2234

REFERENCE DWG'S

ERECTION DIAGRAMS FOR TEMP. CAT. ARRANGEMENTS DWG. No. 46X621
(EXISTING) 3 TR. CURVE BEAM BR., DIAGRAM OF BR. W-489 " " 11B-989

ISSUE NO.	DATE	D'WN	CK'D	APPROVALS	ISSUED FOR
2	1-9-64	S.O.	W.L.		CONSTRUCTION JRS
1	10-15-63	R.M.	W.D.		STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

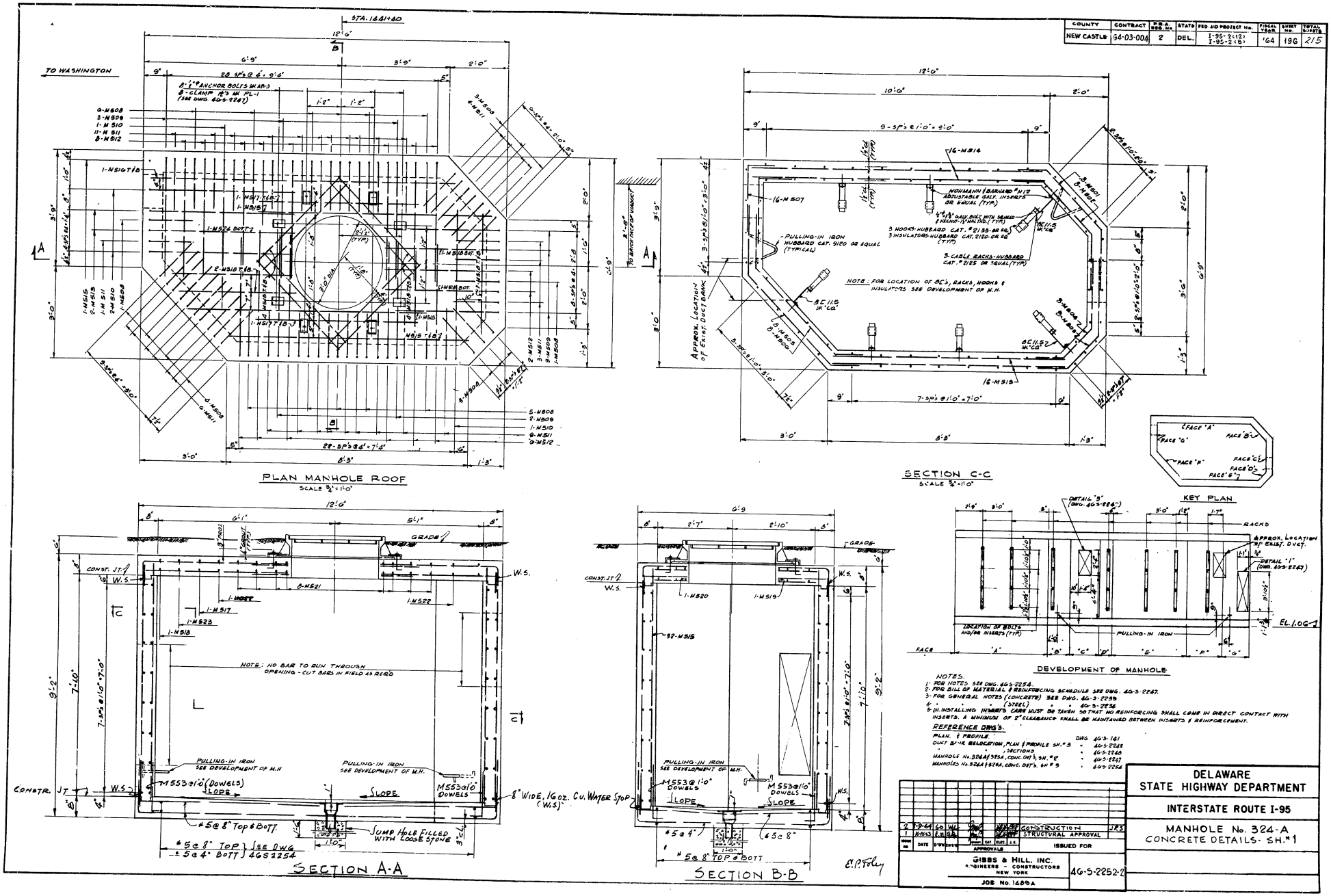
46-S-2251-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING
BEAM BRIDGE W-489

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	196	215



NOTES.
1- FOR NOTES SEE DWG. 46S-2254.
2- FOR BILL OF MATERIAL & REINFORCING SCHEDULE SEE DWG. 46-S-2247.
3- FOR GENERAL NOTES (CONCRETE) SEE DWG. 46-S-2239
4- " " " (STEEL) " " 46-S-2234
5- IN INSTALLING INSERTS CARE MUST BE TAKEN SO THAT NO REINFORCING SHALL COME IN DIRECT CONTACT WITH INSERTS. A MINIMUM OF 2" CLEARANCE SHALL BE MAINTAINED BETWEEN INSERTS & REINFORCEMENT.

REFERENCE DWG'S.

PLAN & PROFILE	DWG	46-S-141
DUCT BANK RELOCATION, PLAN & PROFILE SH. #3	"	46-S-2242
" " SECTIONS	"	46-S-2248
MANHOLE No. 324A & 325A, CONC. DET'S, SH. #2	"	46-S-2247
MANHOLES No. 324A & 325A, CONC. DET'S. SH. #3	"	46-S-2254

ISSUE NO.	DATE	D'WN	CHK'D	APPROVALS	CAT.	ELEC.	A.C.	ISSUED FOR
2	8-9-64	SO	WLL					CONSTRUCTION JRS
1	10-15-63	R.M.	G.A.					STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489A

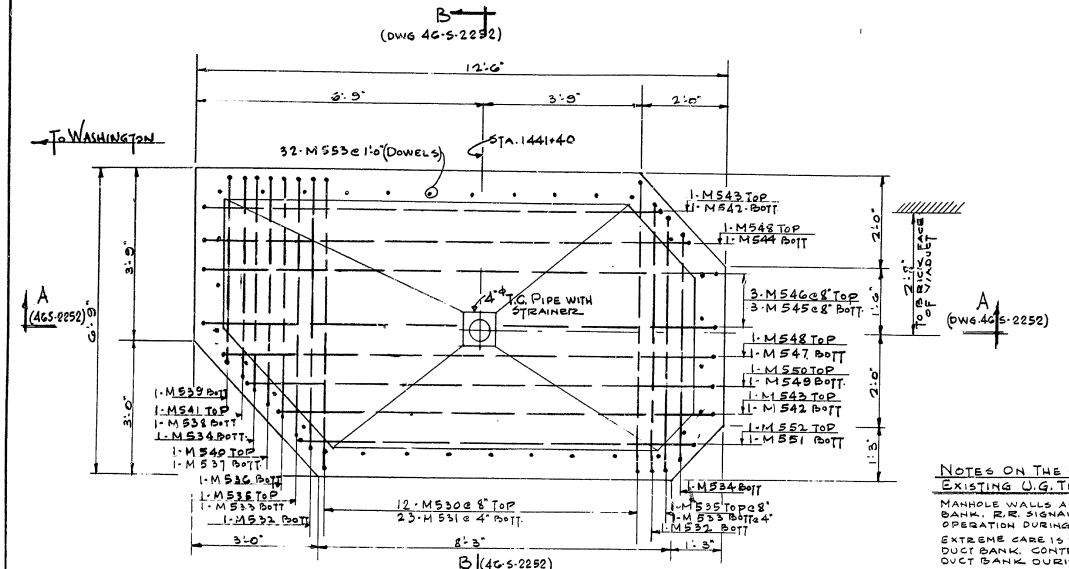
46-S-2252-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

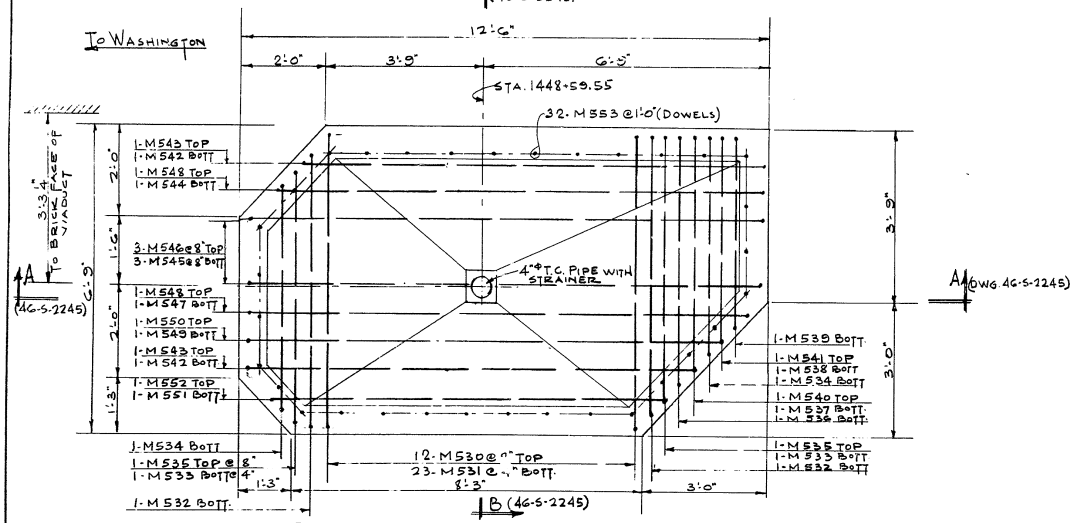
MANHOLE No. 324-A
CONCRETE DETAILS - SH. #1

COUNTY	CONTRACT	FED. & STATE PROJ. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(18)	'64	197	215



PLAN - FLOOR SLAB - MANHOLE Nº 324A

SCALE 3/4":1'-0"



PLAN - FLOOR SLAB - MANHOLE Nº 325A

SCALE 3/4":1'-0"

NOTES ON THE CONSTRUCTION OF MANHOLES AROUND EXISTING U.G. TEL. & SIGNAL DUCT BANK

MANHOLE WALLS ARE TO BE CONSTRUCTED AROUND EXISTING DUCT BANK. R.R. SIGNAL CABLES IN DUCT BANK MUST BE KEPT IN OPERATION DURING THE CONSTRUCTION OF MANHOLES.

