IN DEPTH INSPECTION REPORT

D031085 P.I.N. 3501.60

B.I.N. 1093571

TEAM LEADER	Logan Bessel, P.E.	98781
		NYSPE LICENSE #

ASSISTANT TEAM LEADER	Devin Bush
ASSISTANT TEAM LEADER	Brendan Cataldo
ASSISTANT TEAM LEADER	Samantha Lusher

FEATURE CARRIED	I-481 Southbound
FEATURE CROSSED	CSX Transportation and AMTRAK

DATE FIELD WORK BEGAN	April 25, 2022
DATE FIELD WORK COMPLETED	May 11, 2022

TABLE OF CONTENTS

- IN-DEPTH CONDITION DOCUMENTATION
- IN-DEPTH PHOTO DOCUMENTATION

BIN 1093571

Purpose of Inspection

In-depth inspection was performed in 2013 and 2014 as part of PIN 3501.60; I-81 Viaduct Replacement project. This report serves to update the documentation of the existing bridge elements which will be rehabilitated as part of Phase 1 of the I-81 Viaduct project.

Visual Inspection

The general observations of this bridge during this inspection include concrete cracking and spalling. The structural steel is showing signs of section loss. The bearings appear to be seized and no longer functioning as designed.

The field observations are shown on the plans. Below is a brief summary of conditions for each feature.

Superstructure

Deck – Deck is anticipated to be replaced in Phase 1

Steel – See Structural Steel Inspection Summary

Bearings – Bearings typically contained pack rust and did not appear to be functioning as intended. Pedestals contain cracking and spalling.

Substructure

Begin Abutment – Concrete backwall contained widespread map-cracking across the entire length and isolated areas of delaminated and spalled concrete near the deck joint. The wingwalls exhibit map-cracking over 100% of their exposed faces.

Pier 1 – Concrete cap beam contains areas of cracked and delaminated concrete. Some cracking is on the verge of becoming spalls. The concrete

columns also exhibit widespread delaminated concrete, cracking, and isolated areas of spalled concrete.

Pier 2 – The concrete cap beam contains delaminated and spalled concrete across the majority of its area. The columns also contain widespread areas of delaminated and cracked concrete. The crash wall is 100% delaminated and cracked.

Pier 3 – The concrete cap beam contains delaminated and spalled concrete. The concrete columns also contain widespread areas of delaminated and cracked concrete. The crash wall contains widespread areas of map-cracked, delaminated and spalled concrete with exposed rebar.

Pier 4 – This pier is located adjacent to a salt storage shed. Salt-laden runoff from the salt storage shed was puddled near the face of the crash wall during the inspection. The concrete cap beam contained widespread areas of delaminated concrete. Additionally, cracks are forming in the cap beam above column 2 on both faces of the cap beam. The columns also contained widespread areas of delaminated concrete. The crash wall contained widespread areas of map-cracked, delaminated and spalled concrete.

Pier 5 – The cap beam contains isolated areas of delaminated and cracked concrete. The concrete columns contain isolated areas of delaminated and cracked concrete.

Pier 6 – The cap beam contains isolated areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, cracked and spalled concrete.

Pier 7 – The cap beam contains isolated areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, cracked and spalled concrete.

Pier 8 – The cap beam contains isolated areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, cracked and spalled concrete.

Pier 9 – The cap beam contains isolated areas of delaminated, cracked, and spalled concrete. The columns also contain isolated areas of delaminated, cracked and spalled concrete.

Pier 10 – The cap beam contains isolated areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, and cracked concrete.

Pier 11 – The cap beam contains widespread areas of delaminated and cracked concrete. The columns also contain widespread areas of delaminated, and cracked concrete.

Pier 12 – The cap beam contains isolated areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, cracked, and spalled concrete.

Pier 13 – The cap beam contains widespread areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, cracked, and spalled concrete.

Pier 14 – The cap beam contains isolated areas of delaminated and cracked concrete. The columns also contain isolated areas of delaminated, cracked, and spalled concrete.

End Abutment – Concrete backwall contained widespread map-cracking and areas of delaminated and spalled concrete. The pedestals contained generally sound concrete.

BIN 1093571

Special Emphasis Inspection Required

Non-Redundant/Fracture Critical Members – No

Pin and Hangers – No

Fatigue-Prone Welds – Yes

Non-Categorized Fatigue-Prone Details – No

Other (Specified in Text) – High Rocker Bearings, Steel Web Bearing Areas

Special Emphasis Details

Special emphasis details exist in the form of category D, E, and E' welds. Additionally, high rocker bearings are present. As a result of deterioration, the steel webs within the bearing areas are also of special emphasis. These require 100% hands-on inspection.

Overall Steel Condition

The steel showed signs of deterioration. In general, the bottom flange of the fascia beams, girder ends of all beams were showing signs of section loss. Some cross frames were bent, buckled, or broken as a result of corrosion or receipt of unanticipated loading.

Paint

The paint system was generally failing over the entire structure. The paint failure ranges from flaking paint, to measurable section loss of steel members.

Section Loss

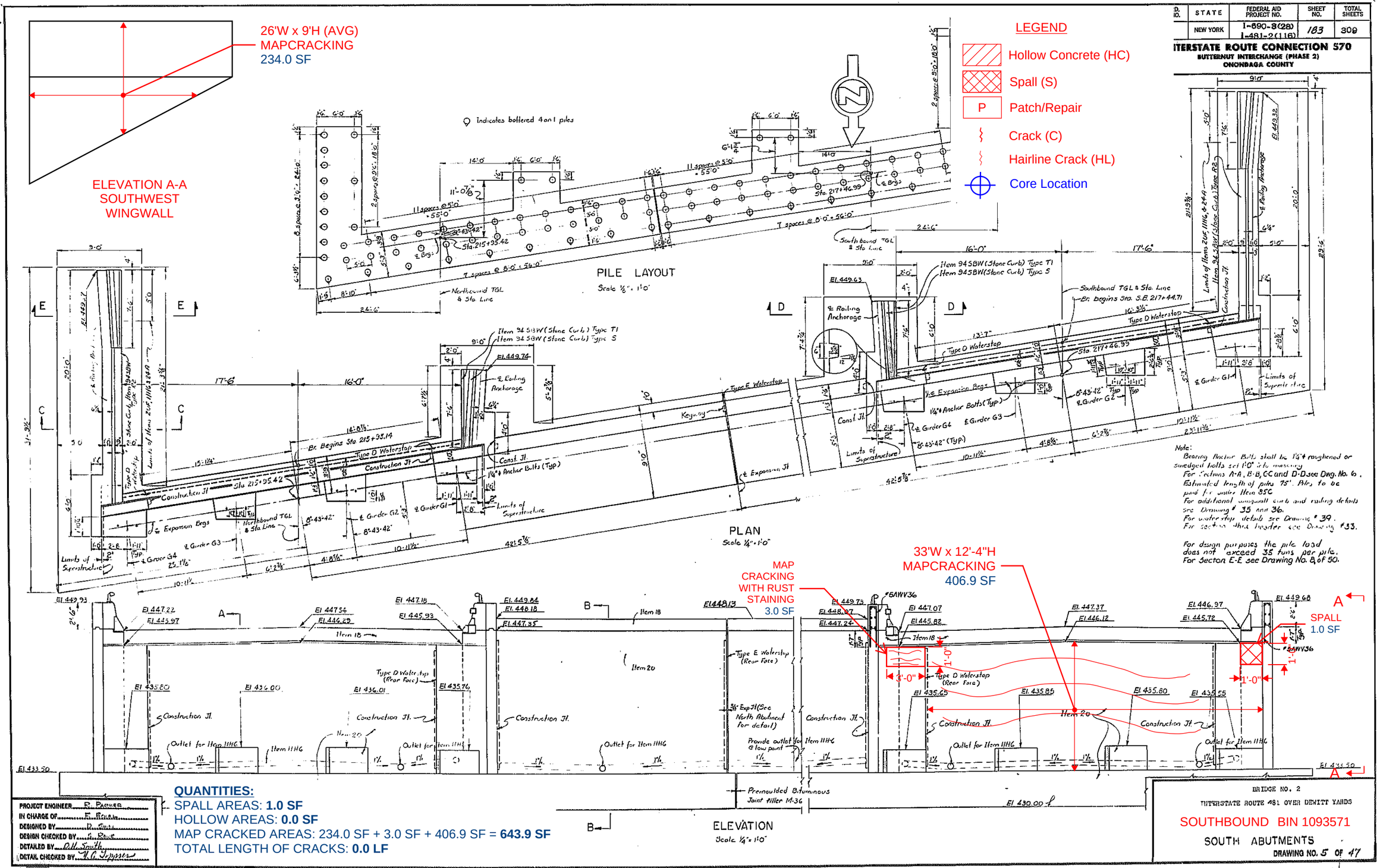
Section loss readings were taken at various points along the bridge. The readings are depicted on the framing plans of each span attached. In general, the areas of most significant loss were the lower six (6) inches of the web and the bottom flange. Additionally, the ends of the girders experienced section loss within the bearing area.

IN-DEPTH CONDITION DOCUMENTATION

F.I.S.H. 70-7

D. ID.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
	NEW YORK	I-690-8(28) I-481-2(116)	183	309

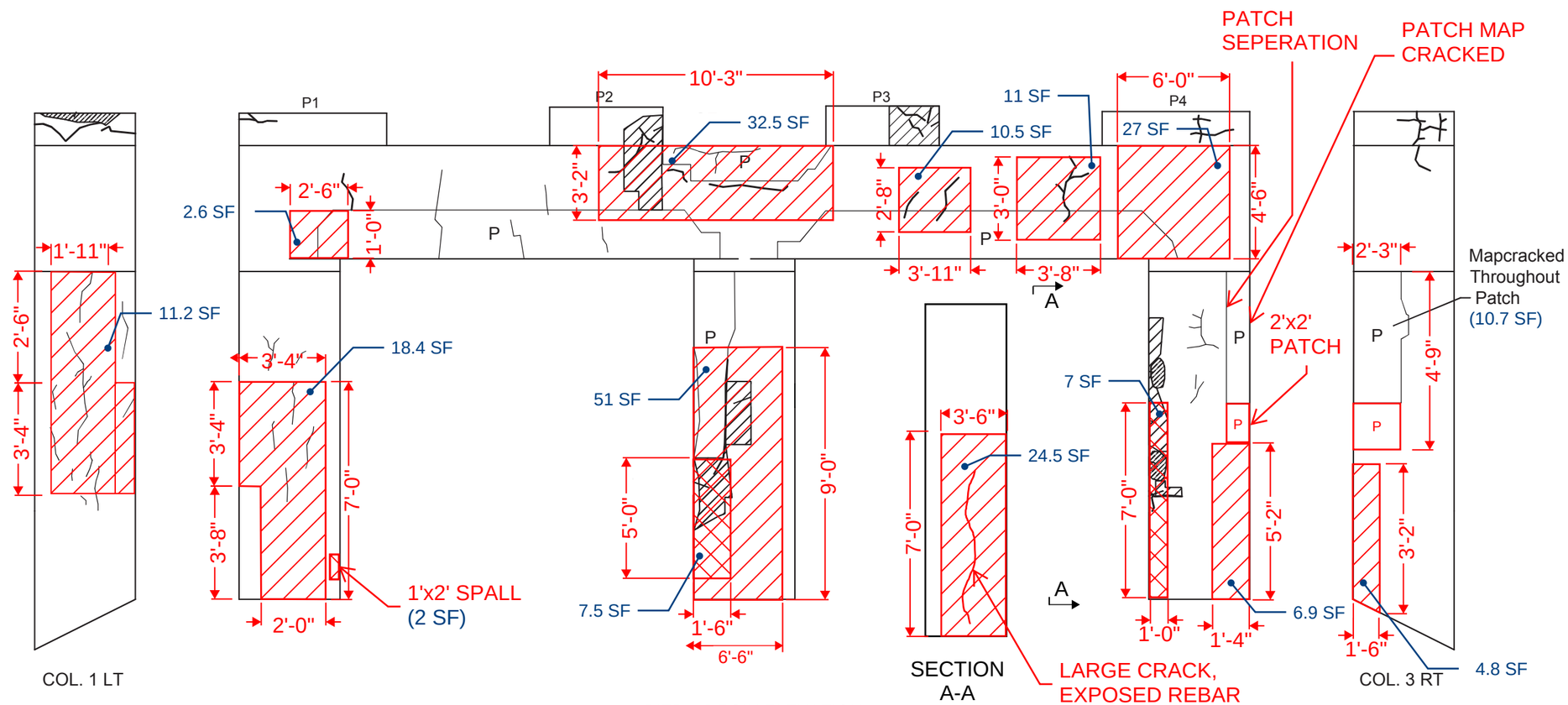
ITERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

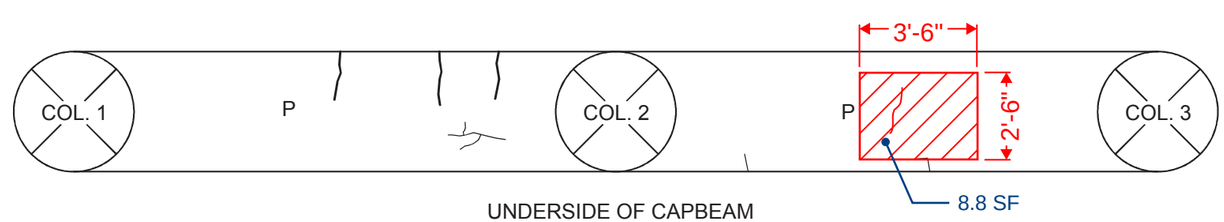


BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 1 DETERIORATION SKETCH

NOT TO SCALE





UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 2 SF + 7.5 SF + 7 SF = **16.5 SF**
HOLLOW AREAS: 11.2 SF + 18.4 SF + 2.6 SF + 32.5 SF + 51 SF + 24.5 SF + 10.5 SF + 11 SF + 27 SF + 6.9 SF + 4.8 SF + 8.8 SF = **209.2 SF**
MAP CRACKED AREAS: **10.7 SF**
TOTAL LENGTH OF CRACKS: **26 LF**

LEGEND

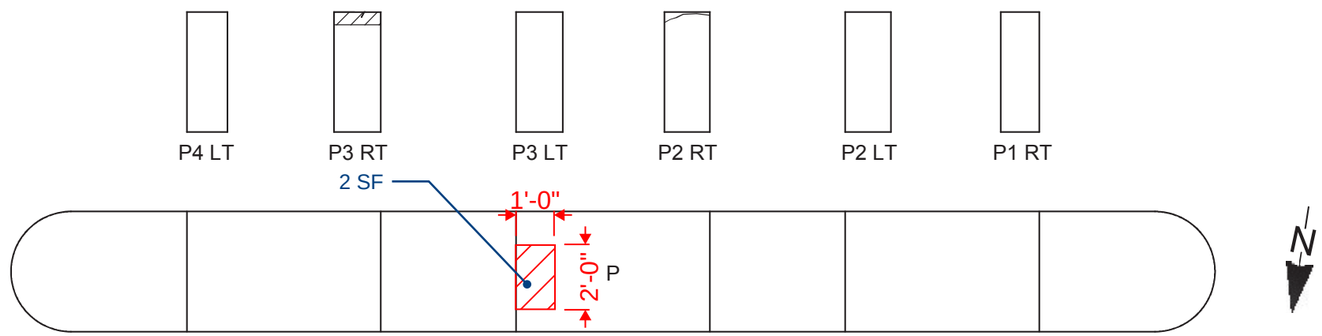
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

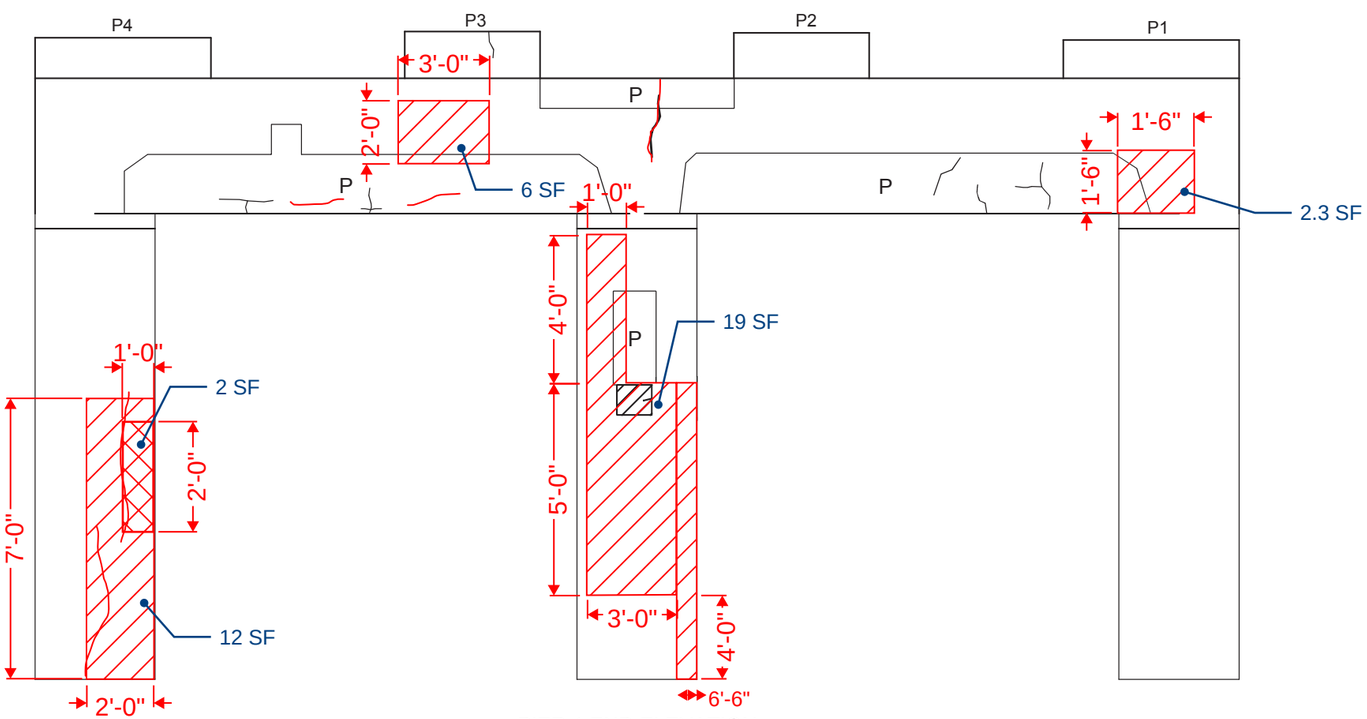
PIER 1 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 1 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 1 END ELEVATION

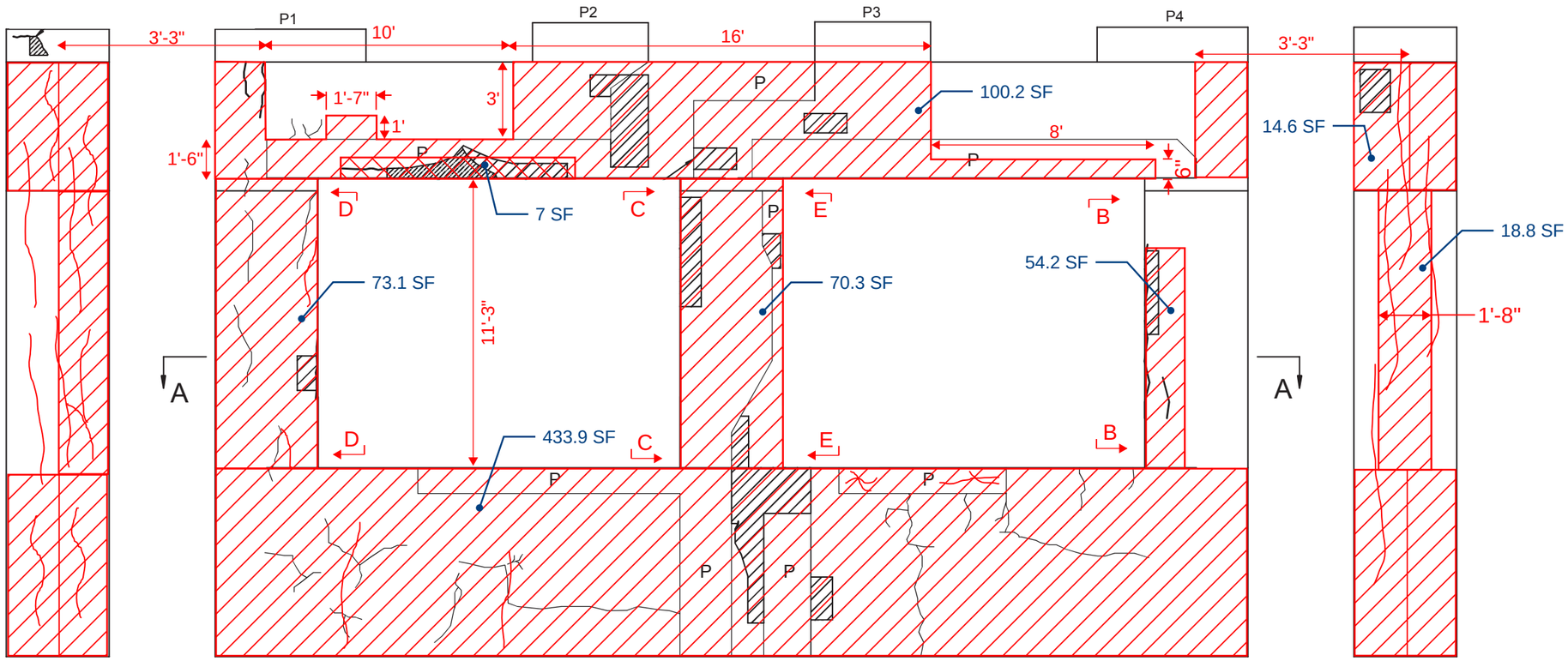
QUANTITIES:
SPALL AREAS: **2 SF**
HOLLOW AREAS: 12 SF + 19 SF + 6 SF + 2 SF + 2.3 SF = **41.3 SF**
MAP CRACKED AREAS: **0**
TOTAL LENGTH OF CRACKS: **15 LF**

LEGEND
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

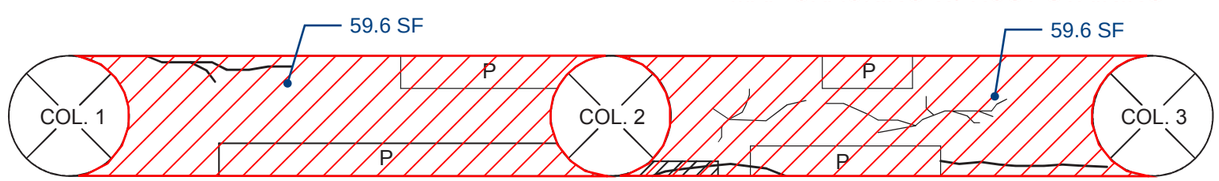
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 2 DETERIORATION SKETCH

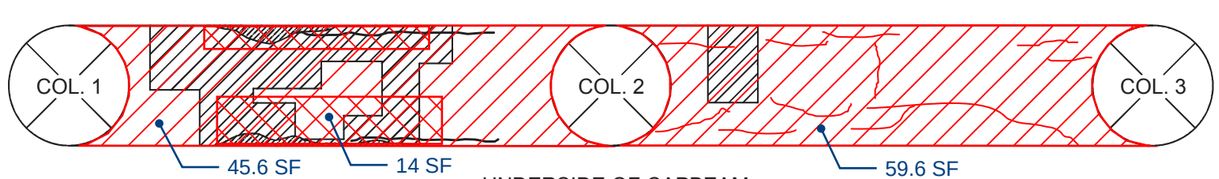
NOT TO SCALE



SEE NEXT PAGE FOR ELEVATIONS B-B, C-C, D-D, AND E-E



TOP OF STEM SOLID PIER SECTION A-A



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)

N

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

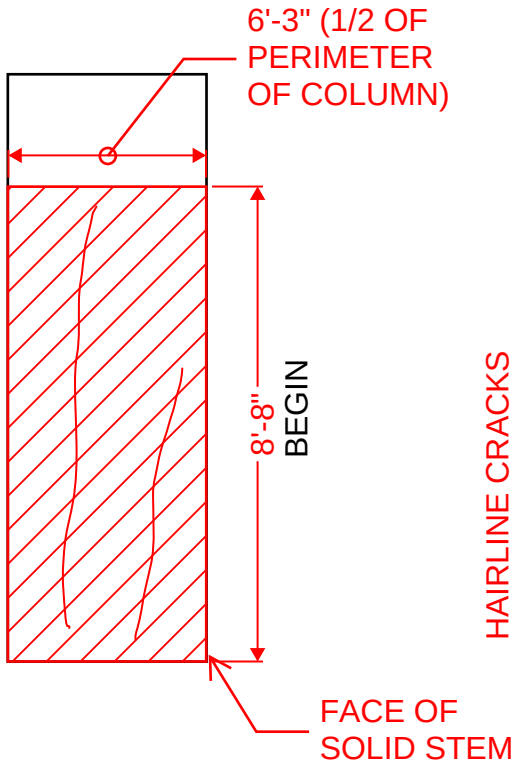
QUANTITIES:

SPALL AREAS: 7 SF + 14 SF + 0.8 SF = **21.8 SF**

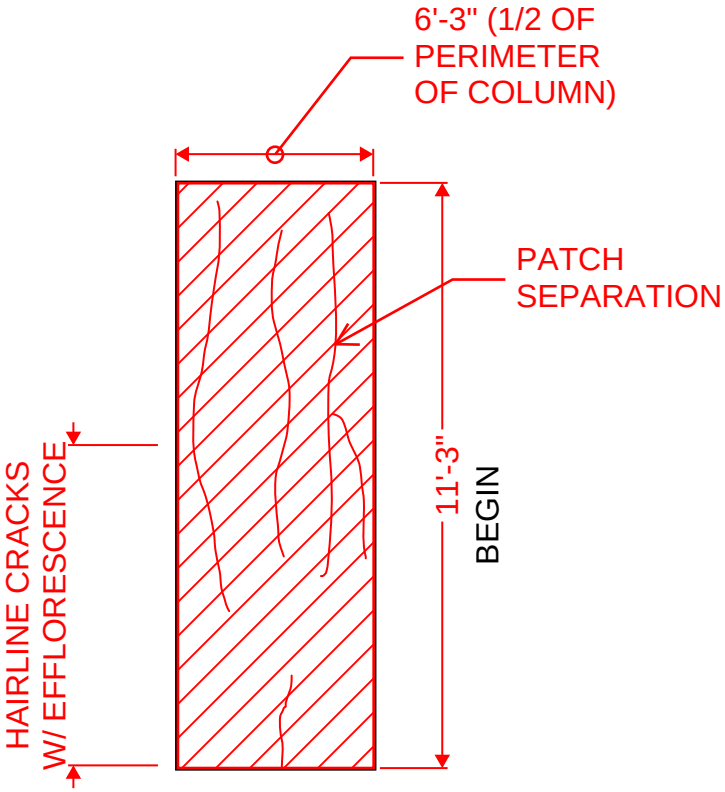
HOLLOW AREAS: 73.1 SF + 70.3 SF + 54.2 SF + 18.8 SF + 100.2 SF + 14.6 SF + 433.9 SF + 59.6 SF + 59.6 SF + 45.6 SF + 59.6 SF = **989.5 SF**

MAP CRACKED AREAS: **0 SF**

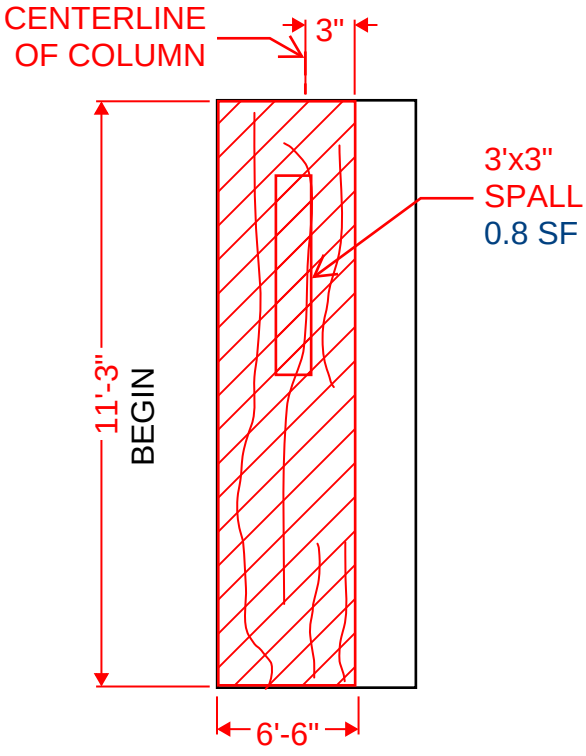
TOTAL LENGTH OF CRACKS: **19 LF**



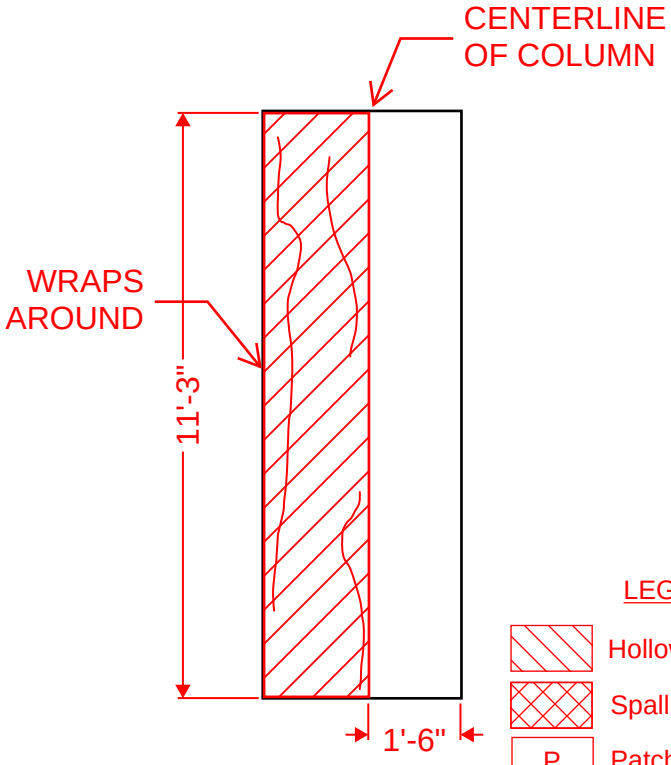
ELEVATION B-B



ELEVATION C-C



ELEVATION D-D



ELEVATION E-E

LEGEND

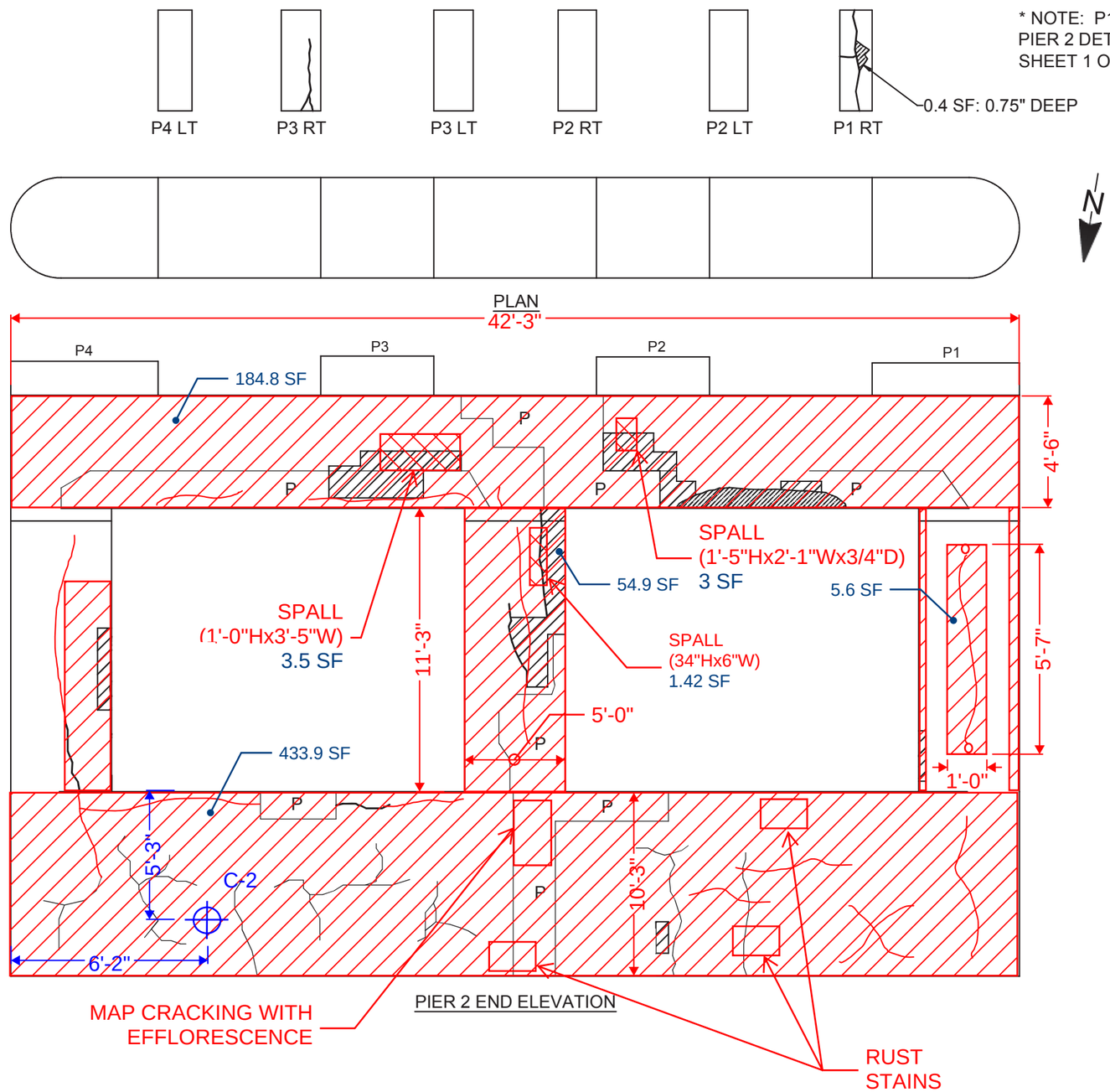
- Hollow Concrete (HC)
- Spall (S)
- P — Patch/Repair
- Crack (C)
- Hairline Crack (HL)

SOUTHBOUND BIN 1093571
PIER 2

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 2 DETERIORATION SKETCH

NOT TO SCALE



* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 2 DETERIORATION SKETCH SHEET 1 OF 2

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

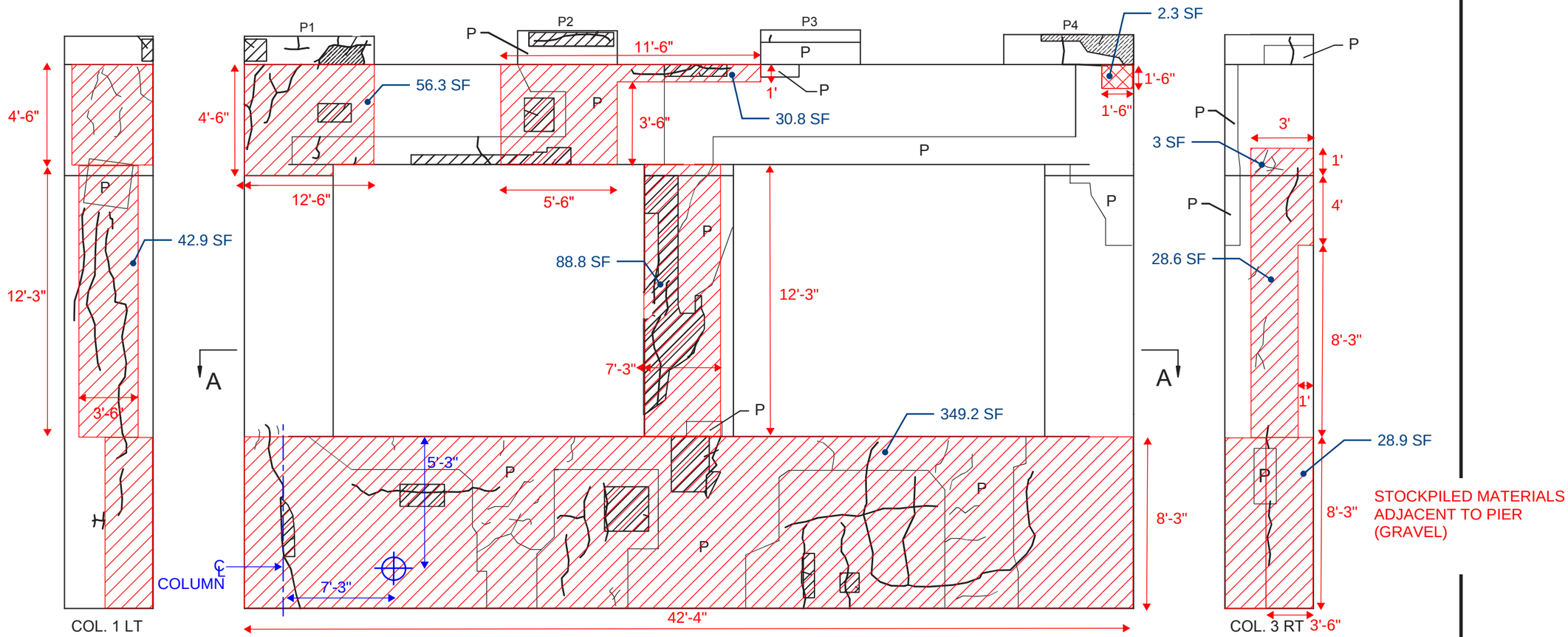
QUANTITIES:

SPALL AREAS: 3.5 SF + 3 SF = **7.5 SF**
HOLLOW AREAS: 184.8 SF + 54.9 SF + 5.6 SF + 433.9 SF = **679.2 SF**
MAP CRACKED AREAS: **0 SF**
TOTAL LENGTH OF CRACKS: **6 LF**

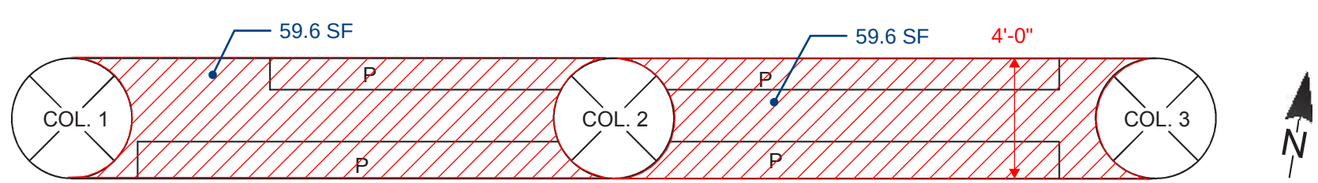
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 3 DETERIORATION SKETCH

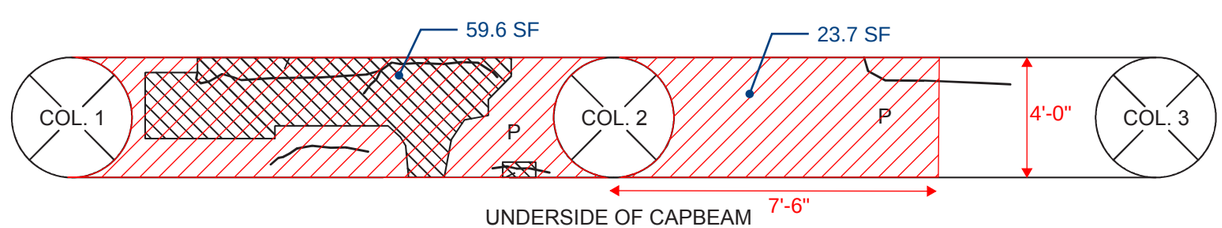
NOT TO SCALE



PIER 3 BEGIN ELEVATION



TOP OF STEM SOLID PIER SECTION A-A



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

QUANTITIES:

SPALL AREAS: **2.3 SF**

HOLLOW AREAS: 42.9 SF + 88.8 SF + 28.6 SF + 56.3 SF + 30.8 SF + 3 SF + 349.2 SF + 28.9 SF + 59.6 SF + 59.6 SF + 59.6 SF + 23.7 SF = **831.0 SF**

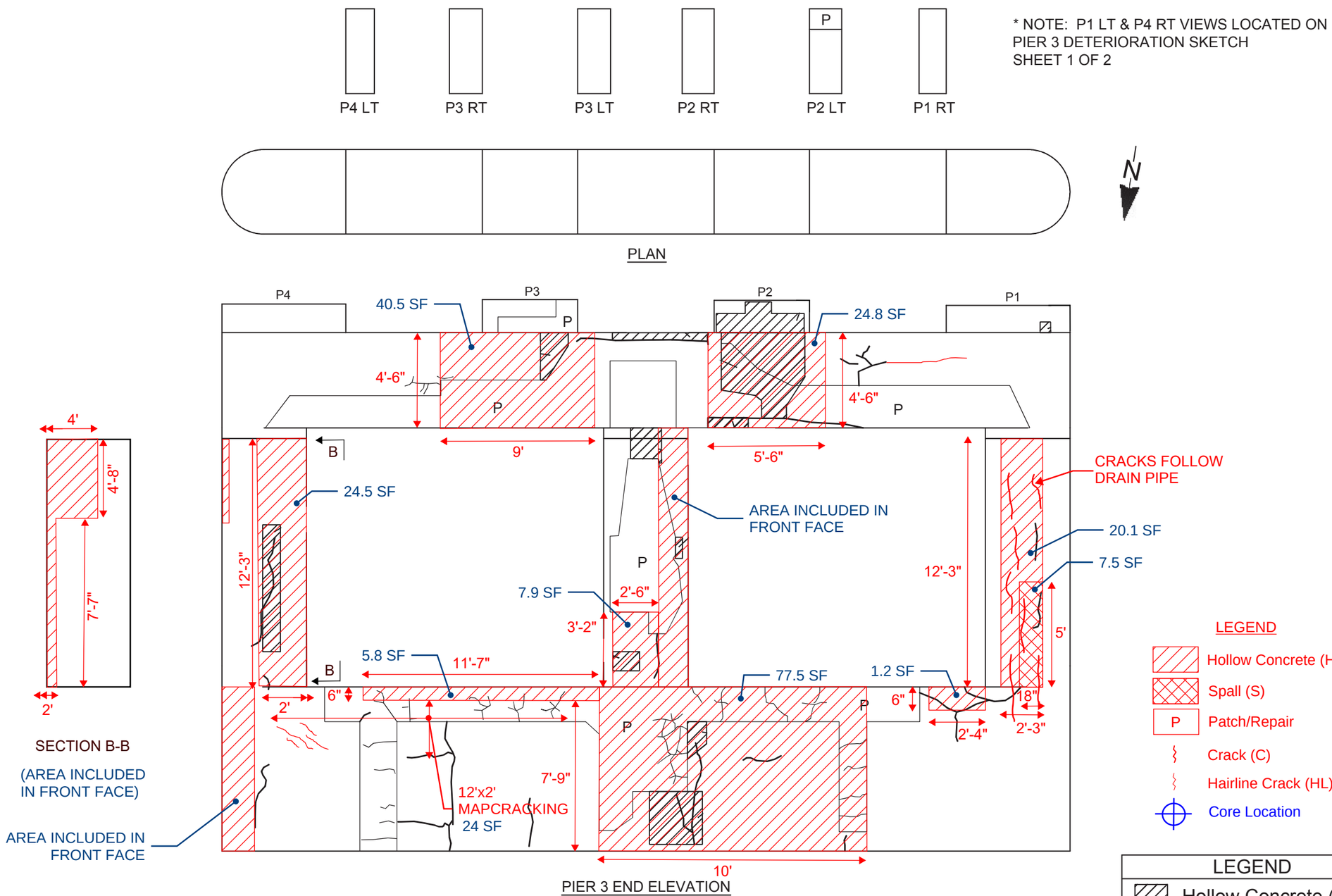
MAP CRACKED AREAS: **0 SF**

TOTAL LENGTH OF CRACKS: **5 LF**

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 3 DETERIORATION SKETCH

NOT TO SCALE



* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 3 DETERIORATION SKETCH SHEET 1 OF 2

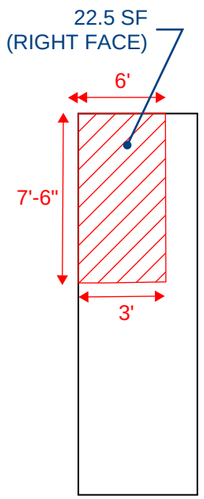
LEGEND	
	Hollow Concrete (HC)
	Spall (S)
P	Patch
	Crack (C)
	Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: **7.5 SF**
HOLLOW AREAS: 40.5 SF + 24.8 SF + 24.51 SF + 5.8 SF + 7.9 SF + 77.5 SF + 1.2 SF + 20.1 SF = **225.7 SF**
MAP CRACKED AREAS: **24 SF**
TOTAL LENGTH OF CRACKS: **38 LF**

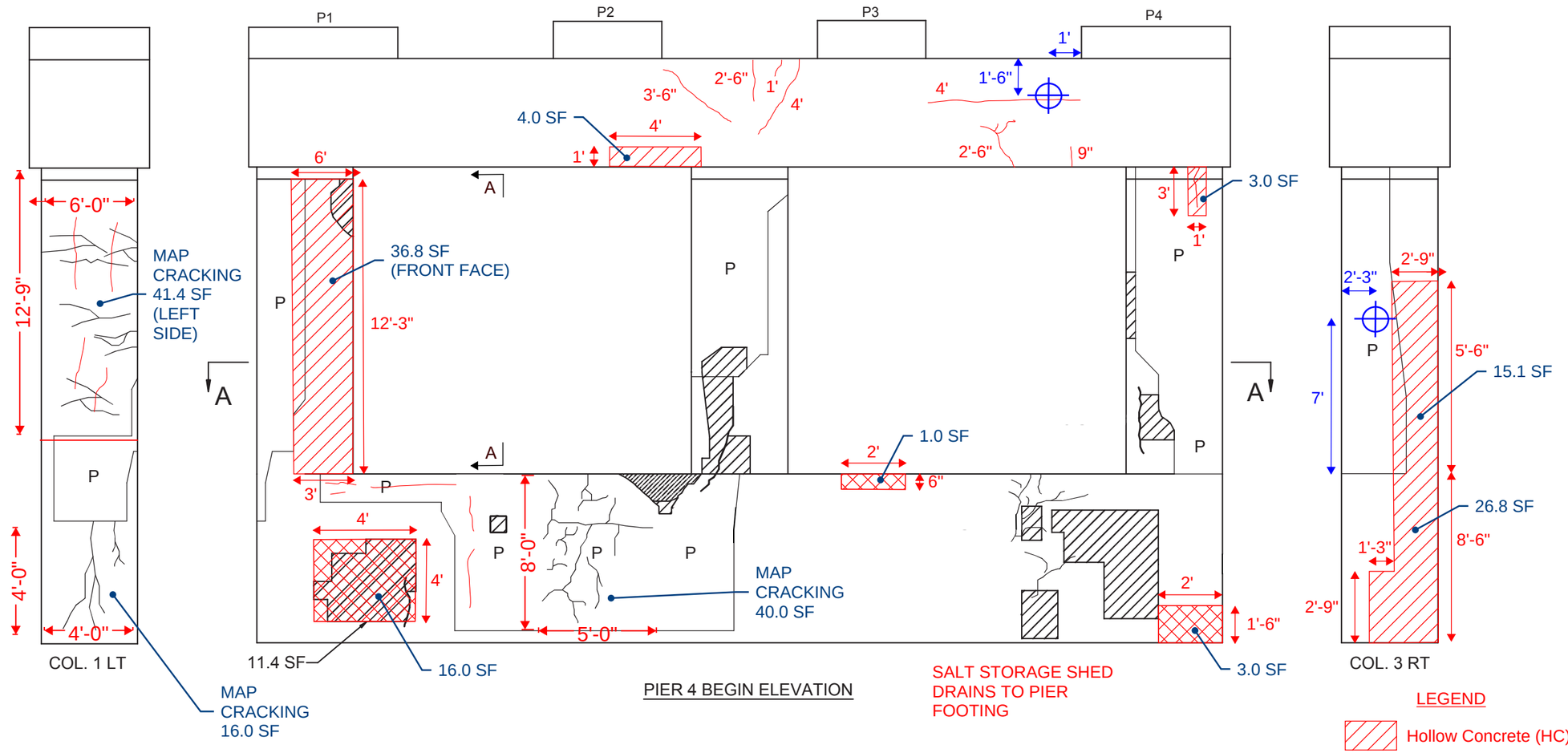
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

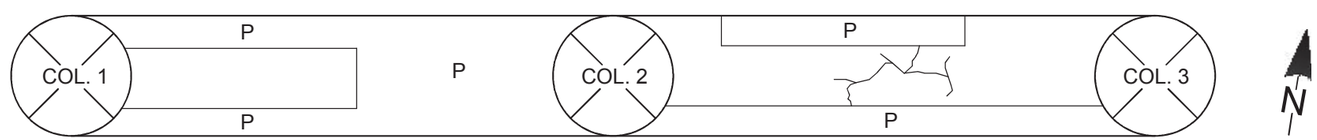
PIER 4 DETERIORATION SKETCH

NOT TO SCALE

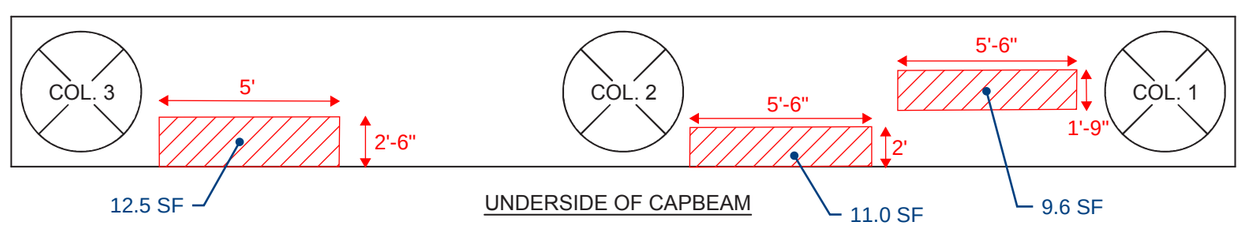


SECTION A-A





TOP OF STEM SOLID PIER SECTION A-A



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 16.0 SF + 3.0 SF + 1.0 SF = 20 SF
HOLLOW AREAS: 22.5 SF + 36.8 SF + 4.0 SF + 3.0 SF + 15.1 SF + 26.8 SF + 12.5 SF + 11.0 SF + 9.6 SF = 141.3 SF
MAP CRACKED AREAS: 41.4 SF + 16.0 SF + 40.0 SF = 97.4 SF
TOTAL LENGTH OF CRACKS: 13.3 LF

