



# CITY OF TAMPA

## BRIDGE BASCULE SPAN REPAIRS

### LAUREL STREET BRIDGE REPAIRS BRIDGE NO. 105503

CITY PROJECT NO. 000082

APRIL 2014

TRANSPORTATION DEPARTMENT

CITY OF TAMPA, FLORIDA

**GOVERNING STANDARDS AND SPECIFICATIONS:**

FLORIDA DEPARTMENT OF TRANSPORTATION, 2014 DESIGN STANDARDS AND REVISED INDEX DRAWINGS AS APPENDED HEREIN, AND 2014 STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, AS AMENDED BY CONTRACT DOCUMENTS.

FOR DESIGN STANDARDS CLICK ON THE "DESIGN STANDARDS" LINK AT THE FOLLOWING WEB SITE:  
<http://www.dot.state.fl.us/rddesign/>  
DESIGN STANDARDS

FOR THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION CLICK ON THE "SPECIFICATIONS" LINK AT THE FOLLOWING WEB SITE:  
<http://www.dot.state.fl.us/specificationsoffice/>  
STANDARD SPECIFICATIONS

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA



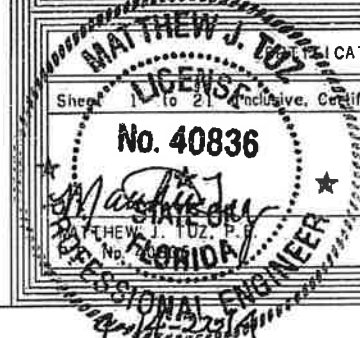
**INDEX OF DRAWINGS**  
SEE SHEETS B1-01 FOR SUMMARY OF PAY ITEMS  
SEE SHEETS B1-02 THROUGH B1-03 FOR SCOPE OF WORK, GENERAL NOTES & PAY ITEM NOTES  
SEE SHEETS B1-04 THROUGH B1-21 FOR STRUCTURAL DRAWINGS

**REVISIONS**

DATE	BY	DESCRIPTION

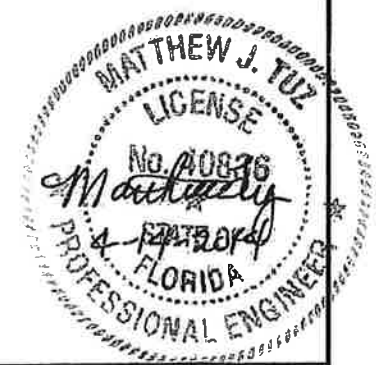
APPROVED BY:

ALTAJ BUKHARI, P.E.  
PROJECT MANAGER  
TRANSPORTATION DEPARTMENT



CERTIFICATION  
Sheets 1 to 21 Inclusive. Certified By:

PAY ITEM #	PAY ITEM DESCRIPTION	UNIT	QUANTITY
0101-1	MOBILIZATION	LS	1
0102-1	MAINTENANCE OF TRAFFIC	LS	1
0460-1-5	STRUCTURAL STEEL - REHABILITATION, (BASCULE LEAVES)	LB	3,885
0460-1-15	STRUCTURAL STEEL - REHABILITATION, (MISCELLANEOUS)	LB	6,009
0460-81	RIVETS-HIGH STRENGTH BOLTS REPLACEMENT	EA	36
0999-25	INITIAL CONTINGENCY AMOUNT (NOT A BID ITEM)	LS	1



REVISIONS						DATE	BY	DESCRIPTION

DRAWN BY: <i>MJR</i> CHECKED BY: <i>MJT</i> DESIGNED BY: <i>MJT</i> CHECKED BY: <i>TJF</i> APPROVED BY: <i>Matthew J. Tuz</i>	NAMES: <i>MJR</i> <i>MJT</i> <i>MJT</i> <i>TJF</i> <i>Matthew J. Tuz</i>	DATES: <i>04-13</i> <i>04-13</i> <i>04-13</i> <i>04-13</i> <i>04-13</i>	ENGINEER OF RECORD: MATTHEW J. TUZ, P.E. P.E. License No: 40836 URS CORPORATION SOUTHERN 7650 West Courtney Campbell Causeway Tampa, Florida 33607 Certificate of Authorization No. 0002		TRANSPORTATION DIVISION DEPARTMENT OF PUBLIC WORKS CITY OF TAMPA, FLORIDA	SHEET TITLE: <b>SUMMARY OF PAY ITEMS</b>	PROJECT NAME: <b>LAUREL STREET BRIDGE NO. 105503          OVER THE HILLSBOROUGH RIVER</b>	SHEET NO. <b>B1-01</b>
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**SCOPE OF WORK**

The work under this contract is for replacement of the metal bridge railings along the bascule leaf and for structural steel repairs required for rehabilitation of a single-leaf bascule bridge.

**STRUCTURAL:**

Replace the metal bridge railings along the bascule leaf. Replace existing deteriorated steel fasteners, batten plates and gusset plates, and other steel components at designated locations on the bascule span and trunnion tower. Replace counterweight pocket steel framing and covers. See General Note 5B, Cleaning and Coating Existing and New Steel for additional information.

**GENERAL:**

All references in the Contract Documents to "Department" shall be defined as "City of Tampa".

**GENERAL NOTES**

**1. GENERAL SPECIFICATIONS:**

Florida Department of Transportation Standard Specifications for Road and Bridge Construction dated 2014.

**2. DESIGN SPECIFICATIONS:**

American Association of State Highway and Transportation Officials (AASHTO) LRFD Bridge Design Specifications, 2012 with 2013 Interims.

AASHTO LRFD Movable Highway Bridge Design Specifications, 2007 edition, including the subsequent Interims.

FDDT Structures Design Guidelines (January 2014).

**3. ENVIRONMENT:**

Superstructure - Extremely Aggressive  
Substructure - Extremely Aggressive

**4. MATERIALS:**

**A. STRUCTURAL STEEL**

Structural steel shall be in accordance with the following Specifications:

ASTM A709, Grade 36 for rolled shapes, angles, pipes, plates and bars.

**B. STEEL CONNECTIONS**

- i. Bolted connections for structural steel (shop or field) shall be made with 7/8" Ø ASTM A325 (Type 1) high-strength (H.S.) bolts placed in 1 1/16" Ø holes (unless noted otherwise). Beveled plate washers shall be utilized at tapered flange surfaces. H.S. bolts and their compatible nuts and washers shall be mechanically galvanized in accordance with ASTM B695, Class 50. The nuts shall be overtapped to the minimum amount required for the fastener assembly and shall be lubricated with a lubricant containing a visible dye so a visual check can be made for the lubricant at the time of installation. Steel connection computed resistance is based on a Class A (Slip Coefficient 0.33) contact surface per AASHTO.
- ii. No existing rivets, bolts, washers or nuts shall be reused. New A325 bolts installed in prior phase work may be temporarily removed in a subsequent phase, then reinstalled at the same location.
- iii. New bolts shall be tensioned per Section 460 of the FDOT Standard Specifications.
- iv. New steel elements shall be fabricated with bolt holes, to be shop or field drilled as detailed in the Contractor's required submittal of shop drawings for the repairs. Do not fabricate new steel elements until the required shop drawings are approved by the Engineer.

- v. Field welding shall not be allowed for making repairs except as noted herein. Contractor to submit proposed welding procedures & welder qualifications for approval by the Engineer.
- vi. Where the number of bolts in a connection are not specified, the number shown in the drawing is the number required.

**5. CONSTRUCTION:**

**A. RIVET AND BOLT REPLACEMENT**

- 1. Contractor shall submit to the Engineer for approval the proposed method for existing rivet removal in accordance with the requirements in Section 5-1 of the FDOT Standard Specifications.
- 2. In the event that the Engineer determines that rivet removal work is resulting in damage to the existing steel, the Contractor shall cease rivet removal operations until a new method has been approved by the Engineer.
- 3. Rivets to be removed shall have their head(s) chipped off and the shank driven, drilled, cored or jacked out as required. Care shall be taken not to enlarge rivet holes or to damage remaining material. Burning will not be permitted. Heat resulting from any removal method shall not damage rivet holes or the surrounding materials.
- 4. Where existing rivets are removed, and the resulting holes require enlargement, the holes shall be enlarged by not more than 1/16" inch in diameter greater than the nominal bolt diameter shown on the plans. Hole enlargement, where required, shall be accomplished by reaming.
- 5. At locations where the rivet hole area contains cracked, torn, or otherwise damaged material due to conditions other than the Contractor's operations, the Contractor shall ream the hole and install an oversized bolt.
- 6. At locations where surrounding material has been damaged as a result of the Contractor's operations, the surrounding material shall be repaired. When reaming of more than 1/16" inch in diameter greater than the nominal bolt diameter shown on the plans and installing an oversized bolt is required for the repair, the reaming, furnishing and installing of oversized bolts shall be at the Contractor's expense.

- 7. Inside surfaces of holes exposed after rivet removal shall be painted in accordance with Sections 560 and 975 of the FDOT Standard Specifications.
- 8. No separate measurement or payment is made for rivets or bolts that are replaced by high strength bolts that are associated with steel repairs detailed in the plans and the Contractor's approved Shop Drawings.
- 9. Severely deteriorated rivets and bolts at locations not specifically associated with steel repairs shall be identified by the Contractor for proposed replacement, subject to approval by the Engineer (see Pay Item Note 9, Sheet No. B1-03).

**B. CLEANING AND COATING EXISTING AND NEW STEEL**

- 1. At the locations of the required steel repairs and leaf railing replacement, the existing adjacent localized steel surfaces (to remain) shall be cleaned, including those surfaces exposed upon the removal of steel elements to be replaced, per the requirements of Section 561 of the FDOT Standard Specifications.
- 2. Localized cleaning of steel surfaces is to be accomplished by means which provide full containment and collection of materials at the work surface, such as provided by needle-guns with vacume-head attachments.
- 3. Existing steel surfaces that have been cleaned per the specifications and approved by the Engineer, shall be field painted with a primer coat, from those approved products on the FDOT Qualified Products List.

- 4. New structural steel shall be shop painted with its primer coat per the requirements of Section 560 of the FDOT Standard Specifications.
- 5. The intermediate and top coating system for the new and existing structural steel shall not be provided by this contract for required steel repairs and railing replacement. Contractor to coordinate with the City of Tampa for additional information (see Pay Item Notes 5, 7 and 8 on Sheet No. B1-03).
- 6. Coatings on the existing and newly installed structural steel that have been disturbed or damaged by the Contractor's operations, as identified by the Engineer, shall be coated or recoated per the requirements of FDOT Specifications 560 and 561.

**C. STRUCTURE STABILITY & ALIGNMENTS:**

The Contractor is responsible for maintaining the stability and alignment of the bascule leaf, trunnion towers and attached members during repairs and modifications, and shall stage the work and/or furnish and install temporary restraints or other devices as required to maintain the stability and alignment while the repairs and modifications are performed.

The Contractor shall survey and make other measurements as necessary to record the alignment before and after the repairs and modifications are performed to demonstrate that the alignment of the bascule leaf steel framing, trunnions and drive machinery has been restored or maintained within specified tolerances.

Temporary shoring and bracing shall be the responsibility of the Contractor, with shop drawings to be submitted to the Engineer for review and approval prior to the Contractor beginning removal of existing steel.

Contractor shall perform all work so as to avoid damage to the structure.

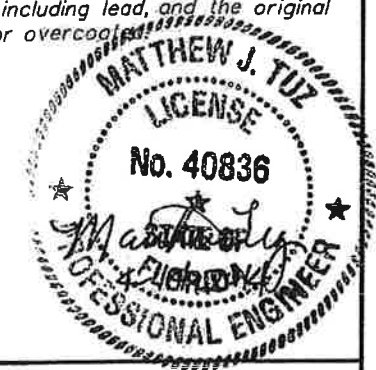
Contractor is responsible for worker and public safety in the work zone throughout the duration of construction.

**6. DIMENSION VERIFICATION:**

The dimensions and details shown are based on information from the original design plans, shop drawings, and rehabilitation plans of the existing bridge and may not represent the as-built conditions. It is the Contractor's responsibility to verify all dimensions and conditions in the field before preparation of shop drawings and prior to ordering materials and beginning construction.

**7. HAZARDOUS MATERIAL:**

The original paint on the steel in the bascule leaf and on those members in the bascule pier including the trunnion tower has been identified as containing hazardous metals including lead, and the original coatings may have since been removed or overcoated.



REVISIONS		NAMES		DATES		ENGINEER OF RECORD: MATTHEW J. TUZ, P.E. P.E. License No: 40836 URS CORPORATION SOUTHERN 7650 West Courtney Campbell Causeway Tampa, Florida 33607 Certificate of Authorization No. 0002	 TRANSPORTATION DIVISION DEPARTMENT OF PUBLIC WORKS CITY OF TAMPA, FLORIDA	SHEET TITLE:		PROJECT NAME:	SHEET NO.	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			SCOPE OF WORK, GENERAL NOTES & PAY ITEM NOTES SHEET 1 OF 2				
										LAUREL STREET BRIDGE NO. 105503		B1-02
										OVER THE HILLSBOROUGH RIVER		

**GENERAL NOTES (CONT.)**

**8. CONSTRUCTION STAGING AND WORK AREAS:**

Except for the area within the Right-of-Way, there are no construction staging areas at the job site designated for such use. Land areas near the bridge shall not be used for staging areas unless approved by the City. The Contractor shall provide off-site staging areas or job site barges as required for staging all of its operations.

**9. MAINTENANCE OF NAVIGATION CHANNEL:**

Notify Michael Lieberum, United States Coast Guard, Miami office at (305) 415-6744 prior to the commencement of construction activities, in advance of actions during bridge construction or demolition which potentially effect waterway users, and prior to the placement of any floating construction equipment in the waterway. Notify the Coast Guard no less than 60 days in advance of actions which could potentially affect the waterway.

Some construction is anticipated to be performed during hurricane season, and the Contractor shall submit a Vessel Heavy Weather Lay-Up Plan to the USCG prior to beginning construction. Coordinate with Edward Ayoub, USCG Tampa office at (813)-228-2191.

**10. MANATEE HABITAT GUIDELINES:**

The project work area is a known habitat of the West Indian Manatee. The Contractor shall comply with the FDOT endangered wildlife guidelines found at the following website: [www.dot.state.fl.us/specificationsoffice/implemented/URLinSpecs/files/endangeredwildlifeguidelines.pdf](http://www.dot.state.fl.us/specificationsoffice/implemented/URLinSpecs/files/endangeredwildlifeguidelines.pdf)

**11. OPERATION OF EXISTING BRIDGE:**

Contact Buddy Evans, City of Tampa Bridge Maintenance Supervisor at (813) 610-0938 to coordinate operating and maintenance related issues prior to construction. The City of Tampa will operate and maintain the bridge throughout the construction duration for the required steel repairs.

**PAY ITEM NOTES**

1. Payment for incidental items not specifically covered in the individual Bid Items shall be included in the Contract Unit Price for the Bid Items.
2. Cost for compliance with all regulations of the Occupational Safety and Health Administration for this project shall be included in the contract unit price for bid items in this project.
3. Item 101-1, Mobilization, consists of work and operations necessary to begin work on the project. Includes moving in equipment and personnel, any temporary offices, safety equipment and sanitary facilities as applicable.
4. Item 102-1, Maintenance of Traffic includes all items required to safely maintain traffic through or around the project work zone with minimal inconvenience to the public. Contractor to prepare a MDT plan, signed and sealed by a registered Professional Engineer for all anticipated traffic disruptions including lane closures, sidewalk closures, and detours.
5. There is no separate payment made for cleaning and coating existing structural steel, or for recleaning and recoating the new steel surfaces, as required by Sections 560 & 561 of the FDOT Standard Specifications.
6. The cost of galvanizing shall be incidental to item being coated.
7. Item 460-1-5, Structural Steel - Rehabilitation, Bascule Leaves includes the cost of removal and disposal of existing steel to be removed including fasteners. No separate measurement or payment is made for the weight of steel to be removed. Item 460-1-5 also includes all costs for materials, equipment, labor and other items that are associated with replacing rivets and bolts with high strength bolts at the required steel repairs and for all cleaning and painting of steel surfaces.
8. Item 460-1-15, Structural Steel - Rehabilitation, Miscellaneous includes the cost of removal and disposal of the existing metal bridge railings including fasteners. No separate measurement or payment is made for the weight of metal bridge railings to be removed. Item 460-1-15 also includes all costs for materials, equipment, labor and other items that are associated with installation of the new metal bridge railing posts into the existing bent plate brackets that are to remain.
9. Item 460-81, Rivets-High Strength Bolts, Replacement, is for replacement of severely deteriorated rivets and bolts not specifically associated with steel repairs detailed in the Plans. The Contractor shall identify deteriorated fasteners for proposed replacement, subject to approval by the Engineer.

Deteriorated rivets and bolts that are approved for replacement with high strength bolts shall be measured and paid for by unit. The contract unit price paid for rivet/bolt removal and replacement shall include full compensation for furnishing all labor, high strength bolts and other materials, tools, equipment and incidentals, and for doing all work involved in removing rivets/bolts, including submitting the proposed method for rivet removal, as shown in the Plans, as herein specified and as directed by the Engineer.

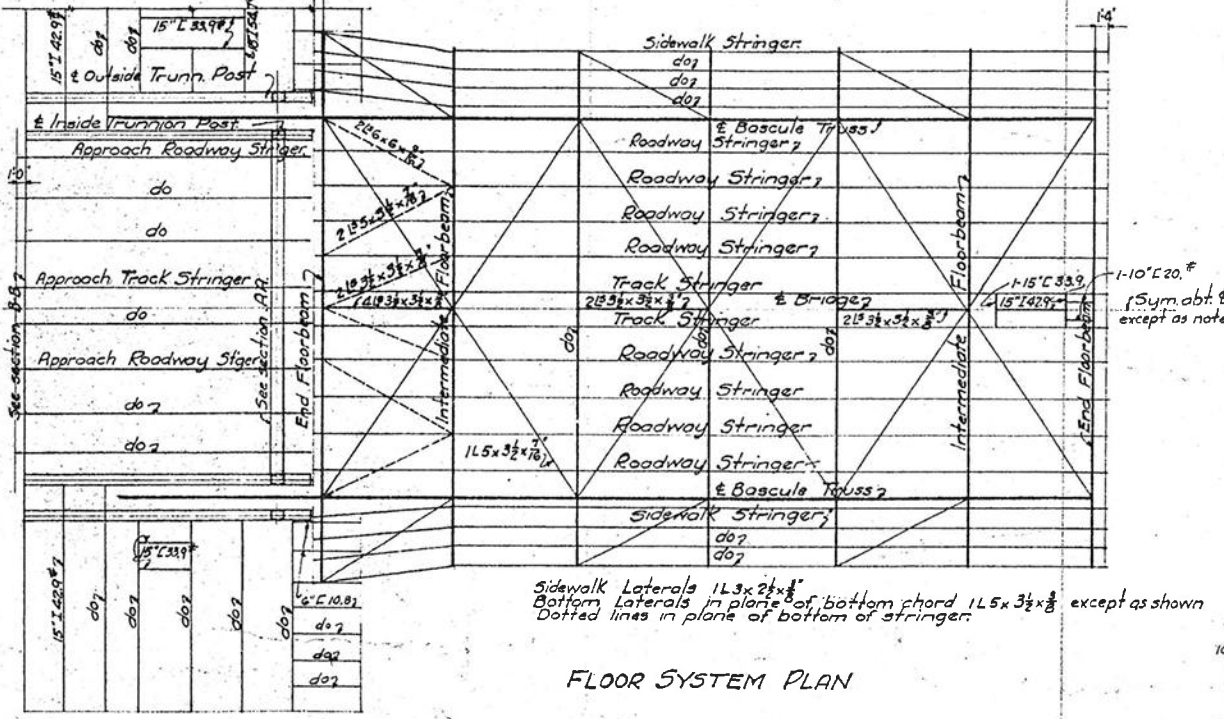
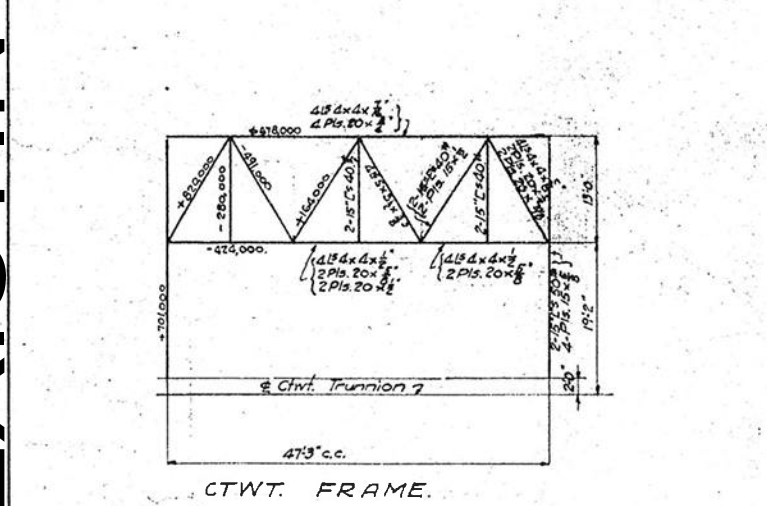
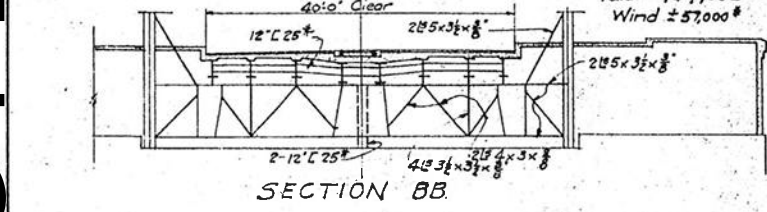
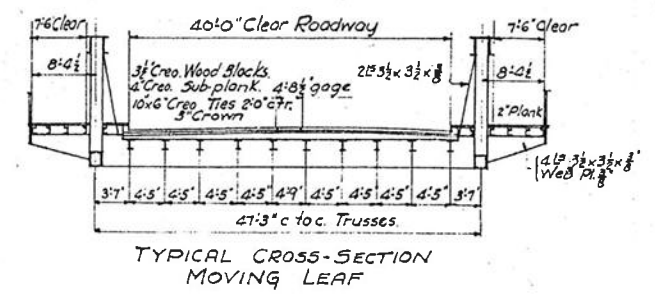
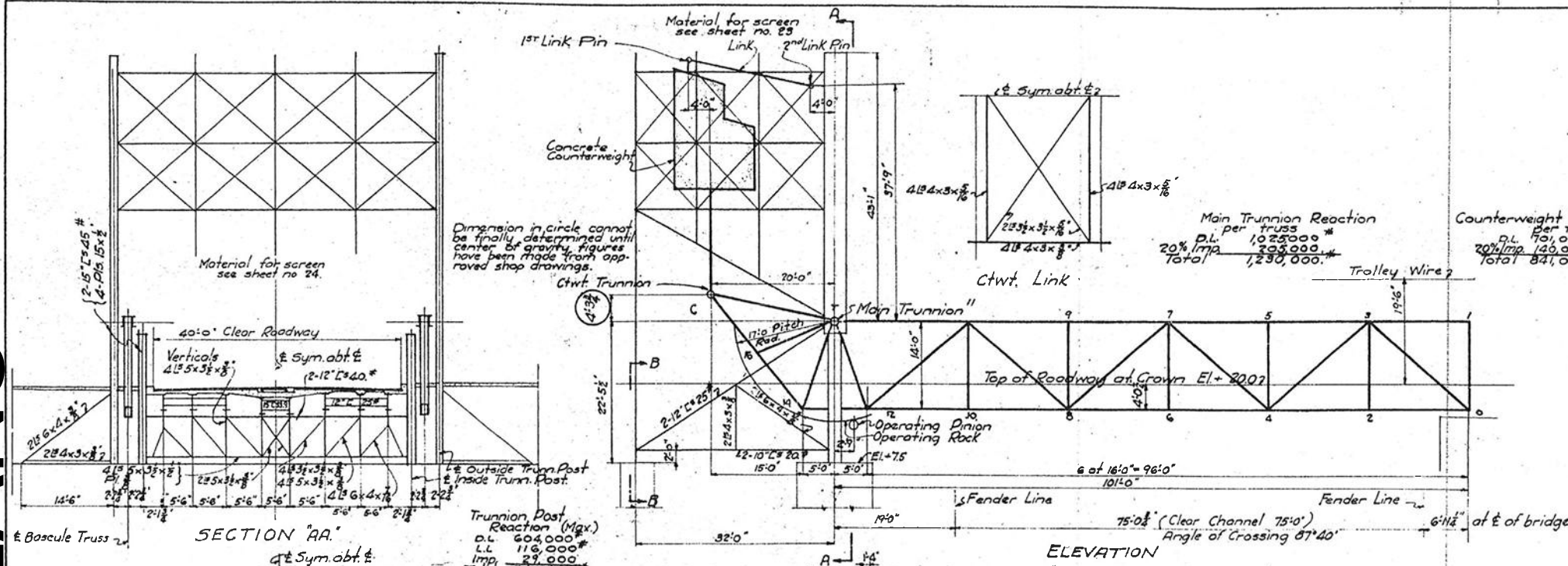


REVISIONS						ENGINEER OF RECORD		PROJECT NAME		SHEET NO.	
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	NAME	DATES	LAUREL STREET BRIDGE NO. 105503		OVER THE HILLSBOROUGH RIVER	
						DRAWN BY	MJR 04-13	TRANSPORTATION DIVISION		SHEET 2 OF 2	
						CHECKED BY	MJT 04-13	DEPARTMENT OF PUBLIC WORKS		PROJECT NAME	
						DESIGNED BY	MJT 04-13	CITY OF TAMPA, FLORIDA		LAUREL STREET BRIDGE NO. 105503	
						CHECKED BY	TJF 04-13	7650 West Courtney Campbell Causeway		OVER THE HILLSBOROUGH RIVER	
						APPROVED BY	Matthew J. Tuz	Tampa, Florida 33607		B1-03	
								Certificate of Authorization No. 0002			



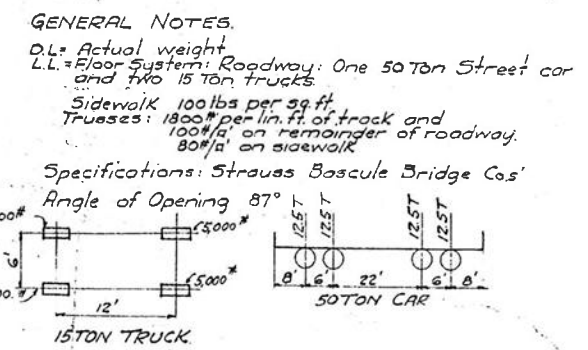


EXISTING PLANS



STRESSES AND SECTIONS IN FLOOR SYSTEM.

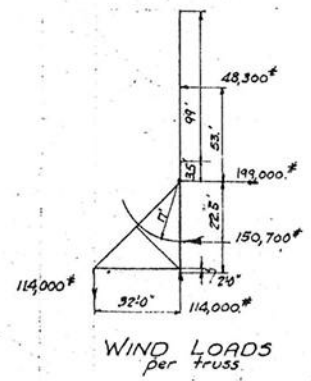
Item	Shears in 1000#				Moments in 1000ft.#				Section
	DL	LL	Imp	Total	DL	LL	Imp	Total	
Roadway Stringer	2.0	11.3	2.8	16.1	8.0	40.0	10.0	58.0	15" I 42.9#
Sidewalk "	0.4	2.0	0.5	2.9	1.6	8.0	2.0	11.6	10" C 20#
Track "	2.4	20.3	5.1	27.8	9.4	66.0	16.5	92.1	15" B-I 54#
End Floorbeam	19.5	50.7	12.7	82.9	230.0	875.0	206.0	1261.0	Web 42x8, 4L 6x6x1/2, 13x1/2
Intern. "	26.0	45.3	11.3	82.6	508.0	736.0	184.0	1228.0	Web 46x8, 4L 6x6x1/2, 21x1/2
Track Stringer	24.0	28.1	7.0	59.1	197.0	162.0	41.0	397.0	28" B-I 106.0#
Roadway "	15.6	13.1	3.3	32.0	134.0	92.0	23.0	249.0	24" B-I 84.5#



STRESSES AND SECTIONS IN BASCULE TRUSS.

Mem	D.L.	LL	Imp	Total	Unit Stress	Area Req'd	Area Used	Section
					Gross	Net	Gross	Net
0-4	+41.0	185.0	36.0	160.0	16.0	10.0	31.24	4L 4x4x3/8 2 P15 20x4
4-8	+252.0	710.0	68.0	544.0	18.5	25.4	31.44	do
8-12	+643.0	1780.0	45.0	1810.0	60.5	21.44	do	2 P15 20x4, 2 P15 20x4
12-14	+1023.0	2760.0	93.5	3016.5	102.2	107.36	do	do
14-C	+1180.0	3380.0	177.2	4737.2	19.8	11.72	do	2 P15 20x4, 2 P15 20x4, 2 P15 20x4
3-7	-124.0	2350.0	59.0	2275.0	16.0	31.8	41.44	4L 4x4x3/8 2 P15 20x4
7-11	-224.0	2520.0	63.0	2359.0	69.4	83.44	do	4 P15 20x4, 2 P15 12x4
11-T	-923.0	490.0	72.0	-361.0	85.6	103.44	85.65	4L 4x4x3/8 2 P15 20x4, 2 P15 20x4
7-C	-1140.0	1930.0	48.0	790.0	12.8	16.7	19.8	2-15" C 33.9#
0-3	+35.0	193.0	3.0	231.0	11.9	12.9	14.64	2-12" C 25.0#
3-4	+111.0	132.0	3.0	246.0	11.9	12.9	14.64	2-12" C 25.0#
4-7	-769.0	820.0	35.0	4.0	23.0	16.0	13.3	17.58 13.58 2-12" C 30.0#
7-8	+228.0	69.0	17.0	314.0	12.7	24.8	26.34	2-15" C 45.0#
8-11	-294.0	116.0	29.0	439.0	16.0	27.4	34.80	2-15" C 33.9# 2 P15 15x4
11-12	+370.0	174.0	44.0	588.0	13.2	44.6	45.44	4L 4x4x3/8 2 P15 20x4
12-T	-294.0	144.0	36.0	474.0	16.0	29.6	35.74	4L 4x4x3/8 2 P15 18x4
12-14	-990.0	1220.0	14.0	230.0	16.0	71.3	85.36	4L 4x4x3/8 do 4L 4x4x3/8 2 P15 20x4
14-T	-39.0	57.0	14.0	112.0	16.0	6.88	12.20	4L 5x3x3/8
14-B	+4.0							do
7-16						9.97		4L 5x3x3/8
1-3						19.8		2-C 6 5-33.9#

\* Max. D.L. + 20% Imp. + indicates compression  
 - indicates tension  
 Areas in sq. inches  
 Stresses in 1000#

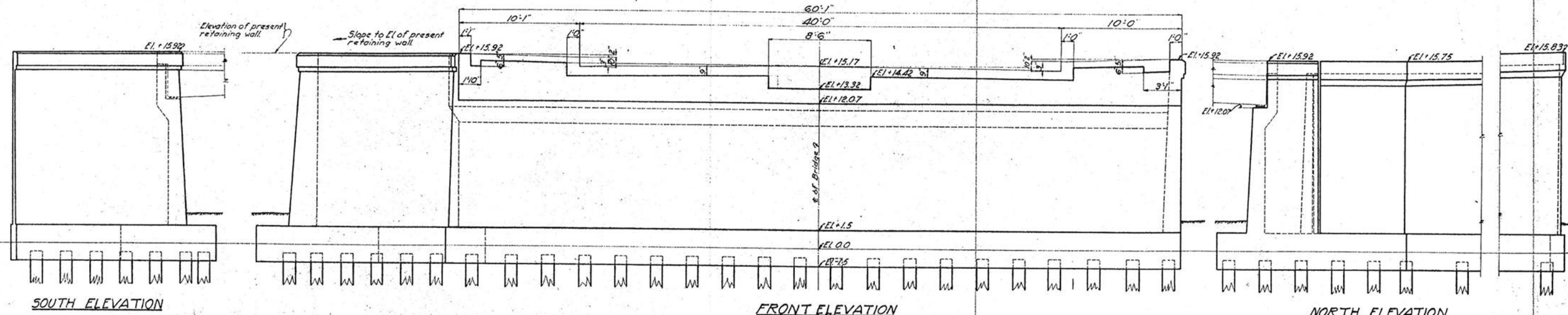


STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DRAWN BY RT  
 TRACED BY RT  
 CHECKED BY C.W.  
 REVISED  
 SCALE 1/4" = 1'-0"  
 DATE 1-25-24  
 GEN. FILE 14  
 SHEET NO. 3

STRESS SHEET

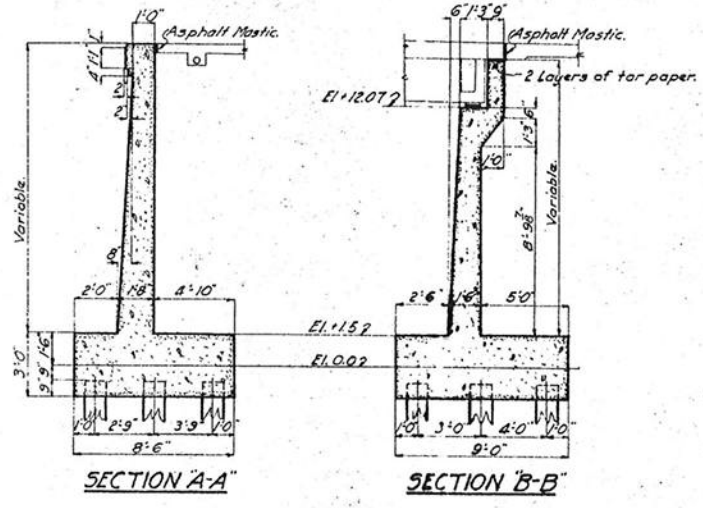
EXISTING PLANS



SOUTH ELEVATION

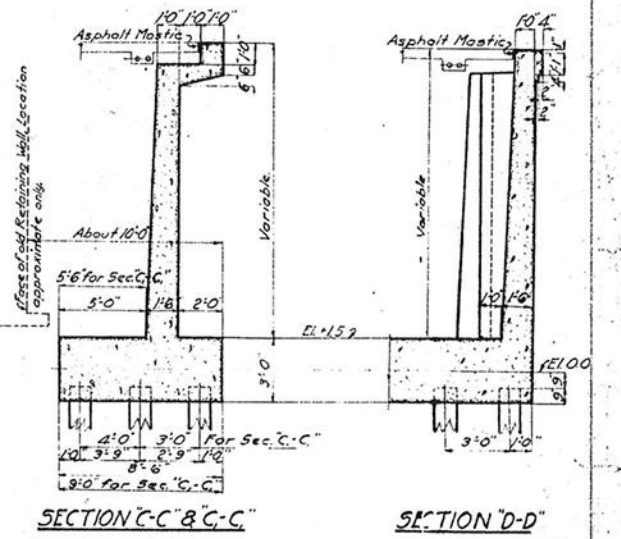
FRONT ELEVATION

NORTH ELEVATION



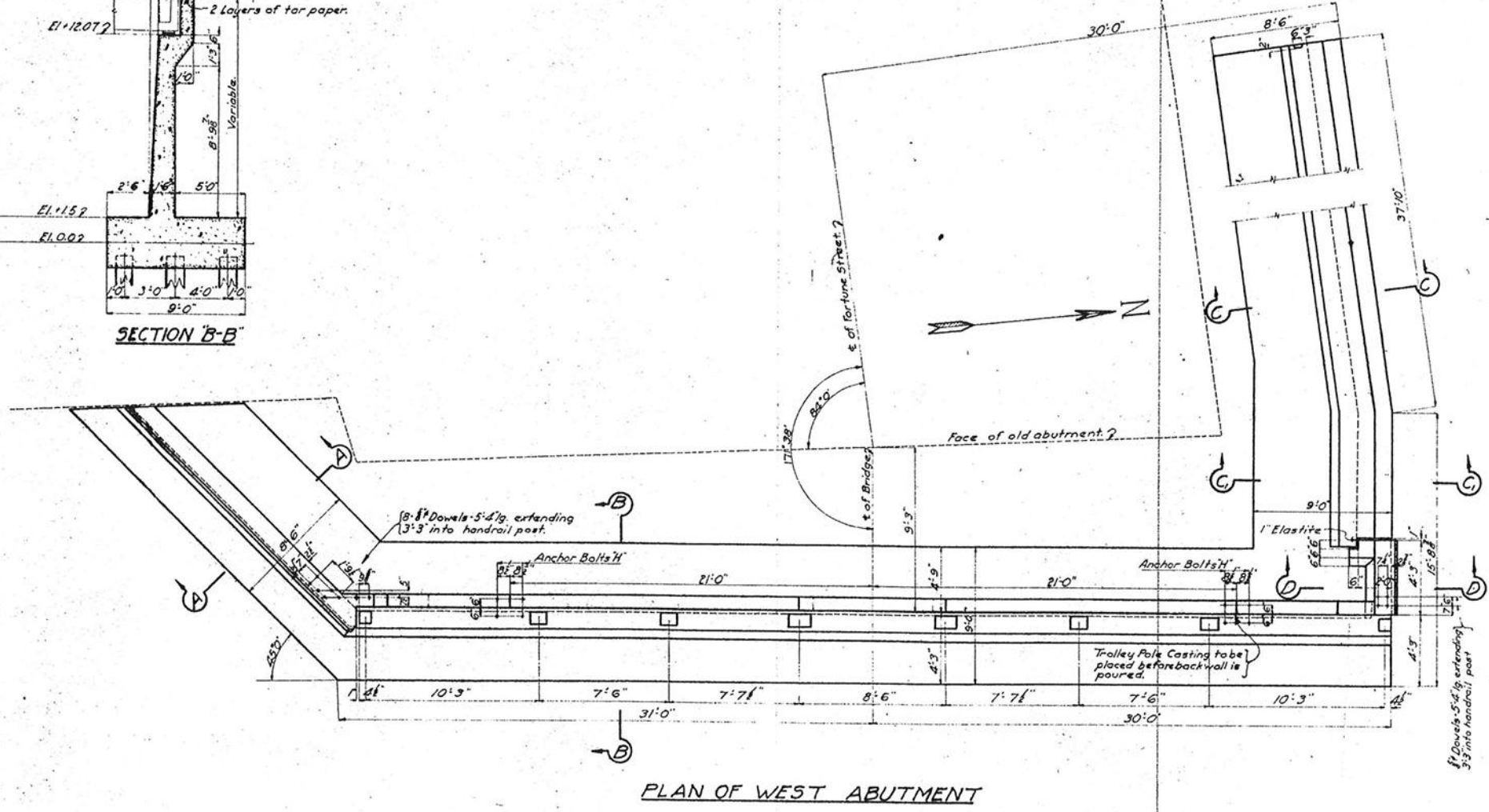
SECTION A-A

SECTION B-B



SECTION C-C & C-C

SECTION D-D



PLAN OF WEST ABUTMENT

GENERAL NOTES:-  
 Remove old abutment & old retaining walls to 4'-0" below crown of roadway.  
 For Anchor Bolt H see sheet # 26.

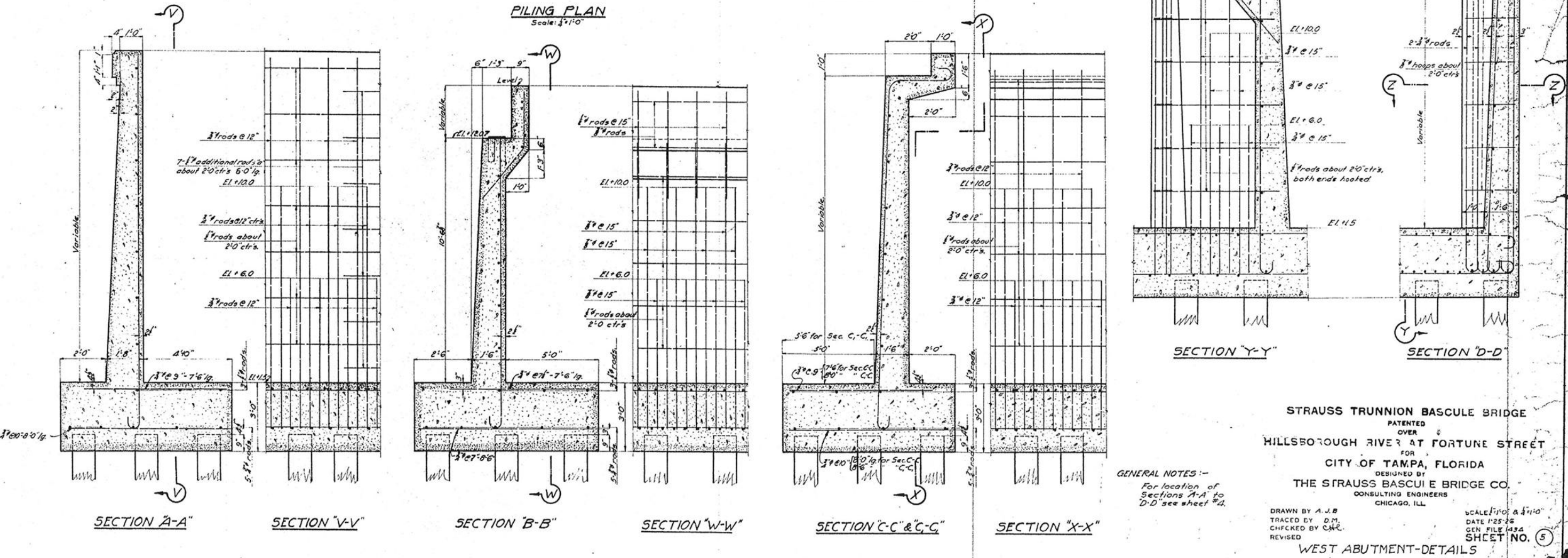
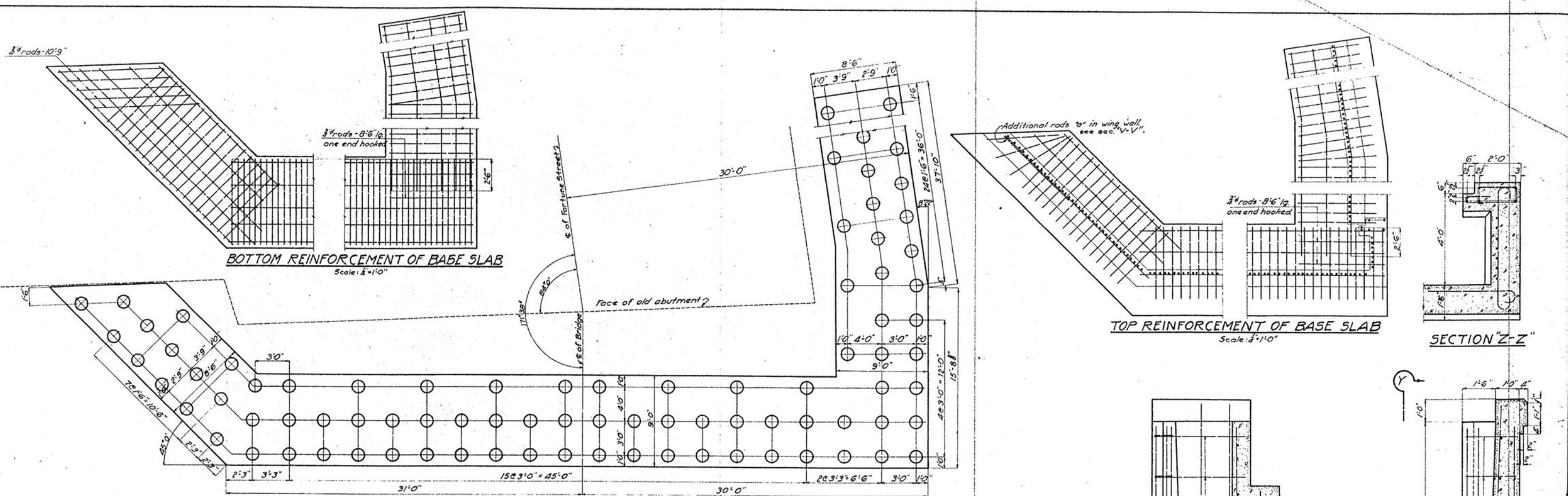
STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED  
 OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DRAWN BY A.J.B.  
 TRACED BY D.M.  
 CHECKED BY C.H.C.  
 REVISED  
 SCALE 1" = 10'  
 DATE 1-25-26  
 GEN. FILE 1434  
 SHEET NO. 4

WEST ABUTMENT-PLAN



EXISTING PLANS



GENERAL NOTES:-  
For location of Sections A-A to D-D see sheet #2.

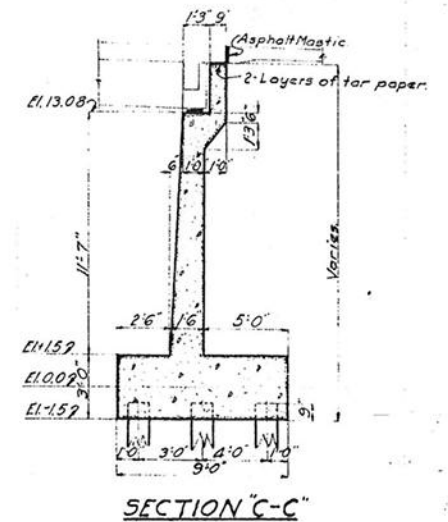
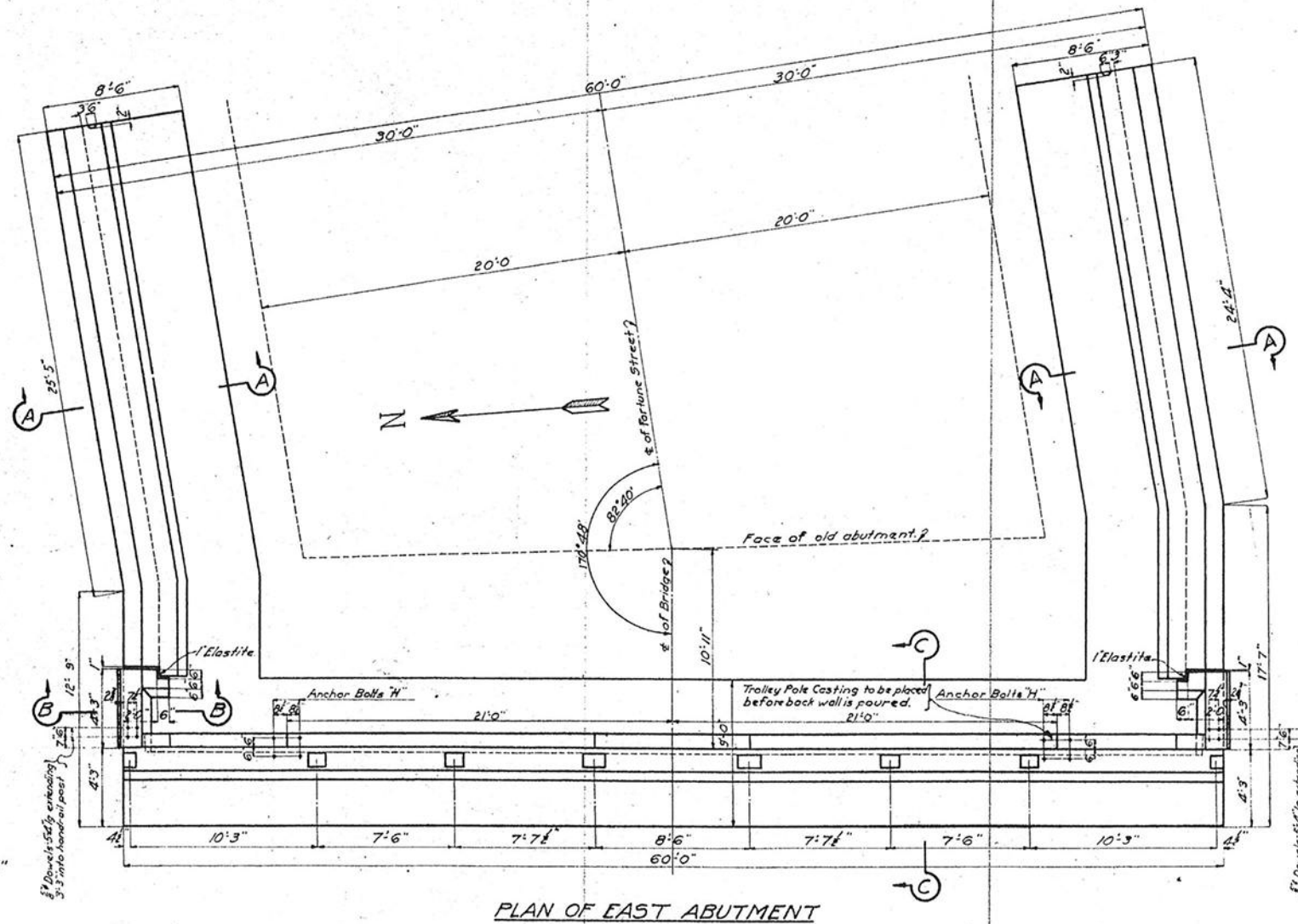
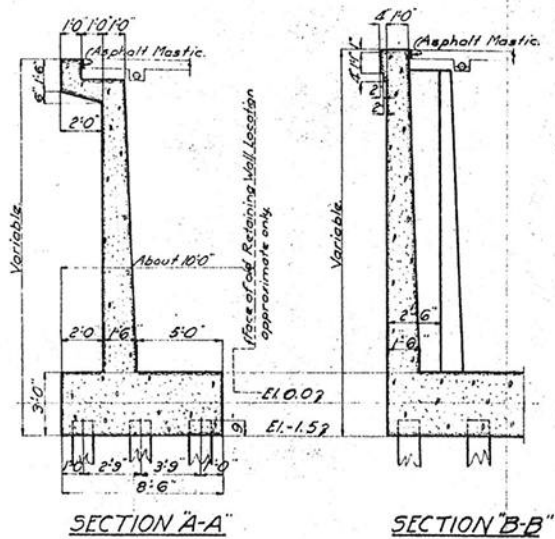
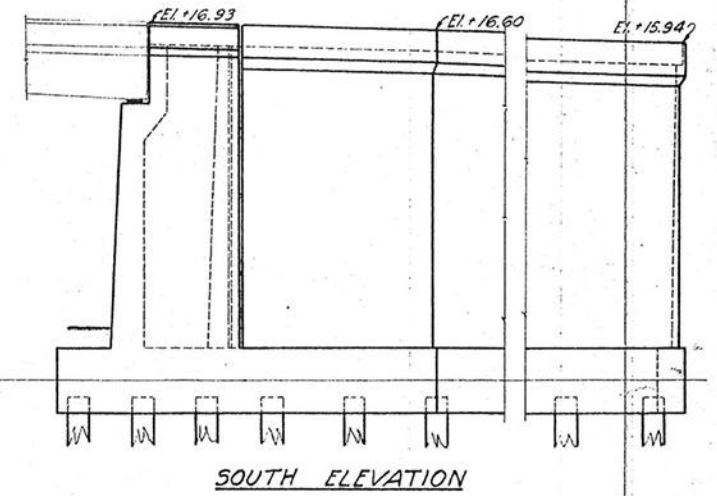
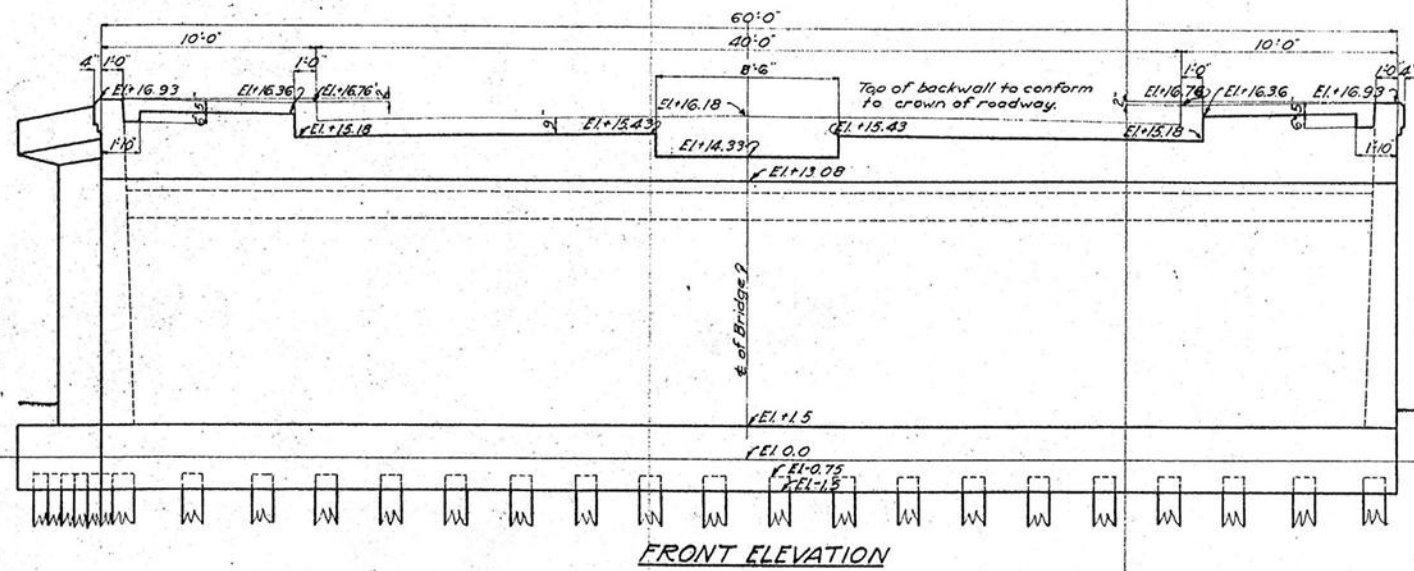
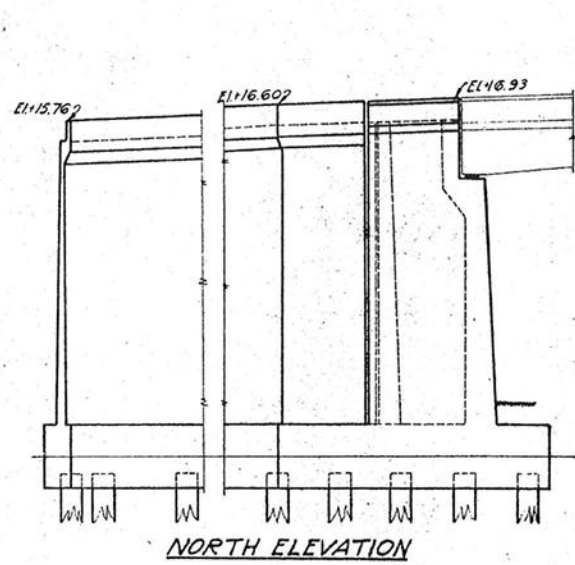
STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED  
 OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DRAWN BY A.J.B.  
 TRACED BY D.M.  
 CHECKED BY C.H.C.  
 REVISED

SCALE: 1/4" = 1'-0" & 1/8" = 1'-0"  
 DATE 1-25-26  
 GEN. FILE 4334  
 SHEET NO. 5

WEST ABUTMENT-DETAILS

EXISTING PLANS



**GENERAL NOTES:-**  
 Remove old abutment & old retaining walls to 4'0" below crown of future roadway.  
 For Anchor Bolts "H" see sheet # 26.