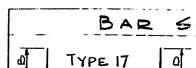
EXTREME CARE IS TO BE USED IN EXCAVATING AROUND THE DUCT BANK. CONTRACTOR TO PROTECT & SUPPORT THE EXISTING DUCT BANK DURING CONSTRUCTION.

R.R. FORCES WILL FURNISH, INSTALL & SPLICE ALL CABLES

AFTER THE REMOVAL OF ALL DUCT MATERIAL, THE UNUSED OPENINGS IN THE MANHOLES ARE TO BE CLOSED WITH CONCRETE OR BRICK

ALL WORK TO BE DONE TO THE SATISFACTION OF THE R.R. ENGINEER.

BAR SCHEDULE



FLOOR SLAB - MANHOLE Nº 324A

MARK	NO REQ'D	SIZE	LENGTH	TYPE	A	B	C	D	E	LOCATION
M530	12	#5	6'-3"	STR						HORIZ. IN FLOOR SLAB
M531	23		10'-0"	17		1'-10"	6'-4"	1'-10"		
M532	2		9'-6"	17		1'-10"	5'-10"	1'-10"		
M533	2		9'-3"	17		1'-10"	5'-7"	1'-10"		
M534	2		8'-6"	17		1'-10"	4'-10"	1'-10"		
M535	2		5'-6"	STR						
M536	1		9'-0"	17		1'-10"	5'-4"	1'-10"		
M537	1		8'-9"	17		1'-10"	5'-1"	1'-10"		
M538	1		8'-3"	17		1'-10"	4'-7"	1'-10"		
M539	1		7'-9"	17		1'-10"	4'-1"	1'-10"		
M540	1		5'-0"	STR						
M541	1		4'-6"	STR						
M542	2		14'-6"	17		1'-10"	10'-10"	1'-10"		
M543	2		10'-9"	STR						
M544	1		15'-3"	17		1'-10"	11'-7"	1'-10"		
M545	3		15'-9"	17		1'-10"	12'-1"	1'-10"		
M546	3		12'-0"	STR						
M547	1		15'-6"	17		1'-10"	11'-10"	1'-10"		
M548	2		11'-9"	STR						
M549	1		14'-9"	17		1'-10"	11'-1"	1'-10"		
M550	1		11'-0"	STR						
M551	1		13'-0"	17		1'-10"	9'-4"	1'-10"		
M552	1		9'-3"	STR						HORIZ. IN FLOOR SLAB
M553	32	#5	2'-9"	17		1'-0"	1'-9"	—		VERTICAL - DOWELS

FLOOR SLAB - MANHOLE Nº 325A
REINFORCING BARS SAME AS ABOVE

NOTES

FOR NOTES SEE DWG 46-S-2239 & 46-S-2234.

REFERENCE DWGS.

MANHOLE Nº 324A - CONCRETE DETAILS SH. Nº 1	46-S-2252
" " 325A " " " "	46A-S-2245
MANHOLES - Nº 324A & 325A - CONCRETE DETAILS SH. Nº 2	46-S-2247

NO.	DATE	BY	DESCRIPTION
2	1-9-64	WC	CONSTRUCTION
1	10-15-63	WC	STRUCTURAL APPROVAL

APPROVALS — ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB NO. 1489A

46-S-2254-2

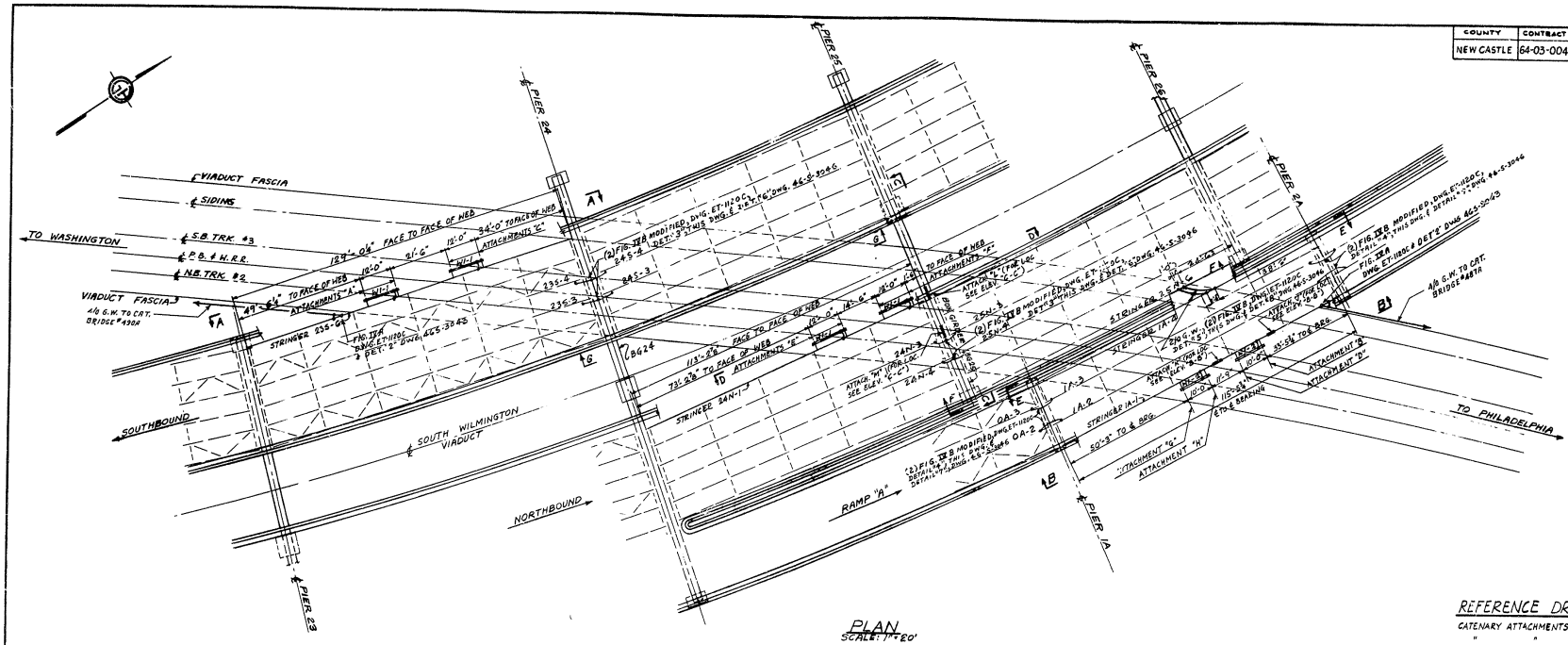
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MANHOLES Nº 324A & 325A
CONCRETE DETAILS SH. Nº 3

C P Foley

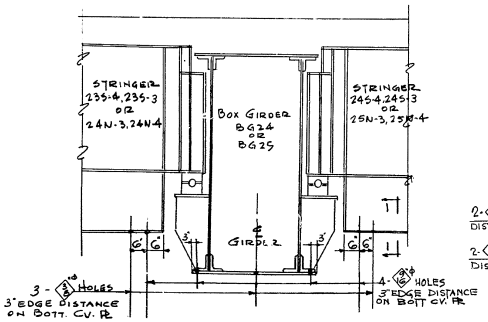
COUNTY	CONTRACT	P.B.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	198	215



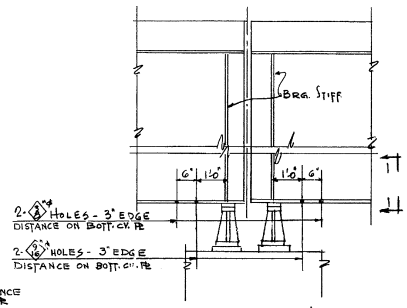
PLAN
SCALE: 1" = 20'

REFERENCE DRAWINGS:

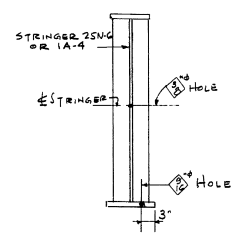
CATENARY ATTACHMENTS - ELEVATIONS	DWG. No. 46-S-3043
" " - STEEL DETAILS	" " 46-S-3044
GROUNDING MATERIAL LIST	" " 46 ML-41
BONDING OF PROTECTIVE BARRIERS	" " 46-S-3046



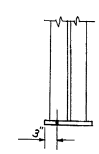
DETAIL "3"
N.T.S.



DETAIL 4
N.T.S.



DETAIL "5"
N.T.S.