LEGEND

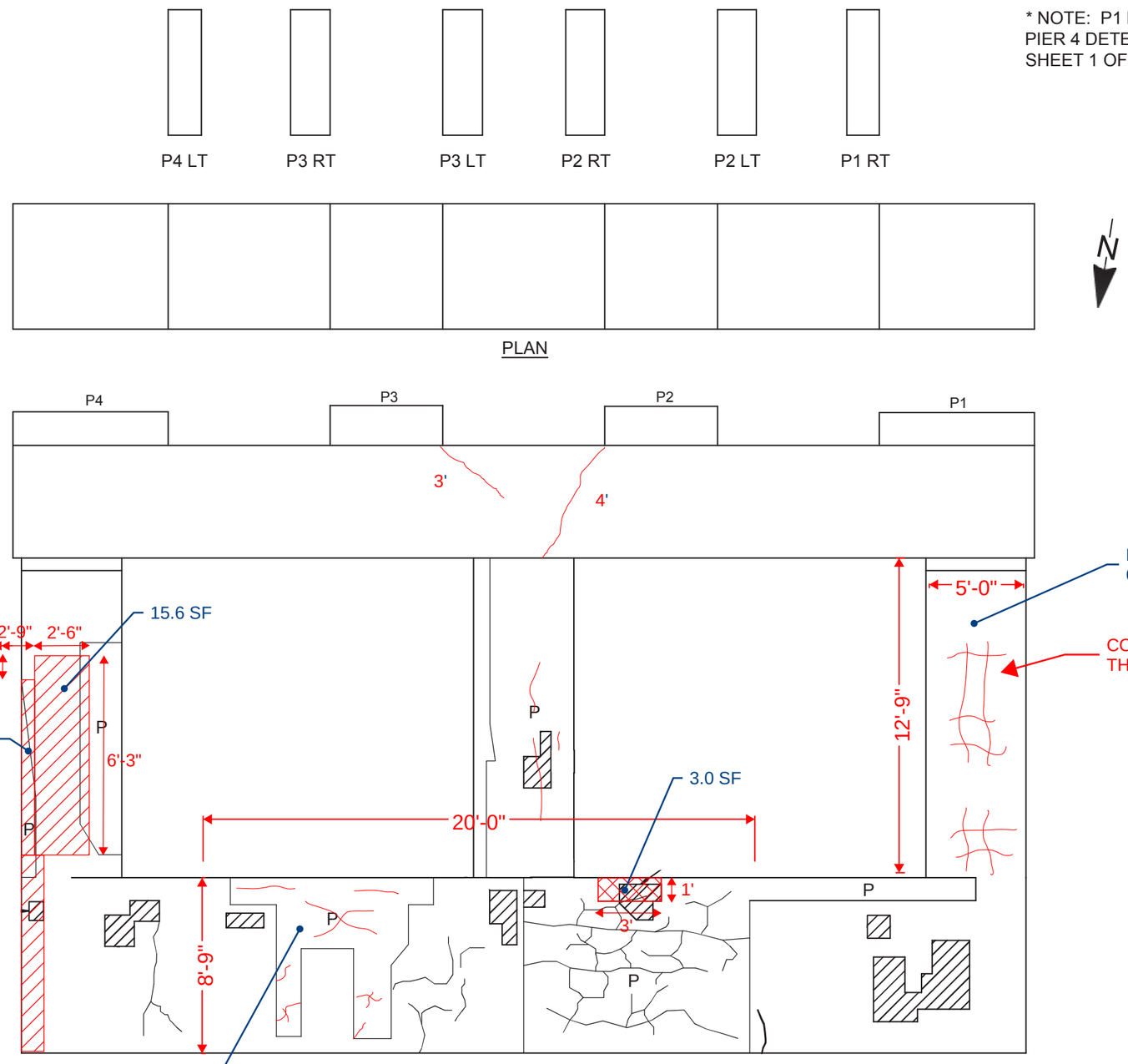
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 4 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 4 DETERIORATION SKETCH SHEET 1 OF 2



PIER 4 END ELEVATION

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

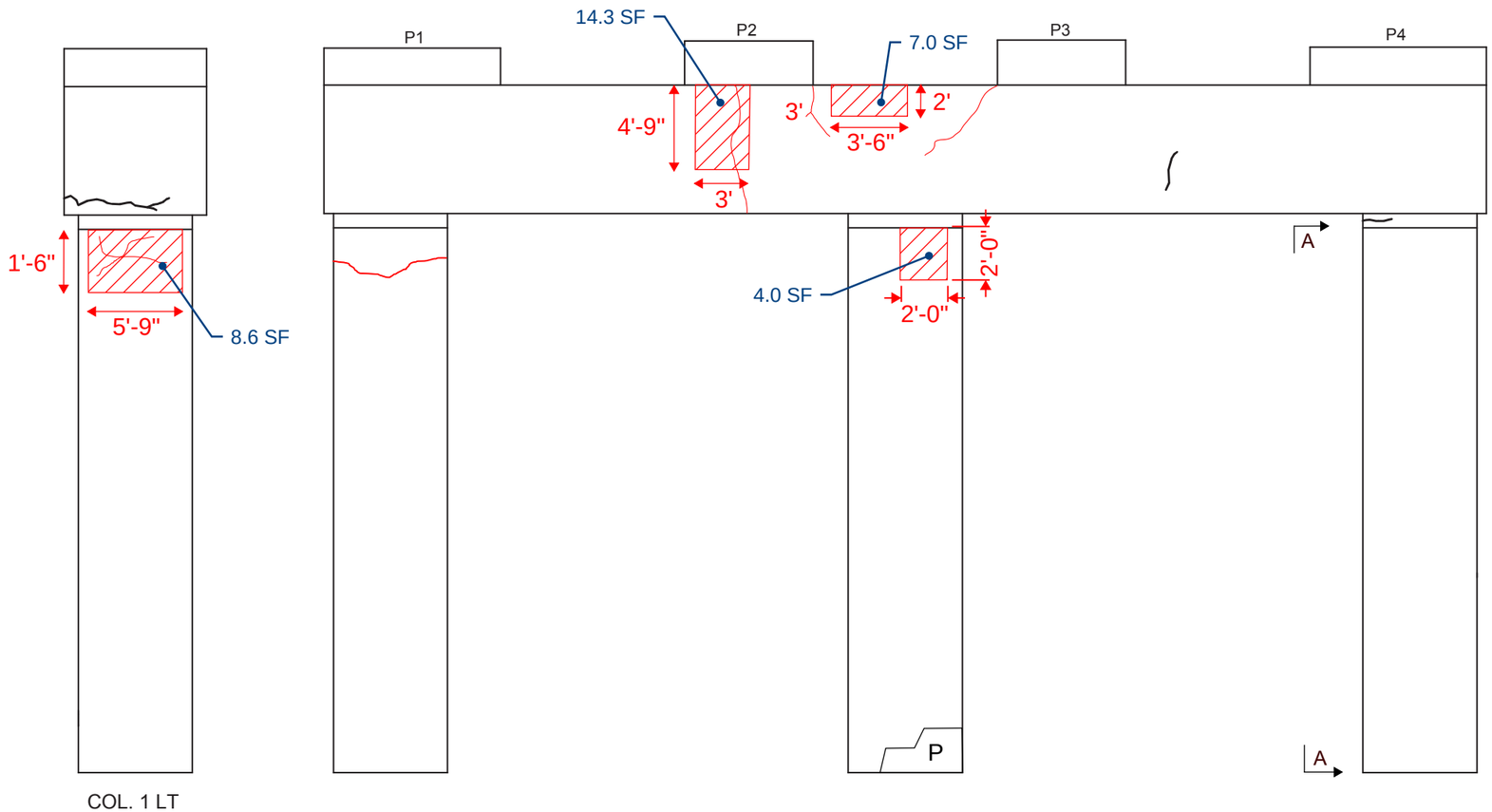
LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

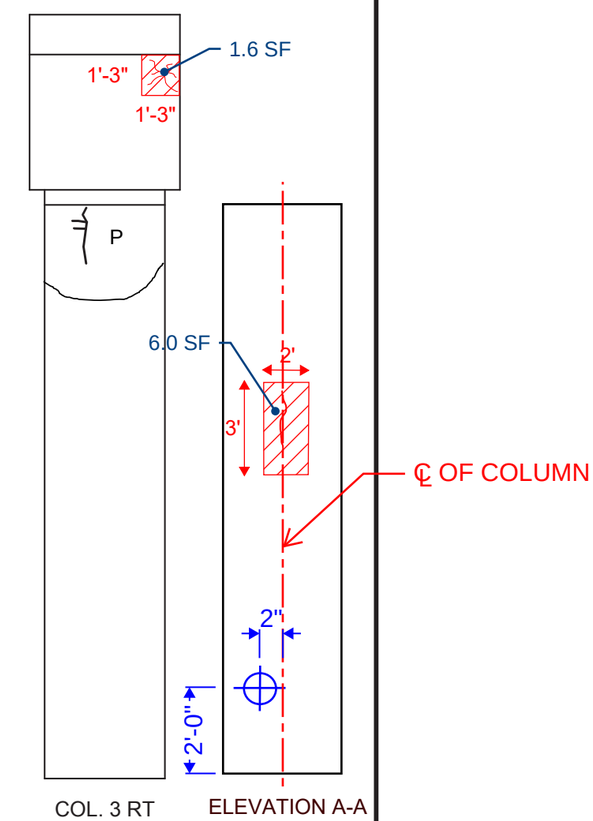
QUANTITIES:
SPALL AREAS: 3.0 SF
HOLLOW AREAS: 15.6 SF
MAP CRACKED AREAS: 175.0 SF + 41.4 SF = 216.4 SF
TOTAL LENGTH OF CRACKS: 18.0 LF

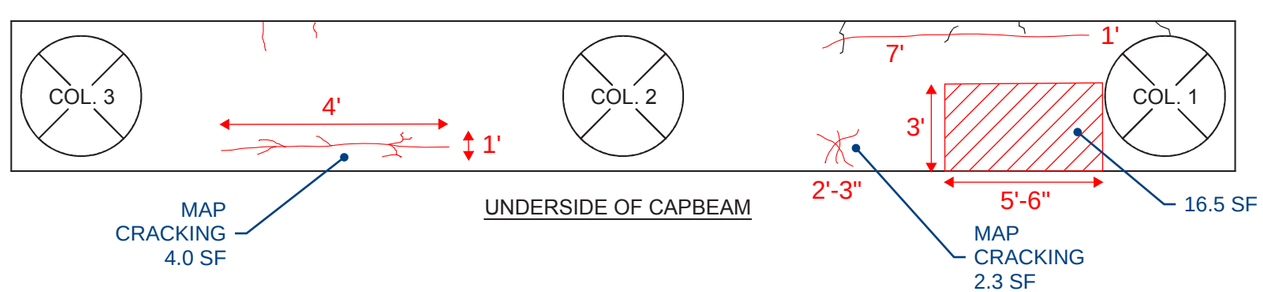
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 5 DETERIORATION SKETCH

NOT TO SCALE







LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 0.0 SF
HOLLOW AREAS: 8.6 SF + 14.3 SF + 7.0 SF + 4.0 SF + 1.6 SF + 6.0 SF + 16.5 SF = 57.9 SF
MAP CRACKED AREAS: 4.0 SF + 2.3 SF = 6.3 SF
TOTAL LENGTH OF CRACKS: 25.0 LF

LEGEND

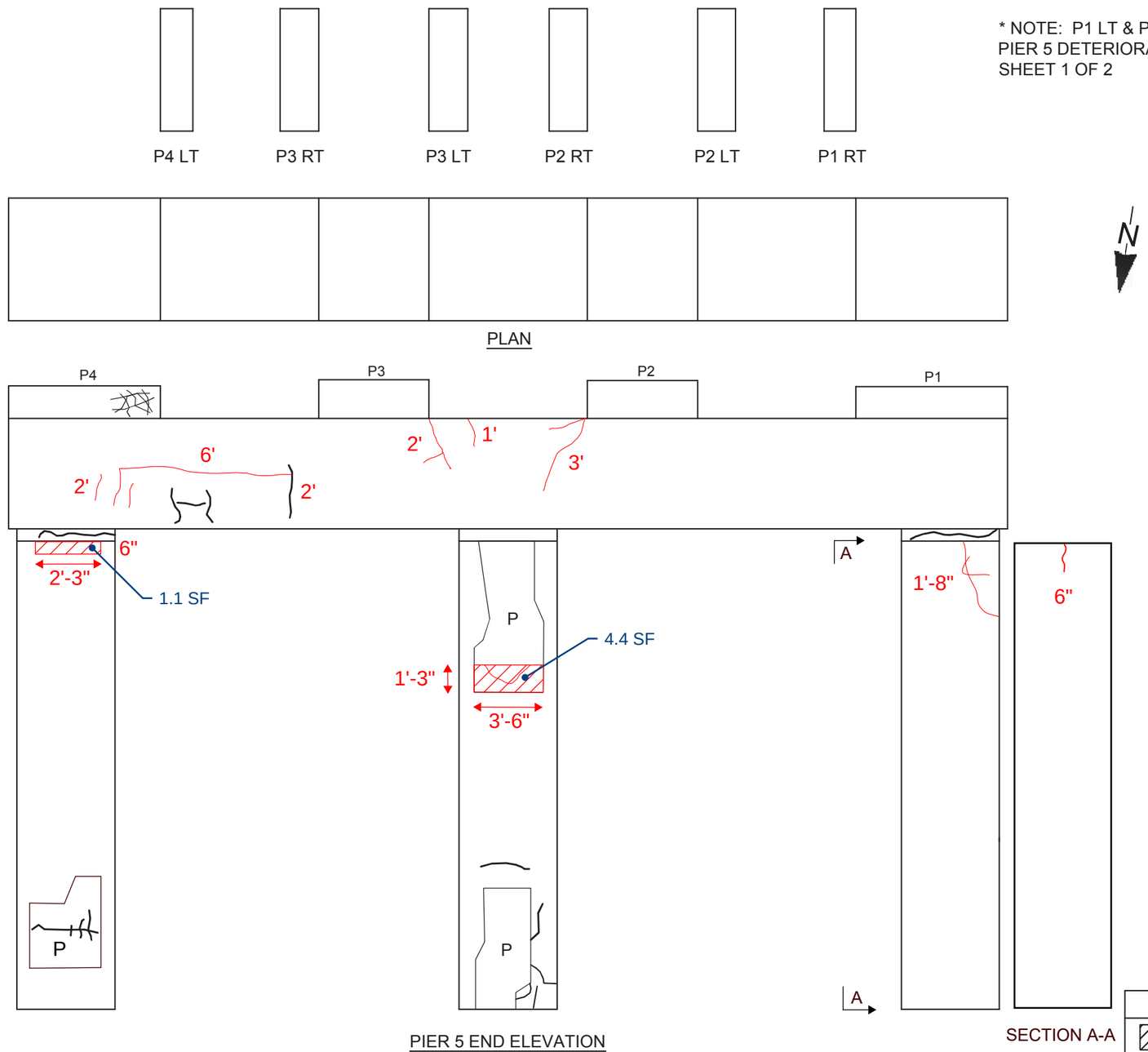
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 5 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 5 DETERIORATION SKETCH SHEET 1 OF 2



LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

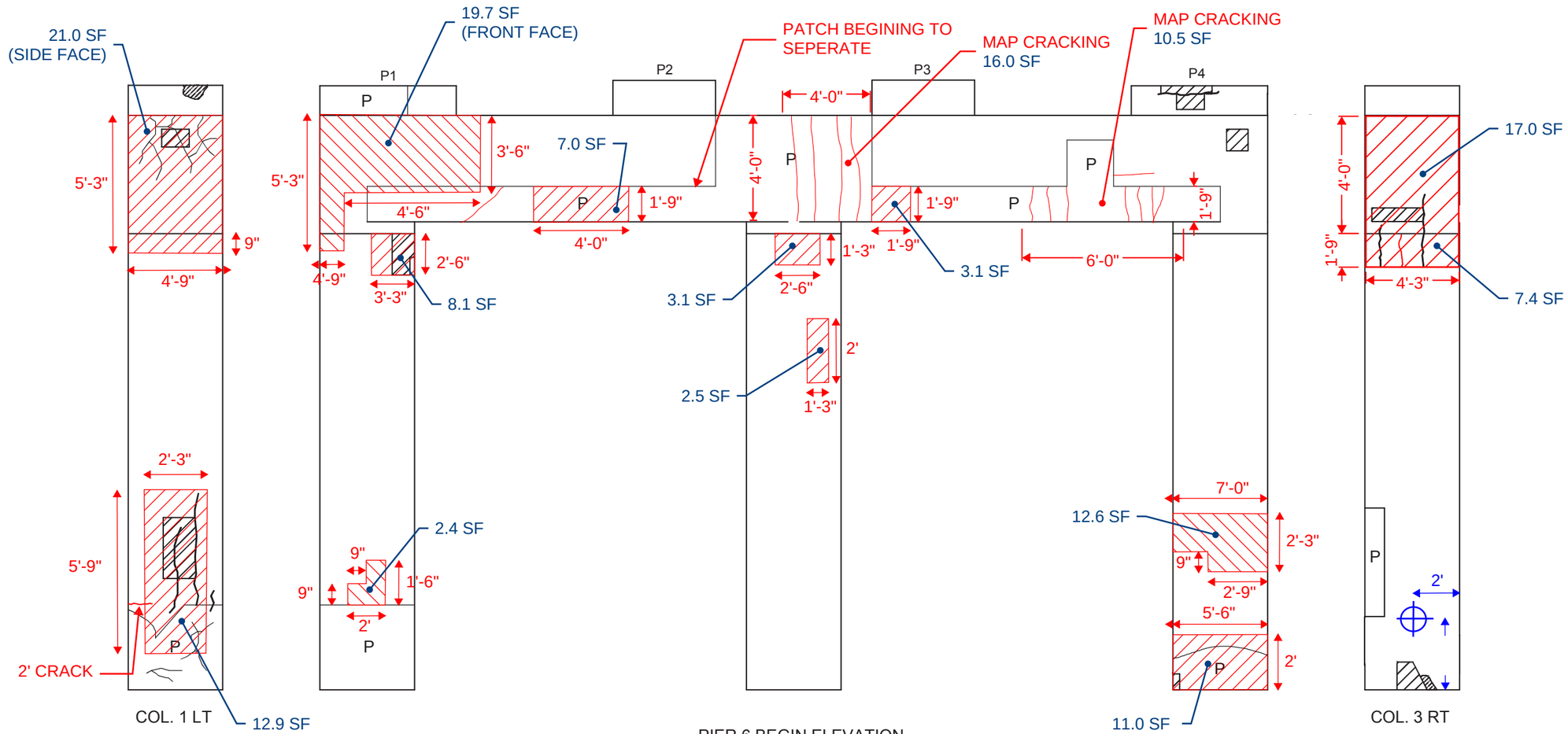
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 0.0 SF
HOLLOW AREAS: 1.1 SF + 4.4 SF = 5.5 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 27.0 LF

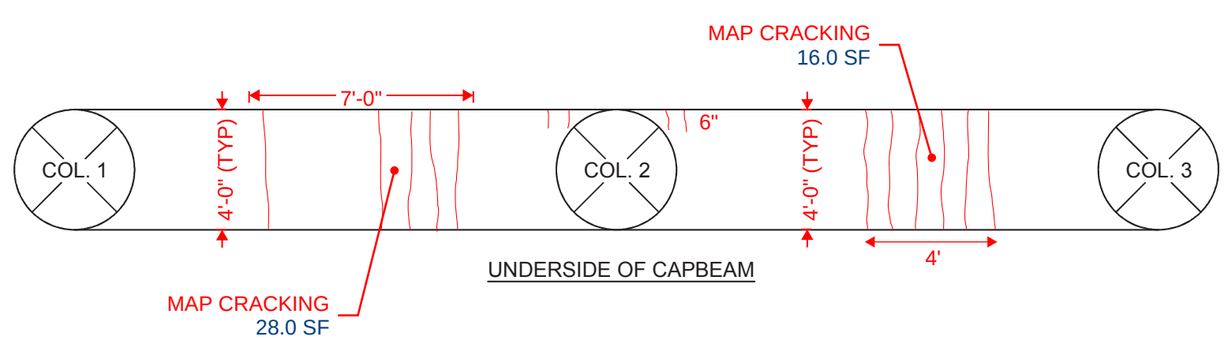
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 6 DETERIORATION SKETCH

NOT TO SCALE



PIER 6 BEGIN ELEVATION



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 0.0 SF
HOLLOW AREAS: 21.0 SF + 19.7 SF + 12.9 SF + 8.1 SF + 2.4 SF + 7.0 SF + 3.1 SF + 2.5 SF + 3.1 SF + 12.6 SF + 11.0 SF + 17.0 SF + 7.4 SF = 127.9 SF
MAP CRACKED AREAS: 16.0 SF + 10.5 SF + 28.0 SF + 16.0 SF = 70.5 SF
TOTAL LENGTH OF CRACKS: 5.0 LF

LEGEND

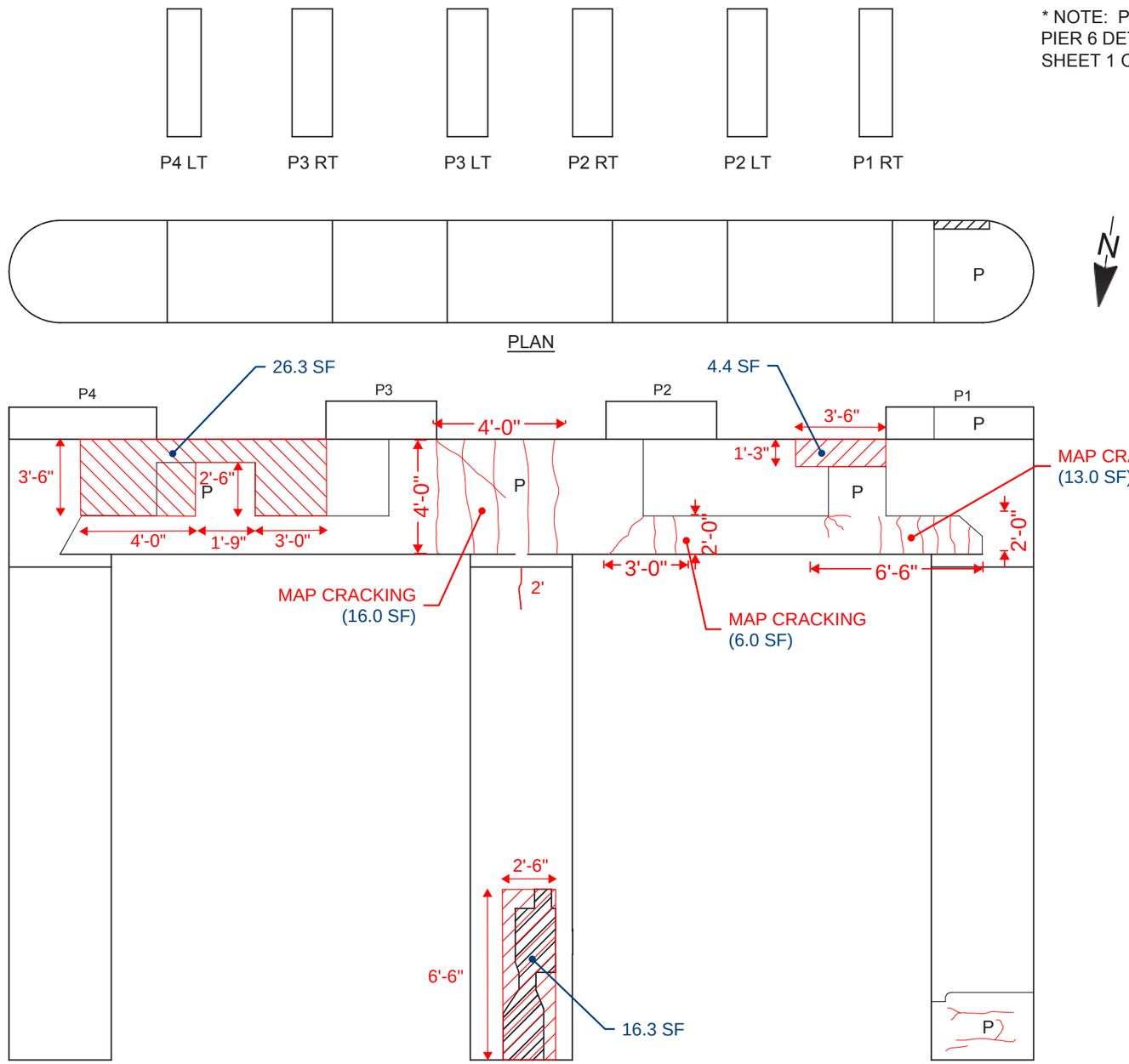
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 6 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 6 DETERIORATION SKETCH SHEET 1 OF 2



LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

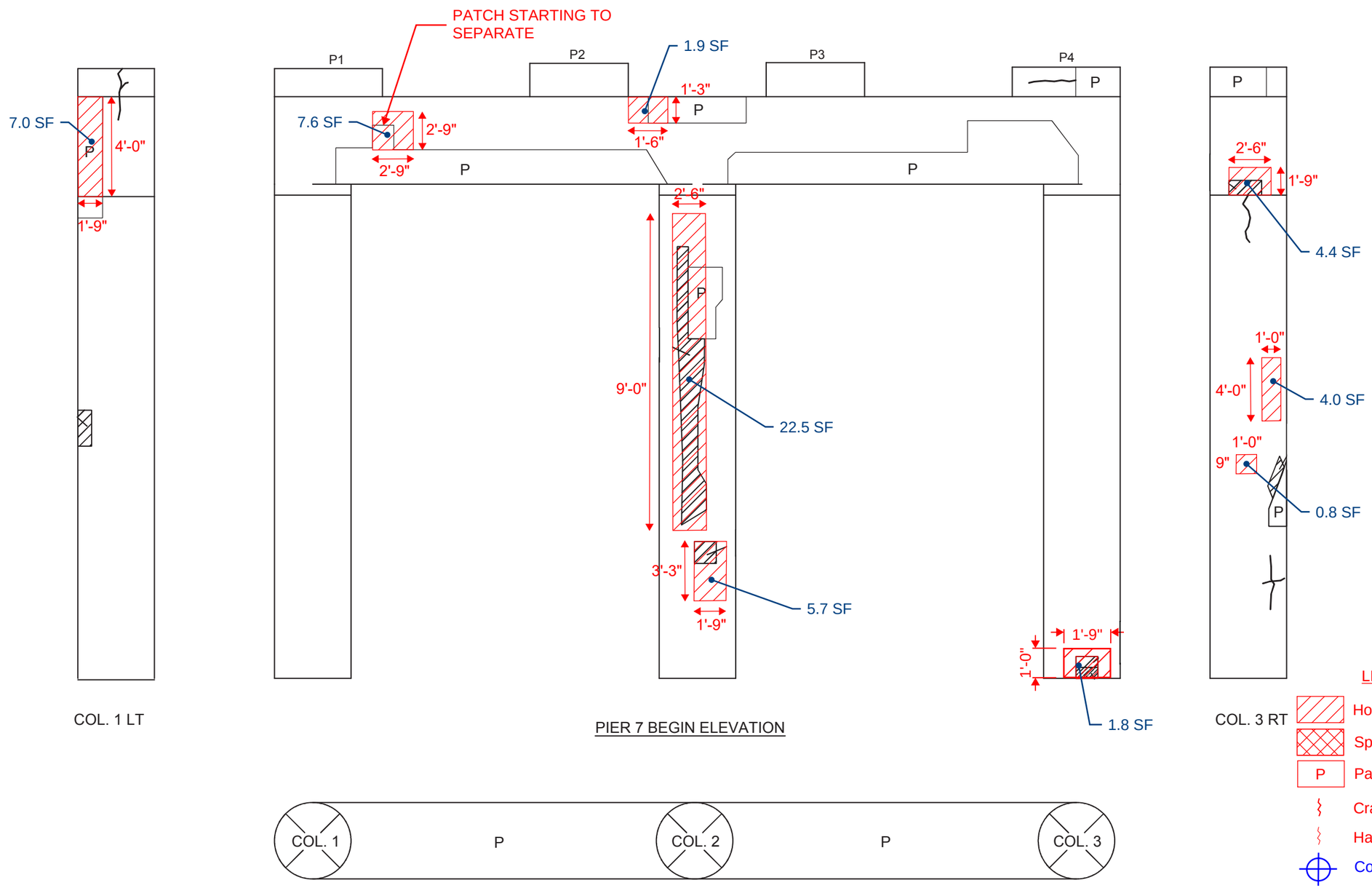
LEGEND	
	Hollow Concrete (HC)
	Spall (S)
P	Patch
	Crack (C)
	Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 0.0 SF
HOLLOW AREAS: 26.3 SF + 4.4 SF + 16.3 SF = 46.9 SF
MAP CRACKED AREAS: 16.0 SF + 6.0 SF + 13.0 SF = 35.0 SF
TOTAL LENGTH OF CRACKS: 9.0 LF

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 7 DETERIORATION SKETCH

NOT TO SCALE



LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

QUANTITIES:

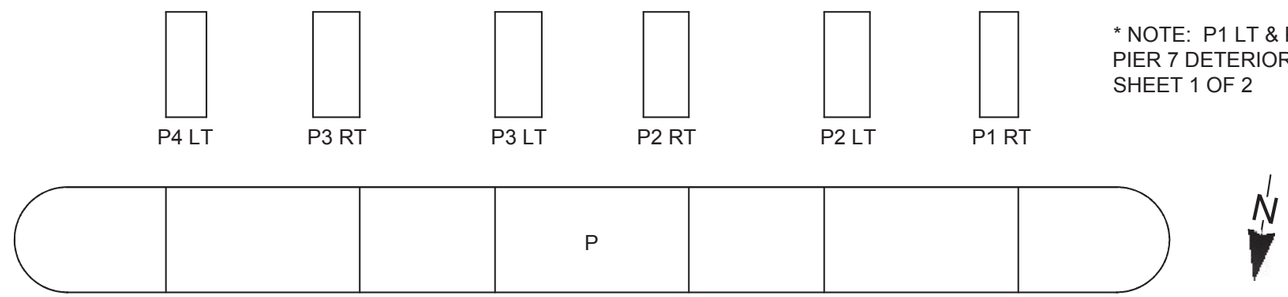
SPALL AREAS: 0.0 SF
HOLLOW AREAS: 7.0 SF + 7.6 SF + 5.7 SF + 22.5 SF + 1.9 SF + 1.8 SF + 0.8 SF + 4.0 SF + 4.4 SF = 55.5 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 6.0 LF

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

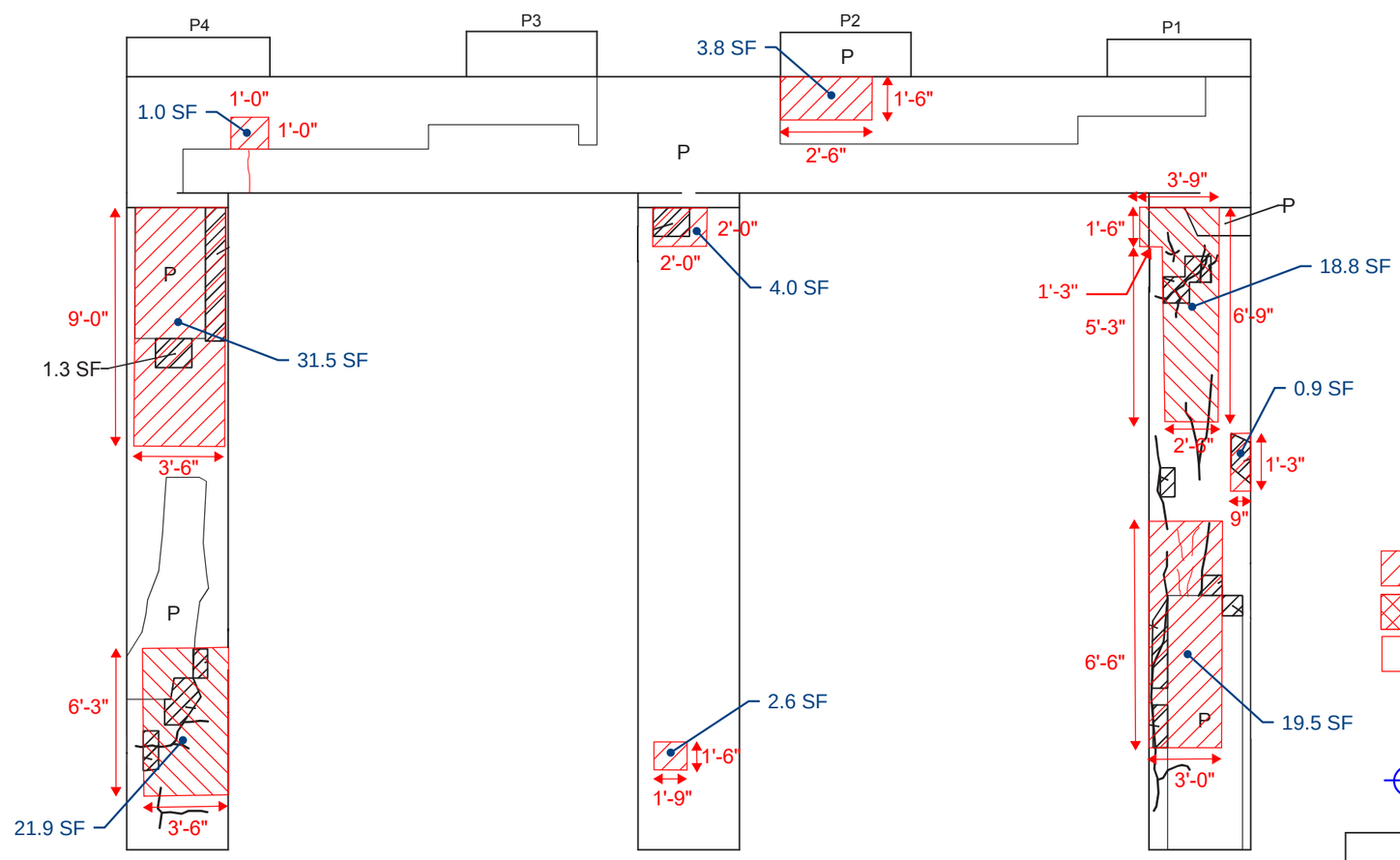
PIER 7 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 7 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 7 END ELEVATION

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

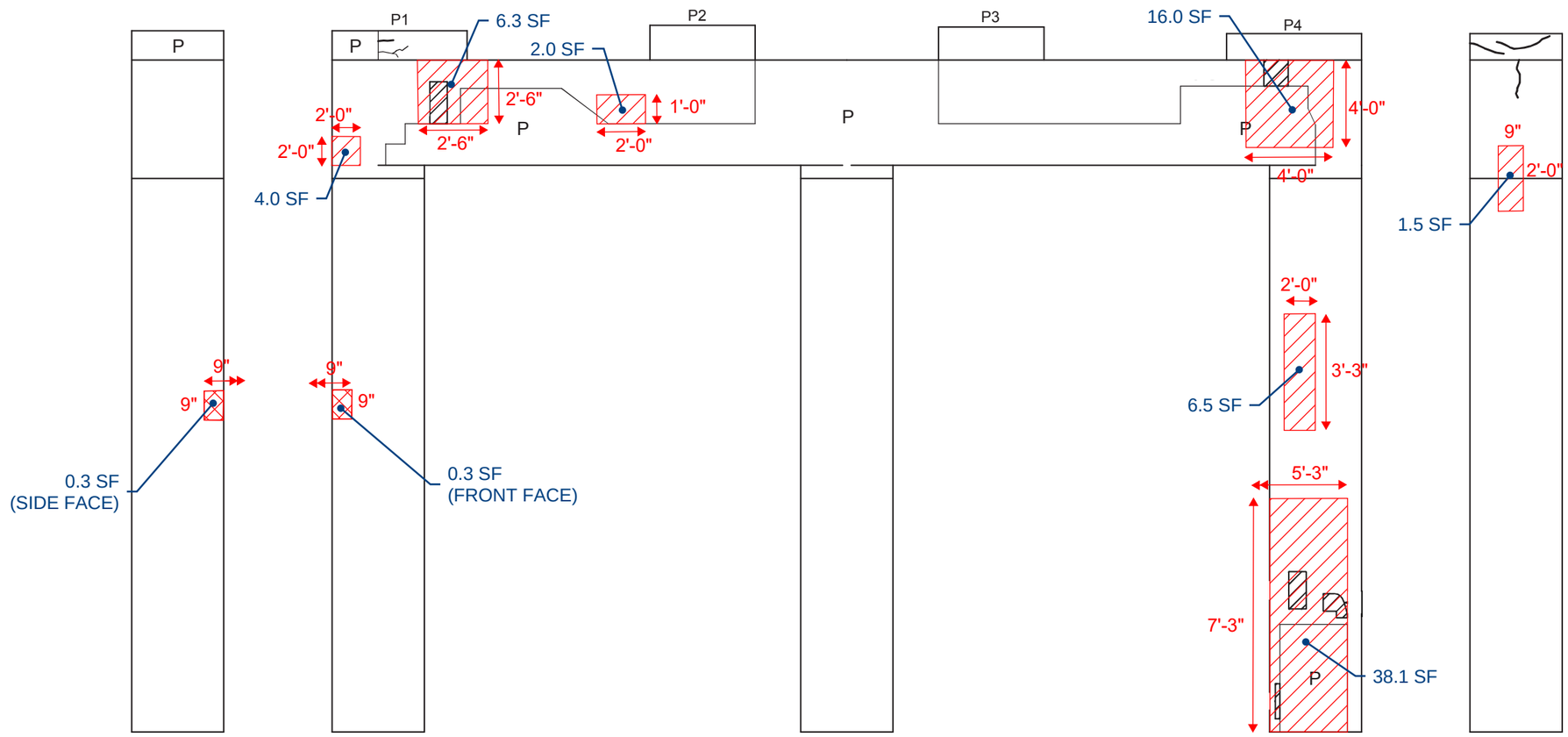
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 0.0 SF
HOLLOW AREAS: 21.9 SF + 31.5 SF + 1.0 SF + 2.6 SF + 4.0 SF + 3.8 SF + 19.5 SF + 0.9 SF + 18.8 SF = 103.9 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 15.0 LF

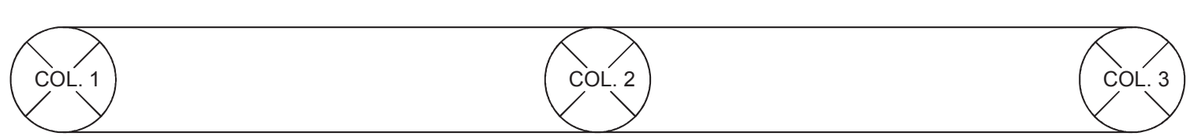
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 8 DETERIORATION SKETCH

NOT TO SCALE



PIER 8 BEGIN ELEVATION



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 0.3 SF + 0.3 SF = 0.6 SF
HOLLOW AREAS: 4.0 SF + 6.3 SF + 2.0 SF + 38.1 SF + 6.5 SF + 16.0 SF + 1.5 SF = 74.3 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 2.0 LF

LEGEND

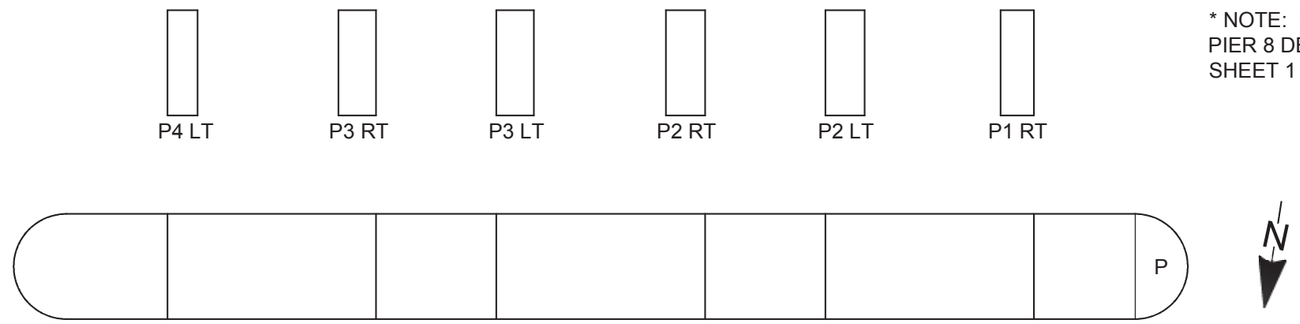
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

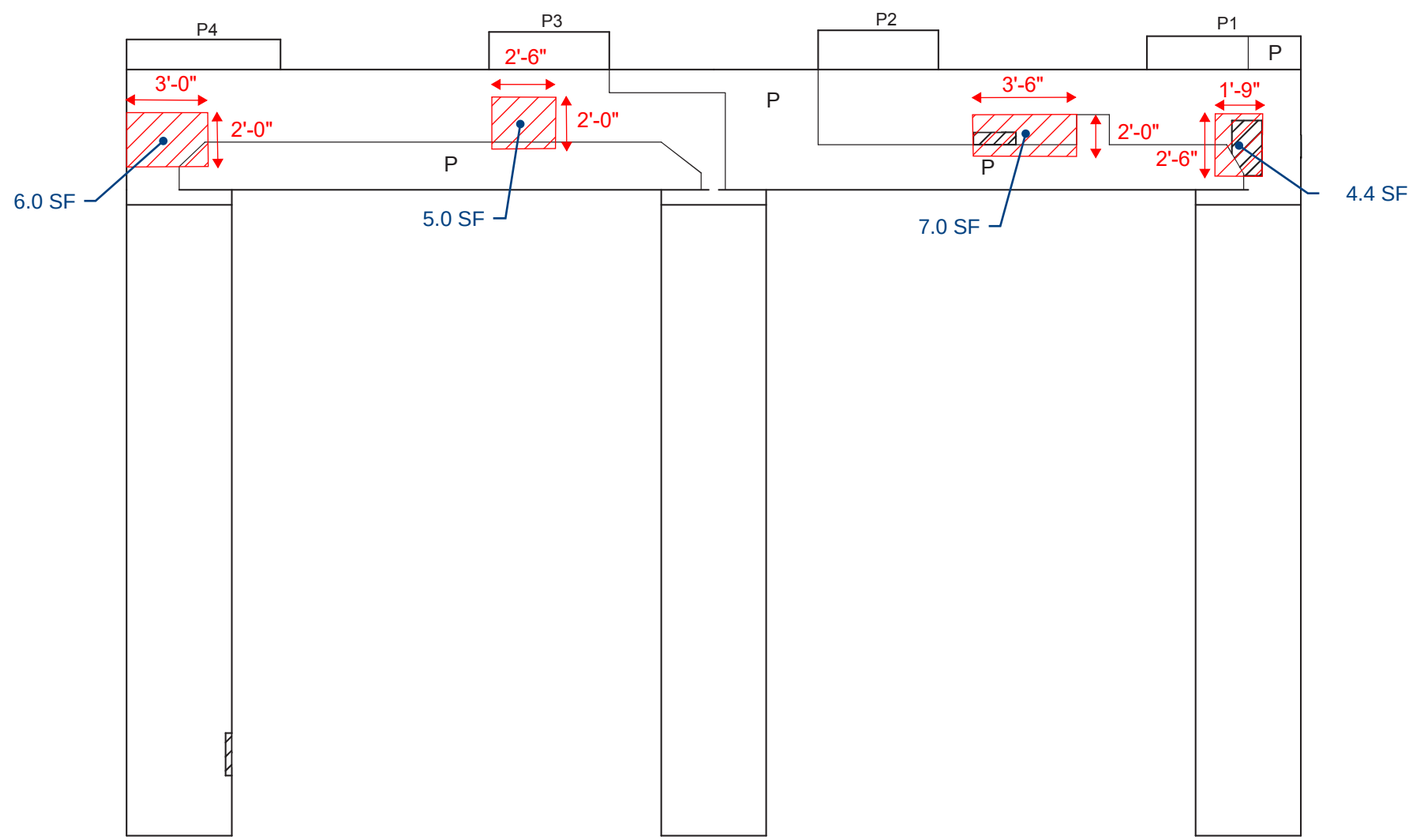
PIER 8 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 8 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 8 END ELEVATION

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

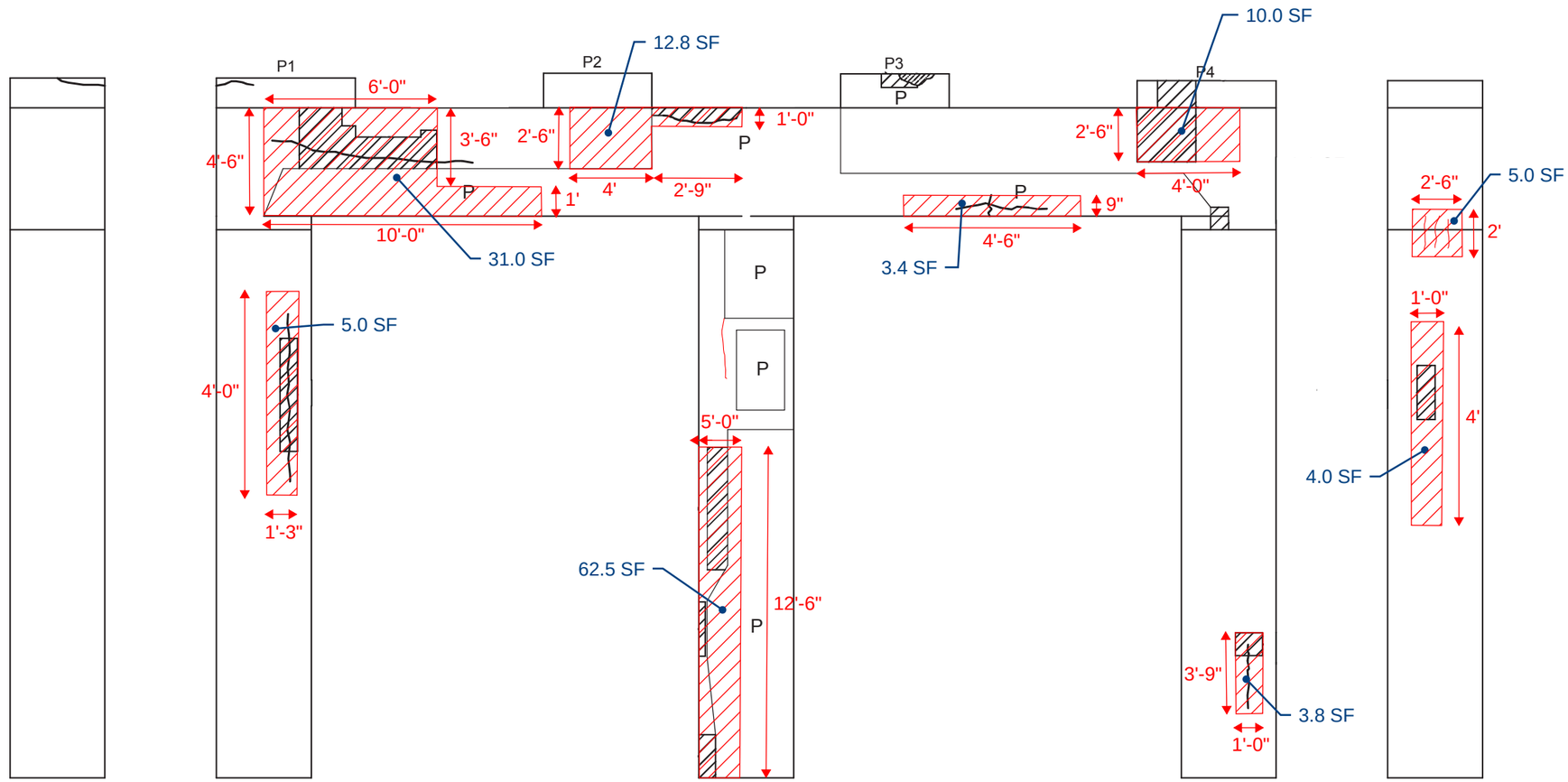
LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 0.0 SF
HOLLOW AREAS: 6.0 SF + 5.0 SF + 7.0 SF + 4.4 SF = 22.4 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 0.0 LF

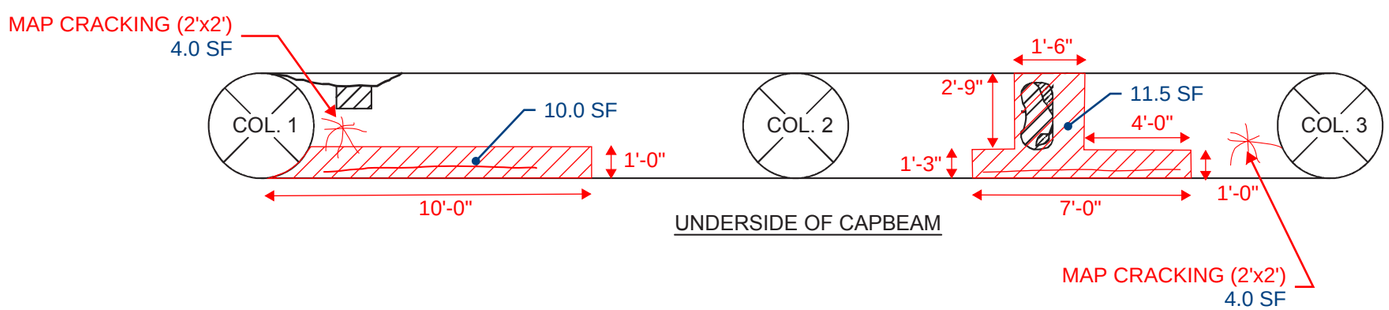
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 9 DETERIORATION SKETCH