**STRAUSS TRUNNION BASCULE BRIDGE**  
 PATENTED OVER  
 HILLCROFT RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

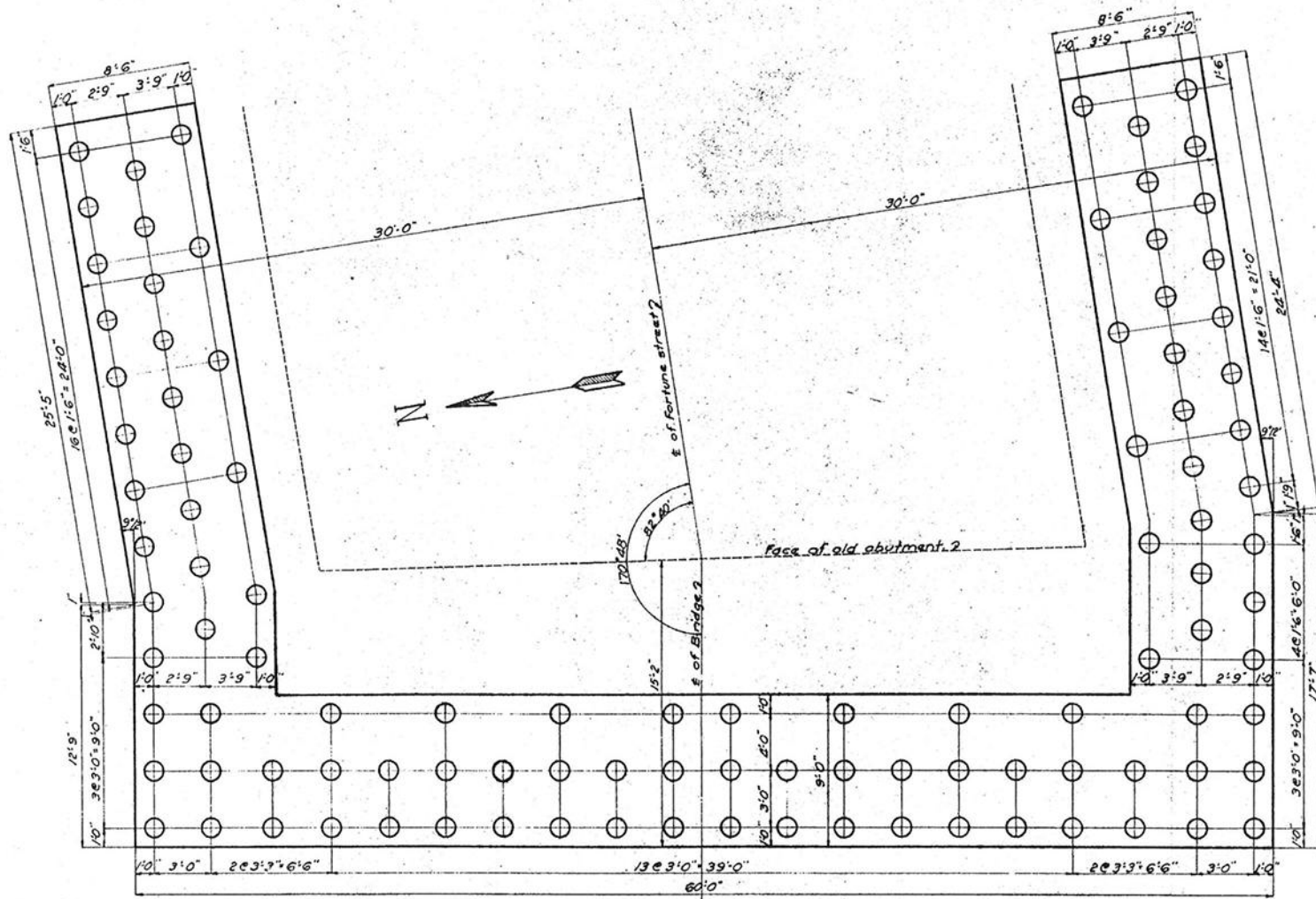
DRAWN BY A.J.B.  
 TRACED BY D.M.  
 CHECKED BY C.H.  
 REVISED

SCALE 1" = 10'  
 DATE 1-25-26  
 GEN. FILE 1434  
 SHEET NO. 6

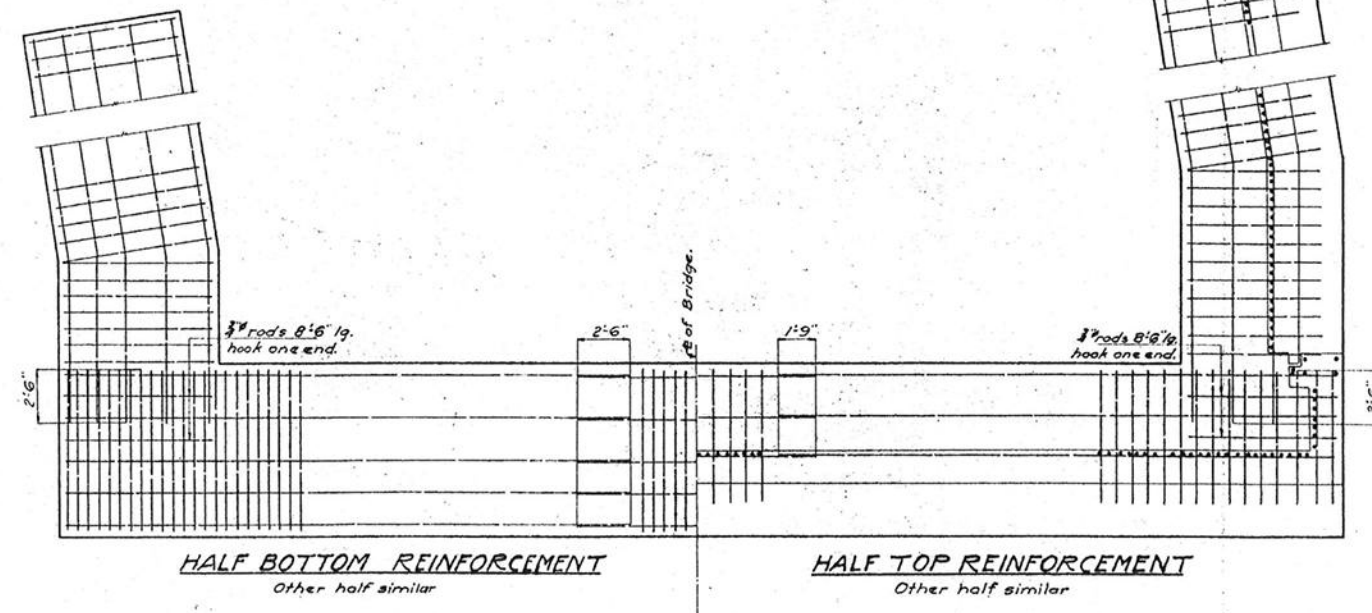
**EAST ABUTMENT-PLAN**



# EXISTING PLANS



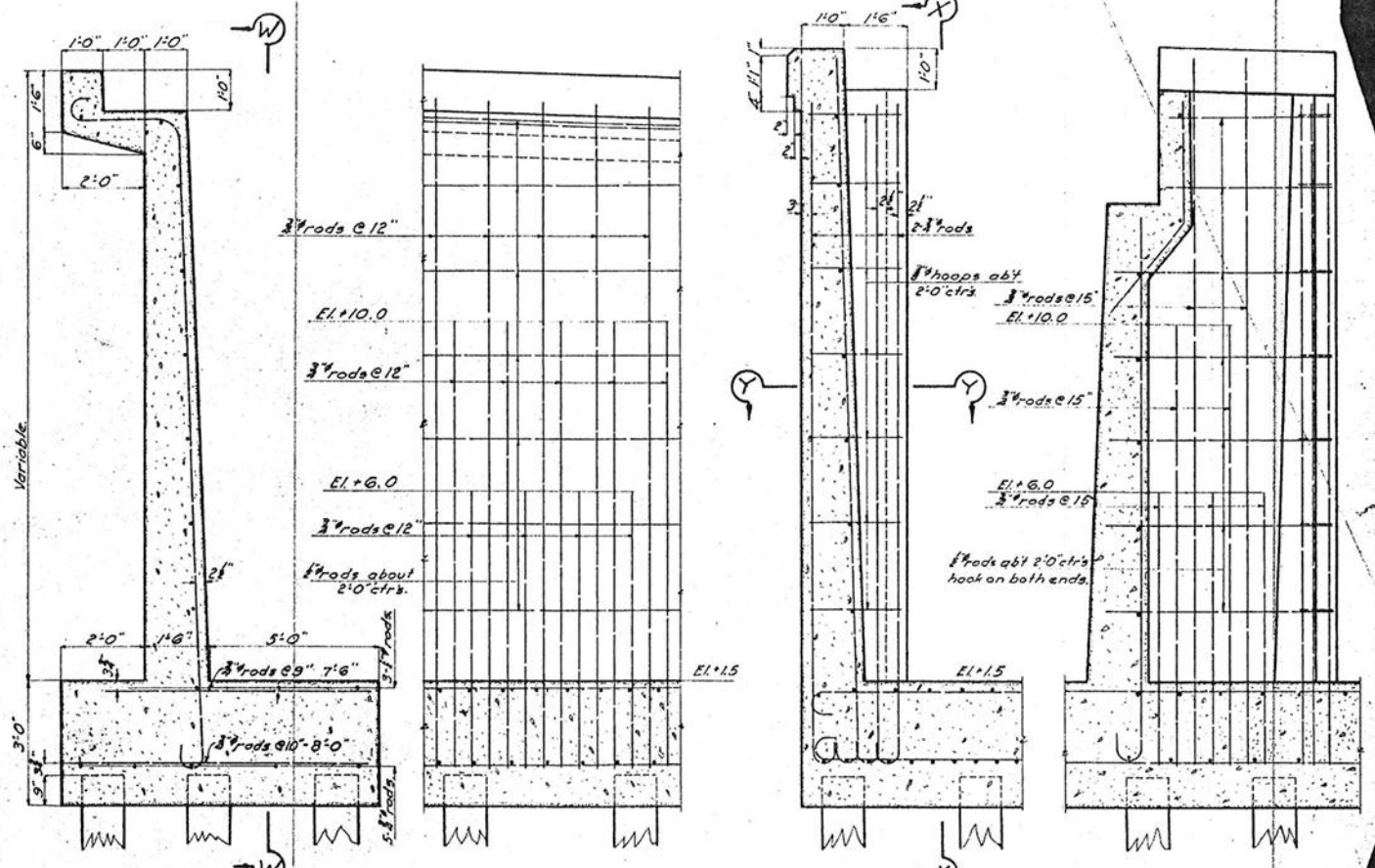
**PILING PLAN**  
Scale: 1/4" = 1'-0"



**HALF BOTTOM REINFORCEMENT**  
Other half similar

**HALF TOP REINFORCEMENT**  
Other half similar

**BASE SLAB**  
Scale: 1/4" = 1'-0"

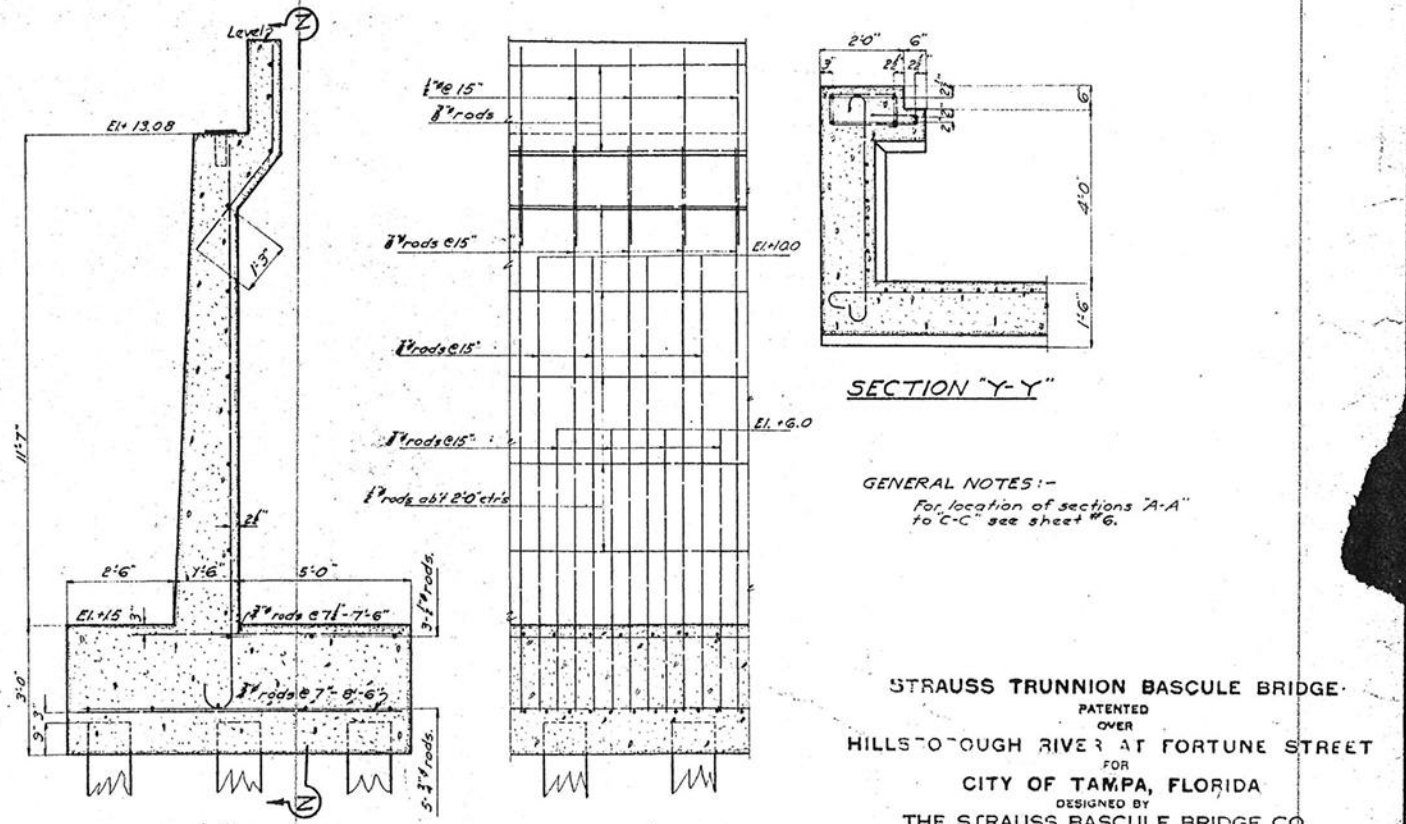


**SECTION A-A**

**SECTION W-W**

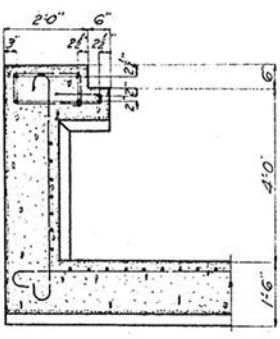
**SECTION B-B**

**SECTION X-X**



**SECTION C-C**

**SECTION Z-Z**



**SECTION Y-Y**

**GENERAL NOTES:-**  
For location of sections A-A to C-C see sheet #6.

**STRAUSS TRUNNION BASCULE BRIDGE**  
 PATENTED  
 OVER  
**HILLS-OUGH RIVER AT FORTUNE STREET**  
 FOR  
**CITY OF TAMPA, FLORIDA**  
 DESIGNED BY  
**THE STRAUSS BASCULE BRIDGE CO.**  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

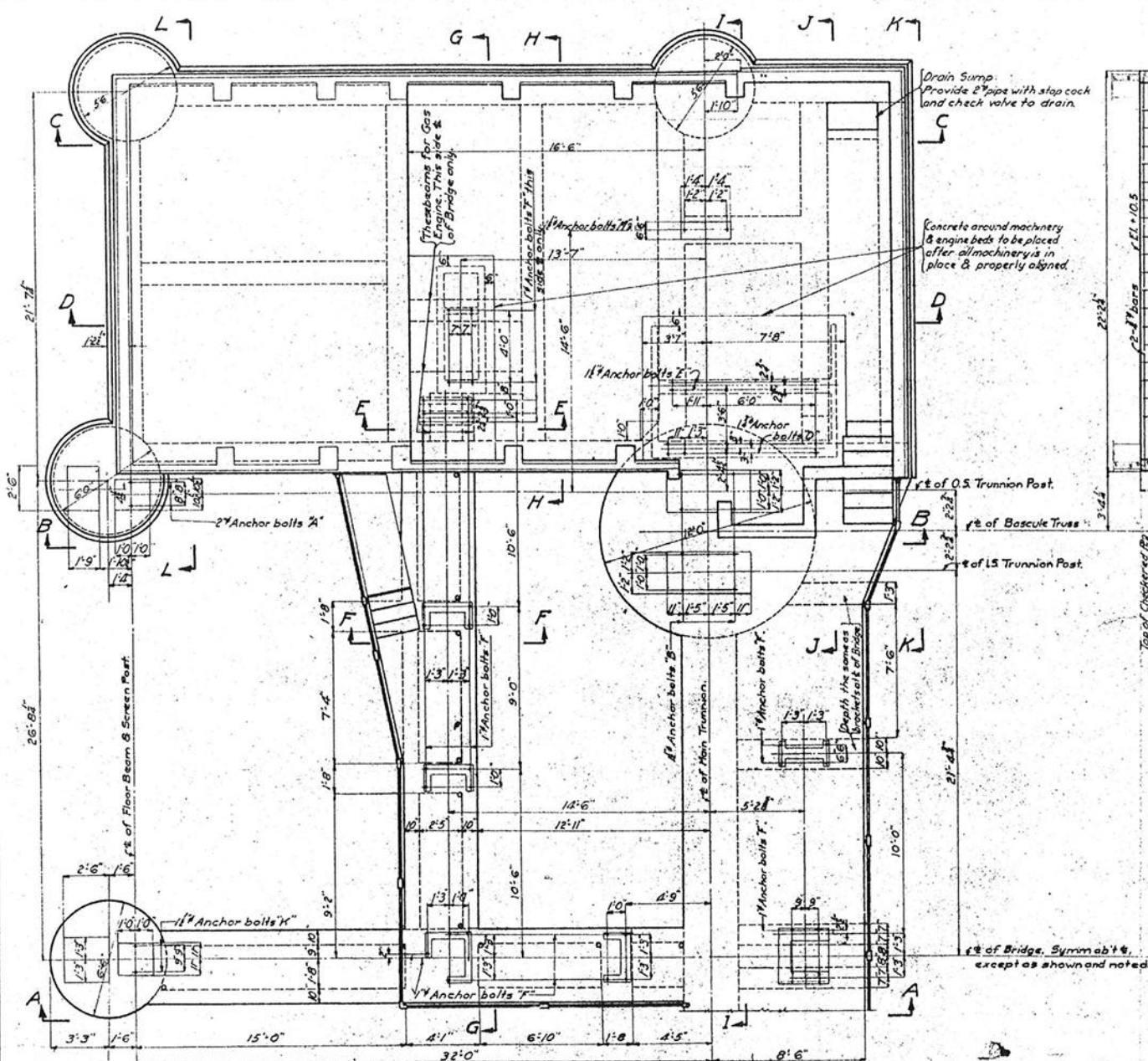
DRAWN BY A.J.B.  
 TRACED BY D.M.  
 CHECKED BY C.H.R.  
 REVISED

SCALE 1/4" = 1'-0"  
 DATE 1-25-26  
 GEN. FILE 1434  
**SHEET NO. 7**

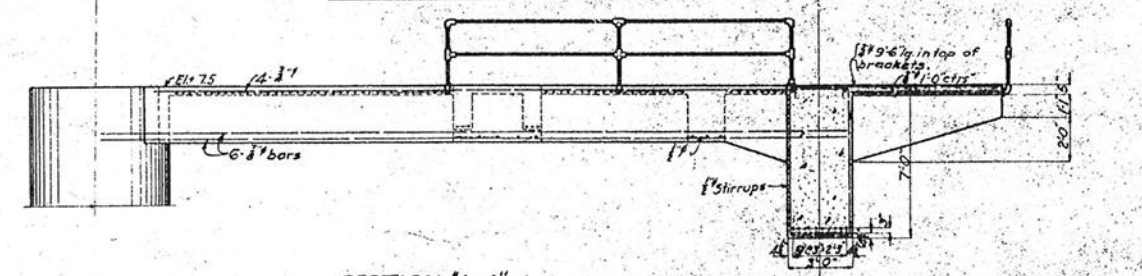
**EAST ABUTMENT-DETAILS**



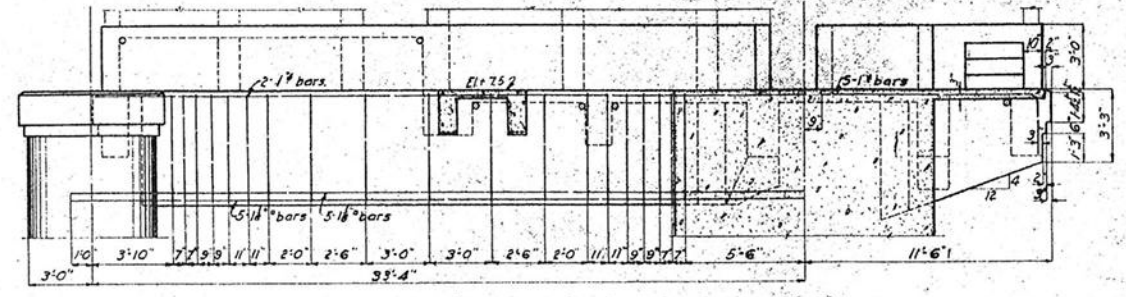
# EXISTING PLANS



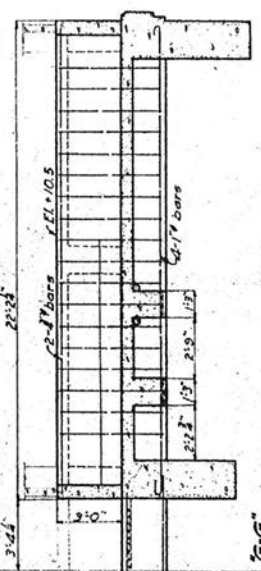
PLAN OF BASCULE PIER



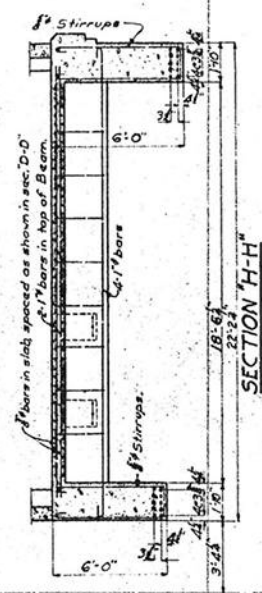
SECTION 'A-A'



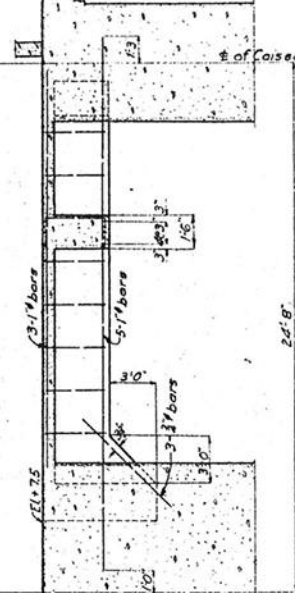
SECTION 'B-B'



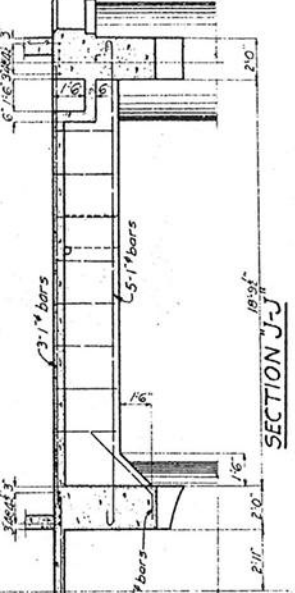
SECTION 'G-G'



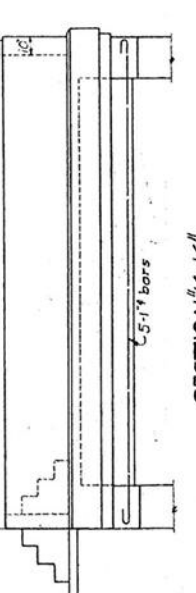
SECTION 'H-H'



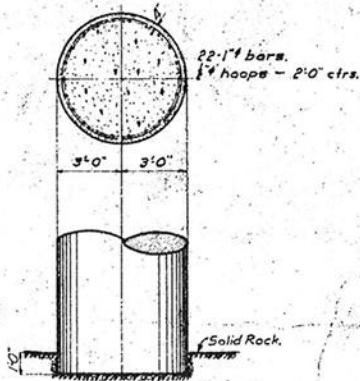
SECTION 'I-I'



SECTION 'J-J'

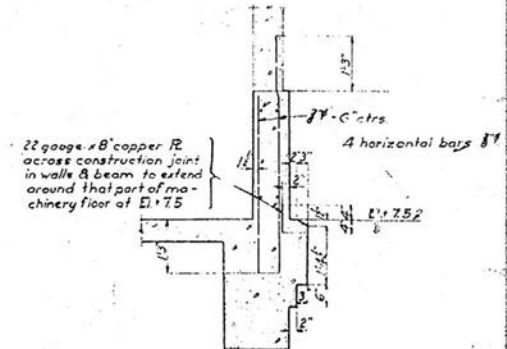


SECTION 'K-K'



TYPICAL DETAIL OF CAISSON

Other caissons similar, except  
 20-1\"/>



Detail of Coping & Waterproofing of Construction Joint at El. +7.5 Scale: 1\"/>

GENERAL NOTES :-

Provide 2\"/>

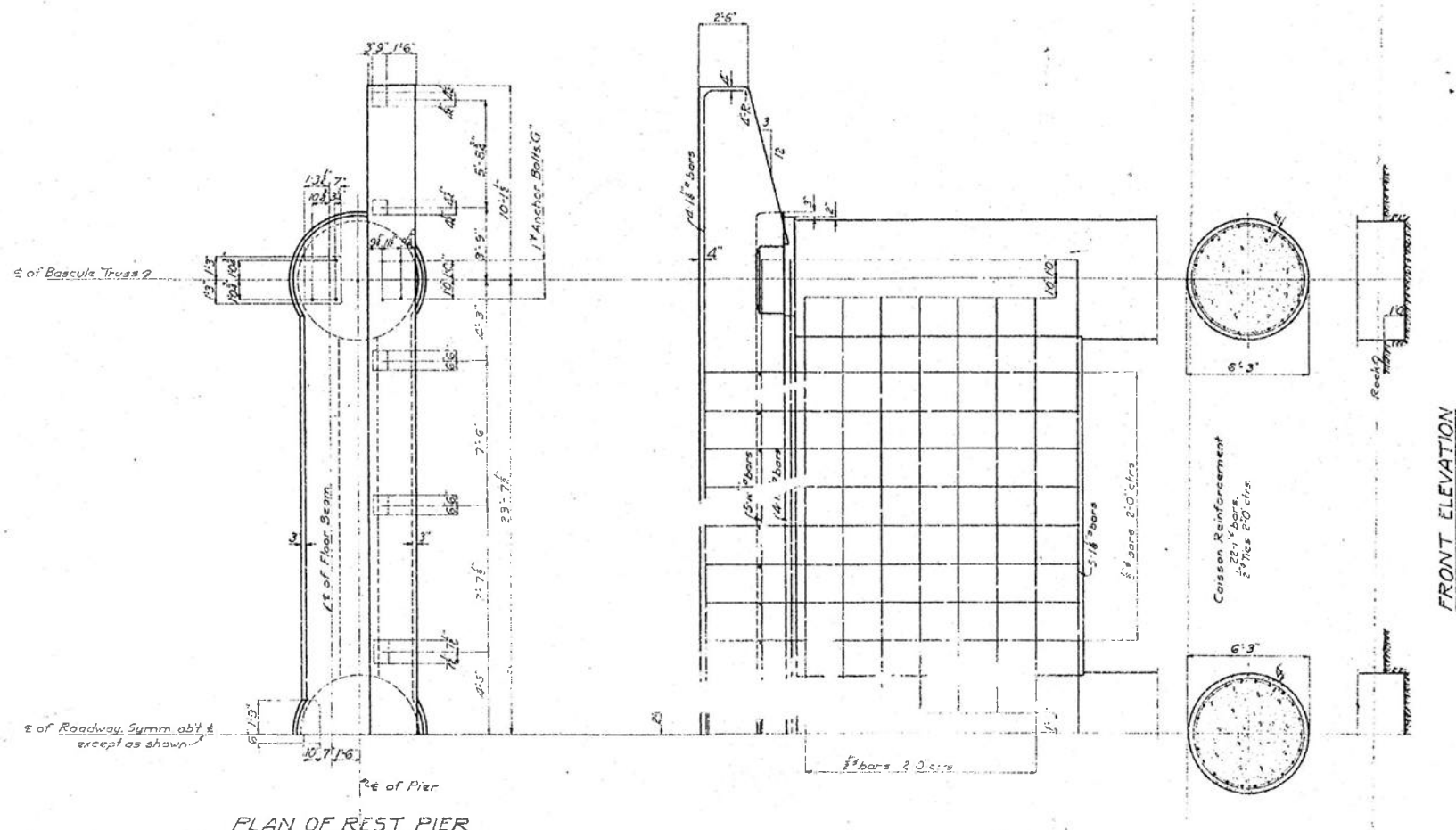
STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DRAWN BY E.C.F.  
 TRACED BY D.M.  
 CHECKED BY C.M.E.  
 REVISED

BASCULE PIER

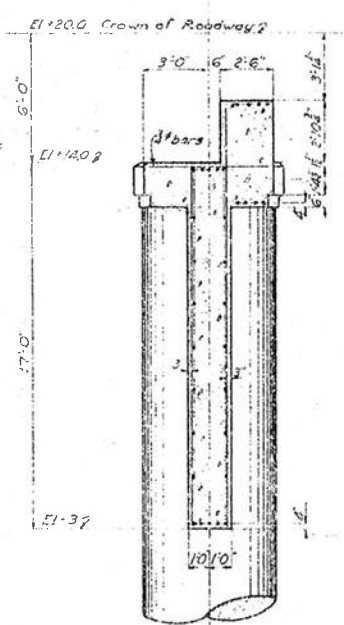
SCALE 1/8\"/>
 DATE 1-25-16  
 GEN. FILE 434  
 SHEET NO. 8

EXISTING PLANS

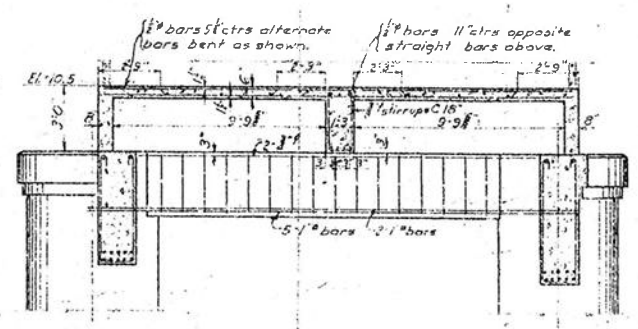


PLAN OF REST PIER

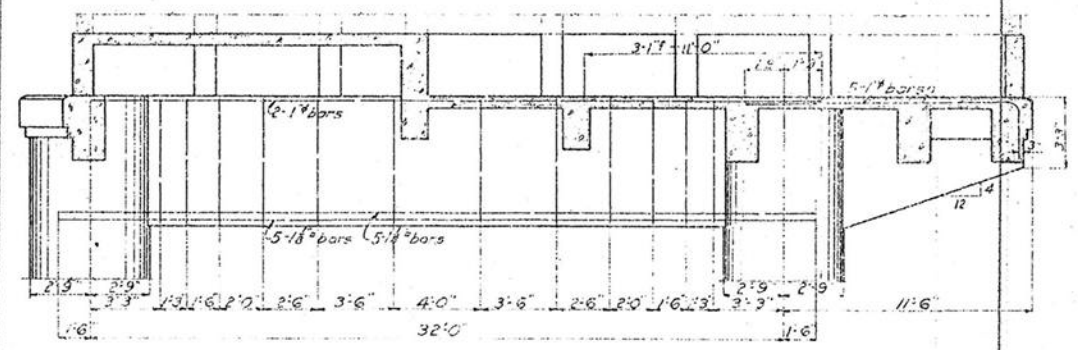
FRONT ELEVATION



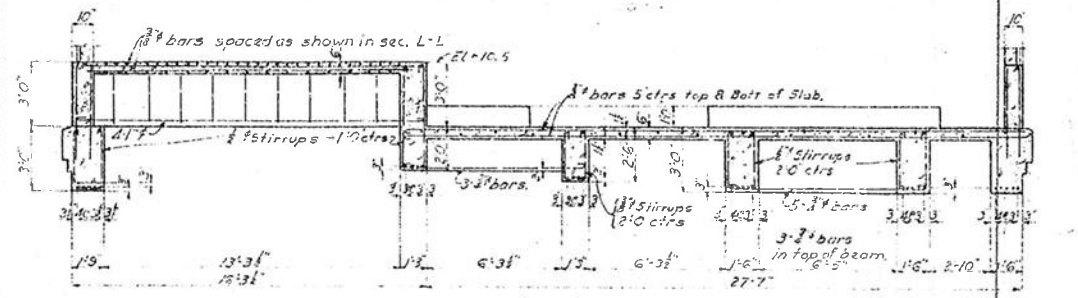
SECTION NEAR  $\epsilon$



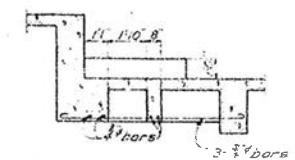
SECTION 'L-L'



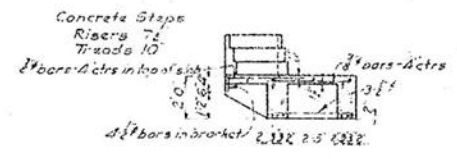
SECTION 'C-C'  
Showing size in outside beam.



SECTION 'D-D'



SECTION 'E-E'



SECTION 'F-F'

GENERAL NOTES:-  
 For location of sections 'C-C', 'D-D', 'E-E', 'F-F', & 'L-L' see sheet 'B'

STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED  
 OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DRAWN BY E.C.F.  
 TRACED BY D.M.  
 CHECKED BY C.A.C.  
 REVISED

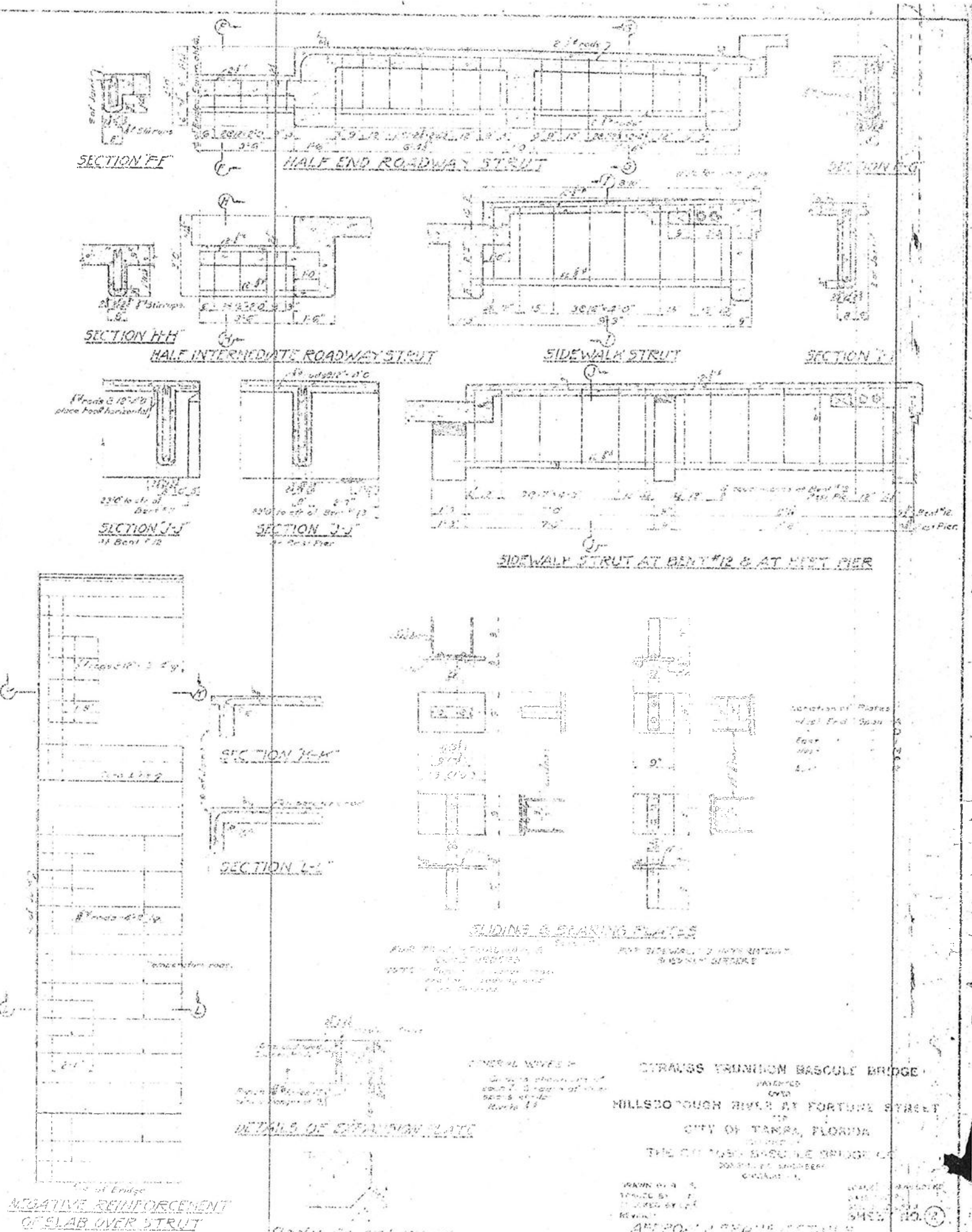
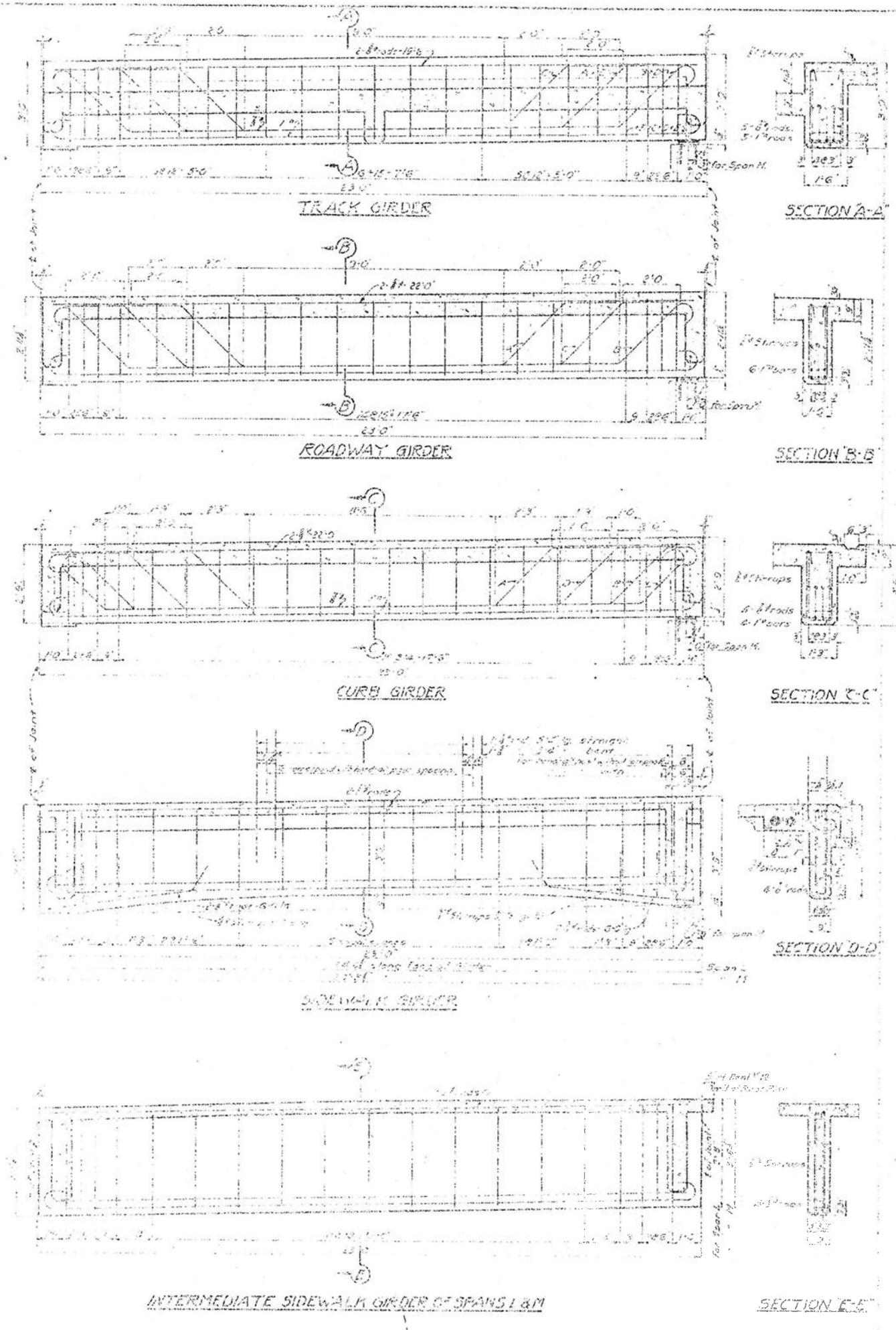
SCALE 3/8" = 1'-0"  
 DATE 1-25-26  
 GEN. FILE 1434  
 SHEET NO. 9

REST PIER





# EXISTING PLANS



SLIDING & SEPARATING PLATES

GENERAL NOTES -

CONTRACT NO. 10-10-10-10

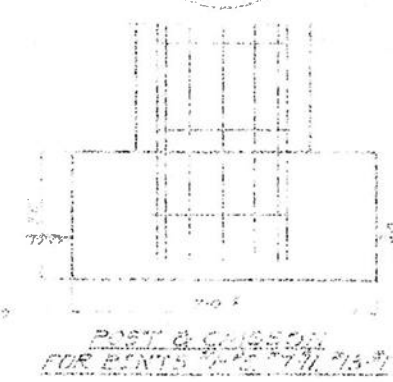
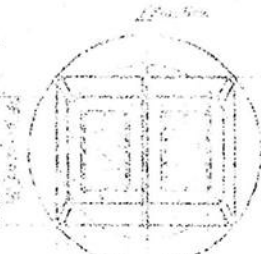
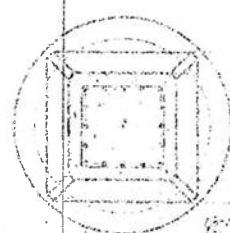
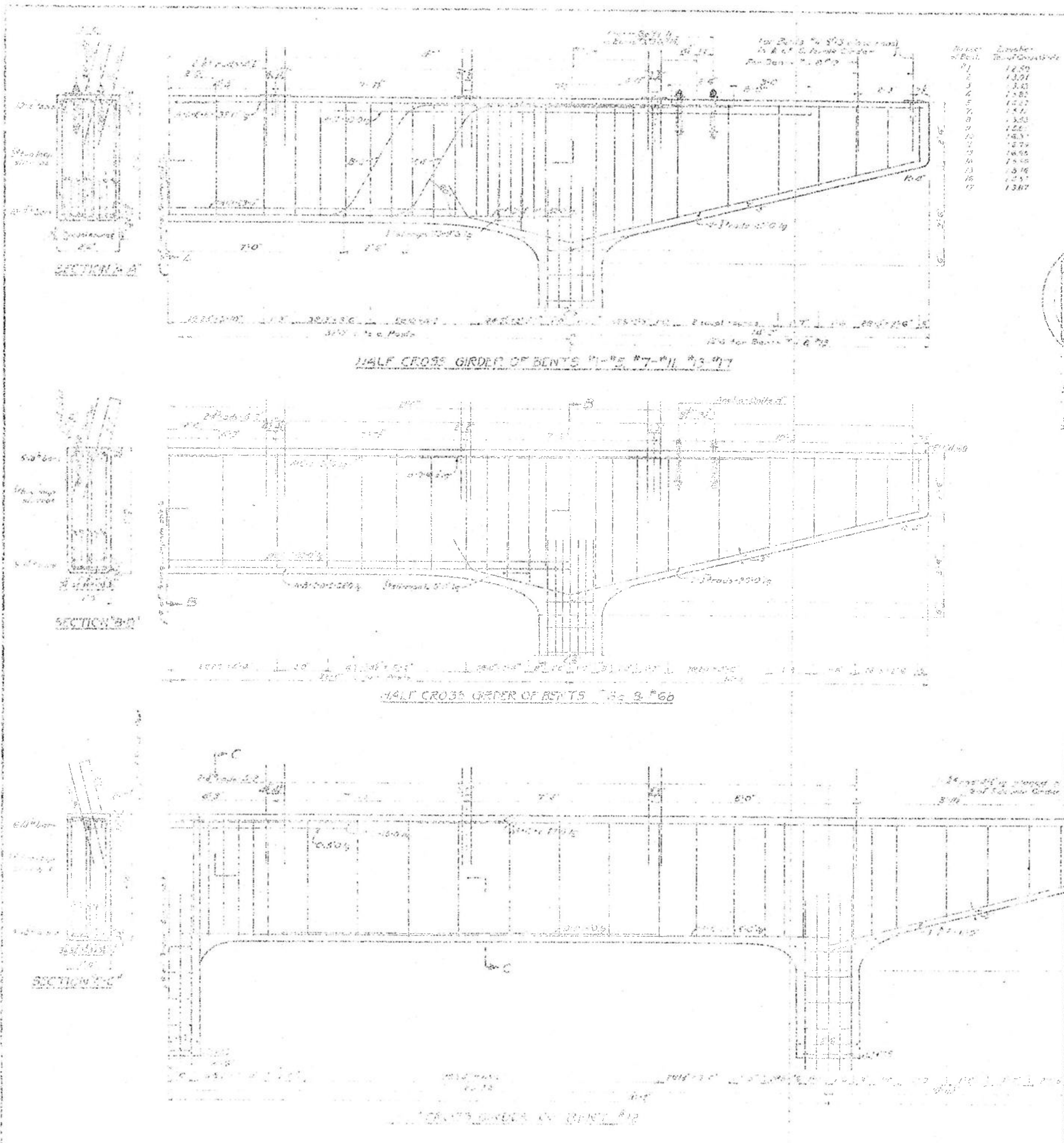
CYRAUS TRUNION BASCULE BRIDGE  
HILLSDOUGH RIVER AT FORTUNE STREET  
CITY OF TAMPA, FLORIDA

THE CITY ENGINEER

APPROVED



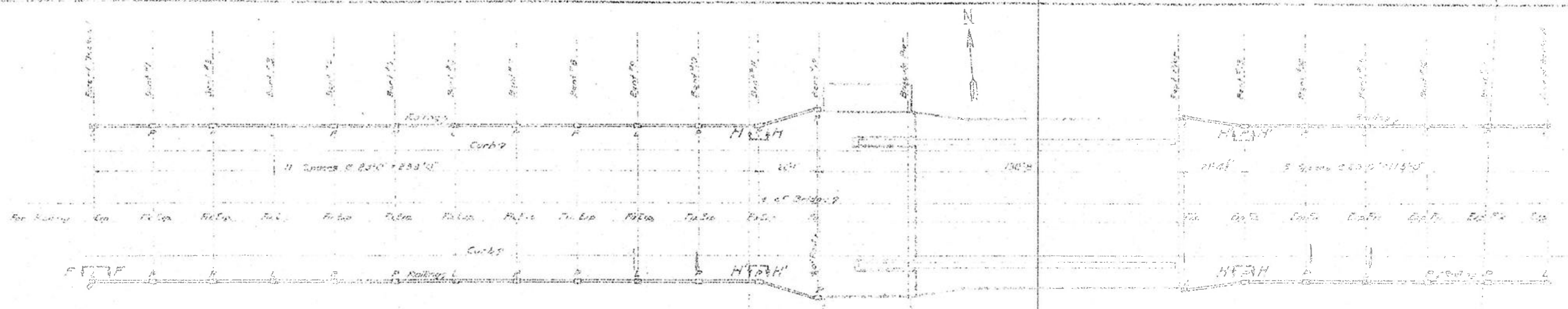
EXISTING PLANS



STRAUSS TRAVELING BRIDGE ENGINE  
 1015  
 11500 DUCK RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 THE JAMES SCOTT BRIDGE CO.  
 1015  
 SHEET NO. 10

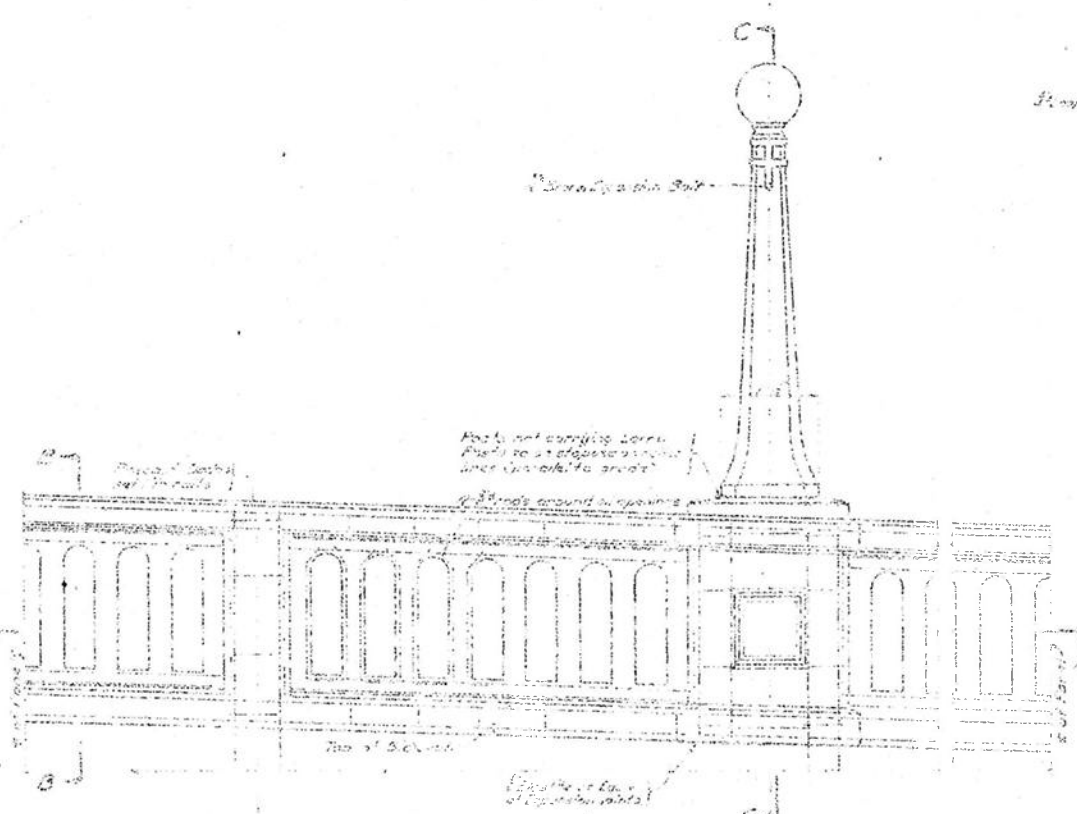


EXISTING PLANS

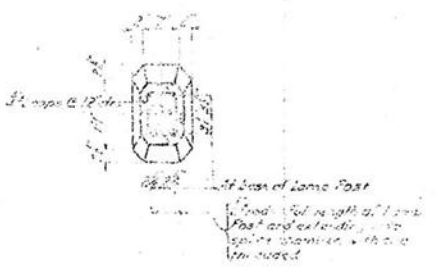


LOCATION PLAN OF POSTS & RAILING

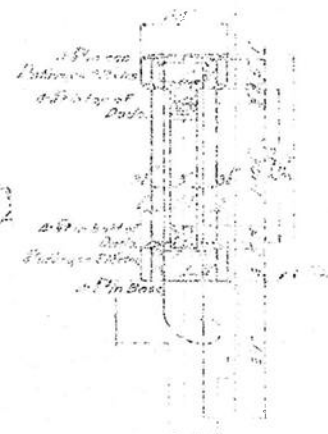
1. Ornamental Lamin Post & Rolling Post  
2. Rolling Post



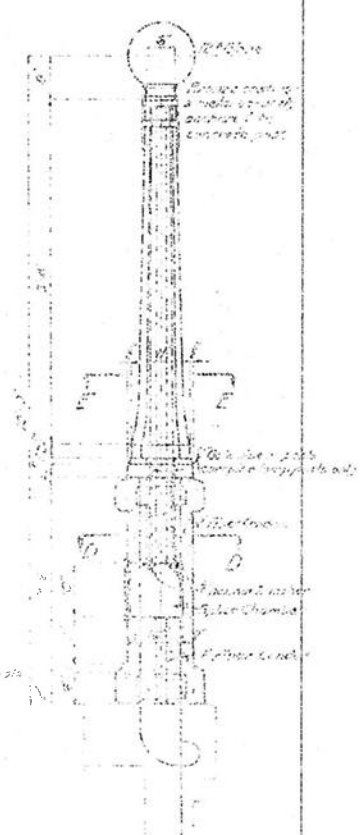
ELEVATION-TYPICAL PANEL OF HANDRAILING



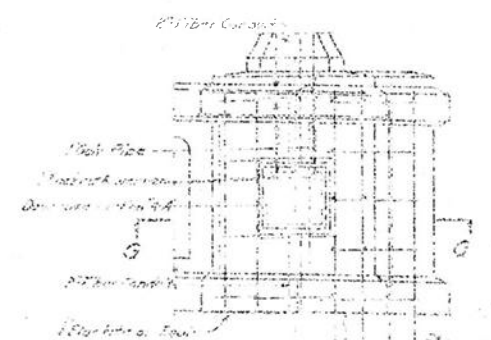
SECTION 'E-E'



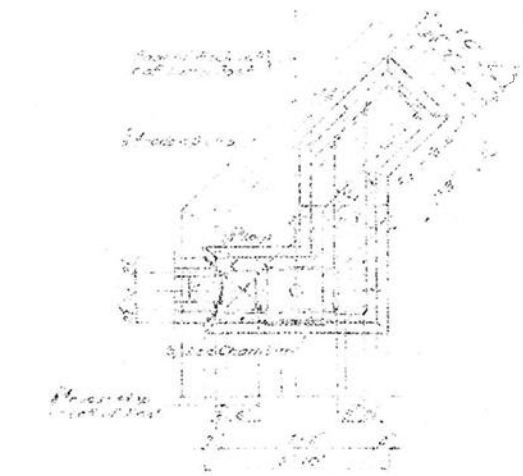
SECTION 'B-B'



SECTION 'C-C'



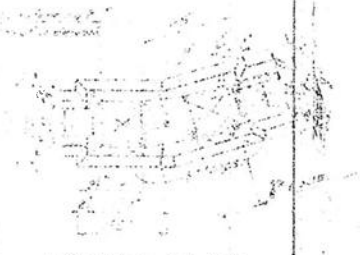
SECTION 'D-D'



SECTION 'G-G'



SECTION 'H-H'



SECTION 'K-K'



SECTION 'A-A'



SECTION THRU DOOR OF SHAKE CHAMBER

NOTE -  
Verify existing conditions  
as necessary in connection  
with the design.