SECTION 1-1

E P Foley

2	1-9-64	SO	WL				ADD BONDING - CONSTRUCTION	JRS
1	10-15-63	JS					STRUCTURAL APPROVAL	
ISSUE NO	DATE	D'WN	CK'D	DWN	CAT	ELEC	APPROVALS	ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

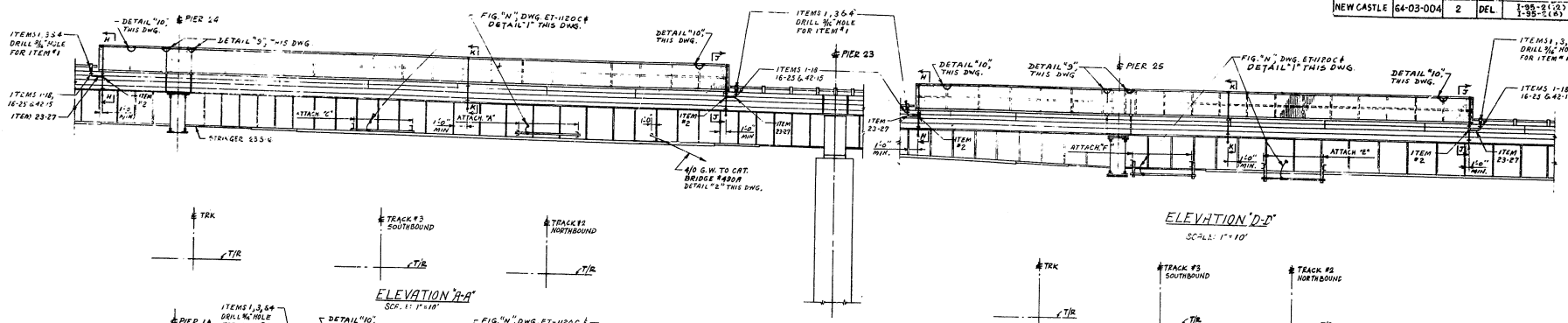
46-S-3042-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

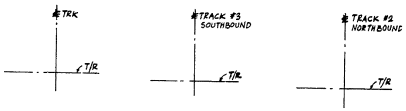
CATENARY ATTACHMENTS
PLAN

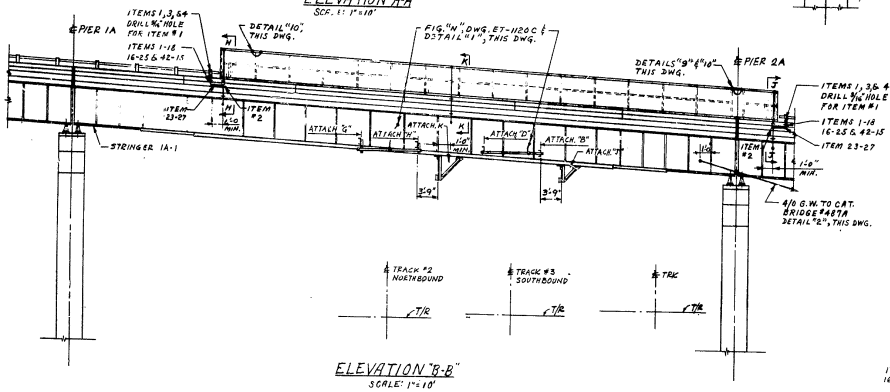
COUNTY	CONTRACT	P.E.A. REQ. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(16)	'64	199	215



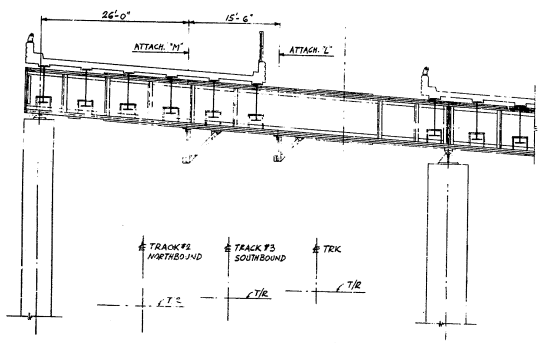
ELEVATION "D-D"
SCALE: 1"=10'

ELEVATION "A-A"
SCALE: 1"=10'

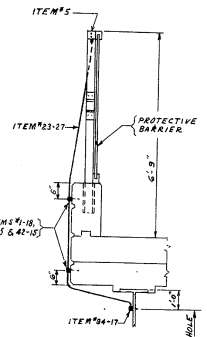




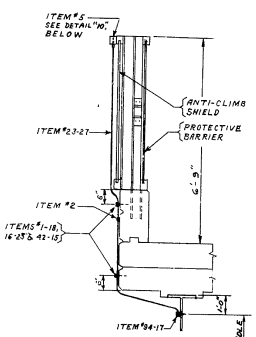
ELEVATION "B-B"
SCALE: 1"=10'



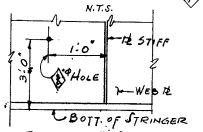
ELEVATION "C-C"
SCALE 1"=10'



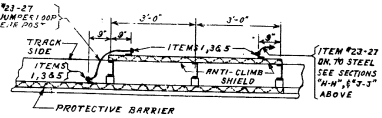
SECTION K-K
N.T.S.



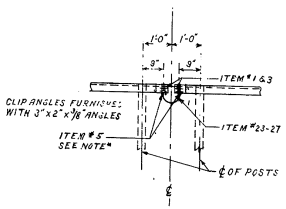
SECTION H-H
SECTION J-J (OPPOSITE HAND)
N.T.S.



DETAIL "1"
N.T.S.



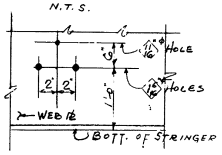
ANTI-CLIMB SHIELD
DETAIL "10"
N.T.S.



EXPANSION JOINT JUMPER

* NOTE:
TIN CABLE ENDS WITH ITEM #6 BEFORE CONNECTING [illegible]

DETAIL "9"
N.T.S.



DETAIL "2"
N.T.S.

E.P. Foley

REFERENCE DRAWINGS:

CATENARY ATTACHMENTS	DWG No. 46-S-3042
" " STEEL DETAILS	" " 46-S-3044
GROUNDING MATERIAL LIST	" " 46 ML-41
BONDING OF PROTECTIVE BARRIERS	" " 46-S-3046

NOTE:

HOLD BONDING OF BRIDGE BARRIERS PENDING RECEIPT OF INFORMATION DEFINING BREAKS IN TOP ANGLE.

NO.	DATE	DESCRIPTION	APPROVALS
2	1-12-64	GP WHO ADD BONDING: CONSTRUCTION JRS	
1	9-10-63	JS STRUCTURAL APPROVAL	

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS — CONSTRUCTORS
NEW YORK
JOB No. 1489A

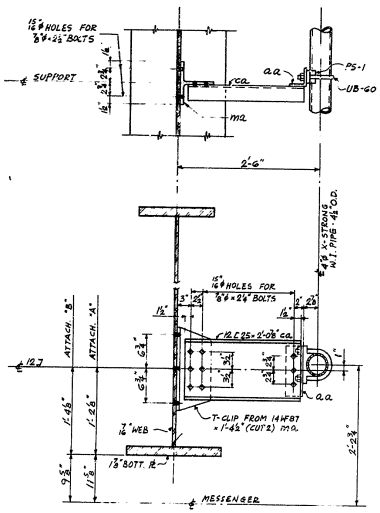
46-S-3043-2

DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

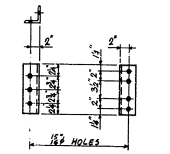
CATENARY ATTACHMENTS
ELEVATIONS

COUNTY	CONTRACT	R.B.& BRDG. No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CAST. E	64-03-004	2	DEL.	I-95-2(12) I-95-2(15)	'64	200	215

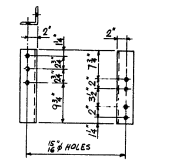


ATTACHMENTS "A" & "B"

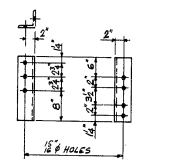
ATTACH "A": 2 REQ'D
" "B": 1 " "
SCALE: 1" = 1'-0"



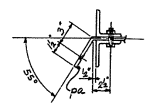
L-3½ x 3½ x ⅜ x 0'-10" MK aa



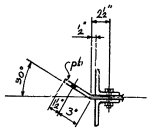
L-3½ x 3½ x ⅜ x 1'-4½" MK ab



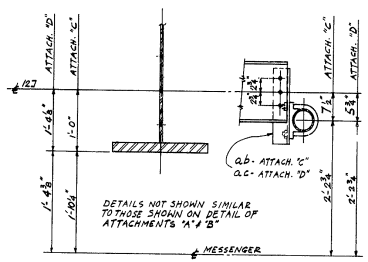
L-3½ x 3½ x ⅜ x 1'-2¾" MK ac



SECTION 1-1
FOR ATT. "J" & "K"

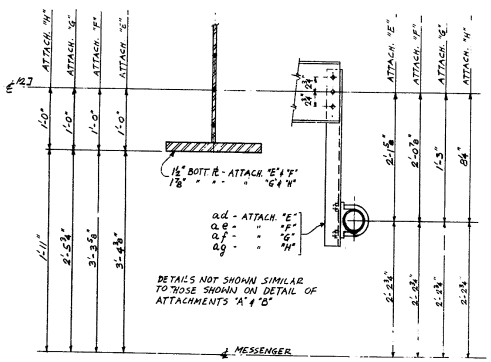


SECTION 2-2
FOR ATT. "L" & "M"



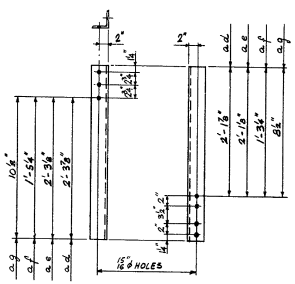
ATTACHMENTS "C" & "D"

ATTACH. "C": 2 REQ'D
" "D": 1 " "
SCALE: 1" = 1'-0"

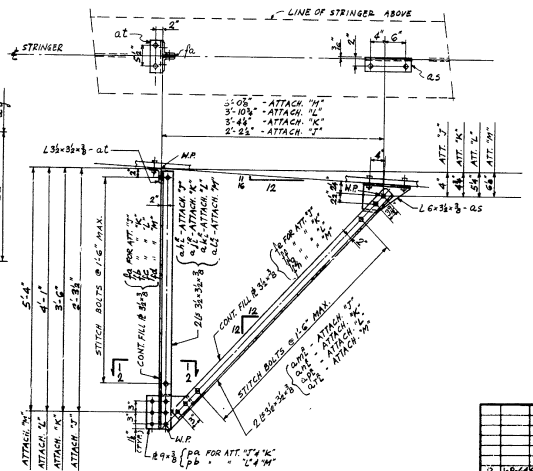


ATTACHMENTS "E", "F", "G" & "H"

ATTACH. "E": 2 REQ'D
" "F": 2 " "
" "G": 1 " "
" "H": 1 " "
SCALE: 1" = 1'-0"



L-3½ x 3½ x ⅜ x 2'-10⅝" MK ad
L-3½ x 3½ x ⅜ x 2'-9⅞" MK ae
L-3½ x 3½ x ⅜ x 2'-0" MK af
L-3½ x 3½ x ⅜ x 1'-5¼" MK ag



ATTACHMENTS "J" "K" "L" & "M"