NOT TO SCALE



PIER 9 BEGIN ELEVATION



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 0.0 SF
HOLLOW AREAS: 5.0 SF + 31.0 SF + 12.8 SF + 62.5 SF + 3.4 SF + 10.0 SF + 3.8 SF + 4.0 SF + 5.0 SF + 10.0 SF + 11.5 SF = 158.9 SF
MAP CRACKED AREAS: 4.0 SF + 4.0 SF = 8.0 SF
TOTAL LENGTH OF CRACKS: 6.0 LF

LEGEND

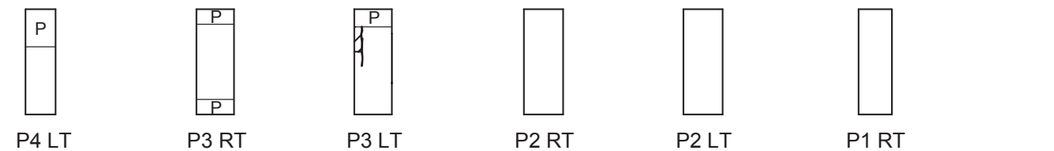
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

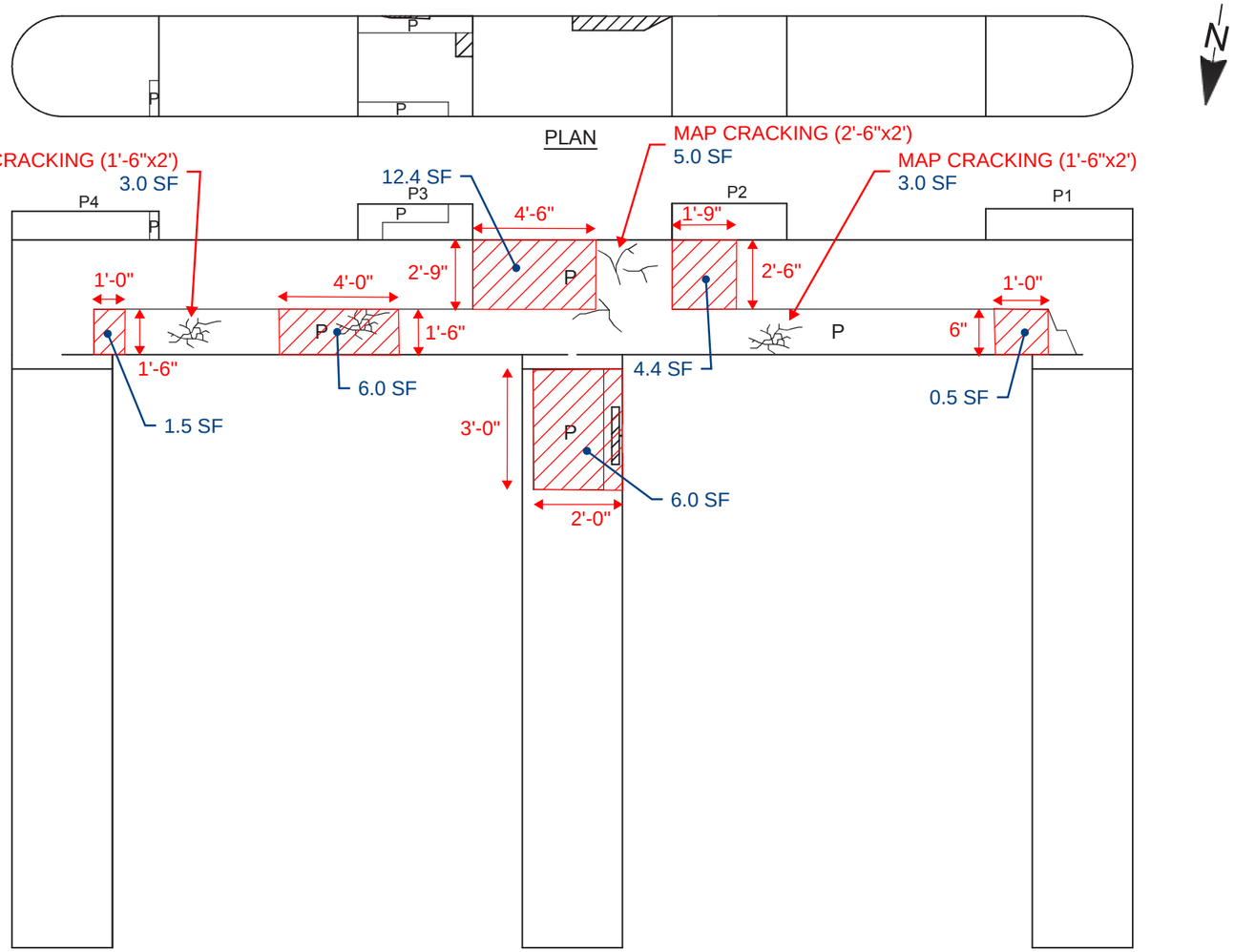
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 9 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 9 DETERIORATION SKETCH SHEET 1 OF 2





PIER 9 END ELEVATION

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

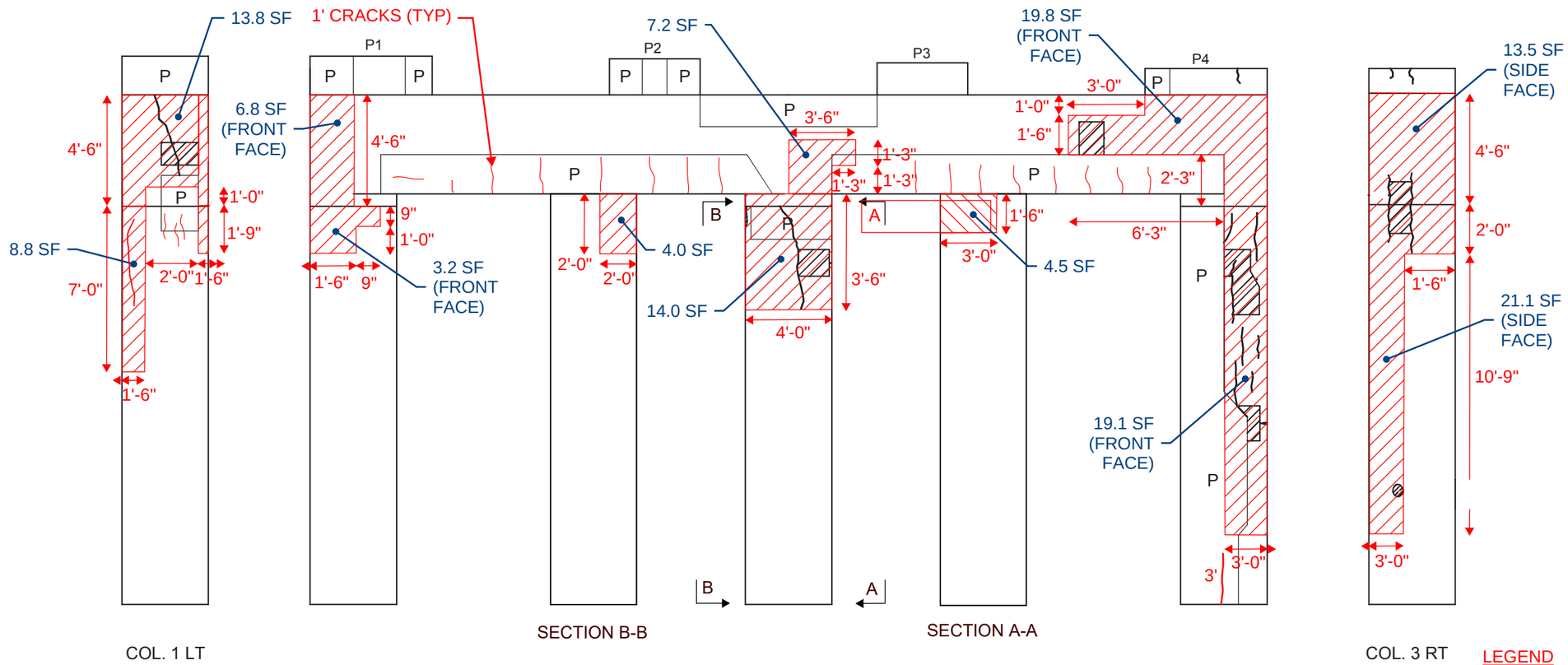
QUANTITIES:

SPALL AREAS: 0.0 SF
HOLLOW AREAS: 1.5 SF + 6.0 SF + 12.4 SF + 6.0 SF + 4.4 SF + 0.5 SF = 30.8 SF
MAP CRACKED AREAS: 3.0 SF + 3.0 SF + 5.0 SF = 11.0 SF
TOTAL LENGTH OF CRACKS: 0.0 LF

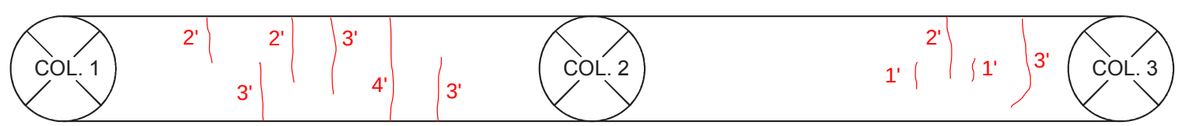
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 10 DETERIORATION SKETCH

NOT TO SCALE



PIER 10 BEGIN ELEVATION



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

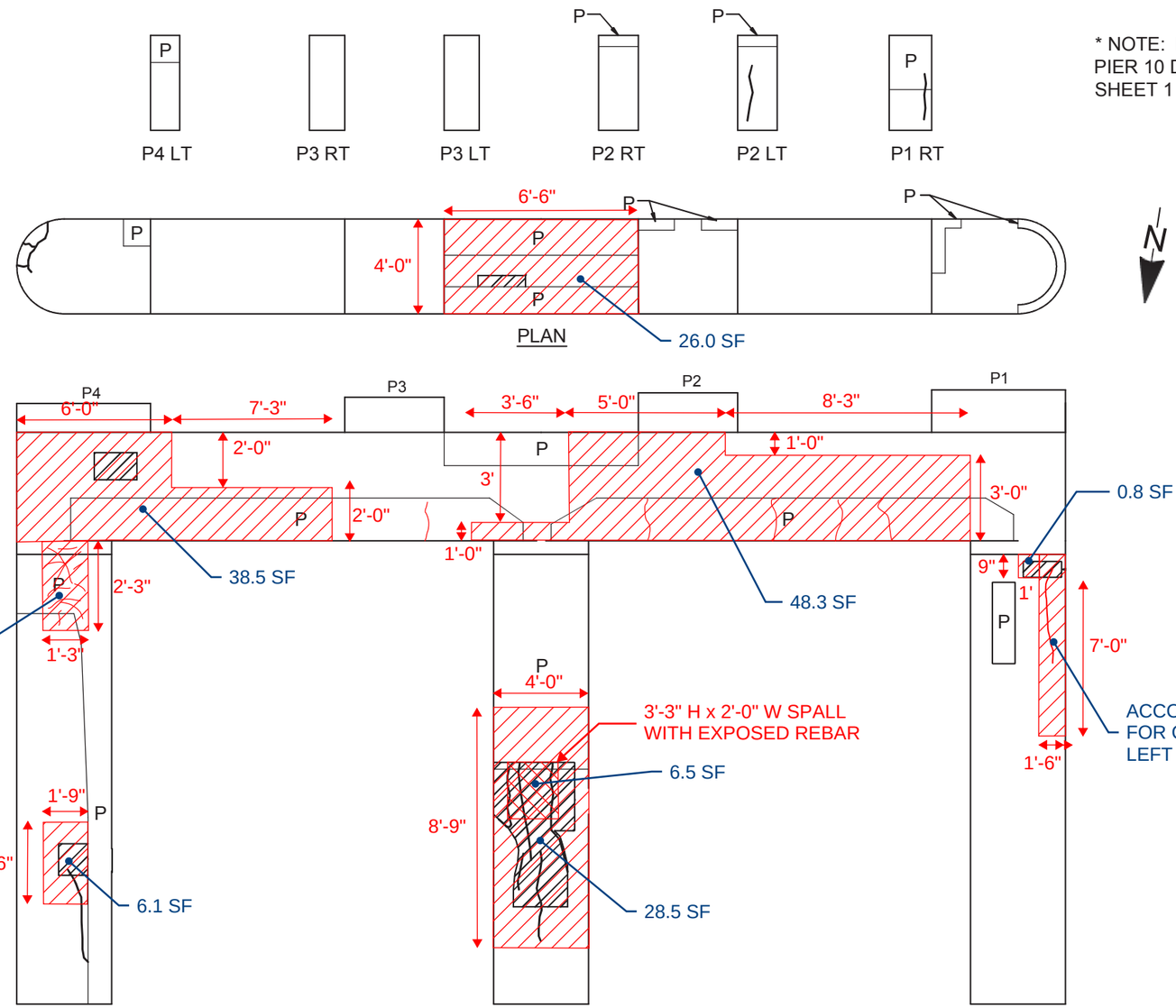
QUANTITIES:

SPALL AREAS: 0.0 SF
HOLLOW AREAS: = 8.8 SF + 13.8 SF + 3.2 SF + 6.8 SF + 4.0 SF + 14.0 SF + 7.2 SF + 4.5 SF + 19.1 SF + 19.8 SF + 21.1 SF + 13.5 SF = 135.8 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 45.0 LF

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 10 DETERIORATION SKETCH

NOT TO SCALE



PIER 10 END ELEVATION

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 10 DETERIORATION SKETCH SHEET 1 OF 2

LEGEND	
	Hollow Concrete (HC)
	Spall (S)
P	Patch
	Crack (C)
	Hairline Crack (HL)

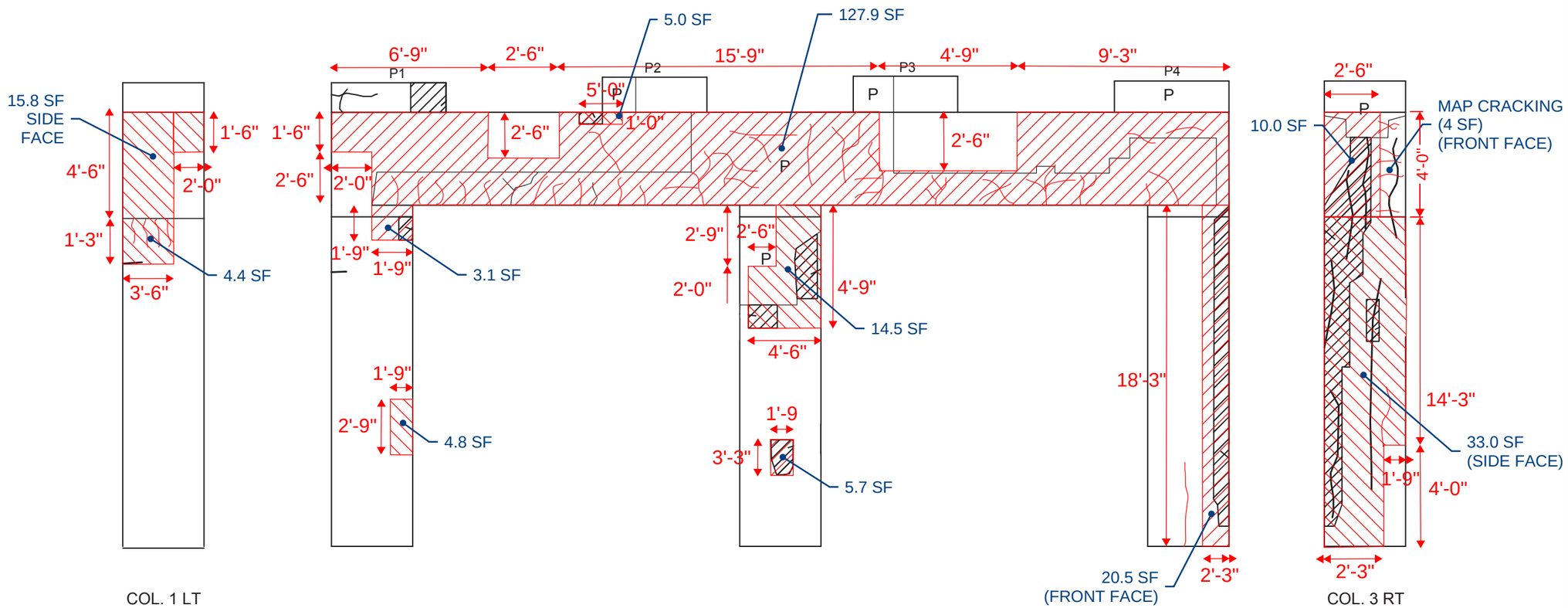
QUANTITIES:

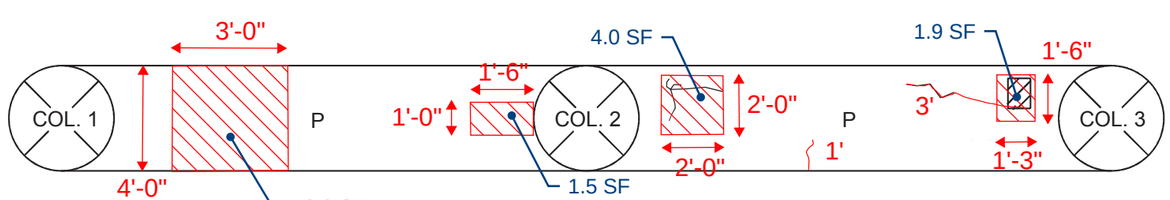
SPALL AREAS: 6.5 SF
HOLLOW AREAS: 6.1 SF + 2.8 SF + 38.5 SF + 28.5 SF + 48.3 SF + 0.8 SF + 26.0 = 151.0 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 5.0 LF

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 11 DETERIORATION SKETCH

NOT TO SCALE





LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: 5.0 SF
HOLLOW AREAS: 4.4 SF + 15.8 SF + 4.8 SF + 3.1 SF + 5.7 SF + 14.5 SF + 20.5 SF + 33.0 SF + 127.9 SF + 10.0 SF + 12.0 SF + 1.5 SF + 4.0 SF + 1.9 SF = 259.1 SF
MAP CRACKED AREAS: 4.0 SF
TOTAL LENGTH OF CRACKS: 5.0 LF

LEGEND

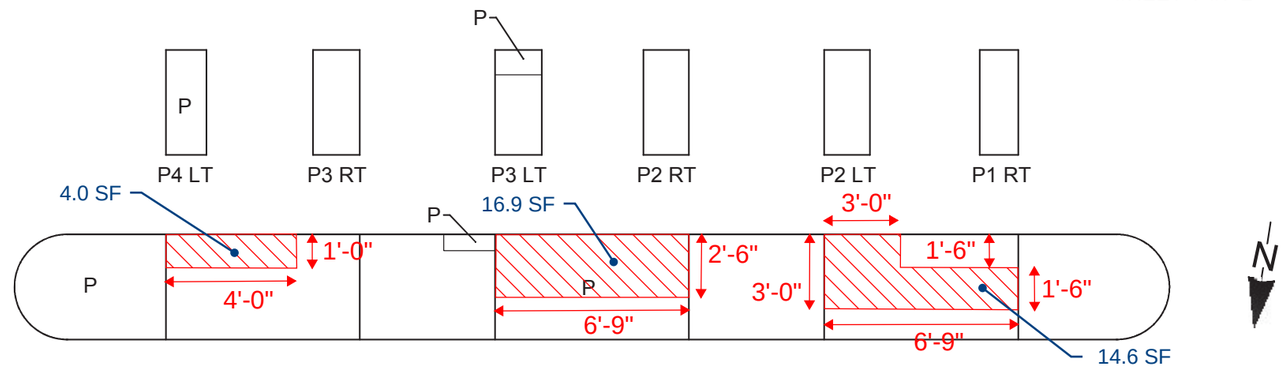
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

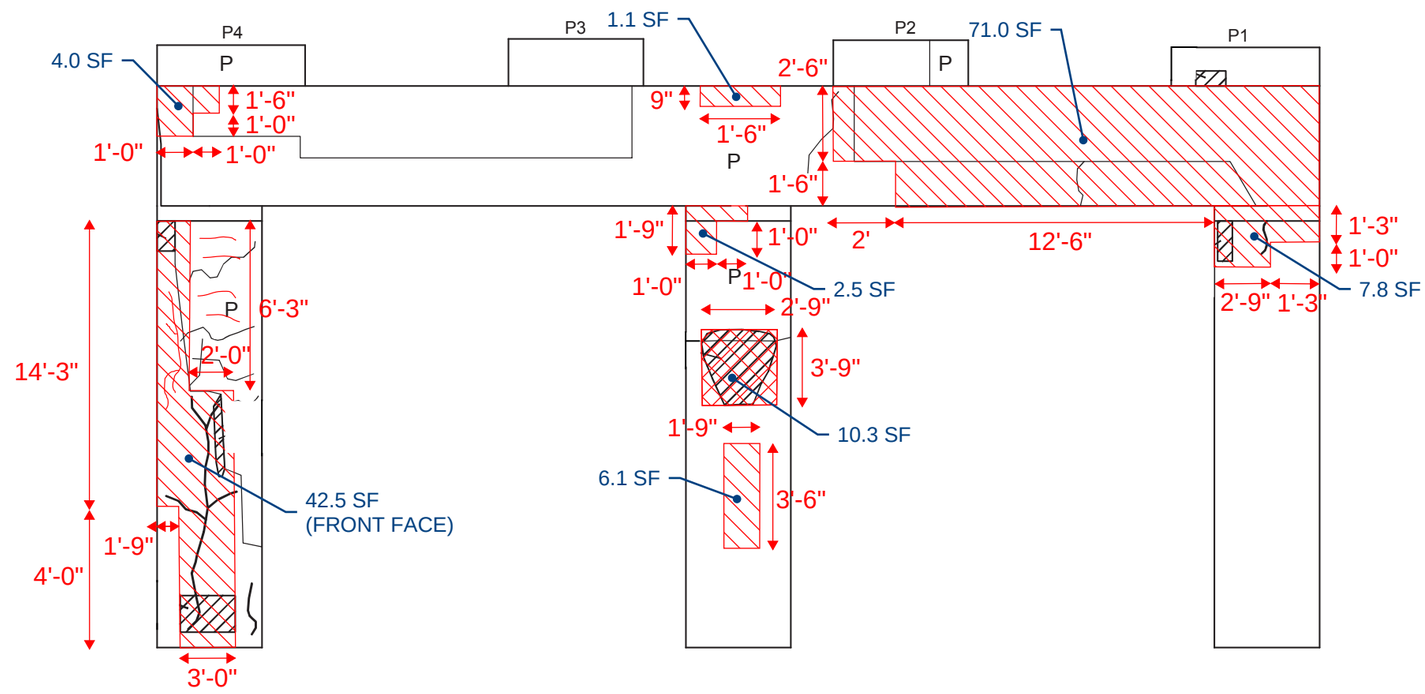
PIER 11 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 11 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 11 END ELEVATION

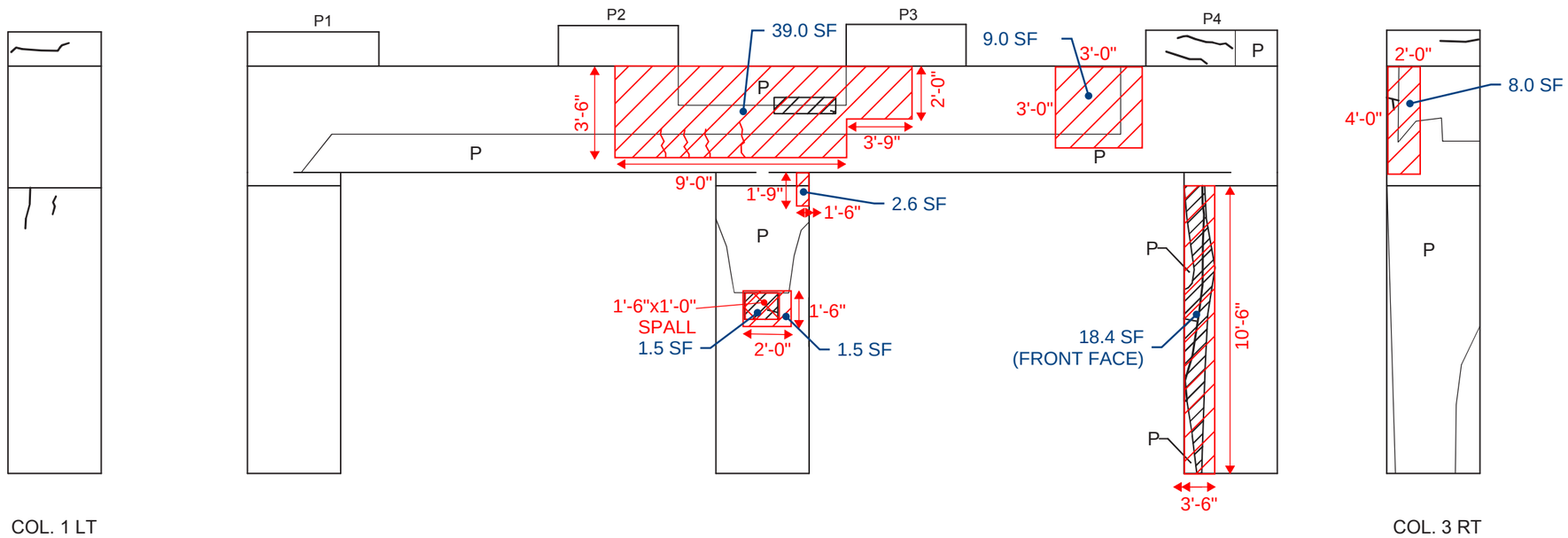
LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 10.3 SF
HOLLOW AREAS: 42.5 SF + 4.0 SF + 6.1 SF + 2.5 SF + 7.8 SF + 1.1 SF + 71.0 SF + 4.0 SF + 16.9 SF + 14.6 SF = 170.5 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 18.0 LF

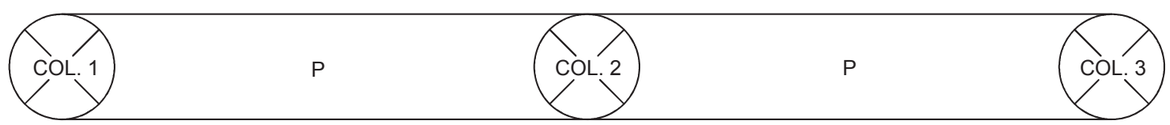
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 12 DETERIORATION SKETCH

NOT TO SCALE



PIER 12 BEGIN ELEVATION



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

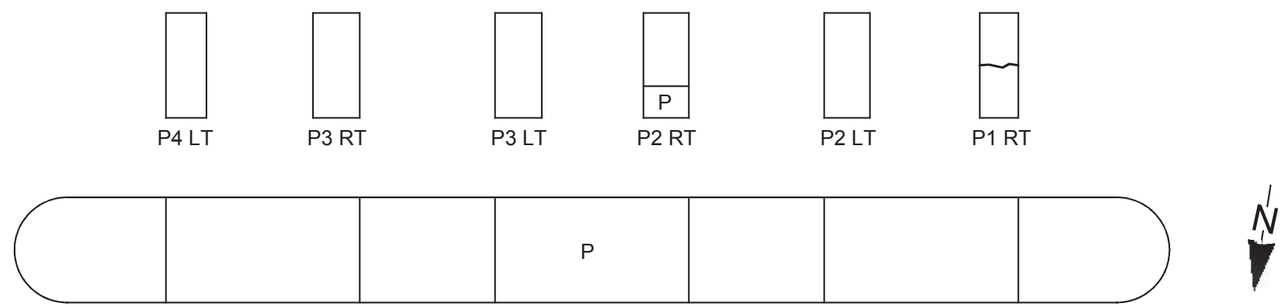
QUANTITIES:
SPALL AREAS: 1.5 SF
HOLLOW AREAS: 1.5 SF + 2.6 SF + 18.4 SF + 39.0 SF - 9.0 SF + 8.0 SF = 78.5 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 5.0 LF

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

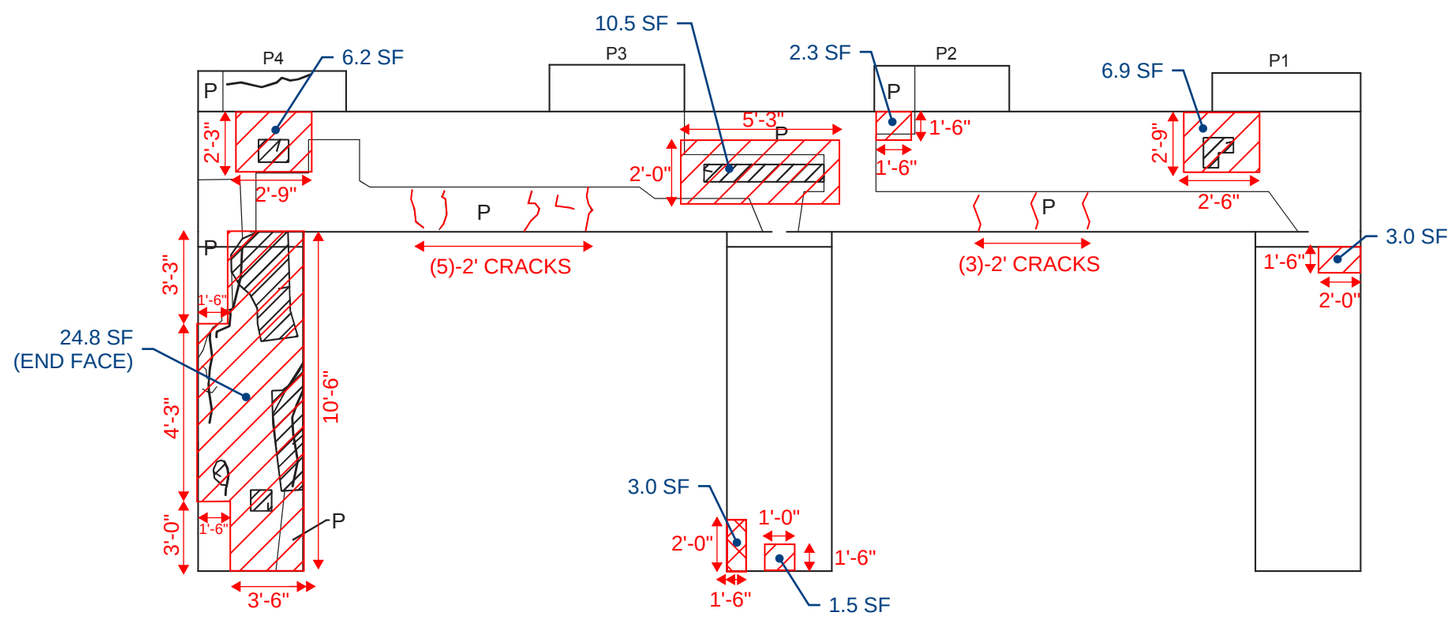
PIER 12 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 12 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 12 END ELEVATION

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

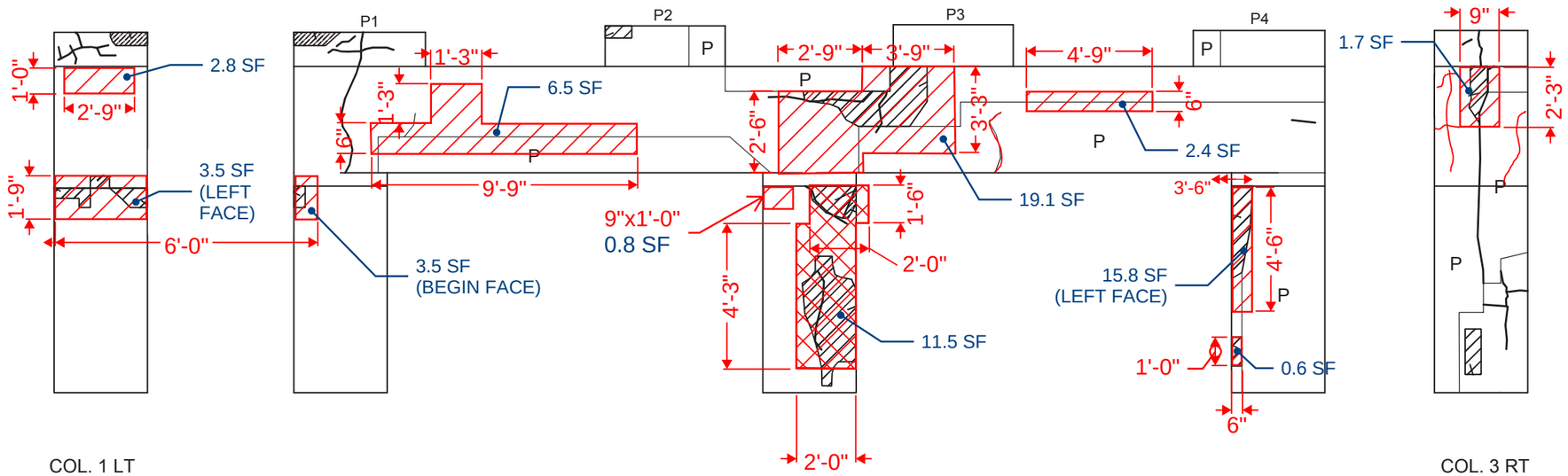
LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 3.0 SF
HOLLOW AREAS: 24.8 SF + 3.0 SF + 1.5 SF + 6.2 SF + 10.5 SF + 2.3 SF + 6.9 SF = 55.1 SF
MAP CRACKED AREAS: 0.0 SF
TOTAL LENGTH OF CRACKS: 16.0 LF

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

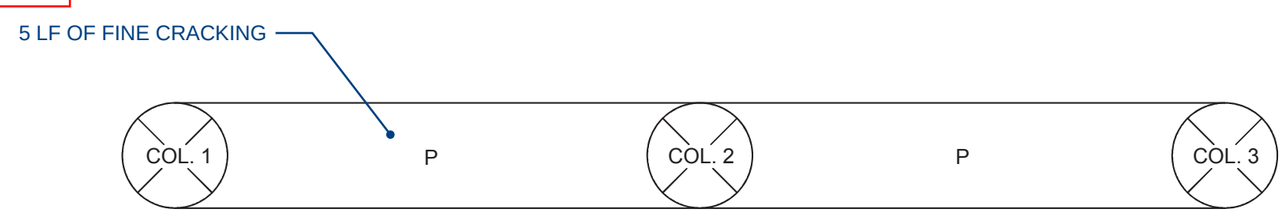
PIER 13 DETERIORATION SKETCH

NOT TO SCALE



PIER 13 BEGIN ELEVATION

APPROXIMATELY 25 LF OF FINE CRACKING (NOT INCLUDED IN REPAIR AREAS)



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

QUANTITIES:

SPALL AREAS: **11.5 SF**

HOLLOW AREAS: 2.8 SF + 3.5 SF + 3.5 SF + 6.5 SF + 19.1 SF + 0.8 SF + 2.4 SF + 15.8 SF + 0.6 SF + 1.7 SF = **56.7 SF**

MAP CRACKED AREAS: **0 SF**

TOTAL LENGTH OF CRACKS: **30.0 LF**

LEGEND

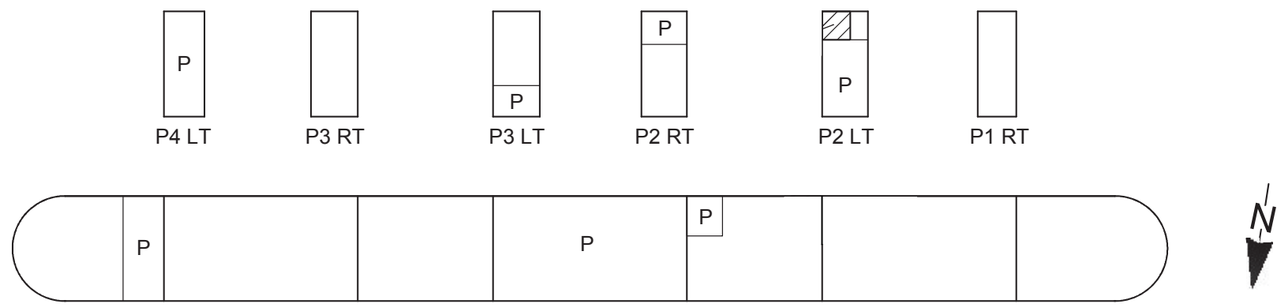
- Hollow Concrete (HC)
- Spall (S)
- P Patch
- Crack (C)
- Hairline Crack (HL)

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

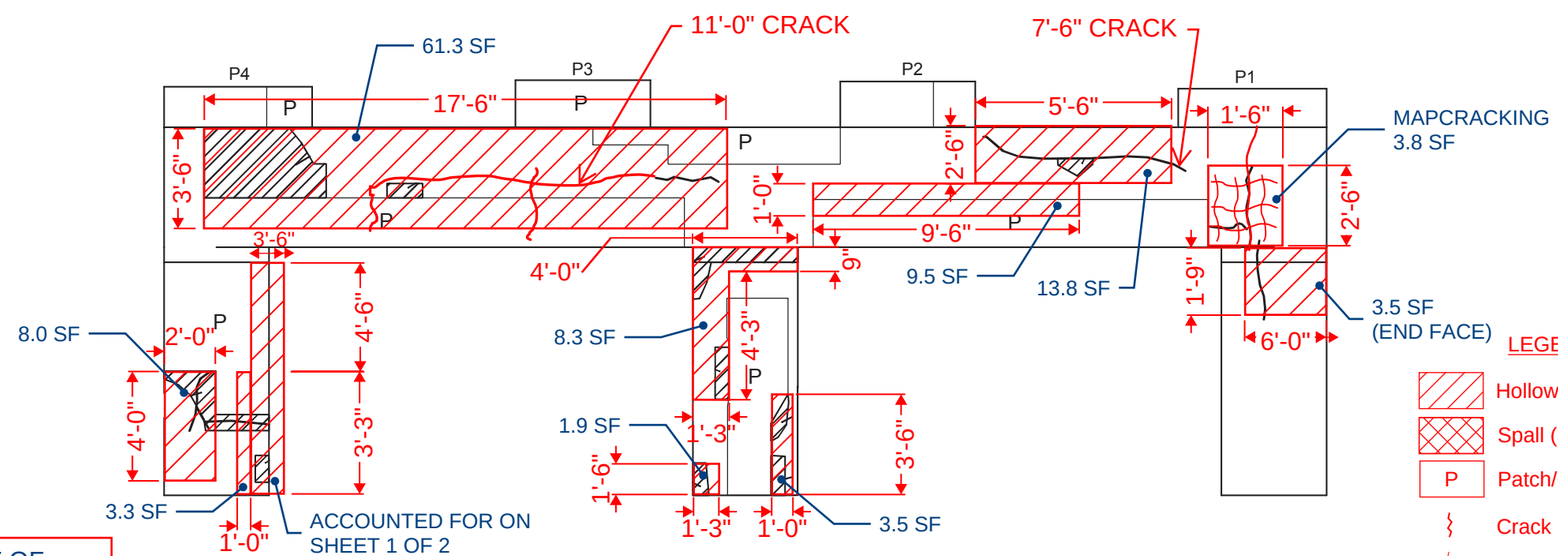
PIER 13 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 13 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 13 END ELEVATION

APPROXIMATLY 15 LF OF FINE CRACKING (NOT INCLUDED IN REPAIR AREAS)

LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

QUANTITIES:

SPALL AREAS: **0.0 SF**

HOLLOW AREAS: 8.0 SF + 3.3 SF + 61.3 SF + 8.3 SF + 1.9 SF + 3.5 SF + 9.5 SF + 13.8 SF + 3.5 SF = **113.1 SF**

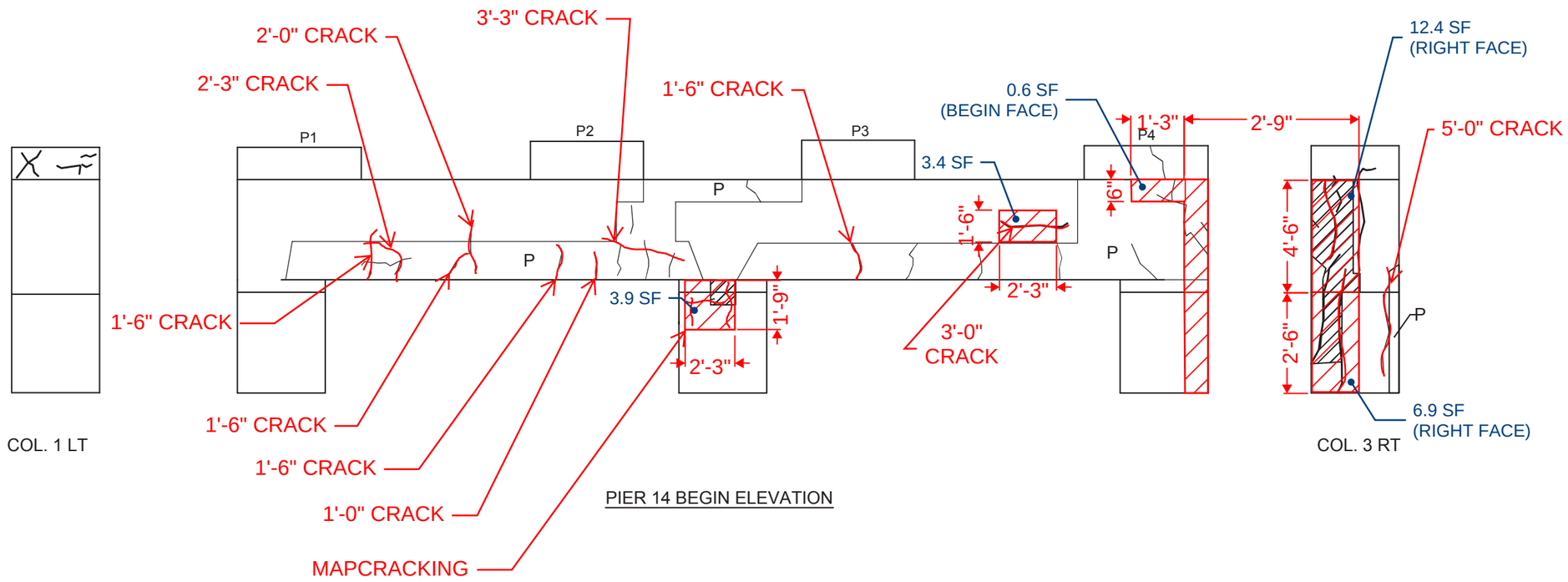
MAP CRACKED AREAS: **3.8 SF**

TOTAL LENGTH OF CRACKS: **15.0 LF**

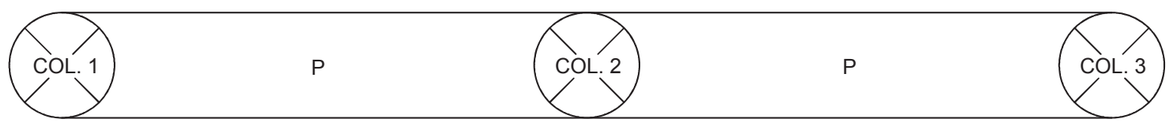
BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

PIER 14 DETERIORATION SKETCH

NOT TO SCALE



PIER 14 BEGIN ELEVATION



UNDERSIDE OF CAPBEAM

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

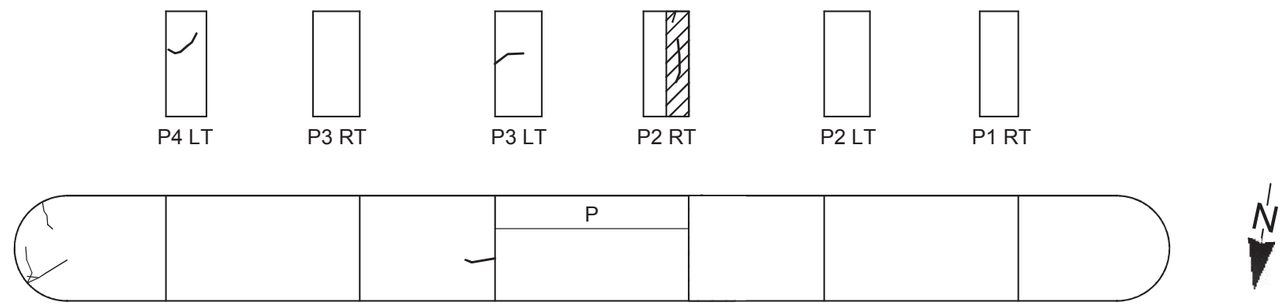
QUANTITIES:
SPALL AREAS: **0.0 SF**
HOLLOW AREAS: 3.9 SF + 3.4 SF + 0.6 SF + 12.4 SF + 6.9 SF = **27.2 SF**
MAP CRACKED AREAS: **0 SF**
TOTAL LENGTH OF CRACKS: **60 LF**

BIN: 1093571
I481 SB / CSX TRANS/AMTRAK

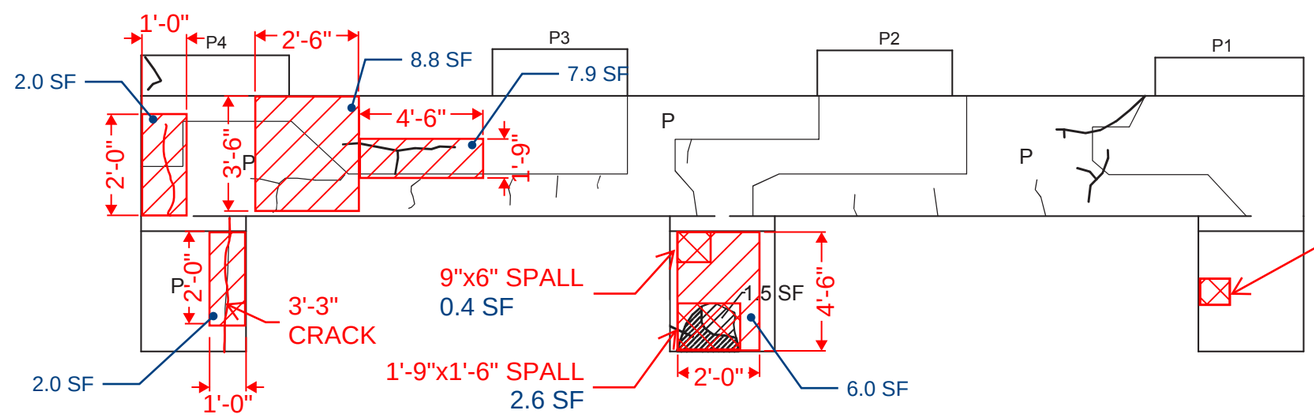
PIER 14 DETERIORATION SKETCH

NOT TO SCALE

* NOTE: P1 LT & P4 RT VIEWS LOCATED ON PIER 14 DETERIORATION SKETCH SHEET 1 OF 2



PLAN



PIER 14 END ELEVATION

LEGEND

- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

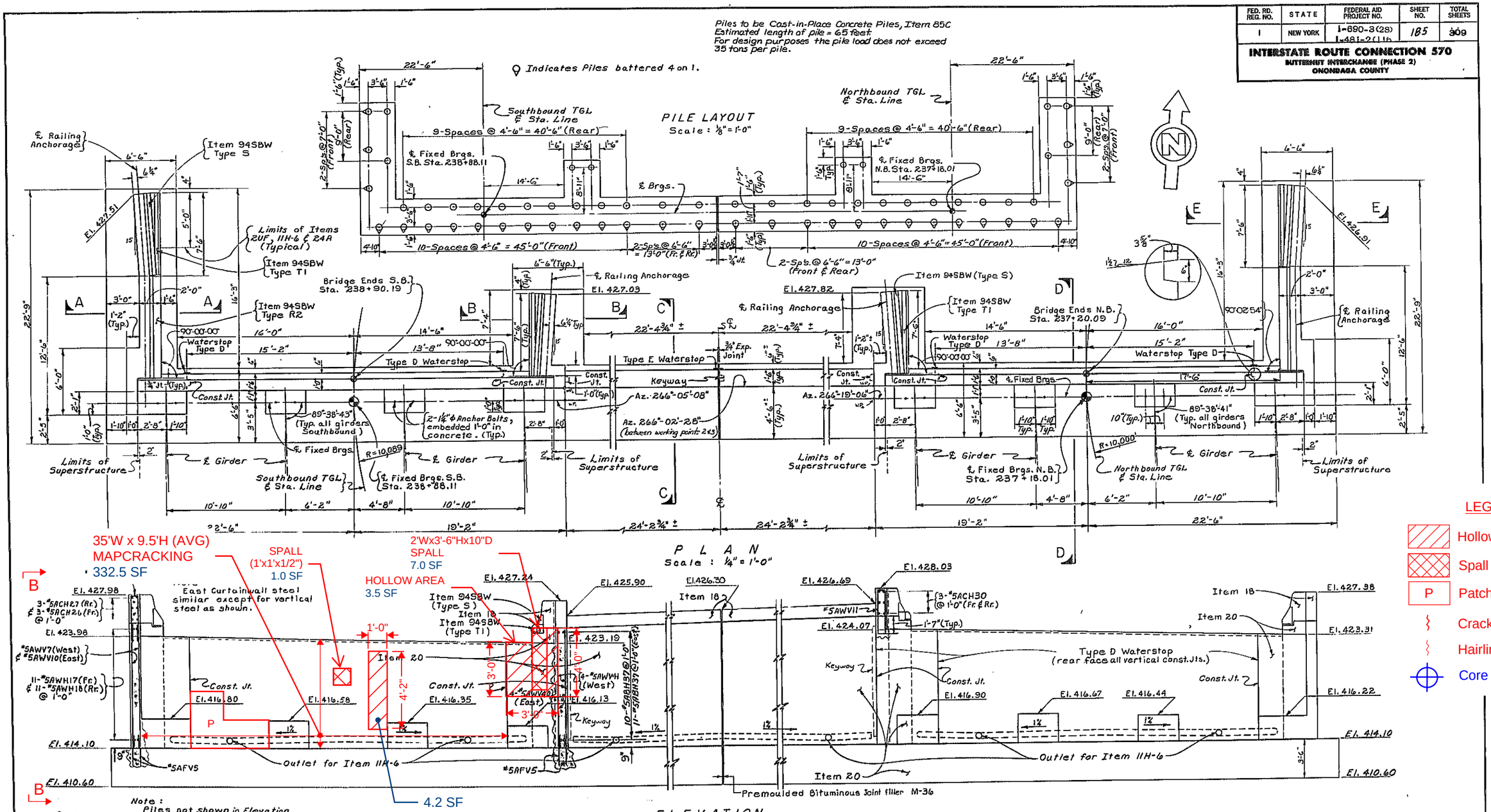
APPROXIMATELY 45'
OF END FACE CRACKS

LEGEND
Hollow Concrete (HC)
Spall (S)
P Patch
Crack (C)
Hairline Crack (HL)