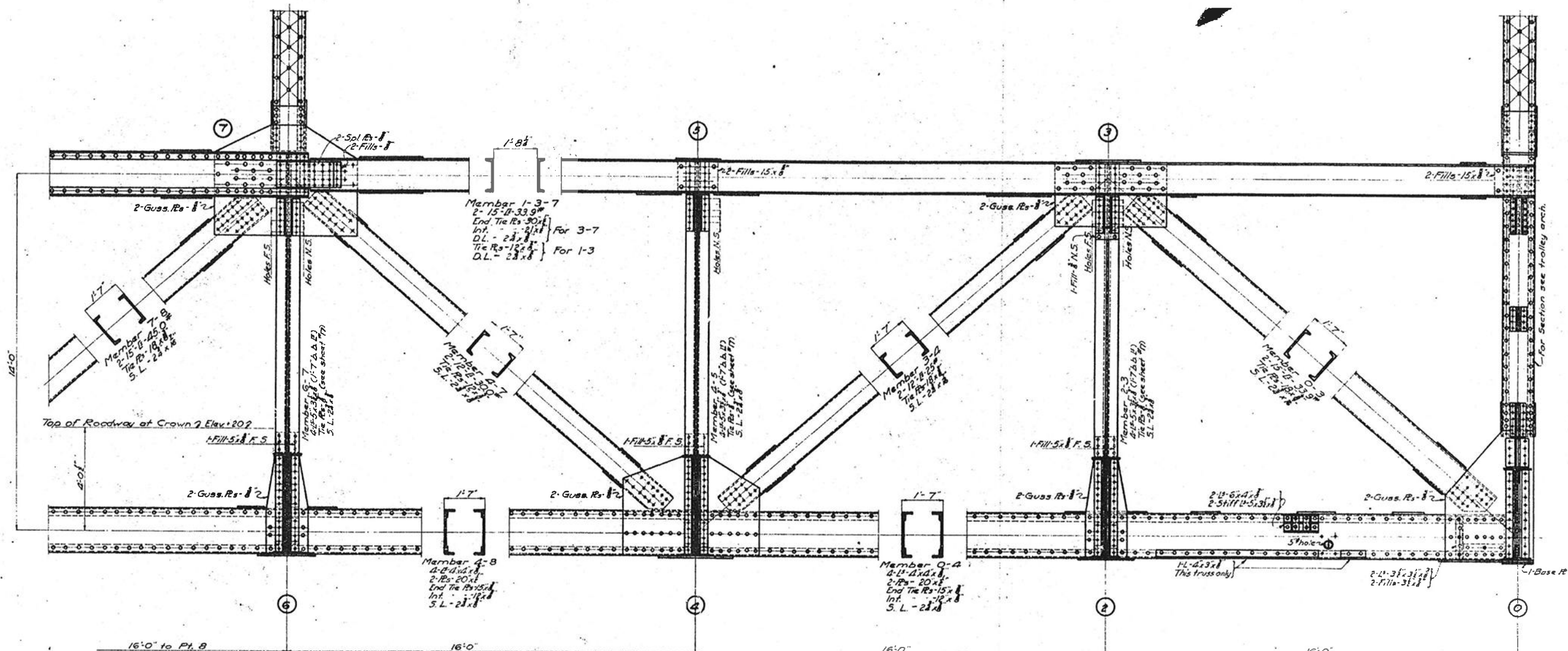
NOTE -  
Check existing conditions  
of the bridge deck at  
the level of the railing  
before construction.

TRAUSS TRUNNION CASQUE BRIDGE  
PATENT  
OVER  
HILLBROUGH RIVER - FORTUNE STREET  
CITY OF TAMPA, FLORIDA  
THE  
C. O. B. CO.  
ENGINEERS  
TAMPA, FLORIDA

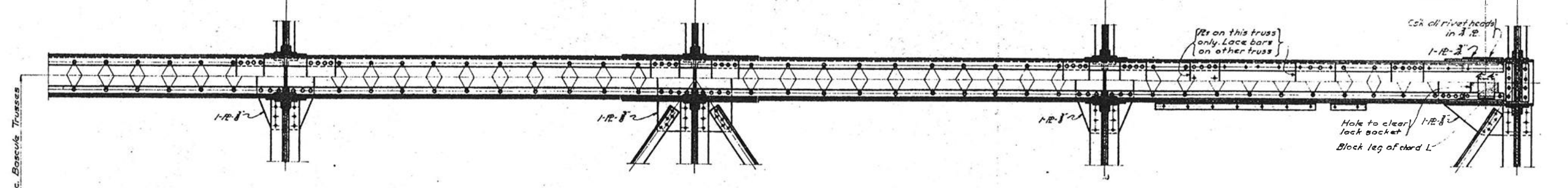




EXISTING PLANS



INSIDE ELEVATION OF FRONT END OF BASCULE TRUSS



GENERAL NOTES:  
Rivets - 5/8"  
Open Holes - 1 1/8"

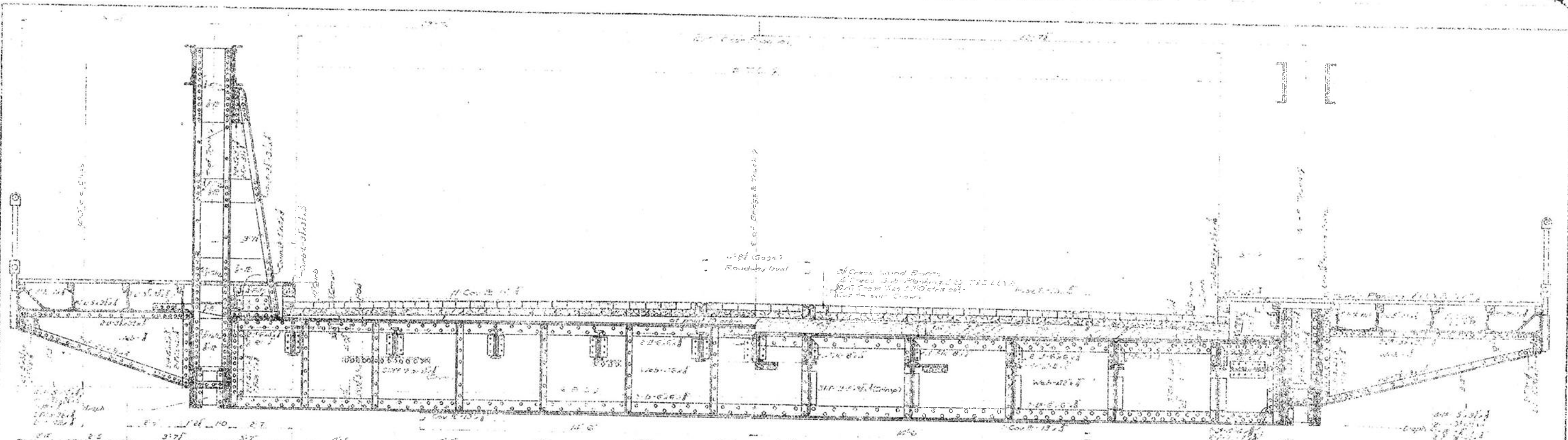
STRAUSS TRUNNION BASCULE BRIDGE  
PATENTED  
OVER  
HILLSBOROUGH RIVER AT FORTUNE STREET  
FOR  
CITY OF TAMPA, FLORIDA  
DESIGNED BY  
THE STRAUSS BASCULE BRIDGE CO.  
CONSULTING ENGINEERS  
CHICAGO, ILL.

DRAWN BY V.B.  
TRACED BY D.M.  
CHECKED BY R.W.D.  
REVISED

SCALE 1/4" = 1'-0"  
DATE 1-25-26  
GEN. FILE 1434  
SHEET NO. 16

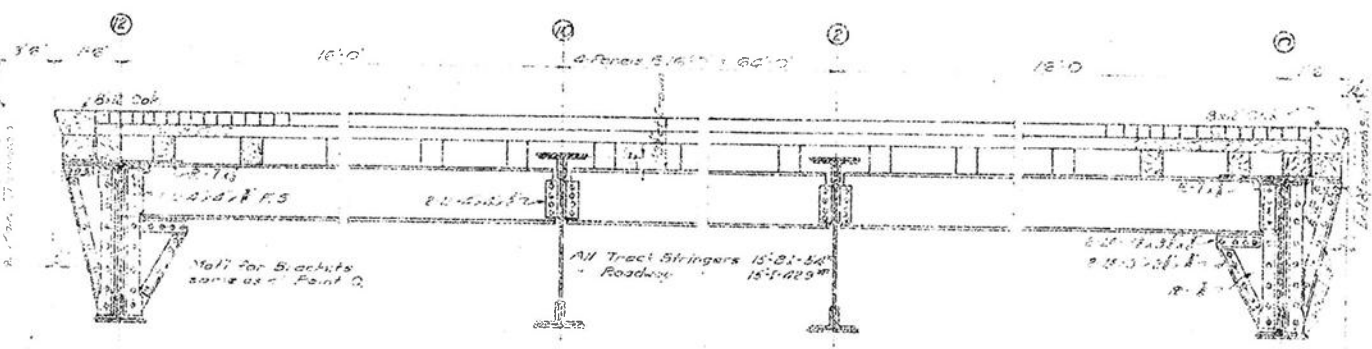
BASCULE TRUSS FRONT END

EXISTING PLANS

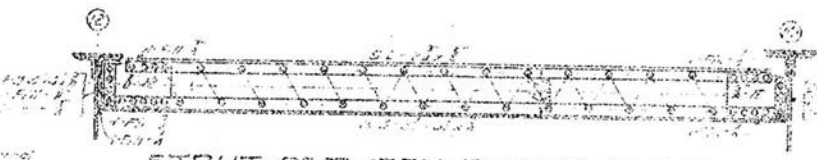


FLOORBEAM AT POINTS 4, 6, 8 & 10  
Sym abt & of Bridge

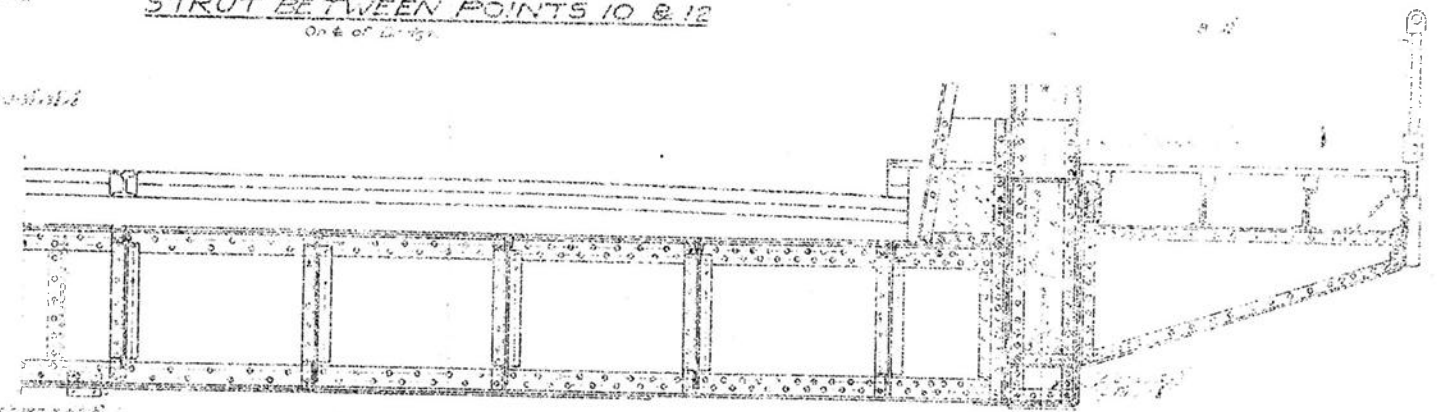
FLOORBEAM AT POINT 12  
Sym abt & of Bridge



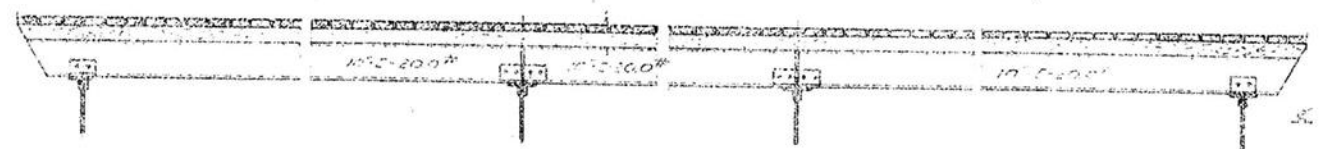
TRACK & ROADWAY STRINGERS



STRUT BETWEEN POINTS 10 & 12  
On & of Bridge



FLOORBEAM AT POINT 0  
Sym abt & of Bridge  
Information not given same as for floorbeam at point 12



SIDEWALK STRINGERS

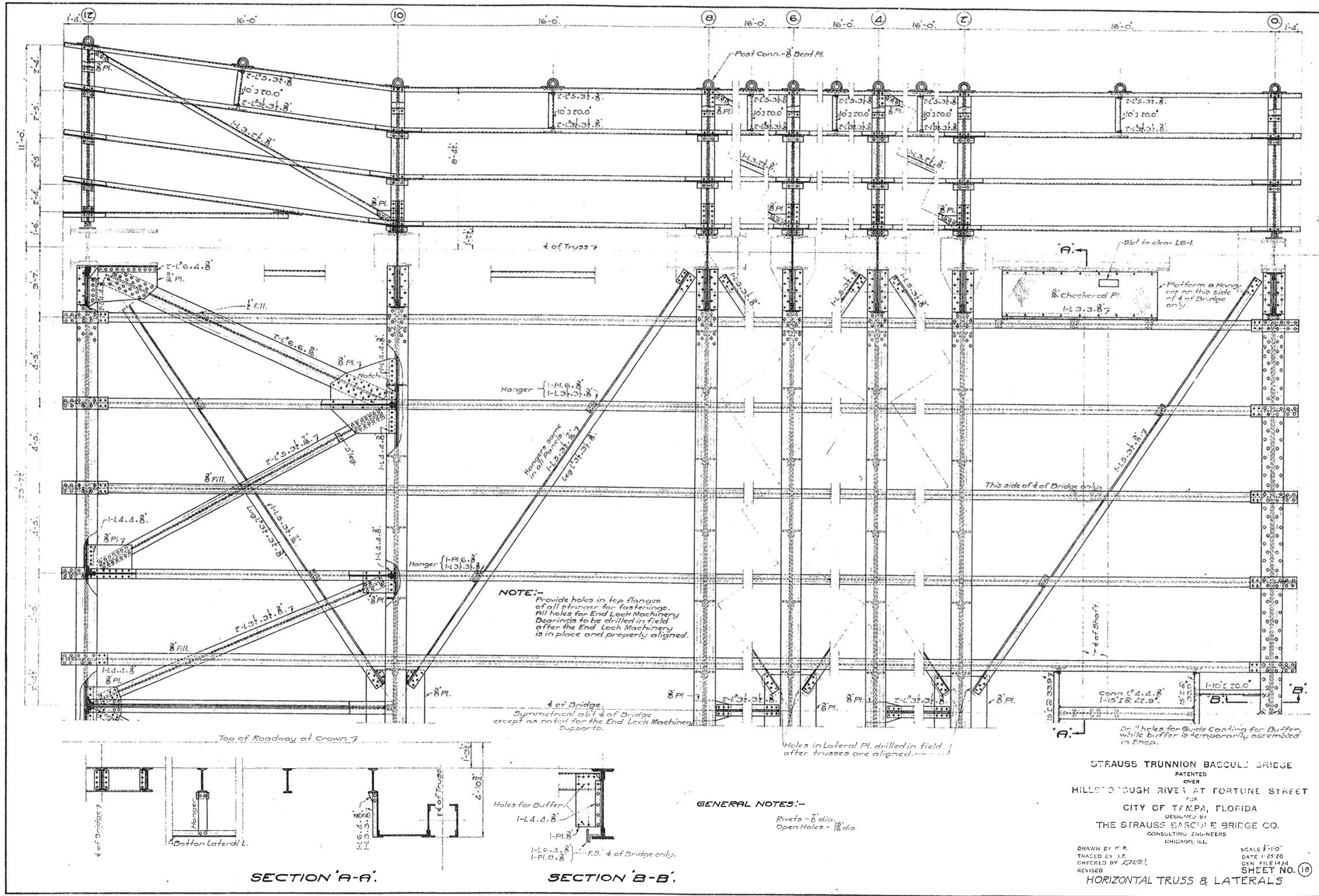
GENERAL NOTES -  
1. See also  
2. See also

STRAUSS TRUSS-BASCULE BRIDGE  
 PATENTED  
 1909  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CHICAGO, ILL.

DRAWN BY W. J. ...  
 CHECKED BY ...  
 REVIS ...  
 THE STRAUSS BASCULE BRIDGE CO.  
 CHICAGO, ILL.



EXISTING PLANS



NOTE:-  
Provide holes in top flanges  
of all stringer for fastenings.  
All holes for End Lock Machinery  
Bearings to be drilled in field  
after the End Lock Machinery  
is in place and properly aligned.

4 of Bridge.  
Symmetrical abt 4 of Bridge  
except as noted for the End Lock Machinery  
Supports.

GENERAL NOTES:-  
Rivets - 7/8 dia.  
Open Holes - 1/8 dia.

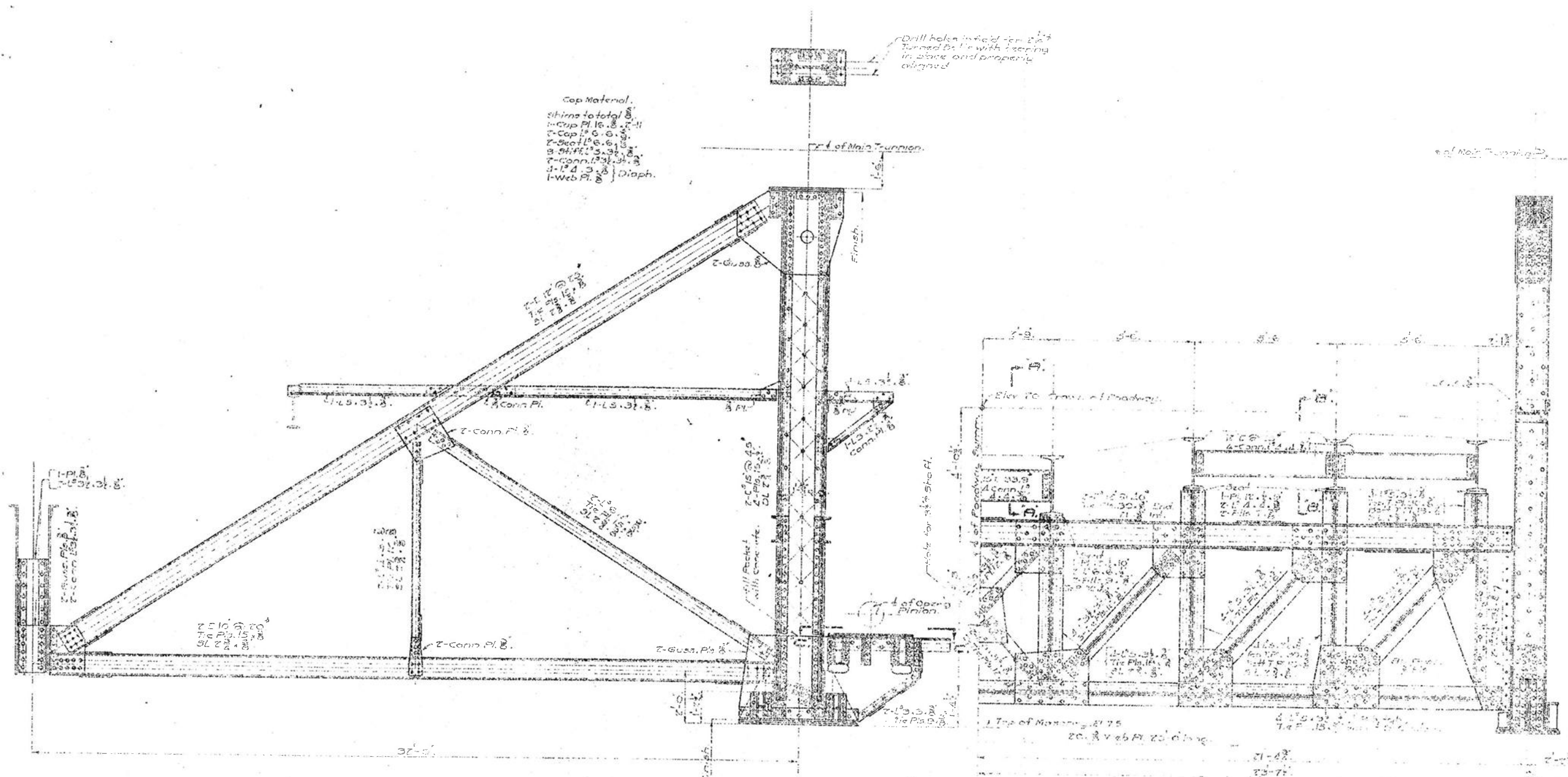
STRAUSS TRUNNION BASCULE BRIDGE  
PATENTED  
OVER  
HILLSBOROUGH RIVER AT FORTUNE STREET  
FOR  
CITY OF TAMPA, FLORIDA  
DESIGNED BY  
THE STRAUSS BASCULE BRIDGE CO.  
CONSULTING ENGINEERS  
CHICAGO, ILL.

DRAWN BY M.R.  
TRACED BY I.F.  
CHECKED BY K.W.  
REVISED  
SCALE 1"=10'  
DATE 1-25-20  
GEN. FILE 1434  
SHEET NO. 18  
HORIZONTAL TRUSS & LATERALS





EXISTING PLANS



- Cap Material**
- Shims to total 8
  - 1-Cap Pl. 16. 8
  - 2-Cap Pl. 6. 6
  - 2-Seat Pl. 6. 6
  - 8-St. Pl. 3. 3
  - 2-Conn. Pl. 3. 3
  - 1-1/2" 3. 3
  - 1-Web Pl. 8
- Diaph.

- Base Material**
- 1-Masonry Pl. 20. 1. 1-0
  - 1-Base Pl. 20. 1. 1-0
  - 2-Base Pl. 6. 6
  - 2-Seat Pl. 6. 6
  - 8-St. Pl. 3. 3
  - 4-Conn. Pl. 3. 3
  - 1-Web Pl.
  - 2-Conn. Pl. 2. 1. 1
  - 2-Conn. Pl. 2. 1. 1
  - 2-Web Pl.
  - 4-Conn. Pl. 2. 1. 1
- Diaph.

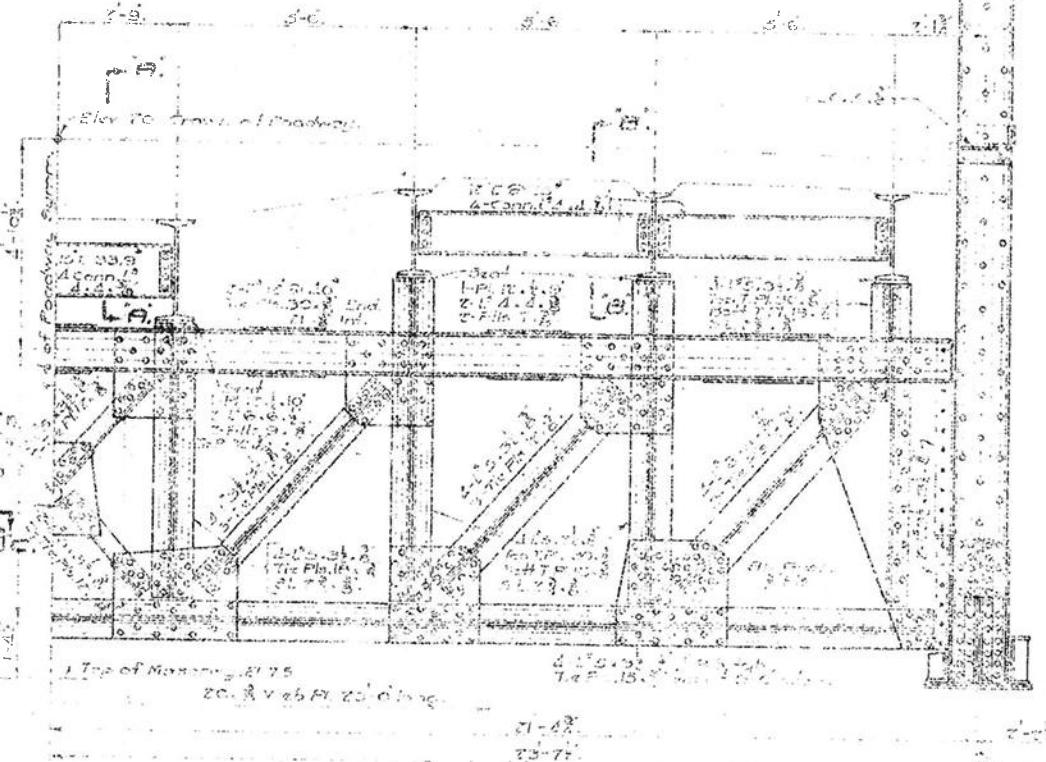
- Shims to total 11**
- 1-Cap Pl. 15. 1. 3-d
  - 2-Cap Pl. 6. 6
  - 4-Seat Pl. 6. 6
  - 8-St. Pl. 3. 3

Drill holes in field for 2" turned bolts with 2" spacing in place and properly aligned

Drill holes in field for 2" turned bolts with 2" spacing in place and properly aligned

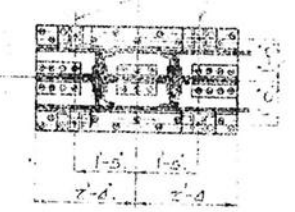
Drill holes in field with 2" turned bolts in place and properly aligned

14-1/2" 3. 3" on north inside of post only



FRONT ELEVATION.

INSIDE ELEVATION OF INSIDE TRUNNION POST.



SECTION 'C-C'

GENERAL NOTES

- Scale 1/4" = 1'
- Open Holes - 1/2"
- and Fasteners Exposed on Outside of Post

STRAUSS TRUNNION BASCULE BRIDGE,  
 PATENTED  
 OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DESIGNED BY S.C.F.  
 CHECKED BY J.P.  
 227560

SCALE 1/4" = 1'  
 DATE 1913  
 GEN. FILE 1034  
 SHEET NO. 10

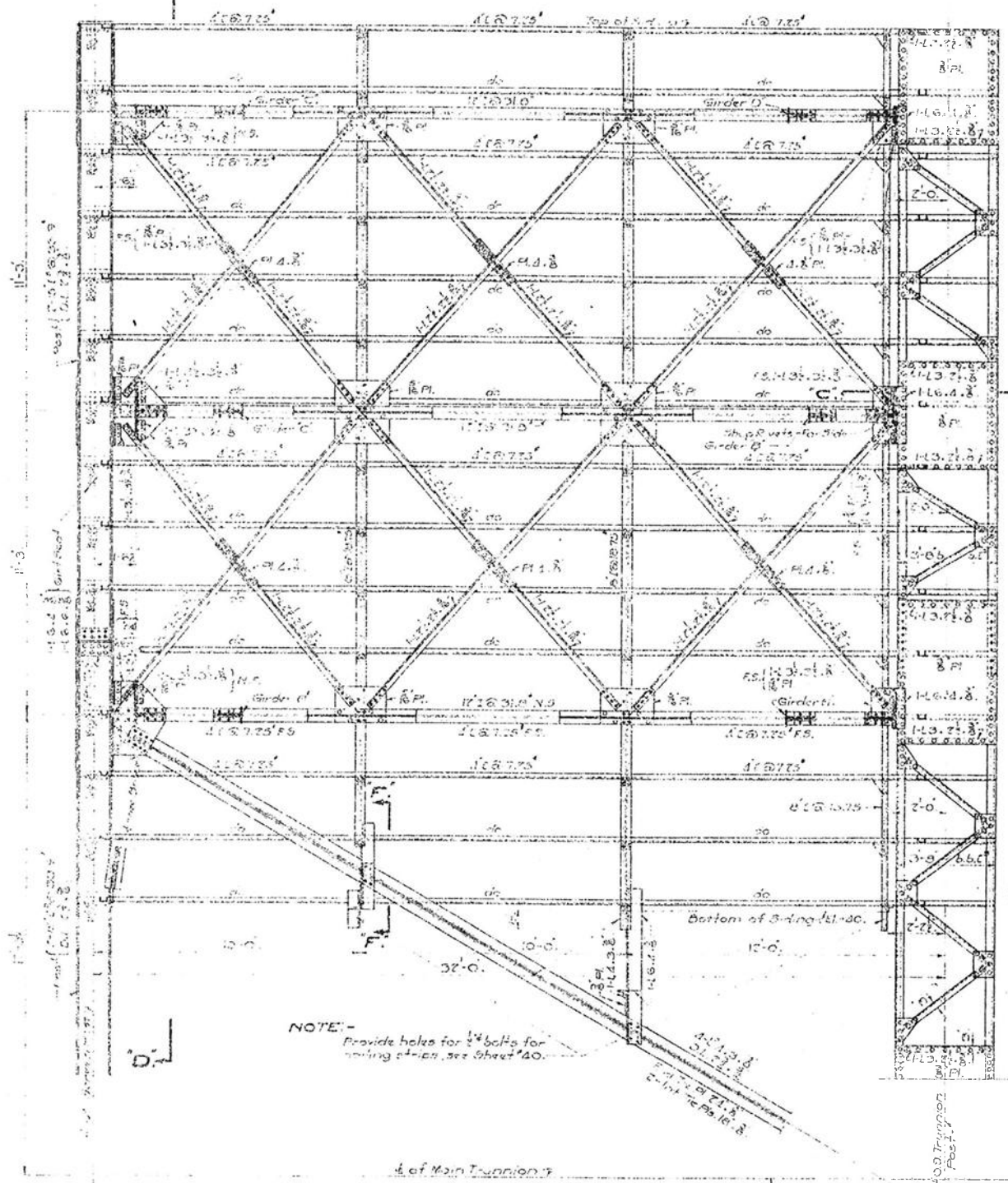
INSIDE TRUNNION POST



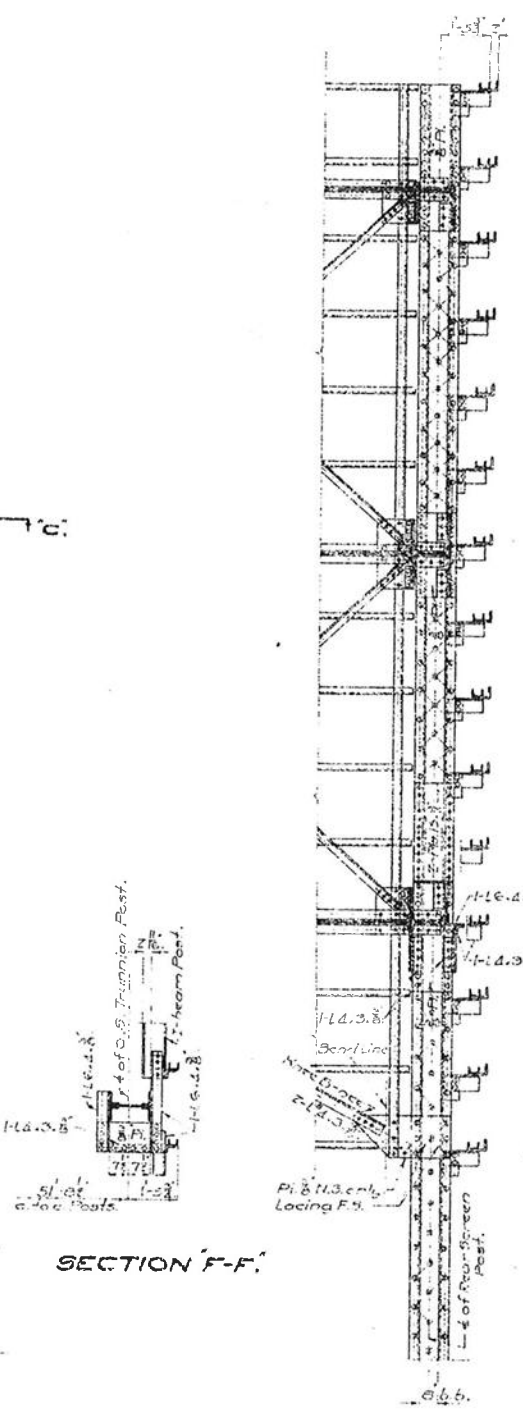




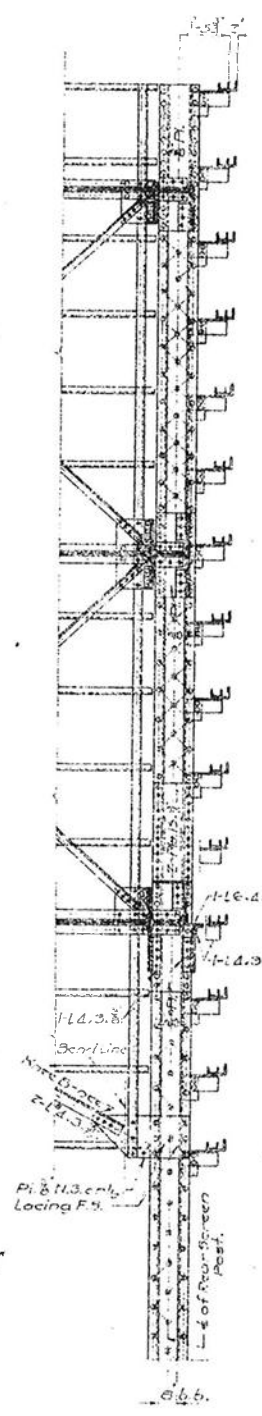
EXISTING PLANS



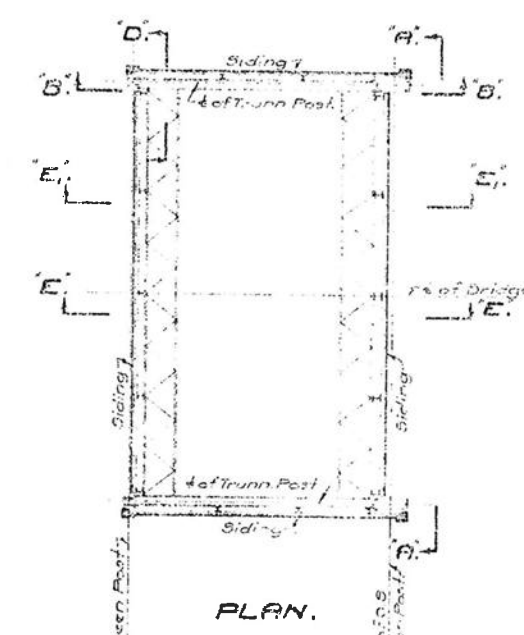
SECTION 'B-B'



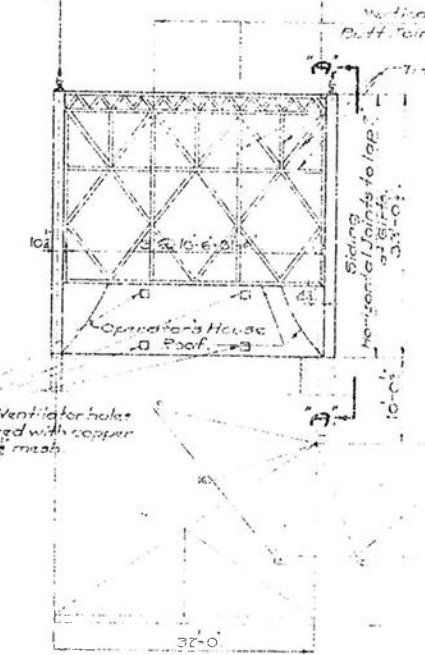
SECTION F-F'



SECTION D-D'



PLAN.

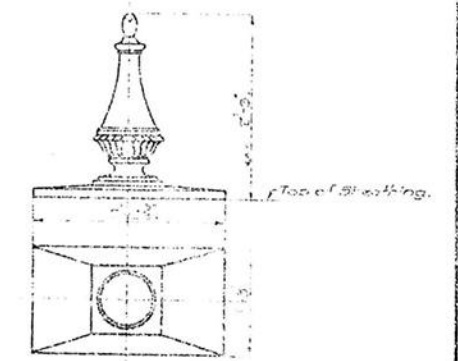


VIEW A-A'

For Structural Steel in View A-A', see Sheet 24.

NOTE:-  
 Timber Paneling over Siding fastened with 1/4\"/>

PRINTING:-  
 Siding to be painted two coats of color the same as the exterior of the house. Timber Paneling of tower to be painted two coats of the same color as used for structural steel.



ORNAMENT FOR TOP OF SCREEN POST.

SECTION K-K:  
 Timber Paneling  
 Siding  
 1/4\"/>

GENERAL NOTES:-

- Rivets - 3/8\"/>
- Open Holes - 1/2\"/>
- Provide holes in steel where necessary for siding fastenings.
- Siding to be 10 Gauge Robertson Process Metal Flat Sheets.
- Provide 1/4\"/>
- For View A-A and Sections C-C, E-E, E-E', see Sheet 24.
- For Girders A, B, C & D, see Sheet 24.

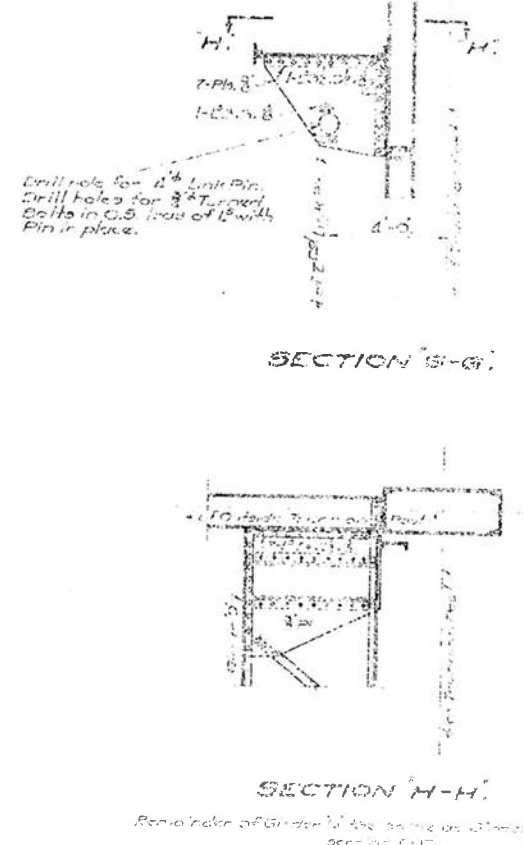
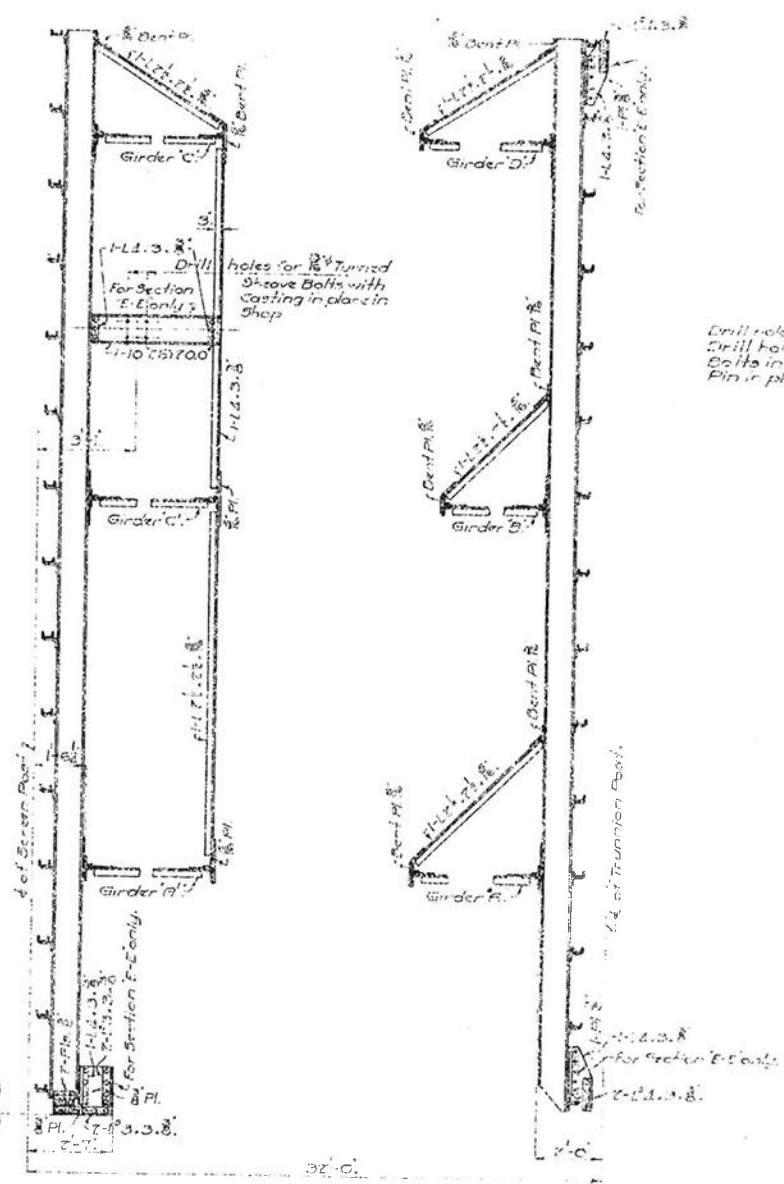
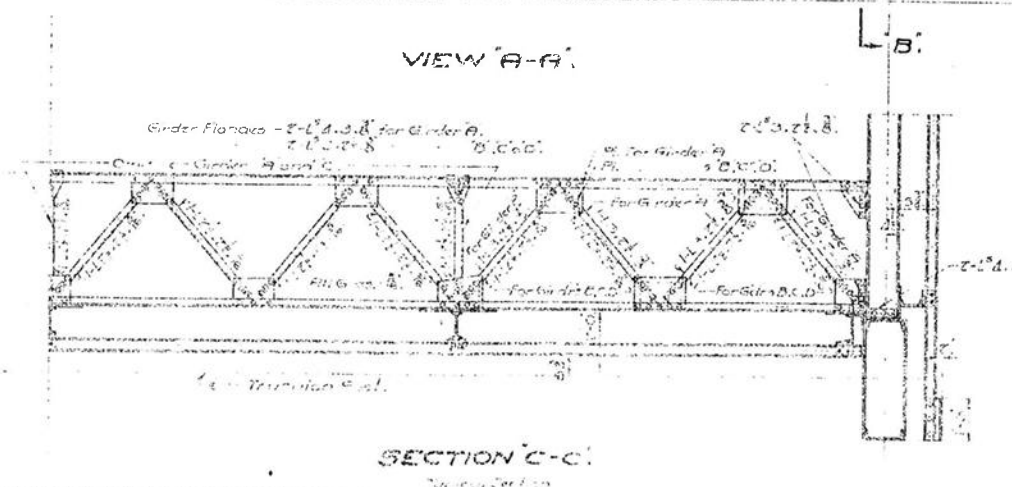
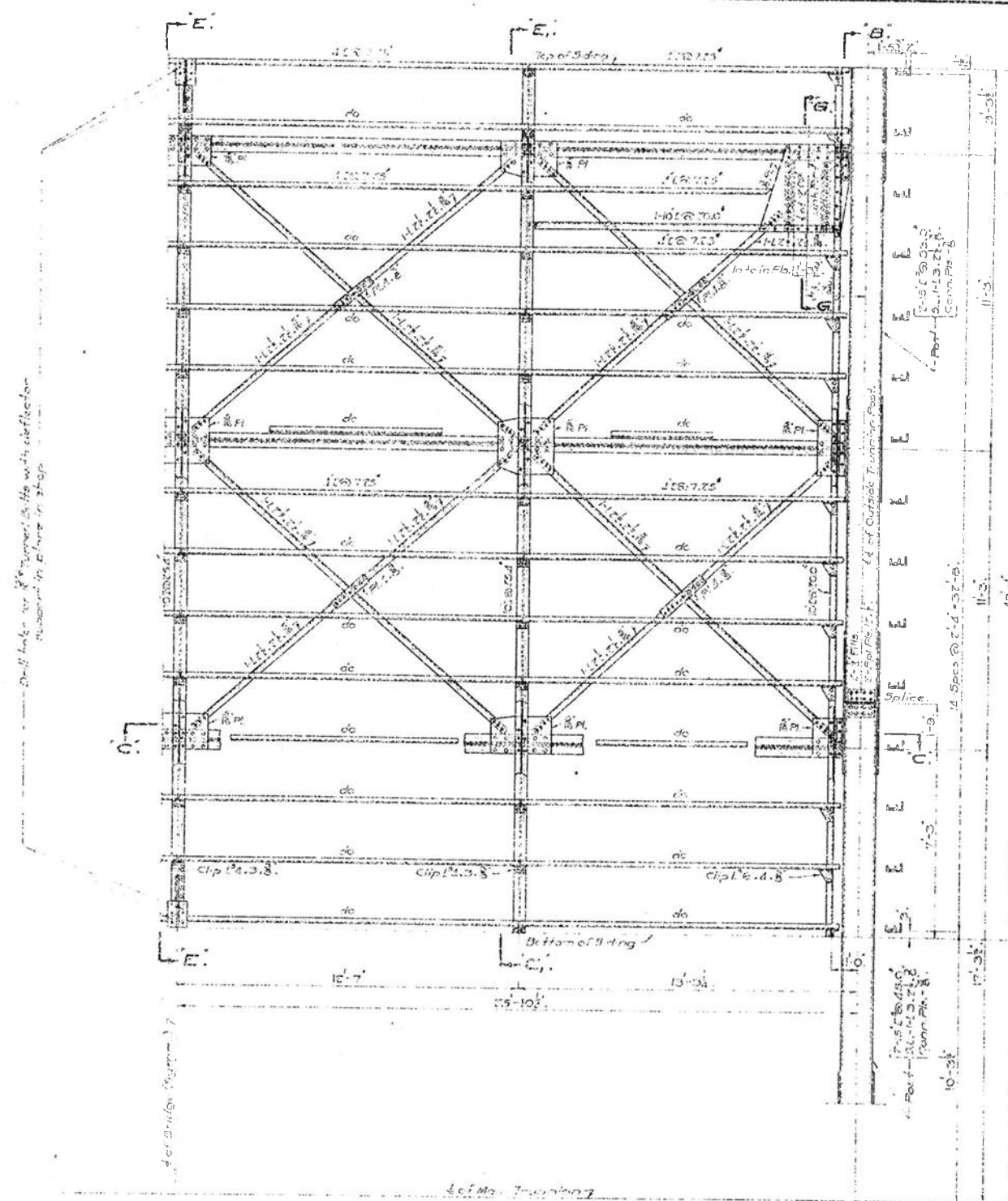
STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED  
 OVER  
 HILLSTOUGH RIVER AT FORTUNE STREET  
 CITY OF TAMPA, FLORIDA  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

DRAWN BY H.P.  
 TRACED BY J.E.  
 CHECKED BY J.E.  
 REVISED  
 SCALE 1/4\"/>

SCREEN TOWER END



EXISTING PLANS

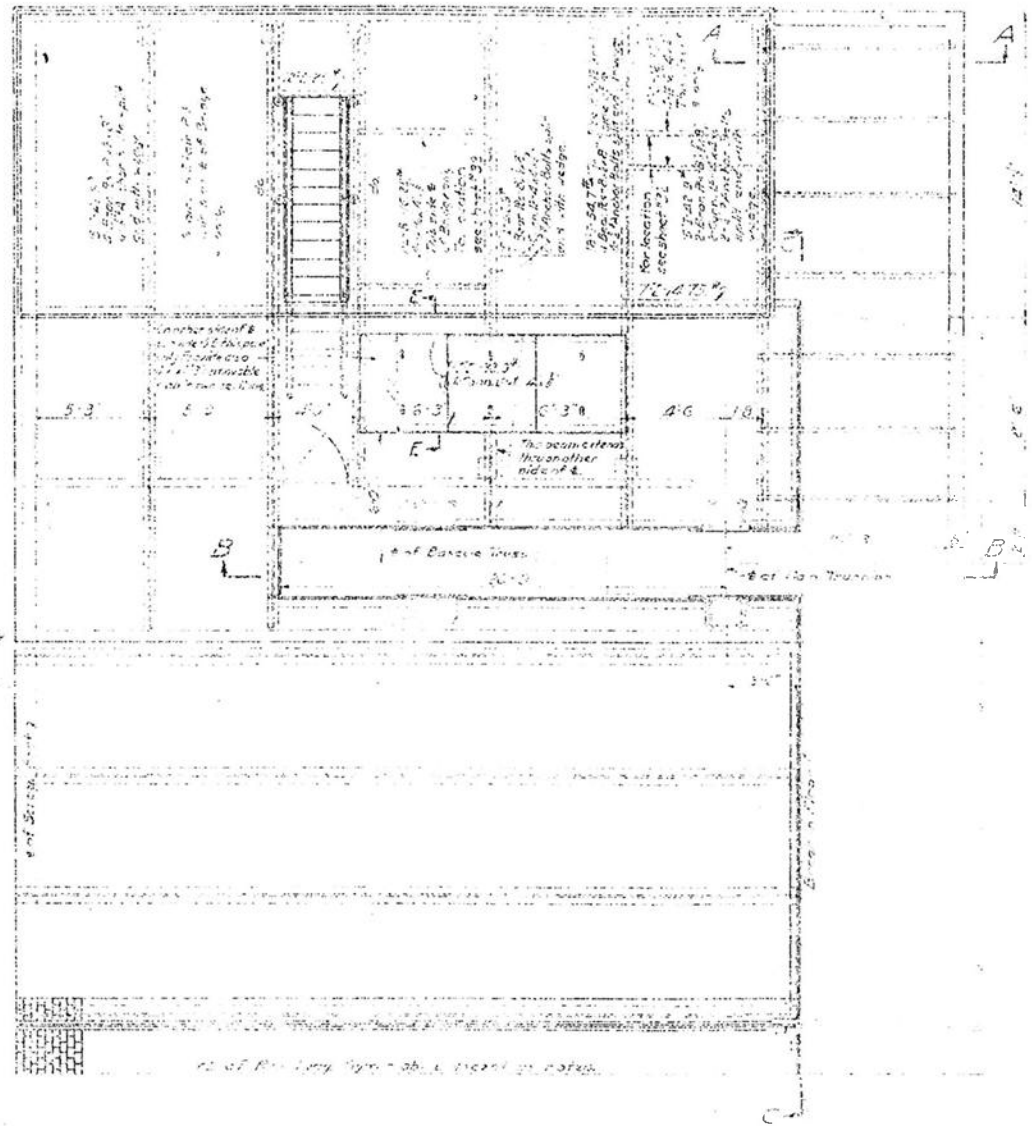


GENERAL NOTES:-

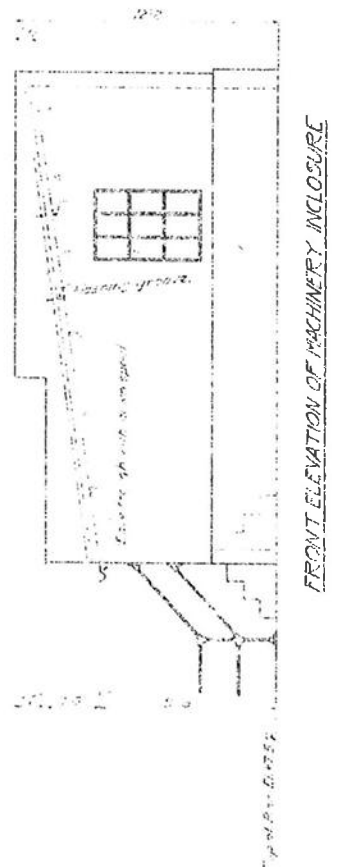
- Rivets - 7/16 in. Posts at corners of Screen.
- In all other members.
- Open holes - 1/8 in. Posts at corners of Screen, except as noted.
- In all other members.
- Provide holes in steel where necessary for siding fastenings.
- Siding to be 16 Gauge Robertson Process Metal roof sheets.
- shelved at mill for painting.
- Provide 1/2 in. diam. holes at 12 in. centers in webs of all 12 in. girders.
- For Section S-G, see Sheet # 20.

STRAUSS TRUNNION BANQUET BRIDGE  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 CITY OF TAMPA, FLORIDA  
 THE STRAUSS BANQUET BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.  
 DRAWN BY R.P.  
 CHECKED BY J.P.  
 REVISION  
 SCALE 1/4" = 1'-0"  
 DATE 11-22-13  
 GEN. FILE 641  
 SHEET NO. 21  
 SCREEN TOWER SIDE

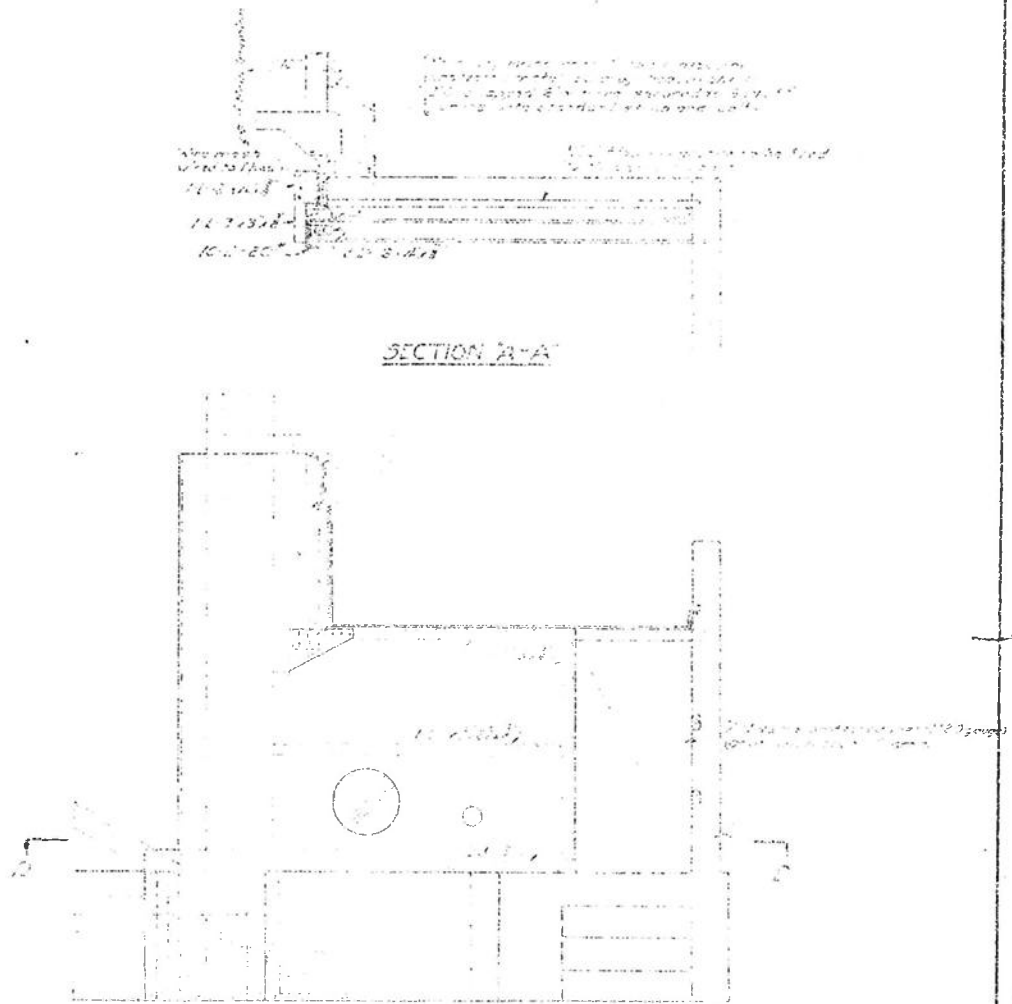
EXISTING PLANS



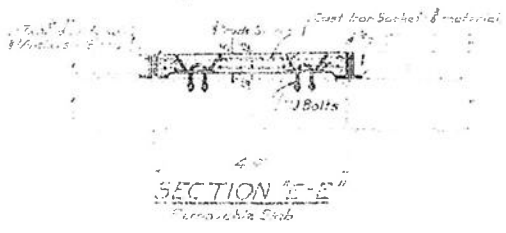
HALF PLAN OF TOWER SPAN FLOOR



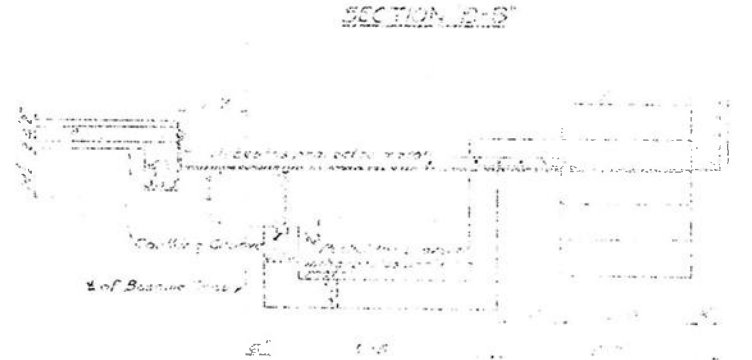
FRONT ELEVATION OF MACHINERY ENCLOSURE



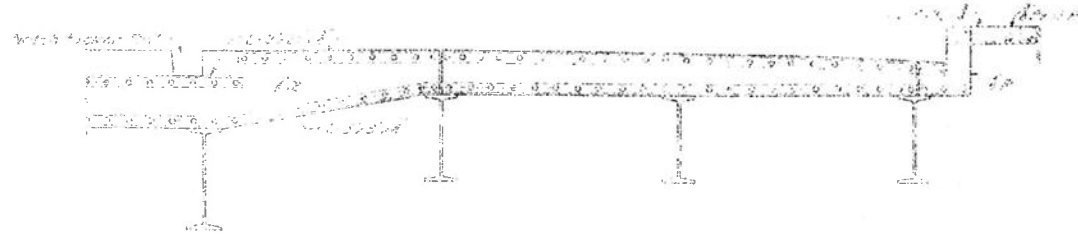
SECTION A-A



SECTION E-E  
Removable Slab



SECTION B-B



SECTION C-C

SEVERAL NOTES -  
 1. All work to be done in accordance with the specifications and drawings.  
 2. The contractor shall be responsible for the accuracy of the dimensions and quantities shown on the drawings.  
 3. The contractor shall be responsible for the quality of the workmanship and materials used.  
 4. The contractor shall be responsible for the safety of the work and the protection of the existing structures.  
 5. The contractor shall be responsible for the removal and disposal of all waste materials.  
 6. The contractor shall be responsible for the completion of the work within the specified time schedule.  
 7. The contractor shall be responsible for the payment of all taxes and fees.  
 8. The contractor shall be responsible for the insurance of the work and the materials.  
 9. The contractor shall be responsible for the maintenance of the work and the materials.  
 10. The contractor shall be responsible for the cleanup of the work area.