ONE OF EACH REQ'D
SCALE: 1" = 1'-0"

MMI ITEM	MARK	DWG. No.	FED. STORES REF. NO.	DESCRIPTION	UNIT	QUANT.
				ATTACH. "A" "B" "C" "D" "E" "F" "G" "H" (GALV.)		
—	ca	THIS DWG.	—	12 C 25 x 2'-0⅝"	EA.	12
—	ma	" "	—	T CLIP FROM 14 WF 87 x 1'-4½"	"	12
—	aa	" "	—	L-3½ x 3½ x ⅜ x 0'-10"	"	3
—	ab	" "	—	" x 1'-4½"	"	2
—	ac	" "	—	" x 1'-2¾"	"	1
—	ad	" "	—	" x 2'-10⅝"	"	2
—	ae	" "	—	" x 2'-9⅞"	"	2
—	af	" "	—	" x 2'-0"	"	1
—	ag	" "	—	" x 1'-5¼"	"	1
				BOLTS ⅞ϕ x 2¼" LG. WITH H.H.N. & H.	"	108
				" ⅞ϕ x 2½" LG. WITH H.H.N. & H.	"	72
				ATTACH. "J" "K" "L" "M" (GALV.)		
—	ah	THIS DWG.	—	L-3½ x 3½ x ⅜	EA.	1-ah
—	aj	" "	—	"	"	1-aj
—	ak	" "	—	"	"	1-ak
—	al	" "	—	"	"	1-al
—	am	" "	—	"	"	1-am
—	an	" "	—	"	"	1-an
—	ap	" "	—	"	"	1-ap
—	ar	" "	—	"	"	1-ar
—	as	" "	—	L-6 x 3½ x ⅜	"	1-as
—	at	" "	—	L-3½ x 3½ x ⅜	"	4
—	pa	" "	—	PL 9 x ⅜ (BENT)	"	2
—	pb	" "	—	PL 9 x ⅜ (BENT)	"	2
—	fa	" "	—	FILL PL 3½ x ⅜	"	1
—	fb	" "	—	" " "	"	1
—	fc	" "	—	" " "	"	1
—	fd	" "	—	" " "	"	1
—	fe	" "	—	" " "	"	1
—	ff	" "	—	" " "	"	1
—	fg	" "	—	" " "	"	1
—	fh	" "	—	" " "	"	1
				BOLTS ⅞ϕ WITH H.H.N. & H.	"	AS REQ'D
*	74-18	PS 1	14 E 133	10-290955 SADDLE, PIPE, MALLEABLE IRON, GALV.	EA.	12
*	19-12	UB-60	ET-148 E	10-178201 BOLT, U, STEEL, GALV. ⅞ x 5½ x 6⅛	"	12
*	66-7	WI-1	—	42-2774 PIPE, W.I., 4" BLACK, X-STRONG, N/O THD. (45.15-016)	FT.	74'-0"
*	66-7	WI-2	—	" " " " " (26.11-016)	"	

* SUPPLIED & INSTALLED BY P.R.R.
ALL OTHER MATERIAL SUPPLIED & INSTALLED BY GENERAL CONTRACTOR

REFERENCE DRAWINGS:

CATENARY ATTACHMENTS - PLAN — DWG. No. 46-S-3042
" " - ELEVATIONS — " " 46-S-3043

NOTES:

FOR GENERAL NOTES SEE DWG. No. 46-S-2234

ISSUE NO.	DATE	D'WN CH'K'D	APPROVALS
2	1-9-64	MC	CONSTRUCTION
1	10-15-63	JS	STRUCTURAL APPROVAL
			ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

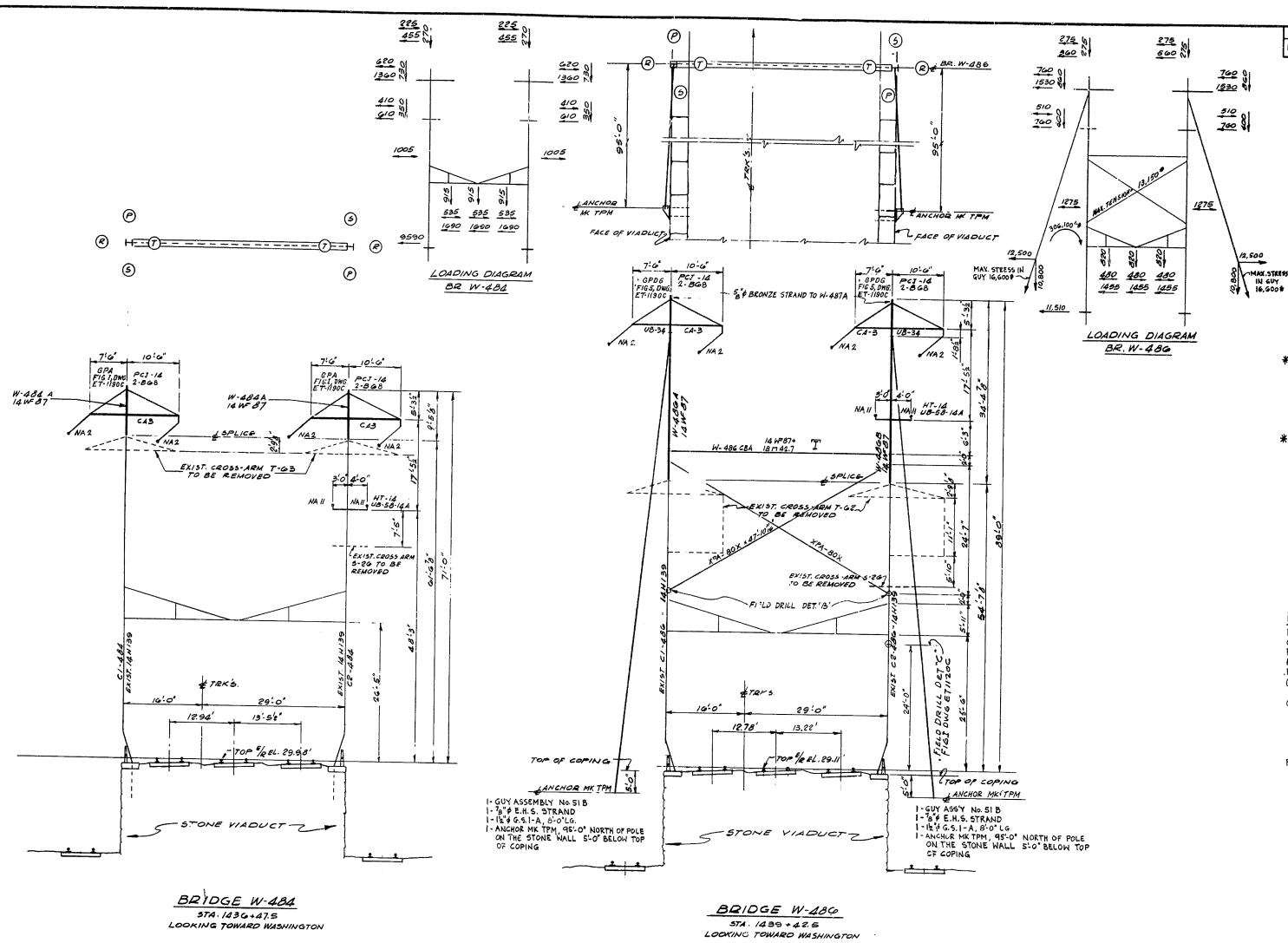
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

CATENARY ATTACHMENTS
STEEL DETAILS

46-S-3044-2

COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(B)	'64	201	215



BRIDGE W-484
STA. 1436+47.5
LOOKING TOWARD WASHINGTON

BRIDGE W-486
STA. 1439+42.5
LOOKING TOWARD WASHINGTON

BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	NO. UNIT
		BRIDGE W-484		
W-484 A	46-S-2237	POLE EXTENSION - 14 WF 87	EA.	2
HT-14	46-S-2235	CROSS-ARM	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
CA 3	46-S-2235	CROSS-ARM	"	2
PCI-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4
		BRIDGE W-486		
W-486A	46-S-2237	POLE EXTENSION - 14 WF 87	EA.	1
W-486B	46-S-2237	" " 14 WF 87	"	1
CA 3	46-S-2235	CROSS-ARM	"	2
HT-14	46-S-2235	" "	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
TPM	46-S-2239	ANCHOR	"	2
G.S. I-A	46-S-2239	1½"ϕ GUY STUB x 8'-0" LG.	"	2
* 51 B	46-S-2238	GUY ASSEMBLY	"	2
UB-34	46-S-2238	U-BOLT	"	2
PCI-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4
W-486 CBA	46-S-2234	CROSS BEAM	"	1
* XPA-80X	46-S-2238	CROSS-SPAN ASSEMBLY	"	2
DET. 'B'	46-S-2237	FIELD DRILLING	"	2
DET. 'C'	46-S-2237	" "	"	1

* TO BE SUPPLIED AND INSTALLED BY P.R.R.
ALL OTHER MATERIAL TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

REFERENCE DRAWINGS:

PLAN & PROFILE	DWG. No. 46-S-141
CROSS-ARM DETAILS	" " 46-S-2235
POLE EXTENSIONS FOR BEAM BRIDGES W-484, W-486, W-491 & W-492	" " 46-S-2237
HARDWARE DETAILS	" " 46-S-2238
FOUNDATIONS & ANCHORS	" " 46-S-2239
(EXISTING) 3 TR. CURVE BEAM BRIDGE, DIAGRAM OF BRIDGE W-484	" " 11B-984
" " " " " " " " W-486	" " 11B-986
GROUNDING MATERIAL LIST	" " 46-ML-41

FOR GENERAL NOTES SEE DWG. No. 46-S-2234

E.P. Foley

ISSUE NO.	DATE	D'WN	CK'D	DESIGN	CAT	ELEC.	J.E.	ISSUED FOR
3	1-9-69	S.D.	WC				BPF	CONSTRUCTION JRS
2	10-15-63		W.D.				BPF	REV. FOR STRUCTURAL APPROVAL
1	7-1-63		W.D.				BPF	STRUCTURAL APPROVAL