QUANTITIES:
SPALL AREAS: 0.4 SF + 2.6 SF + 0.3 = **3.3 SF**
HOLLOW AREAS: 2.0 SF + 2.0 SF + 8.8 SF + 7.9 SF + 6.0 SF = **26.7 SF**
MAP CRACKED AREAS: **0 SF**
TOTAL LENGTH OF CRACKS: **60 LF**

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	185	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



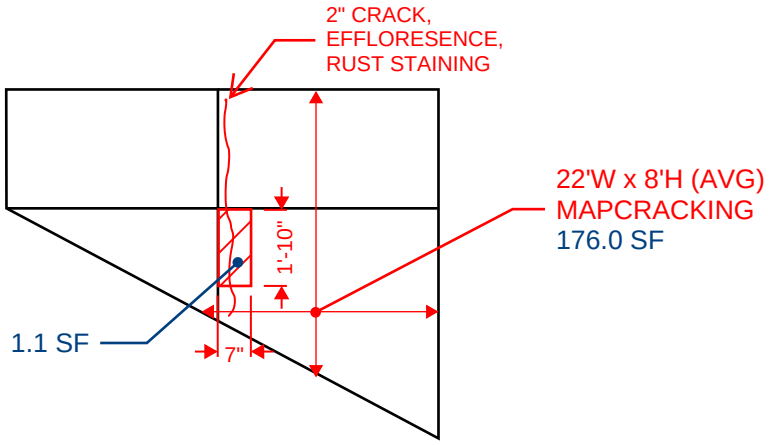
SEE NEXT PAGE FOR ELEVATION B-B

QUANTITIES:
SPALL AREAS: 1.0 SF + 7.0 SF = **8.0 SF**
HOLLOW AREAS: 4.2 SF + 3.5 SF = **7.7 SF**
MAP CRACKED AREAS: **332.5 SF**
TOTAL LENGTH OF CRACKS: **0.0 LF**

LEGEND
- Hollow Concrete (HC)
- Spall (S)
- P Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

PROJECT ENGINEER R. Parker
IN CHARGE OF F. Eckel
DESIGNED BY R.H.W. & Assoc.
DESIGN CHECKED BY J.B. Sherman
DETAILED BY J.C. Thompson
DETAIL CHECKED BY D.H. Smith

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS
SOUTHBOUND BIN 1093571
NORTH ABUTMENTS
DRAWING NO. 7 OF 50



ELEVATION B-B
NORTHWEST
WINGWALL

QUANTITIES:
SPALL AREAS: **0.0 SF**
HOLLOW AREAS: **1.1 SF**
MAP CRACKED AREAS: **176.0 SF**
TOTAL LENGTH OF CRACKS: **4.0 LF**

LEGEND

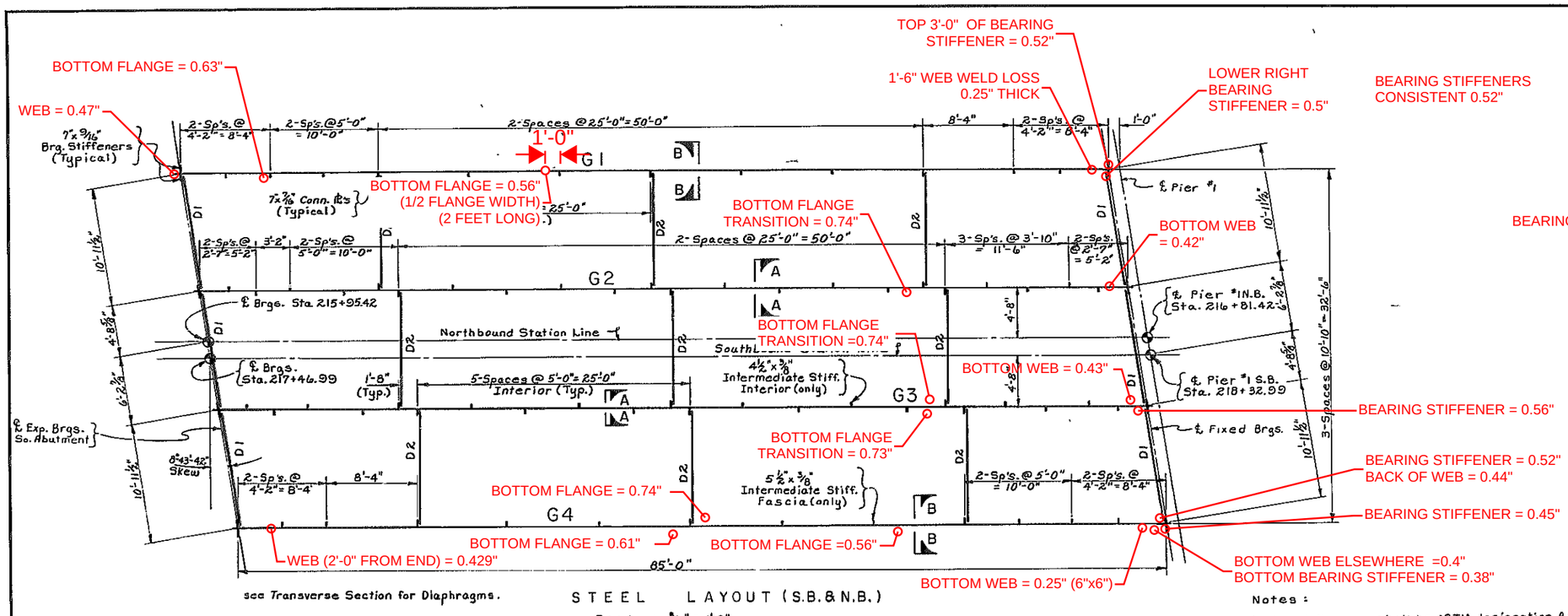
- Hollow Concrete (HC)
- Spall (S)
- P — Patch/Repair
- Crack (C)
- Hairline Crack (HL)
- Core Location

SOUTHBOUND BIN 1093571

F.I.S.H. 70-7

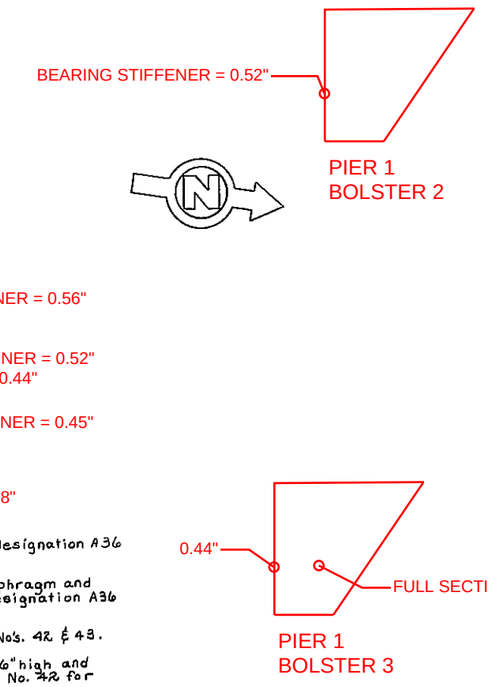
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	196	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



see Transverse Section for Diaphragms.

STEEL LAYOUT (S.B. & N.B.)
Scale : 3/16" = 1'-0"



Notes :

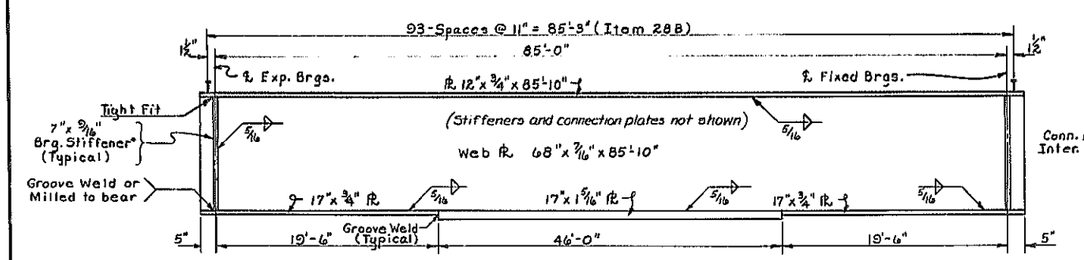
Web and flanges shall be ASTM designation A36 steel.

Stiffeners, Connection Plates, Diaphragm and Gusset Plates shall be ASTM designation A36 steel.

For Bearing Details see Drawing Nos. 42 & 43.

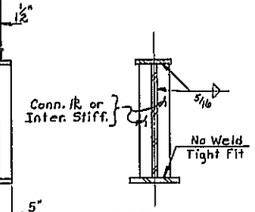
Stud Shear Connectors shall be 6" high and placed in pairs. See Drawing No. 42 for additional details.

For Height of Haunch see Table of Haunch Heights Drawing No. 34.

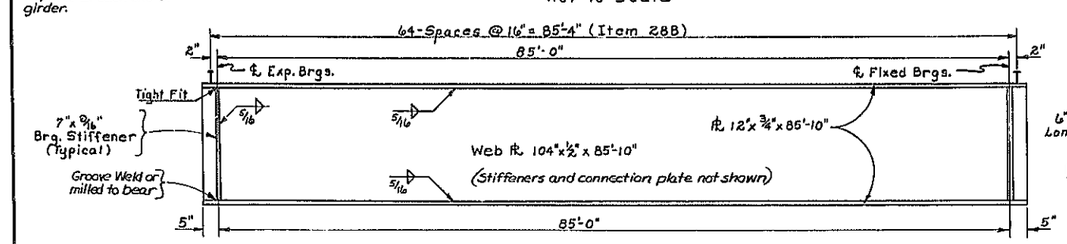


*Two bearing stiffeners required at each end of girder.

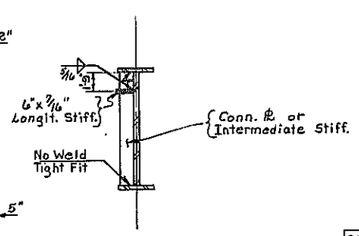
INTERIOR GIRDER ELEVATION (S.B. & N.B.)
Not to Scale



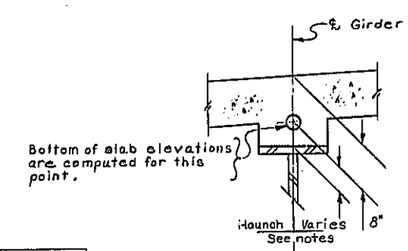
SECTION A-A
Not to Scale



FASCIA GIRDER ELEVATION (S.B. & N.B.)
Not to Scale



SECTION B-B
Not to Scale



GIRDER	SPAN	THEO. BOTTOM OF SLAB ELEVATIONS ℄ Exp. Brgs.	℄ Span	℄ Fix. Brgs.	DEFLECTIONS (FT.) STEEL	SLAB	SDL	TOTAL	CAMBER V.C.C. (ft.)	TOTAL (ft.)	(in.)
G1 N.B.	1	446.55	447.12	447.65	.01	.03	.01	.05	.02	.07	7/8
G2 N.B.	1	446.80	447.40	447.90	.02	.08	.02	.12	.02	.14	1 11/16
G3 N.B.	1	446.79	447.36	447.89	.02	.08	.02	.12	.02	.14	1 11/16
G4 N.B.	1	446.59	447.16	447.68	.01	.03	.01	.05	.02	.07	7/8
G1 S.B.	1	446.34	446.92	447.46	.01	.03	.01	.05	.02	.07	7/8
G2 S.B.	1	446.59	447.17	447.71	.02	.08	.02	.12	.02	.14	1 11/16
G3 S.B.	1	446.64	447.22	447.76	.02	.08	.02	.12	.02	.14	1 11/16
G4 S.B.	1	446.44	447.02	447.55	.01	.03	.01	.05	.02	.07	7/8

V.C.C. = Vertical Curve Correction
S.D.L. = Superimposed Dead Load, includes weight of railing.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPAN 1 SOUTHBOUND
BIN 1093571

DRAWING NO. 18 OF 50

PROJECT ENGINEER R. Parker
IN CHARGE OF F. Eckel
DESIGNED BY N. Toppass
DESIGN CHECKED BY R. Thimble
DETAILED BY J.C. Thompson
DETAIL CHECKED BY H. A. Thomas

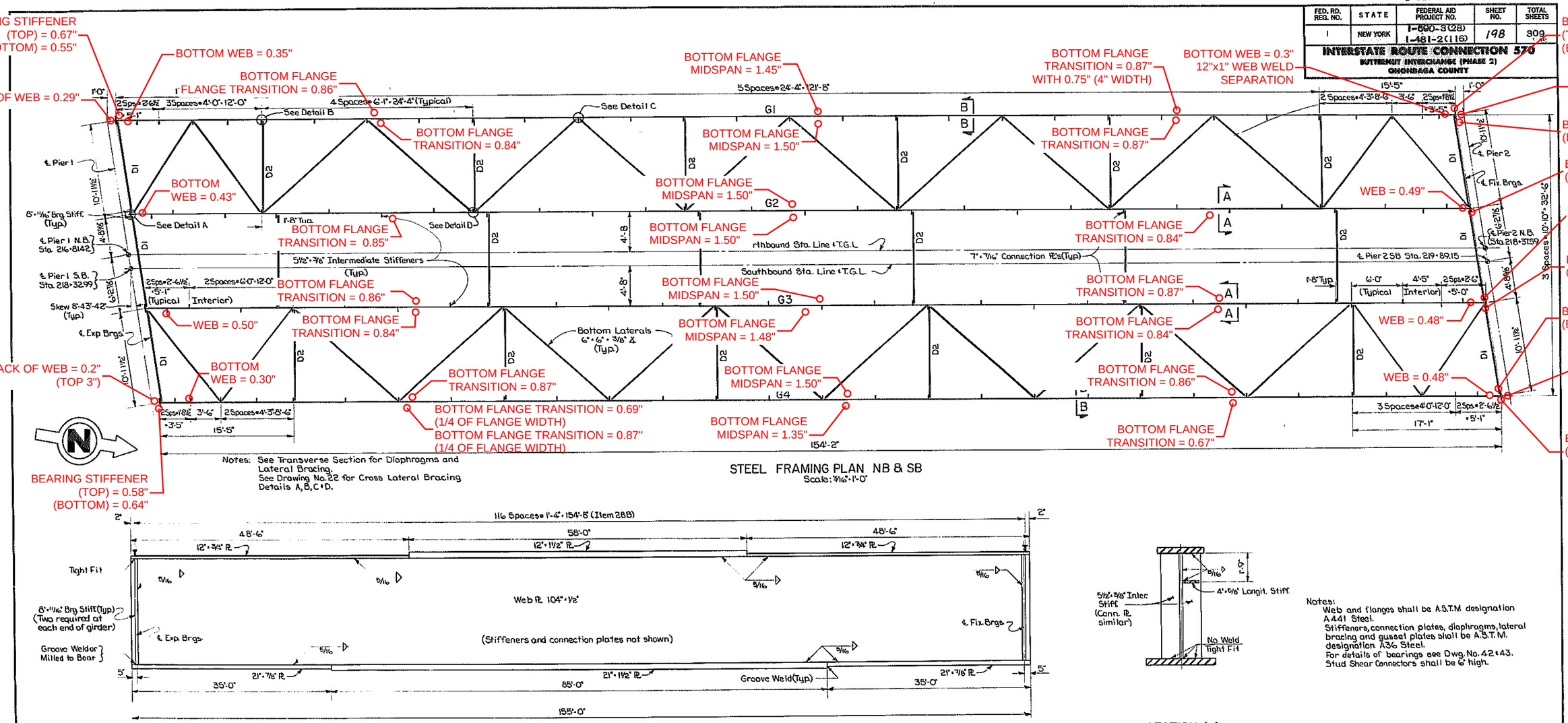
Dewitt Yards 3060.00 -76
Steel Layout Span 1

SH #20

F.I.S.H. 70-7

FED. RD. REGL NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
I	NEW YORK	I-590-3(28) I-481-2(116)	198	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



Notes: See Transverse Section for Diaphragms and Lateral Bracing.
See Drawing No. 22 for Cross Lateral Bracing Details A, B, C & D.

STEEL FRAMING PLAN NB & SB
Scale: 3/16" = 1'-0"

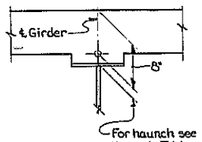
FASCIA & INTERIOR GIRDER ELEVATION NB & SB
Not to Scale

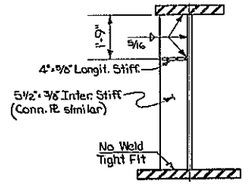
Notes:
Web and flanges shall be A.S.T.M designation A441 Steel.
Stiffeners, connection plates, diaphragms, lateral bracing and gusset plates shall be A.S.T.M. designation A36 Steel.
For details of bearings see Dwg. No. 42 & 43.
Stud Shear Connectors shall be 6" high.

SECTION A-A
Not to Scale

GIRDER	SPAN	THEO. BOTTOM OF SLAB ELEVATIONS ℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	DEFLECTIONS (FT.) STEEL	SLAB	SDL.	TOT.	CAMBER V.C.C. (FT.)	TOTAL (FT.)	(IN.)
G1 NB	2	447.67	448.52	449.23	.08	.16	.07	.31	.07	.38	4 9/16
G2 NB	2	447.92	448.76	449.47	.08	.24	.07	.39	.07	.46	5½
G3 NB	2	447.91	448.75	449.45	.08	.24	.07	.39	.07	.46	5½
G4 NB	2	447.70	448.54	449.24	.08	.16	.07	.31	.07	.38	4 9/16
G1 SB	2	447.48	448.35	449.08	.08	.16	.07	.31	.07	.38	4 9/16
G2 SB	2	447.73	448.60	449.32	.08	.24	.07	.39	.07	.46	5½
G3 SB	2	447.78	448.65	449.37	.08	.24	.07	.39	.07	.46	5½
G4 SB	2	447.58	448.44	449.16	.08	.16	.07	.31	.07	.38	4 9/16

V.C.C. - Vertical Curve Correction
S.D.L. - Superimposed Dead Load, includes weight of railing.





SECTION B-B
Not to Scale

PROJECT ENGINEER R.L. Parker
IN CHARGE OF E. Eckel
DESIGNED BY N. A. Toppses
DESIGN CHECKED BY R. Thimble
DETAILED BY J.F. Darcy
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 381 OVER DEWITT YARDS

SPAN 2 SOUTHBOUND
BIN 1093571

10. 20 OF 50

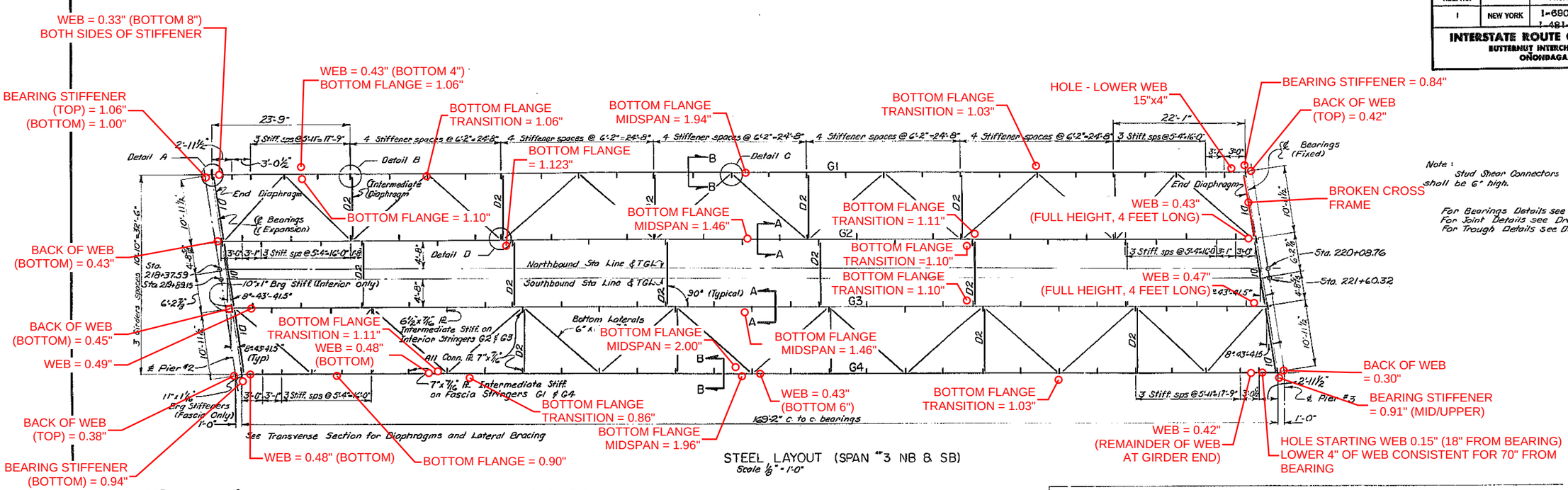
Use with Yk. Spn 2 Steel layout

3003-00

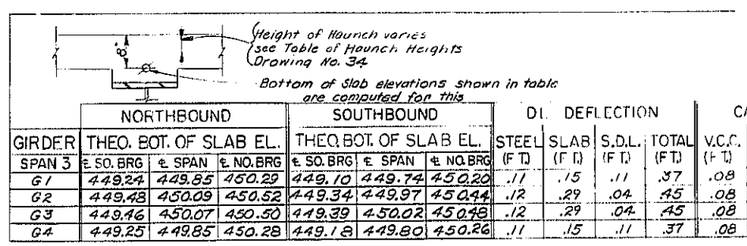
F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	199	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



STEEL LAYOUT (SPAN #3 NB & SB)
Scale 1/8" = 1'-0"

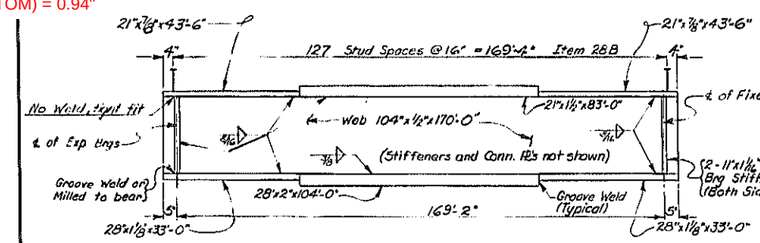


Height of Haunch varies see Table of Haunch Heights Drawing No. 34

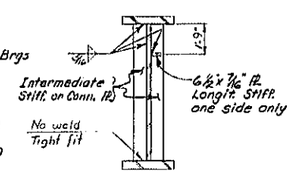
Bottom of Slab elevations shown in table are computed for this

GIRDER	NORTHBOUND THEO. BOT. OF SLAB EL.			SOUTHBOUND THEO. BOT. OF SLAB EL.			DL DEFLECTION STEEL (FT)	SLAB (FT)	S.D.L. (FT)	TOTAL (FT)	CAMBER V.C.C. (FT)	TOTAL (FT)	(IN)
SPAN 3	℄ SO. BRG	℄ SPAN	℄ NO. BRG	℄ SO. BRG	℄ SPAN	℄ NO. BRG							
G1	449.24	449.85	450.29	449.10	449.74	450.20	.11	.15	.11	.37	.08	.45	5 3/8
G2	449.48	450.09	450.52	449.34	449.97	450.44	.12	.29	.04	.45	.08	.53	6 3/8
G3	449.46	450.07	450.50	449.39	450.02	450.48	.12	.29	.04	.45	.08	.53	6 3/8
G4	449.25	449.85	450.28	449.18	449.80	450.26	.11	.15	.11	.37	.08	.45	5 3/8

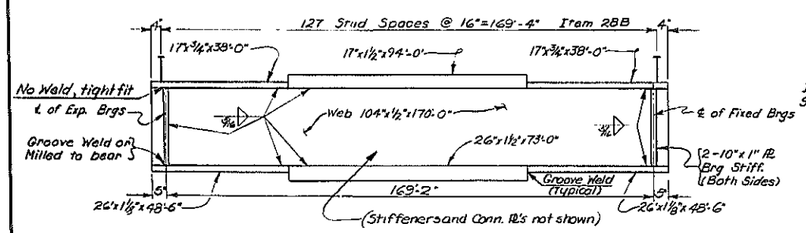
S.D.L. = superimposed dead load, includes weight of parapet and railing.
V.C.C. = vertical curve correction



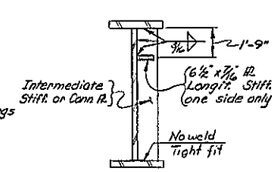
FASCIA GIRDER ELEVATION (G1 & G4)
Not to Scale



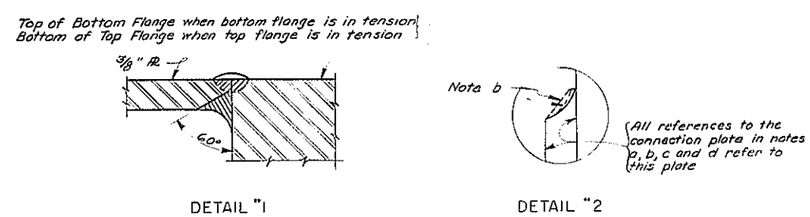
SECTION A-A
Not to Scale
Note: All Conn. Plates 7"x 7/16"



INTERIOR GIRDER ELEVATION (G2 & G3)
Not to Scale



SECTION B-B
Not to Scale
Note: All Conn. Plates 7"x 7/16"



DETAIL "1" DETAIL "2"

LATERAL BRACING DETAILS
Not to Scale

Note:
a. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gauged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
b. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
c. Both the connection plate and flange are to be the same type of steel.
d. Field welding to the connection plate will not be permitted.

The webs, flanges and gusset plates for bottom lateral bracing for the span 3 girders shall be A.S.T.M. Designation A441 steel. Stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. A36 steel.

For additional details of bottom lateral bracing see drawing No. 22

PROJECT ENGINEER R. PARKER
IN CHARGE OF E.W. ECKEL
DESIGNED BY G. Bowe
DESIGN CHECKED BY N. Tapras
DETAILED BY Stte Quoraat
DETAIL CHECKED BY D.H. Smith

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS
BIN 1093571 SOUTHBOUND
SPAN 3
DRAWING NO. 21 OF 50

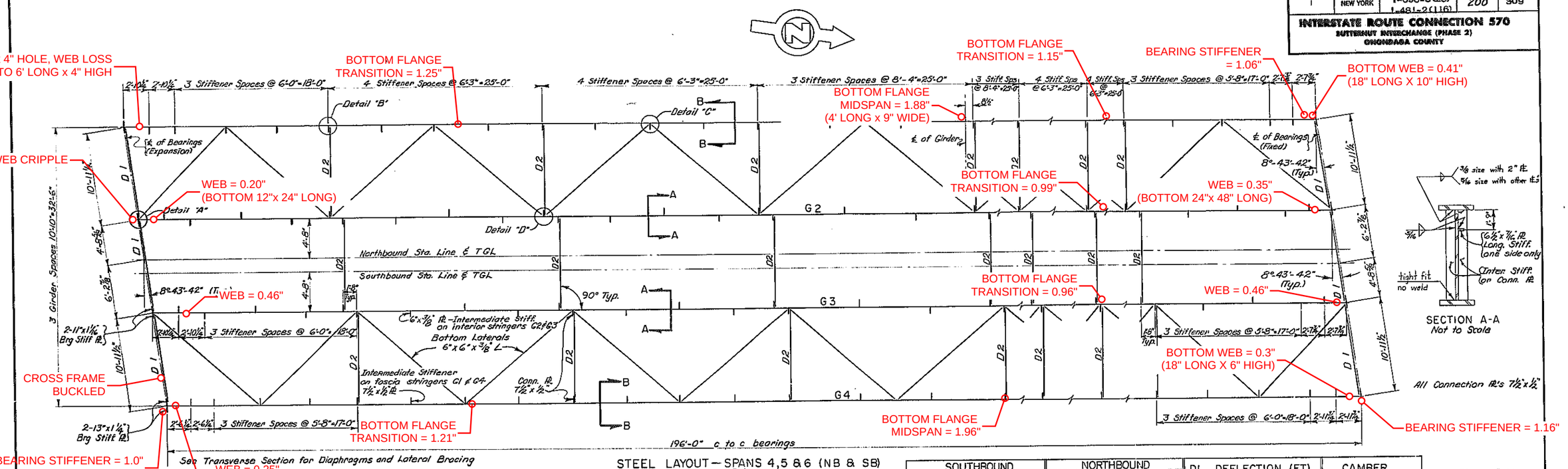
3003.00

3060.00 76

F.I.S.H. 70-7

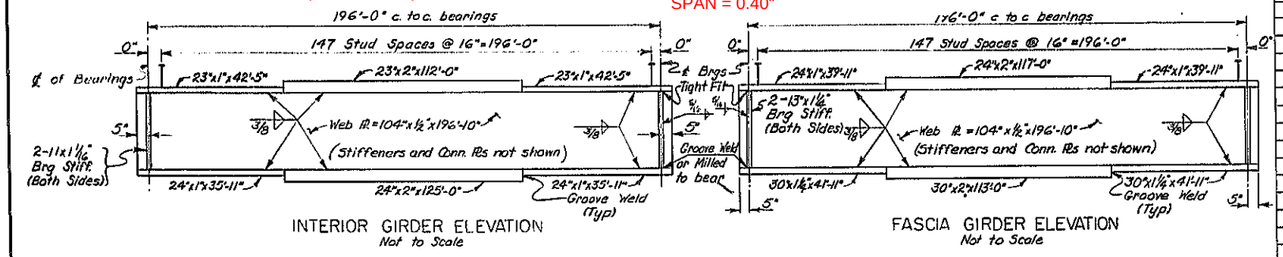
FED. RD. REG. NO.	STATE	FEDERAL A/D PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	200	309

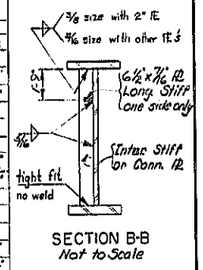
INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



STEEL LAYOUT — SPANS 4,5 & 6 (NB & SB)
Scale: 3/16" = 1'-0"

GIRDER	SOUTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	NORTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	DL DEFLECTION (FT) STEEL	SLAB	SDL	TOTAL DL	CAMBER VCC(FT)	TOTAL FEET	TOTAL INCHES
SPAN 4													
G1	450.21	450.54	450.63	450.30	450.59	450.66	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.45	450.77	450.86	450.53	450.82	450.89	0.178'	0.376'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G3	450.48	450.80	450.89	450.51	450.80	450.85	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G4	450.27	450.58	450.67	450.29	450.57	450.63	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 5													
G1	450.63	450.50	450.14	450.66	450.50	450.10	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.86	450.72	450.36	450.89	450.72	450.32	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G3	450.89	450.75	450.38	450.85	450.68	450.28	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G4	450.66	450.52	450.15	450.63	450.45	450.05	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 6													
G1	450.13	449.54	448.72	450.09	449.47	448.62	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.35	449.75	448.93	450.31	449.68	448.83	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G3	450.37	449.77	448.94	450.27	449.64	448.78	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G4	450.14	449.53	448.70	450.04	449.40	448.54	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"



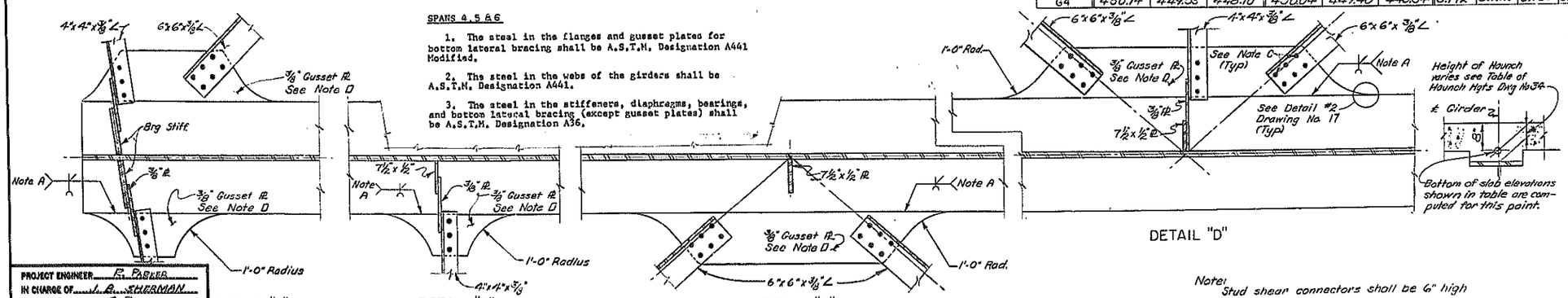


SPANS 4, 5 & 6

1. The steel in the flanges and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Modified.

2. The steel in the webs of the girders shall be A.S.T.M. Designation A441.

3. The steel in the stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36.



Note:
Stud shear connectors shall be 6" high

For Bearing Details see Drawing #42 and #43
For Joint Details see Drawing #31
For Trough Details see Drawing #39

Note:
A. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
B. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
C. Lateral bracing shall be attached to gusset plates with ⅞" ϕ high strength bolts. Field welding will not be permitted.
D. The gusset plate shall be the same type of steel as the flange to which it is welded.

PROJECT ENGINEER F. PAGLIA
IN CHARGE OF J. A. STEERMAN
DESIGNED BY S. Rowe
DESIGN CHECKED BY M. Tepper
DETAILED BY Otto Dussault
DETAIL CHECKED BY D.H. Smith

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 4
SOUTHBOUND BIN 1093571

DRAWING NO. 22 OF 50

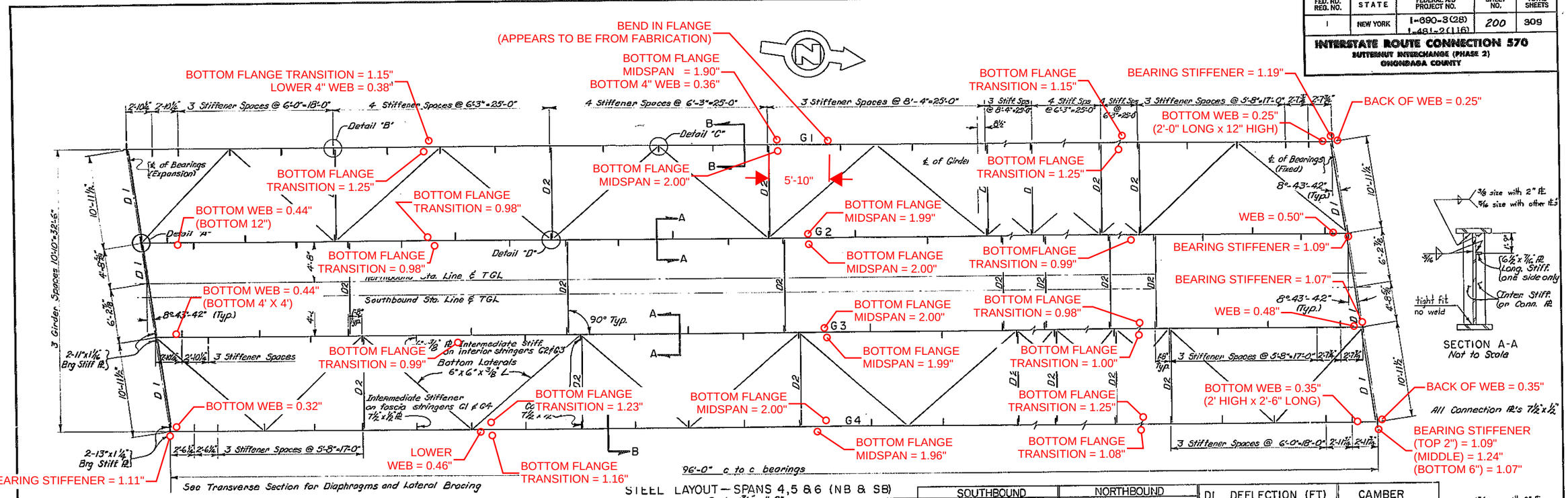
LENGTH = 196'-6"

3060.00 76

F.I.S.H. 70-7

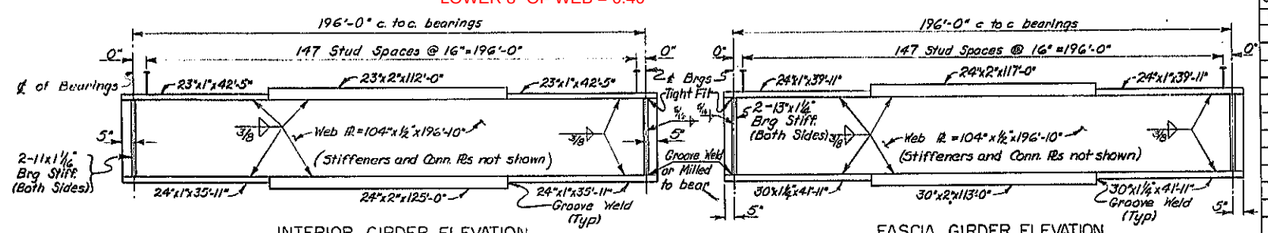
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	200	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



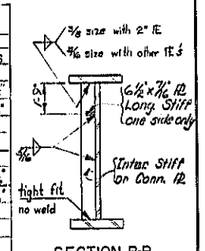
STEEL LAYOUT — SPANS 4,5 & 6 (NB & SB)
Scale: 3/16" = 1'-0"

GIRDER	SOUTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	NORTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	DL DEFLECTION (FT) STEEL	SLAB	SDL	TOTAL DL	CAMBER VCC(FT)	TOTAL FEET	TOTAL INCHES
SPAN 4													
G1	450.21	450.54	450.65	450.30	450.59	450.66	0.172'	0.212'	0.168'	0.552'	0.113'	0.665	8"
G2	450.45	450.77	450.86	450.53	450.82	450.89	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.48	450.80	450.89	450.51	450.80	450.85	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.27	450.58	450.67	450.29	450.57	450.63	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 5													
G1	450.63	450.50	450.14	450.66	450.50	450.10	0.172'	0.212'	0.168'	0.552'	0.113'	0.665	8"
G2	450.86	450.72	450.36	450.89	450.72	450.32	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.89	450.75	450.38	450.85	450.68	450.28	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.66	450.52	450.15	450.63	450.45	450.05	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 6													
G1	450.13	449.54	448.72	450.09	449.47	448.62	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.35	449.75	448.93	450.31	449.68	448.83	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.37	449.77	448.94	450.27	449.64	448.78	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.14	449.53	448.70	450.04	449.40	448.54	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"



INTERIOR GIRDER ELEVATION
Not to Scale

FASCIA GIRDER ELEVATION
Not to Scale



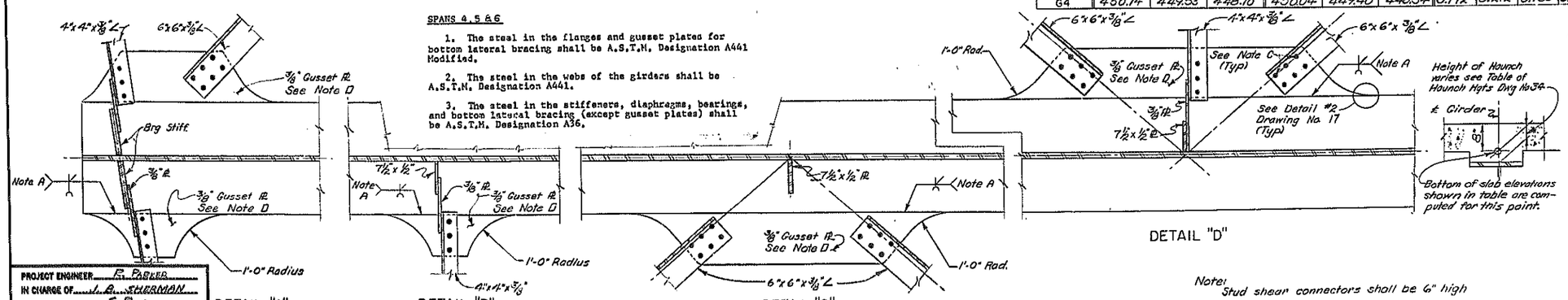
SECTION B-B
Not to Scale

SPANS 4, 5 & 6

1. The steel in the flanges and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Modified.

2. The steel in the webs of the girders shall be A.S.T.M. Designation A441.

3. The steel in the stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36.



DETAIL "A"

DETAIL "B"

DETAIL "C"

DETAIL "D"

Note:
A. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
B. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
C. Lateral bracing shall be attached to gusset plates with ⅞" ϕ high strength bolts. Field welding will not be permitted.
D. The gusset plate shall be the same type of steel as the flange to which it is welded.

Note:
Stud shear connectors shall be 6" high

For Bearing Details see Drawing #42 and #43
For Joint Details see Drawing #31
For Trough Details see Drawing #39

PROJECT ENGINEER R. PARKER
IN CHARGE OF J. R. SHERMAN
DESIGNED BY S. Rowe
DESIGN CHECKED BY M. Tepper
DETAILED BY J. Dussault
DETAIL CHECKED BY D.H. Smith

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 5
SOUTHBOUND BIN 1093571

DRAWING NO. 22 OF 50

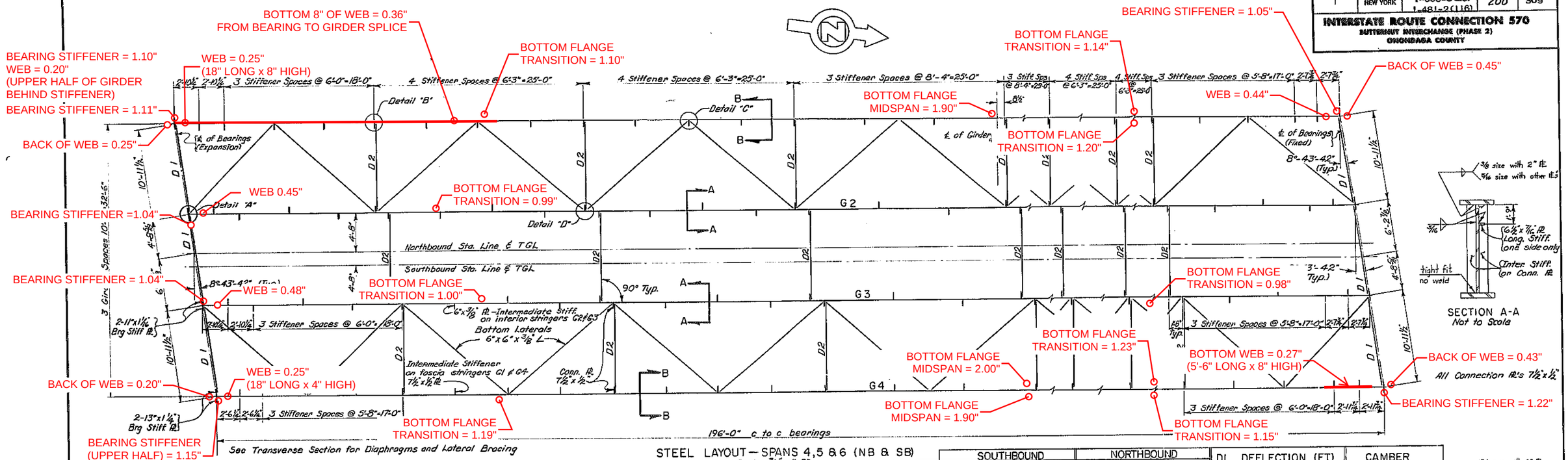
LENGTH = 196'-6"

3060.00 76

F.I.S.H. 70-7

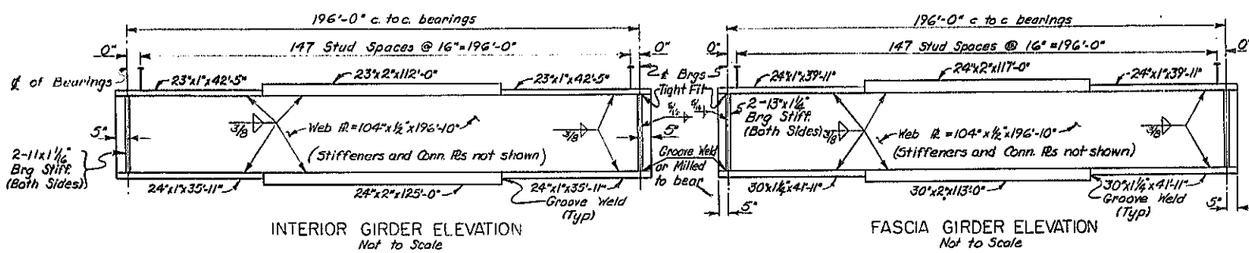
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	200	309

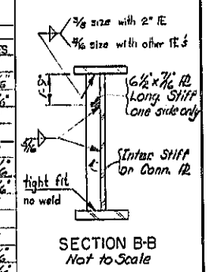
INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

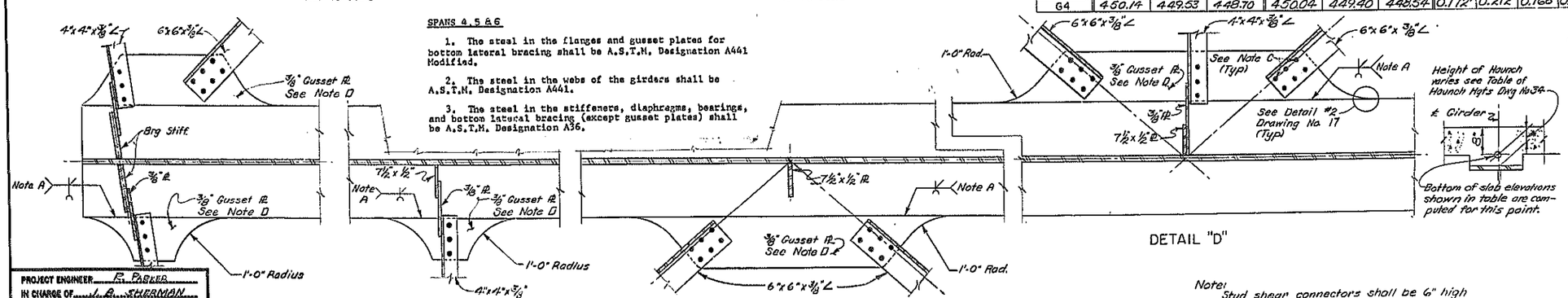


STEEL LAYOUT — SPANS 4,5 & 6 (NB & SB)
Scale: 3/16" = 1'-0"

GIRDER	SOUTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	NORTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	DL DEFLECTION (FT) STEEL	SLAB	SDL	TOTAL DL	CAMBER VCC (FT)	TOTAL FEET	TOTAL INCHES
SPAN 4													
G1	450.21	450.54	450.65	450.30	450.59	450.66	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.45	450.77	450.86	450.53	450.82	450.89	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G3	450.48	450.80	450.89	450.51	450.80	450.85	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G4	450.27	450.58	450.67	450.29	450.57	450.63	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 5													
G1	450.63	450.50	450.14	450.66	450.50	450.10	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.86	450.72	450.36	450.89	450.72	450.32	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G3	450.89	450.75	450.38	450.85	450.68	450.28	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G4	450.66	450.52	450.15	450.63	450.45	450.05	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 6													
G1	450.13	449.54	448.72	450.09	449.47	448.62	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.35	449.75	448.93	450.31	449.68	448.83	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G3	450.37	449.77	448.94	450.27	449.64	448.78	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 7/16"
G4	450.14	449.53	448.70	450.04	449.40	448.54	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"







SPANS 4, 5 & 6

1. The steel in the flanges and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Modified.

2. The steel in the webs of the girders shall be A.S.T.M. Designation A441.

3. The steel in the stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36.

Note:
A. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
B. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
C. Lateral bracing shall be attached to gusset plates with ⅞" ϕ high strength bolts. Field welding will not be permitted.
D. The gusset plate shall be the same type of steel as the flange to which it is welded.