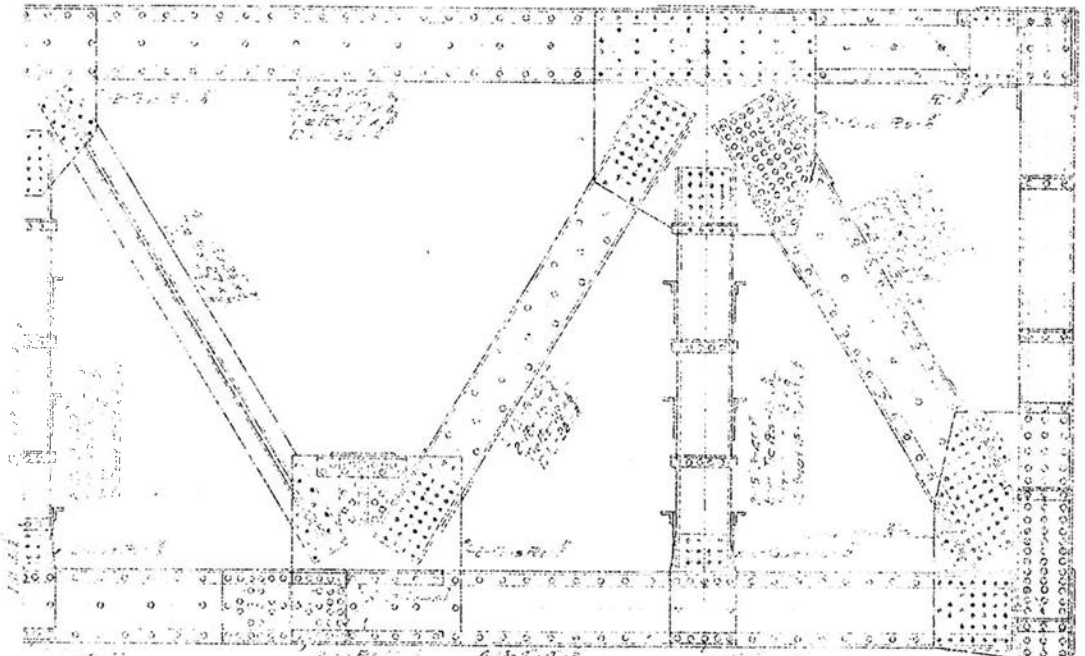
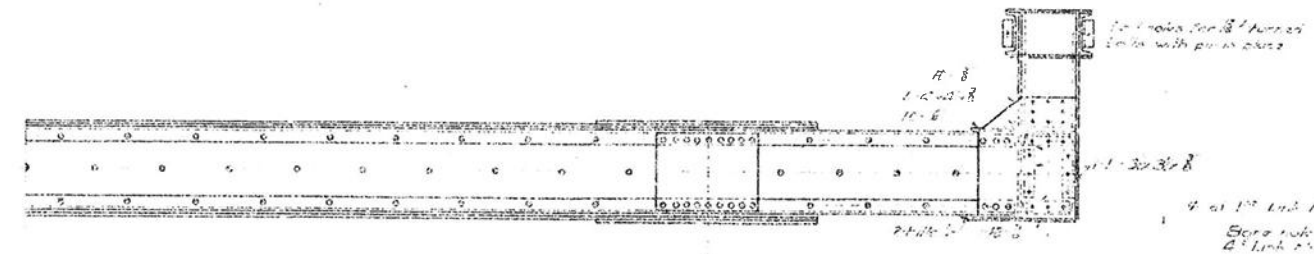
STRAUSS TRUNNION BASCULE BRIDGE  
 HILLSBOROUGH RIVER AT FOX LAKE STATION  
 CITY OF TAMPA, FLORIDA  
 THE STRAUSS TRUNNION BRIDGE CO.  
 TAMPA, FLORIDA

DRAWN BY: [Name]  
 CHECKED BY: [Name]  
 DATE: [Date]  
 SCALE: [Scale]

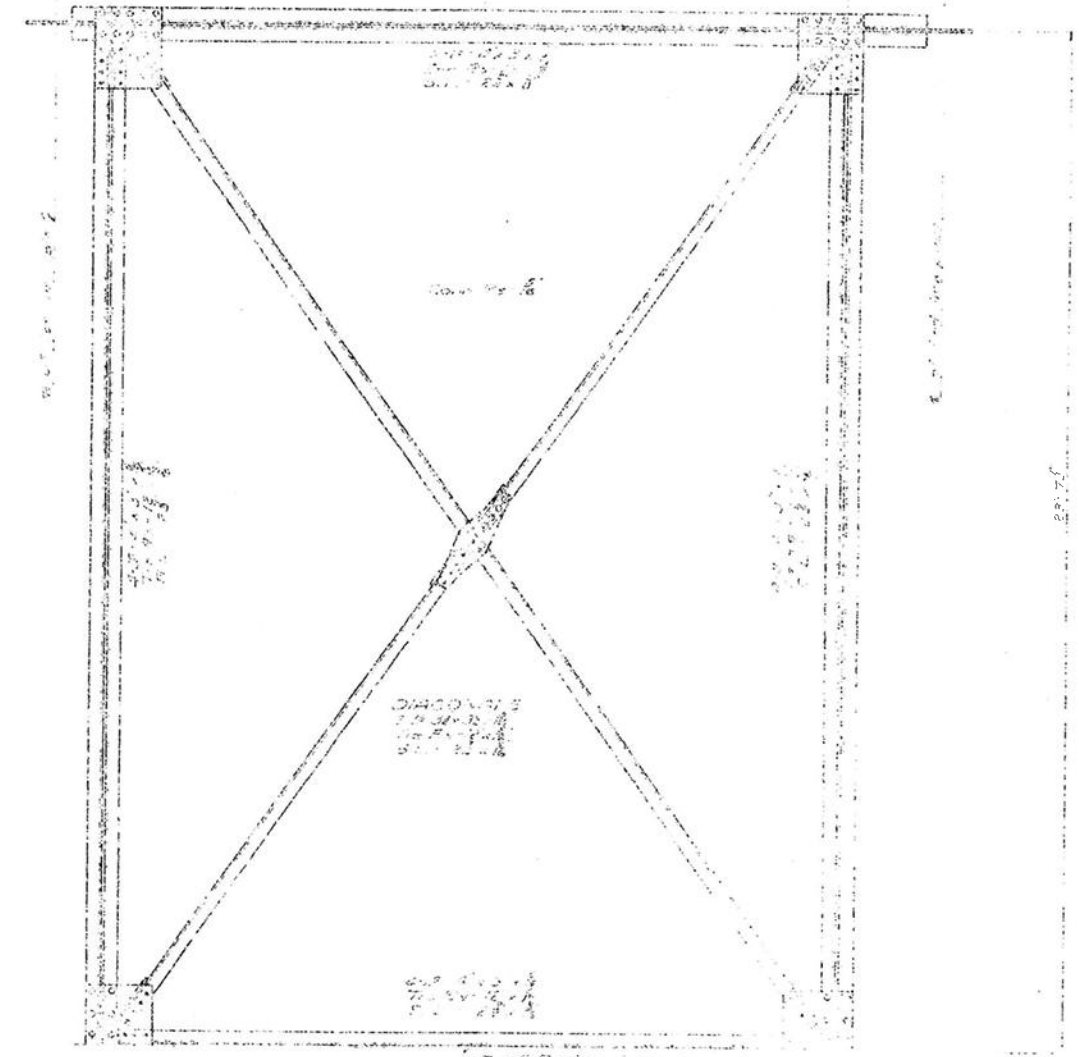
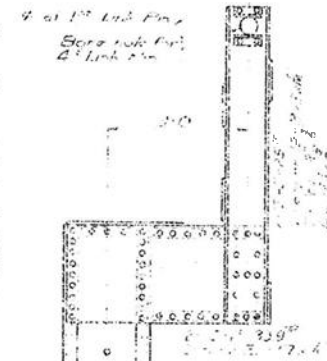
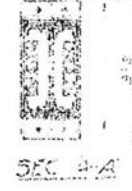




EXISTING PLANS



BASE MATERIAL  
 1/2\"/>



LINK

Dimensions in this drawing are not to be taken as determined unless otherwise indicated. All figures have been made from approved shop drawings.

There is no shop drawing for this detail. The detail shown is based on the shop drawing for the adjacent detail.

STRAUSS TRUNNION BASCULE BRIDGE  
 PATENTED  
 OVER  
 HILLSBOROUGH RIVER AT FORTUNE STREET  
 FOR  
 CITY OF TAMPA, FLORIDA  
 DESIGNED BY  
 THE STRAUSS BASCULE BRIDGE CO.  
 CONSULTING ENGINEERS  
 CHICAGO, ILL.

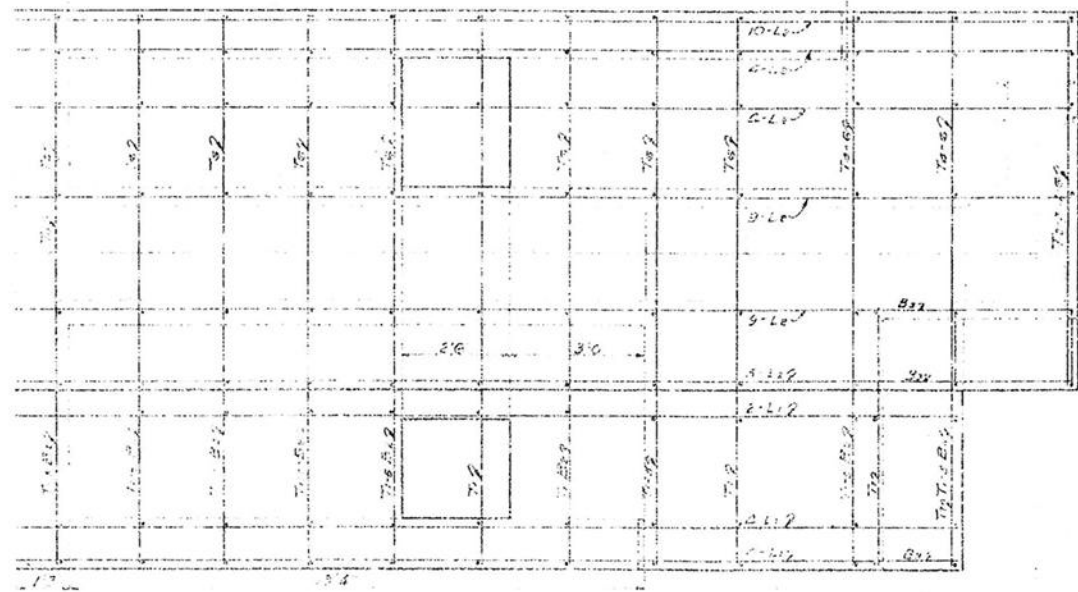
SCALE 1/4\"/>

CTWT FRAME

CTWT FRAME & LINK

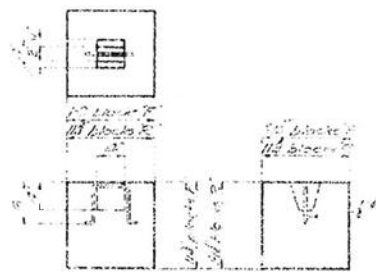


EXISTING PLANS



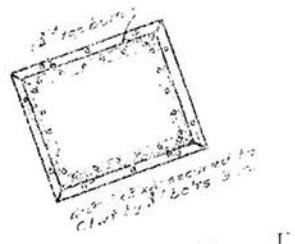
TOP VIEW

Punch holes in L flanges for reinforcing rods.

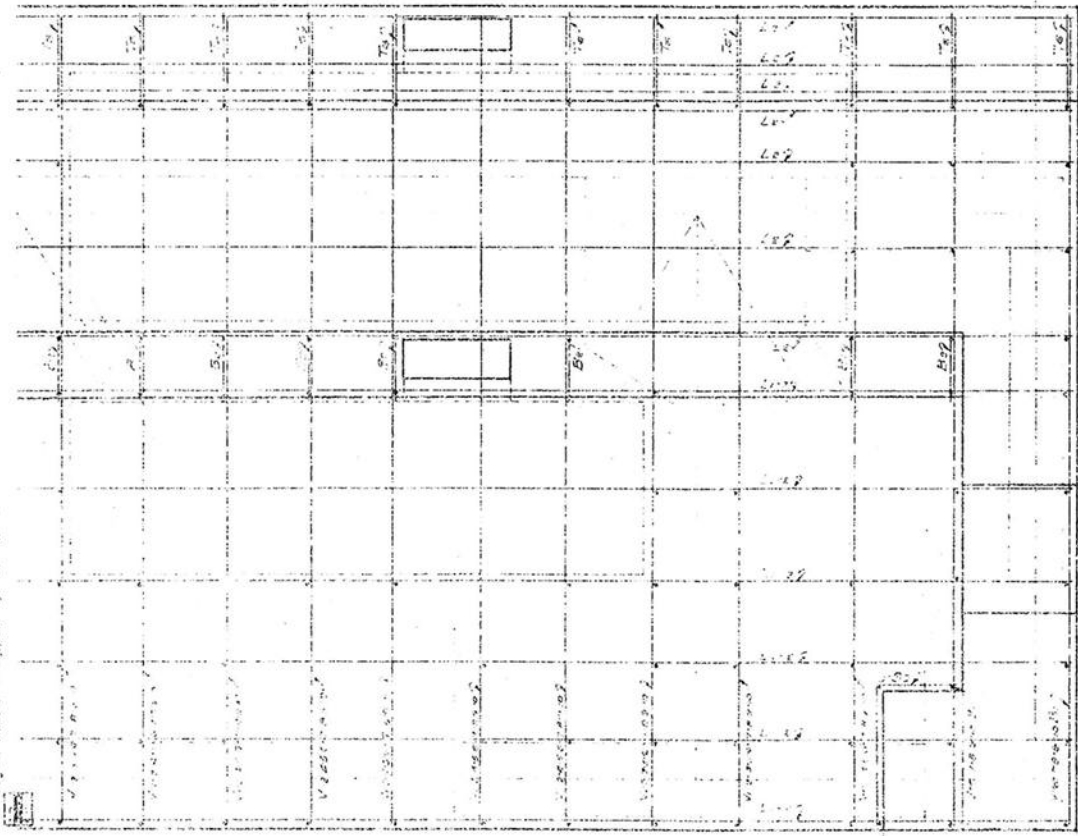


ADJUSTMENT BLOCKS

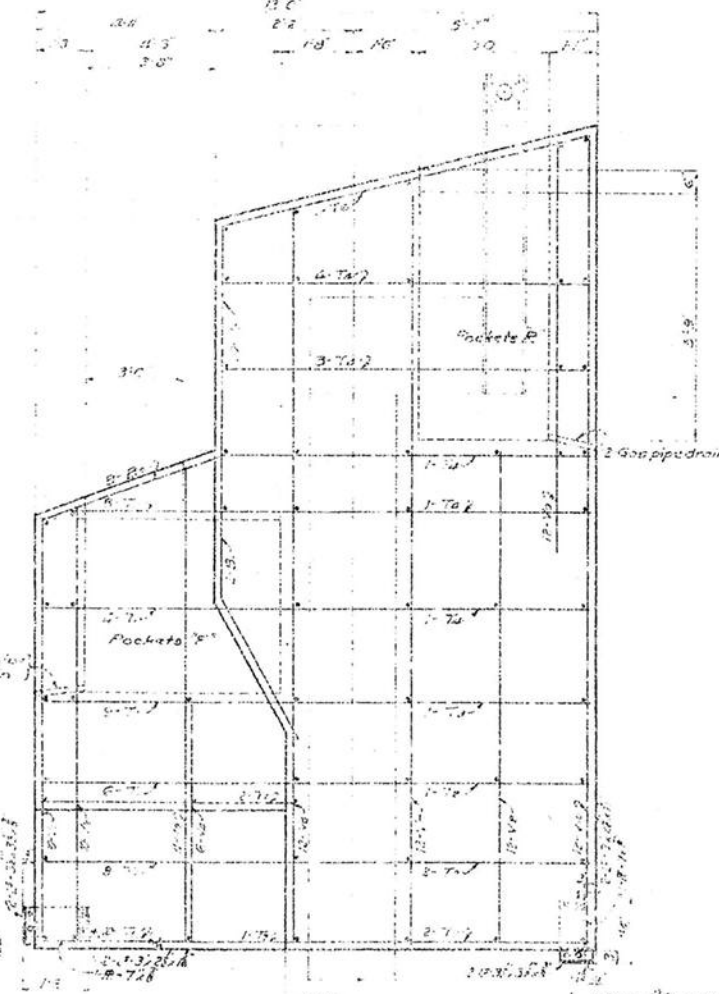
500 # blocks required for 10 pockets. Approximate weight 1500 lbs. 250 # blocks required for 10 pockets. Approximate weight 450 lbs.



SECTION THRU POCKET COVER



FRONT ELEVATION



END VIEW

GENERAL NOTES

Rivets - 3/8\"/>  
Reinforcing bars to be 1/2\"/>  
All bars to have a 6\"/>  
and all bars to be securely wired at each intersection.  
Counterweights - 1/2\"/>  
Foot to be placed 2\"/>  
Average unit weight of counterweight to be about 125\"/>  
Pockets are required as the thickness of concrete slabs, weighing about 125\"/>  
Space between pockets to drain.  
Dimensions of counterweights are only approximate.  
Final dimensions of counterweights cannot be determined until center of gravity figures have been made from approved shop drawings.  
Amount of concrete counterweight including 1/2\"/>  
of blocks is approximately 125,000\"/>

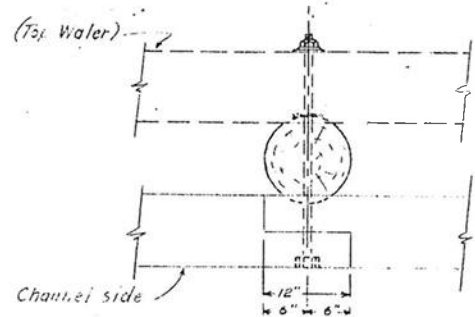
STRAUSS TRUNNICH BASCULE BRIDGE  
PATENTED  
OVER  
HILLSBOROUGH RIVER AT FORTUNE STREET  
FOR  
CITY OF TAMPA, FLORIDA  
DESIGNED BY  
THE STRAUSS BASCULE BRIDGE CO.  
CONSULTING ENGINEERS  
CHICAGO, ILL.

DRAWN BY: E. C. C.  
TRACED BY: D. F. F.  
CHECKED BY: J. H. H.  
REVIEWED:  
SCALE: 1/4\"/>  
DATE: 1917  
SHEET NO. 10  
CONCRETE COUNTERWEIGHT



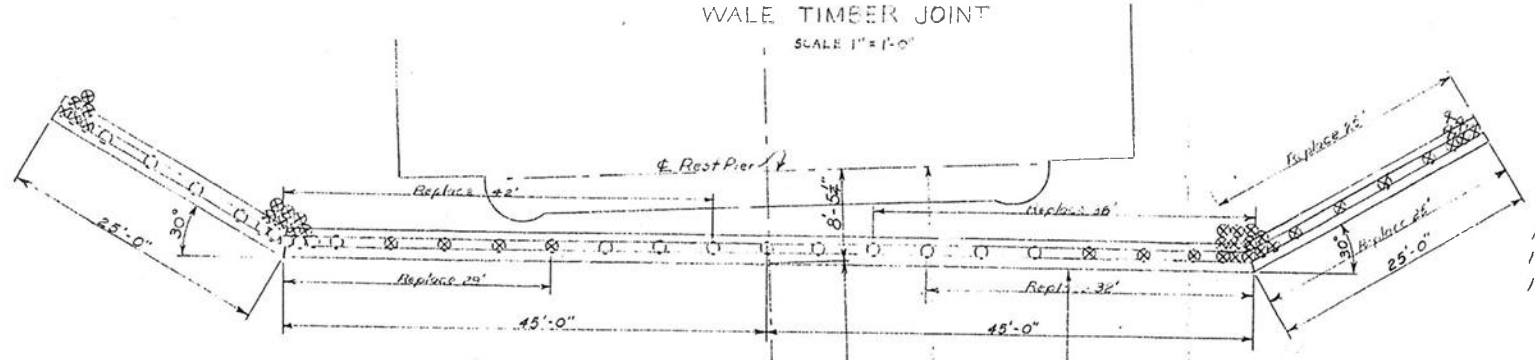


# EXISTING PLANS

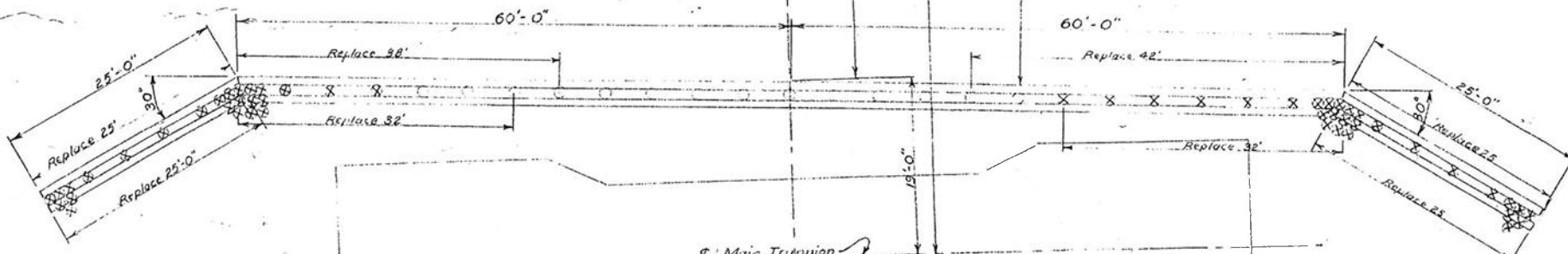


Note: All joints in wale timbers to be centered on piling. Joints in inner and outer wale timbers to be staggered so that only one timber joint per pile results.

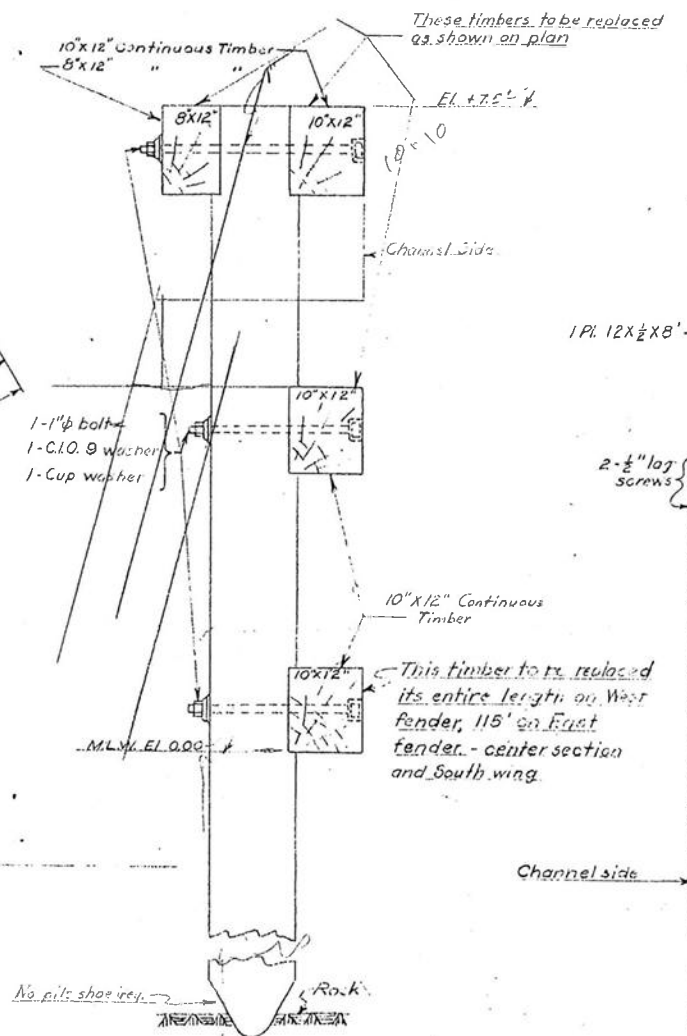
DETAIL OF WALE TIMBER JOINT  
SCALE 1" = 1'-0"



Note: Tie each pile cluster with 9 wires of no. 3 galv. cable. Posts on 4 other cross members that is effective. Cable ends to be secured with wire clamps.



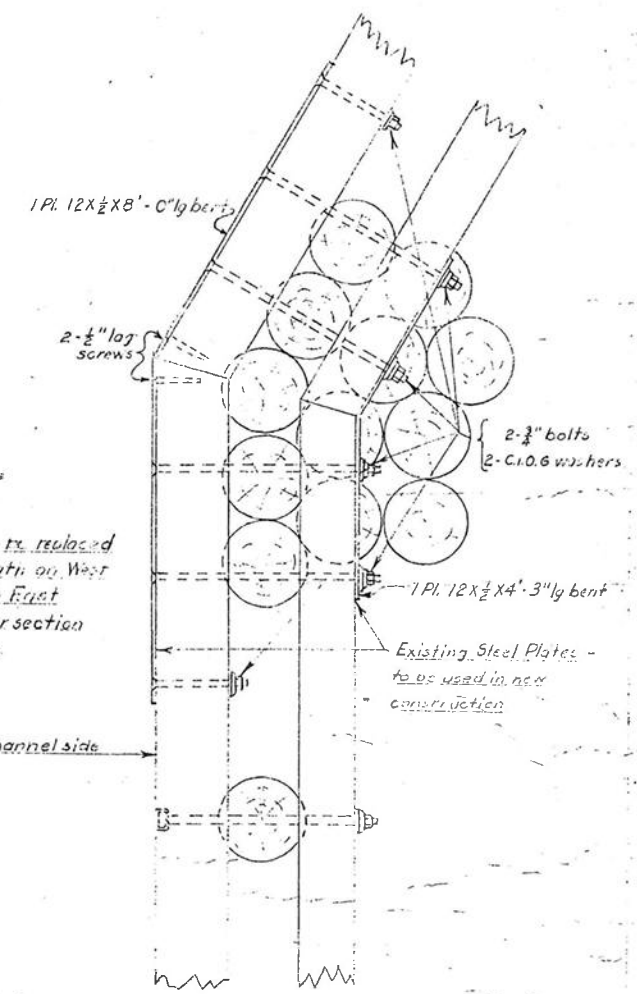
PLAN  
SCALE - 1/8" = 1'-0"



TYPICAL SECTION  
SCALE - 1" = 1'-0"

All piling marked with crosses, thus X, to be replaced. All old timber not replaced is to be re-bolted with new bolts. Piling to be 30' long - 12" min. butt diam. 9" min. tip diam.

Note: All lettering underlined refers to repair work to be done



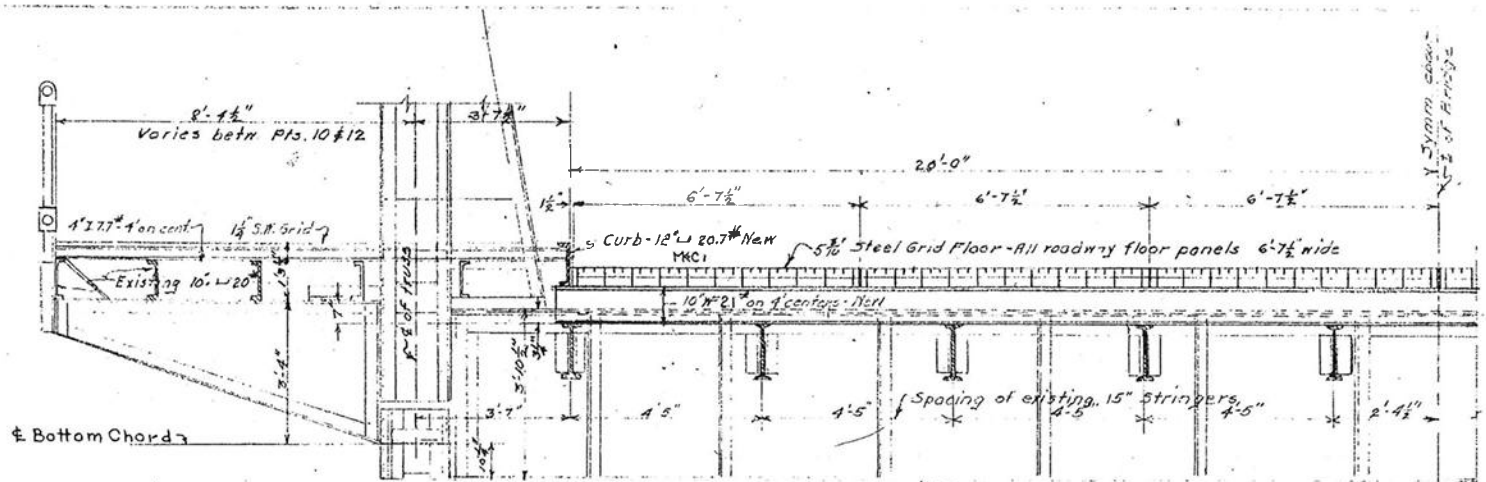
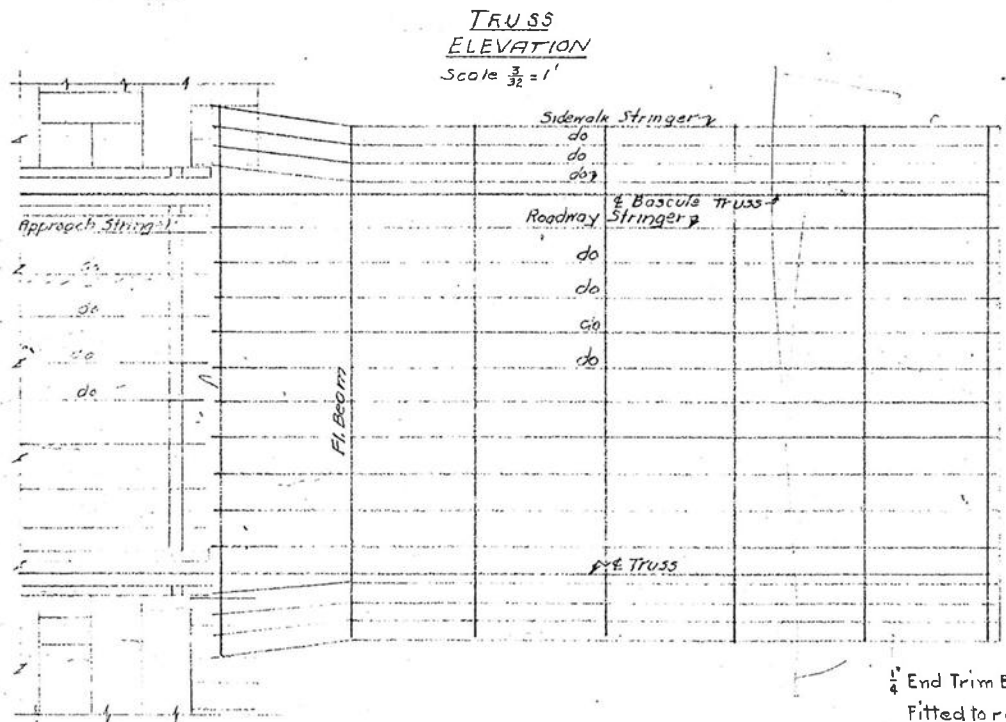
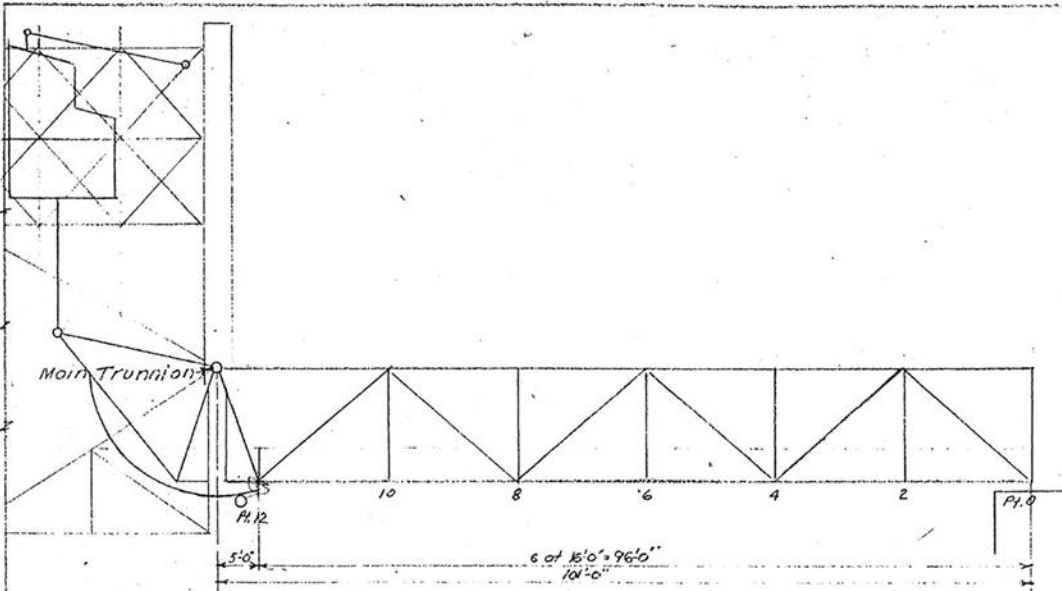
FENDER DETAIL  
SCALE - 1" = 1'-0"

LAUREL ST.

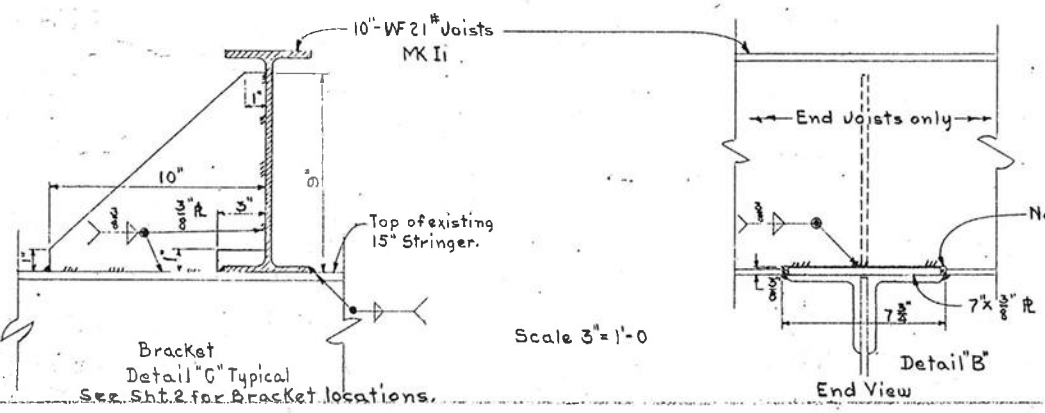
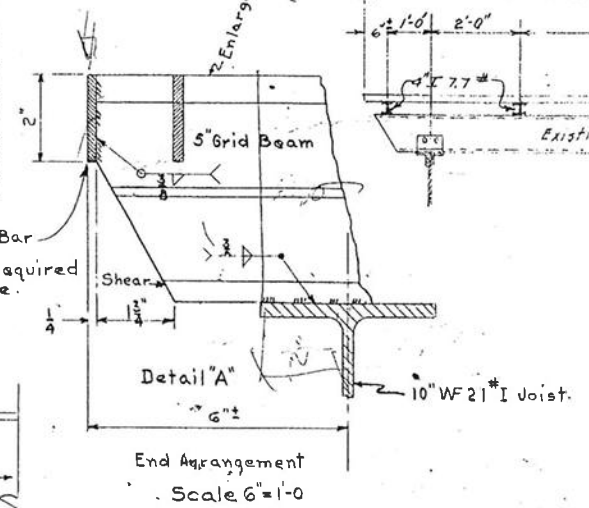
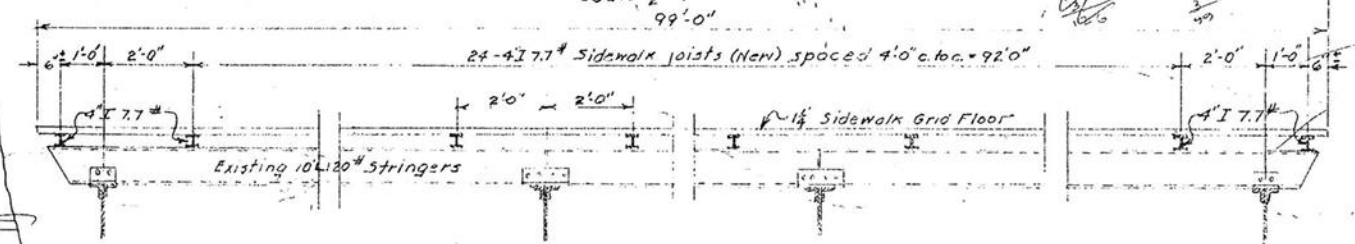
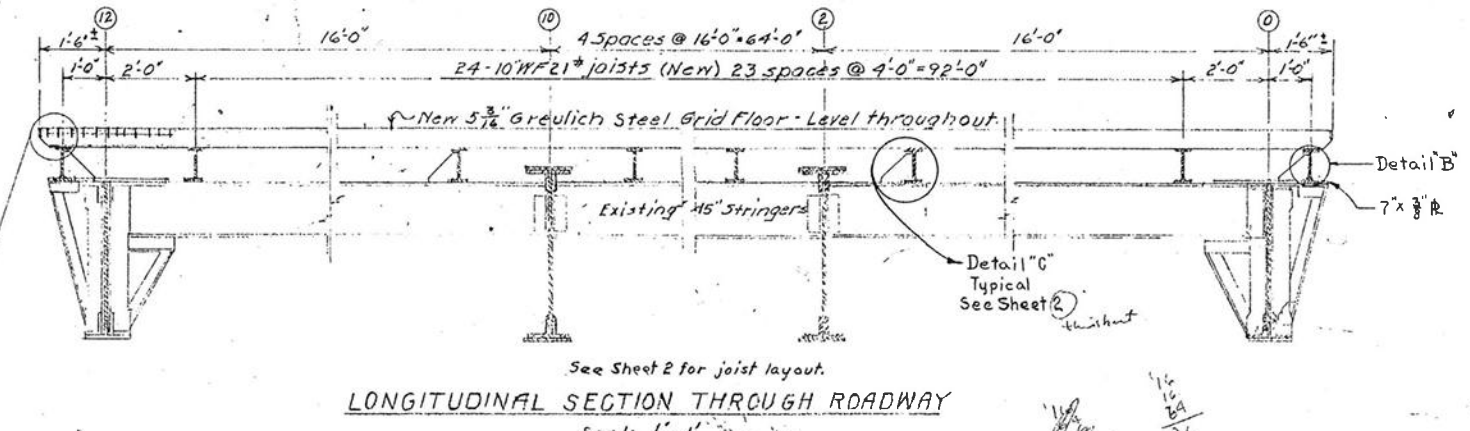
OFFICE OF PUBLIC WORKS DEPARTMENT TAMPA, FLORIDA	
PROJECT	PROJ. NO. 7
FENDER SYSTEM FORTUNE STREET BRIDGE	
Checked by <u>J. J. ...</u>	
SURVEY BY	
BOOK NO.	
DRAWN BY	DHE
CHECKED BY	
SCALE	AS SHOWN
DATE	1-16-51
APPROVED	

56  
15

EXISTING PLANS



Handwritten calculations:  
 $3 \times 4 = 12$   
 $1 - 3 \frac{1}{2} = 4 \frac{1}{2}$   
 $5 - 5 \frac{1}{2} = -\frac{1}{2}$   
 $4 - 10 \frac{1}{16} = 3 - 10 \frac{1}{16}$   
 $19' - 12" = 4' - 10 \frac{1}{16}"$   
 $15' - 1 \frac{1}{16}" = 14' - 1 \frac{1}{16}"$



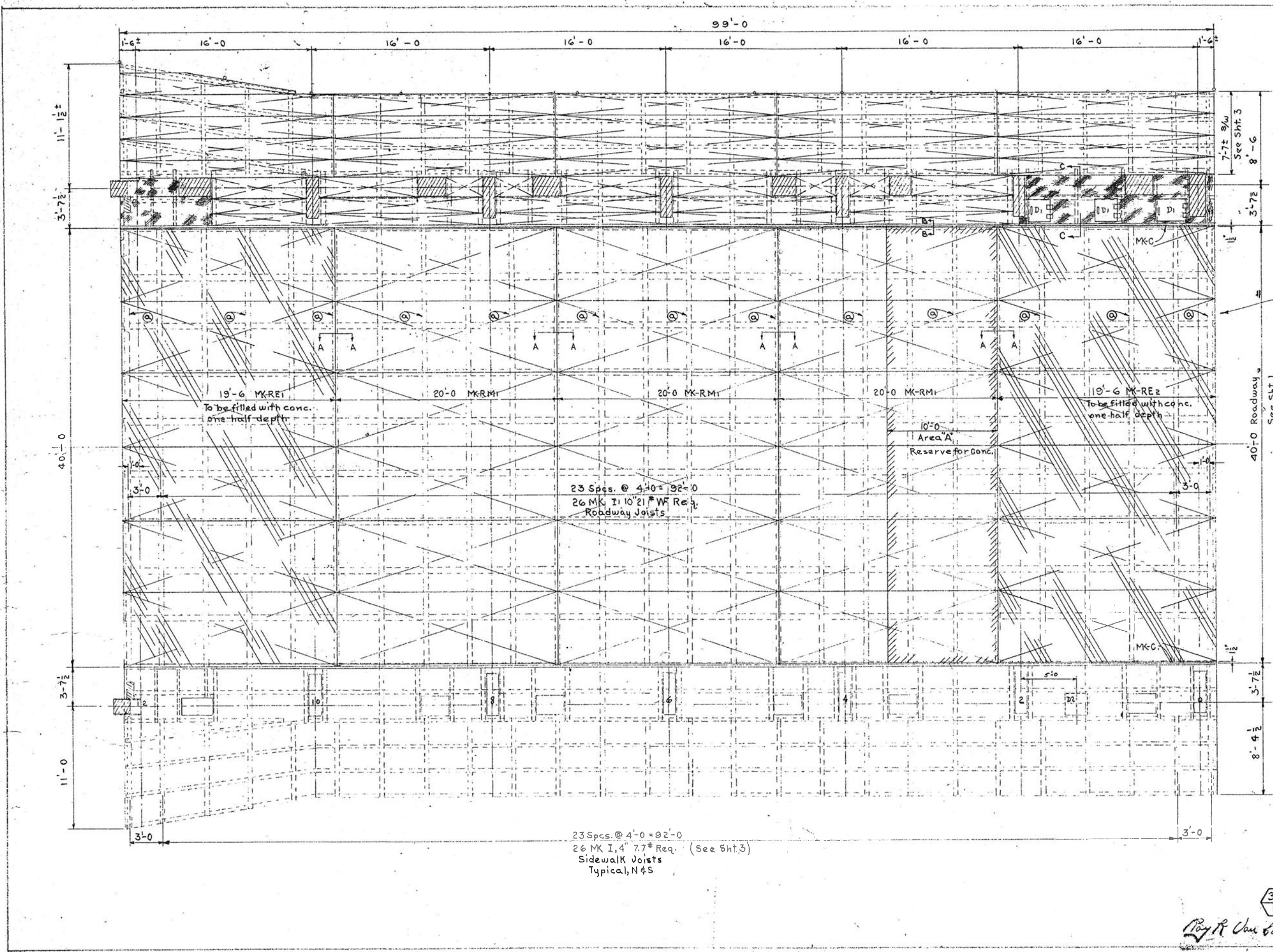
Typical, except see Sheet # 3 for variations in joist spacing and openings in sidewalk floor for truss members, hatches, etc.

PUBLIC WORKS DEPARTMENT TAMPA FLORIDA			
FORTUNE STREET BRIDGE PROPOSED STEEL GRID FLOORS ON BASCULE SPAN			
36	Name	Date	
16	Drawn by	Goodwin	7-21-99
	Checked by	M.S.G.	3-14-00
	Revised		
	Project No.	Scales	Sheet No. File No.
		as noted	1 of 4 B-43

*Roy R. Van Camp*



EXISTING PLANS



SCHEDULE

Structural Steel			
Req.	MK	Length	Lin. Ft. Wt. #
26	I	41'-0"	1066' 22386
2	C	95'-0"	198' 4039
			Total 26485

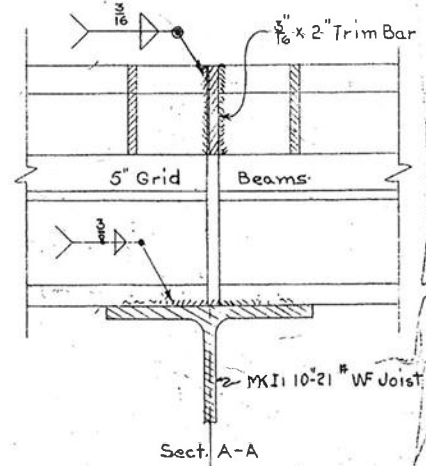
130	Brackets Detail C	744
-----	-------------------	-----

5" Roadway Grid Floor			
6	RE	19'-6"	117' 14495
6	RE	19'-6"	117' 14495
18	RM	20'-0"	360' 44600
			Total 73590

NOTE

All Roadway Joists designated thus-⊙ to be supported by brackets to each roadway stringer, welded to stringers and Joist as shown: Detail 'C' Sheet 1. (13 Joists @ 10 Brackets each = 130 Req.)

For Details of areas to be filled with concrete, See Specifications.



Sect. A-A  
For all welding of 5" grid floor, follow manufacturers recommendations. Kerrigan Iron Works Dwg OF-102.

23 Sps. @ 4'-0" = 92'-0"  
26 MK I, 4" 7.7# Req. (See Sht. 3)  
Sidewalk Joists  
Typical, N4S

PUBLIC WORKS DEPARTMENT  
TAMPA FLORIDA

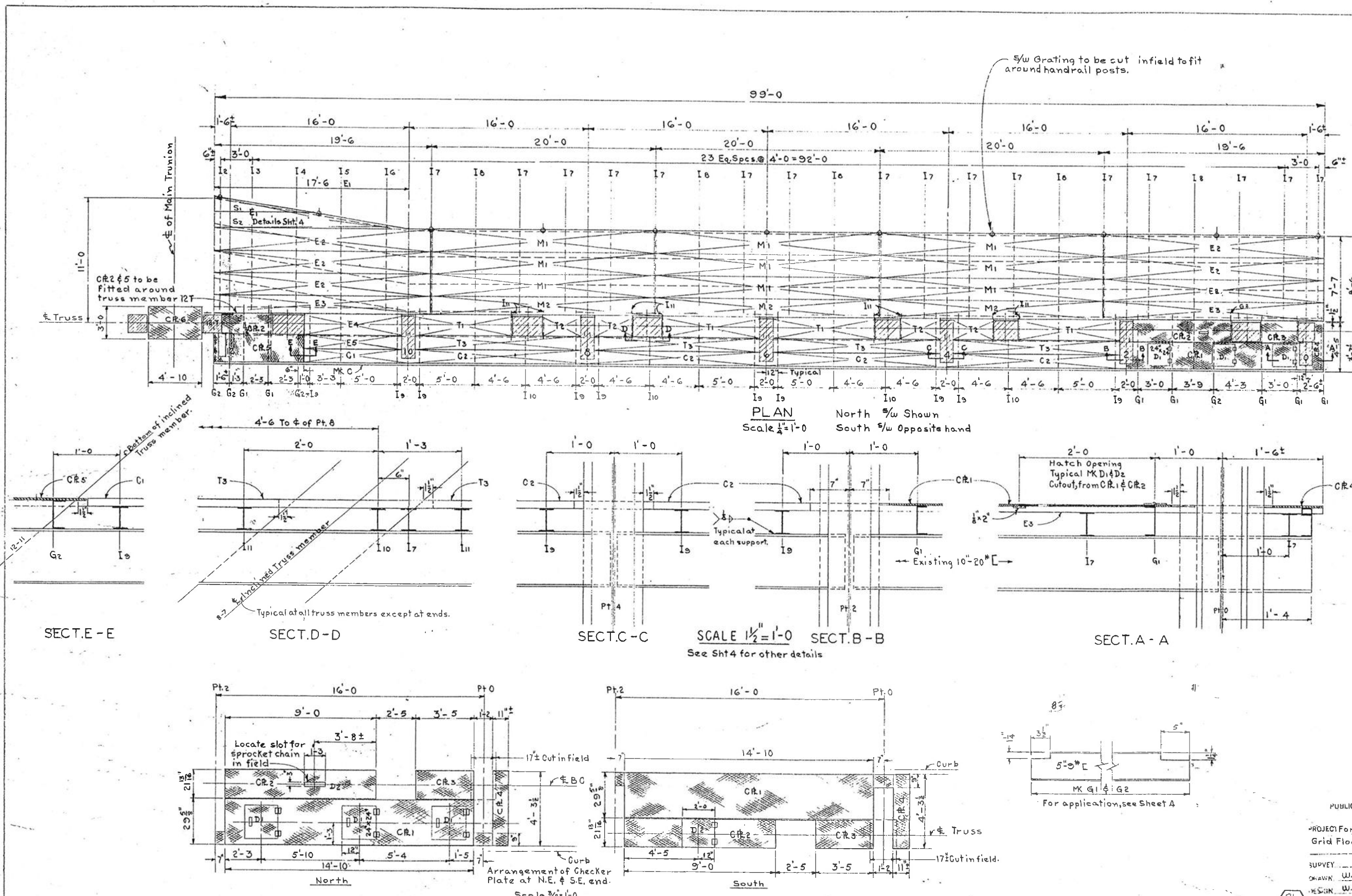
Fortune St. Bridge. Proposed Steel Grid Floors on Bascule Span.