APPROVALS

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

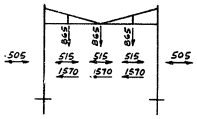
46-S-7417-3

DELAWARE
STATE HIGHWAY DEPARTMENT

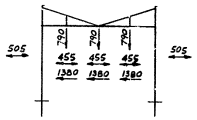
INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING BEAM BRIDGES W-484 & W-486

COUNTY	CONTRACT	P.R.A. BRIDGE No.	STATE	FED. AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(10)	'64	202	215



LOADING DIAGRAM
BR. W-485

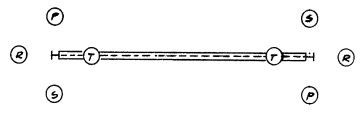


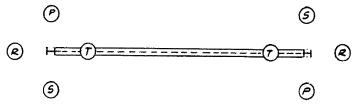
LOADING DIAGRAM
BR. W-487

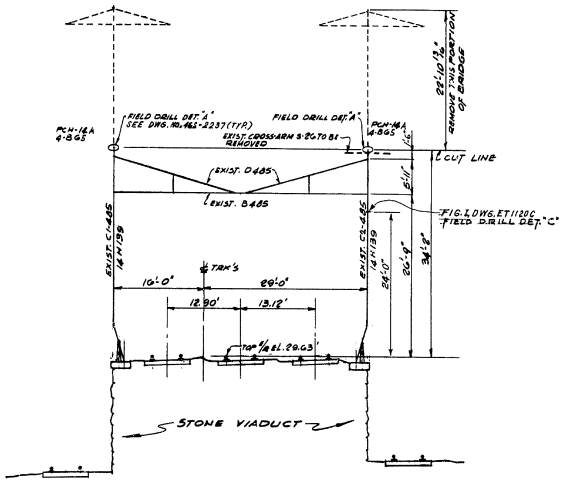
BILL OF MATERIAL

MARK	DWG. No.	DESCRIPTION	UNIT	QUANT.
		BRIDGE W-485		
PCH-14A	—	POLE CAP: REUSE EXISTING	EA.	2
B-65	46-S-2238	¾ϕ BOLT	"	8
DET. "A"	46-S-2257	FIELD DRILLING	"	2
—	46-S-2258	GALV. STEEL ROUND WASHER 1¼ϕ, ¼ THICK, ⅞ϕ HOLE	"	8
DET. "C"	46-S-2257	FIELD DRILLING	"	2
		BRIDGE W-487		
B-65	46-S-2238	¾ϕ BOLT	"	8
PCH-14A	—	POLE CAP: REUSE EXISTING	"	2
—	46-S-2258	GALV. STEEL ROUND WASHER 1¼ϕ, ¼ THICK, ⅞ϕ HOLE	"	2
DET "A"	46-S-2257	FIELD DRILLING	"	2
DET "C"	46-S-2257	" "	"	1

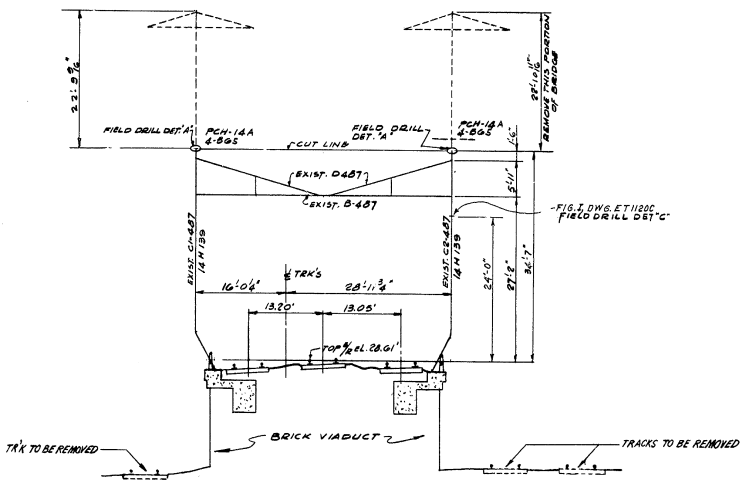
ALL MATERIAL TO BE SUPPLIED & INSTALLED BY GEN. CONTRACTOR.







BRIDGE W-485
STA. 1458+10
LOOKING TOWARD WASHINGTON



BRIDGE W-487
STA. 1440+84.5
LOOKING TOWARD WASHINGTON

REFERENCE DRAWINGS:

	DWG. No.
PLAN & PROFILE	46-S-141
POLE EXTENSIONS FOR BRIDGES W-484, W-486, W-491 & W-498	" " 46-S-2257
HARDWARE DETAILS	" " 46-S-2238
(EXISTING) 5 TR. CURVE BEAM BR., DIAGRAM OF BRIDGE W-485	" " 118-985
" " " " " " " " W-487	" " 118-987
GROUNDING MATERIAL LIST	" " 46-MI-81

FOR GENERAL NOTES SEE DWG. No 46-S-2234.

NO.	DATE	BY	CHK.	APPROVALS
3	1-24-64	S.D.	W.C.	CONSTRUCTION
2	8-16-63	W.D.	W.C.	REV. FOR STRUCTURAL APPROVAL
1	7-1-63	W.D.	W.C.	STRUCTURAL APPROVAL

ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK

JOB No. 1489 A

46-S-7418-3

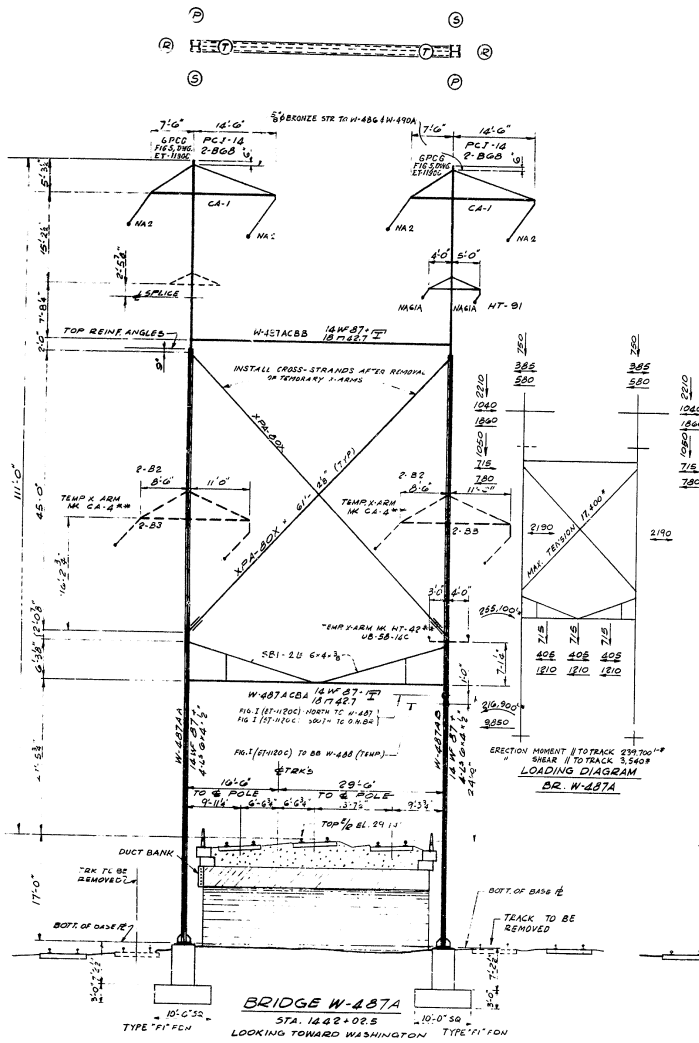
E.P. Foley

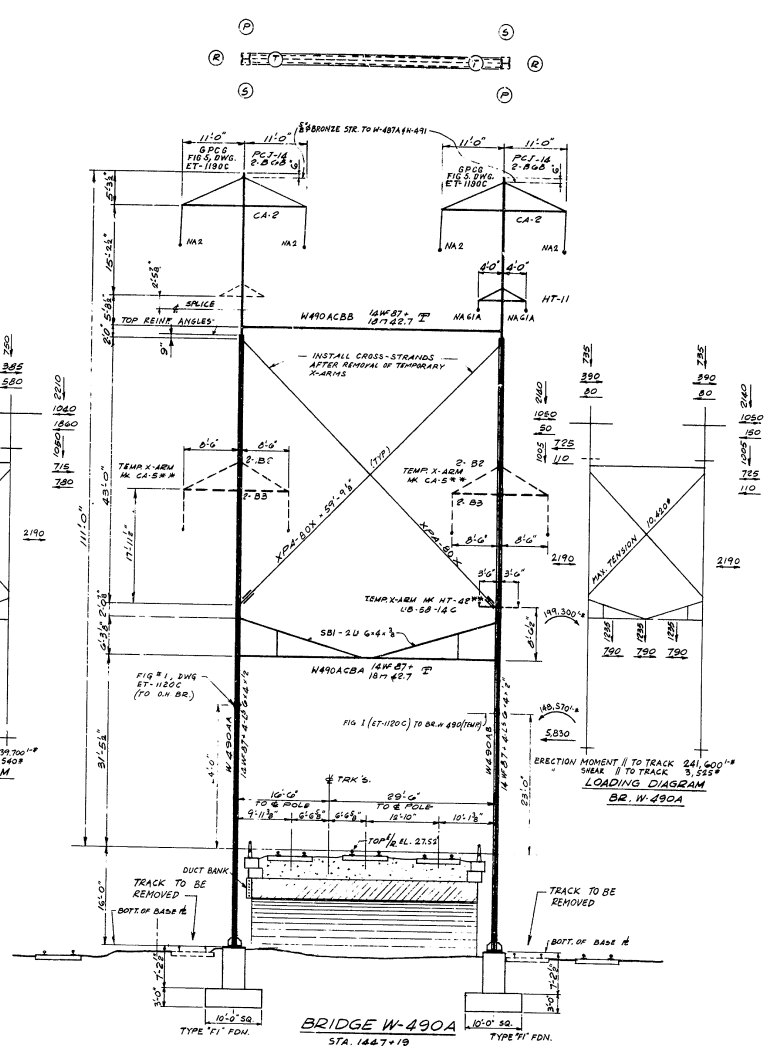
DELAWARE
STATE HIGHWAY DEPARTMENT

INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING BEAM BRIDGES W-485 & W-487