Note:
Stud shear connectors shall be 6" high

For Bearing Details see Drawing #42 and #43
For Joint Details see Drawing #31
For Trough Details see Drawing #39

PROJECT ENGINEER R. PARKER
IN CHARGE OF L. A. SHERMAN
DESIGNED BY S. Rowe
DESIGN CHECKED BY H. Turner
DETAILED BY Jos. Dussault
DETAIL CHECKED BY D.H. Smith

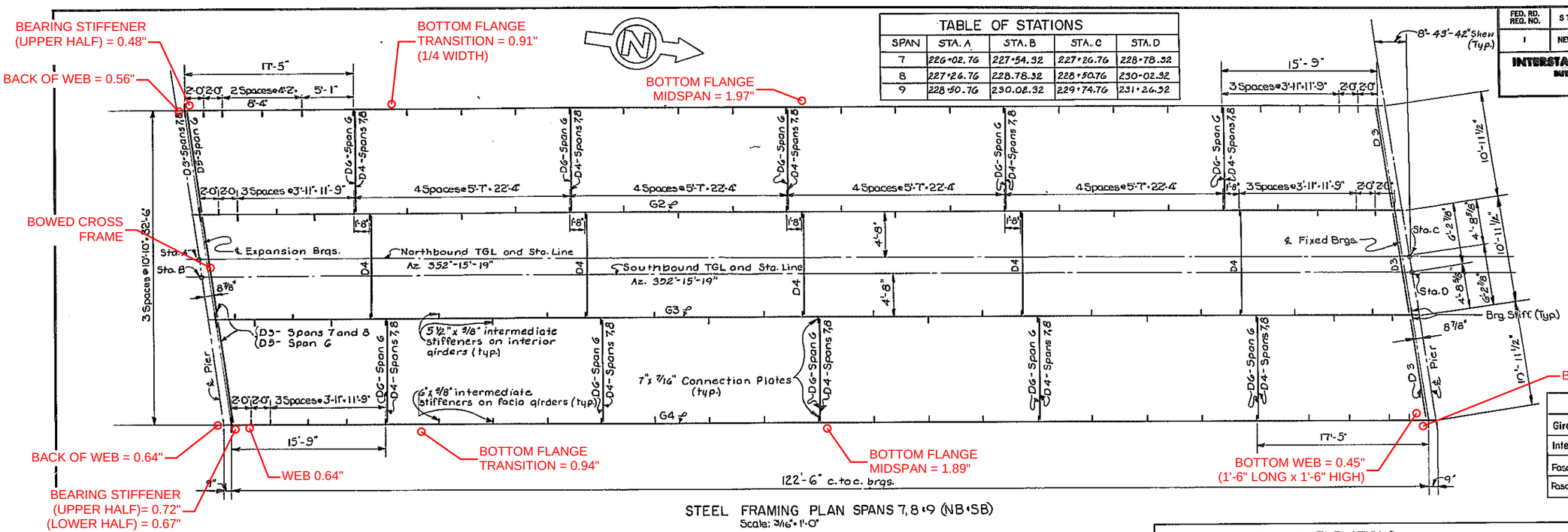
BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS
SPANS 6
SOUTHBOUND BIN 1093571
DRAWING NO. 22 OF 50

LENGTH = 196'-6"

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	202	302

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

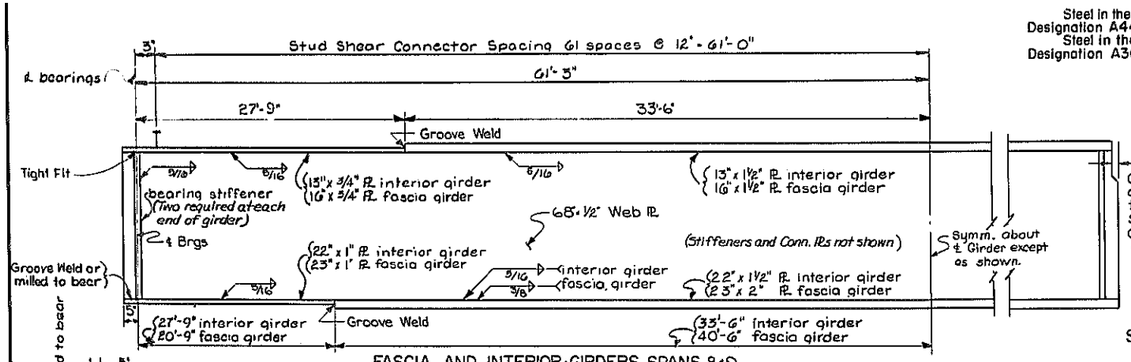


STEEL FRAMING PLAN SPANS 7, 8 & 9 (NB & SB)
Scale: 3/16" = 1'-0"

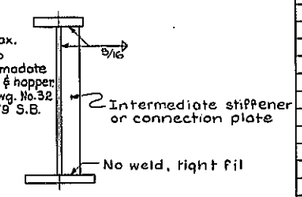
TABLE OF STATIONS				
SPAN	STA. A	STA. B	STA. C	STA. D
7	226+02.76	227+54.32	227+26.76	228+78.32
8	227+26.76	228.78.32	228+50.76	230+02.32
9	228+50.76	230.02.32	229+74.76	231+26.32

BEARING STIFFENER SIZES	
Girder	Size of each plate (2 plates @ each end of girder)
Interior spans 7 & 9	8" x 3/4"
Fascia span 7	8" x 3/4"
Fascia spans 8 & 9	9" x 7/8"

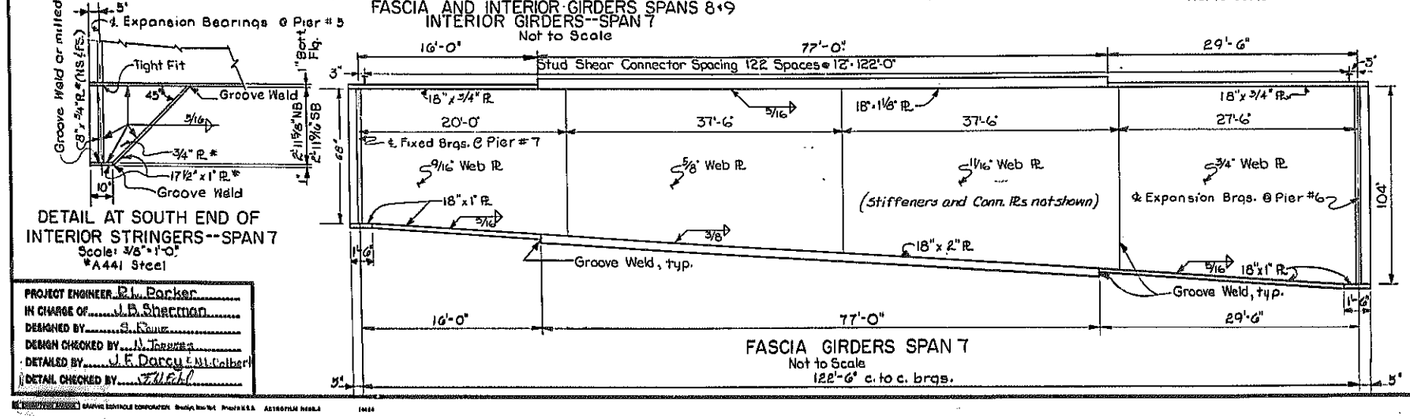
Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.



FASCIA AND INTERIOR GIRDERS SPANS 8 & 9
INTERIOR GIRDERS--SPAN 7
Not to Scale



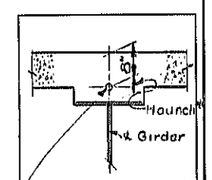
SECTION THRU GIRDER
Not to Scale



DETAIL AT SOUTH END OF INTERIOR STRINGERS--SPAN 7
Scale: 3/8" = 1'-0"
*A441 Steel

FASCIA GIRDERS SPAN 7
Not to Scale
122'-6" c. to c. brgs.

BOTTOM OF SLAB ELEVATIONS									
NORTHBOUND					SOUTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS	℄ SPAN	℄ FIX. BRGS.	GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	7	448.60	447.95	447.22	G1	7	448.70	448.07	447.35
G2	7	448.81	448.16	447.42	G2	7	448.91	448.28	447.56
G3	7	448.77	448.11	447.37	G3	7	448.93	448.29	447.57
G4	7	448.52	447.87	447.12	G4	7	448.68	448.05	447.32
G1	8	447.20	446.37	445.45	G1	8	447.33	446.52	445.63
G2	8	447.40	446.57	445.65	G2	8	447.54	446.73	445.83
G3	8	447.35	446.52	445.59	G3	8	447.55	446.73	445.83
G4	8	447.10	446.27	445.34	G4	8	447.30	446.48	445.58
G1	9	445.43	444.42	443.53	G1	9	445.60	444.61	443.57
G2	9	445.63	444.62	443.58	G2	9	445.80	444.81	443.74
G3	9	445.57	444.56	443.46	G3	9	445.81	444.81	443.73
G4	9	445.32	444.50	443.20	G4	9	445.56	444.56	443.48



-Bottom of Slab Elevation shown in table are computed for this point.

*Height of Haunch varies. See Table of Haunch Heights on Drawing No. 34

	GIRDER	SPAN	DEFLECTIONS STEEL (FT.)	SLAB (FT.)	SDL. (FT.)	TOTAL (FT.)	CAMBER V.C.C. (FT.)	TOTAL (FT.)	TOTAL (IN.)
NB AND SB	G1	7	.05	.09	.06	.20	.04	.24	2 7/8
	G2	7	.08	.24	.03	.35	.04	.39	4 5/8
	G3	7	.08	.24	.03	.35	.04	.39	4 5/8
	G4	7	.05	.09	.06	.20	.04	.24	2 7/8
	G1	8	.07	.12	.08	.27	.04	.31	3 3/4
	G2	8	.08	.24	.03	.35	.04	.39	4 5/8
	G3	8	.08	.24	.03	.35	.04	.39	4 5/8
	G4	8	.07	.12	.08	.27	.04	.31	3 3/4
SB	G1	9	.07	.12	.08	.27	.02	.29	3 1/2
	G2	9	.08	.24	.03	.35	.05	.38	4 1/2
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4
NB	G1	9	.07	.12	.08	.27	-.06	.21	2 1/2
	G2	9	.08	.24	.03	.35	.01	.36	4 3/8
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4

V.C.C.=Vertical Curve Camber
S.D.L.=Superimposed dead load, includes the weight of sidewalk & railing.

PROJECT ENGINEER P.L. Parker
IN CHARGE OF J.B. Sherman
DESIGNED BY S. Kaur
DESIGN CHECKED BY N. Tavares
DETAILED BY J.F. Darcy & M. Colbert
DETAIL CHECKED BY T.W.F.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 7,
SOUTHBOUND BIN 1093571

DRAWING NO. 24 OF 50

Br #2 DeWitt Yds Steel Framing
SPANS 7, 8 AND 9

MIDSPAN INACCESSIBLE DUE TO TREES

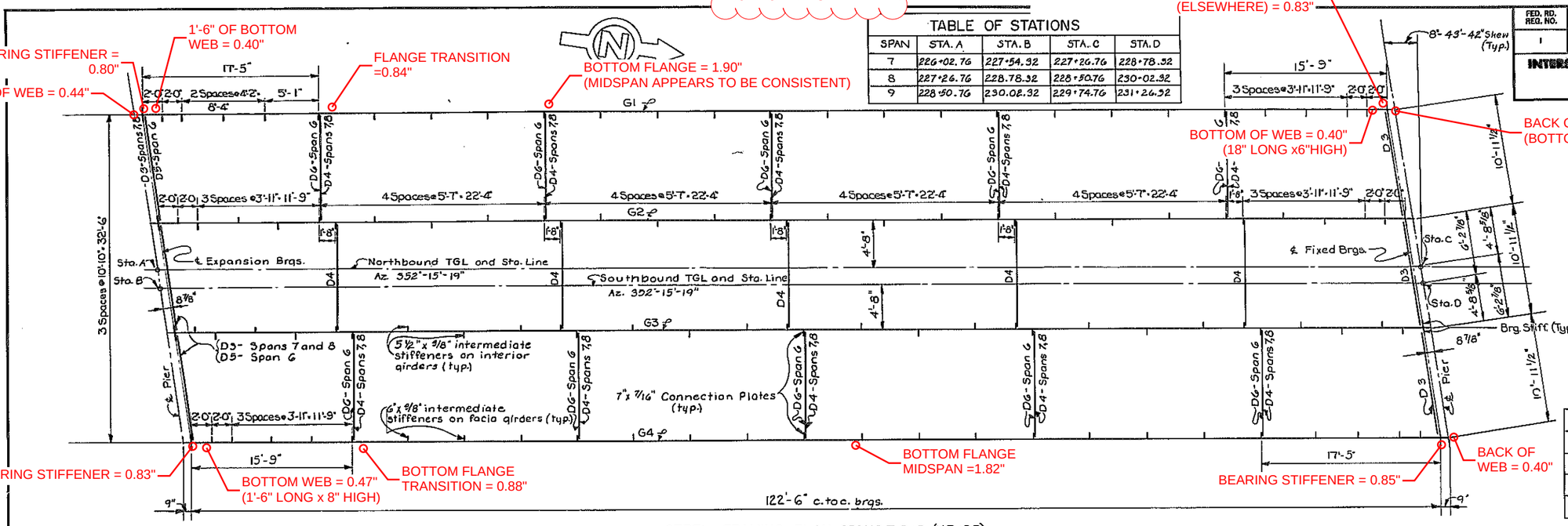
F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	202	302

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

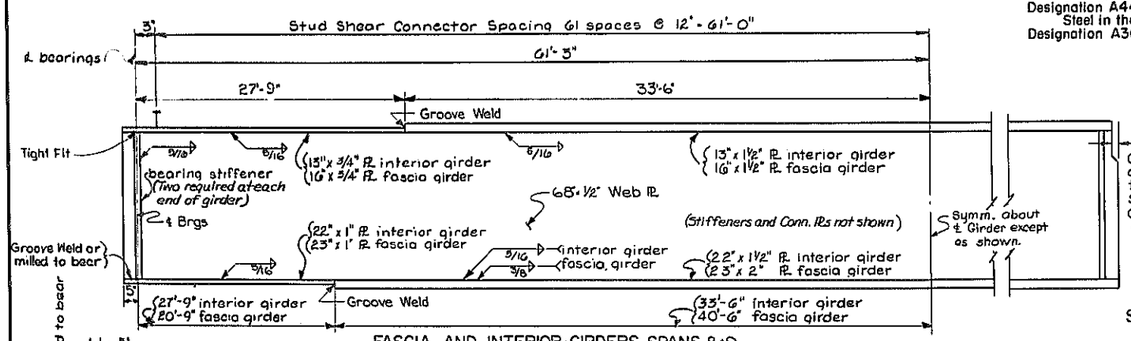
TABLE OF STATIONS

SPAN	STA. A	STA. B	STA. C	STA. D
7	226+02.76	227+54.32	227+26.76	228+78.32
8	227+26.76	228.78.32	228+50.76	230+02.32
9	228+50.76	230.02.32	229+74.76	231+26.32

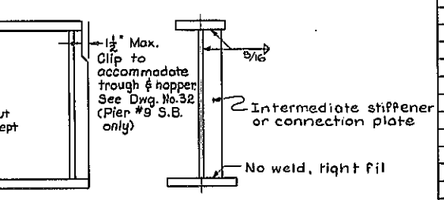


STEEL FRAMING PLAN SPANS 7, 8 & 9 (NB & SB)
Scale: 3/16" = 1'-0"

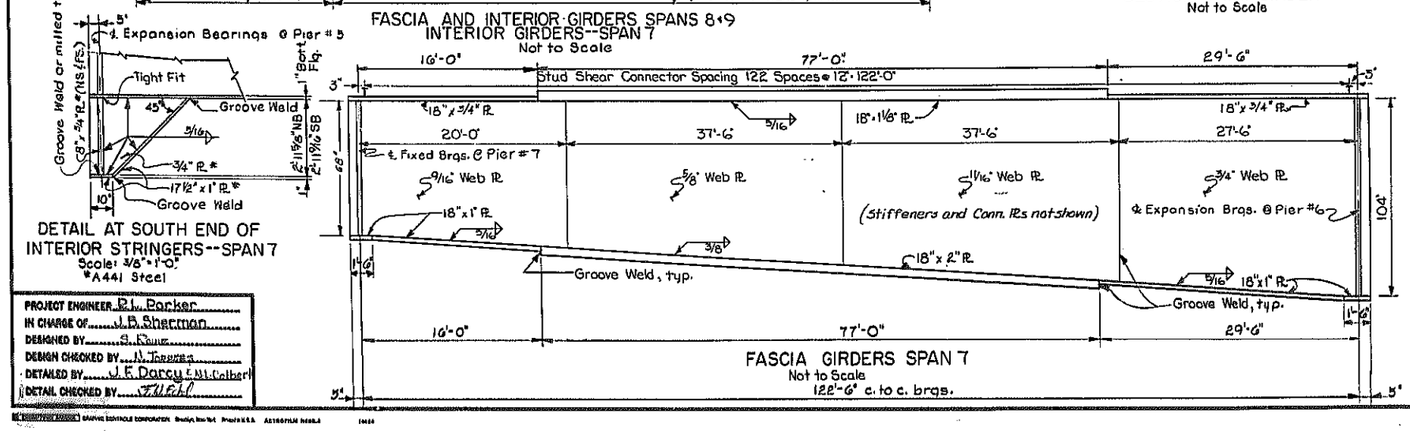
Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.



FASCIA AND INTERIOR GIRDERS SPANS 8 & 9
INTERIOR GIRDERS--SPAN 7
Not to Scale



SECTION THRU GIRDER
Not to Scale



DETAIL AT SOUTH END OF INTERIOR STRINGERS--SPAN 7
Scale: 3/8" = 1'-0"
*A441 Steel

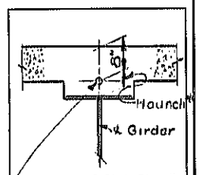
FASCIA GIRDERS SPAN 7
Not to Scale
122'-6" c. to c. brgs.

BEARING STIFFENER SIZES

Girder	Size of each plate (2 plates @ each end of girder)
Interior spans 7 & 9	8" X 3/4"
Fascia span 7	8" X 3/4"
Fascia spans 8 & 9	9" X 7/8"

BOTTOM OF SLAB ELEVATIONS

NORTHBOUND GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	SOUTHBOUND GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	7	448.60	447.95	447.22	G1	7	448.70	448.07	447.33
G2	7	448.81	448.16	447.42	G2	7	448.91	448.28	447.56
G3	7	448.77	448.11	447.37	G3	7	448.93	448.29	447.57
G4	7	448.52	447.87	447.12	G4	7	448.68	448.05	447.32
G1	8	447.20	446.37	445.45	G1	8	447.33	446.52	445.63
G2	8	447.40	446.57	445.65	G2	8	447.54	446.73	445.83
G3	8	447.35	446.52	445.59	G3	8	447.55	446.73	445.83
G4	8	447.10	446.27	445.34	G4	8	447.30	446.48	445.58
G1	9	445.43	444.42	443.53	G1	9	445.60	444.61	443.57
G2	9	445.63	444.62	443.58	G2	9	445.80	444.81	443.74
G3	9	445.57	444.56	443.46	G3	9	445.81	444.81	443.73
G4	9	445.32	444.50	443.20	G4	9	445.56	444.56	443.48



Bottom of Slab Elevation shown in table are computed for this point.

*Height of Haunch varies. See Table of Haunch Heights on Drawing No. 34

	GIRDER	SPAN	DEFLECTIONS STEEL (FT.)	SLAB (FT.)	SDL (FT.)	TOTAL (FT.)	CAMBER V.C.C. (FT.)	TOTAL (FT.)	TOTAL (IN.)
NB AND SB	G1	7	.05	.09	.06	.20	.04	.24	2 7/8
	G2	7	.08	.24	.03	.35	.04	.39	4 5/8
	G3	7	.08	.24	.03	.35	.04	.39	4 5/8
	G4	7	.05	.09	.06	.20	.04	.24	2 7/8
	G1	8	.07	.12	.08	.27	.04	.31	3 3/4
	G2	8	.08	.24	.03	.35	.04	.39	4 5/8
	G3	8	.08	.24	.03	.35	.04	.39	4 5/8
	G4	8	.07	.12	.08	.27	.04	.31	3 3/4
SB	G1	9	.07	.12	.08	.27	.02	.29	3 1/2
	G2	9	.08	.24	.03	.35	.05	.38	4 1/2
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4
NB	G1	9	.07	.12	.08	.27	-.06	.21	2 1/2
	G2	9	.08	.24	.03	.35	.01	.36	4 3/8
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4

V.C.C.= Vertical Curve Camber
S.D.L.= Superimposed dead load, includes the weight of sidewalk & railing.

PROJECT ENGINEER R.L. Parker
IN CHARGE OF J.B. Sherman
DESIGNED BY S. Kane
DESIGN CHECKED BY N. Tsoras
DETAILED BY J.F. Darcy & M. Colbert
DETAIL CHECKED BY F.W.F.H.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 8
SOUTHBOUND BIN 1093571

DRAWING NO. 24 OF 50

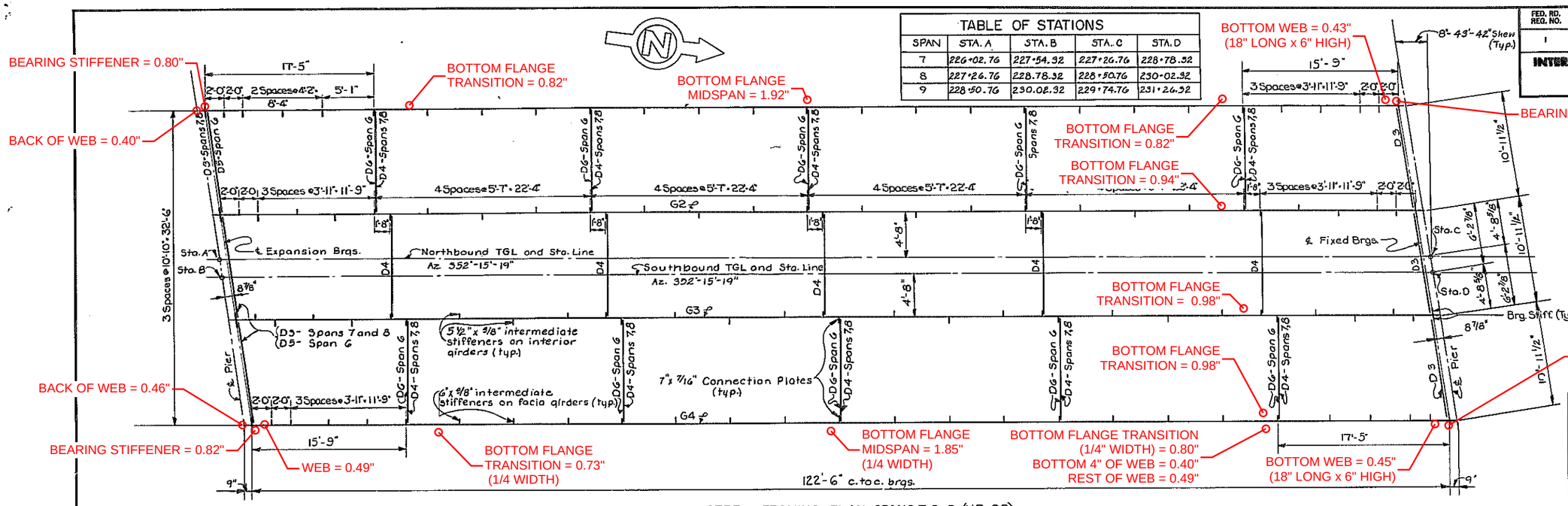
Br #2 DeWitt Yds Steel Framing
SPANS 6, 7 AND 8

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	202	302

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

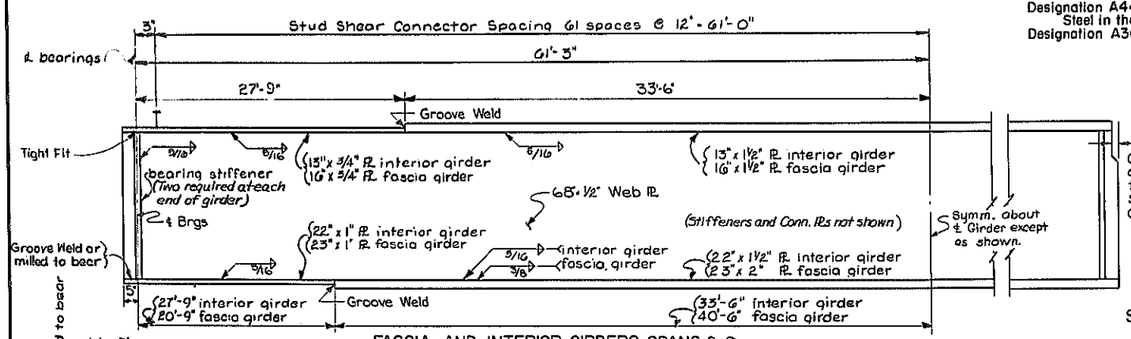
TABLE OF STATIONS				
SPAN	STA. A	STA. B	STA. C	STA. D
7	226+02.76	227+54.32	227+26.76	228+78.32
8	227+26.76	228.78.32	228+50.76	230+02.32
9	228+50.76	230.02.32	229+74.76	231+26.32



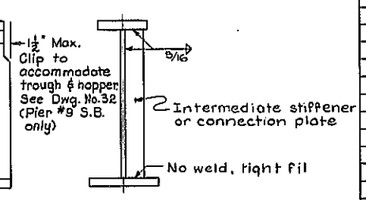
STEEL FRAMING PLAN SPANS 7, 8 & 9 (NB & SB)
Scale: 3/16" = 1'-0"

BEARING STIFFENER SIZES	
Girder	Size of each plate (2 plates @ each end of girder)
Interior spans 7 & 9	8" X 3/4"
Fascia span 7	8" X 3/4"
Fascia spans 8 & 9	9" X 7/8"

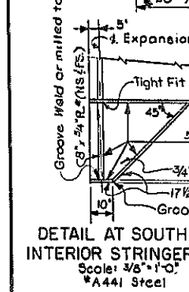
Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.



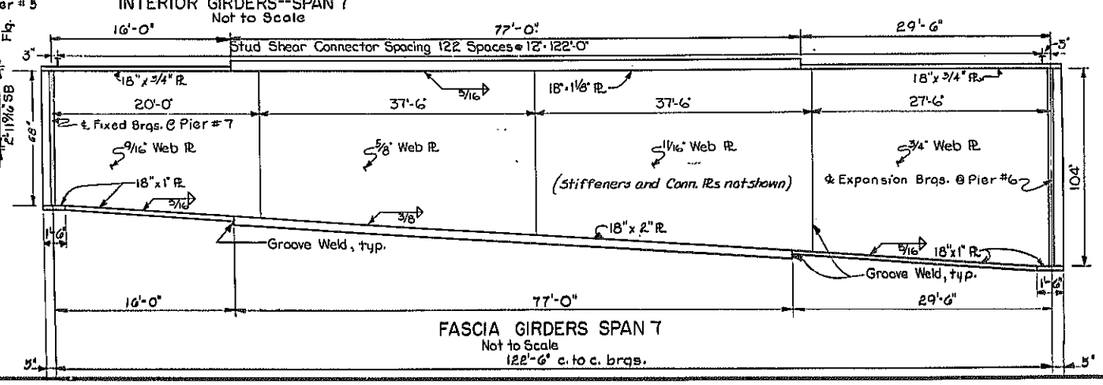
FASCIA AND INTERIOR GIRDERS SPANS 8 & 9
INTERIOR GIRDERS--SPAN 7
Not to Scale



SECTION THRU GIRDER
Not to Scale

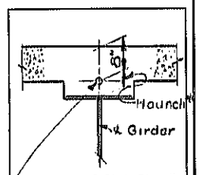


DETAIL AT SOUTH END OF INTERIOR STRINGERS--SPAN 7
Scale: 3/8" = 1'-0"
*A441 Steel



FASCIA GIRDERS SPAN 7
Not to Scale
122'-6" c. to c. brgs.

BOTTOM OF SLAB ELEVATIONS									
NORTHBOUND					SOUTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	7	448.60	447.95	447.22	G1	7	448.70	448.07	447.33
G2	7	448.81	448.16	447.42	G2	7	448.91	448.28	447.56
G3	7	448.77	448.11	447.37	G3	7	448.93	448.29	447.57
G4	7	448.52	447.87	447.12	G4	7	448.68	448.05	447.32
G1	8	447.20	446.37	445.45	G1	8	447.33	446.52	445.63
G2	8	447.40	446.57	445.65	G2	8	447.54	446.73	445.83
G3	8	447.35	446.52	445.59	G3	8	447.55	446.73	445.83
G4	8	447.10	446.27	445.34	G4	8	447.30	446.48	445.58
G1	9	445.43	444.42	443.53	G1	9	445.60	444.61	443.57
G2	9	445.63	444.62	443.58	G2	9	445.80	444.81	443.74
G3	9	445.57	444.56	443.46	G3	9	445.81	444.81	443.73
G4	9	445.32	444.50	443.20	G4	9	445.56	444.56	443.48



Bottom of Slab Elevation shown in table are computed for this point.

*Height of Haunch varies. See Table of Haunch Heights on Drawing No. 34

	GIRDER	SPAN	DEFLECTIONS STEEL (FT.)	SLAB (FT.)	SDL (FT.)	TOTAL (FT.)	CAMBER V.C.C. (FT.)	TOTAL (FT.)	TOTAL (IN.)
NB AND SB	G1	7	.05	.09	.06	.20	.04	.24	2 7/8
	G2	7	.08	.24	.03	.35	.04	.39	4 5/8
	G3	7	.08	.24	.03	.35	.04	.39	4 5/8
	G4	7	.05	.09	.06	.20	.04	.24	2 7/8
	G1	8	.07	.12	.08	.27	.04	.31	3 3/4
	G2	8	.08	.24	.03	.35	.04	.39	4 5/8
	G3	8	.08	.24	.03	.35	.04	.39	4 5/8
	G4	8	.07	.12	.08	.27	.04	.31	3 3/4
SB	G1	9	.07	.12	.08	.27	.02	.29	3 1/2
	G2	9	.08	.24	.03	.35	.05	.38	4 1/2
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4
NB	G1	9	.07	.12	.08	.27	-.06	.21	2 1/2
	G2	9	.08	.24	.03	.35	.01	.36	4 3/8
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4

V.C.C. = Vertical Curve Camber
S.D.L. = Superimposed dead load, includes the weight of sidewalk & railing.

PROJECT ENGINEER P.L. Parker
IN CHARGE OF J.B. Sherman
DESIGNED BY S. Kane
DESIGN CHECKED BY N. Tsoras
DETAILED BY J.F. Darcy & M. Colbert
DETAIL CHECKED BY F.W.F.H.

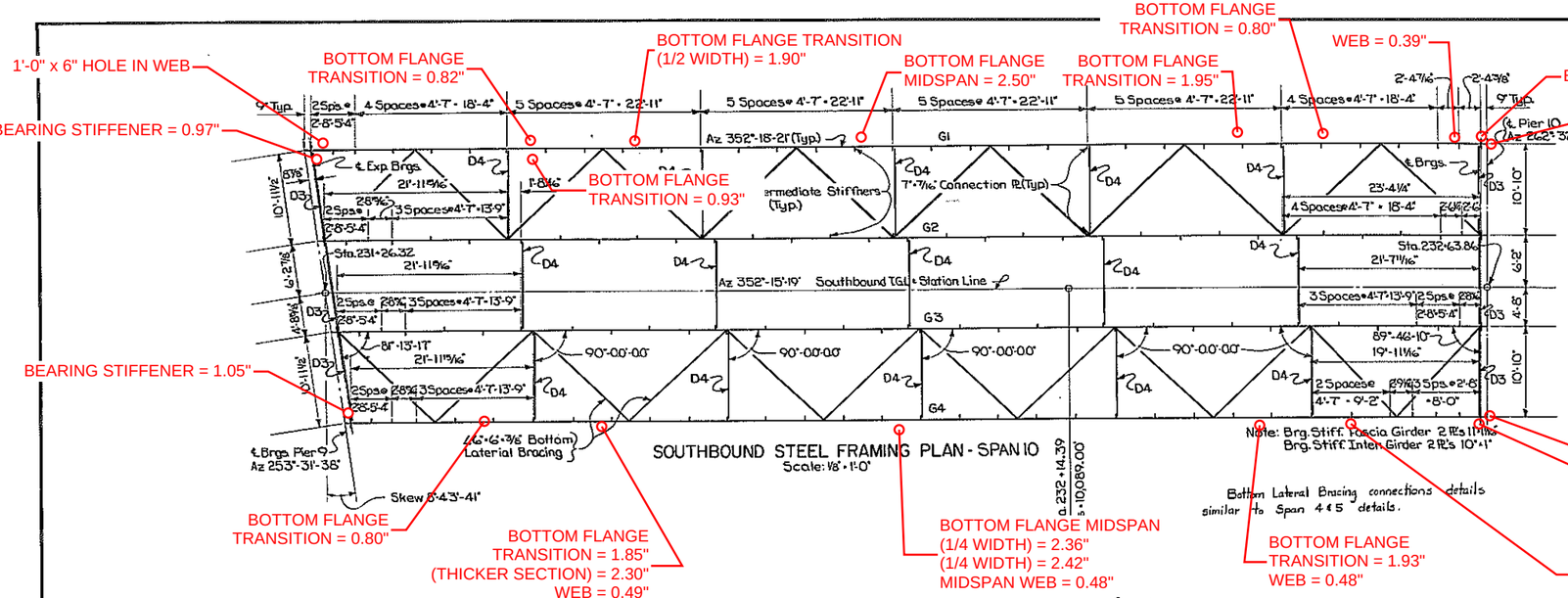
BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS
SPANS 9
SOUTHBOUND BIN 1093571
DRAWING NO. 24 OF 50

Br #2 DeWitt Yds Steel Framing
SPANS 6, 7 AND 8

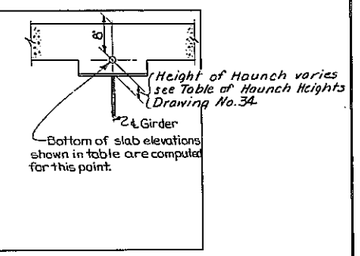
F.I.S.H. 70-7

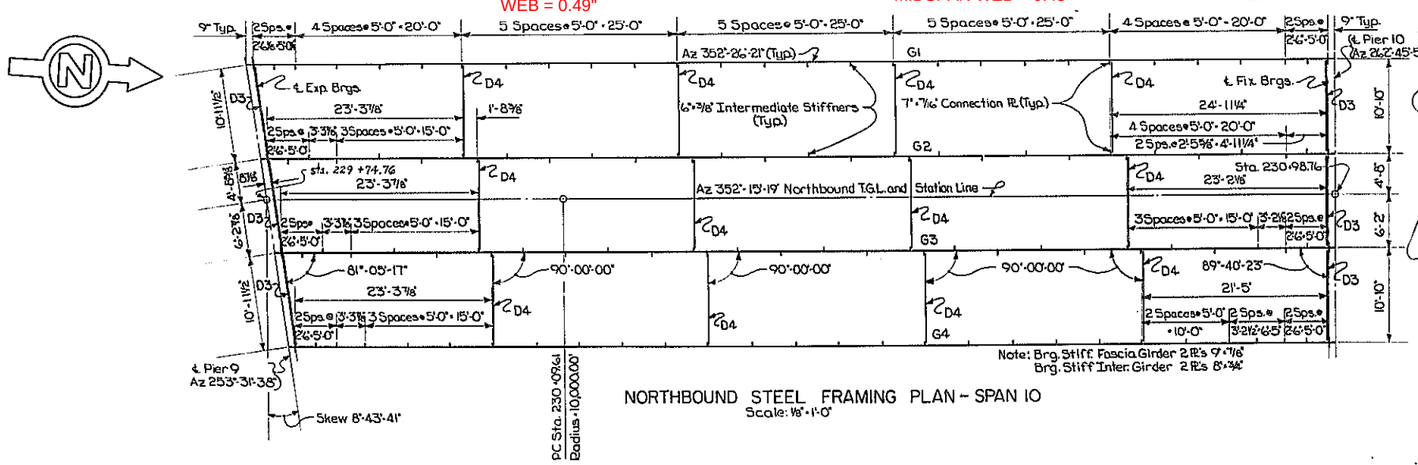
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
I	NEW YORK	I-690-3(28) I-481-2(116)	204	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

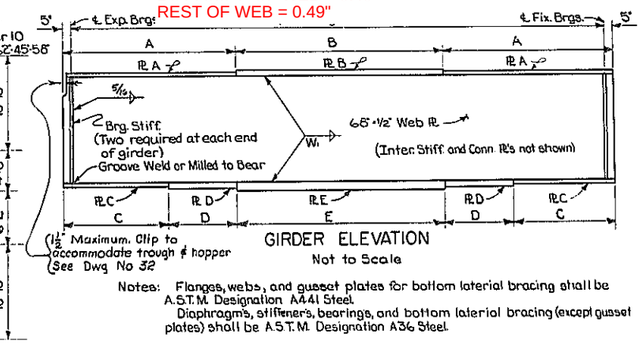


BOTTOM OF SLAB ELEVATIONS				
SOUTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	10	443.54	442.46	441.26
G2	10	443.72	442.49	441.15
G3	10	443.70	442.40	440.99
G4	10	443.45	442.16	440.77
NORTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	10	443.50	442.49	441.39
G2	10	443.56	442.42	441.19
G3	10	443.43	442.24	440.98
G4	10	443.17	442.00	440.75



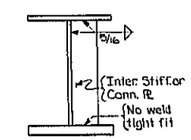


NORTHBOUND STEEL FRAMING PLAN - SPAN 10
Scale: 1/8" = 1'-0"



GIRDER ELEVATION
Not to Scale

Notes: Flanges, webs, and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Steel.
Diaphragms, stiffeners, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36 Steel.



TYPICAL SECTION
Not to Scale

WELD SIZE TABLE	
Thickness of Flange	W_1 Size of fillet weld joining web to flange
1 1/2" and under	5/16"
over 1 1/2" to 2 1/4"	3/8"
over 2 1/4"	1/2"

SPAN 10 GIRDER TABLE

	GIRDER	SPAN LENGTH ℄ TO ℄ BRGS.	FLANGE PLATE SIZES Pl. A	Pl. B	Pl. C	Pl. D	Pl. E	FLANGE PLATE LENGTHS A	B	C	D	E	DEFLECTIONS (FT) STEEL	CONC.	S.D.L.	TOTAL	CAMBER V.C.C. (FT.)	TOTAL (INCHES)	(INCHES)	STUD SHEAR CONNECTOR SPACING
Southbound	G1	138'-8 15/16"	23"x1"	23"x1 1/2"	24"x1"	24"x2"	24"x2 1/2"	36'-9 7/16"	66'-0"	20'-3 7/16"	19'-0"	61'-0"	0.10	0.15	0.11	0.36	.06	0.42'	5"	138 Spaces @ 12" = 138'-0"
Southbound	G2	137'-0 3/16"	19"x7/8"	19"x1 1/2"	24"x1"	None	24"x2"	32'-11 7/16"	72'-0"	23'-5 7/16"	0	91'-0"	0.11	0.28	0.04	0.43	.06	0.49	5 7/16"	137 Spaces @ 12" = 137'-0"
Southbound	G3	135'-3 5/16"	19"x7/8"	19"x1 1/2"	24"x1"	None	24"x2"	32'-0 9/16"	72'-0"	22'-6 9/16"	0	91'-0"	0.10	0.27	0.04	0.41	.05	0.46	5 1/2"	135 Spaces @ 12" = 135'-0"
Southbound	G4	133'-7"	23"x1"	23"x1 1/2"	24"x1"	24"x2"	24"x2 1/2"	34'-2 1/2"	66'-0"	17'-8 1/2"	19'-0"	61'-0"	0.09	0.13	0.09	0.31	.05	0.36	4 3/16"	133 Spaces @ 12" = 133'-0"
Northbound	G1	125'-0 1/4"	17"x3/4"	17"x1 1/2"	24"x1"	None	24"x2"	28'-11 1/16"	68'-0"	21'-5 1/16"	0	83'-0"	0.07	0.12	0.09	0.28	.05	0.33	4"	125 Spaces @ 12" = 125'-0"
Northbound	G2	123'-3 1/8"	14"x3/4"	14"x1 1/2"	23"x1"	None	23"x1 1/2"	27'-6 9/16"	69'-0"	28'-0 9/16"	0	68'-0"	0.08	0.24	0.03	0.35	.05	0.40	4 3/4"	123 Spaces @ 12" = 123'-0"
Northbound	G3	121'-6"	14"x3/4"	14"x1 1/2"	23"x1"	None	23"x1 1/2"	26'-8"	69'-0"	27'-2"	0	68'-0"	0.07	0.23	0.03	0.33	.04	0.37	4 1/2"	121 Spaces @ 12" = 121'-0"
Northbound	G4	119'-8 7/16"	17"x3/4"	17"x1 1/2"	24"x1"	None	24"x2"	26'-3 7/16"	68'-0"	18'-9 7/16"	0	83'-0"	0.06	0.10	0.08	0.24	.04	0.28	3 3/16"	119 Spaces @ 12" = 119'-0"

S.D.L. = superimposed dead load, includes weight of railing and parapet.
V.C.C. = vertical curve correction

PROJECT ENGINEER R.L. Parker
IN CHARGE OF E. Eckel
DESIGNED BY G. Pave
DESIGN CHECKED BY Terence A. Smith
DETAILED BY J.E. Darcy
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPAN 10
SOUTHBOUND BIN 1093571

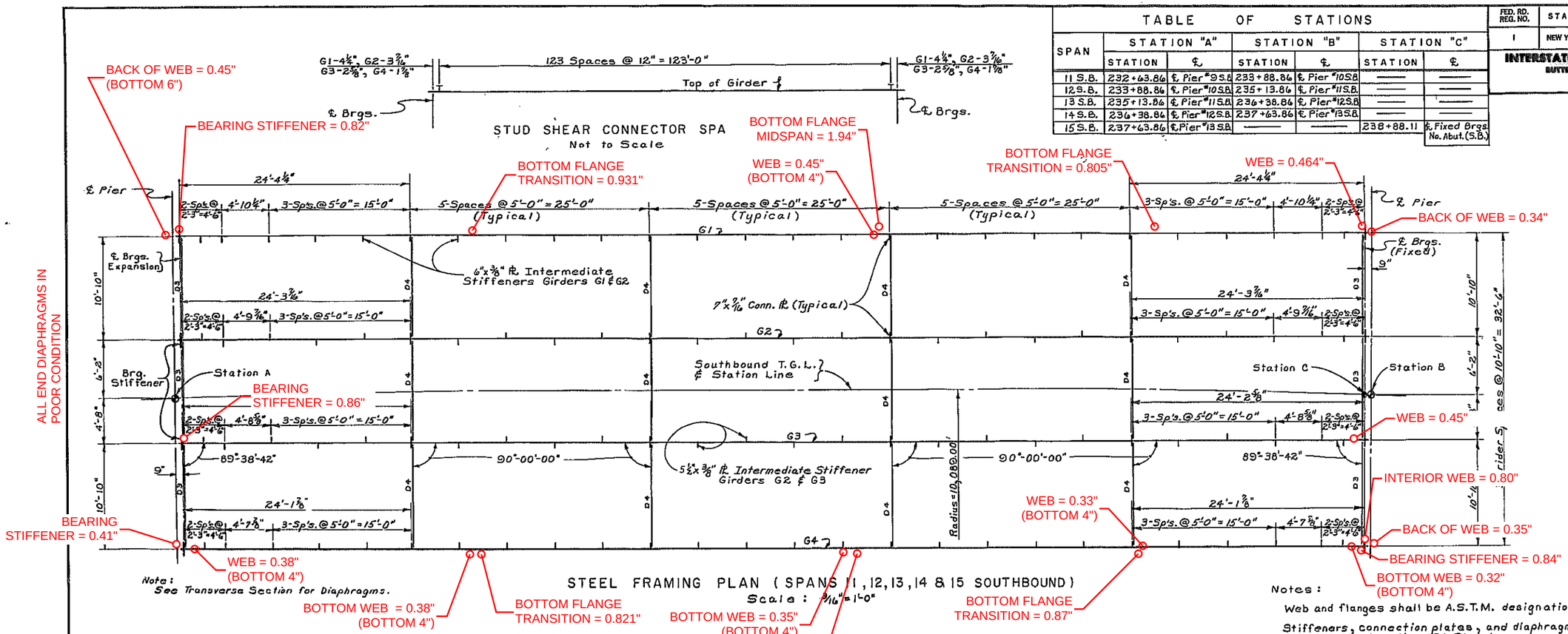
DRAWING NO. 26 OF 50

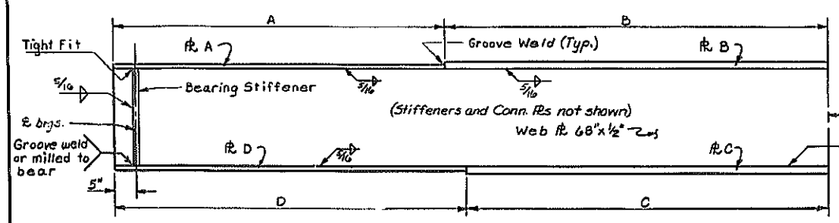
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

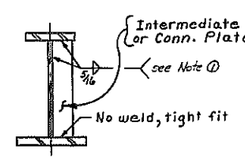
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)





GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

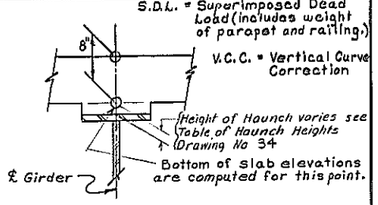
GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)
V.C.C. = Vertical Curve Correction

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (S.B.)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES PL A	PL B	PL C	PL D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-PL's. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	39'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	39'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. R. Sherman
DESIGNED BY N. R. Tappeser
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY T. W. Hill

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 11
SOUTHBOUND BIN 1093571

DRAWING NO. 28 OF 50

SPANS 10 THRU 14 SOUTHBOUND

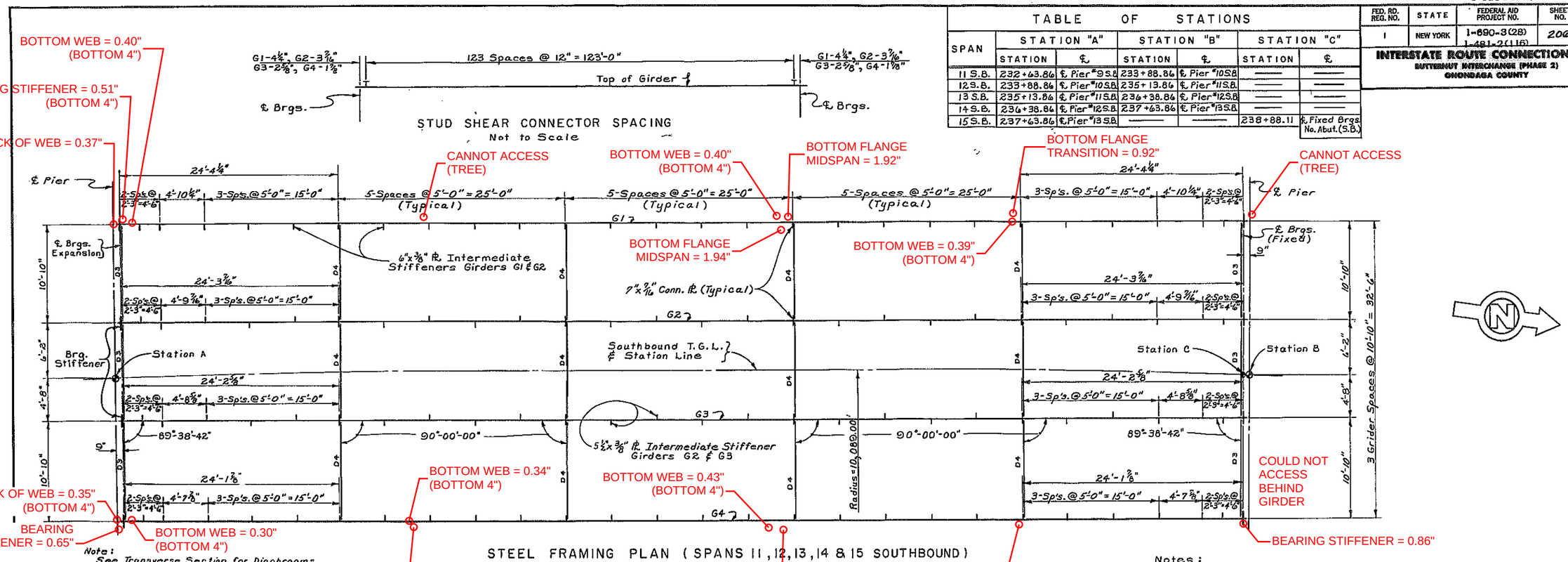
Steel Layout for Spans 10, 11, 12, 13 & 14

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

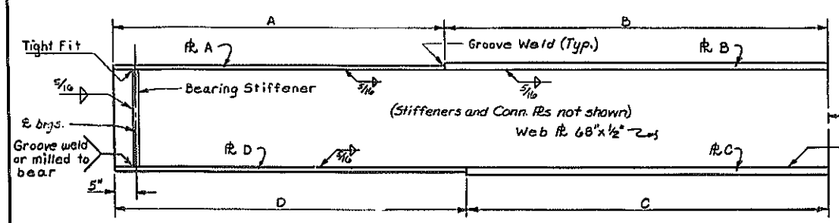


STEEL FRAMING PLAN (SPANS 11, 12, 13, 14 & 15 SOUTHBOUND)
Scale: 3/16" = 1'-0"

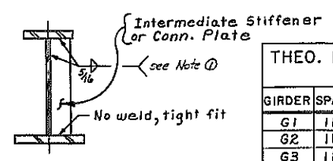
Notes:

Web and flanges shall be A.S.T.M. designation A441 Steel.

Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

V.C.C. = Vertical Curve Correction

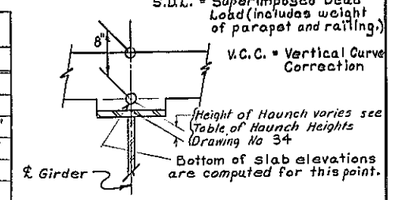


TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (S.B.)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"

SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES ℞ A	℞ B	℞ C	℞ D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-℞s. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. A. Sherman
DESIGNED BY N. A. Tappeser
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY Tolfall

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 12
SOUTHBOUND BIN 1093571

DRAWING NO. 28 OF 50

SPANS 10 THRU 14 SOUTHBOUND

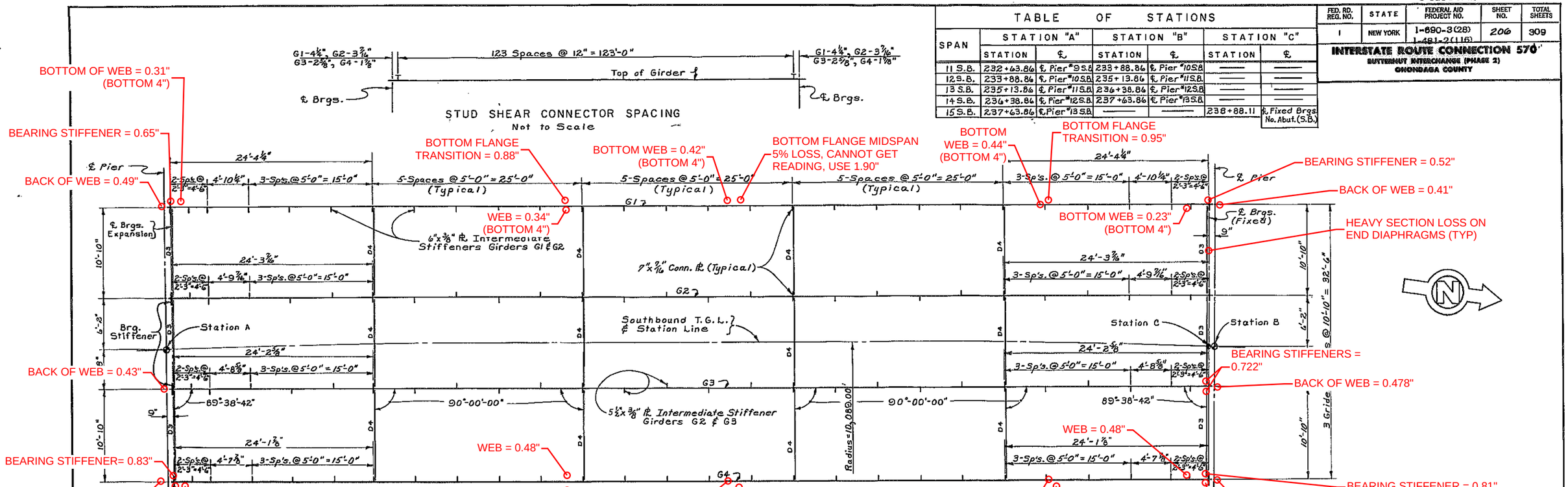
Steel Layout for Spans 10, 11, 12, 13 & 14

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

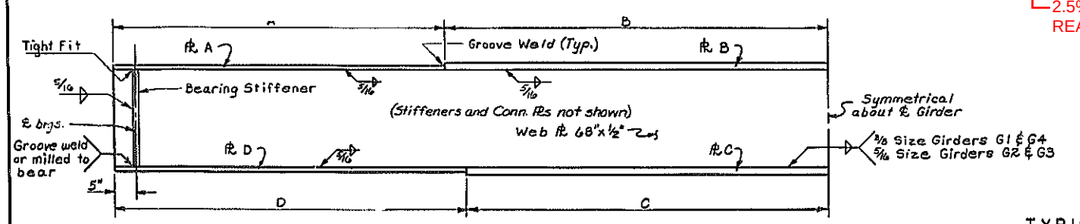
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

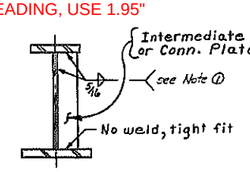


STEEL FRAMING PLAN (SPANS 11, 12, 13, 14 & 15 SOUTHBOUND)
Scale: 3/16" = 1'-0"

Notes:
Web and flanges shall be A.S.T.M. designation A441 Steel.
Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

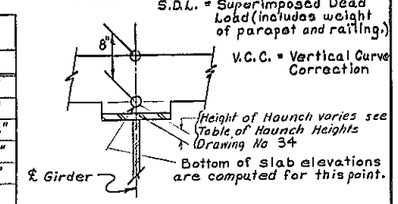
GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (SB)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES ⌶ A	⌶ B	⌶ C	⌶ D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-⌶'s. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9½"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. R. Sherman
DESIGNED BY N. R. Tappeser
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY T. Wolf

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 13
SOUTHBOUND BIN 1093571

DRAWING NO. 28 OF 50

SPANS 10 THRU 14 SOUTHBOUND

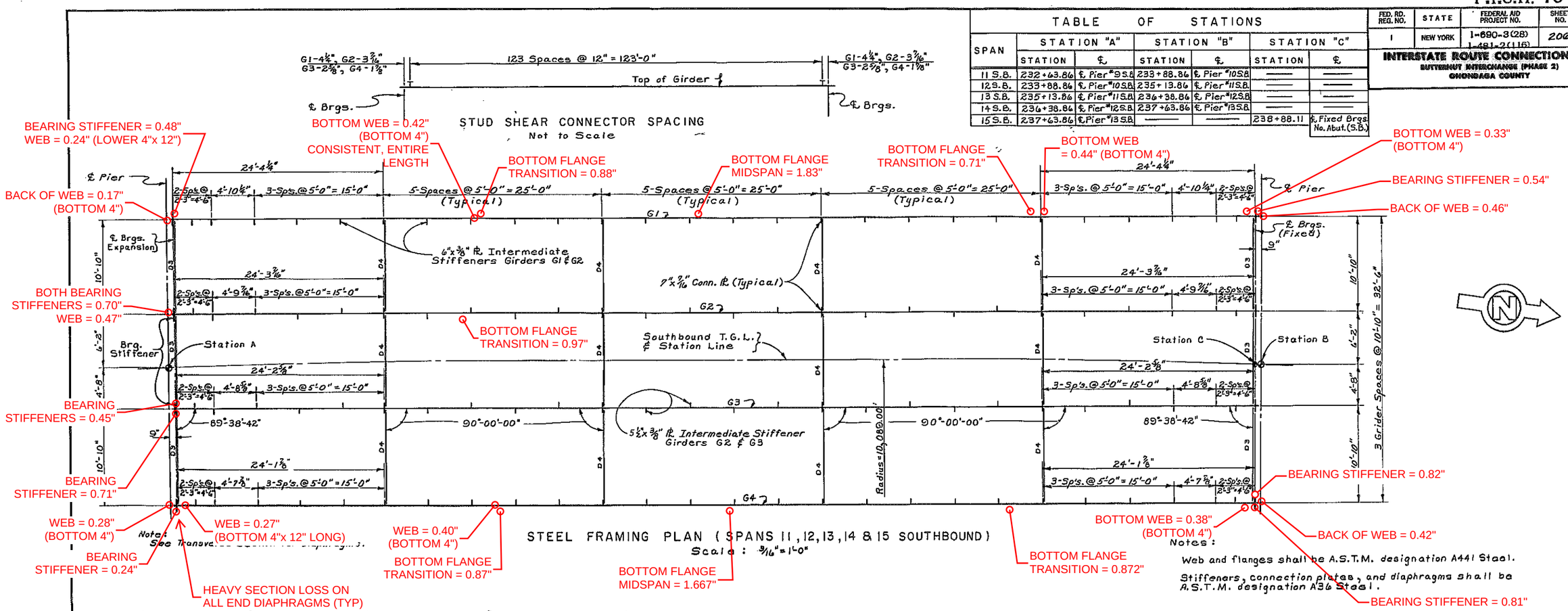
Steel Layout for Spans 10, 11, 12, 13 & 14

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

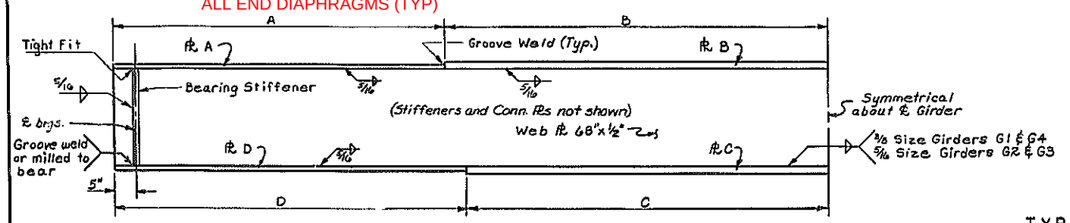
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

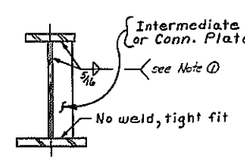


Notes: See Transverse Section for diaphragms.

Notes:
Web and flanges shall be A.S.T.M. designation A441 Steel.
Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV.
(Southbound)

GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.14	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

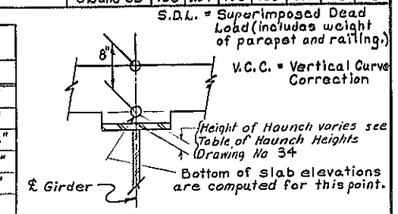
SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

V.C.C. = Vertical Curve Correction

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (SB)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES PL A	PL B	PL C	PL D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-PLs. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. A. Sherman
DESIGNED BY N. A. Tappese
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY T. Wall

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 14
SOUTHBOUND BIN 1093571

DRAWING NO. 28 OF 50

SPANS 10 THRU 14 SOUTHBOUND

Steel Layout for Spans 10, 11, 12, 13 & 14

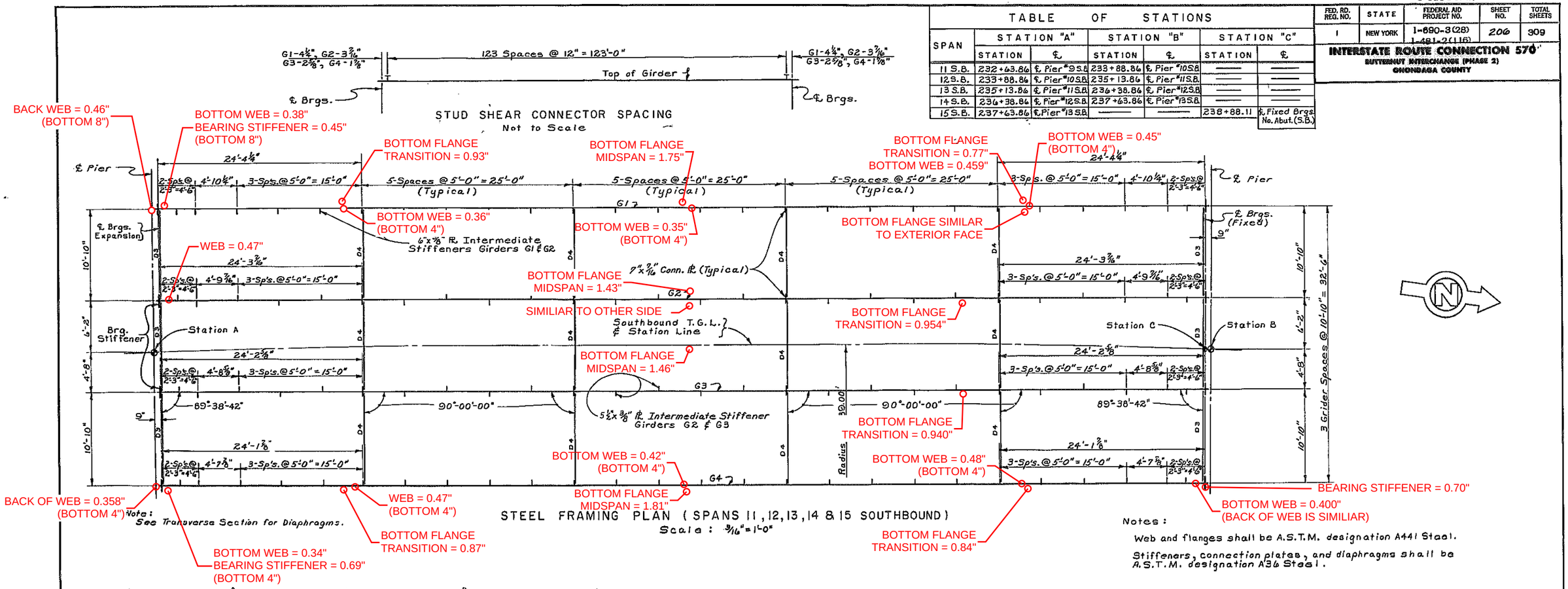
F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

TABLE OF STATIONS

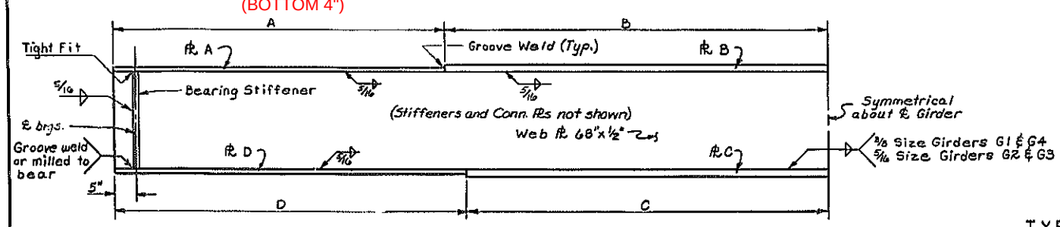
SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)



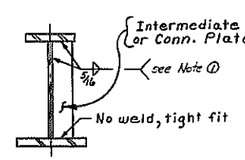
Notes:

Web and flanges shall be A.S.T.M. designation A441 Steel.

Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

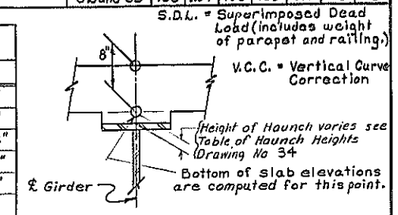
TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (S.B.)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3 3/4
	G2 and G3	.08	.24	.03	.35	.04	.39	4 5/8
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2 5/8
	G2 and G3	.08	.24	.03	.35	-.05	.30	3 5/8
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2 3/8
	G2 and G3	.08	.24	.03	.35	-.07	.28	3 3/8

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

V.C.C. = Vertical Curve Correction



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES PL A	PL B	PL C	PL D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-PL's. required each end of Girder	Intermediate Stiffener Size
G1	123'-8 1/2"	16"x 3/4"	16"x 1 1/2"	23"x 2"	23"x 1"	28'-9 1/4"	33'-6"	40'-6"	21'-9 1/4"	9"x 7/8"	6"x 3/8"
G2	123'-6 15/16"	13"x 3/4"	13"x 1 1/2"	22"x 1 1/2"	22"x 1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x 3/4"	5 1/2"x 3/8"
G3	123'-5 5/16"	13"x 3/4"	13"x 1 1/2"	22"x 1 1/2"	22"x 1"	28'-7 5/8"	33'-6"	33'-6"	28'-7 5/8"	8"x 3/4"	5 1/2"x 3/8"
G4	123'-3 11/16"	16"x 3/4"	16"x 1 1/2"	23"x 2"	23"x 1"	28'-6 7/8"	33'-6"	40'-6"	21'-6 7/8"	9"x 7/8"	6"x 3/8"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. R. Sherman
DESIGNED BY N. A. Teppesse
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 15
SOUTHBOUND BIN 1093571

DRAWING NO. 28 OF 50

SPANS 10 THRU 14 SOUTHBOUND

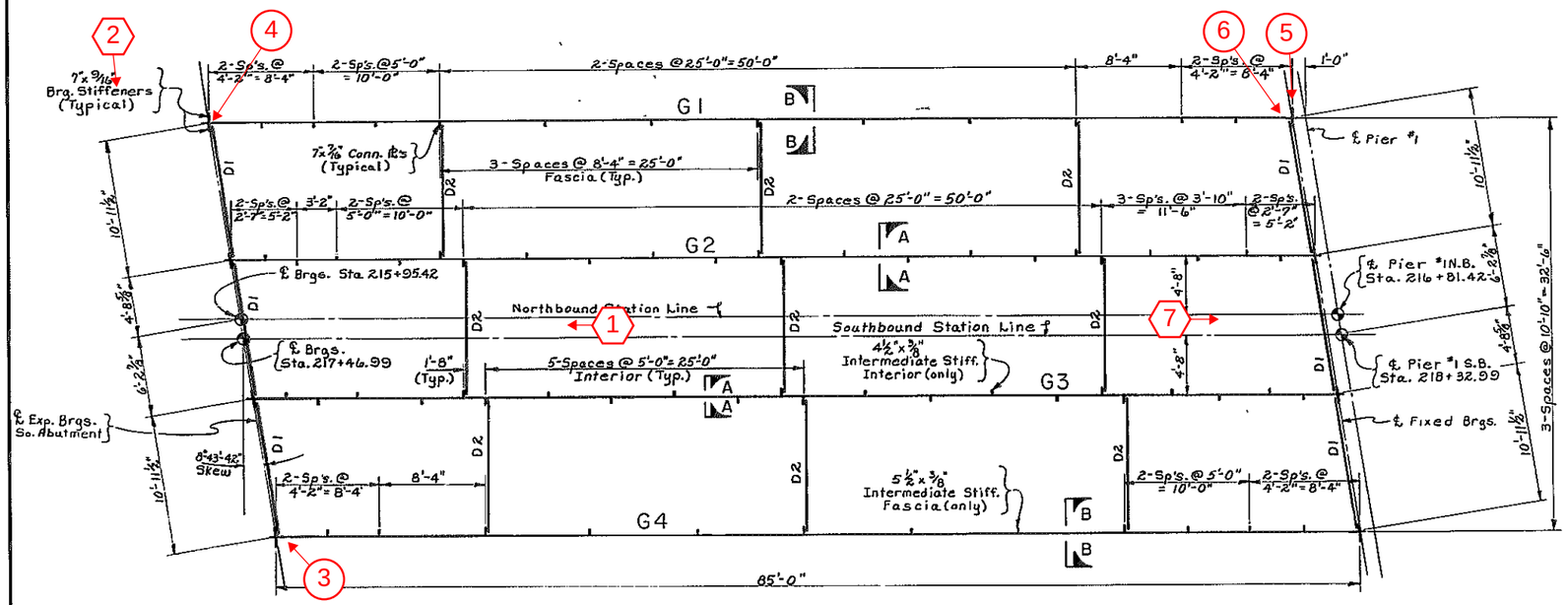
Steel Layout for Spans 10, 11, 12, 13 & 14

IN-DEPTH PHOTO DOCUMENTATION

F.I.S.H. 70-7

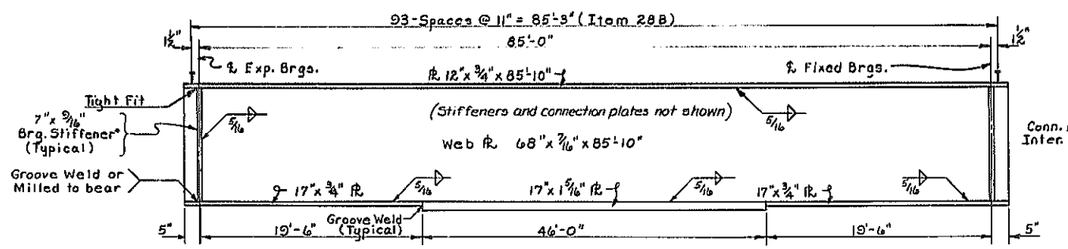
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	196	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



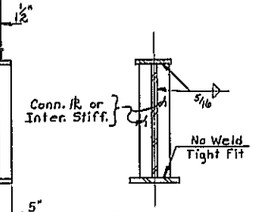
see Transverse Section for Diaphragms.

STEEL LAYOUT (S.B. & N.B.)
Scale : 3/16" = 1'-0"

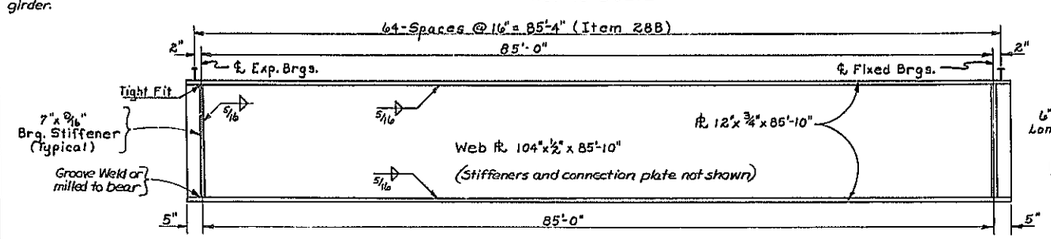


*Two bearing stiffeners required at each end of girder.

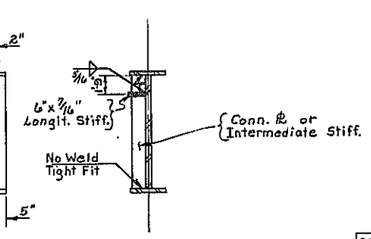
INTERIOR GIRDER ELEVATION (S.B. & N.B.)
Not to Scale



SECTION A-A
Not to Scale



FASCIA GIRDER ELEVATION (S.B. & N.B.)
Not to Scale



SECTION B-B
Not to Scale

Notes :

Web and flanges shall be ASTM designation A36 steel.

Stiffeners, Connection Plates, Diaphragm and Gusset Plates shall be ASTM designation A36 steel.

For Bearing Details see Drawing Nos. 42 & 43.

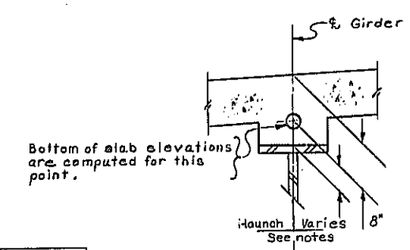
Stud Shear Connectors shall be 6" high and placed in pairs. See Drawing No. 42 for additional details.

For Height of Haunch see Table of Haunch Heights Drawing No. 34.

LEGEND

(#) SUPERSTRUCTURE PHOTOS

⟨#⟩ SUBSTRUCTURE PHOTOS



GIRDER	SPAN	THEO. BOTTOM OF SLAB ELEVATIONS ℄ Exp. Brgs.	℄ Span	℄ Fix. Brgs.	DEFLECTIONS (FT.) STEEL	SLAB	SDL	TOTAL	CAMBER V.C.C. (ft.)	TOTAL (ft.)	(in.)
G1 N.B.	1	446.55	447.12	447.65	.01	.03	.01	.05	.02	.07	7/8
G2 N.B.	1	446.80	447.40	447.90	.02	.08	.02	.12	.02	.14	1 11/16
G3 N.B.	1	446.79	447.36	447.89	.02	.08	.02	.12	.02	.14	1 11/16
G4 N.B.	1	446.59	447.16	447.68	.01	.03	.01	.05	.02	.07	7/8
G1 S.B.	1	446.34	446.92	447.46	.01	.03	.01	.05	.02	.07	7/8
G2 S.B.	1	446.59	447.17	447.71	.02	.08	.02	.12	.02	.14	1 11/16
G3 S.B.	1	446.64	447.22	447.76	.02	.08	.02	.12	.02	.14	1 11/16
G4 S.B.	1	446.44	447.02	447.55	.01	.03	.01	.05	.02	.07	7/8

V.C.C. = Vertical Curve Correction

S.D.L. = Superimposed Dead Load, includes weight of railing.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPAN 1 SOUTHBOUND
BIN 1093571

PHOTO LOCATION PLAN

PROJECT ENGINEER R. Parker
IN CHARGE OF F. Eckel
DESIGNED BY N. Toppass
DESIGN CHECKED BY R. Thimble
DETAILED BY J.C. Thompson
DETAIL CHECKED BY H. A. Thomas

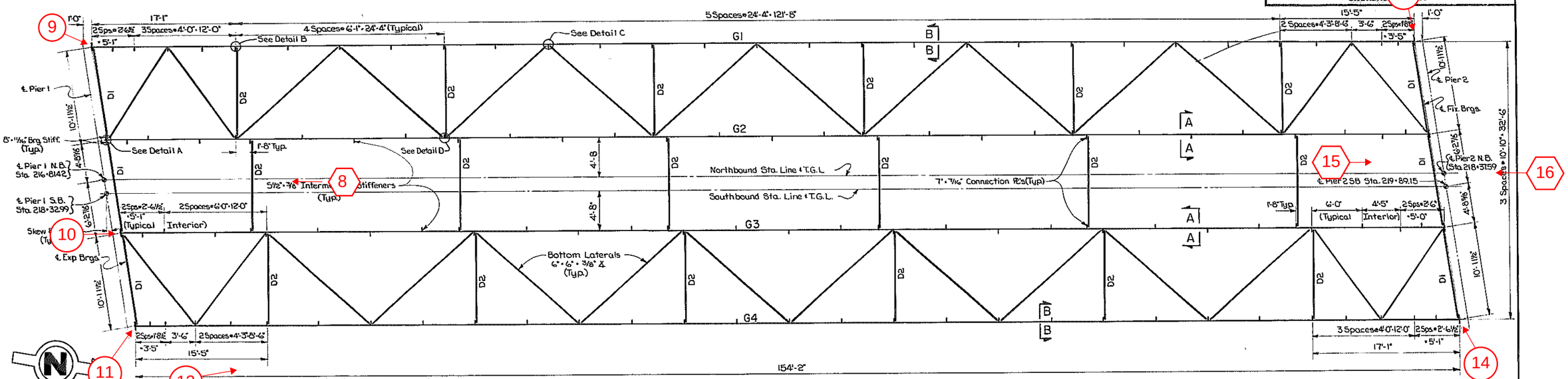
Dewitt Yards 3060.00 -76
Steel Layout Span 1

SH #20

F.I.S.H. 70-7

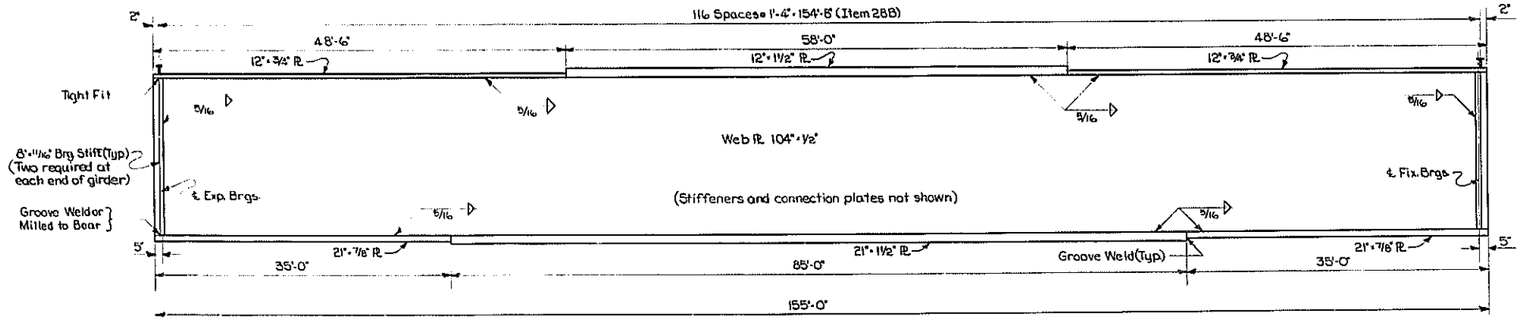
FED. RD. REGL. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
I	NEW YORK	I-590-3(28) I-481-2(116)	198	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTER (PHASE 2)
ONONDAGA COUNTY

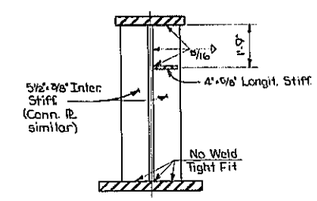


Notes: See Transverse Section for Diaphragms and Lateral Bracing.
See Drawing No. 22 for Cross Lateral Bracing Details A, B, C & D.

STEEL FRAMING PLAN NB & SB
Scale: 3/16"=1'-0"



FASCIA & INTERIOR GIRDER ELEVATION NB & SB
Not to Scale

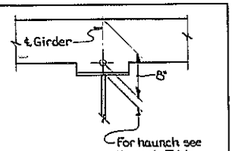


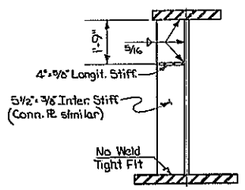
SECTION A-A
Not to Scale

Notes:
Web and flanges shall be A.S.T.M designation A441 Steel.
Stiffeners, connection plates, diaphragms, lateral bracing and gusset plates shall be A.S.T.M. designation A36 Steel.
For details of bearings see Dwg. No. 42 & 43.
Stud Shear Connectors shall be 6" high.

GIRDER	SPAN	THEO. BOTTOM OF SLAB ELEVATIONS ℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	DEFLECTIONS (FT.) STEEL	SLAB	SDL.	TOT.	CAMBER V.C.C. (FT.)	TOTAL (FT.)	(IN.)
G1 NB	2	447.67	448.52	449.23	.08	.16	.07	.31	.07	.38	4 9/16
G2 NB	2	447.92	448.76	449.47	.08	.24	.07	.39	.07	.46	5 1/2
G3 NB	2	447.91	448.75	449.45	.08	.24	.07	.39	.07	.46	5 1/2
G4 NB	2	447.70	448.54	449.24	.08	.16	.07	.31	.07	.38	4 9/16
G1 SB	2	447.48	448.35	449.08	.08	.16	.07	.31	.07	.38	4 9/16
G2 SB	2	447.73	448.60	449.32	.08	.24	.07	.39	.07	.46	5 1/2
G3 SB	2	447.78	448.65	449.37	.08	.24	.07	.39	.07	.46	5 1/2
G4 SB	2	447.58	448.44	449.16	.08	.16	.07	.31	.07	.38	4 9/16

V.C.C. - Vertical Curve Correction
S.D.L. - Superimposed Dead Load, includes weight of railing.





SECTION B-B
Not to Scale

LEGEND

(#) SUPERSTRUCTURE PHOTOS

(#) SUBSTRUCTURE PHOTOS

BRIDGE NO. 2
INTERSTATE ROUTE 381 OVER DEWITT YARDS

SPAN 2 SOUTHBOUND
BIN 1093571 NO. 20 OF 50

PHOTO LOCATION PLAN

PROJECT ENGINEER R.L. Parker
IN CHARGE OF E. Eckel
DESIGNED BY N.A. Toppses
DESIGN CHECKED BY R. Thimble
DETAILED BY J.F. Darcy
DETAIL CHECKED BY N.A. Toppses

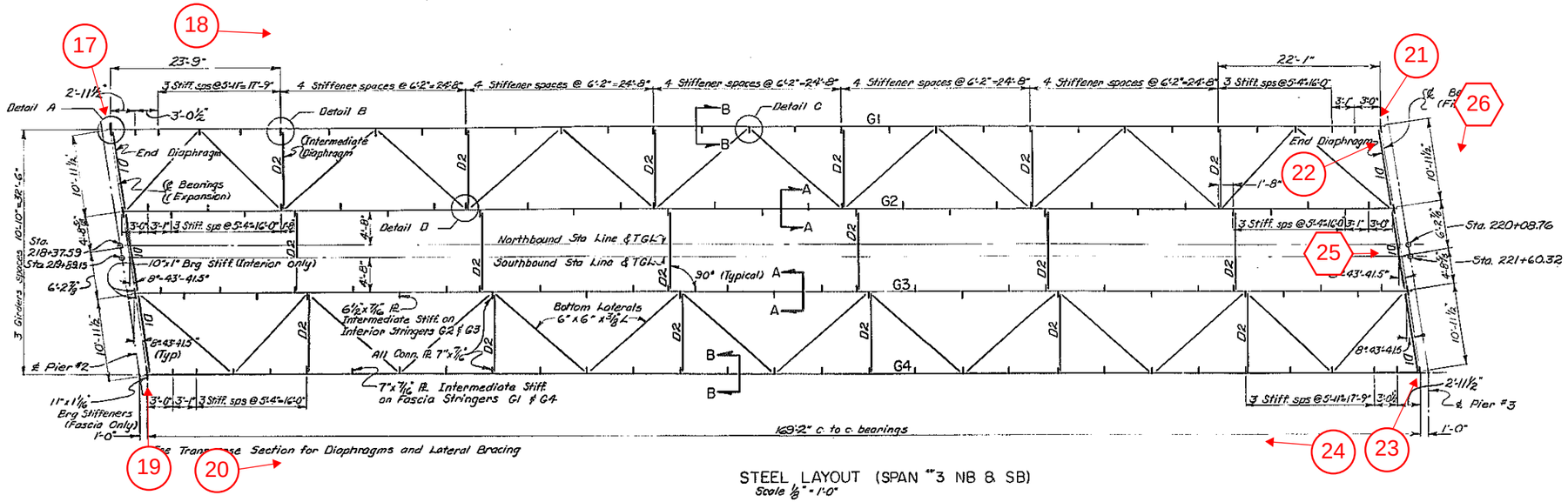
Use with Yth. Span 2 Steel layout

3003-00

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	199	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



Typical Transverse Section for Diaphragms and Lateral Bracing

STEEL LAYOUT (SPAN #3 NB & SB)
Scale 1/8" = 1'-0"

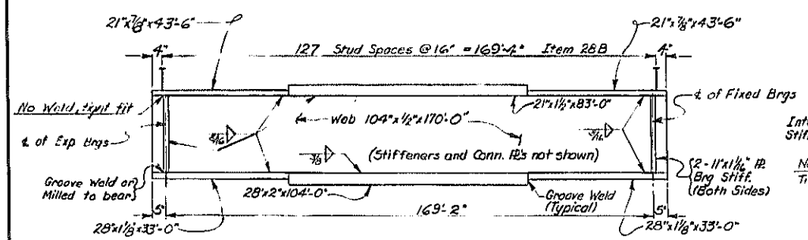
Note: Stud Shear Connectors shall be 6" high.

For Bearings Details see Drawing # 42 and 43
For Joint Details see Drawing # 31
For Trough Details see Drawing # 39

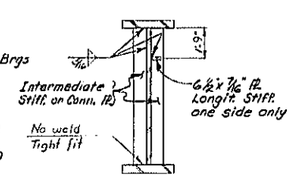
LEGEND

(#) SUPERSTRUCTURE PHOTOS

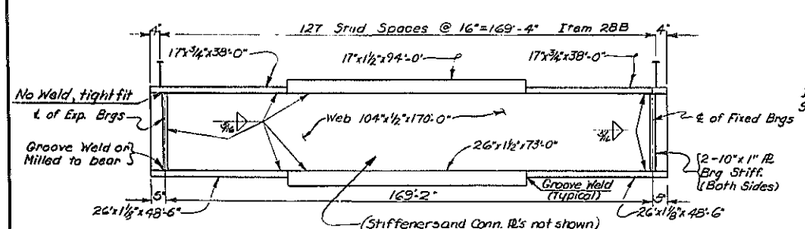
(#) SUBSTRUCTURE PHOTOS



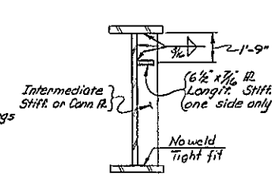
FASCIA GIRDER ELEVATION (G1 & G4)
Not to Scale



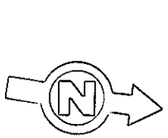
SECTION A-A
Not to Scale
Note: All Conn. Plates 7"x7/16"

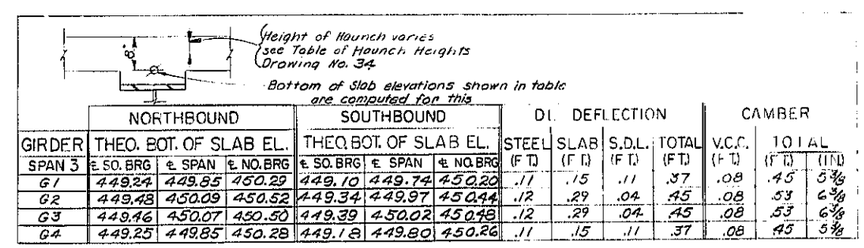


INTERIOR GIRDER ELEVATION (G2 & G3)
Not to Scale



SECTION B-B
Not to Scale
Note: All Conn. Plates 7"x7/16"

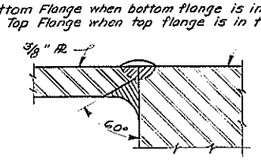




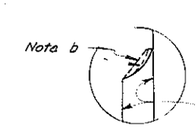
GIRDER	NORTHBOUND THEO. BOT. OF SLAB EL.			SOUTHBOUND THEO. BOT. OF SLAB EL.			DL DEFLECTION STEEL (FT)	SLAB (FT)	S.D.L. (FT)	TOTAL (FT)	CAMBER V.C.C. (FT)	TOTAL (FT)	(IN)
SPAN 3	℄ SO. BRG	℄ SPAN	℄ NO. BRG	℄ SO. BRG	℄ SPAN	℄ NO. BRG							
G1	449.24	449.85	450.29	449.10	449.74	450.20	.11	.15	.11	.37	.08	.45	5 3/8
G2	449.48	450.09	450.52	449.34	449.97	450.44	.12	.29	.04	.45	.08	.53	6 3/8
G3	449.46	450.07	450.50	449.39	450.02	450.48	.12	.29	.04	.45	.08	.53	6 3/8
G4	449.25	449.85	450.28	449.18	449.80	450.26	.11	.15	.11	.37	.08	.45	5 3/8

S.D.L. = superimposed dead load, includes weight of parapet and railing.
V.C.C. = vertical curve correction

Top of Bottom Flange when bottom flange is in tension
Bottom of Top Flange when top flange is in tension



DETAIL "1



DETAIL "2

Note:
a. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
b. The plate may be of any shape that will provide often welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
c. Both the connection plate and flange are to be the same type of steel.
d. Field welding to the connection plate will not be permitted.

LATERAL BRACING DETAILS
Not to Scale

The webs, flanges and gusset plates for bottom lateral bracing for the span 3 girders shall be A.S.T.M. Designation A441 steel. Stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. A36 steel.

For additional details of bottom lateral bracing see drawing No. 22

PROJECT ENGINEER R. PARKER
IN CHARGE OF E.W. EGNEL
DESIGNED BY G. Rowe
DESIGN CHECKED BY H. Tarzes
DETAILED BY Ito Quevat
DETAIL CHECKED BY D.H. Smith

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS
BIN 1093571 SOUTHBOUND
SPAN 3
PHOTO LOCATION PLAN

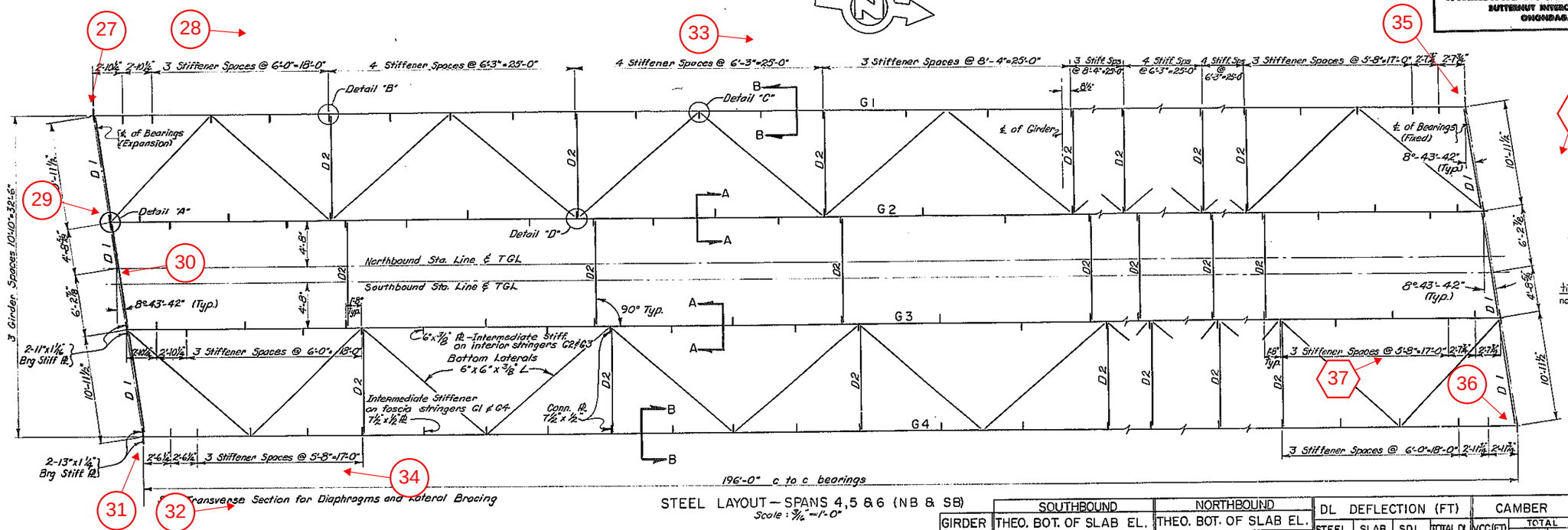
3003.00

3060.00 76

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL A/D PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	200	309

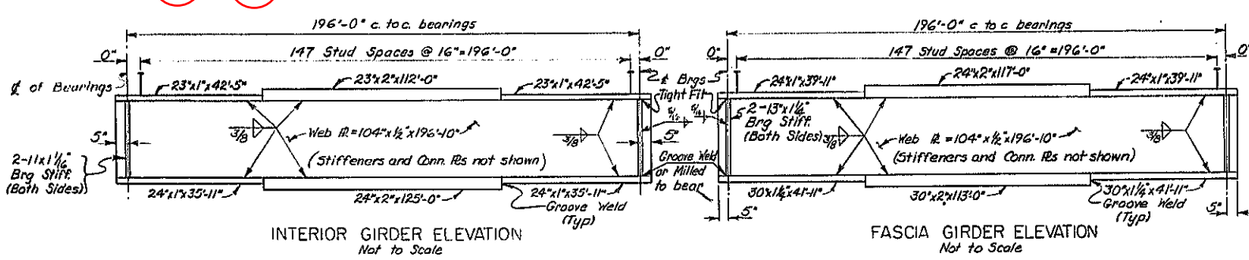
INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



Transverse Section for Diaphragms and Lateral Bracing

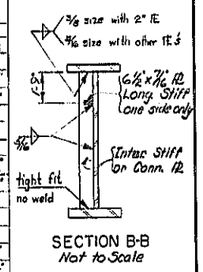
STEEL LAYOUT — SPANS 4,5 & 6 (NB & SB)
Scale: 3/16"=1'-0"

GIRDER	SOUTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	NORTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	DL DEFLECTION (FT) STEEL	SLAB	SDL	TOTAL DL	CAMBER VCC(FT)	TOTAL FEET	TOTAL INCHES
SPAN 4													
G1	450.21	450.54	450.65	450.30	450.59	450.66	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.45	450.77	450.86	450.53	450.82	450.89	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.48	450.80	450.89	450.51	450.80	450.85	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.27	450.58	450.67	450.29	450.57	450.63	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 5													
G1	450.63	450.50	450.14	450.66	450.50	450.10	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.86	450.72	450.36	450.89	450.72	450.32	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.89	450.75	450.38	450.85	450.68	450.28	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.66	450.52	450.15	450.63	450.45	450.05	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 6													
G1	450.13	449.54	448.72	450.09	449.47	448.62	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.35	449.75	448.93	450.31	449.68	448.83	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.37	449.77	448.94	450.27	449.64	448.78	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.14	449.53	448.70	450.04	449.40	448.54	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"



INTERIOR GIRDER ELEVATION
Not to Scale

FASCIA GIRDER ELEVATION
Not to Scale



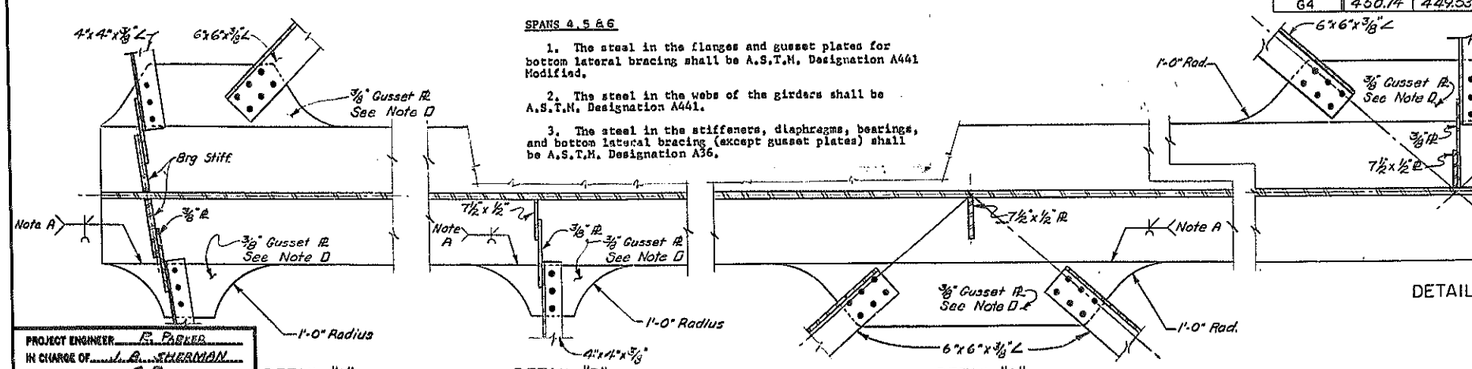
SECTION B-B
Not to Scale

SPANS 4, 5 & 6

1. The steel in the flanges and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Modified.

2. The steel in the webs of the girders shall be A.S.T.M. Designation A441.

3. The steel in the stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36.

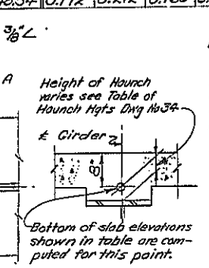


DETAIL "A"

DETAIL "B"

DETAIL "C"

DETAIL "D"



Note:
A. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
B. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
C. Lateral bracing shall be attached to gusset plates with 7/8" ϕ high strength bolts. Field welding will not be permitted.
D. The gusset plate shall be the same type of steel as the flange to which it is welded.

PROJECT ENGINEER R. PARKER
IN CHARGE OF J. A. SHERMAN
DESIGNED BY S. Rowe
DESIGN CHECKED BY H. Tarsen
DETAILED BY Jim Dussault
DETAIL CHECKED BY D.H. Smith

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 4
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

LEGEND

(#) SUPERSTRUCTURE PHOTOS

(#) SUBSTRUCTURE PHOTOS

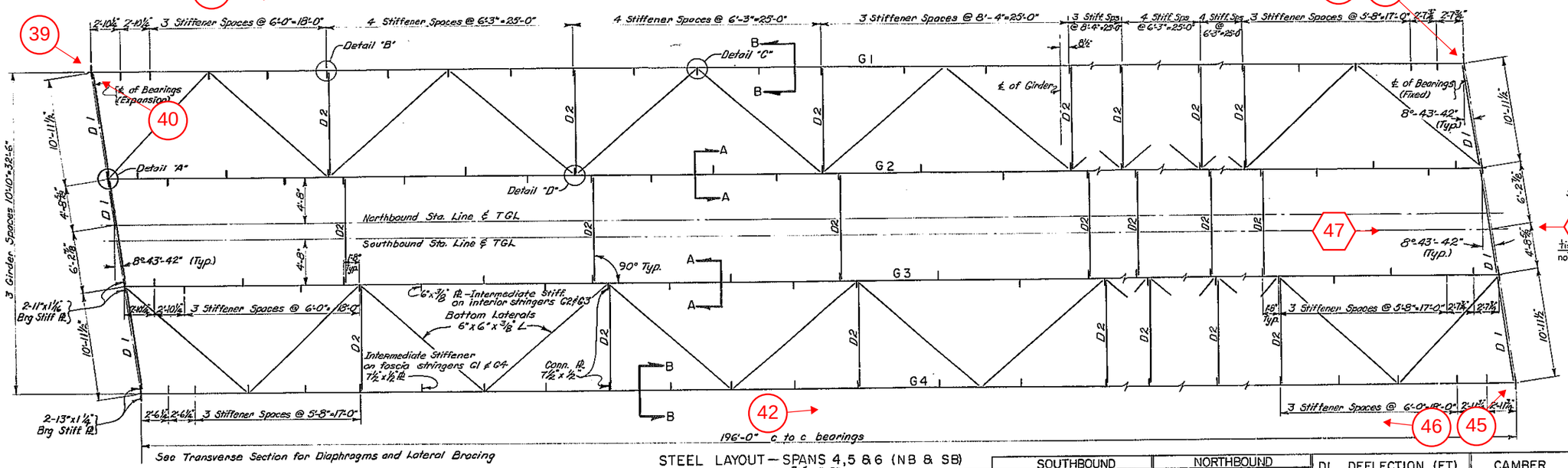
LENGTH = 196'-6"

3060.00 76

F.I.S.H. 70-7

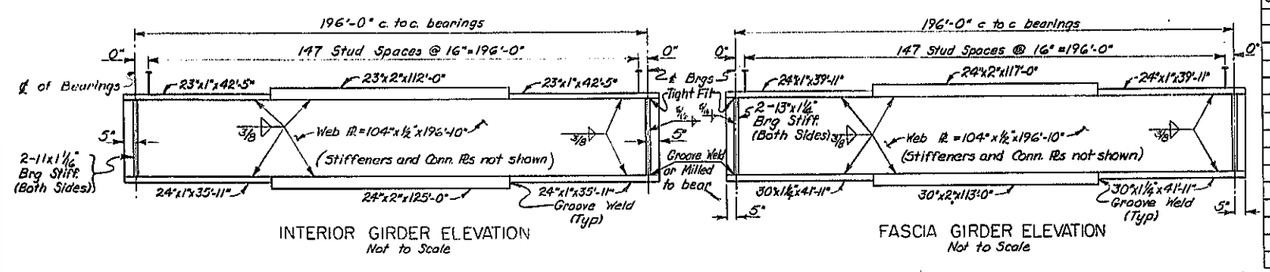
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	200	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



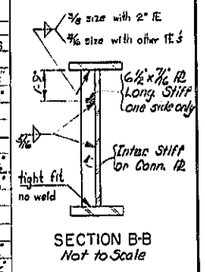
STEEL LAYOUT — SPANS 4,5 & 6 (NB & SB)
Scale: 3/16"=1'-0"

GIRDER	SOUTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	NORTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	DL DEFLECTION (FT) STEEL	SLAB	SDL	TOTAL DL	CAMBER VCC(FT)	TOTAL FEET	TOTAL INCHES
SPAN 4													
G1	450.21	450.54	450.65	450.30	450.59	450.66	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.45	450.77	450.86	450.53	450.82	450.89	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.48	450.80	450.89	450.51	450.80	450.85	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.27	450.58	450.67	450.29	450.57	450.63	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 5													
G1	450.63	450.50	450.14	450.66	450.50	450.10	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.86	450.72	450.36	450.89	450.72	450.32	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.89	450.75	450.38	450.85	450.68	450.28	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.66	450.52	450.15	450.63	450.45	450.05	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 6													
G1	450.13	449.54	448.72	450.09	449.47	448.62	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.35	449.75	448.93	450.31	449.68	448.83	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.37	449.77	448.94	450.27	449.64	448.78	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.14	449.53	448.70	450.04	449.40	448.54	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"



INTERIOR GIRDER ELEVATION
Not to Scale

FASCIA GIRDER ELEVATION
Not to Scale



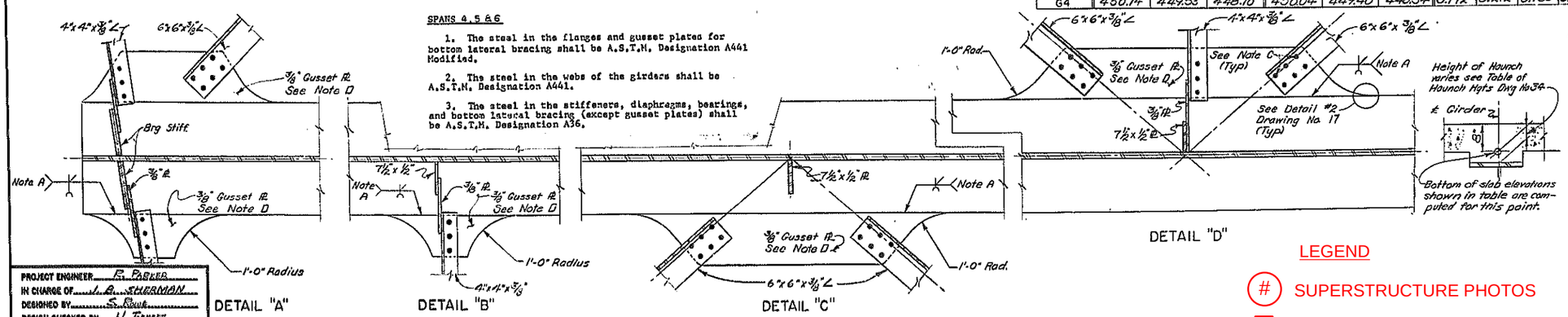
SECTION B-B
Not to Scale

SPANS 4,5 & 6

1. The steel in the flanges and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Modified.

2. The steel in the webs of the girders shall be A.S.T.M. Designation A441.

3. The steel in the stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36.



DETAIL "A"

DETAIL "B"

DETAIL "C"

DETAIL "D"

Note:
A. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
B. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
C. Lateral bracing shall be attached to gusset plates with ⅞" ϕ high strength bolts. Field welding will not be permitted.
D. The gusset plate shall be the same type of steel as the flange to which it is welded.