PROJ. NO. \_\_\_\_\_  
 SUPVEY. \_\_\_\_\_ BOOK NO. \_\_\_\_\_  
 DRAWN M.G. SCALE 1/4" = 1'-0"  
 DESIGN. \_\_\_\_\_ DATE COMP. 3-29-60  
 CHECKED H.A.B. DATE 4-1-1960  
 REVIEWED & REC'D H.A.B. DATE 4-1-1960  
 APPROVED \_\_\_\_\_ DATE \_\_\_\_\_

FILE B-4-9 SHT 2 OF 4

36  
16  
Ray R. Van Camp

EXISTING PLANS



SCHEDULE

Sidewalk Grating					
Req.	MK	Bars	Width"	Length	Wt.#
2	E1	46	31"	SEE SHT 4	669
12	E2	35	23 1/2"	19'-6"	6896
4	E3	28	19"	19'-6"	1826
2	E4	32	21 1/2"	8'-9"	471
2	E5	22	14 1/2"	8'-9"	321
18	M1	35	23 1/2"	20'-0"	10610
6	M2	28	19"	20'-0"	2808
8	T1	30	21 1/2"	9'-0"	1941
8	T2	30	21 1/2"	3'-6"	755
8	T3	22	14 1/2"	15'-0"	2204
2	C1	22	14 1/2"	*9'-3"	331
8	C2	22	14 1/2"	*16'-0"	2378
Total					31209

Kerrigan Type-K 606 3/4 Grating  
\* Irregular

Sidewalk Joists				
4" x 7.7" I Beams				
Req.	MK	Length	Lin. Ft.	Wt.#
2	I2	10'-5"	20'-10"	160
2	I3	9'-11"	19'-10"	152
2	I4	9'-3"	18'-6"	142
2	I5	13'-1 1/2"	26'-3"	202
2	I6	7'-11"	15'-10"	122
32	I7	7'-6"	240'-0"	1848
8	I8	12'-1 1/2"	97'-0"	747
20	I9	5'-0"	100'-0"	770
8	I10	2'-8"	21'-4"	164
16	I11	2'-9"	44'-0"	338
Total				4646

5" x 9" C Iron				
Req.	MK	Length	Lin. Ft.	Wt.#
14	G1	5'-0"	70'-0"	630
10	G2	2'-8"	26'-8"	240
Total				91'-4" 870

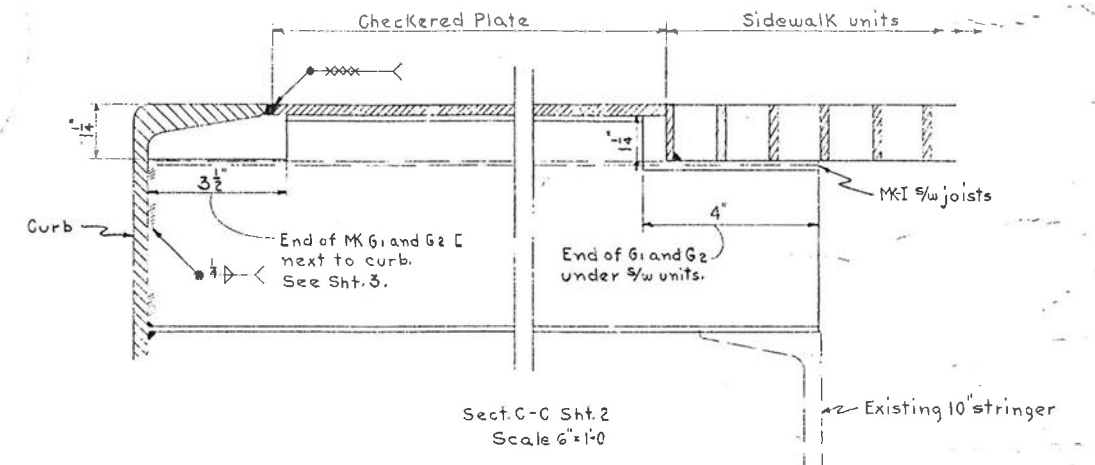
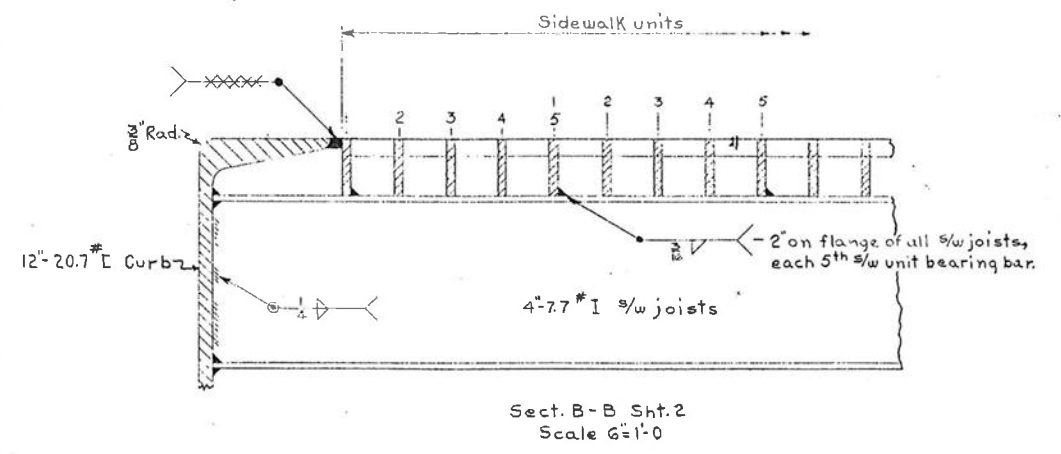
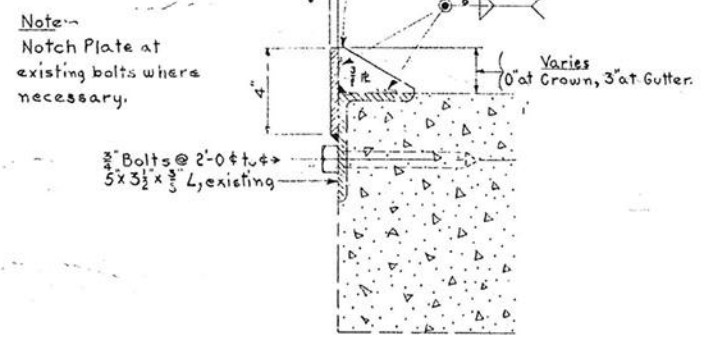
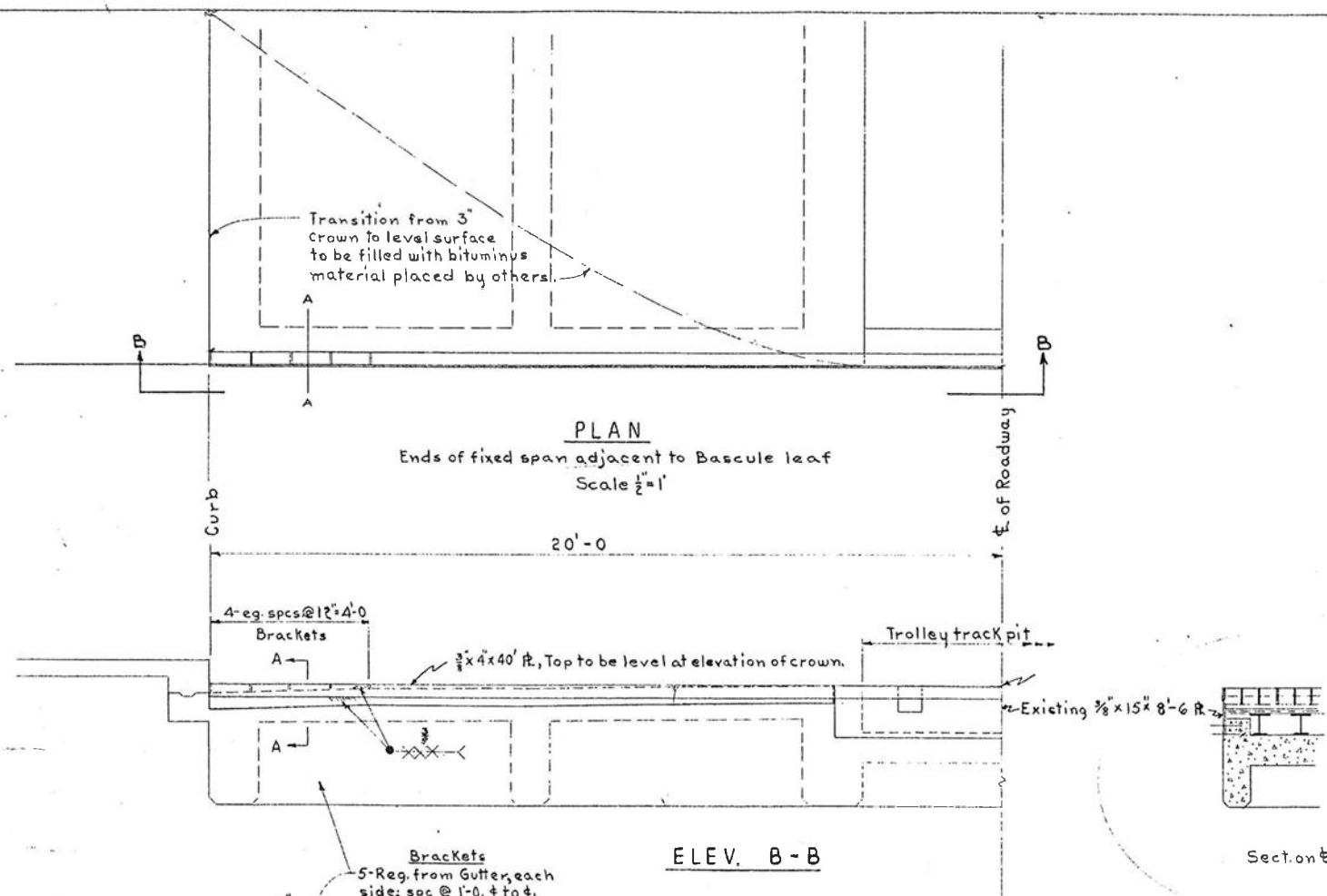
1/4" Checkered Plate				
Req.	MK	Width"	Length	Wt.#
2	CR1	29 1/2"	16'-0"	841
3	CR2	21 1/2"	9'-0"	550
2	CR3	21 1/2"	3'-5"	139
2	CR4	11"	4'-3 1/2"	88
2	CR5	29 1/2"	*7'-9"	435
2	CR6	36"	4'-10"	325
Total				2378

PUBLIC WORKS DEPARTMENT  
TAMPA FLORIDA  
PROJECT: Fortune St. Bridge, Proposed Steel Grid Floors on Bascule Span.  
PROJ. NO. \_\_\_\_\_  
SUPERV. \_\_\_\_\_ BOOK NO. \_\_\_\_\_  
DRAWN: W.L.M.S.G. SCALE: As Shown  
DESIGN: W.L.M.S.G. DATE COMP. 3-28-60  
CHECKED: H.H.P. DATE 4-1-1960  
REVISIONS: H.H.P. DATE 4-1-1960  
DATE: \_\_\_\_\_  
FILE B-4-9 SHT 3 OF 4

36  
18  
Roy R. Van Camp

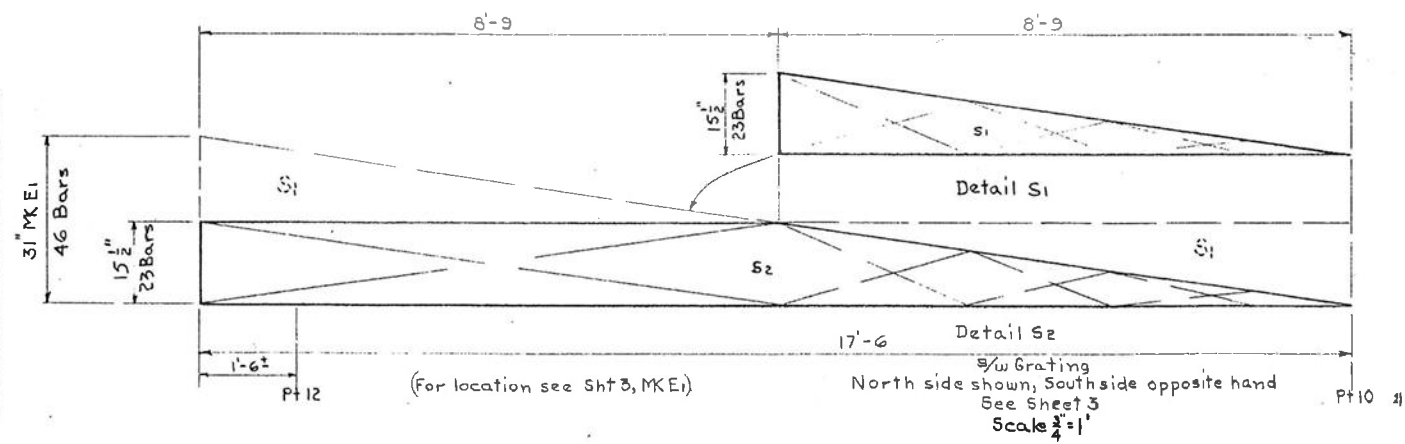


EXISTING PLANS



**ESTIMATED QUANTITIES**

Roadway	Est. Wt#	Sht No.
Steel Grid Floor	73690	2
Floor Joists	22386	2
Floor Joist Brackets	744	2
Curb Channels	4099	2
Approach Span Brackets	408	4
<b>Total-Roadway</b>	<b>101227</b>	
Sidewalk Grating	31209	3
Joists	4646	3
Checked Plate	2378	3
<b>Total-Sidewalk</b>	<b>38233</b>	



PUBLIC WORKS DEPARTMENT  
TAMPA FLORIDA

PROJECT Fortune St. Bridge, Proposed Steel Grid Floors on Bascule Span

PROJ. NO. \_\_\_\_\_  
SURVEY \_\_\_\_\_ BOOK NO. \_\_\_\_\_  
SCALE As Shown  
DATE COMP. 3-18-60  
DATE 7-1-60

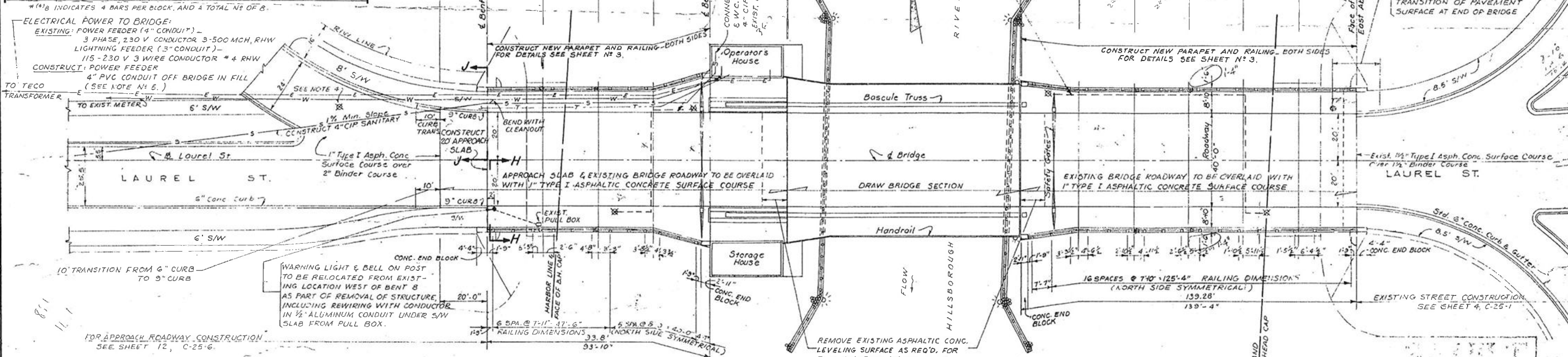
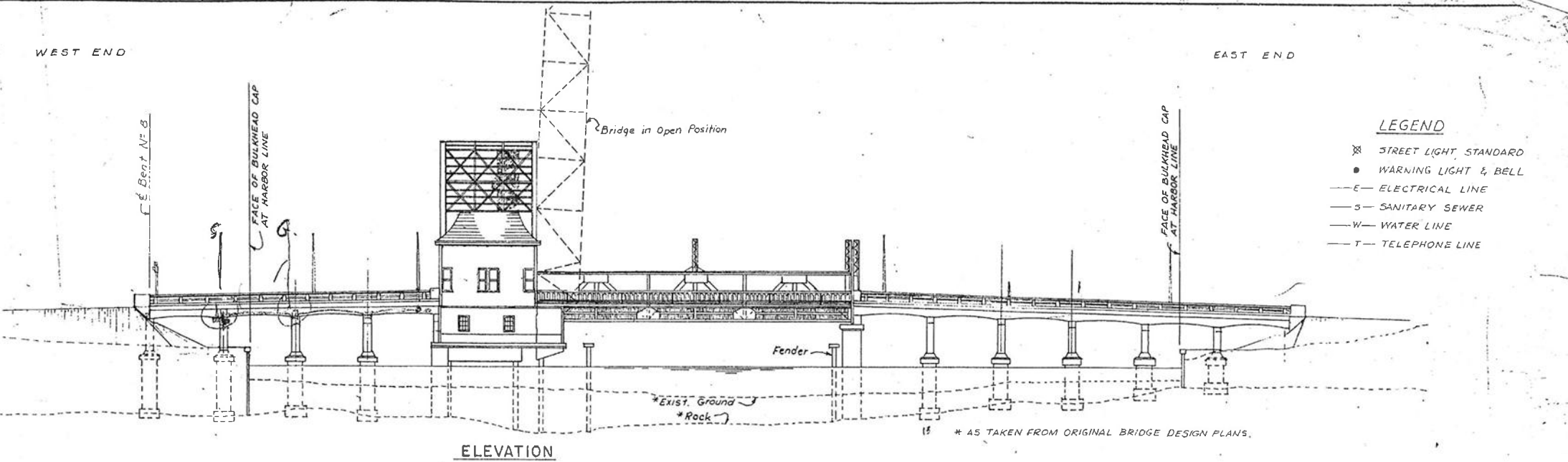
CHECKED *H.H.S.*  
DESIGNED BY *Ray P. Van Camp*

36  
18 FILE B-4-9 SHT 4 of 4

EXISTING PLANS

### SCHEDULE OF PARAPET REINFORCING

FROM STATION	TO STATION	PARAPET DISTANCE	MARK	NORTH PARAPET	SOUTH PARAPET	END BLOCK	COMMENTS
14+12.52	14+35.52	23'	P-1	6	6		
			S	22	22		
			T-1	35	35		
14+35.52	14+58.52	23'	P-1	6	6		
			S	22	22		
			T-1	35	35		
14+58.52	14+81.62	23.1'	P-2	6	6		
			S	22	22		
			T-1	33	33		
14+81.62	15+04.92	24.7'	H			41.8'	
			J-4			(2) 4	
			J-5			(2) 4	
			P-3	6	6		PARAPET & END BK.
			S	22	22		
			T-1	41	41		
16+40.62	16+63.62	23.36'	H			41.8'	END BLOCK
			J-4			(2) 4	
			J-5			(2) 4	
			P-5	6	6		PARAPET & END BK.
			S	20	20		
			T-1	35	35		
16+63.62	16+86.82	23.2'	P-5	6	6		
			S	22	22		
			T-1	35	35		
16+86.82	17+09.92	23.1'	P-2	6	6		
			S	22	22		
			T-1	33	33		
17+09.92	17+32.72	22.8'	P-7	6	6		
			S	22	22		
			T-1	33	33		
17+32.72	17+55.82	23.1'	P-2	6	6		
			S	22	22		
			T-1	33	33		
17+55.82	17+79.52	23.7'	P-8	6	6		
			S	23	23		
			T-1	35	35		



### SUMMARY OF QUANTITIES

ITEM NO.	DESCRIPTION	QUANTITY
13	TYPE I ASPHALTIC CONCRETE	1,280 S.Y.
15	SIWALK PAV'T.	203 S.Y.
24	CLASS "A" CONCRETE	36.5 C.Y.
37	REINFORCING STEEL	7,610 LBS
42	MASONRY ANCHORS	810
44	CONCRETE SLOPE PAV'T.	475 S.Y.
45	ALUMINUM HANDRAIL	454 L.F.

### GENERAL NOTES:

- FOR DETAILS & PLAN OF REMOVAL OF EXISTING STRUCTURES & SAND-BLAST CLEANING OF REMAINING STRUCTURES, SEE SHEET 102
- FOR DETAILS OF SLOPE PAVING AND SIDEWALK UNDER BRIDGE, SEE SHEET 98.
- FOR SECTIONS H-H AND J-J, SEE SHEET 101.
- STREET LIGHTS ARE PROPERTY OF TAMPA ELECTRIC CO AND SHALL BE REMOVED BY THEM WHERE REQUIRED.
- ELECTRICAL POWER SUPPLY TO BRIDGE: REMOVE EXISTING CONDUCTORS AND INSTALL TEMPORARY CONDUCTORS AS PROVIDED BY THE CITY.  
REPLACE POWER FEEDER - CONDUCTOR INSTALLING 4" PVC CONDUIT OFF BRIDGE AFTER BRIDGE REMOVAL HAS BEEN COMPLETED.  
LIGHTING CONDUCTOR TO BE REPLACED WITH 7.5 KVA TRANSFORMER IN BRIDGE HOUSE TO PROVIDE TEMPORARY AND FUTURE LIGHTING CURRENT FROM POWER FEEDER.  
ALL ELECTRICAL WORK TO BE DONE IN ACCORDANCE WITH THE CONTRACT SPECIFICATIONS, SECTION B-22.  
ALL CONDUCTORS REMOVED SHALL REMAIN THE PROPERTY OF THE CITY OF TAMPA.

### GENERAL NOTES (CONT.)

- ALL ELEVATIONS ARE BASED ON CITY OF TAMPA DATUM - MEAN SEA LEVEL.
- CONTRACTOR SHALL, IF REQUESTED BY THE CITY, INSTALL ON BRIDGE A METAL PLAQUE SUPPLIED BY THE CITY, AND IN THE EVENT THAT THE PLAQUE REQUIRES RELOCATING BRIDGE NAME, DO SO AS DIRECTED BY THE ENGINEER, ALL WITHOUT COST TO THE CITY.
- MATERIALS:  
CONCRETE - CLASS "A", 28 DAY CYLINDER STRENGTH 3,000 P.S.I.  
REINFORCING: ASTM A-15 STEEL, INTERMEDIATE OR HARD GRADE WITH A-305 DEFORMATION.
- ALL EXPOSED EDGES OF CONCRETE SHALL BE CHAMFERED 3/4" UNLESS SHOWN OTHERWISE.
- ALL EXPOSED SURFACES OF NEW CONCRETE (PARAPET, END BLOCKS, ETC.) SHALL BE GIVEN A CLASS 1 SURFACE FINISH IN ACCORDANCE WITH FLA.S.R.D. REQUIREMENTS. COLOR OF FINISHED CONCRETE SURFACE SHALL MATCH EXISTING (CLEANED) CONCRETE SURFACE.
- ORIG. DESIGN PLANS ARE AVAILABLE AT D.P.W. OFFICE FOR REF.

## LAUREL ST. BRIDGE

**PUBLIC WORKS DEPARTMENT**  
CITY OF TAMPA, FLORIDA

**RIVERFRONT (WEST SIDE)**  
**URBAN RENEWAL PROJECT**

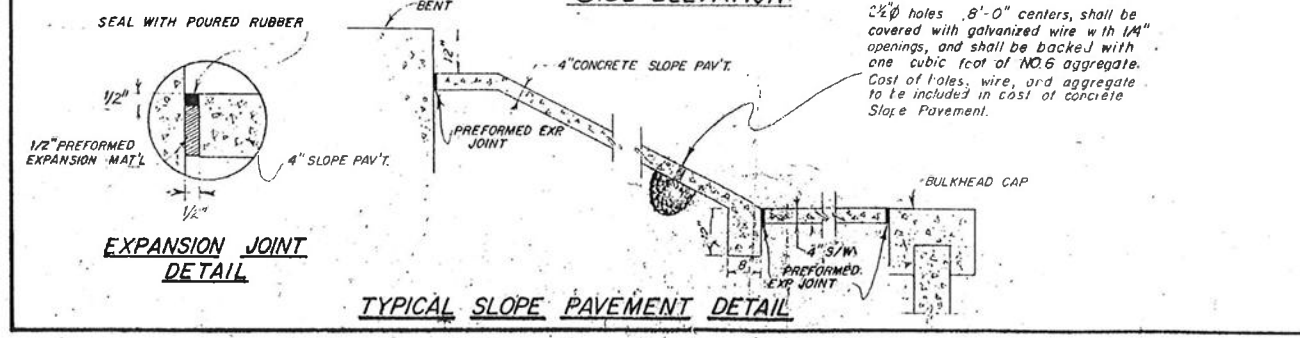
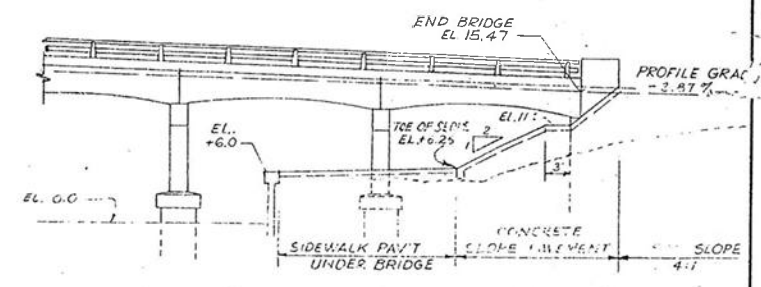
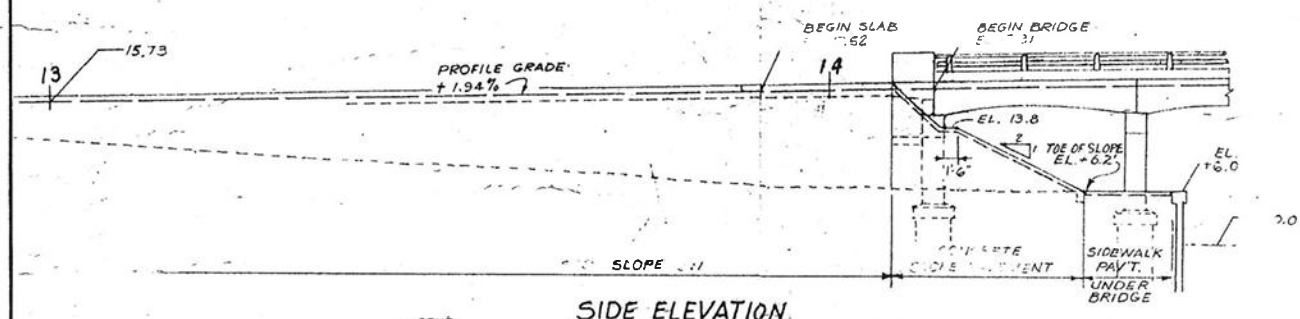
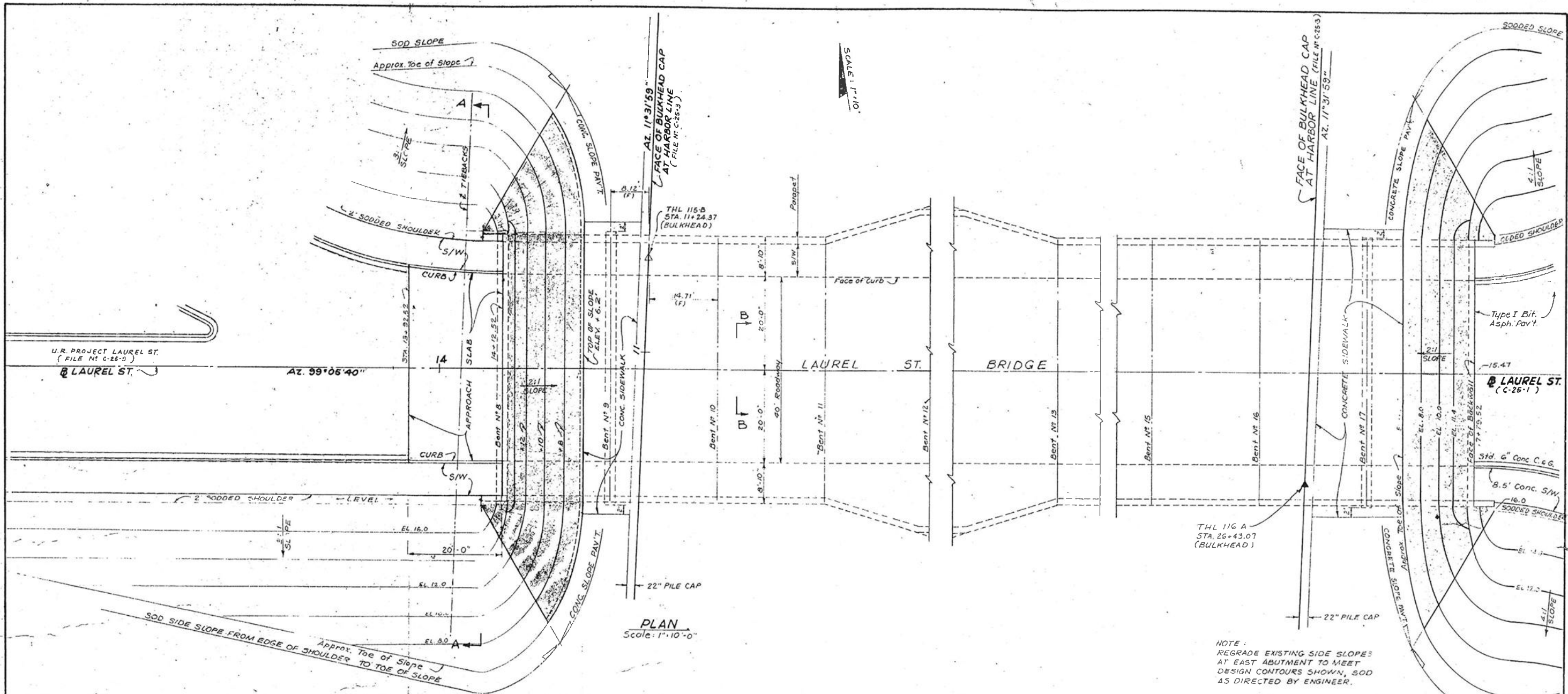
**LAUREL ST. BRIDGE**  
**STRUCTURAL MODIFICATIONS**

Scale: 1" = 20'	Book No.
Drawn: J.D. HS.	Date: 2-13-69
Designed: D.U.T.	Date: 2-18-69
Reviewed:	Date:
Approved:	Date:

NO. 97 OF 108 SHEETS FILE NO. C-25-6



EXISTING PLANS



JUL 16 1969

**PUBLIC WORKS DEPARTMENT**  
 CITY OF TAMPA, FLORIDA

**RIVERFRONT (WEST SIDE)**  
 URBAN RENEWAL PROJECT

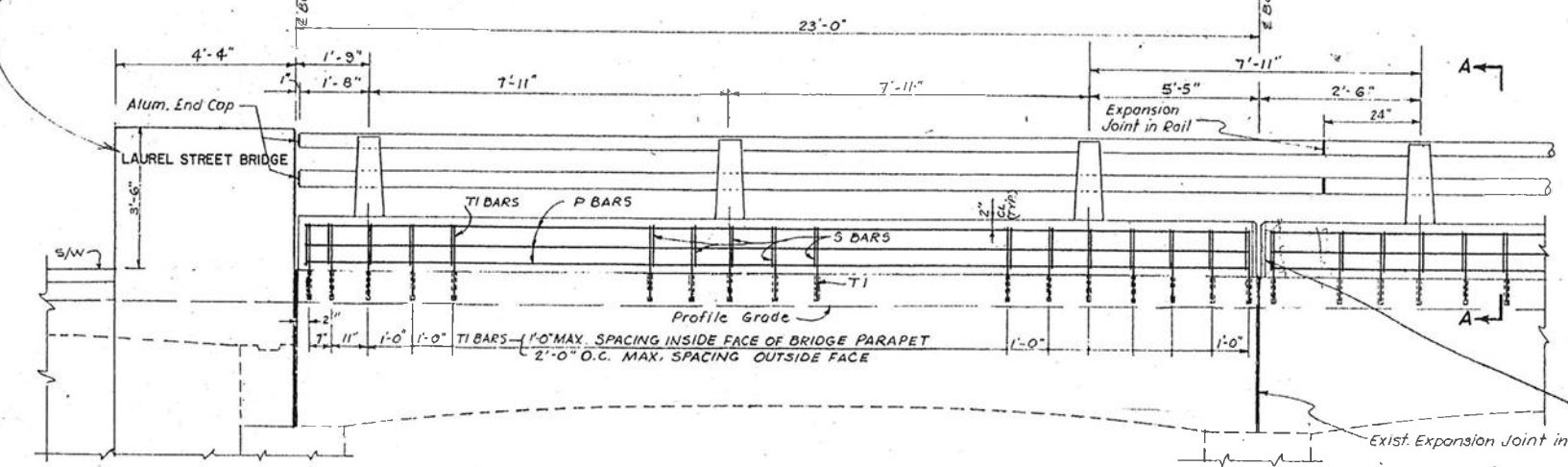
**LAUREL ST. BRIDGE**  
 GRADING DETAILS

Scale 1"=10'-0" Book No. \_\_\_\_\_  
 Drawn U.D. H.S. Date 2-18-69  
 Designed D.V.T. Date 2-13-69  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_

NO 98 OF 108 SHEETS FILE NO. C-25-9

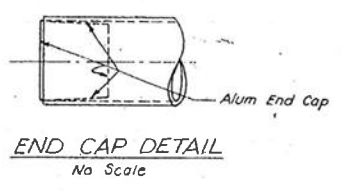
EXISTING PLANS

Provide indented letters formed by 3/8" V-groove, 3" in height (Not Plastic Figures), approved by Engineer. Locate at both ends of bridge on side of oncoming traffic lane.

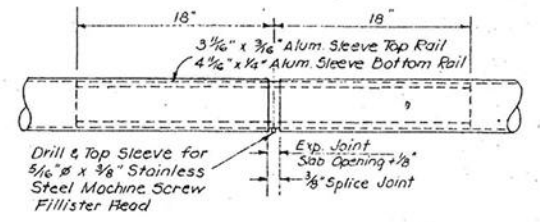


NOTE:  
Existing vertical 5/8"  $\phi$  reinforcing bars shall be preserved when concrete railing is removed, and used in lieu of masonry anchors and T-Bars. See Sheet 102 for location of bars.

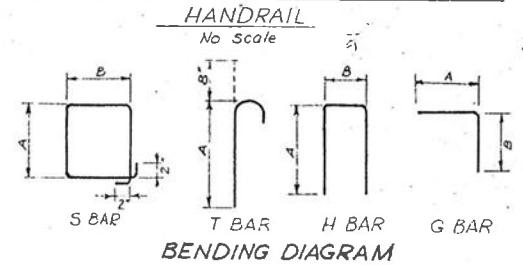
**PART ELEVATION OF HANDRAIL AND PARAPET**  
Not to Scale



**END CAP DETAIL**  
No Scale



**EXPANSION JOINT & SPLICE JOINT DETAIL**



**HANDRAIL BENDING DIAGRAM**  
No Scale

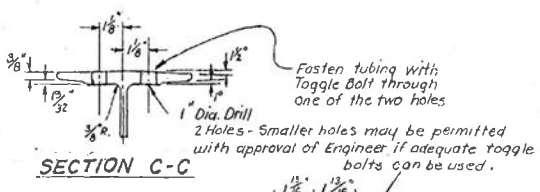
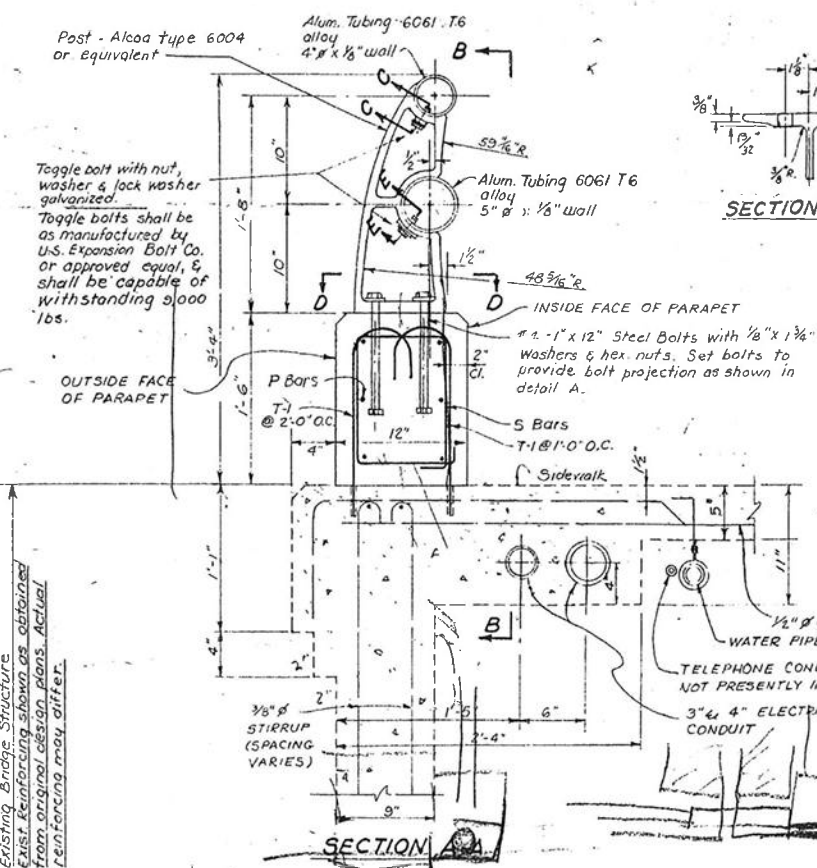
**PARAPET AND END BLOCKS BILL OF REINFORCING STEEL**

MARK	SIZE	NO. REQ'D.	A	B	LENGTH	REMARKS
G	5	6	1'-7"	1'-7"	3'-1 1/2"	SEE BENDING DIAGRAM
H	5	26	3'-4"	8"	7'-3"	"
J1	4	44			4'-0"	"
J2	4	6			3'-8"	"
J3	4	14			2'-9"	"
J4	4	8			2'-6"	"
J5	4	8			2'-9"	"
K1	5	8			2'-6"	"
K2	5	2			7'-5"	"
K3	5	2			6'-10"	"
P1	5	24			22'-7"	"
P2	5	26			22'-8"	"
P3	5	12			24'-6 1/2"	"
P5	5	12			23'-0"	NOTE: P4 HAS BEEN DELETED
P6	5	12			22'-9 1/2"	"
P7	5	12			22'-5 1/2"	"
P8	5	12			22'-2 1/2"	"
S	4	438	1'-2"	8"	4'-0"	SEE BENDING DIAGRAM
T1	6	680	1'-6"		2'-2"	" " "
T2	5	16	10'-1"		10'-8"	" " "

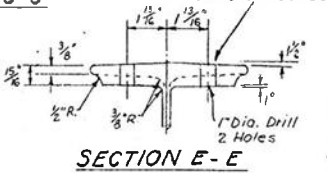
**BACKWALL**

MARK	SIZE	NO. REQ'D.	LENGTH
E1	5	12	29'-10"
E2	5	6	8'-2"
F1	6	18	3'-7"
F2	6	18	2'-7"
F3	6	20	3'-10"

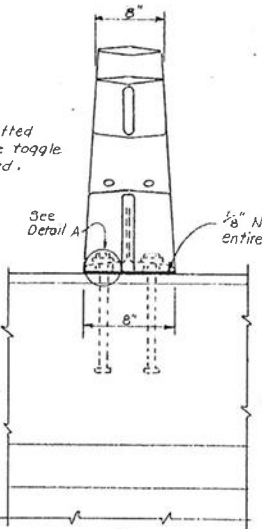
\* USE NO. 5 BAR WITH ANCHOR SHIELD ALTERNATE



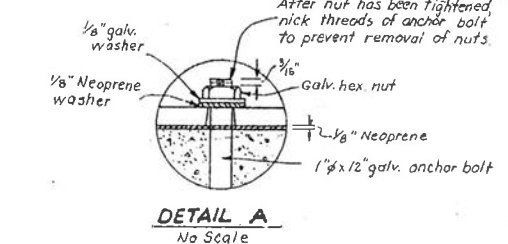
**SECTION C-C**



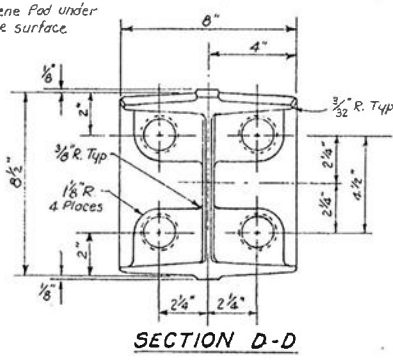
**SECTION E-E**



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



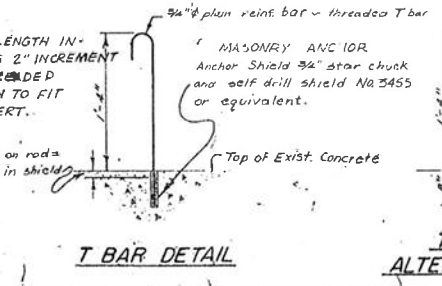
**DETAIL A**  
No Scale



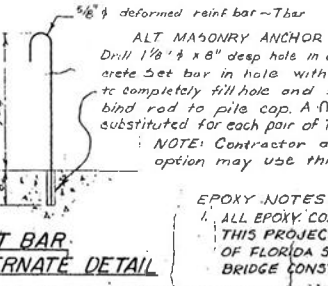
**SECTION D-D**

**HANDRAIL NOTES:**

- ALUMINUM POSTS SHALL BE CAST AND SHALL BE ALUMINUM ASSN. ALLOY A344-T6.
- ALUMINUM RAILING SHALL CONFORM TO THE REQUIREMENTS OF ASTM B 221, ALLOY 6061-T6 OR 6062-T6.
- ANCHOR BOLTS, NUTS AND WASHERS FOR THE ALUMINUM HANDRAIL SHALL BE HOT DIP GALVANIZED STEEL.
- EXPANSION JOINT IN RAILING SHALL BE PROVIDED TO CORRESPOND TO THE EXPANSION JOINTS IN THE BRIDGE DECK. THE SHORT DISTANCE BETWEEN EXPANSION JOINTS SHOULD ELIMINATE THE NEED FOR ADDITIONAL CONTROL JOINTS IN THE RAILING.
- CONTRACTOR SHALL SUBMIT, FOR APPROVAL OF THE ENGINEER, SHOP DRAWINGS COVERING THE FABRICATION INFORMATION AND DIMENSIONS OF THE HANDRAIL. ALL DIMENSIONS SHALL BE CONFIRMED IN FIELD BY CONTRACTOR PRIOR TO SUBMITAL OF SHOP DRAWINGS.



**T BAR DETAIL**



**T BAR ALTERNATE DETAIL**

**EPOXY NOTES:**

- ALL EPOXY COMPOUNDS AND THE USE OF SAME ON THIS PROJECT SHALL CONFORM TO REQUIREMENTS OF FLORIDA S.R.D. SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 326, 1966 EDITION.
- SAND USED FOR EPOXY MORTAR SHALL BE 100% DRY. SOLVENTS SHALL NOT BE USED ON THE EPOXY UNLESS DIRECTED BY THE ENGINEER.

**RAILING DETAILS**

**PUBLIC WORKS DEPARTMENT**  
CITY OF TAMPA, FLORIDA

**RIVERFRONT (WEST SIDE)**  
**URBAN RENEWAL PROJECT**

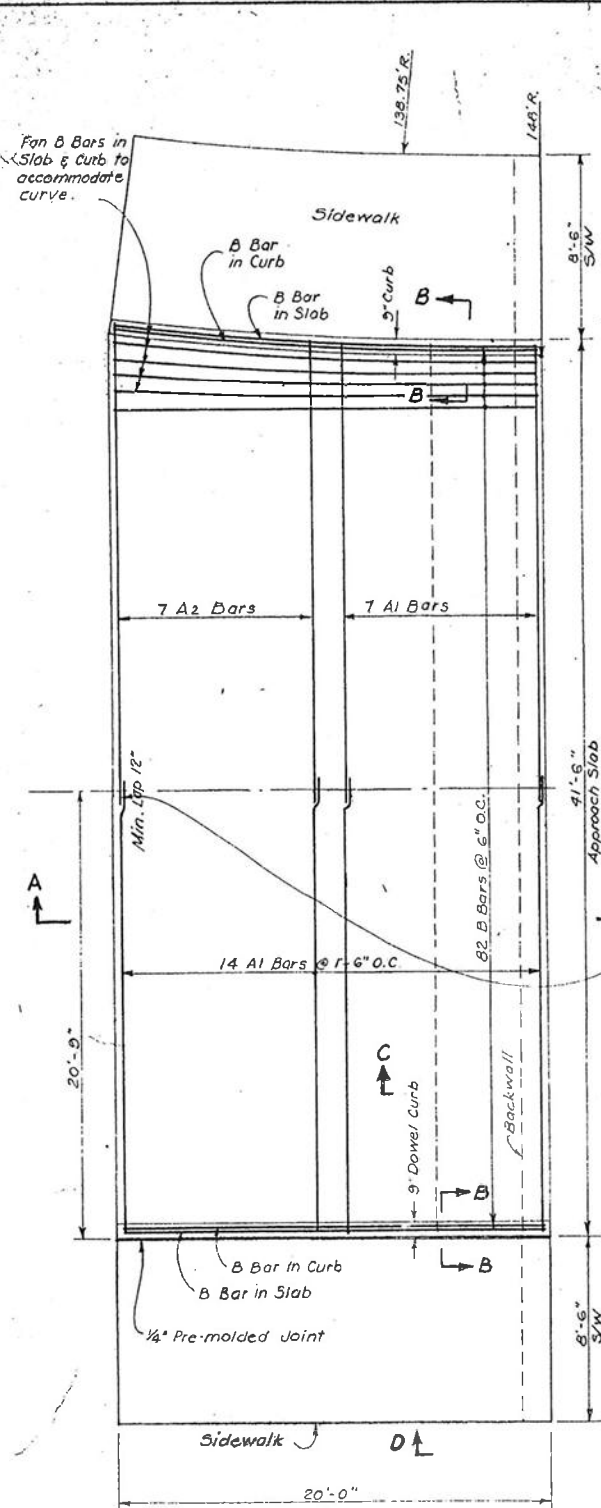
**LAUREL ST. BRIDGE**  
**STRUCTURAL MODIFICATIONS**

Scale: NOTED | Book No. \_\_\_\_\_  
 Drawn: J.D. W.S. | Date: 2-18-69  
 Designed: D.W.F. | Date: 2-18-69  
 Reviewed: \_\_\_\_\_ | Date: \_\_\_\_\_  
 Approved: \_\_\_\_\_ | Date: \_\_\_\_\_

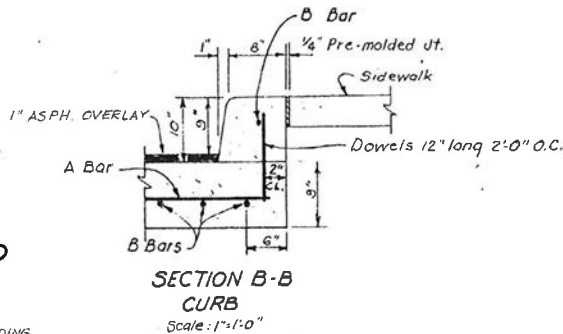
NO. 99 OF 108 SHEETS | FILE NO. C-25-9



EXISTING PLANS



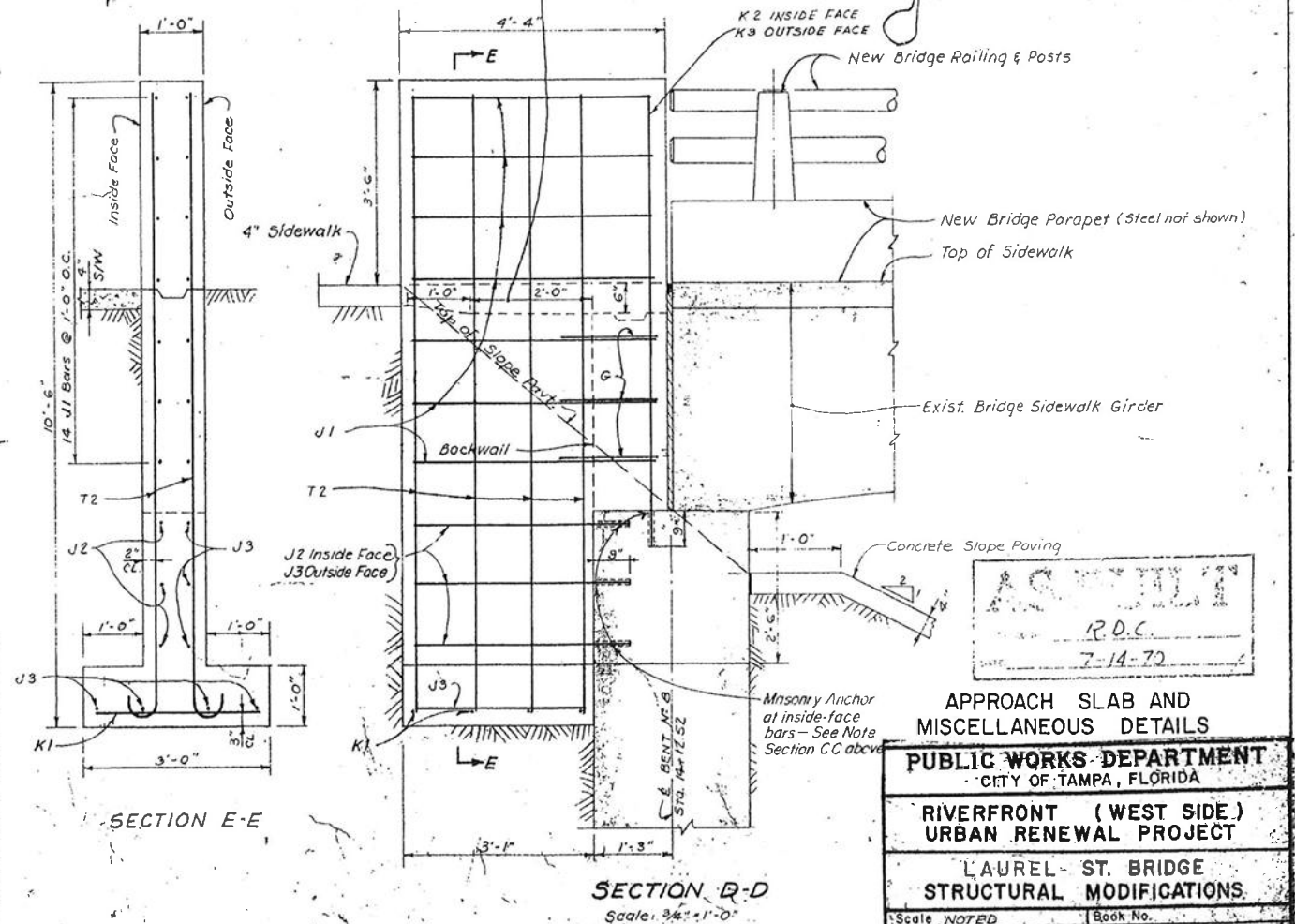
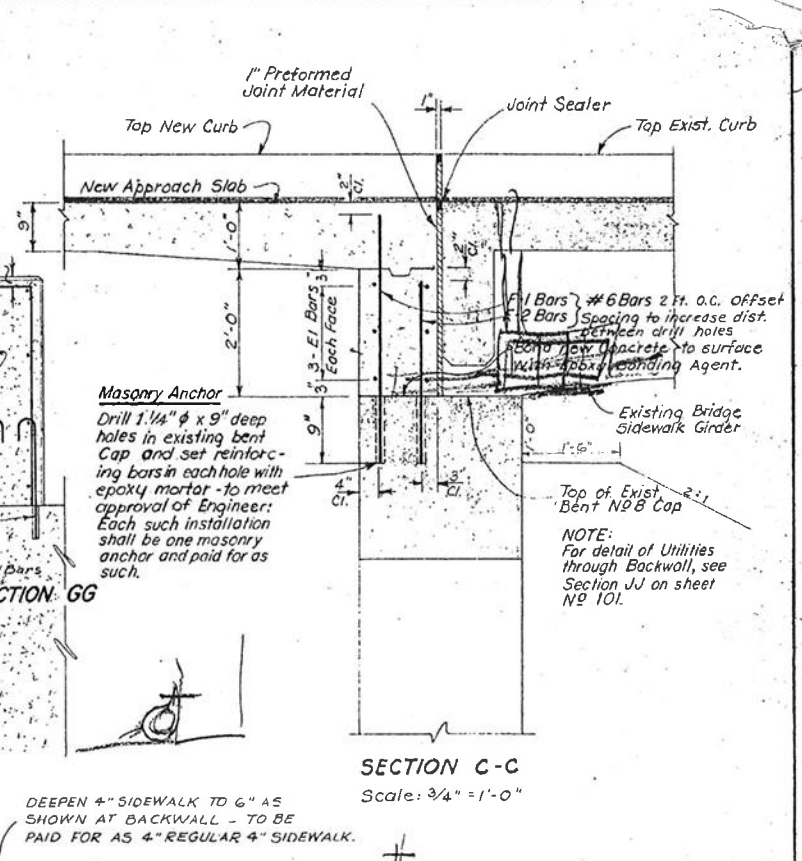
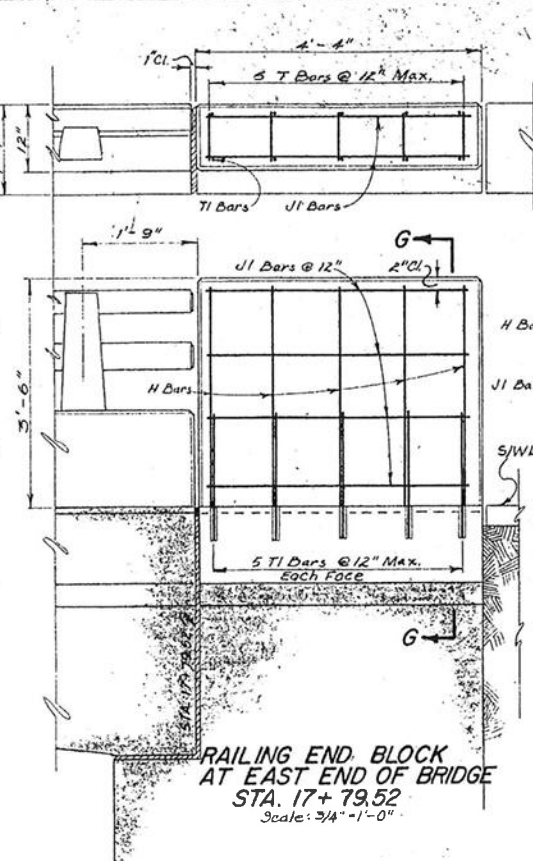
NOTE: COST OF CURB INCLUDING REINFORCING AND DOWELS SHALL BE INCLUDED IN CONTRACT PRICE OF APPROACH SLAB.



**APPROACH SLAB BILL OF REINFORCING STEEL**

MARK	SIZE	NO. REQ'D	LENGTH	BENDING
A1	#4	21	21'-1"	Straight
A2	#4	7	21'-8"	"
B	#5	84	19'-8"	"
Dowel	#4	22	1'-0"	"

**ESTIMATED QUANTITIES:**  
CLASS "A" CONCRETE = 25.3 CU. YDS.\*  
REINFORCING STEEL = 508 LBS.\*



**ASWILL**  
R.D.C.  
7-14-70

**PUBLIC WORKS DEPARTMENT**  
CITY OF TAMPA, FLORIDA

**RIVERFRONT (WEST SIDE) URBAN RENEWAL PROJECT**

**LAUREL - ST. BRIDGE STRUCTURAL MODIFICATIONS.**

Scale: NOTED Book No. \_\_\_\_\_

Drawn: J.D., H.S. Date: 2-18-69

Designed: D.V.T. Date: 2-18-69

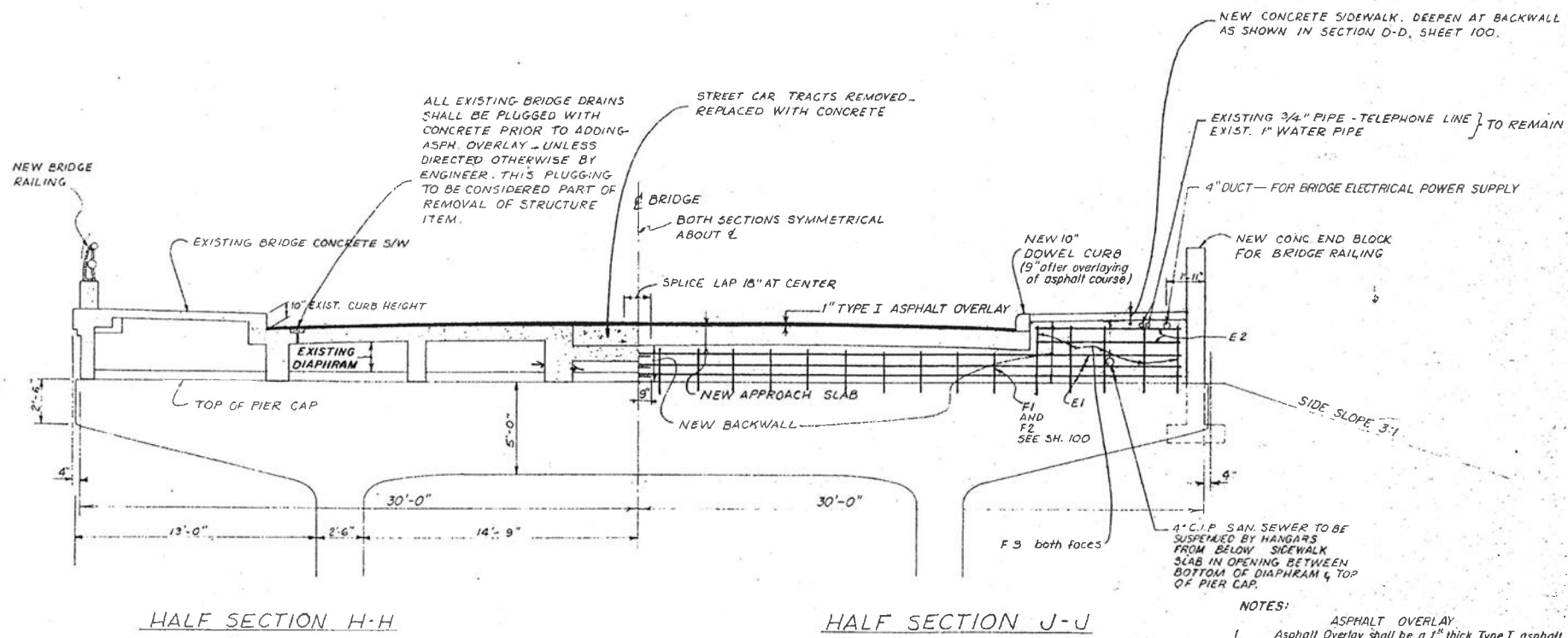
Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

NO 100 OF 108 SHEETS FILE NO C-25-9

\* NOT INCLUDING SIDEWALK

EXISTING PLANS



- NOTES:
1. ASPHALT OVERLAY  
Asphalt Overlay shall be a 1" thick Type I asphalt course.
2. Where conditions require that the asphalt overlay be feathered in order to maintain the surface continuity, Type II asphaltic material may, with approval of the Engineer, be used in place of Type I. The Type II asphalt shall be paid for per ton of material.
3. Expansion joints in the roadway deck between bridge spans shall be provided for in order to prevent breakage of the overlay asphalt, and water seepage through bridge structure. Contractor shall submit proposed joint construction details and obtain approval of Engineer before paving is begun. Expansion joint detail shall include copper water stop.
4. Type II asphalt (See Note #2.) shall conform to the specifications with the exception that the coarse aggregate shall be composed entirely of crushed stone and the mixture shall have a minimum stability of 2,000 lbs. by the Hubbard-Field method.