COUNTY	CONTRACT	R.B.& B. SEC. No	STATE	PSB AND PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTL	64-03-004	2	DEL	I-95-2(10) I-95-2(8)	'64	203	215





** TEMPORARY X-ARM TO BE REMOVED WHEN TRANSMISSION CABLES ARE IN FINAL POSITON

BILL OF MATERIAL

MARK	DWG. NO	DESCRIPTION	UNIT	QUAN.
		BRIDGE W-487A		
CA-4	46-5-2235	CROSS-ARM	EA.	2
W-487AA	46-5-2234	POLE, 14WF87 REINFORCED	EA.	1
W-487AB	46-5-2236	" " "	"	1
CA-1	46-5-2235	CROSS-ARM	"	2
HT-91	46-5-2235	" "	"	1
W-487ACBA	46-5-2234	CROSS-BEAM	"	1
SB-1	46-5-2234	SAG BRACE	"	2
W-487ACBB	46-5-2234	CROSS-BEAM	"	1
PCT-14	46-5-2238	POLE CAP	"	2
B-6B	46-5-2238	3/4"ϕ BOLT	"	4
F1	46-5-2239	FOUNDATION	"	2
* XPA-80X	46-5-2238	CROSS-SPAN ASSEMBLY	"	2
HT-42	403-2235	CROSS-ARM	"	1
UB-58-14C	"	U-BOLT	"	1
B2	"	1"ϕ BOLT	"	4
B3	"	1"ϕ BOLT	"	4
		BRIDGE W-490A		
W-490AA	46-5-2236	POLE, 14WF87 REINFORCED	EA.	1
W-490AB	46-5-2236	" " "	"	1
CA-2	46-5-2235	CROSS-ARM	"	2
HT-11	46-5-2235	" "	"	2
W-490ACBA	46-5-2234	CROSS-BEAM	"	1
SB-1	46-5-2234	SAG BRACE	"	2
W-490ACBB	46-5-2234	CROSS-BEAM	"	1
PCT-14	46-5-2238	POLE CAP	"	2
B-6B	46-5-2238	3/4"ϕ BOLT	"	4
F1	46-5-2239	FOUNDATION	"	2
* XPA-80X	46-5-2238	CROSS-SPAN ASSEMBLY	"	2
CA-5	46-5-2235	CROSS-ARM	"	2
HT-42	"	" "	"	1
UB-58-14C	"	U-BOLT	"	1
B2	"	1"ϕ BOLT	"	4
B3	"	1"ϕ BOLT	"	4

* TO BE SUPPLIED AND INSTALLED BY P&B
ALL OTHER MATERIAL TO BE SUPPLIED & INSTALLED BY GENERAL CONTRACTOR.

REFERENCE DRAWINGS:

	DWG No
PLAN & PROFILE	46-5-131
STEEL DETAILS OF CROSS-BEAMS AND SAG BRACES	" " 46-5-2234
CROSS-ARM DETAILS	" " 46-5-2235
STEEL DETAILS OF POLES W-487AA, W-487AB, W-490AA & W-490AB	" " 46-5-2236
HARDWARE DETAILS	" " 46-5-2238
FOUNDATIONS & ANCHORS	" " 46-5-2239
GROUNDING MATERIAL LIST	46-ML-41

FOR GENERAL NOTES SEE DWG No 46-5-2234 & 46-5-2239

3	1-9-64	S.D.	W.C.		W.M.	DFF	CONSTRUCTION
2	10-15-63	A.M.	W.D.			DFF	REV. FOR STRUCTURAL APPROVAL
1	7-1-63	D.S.	W.D.			SSF	FOR PRELIMINARY APPROVAL
ISSUE NO	DATE	D'WN CHK'D				CAT	ISSUED FOR

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 4671

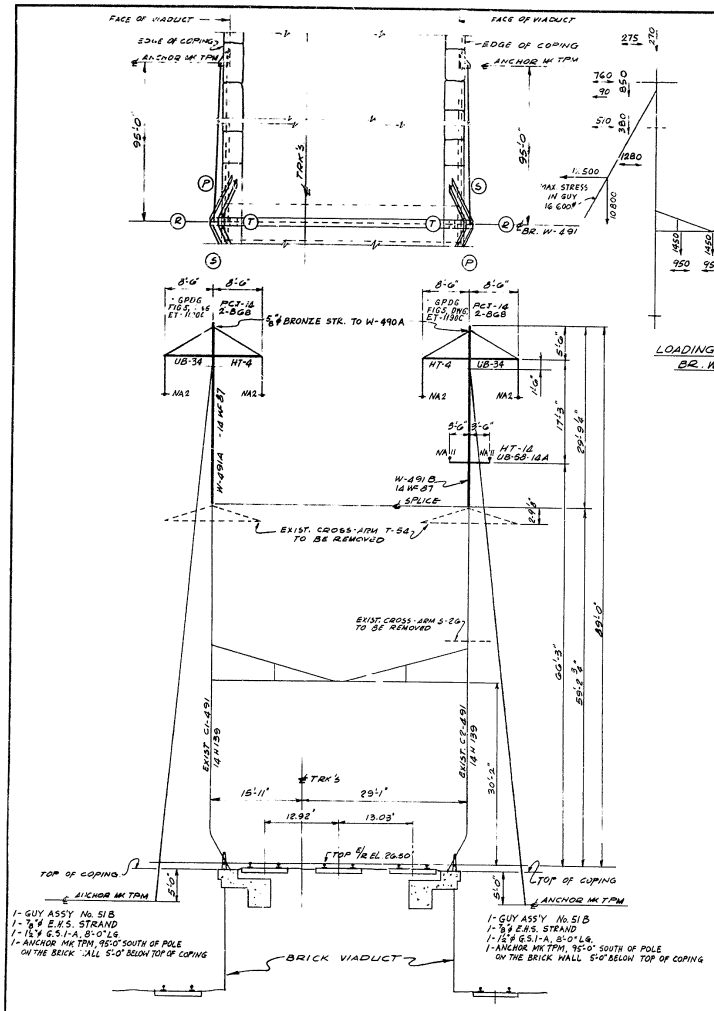
46-5-7419-3

DELAWARE
STATE HIGHWAY DEPARTMENT

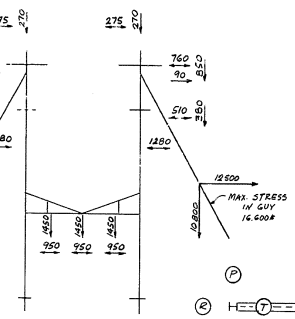
INTERSTATE ROUTE I-95

ERECTION DIAGRAMS OF NEW BEAM BRIDGES W-487A & W-490A

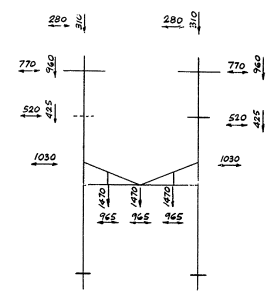
COUNTY	CONTRACT	P.R.A. REG. No.	STATE	FED AID PROJECT No.	FISCAL YEAR	SHEET No.	TOTAL SHEETS
NEW CASTLE	G4-03-0C4	2	DEL	I-95-2 (12) I-95-2 (8)	'64	204	215



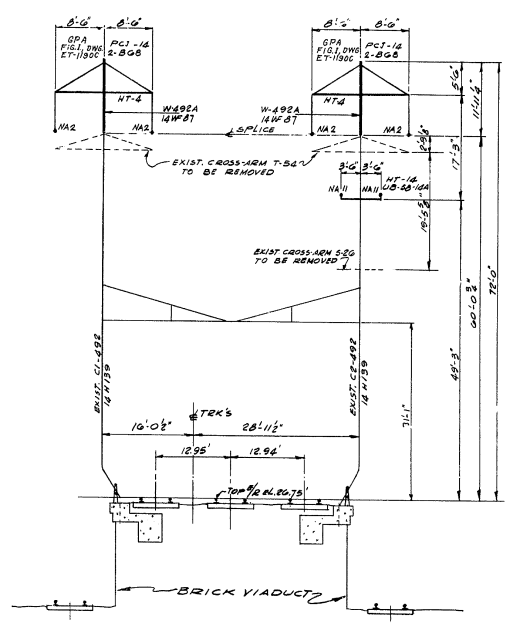
BRIDGE W-491
STA 449+88
LOOKING TOWARD WASHINGTON



LOADING DIAGRAM
BR. W-491



LOADING DIAGRAM
BR. W-492



BRIDGE W-492
STA. 1452+73
LOOKING TOWARD WASHINGTON

BILL OF MATERIAL

MARK	DWG No	DESCRIPTION	UNIT	QUANT.
		BRIDGE W-491		
W-491 A	46-S-2237	POLE EXTENSION, 14WF87	EA.	1
W-491 B	46-S-2237	" " "	"	1
HT-4	46-S-2235	CROSS-ARM	"	2
HT-14	46-S-2235	" "	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
UB-34	46-S-2238	U-BOLT	"	2
* 51 B	46-S-2238	GUY ASSEMBLY	"	2
G.S.1-A	46-S-2239	1½"ϕ GUY STUB × 8'-0" LG.	"	2
TPM	46-S-2239	ANCHOR	"	2
PCJ-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4
		BRIDGE W-492		
W-492A	46-S-2237	POLE EXTENSION, 14WF87	EA.	2
HT-4	46-S-2235	CROSS-ARM	"	2
HT-14	46-S-2235	" "	"	1
UB-58-14A	46-S-2235	U-BOLT	"	1
PCJ-14	46-S-2238	POLE CAP	"	2
B-68	46-S-2238	7/8"ϕ BOLT	"	4

* TO BE SUPPLIED AND INSTALLED BY P.R.R.
ALL OTHER MATERIAL TO BE SUPPLIED AND INSTALLED BY GENERAL CONTRACTOR.