PROJECT ENGINEER R. PASLER
IN CHARGE OF J. R. SHERMAN
DESIGNED BY S. Rowe
DESIGN CHECKED BY M. Tepper
DETAILED BY Otto Dussport
DETAIL CHECKED BY D.H. Smith

LEGEND

(#) SUPERSTRUCTURE PHOTOS

⟨#⟩ SUBSTRUCTURE PHOTOS

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 5
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

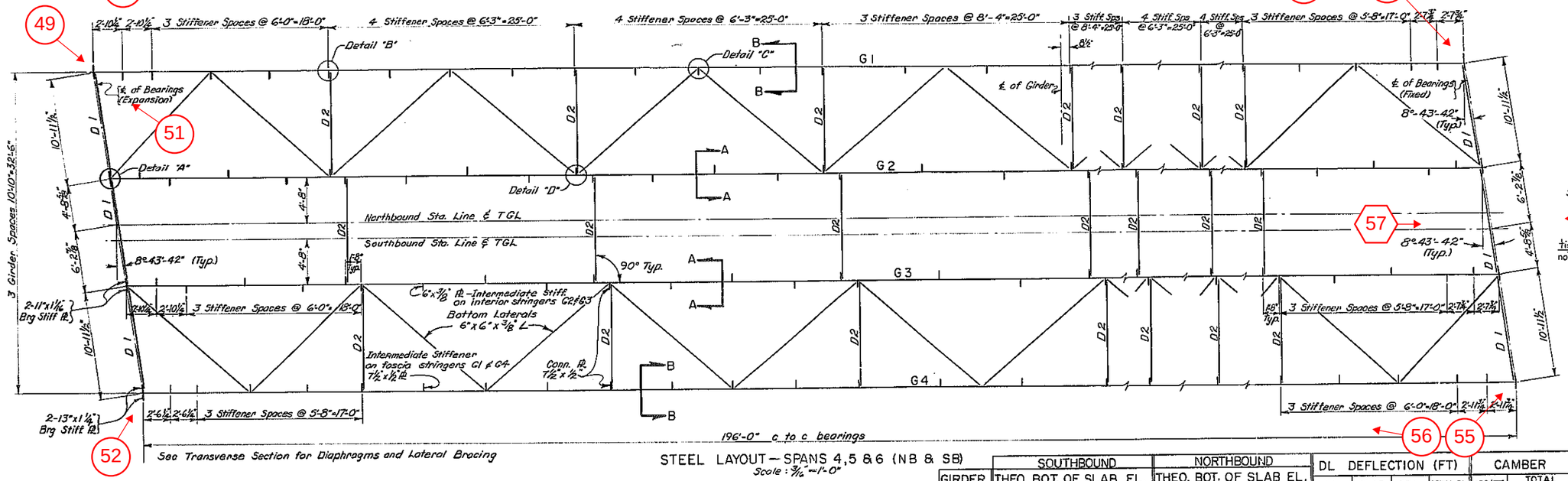
LENGTH = 196'-6"

3060.00 76

F.I.S.H. 70-7

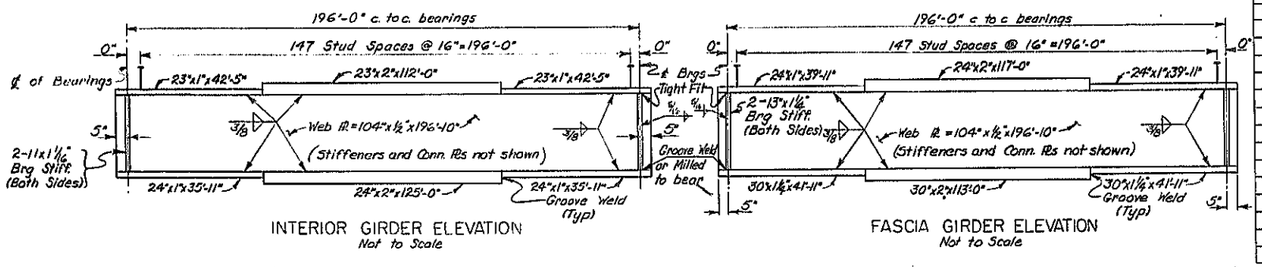
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	200	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



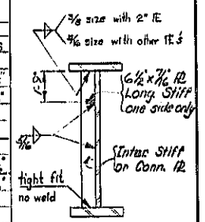
STEEL LAYOUT — SPANS 4,5 & 6 (NB & SB)
Scale: 3/16"=1'-0"

GIRDER	SOUTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	NORTHBOUND THEO. BOT. OF SLAB EL. ℄ SO. BRG	℄ SPAN	℄ NO. BRG	DL DEFLECTION (FT) STEEL	SLAB	SDL	TOTAL DL	CAMBER VCC (FT)	TOTAL FEET	TOTAL INCHES
SPAN 4													
G1	450.21	450.54	450.63	450.30	450.59	450.66	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.45	450.77	450.86	450.53	450.82	450.89	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.48	450.80	450.89	450.51	450.80	450.85	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.27	450.58	450.67	450.29	450.57	450.63	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 5													
G1	450.63	450.50	450.14	450.66	450.50	450.10	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.86	450.72	450.36	450.89	450.72	450.32	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.89	450.75	450.38	450.85	450.68	450.28	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.66	450.52	450.15	450.63	450.45	450.05	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
SPAN 6													
G1	450.13	449.54	448.72	450.09	449.47	448.62	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"
G2	450.35	449.75	448.93	450.31	449.68	448.83	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G3	450.37	449.77	448.94	450.27	449.64	448.78	0.178'	0.378'	0.062'	0.618'	0.113'	0.731'	8 13/16"
G4	450.14	449.53	448.70	450.04	449.40	448.54	0.172'	0.212'	0.168'	0.552'	0.113'	0.665'	8"



INTERIOR GIRDER ELEVATION
Not to Scale

FASCIA GIRDER ELEVATION
Not to Scale



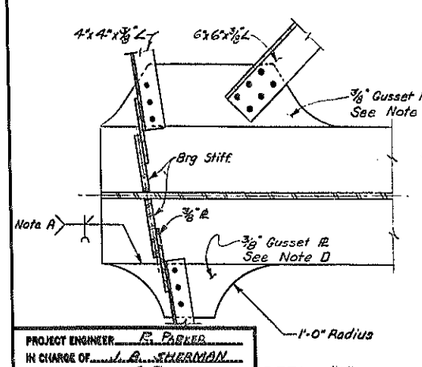
SECTION B-B
Not to Scale

SPANS 4, 5 & 6

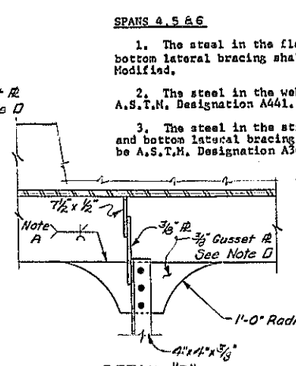
1. The steel in the flanges and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Modified.

2. The steel in the webs of the girders shall be A.S.T.M. Designation A441.

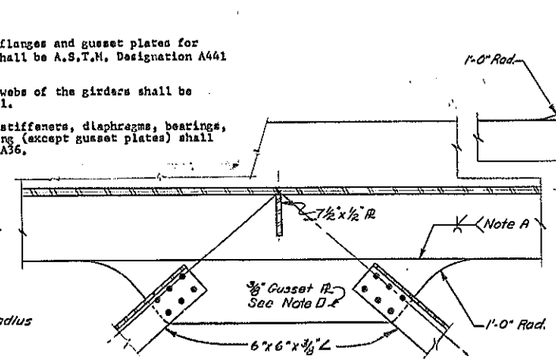
3. The steel in the stiffeners, diaphragms, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36.



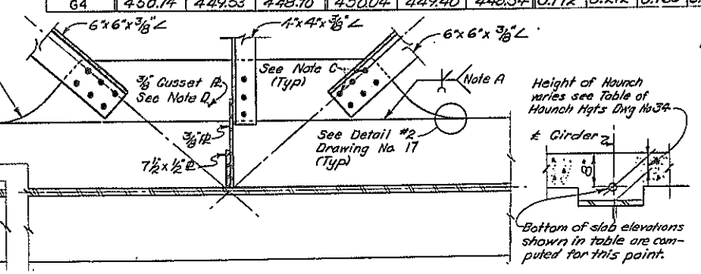
DETAIL "A"



DETAIL "B"



DETAIL "C"



DETAIL "D"

Note:
A. The connection plate shall be prepared and welded as a single bevel groove weld as shown in Detail #1. It shall then be Air Carbon-Arc gouged from the second side into sound weld metal and then welded as detailed. All welding shall be in the flat or "downhand" position.
B. The plate may be of any shape that will provide after welding, cutting, and finish grinding a smooth transition from the flange edge at a minimum radius of 12".
C. Lateral bracing shall be attached to gusset plates with 7/8" ϕ high strength bolts. Field welding will not be permitted.
D. The gusset plate shall be the same type of steel as the flange to which it is welded.

PROJECT ENGINEER R. PARKER
IN CHARGE OF J. R. SHERMAN
DESIGNED BY S. Rowe
DESIGN CHECKED BY M. Tepper
DETAILED BY J. Dussault
DETAIL CHECKED BY D.H. Smith

LEGEND
SUPERSTRUCTURE PHOTOS
SUBSTRUCTURE PHOTOS

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS
SPANS 6
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

LENGTH = 196'-6"

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	202	302

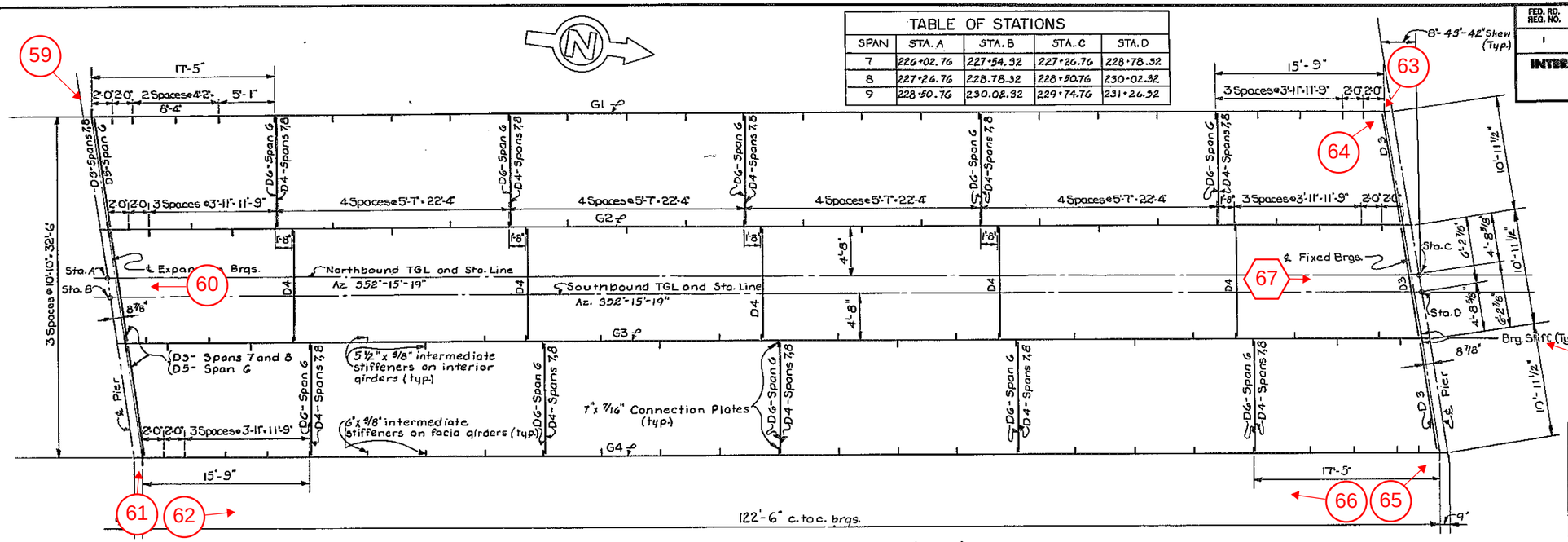
INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

LEGEND

SUPERSTRUCTURE PHOTOS

SUBSTRUCTURE PHOTOS

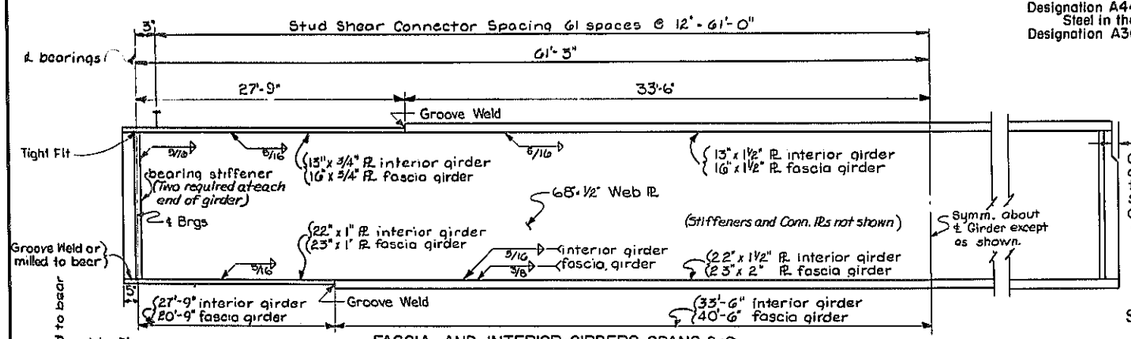
TABLE OF STATIONS				
SPAN	STA. A	STA. B	STA. C	STA. D
7	226+02.76	227+54.32	227+26.76	228+78.32
8	227+26.76	228.78.32	228+50.76	230+02.32
9	228+50.76	230.02.32	229+74.76	231+26.32



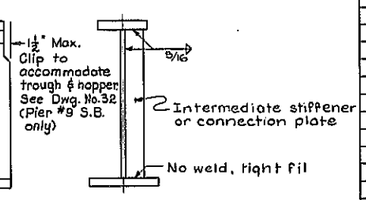
STEEL FRAMING PLAN SPANS 7, 8 & 9 (NB & SB)
Scale: 3/16" = 1'-0"

BEARING STIFFENER SIZES	
Girder	Size of each plate (2 plates @ each end of girder)
Interior spans 7 & 9	8" X 3/4"
Fascia span 7	8" X 3/4"
Fascia spans 8 & 9	9" X 7/8"

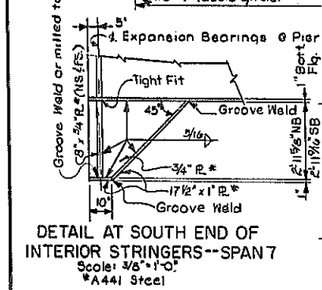
Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.



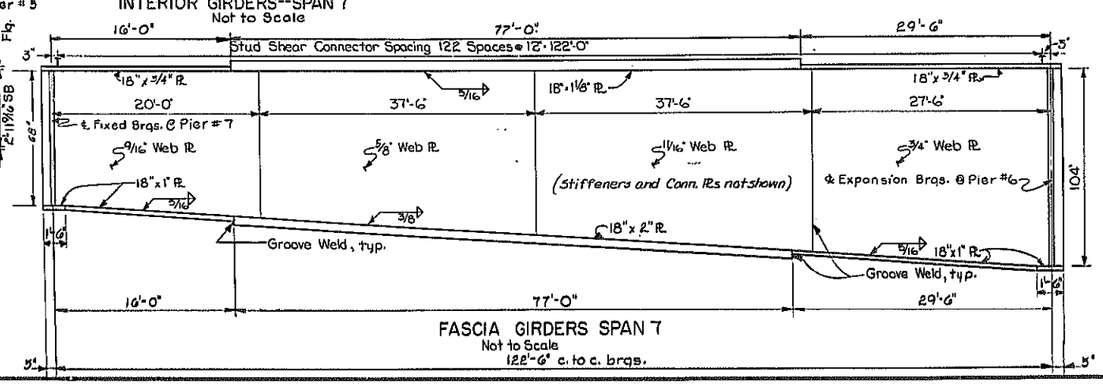
FASCIA AND INTERIOR GIRDERS SPANS 8 & 9
INTERIOR GIRDERS--SPAN 7
Not to Scale



SECTION THRU GIRDER
Not to Scale

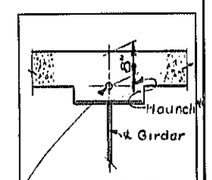


DETAIL AT SOUTH END OF INTERIOR STRINGERS--SPAN 7
Scale: 3/8" = 1'-0"
*A441 Steel



FASCIA GIRDERS SPAN 7
Not to Scale
122'-6" c. to c. brgs.

BOTTOM OF SLAB ELEVATIONS									
NORTHBOUND					SOUTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	7	448.60	447.95	447.22	G1	7	448.70	448.07	447.33
G2	7	448.81	448.16	447.42	G2	7	448.91	448.28	447.56
G3	7	448.77	448.11	447.37	G3	7	448.93	448.29	447.57
G4	7	448.52	447.87	447.12	G4	7	448.68	448.05	447.32
G1	8	447.20	446.37	445.45	G1	8	447.33	446.52	445.63
G2	8	447.40	446.57	445.65	G2	8	447.54	446.73	445.83
G3	8	447.35	446.52	445.59	G3	8	447.55	446.73	445.83
G4	8	447.10	446.27	445.34	G4	8	447.30	446.48	445.58
G1	9	445.43	444.42	443.53	G1	9	445.60	444.61	443.57
G2	9	445.63	444.62	443.58	G2	9	445.80	444.81	443.74
G3	9	445.57	444.56	443.46	G3	9	445.81	444.81	443.73
G4	9	445.32	444.50	443.20	G4	9	445.56	444.56	443.48



-Bottom of Slab Elevation shown in table are computed for this point.

*Height of Haunch varies. See Table of Haunch Heights on Drawing No. 34

	GIRDER	SPAN	DEFLECTIONS STEEL (FT.)	SLAB (FT.)	SDL (FT.)	TOTAL (FT.)	CAMBER V.C.C. (FT.)	TOTAL (FT.)	(IN.)
NB AND SB	G1	7	.05	.09	.06	.20	.04	.24	2 7/8
	G2	7	.08	.24	.03	.35	.04	.39	4 5/8
	G3	7	.08	.24	.03	.35	.04	.39	4 5/8
	G4	7	.05	.09	.06	.20	.04	.24	2 7/8
	G1	8	.07	.12	.08	.27	.04	.31	3 3/4
	G2	8	.08	.24	.03	.35	.04	.39	4 5/8
	G3	8	.08	.24	.03	.35	.04	.39	4 5/8
	G4	8	.07	.12	.08	.27	.04	.31	3 3/4
SB	G1	9	.07	.12	.08	.27	.02	.29	3 1/2
	G2	9	.08	.24	.03	.35	.05	.38	4 1/2
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4
NB	G1	9	.07	.12	.08	.27	-.06	.21	2 1/2
	G2	9	.08	.24	.03	.35	.01	.36	4 3/8
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4

V.C.C. = Vertical Curve Camber
S.D.L. = Superimposed dead load, includes the weight of sidewalk & railing.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 7,
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

PROJECT ENGINEER R.L. Parker
IN CHARGE OF J.B. Sherman
DESIGNED BY S. Kaur
DESIGN CHECKED BY N. Tsoenos
DETAILED BY J.F. Darcy & M. Colbert
DETAIL CHECKED BY F.W.F.H.

Br #2 DeWitt Yds Steel Trans
SPANS 6, 7 AND 8

F.I.S.H. 70-7

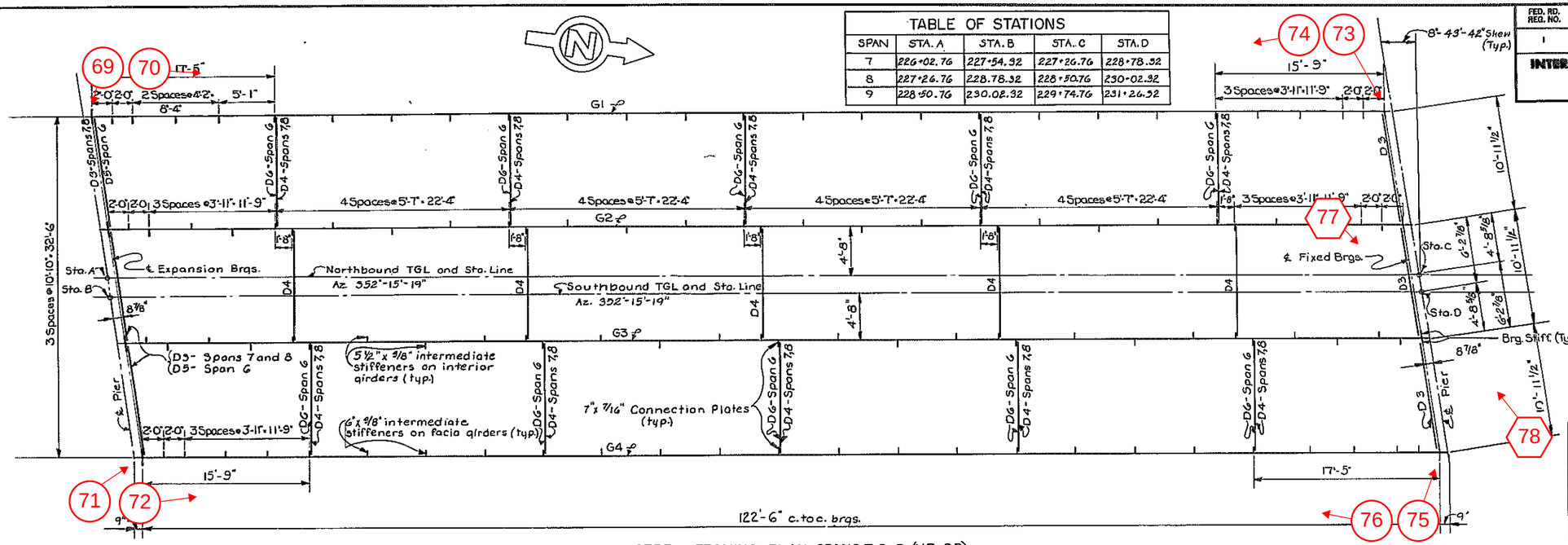
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	202	302

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

LEGEND
(#) SUPERSTRUCTURE PHOTOS
(#) SUBSTRUCTURE PHOTOS

TABLE OF STATIONS

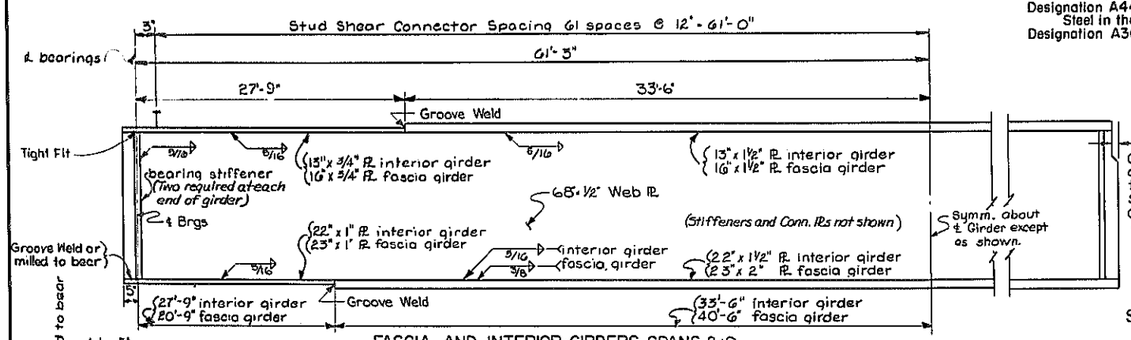
SPAN	STA. A	STA. B	STA. C	STA. D
7	226+02.76	227+54.32	227+26.76	228+78.32
8	227+26.76	228.78.32	228+50.76	230+02.32
9	228+50.76	230.02.32	229+74.76	231+26.32



STEEL FRAMING PLAN SPANS 7, 8 & 9 (NB & SB)
Scale: 3/16" = 1'-0"

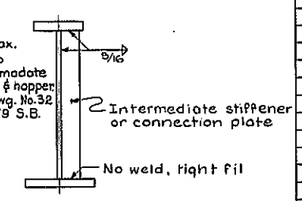
BEARING STIFFENER SIZES	
Girder	Size of each plate (2 plates @ each end of girder)
Interior spans 7 & 9	8" X 3/4"
Fascia span 7	8" X 3/4"
Fascia spans 8 & 9	9" X 7/8"

Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.

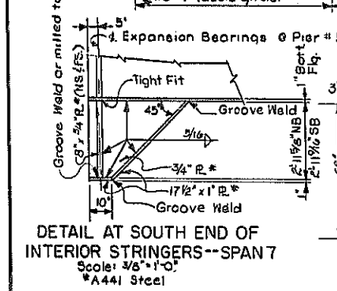


FASCIA AND INTERIOR GIRDERS SPANS 8 & 9
INTERIOR GIRDERS--SPAN 7
Not to Scale

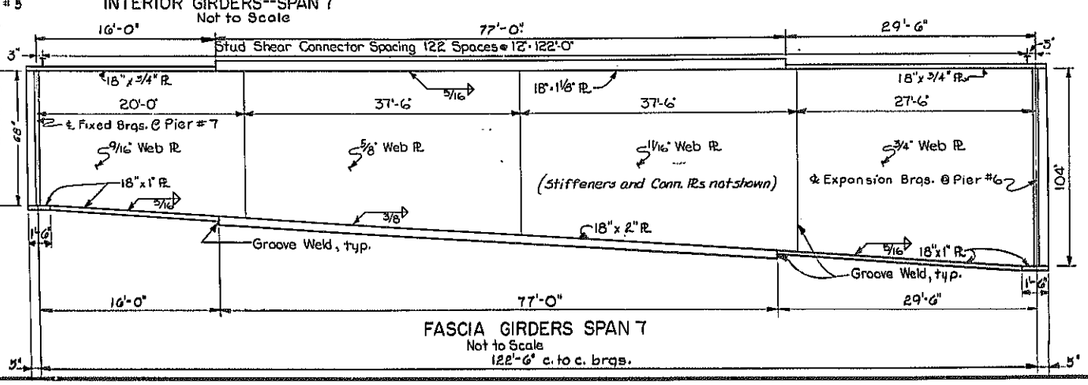
Symm. about ℄ Girder except as shown.



SECTION THRU GIRDER
Not to Scale



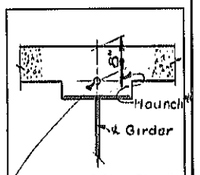
DETAIL AT SOUTH END OF INTERIOR STRINGERS--SPAN 7
Scale: 3/8" = 1'-0"
*A441 Steel



FASCIA GIRDERS SPAN 7
Not to Scale
122'-6" c. to c. brgs.

BOTTOM OF SLAB ELEVATIONS

NORTHBOUND GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	SOUTHBOUND GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	7	448.60	447.95	447.22	G1	7	448.70	448.07	447.33
G2	7	448.81	448.16	447.42	G2	7	448.91	448.28	447.56
G3	7	448.77	448.11	447.37	G3	7	448.93	448.29	447.57
G4	7	448.52	447.87	447.12	G4	7	448.68	448.05	447.32
G1	8	447.20	446.37	445.45	G1	8	447.33	446.52	445.63
G2	8	447.40	446.57	445.65	G2	8	447.54	446.73	445.83
G3	8	447.35	446.52	445.59	G3	8	447.55	446.73	445.83
G4	8	447.10	446.27	445.34	G4	8	447.30	446.48	445.58
G1	9	445.43	444.42	443.53	G1	9	445.60	444.61	443.57
G2	9	445.63	444.62	443.58	G2	9	445.80	444.81	443.74
G3	9	445.57	444.56	443.46	G3	9	445.81	444.81	443.73
G4	9	445.32	444.50	443.20	G4	9	445.56	444.56	443.48



-Bottom of Slab Elevation shown in table are computed for this point.

*Height of Haunch varies. See Table of Haunch Heights on Drawing No. 34

	GIRDER	SPAN	DEFLECTIONS STEEL (FT.)	SLAB (FT.)	SDL (FT.)	TOTAL (FT.)	CAMBER V.C.C. (FT.)	TOTAL (FT.)	TOTAL (IN.)
NB AND SB	G1	7	.05	.09	.06	.20	.04	.24	2 7/8
	G2	7	.08	.24	.03	.35	.04	.39	4 5/8
	G3	7	.08	.24	.03	.35	.04	.39	4 5/8
	G4	7	.05	.09	.06	.20	.04	.24	2 7/8
	G1	8	.07	.12	.08	.27	.04	.31	3 3/4
	G2	8	.08	.24	.03	.35	.04	.39	4 5/8
	G3	8	.08	.24	.03	.35	.04	.39	4 5/8
	G4	8	.07	.12	.08	.27	.04	.31	3 3/4
SB	G1	9	.07	.12	.08	.27	.02	.29	3 1/2
	G2	9	.08	.24	.03	.35	.05	.38	4 1/2
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4
NB	G1	9	.07	.12	.08	.27	-.06	.21	2 1/2
	G2	9	.08	.24	.03	.35	.01	.36	4 3/8
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4

V.C.C. = Vertical Curve Camber
S.D.L. = Superimposed dead load, includes the weight of sidewalk & railing.

PROJECT ENGINEER R.L. Parker
IN CHARGE OF J.B. Sherman
DESIGNED BY S. Kane
DESIGN CHECKED BY N. Tsoenos
DETAILED BY J.F. Darcy & M. Colbert
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 8
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

Br #2 DeWitt Yds Steel Trusses
SPANS 6, 7 AND 8

F.I.S.H. 70-7

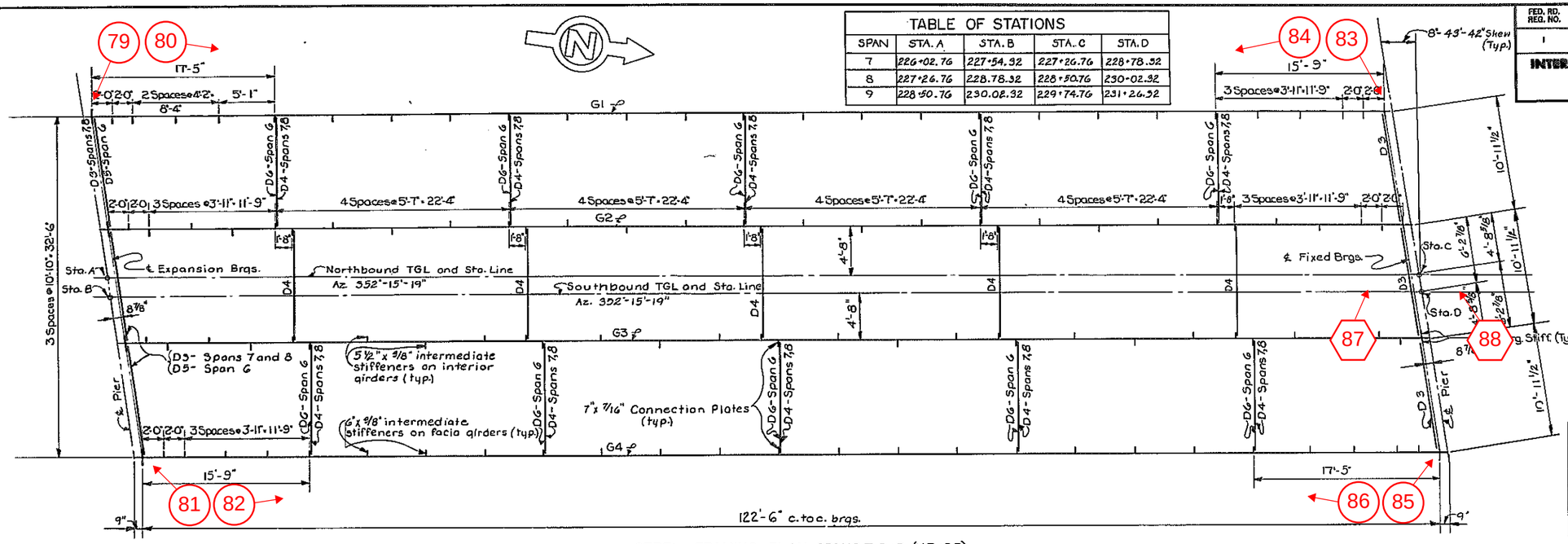
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	202	302

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

LEGEND

(#) SUPERSTRUCTURE PHOTOS

(#) SUBSTRUCTURE PHOTOS

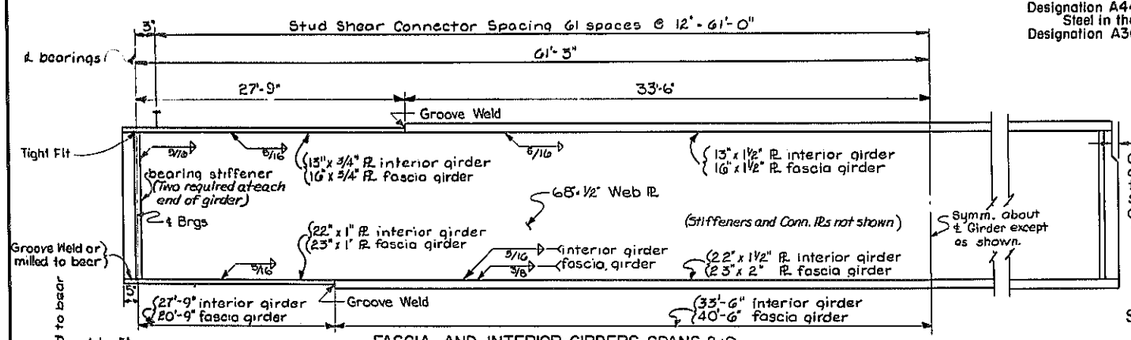


STEEL FRAMING PLAN SPANS 7, 8 & 9 (NB & SB)
Scale: 3/16" = 1'-0"

TABLE OF STATIONS				
SPAN	STA. A	STA. B	STA. C	STA. D
7	226+02.76	227+54.32	227+26.76	228+78.32
8	227+26.76	228.78.32	228+50.76	230+02.32
9	228+50.76	230.02.32	229+74.76	231+26.32

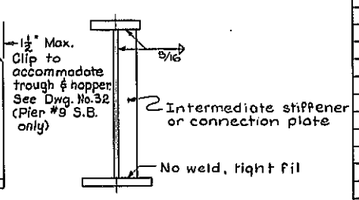
BEARING STIFFENER SIZES	
Girder	Size of each plate (2 plates @ each end of girder)
Interior spans 7 & 9	8" X 3/4"
Fascia span 7	8" X 3/4"
Fascia spans 8 & 9	9" X 7/8"

Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.

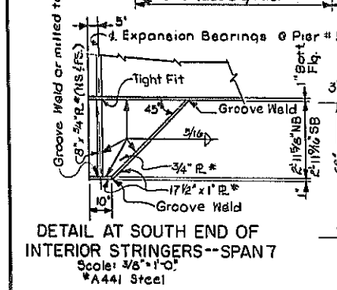


FASCIA AND INTERIOR GIRDERS SPANS 8 & 9
INTERIOR GIRDERS--SPAN 7
Not to Scale

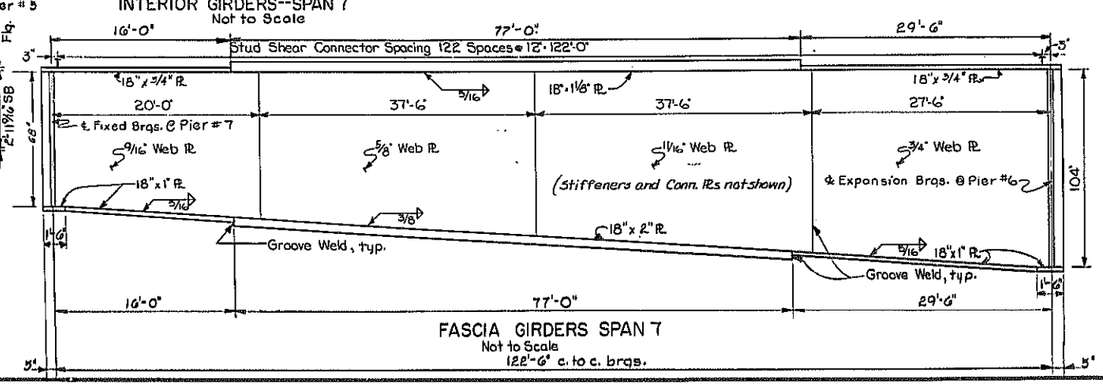
Steel in the girder webs and flanges shall be A.S.T.M. Designation A441 steel.
Steel in the stiffeners and diaphragms shall be A.S.T.M. Designation A36 steel.



SECTION THRU GIRDER
Not to Scale

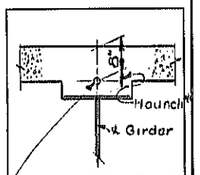


DETAIL AT SOUTH END OF INTERIOR STRINGERS--SPAN 7
Scale: 3/8" = 1'-0"
*A441 Steel



FASCIA GIRDERS SPAN 7
Not to Scale
122'-6" c. to c. brgs.

BOTTOM OF SLAB ELEVATIONS									
NORTHBOUND					SOUTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.	GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	7	448.60	447.95	447.22	G1	7	448.70	448.07	447.33
G2	7	448.81	448.16	447.42	G2	7	448.91	448.28	447.56
G3	7	448.77	448.11	447.37	G3	7	448.93	448.29	447.57
G4	7	448.52	447.87	447.12	G4	7	448.68	448.05	447.32
G1	8	447.20	446.37	445.45	G1	8	447.33	446.52	445.63
G2	8	447.40	446.57	445.65	G2	8	447.54	446.73	445.83
G3	8	447.35	446.52	445.59	G3	8	447.55	446.73	445.83
G4	8	447.10	446.27	445.34	G4	8	447.30	446.48	445.58
G1	9	445.43	444.42	443.53	G1	9	445.60	444.61	443.57
G2	9	445.63	444.62	443.58	G2	9	445.80	444.81	443.74
G3	9	445.57	444.56	443.46	G3	9	445.81	444.81	443.73
G4	9	445.32	444.50	443.20	G4	9	445.56	444.56	443.48



-Bottom of Slab Elevation shown in table are computed for this point.

*Height of Haunch varies. See Table of Haunch Heights on Drawing No. 34

	GIRDER	SPAN	DEFLECTIONS STEEL (FT.)	SLAB (FT.)	SDL. (FT.)	TOTAL (FT.)	CAMBER V.C.C. (FT.)	TOTAL (FT.)	TOTAL (IN.)
NB AND SB	G1	7	.05	.09	.06	.20	.04	.24	2 7/8
	G2	7	.08	.24	.03	.35	.04	.39	4 5/8
	G3	7	.08	.24	.03	.35	.04	.39	4 5/8
	G4	7	.05	.09	.06	.20	.04	.24	2 7/8
	G1	8	.07	.12	.08	.27	.04	.31	3 3/4
	G2	8	.08	.24	.03	.35	.04	.39	4 5/8
	G3	8	.08	.24	.03	.35	.04	.39	4 5/8
	G4	8	.07	.12	.08	.27	.04	.31	3 3/4
SB	G1	9	.07	.12	.08	.27	.02	.29	3 1/2
	G2	9	.08	.24	.03	.35	.05	.38	4 1/2
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4
NB	G1	9	.07	.12	.08	.27	-.06	.21	2 1/2
	G2	9	.08	.24	.03	.35	.01	.36	4 3/8
	G3	9	.08	.24	.03	.35	.04	.39	4 5/8
	G4	9	.07	.12	.08	.27	.04	.31	3 3/4

V.C.C. = Vertical Curve Camber
S.D.L. = Superimposed dead load, includes the weight of sidewalk & railing.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 9

SOUTHBOUND BIN 1093571

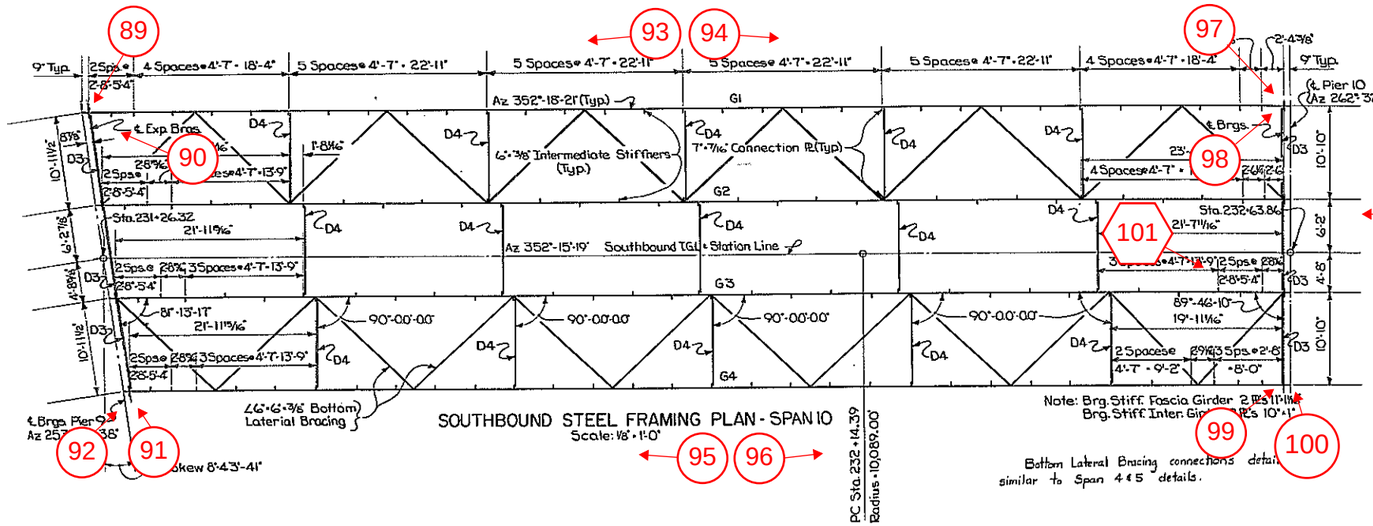
PHOTO LOCATION PLAN

PROJECT ENGINEER R.L. Parker
IN CHARGE OF J.B. Sherman
DESIGNED BY S. Kaur
DESIGN CHECKED BY N. Tsoenos
DETAILED BY J.F. Darcy & M. Colbert
DETAIL CHECKED BY F.W.C.

Br #2 DeWitt Yds Steel Frame
Spans 6, 7 and 8

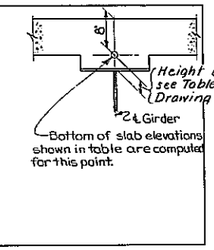
FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	204	309

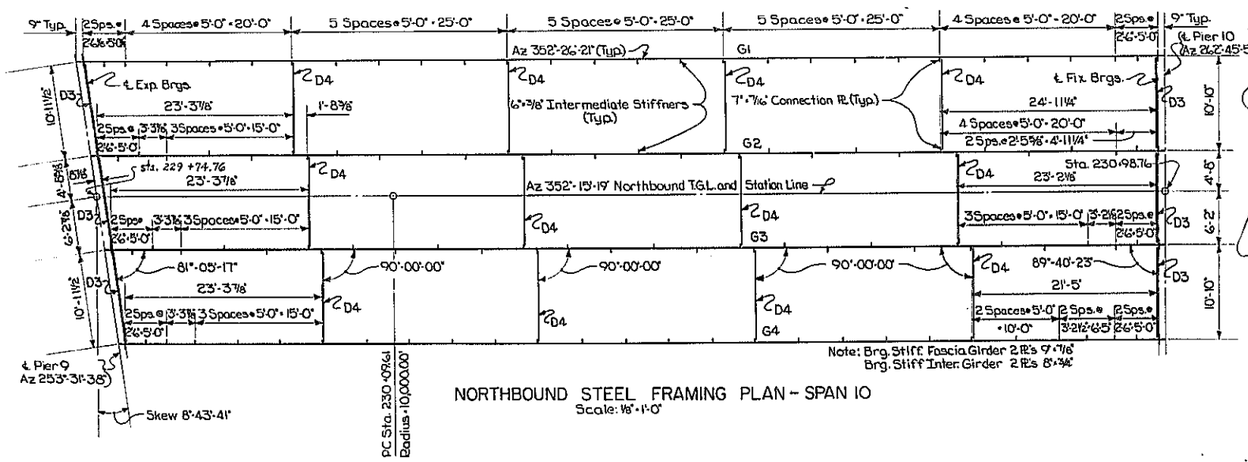
INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY



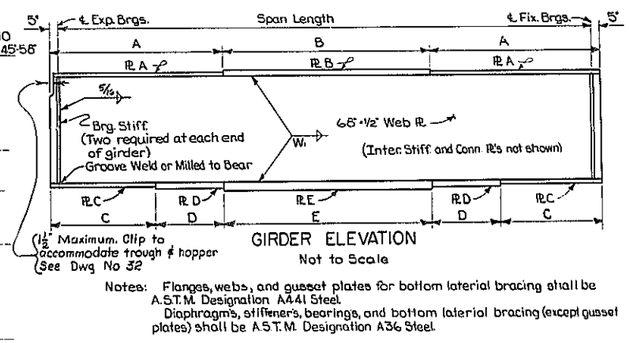
SOUTHBOUND STEEL FRAMING PLAN - SPAN 10
Scale: 1/8" = 1'-0"

BOTTOM OF SLAB ELEVATIONS				
SOUTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	10	443.54	442.46	441.26
G2	10	443.72	442.49	441.15
G3	10	443.70	442.40	440.99
G4	10	443.45	442.16	440.77
NORTHBOUND				
GIRDER	SPAN	℄ EXP. BRGS.	℄ SPAN	℄ FIX. BRGS.
G1	10	443.50	442.49	441.39
G2	10	443.56	442.42	441.19
G3	10	443.43	442.24	440.98
G4	10	443.17	442.00	440.75



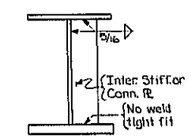


NORTHBOUND STEEL FRAMING PLAN - SPAN 10
Scale: 1/8" = 1'-0"



GIRDER ELEVATION
Not to Scale

Notes: Flanges, webs, and gusset plates for bottom lateral bracing shall be A.S.T.M. Designation A441 Steel.
Diaphragms, stiffeners, bearings, and bottom lateral bracing (except gusset plates) shall be A.S.T.M. Designation A36 Steel.