**AS-BUILT**

R.D.C.

DATE 7-14-70

**PUBLIC WORKS DEPARTMENT**  
CITY OF TAMPA, FLORIDA

**RIVERFRONT (WEST SIDE)**  
**URBAN RENEWAL PROJECT**

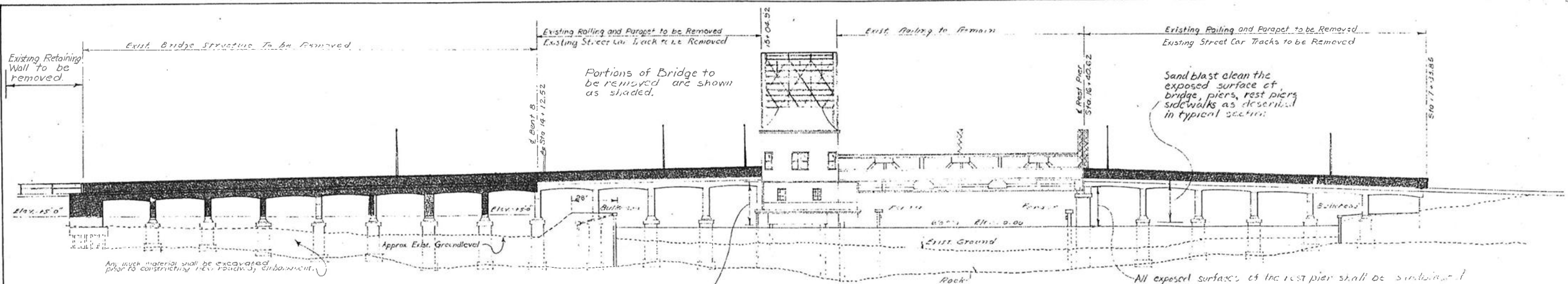
**LAUREL ST. BRIDGE**  
**DETAILS**

Drawn J.D.H.S.	Date 2-18-65
Designed D.J.T.	Date 2-18-68
Reviewed	Date
Approved	Date

NO. 101 OF 108 SHEETS FILE NO. C-25-9



EXISTING PLANS



**Notes: Removal of Structure**

1. Remove existing Bridge Structure to a minimum distance of 2 feet below the finished excavation surface or the original ground surface. Pier columns shall be removed to +5.0 Elev. unless approved otherwise by the Engineer.
2. Removal of Bridge Structure shall be carried to sufficient depth so that any remaining portions of structure shall not cause any interference with the paving and compaction of the roadway embankment.

**Notes: Removal of Structure Continued**

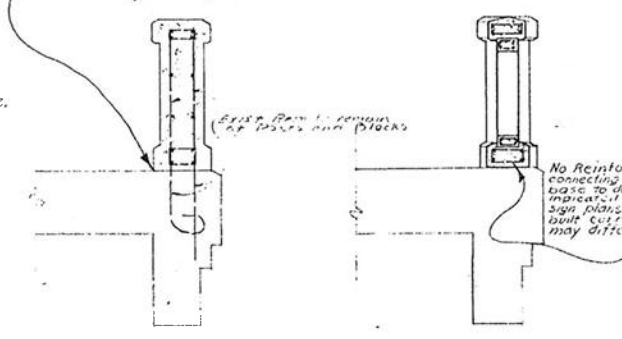
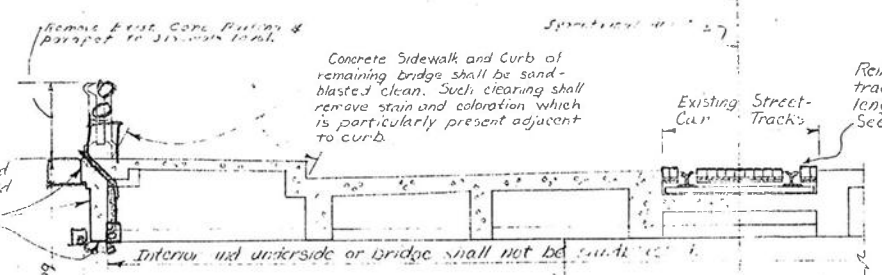
3. Remove granite blocks and supporting mortar to top of cross-tie for entire width of our track section the full length of the bridge. Replace with Class "A" concrete to conform to the existing cross-grade of the roadway with a parabolic transition at the center. Where track has already been removed and replaced with concrete, the bridge shall be cut down to conform to above described cross-section.

Area to be Removed

**ELEVATION**  
Scale: 1" = 20'-0"

All exposed surfaces of concrete lower portion of both bridge houses shall be sandblasted clean.

Where removed block or post exposes a wider area than the new layout will cover, concrete not covered by the parapet shall be removed to within 2'-0" width. The 2'-0" width this remaining shall be included in the bridge removal.

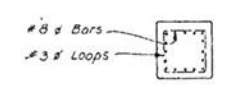


**RAILING BLOCK**  
**RAILING & POST**  
TYPICAL SECTION  
EXISTING CONCRETE PAVING  
Scale: 1/2" = 1'-0"

**SANDBLAST CLEANING**

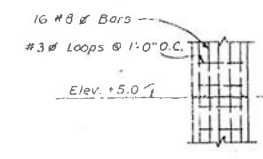
1. SANDBLAST CLEANING SHALL NOT BE DONE TO THOSE PORTIONS OF THE BRIDGE WHICH ARE TO BE REMOVED OR COVERED.
2. ALL FINISHED SURFACES OF THE EXTERIOR OF THE BRIDGE LOWER CONCRETE SIDE OF BRIDGE HOUSES AND ALL THE PIER AND REST PIER SURFACES SHALL BE SANDBLASTED CLEAN TO MEET SPECIFICATIONS AND TO PRESENT A CLEAN AND UNIFORM FINAL FINISHED APPEARANCE. A SAMPLE OF SANDBLAST CLEANING HAS BEEN DONE ON THE INSIDE SURFACE OF THE PIER CAP AND AT THE EXTERIOR REINFORCING SURFACE OF BENT NO. 6. THE SANDBLAST CLEANING SHALL ACHIEVE THE SAME OR BETTER RESULTS.
3. THE SIDEWALK SANDBLAST CLEANING DOES NOT HAVE TO BE AS THOROUGH AS THAT OF THE BRIDGE PORTIONS DESCRIBED IN PARAGRAPH 2. THE PRINCIPAL PURPOSE IS TO REMOVE THE STAIN AND COLORATION PRESENT NEAR CURB, AND TO PRESENT A UNIFORM AND PLEASING SIDEWALK SURFACE WHICH WILL BLEND WITH THE RENOVATED BRIDGE.

**Notes:**  
Vertical bars at railing posts and blocks shall be preserved and incorporated in the new parapet. At such locations, masonry anchors shall not be necessary. If these bars are not preserved, masonry anchors shall be supplied and installed by the Contractor at no cost to the City as replacement.



**SECTION A-A**

Reinforcing shown is as per original design drawings. Existing reinforcement differs.



**SECTION B-B**

To be Removed  
To Remain

PRINTED  
JUL 1969  
100  
BY

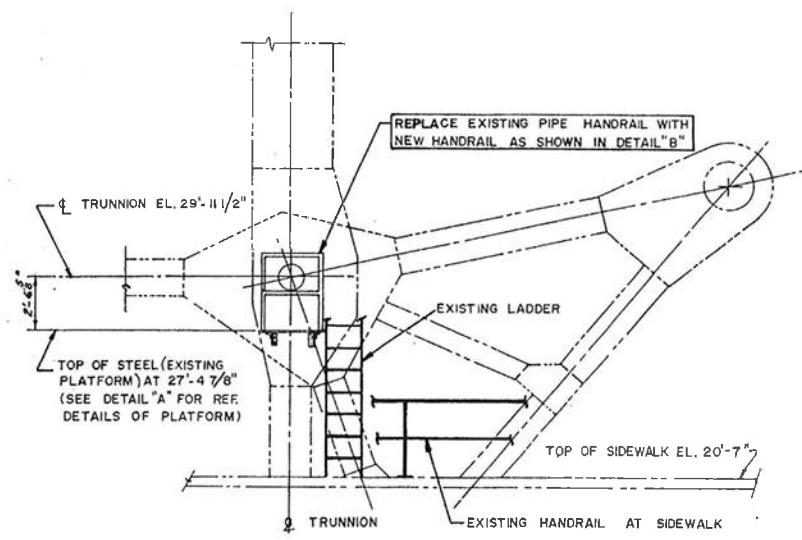
<b>PUBLIC WORKS DEPARTMENT</b>	
CITY OF TAMPA, FLORIDA	
RIVERFRONT (WEST SIDE)	
URBAN RENEWAL PROJECT	
REMOVAL OF PORTIONS OF LAUREL ST. BRIDGE	
Scale: 1/2" = 1'-0"	Book No.:
Drawn: H.S.	Date: 2-18-69
Designed: E.T.	Date: 2-18-69
Reviewed:	Date:
Approved:	Date:

APPROVED  
R.D.C.  
7-14-70

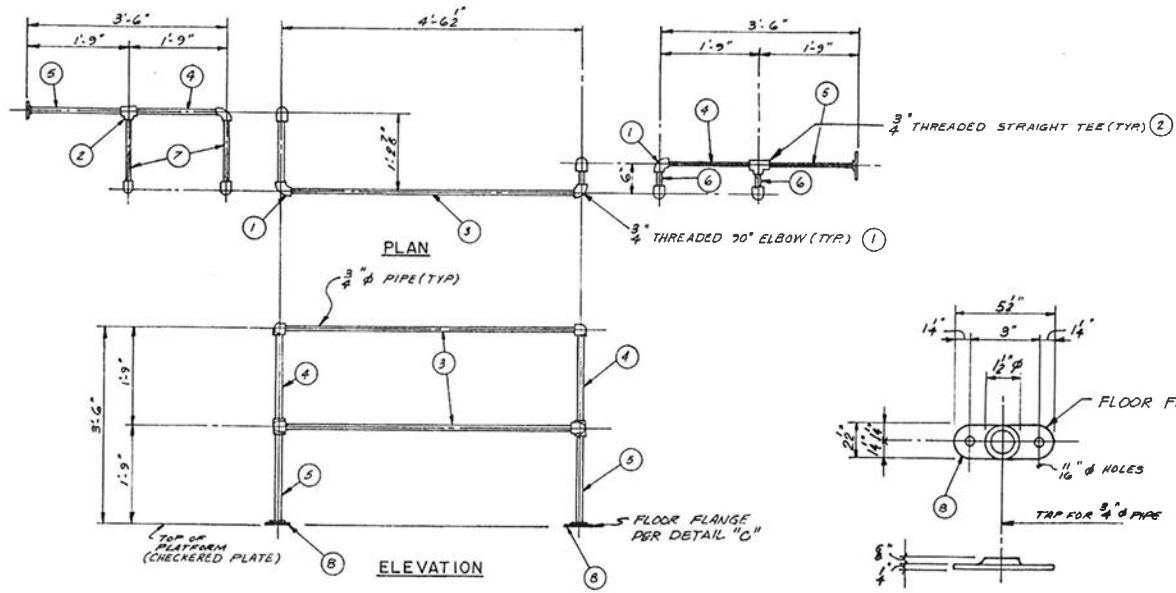




EXISTING PLANS

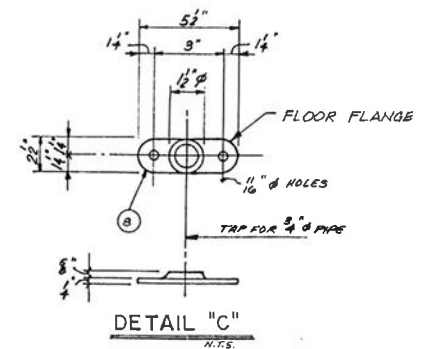


**ELEVATION LOOKING SOUTH AT TRUNNION BEARING ACCESS PLATFORM.**  
(NORTH TRUNNION LOCATED NEXT TO CONTROL HOUSE) N.T.S.

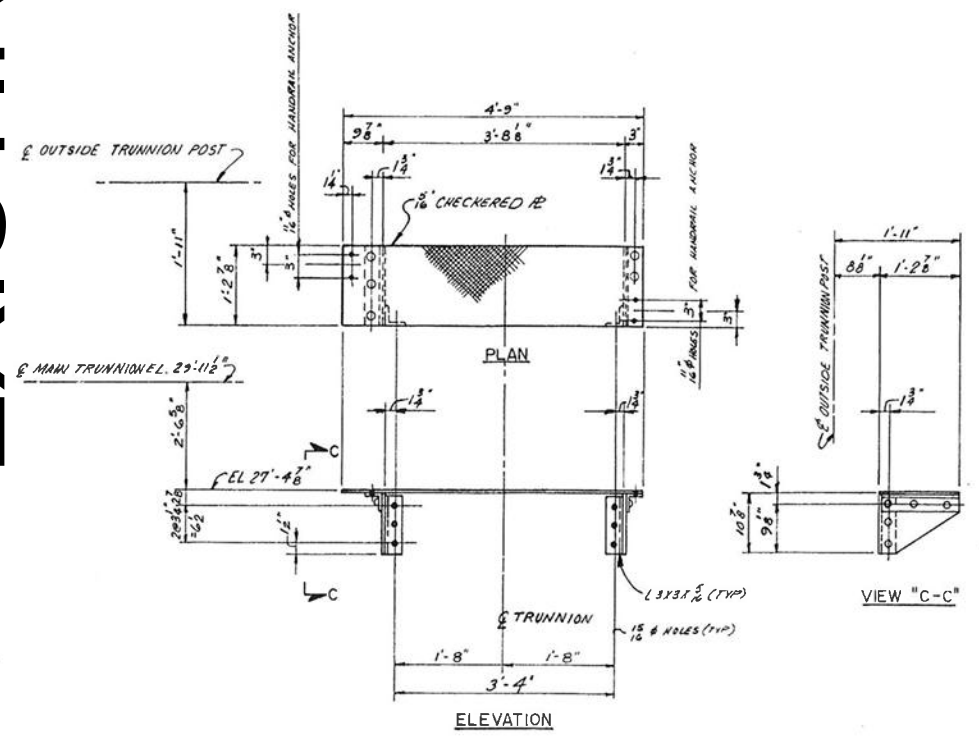


**DETAIL B - NEW 3/4" Ø PIPE HANDRAIL FOR PLATFORM**  
N.T.S.

**MATERIALS**  
PIPE: SHALL BE 3/4" Ø SCHEDULE 80 CARBON STEEL HOT-DIPPED GALV.  
FITTINGS: SHALL BE 150# THREADED MALLEABLE IRON, HOT-DIPPED GALVANIZED (ASTM - A123)



**NOTE:**  
IF EXISTING FLOOR FLANGES ARE SALVAGEABLE THE CONTRACTOR SHALL REMOVE, SANDBLAST, GALVANIZE AND INSTALL.



**DETAIL A - EXISTING BEARING ACCESS PLATFORM**  
FOR REFERENCE ONLY N.T.S.

BILL OF MATERIAL			
MARK	NO. REQ'D.	DESCRIPTION	MATERIAL
(1)	6	3/4" 150# THREADED 90° ELBOW	IRON
(2)	2	3/4" 150# THREADED STR. TEE	IRON
(3)	2	3/4" SCH. 80 PIPE x 4'-6" ±	A53B or EQUAL
(4)	2	x 1'-9" ±	
(5)	2	x 1'-9" ±	
(6)	2	x 0'-6" ±	
(7)	2	x 1'-3" ±	
(8)	2	3/4" PIPE FLOOR FLANGE	IRON

MISCELLANEOUS DETAILS  
BRIDGE NO. 105503

KISINGER CAMPO & ASSOCIATES CORP.  
CONSULTING ENGINEERS AND LAND SURVEYORS  
TAMPA, FLORIDA

LAUREL STREET BRIDGE  
OVER HILLSBOROUGH RIVER

DESIGNED BY C.M.  
DRAWN BY C.M.  
CHECKED BY WGH

DATE MARCH 14, 1986  
SCALE AS NOTED  
FILE NO. 01-B4040

DATE	BY	REVISION

Florida Registered Engineer No. \_\_\_\_\_

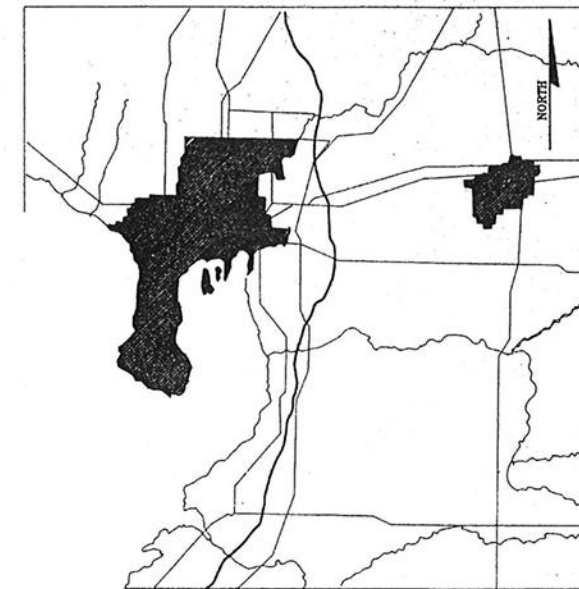
SHEET  
S-3  
OF

PROJECT NO.	FISCAL YEAR	SHEET NO.
-	1992	A-1



CITY OF TAMPA  
 DEPARTMENT OF PUBLIC WORKS  
 PUBLIC IMPROVEMENTS

PLANS OF PROPOSED  
 LAUREL STREET BRIDGE  
 REHABILITATION  
 (REVISED)



THIS CONTRACT PLAN SET INCLUDES:

- STRUCTURAL
- ELECTRICAL
- MECHANICAL

(BRIDGE NO. 105503)

MAYOR SANDRA FREEDMAN

TAMPA CITY COUNCIL MEMBERS

- JOE GRECO
- RONNIE MASON
- LINDA SAUL - SENA
- RUDY FERNANDEZ
- PERRY HARVEY
- EDDIE CABALLERO
- SCOTT PAINE

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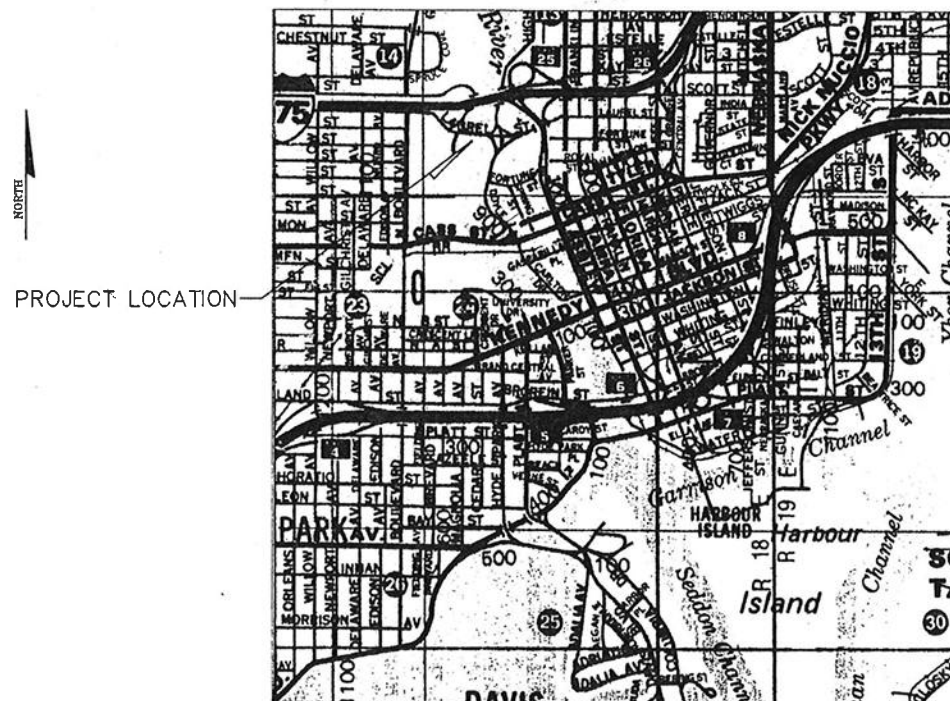
- S-1 PLAN AND ELEVATION AND INDEX OF SHEETS
- S-2 GENERAL NOTES AND SUMMARY OF ESTIMATED QUANTITIES
- S-3 REPAIR NOTES
- S-4 TOP OF DECK - SPANS 1 THRU 4
- S-5 TOP OF DECK - SPANS 6 THRU 11
- S-6 BOTTOM OF DECK - SPANS 1 THRU 4 AND 6 THRU 11
- S-7 TOP AND BOTTOM OF DECK - SPAN 5
- S-8 STEEL RAILING
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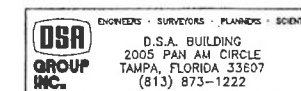
PROJECT LOCATION

LOCATION MAP

ACCEPTED FOR  
 THE CITY OF TAMPA BY:

*Jack P. Morriss*  
 JACK P. MORRISS,  
 Director, Dept. of Public Works

PREPARED BY:



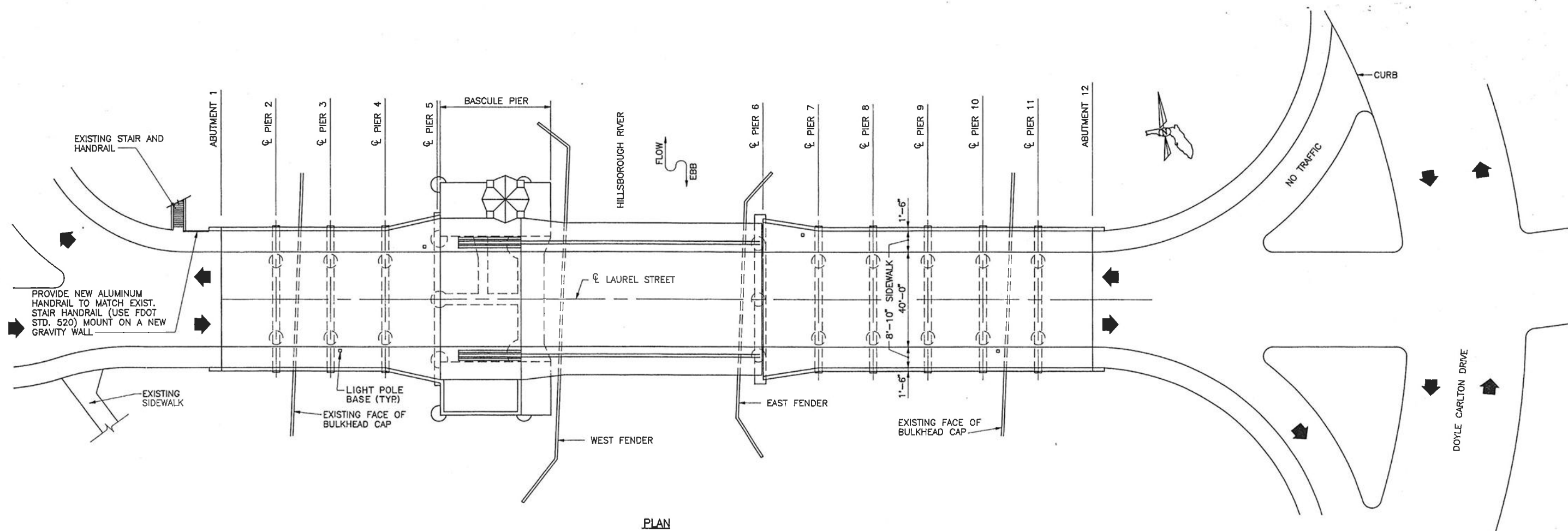
105503

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS  
 MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS  
 MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

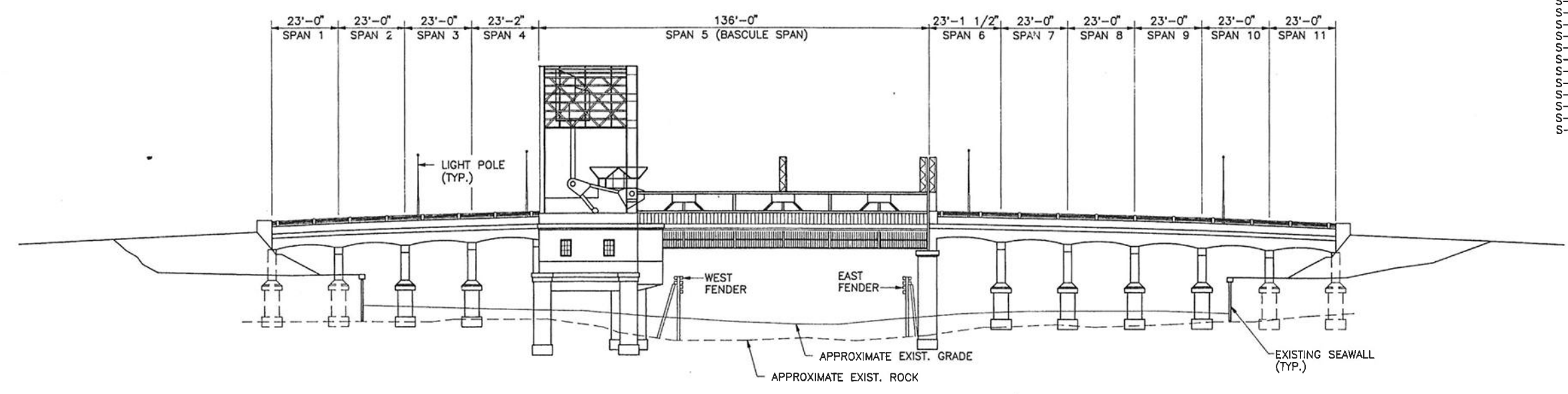
EXISTING PLANS



EXISTING PLANS



PLAN



ELEVATION

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NO.	DATE	DESCRIPTION	BY	CHK'D
<b>LAUREL STREET BRIDGE REHABILITATION</b>				
TAMPA, FLORIDA				
PLAN & ELEVATION AND INDEX OF SHEETS				
D.S.A. BUILDING 2008 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222				
		ENGINEERS • SURVEYORS • PLANNERS • SCIENTIST		
DESIGNED BY	KTL	DRAWING NO.		
DRAWN BY	KTL	<b>S-1</b>		
CHECKED BY	JSR			
APPROVED BY	SCR			
BY:	DSA CM. NO.	91008-F3		
FLA. P.E. REG. NO.	DATE	6/29/92	OF 13 SHEETS	

EXISTING PLANS

**GENERAL NOTES**

**CONSTRUCTION SPECIFICATIONS:**

1. FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION (1991).
2. CITY OF TAMPA TECHNICAL SPECIFICATIONS FOR THIS PROJECT.
3. STEEL STRUCTURES PAINTING COUNCIL.

**GENERAL SCOPE OF WORK:**

THE WORK TO BE PERFORMED UNDER THIS CONTRACT INCLUDES THE FOLLOWING ITEMS, AS DESCRIBED IN THE PLANS AND SPECIFICATIONS:

1. REPAIR ALL CRACKS (CW-3 AND ABOVE) AND ALL SPALLS IN SUBSTRUCTURE AND SUPERSTRUCTURE ELEMENTS.
2. CLEAN AND PAINT STRUCTURAL, MECHANICAL AND MISCELLANEOUS STEEL MEMBERS.
3. REPLACE DETERIORATED RIVETS AND BOLTS.
4. REPLACE EXISTING BUFFER CYLINDER WITH TWO NEW BUFFER CYLINDERS.
5. REPAIR VARIOUS MACHINERY ELEMENTS.
6. REMOVE AND RECONSTRUCT ELECTRICAL SYSTEM.
7. REPAIR OF MISCELLANEOUS ELEMENTS.

**CRACK WIDTH CLASSES:**

CLASS	WIDTH (INCHES)
CW-1	0 - 1/64
CW-2	1/64 - 1/32
CW-3	1/32 - 1/16
CW-4	1/16 - 1/8
CW-5	1/8 OR GREATER

**SCALE DEPTH CLASSES:**

CLASS	SCALE WIDTH (INCHES)
1	0 - 1/4
2	1/4 - 1/2
3	1/2 - 1
4	1 OR GREATER

**SPALL DEPTH AND WIDTH CLASSES**

CLASS	DEPTH (INCHES)	WIDTH (INCHES)
1	0 - 1	0 - 6
2	> 1	> 6

**MAINTENANCE OF TRAFFIC:**

THE CONTRACTOR SHALL SUBMIT TO THE CITY OF TAMPA TRANSPORTATION DEPARTMENT A DETAILED MAINTENANCE OF TRAFFIC PLAN & PROCEDURES AND WORK SCHEDULE. MAINTENANCE OF TRAFFIC PROCEDURES SHALL CONFORM TO THE "MANUAL ON TRAFFIC CONTROL AND SAFE PRACTICES FOR STREET AND HIGHWAY CONSTRUCTION, MAINTENANCE AND UTILITY OPERATIONS" AND TO THE FOLLOWING:

1. DURING PAINTING OPERATIONS, PRECAUTION MUST BE TAKEN BY THE CONTRACTOR TO INSURE NO OVERSPRAYING OF PASSING PEDESTRIANS, MOTOR VEHICLES OR WATER CRAFT. THIS MAY BE ACCOMPLISHED BY USE OF PLYWOOD OR SCREENS.
2. WORK SHALL BE PERFORMED DURING DAYLIGHT HOURS ONLY.
3. STRUCTURE SHALL BE ABLE TO BE OPENED TO MARINE TRAFFIC AT ALL TIMES (UPON REQUEST).
4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER COORDINATION OF MARINE AND VEHICULAR TRAFFIC.
5. A CITY OF TAMPA STREET CLOSURE PERMIT WILL BE REQUIRED FOR CLOSING OF BRIDGES. THE CONTRACTOR SHALL ADHERE TO THE PERMIT REQUIREMENTS.
6. SHORT CLOSURES OF STRUCTURE (FOR EXAMPLE, TO TEST NEW CONTROLS) SHALL BE DONE DURING THE WEEKEND.
7. THE CONTRACTOR SHALL FURNISH AND MAINTAIN ALL NECESSARY SIGNS, PAVEMENT MARKINGS, BARRICADES, LIGHTS AND FLAGMAN NECESSARY TO CONTROL TRAFFIC AND TO PROVIDE FOR SAFETY OF THE PUBLIC.

RECOMMENDED DETOUR ROUTE INFORMATION IS AVAILABLE THROUGH THE CITY OF TAMPA DEPARTMENT OF PUBLIC WORKS, TRAFFIC ENGINEERING, TELEPHONE (813) 223-8333.

**UTILITIES:**

THERE IS A SUBMARINE CABLE ACROSS THE CHANNEL. THE CONTRACTOR SHALL BE CAUTIOUS WITH UTILITIES WHEN WORKING IN THIS AREA.

**NAVIGABLE WATERWAY:**

ANY CONSTRUCTION METHOD THAT DECREASES HORIZONTAL OR VERTICAL CLEARANCE WITHIN A NAVIGABLE WATERWAY MUST BE APPROVED BY THE U.S. COAST GUARD OFFICE IN MIAMI. NO SUCH CONSTRUCTION ACTIVITIES MAY COMMENCE UNTIL SUCH APPROVAL IS RECEIVED. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO OBTAIN THIS APPROVAL.

**OSHA:**

ALL REGULATIONS OF THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION FOR HIGHWAY CONSTRUCTION PROJECTS SHALL BE COMPLIED WITH IN THIS CONTRACT.

**ACCESS:**

THE CONTRACTOR SHALL PROVIDE SAFE ACCESS TO ALL WORK AREAS FOR INSPECTION PERSONNEL AS APPROVED BY THE ENGINEER.

**AASHTO:**

ALL BUFFER CYLINDERS AND ACCESSORY WORK SHALL COMPLY WITH THE AMERICAN ASSOCIATION OF STANDARD HIGHWAY AND TRAFFIC OPERATION (AASHTO) REQUIREMENTS.

**EXISTING CONDITIONS:**

1. THE LOCATION AND EXTENT OF DEFICIENCIES SHOWN IN THESE PLANS ARE BASED ON A FIELD SURVEY. AT THE DIRECTION OF THE ENGINEER, THE CONTRACTOR SHALL PERFORM ADDITIONAL WORK AS REQUIRED DUE TO ACTUAL EXISTING CONDITIONS. PAYMENT FOR THIS WORK WILL BE MADE AT THE UNIT PRICES BID FOR THE INDIVIDUAL PAY ITEMS. SEE BID ITEM NOTES.
2. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS PRIOR TO STARTING THE WORK.
3. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID OPENING. CONTACT O.N. STOKES, JR. AT (813)-223-8988.

**TURBIDITY BARRIERS:**

FLOATING TURBIDITY BARRIERS (APPROXIMATELY 1,800 L.F.) SHALL BE USED DURING PERFORMANCE OF WORK THAT MAY AFFECT WATER QUALITY. FOR TURBIDITY BARRIER DETAILS, SEE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, INDEX NO. 103. PAYMENT SHALL BE MADE UNDER THE CONTRACT BID ITEM NO. 104-11, △ FLOATING TURBIDITY BARRIER.


**BID ITEM NOTES:**

1. PAYMENT FOR INCIDENTAL ITEMS NOT SPECIFICALLY COVERED IN THE INDIVIDUAL BID ITEMS SHALL BE INCLUDED IN THE CONTRACT UNIT PRICES FOR BID ITEMS CONTAINED IN THIS CONTRACT.
2. THE METHOD OF PAYMENT FOR REPAIR WORK SUCH AS CRACKS AND SPALLING SHALL BE MADE BASED ON THE ACTUAL LENGTH OR QUANTITY REQUIRED FOR THE REPAIR AS FIELD MEASURED AND APPROVED BY THE ENGINEER. PAYMENT SHALL BE UNDER THE UNIT PRICES FOR THE TYPE OF WORK REQUIRED.
- △ 3. THE PAINTING OF THE NEW STRUCTURAL STEEL (APPROXIMATELY 2.0 TONS), INSTALLATION OF THE RUBBER BUMPER (APPROXIMATELY 120 L.F.) AND CLEANING AND PAINTING EXISTING STEEL WITH REFLECTIVE YELLOW PAINT (APPROXIMATELY 120 L.F.) SHALL BE INCIDENTAL TO BID ITEM NO. 460-2-1, STRUCTURAL STEEL (CARBON).
4. THE COST OF PERFORMING THE FOLLOWING WORK SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 750-71, ELECTRICAL WORK:
  - A. REMOVAL OF THE EXISTING ELECTRICAL SYSTEM.
  - B. INSTALLATION AND TESTING OF THE NEW ELECTRICAL SYSTEM AS DESCRIBED IN THE PLANS AND SPECIFICATIONS, INCLUDING WIRING, PANELS, JUNCTION BOXES, SWITCHES, LIGHTING, OPERATOR'S CONTROL DESK, AND EMERGENCY GENERATOR.
  - C. REFURBISHING OR REPLACING THE EXISTING ELECTRICAL MOTORS, GATE OPERATORS AND BRAKES.
  - △ D. ALL H.V.A.C. WORK INCLUDING ROOF AND AIR HANDLING UNIT.
5. THE WEIGHT OF NEW REPLACEMENT MATERIAL FOR THE FOLLOWING ITEMS HAVE BEEN INCLUDED IN THE ESTIMATED QUANTITIES FOR ITEM NO. 460-2-1, STRUCTURAL STEEL (CARBON) AND WILL BE PAID AT THE UNIT PRICE BID FOR THIS ITEM:
  - A. STEEL RAILING
  - B. BOLTS AND NUTS
  - C. REINFORCEMENT OF STEEL MEMBERS
  - D. MISCELLANEOUS STRUCTURAL STEEL
6. CLASS 3, 4 AND 5 CRACKS SHALL BE REPAIRED USING THE METHODS SPECIFIED FOR REPAIR. CLASS 1 AND CLASS 2 CRACKS HAVE NOT BEEN INCLUDED FOR REPAIR IN THE TABLES OF DEFICIENCIES OR THE SUMMARY OF ESTIMATED QUANTITIES.
7. THE COST OF REPAIRING MACHINERY DEFICIENCIES AND REACTIVATING THE MANUAL CONTROLS AND THE COST OF THE PORTABLE MANUAL DRIVE UNIT AS DESCRIBED ON SHEET E-9 SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 8460-3-803, MACHINERY AND CASTINGS (ADJUSTMENTS AND REPAIRS) (MOVABLE BRIDGE).
8. PAYMENT FOR ALL THE WORK AND MATERIALS NECESSARY FOR THE APPLICATION OF THE UNDERWATER COMPOUND (APPROXIMATELY 3.0 S.F.) SHALL BE INCLUDED IN THE PRICE BID FOR ITEM NO. 8401-70-1, RESTORE SPALLED AREAS.

**OTHER NOTES:**

1. CONTRACTOR IS RESPONSIBLE FOR UTILITIES COORDINATION ON THIS PROJECT.
2. ALL CONTRACTOR SITE VISITS TO EXAMINE EXISTING CONDITIONS PRIOR TO BID SHALL BE COORDINATED WITH O.N. STOKES JR. AT TEL. NO. (813) 223-8988
- △ 3. ALL WORK INVOLVING SANDING/REMOVAL OF LEAD BASED PAINT AND DISPOSAL OF ELEMENTS COATED WITH LEAD BASED PAINT SHALL COMPLY WITH ALL APPLICABLE LOCAL, STATE AND FEDERAL LAWS AND REGULATIONS.
- △ 4. CARE SHALL BE TAKEN SO THAT NO SOLVENTS, CLEANERS, PAINTS OR ANY OTHER SUCH MATERIALS ARE ALLOWED TO ENTER INTO THE WATERS OF THE COUNTY. STATE WATER QUALITY CONTROL STANDARDS ARE TO BE MAINTAINED AT ALL TIMES.
- △ 5. NOISE SHALL BE LIMITED DURING CONSTRUCTION IN ACCORDANCE WITH CHAPTER 1-10, EPC NOISE RULE.
- △ 6. ANY CONCRETE CONSTRUCTION MATERIALS RESULTING FROM DEMOLITION SHALL NOT BE DEPOSITED IN HILLSBOROUGH BAY WITHOUT UNDERGOING THE PROPER PERMITTING PROCEDURES.

SUMMARY OF ESTIMATED QUANTITIES			
ITEM NUMBER	ITEM	UNIT	QUANTITY
101-1	MOBILIZATION	L.S.	1
102-1	MAINTENANCE OF TRAFFIC	L.S.	1
104-11	FLOATING TURBIDITY BARRIER	L.F.	1800
△ 460-2-1	STRUCTURAL STEEL (CARBON)	TONS	2.0
750-71	ELECTRICAL WORK	L.S.	1
△ 751-1	ASBESTOS ABATEMENT	L.S.	1
8350-78	HOT APPLIED SEALANT	L.F.	660
△ 8400-134	EPOXY MATERIAL	GA.	83
8400-135	INJECT AND SEAL CRACKS (EPOXY)	L.F.	1,250
8401-70-1	RESTORE SPALLED AREAS (POLYMER MODIFIED MORTAR)	C.F.	160
8460-3-803	MACHINERY AND CASTINGS (ADJUSTMENTS AND REPAIRS)	L.S.	1
8500-70	ALUMINUM BRIDGE HANDRAIL	L.F.	10
△ SP-1.71	PROJECT VIDEO TAPING	L.S.	1

9/2/92		ADDED, DELETED OR REVISED ITEM	TC
No.	DATE	DESCRIPTION	BY CHK'D
<b>LAUREL STREET BRIDGE REHABILITATION</b> TAMPA, FLORIDA			
GENERAL NOTES AND SUMMARY OF ESTIMATED QUANTITIES			
 D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222 ENGINEERS - SURVEYORS - PLANNERS - SCIENTIST		DESIGNED BY	LTD
		DRAWN BY	AEV
BY:		CHECKED BY	JSR
		APPROVED BY	SCR
FLA. P.E. REG. NO.		DATE	6/29/92
		DRAWING NO.	S-2
		DSA CH. NO.	91008-F3
		DATE	6/29/92
		OF 13 SHEETS	



EXISTING PLANS

**EPOXY INJECTION**

PRESSURE INJECTION SHALL INCLUDE ALL MATERIALS, TOOLS, EQUIPMENT, APPLIANCES, TRANSPORTATION, LABOR AND SUPERVISION REQUIRED FOR THE FINISHING AND PLACING OF A SUITABLE EPOXY (CONCRETE 1380, AS MANUFACTURED BY MASTER BUILDERS, INC. OR APPROVED EQUAL) TO SEAL THE CRACKS. CONFORM TO ALL THE MANUFACTURER'S SPECIFICATIONS.

THE EPOXY INJECTION EQUIPMENT SHALL BE A POSITIVE DISPLACEMENT PUMP SYSTEM. THE SYSTEM SHALL HAVE A SUITABLE MIXING CHAMBER WHERE THE EPOXY COMPONENTS ARE ACCURATELY METERED AND THOROUGHLY MIXED IMMEDIATELY PRIOR TO INJECTION. A CLEAR, LEGIBLE, AND ACCURATE PRESSURE GAUGE SHALL BE LOCATED IN THE SUPPLY LINE ADJACENT TO THE MIXING CHAMBER.

THE EQUIPMENT SHALL ALSO BE CAPABLE OF PROVIDING A CONTINUOUS AND UNINTERRUPTED PRESSURE HEAD TO CONTINUALLY FORCE THE INJECTION EPOXY INTO THE CRACKS. EPOXY FLOW SHALL BE CAPABLE OF BEING FULLY OPERATED BY CONTROLS AT THE MIXING CHAMBER.

ALL WORKING PERSONNEL SHALL BE FAMILIAR WITH THE EQUIPMENT, MATERIALS, PROCEDURES TO BE USED DURING THE OPERATION AND HAVE SATISFACTORILY COMPLETED A PROGRAM OF INSTRUCTION IN THE METHODS OF RESTORING CONCRETE STRUCTURES UTILIZING THE EPOXY INJECTION PROCESS. THE EPOXY MATERIAL SHALL BE APPLIED BY A CONTRACTOR APPROVED BY THE EPOXY MANUFACTURER. EXTRA (BACKUP) EQUIPMENT TO ASSURE THE CONTINUOUS INJECTION OF EPOXY, IN THE EVENT OF PRIMARY EQUIPMENT FAILURE, SHALL BE REQUIRED.

ALL MATERIALS AND EQUIPMENT, INCLUDING BACKUP EQUIPMENT, SHALL BE AT THE WORK SITE BEFORE INJECTION IS BEGUN. ALL EQUIPMENT SHALL BE IN PROPER CALIBRATION AND IN GOOD WORKING ORDER. PRESSURE POT SYSTEMS AND HAND HELD CAULKING GUNS, OR GREASE GUNS SHALL NOT BE ALLOWED.

ONLY CONTRACTORS PRE-QUALIFIED BY THE MANUFACTURER SHALL BE PERMITTED TO MAKE THE CORRECT REPAIRS.

THE FOLLOWING STEPS SHALL BE FOLLOWED:

**A. PREPARATION**

1. SURFACES ADJACENT TO CRACKS OR OTHER AREAS OF APPLICATION SHALL BE CLEANED OF DIRT, DUST, GREASE, OIL, EFFLORESCENCE OR OTHER FOREIGN MATTER DETRIMENTAL TO BOND OF EPOXY INJECTION SURFACE SEAL.
2. ENTRY PORTS SHALL BE PROVIDED ALONG THE CRACK AT INTERVALS OF NOT LESS THAN THE THICKNESS OF THE CONCRETE AT THAT LOCATION.
3. SURFACE SEAL MATERIAL SHALL BE APPLIED TO THE FACE OF THE CRACK BETWEEN THE ENTRY PORTS. FOR THROUGH CRACKS, SURFACE SEAL SHALL BE APPLIED TO BOTH FACES.
4. ENOUGH TIME FOR THE SURFACE SEAL MATERIAL TO GAIN ADEQUATE STRENGTH SHALL PASS BEFORE PROCEEDING WITH THE INJECTION.

**B. EPOXY INJECTION**

1. INJECTION OF EPOXY ADHESIVE SHALL BEGIN AT LOWEST ENTRY PORT AND CONTINUE UNTIL THERE IS AN APPEARANCE OF EPOXY ADHESIVE AT THE NEXT PORT ADJACENT TO THE ENTRY PORT BEING PUMPED.
2. WHEN EPOXY ADHESIVE TRAVEL IS INDICATED BY APPEARANCE AT THE NEXT ADJACENT PORT, INJECTION SHALL BE DISCONTINUED ON THE ENTRY PORT BEING PUMPED, AND EPOXY INJECTION SHALL BE TRANSFERRED TO NEXT ADJACENT PORT WHERE EPOXY ADHESIVE HAS APPEARED.
3. EPOXY ADHESIVE INJECTION SHALL BE PERFORMED CONTINUOUSLY UNTIL CRACKS ARE COMPLETELY FILLED.
4. IF PORT TO PORT TRAVEL OF EPOXY ADHESIVE IS NOT INDICATED, THE WORK SHALL BE IMMEDIATELY STOPPED AND THE ENGINEER NOTIFIED.

**C. FINISHING**

1. WHEN CRACKS ARE COMPLETELY FILLED, EPOXY ADHESIVE SHALL BE CURED FOR SUFFICIENT TIME TO ALLOW REMOVAL OF SURFACE SEAL WITHOUT ANY DRAINING OR RUN BACK OF EPOXY MATERIAL FROM THE CRACKS.
2. SURFACE SEAL MATERIAL AND INJECTION ADHESIVE RUNS OR SPILLS SHALL BE REMOVED FROM CONCRETE SURFACES.
3. THE FACE OF THE CRACK SHALL BE FINISHED FLUSH WITH THE ADJACENT CONCRETE SHOWING NO INDENTATIONS OR PROTRUSIONS CAUSED BY THE PLACEMENT OF ENTRY PORTS.
4. AFTER THE WORK HAS BEEN ACCEPTED BY THE ENGINEER, CORED HOLES SHALL BE REPAIRED USING A TWO COMPONENT BONDING AGENT. THE BONDING AGENT SHALL BE APPLIED TO THE SURFACES OF CORED HOLE FOLLOWED BY APPLICATION OF GROUT MIX PLACED BY HAND TROWEL, THOROUGHLY RODDED AND TAMPED IN PLACE, AND FINISHED TO MATCH COLOR, FINISH AND TEXTURE OF EXISTING CONCRETE TO THE SATISFACTION OF THE ENGINEER. MATERIAL AND PROCEDURE FOR FILLING TESTING CORE HOLES SHALL BE SUBMITTED TO AND APPROVED BY THE ENGINEER BEFORE PROCEEDING WITH THIS WORK.

**RUBBER BUMPER**

A 3/4" THICK FLEXIBLE ELASTOMERIC ARMAFLEX AS MANUFACTURED BY ARMSTRONG, RUBATEX OR APPROVED EQUAL TO ACT AS A GUARD (OR BUMPER) AROUND CORNERS AND EDGES EXTENDING 5" MINIMUM BEYOND CORNER (IN ALL DIRECTIONS) OR EDGE (IN BOTH DIRECTIONS). APPLY WITH ARMSTRONG 520 ADHESIVE OR RECOMMENDED MANUFACTURER ADHESIVE.

**POLYMER MODIFIED MORTAR**

**SPALL WITHOUT EXPOSED REINFORCING STEEL:** REPAIRING SPALLED CONCRETE SHALL INCLUDE ALL WORK REQUIRED TO REPAIR DETERIORATED CONCRETE SURFACES WHERE INDICATED OR AS DIRECTED BY THE ENGINEER, AND CONFORM TO MANUFACTURER'S SPECIFICATIONS. THIS WORK CONSISTS OF THE REMOVAL AND DISPOSAL OF LOOSE AND DISINTEGRATED CONCRETE, SAW-CUTTING, THE PREPARATION OF THE SURFACE, THE APPLICATION OF AN EPOXY BONDING COMPOUND AND PLACING OF POLYMER MODIFIED MORTAR. THE FOLLOWING STEPS SHALL BE USED:

- A. REMOVE UNSOUND CONCRETE FROM SPALLED AREA. POWER CHIPPING TOOLS MAY BE USED BUT NOT TO EXCEED 30 POUNDS.
- B. CLEAN CONCRETE SURFACES OF ALL LOOSE CONCRETE, DUST, AND ANY OTHER FOREIGN MATERIAL. BE SURE REPAIR AREA IS NOT LESS THAN 1/2 IN. IN DEPTH. PREPARE AREA TO OBTAIN AN AGGREGATE FRACTURED SURFACE WITH A MINIMUM SURFACE PROFILE OF ± 1/16 IN.
- C. USE A POLYMER MODIFIED MORTAR (MASTERPATCH 230 VP AS MANUFACTURED BY MASTER BUILDERS, INC. OR APPROVED EQUAL) WHILE STILL TACKY. THE MATERIAL SHALL COMPLETELY FILL THE AREA. THOROUGHLY COMPACT THE COMPOUND ELIMINATING ALL AIR POCKETS. ALLOW THE MATERIAL TO STIFFEN ENOUGH BETWEEN LIFTS TO SUPPORT ITS OWN WEIGHT.
- D. AFTER THE NEW CONCRETE IS IN PLACE, THE SURFACE SHALL BE FINISHED TO MATCH THE ADJACENT EXISTING AREAS.

**SPALL WITH EXPOSED REINFORCING STEEL:** REPAIRING SPALLED CONCRETE SHALL INCLUDE ALL WORK REQUIRED TO REPAIR DETERIORATED CONCRETE SURFACES WHERE INDICATED OR AS DIRECTED BY THE ENGINEER AND CONFORM TO MANUFACTURER'S SPECIFICATIONS.

THIS WORK CONSISTS OF THE REMOVAL AND DISPOSAL OF ALL LOOSE AND DISINTEGRATED CONCRETE, SAW-CUTTING, THE PREPARATION OF THE SURFACE, CLEANING OR REPLACEMENT OF EXISTING REINFORCEMENT STEEL, FIELD EPOXY COATING EXPOSED EXISTING REINFORCEMENT, AND PLACING OF POLYMER MODIFIED MORTAR.

- A. REMOVE UNSOUND CONCRETE FROM SPALLED AREA. PNEUMATIC TOOLS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE REINFORCING STEEL. EXTREME CARE SHALL BE TAKEN AS NOT TO DAMAGE THE STEEL OR ITS BOND IN THE SURROUNDING SOUND CONCRETE.
- B. REINFORCEMENT STEEL OR OTHER EMBEDDED ITEMS DAMAGED DURING CONCRETE REMOVAL SHALL BE REPAIRED AND/OR REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE, AS DIRECTED BY THE ENGINEER. THE REMOVAL SHALL CONTINUE UNTIL AT LEAST 3/4 OF THE BAR'S CIRCUMFERENCE IS EXPOSED. IF UNSOUND CONCRETE IS ENCOUNTERED AT OR BELOW THE MID-DEPTH OF REINFORCEMENT BARS, REMOVAL SHALL EXTEND TO AT LEAST 3/4 INCHES BEYOND BARS.
- C. CLEAN CONCRETE SURFACE AND EXPOSED REINFORCING STEEL OF ALL LOOSE CONCRETE, DUST AND ANY FOREIGN MATERIAL. RUST SCALE SHALL BE REMOVED BY HYDRO-BLASTING AND THEN EPOXY COAT THE AREAS WHERE RUST SCALES WERE FOUND.
- D. THE REMAINING STEPS ARE SIMILAR TO THOSE USED FOR REPAIRING SPALLS WITHOUT EXPOSED REINFORCING STEEL. THE MATERIAL USED TO REPAIR CONCRETE SPALLS SHALL BE A POLYMER MODIFIED MORTAR (MASTERPATCH 230 VP AS MANUFACTURED BY MASTER BUILDERS, INC. OR APPROVED EQUAL).

WHEN REMOVING SPALLS AND UNSOUND CONCRETE, EDGES SHALL REMAIN VERTICAL (HORIZONTAL) WITH A MINIMUM DEPTH (WIDTH) OF 1/4" SUCH THAT THE NEW CEMENT IS NOT FEATHERED TO MATCH THE EXISTING CONCRETE SURFACE.

**UNDERWATER COMPOUND**

THIS WORK CONSISTS OF REMOVAL AND DISPOSAL OF LOOSE AND DISINTEGRATED CONCRETE, SURFACE PREPARATION AND APPLICATION OF A HEAVY BODY MASTIC (HYDROCOTE 1063 SZ AS MANUFACTURED BY MASTER BUILDERS, INC. OR APPROVED EQUAL) AT THE APPROXIMATE LOCATIONS SPECIFIED, AND CONFORM TO MANUFACTURER'S SPECIFICATIONS. PAYMENT FOR ALL WORK INCLUDED FOR THIS REPAIR SHALL BE INCLUDED IN ITEM NO. B401-70-1, RESTORE SPALLED AREAS.

THE FOLLOWING STEPS SHALL BE USED:

- A. REMOVE UNSOUND CONCRETE FROM SPALLED AREA. CLEAN CONCRETE SURFACES OF ALL LOOSE CONCRETE, DUST, MARINE GROWTH, AND ANY OTHER FOREIGN MATERIAL DETRIMENTAL TO BOND OF UNDERWATER MASTIC BY SANDBLASTING, WATERBLASTING AND CHIPPING.
- B. APPLY A THICK BASE OF THE MIXED MATERIAL TO THE SUBSTRATE STARTING 1 FOOT ABOVE THE MAXIMUM HIGH TIDE LEVEL AND SMEAR UNIFORMLY OVER THE AREA TO BE COATED WITH GLOVED HANDS GRADUALLY WORKING DOWNWARDS INTO THE WATER. A FILM THICKNESS OF 1/8" TO 1/4" SHOULD BE USED AND THE EDGES FEATHERED. HOLD THE PASTE IN CONTACT WITH THE WET SURFACE FOR ABOUT 10 - 15 SECONDS TO OBTAIN OPTIMUM ADHESION.

**NOTE:**

ALL REPAIRS SHALL FOLLOW A THOROUGH CLEANING AND PREPARATION PROCESS TO BE SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.