REFERENCE DRAWINGS:

PLAN & PROFILE	DWG. No. 46-S-141
CROSS-ARM DETAILS	" " 46-S-2235
POLE EXTENSIONS FOR BRIDGES W-484, W-486, W-491 & W-492	" " 46-S-2237
HARDWARE DETAILS	" " 46-S-2238
FOUNDATIONS & ANCHORS	" " 46-S-2239
(EXISTING) 3 TR. TAN. BEAM BRIDGE, DIAGRAM OF BRIDGE W-491	" " 11B-991
" " " " " " " W-492	" " 11B-992
GROUNDING MATERIAL LIST	" " 46-ML-41

FOR GENERAL NOTES SEE DWG. No. 46-S-2234

ISSUE NO	DATE	D'WN	CH'K'D	APPROVALS				ISSUED FOR
3	1-9-64	S.D.	WC					CONSTRUCTION JRS
2	10-15-63		WD					REV. FOR STRUCTURAL APPROVAL
1	7-1-63		WD					STRUCTURAL APPROVAL

GIBBS & HILL, INC.
ENGINEERS - CONSTRUCTORS
NEW YORK
JOB No. 1489 A

46-S-7420-3

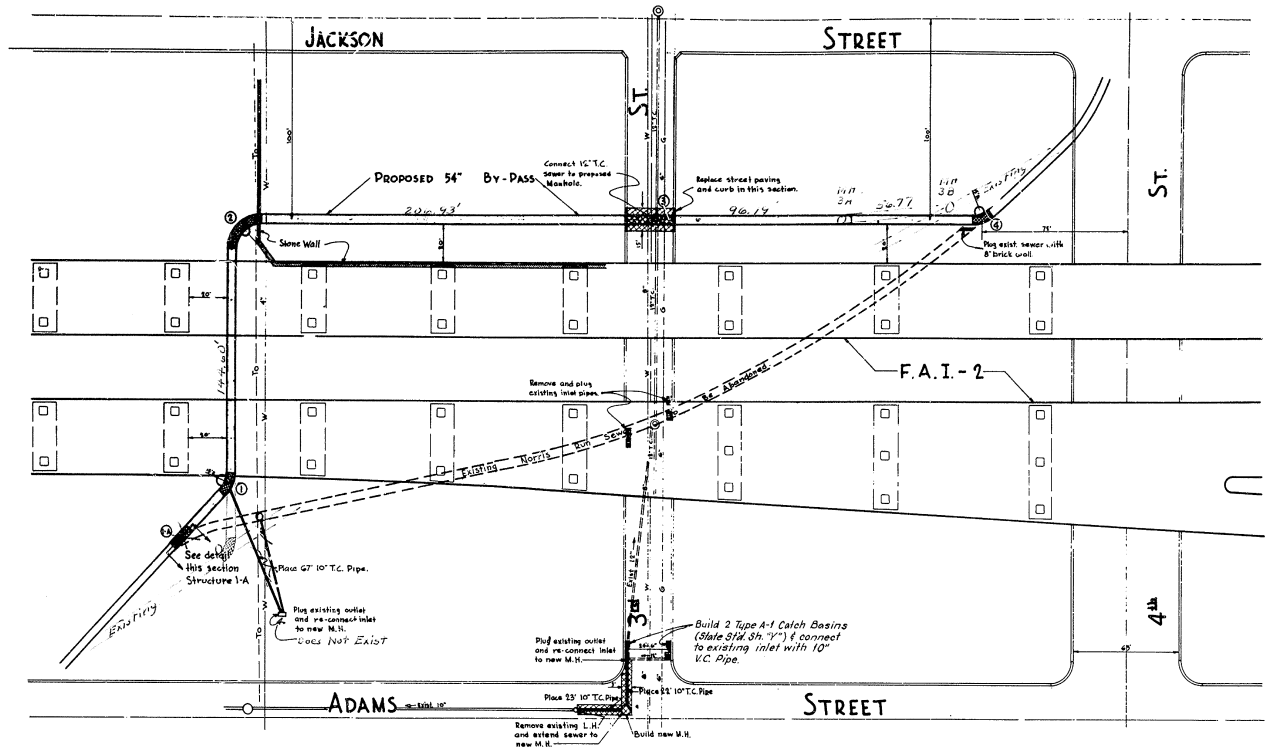
DELAWARE
STATE HIGHWAY DEPARTMENT

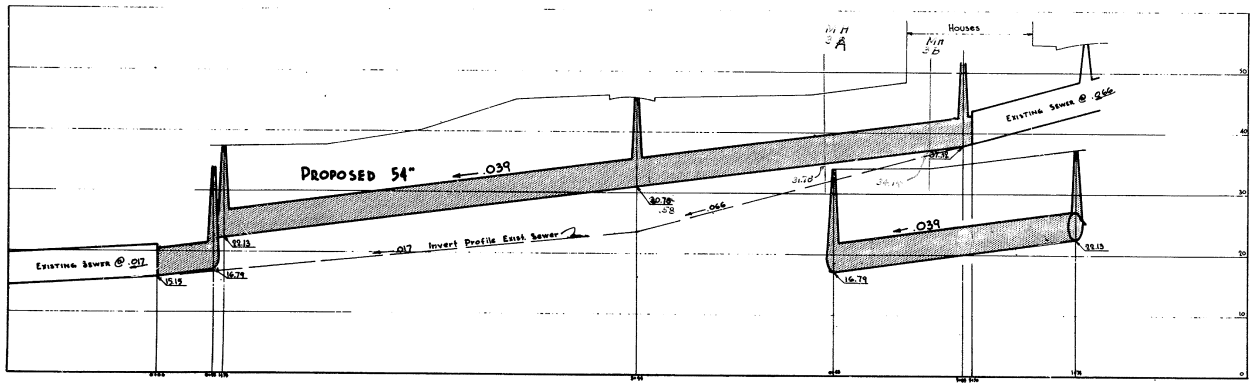
INTERSTATE ROUTE I-95

MODIFICATIONS TO EXISTING BEAM BRIDGES W-491 & W-492

COUNTY	CONTRACT	P.R.S. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12) I-95-2(8)	'64	205	215

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT





DEPARTMENT of PUBLIC WORKS
WILMINGTON, DELAWARE

NORRIS RUN BYPASS
PLAN AND PROFILE

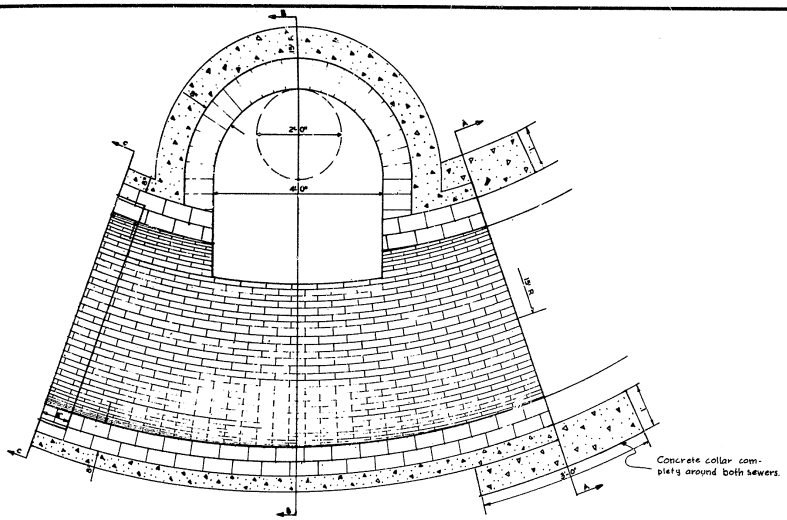
Drawn By Howard F. Smith	Scale: Hor. 1"=30'
Checked By	Vert. 1"=10'
Date Jan. 8, 1964	
Approved By Chief Engineer	Date
Contract No. PW-	Sheet No. of

As Built Plans in Red - 1-9-67 WDC

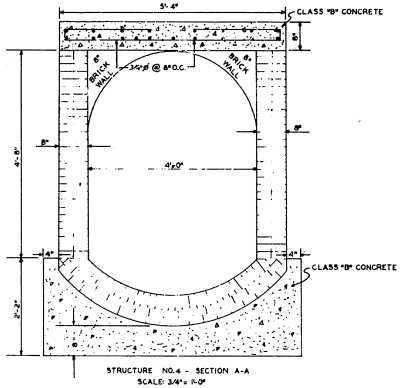
D C B A 1 5 10 A B C D

COUNTY	CONTRACT	R.B.A. REG. NO.	STATE	FED. AID PROJECT NO.	FISCAL YEAR	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL	I-95-2(12) I-95-2(8)	'64	206	215

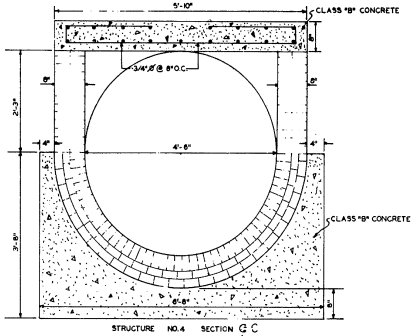
INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT



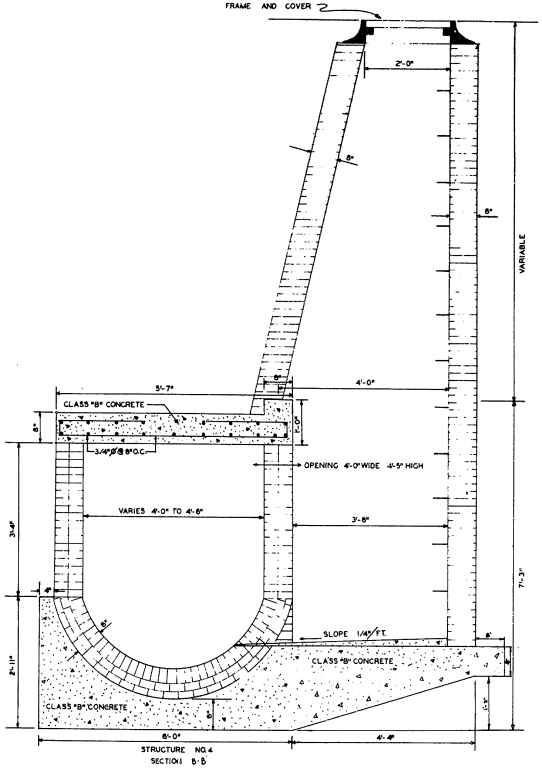
BRICK BEND STRUCTURE NO. 4
TYPICAL BEND STRUCTURE SEE NOTES THIS SHEET.
SCALE: 3/4" = 1'-0"