TYPICAL SECTION
Not to Scale

LEGEND

(#) SUPERSTRUCTURE PHOTOS

⟨#⟩ SUBSTRUCTURE PHOTOS

SPAN 10 GIRDER TABLE

	GIRDER	SPAN LENGTH ℄ TO ℄ BRGS.	FLANGE PLATE SIZES Pl. A	Pl. B	Pl. C	Pl. D	Pl. E	FLANGE PLATE LENGTHS A	B	C	D	E	DEFLECTIONS (FT) STEEL	CONC.	S.D.L.	TOTAL	CAMBER V.C.C. (FT.)	TOTAL (Inch)	(Inches)	STUD SHEAR CONNECTOR SPACING
Southbound	G1	138'-8 15/16"	23"×1"	23"×1 1/2"	24"×1"	24"×2"	24"×2 1/2"	36'-9 7/16"	66'-0"	20'-3 7/16"	19'-0"	61'-0"	0.10	0.15	0.11	0.36	.06	0.42'	5"	138 Spaces @ 12" = 138'-0"
Southbound	G2	137'-0 3/16"	19"×7/8"	19"×1 1/2"	24"×1"	None	24"×2"	32'-11 7/16"	72'-0"	23'-5 7/16"	0	91'-0"	0.11	0.28	0.04	0.43	.06	0.49	5 7/16"	137 Spaces @ 12" = 137'-0"
Southbound	G3	135'-3 9/16"	19"×7/8"	19"×1 1/2"	24"×1"	None	24"×2"	32'-0 9/16"	72'-0"	22'-6 9/16"	0	91'-0"	0.10	0.27	0.04	0.41	.05	0.46	5 1/2"	135 Spaces @ 12" = 135'-0"
Southbound	G4	133'-7"	23"×1"	23"×1 1/2"	24"×1"	24"×2"	24"×2 1/2"	34'-2 1/2"	66'-0"	17'-8 1/2"	19'-0"	61'-0"	0.09	0.13	0.09	0.31	.05	0.36	4 3/16"	133 Spaces @ 12" = 133'-0"
Northbound	G1	125'-0 1/4"	17"×3/4"	17"×1 1/2"	24"×1"	None	24"×2"	28'-11 1/8"	68'-0"	21'-5 1/8"	0	83'-0"	0.07	0.12	0.09	0.28	.05	0.33	4"	125 Spaces @ 12" = 125'-0"
Northbound	G2	123'-3 1/8"	14"×3/4"	14"×1 1/2"	23"×1"	None	23"×1 1/2"	27'-6 9/16"	69'-0"	28'-0 9/16"	0	68'-0"	0.08	0.24	0.03	0.35	.05	0.40	4 3/16"	123 Spaces @ 12" = 123'-0"
Northbound	G3	121'-6"	14"×3/4"	14"×1 1/2"	23"×1"	None	23"×1 1/2"	26'-8"	69'-0"	27'-2"	0	68'-0"	0.07	0.23	0.03	0.33	.04	0.37	4 1/2"	121 Spaces @ 12" = 121'-0"
Northbound	G4	119'-8 7/16"	17"×3/4"	17"×1 1/2"	24"×1"	None	24"×2"	26'-3 7/16"	68'-0"	18'-9 7/16"	0	83'-0"	0.06	0.10	0.08	0.24	.04	0.28	3 3/8"	119 Spaces @ 12" = 119'-0"

S.D.L. = superimposed dead load, includes weight of railing and parapet.
V.C.C. = vertical curve correction

PROJECT ENGINEER R.L. Parker
IN CHARGE OF E. Eckel
DESIGNED BY G. Pave
DESIGN CHECKED BY Terence A. Smith
DETAILED BY J.F. Darcy
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPAN 10
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

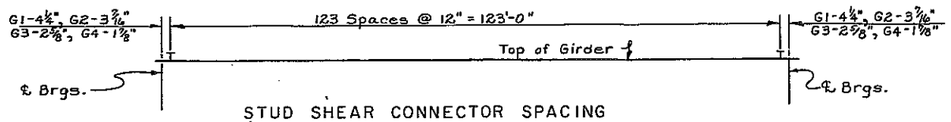
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

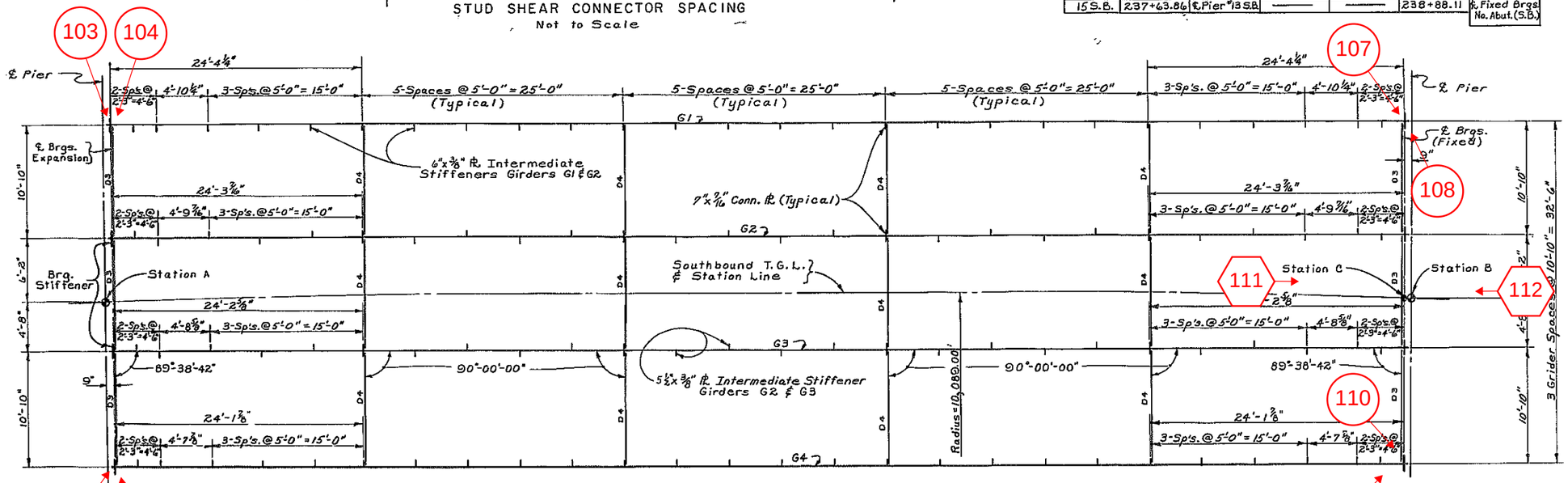
LEGEND

SUPERSTRUCTURE PHOTOS

SUBSTRUCTURE PHOTOS



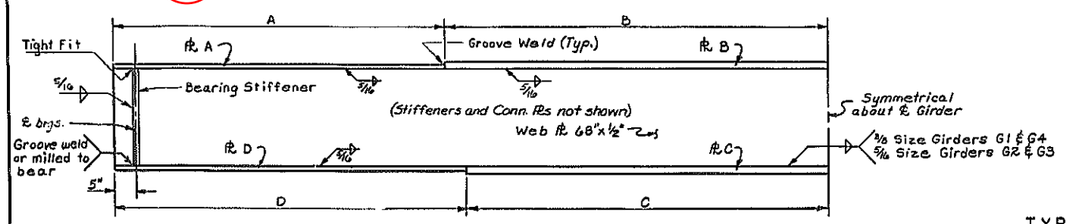
STUD SHEAR CONNECTOR SPACING
Not to Scale



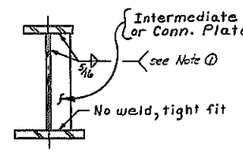
STEEL FRAMING PLAN (SPANS 11, 12, 13, 14 & 15 SOUTHBOUND)
Scale: 3/16" = 1'-0"

Transverse Section for Diaphragms.

Note: Web Plates and Flanges shall be A.S.T.M. designation A441 Steel.
Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

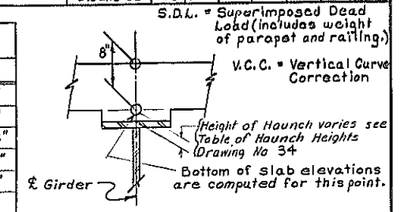
GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.26	3⅛

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)
V.C.C. = Vertical Curve Correction

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (SB)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES Pl. A	Pl. B	Pl. C	Pl. D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-Pl's. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	19"x¾"	19"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 9/16"	19"x¾"	19"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. A. Sherman
DESIGNED BY N. A. Teppsen
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY J.W.H.

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 11
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

SPANS 10 THRU 14 SOUTHBOUND

Steel Layout for Spans 10, 11, 12, 13 & 14

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

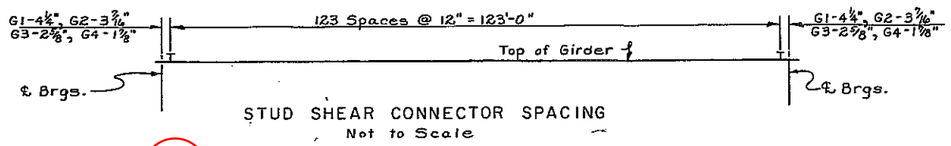
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

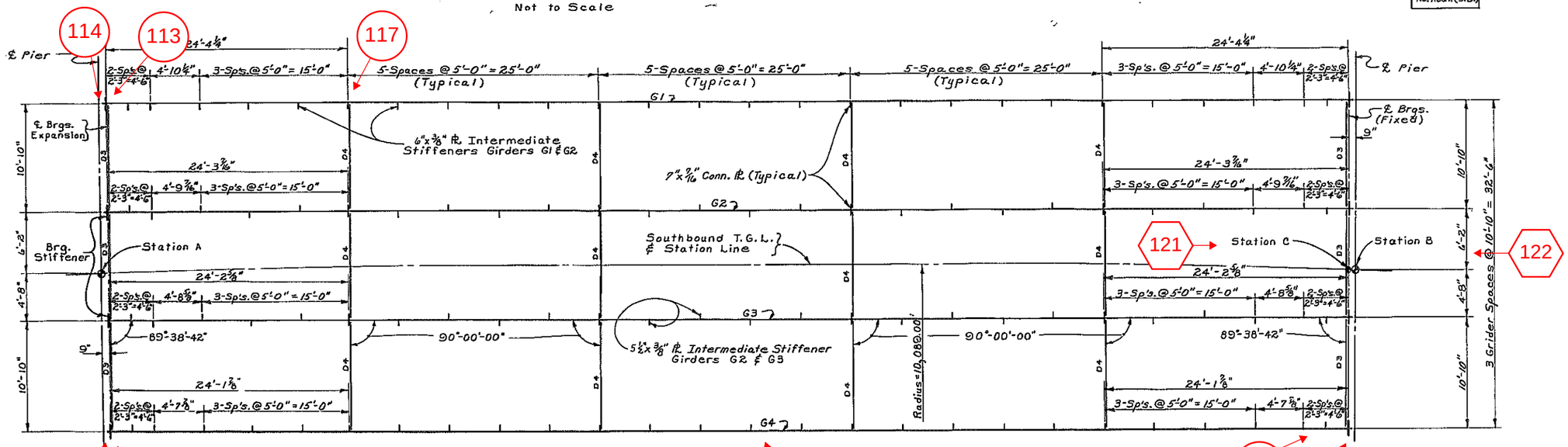
LEGEND

SUPERSTRUCTURE PHOTOS

SUBSTRUCTURE PHOTOS



STUD SHEAR CONNECTOR SPACING
Not to Scale

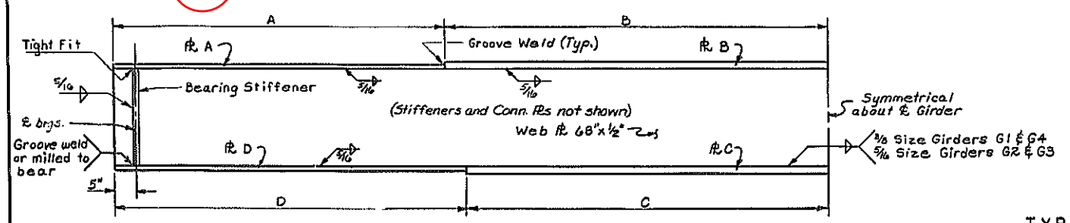


Not [illegible] Cross Section for Diaphragms.

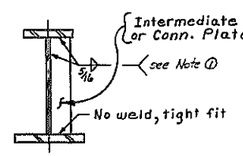
STEEL FRAMING PLAN (SP[illegible] 11, 12, 13, 14 & 15 SOUTHBOUND)
Scale [illegible]=1'-0"

Web [illegible]ges shall be A.S.T.M. designation A441 Steel.

Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

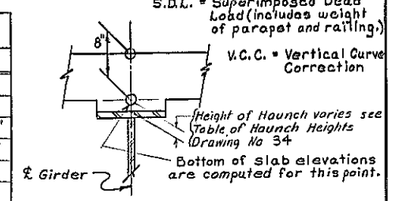
SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

V.C.C. = Vertical Curve Correction

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (S.B.)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES Pl. A	Pl. B	Pl. C	Pl. D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-Pl's. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. B. Sherman
DESIGNED BY N. A. Tappeser
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 12
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

SPANS 10 THRU 14 SOUTHBOUND

Steel Layout for Spans 10, 11, 12, 13 & 14

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

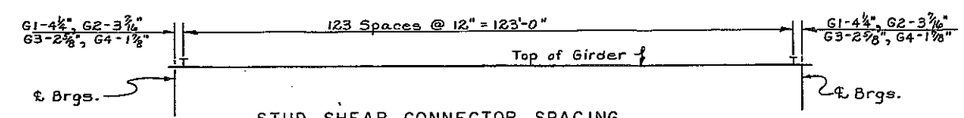
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.84	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

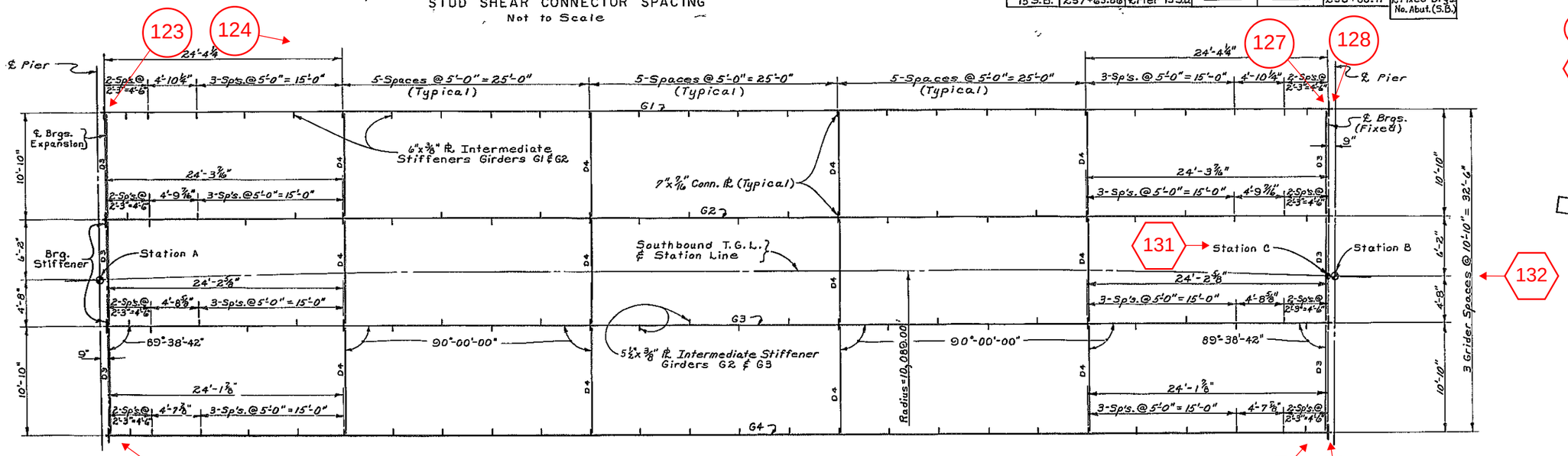
LEGEND

(#) SUPERSTRUCTURE PHOTOS

(#) SUBSTRUCTURE PHOTOS



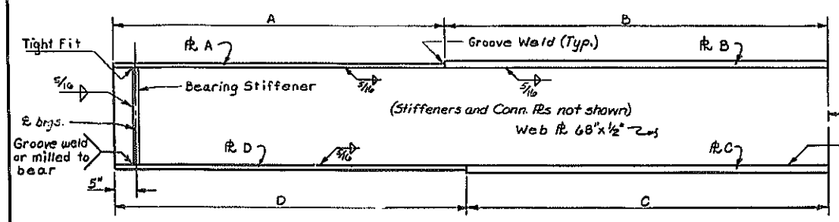
STUD SHEAR CONNECTOR SPACING
Not to Scale



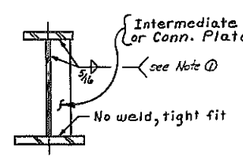
Note: See Transverse Diaphragms. 125 126

STEEL FRAMING PLAN (SPANS 11, 12, 13, 14 & 15 SOUTHBOUND)
Scale: 3/16" = 1'-0"

Note: 129 130
Welds shall be A.S.T.M. designation A441 Steel.
Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.14	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

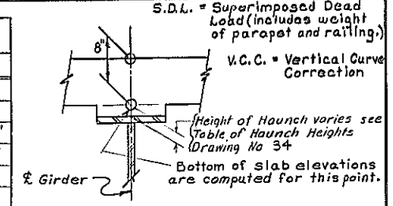
SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	(in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

V.C.C. = Vertical Curve Correction

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (S.B.)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES ⌶ A	⌶ B	⌶ C	⌶ D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-⌶'s. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 9/16"	33'-6"	33'-6"	28'-8 9/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. R. Sherman
DESIGNED BY N. R. Tappeser
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY [illegible]

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 13
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

Steel Layout for Spans 10, 11, 12, 13 & 14

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

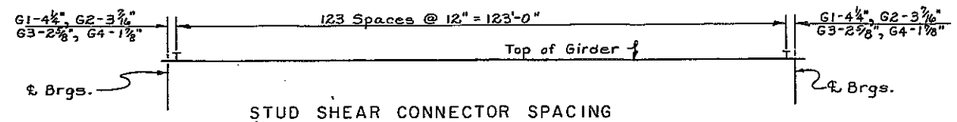
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

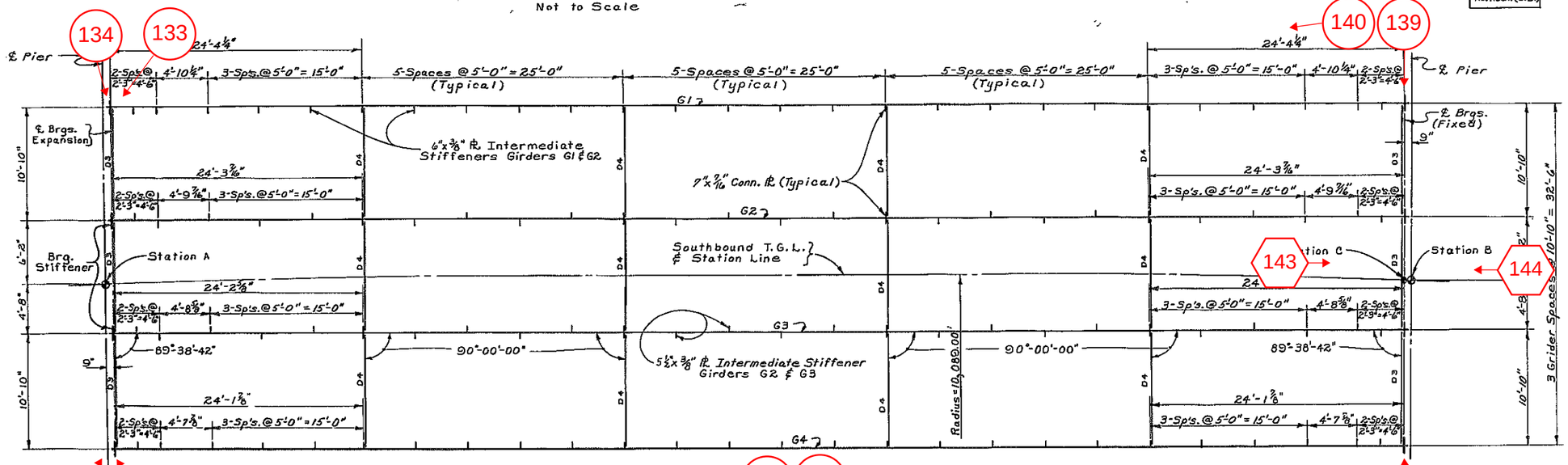
LEGEND

(#) SUPERSTRUCTURE PHOTOS

(#) SUBSTRUCTURE PHOTOS



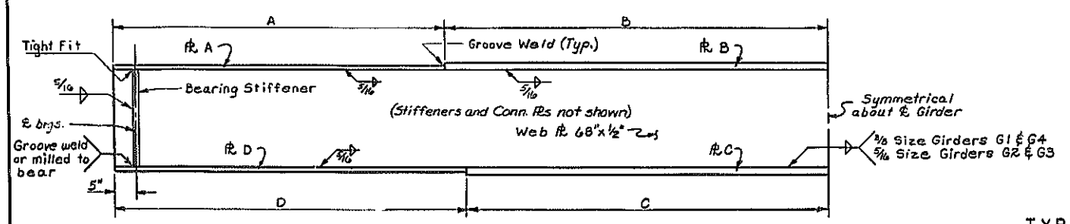
STUD SHEAR CONNECTOR SPACING
Not to Scale



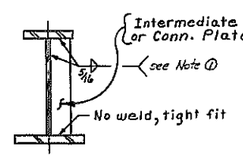
136 135 ...se Section for Diaphragms.

STEEL FRAMING PLAN (137 138 ...,12,13,14 & 15 SOUTHBOUND)
Sc... : ...=1'-0"

Note: 141 142 ...shall be A.S.T.M. designation A441 Steel.
Stiffeners, connection plates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

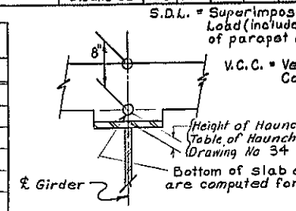
GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (SB)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES Pl. A	Pl. B	Pl. C	Pl. D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-Pl's. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	19"x¾"	19"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	19"x¾"	19"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. A. Sherman
DESIGNED BY N. A. Teppesen
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY T. W. Hill

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 14
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

SPANS 10 THRU 14 SOUTHBOUND

Steel Layout for Spans 10,11,12,13 & 14

F.I.S.H. 70-7

FED. RD. REG. NO.	STATE	FEDERAL AID PROJECT NO.	SHEET NO.	TOTAL SHEETS
1	NEW YORK	I-690-3(28) I-481-2(116)	206	309

INTERSTATE ROUTE CONNECTION 570
BUTTERNUT INTERCHANGE (PHASE 2)
ONONDAGA COUNTY

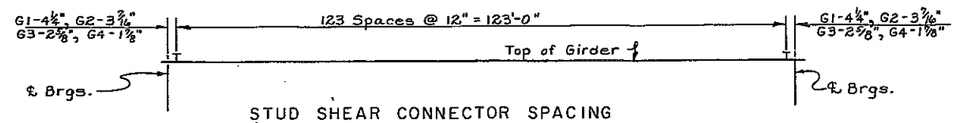
TABLE OF STATIONS

SPAN	STATION "A" STATION	STATION "A" ℄	STATION "B" STATION	STATION "B" ℄	STATION "C" STATION	STATION "C" ℄
11 S.B.	232+63.86	℄ Pier #9 S.B.	233+88.86	℄ Pier #10 S.B.	—	—
12 S.B.	233+88.86	℄ Pier #10 S.B.	235+13.86	℄ Pier #11 S.B.	—	—
13 S.B.	235+13.86	℄ Pier #11 S.B.	236+38.86	℄ Pier #12 S.B.	—	—
14 S.B.	236+38.86	℄ Pier #12 S.B.	237+63.86	℄ Pier #13 S.B.	—	—
15 S.B.	237+63.86	℄ Pier #13 S.B.	—	—	238+88.11	℄ Fixed Brgs. No. Abut. (S.B.)

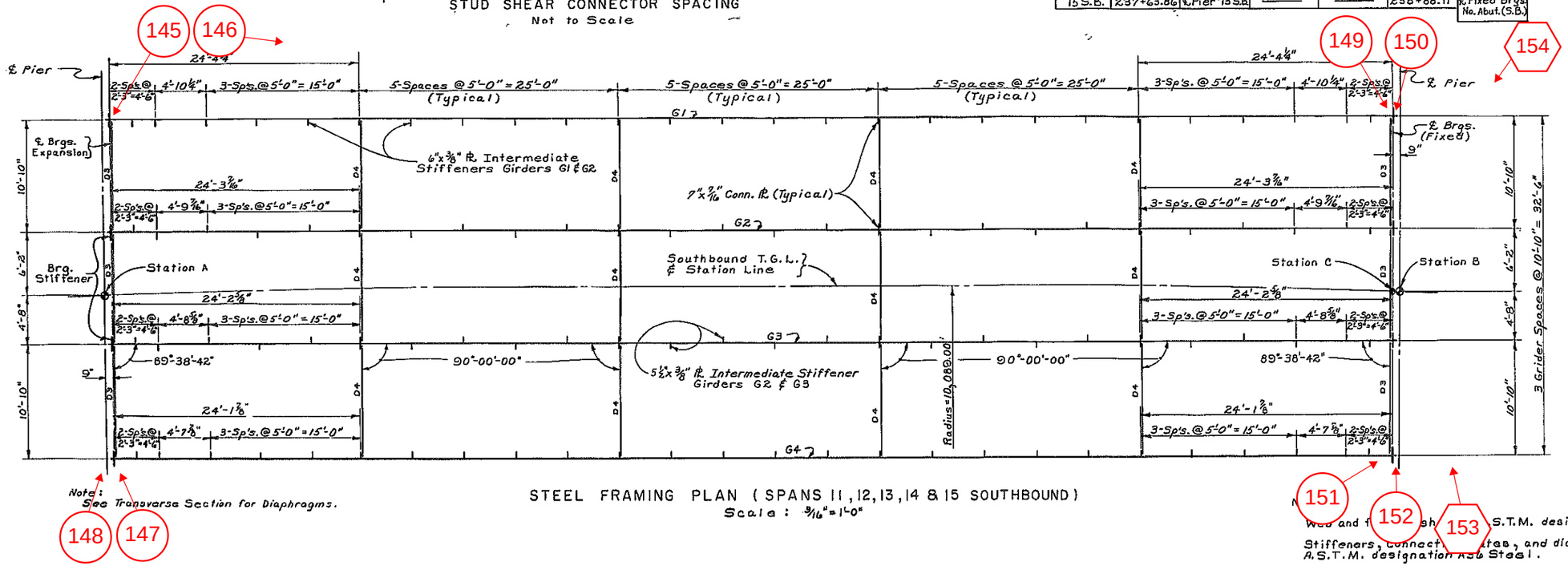
LEGEND

SUPERSTRUCTURE PHOTOS

SUBSTRUCTURE PHOTOS



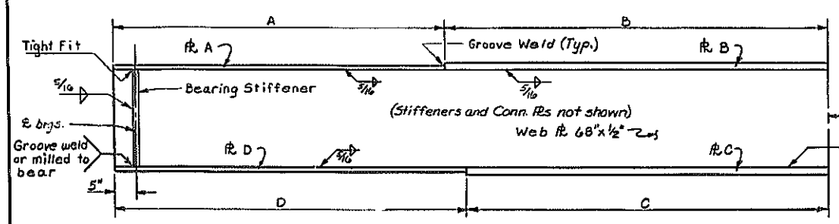
STUD SHEAR CONNECTOR SPACING
Not to Scale



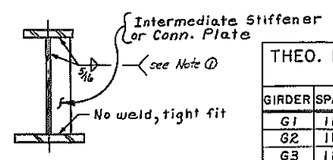
Note: See Transverse Section for Diaphragms.

STEEL FRAMING PLAN (SPANS 11, 12, 13, 14 & 15 SOUTHBOUND)
Scale: 3/16" = 1'-0"

Web and f[illegible]sh[illegible] S.T.M. designation A441 Steel.
Stiffeners, connect[illegible]ates, and diaphragms shall be A.S.T.M. designation A36 Steel.



GIRDER ELEVATION
Not to Scale



TYPICAL SECTION
Not to Scale

Note ①: Where connection plates are used in pairs, the fillet weld at top of stiffener is optional. See Note "Sup 4" in the Superstructure Notes.

THEO. BOTTOM OF SLAB ELEV. (Southbound)

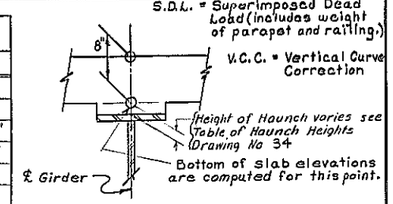
GIRDER	SPAN	℄ So. Brg.	℄ Span	℄ No. Brg.
G1	11	441.24	440.03	438.56
G2	11	441.12	439.30	438.33
G3	11	440.96	439.58	438.11
G4	11	440.74	439.35	437.88
G1	12	438.52	436.95	435.30
G2	12	438.29	436.73	435.07
G3	12	438.07	436.50	434.85
G4	12	437.84	436.27	434.62
G1	13	435.26	433.51	431.67
G2	13	435.03	433.28	431.45
G3	13	434.81	433.06	431.22
G4	13	434.58	432.83	431.00
G1	14	431.63	429.72	427.89
G2	14	431.40	429.49	427.66
G3	14	431.18	429.26	427.44
G4	14	430.95	429.04	427.21
G1	15	427.85	426.16	424.62
G2	15	427.62	425.93	424.39
G3	15	427.40	425.71	424.16
G4	15	427.17	425.48	423.94

SPAN	GIRDER	DEFLECTIONS (ft.) STEEL	SLAB	SDL	TOTAL	CAMBER VCC (ft.)	TOTAL (ft.)	TOTAL (in.)
Spans 11, 12 & 13 (S.B.)	G1 and G4	.07	.12	.08	.27	.04	.31	3¾
	G2 and G3	.08	.24	.03	.35	.04	.39	4⅝
Span 14 (S.B.)	G1 and G4	.07	.12	.08	.27	-.05	.22	2⅝
	G2 and G3	.08	.24	.03	.35	-.05	.30	3⅝
Span 15 (S.B.)	G1 and G4	.07	.12	.08	.27	-.07	.20	2⅜
	G2 and G3	.08	.24	.03	.35	-.07	.28	3⅜

S.D.L. = Superimposed Dead Load (includes weight of parapet and railing.)

TABLE OF AZIMUTHS

LOCATION	AZIMUTHS
℄ Pier #10 (S.B.)	262°-32'-11"
℄ Pier #11 (S.B.)	263°-14'-46"
℄ Pier #12 (S.B.)	263°-57'-22"
℄ Pier #13 (S.B.)	264°-39'-57"
℄ Pier #14 (S.B.)	265°-22'-33"
℄ Fixed Brgs. @ North Abut. (S.B.)	266°-05'-08"
℄ Girders, Span 11 (S.B.)	352°-53'-28"
℄ Girders, Span 12 (S.B.)	353°-36'-04"
℄ Girders, Span 13 (S.B.)	354°-18'-40"
℄ Girders, Span 14 (S.B.)	355°-01'-15"
℄ Girders, Span 15 (S.B.)	355°-43'-51"



SOUTHBOUND GIRDER TABLE — SPANS 11 thru 15

GIRDER	SPAN C. to C. BRGS.	FLANGE SIZES PL A	PL B	PL C	PL D	FLANGE DIMENSIONS A	B	C	D	Brg. Stiffener 2-PLs. required each end of Girder	Intermediate Stiffener Size
G1	123'-8½"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-9¼"	33'-6"	40'-6"	21'-9¼"	9"x⅞"	6"x⅜"
G2	123'-6 15/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-8 7/16"	33'-6"	33'-6"	28'-8 7/16"	8"x¾"	5½"x⅜"
G3	123'-5 5/16"	13"x¾"	13"x1½"	22"x1½"	22"x1"	28'-7⅝"	33'-6"	33'-6"	28'-7⅝"	8"x¾"	5½"x⅜"
G4	123'-3 11/16"	16"x¾"	16"x1½"	23"x2"	23"x1"	28'-6⅞"	33'-6"	40'-6"	21'-6⅞"	9"x⅞"	6"x⅜"

PROJECT ENGINEER R. Parker
IN CHARGE OF J. A. Sherman
DESIGNED BY N. A. Tappeser
DESIGN CHECKED BY S. Rowe
DETAILED BY J. C. Thompson
DETAIL CHECKED BY Tolfall

BRIDGE NO. 2
INTERSTATE ROUTE 481 OVER DEWITT YARDS

SPANS 15
SOUTHBOUND BIN 1093571
PHOTO LOCATION PLAN

SPANS 10 THRU 14 SOUTHBOUND

Steel Layout for Spans 10, 11, 12, 13 & 14

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: BEGIN ABUTMENT

PHOTO 1

DESCRIPTION: BEGIN ABUTMENT – LEFT WINGWALL
MAP CRACKING ALONG ENTIRE FACE

PHOTO 2

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 1: GIRDER 1 (BEGIN)

PHOTO 3

DESCRIPTION: SPAN 1: GIRDER 4 (BEGIN)

PHOTO 4

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 1: GIRDER 1 (END) – FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 5

DESCRIPTION: SPAN 1: GIRDER 1 (END) – FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 6

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 1 – BEGIN FACE

PHOTO 7

DESCRIPTION: PIER NO. 1 – END FACE

PHOTO 8

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 2: GIRDER 1 (BEGIN) – FASCIA

PHOTO 9

DESCRIPTION: SPAN 2: GIRDER 3 (BEGIN) - DIAPHRAGM AND WEB OVERHANG DETERIORATION

PHOTO 10

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 2: GIRDER 4 (BEGIN) – EXTERIOR WEB AND STIFFENER DETERIORATION

PHOTO 11

DESCRIPTION: SPAN 2: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 12

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 2: GIRDER 1 (END) – FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 13

DESCRIPTION: SPAN 2: GIRDER 4 (END) – FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 14

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 2 – BEGIN FACE

PHOTO 15

DESCRIPTION: PIER NO. 2 – END FACE

PHOTO 16

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 3: GIRDER 1 (BEGIN) – FASCIA

WEB OVERHANG AND STIFFENER DETERIORATION

PHOTO 17

DESCRIPTION: SPAN 3: GIRDER 1 – FASCIA

FLANGE DETERIORATION

PHOTO 18

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 3: GIRDER 4 (BEGIN) - FASCIA

END OF WEB AND STIFFENER DETERIORATION

PHOTO 19

DESCRIPTION: SPAN 3: GIRDER 4 - FASCIA

FLANGE DETERIORATION

PHOTO 20

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 3: GIRDER 1 (END) - FASCIA HOLE IN WEB

PHOTO 21

DESCRIPTION: SPAN 3: GIRDER 1 (END) - INTERIOR HOLES IN END DIAPHRAGM BRACING

PHOTO 22

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 3: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 23

DESCRIPTION: SPAN 3: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 24

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 3 – BEGIN FACE

PHOTO 25

DESCRIPTION: PIER NO. 3 – END FACE

PHOTO 26

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 4: GIRDER 1 (BEGIN) - FASCIA
HOLE IN WEB

PHOTO 27

DESCRIPTION: SPAN 4: GIRDER 1 – FASCIA
WEB AND FLANGE DETERIORATION

PHOTO 28

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 4: GIRDER 2 (BEGIN) - INTERIOR WEB CRIPPLE

PHOTO 29

DESCRIPTION: SPAN 4: GIRDER BAY 2 (BEGIN) END DIAPHRAGM DETERIORATION

PHOTO 30

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 4: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 31

DESCRIPTION: SPAN 4: GIRDER 4 (MID) - FASCIA SPLICE AND FLANGE DETERIORATION

PHOTO 32

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 4: GIRDER 1 (FLTR) - FASCIA FLANGE DETERIORATION AT MIDSPAN

PHOTO 33

DESCRIPTION: SPAN 4: GIRDER 4 (FLTR) - FASCIA FLANGE DETERIORATION AT MIDSPAN

PHOTO 34

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 4: GIRDER 1 (END) - FASCIA FLANGE DETERIORATION AT MIDSPAN

PHOTO 35

DESCRIPTION: SPAN 4: GIRDER 2 (END) - INTERIOR WEB AND STIFFENER DETERIORATION

PHOTO 36

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 4 – BEGIN FACE

PHOTO 37

DESCRIPTION: PIER NO. 4 – END FACE

PHOTO 38

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 5: GIRDER 1 (BEGIN) - FASCIA

WEB AND STIFFENER DETERIORATION

PHOTO 39

DESCRIPTION: SPAN 5: GIRDER 1 (BEGIN) – INTERIOR

INTERIOR WEB AND STIFFENER DETERIORATION

PHOTO 40

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 5: GIRDER 1 – FASCIA FLANGE DETERIORATION

PHOTO 41

DESCRIPTION: SPAN 5: GIRDER 4 (MID) - FASCIA WEB AND FLANGE DETERIORATION

PHOTO 42

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 5: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 43

DESCRIPTION: SPAN 5: GIRDER 1 – FASCIA FLANGE DETERIORATION

PHOTO 44

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 5: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 45

DESCRIPTION: SPAN 5: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 46

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 5 – BEGIN FACE

PHOTO 47

DESCRIPTION: PIER NO. 5 – END FACE

PHOTO 48

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 6: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 49

DESCRIPTION: SPAN 6: GIRDER 1 (BEGIN) - FASCIA FLANGE DETERIORATION

PHOTO 50

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 6: GIRDER BAY 1 (BEGIN) – LOOKING SOUTHWEST

END DIAPHRAGM DETERIORATION

PHOTO 51

DESCRIPTION: SPAN 6: GIRDER 4 (BEGIN) – FASCIA

WEB AND STIFFENER DETERIORATION

PHOTO 52

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 6: GIRDER 1 - FASCIA
FLANGE DETERIORATION

PHOTO 53

DESCRIPTION: SPAN 6: GIRDER 1 (END) - FASCIA
WEB AND STIFFENER DETERIORATION

PHOTO 54

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 6: GIRDER 4 (END)
WEB AND STIFFENER DETERIORATION

PHOTO 55

DESCRIPTION: SPAN 6: GIRDER 4 FASCIA
WEB AND FLANGE DETERIORATION

PHOTO 56

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 6 – BEGIN FACE

PHOTO 57

DESCRIPTION: PIER NO. 6 – END FACE

PHOTO 58

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 7: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 59

DESCRIPTION: SPAN 7: GIRDER BAY 2 (BEGIN) END DIAPHRAGM BUCKLED

PHOTO 60

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 7: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 61

DESCRIPTION: SPAN 7: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 62

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 7: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 63

DESCRIPTION: SPAN 7: GIRDER 1 (END) - INTERIOR WEB AND STIFFENER DETERIORATION

PHOTO 64

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 7: GIRDER 4 (END) – FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 65

DESCRIPTION: SPAN 7: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 66

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 7 – BEGIN FACE

PHOTO 67

DESCRIPTION: PIER NO. 7 – END FACE

PHOTO 68

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 8: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 69

DESCRIPTION: SPAN 8: GIRDER 1 – FASCIA FLANGE DETERIORATION

PHOTO 70

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 8: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 71

DESCRIPTION: SPAN 8: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 72

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 8: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 73

DESCRIPTION: SPAN 8: GIRDER 1 – FASCIA FLANGE DETERIORATION

PHOTO 74

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 8: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 75

DESCRIPTION: SPAN 7: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 76

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 8 – BEGIN FACE

PHOTO 77

DESCRIPTION: PIER NO. 8 – END FACE

PHOTO 78

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 9: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 79

DESCRIPTION: SPAN 9: GIRDER 1 – FASCIA FLANGE DETERIORATION

PHOTO 80

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 9: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 81

DESCRIPTION: SPAN 9: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 82

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 9: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 83

DESCRIPTION: SPAN 9: GIRDER 1 – FASCIA FLANGE DETERIORATION

PHOTO 84

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 9: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 85

DESCRIPTION: SPAN 9: GIRDER 4 – FASCIA FLANGE DETERIORATION

PHOTO 86

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 9 – BEGIN FACE

PHOTO 87

DESCRIPTION: PIER NO. 9 – END FACE

PHOTO 88

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 10: GIRDER 1 (BEGIN) - FASCIA HOLE IN WEB

PHOTO 89

DESCRIPTION: SPAN 10: GIRDER 1 (BEGIN) - INTERIOR HOLE IN WEB

PHOTO 90

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 10: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 91

DESCRIPTION: SPAN 10: GIRDER 4 (BEGIN) - FASCIA DELAMINATED STEEL ON STIFFENER

PHOTO 92

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 10: GIRDER 1 (MIDSPAN) – FASCIA FLANGE DETERIORATION

PHOTO 93

DESCRIPTION: SPAN 10: GIRDER 1 (MIDSPAN) – FASCIA FLANGE DETERIORATION

PHOTO 94

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 10: GIRDER 4 (MIDSPAN) – FASCIA FLANGE AND WEB DETERIORATION

PHOTO 95

DESCRIPTION: SPAN 10: GIRDER 4 (MIDSPAN) – FASCIA FLANGE AND WEB DETERIORATION

PHOTO 96

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 10: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 97

DESCRIPTION: SPAN 10: GIRDER 1 (END) – INTERIOR HOLE IN WEB OVERHANG

PHOTO 98

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 10: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 99

DESCRIPTION: SPAN 10: GIRDER 4 (END) - FASCIA WEB OVERHANG DETERIORATION

PHOTO 100

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 10 – BEGIN FACE

PHOTO 101

DESCRIPTION: PIER NO. 10 – END FACE

PHOTO 102

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 11: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 103

DESCRIPTION: SPAN 11: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 104

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 11: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 105

DESCRIPTION: SPAN 11: GIRDER 4 (BEGIN) - FASCIA STIFFENER DETERIORATION

PHOTO 106

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 11: GIRDER 1 (END) - FASCIA WEB DETERIORATION

PHOTO 107

DESCRIPTION: SPAN 11: GIRDER 1 (END) - INTERIOR WEB AND STIFFENER DETERIORATION

PHOTO 108

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 11: GIRDER 4 (END) - FASCIA WEB DETERIORATION

PHOTO 109

DESCRIPTION: SPAN 11: GIRDER 4 (END) - INTERIOR WEB AND STIFFENER DETERIORATION

PHOTO 110

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 11 – BEGIN FACE

PHOTO 111

DESCRIPTION: PIER NO. 11 – END FACE

PHOTO 112

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 12: GIRDER 1 (BEGIN) - FASCIA WEB DETERIORATION

PHOTO 113

DESCRIPTION: SPAN 12: GIRDER 1 (BEGIN) - FASCIA WEB DETERIORATION

PHOTO 114

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 12: GIRDER 4 (BEGIN) - FASCIA FLANGE AND WEB DETERIORATION

PHOTO 115

DESCRIPTION: SPAN 12: GIRDER 4 (BEGIN) - FASCIA STIFFENER DETERIORATION

PHOTO 116

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 12: GIRDER 1 (FLTR) - FASCIA FLANGE AND WEB DETERIORATION

PHOTO 117

DESCRIPTION: SPAN 12: GIRDER 4 (MIDSPAN) - FASCIA FLANGE AND WEB DETERIORATION

PHOTO 118

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 12: GIRDER 4 (END) - FASCIA

FLANGE AND STIFFENER DETERIORATION

PHOTO 119

DESCRIPTION: SPAN 12: GIRDER 4 (END) - FASCIA

STIFFENER DETERIORATION

PHOTO 120

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 12 – BEGIN FACE

PHOTO 121

DESCRIPTION: PIER NO. 12 – END FACE

PHOTO 122

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 13: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 123

DESCRIPTION: SPAN 13: GIRDER 1 (BEGIN) - FASCIA FLANGE DETERIORATION

PHOTO 124

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 13: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 125

DESCRIPTION: SPAN 13: GIRDER 1 (BEGIN) - FASCIA FLANGE DETERIORATION

PHOTO 126

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 13: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 127

DESCRIPTION: SPAN 13: GIRDER 1 (END) - FASCIA WEB DETERIORATION

PHOTO 128

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 13: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 129

DESCRIPTION: SPAN 13: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 130

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 13 – BEGIN FACE

PHOTO 131

DESCRIPTION: PIER NO. 13 – END FACE

PHOTO 132

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 14: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 133

DESCRIPTION: SPAN 14: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 134

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 14: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 135

DESCRIPTION: SPAN 14: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 136

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 14: GIRDER 4 (MID) - FASCIA FLANGE DETERIORATION

PHOTO 137

DESCRIPTION: SPAN 14: GIRDER 4 (MID) - FASCIA FLANGE DETERIORATION

PHOTO 138

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 14: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 139

DESCRIPTION: SPAN 14: GIRDER 1 (END) - FASCIA FLANGE DETERIORATION

PHOTO 140

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 14: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 141

DESCRIPTION: SPAN 14: GIRDER 4 (END) - FASCIA WEB DETERIORATION

PHOTO 142

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: PIER NO. 14 – BEGIN FACE

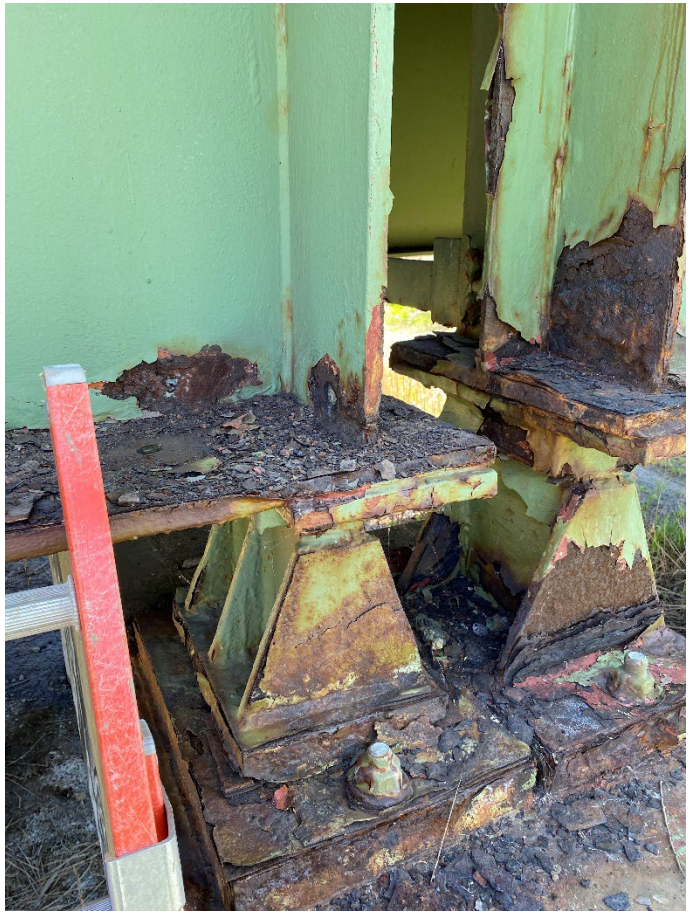
PHOTO 143

DESCRIPTION: PIER NO. 14 – END FACE

PHOTO 144

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571



DESCRIPTION: SPAN 15: GIRDER 1 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 145

DESCRIPTION: SPAN 15: GIRDER 1 (BEGIN) - FASCIA FLANGE DETERIORATION

PHOTO 146

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 15: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 147

DESCRIPTION: SPAN 15: GIRDER 4 (BEGIN) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 148

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 15: GIRDER 1 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 149

DESCRIPTION: SPAN 15: GIRDER 1 (END) - FASCIA WEB AND STIFFENER

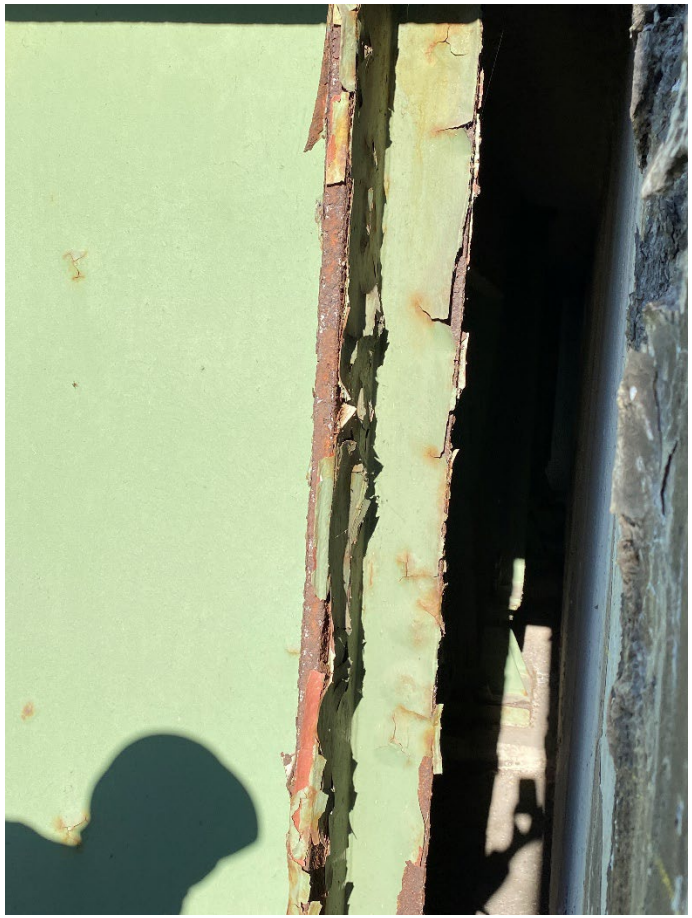
PHOTO 150

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: SPAN 15: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 151



DESCRIPTION: SPAN 15: GIRDER 4 (END) - FASCIA WEB AND STIFFENER DETERIORATION

PHOTO 152

C&S Engineers, Inc.
499 Col. Eileen Collins Blvd.
Syracuse, New York 13212
Phone: (315) 455-2000
Fax: (315) 455-9667
www.cscos.com

I-481 SB over CSX BIN 1093571

DESCRIPTION: END ABUTMENT

CONCRETE SPALLING AND EXPOSED REBAR

PHOTO 153

DESCRIPTION: END ABUTMENT – LEFT WINGWALL

ISOLATED MAP CRACKING ALONG FACE

PHOTO 154