**△CLEAN AND REPAINT STRUCTURAL STEEL**


THE PARAGRAPH DESIGNATIONS (a), (b), (c) AND (d) OF ARTICLE 560-13 OF THE FDOT STANDARD SPECIFICATIONS ARE DELETED AND PAINTING REQUIREMENTS FOR THE BRIDGE STRUCTURE ARE:

- A. POLLUTION CONTROL. DURING SURFACE CLEANING OPERATIONS ANY GENERATED DEBRIS SHALL BE CONFINED TO THE IMMEDIATE AREA OF THE BRIDGE STRUCTURE. DURING PAINTING OPERATIONS TARPULINS SHALL BE ERECTED IN ORDER TO PREVENT ANY WET PAINT FROM DAMAGING PROPERTY OR FALLING INTO WATERWAY.
- B. CLEAN SURFACES SHALL THEN BE PAINTED (BRUSH OR SPRAY) WITH TWO (2) COATS (5.0 TO 9.0 DRY MILS PER COAT) OF ALUMINUM EPOXY PRIMER.
- C. SURFACES NOT PRIMED ON THE SAME DAY THE CLEANING IS ACCOMPLISHED SHALL BE CLEANED AGAIN PER THE SPECIFICATION REQUIREMENTS PRIOR TO PAINTING.
- D. THE FIRST PRIMER COAT SHALL "CURE" A MINIMUM OF 48 HOURS PRIOR TO APPLYING THE SECOND COAT. THE SECOND PRIMER COAT SHOULD BE APPLIED IN A TIME PERIOD RANGING FROM 2 TO 10 DAYS FROM THE TIME THE FIRST COAT IS APPLIED.
- E. THE CLEANED, SOUND SURFACES SHALL BE PAINTED (BRUSH, ROLLER OR SPRAY) WITH ONE FINISHED COAT (1.5 MILS MINIMUM) OF FDOT STANDARD SPECIFICATIONS CODE B-A (SECTION 971-7) ALUMINUM FINISH PAINT.
- F. NO PAINT SHALL BE APPLIED (TO ANY SURFACE) UNLESS THE SURFACE TO BE PAINTED IS A MINIMUM OF 5' F ABOVE THE DEW POINT. NO PAINT SHALL BE APPLIED WHEN THE AMBIENT AIR TEMPERATURE IS LESS THAN 50° F OR MORE THAN 95° F.
- G. APPROVED PRIMER COATINGS SHALL BE MAGNA-MASTIC 7900 AS MANUFACTURED BY PORTER COATINGS CO. OR APPROVED EQUAL.
- H. THE COLOR PIGMENT USED IN FINISHED COAT DESCRIBED IN FDOT STANDARD SPECIFICATIONS CODE B-A (SECTION 971-7) SHALL BE DETERMINED BY THE ENGINEER.

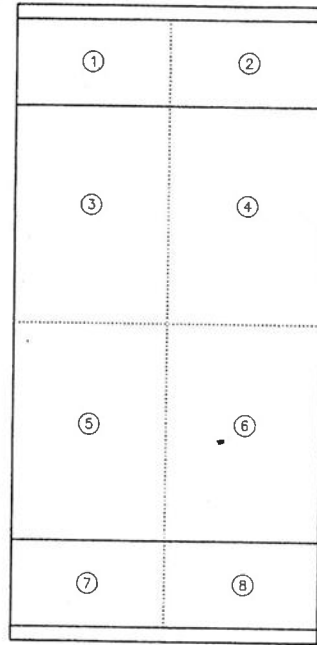
**HOT APPLIED SEALANT**

THIS WORK CONSISTS OF SEALING RANDOM CRACKS IN THE ASPHALTIC CONCRETE PAVEMENT USING HOT APPLIED, SINGLE COMPONENT SEALING COMPOUND (HI-SPEC POLYMERIC JOINT SEALING COMPOUND AS MANUFACTURED BY W.R. MEADOWS, INC., OR APPROVED EQUAL) CONFORM TO MANUFACTURER'S RECOMMENDATIONS.

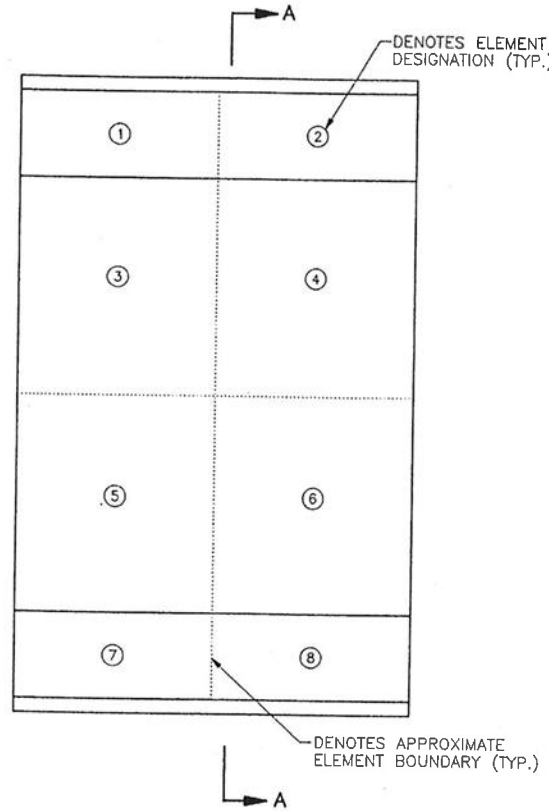
- A. ALL CRACKS SHALL BE CLEANED OF DIRT, DUST, GREASE, OIL OR OTHER FOREIGN MATERIAL DETRIMENTAL TO BOND OF HOT APPLIED SEALANT.
- B. FILL ALL CRACKS TO FULL DEPTH MAKING SURE THAT THE MATERIAL WILL NOT BULGE.
- C. USING A SEALING SHOE, FORM A 1" TO 2" WIDE WIPE ZONE ON EACH SIDE OF THE CRACK.

9/2/92		ADDED, DELETED OR REVISED ITEM		TC	
NO.	DATE	DESCRIPTION	BY	CHK'D	
<b>LAUREL STREET BRIDGE REHABILITATION</b>					
TAMPA, FLORIDA					
REPAIR NOTES					
 D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222 ENGINEERS • SURVEYORS • PLANNERS • SCIENTIST					
		DESIGNED BY	LTD	DRAWING NO.	
		DRAWN BY	AEV	<b>S-3</b>	
		CHECKED BY	JSR		
		APPROVED BY	SCR		
BY:		DSA CM. NO.	9100B-F3		
FLA. P.E. REG. NO.		DATE	6/29/92	OF 13 SHEETS	

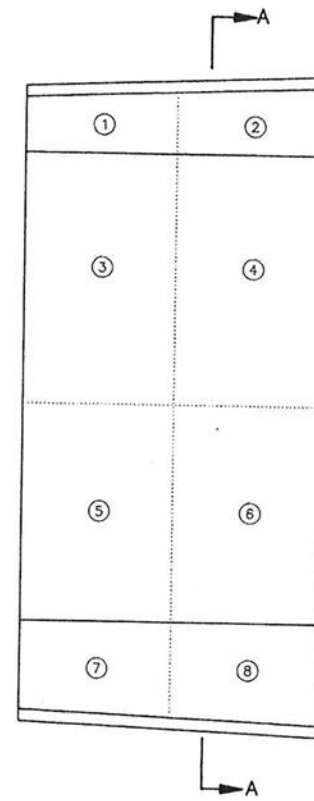
EXISTING PLANS



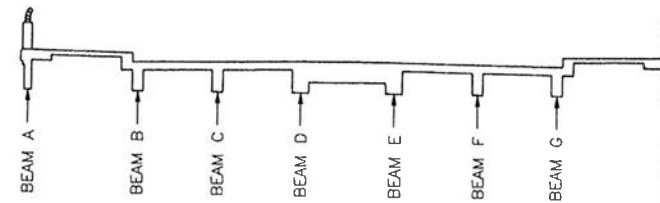
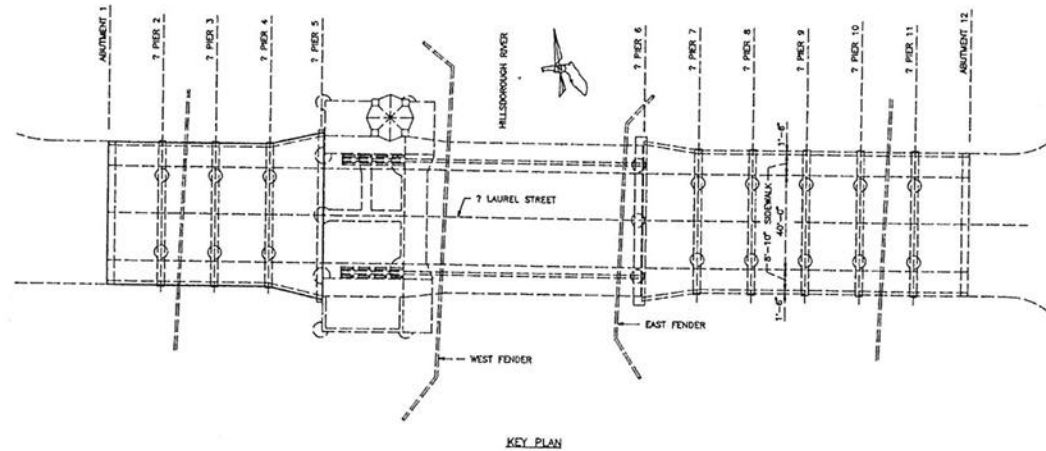
PLAN - APPROACH SLAB 1  
(WITH ELEMENT LOCATIONS INDICATED)



PLAN - TOP OF DECK SPANS 1 THRU 3  
(WITH ELEMENT LOCATIONS INDICATED)



PLAN - TOP OF DECK SPAN 4  
(WITH ELEMENT LOCATIONS INDICATED)



SECTION A-A

△ TABLE OF DEFICIENCIES					
SPAN	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
APP. 1	3	CW-5	TOP OF DECK	10.0 L.F.	HOT APPLIED SEALANT
APP. 1	4	CW-5	TOP OF DECK	10.0 L.F.	HOT APPLIED SEALANT
APP. 1	5	CW-5	TOP OF DECK	10.0 L.F.	HOT APPLIED SEALANT
APP. 1	6	CW-5	TOP OF DECK	10.0 L.F.	HOT APPLIED SEALANT
APP. 1	6	SPALL	TOP OF DECK	0.1 S.F.	HOT APPLIED SEALANT
APP. 1	4	SPALL	TOP OF DECK	0.1 S.F.	HOT APPLIED SEALANT
APP. 1	3	SPALL	TOP OF DECK	0.1 S.F.	HOT APPLIED SEALANT
1	1	CW-5	SIDEWALK	0.7 L.F.	EPOXY INJECTION
1	1	CW-3	SIDEWALK	8.0 L.F.	EPOXY INJECTION
1	1	CW-4	SIDEWALK	8.0 L.F.	EPOXY INJECTION
1	2	CW-3	SIDEWALK	18.0 L.F.	EPOXY INJECTION
1	3	CW-5	TOP OF DECK	9.0 L.F.	EPOXY INJECTION
1	4	CW-5	TOP OF DECK	12.5 L.F.	EPOXY INJECTION
1	5	CW-3	DECK JOINT	1.0 L.F.	EPOXY INJECTION
1	5	CW-4	TOP OF DECK	9.0 L.F.	EPOXY INJECTION
1	6	CW-5	TOP OF DECK	3.5 L.F.	EPOXY INJECTION
1	7	SPALL	EDGE OF SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
2	1	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
2	2	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
2	2	CW-3	SIDEWALK	3.0 L.F.	EPOXY INJECTION
2	3	CW-3	DECK JOINT	1.0 L.F.	HOT APPLIED SEALANT
2	3	CW-5	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
2	5	CW-5	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
2	6	CW-5	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
2	7	SPALL	EDGE OF SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
2	8	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
3	1	SPALL	SIDEWALK	0.2 S.F.	POLYMER MODIFIED MORTAR
3	1	CW-3	SIDEWALK	2.0 L.F.	EPOXY INJECTION
3	1	CW-4	SIDEWALK	2.0 L.F.	EPOXY INJECTION
3	4	CW-3	DECK JOINT	1.0 L.F.	HOT APPLIED SEALANT
3	4	CW-4	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
3	4	CW-5	TOP OF DECK	3.0 L.F.	HOT APPLIED SEALANT
3	5	CW-5	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
3	6	CW-5	TOP OF DECK	12.0 L.F.	HOT APPLIED SEALANT
3	7	CW-3	SIDEWALK	1.5 L.F.	EPOXY INJECTION
3	8	SPALL	SIDEWALK	0.2 S.F.	POLYMER MODIFIED MORTAR
3	8	CW-3	SIDEWALK	1.5 L.F.	EPOXY INJECTION
4	1	CW-3	SIDEWALK	18.0 L.F.	EPOXY INJECTION
4	2	SPALL	SIDEWALK	25.0 S.F.	POLYMER MODIFIED MORTAR
4	2	CW-3	SIDEWALK	25.0 L.F.	EPOXY INJECTION
4	3	CW-4	TOP OF DECK	19.5 L.F.	HOT APPLIED SEALANT
4	4	CW-4	TOP OF DECK	26.5 L.F.	HOT APPLIED SEALANT
4	5	CW-5	TOP OF DECK	18.0 L.F.	HOT APPLIED SEALANT
4	6	CW-5	TOP OF DECK	28.0 L.F.	HOT APPLIED SEALANT
4	7	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
4	7	CW-3	SIDEWALK	12.5 L.F.	EPOXY INJECTION
4	8	CW-3	SIDEWALK	12.5 L.F.	EPOXY INJECTION
4	8	SPALL	SIDEWALK	0.3 S.F.	POLYMER MODIFIED MORTAR
4	8	HOLE IN DECK	SIDEWALK	14 5/8 SQ. IN.	FABRICATE & INSTALL COVER
4	8	SPALL	SIDEWALK	9.0 S.F.	POLYMER MODIFIED MORTAR

NOTES:  
1. FOR DESCRIPTION OF METHOD OF REPAIR AND REPAIR NOTES, SEE SHEET S-3.

9/2/92	ADDED, DELETED OR REVISED ITEM	TC
NO.	DESCRIPTION	BY
LAUREL STREET BRIDGE REHABILITATION		
TAMPA, FLORIDA		
TOP OF DECK - SPANS 1 THRU 4		
D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222		
ENGINEERS • SURVEYORS • PLANNERS • SCIENTIST		
DESIGNED BY	KTL	DRAWING NO.
DRAWN BY	KTL	S-4
CHECKED BY	JSR	
APPROVED BY	SCR	
BY:	DSA CM. NO. 91008-F3	
FLA. P.E. REG. NO.	DATE 6/29/92	OF 13 SHEETS

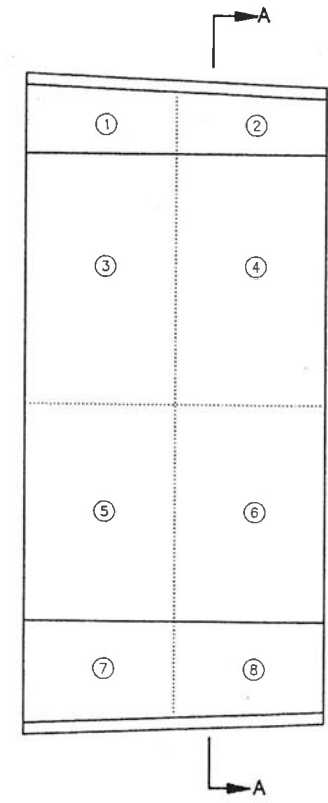


EXISTING PLANS

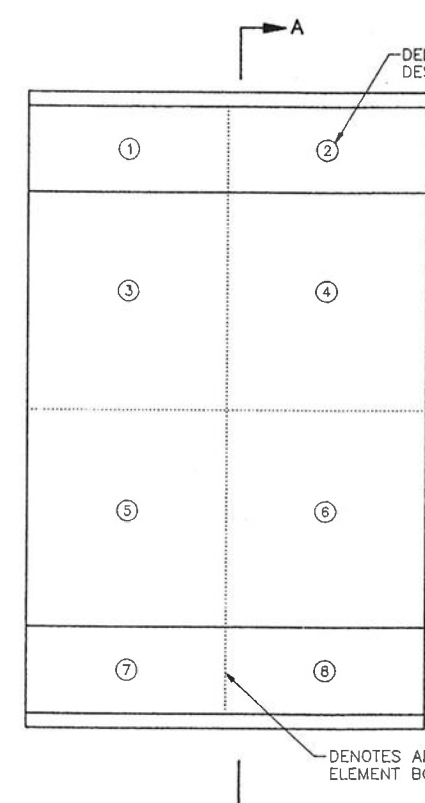
TABLE OF DEFICIENCIES					
SPAN	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
6	1	CW-3	SIDEWALK	3.0 L.F.	EPOXY INJECTION
6	2	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
6	2	CW-3	SIDEWALK	8.5 L.F.	EPOXY INJECTION
6	2	SPALL	SIDEWALK	10.0 S.F.	POLYMER MODIFIED MORTAR
6	3	CW-5	TOP OF DECK	13.5 L.F.	HOT APPLIED SEALANT
6	4	CW-4	TOP OF DECK	3.0 L.F.	HOT APPLIED SEALANT
6	4	CW-5	TOP OF DECK	10.5 L.F.	HOT APPLIED SEALANT
6	5	CW-4	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
6	5	CW-5	TOP OF DECK	10.5 L.F.	HOT APPLIED SEALANT
6	6	CW-4	TOP OF DECK	3.0 L.F.	HOT APPLIED SEALANT
6	6	CW-5	TOP OF DECK	10.5 L.F.	HOT APPLIED SEALANT
6	7	CW-3	SIDEWALK	6.0 L.F.	EPOXY INJECTION
6	7	SPALL	SIDEWALK	9.0 S.F.	POLYMER MODIFIED MORTAR
6	8	CW-3	SIDEWALK	2.0 L.F.	EPOXY INJECTION
6	8	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
7	3	CW-4	TOP OF DECK	14.5 L.F.	HOT APPLIED SEALANT
7	4	CW-4	TOP OF DECK	13.5 L.F.	HOT APPLIED SEALANT
7	5	CW-4	TOP OF DECK	15.0 L.F.	HOT APPLIED SEALANT
7	5	CW-5	TOP OF DECK	11.5 L.F.	HOT APPLIED SEALANT
7	6	CW-5	TOP OF DECK	11.5 L.F.	HOT APPLIED SEALANT
7	6	CW-4	TOP OF DECK	15.0 L.F.	HOT APPLIED SEALANT
7	7	CW-3	SIDEWALK	2.0 L.F.	EPOXY INJECTION
8	1	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
8	2	SPALL	SIDEWALK	3.0 S.F.	POLYMER MODIFIED MORTAR
8	3	CW-5	TOP OF DECK	17.5 L.F.	HOT APPLIED SEALANT
8	4	CW-5	TOP OF DECK	11.5 L.F.	HOT APPLIED SEALANT
8	5	CW-5	TOP OF DECK	17.5 L.F.	HOT APPLIED SEALANT
8	6	CW-5	TOP OF DECK	11.5 L.F.	HOT APPLIED SEALANT
8	7	SPALL	EDGE OF SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
8	8	SPALL	EDGE OF SIDEWALK	0.2 S.F.	POLYMER MODIFIED MORTAR
8	8	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
8	8	CW-3	SIDEWALK	3.5 L.F.	EPOXY INJECTION
8	8	SPALL	SIDEWALK	2.0 S.F.	POLYMER MODIFIED MORTAR
9	1	CW-3	SIDEWALK	10.0 L.F.	EPOXY INJECTION
9	2	CW-3	SIDEWALK	11.0 L.F.	EPOXY INJECTION
9	3	CW-3	TOP OF DECK	13.0 L.F.	HOT APPLIED SEALANT
9	4	CW-3	TOP OF DECK	11.0 L.F.	HOT APPLIED SEALANT
9	5	CW-4	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
9	6	CW-4	TOP OF DECK	8.0 L.F.	HOT APPLIED SEALANT
9	7	SPALL	SIDEWALK	1.0 S.F.	POLYMER MODIFIED MORTAR
10	1	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
10	3	CW-4	TOP OF DECK	4.0 L.F.	HOT APPLIED SEALANT
10	4	CW-4	TOP OF DECK	8.0 L.F.	HOT APPLIED SEALANT
10	5	CW-5	TOP OF DECK	18.0 L.F.	HOT APPLIED SEALANT
10	6	CW-3	DECK JOINT	1.0 L.F.	HOT APPLIED SEALANT
10	6	CW-5	TOP OF DECK	18.0 L.F.	HOT APPLIED SEALANT
10	7	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
10	8	SPALL	SIDEWALK	0.2 S.F.	POLYMER MODIFIED MORTAR
11	1	SPALL	SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
11	2	SPALL	SIDEWALK	4.0 S.F.	POLYMER MODIFIED MORTAR
11	2	CW-4	SIDEWALK	2.0 L.F.	EPOXY INJECTION
11	3	CW-4	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
11	4	CW-4	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
11	5	CW-5	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
11	6	CW-5	TOP OF DECK	9.0 L.F.	HOT APPLIED SEALANT
11	8	CW-5	SIDEWALK	2.0 L.F.	EPOXY INJECTION
11	8	SPALL	SIDEWALK	1.0 S.F.	POLYMER MODIFIED MORTAR
APP. 2	1	CW-5	SIDEWALK	6.0 L.F.	EPOXY INJECTION
APP. 2	1	REPLACEMENT	SIDEWALK	4' x 2' x 1'	CONCRETE *
APP. 2	4	CW-5	TOP OF DECK	10.0 L.F.	HOT APPLIED SEALANT
APP. 2	5	CW-4	TOP OF DECK	11.5 L.F.	HOT APPLIED SEALANT
APP. 2	6	CW-4	TOP OF DECK	11.5 L.F.	HOT APPLIED SEALANT
APP. 2	6	CW-5	TOP OF DECK	10.0 L.F.	HOT APPLIED SEALANT

\* REMOVE CRACKED APPROACH CONCRETE SLAB IN THE NORTH-EAST VICINITY OF WING WALL, USING POWER CHIPPING TOOLS. ALL EXISTING REINFORCING STEEL SHALL BE PROTECTED DURING THIS OPERATION. PNEUMATIC TOOLS SHALL NOT BE PLACED IN DIRECT CONTACT WITH THE REINFORCING STEEL. ANY DAMAGED REINFORCEMENT STEEL DURING CONCRETE REMOVAL SHALL BE REPLACED BY THE CONTRACTOR AT HIS OWN EXPENSE, AS DIRECTED BY THE ENGINEER. ALL EXISTING REINFORCEMENT STEEL SHALL BE SAND BLASTED TO ELIMINATE ANY RUSTED MATERIAL. AFTER REMOVAL OF DAMAGED CONCRETE, FORM AND THEN POUR PORTLAND CEMENT CONCRETE TO INITIAL DIMENSIONS. ALL WORK AND MATERIALS NECESSARY FOR THIS REPAIR SHALL BE INCIDENTAL TO ITEM NO. 8401-70-1, POLYMER MODIFIED MORTAR.

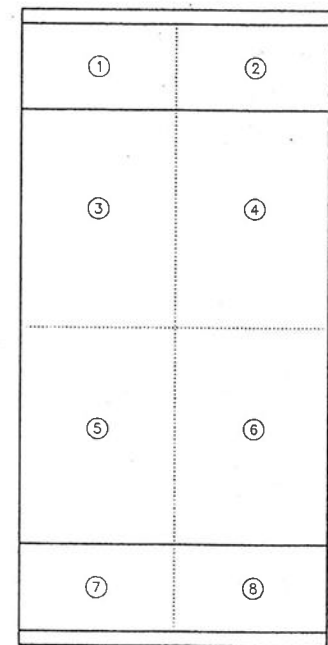
NOTES:  
1. FOR DESCRIPTION OF METHOD OF REPAIR AND REPAIR NOTES, SEE SHEET S-3.



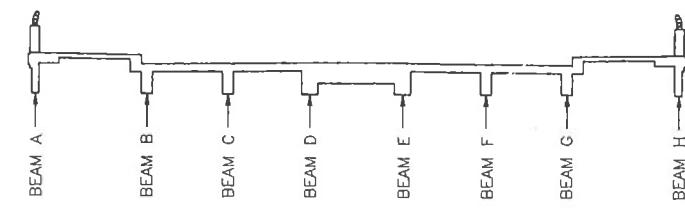
PLAN -- TOP OF DECK SPAN 6  
(WITH ELEMENT LOCATIONS INDICATED)



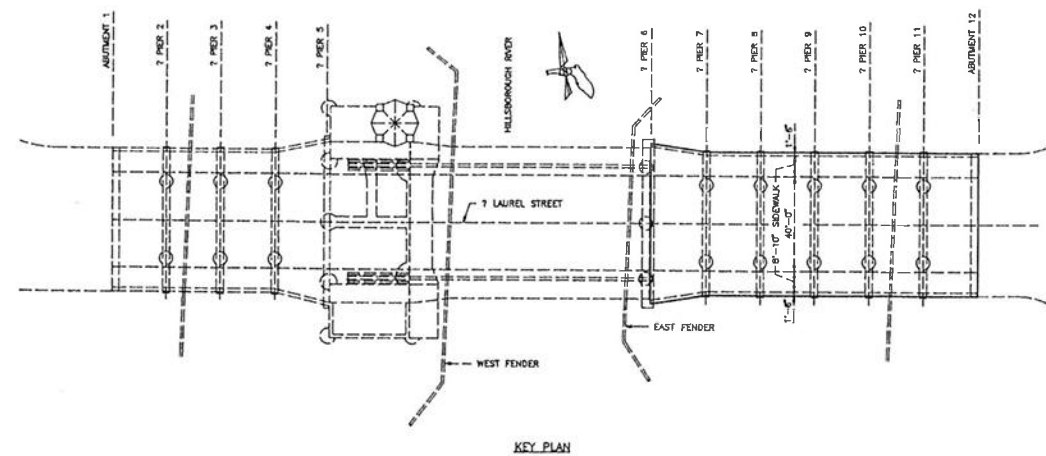
PLAN -- TOP OF DECK SPANS 7 THRU 11  
(WITH ELEMENT LOCATIONS INDICATED)



PLAN -- APPROACH SLAB 2  
(WITH ELEMENT LOCATIONS INDICATED)



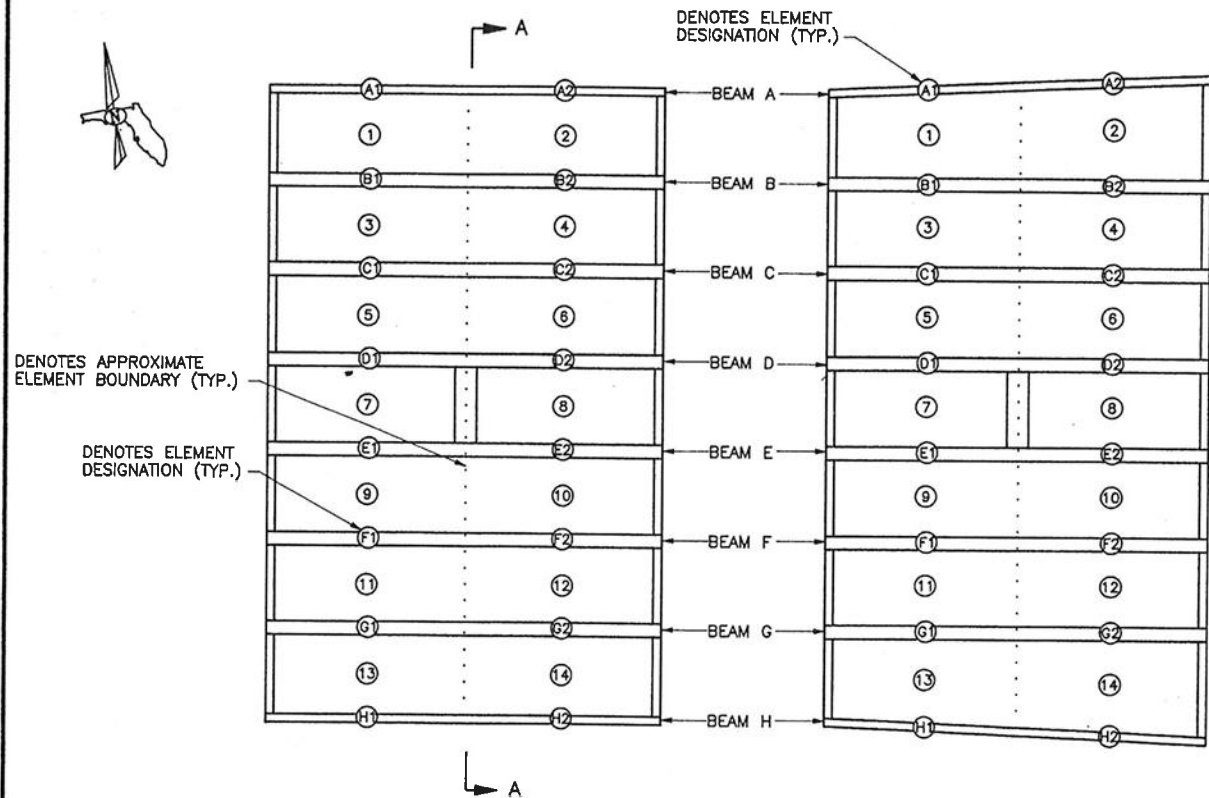
SECTION A-A



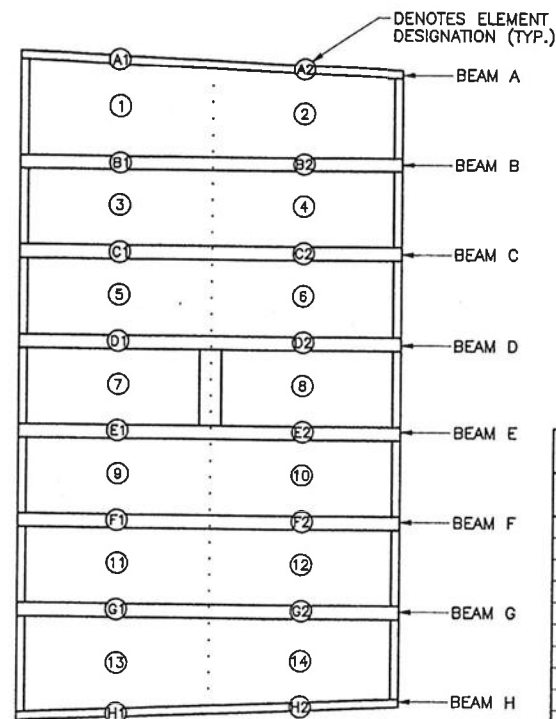
KEY PLAN

NO.	DATE	DESCRIPTION	BY	CHK'D
9/2/92		ADDED, DELETED OR REVISED ITEM	TC	
<b>LAUREL STREET BRIDGE REHABILITATION</b>				
TAMPA, FLORIDA				
TOP OF DECK -- SPANS 6 THRU 11				
		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222		
		ENGINEERS • SURVEYORS • PLANNERS • SCIENTIST		
DESIGNED BY	KTL	DRAWING NO.	<b>S-5</b>	
DRAWN BY	KTL			
CHECKED BY	JSR			
APPROVED BY	SCR			
BY:	OSA CM. NO.	91008-F3		
FLA. P.E. REG. NO.	DATE	6/29/92	OF 13 SHEETS	

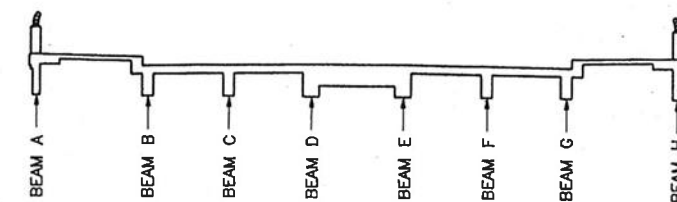
EXISTING PLANS



BOTTOM OF DECK - SPANS 1 THRU 3 AND 7 THRU 11  
(WITH ELEMENT LOCATIONS INDICATED)



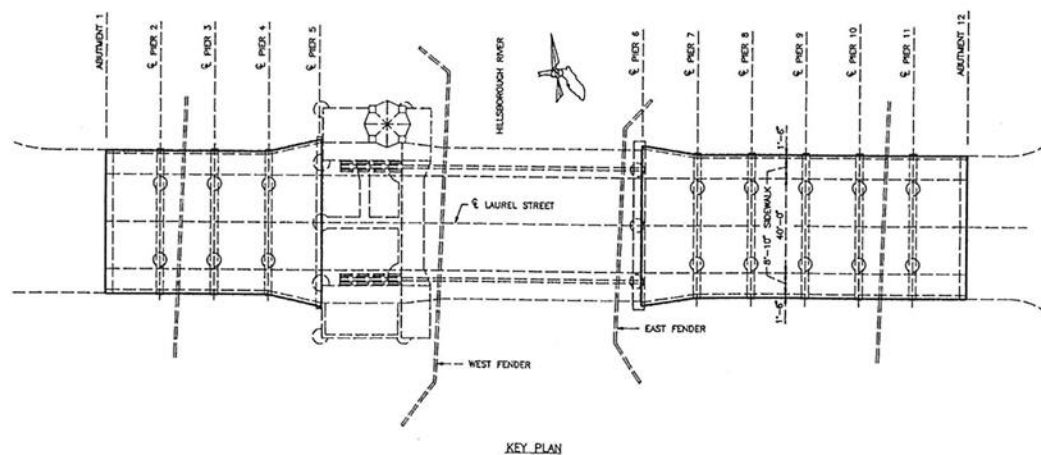
BOTTOM OF DECK - SPAN 4  
(WITH ELEMENT LOCATIONS INDICATED)



SECTION A-A  
(FACING EAST)

TABLE OF DEFICIENCIES					
SPAN	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
1	G1	SPALL	SOUTHEAST CORNER	1.0 S.F.	POLYMER MODIFIED MORTAR
1	1	CW3	NORTHWEST CORNER	12.0 L.F.	EPOXY EJECTION
1	2	SPALL	NORTHEAST CORNER	2.0 S.F.	POLYMER MODIFIED MORTAR
1	14	CW3	WEST SIDE	6.0 L.F.	EPOXY EJECTION
2	7	SPALL *	RANDOM	3.0 S.F.	POLYMER MODIFIED MORTAR
4	13	SPALL *	SOUTHWEST CORNER	0.1 S.F.	POLYMER MODIFIED MORTAR
4	14	SPALL *	SOUTHEAST CORNER	1.2 S.F.	POLYMER MODIFIED MORTAR
6	2	SPALL *	AROUND UTILITIES	2.0 S.F.	POLYMER MODIFIED MORTAR
6	3	SPALL *	AROUND UTILITIES	4.0 S.F.	POLYMER MODIFIED MORTAR
6	4	SPALL *	AROUND UTILITIES	4.0 S.F.	POLYMER MODIFIED MORTAR
6	9	SPALL	OVER PIER 6	1.0 S.F.	POLYMER MODIFIED MORTAR
6	11	SPALL *	AROUND UTILITIES	1.0 S.F.	POLYMER MODIFIED MORTAR
6	13	SPALL	SOUTHWEST CORNER	0.9 S.F.	POLYMER MODIFIED MORTAR
6	14	SPALL *	AROUND UTILITIES	1.0 S.F.	POLYMER MODIFIED MORTAR
8	14	SPALL *	SOUTHEAST CORNER	0.6 S.F.	POLYMER MODIFIED MORTAR
9	1	SPALL	NORTHWEST CORNER	1.0 S.F.	POLYMER MODIFIED MORTAR
9	13	SPALL	SOUTHWEST CORNER	1.2 S.F.	POLYMER MODIFIED MORTAR
10	9	LARGE HOLE *	SOUTHWEST CORNER	4.0 S.F.	POLYMER MODIFIED MORTAR
11	F1	SPALL	SOUTHWEST CORNER	2.0 L.F.	POLYMER MODIFIED MORTAR
11	F2	SPALL	SOUTHEAST CORNER	2.0 L.F.	POLYMER MODIFIED MORTAR
11	2	CW3	NORTHEAST CORNER	2.0 L.F.	EPOXY EJECTION
11	13	CW3	SOUTHWEST CORNER	12.0 L.F.	EPOXY EJECTION
11	14	CW3	SOUTHEAST CORNER	4.0 L.F.	EPOXY EJECTION
11	14	CW4	SOUTHEAST CORNER	8.0 L.F.	EPOXY EJECTION

\* WITH EXPOSED REBAR



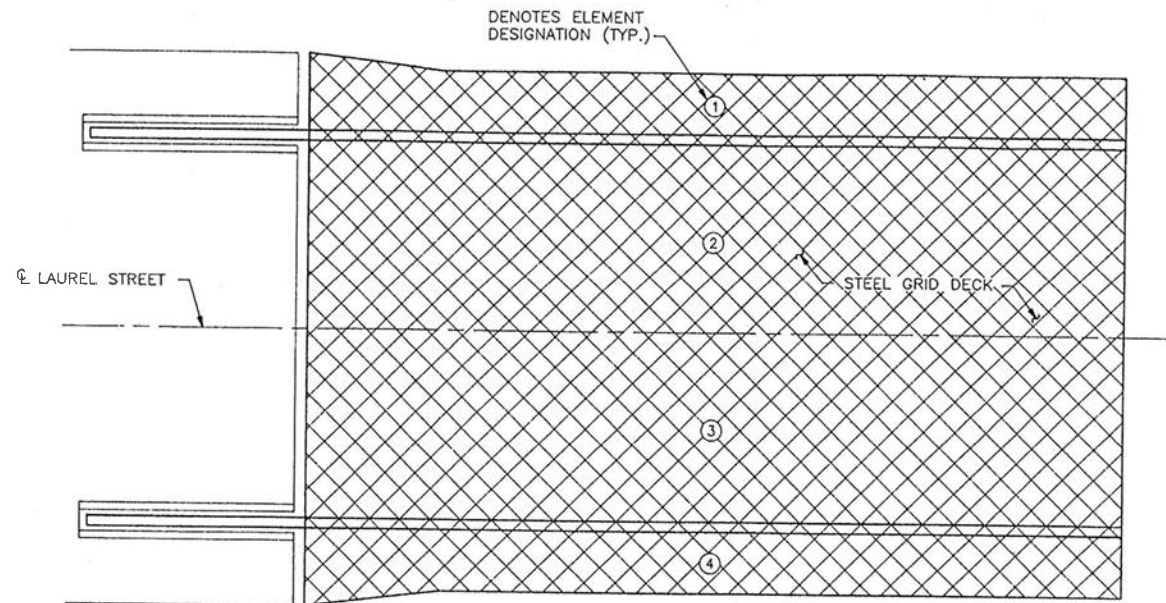
KEY PLAN

NOTES:  
1. FOR DESCRIPTION OF METHOD OF REPAIR AND REPAIR NOTES, SEE SHEET S-3.

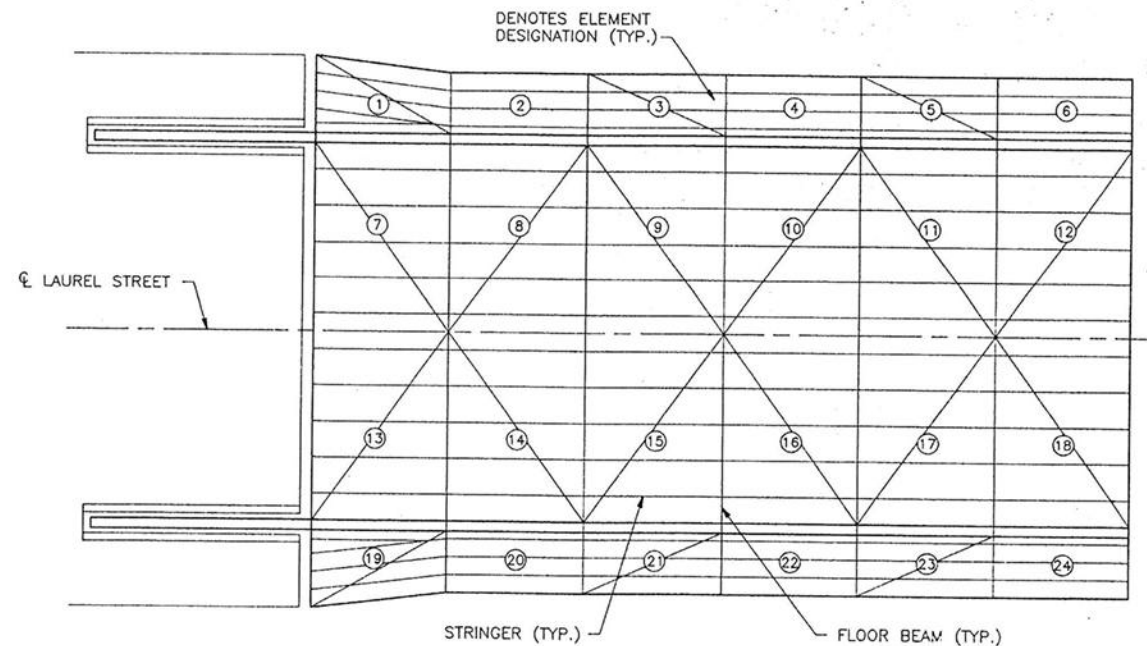
NO.	DATE	DESCRIPTION	BY	CHK'D
<b>LAUREL STREET BRIDGE REHABILITATION</b> TAMPA, FLORIDA				
BOTTOM OF DECK - SPANS 1 THRU 4 AND 6 THRU 11				
		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222		
		ENGINEERS - SURVEYORS - PLANNERS - SCIENTIST		
DESIGNED BY	KTL	DRAWING NO.	<b>S-6</b>	
DRAWN BY	KTL			
CHECKED BY	JSR			
APPROVED BY	SCR			
BY:	DSA CH. NO. 91008-F3			
FLA. P.E. REG. NO.	DATE 6/29/92		OF 13 SHEETS	



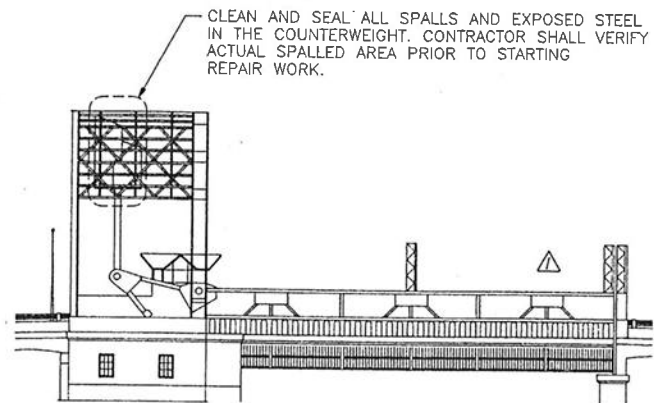
EXISTING PLANS



PLAN - TOP OF DECK BASCULE SPAN  
(WITH ELEMENT LOCATIONS INDICATED)



BOTTOM OF DECK BASCULE SPAN  
(WITH ELEMENT LOCATIONS INDICATED)

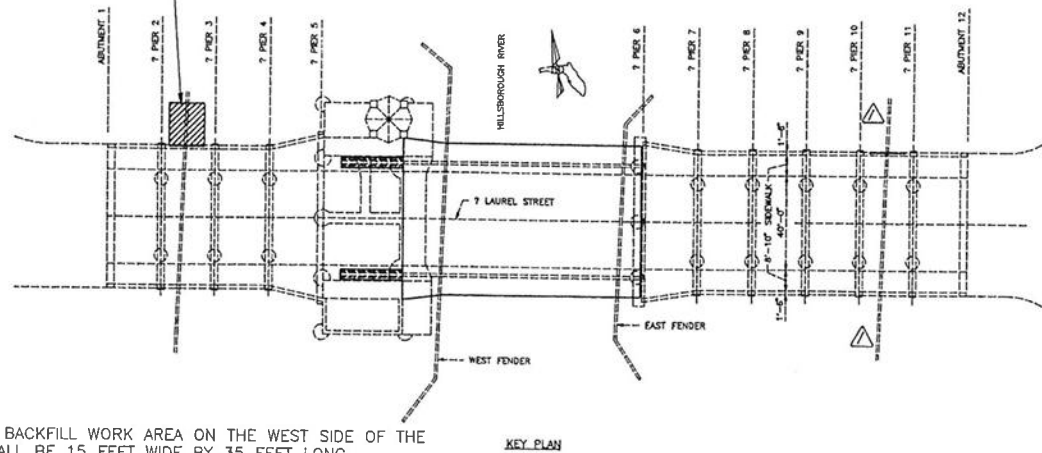


BRIDGE STRUCTURE ELEVATION

TABLE OF DEFICIENCIES					
SPAN	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
5	6	UNALIGNED	DECK RESTING POSITION	15.0 L.F.	ADJUST TO ELIMINATE 1/4" DIFFERENCE IN ELEVATION
5	9	BENT	VERTICAL MEMBER-NORTH SIDE	6.0 L.F.	STRAIGHTEN OR REPLACE
5	10	BENT	VERTICAL MEMBER-NORTH SIDE	6.0 L.F.	STRAIGHTEN OR REPLACE
5	11	BENT	VERTICAL MEMBER-NORTH SIDE	6.0 L.F.	STRAIGHTEN OR REPLACE
5	12	UNALIGNED	DECK RESTING POSITION	15.0 L.F.	ADJUST TO ELIMINATE 1/4" DIFFERENCE IN ELEVATION
5	13	SPALL	SW CORNER-BEHIND RACK	1.0 S.F.	POLYMER MODIFIED MORTAR
5	16	BENT	VERTICAL MEMBER-SOUTH SIDE	6.0 L.F.	STRAIGHTEN OR REPLACE
5	16	UNALIGNED	DECK RESTING POSITION	15.0 L.F.	ADJUST TO ELIMINATE 1/4" DIFFERENCE IN ELEVATION
5	24	UNALIGNED	DECK RESTING POSITION	15.0 L.F.	ADJUST TO ELIMINATE 1/4" DIFFERENCE IN ELEVATION
5	ALL FACES	SPALL	COUNTERWEIGHT	80.0 S.F.	POLYMER MODIFIED MORTAR
5	ALL FACES	SPALL *	COUNTERWEIGHT	20.0 S.F.	POLYMER MODIFIED MORTAR

\* WITH EXPOSED STEEL

BACKFILL ALL ERODED AREAS WITHIN INDICATED LIMITS



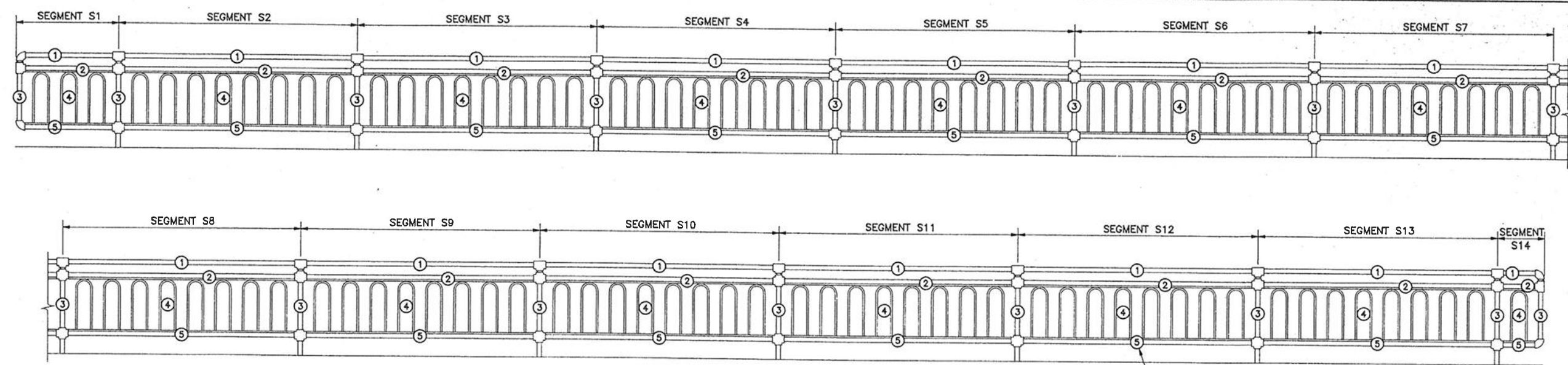
KEY PLAN

NOTE: THE BACKFILL WORK AREA ON THE WEST SIDE OF THE BRIDGE SHALL BE 15 FEET WIDE BY 35 FEET LONG BY 2 FEET DEEP.

PL 81008/LAUREL  
LSPK 07/18/92 083611 PRODUCED BY DSA CAD SYSTEM

9/2/92	ADDED, DELETED OR REVISED ITEM	TC
NO.	DATE	DESCRIPTION
LAUREL STREET BRIDGE REHABILITATION		
TAMPA, FLORIDA		
TOP AND BOTTOM OF DECK - SPAN 5		
		DRAWING NO.
D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222		
DESIGNED BY	KTL	S-7
DRAWN BY	KTL	
CHECKED BY	JSR	
APPROVED BY	SCR	
BY:	DSA CM. NO. 91008-F3	OF 13 SHEETS
FLA. P.E. REG. NO.	DATE 6/29/92	

EXISTING PLANS



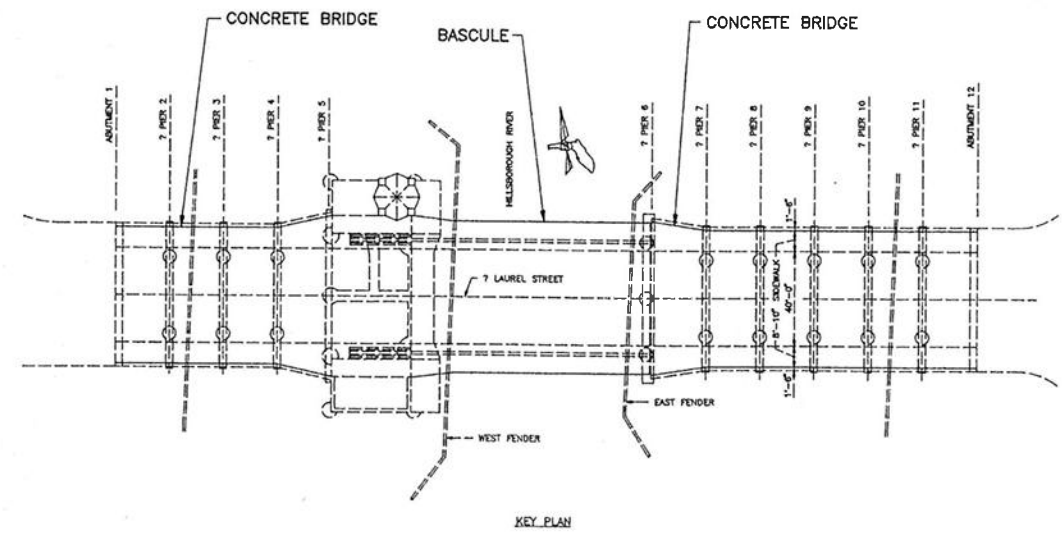
TYPICAL STEEL RAILING ELEVATION - BASCULE

DENOTES ELEMENT DESIGNATION (TYP.)

TABLE OF DEFICIENCIES - BASCULE					
SEGMENT	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
S4	5	CORROSION	NORTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S8	2	CORROSION	NORTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S8	5	CORROSION	NORTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S9	2	CORROSION	NORTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S9	5	CORROSION	NORTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S12	2	CORROSION	NORTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT

TABLE OF DEFICIENCIES - BASCULE					
SEGMENT	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
S1	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S1	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S2	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S2	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S4	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S4	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S5	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S5	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S7	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S10	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S10	4	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S10	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S11	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S11	4	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S11	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S12	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S12	4	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S12	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S13	2	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S13	4	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S13	5	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT
S14	4	CORROSION	SOUTH SIDE	8.0 L.F.	REPLACE, CLEAN AND PAINT

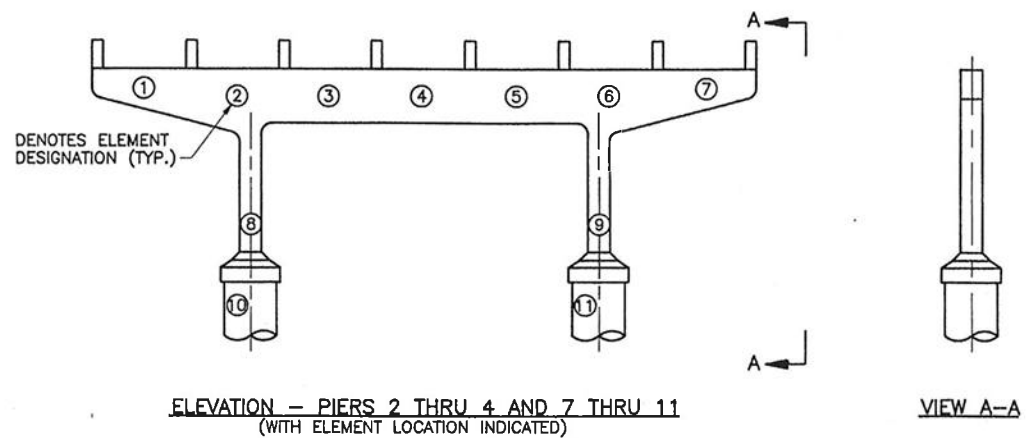
NOTES:  
1. FOR DESCRIPTION OF METHOD OF REPAIR AND REPAIR NOTES, SEE SHEET S-3.