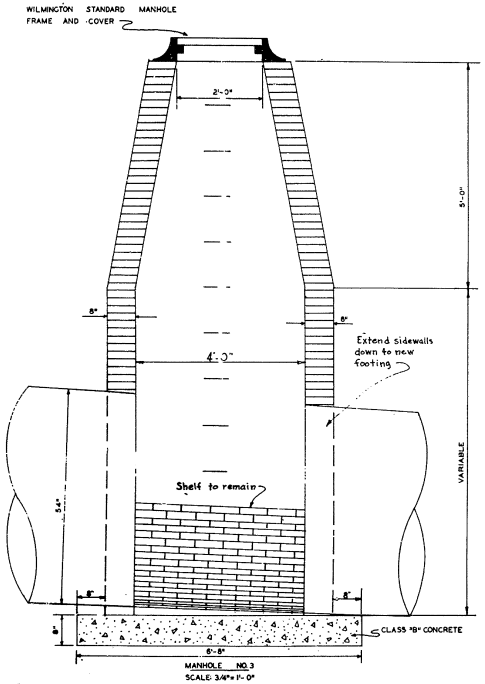
STRUCTURE NO. 4 - SECTION A-A
SCALE: 3/4" = 1'-0"



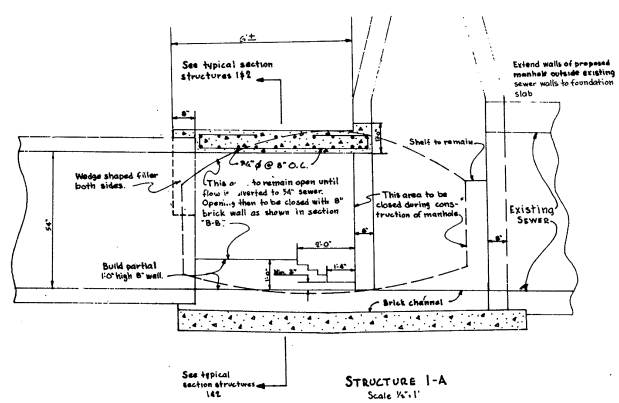
STRUCTURE NO. 4 SECTION C-C
TYPICAL FOR STRUCTURES 1 & 2
SCALE: 3/4" = 1'-0"



STRUCTURE NO. 4
SECTION B-B
SCALE: 3/4" = 1'-0"



MANHOLE NO. 3
SCALE: 3/4" = 1'-0"



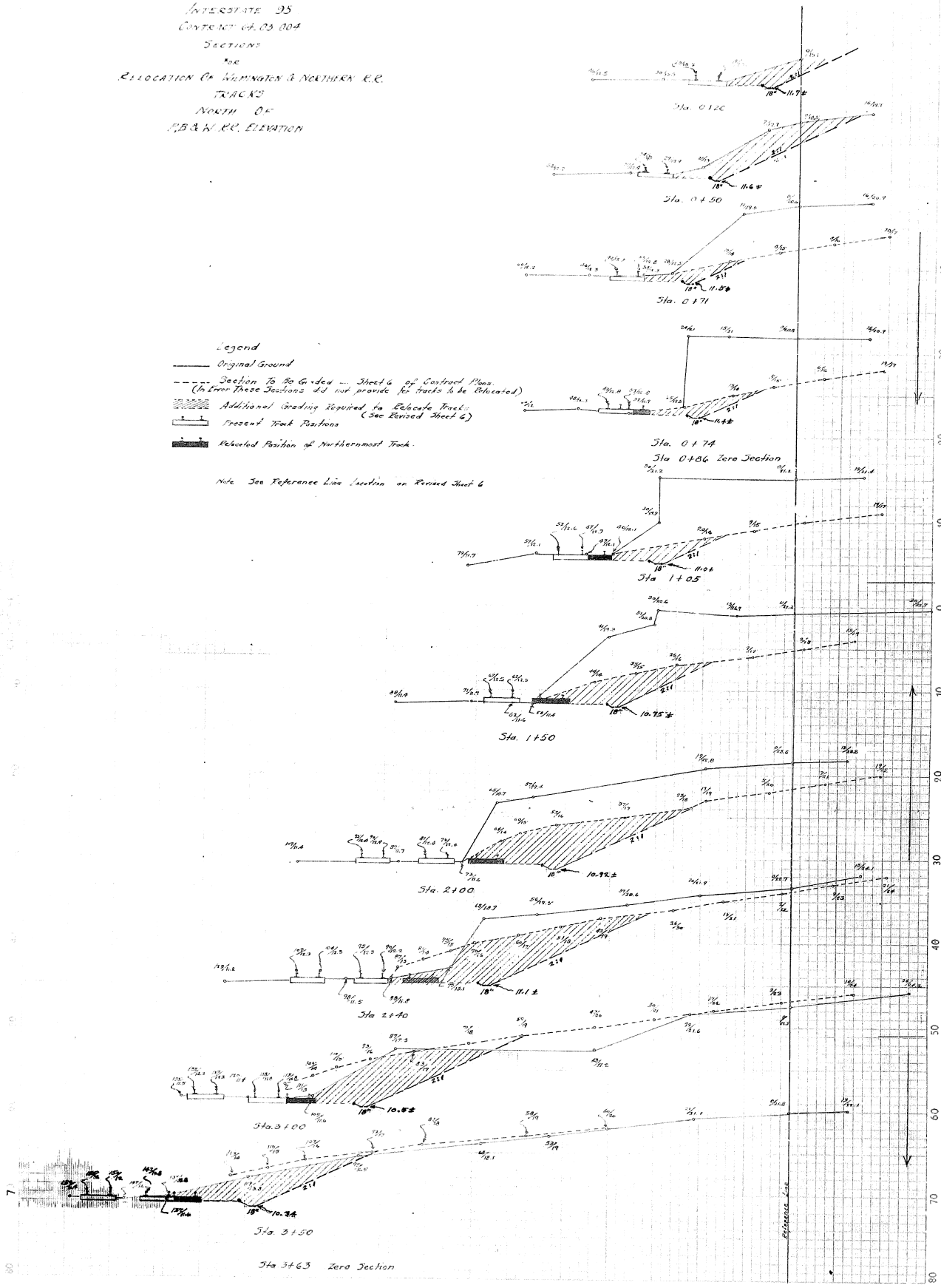
STRUCTURE 1-A
Scale 1/4" = 1'

DEPARTMENT of PUBLIC WORKS
WILMINGTON, DELAWARE

NORRIS RUN BYPASS
DETAILS

Drawn By H.F. Smith Jr.	Scale:
Checked By	Hor. 3/4" = 1'-0"
Date March 6, 1964	Vert.
Approved By Chief Engineer	Date
Contract No. PW-	Sheet No. of

INTERSTATE 95
CONTRACT CF-03 004
SECTIONS
FOR
RELOCATION OF WILMINGTON & NORTHERN R.R.
TRACKS
NORTH OF
P.B.& W. R.R. ELEVATION

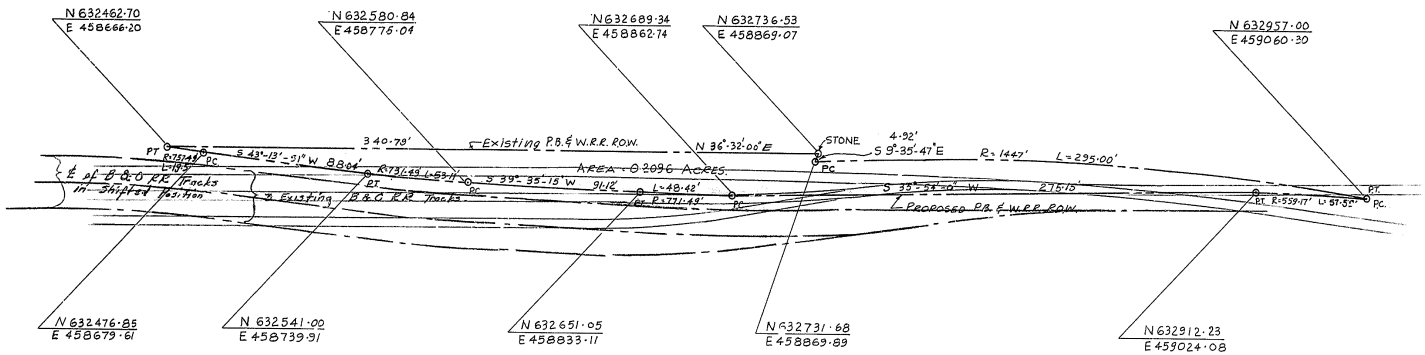


COUNTY	CONTRACT	P.W.A. REG. NO.	STATE	FED. AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
NEW CASTLE	64-03-004	2	DEL.	I-95-2(12)		

INTERSTATE HIGHWAY ROUTE I-95
SOUTH WILMINGTON VIADUCT - SECTION II

NO.	REVISIONS	BY	DATE

Note: See Sh# 179 of 64-03-004 Construction Plans



DELAWARE
STATE HIGHWAY DEPARTMENT

PROPERTY
TO BE ACQUIRED FOR
THE P. B. & W.R.R. CO.

D.	SCALE	APPROVED BY:
T. RKP 6/10/64	1" = 30'-0'	
C. JHF " "		BRIDGE ENGINEER

K+E IMPERIAL TRACING CLOTH