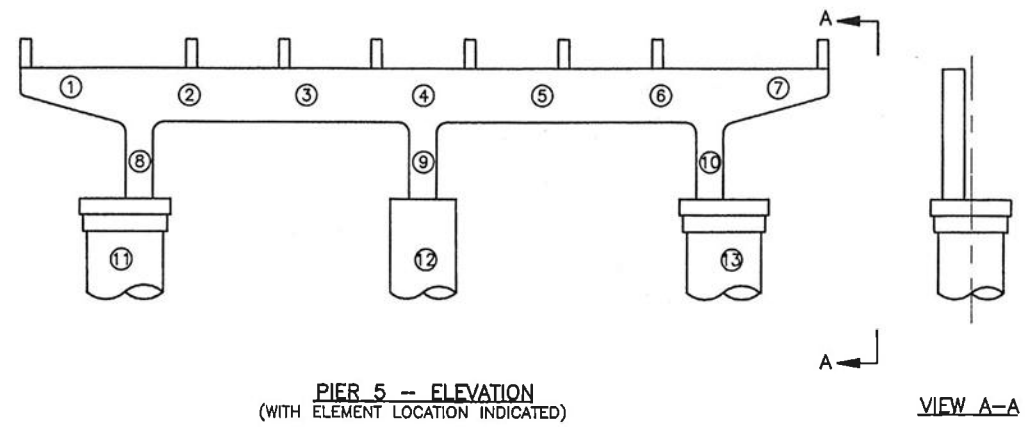
NO.	DATE	ADDED, DELETED OR REVISED ITEM DESCRIPTION	TC	BY	CHK'D
	9/2/92				
<b>LAUREL STREET BRIDGE REHABILITATION</b>					
TAMPA, FLORIDA					
<b>STEEL RAILING</b>					
<b>DSA GROUP INC.</b>		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222			
ENGINEERS - SURVEYORS - PLANNERS - SCIENTIST					
DESIGNED BY	KTL	DRAWING NO.			
DRAWN BY	KTL	<b>S-8</b>			
CHECKED BY	JSR				
APPROVED BY	SCR				
BY:	DSA CM. NO.	91008-F3			
FLA. P.E. REG. NO.	DATE	6/29/92	OF 13 SHEETS		



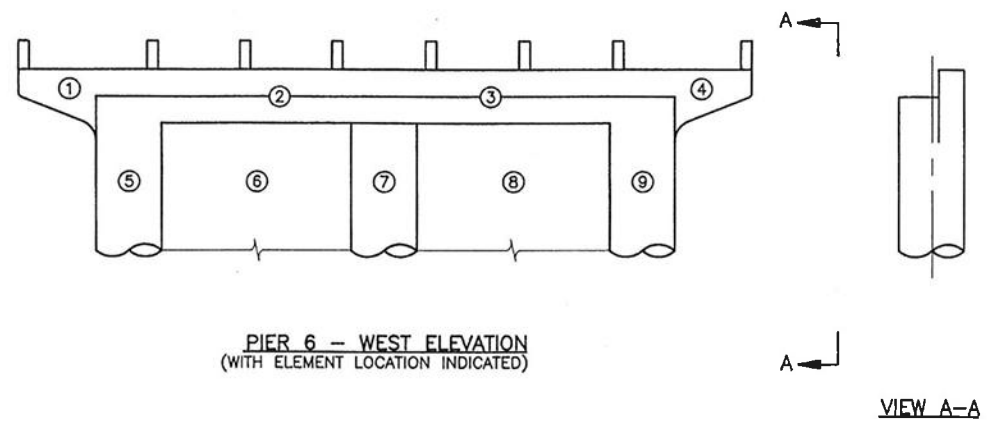
EXISTING PLANS



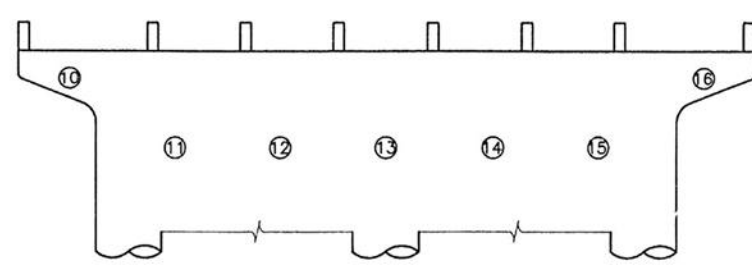
ELEVATION - PIERS 2 THRU 4 AND 7 THRU 11  
(WITH ELEMENT LOCATION INDICATED)



PIER 5 - ELEVATION  
(WITH ELEMENT LOCATION INDICATED)



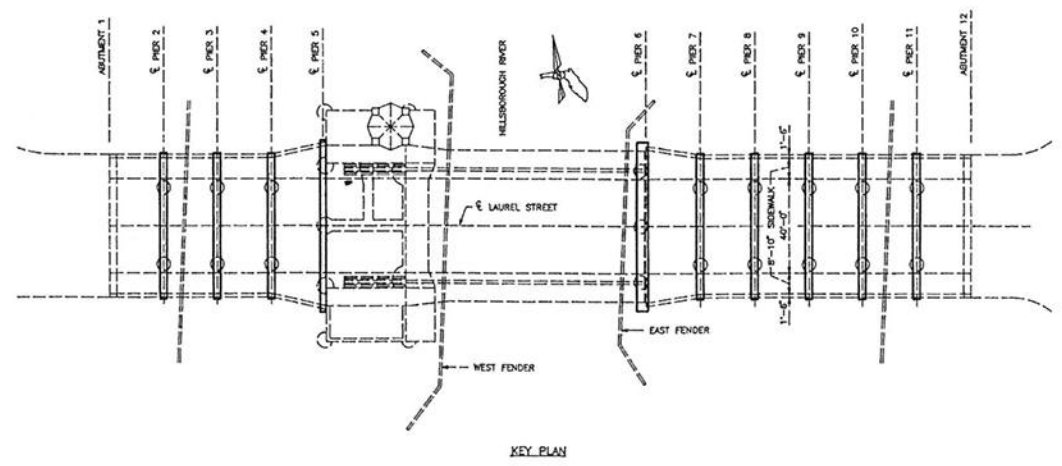
PIER 6 - WEST ELEVATION  
(WITH ELEMENT LOCATION INDICATED)



PIER 6 - EAST ELEVATION  
(WITH ELEMENT LOCATION INDICATED)

TABLE OF DEFICIENCIES					
PIER	ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
2	1	SPALL *	NORTHWEST FACE	0.5 S.F.	POLYMER MODIFIED MORTAR
2	5	SPALL	WEST FACE	0.5 S.F.	POLYMER MODIFIED MORTAR
3	11	CW-3	NORTHWEST FACE	1.5 L.F.	EPOXY INJECTION
3	11	CW-3	SOUTHWEST FACE	1.5 L.F.	EPOXY INJECTION
4	10	CW-3	NORTHWEST FACE	1.5 L.F.	EPOXY INJECTION
4	10	CW-3	SOUTHWEST FACE	1.5 L.F.	EPOXY INJECTION
4	10	CW-3	NORTHEAST FACE	1.5 L.F.	EPOXY INJECTION
4	10	CW-3	NORTHEAST FACE	1.5 L.F.	EPOXY INJECTION
4	11	CW-3	NORTHWEST FACE	1.5 L.F.	EPOXY INJECTION
4	11	CW-3	SOUTHWEST FACE	1.5 L.F.	EPOXY INJECTION
4	11	CW-3	NORTHEAST FACE	1.5 L.F.	EPOXY INJECTION
5	1	SPALL	NORTH FACE	0.5 S.F.	POLYMER MODIFIED MORTAR
5	2	CW-4	WEST FACE	5.0 L.F.	EPOXY INJECTION
5	6	CW-3	WEST FACE	4.0 L.F.	EPOXY INJECTION
6	1	SPALL	WEST FACE	4.0 S.F.	POLYMER MODIFIED MORTAR
6	2	SPALL	WEST FACE	6.0 S.F.	POLYMER MODIFIED MORTAR
6	3	SPALL	WEST FACE	4.0 S.F.	POLYMER MODIFIED MORTAR
6	3	CW-3	WEST FACE	5.0 L.F.	EPOXY INJECTION
6	7	CW-3	WEST FACE	6.0 S.F.	EPOXY INJECTION
6	11	SPALL	EAST FACE	3.0 S.F.	POLYMER MODIFIED MORTAR
10	6	DELAMINATION	WEST FACE	2.0 S.F.	POLYMER MODIFIED MORTAR
10	6	CW-3	WEST FACE	5.0 L.F.	EPOXY INJECTION
10	11	SPALL	EAST FACE	3.0 S.F.	UNDERWATER COMPOUND
11	6	CW-3	EAST FACE	4.0 L.F.	EPOXY INJECTION

\* WITH EXPOSED REBAR



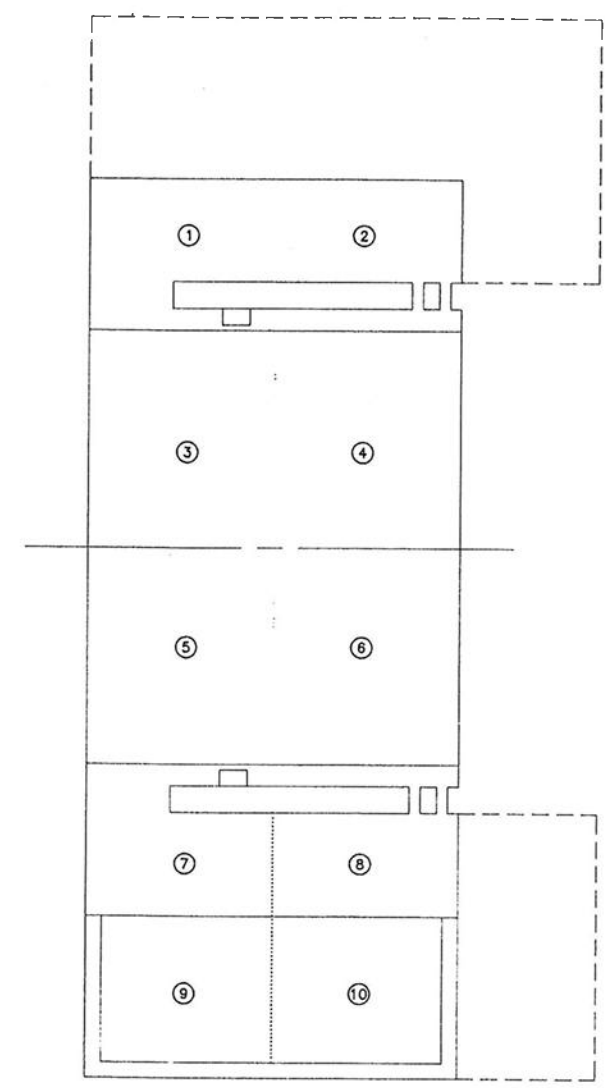
NO.		DATE		DESCRIPTION		BY		CHK'D	
<b>LAUREL STREET BRIDGE REHABILITATION</b>									
TAMPA, FLORIDA									
PIERS 2 THRU 11									
		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222							
		ENGINEERS · SURVEYORS · PLANNERS · SCIENTIST							
DESIGNED BY		KTL		DRAWING NO.		<b>S-9</b>			
DRAWN BY		KTL							
CHECKED BY		JSR							
APPROVED BY		SCR		DATE		8/29/92		OF 13 SHEETS	
BY:		DSA CM. NO. 91008-F3		DATE		8/29/92		OF 13 SHEETS	
FLA. P.E. REG. NO.		DATE		8/29/92		OF 13 SHEETS			

EXISTING PLANS

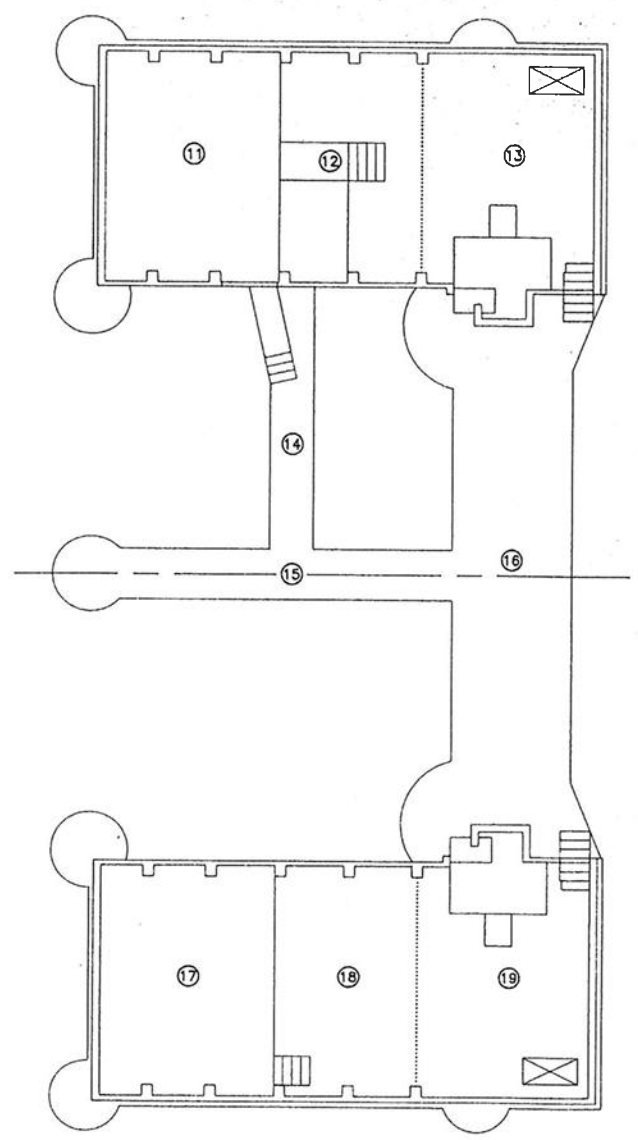
△ TABLE OF DEFICIENCIES				
ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
1	SPALL	SIDEWALK	34.0 S.F.	POLYMER MODIFIED MORTAR
1	CW-3	SIDEWALK	3.0 L.F.	EPOXY INJECTION
1	CW-5	SIDEWALK	9.0 L.F.	EPOXY INJECTION
1	MISC. CRACKING	SIDEWALK	34.0 L.F.	EPOXY INJECTION
1	SPALL	UNDERDECK	4.0 S.F.	POLYMER MODIFIED MORTAR
2	CW-4	SIDEWALK	2.0 L.F.	EPOXY INJECTION
2	CW-5	SIDEWALK	5.0 L.F.	EPOXY INJECTION
2	MISC. CRACKING	SIDEWALK	34.0 L.F.	EPOXY INJECTION
2	SPALL	EDGE OF SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
2	SPALL	SIDEWALK	34.0 S.F.	POLYMER MODIFIED MORTAR
3	CW-4	TOP OF DECK	10.0 L.F.	EPOXY INJECTION
3	CW-5	TOP OF DECK	46.0 L.F.	EPOXY INJECTION
3	SPALL *	W. FACE OF COUNTERWEIGHT	1.0 S.F.	POLYMER MODIFIED MORTAR
3	SPALL *	W. FACE OF COUNTERWEIGHT	2.0 S.F.	POLYMER MODIFIED MORTAR
4	CW-4	TOP OF DECK	3.0 L.F.	EPOXY INJECTION
4	CW-5	TOP OF DECK	45.0 L.F.	EPOXY INJECTION
5	CW-5	TOP OF DECK	49.0 L.F.	EPOXY INJECTION
5	SPALL *	W. FACE OF COUNTERWEIGHT	6.0 S.F.	POLYMER MODIFIED MORTAR
5	SPALL *	W. FACE OF COUNTERWEIGHT	2.0 S.F.	POLYMER MODIFIED MORTAR
6	CW-4	TOP OF DECK	3.0 L.F.	EPOXY INJECTION
6	CW-5	TOP OF DECK	30.0 L.F.	EPOXY INJECTION
7	CW-3	SIDEWALK	11.0 L.F.	EPOXY INJECTION
7	CW-4	SIDEWALK	8.0 L.F.	EPOXY INJECTION
7	CW-5	SIDEWALK	2.0 L.F.	EPOXY INJECTION
7	SPALL *	UNDERDECK	1.0 S.F.	POLYMER MODIFIED MORTAR
7	SPALL	SIDEWALK	20.0 S.F.	POLYMER MODIFIED MORTAR
7	SPALL	UNDERDECK	2.0 S.F.	POLYMER MODIFIED MORTAR
8	CW-3	SIDEWALK	14.0 L.F.	EPOXY INJECTION
8	CW-5	SIDEWALK	8.0 L.F.	EPOXY INJECTION
8	SPALL	SIDEWALK	0.3 S.F.	POLYMER MODIFIED MORTAR
8	SPALL	EDGE OF SIDEWALK	0.1 S.F.	POLYMER MODIFIED MORTAR
8	HOLE	UNDERDECK	3.0 S.F.	INSTALL METAL PLATE
9	CW-3	TOP OF DECK	25.0 L.F.	EPOXY INJECTION
10	CW-3	TOP OF DECK	25.0 L.F.	EPOXY INJECTION
11	UNPROTECTED	UNDER STAIRS	20.0 L.F.	PAINT AND PROTECT **
11	SPALL	CEILING ABOVE STAIRS	1.0 S.F.	POLYMER MODIFIED MORTAR
11	SPALL	CEILING-RANDOM	4.0 S.F.	POLYMER MODIFIED MORTAR
11	SPALL	BASE OF DOORWAY	0.5 S.F.	POLYMER MODIFIED MORTAR
11	SPALL *	COLUMN-S.E.	2.0 S.F.	POLYMER MODIFIED MORTAR
12	SPALL	CEILING UNDER SIDEWALK	10.0 S.F.	POLYMER MODIFIED MORTAR
12	SPALL	CEILING-RANDOM	1.0 S.F.	POLYMER MODIFIED MORTAR
12	SEAL LOSS	HATCH FRAME	30.0 L.F.	HOT SEALANT
12	CW-5	CEILING	20.0 L.F.	EPOXY INJECTION
13	UNPROTECTED	UNDER GEAR GUARD	20.0 L.F.	PAINT AND PROTECT **
13	18" x 34" HOLE	FLOOR	4.3 S.F.	INSTALL METAL PLATE
13	SPALL	CEILING	6.0 S.F.	POLYMER MODIFIED MORTAR
13	CW-5	CEILING	30.0 L.F.	EPOXY INJECTION
13	CORROSION	SHEET METAL WALL	16.0 S.F.	REPLACE, CLEAN AND PAINT
13	CORROSION	SHEET METAL GEAR COVER	16.0 S.F.	ADD AND PAINT
14	RUST	STAIRS-WALKWAY	2'-6" x 3'-4"	REPLACE METAL PLATE
14	SPALL	CEILING	5.0 S.F.	POLYMER MODIFIED MORTAR
14	SPALL	SHAFT CONCRETE MOUNTS	10.0 S.F.	POLYMER MODIFIED MORTAR
14	UNPROTECTED	UNDER GEAR GUARD	20.0 L.F.	PAINT AND PROTECT **
16	UNPROTECTED	UNDER GEAR GUARD	40.0 L.F.	PAINT AND PROTECT **
16	SPALL	CEILING-N.W.	2.0 S.F.	POLYMER MODIFIED MORTAR
16	CRACKED GUSSET	TRUNNION TOWER	18" x 13" x 3/8" STEEL PLATE	WELD PLATE TO GUSSET
17	CW-5	CEILING	33.0 L.F.	EPOXY INJECTION
17	30" x 45" HOLE	CEILING	9.5 S.F.	INSTALL METAL PLATE
18	CW-5	CEILING	27.0 L.F.	EPOXY INJECTION
18	SPALL	COLUMN NW - BOTTOM	2.0 S.F.	POLYMER MODIFIED MORTAR
18	SPALL	COLUMN SW - BOTTOM	2.0 S.F.	POLYMER MODIFIED MORTAR
18	SPALL	CEILING UNDER SIDEWALK	10.0 S.F.	POLYMER MODIFIED MORTAR
19	18" x 34" HOLE	FLOOR	4.3 S.F.	INSTALL METAL PLATE
19	CORROSION	SHEET METAL WALL	64.0 S.F.	REPLACE, CLEAN AND PAINT
19	CORROSION	SHEET METAL GEAR COVER	16.0 S.F.	REPLACE, CLEAN AND PAINT
19	HOLE	CEILING	0.2 S.F.	INSTALL METAL PLATE
19	UNPROTECTED	UNDER GEAR GUARD	20.0 L.F.	PAINT AND PROTECT **
19	CW-5	CEILING	2.0 L.F.	EPOXY INJECTION

\* EXPOSED REBAR  
 \*\* PROVIDE RUBBER BUMPER FROM FLOOR TO 7'-6" AND PAINT W/REFLECTIVE YELLOW COLOR.

NOTES:  
 1. FOR DESCRIPTION OF METHOD OF REPAIR AND REPAIR NOTES, SEE SHEET S-3.

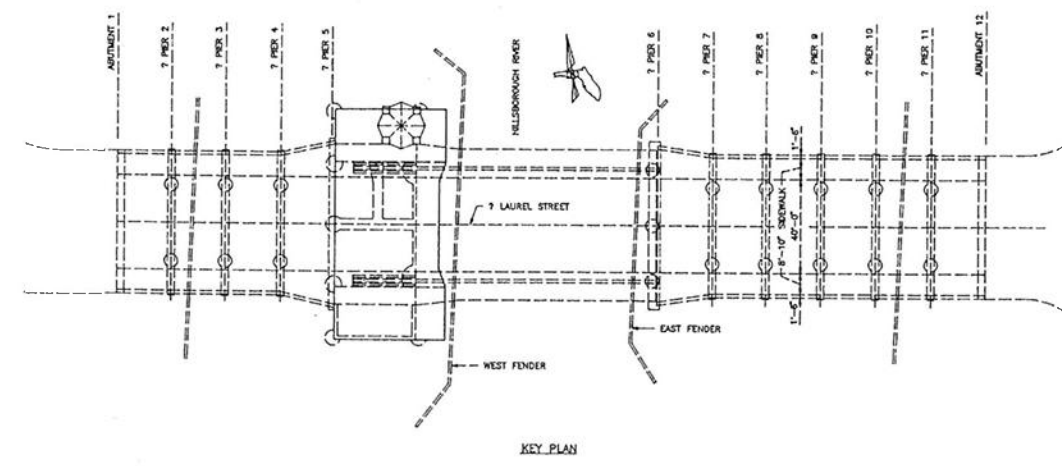


TOP OF DECK



MACHINERY LEVEL

△ NOTES:  
 SOUTH MACHINE ROOM EAST WINDOW.  
 CLEAN AND REMOVE EXISTING CAULKING AND BROKEN GLASS WINDOW PANE.  
 REPLACE WINDOW PANE AND RE-CAULK.

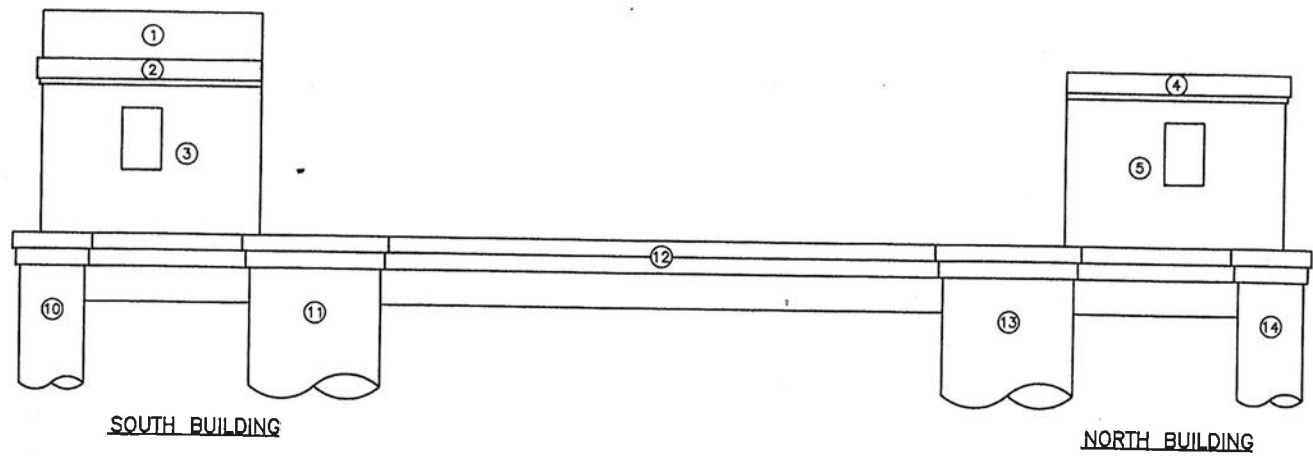


KEY PLAN

9/2/92		ADDED, DELETED OR REVISED ITEM	TC
NO.	DATE	DESCRIPTION	BY
LAUREL STREET BRIDGE REHABILITATION TAMPA, FLORIDA			
BASCULE PIER - PLAN			
		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222	
ENGINEERS - SURVEYORS PLANNERS - SCIENTIST			
DESIGNED BY	TJL	DRAWING NO.	
DRAWN BY	TJL		
CHECKED BY	JSR		
APPROVED BY	SCR		
BY:	DSA CM. NO. 91008-F3		
FLA. P.E. REG. NO.	DATE 6/29/92		OF 13 SHEETS



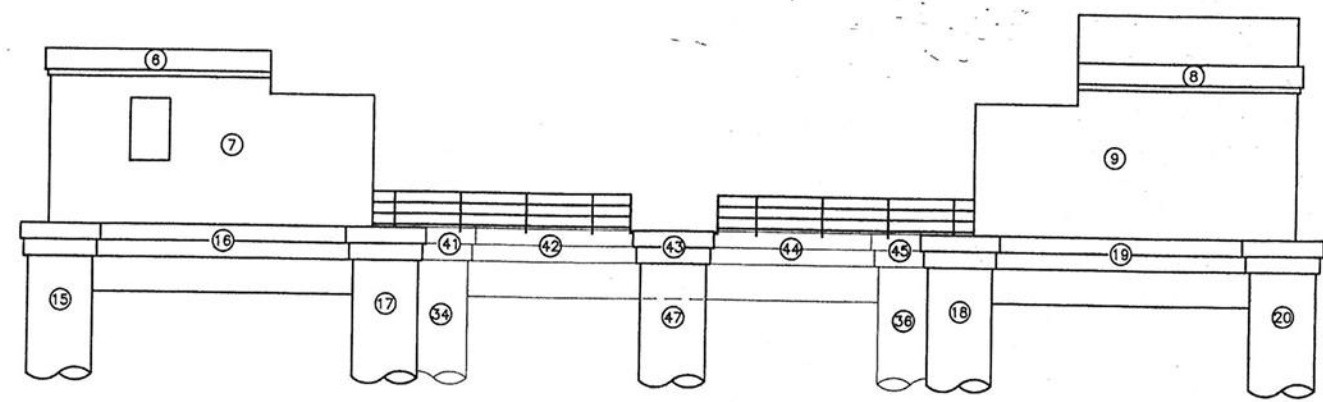
EXISTING PLANS



SOUTH BUILDING

NORTH BUILDING

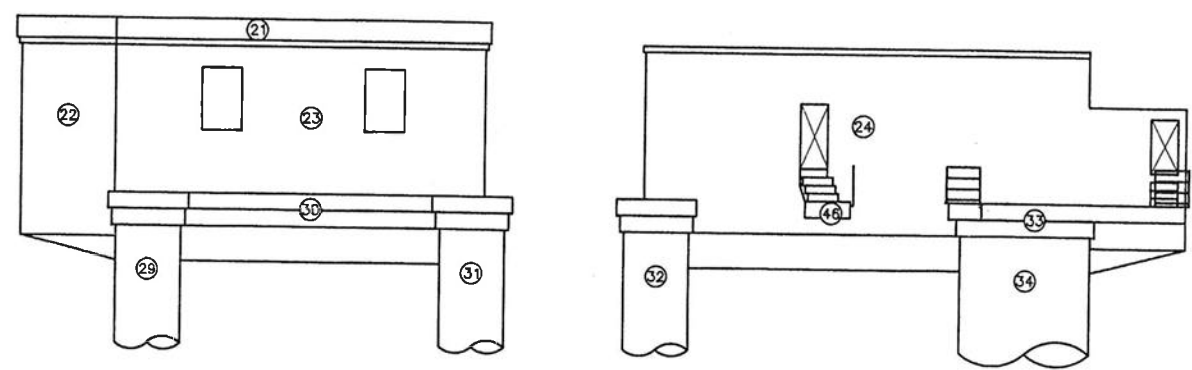
BASCULE PIER - EAST ELEVATION



SOUTH BUILDING

NORTH BUILDING

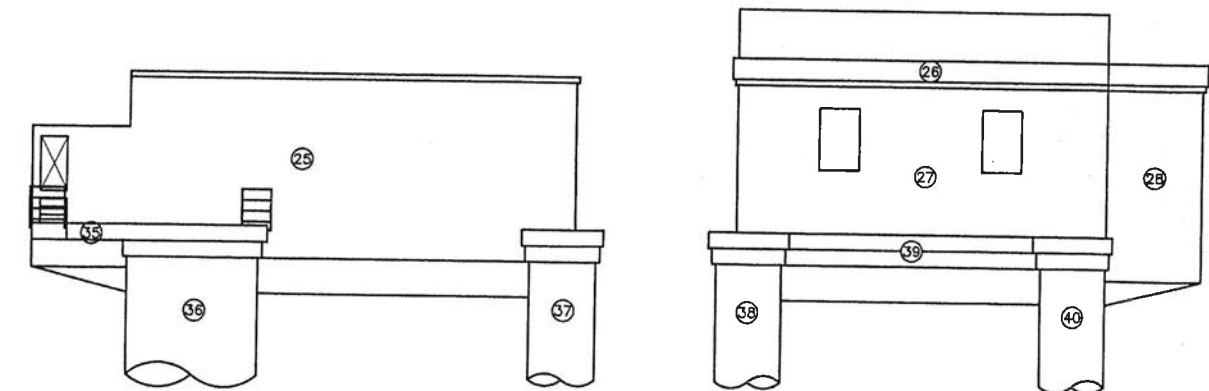
BASCULE PIER - WEST ELEVATION



NORTH ELEVATION

SOUTH ELEVATION

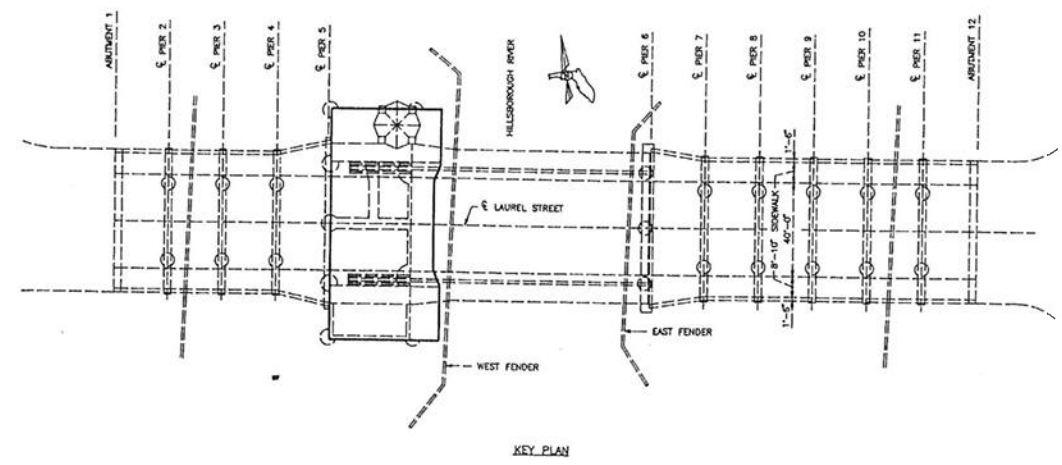
BASCULE PIER - NORTH BUILDING



NORTH ELEVATION

SOUTH ELEVATION

BASCULE PIER - SOUTH BUILDING



KEY PLAN

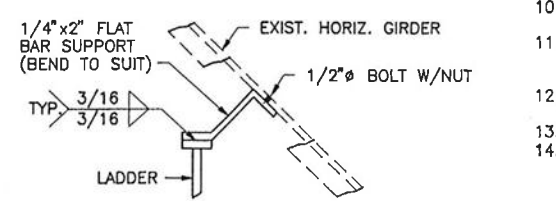
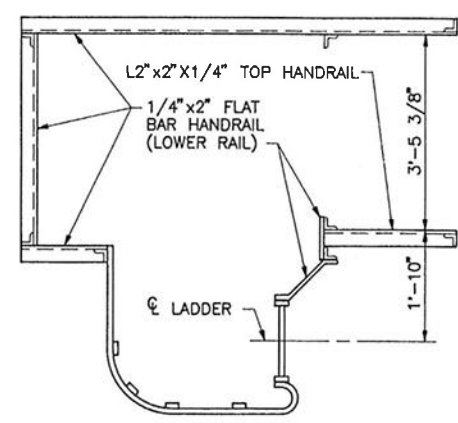
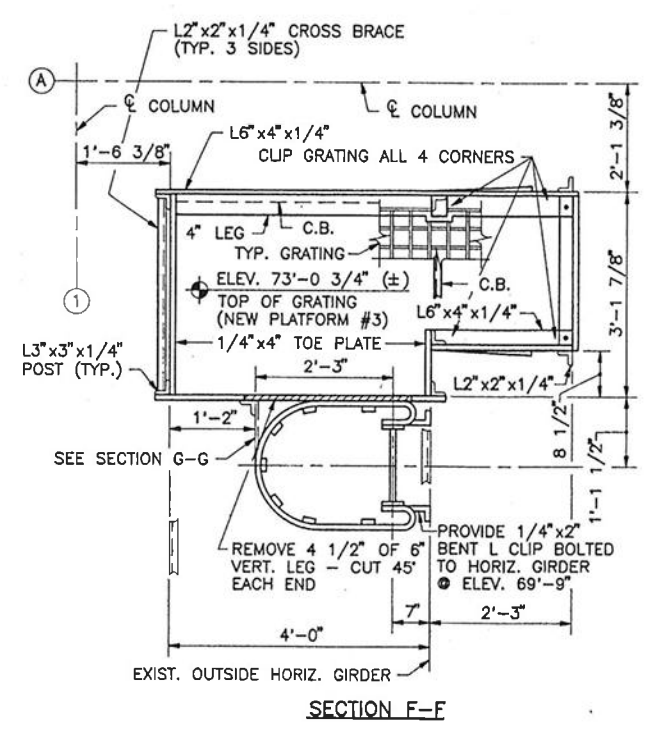
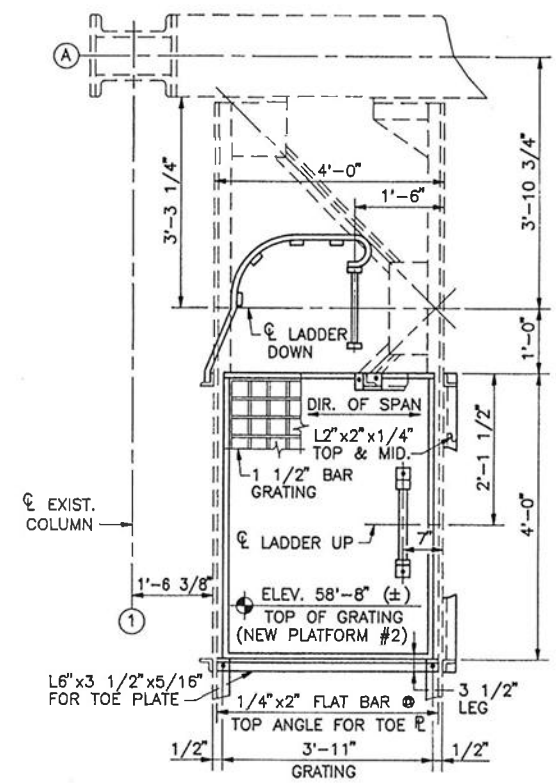
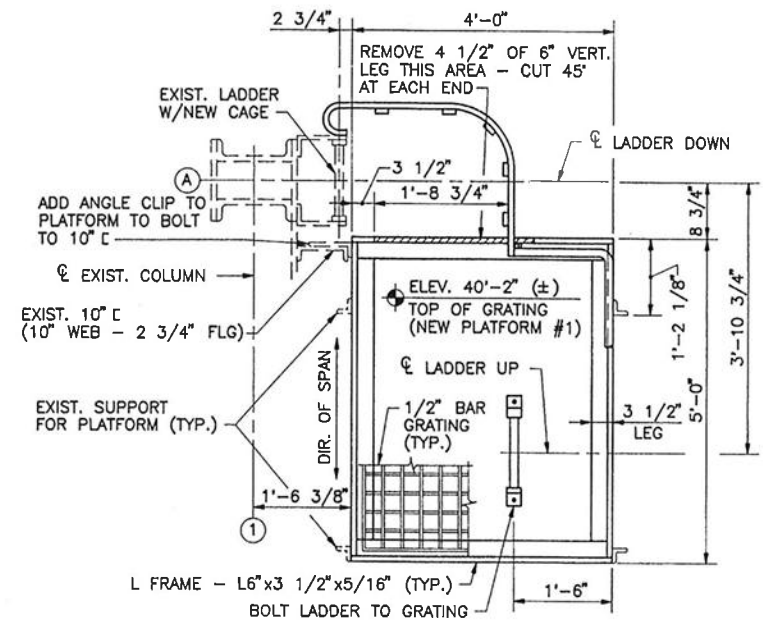
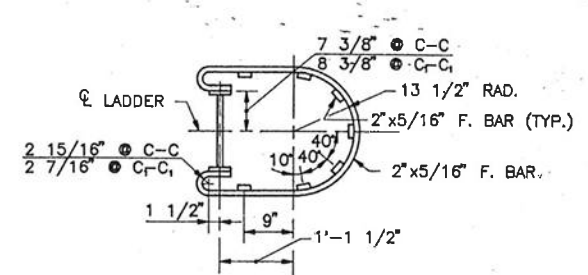
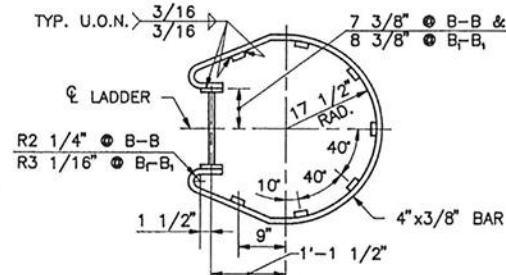
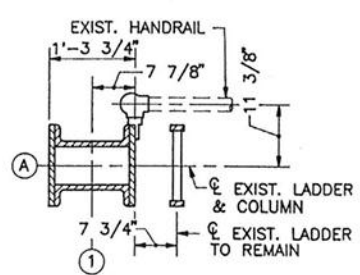
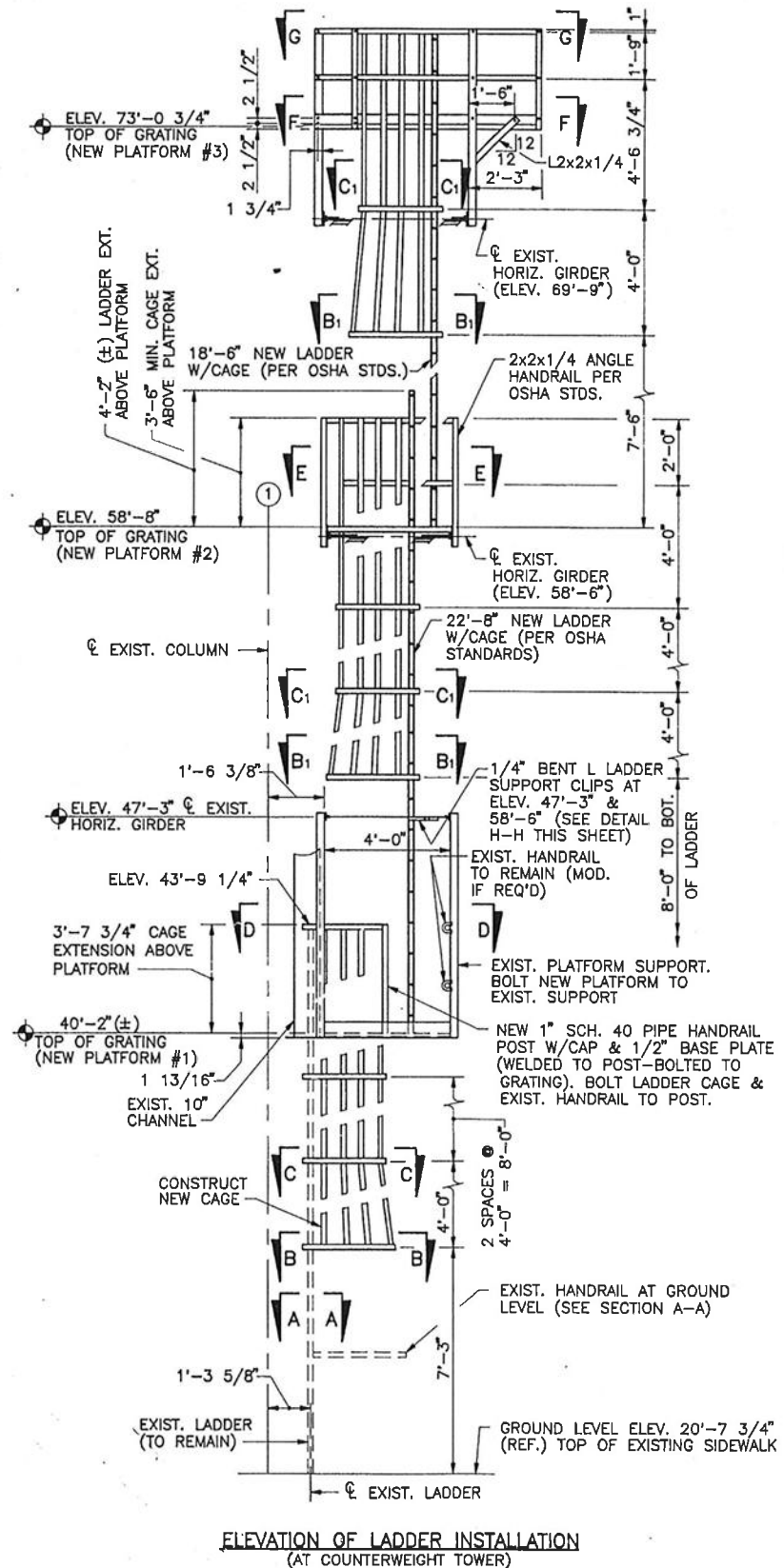
TABLE OF DEFICIENCIES				
ELEMENT	TYPE OF DEFICIENCY	LOCATION	ESTIMATED SIZE	METHOD OF REPAIR
3	SPALL	OUTSIDE	1.0 S.F.	POLYMER MODIFIED MORTAR
5	CW-3	OUTSIDE	5.0 L.F.	EPOXY INJECTION
5	SPALL	OUTSIDE	0.2 S.F.	POLYMER MODIFIED MORTAR
24	SPALL *	OUTSIDE	2.0 S.F.	POLYMER MODIFIED MORTAR
24	CW-5	OUTSIDE	16.0 L.F.	EPOXY INJECTION
25	CW-5	OUTSIDE	25.0 L.F.	EPOXY INJECTION
25	SPALL *	OUTSIDE	18.0 S.F.	POLYMER MODIFIED MORTAR
27	SPALL *	OUTSIDE	3.0 S.F.	POLYMER MODIFIED MORTAR
41	1.5" Ø HANDRAIL	OUTSIDE AND ABOVE	14.0 L.F.	ALUM. HANDRAIL ADDITION +
42	1.5" Ø HANDRAIL	OUTSIDE AND ABOVE	15.0 L.F.	ALUM. HANDRAIL ADDITION +
43	1.5" Ø HANDRAIL	NORTH FACE O & A	12.5 L.F.	ALUM. HANDRAIL ADDITION +
44	1.5" Ø HANDRAIL	OUTSIDE AND ABOVE	15.0 L.F.	ALUM. HANDRAIL ADDITION +
45	1.5" Ø HANDRAIL	OUTSIDE AND ABOVE	14.0 L.F.	ALUM. HANDRAIL ADDITION +
46	1.5" Ø HANDRAIL	EAST FACE O & A	24.0 L.F.	ALUM. HANDRAIL ADDITION +

\* SPALL WITH EXPOSED REBAR  
 + USE FDOT DESIGN STANDARD 520. MOUNTING METHOD TO MATCH EXISTING HANDRAILS. RAIL SHALL MEET OSHA STANDARDS.

NOTES:  
 1. FOR DESCRIPTION OF METHOD OF REPAIR AND REPAIR NOTES, SEE SHEET S-3.

NO.		DATE		DESCRIPTION		BY		CHK'D	
<b>LAUREL STREET BRIDGE REHABILITATION</b> TAMPA, FLORIDA <b>BASCULE PIER - ELEVATIONS</b>									
		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222							
		ENGINEERS - SURVEYORS - PLANNERS - SCIENTIST							
DESIGNED BY		TJL		DRAWING NO.		<b>S-11</b>			
DRAWN BY		TJL							
CHECKED BY		JSR							
APPROVED BY		SCR		DSA CM. NO.		91008-F3			
BY:		DATE		6/29/92		OF 13 SHEETS			

EXISTING PLANS



- NOTES:**
- REMOVE EXIST. PLATFORM @ EL. 40'-2"± (EXCLUDING SUPPORTS).
  - INSTALL NEW PLATFORM PER SECTION D-D.
  - REMOVE ALL EXISTING LADDERS AND PLATFORMS ABOVE EL. 40'-2" IN AREAS SHOWN.
  - ADD NEW CAGE TO EXISTING LADDER @ EL. 27'-10 3/4" AS SHOWN.
  - INSTALL NEW LADDERS, CAGES AND PLATFORMS ABOVE EL. 40'-2" AS SHOWN.
  - MATERIALS: A. ALL STEEL SHALL BE A.S.T.M. A-36 UNLESS OTHERWISE NOTED. (U.O.N.) B. ALL GRATING SHALL BE GALVANIZED GRATING (PER A.S.T.M. A-123) WITH 3/16" x 1 1/2" BEARING BARS AT 4" CENTERS (BAND ALL AROUND) AND 5/16" DIA. CROSS BARS AT 4" CENTERS (BAND ALL AROUND).
  - GRATING SHALL BE SECURED WITH STANDARD GRATING CLIPS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDED PRACTICES. ALL HARDWARE SHALL BE GALVANIZED.
  - ALL BOLT HOLES SHALL BE 9/16" DIA. FOR 1/2" DIA. A-325 HEAVY HEX HEAD BOLTS (U.O.N.).
  - REMOVE ALL SHARP EDGES AND BURRS BY GRINDING.
  - PAINTING: ALL STEEL (EXCLUDING GRATING) SHALL BE COMMERCIAL BLAST CLEANED (SSPC-SP6-91) AND PRIMED WITH (1) ONE SHOP COAT INORGANIC ZINC-RICH PRIMER 3-3.5 MILS. DRY FILM THICKNESS.
  - THE CONTRACTOR SHALL FIELD VERIFY DIMENSIONS & CLEARANCES PRIOR TO FABRICATION. ANY CONFLICTS BETWEEN EXISTING & PROPOSED STRUCTURE SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
  - THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR APPROVAL BY THE ENGINEER PRIOR TO FABRICATION AND/OR PURCHASE OF MATERIALS.
  - SEE S-13 KEY PLAN FOR LADDER LOCATION.
  - PAYMENT FOR ACCESS LADDERS SHALL BE MADE UNDER PAY ITEM NO. 460-2-1, NEW STRUCTURAL STEEL.

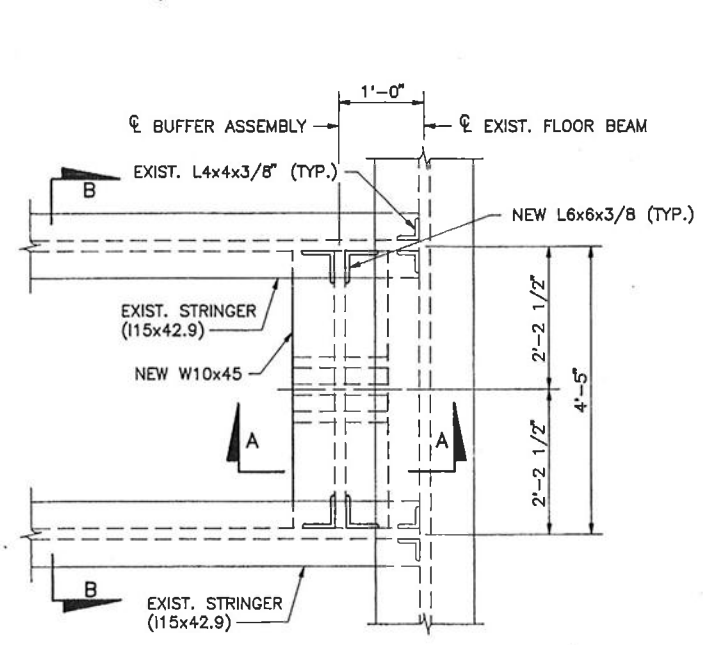
ESTIMATED QUANTITIES		
ITEM	UNIT	QUANTITY
STRUCTURAL STEEL	LBS.	1880.0
GRATING	LBS.	642.0
TOTAL	LBS.	2522.0

NOTE: QUANTITIES SHOWN ARE FOR THIS SHEET ONLY.

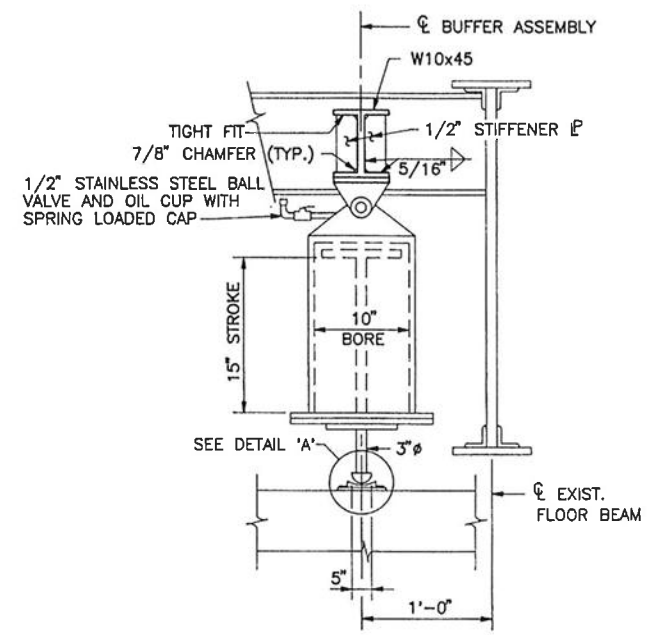
NO.	DATE	DESCRIPTION	BY	CHK'D
<b>LAUREL STREET BRIDGE REHABILITATION</b> TAMPA, FLORIDA				
<b>COUNTERWEIGHT ACCESS LADDERS</b>				
<b>DSA GROUP INC.</b>		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222		
ENGINEERS - SURVEYORS - PLANNERS - SCIENTIST				
DESIGNED BY	LDT	DRAWING NO.	<b>S-12</b>	
DRAWN BY	KTL			
CHECKED BY	LDT			
APPROVED BY	SCR			
BY:	OSA CH. NO.	B1008-F3		
FLA. P.E. REG. NO.	DATE	6/29/92	OF 13 SHEETS	



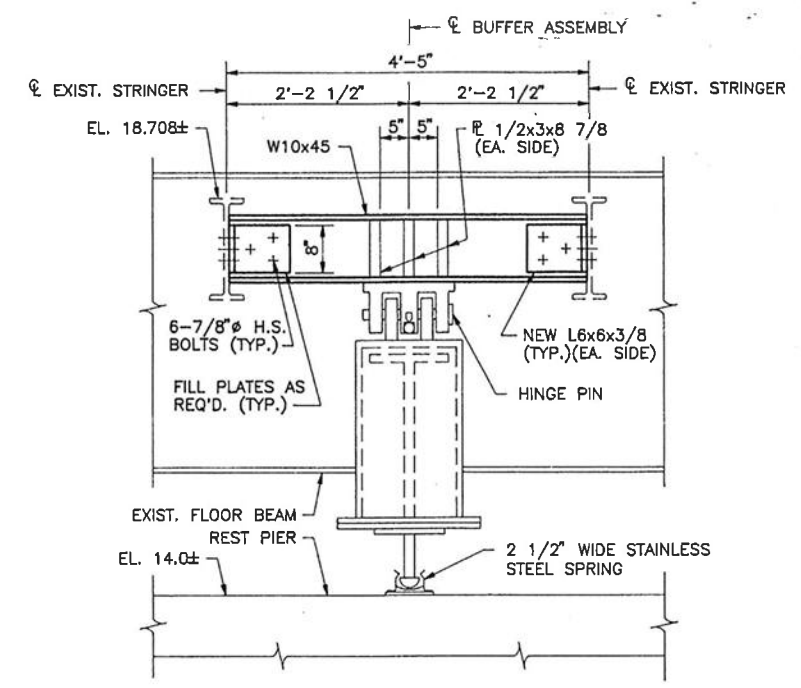
EXISTING PLANS



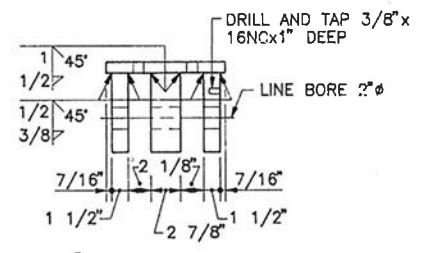
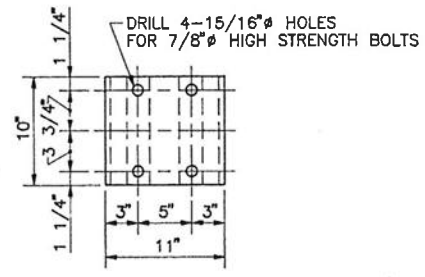
**BUFFER ASSEMBLY - PLAN**  
(REFER TO S-7 FOR LOCATIONS)



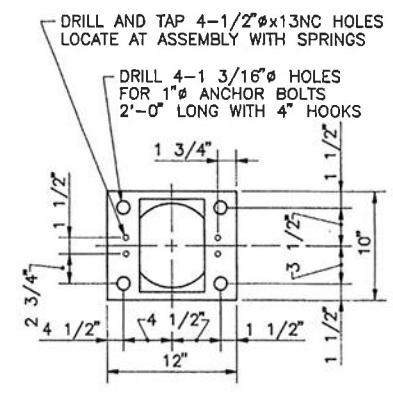
**SECTION A-A**



**SECTION B-B**



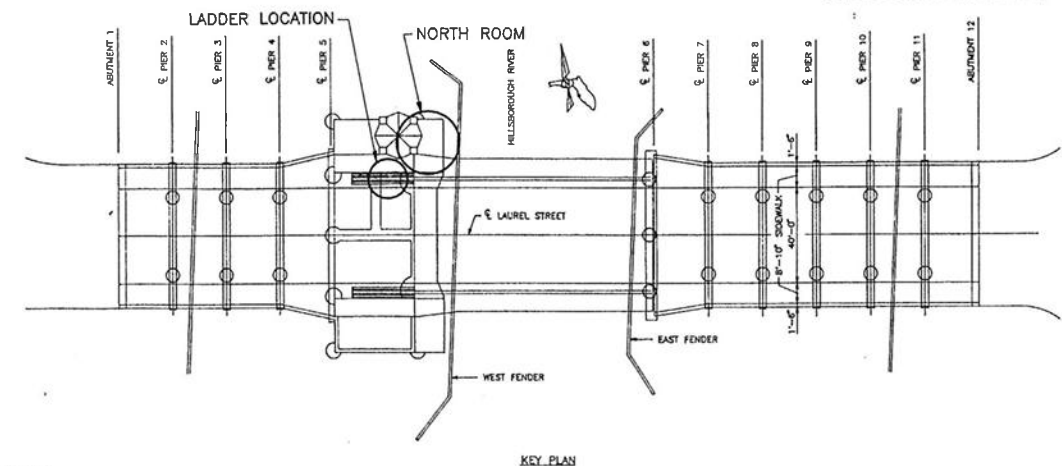
**BUFFER CYLINDER HANGER**



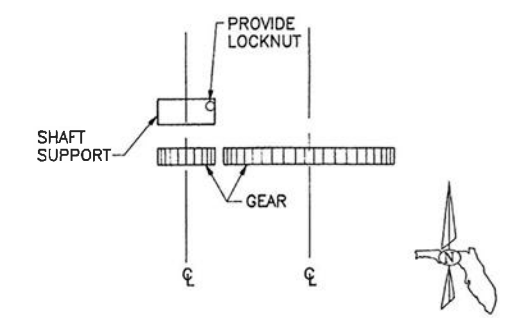
**DETAIL 'A'**

- NOTES:**
- BUFFER ASSEMBLY SHALL CONFORM TO THE 1991 STANDARD SPECIFICATIONS FOR MOVABLE HIGHWAY BRIDGES SECTIONS 1.1.14 AND 3.3.20.
  - MATERIAL SPECIFICATIONS:**  
 BUFFER CYLINDER HANGER - ASTM A36 STRESS RELIEVED  
 PISTON HEAD - ASTM A36  
 PISTON ROD - ASTM A108 GRADE 1045  
 BUFFER PLATE - ASTM A36  
 HINGE PIN - ASTM A306 GRADE 75
  - PISTON RINGS SHALL BE CAST IRON OR PTFE FLUOROCARBON RESIN RINGS, FITTED TO CYLINDER WALLS SO THAT WHEN LUBRICATED WITH OIL NOT HEAVIER THAN 20W, VACUUM PRESSURE WILL HOLD THE WEIGHT OF THE PISTON FOR 6 MINUTES DURING A 15" STROKE.
  - COST OF 2 BUFFERS INCLUDING BUFFER PLATES TO BE INCLUDED IN THE PRICE OF PAY ITEM NO 8460-3-803.
  - REMOVE EXISTING CENTRAL BUFFER AND PROVIDE TWO NEW BUFFERS, ONE ON THE NORTH SIDE AND ONE ON THE SOUTH SIDE. CONTRACTOR SHALL PROVIDE SHOP DRAWINGS FOR REVIEW AND APPROVAL BY THE ENGINEER PRIOR TO INSTALLATION OF NEW UNITS.

**AIR BUFFER DETAILS**



**KEY PLAN**



**MAIN DRIVE AT NORTH ROOM**  
N.T.S.

NO.	DATE	DESCRIPTION	BY	CHK'D
<b>LAUREL STREET BRIDGE REHABILITATION</b> TAMPA, FLORIDA				
MISCELLANEOUS SECTIONS AND DETAILS				
<b>DSA GROUP INC.</b>		D.S.A. BUILDING 2005 PAN AM CIRCLE TAMPA, FLORIDA 33607 (813) 873-1222		
ENGINEERS - SURVEYORS - PLANNERS - SCIENTIST				
DESIGNED BY	LDT	DRAWING NO.		
DRAWN BY	KTL	<b>S-13</b>		
CHECKED BY	LDT			
APPROVED BY	SCR			
BY:	DSA C.M. NO. 91008-F3			
FLA. P.E. REG. NO.	DATE	6/29/92	OF 13 SHEETS	